Ektron Reference

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Ektron 9.50

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Optimizely

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Ektron Reference

Release Notes

Web version of the Ektron Reference

http://documentation.ektron.com/cms400/v9.50/Reference/Web/EktronReferenceWeb.html

Web version of the Release Notes

http://documentation.ektron.com/current/ReleaseNotes/web/ReleaseNotes_WebHelp.htm

Table of Contents

1

Getting started with Ektron

Ektron manages the life cycle of content, from creation to approval and publication. It helps your organization set up a process for overseeing changes to a website, indicate the status of content within that life cycle, and inform the next approver that it is their turn to review the content.

Business users, such as marketing or public relations professionals, can author, manage and publish Web content, build and deploy Web forms, and collect and leverage visitor information. The editor supports the industry's best in-context editing environment, ensuring user adoption and project success.

People interact with your Ektron website in different ways. Some people operate in different roles, and sometimes different roles overlap in activity. For example, a developer uses PageBuilder to create page structures, while content authors use PageBuilder to build a page in those structures. Similarly, some administrators and developers may perform installation and set-up actions.

The major roles for people interacting with your website are as follows:

- **CMS User (Content Author)**. creates content for your website and may edit the content in context on the Web page or in the Workarea. Content authors can have specialized roles and permissions, such as a discussion board administrator.

    - *Ektron's marketing suite* on page 1033
        - *Creating personalized Web experiences with personas* on page 1047
        - *Connecting visitors with targeted content* on page 1063
        - *Measuring Web experiences with multivariate testing* on page 1087
        - *Managing landing pages* on page 1107
        - *Managing calls to action* on page 1099
        - *Managing a blog platform* on page 1141
        - *Ektron's marketing suite* on page 1033
        - *Analyzing websites* on page 483
        - *Targeting content with GeoIP information* on page 1079
    - *Editing in Ektron* on page 553
    - *Creating PageBuilder pages* on page 993
    - *Editing content on a PageBuilder page* on page 997
    - *Managing content* on page 591
    - *Working with Ektron content* on page 622
    - *Working with assets in the Document Management System* on page 649
    - *Working with files in the library* on page 673
    - *Working with collections* on page 740
    - *Managing user communities* on page 1505
    - *Working with discussion boards* on page 933
    - *Working with forums* on page 945
    - *Assigning and managing tasks* on page 1339
    - *Working with calendars* on page 913

- **Marketer**. marketing campaign managers, lead generation managers, digital marketers, and content marketing managers.
  - *Ektron's marketing suite* on page 1033
  - *Creating personalized Web experiences with personas* on page 1047
  - *Connecting visitors with targeted content* on page 1063
  - *Measuring Web experiences with multivariate testing* on page 1087
  - *Managing calls to action* on page 1099
  - *Managing landing pages* on page 1107
  - *Managing a blog platform* on page 1141
  - *Analyzing websites* on page 483
  - *Personalizing a Web page* on page 1327
- **CMS Administrator**. manages the website including access to all content, taxonomies, users, rules, and settings.
  - *Setting up your CMS folder structure* on page 141
  - *Managing content* on page 591
  - *Working with Ektron content* on page 622
  - *Approving content for publication* on page 689
  - *Organizing content with taxonomies* on page 1253
  - *Creating a mobile-driven Web experience* on page 457
  - *Synchronizing servers using eSync* on page 1787
  - *Developing wireframe templates* on page 1007
  - *Using responsive frameworks with PageBuilder* on page 1001
  - *Applying adaptive image resizing* on page 472
  - *Personalizing a Web page* on page 1327
  - *Creating and using widgets* on page 1171
  - *Creating menus for your website* on page 1235
  - *Creating user-friendly URLs with aliasing* on page 1293
  - *Navigating a website with breadcrumbs* on page 1321
  - *Working with multi-language content* on page 1393
  - *Analyzing websites* on page 483
  - *Defining roles* on page 1464
  - *Creating business rules for your website* on page 1361
  - *Working with Smart Forms* on page 815
  - *Viewing network server diagnostics* on page 1903
  - *Managing users and user groups* on page 1439
  - *Sending notifications to a community* on page 1543
  - *Sending Web Alert emails to subscribers* on page 1369
- **Web Administrator**. installs, upgrades, or migrates sites to Ektron and gets Ektron ready for use.

- **Developer**. writes API code, modifies ASPX pages, creates wireframe templates with PageBuilder, and create widgets to customize your website.

For information about developing a Web strategy, see *Creating a mobile-driven Web experience* on page 457.

2

Installing Ektron

For information about system requirements for the current release, see System Requirements. If your system does not conform to them, you should upgrade before installing or upgrading Ektron.

IMPORTANT: Each deployment has unique requirements. Ektron recommends that you engage with a Certified Ektron Partner when making decisions about the needs of your production environment.

License keys

IMPORTANT: Read the *Ektron Perpetual License Agreement* before installing Ektron software.

Ektron controls the usage through a license key, a unique code assigned to your domain. Your license key is included in the email that is sent when you request or purchase Ektron.

When you login to a website that contains Ektron, it checks the license key(s) against the domain.

If the URL of a valid license key matches the URL of the site being accessed, the Workarea appears.

If no valid license key is found for the URL of the site being accessed, Ektron is disabled and you must log in the with Builtin account to change the License Key.

If you have a broken license key or a license key with an incorrect base URL, an error message appears in the Ektron Login window. The message states, "Error: A license violation has occurred and the application is presently locked. Please see your administrator." If this message appears, login with the Builtin account and reenter your license key. If the message continues to appear and you are sure you have a valid key, contact Ektron Support.

Domains in which you can use a license key

The license key is assigned to a base URL, typically your domain name. For example, if your domain name is `www.mycompany.com`, the license key follows this pattern: `www.mycompany.com(expdate)(Modifiers)?1234567890`.

Each domain requires its own license key. For example, to support the domains, `www.mycompany.com`, `sales.mycompany.com` and `support.mycompany.com`, you need 3 license keys.

When you purchase a license key, be sure to register a domain name, not an IP address. Although Ektron supports IP addresses, the domain that you license becomes the required URL in the browser address. For example, if you register `192.168.0.1`, you would need to access the site as `http://192.168.0.1/somedirectory/myloginpage.aspx`. Because users would typically not identify a Web page by its IP address, register a domain name instead.

Using Ektron without a license key

For evaluation purposes, when you install Ektron, you do not need a license key. During the installation process, leave the **License Key** field blank and click **Next** on the License screen. This lets you use Ektron as localhost.

Inserting the license key

You are prompted to enter a license key during installation. If you do not, enter it by choosing **Workarea > Settings > Setup > Edit** and completing the **License Key (s)** field.

When cutting and pasting license keys, keep the full license key intact without adding or deleting characters. License keys that are changed in any way render Ektron inoperable.

Upgrading a license key

If you upgrade Ektron and want to replace the old license key with a new one, choose **Workarea > Settings > Setup > Edit**. Next, add the license key to the **License Key(s)** field. If you want to add new keys *in addition to* old keys, create a comma-delimited list of keys in the **License Key(s)** field.

Installing Ektron

By default, the installation places files in 2 server locations:

- `C:\Program Files (x86)\Ektron\CMS400vXX`. sample and minimal databases, documentation, utilities, setup files for creating additional sites.
- `C:\Inetpub\wwwroot\`*`site root`*. bin folder, Web services, scripts, supporting files, uploaded files and images, graphics used in Ektron, CustomAPI, and so on.

> **NOTE:** The bin folder stores Ektron's binary executable files. .NET automatically searches this folder for .dll files.

During installation, the ASPNET or IIS_WPG and IUSR users are given permission to create folders in these directories:

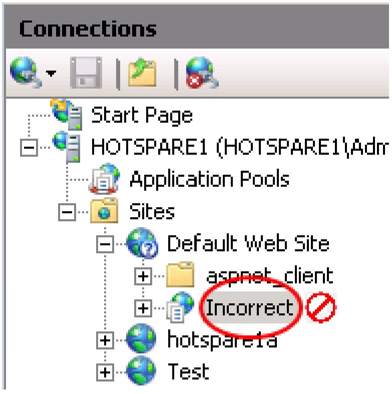
- `C:\Inetpub\wwwroot\`*`site root`*`\uploadedfiles`
- `C:\Inetpub\wwwroot\`*`site root`*`\uploadedimages`

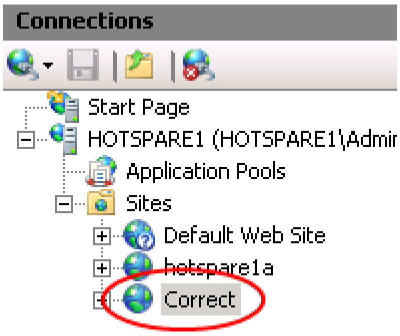
Before you install

1. Create a folder for the site. Make sure the drive and folder to which you install your Ektron website have sufficient space. Anticipate future needs, since the site is likely to grow over time.
2. Make sure that Internet Information Server (IIS) is installed on your server. See *Creating multiple websites on a single server* on page 90.
3. Install the Application Server role on your server. For more information, see https://technet.microsoft.com/en-us/library/cc754684.aspx.

4. Create an IIS site. See also: How to set up your first IIS Web site.
   a. Open IIS.
   b. In the left panel, right click the **Sites** folder and choose **Add Web Site**.
   c. In the Add Web Site dialog, insert sitename, hostname, and physical path for the new site.

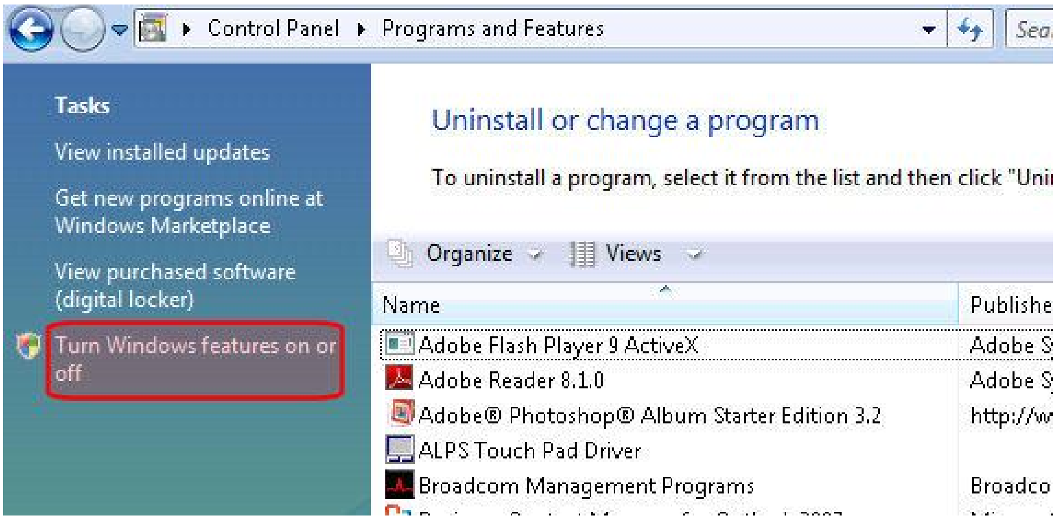
   IMPORTANT: Ektron does not support the installation of nested sites, each having its own web.config file. Nested sites can disrupt features, such as Aliasing, Menus, and eSync.
   Also, do *not* install the site under another application's folder within Web root, nor to an IIS Application under another site.





5. If you are setting up one website that uses multiple Ektron servers and points to a single database server, make sure both servers connect to the same database. This configuration ensures that membership user registrations, forum/blog posts, statistics, and so on, are the same on both servers. For more information, see *Setting up Ektron* on page 67.
6. Decide which search provider you will use. See also: *Search providers* on page 182.
   If you will use any Microsoft search provider, install it. See also: *Working with Microsoft FAST search* on page 423; *Setting Up Microsoft Search Server 2010* on page 302; *Using Solr search* on page 204

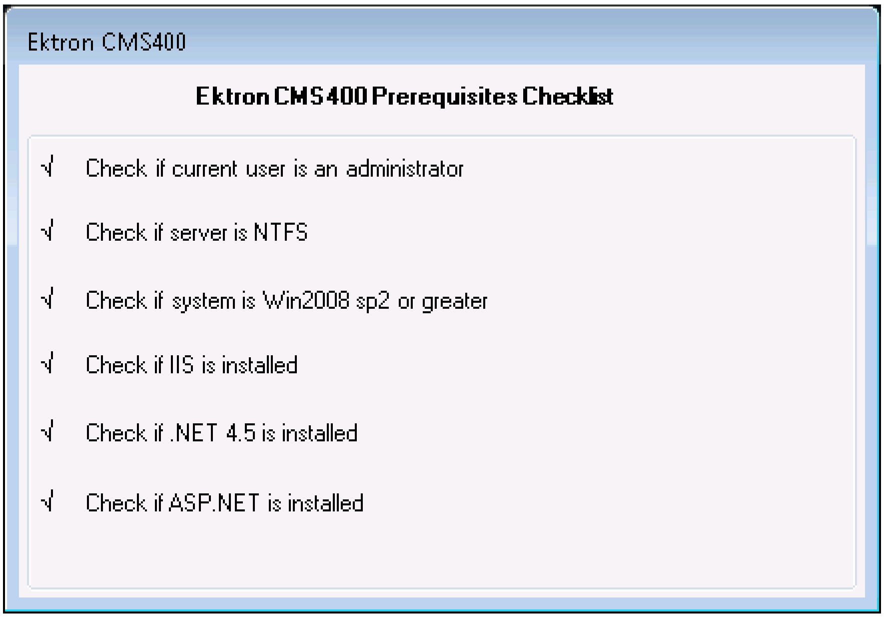
7. Enable IIS 6 metabase compatibility and ASP.NET. To do that:
   a. From the Windows Control Panel, choose **Programs and Features**.
   b. From the left panel, choose **Turn Windows Features On or Off**.



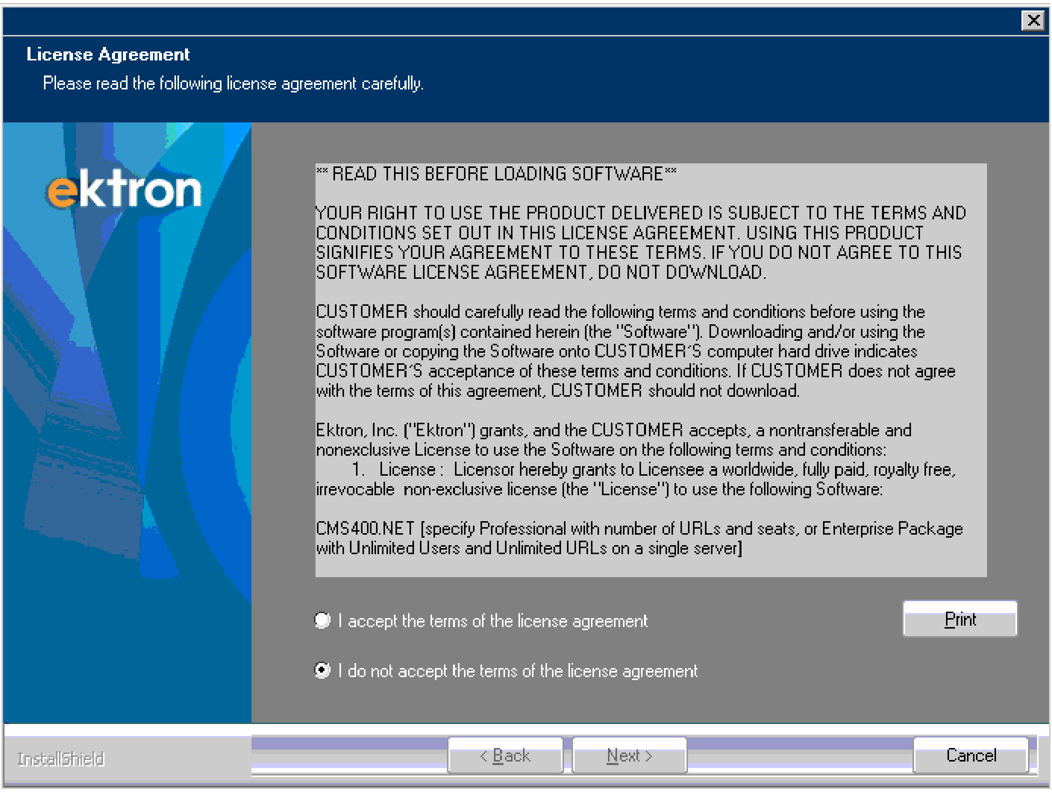
   c. Click to open **Internet Information Services > Web Management Tools > IIS 6 Management Compatibility**.
   d. Check **IIS Metabase and IIS 6 configuration compatibility**.
   e. Click to open **Internet Information Services > World Wide Web Services > Application Development Features**.
   f. Check **ASP.NET.**
   g. Click **OK**.
8. Obtain a license key from Ektron. Send email to license@ektron.com.

Installing the Ektron base

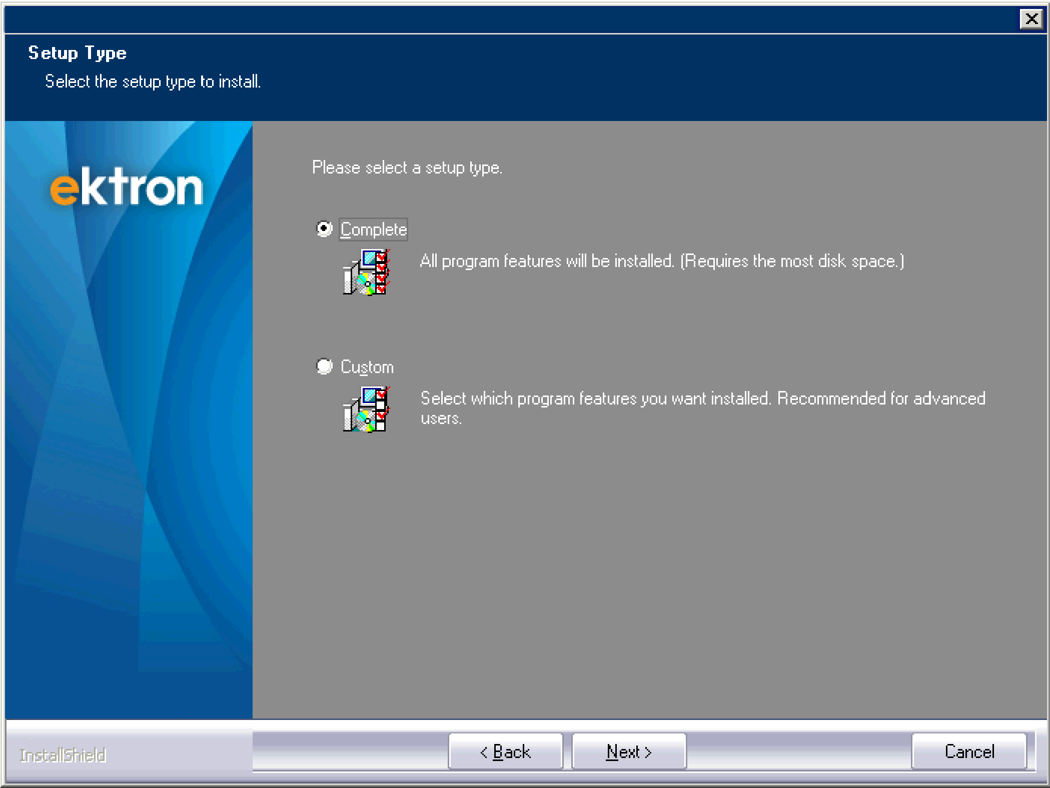
1. Contact your Ektron account manager to obtain a link to download Ektron.
2. Double click the downloaded CMS400Base*releasenumber*.exe file.
3. Ektron verifies that your server has all required components. You must install any missing ones before you can continue.



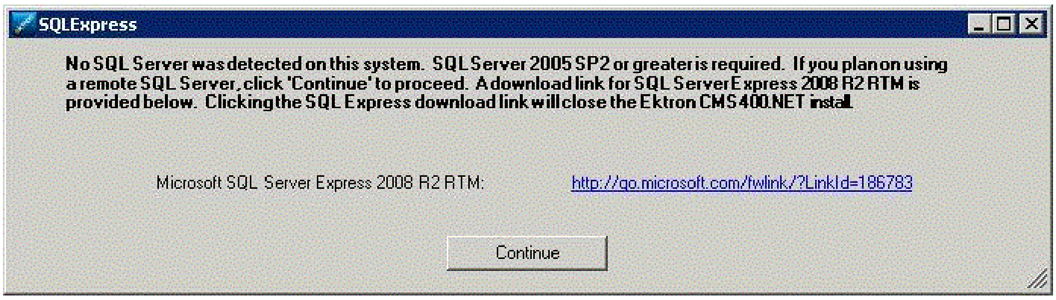
4. A screen displays Ektron's License Agreement. Read it and click **I Accept**. If you do not accept, the setup ends.



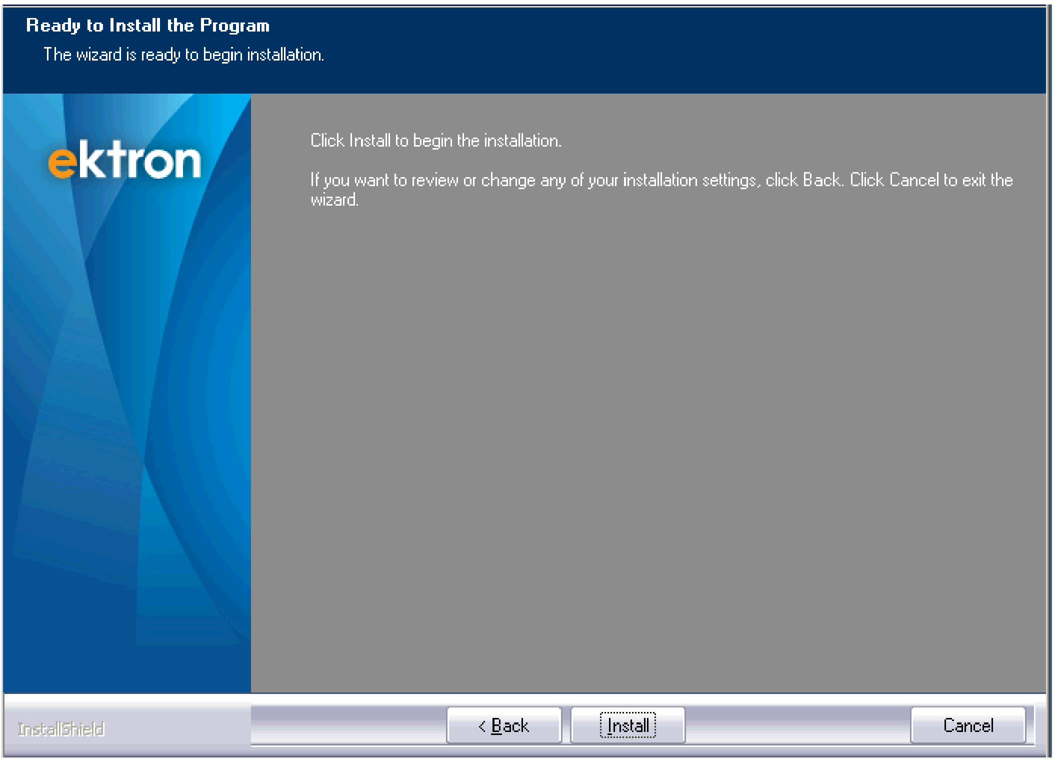
5. Select **Complete** to install all components. Or, select **Custom** to choose which components to install. You can also choose where to install them.



6. When you click **Next**, the install checks for SQL or SQL Express on the server. If SQL is not installed, a dialog prompts you to install SQL Express.
7. If you will use a remote SQL server, click **Continue**. If you plan to use SQL Server on this computer, click the link on the message to install SQL Server Express 2008 R2 RTM. If you do, the Ektron installation terminates. After installing SQL Server Express, restart the Ektron installation.

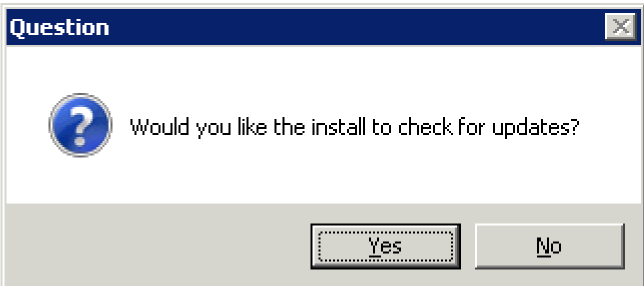


8. The **Ready to Install the Program** screen appears. Click **Install**. The installation program copies files to the `C:\Program Files` folder.



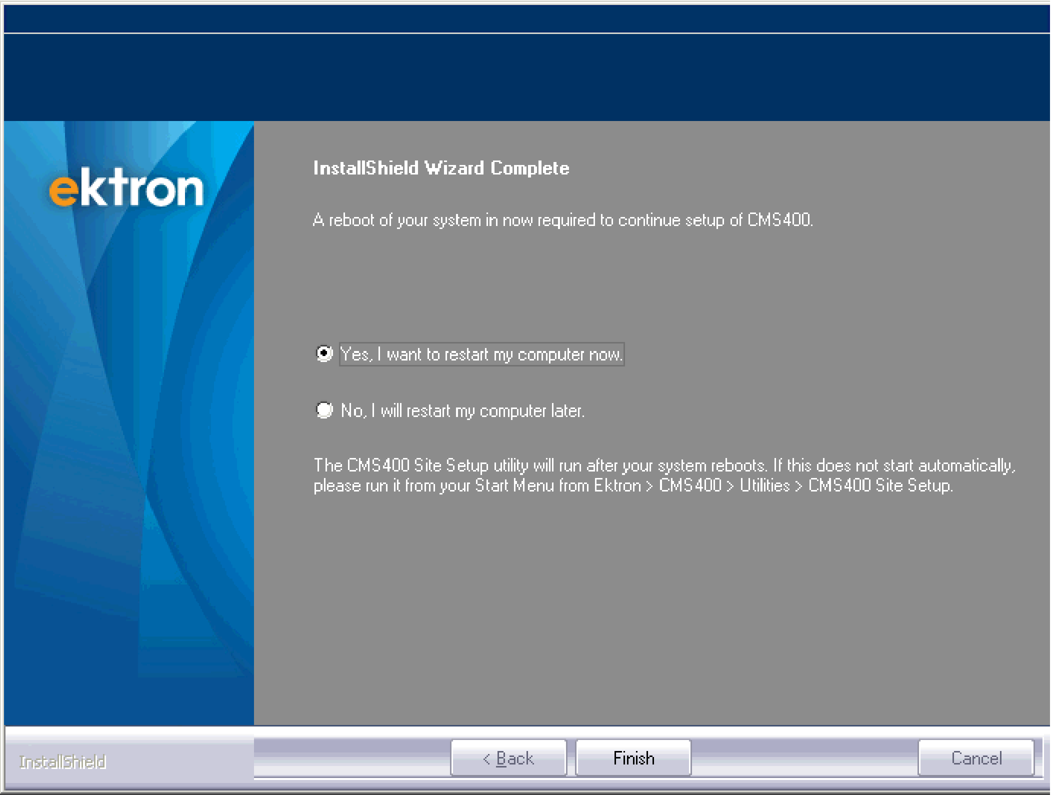
IMPORTANT: After completing the installation, further configure your permissions based on your network security model before using Ektron.

9. Click **Yes** to check for updates. This verifies that you have the latest version of Ektron.



10. You might be prompted to restart your server. If so, you should restart now. Otherwise, the installation begins.

IMPORTANT: If this dialog appears, do not run the site setup until the system reboots.



After you install Ektron, the `web.config` file is updated as follows.

- ek_sitePath. *webroot/siteroot*
- ek_buildNumber. Current build number of Ektron
- ek_cmsversion. Current version of Ektron
- Connection String. Information about the database's connection to Ektron

See also: *Managing web.config* on page 74

Installing a site

NOTE: Continue with these steps after completing *Installing the Ektron base* on page 13.

The installation copies the following folders from `C:\Program Files (x86)\Ektron\CMS400vxx` to the Web root folder you specify:

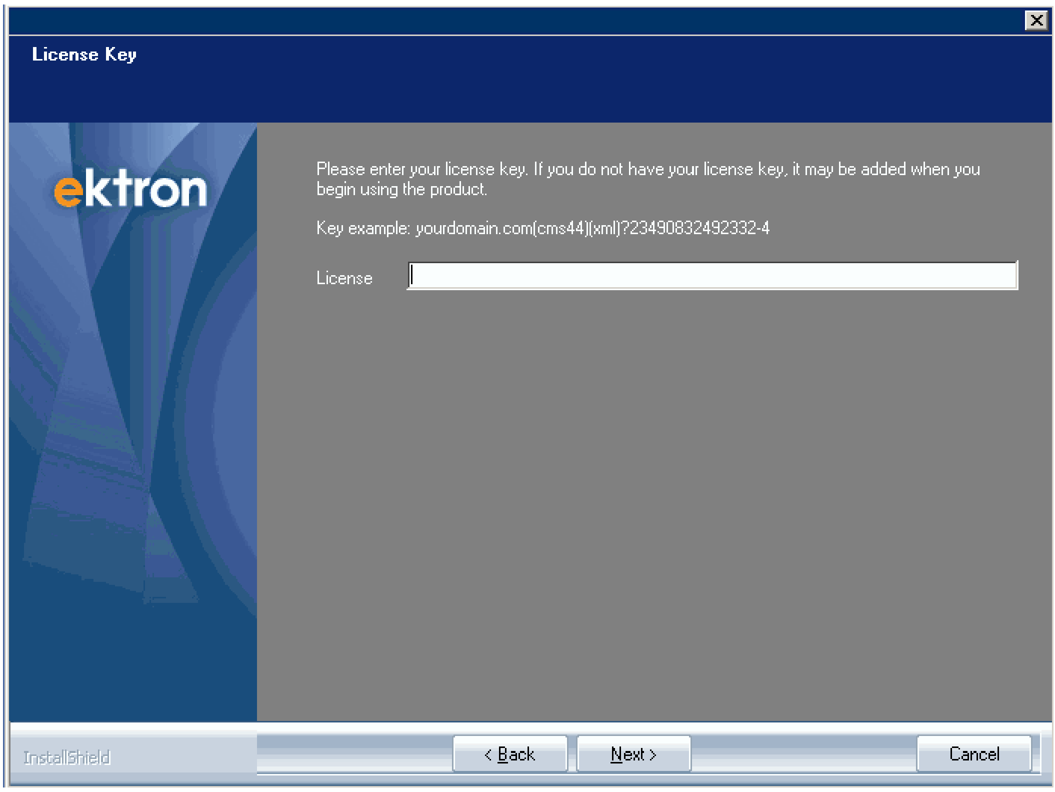
- BIN
- workarea
- documentation
- uploaded files and uploaded images
- a login page
- the Visual Studio solution file

1. You can create a new site manually by clicking the `cms400sitesetup.exe` file located in `C:\Program Files(x86)\Ektron\CMS400vxx\Utilities\SiteSetup` or by choosing **Start > Programs > Ektron > CMS400vXX Utilities >**

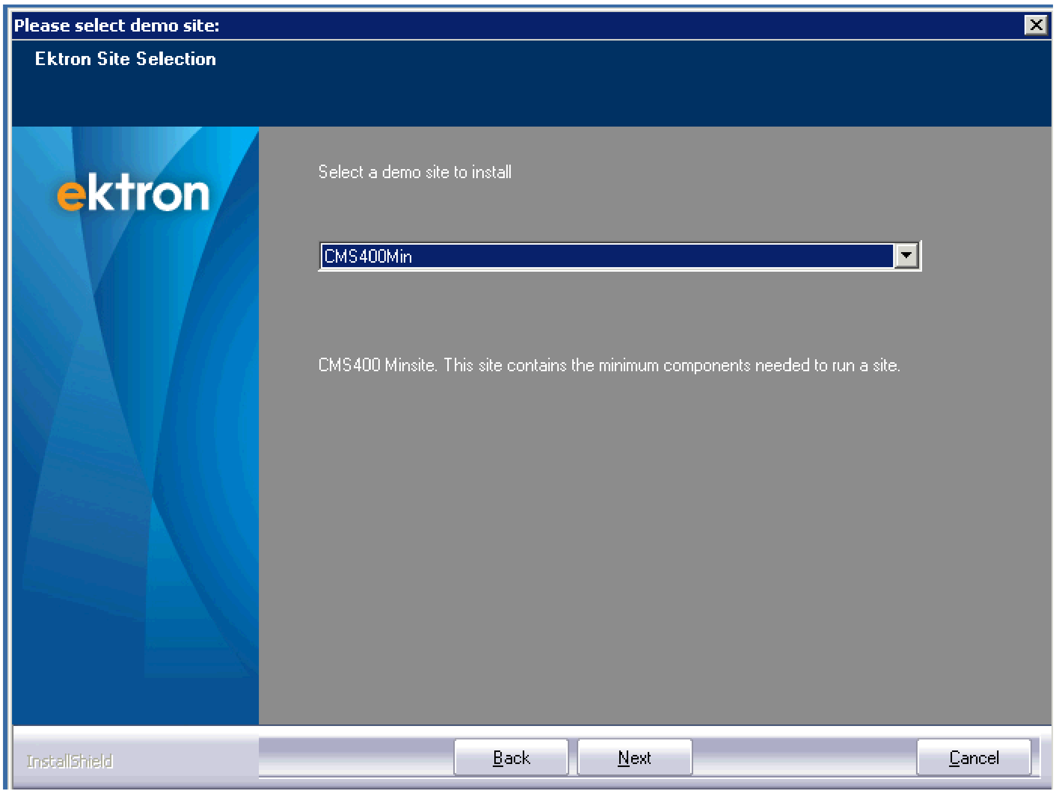
CMS400 Site Setup. The Setup Type screen appears.

If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **CMS400 Site Setup**. Right click and choose **Run as Administrator**.

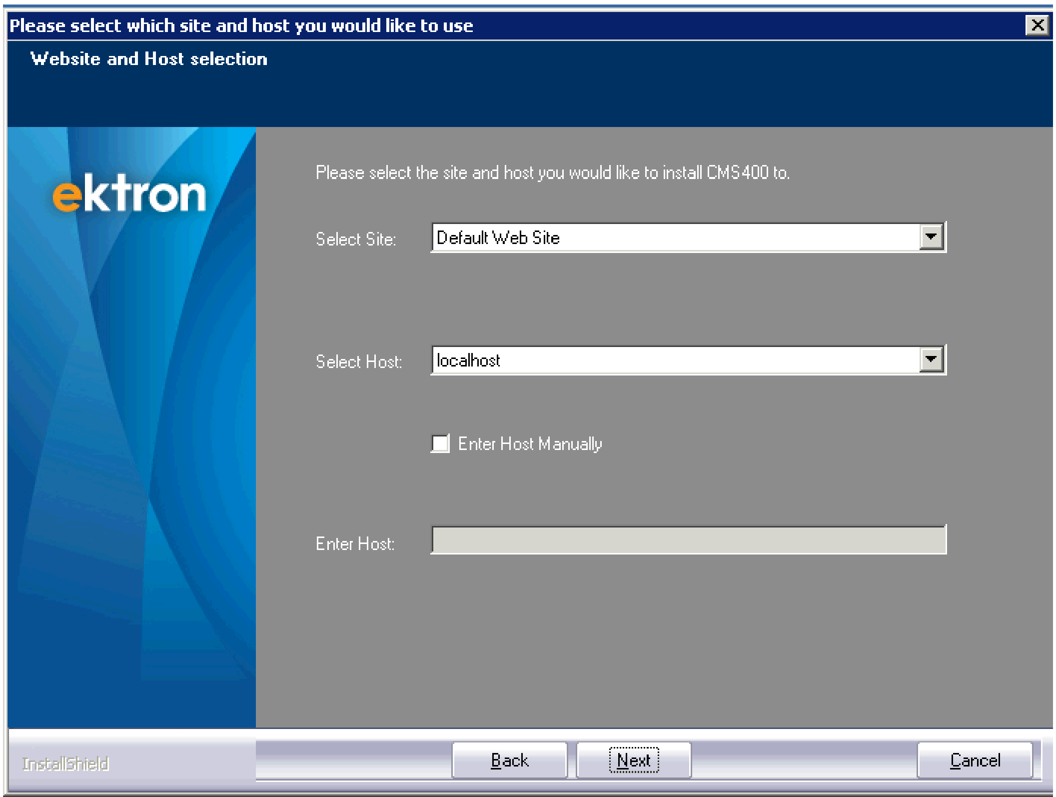
2. Choose an option and click **Next**.
   - **CMS400 Full Installation**. For setting up a new site installation.
   - **CMS400 Upgrade.** For upgrading existing site's database and site files.
   - **CMS400 Database Setup.** For setting up a new site database. Site files, such as .aspx pages, are not included in this setup.
3. In the **License Key** field, enter your primary license key for Ektron. License keys are typically emailed to your organization when you request a copy of the application. When cutting and pasting a license key, keep it intact without adding or deleting characters. If you do not have license keys now, you can insert them later.



4. Select a site to install. This screen does not appear the first time you run the site setup for a starter site. If you run it again and have multiple sites, this dialog appears.



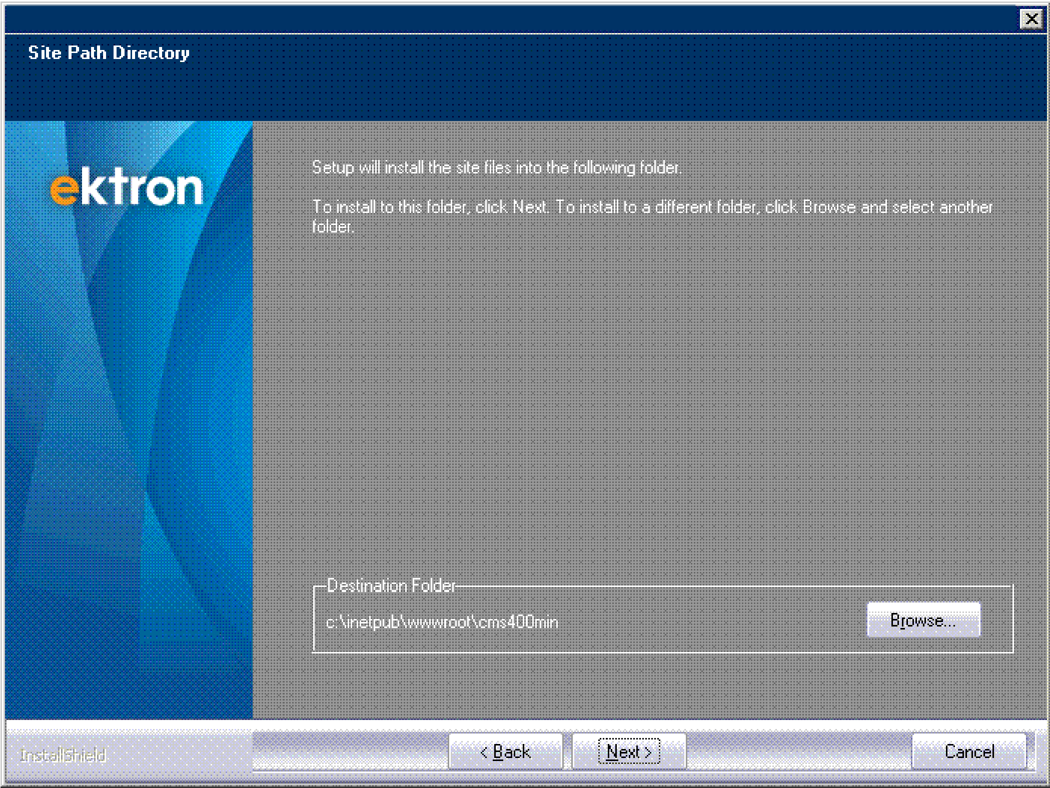
5. Select from the drop-down list the site to which you want to install Ektron. You created the site when preparing for the Ektron installation, as documented in Step 4 of *Before you install* on page 11.



6. Enter the destination folder for the site. If your website resides in a folder other than the default, click **Browse** and go to that folder. The default reflects your selection in the previous dialog.

WARNING! Do not install under another application's folder within the Web root.

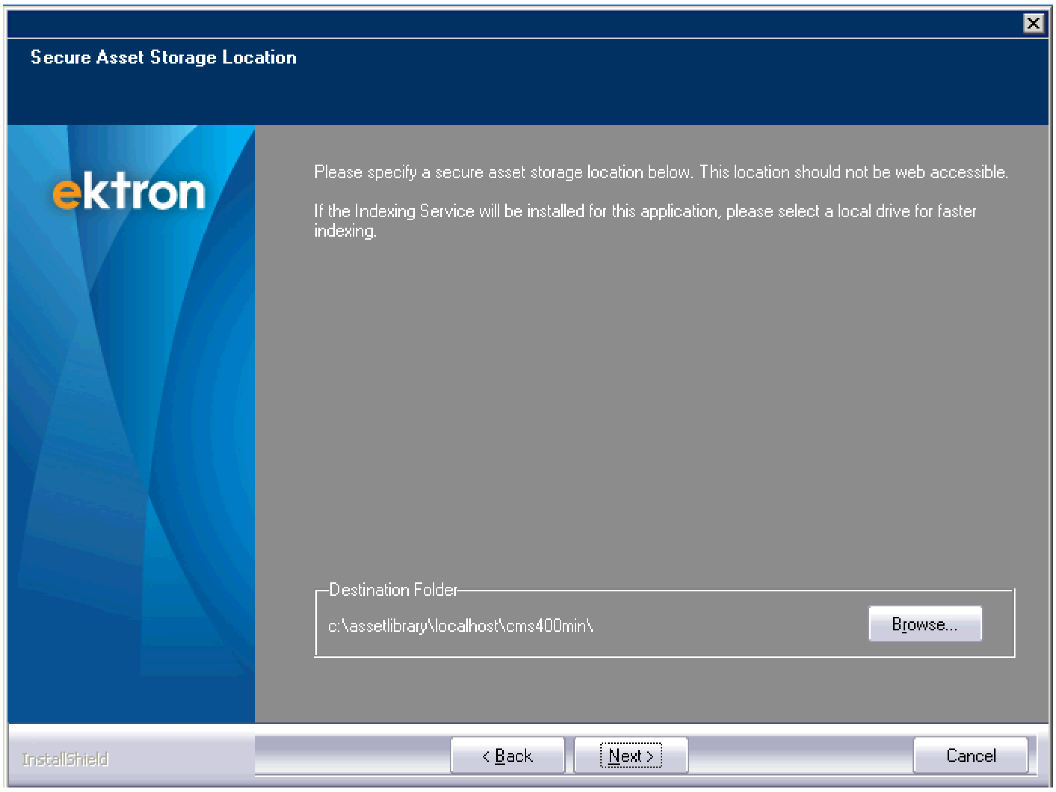
IMPORTANT: Ektron does not support the installation of nested sites, each having its own `web.config` file. Nested sites can disrupt Ektron features, such as Aliasing, Menus, and eSync.



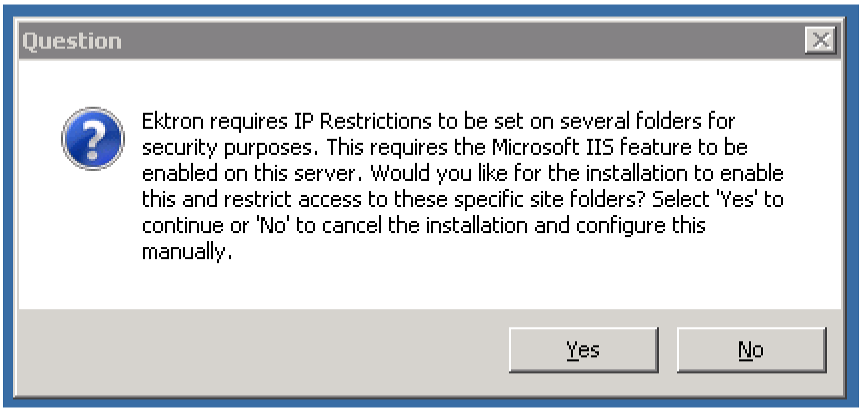
7. Enter the path of the Secure Asset Location. The Site Options screen appears.

IMPORTANT: If you plan to load balance several servers, make sure this path is the same for all servers in the cluster. See also: *Balancing the load on your servers* on page 94.

NOTE: Be sure the drive to which you install the asset library has sufficient storage space plus room for growth.



8. You may see the following dialog.



Click **Yes** if you want the installation to

a. Enable IIS's IP Address and Domain Restrictions role.
b. Restrict access to the `/workarea/webservices` and `/workarea/services` folders and the `/workarea/ServerControlWS.asmx` file, so they are only accessible from localhost.

If you click **No**, the site installation is terminated.

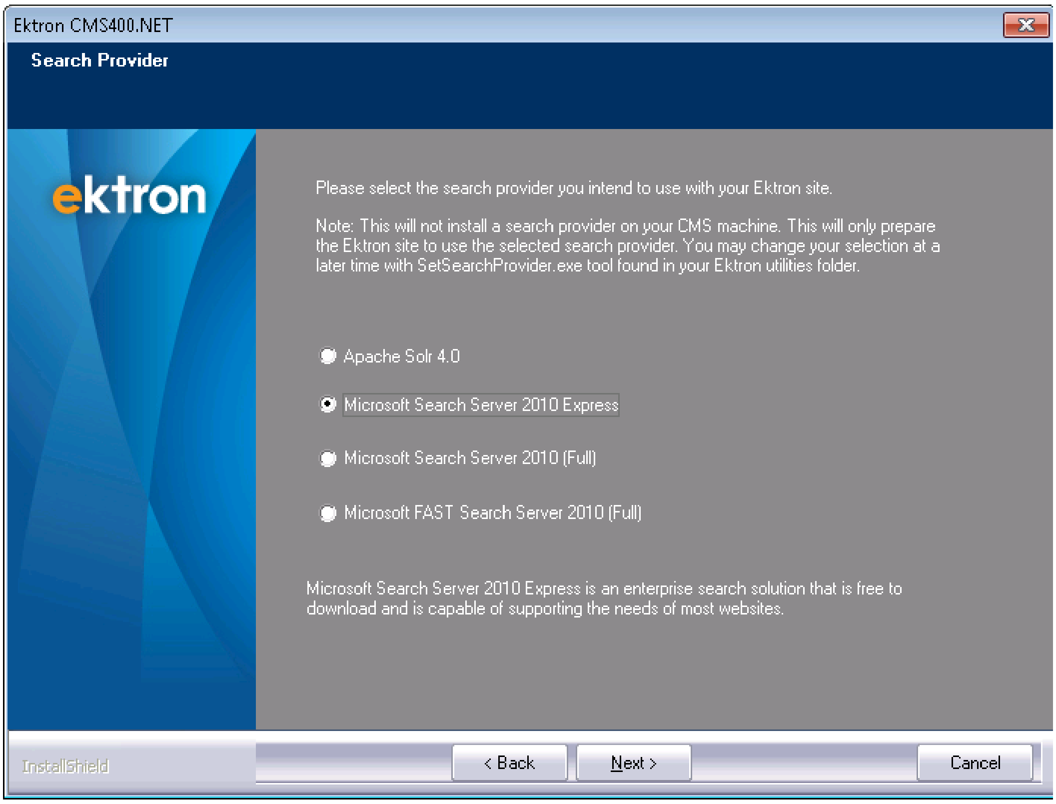
For more information, see https://portal.ektron.com/kb/10234/.

If you click **Yes** and complete the installation, you may have to grant permission to other servers that need to access the restricted folders and file. To do this:

a. Go to IIS.
b. Choose the `/workarea/webservices` folder.

c. Choose **IP Address and Domain Restrictions**.
d. Click **Add Allow Entry** from the right panel
e. Add IP addresses for each server that will access this server's `/workarea/webservices` folder.
f. Repeat Steps **a** through **e** for the `/workarea/services` folder and the `/workarea/ServerControlWS.asmx` file.

9. On the Search Provider screen, choose the search provider you will use with Ektron.



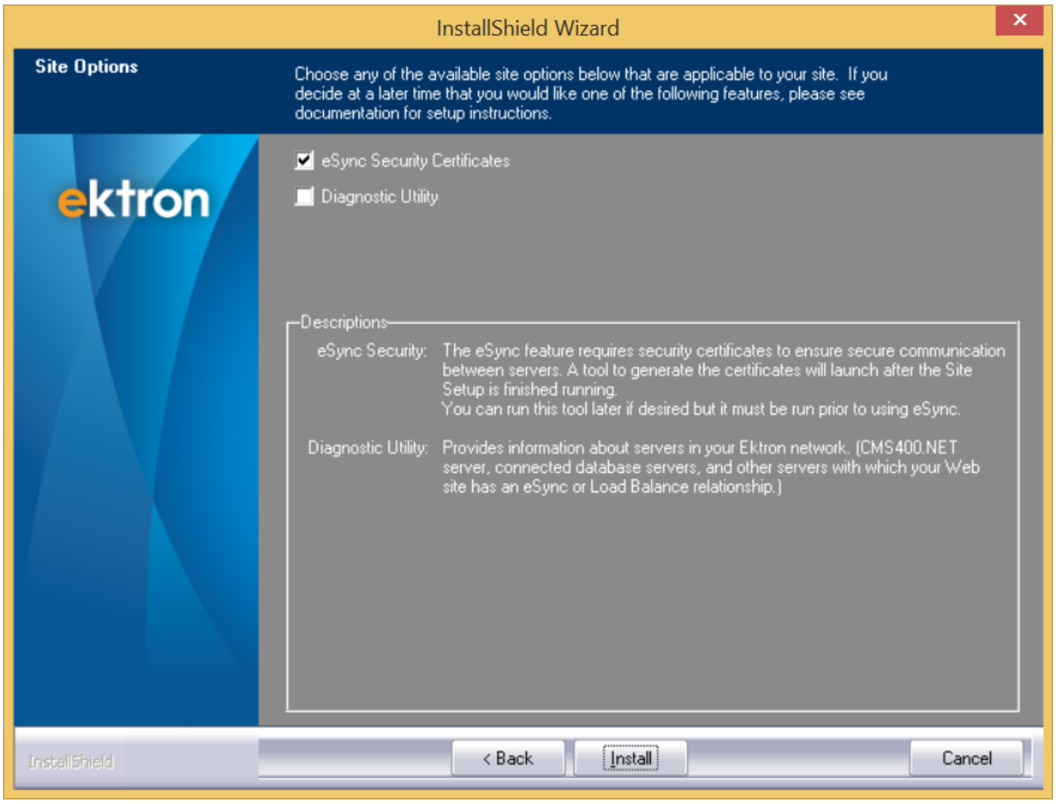
See also: *Working with Microsoft FAST search* on page 423; *Setting Up Microsoft Search Server 2010* on page 302; *Using Solr search* on page 204.

10. On the Site Options screen, check each option you want to install.

NOTE: You should generate a security certificate because it lets the Ektron Windows Service register Ektron sites with Search. Certificates also allow content scheduling and are required for eSync.

See also:

- *Viewing network server diagnostics* on page 1903.
- *Managing eSync security certificates* on page 1838



NOTE: eSync is only available if the eSync modifier is in your license key.

11. After choosing, click **Install**. The Moving Files dialog appears, and the following things happen.
    - files are copied to the site
    - permissions are set for the site's directories
    - ASPNET, IIS_WPG, or Network Service user and IUSR are given permissions to the directories
    - the site is set up to use .NET 4.5
    - `web.config` settings are configured
    - IIS is configured

Setting up a database

PREREQUISITE

If you are using a separate database server, you need the following information:

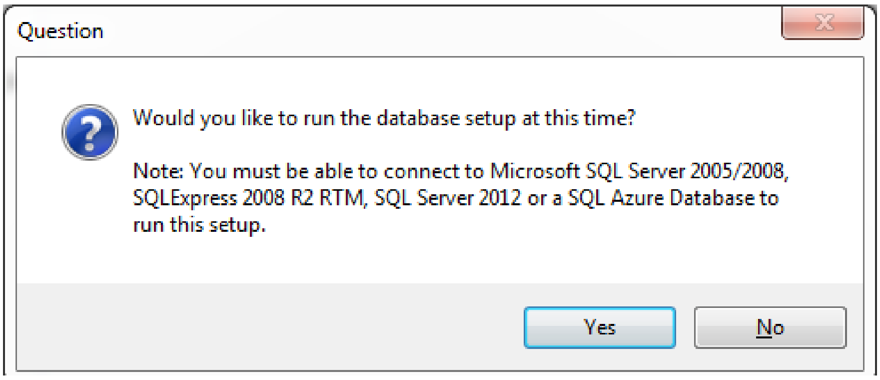
- Database server host name or IP address.
- If the database server is on the same domain as the application server, it supports NT or SQL authentication.
- If the database server is on a separate domain from the Ektron server, it supports SQL authentication.
- You have database administrator or database creator privileges .

NOTE: Continue with these steps after completing *Installing a site* on page 17.

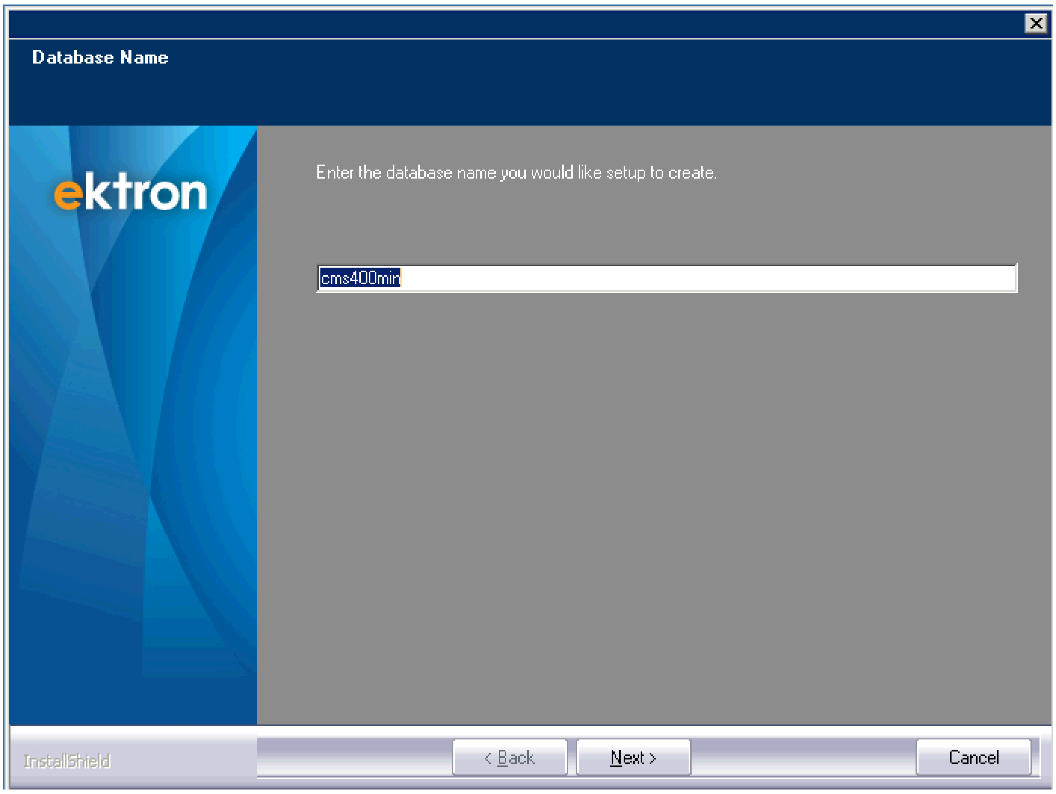
Your database contains information such as users and content blocks. The database setup program:

- checks for SQL or SQL Express server. If either is installed on your server, an appropriate database is set up.
- loads database tables
- updates the `web.config` file with information about your database connection, based on your responses

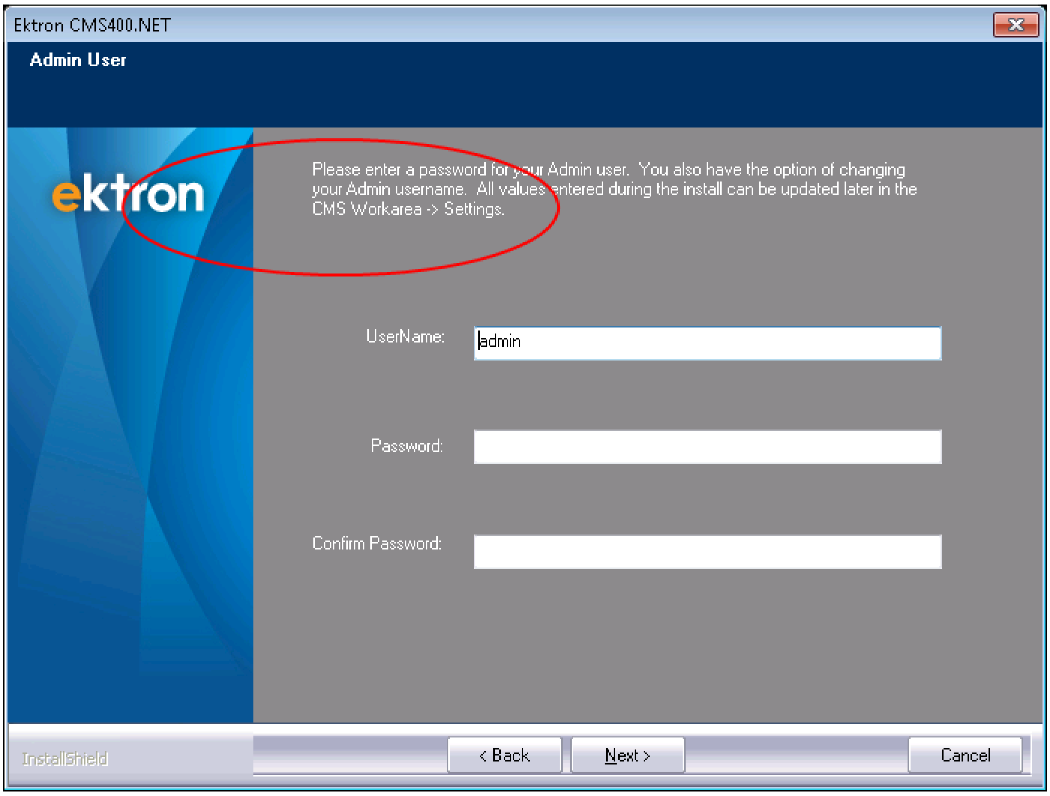
1. You are prompted to set up a database. Click **Yes**.



2. Enter a name for the database.



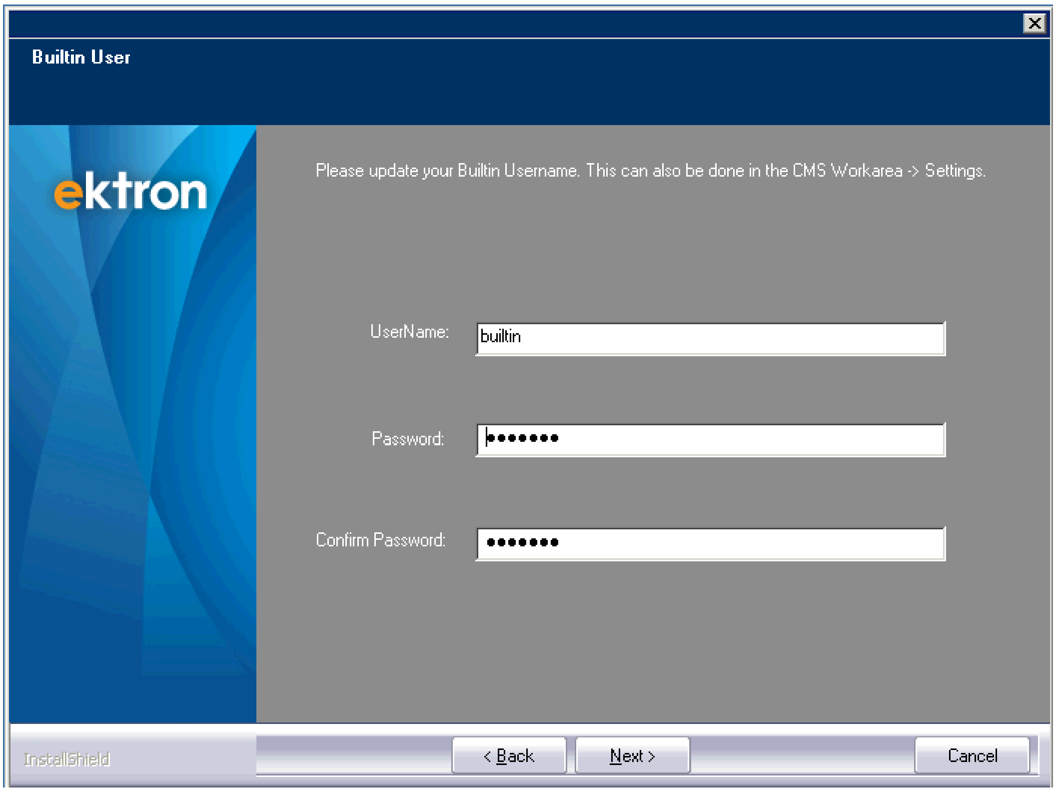
3. Enter the Ektron administrator user's password. It cannot be **admin**. You may also change the user's username if you wish.



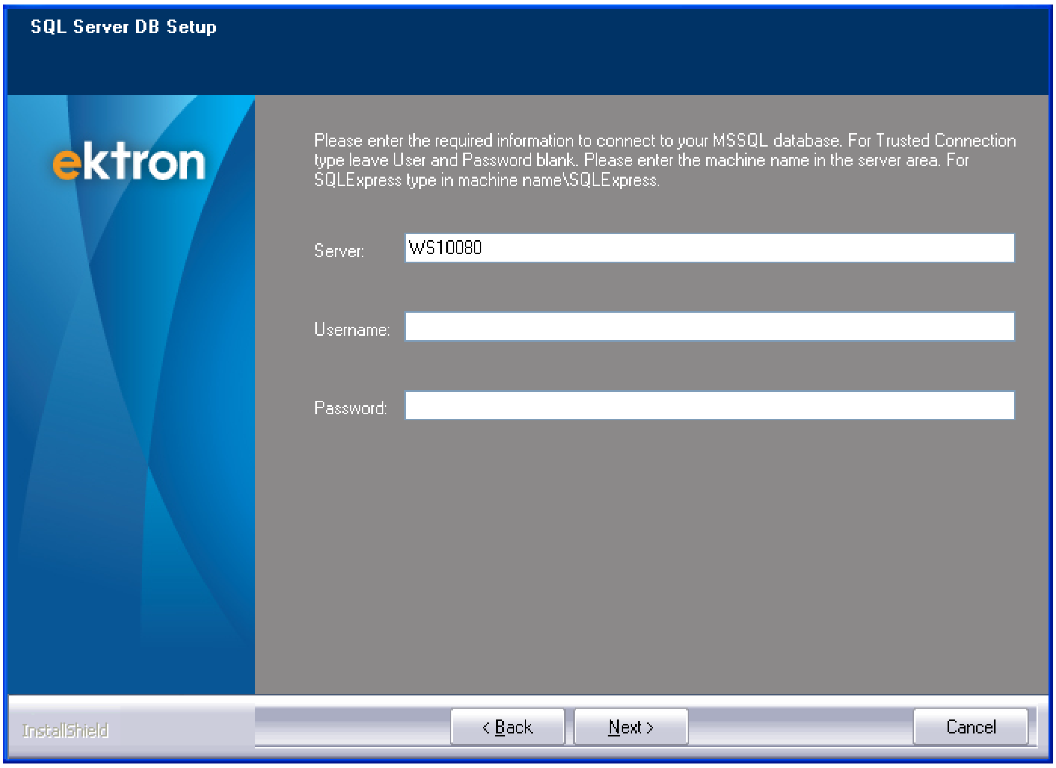
After completing the installation, Ektron administrators may edit these values in the Ektron **Workarea > Settings > Users** screen.

The Ektron administrator user is a member of the Administrators group. Group members have access to all Ektron Workarea screens.

4. Enter the builtin user’s password. For information about the builtin user, see *Editing the builtin username and password* on page 110.



5. Click **Next**. The SQL Server DB Setup screen appears and prompts for database connection information.



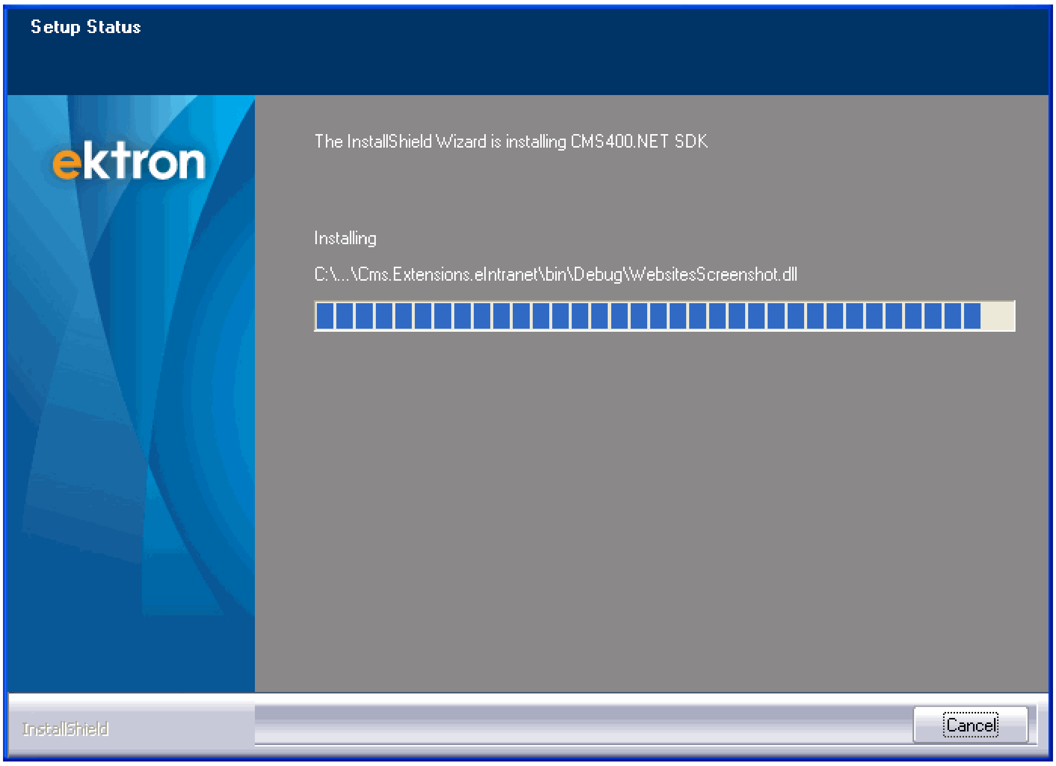
- **Server**. List the database server on this system. To setup the database on this server, accept the default. Otherwise, enter a SQL or SQL Express server that already exists. For SQL, this would typically be **(local)** if it's installed on the local server. Otherwise, enter the Server's name. For SQL Express, enter **(local)\SQLEXPRESS**.

- **Username.** Enter the username you will use to access the database.
- **Password.** Enter the password you will use to access the database.

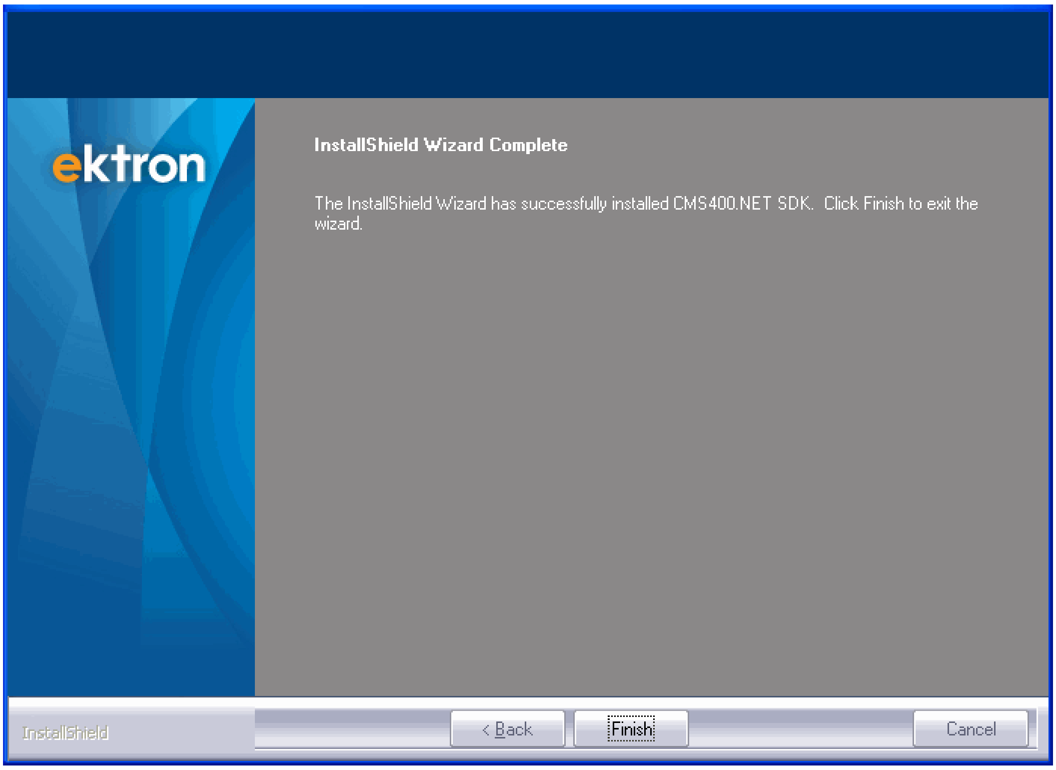
NOTE: If you want to use NT authentication, leave the username and password blank. This will set up a trusted connection.

After you complete the screen, the setup verifies the database connection information. If the database name already exists, you are asked to assign a different name. When a connection is made and the name is available, the installation program creates a database using the provided information.

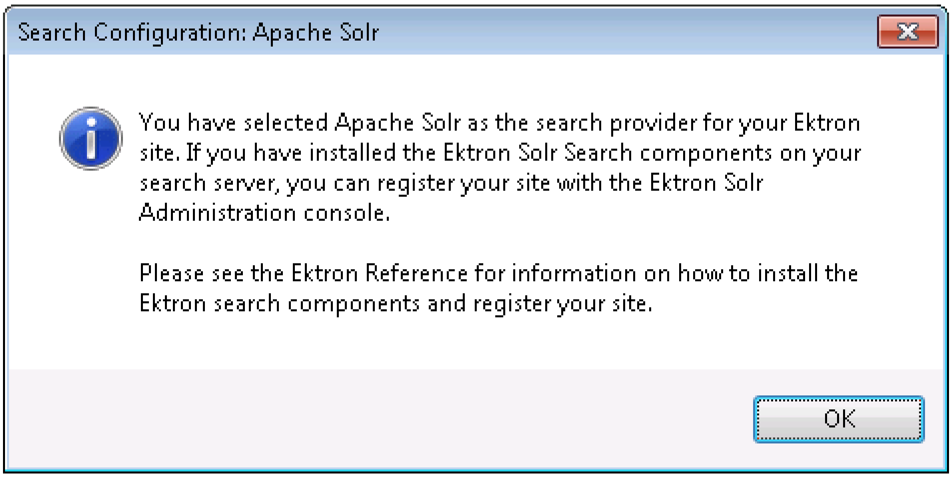
6. If you did not leave the **Username** and **Password** fields blank on the previous screen, the following screen appears.
7. The setup verifies the database connection information. If the database name already exists, you are asked to assign a different name. If the name does not already exist and a connection is made, the installation program creates a database using the provided information.
8. Click **Install** to begin the installation. The Setup Status screen appears.



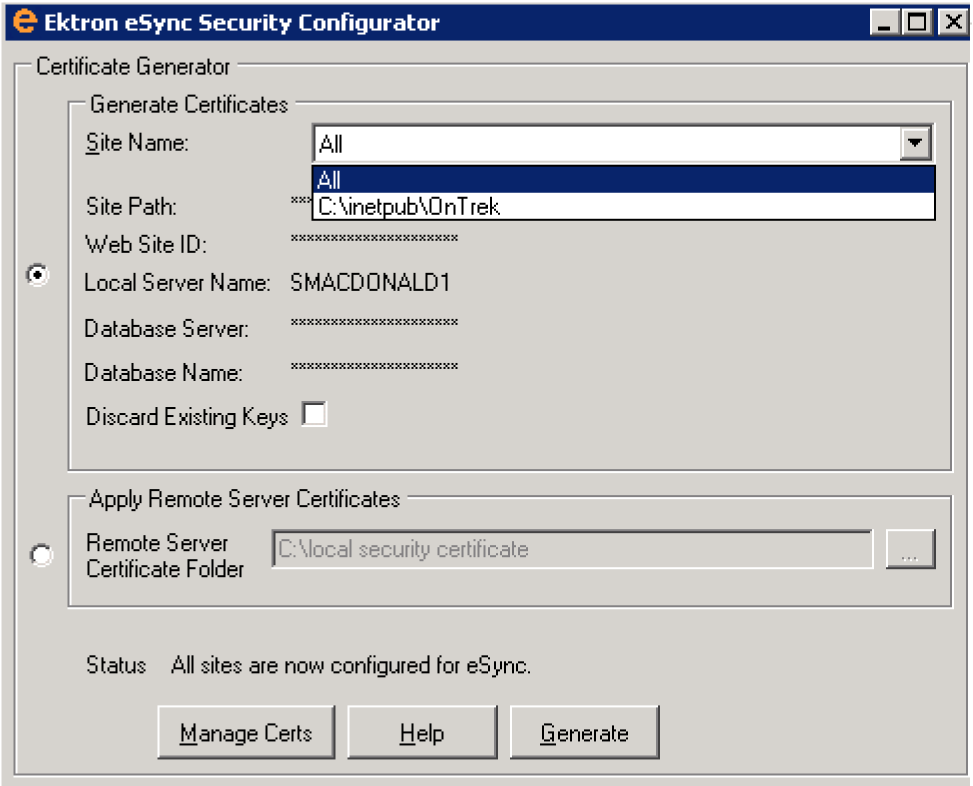
9. When the SDK install is finished, the following screen appears. Click **Finish**. The site and database setup portion of the install is complete.



10. The following screen appears, providing information about setting up a search provider. The message varies according to the chosen search provider.



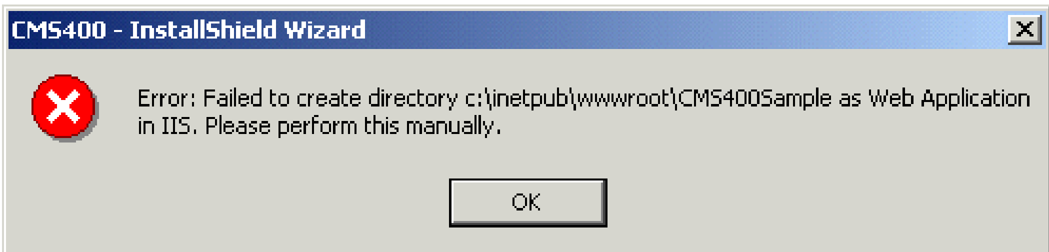
11. If you checked the **eSync** box in Step 9 of *Installing a site* on page 17, the following dialog appears.



To learn about eSync security certificates, see *Part 2: Generate and copy security certificates* on page 1798.

Troubleshooting installation issues

Error: Failed to Create Directory



The possible cause and solutions are as follows:

- User does not have permission to create objects. Grant user permission to create objects. For information on how to, read IIS Security help topic “Setting NTFS Permissions for a Directory or File.” `http://localhost/iishelp/iis/htm/core/iidfpsc.htm`
- Host is not localhost. Install Ektron on localhost machine only.

Error: Configuration error

If Ektron requires .NET 4.0, but you server has a previous version of the Microsoft .NET framework, Install the .NET 4.0 framework.

Installing Ektron on several servers

Perform these steps on the development server.

1. Complete all steps in *Before you install* on page 11.
2. Download and run the Ektron installation file, `CMS400`*`Basevversionnumber`*`.exe`.
3. In Windows Explorer, create a folder to be used for development (for example, `c:/cmsdev`).
   a. At the **Setup Type** page, select **CMS 400 (Complete)**.
   b. On the Site Setup screen, at the **Select Site** drop-down, select the site you created in Step 3, **dev.example.com**. At **Select Host**, select the host you entered for dev.example.com.
   c. On the Site Path Directory screen, browse to the `C:\cmsdev` folder.
   d. On the **Host screen**, enter **http://dev.example.com** or an IP address. A window prompts you to define the Asset Storage Location. Enter **C:\assetlibrary\cmsdev** and **C:\assetcatalog\cmsdev**. The Database Setup utility begins. (See *Setting up a database* on page 23.)
4. Run the Site Setup utility by choosing **Start > Programs > Ektron > Utilities > CMS400 Site Setup**. This installs the site on the development server. (See *Installing a site* on page 17.)

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **CMS400 Site Setup**. Right click and choose **Run as Administrator**.

   a. Enter your database name, **cmsdev** to continue the example. (Do not leave it as **localhost**.)
   b. Enter your database server information, then the host, user and password. The database is created. The site is ready for use.
   c. Open Internet Explorer and go to `http://`*`your web site`*`/login.aspx` to test the site.
   d. Log in to make sure the database is working.

Using the steps, install sites to your staging and production servers.

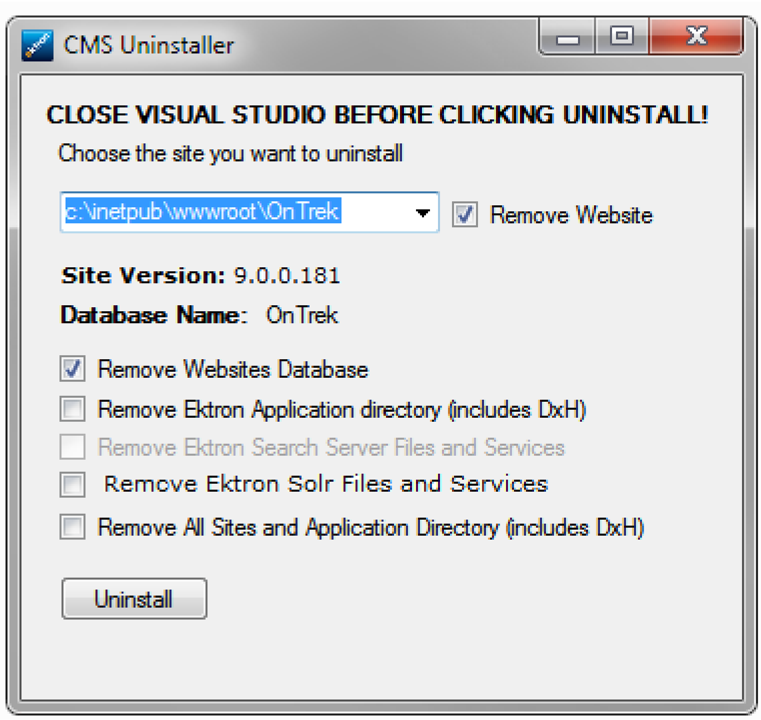
Uninstalling Ektron

Uninstalling removes all Ektron files from your server. You might want to do this if you installed Ektron, experimented with it, and now want to remove that version and install a clean, new version.

IMPORTANT: Do not use the Windows Add/Remove programs utility to uninstall Ektron. Use the uninstall utility instead.

To uninstall Ektron:

1. Close all programs that are using your Ektron website. Close all Ektron files.
2. Go to `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities`.
3. Copy the CMS uninstaller folder to your desktop.
4. From that folder, run CMSUninstaller.exe. You can uninstall specific websites, the Ektron application directory, or all Ektron files.



Effect of removing a website

When you uninstall a website, the following happens.

1. The IIS and Indexing Service stops.
2. The website's database is deleted.
3. The website folder's files are deleted.
4. The IIS and Indexing Service starts.

Effect of removing a website's database

If you check the **Remove Websites Database** box, the site database is removed.

Effect of removing the Ektron application directory

If you check the **Remove Ektron Application directory** box, the following items are removed.

- All Ektron services
- These Program Files (x86)\Ektron directories (if they exist)
    - CMS400v76
    - CMS400v75
    - CMS400v70
    - Dms400
    - EktronWindowsService40
    - EktronWindowsService30
    - EktronWindowsService20
    - EktronWindowsService
    - EktronCmsFileHelperService
    - EktronNotificationServices
    - Plugins
    - CMS400SDK
- Various system directory files
- These registry entries
    - Everything under Software\Ektron
    - All StarterSite keys
    - SDK install key
- The base installer key

Removing search server files and services

If you check the **Remove Ektron Search Server Files and Services** box, the services and files that Ektron uses for Microsoft Search Server are removed. (This action does not remove Microsoft Search Server 2010).

Removing all sites and application directory

If you check the **Remove All Sites and Application Directory** box, all Ektron files are removed.

NOTE: After you complete the uninstall, you may need to manually remove the AssetLibrary, EktronSearchData directories.

Removing third-party programs

To remove all third-party applications required to run Ektron, go to Windows **Control Panel > Uninstall a Program** and remove these programs.

- Your search provider (for example, Microsoft Search Server 2010)
- SQL 2008 R2 Reporting Services Sharepoint 2010 Addin
- Microsoft Sync Framework 2.1 SDK
- Microsoft Visual C++ 2010 x64 Redistributable
- Microsoft Filter Pack 2.0
- Microsoft Visual C++ 2008 Redistributable
- MSXML 4.0 SP2 Parser and SDK
- Microsoft Visual C++ 2005 Redistributable (x64)
- Microsoft Server Speech Recognition Language = Tele (enUS)
- Adobe PDF iFilter for 64bit platforms
- Microsoft Chart Controls for Microsoft .NET Framework 3.5
- Microsoft Server Speech Platform Runtime (x64)
- Microsoft ASP.NET 2.0 AJAX Extensions 1.0
- Microsoft .NET Framework 4 Extended
- Microsoft .NET Framework 4 Client Profile
- Microsoft Sync Services for ADO.NET v2.0 (x64)
- Microsoft Report Viewer Redistributable 2008 SP1
- Microsoft Office 2003 Web Components

NOTE: Some applications may have been installed before you installed Ektron.

Installing help files on a local server

Beginning with Ektron Version 8.5, Ektron online help files reside in an Ektron-hosted Web server instead of a folder on your Web server. If you block your users' workstation access to the Internet, help files are not available, and users see an error when they click the help button. To remedy this issue, either change the firewall to allow access to the internet, or install help files locally.

PREREQUISITE

- You can download files to the Ektron server.
- You can edit files in your website's *siteroot* folder.

Step 1: Download and install the help folder on your Web server

1. Click the following link: http://documentation.ektron.com/cms400/v9.30/Reference/Zip/EktronReference.zip.
2. Download the .zip file to your Ektron server.
3. Create a folder called help in the Workarea folder, typically `inetpub/wwwroot/your-website/Workarea/`.

4. Unzip the file to your Ektron help folder, typically `inetpub/wwwroot/`*`your-website`*`/Workarea/help`. (You can install help to any website folder.)

NOTE: If you installed help to another folder, replace the `web.config` default value with the complete URL to that folder. For example: `<add key="ek_helpDomainPrefix" value="http://www.example.com/help" />`

Step 2: Change your website's web.config file

1. Edit your *siteroot*/`web.config` file.
2. Find `ek_helpDomainPrefix`.
3. If you installed the help folder to this website's Workarea folder, remove the path value. For example:

```
<add key="ek_helpDomainPrefix" value=""/>
```

If you installed help to another folder, replace the default `value` with the complete URL to that folder.

3

Upgrading to

The upgrade procedure copies Ektron's latest features to your Web server. Ektron is installed to its own folder, `C:\Program Files (x86)\Ektron\`. This means Ektron can coexist with previous versions on the same machine—the template directories are independent.

If you are upgrading from version 8.00 or higher, follow the instructions in this section. If you are upgrading from an Ektron version prior to 8.00 and need assistance, please contact Ektron technical support.

For information about the current release's system requirements, see System Requirements. If necessary, upgrade your infrastructure before beginning the Ektron upgrade.

Consider the following information before upgrading:

- **Warning!** During the upgrade procedure, your website's Bin, Workarea and Documentation folders are removed. Any customized files in these folders will be lost. Only store custom files in these folders when absolutely necessary. Even then, keep a backup file in another folder.
- **Important!** You cannot upgrade Ektron sample or starter sites because they are designed to demonstrate the product's latest features, so each version is uniquely created to support a release.
- **Important!** Each deployment has unique requirements. Ektron recommends that you engage with a Certified Ektron Partner when making decisions about the needs of your production environment.

The Site Setup utility uses files in the `CMS400v9x` base folder to create and upgrade Ektron sites. The base folder contains these subfolders.

- `AssetManagement`. Folders and files for the Document Management Functionality
- `Bin`. Required .NET assemblies
- `CMSServiceUpdate`. Files to update your services
- `CommonFiles`. Application Global Resources, Web References and Starter Application files
- `Documentation`. Documentation. The site setup procedure copies this directory to the `workarea` directory when setting up a site.
- `EktronAsyncProcessor_Service`. Files needed to add Asynchronous Processor for Web Alerts
- `StarterSites`. Files for starter sites that have been added
- `StudioHelp`. Files for adding API help to Visual Studio
- `SyncUpdate`. Files to update eSync
- `Utilities`. Utilities for
    - database upgrade
    - database application strings update
    - email encrypt password tool
    - a setup SharePoint Portal

  - Document Management Registration tool
  - Load Balancing service files
- `Workarea`. Scripts used for the Workarea

> **NOTE:** The contents of this folder are later copied to a website folder, typically in the Web server's Web root. The sample provides a good way to learn how to work with an Ektron site.

Backing up databases

To protect your database, back it up before upgrading. During the upgrade, Ektron attempts to back up your database. If that fails, use the following MSDN link for instructions on backing up and restoring your database via SQL Server.

- Backup SQL Server

> **NOTE:** On that web page, links for restoring a backed-up database are at the bottom of MSDN resources.

Before restoring a SQL database, either stop the Ektron Windows service or force all connections closed. You need to do this because the Ektron Windows Service accesses the database. To view and update the status of the service, go to **Computer Management > Services and Applications > Services**. For more information, see *Handling background processing functions with the Ektron Windows Service* on page 128.

Upgrade overview

The upgrade procedure performs these tasks.

1. Installs new files to new directories. See also: *Installing the Ektron base* on page 13.
2. Removes the following folders (and their subfolders) *from* and copies new folders *to* your site directory.
   - bin
   - workarea
   - Documentation

   > **WARNING!** Any customized files in these folders will be lost. So, only store custom files in these folders when absolutely necessary. Even then, keep a backup of customized files in another folder.
3. Updates the `web.config` file.
4. Updates your databases using the upgrade and language update utilities.

   > **NOTE:** The upgrade automatically starts the IIS and Search services.

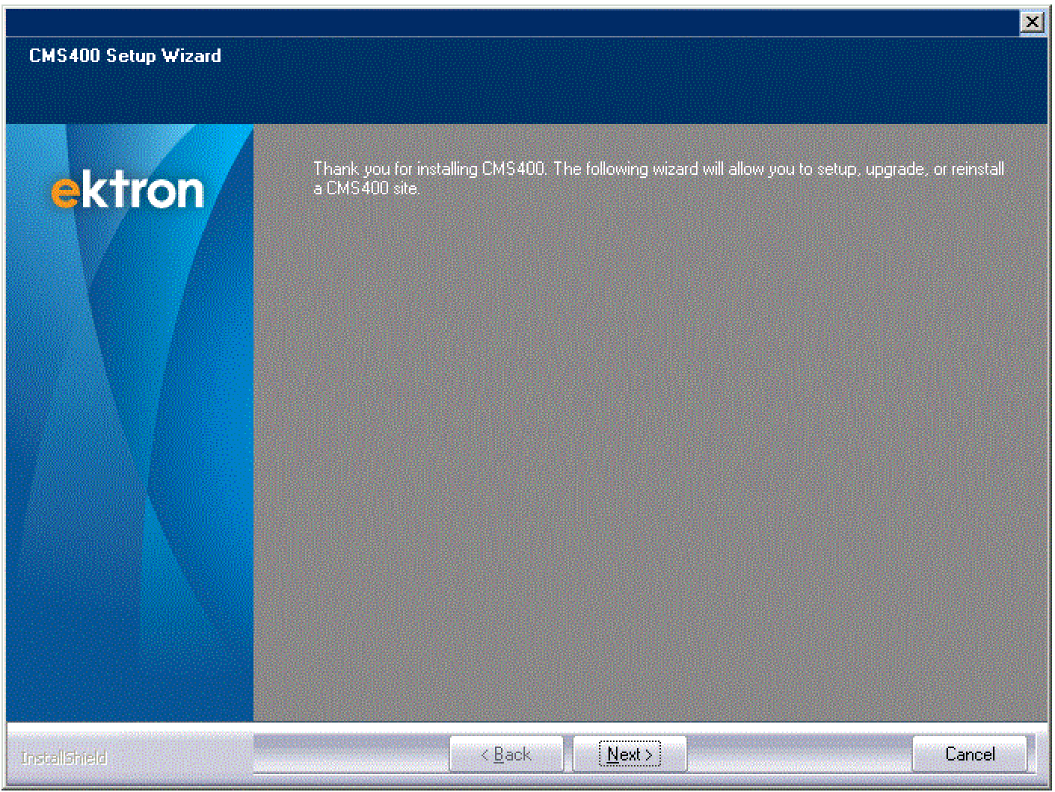
Performing the upgrade

1. If you have not done so already, install a Search provider. You *must* use an external search provider if you want to use search with Ektron. See also: *Setting up search for your website* on page 181.
2. Copy the Assets folder.

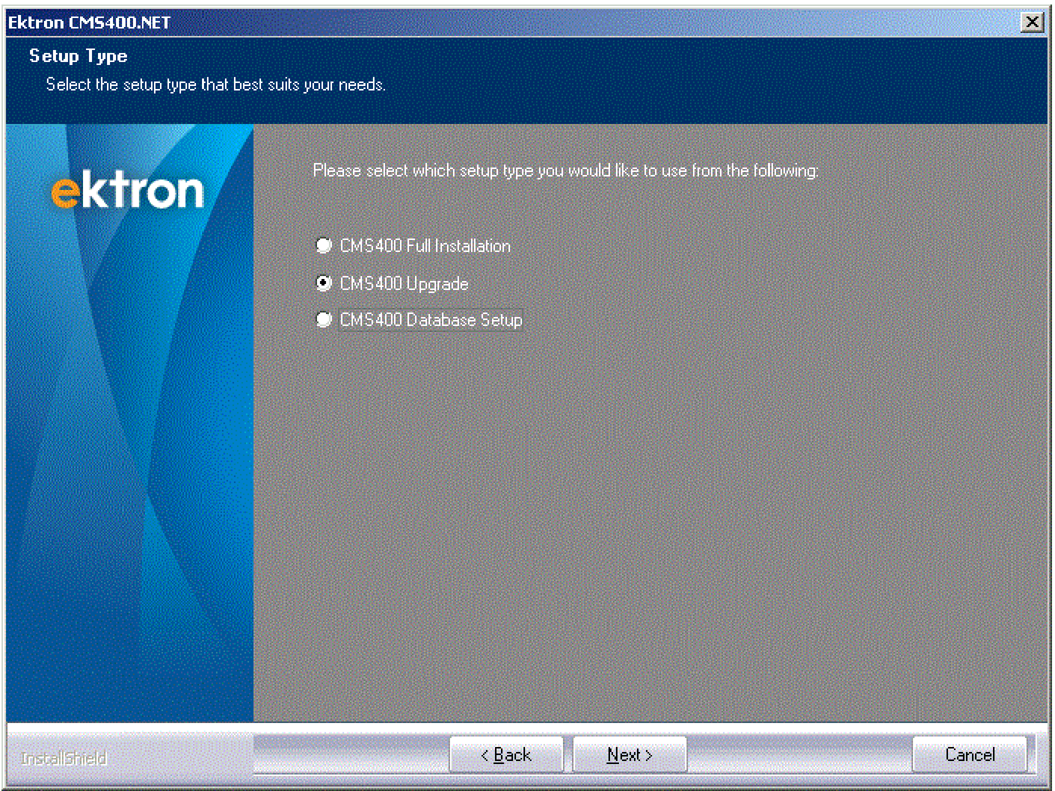
   NOTE: This step is only relevant if you are using Microsoft Search Server 2010 on a server that is different from your Ektron server.

   For Microsoft Search Server 2010 to index your Ektron assets, they must be copied from the Web server to the Search Server. This process is handled in the background once your site is up and running. However, if your site has a large number of assets, the initial copy may get clogged. To avoid this problem, inspect the size of your Ektron site's Assets folder. If it exceeds 1 gigabyte, follow these steps. Failure to do so may result in errors.

   a. Create a folder on your search server to hold the assets. The folder's path must match the path to your Ektron site's Assets folder and include `EktronSearchData` between `C:\` and the beginning of the path.
      For example, if your site's Assets folder is `C:\inetpub\wwwroot\OnTrek85\Assets`, create a folder on your Search Server named `C:\EktronSearchData\inetpub\wwwroot\OnTrek85\Assets`.
   b. Copy the Assets folder from your Ektron site folder to the Search Server folder you created in Step a.
3. Follow the steps of the installation procedure, *Installing the Ektron base* on page 13, which instruct you to install Ektron and restart your server. Continue to the next step when the Site Setup Selection appears.
4. The Setup wizard appears. (If this screen does not appear, launch it by following this path from the Windows Start menu: **Start > Programs > Ektron > CMS400vxx > Utilities > Site Setup**. If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **CMS400 Site Setup**.)

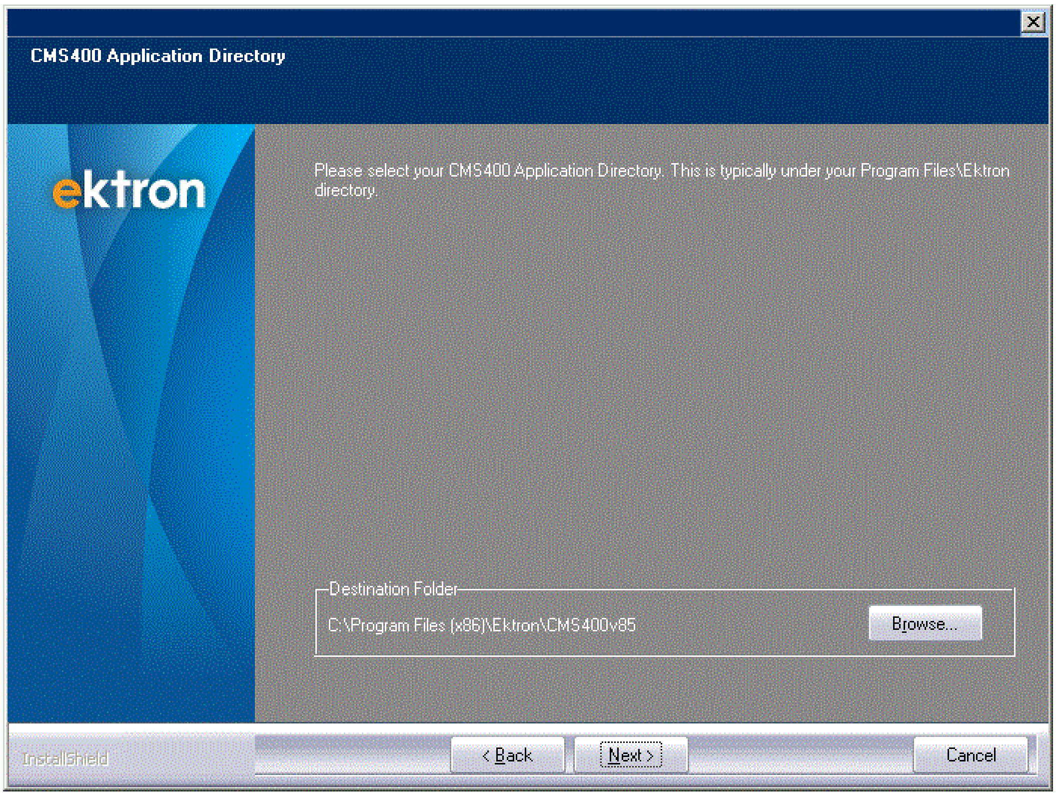


5. The Setup Type screen appears. Choose **CMS400 Upgrade** and click **Next**.

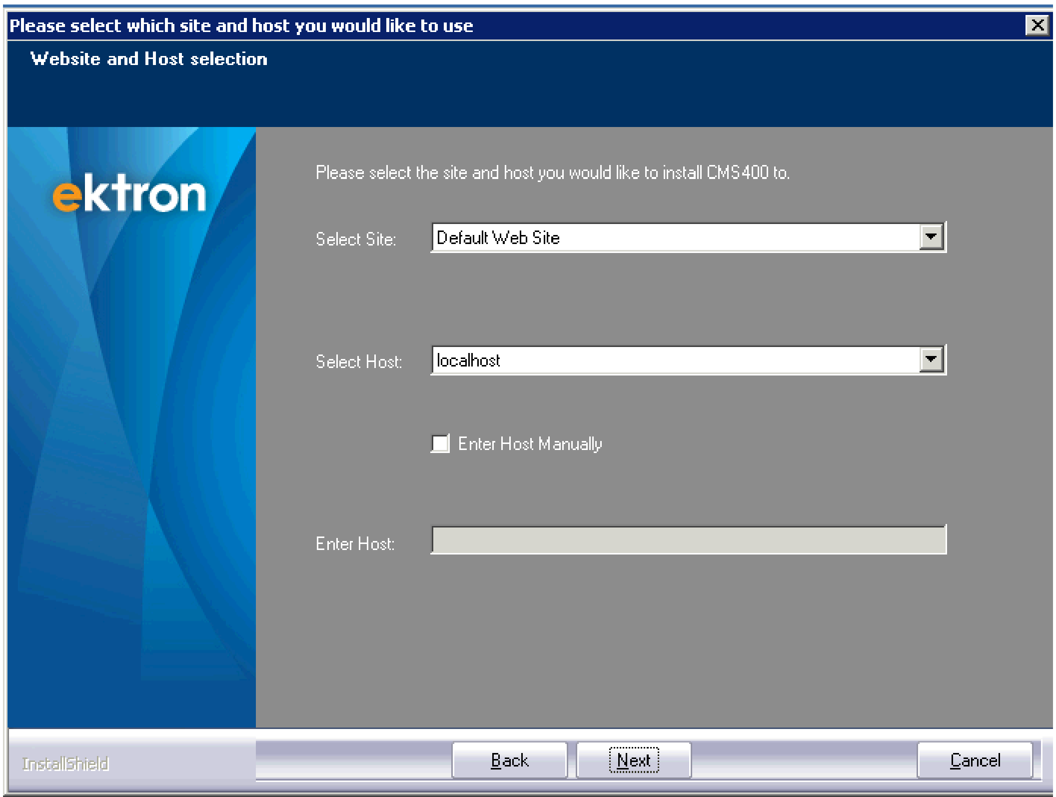


6. Choose an application directory. If you are not sure, use the default (`C:\Program Files(x86)\Ektron\CMS400vxx`). This directory stores Ektron components and utilities.

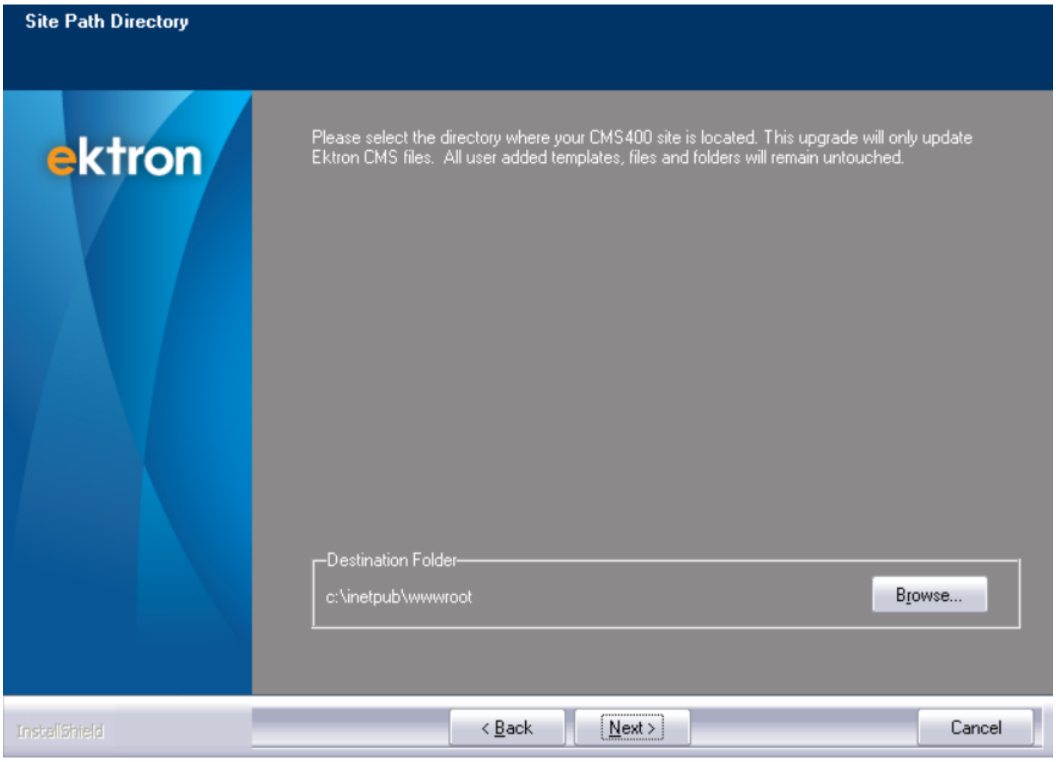
NOTE: This dialog appears only if Setup cannot detect the location of the site's application directory.



7. If your server operating system accommodates multiple websites, select the site to which you want to upgrade Ektron. Otherwise, accept the default.

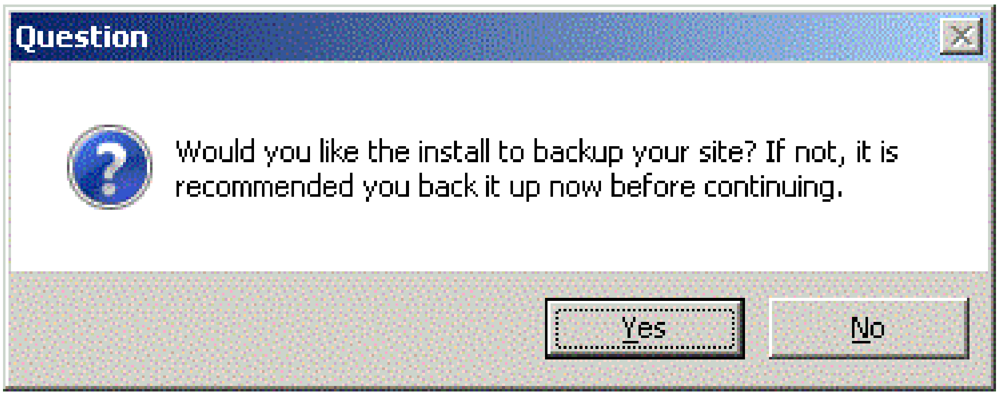


8. Select the path of the website you are upgrading. Note that the upgrade only updates the `web.config` file, Ektron assembly files, and Web services/Workarea components. It does not update your templates nor other files not mentioned above.

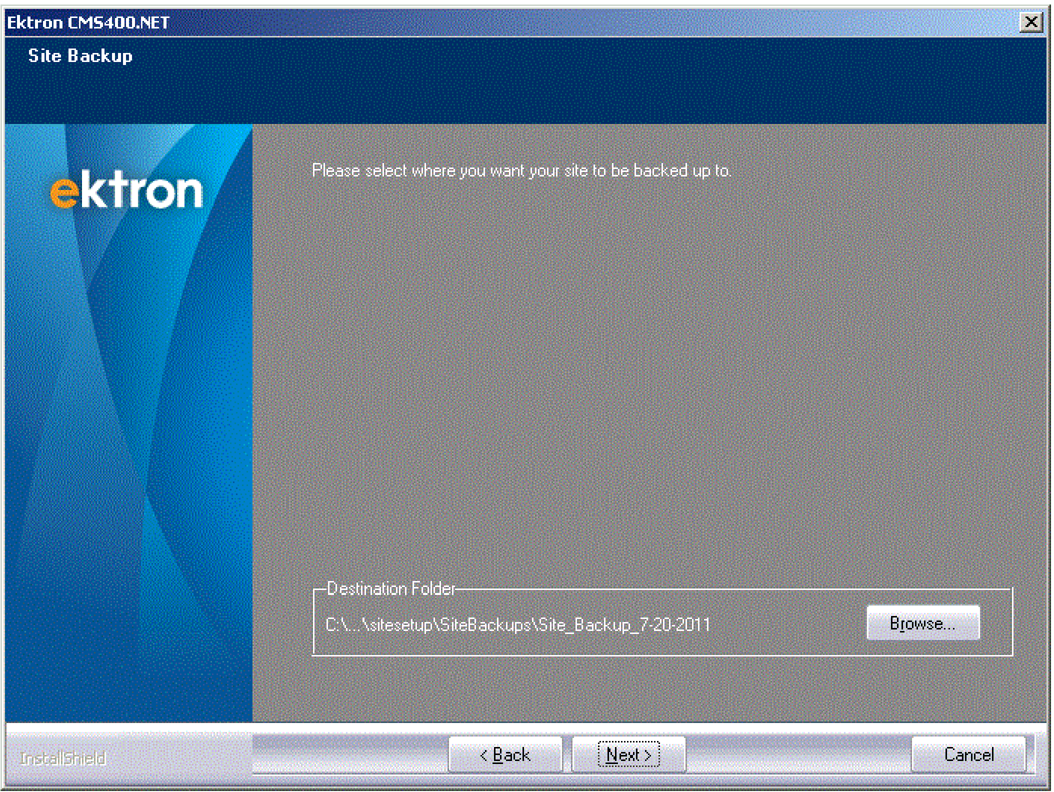


9. The following message appears. Click **Yes** to back up your site.

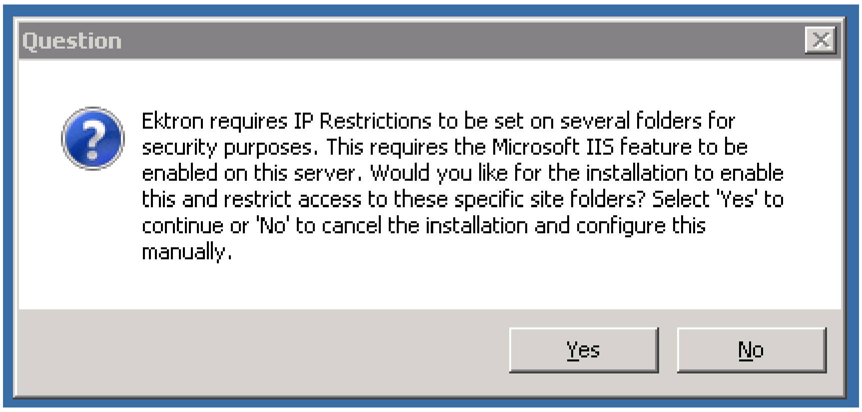
WARNING! Ektron strongly recommends backing up your site before continuing the upgrade. If you choose **No** and the upgrade fails, you cannot revert the files to their original state.



10. If you choose to back up your site, a dialog asks where to store the backup, and provides a suggested folder.



11. If you chose to back up your site, you may see the following dialog.



Click **Yes** if you want the installation to

a. Enable IIS's IP Address and Domain Restrictions role.
b. Restrict access to the `/workarea/webservices` and `/workarea/services` folders and the `/workarea/ServerControlWS.asmx` file, so they are only accessible from localhost.

If you click **No**, the site installation is terminated.

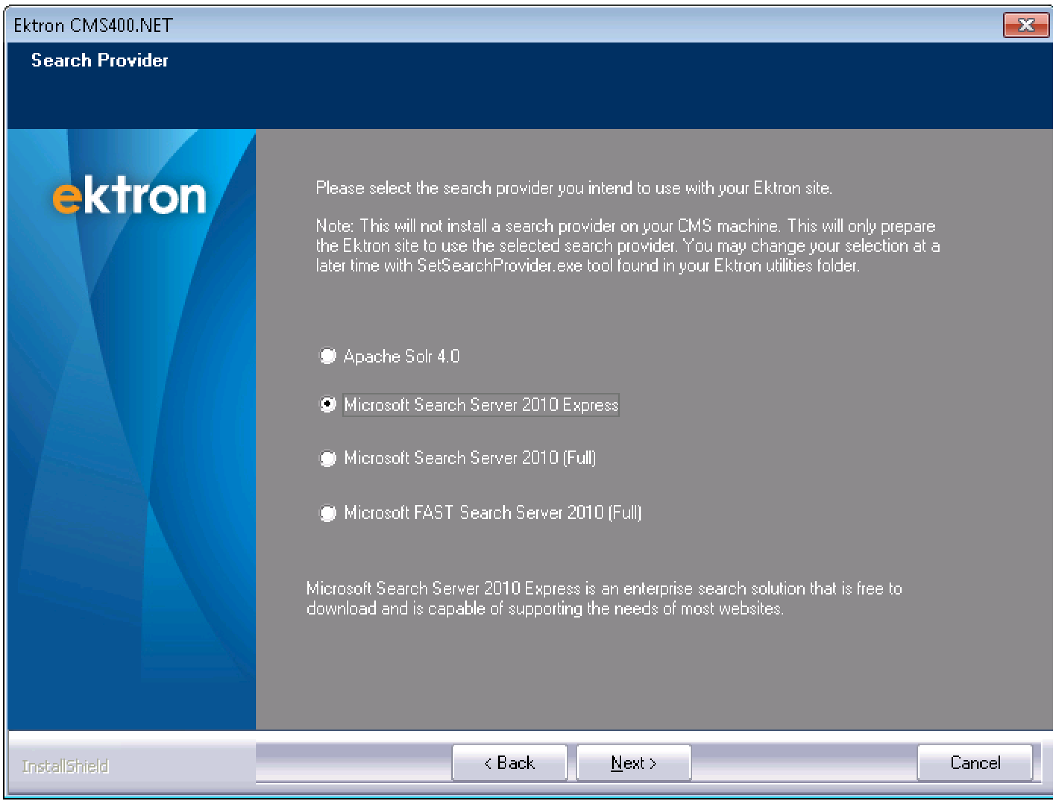
For more information, see https://portal.ektron.com/kb/10234/.

If you click **Yes** and complete the installation, you may have to grant permission to other servers that need to access the restricted folders and file. To do this:

a. Go to IIS.
b. Choose the `/workarea/webservices` folder.

c. Choose **IP Address and Domain Restrictions**.
d. Click **Add Allow Entry** from the right panel
e. Add IP addresses for each server that will access this server's `/workarea/webservices` folder.
f. Repeat Steps **a** through **e** for the `/workarea/services` folder and the `/workarea/ServerControlWS.asmx` file.

12. On the Search Provider screen, determine which search provider you will use with Ektron.

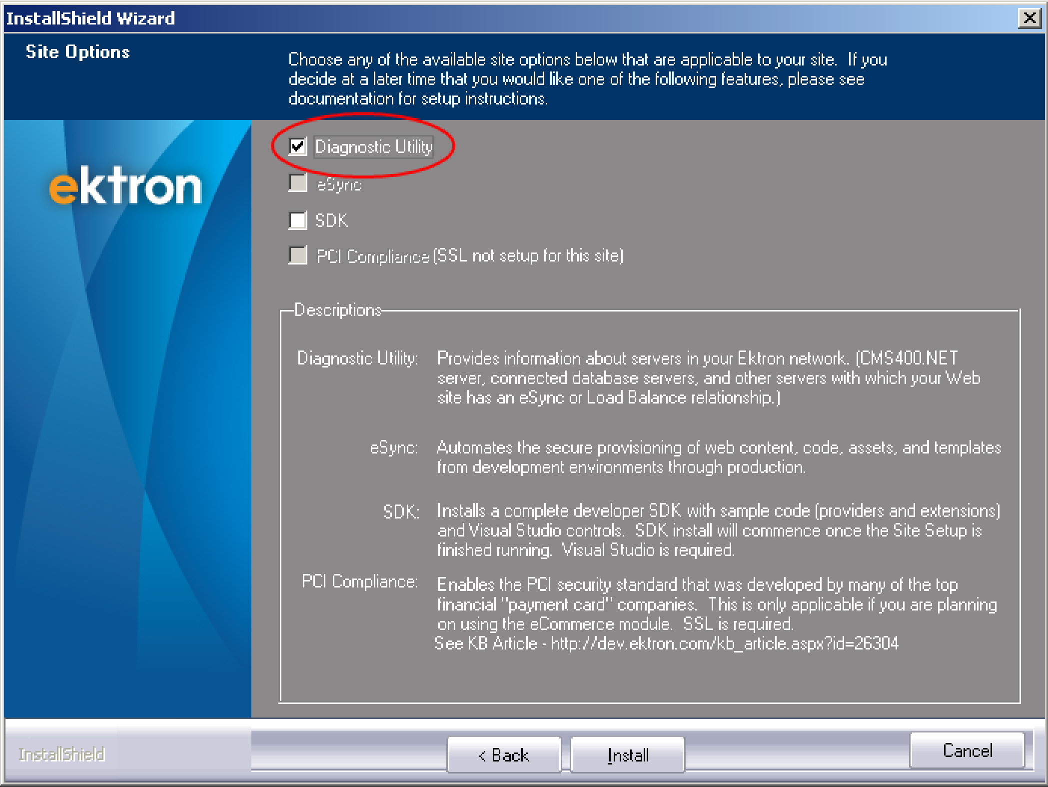


See also: *Setting up search for your website* on page 181.

13. The Site Options screen appears. Check the box next to each option you want to install. Boxes are grayed out if an option is not available for your site. See also:
    - *Viewing network server diagnostics* on page 1903
    - an eSync security certificate. See also: *Managing eSync security certificates* on page 1838.
    - Using Ektron's Developer SDK

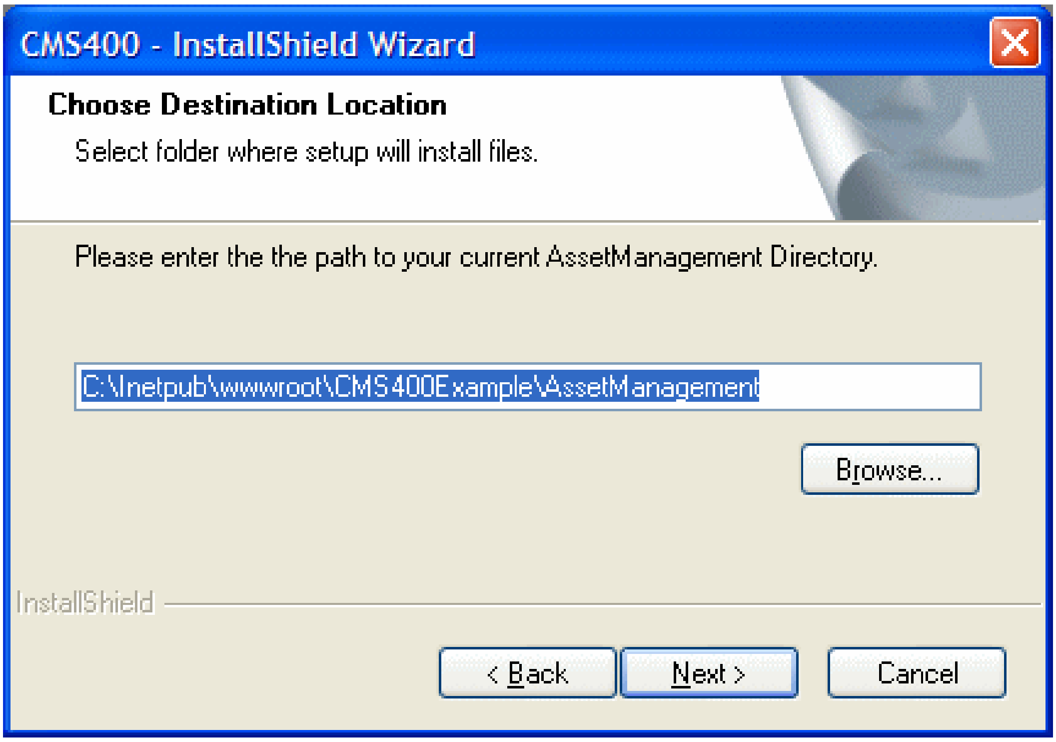
14. After choosing, click **Install**.

NOTE:
eSync is only available if you have the eSync modifier in your license key.
SDK is only available if Visual Studio 2010 is installed on your server.



15. You are asked if you want to update your `siteroot/widgets` directory. Click **Yes** to install the latest widgets. Before doing so, rename any customized widgets in that folder; otherwise, they will be overwritten.
16. You are notified that files are moving to the starter site directory. The Choose Destination Location screen appears.
17. Enter the path to your AssetManagement Directory.

NOTE: This dialog appears only if the upgrade cannot find the AssetManagement directory.

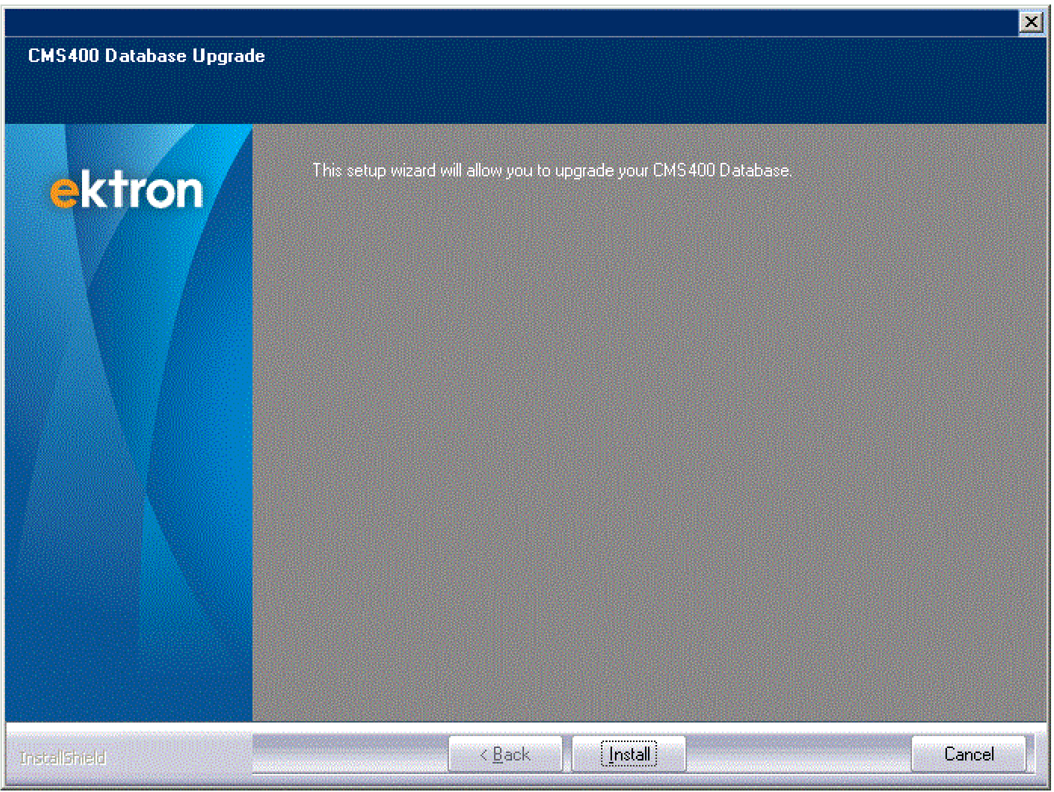


18. If you chose to do so, your site is backed up. Next, the bin, Workarea and other files are updated. Any missing permissions or Index catalogs are added.

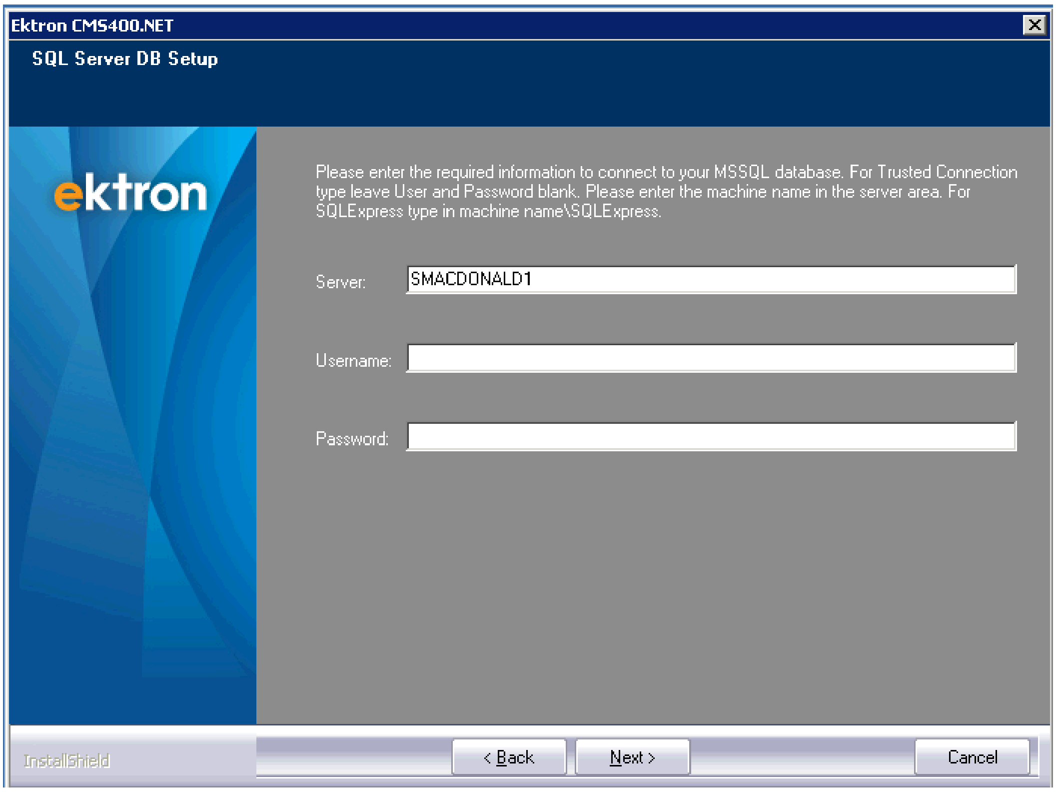
> **WARNING!** The previous version's bin and Workarea folders are removed from your website. Any customized files within these folders are lost. Do not store custom files in them unless absolutely necessary. Even then, always keep a backup file in another folder.

19. Your `web.config` file is updated with information needed to run Ektron. If other applications use the `web.config` file, their sections are unaffected.
20. A dialog asks if you want to upgrade the database. Select **Yes** to upgrade. If you select **No**, the site will not work properly until the database upgrade has been run. To upgrade the database at a later time, run the Site Setup and select **Database Upgrade**. The site setup is located in **Start > Programs > Ektron > CMS400vxX > Utilities > CMS400 Site Setup**. If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **CMS400 Site Setup**.

21. If you selected yes, the Database Upgrade Wizard appears. Click **Install**.



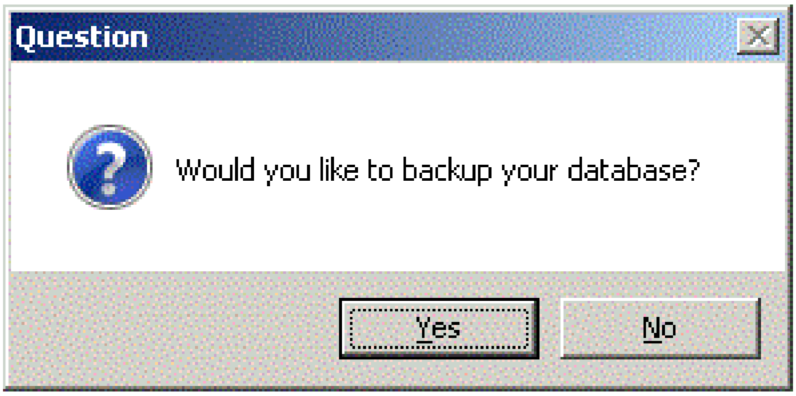
22. This screen prompts for database connection information.



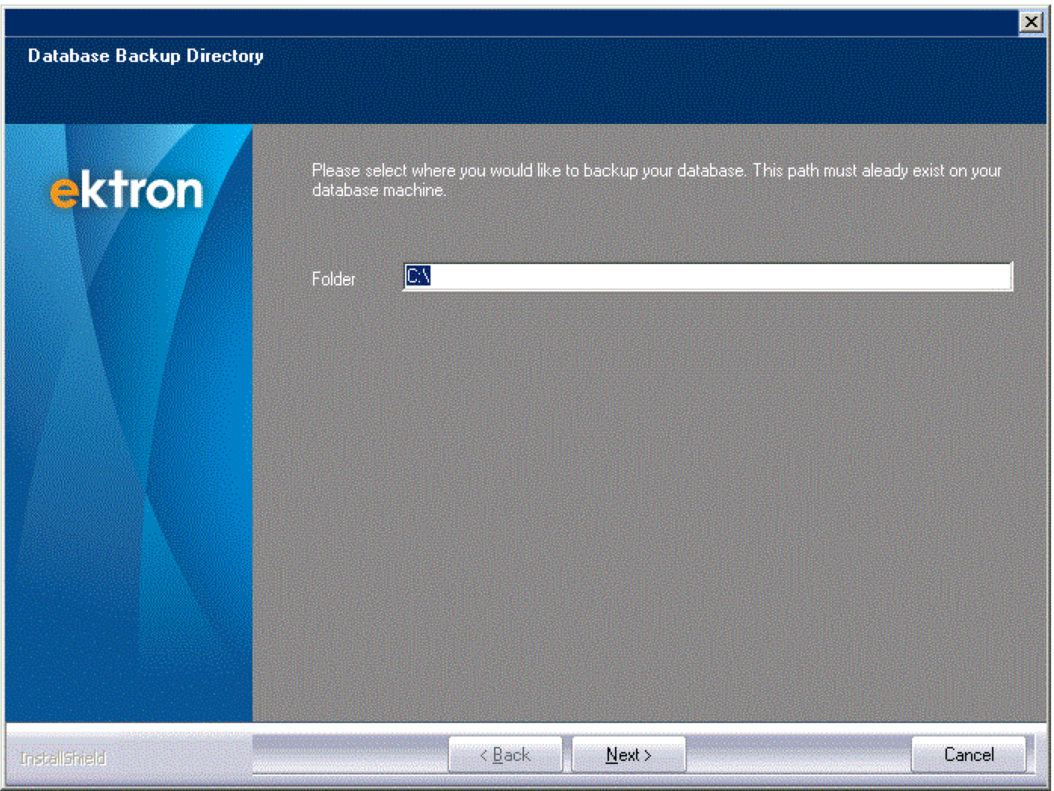
Server. List the database server on this system. To set up the database on this server, accept the default. Otherwise, enter a SQL or SQL Express server that already exists. For SQL, this would typically be **(local)** if it's installed on the local server. Otherwise, enter the Server's name. For SQL Express, enter **(local)\SQLEXPRESS**.

NOTE: This dialog appears if you are using SQL Authentication. If you are using Windows Authentication, skip to the next step.

23. A dialog appears asking you to back up your database. See also: *Backing up databases* on page 37

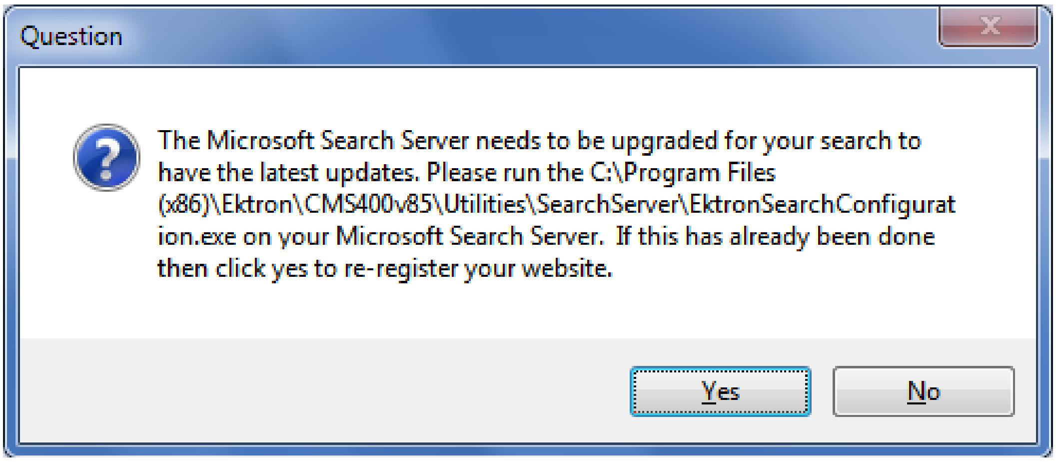


24. If you clicked **Yes**, select the location of your database backup. If this path does not exist on your database machine, the backup will fail. Otherwise, skip to the next step.



IMPORTANT: If the backup fails, the following message appears: **Warning! The install could not backup your database. Please manually back it up now before continuing**. You should manually back up your database before clicking **OK**.

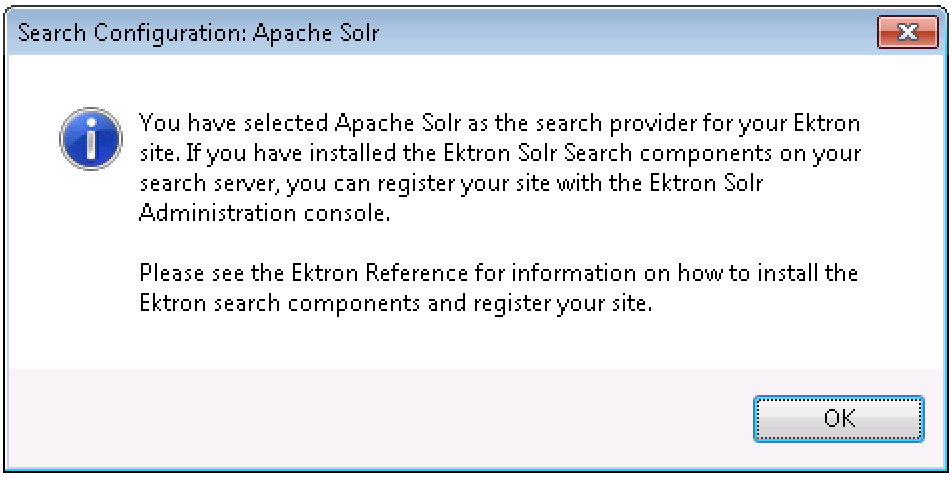
25. If your license key was not generated for the 9.x Release, you are prompted to enter a 9.x license key. If you do not have an 9.x license key:
    - Complete the upgrade.
    - Obtain a 9.x license key from Ektron (send email to license@ektron.com).
    - Log in as builtin user. See also: *Editing the builtin username and password* on page 110.
    - Insert the key into the **Settings > Configuration > Setup** screen's **> General** tab **>License Key(s)** field.
26. If you selected Microsoft Search Server as a search provider, the following screen appears.



- If you have already upgraded the search server to use the Search components, click **Yes**. (This would typically be the case when an Ektron site on the server is already using search).
- If you have not set up a search provider, or the Ektron search components have not yet been installed or upgraded to , click **No**.

  After completing the Ektron CMS installation, install the search provider and the search components.

If you chose Solr, the following dialog appears. Click **OK**.



To complete the search setup, log on to the search server, click the Windows **Start** menu **> All Programs > Ektron > CMS400Vxx > Utilities > Search Configuration**. If you're using Windows 8 or 2012, press the **Windows** key ( )**/Q** then enter **Search Configuration**.

The Connection Information screen appears. See also:

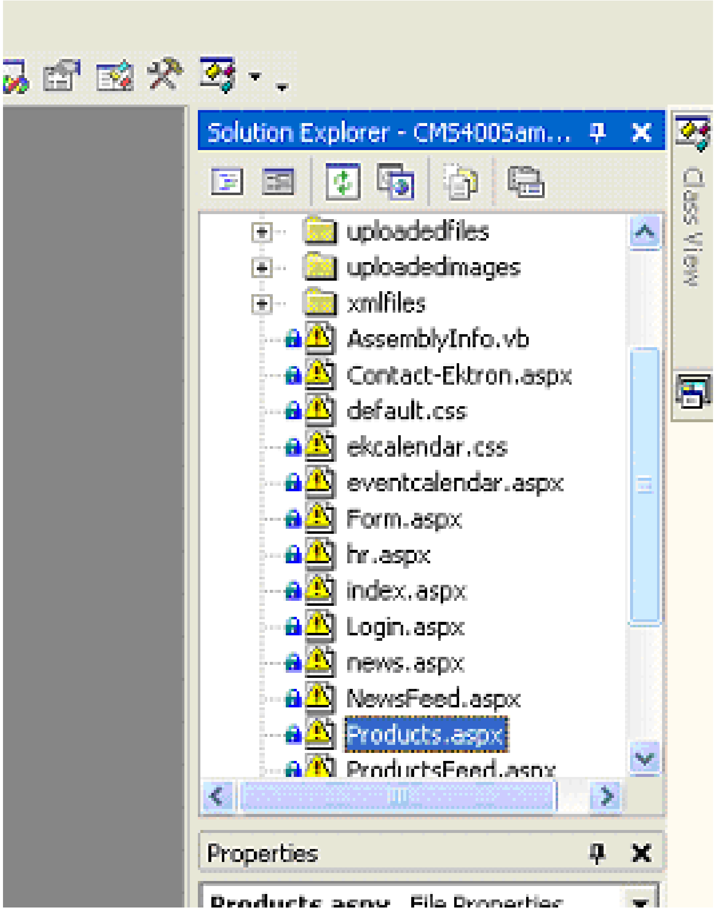
- *Installing Solr on a single on-premises (local) server* on page 216
- *Setting up Microsoft Search Server 2010 Express* on page 295
- *Setting Up Microsoft Search Server 2010* on page 302
- *Working with Microsoft FAST search* on page 423

After upgrading your site and rebuilding the solution, you are ready to use Ektron.

If you did not run the database upgrade or language update during the installation, you need to do it manually. The next sections explain how to do that.

Troubleshooting upgrade problems

Problem 1: After upgrade, Ektron does not load properly. Also, an error icon appears next to your templates when you open the project in Visual Studio.NET. The problem is that your .NET references need to be updated.



Solution 1: To verify the problem, open the Ektron solution file in Visual Studio.NET (*webroot**siteroot*\cms400*sitename*.sln; for example, cms400*Intranet*.sln) and look at the template files. If your references are broken (as shown in the sample screen on the left), delete all Ektron references. Then, add new references with the same name from the *webroot**siteroot*\bin folder.

Problem 2: When viewing a page containing Ektron server controls or API calls, the page returns a fatal error **Compiler failed with Error Code 2000**. Detailed compiler output may say **Fatal error BC2000: compiler initialization failed unexpectedly: The filename, directory name, or volume label syntax is incorrect**. This error message might appear after an upgrade.

Solution 2: To remove the error message, open up your site's .sln file in Visual Studio. Then, rebuild the solution using the **Build > Rebuild** solution menu option.

In this case, the error can be resolved by correcting the database settings in web.config.

NOTE: To use SQL Authentication with Microsoft SQL server (as opposed to Windows Authentication), you must have the database 'Security' properties set to allow "Windows and SQL Authentication." After changing this setting, you must restart SQL Server for it to take effect.

Problem 3: After upgrading from Ektron version 4.8 or earlier, Metadata is no longer applied or required when adding or editing content.

Solution 3: In Ektron version 4.8 or earlier, Metadata is applied globally. In later versions, metadata is applied to each folder individually. Child folders can inherit the metadata from a parent folder or they can have their own metadata settings. To set the metadata settings back to global:

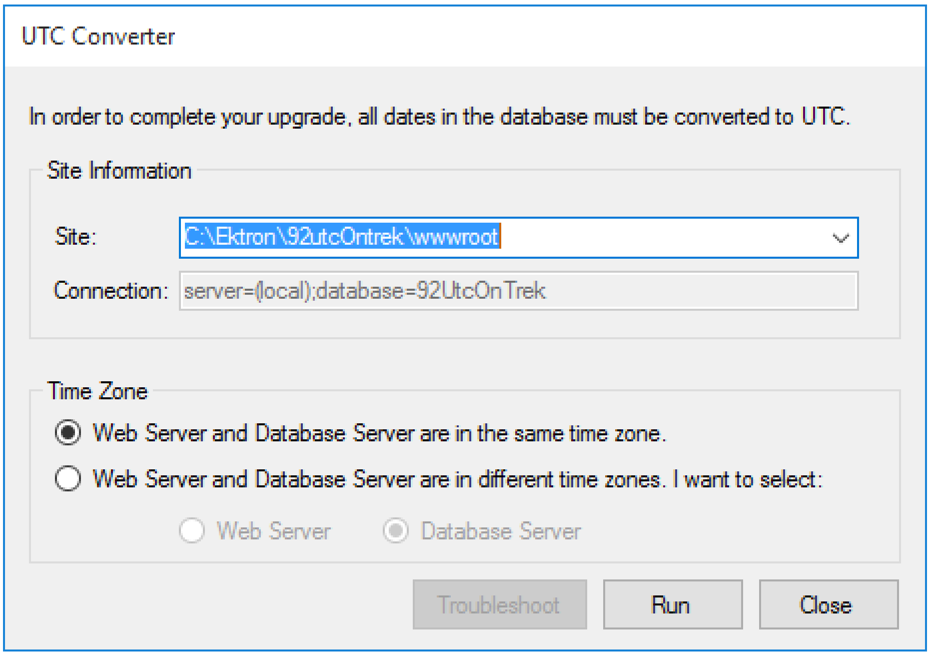
1. In the Workarea, click the site root folder.
2. Next, choose **View > Folder Properties**.
3. Click **Edit Properties**.
4. Click the **Metadata** tab.
5. Check the all of the appropriate check boxes for **Assigned** and **Required** Metadata.
6. Click **Save**.

If you have not broken inheritance on any of the folders, your metadata settings are applied globally.

UTC datetime storage in the database

If you upgrade from an older version of Ektron, the UTC Converter is automatically run after the database upgrade is complete.

Dates in the CMS are stored in UTC rather than in the server time zone, and display in the local user's selected time zone. The dates default back to the server time zone if the user is not logged in.



1. Choose one of the Ektron sites from a provided list.
2. Choose the time zone from which to convert data.
3. Click **Run**. The conversion occurs and UTC automatically closes.

NOTE: If UTC Converter is opened while running an upgrade, you are not permitted to change the "Site."

After installation, you can find the UTC converter at `C:\Program Files (x86)\Ektron\CMS400v93\Utilities\UTCConversion\UTCConverter`.

4

Securing Ektron

WARNING! Securing your Ektron site is critical to you and to anyone using your site. Failure to implement security measures can make your site vulnerable to cyber-attacks and other security threats. You should complete the actions in this section to make Ektron as secure as possible.

Security updates are available for Ektron versions 8.02, 8.5, 8.6, 8.6.1, 8.7, 9.00, 9.10, and 9.20, including all service packs from 8.02 to 9.10 SP2. For information, see Security Update 3.

- Change the password for the Admin and Builtin users.
  - Do not use easy-to-guess passwords (because thieves use automatic programs to test for easy passwords).
  - Do not use passwords that you use for other systems (because if thieves gain access to passwords on one system, they will try them on others).
- Update browsers to take advantage of advances in technology (including security).
- Apply available service packs and updates for CMS, .NET, and Windows.

Changing the admin password

NOTE: If you changed the admin password during site setup, you do not need to change it again.

IMPORTANT: You should create your own Administrator user and delete the Admin user. Also, delete unnecessary users from Ektron.

1. In the Workarea, choose **Settings > Users**.
2. Click the **Admin** user.
3. Click **Edit Users**.
4. Enter the new password in the Password and Confirm Password fields.
5. Click **Save**.

Changing the builtin password

NOTE: If you changed the builtin user password during the site setup, you do not need to change it again. See *Editing the builtin username and password* on page 110 for additional information. Also, the "builtin" user does not appear in the Users list. This user appears on the application setup screen.

1. Workarea **> Settings > Configurations > Setup**.
2. Click **Edit**.
3. Find the **Built In User** field.
4. Enter the new password in the Password and Confirm Password fields.
5. Click **Update**.

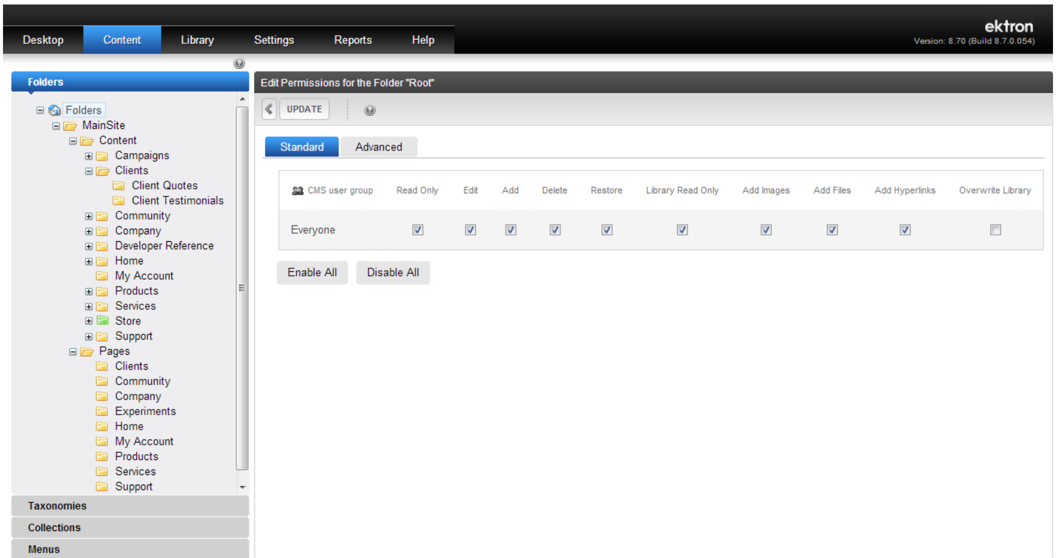
   NOTE: If you cannot sign in to Ektron because the builtin user password was changed and you do not know the new password, use the

`BuiltinAccountReset.exe` utility. This resets your Ektron user / password to Builtin / Builtin. This utility is located in `C:\Program Files (x86)\Ektron\CMS400`*`versionnumber`*`\Utilities`.

Changing the everyone group permissions

By default, the root folder in Workarea provides the Everyone Group with all permissions except Overwrite Library. You should review the permission needs of the Everyone Group when you add a folder. See also: *Managing folder and content permissions* on page 160.

1. Go to **Workarea > Folders > Folders**. The View Contents for Folder "Root" appears.
2. Choose **View > Properties**.
3. Choose **View Permissions** ( ). The View Permissions for Folder "Root" appears.
4. Click on the **Everyone** group. The Edit Permissions for Folder "Root" appears.



5. Check the permissions that you want and click **Update**.

Removing sample users and sample membership users

Ektron includes sample CMS users and membership users for evaluation and demonstration purposes. Remove these users when they are no longer needed.

- *CMS users* have access to the Workarea and can be content authors, administrators or developers. These users count towards the number of users in your license.

- *Membership users* are typically people who only interact with your website but have limited privileges to Ektron. They cannot use the Workarea and do not count towards the number of users in your license.

NOTE: Some users in the following lists might not appear in your user list. Also, you might have sample users that appear in your users lists. This depends on your Ektron version.

Ektron users. See also: *Managing users and user groups* on page 1439

- **jedit**
- **tbrown**
- **jsmith**
- **vs**

Membership users. See also: *Membership users and groups* on page 1507

- **jmember**
- **member@example.com**
- **north**
- **supermember**
- **west**

Removing Ektron users

1. In the Workarea, choose **Settings** > **Users**.
2. Check the box next to each user that you want to remove.
3. Click **Delete** ( ).
4. Click **OK**.

Removing membership users

1. In the Workarea, choose **Settings > Community Management > Memberships > Users**.
2. Check the box next to each user that you want to remove.
3. Click **Delete** ( ).
4. Click **OK**.

Disallowing group user accounts

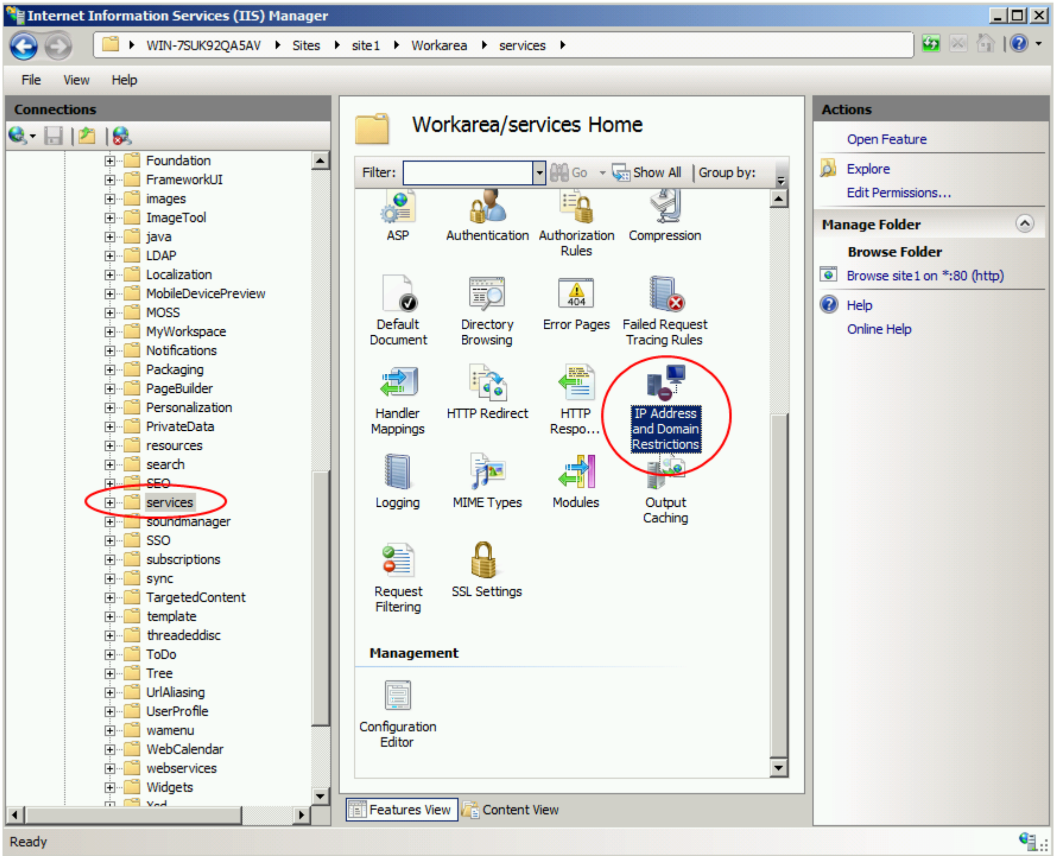
A *group account* is an account used by more than one person to log in to Ektron using the same username and password. This is a serious security issue because it prevents you from tracking user activities in your Workarea. Group accounts violate Ektron's license agreement.

Securing services

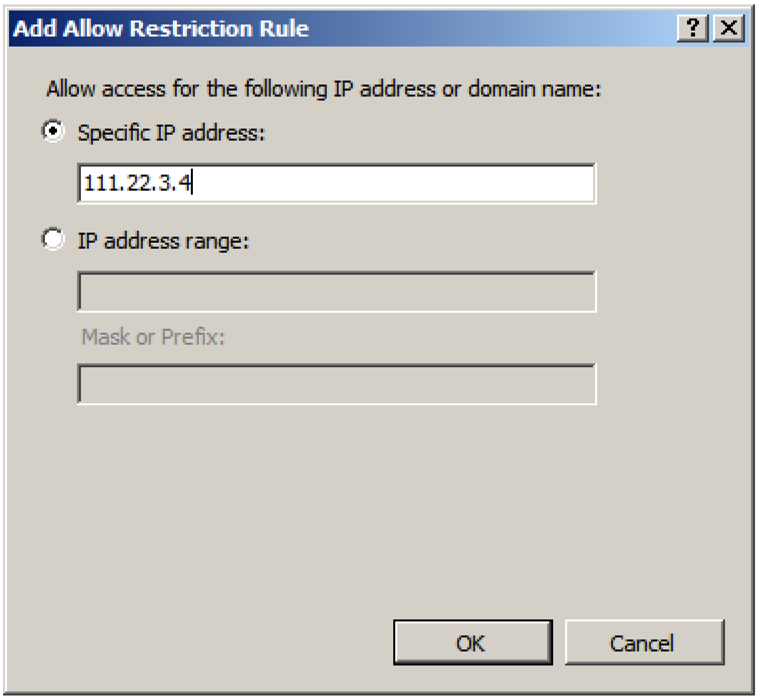
IMPORTANT: Typically, the `\workarea\services\path` is used in 3-tier implementations. Review your site architecture and configure access to support accordingly.

You need to restrict services to specific IP addresses in IIS 7.

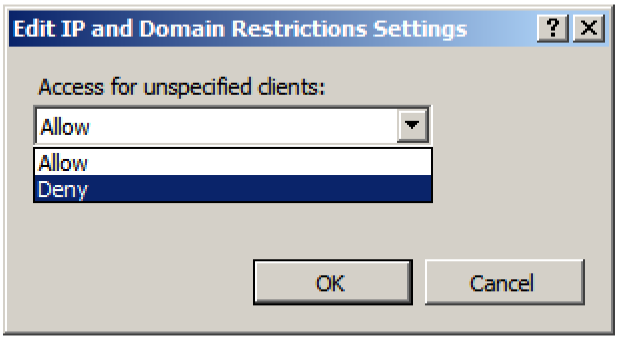
1. From the Windows **Start** menu, choose **Run**, then type `INETMGR`. If you're using Windows 8 or 2012, press the **Windows** key () **/Q** then enter **INETMGR**. IIS Manager appears.
2. Go to ***your website*** **> Workarea > services**.
3. Double click **IP Address and Domain Restrictions**.



4. In the Action pane, click **Add Allow Entry**. The Add Allow Restriction Rule dialog box appears.
5. Select **Specific IP Address**, enter the IP address of the Web server, and click **OK**.



6. In action pane, click **Edit Feature Settings**. The Edit IP and Domain Restrictions Settings dialog box appears.
7. Choose **Deny** from the drop-down and click **OK**.

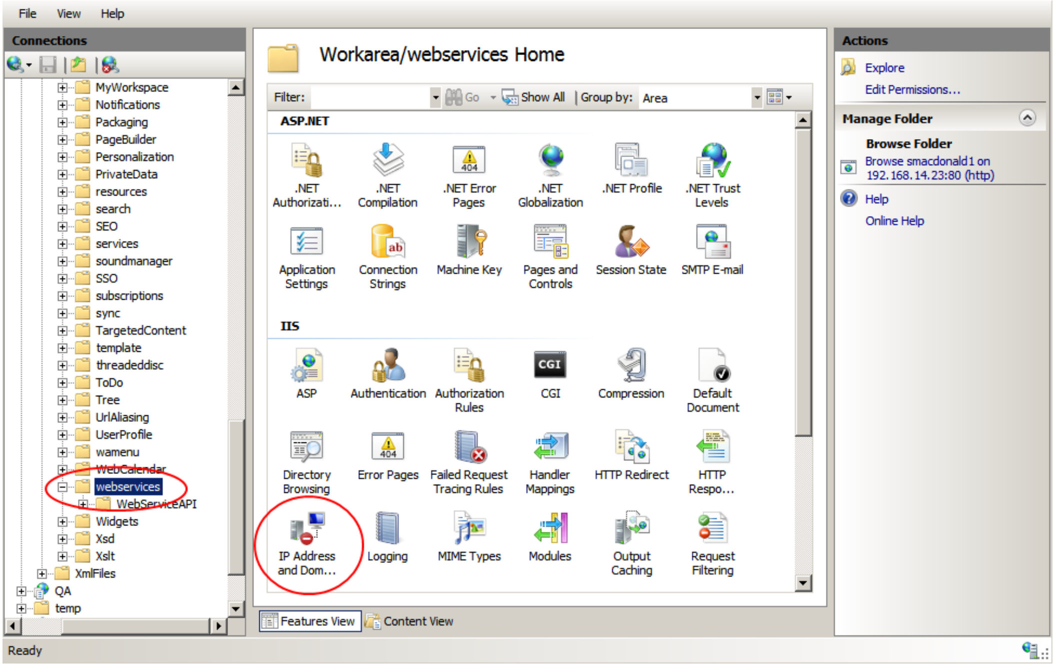


Securing WebServices

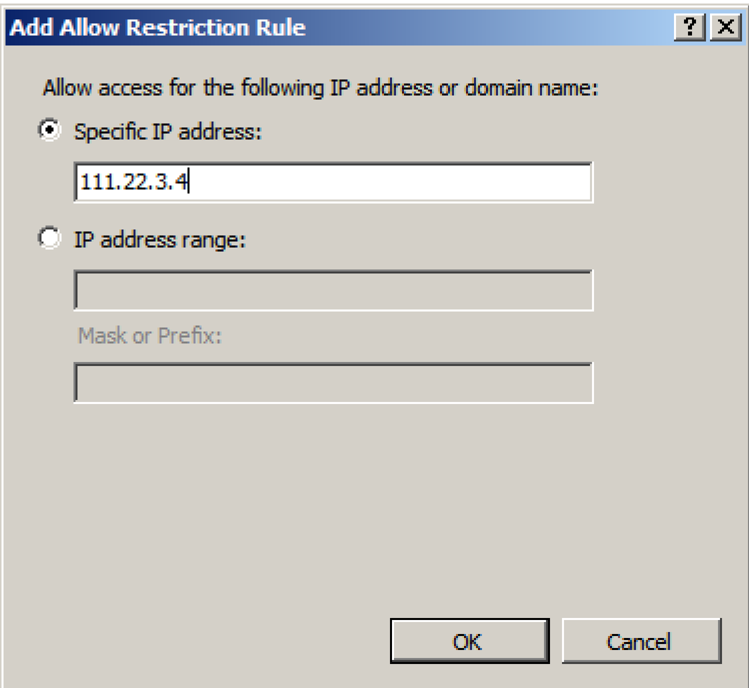
You need to restrict Web services to specific IP addresses in IIS 7.

1. From the Windows **Start** menu, choose **Run**, then type `INETMGR`. If you're using Windows 8 or 2012, press the **Windows** key ( ) **/Q** then enter **INETMGR**. IIS Manager appears.
2. Go to ***your website* > Workarea > webservices**.

3. Double click on **IP Address and Domain Restrictions**.

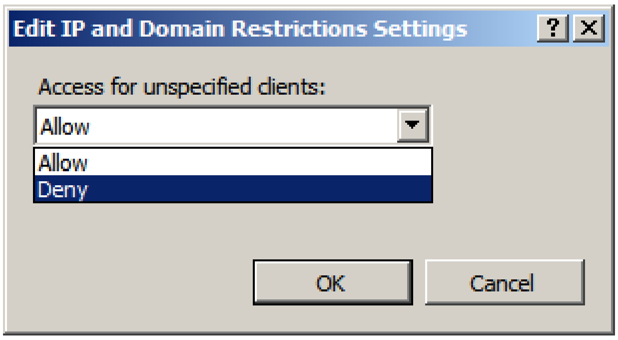


4. In the Action pane, click **Add Allow Entry**. The Add Allow Restriction Rule dialog box appears.
5. Select **Specific IP Address**, enter the IP address of the Web server, then click **OK**.



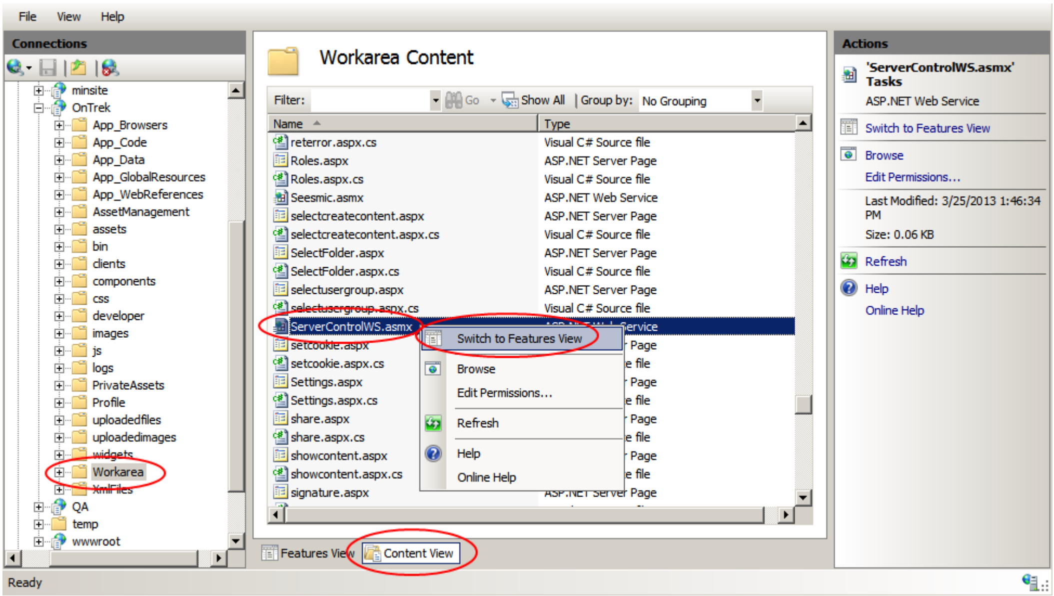
6. In action pane, click **Edit Feature Settings**. The Edit IP and Domain Restrictions Settings dialog box appears.

7. Choose **Deny** from the drop-down and click **OK**.

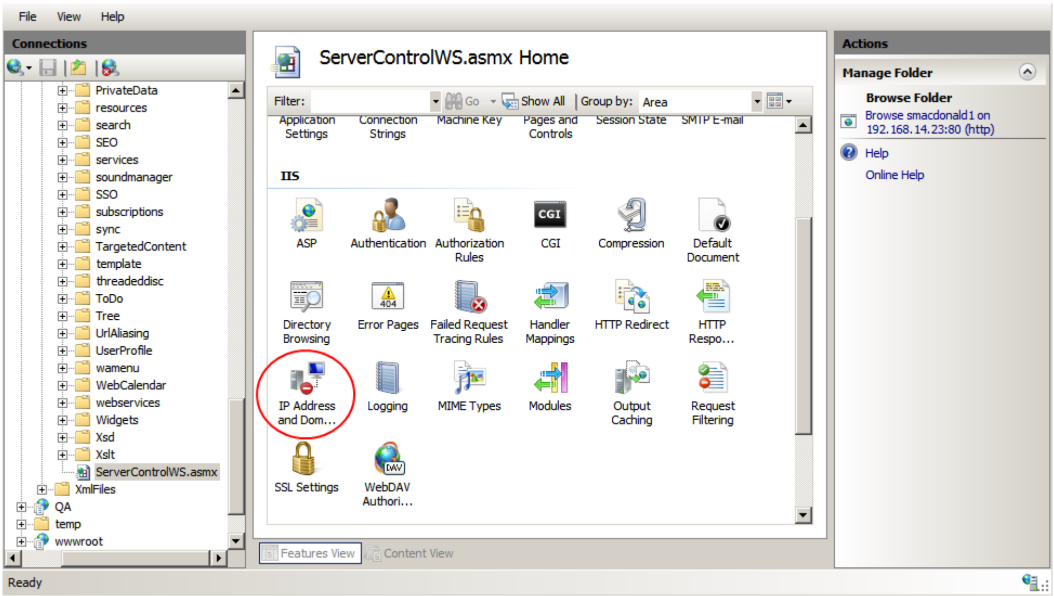


Securing ServerControlWS.asmx

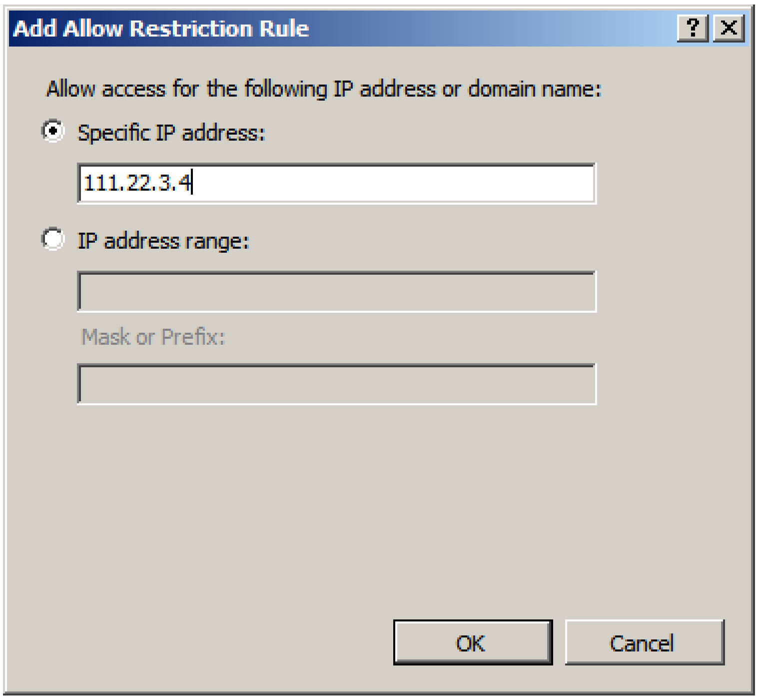
1. From the Windows **Start** menu, choose **Run**, then type `INETMGR`. If you're using Windows 8 or 2012, press the **Windows** key () **/Q** then enter **INETMGR**. IIS Manager appears.
2. Go to ***your website* > Workarea**.
3. Click **Content View** at the bottom of the window.
4. Right click **ServerControlWS.asmx** and choose **Switch to Features View**.



5. Double click **IP Address and Domain Restrictions**.

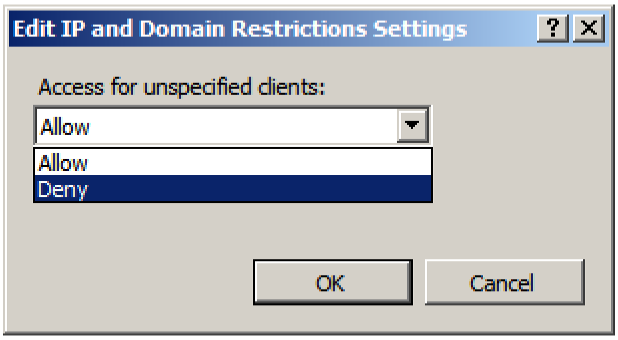


6. In the Action pane, click **Add Allow Entry**. The Add Allow Restriction Rule dialog box appears.
7. Select **Specific IP Address**.
8. Enter the IP address of the Web server and then click **OK**.



9. In action pane, click **Edit Feature Settings**. The Edit IP and Domain Restrictions Settings dialog box appears.

10. Choose **Deny** from the drop-down and click **OK**.



Securing assets and user folders

As of version 8.50, user data is no longer indexed directly under the Assets folder. The `/users/` folder may expose user data, such as your users email addresses, when browsing to this folder. Prevention was made within the Ektron handlers to address this issue in version 8.00, but you should review and remove the following folder `[site root]\Assets\users` if you have version 8.50 or later. If the `users` folder exits, you should delete it.

Defining the default file types for assets

Enable only file types that your website needs to support.

1. Go to **Workarea > Settings > Configuration > Asset Server Setup**.
2. Click **Edit File Types** ().
3. Add or remove file types that your website needs.
4. Click **Save** ().

Enabling firewall use

- Only open port 80 for standard websites. If you enable SSL, open port 443 also.
- If you need FTP, open port 21, but restrict access to IP addresses that need to FTP access to your server. The same applies for SFTP, FTPES, SSH for their respective ports.
- Do not open remote desktop ports, SQL ports, SMTP ports, or any other port unless absolutely necessary. Instead, use a VPN tunnel through the firewall for access to these services. Even FTP can be made accessible through a VPN tunnel.

Setting up SSL

Ektron strongly recommends configuring a secure socket layer (SSL), especially if you are using Active Directory integration. SSL encrypts user names and passwords during transmissions to the Ektron server that are otherwise sent as clear text. See *Updating web.config to use SSL* on page 73.

If your Web server does not have an SSL certificate, install one. If you set up an SSL certificate and configure Ektron to use it, the login page is launched in a Secure Socket Layer.

After completing this procedure, the Ektron Workarea and your website require the `https` protocol—URLs beginning with `http` no longer work.

To set up SSL for Ektron:

PREREQUISITE

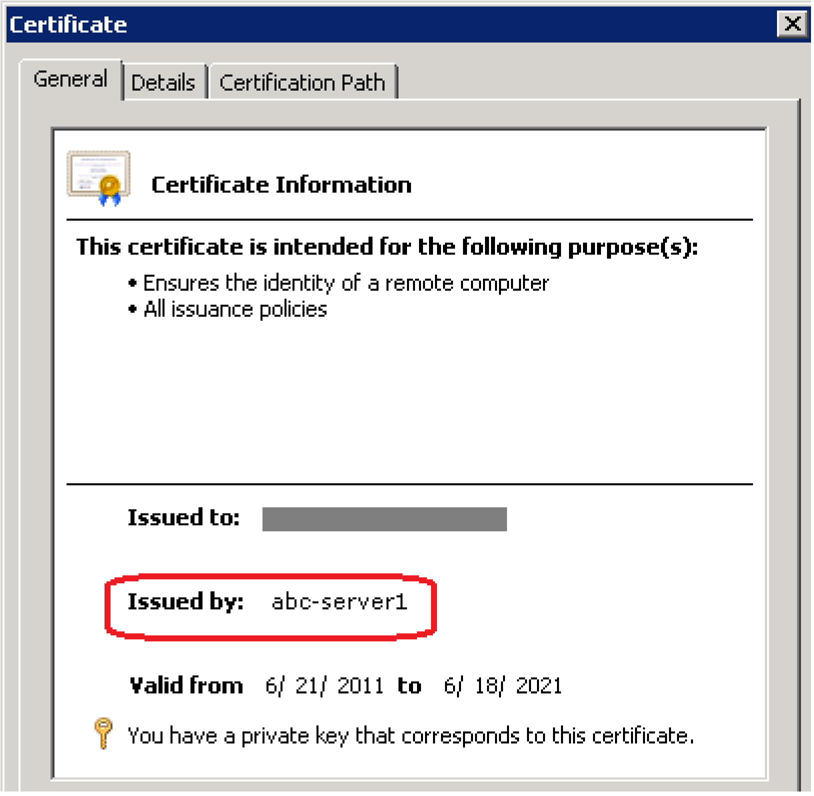
Your server has an SSL certificate. See http://technet.microsoft.com/en-us/library/cc731977%28v=ws.10%29.aspx.

1. Open the *siteroot*\\`web.config` file.
2. Set the value of `ek_UseSSL` to `true`.
3. Set the value of `ek_SSL_Port` to the server port that you want to use for SSL communications.
4. Set the value of `ek_ecom_ComplianceMode` to `true`.
5. Save *siteroot*\\`web.config`.
6. Configure IIS so that your site uses SSL only. To do this:
   a. Open IIS Manager.
   b. Select your Ektron website.
   c. From the right panel, select **Bindings**.
   d. Click **Add**.
   e. In the **Type** drop-down, choose **https**.
   f. In the **SSL certificate** drop-down, choose your server's SSL certificate.
   g. Click **OK**.
   h. From the IIS Manager's center panel, click **SSL settings**.
   i. Check **Require SSL**.

   See also: How to Set Up SSL on a Server.
7. If you are using a self-signed certificate, follow these additional steps.

   a. Open IIS Manager.
   b. Select your Ektron website.
   c. From the right panel, select **Bindings**.
   d. Select **https** and click **Edit**.
   e. On the Edit Site Binding screen, click **View...**.

f. On the **General** tab, copy the value next to **Issued by**.



g. Open your Windows host file.

h. Insert the URL copied in Step 7f.

Additional security measures

The following measures are also recommended.

- Encrypt cookies in `web.config`.

```
<add key="ek_EnableCookieEncryption" value="true" />
```

NOTE: After making this change, you must reset IIS.

- Enable Captcha for new user signup and other membership features. Captcha prevents automated tools from creating unwanted data and traffic on your site. Set the Membership server control's `EnableCaptcha` property to true. See Membership Properties.
- Enable IP filtering on all FTP sites, and WWW sites as needed. Use Ipsec filters to accomplish this. See How to configure TCP/IP filtering in Windows 2000.
- Install needed services only (for example, FTP, www, SMTP, NNTP).
- If you make a backup of `web.config`, do not use another extension. The `.config` extension is secured, but another extension may make the backup file readable. (For example, `web.BAK.config` is secured, but `web.config.BAK` is not!)
- Remove test scripts you may have left on your site.

- If you zip up databases and code, do not leave `.zip` files on your site.
- Do not use IIS on a domain controller.
- *Never* use virtual directories across servers.
- *Never* install websites on the system drive.
- Remove NTFS write permissions wherever possible. See [How IT Works: NTFS Permissions].
- Configure a default website with extremely secure settings (for example, require SSL, Integrated Windows authentication only, accessible from only one IP, NTFS permissions to none on an empty home directory, and so on), then stop the site. This results in a broken default website that 80% of hackers will blindly attack instead of your real website.
- Configure websites so that the host header matches the site's DNS name. Do this for both HTTP and HTTPS. **Do not configure the default website with host header.** This should prevent 90% of automated hacking tools from working by sending them to your crippled default website. To do this:
  1. Open IIS Manager.
  2. Right-click your website icon.
  3. On the Web Site tab, click **Advanced**.
  4. Click the IP Address then **Edit**.
  5. Enter the host header in the Host Header field.
  6. Click **OK** to save.
- Enable IIS auditing.
- Enable W3 extended logging. Verify that the logged information is appropriate. Consider enabling the following items:
  - Date and time
  - IP address of client
  - IP address of server
  - Server port
  - Username
  - HTTP method used to access your site
  - URI Stern
  - URI Query
  - Status of request

  See Extended Log File Format and W3C Extended Log File Format (IIS 6.0).
- Set permission for IIS logs to system and local administrators only.
- Remove write permissions to `hklm\software` for non-admin accounts.
  - Administrators & System: **Full**
  - Everyone: **Read/Execute**
- Restrict NTFS permissions to all executable files on the system.
  - Administrators & System: **Full**
  - Users: **Read/Execute**

  - IUSR account: execute permissions sparingly

  See How IT works: NTFS Permissions.

- Restrict NTFS permissions to any script interpreters, such as Perl.
  - Administrators & System: **Full**
  - Everyone: **Read/Execute**
  - IUSR account: execute permissions sparingly
- Ensure that the Everyone group has read-only permissions for these directories.
  - Web root
  - %systemroot%
  - %systemroot%\system32
  - %systemroot%\system32\inetsrv
  - %systemroot%\system32\inetsrv\asp
  - %systemroot%\program files\common files\

5

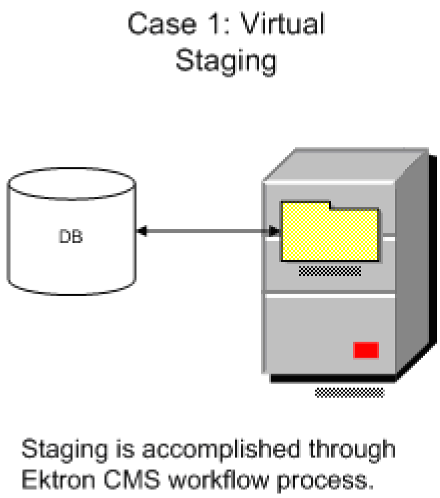
Setting up Ektron

Setting up development and staging environments

You can set up your Ektron website in the following ways. You decide which configuration is the best fit for your particular situation.

Virtual staging

Use Ektron's approval process and scheduled publishing of content to manage when content goes live.

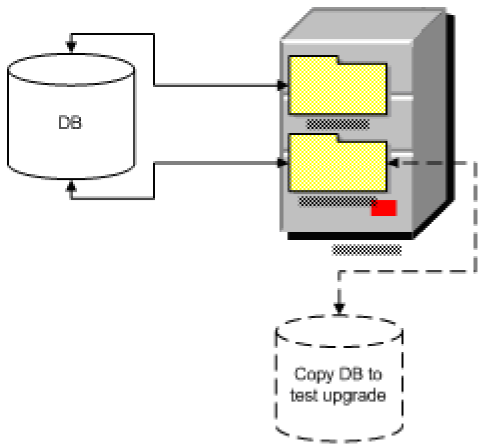


- Best choice when changes to templates and library files are infrequent
- No special implementation guidelines; just an installation on one server
- When upgrading this type of site, make a temporary copy of the site (both display layer and database) on a separate server to test the upgrade

Same server, same database

- Production and development/staging sites use separate copies of Ektron but reside on same server and point to same database
- Ektron's settings, managed content, and library files are identical between sites

Case 3: Same Server, Same DB



To set up this configuration:

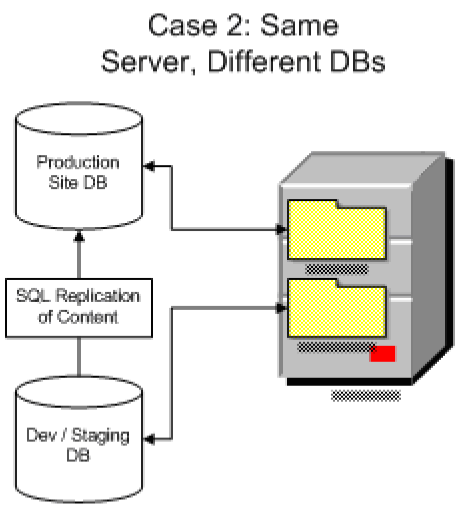
- To maintain file paths between sites:
  - Create separate websites in IIS.
  - Assign different ports to the production and development/staging sites. For example, the production site is `http://www.example.com`, and the development/staging site is `http://www.example.com:8080`.
- Both sites must use the same pathing relative to the Web root. For example, `www.example.com\Workarea\applicationAPI.asp` and `dev.example.com\Workarea\applicationAPI.asp`.
- Because both sites use the same database, editing and publishing content on one site affects the other site. As a result, the development/staging server always has the freshest content.
- Make the Ektron `uploadedimages/` and `uploadedfiles/` folders IIS virtual directories that point to the same physical directory.
- Template changes must be copied between sites. The best way to copy site templates and other assets is eSync. This is described in *Synchronizing servers using eSync* on page 1787.
  - If eSync was not implemented and changes to these items are infrequent, you can manually copy them.

To test and QA an upgrade, make a temporary copy of the site's display layer on a separate server connected to the development/staging database.

If the development/staging database is the master, back it up before upgrading.

Same server, different databases

- Production and development/staging sites use separate copies of Ektron's display layer, reside on same server, but point to different databases
- Changes to content, configuration, or library files made in one site must be copied to other site



To set up this configuration:

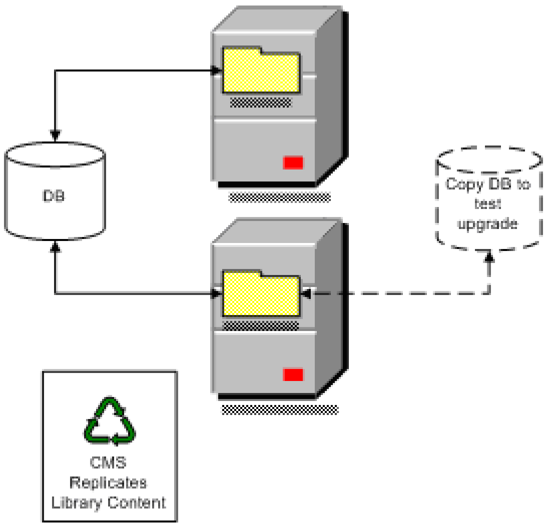
- To maintain file paths between sites:
  - Create separate websites in IIS.
  - Assign different ports to the production and development/staging sites. For example, the production site is `http://www.example.com`, and the development/staging site is `http://www.example.com:8080`.
  - Separate the databases for isolation.
  - One database is the master, and the other is a copy
  - Only edit content in the site connected to the master database
  - Remove the Ektron login page from the site connected to the copy database
- To copy the Ektron database, your best choice is Ektron's eSync feature. This is described in *Synchronizing servers using eSync* on page 1787.
- If you have not implemented eSync, copy site content using a replication tool for the database.
  - **SQL Server 2008 SDK Replication**: See SQL Server Replication.
- Library files. Make sure the Ektron `uploadedimages/` and `uploadedfiles/` folders IIS virtual directories point to the same physical directory.
- Templates and other file system assets—The best way to move these is eSync. If that was not implemented and changes to these items are infrequent, you can manually copy them. For automated replication, use a product such as Microsoft Application Center.
- Upgrading Ektron. To test an upgrade, make a temporary copy of the site's display layer on a separate server connected to the development/staging database. If the development/staging database is the master, back it up before upgrading.

Separate servers, same database

- Production and development/staging sites reside on separate servers, which point to the same database.

- Ektron settings, content, and library files are identical between sites.
- Changes to templates must be copied between servers.

Case 4: Separate Servers, Same Database



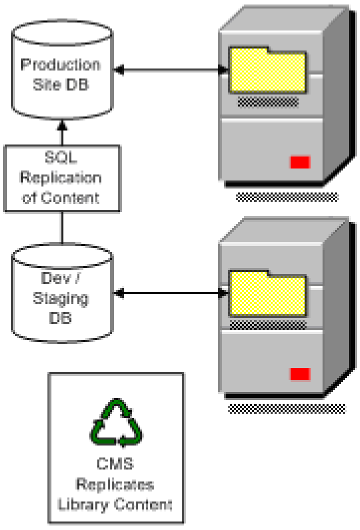
To set up this configuration:

- Configure Ektron's Load Balancing feature to copy uploaded images and files between the servers.
- The best way to move site templates and other assets is eSync. This is described in *Synchronizing servers using eSync* on page 1787.
  - If that was not implemented and changes to these items are infrequent, you can manually copy them. For automated replication, use a product like Microsoft Application Center.
- When upgrading Ektron:
  1. Back up the file system of the development/staging server.
  2. Make a temporary copy of the production server database.
  3. Switch the development/staging site to use the copy.
  4. Test and QA the upgrade on the development/staging server.

Separate servers, separate databases

- Production and development/staging sites are installed to separate servers and point to different databases
- Changes to content, configuration, or files must be copied between sites.

Case 5: Separate Servers, Separate Databases



To set up this configuration:

- Both sites must have the same pathing relative to the Web root, for example, `www.example.com\Workarea\applicationAPI.asp` and `dev.example.com\Workarea\applicationAPI.asp`.
- Separate the databases for isolation.
  - One database is the master, and the other is a copy
  - Only edit content in the site connected to the master database
  - Remove the Ektron login page from the site connected to the copied database
- The best way to copy site templates and library files is eSync. This is described in *Synchronizing servers using eSync* on page 1787.
  - If that was not implemented and changes to these items are infrequent, you can manually copy them. For automated replication, use a product like Microsoft Application Center.
- To copy the Ektron database (containing HTML and XML content), your best choice is Ektron's eSync feature.
  - If you have not implemented eSync, copy site content using a replication tool for the database, such as **SQL Server 2008 SDK Replication**. See SQL Server Replication.
- Make sure the Ektron`uploadedimages/` and `uploadedfiles/` folders IIS virtual directories point to the same physical directory.
- When upgrading Ektron:
  1. Back up the file system of the development/staging server
  2. Make a temporary copy of the production server database
  3. Switch the development/staging site to use the copy
  4. Test and QA the upgrade on the development/staging server

Copying the site and database to other servers

When your project is ready to be tested in house, move the site to a staging server. When the project is ready to go live, move the site to a production (live) server. You can use the same database for all environments. Back up that database often to keep it safe. Alternatively, create a separate database for each server.

To create new environments:

1. On the same server or a separate server, create new folders for Ektron: `C:/cmsstage` and/or `C:/cmsproduct`.
2. In IIS, create a new domain for each server. `http://stage.example.com` points to `c:/cmsstage` and `http://www.example.com` points to `c:/cmsproduct`.
3. If all environments are on the same server, you do not need to copy other folders. But, if you are using a separate server for each environment, copy the `c:/assetcatalog` and `c:/assetlibrary` folders to the other servers.
4. For the database, access the SQL manager and make a backup of the development database. Then, create new databases for staging and production. Finally, restore the backup of the development database to the staging and production databases.
5. In the staging and production environments, open `web.config`. Then, update the database connection information so that it points to the new databases.
6. Test the staging and production environments.

Setting up the certificate for IIS 7

See Configuring Internet Server Certificates (IIS 7).

Updating web.config to use SSL

1. Open the `*siteroot*/web.config` file.
2. Find these settings.

```
<add key="ek_UseSSL" value="false" />
<add key="ek_SSL_Port" value="443" />
```

3. Set `ek_UseSSL` to **true**.

   WARNING! If `ek_UseSSL` is **true**, but you did not install the certificate to the Web Server, you cannot log into Ektron.

4. Set the `ek_SSL_Port` to `443` (unless you specified another SSL port).
5. Find the following line: `<add key="WSPath" value="http://server name/site name/Workarea/ServerControlWS.asmx" />`
6. Change http to http**s**.
7. Edit the `<wsHttpBinding>/<security>` element so it looks like this:

```
<security mode="Transport">
   <transport clientCredentialType="None"
      proxyCredentialType="None" realm="">
   </transport>
</security>
```

8. Save and close the file.

Managing web.config

Ektron's `web.config` file lets you control many key functions of your content management system. When you install Ektron, `web.config` is placed into *`webroot/siteroot`*.

If your server is currently running another .NET application, you must merge that `web.config` file with this one. To distinguish Ektron's tags, they begin with `ek_` and reside within the `<appSettings>` tags of the `web.config` file.

The following sections show the settings in the `web.config` file.

Analytics

- See *Running Google Analytics* on page 510.

Connection strings

For SQL Server, use this connection string to define an SQL server.

- **name**. `ektron.DbConnection`
- **providerName**. `System.Data.SqlClient`
- **connectionString**. this part of the connection string contains the following element.
- **server**. the name of the database server to which Ektron is installed. If installed locally, the value is localhost. This value is set during installation, at the Host screen.
- **database**. use the name of the database.
- **Integrated Security**. use True or False. **True**. use integrated security.
- **user**. If required, specify the username used to connect to the DSN. This user account must have at least read and write permissions to the database.

  NOTE: This value can be blank if you are using Windows authentication.

- **pwd**. If required, specify the password for the username given. It should match your database name.

  NOTE: This value can be blank if you are using Windows authentication.

  IMPORTANT: After changing any database settings, you must stop and restart the Ektron Windows Service. See also: *Handling background processing functions with the Ektron Windows Service* on page 128.

appSettings

- **ek_AdvancedWorkflowEnabled**. Enables or disables advanced workflow; when set to false the original (basic) approval functionality is available.
- **ek_appName**. The name of the application, CMS400. You typically would not change this value.
- **ek_appPath**. This element is prefixed by the ek_sitePath value and describes the location of the Workarea folder. This file stores external applications (such as eWebDiff), templates, and the images folder.
- **ek_appImagePath**. The folder that stores Ektron images, such as toolbar icons. Only change this value if you need to move the images folder to another location. This value is prefixed by the value in the `ek_appPath` variable. By default, `ek_appPath` is set to *webroot*/*siteroot*/`workarea/`. So, by default, this folder is set to *webroot*/*siteroot*/`workarea/images/application/`.
- **ek_appXSLTPath**. The folder that stores XSLTs. Only change this value if you need to move the XSLT folder to another location. This value is prefixed by the value set in the `ek_appPath` variable. By default, `ek_appPath` is set to *webroot*/*siteroot*/`workarea/`. So, by default, this folder is set to *webroot*/*siteroot*/`workarea/Xslt`.
- **ek_buildNumber**. Value set by the installation program. You typically would not change it.
- **ek_cmsversion**. Value set by the installation program. You typically would not change it.
- **ek_enableLegacyBlogFields**. Determines whether the Summary tab displays the 9.00 fields for Tags, Traceback URL and Pingback URL when you create a blog post. In 9.10, the default is `false`. Setting it to `true` uses the functionality from 9.00 and earlier versions. (Blog subjects will display but will not allow changes to be saved without setting the value to `true`.)
- **ek_LDAPMembershipUser**. Integrate membership users with LDAP or Active Directory. Set the value to **True** for Membership Users to be authenticated using LDAP/AD.
- **ek_RedirectFromLoginKeyName**. Provides a mechanism to return from the login page to the previous page, specify the query string key-name. By default the value is **RedirectUrl**. Currently, the redirect works in 2 instances.
  1. When a user tries to use a forum but is not logged in, it sends them to a login page and returns them. The value in this key used in conjunction with the `ek_RedirectToLoginURL` key sends the user from a forum page to a login page and back to the previous page.

     For example, a user tries to reply to a forum post but is not logged in. The user is sent to the login page, then returned to the original page.
  2. A user sends a private message to another user or group administrator from the SocialBar server control. In this case, once the message is sent, the user is returned to the page from which he/she clicked private message.

     For example, you visit a community group's page and click **Private Message Admin**. You are directed to the private message screen. When you click **post**, you return to the community group's page. For additional information, see ActiveTopics.

- **ek_RedirectorInstalled**. Turns the redirector on or off. Turning the redirector on alloes you to alias your website's URL. The default is **False**.
  - **True**. Aliasing turned on.
  - **False**. Aliasing turned off.

  See also: *Creating user-friendly URLs with aliasing* on page 1293.
- **ek_RedirectorManualExt**. Set a comma-delimited list of Web page extensions for which you will create aliased pages. For example, `.aspx,.htm,.html`. By default, the list contains **`.aspx`**. See also: *Creating user-friendly URLs with aliasing* on page 1293.

  NOTE: You can enter several extensions. Each extension must begin with a period, and the last extension must be followed by a comma (,).
- **ek_RedirectToLoginURL**. The URL of a login page to which to redirect a site visitor who is not logged.
- **ek_sitePath**. The location of Ektron relative to the Web root. This value is set during installation at the Site Path Directory screen. If you move Ektron to another folder, you must update this value.
- **ek_TreeModel**. Choose whether or not to use Ajax for the folder tree in the Workarea.
  - **0**. use the legacy folder tree in the Workarea.
  - **1**. use Ajax for the folder tree in the Workarea.

  NOTE: This key has been removed from the `web.config` file. However, you can still use this key by adding it between the `<appSettings>` tags. For example, `<add key="ek_TreeModel" value="0">` changes the Workarea folder tree to legacy.
- **ek_workareaDateFormat**. Choose how to display dates in some areas of the Workarea.
  - **long**. example: Tuesday May 21, 2014
  - **short**. example: 5/21/2014
- **ek_xmlPath**. The location of the xmlfiles directory. The `ek_sitePath` path is prefixed to this location. Only change this value if you want to move the location of the xml files relative to the Web root.
- **GoogleMap**. Enter connection information for using Google Maps with the Mapping feature in Ektron. See also: Map.
- **VirtualEarthMap**. Enter connection information for using Bing Maps for Enterprise with the Mapping feature in Ektron. See also: Map.

Images

These images appear before a user logs in, so cannot be stored in the database. Update as needed. Their location is set in the `ek_appImagePath` variable. See also: ek_appImagePath.

- **ek_Image_1**. close button
- **ek_Image_2**. small login button
- **ek_Image_3**. big login button

SMTP server configuration

See *Enabling email notification* on page 98.

- **ek_SMTPPass**. The password set up to send and receive email
- **ek_SMTPPort**. The port your system uses to retrieve email
- **ek_SMTPServer**. The server that processes email
- **ek_SMTPUser**. The username set up to send and receive email

Mail format

- **ek_MailFormat**. The format of the email created in Ektron.**HTML** generates email in HTML format, while **Text** generates plain text email.

SSL support

See *Updating web.config to use SSL* on page 73.

- **ek_SSL_Port**. SSL port used by Web server.
- **ek_UseSSL**. Determines if server uses SSL for security.

Active Directory Server Configuration

See *Using Active Directory with Ektron* on page 1472.

- **ek_ADAdvancedConfig**. Enable Active Directory advanced configuration.
- **ek_ADEnabled**. Whether Ektron uses Active Directory support.
- **ek_ADPassword**. Password for the Active Directory server.
- **ek_ADUsername**. User name for the Active Directory server.
- **ek_AUTH_Protocol**. The directory access protocol used with the Active Directory feature. The default value is LDAP. Other protocols are GC (global catalog) and WINNT.

Menu settings

- **ek_MenuDisplayType**. Determines the appearance of the content menu that appears within every content block after the user logs in.

  NOTE: This setting only works if `ek_UserMenuType` is set to zero (0).

  - **0**. Horizontal—menu icons are arranged horizontally
  - **1**. Vertical—menu icons are arranged vertically and include the tooltip text
- **ek_UserMenuType**. Determines the appearance of the content menu that appears within every content block after the user logs in.
  - **0**. New dynamic menu—only appears when user moves cursor over content block
  - **1**. Old classic menu—always appears
  - **2**. Menu without borders—a silver pin head appears above content that has a menu available. Hovering over this pin produces a menu.

Multilingual settings

- **ek_DefaultContentLanguage**. Sets the 4 digit, decimal representation of the default content language. For example, American English is 1033. See also: *Setting the default language* on page 1398.
- **ek_EnableMultilingual**. Enable or disable multilingual content support.
  - **1**. enable
  - **0**. disable

  See also: *Enabling/disabling support for multiple language content* on page 1395.
- **ek_ServerURL**. Mainly used in Web services to determine a remote server location. For example, in a Web farm environment, the content server can reside in a remote location. In this case, the developer's content is replaced with this value, so all `<img src=""…/>` and `<href….` references point to server named here instead of the local one.

Machine translation

Lets you enter the path to the Google Translation Service API key. See also: *Enabling machine translation* on page 1418.

Miscellaneous settings

- **ek_assetPath**. The folder that stores assets. Only change this value if you need to move the Assets folder to another location. Note that this value is prefixed by the `ek_appPath` value. By default, `ek_appPath` is set to *webroot*/CMS400Min. So, by default, this folder is set to *webroot*/CMS400Min/assets.
- **ek_BatchSize**. The number of files that can be uploaded at one time. The default is **4**, but it can be any non-negative number.

  NOTE: Users can upload any amount of files. The system handles them 4 at a time.
- **ek_CacheControls**. Enable or disable caching for Ektron server controls. See also: Caching with Server Controls.
  - **0**. Disable
  - **1**. Enable
- **ek_EditControlMac**. Defines the editor used by a Macintosh operating system user. See also: *Changing the default editor* on page 582.
- **ek_EditControlWin**. Defines the editor used by a Microsoft Windows operating system user. See also: *Changing the default editor* on page 582.
- **ek_EnableMessageBoardEmail**. Set to **True** to enable e-mail notification when a user posts a message to a user or community group's message board. If true and a user posts to another user's message board, the board's owner is notified. If true and a user posts a message to a community group's message board, all group members are notified. This setting does not affect content messages. See also: *Sending notifications to a community* on page 1543.

- **ek_helpDomainPrefix**. The path to the help files. By default, help files are located on an external server and the path is
  `http://documentation.ektron.com/cms400/v[ek_cmsversion]/webhelp`

  Change this path if you install help files on a local server. See also: *Installing help files on a local server* on page 33.
- **ek_InvitationFromEmail**. The "From" email address used when a user sends an Invitation. Invitations are emails that are sent to non-system users asking them to join your site. See also: Invite server control.
- **ek_LinkManagement**. This setting determines if Ektron uses linkit.aspx when inserting a quicklink. By default, it is set to `false`. If set to `true`, when a user inserts a quicklink, Ektron inserts a *special link* instead of a quicklink. A special link determines the correct quicklink to use when a site visitor clicks it. For example, a user adds a content block to folder A. A quicklink to that content is `a.aspx?id=10`. Later, if an administrator changes the folder's template but doesn't update the quicklink within the content block, the quicklink is broken. To avoid this problem, enable link management.
- **ek_LogFileName**. Path to the log file name for the message queue
- **ek_loginAttempts**. Ektron has a login security feature that, by default, locks out a user after 5 unsuccessful attempts to log in. See also: *Restricting login attempts* on page 108.
- **ek_LoginScreenWidth**. The width of the login screen in pixels. You may need to widen the screen if you are using Active Directory and database names are long.
- **ek_PageSize**. This setting determines the maximum number of items that can appear on a page before it "breaks." When a page breaks, additional entries appear on another screen, and the following appears near the bottom of the list:

  Page 1 of 2

  [First Page] [Previous Page] [Next Page] [Last Page]

  NOTE: The above text changes depending on the page you are viewing.
- **ek_QueueName**. Path to the message queue.
- **ek_ShowWorkareaRetErrorReferrer**. Choose whether to enable referrer debug information on the `RetError.aspx` page.
  - **True**. enable
  - **False**. disable
- **ek_ToolBarFormatTag**. This setting only applies *after* a user logs in to your site. Change this setting if the colored border that surrounds content looks wrong. (The border color indicates the content's status.) By default, `<table>` tags create the border. If the border looks wrong or inappropriate, change setting to **div**. If you do, `<div>` tags are used to draw the border instead of `<table>` tags. This change typically solves the problem.
- **ek_WorkareaLibSearchResultMode**. Sets the Workarea Library search-results mode.

    - **text**. returns a text only version of the library search results.
    - **mixed**. returns text and images associated with library search results.
    - **graphical**. returns a images associated with library search results.
- **ek_XliffVersion**. Define the XLIFF version to use when exporting files. See also: *Exporting content to XLIFF* on page 1418.
- **WSPath**. Determines the location of the Web services page used by the server controls at design time.

system.diagnostics

- **LogLevel**. Enter a numeric value that determines the level of message logging. By default, diagnostic messages are logged in the Event Log. Choices are:

  1—Error: log errors.

  2—Warning: log errors and warnings.

  3—Information: log errors, warnings and informationals.

  4—Verbose: Everything is logged.

ektronCommerce

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

See *Conducting eCommerce* on page 1605.

- **ek_ecom_ComplianceMode**. When set to true, your site is Security Compliant. This means the Workarea is encrypted in an SSL session and Logging is started.
- **ek_ecom_DefaultCurrencyId**. Select the default currency and enter its Numeric ISO code. This should be done before creating your product catalog. See also: *The default currency* on page 1638.

  WARNING! Do not change the default currency or measurement system after your eCommerce site is live.

- **ek_ecom_TestMode**. When set to true, payments are sent to a test gateway instead of the actual one.
- **ek_MeasurementSystem**. Select whether to use English or Metric measurements for your packages. See also: *Configuring packages* on page 1662.

mediaSettings

See also: *Managing multimedia assets* on page 657.

- **application/x-shockwave-flash**. Define the relationship between the Shockwave Flash mime type and the Flash player.
- **audio/mpeg**. Define the relationship between the MPEG audio mime type and the Windows Media Player.

- **audio/x-ms-wma**. Define the relationship between the MS-WMA mime type and the Windows Media Player.
- **audio/x-realaudio**. Define the relationship between the realaudio mime type and the Real player.
- **audio/x-wav**. Define the relationship between the WAV mime type and the Windows Media, Quicktime and Real players.
- **audio/x-wav-default**. Define the relationship between the WAV default mime type and the Windows Media Player.
- **Flash-CLSID**. The class ID for the Flash player.
- **Flash-Codebase**. Location of the code base plug-in for Flash player.
- **Quicktime-CLSID**. The class ID for the Quicktime player.
- **Quicktime-Codebase**. Location of the code base plug-in for Quicktime player.
- **Realplayer-CLSID**. The class ID for the Real player.
- **Realplayer-Codebase**. Location of the code base plug-in for Real player.
- **video/mpeg**. Define the relationship between the MPEG video mime type and the Windows Media Player.
- **video/quicktime**. Define the relationship between the Quicktime mime type and the Quicktime player.
- **video/x-avi**. Define the relationship between the AVI mime type and the Windows Media, Quicktime and Real players.
- **video/x-avi-default**. Define the relationship between the AVI default mime type and the Quicktime player.
- **video/x-msvideo**. Define the relationship between the msvideo mime type and the Windows Media, Quicktime players.
- **video/x-msvideo-default**. Define the relationship between the msvideo default mime type and the Windows Media Player.
- **video/x-ms-wmv**. Define the relationship between the MS-WMV mime type and the Windows Media Player.
- **video/x-realvideo**. Define the relationship between the realvideo mime type and the Real player.
- **WindowsMedia-Codebase**. Location of the code base plug-in for Windows Media Player.
- **WindowsMedia-CLSID**. The class ID for the Windows Media Player.

Miscellaneous

- **HttpHandlers**. This section sets how the URL Aliasing feature handles URLs with certain extensions. If you have any extension you do not want aliased, add it below the following line using the same syntax.

```
add verb="*" path="*.png" type="URLRewrite.StaticFileHandler,
Ektron.Cms.URLRewriter" />
```

- **maxRequestLength**. This setting determines the maximum size of files that can be uploaded to your server. The default setting is 204,800 kilobytes, or 200

MB. Enter the desired value in kilobytes. To convert megabytes to kilobytes, go to OnlineConversion.com.

- **session state**. Mode—determines the storage option for session data. Ektron supports all session-state modes listed in this article: Session-State Modes.

Migrating your site to Ektron

This section explains how to migrate your website to Ektron, as follows.

- What to copy to your website
- Setting up and deploying templates

Before you migrate

- Ektron requires a physical installation of the product. If you do not have physical access to the machine, someone with access to the machine must run the install. For more information, see *Installing Ektron* on page 11.
- After you install Ektron, verify that it is properly installed by using the starter site. By default, the sample website is located at the following address on the machine to which Ektron is installed.

  ```
  http://localhost/siteroot/default.aspx
  ```

  If you can browse the starter site and it works properly, Ektron is properly installed.

  BEST PRACTICE

  Keep a working version of the starter site to help you debug problems. For example, if you encounter errors on your site, try to reproduce on the starter site. If you can, that may indicate a problem with the installation. If you cannot, the installation is probably OK and an external factor is causing the problem.

Setting up a new site

NOTE: You can use the Site Setup utility to perform these tasks by choosing **Start > Programs > Ektron > CMS400 > Utilities > Site Setup**. See *Installing a site* on page 17.

If you're using Windows 8 or 2012, press the **Windows** key ( )**/Q** then enter **CMS400 Site Setup**. Right click and choose **Run as Administrator**.

1. Copy application core files. Copy these files from the *siteroot*/workarea folder into your site folder. These files operate the Workarea, library, and content functions.
2. Set up the database. Content is stored in a database. To learn how to set one up, see *Setting up a database* on page 23.
3. Modify application parameters. Modify the web.config file installed to the Ektron site root directory. In that file, update the <ConnectionString> tags to point to your server, database, user, and pwd.

NOTE: If you are using SSL, web.config settings are explained in *Setting up SSL* on page 62.

4. Create a Login Page. You can either copy the one from the starter site or create your own. See also: Log-in server control.
5. Log In
    a. Browse to the login page you created and click **Login**. A login dialog box opens asking for a username and password.
    b. Enter the admin username and password and click **Login**. (You selected these while installing Ektron.) You are logged into Ektron.
6. Modify configuration settings. Click **Workarea** to modify these settings.
    - Set up Active Directory. If plan to use Active Directory, configure this now. The settings for Active Directory can be found in the **Settings > Configuration** folder. Refer to *Using Active Directory with Ektron* on page 1472.
    - Modify the Setup screen. The Ektron setup section is located under the **Settings > Configuration** folder. The setup section lets you configure items such as your license key, style sheet support, and default language. See *Modifying setup information* on page 121.
    - Set up Metadata. Ektron includes extensive metadata support. Settings for metadata definitions can be found under the **Settings > Configuration** folder in the Workarea. You can have as many metadata definitions as needed. See also: *Working with Metadata* on page 755.
    - Set up Smart Forms. You can also set up your Smart Forms. You create XML files externally or via the Data Designer. Next, a Smart Form is assigned to content blocks and folders. See also: *Working with Smart Forms* on page 815.
7. Create Ektron users. If you are not using Active Directory support, add users manually. The maximum number of users is determined by your license key. For instance, if you purchase a 10-user license, you can enter 10 users. If you exceed the licensed number of users, you may get locked out of Ektron. Every user must belong to a group. When you first add a user, the user is automatically added to the Everyone group. You can create more user groups and add users to them as desired. See also: *Managing users and user groups* on page 1439.
8. Configure content and forms folders. Create folders to organize content blocks and forms. Create as many folders as you want. Each folder level can go as deep as you want. See also: *Planning your CMS folder structure* on page 142.
9. As you create folders, you can assign a default template and style sheet. The default template is used when a new content block is created and Ektron creates a Quicklink that points to the new content block. If you do not provide a default template, it is inherited from the parent folder.

    After creating the folders, assign permissions and workflow to them. Permissions can be assigned to a user or a user group. The same is true for workflow.

BEST PRACTICE

Limit permissions for the “Everyone” group, as this gives every user permissions to content. Similarly, limit the “Everyone” group’s inclusion in the workflow to restrict which users can publish content.

10. Create templates. Templates determine the look and feel of the site. Masthead, navigation, and footer graphics are all part of the template. Use server controls to insert Ektron content into a template. For a list of server controls, see Server Controls.

BEST PRACTICE

Because dynamic templates include URL parameters, make each main landing page and other important pages static tags. This makes it easier for you to remember if you need to provide that link to someone.

For instance, each main landing page from your home page could use the static tag. Then, as you go deeper into that section, subsequent pages use a dynamic tag.

11. Migrate or create content. You can create or migrate your content. If you are migrating content from an existing site, add a new content block, and cut and paste the content into the Ektron editor.

NOTE: All images and files must be uploaded and inserted into the content separately.

12. Deploy the content. Deployment from development to production is as simple as moving the files over. To properly deploy your new Ektron website:
    a. Copy all assets (templates, images, files, and so on) from your development box to your production machine.
    b. Move the database. You have 2 choices
        - point your data source on the production machine to the database you were using.
        - copy the database, move it to your production server, and point a data source to that.
13. Optionally, for email notification to work in Ektron, make sure the SMTP service is setup and running in IIS, and that it points to a valid mail server. See *Enabling email notification* on page 98.

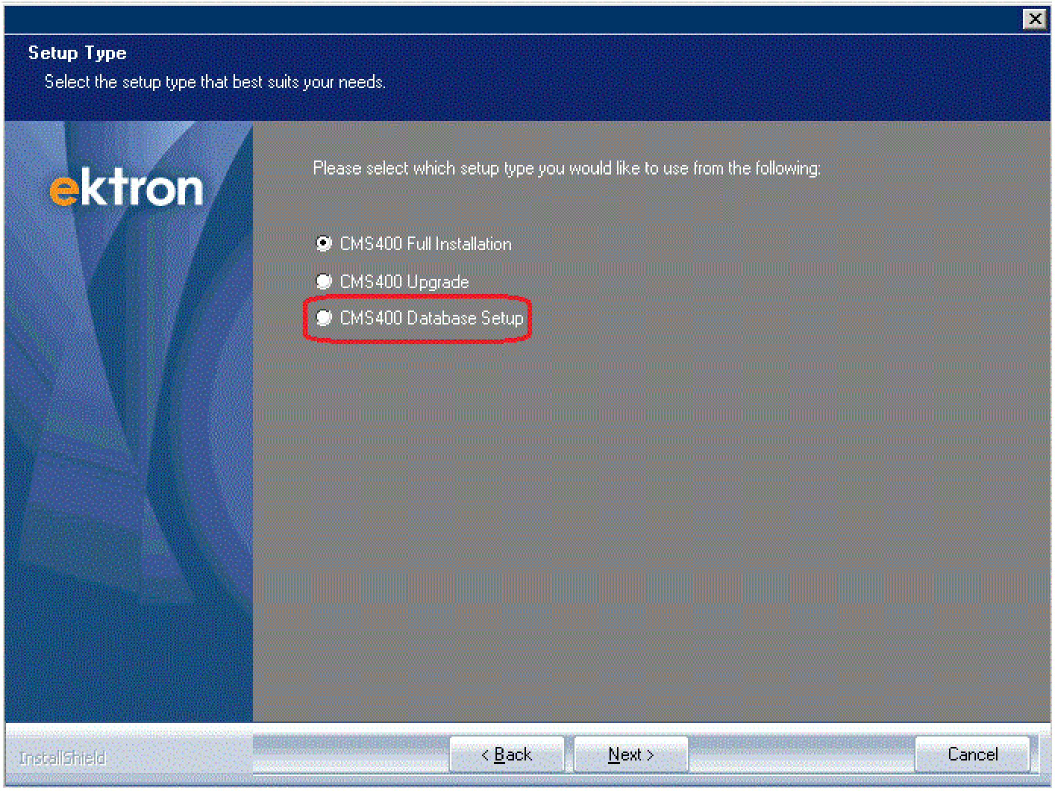
Setting up an additional site

After installing Ektron, it is easy to create another site. While creating the new site, you can create a sample or minimal site and database. To create a site for your content, you typically install a minimal site and database, then create your Web page templates. Later, add users and content.

1. Set up New Site.
   a. Create a new folder in the Web root folder to contain the site files.
   b. From the Windows Start menu, choose **Start > Programs > Ektron > CMS400 > Utilities > SiteSetup**.

      If you're using Windows 8 or 2012, press the **Windows** key ( )**/Q** then enter **CMS400 Site Setup**. Right click and choose **Run as Administrator**.
   c. Follow the steps for creating a new site, as described in *Installing a site* on page 17. When prompted to select a folder to which you want to install the files, choose the folder you created in Step 1.
2. Set up New Database. After installing an Ektron site, it is easy to create a new database. You can create either a sample or minimal database. When creating a database for your content, you typically install a minimal database.
   a. From the Windows Start menu, choose **Start > Programs > Ektron > CMS400 > Utilities > SiteSetup** .

      If you're using Windows 8 or 2012, press the **Windows** key ( )**/Q** then enter **CMS400 Site Setup**. Right click and choose **Run as Administrator**.
   b. On the Setup Type screen, choose **CMS400 Database Setup**.



   c. Follow the steps for creating a new database, as described in *Setting up a database* on page 23.
3. Create Project in Visual Studio.NET. To work with the new site in Visual Studio.NET, you must create a new project for it. To do that:

a. Go to the folder that contains the new site.
b. Double click Ektron's solution file. If you are using the minimal database, the file is `CMS400Min.sln.`

   At this point, you can build the project and log in. If you cannot log in because you have not set up the license key, use the builtin account: by default, the username is builtin and password is builtin.

   IMPORTANT: You should only use the builtin account temporarily. As soon as possible, you should insert the license key and log in under a user name assigned in Ektron.

   To learn about creating templates and using server controls, see Ektron Server Controls.

Supporting multi-site configurations

Ektron's multi-site support lets you set up and manage several websites under one CMS. (The multi-site support feature does not support multiple databases.) You manage content in the additional sites the same way you work with content in the root site. You log into a root site then begin editing content in an additional site. Regardless of which site you are using, you can use the library to insert common hyperlinks, images, files, and quicklinks.

IMPORTANT: Place any file (such as an XSLT file) that needs to be shared among sites in a multi-site environment in a virtual folder. Also, you cannot create a quicklink within content, a collection, menu, and so on to a form that resides in another site.

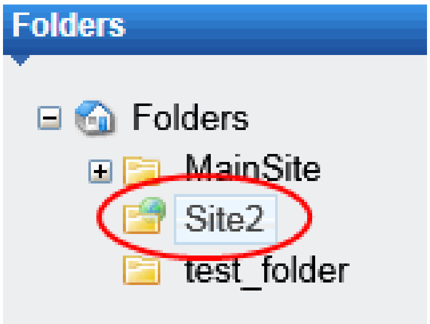
PREREQUISITES

- All sites reside on the same server.
- Each site has a multi-site license key. To purchase additional licenses, contact Ektron sales.

Advantages of multi-site configurations:

- The URL can indicate the nature of the site to visitors
  - www.example.com
  - support.example.com
  - forums.example.com
- All sites can share a single database
  - common content, but appear within their own site and templates
  - a shared library of images and files. These files can be stored once; authors can insert them into content from any site.

In the Workarea, sites appear in Ektron's folder structure with a globe icon.



A folder to which a production domain is assigned is a *domain folder*. Links to content in a domain folder are activated via `linkit.aspx`, which redirects to the appropriate domain name using the appropriate template for the folder or content.

Best practices for working in a multi-site environment

BEST PRACTICES

IMPORTANT: Do not remove your root site!

- Log into the *root site* before working with the root site or any secondary site.
  - **Exception**: If you are a content author, log into the site for which you are authoring content.
- Do not log into a secondary site then add files to a different secondary site.

There are 2 ways to install multi-site support. (The automatic setup is easy to use and minimizes issues.)

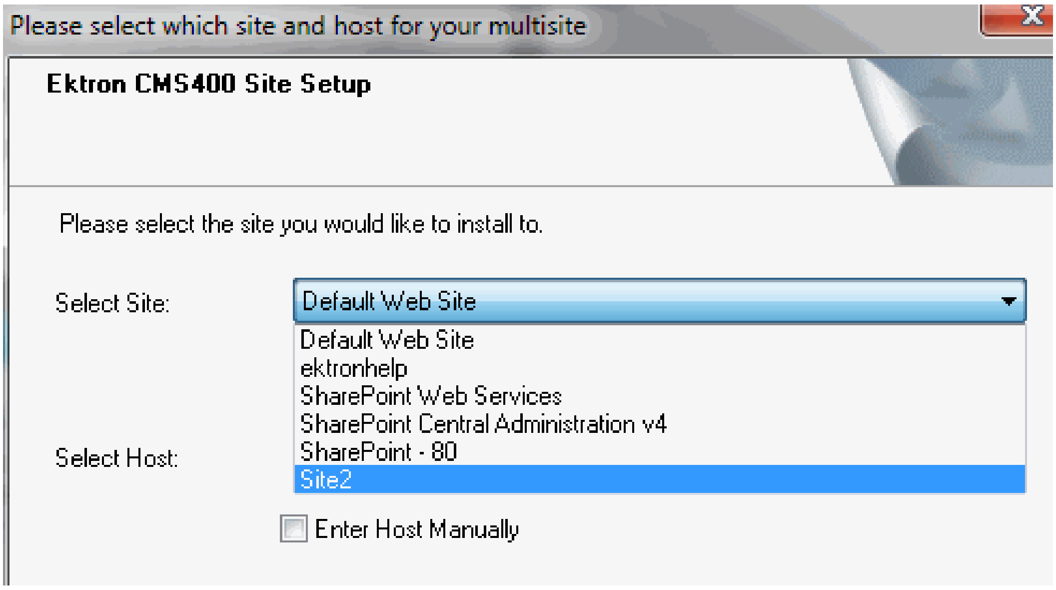
- *Automatic multi-site setup* below
- *Setting up Ektron* on page 67

Automatic multi-site setup

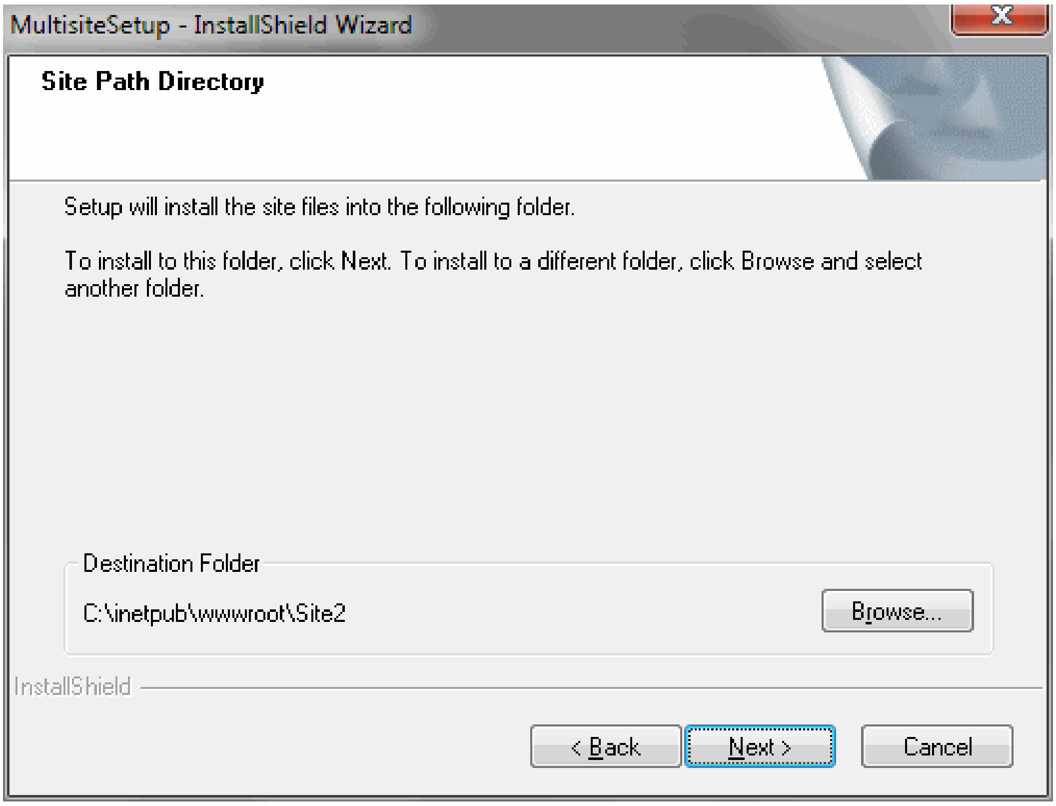
IMPORTANT: Before creating a multi-site configuration, you must have installed an Ektron website. All installed folders must remain in that site. The original site *cannot* have virtual folders. Also, you cannot nest a multi-site under another IIS site.

1. Create each new site in IIS. See http://www.iis.net/learn/manage/creating-websites.
2. Run the Multi-Site Setup Wizard.
   a. Double click `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities\MultiSiteInstall\Multisite.exe`.
   b. Use the pulldown to select the site you created in Step 1.

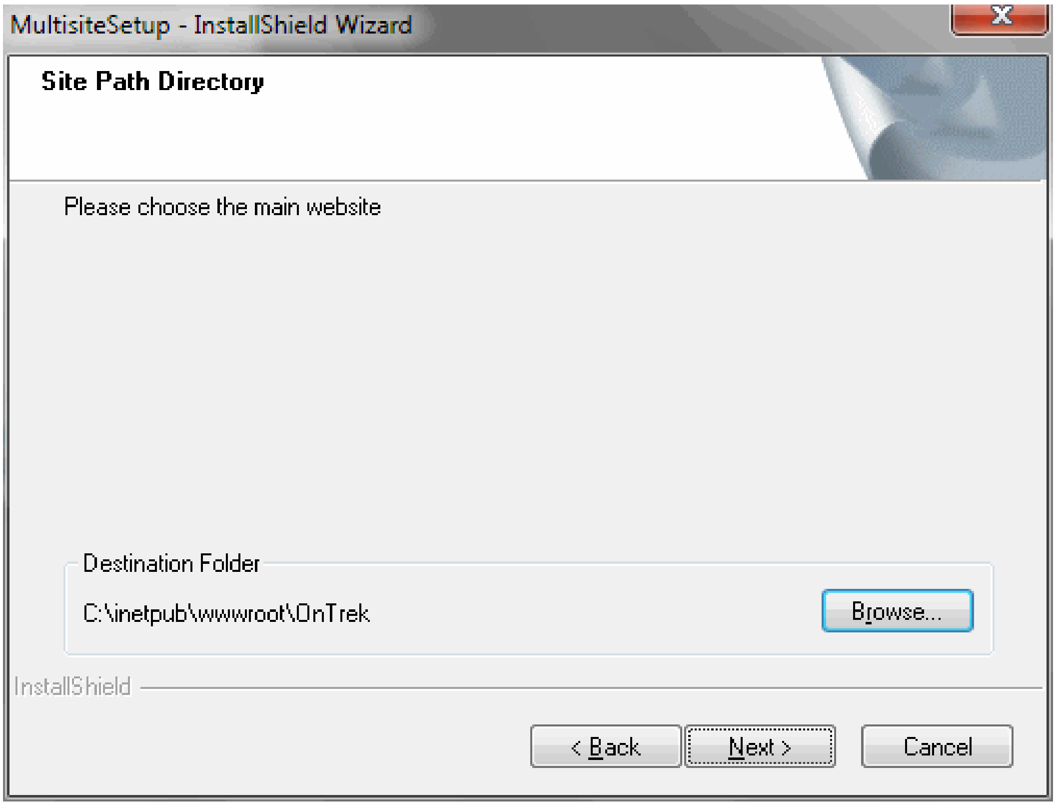
c. Select your host.



d. Enter a path to the new site.



e. Identify your main website; that is, the site to which this multi-site is being added.

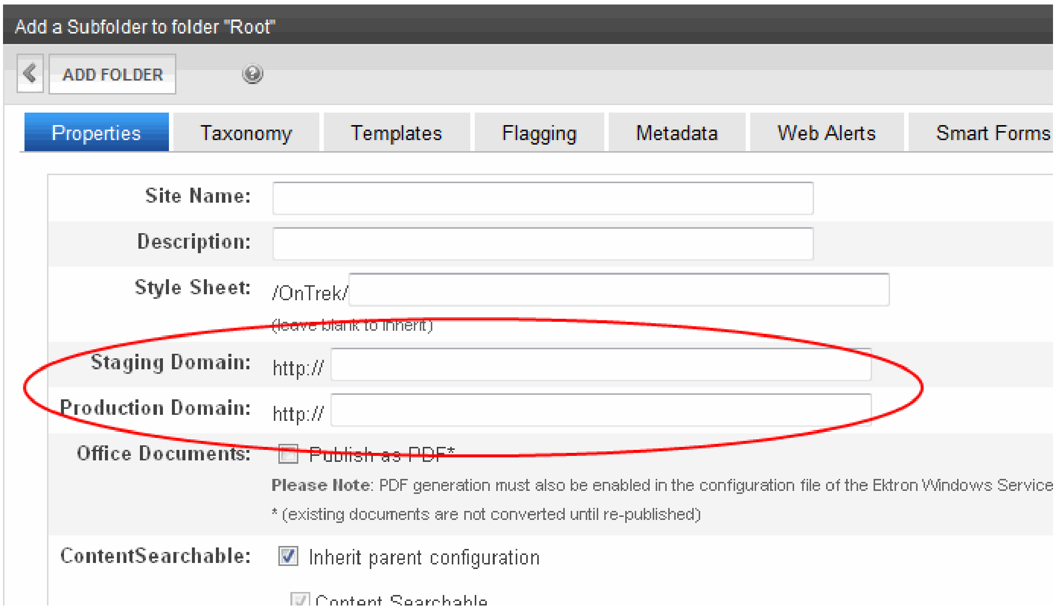


   f. When prompted to add a multi-site key, click **Yes**.
   g. Enter a license key for the new site. This step copies the new site's license keys to the database.
   h. Enter information about the new site's database.
   i. Follow the remaining screens in the wizard.

3. Assign multi-site capabilities in Ektron.
   a. Log in the Workarea.
   b. Click **Content**.
   c. Click the site root folder.

   NOTE: Site folders must reside within the site root folder.

   d. On the View Contents of Folder screen, create a new top-level site folder for each site by choosing **New > Site**.
   e. Assign site folder properties as you did for the root folder. The **Multi-site Configuration** fields appear on the lower section of the screen.

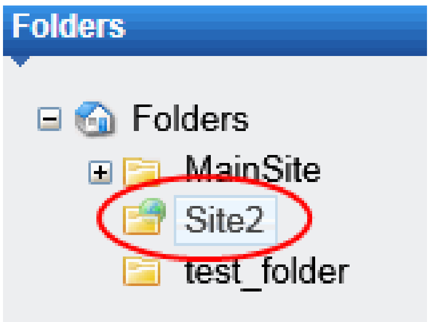


f. In the **Staging Domain** field, insert your staging domain.

IMPORTANT: Production and staging URLs must be unique across multi-sites. In other words, in a multi-site configuration, one site's production or staging URL cannot be the same as another site's production or staging URL.

g. In the **Production Domain** field, insert your production domain.

h. Click **Add Folder**. Within Ektron, new sites are indicated by a globe icon.



Creating multiple websites on a single server

NOTE: This text is adapted from Microsoft's IIS help.

IIS lets you create multiple websites on a single server.

Before adding a website

Adding a website to a server requires careful preparation before running the Website Creation Wizard. Consider these recommendations.

- Review the methods of hosting multiple websites, and determine which one is appropriate for your environment.

- Multiple websites can use the same IP address. But if you decide to use a unique IP address for the new website, obtain a static IP address from your organization or ISP. Then, configure the server's TCP/IP settings.
- If you use a host header name to identify the new website, select a unique name. On a private network, the host header can be an intranet site name. But on the Internet, the host header must be a publicly available Domain Name System (DNS) name, such as support.microsoft.com. Register a public DNS name with an authorized Internet name authority.
- Update your name resolution system (typically DNS) with a new record that contains the new IP address and site name. For more information, see Domain Name Resolution in IIS help.
- Standard Internet services use TCP port 80 by default. It is not recommended to use any other port for HTTP services.

  If you use a non-standard TCP port number to identify a new website for special situations (such as a private website for development/testing), select a TCP port number above 1023. In this way, the number does not conflict with well-known port numbers assigned by the Internet Assigned Numbers Authority. (For more information about IANA and port assignments, see List of TCP and UDP port numbers.)
- Use Windows Explorer to create a home directory for the content. Create subdirectories to store HTML pages, image files, and other content as needed.

  To organize home directories for multiple websites on one server, create a top-level directory for all home directories, then subdirectories for each site.

  You can create a home directory

  - on the local server
  - as a uniform naming convention (UNC) path on a network share
  - as a URL that redirects clients to a different Web server

  You can also create virtual directories that map to physical directories. For more information, see "Setting Home Directories" and "Using Virtual Directories" in IIS help.
- Determine whether to generate the website's identification number incrementally or from the website name.
- Create a home page that clearly identifies the new site.

Adding a website

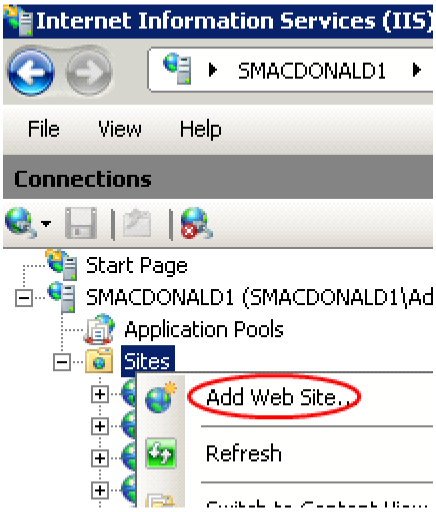
IIS provides 2 methods for adding a new website.

- The Website Creation Wizard
- The `iisweb.vbs` command-line script

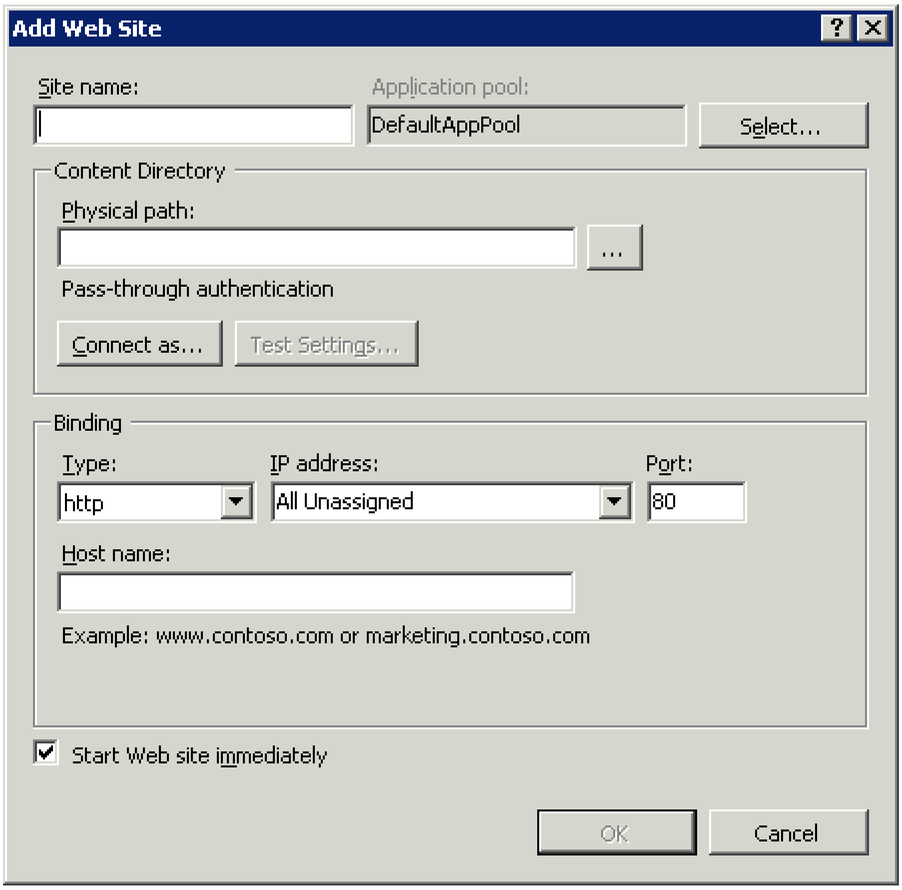
IMPORTANT: You must be a member of the Administrators group on the local computer to perform the following procedure (or procedures), or you must have been delegated the appropriate authority. As a security best practice, log on to your computer using an account that is not in the Administrators group, and then use the Run as command to run IIS Manager as an administrator. From the command prompt, type runas /user:administrative_accountname "mmc %systemroot%\system32\inetsrv\iis.msc".

Using IIS 7's website creation wizard

1. In IIS Manager, expand the local computer, right-click the **Sites** directory, and click **Add Web Site**.



2. Click **Next**. The following dialog appears.



- **Site Name**. Enter the website name.
- **Application Pool**. Click **Select** if you want to select a different application pool than the one listed in the **Application Pool** box. If you do, the Select Application Pool dialog box appears. Select an application pool from the list and then click **OK**.
- **Physical path**. Enter the physical path to the website's folder. Or, click the browse button (...) to go the file system and find the folder.If the physical path that you enter is to a remote share, click **Connect as...** to specify credentials that have permission to access the path. If you do not use specific credentials, select the **Application user** (pass-thru authentication) option in the Connect As dialog.
- **Type**. Select the protocol for the website from the **Type** list.
- **IP Address**. The default value in the IP address box is **All Unassigned**. If you must specify a static IP address for the website, type the IP address in the IP address box. **All Unassigned** refers to IP addresses assigned to a computer but not a specific site. The default website uses all IP addresses not assigned to other sites. Only one site can be set to use unassigned IP addresses for a given port number. For more information on how sites are identified, see Creating Multiple FTP Sites in IIS help.
- **Port**. Enter a port number. The TCP port is assigned to port 80 by default. To use a nonstandard port number to create a unique identity for a private website, enter a new port number above 1023.
- **Host name**. Optionally, enter a host header name for the website.If you are adding additional sites to a single IP address by using host headers, you must assign a host header name containing the full name of the site, for example, `world.optimizely.com/ektron/`.
- **Start website immediately**. Check this box if you do not have to make any changes to the site and want it to be immediately available.

Adding a website with a command line script in IIS 7

To add a site, use the following syntax:

```
appcmd add site /name: string /id: uint /physicalPath:
  string /bindings: string
```

The variable **name***string* is the name, and the variable **id***uint* is the unsigned integer that you want to assign to the site. The variables **name***string* and **id***uint* are the only variables that are required when you add a site in Appcmd.exe.

NOTE: If you add a site without specifying values for the **bindings** and **physicalPath** attributes, the site will not be able to start.

The variable **physicalPath***string* is the path of the site content in the file system.

The variable **bindings***string* contains information that is used to access the site, and it should be in the form of `protocol/IP_address:port:host_header`. For example, a website binding is the combination of protocol, IP address, port, and host header. A binding of `http/*:85:` enables a website to listen for HTTP requests on port 85 for all

IP addresses and domain names (also known as host headers or host names). On the other hand, a binding of `http/*:85:marketing.contoso.com` enables a website to listen for HTTP requests on port 85 for all IP addresses and the domain name `marketing.contoso.com`.

To add a website named contoso with an ID of 2 that has content in `c:\contoso`, and that listens for HTTP requests on port 85 for all IP addresses and a domain name of `marketing.contoso.com`, type the following at the command prompt, and then press **Enter**.

```
appcmd add site /name: contoso /id:2 /physicalPath: c:\contoso /bindings:http/*:85:
marketing.contoso.com
```

See also: Appcmd.exe (IIS 7).

Balancing the load on your servers

Load Balancing has 2 purposes:

- Provides redundancy for your website—if one server fails, a second can handle requests
- Balances requests—distributes requests across multiple servers

To enable load balancing, set up several servers that include the same files.

> **IMPORTANT:** The physical path to the Ektron website *must* be the same on all load balanced servers. Also, sticky sessions must be enabled.

Purchase load balancing equipment to evenly distribute content requests among servers. Then, whenever an image or file is uploaded, regardless of the Web server the user is working on, the asset is replicated on all servers.

The client browser is unaware that more than one server is involved. All URLs point to a single website. The load balance software resolves them.

Ektron provides different strategies for load balancing *library images and files* and DMS *assets*. See also: *eSync in a load-balanced environment* on page 1878.

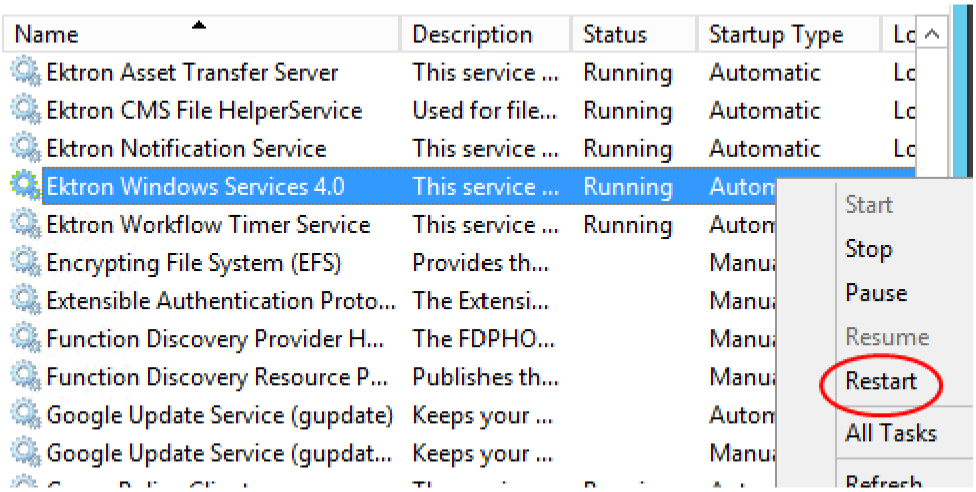
Load-balancing library images and files

Library load balancing is important when your configuration consists of 2 or more websites that share one database. When uploaded, library files are saved to the site root folders `uploadedfiles` and `uploadedimages`.

To support load balancing, library files on all servers must be identical. To maintain this state, whenever a user uploads a library item, it is copied to the corresponding folder on other servers in the configuration.

1. Open the file `C:\Program Files (x86)\Ektron\EktronWindowsService40\Ektron.ASM.EktronServices40.exe.config` using a word processor such as Notepad.
2. Set the value of the `LibraryLoadBalanced` property to 1.
3. Set the value of the `AssetsLoadBalanced` property to 1.

4. Set the value of the `LoadBalServerCount` property to the number of servers in your load balance cluster.
5. Save the config file.
6. Restart the Ektron Windows Service.



See also: *Handling background processing functions with the Ektron Windows Service* on page 128.

Load-balancing assets

Asset load balancing is important when your configuration consists of 2 or more websites that share one database. To balance requests to work with assets across multiple servers, Ektron ensures that each server in the configuration has a copy of every asset.

So, after setting up asset load balancing, any asset added to one server is copied to the corresponding folder on the other servers in the configuration. There is no limit to the number of servers that can be load balanced.

To set up load balancing for assets, follow these steps on all servers in the load balance configuration.

1. Within the */siteroot* folder, open the `AssetManagement.config` file using a word processor such as Notepad.
2. Change the value of the `LoadBalanced` element to **1**.
3. Save the file.
4. Open the following file using a word processor such as Notepad:
   ```
   C:\Program Files (x86)\Ektron\EktronWindowsservice40\
   Ektron.ASM.EktronServices40.exe.config
   ```
5. Set the value of the `LibraryLoadBalanced` property to 1.
6. Set the value of the `LoadBalServerCount` property to the number of servers in your load balance configuration.
7. Save the config file.

8. Repeat steps 1 through 7 on each server in the load balance cluster.
9. Log on to Ektron. This action sets up the load balance software in the database.

Refreshing load-balanced files

PREREQUISITES

- You must be a member of the Administrators group to access the Load Balancing screen.
- Your Ektron license key contains a load balance component

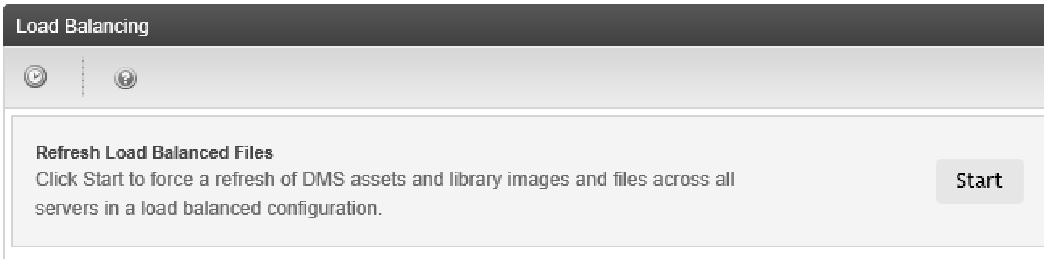
Asset and Library files may become out-of-date or lost due to equipment failures, power outages, or other events. You Load Balance software may have the ability to sync these files.

Ektron also provides a screen which ensures that all files in the DMS Assets folders and the Library Files and Images folders are identical across the servers in the LB configuration. In addition, the Refresh screen ensures that the contents of the `siteroot\Templates` and `siteroot\Workarea` folders are identical across servers.

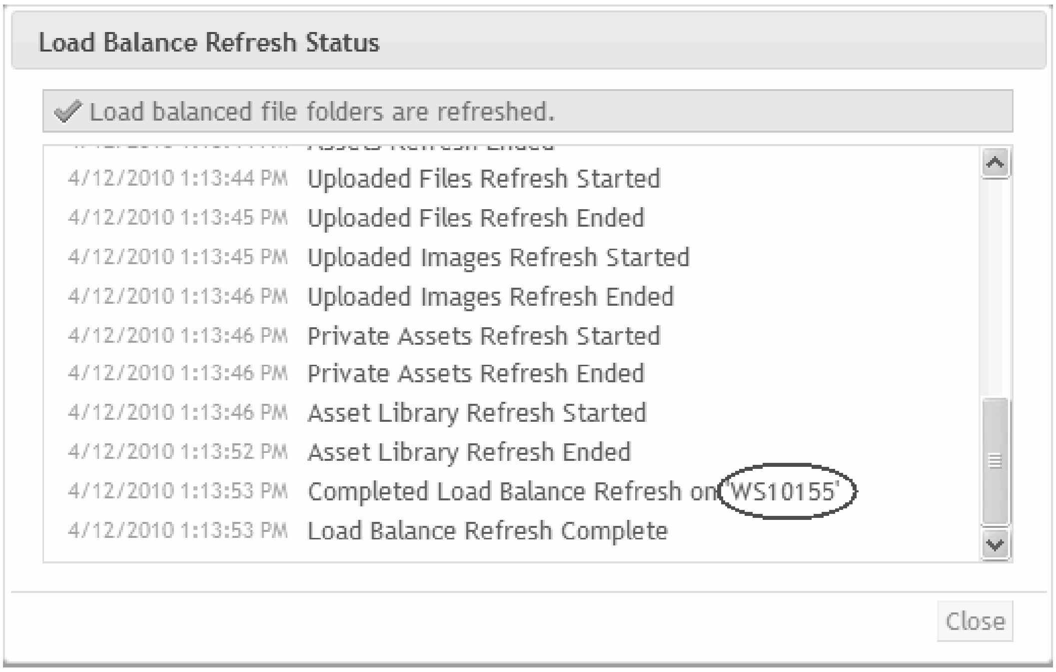
NOTE: For load balancing refresh to work properly, open Port 8732 on load balanced servers.

To refresh load balanced files:

1. **Workarea** > **Settings** > **Configuration** > **Load Balancing**.



2. Click **Start**. A status screen appears.



3. Verify that the status screen shows servers you expect to be refreshed. Server name *WS10155* is circled in the example.

IMPORTANT: If you click **Start** and the screen quickly returns and files do not refresh, or if a server is missing from the status list, check Load Balancing settings in `Ektron.ASM.EKtronServices40.exe.config`.

4. When finished viewing the status, click **Close**.

Load-balancing status

PREREQUISITES

- You must be a member of the Administrators group to access the Load Balancing screen.
- Your Ektron license key contains a load balance component

To check the load balancing status:

1. **Workarea** > **Settings** > **Configuration** > **Load Balancing**.
2. Click the toolbar button ( ). The status screen shows either the previous refresh or the current refresh in progress

Setting up a user for the Ektron database

The installation automatically sets up user permissions based on data collected during setup. However, if you have issues with user permissions, this section describes how to install manually.

NOTE: If you are using SQL Authentication, you only need to set up the SQL user. If you are using Windows Authentication, you need to set up IUSR and an IIS_WPG or Network Service user.

1. In the SQL Server Management Studio, select **Security > Logins**.
2. Right click and select **New Login**.
3. On the Login dialog, click **Search** to the right of the **Login name** field. Network Service
4. Select your server.
5. Enter **ASPNET**, **IIS_WPG**, or **Network Service** user (depending on your Windows version).
6. Click **Add** then **OK**.
7. Select your Ektron database. Then, assign permission to read and write to that database.
8. Run the grant permission script.

   NOTE: Before doing this, review your users and their permissions. Adjust as necessary for your configuration. Also, if you use Windows Authentication and all users are domain users (and the database administrator wants it this way), you may not have to perform this step.

   a. Open SQL Server Profiler.
   b. Choose **File > Open**.
   c. Open `C:\Program Files (x86)\Ektron\CMS400v`*nn*`\Utilities\SiteSetup\Database\cms400_permissions.sql`. (*nn* represents the release number)
   d. Within that file, replace `[MACHINENAME or DOMAINNAME\USERNAME]` with your domain name, backslash (\), and ASPNET (the ASP.NET machine account). For example, `[ws10080\ASPNET]`.

      NOTE: If you are using Microsoft Windows 2003 Server or Microsoft Widows Vista, the user is `IIS_WPG`. For example, `[ws10080\IIS_WPG]`. If you are using Microsoft Windows 2008 Server, the user is `Network Service`.

   e. Click **Execute Query** ( ).
   f. Replace the text between square brackets with your domain name, backslash (\), and the IIS Internet Guest Account. For example, `[ws10080\IUSR_ws10080]`. Click **Execute Query** ( ).
   g. If using SQL server authentication, replace the text between square brackets with the SQL server authentication name only. Do not include the domain name. Click **Execute Query** ( ).

Enabling email notification

Microsoft's SMTP service can be set up to send an email that notifies a user when a task (such as approving a content block) was performed or needs to be performed.

This section explains how to enable email notification in Ektron.

To process email, Ektron uses CDOSYS. Using Simple Mail Transport Protocol (SMTP) and the Network News Transfer Protocol (NNTP) standards, CDOSYS enables Windows applications to route email and USENET-style news posts across multiple platforms. CDOSYS lets authors create and view sophisticated emails using HTML and data sources.

NOTE: If CDOSYS is not installed on the SMTP email server, it tries to use the CDONTS mail server protocol.

For CDOSYS to work, set up the SMTP server on your Ektron server or a remote system that sends and receives email. It is good practice to run SMTP on a server separate from your Ektron server. However, your Ektronserver must relay email messages to your SMTP server.

NOTE: To access an SMTP server on a local or remote system, consult your organization's email administrator.

- **Local**. Before setting up an SMTP server locally, install IIS. Below are examples of SMTP server settings on a local system.

```
“ek_SMTPServer" value=“localhost”
“ek_SMTPServer" value=“127.0.0.1”
“ek_SMTPServer" value=“myname”
```

- **Remote**. Set up an SMTP server on a remote system. Below are examples of SMTP server settings on a remote system.

```
“ek_SMTPServer" value=“smtp.example.com”
“ek_SMTPServer" value=“example.com”
```

Use this article to configure SMTP in IIS7: Configuring SMTP E-mail in IIS 7.

Next, configure Ektron to use SMTP.

1. Open the *siteroot*/web.config file.
2. Find the section with these settings.

```
<!-- SMTP Server configuration -->
<add key="ek_SMTPServer" value="localhost" />
<add key="ek_SMTPPort" value="25" />
<add key="ek_SMTPUser" value="" />
<add key="ek_SMTPPass" value="" />
<add key="ek_SMTP_EnableSsL" value="" />
```

3. Set the `ek_SMTPServer` value.
4. Set `ek_SMTPPort` to the port your system will access to retrieve email. In most cases, the port is 25. If that is not the case, consult your organization's email administrator.
5. Set `ek_SMTPUser` to the username that is set up for the SMTP server to send and receive email. Typically, the username is an email address, such as `"ek_SMTPUser" value="yourname@example.com"`.

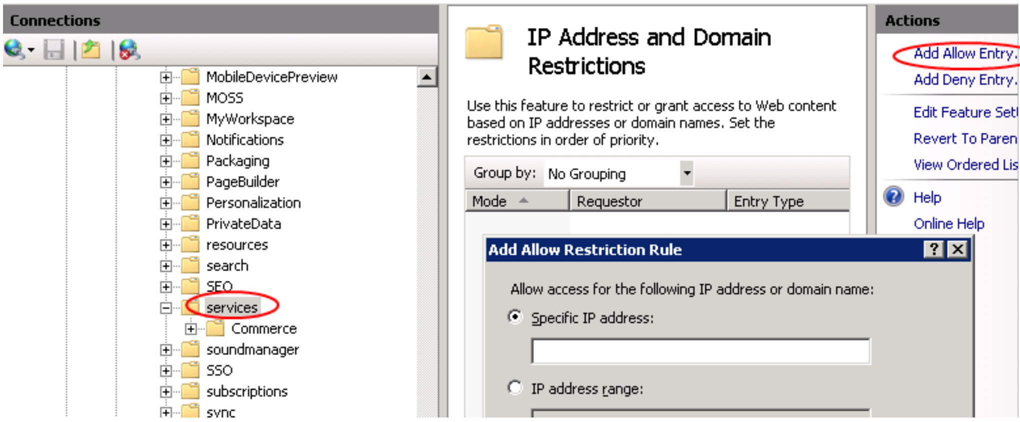
   This retrieval of email is based on how basic authentication is set up for you. You do not need a username when using a local SMTP server. Check with your system administrator for details. If you are using a remote system for accessing email, you must provide an authenticated username before you can send or receive email.

6. Set `ek_SMTPPass` to the password set up for the SMTP server to send and receive email. This password is based on basic authentication. Ektron only accepts encrypted passwords.
7. To encrypt the password, use Ektron's password encrypting tool.
   a. Open `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities`
   b. Run `EncryptEmailPassword.exe`. The Encrypt Utility dialog appears.

   c. Enter your SMTP password in the **Text** field.
   d. Click **Encrypt**. The screen displays an encrypted password.
   e. Copy the encrypted password and paste it into the `web.config` file's `"ek_SMTPPass" value`.
8. Set `ek_SMTP_EnableSsL` to `true`.
9. Set **IP Address and Domain Restrictions** by following these steps. See also: https://portal.ektron.com/kb/10234/.
   a. On your Web server, open IIS.
   b. Click your website **> workarea > services**.
   c. Click **IP Address and Domain Restrictions** in the right pane.

   NOTE: If you do not see this option, enable it through your server's Roles, or by adding it as a Windows feature.

   d. Click **Add Allow Entry** for IP addresses or the IP address range that will connect to the server to access the services APIs. Add all IPs for each server, not just the primary.



e. Repeat steps b-d for the **workarea > webservices** folder and the `/workarea/ServerControlWS.asmx` file.

> **NOTE:** To access the features for the ServerControlWS.asmx file:
> 1. Right click the Workarea folder and select **Switch to Content View**.
> 2. Locate the ServerControlWS.asmx file.
> 3. Right click the file and select **Switch to Features View**.
> 4. Open the **IP Address and Domain Restrictions** feature.

Using Google as an SMTP server

If you want to use smtp.google.com as an SMTP server, use TLS encryption and port 587.

You cannot use implicit SSL. This is because .Net Framework does not support implicit SSL which, by default, uses port 465. See also: SmtpClient.EnableSsl Property.

SMTP error messages

When submitting content to an approval process, if you get an error message listed below, it is generated by the SMTP server on which you set up the mail system, *not* by Ektron.

- The Transport failed to connect to the server. [CBR SendMail R1] [CBR R65] [DIO R 36]
- The server rejected one or more recipient addresses. The server response was: 550 5.7.1 Unable to replay for yourname@example.com [CBR SendMail R1] [CBR R1] [DIO R36]

Automatic email notification

Ektron's automated system sends email to users when an action has been, or needs to be, performed. See also: *Customizing Ektron email with tokens* on the next page.

Email is generated when any of the following content actions takes place.

- Submitted to be published—email sent to next approver
- Submitted to be deleted—email sent to next approver

- Published to website—email sent to author
- Declined to be published or deleted—email sent to author

To be notified of these actions, the following must be set:

- In the Application Setup screen
  - a valid **System E-Mail Address** was entered
  - the **Enable Sending of System Notification Email** box is checked

    See also: *General tab* on page 122.
- In the Edit User screen, for each user to receive notification email
  - a valid **E-Mail Address** was entered
  - the **Disable Receiving of Workflow and Task Email** box is unchecked

    See also: *Managing users and user groups* on page 1439.

The Tasks feature also has automatic email notification. See *Setting up task types and categories* on page 1343.

Customizing Ektron email with tokens

Ektron can send email notification to users, informing them that actions have taken place or are requested of them. For example, a content contributor receives an email that the contributor's content was published. These emails are stored in resource files, where each email consists of one string for the subject and one for the body. To learn about editing the resource file, see *Translating the Workarea* on page 1431.

Each message is called in the presentation layer by its message title. Ektron does not support HTML email, however the message text is fully customizable.

The body of an email can include tokens, located between **@** symbols. Ektron replaces them with the information for that instance of the email. For example, **@appContentTitle@** in the following sentence is replaced with the email's title.

- Before: The content "**@appContentTitle@**" has been deleted.
- After: The content "Home Page Content" has been deleted.

You can customize the emails, move the tokens, add text, rewrite and reorganize.

- Before: "**@appContentTitle@"** has been deleted from the XYZ website.
- After: "About Us" has been deleted from the XYZ website.

Carriage Return/Line Feeds are represented by **@appCRLF@**. These cause the email to move down one line. For example:

- Before: The content was approved.**@appCRLF@**Thank you!
- After: The content was approved.

  Thank you!

Ektron email tokens

Ektron email tokens are specialized for the type of email message you need to send.

- Notify CMS users
  - **@appApprovalList@**. The current approval list that the content block must pass through.
  - **@appChangeDateTime@**. The date and time changes will be updated on the website.
  - **@appComment@**. Displays the comments for the content block.
  - **@appContentLink@**. The link to the content block on the website.

    NOTE: You must be logged in to see the changes.

  - **@appContentTitle@**. The title of the content block.
  - **@appCRLF@**. A carriage return.
  - **@appDeclinerFirstName@**. The first name of the user who declined the content block.
  - **@appDeclinerLastName@**. The last name of the user who declined the content block.
  - **@appDeletionDateTime@**. The date and time the content will be deleted from the website.
  - **@appEmailFrom@**. The address of the email sender.
  - **@appEmailTo@**. The address of the email recipient.
  - **@appFolderPath@**. The location of the content block in the Ektron folder tree.
  - **@appPassword@**. Displays the account password for ResetPassword and RequestResetPassword message types.
  - **@appSubmitterDateTime@**. The date and time the content block was submitted.
  - **@appSubmitterFirstName@**. The first name of the user who submitted the content block.
  - **@appSubmitterLastName@**. The last name of the user who submitted the content block.
- Notify discussion board users—Discussion board email.
  - **@appForumUrl@**. The forum’s URL.
  - **@appHostUrl@**. The host site’s URL.
  - **@appPosterDisplayName@**. The display name of the person who posted.
  - **@appPosterId@**. The integer ID of the person who posted.
  - **@appPosterProfileUrl@**. The profile URL for the person who posted.
  - **@appPostMessage@**. The text of the message posted to the discussion board.
  - **@appPostUrl@**. The URL of the post on the website.
  - **@appRecipientDisplayName@**. The display name of the email recipient.
  - **@appRecipientEmail@**. The email address of the email recipient.
  - **@appRecipientFirstName@**. The first name of the email recipient.

- **@appRecipientId@**. The email recipient’s integer ID.
- **@appRecipientLastName@**. The last name of the email recipient.
- **@appTopicId@**. The integer ID of the topic.
- **@appTopicTitle@**. The title of the topic.

- Invite users to participate in a community group—Community group email.
    - **@appFriendDisplayName@**. The recipient's name.
    - **@appFromUserDeleted@**. Token message is from a user that was deleted.
    - **@appFromUserDisplayName@**. The name of the user from whom the private message was sent.
    - **@appFromUserID@**. The ID of the user from whom the private message was sent.
    - **@appGroupName@**. The group a person is being invited to join.
    - **@appInvitedEmail@**. The recipient's email address.
    - **@appInviteId@**. Appends the invite ID to the registration URL. For example:

      Click `<a href=http://www.example.com/register.aspx&fInvId=@appInviteId@>here</a>` to accept.
    - **@appMessage@**. The Message field of the private message (message body text).
    - **@appOptionalText@**. Text a user types into the **Optional Message** box on the Invite server control.
    - **@appPrivateMessageID@**. The CMS ID for the particular private message.
    - **@appSenderName@**. The sender of the invitation.
    - **@appSubject@**. The Subject field of the private message.
    - **@appToUserDisplayName@**. The name of the user receiving the message.
    - **@appToUserID@**. User ID of the user receiving the message.
    - **@appToUserMessageID@**. The CMS ID of the recipient's message object.
- Notify a subscription list of users through a Web Alert—Web alert email.
    - **@appComment@**. The comments for the content block.
    - **@appContentLink@**. The link to the content block on the website.

      NOTE: You must be logged in to see the changes.
    - **@appContentTitle@**. The title of the content block.
    - **@appContentURL@**. The URL of the content, from the quicklink and domain.
    - **@appCRLF@**. A carriage return. Moves text down one line.
    - **@appSubmitterFirstName@**. The first name of the user who submitted the content block.

- **@appSubmitterLastName@**. The last name of the user who submitted the content block.
- **@appSubscriptionNames@**. Comma separated list of subscriptions that a user selected.

  You can insert these membership tokens into the confirmation message.

  - **@appActivateId@**. Account ID
  - **@appAvatar@**. Avatar
  - **@appDisplayName@**. Display name
  - **@appEmail@**. email address
  - **@appFirstName@**. First name
  - **@appLastName@**. Last name
  - **@appSignature@**. Signature
  - **@appUserName@**. UserName

email notification tokens

The list shows tokens you can use to customize email messages. When the email is sent, the corresponding description replaces the token.

- **@appApprovalList@**. The current approval list that the content block must pass through.
- **@appChangeDateTime@**. The date and time changes will be updated on the website.
- **@appComment@**. Displays the comments for the content block.
- **@appContentLink@**. The link to the content block on the website.

  NOTE: You must be logged in to see the changes.

- **@appContentTitle@**. The title of the content block.
- **@appCRLF@**. A carriage return.
- **@appDeclinerFirstName@**. The first name of the user who declined the content block.
- **@appDeclinerLastName@**. The last name of the user who declined the content block.
- **@appDeletionDateTime@**. The date and time the content will be deleted from the website.
- **@appEmailFrom@**. The address of the email sender.
- **@appEmailTo@**. The address of the email recipient.
- **@appFolderPath@**. The location of the content block in theEktron folder tree.
- **@appPassword@**. Displays the account password for ResetPassword and RequestResetPassword message types.
- **@appSubmitterDateTime@**. The date and time the content block was submitted.

- **@appSubmitterFirstName@**. The first name of the user who submitted the content block.
- **@appSubmitterLastName@**. The last name of the user who submitted the content block.

Default Ektron email messages

The following messages are used if basic workflow is applied to content. To view the messages with advanced workflow, see *Notifying users of advanced workflow activities* on page 707.

- Approved Content Awaiting Go Live Date
  Message Title: content changes approved.
  Message Text: Content changes have been approved.
- Approved Content Published Immediately
  Message Title: content has been changed.
  Message Text: Content changes have been made.
- Decline Approval Request
  Message Title: approval request declined.
  Message Text: Content approval request declined.
- Deletion of Content Approved
  Message Title: content deletion approved.
  Message Text: Deletion of content has been approved.
- Immediate Deletion of Content
  Message Title: content has been deleted.
  Message Text: Content has been deleted.
- Send Approval Message
  Message Title: request for approval.
  Message Text: Request for content approval.

Sending instant email

In addition to automatic email, Ektron lets you email a user or user group from many screens. An email icon ( ) next to a user or group name or on the toolbar indicates your ability to do this. Screens in the following features support instant email.

- Tasks
- Approvals
- Reports
- User groups

When you click one or more user/group names then the toolbar's email icon, a screen appears.

NOTE: The email software must be configured for your server. See *Enabling email notification* on page 98.

When the email screen appears, the following information is copied from Ektron into the email.

- **To**. User you selected to receive email. If the user does not have a valid email address, an error message appears. If you then insert a valid address, the email is sent. If you specify a group to receive the message, as long as one group member has a valid email address, all group members with valid addresses receive the email. You can edit and add recipients.
- **From**. User signed on to Ektron. You cannot edit this field.
- **Subject**. If the email message is linked to content, its title appears. You can edit this field.
- **Body of message**. If the email message is linked to content, a content link appears. You can edit this field.

Managing logins and passwords

This section describes how to log in and out, restrict login attempts, and manage passwords.

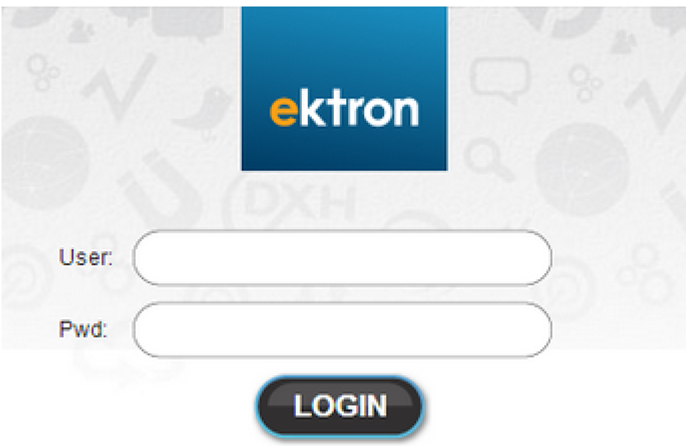
Logging into an Ektron website

PREREQUISITE

- URL (Web address) of your website. Your system administrator provides this.
- Username and password

To log into an Ektron site:

1. In a Web browser, enter the URL of your Ektron website.
2. Click the **Login** button. The Login dialog box appears.



3. Enter your username and password.

   If you are using an Ektron sample site, you can use any of 3 standard users that demonstrate Ektron's flexible user-permissions model.

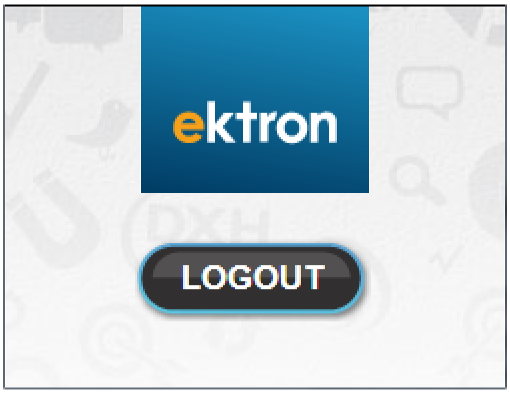
   - **Administrator**. Username: `admin`; Password: `????`; Permissions: All

     NOTE: When Ektron is installed, you are prompted to change the admin user's name and password.

   - **Standard user**. Username: `jedit`; Password: `jedit`; Permissions: Basic (for example, add/edit content, manage library files, and so on)
   - **Membership user**. Username: `jmember`; Password: `jmember`; Permissions: Read-only permission to private content
4. Click the **Login** button. The Web page appears. See also: *Managing content* on page 591.

Logging out

1. Click **Logout** from the content menu, or on the Web page. The Logout confirmation box appears.



2. Click **Logout**. You return to the Web page from which you logged out. However, it is in standard view, not Ektron view.

Restricting login attempts

Ektron can lock out a user after 5 unsuccessful attempts to log into one computer. You control login security via the `ek_loginAttempts` element in the *siteroot*`/web.config` file.

Possible values for `ek_loginAttempts`.

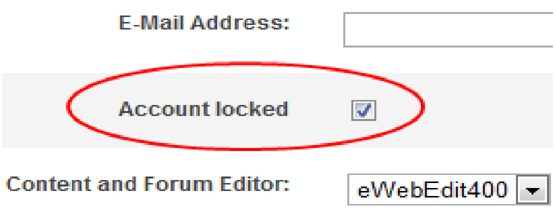
- 1 through 254. The number of unsuccessful login attempts after which a user is locked out
- 0. Lock out all users
- -1. Disable feature; unlock all locked users
- -2. Lock out Ektron users only; membership users can log in

If a user unsuccessfully tries to log in more than the specified number of times, an error appears: **The account is locked. Please contact your administrator**. After that happens, even if the user enters the correct password, the user is locked out.

NOTE: You can change the error message text in the resource file. See also: *Translating the Workarea* on page 1431.

Unlocking a locked account

When an account is locked out, the **Account Locked** field is checked on the Edit User screen.



To unlock the account, an administrator user (or a user assigned to the User Admin role) accesses the Edit User screen and unchecks the box. At this point, the user can login.

NOTE: To unlock *all* users, open *siteroot*/`web.config` and set `ek_login Attempts` to **-1**.

Manually locking a user from logging on

You can use the **Account Locked** field to manually lock a user out of Ektron.

1. In the Workarea, go to **Settings > Users**.
2. Click the user then **Edit**.
3. Check the **Account Locked** field.

That user cannot login until either you uncheck the box or open *siteroot*/`web.config` and set `ek_login Attempts` to **-1**.

Preventing Ektron users from logging on

To lock out all Ektron users, open *siteroot*/`web.config` and set `ek_login Attempts` to **-2**. If you do, only membership users can log in.

NOTE: The builtin user cannot log in if `ek_loginAttempts` is set to **-2**.

Preventing all users from logging on

To lock out all users (including membership users), set the `ek_loginAttempts` element in the `web.config` file to **0**. If you do, no one can log in to Ektron until you change the value.

NOTE: The builtin user cannot log in if `ek_loginAttempts` is set to **0**.

Changing images used for logging in and out

You can change the images used for the login and logout buttons. To do so:

1. Move the new images to the following folder: *siteroot*\`Workarea\images\application`.
2. Open the `web.config` file in your website's root directory.
3. Change the images in this section of the file:

```
<add key="ek_Image_1" value="btn_close.png" />
<add key="ek_Image_2" value="btn_login.png" />
<add key="ek_Image_3" value="btn_login_big.png" />
```

NOTE: You must update the images and `web.config` whenever you upgrade Ektron.

Resolving a problem with the login screen

You may find that in certain browsers, the login screen occupies the entire browser window instead of just a small box. Browsers such as Internet Explorer 8 and Firefox have a feature called tabs. When the login window pops up, it may appear as a new tab. You can change this behavior by turning off tabs within the browser.

Managing passwords

This section explains various aspects of managing passwords.

Editing the builtin username and password

WARNING! Use the builtin user only to correct a bad or expired license key. It is not designed for regular Ektron operations, such as editing content.

The builtin user is an emergency user to use if you cannot log into Ektron. The builtin user can log in to Ektron whether or not Active Directory or LDAP is enabled.

If you log into the Workarea as the builtin user, you can access only the following screens on the **Settings** tab.

- Active Directory
- Asset Server Setup
- Setup
- User
- User Group

If the builtin user password was changed and you don't know it, you cannot log in. In this case, use the BuiltinAccountReset.exe utility, which resets the username/password to `builtin/builtin`. This utility is located in `C:\Program Files (x86)\Ektron\CMS400`*`versionnumber`*`\Utilities`.

The builtin username and password are entered during installation. You can change them on Ektron's setup screen.

PREREQUISITE

You are a member of the Administrators group.

1. From the Workarea, choose **Settings > Configuration > Setup**. The Application Setup screen appears.
2. Click **Edit**.
3. Locate the **Built In User** fields.
4. Change the username or password or both.
5. Click **Update**.

Ektron's password security policy

If you use the Workarea or the API to add a CMS or membership user, or if you change an existing user's password, Ektron enforces a security policy. By default, the policy enforces these criteria:

- at least 5 alphabetical and numeric characters
- at least one uppercase letter

You can modify the criteria by editing the **Regex Expression** tab on the Application Setup screen. See also: *Password Regex tab* on page 126.

IMPORTANT: This policy is new as of Ektron Release 9.10. If you upgrade from an earlier version, this policy does not affect existing users' passwords.

Enforcing a password change every 90 days

Ektron has a security feature that forces an administrator or user with the Commerce Admin role to change the password at least every 90 days. This feature is only enabled if the `ek_ecom_ComplianceMode` key in the site's `web.config` file is set to `true`.

If such a user goes 85 days without changing the password, a dialog appears upon log-in, asking to change the password. If the user does not want to, click **Skip**. The user can repeat this for the next 5 days. After 90 days since the password was entered, the user *must* enter a new password before he or she can log in.

Enforcing log in after time of inactivity

Ektron has a password security feature that automatically logs out an administrator or user with the Commerce Admin role after 15 minutes of inactivity. Activity is based on requests made to the server.

This feature is enabled if the site's `web.config` file's `ek_ecom_ComplianceMode` key is set to `true`. In addition, if you are using *IIS7*, the `<add name="EkUrlAliasModule"...` line in the following code needs to appear between the `<modules>` tags in the `web.config` file. This line is a part of the default install—make sure it has not been removed.

```
<modules>
  <add name="MyDigestAuthenticationModule"
type="Ektron.ASM.EkHttpDavHandler.Security.DigestAuthenticationModule,
    Ektron.ASM.EkHttpDavHandler" />
```

```
  <add name="ScriptModule"
    type="System.Web.Handlers.ScriptModule, System.Web.Extensions,
    Version=1.0.61025.0, Culture=neutral,
    PublicKeyToken=31bf3856ad364e35" preCondition="integratedMode" />
  <add name="EkUrlAliasModule" type="UrlAliasingModule"
    preCondition="integratedMode" />
</modules>
```

Enforcing a minimum password

Ektron has a password security feature that forces an administrator or user with the Commerce Admin role to use at least 7 characters in a password. Further, the password must contain at least one alphabetic and one numeric character.

This feature is enabled only when the `ek_ecom_ComplianceMode` key in the site's `web.config` file is set to `true`.

Enforcing a no-match password

Ektron has a security feature which ensures that when an administrator or user with the Commerce Admin role enters a new password, it does not match that person's previous 4 passwords. This feature is enabled only if site's `web.config` file has the `ek_ecom_ComplianceMode` key is set to `true`.

You can set `ek_ecom_PasswordHistory` to a number higher than 4 if you want a higher level of security. If you set this key to less than 4 and the `ek_ecom_ComplianceMode key` is set to `true`, Ektron enforces 4.

Creating a custom password strategy

The Ektron password validation provider lets developers create custom password validation strategies. These providers can enforce custom password rules inside the system, beyond the out-of-box capabilities.

This section explains how to create a custom password validation provider for Ektron.

1. Create a class library project in Visual Studio.
2. Import the namespaces you need. Add references to:
   - Ektron.Cms.Commerce
   - Ektron.Cms.Common
   - Ektron.Cms.ObjectFactory
   - Microsoft.Practices.EnterpriseLibrary.Validation.dll
   - System.Configuration
   - Ektron.CMS.User
   - Ektron.CMS.DataRW
   - Ektron.Cms.Contracts
3. Add the following `using` statements.

```
using System;
using System.Collections;
using System.Configuration.Provider;
```

```
using Microsoft.Practices.EnterpriseLibrary.Validation;
using Ektron.Cms;
using Ektron.Cms.Common;
using Ektron.Cms.Commerce;
using Ektron.Cms.Commerce.PasswordValidation.Provider;
using System.Collections.Generic;
using System.Text;
using System.Text.RegularExpressions;
```

4. Change the namespace to `Ektron.Cms.Extensibility.Commerce.Samples`, rename your class to `CustomPasswordProvider`, and inherit from the `Ektron.Cms.Commerce.PasswordValidation.Provider.PasswordValidationProvider` class and the `Ektron.Cms.Commerce.IPasswordValidation` interface.

```
namespace Ektron.Cms.Extensibility.Commerce.Samples
{ public class CustomPasswordProvider :
  Ektron.Cms.Commerce.PasswordValidation.Provider.PasswordValidationProvider,
  Ektron.Cms.Commerce.IPasswordValidation
```

5. Add the following constructor.

```
#region constructor, member tokens
public CustomPasswordProvider() { }
#endregion
```

6. Add `GetRegexFor` methods required by the `PasswordValidationProvider` base class. These methods return the RegExs that will validate passwords in Ektron for specific user types.
   - **GetRegexForMember.** Returns one or more regular expressions used for client side validation of *membership users*, along with corresponding error messages to be used when client-side validation fails.
   - **GetRegexForAuthor.** Returns one or more regular expressions used for client side validation of Ektron *authors*, along with corresponding error messages to be used when client-side validation fails.
   - **GetRegexForCommerceAdmin.** Returns one or more regular expressions used for client-side validation of *eCommerce administrators*, along with corresponding error messages to be used when client side validation fails.
   - **GetRegexForAdmin.** Returns one or more regular expressions used for client-side validation of Ektron *administrators*, along with corresponding error messages to be used when client side validation fails.

NOTE: This example enforces a minimal requirement for authors/members, and adds a length and diversity requirement for administrators.

```
#region public methods
public override string GetRegexForAdmin()
{ return "[/.{7}/, Password must contain at least seven characters]
    " + ",[/[0-9]+/,
  Password must contain at least one number]
    " + ",[/[a-zA-Z]+/,
  Password must contain at least one alphabetical character]
    " + ",[/^[^ \t'\"%#]+$/,
  Password cannot contain spaces, tabs, single-quotes,
```

```
    double-quotes, percent-signs, or pound-signs]";
}
public override string GetRegexForAuthor()
{ return "[/.{1}/, Password too short]" + ",[/^[^ \t'\"%#]+$/,
  Password cannot contain spaces, tabs, single-quotes,
    double-quotes, percent-signs, or pound-signs]";
}
public override string GetRegexForCommerceAdmin()
{ return "[/.{1}/, Password too short]" + ",[/^[^ \t'\"%#]+$/,
  Password cannot contain spaces, tabs, single-quotes,
    double-quotes, percent-signs, or pound-signs]";
}
public override string GetRegexForMember()
{ return "[/.{1}/, Password too short]" + ",[/^[^ \t'\"%#]+$/,
  Password cannot contain spaces, tabs, single-quotes,
    double-quotes, percent-signs, or pound-signs]";
}
#endregion
```

7. Implement the `ValidateFor` methods, which use the regexs to validate passwords. We use the generic function `Validate` to which we pass parameters.

```
public override ValidationResults
  ValidateForAdmin(string password)
  { return Validate(password, GetRegexForAdmin());
  }
public override ValidationResults
  ValidateForAuthor(string password)
  { return Validate(password, GetRegexForAuthor());
  }
public override ValidationResults
  ValidateForCommerceAdmin(string password)
  { return Validate(password, GetRegexForCommerceAdmin());
  }
public override ValidationResults
  ValidateForMember(string password)
  { return Validate(password, GetRegexForMember());
  }
protected ValidationResults
  Validate(string password, string regexErrorMessage)
  { ValidationResults results = new ValidationResults();
    string regex, errorMessage;
    string[] parts;
    string[] raw = regexErrorMessage.TrimStart('[').TrimEnd(']')
      .Split(new string[] { "],[" }, StringSplitOptions.None);
    foreach (string combined in raw)
    { parts = combined.Split(new string[] { "/," },
        StringSplitOptions.None);
      regex = parts[0].Trim('/');
      errorMessage = parts[1].Trim().TrimStart('"').TrimEnd('"');
      if (!Regex.IsMatch(password, regex))
      { results.AddResult(new ValidationResult(errorMessage,
        this, "", "", null));
      }
     }
  return results;
  }
```

8. Tell the system whether to enforce password expiration on users. There are 2 requirements.
    - **PasswordExpirationEnabled**. Enabled password expiration globally, which allows the RequiresPasswordExpiration to be called.
    - **RequiresPasswordExpiration**. Returns whether password expiration is enforced for a user.

> **NOTE:** The system handles password expiration dates. Setting **PasswordExpirationEnabled** and **RequiresPasswordExpiration** tells Ektron to check and enforce those values.

```
public override bool PasswordExpirationEnabled()
{ return RequestInformation.CommerceSettings.ComplianceMode;
}
public override bool RequiresPasswordExpiration(long userId)
{ return (userId == 1);
}
```

9. Build the project, and copy the assembly to the Ektron site's bin directory.
10. Register the provider, and direct Ektron to use it. The `*siteroot*/web.config` file lets you manage password providers within Ektron.
    a. Locate the `<passwordValidationProvider...>` tag in the `web.config` file.
    b. Add a reference to the class created earlier in the `<providers>` key.
    c. Change the `defaultProvider` attribute, as shown below.

```
<passwordValidationProvider defaultProvider="CustomPasswordProvider">
<providers>
  <add name="CustomPasswordProvider"
    type="Ektron.Cms.Extensibility.Commerce.Samples
      .CustomPasswordProvider, CustomPasswordProvider" />
</providers>
```

Logging in through Facebook

Facebook Login, an alternative to Ektron's standard login, lets users log in using their Facebook username and password instead of creating an Ektron username and password. Here is an example of Facebook Login control.

This control lets Membership and Ektron users log into an Ektron website. If users have an Ektron user profile, they can be prompted to link the Facebook username and password with that profile.

Facebook Login allows log in only—it provides no other Facebook features, such as viewing profiles or sending messages.

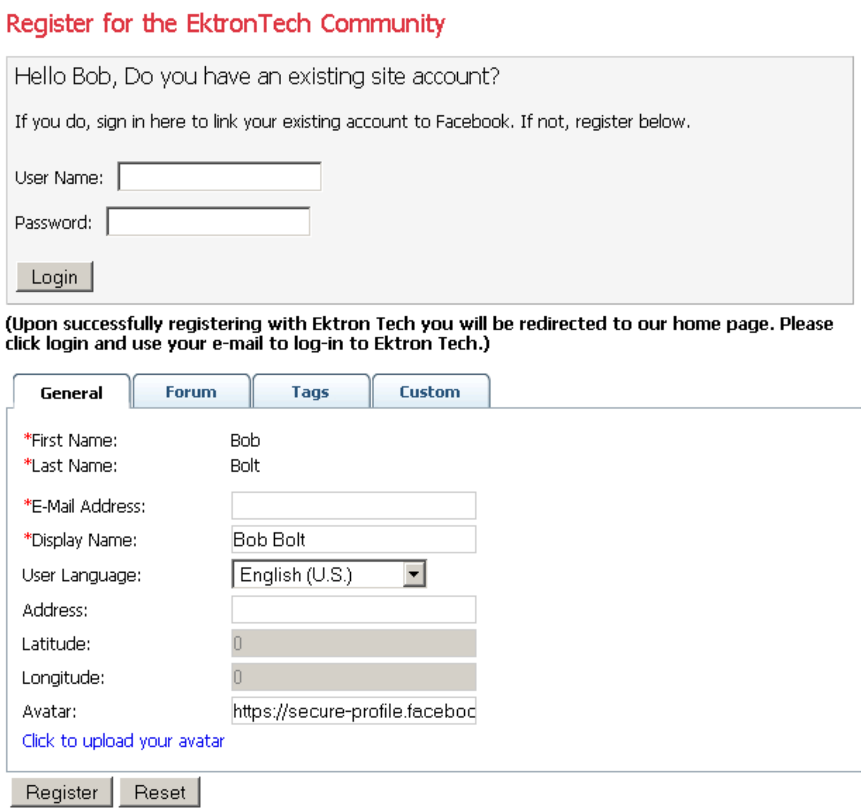
> **NOTE:** The Facebook Login feature does not support Active Directory.

The OnTrek starter site includes a samples of a Facebook Login.

NOTE: The user experience is enabled only after a developer sets up the feature. See also: *Setting up Facebook login* on the facing page.

If a user clicks a Facebook Login button but is not logged into Facebook, the following screen appears.

When you complete this screen or if you are already logged into Facebook, you are forwarded to a page that prompts you to register with or log into Ektron.



This screen asks if you have a membership account. If so, do you want to connect this Facebook username and password with the Ektron account? If you agree, you will access your membership account via the Facebook Login with Facebook credentials from now on. If you do not have a membership account, complete the lower half of the screen. This is the same screen that new members use to create Ektron accounts. From then on, you can click the Facebook Login button to log into Ektron using a Facebook username and password.

When you log out of Ektron, that action does not log you out of Facebook. Conversely, if a user logs out of Facebook, you are not logged out of Ektron.

NOTE: Facebook often caches information in your browser. If you see JavaScript errors or other odd behavior, clear the browser cache, close all browser windows, and try again.

Setting up Facebook login

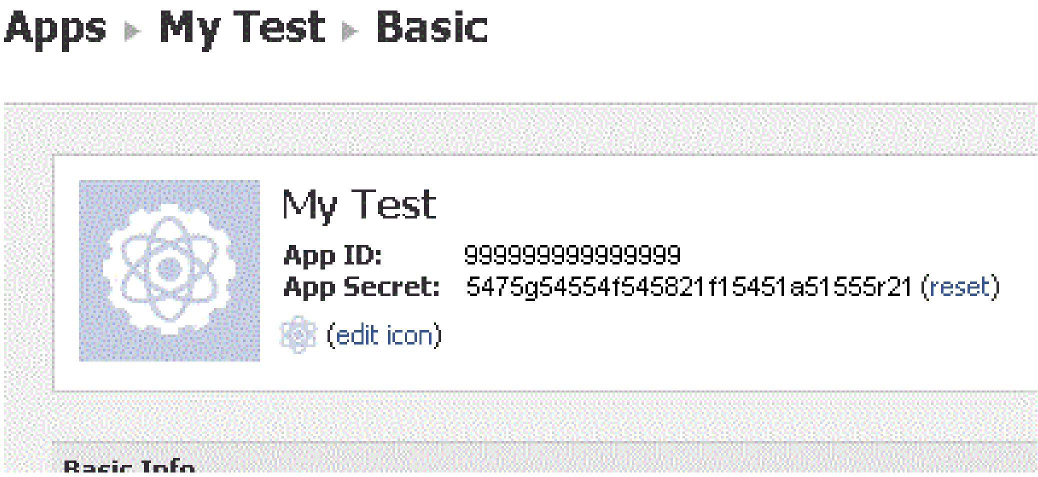
To set up the Facebook login feature:

Step 1: Connect Facebook to Your Ektron Website

Follow these steps to obtain Facebook keys, paste them into the `web.config` file, and identify your site to Facebook.

1. In you do not have one, create a Facebook account. Go to `www.facebook.com` and follow the sign up instructions.
2. Log in to the Facebook Developer site.
3. Click **+Create New App**.

4. Enter an **App Name** and **APP Namespace** for your application. The name cannot include `facebook` or any variations, such as `FB`. Click **Continue**. A new screen appears, showing your **App ID** and **AppSecret**.



5. Open your website's *root folder*/`web.config` file.
6. Copy the Facebook keys into these `web.config` elements.
   - **APP ID**. `ek_FacebookApiKey`
   - **App Secret**. `ek_FacebookSecret`

NOTE: Keys shipped in Ektron sample sites are for localhost. Also, make sure the Facebook keys were generated for the host header/URL to which you're applying them. And, if you are testing secure site setup, verify that the `web.config` element `ek_useSSL` is `true`.

7. Save and close `web.config`.

NOTE: After you update `web.config` with Facebook keys, wait a few minutes before logging into the Ektron site via the Facebook Login server control.

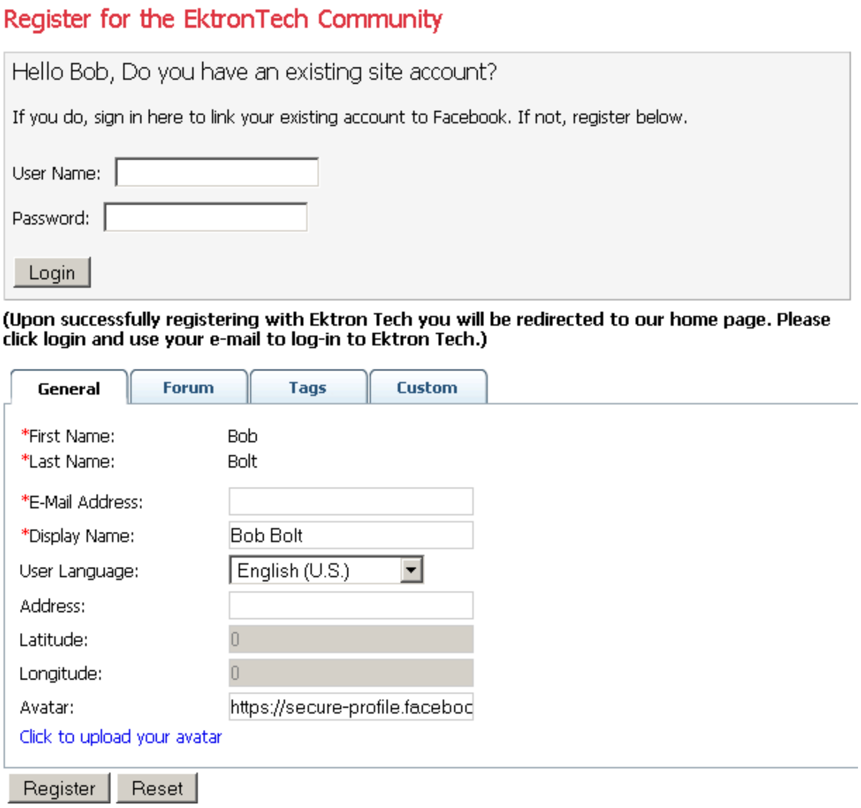
8. Return to the Facebook **Basic** screen.
9. Under **Select how your app integrates with Facebook**, click **Website**.
10. In the **Site URL** field, enter your website's URL.
    - for a public site, enter its URL. For example, **http://www.example.com**.
    - for a shared server or if you are accessing the site from a remote machine, use the IP address. As examples, **http://192.168.14.10**, **http://192.168.14.10/QA**
    - for a local server, use localhost. As examples, **http://localhost**, **http://localhost/EktronTech**
11. Save and close the Facebook screen.
12. After setting up your application, you can return to this screen at any time to view the keys, edit the **Site URL**, etc.

Step 2: Create or Modify a Facebook Login/Signup Page

A Facebook form appears if a user clicks a Facebook **Login** button and is not currently logged into Facebook.

The form is created by Facebook, not Ektron. You can customize parts of it, such as the title and site image, using Facebook's Application settings.

When the user completes the form, the user is forwarded to an Ektron form that prompts the person to register or log in to Ektron.



You specify which form appears via the Facebook Login server control's `SignupTemplate` property.

The logic to connect a Facebook user with an Ektron account (circled) is not part of the Facebook Login server control. However, sample code for that functionality is included in the Ektron Tech sample site's `register.aspx` page.

Alternative to redirecting to the signup form

If you do not want to redirect the user to a signup form after Facebook login, you can hook the `Ektron_FacebookNewMemberLoggedIn` JavaScript event and do whatever you want with it. For example, you could raise a modal dialog with a short signup form. .

Step 3: Place the Facebook login server control on a page

1. In Visual Studio, open the template onto which you want to place a Facebook Login server control. See also: Ektron Server Controls.
2. Drag and drop the control.
3. Use the following information to complete its properties.
   - **Authenticated** (String)
   - **FacebookButtonText** (String)

     Enter the Facebook Login button text. The default is **Connect with Facebook**.
   - **Hide** (Boolean)
   - **InstructionDetail** (String)

     Enter additional text that appears above the Facebook Login button. The default is **Sign in using your Facebook account.**
   - **InstructionHeader** (String)

     Enter text that appears above the Facebook Login button. The default is **Sign in using your Facebook account.**
   - **Language**
   - **SignupTemplate** (String)

     Enter the path to the template that appears after a user completes the Connect with Facebook screen.

You can customize the markup for the form using the LoginTemplate and LogoutTemplate server controls.

Using Facebook connect extension with the Targeted Content widget

Facebook Login lets you retrieve the following Facebook profile information, using Facebook Connect Extension.

- Age
- Gender
- Marital Status
- Likes
- Employment

See also: Creating Personalized Web Experiences with the Targeted Content Widget

Modifying setup information

PREREQUISITE

You are a member of the Administrators group.

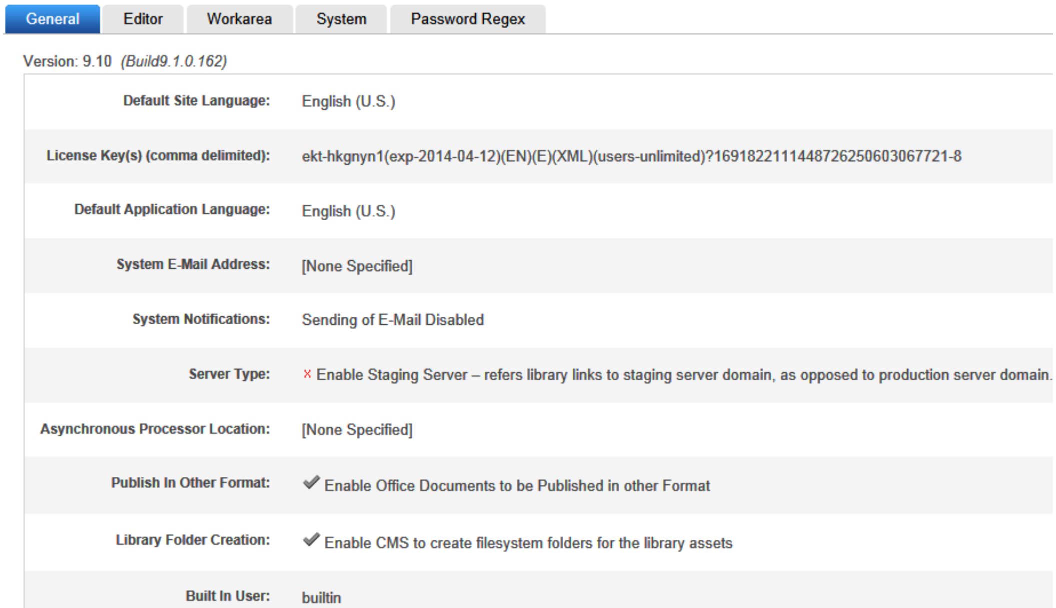
You must complete this before any user can access your Ektron website.

In **Workarea > Settings > Configuration > Setup**, you can enter or edit information for the Ektron website including:

- License keys
- Default language
- email notification
- Physical library folders on file server
- Builtin user information
- Editor options
- Work page size settings
- Password Regex

The Application Setup screen appears. Click **Edit** to modify the settings.

General tab



- **Version**. This number shows the Ektron version and build numbers. This number is important to know if you place a call to Ektron Support.
- **License Key(s)**. Enter the license key sent to you from Ektron.
- **Default Application Language**. Select a default language for Ektron. This user's language determines the screens and messages that appear in Ektron. In the user profile, you can set any user's language to **system default**. Each user set to system default uses the language assigned here.

  NOTE: Do not confuse the default application language with the ek_DefaultContentLanguage variable in `web.config`. For more information on that, see *Setting the default language* on page 1398.

- **System E-mail Address**. Enter a valid email address. This address will appear in the **From** field in the notification emails. See also: *Enabling email notification* on page 98.

- **Enable Sending of System Notification Email.** Check this box if you want notification emails to be sent when triggering actions occur. See also: *Enabling email notification* on page 98.
- **Server Type: Staging Server**. Check this box if you want your library links to refer to the staging server domain, as opposed to the production server domain. This would help you verify that the linked items exist on the staging server. See also: *Automatic multi-site setup* on page 87

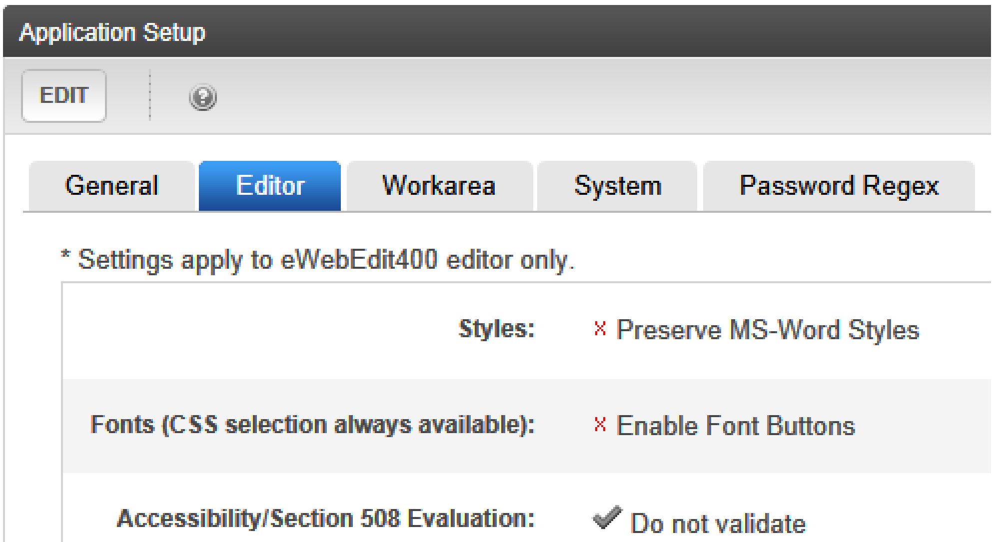
NOTE: Checking this box disables the Web Alerts feature on your server.

- **Asynchronous Processor Location**. If your site uses the Web Alerts feature, enter or update the location of the asynchronous processor Web services file. The default location is "[none specified]." See also: *Setting up message queuing and the asynchronous processor* on page 1371.
- **Enable CMS to create file system folders for library assets**. Check the box if you want to create physical folders on your file system server that match the Ektron library folder tree. See also: *Creating file system folders with Ektron* on page 127.
- **Builtin User**. Edit the username and/or password for the built in user. By default, the username and password combination is **builtin/builtin**.

WARNING! Ektron strongly urges you to change the default password assigned to the builtin user. Opportunities to do this are presented during installation and in the above field.

Editor tab

IMPORTANT: Editor tab settings apply only to the eWebEdit400 editor.

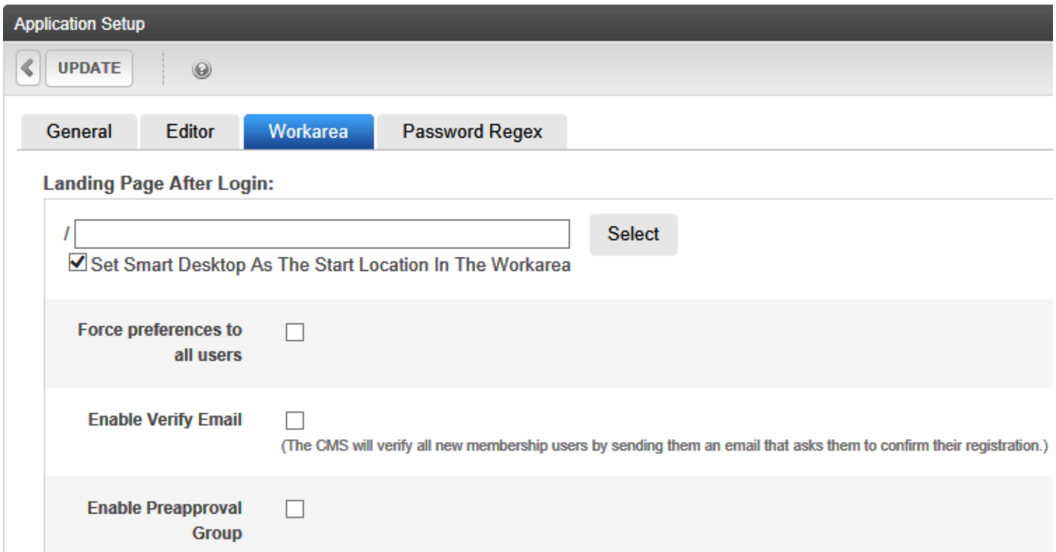


- **Preserve MS-Word Styles**. When Microsoft Word content is pasted into the editor, it removes some Word styles by default. Check this box if you want to prevent the editor from removing them.

NOTE: Ektron does *not* recommend enabling this feature.

- **Preserve MS-Word Classes**. Similar to styles, when Microsoft Word content is pasted into the editor, it removes some Word classes by default. Check this box if you want to prevent the editor from removing them.
- **Enable Font Buttons**. Checking this option displays the following font-related buttons on the editor toolbar:
    - Font Face
    - Font Size
    - Font Color
    - Font Background Color
- **Accessibility/Section 508 Evaluation**. If your editor is **eWebEdit400:**

Workarea tab



The following fields change the default Web page after log-in and the default Workarea page. The default values are automatically applied to all new users, and to all existing users when you upgrade. Normally, you can modify these values for any user via the Edit User screen. But, you can force these values on all users, removing the ability to personalize them.

- **Landing Page After Login**. If you want one page in your website to appear after users log in, enter the URL to that page. If you do, the landing page points to published content, *not* the Workarea. You can click **Select Page** to browse to a landing page. The last published version of the page appears. If the page has never been published, nothing appears.

  By default, the page from which the user logged in reappears.
- **IMPORTANT:** If you are logging in from the OnTrek sample site, this field is ignored. OnTrek has its own landing page after login, regardless of this

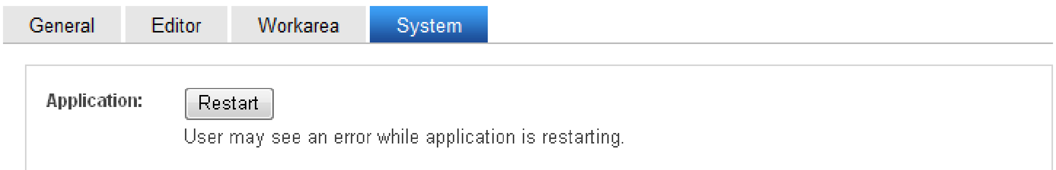
setting.

- **Set Smart Desktop as Start Location in the Workarea**. If you want the Smart Desktop to appear as soon as a user enters the Workarea, click this box. By default, the user sees the Smart Desktop after log in. If you leave this box blank, when a user enters the Workarea, the folder of the content specified in the user profile at the **Landing Page after login** field is displayed.
- **Force Preferences to all users**. To force these settings on all Ektron users, check this box. If you do, users can see the values in the user profile screen but not change them. If you leave this box blank, users can personalize these values in their User Profile.
- **Enable Verify Email**. Check this box if site visitors who complete the membership form are placed on the *Users Not Verified* list. Upon confirming their interest, these site visitors become membership users. If you do not check this box, site visitors who complete the membership form automatically become membership users. See also: *Allowing membership users to self-subscribe* on page 1510.

  IMPORTANT: When using the Checkout server control on an eCommerce site, the **Enable** setting must be unchecked. Otherwise, new users will receive an error message when they sign-up using this control. See also: Checkout.

- **Enable PreApproval Group**. Use this field to enable Automatic Task Creation. See also: *Setting up an automatic task for pre-approving content* on page 1356.

System tab



Use this button to clear Ektron's cache, which recycles the application pool. For example, you updated the `web.config` file but cannot yet see the changes.

Under certain circumstances, Ektron's support group may instruct you to click this button.

Administrators would use this button if they cannot access the hosting servers yet need to reset their website. The button is an alternative to submitting a request to their IT department or hosting company.

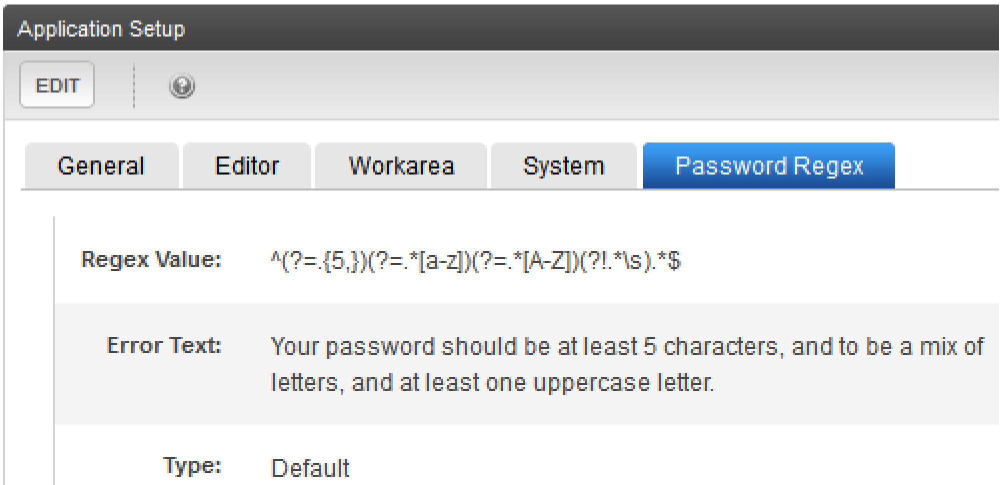
Impact on Ektron

After you click **Restart**, the first request takes longer than usual since the application needs to recompile. Subsequent requests should be processed normally.

To minimize the impact on site visitors, visit your home page immediately after the restart, so that your request is the first "hit."

See also: Managing Application Pools in IIS 7

Password Regex tab



Use the Application Setup screen's **Password Regex** tab to customize Ektron's password security policy, and the error text that appears if a user's entry does not conform to the policy. Ektron provides a default policy and error text. The default policy enforces these criteria:

- minimum of 5 alphabetical and numeric characters
- at least one uppercase letter

The password policy is enforced if either the Workarea or the API is used to add a CMS or membership user, or an existing user's password is changed.

Additional Password Policy Notes

- The policy is not enforced when using the Membership User Reset Password screen. See also: *Activating other membership actions* on page 1513.
- The policy is not enforced during installation, when you are prompted to enter a password for admin and builtin users. The policy is enforced if you later change those users' passwords.
- The policy is not enforced if you are using Active Directory. See also: *Using Active Directory with Ektron* on page 1472.

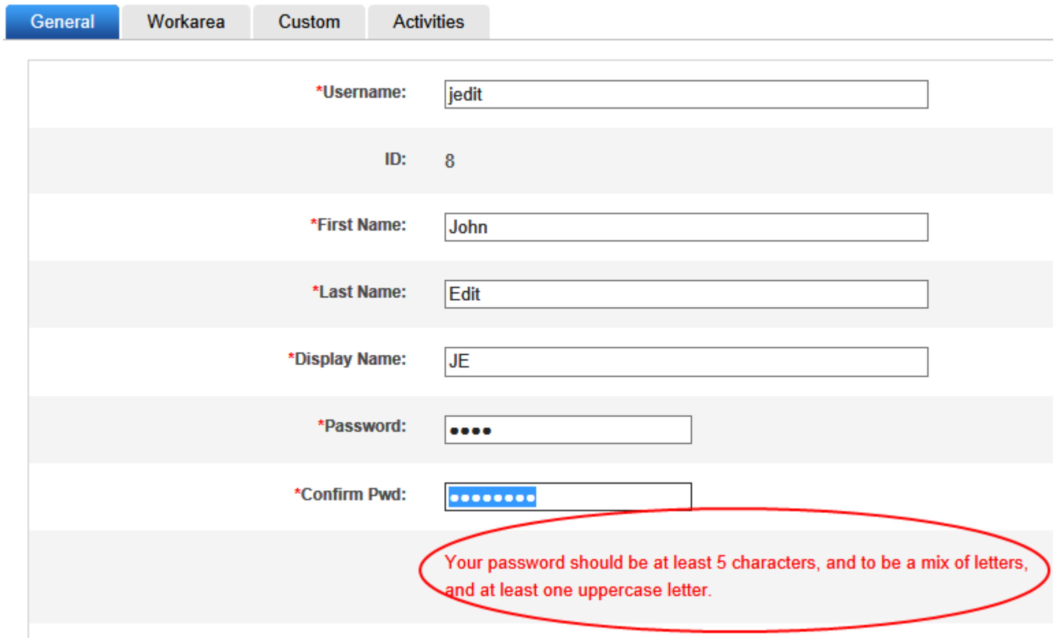
Customizing the password security policy and error text

PREREQUISITE

- Knowledge of RegEx.
- You are a member of the Administrators group.

To customize the password security policy:

1. Go to **Settings > Configuration > Setup > Edit > Password Regex**.
2. Change the **Type** drop-down to **Custom**.
3. If desired, edit the error text. This appears if a new password does not conform to the RegEx expression.



4. If desired, edit the RegEx expression.
5. Click **Update**.
6. Ektron recommends creating a new "dummy" user and entering passwords that both pass and fail the updated RegEx expression, to verify the expected behavior.

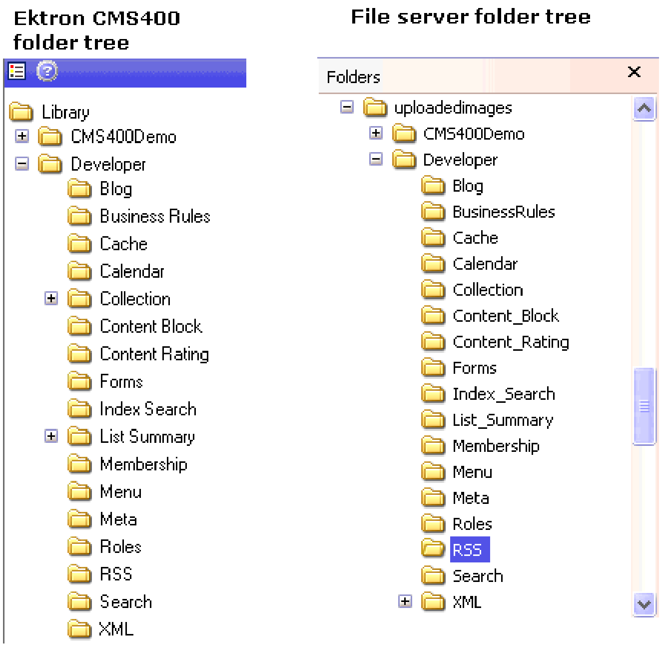
Restoring the default password RegEx and error text

To restore the default password policy and error text:

1. Go to **Settings > Configuration > Setup > Edit > Password Regex**.
2. Change the **Type** drop-down to **Default**.
3. Click **Update**.
4. Ektron recommends creating a new "dummy" user and entering passwords that both pass and fail the RegEx expression, to verify the expected behavior.

Creating file system folders with Ektron

If this option is enabled, each time you create a new content or library folder in Ektron, a corresponding physical folder is created on the file system to organize library files on your file server. The following image shows a library folder tree and its corresponding system folder structure.



NOTE: If you are upgrading, the installation does not create sample website folders on the file server. You must add these folders manually. However, all folders that you create are also created on the file server when enabled.

Handling background processing functions with the Ektron Windows Service

Ektron provides a Windows service (EWS) to handle the following background processing functions.

- *Balancing the load on your servers* on page 94
- *Bad link report* on page 982
- Scheduling Content to go live at a future time, and removal of content scheduled to expire.
- Applying Metadata to content: When a new metadata definition is created, the Windows service applies it to all content in the Ektron database. However, the metadata definition is only activated for the content when it is enabled for the content's folder.

Also, the EWS propagates updates that are made to the database connection string or the site path in the `web.config` file. The service copies the new value to the `data.config` and `sitedb.config` files, which are located in `C:\Program Files (x86)\Ektron\EktronWindowsservice40`. Any Ektron components that reference these values can retrieve the current information from these files.

The `data.config` and `sitedb.config` files are updated once each day at a time prescribed in the `updateTime` value in `C:\Program Files (x86)\Ektron\EktronWindowsservice40\Ektron.ASM.EktronServices.exe.config`. You can change this time.

WARNING! Do not edit the `data.config` and `sitedb.config` files. They are dynamically generated by Ektron. If these files have incorrect values, edit the `web.config` file, which is used to generate them.

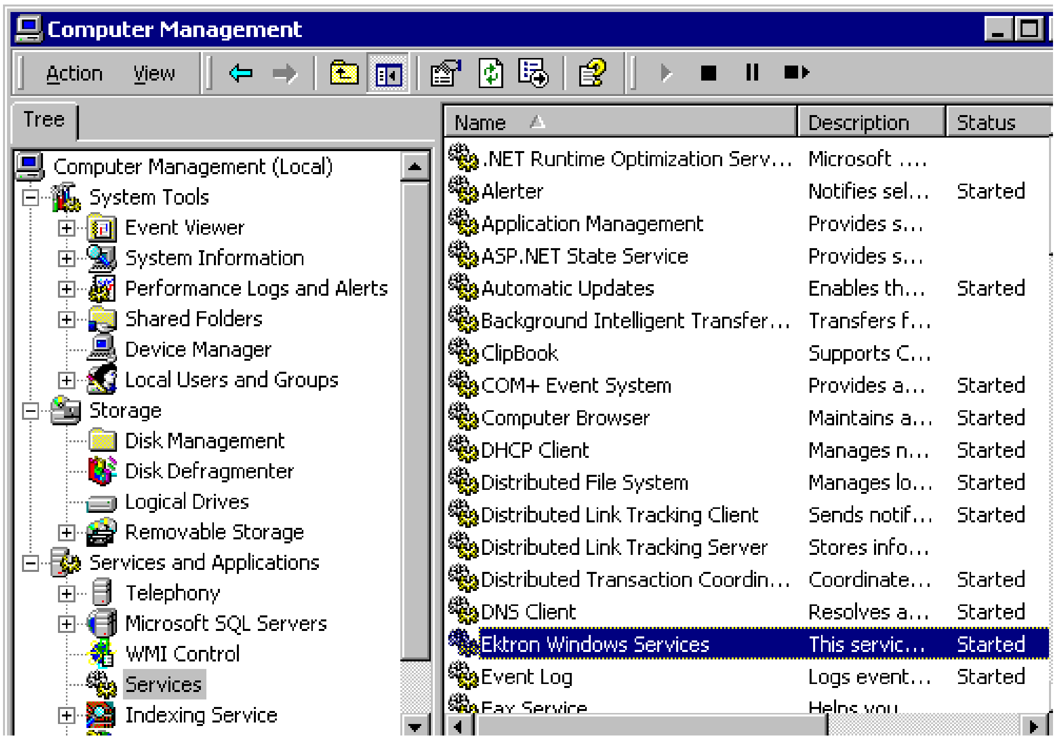
The EWS starts automatically when Ektron is installed, and again whenever the server is restarted.

To see the status of the service, go to **Start > Computer**, then right click and choose **Manage**.

- Windows 7: The Computer Management screen appears. Choose **Computer Management > Services and Applications > Services**.
- Windows 2008: The Server Manager screen appears. Choose **Server Manager > Configuration > Services**.

If you're using Windows 8 or 2012, press the **Windows** key () **/Q** then enter **Services**.

Look for **Ektron Windows Services**. You can see its status in the **Status** column.



On your file system, the EWS is located in `C:\Program Files (x86)\Ektron\EktronWindowsservice40`. Within that folder, the `Ektron.ASM.EktronServices.exe.config` file runs the EWS.

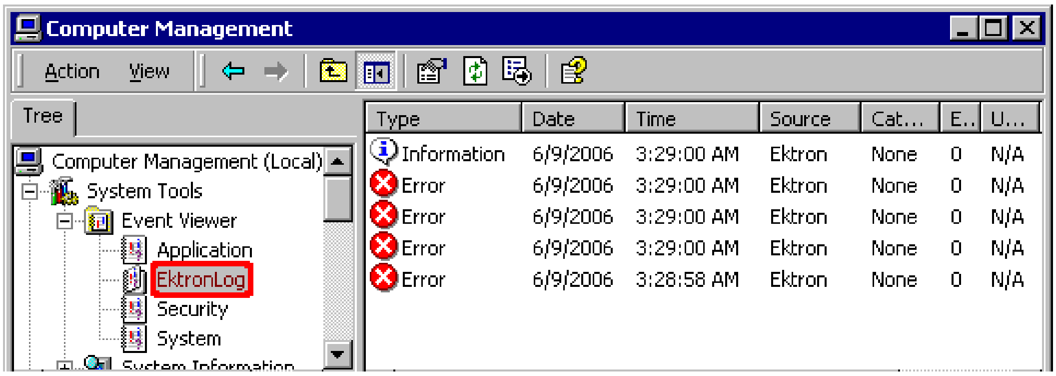
Additional resources

[Upgrading the Ektron Windows Service](#)

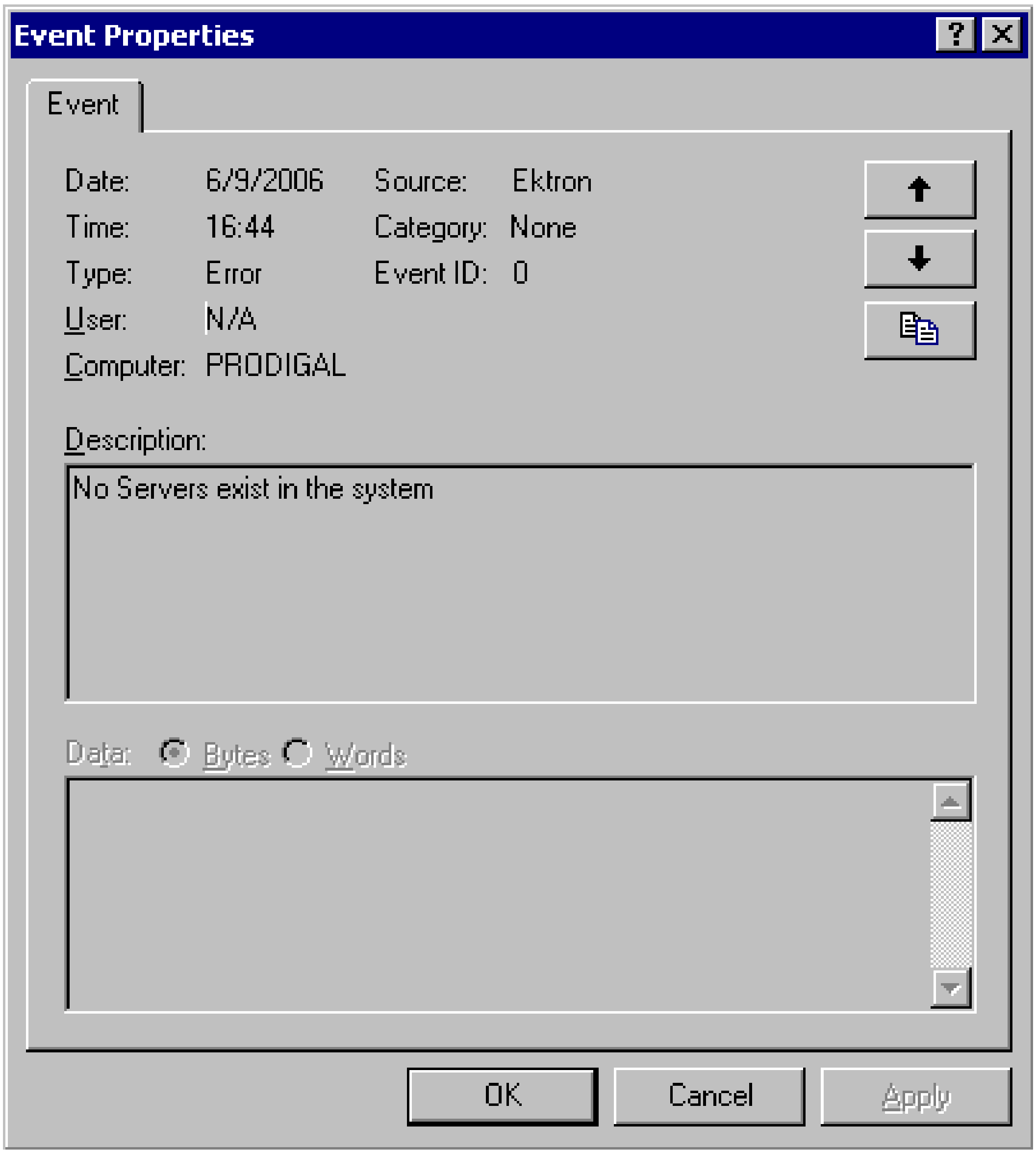
Viewing the EWS activity log

The EWS has an Activity Log that tracks all related events. To view detail for any event, double click it.

- Windows 7: **Computer Management > System Tools > Event Viewer > Ektron Log**
- Windows 2008: **Server Manager > Diagnostics > Event Viewer > Ektron Log**



A common source of errors is that the service cannot find Ektron sites, because they have not been created yet, as shown in the sample below.



Setting up an Ektron site to use Amazon BLOB storage

This section explains how to set up a local site to use Amazon BLOB storage. The resulting configuration stores assets in BLOB storage rather than the local file system.

This configuration also serves files from the BLOB store, by redirecting requests to the BLOB URL rather than the local system.

1. Create new bucket on Amazon.
   a. Name: **[ektronbucket]**
   b. Region: **[Asia Pacific (Singapore)]**

2. To install the package to your website project, run the **Install-Package AWSSDK** command.
   Ensure that the latest `AWSSDK.dll` file resides in the Ektron site's `bin` folder.
3. Modify your website's `web.config` file.
   a. Change the `unity.storage` section to match the sample below:
```
<section name="unity.storage"

type="Microsoft.Practices.Unity.Configuration.UnityConfigurationSection,
               Microsoft.Practices.Unity.Configuration,
         Version=3.0.0.0,
         Culture=neutral,
         PublicKeyToken=31bf3856ad364e35" />
```
   b. Define `unity.storage` as follows:
```
<unity.storage>
 <assembly name="Ektron.Storage"/>
 <assembly name="Ektron.Cloud"/>
 <namespace name="Ektron.Cloud.Amazon.Storage"/>
 <namespace name="Ektron.Storage"/>
 <container name="storageContainer">
   <register type="IFileService" mapTo="S3FileService"/>
   <register type="IDirectoryService" mapTo="S3DirectoryService"/>
 </container>
</unity.storage>
```
   c. Modify appsettings keys, or add them to match the sample below:
```
<add key="ek_CloudStorageType" value="AMAZON" />
<add key="BlobStorageName" value="ektronbuket" /> <!--bucket name-->
<add key="AWSAccessKey" value="*******" /> <!--bucket access key-->
<add key="AWSSecretKey" value="*********" /> <!--bucket secret key-->
<add key="AWSRegion" value="ap-southeast-1" /> <!--bucket region-->
<add key="AWSPublicRead" value="false"> <!--bucket block publicACL setting--
>
```
   d. Add the following to the `<modules>` section:
```
<add name="EkBlobModule" type="BlobRedirectModule"
preCondition="integratedMode" />
```
4. Delete all contents (except `web.config`) from the following folders on the Amazon vm.
   - [siteroot]\assets
   - [siteroot]\privateassets
   - [siteroot]\uploadedfiles
   - [siteroot]\uploadedimages
   - C:\assetlibrary\[sitename]

For eSync

1. Create 2 sites. Configure and run a successful eSync between them. Ensure that the profile is one way sync (Upload/Download).

2. Create a sync relationship from the local server to the remote server that has the CDN settings.
   a. Apply appropriate certificates to both sides.
   b. Make sure appropriate ports are open. See https://portal.ektron.com/kb/10123/.
   c. Make sure appropriate ports are open on the remote server network security group.
   d. Make sure you can access the remote server site from the local server.
3. Run the initial sync.

   At this point, the db sync should work, and assets will be uploaded. But, they will be uploaded to the local folder of the remote server, not the BLOB store. The next steps change sync to push directly to the BLOB.
4. Update the scheduler row in the database.

   Replace the tokens in the following statement, and run it on the database in which you just created the relationship (the sending side). This updates the most recent relationship created. See notes later in this section if you need to update an older relationship.

```
update scheduler set external_args=N'
  <CloudServiceRequest
    xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <SubscriptionID>[Leave blank for Amazon]</SubscriptionID>
    <StorageAccountID>[AWSAccessKey from web.config]</StorageAccountID>
    <StorageAccountKey>[AWSSecretKey from web.config]</StorageAccountKey>
    <UseHttps>True</UseHttps>
    <CDNEndpoint />
    <ContainerConfigName>amazon</ContainerConfigName>
    <WebSites>
      <SiteInfo>
        <ContainerAddress>[BlobStorageName from web.config]</ContainerAddress >
        <LocalSitePath>[Your local website path ex.,
c:\inetpub\site1]</LocalSitePath>
      </SiteInfo>
    </WebSites>
    <ServiceArguments>
      <ComputeArguments>
        <Location>ap-southeast-1</Location>
      </ComputeArguments>
      <StorageArguments>
        <PublicRead>[AWSPublicRead from web.config]</PublicRead>
      </StorageArguments>
    </ServiceArguments>
    </CloudServiceRequest>'
where scheduleid=(select top 1 scheduleid from scheduler
where parentsyncid = 0 order by date_created desc)
or parentsyncid=(select top 1 scheduleid from scheduler
where parentsyncid = 0 order by date_created desc)
```

5. Run the updated profile again.
   a. Validate that the assets went into the BLOB.
   b. Validate that the assets are viewable from the Amazon site.
6. Delete all content (except for the `web.config` file) from inside the following folders on the Amazon BLOB.
   - [siteroot]\assets
   - [siteroot]\privateassets
   - [siteroot]\uploadedfiles
   - [siteroot]\uploadedimages
   - C:\assetlibrary\[sitename]

Notes:

- The SQL statement must be run again after new sync profiles are created.

  If you hover over the plus sign (+) on the relationship, the URL is similar to: `http://95site.com/workarea/sync/SyncProfile.aspx?action=add&id=7`.

  The ID at the end of the URL is the parent sync row. The statement to update all profiles on that ID is:

```
update scheduler set external_args=N'
  <CloudServiceRequest
    xmlns:xsd=http://www.w3.org/2001/XMLSchema
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <SubscriptionID>[Leave blank for Amazon]</SubscriptionID>
    <StorageAccountID>[ AWSAccessKey from web.config]</StorageAccountID>
    <StorageAccountKey>[ AWSSecretKey from web.config]</StorageAccountKey>
    <UseHttps>True</UseHttps>
    <CDNEndpoint />
    <ContainerConfigName>amazon</ContainerConfigName>
    <WebSites>
      <SiteInfo>
        <ContainerAddress>[ BlobStorageName from web.config]</ContainerAddress >
        <LocalSitePath>[Your local website path ex.,
c:\inetpub\site1]</LocalSitePath>
      </SiteInfo>
    </WebSites>
    <ServiceArguments>
      <ComputeArguments>
        <Location>ap-southeast-1</Location>
      </ComputeArguments>
      <StorageArguments>
        <PublicRead>[AWSPublicRead from web.config]</PublicRead>
      </StorageArguments>
    </ServiceArguments>
  </CloudServiceRequest>'
where scheduleid=[parent id from url (in this case 7)]
or parentsyncid=[parent id from url (in this case 7)]
```

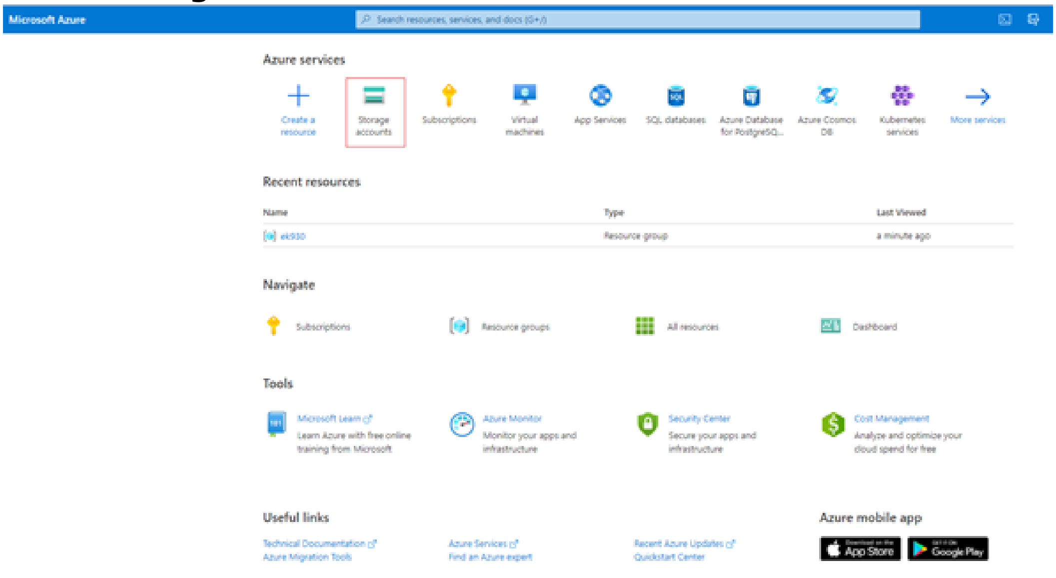
- The profiles to sync assets cannot be bi-directional. They must be **upload** or **download**. You can have both types of profiles.

Setting up an Ektron site to use Azure BLOB storage

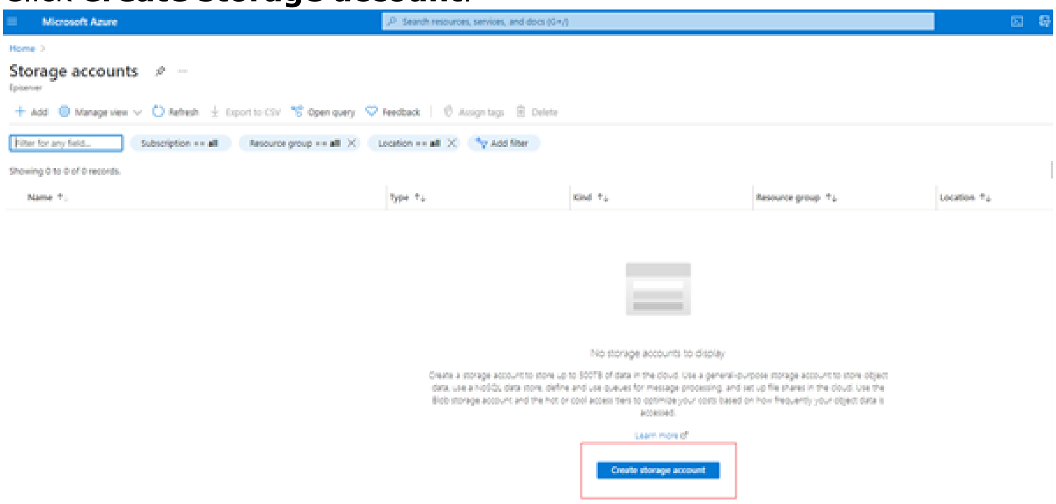
This section explains how to set up a local site to use Azure BLOB storage. The resulting configuration stores assets in BLOB storage rather than the local file system.

This configuration also lets files be served from the BLOB store, by redirecting requests to the BLOB URL rather than the local system.

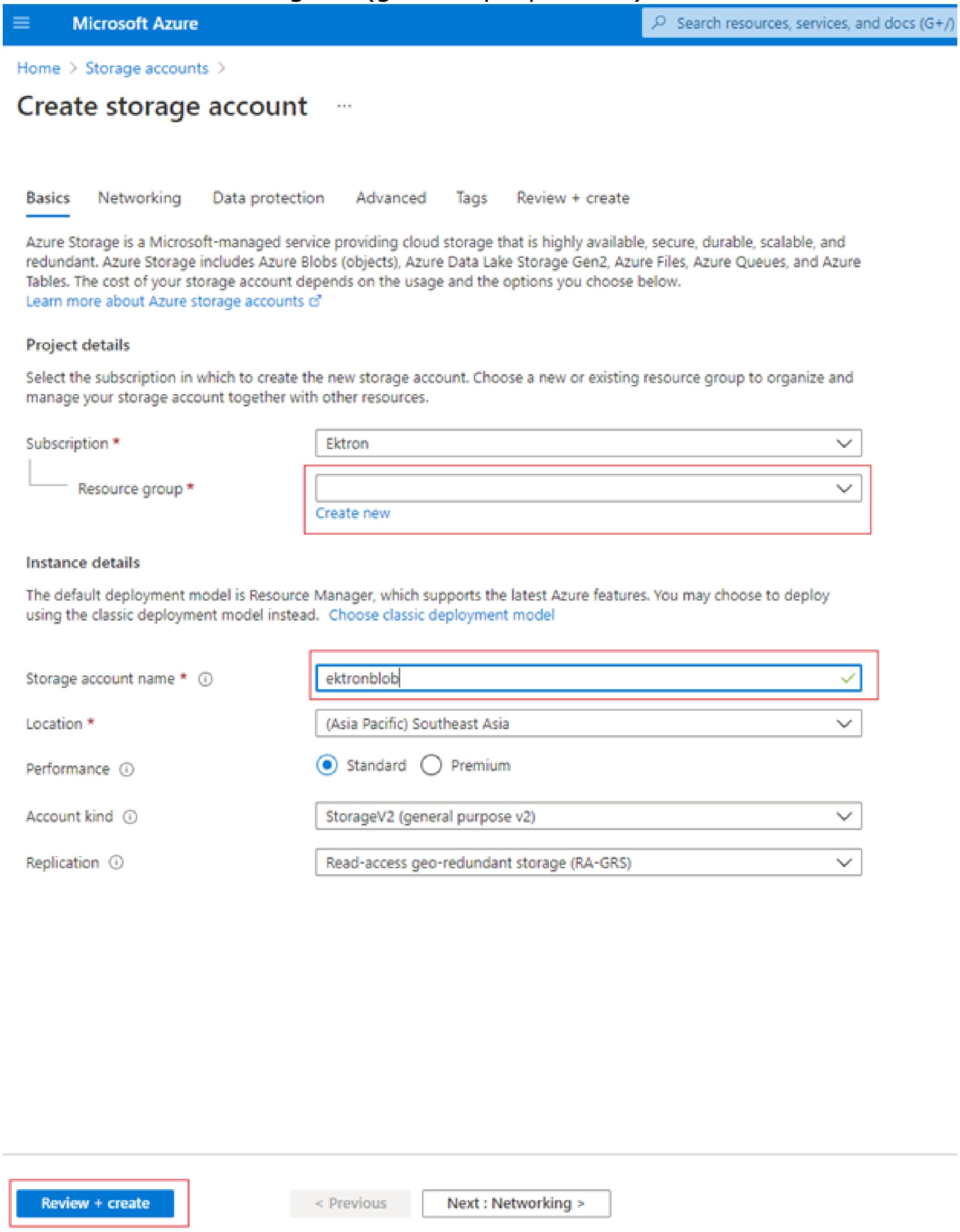
1. Create a new storage account on Azure.
    a. Select **Storage Accounts**.



    b. Click **Create storage account**.



c. Enter data in the form.
   - Select or create a new **Resource group**.
   - **Name**: [*ektronblob*]
   - **Account kind**: StorageV2 (general purpose V2)



2. In Visual Studio, open your site and install the `Azure.Storage.Blobs` package by running the following command:

```
Install-Package Azure.Storage.Blobs -version 12.8.1
```

3. Modify your website's `web.config` file.
   a. Change the `unity.storage` section to match the sample below:
   ```
   <section name="unity.storage"
     type="Microsoft.Practices.Unity.Configuration.UnityConfigurationSection,
           Microsoft.Practices.Unity.Configuration,
           Version=3.0.0.0,
           Culture=neutral,
           PublicKeyToken=31bf3856ad364e35" />
   ```
   b. Define `unity.storage` as follows:
   ```
   <unity.storage>
     <assembly name="Ektron.Storage"/>
     <assembly name="Ektron.Cloud"/>
     <namespace name="Ektron.Cloud.Azure.Storage"/>
     <namespace name="Ektron.Storage"/>
     <container name="storageContainer">
       <register type="IFileService" mapTo="S3FileService"/>
       <register type="IDirectoryService" mapTo="S3DirectoryService"/>
     </container>
   </unity.storage>
   ```
   c. Modify appsettings keys or add them to match the sample below:
   ```
   <add key="ek_CloudStorageType" value="AZURE" />
   <add key="ek_StorageConnectionString" value="xxxxxx" />
    <--storage connection string-->
   ```
   d. Add the following to the `<modules>` section:
   ```
   <add name="EkBlobModule" type="BlobRedirectModule"
   preCondition="integratedMode" />
   ```

Deleting old assets

After you update `web.config`, new assets are stored in Azure BLOB instead of local folders. You can no longer view old assets in local folders because the storage is changed to Azure storage. If you do not want to use the old assets, you can delete all contents except for `web.config` from inside the following folders on the remote server:

- [siteroot]\assets
- [siteroot]\privateassets
- [siteroot]\uploadedfiles
- [siteroot]\uploadedimages
- Assetlibrary folder (typically at C:\assetlibrary\[sitename])

Uploading old assets to Azure BLOB

If you want to upload the old assets to Azure BLOB, perform the following steps:

1. Create 2 sites.
   a. Create and run eSync profile from the local site with **direction = Upload** (from the local site to the Azure-configured site) **> Assets**.

   b. Create and run eSync profile from the local site with **direction = Download** (from the Azure-configured site to the local site) **> Assets**.
2. Configure and run a successful eSync between the local and remote servers.
3. Create sync profile to upload assets from local to remote server.
   a. Apply appropriate certificates to both sides.
   b. Make sure appropriate ports are open. See https://portal.ektron.com/kb/10123/.
   c. Make sure appropriate ports are open on the remote server network security group.
   d. Make sure you can access the remote server site from the local server.
4. Run the initial sync.

   At this point, the database sync should work, and assets are uploaded. But, they are uploaded to the local folder of the remote server, not the BLOB store. The next steps change sync to push directly to the BLOB.
5. Update the scheduler row in the database.

   Replace the tokens in the following statement, and run it on the database in which you just created the relationship (the sending side). This updates the most recent relationship created. See notes later in this section if you need to update an older relationship.

```
update scheduler set external_args=N'
<CloudServiceRequest
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SubscriptionID>[xxxxxxxxxx]</SubscriptionID>
  <StorageConnectionString>[StorageConnectionString from
web.config]</StorageConnectionString>
  <CDNEndpoint />
  <ContainerConfigName>azure</ContainerConfigName>
  <WebSites>
    <SiteInfo>
      <ContainerAddress>[Leave blank for Azure]</ContainerAddress>
      <LocalSitePath>[Your local website path ex.,
c:\inetpub\site1]</LocalSitePath>
    </SiteInfo>
  </WebSites>
</CloudServiceRequest>'
where scheduleid=(select top 1 scheduleid from scheduler where parentsyncid = 0
order by date_created desc)
or parentsyncid=(select top 1 scheduleid from scheduler where parentsyncid = 0
order by date_created desc)
```

6. Run the updated profile again.
   a. Validate that the assets went into the BLOB.
   b. Validate that the assets are viewable from the Azure site.
7. Delete all content (except for the `web.config` file) from inside the following folders on the remote server.
   - [siteroot]\assets
   - [siteroot]\privateassets

- [siteroot]\uploadedfiles
- [siteroot]\uploadedimages
- Assetlibrary folder (typically at C:\assetlibrary\[sitename])

Notes:

- The SQL statement must be run again after new sync profiles are created. If you hover over the plus sign (+) on the relationship, the URL is something like: `http://95site.com/workarea/sync/SyncProfile.aspx?action=add&id=7`. The `id` at the end of the URL is the parent sync row. The statement to update all profiles on that `id` is:

```
update scheduler set external_args=N'
<CloudServiceRequest
  xmlns:xsd=http://www.w3.org/2001/XMLSchema
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SubscriptionID>[xxxxxxxx]</SubscriptionID>
  <StorageConnectionString>[StorageConnectionString from
web.config]</StorageAccountID>
  <CDNEndpoint />
  <ContainerConfigName>azure</ContainerConfigName>
  <WebSites>
    <SiteInfo>
      <ContainerAddress>[Leave blank for Azure]</ContainerAddress>
      <LocalSitePath>[Your local website path ex.,
c:\inetpub\site1]</LocalSitePath>
    </SiteInfo>
  </WebSites>
</CloudServiceRequest>'
where scheduleid=[parent id from url (in this case 7)]
or parentsyncid=[parent id from url (in this case 7)]
```

- The profiles to sync assets cannot be bi-directional. They must be **upload** or **download**. You can have both types of profiles.

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6

Setting up your CMS folder structure

Folders are containers for . Ektron provides the following types of folders:

- Standard. See this chapter
- Root. The top-level container for all folder types
- Site. See *Supporting multi-site configurations* on page 86
- Community. See *Community folders* on page 1520
- Blog. See *Working with blogs* on page 887
- Discussion Board. See *Working with discussion boards* on page 933
- eCommerce catalog. See *Creating a catalog folder* on page 1687
- Web Calendar. See *Working with calendars* on page 913

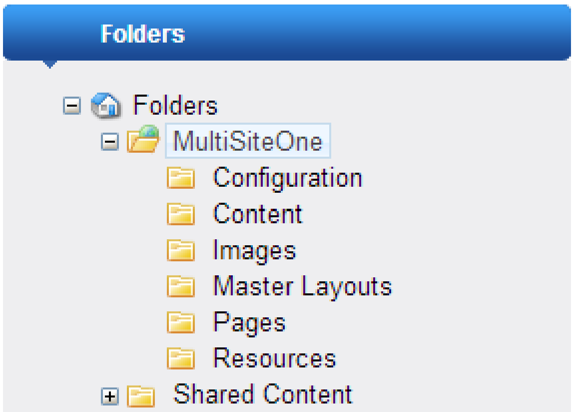
Planning your CMS folder structure

At their core, all Web content management systems serve the same purpose: to manage content. The only real difference among systems is the way in which that content is used. You can divide content into 3 categories:

- **Complete Content**. A content item that is considered ready for visitor consumption without further manipulation of the content. It may be comprised of several other items. For example, a Press Release is complete if does not have dependencies on other data. Also, a PageBuilder Page Layout, which has had its dependencies on other content fulfilled, is a complete object. These items require no other context in order to convey their intended meaning.
- **Resource Content** (or Incomplete Content). A content item that is not yet ready for visitor consumption because it lacks some surrounding context to complete its message. It is not intended to be viewed without the complete context. For example, a call to action (CTA) is a resource that needs to be placed in the context of a complete page to make sense. You also do not want a CTA showing up in search results, and shown without more information.
- **Custom Configuration Data**. Settings or global configuration to the site. This data is not complete and useful without context, yet it is also not content to be dragged onto a larger page. Rather, it helps define smaller, more global elements and settings. This data is stored in a Smart Form and can vary among the following items: selecting other CMS content, menus or other objects, or providing a text template for your copyright statement and standard values for your **Previous** and **Next** buttons in pagination.

The following base CMS folder structure uses the 3 categories to organize your content to provide sufficient separation of roles, search scopes, and content purpose to satisfy most Ektron implementations. You can further sub-divide the structure. The structure may be your root architecture in a single-site instance, or developed within site folders in a multi-site environment.

This structure lets you clearly identify configuration roles, resource roles and content versus page layout roles with user groups and setup permissions accordingly. The folder structure gives you an easy means of keeping unwanted content from showing up in the site search results by having clearly defined locations for the various content types and functions.

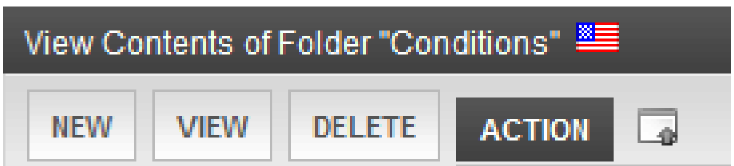


- **Configuration**. Administrative content, such as Smart Forms, that supports *Custom Configuration Data*.
- **Content**. Complete content that can be indexed and included in the scope for your site search. You should consider any content URL or Alias within these folders as complete and requiring no additional context.
- **Images**. An image is resource content because it is frequently part of a larger content item and therefore should not be independently searchable. If you want to have some images on your site returned in search results (for example, info-graphics or gallery photos), place them in a sub-directory of the Content folder.
- **Master Layouts**. PageBuilder Master Layouts or Page Layouts used as templates for other pages or content, respectively, within the CMS. This content is not searchable and, without the additional content, does not stand on its own as an individual site page.
- **Pages**. PageBuilder Page Layouts that may rely on other data, but the page itself is complete. Because these pages are complete, they should be indexed for search.
- **Resources**. Smart Form or HTML content that requires a larger context are resource content; for example, slides for your home page banner, CTAs, or descriptive text to be placed at the top of a careers listing. Content in this folder should not be searchable because each item does not make sense on its own.

By dividing the content data into categories that are based on how the content is used in the application, everything else falls into place more easily.

Using folder menus

The following menus and button appear across the top of the View Contents of Folder screen. Depending on your permissions, you may not see all menu options.



For information on **Add Asset** (), see *Working with assets in the Document Management System* on page 649.

New menu

Lets you create and upload new items into a folder.

- **Add Calendar Event**. Add calendar event. This option is only available in a WebCalendar folder.) See also: *Adding system calendar events* on page 916
- **Blog**. Add blog. See also: *Working with blogs* on page 887
- **Calendar**. Add Web calendar. See also: *Working with calendars* on page 913
- **Catalog**. Add eCommerce catalog. See also: *Creating a catalog folder* on page 1687
- **Collection**. Add collection. See also: *Working with collections* on page 740.
- **Community Folder**. Add folder whose content can be updated by membership as well as regular users. See also: *Community folders* on page 1520.
- **Discussion Board**. Add discussion board. See also: *Working with discussion boards* on page 933.
- **DMS Document**. Add Office document, managed file, or multimedia file, any supported type. See also: *Managing Microsoft Office assets* on page 661, *Managing assets* on page 653.
- **Folder**. Add folder. See also: *Setting up your CMS folder structure* on page 141.
- **HTML Content**. Add HTML content. See also: *Creating new content* on page 626.
- **HTML Form/Survey**. Add HTML form, poll, or survey. See also: *Creating surveys and polls* on page 798.
- **Master Layout**. Add master layout. This option is only available in a PageBuilder folder. See also: *Creating a PageBuilder master layout* on page 1010.
- **Menu**. Add menu. See also: *Creating menus for your website* on page 1235.
- **Multiple DMS Documents**. Add several Office documents, managed files, multimedia files, any supported type. See also: *Adding multiple DMS documents* on page 656.
- **Page Layout**. Add page layout. This option is only available in a PageBuilder folder. See also: *Developing wireframe templates* on page 1007.
- **Site**. Add website. This option is only available in the root folder. See also: *Supporting multi-site configurations* on page 86.
- **Smart Form**. Add Smart Form. This option is only available if one or more Smart Form configurations are assigned to the folder. See also: *Working with Smart Forms* on page 815.

View menu

Lets you display information about content in a folder.

- **All types**. Displays *all* content types of selected language.
- **Archived Content**. View and work with content that passed its scheduled End Date and whose archive option is either **Archive and remove from site** or **Archive and remain on Site**. When a Web Calendar folder is selected, this menu item is labeled "Archived Events".
- **Collection**. Work with collections assigned to this folder. See also: *Working with collections* on page 740.
- **HTML content**, **HTML Form/Survey**, **Office Documents**, **Managed Files**, **Multimedia**, or **Image Assets**. Limits folder display to *selected content type*. For example, choose **View > Managed Files** and see only managed files in the folder; other content types are suppressed. This is especially helpful if the folder has many items, and you are looking for only one type of content. If a PageBuilder folder is selected, you can limit the display to Page Layouts or Master Layouts. For more information on specific types of content:
  - *Creating new content* on page 626
  - *Working with HTML forms* on page 775
  - *Managing Microsoft Office assets* on page 661
  - *Managing assets* on page 653
  - *Managing multimedia assets* on page 657
- **Language**. Limits display of folder content to one language, or lets you display all languages. If set to one language, this also determines the language of new items you create or upload into the folder.
- **Menu**. Work with menus assigned to this folder. See also: *Editing a menu item* on page 1245.
- **Properties**. Only members of the administrators group and those assigned to the Folder-Admin role see this option. It lets you assign folder properties, such as which users can edit a folder’s content. See also: *Defining roles* on page 1464, *Setting folder properties* on page 150.

Delete menu

Lets you delete folder or content within folder.

- **Content**. Delete one or more content items in folder. See also: *Deleting content* on page 631.
- **This folder**. Delete current folder and all of its content. If a Web Calendar is selected, the menu option appears as "This calendar." You cannot delete the Root folder. See also: *Deleting a folder* on page 158.

Action menu

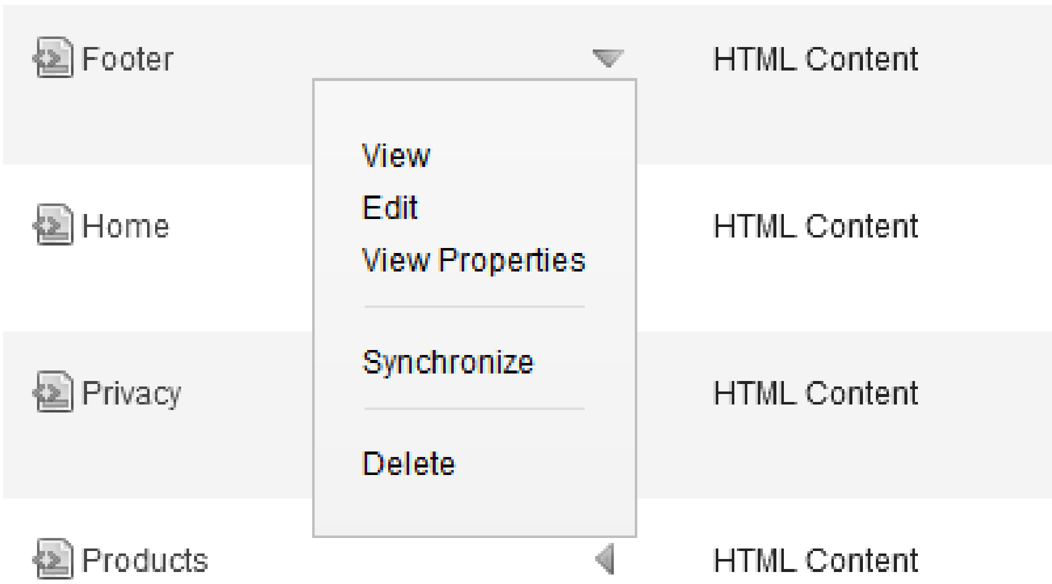
Lets you perform actions on the folder or content within the folder.

- **Cut/Copy**. Move or copy content to another folder. See also: *Moving or copying content* on page 629.

- **Export For Translation**. Prepare content for translation by a translation agency. See also: *Exporting content to XLIFF* on page 1418.
- **Search**. Search content in the Workarea. See also: *Searching the Workarea* on page 363.
- **Synchronize Folder**. Sync this folder on the current server with the same folder on another server. This option is only displayed if eSync has been set up, you have the required privileges, and content has changed. See also: *Synchronizing content and folders* on page 1855.

Workarea content menu

The View Contents of Folder screen features a context-sensitive, drop-down menu of options you can perform for content.



The options depend on several factors, such as

- your folder permissions
- your position in the workflow (if any)
- the content's status
- whether the item is a Microsoft Office document or asset

To see any content item's menu options:

1. Go to the folder that contains the content.

2. Click the triangle. A menu of options for that content item appears. The following options may be available:
   - **Approve**. Approve content that was submitted for publishing. See also: *Approving cont*
   - **Check-In**. Change content status to checked in. Might use if you checked out and saved a document then it became lost or corrupted. This option changes original document's status to checked in. However, it does not replace the version of the file in Ektron. To replace content that was checked out and edited, drag and drop it into Ektron. See also: *Updating an Office document* on page 662.
   - **Check out and Save As**. Change a content item's status to checked out and save it to your local computer. When you finish editing the item, drag and drop it to Ektron. See also: *Updating an Office document* on page 662.
   - **Decline**. Decline an approval request submitted to you. This option rejects the changes and keeps the current version live on website. You are prompted to enter a reason for the decline. After you decline, the author who made the change is notified by email and the content is removed from the workflow. If the author updated content then submitted it for approval, the updated content remains in the file. If you do not want it to remain, choose the **Edit** option. See also: *Approving content for publication* on page 689.
   - **Delete**. Submit content for deletion. See also: *Deleting content* on page 631.
   - **Edit**. For HTML, HTML form, or Smart Form content, edit content within the editor. For assets, use **Check out and Save As** or **Save As** to save asset to your computer and edit it. Then, use Edit to replace version in Ektron.
   - **Edit in Microsoft Office**. Edit Office document within Ektron. See also: *Managing Microsoft Office assets* on page 661.
   - **Edit Properties**. Edit item's Ektron information, such as summary, metadata, Schedule, and taxonomy. After you complete the edit screen, you proceed to the View Content screen. From here, you can perform additional content activities, such as move/copy, delete, and view history.See also:
     - *Scheduling content* on page 640
   - **Force Check In**. Only appears if login user is a member of the Administrator group or assigned the folder user admin role and content is checked out. This option lets an administrator check in content even though the administrator did not check it out.
   - **Publish**. Accept changes to content and publish it to the site.
   - **Request Check In**. Allows either admin user or non-admin user with edit permission for the content's folder to email the user who checked out content. The email asks the check-out user to check it in.
   - **Save As**. Save Office document or asset to your computer. See also: *Saving an Office document* on page 663.

- **Submit**. Submit current version of content for publishing. When you do this, the first user or user group in the workflow is notified that your content is ready for review.
- **Synchronize**. Synchronize content or folders between 2 servers. See also: *Synchronizing servers using eSync* on page 1787.
- **View**. View item's Ektron information, such as summary, metadata, Schedule, and taxonomy. After viewing, you can also edit that information if you have permission
- **View in Microsoft Office**. View Office document within Office application. Cannot change.
- **View Properties**. View Office document's Ektron information, such as Summary, Metadata, Schedule, and Taxonomy. After viewing, you can edit the information if you have permission.

Viewing a folder

The View Contents of Folder screen lists the following information about each content item.

- **Title**. The content title.
- **Content Type**. HTML content, HTML form, XML Smart Form, managed asset, image, and so on.
- **Language**. The content language. See also: *Working with multi-language content* on page 1393.
- **ID**. The number assigned to the content by Ektron. It is used to retrieve the content from a database.
- **Status**. The content status. See also: *Content statuses* on page 624.
- **Date Modified**. The most recent date the content was added, edited, or published.
- **Last Editor**. The last user who edited the content.

To view a folder, follow these steps.

NOTE: You can only view folders for which your system administrator has granted permission. See also: *Managing folder and content permissions* on page 160

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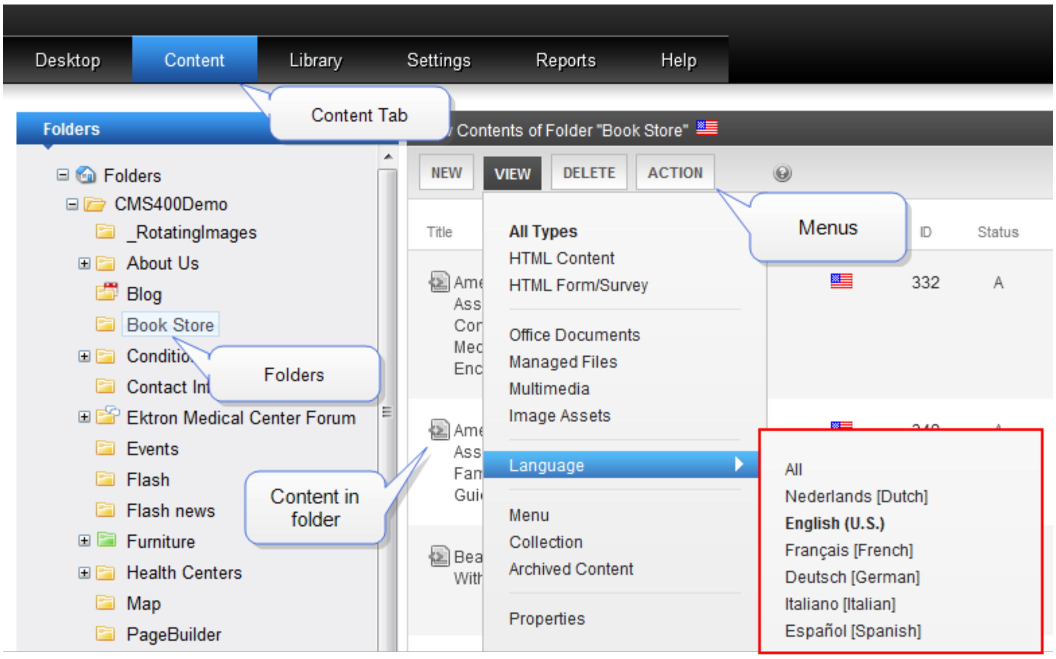
1. Access the Workarea and click the **Content** tab.



2. All content in the root folder and the selected language appear in the right frame. Subfolders appear in the left frame.

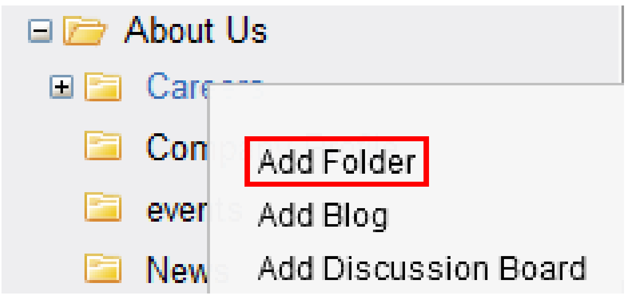
NOTE: The View menu option lets you filter content by type. For example, you can set it to view only HTML content. Therefore, you may only see content of a selected type in the folder.

3. To work with any folder or its content, click the folder. When you do, its content appears in the right frame.
4. If your system supports more than one language, you can view content for a particular language or all languages using the **View > Language** option.

Adding a folder

To organize content on your website, create folders to store related content. See also: *Planning your CMS folder structure* on page 142

1. Go to and click the folder within which you want to create the new folder (that is, the parent folder).
2. Choose **New > Folder**. Alternatively, you can hover the cursor over a folder, right click the mouse, and choose **Add Folder**. The Add a Folder screen appears.



3. Complete the fields. See *Setting folder properties* below.
4. Click **Add Folder**.

You can modify the folder’s properties, permissions, workflow, and so on.

- If this is a Community Folder, see *Community folders* on page 1520.
- If this is a Site Folder, see *Supporting multi-site configurations* on page 86.
- If this is a Catalog Folder, see *Creating a catalog folder* on page 1687.

Setting folder properties

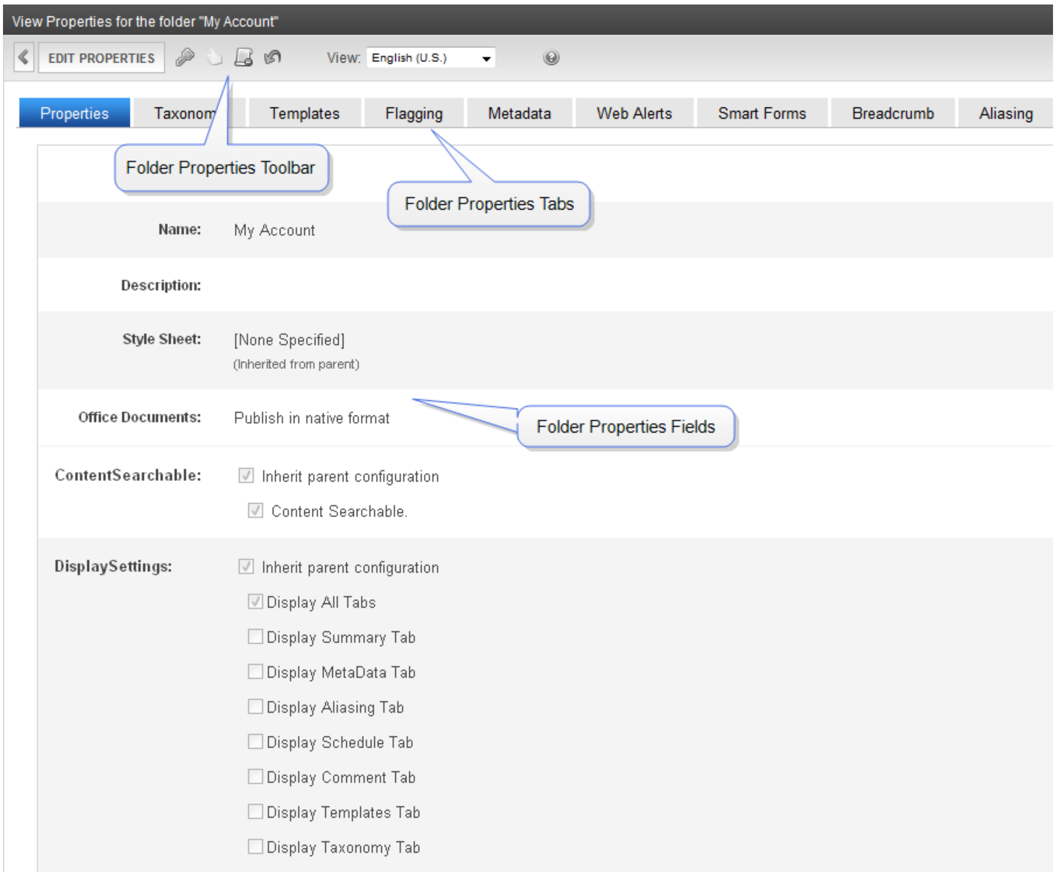
The folder properties screen lets you set permissions and workflow for a folder. You can also assign or modify the folder’s metadata, Web Alerts, and Smart Forms.

PREREQUISITE

Only members of the Administrator Group and those assigned to the Folder User Admin role can view, add, or edit folder properties. (See also: *Defining roles* on page 1464).
In addition, if a user is not a member of the Administrators Group, the user must be given permission on the View Permissions for Folder screen. (See also: *Managing folder and content permissions* on page 160).

NOTE: If you are using an eCommerce catalog, see *Creating product types and catalogs* on page 1675 for a description of the Product Types screen. If you are using a Web Calendar folder, see *Viewing system calendar properties* on page 920.

1. Select the folder.
2. From the View Contents of Folder screen, choose **View > Properties**. Alternatively, from the left panel, right click the mouse and choose **View Properties**.



The Folder Properties screen contains these toolbar buttons.

- **Edit Properties**. Access the Edit Folder Properties screen.
- **Permissions**. Access the folder's Permissions screen; see *Managing folder and content permissions* on page 160.
- **Modify Preapproval Group**. Set or update preapproval group assigned to folder; see *Setting up an automatic task for pre-approving content* on page 1356
- **Approvals**. Access the folder's workflow; see *Managing folder and content permissions* on page 160
- **Purge History**. Access the folder's purge history table; see *Purging content history* on page 159
- **Restore Web Alert Inheritance**. Assigns the folder's Web Alert properties to all content in folder; see *Restoring folder-level Web Alert settings to content* on page 1387
- **Back**. Go to previous screen

3. To change properties, click **Edit Properties** to open the edit screen.

   The Properties screen lets you set the following folder properties, arranged by tab:

   Properties tab

   - **Name**. Edit the name of the content folder. You cannot change the root folder name.
   - **Description**. Edit the description of the content folder.
   - **Style Sheet**. Specify a style sheet filename that defines styles that may be applied to content in this folder. The style sheet populates the style drop-down list within the editor. Leave this field blank to inherit the parent folder's style sheet.

     This style sheet affects content being edited. It does not necessarily affect the content's appearance on your website. To set or edit the style sheet that determines your Web pages' appearance, open the page's Web form and place a `<link rel="stylesheet"...`tag within its `<HEAD>`tags. If desired, you can identify the same style sheet in both locations. To include user-selectable styles, they must be generic classes.

     The Ektron editor ignores the CSS custom properties `caption` and `visible`. To address this problem for Internet Explorer, replace them with the custom CSS properties `localeRef, caption` and `visible`. For other browsers, use the custom CSS selectors `localeRef` and `unselectable` (same as `visible: false`). To achieve cross-browser compatibility, use both approaches. Non-IE browsers have no equivalent for`caption`.
   - **Multi-site Domain Configuration**. The **Site Name**, **Staging Domain**, and **Production Domain** fields only appear for Site folders. These fields are used to set up and manage several websites under one CMS. See also: *Supporting multi-site configurations* on page 86.
   - **Office Documents**. This field only appears if the **Enable Office documents to be published in other format** property is checked in the **Settings > Configuration > Setup** screen. See also: *General tab* on page 122. Enable the **Publish Office documents as PDF** check box if Office documents in this folder are published as PDF files. This property is not inherited from a parent folder, nor is it inherited by any subfolders below this folder.
   - **Content Searchable**. Check the **Inherit Parent Configuration** box if you want this folder to inherit the Content Searchable value from its parent folder. Uncheck this box to break inheritance and apply a unique Content Searchable setting to this folder.
     Check this box to set the *default* value of the Content Searchable property for new content added to this folder. It does not affect existing content in the folder, or content copied or moved to this folder. Regardless of the default value, an authorized user can change the Content Searchable value while adding content to the folder or at any other time. See also: *Making content searchable* on page 346.

- **Display Settings**. Enable the **Inherit Parent Configuration** check box if you want this folder to inherit the Display Settings value from its parent folder setting. Disable this check box if you want to break inheritance and apply a unique Display Settings setting to this folder.
- **Display All Tabs**. Check this box to display all tabs on the Create or Edit Content screen. Or, check any tab-specific check boxes to display the selected tabs on the Create or Edit Content screen. If you enable the **Display All Tabs** check box and other tab-specific selections, only the individually checked tabs remain when you click **Update**. Also, if a tab has a "required" property on it, the tab displays even if you uncheck its box.

Taxonomy tab. See *Assigning categories to a folder* on page 1262

- **Taxonomy**. Enable the **Inherit Parent Configuration** check box if you want this folder to inherit taxonomy configurations from the parent folder. If you disable **Inherit Parent Configuration**, you can then select taxonomies that can be applied to content in this folder. Check the **At least one category is required** check box if you want all content in this folder to be assigned at least one taxonomy category. See also: *Organizing content with taxonomies* on page 1253

Templates tab. See *Working with templates* on page 769

- **Page Templates**. Lets you specify one or more templates for content in this folder. This folder's content uses the specified template when appearing on your website. Enable the **Inherit parent configuration** check box to inherit the template from the parent content folder. Or, do not check this box and specify one or more templates.

Flagging tab. See *Assigning a flagging definition to a folder* on page 1592

- **Flagging**. Enable the **Inherit Parent Configuration** check box if content in this folder inherits a flagging definition from its parent folder. If you do not check the box, use the drop-down list to apply a flagging definition to content in this folder. See also: *Defining flags for content* on page 1590, *Assigning a flagging definition to a folder* on page 1592.

Metadata tab. See *Working with Metadata* on page 755.

- **Metadata**. Enable the **Inherit Parent Configuration** check box if you want this folder to inherit the metadata values from its parent folder setting. Uncheck this box if you want to break inheritance and apply unique metadata settings to this folder. If inheritance is disabled, check the applicable boxes to determine which metadata definitions can be used.Only metadata definitions whose Assigned box is checked can be completed by users working with content in the folder.

Web Alerts tab. See *Assigning a Web Alert to a folder or content* on page 1383.

- **Web Alerts**. Lets you specify custom Web alert settings for this folder or inherit settings from the parent folder. For a description of the Web alert settings, see *Assigning a Web Alert to a folder or content* on page 1383.

Smart Forms tab. See *Working with Smart Forms* on page 815.

- **Smart Forms**. Lets you specify custom Smart Form settings for this folder or inherit settings from the parent folder. For a description of the Smart Form settings, see *Assigning a Smart Form to a folder* on page 831.

Product Types tab. See *Creating product types* on page 1675.

- **Default product type**. Enable the **Inherit Parent Configuration** check box if you want this folder to inherit the metadata values from its parent folder setting. Uncheck this box if you want to break inheritance and apply unique metadata settings to this folder. If inheritance is broken, use the radio buttons to enable a default product type.

Breadcrumb tab. See *Creating a sitemap breadcrumb trail* on page 1322

- **Breadcrumbs**. Lets you specify custom breadcrumb settings for this folder or inherit settings from the parent folder.

Site Alias tab. See *Creating a URL alias for a site* on page 1316

- **Name**. A URL to be used as an alias for the site. This tab and field combination only appears for Site folders.

Aliasing tab. See *Creating user-friendly URLs with aliasing* on page 1293

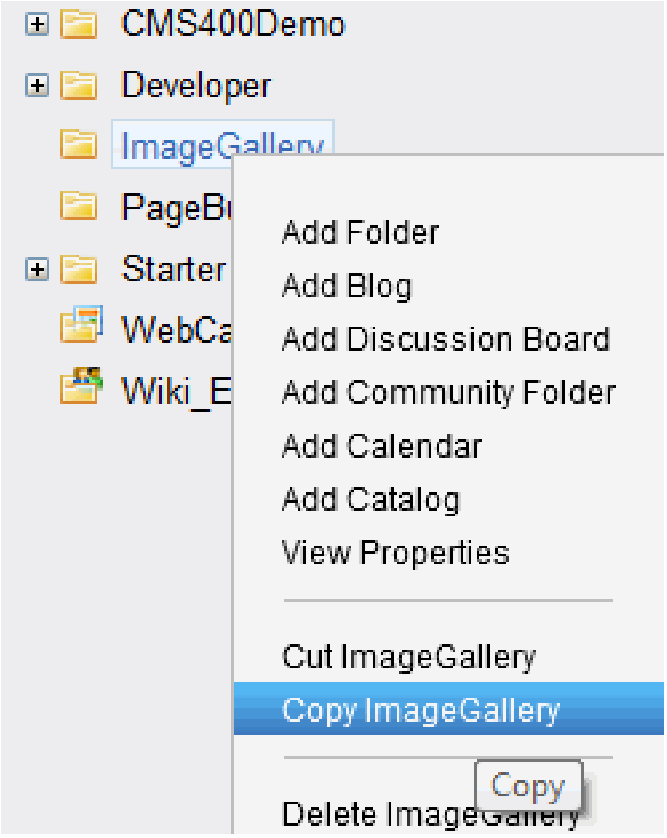
- **Aliasing**. Only appears if some form of aliasing is enabled. Enable the **Manual Alias Required** check box to force the user creating or updating content in the folder to add a manual alias (if none exists). Enable the **Inherit parent configuration** check box (disabled by default) if you want the folder to inherit the **Manual Alias Required** value from the parent folder.

Copying and moving a folder

You can copy a folder and paste it into another folder. Or you can cut and paste one folder into another. Cut and paste is synonymous with move.

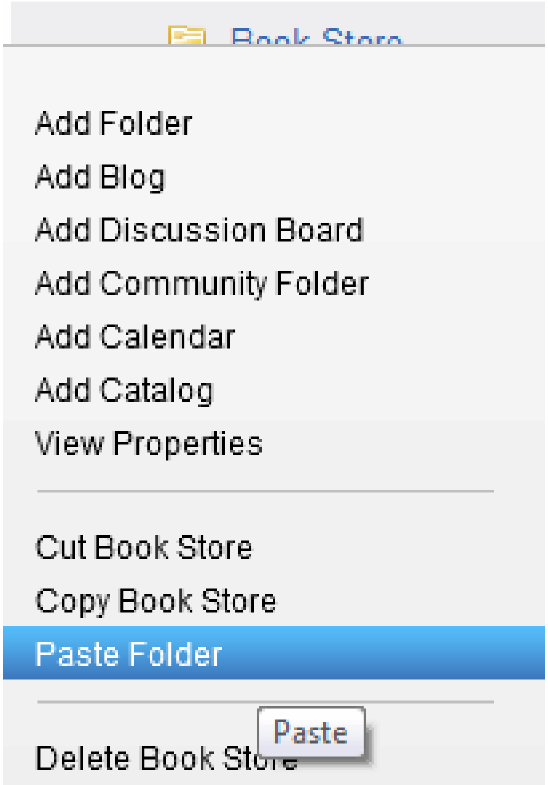
1. In the left panel of the Workarea, hover the cursor over the folder you want to copy/move.
2. Right click the mouse.

3. Click **Copy** or **Cut** *folder name.*

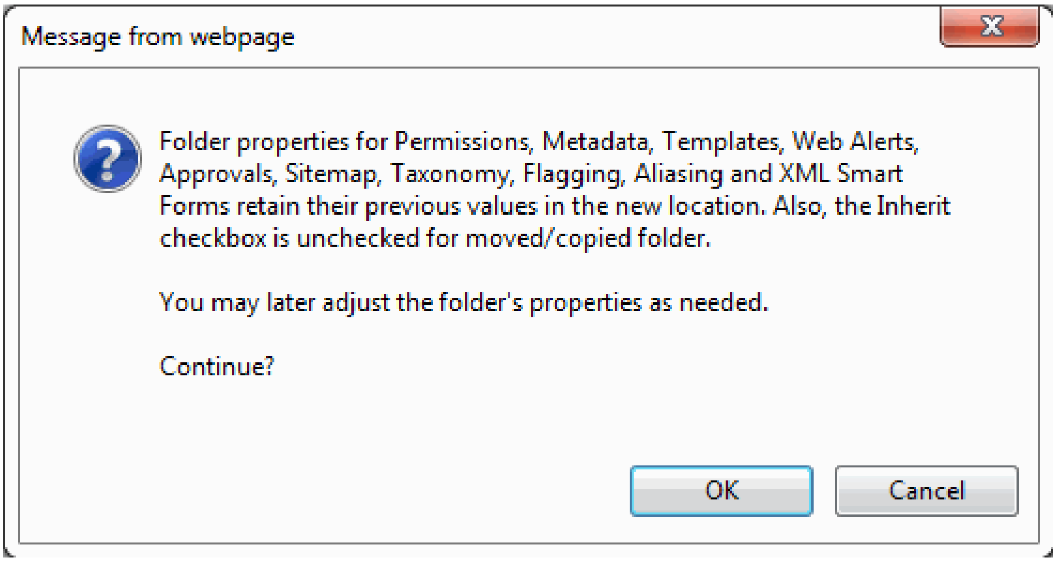


4. Hover the cursor over the folder to which you want to paste the copied/cut folder.

5. Right click the mouse and select **Paste Folder**.



6. A warning message appears. Click **OK**.



Who can copy and move folders

These users can copy or move folders.

- users who have Add, Edit and Delete permissions for the folder being moved/copied and the destination folder See also: *Managing folder and content permissions* on page 160
- members of the Administrators user group

- users assigned in the Roles > Folder Specific > Folder User Admins screen
- users assigned in the Roles > Folder Specific > Move or Copy screen

See also: *Defining roles* on page 1464

Rules for copying and moving folders

- When you copy or move a folder, you also copy/move all of its subfolders.
- All properties assigned to a folder (permissions, metadata, templates, and so on) remain assigned after the copy or move. You can edit the folder in its new location and adjust properties as needed.
- **Inherit** checkboxes that were checked are now unchecked. After the copy/move, check them as needed.

- You cannot copy or move the root folder
- You cannot copy or move a folder into its own subfolder
- You cannot *move* a folder to same level in the folder structure
- You can *copy* a folder to same level in the folder structure. If you do, a number is appended to the folder name, such as `calendar(1)`.
- If you *move* a folder, its content retains its status. That is, if content's status was checked out (O) before the move, it is checked out after the move.
- If you *copy* a folder, only Approved content is copied. Content in other statuses is not copied.
- All folder content that follows the above rules is moved/copied. This includes all language versions of those items.

Folder types that can be moved and copied

The following folder types can be copied or moved into other folder types.

- **Content folders**. Can be copied or moved into Content, Site, and Root folders.
- **Blog folders**. Can be copied or moved into Content, Site, and Root folders.
- **Discussion Board folders**. Can be copied or moved into Content, Site, and Root folders.
- **Forum folders**. Cannot be copied or moved into any other folder.
- **Community folders**. Can be copied or moved into Content, Community, Site, and Root folders.
- **Web Calendar folders**. Can be copied or moved into Content, Site, and Root folders.
- **Catalog folders**. Only the folder can be copied or moved into Content, Catalog,

Site, and Root folders; the content of the Catalog folder is not copies or moved.
- **Site folders**. Cannot be copied or moved into any other folder.

Deleting a folder

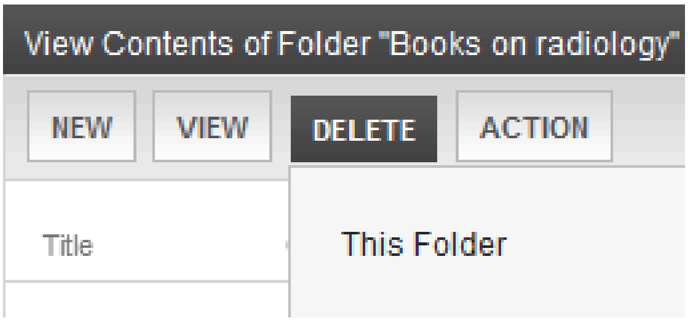
You can delete obsolete folders from the Ektron website.

NOTE: The top-level folder, **Root**, cannot be deleted nor renamed.

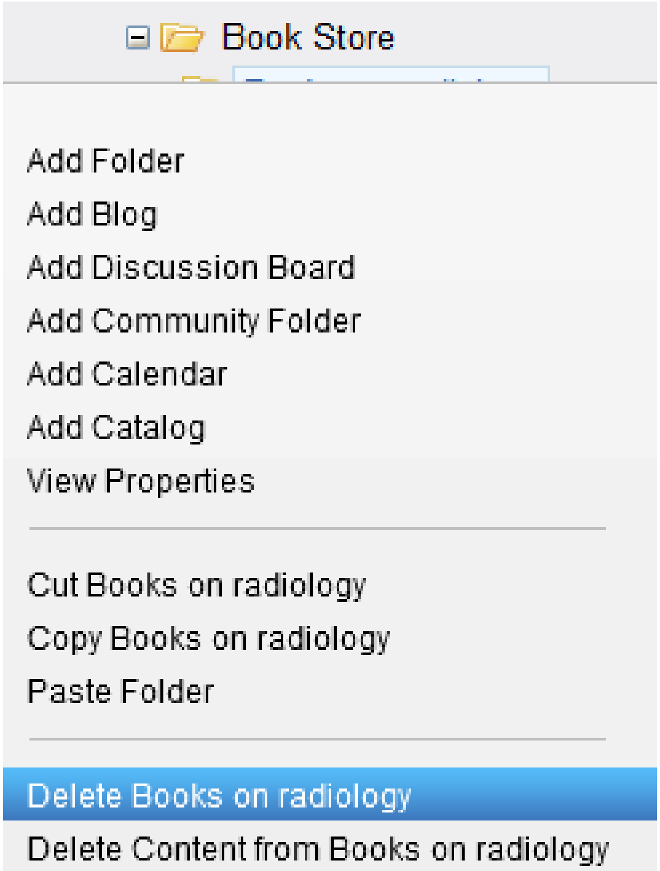
WARNING! Deleting a folder permanently deletes the content and Quicklinks that belong to the folder and all of its subfolders. You cannot retrieve deleted content.

NOTE: Only certain users are allowed to delete Ektron folders. See *Auditing changes* on page 632.

1. In the Workarea, go to the content folder you want to delete.
2. From the options across the top of the screen, choose **Delete > This Folder**.



3. Alternatively, you can hover the cursor over the folder in the folder display panel, right click the mouse, and choose **Delete *folder name***.



4. Click **OK**.

Purging content history

WARNING! Purging permanently deletes content. You cannot retrieve purged content.

The Purge History option lets you delete historical versions of content in a folder. For more information on content versioning, see *Managing versions of content* on page 643.

Purging is generally performed due to storage space concerns or to clear away obsolete versions before going live or migrating a site. Before purging, make sure you are aware of any organizational or legal data retention policies.

When purging, you can:

- specify a date to limit which historical versions are purged. Only historical versions with an edit/publish date *before* this are purged.
- indicate whether a folder's subfolders are purged
- purge published as well as checked-in versions of content

Prerequisite

Only members of the administrators group and users identified on the Manage Members for Role: Folder User Admin screen can purge history.

To purge the history for a folder:

1. In the Workarea, go to the folder whose content you want to purge.
2. Click **View > Properties**.
3. Click **Purge History** ( ). The Purge History screen appears.
4. Customize the purge options.
   - **Only purge historical versions before** (required). Specify a date to limit which historical versions are purged. When specified, only historical versions with a date before this date are purged.
   - **Recursive Purge** (optional). Purges historical content versions in this folder's subfolders.
   - **Purge versions marked as Published** (optional). Purges published versions of content as well as checked-in versions. If you do not check this box, Published version are not purged.
5. Click **Purge History**.
6. Click **OK** to execute the purge.

Managing folder and content permissions

Permissions determine which actions Ektron users and user group members can perform on content, library items, and content folders. For example, you let your Webmaster perform advanced actions, such as adding folders, editing folder properties, and deleting folders. At the same time, you let content contributors only view, edit, and add content.

You can set permissions for a folder or content item. Content item permissions override the associated folder permissions. When you assign permissions to a folder, they affect all of its subfolders and content unless you break inheritance for a subfolder or content item.

Unlike some folder properties (such as workflow), permissions are not language-specific. They apply to all language versions of a content item.

Only Ektron administrators and users identified on the Manage Members for Role: Folder User Admin screen can set permissions. See also: *Using the roles screens* on page 1465

NOTE: Use the Roles screens to assign permissions not defined in the Permissions screen, such as the ability to create tasks. See also: *Defining roles* on page 1464

NOTE: You can view and update permissions for membership users by selecting **Membership users** from the User Type drop-down menu; see *Assigning membership permissions* on page 1516.

Accessing the permissions screen

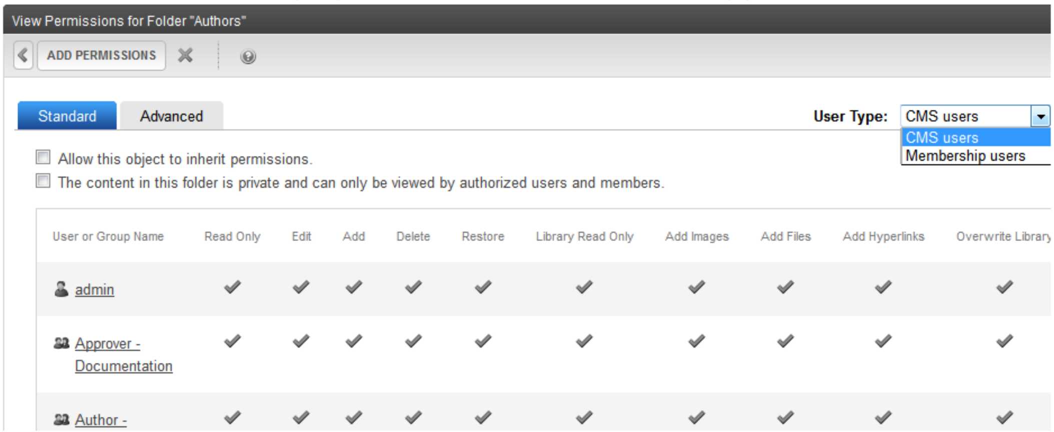
IMPORTANT: Members of the administrators group have all permissions for all Ektron folders, whether or not they appear on a folder's permissions screen.

You manage the following permissions through the Permissions screen.

- Content management: view, add, edit, delete, restore
- Library File Management: view, add images, add other types of files, add hyperlinks, overwrite files
- Folder management: add, edit, delete, traverse
- Work with collections and menus

To access the Permissions screen:

1. From the left frame of the Workarea, select a content folder.
2. Choose **View > Properties**. The Folder Properties screen appears.
3. Click **Permissions** ( ). The Permissions screenappears.



The Permissions screen displays each user or group’s abilities to act on content in the selected folder. Because all permissions cannot fit on one screen, click the **Advanced** tab to see additional actions.

NOTE: To let users copy or move content, assign the Move or Copy role. See also: *Defining roles* on page 1464

Standard permissions

- **Read Only**. View content
- **Edit**. Edit content
- **Add**. Add content
- **Delete**. Delete content
- **Restore**. Restore old versions of content
- **Library Read Only**. View items in the corresponding library folder See also: *Working with files in the library* on page 673
- **Add Images**. Upload images to the corresponding library folder
- **Add Files**. Upload files to the corresponding library folder
- **Add Hyperlinks**. Add hyperlinks to the corresponding library folder
- **Overwrite Library**. Overwrite images and files to the corresponding library folder

Advanced permissions

- **Collections**. Manage collections See also: *Working with collections* on page 740

IMPORTANT: If a user is assigned any of the following roles, the user can create, edit, and delete collections regardless of the user's Collections folder permission: Collection and Menu Admin, Collection Admin, Collection Approver.

- **Add Folders**. Add sub folders See also: *Adding a folder* on page 149
- **Edit Folders**. Edit folder properties See also: *Setting folder properties* on page 150
- **Delete Folders**. Delete the current folder or its subfolders See also: *Deleting a folder* on page 158
- **Traverse Folders**. Access folders under the root folder. By default, the **Everyone** user group has permission to view all subfolders. If you disable or modify the Everyone user group, and you want to grant users/groups permission to a folder other than the root folder, you must also assign Traverse permission. If you do not, the user cannot access the folder. In that case, the user cannot perform any other granted permissions.
- **Modify Preapproval**. Set or update a folder’s preapproval group. This permission is only displayed if preapproval groups are enabled. See also: *Setting up an automatic task for pre-approving content* on page 1356

Inheriting permissions

By default, folders and content items inherit permissions from their parent folder. You have 2 options for modifying folder or content permissions.

- Modify the parent folder's permissions
- Break inheritance then modify the permissions fr the folder/content

Breaking inheritance

IMPORTANT: You cannot break inheritance if you are using advanced workflow, and any content in the folder is in Submitted status.

---

1. From the left frame of the Workarea, select a content folder.
2. Choose **View > Properties**. The Folder Properties screen appears.
3. Click **Permissions** (). The Permissions screenappears.
4. Uncheck the **Allow this object to inherit permissions** box.
5. Click **OK**.

Restoring inheritance

IMPORTANT: You cannot restore inheritance if you are using advanced workflow, and any content in the folder is in Submitted status.

---

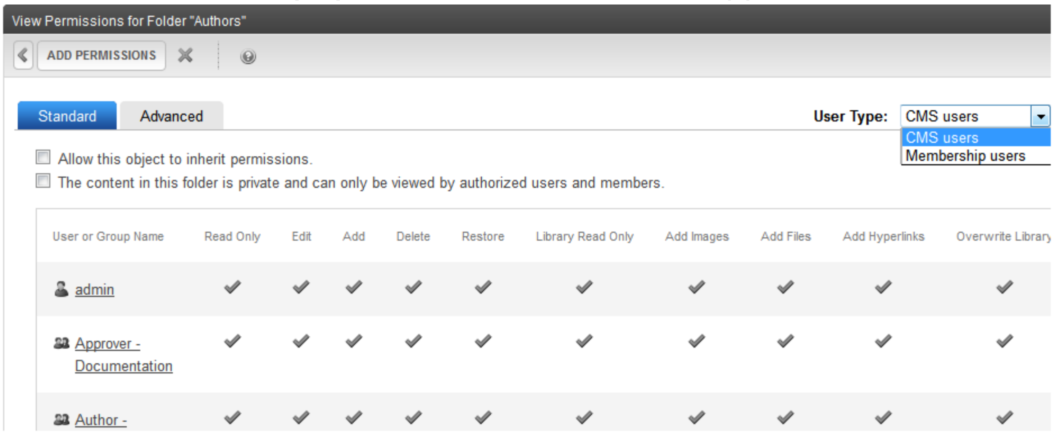
1. From the left frame of the Workarea, select a content folder.
2. Choose **View > Properties**. The Folder Properties screen appears.
3. Click **Permissions** (). The Permissions screenappears.

4. Check the **Allow this object to inherit permissions** box.
5. Click **OK**.

Adding a user or user group to the permissions screen

NOTE:
* Before adding users or groups, you must break inheritance. See *Breaking inheritance* on the previous page.
* If a user and a user group to which that user belongs are both given permission to a folder, the user has all permissions to which he/she is assigned as well as permissions assigned to the group.
* You can assign only Read Only permission to a Membership user or group. See also: *Membership users and groups* on page 1507.

1. From the left frame of the Workarea, select a folder.
2. Choose **View > Properties**. The Folder Properties screen appears.
3. Click **Permissions** (). The Permissions screenappears.



4. Select **CMS users** or **Membership users** from the User Type drop-down menu. Users and groups of the selected type appear.
5. Click **Add Permissions**. The Add Permissions screen appears. Only users and groups *not* assigned to the Permissions screen appear.
6. Check users and groups to add to the Permissions screen.
7. Click **Save**. The Add Permissions screen appears.
8. Check the standard and advanced permissions for the user or group.

   NOTE: Check **Enable All** to assign all permissions on the screen.

9. Click **Save**.

Deleting a user or user group from the permissions screen

IMPORTANT: If a user or group is assigned to an advanced workflow, before you can delete the user or group, you must remove it from all workflows. See also:

Editing an advanced workflow for a folder on page 712, *Editing an advanced workflow for content* on page 716

1. From the left frame of the Workarea, select a content folder.
2. Choose **View > Properties**. The Folder Properties screen appears.
3. Click **Permissions** ( ). The Permissions screenappears.
4. Select **CMS users** or **Membership users** from the User Type drop-down menu. Users and user groups of the selected type appear.
5. Click **Delete** ( ). The Remove Permissions screen appears.
6. Select the user or group to remove from the Permissions screen.
7. Click **Remove Permissions for folder**.
8. Click **OK**.

NOTE: When you delete the permissions of a user or user group, that change is propagated to all subfolders and content that inherit the permissions. Also, if the user or group was part of a workflow, they are removed from it.

Editing user or user group permissions

IMPORTANT: If a user or group is assigned to an advanced workflow, before you can edit the user or group, you must remove it from all workflows. See also: *Editing an advanced workflow for a folder* on page 712, *Editing an advanced workflow for content* on page 716

1. From the left frame of the Workarea, select a content folder.
2. Choose **View > Properties**. The Folder Properties screen appears.
3. Click **Permissions** ( ). The Permissions screenappears.
4. Select **CMS users** or **Membership users** from the User Type drop-down menu. Users and user groups of the selected type appear.
5. Click the user or group for which you want to edit permissions. The Edit Permissions screen appears.
6. To assign any permission, check the box. To remove any permission, uncheck the box. See also: *Standard permissions* on page 161, *Advanced permissions* on page 161

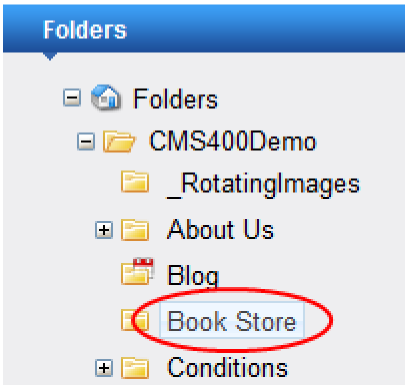
   NOTE: Remember to toggle between standard and advanced permissions.

7. Click **Update**.

Setting permissions for content

For an overview of permissions, see *Managing folder and content permissions* on page 160.

Users can only add, edit, or delete content in folders if they have traverse permission for its parent folders all the way up to root. If the folder to which you assign permissions is not the root folder, you must grant the user the Traverse Folder permission to all folders above that folder. Otherwise, the user cannot go to the folder. For example, consider the following folder structure.



To let a user edit the *Book Store* folder only and no other folders, assign to the user Traverse Folder permission for the 2 folders above Book Store: *CMS400Demo* and *Folders* (root folder).

PREREQUISITES

- Traverse permission to the folder containing the content, and all folders above it
- Edit permission for the content

1. Access the content by navigating to its folder, selecting a language, and clicking on it.
2. Click **View Permissions** ( ).
3. Uncheck the box next to **Allow this object to inherit permissions**.

   NOTE: If **Allow this object to inherit permissions** is already checked, you cannot uncheck this box. The content in this folder is private and can only be viewed by authorized users and members; see *Making content private* on page 637. In that case, this folder is inheriting this setting from its parent folder.

4. Click **OK**.
5. You can perform any action on the content that you can perform on a folder. These options are described in *Managing folder and content permissions* on page 160.

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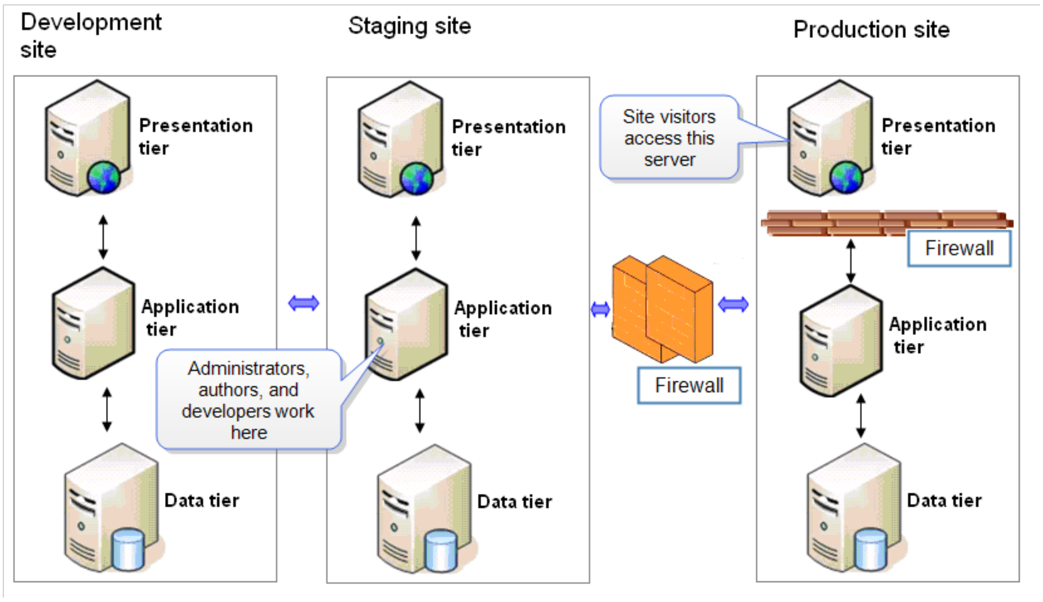
7

Distributing resources with 3-tier architecture

Versions of Ektron previous to 8.5 featured 2-tier architecture, in which the Application and Presentation tiers resided on the same server. In 3-tier architecture, you can locate the Application tier in the client's environment or an Ektron hosting environment. This represents a true separation of the Web server from the database. The Application tier does the bulk of the work, while the Presentation tier does basic processing.

IMPORTANT: You are not required to use 3-tier architecture—Ektron continues to run successfully on 2-tier architecture.

A 3-tier architecture lets you spread the processing of Ektron data among 3 tiers, shown in the following figure. Each tier should reside on its own server.



NOTE: You may run all 3 tiers on a single server for development purposes only.

The 3 tiers are Data, Application, and Presentation.

- **Data**. Contains SQL and Ektron database objects (stored procedures, views, tables, and so on).
- **Application**. Full Ektron installation.
  - Ektron DLLs
  - Ektron Workarea
  - Ektron Windows Services
  - Ektron WCF Services
  - Custom WCF Services
- **Presentation**.
  - Handles site visitor requests and displays Web pages
  - Minimal footprint, lightweight
  - Requires IIS
  - No Ektron installation

- Contains
  - Standard ASP.NET website
  - Minimal set of Ektron .dlls in bin folder
  - Configuration files (`web.config`, unity.config)
  - Workarea required only if website uses PageBuilder or templated server controls.

The Ektron Framework API uses the Microsoft Unity Framework to inject business logic implementations into our Framework API. When running in 3-Tier mode, the Framework API on the Presentation tier uses a WCF service client implementation, thereby routing Framework API calls through WCF services, while the actual logic is running on the Application server.

To minimize network requests the between Presentation and Application tiers, Ektron includes a caching tier.

NOTE: 3-tier architecture is different from MVC coding style, which consists of a data layer, business logic layer, and an API layer.

NOTE: To communicate between servers, you can choose any unused port. If you choose a port other than 80, Ektron recommends one outside the well-known port range (0 to 1023).

Benefits of 3-tier architecture

3-tier architecture provides the following benefits.

- **Scalability**. Each tier can scale horizontally. For example, you can load-balance the Presentation tier among 3 servers to satisfy more Web requests without adding servers to the Application and Data tiers.
- **Performance**. Because the Presentation tier can cache requests, network utilization is minimized, and the load is reduced on the Application and Data tiers. If needed, you can load-balance any tier.
- **Availability**. If the Application tier server is down and caching is sufficient, the Presentation tier can process Web requests using the cache.

Limitations of 3-tier architecture

3-tier architecture has the following limitations.

- You must manually push templates, assets, private assets, uploaded images, and uploaded files from the Application tier to the Presentation tier. You may use a tool like Robocopy to do this.
- You create content (HTML, assets, PageBuilder pages, and so on) only in the Application tier. You can only view content from Presentation tier.
- Because 3-tier architecture uses WCF, it requires:
  - the 8.5 or higher Framework API and databinding. You cannot use API calls outside of the Framework API

  - templated server controls
  - widgets created by the Framework API
- Because the business logic executes on the Application tier, its website directory must be identical to the Presentation tier's.

Impact of 3-tier setup on a developer

The Unity Framework provides the same developer experience, whether you use 2- or 3-tier architecture, by defining which container to use in the `web.config` file. See also: Introduction to Unity, *Creating a sample content block in 3-tier architecture* on page 175.

NOTE: You do not need to know about the Unity Framework—it is mentioned here to help you understand how Ektron achieves 2-tier and 3-tier architecture.

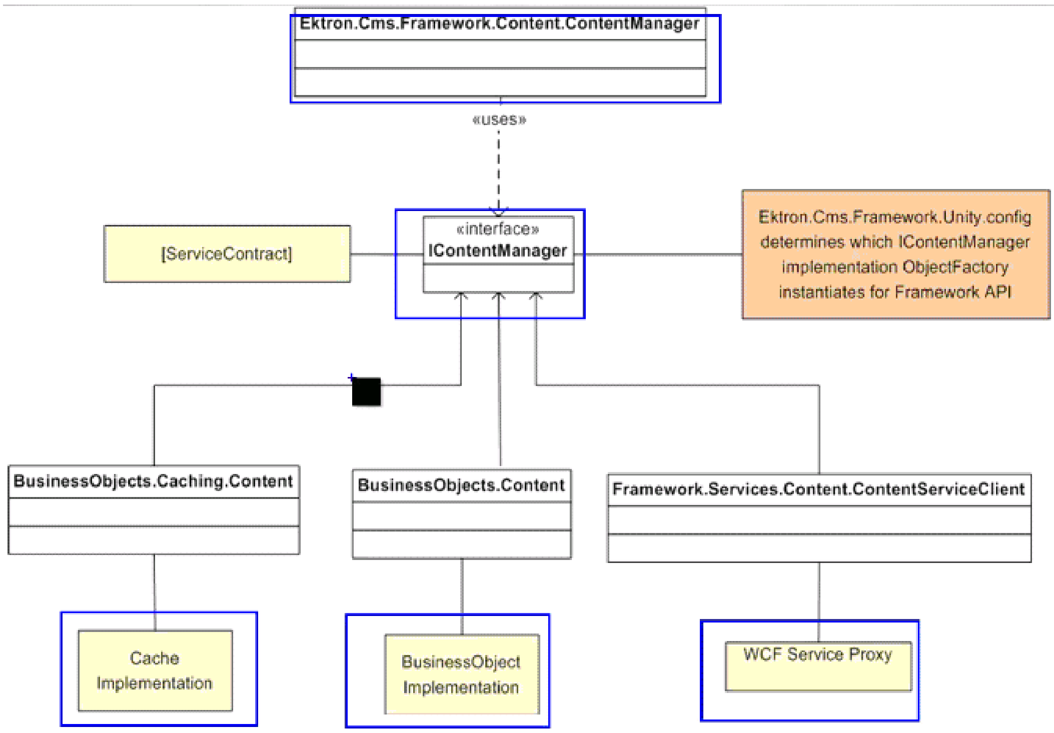
Ektron has 3 main containers, which transmit data between tiers.

- **Business object** (`BusinessObjects.Content`)
  - contains Ektron's implementation of business logic
  - used in 2-tier architecture
  - in 3-tier architecture, executed in the Application tier
- **WCF service proxy** (`Framework.Services.Content.ContentServiceClient`)
  - used in 3-tier architecture to communicate between Application and Presentation tiers
- **Cache** (`BusinessObjects.Caching.Content`)
  - Ektron uses the Unity Framework to insert a caching layer
  - When an API call is made (or a templated server control is used) from the Presentation tier, Ektron caches frequently-used objects
  - Caching minimizes API calls between Application and Presentation tiers

  NOTE: Caching uses a provider model. By default, Web caching is implemented, but you can replace it with other caching options.

The following chart shows how the Framework API uses the containers.

1. Content manager gets initialized and implements the `IContentManager` interface.
2. The Presentation tier uses the container specified in `web.config`. In `web.config`, if `defaultContainer= “Default”`, the Presentation tier first looks in cache for the requested data object. If the data object is not there, the Presentation tier looks in the `ChildContainer` property value, which is **WCF** by default.



Setting up 3-tier architecture

Prerequisites

- The IP address of your application tier server
- If the Ektron machine is running Windows 2012 server, you must install WCF HTTP Activation.

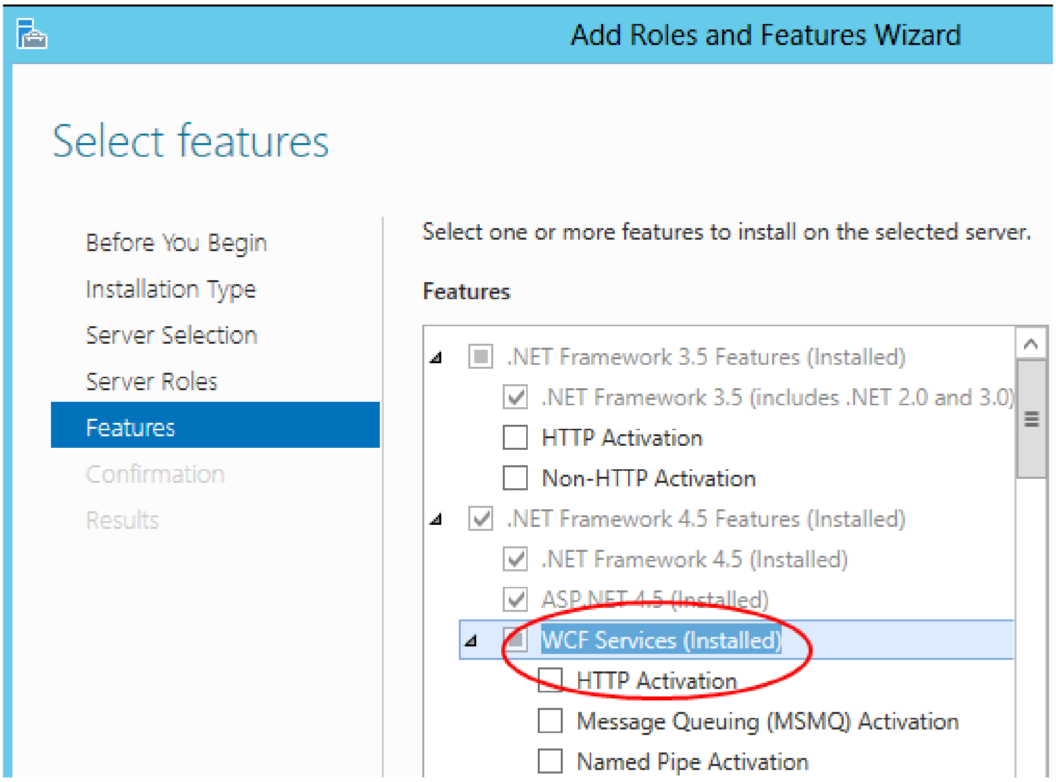
  Installing WCF HTTP Activation

  a. Launch Server Manager from the task bar or Start menu.
  b. Choose the server on which you want to install WCF.
  c. From the task drop-down, scroll to **Roles and Features**.
  d. On the Add Roles and Features Wizard dialog, in the left panel, select **Features**.
  e. Expand **.NET Framework 4.5 Features**.

  NOTE: If you have not installed **.NET 4.5**, go back to **Server Roles** and install it.

  f. Under **WCF Services**, check the **HTTP-Activation** box.

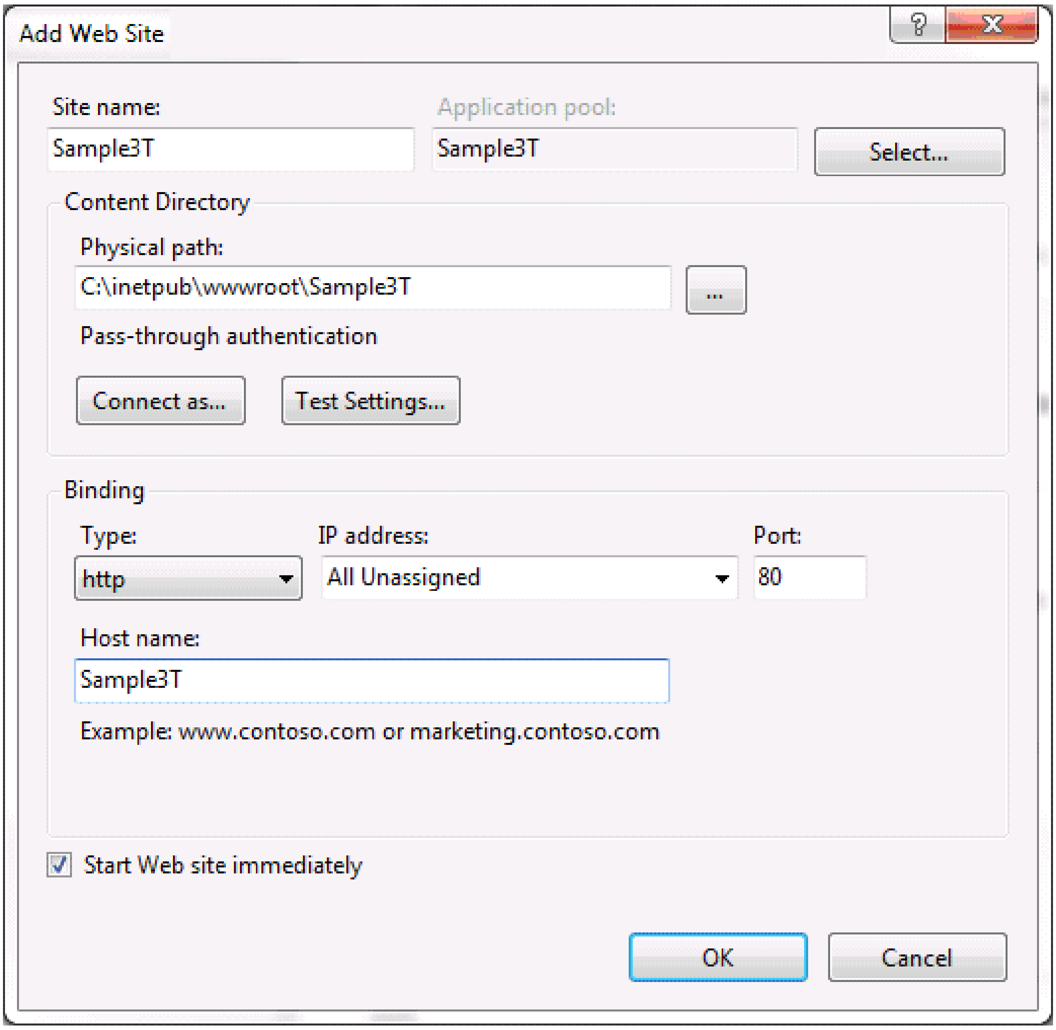
g. Click **Install**.



1. On your Web Application server, install an Ektron website to the site root folder (if you do not already have one). During installation, install the Ektron database to a remote SQL Server.

   NOTE: The 8.5 and higher installation includes a `startersites\3TierMin\Content` folder that contains files needed for the Presentation tier.

2. On the Web application server, copy the `C:\Program Files (x86)\Ektron\CMS400vxx\startersites\3TierMin\Content` folder.
3. On the Presentation tier server, paste that folder to the website root folder.
4. On the Presentation tier server, open IIS and make the new folder a website. See also: *Creating multiple websites on a single server* on page 90.



5. On the Presentation tier server, open the site `root/web.config` file.
6. Update `ek_ServicesPath` to point to the `workarea/services` folder on your Application tier server.

```
<appSettings>
<!-- This is the path to your CMS App Site.
It should always end in workarea/services/  -->
<add key="ek_ServicesPath" value="http://[YOUR_CMS_SERVER]
  /workarea/services/" />
</appSettings>
```

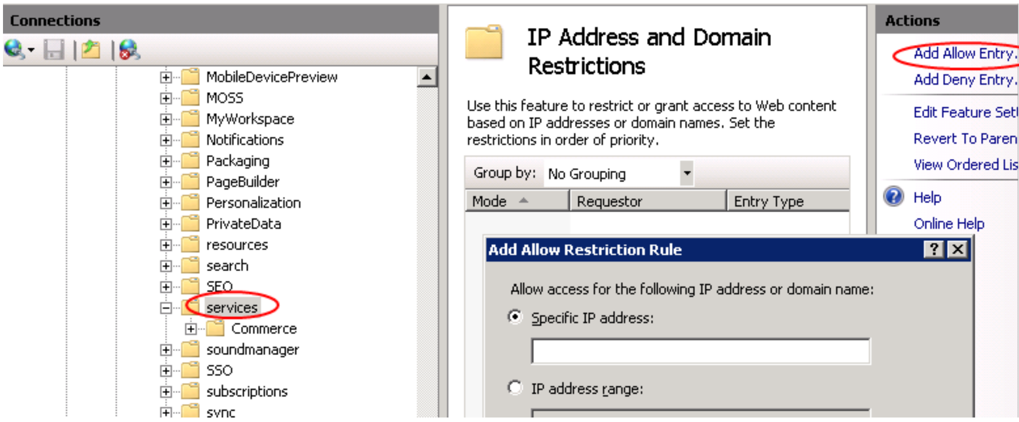
7. If you want to turn on caching, set the following values in the `web.config` file.

```
<ektron.cacheProvider defaultProvider="webCache">
  <providers>
    <add name="webCache" cacheTimeSeconds="300"
      type="Ektron.Cms.Providers.Caching.WebCacheProvider,
      Ektron.Cms.Providers" />
  </providers>
</ektron.cacheProvider>
```

8. Make sure the value of the `framework defaultContainer` tag is `Cache`, and the `framework childContainer` tag is `WCF`.

```
<framework defaultContainer="Cache" childContainer="WCF">
```

9. On the Application tier server, open IIS.
10. Click your website **> workarea > services**.
11. Click **IP Address and Domain Restrictions** in the right pane.
12. Click **Add Allow entry** and enter your Presentation layer's IP address.



13. Click your website **> workarea > webservices**. Then, click **IP Address and Domain Restrictions** in the right pane.
14. Click **Add Allow entry** and enter your Presentation layer's IP address.
15. Open a browser and browse to your site.
16. Deploy templates and supporting files to the Presentation server.

Files copied to the Presentation tier

The following files are copied from the Application tier server to initialize the Presentation tier after you complete the set up. The files are located in the `startersites\3TierMin\Content` folder.

- `App_Code` folder. Contains URL Aliasing module See also: *Aliasing with 3-tier architecture* on page 176.
- `Bin` folder. Subset of full bin folder; contains binaries for Presentation tier only
- `Workarea` folder. Subset of full Workarea folder; Framework UI is required to run templated controls and PageBuilder controls on Presentation tier
- The following configuration files:
  - `Ektron.cms.framework.ui`. Contains default templates for templated server controls
  - `Ektron.cms.framework.unity`. Has mapping interfaces and implementation
  - `Ektron.cms.framework.ui.unity`. Has mapping for templated control to services
- Within `web.config`
  - Within `<configsections>` tags. `<sectionGroup>` settings define how the Presentation tier communicates with the Application tier
  - `ek_ServicesPath`. Defines the path to the Application tier's Web services file

- The following UI elements for templated server controls

```
<ui.unity configSource="ektron.cms.framework.ui.unity.config" />
<ui configSource="ektron.cms.framework.ui.config" />
```

- The `<ektron.framework.services>` tag defines the container.

```
<ektron.framework.services>
  <unity configSource="ektron.cms.framework.unity.config"/>
  <framework defaultContainer="Default" childContainer="WCF"/>
</ektron.framework.services>
```

If `defaultContainer=“Default”`, the Presentation tier first looks in cache for the requested data object. If the data object is not there, the Presentation tier looks in the `ChildContainer` property value, which is **WCF** by default.

- content of `<pages>` tag. Controls used by PageBuilder and templated server controls.
- The `<modules>` section manages Aliasing. See also: *Aliasing with 3-tier architecture* on the next page.

```
<system.webServer>
<modules runAllManagedModulesForAllRequests="true">
<add name="EkUrlAliasModule" type="UrlAliasingModule"
  preCondition="integratedMode"/>
</modules>
</system.webServer>
```

Creating a sample content block in 3-tier architecture

This example illustrates how the same code can work in the Application and Presentation tiers. Ektron uses the Framework API to get a content item.

1. In Visual Studio, open the Presentation tier's website.
2. Add a new Web form.
3. Add a label control that can render a content block.

```
<asp:Label ID=”contentblock1” runat=”server”> </asp:Label>
```

4. Open the form’s code-behind file.
5. Insert the following code.

NOTE: This example assumes that ID 30 is a valid Ektron content item.

```
long id = 30;
if (!string.isNullorEmpty(Request.QueryString[“id”]))
{ long.TryParse(Request.QueryString[“id”].ToString(), out id);
}
```

6. While in the code-behind file, initialize content manager as the logged in user.

```
ContentManager contentManager = new ContentManager();
```

7. Get the content and return it to the asp Label control.

```
ContentData data = contentManager.GetItem(id);
contentblock1.Text = data.Html;
```

8. Build and run.
9. Open a Web browser.
10. Insert the Presentation server/page you just created into your browser address field, where you will see Ektron content through the Presentation tier.

Creating a PageBuilder page with 3-tier architecture

PREREQUISITES

- A PageHost file in the Presentation tier used specifically to support 3-tier architecture. The file lets you view only; you cannot edit.
- A widget built using the Framework API (for example, the sample Content Block widget).

 NOTE: A 3-Tier site contains many widgets. Only those built using the Framework API work on the Presentation tier.

- A wireframe template (`content.pb.aspx`) that exists on the Application and Presentation tiers.

1. Go to the Application tier website's Workarea.
2. Create a sample PageBuilder page. See also: *Developing wireframe templates* on page 1007.
3. Go to a folder to which the `content.pb.aspx` wireframe template is applied.
4. Create new Page Layout.
5. Drag and drop a content block widget onto the page layout and assign an Ektron content item.
6. Publish.
7. Browse to the Presentation website to see the content.

Aliasing with 3-tier architecture

URL Aliasing works within 3-tier architecture. See also: *Creating user-friendly URLs with aliasing* on page 1293.

NOTE: Aliasing code is stored in the `App_Code/CSCode/UrlAliasingModule.cs` file.

3-tier architecture requires the Aliasing module files (`UrlAliasingModule.cs` and `UrlAliasingBase.cs` in the `App_Code/CSCode` folder), and the registration of that module in the `web.config` file. To verify the registration:

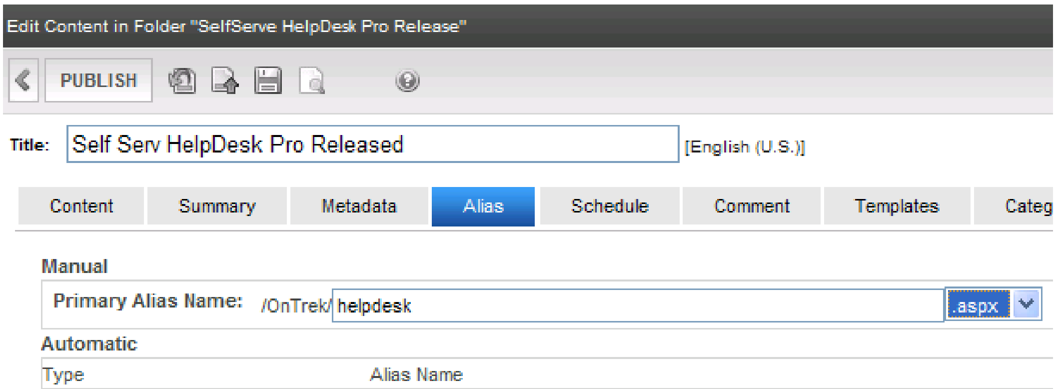
1. In the Presentation website, open *`siteroot`*`/web.config`. See also: *Setting up 3-tier architecture* on page 171.
2. Go to the `<Modules>` tag.

3. Verify that the URL alias module is registered, as shown in the following code.

```
<modules runAllManagedModulesForAllRequests="true">
<add name="EkUrlAliasModule"
     type="UrlAliasingModule"
     preCondition="integratedMode" />
</modules>
```

To test URL aliasing, follow these steps.

1. Go to the Application tier website.
2. Create a content block.
3. On its **Alias** tab, enter a manual alias.



4. On the **Template** tab, choose a template that exists on the Application and Presentation tiers.
5. Publish the content.
6. Verify that Aliasing works on the Application tier.
7. Verify that Aliasing works on the Presentation tier.

Using eSync with 3-tier architecture

You may use eSync to move files among tiers and sites, but eSync is not a prerequisite of 3-tier architecture.

You can use eSync to move changes from the development to the staging to the production sites. You also can use eSync to move changes from the Data to Application tier. Then, use Web services to move files from the Application tier to the Presentation tier. However, see *Limitations of 3-tier architecture* on page 169.

Using search with 3-tier architecture

If you use Microsoft Search Server 2010 with 3-tier architecture, you do not need to make any adjustments.

To use Solr search with 3-tier architecture, see *Using Solr search with 3-tier architecture* on the next page.

To use Microsoft FAST Search Server 2010 search with 3-tier architecture, see *Using Solr search with 3-tier architecture* on the next page.

Using Solr search with 3-tier architecture

If you are using Solr search for your presentation layer, follow these steps to prepare it for Solr.

1. Open the presentation layer's *site root*/ektron.cms.framework.unity.config file.
2. Locate the following section.

```
<!-- Search-->
<typeAlias alias="BusinessObjects.ICrawler"
type="Ektron.Cms.Search.SearchServerCrawler, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISearchSettings"
type="Ektron.Cms.Search.SearchSettings, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISynonyms" type="Ektron.Cms.Search.CmsSynonyms,
Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISuggestedResults"
type="Ektron.Cms.Search.SuggestedResults, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchManager"
type="Ektron.Cms.Search.SearchManager, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchPropertyRule"
type="Ektron.Cms.Search.SearchPropertyRule, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchProvider"
type="Ektron.Cms.Search.SS2010.SS2010SearchProvider, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISearchResultBuilder"
type="Ektron.Cms.Search.SharePointSearchResultBuilder, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IIntegratedSearchMapping"
type="Ektron.Cms.Search.IntegratedSearchMapping, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.IPropertyNameResolver"
type="Ektron.Cms.Search.SharePointPropertyNameResolver, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IDocumentPromotionManager"
type="Ektron.Cms.Search.DocumentPromotionManager, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IQueryProposition"
type="Ektron.Cms.Search.SharepointQueryPropositionService, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IQueryPropositionManager"
type="Ektron.Cms.Search.QueryPropositionManager, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.IRecordQueryStatisticsHelperService"
type="Ektron.Cms.Search.SharepointRecordQueryStatisticsService,
Ektron.Cms.Search"/>
```

3. Replace that section with the following code.
4.

```
<!-- Search-->
<typeAlias alias="BusinessObjects.ICrawler" type="Ektron.Cms.Search.SolrCrawler,
Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISearchSettings"
type="Ektron.Cms.Search.SearchSettings, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISynonyms" type="Ektron.Cms.Search.CmsSynonyms,
Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISuggestedResults"
type="Ektron.Cms.Search.SuggestedResults, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchManager"
type="Ektron.Cms.Search.SearchManager, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchPropertyRule"
type="Ektron.Cms.Search.SearchPropertyRule, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchProvider"
type="Ektron.Cms.Search.Solr.SolrSearchProvider, Ektron.Cms.Search"/>
```

```
<typeAlias alias="BusinessObjects.ISearchResultBuilder"
type="Ektron.Cms.Search.Solr.SolrSearchResultBuilder, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IIntegratedSearchMapping"
type="Ektron.Cms.Search.IntegratedSearchMapping, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.IPropertyNameResolver"
type="Ektron.Cms.Search.Solr.SolrPropertyNameResolver, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IDocumentPromotionManager"
type="Ektron.Cms.Search.DocumentPromotionManager, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IQueryProposition"
type="Ektron.Cms.Search.Solr.SolrQueryPropositionService, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IQueryPropositionManager"
type="Ektron.Cms.Search.QueryPropositionManager, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.IRecordQueryStatisticsHelperService"
type="Ektron.Cms.Search.Solr.SolrRecordQueryStatisticsHelperService,
Ektron.Cms.Search"/>
```

Using Microsoft FAST Search Server 2010 with 3-tier architecture

If you are using Microsoft FAST Search Server 2010 for your presentation layer, follow these steps to prepare it for FAST.

1. Open the presentation layer's *site root* ektron.cms.framework.unity.config file.
2. Locate the following section.

```
<!-- Search-->
<typeAlias alias="BusinessObjects.ICrawler"
type="Ektron.Cms.Search.SearchServerCrawler, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISearchSettings"
type="Ektron.Cms.Search.SearchSettings, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISynonyms" type="Ektron.Cms.Search.CmsSynonyms,
Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISuggestedResults"
type="Ektron.Cms.Search.SuggestedResults, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchManager"
type="Ektron.Cms.Search.SearchManager, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchPropertyRule"
type="Ektron.Cms.Search.SearchPropertyRule, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchProvider"
type="Ektron.Cms.Search.SS2010.SS2010SearchProvider, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISearchResultBuilder"
type="Ektron.Cms.Search.SharePointSearchResultBuilder, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IIntegratedSearchMapping"
type="Ektron.Cms.Search.IntegratedSearchMapping, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.IPropertyNameResolver"
type="Ektron.Cms.Search.SharePointPropertyNameResolver, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IDocumentPromotionManager"
type="Ektron.Cms.Search.DocumentPromotionManager, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IQueryProposition"
type="Ektron.Cms.Search.SharepointQueryPropositionService, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IQueryPropositionManager"
type="Ektron.Cms.Search.QueryPropositionManager, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.IRecordQueryStatisticsHelperService"
type="Ektron.Cms.Search.SharepointRecordQueryStatisticsService,
Ektron.Cms.Search"/>
```

3. Replace that section with the following code.

```
<!-- Search-->
<typeAlias alias="BusinessObjects.ICrawler"
type="Ektron.Cms.Search.SearchServerCrawler, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISearchSettings"
type="Ektron.Cms.Search.SearchSettings, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISynonyms" type="Ektron.Cms.Search.CmsSynonyms,
Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISuggestedResults"
type="Ektron.Cms.Search.SuggestedResults, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchManager"
type="Ektron.Cms.Search.SearchManager, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchPropertyRule"
type="Ektron.Cms.Search.SearchPropertyRule, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.ISearchProvider"
type="Ektron.Cms.Search.FS2010.FS2010SearchProvider, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.ISearchResultBuilder"
type="Ektron.Cms.Search.SharePointSearchResultBuilder, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IIntegratedSearchMapping"
type="Ektron.Cms.Search.IntegratedSearchMapping, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.IPropertyNameResolver"
type="Ektron.Cms.Search.SharePointPropertyNameResolver, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IDocumentPromotionManager"
type="Ektron.Cms.Search.DocumentPromotionManager, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IQueryProposition"
type="Ektron.Cms.Search.SharepointQueryPropositionService, Ektron.Cms.Search"/>
<typeAlias alias="BusinessObjects.IQueryPropositionManager"
type="Ektron.Cms.Search.QueryPropositionManager, Ektron.Cms.BusinessObjects"/>
<typeAlias alias="BusinessObjects.IRecordQueryStatisticsHelperService"
type="Ektron.Cms.Search.SharepointRecordQueryStatisticsService,
Ektron.Cms.Search"/>
```

8

Setting up search for your website

Ektron Web search finds relevant results within several parts of the CMS structure and offers massive scalability, scaling to tens of millions of items and beyond. Search capability is based on Microsoft Search Server or Apache Solr technology, which provide superior search capability with performance and extensibility currently demanded by enterprises world wide. There are specific search functions for the visitor using the website and the administrator using the Workarea. You can search content, documents, metadata, keywords, descriptions, titles, community content, users, groups, and activity streams.

For more information about Search, see the **Ektron Framework API > Ektron.Cms.Framework.Search** and the **Framework UI > Templated Server Controls > Search** in the Ektron Online Developer's Reference.

Search providers

BEST PRACTICES

- The server hosting your search provider needs at least 120 GB free space.
- Install SQL Server on a standalone server
- Operating system is Microsoft Windows Server 2008 R2 or 2012

You can choose from the following search providers. Use the following guidelines to determine which search server is best for you.

- Solr Search
  - An open-source, enterprise-level search platform, from the Apache Lucene project, that is known for scalability and performance.
  - *Installing Solr on a single on-premises (local) server* on page 216
- Microsoft Search Server Express 2010

  IMPORTANT: As of Ektron version 9.3 SP1, Microsoft Search Server 2010 Express is no longer supported.

  - A free, enterprise search solution that is simple and flexible to configure, and powerful enough to meet your needs.
  - Requirements: Hardware and software requirements (Search Server 2010)
  - Installation: *Setting up Microsoft Search Server 2010 Express* on page 295
- Microsoft Search Server 2010

  IMPORTANT: As of Ektron version 9.3 SP1, Microsoft Search Server 2010 is no longer supported.

  - You are indexing more than 10 million items.
  - Requirements: Hardware and software requirements (Search Server 2010)
  - Installation: *Setting Up Microsoft Search Server 2010* on page 302
- Microsoft Search Server 2013 or 2016
  - Installation: *Installing and Setting up Microsoft Search Server 2013 or 2016* on page 378

- Microsoft FAST Search Server 2010
  - You are indexing more than 100 million items.
  - Requirements: Hardware and software requirements (FAST Search Server 2010 for SharePoint)
  - Installation: *Working with Microsoft FAST search* on page 423
- Optimizely Search & Navigation
  - A powerful and scalable query platform that lets you index and query large amounts of structured or unstructured content
  - *Using Optimizely Search & Navigation with Ektron* on the next page

Search provider comparisons

The following table compares functionality available with search providers.

Function	Solr search	Microsoft Search Server Express	Microsoft Search Server 2010, 2013, or 2016	Microsoft FAST Search Server
Providing suggested results on page 350 (*managed within* Ektron)	✓	✓	✓	✓
Synonym sets (*managed within* Ektron)	✓	✓	✓	✓
Integrated search	✓	✓	✓	✓
Load balanced search			✓	✓
Faceted search	✓			✓
Similar Results	✓			✓
Autosuggest	see auto-complete	✓	✓	✓

Function	Solr search	Microsoft Search Server Express	Microsoft Search Server 2010, 2013, or 2016	Microsoft FAST Search Server
Autocomplete	✓			
"Did you mean?" feature	✓ single word only	✓	✓	✓
Language support	14 supported "out of the box"[1]	as supported by Microsoft Search Server Express	as supported by Microsoft Search Server	as supported by Microsoft Fast Search Server

[1]—additional languages may be enabled; see *Solr language support* on page 282

This chapter also contains the following topics.

- *Using Solr search* on page 204
- *Setting up Microsoft Search Server 2010 Express* on page 295
- *Setting Up Microsoft Search Server 2010* on page 302
- *Installing and Setting up Microsoft Search Server 2013 or 2016* on page 378
- *Working with Microsoft FAST search* on page 423
- *Using Microsoft Search Server features* on page 335
- Search Templated Server Controls
- *Using Optimizely Search & Navigation with Ektron* below

Using Optimizely Search & Navigation with Ektron

Optimizely Search & Navigation is a powerful and scalable query platform that lets you index and query large amounts of structured or unstructured content. Using Optimizely Search & Navigation, you can create customized website search functionality or build advanced navigation for non-hierarchical content. Other search providers use a crawl to update site content, which can delay the updating of search results. Optimizely Search & Navigation, on the other hand, uses push technology, which means that search results on your website are updated in near real-time.

Optimizely Search & Navigation provides search capabilities for all Ektron content, including HTML content, HTML forms, Smart Forms, assets, and PageBuilder. When using Optimizely Search & Navigation with Ektron, Ektron content and documents are initially pushed to a Find index. from then on, the Find index is updated whenever Ektron content is edited, deleted, or added. For example, if content is scheduled to go live at a future date and time, Optimizely Search & Navigation can retrieve the content after the go-live date and time. Similarly, content scheduled to be archived and removed from site is no longer available in search results as of the scheduled date and time. To query the index and return search results, use Find APIs.

Because Find does not impact existing search capabilities, it can co-exist with your current search provider.

Setting up Optimizely Search & Navigation

This section explains how to set up Optimizely Search & Navigation as a search provider for your Ektron website.

PREREQUISITE

Ektron version 9.10 SP1 or higher

Obtaining Find indexes

Upon creating a developer account, you can use a free *development index* for testing. This index has a 10,000 document limit, a 90-day lifespan, and a maximum file size of 5 MB.

After completing testing, if you want to move into a production environment, obtain a *production index*. See http://www.episerver.com/orderfind.

Installing Optimizely Search & Navigation

1. Create an Optimizely Search & Navigation developer service.
   a. Go to http://find.episerver.com/.
   b. Create an account and verify it.
   c. Click **Add Developer Service**. The Create Developer Service screen appears.
   d. Enter an index name, choose languages to support, accept the terms and conditions, and click **Create Service**. The Index Details screen displays your information.

      TIP — SAVE THIS PAGE WITH YOUR BROWSER FAVORITES SO YOU CAN QUICKLY OPEN IT IN THE FUTURE.
2. Prepare the Ektron website in Visual Studio.
   a. Open the Ektron site as a website.
   b. Save a solution file for the site.
   c. Set the site's Target Framework to **.NET Framework 4.5**.

3. Update the Ektron `web.config` file with snippets from the Create Service screen.
   a. From the Optimizely Search & Navigation Create Service screen, copy the `web.config` snippet within the `<configSections>` tag.

```
<configuration>
    <configSections>
        <section
            name="episerver.find" type="EPiServer.Find.Configuration, EPiServer.Find"
requirePermission="false"/>
    </configSections>
    <episerver.find
        serviceUrl="http://es-api01.episerver.com/pSuRPv03K2w3W5siEG6sBUFdP6tglVlg/"
        defaultIndex="aaaaa_bbb"/>
</configuration>
```

   b. Open your Ektron *siteroot*`\web.config` file.
   c. Find the closing `configSections` tag (`</configSections>`).
   d. Paste the copied text above the closing `</configSections>` tag.
   e. From the Optimizely Search & Navigation Create Service screen, copy the `web.config` snippet below the closing `</configSections>` tag and above the closing `</configuration>` tag.

```
<configuration>
    <configSections>
        <section
            name="episerver.find" type="EPiServer.Find.Configuration, EPiServer.Find"
requirePermission="false"/>
    </configSections>
    <episerver.find
        serviceUrl="http://es-api01.episerver.com/pSuRPv03K2w3W5siEG6sBUFdP6tglVlg/"
        defaultIndex="aaaaa_bbb"/>
</configuration>
```

   f. Within the Ektron `siteroot\web.config` file, find the closing configuration tag (`</configuration>`).
   g. Paste the copied text above that tag.
4. Create an Optimizely Search & Navigation package source.
   a. In Visual Studio, choose **Tools > Library Package Manager > Package Manager Settings**. The Options screen appears.
   b. Under **Package Manager**, choose **Package Sources**.
   c. Add a new source called **Episerver Find**. Assign it a URL of `http://nuget.episerver.com/feed/packages.svc/`
5. Install the Ektron.Cms.Find Nuget package.
   a. In Visual Studio, open Solution Explorer.
   b. Right-click the Ektron website project.
   c. From the context menu, choose **Manage NuGet Packages...**
   d. In the left panel, choose **Online**.
   e. In the **Search** field, enter `Ektron.cms.find`.
   f. Click the Ektron.Cms.Find package's **Install** button.
6. Update the `Global.asax` file with a reference to bootstrapper file.
   a. Open *yoursiteroot*`\Global.asax`.

> **NOTE:** If your `siteroot` folder does not contain a `Global.asax` file, create one.

b. Find the following method:

```
void Application_Start(object sender, EventArgs e)
{
}
```

c. Between the curly brackets ({ }), insert the following code.

```
Ektron.Cms.Find.AspNetBootstrapper.EktronFindBootstrapper.Start();
```

7. To update the Find index with content changes created by Ektron eSync, follow these steps.
   a. Stop the Ektron Windows Service.
   b. Copy the Ektron.Cms.Find.EsyncNotification.dll file from the bin folder. Paste it to the `C:\Program Files (x86)\Ektron\EktronWindowsService40` folder.
   c. Open the `C:\Program Files (x86)\Ektron\EktronWindowsService40\objectFactory.config` file.
   d. Find the following section of the file.

```
<add name=”ESyncNotification”>
  <strategies>
  </strategies>
</add>
```

   e. Within the <Strategies> tags, insert the following line.

```
<add name="FindStrategy"
type="Ektron.Cms.Find.EsyncNotification.FindStrategy,
Ektron.Cms.Find.EsyncNotification"/>
```

   f. Save the `objectFactory.config` file.
   g. Restart the Ektron Windows Service.

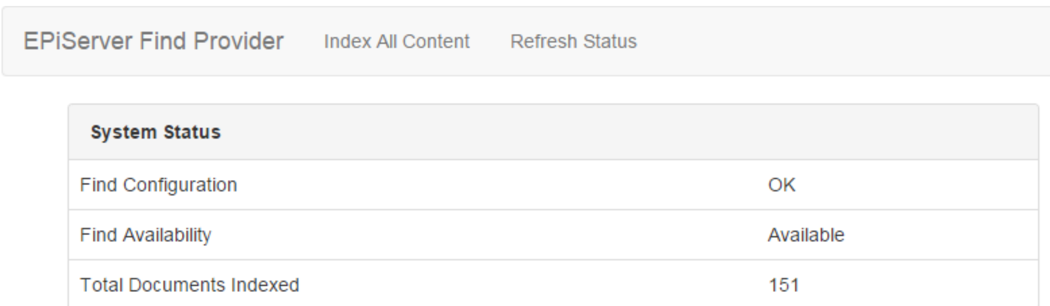
Loading Ektron content into the Find index

After installing Optimizely Search & Navigation, push your website content to the Find index.

PREREQUISITES

- You completed all installation steps. See *Installing Optimizely Search & Navigation* on page 185.
- You are a member of the Ektron Administrators Group.

1. Open the following URL: *yoursiteroot*/`episerverfind/`. The following screen appears.



   - The **Find Configuration** field indicates that the `Global.asax` file includes the correct reference to the bootstrapper file. (This step was covered in *Installing Optimizely Search & Navigation* on page 185.)
   - The **Find Availability** field indicates that your `web.config` file was updated with snippets from the Create Service screen. (This step was also covered in *Installing Optimizely Search & Navigation* on page 185.)
2. Click **Index All Content**. The screen indicates that indexing has begun.
3. Click **Refresh Status** occasionally to view progress. When the **Total Documents Indexed** number stops changing, indexing is complete.

Using Find with Ektron content types

IMPORTANT: When you edit the bootstrapper file or code that it references, you must restart IIS to push the latest changes to Find. Then, clear the Find index and reindex. These actions prevent mismatches between the Find index and custom types that use it.

Using Find to query HTML content

You can used FIND APIs to query and filter published HTML content by the following properties.

- Title
- Body
- Summary
- Taxonomy category
- Creation date
- Modification date
- Last editor
- Folder
- Content ID
- Language
- Quicklink

Using Find with a PageBuilder page

Optimizely Search & Navigation returns search results for all searchable content on a published PageBuilder page. Text that appears on such a PageBuilder page is indexed, along with the page's title. For example, if a PageBuilder page includes a collection widget, and each collection item's teaser is displayed, the teaser text is searchable.

Indexing PageBuilder master layouts

Pagelayout pages are indexed. Master layouts are not indexed, but PageBuilder pages based on a master layout are indexed. See also: *Creating a PageBuilder* *master layout* on page 1010.

Suppressing page elements from search results

You may want to suppress certain page elements from search results. For example, you want to exclude navigation menus or footers. The following Knowledge Base article explains how to do this: How to hide an element on a PageBuilder page from showing up in search results.

NOTE: Any text that is not visible to the builtin user is not indexed.

Using Find with Ektron Smart Forms

NOTE:
* If you want a Smart Form to be indexed, you must select its **Content Searchable** checkbox.
* The **Indexed** checkbox on Smart Form configuration field's dialog has no effect on whether the field's content is searchable. Any property specified in your custom Smart Form class and populated by serialization logic is searchable.

You can query Smart Forms using the content type `Smartform`. For example: `SearchResults<Ektron.Cms.Find.Models.SmartForm> results;`

If you use this approach, Episerver Find returns Smart Form content as a single string. To extract field data, developers must use a string split technique.

If you want to query data stored in Smart Form fields, use a type mapper to store a custom content type. This type lets you convert each field in Smart Form configuration to a field in a custom object. You can then use Find to query that object using this syntax.

```
var results = client.Search<customclassname>().Filter(…).GetResult();
```

For example, if the class created for your Smart Form configuration is *OurTeam*, you would use this.

```
var results = client.Search<OurTeam>().Filter(…).GetResult();
```

To learn how to use a type mapper to store a custom content type, see *Converting a Smart Form configuration to a class* below.

Converting a Smart Form configuration to a class

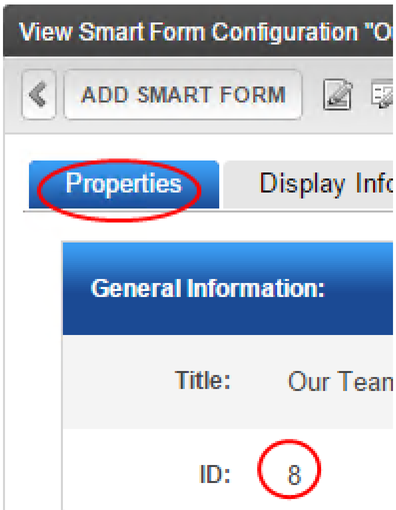
Converting a Smart Form configuration to a class

Complete these steps for *each* Smart Form configuration that you want to convert into a class. After you complete the procedure, Optimizely Search & Navigation indexes registered configurations when a Smart Form is edited or added.

NOTE: To learn about updating Find upon deleting, see *Updating Find index upon deletion of a Smart Form* on page 195.

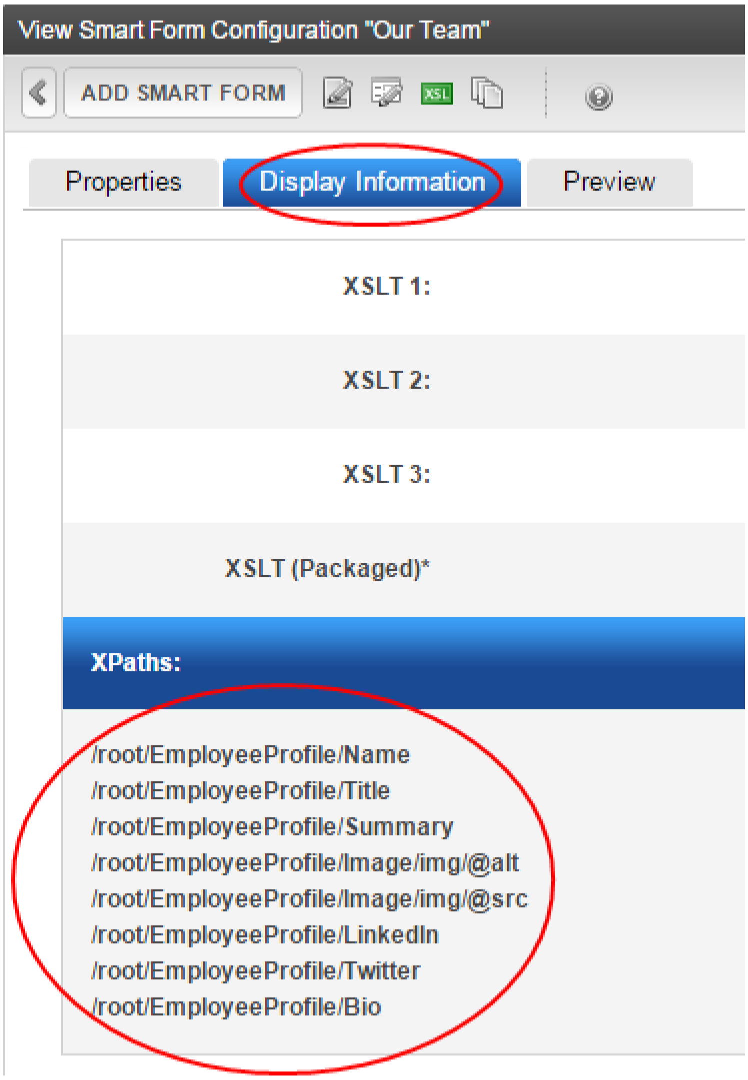
Part 1: Analyze the Smart Form configuration

1. Obtain the Smart Form configuration’s ID. You use this information in later steps.



2. Analyze the configuration’s XML structure: its root class and subclasses. These appear on the View Smart Form Configuration screen's **Display Information**

tab. Consider the following example.



This Smart Form configuration has the following structure. You use this information in later steps

Root class: Ourteam

Subclass: Employee profile

Subclass: Image

Subclass: img

Part 2: Create class and move .dll to bin folder

1. In Visual Studio, create a class library.
2. Save the Smart Form configuration schema as an XSD file, then generate a class from it. This procedure is explained in steps 1 (*Save Schema XSD File*) and 2 (*Generate Class from XSD*) in the Ektron Knowledge Base article "Generate Class for Smart Form.
3. Move the .cs file created in step 2 to the Visual Studio class library.

4. Build your Ektron solution. This action creates a .dll file in your Visual Studio project's `bin\Debug` folder. For example: `C:\Users\jedit\Documents\Visual Studio 2012\Projects\MySmartFormClassLibrary\MySmartFormClassLibrary\bin\Debug`.

   The file name matches the Smart Form configuration name.

5. Copy the .dll file to your Ektron website's bin folder.

Part 3: Register the class

1. In Visual Studio, open your Ektron website solution.
2. Open the `findbootstrapper.cs` file, located in `C:\Users\`*`user name`*`\Documents\Visual Studio `*`version`*`\Projects\`*`yoursitename`*`\packages\Ektron.Cms.Find.1.0.0\content\App_Code\CSCode\`.
3. Find these comments.

```
// Register type mappings below to translate Smart Forms
// to custom models.
// Example:
//  ektronMessaging.Types.Register(content => new MySmartFormModel { ... })
//     .For(content => content.XmlConfiguration.Id == ...);
```

4. Below the comments, register the class you created in *Part 2: Create class and move .dll to bin folder* on the previous page. To do that, use this syntax:

```
ektronMessaging.Types.Register(SmartForm configuration name.Create)
.For(SmartForm configuration name.CanCreate);
```

   For example:

```
ektronMessaging.Types.Register(OurTeam.Create).For(OurTeam.CanCreate);
```

NOTE:
* The Ektron Messaging class’s `Types` property configures how Ektron indexes content.
* `Register` converts Ektron content data to an object that Optimizely Search & Navigation can query.
* As an argument, the `Register` method takes a delegate, which receives content data and returns an object. This object is pushed to the Find index.
* The `.For` statement enables you to map only content data that satisfy a criterion. `.For` takes a delegate, which returns a Boolean. Content is only converted to the registered class if Ektron content data matches this criterion. Without a `.For` statement, the type mapper applies to all content passed through the system.
* The `CanCreate` method is defined in your configuration's .cs file. See step 10 later in this section.

5. Open the .cs file that you created in step 2 of *Part 2: Create class and move .dll to bin folder* on the previous page. It contains your configuration's XML structure. For example:

```
namespace MySmartFormClassLibrary
{
       public class Image
       {
            public img img { get; set; }
       }
       public class EmployeeProfile
       {
               public string Name { get; set; }
               public string Title { get; set; }
               public string Summary { get; set; }
               public string LinkedIn { get; set; }
               public string Twitter { get; set; }
               public string Bio { get; set; }

               public Image Image { get; set; }
}
```

6. Find the following section. The sample below continues using the `OurTeam` configuration.

```
[XmlRoot("root")]
  public class OurTeam
  {
```

7. Under that section, insert the following code. It creates a unique identifier for the Smart Form configuration.

```
public long Id { get; set; }
public int LanguageId { get; set; }
public string Title { get; set; }
```

IMPORTANT: Repeat steps 8 through 10 for each subclass directly below `/root/` in your Smart Form configuration.

8. Declare the first subclass in your configuration. (This was discovered in *Part 1: Analyze the Smart Form configuration* on page 190.)

```
public EmployeeProfile EmployeeProfile { get; set; }
```

9. Add the following code to set property values for the OurTeam configuration. Replace references to OurTeam with your Smart Form configuration name.

NOTE: Ektron Smart Forms store rich text HTML as valid XML. This code deserializes rich text HTML into an encoded XML string, which Find can consume.

```
public static OurTeam Create(ContentData content)
{
   XmlSerializer serializer = new XmlSerializer(typeof(OurTeam));
   OurTeam oTeam = (OurTeam)serializer.Deserialize(new StringReader
     (content.Html));
   oTeam.Id = content.Id;
   oTeam.LanguageId = content.LanguageId;
   oTeam.Title = content.Title;
   return oTeam;
}
```

10. Define the `CanCreate` method, which is referenced in the `findbootstrapper.cs` file's registration method, which returns the config ID for registering the type (see step 4 above).
11. Replace the ID number with your configuration ID, which you obtained in *Part 1: Analyze the Smart Form configuration* on page 190.

```
public static bool CanCreate(ContentData content)
{
   return content.XmlConfiguration.Id == 8;
}
```

Here is the complete sample file, OurTeam.cs.

OurTeam.cs sample file

```
using Ektron.Cms;
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Xml.Serialization;

namespace MySmartFormClassLibrary
{

    public class Image
    {
        public img img { get; set; }
    }

    public class EmployeeProfile
    {
        public string Name { get; set; }
        public string Title { get; set; }
        public string Summary { get; set; }
        public string LinkedIn { get; set; }
        public string Twitter { get; set; }
        public string Bio { get; set; }

        public Image Image { get; set; }
    }

    [XmlRoot("root")]
    public class OurTeam
    {

        public long Id { get; set; }
        public int LanguageId { get; set; }
        public string Title { get; set; }

        public EmployeeProfile EmployeeProfile { get; set; }

        public static OurTeam Create(ContentData content)
        {
            XmlSerializer serializer = new XmlSerializer(typeof(OurTeam));
```

```
            OurTeam oTeam = (OurTeam)serializer.Deserialize(new StringReader
(content.Html));

            oTeam.Id = content.Id;
            oTeam.LanguageId = content.LanguageId;
            oTeam.Title = content.Title;

            return oTeam;
        }

        public static bool CanCreate(ContentData content)
        {
           return content.XmlConfiguration.Id == 8;
        }
    }
}
```

Updating Find index upon deletion of a Smart Form

If you delete a Smart Form configuration, its content remains in the Find index. To remove the custom type entries of a Smart Form from the index, remove the type mapper by not registering it. Then, clear the index and reindex. These actions index the Smart Form contents as the default Smart Form type.

Alternatively, you can delete individual documents from the Find index using the following article: http://world.episerver.com/documentation/Items/Developers-Guide/Episerver-Find/9/DotNET-Client-API/Deleting-documents/.

Smart Form indexing guidelines

When you create a Smart Form configuration, no indexing occurs because there is nothing to index at this point. If Smart Form content is published before the configuration is converted to a class, it is indexed as HTML content. If you later convert the configuration to a class, you should clear the index and reindex your site to make Smart Form content available to Optimizely Search & Navigation.

Similarly, if you modify a class, you should clear the index and reindex your site.

Using Find to search by taxonomy

Taxonomy and category information is updated in the Find index whenever any of these events occurs.

- A taxonomy category is assigned to content.
- A taxonomy category is removed from content.
- A taxonomy category is updated.
- A taxonomy category is removed.

Find divides taxonomy paths into individual taxonomies, indexes each category, and returns the following string-based properties.

- **Id**. the taxonomy ID.
- **Path**. the taxonomy path using category titles.

- **IdPath**. the taxonomy path using IDs.

For example:

Root taxonomy

```
"Id$$string":"154",
"Path$$string":"\Food",
"IdPath$$string":"\154",
```

Child taxonomy

```
"Id$$string":"155"
"Path$$string":"\Food\Chinese"
"IdPath$$string":\154\155
```

IMPORTANT: All properties are stored as strings.

Taxonomy-based search and parent/child nodes

When a search query uses a taxonomy filter, the results include content assigned to child categories *even if* the query only specifies the root taxonomy. Similarly, if a query specifies a child category, parent taxonomy categories are available, so users can find content by searching any category in the tree.

Consider the following example.

- **Content title**. General Guidelines for Cooking
  - **ID**. 68
  - **Taxonomy path**. `\Food`
- **Content title**. Grilled Asian Chicken
  - **ID**. 231
  - **Taxonomy path**. `\Food\Chinese`

Search query 1

```
IClient client = Client.CreateFromConfig(); //A client retrieved from config or
injected into the method
client.Search<Ektron.Cms.Find.Models.Content>()
           .Filter<Ektron.Cms.Find.Models.Content>(c =>
c.Categories.MatchContained<TaxonomyCategory>(tax => tax.Path, @"\Food"))
           .GetResult();
```

When executed, this code returns content assigned to the `Food` and `Chinese` categories. So, content IDs 68 and 231 are returned even though 231 is not assigned to the `Food` category.

Search query 2

```
client.Search<Ektron.Cms.Find.Models.Content>()
       .Filter<Ektron.Cms.Find.Models.Content>(c =>
c.Categories.MatchContained<TaxonomyCategory>(tax => tax.Path, @"\Food\Chinese"))
       .GetResult();
```

When executed, this code returns content assigned to the `Chinese` and `Food` categories. So, content IDs 231 and 68 are returned.

Using Optimizely Search & Navigation to search assets

Episerver Find can retrieve search results from assets as it does with HTML content.

- **Maximum file size**. Developer index: 5 MB; Production index: 50 MB.

  NOTE: Indexed files are sent base 64 encoded, which increases their size by roughly 1/3.

- **Supported file types**. See http://world.episerver.com/documentation/Items/Developers-Guide/Episerver-Find/9/DotNET-Client-API/File-attachments/.
- **Text-based documents**. You can search text inside PDFs, Word documents, and so on.
- You can search and filter by the following criteria:
  - Ektron title
  - summary
  - path
  - searchable metadata

Using Optimizely Search & Navigation to search Ektron metadata

If you want to query data stored in Ektron metadata, use a type mapper to store a custom content type. This type lets you convert selected metadata definitions to a field in a custom object. You then can use Optimizely Search & Navigation to query that object using this syntax.

```
var results = client.Search<custommetadataclassname>().Filter(…).GetResult();
```

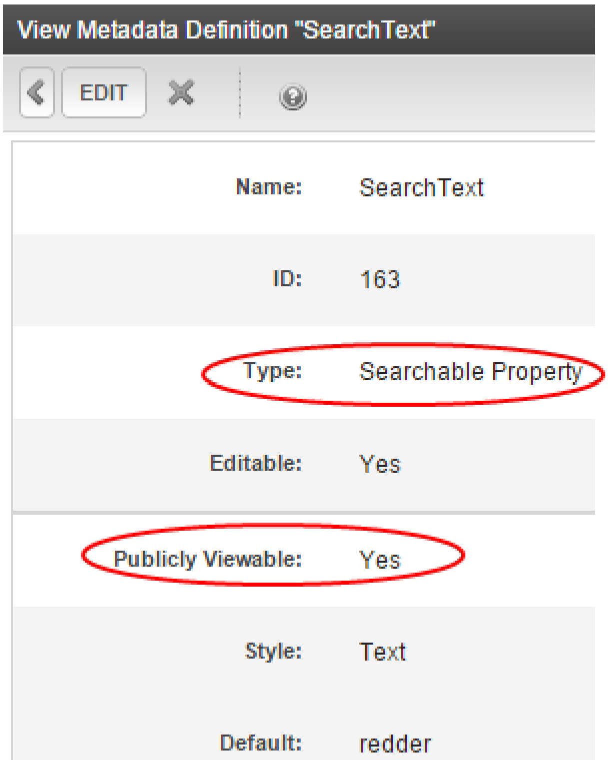
For example, if the class created for your metadata definition is `UnstructuredContentModelWithMetadata`, you would use the following code.

```
var results = client.Search<UnstructuredContentModelWithMetadata>().Filter
(…).GetResult();
```

To convert a metadata definition to a class, use the following steps.

PREREQUISITE

Your Ektron CMS has metadata definitions that are applied to content and to which values are entered. The definitions must be of the Searchable Property type, publicly viewable, and active. See also *Metadata types* on page 755.



1. Create a class for each group of Ektron metadata definitions that Find will query. Within the class, create a property that maps to each metadata definition. The class's type must match the metadata definition's type. For example:
```
public class UnstructuredContentModelWithMetadata : UnstructuredContent
{
    public string SearchTextMetadata { get; set; }
    public List<string> SearchSelectionMetadata { get; set; }
    public DateTime SearchDateMetadata { get; set; }
    public int SearchNumberMetadata { get; set;
    public string mymeta { get; set; }
    public UnstructuredContentModelWithMetadata()
    {
        SearchSelectionMetadata = new List<string>();
    }
}
```
This example illustrates the following metadata definitions and their types.
   - **SearchTextMetadata**. type:string
   - **SearchSelectionMetadata**. type:List<string> (user can select one or several string values)
   - **SearchDateMetadata**. type:datetime
   - **SearchNumber**. type:integer
2. To enable Optimizely Search & Navigation to search a class, register it in the `EktronFindBootstrapper` file, located in *`siteroot`*`\App_Code\CSCode\`. Enter the register statement below `applicationBuilder.App.Start();` as shown in the following example:

```
ektronMessaging.Types.Register(CreateMyUnstructuredContentModelWithMetadata)
        .For(content => (content.XmlConfiguration.Id == 0 &&
                             (content.SubType ==
Common.EkEnumeration.CMSContentSubtype.Content && content.Type == 1)
                                     ));
```

- `Register` specifies how to convert Ektron ContentData to an instance of the new type created in Step 1. It accepts a condition that selects eligible CMS content to be indexed as this type. The `CreateMyUnstructuredContentModelWithMetadata` method is described in step 3.
- **`.For`** is a filter that determines which Ektron ContentData can be mapped. In this example, only HTML content is eligible.

3. Create a function that accepts an Ektron `ContentData` object and converts it to a type defined in step 1. This type is indexed by Find for content matching the `.For` filter condition specified in step 2 .

   You define the function (`CreateMyUnstructuredContentModelWithMetadata` in this example) under your site's `AppCode` directory or in a separate class library/dll.

   In the following example, the function populates `UnstructuredContentModelWithMetadata` with Ektron metadata for the Find index.

```
private static UnstructuredContentModelWithMetadata
CreateMyUnstructuredContentModelWithMetadata(
ContentData data)
{
   UnstructuredContentModelWithMetadata contentWithMeta = new
UnstructuredContentModelWithMetadata();
   if (data.MetaData == null || data.MetaData.Length <= 0)
          return contentWithMeta;
IEnumerable<ContentMetaData> eligibleMetadata = GetMetadataForContent
(data.MetaData.ToList(),
data.FolderId, data.LanguageId);

\\ See note #1 below
ContentMetaData cm = eligibleMetadata.ToList().Find(m => m.Name == "SearchText");

if (cm != null)
{
    string metaValue = (string)cm.Text;
    if (!String.IsNullOrWhiteSpace(metaValue))
    {
       contentWithMeta.SearchTextMetadata = metaValue;
     }
}
\\ See note #2 below
cm = eligibleMetadata.ToList().Find(m => m.Name == "SearchNumber");
if (cm != null)
{
   int value;
   if (Int32.TryParse(cm.Text, out value))
       contentWithMeta.SearchNumberMetadata = value;
```

```
}
\\ See note #3 below
cm = eligibleMetadata.ToList().Find(m => m.Name == "SearchDate");
if (cm != null)
{
  DateTime mydate;
  if (DateTime.TryParse(cm.Text, out mydate))
      contentWithMeta.SearchDateMetadata = mydate;
}
\\ See note #4 below
cm = eligibleMetadata.ToList().Find(m => m.Name == "SearchSelection");
if (cm != null)
{
     string metaValue = (string)cm.Text;
     if (!String.IsNullOrWhiteSpace(metaValue))
     {
        string[] metaValues = metaValue.Split(new string[] { ";" },
StringSplitOptions.RemoveEmptyEntries);

        if (metaValues != null && metaValues.Length > 0)
        {
           contentWithMeta.SearchSelectionMetadata = metaValues.ToList();
        }
      }
}
```

Notes on the above sample

- **#1** The following snippet uses the find-extension method to select only `SearchText` metadata from `ContentData`. This type is a string, as defined in the class and the Ektron metadata definition. If this metadata exists, apply it to the `SearchTextMetadata` property of your class.

```
ContentMetaData cm = eligibleMetadata.ToList().Find(m => m.Name ==
"SearchText");
if (cm != null)
{
    string metaValue = (string)cm.Text;
    if (!String.IsNullOrWhiteSpace(metaValue))
    {
       contentWithMeta.SearchTextMetadata = metaValue;
     }
}
```

- **#2** In the following snippet, the `SearchNumber` metadata is an integer in the class and the Ektron metadata definition.

```
cm = eligibleMetadata.ToList().Find(m => m.Name == "SearchNumber");
if (cm != null)
{
   int value;
   if (Int32.TryParse(cm.Text, out value))
       contentWithMeta.SearchNumberMetadata = value;
}
```

- **#3** In the following snippet, the `SearchDate` metadata is a DateTime object in the class and the Ektron metadata definition.

```
cm = eligibleMetadata.ToList().Find(m => m.Name == "SearchDate");
if (cm != null)
{
  DateTime mydate;
  if (DateTime.TryParse(cm.Text, out mydate))
      contentWithMeta.SearchDateMetadata = mydate;
}
```

- **#4** In the following snippet, `SearchSelection` metadata is a list of strings (`List<string>`) in the class, and multiple selections in the Ektron metadata definition. Ektron stores values as a single string, and each value is separated by a delimiter (in this case, a semicolon (`;`)). For example, if metadata definition stores transportation methods, its value might look like this: `train;bus;automobile`.

```
cm = eligibleMetadata.ToList().Find(m => m.Name == "SearchSelection");
if (cm != null)
{
     string metaValue = (string)cm.Text;
     if (!String.IsNullOrWhiteSpace(metaValue))
     {
        string[] metaValues = metaValue.Split(new string[] { ";" },
StringSplitOptions.RemoveEmptyEntries);

        if (metaValues != null && metaValues.Length > 0)
        {
           contentWithMeta.SearchSelectionMetadata = metaValues.ToList();
        }
      }
}
```

The `string[ ]` line separates the multiple selection string into individual values that Find can query.

How Find manages archived content

Content that has expired and is set to **Archive and remove from site** or **Archive and remain on site** is not automatically removed from the index. Such content is removed upon the next full reindexing. Until then, to exclude expired content from search results, use the Find Client API's `EndDate` and `EndDateAction` properties to filter results.

NOTE: Content that has expired but is set to **Add to CMS Refresh reports** is considered live content, so remains in the Find index.

Working with the Optimizely Search & Navigation API

Usage of the Find Service and API is outside the scope of this document.

Querying and filtering Ektron content by type

Use the `Ektron.Cms.Find.Models` namespace to query and filter Ektron content. A search page's .cs file typically contains a `Searchresults` command like this:

```
SearchResults<Ektron.Cms.Find.Models.Content> results;
```

The namespace contains these classes.

- `Content`. Returns Ektron content types. See *Fields that you can query and filter using the content class* below.
- `PageBuilder`. Returns PageBuilder content. It inherits all properties from the `content` class.
- `UnstructuredContent`. Returns HTML content. It inherits properties from the `content` class.
- `SmartForm`. Returns content from Smart Forms, as explained in *Converting a Smart Form configuration to a class* on page 189. It inherits all properties from the `content` class.
- `asset`. Returns content from assets. You can filter them using their summary or path. It inherits properties from the `content` class.
- `Taxonomy`. Returns content assigned to selected categories. It inherits properties from the `content` class.

Fields that you can query and filter using the content class

```
namespace Ektron.Cms.Find.Models
{
   public class Content : IHaveReferences
    {
        public Content();
        public string Body { get; set; }
        public IEnumerable<TaxonomyCategory> Categories { get; set; }
        public DateTime CreationDate { get; set; }
        public Author Editor { get; set; }
        public Folder Folder { get; set; }
        public long Id { get; set; }
        public int Language { get; set; }
        public DateTime ModificationDate { get; set; }
        public string Quicklink { get; set; }
        public DocumentReference Reference { get; set; }
        public string Summary { get; set; }
        public string Title { get; set; }
        public DateTime EndDate { get; set; }
        public EndDateAction EndDateAction { get; set; }
    }
}
```

Using Episerver Find with eSync

If you want the Find index to be updated whenever eSync moves content changes between servers, follow Step 7 in the installation instructions.

It takes longer for changes triggered by eSync to appear in search results than other content changes. This is because, after an eSync is completed, a full reindex is launched.

Notes and limitations of Episerver Find integrated with Ektron

- Basic search, Advance search with match all, none, any word case can search in fields:
    - Title
    - Body
    - Summary
    - Editor first name
    - Editor last name
    - Folder name
    - Quicklink
- Taxonomy name
- Synonym only works when searching one keyword
- PDF and docx files: search by title only; cannot search by content
- In Library: can only search for images
- Archived content: If "Expired and remove from site" assigned, cannot be searched.
- Search API (expression tree) limitations
    - Does not support: ImplicitAnd, Scope, Permission, Boost, Keyword expression
    - Supports fields in filter: return and order by:
        - Id
        - Language
        - FolderId
        - ContentType
        - ContentSubType
        - Title
        - QuickLink
        - Path
        - HighlightedSummary
        - Description
        - DateCreated
        - DateModified
        - ExpiryDate
        - ExpiryType
        - FolderName
        - Private
        - FolderPath
        - FolderIdPath

- Not supported fields
  - TaxonomyCategory
  - Tags
  - Author
  - Rank
  - Size
  - GoLiveDate
  - MapDate
  - MapLongitude
  - MapLatitude
  - MapAddress
  - AssetVersion
  - SiteId

Related information

Optimizely Search & Navigation provides extensive capabilities for monitoring search activity and customizing search functionality on your website. See the following related information.

- **Developer documentation**. http://world.episerver.com/documentation/Items/Developers-Guide/Episerver-Find/9/
- **Searching** (Episerver World article). http://world.episerver.com/documentation/Items/Developers-Guide/Episerver-Find/9/DotNET-Client-API/Searching/Searching/
- **Developer forum**. http://world.episerver.com/forum/developer-forum/Episerver-Search/
- **Get started developing with Find.** http://world.episerver.com/documentation/Other-products/Episerver-Find/Get-started-with-Find/
- **Episerver Find home page**. http://world.episerver.com/add-ons/episerver-find/

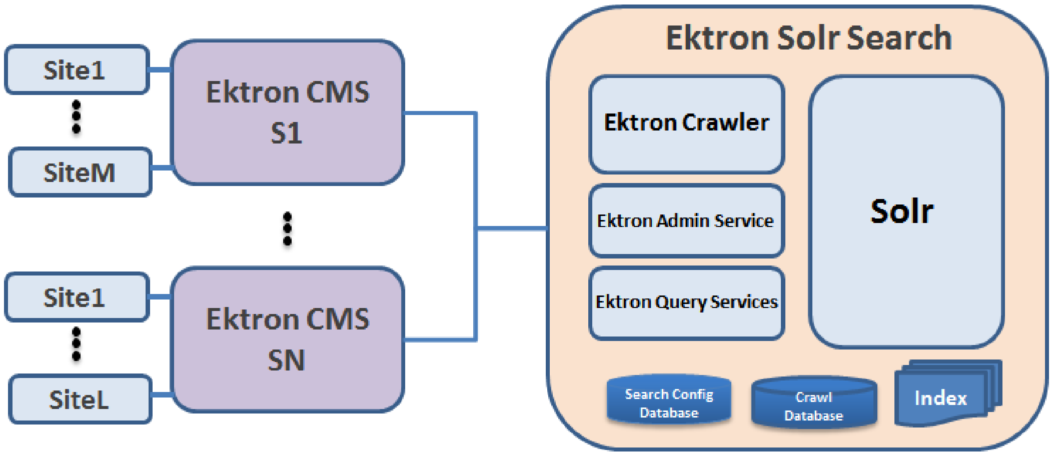
Using Solr search

Solr is an open-source, enterprise-level search platform, from the Apache Lucene project, that is known for scalability and performance. In its implementation of Solr, Ektron uses Apache Tomcat to host the Solr application, and ManifoldCF to manage the crawling of new or updated content. According to https://lucene.apache.org/solr/, "Solr powers the search and navigation features of many of the world's largest internet sites."

Using Solr, you can search all Ektron content, including Smart Forms and assets. Ektron's Solr implementation supports advanced search features, such as Refinements, Synonym Sets, Suggested Results, and Autocomplete. Solr also supports Ektron's templated search server controls and API. So if you previously worked with these components, you only need to master a few new concepts to migrate to Solr.

NOTE: To compare Solr with other Ektron search providers, see *Search provider comparisons* on page 183.

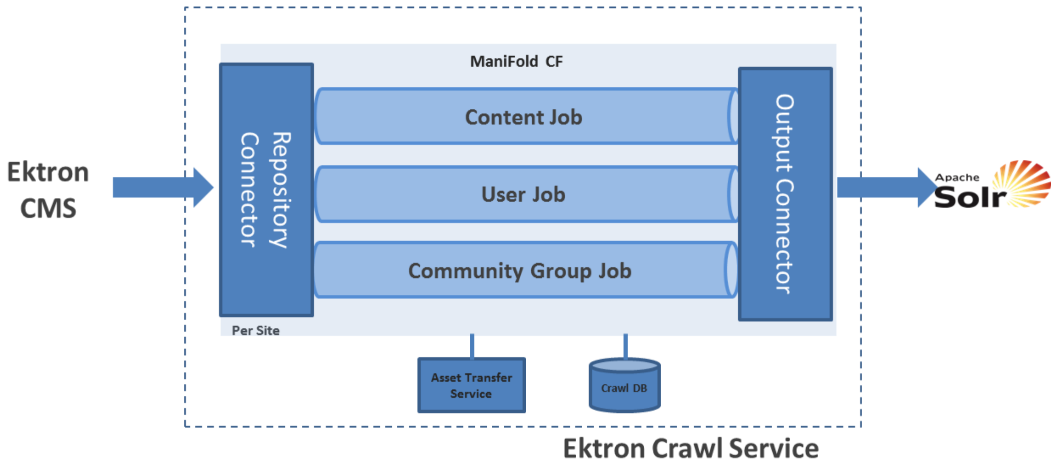
Solr Search Components



The Ektron Solr search provider is made up of several components, which can crawl your content to index the latest changes, as well as manage search queries. Solr manages the search for any number of Ektron instances, each of which can support several sites.

Ektron crawl service

This diagram explains the crawl service's activities.



The Apache ManifoldCF (connector framework) crawls data from a repository connector to an output connector. Ektron's Solr deployment uses its own repository connector with the Solr output connector that updates the Solr Index.

When a site is registered, the following steps occur within ManifoldCF.

1. An Ektron repository connection is created, using database information from the Ektron site.
2. A Solr output connection is created with a connection to a Solr core exclusive to the Ektron site.
3. Content, user, and community group jobs are created for each Ektron repository/Solr output connection pair to crawl the various Ektron items.

Asset transfer service

Ektron's crawl component uses the Asset Transfer Service as the endpoint for crawling assets. The Ektron Asset Transfer Server, which resides on the Ektron Web server, is one half of a pair of services that supports the indexing of assets. (The Ektron Asset Transfer Client resides on the Solr server.) When an asset is indexed, it must be transferred to a cache on the Solr server before its content can be extracted.

When the crawl service requires an asset, it asks the Ektron Asset Transfer Client to retrieve it. If the Ektron site and Solr run on the same server, the client directs the indexer to the asset's location on the file system. If the asset resides on a remote server, the client requests the asset from the appropriate Ektron Asset Transfer Server and stores it in cache for indexing.

The crawl database

The crawl database stores and maintains the crawl state and crawl queues during a crawl.

Ektron Solr admin service

The Ektron Solr Admin service manages

- site registration requests (from the Solr Admin Console)
- crawl management requests (from Ektron and EWS during eSync)
- status requests from the Ektron Workarea's Search Status screen

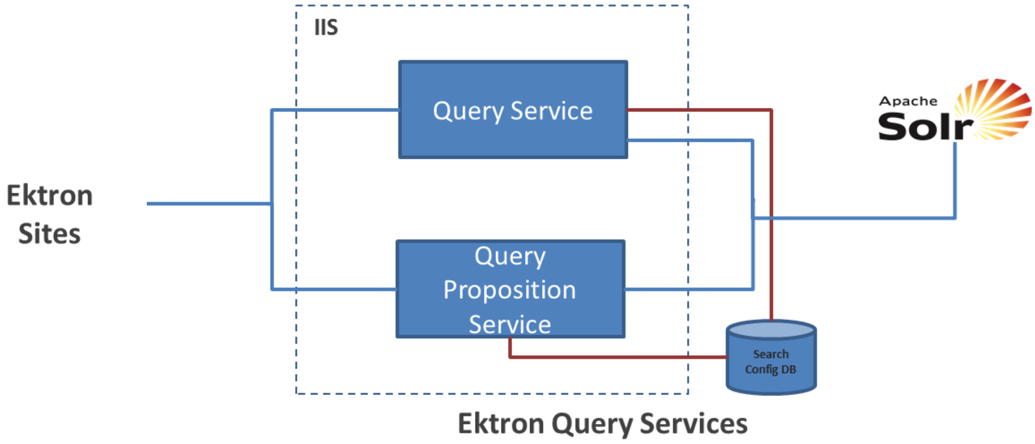
During site registration, the admin service performs

- validation tasks prior to site registration
- job deletion and creation in ManifoldCF
- Solr core deletion and creation
- search configuration store and Ektron database updates with registration information

the Solr Admin service also communicates with the crawler component (ManifoldCF) of the Ektron site and fires an appropriate crawl of jobs for the core.

Ektron query services

This diagram depicts IIS query services that act as a proxy to the Solr counterparts.



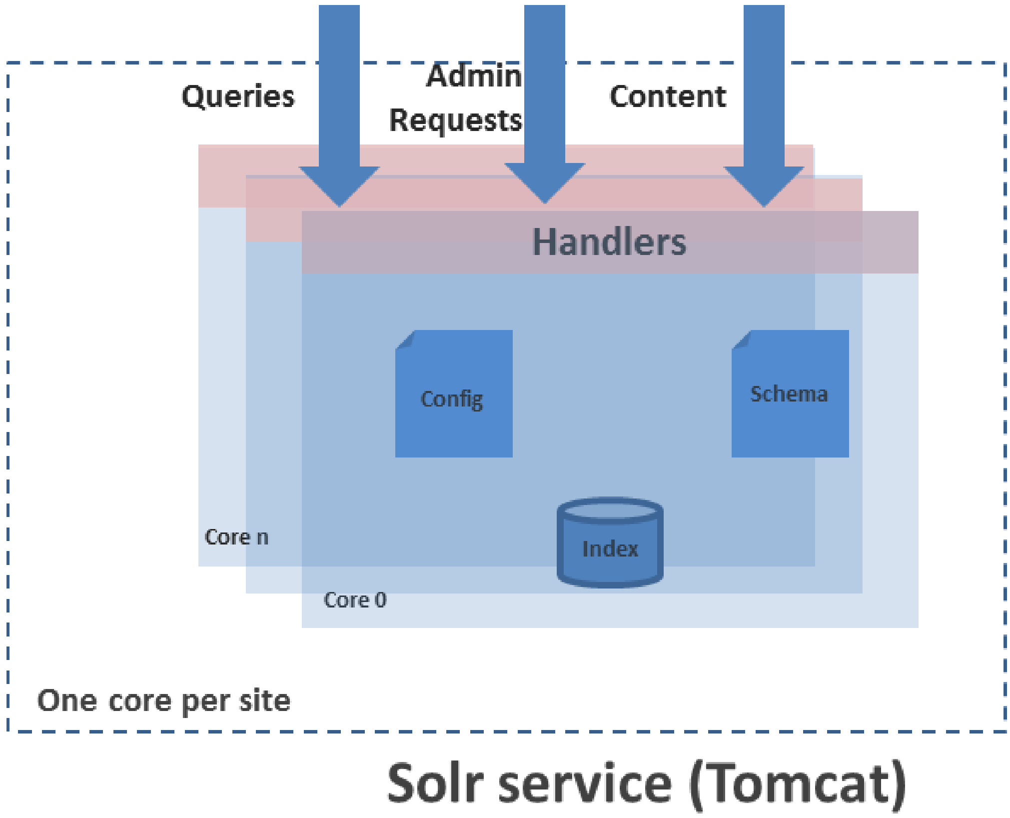
The Query Service routes queries from sites registered with the Solr Search server to the Solr core that corresponds to the site.

The Query Proposition service is a RESTful service that routes autocomplete queries to the Solr core that corresponds to the site.

The Search Config database serves as a "centralized store." It maintains configuration information for search endpoints, Solr, ManifoldCF, Admin Service, and registration information for the registered sites.

Solr core

This diagram details the Solr core, the rectangle on the right side of the above image.



A Solr core is a single instance of Solr with its own configuration, schema, and independent index. Each Solr core can be thought of a compartmentalized Solr application. It has several endpoints, called *handlers*, that serve requests addressed to the core.

Ektron's search deployment uses handlers to manage queries (search queries & completion requests), administrative requests (to manage cores), and content updating.

Mime types supported by Solr search

Solr's ExtractingRequestHandler uses Tika to lets users upload binary files to Solr, and then have Solr extract text from and index them. For a list of supported file types, see https://tika.apache.org/1.4/formats.html.

Also, Ektron has its own list of files types that may be uploaded to the Workarea. You can only upload supported file types. See *Supported types of assets* on page 650.

See also: Excluding Library Images When Using Solr Search.

Solr search concepts

This section explains some inner workings of the Solr search. It is intended to help explain why you do or do not get certain search results.

Keyword search

Keyword search is the search performed when a user types text or a phrase into a text field. (A phrase is several words enclosed in quotes. For example, “This is a phrase”). Keyword search is performed against the content title and the body only, because they contain the "meat" of a content item.

NOTE: For HTML content, content body corresponds to the content table's `content_html` column. For PageBuilder pages, content body corresponds to the content table's `content_text` column.

Content title and body are subject to *linguistic processing*, which applies rules based on the language of the search text or phrase. (By default, this is the site language, but it can be changed via the Search API). For Solr-based search, linguistic processing refers to *stemming* and *stop word* recognition only.

Stemming

Stemming reduces a word to its stem. English examples of stemming:

- engineering > engine
- parsing > pars
- analysis > analysi

Stemming helps a user find desired content because, in most cases, the user is unsure of the exact text in the document.

Stemming is applied when content is indexed and when query terms are processed. During indexing, the content language is used to perform language-specific stemming. During querying, the language of the query (by default, the site language) is used to perform stemming.

Sometimes, stemming produces false matches. For example, the terms "engineering" and "engine" are both reduced to "engine" during indexing. So, a query for "engine" matches a document that contains "engineering". Also, since Solr only performs stemming reduction, a query containing "ran" does not match a document containing "running", since these words get reduced to "ran" (query side) and "run" (index time). Out-of-the-box Solr only supports stemming and not the more extensive lemmatization, which provides more accurate results and fewer false positives.

Stop words

Stop words are terms that are removed from queries and indexes because they do not contribute to the quality of a search. For example, these are English stop words: "the", "in," "an", "a".

Query expression

The `QueryText` property of the `KeywordSearchCriteria` class contains the text or phrase that a user enters when submitting a keyword search. With regards to Solr, any query expression assigned to the `ExpressionTree` property of the `KeywordSearchCriteria` class is treated as a filter query. The filter query merely helps in reduction of the result subset and does not improve relevance.

Rank computation (relevance)

When ranking content returned as search results, Solr uses the quality of a document's match against query text. Match quality is based on these factors.

- *Frequency* of search text or phrase in the content.
- *Rarity* of search terms with regards to the whole corpus of content (the entire site).
- *Proximity* of search terms in the content. For example, if a query has the phrase "content repository", content having "The content item rocks" in closest proximity is ranked higher than content with the terms "lack of actual content in an item."
- If search terms include an OR operator, content with the greatest number of terms ranks highest. For example, if a query consists of "valid OR resultant OR set OR items", content with "valid resultant set" ranks higher than content with "resultant set."

Notes regarding rank computation (relevance)

- When computing rank, Ektron Solr only considers terms in the content's title and body.
- Only terms entered against the `QueryText` property of the `KeywordSearchCriteria` class are used for rank computation. Other fields specified in the `ExpressionTree` property are not considered for rank computation.
- A match on content title has the same weight as a match on content body.

ContainsExpression vs EqualsExpression

When using Solr, the `ContainsExpression` can be tricky.

NOTE: A `ContainsExpression` involves using `ContainsExpression` directly or indirectly via `SearchContentProperty.<PropertyName>.Contains`.

Unlike the C#/.NET `String.Contains`, Solr's `ContainsExpression` matches whole words only—it *does not* match on substrings. For example, if a text metadata field contains "Tax Revenue Statement, Year 2012," a `contains` search returns the content if a query using `ContainsExpression` includes "Tax" or "Revenue Statement" or "Revenue" as whole words. The query is not a match for the substring term "State."

Also, the `ContainsExpression` query is case-insensitive. So for example, "Revenue" is the same as "revenue" and "rEvenUe."

The `EqualsExpression`, on the other hand, performs a letter to letter, case-sensitive, exact search on the entire text of a field.

NOTE: An `EqualsExpression` involves either `EqualsExpression` directly or indirectly via `SearchContentProperty.<PropertyName>.EqualTo`.

To continue the above example for an `EqualsExpression`, a match results only if the query is submitted as “Tax Revenue Statement, Year 2012”. Note the comma in the query.

Using .Contains with Solr in Ektron version 9.30

When using the Solr search provider in Ektron version 9.30, the FolderId, FolderPath, and TaxonomyPath `.Contains` syntax acts like a `startswith` expression instead of a `Contains` one. Examples:

FolderIdPath examples

- `FolderIdPath .Contains "72/"` returns content in folder 72 and subfolder 73
- `FolderIdPath .Contains "72/73/"` returns content in folder 73
- `FolderIdPath .Contains "73/", "73", "/73/"` returns no content

Taxonomy examples

- `TaxonomyPath .Contains "12/"` returns content in category 12 and sub-category 13
- `TaxonomyPath .Contains "12/13/"` returns content in sub-category 13
- `TaxonomyPath .Contains "73/", "73", "/73/"` returns no content

Exception

- `FolderIdPath or TaxonomyPath .Contains "/"` returns content in the root folder/taxonomy only

Configuring the Ektron Solr package for Java Heap Memory

The Ektron Solr package has the Java Heap Memory (HSQLDB-Crawl Database, ManifoldCF-Crawler, and Tomcat-Solr Process) tuned to support the simultaneous registration and crawling of multiple sites. This tuning is optimized for a server with at least 8GB RAM and 2 high speed disks (1 for the search index, and 1 for search installation). The tuning also accommodates servers with more than 8GB RAM.

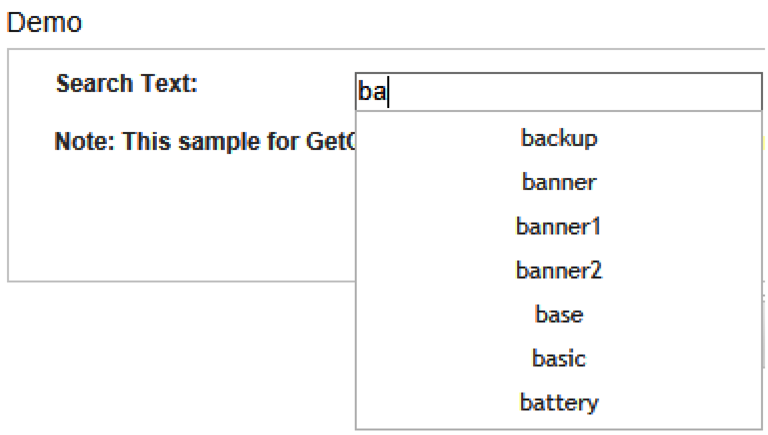
Because the Solr configuration is less reliant on the Java Heap for loading the index , the default tuning should suffice for most production usages. Before changing the Java Heap configuration, Ektron's Professional Services Group must evaluate your plans to ensure that correct choices are being made with regards to garbage collection patterns and search/crawl performance.

After a site is registered, the first query served by Solr is slower than subsequent ones. If the Solr server is rebooted, you can expect similar slowness for registered sites. To avoid this slow first response, create a dummy search request to be run after a site is registered for the first time. You can also avoid this slow first response by issuing a search request from a site (for every site) after the Solr search server has been rebooted.

You may perform additional performance tuning via the Apache Solr site. Before making any adjustments, you must have a thorough understanding of the technologies. Be very careful when tuning for performance.

Query suggestions vs query completions

Query suggestions are a search type-ahead feature, in which a search field presents query options as the user begins to type in characters. Suggestions are based on previously used, successful queries submitted by other users.



Query completions are another search type-ahead feature in which the search field presents query options as a user begins to type in characters. However, in this case, query options are based on either the search index (the default option) or a dictionary of terms.

Ektron Solr only supports query completions.

You can change the source of query completions from the search index to a dictionary of terms. See also: *Managing Solr autoComplete* on page 285.

With regards to query completions, the search only considers terms from the title by default. You can use a custom field instead of title. To accomplish this, customize the configuration during registration. See also: *Part 2: Register your Solr site* on page 223.

Securing the Solr server

To maximize the security of your Solr server, follow these guidelines.

- Limit traffic to the immediate network between the Web server and the Solr server. To do this, open these ports and place these restrictions on them.
  - Solr server base port (by default, port 7600): Create a firewall rule that restricts base port access to the IP addresses of
    - the Ektron server
    - servers on which users will access the Admin Console to register Ektron sites for search
  - Solr server base port + 1 (by default, port 7601): Create a firewall rule that restricts access to the Ektron server only.
  - Ektron server port 8732: Create a firewall rule that allows access to the Solr search server only.
- Block unused Solr server ports (for example, ports 80 and 443).
- Use a firewall to lock down port 7602 so it is accessible only on the local machine.

- Restrict which IP addresses can access the Solr site's Web services to Ektron Web servers that use Solr.
- Leave other needed service ports open (for example, RDP). Use a firewall to lock these ports down, so they are accessible to localhost only.

Setting up Solr search

Setting up Solr search on a single on-premises (local) server

- For the configuration database, SQL 2008 or higher (Express version is supported); can be installed to any server, for example the Ektron server, the Solr server, or any other database server.

Preparing the Ektron server to work with Solr search

1. On the Ektron search server's firewall, open port 8732. This runs Ektron Windows service and asset transfer server services.
2. Restart the Ektron server to apply all changes, not only those affecting SQL but also the JDK installation, new environment variables, and so on.

NOTE: You must generate an eSync certificate to start Ektron Windows Service to register a site.

Preparing the Solr search server to work with Ektron

During Solr installation, the user selects a base port (the default is 7600). The installation allocates that port and nine above it to accommodate Solr search. For example, if you use the default value of 7600, ports 7600 through 7611 are dedicated to Solr search.

On the Solr search server's firewall, open to the Ektron Web server ports +0 and +1 in the range—they are used by Ektron’s query and admin services. To continue the default example, open ports 7600 and 7601.

PREREQUISITES

- Solr server
  - Hardware requirements: minimum 8 gigabytes of RAM, quad core, 64-bit processor
  - Operating system: Windows 2008, Windows 2012, Windows 2016

    NOTE: For a production server, use Windows 2008 R2, Windows 2012, or Windows 2016.

  - Enable the following
    - Roles
      - Application Server Role Services
        - .NET Framework 4.5

IMPORTANT: With Windows Server 2008 or 2008 R2, be sure that .NET 3.5 is installed before installing 4.5.

        - Web Server IIS Support
      - Web Server (IIS) Role Services
        - Windows Authentication feature
        - .NET Extensibility 4.5
        - ASP.NET 4.5
    - Features
      - .NET Framework > WCF Activation

        NOTE: Make sure that HTTP activation is also checked.

      - Static content
    - SQL browser, if not using default instance
  - For optimal performance, use a separate disk (that is, not the system drive) for index and asset cache
  - May be installed on Ektron server but only in a development environment.
    Consult an Ektron certified partner to determine your server requirements. Ektron does not recommend installing Solr on a server that also hosts Microsoft Search Server.
  - Java Development Kit , Windows x64 version.

    IMPORTANT: If you upgrade the JDK version, you must replace it in the same directory to which you originally installed it. You may not install more than one JDK version to that directory.

- An Ektron site installed on an Ektron server. See also: *Installing Ektron* on page 9, *Upgrading to* on page 35.

  NOTE: During the Ektron installation, you should have selected Solr as your search provider. If you need to change your search provider to Solr, see *Changing your search provider to Solr* on page 277.

- The Ektron Solr installation file. Contact your Ektron account manager to obtain a link to the file.
- Users
  - A SQL login account assigned the dbcreator role. This account is used to create the search configuration database.
  - A SQL login account that Ektron search components use to access the search configuration database.

    Both SQL accounts must follow these rules:

- If integrated security is set to true

  ...and Solr search and the Ektrondatabase are on *different* servers, a domain user is required.

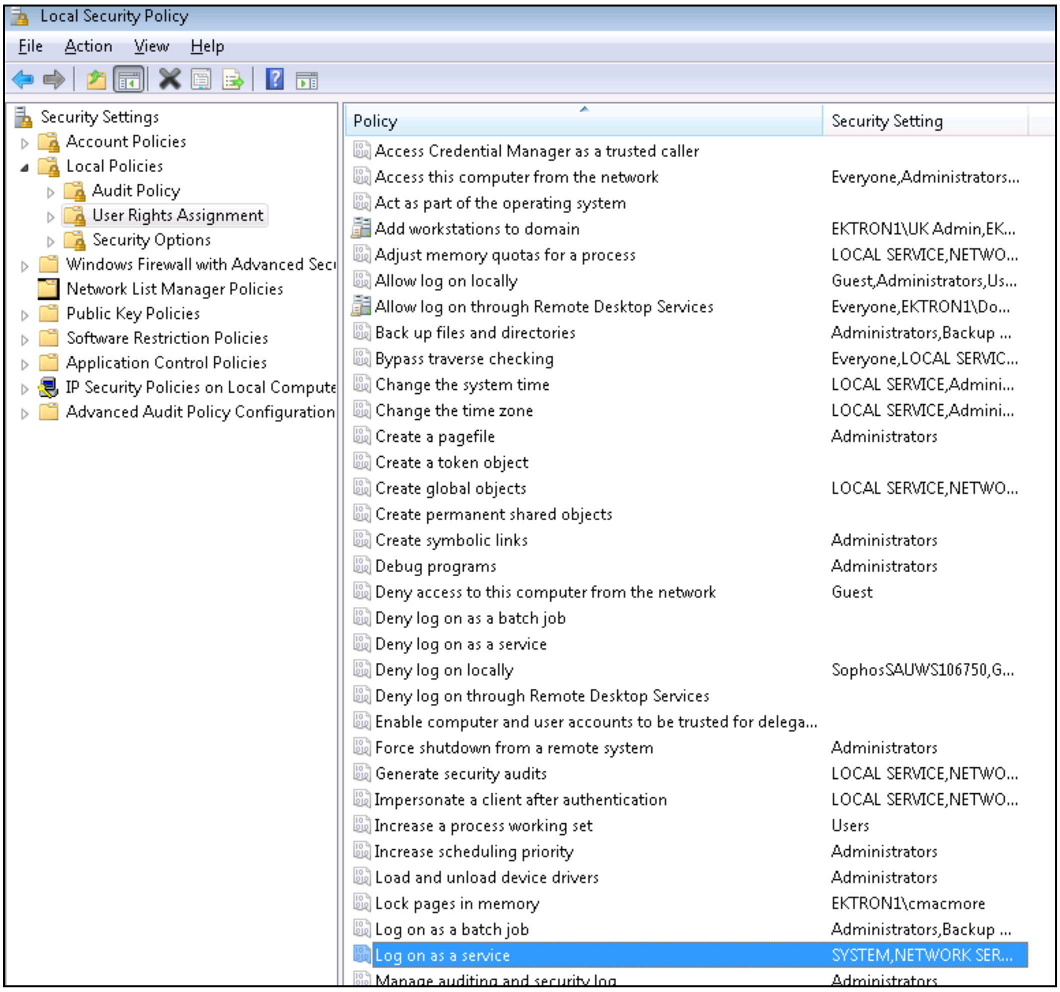
  ...and Solr search and the Ektron database are on *the same* server, a local Windows user is required.
- if integrated security is set to false, a SQL server user.

BEST PRACTICE

Use SQL authentication rather than Integrated Security. Although Integrated Security is supported, the connection is made in the context of the search service account (Windows user) provided during installation. If this user does not have access to the database, the connection fails.

- A Windows user account under which Solr services will run. This account, which manages Solr components and authenticates queries, must have permission to
  - write to the search 2.0 folder and its subfolders
  - start the Solr admin service
  - log on as a service

  This user can be either a Windows user on the search server, or a domain user. If it is a domain user, the Netlogon service must be enabled and running.



- Knowledge of Solr, for administrators who want to perform advanced tasks

Installing Solr on a single on-premises (local) server

After installing Ektron, you can install Solr. This is a 2-step procedure.

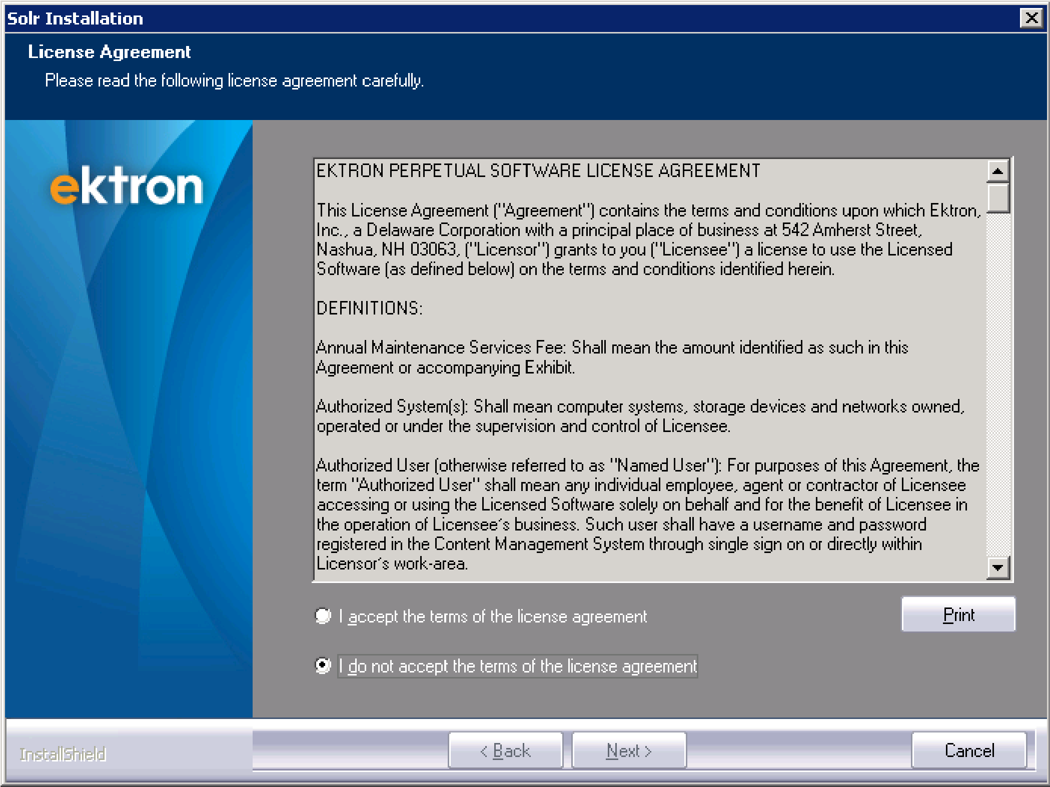
1. Install files needed to run Solr.
2. Register the Ektron site with the Solr search engine.

See also: *Using Solr search with 3-tier architecture* on page 178.

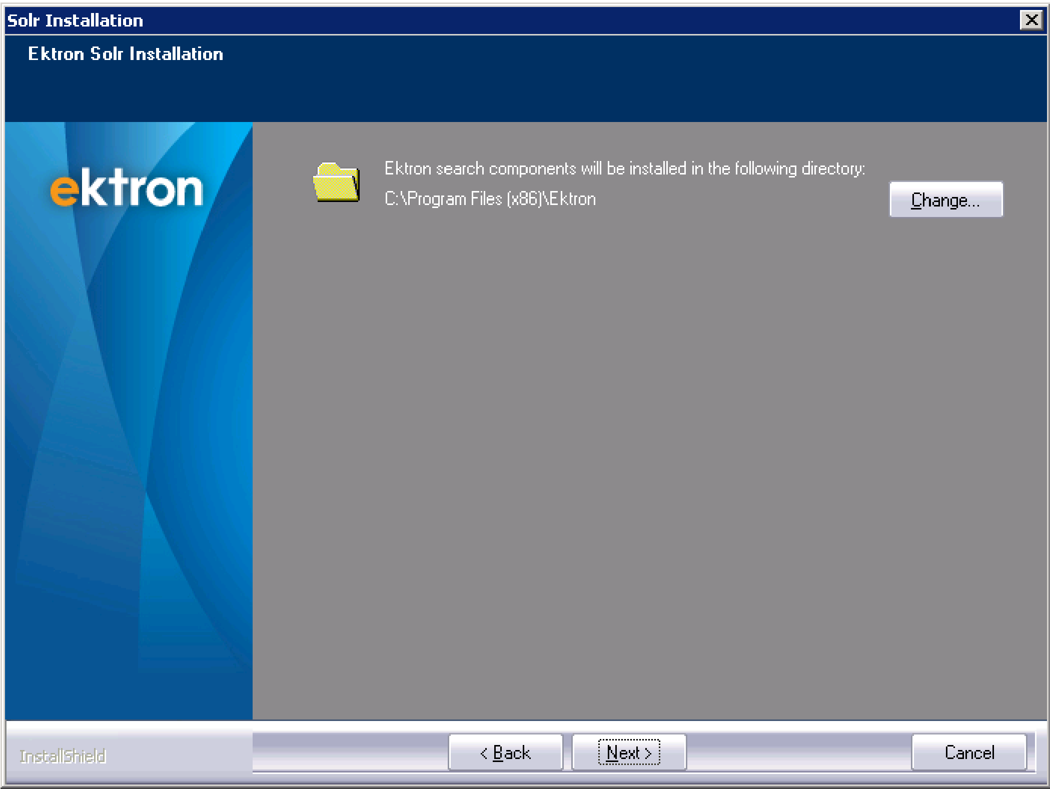
Part 1: Run SolrInstall.exe

1. Contact your Ektron account manager to obtain a link to download the Solr installation file.
2. Log in as a Windows Administrator user.
3. Download and run the Ektron Solr installation file as an administrator.

4. Accept the license agreement.



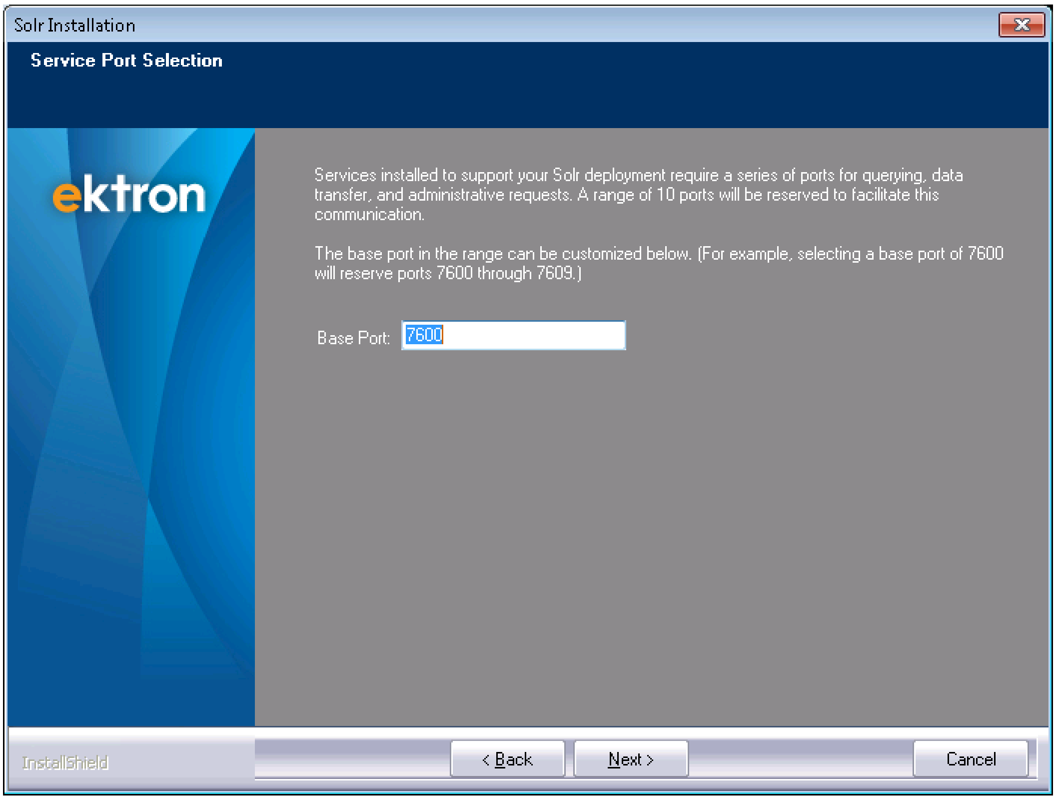
5. Select a folder in which to save the Solr installation files.



6. You are prompted to select a *base port*. After you select a port, it and 9 consecutive ports are designated for Solr use. For example, if you accept the

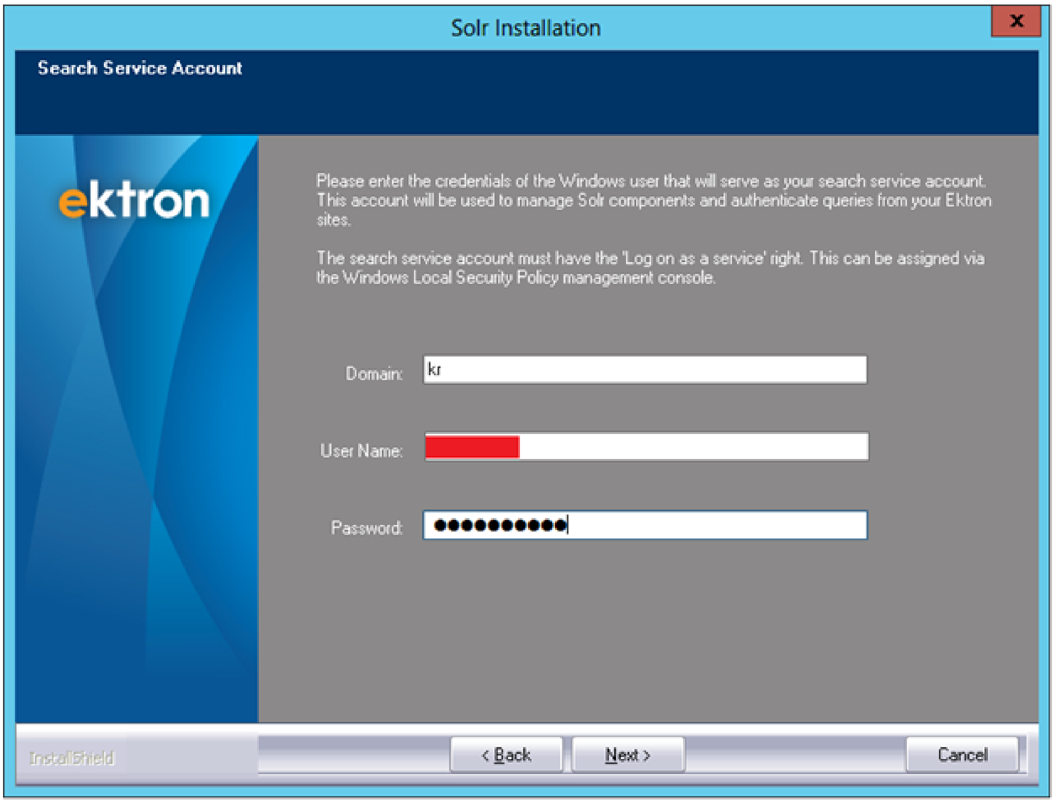
default port 7600 as the base, ports 7600 through 7611 are used for Solr.

NOTE: Do not use a port number below 1025. Also, do not use ports 6080, 6081, and 8732: they are reserved for other Ektron components.

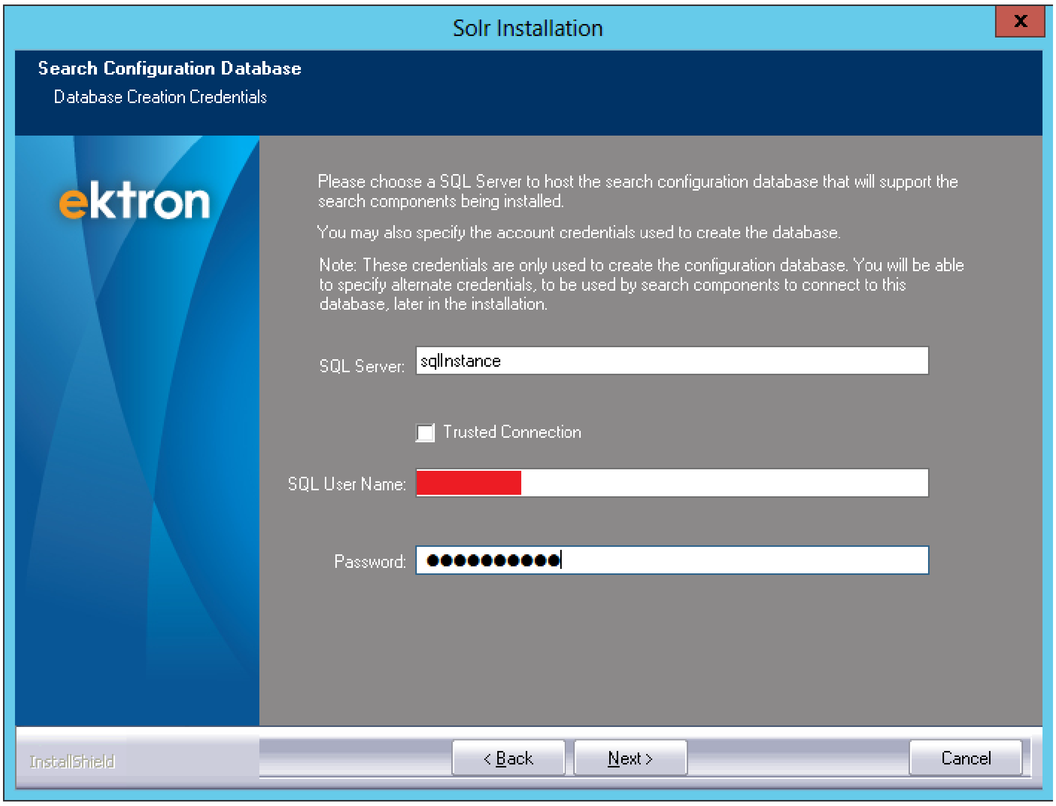


7. Enter credentials (domain, user name, and password) of the Windows user account under which Solr query services will run. This account manages Solr components and authenticates queries. The account must have permission to
   - write to the search 2.0 folder and its subfolders
   - start the Solr admin service
   - lock pages in memory. You can assign this in the machine's Local Security Policy under **Local Policy > User Rights Assignment**.
   - log on as a service. If the user does not have "Log on as a Service" right, you are prompted to assign it.

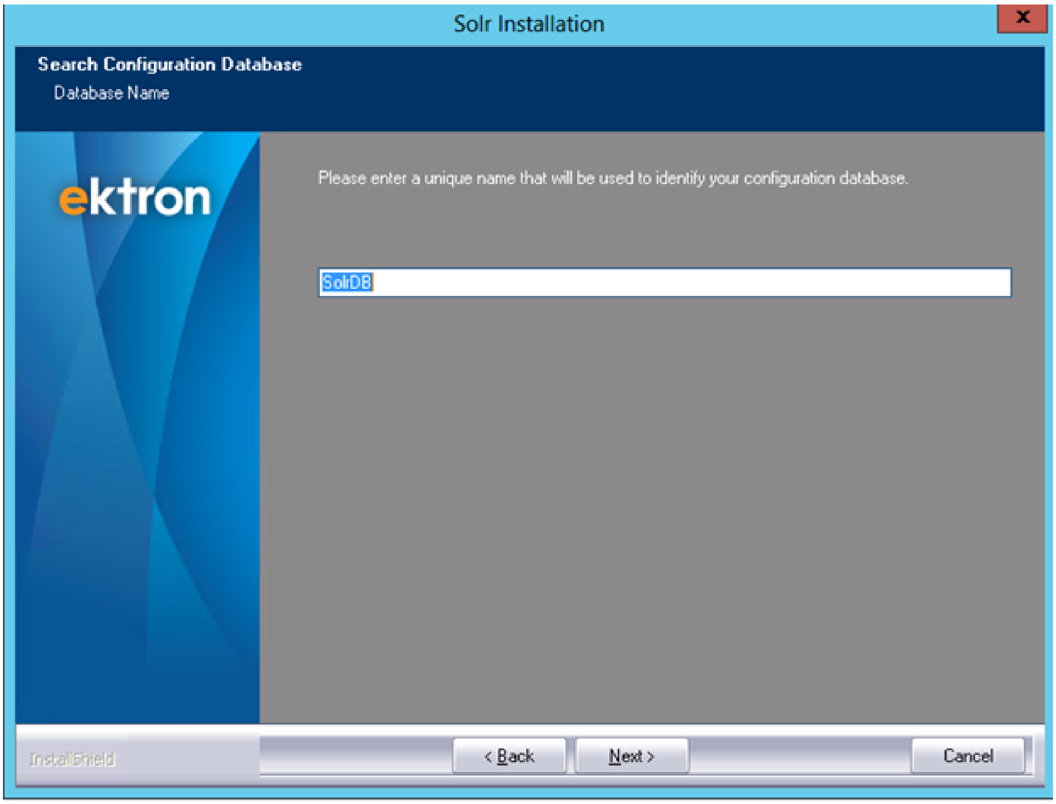
   If you are using a domain account, the Netlogon Service must be enabled and running.



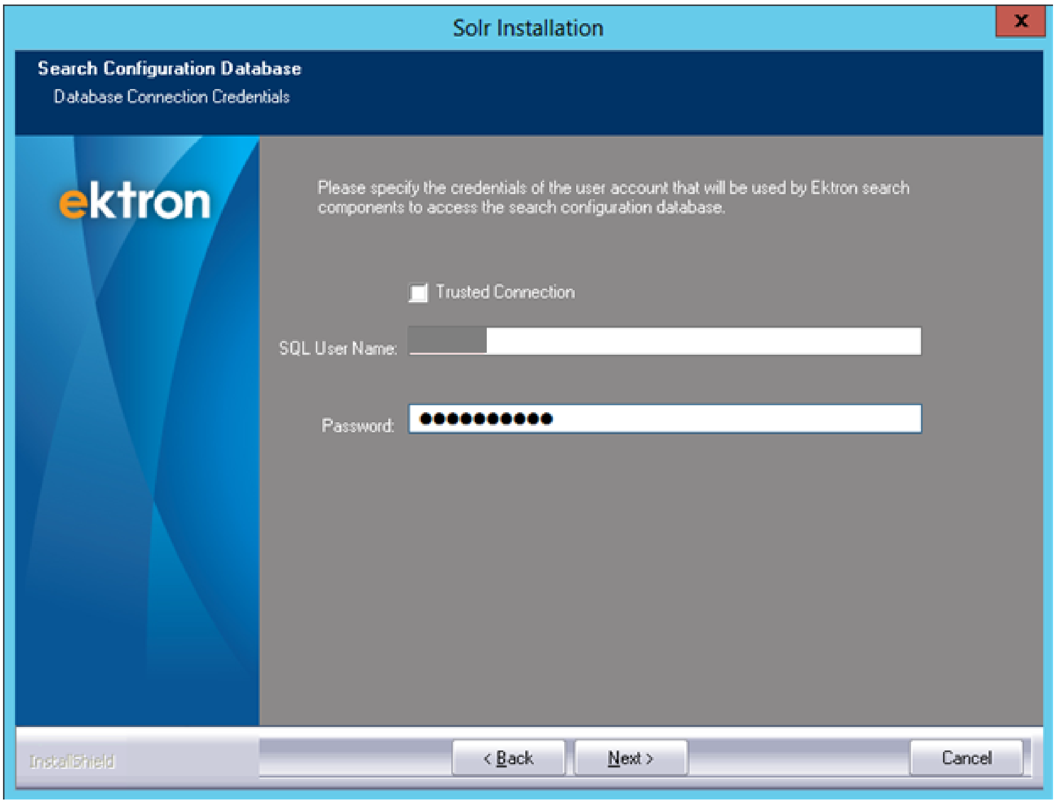
8. Enter the SQL Server that will host the Solr configuration database. Then either select **Trusted Connection** or enter the username and password of the user who will create the search configuration database. The user must be assigned the SQL Server dbcreator role.



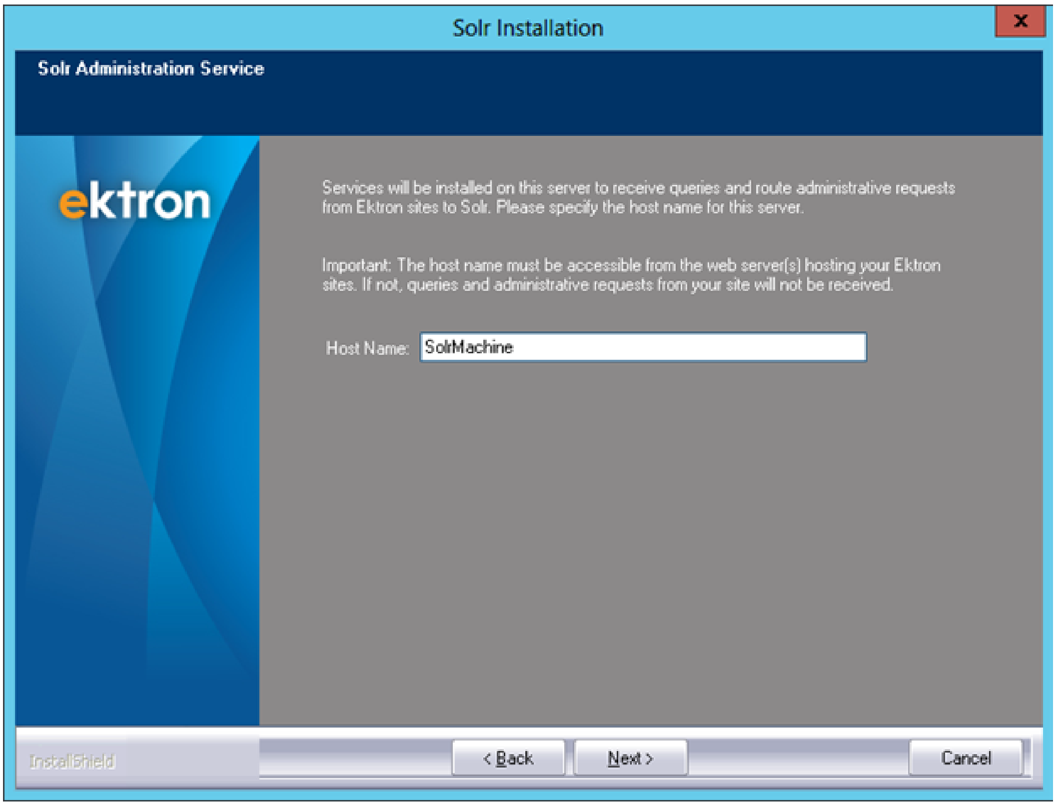
9. Enter a unique name for your search configuration database. Spaces are not allowed.



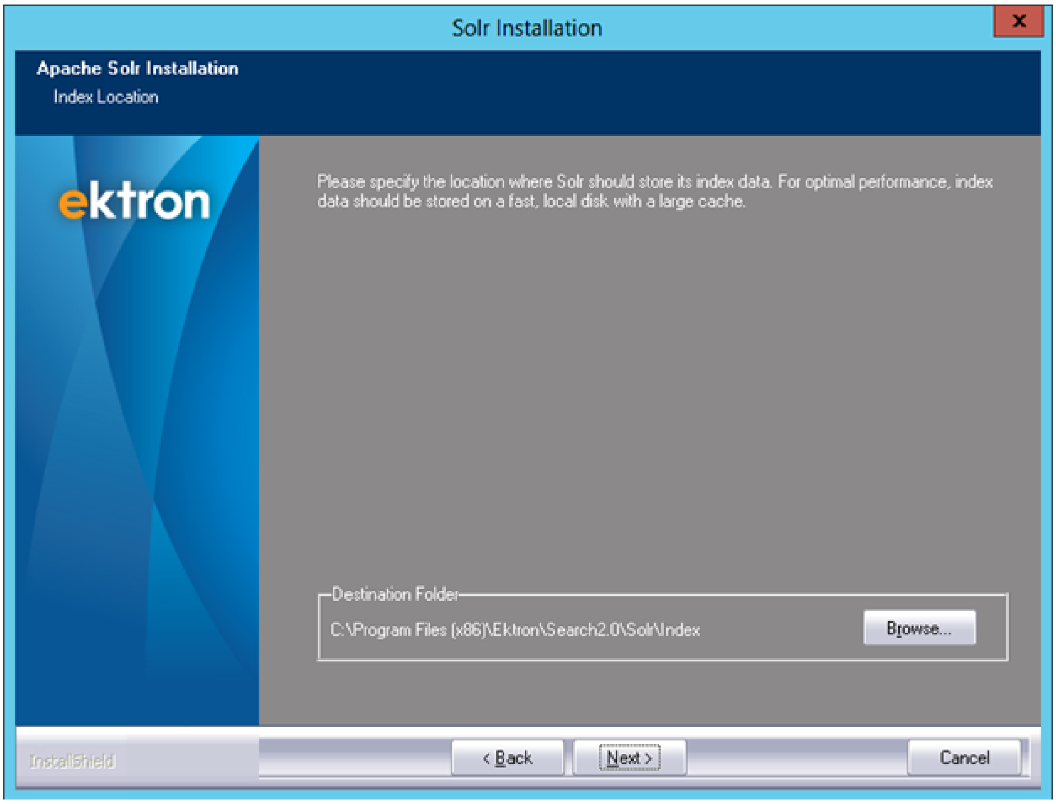
10. Enter credentials for a SQL login account that Ektron search components will use to access the search configuration database.



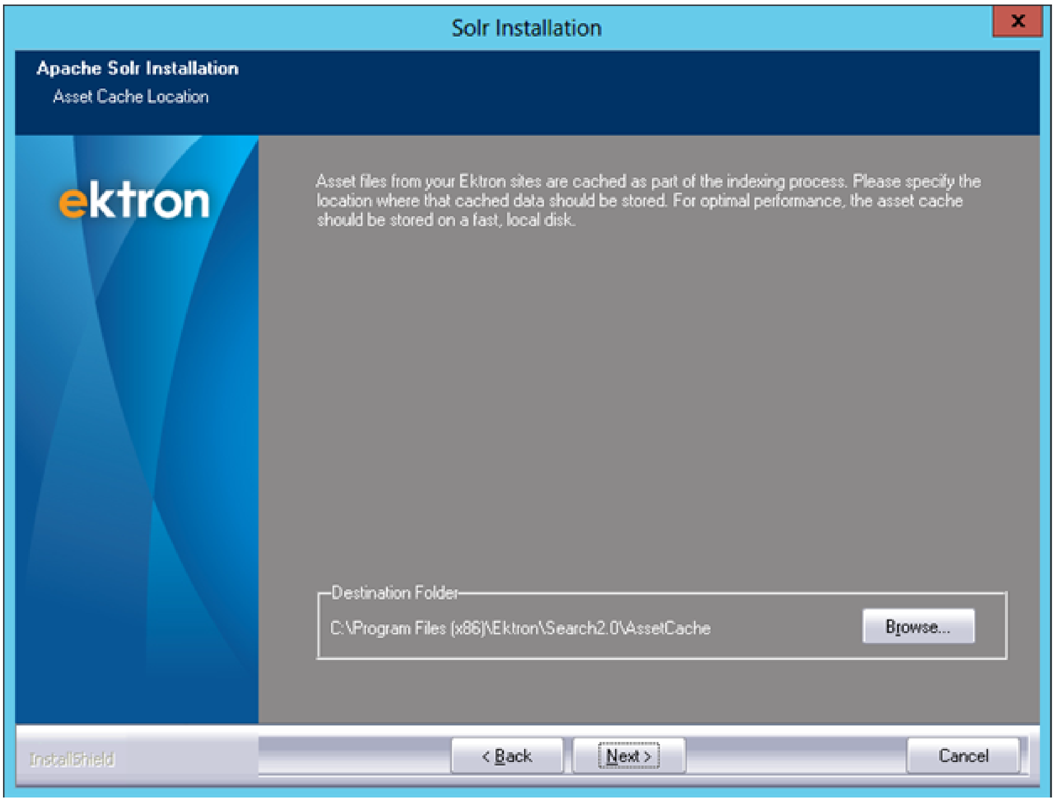
11. Enter the host name of the server on which you are running the Solr installation. The Ektron server must be able to access this host.



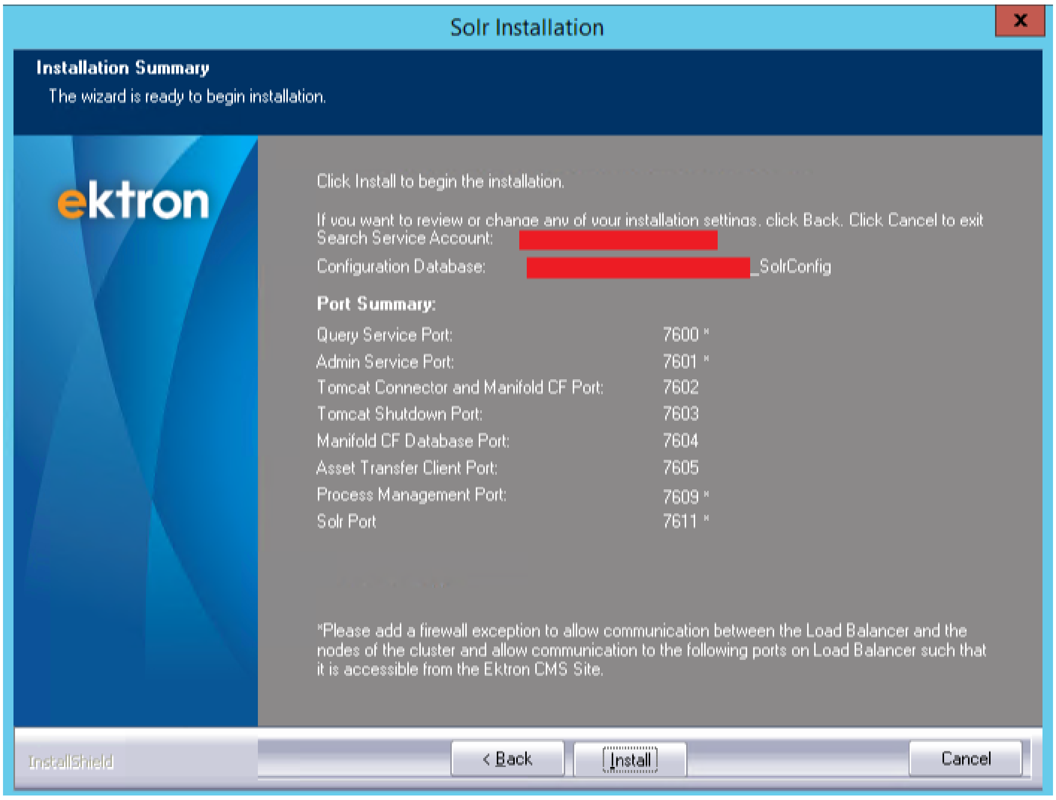
12. Select a folder in which Solr will store its index data.



13. Specify the location of your asset cache. The asset cache is used only if the Ektron asset files are not stored on your Solr search server.



14. A summary of installation choices appears. If everything looks OK, click **Install**.



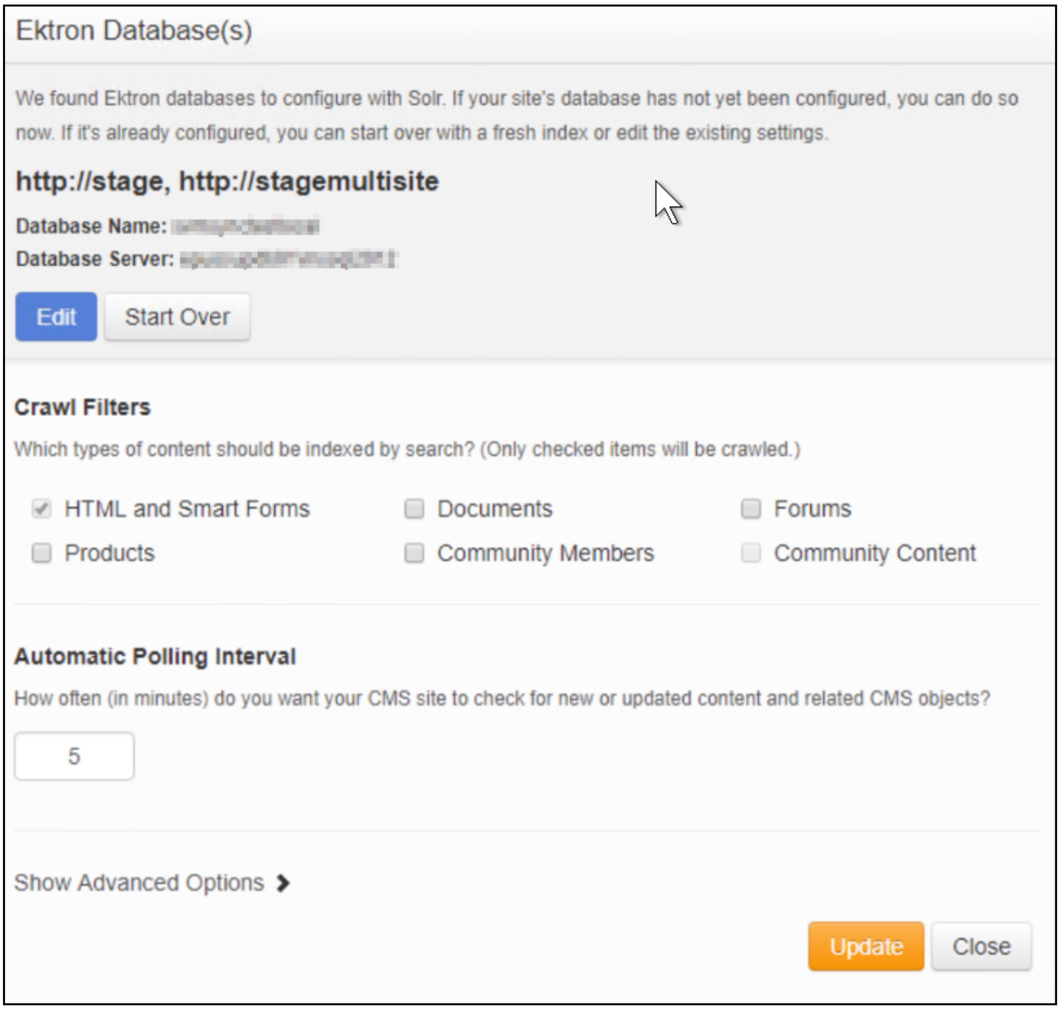
Key points on this screen:

- The query service port is always the base port.
- The screen lists your search service account, configuration database, and the port number assigned to the following:
  - Query service. Outbound from Ektron server
  - Admin service. Outbound from Ektron server
  - Tomcat connector. For local communications between Solr and Tomcat
  - Tomcat shutdown. For local communications between Solr and Tomcat
  - ManifoldCF. For local communications between Solr and ManifoldCF
  - Asset Transfer Client. Two-way between Ektron and Solr servers

IMPORTANT: The summary screen's first 2 ports have an asterisk (*). Set up the Ektron server's firewall such that these ports let the Ektron site communicate with the Solr service.

Part 2: Register your Solr site

1. Remote onto the Solr machine and go to the following URL: `https://YourSolrMachineName:7600/SolrAdminConsole/Index.html`.
2. If prompted, enter the credentials of the search server user used to install Solr. If you are uncertain of the username, go to the Windows Services panel, locate the Ektron Solr Process Manager service, and identify the user in the **Log On As** column. Use this user to login to the site listed in step one.
3. In the **Web Server Name** field, enter the machine name of the server that contains the CMS site you are registering and click **Connect**.
4. A list of Ektron databases on the server should be listed. Identify the database you wish to register.
5. If you deleted the crawl database, click the **Start over** button, confirm that the crawl filter and polling interval settings are correct, and hit the **Register** button. Take time to consider the crawl filters-your choice can make a considerable difference in crawl time.



If you are registering the site for the first time, the steps are the same minus the start over step.

6. If everything is configured correctly, you see a **registration successful** message. Otherwise, search the knowledge base for the error you are receiving. If necessary, contact Support.

Setting up Solr search in the Amazon cloud

This section explains how to set up Solr search to support an Ektron website deployed to the Amazon cloud.

Part 1: Set up an Ektron site in the Amazon cloud

When prompted to select a **Web Instances Type**, select **m1.large**.

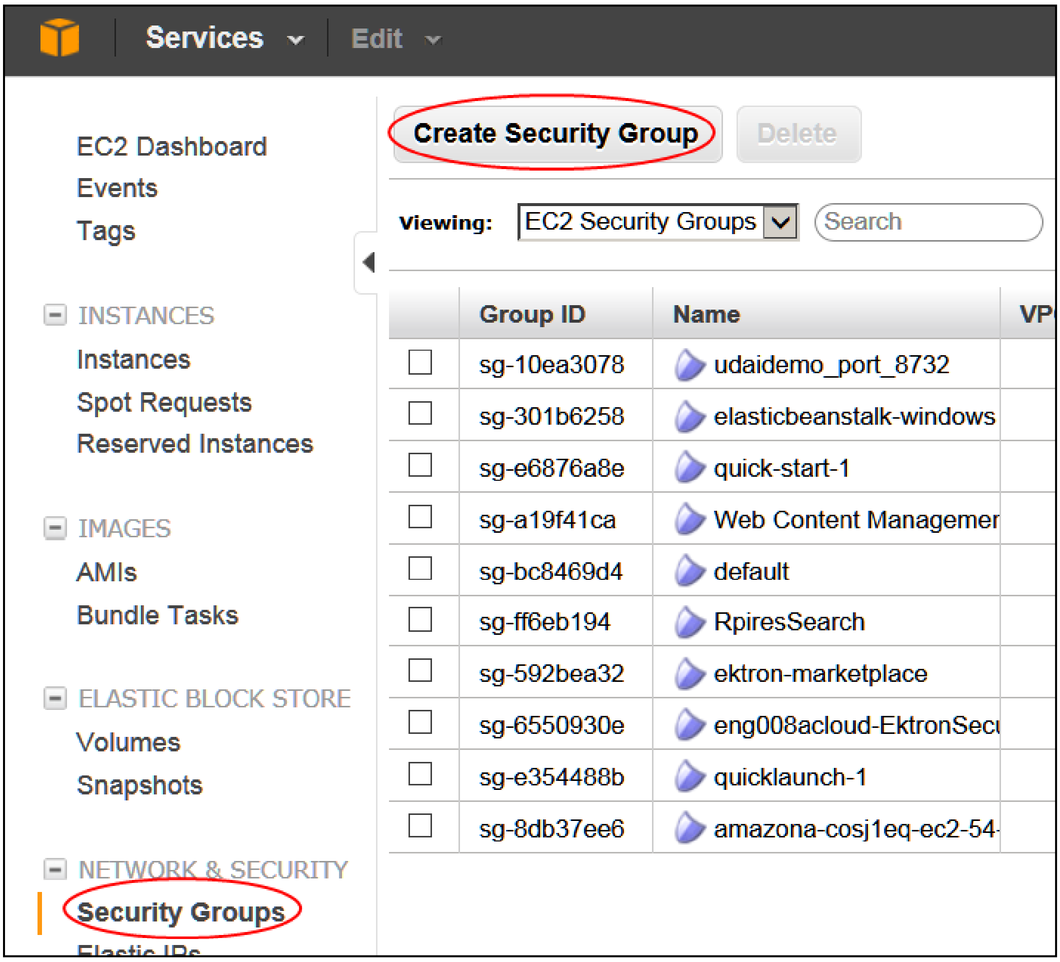
Part 2: Create a security group

The security group authorizes the opening of ports, which access search components between Ektron and the Solr VM. Two of the ports, selected during the Solr installation, are base port and base port+1. By default, they are 7600 and 7601.

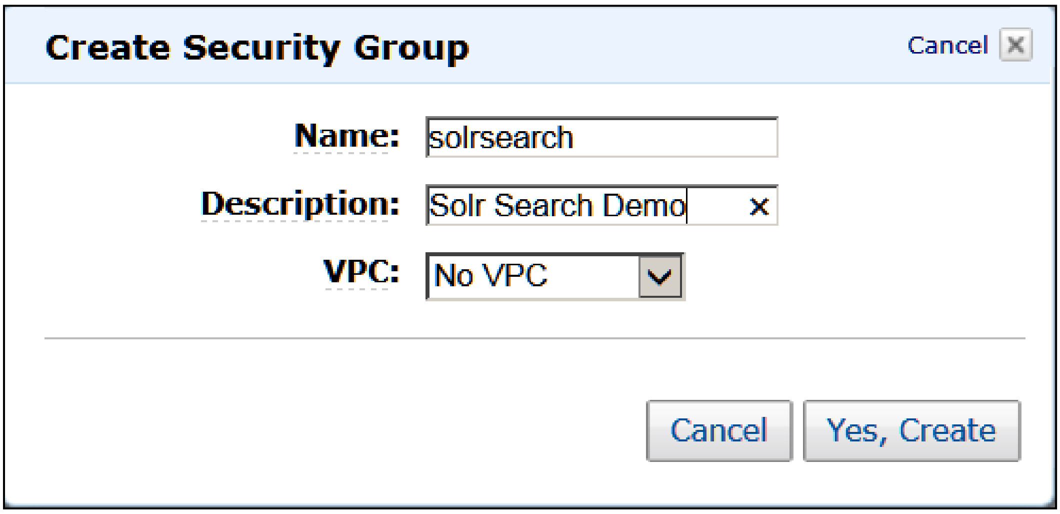
NOTE: The base port is for the Admin Console/Registration UI and Query services. The base+1 port is for the Ektron Solr Admin Service.

NOTE: Create the Security Group for the region you selected for the Cloud site (for example, US East).

1. Sign in to the Amazon Web services console.
2. Click **Services > EC2 > Security Groups > Create Security Group**.



3. Add a **Name**, **Description** and select **No VPC**.

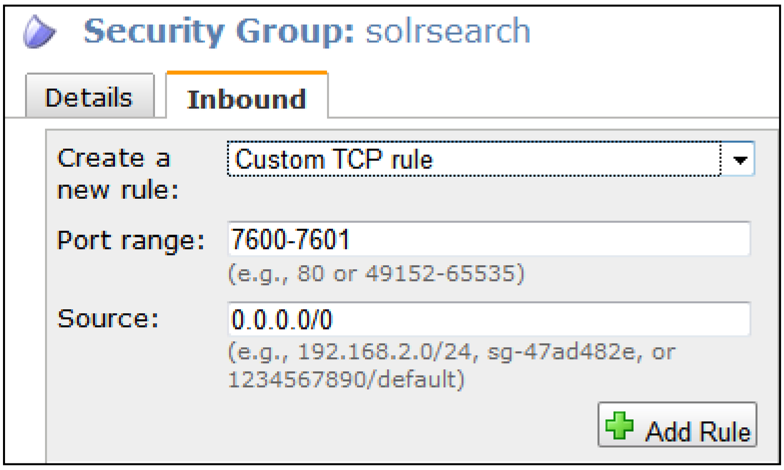


4. Click the group and add these 2 inbound rules.

```
Rule: TCP
Port range: 3389
Source: 0.0.0.0/0
```

```
Rule: TCP
Port range: 7600-7601
Source: 0.0.0.0/0
```

NOTE: For the second inbound rule, you are not required to use ports 7600 and 7601. These are only examples of ports you might use.



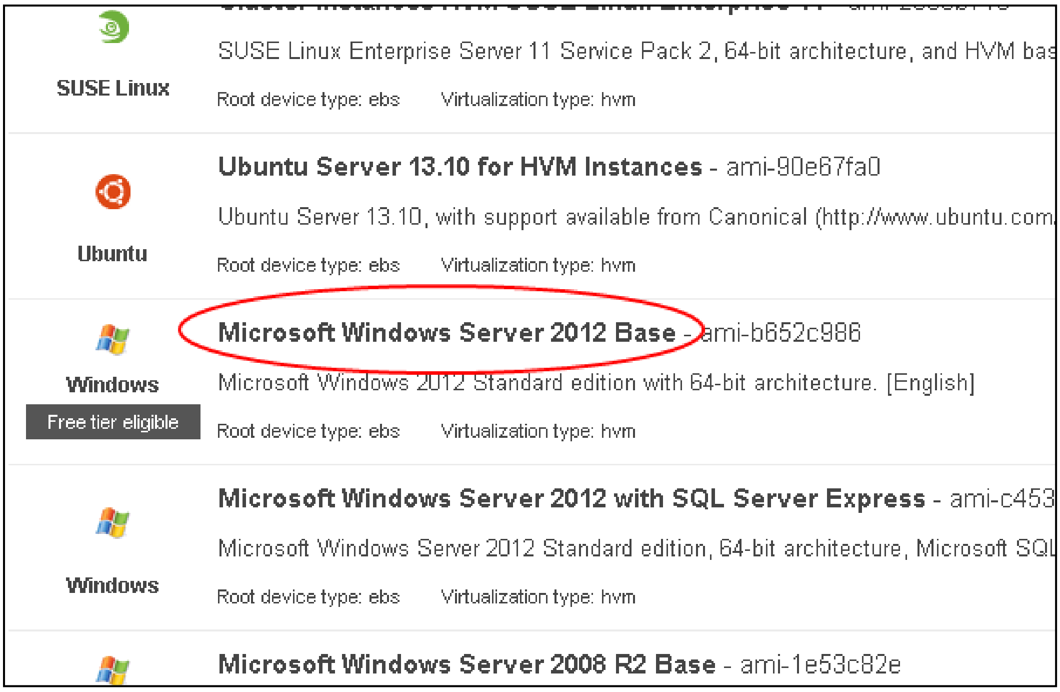
5. Click **Apply Rule Changes**.

Part 3: Create Solr search VM

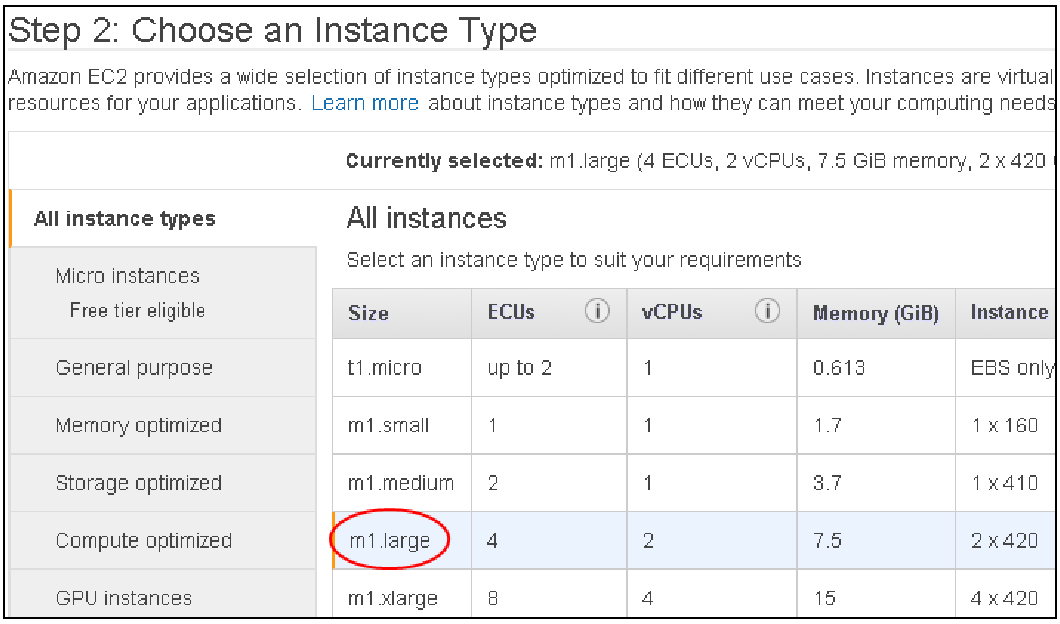
In this part, you create a Solr search version on an Amazon virtual machine.

NOTE: Create the Solr Search VM in the same region you selected for the Cloud site.

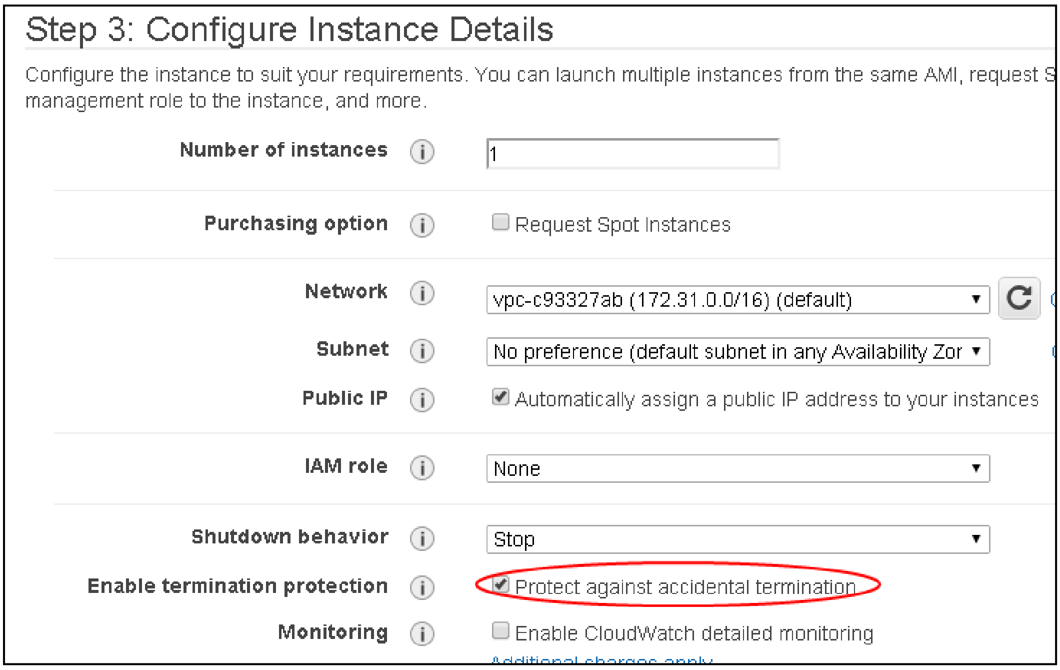
1. Sign in to Amazon Web services console.
2. Click **EC2 > Instances > Launch Instance**.
3. Click the **Quick Start** tab.
4. Select a Microsoft Windows server that supports Solr search. Do not choose one that is bundled with a SQL server. See also: *Setting up Solr search on a single on-premises (local) server* on page 213



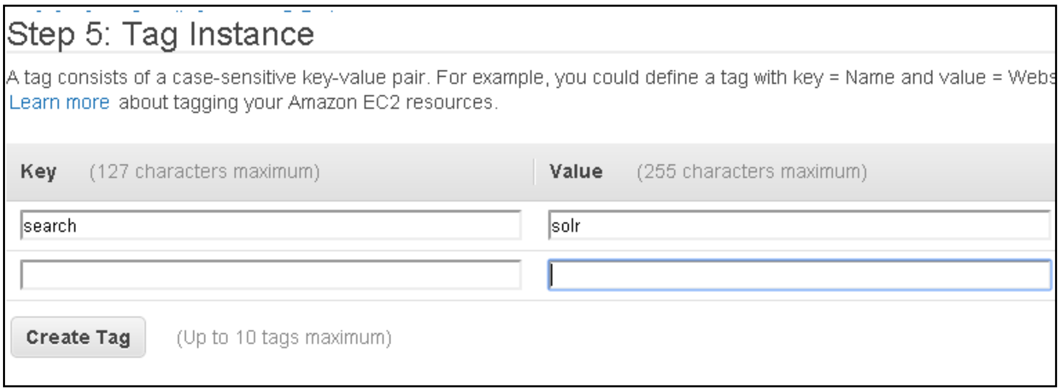
5. Click the **Select** button. A new window appears.
6. Select **All Instance Types > M1 large** and click **Next**.



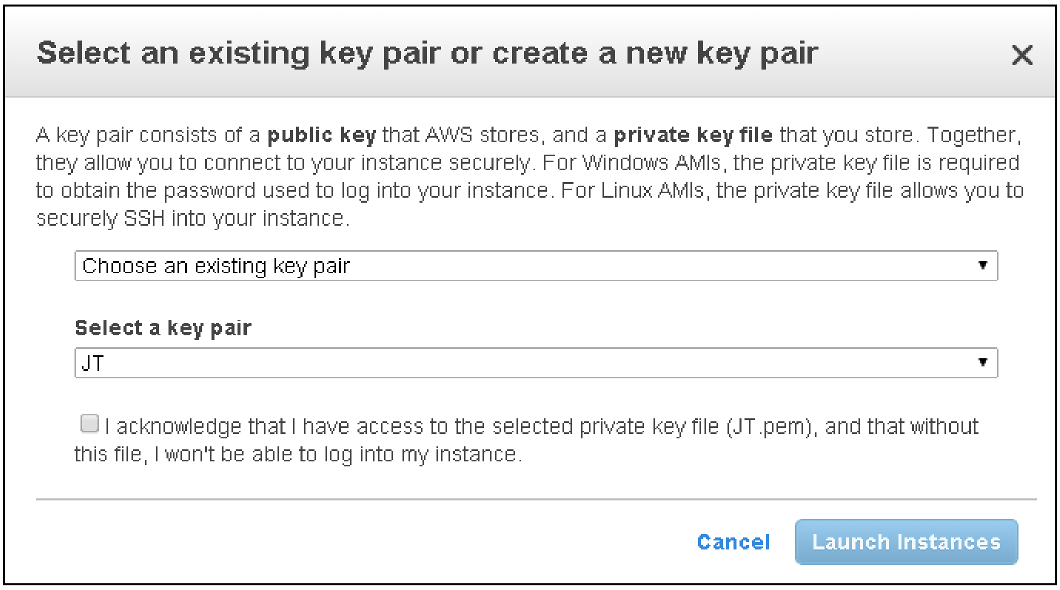
7. On the Configure Instance screen, check **Protect against accidental termination** and click **Next**.



8. The Storage Device Configuration screen appears. Click **Next**. The Tag Instance screen appears.
9. Add a tag. For the **Key**, enter **search**. For the **Value**, enter **solr**. Click **Next**.

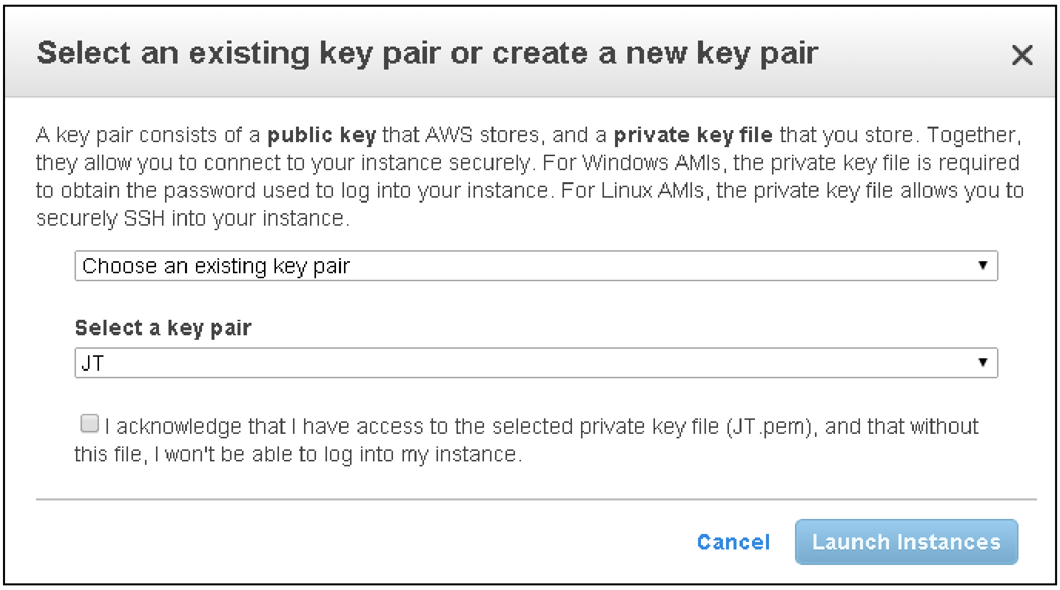


10. Select the security group you created in *Part 2: Create a security group* on page 224 and click **Review and Launch**.



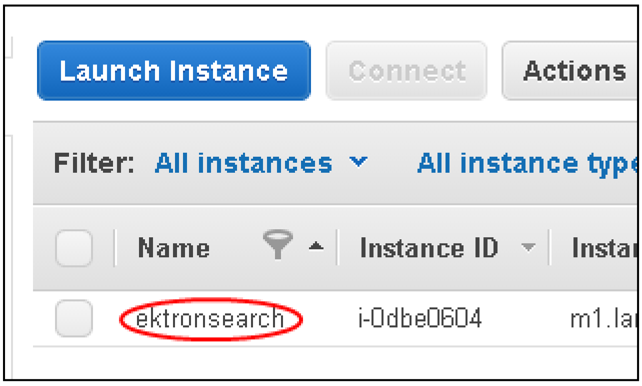
11. Review screen information then click **Launch**.
12. Select the key pair that you created and click **Launch Instances**.
    If you created a new key pair when you ran the deployment wizard, the `CloudPemFile` is created in the Ektron on-premises Windows Service install directory, `C:\Program Files (x86)\Ektron\EktronWindowsService40\CloudPemFile`.

NOTE: If you do not have an existing key pair, create new pair and save the key pair file on your computer. You will need it later to log in.

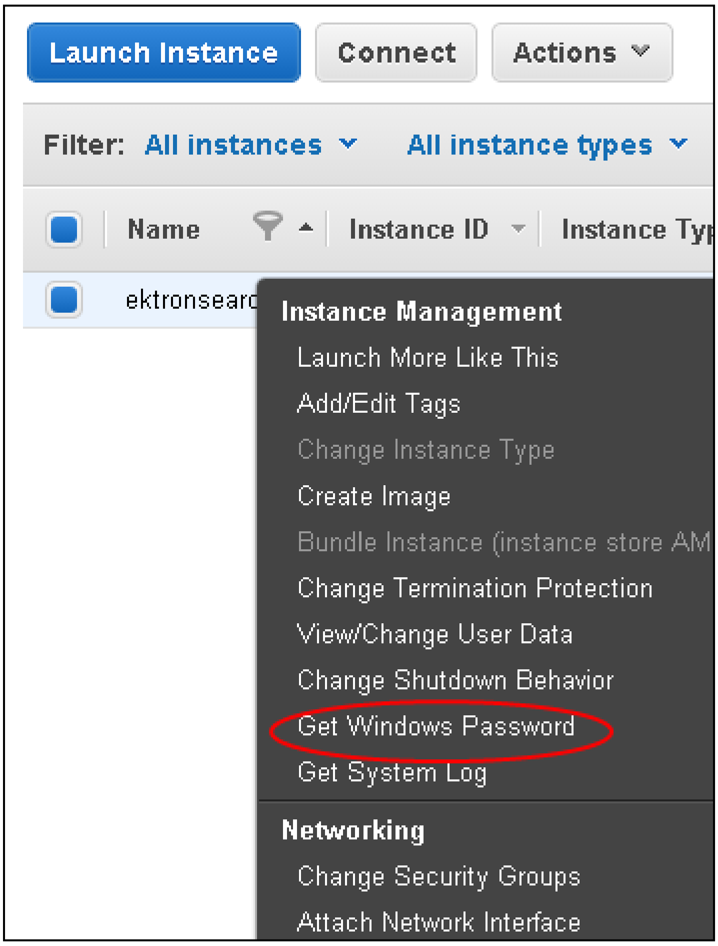


13. Move the cursor to the row containing the new instance, click the **Name** field, then insert a name.

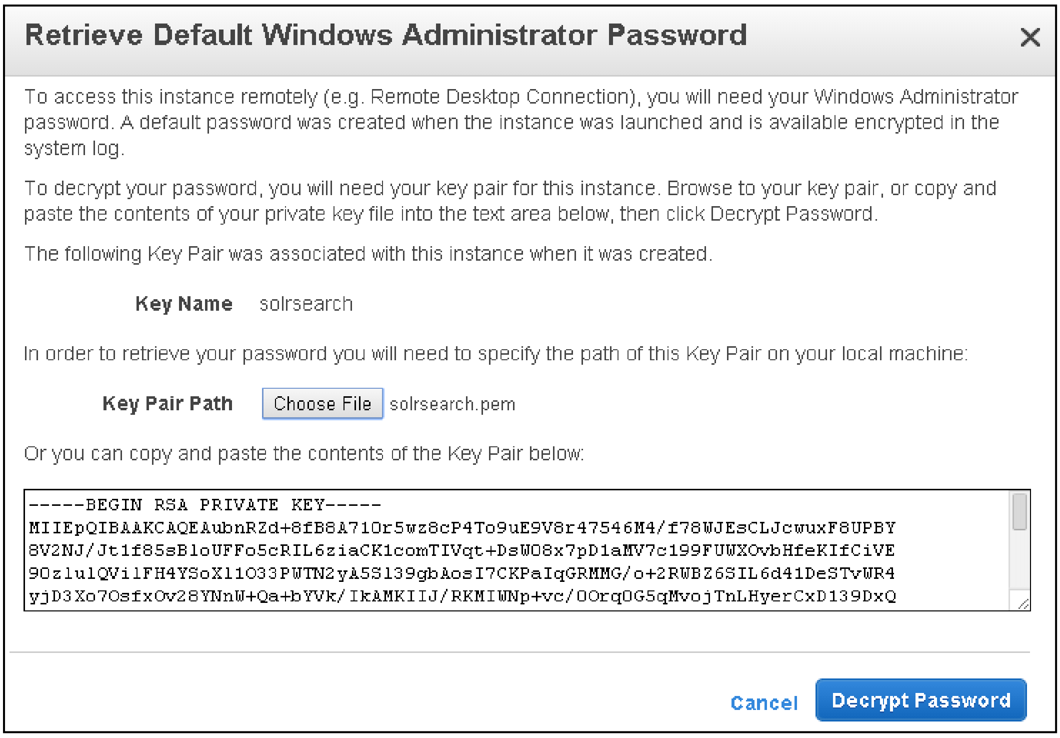
NOTE: This step is not required but will ease identification of your VM later.



14. When the launch is finished, right click the instance and select **Get Windows Password**.



15. Browse to the keypair file described in Step 10, EktronSolrSearchKP.pem, and click **Decrypt Password**.



16. You see the decrypted password & hostname. Save them for future access to the EC2 Instance Remote Desktop Session.

Part 4: Set up the Amazon Solr search VM

On the Solr search Amazon VM (which you installed in *Part 3: Create Solr search VM on page 226*), install the Solr search prerequisites.

PREREQUISITES

- Solr server
  - Hardware requirements: minimum 8 gigabytes of RAM, quad core, 64-bit processor
  - Operating system: Windows 2008, Windows 2012, Windows 2016

    NOTE: For a production server, use Windows 2008 R2, Windows 2012, or Windows 2016.

  - Enable the following
    - Roles
      - Application Server Role Services
        - .NET Framework 4.5

          IMPORTANT: With Windows Server 2008 or 2008 R2, be sure that .NET 3.5 is installed before installing 4.5.

        - Web Server IIS Support

            - Web Server (IIS) Role Services
                - Windows Authentication feature
                - .NET Extensibility 4.5
                - ASP.NET 4.5
        - Features
            - .NET Framework > WCF Activation

              NOTE: Make sure that HTTP activation is also checked.

            - Static content
        - SQL browser, if not using default instance
    - For optimal performance, use a separate disk (that is, not the system drive) for index and asset cache
    - May be installed on Ektron server but only in a development environment.
      Consult an Ektron certified partner to determine your server requirements. Ektron does not recommend installing Solr on a server that also hosts Microsoft Search Server.
    - Java Development Kit , Windows x64 version.

      IMPORTANT: If you upgrade the JDK version, you must replace it in the same directory to which you originally installed it. You may not install more than one JDK version to that directory.

- An Ektron site installed on an Ektron server. See also: *Installing Ektron* on page 9, *Upgrading to* on page 35.

  NOTE: During the Ektron installation, you should have selected Solr as your search provider. If you need to change your search provider to Solr, see *Changing your search provider to Solr* on page 277.

- The Ektron Solr installation file. Contact your Ektron account manager to obtain a link to the file.
- Users
    - A SQL login account assigned the dbcreator role. This account is used to create the search configuration database.
    - A SQL login account that Ektron search components use to access the search configuration database.

      Both SQL accounts must follow these rules:

        - If integrated security is set to true

          ...and Solr search and the Ektrondatabase are on *different* servers, a domain user is required.

...and Solr search and the Ektron database are on *the same* server, a local Windows user is required.

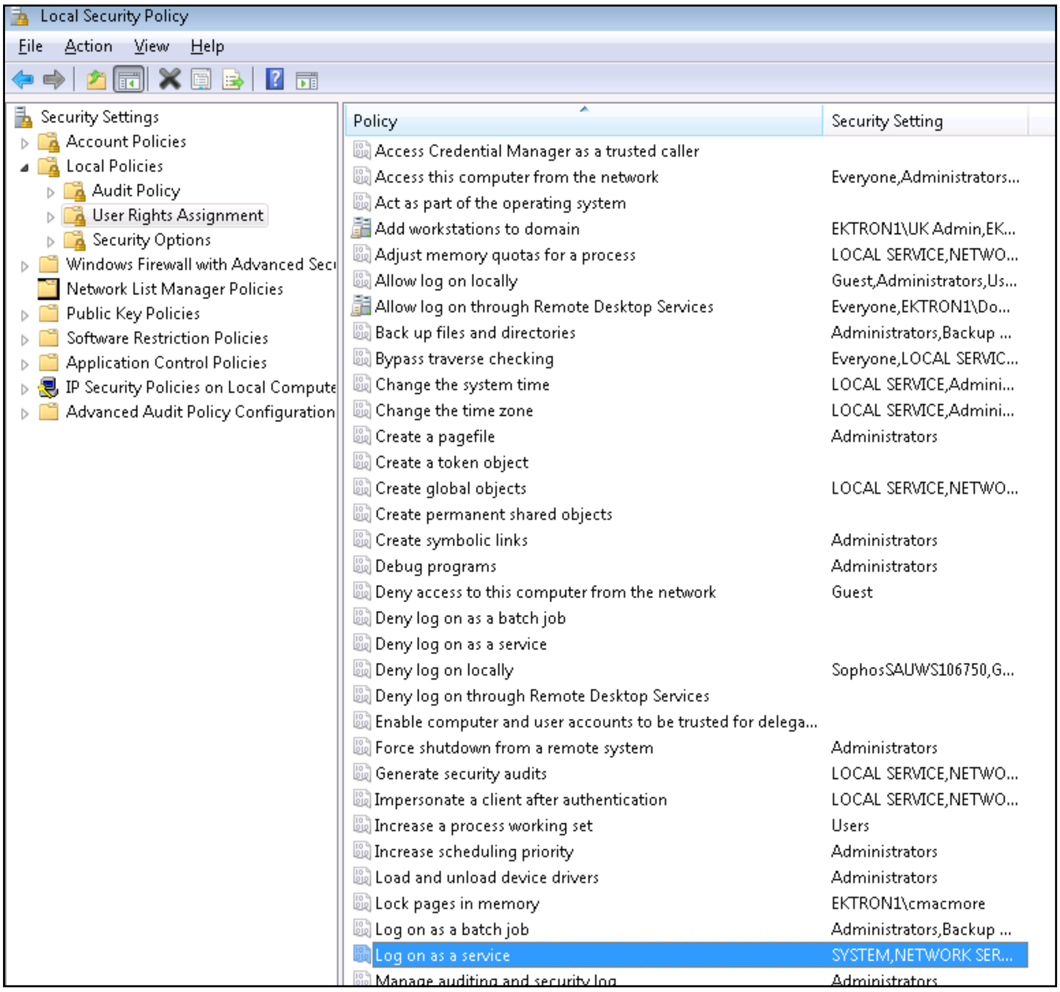
- if integrated security is set to false, a SQL server user.

BEST PRACTICE

Use SQL authentication rather than Integrated Security. Although Integrated Security is supported, the connection is made in the context of the search service account (Windows user) provided during installation. If this user does not have access to the database, the connection fails.

- A Windows user account under which Solr services will run. This account, which manages Solr components and authenticates queries, must have permission to
  - write to the search 2.0 folder and its subfolders
  - start the Solr admin service
  - log on as a service

  This user can be either a Windows user on the search server, or a domain user. If it is a domain user, the Netlogon service must be enabled and running.



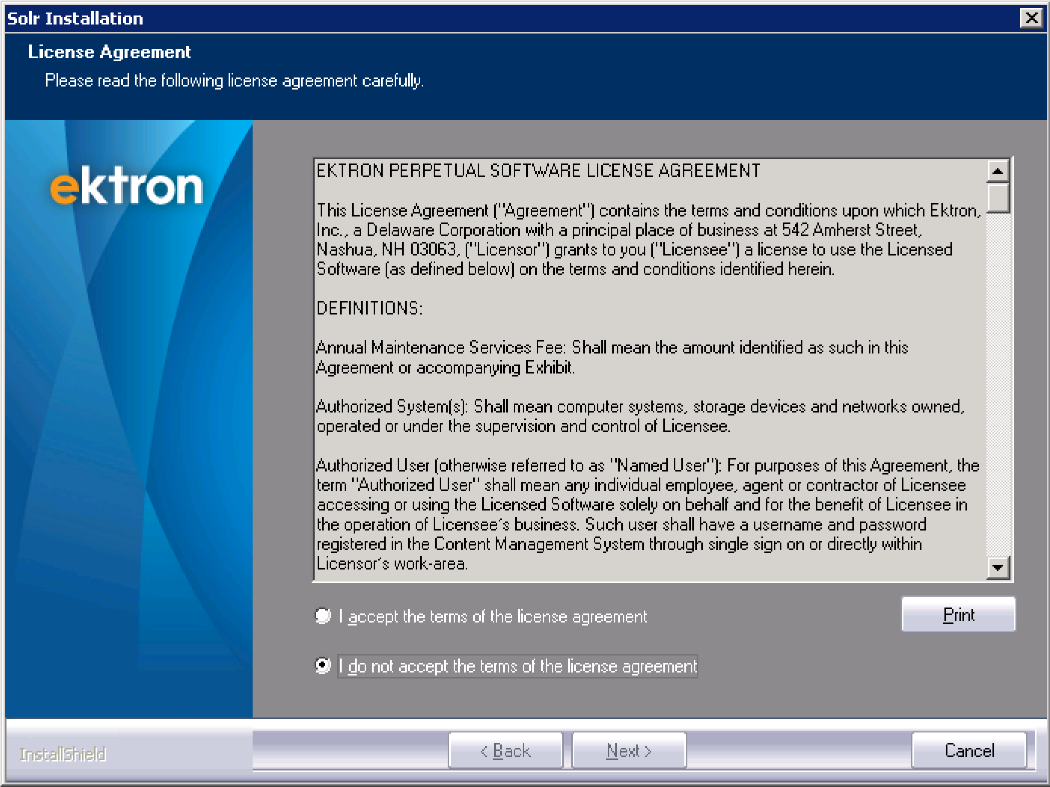
- Knowledge of Solr, for administrators who want to perform advanced tasks

Part 5: Install Solr on the Solr VM

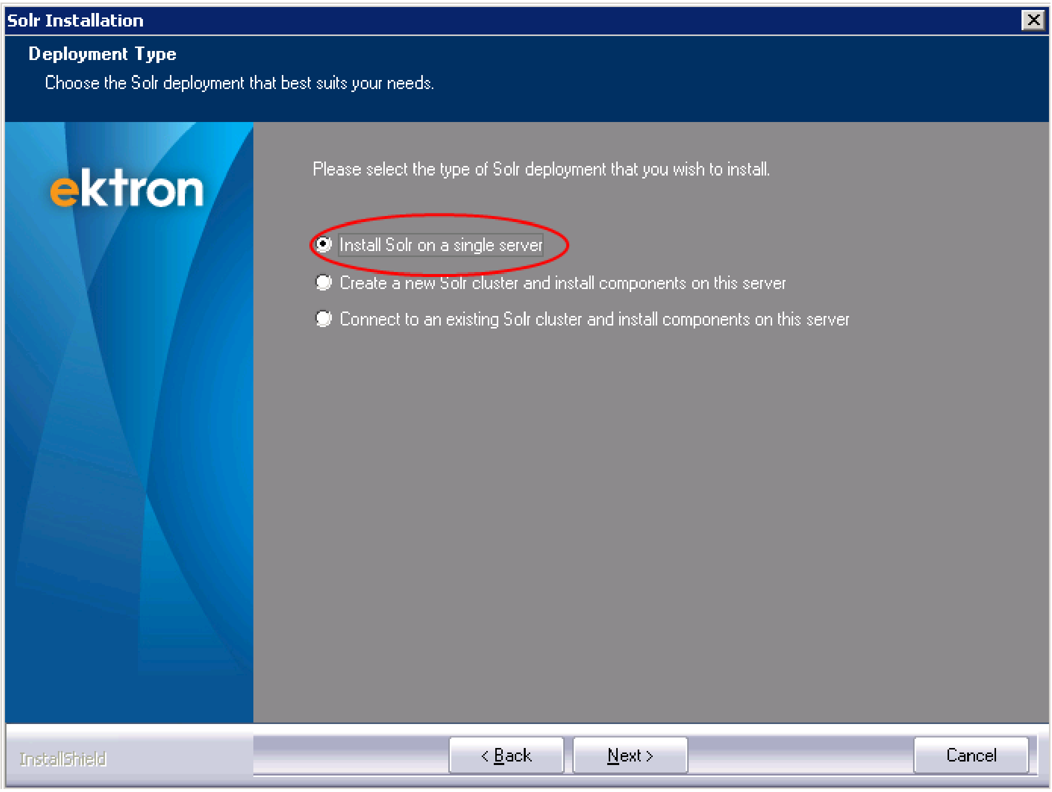
Remote into your Solr VM then complete these steps.

1. Contact your Ektron account manager to obtain a link to download the Solr installation file.
2. Log in as a Windows Administrator user.
3. Download and run the Ektron Solr installation file as an administrator.

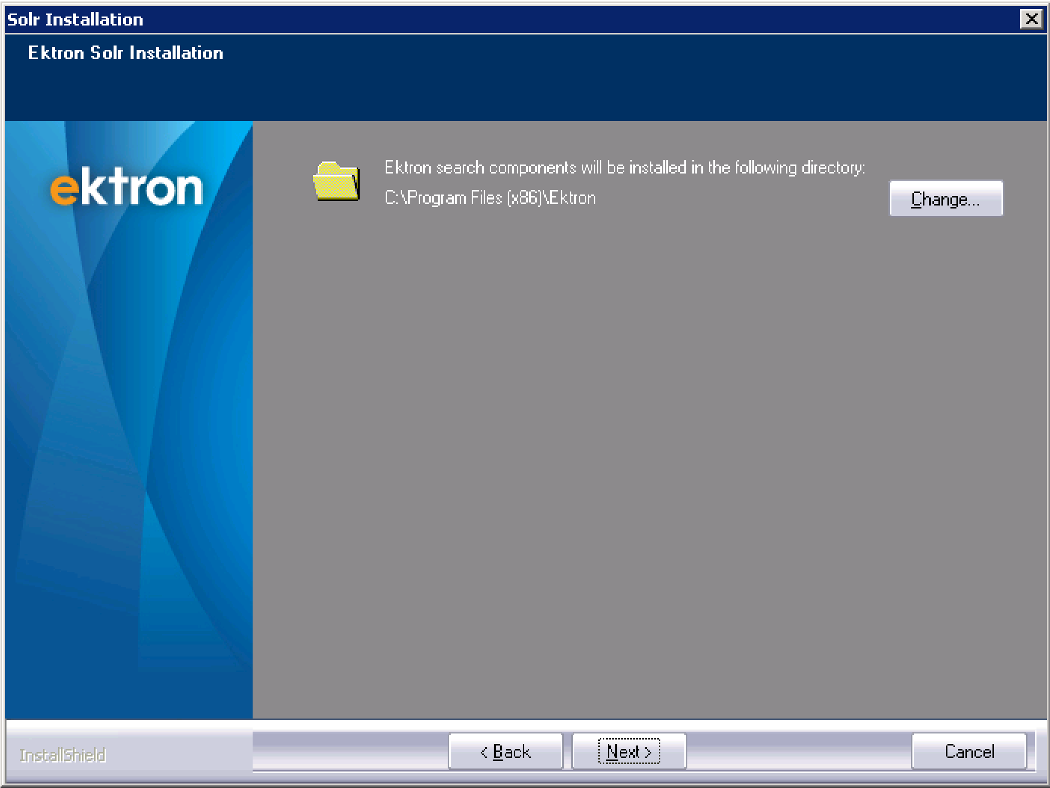
4. Accept the license agreement.



5. On the Deployment Type screen, choose **Install Solr on a single server**.

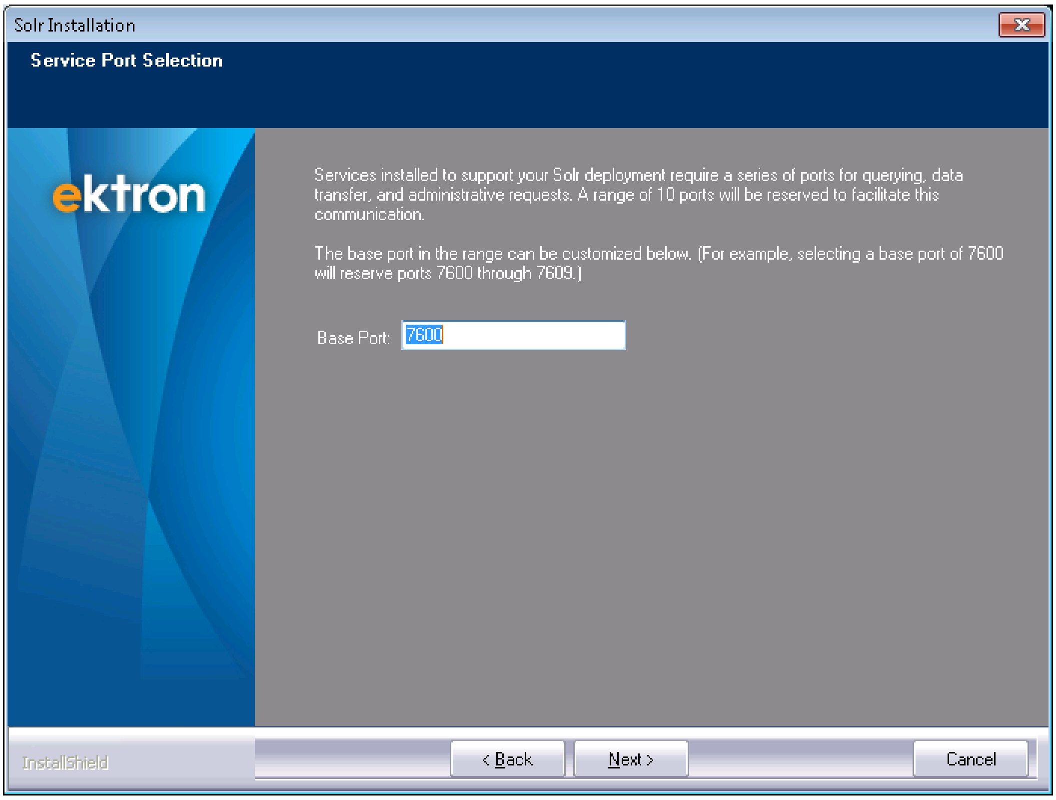


6. Select a folder in which to save the Solr installation files.



7. You are prompted to select a *base port*. After you select a port, it and 9 consecutive ports are designated for Solr use. For example, if you accept the default port 7600 as the base, ports 7600 through 7611 are used for Solr.

NOTE: Do not use a port number below 1025. Also, do not use ports 6080, 6081, and 8732. They are reserved for other Ektron components.

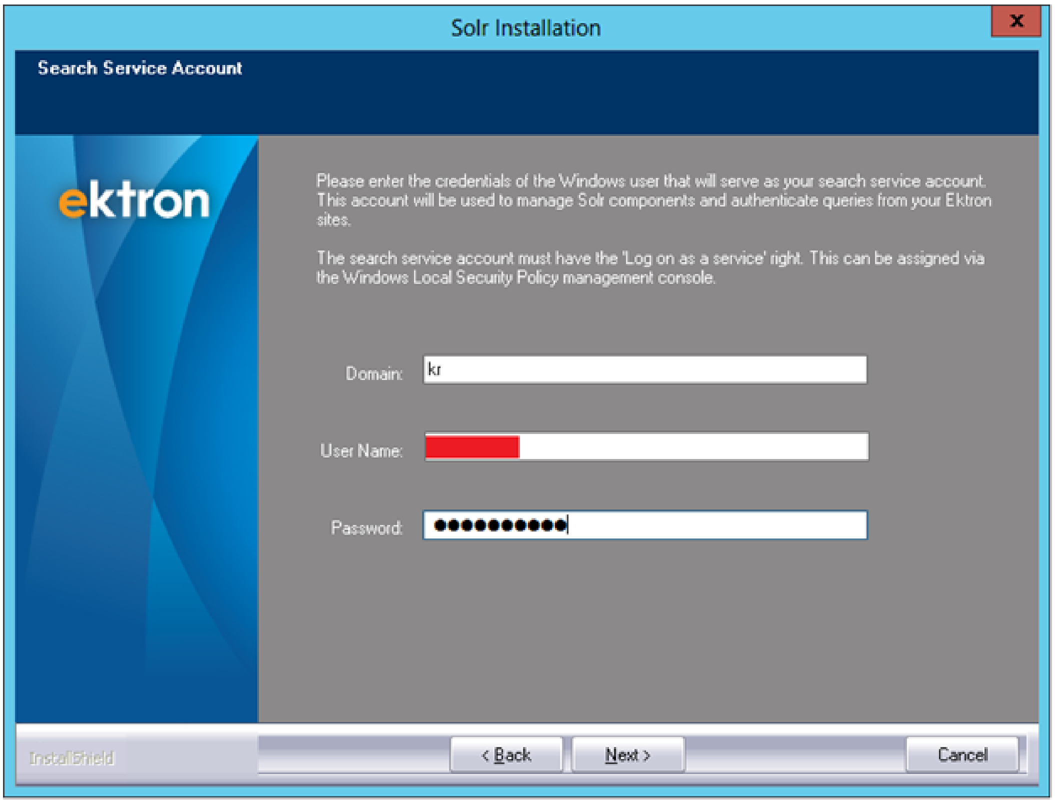


8. Enter credentials (domain, user name, and password) of the Windows user account under which Solr query services will run. This account manages Solr components and authenticates queries.

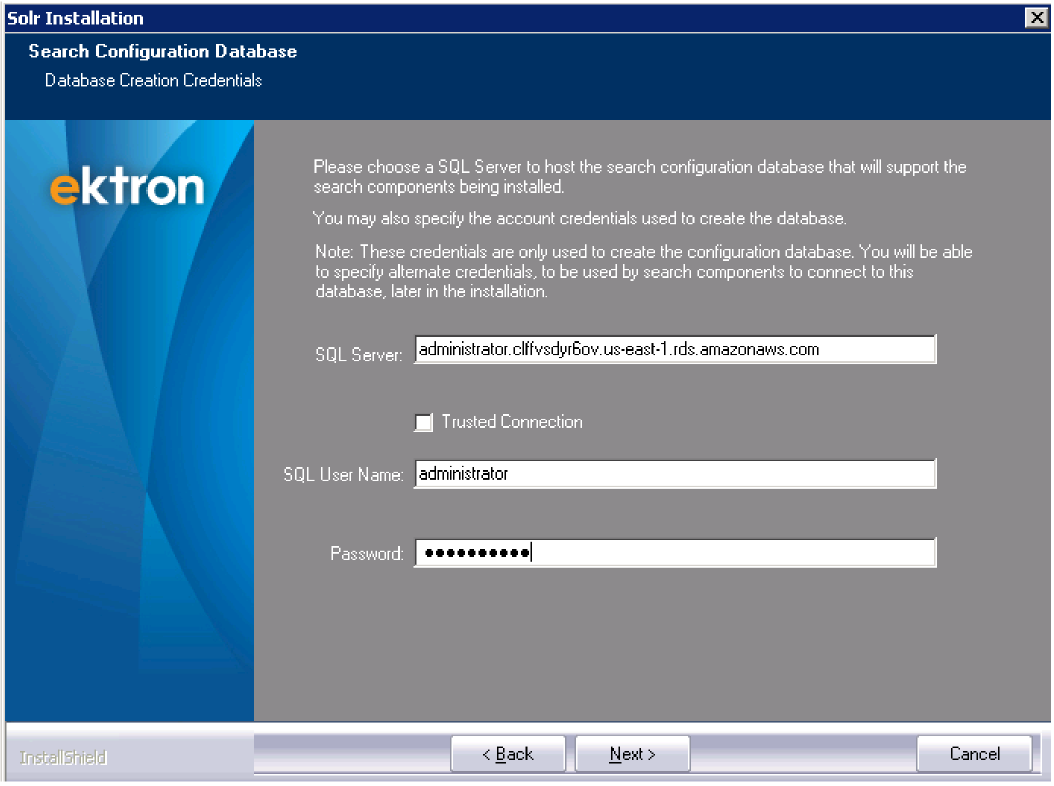
   The account must have permission to

   - write to the search 2.0 folder and its subfolders
   - start the Solr admin service
   - log on as a service. If the user does not have "Log on as a Service" right, you are prompted to assign it.

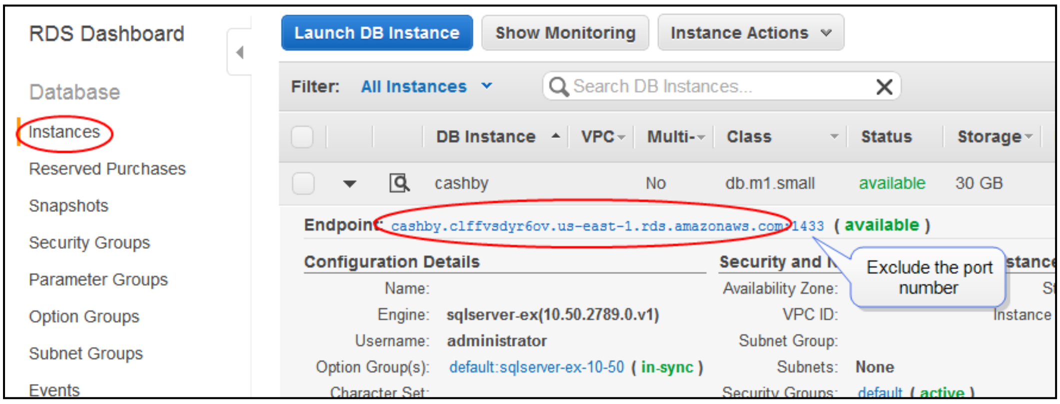
   If you are using a domain account, the Netlogon Service must be enabled and running.



9. Enter the SQL Server that will host the Solr configuration database. Then either select **Trusted Connection** or enter the username and password of the user who will create the search configuration database.

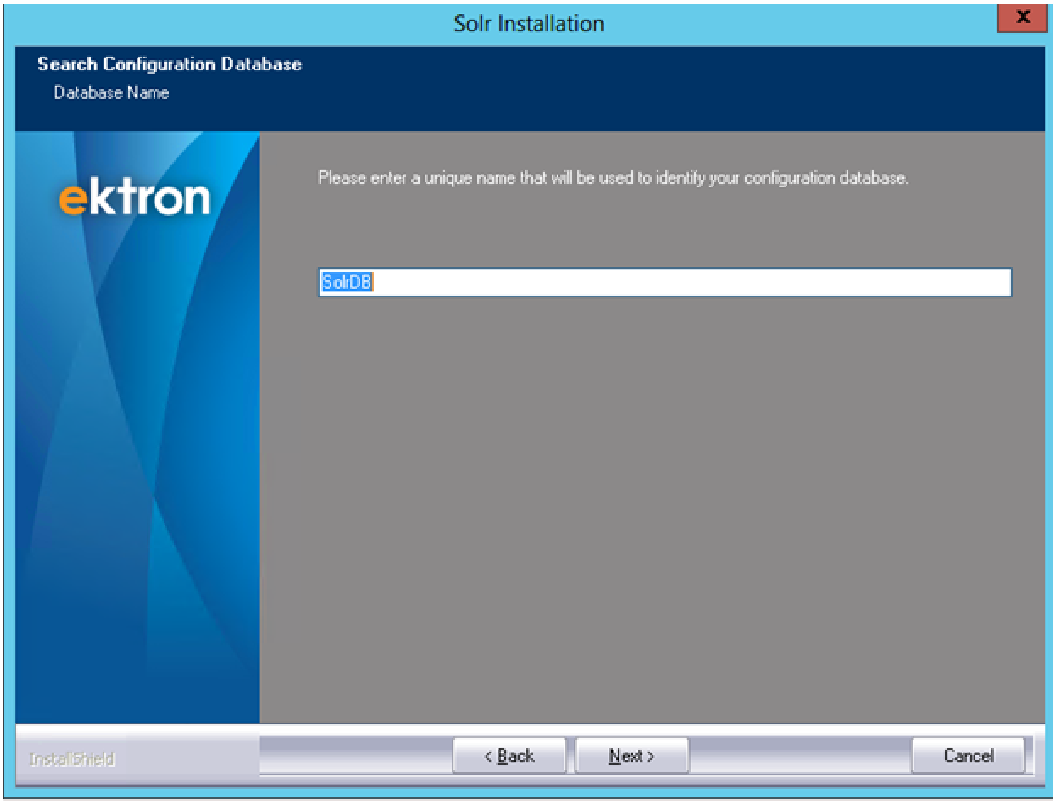


To get the SQL server name, use the Endpoint field in the Amazon Cloud Instances screen. Exclude the Endpoint's port number.

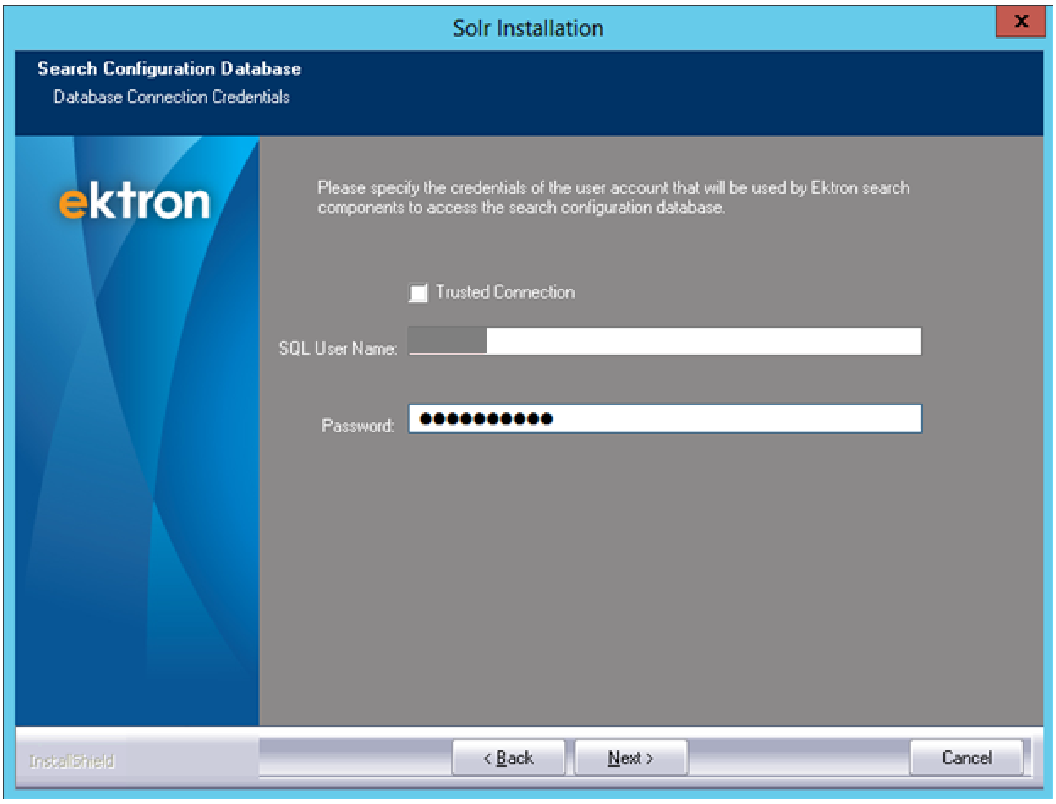


The user must be assigned Create Any Database permission on the RDS database server. See also: Amazon Relational Database Service (RDS) documentation.

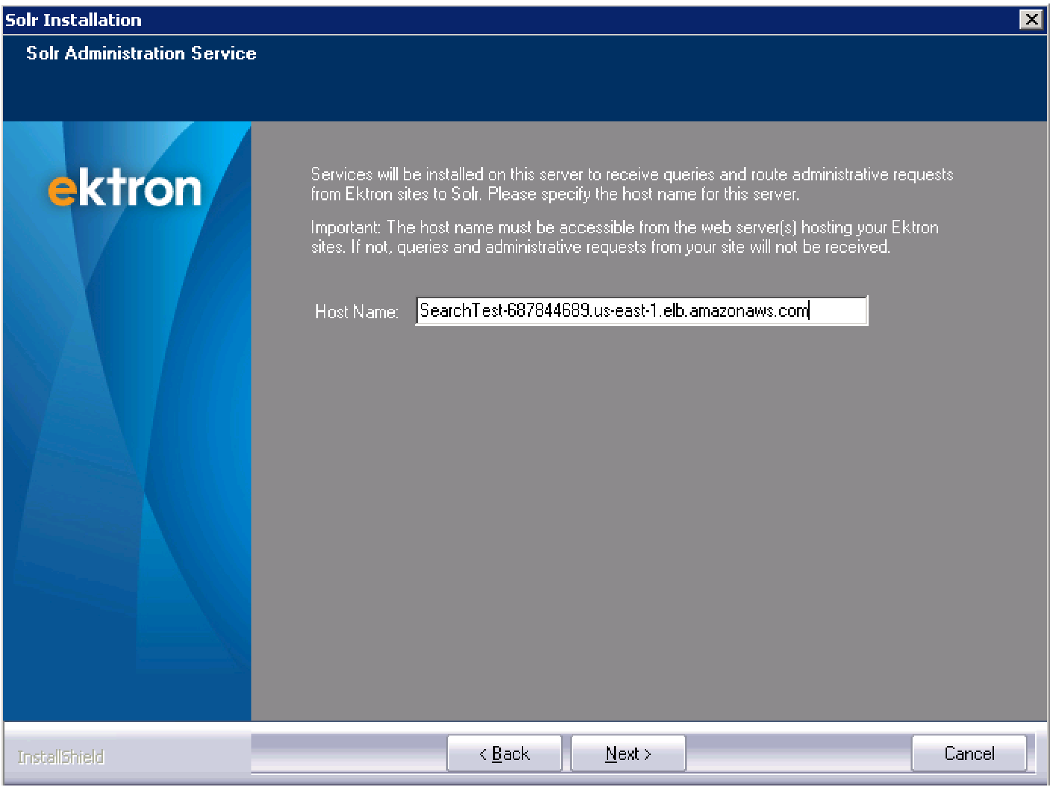
10. Enter a unique name for your search configuration database. Spaces are not allowed.



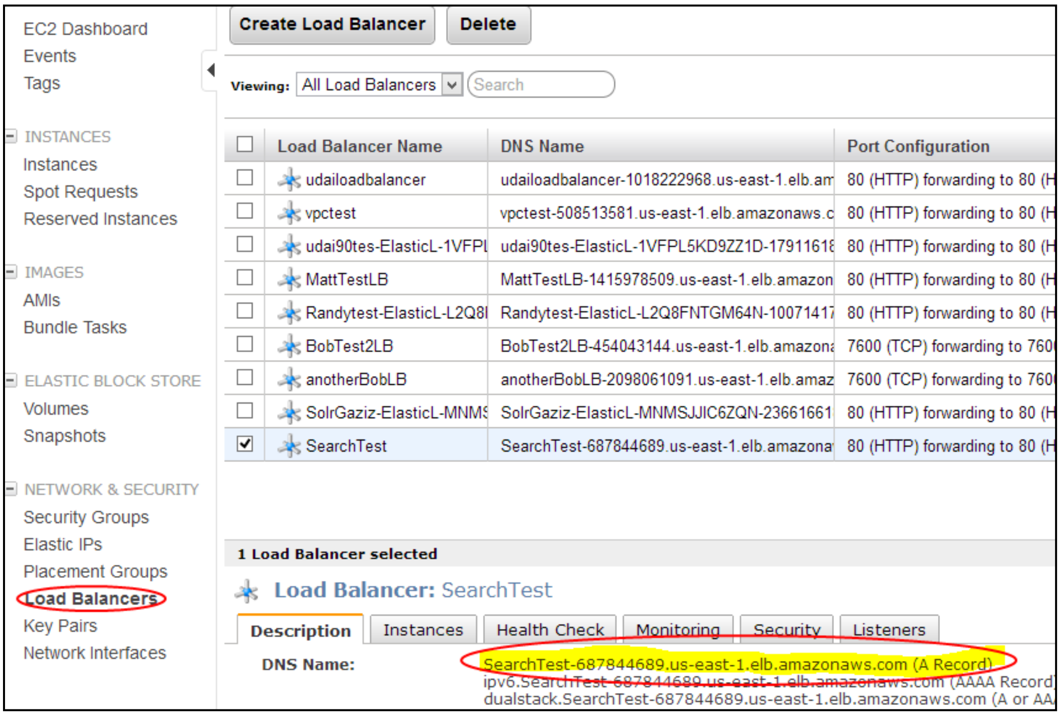
11. Enter credentials for a SQL login account that Ektron search components will use to access the search configuration database.



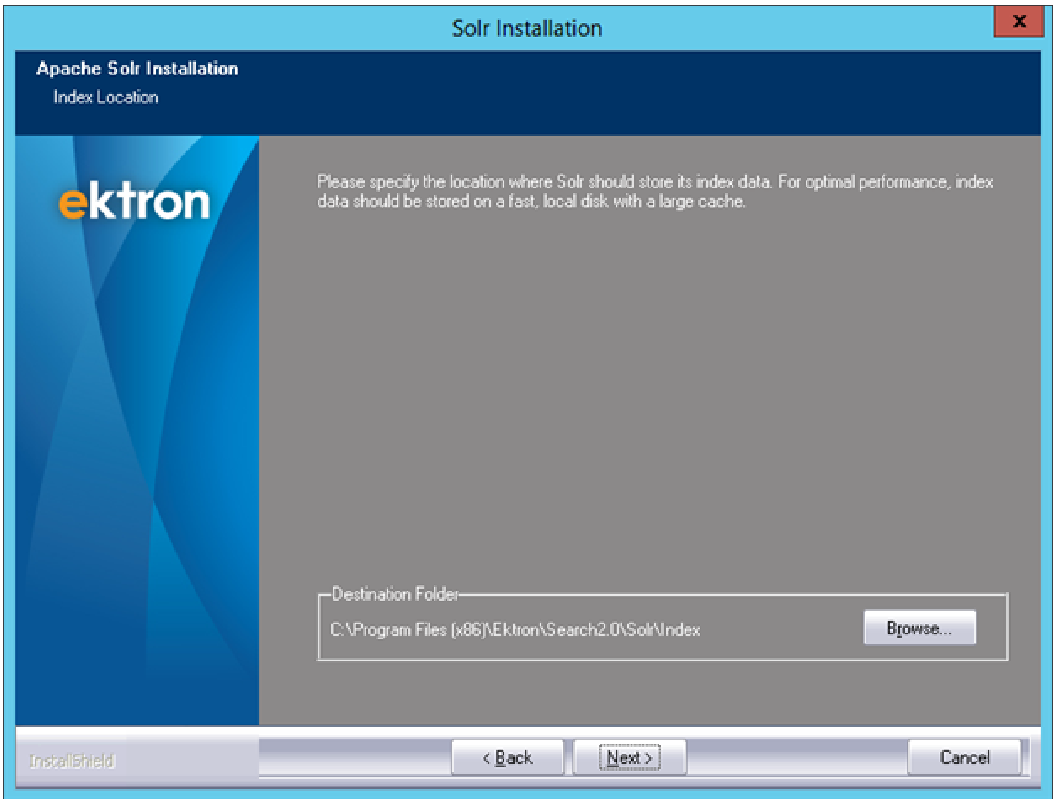
12. Enter the host name of the server on which you are running the Solr installation. The Ektron server must be able to access this host. Your host name may look like this.



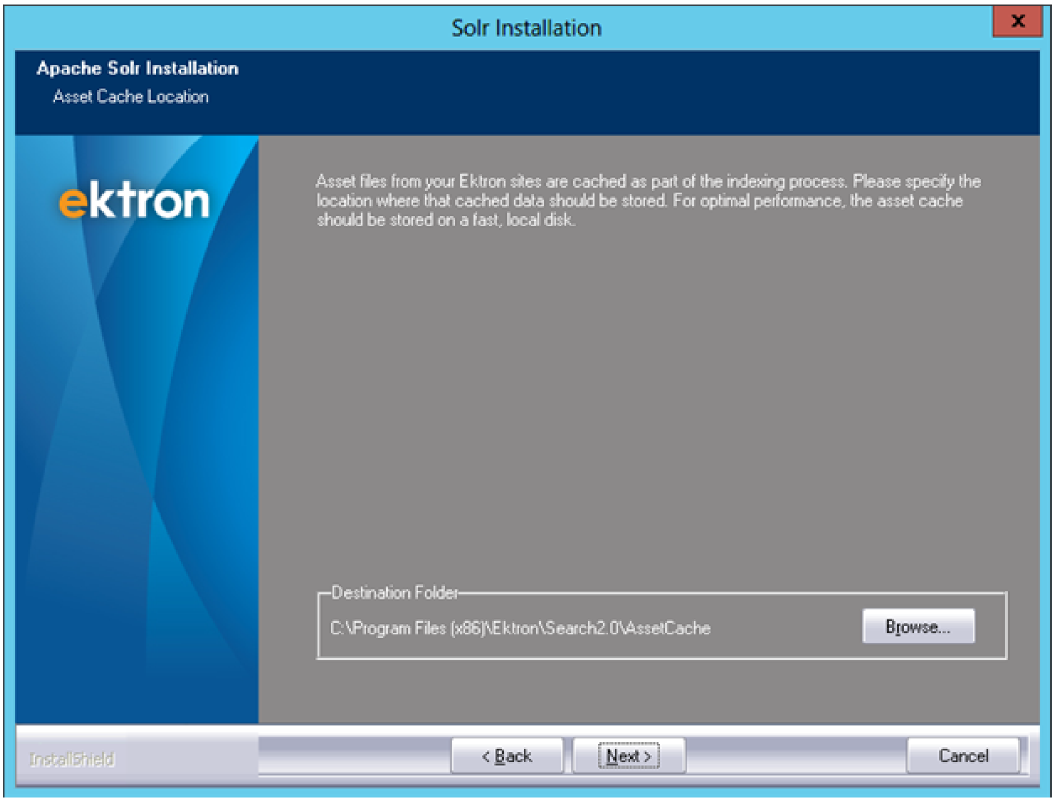
The following image indicates where to get the Amazon load balancer host name.



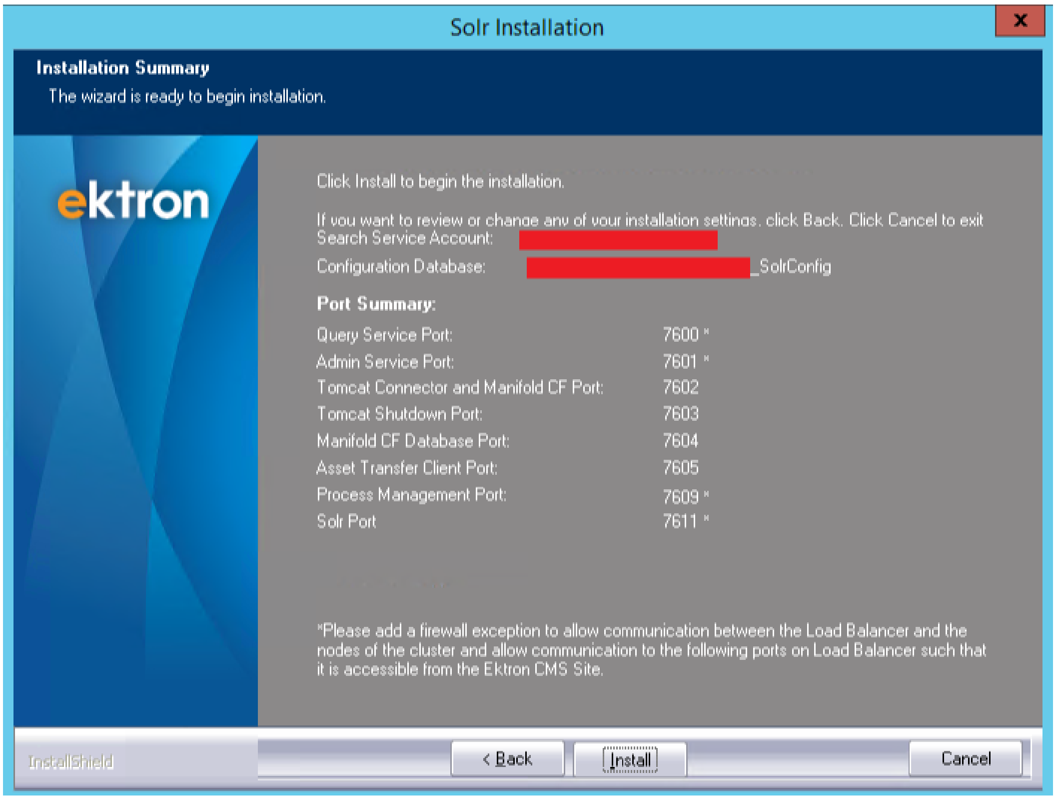
13. Select a folder in which Solr will store its index data.



14. Specify the location of your asset cache. The asset cache is used only if the Ektron asset files are not stored on the Solr search server.



15. A summary of installation choices appears. If everything looks OK, click **Install**.



Key points on this screen:

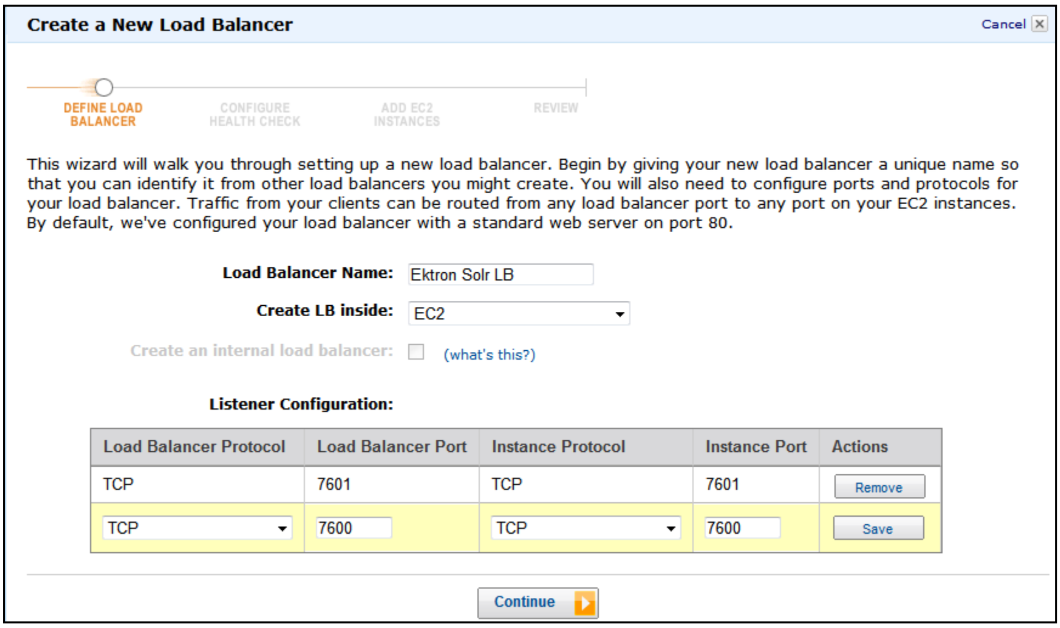
- The query service port is always the base port.
- The screen lists your search service account, configuration database, and the port number assigned to the following:
  - Query service. Outbound from Ektron server
  - Admin service. Outbound from Ektron server
  - Tomcat connector. For local communications between Solr and Tomcat
  - Tomcat shutdown. For local communications between Solr and Tomcat
  - ManifoldCF. For local communications between Solr and ManifoldCF
  - Asset Transfer Client. Two-way between Ektron and Solr servers

IMPORTANT: The summary screen's first 2 ports have an asterisk (*). On the Ektron server, adjust the firewall to allow these ports to communicate between your Ektron site and the Solr service.

Part 6: Set up a search load balancer

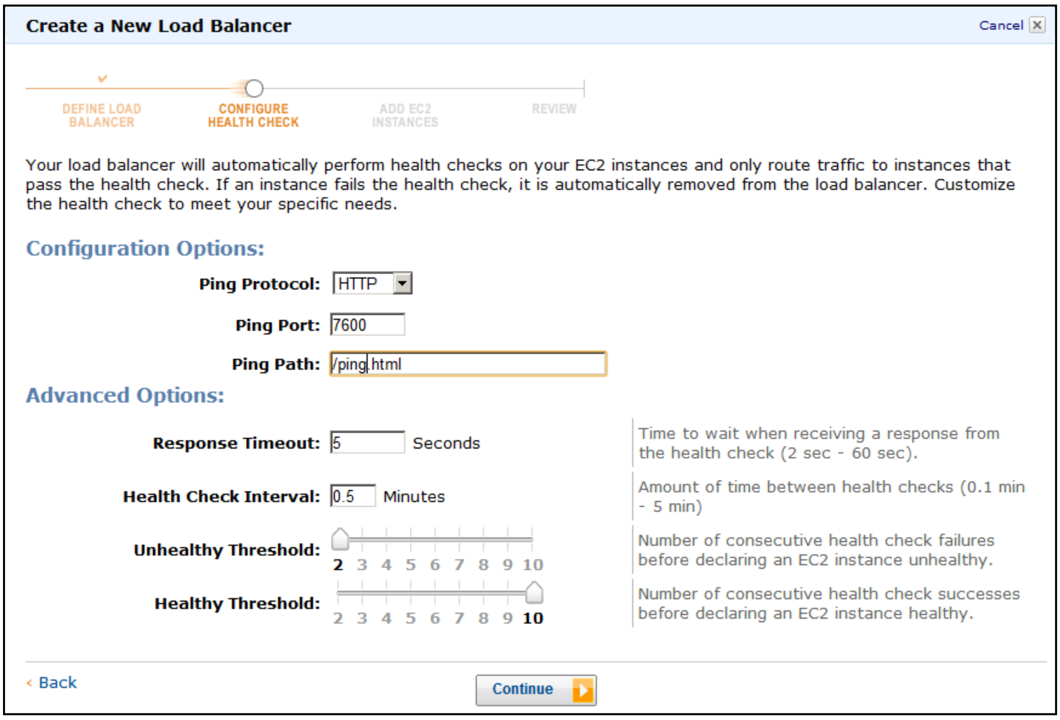
In this section, you load balance your search. You need to do this so the cloud-based Ektron site can access search components on the Solr VM, which will be accessible through the load balancer.

1. From the Amazon Web services console, go to **EC2 > Load Balancers > Create Load Balancer**.
2. Give the Load Balancer a name.
3. At **Create LB Inside**, choose **EC2**.
4. Map the base and base + 1 ports (by default, 7600 and 7601) between load balancer and Instance. Use **TCP** protocol, *not* Http. Click **Continue**.



5. On the Health Check dialog
   - at **Ping Protocol**, select **HTTP**.
   - at **Ping Port**, enter the base port. By default, it is **7600**.

- at **Ping Path**, enter **/ping.html**.

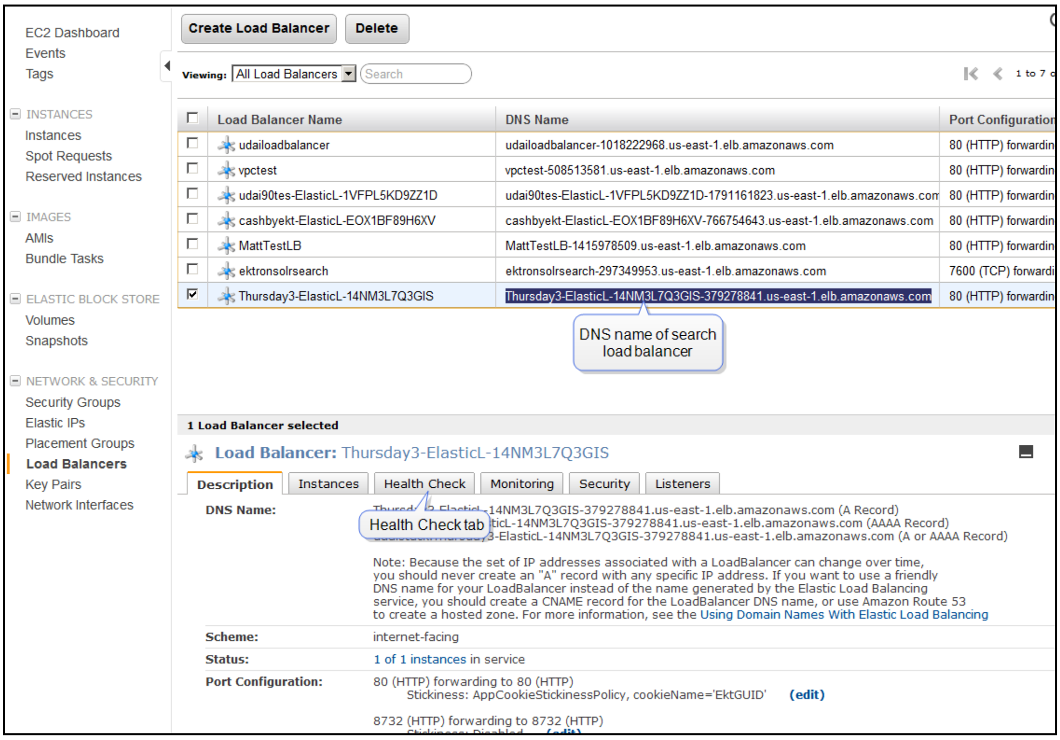


6. The Add EC2 Instances screen appears. Select the instance you created in *Part 3: Create Solr search VM* on page 226 and click **Continue**.
7. A review screen displays the settings. When you are ready, click **Create**. Amazon sets up a Search Load Balancer.

NOTE: The health check may fail since Solr Install has not run yet, and ping.html is not present on the VM.

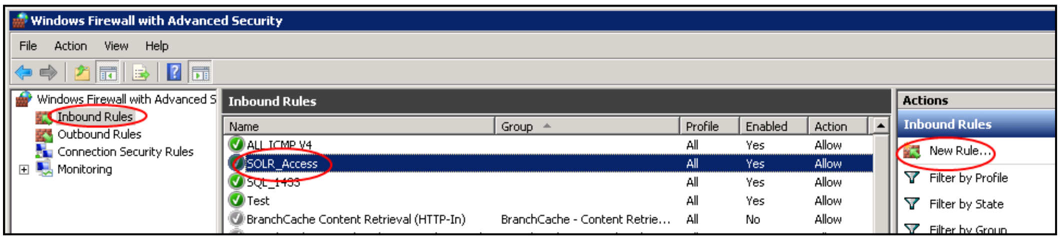
Part 7: Edit health check, create inbound rule, and verify QueryService URL

1. From the Amazon Web services console, go to **EC2**, click **Load Balancers**, and select the load balancer you created.



2. On the Amazon Solr server, create an inbound rule to allow connections to Solr ports.This allows your Ektron VM to communicate with the Solr Admin Console. To do this:
   a. Go to **Control Panel > Windows Firewall > Advanced settings > Inbound Rules > New Rule**.

   NOTE: Leave firewall status "Turned On".



   b. On the Rule Type screen, choose **Port**.
   c. On the Protocols and Ports screen, choose **TCP**. In the **Specific local ports** field, enter your baseport and baseport + 1. For example, 7600-7601.
   d. Click **Next** then **Allow the connection**.
   e. On the **When does this rule apply?** screen, check all boxes.
   f. Assign a name to the rule.
3. Click the **Health Check** tab. Click **Edit Health Check**. Change the value of **ResponseTimeout** to any value and save. Verify that this action changes your load balancer status to *In Service*.
4. On the Amazon Ektron server, create an inbound rule to add 8732 as an inbound port. This allows the Solr Admin Console to communicate with your Ektron VM.

To do this:

a. On the Amazon instance that hosts Ektron, go to **Control Panel > Windows Firewall > Advanced settings > Inbound Rules > New Rule**.

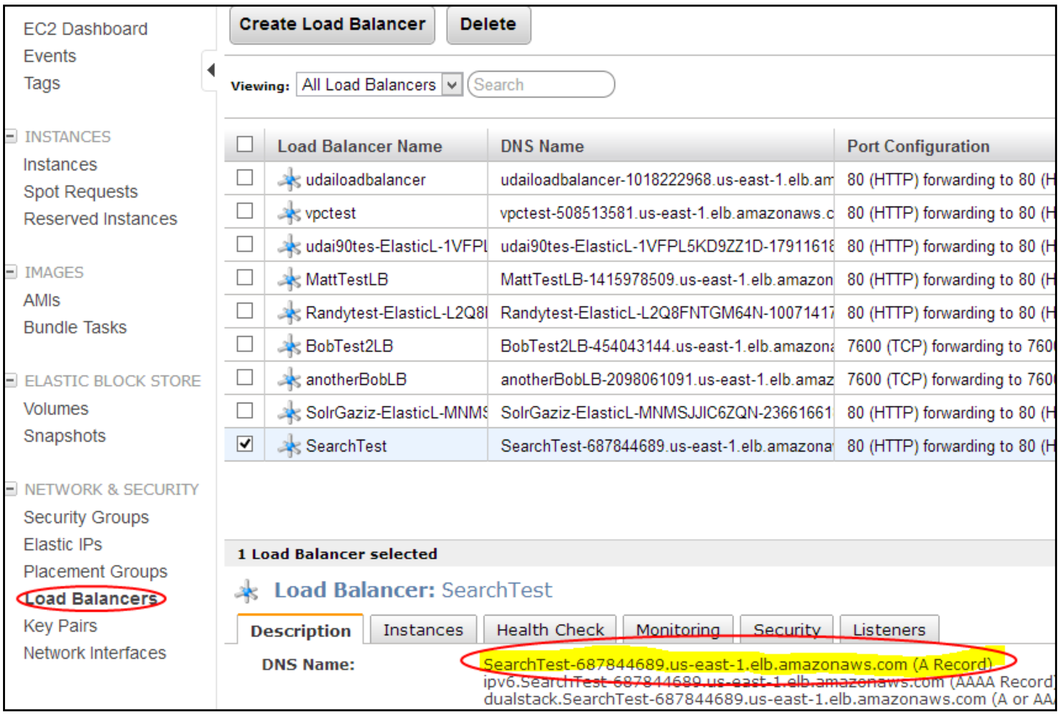
> **NOTE:** Leave Firewall status "Turned On".

b. On the Rule Type screen, choose **Port**.

c. On the Protocols and Ports screen, choose **TCP**. In the **Specific local ports** field, enter **8732**.

d. Click **Next** then **Allow the connection**.

5. From Amazon EC2 console, obtain the **DNS Name** of the search load balancer.

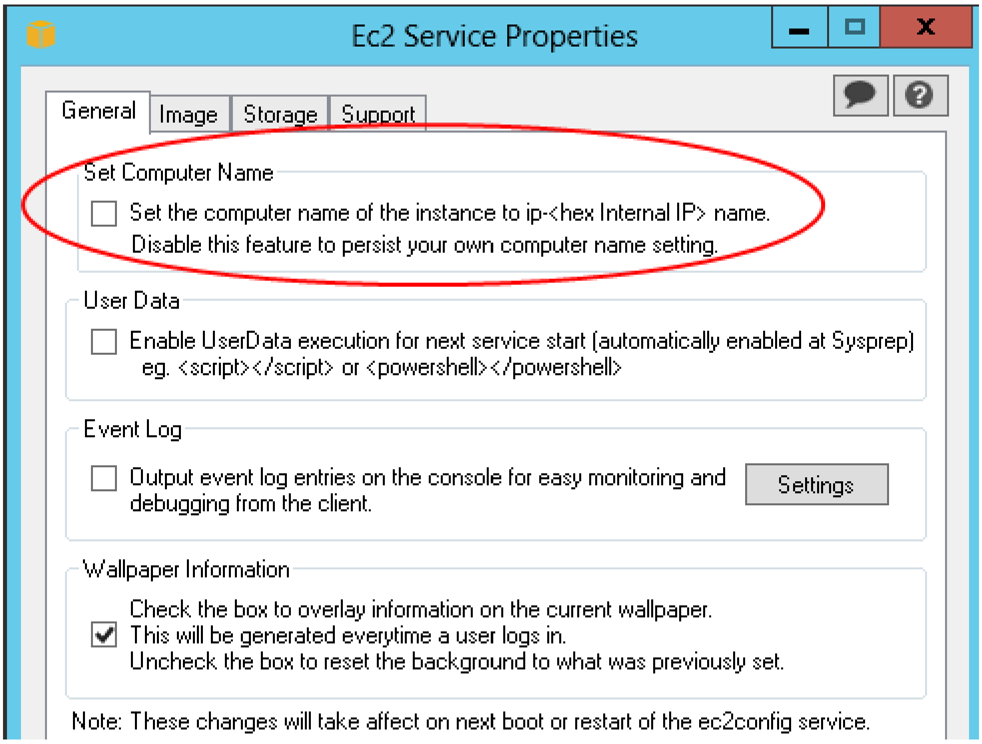


6. Verify that the QueryService Url works from the Ektron server via this URL: `https://`*`load balancer DNS name`*`:`*`baseport number`*`/SolrQueryService/SolrQueryService.svc`

Part 8: Disable "Set Computer Name"

1. On the Solr search Amazon VM, press **Windows key\S** to open the search box and enter `EC2ConfigService`.

2. On the Ec2 properties dialog, uncheck the **Set Computer Name** box.



Part 9: Register the load-balanced site

Register the load balanced site using the following URL: `https://`*load balancer DNS name*`:`*baseport number*`/SolrAdminConsole/index.html`.

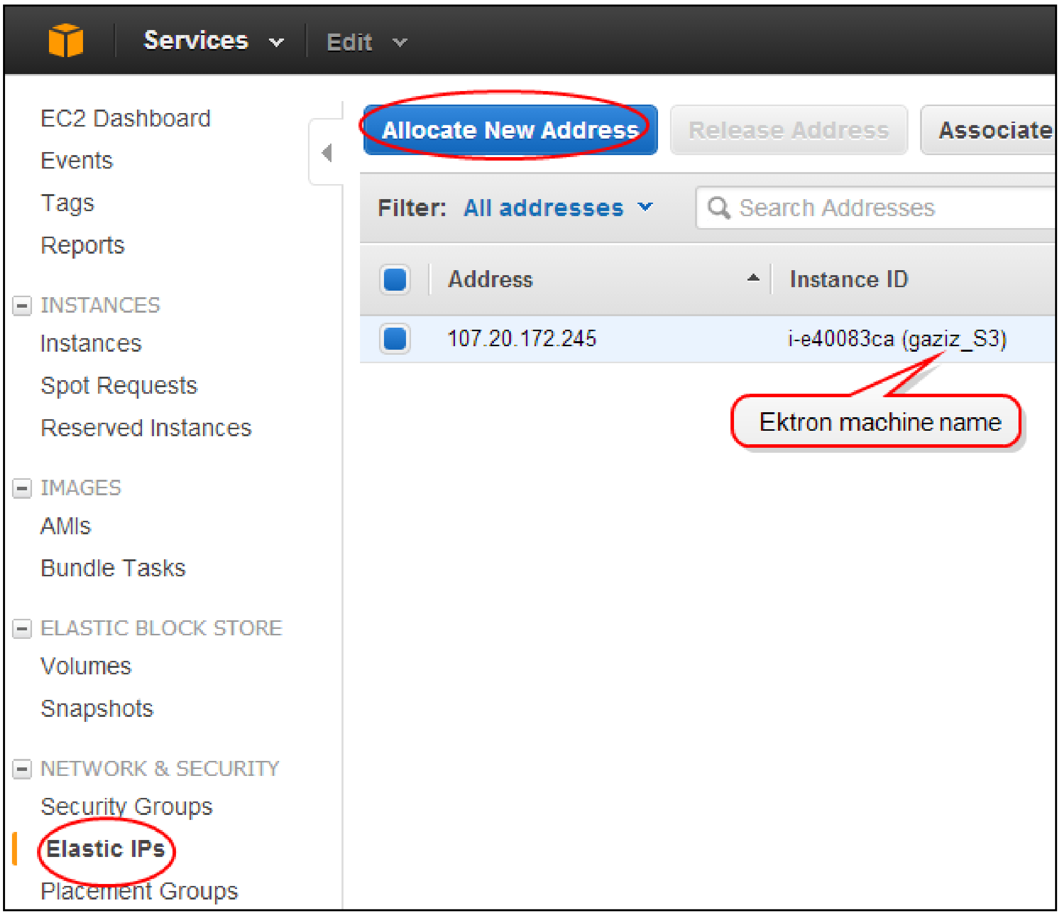
Additional steps if Ektron is installed manually on Amazon EC2

If Ektron was manually installed in an Amazon EC2 environment, and you want Solr search to crawl Ektron resource files, follow one these procedures to enable that crawl.

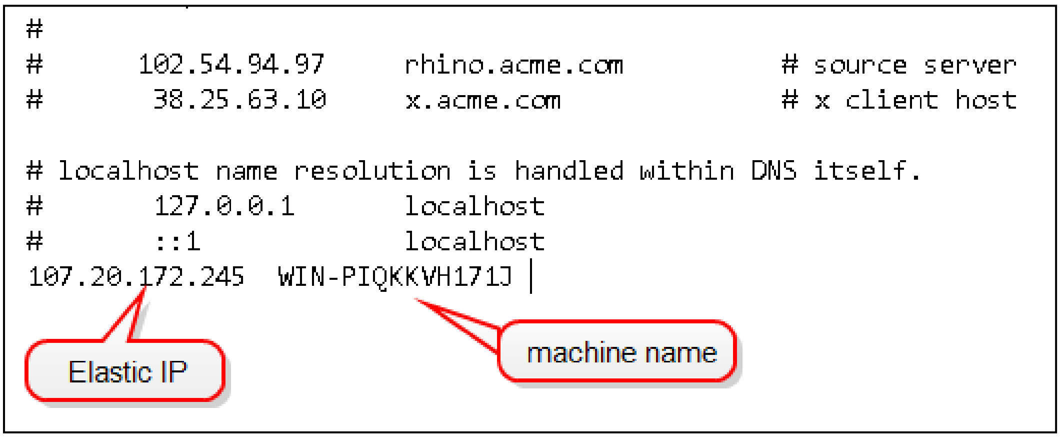
Store resource files on the EC2 instance

Follow these steps to allow Solr search to crawl Ektron resource files (assets, private assets, uploaded images, uploaded files, asset library) on an EC2 instance. To properly configure this, create an elastic IP for the Ektron EC2 instance. This enables Solr's asset transfer client to connect to Ektron's asset transfer service.

1. From the Amazon Web services console, go to **EC2 > Network & Security > Elastic IPs.**
2. Select the Ektron machine name and click **Allocate New Address**.



3. The Associated Address dialog appears. Check the Ektron server that will work with this Amazon Solr instance.
4. On the Solr VM, open the hosts file (`C:\Windows\System32\Drivers\etc\hosts`).
5. Add a new host file entry. Insert the Elastic IP address of and the name of the Ektron EC2 instance.



Store resource files in the Amazon S3

Follow these steps to allow Solr search to crawl Ektron resource files stored in the Amazon Simple Storage Service (S3). To set up this capability, update the following section of your site's *siteroot*\web.config file, in the <appsettings> section.

```
<add key="ek_CloudStorageType" value="" />
<add key="ek_CloudAccountId" value="" />
<add key="ek_CloudAccountKey" value="" />
<add key="ek_CloudContainer" value="" />
```

- ek_CloudStorageType—Enter **AMAZON**.
- ek_CloudAccountId—Enter your Amazon account access key.
- ek_CloudAccountKey—Enter your Amazon account secret key.
- ek_CloudContainer—Enter the S3 bucket name.

For these changes to take effect:

1. On the Ektron EC2 instance, restart the EktronWindowsServices40 and EktronAssetTransferServer.
2. On the Solr EC2 instance, restart EktronAssetTransferClient2.0 and EktronSolrAdminService.
3. Register the site again. See *Part 9: Register the load-balanced site* on page 247
4. All new resource files will be stored in the S3 bucket. Verify that they are searchable from the Ektron site.

Setting up Solr Search in the Azure cloud

If you want to deploy an Ektron website to the Azure cloud, deploy Solr search to Azure cloud, then connect both cloud-based systems, you have 2 options:

- Install an Ektron site to an on-premises server then push the site up to an Azure VM. Next, deploy Solr to the cloud. Finally, connect both cloud-based systems.
  To view these instructions, see *Pushing an Ektron site to the Azure cloud and connect it to Solr search* below.
- Install an Ektron site on an Azure VM. Next, deploy Solr to the cloud. Finally, connect both cloud-based systems.
  To view these instructions, see *Installing Ektron site on Azure cloud and connecting it to Solr search* on page 266.

Pushing an Ektron site to the Azure cloud and connect it to Solr search

Part 1: Deploy Ektron Site to the Cloud

Follow the steps in Using Ektron in the Windows Azure Cloud to deploy an Ektron site to the Azure cloud. But note this important difference:

You cannot update the ektron.cms.framework.unity.config file directly on the Ektron VM that hosts the Solr search provider. This restriction occurs because, when the machine reboots, your changes are lost. So, follow these steps to update the ektron.cms.framework.unity.config file.

1. During the Ektron installation, select Solr. If you did not do this, see *Changing your search provider to Solr* on page 277.

2. Copy the *siteroot*/ektron.cms.framework.unity.config to:

```
C:\Program Files (x86)\Ektron\CMS400vxx\CommonFiles\Configs
```

3. Run the initial cloud deployment.

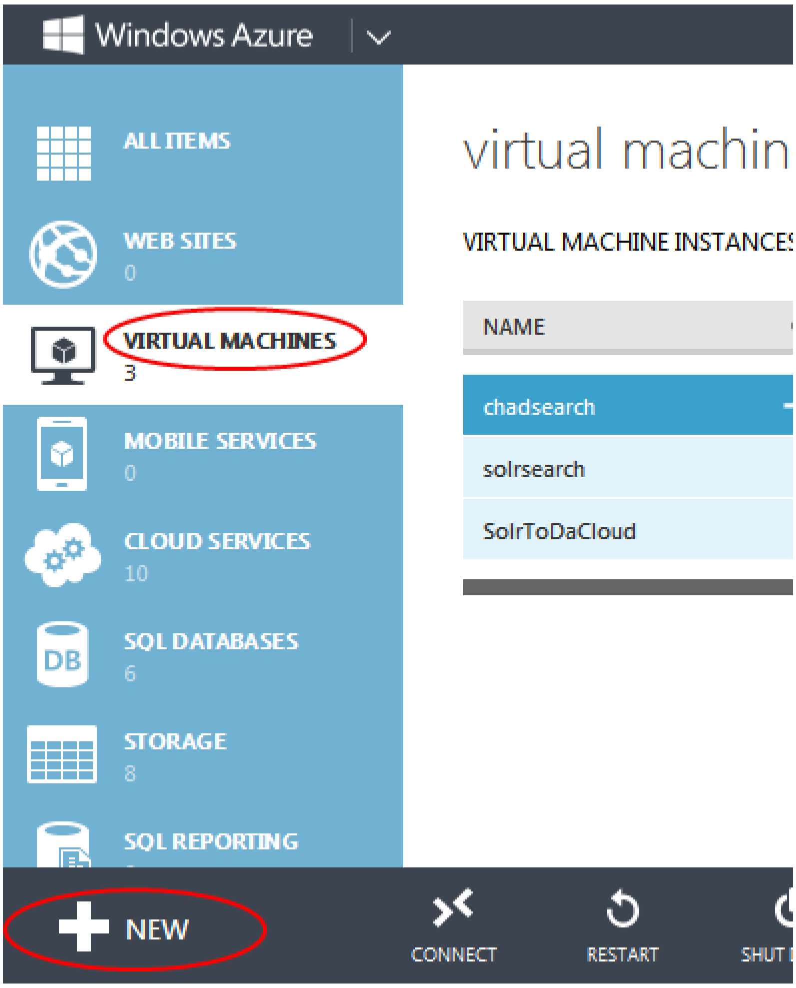
If you need to make these changes after the initial cloud deployment, update the unity.config file in the C:\sync\azuredeploy*GUID*\HostedServiceName\'HostedServiceName'_web folder.

To upload this file to a cloud-based site, use the EktronConfigUploader.exe utility in C:\Program Files(x86)\Ektron\EktronCloud\bin\ms\2.0.0.0 .

Part 2: Create Azure Solr search VM

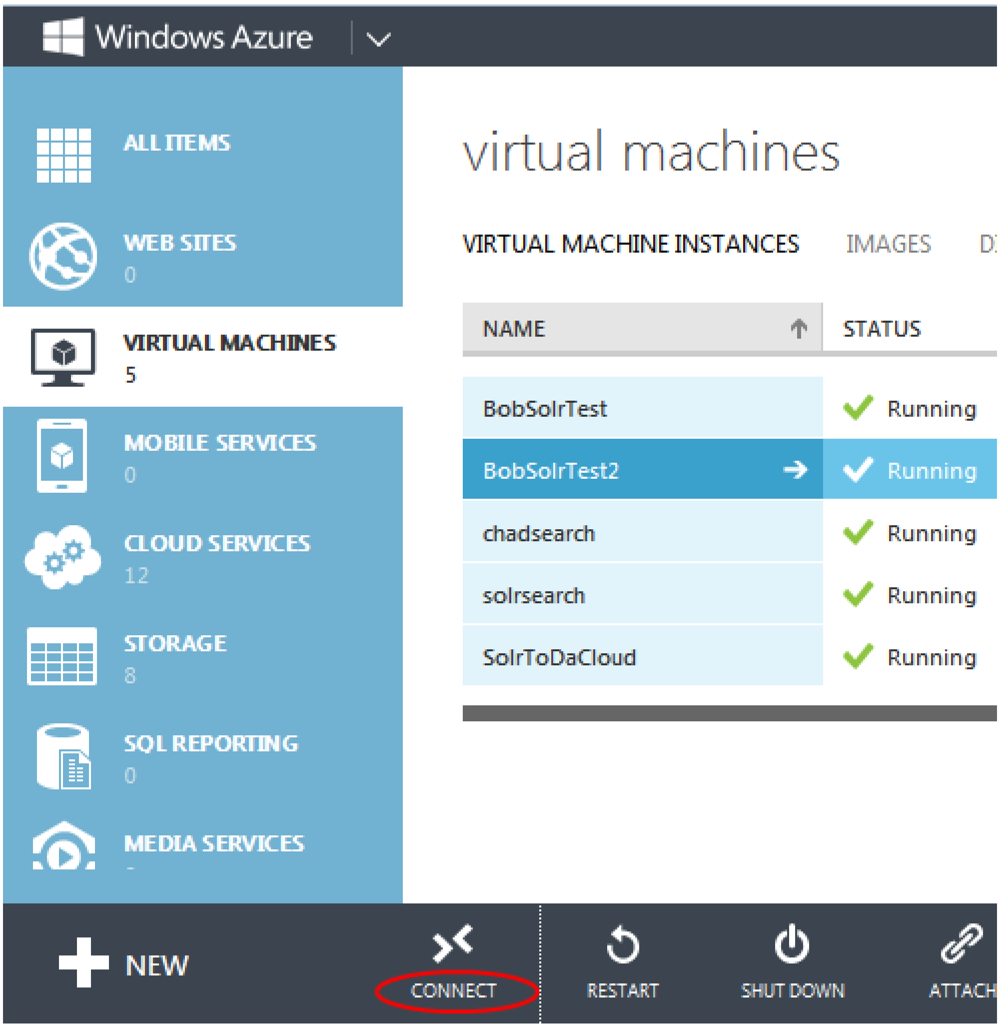
Create an Azure virtual machine to host Solr search.

1. Log into https://manage.windowsazure.com.
2. Click **Virtual Machines > New**.

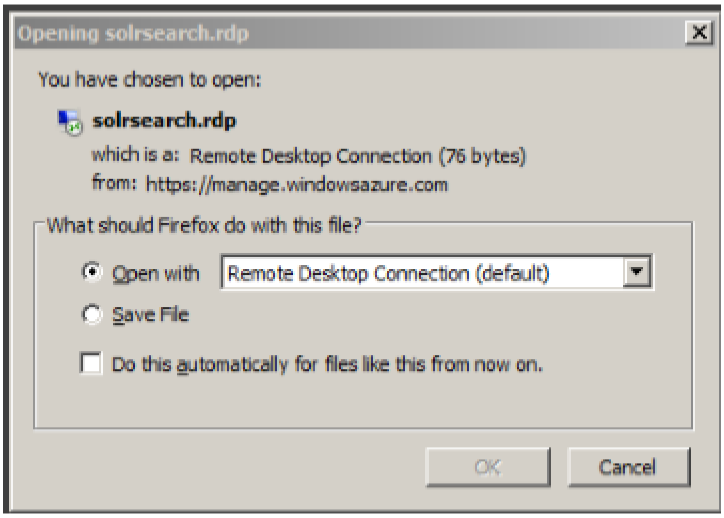


3. Click **Quick Create**.
4. For the new server, enter a **DNS Name**.
5. For the image, choose Windows Server 2012.
6. Choose a large size with at least 8 GB of memory.

7. Enter your user name and password.
8. At **Region/Affinity Group**, select the region selected when setting up the Ektron site (in Using Ektron in the Amazon EC2 Cloud).
9. Click **Create a Virtual Machine**.
10. Wait until the status changes from **Starting (Provisioning)** to **Running**.
11. Select the VM and click **Connect**.



12. The following dialog appears. Click **OK** to connect to the virtual machine.



13. When you are prompted for Windows credentials, prefix your username with the **DNS Name** you created in Step 4.

Part 3: Set up Solr search on Azure VM

This section explains how to set up Solr search on the Azure VM.

1. Apply all prerequisites to the Azure VM. You already set up an Ektron site in Using Ektron in the Windows Azure Cloud (PaaS).
   - An Azure database server is required. You have 2 options:
     - Use the database server that hosts Ektron.
     - Create a new database server.
   - If you installed Ektron manually on an Azure VM (see *Installing Ektron site on Azure cloud and connecting it to Solr search* on page 266), follow these steps to enable the crawling of assets and private assets.
     a. On the virtual machine that hosts the Ektron site, locate the Public Virtual IP (VIP) address.

b. On the virtual machine that hosts Solr search, open the hosts file (located in `%systemroot%\system32\drivers\etc`).

c. Into the hosts file, insert the VIP obtained in Step 1, followed by the hostname of the VM that hosts Ektron.

hosts - Notepad

File Edit Format View Help

```
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#      102.54.94.97     rhino.acme.com          # source server
#       38.25.63.10     x.acme.com              # x client host

# localhost name resolution is handled within DNS itself.
#       127.0.0.1       localhost
#       ::1             localhost
        99.99.99.999    chadVM1
```

2. On the Azure VM, copy the following into a .bat file and run it. This code fixes a problem in which Java JDBC to SQL Azure connections are being forcibly closed.

```
REG ADD HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters
 /v KeepAliveTime /t REG_DWORD /d 30000
```

```
REG ADD HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters
/v KeepAliveInterval /t REG_DWORD /d 1000
```

```
REG ADD HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters
/v TcpMaxDataRetransmission /t REG_DWORD /d 10
```

3. On the Azure VM, register ASP.NET.
   a. As an administrator, open a command prompt.
   b. Enter `cd C:\Windows\Microsoft.NET\Framework64\v4.0.30319`
   c. Run `C:\Windows\Microsoft.NET\Framework64\v4.0.30319>aspnet_regiis.exe -i`
4. Copy your storage access account and primary key to the Azure web.config file. This enables the Asset Transfer service to correctly transfer Azure assets to Solr Search VM. To do this:
   a. On the Azure VM, find your storage account primary key by navigating to **Storage Accounts** > your storage account.

      NOTE: You created the storage account when you deployed an Ektron site to the Azure cloud, as described in Deploying a Site Package to the Azure Cloud.

   b. Click **Manage Access Keys**.
   c. Copy the **Storage Account Name** and **Primary Access Key**. you will paste them in Step g.
   d. Log on to the on-premises Ektron server.
   e. Open the file `C:\sync\azuredeploy\`*`GUID`*`\HostedServiceName\`*`HostedServiceName_`*`web\web.config`.
   f. Within the `<appsettings>` tag, add these keys. Insert the values you collected in Step 4c.

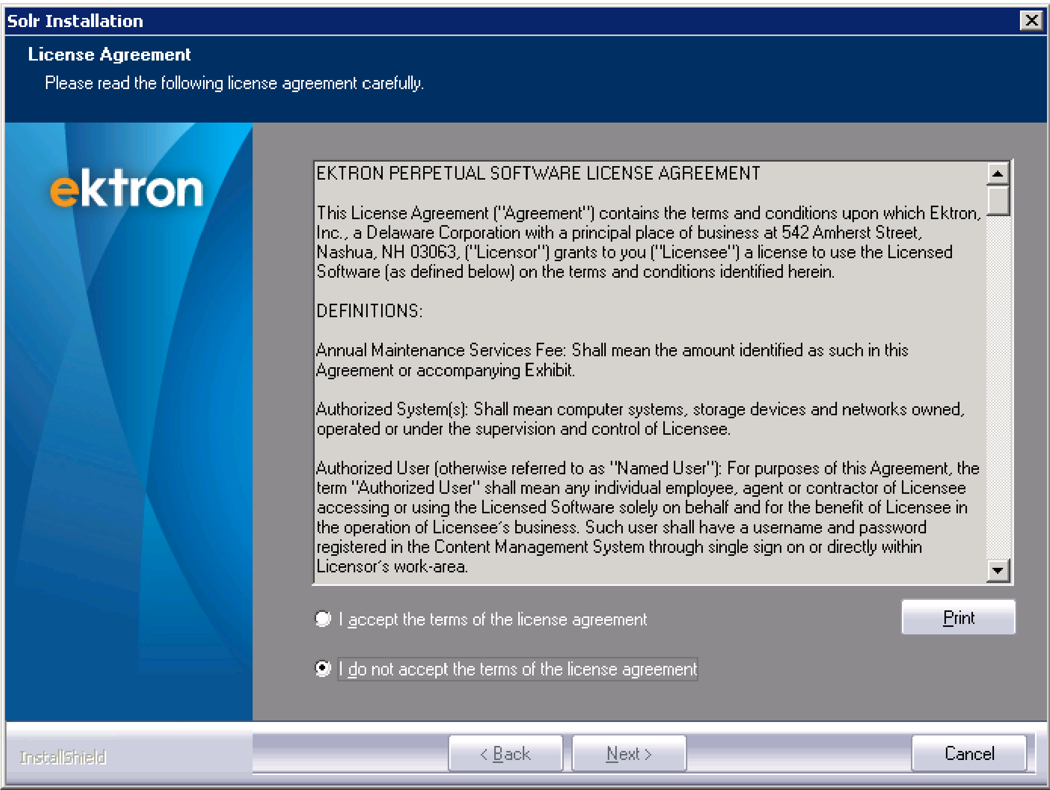
```
<add key="ek_CloudStorageType" value="AZURE"/>
<add key="ek_CloudAccountId" value="storage account name"/>
<add key="ek_CloudAccountKey" value="storage account primary key"/>
```

   g. Restart the Azure VM.
5. Push the `web.config` changes to your Azure site. To do this:
   a. On the on-premises Ektron server, go to `C:\Program Files (x86)\Ektron\EktronCloud\bin\ms\2.0.0.0`.
   b. Open EktronConfigUploader.exe.
   c. Enter your storage account name and storage account primary key. (You obtained them in Step 4.)
   d. Click **Browse** and go to the web.config file that you updated in Step 4.
   e. Click **Upload**.

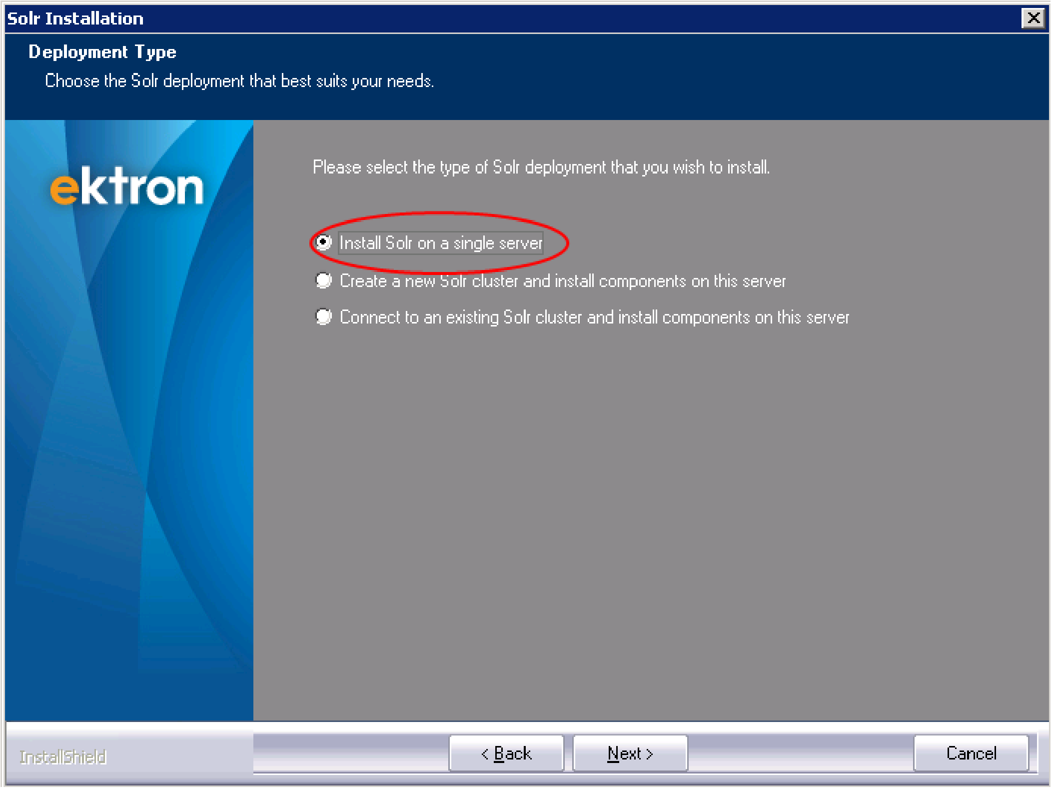
6. Reboot the Worker Hosted service. This, in turn, restarts the Ektron Windows service. To do this:
   a. Log into https://manage.windowsazure.com.
   b. Click **Cloud Services**.
   c. Click your cloud service. (You created the cloud service when setting up the Ektron site in the Azure cloud.
   d. Click **Instances**.
   e. Click the instance `hosted service name_worker_IN_0`.
   f. Click **Restart**.
7. Log into the VM you created in *Part 2: Create a security group* on page 224.

Part 4: Run the Solr Installation

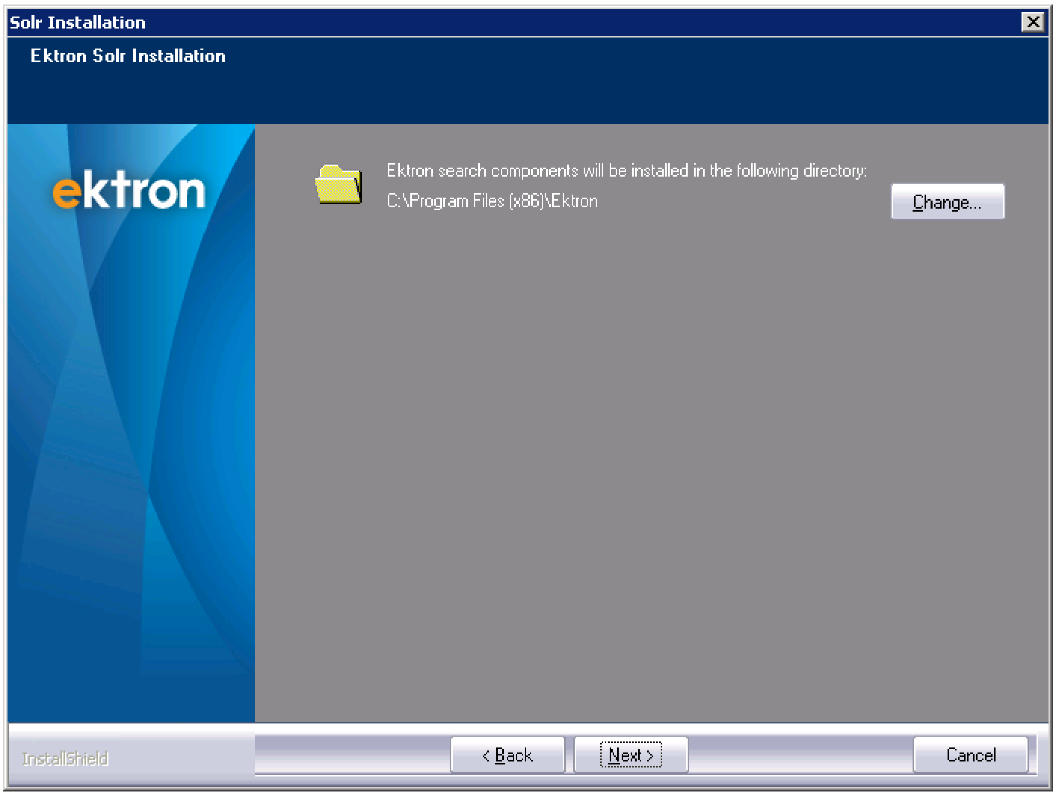
1. Contact your Ektron account manager to download the Solr installation file.
2. Log in as a Windows Administrator user.
3. Download and run the Ektron Solr installation file as an administrator.
4. Accept the license agreement.



5. On the Deployment Type screen, choose **Install Solr on a single server**.



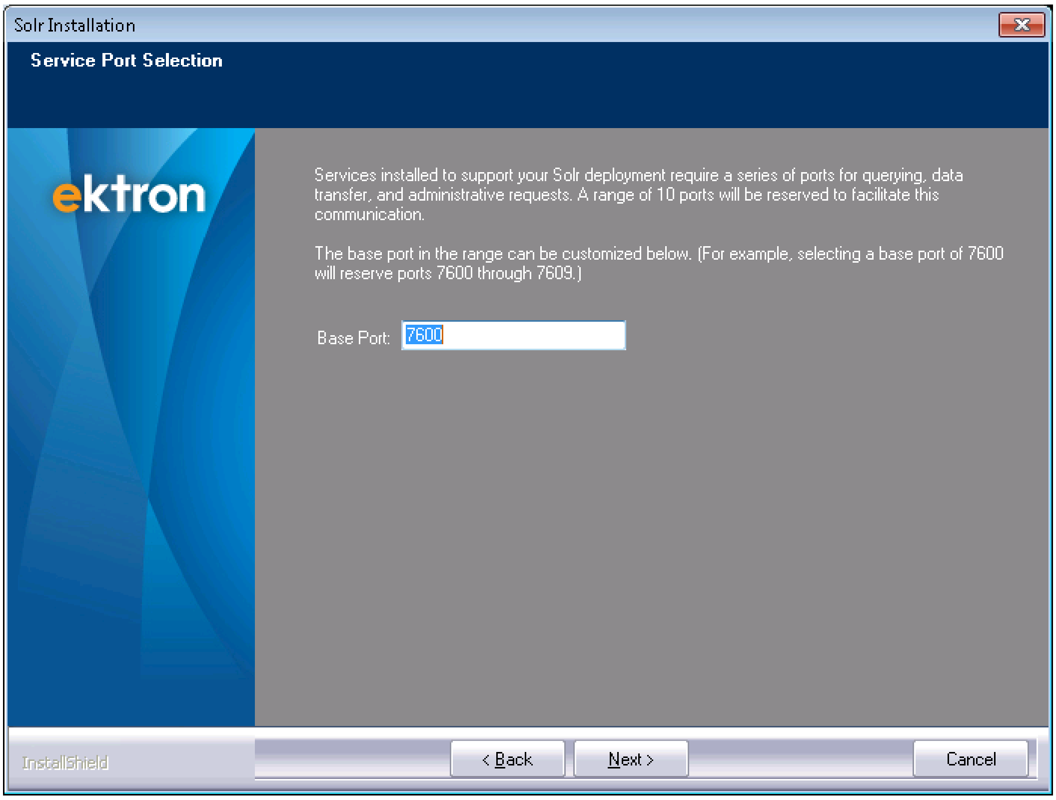
6. Select a folder in which to save the Solr installation files.



7. You are prompted to select a *base port*. After you select a port, it and 9 consecutive ports are designated for Solr use. For example, if you accept the

default port 7600 as the base, ports 7600 through 7611 are used for Solr.

NOTE: Do not use a port number below 1025. Also, do not use ports 6080, 6081, and 8732: they are reserved for other Ektron components.

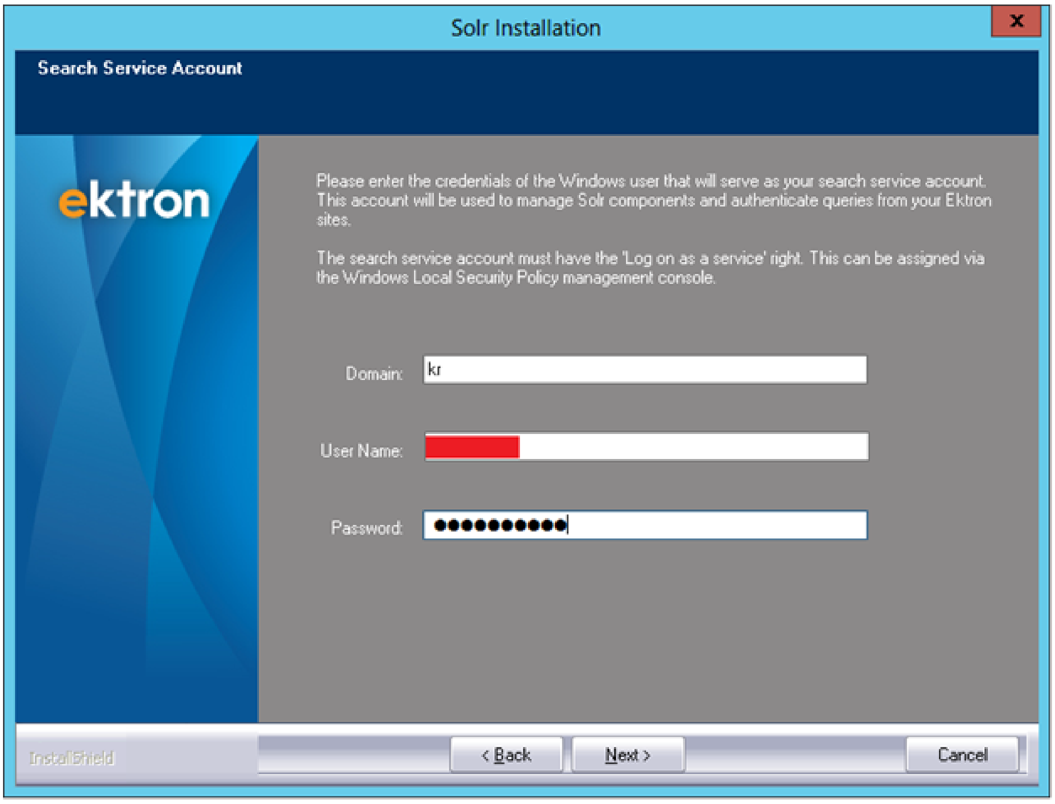


8. Enter credentials (domain, user name, and password) of the Windows user account under which Solr query services will run. This account manages Solr components and authenticates queries.

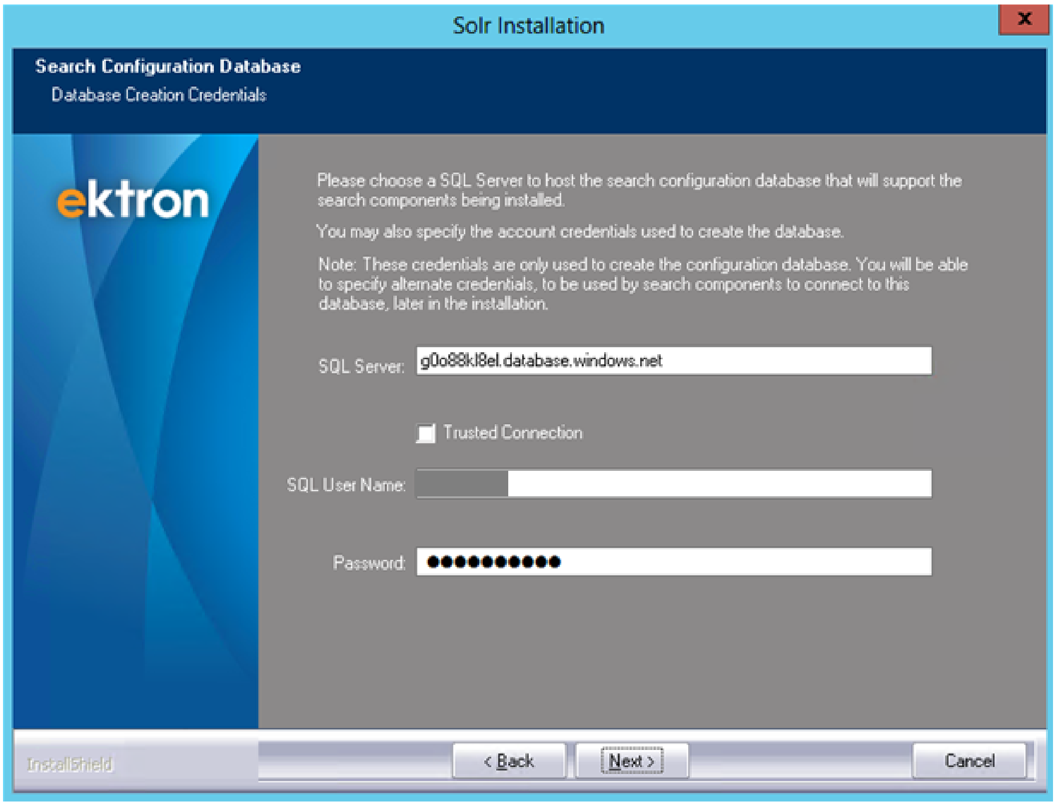
   The account must have permission to

   - write to the search 2.0 folder and its subfolders
   - start the Solr admin service
   - log on as a service. If the user does not have "Log on as a Service" right, you are prompted to assign it.

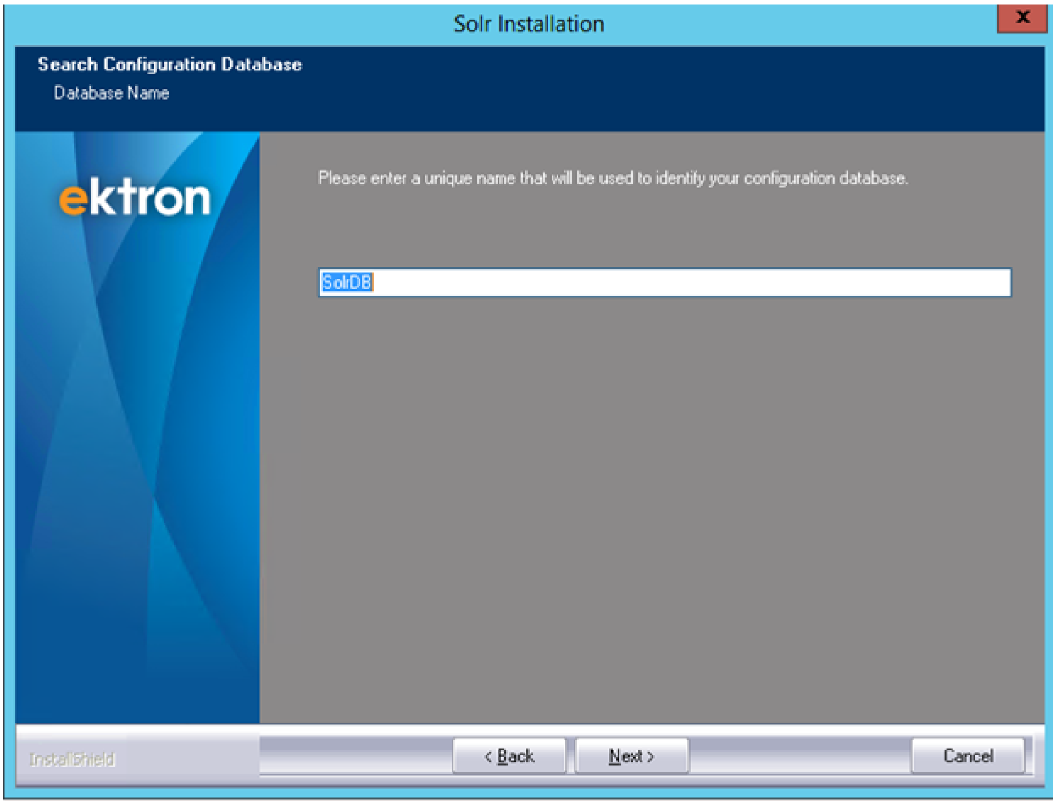
   If you are using a domain account, the Netlogon Service must be enabled and running.



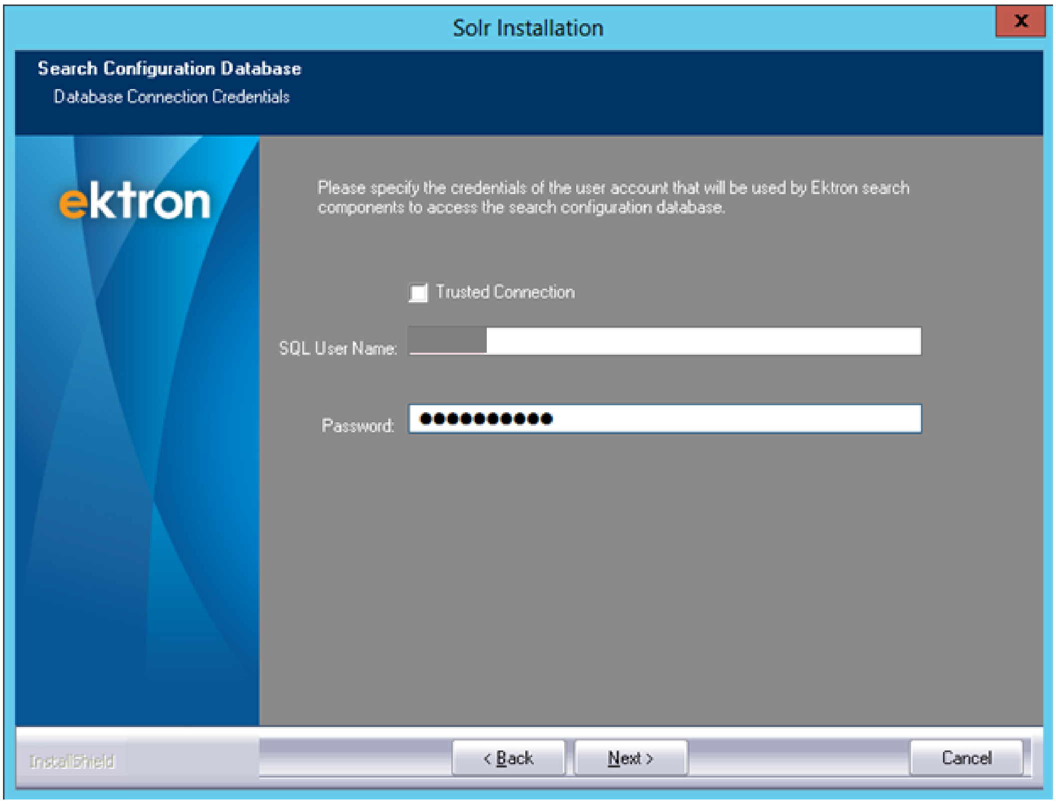
9. Enter a fully qualified DNS name for the Azure SQL Server that will host the Solr configuration database. Then either select **Trusted Connection** or enter the username and password of the user who will create the search configuration database. If you enter a user, select someone who is either the server-level principal login or assigned the dbmanager database role. See also: Managing Databases and Logins in Windows Azure SQL Database.



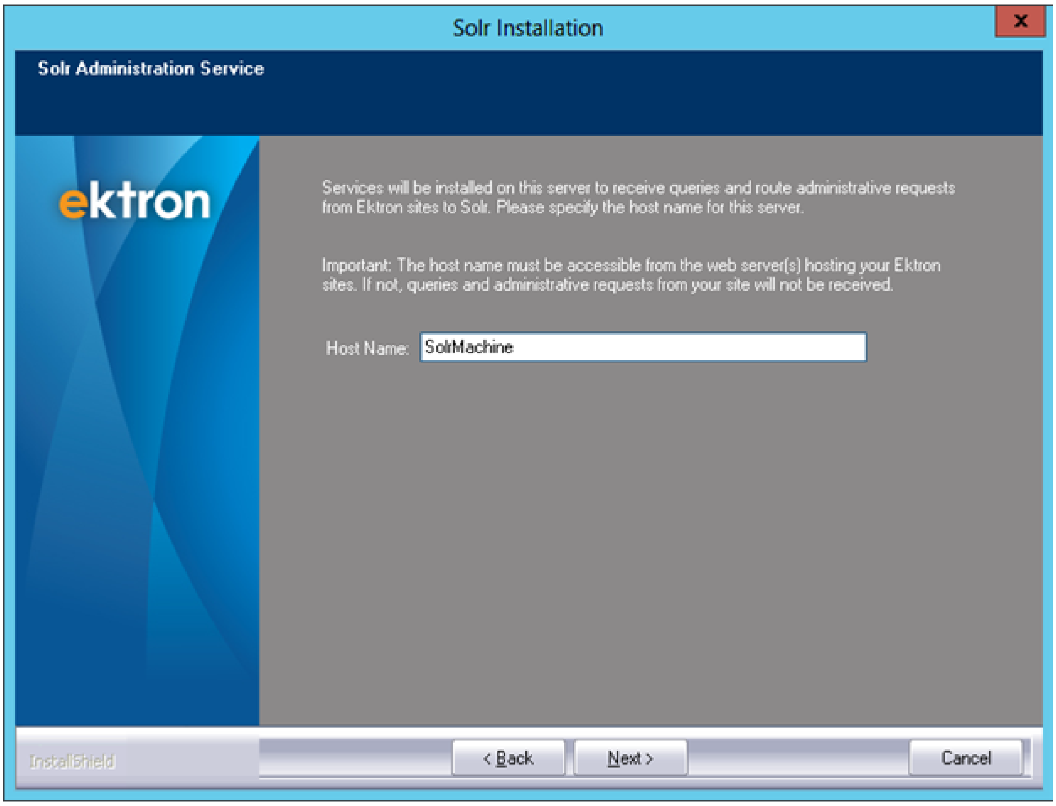
10. Enter a unique name for your search configuration database. Spaces are not allowed.



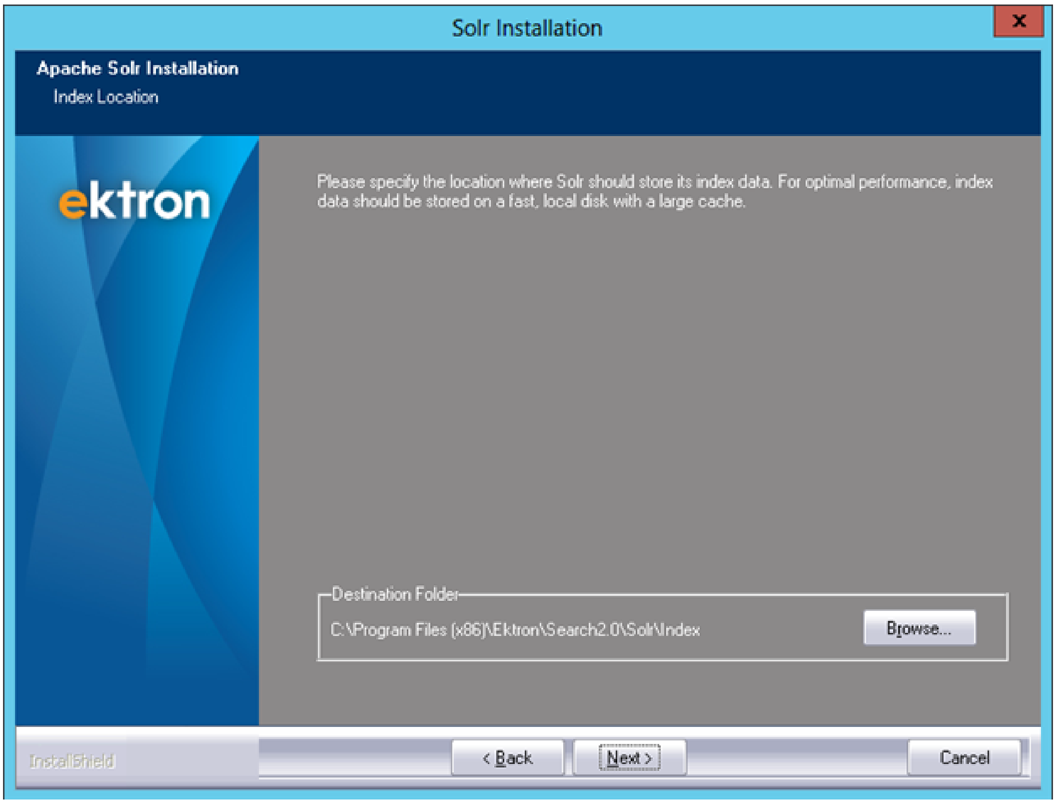
11. Enter credentials for a SQL login account that Ektron search components will use to access the search configuration database.



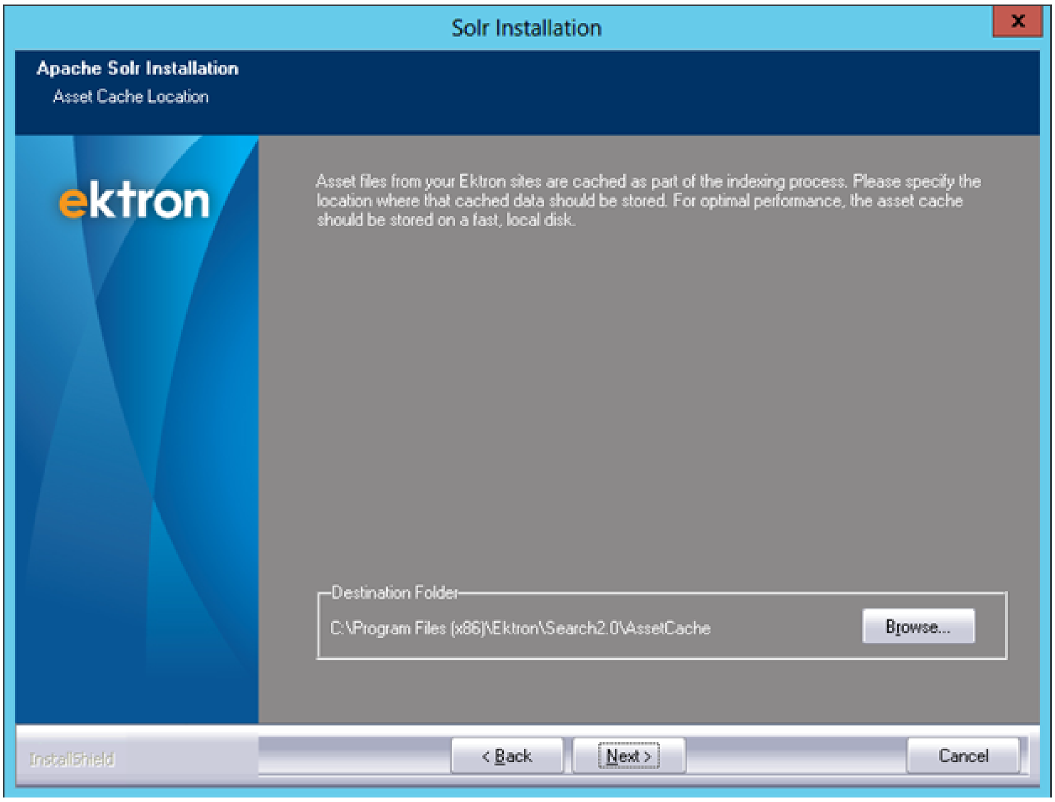
12. Enter the fully-qualified DNS name of the server on which you are running the Solr installation. The Ektron server must be able to access this host.



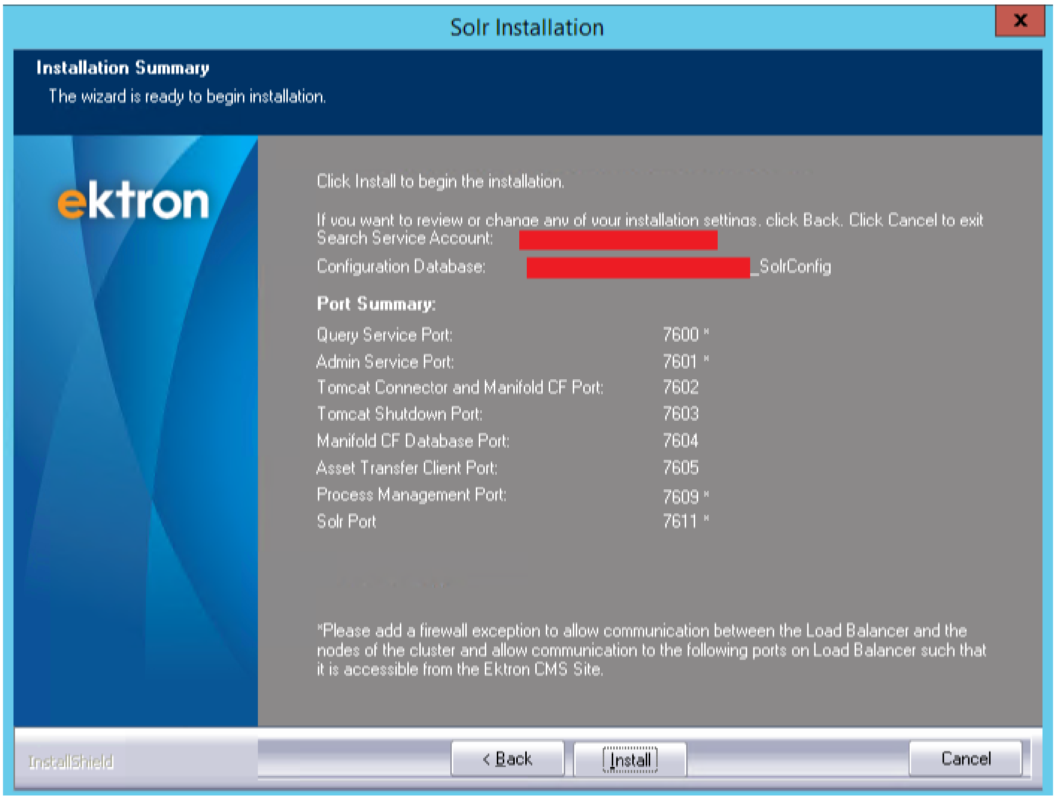
13. Select a folder in which Solr will store its index data.



14. Specify the location of your asset cache. The asset cache is used only if the Ektron asset files are not stored on your Solr search server.



15. A summary of installation choices appears. If everything looks OK, click **Install**.



Key points on this screen:

- The query service port is always the base port.
- The screen lists your search service account, configuration database, and the port number assigned to the following:
  - Query service. Outbound from Ektron server
  - Admin service. Outbound from Ektron server
  - Tomcat connector. For local communications between Solr and Tomcat
  - Tomcat shutdown. For local communications between Solr and Tomcat
  - ManifoldCF. For local communications between Solr and ManifoldCF
  - Asset Transfer Client. Two-way between Ektron and Solr servers

IMPORTANT: The summary screen's first 2 ports have an asterisk (*). On the Ektronserver, adjust the firewall to allow these ports to communicate between your Ektron site and the Solr service.

Part 5: Add Inbound Rules and Endpoints

Add inbound rules to allow TCP communication for Solr Search components and the Solr Administration Service. You defined these ports while completing *Part 4: Run the Solr Installation* on page 255. To do this:

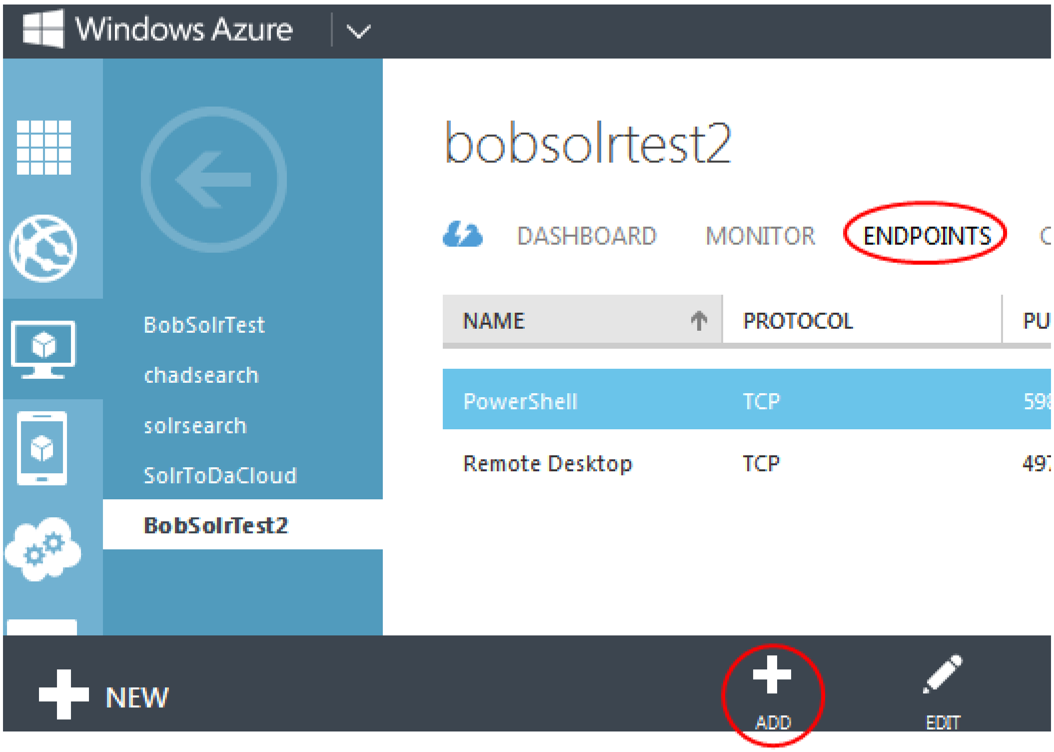
NOTE: Leave firewall status "Turned On."

1. Go to **Server manager > Windows Firewall with Advanced settings > Inbound Rules > New Rule**.
2. On the Rule Type screen, choose **Port**.
3. On the Protocols and Ports screen, choose **TCP**. In the **Specific local ports** field, enter your base port and base port + 1. For example, **7600-7601**.
4. Click **Next** then **Allow the connection**.
5. On the **When does this rule apply?** screen, check all boxes.
6. Assign a name to the rule.
7. Click **Finish**.

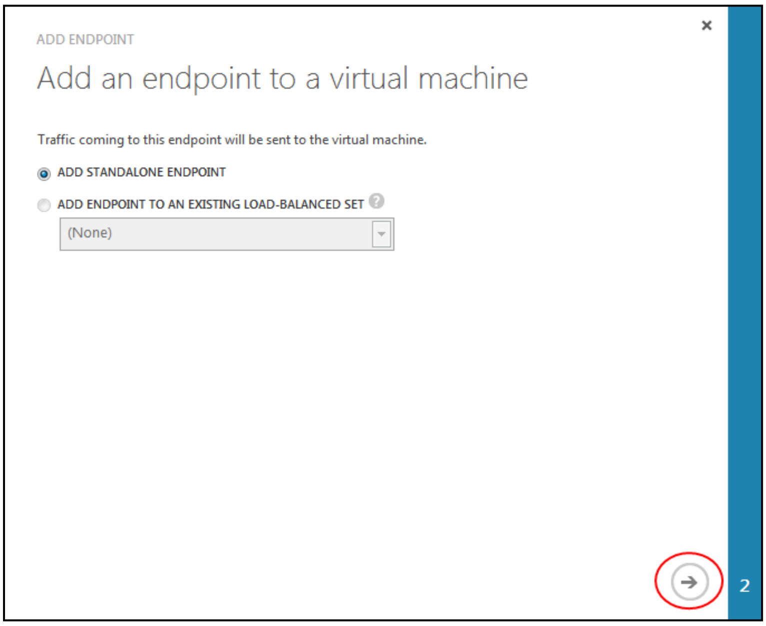
Add 2 endpoints. To do this:

1. Return to the Windows Azure portal, https://manage.windowsazure.com.
2. Click your virtual machine.

3. Click **Endpoints > Add**.



4. The following dialog appears. Click the **->** (next) button.



5. Add 2 endpoints that make Ektron Solr components on the Azure Solr Search VM accessible from the Ektron VM. To do this.
   - Name: SolrSearchSite
     - Protocol: **TCP**
     - Public and private ports: base port (by default, this is 7600)

NOTE: To identify the base port number, log on to the virtual machine, open IIS, click **EktronSolrSearch2.0 > bindings**, and view the port value.

- Name: SolrAdminSvc
  - Protocol: **TCP**
  - Public and private ports: base port plus 1 (by default, this is 7601)
- Do *not* check **Create a Load-Balanced Set** and **Enable Direct Server Return** boxes

Part 6: Test and register Solr on the Azure VM

1. Verify you can reach the Solr Search components by using this ping Url under the EktronSolrSearch site.

   ```
   https://DNSname.cloudapp.net:baseportnumber/ping.html
   ```

   For example, if the DNS name you assigned in *Part 2: Create a security group* on page 224 is `solrsearch`, and your base port is 7600, the URL would be `https://solrsearch.cloudapp.net:7600/ping.html`.
2. Register site using this URL.

   ```
   https://DNSname.cloudapp.net:baseportnumber/SolrAdminConsole/index.html
   ```

   See also: *Part 2: Add a storage account in Azure manager* on page 268

SQL Azure database firewall permissions

- To understand server-level and database-level SQL Azure permissions, refer to this Azure documentation.
  - How to: Configure the Server-Level Firewall Settings (Windows Azure SQL Database)
  - How to: Configure the Database-Level Firewall Settings (Windows Azure SQL Database)
  - Windows Azure SQL Database Firewall
- If your SQL Azure configuration > **Windows Azure Services** box is checked or the **allow all azure IPs** rule is added to your master database using `exec sp_set_database_firewall_rule N'AllAzureIps','0.0.0.0','0.0.0.0'`, any database in this SQL Azure instance is accessible by any Azure IP.
- To grant your Azure Search VM permission to access the search configuration database (created by the SolrInstall), add your Azure Search VM to your search configuration database's firewall rules, and remove server-level permissions.
  - Add the public virtual IP of your Azure Search VM to your database firewall rules (after connecting to your search config database). Example:

    ```
    exec sp_set_database_firewall_rule
    N'ALLAzureIPs','137.135.70.139','137.135.70.139'
    ```

  - To delete server-level permissions using the Azure portal:
    1. Select your SQL Azure server.
    2. Configure it.
    3. Remove rules, or revoke them in the master database, using `exec sp_delete_database_firewall_rule N'ALLAzureIPs'`

Azure recommends waiting 5 minutes for rule changes to take effect.

- If you have one IP address in your server-level rule and another IP address in your database-level rule, both the IPs have access to the search configuration database. Server-level rules apply to all databases in an instance, while database-level rules apply to specific databases.
- To list all rules, use
```
select * from sys.database_firewall_rules
```

Installing Ektron site on Azure cloud and connecting it to Solr search

Follow this procedure if you want to manually install an Ektron site on an Azure VM. Next, deploy Solr to the cloud. Finally, connect both cloud-based systems.

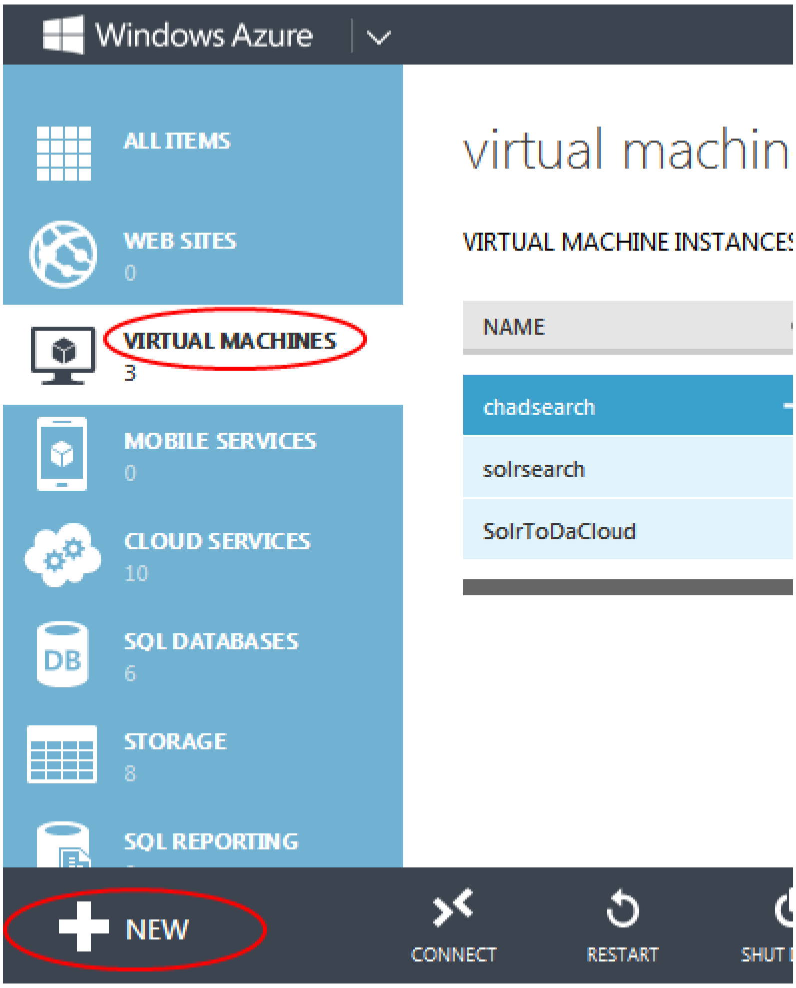
PREREQUISITES

- Contact your Ektron account manager to obtain a link to download `EktronCloudSetup.exe`.

Part 1: Provision a virtual machine for the Ektron site

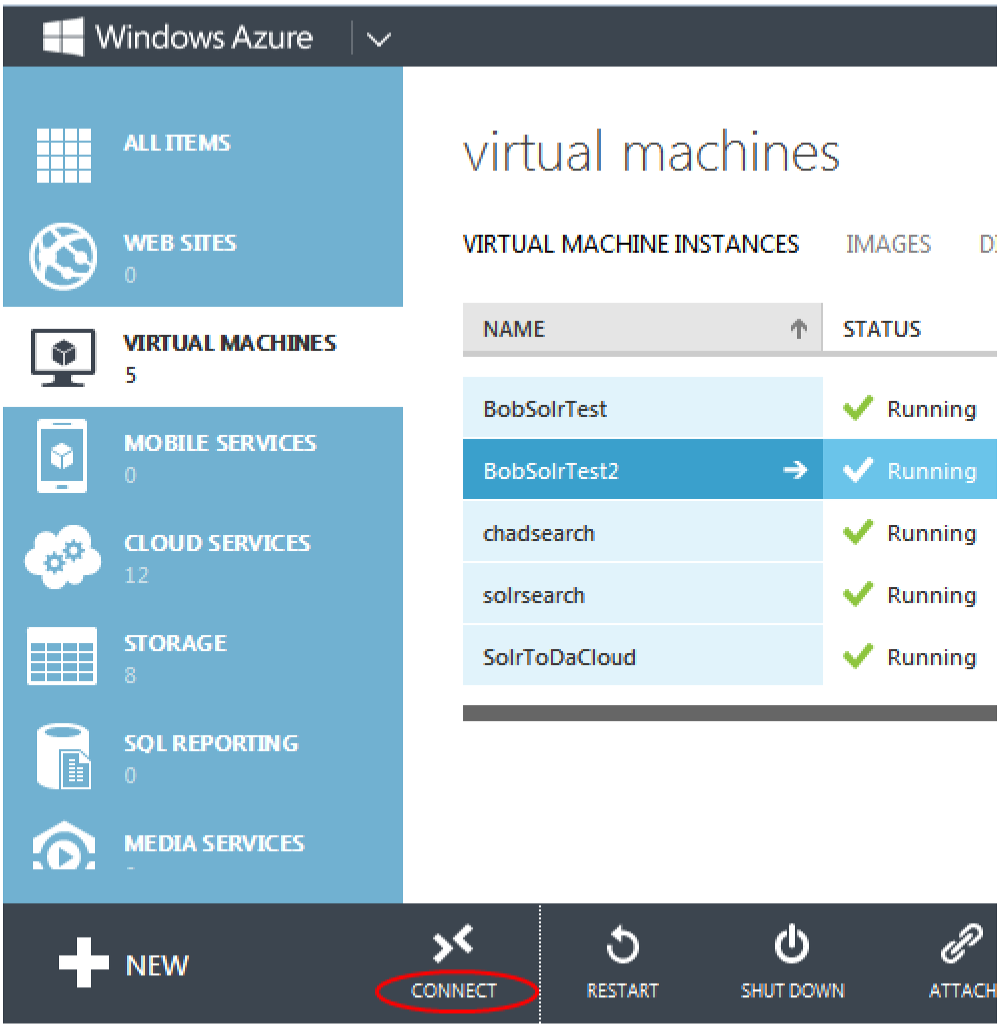
Part 1: Provision a virtual machine for the Ektron site

1. Log into https://manage.windowsazure.com.
2. Click **Virtual Machines > New**.

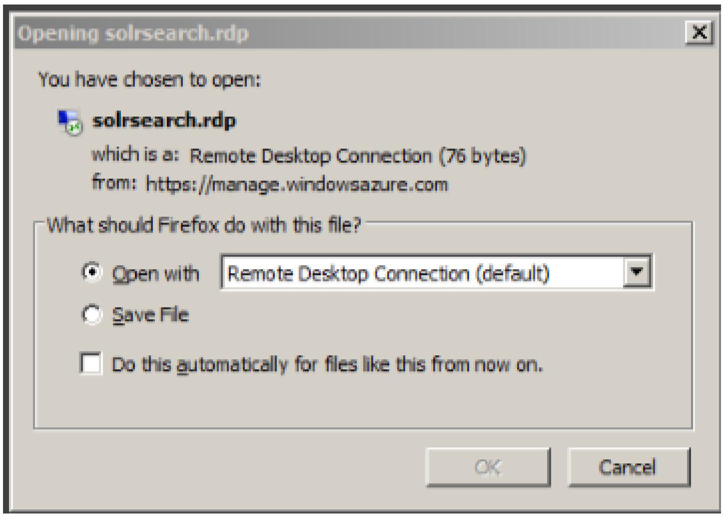


3. Click **Quick Create**.
4. For the new server, enter a **DNS Name**.
5. For the image, choose Windows Server 2012.
6. Choose a large size with at least 8 GB of memory.
7. Enter your user name and password.
8. At **Region/Affinity Group**, select the region selected when setting up the Ektron site (in Using Ektron in the Amazon EC2 Cloud).
9. Click **Create a Virtual Machine**.
10. Wait until the status changes from **Starting (Provisioning)** to **Running**.

11. Select the VM and click **Connect**.



12. The following dialog appears. Click **OK** to connect to the virtual machine.



13. When you are prompted for Windows credentials, prefix your username with the **DNS Name** you created in Step 4.

Part 2: Add a storage account in Azure manager

You need a storage account to store site resources in the cloud storage service, and to store and synchronize assets, private assets, uploaded files, uploaded images and the asset library. To create a storage account:

1. From the home page of https://manage.windowsazure.com, click **Storage**. The Storage screen appears.
2. At the bottom of the screen, click **New**. The New panel opens.
3. Choose **Data Service > Storage > Quick Create**.
   a. Specify a URL name for your cloud service (for example, *cloudservicename*). The `.core.windows.net` will be appended to your name to complete the URL.
   b. Choose the Location or Affinity Group from the drop-down list. For example, East US.
   c. Leave **Enable Geo-replication** checked if you have multiple servers.
4. Click **Create Storage Account** at the bottom of the panel.

Part 3: Install Ektron site on virtual machine

On the Azure VM, install Ektron. See *Installing Ektron* on page 11.

Part 4: Run EktronCloudSetup.exe on virtual machine

On the Azure VM, install `EktronCloudSetup.exe`.

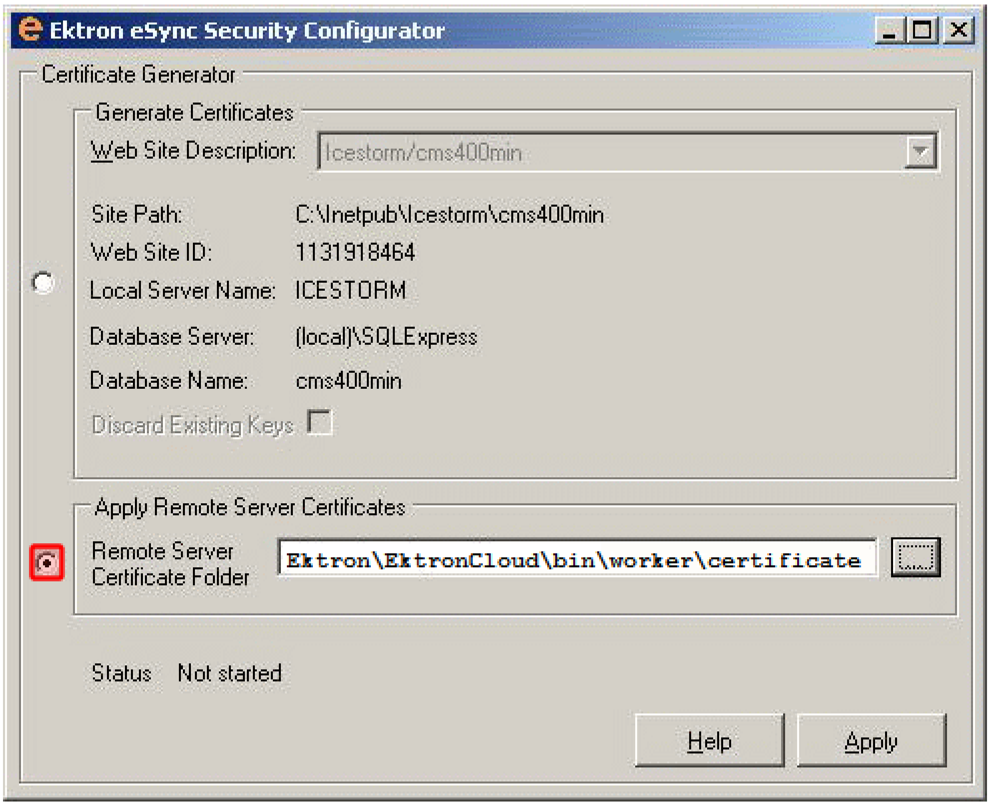
After you download and install `EktronCloudSetup.exe`, the Cloud Manager is added to the Workarea Settings.

Part 5: Run security configurator

1. On the Azure VM, click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

   The security configurator screen appears.



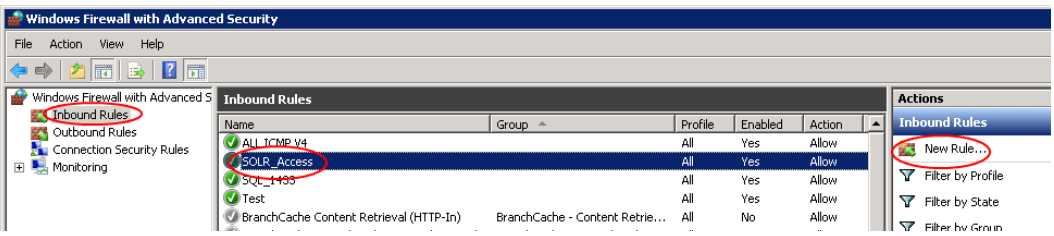
2. Check the **Remote Server Certificate Folder** radio button. Then use the browse button to go to the `Ektron\EktronCloud\bin\worker\certificate` folder.
3. Click **Apply**.

Part 6: Add inbound rules for ports

On the Amazon Solr server, create inbound rules to allow connections to Ektron port 8732 and database port (for example 1433). The rule enables the Ektron VM to communicate with the Solr Admin Console. To do this:

1. On the Amazon Solr server, go to **Server Manager> Windows Firewall with Advanced settings > Inbound Rules > New Rule**.

NOTE: Leave firewall status "Turned On".

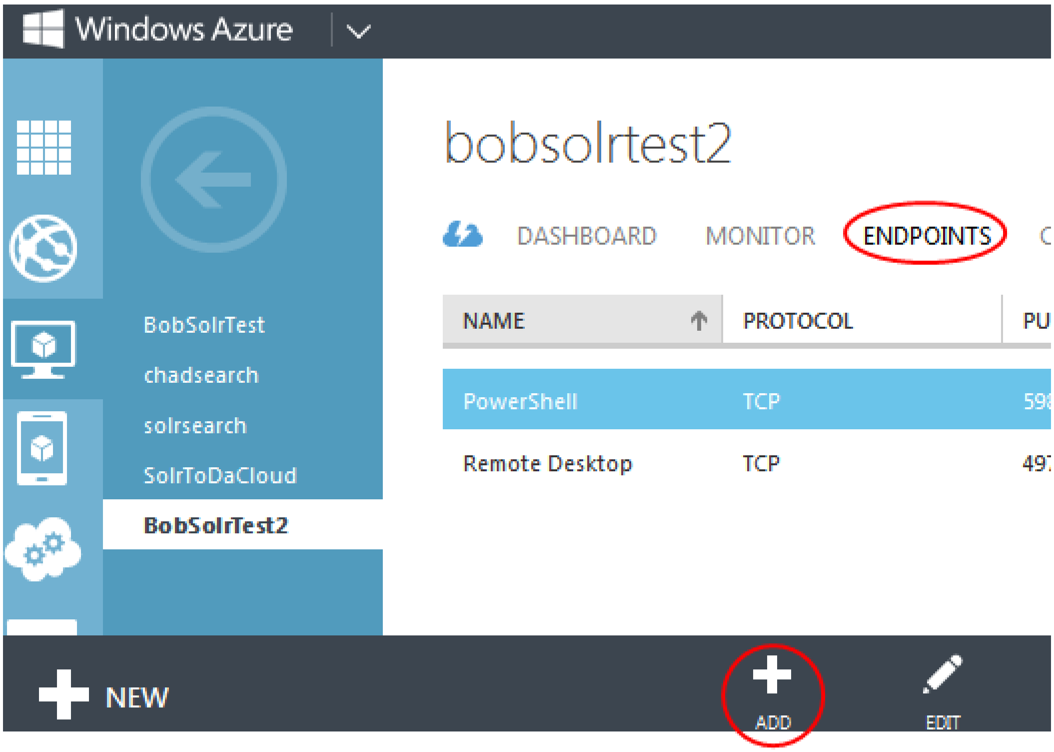


2. On the Rule Type screen, choose **Port**.
3. On the Protocols and Ports screen, choose **TCP**. In the **Specific local ports** field, enter **8732**.
4. Click **Next** then **Allow the connection**.
5. On the **When does this rule apply?** screen, check all boxes.

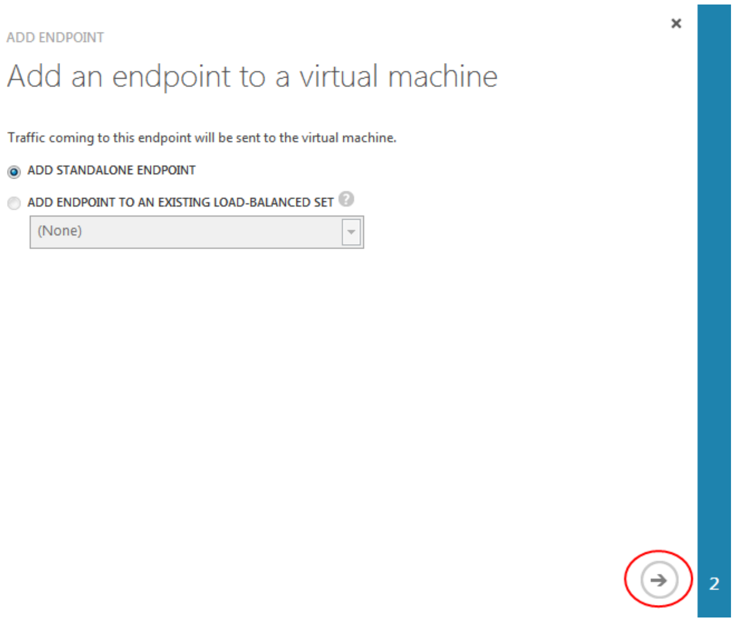
6. Assign a name to the rule.
7. Click **Finish**.
8. Repeat steps 1-7 for the database port.

Part 7: Add endpoints for port 8732 and the database port

1. Return to the Windows Azure portal, https://manage.windowsazure.com.
2. Click your virtual machine.
3. Click **Endpoints > Add**.



4. The following dialog appears. Click the **->** (next) button.



5. Add your Ektron Windows Service port.
   - Name: EWSPort
   - Protocol: TCP
   - Public and private ports: base port 8732
6. Repeat steps 1-5 for the database port.

Part 8: Update the Ektron web.config

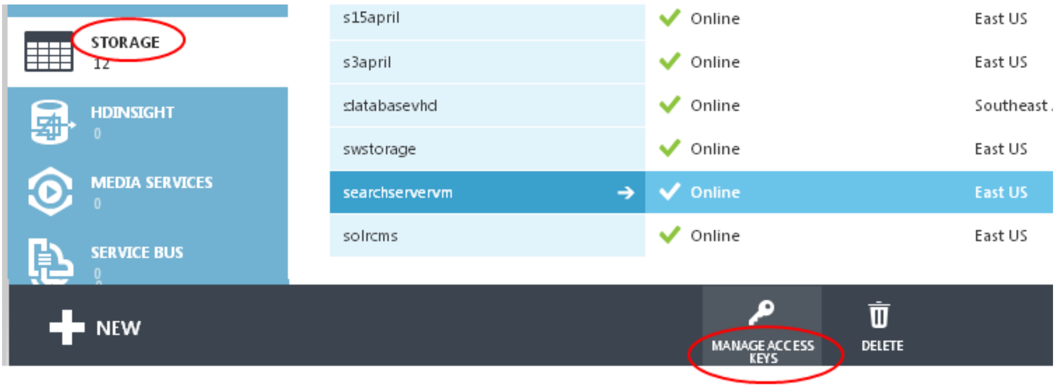
1. On the Azure VM, open the Ektron site's *siteroot*\web.config file.
2. Replace the `unity.storage` section with this:

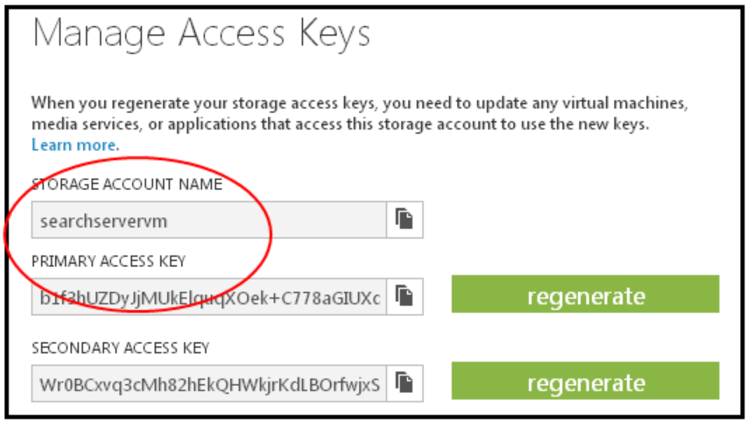
```
<unity.storage>
<assembly name="Ektron.Storage" />
<assembly name="Ektron.Cloud" />
<namespace name="Ektron.Cloud.Azure.Storage" />
<namespace name="Ektron.Storage" />
  <container name="storageContainer">
    <register type="IFileService" mapTo="CloudFileService" />
    <register type="IDirectoryService" mapTo="CloudDirectoryService" />
  </container>
</unity.storage>
```

   Save but do not close the web.config file. You will update further soon.

3. Obtain your Azure Storage Account Name and Primary Access Key. To do this:
   a. In a browser, go to https://manage.windowsazure.com.
   b. From the left panel, click **Storage**. The Storage screen appears.
   c. Select the storage account you created in *Part 2: Add a storage account in Azure manager* on page 268.

d. Click **Manage Access Keys** at the bottom of the page.





e. A screen shows your **Storage Account Name** and **Primary Access Key**.

4. Within the web.config file, find the following element:

```
<add key="StorageConnectionString"
value="DefaultEndpointsProtocol=http;AccountName={0};
AccountKey={1}"/>
```

5. Replace `{0}` with the **Storage Account Name** you obtained in Step 3. Then, replace `{1}`with the **Primary Access Key** that you obtained in Step 3.
6. Within the web.config file, locate the `<appsettings>` section then add these keys within it.

```
<add key="ek_CloudStorageType" value="AZURE" />
<add key="ek_CloudAccountId" value="MyStorageAccountName" />
<add key="ek_CloudAccountKey" value="MyKeyValue" />
<add key="ek_CloudContainer" value="" />
```

7. In the above elements, replace `MyStorageAccountName` with the **Storage Account Name** you obtained in Step 3. Then, replace `MyKeyValue` with the **Primary Access Key** you obtained in Step 3.
8. Save and close web.config.

Part 9: Set up Solr search on the Azure cloud

Follow these steps.

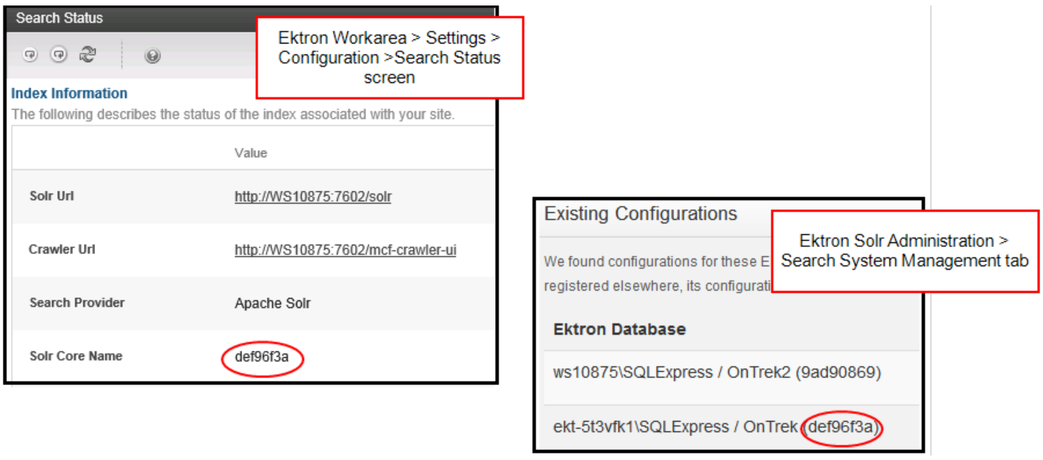
- *Part 2: Create Azure Solr search VM* on page 250
- *Part 3: Set up Solr search on Azure VM* on page 252

- *Part 4: Run the Solr Installation* on page 255
- *Part 5: Add Inbound Rules and Endpoints* on page 263
- *Part 6: Test and register Solr on the Azure VM* on page 265

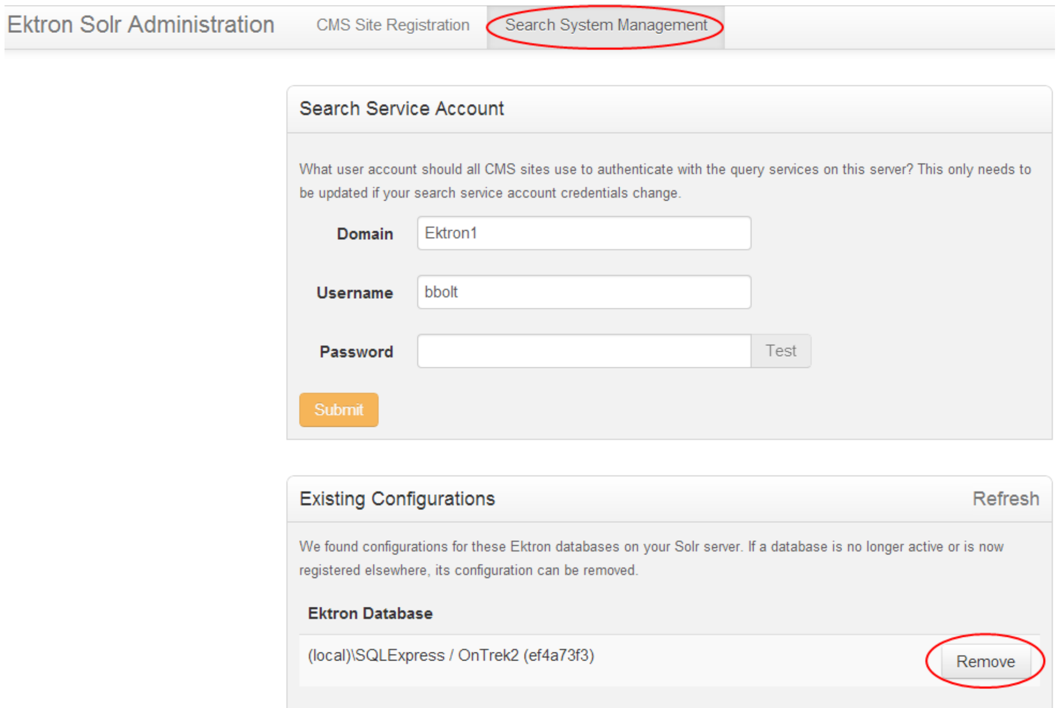
Unregistering a Solr site

If you remove an Ektron Web site which uses a Solr search server, use this procedure to unregister the Ektron site from Solr. This is especially important if you will install another Ektron site in the same location as the one that was removed.

1. On the server on which you completed *Part 1: Run SolrInstall.exe* on page 216, and using an HTML5 CSS3-compliant browser, click Windows **Start** menu **> All Programs > Ektron > Ektron Solr Search 2.0 > Ektron Solr Administration**. If you're using Windows 8 or 2012, press the **Windows** key ( )**/Q** then enter **Ektron Solr Administration**. The site registration screen appears.
2. Enter the host name of the Ektron server then click **Connect**.
3. Click the **Search System Management** tab.
4. Under **Existing Configurations**, find the Ektron database that was removed. If you are unsure, compare the code following the Ektron database name with the Search Configuration Details screen's **Solr Core name** field.

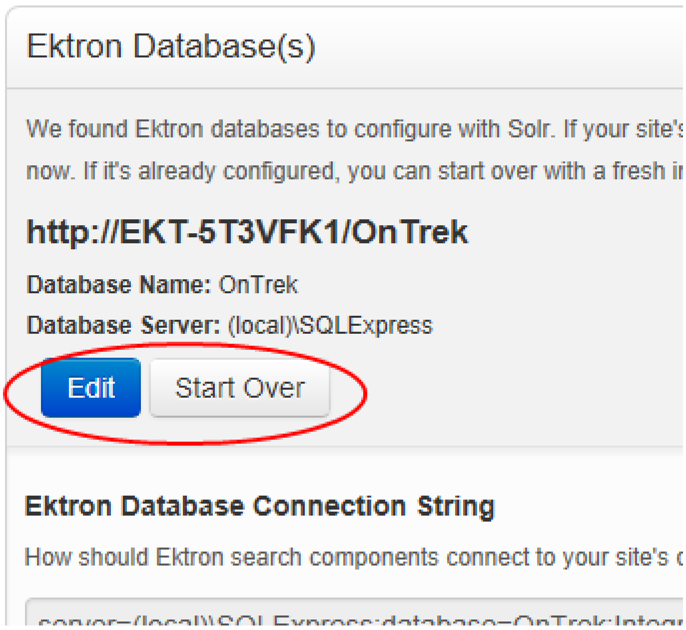


5. Click the **Remove** button.



Editing Solr registration information

After a site is configured, the buttons below the database change to **Edit** and **Start Over**.



Start Over is a full reconfiguration. The index, schema, and configuration data are completely overwritten, and the site's data is re-indexed. Because the index and supporting configuration are overwritten, *search functionality is unavailable* while the site is being registered and re-indexed.

Consider this option if

- You need to change the site’s connection string, which is used to extract data at index time.
- You need to change the physical location of the asset files.
- Your index is in a state where you want to start fresh.

Edit updates an existing search configuration's settings. The index, schema, and configuration data remain intact. When settings are saved, the site’s data is reindexed. *Search functionality remains available* throughout this process.

Consider this option if you need to

- update the type of data indexed for your site
- change the automatic polling interval
- update advanced configuration options

Uninstall Solr search provider from an on-premises (local) server

The following scenarios describe uninstalling the Solr search provider.

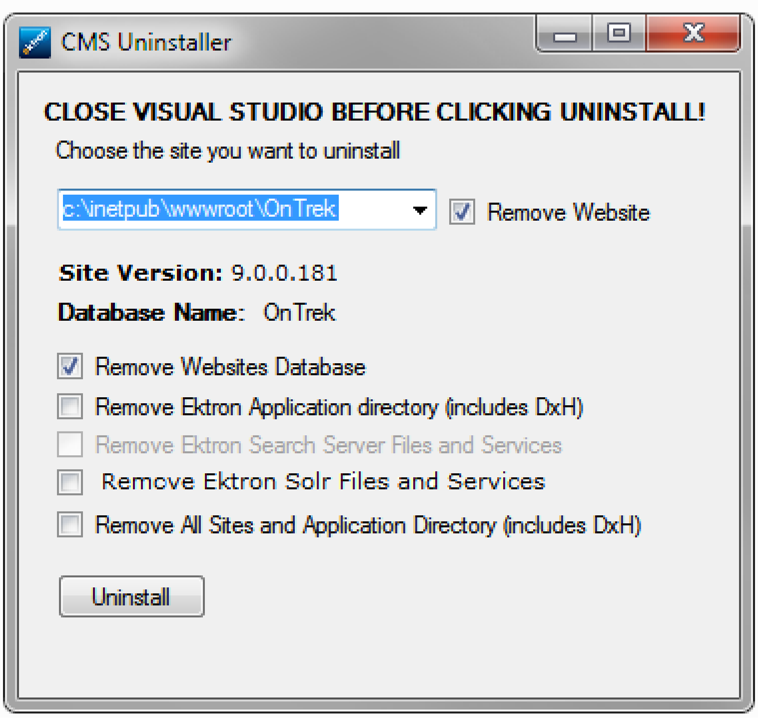
IMPORTANT: Before uninstalling Solr, back up related files that have been customized. For example, these Ektron Search2.0 directory files may have been customized.
* solrconfig.xml
* schema.xml
* dictionary files
* wddf types
* .txt files

Simultaneously uninstall Ektron and Solr search provider

To uninstall Ektron and Solr at the same time:

1. Back up any Solr files that have been customized.
2. Use the uninstall procedure described in *Uninstalling Ektron* on page 31.
3. On the Uninstall dialog, check the **Remove Ektron Solr Files and Services**

box.



Uninstall Ektron, but do not uninstall Solr search provider

To uninstall Ektron but leave Solr installed, use the uninstall procedure described in *Uninstalling Ektron* on page 31. On the Uninstall dialog, do *not* check the **Remove Ektron Solr Files and Services** box.

Uninstall only the Solr search provider

To uninstall the Solr search provider:

1. Back up any Solr files that have been customized.
2. Close the four command windows that open at the end of the Solr installation.
3. Run the Ektron Solr installation file as an administrator. (You used this file to install Solr.)
4. On the screen that has **Upgrade** and **Remove** options, choose **Remove**.

Changing your search provider to Solr

If you selected a search provider other than Solr during site setup and want to change to Solr, follow these steps.

Change the search provider to Solr and uninstall the Microsoft Search Server.

1. Uninstall Microsoft Search Server.
2. On the Ektron server, open `c:\Program Files (x86)\CMSvXXX\Utilities\SetSearchProvider`.
3. Click `SetSearchProvider.exe`.

4. Select the website that you want to change.
5. Select **Apache Solr 4.0**.
6. Install the Solr search provider. See *Installing Solr on a single on-premises (local) server* on page 216.

Change the search provider to Solr but do *not* uninstall the Microsoft Search Server.

1. On the Ektron server, open `c:\Program Files (x86)\CMSvXXX\Utilities\SetSearchProvider`.
2. Click `SetSearchProvider.exe`.
3. Select the website that you want to change.
4. Select **Apache Solr 4.0**.
5. Install the Solr search provider. See *Installing Solr on a single on-premises (local) server* on page 216.
6. On your search server machine, stop the Search Server Service.
7. On your search server, open `C:\Windows\System32\SiteConfiguration.exe` and remove your website's entry.
8. Run an IISReset.
9. Start the Search Server service.

Monitoring the status of search

The Ektron Workarea provides 2 screens to help you monitor the status of your search. For information about managing the search crawl, see *Managing the search crawl* on page 368.

Solr search configuration details screen

The Solr Search Configuration Details screen provides information about

- Solr server host
- Ektron Solr Administration Service URL
- Ektron Solr Query Service URL
- Solr core name
- Query credentials
- incremental crawl interval—to adjust, use the Solr site registration screen's **Automatic Polling Interval** field.
- crawl filters

To access the screen, go to the Ektron Workarea **> Settings > Configuration > Search > Configuration**.

Solr Search Configuration

The following table describes the Solr search configuration associated with your site.

	Value	Description
Solr Server Host	smacdonald1	The Solr Search Server configured for your site.
Ektron Solr Administration Service	http://smacdonald1:7801	The Ektron Solr administration service URL associated with your site.
Ektron Solr Query Service	http://smacdonald1:7800/SolrQueryService/SolrQueryService.svc	The Ektron Solr Query service URL associated with your site.
Solr Core Name	8d28f9db	Name of the Solr Core associated with your site.
Query Credentials	smacdonald1\admin2	The Windows user authorized to communicate with the query service.
Incremental Crawl Interval	60	Indicates the frequency of incremental crawl request submissions.

Crawl Filters

The following filters indicate what types of content will be included in your index.

	Filter	Description
HTML Content	Included	Content blocks, blogs, forums, etc.
Document Content	Included	Office documents, PDFs, images, etc.
Forum Content	Included	Discussion topics, replies, etc.
Product Content	Included	eCommerce data, etc.
Community Members	Included	Community users and groups, etc.
Community Content	Excluded	Community workspaces, photos, and related content, etc.

Solr Search node status screen

The Solr Node Status screen provides information about the search crawl on 2 tabs.

- **Crawl status** tab shows
  - The crawl status, as returned by ManifoldCF
  - The current and next indexing activities
  - For the most recent crawl: start time, end time, duration
  - If an incremental crawl request is pending See also: *Full vs. incremental crawls* on page 368.

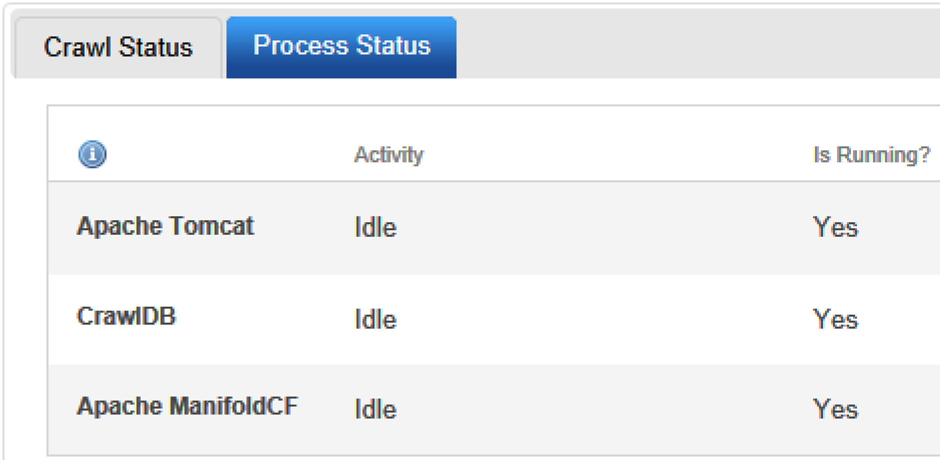
Crawl Status | Process Status

	Content	Users	Community Groups	Description
Crawl Status	Done	Done	Done	The current status of the crawl job as returned by ManifoldCF.
Current Action	Idle	Idle	Idle	The indexing request currently being processed by the CMS.
Next Action	Idle	Idle	Idle	The indexing request that will be processed upon completion of the current one.
Crawl Start Time	3/19/2014 5:21:07 PM	3/19/2014 5:21:07 PM	3/19/2014 5:21:07 PM	The start time of the most recent crawl.
Crawl End Time	3/19/2014 5:21:17 PM	3/19/2014 5:21:17 PM	3/19/2014 5:21:17 PM	The end time of the most recent crawl.
Crawl Duration	00:00:10	00:00:10	00:00:10	The duration of the most recent crawl.
Incremental Crawl Request Pending	No	No	No	Indicates whether or not the site has a request for an incremental crawl to submit.

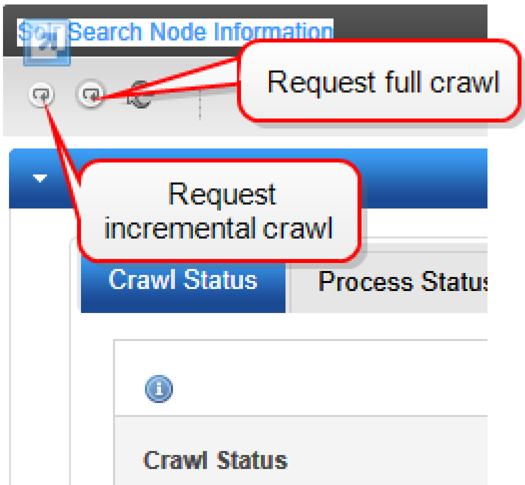
Crawl Status | Process Status

	Content	Users	Community Groups	Description
Crawl Status	Done	Done	Done	The current status of the crawl job as returned by ManifoldCF.
Current Action	Idle	Idle	Idle	The indexing request currently being processed by the CMS.
Next Action	Idle	Idle	Idle	The indexing request that will be processed upon completion of the current one.
Crawl Start Time	9/2/2014 1:25:38 PM	9/2/2014 1:25:38 PM	9/2/2014 1:25:38 PM	The start time of the most recent crawl.
Crawl End Time	9/2/2014 1:26:01 PM	9/2/2014 1:25:51 PM	9/2/2014 1:25:51 PM	The end time of the most recent crawl.
Crawl Duration	00:00:23	00:00:13	00:00:13	The duration of the most recent crawl.
Pending Crawl	Incremental	None	None	Indicates whether or not the site has a pending crawl request to submit.

- **Process Status** tab shows the status of the (Ektron search) Java processes on the Solr Search server, such as Apache Tomcat, crawl database, and Apache ManifoldCF.



From this screen, you can launch an incremental or full crawl using toolbar buttons. See also: *Full vs. incremental crawls* on page 368.



Apache Manifold CF status screen

To view the Apache Manifold CF status screen, on the Solr server, click the Windows **Start** button **> All Programs > Ektron > Ektron Solr Search 2.0 > Tools > Apache Manifold CF**. If you're using Windows 8 or 2012, press the **Windows** key ( ) **/Q** then enter **Apache Manifold CF**.

The Apache Manifold CF screen displays the status of the jobs crawling your Ektron content. For more information, see ManifoldCF-End-user Documentation.

Apache Solr console

To view the Apache Solr console screen:

1. On the Solr server, go to Windows **Start** button **> All Programs > Ektron > Ektron Solr Search 2.0 > Tools > Apache Solr**. (If you are using

Windows 8 or 2012, press the **Windows** key () **/Q** then enter **Apache Solr**.) A login screen appears.

2. Enter the username `solr`.
3. Enter the password which you can find in `C:\Program Files (x86)\Ektron\Search2.0\Administrative Service\Ektron.Cms.Search.Solr.ServiceHost.exe.config` in the **SolrPassword** field. This solr password is unique for each installation.

The Apache Solr console screen provides information about available logging levels, how to get management information about each core, the Java information about each core, and so on.

For more information, see Using the Solr Administration User Interface.

Managing Solr administrative tasks

The following topics explain how to perform administrative tasks that are unique to Solr. The following list shows other search-related functions that apply to all search providers.

- *Basic versus advanced website search* on page 336
- *The "Did you mean?" feature* on page 345
- *Managing searchability of Ektron content* on page 346
- *Managing search results* on page 347
- *Using synonym sets* on page 348
- *Providing suggested results* on page 350
- *Searching the Workarea* on page 363
- *Reporting search activity* on page 375

Solr language support

The following languages are supported, along with their two-letter language codes, without customization. Support is limited to Solr's linguistic capabilities (tokenizing, stemming, and so on).

- English (en)
- German (de)
- Greek (el)
- Spanish (es)
- French (fr)
- Hindi (hi)
- Italian (it)
- Japanese (ja)
- Korean (ko)
- Dutch (nl)
- Norwegian (no)
- Portugese (pt)

- Russian (ru)
- Thai (th)
- Chinese (zh)

You may customize Solr to support additional languages. Refer to the guidelines specified <*SolrInstallPath*>\Search2.0\Solr\core0\conf\schema.xml.

Managing the stopwords list

When processing a search query, Ektron's Solr search ignores all words in the stopwords file for the selected language. The stopwords list's default location is: `C:\Program Files (x86)\Ektron\Search2.0\Solr\cores\<core_id_number>\conf\<lang>\stopwords_<languagecode>.txt`.

The language code is a 2-character alphabetic code. For example, English is **en**.

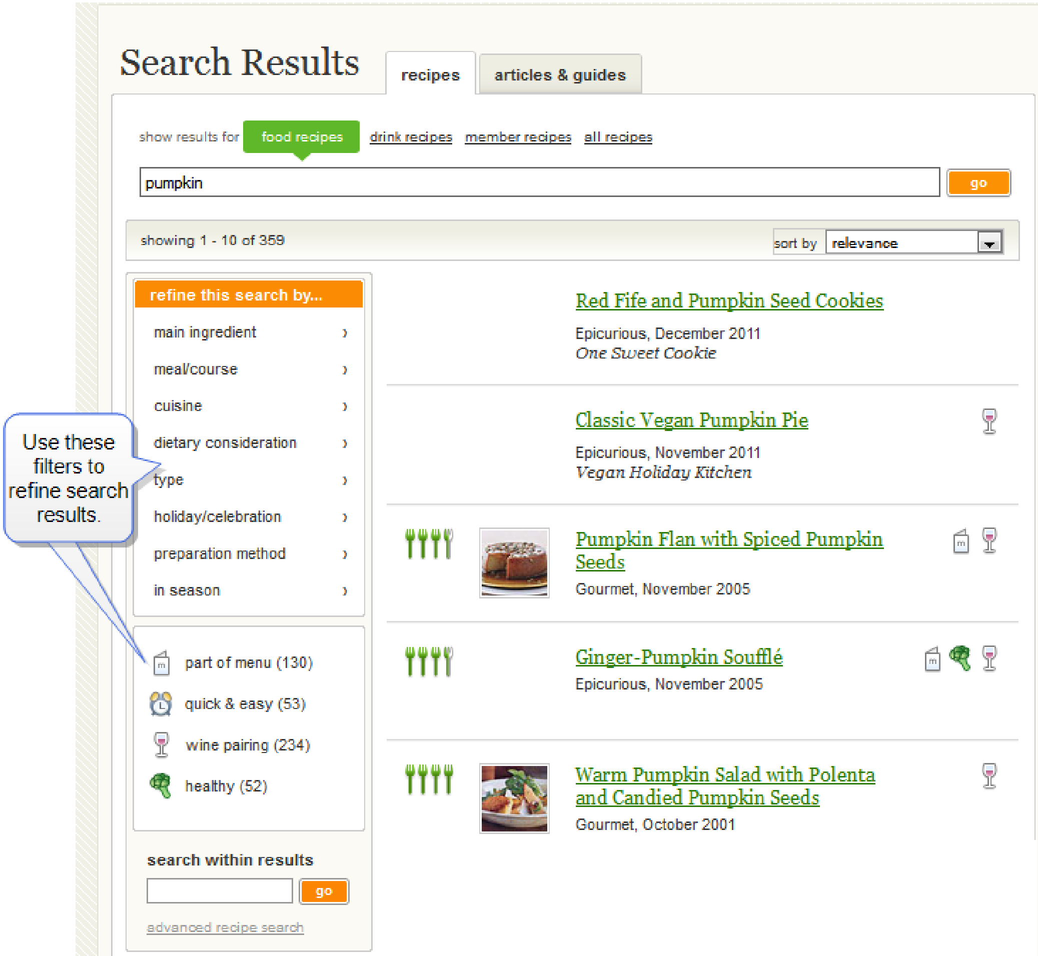
Your Solr core name appears on the *Solr search configuration details screen* on page 278.

To modify the stopwords list, add or remove terms and save.

NOTE: To change the path to the stopwords file, customize the schema.

Filtering results with Solr refinements

Refinements lets users explore search results by applying one or more filters. Here is an example from epicurious.com. Refinements are often called facets.



When describing the refinements feature within Ektron's deployment of Solr search, the following terms are used.

- **Facet**. A categorization of search results by values of an index field. A facet is made up of buckets: each bucket contains a collection of values, and the number of result items that contain that value.
- **Refinement Specification**. A data structure defining a request for a particular facet to be returned with the results for the associated query. The specification may include data (thresholds) defining how the data should be categorized.
- **Refinement**. The classification by which you want to restrict a search query. This can be thought of as an identifier representing a particular facet bucket. By applying a refiner to a query, you indicate that you only want to see results within that facet bucket.

You can create refinements from any indexed content property, Smart Form field, or content metadata. Content properties are always indexed for searchable content. Smart Form fields and metadata that you feel may enhance your site’s search experience can be marked as searchable, at your discretion. To indicate that Smart Form fields are searchable, check the **Indexed** box on the properties dialog. For metadata, choose searchable type.

Use the following fields on the Solr Registration screen to configure certain elements of working with facets.

- Minimum Facet Count
- Facet Sorting

You request facets by adding refinement specifications to search criteria. A specification primarily identifies the target field for which a facet should be generated. For example:

```
criteria.Refinement.Add(new IntegerRefinementSpecification
(SearchContentProperty.Size));
```

If you are working with index fields whose data types may represent ranged values, you may specify a collection of bounds to help categorize the data.

To access the API for managing refinements:

1. Install the Ektron 9.10 SP3 version of the OnTrek Sample site.
2. From the site's home page, go to **Developer Reference > Framework API > Ektron.Cms.Framework.Search**.
3. Look at KeywordSearchCriteria and terms with “refinement” or “facet.”

NOTE: The Ektron Search API supports Solr field types that translate directly to string, long, double, and DateTime. Other field types (for example, LatLonType) are not supported as facets.

NOTE: If you do not apply thresholds when submitting a refinement specification for a field with a ranged-value data type, data is categorized by each individual value. (Ranges are not auto-generated.)

Every facet bucket references a refinement. The refinement represents a filter that, when applied to a subsequent query, ensures the results only include items corresponding to that facet bucket.

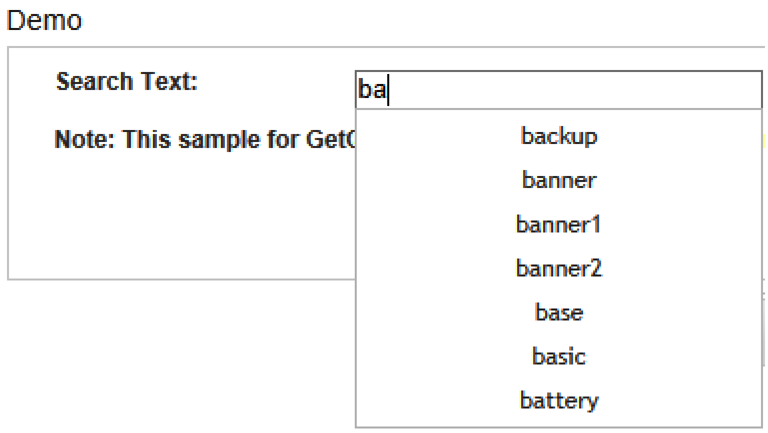
Best Practices for Working with Refinements

When you work with Solr refinements, consider the following advice.

- Limit the number of refinement fields applied to a query. Six or fewer is a "good rule of thumb." More than that can be confusing and overwhelming, which undermines your goal of creating a better experience.
- Use fields with a smaller set of unique values.
- As you organize content and design Smart Forms, think about key properties that will enable users to identify content of interest.
- Consider the significance of the property in determining the placement of a facet. For televisions, brand and price are probably the most significant properties, so should receive more prominent placement. Less significant properties do not require faceting and can be displayed within the product listing.
- Tag content. Content tags are a quick and easy way to provide free-form classifications of your content and be a very effective facet. See also: *Tagging content, library items, users, and groups with keywords* on page 1596.

Managing Solr autoComplete

Solr's Autocomplete feature suggests terms based on the user's input. For example, if you enter **ba**, autocomplete provides the following suggestions.



If a user selects a word from the list, a query is executed using that word.

Since the suggestion list is based on user input, it changes as a user enters more characters. By default, the suggestion list is based on words within searchable Ektron content. If you prefer, you can create a custom autocomplete suggestions list. You might do this to control which terms appear on the list, thereby directing site visitors to desired content. If you create a custom list, only its terms appear as suggestions—Ektron content is ignored. See also: *Creating a custom autocomplete suggestions list* on the facing page.

Additional points about working with AutoComplete:

- AutoComplete works with single words only—if the user enters a space, AutoComplete terminates.
- Suggestion list terms may include a special character, like power-shot
- Special characters (such as exclamation point (!) or period (.)) within a search term are ignored.

  Apache Lucene supports the escaping of special characters that are part of the query syntax. Here is the current special characters list:
  `+ - && || ! ( ) { } [ ] ^ " ~ * ? : \`

  NOTE: The period (.) is not listed a special character at Apache Lucene - Query Parser Syntax.

Enabling autocomplete

...via Server Control

To enable autocomplete for a templated server control, modify the SiteSearchController control by adding the following property: `EnableAutoComplete="true"`. See also: SiteSearch templated server control.

When using Solr search with templated controls, note these restrictions:

- You cannot retrieve custom content.
- The FacetsView control does not support ranged facets for integer, decimal, and date properties.

...via API

For a sample of enabling autocomplete via the API:

1. Install the latest version of Ektron's OnTrek Developer Sample site.
2. From the site's home page, go to **Developer Reference > Framework API > Ektron.Cms.Framework.Search > QueryPropositionManager**.

On an Ektron server, the page's path is `siteroot\developer\Framework\Search\QueryPropositionManager`.

Creating a custom autocomplete suggestions list

Follow these steps to create a custom autocomplete suggestions list.

Part 1: Changing the source of autocomplete suggestions

1. Access the Solr registration screen by inserting the following URL into a browser:
   ```
   https://localhost:base port/SolrAdminConsole/index.html
   ```
   For example, if you selected the default base port of 7600 during the Solr installation, enter `https://localhost:7600/SolrAdminConsole/index.html`.
2. Under the database that you are working with, click **Show Advanced Options**.
3. Within the screen section **Query Completion Dictionaries**, check the box next to the default dictionary (term list).
4. Click **Register**.
5. After a few minutes, the change is registered. If the registration is successful, the change is registered in the Search configuration database.

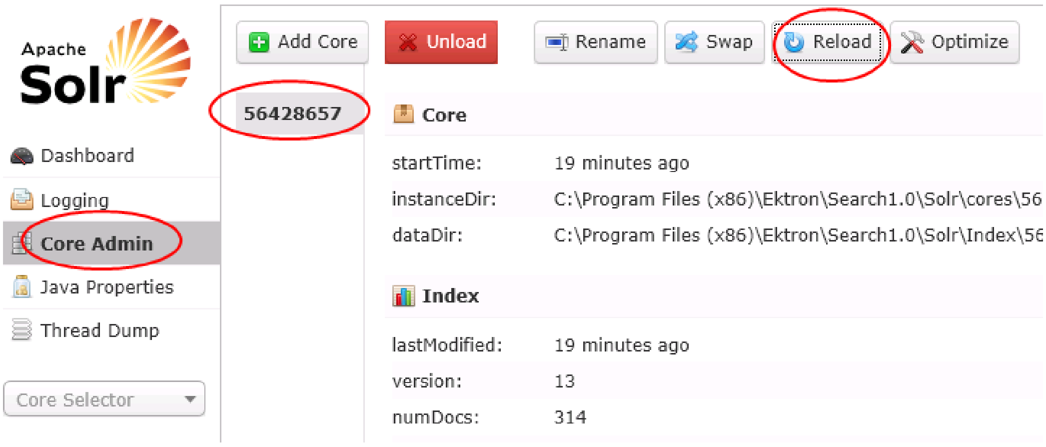
Part 2: Create a custom suggestions list

PREREQUISITES

- Your **Solr Server** and **Core Name**, available on the **Workarea > Settings > Configuration > Search > Configuration** screen.

1. On the Solr search server, open the Ektron Search2.0 folder. (You selected its location when installing Solr. By default, it is installed to `C:\Program Files (x86)\Ektron\`)
2. Within that folder, open `Solr\cores\`*`core number`*`\conf\staticfile.txt`.
3. Insert custom words into that file, each on a separate line, and save it.
4. Access the Solr Administrator page: https://*Solr server from Search Status screen*/#/~cores/*Solrcore name from Search Status screen*. For example: `https://localhost:7602/solr/#/~cores/56428657`.

5. Select **Core Admin** > your core > **Reload**.



For more information on using the Custom Suggestions List, see `https://wiki.apache.org/solr/Suggester` > **Dictionary**.

Maximum size of Solr assets

For optimal performance, Ektron imposes a 10 MB limit on assets. Assets greater than 10 MB can be found by searching for their title or description.

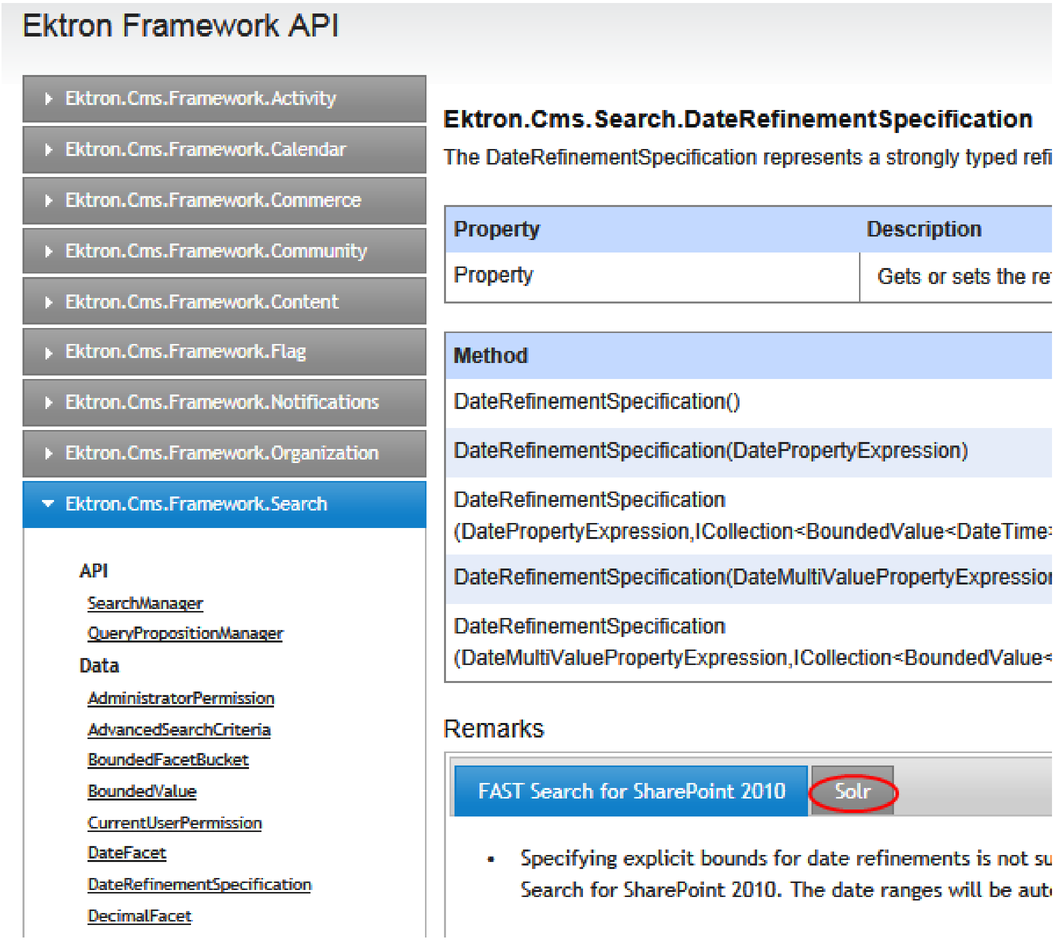
NOTE: The description is searchable via the API's `SearchContentProperty.description` property.

Accessing Solr API documentation

To access documentation for the Solr search API:

1. Install the current version of Ektron's OnTrek Developer Sample site.
2. From the site's home page, go to **Developer Reference > Framework API > Ektron.Cms.Framework.Search**.
3. The search API classes, methods and properties are available for all search providers, including Solr. Tabs explain behavior or functionality differences for

each search provider.



Search Framework API Tutorial is an excellent resource for learning Ektron's Search APIs.

Troubleshooting Solr

Problem: A request to Manifold CF failed unexpectedly

After completing the Solr registration screen, you see this error:

Validation of your input parameters has failed
A request to Manifold CF failed unexpectedly

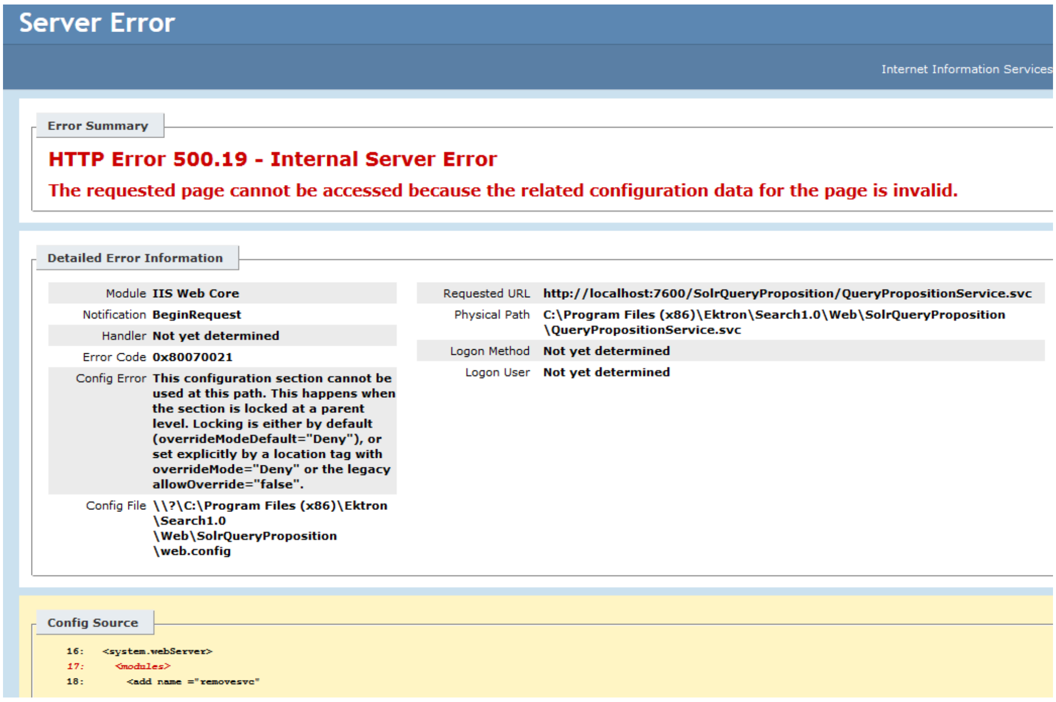
Cause: The Search Process services stopped running.

Solution: Run Process Manager as an administrator (`C:\Program Files (x86)\Ektron\Search2.0\ProcessManager\ProcessManager.exe`).

Problem: HTTP Error 500.19 - Internal Server Error

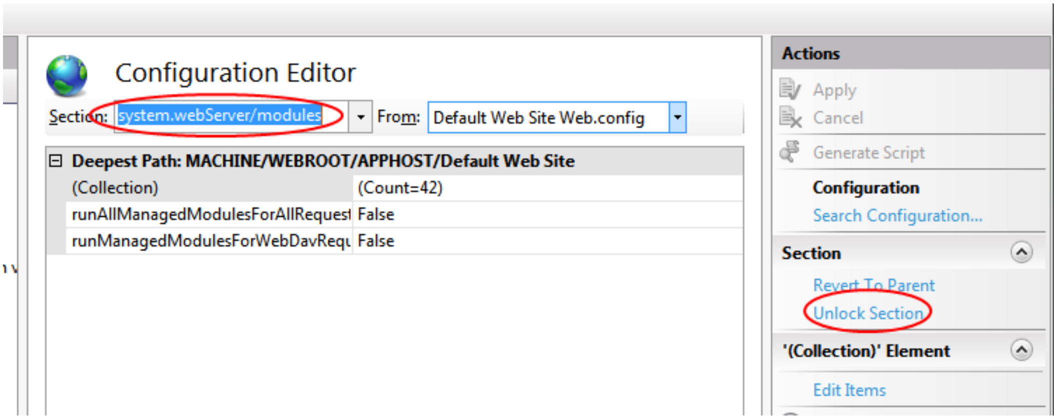
HTTP Error 500.19 - Internal Server Error

The requested page cannot be accessed because the related configuration data for the page is invalid.



Cause: The modules section is locked at the server level.

Solution: IIS > Configuration Editor > System.webServer/modules > Unlock section.



Problem: Error: (405) Method Not Allowed; also 404.17 may be encountered.

No search results in the Workarea. You see the following error in the Windows Event Viewer/WindowsLogs/Application:

```
Timestamp: 12/16/2013 10:06:32 PM
Message:Ektron.Cms.Search.SearchException: An error occurred while submitting the
query.
---> System.ServiceModel.ProtocolException: The remote server returned an unexpected
response: (405) Method Not Allowed.
```

Cause: WCF Activation is not enabled.

Solution: For IIS 7.5, use the Add Features Wizard. Go to .NET Framework 3.5.1 Features > select both WCF Activation and HTTP activation .

For IIS 8 (Windows Server 2012), use the Add Roles and Features Wizard. The HTTP Activation feature is located under .NET Framework 4.5 Features > WCF Services.

https://www.iis.net/learn/web-hosting/configuring-servers-in-the-windows-web-platform/windows-communication-framework-wcf

Known Solr issues and limitations

Installation and launch

- Whenever you use Solr, log in as the user who installed it. Do not let that user's credentials expire.
- If you need change port numbers selected during installation, you must reinstall Solr.
- If you upgrade your JDK version, you must replace it in the same directory to which you originally installed. You may not install more than one JDK version to that directory.

Site registration

- While re-registering a site, there may be an error (returned by ManifoldCF) while deleting a pre-existing connection corresponding to your core.

Error description

During site registration, old jobs for existing connectors (output and Ektron connector) are deleted prior to deleting the connectors themselves. Although the jobs are deleted, Manifold may perform clean-up operations on deleted jobs. During clean up, attempts to delete connectors for such jobs may fail.

In this case, the site registration process attempts to delete the connection again after a specific interval. You can configure the maximum number of re-tries or the retry interval in the Ektron Solr Admin Service config file (`C:\Program Files (x86)\Ektron\Search2.0\Administrative Service\Ektron.Cms.Search.Solr.ServiceHost.exe.config`). Within that file, edit the `MaxDeleteAttempts` and `MaxDeleteInterval` properties. Then, restart the Ektron Solr Admin Service.

Solution

If you see errors like **Exceeded MaxTries while trying to delete output/repository connection** in the Ektron Solr Admin Service logs (Verbose logging), increase these parameters or wait for the jobs to be completely removed from Manifold CF. Depending on the size of your index, the clean up of a deleted job may take a few minutes.

- After installing Solr, until you register at least one site, if you attempt to browse to the Solr Admin screen, this message appears: **There are no Solr cores running. Using the Solr Admin UI currently requires at least one Solr core**.

  After you register a site, this message disappears.

- If you edit the schema.xml file and try to re-register your site, an error is thrown.

  ### Error Description

  ```
  The site registration process encountered an error while attempting to remove
  an existing Solr core for your site. Could not find a part of the path
  'C:\Program Files (x86)\Ektron\Search2.0\Solr\cores\1ca92f29\conf.
  ```

  ### Solution

  Stop and start the Manifold Agent and Tomcat.

- If you reload a core and try to register your site again, an error is thrown.

  ### Error Description

  ```
  The site registration process encountered an error while attempting to remove
  an existing Solr core for your site. The process cannot access the file
  'tlog.0000000000000000000' because it is being used by another process.
  ```

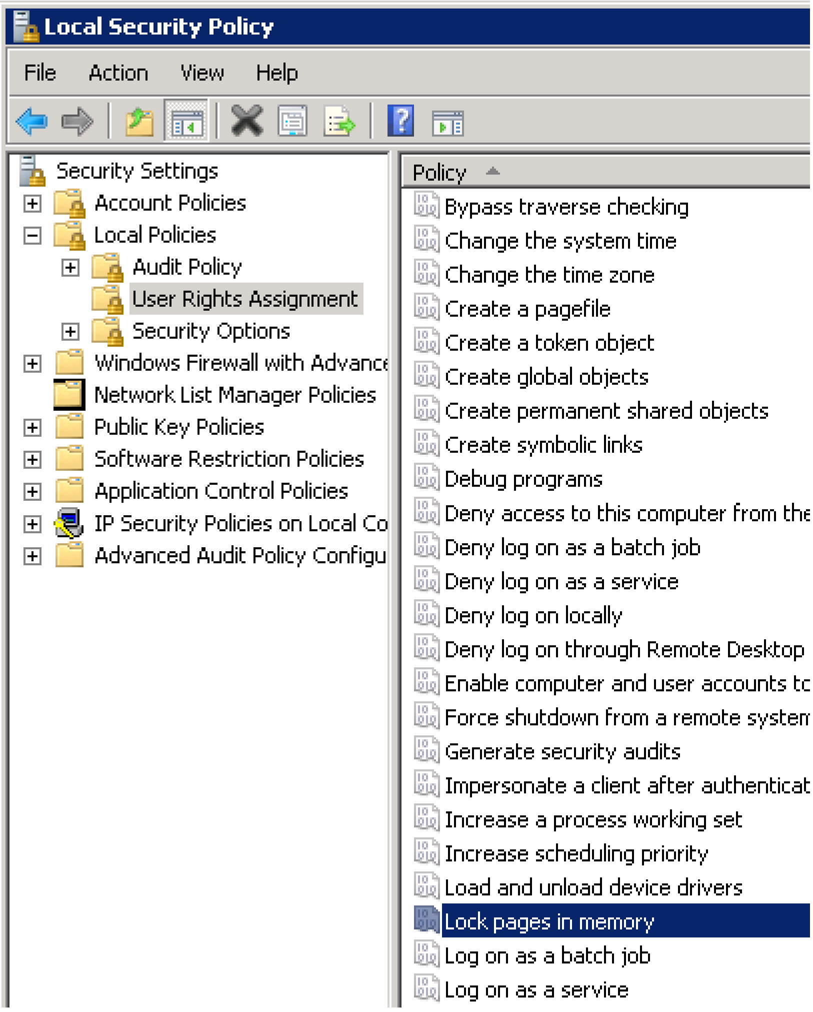
  ### Solution

  Stop and start Tomcat.

General issues

- If you used the Framework API and templated controls to create search controls using Microsoft Search Server, you can reuse that code with Solr for the most part. The Ektron Developer Reference documents functional differences among search providers.
- Only templated server controls and the Framework API are supported.
  - Since version 8.5, the following controls and API are *not* supported:
    - IndexSearch server control
    - Web Search server control
    - ProductSearch server control
    - CommunitySearch server control
    - Search APIs that predate the Framework API
      > `Ektron.Cms.Framework.Search`
- To improve performance, assign to the user account under which Solr services

will run permission to lock pages in memory.



Crawling

- If a full crawl fails, the next crawl is a full one (even if a request for an incremental crawl was received).

Search results

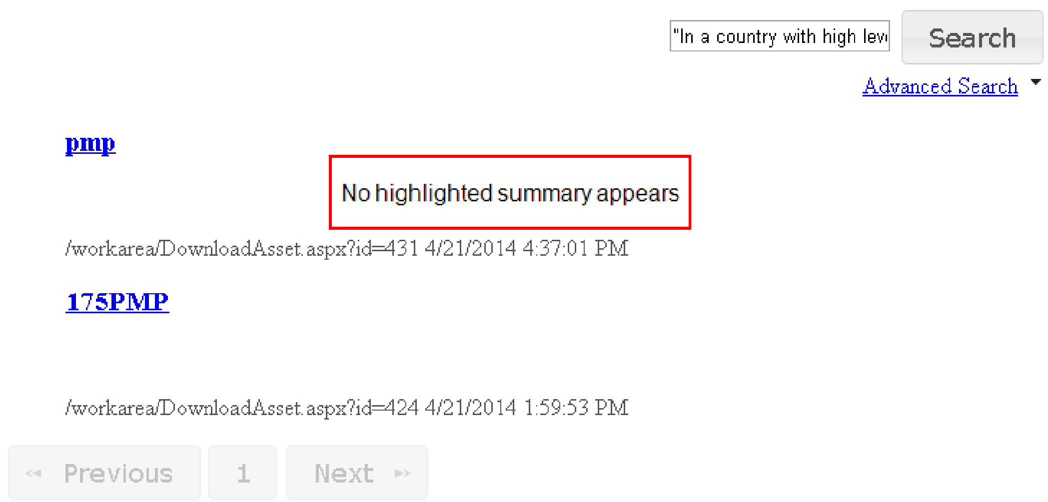
- The search ignores words in a custom summary.
- If you search a Web calendar title, the results include random words with the search text.
- Some results from PageBuilder pages return concatenated text.
- In some asset summaries, asterisks (*), question marks (�), and other special characters appear.
- If you
  1. Import a .doc file to the Ektron Workarea.
  2. Copy and paste that file in another folder.

3. Run a crawl.
4. The second document can only be searched by its title.

- If you
  1. Publish a content block.
  2. Crawl the content.
  3. Edit the content block, and set the golive date to a future date.
  4. Publish the content.
  5. Crawl the content, you see this error:
     Error: java.lang.IllegalArgumentException: Source input stream may not be null
- If you
  1. Install and register a site.
  2. Open the Solr admin console and reload your core.
  3. Try to register the site again, you see this error:

     The site registration process encountered an error while attempting to remove an existing Solr core for your site.

     The process cannot access the file 'tlog.0000000000000000000' because it is being used by another process.
  4. To resolve, stop and start Tomcat to register the site again.
- Solr misinterprets some complex queries.
- The Workarea's search results include content for which the user does not have read permission. If a user clicks such content, he is denied access.
- If a search term exists in a document in a location beyond 100,000 characters, the document appears in search results but its highlighted summary is blank.



If desired, you can increase the number of characters beyond which the highlighted summary appears with search results. If you do, you may see a degradation in your search's performance. To increase the number of characters, follow these steps.

1. Open `C:\Program Files (x86)\Ektron\Search2.0\Solr\cores\[CoreName]\conf\solrconfig.xml`.
2. Increase the value of the `hl.maxAnalyzedChars` property.

```
<int name="hl.maxAnalyzedChars">100000</int>
```

Solr ManifoldCF database maintenance

See https://portal.ektron.com/KB/10171/.

Templated search controls

The FacetsView control does not support ranged facets for integer, decimal, and date properties.

Setting up Microsoft Search Server 2010 Express

IMPORTANT: As of Ektron version 9.3 SP1, Microsoft Search Server 2010 and Microsoft Search Server 2010 Express are no longer supported.

This section explains how to install Microsoft Search Server 2010 Express. After installing it, follow *Configuring Microsoft Search Server* on page 311 to configure the search provider. To learn how to use the search, read *Using Microsoft Search Server features* on page 335.

Prerequisites

- You have purchased and deployed Microsoft Search Server 2010. See also: Product Licensing Search.
- An understanding of Microsoft Search Server 2010, Best practices for Search Server 2010

  Before beginning the installation, review these Microsoft documents.
    - Hardware and software requirements: https://technet.microsoft.com/en-us/library/bb905370(v=office.14).aspx#BKMK_hw_reqs
    - User requirements: https://technet.microsoft.com/en-us/library/ff717834(v=office.14).aspx
    - Installation of Microsoft Search Server 2010: https://technet.microsoft.com/en-us/library/ee808898(v=office.14).aspx
- Both servers can browse to each other across the network.
- The search, SQL, and CMS servers must be on the same domain.

- On your Microsoft Search Server 2010 server
  - Create a Windows user for search purposes. The user should be
    - a domain user
    - assigned the "log-on as a service" role
    - a member of the administrators group. That user must be logged in when Microsoft Search Server 2010 is being installed.
  - Open port 6080 (used by the Protocol Handler Service)
- On your Ektron server
  - Open ports 6080 and 6081 (used by the CMS File Helper Service to communicate Ektron services and copy files between the Web and Search servers)
  - Set SQL Security to **SQL Server and Windows Authentication mode**
  - Through SQL Management Studio, add the Windows login that you created on your Microsoft Search Server 2010 server. Assign to that user
    - db_creator role
    - securityadmin SQL role

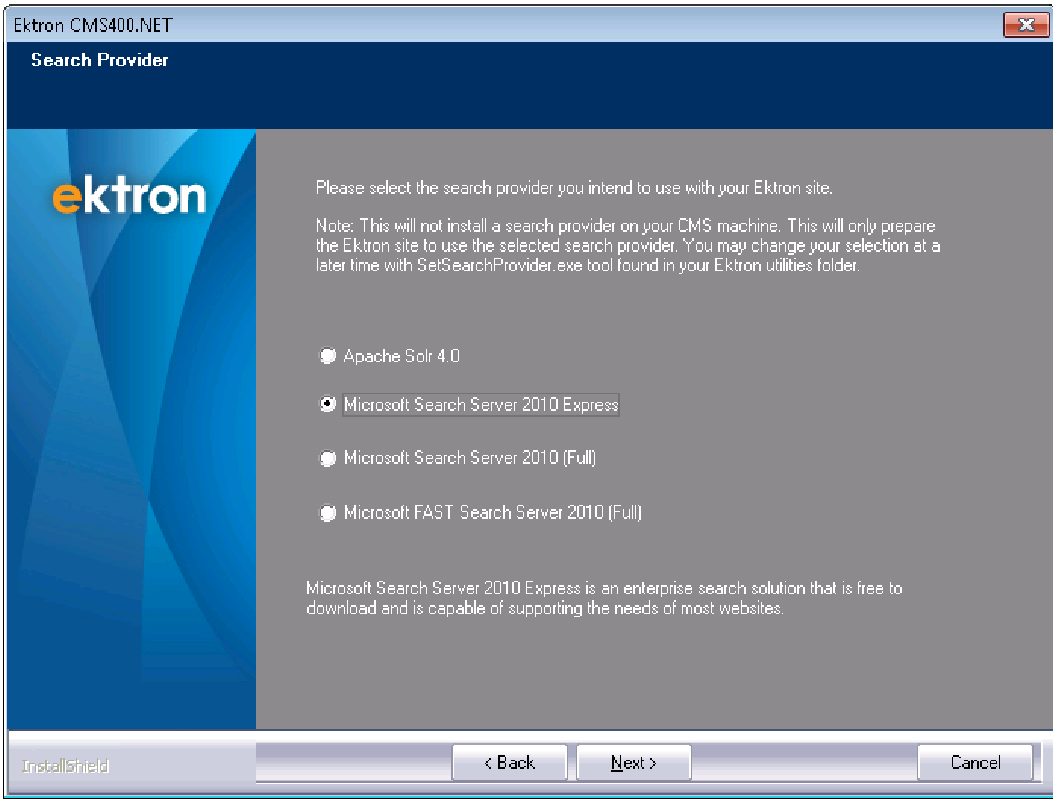
    Microsoft Search Server 2010 uses that login to access the Ektron database.

    BEST PRACTICE

    You should update your Ektron site's `web.config` file's `<connectionstrings>` tag with the username and password of that SQL user. Set `Integrated Security` to `False`. Then, log into Ektron to verify that the connection string is valid. See also: *Managing web.config* on page 74.
- On your database server
  - Open Port 1433

Installing Microsoft Search Server 2010 Express

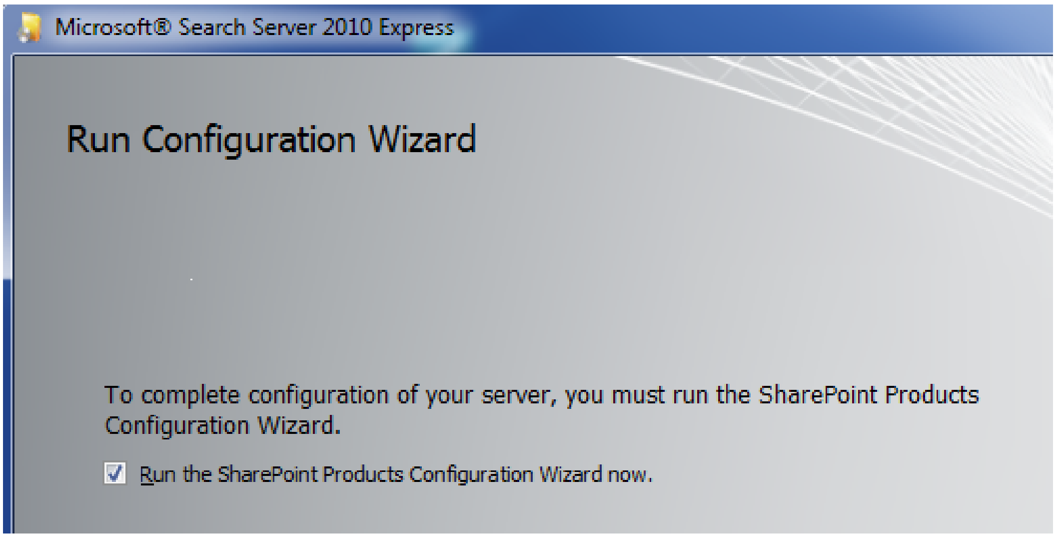
1. Install or upgrade Ektron on its server, using the normal procedure. See also: *Installing Ektron* on page 9, *Upgrading to* on page 35.
2. When prompted to choose a search provider, choose Microsoft Search Server 2010 Express. If you already chose another search provider but want to switch, see *Changing your search provider to Solr* on page 277.



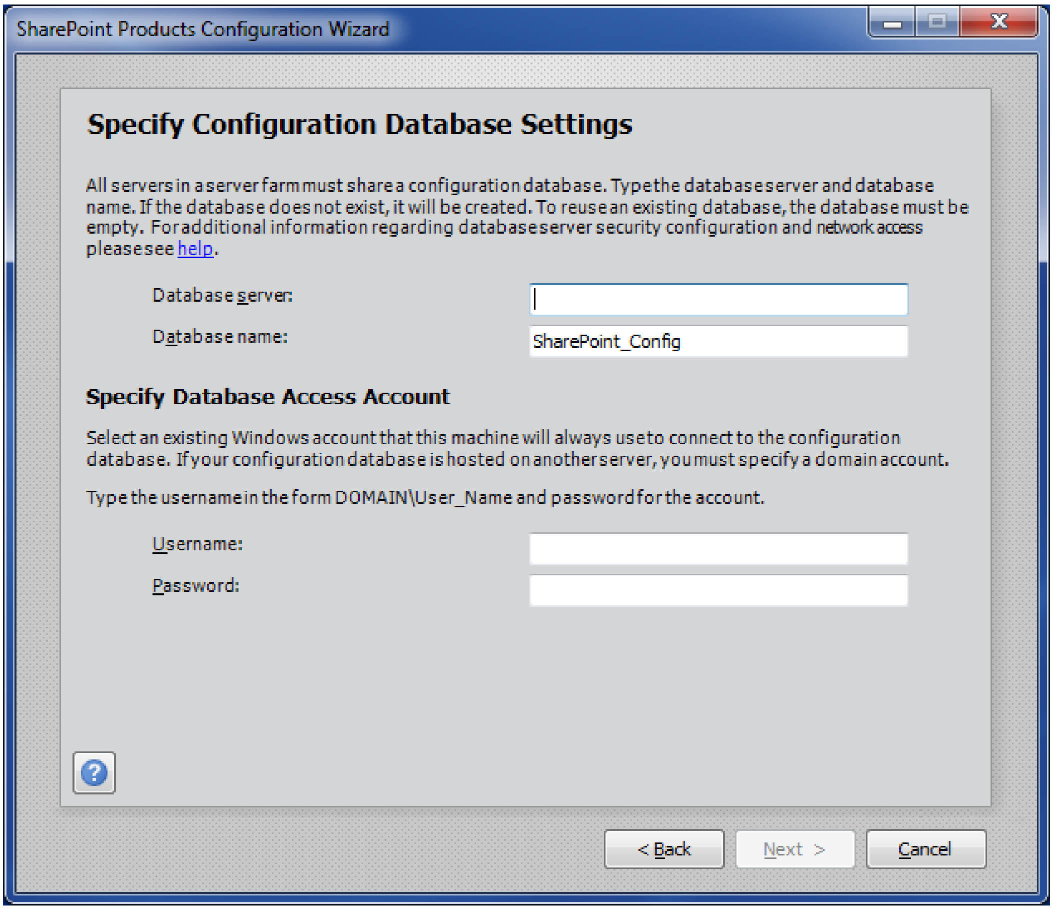
3. Continue the Ektron installation.
4. Download Search Server Express 2010 on the server that will host it. See http://www.microsoft.com/en-us/download/details.aspx?id=18914.

NOTE: If you are using SQL Server 2012, install Microsoft Search Server Express 2010 SP1.

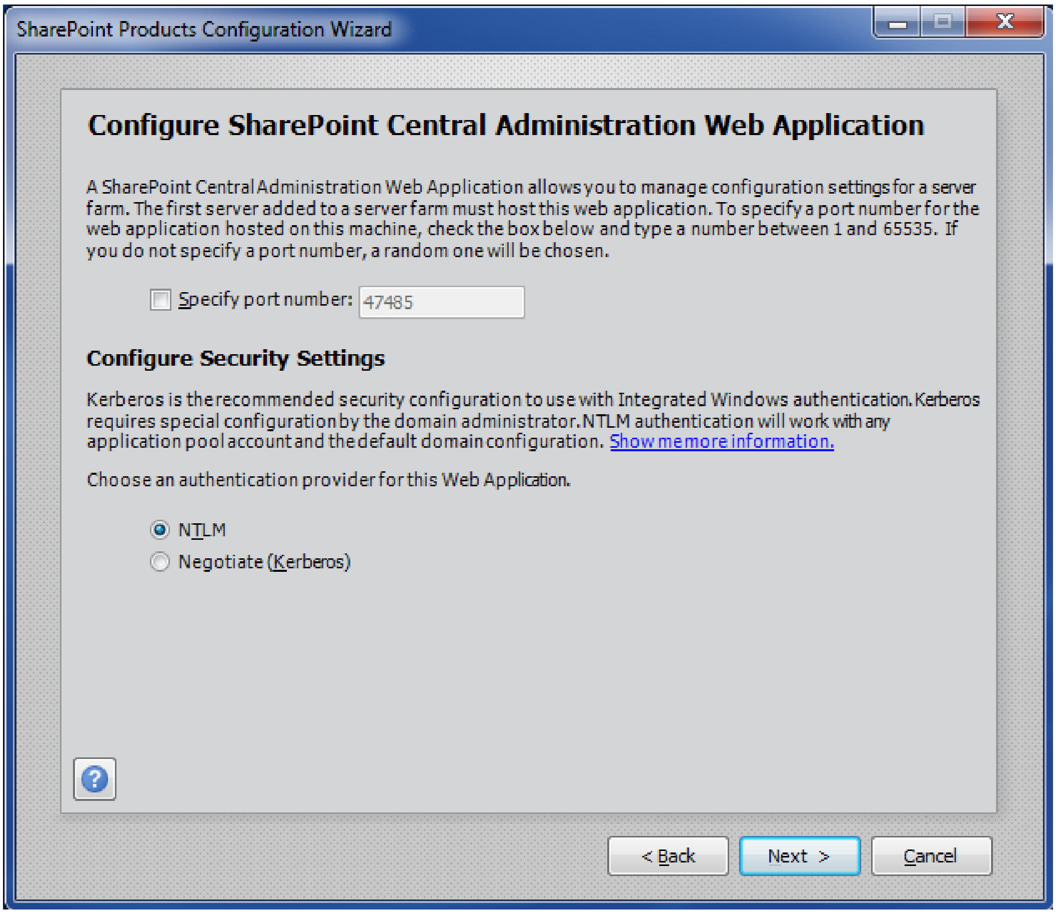
5. Launch the Search Server Express installation file. The installation wizard installs the necessary prerequisites.
6. Accept the Microsoft Software License Terms. Click **Continue**.
7. When asked to install as a **Standalone** or **ServerFarm**, choose **ServerFarm**.
8. On the **Server Type** dialog, choose **Complete** then click **Install Now**. The Installation Progress screen appears.
9. The following screen appears. Click **Run the SharePoint Products Configuration Wizard now** then **Close**.



10. The SharePoint Products Configuration Wizard appears. Click **Next**.
11. A notice about services that may be affected during the configuration appears. Click **Yes**.
12. The **Connect to a server farm** dialog appears. Select **Create a new server farm** then click **Next**.
13. Enter the database server and name along with account information. Then click **Next**.

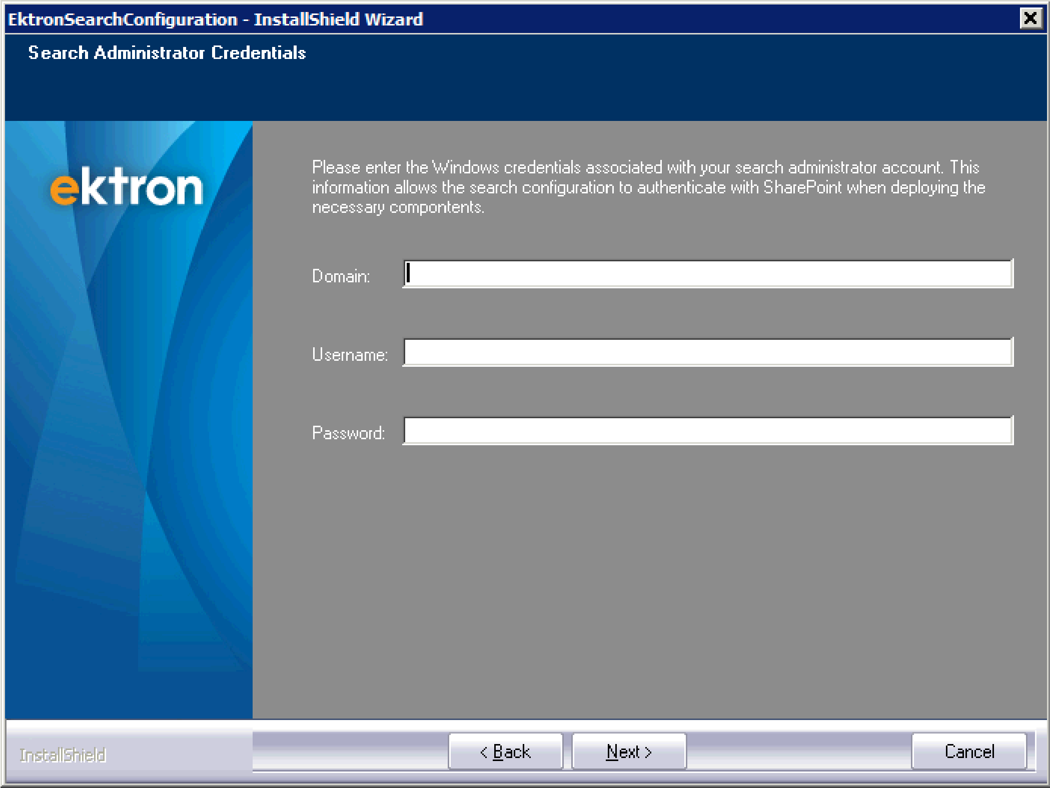


14. The Specify Farm Security Settings screen appears. Enter any password. You will need this password to work with the SharePoint Products farm.
15. The Configure SharePoint Central Administration Web Application screen appears. Accept the default port number or enter a different one.

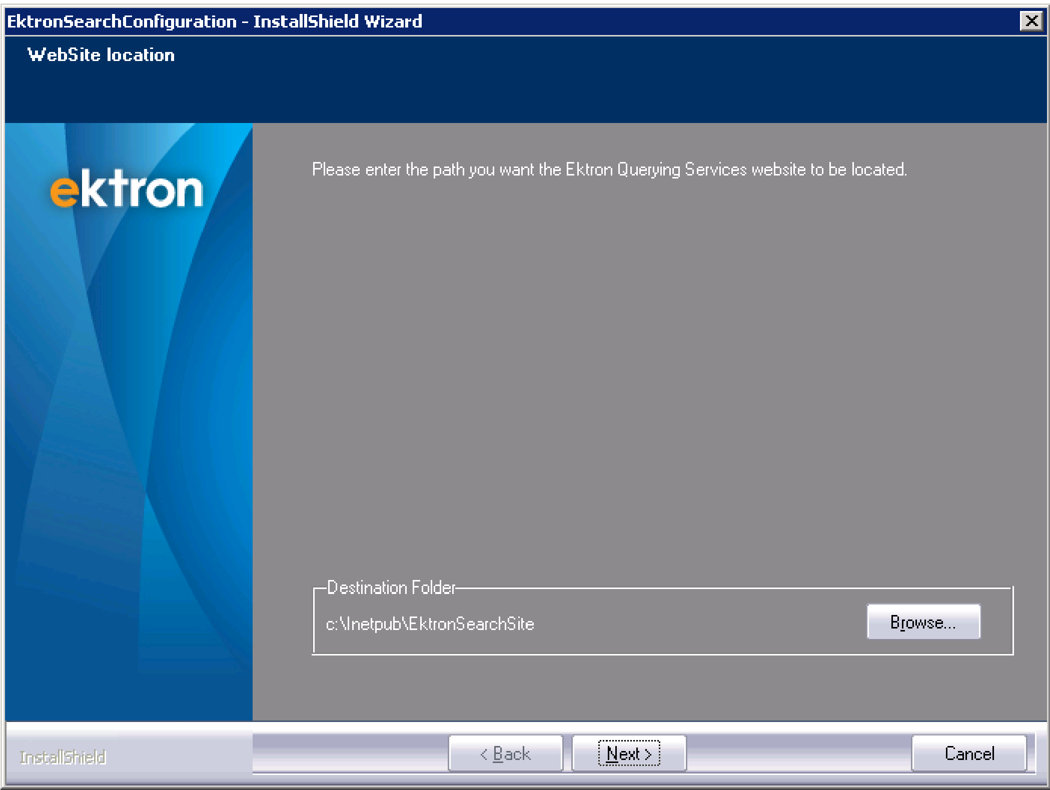


16. Under **Configure Security Settings**, choose **NTLM**. Click **Next**.
17. The **Configuration Successful** message appears. Click **Finish**.
18. The SharePoint Central Administration opens with dialog about Customer Experience Improvement. Select No (or Yes) then click **OK**.
19. The Central Administration > Configure your SharePoint farm page appear. Click **Start the Wizard**.
20. Select **Use existing managed account** then click **Next**.
21. The page to create a top-level website displays. Click **Skip**.
22. The **Farm Configuration Wizard complete** page appears. Click **Finish**.
23. On the Ektron server, copy `C:\Program Files (x86)\Ektron\CMS400` *`versionnumber`*`\Utilities\SearchServer\EktronSearchConfiguration.exe`.
24. On the Search Server Express server, paste and run `EktronSearchConfiguration.exe` as an administrator. The **Search Administrator Credentials** screen appears.

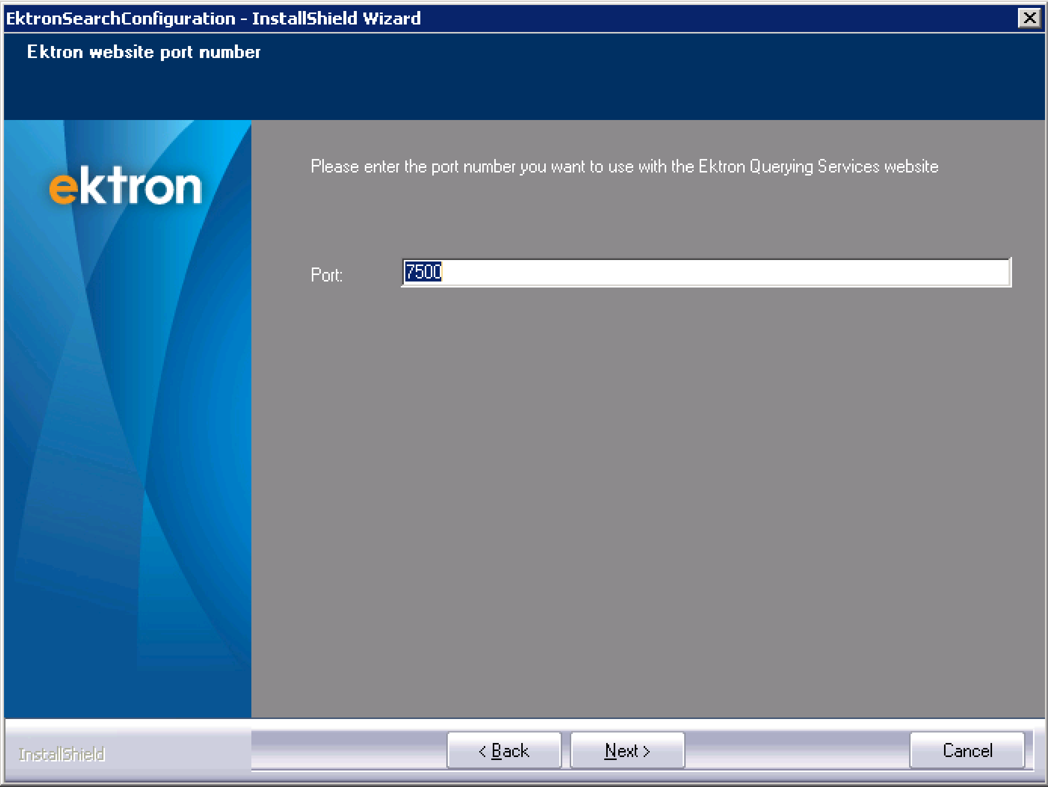
25. Enter the domain, username, and password of a user who is a member of the Windows Administrator group on the Search Server Express server. Click **Next**.



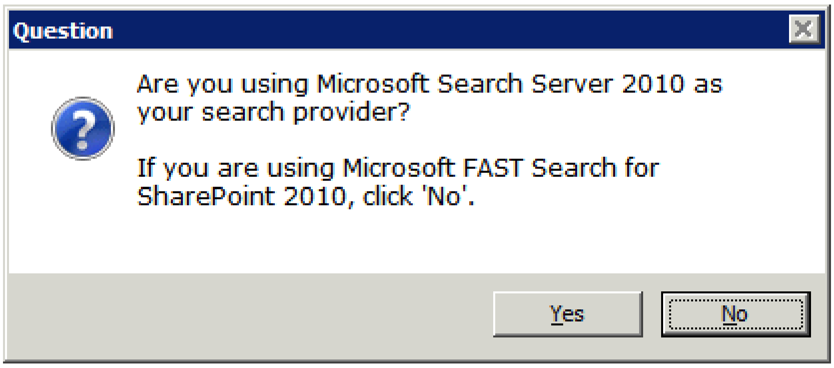
26. Determine the location of the folder that maintains the Ektron query service files.



27. Select the port number to use with the Ektron query service website.



28. The following screen appears. Click **Yes** even though you are using Search Server Express.



29. The Ektron Search Configuration files are installed and configured.
30. You are prompted to run the Ektron Search Configuration Utility. Click **OK**.
31. The InstallShield Wizard Complete dialog appears. Click **Finish**.
32. Run the Search Configuration utility on the Ektron server. For documentation of that process, see *Configuring Microsoft Search Server* on page 311.

Setting Up Microsoft Search Server 2010

IMPORTANT: As of Ektron version 9.3 SP1, Microsoft Search Server 2010 and Microsoft Search Server 2010 Express are no longer supported.

This section explains how to install Microsoft Search Server 2010. After installing it, follow *Configuring Microsoft Search Server* on page 311 to configure the search provider. To learn how to use the search, read *Using Microsoft Search Server features* on page 335.

Prerequisites

- You have purchased and deployed Microsoft Search Server 2010. See also: Product Licensing Search.
- An understanding of Microsoft Search Server 2010, Best practices for Search Server 2010

  Before beginning the installation, review these Microsoft documents.
  - Hardware and software requirements: https://technet.microsoft.com/en-us/library/bb905370(v=office.14).aspx#BKMK_hw_reqs
  - User requirements: https://technet.microsoft.com/en-us/library/ff717834(v=office.14).aspx
  - Installation of Microsoft Search Server 2010: https://technet.microsoft.com/en-us/library/ee808898(v=office.14).aspx
- Both servers can browse to each other across the network.
- The search, SQL, and CMS servers must be on the same domain.
- On your Microsoft Search Server 2010 server
  - Create a Windows user for search purposes. The user should be
    - a domain user
    - assigned the "log-on as a service" role
    - a member of the administrators group. That user must be logged in when Microsoft Search Server 2010 is being installed.
  - Verify that the server meets the *Optimizing Microsoft Search Server 2010 with Ektron* on page 317
  - Open port 6080 (used by the Protocol Handler Service)
- On your Ektron server
  - Open ports 6080 and 6081 (used by the CMS File Helper Service to communicate Ektron services and copy files between the Web and Search servers)

- Set SQL Security to **SQL Server and Windows Authentication mode**
- Through SQL Management Studio, add the Windows login that you created on your Microsoft Search Server 2010 server. Assign to that user
  - db_creator role
  - securityadmin SQL role

  Microsoft Search Server 2010 uses that login to access the Ektron database.

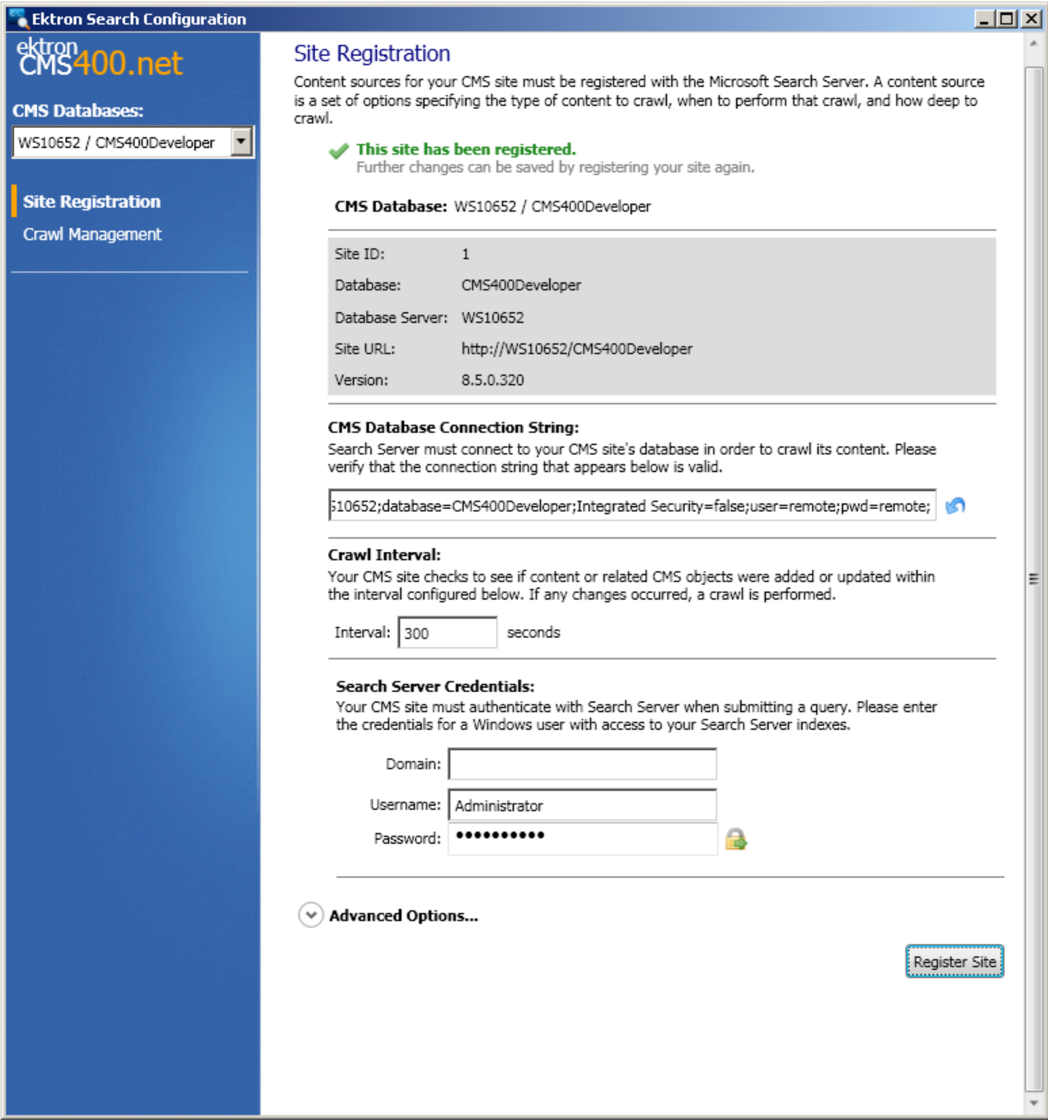
BEST PRACTICE

You should update your Ektron site's `web.config` file's `<connectionstrings>` tag with the username and password of that SQL user. Set `Integrated Security` to `False`. Then, log into Ektron to verify that the connection string is valid. See also: *Managing web.config* on page 74.

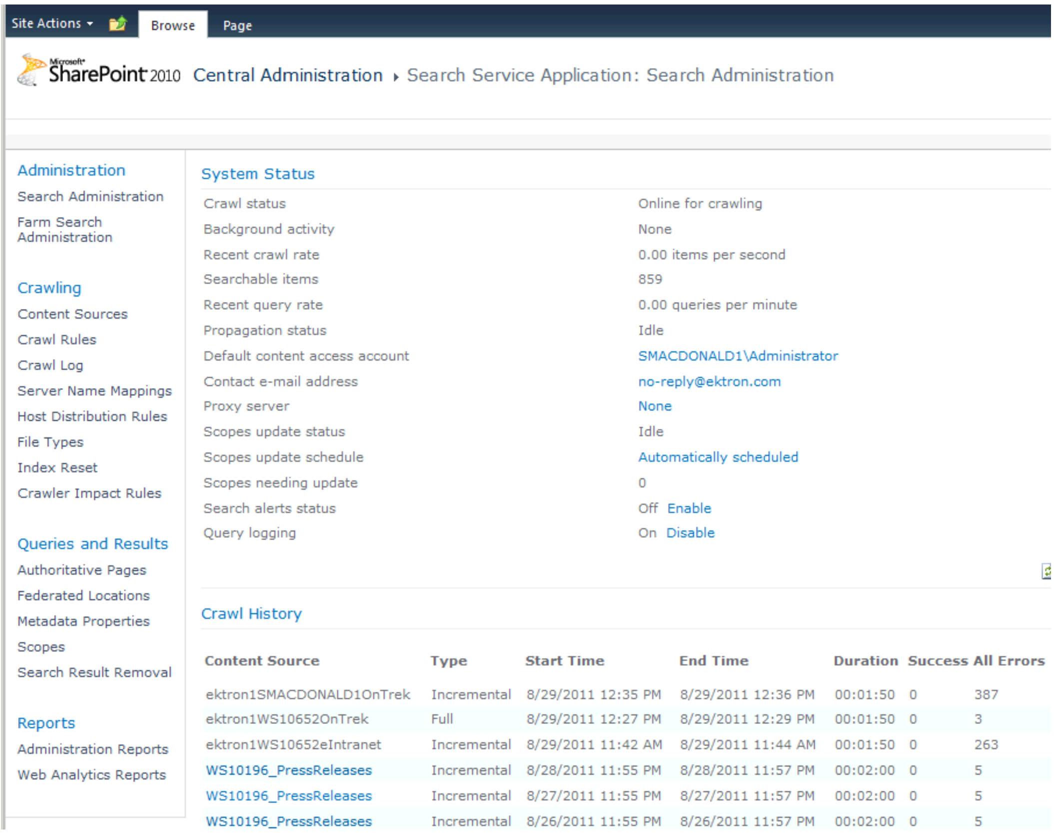
- On your database server
  - Open Port 1433

Microsoft Search Server 2010 features

- A configuration screen for connecting Ektron server with the server hosting Microsoft Search Server 2010. That screen also monitors the status of search crawls.



- You can also manage search via SharePoint 2010's Central Administration console.



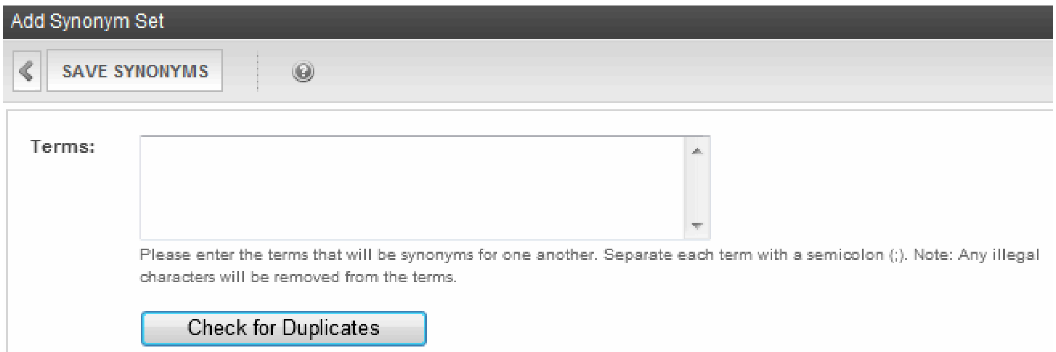
System Status	
Crawl status	Online for crawling
Background activity	None
Recent crawl rate	0.00 items per second
Searchable items	859
Recent query rate	0.00 queries per minute
Propagation status	Idle
Default content access account	SMACDONALD1\Administrator
Contact e-mail address	no-reply@ektron.com
Proxy server	None
Scopes update status	Idle
Scopes update schedule	Automatically scheduled
Scopes needing update	0
Search alerts status	Off Enable
Query logging	On Disable

Content Source	Type	Start Time	End Time	Duration	Success	All Errors
ektron1SMACDONALD1OnTrek	Incremental	8/29/2011 12:35 PM	8/29/2011 12:36 PM	00:01:50	0	387
ektron1WS10652OnTrek	Full	8/29/2011 12:27 PM	8/29/2011 12:29 PM	00:01:50	0	3
ektron1WS10652eIntranet	Incremental	8/29/2011 11:42 AM	8/29/2011 11:44 AM	00:01:50	0	263
WS10196_PressReleases	Incremental	8/28/2011 11:55 PM	8/28/2011 11:57 PM	00:02:00	0	5
WS10196_PressReleases	Incremental	8/27/2011 11:55 PM	8/27/2011 11:57 PM	00:02:00	0	5
WS10196_PressReleases	Incremental	8/26/2011 11:55 PM	8/26/2011 11:57 PM	00:02:00	0	5

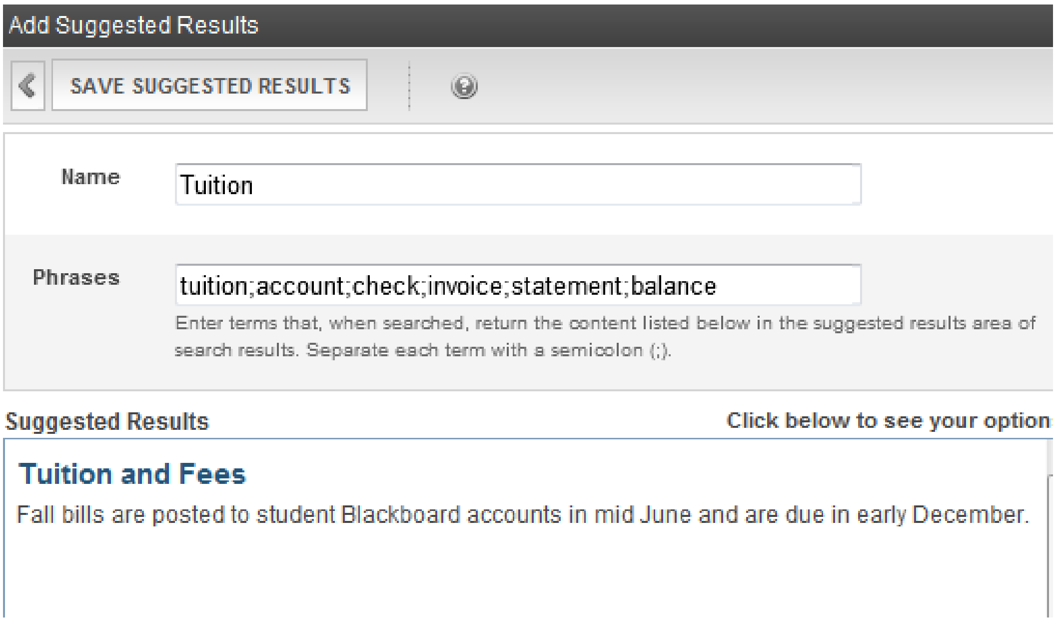
- Workarea screens that let you
  - view the status of search crawls
  - begin new ones if needed

Status Item	Value	Description
Content Source Name	ektron1WS10652CMS400Developer	The index associated with your site.
Query Credentials	Administrator	The Windows user authorized to communicate with the query service.
Crawl Request Pending	No	Indicates whether or not the site has a request for a crawl to submit.
Current Action	Idle	The indexing activity that is currently in progress.
Pending Action	None	The indexing activity that will execute upon completion of the current activity.
Crawl Start Time	5/2/2011 2:02:36 PM	The start time of the most recent crawl.
Crawl End Time	5/2/2011 2:05:16 PM	The end time of the most recent crawl.
Crawl Duration	00:02:40	The duration of the most recent crawl.
Crawl Interval	00:05:00	Indicates how often the site will submit crawl requests.

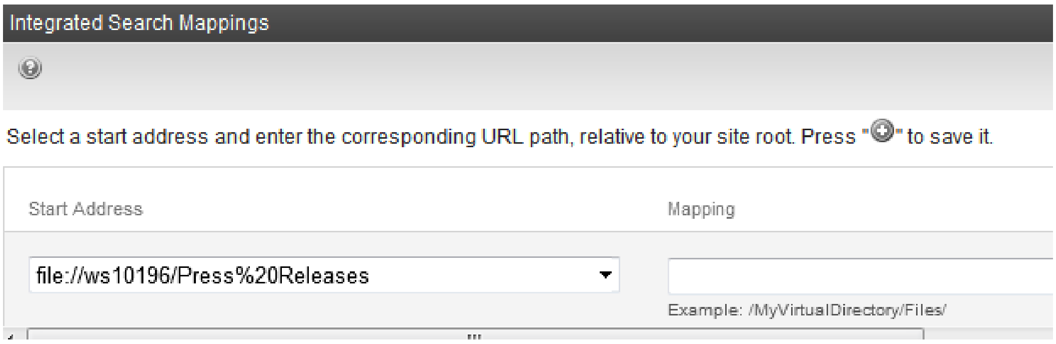
- Create and maintain synonym sets



- Create and maintain suggested results

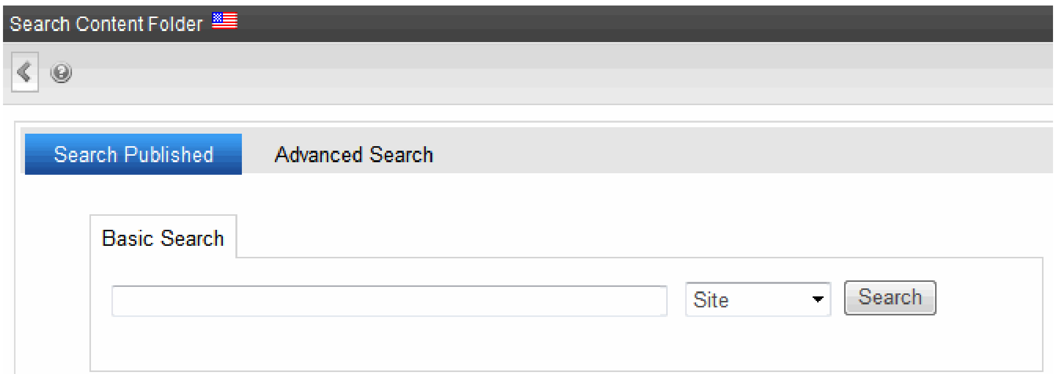


- Manage the Integrated Search



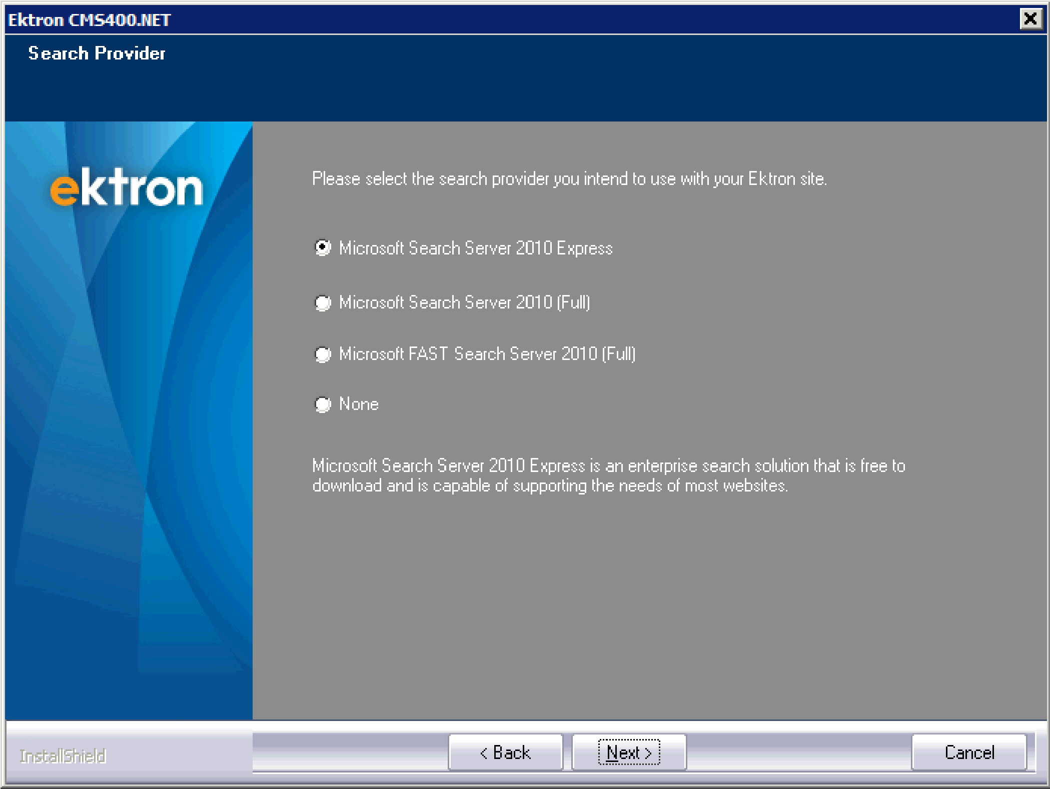
- Templated controls let developers deploy search functionality to the website

- Workarea search, which lets Ektron administrators and editors find content within the Workarea

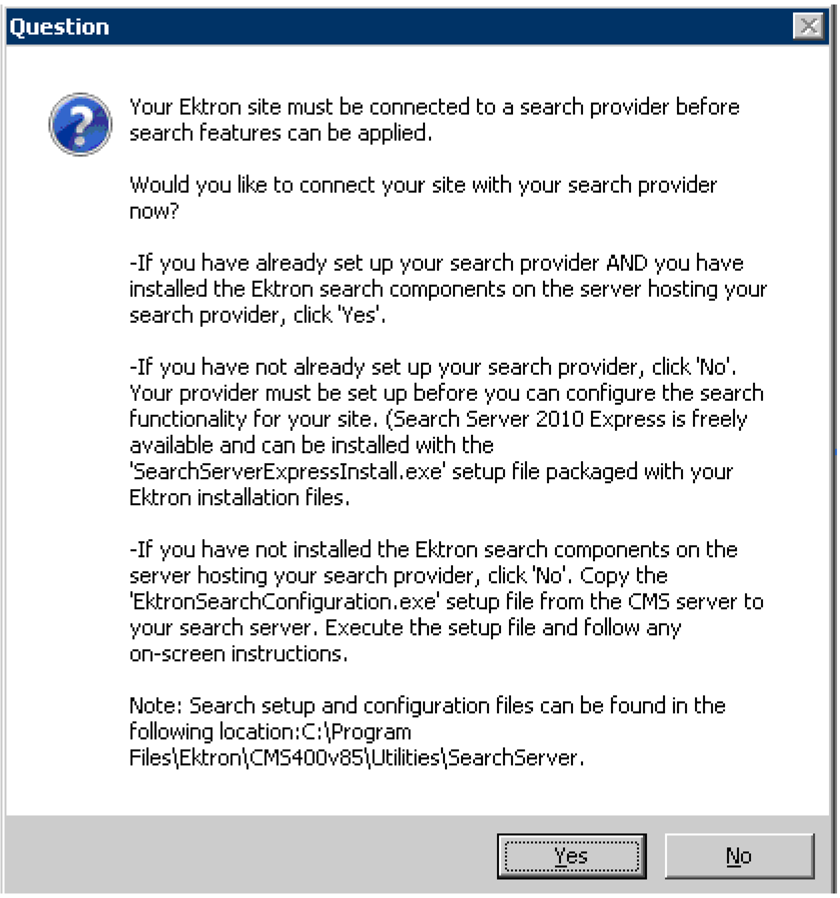


Installing Microsoft Search Server 2010

1. Log into the search server as the user created for search purposes. As explained in *Prerequisites* on page 302, the user must be
    - a domain user
    - assigned the "log-on as a service" role
    - a member of the administrators group. That user must be logged in when Microsoft Search Server 2010 is being installed.
2. Install Microsoft Search Server 2010. Make sure you use the farm install.
3. Install or upgrade Ektron on its server, using the normal procedure. See *Installing Ektron* on page 9, *Upgrading to* on page 35. If you already installed Ektron, skip to Step 6.
4. During the Ektron installation, choose Microsoft Search Server 2010 (Full).

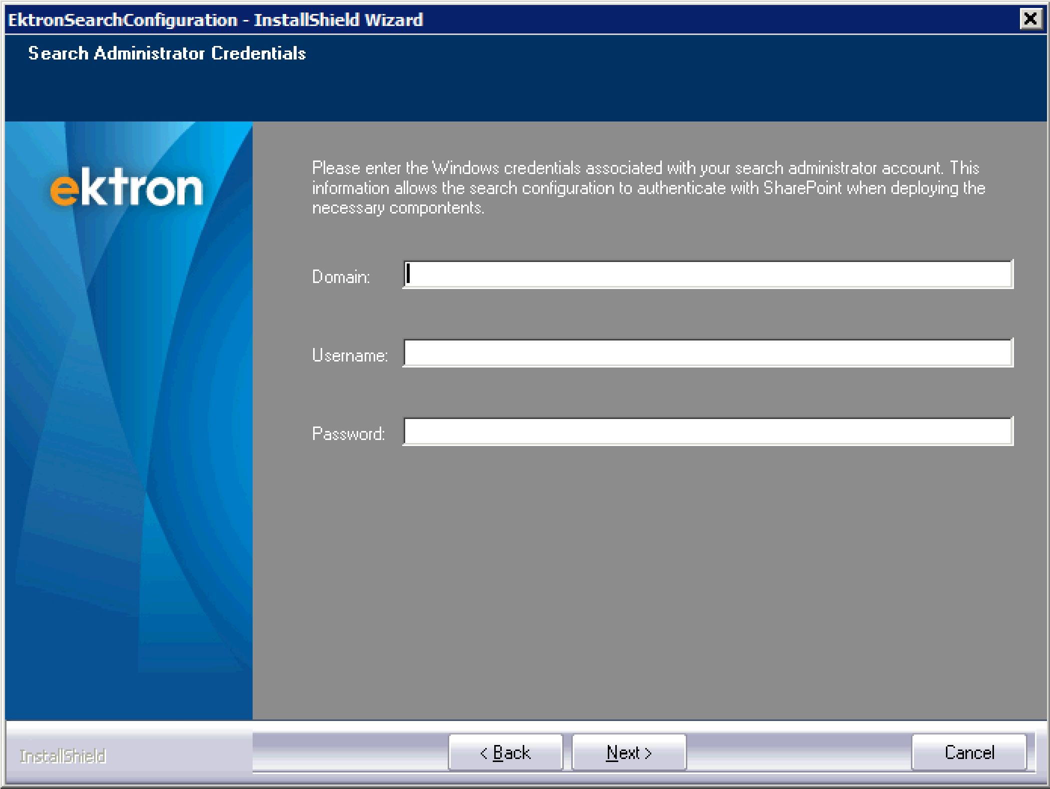


5. After the Ektron database setup, the following dialog appears. Click **No**.

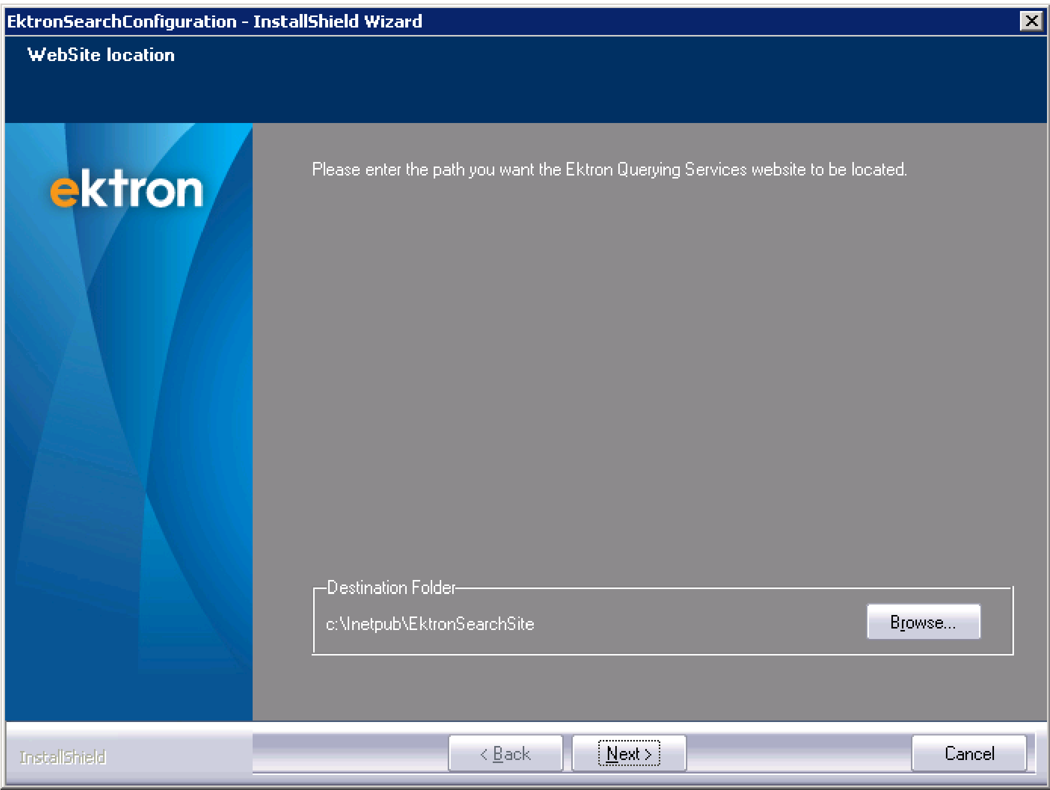


The Ektron installation completes.

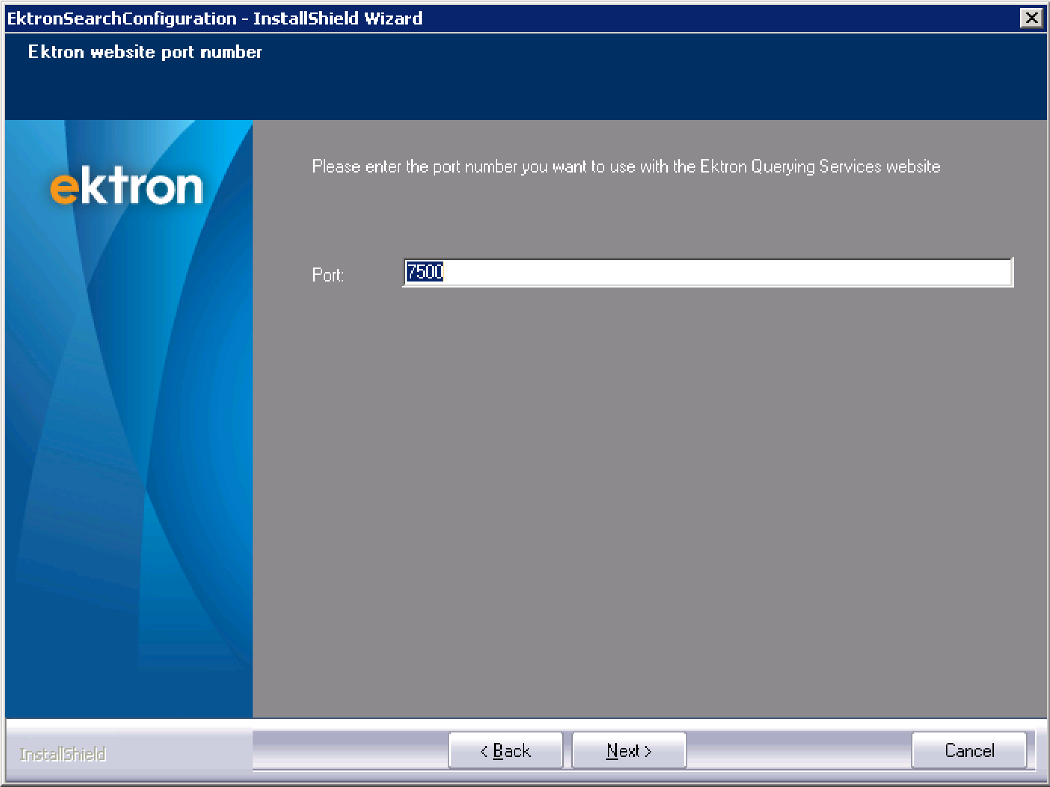
6. On the Ektron server, copy `C:\Program Files (x86)\Ektron\CMS400` *`versionnumber`*`\Utilities\SearchServer\EktronSearchConfiguration.exe`.
7. Log onto the Microsoft Search Server 2010 server as the same user who ran the Search Server 2010 Install.
8. On the Microsoft Search Server 2010 server, paste and run `EktronSearchConfiguration.exe`. The **Search Administrator Credentials** screen appears.
9. Enter the domain, username, and password of a user with Windows Administrator privileges on the server you will use for Microsoft Search Server 2010.



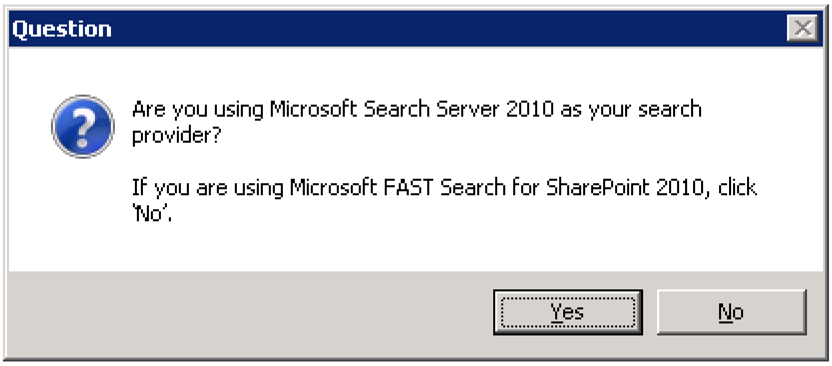
10. Determine the location of the folder that maintains the Ektron query service files.



11. Select the port number to use with the Ektron query service website.

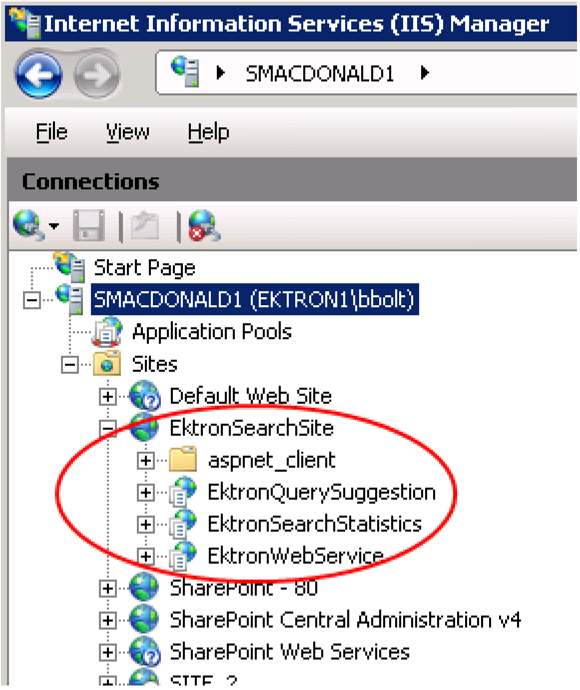


12. The following screen appears. Click **Yes** if you are using Microsoft Search Server 2010. Click **No** if you are using Microsoft FAST Search Server 2010



13. The Ektron files are installed and configured. A message instructs you to run the Search Configuration utility on the Ektron server. For documentation of that process, see *Configuring Microsoft Search Server* on the facing page.

During installation, Ektron creates a new website in IIS to host the search services.



Configuring Microsoft Search Server

This section explains how to configure search using the Express or full version of Microsoft Search Server 2010. The Search Configuration screen lets you manage the Ektron's implementation of Search Server.

IMPORTANT: Ektron`s Search Configuration screen provides access to a few commonly-used features of your search provider. To fully use search capabilities, use the search provider's administration utility.
Also, if you remove or edit Ektron website information using IIS, you must restart the Ektron Windows Service before using the Search Server Configuration screen.

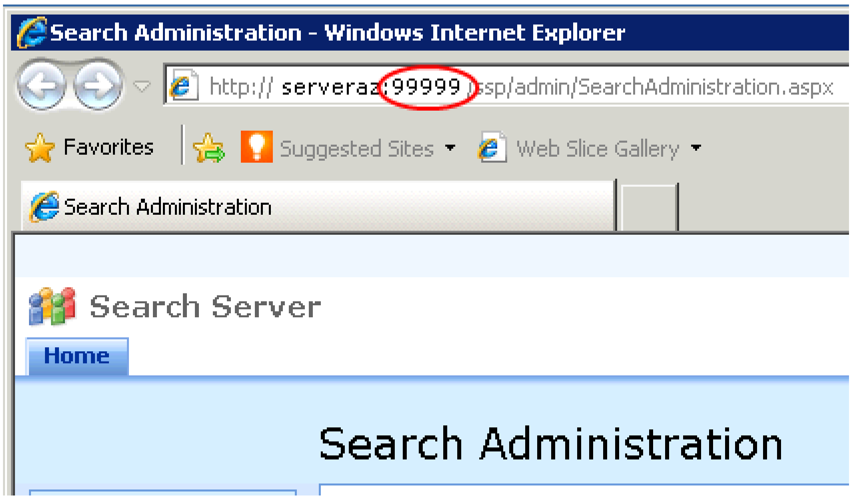
Before you log into the Search Configuration screen

- Is the Ektron Search Server Service started?
- For ports opened between the Ektron server and the search server, are firewalls off?
- Verify that the user entered during the Search Server installation is also the user running these Windows services:
  - SharePoint 2010 Timer
  - SharePoint Server Search 14
  - Ektron Search Server
- Verify that the user entered during the Search Server installation is also the user set in the **Advanced Settings** > **Identity** field running these Application Pools:
  - <GUID> (there may be more than one)
  - SecurityTokenServiceApplicationPool
  - SharePoint Central Administration v4

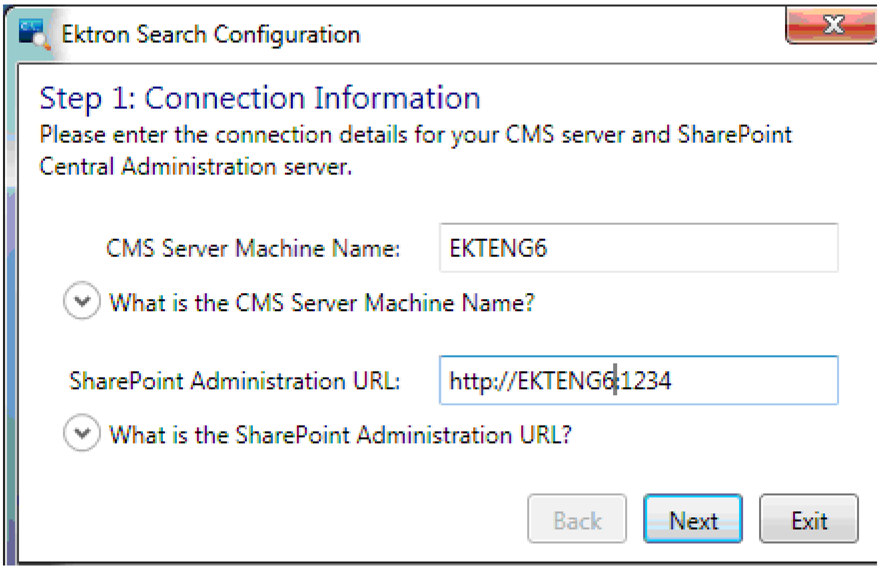
Logging into Ektron's Search Configuration screen

1. Log on to the server hosting Search Server as an administrator.
2. Click the Windows **Start** menu **> All Programs > Microsoft SharePoint 2010 Products > SharePoint 2010 Central Administration**. If you're using Windows 8 or 2012, go to `C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Microsoft SharePoint 2010 Products\SharePoint 2010 Central Administration`.

   The port number appears in the browser address field, following `http://`*`server name`*

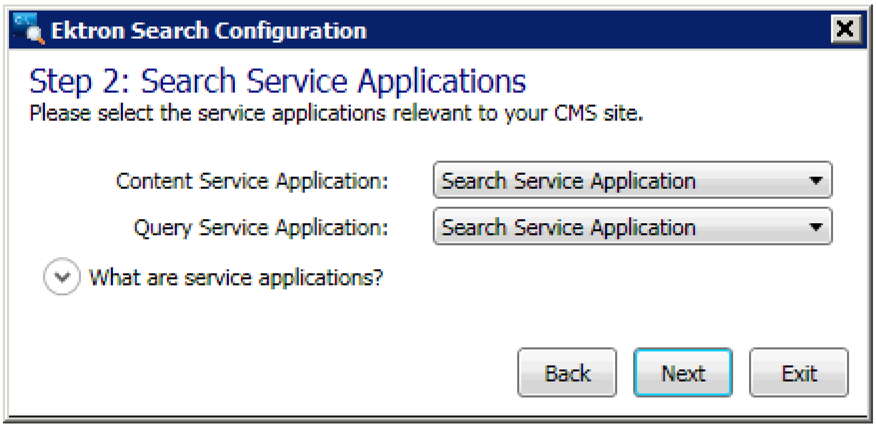


3. Click the Windows **Start** menu **>All Programs > Ektron > CMS400Vxx > Utilities > Search Configuration**. If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Search Config**. Right click and choose **Run as Administrator**.
4. The Connection Information screen appears.



5. In the **CMS Server Machine Name** field, enter the Ektron server.

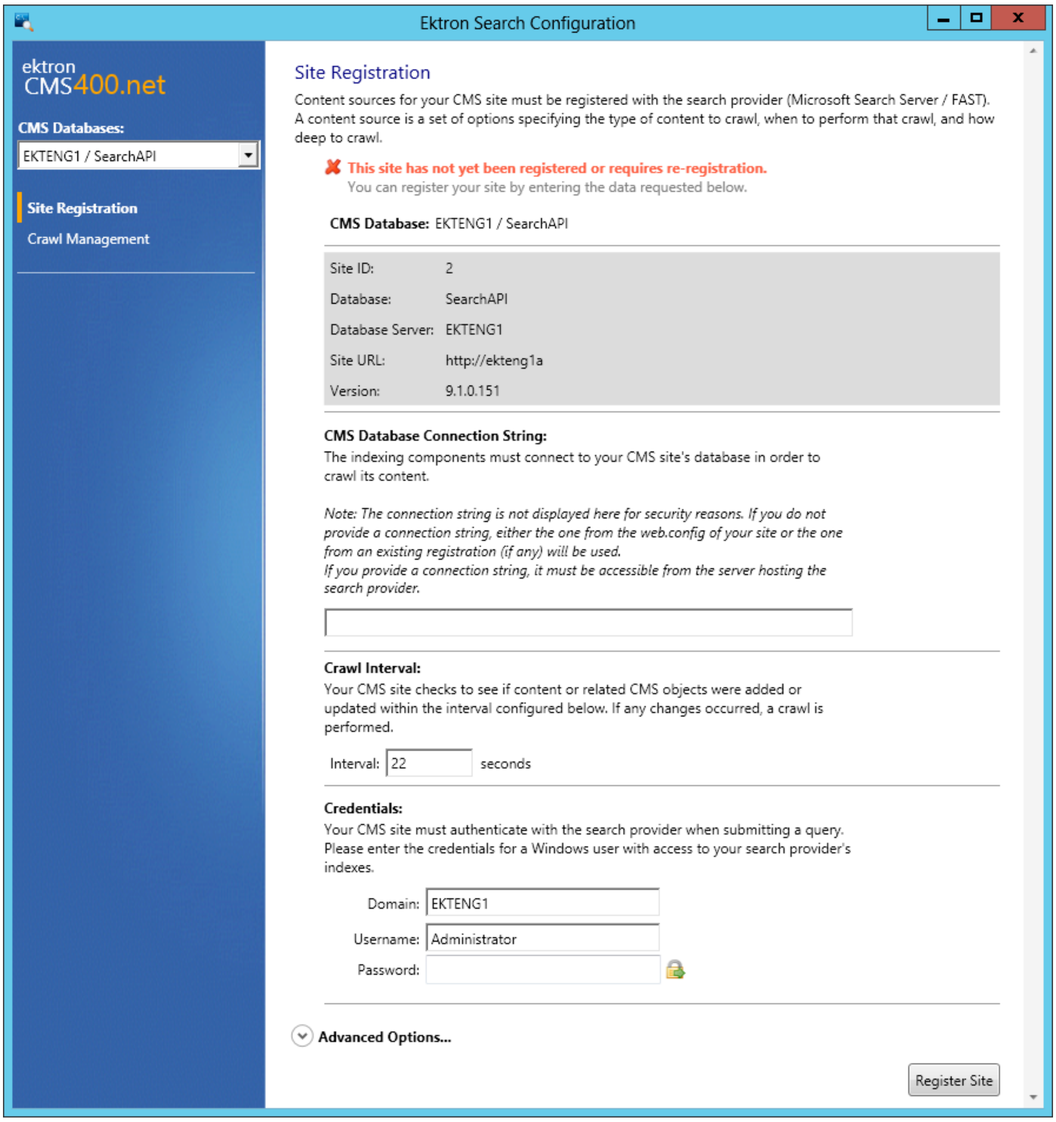
6. In the **SharePoint Administration URL** field, enter **http://**, your search server name, colon(**:**), and port number (see *Part 1: Install Microsoft Search Server 2010* on page 327) For example, `http://MySearchServer:12345`.
7. The Search Service Applications screen appears. Select appropriate Content and Query Service applications. Click **Next**.



Ektron's Search Server Configuration screen appears.

Managing the search configuration

This section explains how to use the Search Configuration screen.



When your Search Server configuration is properly set to connect to your Web server, the following appears on the screen.

- **CMS Database**. Information about Search Server's connections to your website.
  - **Site ID**. The IIS site ID on the Web server.
  - **Database**. The database that Search Server crawls.
  - **Database Server**. The name or IP address of the site's Web server.
  - **Site URL**. The URL visitors use to view the website.
  - **Version**. The website's Ektron version.
- **CMS Database Connection String**. Search Server uses the CMS Database Connection string to connect to your Ektron database. If the database is on the same domain as your search server, set **Integrated Security** to true. Otherwise, set **Integrated Security** to false and enter a SQL username and

password.

You may leave the field blank to use the connection string in your web.config file (for a first-time registration) or a previously-used string (for subsequent registrations).

Or, you can enter a connection string if you wish to override the default connection string chosen by the registration process. Here is a sample connection string that gives search access to a specific SQL user:

```
connectionString="server=Ektron1;database=OnTrek;Integrated
Security=FALSE;user=ABC;pwd=123;"
```

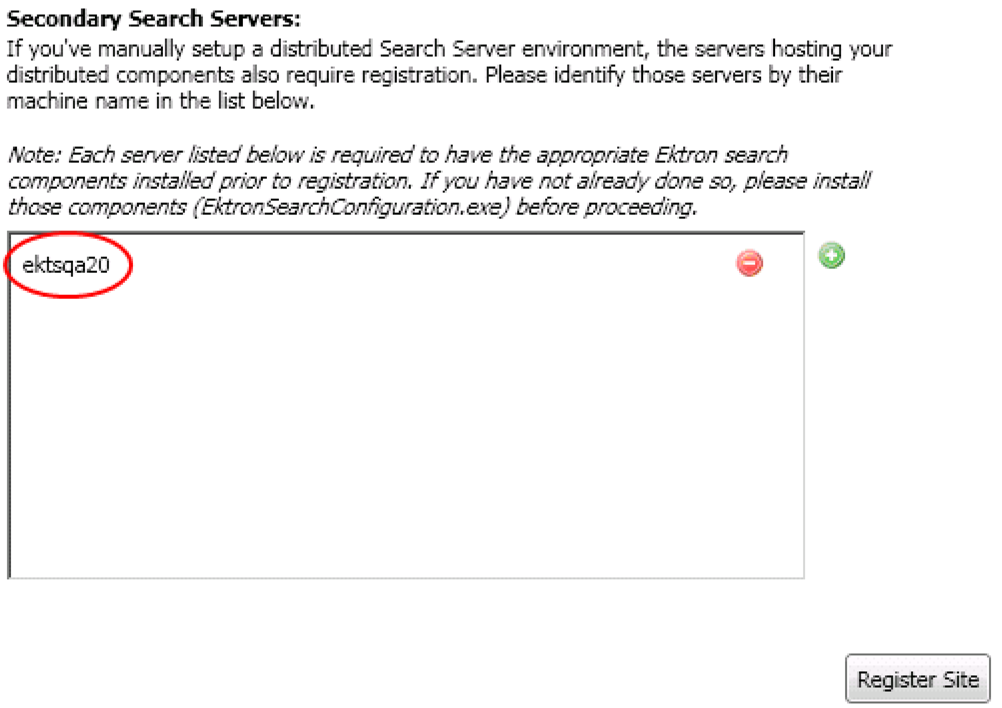
If you manually enter a connection string, the server name and database name must match those values in the web.config's connection string.

BEST PRACTICE

Use SQL authentication rather than Integrated Security. Although Integrated Security is supported, the connection is made in the context of the search service account (Windows user) provided during installation. If this user does not have access to the database, the connection fails.

- **Crawl Interval**. Set the incremental crawl interval.
- **Search Server Credentials**. Enter the domain, username, and password of a user with privileges to connect to Search Server.
- **Advanced Options**
  - **Crawl Tracing**. Use the drop-down to specify a level of detail collected by the crawl log. A separate log is created for each crawl, and is saved to the Data Directory.
  - **Data Directory**. Identify the folder on your Search Server that stores a copy of Ektron content needed by Search Server. The directory also stores protocol logs, which track crawl activity. The default value is `C:\EktronSearchData`.
  - **Secondary Search Servers**. Use this area to add secondary search servers to a load-balanced cluster. You would only do this on a primary server, to identify its secondary servers. See also: *Setting up a load-balanced search with Microsoft Search Server 2010* on page 321
    1. In the **Secondary Search Servers** section, click **Add** ( ).
    2. Insert the name of the secondary servers.

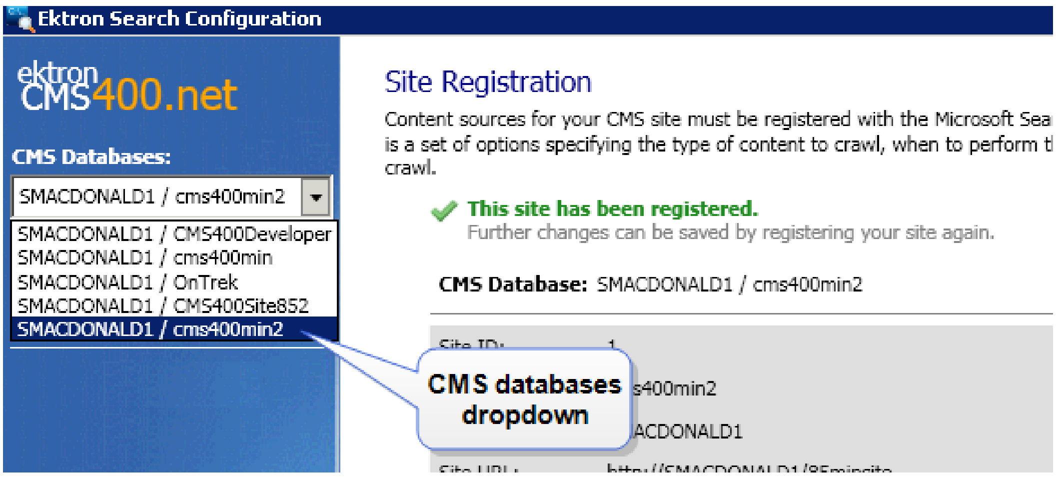
3. Click **Register Site**.



Updating the site registration panel

If you make changes to the Site Registration panel, you need to register the site again.

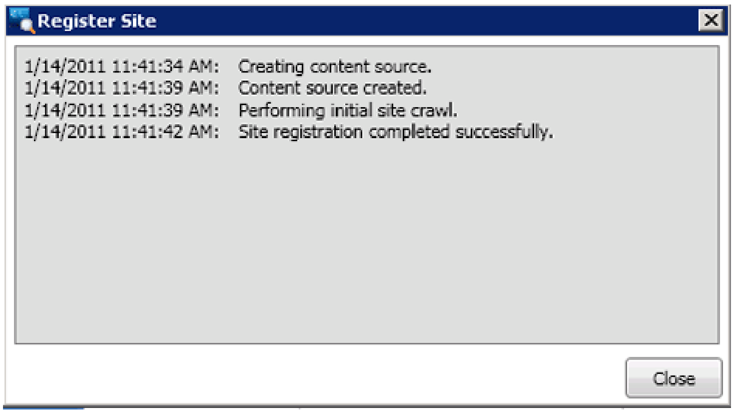
1. Start the Search Configuration Utility. See also: *Logging into Ektron's Search Configuration screen* on page 312.
2. If the Ektron server has several databases, select one from the drop-down.



NOTE: If your Ektron version supports multi-site, the **CMS Databases** drop-down lists the multi-site database only once. The site Url may correspond to the main site or any sub-site (depending on their order in IIS).

3. In the **Search Server Credentials** area, enter the **Domain**, **Username**, and **Password** for your Search Server.

4. Click **Register Site**. A confirmation window appears.
5. Click **Yes**. Progress appears in a window.



6. When finished, click **Close**.

Troubleshooting site registration

Error: Failed to connect to specified Search Server. Please verify that your Search Server URL and port number are valid and try again.

Possible solution:

1. Open the Windows Services control panel.
2. Right-click Ektron Search Server Service.
3. Choose **Properties** from the context menu.
4. Select the **Log On** tab from the properties dialog window.
5. Select the radio button labeled **This account**.
6. Enter the credentials to match those of the SharePoint Server Search 14 (OSearch14) service.
7. Commit your changes.

Optimizing Microsoft Search Server 2010 with Ektron

After installing Microsoft Search Server 2010, you can do several things to optimize Ektron's use of that technology. These actions ensure you are doing everything possible to help site visitors find Ektron content.

- You want Ektron to search text within Visio files. See *Installing the Visio IFilter* on page 346.
- You want Ektron to search aliased pages, and their extension is not one of Search Server's standard file types. See *Defining unusual file extensions used in aliasing* on the next page.
- The crawl is taking a long time and your website has over 1 gigabyte of assets, and over 100 PDFs. Install Foxit PDF Filter from Foxit® PDF IFilter - Server.

  After installing, update the registry:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Office
Server\14.0\Search\Setup\Filters\.pdf] "Extension"=".pdf"
"FileTypeBucket"=dword:00000001
"MimeTypes"="application/pdf"
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\
Office Server\14.0\Search\Setup\ContentIndexCommon\Filters\Extension\.pdf]
@="{987f8d1a-26e6-4554-b007-6b20e2680632}"
```

See also: Index and Search PDF Files in SharePoint Server 2010.

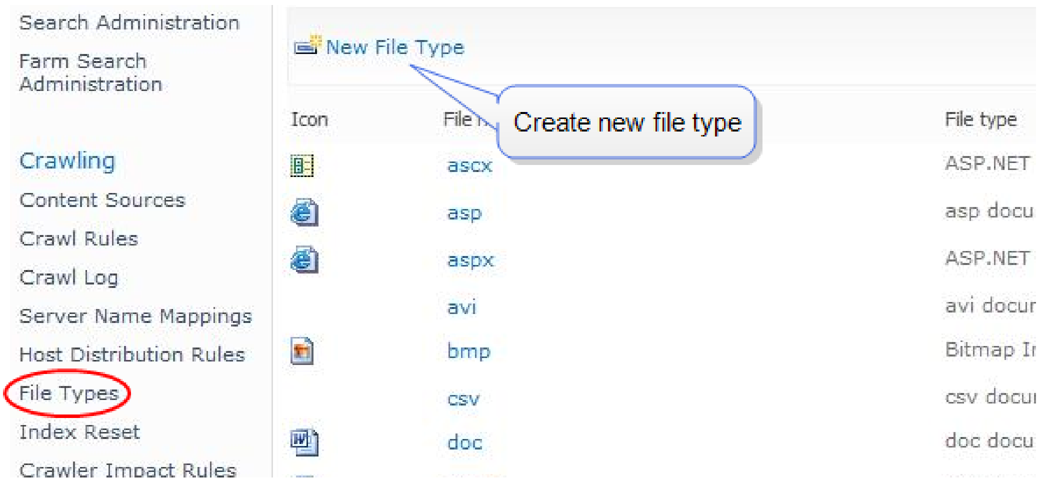
- Either the crawl or the response time for search queries is too slow. See *Setting up a load-balanced search with Microsoft Search Server 2010* on page 321.

Defining unusual file extensions used in aliasing

Ektron's Aliasing feature lets you create human-readable URLs, such as `support.episerver.com`. The URL Aliasing Configuration screenlets you define file types that may be applied to aliased pages. See also: *Creating user-friendly URLs with aliasing* on page 1293

If you define an aliasing file type that is not on Search Server's file type list, you must add the missing type to Search Server. Follow these steps to accomplish that.

1. Go to Windows **Start** button **> All Programs > Microsoft Search Server > Search Administration**. If you're using Windows 8 or 2012, press the **Windows** key ( ) **/Q** then enter **Search Administration**.
2. Click **File Types** (as illustrated in the following figure).



3. Review the Search Server's file type list.
4. If you do not see all extensions defined on the URL Aliasing Configuration screen, click **New File Type** (shown in the previous image), then add the missing file types.

Windows services used by Microsoft Search Server 2010

Ektron's search feature uses several Windows services to monitor database updates, determine if a new crawl needs to be launched, and perform the database crawl. This section explains the operation of these services.

- **Ektron Search Server Service**
  - Runs on search server and Ektron site server.
  - Responsible for communicating between servers. It triggers search tasks such as crawling, synonym sets, and so on.
  - Whenever content is added, updated or deleted, this service changes the Search Status screen's **Incremental Crawl Request Pending** flag to **Yes**. As a result, the next time the crawl interval is reached, this service launches the Ektron CMS File Helper Service. See also: *Using Microsoft Search Server features* on page 335
- **Ektron ProtocolHandler File Helper Service**
  - Uses `protocolhandler.dll` file
  - Runs on Ektron server during a crawl
  - Gets content updates from database server and feeds them to Search Server
- **Ektron CMSFileHelper Service**
  - Runs on Ektron site server
  - Indexes assets and sends them to Ektron ProtocolHandler File Helper Service
- **Ektron Query Service**. Passes search term from Ektron server to Microsoft Search Server 2010 and returns results

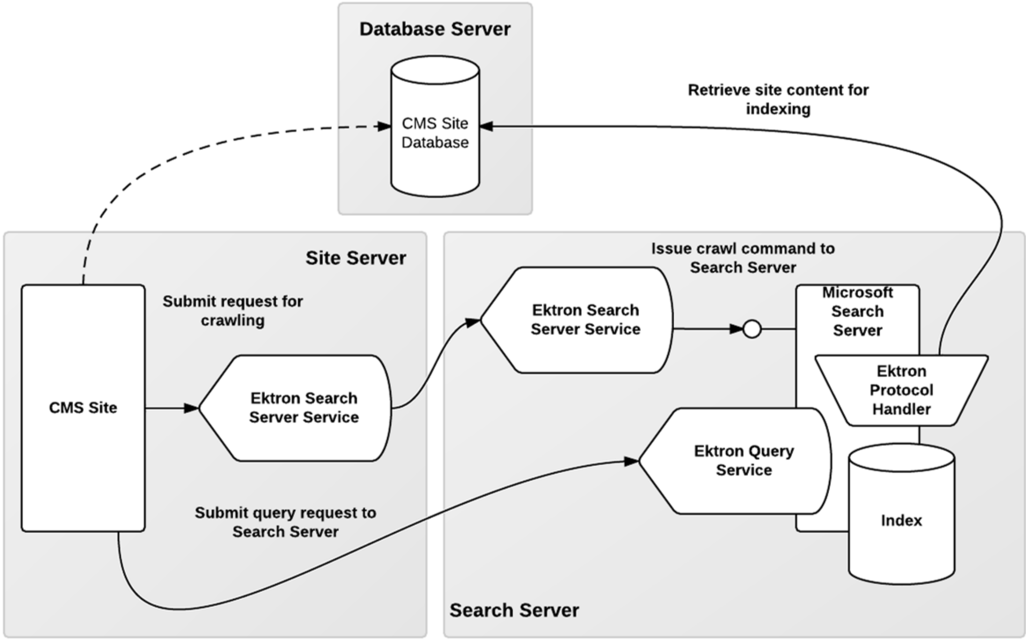
How services process content updates

1. As Ektron content is added, changed or deleted, the Ektron database is updated.

   NOTE: To learn about which events trigger a crawl, see *Full vs. incremental crawls* on page 368.

2. If the change warrants a full crawl, it is launched immediately.
3. If the change warrants an incremental crawl, the *Ektron Search Server Service* updates the flag that determines if a crawl needs to be started to **Yes**. You can view this flag on the Search Status screen's **Incremental Crawl Request Pending** field. When the crawl interval expires, the *Ektron CMS File Helper Service* sends content updates to the *Ektron Protocol Handler Service.*

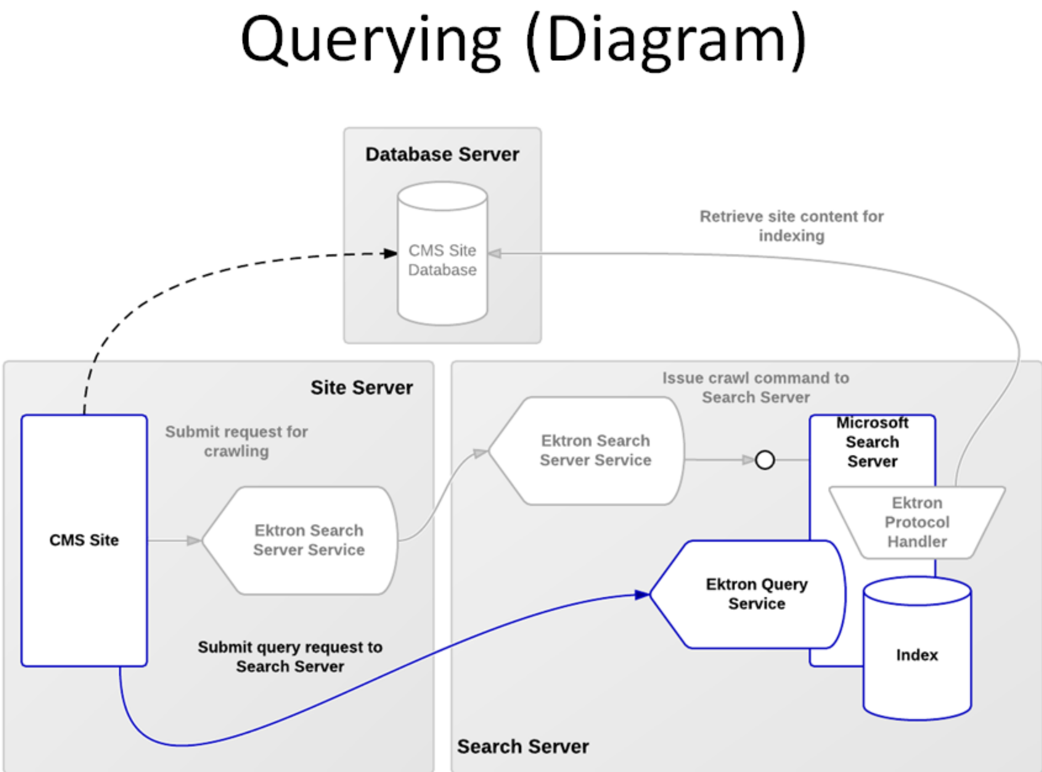
4. The *Ektron Protocol Handler Service* feeds the content updates to Search Server.



How queries are processed

Querying is the process by which Ektron retrieves content from the search index.

The Ektron site uses Ektron's Query Service to connect to Microsoft Search Server 2010.



Default settings for managed properties created by Ektron

When Ektron content is crawled by Microsoft Search Server 2010, the following default values are set for these metadata properties. You can edit the values using the Microsoft Search Server 2010 Central Administration console.

- Queryable. True
- StemmingEnabled. False
- RefinementEnabled. False
- MergeCrawledProperties. True
- SubstringEnabled. False
- DeleteDisallowed. False
- MappingDisallowed. False
- MaxIndexSize. 1024
- MaxResultSize. 64
- DecimalPlaces. 10
- SortableType. SortableEnabled
- SummaryType. Static

Setting up a load-balanced search with Microsoft Search Server 2010

You can use load balancing to distribute your search's workload across multiple servers. Load balancing improves search's performance by significantly decreasing the time to complete search crawls and process search queries (especially when a site is under a heavy load).

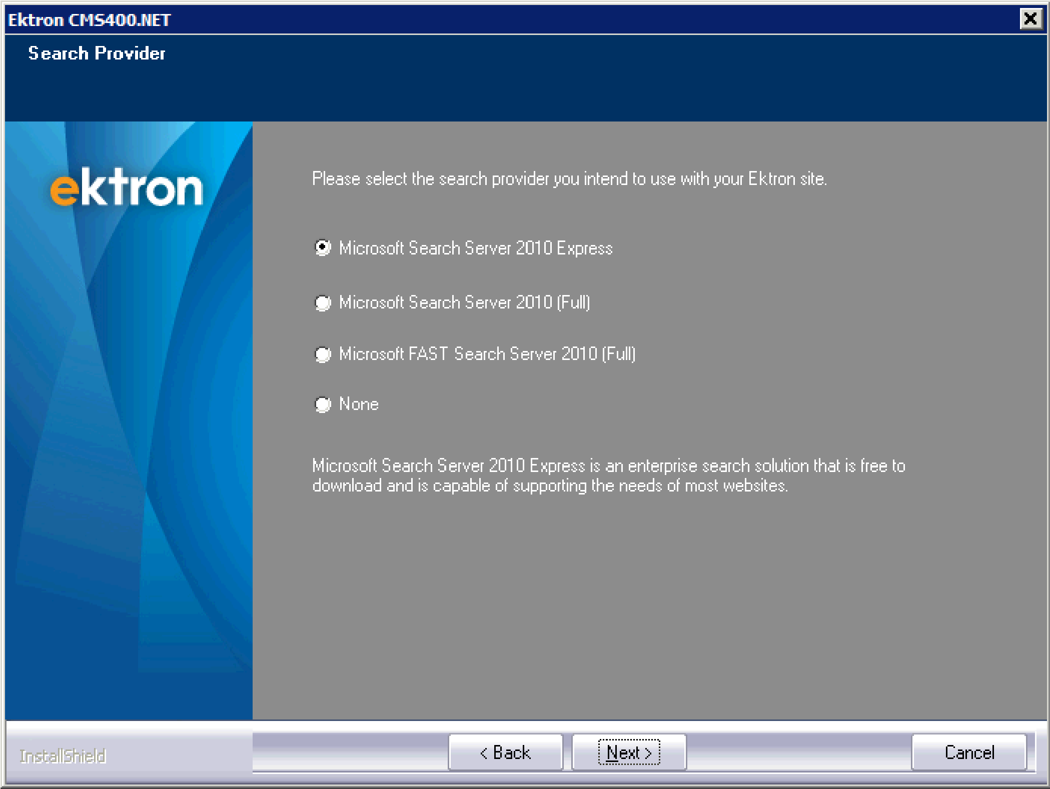
This section describes 2 scenarios for setting up Load Balanced search.

- You already installed Microsoft Search Server 2010 on one server, and now want to bring additional servers into the cluster—see *Adding a site to a server that hosts Microsoft Search Server 2010 and Ektron* below
- You have not yet installed Microsoft Search Server 2010—see *Installing Microsoft Search Server 2010 to a primary server in a load balance cluster* on page 323

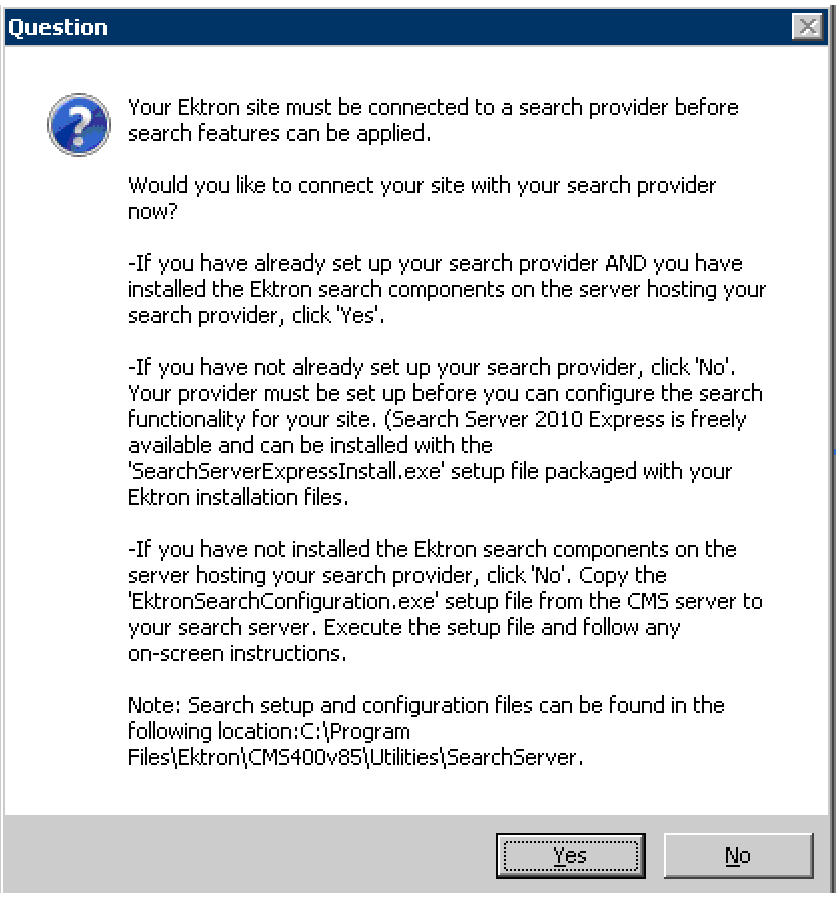
Adding a site to a server that hosts Microsoft Search Server 2010 and Ektron

1. On the Ektron server, run the Site Setup utility: Windows **Start** button **> Programs > Ektron >*version*> Utilities > CMS400 Site Setup**. If you're using Windows 8 or 2012, press the **Windows** key ( ) **/Q** then enter **CMS400 Site Setup**.
   See also: *Installing a site* on page 17

2. During the Ektron installation, you are prompted to choose a search provider. Choose Microsoft Search Server 2010 Full.



3. The setup continues as normal. After the installation is complete, the following dialog appears. Click **Yes**.



The Search Configuration screen appears. For documentation of that process, see *Managing the search configuration* on page 313

Installing Microsoft Search Server 2010 to a primary server in a load balance cluster

Use this procedure if you have not installed Microsoft Search Server 2010 on the *primary* server in a Load Balance cluster.

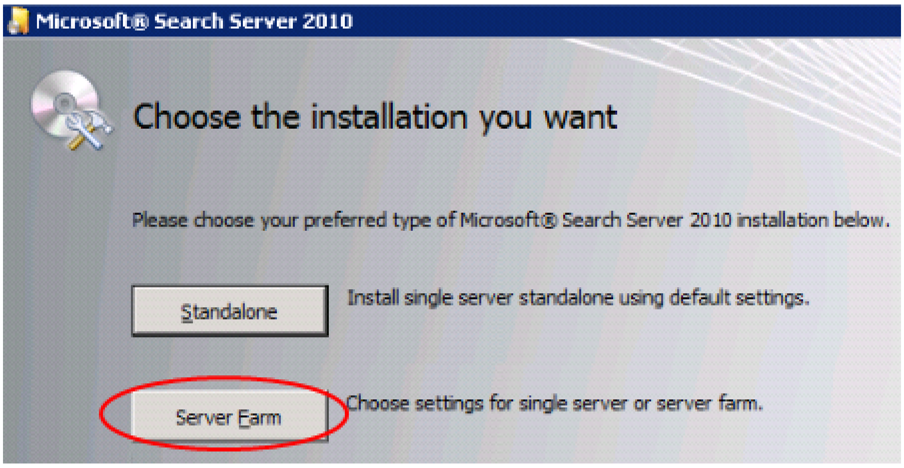
PREREQUISITE

- See Hardware and software requirements (Search Server 2010).
- A SQL user with the sysadmin role

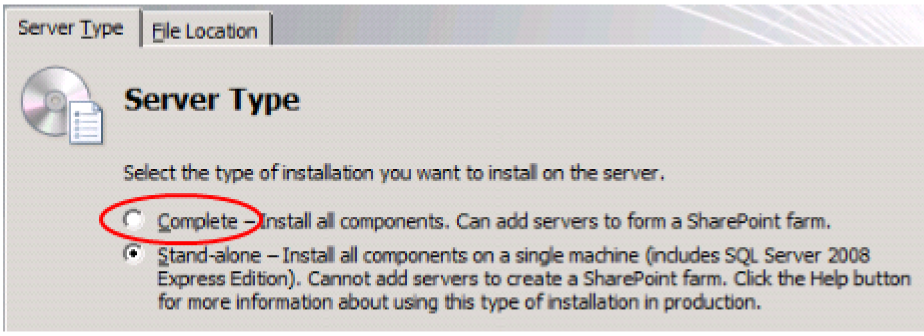
1. Obtain, download, and install Microsoft Search Server 2010.

   NOTE: You may be informed that you need to run the Products Preparation Tool before beginning the installation.

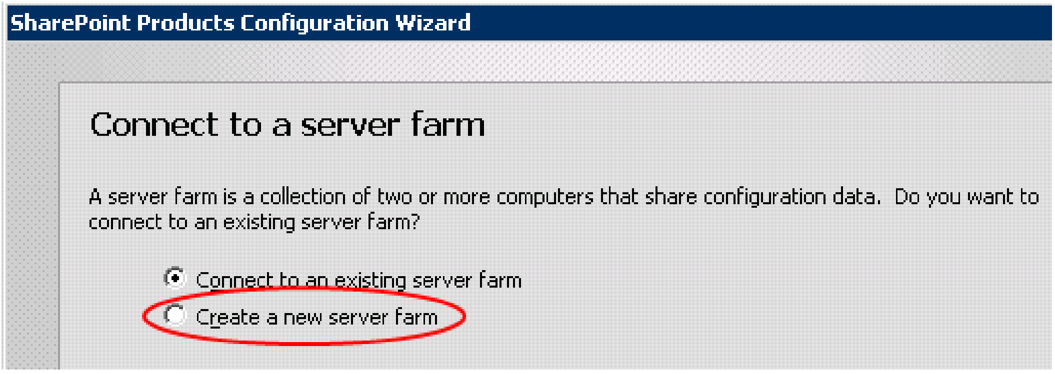
2. Choose **Server Farm** when you are prompted for an installation type.



3. On the **Server Type** tab, select **Complete** then click **Install Now**. Search server is installed.

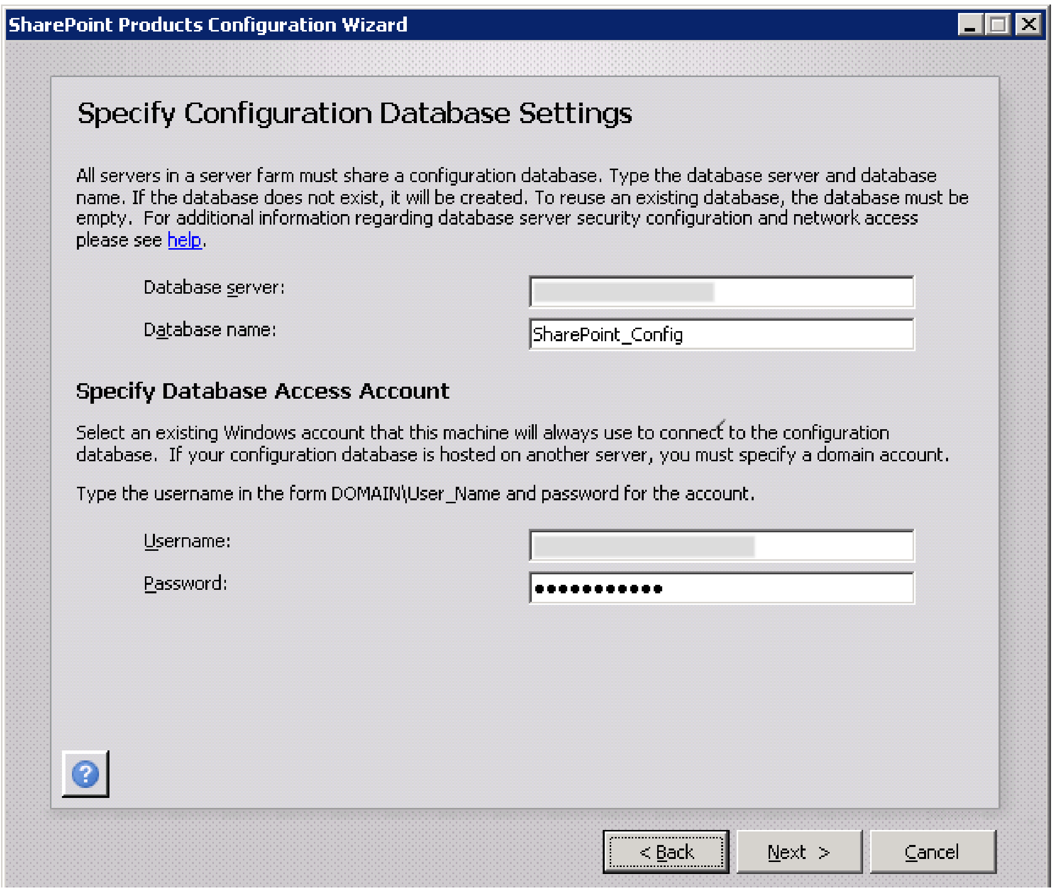


4. Run the Configuration Wizard, which lets you set up Microsoft Search Server 2010. The SharePoint Configuration Wizard is launched.
5. Choose **Create a new server farm** on the Connect to a server farm screen.

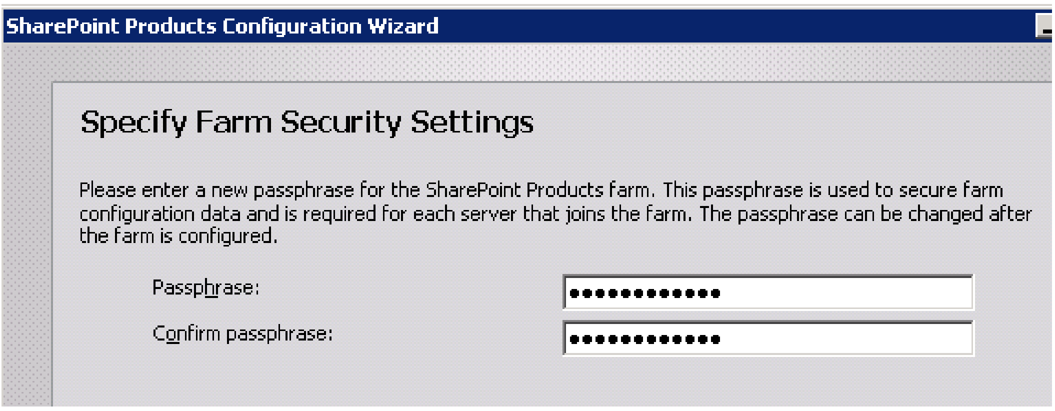


6. Specify a database server, name, and user name and password for access to the account.
   a. For **Database name**, accept the default of **SharePoint_Config**.
   b. Enter a **Username** and **Password** of a SQL user with the sysadmin role. Microsoft Search Server 2010 uses them to access your Ektron database.

Click **Next**.



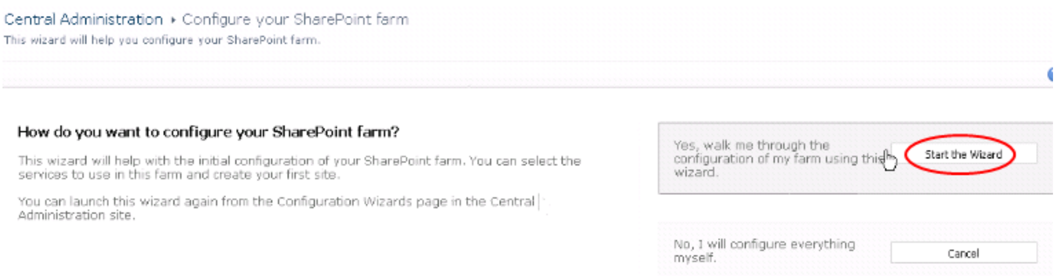
7. Enter a password for access to the server farm.



8. Enter a port number and Security settings. You may enter any open http port. For Security Settings, choose **NTLM**.

9. Click **OK** to confirm the information you entered.
10. Click **Finish** to launch the SharePoint Central Administration site to allow for additional configuration and provisioning. Noted that the first installation in a farm does not create a Web application or provision a site. See also: SharePoint 2010 Central Administration.

    The following screen appears within SharePoint.



11. Click **Start the Wizard** and complete the wizard.

Adding servers to a load balance cluster

PREREQUISITE

2 servers running Microsoft Search Server 2010; the servers *cannot* use Search Server Express.

See Hardware and software requirements (Search Server 2010)

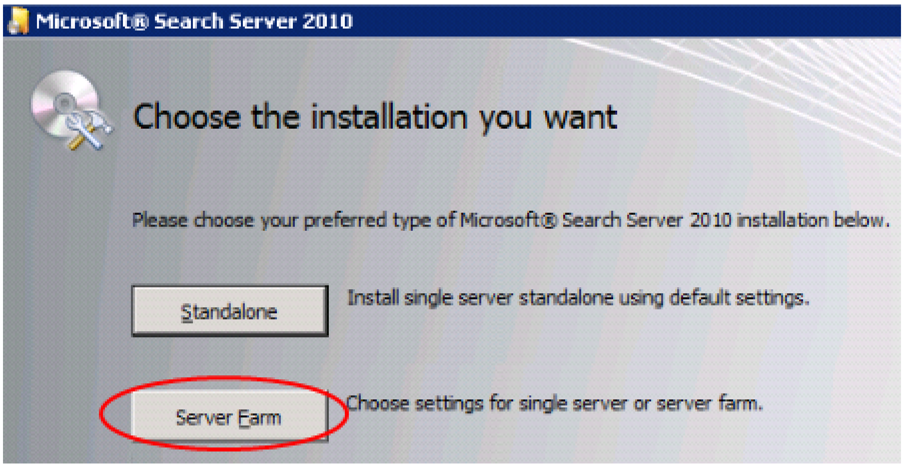
When setting up search load balancing, you need to decide which server is the primary one, and which is/are the secondary one(s). This procedure describes how to set up a single secondary server in a load balanced cluster. To set up additional secondary servers, follow these instructions for each secondary server. See also: *Installing Microsoft Search Server 2010 to a primary server in a load balance cluster* on page 323

Part 1: Install Microsoft Search Server 2010

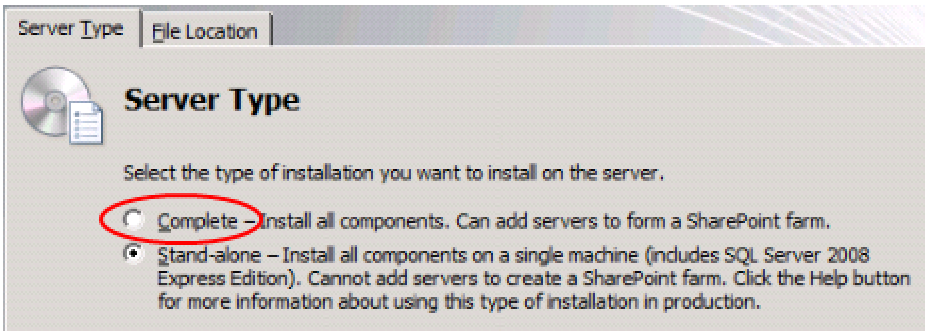
1. Obtain, download, and begin to install Microsoft Search Server 2010.

   NOTE: You may be informed that you need to run the Products Preparation Tool before beginning the installation.

2. For an installation type, choose **Server Farm**.

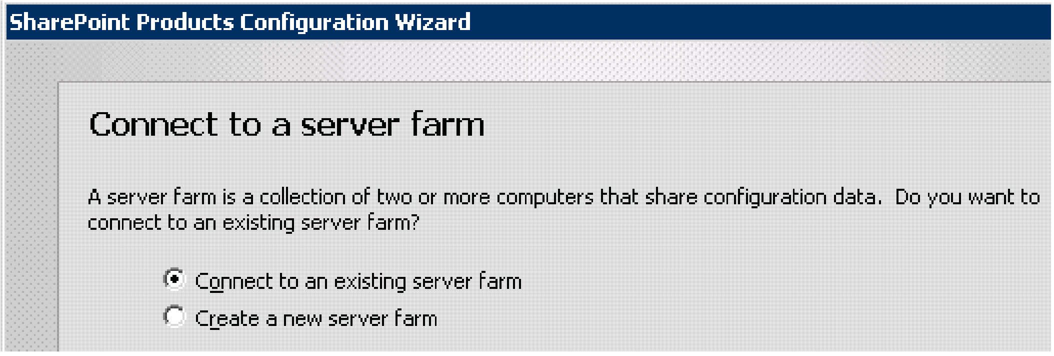


3. On the **Server Type** tab, select **Complete** then click **Install Now**.

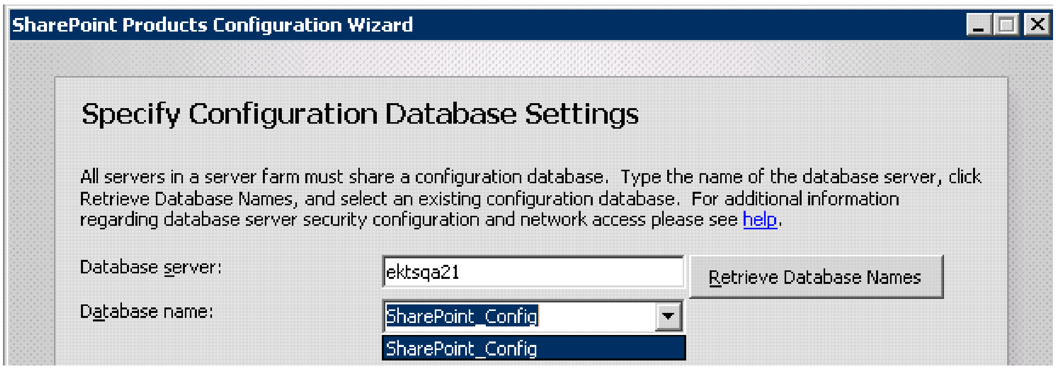


   Search server is installed.

4. Run the Configuration Wizard, which lets you set up Microsoft Search Server 2010. The SharePoint Configuration Wizard is launched.
5. On the Connect to a server farm screen, choose **Connect to an existing server farm**.



6. On the Specify Configuration Database Settings screen, in the **Database server** field, enter the primary server in the load balance cluster.
7. Click **Retrieve Database Names**. The primary server's database appears in the **Database name** field.

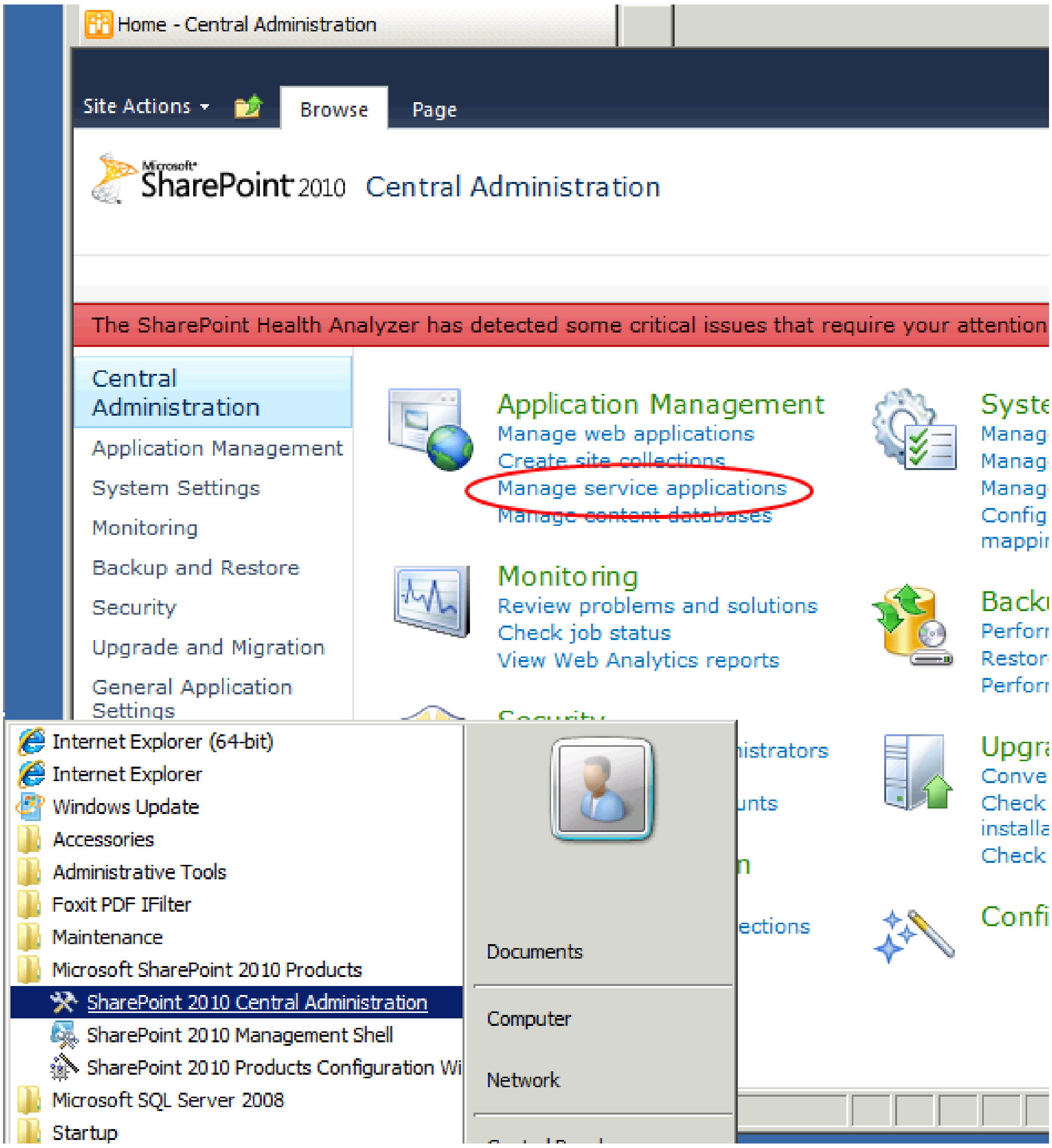


8. Enter the same passphrase that you entered when setting up the primary server. See also: *Installing Microsoft Search Server 2010 to a primary server in a load balance cluster* on page 323
9. Complete the remaining prompts; the wizard uses information to configure Microsoft Search Server 2010.

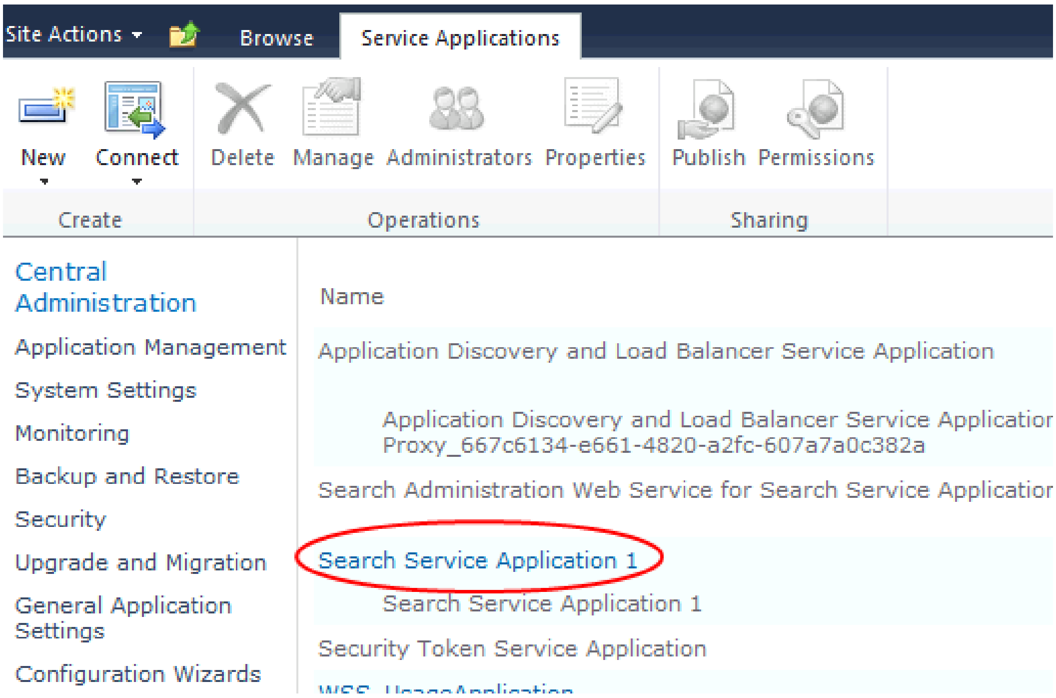
Part 2: Set up query components

In this procedure, you create 2 query components. One defines this secondary server as a failover server, which takes over processing if the primary server goes offline. The second query component distributes the processing of search queries among search servers.

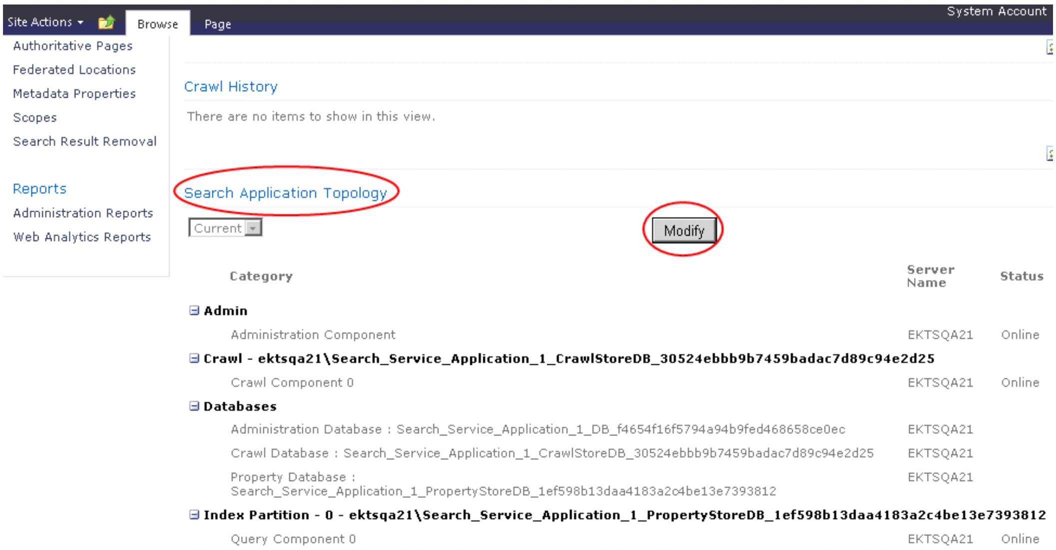
1. Open Microsoft Search Server 2010's Central Administration screen.



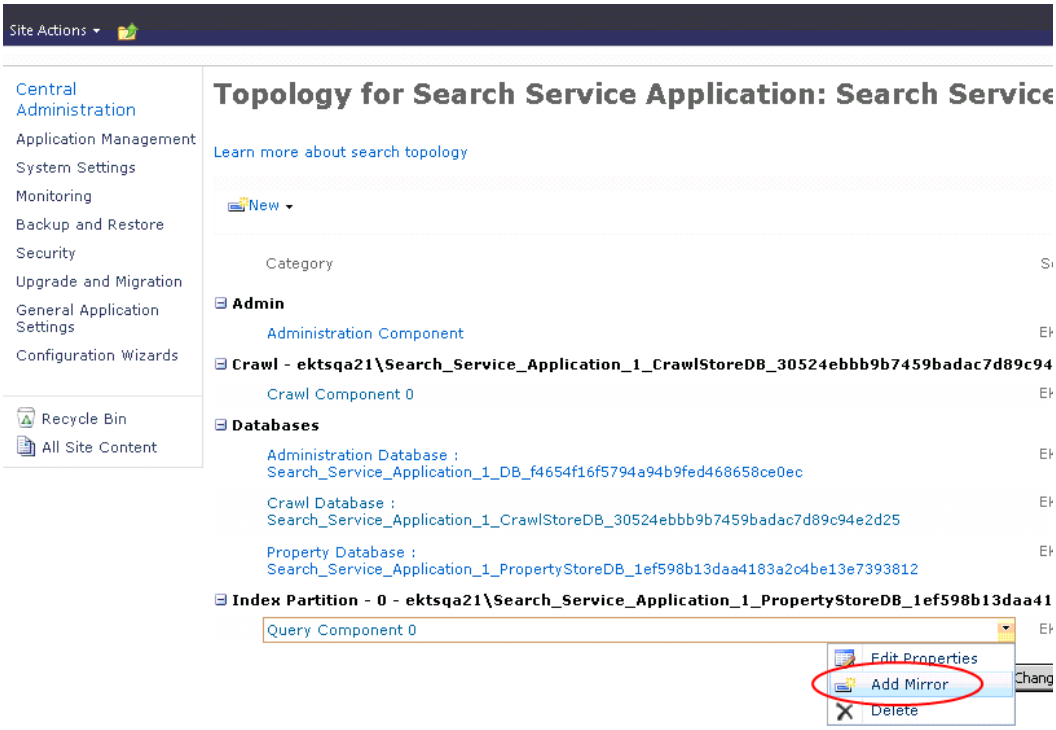
2. Click **Manage service applications** (highlighted). The Service Applications screen appears.
3. Click **Search Service Application 1**. The Search Service Application 1: Search Administration screen appears.



4. Scroll down to **Search Application Topology** and click **Modify** (highlighted).



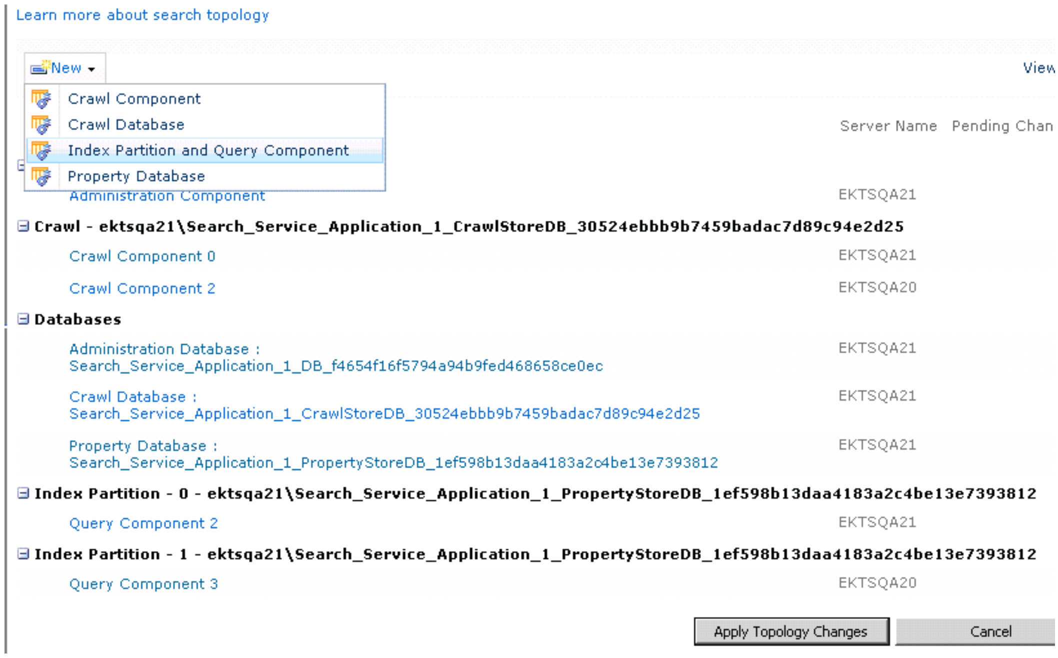
5. To set up the failover server, under **Index partition 0**, click **Query Component**, then **Add Mirror**.



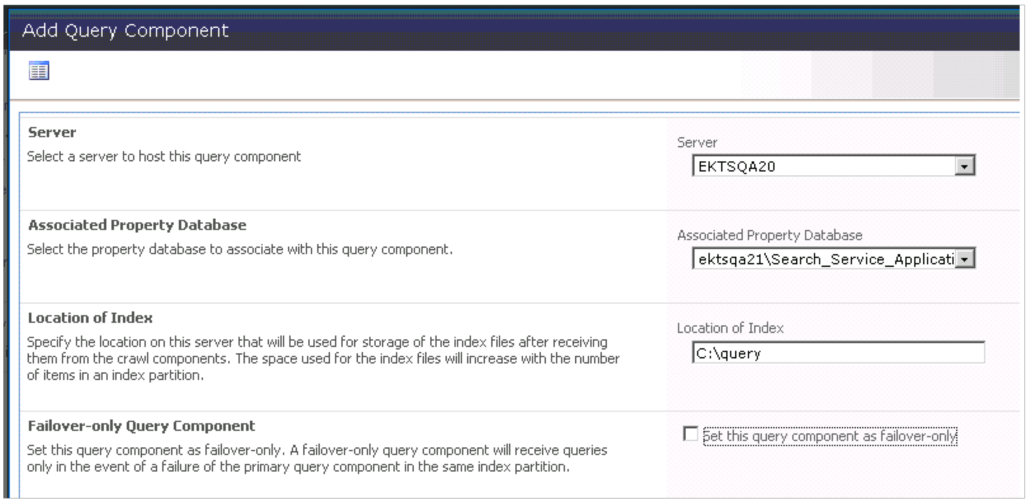
6. Use the following information to complete the Add Mirror Query Component screen.
   - **Server**. Enter the server to which you are currently signed on.
   - **Associated Property database**. Select the primary server and the database you specified in Step 4.
   - **Location of Index**. Accept the default.
   - **Failover-only Query Component**. Ektron recommends checking this box. If you do, and the primary search server goes offline, the secondary server processes all search queries until the primary server returns.
7. The Search Service Application 1: Search Administration screen reappears. Click **Apply Topology Changes**.

   The secondary server now appears under **Index Partition** (highlighted).

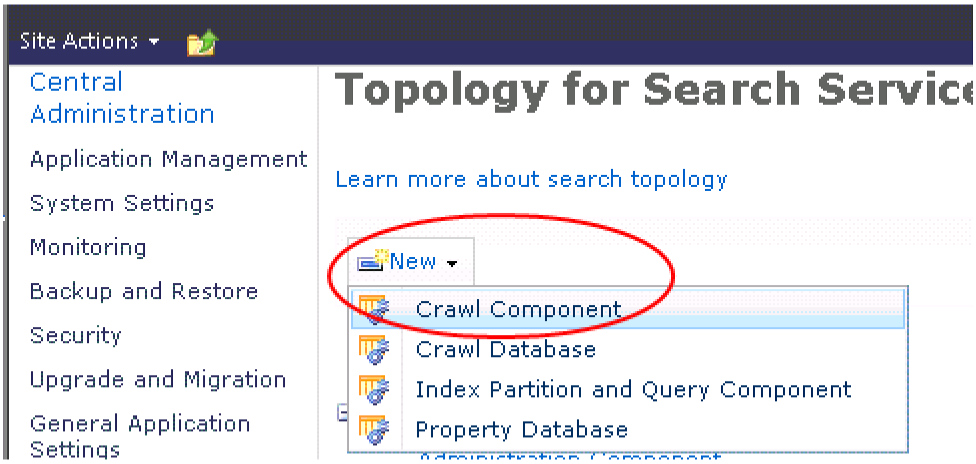
8. Set up a query component to distribute the workload of handling search queries. To do that, from the Search Application Topology area, click **New > Index Partition and Query Component**.



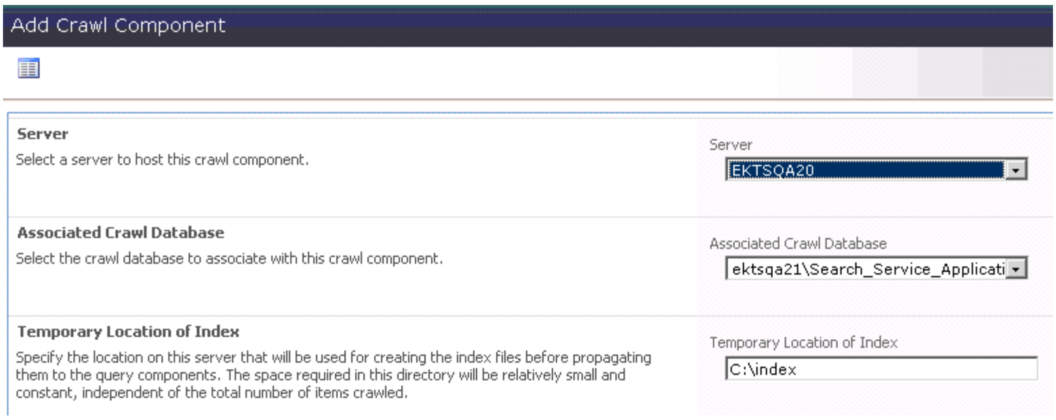
9. The Add Query Component Screen appears. Complete *Part 2: Set up query components* on page 328, but this time do not check the **Failover-only Query Component** box.



10. The Search Service Application 1: Search Administration screen reappears. Click **Apply Topology Changes**.
11. To do that, from the Search Application Topology area, click **New > Crawl Component**.



12. Specify the fields when the Add Crawl Component screen appears.

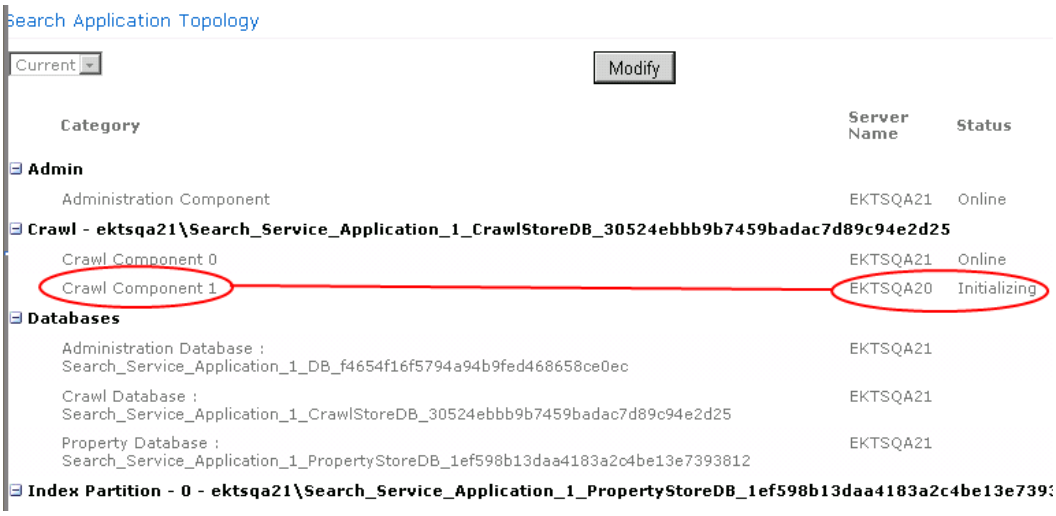


- **Server**. Enter the server to which you are currently signed on.
- **Associated Crawl database**. Select the primary server and the database

you specified in Step 4.

- **Temporary Location of Index**. Accept the default.

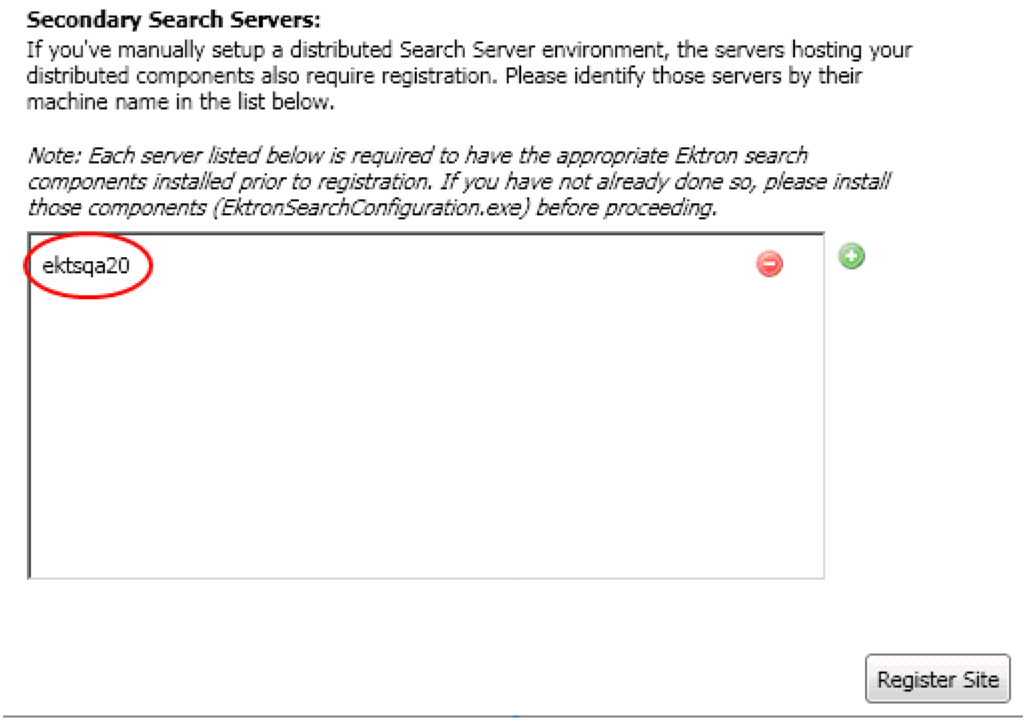
13. The secondary server appears under **Crawl** (highlighted).



14. Close Search Server Administration.

NOTE: You only need to follow the next 2 steps once. So, if you are setting up multiple secondary servers, you can skip these 2 steps after setting up the first one.

15. On the Ektron server, copy `C:\Program Files (x86)\Ektron\CMS400` *`versionnumber`*`\Utilities\SearchServer\EktronSearchConfiguration.exe`.
16. On both search servers, paste `EktronSearchConfiguration.exe` and run it.
17. On your Ektron Web server, open the Search Configuration screen, available from `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities\SearchServer\Ektron.Cms.Search.Config.UI.exe`.
18. Click **Advanced Options**.
19. In the **Secondary Search Servers** section, click **Add** ( ) then insert the name of the secondary server(s).



20. Click **Register Site**.

Using Microsoft Search Server features

NOTE: This section applies to Microsoft search servers. Exceptions within Search Server versions (including FAST) are noted. For information about Solr search servers, see *Using Solr search* on page 204.

Visitors choose search to go your website more frequently than any other navigation option. Search usage often exceeds links, menus, or site maps. This is especially true when visitors have a term or phrase in mind. Advanced visitors may narrow down search results by adding special terms or query strings.

As an administrator or developer, you want to provide the optimum search results quickly, with the most relevant results near the top. To accomplish this, adjust the search engine results by setting *Using synonym sets* on page 348, Suggested Results, and keywords.

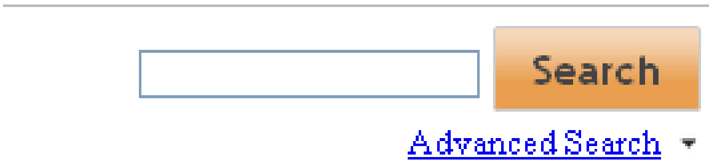
In some cases, you can anticipate what the visitor is looking for and provide a convenient way to display results with the click of a button or image. To do this, developers can create automated queries that provide the unique combination of keywords and terms that provide results that are highly targeted to the visitor's quest. These queries are found in the code-behind and use the search API.

The website search should provide a simple user interface and relevant results.

Basic versus advanced website search

To provide your website with search capabilities, your developer places Site Search server controls on a page. See also: SiteSearch Templated Server Controls

The search may look like the following image, although your developer has total control over its appearance.



Basic search

NOTE: You can designate a folder outside of Ektron to be searched. For more information, see *Including external files in a search* on page 359.

The Basic Search finds content that satisfies these criteria.

- Published. Changes checked in but not published are not accessible.

  NOTE: New and updated content is available only after the next crawl completes. See also: *Managing the search crawl* on page 368.

- Active. Also, expired content appears if the archive option is **Archive and remain on Site.**
- Content's **Content Searchable** box is checked.
- Public. Private content is only available to those with permission to view it, such as membership users after logging in. See also: *Making content private* on page 637.

  IMPORTANT: Private content is hidden from search results if your search provider is Microsoft Search Server 2010. It is not hidden if you are using another search provider.

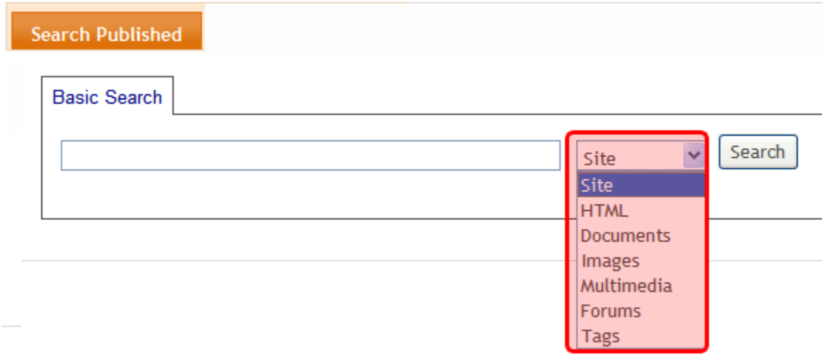
- Library items are searchable by title and file name. To make the content of non-image files (for example Word documents) searchable, add them as assets. See also: *Working with assets in the Document Management System* on page 649.
- Language
  - Website search—Content in selected site language appears unless the developer sets the language via Advanced Query Text or API
  - Workarea search—Content in the Workarea's current language appears (user selects Workarea language via the **View > Language** menu option)
- Search text is contained in title or content
- If the search text is more than one term, all terms must be found. So, multiple terms have an AND relationship.

NOTE: A user may force an OR relationship by entering OR between search terms, or using the Advanced Search's **any of these words** option. Developers may create an OR-based search using the API property `ImplicitAnd`.

IMPORTANT: If you have a multi-site configuration, a search conducted from *any* site returns results from *all* sites. To limit search to single site, use a syntax like this:

```
AdvancedQueryText=' AND ( "parentsiteid"=0 OR "parentsiteid"=161 ) '
```

- Satisfies content type criterion selected on screen, if chosen.



NOTE: The search does not find documents inside compressed files, such as *.zip, *.cab, and so on.

The following list explains the values in the **Advanced Search** tab's **Content Type** field.

- **Site**
  - Content from all options.
  - Any document file type defined in the Asset Server Setup screen.

    NOTE: You can find these files using **Site** as the content type criterion, but not using **Documents**.
- **HTML**
  - HTML
  - HTML form (but not data submitted on form)
  - XML Smart Form (field values but not field labels)
  - Blog entries (not comments)
  - Web calendar events
- **Documents**
  - MS Office documents (includes Powerpoint, Excel)

    NOTE: To search Visio documents, you must install the Visio IFilter. See also: *Installing the Visio IFilter* on page 346

    - Document properties (categories, comments, and so on)
  - PDF file

> **IMPORTANT:** The search only finds text in the first 16 MB of any PDF document. So, for example, if the file is 32 MB, only the first half of the text is searchable.

    - .txt file
- **Images added as assets and through the library**
    - Search text in file name (including file type extension) and summary.

    > **NOTE:** If you assign several images to an eCommerce catalog entry, and want to allow searching for that catalog entry by image file name, the search only works with the *first* image assigned to the catalog entry.

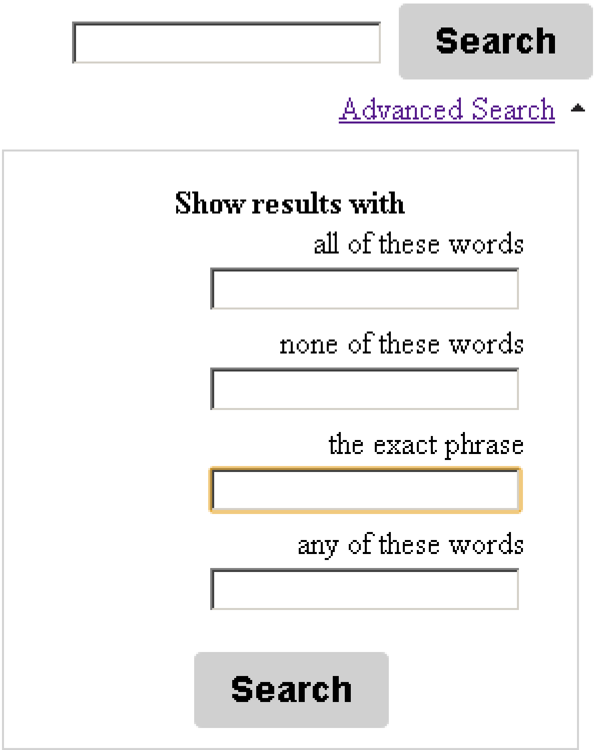
- **Multimedia** (Flash, .mp3, and so on)
    - Search text in file name (including file type extension) or summary
- **Forums**
    - Forum posts and replies
- **Tags**
    - Tags applied to content and library items See also: *Tagging content, library items, users, and groups with keywords* on page 1596
- **PageBuilder Pages**
    - PageBuilder page: properties (summary, metadata, and so on) and content within the page's widgets.

    > **IMPORTANT:** If a content block is added to a PageBuilder page, the search only returns its appearance on the PageBuilder page. The search does not find such content on a non-PageBuilder page.

Advanced search

The Advanced Search uses the same search criteria as the Basic Search. (See *Basic search* on page 336). The differences are additional options and the fact that you cannot use queries.

> **NOTE:** The advanced search screen may look like the following image, although your developer has total control over its appearance."



- **all of these words**. Web page includes all submitted terms; their position on the page does not matter.
- **none of these words**. Web page does not contain the submitted term
- **the exact phrase**. Web page must include the exact phrase. For example, if you enter **Ektron healthcare**, a page with the term **Ektron provides healthcare** is not found because it is not an exact match.
- **any of these words**. Web page includes any submitted term

Managing search queries

Formulating search queries

NOTE: Following text extracted from Free-Text Keyword Queries.

To search for any word or phrase on a website, enter the word into the field and click **Search** to begin.

The following rules apply to formulating queries:

- By default, multiple words have an "and" relationship. So, the search term **calendar server** returns pages that have both words.
    - To find pages with *either* term, use the OR operator. For example, **calendar OR server** returns pages that have either word.

IMPORTANT: You must capitalize Boolean operators, such as **AND**.

- To find pages with several terms *in exact order* with no intervening words, use quotes. For example, "**calendar server**" returns pages that have both terms in that order.
- To find pages that have one term without another, use the NOT operator. For example, For example, **calendar NOT server** returns pages that have **calendar** and do not have **server**.
- To find several terms close together, use NEAR. For example, **treatment NEAR immunoglobulin** finds pages with the word "treatment" near the word "immunoglobulin."

IMPORTANT: You cannot use the NEAR operator with Solr search provider.

The NEAR operator is like AND because it finds pages that include both search words. However, the rank assigned by NEAR depends on the proximity of the search words. A page with search terms closer together has a higher rank than a page where they are farther apart.

NOTE: The NEAR operator can be applied only to words or phrases.

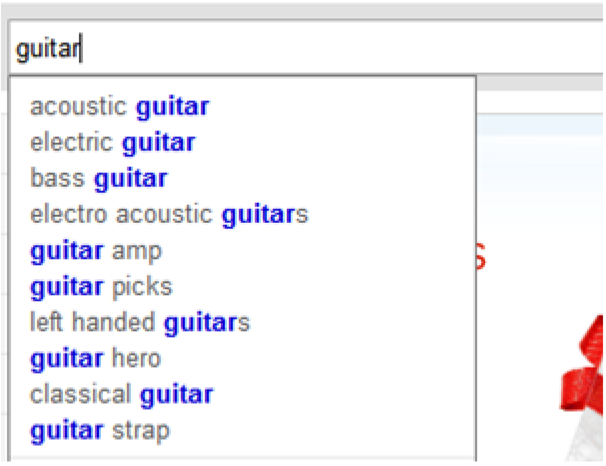
- Search terms are case-*in*sensitive.
- Punctuation marks, such as period (.) and comma (,), are ignored by the search.
- Operators (<, >, and &) are ignored by a search. Also, the search does not find text within angle brackets, for example `<Ektron>`.
- To include in a query special characters that are not operators, such as +, |, ^, #, @, $, (,), enclose the query in quotation marks (").
- Use the wildcard character (*) to find words that start with a certain letter sequence. For example, **esc*** returns Web pages with "ESC," "escape," and so on.
- To nest expressions within a query, add parentheses. Expressions within parentheses are evaluated before the rest of the query.
- Use double quotes (") to ignore a boolean or NEAR operator keyword. For example, "Abbott and Costello" finds pages with the entire phrase, not pages that match the Boolean expression.
- The AND operator has a higher precedence than OR. For example, the first 3 queries are equal, but the fourth is not:
  - a AND b OR c
  - c OR a AND b
  - c OR (a AND b)
  - (c OR a) AND b

Using Autosuggest

IMPORTANT: Autosuggest works with Microsoft-based search providers only. If you are using the Solr search provider, see *Managing Solr autoComplete* on

page 285.

Autosuggest is a search feature that suggests similar terms or common refinements that searchers have used in the past which are related to the search term. As a user enters text, possible matches appear. This immediate feedback may preclude the user from typing an entire search phrase, and instead choose a term with which to launch the search.



Terms appear on the list if they

- include the submitted letters, and
- were previously submitted by site visitors, and
- have resulted in the viewing of a search result

Autosuggest only works with the Site Search Control.

Enabling Autosuggest

1. Every Web page that retrieves search results requires a SiteSearchController templated server control. See also: SiteSearch Templated Server Control. In Visual Studio, add the following properties and values to each SiteSearchController control that will use Autosuggest.
    - `EnableQueryStatistics="true”`
    - `EnableAutoSuggest="true"`
    - `AutoSuggestMaxCount`—the maximum number of entries in the autosuggest list
2. On your search server machine:
    a. Go to IIS Manager and expand the **EktronSearchSite** IIS Site.
    b. Right click **EktronSearchStatistics** and choose **Explore**.
    c. Under EktronSearchStatistics, open `web.config`.
    d. Within that file, set `NumberOfClicksToTrigger` to 1, 2 or 3. This key defines the number of times a user chooses an autosuggest search term and then clicks on a search results page before the term is added to the suggested results list.

For example, you decide that a term is added to the list only after it is selected and users click on the results page 3 times.

Adding a term to Autosuggest

Normally, you would not add autosuggest terms, because the terms list is built from previous successful searches. However, there may be times when you want to add autosuggest terms that direct searches to specific content. To manually add terms to the autosuggest list, follow these steps.

PREREQUISITE

Knowledge of SharePoint Powershell cmdlets

1. Log on to your search server.
2. Open the SharePoint 2010 Management Shell.
3. Add a term to the autosuggest list by inserting this command.

```
New-SPEnterpriseSearchLanguageResourcePhrase
-SearchApplication <Search Service Application>
-Name <Name of the term>
-Language <en-US>
-Type QuerySuggestionAlwaysSuggest
```

   Command Parameters

   - If you are using a Microsoft FAST search server, for `<Search Service Application>`, enter the Search Service Application you created for **FAST Query** in *Part 2d: Create a search service application for querying* on page 429.
   - If the search term has more than one word, surround it with double quotes. For example, "Phrase Term."
   - For `Language`, enter a language code followed by the locale code (as examples: en-US, en-UK).

4. Remove the term from the block list (if it exists there) by inserting this command.

```
Remove-SPEnterpriseSearchLanguageResourcePhrase
-SearchApplication <Search Service Application>
-Identity <Name of the term>
-Language <en-US>
-Type QuerySuggestionBlockList
```

5. Run the timer job.

```
Get-SPTimerJob
-Identity "Prepare Query Suggestions" | Start-SPTimerJob
```

6. Check the Last Run time against the current time.
7. When the Timer Job shows the Last Run Time as the current time, the operation has succeeded, and the term is added to the suggested terms list.

Example of adding a term to Autosuggest

To manually add a suggestion for **ektron**:

```
$app = Get-SPEnterpriseSearchServiceapplication "FASTQuery"
```

```
New-SPEnterpriseSearchLanguageResourcePhrase
-SearchApplication $app
-Language en-us
-Type QuerySuggestionAlwaysSuggest
-Name “ektron”
```

If **ektron** was added to the Block list, it must be removed. (If it does not exist and you run these commands, you get an error: **Given key not present in the dictionary**.)

```
Remove-SPEnterpriseSearchLanguageResourcePhrase
-SearchApplication $app
-Identity ektron
-Language en-us
-Type QuerySuggestionBlockList
```

```
(Get-SPTimerJob –Identity “Prepare Query Suggestions”).RunNow()
```

Wait 3 minutes to see results.

Removing a term from Autosuggest

You may need to remove inappropriate or derogatory terms from the autosuggest list. To do that, a term to the block list by following these steps.

PREREQUISITE

Knowledge of SharePoint Powershell cmdlets

1. Log on to your search server.
2. Open the SharePoint 2010 Management Shell.
3. Add a term to the block list by inserting this command. See also: *Command Parameters* on the previous page

   ```
   New-SPEnterpriseSearchLanguageResourcePhrase
   -SearchApplication <The Search Service Application>
   -Name <Name of the term>
   -Language <en-US>
   -Type QuerySuggestionBlockList
   ```

4. Run the timer job.

   ```
   Get-SPTimerJob
   -Identity "Prepare Query Suggestions" | Start-SPTimerJob
   ```

5. Check the Last Run time against the current time.
6. When the Timer Job shows the Last Run Time as the current time, the operation has succeeded, and the term is blocked from the autosuggest list.

   If you later decide to remove a term from the block list, use this command.

   ```
   Remove-SPEnterpriseSearchLanguageResourcePhrase
   -SearchApplication <The Search Service Application>
   -Identity <Name of the term>
   -Language <en-US>
   -Type QuerySuggestionAlwaysSuggest
   ```

Example of removing a term from Autosuggest

To block the term **ontrek**

```
$app = Get-SPEnterpriseSearchServiceApplication "FASTQuery"
```

```
New-SPEnterpriseSearchLanguageResourcePhrase
-SearchApplication $app
-Language en-us
-Type QuerySuggestionBlockList
-Name ontrek
```

Remove the term from the suggestion list, if it exists. (If it does not exist and you run these commands, you get an error: **Given key not present in the dictionary**.)

```
Remove-SPEnterpriseSearchLanguageResourcePhrase
-SearchApplication $app
-Identity ontrek
-Language en-us
-Type QuerySuggestionAlwaysSuggest
```

```
(Get-SPTimerJob –Identity “Prepare Query Suggestions”).RunNow()
```

Wait 3 minutes to see results.

Viewing the blocked words list

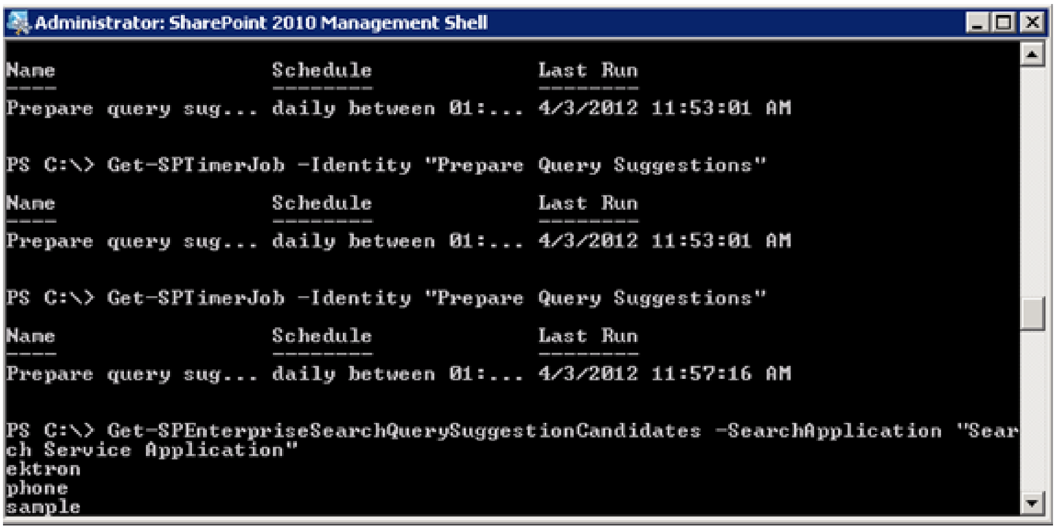
To view the blocked words list, enter

```
Get-SPEnterpriseSearchLanguageResourcePhrase
-SearchApplication <Search Service Application>
-Language en-US
-Type QuerySuggestionBlockList
```

Troubleshooting Autosuggest

If you don’t see the autosuggest drop-down, try the following.

1. Open all (3) web.configs and verify that they contain the same values for the `QuerySSA` and `ProviderAdmin` keys.
2. Open `C:\Program Files (x86)\Ektron\EktronSearchServerService\EktronSearchServerHelperService.exe.config` and verify that the following keys have correct paths.
   - QueryServiceEndpoint
   - QueryStatisticsEndpoint
   - QuerySuggestionEndpoint
3. In the SharePoint Management Shell, enter `Get-SPEnterpriseSearchQuerySuggestionCandidates -SearchApplication "<Search Service Application Name>"`. Inspect the command for your autosuggest word.



- If the command returns a blank screen, check the `C:\inetpub\EktronSearchSite\EktronSearchStatistics` directory for a logs folder. If this folder is empty, verify that the SiteSearchController contains `EnableQueryStatistics="true”` and `EnableAutoSuggest="true”`.
- If your list appears but the autosuggest drop-down does not, verify that your SiteSearchController contains `EnableAutoSuggest="true"`.

4. Manually test that autosuggest words are returned to your site by entering the URL on the Ektron server.

```
http://<Your EktronSearchSite website:Port # >
  /EktronQuerySuggestion/SPQuerySuggestion.svc
  /QuerySuggestionForCulture?keywordPrefix=sa&culture=en-US
```

NOTE: ‘sa’ is the prefix you used to return autosuggest entries.

After submitting this url, download and open QuerySuggestionForCulture file in Notepad to see autosuggest results. To continue the above example, you might see `{"QuerySuggestionForCultureResult":{"Suggestions":["sample"]}}`

The "Did you mean?" feature

If a site visitor enters a word that is similar to a crawled term, the "Did you mean?" feature often suggests close alternatives. If you click a suggested term, a search is performed on it.

The "Did you mean?" feature works only with single word queries.

NOTE: If your search provider is Solr, the "Did you mean?" feature only works with words in the content title.

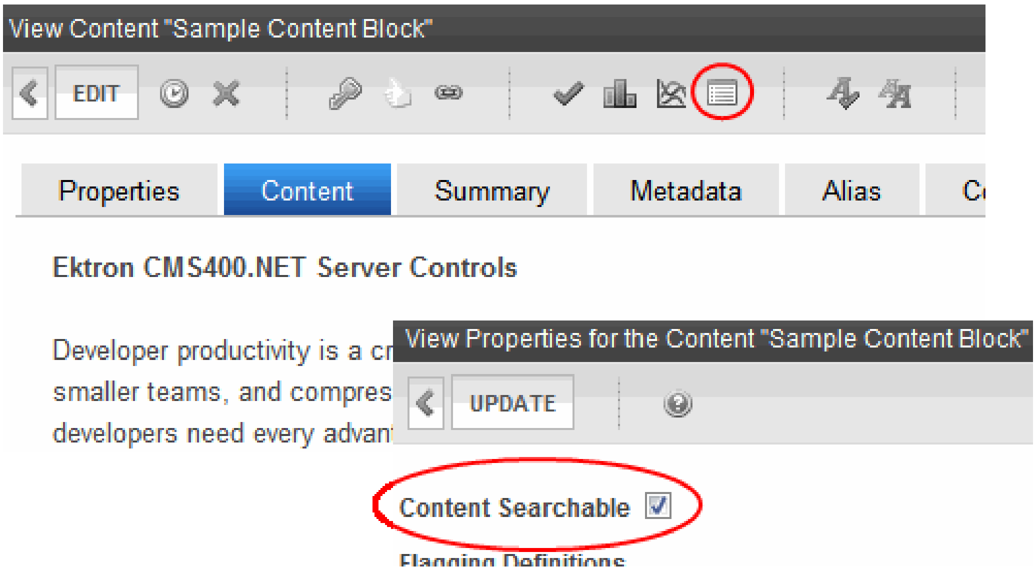
Managing searchability of Ektron content

Making content searchable

Search only accesses data about the content if the **Content Searchable** field is checked.

NOTE: Despite the value of this checkbox, if an Ektron user places this content item in a Suggested Results list, it appears in the **Suggested Results** area of the Search Results screen. See also: *Providing suggested results* on page 350.
Also, even if **Content Searchable** is unchecked, the Advanced Workarea search can find the content.

The default value of this field is determined by the **ContentSearchable** folder property.



Installing the Visio IFilter

The search finds text within Visio documents if the Visio IFilter is installed to the Microsoft Search Server used by the Ektron Web server. Use the following link to download and install the Visio IFilter.

Microsoft Office 2010 Filter Packs

IMPORTANT: The Visio IFilter does not work with the Solr search provider.

Searching for metadata

The following rules apply when searching for values inside metadata.

- The search finds text within Searchable type and Content Tag metadata fields. For example, a content block has a searchable type metadata field, **MapAddress**, that contains **131 Amherst St**. Searching for **131** returns that content.
- To find content with searchable metadata whose style is **yes or no**, enter `true` or `false`.

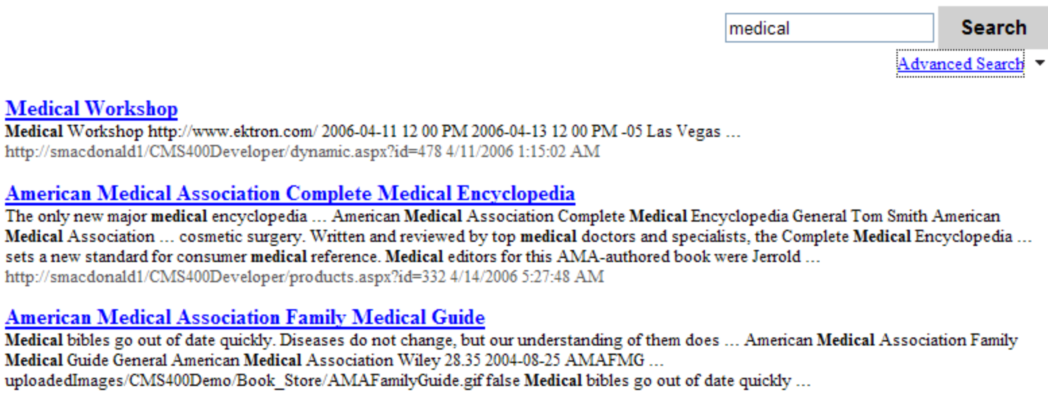
See also: *Working with Metadata* on page 755

Managing search results

Displaying search results

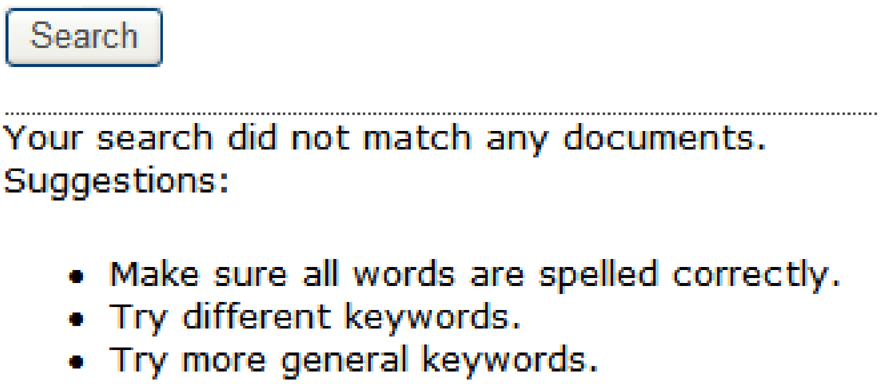
See also: *Search result ranking* on the next page

The following example shows the website search results screen. Your developer can customize it using the appropriate ResultsView server control. For example, to display eCommerce catalog entry results, the developer uses ProductSearch templated server controls.



Customizing the postback message

By default, if a search term yields no results, a message appears.



To customize this message:

1. In your site root folder, find the `workarea/resources` folder.
2. Open the resource file that corresponds to your site's language. For example, if your site is in American English, open `EkResource.en-US.resources`. To learn how to work with a resource file, see *Translating the Workarea* on page 1431.

If your site supports multiple languages, follow these steps for each corresponding resource file.

a. Within the resource file, find the key `lbl search no results`.
b. The default text (shown above) follows this key. Modify the text as needed.
c. Save the file.

Search result ranking

NOTE: This topic describes search rank using Microsoft Search Server 2010. To learn about search rank using Microsoft FAST Search Server 2010, see *Setting Up Microsoft Search Server 2010* on page 302.

Each content item found by search is given a numerical rank. Search results are sorted by rank. Criteria used to calculate rank include the

- number of occurrences of the search term
- proximity of search term to beginning of file
- proximity of search term to other occurrences of the term
- whether the term is in the title

If you need to ensure that certain content appears at the top of search results when certain terms are entered, use suggested results. See also: *Providing suggested results* on page 350

To learn about customizing ranking for Microsoft Search Server 2010, see

- Custom Ranking Models with SharePoint 2010: Background, Value and Administrative Overview
- Creating Custom Ranking Models
- SharePoint 2010 enterprise search developer training

Using synonym sets

PREREQUISITE

You must be a member of the Administrators Group or assigned the Search-Admin role to access Synonym Sets. See also: *Defining roles* on page 1464

IMPORTANT:
*Changes to a Synonym Set reset Search Server. To minimize impact on your visitors, make such changes during off-peak hours.
* Synonym Sets apply to all Ektron sites associated with a Search Server instance. For example, if Site A, Site B, and Site C use the same Search Server instance, they share Synonym Sets. This means that a Synonym Sets created in Site A may affect Site B's search results.

You can create sets of synonyms to work with the search. If a site visitor enters into the search field any term in a synonym set, the search returns results for that term plus all other terms in the set.

For example:

- **Synonym Set**: Tuition
- **Terms**: tuition, bill, payment, pay, fee, charge, price, amount, cost, balance

If a site visitor inserts **bill** into the search field, Ektron uses **bill** or **tuition** or **payment** or **pay** or **fee** or **charge**, and so on., to determine search results.

The Synonym feature typically produces more "hits." So, while visitors do no more work, their chances of finding the right information are greatly increased.

NOTE: Previous to version 8.5, you could use Synonym sets in Suggested Results. This is no longer provided in versions 8.5 and higher.

Best Practices for using synonym sets

A search term can consist of several words as long as the term is entered the same way in the Synonym Set. For example, **love seat** is part of a Synonym Set that includes sofa. As long as both love and seat are in a content item, the search finds it even if the words are separated. But, entering a single term, like **love**, will not find that Synonym Set. So, if you think people may search using **loveseat** or **love seat**, enter both terms into the Synonym Set.

The metadata search does not use or support Synonyms Sets.

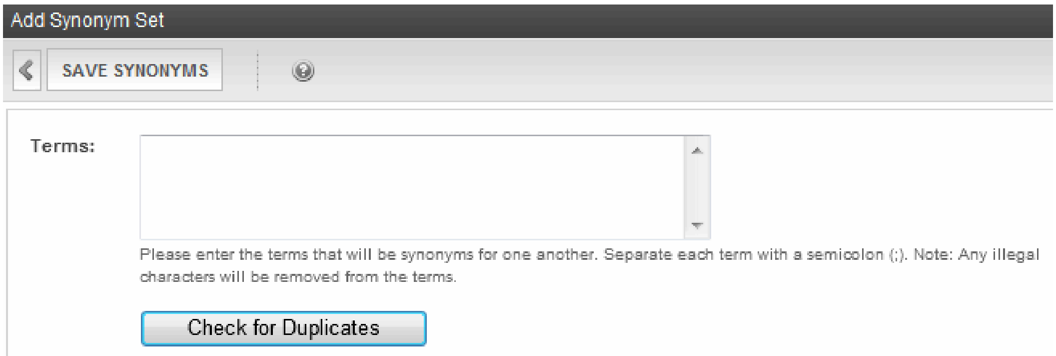
If a search term consists of several words, it does not return synonym match results.
For example, you create a synonym set that contains `{cms; content management system}`. If a site visitor enters **CMS**, the search results include matches for **cms** and **content management system**. But, if the site visitor enters **content management system**, the results do *not* include matches for **cms**.

Creating a synonym set

IMPORTANT: A term can only appear in one Synonym set.

1. Choose **Workarea > Settings > Configuration > Search > Synonyms**.
2. Select a language for the Synonym Set from the language drop-down menu. (The search is language-specific. When site visitors begin using your site, they select a language. Only synonyms sets in that language are considered.)

3. Click **Add Synonym**. The following screen appears.



4. Enter all terms in the set. Separate each with a semicolon (;). You cannot enter a comma (,) or parenthesis character (().
5. Click **Check for Duplicates**. Ektron compares these terms against other Synonym Sets in this language. If the same term is found in another set, you are notified and must remove it.
6. Click **Save Synonyms**.

Editing a synonym set

1. Choose **Workarea > Settings > Configuration > Search > Synonyms**.
2. Select a language for the Synonym Set from the language drop-down menu.
3. Click the Synonym Set that you want to edit.
4. Click **Edit**. The Edit Synonym Set screen appears.
5. Add or remove terms. Be sure to separate each term with a semicolon (;).
6. Click **Check for Duplicates**. Ektron compares these terms against other Synonym Sets in this language. If the same term is found in another set, you are notified and must remove it.
7. Click **Save Synonyms**.

Deleting a synonym set

1. Choose **Workarea > Settings > Configuration > Search > Synonyms**.
2. Select a language for the Synonym Set from the language drop-down menu.
3. Click the Synonym Set that you want to delete.
4. Click **Delete** ().
5. Confirm your action.

Providing suggested results

PREREQUISITE

You are a member of the Administrators Group or assigned the Search-Admin role See also: *Defining roles* on page 1464

Your website may contain thousands of content items. Sometimes, depending on the search phrase, you want to focus the visitor's attention on a few topics. The

Suggested Results feature lets you create a set of search terms, then specify content to appear at the top of the results when someone searches on a term.

Suggested Result links can jump to your website or an external website.

IMPORTANT:
* Prior to Ektron version 8.5, Suggested Results could be language-specific. Beginning with version 8.5, Suggested Results do not filter based on language.
* As of version 8.5, Suggested Results do not use terms from the Synonyms Set feature.

Using suggested results to enhance business opportunities

You can use Suggested Results to direct site visitors to business partners' websites. One example is a smoking cessation clinic near your hospital. When someone visits your website and searches for smoking, you can set the clinic to be the top Suggested Result.

As another example, your organization creates widgets but does not implement or customize them. Over time, several agencies develop experience at deploying and customizing your widgets. Therefore, you want to promote the supporting businesses on your site. The following steps describe how this works.

1. Create a phrase with synonyms—*deploy, install, implement, customize, modify, adapt*.

2. Assign the websites of approved agencies to the Suggested Results list.
3. When a site visitor searches for the word *implement*, he gets links to those agencies' websites.

Suggested Results can also be used to advertise products, as used in the sponsored results section of search engines like Google® search and Yahoo!®.

Using suggested results to direct site visitors

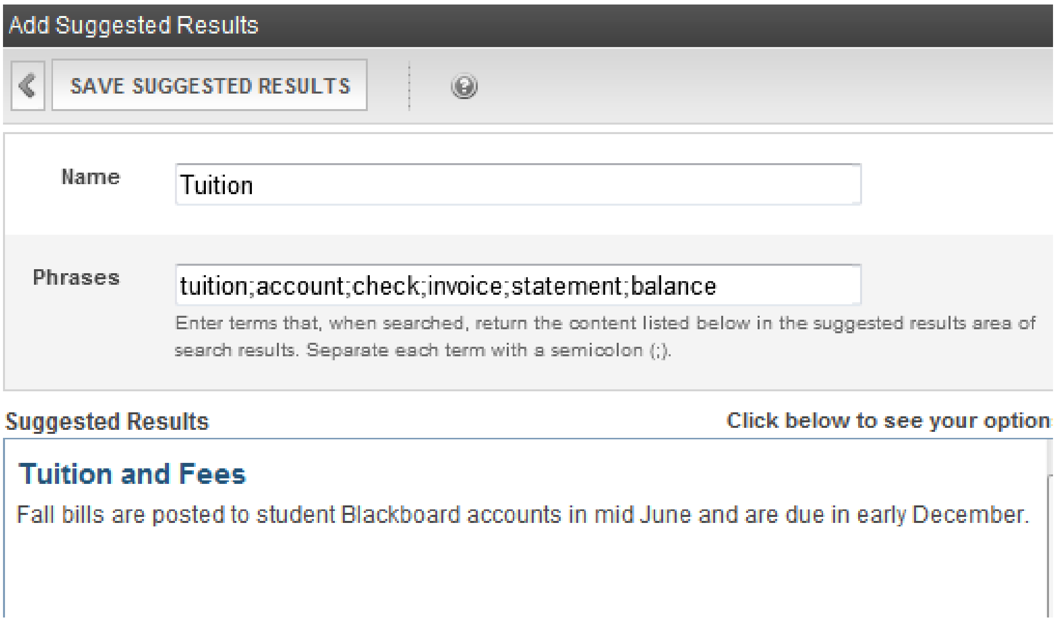
Use this feature to provide search results that do not naturally appear at the top of the page. For example, you manage a university's website. When a site visitor wants to know where to mail a tuition payment, he enters **bill** into the search field and gets these results.

- **Faculty member Bill McDermott**
- **The Student Bill of Rights**
- **How a Bill Becomes Law**

Frustrated, many people call the business office to get information that exists on the website but is difficult to find.

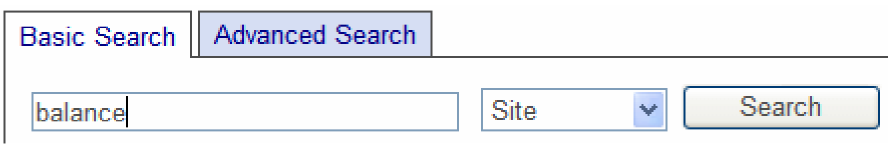
Using Ektron, you create Suggested Results to direct site visitors to the correct Web pages. To continue this example, you could create

- a title (such as **Tuition**) that describes a set of terms and links
- a list of synonyms that visitors might enter when searching for the tuition page on your site
- a Suggested Results list, where you assign the content "Tuition & Fees"

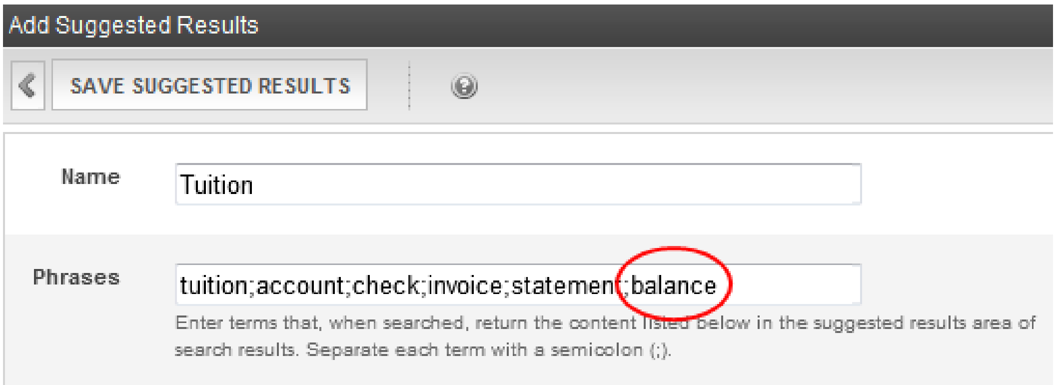


After you set up Suggested Results, this is a typical sequence of events.

1. A site visitor enters text on your **Search** page.

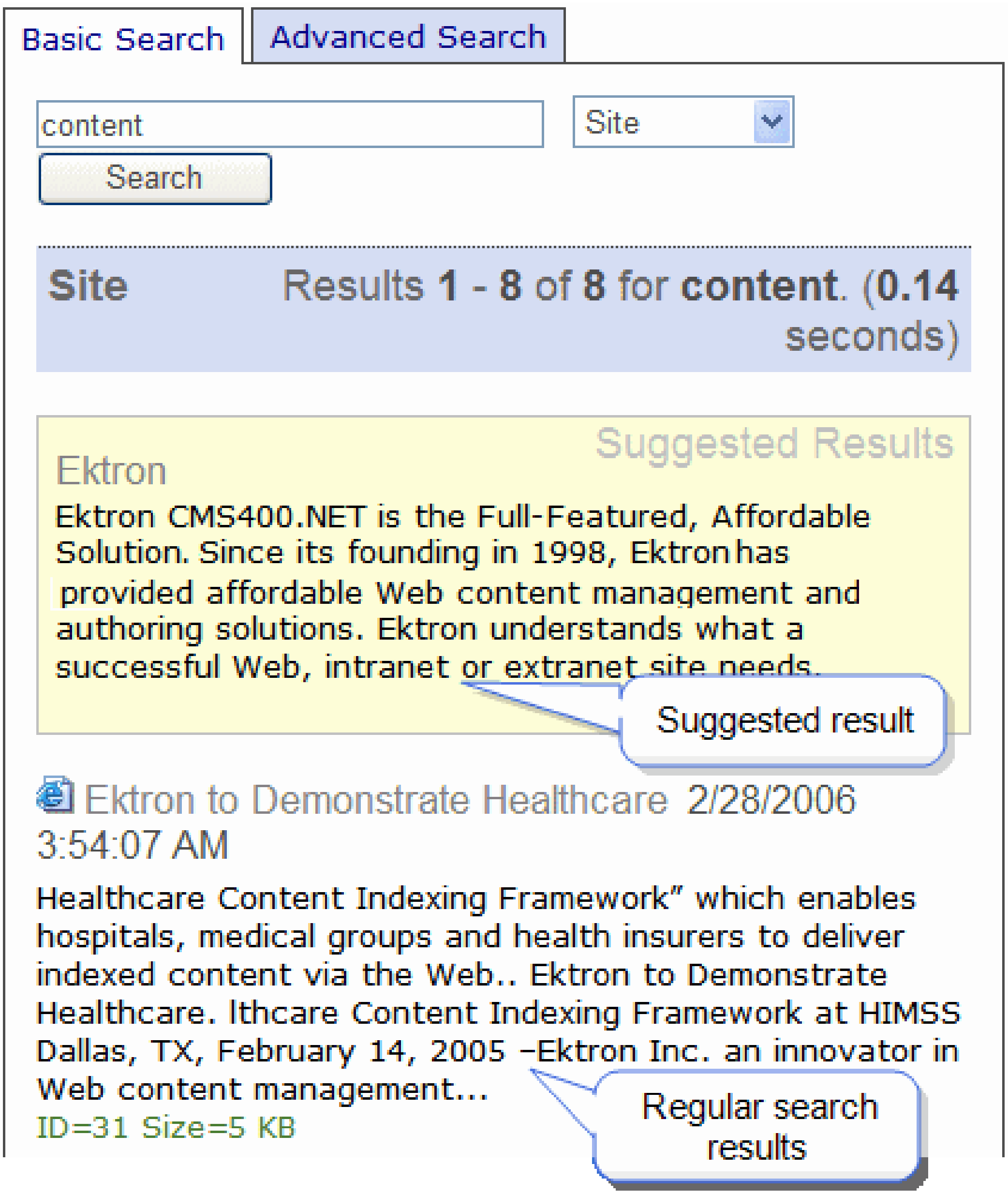


2. The text matches a term in the **Phrases** list of a Suggested Results set.



3. Suggested Result links assigned to the phrase appear in a special area of the results page. They appear in the same order that you created in the Suggested Results set.

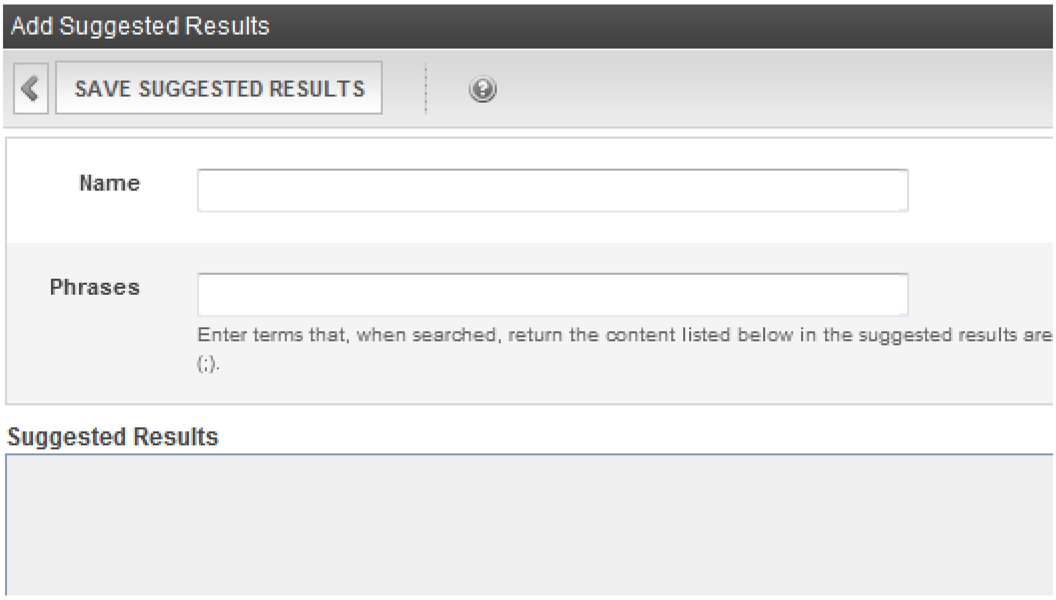
NOTE: The following example shows how suggested results may appear. Your developer styles suggested results in the ResultsView server control.



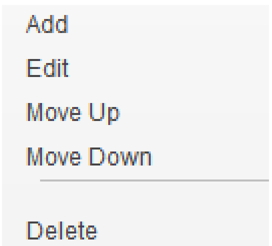
4. The search term's regular results may also appear. Your developer determines their location on the results page.

Creating a set of suggested results

1. **Workarea >Settings > Configuration > Search > Suggested Results**.
2. Click **Add New Suggested Result Set**. The following screen appears.



3. Complete the fields.
   - **Name.** A word that names the Suggested Results set and is the first synonym. (You cannot repeat the phrase in the Synonyms.)
   - **Phrases.** The list of words that triggers the Suggested Results you will create. That is, if a user enters a search phrase that matches any term in the Synonyms, the Suggested Results appear.
   - **Suggested Results.** The links to appear when a phrase or synonym is found. To define them, place the cursor in this field and click. A menu appears.



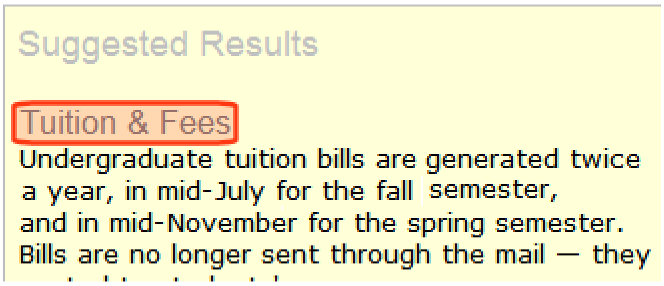
4. Click **Add**. A screen appears.
5. Add the URL, title, and summary for each suggested result.
   - **Link.** To create a link to…
     - *content on your website*, click the **Browse to CMS content** button. Then, go to the folder that contains the content, select it, and click **Save**.

       NOTE: Only content in the Workarea language appears. To change the language, exit this screen, go to the root folder, and click **View > Language**.

- *an external website*, enter its full address, starting with its protocol, such as `http://`.

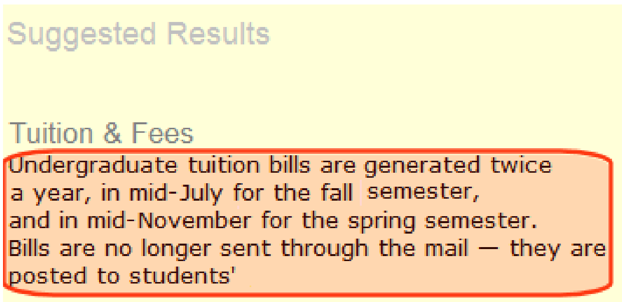
- **Title.** If you created a link to…
  - *content on your website*, its title is retrieved and displayed here. You may edit it as needed.
  - *an external website*, enter the text of the link that will appear on the Suggested Results display.

    Site visitors use this text to select the linked Web page.



- **Summary.** If you created a link to…
  - *content on your website*, its summary appears here. You may edit it as needed.
  - *an external website*, nothing appears. Enter text to further describe this link on the search results page.

    The summary cannot exceed 320 characters (including HTML tags). For example:



6. Click **Add New Suggested Result Set**. The Add Suggested Results screen reappears. You can add more links, edit existing ones, and so on.
7. Click **Save Suggested Results**.

Displaying suggested results

To display suggested results using templated server controls, set up a SiteSearchResultsView control whose `Eval` statement refers to `SuggestedResults`.

```
<ektron:SiteSearchResultsView ID="r" runat="server" ControllerID="c">
  <ItemTemplate>
    <h3>Suggested Results</h3>
      <asp:ListView ID="suggestedResults" runat="server"
        DataSource='<%# Eval("SuggestedResults") %>'>
        <ItemTemplate>
          <span class="highlight">
```

```
            <a href="<%# Eval("Url") %>"><%# Eval("Title") %></a>
            <%# Eval("Summary") %>
          </span>
          </br>
        </ItemTemplate>
    </asp:ListView>
  </ItemTemplate>
</ektron:SiteSearchResultsView>
```

The suggested results class displays only 3 fields: title, URL, and summary.

If you want regular search results to appear below suggested results (as shown in *Providing suggested results* on page 350), your developer may want to style the suggested results to stand out. Some styling is shown above.

To display regular search results below suggested results and customize the standard result template, make the following modifications.

```
<ektron:SiteSearchResultsView ID="r" runat="server" ControllerID="c">
  <ItemTemplate>
    <h3>Suggested Results</h3>
      <asp:ListView ID="suggestedResults" runat="server"
        DataSource='<%# Eval("SuggestedResults") %>'>
        <ItemTemplate>
          <span class="highlight">
          <a href="<%# Eval("Url") %>"><%# Eval("Title") %></a>
          <%# Eval("Summary") %>
          </span>
          </br>
        </ItemTemplate>
      </asp:ListView>
      <asp:ListView ID="suggestedResults" runat="server"
        DataSource='<%# Eval("Results") %>'>
        <ItemTemplate>
          . . .
        </ItemTemplate>
      </asp:ListView>
  </ItemTemplate>
</ektron:SiteSearchResultsView>
```

However, if you want to display standard results and use the default template, insert a separate SiteSearchResultsView control below the suggested results control. See also: SiteSearch templated server controls.

Adding a link to a suggested result set

1. Choose **Workarea > Settings > Configuration > Search > Suggested Results**.
2. Select the suggested results set to which you want to add a link.
3. Click **Edit**.
4. Place the cursor over the first result in the Suggested Results area of the screen.
5. Click once and a menu appears.
6. Click **Add**. The Add New Suggested Results screen appears.

7. See *Click Add New Suggested Result Set. The Add Suggested Results screen reappears. You can add more links, edit existing ones, and so on.* on page 356
8. Click **Add New Suggested Result Set**.
9. Click **Save Suggested Results**.

Editing a link in a suggested result set

1. Choose **Workarea > Settings > Configuration > Search > Suggested Results**.
2. Select the suggested results set that you want to edit.
3. Click **Edit**.
4. Place the cursor in the suggested results area of the screen.
5. Place the cursor on the result that you want to edit.
6. Click once and a menu appears.
7. Click **Edit**.
8. See *Click Add New Suggested Result Set. The Add Suggested Results screen reappears. You can add more links, edit existing ones, and so on.* on page 356
9. Click **Add New Suggested Result Set**.
10. Click **Save Suggested Results**.

Removing a link from a suggested result set

1. Choose **Workarea > Settings > Configuration > Search > Suggested Results**.
2. Select the suggested results set from which you want to remove a link.
3. Click **Edit**.
4. Place the cursor in the suggested results area of the screen.
5. Place the cursor over the result that you want to delete.
6. Click once and a menu appears.
7. Click **Delete**.
8. Click **OK**.
9. Click **SaveSuggested Results**.

Rearranging the sequence of a suggested result set

1. Choose **Workarea > Settings > Configuration > Search > Suggested Results**.
2. Select the Suggested Results set from which you want to remove a link.
3. Click **Edit**.
4. Place the cursor in the suggested results area of the screen.
5. Place the cursor over the result that you want to move up or down.
6. Click once. A menu appears.
7. Click **Move Up** or **Move Down**.
8. Click **Save Suggested Results**.

Deleting a suggested result set

1. Choose **Workarea > Settings > Configuration > Search > Suggested Results**.
2. Select the suggested results set that you want to delete.
3. Click **Delete** ().
4. Click **OK** to the confirmation message.

Including external files in a search

Use integrated search if you want the search to include files outside of Ektron but located on your Web server. For example, you want a folder full of press releases to be searchable but do not want to add them to Ektron. Instead, you follow the steps in this section to make the folder searchable, and search results include the press releases.

NOTE: The descriptions below refer to the folder that is *not* part of Ektron as the *external folder*.

You can search non-Ektron content by file title. For example, you can find Ektron.gif by inserting **Ektron** into the search field. In addition, you can find a variety text-based files, like .doc, .pdf, and .txt, by searching their text. Finally, Microsoft Search Server 2010 searches file metadata for media files.

Step 1: Place content in an external folder

External folders must reside in the website folder so IIS has permission to access their content. Best practice is to create the external folder under the Webroot. Then, place content in the folder for the integrated search.

Set permissions for the external folder

The top-level folder that contains the external files must be accessible to the website, and the user account used by search server must have permission to read it.

The following example creates a user called *IntegratedSearchUser* and shares the external folder. Search Server uses the *IntegratedSearchUser* account to access the external folder's content.

1. On the Web Server, start **Control Panel > Administrative Tools > Computer Management** and create a new user called **IntegratedSearchUser**.
2. Using Windows Explorer, right click the external folder and choose **Share**.
3. Enter the **IntegratedSearchUser** user.
4. Click **Add**.

IntegratedSearchUser now has read permission for the external folder.

Step 2: Create a content source for the external folder

1. On your *search server*, open the SharePoint 2010 Central Administration screen.
2. Go to **Manage service applications > Search Service Application > Content Sources > New Content Source**.

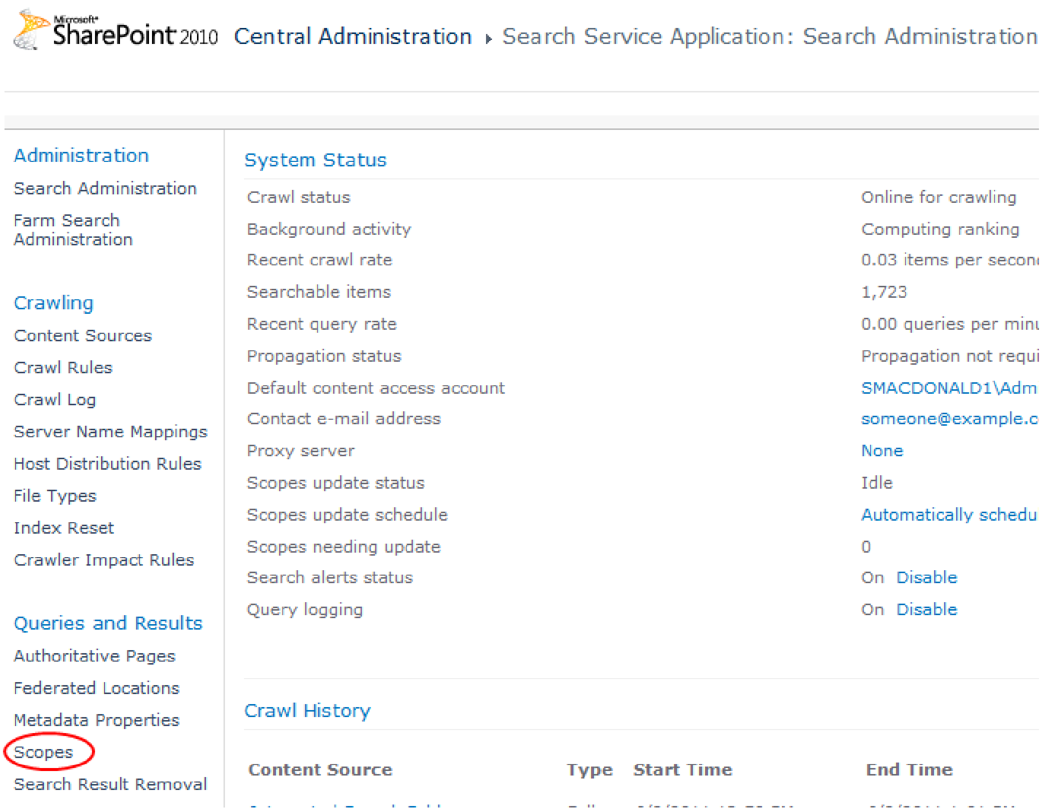
   If you are using Microsoft FAST Search Server 2010, go to **Manage service applications > FastContent Connector > Manage Content Sources > New Content Source**
3. Enter the following values.
   - Enter a **Name** for the content source.
   - In the **Content Source Type field**, choose **File Shares**.
   - In the **Start Addresses** field, enter the external folder as a UNC path (`\\server\directory`) or full file URI (`file://server/directory`).
     - To make sure the search can access the external folder, you may want to use `C$` in the path, like this: `\\server1\c$\integratedsearch`.
   - Set up **Crawl Schedules** for your integrated search folder contents to automatically refresh search indexes as frequently as you need to keep search results reliable. (This schedule is different than the crawl schedule for Ektron content.)
   - Begin a crawl by checking **Start full crawl of this content source**.
   - Click **OK**.

   If you successfully set this up, you see the new content source and the status shows "starting".

Step 3: Create scope for a content source

NOTE: If you are using Microsoft FAST Search Server 2010, you can ignore Steps 3 and 4 proceed to Step 5.

1. On your Search Server, open the SharePoint 2010 Central Administration screen.
2. Go to **Manage service applications > Search Service Application > Queries and Results > Scopes**.



3. Click **New Scope**.
4. Give it a **Name** (no spaces) and **Description**.
5. Leave **Use the Default Search Results Page** checked.
6. Click **Ok**. The View Scopes screen reappears.
7. Use the pull-down next to the new scope name and select **Edit Properties and Rules**.

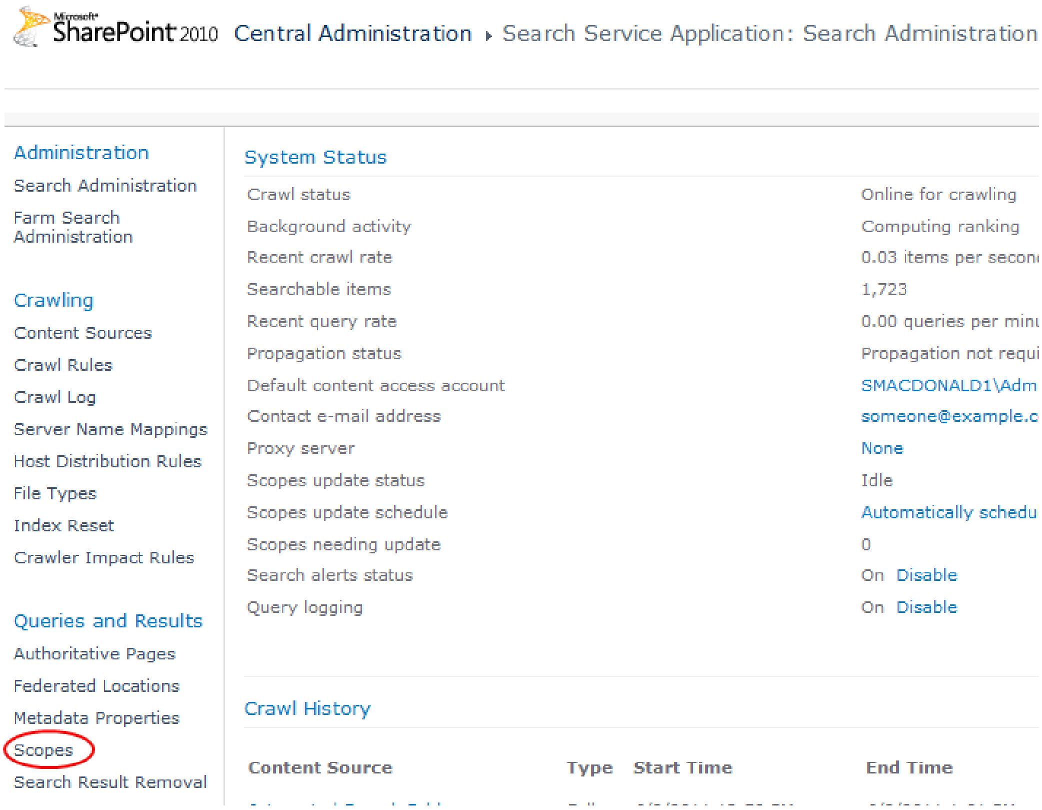
8. Add a **New Rule**.
9. In the **Scope Rule Type** field, select **Content Source**.
10. In the **Content Source** field, select the content source you created in *Step 2: Create a content source for the external folder* on page 359.
11. Set **Behavior** to **Include**.
12. Click **Ok**.

Step 4: Add external folder to Ektron website scopes

NOTE: If you are using Microsoft FAST Search Server 2010, you can ignore Step 4 proceed to Step 5.

This step insures that the external folder content is included in Ektron search results.

1. Open the SharePoint 2010 Central Administration screen.
2. Go to **Manage service applications > Search Service Application > Queries and Results > Scopes**.



3. Use the pulldown next to your Ektron website's content source and select **Edit Properties and Rules**.
4. Click **New Rule**.
5. In the **Scope Rule Type** field, select **Content Source**.
6. In the **Content Source** field, select the external folder that you created in *Step 2: Create a content source for the external folder* on page 359.
7. In the **Behavior** field, select **Include**.
8. Click **OK**.

Step 5: Add a crawl rule for the integrated search user

This step sets the permission for the search server to access the external folder.

1. On your Search Server, open the SharePoint 2010 Central Administration screen.
2. Go to **Manage service applications > Search Service Application > Crawling > Crawl Rules**.
3. Click **New Crawl Rule**.
4. Set the **path** to the external folder. (For example: `\\ws10196\PressReleases\*`.)
5. Set the Crawl Configuration to **Include all items in this path**.

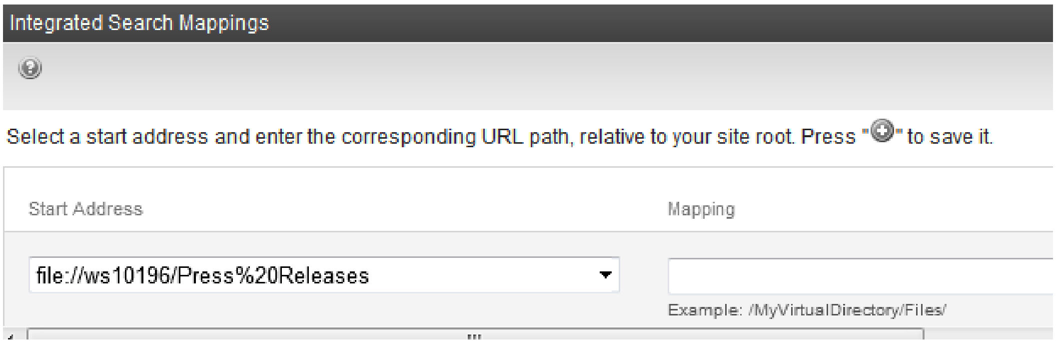
6. Set Specify Authentication to **Specify a different content access account**.
7. Enter the **Account**. (For example: `IntegratedSearchUser`.)
8. Enter the **Password** and **Confirm the Password**.
9. Uncheck **Do not allow Basic Authentication**.
10. Click **Ok**.

Step 6: Complete the integrated search mappings screen

PREREQUISITE

You are a member of the Administrators Group or assigned the Search-Admin role See also: *Defining roles* on page 1464

1. Choose **Workarea > Settings > Configuration > Search > Integrated Search Mappings**.



2. In the **Start Address** field, find the external folder.
3. In the **Mapping** field, enter the path to the external folder relative to your site root.
4. Click ( ) to save.

Troubleshooting integrated search

- **Problem**. The protocol handler cannot be found. Check that the handler has been installed

  The protocol handler is normally installed in this folder.

  `c:\windows\system32\DatabaseProtocolHandler.dll`

  Solution. If the handler is in the correct place, check that all folder names and paths are correctly entered in the Content Sources, Crawl Rules and Scopes in the Search Service Application settings.

- **Problem**. Item was not crawled because of a password change. Update password and retry crawling.

  Solution. Verify that the Search Server user account has permission to read and write to the content database. You may have to create a unique user on the content server for this purpose.

Searching the Workarea

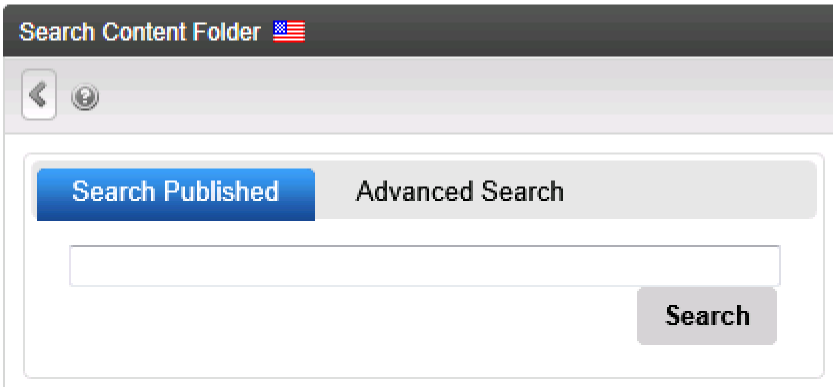
You can search any Workarea folder to locate content within it. The following sections explain the Workarea search.

Searching a folder hierarchy

1. Go to the folder from which you want to begin the search.

> **NOTE:** To search the entire site, search from the top-level (Root) folder. To limit the search to a folder (and its subfolders), select it then enter search criteria.

2. Click **Action > Search**. The Search Content Folder screen appears.



- **Search Published** is the same as the Site Search, except your results are only retrieved from the current folder and its subfolders. If your search provider is Microsoft Search Server or Microsoft Search Server Express, you must have read-only or greater permission for the folder.
    - You can search for content that contains a metadata value. To do this, use the pattern **emt***metadata definition*: *metadata value.* For example, if the metadata definition is "MapAddress" and the value is "London", enter **emtmapaddress: london**.

      Note that the metadata definition type must be "searchable property." And, you must enter the definition in all lowercase letters, even if the name includes uppercase letters.
- **Advanced Search** lets you expand search to include internal properties, such as last editor, date created/modified, status, and comments. See also: *Using advanced search in the Workarea* below

Using advanced search in the Workarea

The Workarea Advanced Search lets you find content using information that content authors and publishers would typically know. For example, you can search for content edited by a particular author within a date range.

When performing a search, enter one or more words into the text box, select search preferences, then click **Search**.

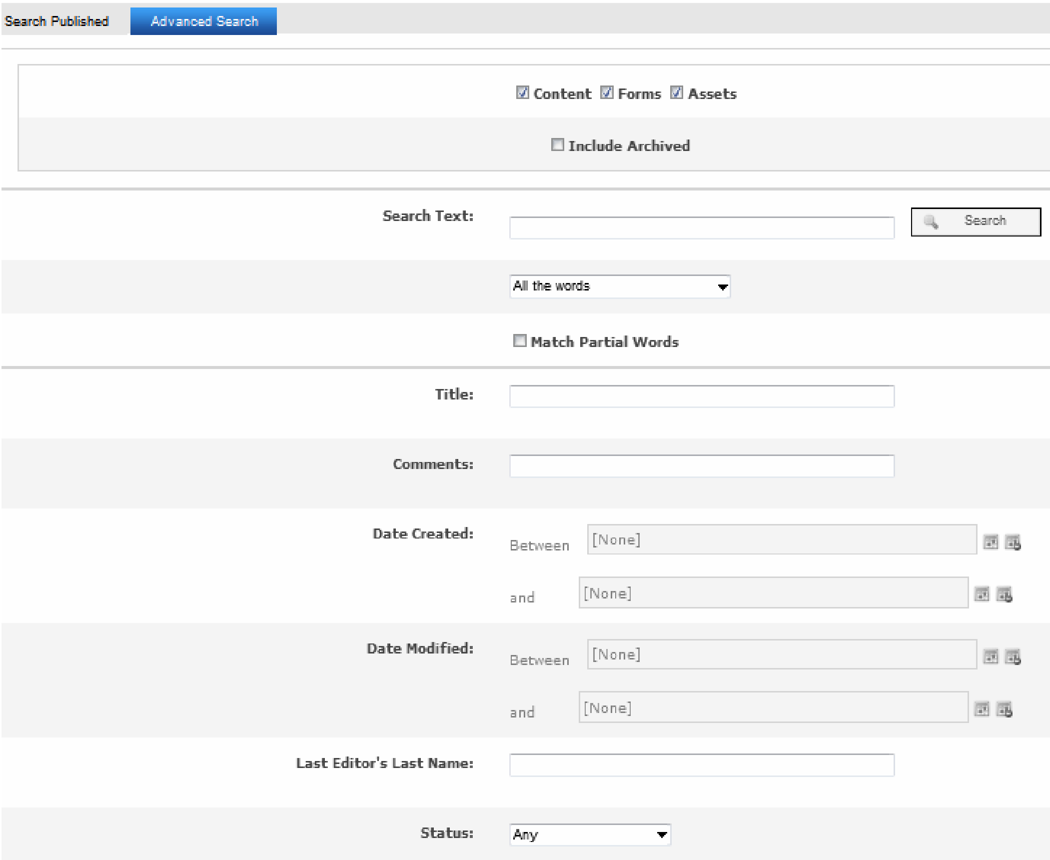
You can use an asterisk as a *wildcard* character to stand for any character. For example, the phrase **CMS*00** returns topics that include CMS400, CMS300, CMS200 and CMS100.

Your system administrator can add custom search fields that only appear if a user is logged in. For more information, see *Working with Metadata* on page 755.

IMPORTANT: The Advanced search finds content whether or not it is marked **Searchable**.

The Workarea Advanced Search finds content that satisfies these criteria.

- user has read-only or greater permission for content’s folder
- matches selected language, if site is multilingual
- satisfies criteria entered on the screen



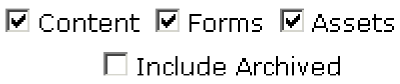
The Advanced Search screen lets you find Ektron content by specifying the following criteria. While the fields are optional, the search only returns content that satisfies *all* criteria.

- content type (for example, HTML content, forms, assets)
- one or more search terms. Unlike the **Search Published** screen, you cannot use a query.
- to search title only, enter search text into the **Title** field
- to search comments, enter search text into the **Comments** field
- a range of created or modified dates

- the editor who created or most recently updated the content
- the content's status
- any searchable metadata assigned to the folder

Specifying content type to search

Near the top of the screen, check boxes let you determine the types of content to search.

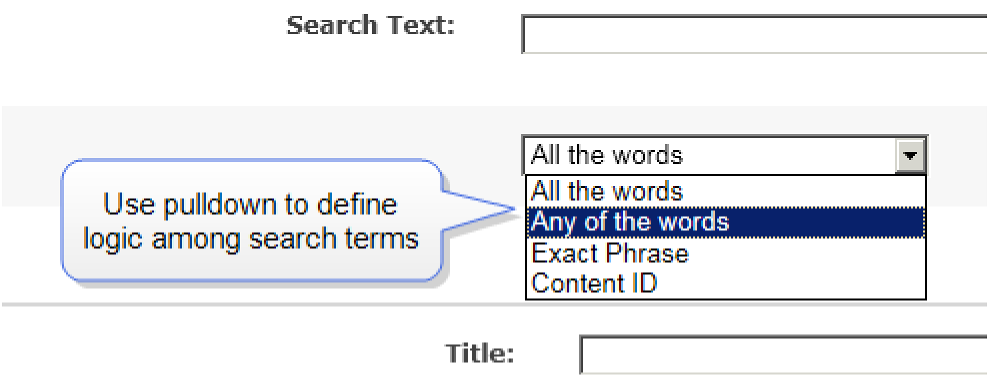


- **Content**. HTML content, blogs entries, and XML Smart Form field values
- **Forms**. HTML forms
- **Assets**. Content that is neither HTML nor XML, such as Office documents and managed files. See also: *Working with assets in the Document Management System* on page 649
- **Include Archived**. Content, forms and assets that were archived using the **Archive and remove from site** or **Archive and remain on Site** option

Specifying a search word or phrase

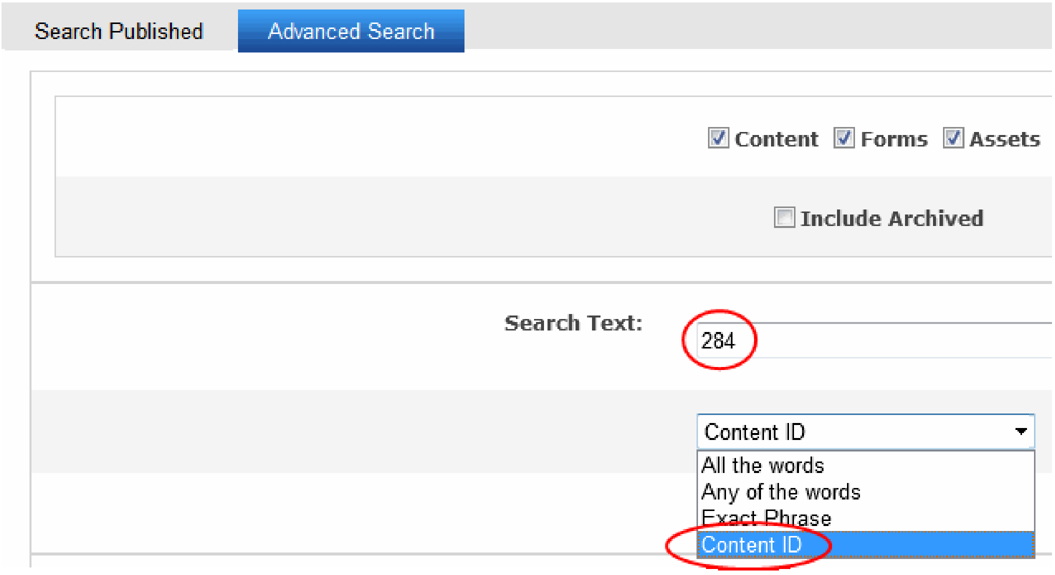
In the **Search Text** field, enter one or more words that you want to find within content, forms, and assets. Entering text here is optional. That is, you can use the other fields to find content.

If you enter several terms, specify a logical relationship among them in the pulldown under the **Search Text** field.



- **All the words**. all words in the **Search Text** field. **All Words** is an "and" function. The search returns only content that has the words content *and* management *and* system. The words can be in any order within the content.
- **Any of the words**. any word in the **Search Text** field. This is an "or" function. It returns content that has *at least one* of the words in the **Search Text** field; it returns content with the word content *or* management *or* system.
- **Exact Phrase**. all words in the order specified in the **Search Text** field.

- **Content ID**. To find content by ID number
  1. In the **Search Text** field, enter the ID number.
  2. From the pulldown below **Search Text**, select **Content ID**.
  3. Click **Search**.



Specifying additional search criteria

- **Title.** The title of the content. You can enter a partial word. For example, entering **Part** yields the following results.
  - Multi-Hospital Nurse Executive Participation
  - Ektron Partners and Customers

  You can enter more than one word or phrase as long as they are in the correct sequence. The **Search Text** field also searches content title.

- **Comments.** The content’s comments, which can be inserted via the **Comment** tab.

NOTE: If you enter multiple terms into the **Comments** field, they must be in the order in which they appear in the content's comments.

- **Date Created.** The file’s creation date. You can enter a single date or a range of dates. The search returns content with that creation date that satisfy the other criteria.
- **Date Modified.** The last date when the file was modified. You can enter a single date or a range of dates. The search returns items with that edit date that satisfy the other criteria.
- **Last Editor’s Last Name.** The last name (surname) of the user who most recently changed the content. This is taken from the **Last Name** field on the User Information screen. The search returns items last edited by that user that satisfy the other criteria.

- **Status.** The content status. See also: *Content statuses* on page 624

NOTE: Search results display only the most recently-published version. Also,content that has never been approved does not appear.

Managing the search crawl

Crawling is the process of preparing index files for searching. When Ektron content is added, deleted, or updated, a crawl makes that content available (or no longer available) to the search. In general, Ektron manages the crawl automatically—you do not need to do anything.

This section explains the automatic crawl: what starts one, how to monitor its status, and so on. In addition, if your search has a problem, you can run a manual crawl to troubleshoot it.

Full vs. incremental crawls

Microsoft Search Server 2010 supports 2 types of crawls.

- **Full**. occurs immediately after events that significantly change data structure
- **Incremental**. occurs after incremental crawl interval passes for less significant events that still require a crawl

A *full* crawl registers searchable Ektron properties with the search provider and ensures that search results reflect the latest information for all Ektron content. An example of a full-crawl triggering event is the registration of a new site.

Many other Ektron events trigger an *incremental* crawl, which is run when the specified time interval passes. See: *Setting the incremental crawl interval* below. Examples of incremental-crawl triggering events are the creation of new content and the editing of existing content.

If you are using eSync, a sync can trigger a full or incremental crawl, depending on the data being synched and the profile selected.

Setting the incremental crawl interval

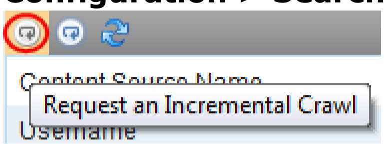
Starting crawls manually

You should not need to start a crawl. Ektron initiates crawls as necessary. You would typically begin a manual crawl for troubleshooting purposes.

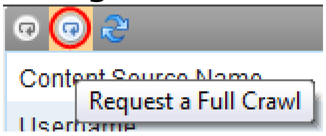
PREREQUISITE

You are a member of the Administrators group or assigned to the Search-Admin role.

- To start an incremental crawl immediately, go to **Workarea > Settings > Configuration > Search > Status**. Click **Request Incremental Crawl**.

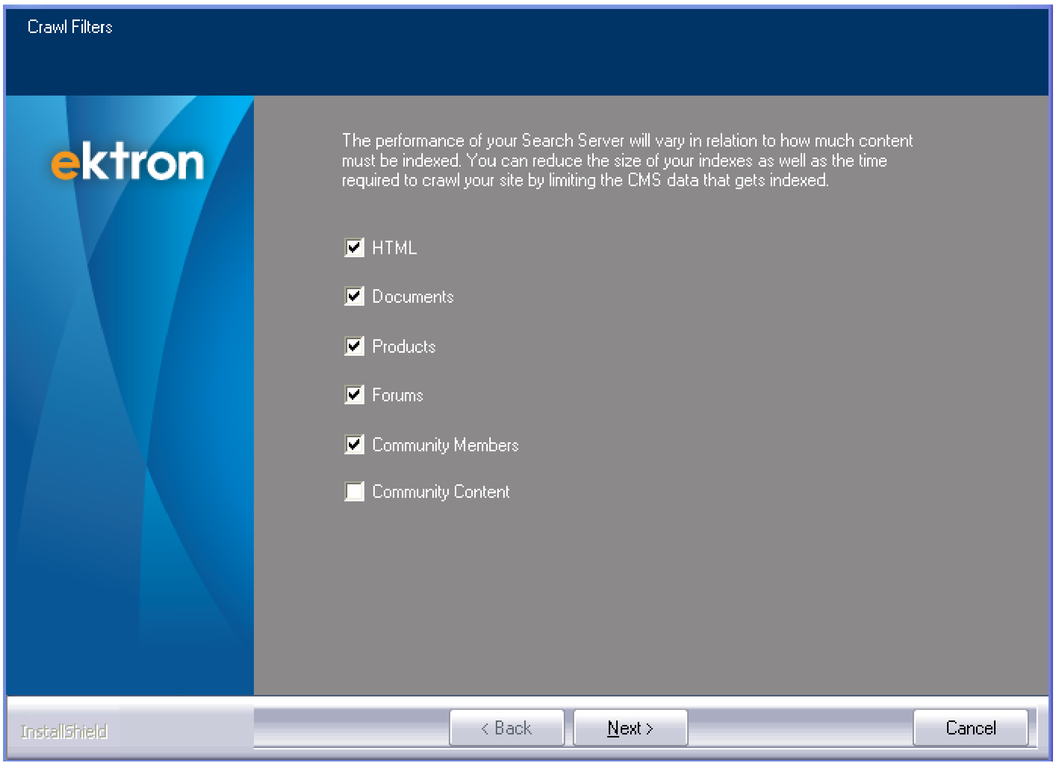


- To start a full crawl immediately, go to **Workarea > Settings > Configuration > Search > Status**. Click **Request Full Crawl**.

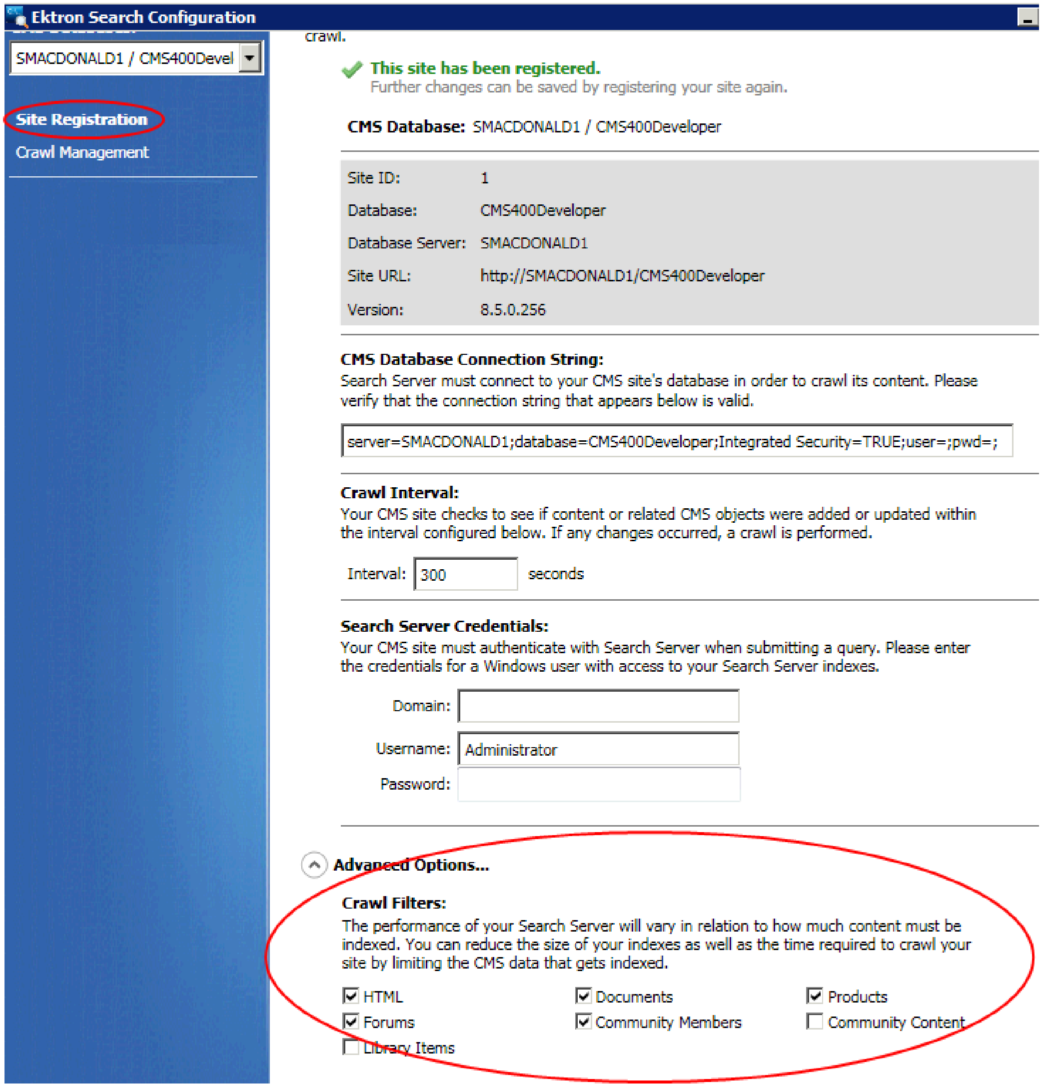


Improving search performance with crawl filters

When you set up the connection to Microsoft Search Server, you determine the types of content to be crawled using the following screen.



If your crawl is taking too long, consider removing content types, especially those you do not use. To update the crawled content types, use the Search Configuration Screen's **Site Registration** panel **> Advanced Options > Crawl Filters** fields.



- **NOTE:** Metadata and tags are crawled regardless of the crawl filter settings. Also, changes to other Ektron data objects result in the appropriate crawl, regardless of these settings. See also: *Full vs. incremental crawls* on page 368.

Monitoring crawls

The Data Directory stores a log of information about each crawl. The Search Configuration screen's **Crawl Tracing** field lets you determine the amount of detail you want the log to collect.

The following errors may appear in the crawl log.

- **Error**. <url_path_to_asset>: The filtering was stopped because of a user action, such as stopping the crawl
- **Problem**. An asset is referenced in the Ektron database, but the physical file was deleted from the file system.

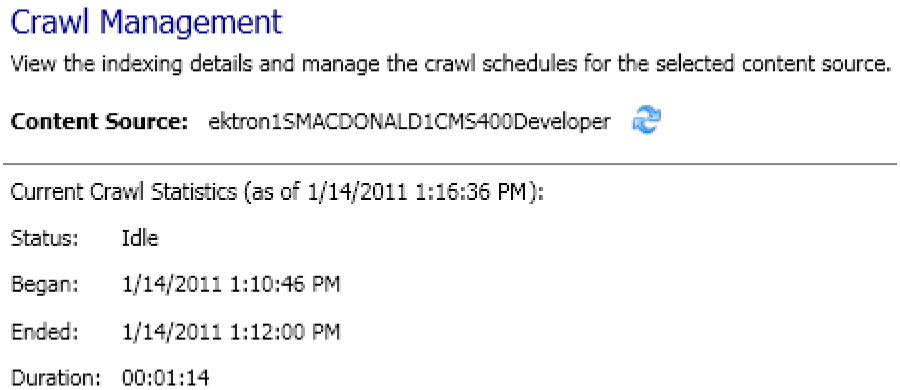
The following screens also let you monitor and manage crawls.

- Search Status screen in the Workarea. See also: *Monitoring Microsoft Search Server 2010 from the Workarea* on page 374

Search Status

Status Item	Value	Description
Content Source Name	ektron1WS10652CMS400Developer	The index associated with your site.
Query Credentials	Administrator	The Windows user authorized to communicate with the query service.
Crawl Request Pending	No	Indicates whether or not the site has a request for a crawl to submit.
Current Action	Idle	The indexing activity that is currently in progress.
Pending Action	None	The indexing activity that will execute upon completion of the current activity.
Crawl Start Time	5/2/2011 2:02:36 PM	The start time of the most recent crawl.
Crawl End Time	5/2/2011 2:05:16 PM	The end time of the most recent crawl.
Crawl Duration	00:02:40	The duration of the most recent crawl.
Crawl Interval	00:05:00	Indicates how often the site will submit crawl requests.

- Search Configuration Screen's Crawl Management panel



The following table compares the screens.

Options	Workarea's Search Status screen	Search Configuration Screen
How to access	**Workarea > Settings** > **Con-figuration** > **Search** > **Status**	On server that hosts Search Server: Windows **Start > All Programs > Ektron > CMS400v*xxx*> Utilities > Search Config** If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Search Config**. Right click and choose **Run as Administrator**.

Options	Workarea's Search Status screen	Search Configuration Screen
View crawl information	• search server • content source name • query credentials • if there is a pending request to begin incremental search • current and next scheduled search action See also: *Monitoring Microsoft Search Server 2010 from the Workarea* on page 374 • most recent start and end times • duration (**last** if no crawl currently running; **current** if crawl currently running) • interval See also: *Setting the incremental crawl interval* on page 368 • crawl filters	On **Site Registration** panel • **Crawl Interval** See also: *Setting the incremental crawl interval* on page 368 • **Crawl Filters** • **Crawl Tracing Level** On **Crawl Management** panel • content source name • crawl status (same as **Current Action** on Search Status screen) • most recent start and end times • duration
Start full crawl	✓	Not available
Start incremental crawl	✓	Not available
Set incremental crawl interval	View only	✓ **Site Registration** panel **>** **Crawl Interval** field See also: *Setting the incremental crawl interval* on page 368

Options	Workarea's Search Status screen	Search Configuration Screen
Set the type of data that is searched	View only	✓ **Site Registration** panel **> Advanced Options > Crawl Filters**

Troubleshooting crawl errors

The following information lists errors that may appears during a crawl, and how to resolve them. Errors appear in Microsoft Search Server 2010's administration portal. They do not appear in Ektron.

Condition. What happens if a crawl is running when a new one is scheduled to start?

- If a crawl request is issued while a crawl is running, the new crawl will start only after the current crawl completes.
- A pending *full* crawl starts before any pending *incremental* crawls.

Problem. A content block based on a Smart Form has a blank content_html field. An error occurs: Exception from HRESULT: 0xC00CEE2D

Solution. Remove the field or insert content into it.

Problem. The crawl is taking a long time, your website has over 1 gigabyte of assets, and over 100 PDFs.

Solutions

- **Install Foxit PDF Filter**

  Install Foxit PDF filter from Foxit® PDF IFilter - Server

  After installing, update the registry:

  ```
  [HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Office Server\14.0
  \Search\Setup\Filters\.pdf]
  "Extension"=".pdf"
  "FileTypeBucket"=dword:00000001
  "MimeTypes"="application/pdf"

  [HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Office Server\14.0
  \Search\Setup\ContentIndexCommon\Filters\Extension\.pdf]
  @="{987f8d1a-26e6-4554-b007-6b20e2680632}"
  ```

  See also: Index and Search PDF Files in SharePoint Server 2010

- **Use the Filters Screen**

  The Crawl Filters screen lets you decide which file types are crawled. You can exclude non-critical file types to speed up the crawl. See also: *Using Microsoft Search Server features* on page 335

Monitoring Microsoft Search Server 2010 from the Workarea

Use the Search Status screen to monitor information about search crawls. You can also launch an incremental or full crawl from the screen. See also: *Managing the search crawl* on page 368

PREREQUISITE

You are a member of the Administrators group or assigned to the Search Admin role.

1. Choose **Workarea > Settings > Configuration > Search > Status**. The Search Status screen appears.


Search Status

Status Item	Value	Description
Content Source Name	ektron1WS10652CMS400Developer	The index associated with your site.
Query Credentials	Administrator	The Windows user authorized to communicate with the query service.
Crawl Request Pending	No	Indicates whether or not the site has a request for a crawl to submit.
Current Action	Idle	The indexing activity that is currently in progress.
Pending Action	None	The indexing activity that will execute upon completion of the current activity.
Crawl Start Time	5/2/2011 2:02:36 PM	The start time of the most recent crawl.
Crawl End Time	5/2/2011 2:05:16 PM	The end time of the most recent crawl.
Crawl Duration	00:02:40	The duration of the most recent crawl.
Crawl Interval	00:05:00	Indicates how often the site will submit crawl requests.

   - **Search server**. The Search Server instance that hosts your search index.
   - **Content source name**. The Search Server content source that identifies your website.
   - **Query credentials**. The Windows user authorized to communicate with the query service.
   - **Incremental Crawl Request Pending**. **Yes** appears if there is a pending request to begin an incremental crawl. See also: *Using Microsoft Search Server features* on page 335. Otherwise, **No**.
   - **Current and Next scheduled search action**. at any time, there may be an action that will start when the current one completes. There is never more than one.
     - **Idle**. Search Server is taking no action.
     - **None**. (appears for **Next Action** only) Nothing is scheduled to occur when the current action completes.
     - **Incremental Crawl**. Search Server is crawling content that changed since the last crawl. See also: *Full vs. incremental crawls* on page 368
     - **Full Crawl** (Property Discovery). Search Server is crawling Ektron content, looking for new searchable properties.
     - **Full Crawl**. Search Server is crawling all content.
     - **Property Mapping**. Search Server is mapping searchable properties that were found.

- **Most recent start and end times**. When the most recent crawl began and ended.
- **Duration** (**last** if no crawl currently running; **current** if crawl currently running). If **last**, the length of time (in seconds) required to complete the most recent crawl. If **current**, the length of time (in seconds) since the current crawl began. Click the Refresh button ( ) to get the latest information.
- **incremental crawl interval**. See also: *Setting the incremental crawl interval* on page 368
- **crawl filters**. See *Managing the search crawl* on page 368.

2. If you want to launch a crawl from the toolbar:
   - click ( ) to launch an incremental crawl (*note black color*)
   - click ( ) to launch a full crawl (*note blue color*)

Reporting search activity

EktronSearchStatistics logs

IMPORTANT: EktronSearchStatistics Logs are not available for the Solr search provider.

This log shows submission of the query statistics. It is updated only after a site visitor inserts a search term, clicks the search button, and clicks a result. To access the log, sign on to the Search Server machine > EktronSearchSite Web root > click EktronSearchStatistics folder.

```
PID:7284 TID:7056       MTID:   2012-04-03T14:55:15
Verbose   Publishing Search Statistics : Begin
PID:7284 TID:7056      MTID:   2012-04-03T14:55:1
Verbose  QueryContext.Create: Creating QueryContext /
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose  QueryContext.Create: Created QueryContext /
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose  QueryServiceInfoProcessor.GetSearchApp for
  QuerySSA:Search Service Application
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose  QueryServiceInfoProcessor.GetSearchAppProxy
  for QuerySSA:Search Service Application
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose  MSStatsRecorderProxy.Record: Recording
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose  MSSearchStatsHelper.SubmitStatistics:
  Beginning statistics recording to SharePoint!
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose  MSSearchStatsHelper.FetchClicksToRegisterValue:
  Will be using 2 click(s) to complete
statistics recording to SharePoint!
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose  MSSearchStatsHelper.SubmitStatistics:
  Ending statistics recording to SharePoint!
```

```
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose  MSStatsRecorderProxy.Record: Recorded!
PID:7284 TID:7056      MTID:   2012-04-03T14:55:15
Verbose   Publishing Search Statistics :
  Ends with Status SUCCESSFUL: 0
```

EktronQuerySuggestion logs

IMPORTANT: EktronQuerySuggestion Logs are not available for the Solr search provider.

This log shows the number of entries for the query prefix. In the following example, the user entered `'samp'` and Autosuggest found one entry (sample). To access the log, sign on to the Search Server machine, find EktronSearchSite Web root, and click **EktronQuerySuggestion** folder.

```
PID:7900 TID:5168       MTID:   2012-04-04T08:51:18
Verbose  QueryContext.Create: Creating QueryContext /
PID:7900 TID:5168      MTID:   2012-04-04T08:51:18
Verbose  QueryContext.Create: Created QueryContext /
PID:7900 TID:5168      MTID:   2012-04-04T08:51:18
Verbose  QueryServiceInfoProcessor.GetSearchApp for
  QuerySSA:Search Service Application
PID:7900 TID:5168      MTID:   2012-04-04T08:51:18
Verbose  QueryServiceInfoProcessor.GetSearchAppProxy for
  QuerySSA:Search Service Application
PID:7900 TID:5168      MTID:   2012-04-04T08:51:18
Verbose  SPQuerySuggestionReporter.GetQuerySuggestions:
  Q:[samp] Profile:[]
PID:7900 TID:5168      MTID:   2012-04-04T08:51:18
Verbose  SPQuerySuggestionReporter.GetQuerySuggestions:
  Response for Q:[samp] : [1]
PID:7900 TID:5168      MTID:   2012-04-04T08:51:18
Verbose  SPQuerySuggestionFeed.QuerySuggestionForProfileFeed:
  completed feed request: Q:samp Culture:en-US
```

Using a search phrase report

The Search Phrase Report displays terms that were entered into a Search field within a selected range of dates. You can use it to discover terms being submitted to the search.

The report is gathered from the query text of keyword-based queries. The queries include those submitted through the search field of search server controls, the keyword search API, and the Workarea's **Search Published** tab.

You can narrow down the search by selecting any combination of these criteria.

- language—the language of the *search page* (either Workarea or website search). The user performing the search can choose a language before inserting the search text. If he does not explicitly choose a language, the search uses the default one. This report shows results from all languages or one that you select.
- a *minimum number of occurrences* of the word or phrase to return. For example, you only want words or phrases searched for 10 times or more during the last month.
- range of dates when searches were conducted

After entering search criteria, click **Get Result**.

The search results show the number of times each word or phrase that satisfies the selection criteria appears. They are arranged in this order.

- words or phrases with the most occurrences appear first
- if several words or phrases have the same number of occurrences, they are arranged alphabetically

NOTE: Search terms are added to the Search Phrase Report according to rules explained in *Specifying the frequency of writing to the database* on page 492.

Also, terms entered into the website or Workarea search are surrounded by parentheses (). Terms entered into the Advanced Workarea search have no parentheses. The Microsoft search engine uses this syntax to find content.

Troubleshooting Microsoft search

Problem. You publish a Visio® document but the search cannot find it.

Solution 1. Make sure the Visio iFilter is installed. See *Installing the Visio IFilter* on page 346.

Solution 2. Does the content have a non-standard alias extension? Aliases that use standard extensions are not a problem. However, you can create custom alias extensions. See also: *Creating user-friendly URLs with aliasing* on page 1293. If you do, that content is searchable only if you add the custom extension to Search Server's extension list. From the Search Server Administration page, click **File types > New File Type**, and add the custom extension. Then, run a full crawl to index these pages.

Solution 3. Is the content stored in a Smart Form field whose type is content? Search does not support Smart Form fields with an Advanced type of **Content** (instead of **Attribute** or **Element**). Smart Form fields that need to be indexed must have a type of **Attribute** or **Element**.

Problem. SearchConfigUI.exe crashes while building search indexes and catalogs

Solution.

1. Make sure the `metaconfig.doc` file exists in the *siteroot*`/uploadedfiles` directory. If it does not, ask Ektron Supportto send you a new file.
2. If anyone uploaded Visio documents to your server, make sure the iFilter is installed. See *Installing the Visio IFilter* on page 346.

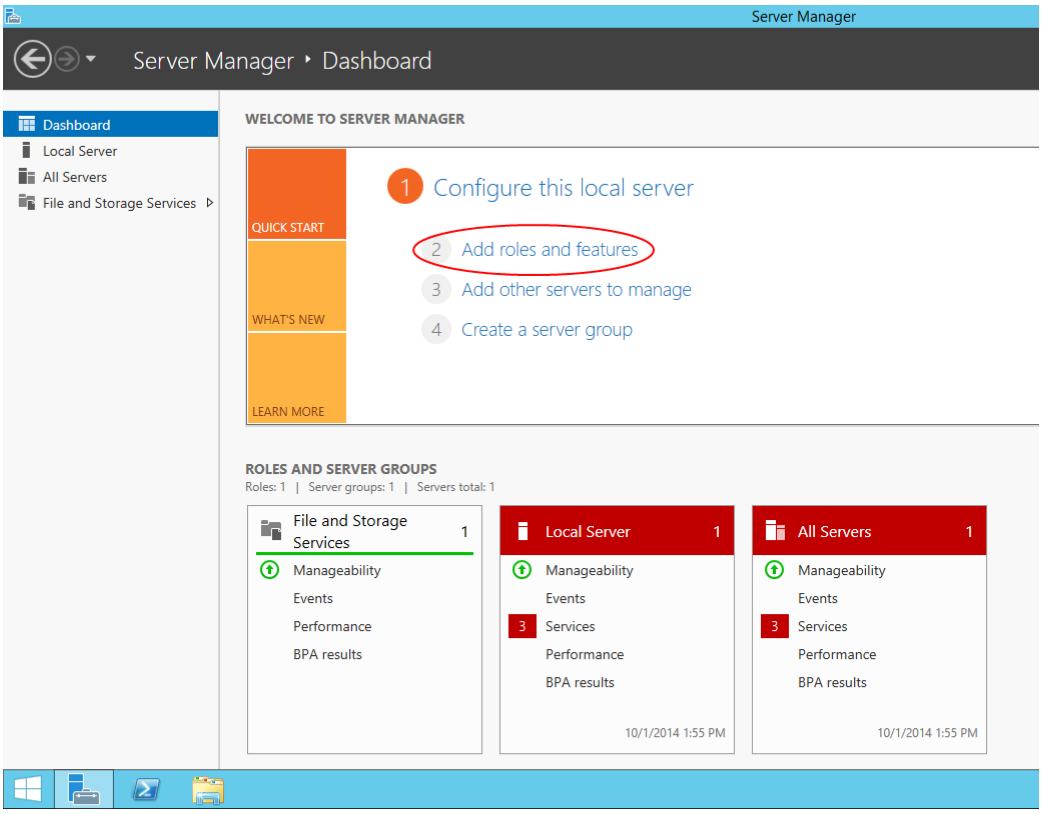
Installing and Setting up Microsoft Search Server 2013 or 2016

This section explains how to install Microsoft Search Server 2013 or 2016. After installing it, follow *Configuring Ektron to work with Microsoft Search Server 2013 or 2016* on page 416 to configure the search provider. To learn how to use the search, read *Using Microsoft Search Server features* on page 335.

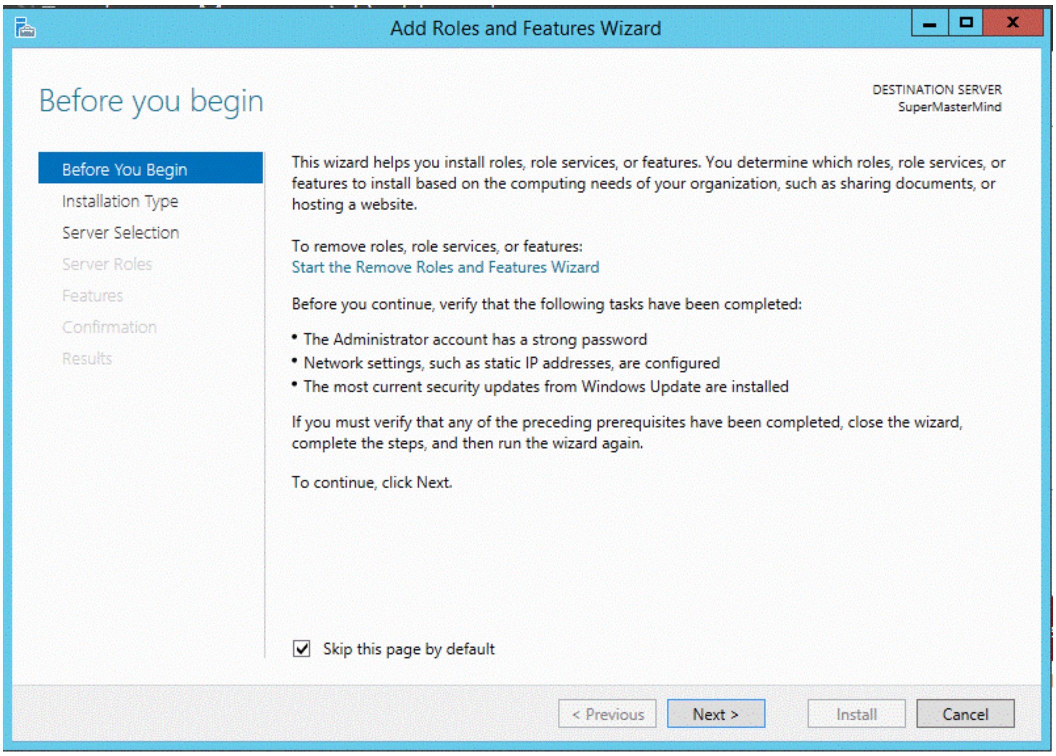
- *Installing active directory domain services* below
- *Installing SQL Server 2012 R2* on page 388
- *Installing and troubleshooting online prerequisites issues for SharePoint 2013* on page 402
- *Installing SharePoint 2013* on page 405
- *Configuring Ektron to work with Microsoft Search Server 2013 or 2016* on page 416

Installing active directory domain services

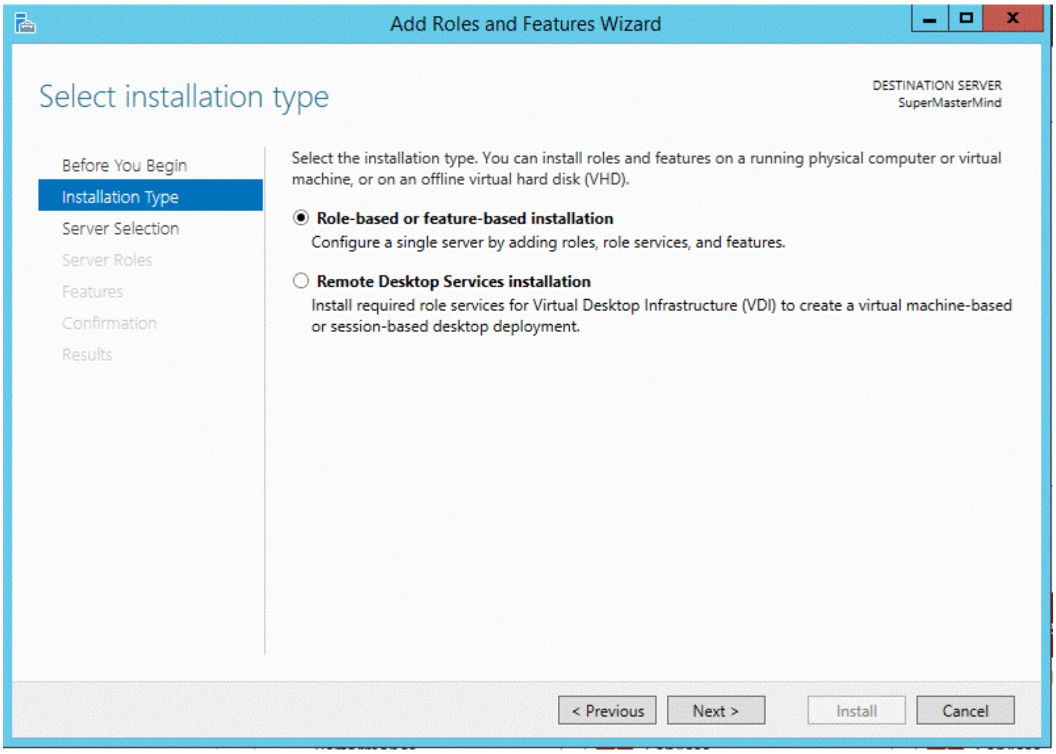
1. In Server Manager, open the Dashboard and click the **Add roles and features** links from the right panel.



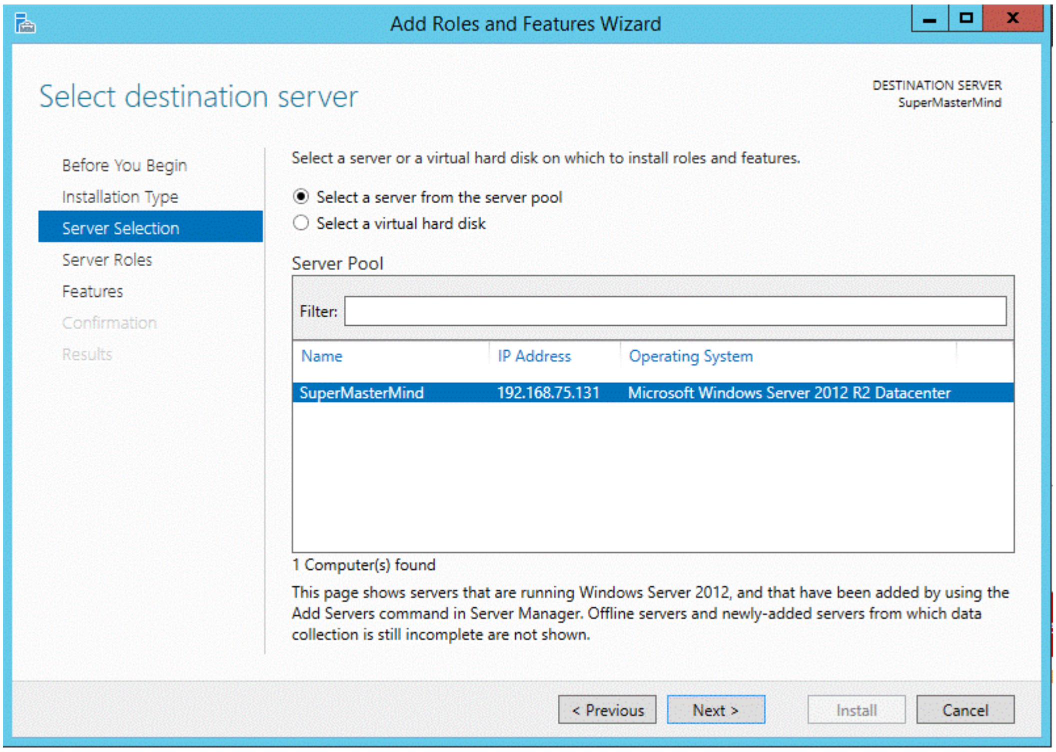
2. The Add Roles and Features Wizard appears. Check the **Skip this page by Default** box.



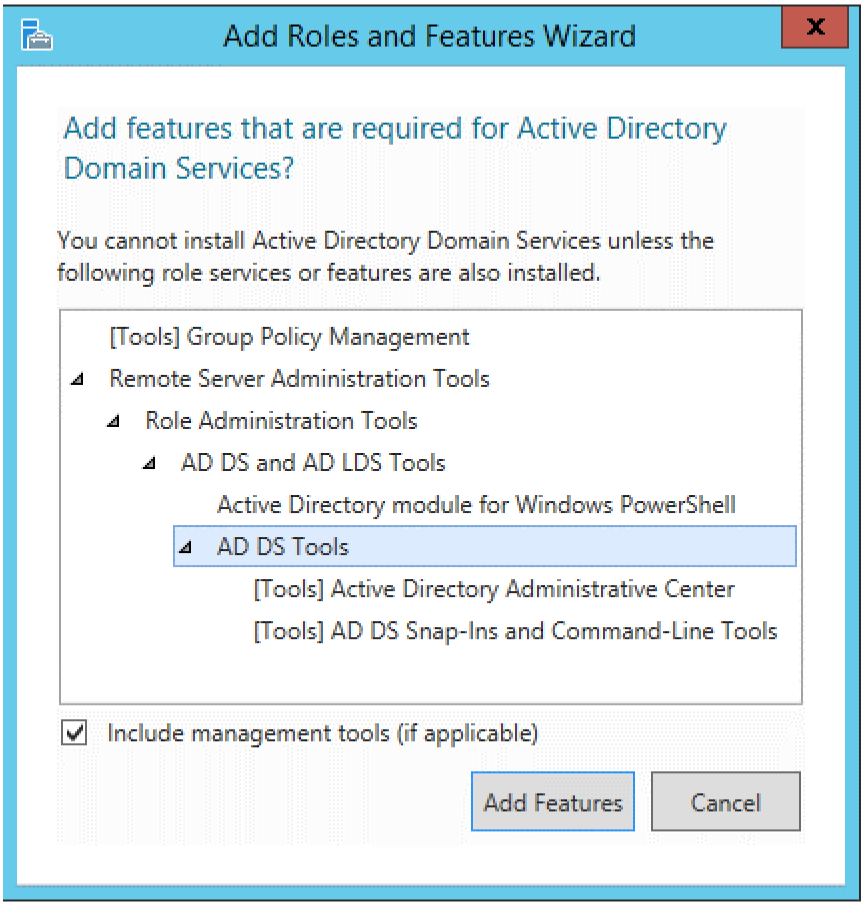
3. You are asked to select an installation type. Click **Role-based or feature-based Installation**.



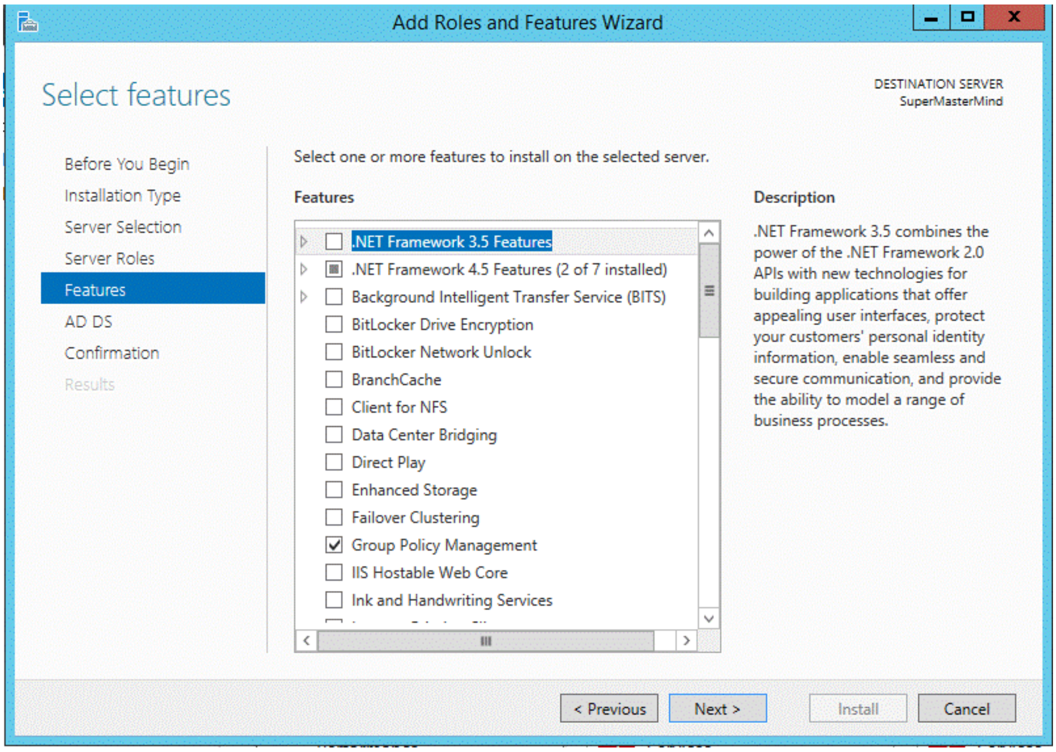
4. You are asked to select a destination server from the server pool.



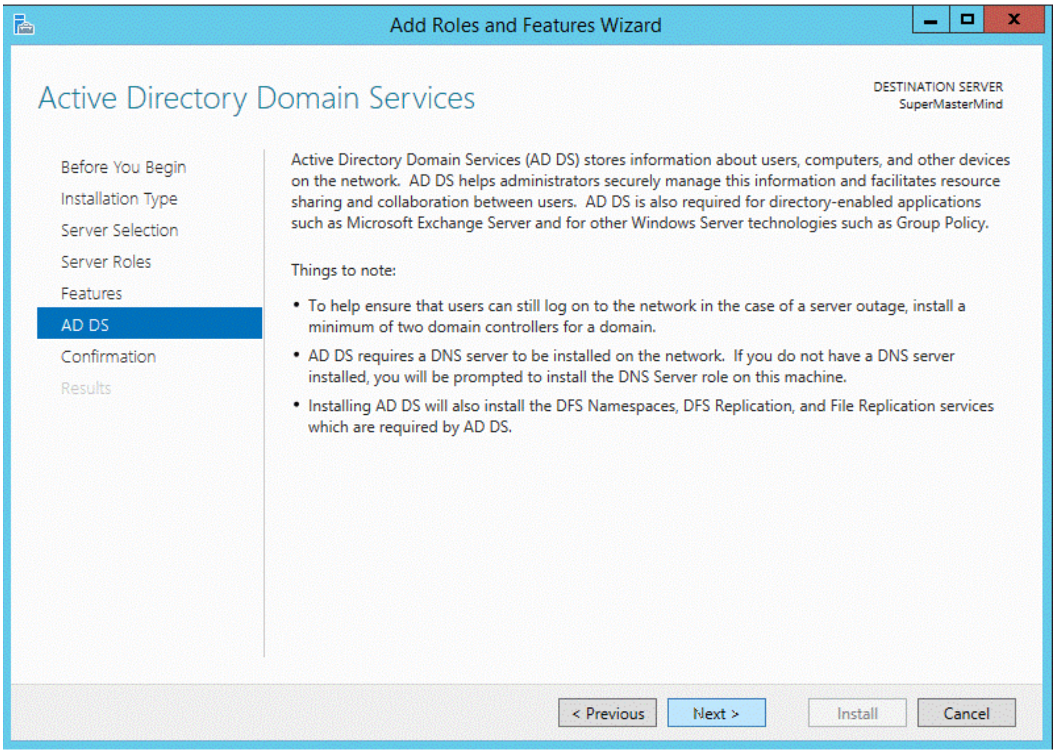
5. On the Select Server screen, select the role **Active Directory Domain Services**. Next, you are prompted to install prerequisites. Check the **Include management tools (if applicable)** box and click the **Add Features** button.



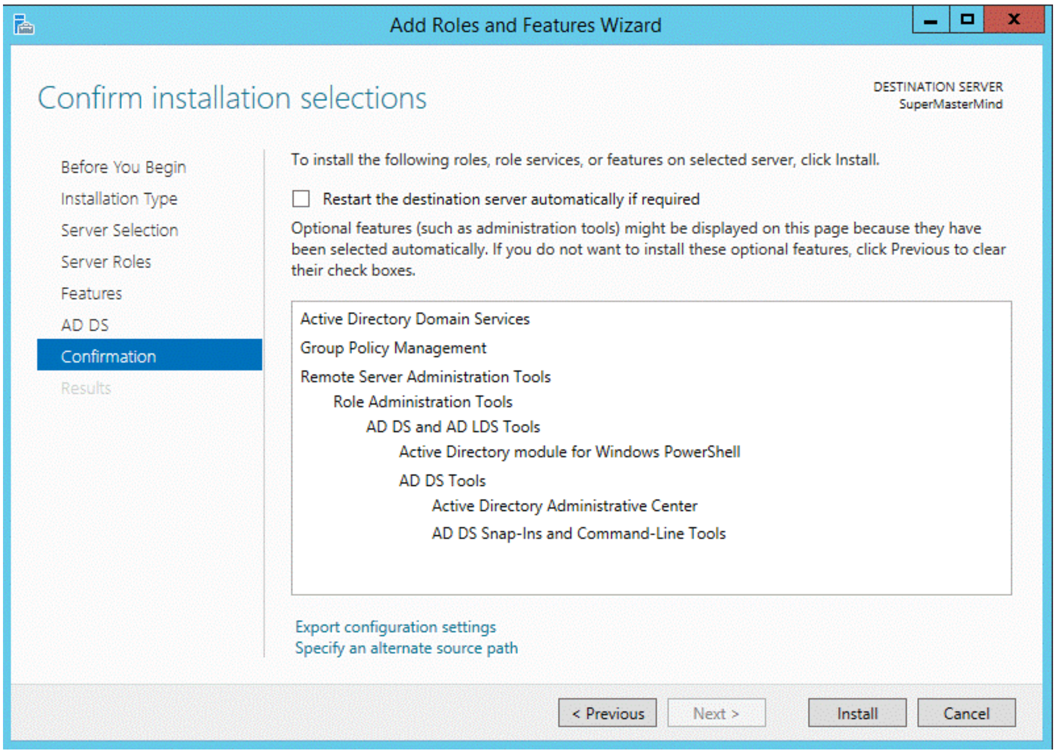
6. You have installed all the prerequisites for Active Directory. Select additional Roles and Features if required.

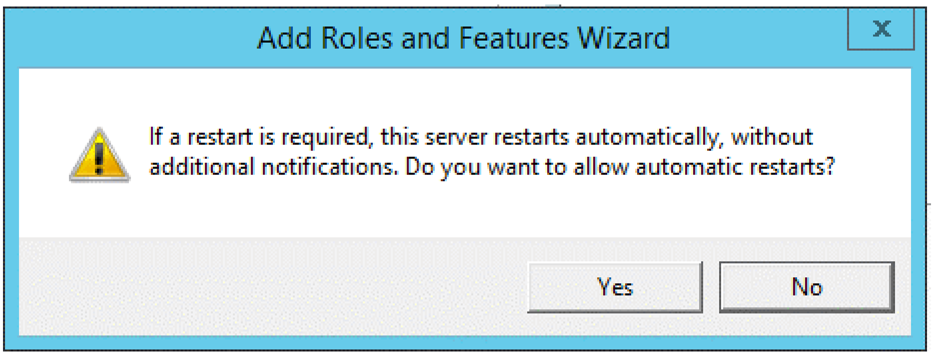


7. The following screen has information about how Active Directory Domain Services will be installed.

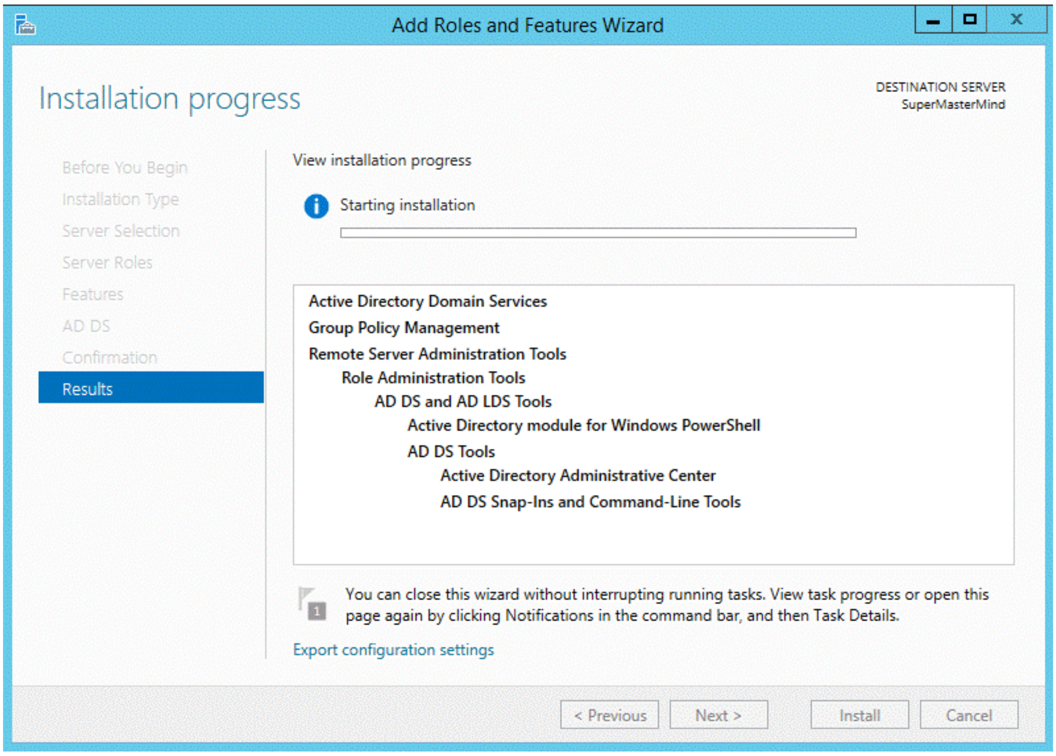


8. On the next screen, Click **Restart the destination server automatically if required** and click the **Install** button.



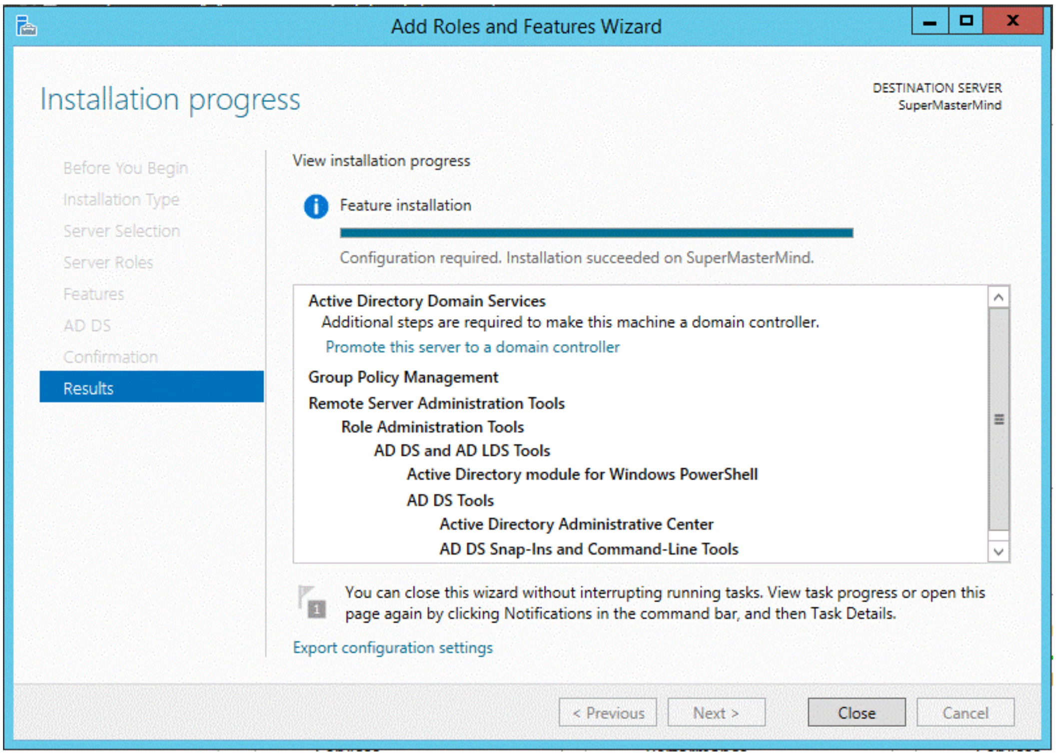


9. The Installation process begins. It takes several minutes to complete.

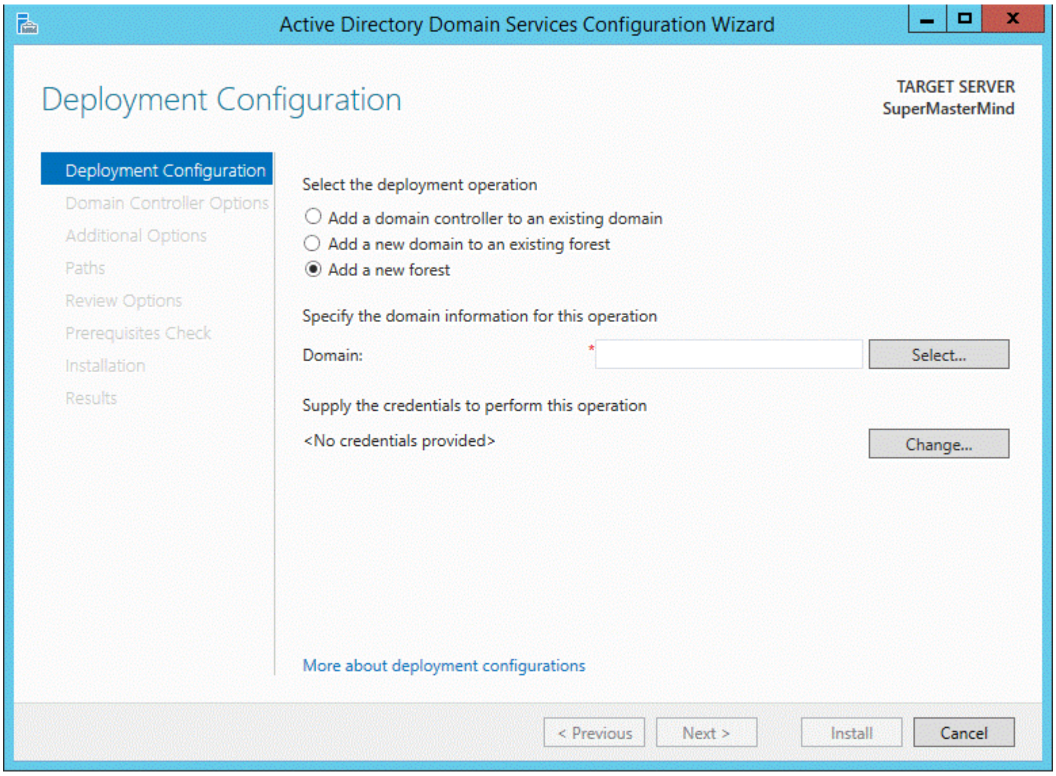


10. Once the Active Directory Domain Service is installed, you see the installation results. Click **Promote this server to a domain controller** to launch the **Active Directory Domain Services** configuration wizard.

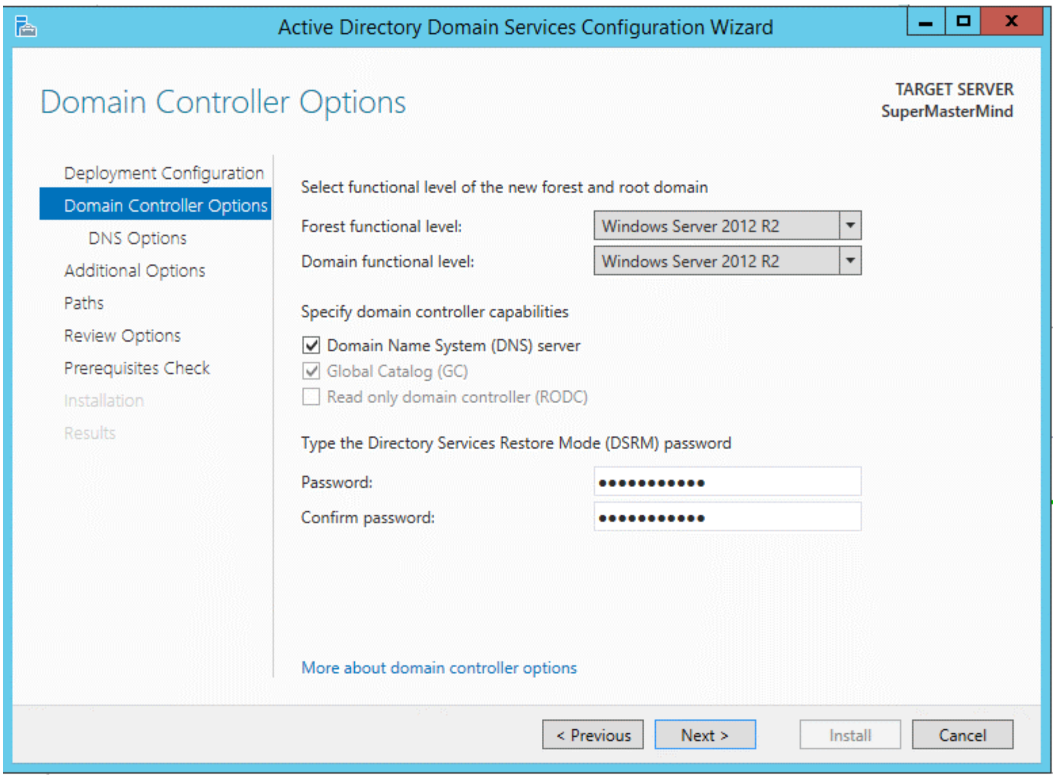
IMPORTANT: Do not close the screen yet.



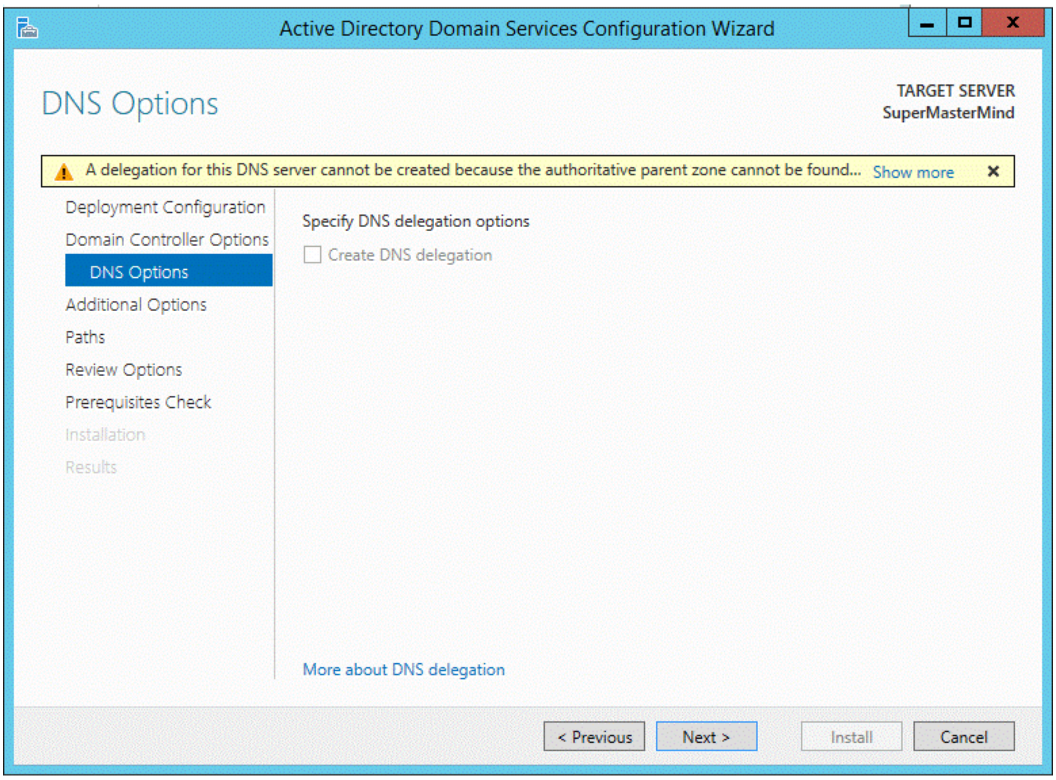
11. The Deployment Configuration screen appears. Select the **Add new a Forest** button and provide a **Root domain name** in the text box.



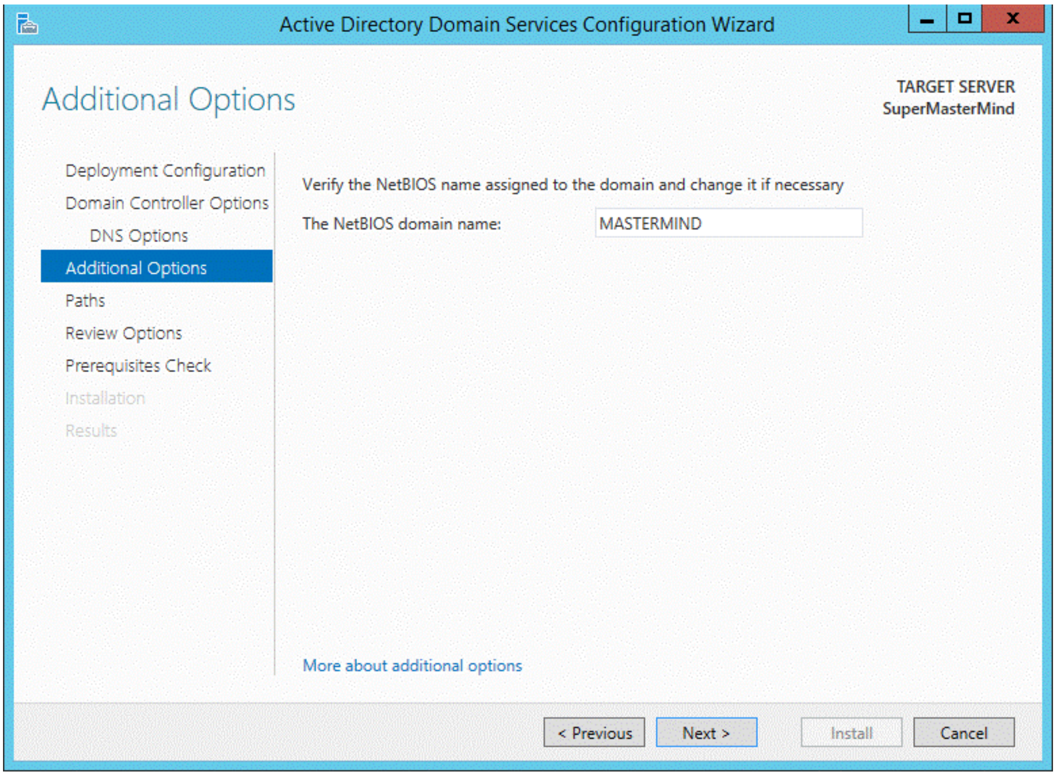
12. The Domain Controller Options screen appears. Enter a password of your choice in the **Password** and **Confirm password** fields. Keep default values for other settings.



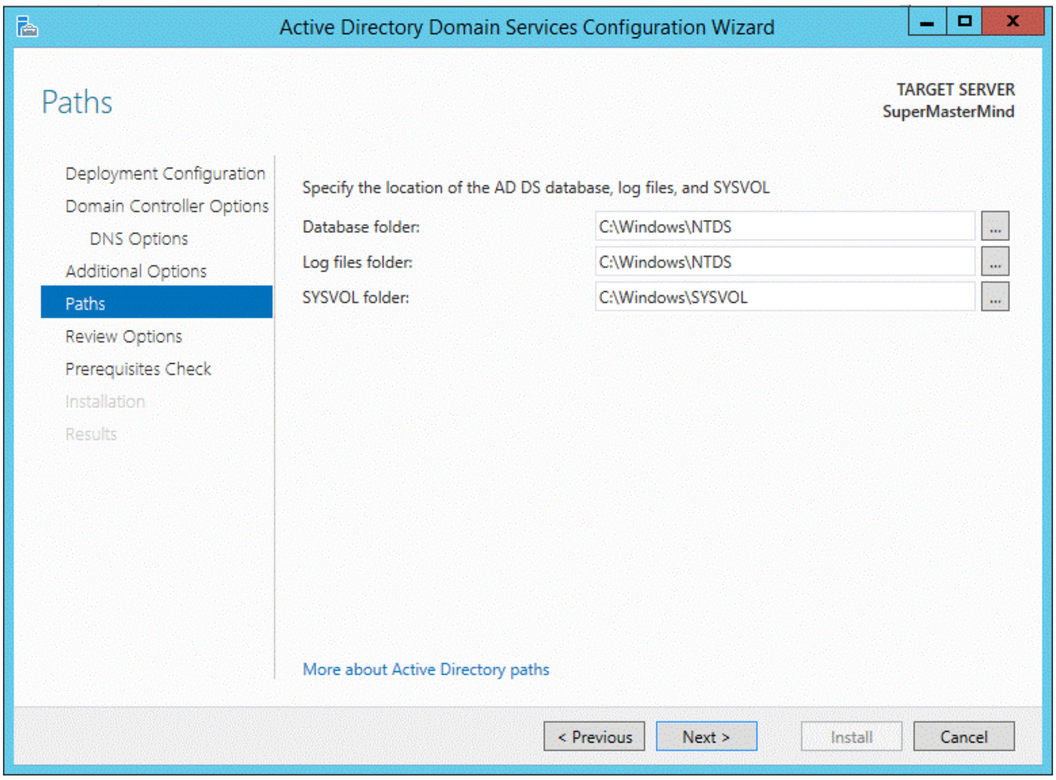
13. A warning appears on the DNS Option screen. You don't need to do anything.



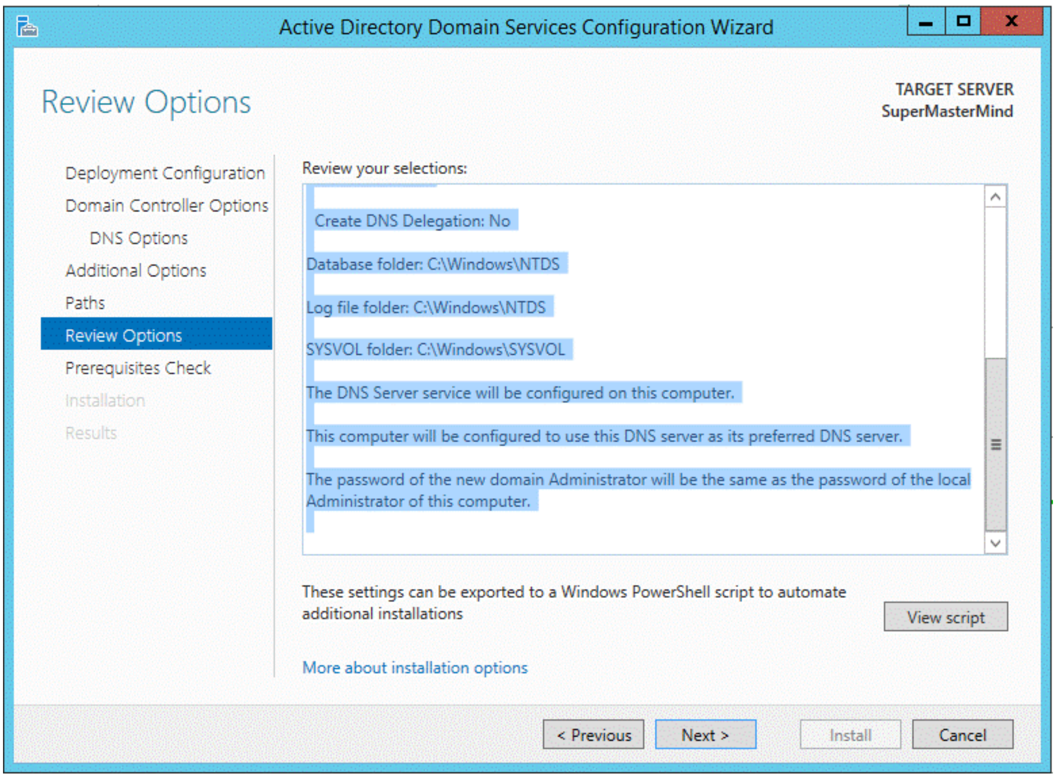
14. The Additional Options screen appears. Verify your **NetBIOS domain name**.



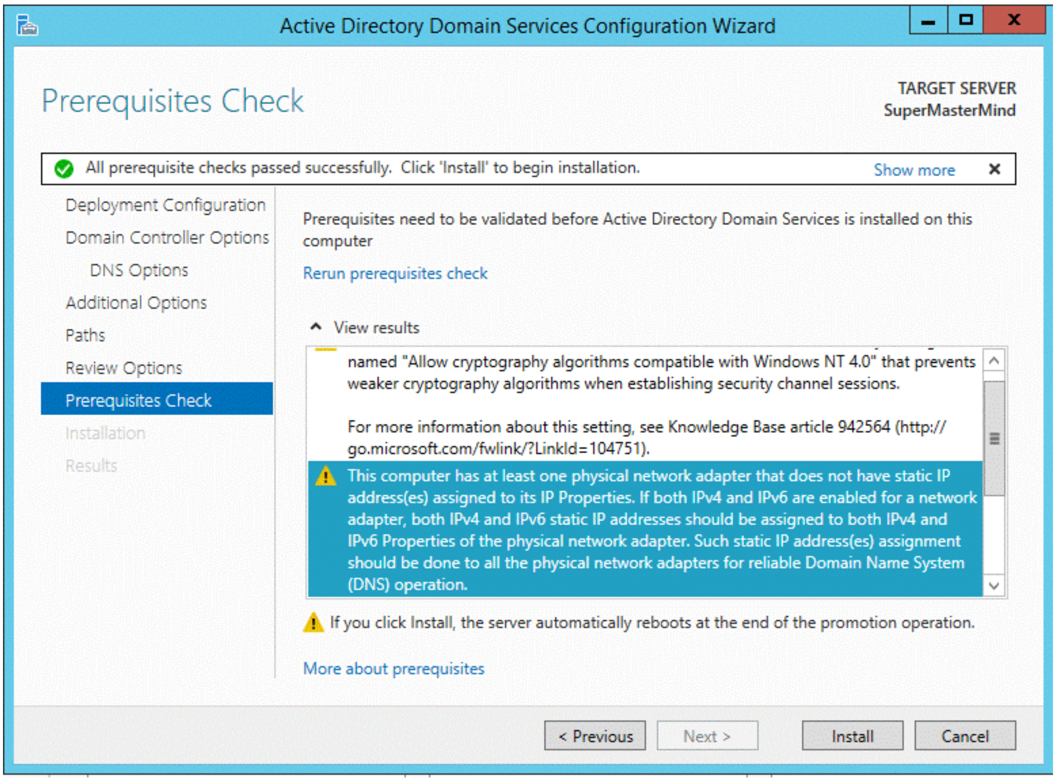
15. The Paths screen appears. Leave all settings as is.



16. The Review Options screen shows the selected wizard settings.

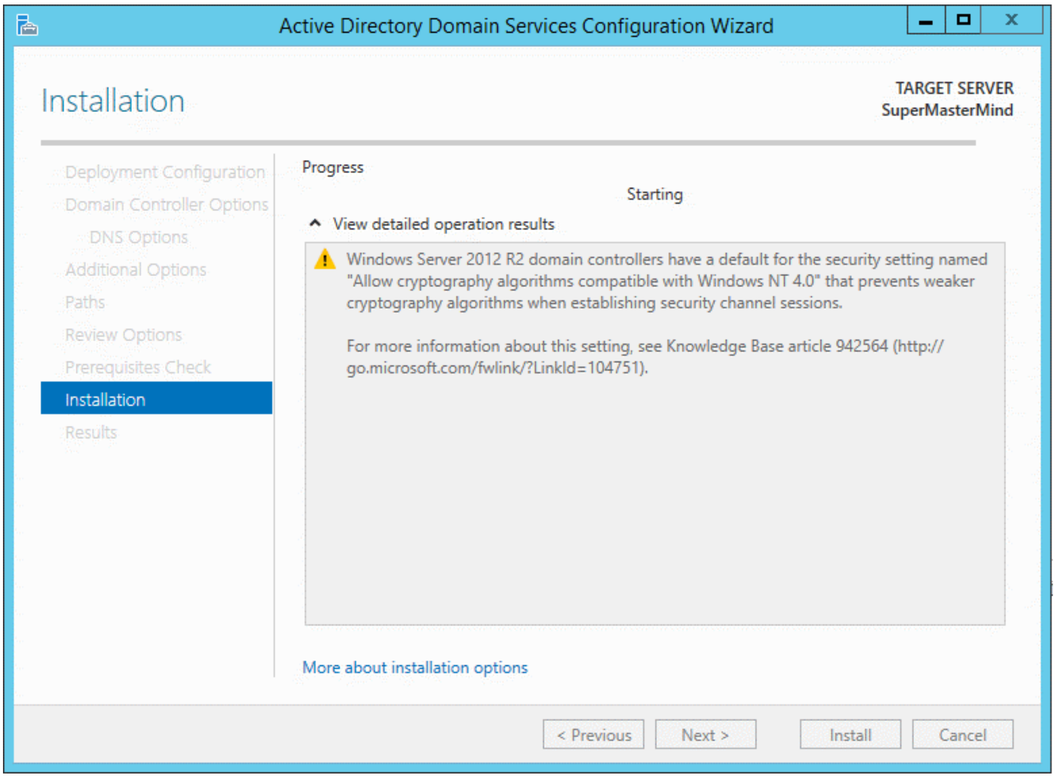


17. The Prerequisites Check screen appears. This takes several minutes to complete. When the test completes, click the **Install** button.

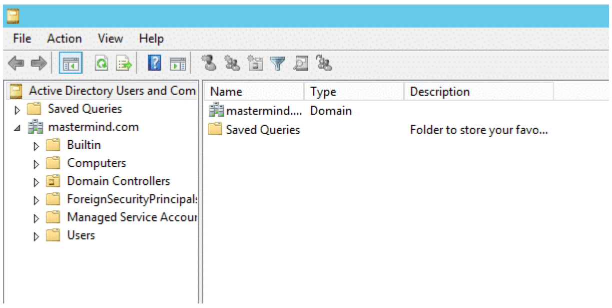


18. You reached last screen of the Active Directory Domain Services Configuration Wizard. This screens shows the installation progress. When the installation is

completed, your server restarts automatically.



19. After restart, you should be able to able to log into the domain using Domain credentials, for example, `Domain\UserName`.
20. You can use the Active Directory Users and Computers administrator tool to create users and groups.

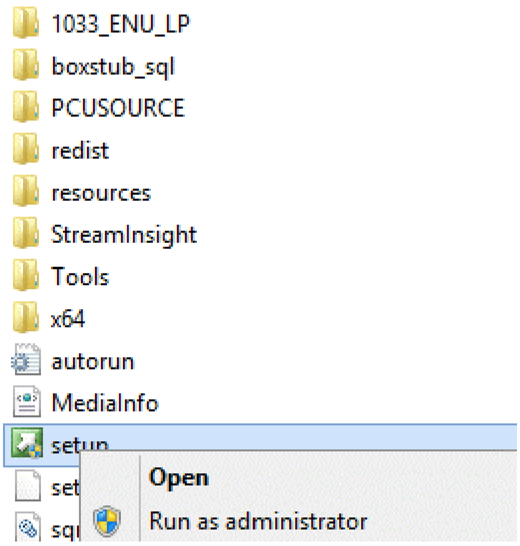


21. Verify domain details by browsing the Users folder in Left panel.

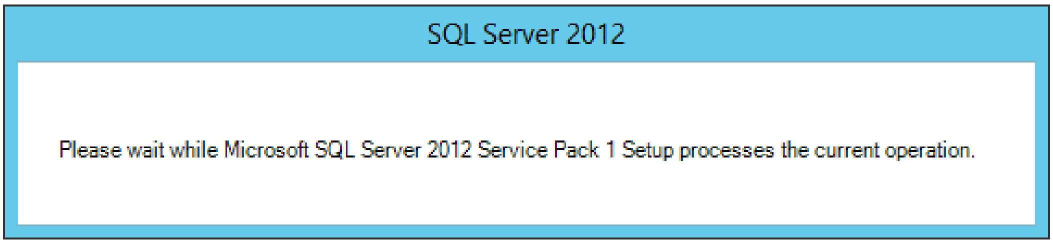
Installing SQL Server 2012 R2

1. Browse the directory of the system where Microsoft SQL Server 2012 setup files reside.

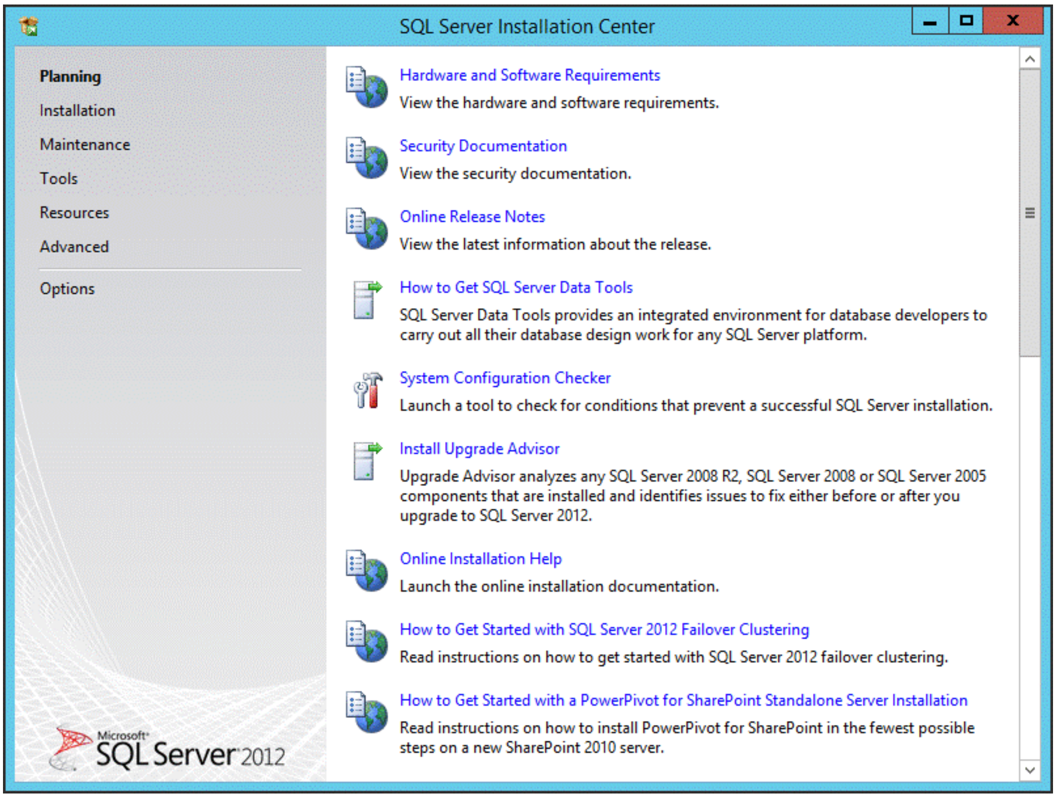
2. Right click Setup.exe files and run as administrator.



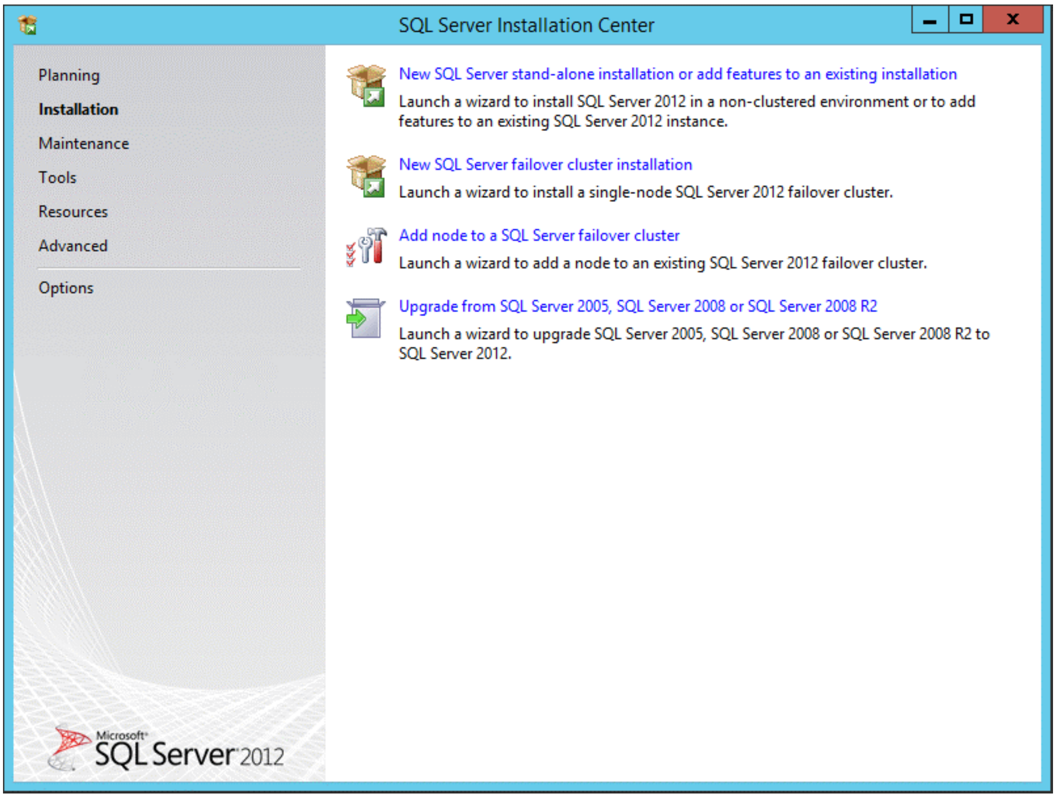
3. The Splash screen keeps you waiting until SQL Server installation Center screen appears.



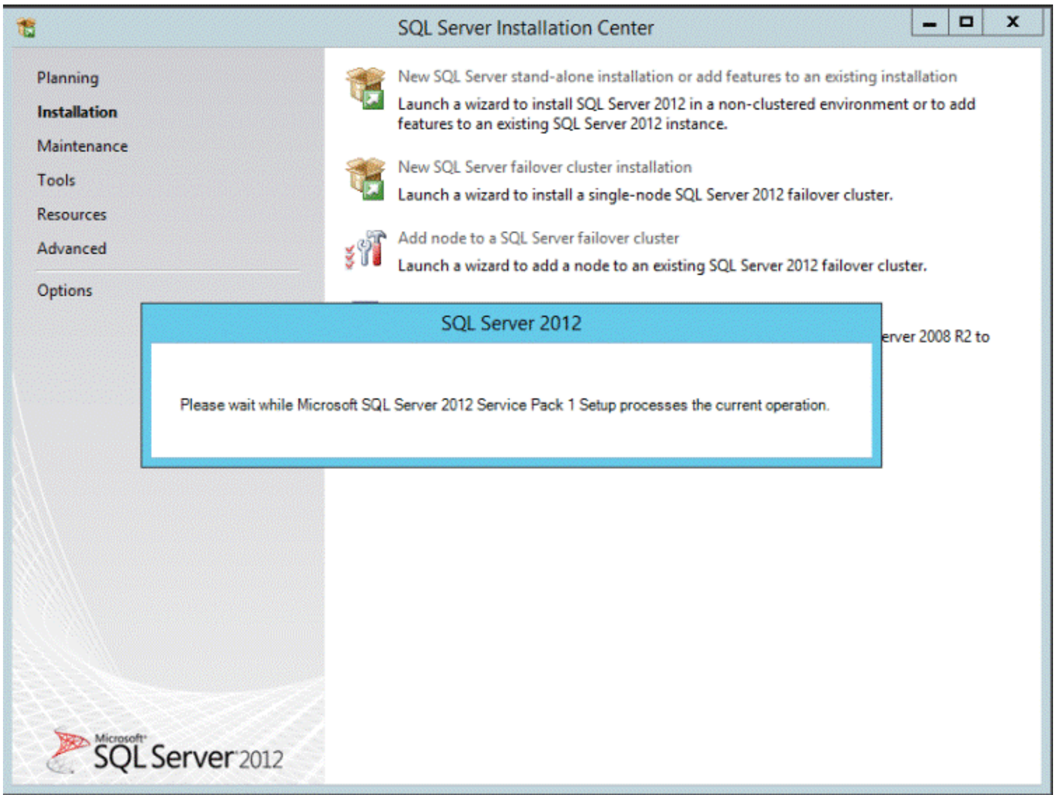
4. The SQL Server installation Center screen appears.



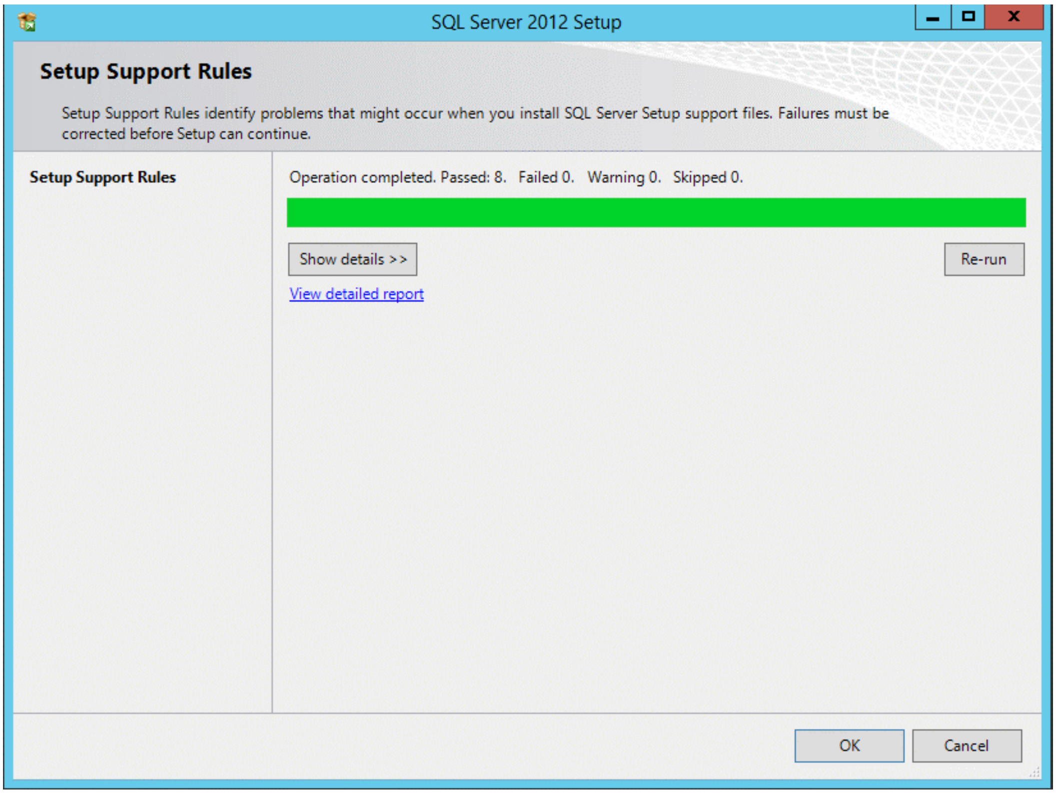
5. From left panel, click **Installation**. Installation options appear.



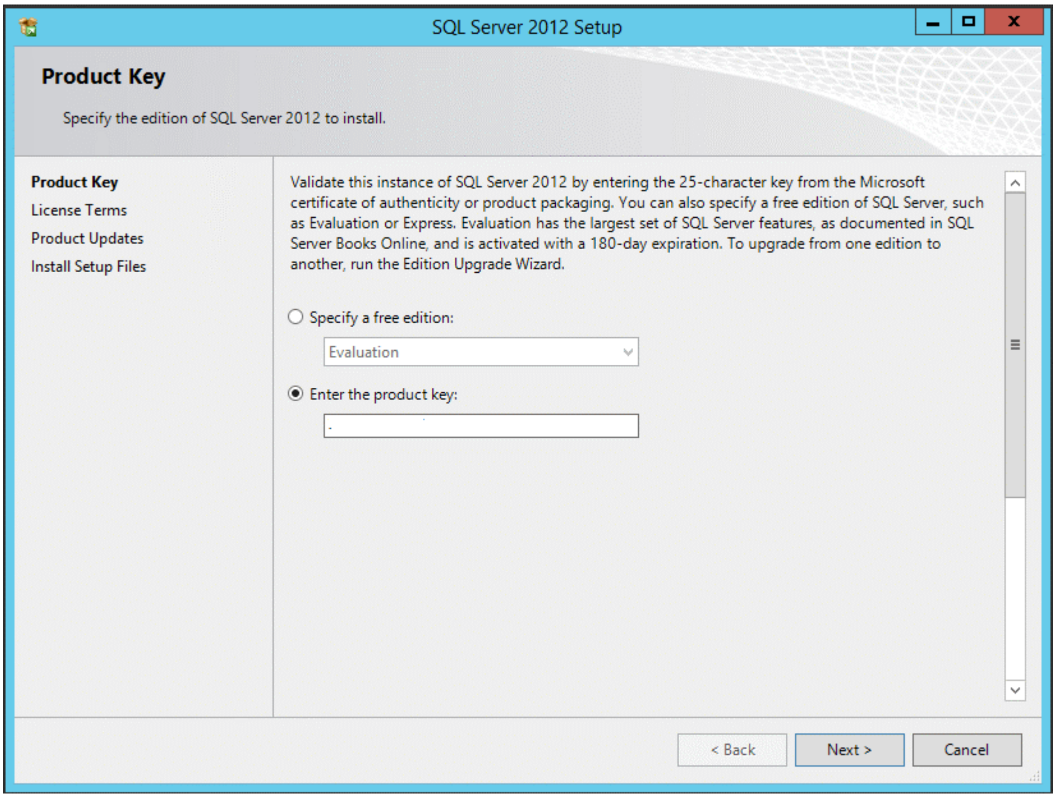
6. Click **New SQL Server stand-alone installation** or add features to an existing installation link. A splash screen keeps you waiting until the Microsoft SQL Server 2012 Service Pack 1 setup process completes.



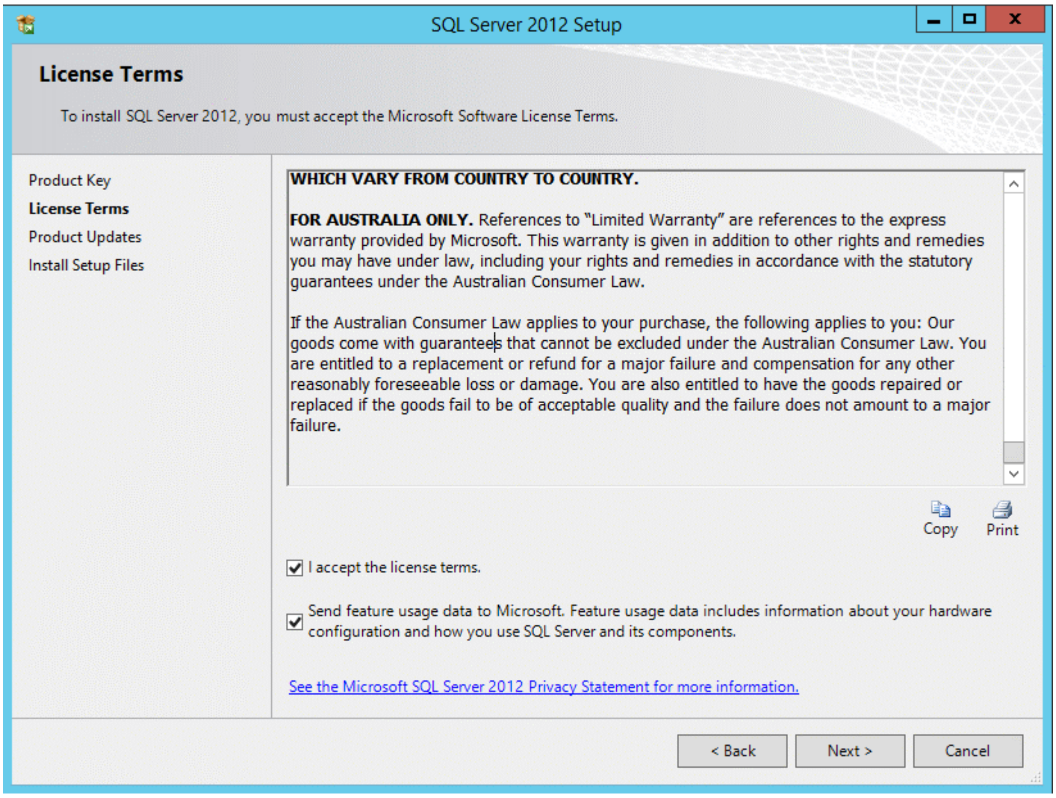
7. On the Setup Support Rules screen, the Installer checks for any issues that occurred during installation.



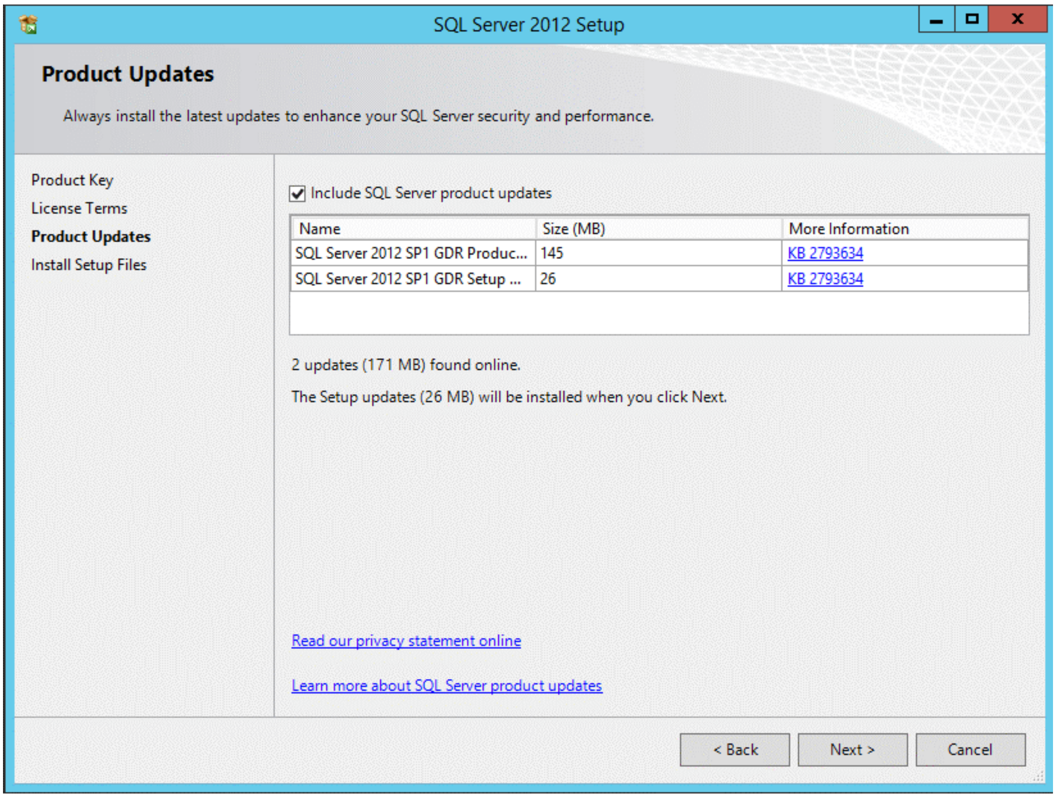
8. In the Product Key screen, provide a valid license Key. If you are installing the free version, select **Specify a free edition**.



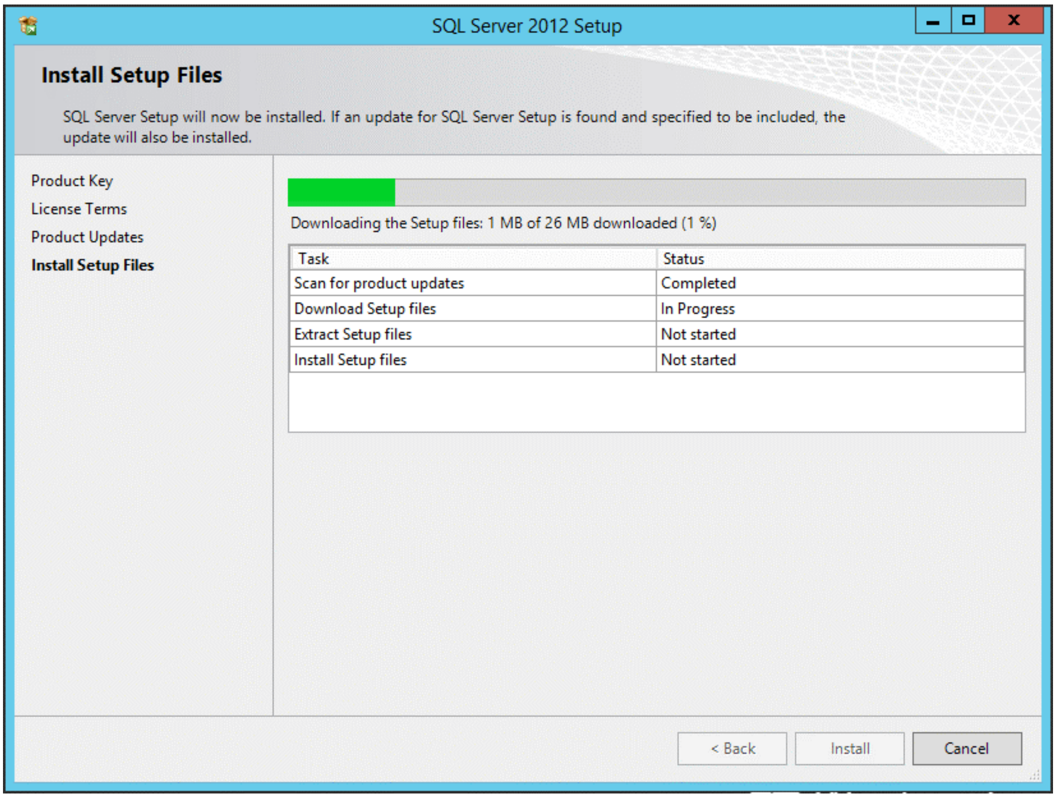
9. The License Terms screen appears. Read the terms carefully and check the **Accept the license terms** option if you are happy with them



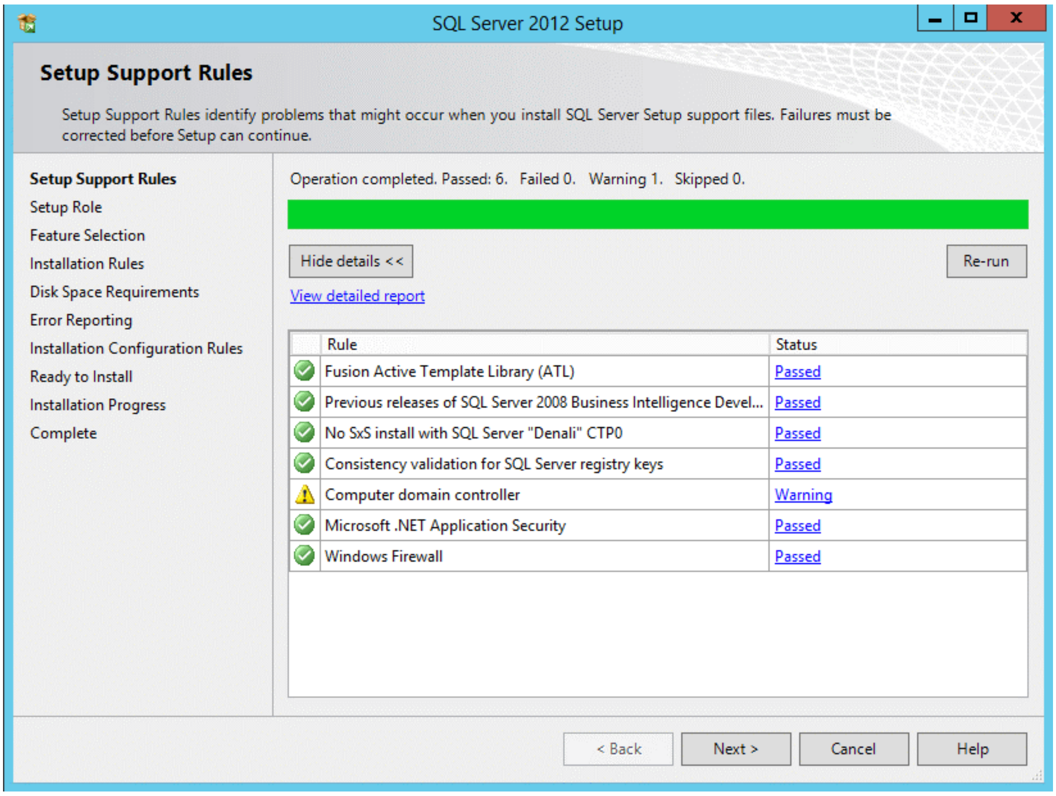
10. The Product Updates screen appears. You are notified of hot fixes or updates for SQL Server 2012 relevant to this installation.



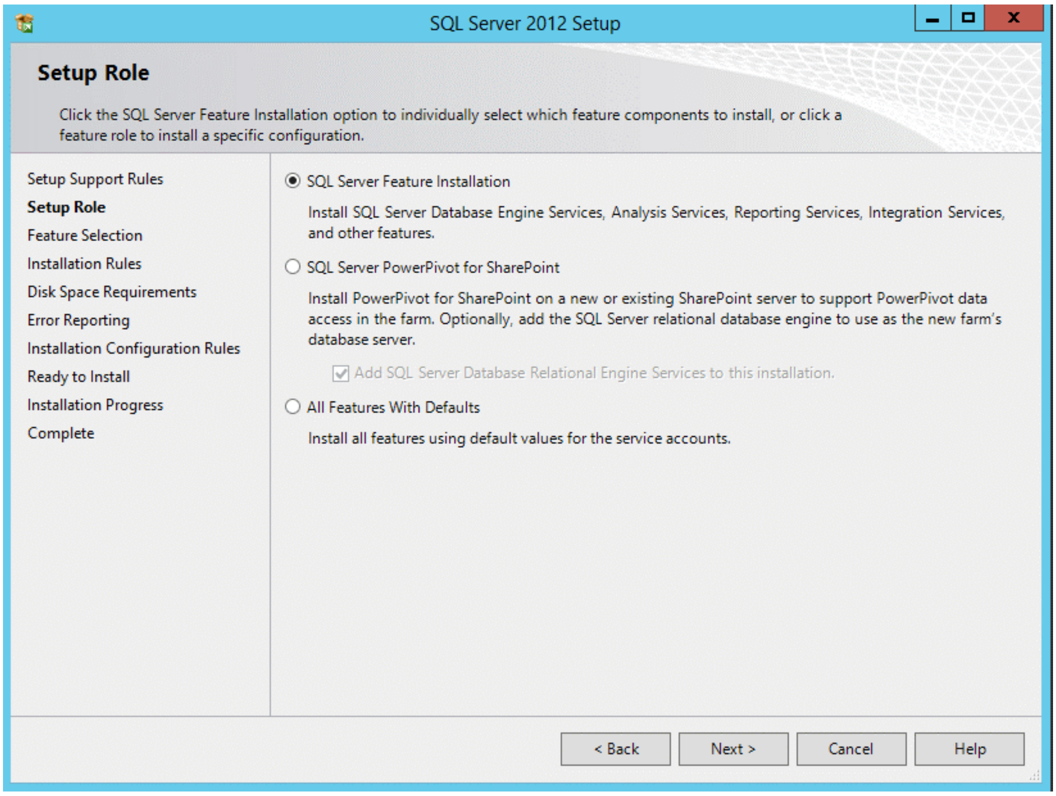
11. On the Install Setup Files screen, the Setup files are downloaded. Click **Install**.



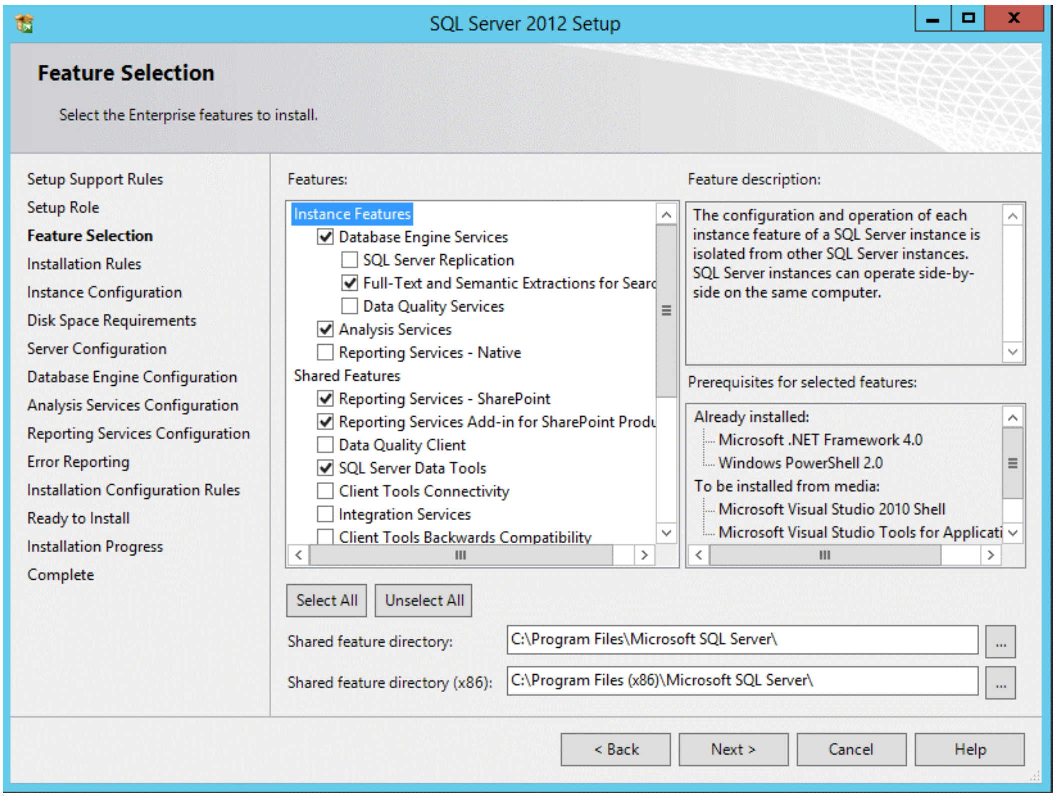
12. The Setup Support Rules screen appears, identifying installation issues.



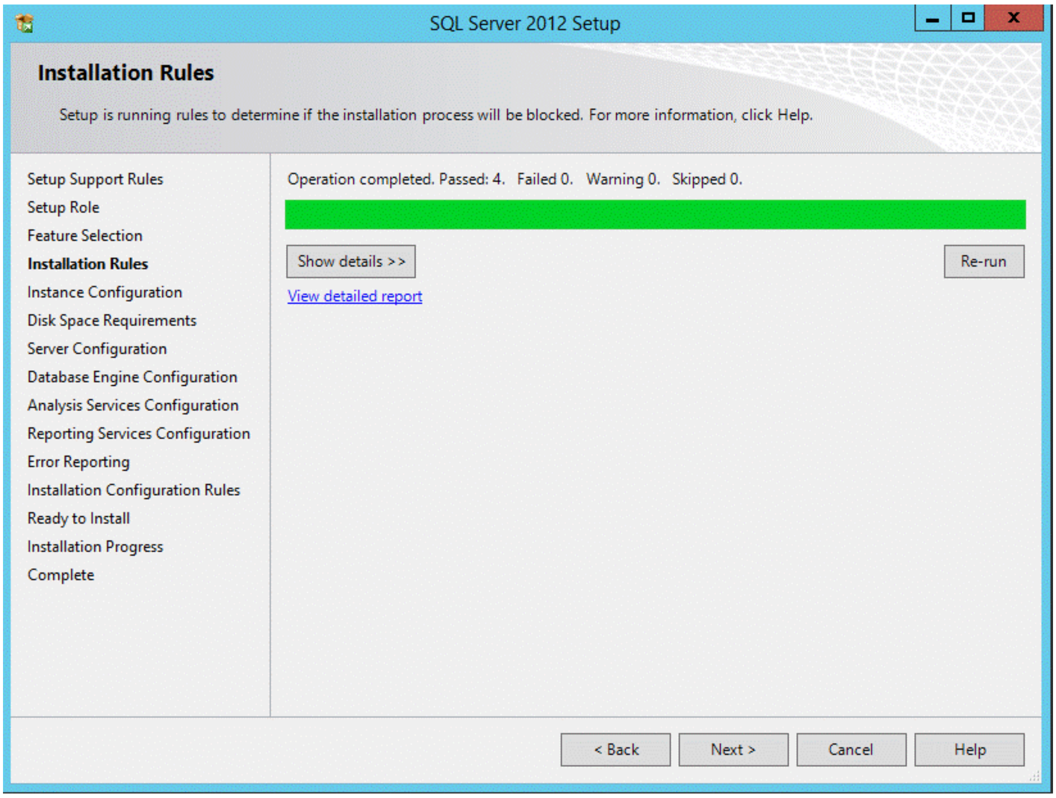
13. On Setup Role screen, select **SQL Server Feature Installation**.



- Instances Features
  - Database Engine Services
  - Full-Text and Semantic Extractions for Search
  - Analysis Services
- Shared Features
  - Reporting Services – SharePoint
  - Reporting Services Add-in for SharePoint Products
  - SQL Server Data Tools
  - Management Tools – Basic
  - Management Tools – Complete

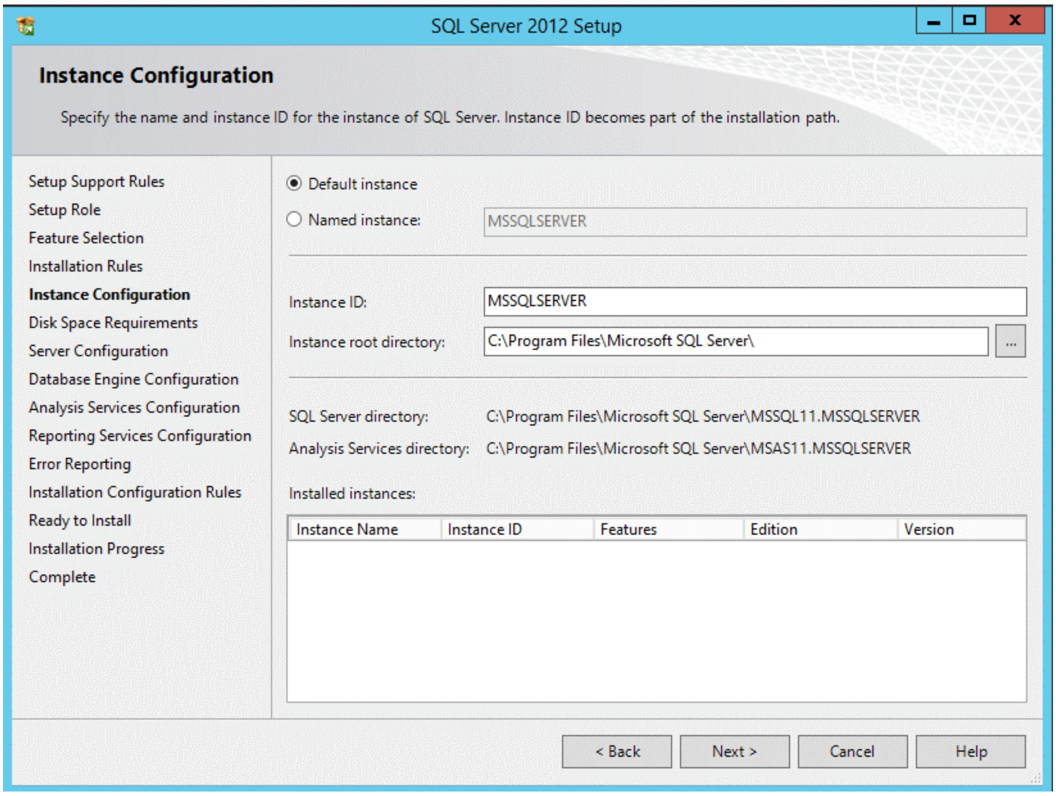


14. The Installation Rules screen indicates if the Installation process had problems and got stuck.

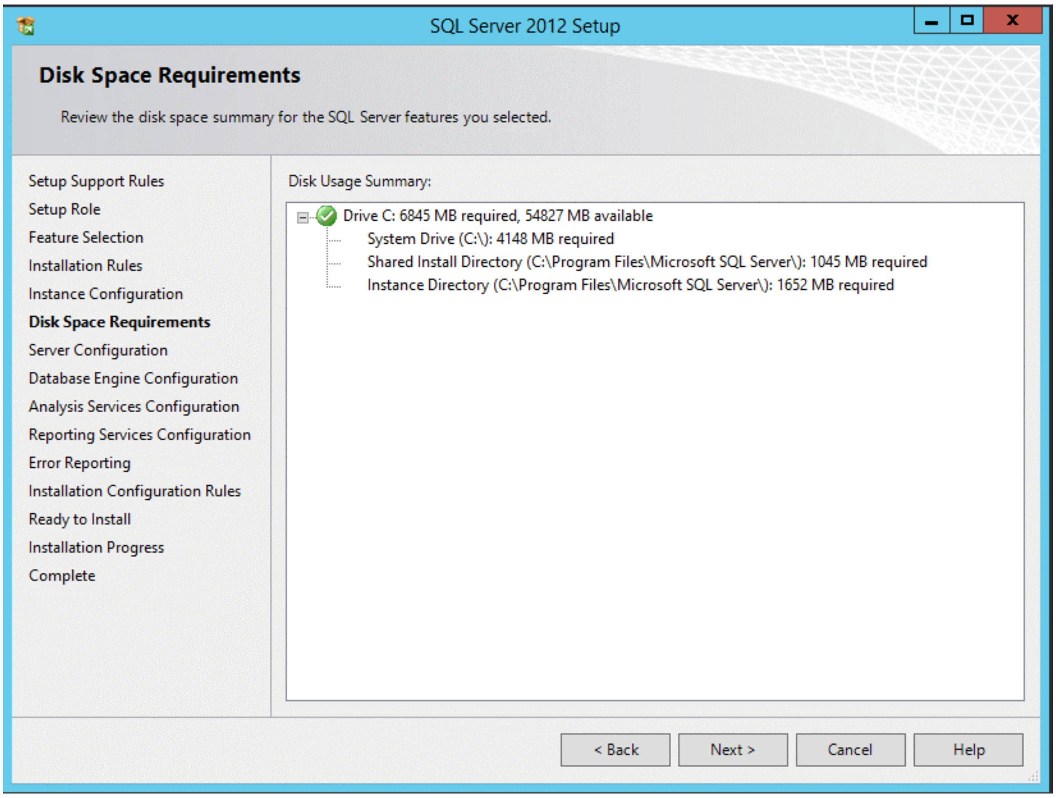


15. The Instance Configuration screen prompts you to choose the default SQL Server Instance or create a new Named Instance. Also, you can change the

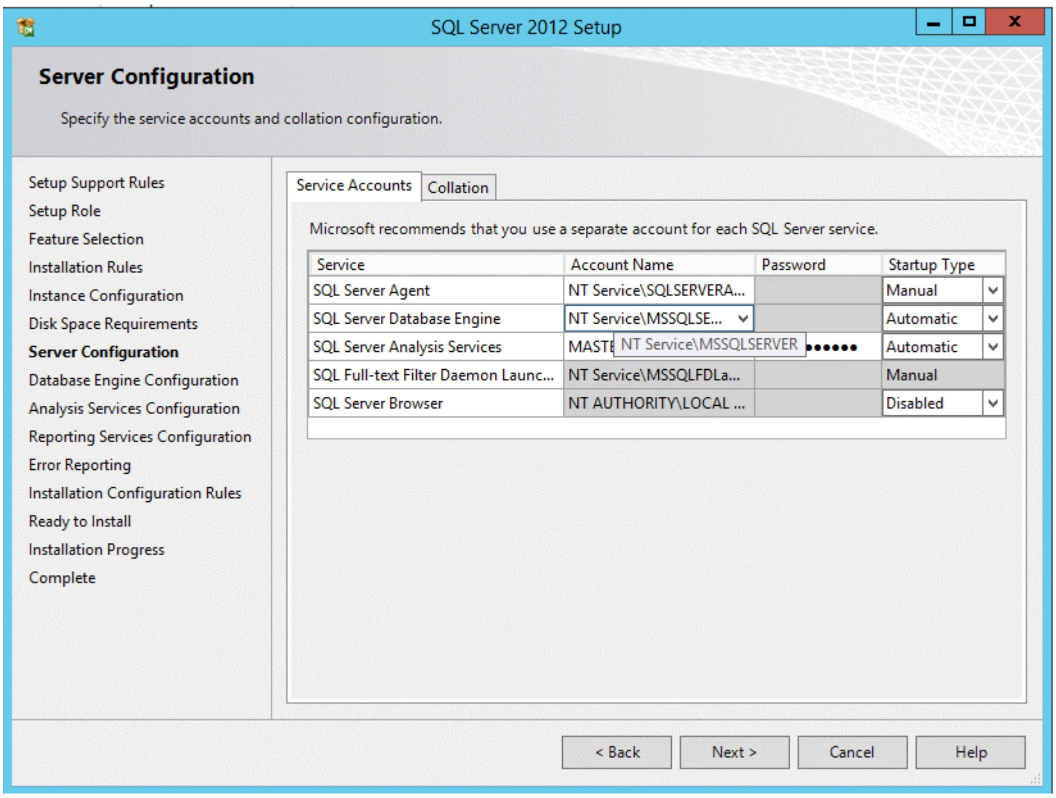
Instance directory on Windows Server 2012 R2.



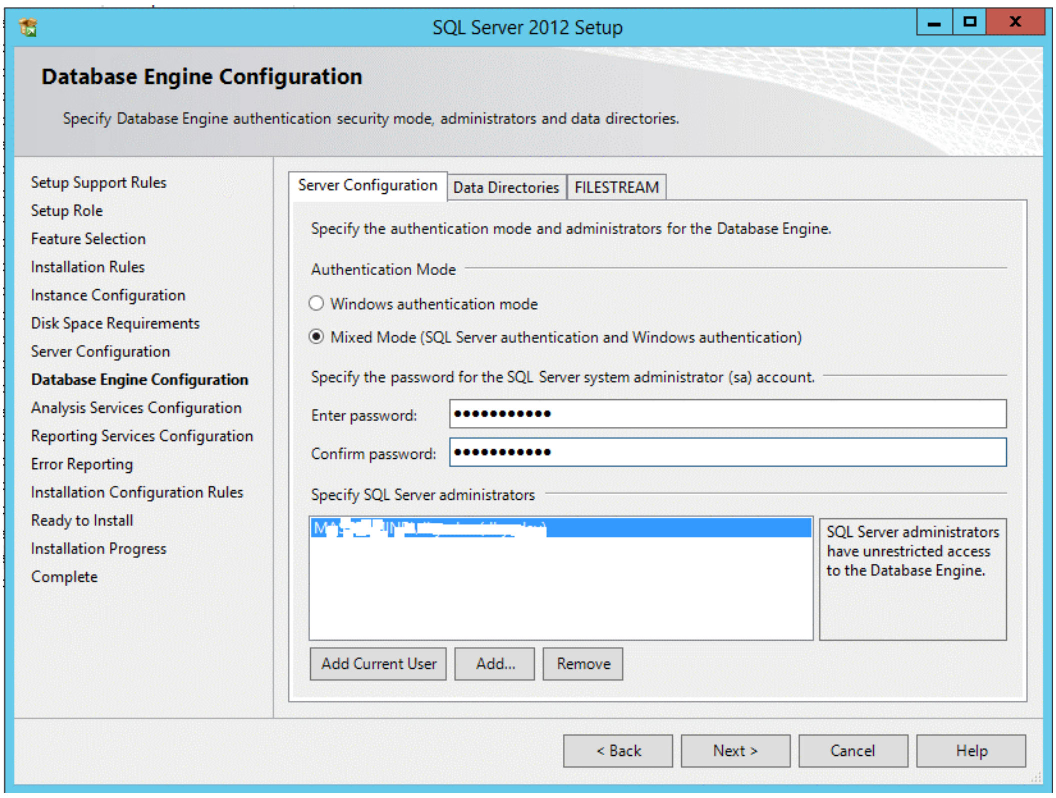
16. The Disk Space Requirements screen displays the space required for installation. If your Windows Server 2012 R2 has enough space, click **Next** to continue.



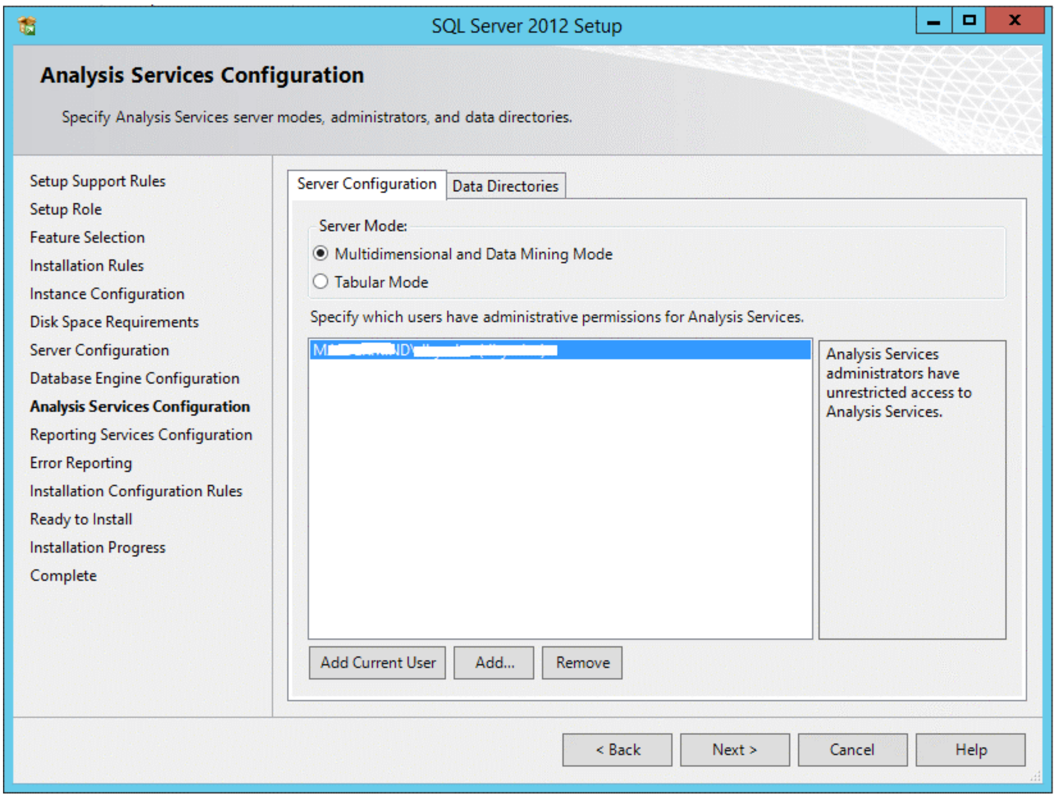
17. On the Server Configuration screen, click the **Service Accounts** tab and perform the following actions.
    a. Change Startup Type for the SQL Server Agent to **Automatic**.
    b. Change the Account Name for the SQL Server Database Engine to **NT AUTHORITY\SYSTEM**.
    c. Change the Account Name for the SQL Server Analysis Services to **NT AUTHORITY\SYSTEM**.



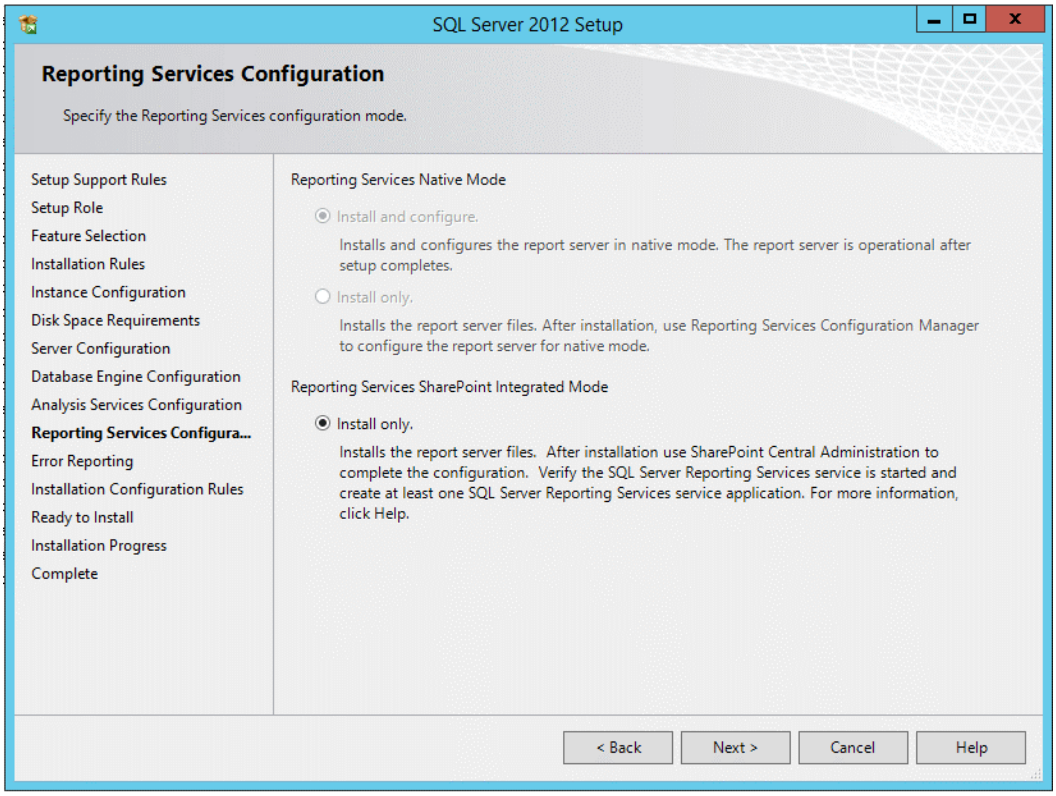
18. In the next screen, go to the **Server configuration** tab and select the **Mixed Mode (SQL Server authentication and Windows authentication)** option. Also, add the current logged-in user as a System Administrator Account for this SQL Server Instance.



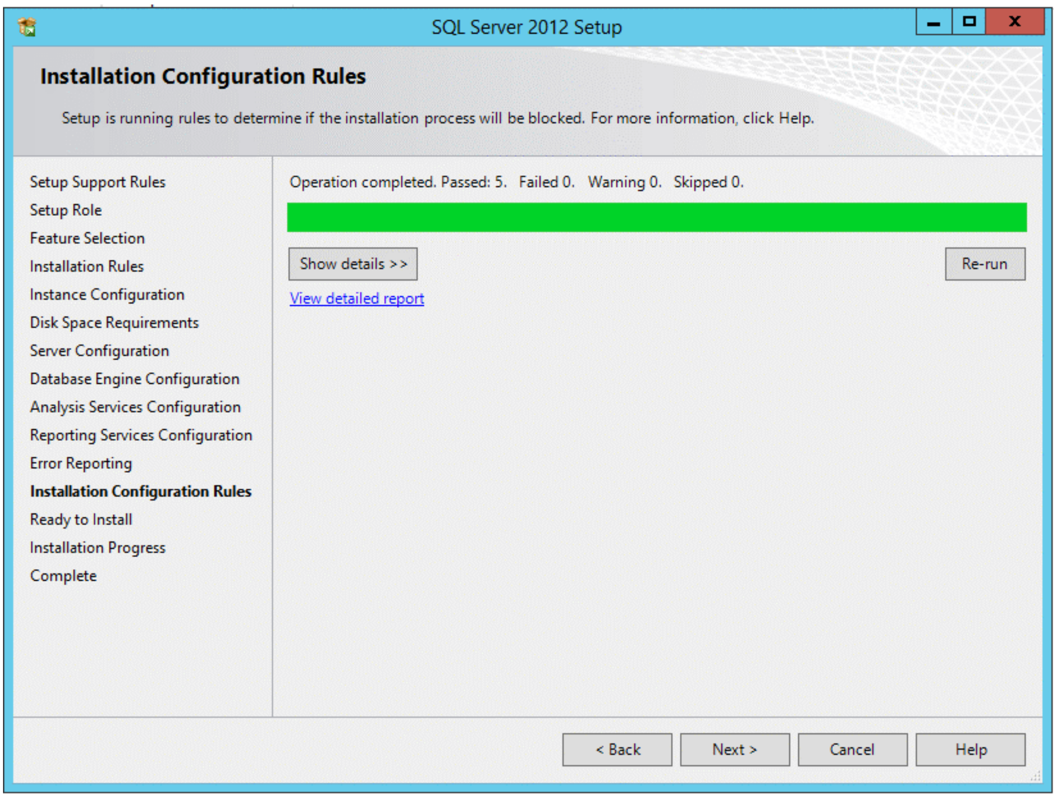
19. On the Analysis Services Configuration screen, select the current logged-in user as a System Administrator for Analysis Services



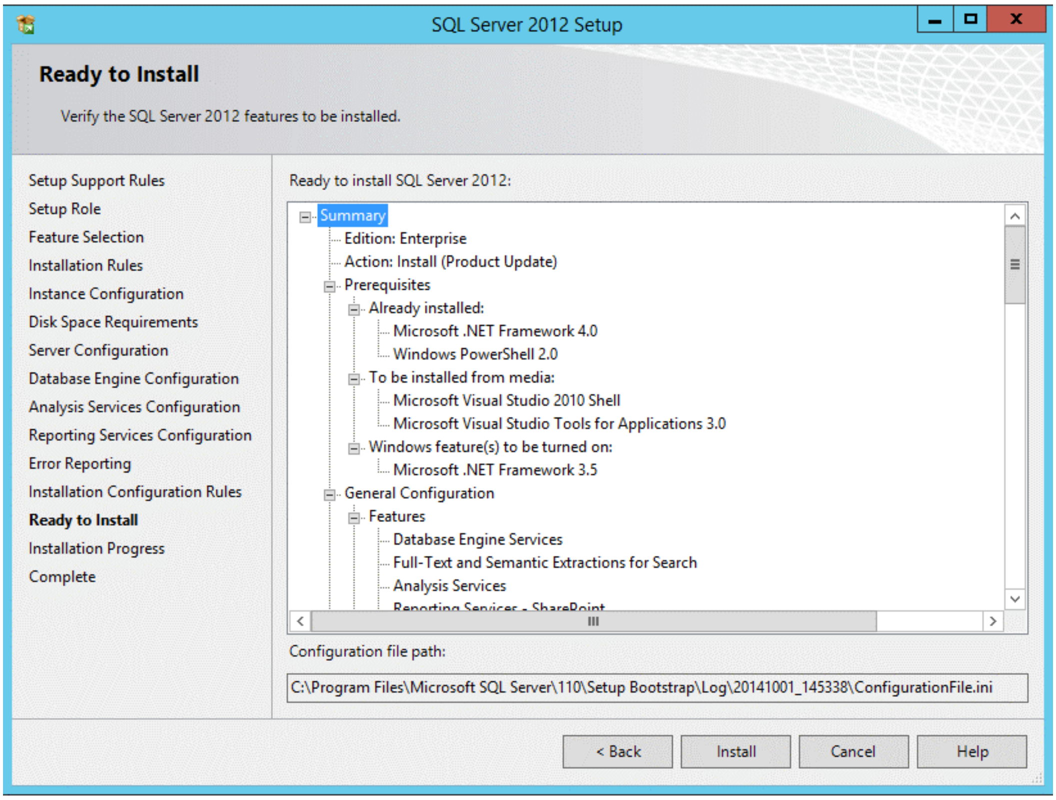
20. On the Reporting Services Configuration screen, select the **Install Only** button.



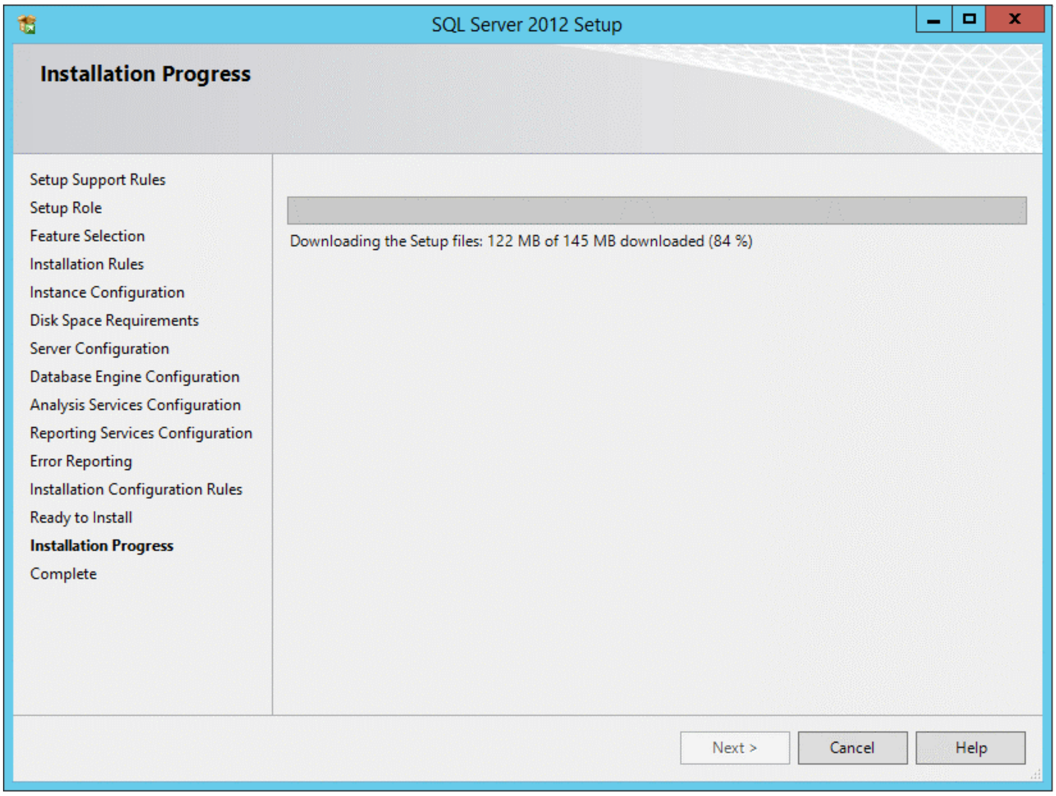
21. On the Installation Configuration Rules screen, review issues that occurred during installation.



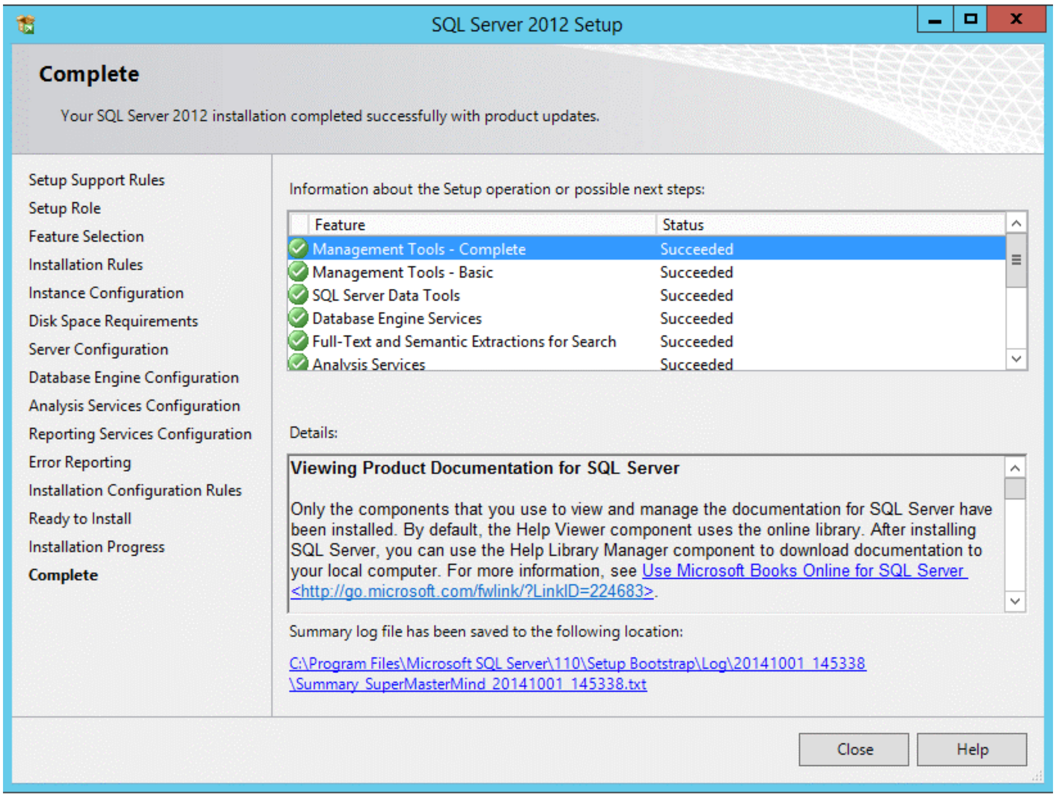
22. On the Ready to Install screen, review all Feature details that you wanted to install.



23. On the Installation Progress screen, monitor the download status of required software and the status of installation.



24. The Complete screen displays the status of features you selected to install. Close the screen and restart Windows Server 2012 R2.



25. After restarting Windows Server 2012 R2, you should be able to login in to your SQL Server Instance.

26. After completing the installation, configure the Named Pipes protocol for SQL Server 2012. To do this, browse the following path using SQL Server Configuration Manager:
SQL Server Configuration Manager > SQL Server Network

Configuration > Protocols for MSSQLSERVER. Locate the **Named Piped** protocol in the screen 's right panel and enable.

Installing and troubleshooting online prerequisites issues for SharePoint 2013

Preliminary steps

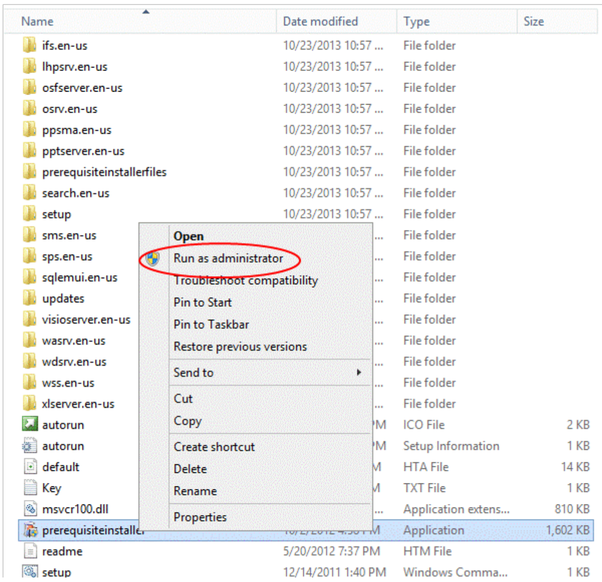
NOTE: Before installing prerequisites, follow these steps to ignore an issue that appears when installing.

1. Update Windows to the latest package.
2. On the Windows server, open **Server Manager > Configure this local server > IE Enhanced Security Configuration**. Turn this setting off.
3. Add the following features with a Powershell command:

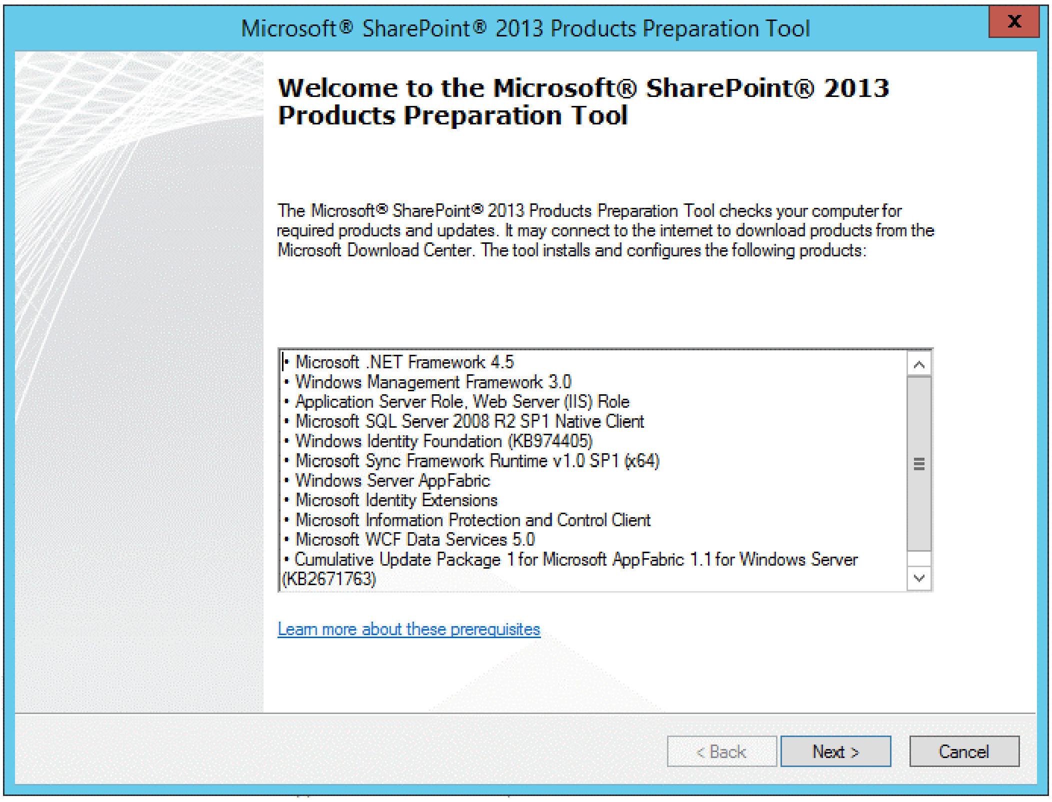
   Add-WindowsFeature NET-HTTP-Activation,NET-Non-HTTP-Activ,NET-WCF-Pipe-Activation45,NET-WCF-HTTP-Activation45,Web-Server,Web-WebServer,Web-Common-Http,Web-Static-Content,Web-Default-Doc,Web-Dir-Browsing,Web-Http-Errors,Web-App-Dev,Web-Asp-Net,Web-Asp-Net45,Web-Net-Ext,Web-Net-Ext45,Web-ISAPI-Ext,Web-ISAPI-Filter,Web-Health,Web-Http-Logging,Web-Log-Libraries,Web-Request-Monitor,Web-Http-Tracing,Web-Security,Web-Basic-Auth,Web-Windows-Auth,Web-Filtering,Web-Digest-Auth,Web-Performance,Web-Stat-Compression,Web-Dyn-Compression,Web-Mgmt-Tools,Web-Mgmt-Console,Web-Mgmt-Compat,Web-Metabase,WAS,WAS-Process-Model,WAS-NET-Environment,WAS-Config-APIs,Web-Lgcy-Scripting,Windows-Identity-Foundation,Xps-Viewer -verbose
4. If you get the error **Application Server Role, Web Server (IIS) Role: configuration error** when running the prerequisite installer, follow these steps.
   a. Open the MMC console.
   b. Add the Group Policy Object snap-in.
   c. In Local Computer Policy, go to **Computer Configuration > Administrative Templates** and select **System**.
   d. In system settings, scroll down the list and find **Specify settings for optional component installation and component repair**.
   e. In the top left corner, select **Enabled** and **Contact Windows Update directly to download repair content instead of Windows Server Update Services (WSUS)**.
   f. Click **OK** and close the MMC console.
   g. Go to Windows/System32, duplicate servermanager.exe and rename it servermanagercmd.exe.
   h. If the SharePoint 2013 Preparation tool is stuck in configuring the Application Server and the Web Server IIS roles, close the Server Manager windows. The tool starts the other configurations.
5. If you get an error with the AppFabric, remove the **PSModulePath** entry in the system environment variables.

Beginning the installation

1. Go the directory that contains your installation files.
2. Select the Prerequisiteinstaller.exe file and **Run as Administrator**.

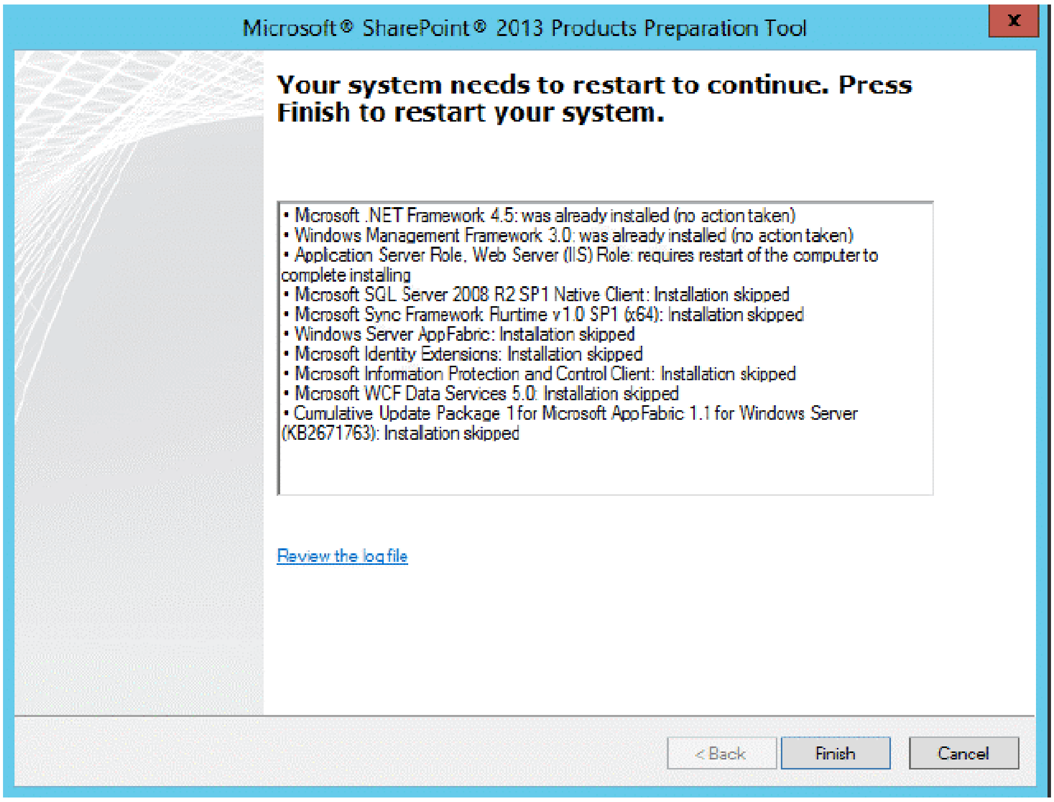


3. You are prompted with a User Account Control dialog. Click **Yes**.
4. The Microsoft SharePoint 2013 Products Preparation Tool screen appears. You can see the complete list of prerequisite products for installation.

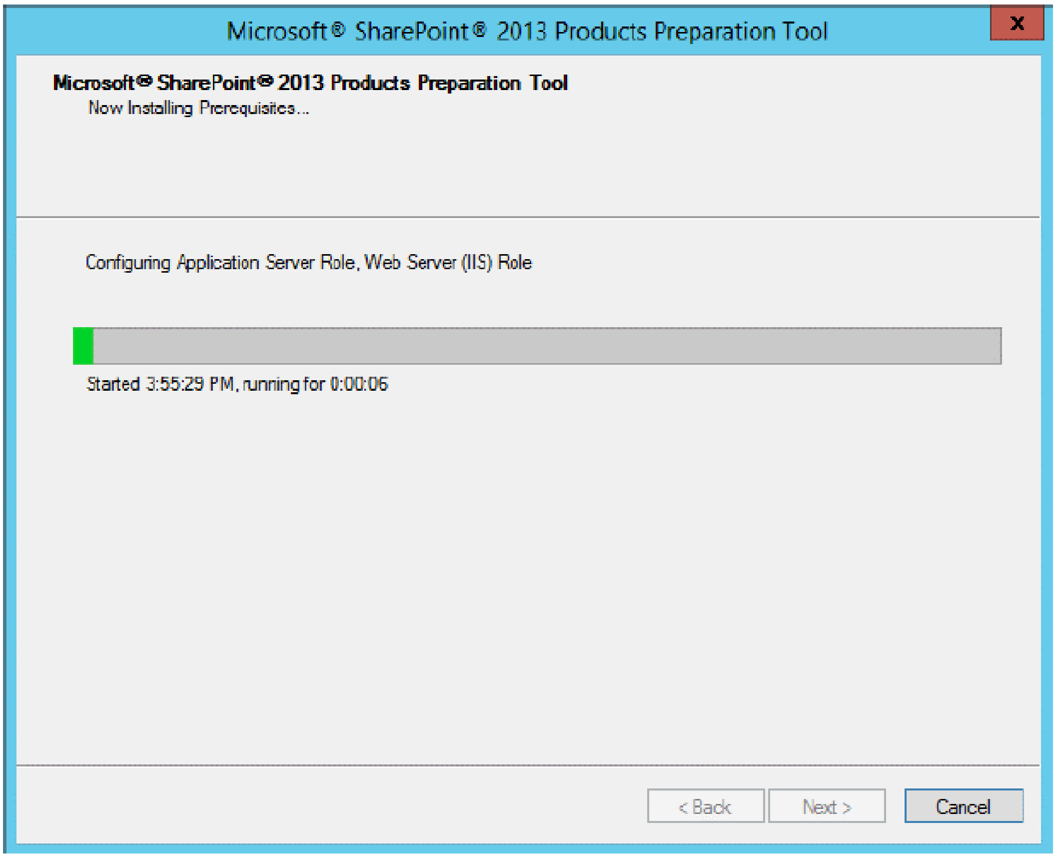


5. The License Terms for software products screen appears. Read the license terms carefully and check the box to accept the license terms.

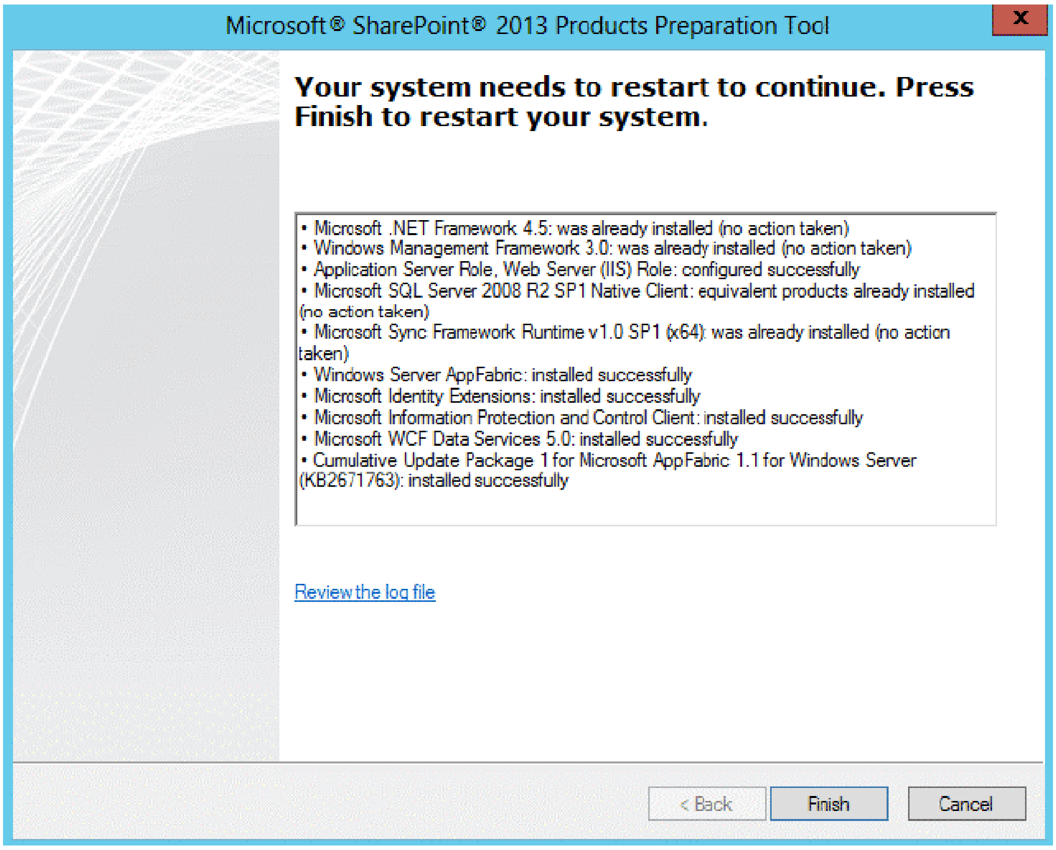
6. Prerequisite Installer enables the Application Server Role on your server. Then, you are asked to restart the server.



7. After you restart the server, the Prerequisite Installer continues the installation.



8. The Prerequisite Installer configures the following components on your server.
   - Application Server Role, Web Server (IIS) Role
   - Windows Identity Foundation (Windows6.1-KB974405-x64.msu)
   - Microsoft Sync Framework Runtime v 1.0 SP1 (Synchronization.msi)
   - Windows Server App Fabric (WindowsServerAppFabricSetup_x64.exe)
   - Microsoft Identity Extensions (MicrosoftIdentityExtensions-64.msi)
   - Microsoft Information Protection and Control Client
   - Microsoft WCF Data Services 5.0 (WcfDataServices.exe)
   - Cumulative Update Package1 for Microsoft App Fabric 1.1 for Windows Server (AppFabric1.1-RTM-KB2671763-x64-ENU.exe)
9. Once all components are configured and installed, a screen asks you restart the server. Click **Finish**.



All SharePoint 2013 prerequisites will be installed.

Installing SharePoint 2013

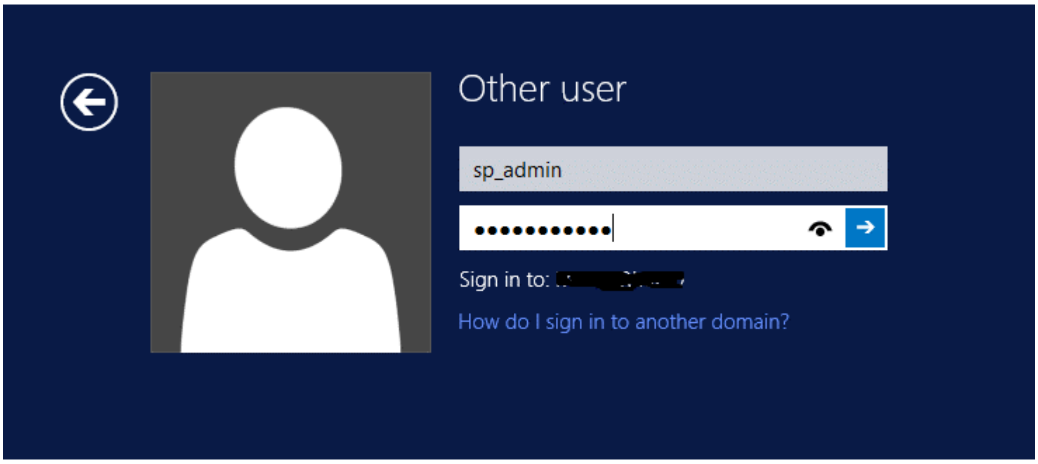
Prerequisites

- A valid SharePoint 2013 Server product key.

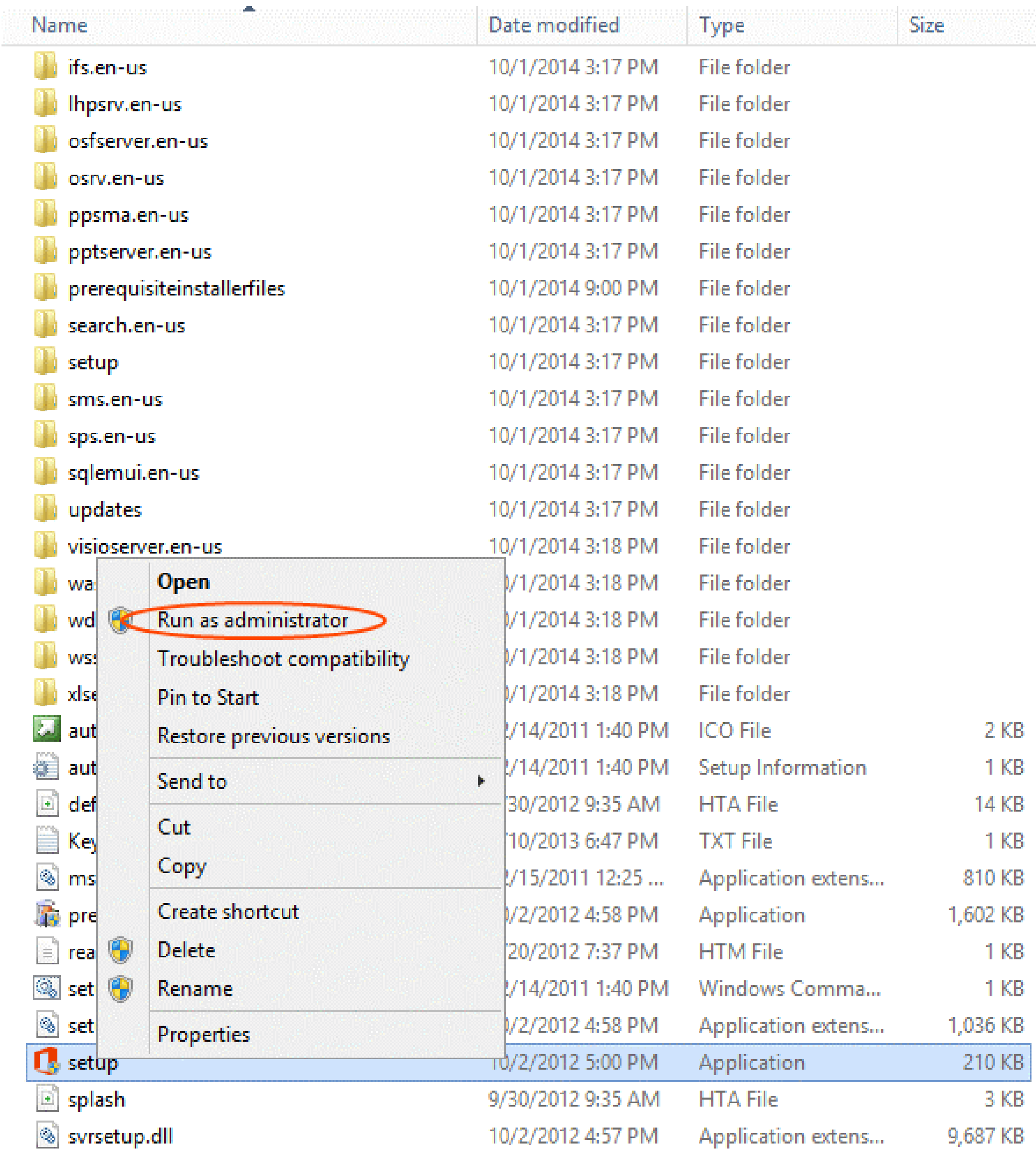
NOTE: SharePoint Foundation 2013 is not compatible with Ektron.

- A domain user added to the administrators group of the search machine with DBCreator permissions on the SQL server. (For example, Domain/SP_Admin.)

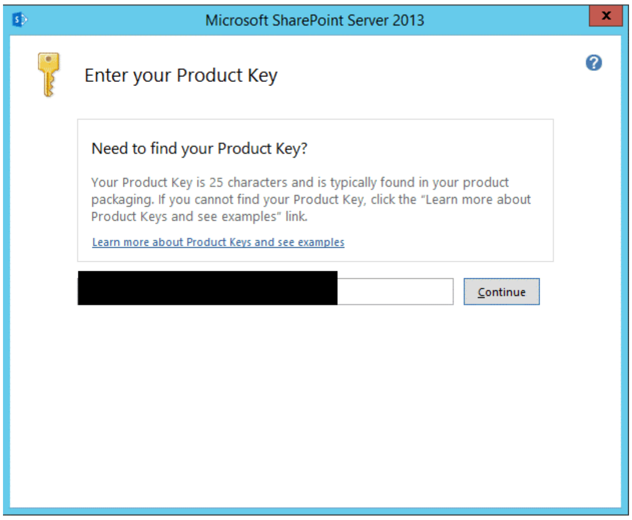
1. Log into Windows Server 2012 R2 as a SharePoint Administrator (SP_Admin) user.



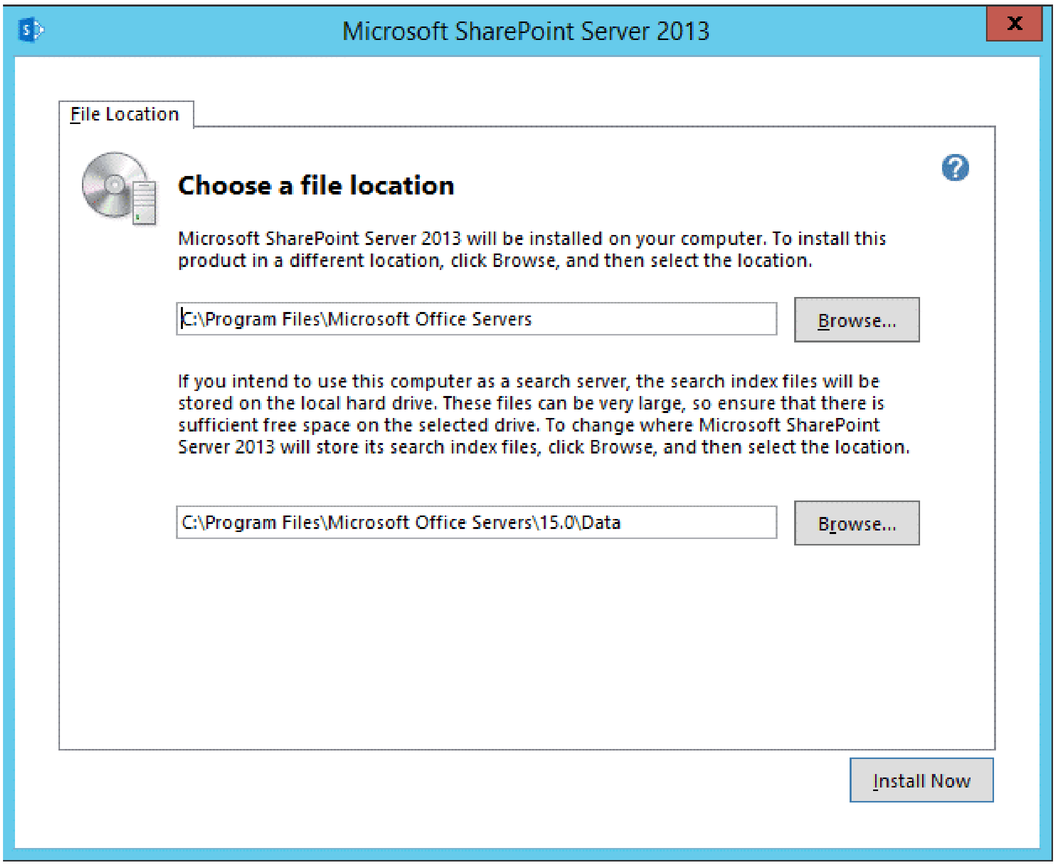
2. Go to the directory that contains the SharePoint 2013 Installation files.
3. Select the setup.exe file and **Run as Administrator**.



4. You see with User Account Control Window. Click **Yes**.
5. The Enter your product Key screen appears. Enter a valid SharePoint 2013 Server product key.

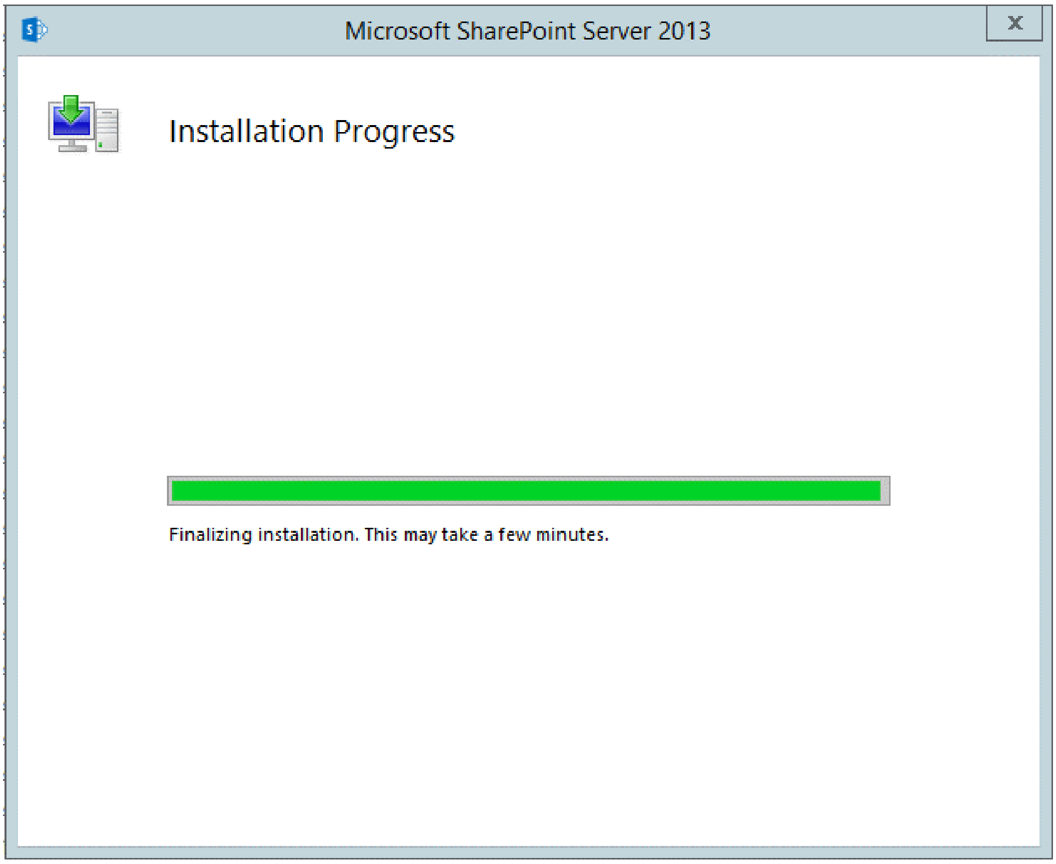


6. The Read the Microsoft Software License Terms screen appears. Read carefully and check the **I accept the terms of this agreement** box.
7. On the **Choose a file location** page, accept the default settings and click **Install Now**.



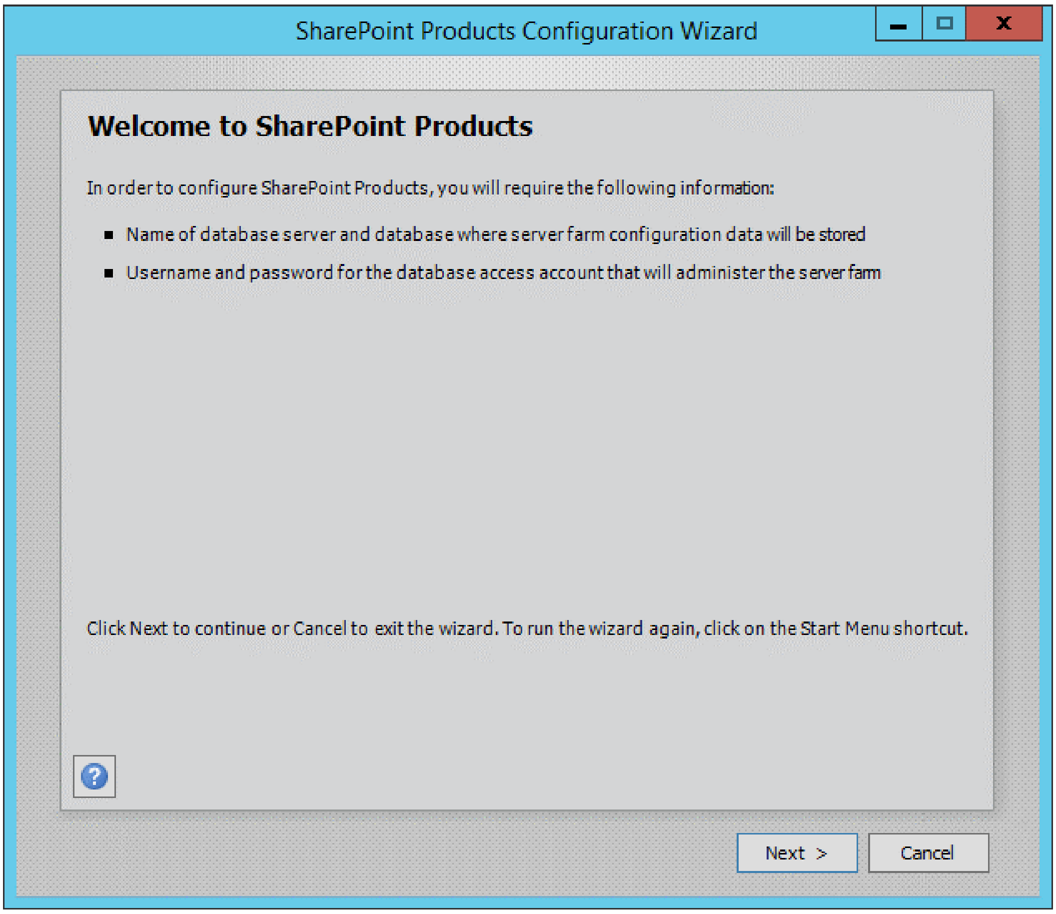
8. A screen informs you that it is preparing files for Installation of SharePoint 2013.

9. An Installation Progress screen appears. It might take some time to complete.

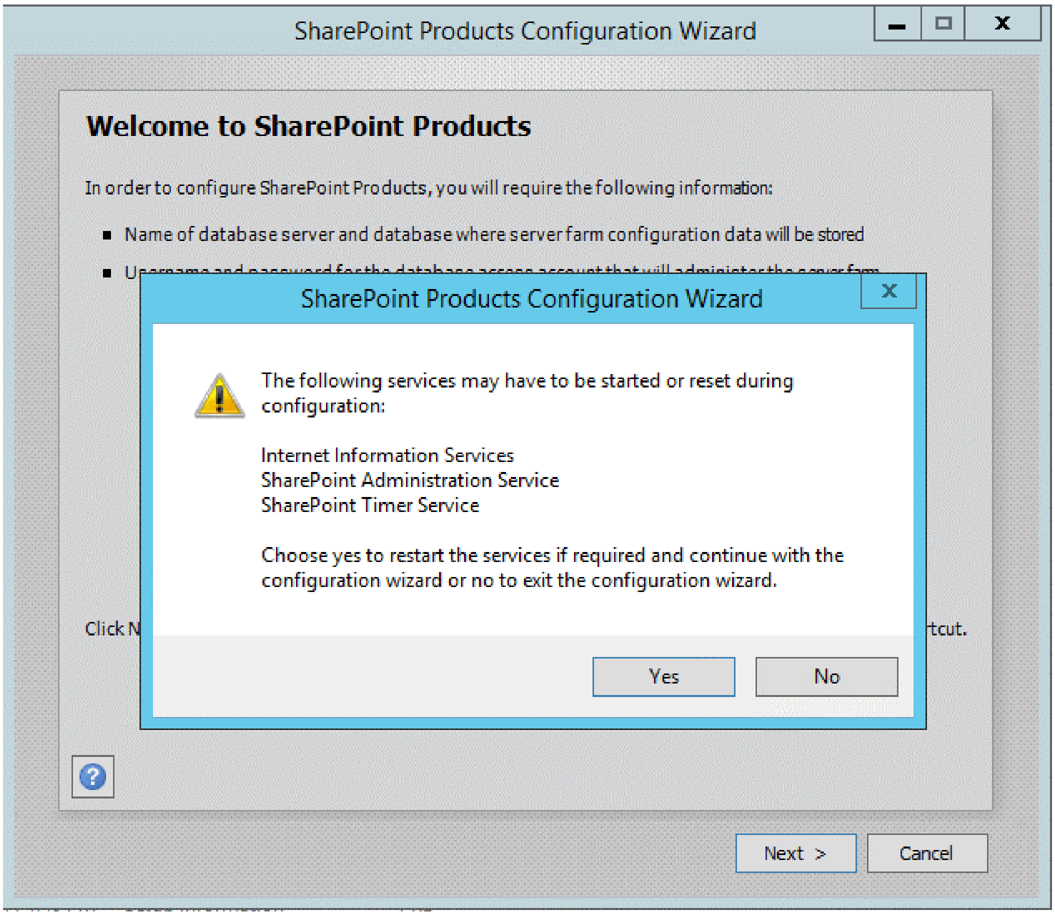


10. When the installation completes, a Run Configuration Wizard appears. Check the **Run the SharePoint Products Configuration Wizard now** box. Click the **Close** button.

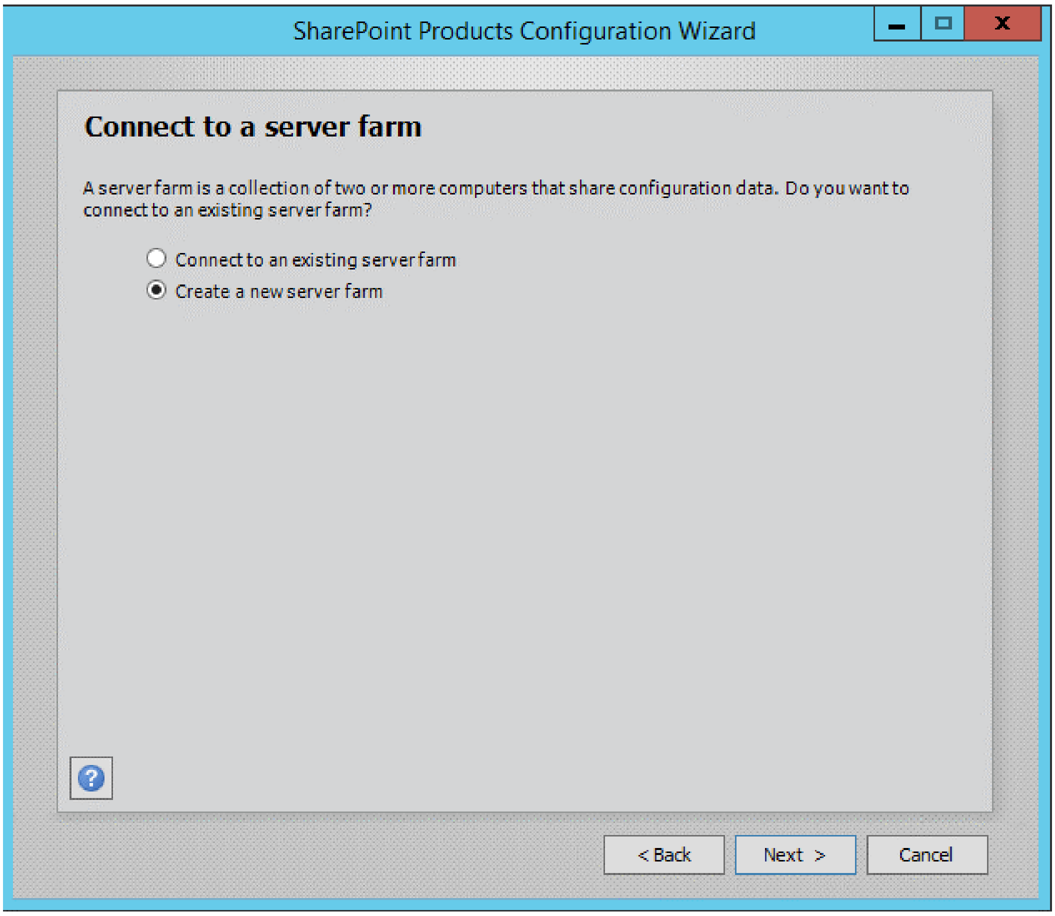
11. The Welcome to SharePoint Products screen appears.



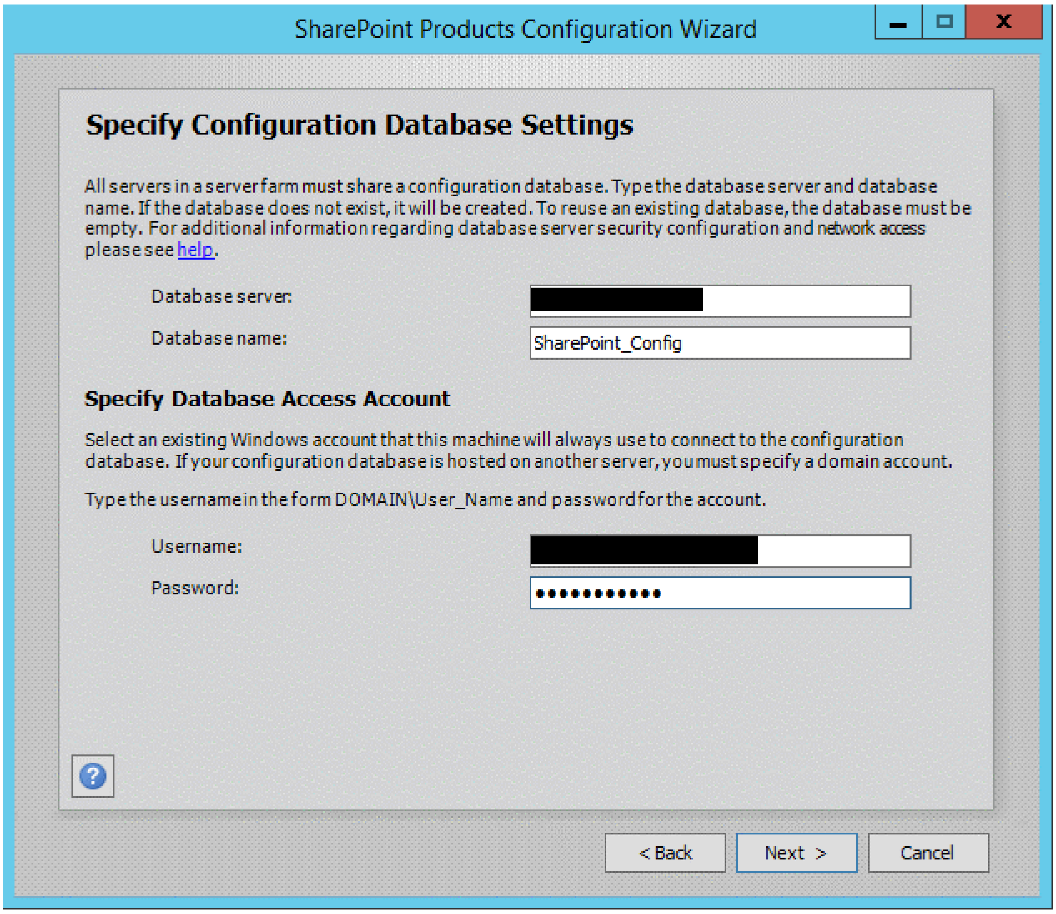
12. During Configuration, you are prompted to restart the services. Click Yes to continue.



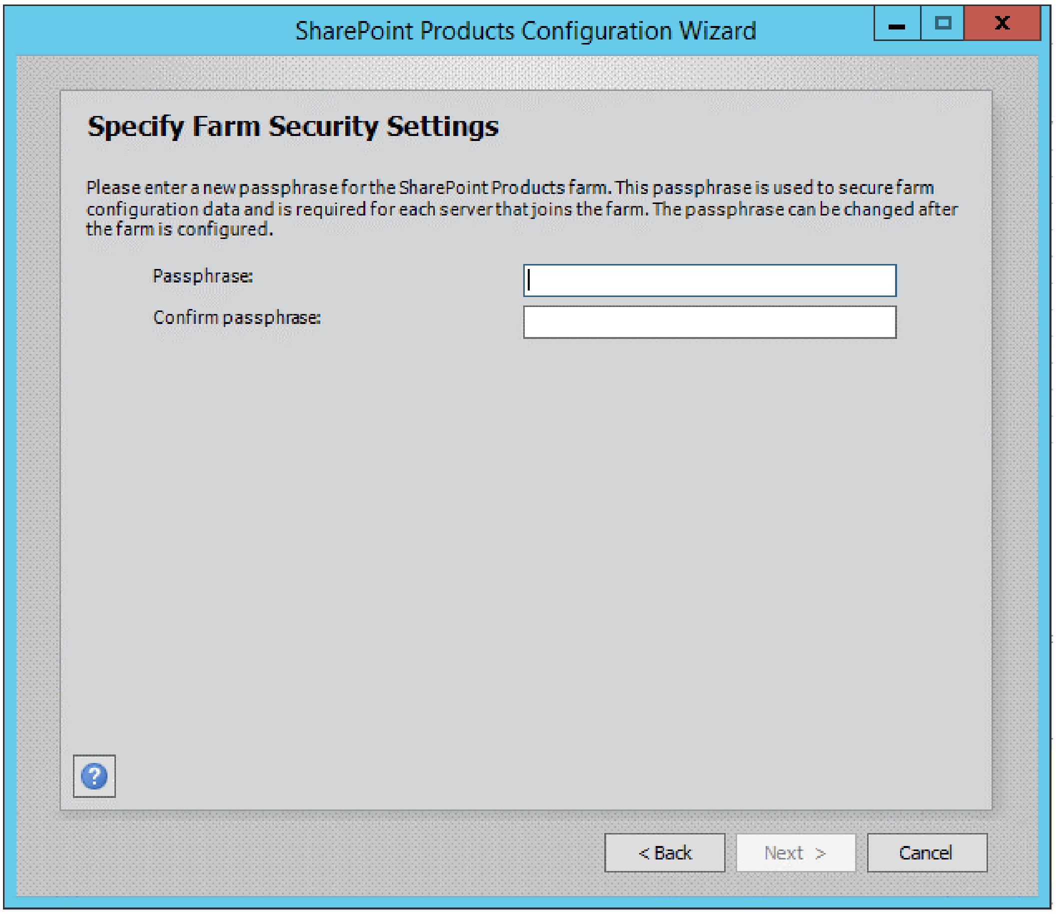
13. On the **Connect to a server farm** screen, click the **Create a new server farm** button.



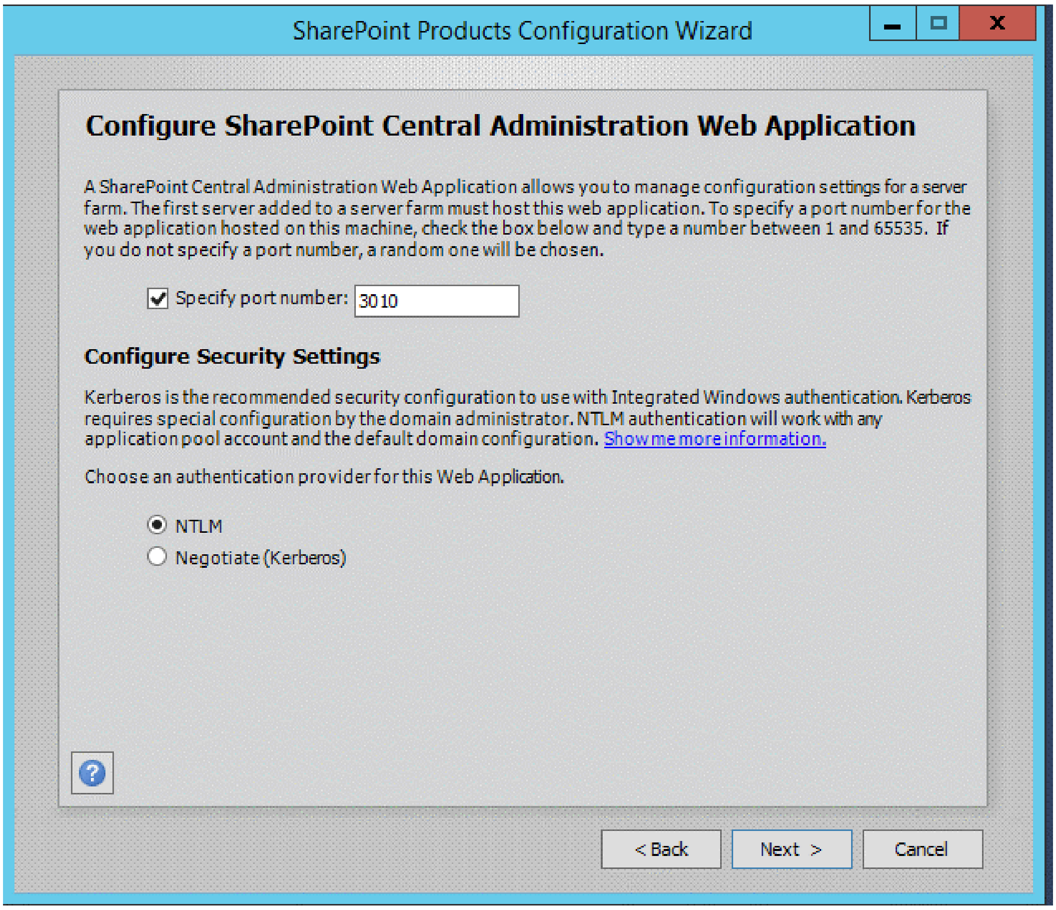
14. On the next screen, complete the fields below to complete the configuration.
    - **Database server**. Instance name of your SQL Server 2012 R2
    - **Database Name**. Database of the SQL Server
    - **Username**. Domain user (SP_Farm)
    - **Password**. Your choice



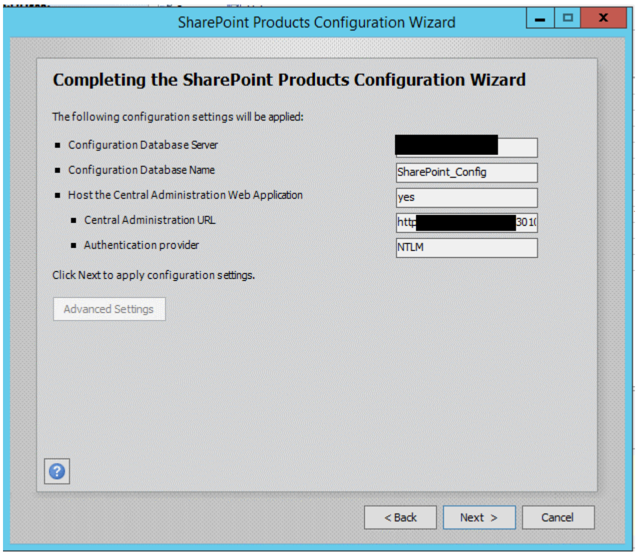
15. On the Specify Farm Security Settings screen, to provide a password to secure the configuration data.



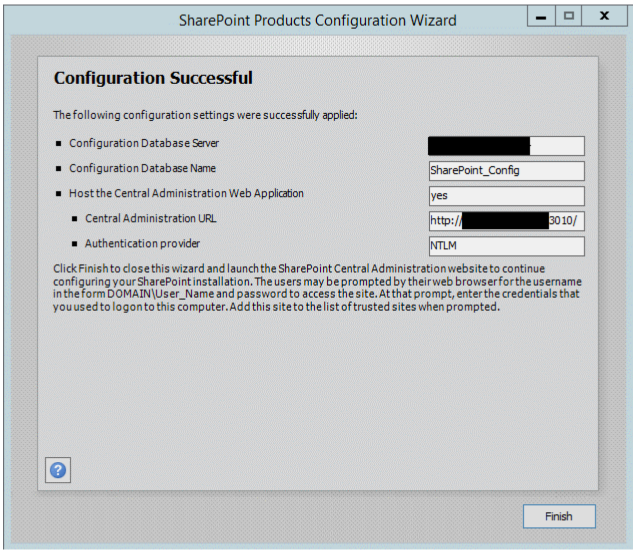
16. On the following screen, set up the port number and security settings for your site.



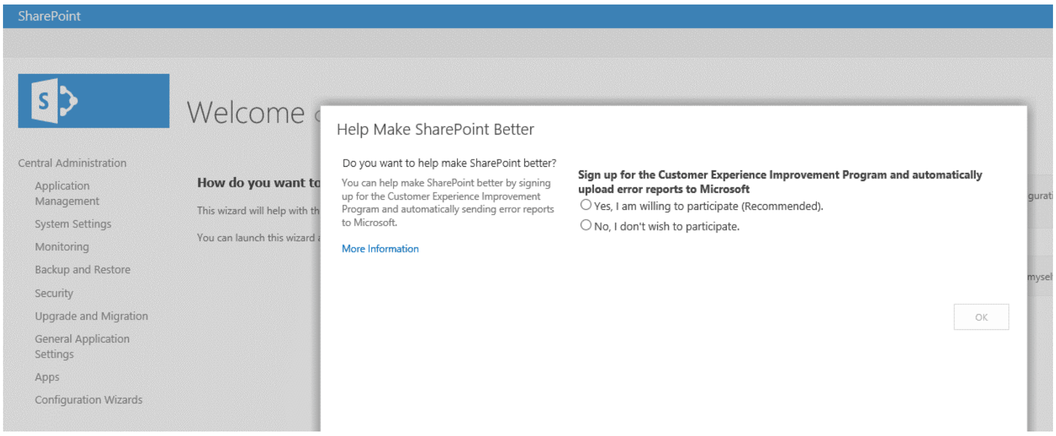
17. On the Completing the SharePoint Products Configuration Wizard screen, click **Next**.



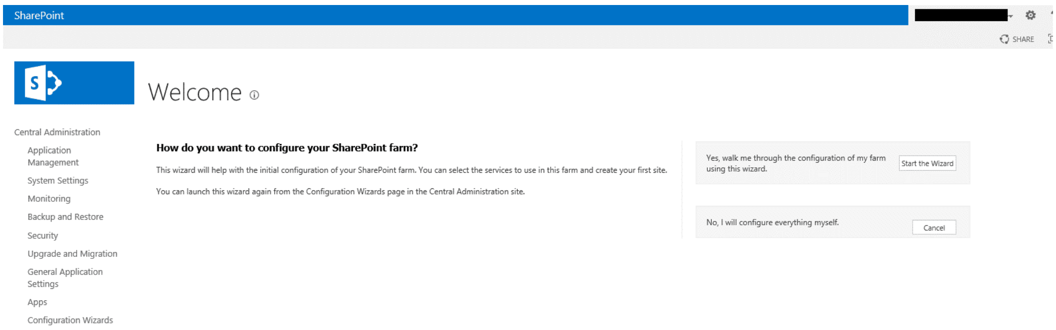
18. When the configuration completes, you see the Successful message. Click **Finish**.



19. You should be able to configure your site through a browser. If you want to take part in the Microsoft Improvement program, select an option here.

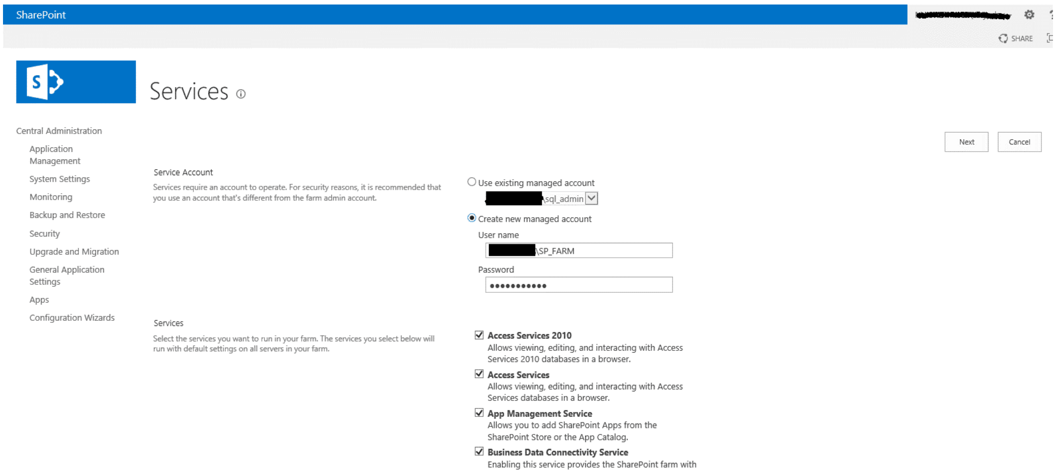


20. The welcome page of the SharePoint Farm configuration appears. Click the **Start the Wizard** button.

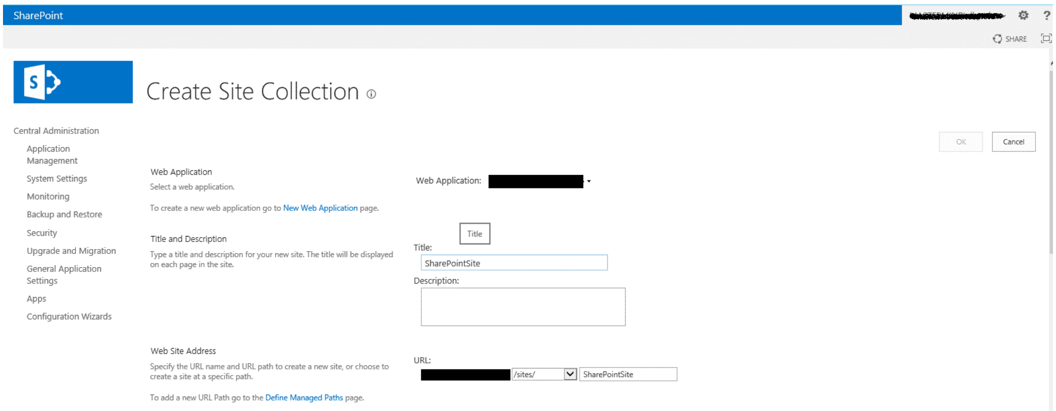


21. On the Services screen, configure a new Service Account to operate SharePoint.

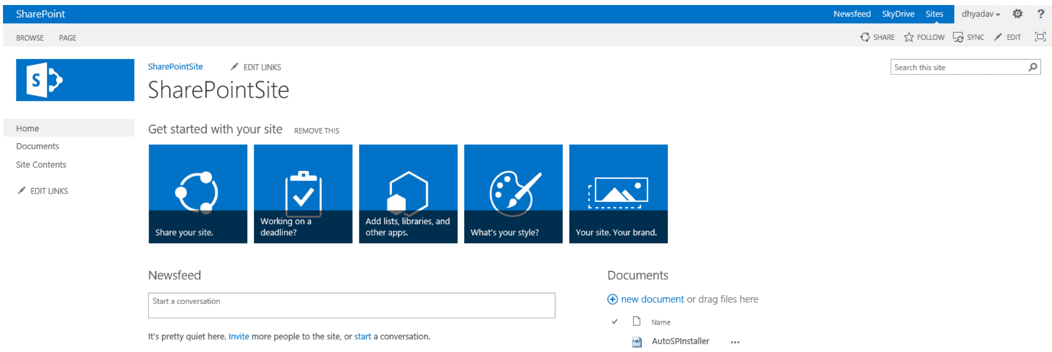
NOTE: The SP_FARM user should be a domain user that was added to the administrators group of the search machine, otherwise it will not let you add it. Instead of setting up a new user you can click **Use existing managed account**.



22. A progress screen appears, saying **Working on it**.
23. When your service account is created, create a site collection in SharePoint 2013. Enter a site name of your choice.



24. A success message appears.
25. You should see your SharePoint 2013 site.

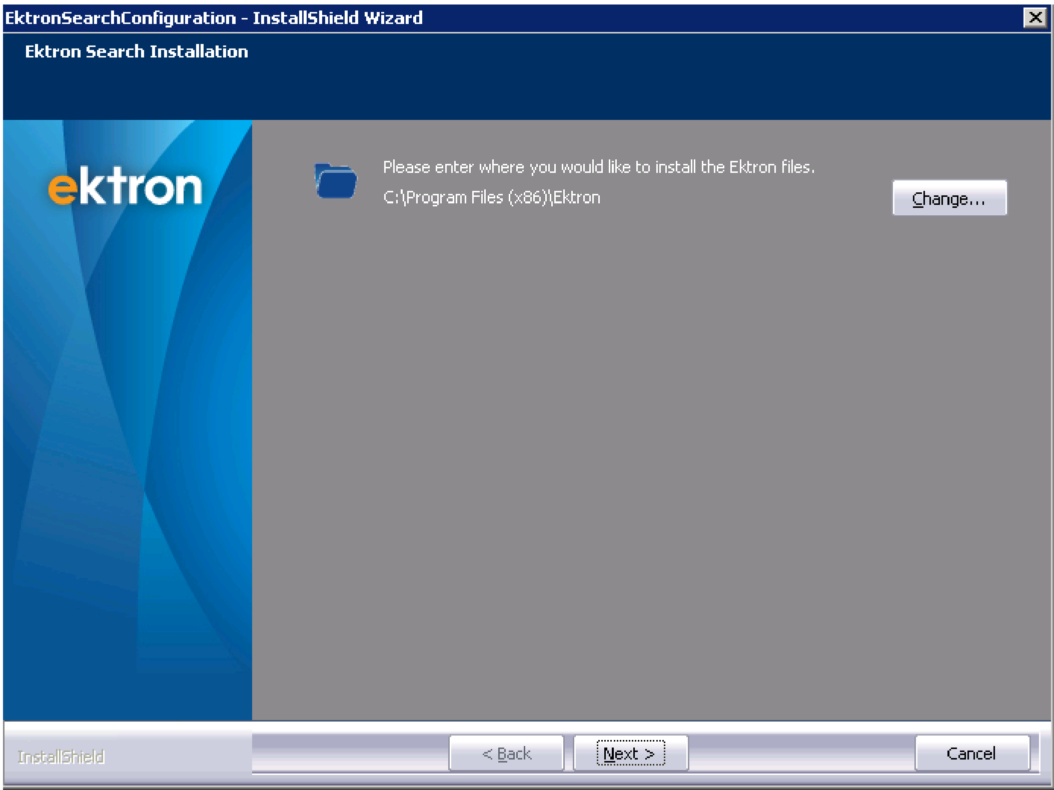


Configuring Ektron to work with Microsoft Search Server 2013 or 2016

Prerequisites

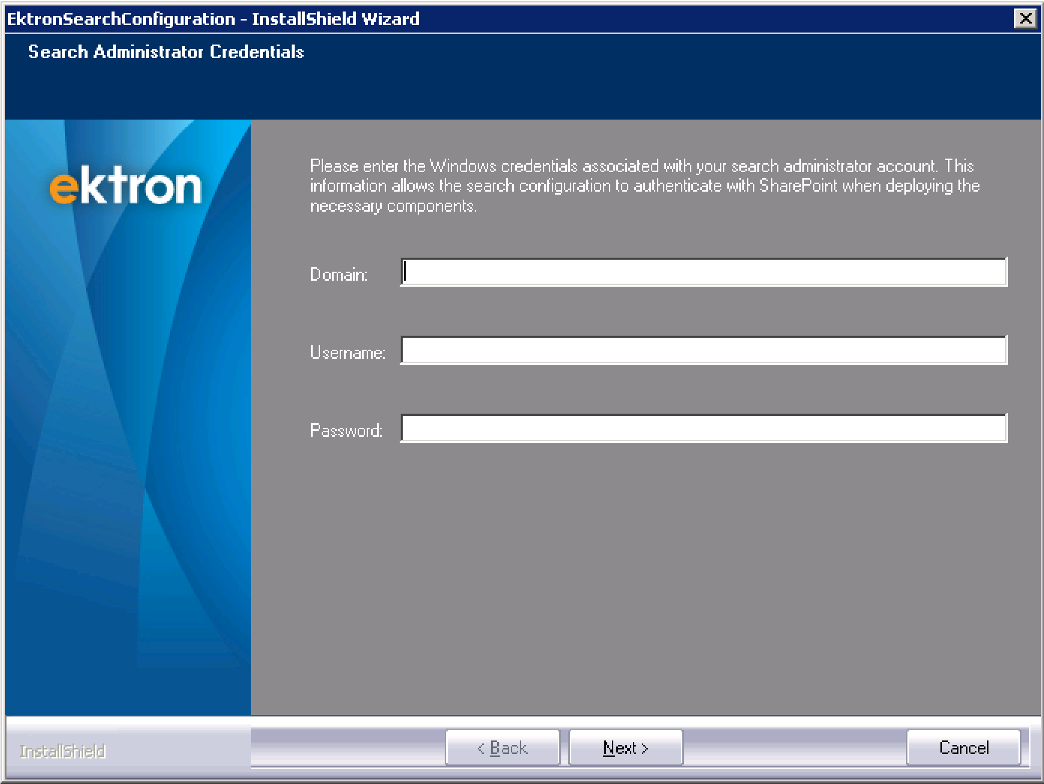
- Both servers can browse to each other across the network.
- On your Ektron server
  - Set SQL Security to **SQL Server and Windows Authentication mode**.
  - Create a SQL user login with the sysadmin role. Microsoft Search Server 2013 or 2016 uses that login to access the Ektron database.
  - Enable the TCP/IP for SQL server. Open SQL Server Configuration Manager > SQL Server Network Configuration > Protocols for MSSQLSERVER > Enable all 3 items. Restart the server.
- On your Microsoft Search Server 2013 or 2016 server
  - Obtain the username and password of a user with Windows administrator privileges.

1. Install or upgrade Ektron on its server, using the normal procedure. On the Search Provider screen, choose **Microsoft Search Server 2013 or 2016**.
2. On Ektron server, copy the folder `C:\Program Files\Ektron\`*`CMS400versionnumber`*`\Utilities\SearchServer`.
3. On the Microsoft Search Server 2013 or 2016 server, paste that folder and run the file `EktronSearchConfiguration.exe`.
4. The following screen appears.

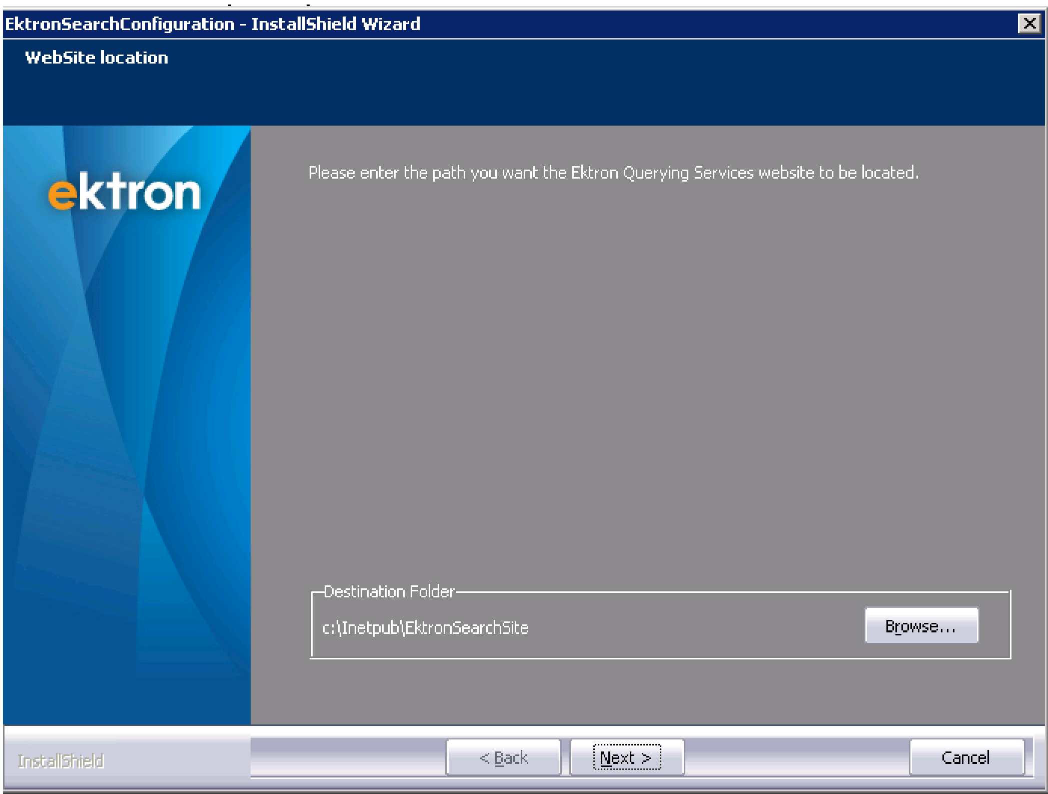


   Select the folder to which you want to install the Search Server files. Ektron recommends using the default folder. Click **Next**.

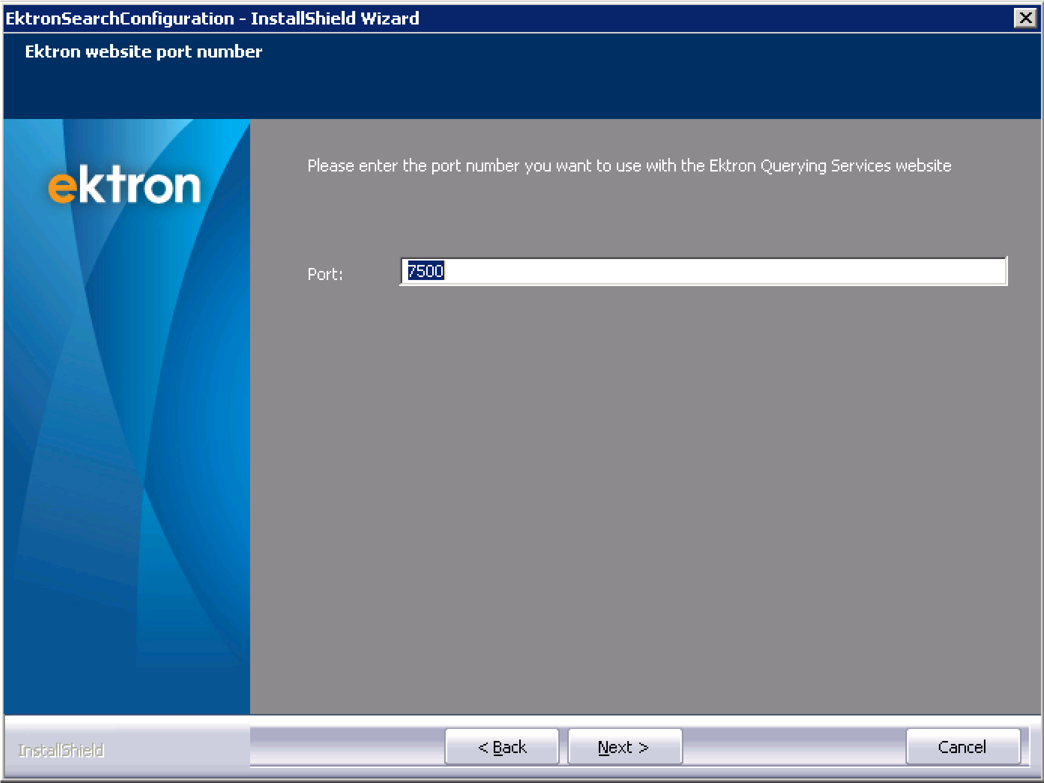
5. The following screen appears. Enter the domain, username, and password of a user with Windows Administrator privileges on the server you will use for Microsoft Search Server 2013. Click **Next**.



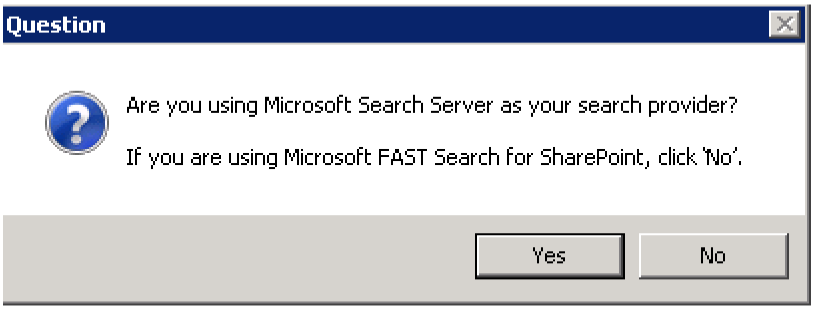
6. Enter the path where you want to locate the Ektron Querying Services website. Click **Next**.



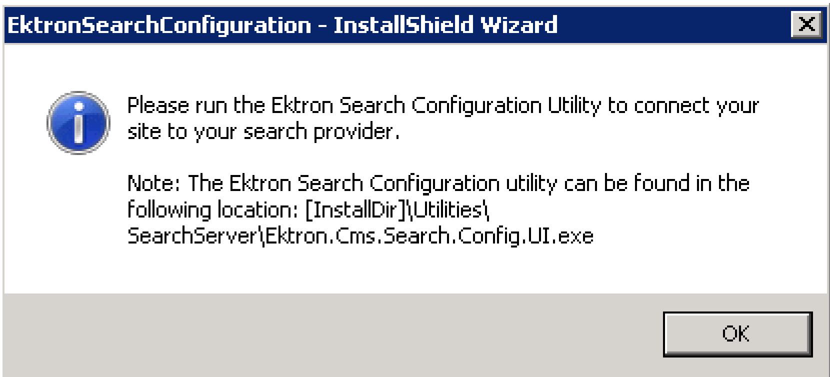
7. Enter the port number you want to use with the Ektron Querying Services website. Click **Next**.



8. Click **Yes** for using Microsoft Search Server as your search provider.

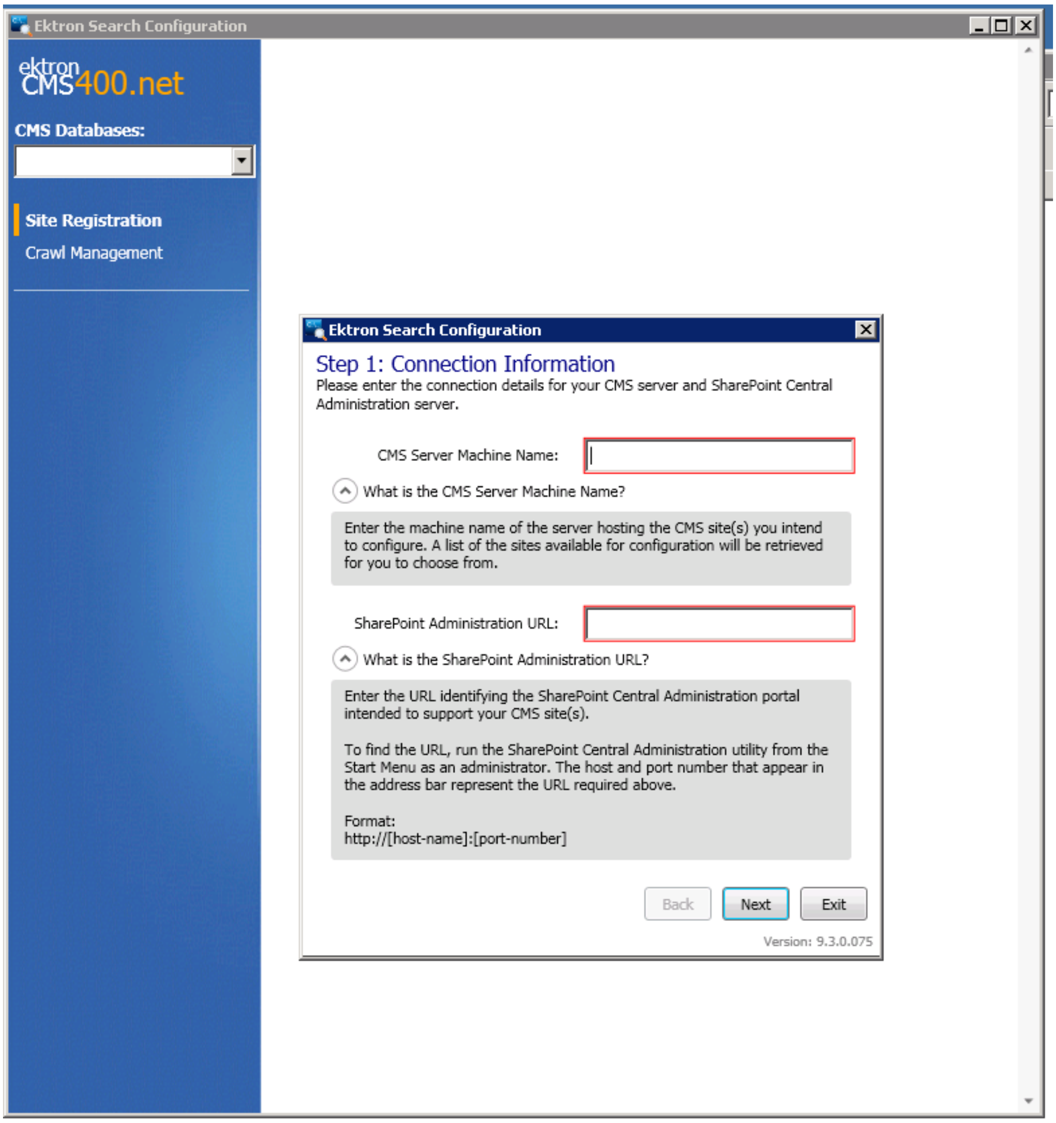


9. The following message appears, instructing you what to do next.

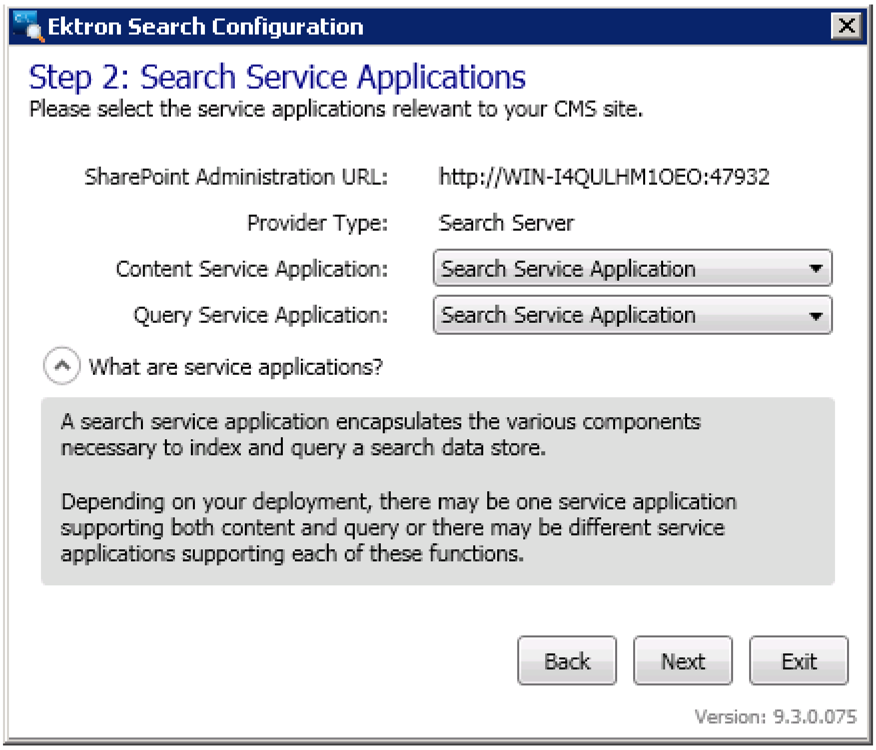


10. Open the Search Configuration screen, available from `C:\Program Files (x86)\Ektron\`*`CMS400versionnumber`*`\Utilities\SearchServer\Ektron.Cms.Search.Config.UI.exe`.

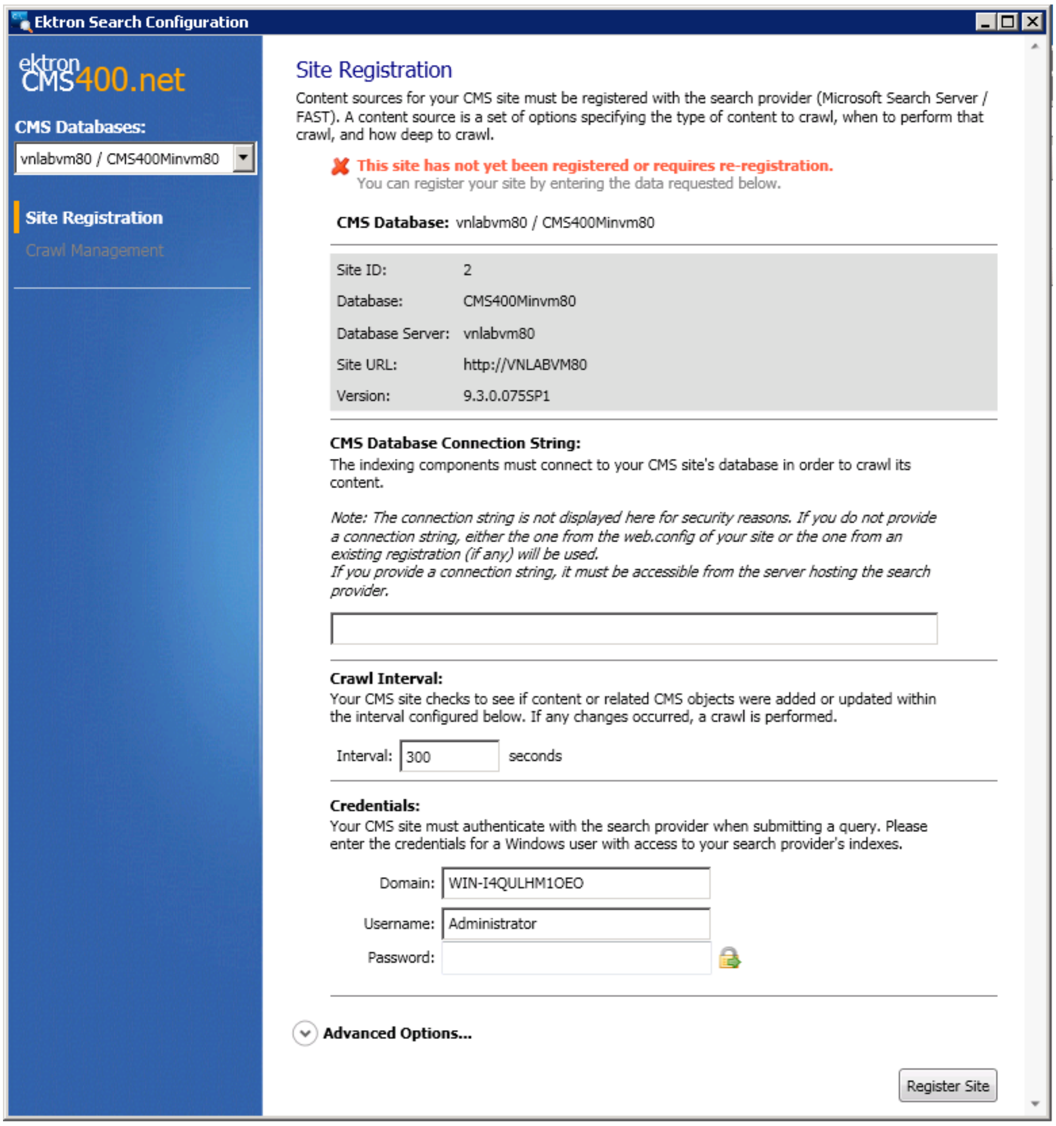
11. Enter the CMS Server Machine Name and SharePoint Administrator URL. Click **Next**.



12. Click Next.



13. The following screen appears.



a. In the **CMS Databases** drop-down, choose the database you installed.
b. In **CMS Database Connection String** section, enter the connection string of your Ektron site. It must be accessible from the server hosting the search provider.
c. In **Credentials** section, enter domain, username and password of a Windows user can access to your search provider's indexes.
d. Click **Register Site**.

Working with Microsoft FAST search

Microsoft FAST Search provides the following advantages:

- **Profile ranking**. Forces topics to the top of search results. See *Managing rank profiles* on page 447
- **Faceted searching**. See *Using faceted search* on page 443
- **Documentation promotion**. See Add, remove and display document promotions for a keyword by using Windows PowerShell (FAST Search Server 2010 for SharePoint) and Add document promotions.
  - Supported for CMS content
  - Entirely configured within SharePoint/FAST
  - No explicit API or templated control support required
- High degree of **relevant results/Similar Results**. See Improving Relevance for FAST Search Server 2010 for SharePointand Find Similar (FAST Search Server 2010 for SharePoint)
  - Supported for CMS content
  - No configuration required
  - Support exists within the API and templated controls to add this to search criteria.

This chapter explains how to set up Microsoft FAST Search, and how to use its features.

Setting up a Microsoft FAST search

PREREQUISITE

You purchased and deployed Microsoft FAST Search Server 2010 and SharePoint Server 2010. See also: Licensing Q&A: Determining Your Licensing Needs, Product Licensing Search

Configuring Ektron to work with Microsoft FAST Search Server 2010 and SharePoint Server 2010 involves the following major tasks:

- *Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010* on the next page
- *Part 2: Set up Microsoft FAST Search Server 2010 for SharePoint 2010 Search* on the next page
- *Part 3: Enable querying from SharePoint to Microsoft FAST Search Server 2010* on page 433
- *Part 4: Enable indexing of additional formats* on page 434

- *Part 5: Verify that Microsoft FAST Search Server 2010 can communicate with SharePoint 2010* on page 435
- *Part 6: Set up Ektron to work with Microsoft FAST Search Server 2010* on page 437
- *Part 7: Make FAST SharePoint's query search application* on page 440

After you complete the tasks...

- the FAST service is configured to crawl the Ektron site.
- Ektron events that affect content trigger a FAST crawl.
- Ektron templated search controls can execute FAST queries to retrieve search results.

Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010

1. Install SharePoint 2010 and Microsoft FAST Search Server 2010, each on its own server, on the same domain. Please refer to Microsoft's installation documentation for details.

   NOTE: When installing Microsoft FAST Search Server 2010, you are prompted to enter a certificate password. Note this password, because you need it in *Part 2c: Set up SSL-enabled communication* on page 428.

2. Create 2 domain user accounts: one for Microsoft FAST Search Server 2010 and one for SharePoint 2010.
3. Add the SharePoint site administrator to the Microsoft FAST Search Server 2010 administrators group (located on the Microsoft FAST Search Server 2010 server).

Part 2: Set up Microsoft FAST Search Server 2010 for SharePoint 2010 Search

You need to create 2 Search Service Applications.

- **FAST Search Connector**. for crawling content.
- **FAST Search Query**. for accepting search terms, querying the database, and returning results.

In this section, you complete these tasks.

- *Part 2a: Create a collection for the content source* below
- *Part 2b: Create a FAST search connector service application for crawling content* on the facing page
- *Part 2c: Set up SSL-enabled communication* on page 428
- *Part 2d: Create a search service application for querying* on page 429

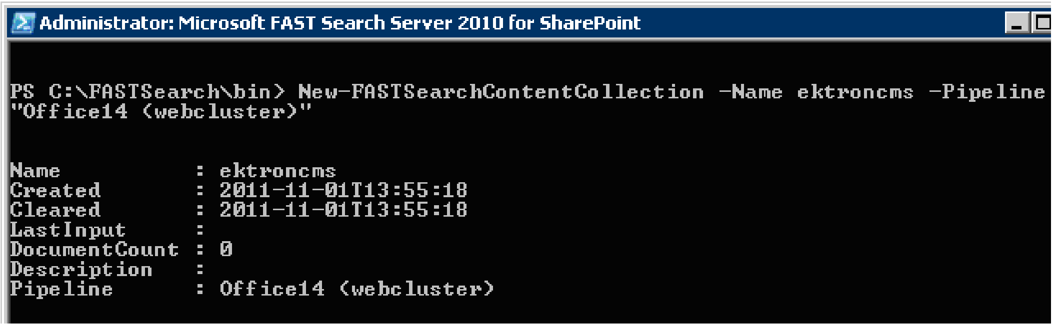
Part 2a: Create a collection for the content source

Before creating the FAST Search Connector, create a collection for the Ektron content source. The collection lets you clear only Ektron content from the index. To learn more, see Manage content collections (FAST Search Server 2010 for SharePoint).

1. On the Microsoft FAST Search Server 2010 server, go to **Start > All Programs**.

   If you're using Windows 8 or 2012, go to `C:\ProgramData\Microsoft\Windows\Start Menu\Programs\`.

2. Right click **Microsoft FAST Search Server 2010 for SharePoint** and click **Run as Administrator**. A PowerShell window for managing Microsoft FAST Search Server 2010 appears.

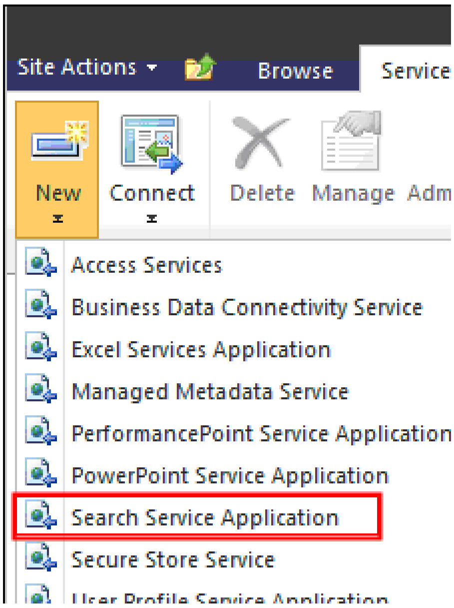
3. Enter the following command:

   ```
   New-FastSearchContentCollection -Name ektroncms -Pipeline
   ”Office14 (webcluster)”
   ```

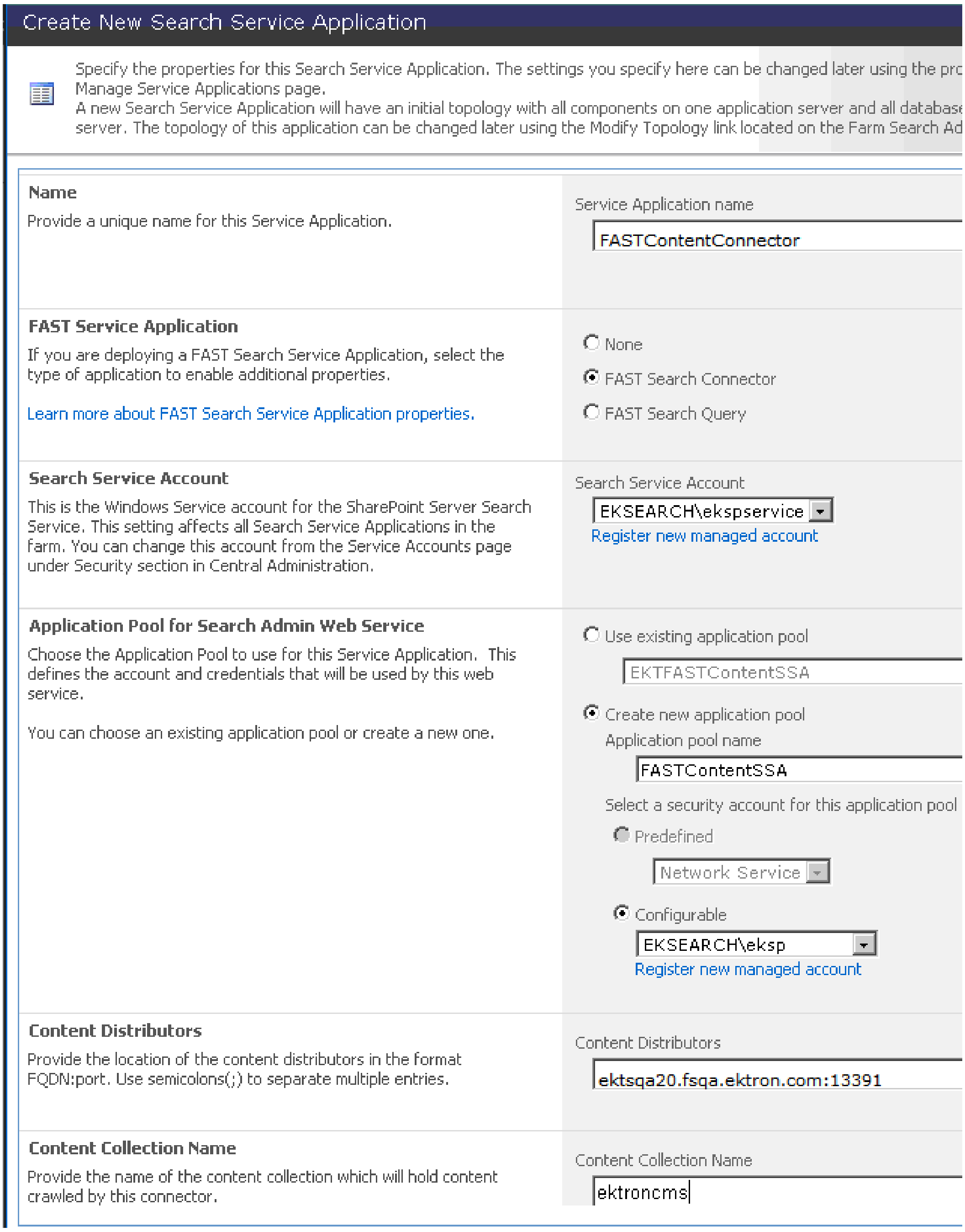
NOTE:
* The `Name` is the new collection name.
* Surround the `Pipeline` name in quotes (as shown above).
* Surround `webcluster` with curly brackets ().
* See also: New-FASTSearchContentCollection

Part 2b: Create a FAST search connector service application for crawling content

1. Open SharePoint 2010 Central Administration home page.
2. Under **Application Management**, click **Manage Service Applications**.
3. On the Manage Service Applications page, click **New > Search Service Application**.



4. Complete the screen.



- **Name**. Enter a unique name for this application.
- **Fast Service Application**. Select **Fast Search Connector**.
- **Search Service Account**. Click **Register new managed account** to create a new account for this search service.
- **Application Pool for Search Admin Web Service**. Select **Create new application pool** and enter a name. Under **Select a security account**, select **Configurable** and select the account under which the SharePoint search service is running. You created this account in *Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010* on page 424.

- **Content Distributors**. On the Microsoft FAST Search Server 2010 server, open the **`%FASTSEARCH%\Install_Info.txt`** file. Copy the value of **Content Distributors (for GUI SSA creation)** to this field.

```
===============================================================
FASTSearch: Installation Details
===============================================================
---------------------------------------------------------------
FAST Search Query Search Service Application configuration
---------------------------------------------------------------
Query Service Location HTTP (default):
  http://ektsqa20.fsqa.ektron.com:13287
Query Service Location HTTPS:
  https://ektsqa20.fsqa.ektron.com:13286
Administration Service Location HTTP (default):
  http://ektsqa20.fsqa.ektron.com:13257
Administration Service Location HTTPS:
  https://ektsqa20.fsqa.ektron.com:1325
8Resource Store Location:
  http://ektsqa20.fsqa.ektron.com:13255
Account for Administration Service:
  fsqa\fsuser
---------------------------------------------------------------
FAST Search Content Search Service Application configuration
---------------------------------------------------------------
Content Distributors (for PowerShell SSA creation):
  ektsqa20.fsqa.ektron.com:13391
Content Distributors (for GUI SSA creation):
  ektsqa20.fsqa.ektron.com:13391
Default Content Collection Name: sp
---------------------------------------------------------------
Other services.....
```

NOTE: Keep the **`Install_Info.txt`** file open—you need it in *Part 2d: Create a search service application for querying* on the facing page.

- **Content Collection Name**. Enter the name you entered for the **Name** parameter in *Part 2a: Create a collection for the content source* on page 424.

Part 2c: Set up SSL-enabled communication

To authorize SSL communication between SharePoint 2010 and Microsoft FAST Search Server 2010: Source: Create and set up the Content Search Service Application (FAST Search Server 2010 for SharePoint)

PREREQUISITE

You need the password you supplied when setting up Microsoft FAST Search Server 2010.

1. Log on to the Microsoft FAST Search Server 2010 server.
2. Open `\FASTSearch\installer\scripts`.
3. Copy securefastsearchconnector.ps1 to any folder on the SharePoint server.
4. Open `\FASTSearch\data\data_security\cert`.

5. Copy `FASTSearchCert.pfx` to any folder on the SharePoint server.
6. Log onto the SharePoint server.
7. Open a Microsoft SharePoint 2010 Management Shell using **Start >All Programs > Microsoft SharePoint 2010 Products**.If you're using Windows 8 or 2012, press the Windows key **( ) /Q** then enter **Microsoft SharePoint 2010 Products**
8. Right click **SharePoint 2010 Management Shell** and click **Run as Administrator**.
9. Go to the directory to which you copied the securefastsearchconnector.ps1 script in Step 3.
10. Run the script, replacing parameters with your environment's values. For example:

```
.\SecureFASTSearchConnector.ps1
  -certPath "path of the certificate\FASTSearchCert.pfx"
  -ssaName "name of your content SSA"
  -username "domain\username"
```

    Replace the following parameter values:

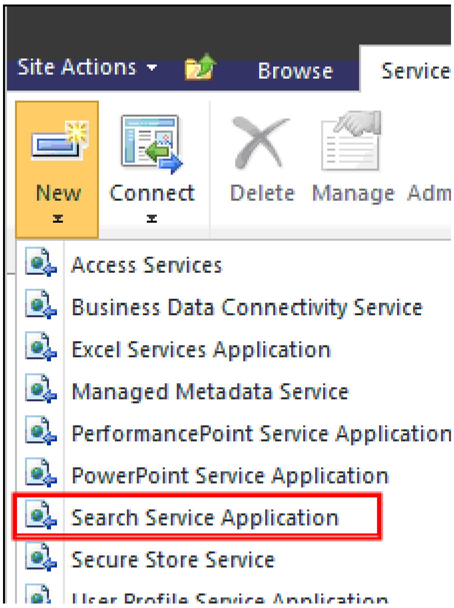
    - **certPath**. The folder path to which you copied the certificate in Step 5.
    - **ssaName**. The **Name** you assigned to your FAST Search Connector service application in *Part 2b: Create a FAST search connector service application for crawling content* on page 425.
    - **username**. The domain and username under which the SharePoint 2010 service runs. You set up this account in *Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010* on page 424.
11. When prompted to enter a certificate password, enter the password you supplied when you ran the post-setup configuration of Microsoft FAST Search Server 2010.

Part 2d: Create a search service application for querying

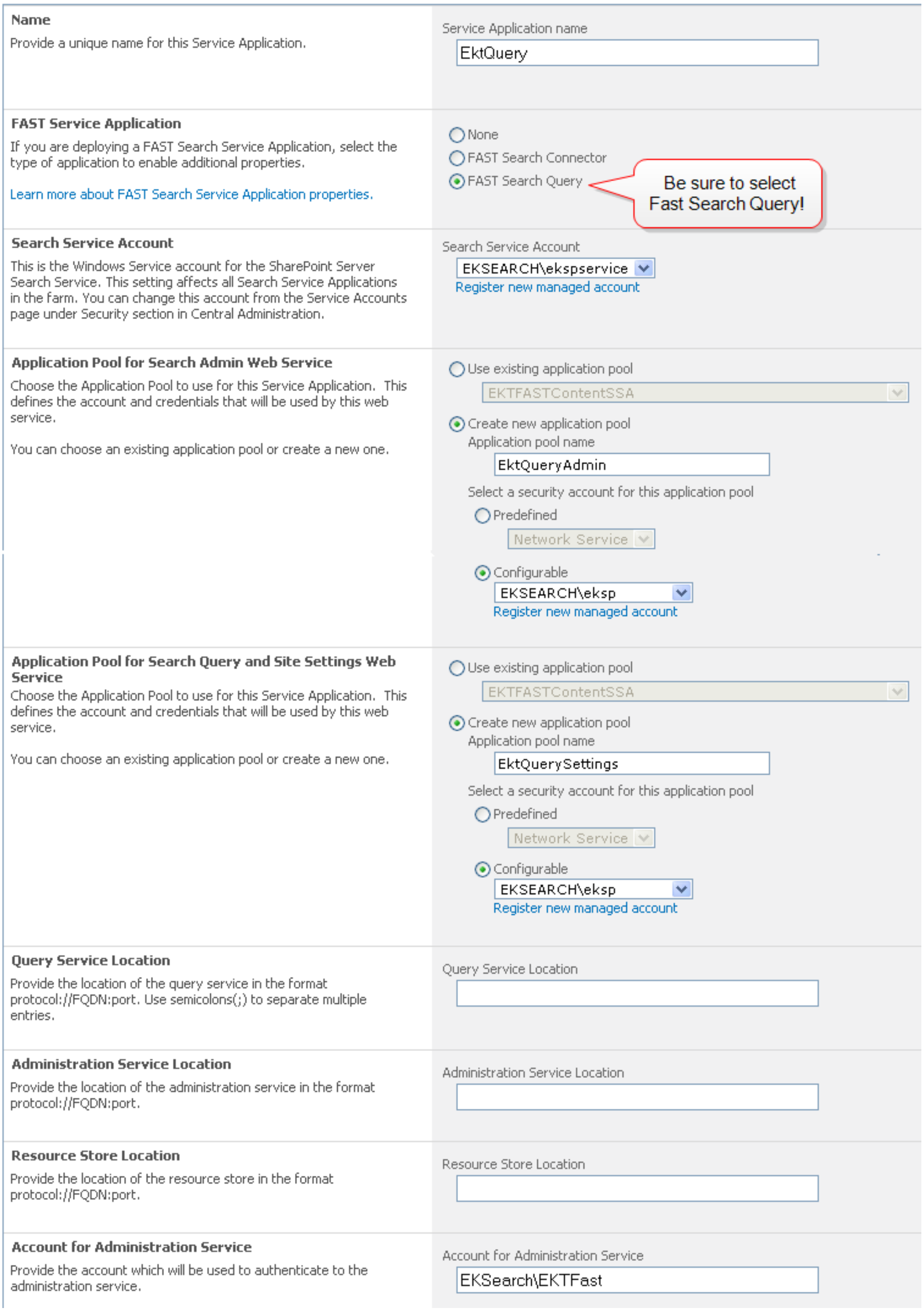
(Source: Create and set up the Query Search Service Application (FAST Search Server 2010 for SharePoint))

1. Open the SharePoint 2010 Central Administration home page.
2. Under **Application Management**, click **Manage Service Applications**.
3. On the Manage Service Applications page, click **New > Search Service**

Application.



4. Complete the screen.



- **Name**. Enter a unique name for this application.
- **Fast Service Application**. Select **Fast Search Query**.
- **Search Service Account**. Click **Register new managed account** to create a new account for this search service.
- **Application Pool for Search Admin Web Service**. Select **Create new application pool** and enter a name, such as EktQueryAdmin. Under **Select**

a security account, select **Configurable** and select the account under which the SharePoint search service is running. The application pool must run in the context of a FAST Search administrator.

- **Application Pool for Search Query and Site Settings Web Service**. Select **Create new application pool** and enter a name, such as EktQuerySettings. Under **Select a security account**, select **Configurable** and select the account under which the SharePoint search service is running.The application pool must run in the context of a FAST Search administrator.
- **Query Service Location**. Open the **`%FASTSEARCH%\Install_Info.txt`** file to obtain the value for this field. Use the HTTPS value if you want to use secure communications between the SharePoint 2011 and Microsoft FAST Search Server 2010 servers.

```
===============================================================
FASTSearch: Installation Details
===============================================================
---------------------------------------------------------------
FAST Search Query Search Service Application configuration
---------------------------------------------------------------
Query Service Location HTTP (default):
  http://ektsqa20.fsqa.ektron.com:13287
Query Service Location HTTPS:
  https://ektsqa20.fsqa.ektron.com:13286
Administration Service Location HTTP (default):
  http://ektsqa20.fsqa.ektron.com:13257
Administration Service Location HTTPS:
  https://ektsqa20.fsqa.ektron.com:13258
Resource Store Location:
  http://ektsqa20.fsqa.ektron.com:13255
Account for Administration Service:
  fsqa\fsuser
---------------------------------------------------------------
FAST Search Content Search Service Application configuration
---------------------------------------------------------------
Content Distri.......
---------------------------------------------------------------
```

- **Administration Service Location**. Obtain the value for this field from **`%FASTSEARCH%\Install_Info.txt`**. (See example above.) Use the HTTPS value if you want to use secure communications between the SharePoint 2011 and Microsoft FAST Search Server 2010 servers.
- **Resource Store Location**. Obtain the value for this field from **`%FASTSEARCH%\Install_Info.txt`**. (See example above.)
- **Account for Administration Service**. specify a domain account for a user who is a member of the FAST Search Administrators group on the Microsoft FAST Search Server 2010 server.

5. You see a confirmation that a new Query Search service application is created.

Part 3: Enable querying from SharePoint to Microsoft FAST Search Server 2010

Part 3 describes how to transfer a Microsoft FAST Search Server 2010 STS certificate (MOSS_STS) from SharePoint Server 2010 to FAST servers. This certificate enables SharePoint query servers to provide security-trimmed queries. See also: Enable queries from Microsoft SharePoint Server (FAST Search Server 2010 for SharePoint)

PREREQUISITE

You will need a SharePoint Server 2010 directory that is accessible to Microsoft FAST Search Server 2010 servers.

3. At the Windows PowerShell command prompt, enter the following commands.

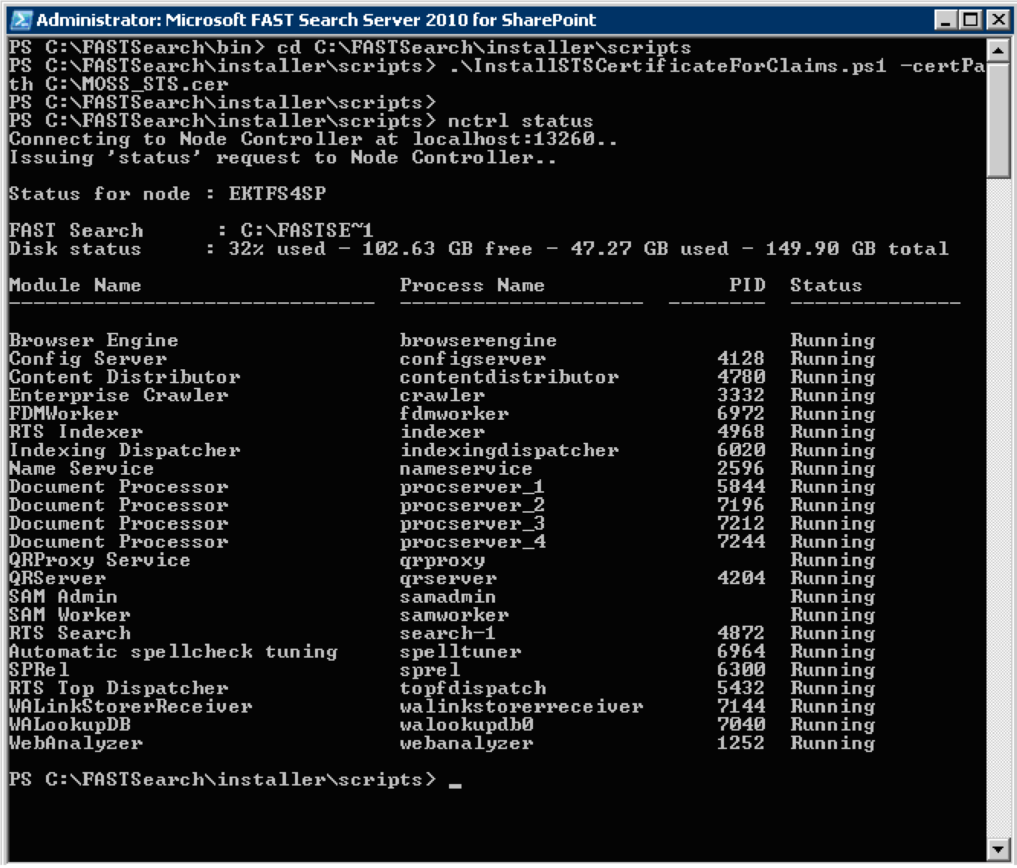
```
$stsCert = (Get-SPSecurityTokenServiceConfig)
  .LocalLoginProvider.SigningCertificate
$stsCert.Export("cert") | Set-Content -encoding byte MOSS_STS.cer
```

4. The `MOSS_STS.cer` file is created in the directory in which you run the commands.
5. Copy `MOSS_STS.cer` to a directory accessible to the Microsoft FAST Search Server 2010 server(s).
6. Import the SharePoint STS certificate to each Microsoft FAST Search Server 2010 server. To do that:
   a. On the Microsoft FAST Search Server 2010 server, click **Start >All Programs > Microsoft FAST Search Server 2010 for SharePoint**.
   b. Right click **Microsoft FAST Search Server 2010 for SharePoint** and select **Run as administrator.**
   c. At the Windows PowerShell command prompt, browse to `<FASTSearchFolder>\installer\scripts\`, where `<FASTSearchFolder>` is the path to the Microsoft FAST Search Server 2010 folder. For example, `C:\FASTSearch\installer\scripts\`.
   d. Enter the following command:

   ```
   .\InstallSTSCertificateForClaims.ps1
   -certPath <"full path of MOSS STS certificate">
   ```

   Where *`full path of MOSS STS certificate`* is the path to the location to which you copied the MOSS_STS.cer file in Step 5.
7. Repeat steps 6a through 6d for all query servers (if you have more than one).
8. Within the PowerShell window, check the status of FAST services by entering the

following command: **nctrlstatus**. The results should look something like this.



```
Administrator: Microsoft FAST Search Server 2010 for SharePoint
PS C:\FASTSearch\bin> cd C:\FASTSearch\installer\scripts
PS C:\FASTSearch\installer\scripts> .\InstallSTSCertificateForClaims.ps1 -certPa
th C:\MOSS_STS.cer
PS C:\FASTSearch\installer\scripts>
PS C:\FASTSearch\installer\scripts> nctrl status
Connecting to Node Controller at localhost:13260..
Issuing 'status' request to Node Controller..

Status for node : EKTFS4SP

FAST Search      : C:\FASTSE~1
Disk status     : 32% used - 102.63 GB free - 47.27 GB used - 149.90 GB total

Module Name                      Process Name          PID   Status
------------------------------   -------------------   -------   --------------

Browser Engine                   browserengine               Running
Config Server                    configserver          4128  Running
Content Distributor              contentdistributor    4780  Running
Enterprise Crawler               crawler               3332  Running
FDMWorker                        fdmworker             6972  Running
RTS Indexer                      indexer               4968  Running
Indexing Dispatcher              indexingdispatcher    6020  Running
Name Service                     nameservice           2596  Running
Document Processor               procserver_1          5844  Running
Document Processor               procserver_2          7196  Running
Document Processor               procserver_3          7212  Running
Document Processor               procserver_4          7244  Running
QRProxy Service                  qrproxy                     Running
QRServer                         qrserver              4204  Running
SAM Admin                        samadmin                    Running
SAM Worker                       samworker                   Running
RTS Search                       search-1              4872  Running
Automatic spellcheck tuning      spelltuner            6964  Running
SPRel                            sprel                 6300  Running
RTS Top Dispatcher               topfdispatch          5432  Running
WALinkStorerReceiver             walinkstorerreceiver  7144  Running
WALookupDB                       walookupdb0           7040  Running
WebAnalyzer                      webanalyzer           1252  Running

PS C:\FASTSearch\installer\scripts> _
```

Part 4: Enable indexing of additional formats

Advanced Filter Pack is a Microsoft FAST Search Server 2010 feature that enables text and metadata extraction from several hundred file formats (such as PDF), complementing the document formats supported by the Microsoft Filter Pack.

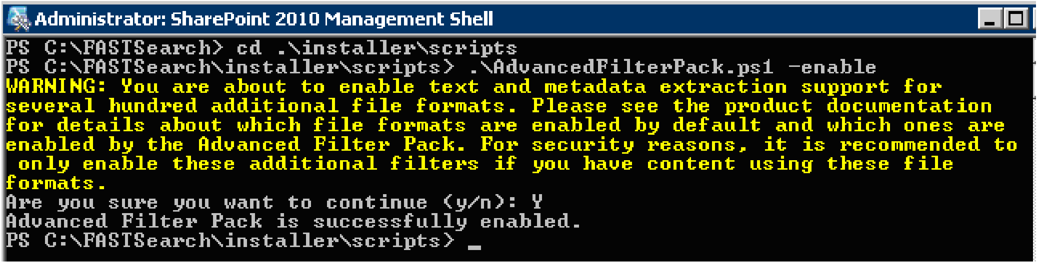
PREREQUISITE

Install 1 of the following PDF filters on the Microsoft FAST Search Server 2010 server:

- Foxit PDF filter (Foxit® PDF IFilter - Server—recommended if you will index a large number of PDF files)
- Adobe 64-bit PDF iFilter (installed on Ektron server `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities\iFilterPack`)

3. Go to the [FASTSEARCH] folder (represented by the environment variable %FASTSEARCH%).
4. Move to the `installer\scripts` folder using this command: `cd .\installer\scripts`.
5. Insert the command `.\AdvancedFilterPack.ps1 -enable`.

6. When you see **Are you sure you want to continue**, enter **Y.**



7. Open the file `%FASTSEARCH%\etc\config_data\DocumentProcessor\formatdetector\user_converter_rules.xml`.
8. Enable PDF format detection by adding `<ext name=".pdf" mimetype="application/pdf" />` and `<mime type="application/pdf">PDF Document</mime>` as show in the following example:

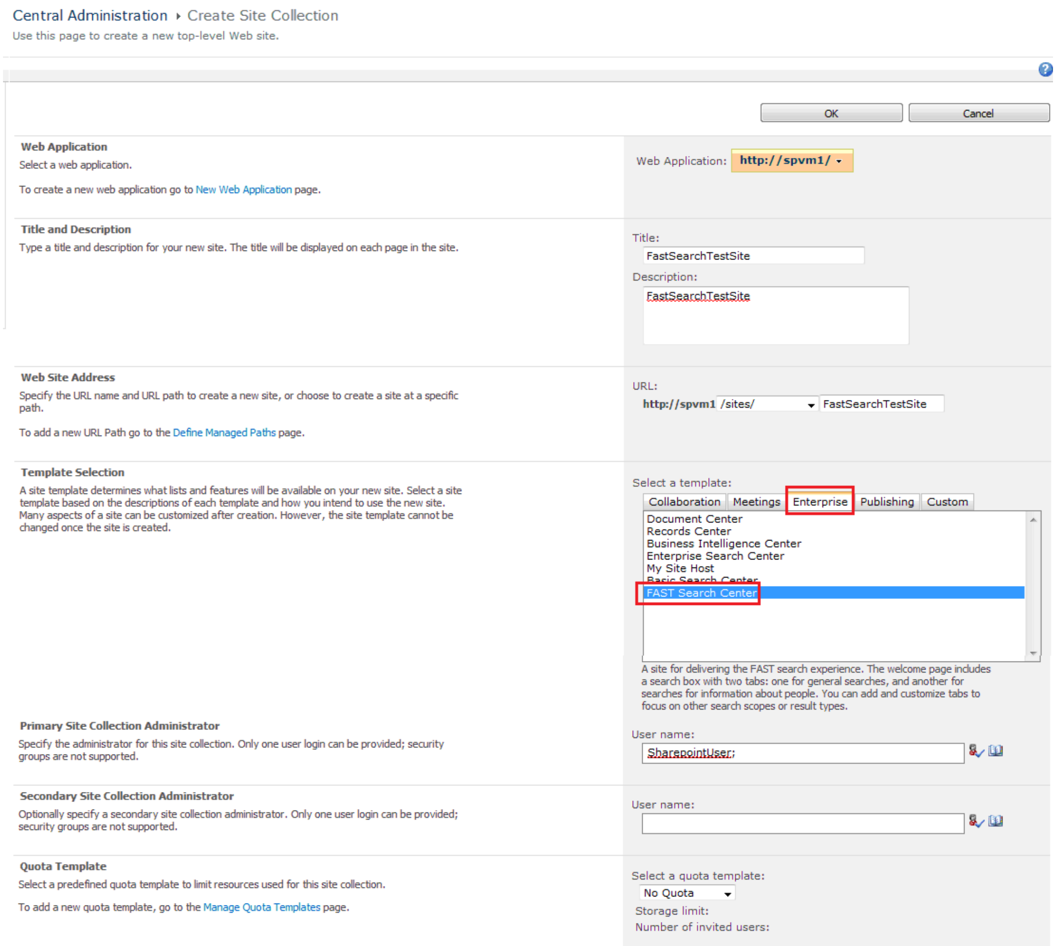
```
<ConverterRules>
<IFilter>
<trust>
<!-- A list of extensions that bypasses the builtin format detection.
  Any extension that is not supported out-of-the-box, need to be
  added here along with the mimetype if you have installed an IFilter
  for that type and want to use it. A mime element should also be
  added to the MimeMapping element with a human-friendly description
  of the type.
  <ext name=".xxx" mimetype="application/xxx" />
  <ext name=".yyy" mimetype="image/yyy" /> -->
  <ext name=".pdf" mimetype="application/pdf" />
</trust>
</IFilter>
<MimeMapping>
<!-- A mapping between mime types and the description of them.
<mime type="application/xxx">XXX Document</mime>
<mime type="application/postscript">YYY Image</mime> -->
  <mime type="application/pdf">PDF Document</mime>
</MimeMapping>
</ConverterRules>
```

IMPORTANT: Back this file up in a safe location, so that you can re-enter these changes if you later need to apply a FAST service pack, patch, or hotfix.

9. Stop the FAST service by going to Windows Services, find **FAST Search for SharePoint**, and click **Stop**.
10. Restart the Microsoft FAST Search Server 2010 server.

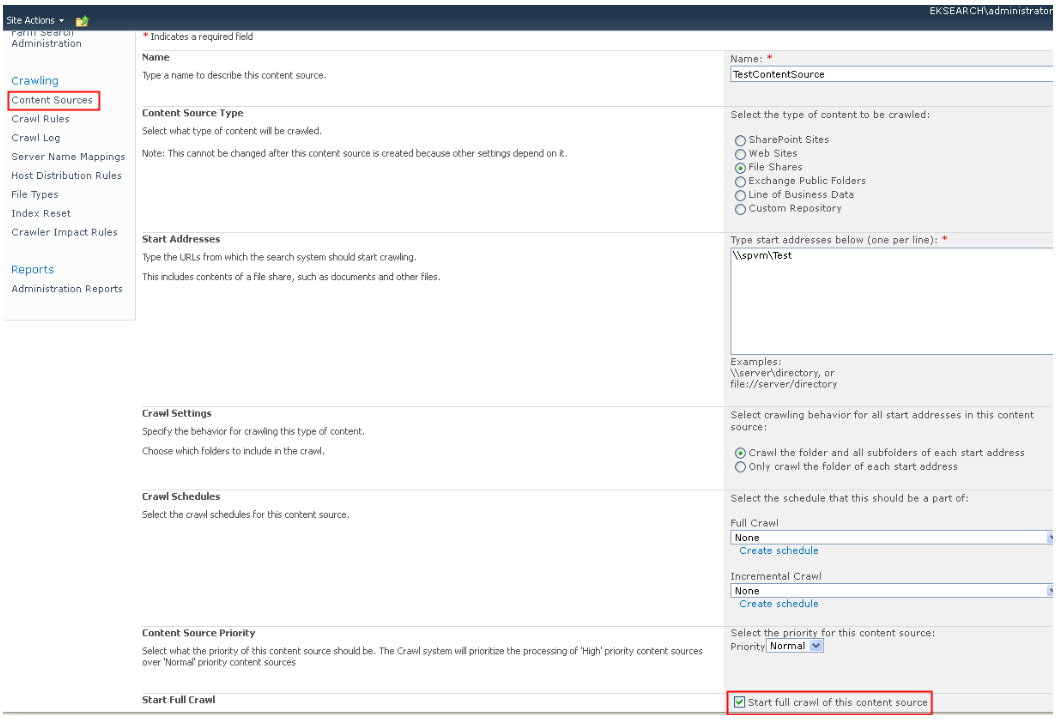
Part 5: Verify that Microsoft FAST Search Server 2010 can communicate with SharePoint 2010

1. On the SharePoint 2010 Central Administration Screen, go to **Application Management>Create Site Collections**. The Create Site Collection screen appears.



2. Enter a **Title**, **Description**, and **URL**, assigning any name.
3. In the **Template Selection** area, click the **Enterprise** tab then select **FAST Search Center**.
4. In the **User name** field, enter the name of the SharePoint user you created in *Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010* on page 424.
5. Click **OK** to create a site collection.
6. On the SharePoint 2010 server, create a new folder and share it with the Microsoft FAST Search Server 2010 user that you created in *Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010* on page 424.
7. On the folder's **Security** tab, grant the Microsoft FAST Search Server 2010 user full control.
8. Drag and drop a few text files into that folder. If you enabled PDF support (as explained in *Part 4: Enable indexing of additional formats* on page 434), drop some PDFs.
9. Create a Content Source for the folder. To do this:
   a. On the SharePoint 2010 Central Administration screen, click **Manage service applications**.
   b. Click the Ektron content service application you created in *Part 2b: Create a FAST search connector service application for crawling content* on page 425.

c. On the Search Administration screen, under **Crawling**, click **Content Sources**.



d. On the New Content Source screen:
   - Enter a **Name**.
   - For **Content Source Type**, select **File Shares**.
   - For **Start Addresses**, enter the folder that you created in Step 6.
   - For **Crawl Settings**, select **Crawl the folder and all subfolders of each start address**.
   - Check the **Start full crawl of this content source** box.
   - Click **OK**.

10. Verify that the search works by navigating to the FAST search site and searching for content in the test folder you indexed. If correct results are returned, Microsoft FAST Search Server 2010 is configured correctly. If not, or if you see errors in the Crawl Log, there is a configuration issue with your setup.

Part 6: Set up Ektron to work with Microsoft FAST Search Server 2010

Install Ektron, setting it up for your environment. When prompted to select a search provider, choose Microsoft FAST Search Server 2010. When prompted to connect the site to a Microsoft Search Server 2010 instance, click **No**. Complete the Ektron installation. See also: *Installing Ektron* on page 9

In this section, you complete these additional tasks.

- *Part 6a: Set up the Ektron search connection on the SharePoint server* on the next page

- *Part 6b: Set credentials for the Ektron search server service* below
- *Part 6c: Run the Ektron search configuration utility* on the facing page

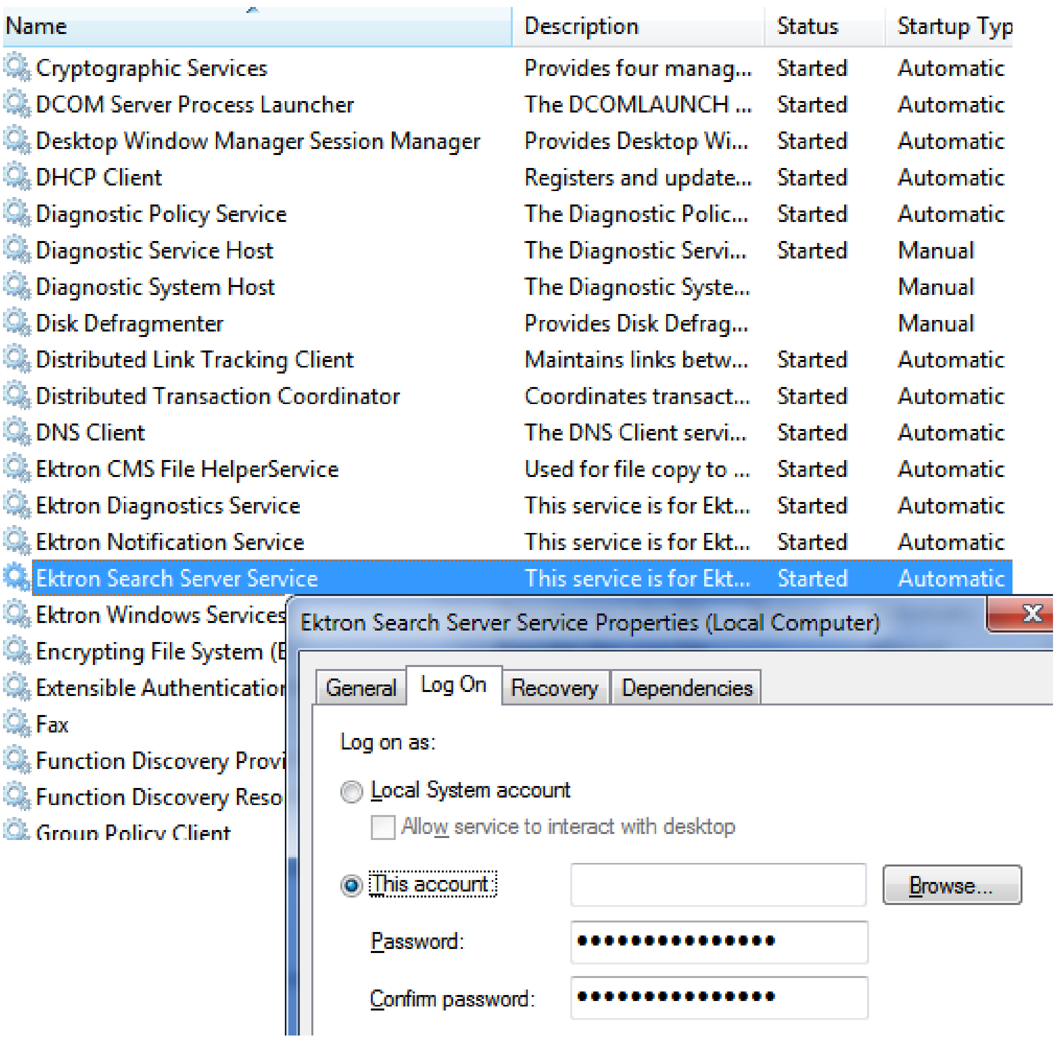
Part 6a: Set up the Ektron search connection on the SharePoint server

`EktronSearchConfiguration.exe` enables communications between your site and the FAST search service.

1. From the Ektron server, copy the following file to any folder on the SharePoint server.
   ```
   %SystemDrive%\Program Files (x86)\Ektron\Utilities\SearchServer
     \EktronSearchConfiguration.exe
   ```
2. From the SharePoint folder, run the file.

Part 6b: Set credentials for the Ektron search server service

1. On the SharePoint server, open the Windows Services control panel.
2. Right click **Ektron Search Server Service**.
3. Click **Properties**.
4. Select the **Log On** tab.

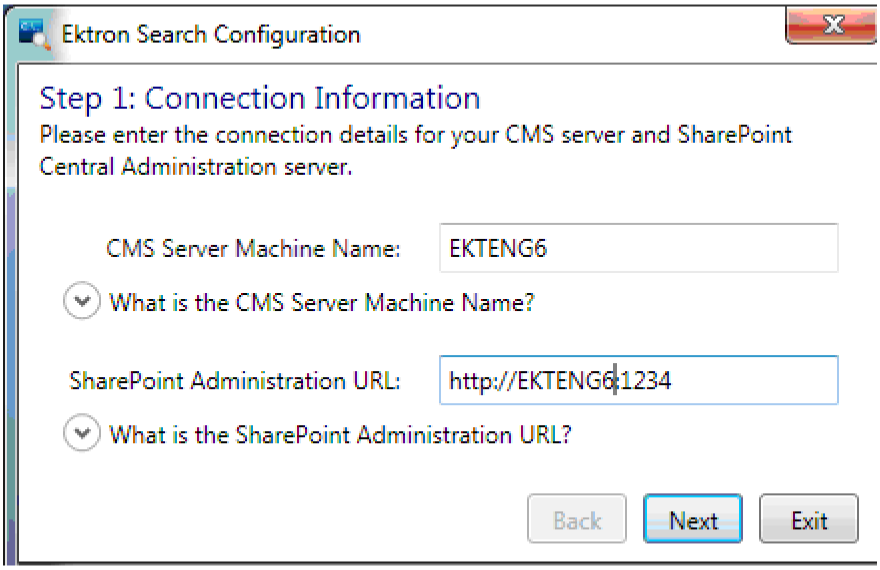


5. Select **This account**.

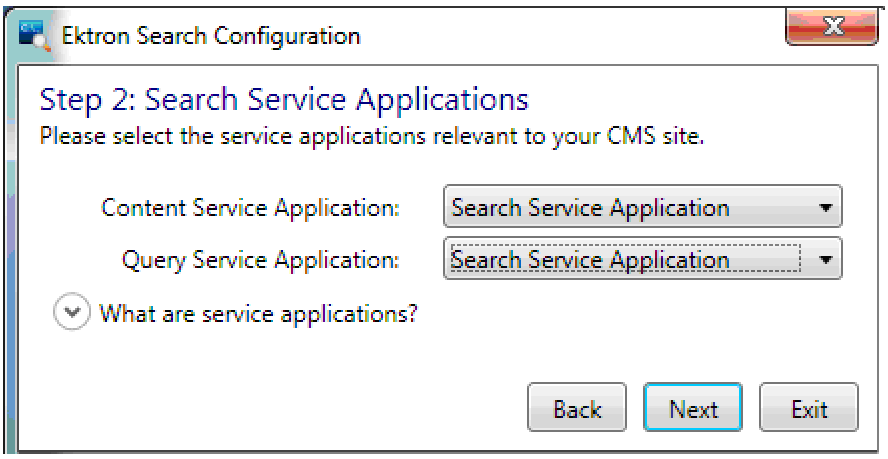
6. Enter the credentials of the user under whom the SharePoint Server Search service runs. You created this user in *Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010* on page 424.
7. Click **OK**.
8. Restart the Ektron Search Server Service.

Part 6c: Run the Ektron search configuration utility

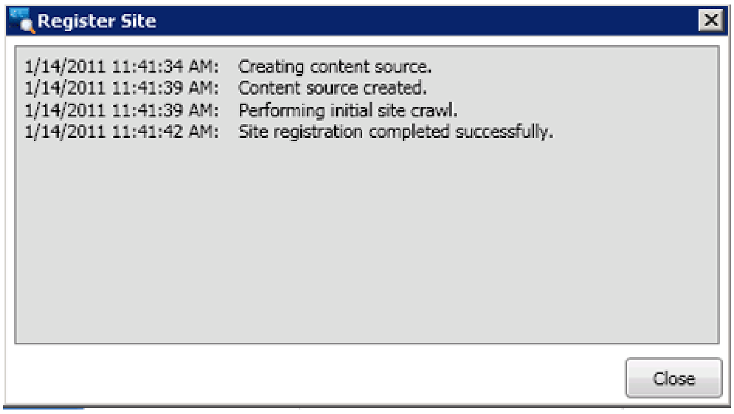
1. Log on to the SharePoint server.
2. Click the Windows **Start** menu > **All Programs > Ektron > CMS400*vreleasenumber* > Utilities > Search Config**. If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Search Config**. The Step 1 configuration screen appears.



3. Enter the Ektron server name.
4. Enter the SharePoint Administration URL. See also: *Logging into Ektron's Search Configuration screen* on page 312.
5. Click **Next**. The Step 2 configuration screen appears.



6. At the **Content Service Application** field, select the application you created in *Part 2b: Create a FAST search connector service application for crawling content* on page 425.
7. At the **Query Service Application** field, select the application you created in *Part 2d: Create a search service application for querying* on page 429.
8. Click **Next**. The Ektron Search Configuration screen appears. For documentation, see *Updating the site registration panel* on page 316.
9. When you complete the screen, click **Register Site**. Progress appears in a window.



During this process, the FAST search index is populated with your data, and the schema is modified to include your site's searchable properties. This process can be lengthy when registering a site for the first time. You can monitor these activities in the Workarea.

Part 7: Make FAST SharePoint's query search application

In this section, you complete these tasks.

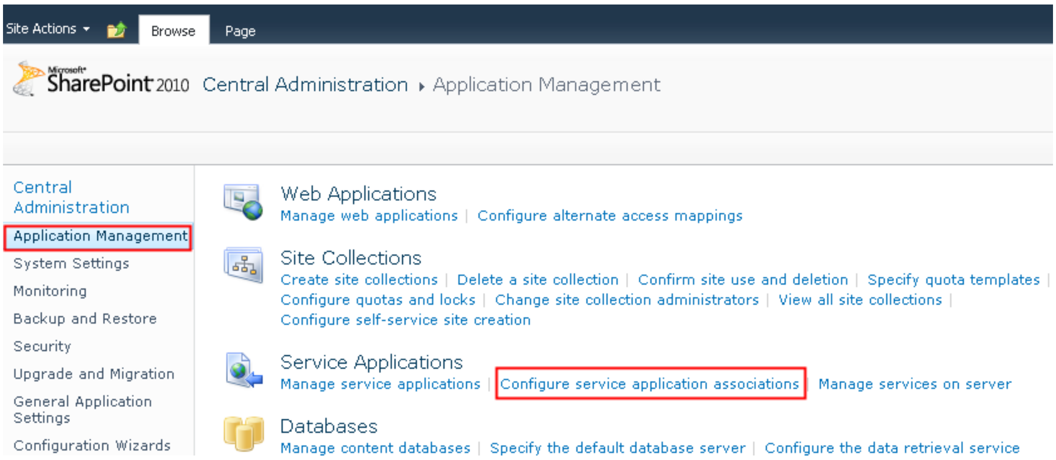
- *Part 7a: Update web.config with query service application* below
- *Part 7b: Set FAST search query as default search service application* below

Part 7a: Update web.config with query service application

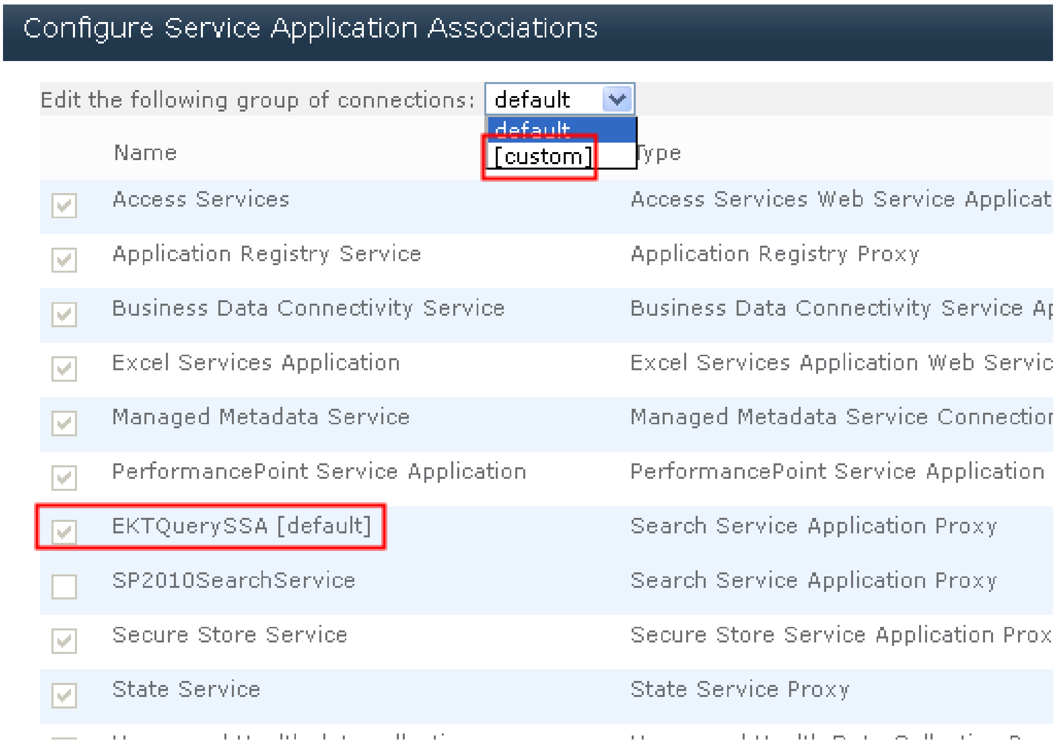
1. On the SharePoint server, go to %CommonProgramFiles%\Microsoft Shared\Web Server Extensions\14\ISAPI\EktronWebService.
2. Open the web.config file.
3. Find the following entry: <add key="QuerySSA" value="FAST Query SSA" />
4. Replace the value property with the name of the Query Service application you entered in *Part 2d: Create a search service application for querying* on page 429. To continue that example, the line would look like this: <add key="QuerySSA" value="EktQuery" />
5. Restart the Ektron search site application pool. See also: Start or Stop an Application Pool (IIS 7).

Part 7b: Set FAST search query as default search service application

1. Open the SharePoint 2010 Central Administration Page.
2. Go to **Application Management >Service Applications > Configure service application associations**.



3. Under **Web Application**, click **SharePoint-80**. The Configure Service Application screen appears.
4. If **EKTQUERYSSA** is the default, exit the screen. Otherwise, click the **Edit the following group of connections** pulldown and choose **[custom]**. The screen refreshes and the check boxes are active.



5. Check **EKTQUERYSSA[default]** then click **OK**.

Managing FAST administrative tasks

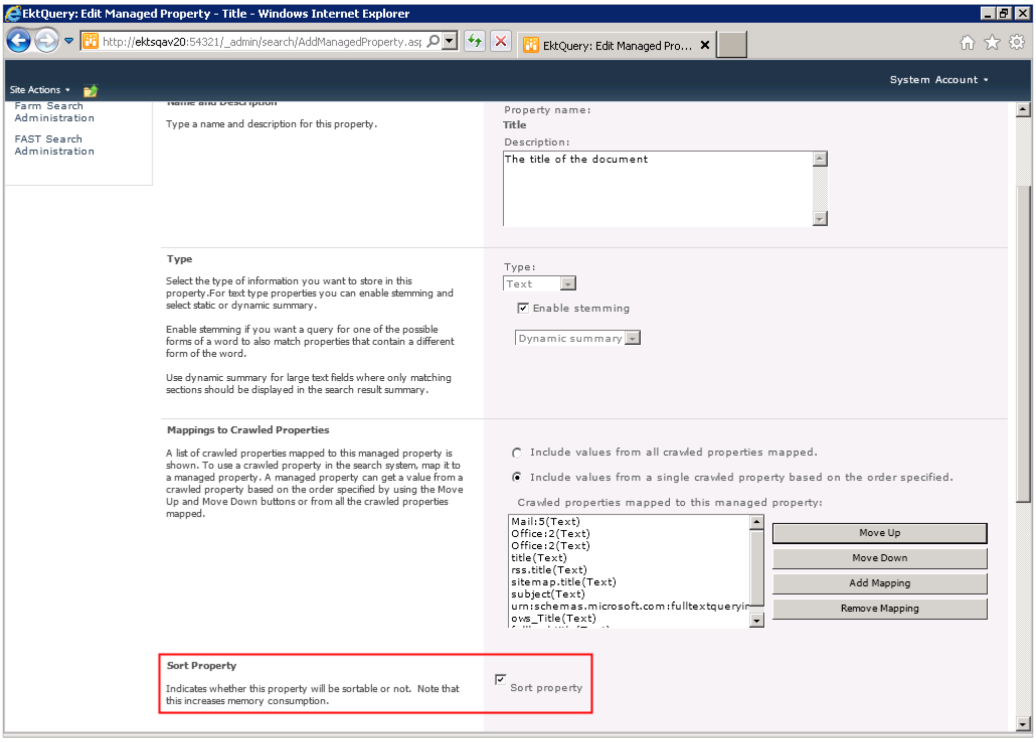
The following topics explain how to perform administrative tasks that are unique to Microsoft FAST Search Server 2010. The following list shows other search-related functions that apply to all Microsoft search providers (including Microsoft FAST Search Server 2010).

- *Basic versus advanced website search* on page 336
- *Formulating search queries* on page 339
- *Using Autosuggest* on page 340
- *The "Did you mean?" feature* on page 345
- *Managing searchability of Ektron content* on page 346
- *Managing search results* on page 347
- *Using synonym sets* on page 348
- *Providing suggested results* on page 350
- *Using advanced search in the Workarea* on page 364
- *Reporting search activity* on page 375

Making the title property sortable

By default, the **Title** property is not sortable. To change it so that it is sortable, follow these steps.

1. Log into the Fast Central Administrator console.
2. Choose **Manage Service App > Query Service Application > Fast Search Administrator > Managed Properties**.
3. Find the **Title** Managed Property.
4. Edit it and check the **Sort property** box.



IMPORTANT: When used to sort, the Title property follows an ASCII sort pattern. As a result, titles that begin with a capital letter precede ones that begin with a lower case letter. For example:

```
Better Business Bureau
Tiramisu recipe
american foreign policy
```

See also:

- Enable a managed property as sort option by using Windows PowerShell
- Make a managed property sort option available in the web front-end by using the graphical user interface

Using faceted search

Facets are content properties that allow site visitors to filter search results. For example, your site lists job postings. So, your results page offers a **Region** facet, which visitors use to select jobs in specific regions.

Faceted search has these limitations:

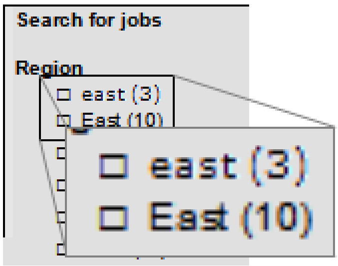
- If the metadata definition type is integer or date, facet categories only appear if a metadata value is assigned to 2 or more content items. For example, if the South region was assigned to only one content item's metadata, **South** would not appear on the facets list. However, the content would be returned in search results.
- If the same metadata value is applied to all content, no facet categories appear. To continue the above example, if all content to which the **Regions** metadata definition may be applied have **South** for their value, no facets list appears.
- The refiner count may be inaccurate if you are using duplicate removal. For more information, see Refiner count is wrong when using duplicate removal.

This section explains how to implement faceted searching using Ektron and Microsoft FAST Search Server 2010.

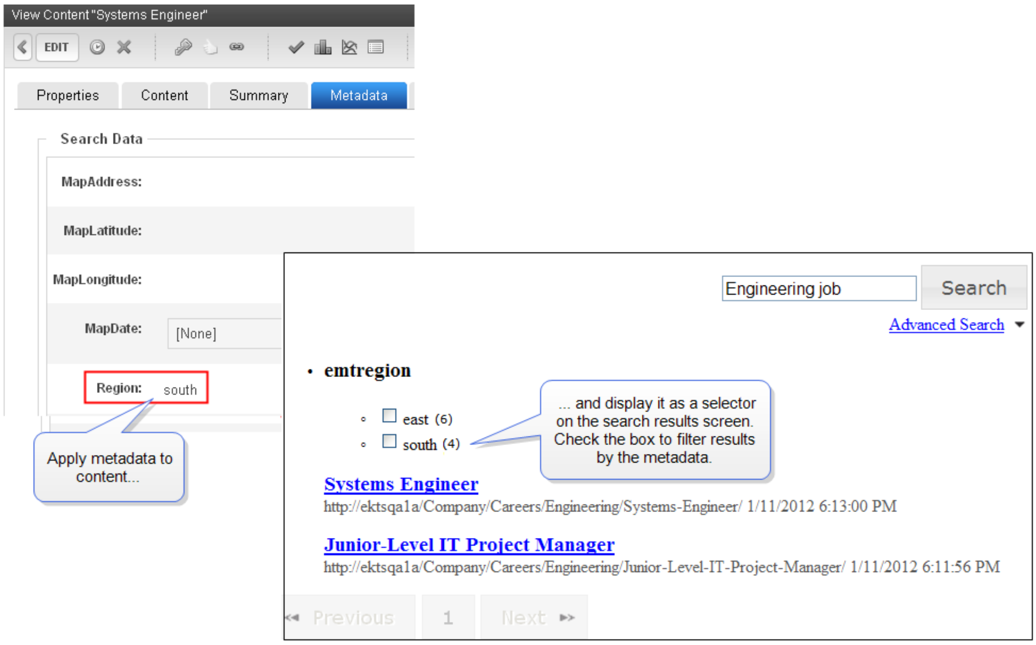
Creating facets

1. Create searchable Ektron metadata definitions. See also: *Creating and deploying a Search tag definition* on page 759.

   IMPORTANT: Carefully plan capitalization, spelling, spacing, and so on of metadata definitions for Faceted Search. Minor inconsistencies can result in duplicate entries.



2. Apply metadata values to appropriate content.
3. Run a full crawl. The metadata become managed properties within Microsoft FAST Search Server 2010.
4. Update search server controls to look for the metadata/managed property. They appear as selectors on your search results page.



Creating a faceted search

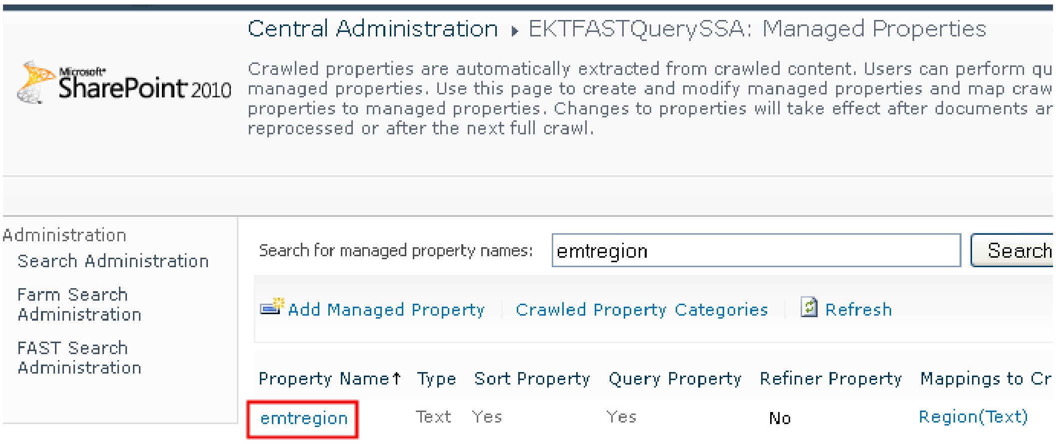
1. Create a metadata definition in the Workarea. See *Working with Metadata* on page 755. This example uses a text metadata definition called **region**.
2. Apply the new metadata definition to a folder. See *Assigning metadata to a folder* on page 764.
3. Within that folder, apply the new metadata definition to appropriate content. See *Adding metadata to content* on page 766.
4. Sign on to Microsoft FAST Search Server 2010.
5. Go to **Search Central Administrator > Manage Service Applications > click the query content source > Fast Search Administration > Managed Properties**.
6. In the **Search** field, enter **emt** followed by the metadata definition you created in Step 1. To continue the example, enter **emtregion**.

NOTE: You enter **emt** because this is a text-style metadata definition. Use these prefixes for other styles.

Microsoft FAST Search Server 2010 prefixes for Ektron metadata definition styles:

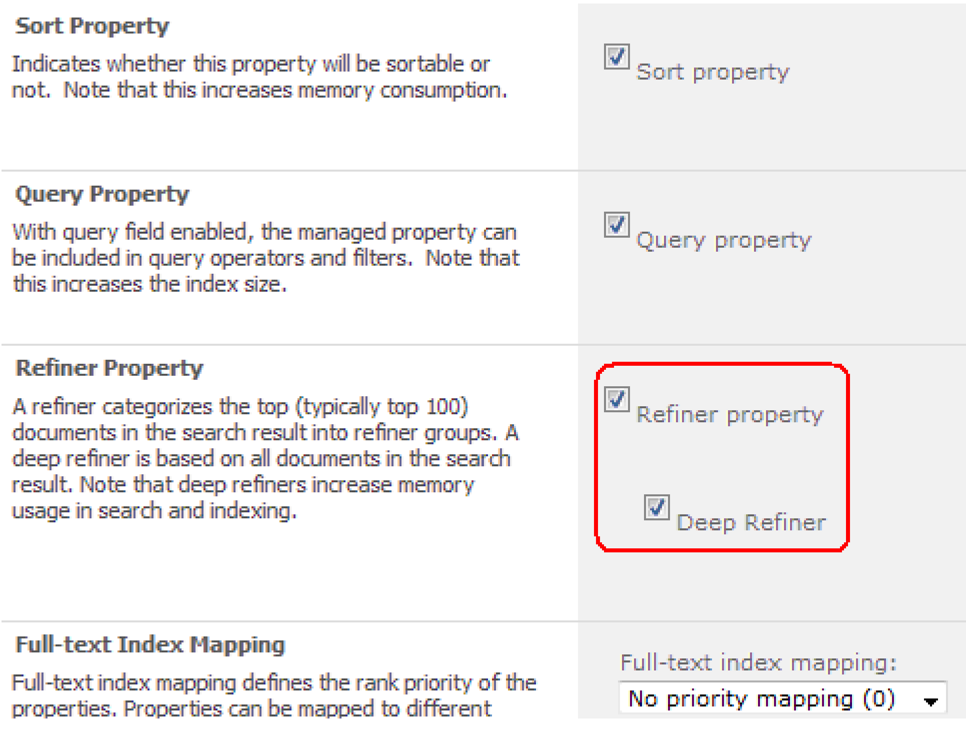
- **Text, select from list, multiple selections**. emt
- **Integer and number**. emi
- **Boolean**. emb
- **Date**. emd
- **Double**. emf
- If the content is an XML Smart Form, use these prefixes instead:
  - **Text, select from list, multiple selections**. est
  - **Integer and number**. esi
  - **Boolean**. esb
  - **Date**. esd
  - **Double**. esf

7. Click the metadata definition/managed property.



8. Scroll down to **Refiner Property**.

9. Check it and the **Deep Refiner** box.



10. Complete Steps 1 through 9 for all metadata definitions that you want to add.
11. Run a full crawl. See *Using Microsoft Search Server features* on page 335.
12. To enable a search server control to display a metadata selector, modify the SearchController control using a <Refiners> tag as shown. The tag references the managed property name, emtregion in our example.

```
<ektron:SiteSearchController ID="controller" runat="server">
  <Refiners>
    <ektron:Refiner Name="emtregion"/>
  </Refiners>
</ektron:SiteSearchController>
<ektronUI:Pager runat="server" ResultsPerPage="50"
  PageableControlID="controller" >
</ektronUI:Pager>
```

Here are sample search results. If you check a box next to a region, the page refreshes and displays only content to which that metadata property is applied.

Managing rank profiles

Microsoft FAST Search Server 2010 lets you adjust the rank of search results, enabling you to control which content appears near the top. This feature is sometimes called "Advanced Sorting." You typically use the Rank Profile feature when site visitors are not getting expected search results. For example, your manage a university website and, when people enter **Admissions**, the Admissions department page is not among the top search results. To fix that, use a Rank Profile to force certain search results to the top.

See also: Tune relevance factors (FAST Search Server 2010 for SharePoint), Manage rank profiles (FAST Search Server 2010 for SharePoint), Ranking and Sorting (FAST Search Server 2010 for SharePoint).

Increasing the search rank of a content item

Here is an overview of how to increase the search rank for selected content.

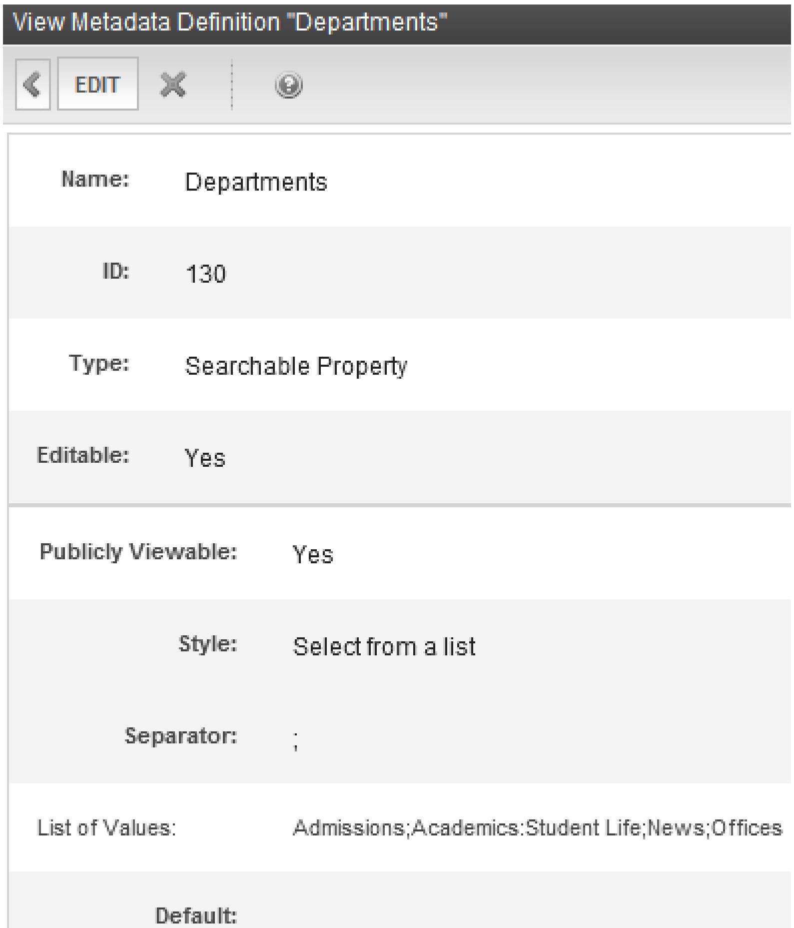
1. Create a metadata definition to define searchable properties.
2. Apply metadata values to selected content. When the content is crawled, the metadata values become managed properties in Microsoft FAST Search Server 2010.
3. Use Microsoft FAST Search Server 2010 to create a Rank Profile. While defining the profile, you
   - list the metadata values/managed properties
   - modify the search rank of the managed properties, which in turn, modify the rank of content to which they are applied
4. Update a search server control or the API to use the rank in the search results algorithm.

Part 1: Create metadata definitions

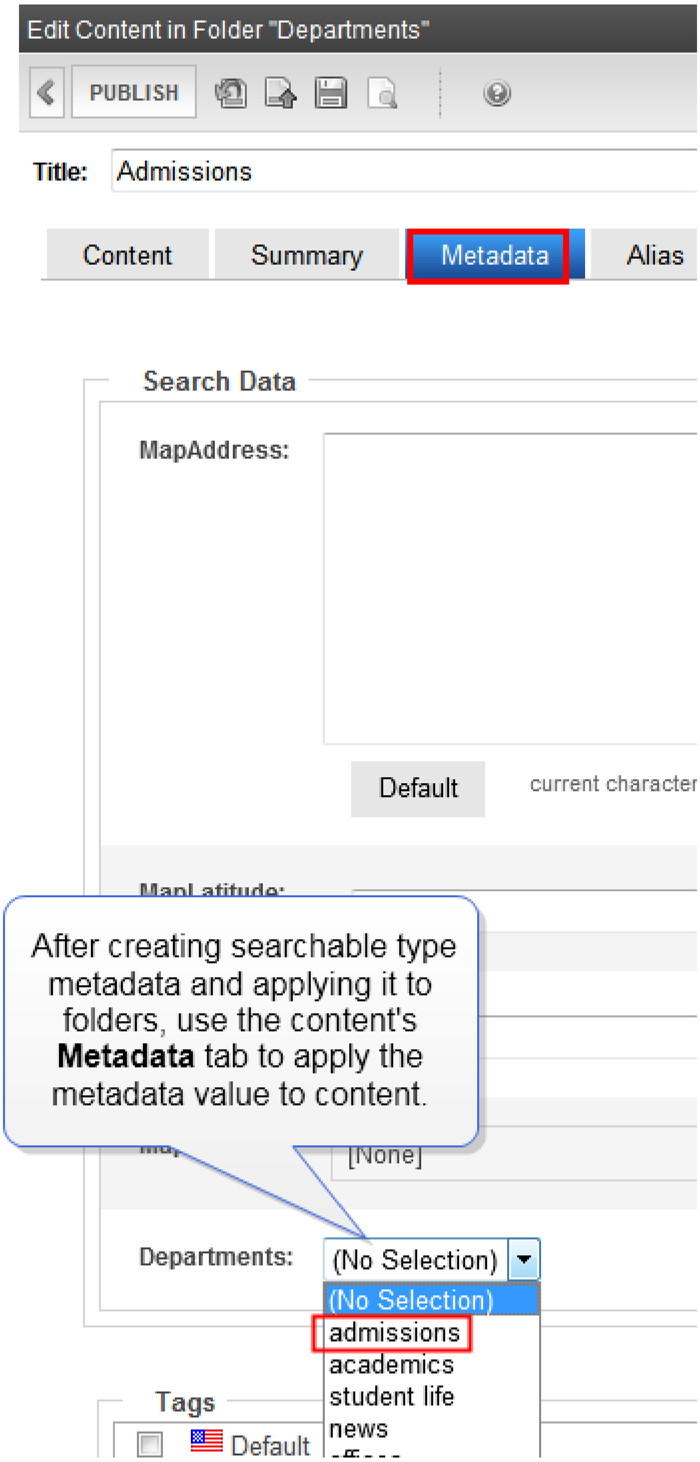
To increase a content item's search rank, first create searchable Ektron metadata definitions. They contain the content attribute by which site visitors will search. Then, apply those metadata definitions to relevant folders and content.

NOTE: The process of creating and applying metadata is abbreviated here. For full details, see *Creating and deploying a Search tag definition* on page 759.

To continue the above example, create a searchable metadata definition named Departments, of the type **Select from a List**. Add **Admissions** to the list of values. Then, apply that metadata to all folders that contain relevant content.



Next, find Ektron content that describes your Admissions department. Edit that content, click the **Metadata** tab, and apply the Admissions metadata to the content.



Part 2: Create a rank profile

PREREQUISITE

The Microsoft FAST Search Server 2010 *type* and metadata value name you use to increase the search rank. To continue the above example, use **emtadmissions**. For a list of types, see *Using faceted search* on page 443.

NOTE: For more information on Index schema cmdlets, see Index schema cmdlets (FAST Search Server 2010 for SharePoint).

To create a Rank Profile:

3. Create and enter a name for the Rank Profile.
```
New-FASTSearchMetadataRankProfile
-name (your profile name)
```
4. Define the Microsoft FAST Search Server 2010 type and name of the metadata value used to increase search rank.
```
$mp = Get-FASTSearchMetadataManagedProperty
-Name (your managed property)
```
5. Set a variable to your profile. This is typically the same as the name you entered in Step 3.
```
$rp = Get-FASTSearchMetadataRankProfile
-name (your profile name)
```
6. Add a managed property boost to your profile. The `$mp` command has 2 parameters:
   - **string,int**. the Microsoft FAST Search Server 2010 type and name of metadata value whose search rank you want to increase
   - **boost number**. a relative value by which you want to increase the profile's search rank. See also: Change the managed property field boost weight by using Windows PowerShell
   ```
   $rp.CreateManagedPropertyBoostComponent($mp,
     "<string/integer managed property value>,<boost number>)”)
   ```
   Replace values within angle brackets (< >) with actual values.
7. Update your profile
```
$rp.Update()
```
Here’s an example:
```
New-FASTSearchMetadataRankProfile -name departments
$mp = Get-FASTSearchMetadataManagedProperty -Name emtadmissions
$rp = Get-FASTSearchMetadataRankProfile -name departments
$rp.CreateManagedPropertyBoostComponent($mp, "admissions,20000")
$rp.Update()
```

Part 3: Incorporate the rank profile into the search result display

This section explains how to use a Rank Profile to modify search results, using either the SiteSearchInputView server control or the API.

1. Add the rank to a Search server control:

   Modify all SiteSearchInputView server controls that you want the ranking to modify. See also: Using the Search Server Controls. To achieve that, use `<SortProperties>` tags. Inside the tags, set these parameters.

- **DisplayName**. Enter any unique name to identify this profile.
- **RankId**. Your profile name that you created on the FAST server.

```
<ektron:SiteSearchInputView ID="SiteSearchInputView1"
  runat="server" ControllerID="SiteSearchController1">
  <SortProperties>
    <ektron:RankSearchProperty DisplayName="Custom Relevance"
      RankId="departments" />
  </SortProperties>
</ektron:SiteSearchInputView>
```

2. Add the rank using the API:

   The following illustrates how to modify search results via the Rank Profile using the API.

```
criteria.OrderBy = new List<OrderData>()
{ new OrderData(new RankPropertyExpression("rank profile name"),
  OrderDirection.Ascending) };
```

   For example:

```
criteria.OrderBy = new List<OrderData>()
  { new OrderData(new RankPropertyExpression("departments"),
  OrderDirection.Ascending) };
```

Removing a boost

1. Set a variable to the profile. Use the same profile name that you used in *Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010* on page 424.

```
$rp = Get-FASTSearchMetadataRankProfile -name (your profile name)
```

2. Set to a variable the Microsoft FAST Search Server 2010 type and name of the metadata value used to increase search rank.

```
$mp = Get-FASTSearchMetadataManagedProperty
-name Name (your managed property)
```

3. Set a variable for the boost you want to delete.

   The `$_.BoostValue` command has 2 parameters: **string,int** and **boost number**. Use the same values you used when creating the Rank Profile. See *Part 1: Install SharePoint 2010 and Microsoft FAST Search Server 2010* on page 424.

```
$boost1 = $rp.GetManagedPropertyBoosts()
  | Where-Object{$_.BoostValue -like '*(string/int),(boost number)*'}
```

4. Delete the boost.

```
$boost1.Delete()
```

5. Update your profile.

```
$rp.Update()
```

   Here's an example:

```
$rp = Get-FASTSearchMetadataRankProfile -name departments
$mp = Get-FASTSearchMetadataManagedProperty -name emtadmissions
$boost1 = $rp.GetManagedPropertyBoosts()
  | Where-Object{$_.BoostValue -like '*admissions,20000*'}
```

```
$boost1.Delete()
$rp.Update()
```

Viewing all boosts

Run this query: `$rp.GetManagedPropertyBoosts()`

Troubleshooting boosts

- **Problem.** The boost does not affect search results
- **Solution.** Verify that the `FreshnessResolution` is set to `second`. See also: Change the freshness resolution and weight by using Windows PowerShell

Troubleshooting FAST

Problem. Documents are not being indexed.

Solution. Provide full control rights on the `%FASTSEARCH%\bin` and `%FASTSEARCH%\tmp` folders for the user running Microsoft FAST Search Server 2010

More information. Crawling and processing Office documents with FAST for Sharepoint 2010 results in document conversion errors in the crawl log

9

Ektron Digital Experience Hub release notes

Ektron's Digital Experience Hub (DXH) adds seamless integrations with Pardot, Eloqua and Silverpop marketing systems to its extensive library of out-of-the-box data connectors. Ektron connectors provide bi-directional data integration between Ektron’s core Content Management System (CMS) and leading enterprise systems for CRM, marketing automation, social media, web analytics, and enterprise content management.

Connectors

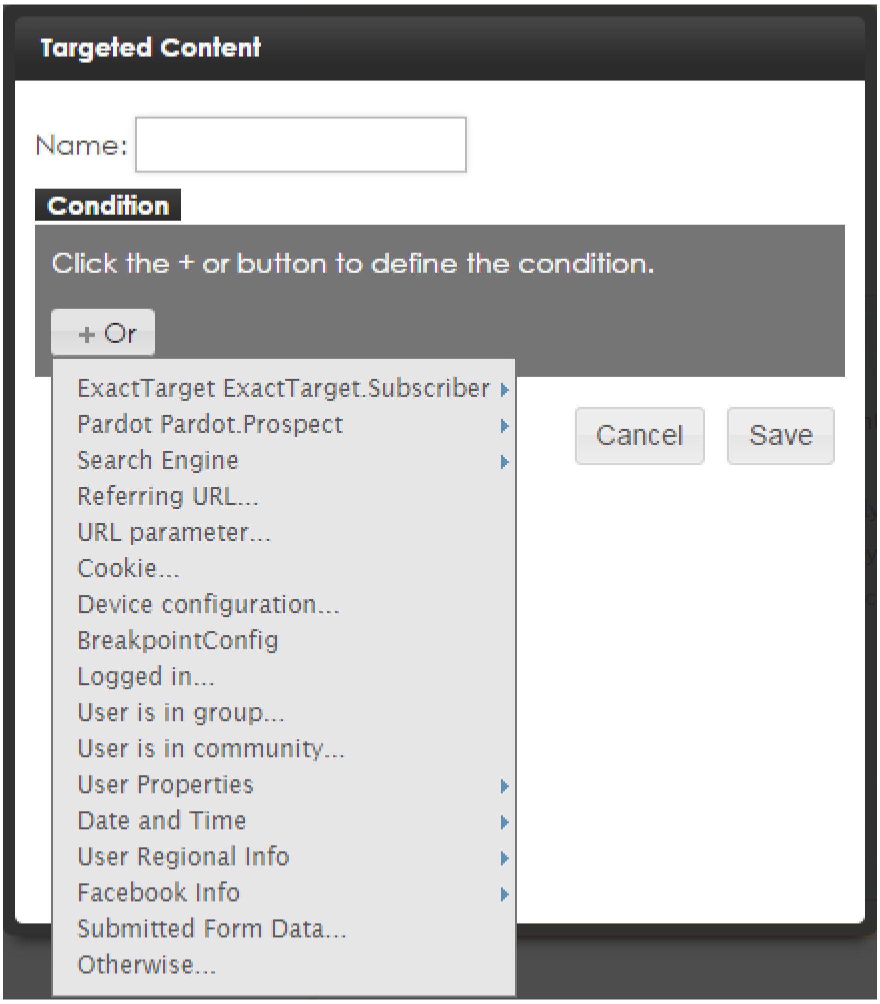
DXH has the following connectors that let you export data collected on your website and map data to targeted content to provide content that matches their interests, thereby placing your site information in the context of your users.

- Eloqua
- ExactTarget
- Pardot
- Silverpop

Using connector information in targeted content

See Connecting Visitors with Targeted Content in the *Ektron Reference*.

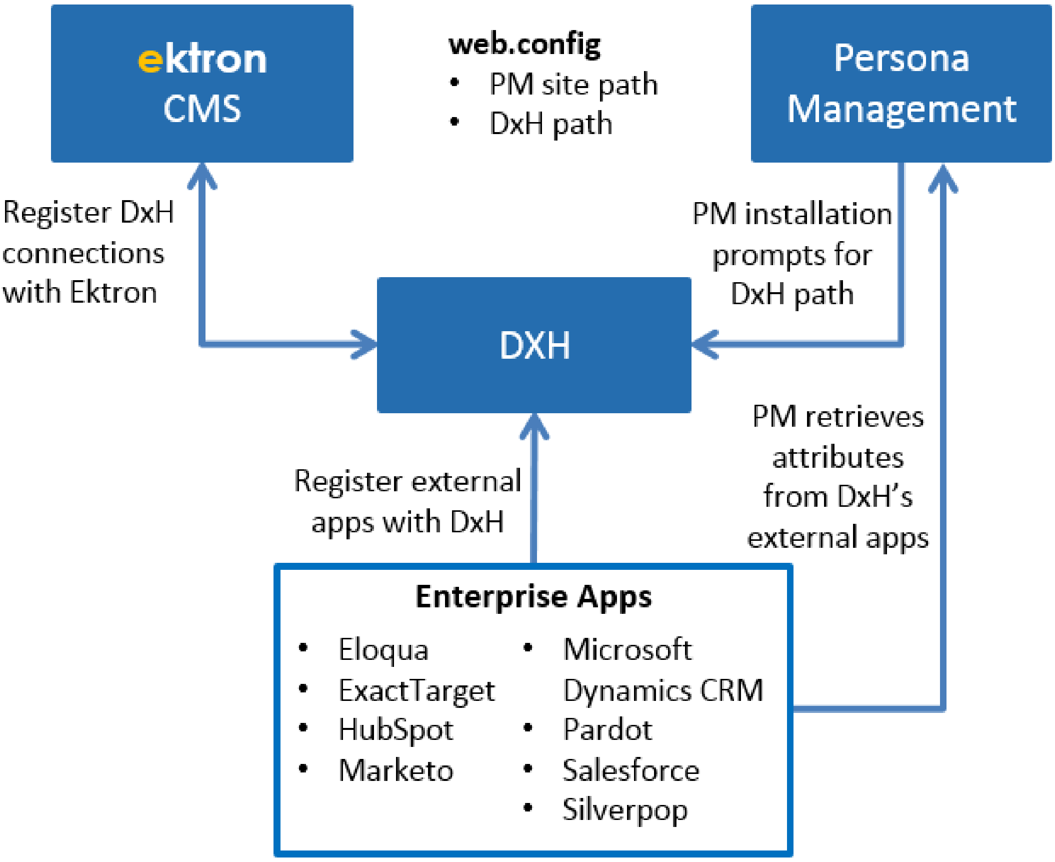
ExactTarget and Pardot connectors can provide data criteria to the Targeted Content widget, which lets you provide content that matches their interests. For example, search keywords used to find your site might determine the best offer to show a prospect. Or, site members might explicitly state their interests by adding to their user profile or filling out a form or survey.



Using connector information to create a persona

See [Creating Personalized Web Experiences with Personas] in the *Ektron Reference*.

You can use connector information to create persona criteria.



What's fixed in DXH?

- 73612. You could map hidden fields on an Ektron form to a CRM form.
- 73726. DXH generated an error in the log pointing to SharePoint.

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10

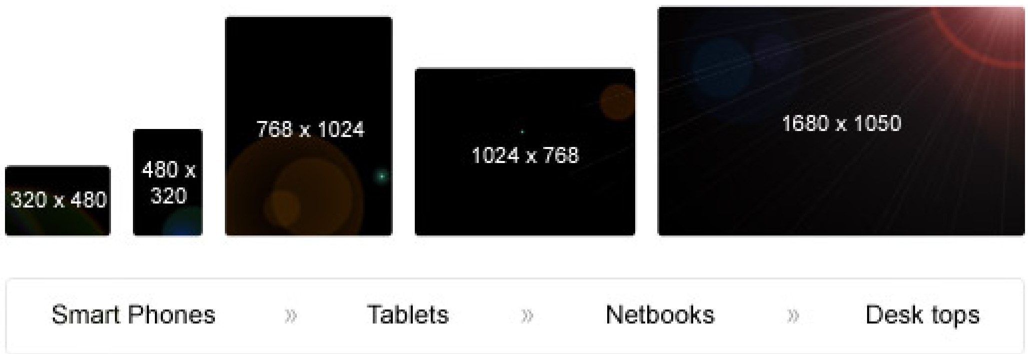
Creating a mobile-driven Web experience

Web traffic from mobile devices is accelerating. Making your website available to mobile users is not enough. Your website must deliver the same, consistent level of experience to your mobile visitors as you do for those who visit your website on their desktop to ensure that your consumers are accessing information, products, and services from your website.

Mobile applications require different, more compact navigational aids, and content must fit into a smaller footprint. Mobile websites need "tap to call" options to take advantage of cellular technology, a robust search, flexible menus, and quick access to content. Tables and figures may need to be adjusted or reconfigured to avoid unnecessary "pinching" and scrolling.

Developing a multi-channel website design

When you design and develop your website, you want to reach as many people as possible. People are using a wide variety of devices to access the Web.



When you evaluate your website, or where you want it to be, consider the following website strategies:

- **Foundational**. Educate your users about your purpose and products with little interactivity. Enable business users to publish content using content editing and management, approval chains, and publishing. Reduce site maintenance for IT and increase the number of visits to your website.
- **Tactical**. Facilitate content reuse, user-generated content, categorization, and page assembly. Create Smart Forms, taxonomies, online communities. Synchronizemultiple sites. Develop pages, templates, surveys and polls, blogs, search, commenting and threaded discussions.
- **Strategic**. Embrace multi-channel delivery and support a richer customer experience with eCommerce, multi-channel, multi-site, multi-language, and video.
- **Engagement**. Continually analyze and customize the customer experience with personas, create touch-centric interaction for mobile devices, integrate with marketing automation, use multivariate testing, geolocation, device orientation, and activity streamsto target content for what is relevant and meaningful to your site visitor. Customer Relationship Management systems can personalize the Web experience to drive revenue, deliver better business results, increase your brand awareness, and create customer loyalty.

Consider the following approaches to design.

- Separate Mobile Site Design
- Separate Mobile Template Design
- Responsive Web Design
- Responsive Web Design and Server Side Components (RESS)

Separate mobile site design

If you have an existing website that you do not want to redesign, you can separate the content into 2 site architectures: 1 for desktop computers and 1 for mobile devices. You can target your content specifically for mobile devices, avoiding the complexity of developing device-conditional style sheets and manipulating existing content.

However, you will have to maintain 2 sites and ensure that they are synchronized (where applicable). You have to set up device recognition so that mobile device requests for your website are routed to your mobile (m-dot) site instead.

Also, having 2 sites can impact your SEO ranking negatively if content is found on both sites.

Separate mobile template design

Separate templates, optimized for mobile, get rendered whenever somebody visits your site from a mobile device. This approach lets you define a unique mobile experience, without affecting the desktop experience, and create a mobile experience without having to undergo a complete website redesign. Loading of pages is more streamlined when you use separate templates instead of the responsive design approach because only the mobile content gets retrieved from the server; responsive sites often have extra content that is then hidden by CSS rules based upon the current device.

However, you must maintain more than 1 set of templates (for mobile and desktop experiences). Also, the server must detect whether a visitor is using a mobile device before rendering a mobile template, so a list of devices must be kept up-to-date. Fortunately, Ektron is able to keep the device list up to date for you. See *Updating the Wireless Universal Resource File* on page 481.

Responsive Web Design

You should consider a Responsive Web Design (RWD) when you have a high degree of overlap between the site visitor experience and content on many devices.

Responsive design provides an optimal viewing experience for devices of any size by adapting the layout of your pages with CSS3 media queries. The elements on your pages (including any images) must use relative units (percentages or ems) for sizing instead of fixed dimensions (pixels). This enables your site to expand and contract to the viewing size of any device.

Responsive design has a single code base, where other approaches require the use of separate mobile-specific templates to display your pages to mobile devices. While you may identify which of your content is "canonical" in a *Separate mobile site design* on the previous page, the singular architecture and repository of a responsive design means that you have one authoritative source for SEO leading to higher rankings by search engines. (Multiple websites can dilute your ranking.) It also lets your site visitors use a consistent set of URLs without the issue of directing to the WWW or m (dot) site.

Many traditional websites require a complete redesign and implementation to change to a responsive site. Additionally, a complete redesign may require added time and effort to ensure that the user experience is mobile-friendly. You must weigh the costs of a redesign to gain the benefits of a single code base (long-term maintenance savings, SEO improvements, and so on).

Another issue to consider before creating a responsive website is that entire pages are loaded. If you have a lot of content on a page, it can impact the user experience. By contrast, if your site uses separate mobile templates, you can decide if some of that content should be loaded on certain types of devices.

Using responsive frameworks with PageBuilder on page 1001 shows how to work responsive Web design into your PageBuilder pages.

Responsive Web Design and Server Side Components

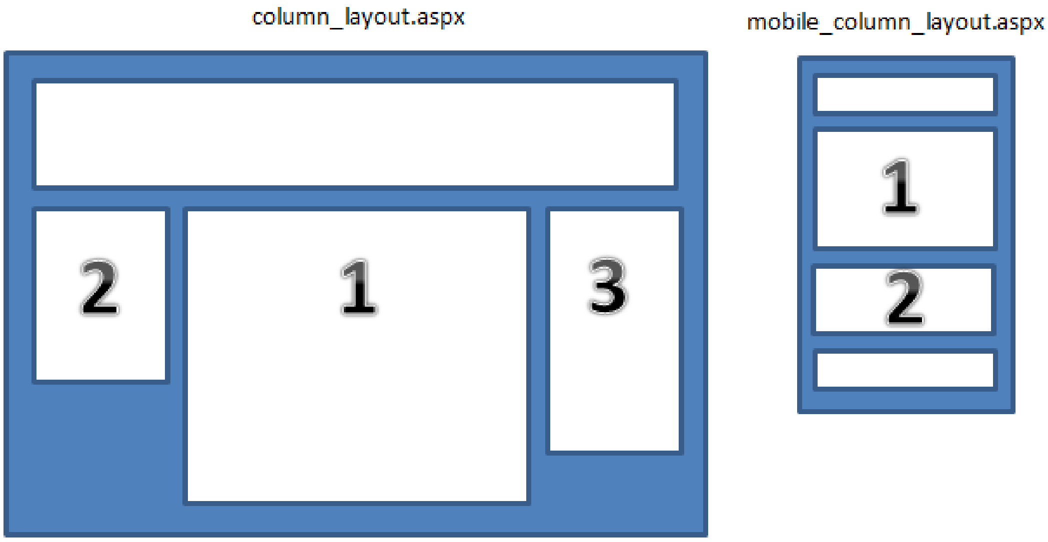
Responsive Web Design + Server Side Components (RESS) has the flexibility of responsive design while providing the granularity of device detection to deliver device-specific components.

Ektron supports the use of RESS by providing tools to display content and assets based on groups of devices, which can be added to your responsive pages. Of course, this responsive aspect means that your site needs to be redesigned, but once redesigned, these tools can provide the best of both approaches.

Using responsive frameworks with PageBuilder on page 1001 shows how to work responsive Web design into your PageBuilder pages.

Using mobile templates

A template is a customized Web page format comprised of objects such as content blocks, list controls, menus, rotating banners, a search object, and videos. How you assemble the objects affects the user experience. Because of the smaller display size, templates for mobile devices may have a single column to eliminate horizontal scrolling, pinching, and zooming. You decide what is practical for each device by creating different templates instead of creating different content. Objects may have to be omitted or replaced with mobile-friendly objects. The following image shows PageBuilder templates for desktop and mobile devices. Note that the mobile template does not include content object 3. See *Developing wireframe templates* on page 1007 for information about creating PageBuilder wireframe templates.



You should use the same dropzone IDs for both the mobile and desktop templates. Content does not display if a mobile template contains a dropzone ID that the corresponding desktop template does not have.

Ektron can detect specific characteristics of a mobile device, such as the differences between the *Android Droid X* and *Droid 2*. These characteristics help you determine how to render the user experience. For example, one device may support Flash technology and another may not.

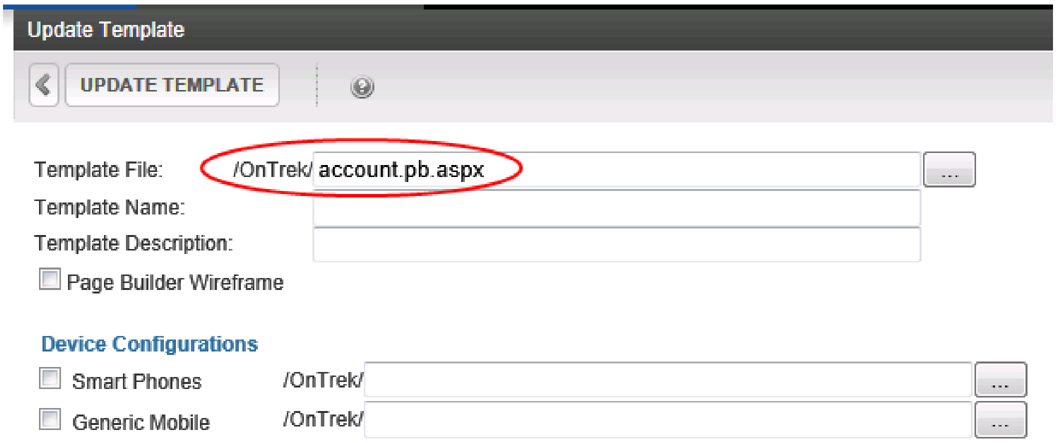
In any case, you want to ensure that your content on a mobile device is *elastic*, meaning that it can scale to the various sizes of displays. Use percentages instead of hard-coded pixel sizes for the mobile template. If you set PageBuilder dropzone width to 100%, the normal flow of the objects in the mobile browser cause them to stack from the top to the bottom.

Setting up a mobile template

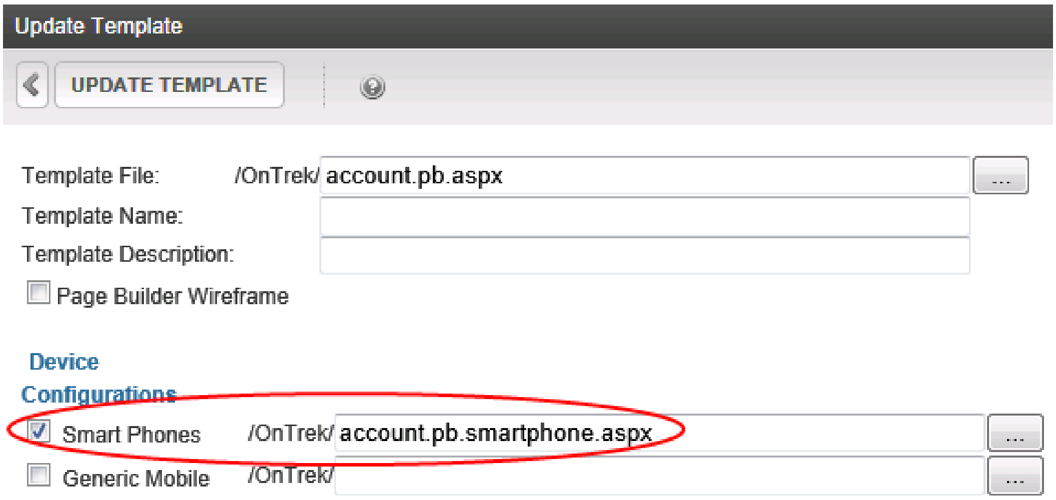
1. In the *site root*/web.config file, set **ek_EnableDeviceDetection** to **True**.

```
<add key="ek_EnableDeviceDetection" value="true">
```

2. Identify a template for which you want to create a mobile version, using the **Workarea > Settings > Configuration > Template Configuration** screen. Click any template to see its folder location relative to your site root.



3. Open Windows Explorer and locate that template in the *site root* folder.
4. Copy and save a mobile version of the template under a suitable name, for example, `account.pb.smartphone.aspx`.
5. Adapt the template for mobile use by changing column styles, removing unwanted navigation, images, headers, footers, adding components that help mobile users, and so on.
6. Create device groups. Assign to each one any mobile devices that use the template you created. See also: *Grouping mobile devices* on page 466.
7. Return to the Template Configuration screen and click the template you identified in Step 2.
8. Check every mobile **Device Group** for which you created a mobile template version. Then, for every checked configuration, click the ellipsis button (...) to its right, go to and select the mobile template you created in Step 6.



Now, if a mobile device user accesses a page which uses that template, the mobile-enhanced template displays the content.

- To test mobile templates, preview your content within them. See *Previewing content in a mobile template* on the facing page.

- Ektron uses the Wireless Universal Resource File (WURFL) file to obtain wireless device information. To learn how to view, update, and customize this file, see *Updating the Wireless Universal Resource File* on page 481.
- To conditionalize Smart Form content based on user device, see *Specifying device-specific content with Smart Forms* on page 465.
- To use a mobile site visitor's geographic location to deliver relevant content, see *Using Geographic data from a mobile device* on page 479.

Previewing content in a mobile template

You can preview content in mobile template to ensure the content fits within the screen resolution.

Previewing mobile content from a PageBuilder page

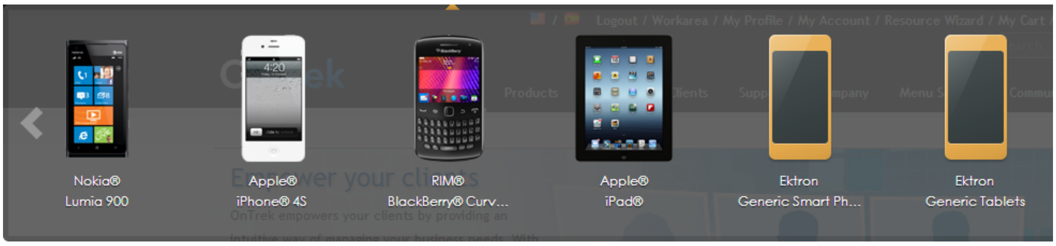
Ektron multi-channel preview lets you ensure that your page is optimized for devices of every size. You can browse your entire site using any preview device.

If you have the toolbar enabled...

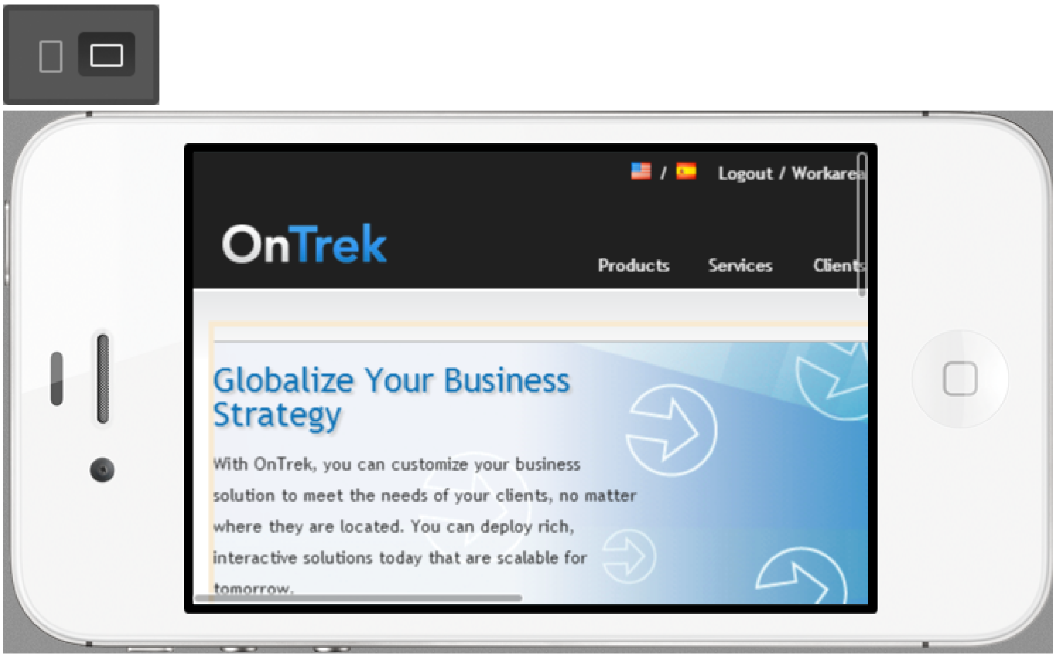
PREREQUISITE

Previewing virtual mobile devices requires an HTML5 CSS3-compliant browser. You must also enable the toolbar, for any template you want to use it, by checking the boxes in the **Enable Toolbar** column at **Workarea > Settings > Configuration > Template Configuration**.

1. Click **Preview** on the toolbar to show your page on a variety of simulated devices (portrait and landscape views). A bar appears with devices that simulate your Web page on those devices. For information about setting these devices, see *Adding a group by device model* on page 470.

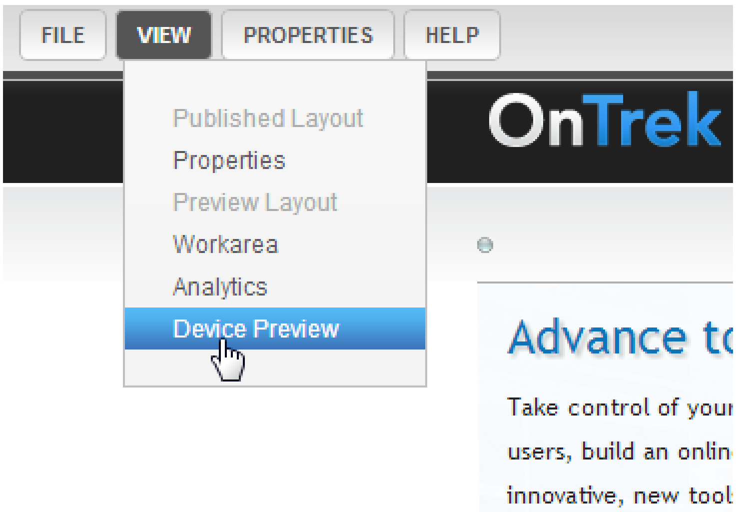


2. Click on the device on which you want to preview the web page. For example, choose Apple® iPhone® 4s. The Web page appears in the simulated device. You can select portrait or landscape view.



If you have the toolbar disabled (or do not have an HTML5 CSS3-compliant browser)...

1. Log into your Ektron website.
2. Go to PageBuilder page that you want to view as a mobile device user would.
3. From the PageBuilder menu, click **View > Device Preview**. A dialog box appears.



Choose the breakpoint you want to preview from the drop down menu. The page displays in the dialog box.

Previewing mobile content within the editor

1. Edit content in the editor.
2. Click **Preview** ( ).
3. Select a model from the **Device Configuration** drop-down and click **Preview**. The content displays in the selected template.

Specifying device-specific content with Smart Forms

You can set up Smart Form configurations to recognize a user's device and, based on that information, display appropriate content. For example, if a user is *not* using a Smart Phone, show a complex display with rich graphics. If a user *is* using a Smart Phone, create a simpler presentation of the same fields without graphics. To learn about this capability, see *Inserting a conditional section* on page 828.

You can also designate some or all of an HTML form's postback message to be conditional upon a user's device. So, for example, the postback message for Smart

Phone users can be much shorter than the message for users who are not using a mobile device. To learn more about this, see *Specifying conditional text in the postback message* on page 805.

Grouping mobile devices

You can accommodate a variety of mobile devices by grouping characteristics, such as display size. You can group devices for standard presentation and add refinements for specific devices. For example, a device configuration may consist of a *Smart Phones* group (Apple iPhone®, Samsung Galaxy Note™ II, Motorola® Droid RAZR MAXX HD, and so on) and a *Tablets* group (Apple iPad®, Google Nexus™ 10, Microsoft® Surface™, and so on).

With Ektron, you can group devices by breakpoint, model or operating system. A breakpoint is a screen width at which media queries make changes to the layout and switch from one image file to another.

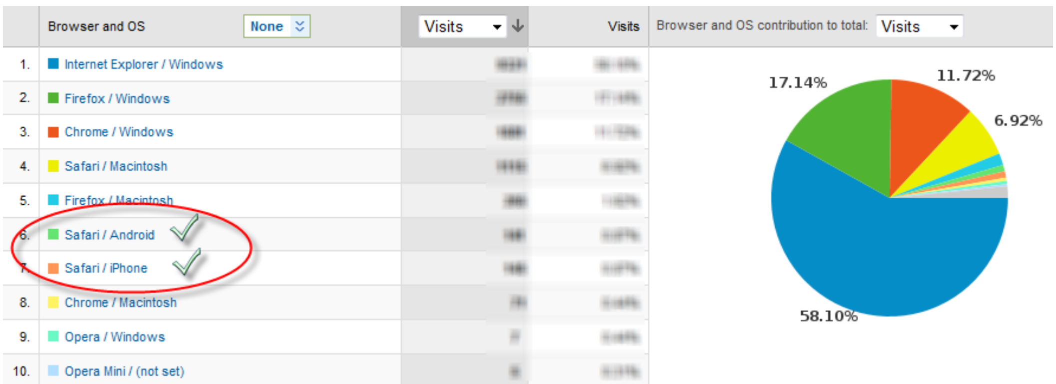
For example, you can set a breakpoint of 480 pixels-wide and call the group "Smart Phones," and set another breakpoint of 1024 pixels-wide and call the group "Tablets." If an image is loaded at 720 pixels-wide, the image is allowed on devices in the "Tablets" group. (You may have alternate images to display for the "Smart Phones" group. See *Applying adaptive image resizing* on page 472 for information about optimizing images for device groups.)

Grouping by model gives you more control over specifications, but it is quicker to group by operating system. You may want to first group by breakpoint, then by operating system, then only define models that do not work properly under an operating system configuration.

To determine which mobile devices to add to your device configurations, review your Analytics reporting to see which mobile devices are browsing your site. To see the Browser and OS report:

1. In the Workarea, select **Reports > Traffic Analytics > Visitors > Browser Capabilities > Browsers and OS**.
2. Modify the time period and rank if needed. For more information, see *Analyzing websites* on page 483.

The following example shows that Android and iPhone mobile devices have browsed pages. You can create templates and device configurations to improve the experience of these visitors.

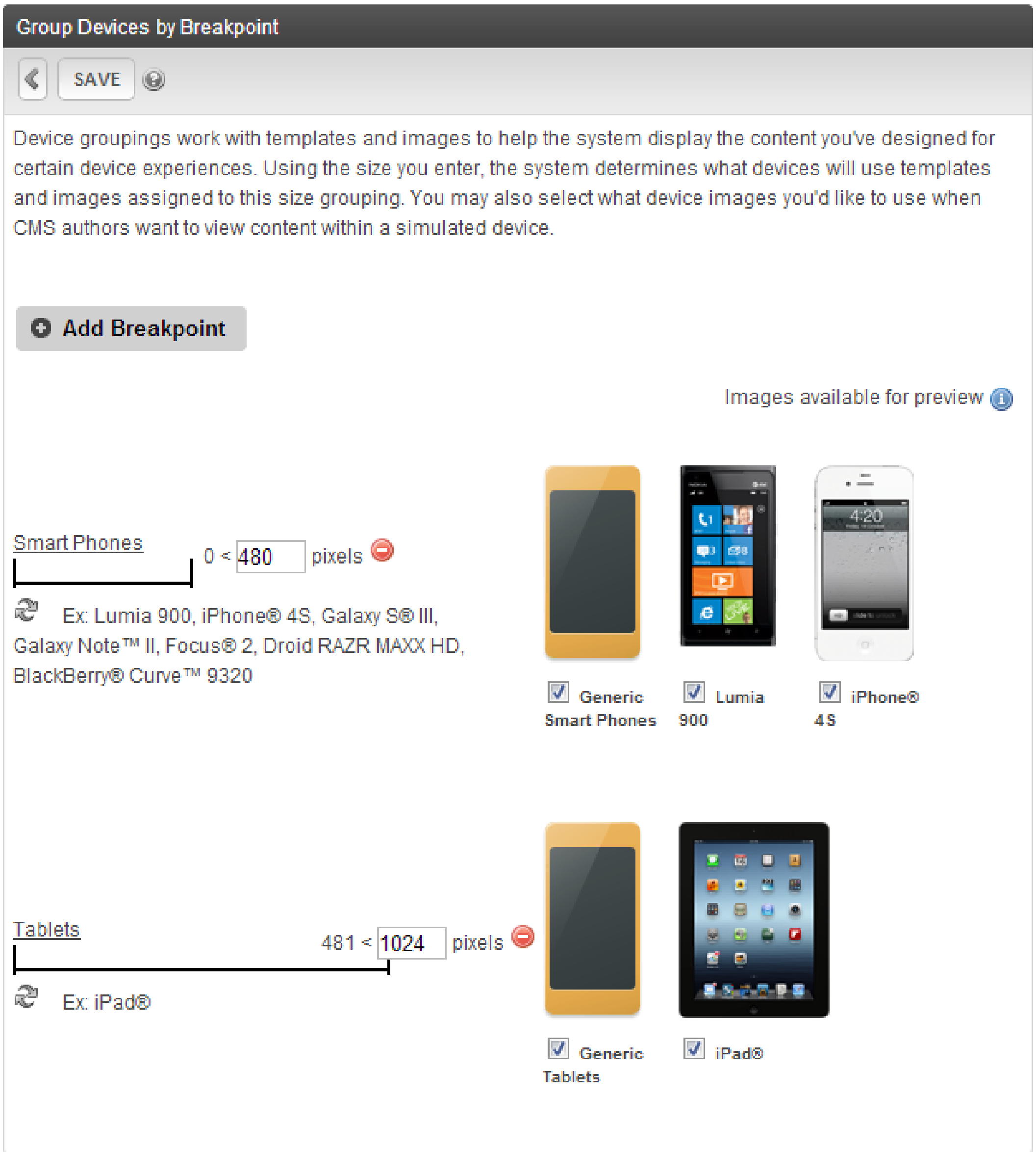


Adding a group by breakpoint

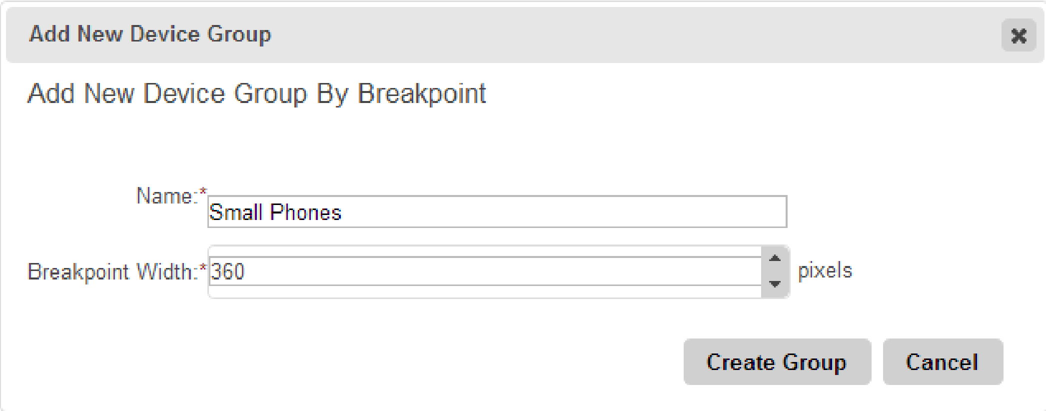
Ektron provides 2 default groups by breakpoint (Smart Phones, and Tablets). When you set up breakpoints, images that are subsequently uploaded are created in each of the breakpoint sizes for use on devices that fit the breakpoint criteria. See also: *Applying adaptive image resizing* on page 472.

1. **Workarea > Settings > Configuration > Mobile Settings > View All Device Groups**.
2. Click **New Group**.
3. Click **Group by Breakpoint**.
4. Click **Create Group**. The Group Device by Breakpoint screen appears. The Smart Phones group has a breakpoint of 480 pixels. The graphics to the right of the groups show the devices that fit your criteria. The check boxes under the device images lets you select the devices that you want to show as options on the Device Preview screen of the toolbar. See *Editor toolbar options* on page 554.

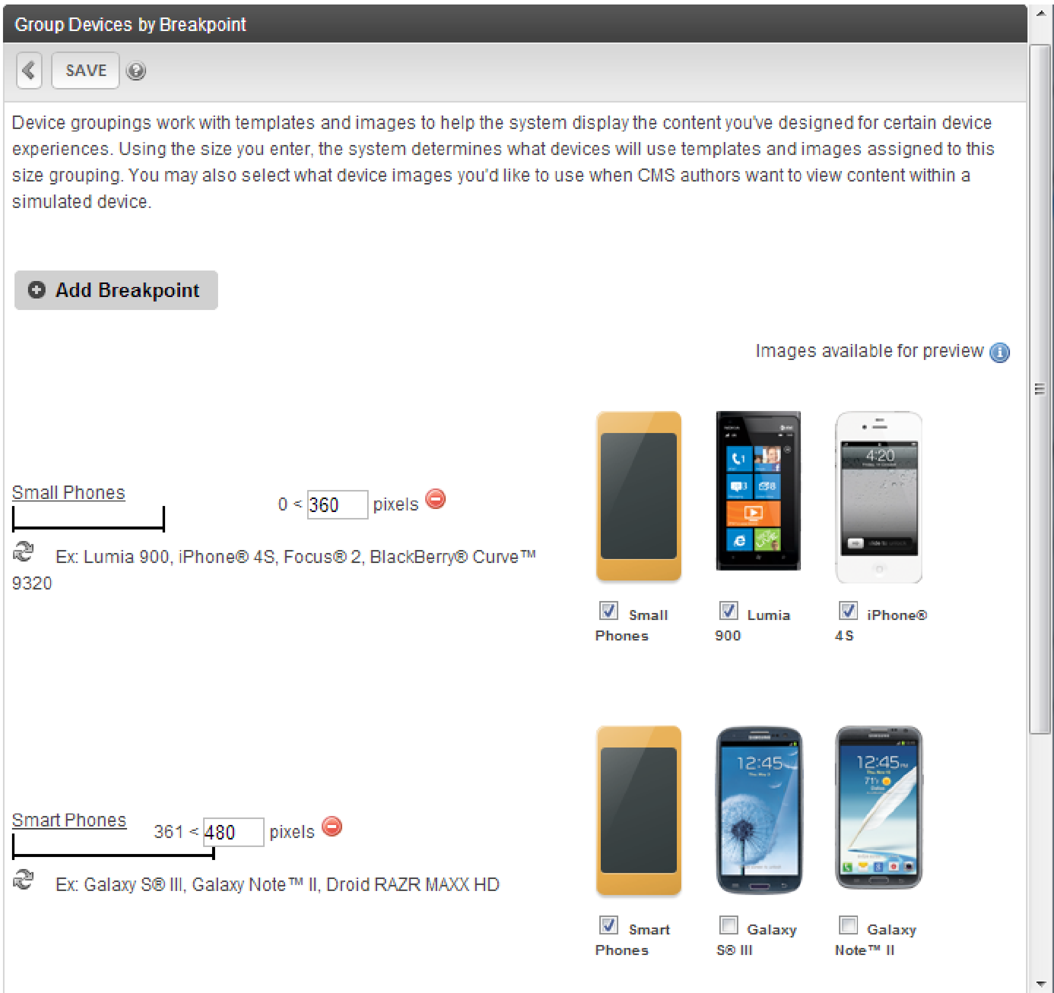
NOTE: You can specify new breakpoint values for an existing group on this screen and click **Save**.



5. If a Wireless Universal Resource File (WURFL) update is available, click **Update**. For more information about WURFL, see *Updating the Wireless Universal Resource File* on page 481.
6. Click **Add Breakpoint** to create a new breakpoint group. The Add New Device Group dialog box appears.



7. Enter the name of this breakpoint group. For example, `Small Phones`.
8. Enter the breakpoint width for the group. For example, `360`.
9. Click **Create Group**. The Group Device by Breakpoint screen re-appears with device images next to the new breakpoint group.

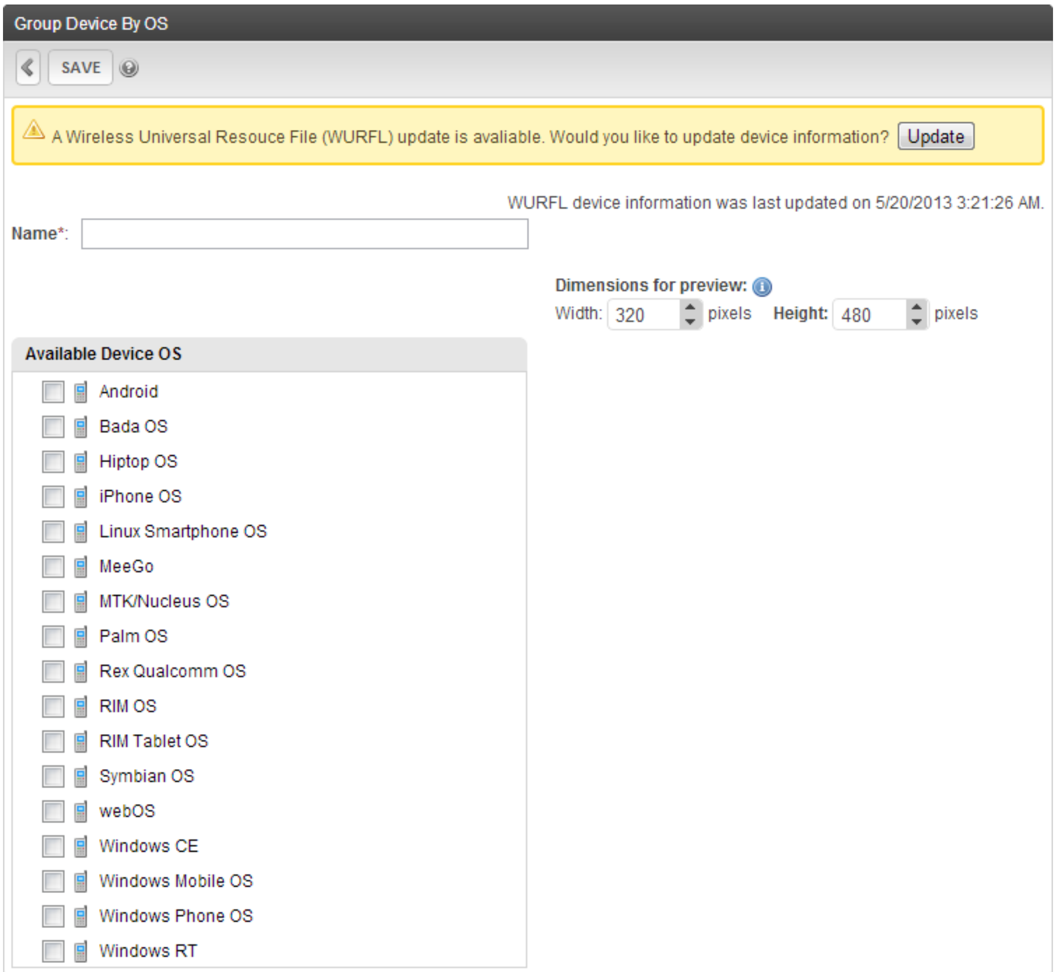


10. Click **Save** to create the new group. The new group appears in the Groups By Breakpoint (Default) section of the View All Device Groups screen.

Adding a group by operating system

1. **Workarea > Settings > Configuration > Mobile Settings > View All Device Groups**.
2. Click **New Group**.
3. Click **Group by Operating System (OS)**.
4. Click **Create Group**. The Group Device by OS screen appears.

> **NOTE:** If your Wireless Universal Resource File (WURFL) is out of date, a notice appears on the screen. Click **Update** to update the device information. For more information about WURFL, see *Updating the Wireless Universal Resource File* on page 481.



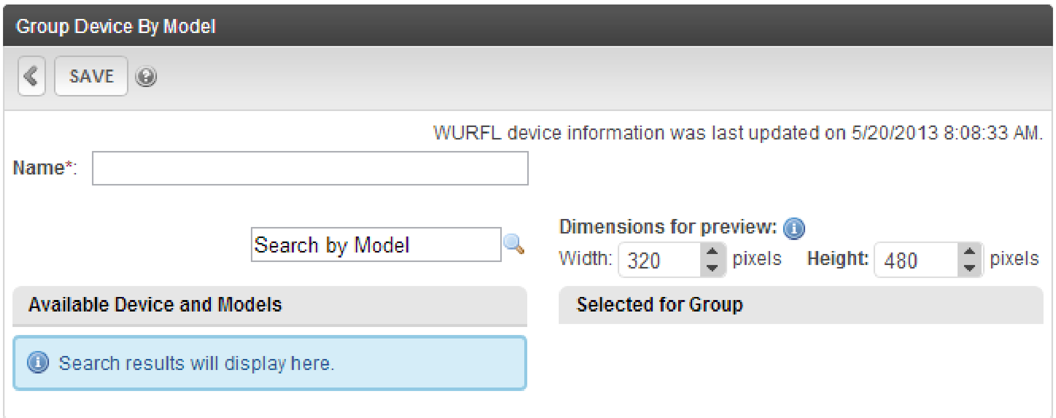
5. Enter the name of this OS group.
6. Check the boxes next to the available operating systems you want in this group.
7. You can specify new dimensions for preview, or accept the default values.
8. Click **Save** to create the new group. The new group appears in the Groups By Device Configuration section of the View All Device Groups screen.

Adding a group by device model

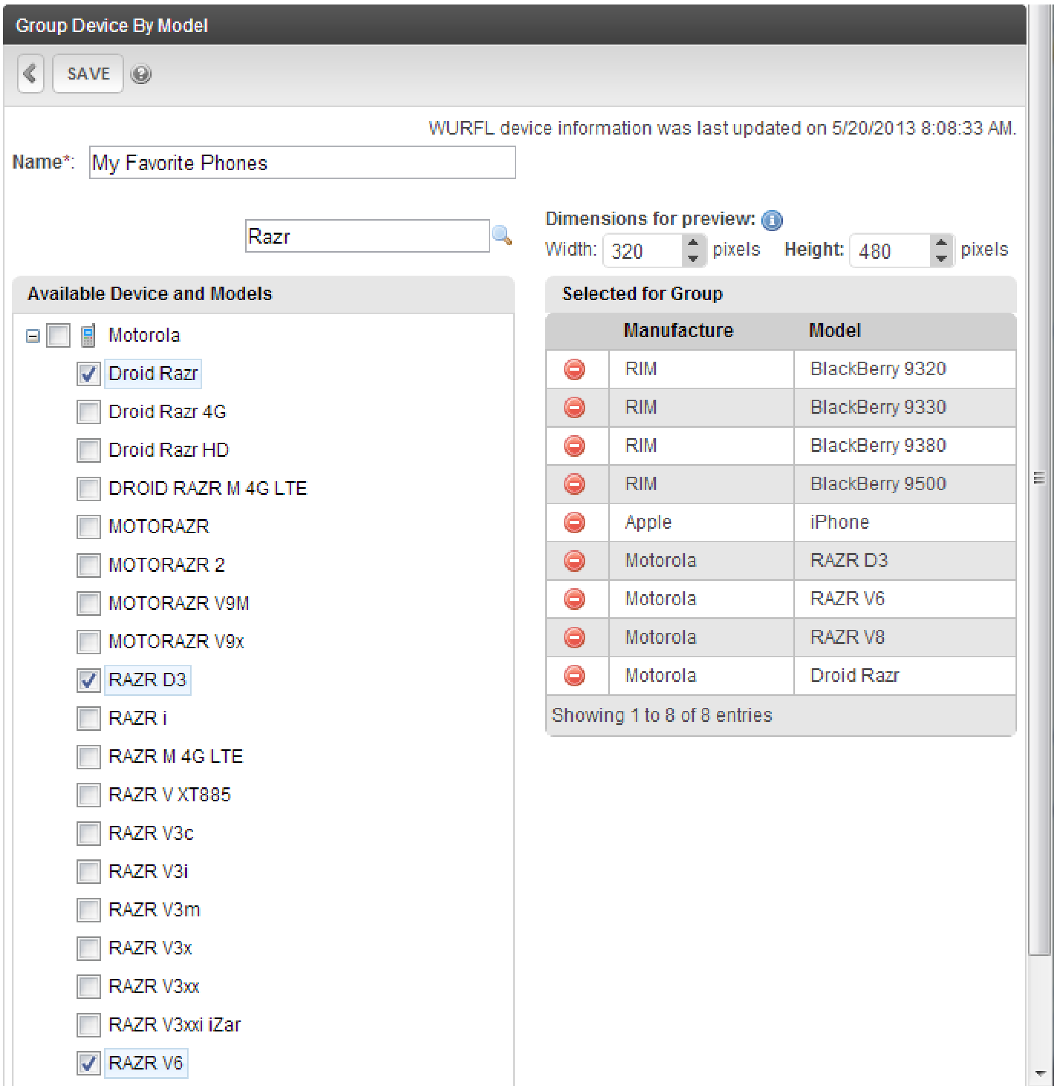
When adding individual devices to a configuration, group devices that share characteristics, such as Flash support and screen resolution. Since you will assign the configuration to a mobile template, make sure that all devices support the template's functionality.

1. **Workarea > Settings > Configuration > Mobile Settings > View All Device Groups**.
2. Click **New Group**.
3. Click **Group by Device Model**.
4. Click **Create Group**. The Group Device by Model screen appears.

> **NOTE:** If your Wireless Universal Resource File (WURFL) is out of date, a notice appears on the screen. Click **Update** to update the device information. For more information about WURFL, see *Updating the Wireless Universal Resource File* on page 481.



5. Enter the name of this Model group. For example, `My Favorite Phones`.
6. Enter a model name in the search box of a device that you want to add. For example, enter `Blackberry` or `iPhone` and press **Enter**.
7. Select the devices you want in the model group by checking the boxes. If you want to choose models from `Blackberry` **AND** `iPhone` **AND** `Razr`, first select your device and models from one, then enter another into the search box and select the others. Your selections appear on the right side of the screen.



8. You can specify new dimensions for preview, or accept the default values.
9. Click **Save** to create the new group. The new group appears in the Groups By Device Configuration section of the View All Device Groups screen.

Deleting a device group

1. **Workarea >Settings > Configuration > Mobile Settings > View All Device Groups**.
2. Click **Delete** ( ). A confirmation dialog box appears.
3. Click **Delete**.

Applying adaptive image resizing

Adaptive Image Resizing resizes images and helps you implement a caching strategy to enhance a user's mobile experience on your site. It includes the following features:

- Criteria to determine which images get resized
- A user-defined set of resolutions—Ektron renders the image in a device-appropriate resolution
- A *direct access* mode that lets a developer set an image to a predefined resolution

PREREQUISITE

To enable Adaptive Image Resizing settings, set **ek_EnableDeviceDetection** to **True** in `siteroot/web.config`.

```
<add key="ek_EnableDeviceDetection" value="true" />
```

Some visitors to your website will be on devices that have less-than-optimal bandwidth due to their geographic location, their network, or device limitations. As a result, the website loads slower for the mobile visitor than for the desktop visitor. By optimizing your images for device sizes, you minimize these limitations.

Simply shrinking an image to fit a smaller device may result in an unsatisfactory image. To ensure that your mobile visitors receive the best experience, Ektron's Mobile Image Selector lets content authors replace the image (with a satisfactory substitute) that gets displayed for visitors on mobile devices of certain sizes. For example, the following images show a "Times Square" article example on a Smart Phone. Authors can swap out the desktop image for an image that renders well on smaller devices; the shrunken image on the left gets replaced by the image on the right.

Adaptive Image Resizing lets every visitor receive the image that is most appropriate based on their device. For example, Smart Phones may receive an image that's been scaled down to a lower resolution and 480-pixels wide, while the "Desktop" version of the image might be high resolution and 1200-pixels wide.

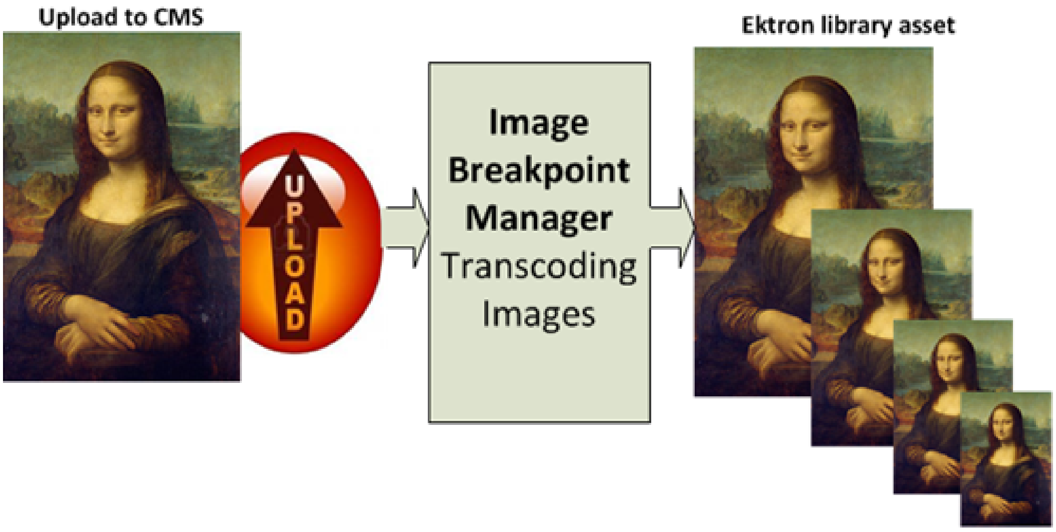
Image resolution ultimately defines the amount of detail an image holds. If an original image is 1024 x 1024 pixels, there is a significant loss of detail when looking at a scaled-down 24 x 24 thumbnail image. However, a 24 x 24 thumbnail image has a much smaller physical size in KB, which means that it downloads much faster.

IMPORTANT: A delay in loading a page by only 1 second can dramatically impact your conversion rate and deliver a poor customer experience.

If you view a 1024-pixel-wide image on a 320-pixel-wide screen, you cannot see the detail. Downsizing the image to 320 pixels reduces the physical size significantly with no loss of image detail. Similarly, you also can crop a section of the 1024-pixel-wide image to a 320-pixel-wide section with all of its detail.

You want to balance image quality with file size because every millisecond of load-time makes a difference to the experience (and tolerance) of your site visitors.

When you add an image to the Ektron CMS, Ektron creates copies of the image in the sizes specified in the image breakpoint groups, up to the width of the original image.



For example, if you set up 4 image breakpoints at 320, 476, 620 and 768 pixels wide, when you upload an 1024 x 1600 image called `MonaLisa.jpg`, the CMS creates 4 additional images as follows:

- Original image. `/uploadedimages/MonaLisa.jpg MonaLisa.jpg`
- 320 breakpoint. `/uploadedimages/320W_MonaLisa.jpg`
- 476 breakpoint. `/uploadedimages/476W_MonaLisa.jpg`
- 620 breakpoint. `/uploadedimages/620W_MonaLisa.jpg`
- 768 breakpoint. `/uploadedimages/768W_MonaLisa.jpg`

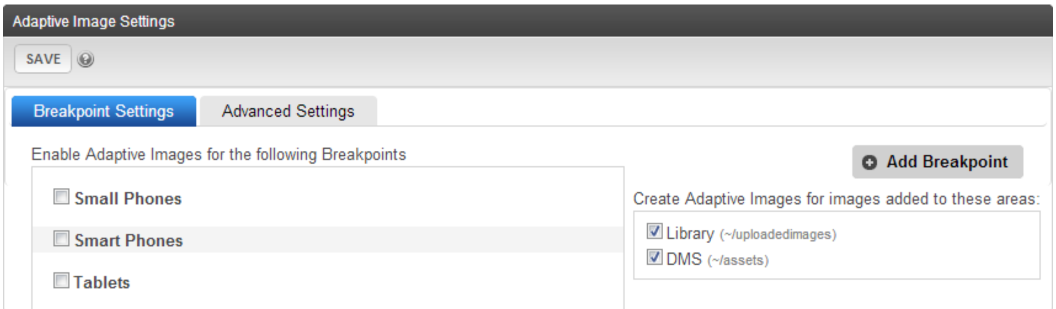
If a 400-pixel-wide device calls the Mona Lisa image, the device gets the 476-pixel image scaled to fit the (400-pixel device) container. However, even though you can force an 1024 x 1600 image to fit into a container, creating a smaller image drastically reduces the physical size of the image file by several factors of kilobytes that are transferred, significantly speeding up page-load time. Delays in page loading can mean a loss in customer conversions and deliver a poor customer experience.

When you specify both width and height breakpoints, a device uses the larger of the breakpoints to scale the image while keeping the aspect ratio of the image. For example, if the height is 400 and the width is 600, the width is used to determine the scale and the aspect ratio is kept.

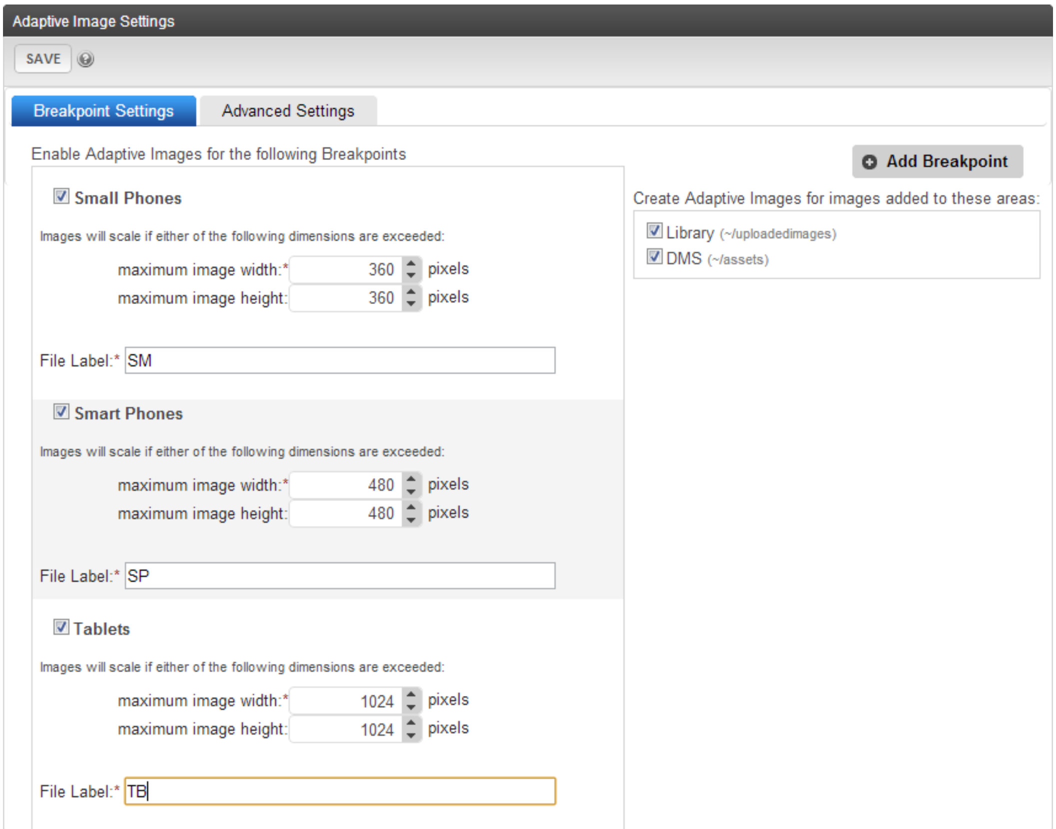
NOTE: Adaptive images and responsive images are similar: adaptive images are affected by the server while responsive images depend on the client to display correctly. For information about responsive image selection when you are editing your Web page, see *Editing images* on page 570 in *Editing in Ektron* on page 553.

Enabling adaptive images for breakpoints

If you have mobile devices grouped by breakpoints, you must enable groups to create adaptive images when images are uploaded to the library or as assets. Go to **Workarea > Settings > Configuration > Mobile Settings > Adaptive Image Settings**. The Adaptive Image Settings screen appears. The following example shows the **Small Phones** group that was added in *Adding a group by breakpoint* on page 467.

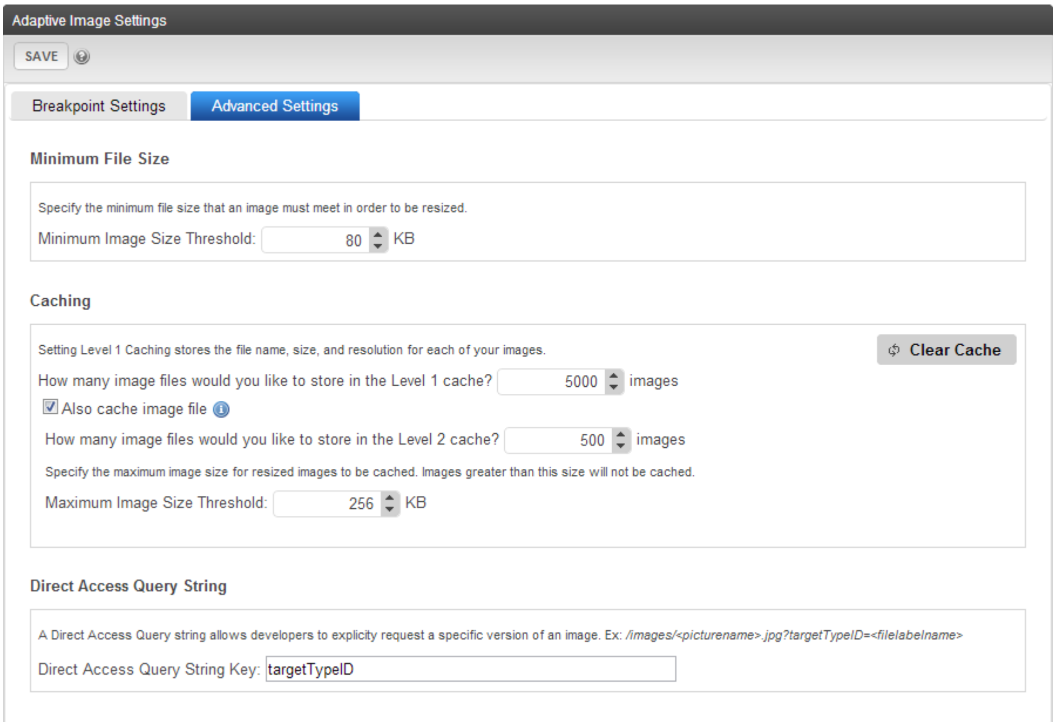


When you check a box next to a breakpoint group, the screen expands to let you specify maximum width and height for the breakpoint images, and lets you add a file label as a prefix to the image filename. In the following example, uploading `Mona_Lisa.jpg` generates `SM_Mona_Lisa.jpg` for the **Small Phones** group, `SP_Mona_Lisa.jpg` for the **Smart Phones** group, and the `TB_Mona_Lisa.jpg` for the **Tablets** group.



Checking boxes for **Library** and **DMS** enables adaptive image generation when images are uploaded into these locations.

The Advanced Setting tab of the Adaptive Image Setting screen lets do the following:



- Specify minimum file size that an image is before it will get resized. The default minimum is 80 KB—smaller files are not resized.
- Specify caching levels 1 and 2. Use caching to avoid expensive query storage. You should approximate the number of image files in the image folders.

  To clear both Level 1 and Level 2 cache, click **Clear Cache**.

  - *Level 1* caching stores only a filename, file size, and resolution.
  - *Level 2* caching stores the file's content as a byte array.

  BEST PRACTICE

  Use the following formula to calculate memory usage for Level 2 caching:

  ```
  Level2CacheItemThresholdKB * Level2CacheSize = total memory used
  ```

  For example: `256KB*500=128000KB=128MB` of maximum memory used by Level 2 caching.

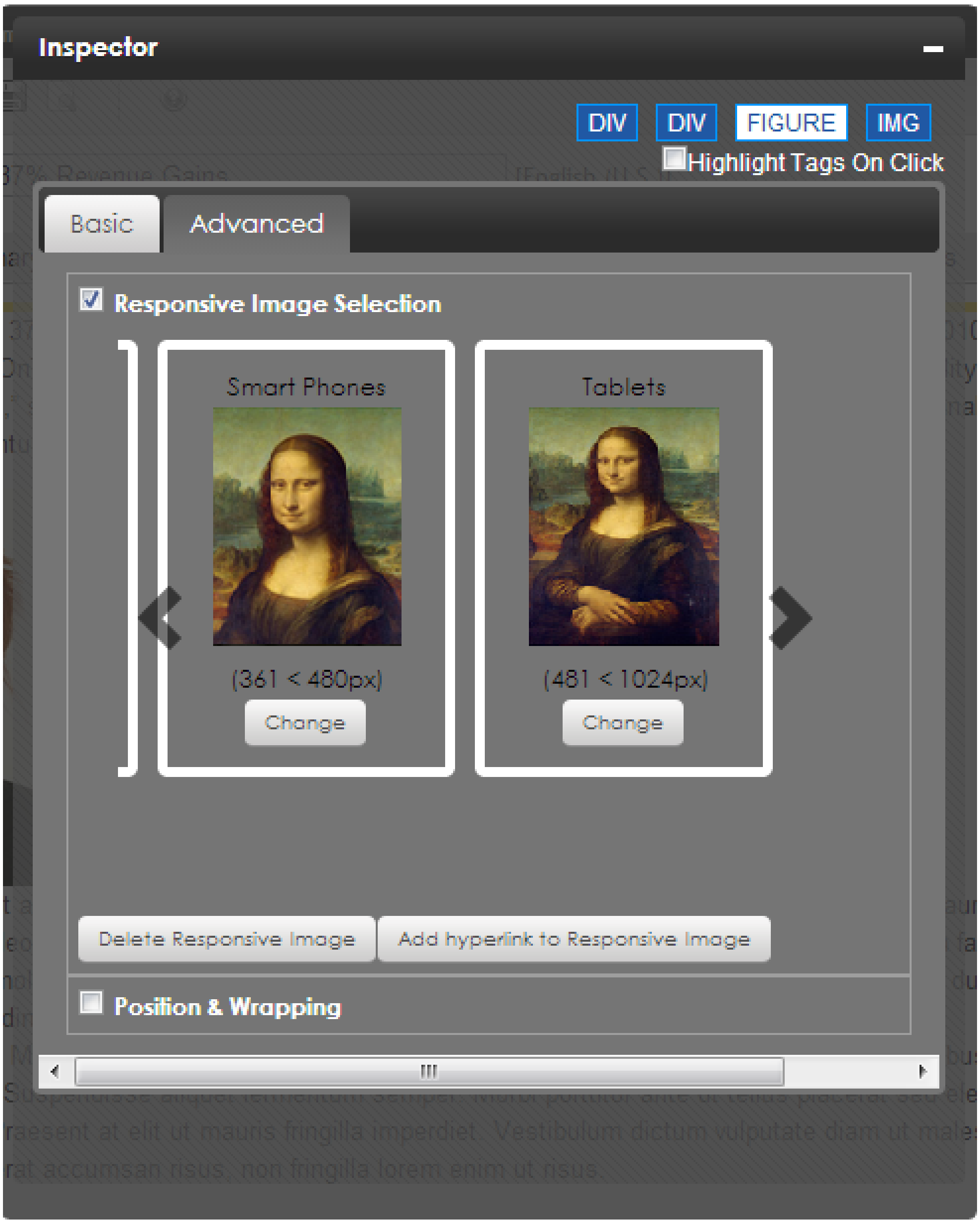
  How adaptive image caching works

  1. A user on a mobile device accesses an Ektron Web page that uses Adaptive Image Resizing.
  2. For every image file request, Ektron looks for it in Level 1 cache to determine if the image size exceeds the threshold.
     - If the cached item is found, the cached file information is used.
     - If the cached item is not found, Ektron queries the storage device for the file information and caches it.
  3. For every qualified image request, if level 2 caching is enabled, Ektron searched Level 2 cache for the target file. If the file is found, the cached byte array is sent to the user's device. If the file is not found, Ektron sends the image from storage and caches the byte array (if the size does not exceed the defined limits).
- The Direct Access Query String Key (`targetTypeID`) is for developers who want to ignore a user's device and choose a specific version of an image. The `targetTypeID` string is appended after the question mark (?) on a URL. You can change `targetTypeID` to another string in this field.

Using responsive images with the editor

When you insert an image from the library into content then click the image to select it, the Inspector's Advanced tab shows all breakpoints and their corresponding images.

You can replace an image by clicking **Change** and selecting another image from the library.



When responsive images are inserted into the editor, the editor produces HTML similar to the following code to determine which images should be displayed for each breakpoint.

```
<figure class="ektron-responsive-imageset"
  title="Mona Lisa"
  data-ektron-image-src="/uploadedImages/Content/About/
    Mona_Lisa.jpg?targetTypeId=Tablets"
  data-media="/uploadedImages/Content/About/
    FP_Mona_Lisa.png?targetTypeID=FeaturePhone"
  data-media316="/uploadedImages/Content/About/
    SM_Mona_lisa.jpg?targetTypeID=Smartphone"
  data-media768="/uploadedImages/Content/About/
    Mona_Lisa.jpg?targetTypeID=Tablets">
  <img src="/uploadedImages/Content/About/
    Mona_Lisa.jpg?targetTypeID=Tablets" alt="Mona Lisa" />
</figure>
```

For information about the editor, see *Editing in Ektron* on page 553.

Creating image copies in a specified resolution

After you enable device detection in `web.config`, Ektron automatically creates versions of the image in specified sizes for a matching breakpoint when a visitor views an image.

```
<add key="ek_EnableDeviceDetection" value="true" />
```

A new image filename consists of `ImageResConfig TypeID_original file name.extension`. For example, if the original image filename is `mytest.png`, and it is resized to specifications set in the `LowRes ImageResConfig` element, the new filename is `LowRes_mytest.png`.

If a mobile visitor views an image that was in Ektron *before* device detection was turned on, the image may be resized at that time. Ektron creates resized image versions in the same folder as the original image.

If you later view the image on any device with the same resolution range, the saved version is displayed. This practice enhances the performance of your mobile website. However, creating additional image versions also increases the number of files and storage space needed.

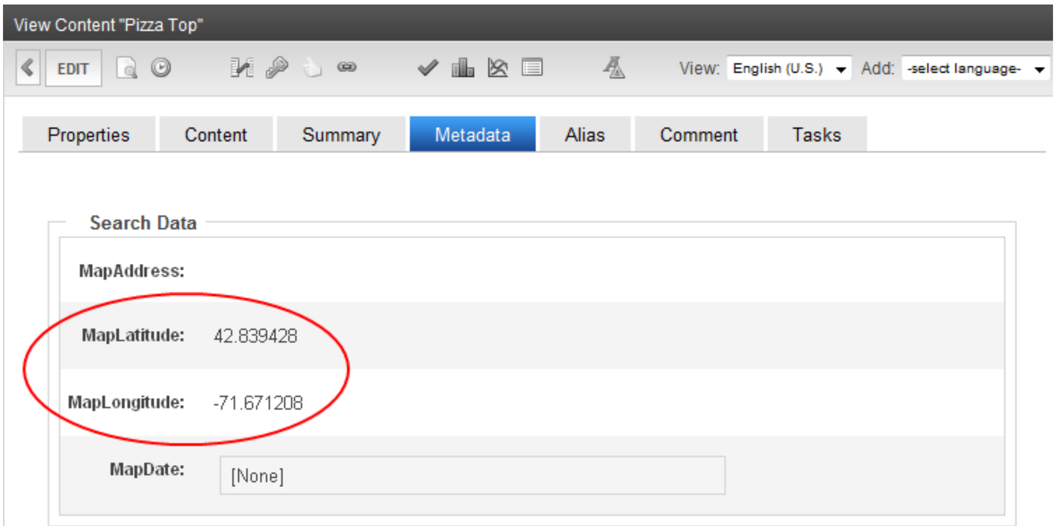
BEST PRACTICE

> When planning an implementation of Adaptive Image Resizing, consider your future space requirements.

Using Geographic data from a mobile device

If your site visitor is on a mobile device, the geographic location of your site visitor becomes very important information. For example, if a mobile visitor is accessing your site, you can display nearby stores and special promotions. To create a geographically aware Web experience with Ektron, follow these steps.

1. Create content with MapLatitude and MapLongitude geo-location metadata. This metadata is automatically added when you publish content with a street and city address in the MapAddress field.



2. Place the Map server control in a mobile device template.
3. Because of the size of a mobile device, you may want to rearrange the content list, map image, and search components provided by the Map server control. To do this, change the standard map EkML file. See Ektron Markup Language and the sample file `[siteroot]/workarea/template/map/map.ekml`.

To learn more about using geolocation, see the Map server control.

After finishing the previous steps, use your mobile device (if it has GPS capability) to browse to the template that contains the map; it shows your location at the center of the map. For other mobile devices, the center of the map is the Latitude and Longitude coordinates set by the Map server control. Content locations appear as map pins, and the content list is sorted by distance from the current location (with GPS) or map center.

Updating the Wireless Universal Resource File

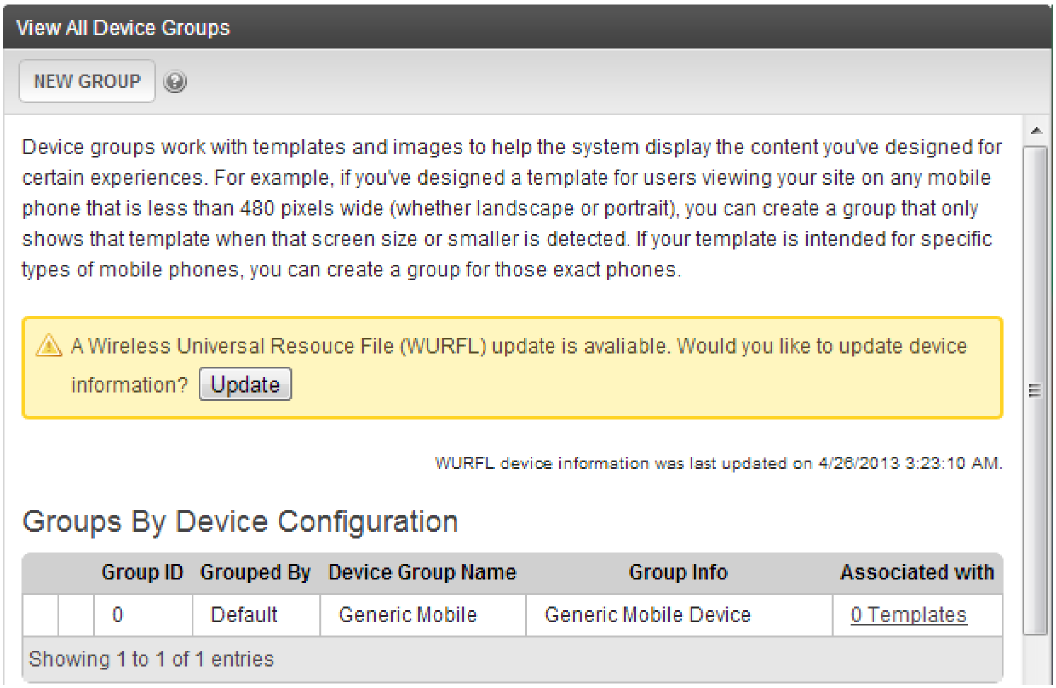
NOTE: The commercial license between Ektron Inc. and ScientiaMobile, Inc., the owner of WURFL, expired on April 3rd, 2016. You have the following options:

- Disable the WURFL data repository in your deployment so that you are not using WURFL in an unlicensed manner.
- Contact Scientiamobile, Inc. to obtain a license directly. ScientiaMobile, Inc. has provided a guide to transitioning.
- Replace the WURFL data repository with the 51 Degrees(TM) Lite library by 51Degrees.mobi, which is licensed under an Mozilla Public License open-source license agreement.

When a device requests information from a Web server, HTTP headers are passed to the server along with the image URL. The HTTP headers contain information that identifies the type of device that is doing the request. Because new mobile devices are being created every day, it is important for your website to detect these devices when they are available and present the appropriate experience to visitors who use these devices when they visit your site.

Each time a user clicks on the View All Device Groups folder, Ektron determines whether more recent device information is available.

1. Go to **Workarea > Settings > Configuration > Mobile Settings > View All Device Groups**. If your WURFL file is not up-to-date, you are given the opportunity to update it.



2. Click **Update**.

11

Analyzing websites

Ektron has 2 types of analytics.

- **Ektron Business Analytics.** uses Ektron server controls to track activity, store the information in the database, and report on that information. See *Running Ektron business analytics* on page 488.
- **Ektron Traffic Analytics.** uses an outside service provider, such as Google Analytics to monitor all aspects of Web traffic to your site and report on that information. See *Running Ektron traffic analytics* on page 509.

You can also run analytics from other providers documented in this chapter.

Viewing page-level analytics data

After you enable analytics tracking, your provider retains data on every visited page (that is, a unique URL) such as `http://developer.ektron.com/articles.aspx` or `http://developer.ektron.com/template.aspx?id=6572`. Data is tracked when the quicklink is used, as well as any alias assigned to the content. See also: *Creating user-friendly URLs with aliasing* on page 1293

You can view any page's analytics data from the following locations.

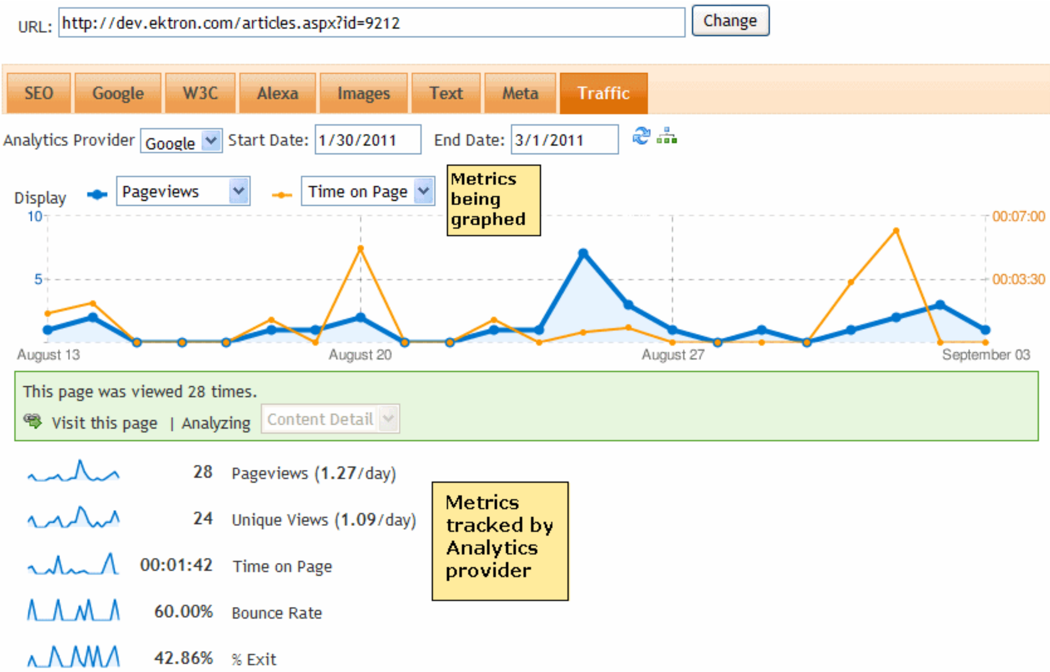
- *Viewing page-level analytics from the site* below
- *Viewing page-level analytics from a PageBuilder page* on the facing page
- *Viewing page-level analytics from the Workarea* on page 486

Viewing page-level analytics from the site

Any authorized user can view analytics for a page on your website by following these steps.

1. Log into the website.
2. Go to the page whose analytics data you wish to view.
3. Hover the cursor over the Website Content menu.

4. Choose **View Page Activity**. The SEO page's **Traffic** tab appears.



The Traffic tab of the SEO control graphs the analytics data of any 2 search criteria. There are data under the graph for the 5 visit criteria tracked by the analytics provider.

- **Pageviews**. number of pageviews for this page over the selected date range
- **Unique pageviews**. number of unique visitors to this page over the selected date range
- **Average time on page**. how long a visitor spent on the page. It is calculated by subtracting the initial view time for this page from the initial view time of the subsequent page. So, this metric does not apply to exit pages.
- **Bounce rate**. the percentage of single-page visits (that is, visits in which the visitor exited your site from the entrance page)
- **% Exit.** the percentage of site exits that occurred from this page

You can change the date range, analytics provider, and either search criterion (**Pageviews** and **Time on Page** in the example above).

You can also replace the **URL** with a different one, and view the page being analyzed (by clicking **Visit this page** in the green bar).

Viewing page-level analytics from a PageBuilder page

Any authorized user can view analytics for a PageBuilder page by following these steps.

NOTE: You cannot drag and drop the Analytics widget onto a PageBuilder page.

1. Open the PageBuilder menu. See also: *Creating Web pages with PageBuilder* on page 991

2. From the menu, choose **View > Analytics**. The SEO page's **Traffic** tab appears.

Viewing page-level analytics from the Workarea

The Workarea provides 2 page-level views of analytics data.

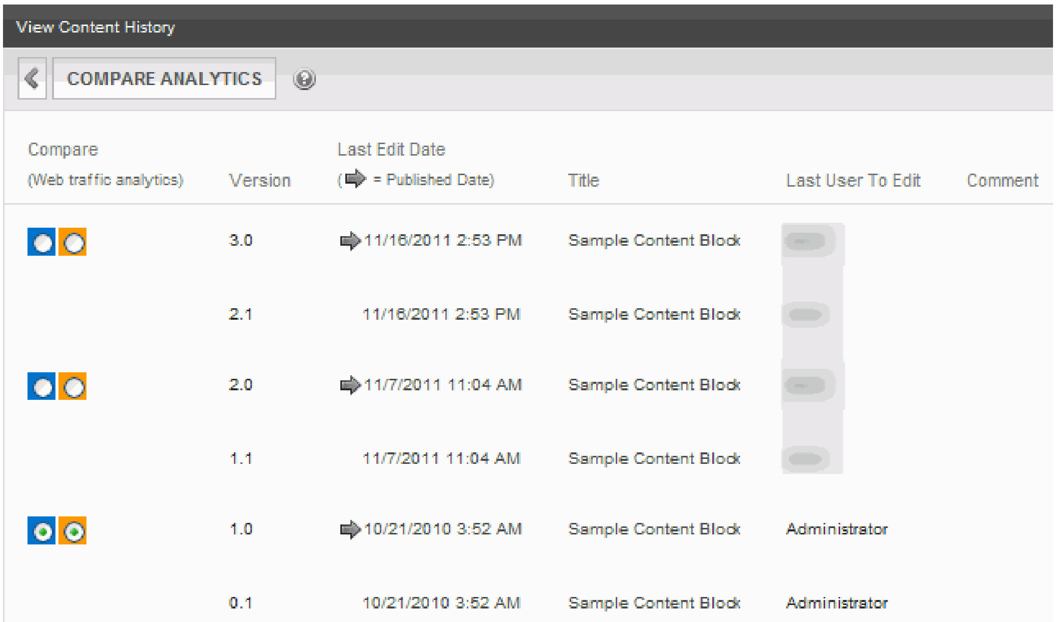
- The View Content History screen compares analytics data for any 2 published versions
- The Analytics toolbar button displays the SEO page's **Traffic** tab.

To view a content item's analytics data from the Workarea:

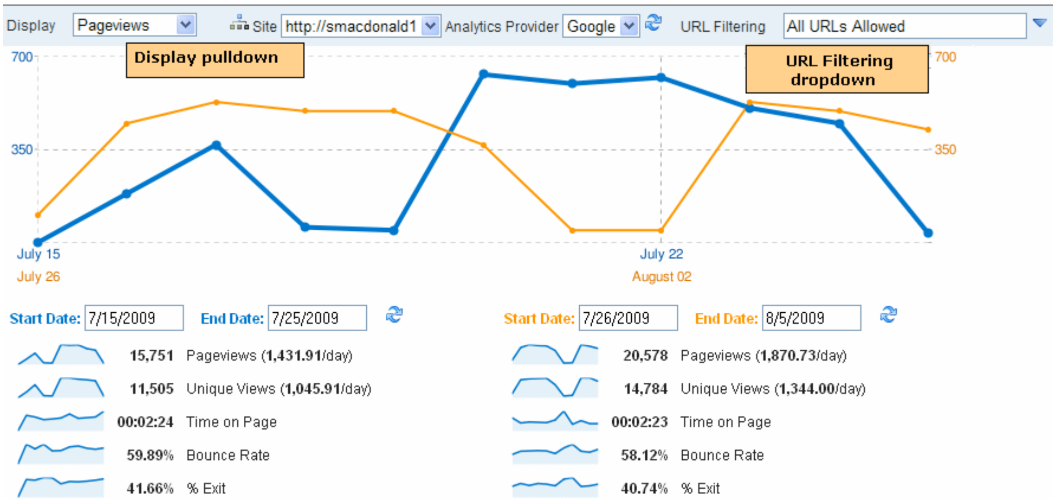
1. Go to the folder containing the content whose analytics data you want to view.
2. Click the content item.
3. To compare analytics data between any 2 published versions, click **History**( ). See also: *Comparing versions of content* on page 645

   To view analytics for the currently published version, click **Analytics** ( ). When you do, you see the Traffic tab of the SEO page.

On the View Content History screen, blue and orange radio buttons appear next to each *published* version of content.



To compare analytics data, click the appropriately-colored radio button next to each version, then click **Compare** ( ). The Compare screen for the 2 versions appears.



You can change the date range for each content version. You can also:

- Use the Display pull-down to graph any visit data.
- Click the **URL Filtering** tab to select the URLs being displayed. See also: *URL filtering* below
- Select a different site
- Select a different analytics provider
- Use the Segments button ( ).

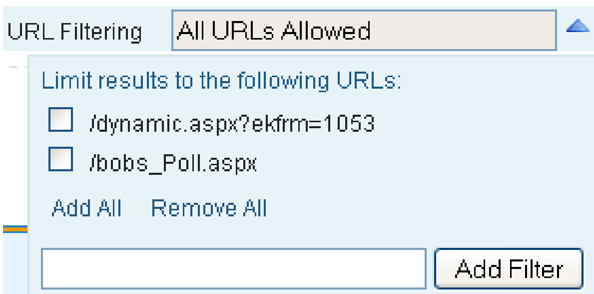
URL filtering

Any content item can be viewed via several URLs, such as

- its *quicklink*. See also: *Adding a quicklink to content* on page 686
- manual alias
- automatic alias See also: *Creating user-friendly URLs with aliasing* on page 1293

NOTE: While Regex-based aliases affect Analytics data, they do not appear on the URL Filtering tab.

The **URL Filtering** tab of the Compare Analytics screen lets you analyze the data by each identifier. So, for example, you can drill down to view only the data collected when site visitors accessed a page by typing its manual alias into the browser.

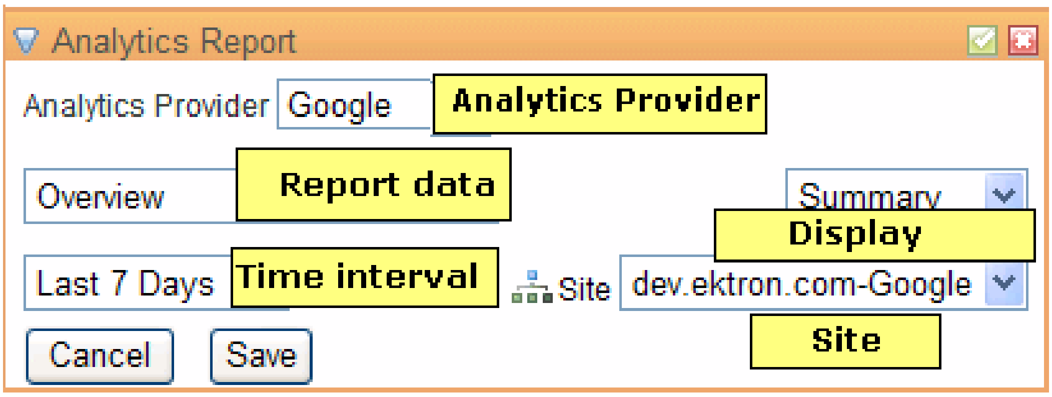


Viewing site-level analytics data

You can view analytical data for any site via the Analytics Report widget and several reports. See also: *Creating and using widgets* on page 1171

You can drag and drop the Analytics Report widget onto the Smart Desktop. When you do, you initially see the Direct Traffic report for the past 7 days.

You can click **Edit** () to change the display using any of the following options.



There are 3 time interval choices:

- last 7 days (the default)
- last 30 days
- last 90 days

Running Ektron business analytics

The Business Analytics feature lets you track statistics about visits to your website. You can use it to determine the following kinds of information:

- how often your content was viewed
- how many site visitors viewed for first time, and how many returned
- the most popular referral pages (that is, the Web page from which visitors clicked to arrive on your site)

Several options for selecting a date range let you compare activity across different weeks, months, and years.

By default, the Business Analytics feature is disabled in the `web.config` file. To enable it, set the value of the `ek_enableClassicAnalytics` property to true. If you set this property to `true` and later change it to `false`, statistical data remains within Ektron, but no additional data is collected.

```
<add key="ek_enableClassicAnalytics" value="true" />
```

For every template view, business analytics captures the following statistical information:

- **url**. the visited page
- **content_id**. the ID of the visited content. Captured by the Analytics server control. *Tracking clicks by file type* on page 526
- **visitor_id**. a unique GUID that identifies a visitor
- **hit_date**. date and time when a page view occurred
- **referring_url**. the URL a user was viewing before jumping to the visited page
- **visit_type**. zero (0) indicates new visitor, 1 indicates returning visitor, 2 indicates all other views. After a user logs on, the first page hit tracks the visit as zero (0) (if the user is new) or 1 (if the user previously visited the page). From then on, 2 is logged for that user.

In addition to writing Business Analytics data to the database, you can write it to the IIS log. To do this, enable the `appendToIISLog` element in the `web.config` file. Note that if you set `appendToIISLog` to `true`, some Business Analytics data is only written to the IIS log and does not appear in the Workarea.

Analyzing site statistics

The following table shows analytic statistics available for each level of the site.

Type of Statistical Information	Site-wide	Template-Level	Content-Level
Views of Any Template	✓	✓	✓
Visitors: New and Return	✓	✓	✓
Pie Chart of New vs. Return Visitor	✓	✓	✓
Pie Chart of Views/Visitors Ratio	✓	✓	✓
Bar Graph of Views/Visitors Ratio	✓	✓	✓
Visited Pages	✓		
Visited Content Blocks	✓	✓	
URLs from which Site Visitors Accessed Ektron	✓		

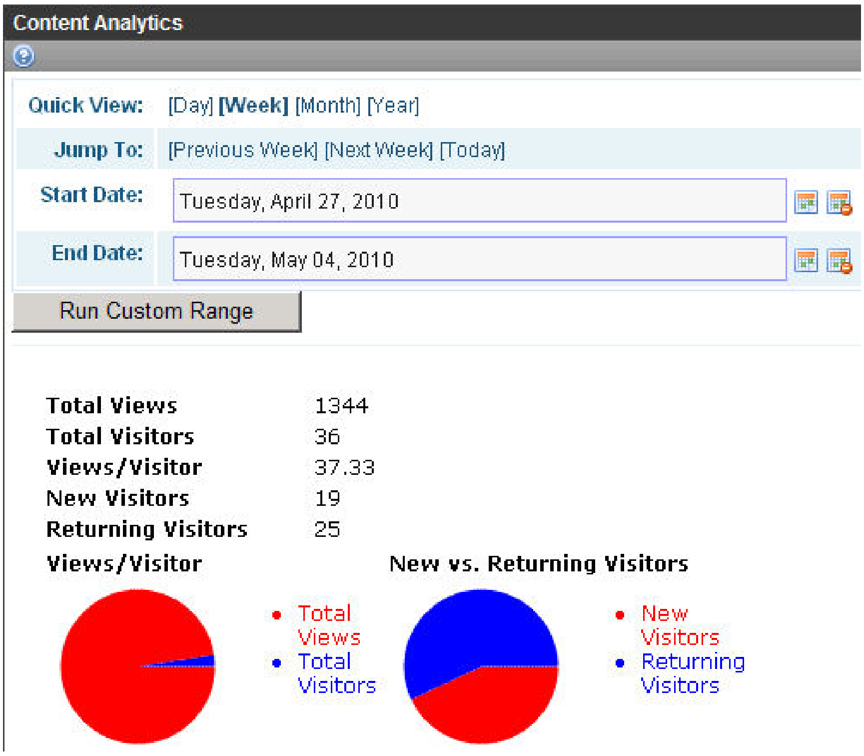
Site statistics view

The Site Statistics view offers an overview of tracked activity within the selected date range. You see actual data for the

- number of views
- number of visitors
- ratio of visitors per view
- number of new and returning visitors
- ratio of new to return visitors

  See also: *Tracking site visitors* on page 492.

The following image shows pie charts of the ratio of views to visitors and new vs. return visitors.



Content view

The Content View shows the most frequently-accessed content on your website.

Click any content item to view:

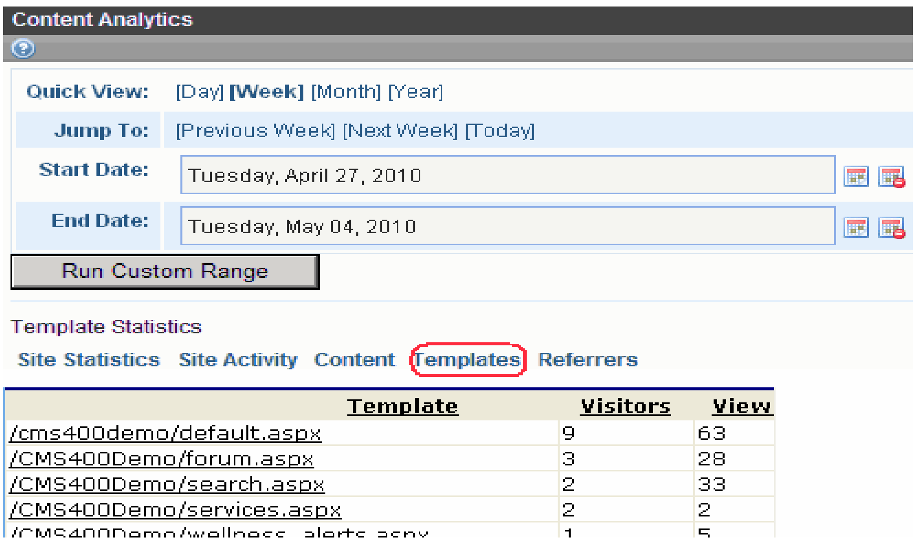
- **Content Statistics**. Statistics for that content item only
- **Content Activity**. Relative activity for that content item only
- **Audit Content**. All users who viewed the selected content; to the right of each user are the date and time when content was viewed

NOTE: Only users who viewed content after logging in appear on the list. Site visitors who do not log in affect statistics but are not tracked on this report.

Templates view

The Templates View shows all viewed templates on your website, with the most frequently-accessed ones on top.

By default, the templates at the top have the highest number of unique visitors. You can change the sort by clicking any column header. For example, to sort templates by the number of views, click **Views**.

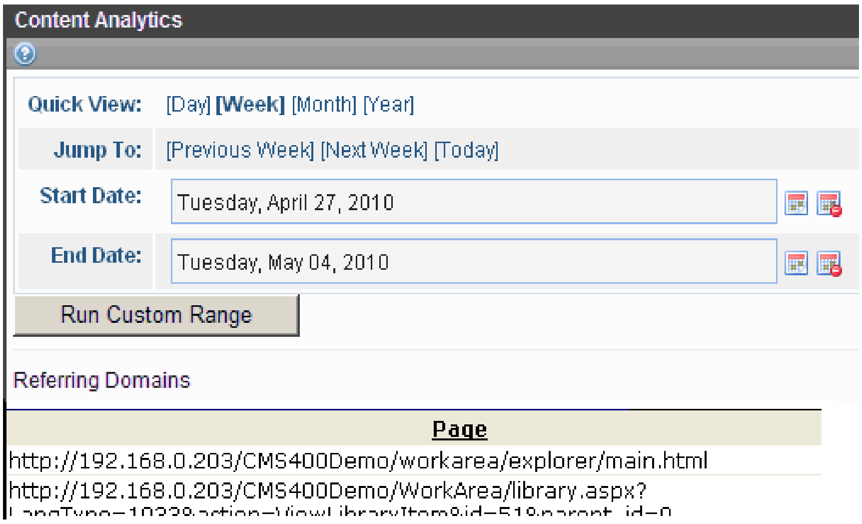


You can click any template to view

- **Template Statistics**. Statistics for that template only
- **Template Activity**. Relative activity for that template only
- **Content in Template**. If a content item was specified for the template in the Content Analytic server control, this view show statistics for the template. You can click the template to view Template Level activity.

Referrers view

The Referrers View shows domains from which your site was most frequently accessed.



Tracking site visitors

The Business Analytics feature provides information about visits made by *new* versus *returning* visitors. To capture this data, the feature asks this question whenever a page is visited: is the user logged in as either a membership or regular user?

- If yes, capture the user ID with the statistical data
- If no, place a cookie on the visitor's computer

The next time the user visits that page, the feature checks the visit history for the user ID, or for a cookie. If either is found, the visit is considered a return.

The same user visit may be considered new on one view but not on another. For example, someone visits on January 30 (Monday) then again February 2 (Thursday). On the monthly statistics, that visitor is new, but on the weekly statistics, the February 2 hit would be a return visit (his second this week).

Now consider a second visitor, who browses to your site on the first and 20th of the month. These visits appear on weekly statistics as 2 new visits, but on the monthly statistics, only the first visit would show up on that month's tally of new visitors. The second visit would add to the return visitor statistics.

Specifying the frequency of writing to the database

After you set up the Business Analytics feature, your database is subject to a continuous barrage of write activity, generated by visits to your site. To optimize your database's performance, you can hold visit activity in application server memory until a predetermined amount of data is collected. When collected, it is moved in one packet to the database. So, the database is "hit" much less frequently.

Specify the amount of data saved in memory prior to being written to the database using these `web.config` file elements.

- `recordsBeforeWrite`. the number of unique template visits
- `timeBeforeWrite`. the number of seconds since the last time a database write occurred

When either element reaches the value set in `web.config`, all records stored in memory are written to the database. That event resets both elements to zero (0).

When you first view statistical data, the default date range is today (one day).

If you view statistics for different date ranges, when you return to the screen, the last selected date range is the default selection. You can change it if needed.

Using Quick View options

Use Quick View options to view analytics for any of these time periods.

- one day
- one week
- one month
- one year

When you click **Quick View [week], [month]** or **[year]**, the current end date is used as the last day of the range. Here are some examples.

- Week. If end date is today, begin date is one week earlier than today
- Month. If end date is today, begin date is one month earlier than today
- Year. If end date is today, begin date is one year earlier than today

Using Jump To options

Use **Jump To** options to view statistics for a time period before and after the current date range. The time period is determined by the Quick View increment. For example, if the Quick View option is **Day**, you can jump to the previous day, the following day, or today.

Regardless of the Quick View increment, you can always view statistics for today.

Viewing business analytic reports

The Business Analytics reports let you drill down from the entire site to individual templates to individual content items.

PREREQUISITE

In your site's `web.config` file, the `ek_enableClassicAnalytics` setting is set to `true`.

NOTE: The Most Popular and Trends widgets also report on Business Analytics data. See *Most popular widget* below and *Trends widget* on page 497.

To access Business Analytics Reports:

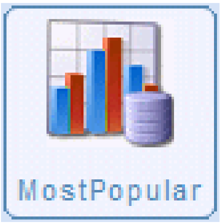
Either

1. Browse to a content item for which Business Analytics data is being captured.
2. Right click the mouse.
3. Choose **View Template Activity** to see Business Analytics data for the current content item (to learn more about data captured for one content item, see *Content view* on page 490).
4. Choose **View Site Analytics** to view Business Analytics data for the entire site.

or

- From the **Ektron** Workarea, choose **Reports > Business Analytics** to view analytic data for the entire website. The following reports are available.
  - *Site statistics view* on page 490
  - *Content view* on page 490
  - *Templates view* on page 491
  - *Referrers view* on page 492

Most popular widget



The Most Popular widget reports on these categories of content on your website. By default, every Most Popular widget tab shows up to 5 results.

- Most Viewed
- Most Emailed
- Most Commented
- Highest Rated

You can place the Most Popular widget onto any PageBuilder page. See also: *Creating Web pages with PageBuilder* on page 991.

NOTE: You cannot place more than one Most Popular widget on a PageBuilder page. Also, you can hide up to 3 tabs if desired.

The Most Popular widget references *content events*, which are Ektron events that are tracked when used with various server controls. Here are 2 examples of a content event:

- for the Most Viewed tab, the content was viewed and tracked by the Analytics Tracker server control. See also: Analytics Tracker.
- for the Most Emailed tab, the content was emailed from the Social Bar server control.

The Most Popular widget displays content items that meet these criteria.

- the content is tracked by a server control
- content events occurred within the date range set in widget properties. The default value is 7 days, but you can change it if desired.
- the content is assigned to a selected folder or taxonomy. By default, the widget has no folder or taxonomy restrictions. But the properties screen lets you restrict results by folder or taxonomy.
- the content is among the highest-rated content items for that tab.

  For example, if the **Most Viewed** tab shows the top 5 content items (the default setting), content that has not been viewed as frequently as the top 5 does not appear. Consider the following example.

Content ID	Number of Times Content Viewed within Date Range
30	87
259	82
316	78
12	78
658	67
243	62

  In this example, content ID 243 does not appear on the Most Popular widget because it is sixth in viewing rank frequency.

Each time a content item is used with one of the following server controls, its count for that day is incremented by 1.

- Analytics Tracker. Most Viewed tab—A site visitor browses to a page that is tracked by the Analytics Tracker server control. The control lets you determine which content is counted when the page is viewed.
- SocialBar. Most Emailed tab—A community group member browses to a page that hosts the Social Bar server control, and emails a content item to a friend. (The SocialBar server control must be associated with content.)

- [MessageBoard](). Most Commented tab—A Community Group member browses a page that hosts the Message Board server control and comments on a content item on that board. (The MessageBoard server control must be associated with content.)
- [ContentReview](). Highest Rated tab—A site visitor browses to page that hosts the Content Review server control, and uses the control to rate a content item.

Next to each content item is a count. The count indicates the number of times a content event occurred for that content within the specified time frame.

The date range can affect the count. For example, if a content item was viewed once a day for the past 10 days but the date range is set to 7 days, the count is **7**. To change this maximum:

1. Open `siteroot/widgets/mostpopular.ascx.cs`.
2. Find the following line: `private int _PageSize = 5;`.
3. Change the number at the end of the line to the maximum results to display.

> **NOTE:** This setting affects *all* tabs and instances of the Most Popular widget.

A logged in user can change properties that determine what appears on the **Most Viewed** tab. To do so, click **Edit** ().

- **Tab text**. The text that appears on this tab. In the above example, the left tab's text is the default **Most Viewed**.
- **Visible**. Determines if the tab you are editing appears on the widget. At least one tab must appear. Checked is the default.
- **Number of days to report**. The number of days for which to display the data. The default is 7.
  - The current day is not counted, since it is incomplete. So if you enter **1**, you see information for all of yesterday and today.
  - The date calculation is based on the clock on the website's server.

  > **NOTE:** You can change this to any number you wish. However, the widget can only show data for days for which data is stored in your database.

- **Report**. Determines information that appears when a tab is clicked.
  - Tab 1. Most Viewed
  - Tab 2. Most Emailed

- Tab 3. Most Commented
- Tab 4. Highest Rated

- **Filter By**. You can restrict the content appears on this widget by selecting a folder (default) or a taxonomy.

While selecting a folder/taxonomy category, you can include all folders/categories under the selected one. To remove this restriction later, click **Delete** ( ).

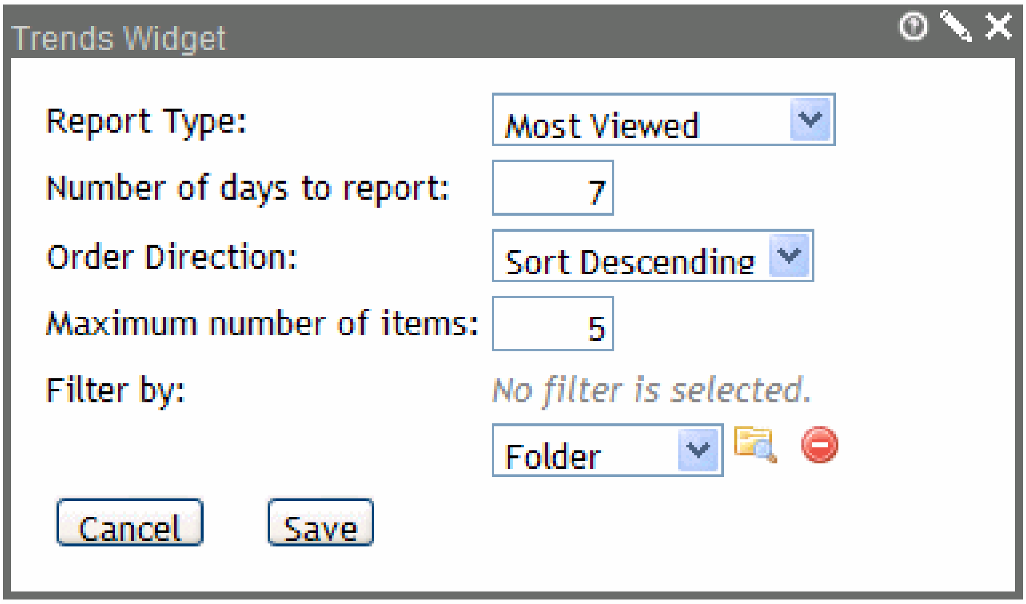
Trends widget

By default, the Trends widget shows the Most Viewed content on your website. You can edit the widget's properties so that it displays any of the following categories of content instead.

- Most Emailed
- Most Commented
- Highest Rated

The Trends widget is a subset of the Business Analytics, so you should be familiar with that section before reading this. It explains topics such as how Ektron determines which content appears for each category. You can place the Trends widget on any PageBuilder page. See also: *Developing wireframe templates* on page 1007.

A logged in user can change properties that determine the appearance of the Trends widget. To do so, click **Edit** ( ). The Trends widget screen appears.



- **Report Type**. Report types are:
  - Most Viewed (default)
  - Most Emailed
  - Most Commented
  - Highest Rated
- **Number of days to report**. The number of days for which to display the data. The default is 7.
  - The current day is not counted, since it is incomplete. So if you enter **1**, you see information for all of yesterday and today.
  - The date calculation is based on the clock on the website's server.

  NOTE: You can change to any number you wish. However, the widget only shows data for days for which data is stored in your database.

- **Order Direction**. The direction in which search results are sorted. The default is **Descending**.
  - **Ascending**. Alphabetical results from A to Z; numeric values low to high; dates from oldest to most recent
  - **Descending**. Alphabetical results from Z to A; numeric values high to low; dates from most recent to oldest
- **Maximum Number of Items**. Enter the maximum number of content items that may appear on the Trends widget. The default is 5. The Ektron database maintains a count (number of hits) for each content item, for each date. When you select a number of days, the Trends widget displays the content with the most hits during that date range, up to the number you set in this field.
- **Filter By**. You can filter which content appears on this widget by selecting a folder or a taxonomy.

While selecting a folder/taxonomy category, you have the option to *include* all folders/categories under the selected one. If you later want to remove this restriction, click **Delete** ( )

Business analytics API

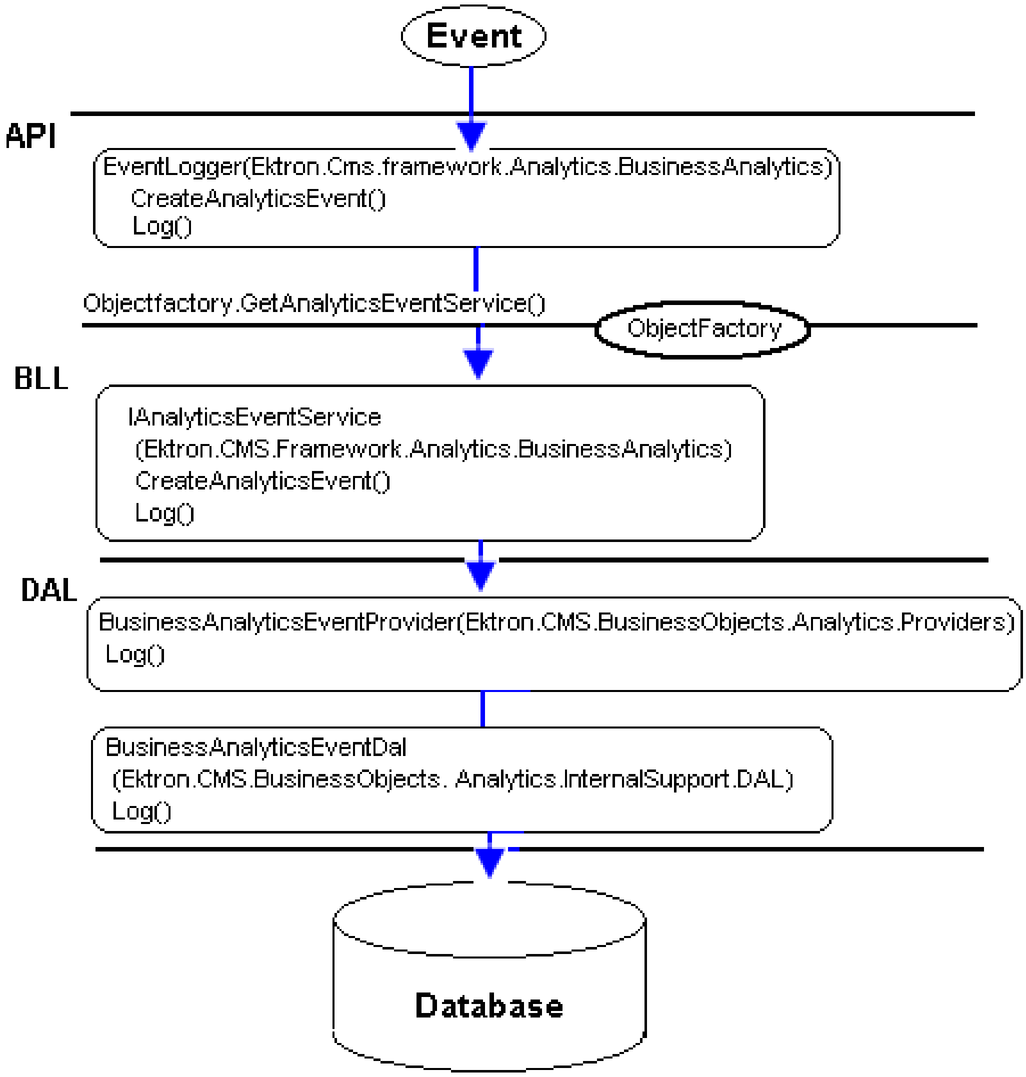
The Business Analytics API's namespace is `Ektron.Cms.Framework.Analytics.BusinessAnalytics` and consists of several static methods arranged into 2 groups:

- those that save events to the database
- those that retrieve the event data from the database for use in reports

NOTE: The demonstration code in this section uses C# syntax.

Saving event data

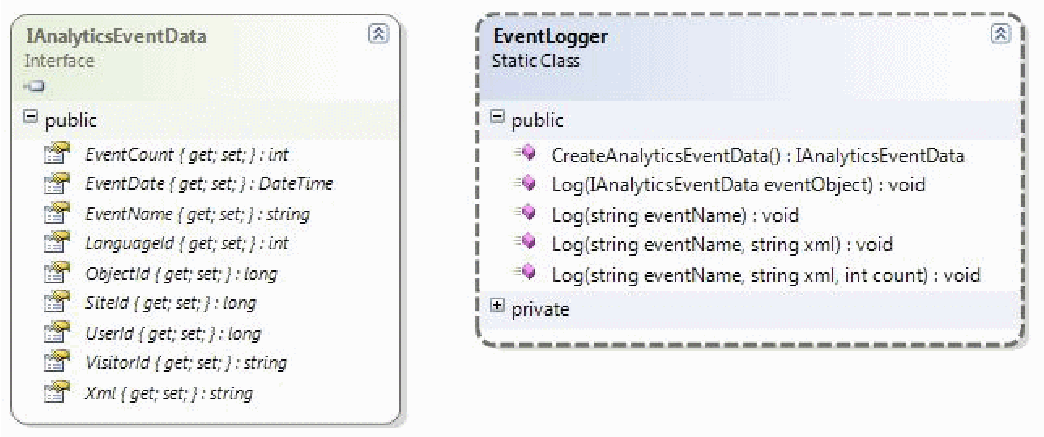
The following illustration depicts *saving* event data to the database.



To save events, use the static class `EventLogger`, which exposes the following methods.

- `IAnalyticsEventData CreateAnalyticsEventData()`
- `void Log(IAnalyticsEventData eventObject)`
- `void Log(string eventName)`
- `void Log(string eventName, string xml)`
- `void Log(string eventName, string xml, int count)`

The following image shows the `EventLogger` class.



As long as an event (`myEvent`) has been registered in the system, you can store an event like this:

```
using Ektron.Cms.Framework.Analytics.BusinessAnalytics;
…
EventLogger.Log("myEvent");
```

This code saves the event data with default values. As shown, the `Log` method has several overloaded versions. Each provides a different amount of control over the information saved to the database. The following list shows the `Log` method's parameters.

- **eventName** (String). A name that uniquely identifies the event. This name must be registered and enabled in the database for it to be recorded.
- **XML** (String). This parameter is purely for customization. By default, its value is null. The API stack passes the string to the database, where the appropriate stored procedure can use it. For example, it can store additional values that are not part of the current event-object
- **count** (Integer). Allows increments other than the default value of one. For example, you may want a specific event to increment the event counter by 5.

In addition to the parameters listed above, you can set other values by referencing the event object that carries the information to the database. A call to `CreateAnalyticsEventData` returns this object, and can be used as follows:

```
IAnalyticsEventData eventObject = CreateAnalyticsEventData();
```

Through the interface `IAnalyticsEventData`, the object provides the following additional parameters, which allow more control over what information is saved with the event.

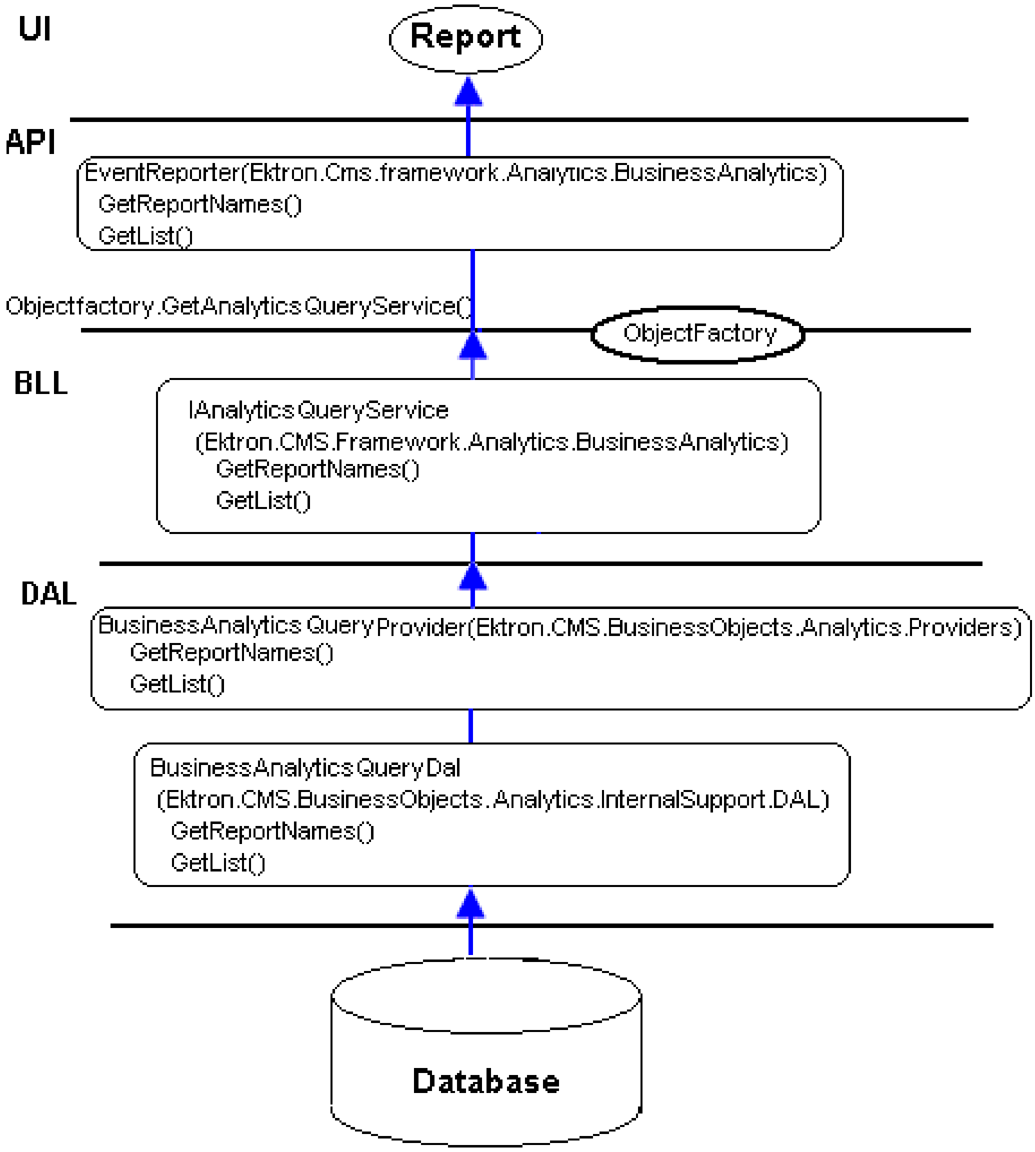
- **ObjectId** (Long). For a content related event, ObjectId should be set to a Content ID.
- **LanguageId** (Integer). The content object's Language ID. If that is not available, the current request's Language ID.
- **SiteId** (Long). The current request's Site ID

NOTE: A value of **-1** means this value has not been set, and will be updated appropriately at a lower level.

- **UserId** (Long). The current request's User ID (if logged in)
- **VisitorId** (String). The current request's Visitor ID (if not logged in)
- **EventDate** (DateTime). Defaults to current date and time

Retrieving event data

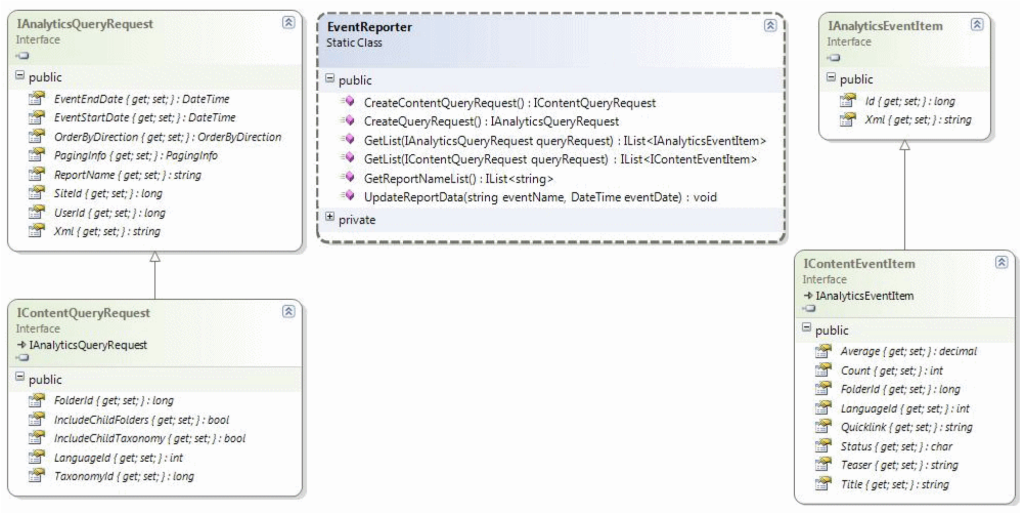
This illustration depicts *retrieving* that data into reports.



Use the static class `EventReporter` to retrieve events stored in the database. This class exposes the following methods.

- `IList<string> GetReportNameList()`
- `IAnalyticsQueryRequest CreateQueryRequest()`
- `IContentQueryRequest CreateContentQueryRequest()`
- `IList<IAnalyticsEventItem> GetList(IAnalyticsQueryRequest queryRequest)`
- `IList<IContentEventItem> GetList(IContentQueryRequest queryRequest)`
- `void UpdateReportData(String eventName, DateTime eventDate)`

The `EventReporter` classes are illustrated as follows.



GetReportNameList method

Use the `GetReportNameList` method to obtain a list of recognized (e.g., registered) report names. You can extend this list by adding custom event types and their corresponding stored procedure handlers.

For example, to obtain a list of the allowed report names, use the following code.

```
using Ektron.Cms.Framework.Analytics.BusinessAnalytics;
...
IList<String> names = EventReporter.GetReportNameList();
```

CreateQueryRequest method

Use the `CreateQueryRequest` method to specify an event data report of the base-level type. The method returns an object that implements the interface `IAnalyticsQueryRequest`, which has the following parameters.

- **ReportName** (String). Uniquely specifies the report, which is registered and corresponds to one or more stored procedures which, when run, generate the requested data.
- **SiteId** (Long). The Site ID of the data being returned.
- **UserId** (Long). The User ID of the data being returned.
- **EventStartDate** (DateTime). If desired, use to determine the earliest date for which report data is returned. By default, data from the earliest date is returned.
- **EventEndDate** (DateTime). If desired, use to determine the latest date for which report data is returned. By default, data through the most recent date is returned.
- **PagingInfo** (Ektron.Cms.PageingInfo). Page size and number let you display a small portion of the report at a time. By setting page size and number, the report data is reduced, and performance will improve. Conversely, performance degrades as page size (RecordsPerPage) increases, especially if the amount of stored data is large. This type has the following fields:
    - CurrentPage
    - EndRow

  - RecordsPerPage
  - StartRow
  - TotalPages
  - TotalRecords
- **OrderByDirection** (EkEnumeration.OrderByDirection). Descending or Ascending
- **XML** (String). This parameter is purely for customization. By default, its value is null. While saving event data, the API stack passes the string to the database, where the appropriate stored procedure can use it. For example, it can store additional values that are not part of the current event-object. Within the `CreateQueryRequest` method, this parameter can returns that string.

CreateContentQueryRequest method

Use the `CreateContentQueryRequest` method to specify a report of event data that is related to content. It returns an object that implements the interface IContentQueryRequest which, in addition to those provided by interface `IAnalyticsQueryRequest` (see *CreateQueryRequest method* on the previous page) has the following parameters.

NOTE: You can use either the `FolderID` or the `TaxonomyID` parameter but not both. Also, you can only use the `IncludeChild` parameter related to the selected parent parameter.

- **LanguageId** (ID). The Language ID of the content that the report returns.
- **FolderId** (Long). The folder of the content being returned. All content in the folder is returned. It defaults to that of the current HTTP request.
- **IncludeChildFolders** (Boolean). Determines whether the report includes children of the folder specified in the `FolderID` parameter.
- **TaxonomyId** (Long). The taxonomy category of the content being returned. All content to which the category is applied the folder is returned. It defaults to that of the current HTTP request.
- **IncludeChildTaxonomy** (Boolean). Determines whether the report includes children of the folder specified in the `FolderID` parameter.

GetList method

There are 2 versions of the GetList method.

One version takes an `IAnalyticsQueryRequest` object, and returns a list of objects that implement `IAnalyticsEventItem`. That version has the following parameters.

- **ID** (Long). The object Id s supplied when the related events were saved.
- **XML** (String). This parameter is purely for customization. By default, its value is null.

  While saving event data, the API stack passes the string to the database, where the appropriate stored procedure can use it. It can store additional values that are not part of the current event-object.

The other version of the `GetList` method takes an `IContentQueryRequest` object and returns a list of objects that implement the interface `IContentEventItem`. That provides the following parameters in addition to those of `IAnalyticsEventItem` (shown above).

- **LanguageId** (Integer). The Language ID of the content that the report returns.
- **Quicklink** (String). The object's URL.
- **Title** (String). Determines whether the report includes children of the folder specified in the `FolderID` parameter.
- **Teaser** (String). The content summary.
- **Status** (String). The content's status. See also: *Content statuses* on page 624
- **FolderID** (Long). The FolderID of the content being reported.
- **Count** (Integer). The count of the object being reported. For example, if you are retrieving the most frequently emailed content item, the count is the number of times it was emailed. The count and average values may be used individually or together, depending on the report. For example, the rating report returns both the average (rating) and the count (the number of ratings), while the commented report uses only the count.
- **Average** (Decimal). The a numerical value divided by the count. For example, when Ektron calculates average content rating, it divides the total number of rating points (on a scale of 1 thru 10) by the number of votes.

UpdateReportData method

This method tells the database that an event's details should update that event's aggregated data. This method is only required if the database does not automatically do this, such as when the corresponding bit is disabled for that an type in the database. Disabling the corresponding bit generally improves performance, especially if the event logging rate is high. But, if you disable the corresponding bit, you must call this update method if you want the report to show current data.

The `UpdateReportData` method takes the following parameters.

- **eventName** (String). The event whose data will be updated.
- **eventDate** (DateTime). The date of the event's occurrence. For example, if you pass `1/1/2009`, one row in the aggregate table is updated. If the row does not exist, it gets created. If you do not pass an event date, this method updates the aggregate table with summary info for that event *for all dates*. For example, if today is February 1, the system has been in use since the beginning of the year, and you pass NULL for the date, 32 table rows are updated (31 days in January plus 2/1).

Disabling the saving or reading of events

You can disable the saving or reading of all events or of individual events.

It is useful to disable events when you want to minimize database traffic. To disable all events:

1. Open *siteroot*/web.config.
2. Set the following parameters to false.

```
<!-- Enable saving business-analytics events to the database
   (at API level) -->
  <add key="ek_enableBusinessAnalyticsEventStorage" value="false"/>
<!-- Enable querying the database for business-analytics events
   (at API level) -->
  <add key="ek_enableBusinessAnalyticsEventReports" value="false"/>
```

NOTE: These settings are set to enabled (true) by default.

You can also enable or disable individual events in the database itself, but this does require a call to travel through the full stack.

Using a custom provider

Providers that read and write event data are located under the service level. Default providers pass calls through to standard Ektron database-access-level code, which reads and writes from the database. You can modify this behavior to almost any conceivable alternative. For example, you can

- save data to an alternate database on an alternate machine.
- call Web services to handle reads and writes.
- filter the data and/or requests.
- process information on its way to or from the database.

The SDK contains sample providers, as well as full source code for Ektron-supplied providers. You can use this material as a basis for writing custom providers, which is the preferred technique for customizing the behavior of the Business Analytics API stack and subsystem.

The default providers for saving and reading event data (respectively) are EktronEventProvider.cs and EktronQueryProvider.cs. Example custom-provider source code has the following names for saving and reading event data (respectively): DemoEventProvider.cs and DemoQueryProvider.cs. For the default providers, the *siteroot/*web.config file must contain the following, inside <configuration><configSections>.

```
<section name="businessAnalyticsQueryProvider"
  type="Ektron.Cms.Analytics.Providers
    .BusinessAnalyticsQueryProviderConfiguration,
  Ektron.Cms.BusinessObjects"
  allowDefinition="MachineToApplication"
  restartOnExternalChanges="true"/>
<section name="businessAnalyticsEventProvider"
  type="Ektron.Cms.Analytics.Providers
    .BusinessAnalyticsEventProviderConfiguration,
  Ektron.Cms.BusinessObjects"
  allowDefinition="MachineToApplication"
  restartOnExternalChanges="true"/>
```

Additionally, the following must exist inside the <configuration> tags.

```
<businessAnalyticsQueryProvider
  defaultProvider="EktronBusinessAnalyticsQueryProvider">
  <providers>
    <add name="EktronBusinessAnalyticsQueryProvider"
      type="Ektron.Cms.Analytics.Providers.EktronQueryProvider,
      Ektron.Cms.BusinessObjects"/>
  </providers>
</businessAnalyticsQueryProvider>
<businessAnalyticsEventProvider
  defaultProvider="EktronBusinessAnalyticsEventProvider">
  <providers>
    <add name="EktronBusinessAnalyticsEventProvider"
      type="Ektron.Cms.Analytics.Providers.EktronEventProvider,
      Ektron.Cms.BusinessObjects"/>
  </providers>
</businessAnalyticsEventProvider
```

Creating custom providers

To override the default Ektron provider with a custom provider:

1. Create a new solution with a project named CustomProviders.
2. Add the following references to the project.
   - Ektron.Cms.BusinessObjects.dll
   - Ektron.Cms.Common.dll
   - Ektron.Cms.ObjectFactory.dll
3. Add files `DemoEventProvider.cs` and `DemoQueryProvider.cs` (from the Ektron SDK).
4. Build.
5. Copy the `CustomProviders.dll` file to your Ektron site's bin file.
6. Update `web.config` by modifying the `<configuration>` section. Specifically, add demo providers to the Business Analytics providers.

```
<businessAnalyticsQueryProvider
  defaultProvider="DemoQueryProvider">
  <providers>
    <add name="EktronBusinessAnalyticsQueryProvider"
      type="Ektron.Cms.Analytics.Providers.EktronQueryProvider,
      Ektron.Cms.BusinessObjects"/>
    <add name="DemoQueryProvider"
      type="Ektron.Cms.Analytics.Providers.DemoQueryProvider,
      CustomProviders"/>
   </providers>
</businessAnalyticsQueryProvider>
<businessAnalyticsEventProvider
  defaultProvider="DemoEventProvider">
  <providers>
    <add name="EktronBusinessAnalyticsEventProvider"
      type="Ektron.Cms.Analytics.Providers.EktronEventProvider,
      Ektron.Cms.BusinessObjects"/>
    <add name="DemoEventProvider"
      type="Ektron.Cms.Analytics.Providers.DemoEventProvider,
      CustomProviders"/>
```

```
  </providers>
</businessAnalyticsEventProvider>
```

Running Ektron traffic analytics

To access a fully-developed, Web traffic analytics provider model, go to **Workarea > Reports > Traffic Analytics**.

By linking to best-of-breed analytics software, such as Google, Webtrends, and SiteCatalyst, your website's information is integrated into Ektron's Workarea, and you can view analytics from other Web Analytics providers.

IMPORTANT: No data is stored in Ektron; Ektron retrieves the analytics on demand from Web Analytics providers.

By analyzing the user traffic coming to and interacting with your site, you can better understand key elements of your Web presence. Traditional Web analytics packages help you understand where your traffic is coming from, when traffic is occurring (including high and low points), and which pages users are interacting with. But this information is often isolated from Web content and, so, lacks the context needed to take advantage of it.

You can place the Analytics Reports widget on your dashboard, so that you have instant access. Also, the software is integrated into the content history, making your traffic analytics more relevant because you can view what modifications were made, when, and how they impacted traffic to that page. You can react immediately, restoring content that performed better or changing current content to better reflect your goals.

Customer reporting, segmentation, and legacy data are easier to access, and Ektron becomes the central hub for all of your website's information, bringing it together so that it is no longer siloed. Having all information in one place puts it in context, making it easier to draw conclusions needed to optimize your Web presence.

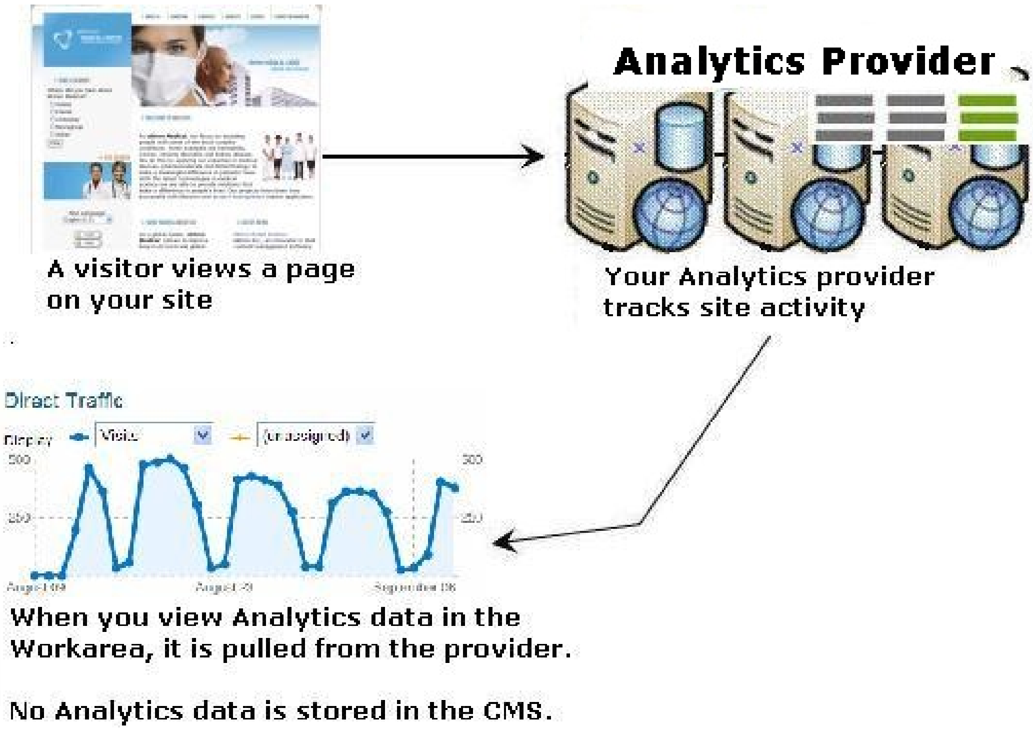
PREREQUISITES

- To view Web traffic analytics, you must have an Ektron Professional or Enterprise License.
- Only the following users can view the Web Analytics data.
  - Administrators group members
  - Administrators group members

Ektron's Workarea provides customized reporting, reflecting exactly the information you care about. The data can analyzed in many ways, such as:

- number of visits per day
- browser usage
- visitor location
- visitor language
- top content
- referring sites

When you set up Web Traffic Analytics, the Analytics Provider monitors every site visit. In the Workarea, you can view this data from many perspectives.



Running Google Analytics

Google Analytics is an enterprise-class solution that gives you rich insights into your website traffic and marketing effectiveness. Powerful, flexible, and easy-to-use features let you see and analyze traffic data in an entirely new way. Google Web Analytics prepare you to write better-targeted ads, strengthen your marketing initiatives, and create higher converting websites. Its main features are:

- **Advertising ROI**. Measure the success of your display, search, new media, and offline advertising efforts.
- **Cross Channel and Multimedia Tracking**. Compare your site usage metrics with industry averages and track Flash, video, and social networking sites and applications.
- **Visualizing Data**. Uncover trends, patterns, and key comparisons with funnel visualization, motion charts, mapping, and more.
- **Customized Reporting**. Create reports, dashboards, and segments that make the most sense for your business.
- **Sharing and Communicating**. Administration controls and email reports let you share data across your organization.
- **Google Integration and Reliability**. Google Web Analytics complements a suite of related products, all running on the same world-renowned infrastructure that powers Google.

For more information, see the Google Analytics home page, Configuring your Ektron Site for Google Analytics.

BEST PRACTICE

See also the following recorded demonstration: Configuring Google Analytics - Ektron Developer Office Hours; and Configuring your Ektron Site for Google Analytics.

Deciding which Google Analytics version to use

Ektron supports Google Analytics versions 2.4 and 3.0. To compare versions, see Migration Guide: Moving from v2.3 APIs to v2.4 & v3.0> **Differences between v2.4 and v3.0**.

You may use both versions. If you enable both, the Ektron Workarea displays a drop-down for choosing a provider. Data is the same for both providers if you use the same Google analytics profiles.

IMPORTANT: If you will use Google's Core Reporting API v3.0, Ektron supports the ClientLogin and OAUTH 2.0 authentication. If you will use Google's Core Reporting API v2.4, Ektron only supports ClientLogin authentication.

Setting up Google Analytics

This section explains how to set up Google analytics. After you complete these steps, Google begins tracking your entire website. Alternatively, you can track individual site pages (see *Tracking a single page* on page 526), or clicks by file type (see *Tracking clicks by file type* on page 526).

PREREQUISITE

If you want to use OAuth2.0 authentication, follow the steps in *Setting up the OAuth2.0 authorization protocol for Google Analytics 3.0* on page 517 before beginning this procedure.

WARNING! Enabling the tracking code may cause a significant increase in CPU usage.

1. Create a Gmail account (http://mail.google.com).
2. Sign up for Google Web Analytics (www.google.com/analytics/). When setting up a Google Web Analytics profile for your site, you are assigned a profile ID and a User Account. You need those to complete Step 8.
3. Open this Google Analytics help page: Migration Guide: Moving from v2.3 APIs to v2.4 & v3.0.
4. Under "Create a Project in the Google APIs Console," follow steps 1 through 4. On the API Access screen, under **Simple API Access**, click the **Create new Browser key** button. Copy the new browser key. This will be your API key in Step 8.
5. On the server that hosts Ektron, go to `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities\EncryptEmailPassword.exe`.
6. Use that utility to encrypt the Gmail username and password that you obtained in Step 1. Enter the full user name, including `@gmail.com`.

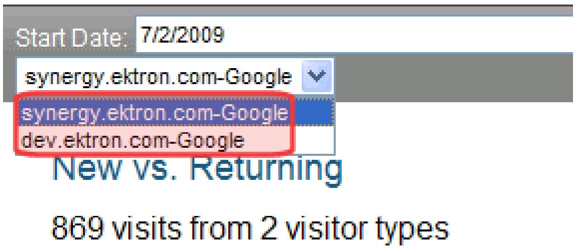
7. Open your *siteroot*/web.config file and find the AnalyticsDataProvider tag. If you enable versions 2.4 and 3.0, edit the GoogleV3.0 and GoogleV2.4 tags.

```
<AnalyticsDataProvider defaultProvider="Google">
  <providers>
    <add name="GoogleV3.0"
      type="Ektron.Cms.Analytics.Providers.GoogleAnalyticsProviderv3,
      Ektron.Cms.BusinessObjects"
      EmailAddress=""
      KeyFilePassword=""
      KeyFilePath="/Key/privateKey/xxxxxxxxx.p12"
      Username=""
      Password=""
      ProfileId=""
      SiteURL=""
      UserAccount=""
      Endpoint="https://www.googleapis.com/analytics/v3/data/"
      ApiKey=""
      CacheInterval="0"
GoogleAnalyticsTrackingCodePath="Analytics\template\googletrackingcode.ascx"
      Version="3.0" />
    <add name="GoogleV2.4"
      type="Ektron.Cms.Analytics.Providers.GoogleAnalyticsProvider,
        Ektron.Cms.BusinessObjects"
      Username=""
      Password=""
      ProfileId=""
      SiteURL=""
      UserAccount=""
      Endpoint="https://www.googleapis.com/analytics/v2.4/"
      ApiKey=""
      CacheInterval="0"
GoogleAnalyticsTrackingCodePath="Analytics\template\googletrackingcode.ascx"
      Version="2.4" />
  </providers>
</AnalyticsDataProvider>
```

NOTE: If your web.config has several analytics providers and you want to disable tracking for any of them, delete the value of the GoogleAnalyticsTrackingCodePath property.

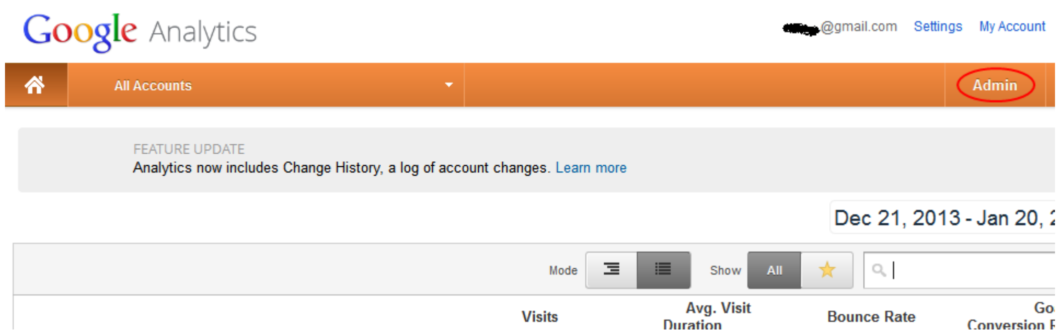
8. Complete each tag's properties.
   - **name**. The free text name of the site being tracked and the Google version. You should use the site name followed by provider name and version. For example, www.ektron.com-Google V3.0. When Workarea users view site-level displays of Web Analytics data, they choose the site from a drop-down. If you change the name, you must also change the <AnalyticsDataProvider

defaultProvider element to match the name.



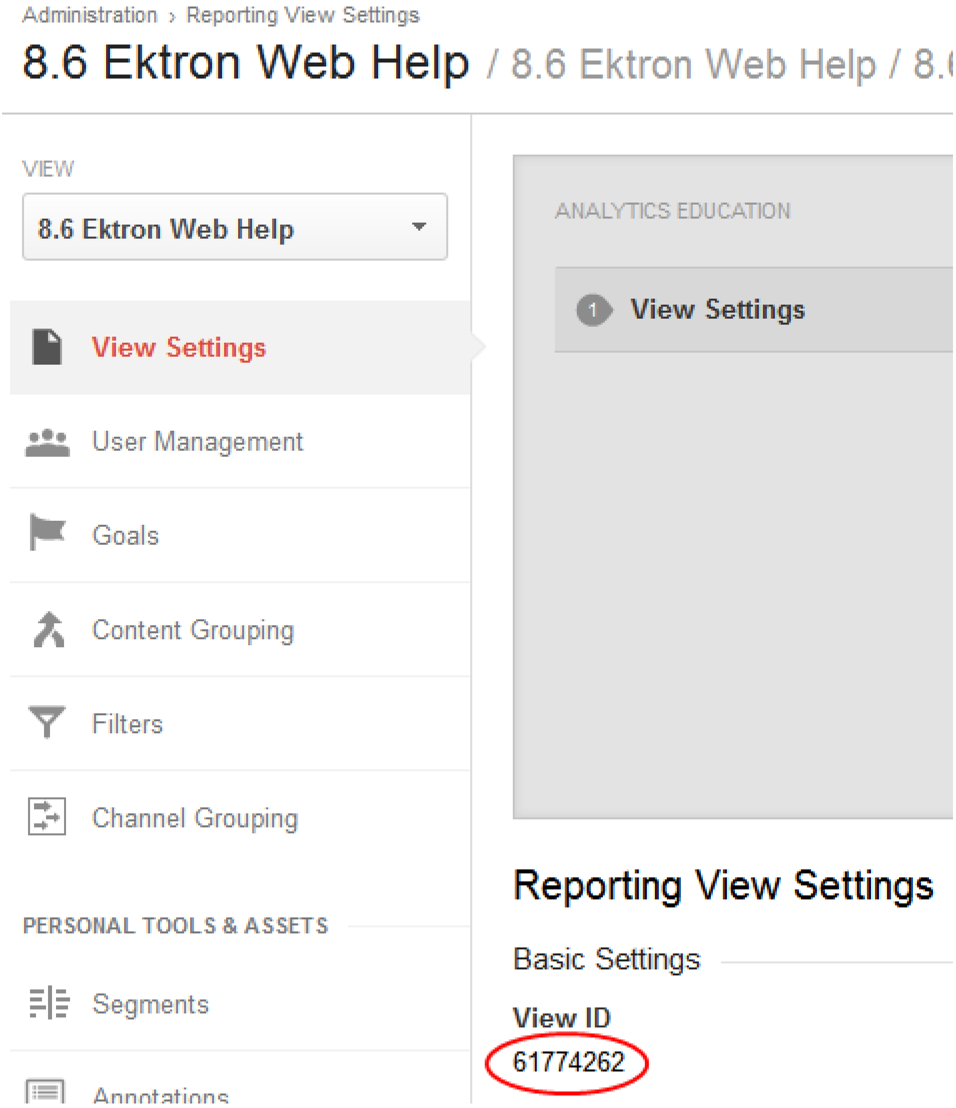
NOTE: The following three fields are only used if you are using OAuth 2.0 authentication.

- **EmailAddress.** Enter the service account email address that you used to register your site in the Google Console. For example: 111111111111@developer.gserviceaccount.com.
- **KeyFilePassword.** Appears in the Download dialog that appears while registering your site in the Google Console.
- **KeyFilePath**. Enter the path to the privatekey file that you downloaded and saved while registering your site in the Google Console.
- **Username**. The Gmail username you encrypted in Step 6.
- **Password**. The Gmail password you encrypted in Step 6.
- **ProfileID**. The Google Analytics Profile ID you obtained in Step 2. Another way to find your **ProfileID** is
  a. Log into https://www.google.com/analytics/.
  b. Click **Admin**.



  c. In the **View** column, select the account that you want to track. If you do not see the account, create it.

d. In the **View** column, under **View Settings**, locate the **View ID.**

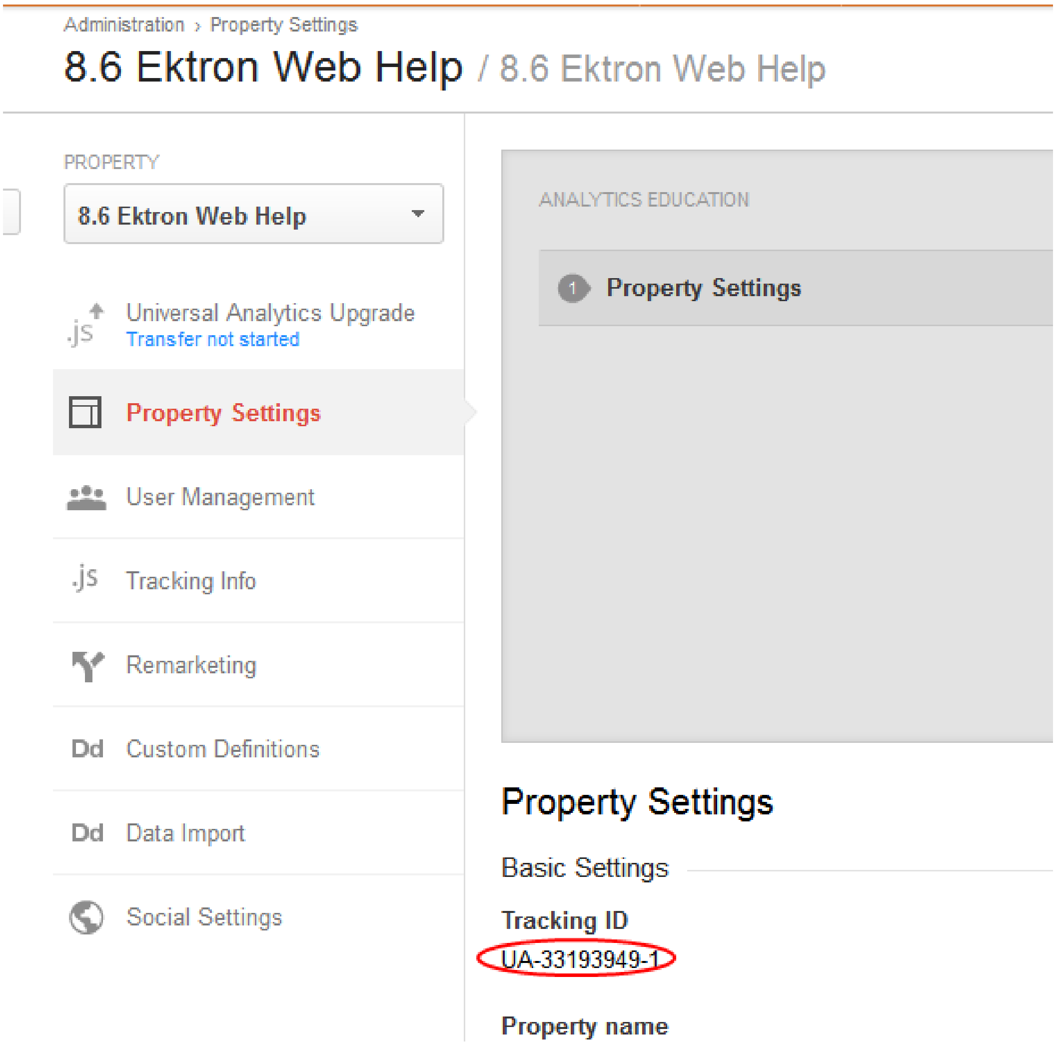


- **SiteURL**. Enter the current server's fully-qualified domain name. For instance, if your site's URL is `http://hostname.domain.com`, the **SiteURL** value should be `hostname.domain.com`. Careful! Omit the leading `http://` or `https://`.

NOTE: In an eSync environment, set the **ProfileID** to the analytics account you wish to view. The **SiteURL**, however, should be the fully-qualified domain name of the current server.
For example, if you want to view production site analytics from your staging URL, set **SiteURL** to the staging server's fully qualified domain name, while **ProfileID** and **Account ID** point to your production server.

- **UserAccount**. The Google Analytics SiteURL you obtained.

NOTE: On your Google Analytics Settings page, the `UA-xxxxxx-x` string next to your site domain is the Google UserAccount.
That string also appears on the **Admin > Property> Property Settings** page.



NOTE: To track multiple providers or sites:
1. Copy the `<providers>` tag.
2. Paste it under the existing tag and above `</AnalyticsDataProvider>`.
3. Modify the elements.

- **API key**. Insert the API key that you created in Step 4.

9. Within the `web.config`'s `<analyticsSettings>` tags is a `suppressBeacon` element that lets you track or suppress the tracking of users on your website. Many site administrators do not want to track user behavior in Traffic Analytics reports, as it corrupts the data. (This setting does not apply to Business Analytics.) See also: *Analyzing websites* on page 483. Possible values for this element are
   - **None**. Track all users, including authenticated membership and Ektron users.
   - **Members**. Track unauthenticated and logged-in Ektron users only. Do not track membership users.
   - **Authors**. Track unauthenticated and logged-in membership users only. Do not track Ektron users.

   - **All**. Track unauthenticated users only. Do not track membership and Ektron users.
10. Within the *siteroot*\web.config file, find the ek_AutoInsertBeaconScript. Change its value to true.
11. Save web.config.

IMPORTANT: No server control is needed to track Web Analytics. After you enable Web Analytics in the web.config file, the following JavaScript is automatically added to each PageBuilder page and any site page that contains an Ektron server control.

```
<%@ Control Language="C#"
  AutoEventWireup="true"
  CodeFile="googletrackingcode.ascx.cs"
  Inherits="Analytics_Template_GoogleTrackingCode"
  EnableTheming="false" EnableViewState="false" %>
<!-- Start Google Code -->
<script type="text/javascript">
  var _gaq = _gaq || [];
  _gaq.push(['_setAccount','<asp:literal id="GoogleUserAccount"
runat="server"/>']);
  _gaq.push(['_trackPageview']);
  <asp:literal runat="server" id="variables"/>
    (function()
      { var ga = document.createElement('script');
      ga.type = 'text/javascript';
      ga.async = true;
      ga.src = ('https:' == document.location.protocol ? 'https://ssl' :
         'http://www') + '.google-analytics.com/ga.js';
      s.parentNode.insertBefore(ga, s);
        var s = document.getElementsByTagName('script')[0];
      }
    )();
/* Start Track Event binding Code */
//
// extracted from
// http://runtingsproper.blogspot.com/
//   2009/12/how-to-automatically-track-events-with.html
//
// un-comment the following if you want Google Analytics to track your pdf
  // download links on the website.
//$(document).ready(function () {
// TrackEventsForClicks();
//});
//
//function TrackEventsForClicks()
//{
// TrackEventByFileExtension(".pdf");
//
// add your file extension here
//}
//
//function TrackEventByFileExtension(FileExtension)
// {
// $("a[href$='" + FileExtension + "']").click(function()
```

```
//{
// var fileURL = $(this).attr("href");
// _gaq.push(['_trackPageview', fileURL]);
// });
//}
/* End Track Event Binding Code */
</script> <!-- End Google Code -->
```

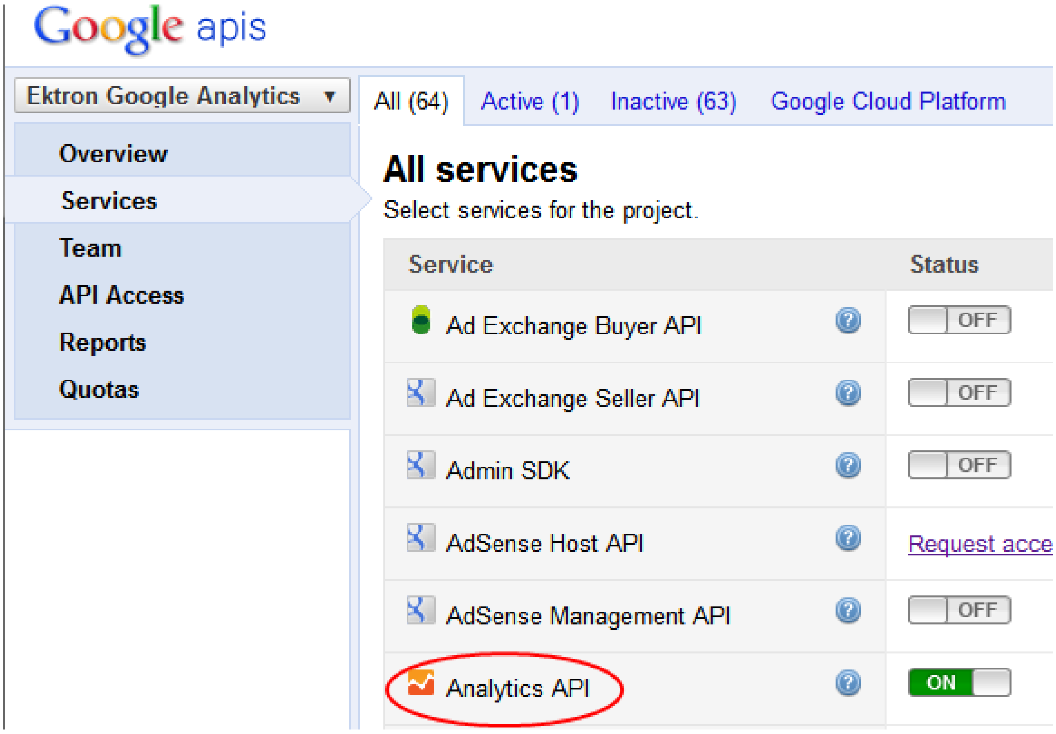
Setting up the OAuth2.0 authorization protocol for Google Analytics 3.0

OAuth2.0, the next evolution of the OAuth protocol, lets you provide authorization flows for Web applications, desktop applications, mobile phones, and so on. Google APIs use OAuth 2.0 for authentication and authorization. Google has implemented an OAuth2.0 for access to its resources from third-party applications, such as Ektron. It's secured, so that the client need not share user credentials with third party applications. See also: http://oauth.net/2/, https://developers.google.com/accounts/docs/OAuth2

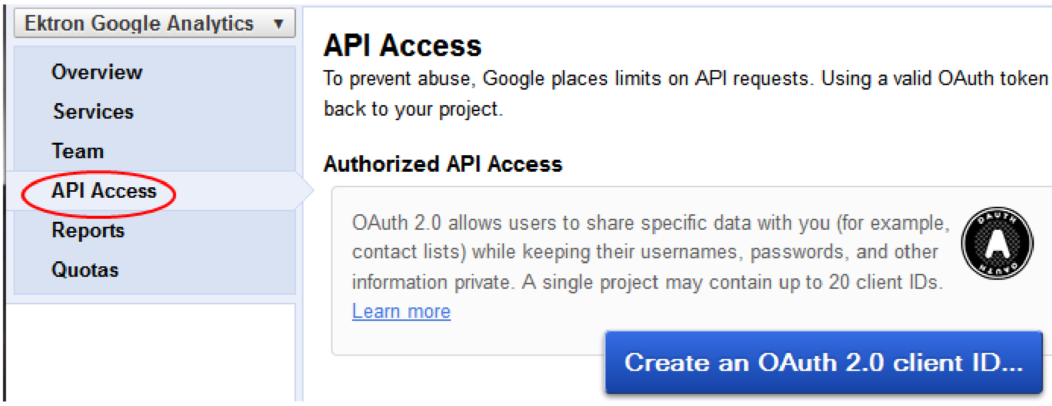
Follow these steps to implement the OAuth2.0 authorization protocol for Google Analytics 3.0.

1. Createa Gmail account. If you already created an gmail account to complete Step 1 of *Setting up Google Analytics* on page 511, enter that email address.
2. Sign up for Google Web Analytics (www.google.com/analytics/). When setting up a Google Web Analytics profile for your site, you are assigned a profile ID and a User Account. You need those to complete Step 15.
3. Open a browser and go to https://code.google.com/apis/console.
4. Click **Create project**.
5. In the left panel, click **Services**.

6. Turn on **Analytics API**. Agree to terms of service.

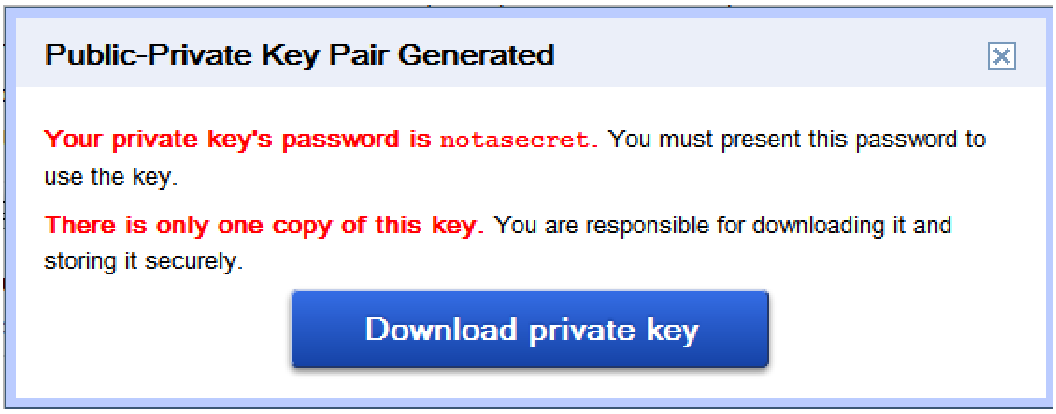


7. In the left panel, click **API Access**.
8. Click the button **Create an OAuth 2.0 client ID**.

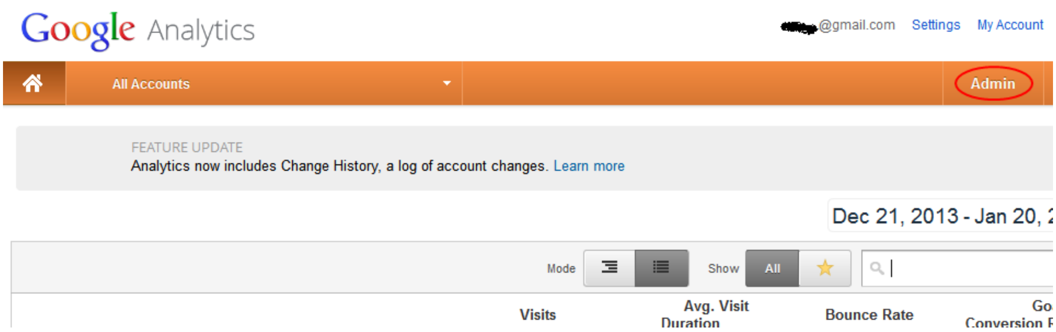


9. A pop-up window opens. Register your site information. In the **Home Page URL** field, enter your website address. Click **Next**.
10. The Create Client ID screen appears. Choose **Service Account** and click **Create client ID**.

11. The following screen appears. Click **Download private key**. Close the window.



12. A key file is downloaded. Keep it in a secure directory. The file contains a private key that is unique per user. You need this information to complete Step 8 of *Setting up Google Analytics* on page 511.
13. The next screen displays your Client ID, email address and public key fingerprints. You need this email address to set up OAUTH in the `web.config` section (in Step 20).
14. Log into https://www.google.com/analytics/.
15. Click **Admin**.



16. In the **Account** column, select the account that you want to track. If you do not see the account, create it.
17. In the **Property** column, click **User Management**.
18. Under **Add permissions for**, add the GA service email address generated in Step 13. For example: `111111111194@developer.gserviceaccount.com`.
19. Open your site's *`siteroot`*`/web.config` file and find the `AnalyticsDataProvider` tag. If you enable version 3.0, edit the GoogleV3.0 tags.

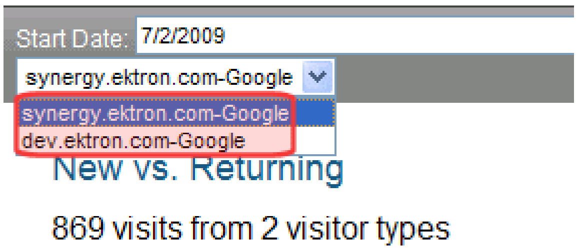
```
<AnalyticsDataProvider defaultProvider="Google">
  <providers>
    <add name="GoogleV3.0"
      type="Ektron.Cms.Analytics.Providers.GoogleAnalyticsProviderv3,
      Ektron.Cms.BusinessObjects"
    EmailAddress="" <!-- address comes from Step 13 -->
    KeyFilePassword="" <!-- Password is "notasecret" as shown in Step 11 -->
    KeyFilePath="/Key/privateKey/xxxxxxxxx.p12" <!-- Replace sample path with
actual path -->
```

```
   Username="" Password="" ProfileId=""
      SiteURL="" UserAccount=""
      Endpoint="https://www.googleapis.com/analytics/v3/data/"
      ApiKey="" CacheInterval="0"
GoogleAnalyticsTrackingCodePath="Analytics\template\googletrackingcode.ascx"
      Version="3.0" />
  </providers>
</AnalyticsDataProvider>
```

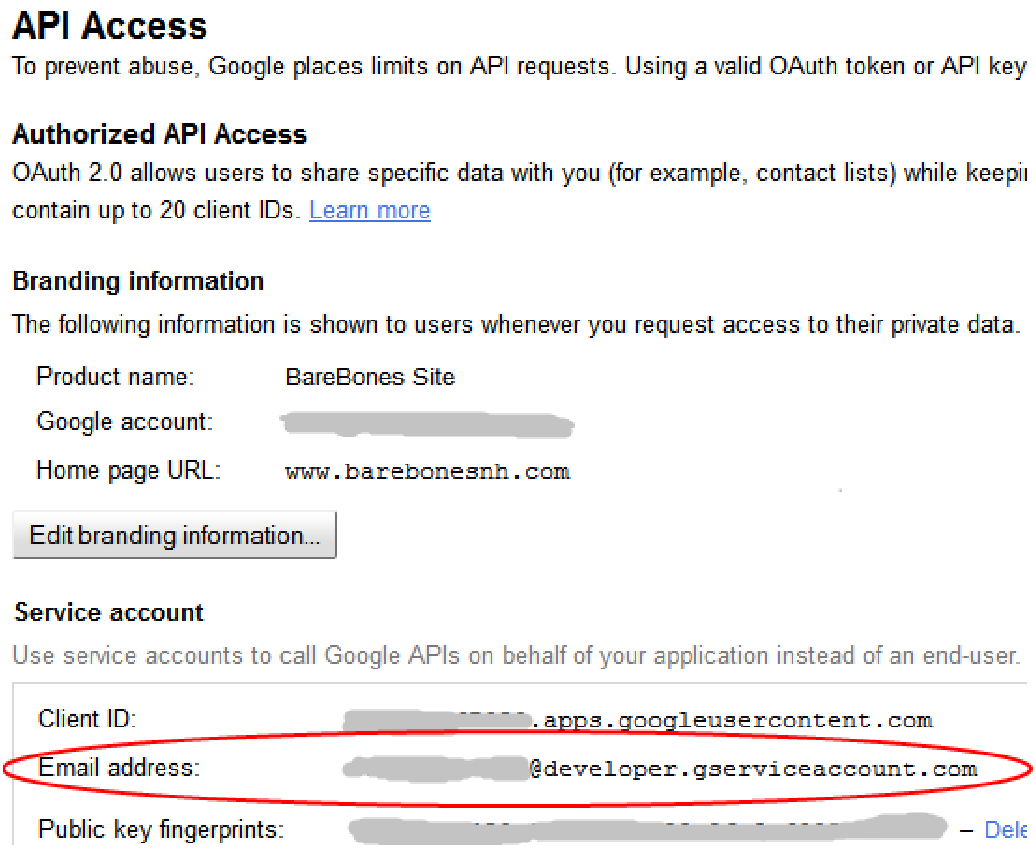
NOTE: If your `web.config` has several analytics providers and you want to disable analytic tracking for any of them, delete the value of the `GoogleAnalyticsTrackingCodePath` property.

NOTE: To track multiple providers or sites:
1. Copy the `<providers>` tag.
2. Paste it under the existing tag and above `</AnalyticsDataProvider>`.
3. Modify the elements.

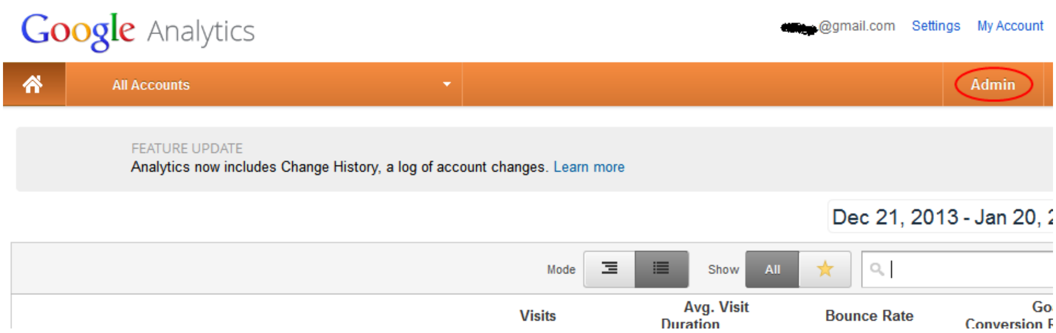
20. Complete each tag's properties.
    - **name**. The free text name of the site being tracked and the Google version. You should use the site name followed by provider name and version. For example, www.ektron.com-Google V3.0. When Workarea users view site-level displays of Web Analytics data, they choose the site from a drop-down. If you change the name, you must also change the <AnalyticsDataProvider defaultProvider element to match the name.



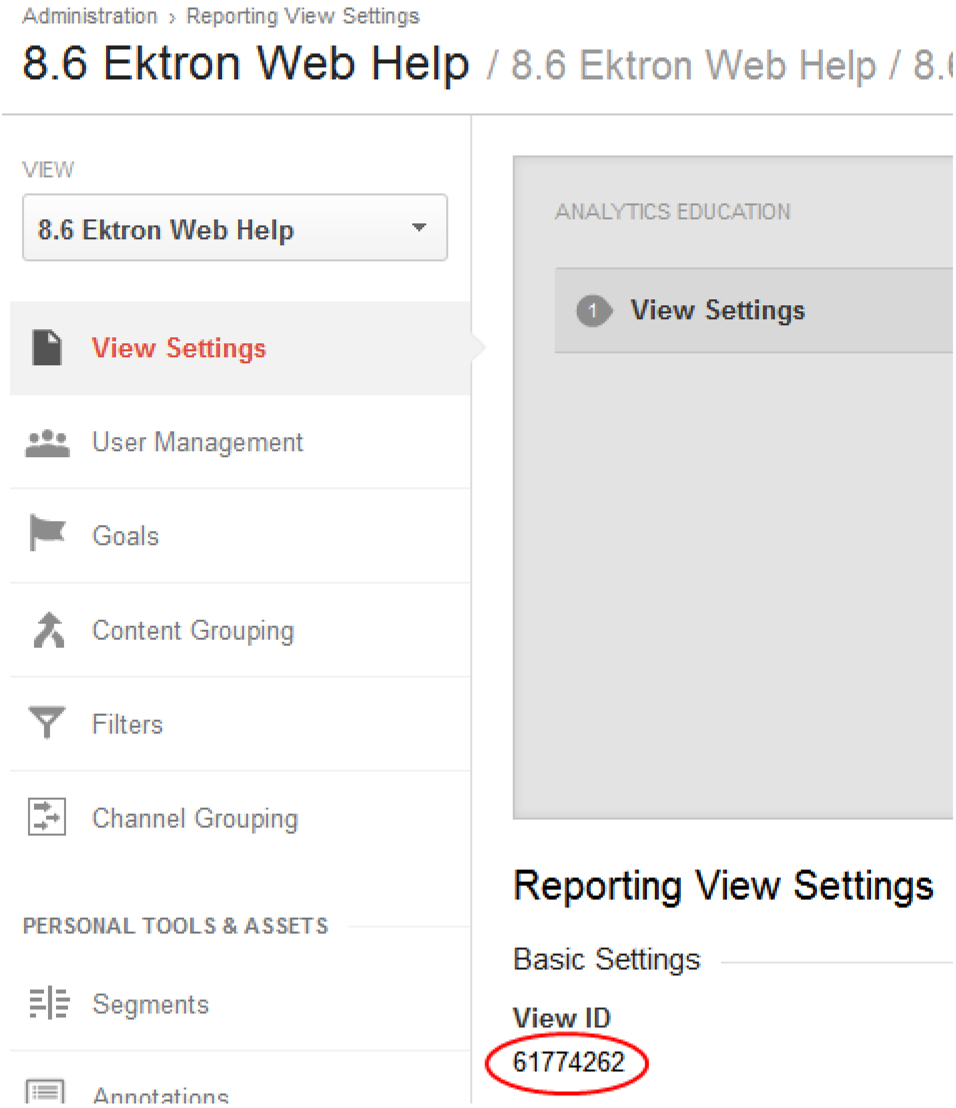
    - **EmailAddress.** OAUTH2.0 only—Enter the service account email address that you used to register your site in the Google console. This address was created in Step 13 above.



- **KeyFilePassword.** OAUTH2.0 only—Was displayed in the Download dialog that appears while registering your site in the Google Console (step 10 above).
- **KeyFilePath**. OAUTH2.0 only—Enter the path to the privatekey file that you downloaded and saved while registering your site in the Google Console (step 10 above).
- **Username**. non-OAUTH2.0 only—The Gmail username you obtained in Step 1.
- **Password**. non-OAUTH2.0 only—The Gmail password you obtained in Step 1.
- **ProfileID**. The Google Analytics Profile ID you obtained in Step 2. Another way to get your Profile ID:
  a. Log into https://www.google.com/analytics/.
  b. Click **Admin**.

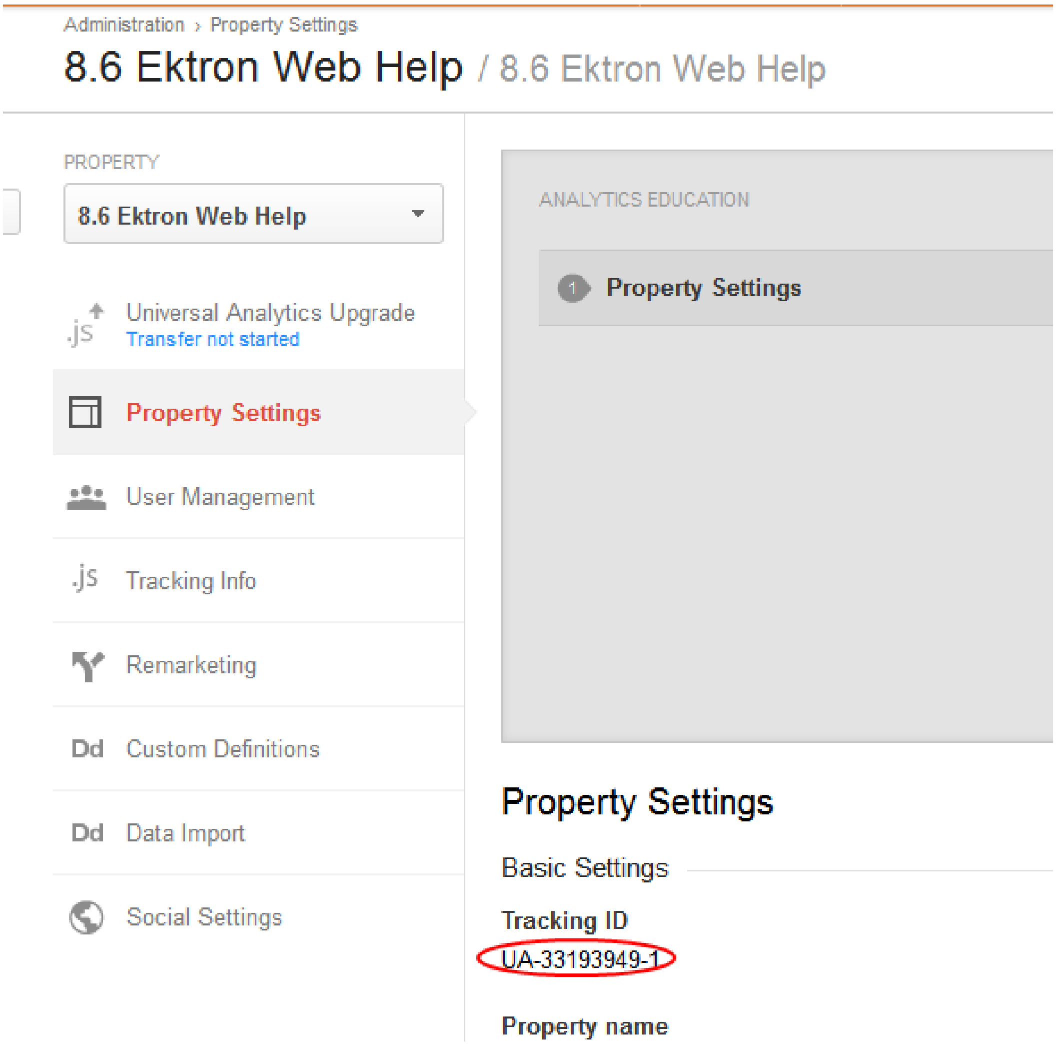


c. In the **View** column, select the account that you want to track. If you do not see the account, create it.
d. In the **View** column, under **View Settings**, locate the **View ID.**

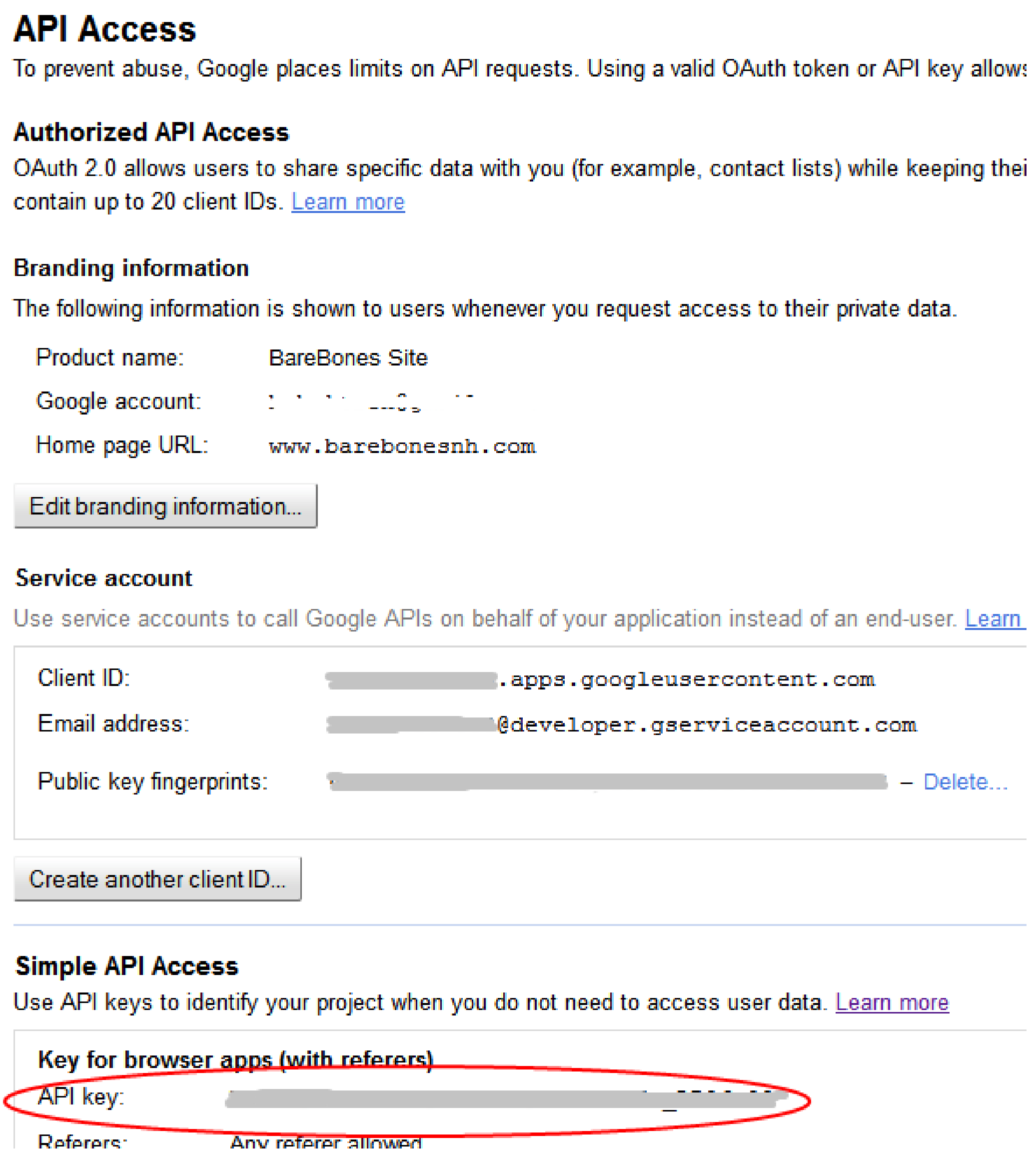


- **SiteURL**. Your site root name. For example, you could set up one `<providers>` tag for the `developer.ektron.com` site, and another for the `synergy.ektron.com` site. The SiteURL needs to match the development site URL when you test in your development environment. For example, if the site path is `http://MyDevMachine/default.aspx`, the **SiteURL** is `MyDevMachine`. If there is no match, the Google beacon is not inserted onto your page.
- **UserAccount**. The Google Analytics SiteURL you obtained.

NOTE: On your Google Analytics Settings page, the `UA-xxxxxx-x` string next to your site domain is the Google user account.
That string also appears on the **Admin > Property> Property Settings** page.



- **API key**. non-OAUTH2.0 only—Insert the API key that was displayed in Step 12.



21. Within the `web.config`'s `<analyticsSettings>` tags is a `suppressBeacon` element that lets you track or suppress the tracking of users on your website. Many site administrators do not want to track user behavior in Traffic Analytics reports, as it corrupts the data. (This setting does not apply to Business Analytics.) See also: *Analyzing websites* on page 483. Here are the possible values for this element.
    - **None**. Track all users, including authenticated membership and Ektron users.
    - **Members**. Track unauthenticated and logged-in Ektron users only. Do not track membership users.
    - **Authors**. Track unauthenticated and logged-in membership users only. Do not track Ektron users.
    - **All**. Track unauthenticated users only. Do not track membership and Ektron users.

22. Within the `web.config`'s `<appSettings>` tags is an `ek_AutoInsertBeaconScript` element that either tracks or suppresses tracking activity on your website. Change its `value` to `true`.
23. Save `web.config`.

IMPORTANT: No server control is needed to track Web Analytics. After you enable Web Analytics in the `web.config` file, the following JavaScript is automatically added to each PageBuilder page and any site page that contains an Ektron server control.

```
<%@ Control Language="C#"
  AutoEventWireup="true"
  CodeFile="googletrackingcode.ascx.cs"
  Inherits="Analytics_Template_GoogleTrackingCode"
  EnableTheming="false" EnableViewState="false" %>
<!-- Start Google Code -->
<script type="text/javascript">
  var _gaq = _gaq || [];
  _gaq.push(['_setAccount','<asp:literal id="GoogleUserAccount"
runat="server"/>']);
  _gaq.push(['_trackPageview']);
  <asp:literal runat="server" id="variables"/>
    (function()
      { var ga = document.createElement('script');
      ga.type = 'text/javascript';
      ga.async = true;
      ga.src = ('https:' == document.location.protocol ? 'https://ssl' :
         'http://www') + '.google-analytics.com/ga.js';
      s.parentNode.insertBefore(ga, s);
        var s = document.getElementsByTagName('script')[0];
      }
    )();
/* Start Track Event binding Code */
//
// extracted from
// http://runtingsproper.blogspot.com/
//   2009/12/how-to-automatically-track-events-with.html
//
// un-comment the following if you want Google Analytics to track your pdf
  // download links on the website.
//$(document).ready(function () {
// TrackEventsForClicks();
//});
//
//function TrackEventsForClicks()
//{
// TrackEventByFileExtension(".pdf");
//
// add your file extension here
//}
//
//function TrackEventByFileExtension(FileExtension)
// {
// $("a[href$='" + FileExtension + "']").click(function()
//{
```

```
// var fileURL = $(this).attr("href");
// _gaq.push(['_trackPageview', fileURL]);
// });
//}
/* End Track Event Binding Code */
</script> <!-- End Google Code -->
```

Tracking a single page

As an alternative to tracking your entire site, you can track individual .aspx pages. To do that, follow these steps on every page you wish to track.

PREREQUISITE

You completed all steps in *Setting up Google Analytics* on page 511.

1. Open the `siteroot/web.config` file.
2. Find the `ek_AutoInsertBeaconScript` tag.
3. Set its `value` to `false`.
4. Save `web.config`.

NOTE: The previous steps disable the tracking code on your website.

5. Open Visual Studio.
6. Open the .aspx page to which you want to apply the tracking code.
7. In the Solution Explorer tree, go to `Workarea/Analytics/template/googletrackingcode.ascx`.
8. Drag and drop that user control onto the page.
9. Assign `EktronAnalyticsTrackingCode` as the ID of the control.

Tracking clicks by file type

To track the number of times that files on your site (for example, PDFs) are accessed, follow these steps.

PREREQUISITE

You completed all steps in *Setting up Google Analytics* on page 511.

1. Open the `siteroot/web.config` file.
2. Find the `ek_AutoInsertBeaconScript` tag.
3. Set its `value` to `true`.
4. Save `web.config`.
5. Open Visual Studio.
6. Open the .aspx page to which you want to apply the tracking code.
7. In the Solution Explorer tree, go to `Workarea/Analytics/template/googletrackingcode.ascx`.

8. Uncomment the following code.

```
/* Start Track Event binding Code */
//
// extracted from
// http://runtingsproper.blogspot.com
//   /2009/12/how-to-automatically-track-events-with.html
//
// un-comment the following if you want Google Analytics to track your pdf
//   download links on the website.
//$(document).ready(function () {
// TrackEventsForClicks();
//});
//
//function TrackEventsForClicks()
//{
// add your file extension here
// TrackEventByFileExtension(".pdf");
//
//}
//
//function TrackEventByFileExtension(FileExtension)
//{
// $("a[href$='" + FileExtension + "']").click(function() {
// var fileURL = $(this).attr("href");
// _gaq.push(['_trackPageview', fileURL]);
// });
//}
/* End Track Event Binding Code */
```

By default, the JavaScript tracks the opening of PDF files on your website. To add file types, copy `TrackEventByFileExtension(".pdf");` and paste it, and change the file type as shown in the following example.

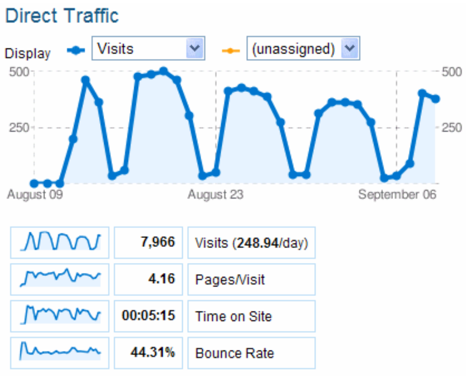
```
xfunction TrackEventsForClicks()
  {
    TrackEventByFileExtension(".pdf");
    TrackEventByFileExtension(".png");
```

Google site reports

You can access site-level Google Analytics reports from within the Workarea by selecting **Reports > Traffic Analytics > Google**.

NOTE: The following text was adapted from Google Analytics Help Center. Check that site for additional details on the reports.

Google sites reports show direct traffic on left side, top content on the right.



Top Content

17,821 pages were viewed a total of 102,572 times

Page	Pageviews	Unique Pageviews	Avg. Time on Page	Bounce Rate	% Exit
/	7,572	6,263	00:01:00	24.75%	23.20%
/forum.aspx	5,997	3,688	00:00:57	22.98%	10.59%
/kb_article.aspx?id=5982	4,750	4,382	00:04:42	91.60%	90.67%
/forum.aspx?g=topics&f=80	3,891	1,398	00:02:24	27.65%	12.72%
/forum.aspx?g=search	2,182	1,128	00:01:28	41.18%	18.70%
/support.aspx	2,167	1,694	00:01:27	34.63%	32.16%
/cms400releasenotes.aspx	1,269	1,090	00:03:08	80.68%	64.30%
/forum.aspx?g=topics&f=88	1,236	544	00:02:13	38.83%	13.35%

Search reports show terms used by site visitors to find content on your site. Note that this data is not retrieved from Google Analytics. Instead, it is retrieved from Ektron's site search.

The following sections describe Google's site-level reports.

Visitors

This report shows the number of new and returning visitors who came to your site and how extensively they interacted with your content. This traffic overview lets you view aspects of visit quality (i.e. average pageviews, time on site, bounce rate) and visit characteristics (i.e. first time visitors, returning visits).

Locations

32,639 visits came from 151 countries/territories

Country/Territory	Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate
United States	18,786	3.86	00:04:51	44.34%	50.45%
India	2,505	2.22	00:02:53	69.38%	68.78%
United Kingdom	1,960	2.88	00:03:30	59.29%	60.20%
Canada	1,810	3.43	00:04:07	54.59%	54.36%
Australia	568	2.29	00:02:12	73.59%	68.66%
Germany	347	1.35	00:00:52	91.93%	84.15%
Netherlands	329	1.72	00:01:41	83.59%	80.55%

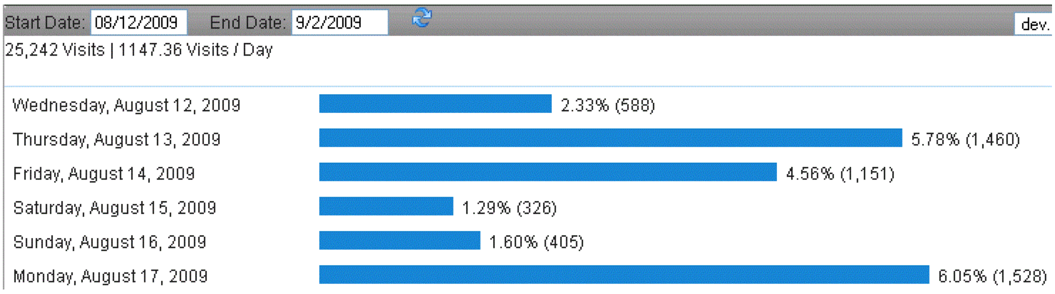
- **Locations**. Countries of your site visitors.
- **New vs. Returning**. The number of visitors to your site who are new or returning.

  A high number of new visitors suggests that you are successful at driving traffic to your site, while a high number of return visitors suggests that the site content is engaging enough to keep visitors coming back. You can see how frequently visitors return and how many times they return in 'Recency' report and the 'Loyalty report', both under 'New vs. Returning' in the Visitors section.
- **Languages**. Uses the language provided by the HTTP Request for the browser to determine site visitors' language. Values are given in 2- or 4-character language code (for example, en-br for British English).

  This report captures the preferred language that visitors have configured on their computers. Understanding who your visitors are is crucial to developing the right content and optimizing your marketing spend. Many times, geo-location is not enough. Many countries have diverse populations speaking different languages which present important market targeting opportunities.

- **User defined**. If you modified the tracking code to provide a user-defined segment, this field identifies that segment by the string you provide when setting up a user-defined segment.

Visitor trending



- **Visits**. The number of visits your site receives is the most basic measure of how effectively you promote your site. Starting and stopping ads, changing your keyword buys, viral marketing events, and search rank influence the number of visits your site receives.
- **Absolute Unique Visitors**. The number of unduplicated (counted only once) visitors to your website over the specified time period. A Unique Visitor is determined using cookies.
- **Pageviews**. The total number of pages viewed on your site. It is a general measure of how much your site is used. It is more useful as a basic indicator of the traffic load on your site and server than as a marketing measure.
- **Average Pageviews**. Average pageviews is one way of measuring visit quality. A high Average Pageviews number suggests that visitors interact extensively with your site. A high Average Pageviews results from:
  - Appropriately targeted traffic (that is, visitors who are interested in what your site offers)
  - High quality content presented effectively

  Conversely, a low average pageviews indicates that traffic coming to the site has not been appropriately targeted to what the site offers or that the site does not deliver what the visitor expected.
- **Time on Site**. One way of measuring visit quality. If visitors spend a long time visiting your site, they may be interacting with it extensively. However, Time on site can be misleading because visitors often leave browser windows open when they are not actually viewing or using your site.
- **Bounce Rate**. The percentage of single-page visits (that is, visits in which the person left your site from the entrance page).

  Bounce rate is a measure of visit quality, and a high bounce rate generally indicates that site entrance (landing) pages are not relevant to your visitors. You can minimize Bounce Rates by tailoring landing pages to each keyword and ad that you run. Landing pages should provide the information and services that were promised in the ad copy.

Browser capabilities

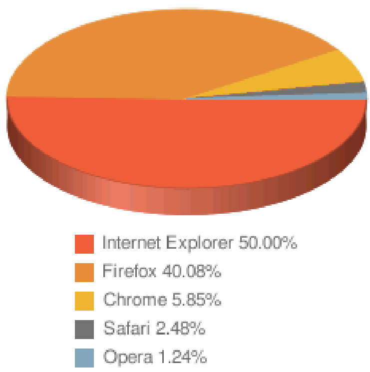
Optimizing your site for the appropriate technical capabilities helps make your site more engaging and usable and can result in higher conversion rates and more sales.

Browsers

34,589 visits used 20 browsers

Browser	Visits	%
Internet Explorer	17,294	50.00%
Firefox	13,864	40.08%
Chrome	2,024	5.85%
Safari	858	2.48%
Opera	429	1.24%
Mozilla	68	0.20%
Opera Mini	14	0.04%
SeaMonkey	9	0.03%
Mozilla Compatible Agent	7	0.02%
Konqueror	5	0.01%
Yandex	4	0.01%
Galeon	2	0.01%
Netscape	2	0.01%

Contribution to total



- **Browsers**. The browsers that your visitors use.
- **Operating Systems**. The operating systems that your visitors use.
- **Browsers and OS**. The browser/operating system combinations that your visitors use.
- **Screen Colors**. The number of screen colors your visitors use.
- **Screen Resolutions**. The screen resolutions that your visitors use.
- **Flash Versions**. The versions of Flash that your visitors have installed.
- **JavaSupport**. Whether Java is supported on your visitors' platforms.

Network properties

Network Location

25,242 visits came from 5,323 network locations

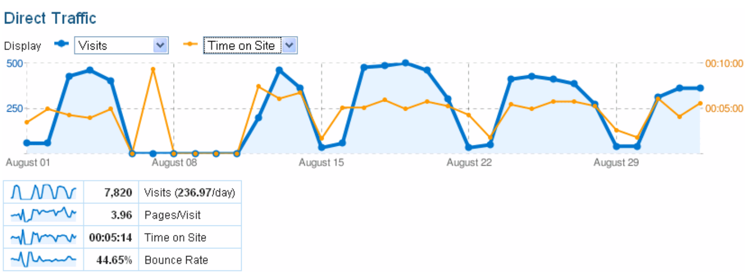
Network Location	Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate
sprint	1,741	4.82	00:06:20	14.65%	39.86%
road runner holdco llc	755	3.03	00:02:59	56.69%	56.29%
comcast cable communications inc.	456	2.35	00:02:45	75.66%	67.54%
ektron inc.	434	1.81	00:01:43	6.22%	75.12%
verizon internet services inc.	392	2.93	00:02:38	68.11%	62.24%
internet service provider	338	2.83	00:03:43	69.23%	73.37%
cox communications inc.	224	5.10	00:08:45	41.96%	46.43%

- **Network Location**. The internet service providers that your visitors use. This report lets you track the internet service provider (ISP) domains to which the user resolves.

  The domain is determined by the internet service that owns the user's internet protocol (IP) identifier.
- **Hostnames**. Hosts from which people are visiting your site. Hostnames sometimes provide insight into organizations that are interested in what you offer.
- **Connection Speeds**. Connection speeds that your visitors are using. Optimizing your site so that it loads quickly for most visitors can result in higher conversion rates and more sales.

Traffic sources

This section provides an overview of the different kinds of sources that send traffic to your site. The graph shows traffic trends; the pie-chart and tables show what is driving the trends.



- **Direct Traffic**. Visits from people who clicked a bookmark to come to your site or who typed your site URL directly into their browser. Direct traffic can include visitors recruited via offline (i.e. print, television) campaigns.
- **Referring Sites**. Externals sites from which visitors linked to your site.
- **SearchEngines**. Visitors who clicked to your site from a search engine result page.
- **All TrafficSources**. Visitors referred from search engines, sites, and tagged links. The graph shows the overall trends while the table shows the specific sources (i.e. search engines, sites, and tagged links) driving the trends.
- **Keywords**. Compares traffic from search keywords to overall traffic to your site.
- **Campaigns**. How people referred from your configured campaigns compare to the "average" visitor to your site.

  The graph shows overall trends, while the table lists each configured campaign. Because all traffic in this report results from campaigns that you explicitly control, you can use this information to add or delete campaigns, or to determine the effectiveness of tests that you have set up using custom tags.
- **Ad Versions**. Compares your AdWords ads (and configured campaigns in which you use the "content" tag) against each other.

  This report shows you which ad copy (in AdWords ads or in configured campaigns) is most effective. Ads with high clickthrough rates show that the copy is effective at getting the user to click, while high bounce rates, for example, indicate a need for landing pages that are consistent with what the ad promises.

Content

This report provides an overview of pageview volume and lists the pages (Top Content) that were most responsible for driving pageviews. You can also reach some useful reports that reveal how users interact with your site and statistics related to how they found your site in the first place.

NOTE: Content reports include a link icon ( ) and a hyperlink. If you click the link icon, you go to the page. If you click the hyperlink, you see a more detailed Analytics report about that page.

Top Content

16,091 pages were viewed a total of 88,948 times

Page	Pageviews	Unique Pageviews	Avg. Time on Page	Bounce Rate	% Exit
/	7,300	6,031	00:01:10	26.98%	25.41%
/forum.aspx	4,729	2,887	00:00:59	22.65%	10.51%
/kb_article.aspx?id=5982	4,341	3,993	00:04:32	91.61%	90.65%
/forum.aspx?g=topics&f=80	3,137	1,107	00:02:31	29.51%	12.88%
/support.aspx	2,117	1,645	00:01:28	37.67%	34.10%
/forum.aspx?g=search	1,729	911	00:01:31	43.86%	19.26%

- **Top Content**. The most commonly viewed pages on your site, and how they are used.

  The table lists all pages which were viewed on your site. A high bounce rate indicates a landing page that should be redesigned or tailored to the specific ad which links to it. A high 'Time on Page' may indicate content that is particularly interesting to visitors. The significance of exits varies according to each page. For example, it may be common for visitors to exit your site from a receipt or “thank you” page because they have completed a conversion activity. In contrast, a high number of exits from a non-goal page (from a funnel page, for example) may indicate that the page is confusing or that it generates user errors.

- **Content by Title**. The most commonly viewed groups of pages on your site (grouped by title), and how they are used. This report provides the same information in the “Top Content” report, but aggregated by title tag value.
- **Top Landing Pages**. Data on how effectively your landing pages entice visitors to click further into your site. You can lower bounce rates by tailoring landing pages to their associated ads and referral links and placing a clear call-to-action on each landing page.
- **Top Exit Pages**. Pages from which people exit your site.

  The significance of an exit rate varies according to each page. For example, it may be common for visitors to exit your site from a receipt or “thank you” page because they have completed a conversion activity. In contrast, a large number of exits from a non-goal page (from a funnel page, for example) may indicate that the page is confusing or that it generates user errors

Viewing Google segments

Google Analytics has an *Advance Segments* tool that lets you "slice and dice" your Analytics data with great precision. Advanced segments let you choose what types of visits you want to be considered when generating the data for a report." (source: About Advanced Segments)

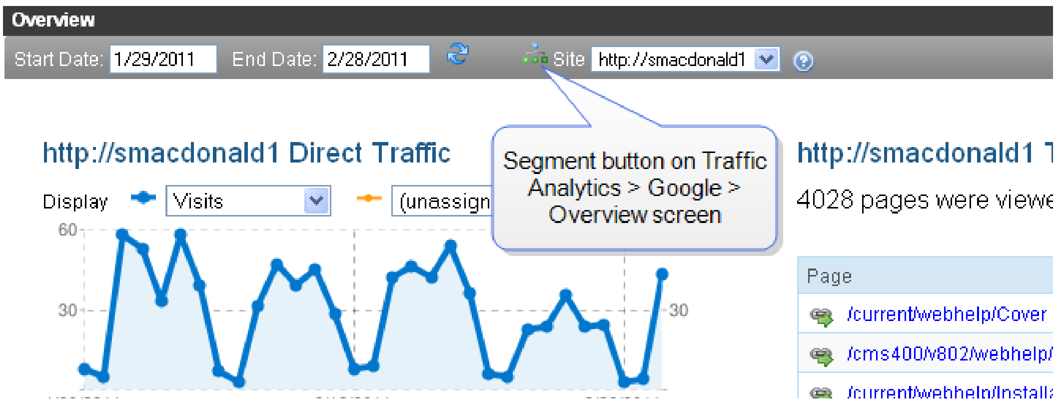
Google segments allow marketers using analytics reports to drill down to specific classes, or segments, of site visitors, such as

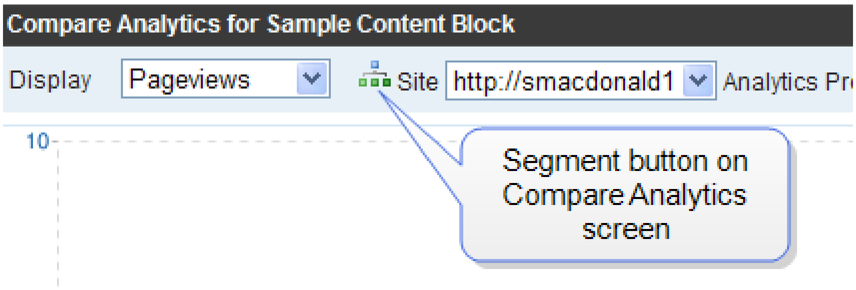
- Users
- Sessions and visitors
- Members and authors

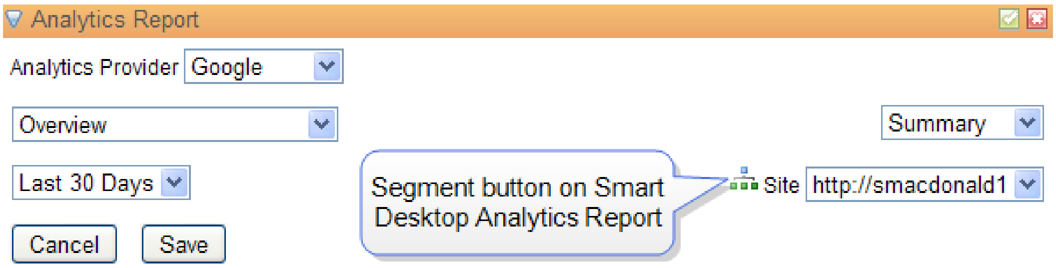
This section explains how to select and view segments within Ektron.

NOTE: While you can view custom segments within Ektron, you must create them within Google Analytics.

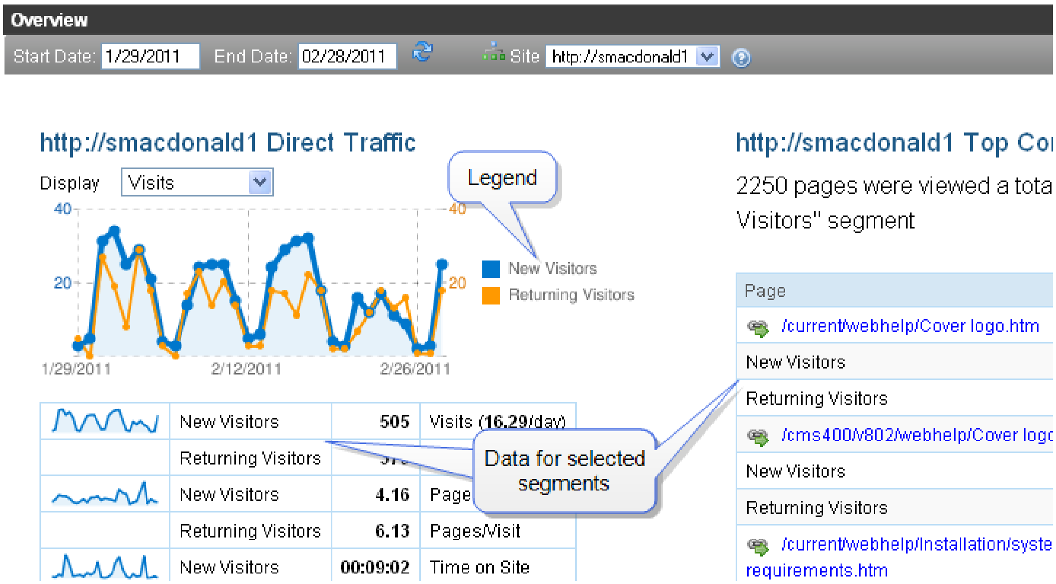
1. Browse to a view of Analytics data. See also:
2. Click **Segment** ( ).







3. The Segments screen appears. Select up to 4 segments to display.
4. The screen refreshes and graphs each segment in a different color. In the following example, new visitors are graphed in blue and returning visitors are orange. Also, the screen breaks down data by each segment.



Running Webtrends analytics

Marketers today face a new set of challenges. With the explosion of new digital channels such as social and mobile, it is even harder to understand customer behaviors and optimize how to communicate with them. Both Webtrends Analytics On Demand and On Premises deliver the industry's most accurate picture of how customers interact with your brand in the digital space.

Real-time data, intelligent alerts, and the ability to easily share information within your organization means you empower your team to make smart and timely decisions based on solid data. You'll find new opportunities, ensure conversions are on track and respond to needs faster than ever before.

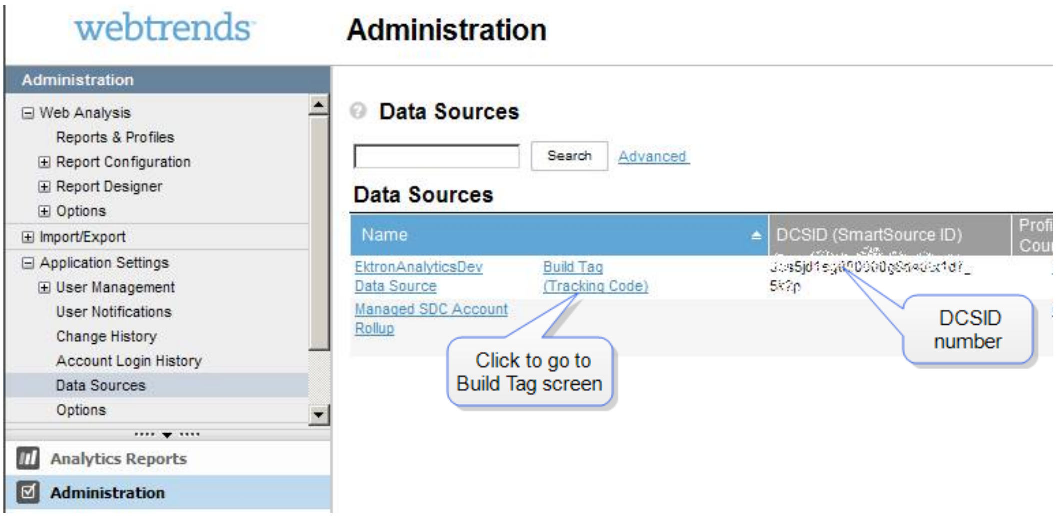
Setting up Webtrends analytics

PREREQUISITE

- Webtrends On Demand 2.1 and 3
- You have permission to edit files on the Ektron Web server.

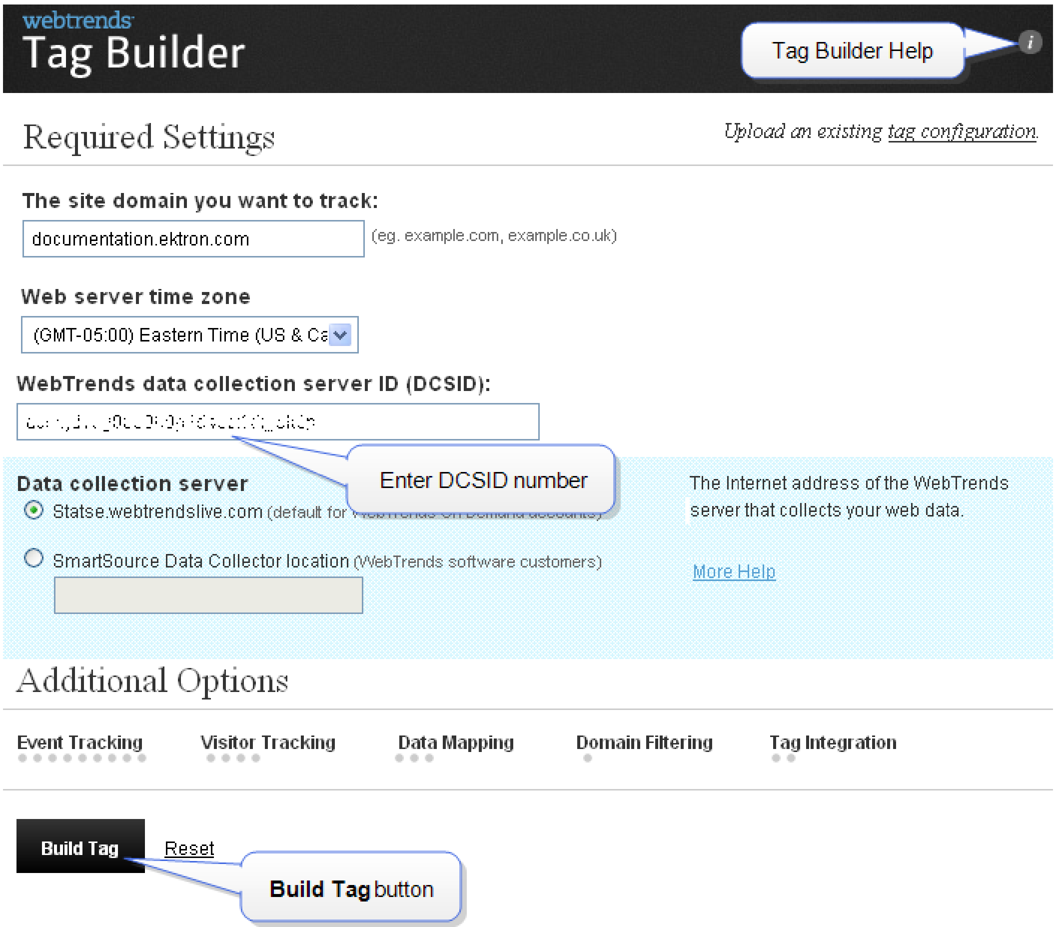
To set up Webtrends Analytics to work with Ektron:

1. Create a Webtrends Account and create a tracking script.
   a. Set up a Webtrends account: Webtrends Developer Network.
   b. Webtrends sends you an account name, username, and password.
   c. Log into Webtrends using this URL: Webtrends Developer Network Login.
   d. Use your Webtrends account name, username, and password.
   e. From that page, follow this menu path: **Administration> Application Settings > Data Sources**.
   f. Click **New**. A Data Source Wizard screen appears.
      - Enter a name for the data you will retrieve.
      - Select your server's time zone.
      - Click **Next**.
      - A summary of the information you entered appears along with a **Webtrends data collection server ID (DCSID)** value.
      - Click **Save**. The Data Sources screen reappears with your new data source.
   g. Copy your Data Source ID number (**DCSID**), indicated in the following figure. You will use this number in the next step.



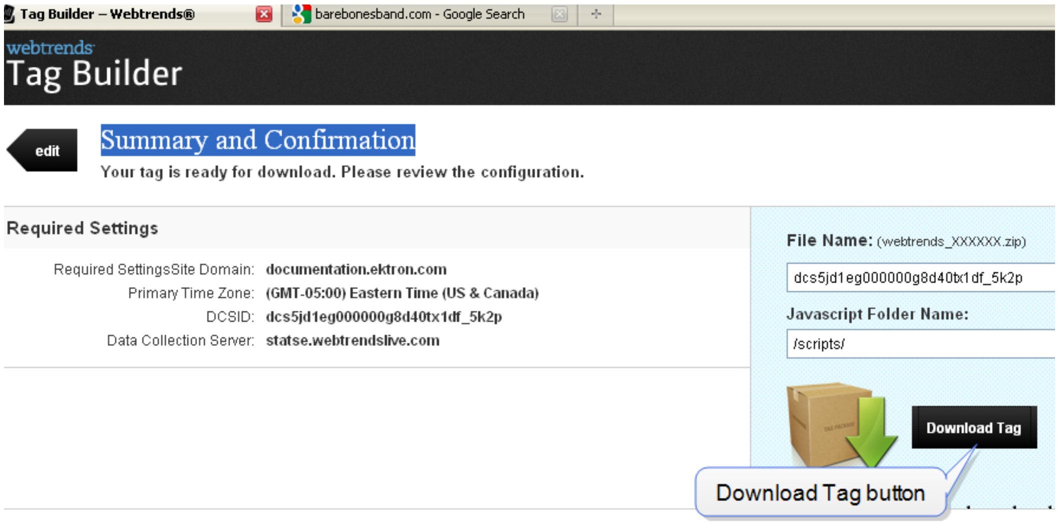
2. Build the Tracking Files. In this step, you tell Webtrends the type of data you want to track. Webtrends then generates files that track that data.

a. Open Webtrends' Tag Builder page: Webtrends Tag Builder
b. From the Data Sources screen, you can click **Build Tag (Tracking Code)**.
c. Complete this page, which prompts you to identify which data Webtrends should track.
d. Into the page's **Webtrends data collection server ID (DCSID)**field, paste the number you copied in Step 1g above. For help completing the Tag Builder page, click the information button in the top right corner.



e. Click the **Build Tag** button. Webtrends generates files you will use to track usage statistics. The **Summary and Confirmation** screen appears.

f. Click the **Download tag** button.



g. Save the .zip file to your computer.

3. Copy Webtrends tracking files to Ektron. In this step, you replace the `Webtrends.html` file in your Workarea folder with the one you downloaded, and you replace the `<div>` tag in your Workarea's `Webtrends.ascx` file with the one in the downloaded file of the same name.
   a. Extract the .zip file you downloaded.
   b. Open the folder that contains the extracted files.
   c. Copy `Webtrends.js`.
   d. Paste it into the *site root*`\Workarea\Analytics\template` folder. This action replaces a file of the same name.
   e. In the folder that contains the extracted files, open `Webtrends.html`.
   f. Copy the following `<div>` tag.

```
<div><img alt="DCSIMG" id="DCSIMG" width="1" height="1"
src="http://statse.webtrendslive.com/dcs5jd1eg000000g8d40tx1df_5k2p
/njs.gif?dcsuri=/nojavascript&amp;
WT.js.No&amp;WT.tv9.3.0&amp;WT.dcssip=www.documentation.ektron.com"/>
</div>
```

   g. In the *site root*`\Workarea\Analytics\template` folder, open `Webtrends.ascx`.
   h. Replace the `<div>` tag with the one you copied.

4. Update Ektron's `web.config` file. You must have permission to edit files on your Ektron Web server.
   a. Obtain a value for your `web.config` file's `ProfileFileName` property by going to https://ws.Webtrends.com/v2/ReportService/profiles/?format=xml. (Authentication required.)
      - In the **User name** field, enter your **account name\username** that you obtained.

- In the **Password** field, enter your password. A screen displays your Webtrends profile as follows.

```
<?xml version="1.0" encoding="utf-8" ?> –
<list> –
  <ProfileDefinition>
    <string name="ID">ABCD1234</string>
    <string name="name">MyAnalyticsAccountName</string>
    <decimal name="AccountID">234567</decimal>
    <decimal name="TimeZoneID">-500</decimal>
  </ProfileDefinition>
</list>
```

You will use the `string name` value (highlighted in red), `ProfileFileName` property.

b. Open your *`siteroot`*`/web.config` file
c. Find the tag beginning with `<add name="Webtrends"`.
d. Replace the `Webtrends` tag's properties.
  - **Name**. The name displayed on the report. If you have several accounts, you can use names like these.
    - Webtrends. developer.ektron.com
    - Webtrends. document.ektron.com

    However, the value of this field for one analytics provider must match the value of the `<AnalyticsDataProvider defaultProvider>` tag.
  - **Type**. Do not change.
  - **Username, Password**.
    1. Go to `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities\EncryptEmailPassword.exe`.
    2. Encrypt the Webtrends username and password you obtained.
    3. Enter the encrypted values into these properties.
  - **ProfileFileName**. Enter the string name value you obtained.
  - **SiteURL**. Enter the URL visitors use to access your site. For example, www.example.com.
  - **UserAccount**. Enter the account name you obtained.
  - **Endpoint**. The default endpoint value is `https://ws.Webtrends.com/v2/ReportService/`. You only need to update this value if you are not using the default Data Collection Server on the Tag Builder page.
  - **Cache Interval**. Use to cache the Analytics provider's data. Enter a number in seconds. The maximum 86400. Caching improves the performance of the traffic report page.
  - **AnalyticsTrackingCodePath**. Do not change.

Displaying Webtrends site reports

You can access Webtrends analytics reports within the Workarea by selecting **Reports > Traffic Analytics > Webtrends**.

Refer to the following WebTrends manual for information about specific reports: Webtrends Administration User Guide> Chapter 32 : Webtrends Analytics Report Library

Display options

Webtrends reports provide the following display options.

Data table

Search Engines: Keywords

Start Date: 10/30/2011 End Date: 11/29/2011 Site www.example.com

www.example.com Search Engines: Keywords

View: Data Table

Search Engine	Visits	Page Views	Avg Visit Duration (Min)	Single Page View Visits	Entry Page Visits
Google	4454	22548	2.86	1969	8215
Google UK	887	5087	2.74	372	1858
Google Product Search	759	4164	3.09	405	1639
Google India	732	5269	3.24	368	2288
Google Canada	629	3628	3.13	271	1282
Bing	503	2963	2.80	200	992
Google Australia	418	2147	2.93	183	853
Yahoo	141	941	2.83	52	287
Google Germany	109	475	1.61	70	226
Google Netherlands	107	560	2.60	50	234

Bar chart

Search Engines: Keywords

Start Date: 10/30/2011 End Date: 11/29/2011 Site www.example.com

www.example.com Search Engines: Keywords

View: Bar Chart

Search Engine	Visits	Page Views	Avg Visit Duration (Min)	Single Page View Visits	Entry Page Visits
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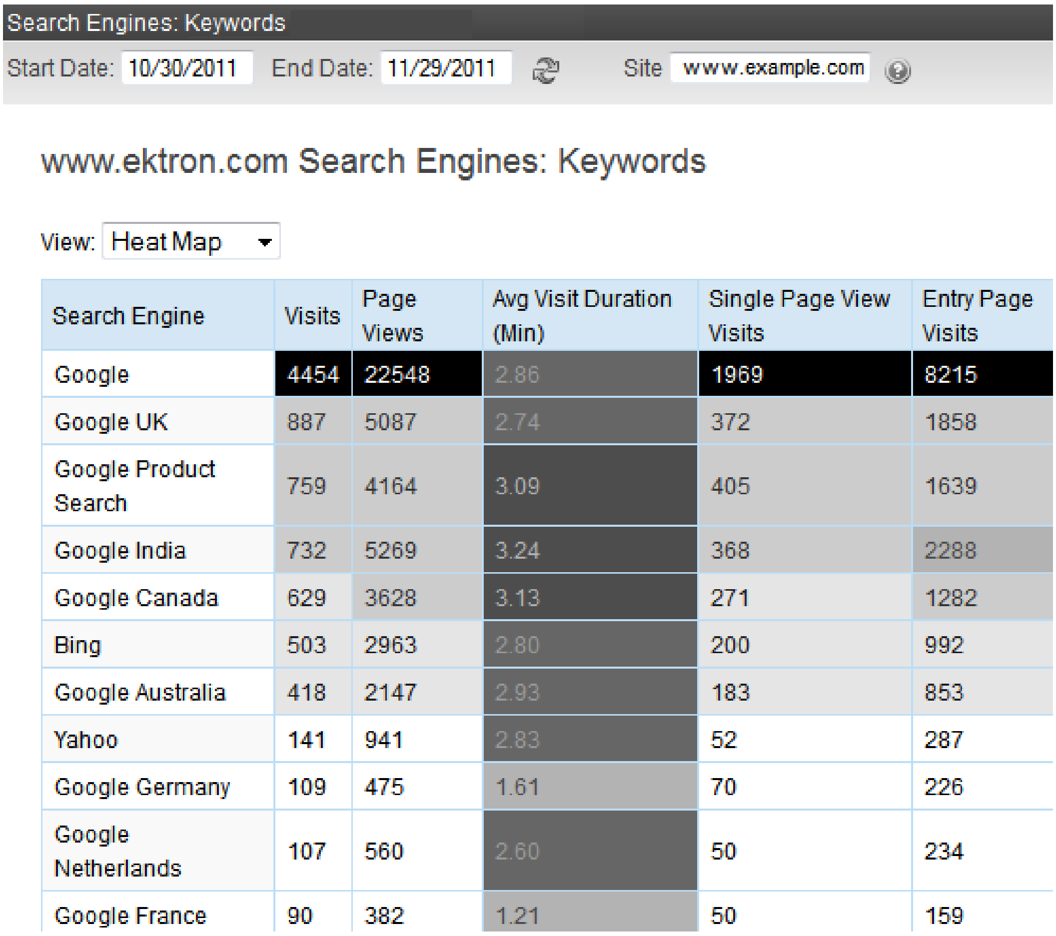
Google India	732	5269	3.24	368	2288
Google Canada	629	3628	3.13	271	1282
Bing	503	2963	2.80	200	992
Google Australia	418	2147	2.93	183	853
Yahoo	141	941	2.83	52	287

Heat map



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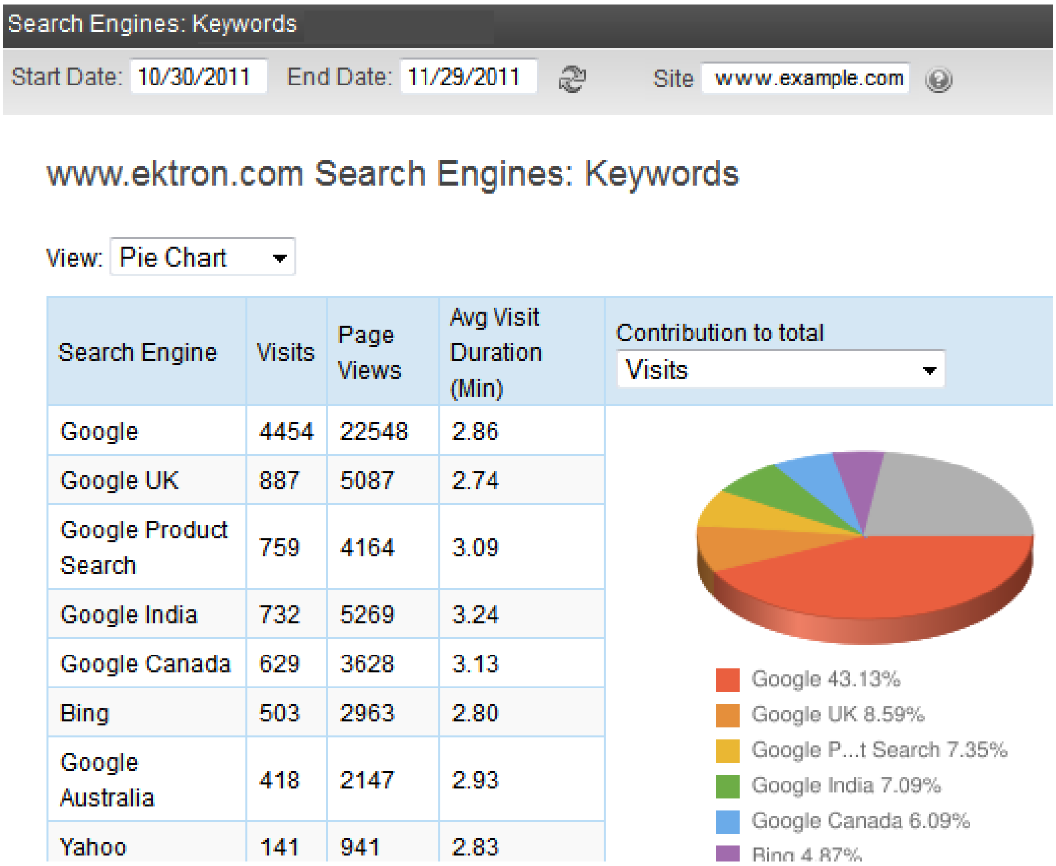
Google India	732	5269	3.24	368	2288
Google Canada	629	3628	3.13	271	1282
Bing	503	2963	2.80	200	992
Google Australia	418	2147	2.93	183	853
Yahoo	141	941	2.83	52	287
Google Germany	109	475	1.61	70	226
Google Netherlands	107	560	2.60	50	234
Google France	90	382	1.21	50	159

Pie chart



From the pie chart, you can change the display to see percentages of the following factors.

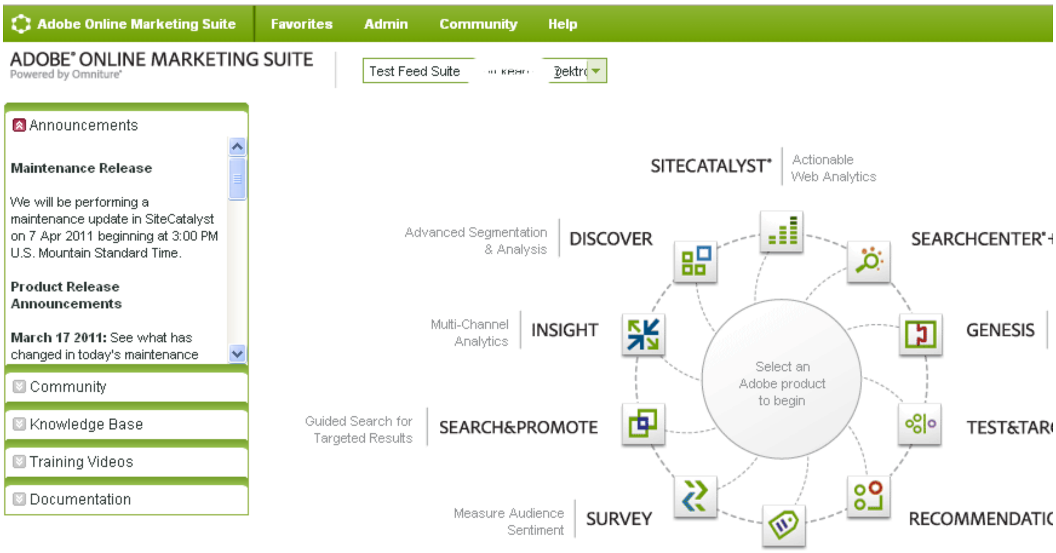
- Visits
- Page views
- Average visit duration (minutes)
- Single page view visits
- Entry page visits

Running Adobe Analytics

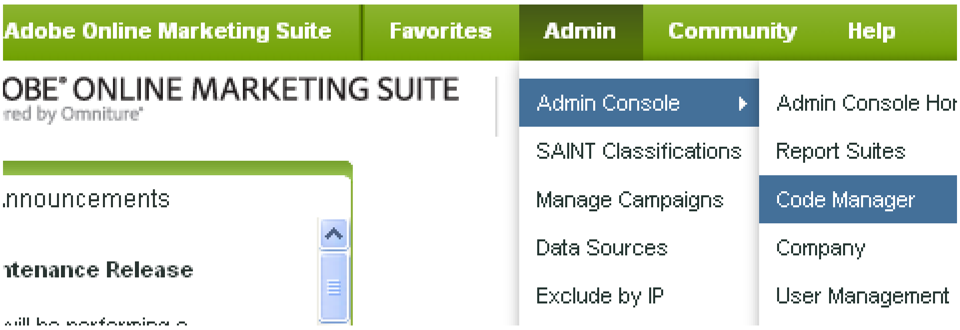
Adobe Analytics® (formerly known as Omniture SiteCatalyst) provides marketers with actionable, real-time intelligence about online strategies and marketing initiatives. Adobe Analytics helps marketers quickly identify the most profitable paths through their website, determine where visitors are navigating away from their site, and identify critical success metrics for online marketing campaigns.

To set up and monitor Web traffic analytics using Adobe Analytics.

1. Log onto site and generate tracking code.
   a. Contact Adobeand set up an account to use Adobe Analytics.
   b. Use the information Adobe provides (URL, username, password, and so on) to log in to Adobe Online Marketing Suite.



c. Click **Admin > Admin Console > Code Manager**.



d. In the **Select the type of code to generate** drop-down, choose **Javascript**.

e. In the **Select a Report Suite that collects data for your website** drop-down, choose a report suite you selected when setting up your Adobe Analytics account.

f. In the **Match the Character-Encoding of your website** drop-down, choose UTF-8.

g. In the **Choose your Currency for Tracking Conversion** drop-down, choose your currency.

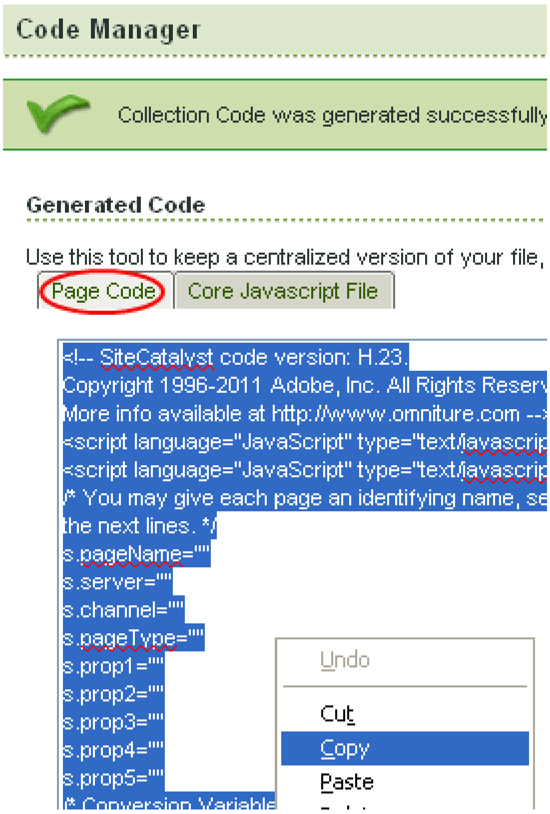
h. In the **How many periods are in your domain name?** drop-down, enter the appropriate number. The screen shows an example.

i. If your site uses SSL, check the box next to **Use https:// instead of http://?**. See also: *Setting up the certificate for IIS 7* on page 73.

j. Click **Generate Code**.

2. Copy the tracking code to `sitecatalyst.ascx`.

    a. The Code Manager screen displays code to track analytics on your Ektron site. Copy the code under the **Page Code** tab.



b. Open the following file: *`site root`*`\Workarea\Analytics\template\sitecatalyst.ascx`.

c. Delete all text *below* the following line.

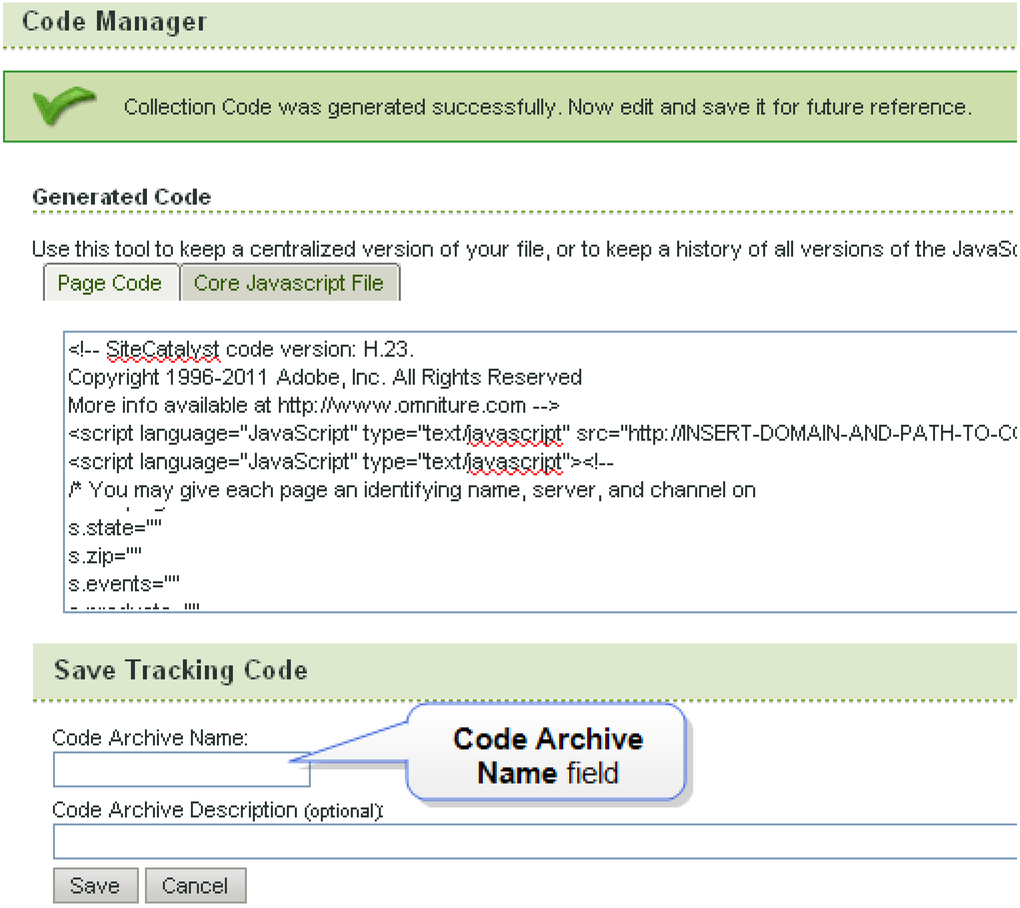
```
<%@ Control Language="C#"
  AutoEventWireup="true"
  CodeFile="sitecatalyst.ascx.cs"
  Inherits="Analytics_Template_Adobe Analytics"
  EnableTheming="false" EnableViewState="false" %>
```

d. Paste the code you copied in Step 1 into `sitecatalyst.ascx`, below the line shown in step c.

e. Save `sitecatalyst.ascx`.

3. Copy the `s_code.js` file to Workarea folder.

   a. Use the Code Manager screen's **Code Archive Name** field to assign a name to the files you created in the previous step.

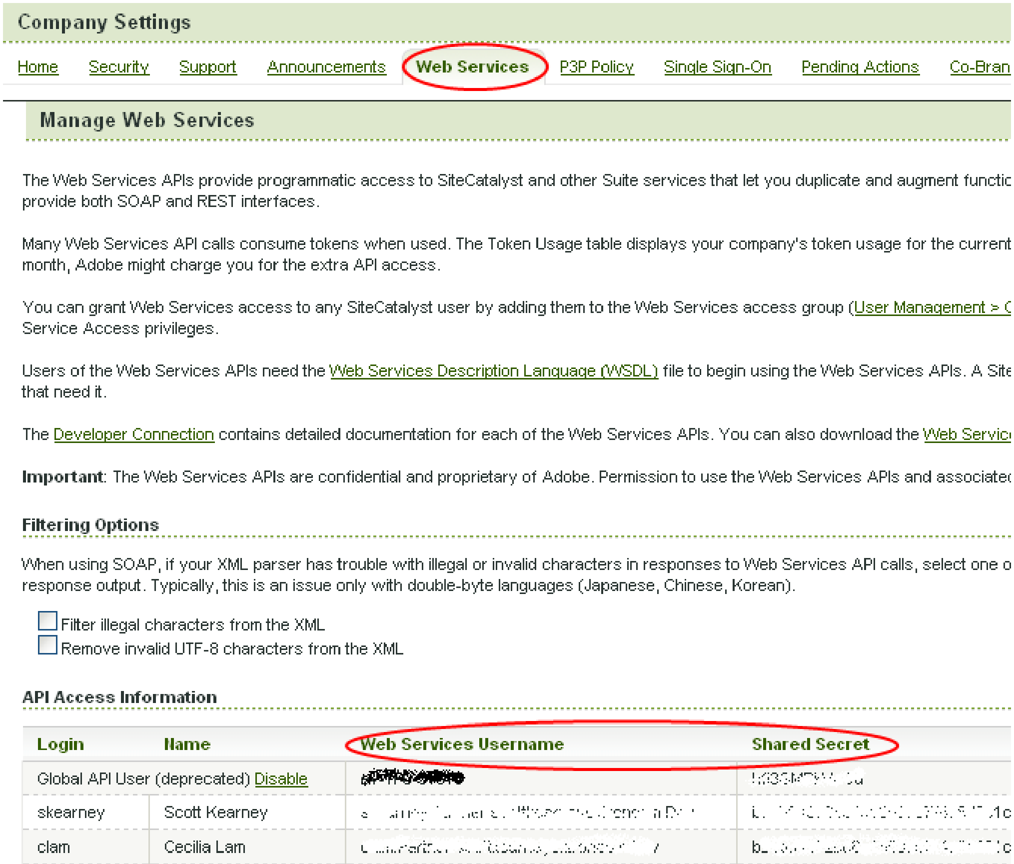


b. Use the **Code Archive Description** field to assign a more detailed description to the files you created in Business Analytics.
c. Click **Save**. Code Manager compresses the Page Code and Core JavaScript files into a .zip file, and displays them under **Saved Code**.
d. Click **Download** next to the saved .zip file. You are prompted to download the .zip file to your computer.
e. Click **OK**.
f. Open the downloaded .zip file.
g. Extract the `s_code.js` file to *site root*`\workarea\analytics\template`. You may be prompted to confirm that you are overwriting a file of that name already in the folder.

4. Update Ektron's `web.config` file.

PREREQUISITE

Your Adobe Analytics Web Services Username and Shared Secret. To obtain, log in to Adobe Online Marketing Suite and click **Admin > Admin Console > Company > Company Home > Web Services**.



a. Open your *siteroot*/`web.config` file.

b. Find the tag beginning with `<add name="SiteCatalyst"`.

c. Replace the Adobe Analytics tag's properties.
   - **Name**. Do not change.
   - **Type**. Do not change.
   - **Username, Secret**.
     1. Go to `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities \EncryptEmailPassword.exe`.
     2. Encrypt the Adobe Analytics Web Services Username and Shared Secret you obtained.
     3. Enter the encrypted values into these properties.
   - **CompanyName**. Enter the company name obtained from Adobe when your account was created.
   - **ReportSuiteID**. Enter the ReportSuiteID obtained from Adobe when your account was created.
   - **SiteURL**. Enter the site URL. For example, `www.example.com`.
   - **Endpoint**. Enter your account's endpoint. You obtain one when you set up your Adobe Analytics account. An endpoint looks like this: `https://api-sbx1.omniture.com/admin/1.2/rest/`.

- **CacheInterval**. You can use this field to cache the Analytics provider's data. Enter a number in seconds. The maximum 86400 (24 hours). Caching improves the performance of the traffic report page.
- **AnalyticsTrackingCodePath**. Do not change.

Adobe Analytics reports

You can access site-level Adobe Analytics reports from within the Workarea by selecting **Reports > Traffic Analytics > Adobe Analytics**.

NOTE: The descriptions were adapted from Adobe Analytics Analytics Help Center (Adobe Marketing Cloud Sandbox Sign In). Check that site for additional details on the reports.

- *Analyzing site statistics* on page 489
- *Site content* below
- *Mobile* on the next page
- *Paths* on the next page
- *Traffic sources* on page 531
- *Products* on page 550
- *Visitor retention* on page 550
- *Visitor profile* on page 550

Site metrics

Page views

Displays the number of times your website pages were viewed for the selected time period (hour, day, week, month, quarter or year). This report lets you track page views for each individual page on your site, as well as an aggregate of page views for your website as a whole.

Visits

Displays the number of visits made to your website during the selected time period.

Daily unique visitors

Shows the number of unique visitors to your site for a selected daily time frame. A unique visitor is counted the first time he/she visits your site within the selected time frame. If a visitor returns again to your site, they are not counted as a unique user again until the selected time frame has passed.

Time spent per visit

Reveals the length of time visitors spend viewing your site as a whole during each visit. It also has an Average Time Spent on Site statistic that shows the average time that was spent viewing your site, taken across all visitors.

Site content

Pages

Ranks pages on your site based on those that receive the most traffic.

Site Sections

Shows the areas of your site that were visited most by your site customers. Site Sections could include (but are not limited to) groups of products, similar to Categories. Data for the Conversion Site Sections report is imported from the Site Section report in the Traffic group, which receives its information from the channel variable in the Adobe Analytics tracking code. You can use this report to identify the greatest impact on site statistics from items in varying site sections.

Servers

Adobe Analytics lets you group pages together that are being hosted by a particular server. For example, if you have a website that is hosted on two different servers, you may want to see if one server is serving more impressions than the other server. This report lists all of the servers of your website that are being tracked by Adobe Analytics and tells you which servers are being accessed the most.

Exit links

Shows links that your visitors click to leave your site and go to another site. Exit links are those links that take your visitor to another site. Most common examples of exit links are links to partners, affiliates, and so on.

Custom links

Shows links your site visitors prefer, helping you better understand the navigation patterns within your site.

File downloads

Displays files that have been downloaded from your website. These files can be any type of document you wish to track, including user manuals, presentations, audio, or video files. This report requires that link tracking code to be installed on the site you are tracking.

Pages not found

Lists the number of times a Page Not Found (404- error) page appears to your site visitors and lists the URLs of the pages that were not found.

Mobile

Mobile

Several criteria about mobile devices visitors use to access your site, such as device type, screen size, audio support, and so on.

Paths

Reloads

Shows the number of times individual pages were reloaded by page visitors.

Page depth

Identifies the depth at which each page within your site is visited. Depth for a page is measured by counting the number of pages viewed before that page. So, if your "About Us" page is the third page visited by a given visitor, its depth for that visit is 3. You can use this report to identify which pages compel your visitors to travel the deepest into your site and to optimize content and navigation to make key content more accessible.

Time spent on page

Displays the length of time that visitors browse individual pages in your site. The time spent is divided into 10 categories: less than 15 seconds, 15-30 seconds, 30-60 seconds, 1-3 minutes, 3-5 minutes, 5-10 minutes, 10-15 minutes, 15-20 minutes, 20-30 minutes and greater than 30 minutes.

Entry pages

Shows, by percentage and total visits, which pages on your site are the first ones seen by new visitors.

Original entry pages

Shows the first page viewed of the first-ever visit to your site. Each user is counted only once unless they delete their cookies or are not being tracked with cookie

Traffic sources

Search keywords—All, Paid

Displays a breakdown of each search keyword that has been used to find your site. You can sort this list by page views or search keywords by clicking the column title above the listing. Click on the blue magnifying glass next to each search keyword to see the actual search results screens where your site was listed.

Search engines—All, Paid, Natural

Helps you learn which search engines people are using to find your Web page. The graph shows you the percentage breakdown of the search engines that have been used to find your site.

All Search Page Ranking

Shows the results pages on which your site links were located in the user's searches that were performed. For example, a user who came to your site from a search engine may have seen you on the third of one hundred pages of results. This can help you quickly see and optimize search engine efforts. Data for this report may be viewed for all but the 'Hourly' time period.

Referring domains

Shows the domains that referred the customers that most impacted your site's Success Metrics. Referrers fall into 2 main categories: Domains and URLs. Domains refer to the domain name, and appear as the base domain without the query string or subdirectories attached. URLs include the base domain name, as well as any query strings or subdirectories.

Original Referring Domain

Shows the original referrers that produced the customers on your site. Customers can visit your site multiple times, and have a different referrer for each visit. This report shows how they were referred the first time they arrived at your site. This can help you see if they continued to use the same referrer and view patterns in how customers are referred to your site. You can view the number of visitors generated by an original referrer or discover how much revenue each original referrer was responsible for producing.

Products

Helps you identify how individual products and groups of products (categories) contribute to your various conversion metrics, such as revenue or checkouts.

Visitor retention

Return frequency

Shows the number of visitors who returned to your site within one of the following categories (representing the time lapse between visits): less than 1 day, 1-3 days, 3-7 days, 8-14 days, 14 days to 1 month and longer than 1 month.

Visit number

Provides another method for gauging visitor loyalty by displaying the visit number for each visitor that comes to your site.

Visitor profile

Geosegmentation

- **Countries**. Shows countries from which visitors access your site. In addition to the standard "Ranked" and "Trended" views available on most reports, there is also a "Map" view that color-codes the countries according to their relative contribution to your total traffic-the more intense the color the greater the number of daily unique visitors from that country that are visiting your site
- **Regions**. Shows regions from which visitors access your site. To the right of each region shown, the country of the region is also shown in parentheses. Clicking the magnifying glass icon to the left of the region will open the line item in the Adobe Analytics Cities Report. With this report, you can see how a selected region performed compared to another on your web site.
- **State**. The U.S. states from which visitors access your site.
- **Zip/postal code**. Shows the zip and postal codes that produced the customers that had the greatest effect on purchase success metrics.
- **Cities**. Shows U.S. cities from which visitors access your site.
- **U.S. DMA** (Designated Market Area). Shows the marketing areas within the United States from which visitors access your site. By clicking the link next to State in the Report Status header, you may restrict the report to marketing areas within a particular state. This data is provided via a partnership between Omniture and Nielsen Media Research, Inc. By clicking the Visitors Per Capita link next to Display in the Report Status header, you can adjust the data by the

relative population of each marketing area. Enabling this option shows both the number of daily unique site visitors per 10,000 people living in the market area as well as the percent above or below the national average value. You can also generate a Correlation report by clicking the Correlation icon next to one of the market areas and selecting the item with which you want to correlate the data.

- **Visitor Home Page**. Another method of gauging visitor loyalty and assessing the perceived value your visitors place on your website's content. The report shows how often your visitors mark a page on your website as their 'Home Page' in their browser.
- **Language**. Displays your visitors' preferred languages. The Languages Report captures the default browser language and displays those most used by visitors to your site.
- **Time zone**. Displays the time zones your visitors are located in when they view your site. This report superimposes a bar graph (indicating the number of visitors) on a map of the world so you can quickly see what part of the world your visitors are from.
- **Domains**. Lists the organizations and ISPs your visitors use to browse your site. This report differs from the Full Domains report in that the Full Domains report registers the full ISP domain, whereas this report lists the secondary domain.
- **Top Level Domains**. Identifies world regions that visitors come from, based on their originating domain extension, and shows how many visitors come from these countries. Domains ending in Commercial (.com), Network (.net), Education (.edu), Government (.gov) and Organization (.org) are usually based in the United States, and are listed separately from the rest of the domains.

Technology

- **Browsers**. Identifies the types and versions of browsers that are used by your visitors.
- **Browser Type**. Classifies the browsers visiting your site into their major families
- **Browser Width, Browser Height**. Shows the most common widths or heights of the browsers (in pixels) your visitors use to view your site.
- **Operating Systems**. Shows which operating systems are being used by your site visitors
- **Monitor Color Depth**. Shows your visitors' most popular color-depth settings as configured on their computer. Color-depth refers to the number of colors that can be displayed on the screen.
- **Monitor Resolutions**. Shows screen resolutions that visitors to your website most commonly use, as configured on their computers.
- **Java, JavaScript**. The JavaScript Version report displays the versions of JavaScript your visitors' browsers use while viewing your site.
- **Cookies**. Shows the percentage of visitors that prefer to use cookies while browsing.
- **Connection Type**. Displays the percentage of your site's visitors that utilize high-speed Internet connections versus slower dial-up connections.

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12

Editing in Ektron

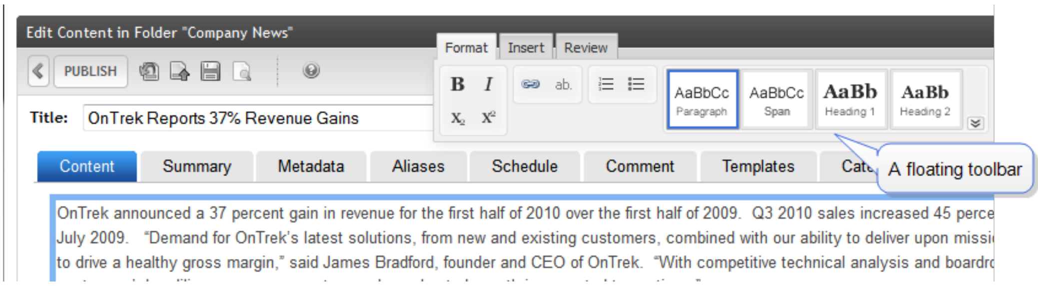
IMPORTANT: If you are using *Internet Explorer 11*, set the following parameters to ensure optimum functionality.
1. Press **Alt/X** to display the Internet Explorer Tools menu.
2. Choose **Compatibility View Settings**.
3. Uncheck **Display intranet sites in Compatibility View**.

If you are using *Internet Explorer 10*, set the following parameters to ensure optimum functionality.
1. Press **F12**. A settings menu bar appears at the bottom of the browser above the tabs.
2. Set **Browser Mode** to **IE10** (*not* Compatibility view).
3. Set **Document Mode** to **Standards**.
4. Click **X** to exit.

In several places within the Ektron Workarea, a rich-text editor appears. For example, when creating or editing HTML content, the editor lets you apply text styling, insert images and tables, and edit the content source. To access these functions, use the editor toolbar.

In some editor locations, the toolbar "floats," and you can drag it to any screen location. In other locations, the toolbar is fixed at the top of the editor. To change a fixed toolbar so that it can float, see *Detaching the editor's fixed toolbar* on page 582

NOTE: If the editor toolbar is floating, you can place it anywhere on the screen and make it stay by clicking on the pin icon ( ). When pinned, the icon changes ( ).



The editor toolbar consists of tabs with buttons. A system administrator can customize the toolbar options depending on the context. For example, he may want the Inspector available when editing content in the Workarea but not while editing "in context." For information about customizations, see *Customizing the editor* on page 581 and *Modifying editor plug-ins* on page 582.

Editor toolbar options

This section describes each button on the editor toolbar, which is organized into 3 tabs. For documentation of additional buttons and tabs available when editing content, see *Creating new content* on page 626.

NOTE: *Customizing the editor's toolbar buttons* on page 586 explains how an Ektron administrator may change the toolbar options.

Format Tab

- —**Bold** (**Ctrl/b**). Make selected text **bold**.
- —**Italic** (**Ctrl/i**). Make selected text *italic*.
- —**Superscript**. Make selected text appear smaller and above text line.
- —**Subscript**. Make selected text appear smaller and below text line.
- —**Add Hyperlink**. Add information about a hyperlink. See *Working with links* on page 558.
- ab—**Display bubble text on content**. See *Displaying bubble text on content* on page 576.
- —**Number**. Begin the line on which the cursor rests with a number. If the line above this line is:
  - not numbered, assign this line 1.
  - numbered, assign a number one more than the line above.

  NOTE: The Number button applies a number to each paragraph. To switch to regular paragraphs, click the button a second time.

- —**Bullet**. Begin the line on which the cursor rests (or all selected lines) with a bullet.

  NOTE: The Bullet button applies a bullet to each paragraph. To switch to regular paragraphs, click the button a second time.

- 

—**Formatting toolbar**. Lets you format selected text.
- 

—**Styling toolbar**. Lets you apply styling to selected text. See also: *Applying styles* on the next page

Insert tab

- . Insert library file. See *Working with files in the library* on page 673.
- . Insert template. See *Using a template to structure content* on page 578.
- . Insert external content (such as a video). See *Editing in Ektron* on page 553*Embedding external content* on page 571
- . Insert a table. See *Working with tables* on page 563.
- Ω. Insert symbols and special characters.
- . Add a hyperlink. See *Working with links* on page 558.
- . Add a bookmark. See *Adding a bookmark* on page 562.
- ab. Display bubble text on content. See *Displaying bubble text on content* on page 576.
- . Insert horizontal line.

Review tab

- **Inspector**. apply properties to selected content. See *Applying refinements with Inspector* on the facing page.
- . Validate content against selected guidelines. See *Validating content* on page 578.
- . Translate content. See *Translating content* on page 580.
- . View content source. See *Viewing and editing HTML source content* on page 576.

Editor notes

- Cut, copy, and paste are accessible through your browser. Right-click to choose them or use keyboard shortcuts. The editor may modify pasted content, depending on tags that an administrator sets in `StyleConfig.js`. For example, headings, bullets, and bold fonts may be maintained during a paste operation, but the actual font may not. See also:*Creating styles and classes* on page 587.

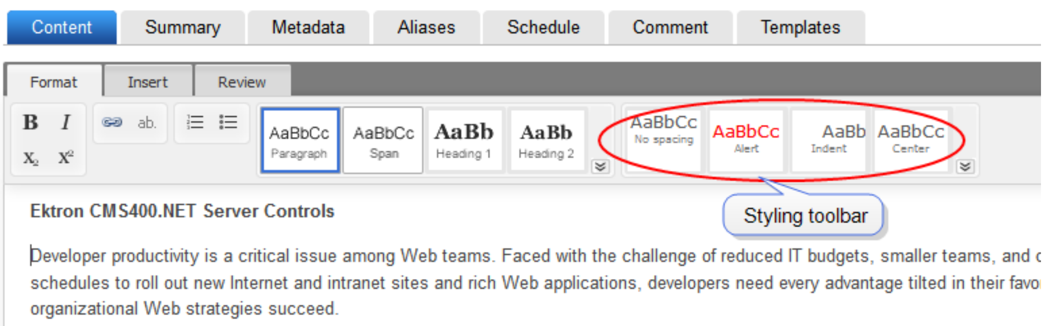
  IMPORTANT: When you paste content from another application, the editor formats that content into valid, minimal HTML and retains as much formatting and styling as possible. However, results are browser-dependent.

- Paste HTML content into the Source Viewer. See also: *Viewing and editing HTML source content* on page 576.
- Your browser checks spelling. If your browser does not support it, find and install a plug-in to do it.

NOTE: If you apply the Span style, you can select it in the Inspector to enter style modifications.

Applying styles

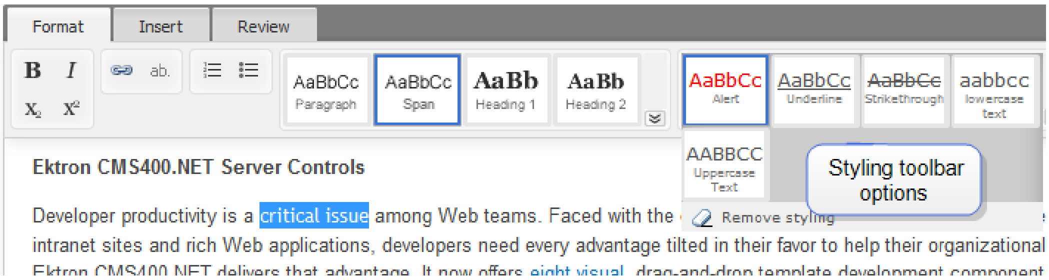
To apply inline styles or style classes to text, use the styling toolbar.



You can select paragraphs or words, then use styling toolbar buttons to style the selected text. Click the down arrow in the toolbar's lower right to view additional buttons. Styling buttons are context-sensitive, so they vary according to cursor location, which format toolbar button is selected, and whether any text is selected.

Place the cursor anywhere inside a paragraph to select it.

For example, within the editor, select the text **critical issue** and click **Span** (
). Next, open the styling toolbar, and click one or more buttons to apply styling.



To modify the style buttons, an Ektron administrator modifies the `styleconfig.js` file, as described in *Creating styles and classes* on page 587.

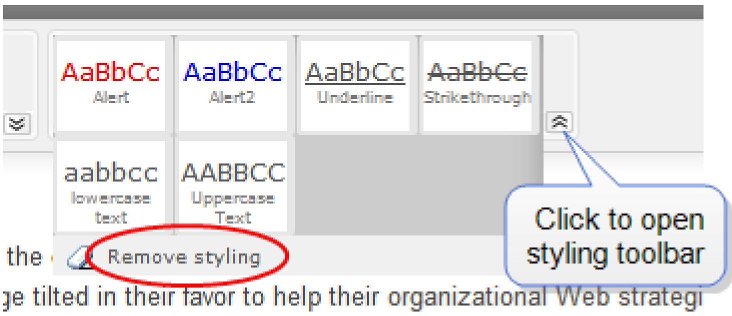
BEST PRACTICE

To enhance your site's appearance, define a set of styles from which content authors can select, instead of letting authors apply styling as needed.

Removing styling from text

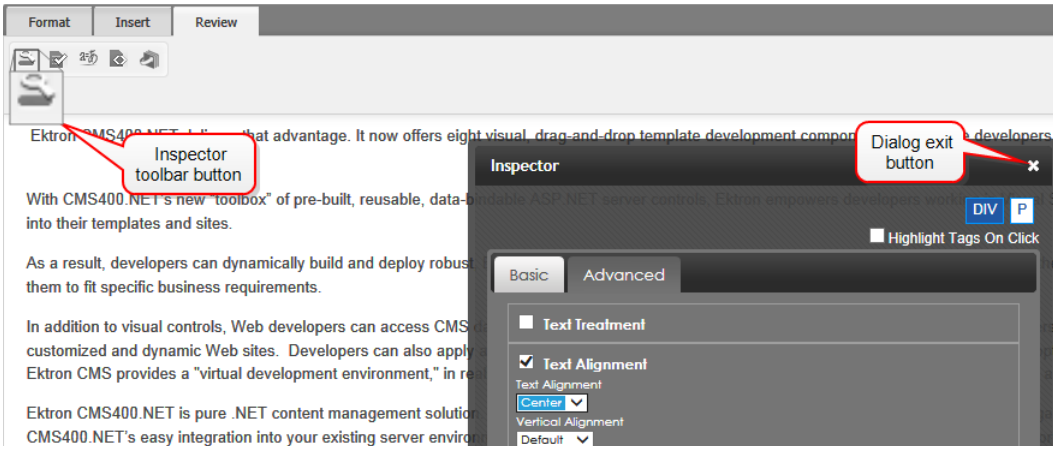
To remove styling from text:

1. Select the text to which the styling is applied.
2. Click the down arrow in the toolbar's lower right.
3. Click **Remove styling**.



Applying refinements with Inspector

Use the Inspector to perform advanced actions on content items (images, hyperlink, paragraphs, and so on). If enabled, the Inspector button appears on the **Review** toolbar tab. Click to open the Inspector dialog, set values, then click the exit button.



NOTE: If you apply the Span style, you can select the affected content in the Inspector to enter style modifications.

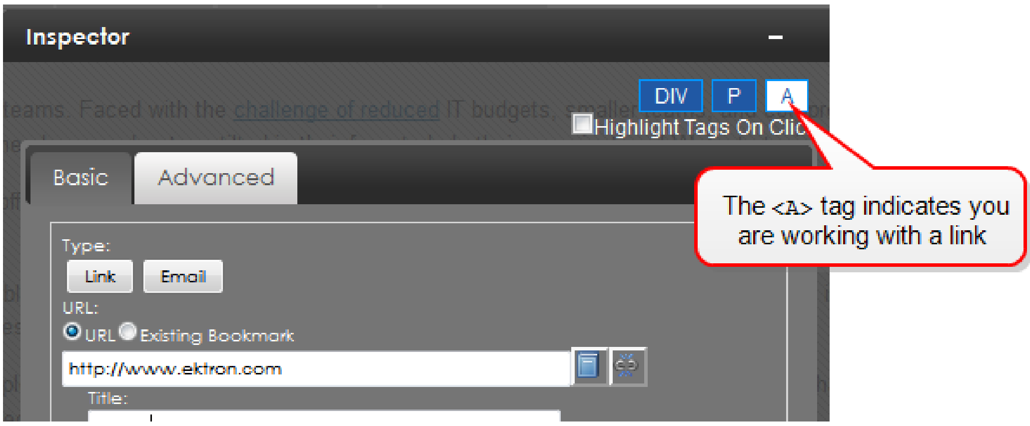
The Inspector lets you apply additional properties to the selected element.

Working with links

This section explains how to view, insert, or delete links to an external Web site or email address. To learn how to link to another Ektron content item, see *Working with quicklinks* on page 561. To learn how to link to paragraph within an Ektron content item, see *Adding a bookmark* on page 562.

Viewing a link

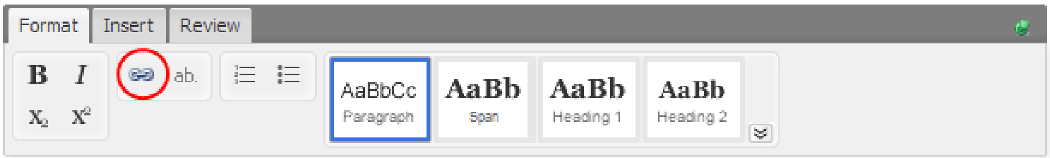
1. Click the cursor on the linked text or image.
2. Open the Inspector (**Review** tab >) to view the link's properties.
3. Use the dialog to modify the link's properties.



Inserting a link to text

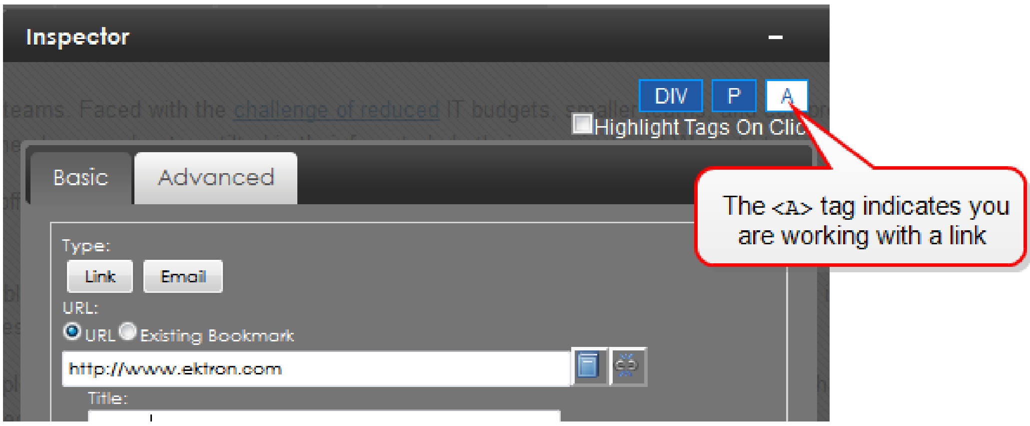
1. Highlight text that you want to become a hyperlink.
2. Click **Link** ( ) on the Format tab. (If you click **Link** on an empty space, a link appears in the content as **New Link**. Be sure to change **New Link** to something

meaningful.)

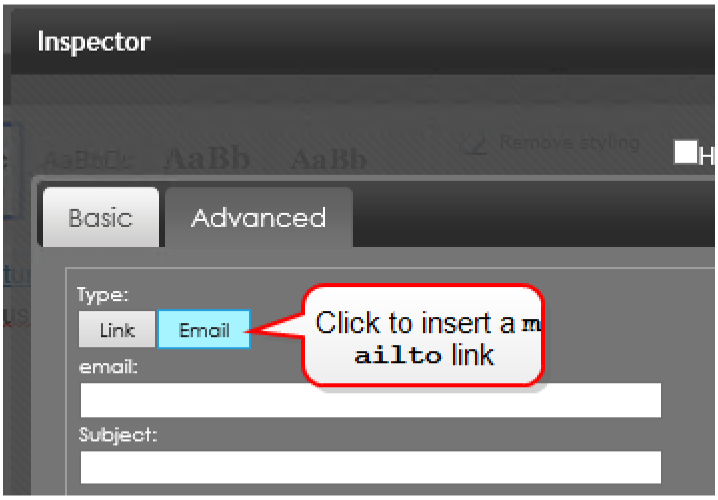


A link tab appears.

3. In the link field, enter the desired URL and press **Enter**. The selected text becomes a hyperlink.
4. To enter link properties, select linked text and open the Inspector (**Review** tab >).



Alternatively, you can insert a mailto link. If you do, place the email address in the **email** field, and optionally a default **Subject**.



You can set or modify these link properties within the Inspector.

- Title
- Target frame. See http://www.w3schools.com/tags/att_a_target.asp.

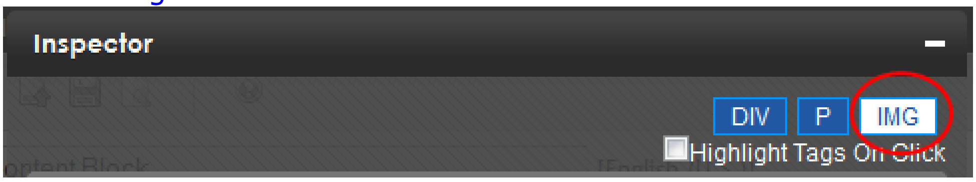
- Text attributes and alignment
- Css class and styles

Inserting a link to an image

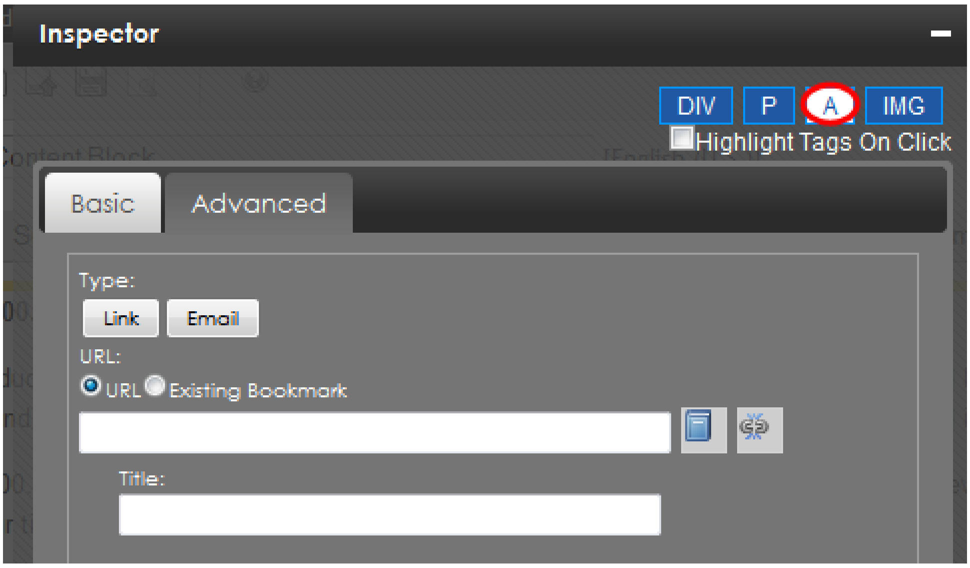
To learn about inserting an image, see *Inserting an image* on page 568.

1. Click an image that you want to become a hyperlink.

NOTE: You know that you selected an image if the Inspector displays an <IMG> tag.



2. Open the Inspector (**Review** tab >).
3. Click **Add hyperlink to Image**.
4. Click the <A> tag.



5. Enter hyperlink information. You can set or modify these link properties within the Inspector.
   - Title
   - Target frame. See http://www.w3schools.com/tags/att_a_target.asp.
   - Text attributes and alignment
   - Css class and styles

Editing a link

1. Click the linked item. The link destination appears in the toolbar.
2. Edit the link text as needed.

Removing a link

1. Click the linked item. The link destination appears in the toolbar.
2. Click **Break Link** ( ). The link is removed.

Working with quicklinks

A *quicklink* is a special hyperlink that "jumps" to content on your website. You can apply a quicklink to text or an image. When a site visitor views the content and clicks the quicklink, a new page appears, displaying the referenced content.

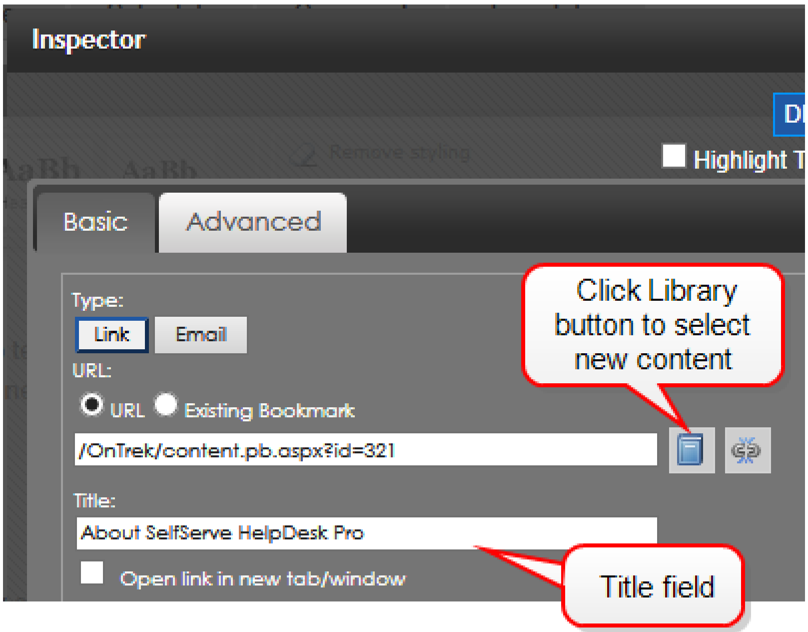
Adding a quicklink to content

1. Edit the content into which you want to insert the quicklink.
2. Place the cursor where you want the quicklink to appear. If you want to attach the quicklink to text or an image, select it.
3. Click **Insert > Library** ( ).
4. Go to the folder that contains the content whose quicklink you want to insert.
5. From the file types drop-down list, select **Quicklinks**. Quicklinks in the selected folder appear.
6. Click the quicklink you want to insert.
7. Click **Insert**. The quicklink is added.

NOTE: If you do not select text or an image before inserting a quicklink, the referenced content's title becomes the quicklink text.

Editing a quicklink

1. Place the cursor on the quicklink.
2. Open the Inspector (**Review** tab >).
3. To change the link destination, click the Library button at the end of the **URL** field.



4. To edit the link text, edit the **Title** field.

Deleting a quicklink

1. Click the quicklink. The link destination appears in the toolbar.
2. Click **Break Link** (). The link is removed.

Adding a bookmark

Use a bookmark to let a site visitor "jump" from any word or phrase to another place in the same content block. On your Web page, text appears in a different color to indicate the bookmark.

Bookmarks are particularly helpful on a long page. For example, your Web page contains minutes from several meetings, and the top of the page lists meeting dates. You could assign a hyperlink to each date, and a bookmark to each set of minutes. A site visitor can click any date to "jump" (using the bookmark) to those minutes.

To use a bookmark, you create 2 things:

- A source. Text a user clicks to jump to the bookmark
- A destination. The location to which the cursor jumps when the source is clicked

For example, place the text **[Top] [Bottom]** at the top and bottom of a content block. The following procedure shows how to create bookmarks so that clicking **[Top]** at the bottom of the page jumps to the top of the page, and clicking on **[Bottom]** at the top of the page jumps to the bottom of the page.

1. Create the bookmark's (destination).
   a. At the bottom of the page, insert then highlight the destination text, in this case **[Top]**.

b. On the editor toolbar, choose **Insert > Bookmark** ( ). A bookmark icon displays next to the source text but does not show up on the Web page.
c. Double click the bookmark icon then open the Inspector (**Review** tab >). A dialog displays the bookmark options.
d. Specify the title, `PageTop`.
e. Repeat steps a through d for **[Bottom]** at the bottom of the content, and give it the Title of `PageBottom`.

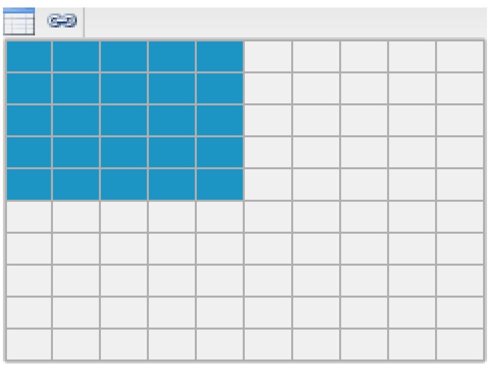
2. Create links to the bookmarks.
   a. Highlight the source text. In this example, **[Top]** at the bottom of the content.
   b. Choose **Format > Insert Link** ( ). The text is selected.
   c. Double click the selected text.
   d. Open the Inspector (**Review** tab >).
   e. Choose **Existing Bookmark**. A drop-down list appears from which you can select a bookmark.
   f. Choose **PageTop** from the drop down list.
   g. Repeat steps a through d for **[Bottom]** at the top of the content, and choose **PageBottom** from the drop-down list.

Working with tables

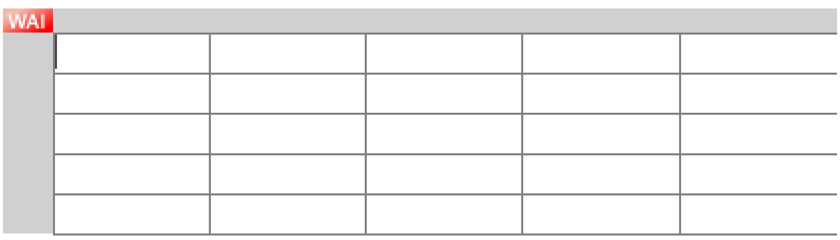
This section describes how to insert and edit tables.

Inserting a table

1. From the toolbar's **Insert** tab, click **Table** ( ). A table dialog box appears.
2. Drag the cursor over rows and columns to indicate the table size. The following example shows 5 columns and 5 rows.



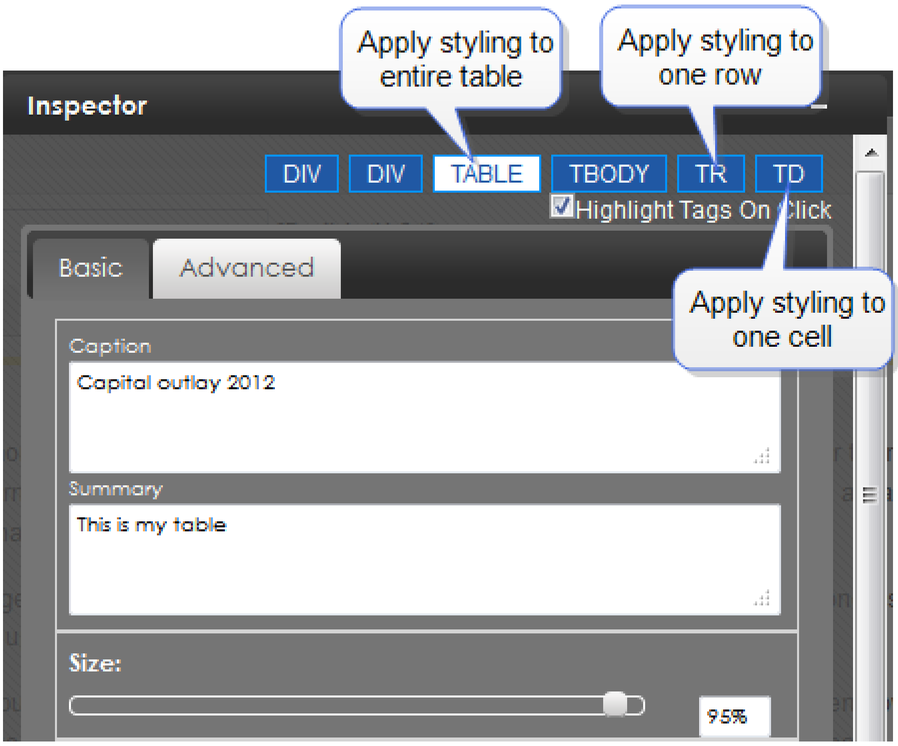
3. Click the mouse. The table is inserted.



NOTE: You can use **Tab** to move from one cell to the next. If you are on the last cell, **Tab** creates a new row. Use **Shift/Tab** to move backwards.

Applying table properties

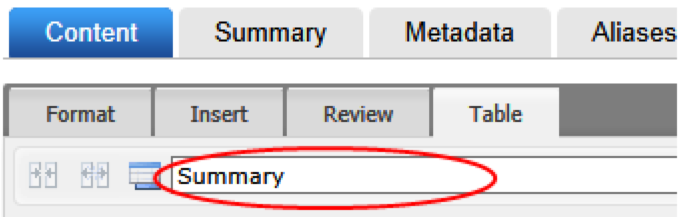
Use the Inspector (**Review** tab >) to apply properties to a table, a table row (`TR`), or a single cell (`TD`).



- table properties. http://www.w3schools.com/tags/tag_table.asp
- tbody properties. http://www.w3schools.com/tags/tag_tbody.asp
- table row (TR) properties. http://www.w3schools.com/tags/tag_tr.asp
- table cell (TD) properties. http://www.w3schools.com/tags/tag_td.asp

Adding a table summary

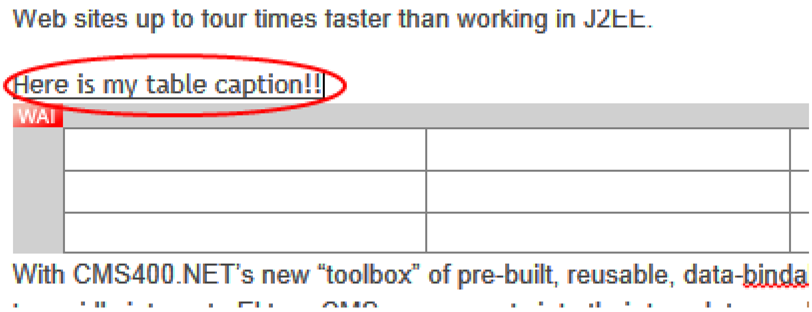
1. Place the cursor inside the table. In the toolbar, the **Table** tab is selected.
2. Enter the summary in the text box (circled in the following image).



Alternatively, you can enter a table summary in the Inspector (**Review** tab >).

Adding a table caption

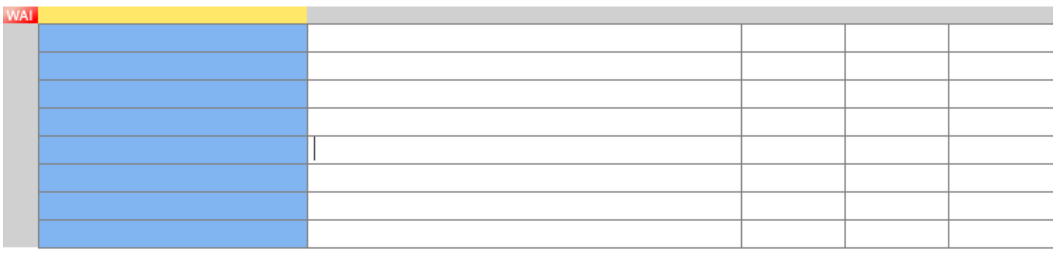
1. Place the cursor inside the table. In the toolbar, the **Table** tab is selected.
2. Click **Table Caption** ( ).
3. Enter the caption in the textbox above the table.

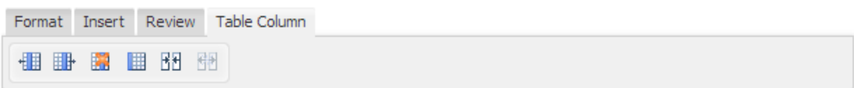


Alternatively, you can enter a table caption in the Inspector (**Review** tab >) .

Modifying rows and columns

Click the gray area beside a table row or above a table column. Your selection is highlighted.



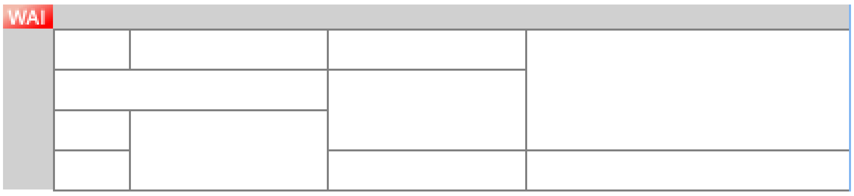


You can use the following functions on selected rows or columns:

- . Add column to the left
- . Add column to the right
- . Add row below
- . Add row above
- . Delete column
- . Delete row
- . Format column as header (create a 508-compliant table without modifying the source)
- . Format row as header (create a 508-compliant table without modifying the source)
- . Merge cells (to select several cells, depress **Shift** while selecting)
- . Split cells (depress **Shift** while selecting the cell to be unmerged)

IMPORTANT: When you save and publish your content, your site styling is applied. Therefore, a table in the Workarea may appear differently from a table you edit in context.

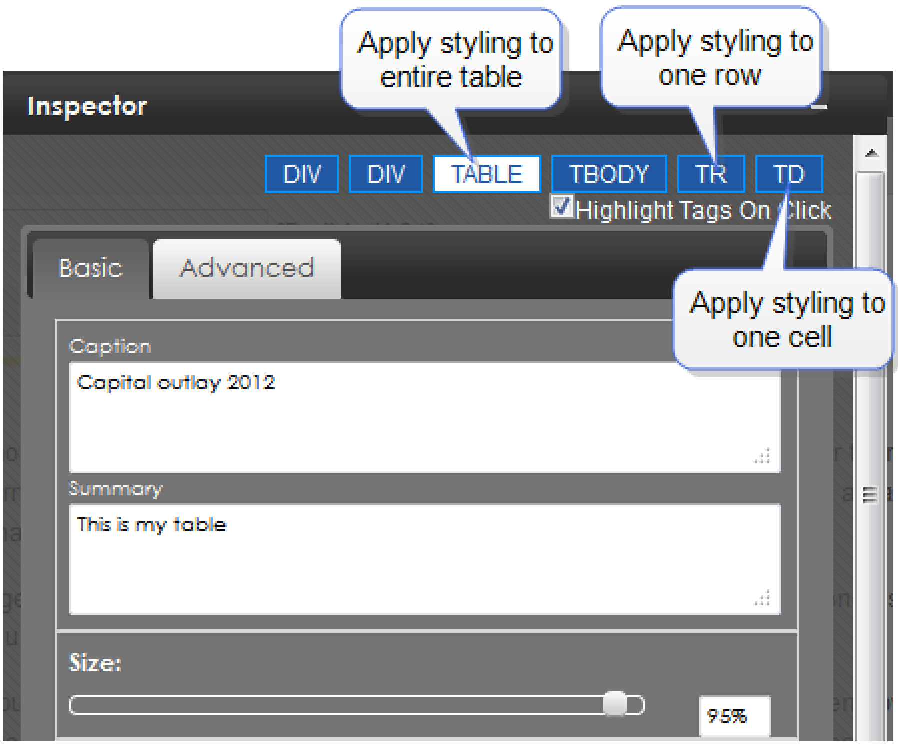
Table with merged cells



NOTE: To split a merged cell, select the column or row of the merged cell before clicking **Split**.

Modifying a table style

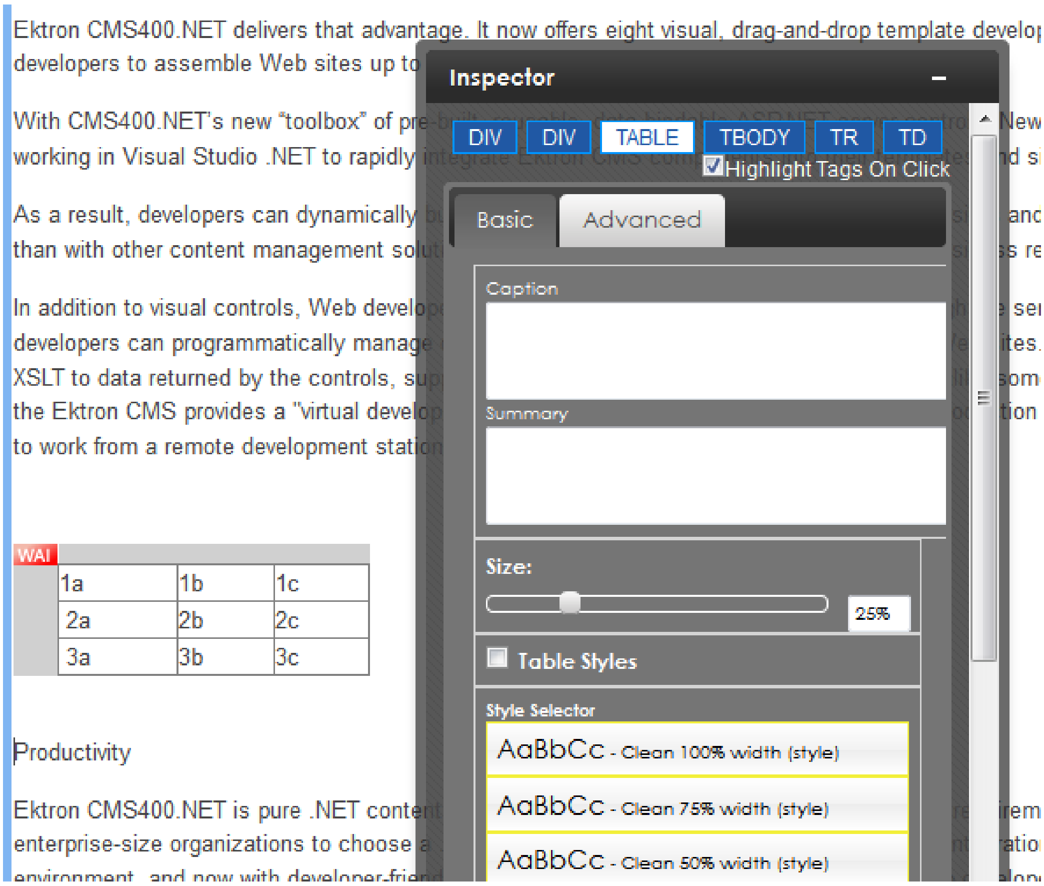
With the Inspector open, click anywhere in a table to view styles and advanced properties you can apply.



In the following example, a 3x3 table was created. Clicking in a cell, the nested tag structure shows the following:

DIV DIV TABLE TBODY TR TD DIV

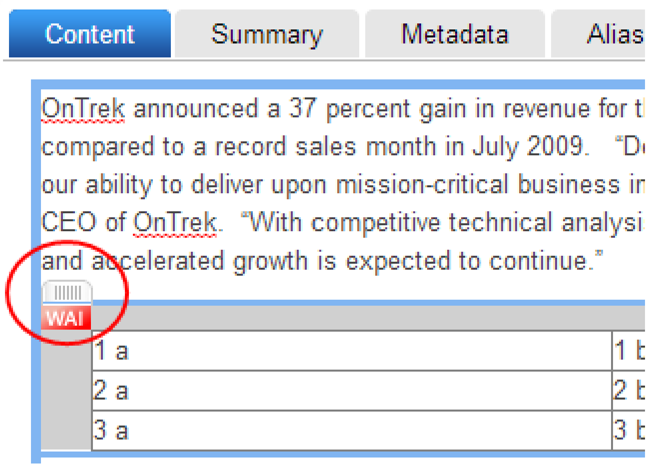
Click any tag to see styles you can apply to it. For example, click TABLE to see table properties. The following image shows the table size reduced to 25%.



- table properties. http://www.w3schools.com/tags/tag_table.asp
- tbody properties. http://www.w3schools.com/tags/tag_tbody.asp
- table row (TR) properties. http://www.w3schools.com/tags/tag_tr.asp
- table cell (TD) properties. http://www.w3schools.com/tags/tag_td.asp

Moving a table

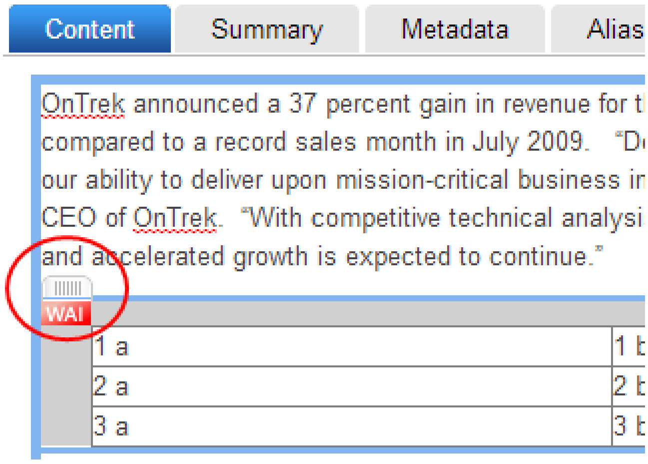
When you make a table the content focus (a colored bar appears around the table), a tab appears above the table's left top corner. Use the tab to drag the table to another place in your content.



NOTE: You can also move a table in Source Viewer.

Deleting a table

1. Select the table.
2. Click the handle.



3. Press **Delete**.

NOTE: You can also delete a table from Source View, and easily collapse the entire table to delete it in one line of HTML.

Working with images

The easiest way to insert an image into content is by dragging and dropping it from a Windows Explorer window. You can also

- insert an image that has been saved to the Library or as an asset, or
- add a new image to the Library while inserting it into content

Inserting an image

Inserting an image using drag and drop

You can drag-and-drop an image from your computer into Ektron content using Windows File Explorer. You can drag and drop only one image at a time.

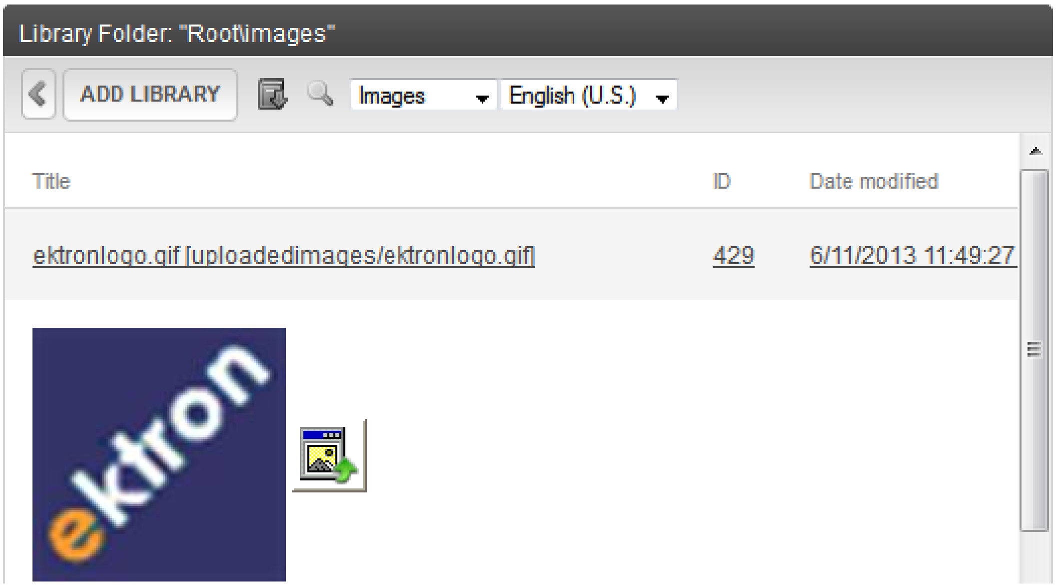
Dropped images are added to the library for future reuse. Dropped images must have one of these extensions: `.jpg`, `.gif`, or `.png`, and cannot exceed 5 MB.

When dragging and dropping, the file name becomes the item's title, and no other library information is collected (for example, its summary and metadata). Once the content is saved, use the Edit Library screen to add information for the new library item.

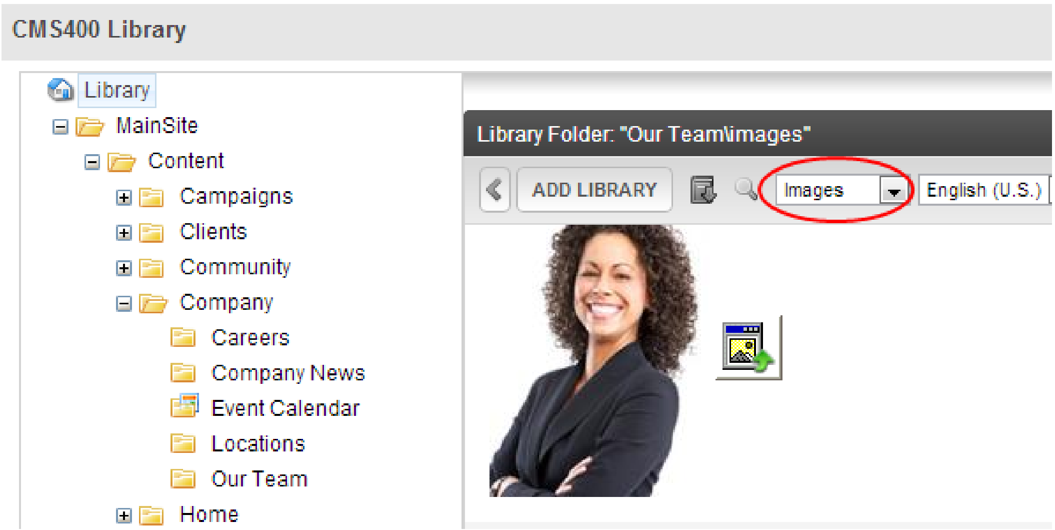
Inserting an image using the library

1. Place the cursor where you want the image to appear.
2. Click **Library** (). The Library screen appears.
3. From the left panel, go to the folder containing the image you want to insert. If you do not know its folder, use **Search** () to find an image by title, description, or internal file name.

NOTE: If the file is not in the library, you can insert it by clicking the **Add Library** button > **Browse** and navigating to the file. Then, enter a title and optionally a description and metadata information. The file is inserted into the content and added to the library.



4. Select **Images** from the content type drop-down.



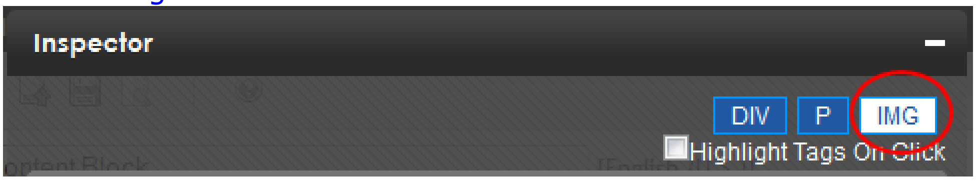
5. Select an image and click **Insert** (). The image is inserted into the content. (You can also double-click the image.)

Alternatively, you can insert a miniature version of the image, called a *thumbnail*, by clicking the thumbnail button ( ). When the thumbnail appears on a Web page, a site visitor clicks it to view a full-sized image.

Editing images

To adjust an image's properties, click to select it then open the Inspector (**Review** tab >). If you are using the Internet Explorer browser, double click the image.

NOTE: You will know that you selected an image if the Inspector displays an <IMG> tag.



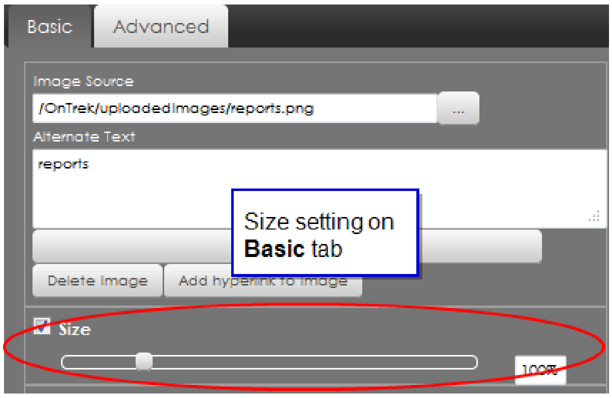
The Inspector's **Advanced** tab lets you modify the image size, position, wrapping, and so on, and lets you select images that change based on breakpoints for viewing modes of your users. See *Adding a group by breakpoint* on page 467.

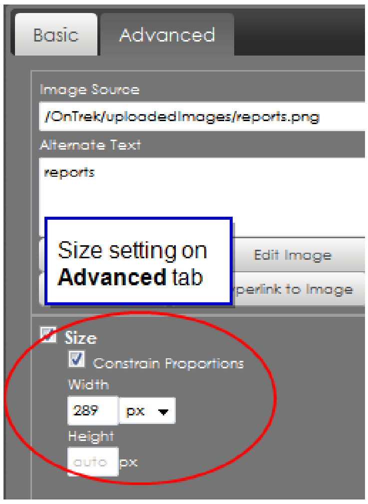
For example, click **Responsive Image Selection > Change** and select an image to display when screen resolution is 480 pixels or fewer.

If you reduce the size of the editing window to under 481 pixels, the editor automatically switches to the smaller picture.

Adjusting image size

Within the Inspector, the Basic and Advanced tabs have a field for adjusting image size.



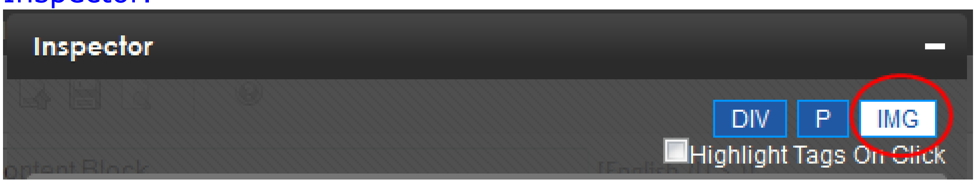


- **Basic** tab—Use the **Size** slider to specify a percentage of the original image. The **Size** is calculated as pixels and stored in the `<img>` tag as a style attribute.
- **Advanced** tab—the **Size** > **Width** field represents a percentage of the parent container. This number is stored in the `<img>` tag as is.

Deleting an image

1. Select the image.
2. Open the Inspector (**Review** tab >).

NOTE: You know that you selected an image if an <IMG> tag appears in the Inspector.



3. Click **Delete image**.

Embedding external content

Embedding external content

You can embed the following types of external content into the editor.

- YouTube
- Vimeo
- DailyMotion
- Google Maps
- any Iframe

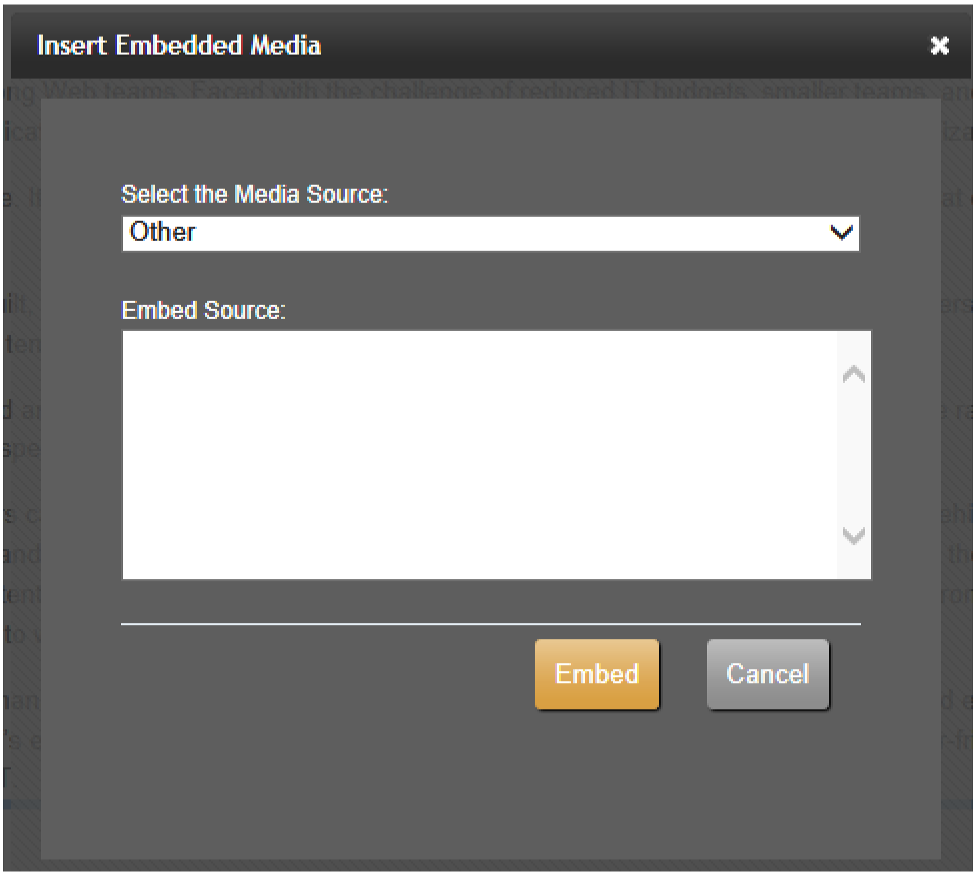
You can also insert content using its `<embed>` or `<object>` code.

Embedded elements are treated *responsively*. This means that a video or map is sized according to the device on which it is viewed.

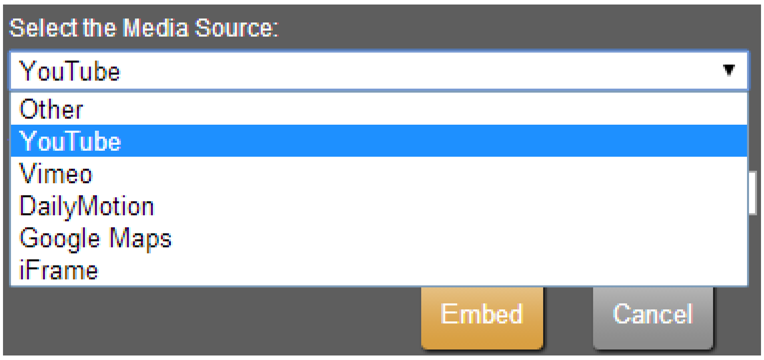
PREREQUISITE

You need the URL of the media item that you want to embed. Content providers typically supply an easy way to find the content's URL. For example, to find a YouTube video, click **Share**, then copy the URL.

1. On the editor toolbar, click the **Insert** tab then **Insert Embedded Media** ( ). The Insert Embedded Media screen appears.

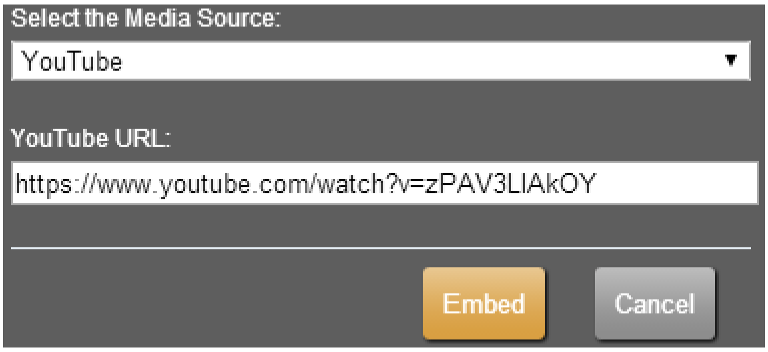


2. Use the **Select the Media Source** pulldown to select a media source.

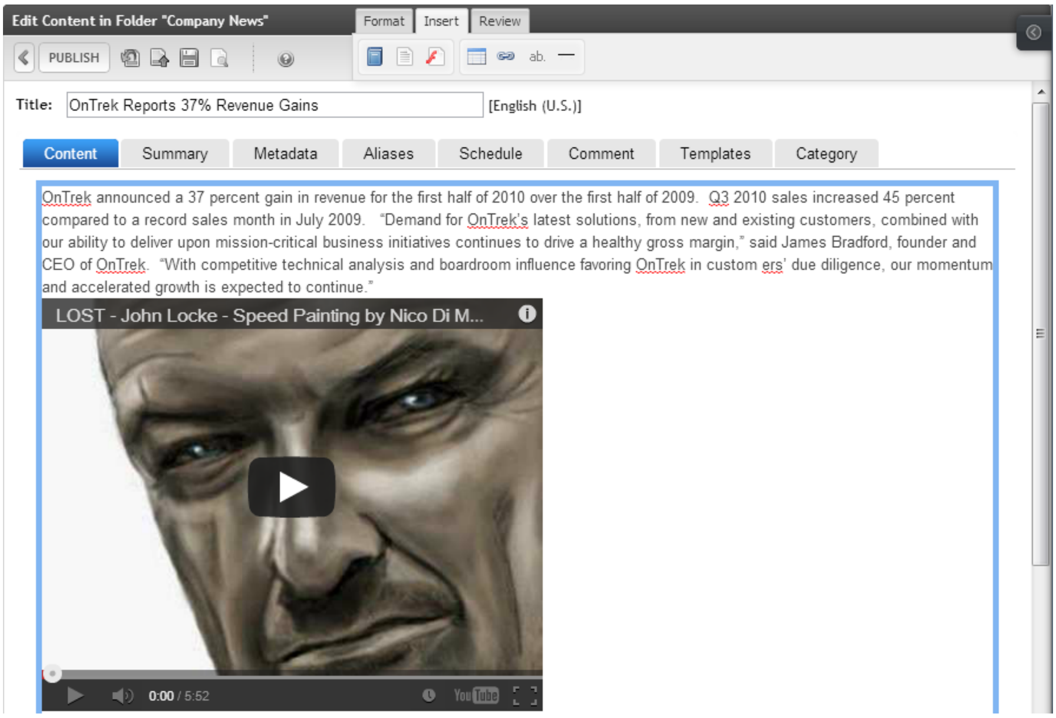


3. Insert the URL for the content that you want to embed.

   To embed content from another source, choose **Other** in the **Select the Media Source** pulldown, then insert the code. See also: *Tips for embedding a Google map* on the next page.



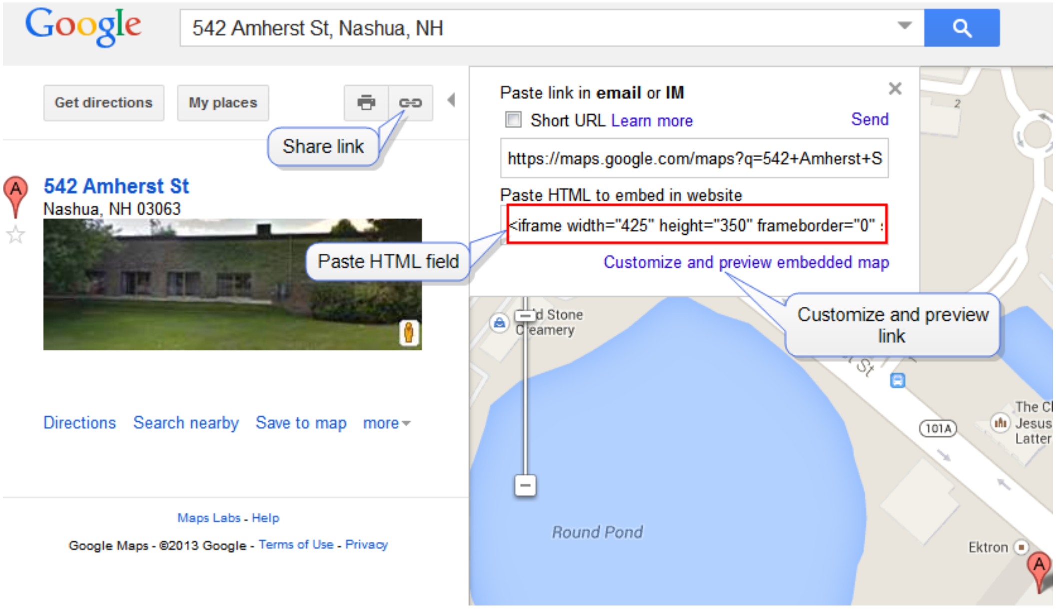
4. Click **Embed**. The media is embedded in the content.



Tips for embedding a Google map

Tips for embedding a Google map

Click the **Share** link. Then copy the text in the **Paste HTML to embed in website** field and paste it into the **Embed Source** field.



To modify the map before inserting it, click the **Customize and preview embedded map** link. You can change the size, view, and zoom. When finished, copy the HTML from the bottom of the screen and paste it to the **Embed Source** field.

Removing external content

1. On the **Review** tab, click the **View Source** button ( ). Source Viewer appears.
2. Find and delete content between the opening and closing `<div class="embed-container>` tags that surround the video, as shown in the following example.

```
<div class="embed-container">
```

```
<iframe marginheight="0"  marginwidth="0"
 src="https://maps.google.com/maps?f=q&amp;source=s_q&amp;

hl=en&amp;geocode=&amp;q=542+Amherst+Street,+Nashua,+NH&amp;aq=0&amp;oq=542&amp;
sll=42.752811,
-
71.49671&amp;sspn=0.203443,0.308647&amp;ie=UTF8&amp;hq=&amp;hnear=542+Amherst+St
,+Nashua,+New+Hampshire+03063
&amp;t=h&amp;ll=42.796156,-
71.573181&amp;spn=0.120922,0.219727&amp;z=12&amp;iwloc=A&amp;output=embed"
```

```
frameborder="0"  height="480"  scrolling="no"
 width="640"></iframe>
```

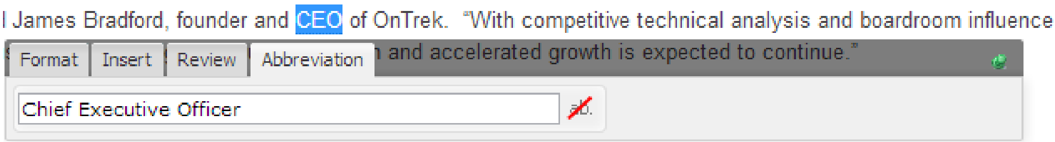
```
<br/><small><a href="https://maps.google.com/maps?f=q&amp;
source=embed&amp;hl=en&amp;geocode=&amp;q=542+Amherst+Street,
+Nashua,+NH&amp;aq=0&amp;oq=542&amp;sll=42.752811,-
71.49671&amp;sspn=0.203443,0.308647&amp;

ie=UTF8&amp;hq=&amp;hnear=542+Amherst+St,+Nashua,+New+Hampshire+03063&amp;t=h&am
p;
ll=42.796156,-71.573181&amp;spn=0.120922,0.219727&amp;z=12&amp;iwloc=A"
style="color:#0000FF;text-align:left">View Larger Map</a></small>
```

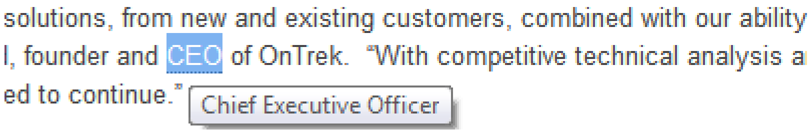
```
</div>
```

Displaying bubble text on content

1. Highlight text for which you want to display bubble text.
2. On the **Format** tab, click **Abbreviation** ( ) . The Abbreviation tab appears.



3. Enter the bubble text in the field and press **Enter**. When a site visitor hovers over highlighted text, the bubble text appears.



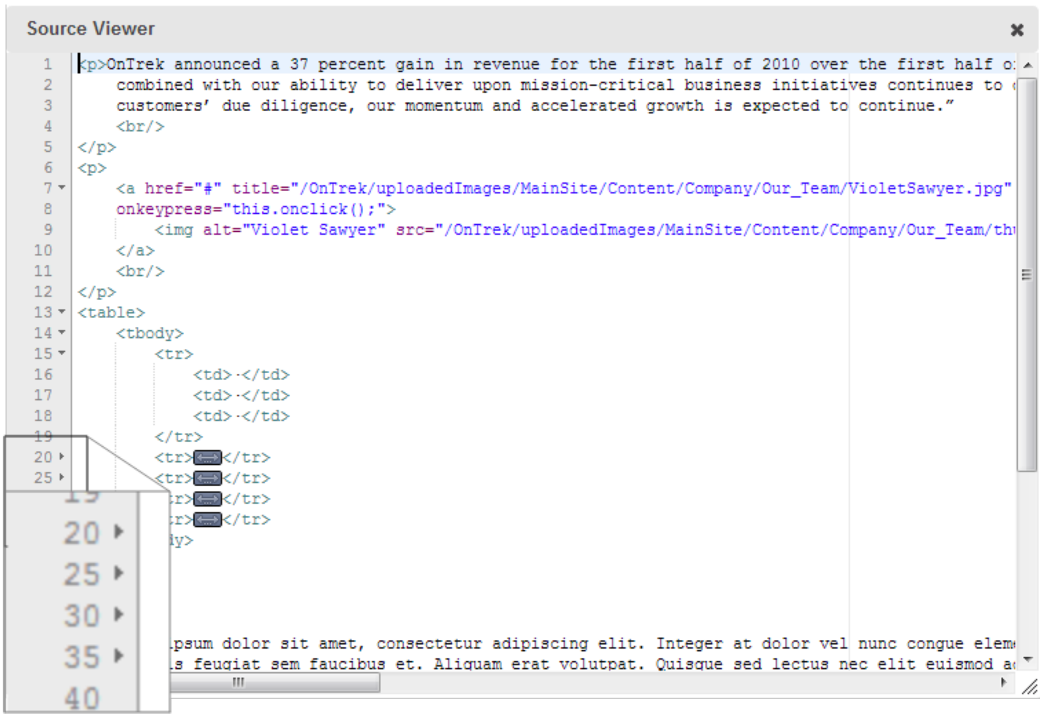
Viewing and editing HTML source content

To view and edit the HTML source, click **View Source** ( ) on the **Review** tab. The Source Viewer appears. As you edit the HTML, the content window dynamically updates with your changes.

When you finish editing in the Source Viewer, click the **X** in the top right corner.

The Source Viewer supports tag completion. For example, if you type `<p>`, the Source Viewer automatically adds a closing `</p>` tag.

The Source Viewer supports collapsing and expanding tags. For example, if a table is in the content, a small arrow appears next to the line numbers. Click the arrow to expand or collapse the nested tags.



Finding and replacing text in the source viewer

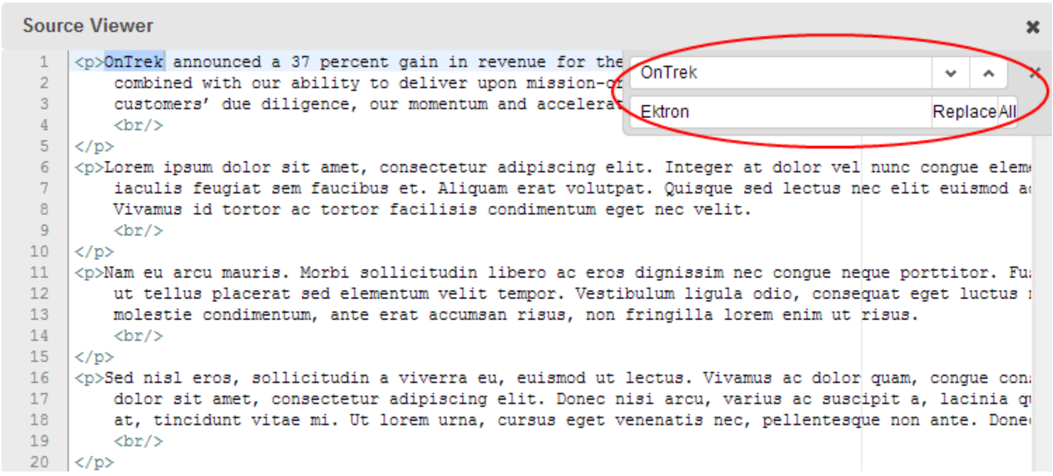
NOTE: Replacing text is supported only in the Source Viewer. Search is supported in the editor by pressing **Ctrl/f**.

Consider replacing *OnTrek* with *Ektron* in the following content.

```
<p>OnTrek announced a 37 percent gain in revenue for the first half of 2010
over the first half of 2009.  Q3 2010 sales increased 45 percent compared to
a record sales month in July 2009. "Demand for OnTrek's latest solutions,
from new and existing customers, combined with our ability to deliver upon
mission-critical business initiatives continues to drive a healthy gross margin,"
said James Bradford, founder and CEO of OnTrek. "With competitive technical
analysis and boardroom influence favoring OnTrek in customers' due diligence,
our momentum and accelerated growth is expected to continue."
<br/></p>
```

1. On the **Review** tab, click the **View Source** button ( ). Source Viewer appears.
2. Press **Ctrl/f** to open the find and replace boxes.
3. Type the search text in the first box and the replacement text in the second box.
4. Click **Replace** to find and replace occurrences one at a time. Click **All** to replace

all occurrences.

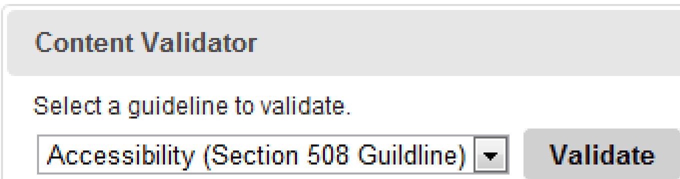


Validating content

You can validate content against Accessibility (Section 508 Guideline), WCAG, HTML5, or XHTML guidelines by clicking **Validate** ( ) on the Review tab. The Content Validator screen appears. Choose which guideline you want to use from the drop-down menu, then click **Validate**. Options include:

- Accessibility (Section 508 Guideline)
- WCAG 2.0 Level A
- WCAG 2.0 Level AA
- WCAG 2.0 Level AAA
- HTML5
- XHTML

NOTE: Each standard may have conflicts with the other standards; valid HTML5 code may not be valid XHTML code. Choose the standard guideline that you need.



Using a template to structure content

A template is section of HTML-formatted content that users can copy into their content for any number of reasons. For example, a template can help maintain a structure, such as image captions. If you want the caption on the left with content flowing around it, create mark-up to do this and put it in a template.

Administrators create content templates within a designated folder structure. When authors are editing content in any folder, they click a toolbar button, then select and insert a template.

The following sections provide additional details on how to create and insert templates.

Creating a template

PREREQUISITE

You have permission edit files in the Ektron site root folder.

To prepare for templates, create an Ektron folder structure to contain them. Then, specify its parent folder's ID number at the `templatePlugin` element in the `AlohaEktron.aspx` file, located in `siteroot\Workarea\FrameworkUI\js\Ektron\Controls\EktronUI\Editor\Aloha\`.

```
templatePlugin: {FolderID: 45}
```

IMPORTANT: You cannot use zero (0), the root folder, as the parent folder for templates.

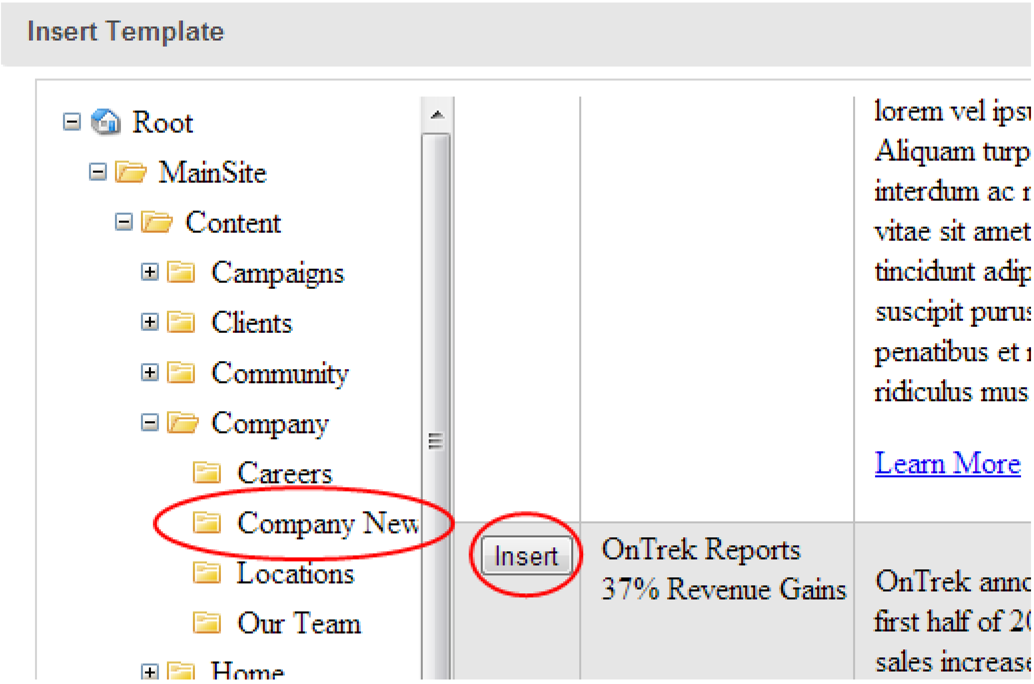
NOTE: You set permissions on the parent template folder as you do for any other folder. Users must have read-only or greater permission for the parent template folder in order to insert a template into content.

After you create the folder, open it (or any of its child folders) and create and publish HTML content to be used as a template. Authors may only select *published* content from this folder structure when inserting a template into content.

Inserting a template

To insert a template

1. Place the cursor where you want the template to be inserted.
2. On the toolbar's **Insert** tab, click **Insert Template** ( ) .
3. Go to the template that you want to insert.
4. Select it and click **Insert**.



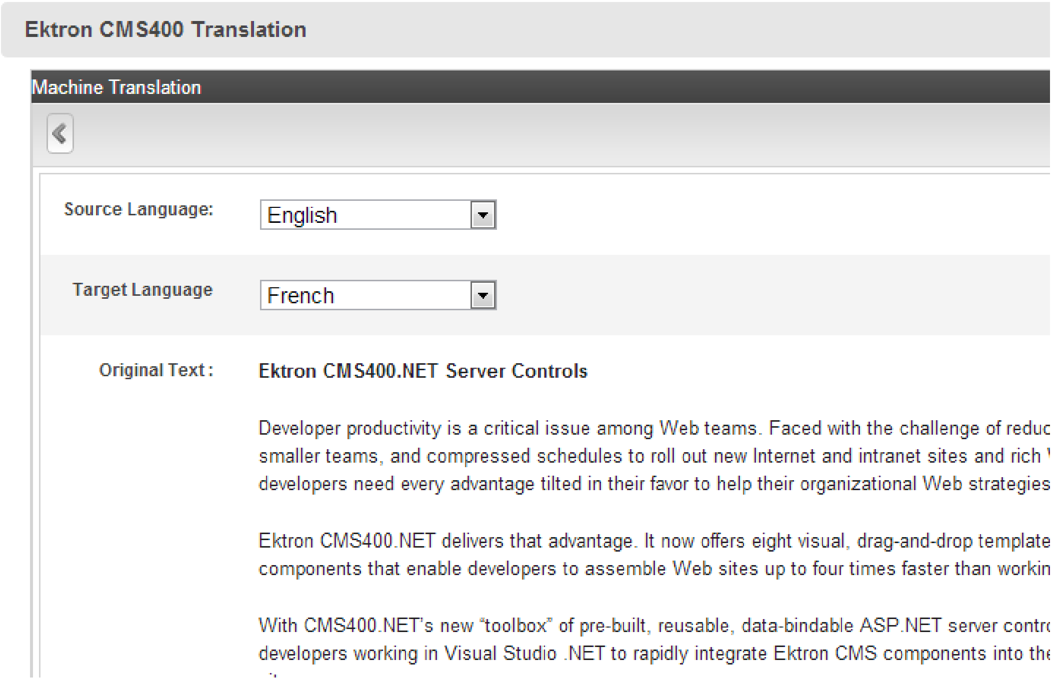
The template is copied to your content, and then decoupled from the template source file. So, you can modify the copied text as you like; modifications do not affect the template. Also, if you later change the template, that action does not affect previously-inserted copies.

Translating content

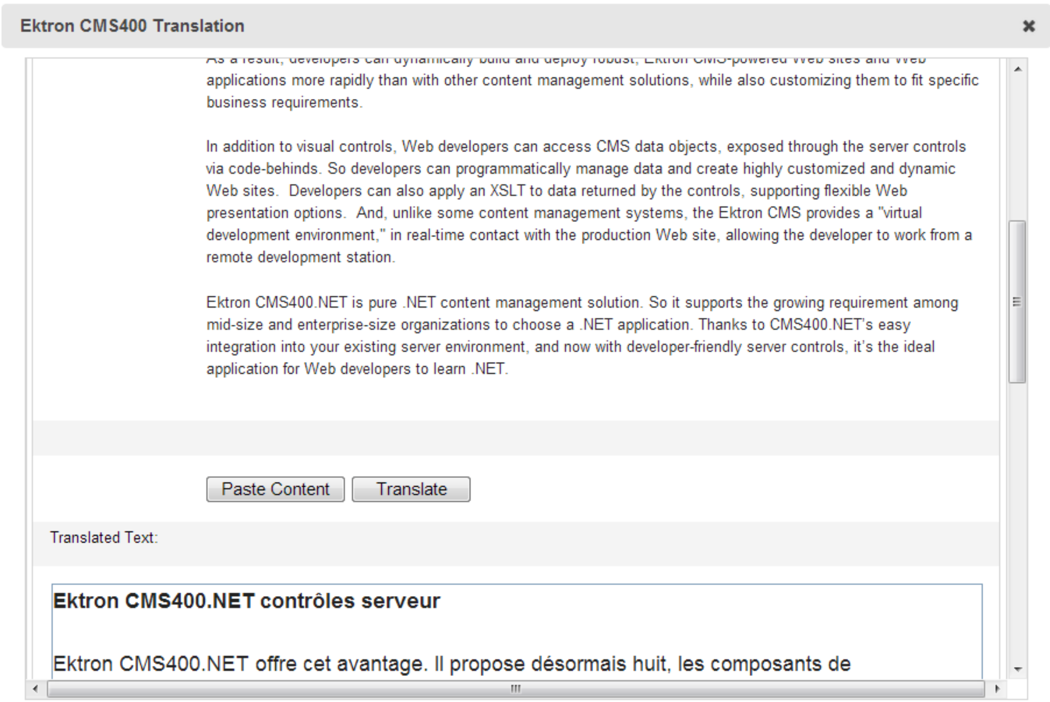
This section describes machine translation, which converts content to another language. Machine translation operates on an entire piece of content, not selected portions of content.

IMPORTANT: Before you can use machine translation, a system administrator must enable it. See *Enabling machine translation* on page 1418.

1. While editing a piece of content, click **Translate** (icon) on the Review tab. The content appears in a new window.



2. Choose the Source and Target Languages and click **Translate**. The machine translation appears.



3. If the translation is acceptable, click **Paste Content** to replace the original with the translated text.
4. Edit the translation as needed then save.

Customizing the editor

An administrator can customize the editor.

Detaching the editor's fixed toolbar

By default, the toolbar is in a fixed position in the following editors:

- editing HTML content, and its summary
- Smart Form rich area text fields
- blog posts

An Ektron administrator can change this, so that the toolbar "floats" in these locations. To do this, open the `\`*`siteroot`*`\ektron.cms.framework.ui.config` file, and find the `<add name="EditInContext">` element. Within that, find the `<add name="Content"` property and delete `ektron/persistToolbar`.

Changing the default editor

The editor is determined by the `ek_EditControlWin` (Windows) or `ek_EditControlMac` (MacIntosh) element values in `web.config`. You can change the default values to use another editor, or let the user choose the editor.

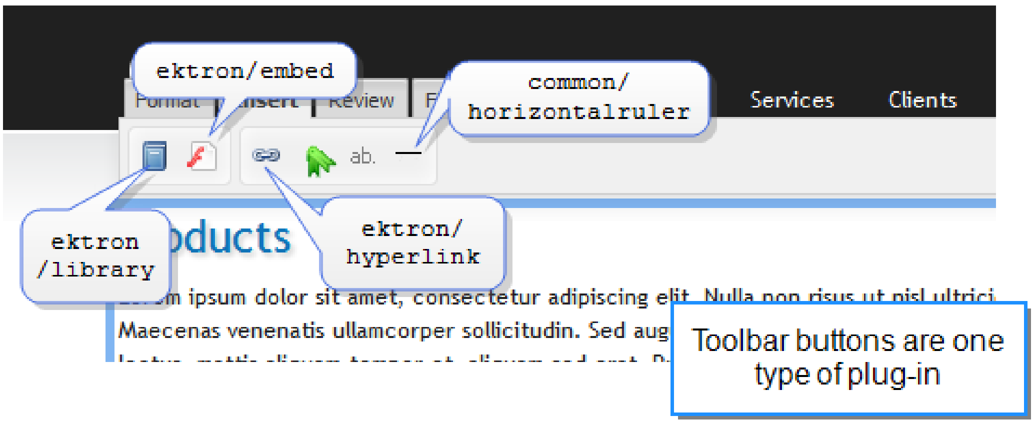
```
<!-- EditControlWin may be either "Aloha" or "ContentDesigner" or "UserPreferred" -->
<add key="ek_EditControlWin" value="Aloha" />
```

- `Aloha` designates the default editor for all users. See also: *Editing in Ektron* on page 553.
- `ContentDesigner` designates the eWebEdit400 editor for all users. See also: *Using the eWebEdit400 editor* on page 1919.
- `UserPreferred` lets users choose an editor on their profile page. See also: *Creating a user* on page 1440.

  If `UserPreferred` is chosen for Windows or Macintosh users, Aloha is the default value for those users.

Modifying editor plug-ins

Plug-ins are open-source, customizable pieces of JavaScript code that provide editor functionality. Ektron provides several useful plug-ins that lets you customize the editor. You specify the editor plug-ins that you want to use in the *`siteroot`*`\ektron.cms.framework.ui.config` file. Many plug-ins are buttons on the editor toolbar. See also: *Customizing the editor's toolbar buttons* on page 586



Editor plug-ins are stored at `\Workarea\FrameworkUI\js\Ektron\Controls\EktronUI\Editor\Aloha\plugins\ektron\[plug-in_name]`. Each `[plugin_name]` folder has supporting `CSS` and `lib` folders containing these files:

- *`Plug-in_Name`*`.css`. Cascading style sheet for the plug-in
- *`Plug-in_Name`*`-plug-in.js`. JavaScript file for the plug-in

Plug-in code has the following basic outline:

- Define/inclusion calls are at the top (powered by RequireJS for easy-to-use paths)
- Main function (returns created plug-in)
  - Default variables or strings to be used
  - `Init` function executes upon loading (usually to create the button)
  - `createButtons` function adds a button to floating menu
  - Function that can be called whatever you like, and should be executed upon button click

Each editor plug-in has one of these prefixes:

- `common/`. Native to the editor
- `ektron/`. Supplied by Ektron
- `extra/`. Supplied by others. You can create your own plug-ins. (This document does not describe how.)

The following are standard editor plug-ins.

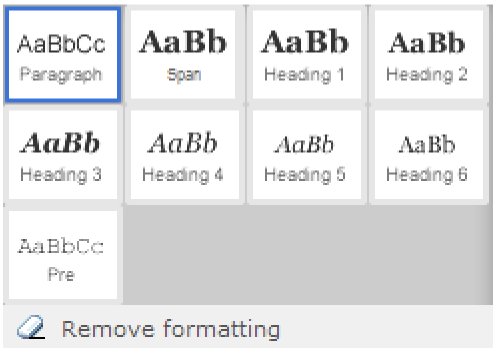
- `common/ui`, `common/block`. Required internal plug-ins; do not remove
- `common/abbr` (ab). Specify an abbreviation for content, which shows up as bubble text. See also: *Displaying bubble text on content* on page 576.
- `common/characterpicker` (Ω). Insert special characters (such as ® and ±)
- `common/contenthandler`. Controls sanitization of content and supports cleaning of Microsoft Word documents being pasted to the editor to preserve as much formatting as possible.

  Content handler is independent of paste. It cleans content when certain actions are performed, such as paste, `getContents` (getting content to save it to the database), and `initEditable` (opening content).

  NOTE: If content contains improper tagging, it is removed when pasted. Also, images embedded within documents are not pasted into Ektron content; you must insert them separately.

- `dom-to-xhtml/dom-to-xhtml`. Ensures XHTML compliance. This plug-in enables Ektron controls.
- `common/highlighteditables`. Not a toolbar button; if enabled, you can click a content item to highlight it for easy identification of content elements
- `common/horizontalruler` (—). Insert horizontal line
- `common/list` (and). Create an unordered (bulleted `<ul>`) or ordered (numbered `<ol>`) list

- `common/paste`. Not a toolbar button; uses the browser's ability to paste content from the clipboard
- `common/table` (). Insert a table See also: *Inserting a table* on page 563.
- `common/undo`. Not a toolbar button; enables the browser's ability to undo the last action
- `ektron/bookmark` (). Set a bookmark See also: *Removing a link* on page 561.
- `ektron/draganddrop`. Not a toolbar button; enables drag and drop of images into content; supported browsers: Webkit-based (such as Safari and Chrome)
- `ektron/editInContextCallback`. Raise callback events (that depend on your permissions and workflow) when you "edit in context" *Editing content in context on a Web page* on page 593.
- `ektron/embed` (). Embed a video into your content See also: *Embedding external content* on page 571
- `ektron/format`. Contains bold (**B**), italic (*I*), subscript (X), superscript (X), and the formatting palette (Paragraph, Span, Heading1-Heading6, Pre)



- `ektron/hyperlink` (). Insert a hyperlink See also: *Working with links* on page 558.
- `ektron/library` (). Insert a library item (file, form, hyperlink, image, and quicklink) into the content
- `ektron/persistToolbar`. fixes the toolbar to the top of the editor screen. See also: *Detaching the editor's fixed toolbar* on page 582
- `ektron/sourceview` (). Opens a view of HTML coding of the content. Whether you edit in the source viewer or the HTML editor, both views are kept concurrent. See also: *Viewing and editing HTML source content* on page 576.
- `ektron/template` (). Insert predefined content into the editor at the cursor location; for example, a caption below an image. See also: *Using a template to structure content* on page 578.
- `ektron/translate` (). Machine translate text to another Ektron-supported language. See also: *Translating content* on page 580.
- `ektron/validator` (). Verify content against HTML5, XHTML, WC3, and WCAG compliance. See also: *Validating content* on page 578.

Creating "Hello-World-plug-in.js"

The following example shows how to create a "Hello World" plug-in snippet within a `<span>` tag. To learn about creating plug-ins, see http://aloha-editor.org/guides/writing_plug-ins.html.

```
// define the HelloWorld module using RequireJS
define([
  'aloha',
  'aloha/plug-in',
  'aloha/floatingmenu',
  'aloha/jquery',
  'i18n!aloha/nls/i18n',
  'css!helloworld/css/helloworld.css'],
// callback executed once dependencies are loaded by RequireJS
  function (Aloha, Plugin, FloatingMenu, jQuery, i18nCore) {
  // create and register the Plugin
    return Plugin.create("helloworld", {
      defaults: {
        text: "Hello World!",
        wrapper: '<span class="helloworld"></span>'
      },

      init: function () {
        // executed on plug-in initialization
        window.console.info("HelloWorld: Begin initialization");
        this.createButtons();
        window.console.info("HelloWorld: End initialization");
      },

      createButtons: function () {
        // provide locally scoped version of this for use
        // in callbacks,e tc.
        var that = this,
          tabInsert = i18nCore.t('floatingmenu.tab.insert');

        // create hellowworld button
          this.helloWorldButton = new Aloha.ui.Button({
          'name': 'helloWorld',
          'iconClass': 'ektron-aloha-button ektron-aloha-helloWorld',
          'size': 'small',
          'onclick': function () {
          that.insertHello();
        },
        'tooltip': "Click to insert Hello World!",
        'toggle': false
        });

        // add it to the floating menu
        FloatingMenu.addButton(
          'Aloha.continuoustext',
          this.helloWorldButton,
          tabInsert,
          1
        );
```

```
      },

      insertHello: function () {
        window.console.info("HelloWorld: Hello World Button clicked");
        var html = jQuery(this.settings.wrapper).text(this.settings.text);
        // get the current selection range
        var range = Aloha.Selection.getRangeObject();
        if (range.isCollapsed()) {
          GENTICS.Utils.Dom.insertIntoDOM(html, range,
            jQuery(Aloha.activeEditable.obj));
        }
        else {
          // remove the contents of the current selection
          range.deleteContents();
          // insert our Hello World elements
          GENTICS.Utils.Dom.insertIntoDOM(html, range,
          jQuery(Aloha.activeEditable.obj));
          // deselect the current range object
          Aloha.getSelection().removeAllRanges();
        }
        return false;
      }
    });
  }
);
```

Customizing the editor's toolbar buttons

The editor toolbar appears in several Workarea locations, and on your site when logged-in users edit in context. A variation of the toolbar appears when content authors create HTML content, enter a calendar event, reply to a discussion forum post, and so on.

In the `\`*`siteroot`*`\ektron.cms.framework.ui.config` file, the `<add name="EditInContext">` element lists all editor toolbar variations. Following each variation is a list of buttons for that variation. To customize the functions that appear in a variation, edit the list.

IMPORTANT: When placing the editor on an .aspx page, specify its toolbar using the `ToolbarConfig` property.

```
<ektron:AlohaEditor ID="AlohaMessage" runat="server"
AllowScripts="false" ToolbarConfig="Mediamedia" />
```

NOTE: Embedded within each plug-in's description is the editor tab under which it appears. You cannot change this information.

Editor variations are:

- Minimal. Sample minimal toolbar that you can copy to other locations; not used.
- Content. Toolbar appears when editing HTML content, and its summary; Smart Form rich area text fields; blog posts.
- Assets. Toolbar appears when editing an asset's summary.
- DiscussionTopic. Toolbar appears when working with a discussion topic and its forum posts.

- Mediamedia. Used in the following:
  - **Workarea > Library > Add** or **Edit Library** item
  - library popup within editor, when adding new library item
- CalendarEntryCMSUser. Toolbar appears when an Ektron user is working with a calendar event
- CalendarEntryMembershipUser. Toolbar appears when a membership user is working with a calendar
- EditInContext. Toolbar appears when using the **Edit in Context** option; See also: *Editing a link* on page 560.

For example, to remove the validator button ( ) from the toolbar when editing a Smart Form rich area text field:

1. Using the Editor Variations list, determine that you need to find the `Content` element within the `ektron.cms.framework.ui.config` file.
2. Using the Editor Plug-ins list, find the `ektron/validator` plug-in within the `Content` element.
3. Remove the `ektron/validator` plug-in (crossed out in the following example).

```
<add name="Content" path="dom-to-xhtml/dom-to-xhtml,common/ui,ektron/format,
common/contenthandler,common/table,common/list,ektron/hyperlink,
common/highlighteditables,common/undo,common/paste,common/horizontalruler,
ektron/translate,ektron/validator,ektron/template,ektron/embed,ektron/inspector,
ektron/sourceview,ektron/advancedinspector,ektron/draganddrop,common/block"
default="false" />
```

Creating styles and classes

While the editor supports both inline styles and classes, the preferred method is to use style classes and a css file. This is because inline styles get embedded into the HTML source. If you later need to change the styling, you must modify every affected content item. To change the properties of a style class, on the other hand, simply modify its css file.

NOTE: Inline styles immediately affect the content display. But classes only affect a Web page if it loads the CSS file that defines them.

PREREQUISITE

You can edit files on the Ektron server.

Setting up styles and classes

Use the `StyleConfig.js` file to create styles and classes that appear on the toolbar. The file is located here:

```
siteroot\Workarea\FrameworkUI\js\Ektron\Controls\EktronUI\Editor\
   Aloha\plugins\ektron\advancedinspector\lib\StyleConfigjs
```

Creating styles example

In this example, an inline style named “Alert” (which applies to the `STRONG` tag) is defined as follows:

```
"STRONG": {
  "styles": {
    "Alert":  {
        "type": "style",
        "value": "color:red;",

               }
             }
           }
```

- `STRONG`. The tag to which the style may be applied.
- `Alert`. The name of the style that appears on the toolbar.
- `type`. Identifies this definition as either an inline `style` or a CSS `class`.
- `value`. Defines the value of the style property, `"color:red;"`, that will be applied to the tag.

Example result: `<strong style="color:red;">`

Creating classes example

In this example, a CSS style class named `“text-justify”` (which applies to the `P` tag) is defined as follows:

```
"P": {
  "styles": {
    "Justify":  {
        "type": "class",
        "value": "text-justify",

                 }
             }
      }
```

- `P`. The tag to which the style may be applied.
- `Justify`. The name of the style that appears on the toolbar
- `type`. Identifies this as a `class` rather than an inline `style`.
- `value`. Defines the value of the class property, `“text-justify”`, that will be applied to the tag (matches the class name defined in the css file).

Example result: `<p class=”text-justify”>`

Integrating the editor into an ASPX page

ektronUI:Editor Control

The `ektronUI:Editor` control is an ASP.NET server component that you can integrate into an .aspx page.

The `ToolbarConfig` property value (`EditInContext` in this example) specifies which plug-ins to load with the editor. See also: *Modifying editor plug-ins* on page 582.

```
<!DOCTYPE html PUBLIC "~//WJC//DTD XHTML 1.0 Strict//EN"
"http:..www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head runat="server">
     <title>Editor control integration</title>
  </head>
  <body>
    <div id="content">
      <ektronUI:Editor ID="Editor1" runat="server" ToolbarConfig="EditInContext" />
    </div>
    </body>
</html>
```

(This page intentionally blank.)

13

Managing content

Most of your time in Ektron is spent creating, editing, and performing other activities with content. Content encompasses all of the articles, news, forms, blogs, discussion forums and even calendars that appear on your website. Authors can conveniently update content directly from the website (after logging in). To access the full functionality, however, users complete tasks within the Workarea.

You can manage Ektron content using 1 or more tools.

- **Web Page Editing**. You can interact directly on the Web page anywhere you see a silver access point ( ) or a menu ( ), which lets you edit the content on the page. For information about editing on the Web page, see *Editing a link* on page 560.

  Access Point versus Menu

  Starting with Ektron 9.00, the silver access point ( ) is replaced with a menu ( ). Ektron recommends that you replace the following code with its Ektron 9.00 replacement in your site's ASPX pages. This code change enables the menu for use with any HTML5 CSS3-compliant browser and it does not affect the use of the access point with other browsers.

  Deprecated code:

  ```
  <ektron:AccessPoint />
    Associated Content Goes Here
  ```

  Replacement:

  ```
  <ektron:EditorsMenu>
    Associated Content Goes Here
  </ektron:EditorsMenu>
  ```

- **Content Dashboard**. Requires an HTML5 CSS3-compliant browser; lets you manage content that is relevant to you.
- **Workarea**. Depending on permissions, lets you access all content, assets, reports, and settings.
- **Smart Desktop**. Lets you organize information that is relevant to you in the Workarea.

Editing content

You can only edit content for which you have permission and in one of the following statuses:

- Published
- Checked in
- Checked out by you
- Submitted for your approval

After you sign in, you can access content by a silver access point ( ) or menu ( ) on the Web page, or through the Workarea, or through the Content Dashboard. You can edit content in the following ways:

- Edit in context on the Web page
- Edit in the Workarea
- Edit from the Content Dashboard

NOTE: For information about using the Ektron editor, see *Editing in Ektron* on page 553.

Editing content in context on a Web page

When you log in, you can edit content on any Web page that contains an Ektron toolbar with an edit/view switch.

HTML5 CSS3-compliant browsers may display the Ektron toolbar if it is enabled in the Workarea. PageBuilder actions are available when you click **Design**. You can enable or disable the toolbar for any template at **Workarea > Settings > Configuration > Template Configuration**; check or uncheck boxes in the **Enable Toolbar** column. See *Editing in context on an HTML5 CSS3-compliant browser* below.

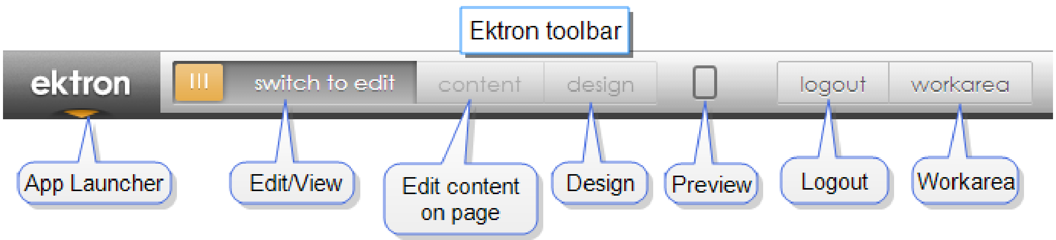
For other browsers (or if the toolbar is disabled), the top of the page displays a PageBuilder menu for performing actions on the page, such as checking in, viewing properties, and placing widgets on the page.

NOTE: For information about how to create a widget, see *Creating the "Hello World" widget* on page 1175.

Editing in context on an HTML5 CSS3-compliant browser

PREREQUISITE

The Ektron toolbar requires an HTML5 CSS3-compliant browser. If you do not have this, see *Editing in context on any browser* on page 597.



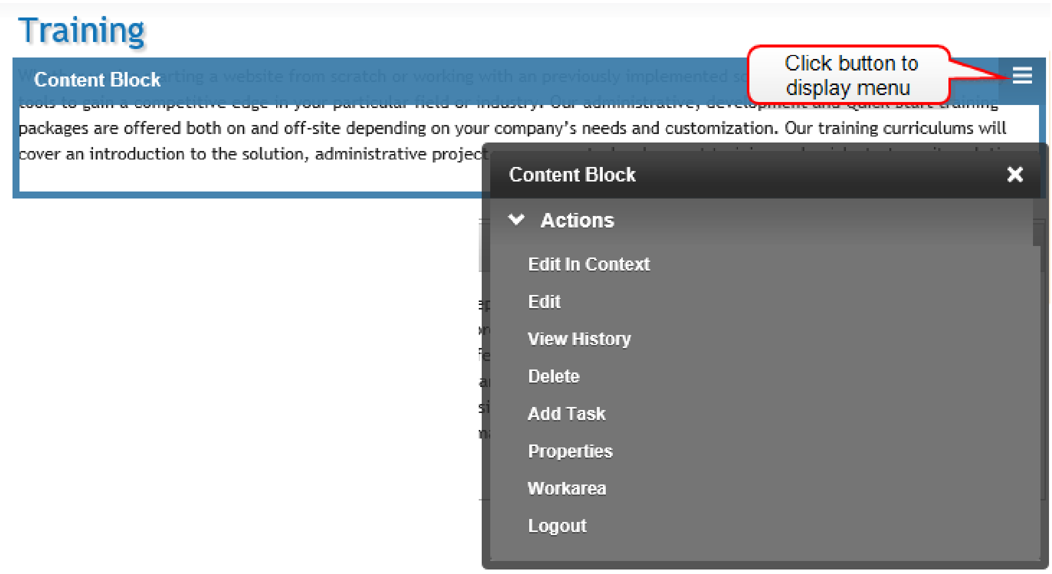
The toolbar lets you:

- Use the **App Launcher** to view and edit your website, or interact with content using the Content Dashboard. See *Managing content from the Content Dashboard* on page 603.
- **Switch to edit** your site's content or PageBuilder pages without leaving the page.

- Click **Content** to work with content on the current page.

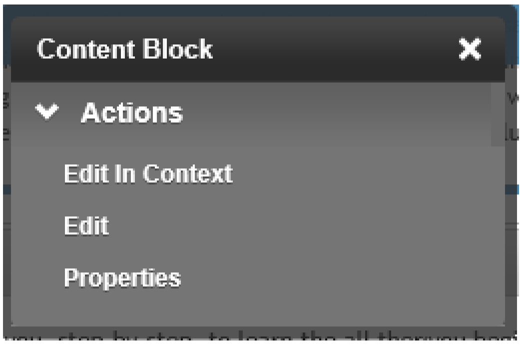
  When you edit a page "in context" using an HTML5 CSS3-compliant browser, your mouse-over exposes editable areas. Click the menu ( ) to display available actions.

  For example, on the OnTrek main page, the first column contains a Content Block widget. Click the menu to see available actions, such as **Edit in Context**. To learn about editor details, see *Editing in Ektron* on page 553.



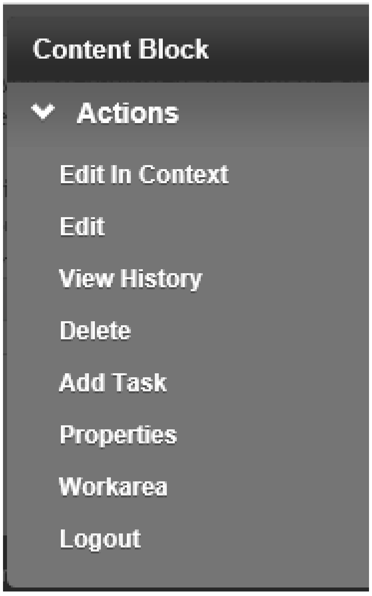
Managing edit in context menu options

On the Edit in Context menu, Ektron administrators can provide a full or minimal set of menu options.



`ExcludeEditorMenuItems=true`

Content author sees minimal option set



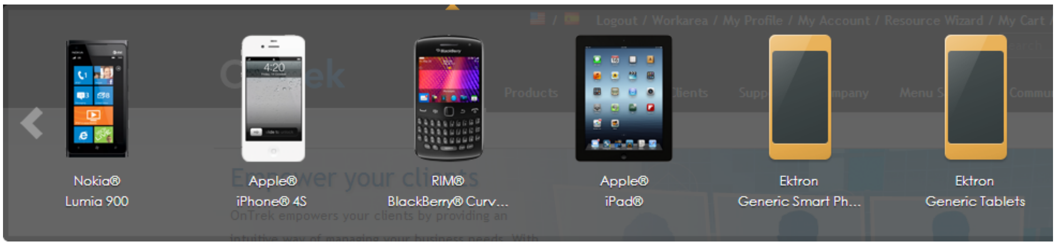
`ExcludeEditorMenuItems=false`

Content author sees full set of menu options

To determine the menu that content authors see, set the appropriate value in the `siteroot\web.config` file's `ExcludeEditorMenuItems` element.

- `true`. Show minimal option set
- `false`. Show full set of menu options

- Click **Design** to edit PageBuilder layouts and perform other actions on the page, including adding widgets to the page or accessing the Workarea. Accordion menus appear: Page Action, Properties, and Widgets.
-  Click **Preview** to show your page on a variety of simulated devices (portrait and landscape views). A bar appears with devices that simulate your Web page on those devices. For information about setting these devices, see *Adding a group by device model* on page 470.



Troubleshooting the toolbar

Problem. I cannot see menus or title bars when editing my page.

A JavaScript error occurred on the site and has shut down the JavaScript engine. It is also possible that the access point () or PageBuilder is not implemented on the page.

Solution. If this is a JavaScript issue, activate the test pages in the Min site. If the error does not occur on the test pages, then the issue is with your JavaScript, which you should debug.

Problem. I cannot interact with the page even though the Toolbar is showing and I am logged in.

Your session may have expired or you may be logged in on another browser. (Need to reset cookie)

Solution. Log out and then log in again. Also, you can set session expiration time in `web.config`.

```
<sessionState mode="InProc"
  stateConnectionString="tcpip=127.0.0.1:42424"
  sqlConnectionString="data source=127.0.0.1;Trusted_Connection=yes"
  cookieless="false"
  timeout="20" />
```

Problem. The toolbar is enabled and I am using the correct version of Internet Explorer, but the old user interface is showing up on the page.

You are probably using Internet Explorer in *Browser mode: Internet Explorer 9 Compatibility View*.

Solution. Change this with the following steps:

1. Press **F12** in your IE9 browser. A menu bar appears at the bottom of the browser above the tabs.
2. Set Browser Mode to **Internet Explorer 9** (*not* Compatibility view).
3. Set the Document Mode to **IE9 Standards**.
4. Click X to exit.

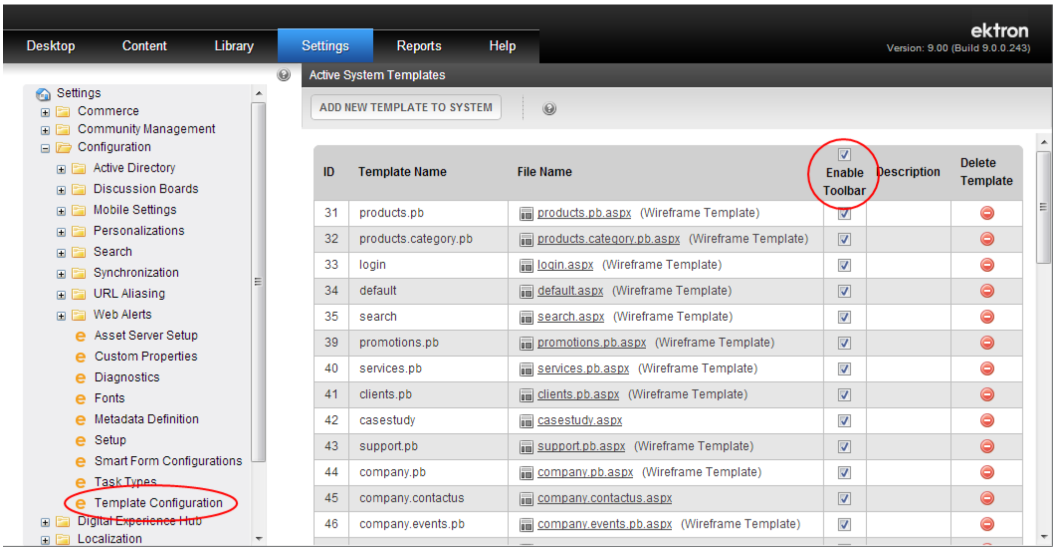
Problem. The Ektron user experience looks messed up on my page.

You may have errors in your site code, or you may have CSS Cascading conflicts.

Solution.

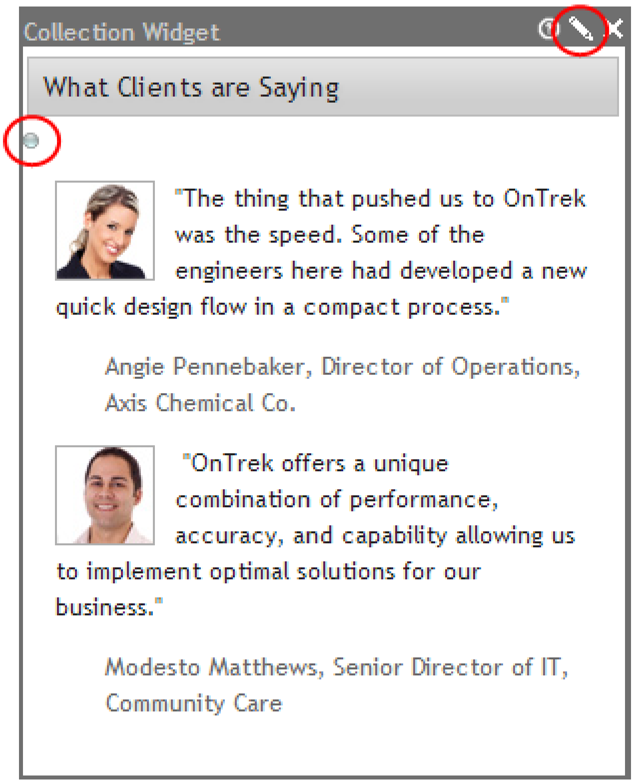
1. Debug your page. If no errors are found, the problem is likely a CSS conflict.
2. Modify customer CSS. For example, look for "Important!" rules.
3. Test on test page from min site.

4. If these measures do not resolve the issue, turn off toolbar at **Workarea > Settings > Configurations > Template Configuration**.



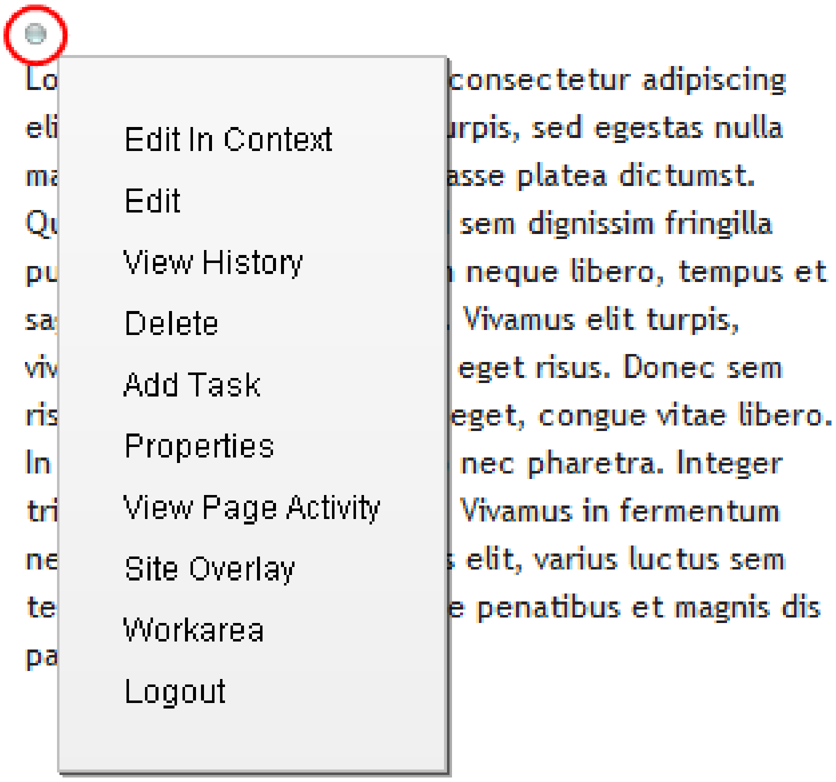
Editing in context on any browser

When you choose **File > Edit** from the PageBuilder menu, you see the widget components on your page. In addition to modifying content, you can add or modify the widget placement. You can edit the content using the access point ( ), and modify the widget properties by clicking **Edit** ( ). Menu options vary depending on the content's status, your permissions, and so on. For information about editing the PageBuilder page, see *Creating Web pages with PageBuilder* on page 991. To learn about editor details, see *Editing in Ektron* on page 553.



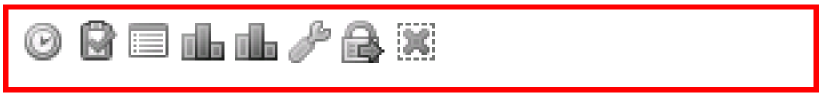
You can modify the access point menu's appearance by editing the `ek_UserMenuType` element of the *siteroot*`/web.config` file. By default, `ek_UserMenuType` is set to **2**.

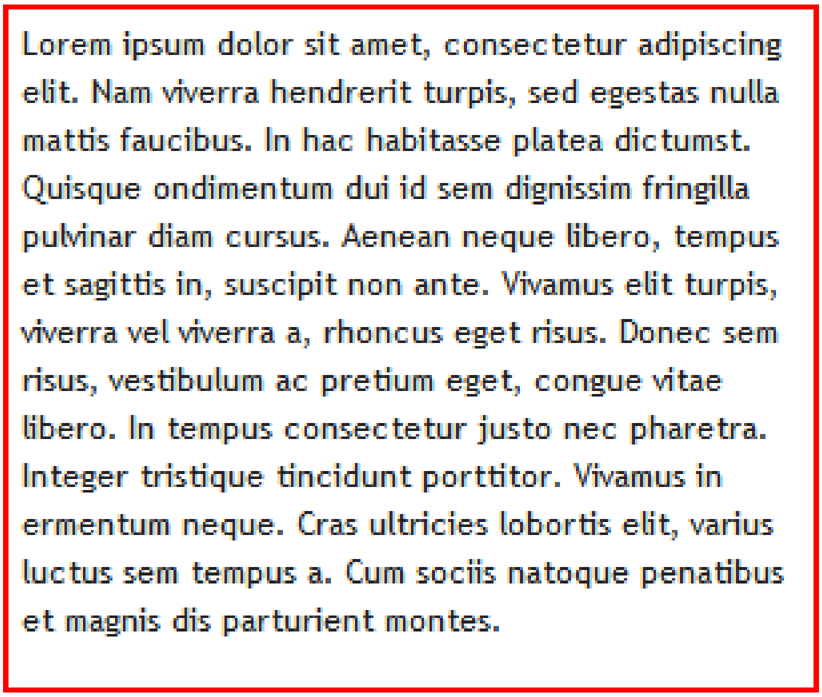
- **2**. **drop-down Interface**. No borders; drop-down menu appears when user clicks the access point.



- **1**. **Classic Interface**. Colored borders and menus always appear; menu options appear as icons in the top row.

NOTE: If you use this interface, the page layout is not depicted accurately because of the fixed toolbars.



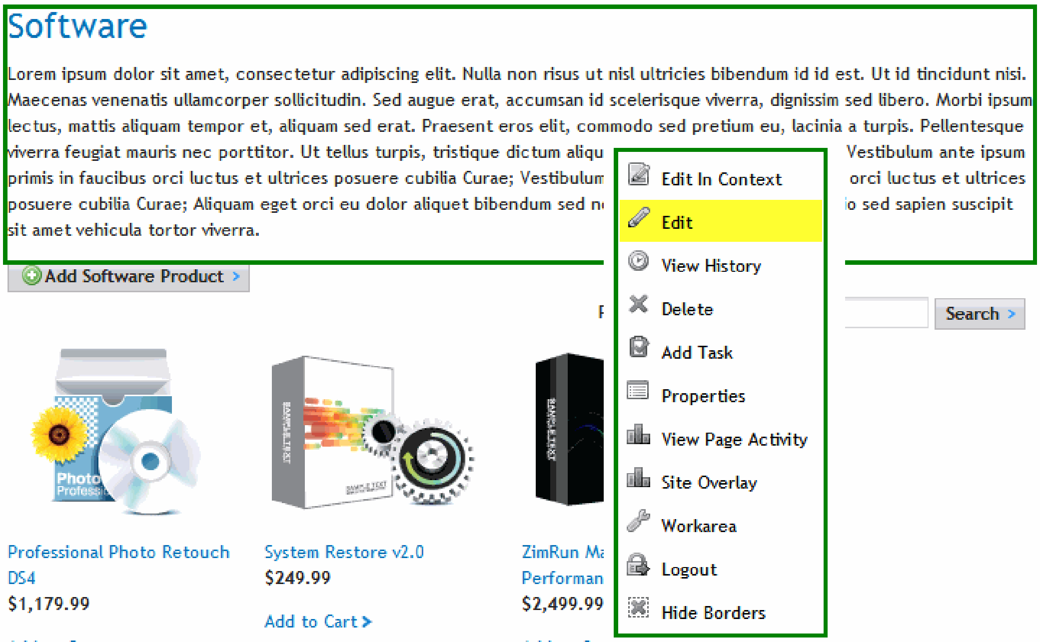


System administrators can modify toolbar buttons by editing the `C:\Program Files (x86)\Ektron\CMS400vxx\workarea\ContentDesigner\configurations\InterfaceEditInContext.aspx` file. Also, the content block server control's `Suppresswrappertags` property must be set to `false`.

- **Add**. Appears if you selected a language and the content is not available in that language. Use this button to copy existing content into new content and translate it to the new language. *Creating multi-language content* on page 1407
- **Add HTML Content**. Create new HTML content in the folder to which the control is assigned. *Creating new content* on page 626
- **Add Smart Form Content**. Create new Smart Form content in the folder to which the control is assigned. *Working with Smart Forms* on page 815
- **Approve**. Approve or decline a request to publish or delete content. *Approving content for publication* on page 689
- **Add Task**. Add a task to a user. *Assigning and managing tasks* on page 1339
- **Delete**. Open View Content page. From it, you can delete the content.
- **Edit**. Check out content for editing; open in separate window. *Editing content* on page 592

- **Edit in Context**. Check out content for editing; content remains within Web page. *Editing content in context on a Web page* on page 593
- **Logout**. Log out of website.
- **New Poll**. Create new poll or survey. *Creating surveys and polls* on page 798
- **Preview**. Preview content before it is published. *Previewing content in a mobile template* on page 463
- **Properties**. Open content’s View Content page.
- **Publish—**Force the immediate publishing of this content item. *Forcing the publication of content* on page 722.
- **View Content Difference**. Contrast previous and current versions of content. *Comparing versions of content* on page 645.
- **View History**. Open View History screen, where you can view previous versions of content. *Managing versions of content* on page 643
- **View Page Activity**. View the current page's SEO information. SEO (Search Engine Optimization)
- **Workarea**. Open Workarea. From here, you can perform all Ektron tasks. *Managing content* on page 591

- **0**. **Hover Interface**. Colored border appears when user hovers mouse over area; menu appears when user right clicks mouse inside border. This interface has 2 display options: vertical (*shown*) and horizontal. To change:
  1. Open the `siteroot/web.config` file.
  2. Find `ek_MenuDisplayType`.
  3. Change its value:
     - 0 (zero) = horizontal
     - 1 = vertical



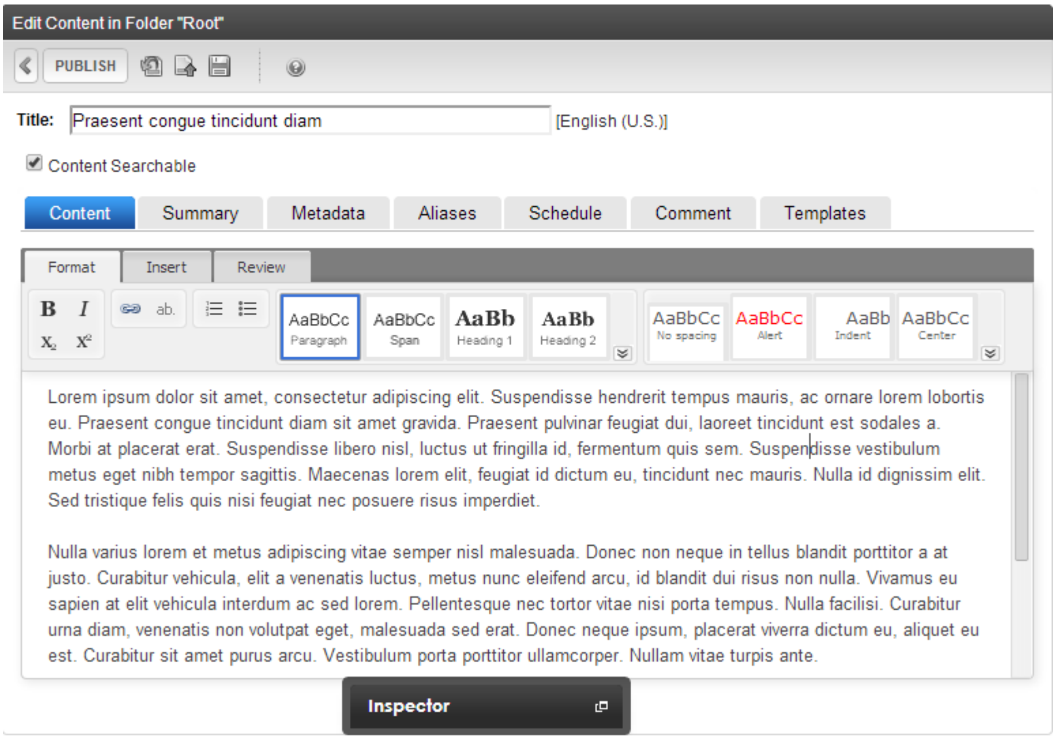
Editing content in the Workarea

In the Workarea, you can edit all types of content (HTML content, HTML forms, XML Smart Forms, and so on), add information about content (summary, metadata, and so on), and edit, check in, submit, and publish content.

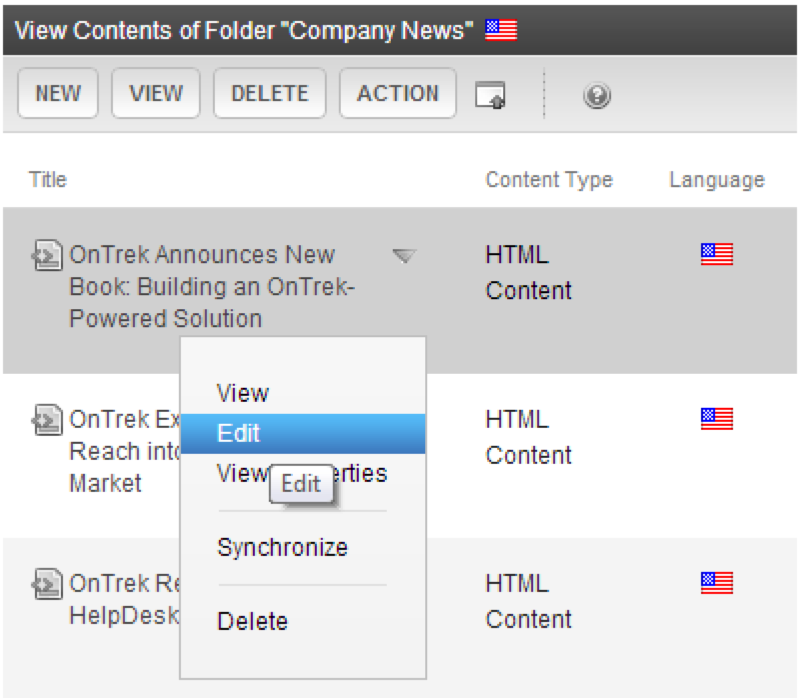
1. From the Workarea, click **Content** and go to the folder that contains content you want to edit.

   NOTE: If you do not know the folder location, search for content using **Action > Search** from the root folder.

2. Click the content you want to edit. The View Content screen appears.
3. Click **Edit**. The editor appears. To learn about editor details, see *Editing in Ektron* on page 553.



You also can edit via the View Contents of Folder screen's context menu. Click the triangle (◂) next to the content item, and choose **Edit** from the menu. The editor appears.



Editing from the Content Dashboard

PREREQUISITE

The Content Dashboard requires an HTML5 CSS3-compliant browser. You must also enable the toolbar, for any template you want to use, by checking the boxes in the **Enable Toolbar** column at **Workarea > Settings > Configuration > Template Configuration**.

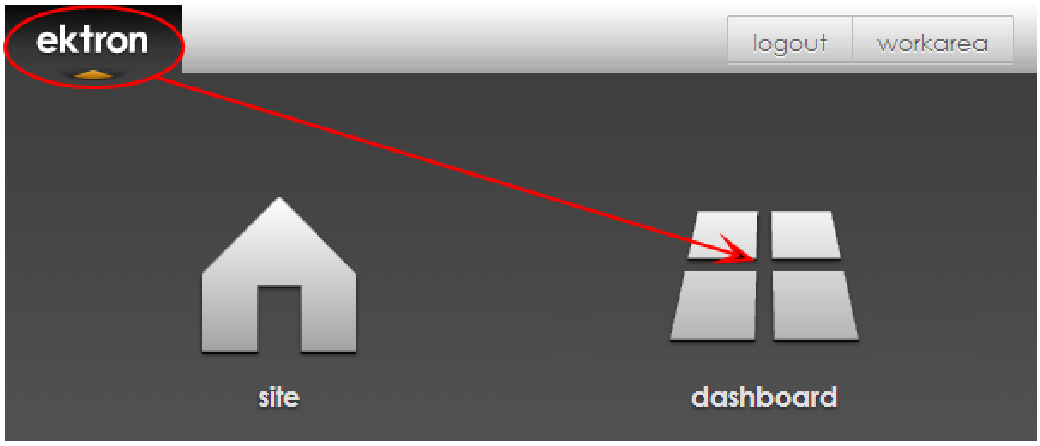
You can access content from the Content Dashboard. When you find the content you want to edit, click **Edit**. See *Managing content* on page 591 for more information. To learn about editor details, see *Editing in Ektron* on page 553.

Managing content from the Content Dashboard

PREREQUISITE

The Content Dashboard requires an HTML5 CSS3-compliant browser. If you do not have this, see *Managing content from the Smart Desktop* on page 612. You must also enable the toolbar for any template by checking boxes in the **Enable Toolbar** column at **Workarea > Settings > Configuration > Template Configuration**.

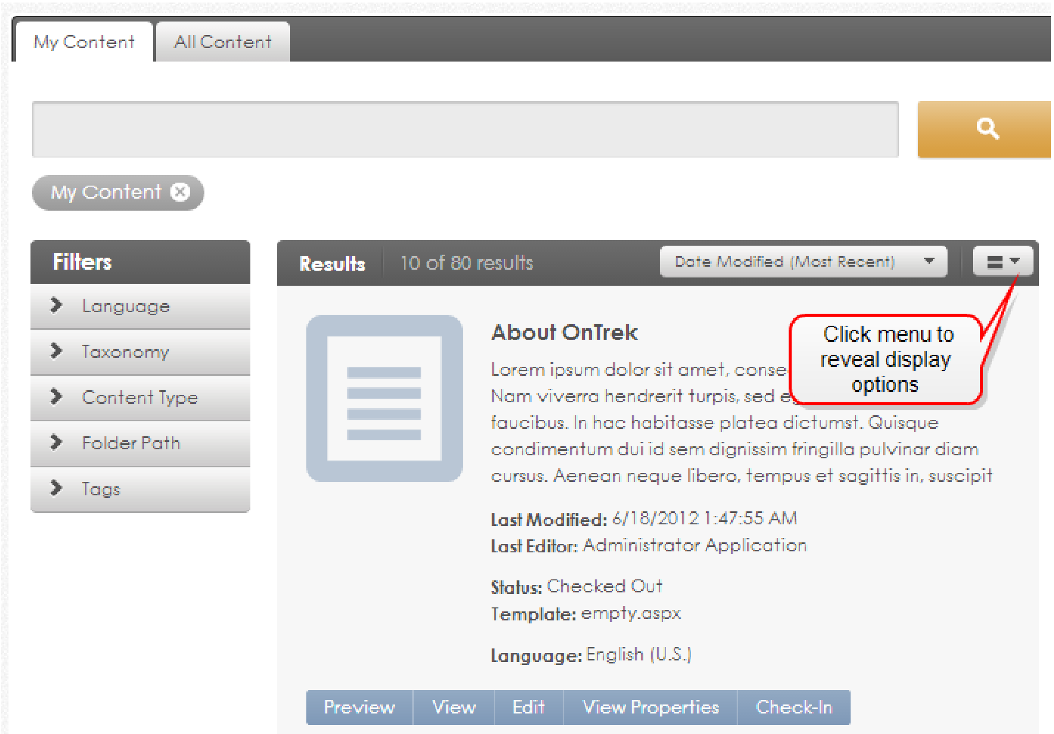
On the website, open the Ektron app launcher and click **Dashboard**.



The Content Dashboard appears. By default, you see content that you last edited.

IMPORTANT: The Content Dashboard shows Published content only. Content that has been checked in but not published does not appear. Use the Workarea to edit unpublished content.

The **My Content** tab (shown below) displays content that you created or last edited. To search for all content, click the **All Content** tab.



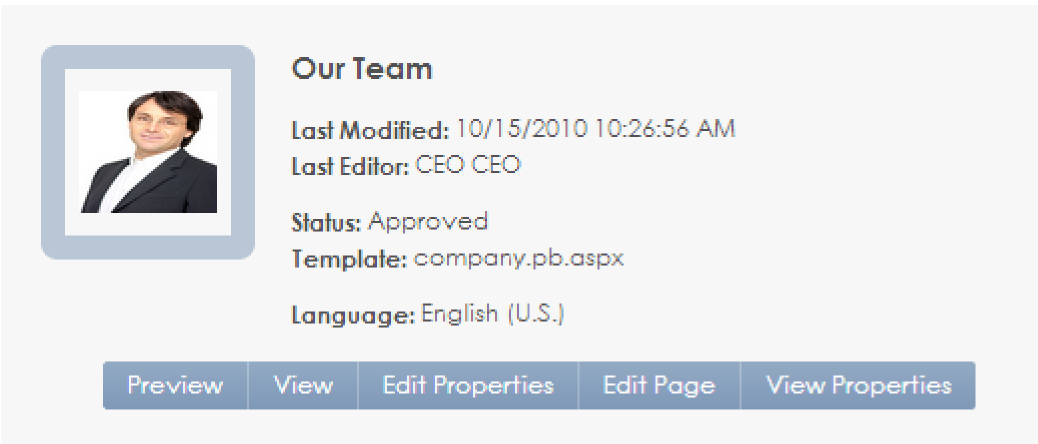
NOTE: The Language field may display the Locale ID instead of the name of the language. Locale ID Assigned by Microsoft shows all Language codes.

You can view results in:

- Grid (☰). shows content data and actions you can take.
- Tile (⁞⁞). shows content data in 2 columns and actions you can take.
- Line (☰). shows a more compact view of your content.

The action bar that you see depends on your permissions.

If a content item's metadata has an image, it shows as the item's thumbnail. For example:



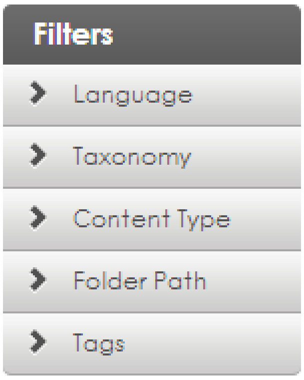
Results are added 10 at a time. If you scroll beyond the first 10 results, another 10 results are added until all results are shown.

NOTE: If no results appear when you open Content Dashboard, then you either have no content that was "Last edited" by you, or your search is not functioning. Try the **All Content** tab to see if anything appears there.
If not, check your search's crawl status: **Workarea > Settings > Configuration > Search > Status**. If the search is not set up, contact your Ektron administrator.

Filtering content

IMPORTANT: Content Dashboard filters are supported by Solr search. If you are using another search provider, results appear but filtering capabilities do not. See Also: *Using Solr search* on page 204.

If you have a lot of content to sort and sift, use the Filters panel to narrow your search by opening the tabs and clicking filters.



Each filter displays the number of content items to which it is assigned.

A *filter* is a property with a specific value. If you choose a filter, the search results refresh, and you only see content to which the filter applies. For example, the content's last editor is John Wang. If you choose that filter (by clicking inside its check box), the screen refreshes, and only content last edited by John Wang appears.

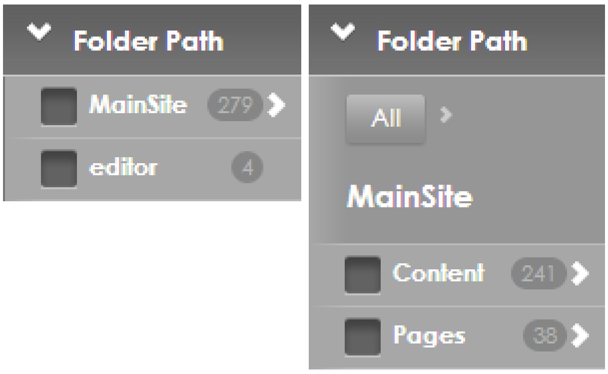
If you choose several filters, content only appears if it satisfies all filters and the search term(s).

If you choose a folder or taxonomy category, content within it and any of the child folders/categories appears.

Upon choosing a filter, the screen refreshes. If a content property can only have one value, it no longer appears in the filters display. For example, a content item only has one folder. So, if you choose the Solutions folder, the filters display hides all other folders. The filters display also hides unapplied editors. On the other hand, more than one tag or taxonomy category can be applied to content. So, they continue to appear after you choose one of them.

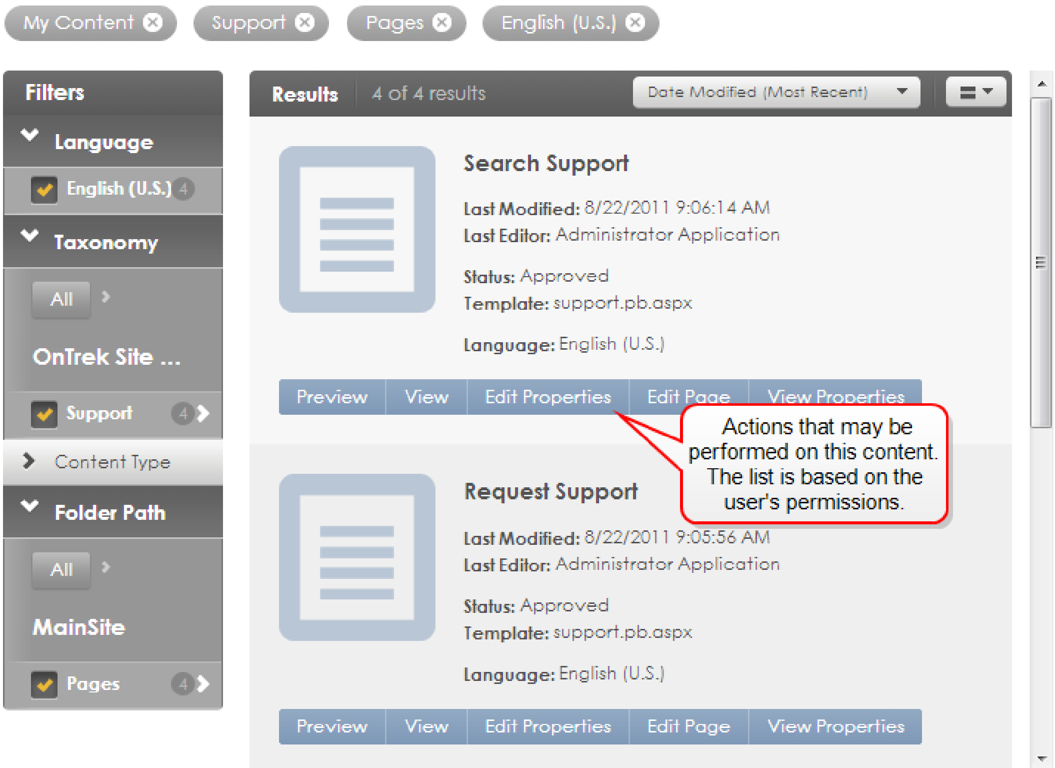
If you want to add a hidden filter, remove the applied filters, and all available filters reappear.

If an item has an arrow (), use it to expand the item tree for further refinement. For example, if you open the MainSite folder path, its subfolders appear, Content and Pages.



You can choose several filters to refine search results. The following example shows results that meet these criteria:

- **My Content**
- are assigned to the **Support** taxonomy
- belong to the **Pages** folder path
- language is **English**

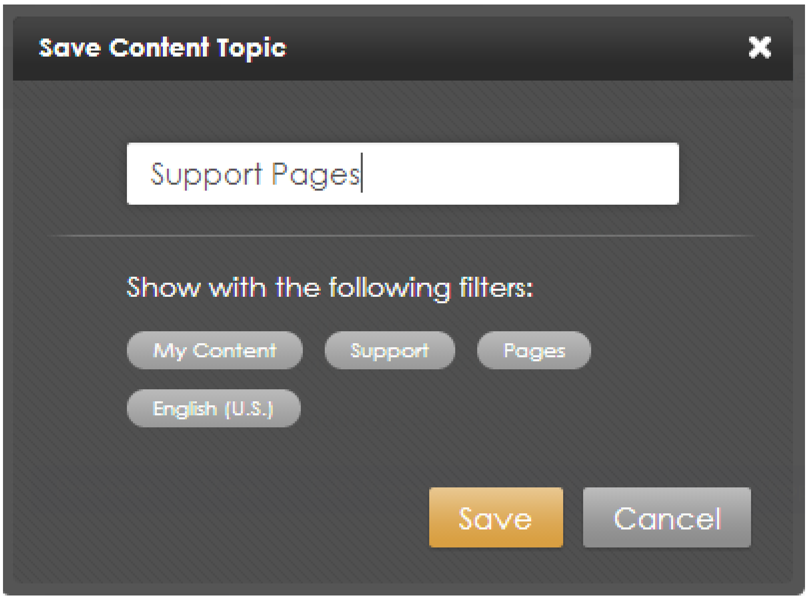


Selected filters are checked in the filters panel and appear under the search bar. To remove a filter, click **X** on the filter under the search bar. If you do, the results automatically update.

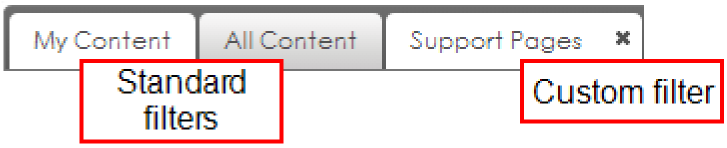
Saving filtered searches

If you often filter content in the same way, you can save a set of search filters on a tab. Whenever you click the tab, the filters are applied, and content that satisfies those filters appears.

1. Specify filters by which you want to narrow search results. See *Filtering content* on page 605.
2. Click **Save** on the right of the tab bar. The Save Content Topic screen appears, showing the selected filters.

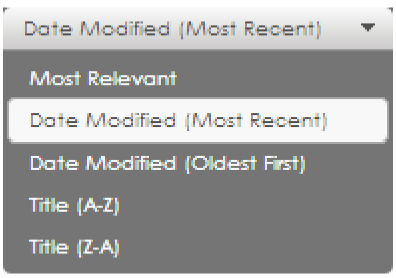


3. Enter a name for the filtered search and click **Save**. The new tab appears on the tab bar.



Sorting content

You can sort search results by Most Relevant, Date Modified, or Title by selecting an option from the following menu.



If you sort by **Most Relevant**, content that needs to be checked in (or otherwise acted on) is displayed ahead of content that does not.

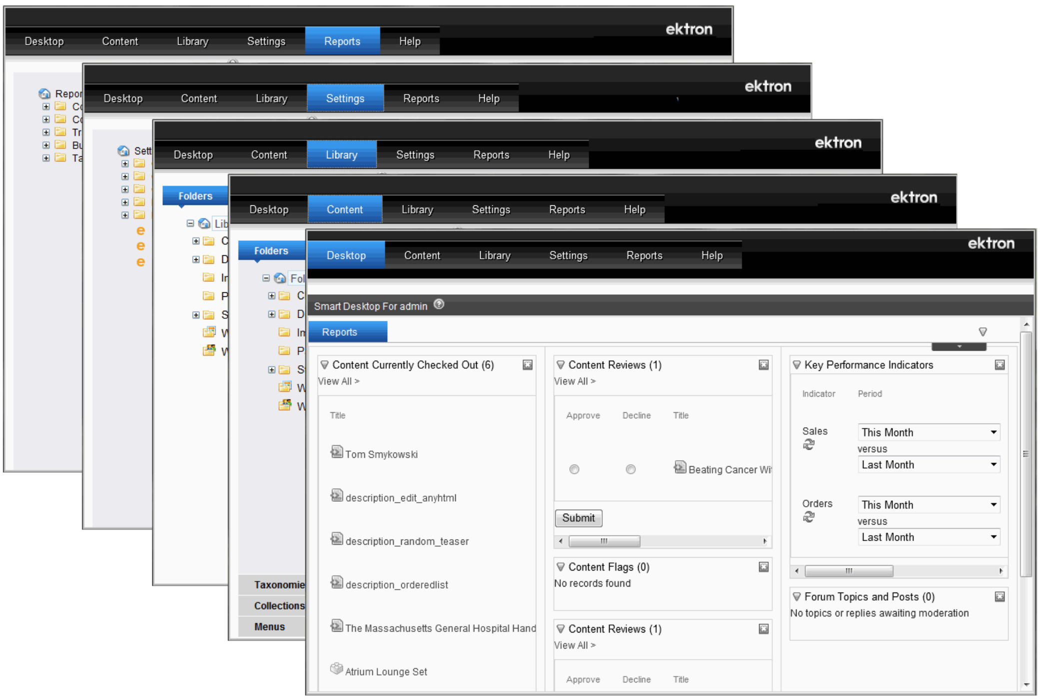
Managing content from the Workarea

The Workarea is a central location where you can perform most tasks for managing your website. The Workarea is similar to Microsoft Outlook in its ability to manage email, calendars, tasks, and so on.

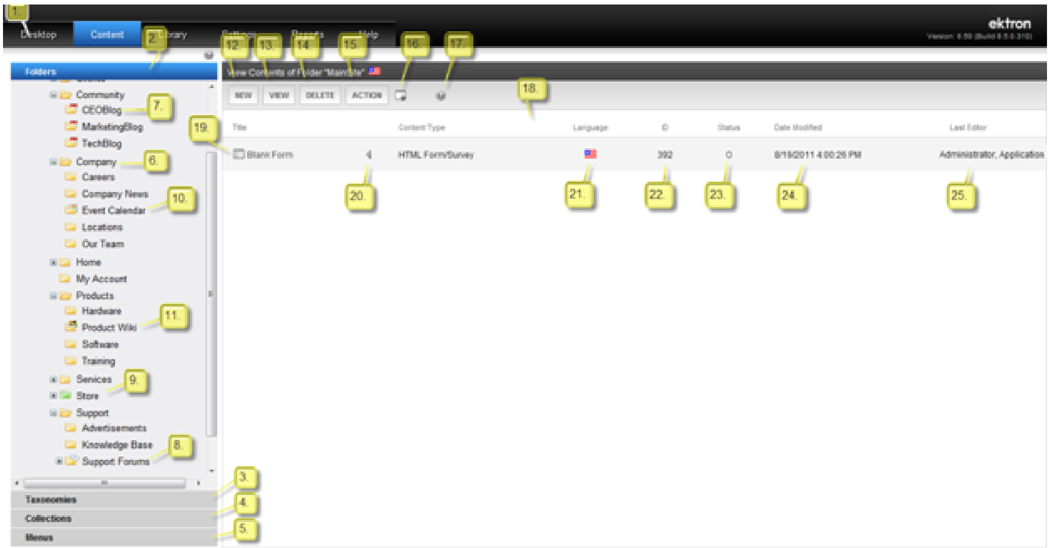
IMPORTANT: If you are using Internet Explorer 11, set the following parameters to ensure optimum functionality.
1. Press **Alt/X** to display the Internet Explorer Tools menu.
2. Choose **Compatibility View Settings**.
3. Uncheck **Display intranet sites in Compatibility View**.

If you are using *Internet Explorer 10*, set the following parameters to ensure optimum functionality.
1. Press **F12**. A settings menu bar appears at the bottom of the browser above the tabs.
2. Set **Browser Mode** to **IE 10** (*not* Compatibility view).
3. Set **Documentation Mode** to **Standards**.
4. Click **X** to exit.

NOTE: To access the Workarea, you must be logged in to your Ektron website.



Workarea quick reference



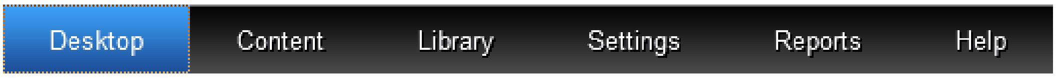
- 1. **Workarea Tabs**
  - Desktop. Smart personalization desktop.
  - Content. Folders, contents, DMS, taxonomies, collections and menus.
  - Library. Content folder structure which organizes the storage images, files , hyperlinks and quicklinks.
  - Settings. Manage CMS Settings based upon permissions.
  - Reports. Content reports and Site analytics.
  - Help. In Workarea and in context help section.
- **Content Tab Types**
  - 2. Folder Tab. Select to view folder architect structure of CMS.
  - 3. Taxonomy Tab. Select to view Taxonomy Structure and options.
  - 4. Collections Tab. Select to view Collections and options.
  - 5. Menu Tab. Select to view Menus and options.
- **Folder Types**
  - 6. Content Folder. Regular folder for contents, select to view contents in that folder.
  - 7. Blog Folder. Select to view the posts and comments on this blog.
  - 8. Forum Folder. Select to view the discussion forums, categories, topics, and replies.
  - 9. eCommerce Folder. Select to view the eCommerce items.
  - 10. Calendar Folder. Select to view and plan events on the calendar.
  - 11. Community Folder. Folders for membership uses to edit content, select to view contents.
- **Dropdown Menus**
  - 12. New menu. Create new content, forms documents, Folders menus and collections.
  - 13. View menu. View Language, Properties and archived content and more.

- 14. Delete menu. Used to delete multiple items. Administrators can delete folders.
- 15. Action menu. Export for translation, search, move/copy content, eSync.
- 16. DMS/ Add asset. Pop up the window for drag and drop documents from local machine.
- 17. In Context Help. Click to get in context help anywhere in the Workarea.
- 18. Content Organization Bar. Ability to sort content by the title.

- **Content Types**
  - 19. Content Items. HTML Content, Forms, DMS, or Multimedia Content.
  - 20. Quick Edit Menu. For content editing, properties and content eSync.
  - 21. Language Flag. Indicate the content language version.
  - 22. Content ID. Automatically generated by system.
  - 23. Content Status. Shows the current status of a piece of content. See *Content statuses* on page 624
  - 24. Date Modified. Last modified date of the content.
  - 25. Last Editor. Editor who made the last modification.

Workarea tabs

The Workarea has 6 tabs in the upper left corner. Use them to access all other pages.



The following list shows the Workarea's main pages.

- Desktop. *Managing content from the Smart Desktop* on page 612
- Content. *Managing content* on page 591
- Library. *Working with files in the library* on page 673
- Settings. contains these folders.
  - Commerce. *Conducting eCommerce* on page 1605
  - Community Management. *Managing user communities* on page 1505
  - Configuration. See feature-specific topics
  - Digital Experience hub. *Ektron Digital Experience Hub release notes* on page 453
  - Localization. *Importing translation files* on page 1422
  - Roles. *Defining roles* on page 1464
  - Business Rules. *Creating business rules for your website* on page 1361
  - User Groups. *Managing user groups* on page 1450
  - Users. *Managing users* on page 1440
- Reports. Contains these folders:
  - Commerce. *Generating eCommerce reports, widgets, and logs* on page 1732

  - Contents. *Working with content reports* on page 975
  - Traffic Analytics. *Running Ektron traffic analytics* on page 509
  - Business Analytics. *Running Ektron business analytics* on page 488
  - Tasks. *Assigning and managing tasks* on page 1339
- Help

Workarea style sheets

The Workarea uses 2 primary style sheets:

- `Ektron.workarea.css`. The primary CSS file for the Workarea. It replaces the previous Ektron version's global.css file.
- `Ektron.workarea.ie.css` is used for Internet Explorer browsers, and generally targeted at IE7 or less. It includes overrides for some CSS rules in Ektron.workarea.css that get around IE CSS bugs or deficiencies.

Using widely accepted style sheet classes and class attributes, you can modify the Workarea, including colors, spacing, fonts, and so on. Also, if you later upgrade or re-install Ektron, you can reuse this file and retain your changes.

NOTE: Several language-specific images are used at the top of the Workarea. They reside in the language folders and always start with the word "`Workarea`" and end with "`_top`." These images are 467 pixels wide by 77 pixels high. Their width can change but the height cannot. There are approximately six images in each language folder. An Adobe Photoshop file, `Workarea_top.psd`, can be found under `\Workarea\images\English folder`. You can modify these images as needed.

Accessing the Workarea

To access the Workarea, log into your website and click **Workarea**. The Smart Desktop is the default tab.

NOTE: The Application Setup screen lets you determine the initial screen that appears when you access the Workarea. See also: *Modifying setup information* on page 121.

The Smart Desktop contains useful information that pertains to you. You may personalize this page by adding, moving or deleting Workarea widgets. See also: *Managing content from the Smart Desktop* on the next page

Closing the Workarea

There are 2 ways to close the Workarea.

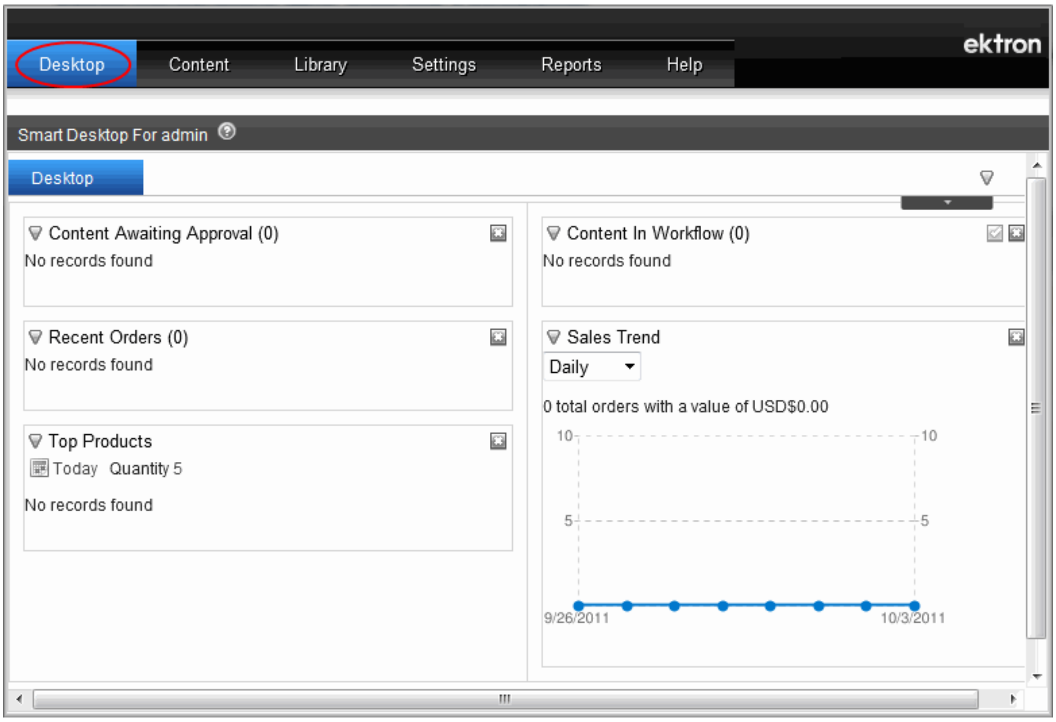
- Log out of the Website from a Logout link on the Web page or the Logout button (

).
- Using the Windows Close button (

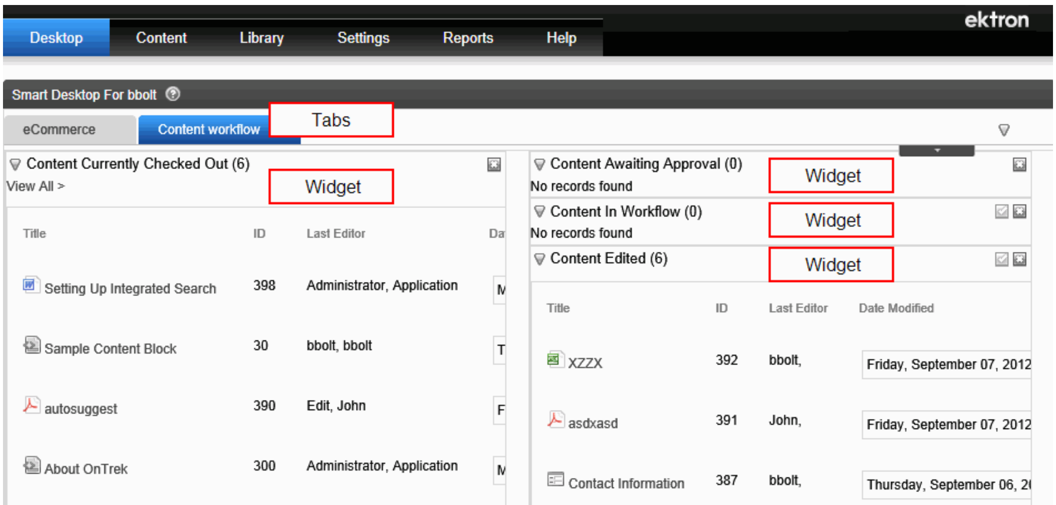
) in the upper right corner of the browser. If you do this, you remain logged in to the website.

Managing content from the Smart Desktop

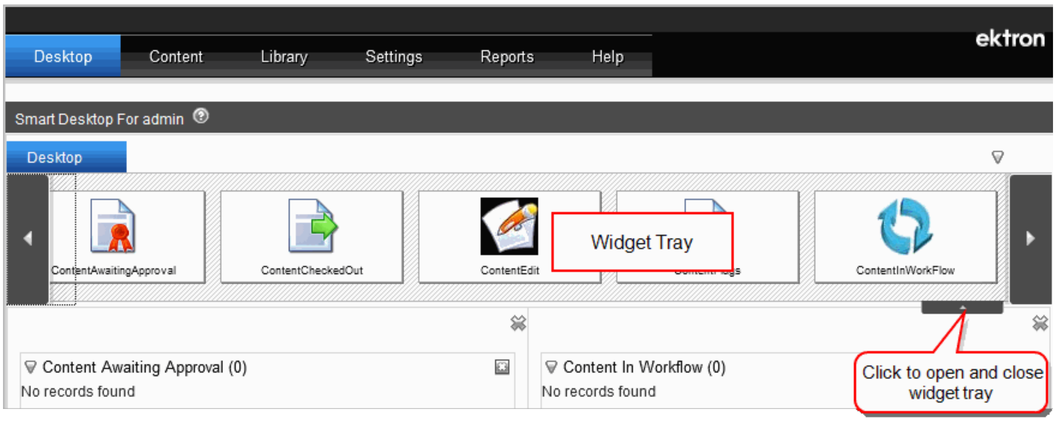
To personalize your Smart Desktop, you choose and arrange widgets that pertain to your work. To access the Smart Desktop, click the **Desktop** tab in the Workarea.



The default Smart Desktop displays several widgets with information about your website. You can create new tabs on a Smart Desktop to add, move, delete, and organize widgets by subject. Each tab consists of 1 or more columns, which you can create to further arrange widgets on a tab. The following screen has 2 columns.



Smart Desktop widgets are stored in a widget tray. Drag and drop widgets from the tray to any tab and column on the Smart Desktop.



Enabling Smart Desktop widgets

PREREQUISITE

You are a member of the Administrators group.

You must complete this procedure before administrators can create a default Smart Desktop.

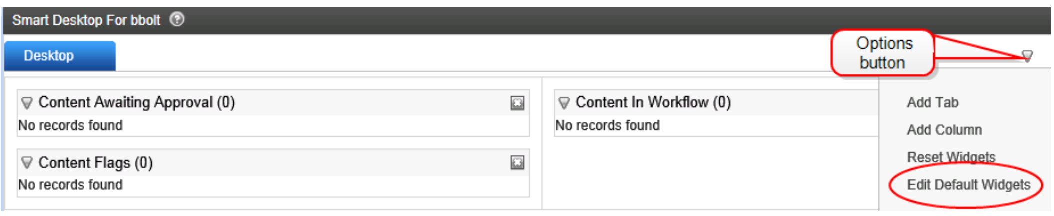
1. **Workarea > Settings > Configuration > Personalizations > Widget Space**.
2. Click **Edit** (icon) next to **UserSmartDesktop**.
3. Select widgets that users can place on their Smart Desktop.
4. Click **Click here to save widget space**.

Setting the default Smart Desktop

The following procedure shows how an administrator creates a default Smart Desktop consisting of a unique arrangement of widgets, tabs, and columns. The default desktop becomes every user's Smart Desktop until modified by the user. A user can reset the Smart Desktop to the default setting by running the **Reset Widgets** command (see *Restoring tabs and widgets* on page 617).

NOTE: If you change the default Smart Desktop, that action does not affect existing users' desktops. Those desktops are set to default settings only if the user runs the **Reset Widgets** command.

1. Go to **Workarea > Desktop**.
2. Choose **Options** (▽) **> Edit Default Widgets** on the right side of the Smart Desktop. A confirmation dialog box appears.



3. Click **OK**.

4. Arrange the Smart Desktop with widgets, tabs, and columns that you want to be the default. See also: *Adding a widget to the Smart Desktop* on the facing page, *Adding a tab to the Smart Desktop* on page 616, *Adding a column* on page 617
5. Choose **Options** (▽) **> Done**.

Adding Smart Desktop widgets

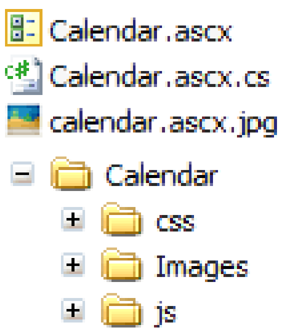
Smart Desktop widgets are located in the Web server's `workarea\widgets` folder. You can also make Personalization and PageBuilder widgets available to the Smart Desktop.

IMPORTANT: Some Personalization and PageBuilder widgets may not work properly on the Smart Desktop. Test them before notifying users.

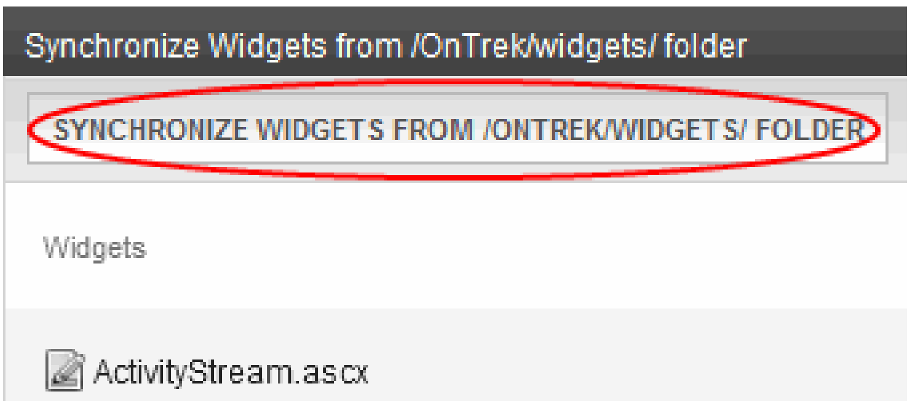
PREREQUISITE

You can access the Ektron Web server's file system.

1. On the Web server, copy desired widget files from the *siteroot*`\widgets` folder to the *siteroot*`\Workarea\Widgets` folder. Be sure to copy *all* widget-related files and folders. The following image shows *all* Calendar widget folders (with their files inside).



2. Click **Workarea > Settings> Configuration > Personalizations > Widgets**.
3. Click **Synchronize Widgets**....



4. At the prompt, click **OK**.
5. Go to **Workarea > Settings > Personalizations > Widget Space**.

6. Click **Edit** () next to **UserSmartDesktop**.
7. Select the new widget (you may have to scroll down to see it).
8. Click **Click here to save widget space**.
9. Users many now add the widget to the Smart Desktop. See *Adding a widget to the Smart Desktop* below.

Customizing the Smart Desktop

An end user can do the following when customizing a Smart Desktop:

- drag and drop widgets—See *Adding a widget to the Smart Desktop* below
- add tabs—See *Adding a tab to the Smart Desktop* on the next page
- add or remove columns within a tab—See *Adding a column* on page 617, *Deleting a column* on page 617
- restore Smart Desktop to default settings—See *Restoring tabs and widgets* on page 617

Adding a widget to the Smart Desktop

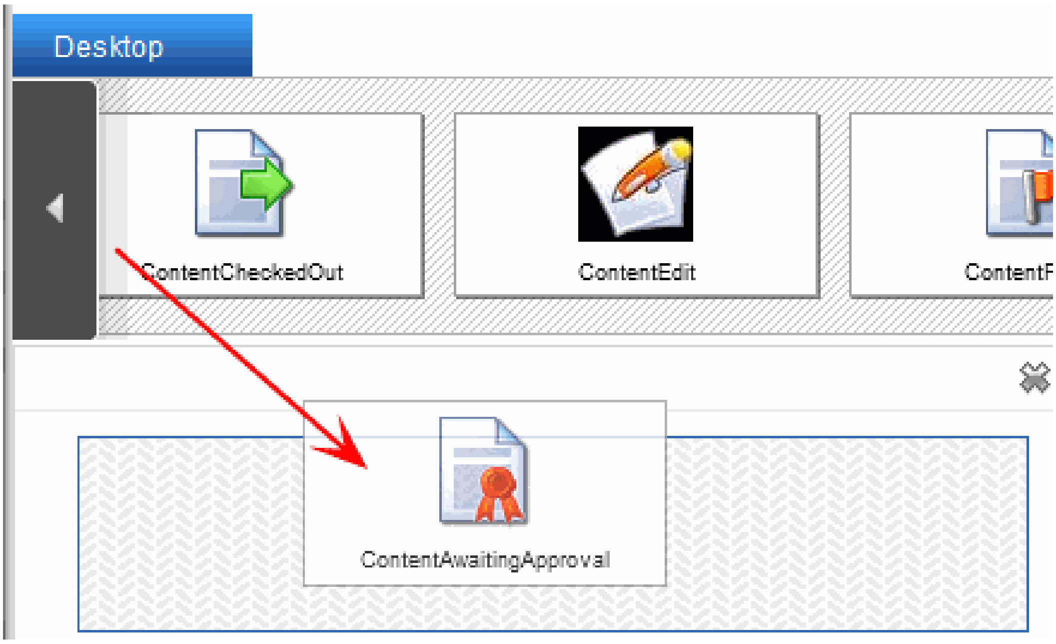
PREREQUISITE

Smart Desktop widgets have been enabled. See also: *Enabling Smart Desktop widgets* on page 613

1. Go to the **Workarea > Desktop**.
2. Click the Toggle widget tray arrow, located in the upper right corner of the Smart Desktop (circled).

3. The *widget tray appears,* containing widgets you can drag and drop to your Smart Desktop. Use the left arrow () or right arrow () buttons to see more widgets.
4. To choose a widget, drag it from the tray and drop it into the Smart Desktop

panel.

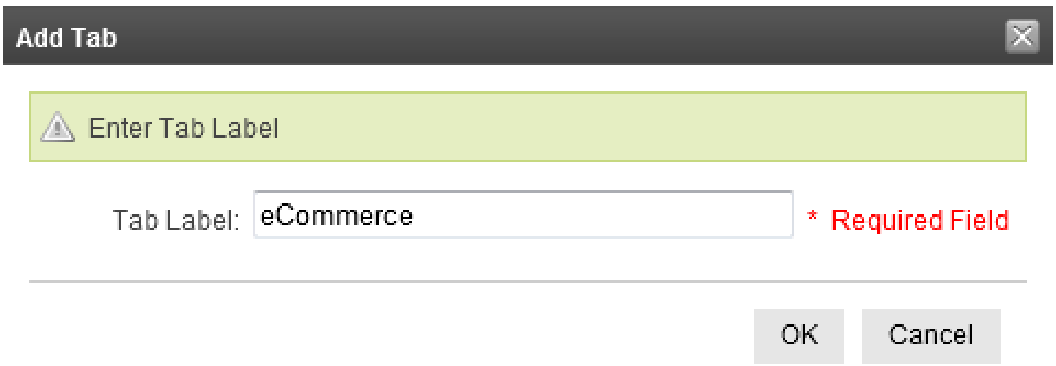


After placing a widget on the Smart Desktop, you may drag it to any desktop location.

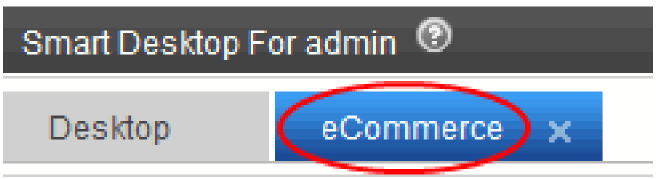
Adding a tab to the Smart Desktop

Tabs help you organize your Smart Desktop. You may add or remove tabs. For example, you create an eCommerce tab on which to drop orders widgets. To add a tab:

1. Choose **Options** (▽) **> Add Tab**. The Add Tab dialog window appears.



2. Enter a **Tab Label**. For example, **eCommerce**.
3. Click **OK**. The new tab appears at the top of the Smart Desktop.

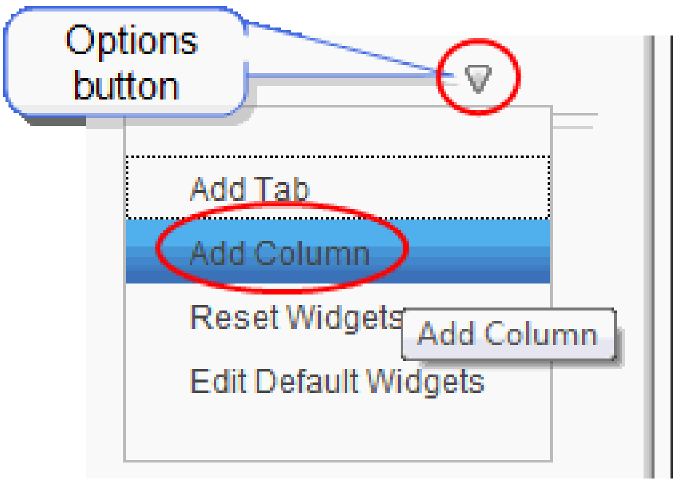


Adding a column

You can divide a Smart Desktop tab into columns This capability helps you arrange widgets on the tab.

NOTE: Two columns are created for each new tab by default.

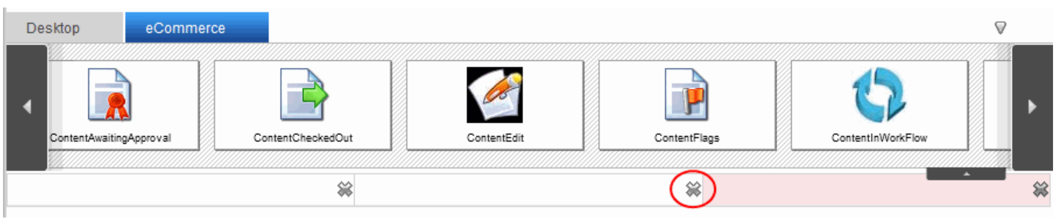
To add a column to a Smart Desktop tab, choose **Options** (▽) **> Add Column**.



Deleting a column

1. Click the toggle widget tray button (circled) to show the widget tray and columns.

2. Click **Remove Column** (✖) (circled) inside the column you wish to delete.

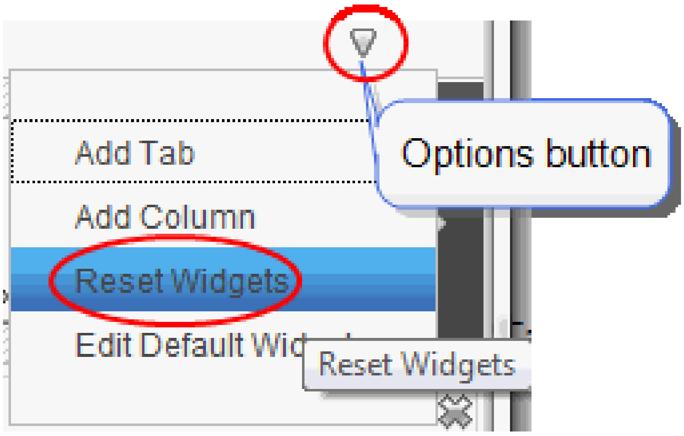


Restoring tabs and widgets

A user can restore the Smart Desktop to the default widget and tab set.

WARNING! This action removes ***all*** tabs and widgets you have modified on your Smart Desktop. After you restore, the default tabs and widgets appear.

1. Click the Options button on the right side of the Smart Desktop.
2. Click **Reset Widgets**.



3. A dialog appears. Click **OK**.

Standard Desktop Widgets

The following list describes the standard Smart Desktop widgets. See also: *Adding Smart Desktop widgets* on page 614

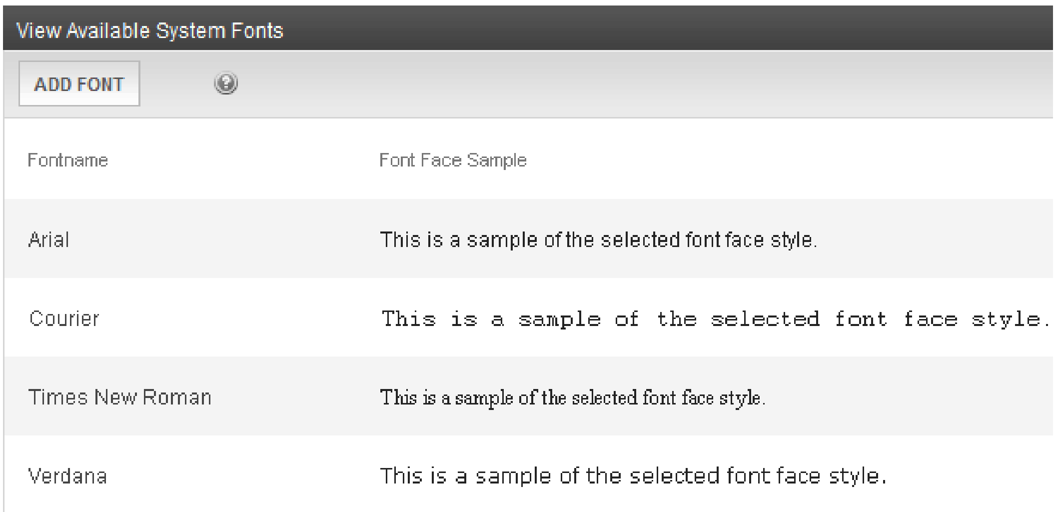
- **Content Awaiting Approval**. Content awaiting your approval; *Approving content for publication* on page 689
- **Content Checked Out**. Content in checked-out status; *Checked out content report* on page 976
- **Content Edited**. Content edited within the last week
- **Content Flags**. The 10 most recently-added content flags**;** *Defining flags for content* on page 1590
- **Content In Workflow**. Content that has been part of an workflow within the last week;*Approving content for publication* on page 689
- **Content Reviews**. Content reviews awaiting moderation; *Moderating reviews* on page 987
- **Content to Expire**. Content that will expire between today and a number of days you specify; *Content to expire report* on page 979
- **Forum Topics and Posts**. Forum posts that require approval; *Approving a post* on page 967
- **Order on Hold**. eCommerce orders on hold; *Managing customer orders* on page 1716

- **Recent Orders**. Recent eCommerce orders; *Managing customer orders* on page 1716
- **Customer List**. The top 5 eCommerce customers ranked according to account date, sales, and orders;*Customer report* on page 1732
- **Key Performance Indicators**. Compares eCommerce sales and orders for 2 time periods;*Key performance indicators report* on page 1734
- **Reconciliation report**. Lists payments for a specific time period; *Reconciliation reports* on page 1735
- **Sales Trend**. The number of eCommerce orders for the past 8 periods; *Sales Trend report* on page 1736
- **Top Products**. The most popular products on your eCommerce site; *Top Products report* on page 1737
- **Analytics Report**. The Direct Traffic report for the past 7 days; *Analyzing websites* on page 483

Controlling available fonts

As an administrator, you can add, edit, and delete fonts to and from the Ektron application. By adding fonts, you are allowing the content contributors to use them when creating content. Administrators can also edit the name of a font, and delete a font from the system.

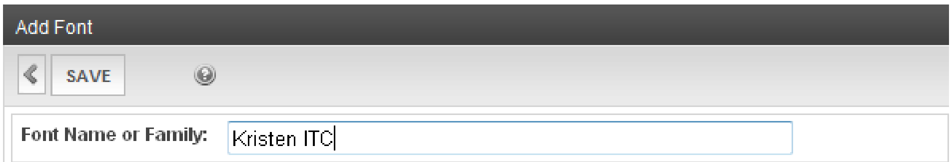
Minimizing the number of available fonts makes the website look more uniform. The following figure shows the Font Manager screen.



NOTE: Only members of the Administrator User Group can view, add, or edit fonts.

Adding fonts

1. From the Workarea, choose **Settings > Configuration > Fonts**.
2. Click **Add Font**. The Add Font screen appears.



3. Enter the font name or family into the text field; (*Kristen ITC* in this example).
4. Click **Save**.

   The new font is available to use when adding or editing content if the Application Setup screen's **Enable Font Buttons** field is checked. See also: *Modifying setup information* on page 121

Viewing fonts

When viewing fonts, you can also edit or delete them.

1. From the Workarea, choose **Settings > Configuration > Fonts**.
2. Click the font you want to view.The view font screen appears.

Editing fonts

When you edit a font, the font or family name is changed. Editing does not change any fonts in existing content.

1. From the Workarea, choose **Settings > Configuration > Fonts**.
2. Click the font you want to edit. The view font screen appears.
3. Click **Edit**. The Edit Font screen appears.
4. Edit the font name or family in the text field specified.
5. When finished, click **Update**.

Deleting fonts

By deleting a font from the system, you are taking away the content contributors' use of that font in their content.

1. From the Workarea, choose **Settings > Configuration > Fonts**.
2. Click the font you want to delete. The view font screen appears.
3. Click **Delete** ( ).
4. Click **OK**. The screen is refreshed, and the updated fonts table appears.

NOTE: When you delete a font from Ektron, you do not delete it from your computer.

Additional topics about managing content

The following topics explain managing types of content in Ektron.

- *Working with Ektron content* on the next page
- *Working with assets in the Document Management System* on page 649
- *Working with files in the library* on page 673
- *Working with collections* on page 740
- *Working with Metadata* on page 755
- *Working with templates* on page 769
- *Working with HTML forms* on page 775
- *Working with Smart Forms* on page 815
- *Working with blogs* on page 887
- *Working with calendars* on page 913
- *Working with discussion boards* on page 933
- *Working with content reports* on page 975
- *User-ranking of content* on page 986
- Using the Map Server Control

Working with Ektron content

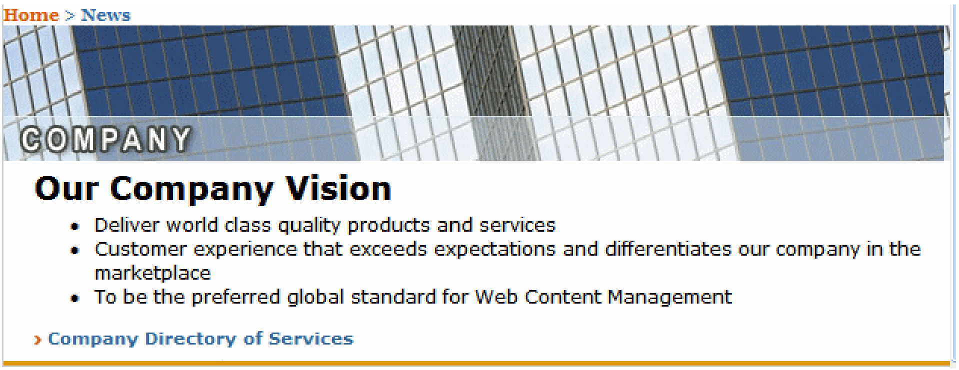
To work with content on your website or in the CMS Workarea, you must log in as a CMS user. Ektron lets you access content on a Web page in the following ways:

- Web page with the Ektron 9.10 SP3 toolbar. An HTML5 CSS3 interface that gives you additional options and experience
- Web page with PageBuilder menu. Hover over the access point ( ) to see options for content on the page.
- Workarea. You can specify additional information for content such as metadata, a content summary, aliases, comments, scheduling, and so on.
    - Go the *Workarea* folder tree. See also: *Managing content* on page 591.
    - Use the **Action > Search** option, which appears in the View screen of every folder. See also: *Searching the Workarea* on page 363.

Ektron has many types of content that you can use on your website. See *Understanding Ektron content* below for information about the types of content.

Understanding Ektron content

A website consists of pages that are made up of one or more *blocks* of content as shown in the following example from the home page of one of Ektron's sample sites.



The following sections provide information about Ektron content.

- Content Types
- Content Properties
- Content Statuses
- Other Content Information

Content types

Every piece of content in Ektron is one of the following types.

- **HTML content**. Content designed to be published on the World Wide Web. See *Editing in Ektron* on page 553.

- **XML Smart Forms**. XML-based Smart Form configurations collect and validate structured content. An XML schema validation ensures the accuracy and format of your Web content, which reduces review and revision time. See *Working with Smart Forms* on page 815.
- **HTML form/survey**. Online forms, polls, or surveys designed to collect information from site visitors and save it in an HTML format. See *Working with HTML forms* on page 775.
- **DMS Documents**. consists of Office documents, managed files, and multimedia files. See *Working with assets in the Document Management System* on page 649.
- **Office documents**. Files normally created and edited using Microsoft Office. See *Working with assets in the Document Management System* on page 649.
- **Managed files**. Files created outside of Ektron, such as PDF files. You cannot create or edit these files within Ektron—you can only store them. See *Working with assets in the Document Management System* on page 649.
- **Multimedia**. Files that run in a media player, such as sound and movie files. See *Managing multimedia assets* on page 657.
- **Blogs**. A blog is a form of online information sharing and is often set up so a group of people can share their thoughts on a subject. See *Working with blogs* on page 887.
- **Web Calendars**. Web Calendars keep visitors informed about upcoming events. They can be displayed to all visitors to your website, and any authorized user can add events to a calendar. See *Working with calendars* on page 913.
- **Discussion Boards**. The Discussion Board feature provides an opportunity for topic discussions on your website. A site or membership user with Add Topic permission creates a topic and posts a starter question. Site visitors can then reply. See *Working with discussion boards* on page 933.
- **Content Imported from SharePoint®**. After an Ektron administrator sets up DXH to map SharePoint to Ektron, an end user only needs to place content in a SharePoint folder to update their Ektron-powered website; the content is automatically transferred to the Ektron Workarea. You also can manually import SharePoint content from the Ektron Workarea.

Content properties

- **Content Title**. The title assigned to the content
- **Content ID**. The ID number assigned to the content. The ID number is used to retrieve content from a database.
- **Content Language**. The content’s language
- **Status**. The current status of the content. See also: *Content statuses* on the next page.
- **Last User to Edit**. The last user to edit this content
- **Last Edit Date**. When the content was last edited
- **Start Date**. When the content will go live on the website

- **End Date**. When the content will be removed from the website
- **Action on End Date**. What happens to the content when its end date and time are reached. See also: *Scheduling content* on page 640.
- **Date Created**. When the content was created
- **Approval Method**. Whether all approvers must sign off on content before it is published; only appears if basic workflow is applied to content or its folder. See also: *Changing the approval method* on page 695
- **Approvals**. Users in the workflow for this content. See also: *Approving content for publication* on page 689.
- **Smart Form Configuration**. The Smart Form applied to the content. This is typically managed by your system administrator. See also: *Working with Smart Forms* on page 815.
- **Template**. The template currently assigned to the content. This is typically managed by your system administrator. See also: *Working with templates* on page 769.
- **Path**. The folder path to the content's folder. A slash (\) represents the Content folder.
- **Ranking**. Ektron's Content Ranking feature lets site visitors rate content on a scale of 1 to 10. If this feature is enabled for the content, the average numerical rating appears. See also: *User-ranking of content* on page 986.
- **Content Searchable**. **True** appears if the content can be found when someone searches your website. See also: *Making content searchable* on page 346. However, even if content is *not* searchable, the Workarea Advanced search still finds it. See also: *Using advanced search in the Workarea* on page 364.

Content statuses

- **A** (Approved). Through the workflow and published on the website. You can:
  - Check content out and save it on your computer
  - Save a copy to your computer
  - Check out the content and edit it
  - Edit the content summary, metadata, schedule, comment, and so on
  - View the content information
  - Delete or submit a request to delete the content.
- **O** (Checked Out). Currently being edited. Has not been checked in. You can:
  - If you checked out the content
    - Check it in
    - Save a copy to your computer
    - Edit it
    - Edit the summary, metadata, schedule, comment, and so on
  - If you are an administrator
    - Force a check in
    - Request a check in from the person who checked it out

- Anyone can view the content information
- **I** (Checked In). Checked in for other users to edit. You can:
  - Check content out and save it on your computer
  - Save a copy to your computer
  - Check out the content and edit it
  - Edit the content summary, metadata, schedule, comment, and so on.
  - View the content information
  - Delete or submit a request to delete the content.
  - Publish content or submit it to the workflow.
- **S** (Submitted for Approval). Saved and submitted into the workflow. You can
  - Approve and publish content to the website
  - Decline to publish the submitted content
  - Check out the content and edit it
  - View the content information
- **M** (Marked for Deletion). Requested for deletion. You can:
  - Approve the deletion request
  - Refuse the deletion request
  - Save a copy to your computer
  - View the content information
- **P** (Pending Go Live Date). Approved but the Go Live date has not occurred yet. You can:
  - Check out and edit the content
  - View the content information
- **T** (Awaiting Completion of Associated Tasks). Task(s) assigned to content are not complete

Other content information

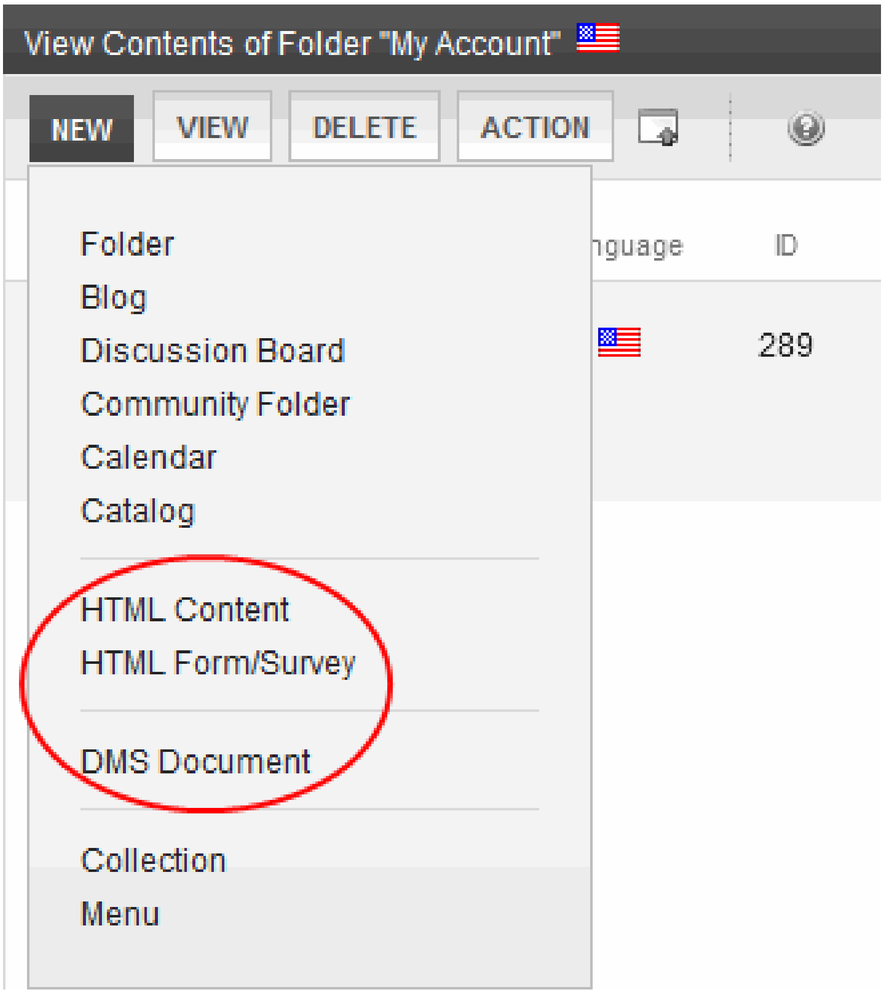
- **Properties** tab. View the content's properties
- **Content** tab. Display and edit content
- **Summary** tab. Edit content's summary
- **Metadata** tab. Edit content's metadata
- **Alias** tab. View and edit the content item's primary alias, or view all secondary aliases; *Creating a manual URL alias* on page 1304
- **Comment** tab. View comments on changes made when editing content. This comment also appears on the View Content and Content History screens. Use it to help distinguish one version from another.
- **Tasks** tab. Add or edit tasks for this content; *Assigning and managing tasks* on page 1339
- **Web Alerts** tab. Add or edit Web Alerts for this content; *Sending Web Alert emails to subscribers* on page 1369

- **Templates** tab. The template currently assigned to the content; *Working with templates* on page 769
- **Category** tab. Any taxonomy categories currently assigned to the content. Only appears if at least one Taxonomy is applied to the folder in which the content resides.
- **Edit**. Open content for editing
- . View older versions of content; restore older version; *Managing versions of content* on page 643
- . Toggle display between Published and staged versions
- . Compare current and earlier versions of content; *Managing versions of content* on page 643
- . Delete content; *Deleting content* on page 631
- . View and edit permissions for content
- . View and possibly edit the content's workflow; *Approving content for publication* on page 689
- . Find all content with Quicklinks to this content; *Checking links before deleting* on page 631
- . Attach a task to content; *Creating a task assigned to content* on page 1341
- . View Analytics for this content; *Viewing page-level analytics from the Workarea* on page 486
- . Displays the content item's rating and reviews, messages, and flags; *Defining flags for content* on page 1590
- . View and edit content's **Content Searchable** check box and flagging definitions; *Making content searchable* on page 346; *Defining flags for content* on page 1590
- . Go back to previous menu
- . Determines if content will be included when an .xlf file is created; *Marking translation statuses* on page 1424
- . Copy content to XLIFF files that can be submitted to a translation agency; *Working with multi-language content* on page 1393
- **View** (language). If you can view content in more than one language, select a language from the drop-down list.
- Add-select language. Lets you copy current content into a new item and translate it to selected language; *Translating content into another language* on page 640

Creating new content

NOTE: For information about editing content, see *Editing in Ektron* on page 553.

1. In the Workarea, go to the folder in which you want to create a new content item.
2. Choose a type of content from the New menu. (For example, choose **New > HTML Content**). The Edit Content screen appears.



Non-HTML content types:

- HTML Form/Survey. *Creating a form* on page 775
- XML Smart Form. *Working with Smart Forms* on page 815
- Assets (including multimedia). *Managing assets* on page 653
- Microsoft Office document. *Working with assets in the Document Management System* on page 649
- PageBuilder page. *Creating Web pages with PageBuilder* on page 991
- Web Calendar event. *Adding system calendar events* on page 916
- Blog post. *Working with blog posts* on page 902
- Discussion forum posts. *Working with posts* on page 959

3. Specify a title and begin creating your new content item.

- **Title**. Enter a title for the content. It cannot include these characters: * > < |

- **Content Searchable**. (Available to Administrators) Check this box if this content should be found when someone searches your website. However, even if content is *not* searchable:
  - the Workarea Advanced search still finds it. See also: *Advanced search* on page 338
  - it can appear among Suggested Results. See also: *Providing suggested results* on page 350
- **Publish** or **Submit**. Publish the content to the website. This action updates the content in the database and exits the editor. See also: *Approving content for publication* on page 689

  NOTE: Only the last approver in the workflow sees the **Publish** button. Other users see **Submit**. If no workflow is assigned to the content's folder, every authorized user sees **Publish**.

- . **Check In**. Save and check-in the content. This action updates the content in the database and exits the editor. It does *not* submit the content into the workflow. Rather, it allows you and other users to continue changing it.
- . **Undo Checkout**. Close editor without saving changes. Return content to its state prior to checkout.
- . **Save**. Save content without leaving the editor. It is a good idea to save your work frequently. But, if you later click **Cancel** and exit the editor, you lose changes saved by clicking this button.
- **. Cancel**. Close editor without saving changes. Leave content in *checked out* state.
- . **Preview**. Preview current content within its template in a new browser. If you cannot see the preview, make sure your browser does not block popups.
- **Content**. Enter content.
- **Summary**. Enter or edit the content summary.
- **Metadata**. Enter or edit the content metadata.

  All required metadata must be added before content can be checked in or submitted into the workflow.

- **Alias**. Enter or edit the content's manual alias, and view its automatic alias. See also: *Creating user-friendly URLs with aliasing* on page 1293.

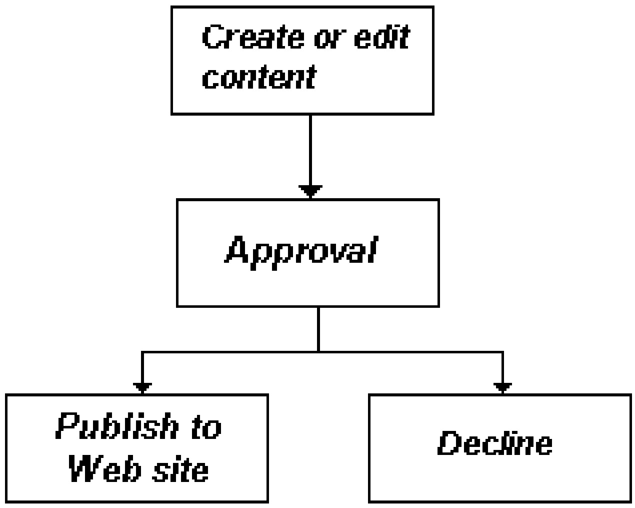
  A folder's **Aliasing** tab has a **Manual Alias Required** check box. If checked, the user creating or updating content *must* enter a manual alias before the user can save or submit the content.

- **Comment**. Briefly describe the content, or comment on changes made when editing content. The history comment appears on the View Content and Content History screens. On the Advanced Workarea Searchscreen, you can search for content by comments.

- **Schedule**. Use this tab to set a future publication date/time. To be published, this content must be approved *and* reach its publication date/time. See also: *Scheduling content* on page 640. If appropriate, enter a date when the content will no longer be viewable on the website. See also: *Setting an end date* on page 642.
- **Web Alerts**. See *Sending Web Alert emails to subscribers* on page 1369.
- **Templates**. This content's folder must have a default template. It can also have additional templates assigned. When content is created, the default template is assigned to it. If you want to change the template assigned to this content, click this tab and choose a template from the drop-down list. See also: *Working with templates* on page 769.
- **Category**. Assign taxonomy categories to this content. See also: *Organizing content with taxonomies* on page 1253.

After you create content, you or your system administrator typically make it available on the site. For example, you can add a hyperlink to it from another page, or place it in a collection or menu. Your administrator can add it to a list summary or content list.

You can set up an workflow process by which content is available to your website after it is reviewed by people with approval responsibility. See also: *Approving content for publication* on page 689. When a content creator submits content for publishing approval, an email is sent to the list of approvers. When the last approver signs off, the new content becomes available on the website. The following graphic illustrates the content workflow cycle.



To help track content's position in this workflow, Ektron assigns a status to each content item. The status determines what you can do with it, and indicates what must occur for it to get published to the website. See also: *Content statuses* on page 624.

Moving or copying content

You can *move* content from a folder to another folder. Or, you can *copy* content between folders. Moved content retains the original ID number, while copied content gets the next available ID number.

Your can only move or copy content that has an Approved status. If a destination folder has an workflow, the content status changes to Submitted (or Approved if you are the last person in the workflow).

NOTE: If you are using basic workflow, a folder's Approval Method can affect the status of the moved/copied content. See also: *Setting the approval method* on page 694

You should move or copy content only between regular folders or eCommerce catalog folders. Do not move or copy from or to other folder types. If you copy an eCommerce catalog entry whose product type is not assigned to the destination catalog folder, the new product type gets assigned to the folder. See also: *Defining roles* on page 1464; *Managing folder and content permissions* on page 160.

To move or copy content between folders:

1. Select content items in a folder and choose **Action > Cut** or **Copy** (or right click and choose **Cut** or **Copy**).
2. In the left panel of the Workarea, go to the folder to which you want to paste the selected content, right click and choose **Paste Content**.

NOTE: If you are *copying* content, and the content exists in more than one language, you are informed that some content exist in several languages and asked if you want to paste them in all languages or only selected languages. If you are *moving* content, all language versions are moved.

Permissions for moving/copying content

Only users with any of these permissions/roles can move or copy content:

- member of the Administrators user group
- a user with Add, Edit, and Delete permissions for the source and destination folders, or is a member of a group with those permissions
- a user assigned the Folder User Admin role, or is a member of a group assigned that role. See also: *Defining roles* on page 1464
- a user assigned the Move or Copy role, or is a member of a group assigned that role

Effects of Mmoving/copying content

When content is moved or copied, the following changes are made.

- The content inherits permissions, the workflow, and the default template from the new folder.
- The content’s Quicklink is moved or copied in the library to the destination folder. However, the Quicklink remains the same (that is, the default template doesn’t change). You can update this by editing the Quicklink.

NOTE: If the Link Management setting in the web.config file is set to `true`, you do not need to update the quicklink. Link Management automatically finds the correct template based on the current folder.

- If the new folder already contains content with the same title, Ektron appends a number to the title to make it unique. For example: `ASP.NET Unleashed(2)`.
- Library image paths inside the content remain the same.
- If a destination folder has required metadata that the pasted content lacks, the paste action is not affected. But, the next time a user edits that content, the user must complete the required metadata before the user can save the edits.
- If the content's template is a Smart Form, it remains assigned even if the Smart Form is not assigned to the new folder.

Deleting content

The Delete command lets you permanently delete content from your website. You can only delete checked in or approved content. And, if the content is an eCommerce catalog entry, you can only delete if it is not on an order and its status is *checked in* or *approved*.

NOTE: If you do not see a Delete button or menu option, you do not have permission to delete, or the content status does not support deleting.

If content is managed by a basic or advanced workflow, it impacts the deletion procedure. See also: *Deleting content under basic workflow* on page 702, *Deleting content in an advanced workflow* on page 723.

Checking links before deleting

NOTE: It is good practice to check for broken quicklinks before deleting content.

Use the link checker button to locate all content with a link to the current content. The identified content that will include a "dead" link after you delete the current content. So, remove or change the obsolete links before deleting.

1. Go to the folder that contains the content.
2. Click the content and choose **View Properties**. The View Content screen appears.
3. Click **Link Search** (). A screen displays each content item with a link to the current content.
4. Click the linked content to access the View Content screen for the selected content.
5. Remove or change the Quicklink.

Deleting content from a Web page

1. Sign in and browse to the content you want to delete.
2. From the access point (), choose **Delete**. The View Content screen appears.

3. Click **Delete** (✖).
4. Click **OK**.

Deleting content from the Workarea

1. Go to the folder that contains content you want to delete.
2. Hover the cursor over the triangle (◀) and choose **Delete**.
3. Click **OK**.

Deleting several content items in a folder

On the View Contents of Folder screen, you can delete several content items at once.

1. Go to the folder that contains the content you want to delete.
2. Choose **Delete > Content**. The Delete Contents screen appears.
3. Check the boxes of content items you want to delete.
4. Click **Delete Content**.
5. Click **OK**.

Auditing changes

The Change Auditing feature provides the ability to audit or archive (or both) the deletion of these CMS objects:

- content
- folders
- menus
- taxonomies
- users

Audit means that a deletion (or attempted deletion, if the user is not authorized to delete) is logged in the event log.

Archive means that, when an authorized user clicks the **Delete** option for content, a folder or a taxonomy, instead of being deleted, the object is placed in a temporary holding area. From here, it can be restored. Archiving is *not* available for menus or users.

The Change Auditing feature is enabled through the following capabilities.

- **A recycle bin folder**. A folder to which content and folders are archived when an authorized user deletes them. Authorized users can restore these items.
- **Designated users who can delete items**. Roles or user groups that authorize users to
  - delete/archive and restore content and folders
  - delete menus and users (no archive/restore option)

- "delete" a taxonomy

  NOTE: If you enable the ability to delete taxonomies, the delete action changes the value of the taxonomy's **Display to Users** field to **false**. In this state, the taxonomy does not appear on your website but is still available in the Workarea. See also: *Creating a taxonomy and its associated categories* on page 1255.

Once you designate these users, other users cannot delete these items.

NOTE: You can designate only some content types for Change Auditing. For example, you can specify a user group that can archive and restore content and folders, but not restrict who can delete menus and users.

- **Deletion Logging**. The Event Log captures the deletion of these items.

  Logging is independent of the other capabilities. So, even if you do not set up a recycle bin nor users who can delete items, you can still track which users are deleting items and when.

Configuring change auditing

PREREQUISITE: ABILITY TO EDIT FILES IN YOUR *SITEROOT* FOLDER.

To configure Change Auditing, follow these steps.

1. If you want to authorize users to archive content and folders upon deletion:
   a. Create a user group and add to it users who can archive and restore content and folders. See also: *Managing user groups* on page 1450.
   b. Log into the Workarea and create a folder to store archived content and folders. Name it **Recycle Bin**.
   c. Assign to the user group created in step 1a all permissions for the Recycle Bin folder.
2. If you want to authorize users to delete menus, users, and taxonomies, set up three roles.
   - users who can delete *users*.
   - users who can delete *menus*.
   - users who can "delete" *taxonomies*. (See Note above.)

   Assign appropriate users to each role.
3. In your *siteroot*`/web.config` file, find or create the `appSettings` key.
4. Add an entry for `ek_cmsauditlogging` and set it to **true**.
5. In your *siteroot* folder, edit the `ektron.cms.auditing.config` file.
6. In the `<settings>` area, set values for roles or user groups created above.
   - MenuDeleterRole. Enter the role whose users can delete *menus*.
   - UserDeleterRole. Enter the role whose users can delete *users*.
   - TaxonomyDeleterRole. Enter the role whose users can "delete" *taxonomies*. (See Note above.)
   - FolderDeleterGroup. Enter the group whose users can archive and restore *folders*.

NOTE: There is no ContentDeleterRole. To give a user the ability to archive and restore content, assign him to the user group created in step 1a.

7. While in the `ektron.cms.auditing.config` file, go to the `<strategies>` section and define an action for each content type. For example, if you created a user group named "folder_delete," assigned users to that group, and want authorize them to archive folders upon deletion, enter `<add name="FolderAuditing" value="LogandArchive"/>`.
As shown below, only certain actions are available for each content type. For example, you cannot apply **LogandArchive** to menus and users because they cannot be restored.

Content Type	Logand Archive	Logand Delete	None	Logand Exception
Content	X	X	X	
Folder	X	X	X	
Menu		X	X	X
Taxonomy	X	X	X	X
User		X	X	X

Content Type Actions

- **LogandArchive**. Upon deletion, item is archived to recycle bin folder. Authorized users can later restore it. Deletion is recorded in the Event log.
- **LogandDelete**. Upon deletion, event is recorded in the Event log. Item *cannot* be recovered.
- **None**. Upon deletion, item cannot be recovered. Do not record deletion attempt in Event log.
- **LogandException**. Prevent deletion of item. Record deletion attempt in Event log.

Restoring archived content and folders

To restore content, move it to its original folder and republish.

To restore a folder, move it to its original folder.

Restoring a taxonomy

To make a "deleted" a taxonomy reappear on the website, follow these steps.

PREREQUISITE

Only members of the Administrator user group or those assigned to the Taxonomy Administrator role can perform these actions.

1. Log into the Workarea.
2. Go to **Workarea > Content > Taxonomies**.
3. Select the taxonomy.
4. Click **Edit** ( ).
5. Check the **Display to Users** box.

Sample ektron.cms.auditing.config file

```
<?xml version="1.0"?>
<cmsaudit>
  <settings>
       <add name="MenuDeleterRole" value="MenuDeleter"/>
       <add name="UserDeleterRole" value="UserDeleter"/>
       <add name="TaxonomyDeleterRole" value="TaxonomyDeleter"/>
       <add name="FolderDeleterGroup" value="FolderDeleter"/>
       <add name="RecycleBinFolderName" value="Recycle Bin"/>
  </settings>
  <strategies>
  <!--  Valid values for ContentAuditing:
       LogandArchive - Log and set content archived rather than delete content
       LogandDelete - log and delete content
       None
  -->
  <add name="ContentAuditing" value="LogandArchive"/>
  <!--  Valid values for FolderAuditing:
       LogandArchive - Log and move folder to configured recycle bin folder above
       LogandDelete - Log and delete
       None
  -->
  <add name="FolderAuditing" value="LogandArchive"/>
       <!--  Valid values for MenuAuditing:
       LogandException - Log and cancel delete action
       LogandDelete - Log and delete
       None
  -->
  <add name="MenuAuditing" value="LogandException"/>
  <!--  Valid values for TaxonomyAuditing:
       LogandArchive - Log and set taxonomy invisible to user
       LogandException - Log and cancel delete action
       LogandDelete - Log and delete
       None
  -->
  <add name="TaxonomyAuditing" value="LogandArchive"/>
       <!--  Valid values for UserAuditing:
       LogandException - Log and cancel delete action
       LogandDelete - Log and delete
       None
  -->
  <add name="UserAuditing" value="LogandException"/>
 </strategies>
</cmsaudit>
```

Writing a summary for content

A content summary is a short description that supplements the title. It can be used to summarize a content item when several appear on a Web page, such as page of top news stories. Web developers can display a summary to attract readers to the full story. Summaries can include images and text styling.

Content authors can compose a summary when creating or editing content. Or, a summary can be automatically generated by extracting the first part of the item's content.

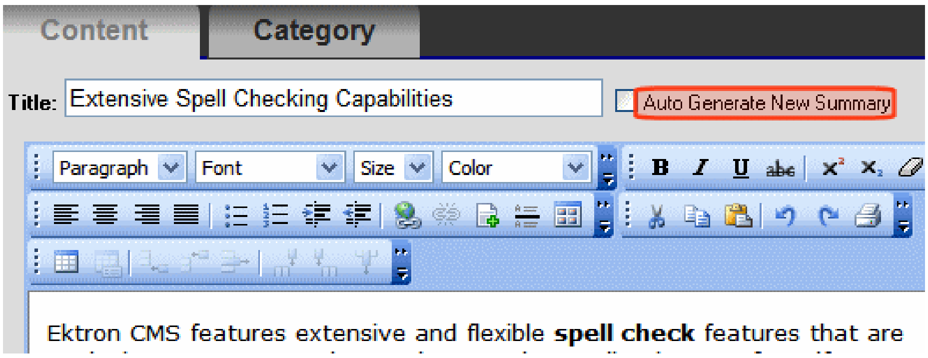
TOP STORIES
Ektron Named a Rising Star (08-15-2010)
August 15, 2013, Nashua, New Hampshire, USA — Optimizely, an innovator in Web content management and authoring, has been named a Rising Star as part of the prestigious New England Technology Fast 50 Program.

Ektron Launches International Distribution Program*(08-08-2009)*
August 8, 2009, Nashua, New Hampshire, USA — Optimizely, an innovator in dynamic Web content authoring and management with over 350,000 users, today announced the launch of its international distribution program.

Automatically creating a summary

Ektron can automatically generate a summary for new content if none exists when it is published. If the summary is blank and auto-summary is enabled, Ektron copies the first 40 words of content to the summary. After the content is published, you can update or delete the summary. If you delete a summary, it remains blank and is not automatically generated again.

If a membership user edits content and wants to update the summary, the user checks the **Auto Generate New Summary** field on the membership editing screen, and the first 40 words of the content are automatically copied into the summary.



There is no limit on the number of times a membership user can automatically generate a new summary.

Enabling auto summaries

To enable the auto-generation of summaries for *content*, apply these settings.

- open *siteroot*/web.config and set the value of `ek_enableContentAutoSummary` to **true**
- open C:\Program Files (x86)\Ektron\EktronWindowsService40\Ektron.ASM.EktronServices40.exe.config and change the value of `GenerateAutoSummary` to **1**

To enable the auto-generation of summaries for assets, apply these settings.

- open *siteroot*/web.config and set the value of `ek_enableDmsAutoSummary` to **true**
- open C:\Program Files (x86)\Ektron\EktronWindowsService40\Ektron.ASM.EktronServices40.exe.config and change the value of `GenerateAutoSummary` to **1**

To disable the auto-generation of summaries, set the above values to **false** and **0** (zero).

Creating or editing a summary

1. Go to the folder in which you want to create or edit the content.
2. In the View Content screen, choose **New > {type of content}** or open the View menu next to existing content and choose **Edit**. The Edit content screen appears.
3. Insert a **Title** and content, if needed.
4. Click the **Summary** tab.
5. Enter a summary for the content. The summary can include images, files, and hyperlinks. To learn about the editor, see *Editing in Ektron* on page 553.
6. When done, click the appropriate button.

You can only edit the summary of content that is published, checked in, or checked out by you. When you enter or edit existing content’s summary, its status changes to checked out. After you create or edit the summary, click **Check-In** to check the content in. From that point, you need to submit or publish it.

Making content private

Private content is available to Ektron administrators and users or membership users with at least Read-Only permissions for its folder. Those users must log in to work with private content. Unauthorized site visitors cannot see it. When you make a folder private, the content and any subfolders are also private (if they inherit permissions). You also can designate specific content items as private.

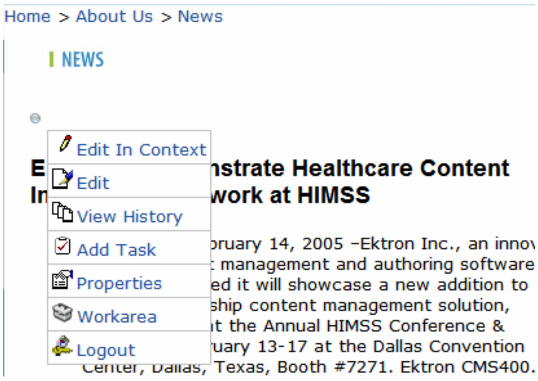
IMPORTANT: Private content is hidden from search results if your search provider is Microsoft Search Server 2010. It is not hidden if you are using another search provider.

To demonstrate private content, the following shows how a user’s permissions affect the display of content in 3 scenarios.

- Site visitor

- Logged in user with read-only permission

- Logged-in user with edit permissions



Making a folder private

NOTE: You can only set content to private when inheritance is broken. See also: *InheritING permissions* on page 162.

1. In the Workarea, go to the folder that you want to make private.
2. Choose **View > Properties**.
3. Click **View Permissions** ( ).
4. If necessary, uncheck the box that says **Allow this object to inherit permissions**. (You must disable inheritance before you can make the content private.)
5. Check the box that says **The content in this folder is private and can only be viewed by authorized users and members**.
6. Click **OK**. All content in the folder is now private. As new content is added, it is automatically set to private.

Making content private

1. In the Workarea, go to the folder that contains the content you want to make private.
2. Click the content item you want to make private.
3. Click **View Permissions** ( ).
4. If necessary, uncheck the box that says **Allow this object to inherit permissions**. (Inheritance must be disabled before you can make the content private.)
5. Check the box that says **This content is private and is NOT viewable on the public website**.
6. Click **OK**. The content is now private.

Making assets private

If assets are set to private, they are handled like other private content with one important exception: if you do not use the following procedure, anyone can access an asset by *typing the URL of the asset into the browser's address field*.

If a user attempts to access the asset in any other way (such as, linking to it from a Web page), the regular methods of making content private work. See *Making a folder private* on the previous page and *Making content private* on the previous page.

To make assets private even if someone types their URL into the browser's address field:

NOTE: If site users receive a **404 Page Not Found** error when trying to view private assets, make sure you have completed the following steps.

1. Open your website's `web.config` file, located in the site root folder.
2. Make sure the following line is uncommented.
```
<remove verb="GET,HEAD,POST" path="*"/>
```
3. Comment out the following lines with the `<!--` and `-->` comment marks.
```
<httpHandlers>
<remove verb="GET,HEAD,POST" path="*"/>
<add verb="HEAD,OPTIONS,PROPFIND,PUT,LOCK,UNLOCK,MOVE,COPY,GETLIB,
  PROPPATCH,MKCOL,DELETE,(GETSOURCE),(HEADSOURCE),(POSTSOURCE)"
  path="*" type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
<!--
<add verb="GET,POST" path="*.doc"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
<add verb="GET,POST" path="*.docx"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
<add verb="GET,POST" path="*.xls"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
<add verb="GET,POST" path="*.xlsx"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
<add verb="GET,POST" path="*.ppt"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
<add verb="GET,POST" path="*.pptx"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
<add verb="GET,POST" path="*.vsd"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
```

```
<add verb="GET,POST" path="*.vsdx"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
-->
```

The `add verb` statements in the middle are commented out.

4. Make sure the following line is uncommented.

```
<add verb="GET,HEAD,POST" path="*"
  type="Ektron.ASM.EkHttpDavHandler.EkDavHttpHandlerFactory"/>
```

5. Save `web.config`.

Translating content into another language

See *Translating content* on page 1415.

Scheduling content

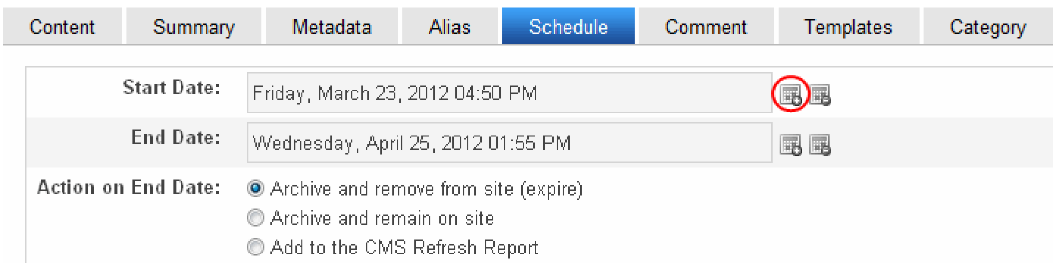
Scheduling lets you control when a version of content becomes visible on the website or when it expires (and is removed).

When you create or modify content, you can select a "go-live" date and time. If you do, after the content passes through the workflow, Ektron publishes the content to the live site at the scheduled time. For example, your company is having a sale of the century in a month, and everything is ready except the announcement. With this feature, you create the Web content now and set it to go live a week before the sale.

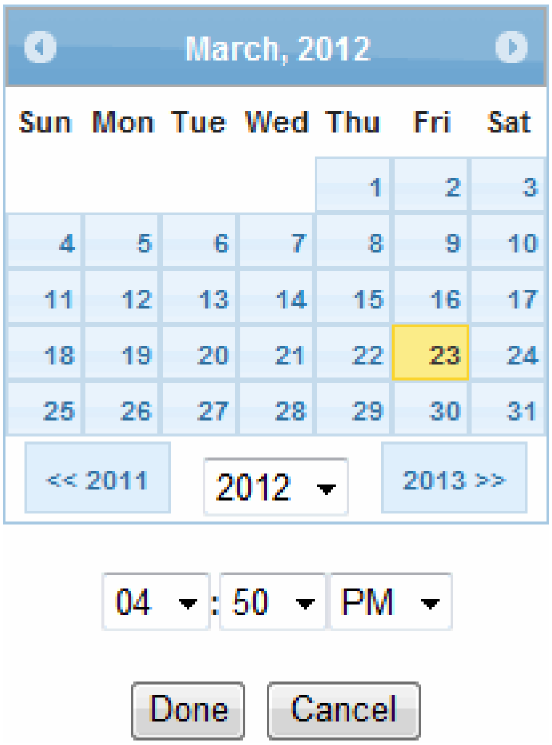
The Ektron Windows Service manages these changes to your site. See also: *Handling background processing functions with the Ektron Windows Service* on page 128.

Setting a start date

1. Edit a content item and click the **Schedule** tab.
2. Click **Add** ( ) next to the **Start Date** field.



3. A calendar pops up. Select the date and time when this version of the content will become visible on the website.



4. Click **Done**. The date and time appear in the **Start Date** field.

NOTE: When you select a time for content to go live, that time depends on the server's system clock. If the clock is incorrect, the content will not go live at the intended time.

After you save the content, it appears on the Content Pending Start Date report, which tracks content with a future start date. See also: *Content pending start date report* on page 977

After you set a go-live date and the content completes the workflow, the following scenarios may occur:

- Setting the Go-Live Date on New Content

  When you set a go-live date on new content, it becomes viewable on the specified date and time as long as it completes the workflow. If a site visitor accesses the page that contains the content before then, only the template appears.

  If a logged-in Ektron user browses your website, the user sees a gray border around the content until the date specified. If the user clicks within the gray border, the user can use the Preview option to see the new content.

- Setting the Go-live Date on Existing Content

  When you set a go-live date for changes to existing content, and it completes the workflow, a logged-in Ektron user sees a gray border around the content until the date specified.

When you view content on the website, you see the previously published version. When the go-live date occurs, the new content replaces the previous version, and its status changes to Active.

Setting an end date

1. Edit a content item and click the **Schedule** tab.
2. Click **Add** ( ) next to the **End Date** field.
3. A calendar pops up. Select the date and time when this version of the content will become unavailable on the website. To archive immediately, choose a past date.
4. Click **Done**. The date and time appear in the **End Date** field.

When content reaches its end date, it appears on the Expired Content report. See also: *Content to expire report* on page 979.

If your choice means the content will not appear on the website, you should have another content item ready to replace it. If not, the template appears without the content.

Setting archive options

Use content's archive options to determine what happens upon reaching its end date/time. To be eligible for any option, the content must reach its end date/time, progress through its workflow, and be published. Until those events occur, the content remains visible within its Workarea content folder and on the site.

Archive and remove from site (expire)

- Site visitors cannot view content upon expiration.
- You can view and edit content within its folder by choosing the **View > Archive Content** option. Also, you can find the content through a basic search and advanced search (if the **Archived** check box is checked).

Archive and remain on site

- Content appears in a List Summary if the ListSummary control's `contentype` property is set to **Archive_Content**.
- If content is an HTML form, the response page option appears. For example, if the form displays a message after the user completes it, that message appears.
- Content found by the search
- Content visible within its taxonomy display
- Content visible if site visitor enters exact path, such as `http://localhost/CMS400Developer /dynamic.aspx?id=1014&__taxonomyid=14`
- Within Workarea, you can view and edit content within its folder by choosing the **View > Archive Content** option. Also, you can find the content through a basic search and advanced search (if the **Archived** check box is checked).

Add to CMS Refresh Report

- Site visitors can view content upon expiration
- You can view content in the active area of its folder and on the Refresh Report. See also: *Refresh reminder report* on page 978.

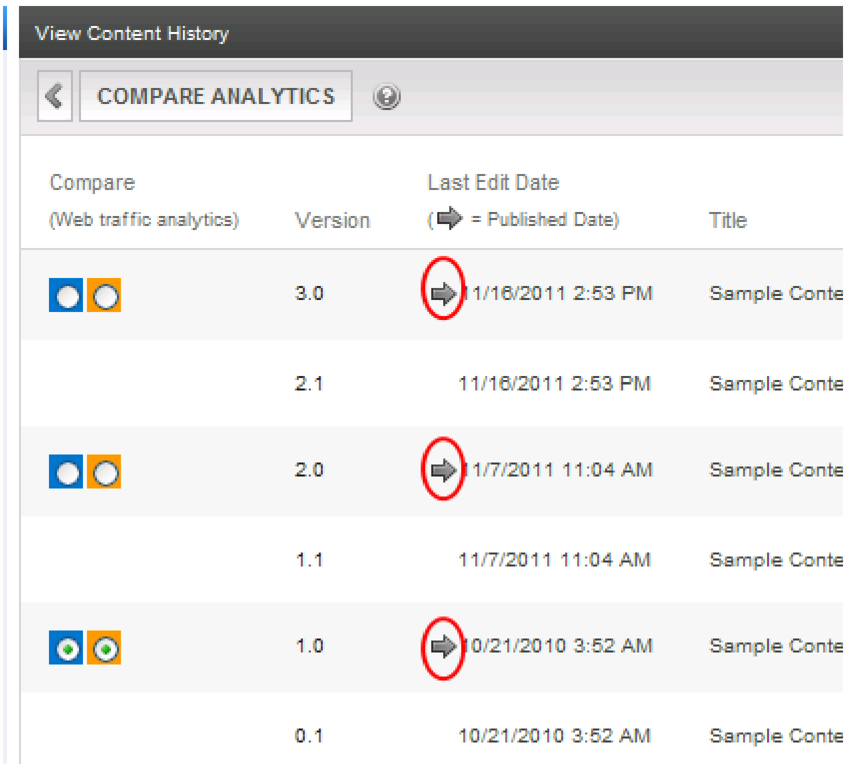
Restoring content from archived to active state

1. Go to its folder.
2. Choose **View > Archived Content**.
3. Hover the cursor over the content, click the triangle ( ), then **Edit** from the drop-down menu. The Edit Content in Folder screen appears.
4. Click the **Schedule** tab.
5. Remove the **End Date** or change it to a future date.
6. Submit the content for publishing. When the content is published, it will no longer be archived.

Managing versions of content

You can view and restore past versions of Published content. After viewing previous versions of content, authorized users can replace the current version with any previous one. See also: *Managing folder and content permissions* on page 160.

Ektron assigns a unique number to each content version. The number is increased by one tenth if the content is checked in but not published. If the content is published, the next whole number is assigned. For example, if the current version is 1.0 and you check in that content, that version is 1.1. If the next editor publishes it, that version is 2.0. Published version are indicated by an arrow.

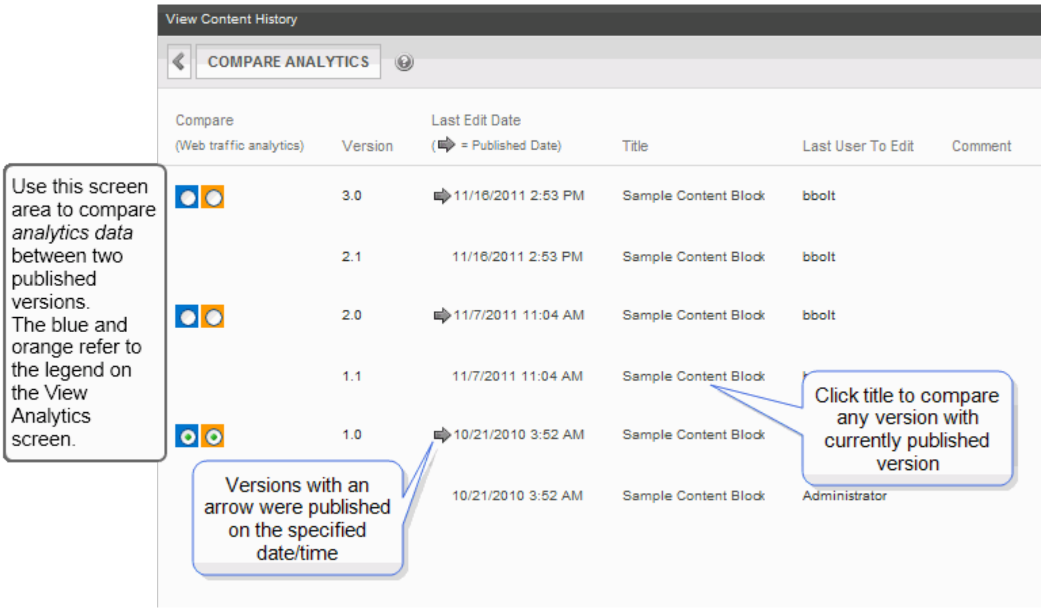


If content versions are purged, the numbering scheme restarts with the remaining content.

NOTE: The Purge History feature deletes historical versions of content according to user-defined criteria. Therefore, some previous versions may be unavailable. See also: *Purging content history* on page 159.

Viewing content history

- To access content history from the Workarea, click on a piece on content. The View Content Screen appears. Then click **View History** ( ).
- To access content history from a Web page, click the access point ( ) and choose **View History**.



The window displays the following information for each version.

- a **Compare** column lets you compare Web traffic analytics data between any 2 Published versions.
- Ektron assigns a unique number to each saved version of a content block.
- an arrow indicates a Published version. Versions without an arrow indicate content that was checked-in.
- date and time version was checked in or published
- content title
- last user who edited content
- comments entered by user to describe the changes

To view any version, click its title to display the Content History window for that content.

There are 3 view modes.

- **Diff**. Compares Published version of content to staged version
- **Published**. Displays currently published version

- **Staged**. Displays the staged version of content.

Comparing versions of content

If content can be compared with another version, the View Difference button ( ) appears in the content history area or the Web page view.

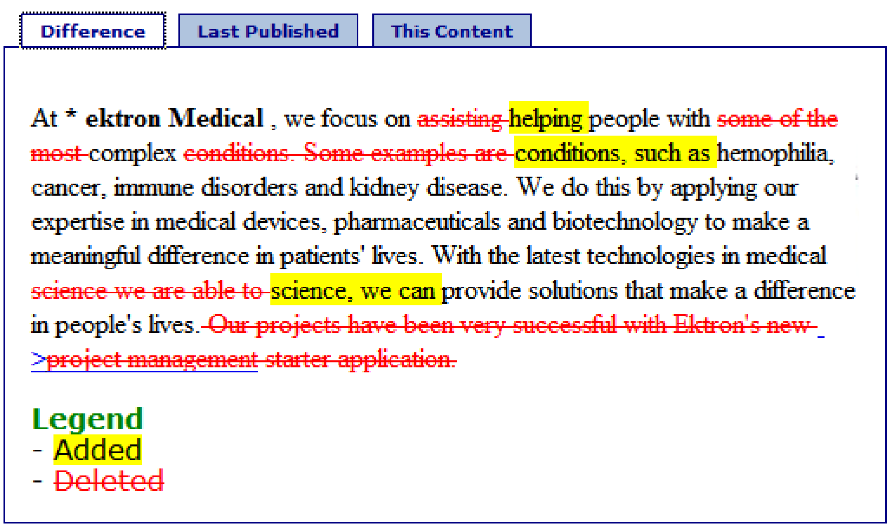
NOTE: The first time you use the View Content Difference screen on a client machine, you are prompted to install the differences tool. When the installation program completes, close and reopen the View Content Difference feature.

There are varying versions of this procedure. Consult your system administrator to determine the correct procedure for you.

Comparing content (32-bit server/32-bit client)

NOTE: Content compare does not work with PageBuilder pages.

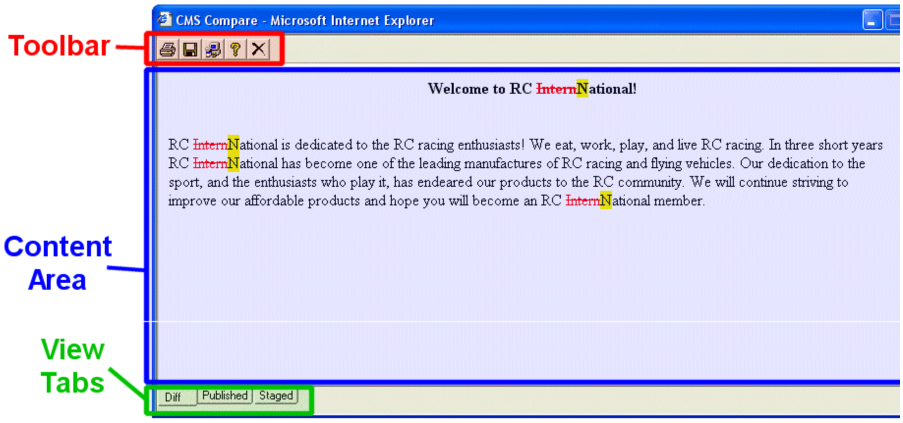
1. Click **View Properties** on content that you want to compare.
2. Click **History** ( ). The View Content History screen appears.
3. Click a version that you want to compare with the most recently published version.
4. Click **View Diff**. The View Content Difference screen highlights changes to selected content as shown in the following example.



- **Difference**. Both versions:
  - content that only appears in the version on the **This Content** tab is highlighted in yellow
  - content that only appears in the currently published version is red
  - unchanged content is black
- **Last Published** —Currently-published.
- **This Content**. The version you are comparing the currently-published content against.

Comparing content (64-bit server/32-bit client)

1. Click **View Properties** on content that you want to compare.
2. Click **History** ( ). The View Content History screen appears.
3. Click a version that you want to compare with the most recently published version.
4. Click **Compare Analytics**. The CMS Compare screen highlights changes to selected content as shown in the following example.



- **Print**. Sends content to local or network printer. This option prints the currently displayed content, whether it is the compared, published, or staged content.
- **Save**. Saves the version of the content (in HTML) to your local machine or network. When saved as a physical file, you can edit the HTML. However, the changes are not saved to the Web Server.
- **Setup**. Opens setup dialog box to configure the settings. Typically, only an administrator would use this.
  - **Compare visual aspect**. Compares content as it would appear on a Web page
  - **Compare source code**. Displays compared content as source HTML
  - **Ignore All**. Blank (whitespace) characters are ignored
  - **Smart Detect**. One or more consecutive whitespace characters are treated as a single separation sequence. That is, multiple whitespace characters are ignored.
  - **Detect All**. Blank (whitespace) characters are treated as any other character.
  - **Ignore case**. Determines whether comparison is case sensitive. For example, if you check this box, the strings “Bob” and “BOB” are not highlighted because their only difference is the case of the characters.
  - **Ignore format attributes**. Determines whether comparison ignores changes in text-formatting attributes (HTML Visual Analysis only).

- **Help**. Displays additional information about the compare feature.
- **Exit**. Closes the window.

Restoring a previous version

PREREQUISITE

You have permission to restore the content in question. See also: *Managing folder and content permissions* on page 160.

1. Open the folder that contains the content.
2. Click the content item.
3. Click **History** ( ).
4. Select a version that you want to restore.

   IMPORTANT: Ektron recommends restoring a Checked In version of content, because this restores *all* content attributes. If you restore a published version, metadata is not restored.
   To learn how to recognize checked-in content on the View Content History screen, see *Managing versions of content* on page 643.

5. Click **Restore**. The content history window closes, and you return to the View Content page or the Web page, with the content in a Checked In status.

   If desired, check out the content to make additional changes. Select the workflow to perform on the content. When the historical version is approved, it is published to the website.

Removing applied XSLT

You can only remove an applied XSLT when viewing historical versions of XML content. If you remove the applied XSLT, you can view the content without the irrelevant XML tags.

RC Planes

Product Name: RC Redstar

Description:

The RC Redstar is a radio controlled, gas powered, low-wing aircraft. This new plane is for beginners-intermediates that are looking for a easy plane to learn with or to have fun with. The Redstar is easy to fly and easy to maintain.

Specifications

Airfoil:	Low-Wing
Overall Length:	57 in.
Wingspan:	71 in.
Weight:	7-8 lbs.
Engine Size:	.60-.70 cc
Fuel Tank Size:	12 oz.
Engine Run Time:	15 min (full tank)
Refill Time:	17 secs.
Fuel Type:	Standard White (highly refined) gasoline
Color:	Standard

IMPORTANT:

Content:

RC Redstar

The RC Redstar is a radio controlled, gas powered, low-wing aircraft. This new plane is for beginners-intermediates that are looking for a easy plane to learn with or to have fun with. The Redstar is easy to fly and easy to maintain.

Low-Wing 57 in. 71 in. 7-8 lbs. .60-.70 cc 1 15 min (full tank) 17 secs. Standard White (highly refined) gasoline Standard

Working with assets in the Document Management System

The Document Management System (DMS) lets you import Microsoft Office files and other types of files into Ektron. Collectively, these files are called assets. When you import and save an asset to Ektron, a copy of it is saved to the Document Management server. Then, whenever you edit and save the asset, a new copy is stored, letting you review and, if needed, restore a prior version.

To edit an asset, download it to your local computer, edit it and the upload it again into Ektron.

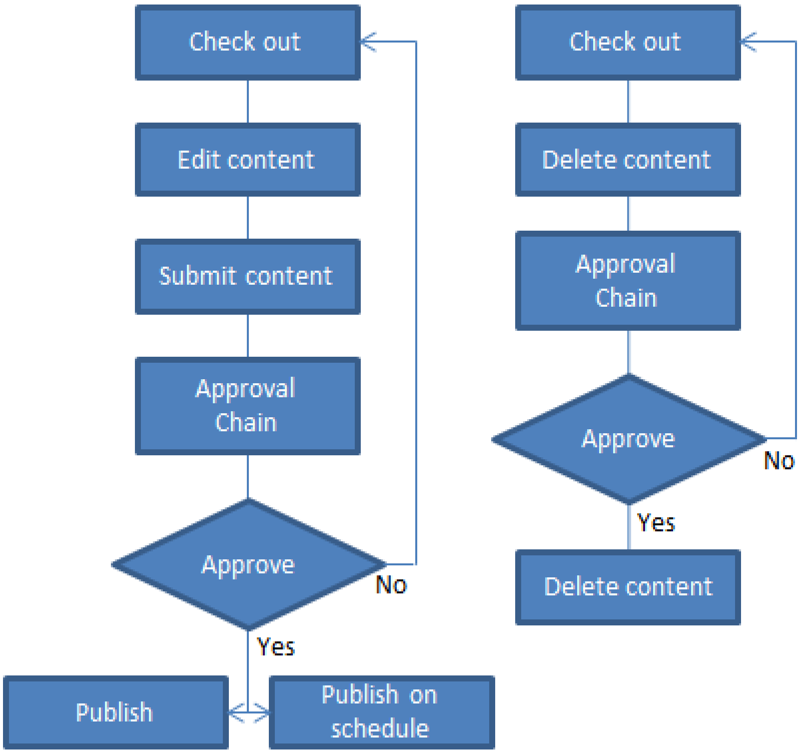
Assets have the following qualities:

- can be stored in folders with other content, or in separate folders that you create just for them
- are assigned content IDs
- can have summary, metadata, comment, task, schedule, and taxonomy information
- inherit permissions and workflow from their folder properties
- progress through the workflow process (check out, check in, publish)
- retain a history so you can restore earlier versions
- can be searched
- support foreign language editions
- can have a task assigned to them
- appear on content reports
- update the Smart Desktop listing of files awaiting approval, checked out, to expire, and so on

After you save an asset, you can update and track it like other content. Assets are treated like other content for security purposes. A system administrator applies security to each folder, determining which user groups can perform which tasks on its content. For more information, see *Managing folder and content permissions* on page 160 and *Checking document management permissions* on page 665.

The AssetControl and ImageControl server controls are associated with DMS content.

The following image shows the asset workflow.



Storing external files as library items vs. assets

You may save an external file in Ektron as a library item or an asset. The following list compares each option. See also: *Working with files in the library* on page 673.

- Asset
  - First class content items
  - All content management features, such as search-ability, history, permissions and workflow, scheduled go-live date, applying a template, and so on.
  - Used primarily for text-based documents, like Office documents and PDFs
  - Can import and store images, if history and workflow are needed
  - Works well when displaying a resource within a content block
  - Uses logical folder paths, which do not appear in the file system
  - Checks the database to find file location on the Web server, then sends that location to the client
- Library
  - Simple resources, such as a company logo
  - No content management features
    - Text-based documents, like Office documents and PDFs, are not searchable
  - Works well when providing a link to download an item

Supported types of assets

By default, Ektron lets you store these file types as assets. An administrator can add or delete file types on the **Settings > Configuration > Asset Server Setup** screen.

NOTE: Ektron does not support double extensions, such as *filename*.aspx.vb.

- Microsoft Office 2000 or later documents. Word, Excel, Powerpoint, Project, Publisher, Visio, and so on.
- Managed files. *.zip files, PDFs, *.txt files
- Image Assets. Graphic files such as *.gif and *.jpeg
- Multimedia files. *.swf, *.mp3, *.wav. *.avi

If you try to upload an unsupported file type, an error message appears.

To learn how to edit the supported asset types, see *Configuring document management* below.

Browser notes

- You can load multiple DMS documents with Internet Explorer, but not other browsers. See *Adding multiple DMS documents* on page 656.
- The **Edit in Microsoft Office** option is not supported in Chrome

Configuring document management

This section explains configuring the Document Management feature. By changing these settings, you can:

- update Document Management server settings
- change which file types are allowed on the Document Management server
- set the View Type

There are 2 ways to configure a Document Management server:

- Asset Server Setup screen
- AssetManagement.config file

In either case, you are editing the AssetManagement.config file. While the Workarea screen provides a quick way to update this information without accessing the Ektron server, some tags can only be updated in the AssetManagement.config file.

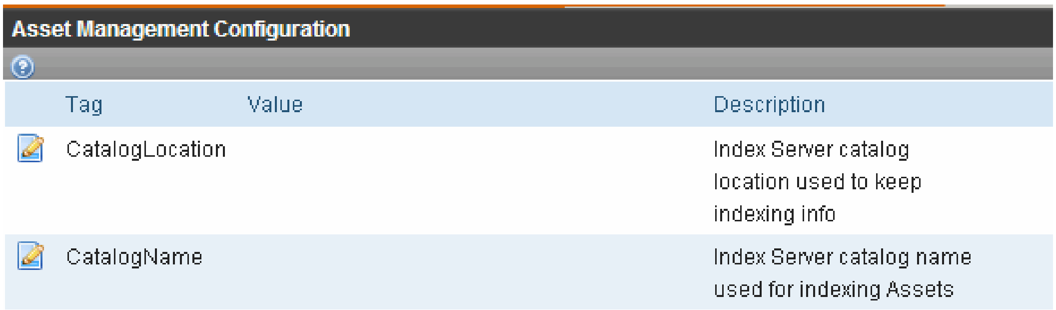
Updating asset configuration settings

You can update some `AssetManagement.Config` tags from the Workarea.

PREREQUISITE

- Only Administrators Group members can access the Asset Server Setup screen.

1. In the Workarea, go to **Settings > Configuration > Asset Server Setup**. The **Asset Management Configuration** screen appears.



2. Click the **File Types** Edit button ().
3. Change the supported file types.
4. Click **Save**.

The following list describes the `AssetManagement.Config` file's tags that you can edit from this screen in the Workarea.

- **DomainName**. Can be Domain Name, IP Address or Machine Name. An example is: localhost. This is the address a Web client system uses to open managed documents through HTTP.
- **FileTypes**. Files types that users are allowed to upload to Document Management. The default file types are:

  `.doc, .xls, .ppt, .pdf, .gif, .jpg, .jpeg, .log, .vsd, .dot, .zip, .swf, .wma, .wav, .avi, .mp3, .mp4, .rm, .wmv, .ra, .mov, .odb, .odt, .odf, .odp, .odg, .ods, .png, .docx, .xlsx, .pptx, .vsdx, .wmf, .xml, .htm, .html, .flv`

  IMPORTANT: You can only add file extensions that are listed in the *siteroot*/web.config file property `ek_DMSFileTypeWhiteList`.
  See also: *Using the file type whitelist* on the facing page

  Administrators control which file types are allowed by editing the `AssetManagement.config` file. Reasons for limiting file types include:

  - Security. For example, you do not want users to load .exe files to your Ektron server
  - Ease of management. For example, you want your Ektron server to store .doc files only

  The `<FileTypes>` tag in the AssetManagement.config file contains the file types users can upload.

  To add or remove a file type from the list:

  1. Edit the **Workarea > Settings > Configuration > Asset Server Setup > Asset Management Configuration** screen.

     or

     Open the *siteroot*/AssetManagement.config file.

2. Edit the `FileTypes=""` element. All file types must appear between the quotes. For example, `FileTypes="*.doc,*.xls"`.

   NOTE: Use a comma to separate file types. Also, format file types as wildcard.extension. For example, adding an .mp3 file type after *.zip looks like this: `*.zip,*.mp3`

3. Add or remove any file type.
4. Save and close the screen or `AssetManagement.config` file.

- **LoadBalanced**. Enables Load Balancing for assets. Set to **1** to enable. See also: *Load-balancing assets* on page 95
- **ServerName**. The name of the server that hosts Ektron.
- **StorageLocation**. The folder location where Published assets are stored. For example: `C:\assetslibrary`
- **WebShareDir**. The folder that stores temporary data files waiting to be checked in, saved, or published. For example: `dmdata`

Using the file type whitelist

The *siteroot*/web.config file property `ek_DMSFileTypeWhiteList` contains the same default file types as those on the **Asset Management Configuration** screen and AssetManagement.config file.

```
<add key="ek_DMSFileTypeWhiteList" value="*.odb,*.ods,*.odg,*.odp,*.odf,*.odt,*.doc,
*.xls,*.ppt,*.pdf,*.gif,*.jpg,*.jpeg,*.log,*.vsd,*.dot,*.zip,*.swf,*.wma,*.wav,*.avi,

*.mp3,*.mp4,*.rm,*.wmv,*.ra,*.mov,*.png,*.docx,*.xlsx,*.pptx,*.vsdx,*.wmf,*.xml,*.ht
m,
*.html,*.flv" />
```

A server administrator can use this property to restrict which file types may be uploaded to Ektron. For example, if an Ektron administrator wants to add a new file type, someone who can edit files on the Ektron server must first add it to the web.config `ek_DMSFileTypeWhiteList` property. This provides additional security over which file types can be uploaded to Ektron.

Conversely, if a server administrator wants to remove an allowed file type from the **Asset Management Configuration** screen/AssetManagement.config file, the administrator must first remove it from the `ek_DMSFileTypeWhiteList` property.

Managing assets

DMS can store and help you manage assets.

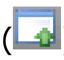
When you use the **New > DMS Document** file import option, you enter an Ektron title for the file. When you import a file using any other method, its title is the file name without the extension. So for example, `mypicture.jpg` becomes `mypicture` in Ektron. While it may appear that the file extension was removed, it is retained and reappears for assets when you use the **Edit** option, on the View Contents of Folder screen. The original file extension also appears when you check out.

You cannot import a file whose name and extension match a file already in the folder. If you import a file of the same name but a different extension into the folder, a number is appended to the file name. For example, `mypicture(2)`.

You cannot import files whose name includes a percentage sign (%) or ampersand (&).

Methods for importing assets

Ektron provides several ways to import assets.

- **New > DMS Document** (All browsers) from View Contents of Folders screen
  - Can enter summary, metadata, and so on for each asset
  - Can create unique title for each asset
  - Can check in or submit for approval
  - Uploads one asset at a time
- **New > Multiple DMS Documents** (Internet Explorer with MS Office) from View Contents of Folders screen
  - Uploads several files at once
  - Can apply same summary, metadata, and so on to all files
  - Can check in or submit for approval
  - Asset title taken from Windows file name
- **Add Asset** button on the View Contents of Folder screen ()
  - File Upload tab (all browsers)
  - Multiple DMS Documents tab (Internet Explorer with MS Office)
    - Same as *Adding multiple DMS documents* on page 656 except there is no check-in option
    - Can upload several files at once
    - Asset title taken from Windows file name
- **Drag and drop to mapped network folder**; *Adding assets to a mapped network folder* on page 659
  - User doesn’t need to install or learn Ektron software
  - Can drag/drop folder structure; Ektron recreates it in Workarea
  - Title taken from Windows file name
  - Content status is checked in; submitting for publishing is separate step
  - Cannot assign language to content
  - Cannot work with content in language other than default

Restrictions and warnings about importing assets

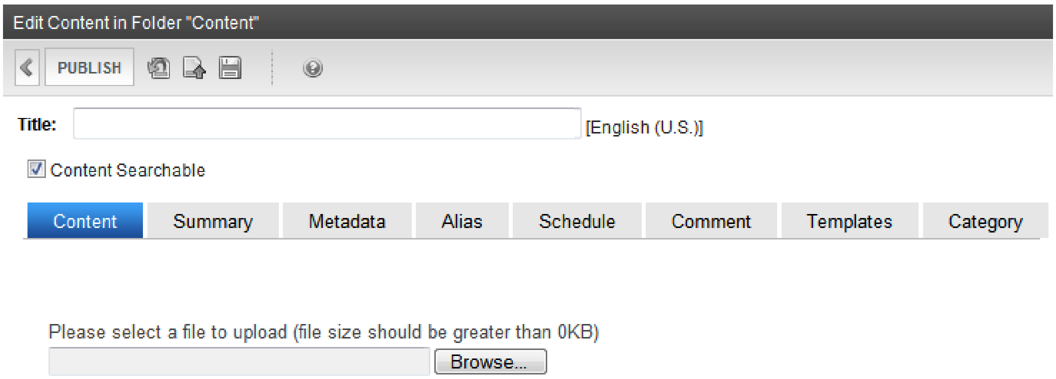
- You can only import assets using a method listed in the previous section. You cannot simply drop files in the *siteroot*/assets or *siteroot*/PrivateAssets folder then manage them using Ektron.

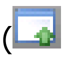
- Only users with **Add** folder permission can import files to it. See also: *Managing folder and content permissions* on page 160.
- You cannot import to a folder for which XML Smart Forms are required. See also: *Assigning a Smart Form to a folder* on page 831.
- If you are using the Firefox browser, you may not be able to upload a large file. To resolve this, go to **Firefox >Tools > Options > Advanced > Network** and increase the **Offline Store** to a size larger than the file being uploaded.
- With MS Office 2010, you cannot upload more than 100 files at a time.
- With MS Office 2010, files greater than 100 megabytes may fail if your computer's memory is insufficient. In general, do not upload larges file via the Multiple DMS Documents option.

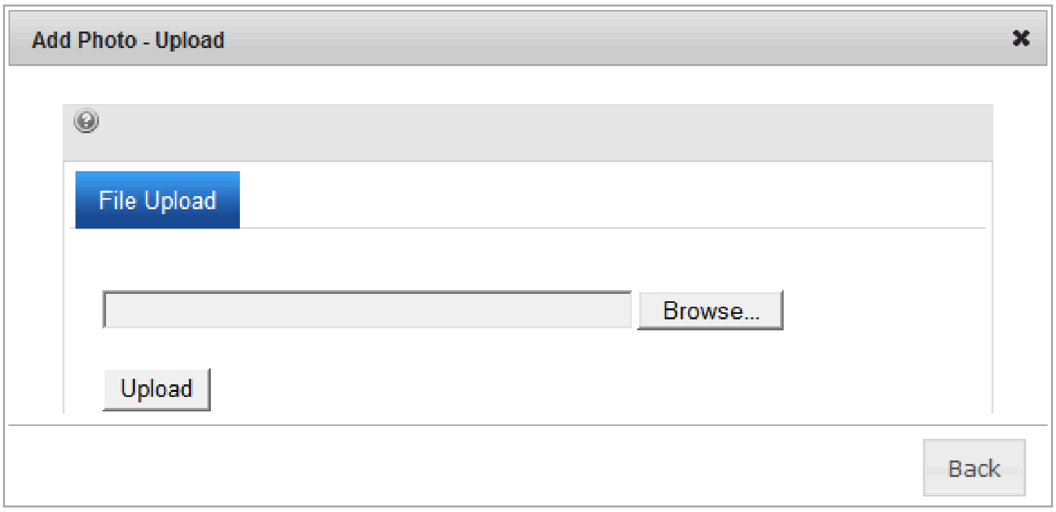
Adding an asset

To add an asset via the **New > DMS Document** menu option:

1. Go to the folder in which you want to place the document.
2. The default language icon appears next to the screen title. To create a document for a different language, click **View > Language** and select the language.
3. Click **New > DMS Document**. The following screen appears.



Or, from the View Contents of Folder screen toolbar, click **Add Assets** (). This screen appears.



4. Click **Browse** and go to the file you want to import.
5. Enter a **Title**. It cannot include these characters: *> <|

NOTE: If you want to retain the original document name, insert the full filename into the **Title** field. For example, enter *mydocument.doc*.

6. Use the **Content Searchable** checkbox to determine if the content should be searchable.See also: *Making content searchable* on page 346.
7. If desired, add a summary, metadata, a schedule, and comments. See also:
   - *Scheduling content* on page 640
8. Check in or submit the content for publishing as you would HTML content.

Adding multiple DMS documents

This option requires Internet Explorer and Office 2003 or higher on your computer. Also, you must enable ActiveX controls in your browser settings. To do this, open Internet Explorer and go to **Tools > Internet Options > Security Tab > Custom Level** button. Within that screen, under **ActiveX controls and plugins**, find **Script ActiveX controls marked safe for scripting*** and click **Enable**.

IMPORTANT: If you will apply the same information (summary, metadata, categories, and so on) to several files, place them in the same Windows folder before starting this procedure.

See also: *Managing Microsoft Office assets* on page 661.

To add assets to Ektron via the **New > Multiple DMS Documents** menu option:

1. From the Workarea, select the **Content** tab.
2. Select the folder in which you want to place the documents.
3. Click **New > Multiple DMS Documents**.
4. Select your version of MS Office and click **OK**. If Office 2003 or 2007 is installed as well as Office 2010, choose **Office 2010**. The Multiple Document Upload option uses MS Office to perform the upload. The upload screen appears.

NOTE: If you later change your computer's Office version, update this setting from the Add Assets button > Multiple DMS Document option > **Switch Office version** option.

5. Open Windows Explorer in a separate window, then drag and drop files onto the screen. Or, you can **Browse for files instead**. You can only import files from one folder at a time.
6. If Ektron requires you to apply metadata or a taxonomy category to the content, complete all required information.
7. To *check in* the files, click **Check In**. To *submit* the files into the workflow, click **Submit** or **Publish**.

NOTE: If your website uses an https secure site setting, you may see errors after uploading assets. If this occurs, open your site's `web.config` file and change the value of the `add key="ek_UseSSL"` setting to `true`.

Managing multimedia assets

Multimedia files contain audio, video, or both. File types include .wav, .mpeg., .swf, .avi, and .wma.

Ektron supports multimedia files that run on these players.

- WindowsMedia®
- Quicktime®
- Realplayer®
- Flash®

If you import a multimedia file that does not play on a supported player, it is treated like any other asset but cannot be played within Ektron. If you try to play a file in the Workarea, or a site visitor tries to play a file but no supporting media player exists on the user's computer, you are prompted to download and install the player.

NOTE: To learn about importing embedding external content (such as content from YouTube, Vimeo, DailyMotion, Google maps or an Iframe) into HTML content via the editor, see *Embedding external content* on page 571.

Every multimedia file type has a corresponding MIME type. For example, an mp3 file's MIME type is audio/mpeg. Supported MIME types are defined in the `mediasettings` element of the `web.config` file as follows:

```
<add key="application/x-shockwave-flash" value="Flash" />
<add key="audio/x-wav" value="WindowsMedia, Quicktime, Realplayer" />
<add key="audio/x-wav-default" value="WindowsMedia" />
<add key="audio/x-pn-realaudio" value="WindowsMedia, Quicktime, Realplayer" />
<add key="video/x-avi" value="WindowsMedia, Quicktime, Realplayer" />
<add key="video/x-avi-default" value="Quicktime" />
<add key="video/x-msvideo" value="WindowsMedia, Quicktime"/>
<add key="video/x-msvideo-default" value="WindowsMedia"/>
<add key="audio/x-ms-wma" value="WindowsMedia"/>
<add key="audio/mpeg" value="WindowsMedia,Quicktime"/>
<add key="video/x-realvideo" value="Realplayer"/>
<add key="video/x-ms-wmv" value="WindowsMedia"/>
```

```
<add key="audio/x-realaudio" value="Realplayer"/>
<add key="video/quicktime" value="Quicktime"/>
```

To determine if a multimedia file type is supported, go to HTML Multimedia, then go to the web.config file section to see if the MIME type exists and insert the player name within the value element. For example:

```
<add key="audio/mpeg" value="WindowsMedia"/>
```

In this example, WindowsMedia is the only supported player for mp3 files. If you know that other players can run mp3 files, insert additional players after WindowsMedia. To get the exact name of the player, review the value elements in web.config file section.

If you want Ektron to support additional MIME types, add them within the <mediaSettings> element using the following syntax:

```
<add key="MIME type/subtype" value="supported media player(s)"/>
```

For example:

```
<add key="video/x-ms-asf" value="WindowsMedia"/>
```

To identify a player as the default for a MIME type, use the following syntax within web.config.

```
<add key="MIME Type/subtype" value="default player"/>
```

For example:

```
<add key="video/x-msvideo-default" value="WindowsMedia"/>
```

You must also add new file types to the supported file list in the assetmanagement.config file. See also: *Using the file type whitelist* on page 653.

After a multimedia file is imported into Ektron, you can view supported media players' properties on the Edit Content screen's **Content** tab. Players defined for the file's MIME type are checked. You may uncheck any media players that you do not want to operate a particular file.

- If a default media player is defined for a MIME type in web.config, you cannot uncheck its checkbox.
- If the file is supported by several players, first check the player whose properties you want to modify, then edit its properties.

The **Width** and **Height** fields determine the size (in pixels) of the media player when it appears in the Workarea and on your website. The remaining properties are determined by the media player (QuickTime in the example above).

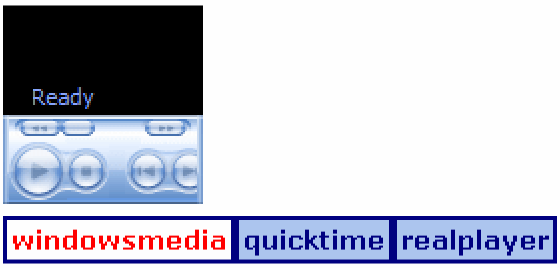
When you visit a page that hosts a multimedia file, Ektron tries to match media players on the user's computer with those defined in the web.config file for the file's MIME type. Ektron then displays a list of choices for every supported media player for the file.

You can change the multimedia player's style properties by modifying the EKTTabs.css style sheet. This file is installed to *sitefolder*/Workarea/csslib.

For example, you can change the color of the text that selects a player to red by changing the value of the color property.

```
.EktTabActive
    {
      padding: 2px 2px 2px 2px;
      top:10px;
      text-decoration:none;
      position: relative;
      background-color:white;
      border: solid thin navy;
      color:Red;
      font-weight:bolder;
     }
```

Here is the result.



Adding assets to a mapped network folder

You can set up a mapped network folder then drag and drop folders or assets into it. You can also delete and move assets using the mapped network folder. The advantage of this method is that you can upload documents without installing or learning how to use Ektron.

When using drag and drop, you can choose individual assets or a folder. Only supported file types may be uploaded. If you choose a folder, Ektron recreates that folder structure, even if it is several levels deep.

NOTE: You cannot choose a language for assets in a mapped network folder because they are automatically assigned the Ektron default language (set in the siteroot/`web.config` file at the `ek_DefaultContent Language` element). Also, you can only work with assets in the default language.

PREREQUISITE

- Basic Authentication must be disabled in IIS.
- You must have the path to your Ektron website.
- You must have an Ektron username and password.
- You must verify that WebDav is installed on your client system, and enabled on the Ektron server that hosts your site. See http://www.iis.net/learn/publish/using-webdav/using-the-webdav-redirector.

1. Log onto the server that hosts Ektron, or a client that can access Ektron.
2. Open Windows Explorer.
3. For Windows 2008 server, click **Start > Computer > Map Network Drive**. The Map Network Drive screen appears.

For Windows 8, open File Explorer then click **Computer > Map Network Drive**.

4. Click **Connect to a website that you can use to store documents and pictures**. A wizard screen appears.
5. Click **Next**. Another wizard screen appears.
6. Click **Choose a custom network location** and click **Next**. A third wizard screen appears.
7. Enter the path to your Ektron site, followed by the ekdavroot folder. For example, `http://CMSMIN870037/ekdavroot` and click **Next**. An Ektron login screen appears.
8. Enter your username and password and click **OK**. Another wizard screen appears.
9. Name the network drive and click **Next**. You use this name to identify the folder when dropping assets into it. The Finish screen appears.
10. In Windows Explorer, open the new network folder (it appears under **Computer > Local Disk (C:)**). Notice that its structure mirrors your Workarea folders.
11. Go to the folder to which you want to drop files, and drag and drop them.

NOTE: Your access to folders and ability to drop files into them are determined by your Ektron folder permissions (collected in Step 7). See also: *Managing folder and content permissions* on page 160

12. If an asset is not supported, an error message appears: **An error occurred copying some or all of the selected files**. However, all supported assets are uploaded.

Status of asset saved to mapped network folder

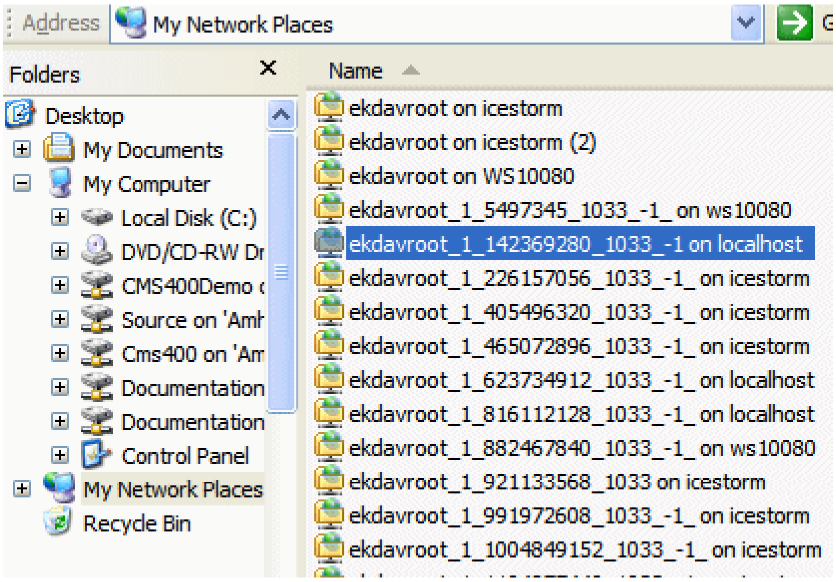
The status of an asset dropped in a mapped network folder depends on the workflow and the user who signed in to the folder.

- If you are the last approver, or if there is no workflow, its status is *Approved*.
- If there is a workflow and you are not the last approver, its status is *Checked In* (I).

Also, if the content's folder requires metadata or a taxonomy category which has not been entered, its status is *Checked In* (I).

Removing mapped network drives

Ektron's DMS feature creates a mapped, `ekdavroot` network drive for many functions. For example, if you sign on to Ektron and create a new folder, a new mapped, `ekdavroot` network drive is created.



If you find that `ekdavroot` folders clutter up your My Network Places folder, you can delete them. Deleting `ekdavroot` folders has no impact on your ability to use Ektron.

Managing Microsoft Office assets

To learn about importing Microsoft Office assets, see

- *Methods for importing assets* on page 654
- *Restrictions and warnings about importing assets* on page 654
- *Adding an asset* on page 655

This section shows you how to do the following:

- *Deleting an Office document* on the next page
- *Updating an Office document* on the next page
- *Saving an Office document* on page 663
- *Saving an Office document in HTML format* on page 663

PREREQUISITE

Before you begin working with Microsoft Office documents:

- Your computer should have MS Office 2003 or higher.
- Problems can arise if you try to open a document created with Office 2007 or 2010, and your computer has an earlier version of Office. The best solution is to upgrade to Office 2007/2010.

  If you cannot, install the Microsoft Windows Compatibility Pack. See Microsoft Office Compatibility Pack for Word, Excel, and PowerPoint File Formats.

  When installed, you can work with Office 2007/2010 documents using an earlier version of Office.

- If you import an Excel spreadsheet then click it from its Ektron folder, you see **Download this file name**. Click the download link to view the file.

Updating an Office document

To work with an Office document, you check it out and save it to your computer, edit it, then upload it to Ektron.

While an Office document is checked out, only you or an Ektron administrator can check it back in. Other users cannot edit it. You may use this feature to work on the document on your computer, copy it to another computer, or even email it to someone who does not have access to Ektron.

Follow these steps to update an Office document.

IMPORTANT: There are several ways to import a document into Ektron. Some methods retain the original file name while others let you assign a name. When you check out and save a document to your computer, it is saved under the *original file name*, which may be different from its Ektron name. The original file name is on the screen that appears after you select **Check out and Save as**. Make note of the original file name, because you use it to identify the file after it is saved to your computer.

1. Go to the folder that contains the Office document.
2. Click the triangle (◀) next to the document.
3. Select **Check out and Save As**.
4. Click **Save**. The document's status changes to *checked out* (O).

   NOTE: Your browser controls the location of downloaded files.

5. Edit the document in Office.

   NOTE: If you change your mind and do not edit the document, but simply close Office, the document remains Checked Out (O). Use the **Check In** menu option to check it in.

6. Within Office, click **File > Save As** and select a folder to which to save the document. Do not change the file name.
7. Within the Ektron folder, open the document's folder and select the document.
8. From the context menu, click **Check In**.
9. From the context menu, click **Edit Properties**.
10. Click the **Browse** button and go to the folder selected in Step 6.
11. Select the edited document.
12. From the toolbar, click **Check in** or **Publish**.
13. You are asked to confirm the file replace. Click **Yes**. The revised document is saved in Ektron.

Deleting an Office document

NOTE: You must have delete permissions for the folder that contains the document. See also: *Managing folder and content permissions* on page 160. Also, it is good practice to check for broken quicklinks before deleting documents. See *Checking links before deleting* on page 631.

To delete an Office document:

1. In the Workarea, open the folder that contains the document.
2. Hover the cursor over the triangle (◀) next to the document and click. A drop-down menu appears.
3. Click **Delete**.
4. Click **OK**.

If a Basic Workflow is applied to the document, deleted content must be approved before it is removed. If you are the last approver in the workflow, the content is deleted immediately. See also: *Approving or declining content* on page 698.

Saving an Office document

You would typically save an Office document to your computer to distribute it to others, or if you want a personal copy. You should *not* save a document to your computer if you plan to edit it then replace the version in Ektron—doing this may overwrite edits made by other users.

If you want to edit a document, use the **Check out and Save As** menu option. The option sets the content to checked out status, which prevents non-administrator users from editing it until you check it back in.

To save an Office document:

1. Go to the folder with the Office document.
2. Hover the cursor over the triangle (◀) on the right end of the document and click **Save As**.
3. You are asked if you want to open or save the document. Choose **Save**.
4. Select a folder to which you want to save the document.

Saving an Office document in HTML format

This feature converts Office documents to HTML format, which means they are formatted to display within a browser. As a result, anyone visiting your site can view the document, whether or not Microsoft Office is installed on their computer.

NOTE: You can publish only Microsoft Word and Excel documents as HTML. Ektron does not support publishing Powerpoint or Visio documents as HTML.

There are 2 ways to save an Office document in HTML format.

- Drag and drop an Office document into Ektron and use the **Edit in MS Office** option to save it in HTML format. You don't need to know the path to your website's root folder.

- Open an Office document on your computer and save it in HTML format to the `ekdavroot` folder in your Web root. You don't need to drag and drop document to Ektron.

Regardless of how you save Office documents as HTML, be careful to set up procedures that prevent HTML content from being overwritten. For example:

1. You save a Word document as .html.
2. Someone edits the HTML version.
3. You save the original Office Document as .html again.

In this scenario, the edits made in step 2 are overwritten by step 3. You should establish procedures to avoid such problems.

Saving an Office document as a Web page

When saving a Word document, after you choose **Save as** from Word's File menu, there are 2 choices for saving as HTML.

NOTE: When saving an Excel document, **Save as Web Page (*.htm, *.html)** is the only option.

- save as Web Page
- save as Web Page Filtered

NOTE: For a description of the differences between these options, see About using filtered HTML.

You should save as Web Page, Filtered because the resulting HTML is almost identical to the original document. The **save as Web Page** is not a good option because its HTML content does not match the original document and may cause problems when being edited.

Handling images embedded within a Word document

If you save an Office document that includes images, they appear when anyone is editing the document as well as when it appears on your website. In addition, the images are saved to the corresponding Ektron Library folder. In this way, other Ektron users can apply the images to HTML content as needed.

See also: *Working with files in the library* on page 673

Saving an Office document as .html from Ektron

This procedure assumes the Office document has been saved to Ektron. Procedures for doing this are explained in *Managing Microsoft Office assets* on page 661.

1. Go to the folder that contains the Office document you want to save as .html.
2. Hover the cursor over the triangle (◀) on the right end of the document you want to save
3. Click **Edit in Microsoft Office**. The document opens within Office.
4. From Office's **File** menu, select **Save as Web Page**.

5. In the **Save as Type** field, select **Web page, Filtered (*,htm, *.html)**. See also: *Saving an Office document as a Web page* on the previous page
6. Click **Save**.
7. You may be warned about formatting features not supported in HTML. Click **Continue**.
8. A dialog prompts you to enter your Ektron user name and password.
9. Ektron's folders appear in a Save as window. The folder that contains the Word document is the default folder. Select that or any other Ektron folder and click **Save**.
10. The Office document is saved as an HTML file into Ektron.

Saving an Office document as .html from your computer

1. Open the Office Document.
2. Click **File > Save as (*,htm, *.html)**.
3. Click **My Network Places** and go to `ekdavroot` folder on the server that hosts Ektron.
4. Ektron's folders appear. The folder that contains the Word document is the default folder. Select that or any other Ektron folder.
5. In the **Save as Type** field, select **Web page (*.htm, *.html)** or **Web Page, filtered (*.htm, *.html)**. See also: *Saving an Office document as a Web page* on the previous page.
6. Click **Save**.
7. You may be warned about formatting features not supported in HTML. Press **Continue**.
8. A dialog prompts you to enter your Ektron user name and password.
9. The Office document is saved as an HTML file into Ektron.

The status of the document depends on the workflow and the user who signed in when the mapped network folder was created.

- If you are the last approver, or if there is no workflow, its status is *Approved*.
- If there is a workflow and you are not the last approver, its status is *Submitted*.

Checking document management permissions

If you are having any problems with permissions, use this section to verify that your user and folder settings are assigned properly. You can view current user permission settings for affected folders in *Viewing network server diagnostics* on page 1903.

When the Document Management functionality is installed, permissions are granted to several users for the following folders.

- *root*/assetLibrary. Set by the user during installation, you can view and change the path to this folder in the Workarea **Settings > Configuration > Asset Server Setup > Storage Location**.

- `siteroot\AssetManagement\dmdata`. Set by Ektron during installation, dmdata has settings for both the file system and IIS.
- *siteroot*/assets. Set by Ektron during installation, the Asset Library folder contains file assets uploaded to and managed by DMS. You can view and change the path to this folder in the Workarea **Settings > Configuration > Asset Server Setup > Storage Location**.

The assigned permissions vary depending on your server's operating system.

The following table shows which users and permissions should be enabled for the folders listed above. Use this information to troubleshoot permission problems. See also: *Managing folder and content permissions* on page 160.

User	Windows 2000 Pro or XP Pro	Windows 2003 Server	Windows 2003 Enterprise Edition
IIS_WPG User		✓	✓
IUSR_ The IUSR_ account is required only if `Impersonate` is set to `True` in `web.config`, and its username and password attributes are not specified. If `impersonate` is set to `false` (default setting), the IUSR_ account may be harmlessly removed from the folders listed.	✓	✓	
IUSR_Group			✓
ASP.NET User	✓		
User Defined (The User Defined user account is required only if `Impersonate` is set to `True` in `web.config`, and its username and password attributes are specified.)	✓	✓	✓

The following list shows extended permissions for use with the Document Management functionality.

- Traverse Folder / Execute File
- List Folder / Read Data
- Read Attributes

- Read Extended Attributes
- Create Files / Write Data
- Create Folders / Append Data
- Write Attributes
- Write Extended Attributes
- Delete Subfolder and Files
- Read Permissions

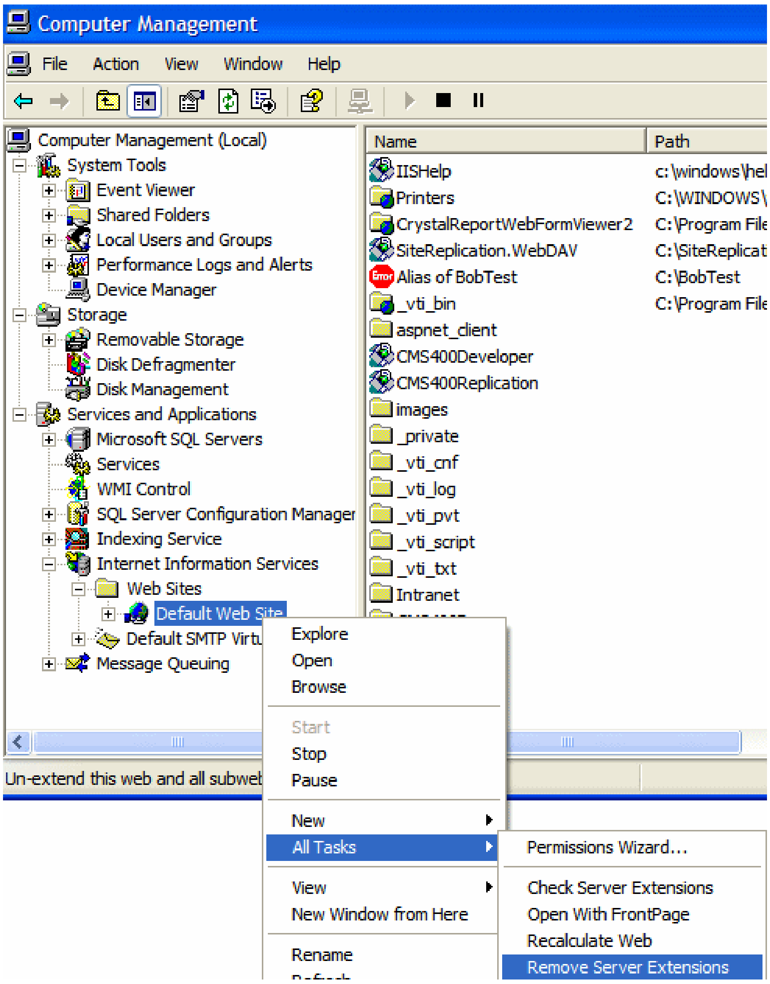
Removing Front Page server extensions

When you remove FrontPage Server Extensions from the Web root, the extensions also are removed from folders under the Web root folder.

1. Click the Windows **Start** button **> Control Panel > Administrative Tools > Internet Information Services Manager**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **IIS**.

2. In that screen, choose **Sites > Default Web Site**.



3. Right click the mouse and select **All Tasks > Remove Server Extensions**.

Troubleshooting assets

This section explains how to fix problems that may occur with Ektron assets.

Problem. Cannot drag and drop assets into Ektron

Symptom. You cannot drag and drop assets into Ektron.

Resolution. See *Removing Front Page server extensions* on the previous page.

Problem. Target Directory Already Exists

Symptom. While trying to drag and drop an asset, an error message appears: **The target directory already exists**.

Resolution. Check the `impersonate` element of the `web.config` file. If it is set to `true`, make sure the anonymous access account has at least write access to the `dmdata` and `assets` directories.

Problem. Cannot Update Published DMS Documents

Symptom. When you try to publish DMS documents, Ektron sometimes does not allow them to update.

Resolution. Make sure your production server is not running Windows XP. You cannot use XP as a production server for DMS.

Problem. Removing aspnet_isapi.dll from the List of Wildcard Application Maps

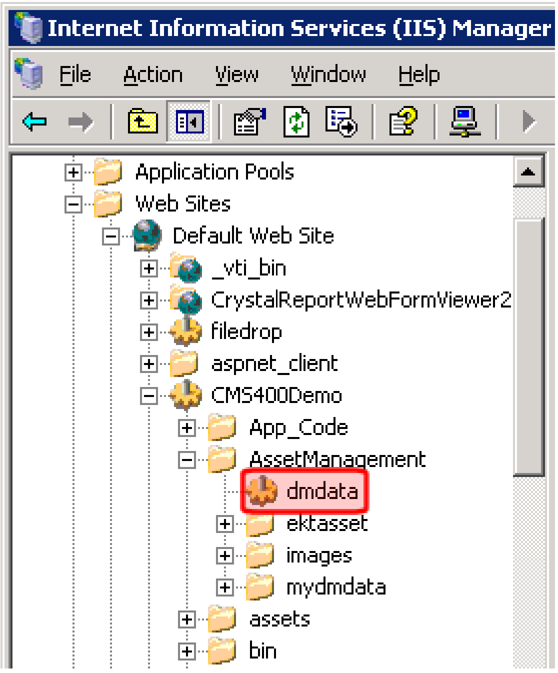
Symptom. When you try to upload an asset, you get the error message "Failed to upload documents."

Cause. Remove the `aspnet_isapi.dll` from the list of Wildcard Application Maps.

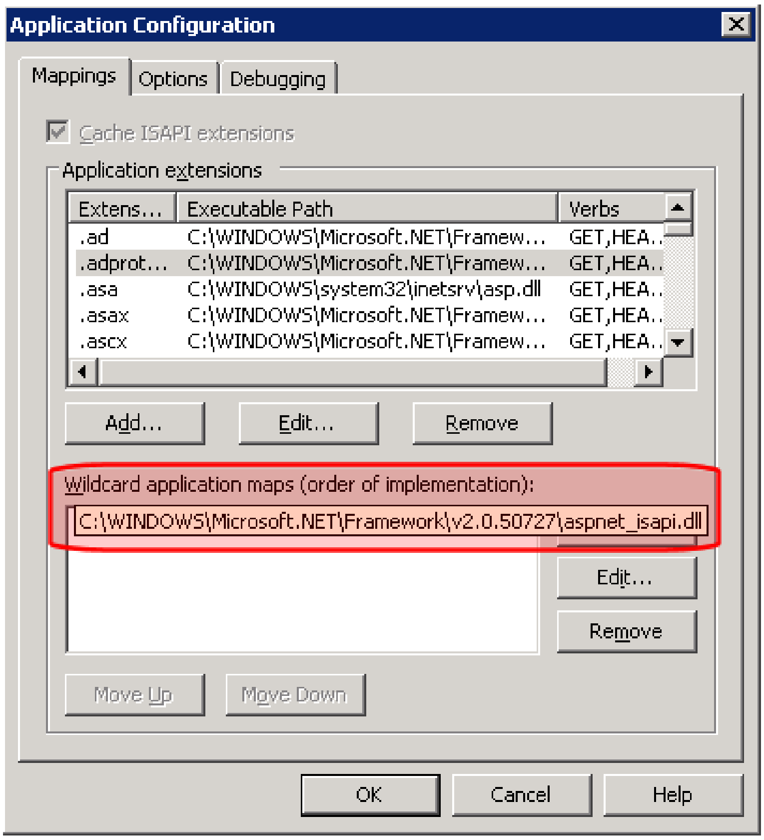
Resolution.

1. Open IIS.
2. Go to your Ektron website.

3. Underneath the website, click **Asset Management > dmdata**.



4. Right click **dmdata** and choose **Properties**.
5. Click the **Virtual Directory** tab.
6. Click **Configuration**.
7. Look in the **Wildcard Application Maps** area. If `aspnet_isapi.dll` appears, remove it.



8. Click **OK**.

Problem. ERRMSG: AssetManagement error: Failed to save asset

Symptom. After recently moving the ASM database to a new SQL server that has never hosted an ASM database, the following error appears while adding a DMS asset.

```
AssetManagement error: Failed to save asset.
Internal Message: RAISERROR could not locate entry for error 2000000002 in
sysmessages. at
Ektron.ASM.Documents.Asset.Create(enAssetStatus state) at
Ektron.ASM.Documents.AbstractAssetManagement.Create(AssetMetaData
  assetMetaData, enAssetStatus state) at
Ektron.ASM.PluginManager.PluginHandler.Create(AssetMetaData
  assetMetaData, enAssetStatus state) at
AssetManagement.AssetManagementService.Create(AssetMetaData
  assetMetaData, enAssetStatus state) at
Mojave.AssetManagementProxy.Create(AssetMetaData assetMetaData,
  enAssetStatus state) at
Ektron.Cms.DataIO.EkContentRW.AddContentv2_0(Collection ContObj) at
Ektron.Cms.EkException.ThrowException(Exception ex) at
Ektron.Cms.DataIO.EkContentRW.AddContentv2_0(Collection ContObj) at
Ektron.Cms.Content.EkContent.AddNewContentv2_0(Collection ContObj)
```

Cause. During the creation of the ASM database, a total of 7 messages are written to the sysmessages table in SQL Server's master database. Each installation of SQL Server has its own master database and, in a typical move from one location to another, changes to the master database are not brought over.

If the ASM database was moved, and these messages are not in the sysmessages table in the new location's master table, the above error appears instead of a standard error message.

Resolution. Run this set of SQL scripts against your database. They add appropriate messages to the sysmessages table in the master database.

```
/***************************************************************************
*******/
sp_addmessage 2000000001, 10, N'Error in %s: Error %d inserting into %s.
%s',
  US_ENGLISH, FALSE, REPLACE
go

/***************************************************************************
*******/
sp_addmessage 2000000002, 10, N'Error in %s: Insert into %s returned %d
rows. %s',
  US_ENGLISH, FALSE, REPLACE
go

/***************************************************************************
*******/
sp_addmessage 2000000003, 10, N'Error in %s: Failed creating record
because
  primary key already exists. %s', US_ENGLISH, FALSE, REPLACE
go

/***************************************************************************
*******/
sp_addmessage 2000000004, 10, N'Error in %s: Error %d updating into %s.
%s',
  US_ENGLISH, FALSE, REPLACE
go

/***************************************************************************
*******/
sp_addmessage 2000000005, 10, N'Error in %s: Update into %s returned %d
rows. %s',
  US_ENGLISH, FALSE, REPLACE
go

/***************************************************************************
*******/
sp_addmessage 2000000007, 10, N'Error in %s: Error %d deleting into %s.
%s',
  US_ENGLISH, FALSE, REPLACE
go

/***************************************************************************
*******/
sp_addmessage 2000000008, 10, N'Error in %s: Delete into %s returned %d
```

```
rows. %s',
  US_ENGLISH, FALSE, REPLACE
go
```

This snippet utilizes the `sp_addmessage` stored procedure from the master database, which adds the appropriate messages to the correct table.

NOTE: Although it is possible to recode these as an INSERT statement that can run directly against the sysmessages table, that procedure is not recommended.

Working with files in the library

The library folder stores images, files, quicklinks, and hyperlinks that can be inserted into editor content. Before you can insert them into content, you must copy them from your computer to a larger, file server computer that everyone editing your site can access.

See also: *Storing external files as library items vs. assets* on page 650.

- An *image* is any graphic file, which can include illustrations and photos. Common image file extensions are .gif., .jpg, .tiff, and so on.
- A *file* is type of file that can be launched from a browser, such as Internet Explorer. Examples include a Microsoft Word document and a .PDF file.
- A *hyperlink* is a commonly used or hard to remember Web address (also known as a URL). After you add hyperlinks to the library, users can easily apply them to editor content. For example, if the editor content is "Contact Ektron," the user can select the text, click the library button, select **hyperlinks** to find the Ektron hyperlink, and apply that hyperlink to the text. When the page is published, a person reading it can click the text to "jump" to the Web address `www.ektron.com`.
- A *quicklink* is a special kind of hyperlink that jumps to another content item on your website. (A regular hyperlink jumps to an external Web page on the internet.)
- A *form* is a quicklink to HTML form content. Whenever content is created, a form link is automatically created for it.

Working with the library

This section describe actions you may perform with library files.

Performing actions on library items

The library is made up of images, files, form Quicklinks, hyperlinks, and regular Quicklinks that were added by Ektron users. The following list shows the actions that can be performed for each library item type.

- **Files**. Add, Edit, View, Overwrite, Delete, Remove from server, Check Links
- **Images**. Add, Edit, View, Overwrite, Delete, Remove from server, Check Links
- **Hyperlinks**. Add, Edit, View, Delete, Check Links, Update URL
- **Quicklinks**. Add, Edit, View, Delete, Check Links, Update URL
- **Form Quicklinks**. Add, Edit, View, Delete, Check Links, Update URL

Most actions can be performed by a user who is granted permission to do so.

Whenever a new content folder is created and permissions given to it, a corresponding library folder is created. The new library folder inherits permissions from the content folder.

Items added to library folders are only accessible by users with permission to the corresponding content folder. If items are added to a library folders directly under the main library folder, all users with at least library Read-Only permissions can use those library items in their content.

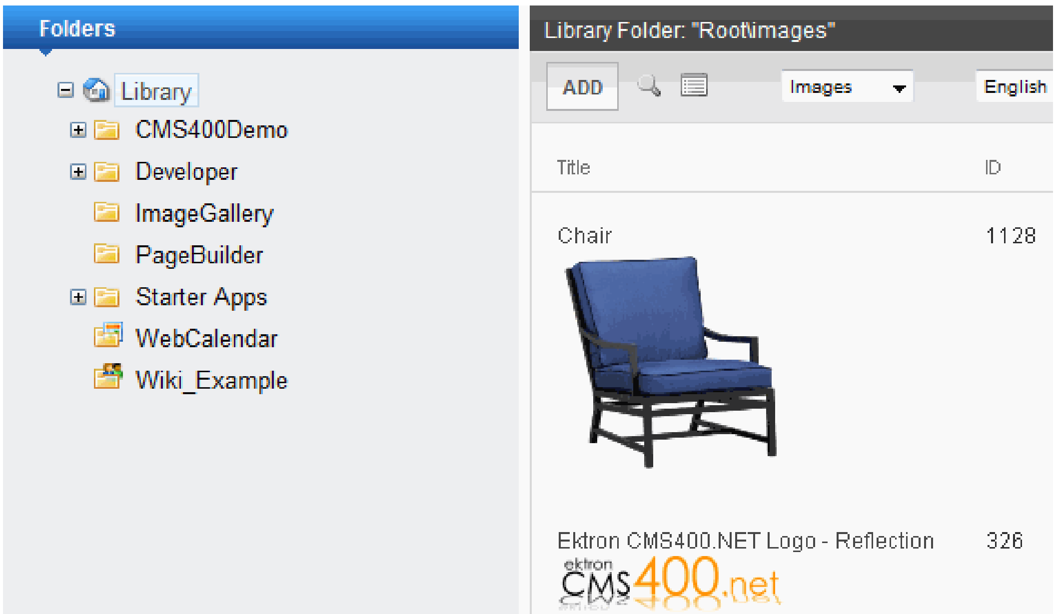
Conversely, if a library item is uploaded to a folder to which only one person has permissions, that is the only user who can use that library item.

To add, edit, overwrite, or delete a library item you must either be a member of the administrators group or have the following combination of folder permissions.

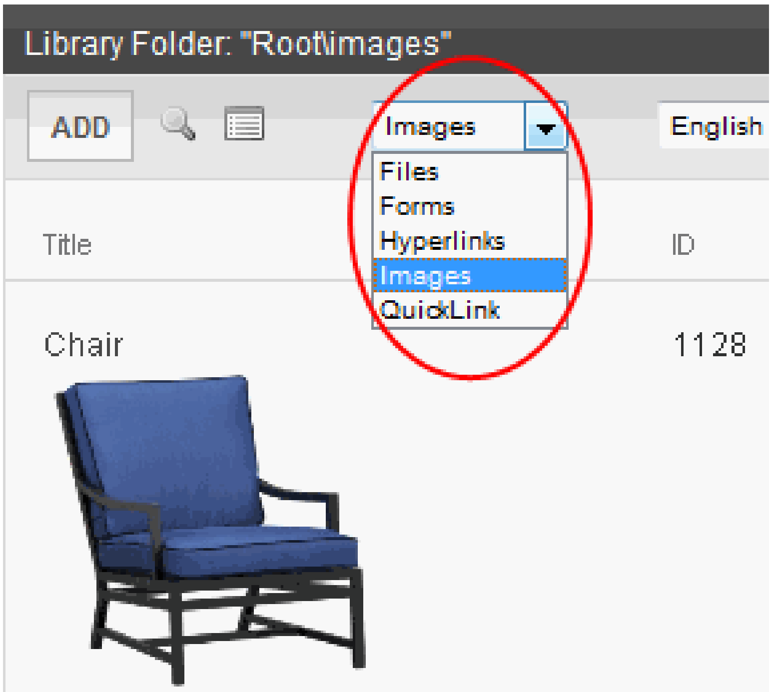
	Add	Edit file name, summary, metadata	Overwrite file	Delete
Library images	**Add Images**	**Add Images**	**Overwrite library**	**Delete** and **Add Images**
Library files	**Add Files**	**Add Files**	**Overwrite library**	**Delete** and **Add Files**
Library hyper-links	**Add Hyper-links**	**Add Hyperlinks**	**Overwrite library**	**Delete** and **Add Hyper-links**

Accessing the library

1. Click **Workarea > Library**. The **Library** folder appears.



2. The sub-folders appear in the left frame. Files in the root folder (library) appear in the right frame.



You can use the drop-down list (circled above) to change the type of library files that appear.

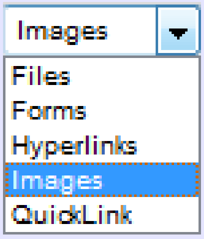
To work with any library file, click it. When you do, the View Library screen appears, providing additional information about the item. From here, you can

- edit its title, file name, or description
- overwrite it
- find content linked to it
- delete it

The following table explains toolbar buttons on the library screen.

NOTE: Your system administrator determines which library folders you can access, and which functions you can perform on library items within the folders.

Button	Description
	Search library; *Searching the library* on page 677.
	View the library's properties screen; *Accessing library folder properties* on the next page.
ADD	Add an image, file, quicklink, or hyperlink to the library; *Adding a file to the library* on page 680.

Button	Description
	Select a type of Library file to work with

Accessing library folder properties

The library folder properties screen lets you view and update image and file types may be uploaded. Administrators have permission to change library properties.

IMPORTANT: You can only add file extensions that are listed in the *siteroot*/web.config file property `ek_LibFileTypeWhiteList`.

To view the properties of the library folder:

1. Click **Workarea > Library**. The **Library** folder appears.
2. Click **Properties** (). The Library Management window appears, displaying the following settings.
   - **Image Extensions**. The types of image files that a content contributor can upload to the library. You can add as many image file extensions as you want, or have none. If no extensions appear, no one can upload image files to the specified folder.

     IMPORTANT: You can only add file extensions that are listed in the *siteroot*/web.config file property `ek_LibFileTypeWhiteList`. See also: *Using the file type whitelist* on the facing page.

   - **Image Upload Directory**. Specifies where the uploaded images are saved on the Web server. By default, the image upload directory is `Web root/ek_sitepath/uploadedimages`. The `ek_sitepath` value is set in the `siteroot\web.config` file.
   - **Make Directory Relative to this website**. If you want to specify the image upload directory's location as relative to your website root, check this box. (Your website root's location appears to the right of **Make Directory Relative to this website**.)
   - **File Extensions**. Specify the types of non-image files that a content contributor can upload to the library. You can add as many non-image file extensions as you want, or have none. If no extensions appear, no one can upload non-image files to the specified folder.

     IMPORTANT: You can only add file extensions that are listed in the *siteroot*/web.config file property `ek_LibFileTypeWhiteList`. See also: *Using the file type whitelist* on the facing page.

- **File Upload Directory**. Specifies where the uploaded files are saved on the Web server. By default, the file upload directory is `Web root/ek_sitepath/uploadedfiles`. The `ek_sitepath` value is set in the *siteroot*`\web.config` file.

  NOTE: You must manually create the directory in your Web root folder before adding it in Ektron.

- **Make Directory Relative to this website**. If you want to specify the file upload directory's location as relative to your website root, check this box. (Your website root's location appears to the right of **Make Directory Relative to this website**.)

Using the file type whitelist

The *siteroot*/`web.config` file property `ek_LibFileTypeWhiteList` contains the same default file types as those on the Library Management screen's **Image Extensions** and **File Extensions** fields.

A server administrator can use this property to restrict which file types may be uploaded to the library. For example, if an Ektron administrator wants to add a new file type, someone who can edit files on the Ektron server must first add it to the `web.config` `ek_LibFileTypeWhiteList` property. This provides additional security over which file types can be uploaded to the library.

Conversely, if an server administrator wants to remove an allowed file type from the Library Management screen, he must first remove it from the `ek_LibFileTypeWhiteList` property.

Searching the library

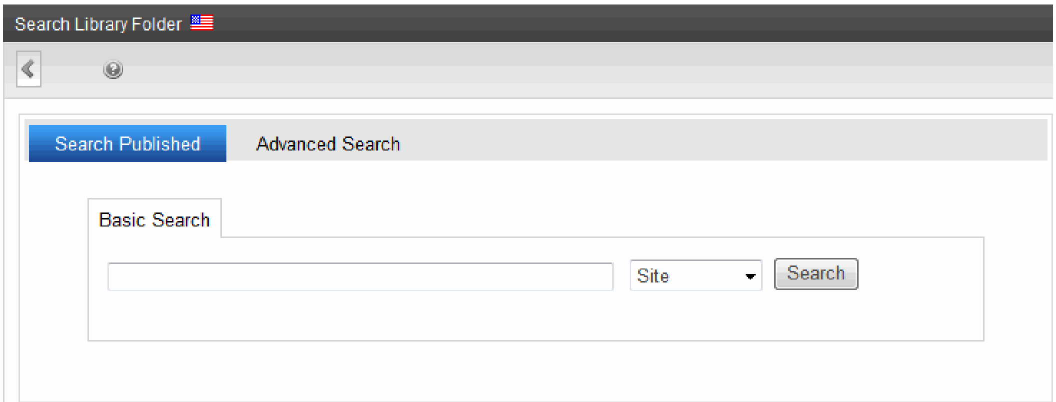
NOTE: New and updated library items are available only after the next crawl completes. See also: *Managing the search crawl* on page 368.

You can search the library to find items if you know only some information about them. For example, you know that an image's name includes **Ektron** but don't know its filename or folder.

To search the library, first select the folder in which you want to begin the search. The search only considers files in that folder and its child folders. To search the entire library, select the Library (root) folder.

IMPORTANT: The library search does not find terms within text-based files, such as Microsoft Word documents and PDFs. To allow searching within such files, import them as assets. See also: *Working with assets in the Document Management System* on page 649.

Next, click **Search** ( ) from the library toolbar. When you do, a search screen appears.

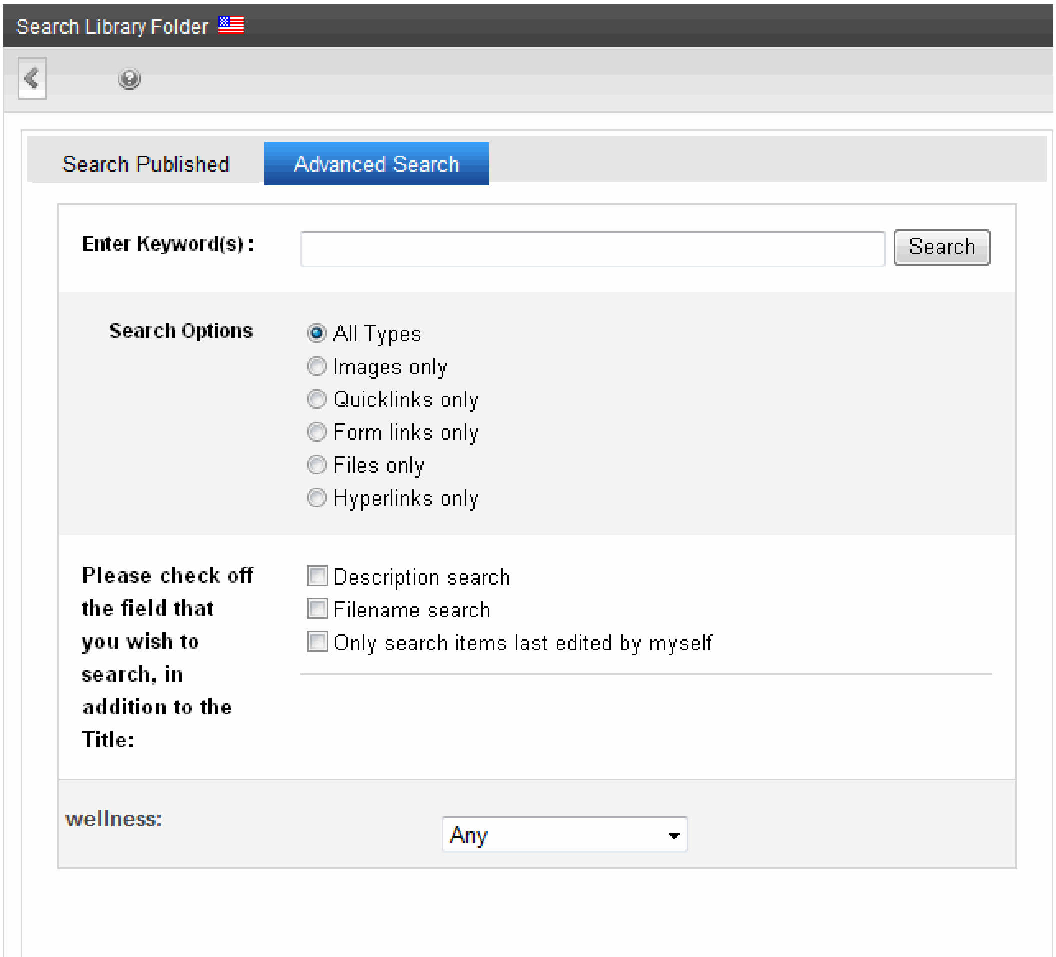


The left tab, **Search Published**, finds both library items and content that satisfies the search criteria.

- Matches selected language.
- Search text is contained in title, summary, filename, or path.
- If the search text is more than one term, all terms must be found. So, multiple terms have an AND relationship.

To force an OR relationship, enter OR between search terms.

The right tab, **Advanced Search**, lets you narrow your search.



- **Enter Keyword(s)**. Specify one or more keywords that the search will use. The search looks for keywords in the file's title. (The title is assigned by the user when the file is added to the library.) If a file's title matches the keywords, the file appears on the search results screen.

  The search also uses keywords to search through the file's

  - internal name (for example, airplane.gif) if the **Filename Search** checkbox is checked
  - description if the **Description search** checkbox is checked

  A keyword can be a complete or partial word. But, you can only enter a partial term for one word. For example, you can enter **Adv** and have the search return the content titled "Adverse Drug Reactions." But if you enter **Adv Drug**, the search returns nothing.

  You can enter several complete search terms but they must be in the correct sequence. For example, to find the topic titled "Adverse Drug Reactions," you can enter **Adverse Reactions** but cannot enter **Reactions Adverse**.

  To find all files in a selected library folder, enter nothing in this field. Or, to find all files in a selected library folder of a type (for example, images), select the type and enter nothing in this field.

- **All Types**. The search considers all library file types.
- **Images only**. The search only considers images.
- **Quicklinks Only**. The search only considers quicklinks.
- **Forms Only**. The search only considers forms.
- **Files Only**. The search only considers files.
- **Hyperlinks Only**. The search only considers hyperlinks.
- **Description Search**. If you check this box, the search considers the library item's description when returning search results. Otherwise, the search ignores the description. For example, if you enter **Ektron** into the keyword field, the search returns all library files that include that string.
- **Filename Search**. If you check this box, the search considers the file name when returning search results. Otherwise, the file name is not considered by the search. For example, if you enter **ppt** into the keyword field, the search returns all files that include that string (such as all Powerpoint presentations).
- **Only search items last edited by myself**. The search only considers library files that were last modified by you.
- One or more search criteria set by your system administrator in the Metadata Definitions screen.

NOTE: Some search field check boxes are circles while others are squares. If the box is a circle, you can only choose one option. If it is a square, you can choose several.

The search displays library items that meet the search criteria. You can click any item to view its properties (such as Library ID number, Last Edit Date and Description).

Working with library files

This section explains how to work with library files (which includes files, forms, hyperlinks, images, and Quicklinks).

Adding a file to the library

After a file is copied to the library, users can add it to content. They can also add an item into the library while inserting it to content.

PREREQUISITE

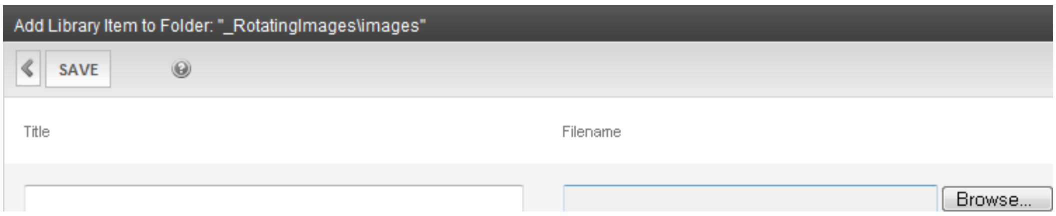
For the file being added, its type is defined in the Library Properties screen's **Image Extensions** or **File Extensions** field. See also: *Accessing library folder properties* on page 676.

To add a file to the library:

IMPORTANT: You should use the Document Management system to add files. Unlike library files, DMS files can be part of a workflow, maintain a history, are searchable, and can have a summary, schedule, metadata, taxonomy categories, and so on.

NOTE: Microsoft lets users upload files of any name. However, IIS security blocks files with names that contain an ampersand (&), colon (:), or percentage sign (%). *Source: FIX: "HTTP 400 - Bad request" error message in the .NET Framework 1.1*
To allow these characters, add the following registry key to your Web server then reset IIS.
Reg Key: `DWORD HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\ASP.NET VerificationCompatibility = 1.`

1. In the Workarea, browse the library folder and select a folder to which you want to copy a file.
2. When you copy a file to a folder, only users with permissions to that folder can insert the file into content. A list of files in that folder appears.
3. Click **Add**. The Add Library Item to Folder screen appears.



4. Enter the necessary information according to the following list.
   - **Title**. Enter a title for the file to be copied.
   - **Filename**. Enter the path to the file to be copied. You can use the **Browse** button to find it.

IMPORTANT: You can only add file extensions that are listed in the *siteroot*/web.config file property `ek_LibFileTypeWhiteList`. See also: *Using the file type whitelist* on page 677.

- **Description**. Enter a full text description to help other users identify this file. The **Description** appears on the View File and Search Results screens.

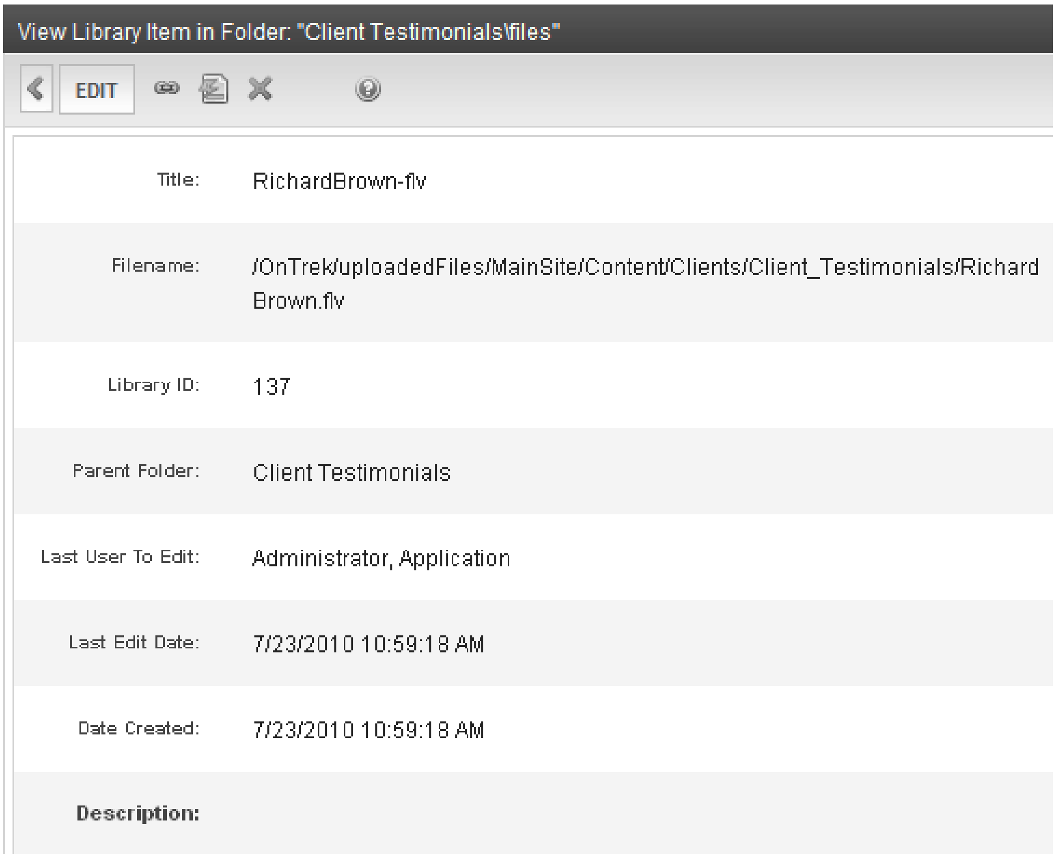
5. Click **Save** to copy the file. Users with permissions to the selected folder can insert the file into their content.

NOTE: When an image is uploaded to the Media tab for a product in the eCommerce feature, the original image and any thumbnails associated with it are added to the Library. For example, if you add an image named "TestImage" (actual file name: "case.jpg") with a 150px and 50px thumbnails, you will see the following entries in your library (*File Name - Path*):
TestImage - /~siteroot~/uploadedImages/case.jpg
case[filename]150 - /~siteroot~/uploadedImages/case[filename]150.jpg
case[filename]50 - /~siteroot~/uploadedImages/case[filename]50.jpg

Viewing a file

When a file is copied to the library, you may preview it. To preview a copied file:

1. Go to the library folder to which the file was copied.
2. Click the file you want to preview. The View File screen appears.



- **Title**. Title assigned by user who copied or edited it.
- **Filename**. Filename and location on the server.
- **Library ID**. ID number assigned by Ektron when file was originally copied.
- **Parent Folder**. File’s parent folder. Users need permissions to this folder to insert the file into content.
- **Last User to Edit**. Last user who changed file.
- **Last Edit Date**. When file was last edited.
- **Date Created**. When file was originally copied to library.
- **Description**. Optional, full-text description of file.

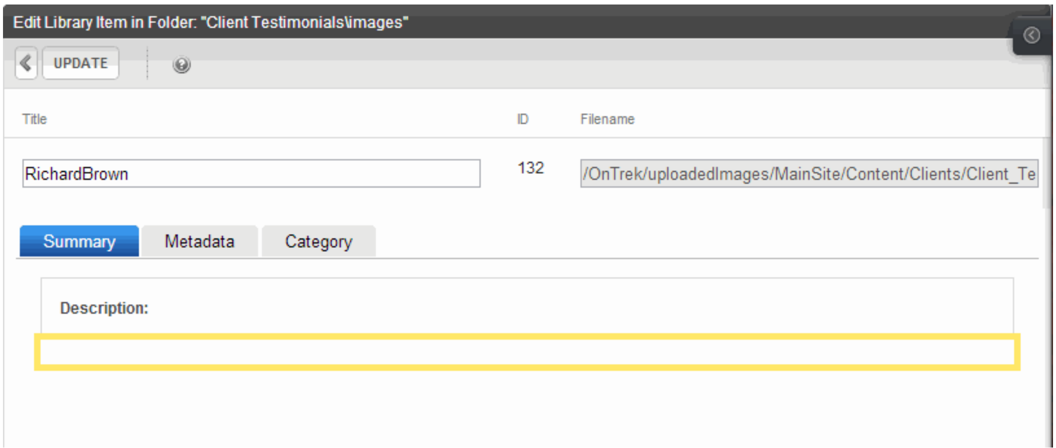
If the file can be displayed in your browser, a preview of it appears at the bottom of the screen. If it cannot display in the browser, a link to preview it in its host application appears instead.

NOTE: You may need to download some files before you can be view them (for example, .mdb, .mp3, .zip, and so on).

Editing a file

To edit the title, filename and description of any library file:

1. Access the View File screen and click **Edit**. The Edit File screen appears.



2. Change the title, file name, and/or description of the file.
3. Click **Update**.

Searching library links

Link searching indicates all content that includes a library link. It is useful when you want to delete a library item. With the click of a button, you see all content that you need to update to reflect the change you are making.

To perform a library item link search:

1. Access the View Library Item for any type of library item and click **Link Search** ( ).
2. A list of all content that references the library item appears.

You should edit that content before deleting the item.

Adding a library file to content

After a file is copied to the library, users can add it to content. You can also insert an item into the library while adding it to content.

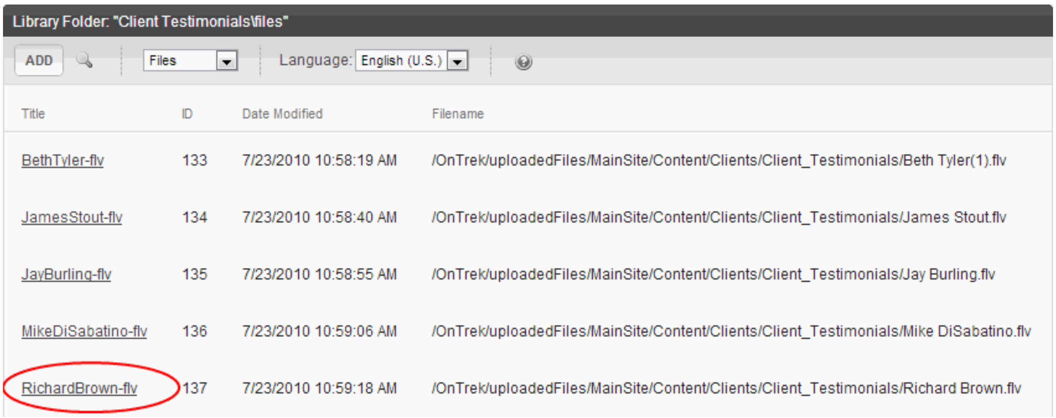
NOTE: Alternatively, you can drag and drop an image file into content. See *Inserting an image using drag and drop* on page 568.

If you insert an image file, it appears within the content. If you add any other type of file, the file name appears as a hyperlink within the content. When a site visitor viewing that page clicks the hyperlink, the inserted file is launched.

NOTE: The following procedure applies to files, forms, hyperlinks, images and quicklinks.

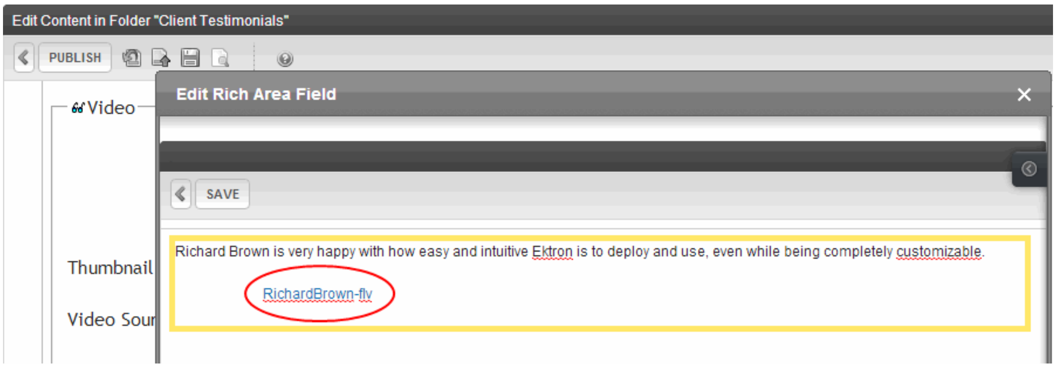
---

1. Invoke the editor by adding or editing content in Ektron.
2. Place the cursor within the content where you want the library file to appear.
3. Click **Library** ( ). The Library screen appears.
4. Go to the folder that contains the file you want to insert.

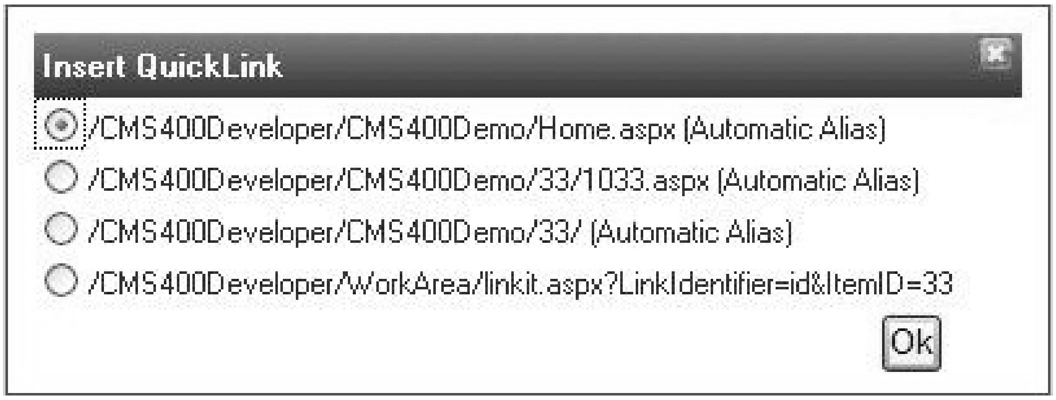


5. From the file types drop-down list, select the kind of file (file, form, hyperlink, image, or quicklink) you want to insert. All library files of that type in the selected folder appear on the screen.
6. Click the file you want to insert.
7. Click **Insert** ( ) to insert the file. The content appears in your editor. In this example, inserting the file creates a link in your content. If you select an image,

the image appears.



If you select **Files** from the file types list, and Aliasing is enabled for your website, the following screen appears.



Adding a file to the library and inserting it into content

Use this procedure to insert an image into content that has not yet been copied to the library. This procedure inserts the item into the library then into the content.

1. Invoke the editor by adding or editing content in Ektron.
2. Place the cursor where you want the library item to appear.
3. Click **Library** ( ). The library opens.
4. Go to the folder that will contain the file after you insert it.
5. Select the type of file (file, form, hyperlink, image, or quicklink) you want to insert from the File types drop-down.
6. Click **Add Library**. A new screen appears.
7. Browse to the file you want to insert, or you can click **Search** ( ) to search for a file to insert.

> **IMPORTANT:** You can only add file extensions that are listed in the *siteroot*/web.config file property `ek_LibFileTypeWhiteList`. See also: *Using the file type whitelist* on page 677.

8. Enter a **Title** for the file.
9. If metadata is required for the library item, you must complete it. Metadata fields may appear in the lower section of the screen.

10. Click **Add Library**. The file is inserted into the selected library folder and the content.

Overwriting a file

If a library file or image becomes out-of-date or the wrong version was copied, you can replace it with a new version. Overwriting files lets you minimize disk space and the number of library files.

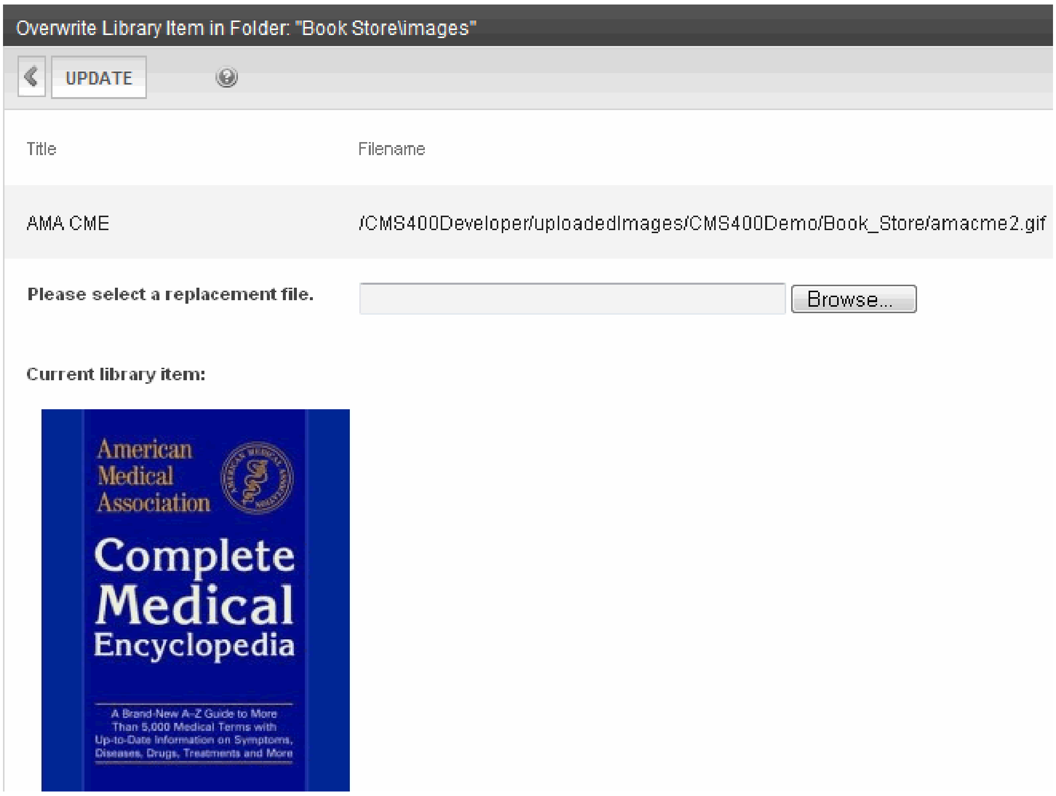
NOTE: The ability to overwrite a library file is a privilege granted by the system administrator. If you do not see an Overwrite button on the View Library Item in Folder screen, you do not have permission to overwrite. You can only overwrite images and files. The new image or file must have the same file extension as the file being replaced.

When overwriting an image, the new image uses the same size dimensions and file extension as the older image. Be sure that the 2 images have the same file extension and size, or adjust each occurrence of the image.

Remember, all links to the overwritten file now point to the new file.

To overwrite a library file:

1. Go to the View File screen for the file you want to overwrite and click **Overwrite** ( ). The Overwrite File screen appears.



2. Click **Browse**. A window lets you go to the new file.

IMPORTANT: You can only add file extensions that are listed in the *siteroot*/web.config file property `ek_LibFileTypeWhiteList`. See also: *Using the file type whitelist* on page 677.

3. Select a file, then click **Open**. You return to the Overwrite File screen with the path to the new file in the **Filename** field.

4. Optionally, enter a description for the new file.
5. Click **Update** to overwrite the current version of the file with this version. A message appears before you can continue.
6. Click **OK** to overwrite the file.

Deleting a library item

You can delete obsolete items from the library. By deleting an item, you prevent users from adding it to content. A deleted hyperlink, quicklink or form quicklink remains on your Web server, so existing links are not broken.

On the other hand, if an item is a file or image, the delete window displays an additional prompt, **Remove from the server,** that lets you remove the item from the server. This feature is available to help reduce disk space taken up by these files. Before removing an image or file from your server, review all content with links to it and remove or update the link.

To delete an item from the library:

1. Access the View Library Item screen for any type of library item and click **Delete** ( ). The Delete Library Item screen appears.
2. If appropriate, check the box next to **Remove from the server**.
3. Click **Delete** ( ).

Adding a quicklink to content

A *quicklink* is a special kind of hyperlink that "jumps" to a content item on your website. You can apply a quicklink to text or an image. When a site visitor is viewing the content and clicks the quicklink, a new page appears, displaying the referenced content.

If you do not select text or an image before inserting a quicklink, the referenced content's title becomes the quicklink text.

1. Edit the content into which you want to insert the quicklink.
2. Place the cursor where you want the quicklink to appear. If you want to attach the quicklink to text or an image, select it.
3. Click **Library** ( ).
4. Go to the folder that contains the content whose quicklink you want to insert.

5. From the file types drop-down list, select **Quicklink**. All quicklinks in the selected folder appear.
6. Click the quicklink you want to insert.
7. Click **Insert**. The quicklink appears in the editor.

Viewing quicklinks or forms

To view a quicklink or form, follow the procedure described in *Viewing a file* on page 681. The only difference is that you view a quicklink or form instead of a file.

The following list describes each field on the quicklinks display.

- **Title**. Title given to the hyperlink or form by the user who added it, or last edited it.
- **URL Link**. URL link for the quicklink or form.
- **Library ID**. ID number assigned automatically by Ektron when the quicklink or form was originally added.
- **Parent Folder**. Parent folder that the quicklink or form belongs to. Users need permissions to this folder to be able to access the quicklink or form.
- **Last User to Edit**. Last user that made changes to the quicklink or form.
- **Last Edit Date**. The date the quicklink or form was last edited.
- **Date Created**. The date and time the quicklink or form was originally added to the Ektron library.

To preview a quicklink or form, click the link at the bottom of the page.

Updating the default template for multiple quicklinks

IMPORTANT: This procedure is only necessary if Link Management is set to `false` in your `web.config` file. If if Link Management is set to `true`, Ektron automatically updates the template within the quicklink when content is moved. See your system administrator for help with the `web.config` file.

When content is moved in Ektron, its quicklink does not get changed. After it is moved, you need to update the default template called in the content's quicklink.

NOTE: This action can only be performed on quicklinks.

To update the default template for one or more quicklinks:

1. In the library, access the quicklinks folder containing quicklinks you want to update.
2. Click **Update Quicklink** ( ). The Update URL Link Template Quicklinks screen appears.
3. Check the quicklinks you want to update.

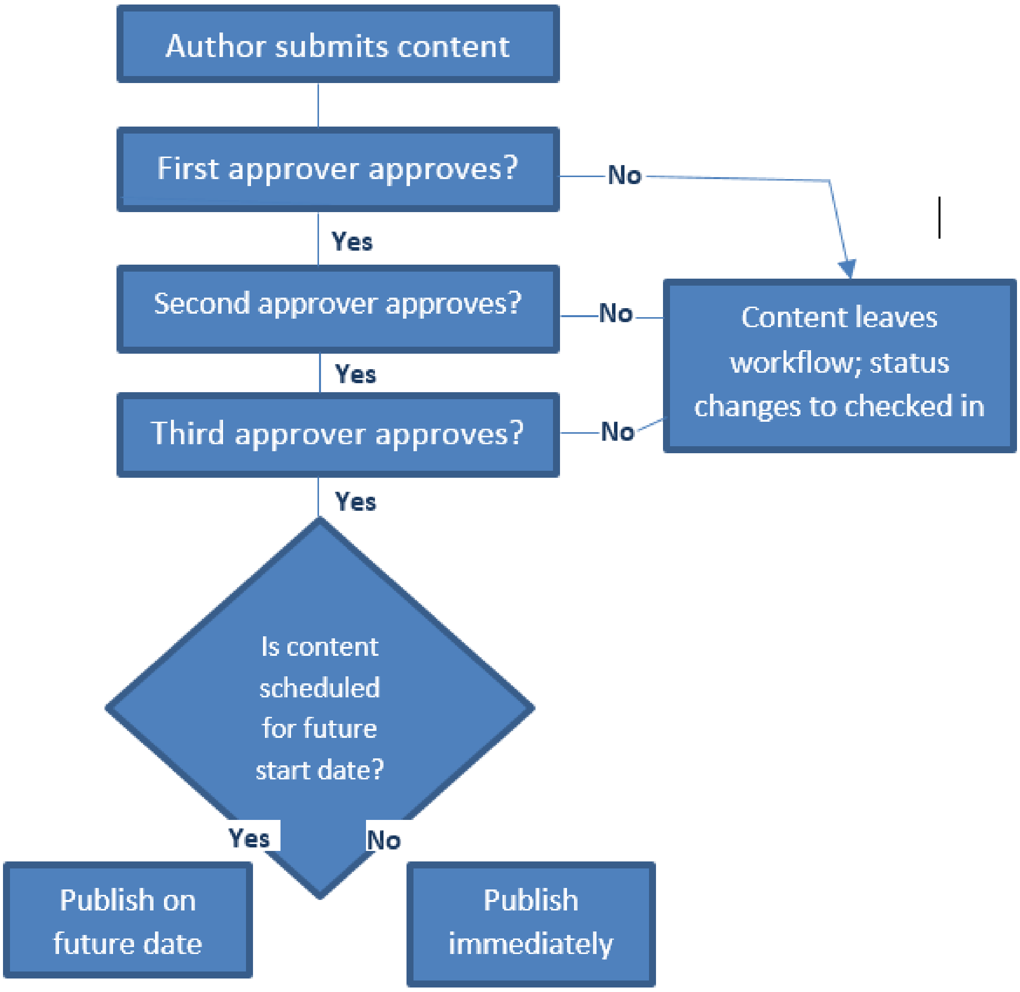
   NOTE: Check the box in the table header to select or deselect all.

4. In the **To:** text field, enter the name of the template you want to apply to the selected quicklinks.
5. Click **Update Quicklink** () to update the changes.
6. Click **OK** to continue. The selected quicklinks are updated to use the specified template.

Approving content for publication

Workflow, a core element of Ektron, lets you set up a sequence of approvers who control the publication of content to your website.

When workflow is implemented, submitted content must be approved by each user or group in the sequence before the content is published. Any reviewer can edit the content, *decline* the content (which returns it to the previous approver), or *approve* the content (which forwards it to the next approver). Upon final approval, the content is published, and the website is updated.

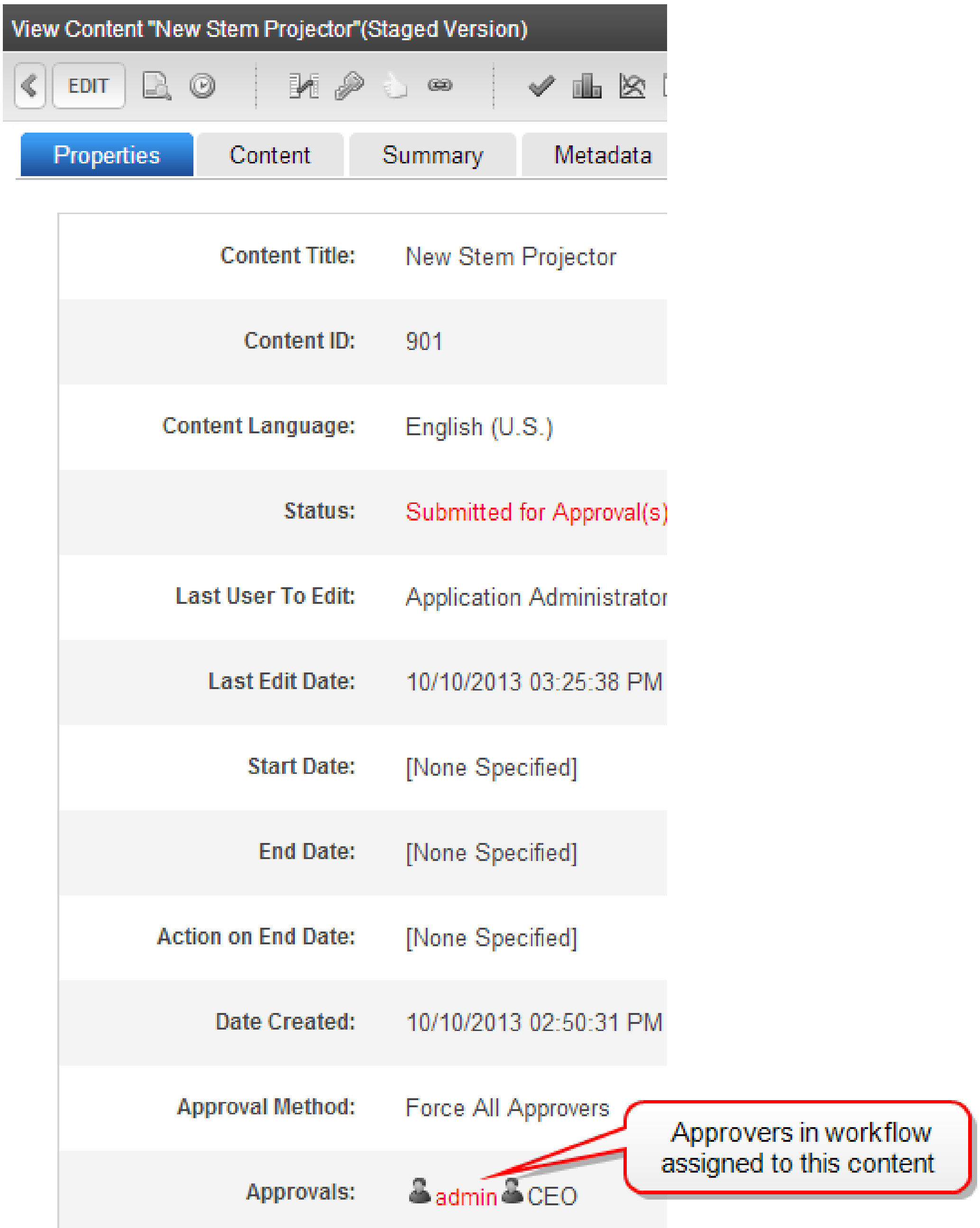


Key workflow concepts

- You can implement workflow at the folder and content level. If a workflow is applied to content, it overrides a folder-level one.
- **Inheritance**. Content inherits workflow from its folder, and a folder inherits from its parent folder.

To apply unique workflow rules to a folder or content, break inheritance from the content's permission screen.

- The last approver sees **Publish** instead of **Approve**, indicating that upon approval, the content is updated on your website.
- You can add only users or user groups to a workflow that have read-only or higher permission to a folder or content.
  - If you assign a user group to a workflow step, any user in the group can approve the content.
- For any content, you can view users or groups that make up its workflow on the View Content screen's **Properties** tab **Approvals** field. Red text indicates the current approver.



- **Notifications**. Ektron can automatically send email notifications, informing users that workflow events have either taken place or are requested of them. For example:
    - After a user approves content, an email notifies the next approver that content is ready for their approval.
    - Content authors receive email when their content is published.

  The email text and directions for customizing it are described in *Customizing Ektron email with tokens* on page 102.

Approving content with a basic workflow

- Features a simple, linear chain of approvers.
- Any user or group can appear only once in the workflow.
- Includes an Approval Method feature, which lets you determine the approval sequence if a user who is part of the basic workflow submits or edits the content. See also: *Setting the approval method* on page 694.
- Can be managed by an Ektron administrator.
- Content deletion is subject to approval.
- Any folder or content item can have a different workflow type for each language.
    - If you initialize new foreign language content with content from another language, the new content initially has no workflow. You must add it as you would any other workflow. See also: *Translating content manually* on page 1415.
- You can switch from one workflow type to another. See *Switching from basic workflow to advanced workflow* on page 703.
- If a user appears in a basic workflow twice (both as a user and part of a user group), the second occurrence is skipped because the user already approved the content.
- Ektron can automatically send email notification, informing users that workflow events have either taken place or are requested of them. For example:
    - When content is submitted, the first approver or members of the first approver user group get an email notification.
    - When content is approved, the next approver or members of the next approver user group are notified.
    - A content contributor receives an email notification when his content is published.

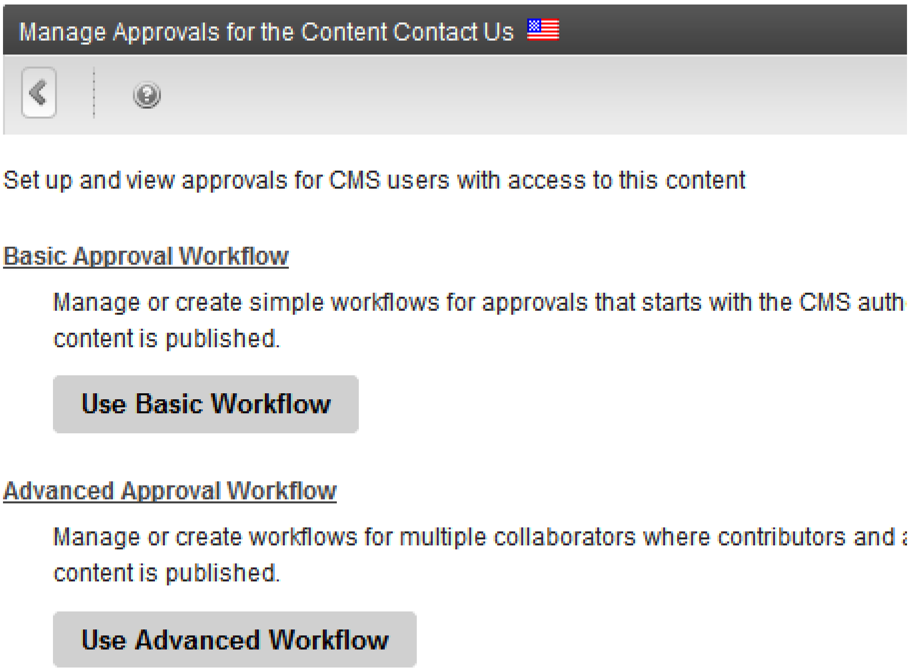
  The list of automatic emails and directions for customizing their content are described in *Customizing Ektron email with tokens* on page 102.

Viewing a folder’s basic workflow

1. Go to the folder whose basic workflow you want to view.
2. Choose **View > Language** and select a language.
3. Choose **View > Properties**.

4. Click **Manage Approvals** ( ).

   If you see the following screen, no workflow is assigned to the folder.



NOTE: If a folder inherits its workflow, instead of seeing it, you see **Approval workflow for this folder is currently inherited. You can break this inheritance in the "View Permissions" screen for *parent folder*.**

Creating a basic workflow for a folder

Assigning basic workflow to a folder consists of selecting users or groups who are responsible for approving changes to the folder's content before it gets published. You can also change the order of the approvers and assign an approval method.

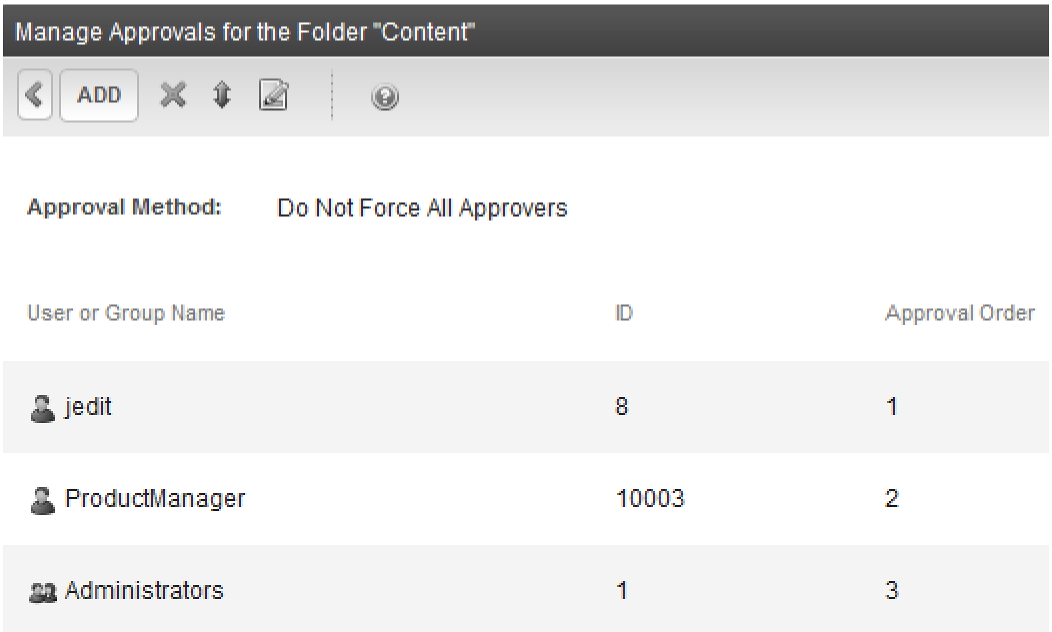
PREREQUISITE

Only administrators group members and users assigned to the Folder User Admin Role screen can assign a basic workflow. See also: *Defining roles* on page 1464

1. Go to the folder to which you want to assign a basic workflow.
2. Choose **View > Language** and select a language.
3. Choose **View > Properties**.
4. Click **Manage Approvals** ( ). You may see a screen that prompts you to create either **basic workflow** or **Advanced** workflow.

   NOTE: If a folder inherits its workflow, instead of seeing it, you see **Approval workflow for this folder is currently inherited. You can break this inheritance in the "View Permissions" screen for *parent folder*.** To view (and possibly break) the inherited workflow, view the parent folder's workflow. See also: *Breaking inheritance* on page 162

5. Choose **Basic** to create a basic workflow. The Manage Approvals screen appears.



From this screen, you can perform these actions:

- **Add**. Add approvers. See also: *Adding approvers* below
- . Remove approvers. See also: *Deleting approvers* on the next page
- . Change the order of approvers. See also: *Editing the approval order* on the next page
- . Change the approval method. See also: *Setting the approval method* on the next page

Adding approvers

When you add approvers to a folder or content, that action creates a basic workflow.

PREREQUISITE

Only users and user groups with read-only or higher permissions to the folder may be added as approvers. See *Adding a user or user group to the permissions screen* on page 163 for more information.

BEST PRACTICE

Assign user groups (not individual users) to a basic workflow. In this way, if someone is out of the office, any group member can approve content.

1. From the Manage Approvals screen, click **Add**. The Add Approvals screen appears.
2. Click the user or user group to add to the basic workflow.
3. Click **OK**.
4. Repeat Steps 2 and 3 until all approvers are chosen.

Deleting approvers

You can delete approvers at any time, including while content is in an approval process. If you do, the users or groups are eliminated from the basic workflow. If a removed user was the current approver, approval moves to the next user or group in the basic workflow.

WARNING! If a user is deleted from a folder or content Permissions screen, the user is deleted from the basic workflow. If all approvers are deleted from a Permissions screen, the basic workflow is removed.

1. From the Manage Approvals screen, click **Delete** ( ). The Remove Approval screen appears.
2. Click a user or group to remove from the basic workflow.
3. Click **OK**.

NOTE: If you delete all approvers from a basic workflow, it is removed.

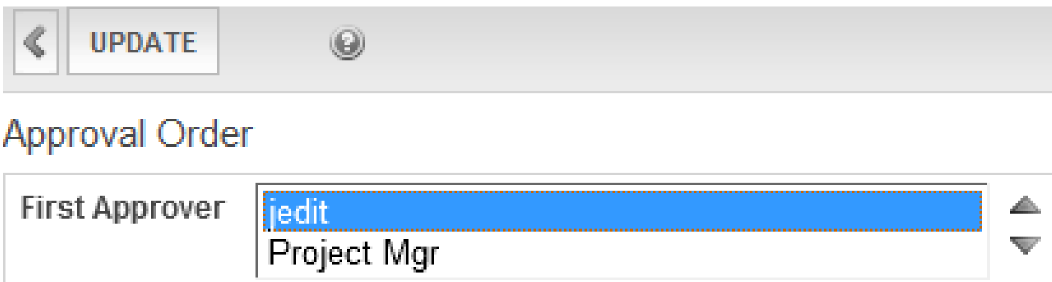
Editing the approval order

After assigning approvers to a folder or content, you can adjust the approval order. Place the user or group with final approval at the end of the workflow (that is, assign *the highest number*). For example, if a department head must approve edits, and a Webmaster has final review of content, the approval order is:

- Department Head—1
- Webmaster—2

To edit approval order:

1. From the Manage Approvals screen, click **Reorder Items** ( ). The Edit Approval Order screen appears.
2. Click the user or group whose approval order you want to change.



3. Click **Up** ( ) or **Down** ( ) to move users and groups to the desired order.
4. Click **Update**.

Setting the approval method

The approval method determines if content must be approved by all users in the workflow, or only users higher up the workflow than the user submitting the content. The approval method affects the approval process only if the person submitting content is a member of the basic workflow.

There are 2 approval methods.

- **Force All Approvers**. *All* users in the basic workflow must approve the content, beginning with the first.
- **Do Not Force All Approvers**. Only approvers *after* the user submitting content in the basic workflow must approve the content.

The Approval Method applies to *all* content in a folder, regardless of its language. For example, assume a basic workflow consists of

1. Content contributor
2. Department head
3. Webmaster

If the approval method is **Force All Approvers**, and the department head submits content, the content must be approved by the content contributor, department head, then Webmaster before it is published.

If the approval method is **Do Not Force All Approvers**, and the department head submits content, the content must only be approved the Webmaster before it is published.

Changing the approval method

PREREQUISITES

- If basic workflow is inherited, the approval method is also inherited from the parent folder. Before you can change an inherited approval method, you must break inheritance.

By default, the approval method is set to **Do Not Force All Approvers**. To change the approval method for a content folder or item:

1. Go to the folder to which you want to assign a basic workflow.
2. Choose **View > Language** and select the workflow's language.
3. Choose **View > Properties**.
4. Click **Manage Approvals** ().
5. Click **Edit Approval Method** (). The Edit Approval Method screen appears.
6. Click the applicable radio button.
7. Click **Update**.

Editing a basic workflow for a folder

1. Go to the folder that has the basic workflow that you want to edit.
2. Choose **View > Language** and select the workflow's language.
3. Choose **View > Properties**.
4. Click **Manage Approvals** ().
5. From the Manage Approvals screen, you can
   - Add or remove approvers. See *Adding approvers* on page 693, *Deleting approvers* on the previous page

- Change the approval order. See *Editing the approval order* on page 694
- Change the approval method. See *Setting the approval method* on page 694

Removing a basic workflow from a folder

1. Go to the folder that has the basic workflow that you want to remove.
2. Choose **View > Language** and select the workflow's language.
3. Choose **View > Properties**.
4. Click **Manage Approvals** ( ).
5. Remove all approvers by clicking the Remove button ( ) then selecting each approver one at a time. When you complete this, the workflow is no longer assigned to the folder. See also: *Deleting approvers* on page 694

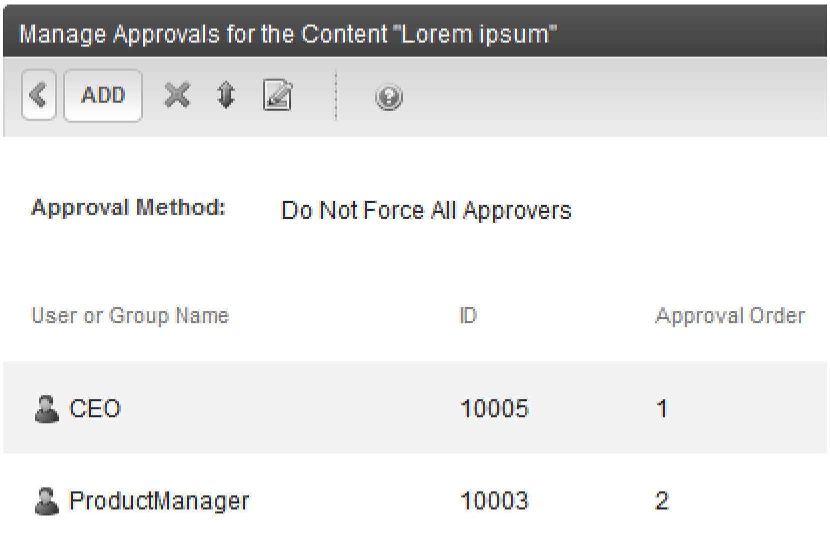
Creating a basic workflow for content

You can create, edit, or delete a basic workflow for a specific content item. If you do, content-level workflow overrides folder-level workflow.

PREREQUISITES

- You must disable the inheritance of permissions for content whose basic workflow you want to edit. See *Setting permissions for content* on page 164.
- You must assign users or groups to a basic workflow. Only users and user groups with permissions to the content can be assigned. See *Managing folder and content permissions* on page 160.

1. Go to the folder that contains the content.
2. Choose **View > Language** and select the language of the basic workflow you want to create.
3. Click the content and choose **View Properties**.
4. Click **Manage Approvals** ( ). If content-level basic workflow is applied to this content, it appears.

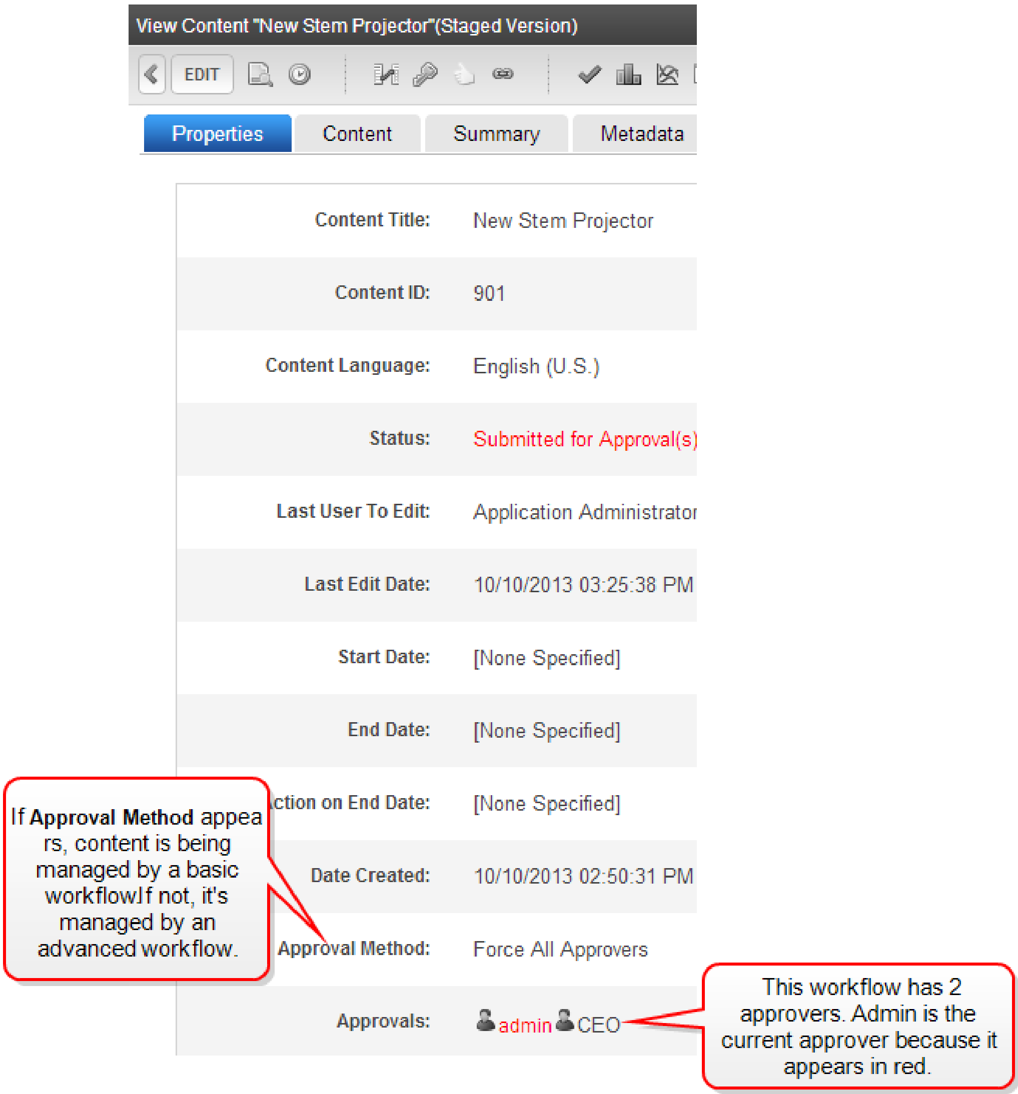


If content inherits a basic workflow from its folder, you are informed of this. To view (and possibly break)the inherited workflow, view the content folder's workflow. See also: *Viewing a folder's basic workflow* on page 691

5. From this screen, you can perform these actions.
   - **Add**. Add approvers. See also: *Adding approvers* on page 693
   - . Remove approvers. See also: *Deleting approvers* on page 694
   - . Change the order of users. See also: *Editing the approval order* on page 694
   - . Change the approval method. See also: *Setting the approval method* on page 694

Monitoring content under a basic workflow

To see any content item's basic workflow and current approver, view its properties screen. Red text indicates the current approver.



To see content

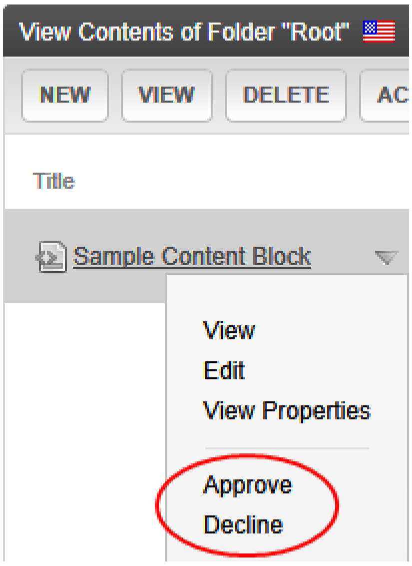
- awaiting your approval, use the *Approval report* on page 975.
- in Submitted status, use the *Submitted content report* on page 977.
- via desktop widgets—*Managing content from the Smart Desktop* on page 612.
    - Content Awaiting Approval (shortcut to *Approval report* on page 975)
    - Content In Workflow—all content in Submitted status (shortcut to *Submitted content report* on page 977)

Approving or declining content

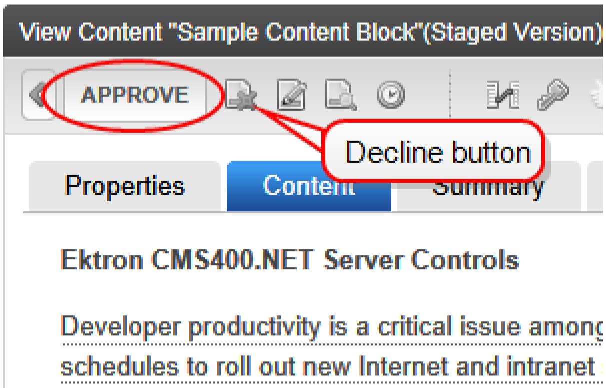
Prerequisite

There are several ways that a current approver (or approver group member) can approve or decline content.

1. Use one of the following methods to access the **Approve** or **Decline** option.
   - the content's context menu



   - the content's view screen



   - via the *Submitted content report* on page 977
   - via the *Approval report* on page 975
   - via desktop widgets
     - Content Awaiting Approval (shortcut to the *Approval report* on page 975)
     - Content In Workflow—all content in Submitted status (shortcut to *Submitted content report* on page 977)
2. Click **Approve** or **Decline**.

   If you approve, the content is either submitted to the next publisher or published immediately, depending on your sequence in the content's workflow, and how the Approval Method is set.

   If you decline, the content status changes to Checked In, and it leaves the approval process.

Example basic workflow

The following example shows a typical content item from creation to publication. Three users make up the basic workflow.

- Sports Writer—creates sports content
- Sports Editor—edits and publishes all sports articles
- Editor-in-Chief—edits and publishes all articles

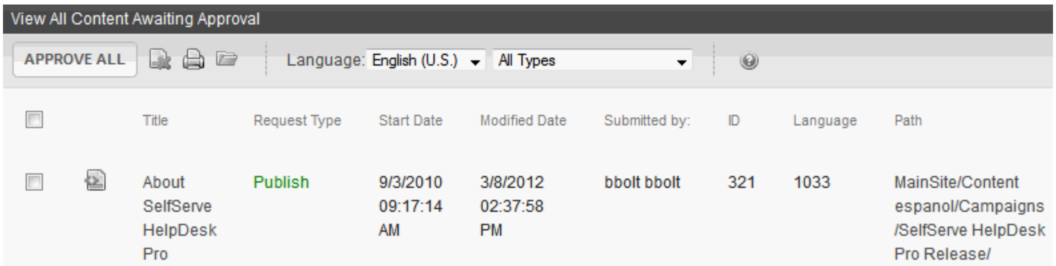
Each user has different permissions that correspond to their roles.

Basic workflow begins when a content contributor submits new content or edits existing content.

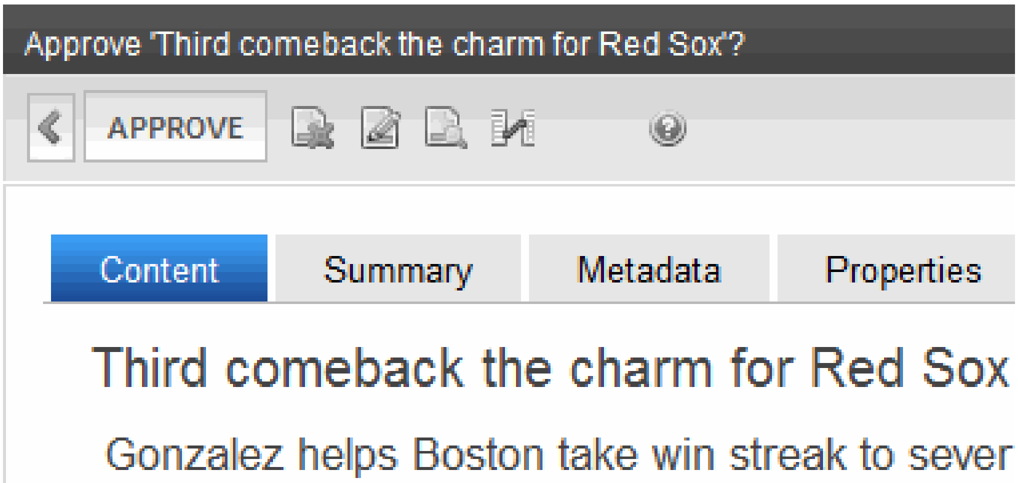
First approver

After the Sports Writer submits content, the first user in the basic workflow, the Sports Editor, receives an email stating that content needs approval. The Sports Editor can modify and approve the content or decline it.

1. The Sports Editor logs into Ektron, goes to the desktop, and sees the Content Awaiting Approval widget.



2. The Sports Editor clicks the **View All** link and sees content awaiting approval. The screen displays information such as title, who submitted it, publication date, and so on. The Sports Editor clicks the Submitted content.



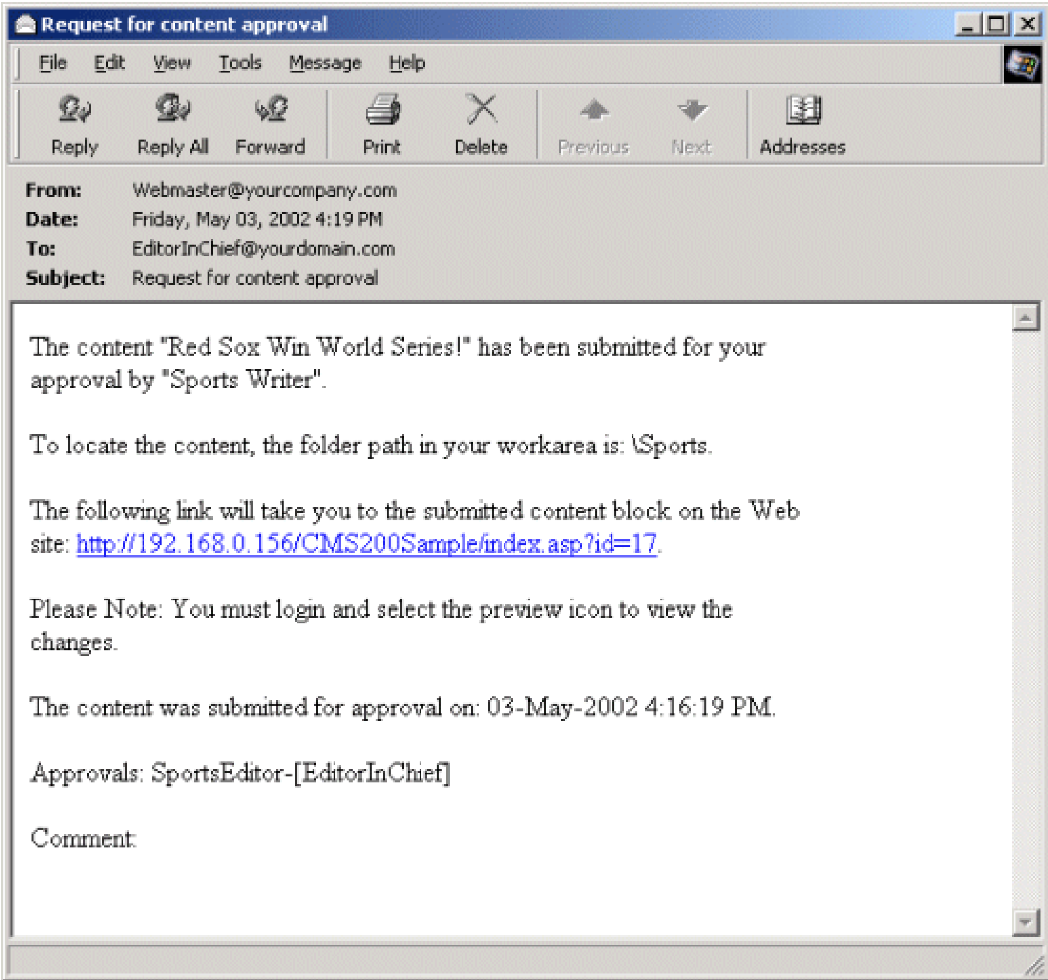
On the Approve screen, the Sports Editor has these options.

- **Approve**. Send content to next approver in basic workflow.
- **Decline**.
  - Send email to creator, notifying him/her that content was declined.
  - Remove content from basic workflow.
- **Edit**. Invokes the editor. From here, the approver can change the content.

3. The Sports Editor chooses **Approve**.

Second approver

After the content is approved, the Editor-in-Chief is the next approver in the basic workflow who is notified by email that content is ready for approval.

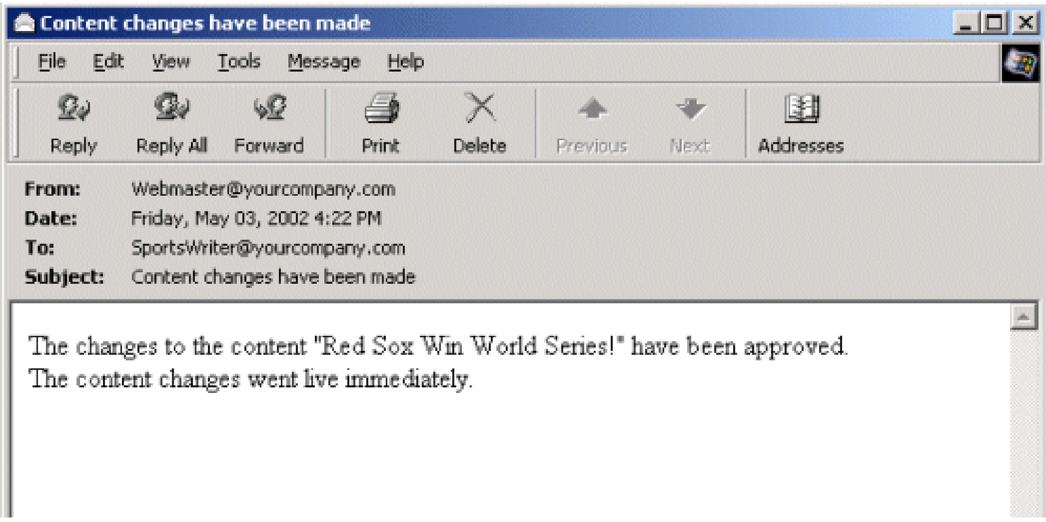


1. The Editor-in-Chief logs in to Ektron and accesses the Workarea. The Workarea has an Approvals report with the content awaiting approval.
2. The Editor-in-Chief reviews the Approvals report and finds the content **Red Sox win World Series**.
3. From this window, the Editor-in-Chief views information about the content, including title, publication date, the user who created it, and so on.

4. The Editor-in-Chief clicks the content to be approved. This screen is similar to the previous approver's but includes a **Publish** button, because Editor-in-Chief is the last approver in the basic workflow.

   Like the Sports Editor, the Editor-in-Chief has these options:

   - **Publish**. Publish the content.
   - **Decline**.
     - Sends an email to the creator, notifying him/her that content was declined.
     - Removes content from the basic workflow.
   - **Edit**. Invokes the editor. The approver changes the content.
5. After reviewing the content, the Editor-in-Chief decides to publish it. The content is published on the website.
6. The basic workflow is complete and the user who created the content receives email notification that it was published.



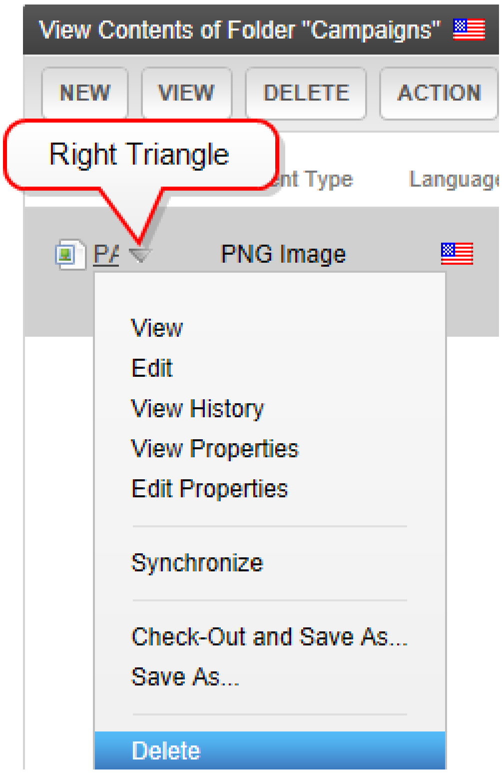
Deleting content under basic workflow

Any member of the administrators group, or user or group assigned delete permission for content, can begin the process of deleting it. Because content is under basic workflow control, every approver must approve the request before the deletion is final.

You can only begin the deletion process if the content's status is Checked In (I) or Approved (A). See also: *Deleting content* on page 631

To delete content under a basic workflow:

1. Go to the folder that contains the content.
2. Click the content's right triangle to access the context menu.



3. Click **Delete**.

   The content is set to Submitted status, and assigned to the first approver in the workflow. That approver can approve or decline the deletion request.

   When the last approver approves the deletion request, the content is deleted, and the website is updated.

Switching from basic workflow to advanced workflow

See also: *Switching from advanced workflow to basic workflow* on page 718

PREREQUISITES

- You have permission to edit the folder or content item being switched.
- All approvers for the advanced workflow are assigned to the folder's or content item's Permissions screen.

1. If a folder or content item inherits workflow, break inheritance. See also: *Key workflow concepts* on page 689
2. Within the Workarea, go to the folder or content item.
3. Choose **View > Language** and select the content's language.
4. Click **View > Properties**.
5. Click **Manage Approvals** ( ).

6. Remove all approvers by clicking the Remove button ( ) then selecting each approver one at a time.
7. When the Manage Approvals screen reappears, click **Use advanced workflow**.

> **NOTE:** If no users are assigned to basic workflow, and you do not see an **advanced workflow** option, it is likely that your Ektron administrator has not enabled advanced workflow. See *Enabling and disabling advanced workflow* on page 706.

8. Follow *Setting up advanced workflow for a folder* on page 709.

Approving content with an advanced workflow

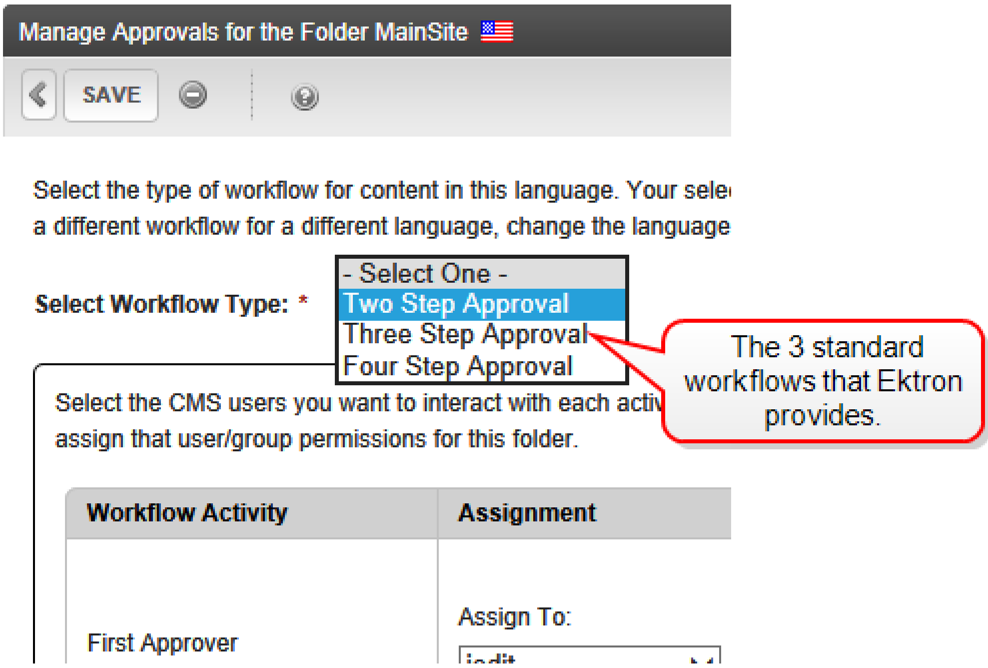
Advanced workflow provides an alternative way to manage the publication of content. Like basic workflow, the advanced version supports a sequence of users or groups who approve content before it is published. Also, content and folders inherit workflow from their parent folders unless you break inheritance. Advanced workflow differs significantly from basic workflow in the following ways.

- Because Advanced workflow leverages the Windows Workflow Foundation, it can support complex workflows with any number of activities and users.
  - State MachineWorkflow type is supported.
  - Typically requires a developer, who can create new workflows to meet your needs.
- The same user or group can appear in several steps.
- To any approval step, you can assign an escalation period and user or group.
- Deletion is not subject to workflow approval.
- You cannot use advanced workflow on calendar events.

> **NOTE:** You cannot apply an advanced workflow to assets imported via the **Multiple DMS Documents** option. See also: *Adding multiple DMS documents* on page 656

Standard vs. custom workflow

When you install Ektron, 3 standard workflows are provided. They appear when you are assigning a workflow on the Manage Approvals screen.



You can use a standard workflow to implement an approval process that consists of 2, 3 or 4 users or groups. To assign a workflow with more than 4 approvers, or to add custom code to any approval activity, have a developer create a custom advanced workflow. See also: *Creating a custom advanced workflow* on page 724

How escalation affects the approval process

After choosing a workflow, you select a user or group for each approval step. For each step, you can also assign an escalation time period and user or group. If they are assigned, and the original user or group member does not approve or decline within that period, the approval request is transferred to the escalation user or group. If this happens, the escalation user or group is notified that they are responsible for approving the content, and the original user can no longer act on the approval request.

Notification to escalation approver

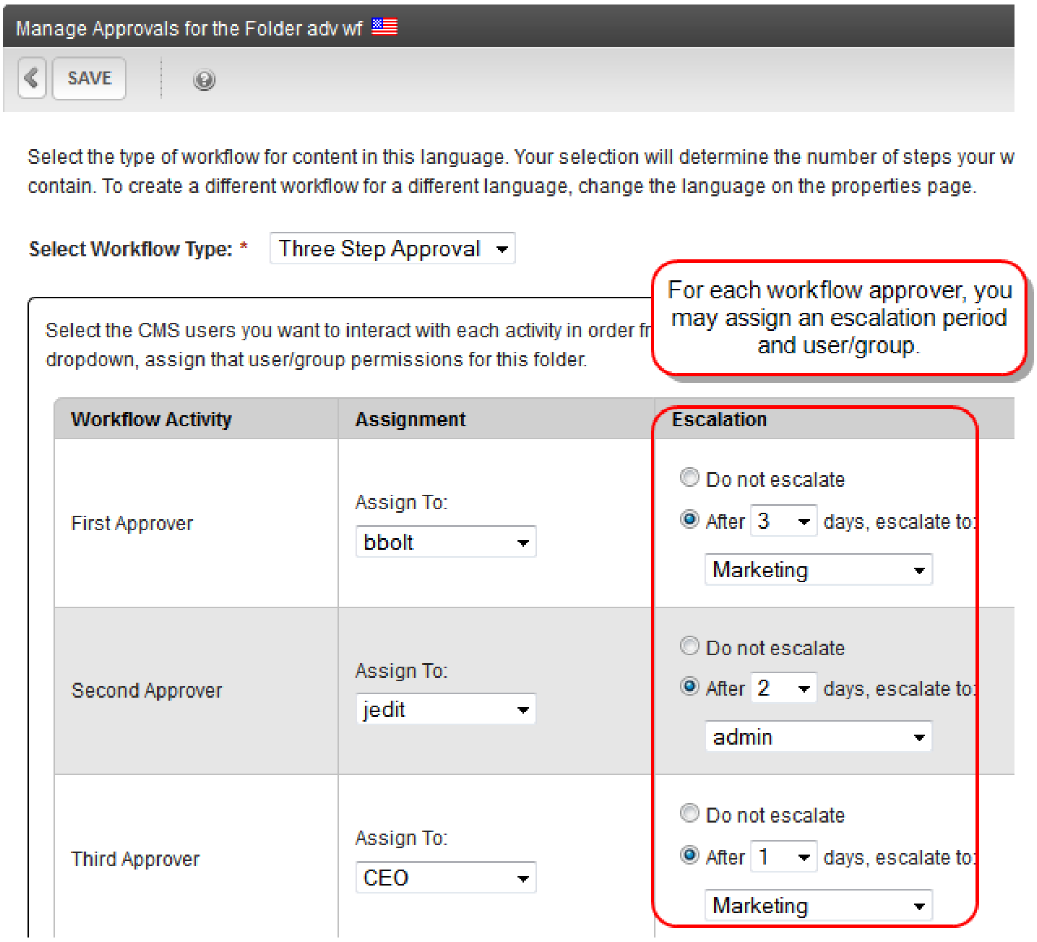
Content Escalated For Your Approval

```
The following content has been escalated for your approval: Blog Post at: Blog Check/
originally submitted to:adam by James Smith on 12/24/2013 2:15:55 PM
To approve or decline this content,log in to your Ektron workarea, select the content
and click on the Approve or Decline icon or link.
```

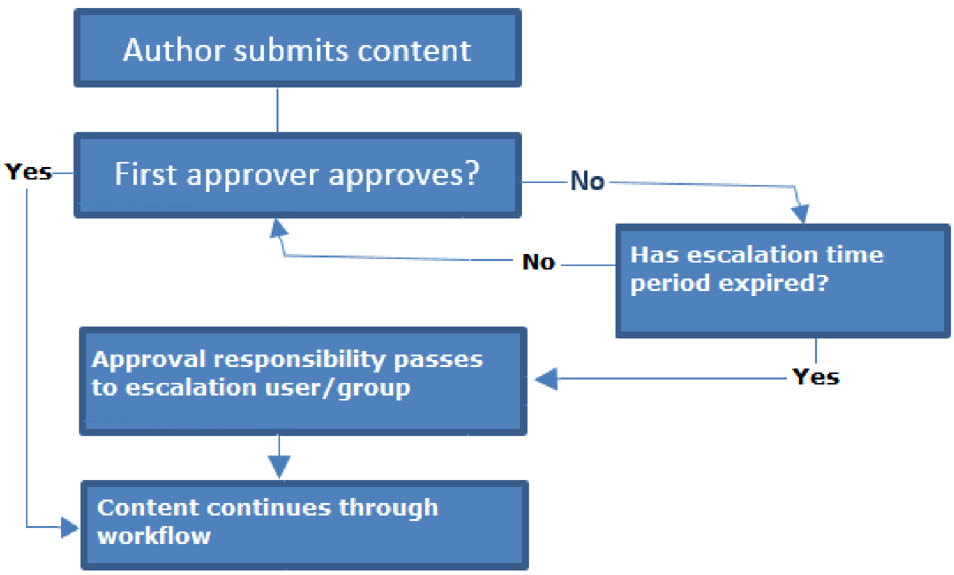
Notification to original approver

Approval Has Been Escalated

```
The following content was not approved within x days, so the approval has been
escalated:
HTML 1 at: Content Level Test/escalated for approval to: Application Administrator on
12/24/2013 2:16:15 PM
You are no longer required to approve or decline this content.
```



How escalation time period and user impact Advanced Workflow



Enabling and disabling advanced workflow

PREREQUISITE

You have permission to edit files in the Ektron site root folder.

1. Open the Ektron *siteroot*\`web.config` file.
2. Find the `ek_AdvancedWorkflowEnabled` element.
3. To enable advanced workflow, set its value to `true`.
   To disable advanced workflow, set its value to `false`.
4. Save.

Notifying users of advanced workflow activities

Ektron's advanced workflow feature automatically sends email to affected users when certain events occur.

You identify the email "from" address in your *`siteroot`*`\web.config` file's `ek_AdvancedWorkflowEscalationEmail` property.

PREREQUISITE

Email notification is enabled. See *Enabling email notification* on page 98.

- When content is submitted, the first approver or members of the first approver user group get an email notification.
  Notification text

  Request for content approval

  The content HTML 1 has been submitted for your approval by James Smith.

  To locate the content, the folder path in your workarea is: \Content Level Test.

  The following link will take you to the submitted content block on the Web site: http://*servername*/OnTrek/Default.aspx?id=910&LangType=1033

  Please Note: You must login and select the preview icon to view the changes.

  The content was submitted for approval on: 23-Dec-2013 14:02:50 PM.

  Approvals: **[**adam**]**-JohnB

  NOTE: The current approver is surrounded by square brackets **[ ]**.

  Comment:

- When content is approved, the next approver or members of the next approver user group get an email notification.
  Notification text

  Request for content approval

  The content HTML 1 has been submitted for your approval by James Smith.

  To locate the content, the folder path in your workarea is: \Content Level Test.

  The following link will take you to the submitted content block on the Web site: http://*servername*/OnTrek/Default.aspx?id=910&LangType=1033

  Please Note: You must login and select the preview icon to view the changes.

The content was submitted for approval on: 23-Dec-2013 14:02:50 PM.

Approvals: [adam]-JohnB

Comment:

- When content is published, the content author gets an email notification.
  Notification text

  Content changes have been made

  The changes to the content Break-room Survey have been approved. The content changes went live immediately.

- If content is declined, the previous approver gets an email notification, unless the approver is the first one. In that case, the content author gets an email notification.
  Notification text

  Content approval request declined

  Your submitted approval request for the content Break-room Survey has been declined by user a. Reason: .

- If an escalation period is set for a workflow step, and the first approver does not approve within that period, the approval request transfers to the escalation user or group. Both the escalation user or group and the original approver get an email notification.
  Notification to original approver

  Approval Has Been Escalated

  The following content was not approved within `x` days, so the approval has been escalated:

  HTML 1 at: Content Level Test/

  escalated for approval to: Application Administrator on 12/24/2013 2:16:15 PM

  You are no longer required to approve or decline this content.

  Notification to escalation approver

  Content Escalated For Your Approval

  The following content has been escalated for your approval:

  Blog Post at: Blog Check/

  originally submitted to: adam

  by James Smith on 12/24/2013 2:15:55 PM

  To approve or decline this content, log in to your Ektron workarea, select the content and click on the Approve or Decline icon or link.

Customizing email notification text

1. On the Ektron server, open the folder `C:\Program Files (x86)\Microsoft SDKs\Windows\v7.0A\Bin\NETFX 4.0 Tools.`

NOTE: In some Windows versions, the folder is `C:\Program Files (x86)\Microsoft SDKs\Windows\v8.0A\Bin\NETFX 4.0 Tools`.

2. Copy the `resgen.exe` file.
3. Paste the file in your `siteroot\Workarea\resources` folder.
4. Open a command window.
5. Insert this command:
   `cd C:\Inetpub\wwwroot\yoursiteroot\Workarea\resources` (replace `yoursiteroot` with your site root folder)
6. In the command window, insert `resgen EKResource.en-US.resources anyfilename.txt` (You can assign any name to the .txt file.)

   A .txt file of resource strings is created in the `resources` folder.

7. Update notification text as desired.

   IMPORTANT: Each message has a name followed by an equal sign (=). Do not change text to the left of the equal sign.

   The standard message text is shown in *Notifying users of advanced workflow activities* on page 707.

   To understand the variables within the text, see *Customizing Ektron email with tokens* on page 102.

8. In the command window, insert `resgen anyfilename.txt EKResource.en-US.resources`. This action saves your changes to the resources file.

Setting up advanced workflow for a folder

Assigning an advanced workflow to a folder consists of 3 steps.

- Select a workflow. (Your developer creates workflows. See also: *Creating a custom advanced workflow* on page 724.)
- Choose users or groups who approve content submissions.
- For each approver or group, you can assign an escalation time period and user or group.

PREREQUISITES

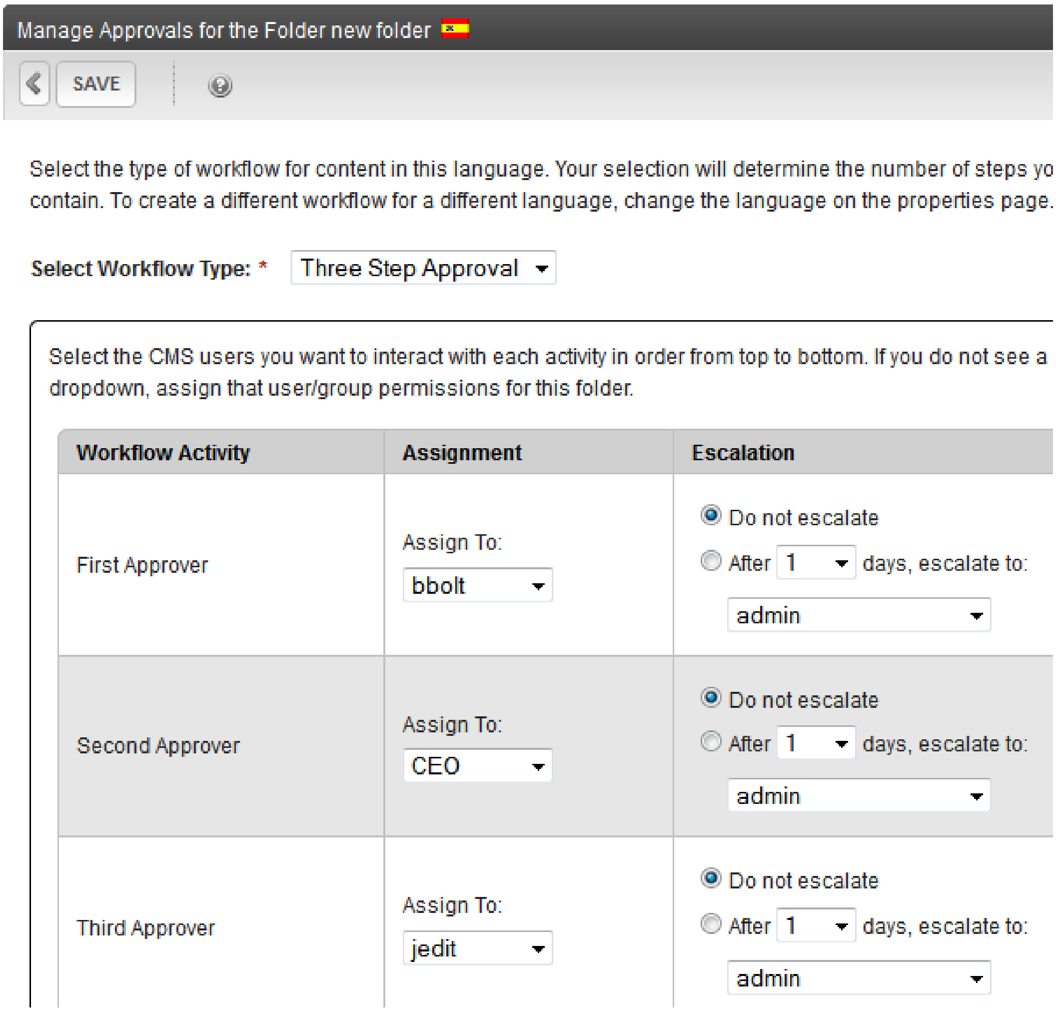
- Only administrator group members and users assigned to the Folder User Admin Role screen can assign an advanced workflow. See also: *Defining roles* on page 1464.
- Advanced workflow is enabled. See also: *Enabling and disabling advanced workflow* on page 706.

Assigning an advanced workflow to a folder

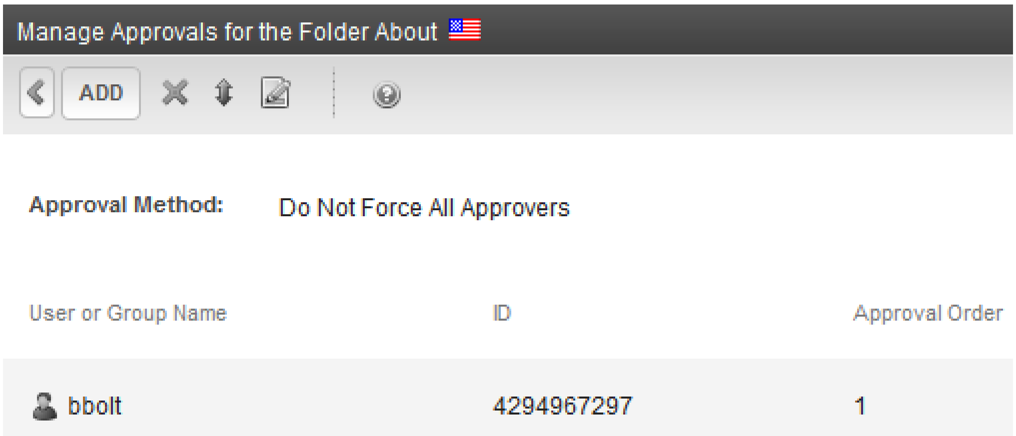
1. Go to **Workarea > Content**.
2. Select an existing folder or create a new folder.

NOTE: If you create a new folder, its workflow initially matches the parent folder's workflow.

3. Choose **View > Language** and select the language of the workflow you want to add.
4. Choose **View > Properties**.
5. Click **Manage Approvals** ( ). Several things can happen:
   - If no workflow is assigned to the folder, a screen prompts you to assign a basic or advanced workflow. Choose **Advanced**. The Manage Approvals screen appears. Continue to the next step.



   - If basic workflow is assigned to the folder (as shown in the following image), see *Switching from basic workflow to advanced workflow* on page 703. Then, continue to the next step.



- If any content in the folder is in Submitted status, a message appears: **The workflow for this folder cannot be changed because some content is currently in an approval process**
  If you still want to edit the workflow, your options are as follows:
  - cancel the approval process all content in Submitted status. See also: *Canceling an approval request in an advanced workflow* on page 721
  - force publish all content in Submitted status. See also: *Forcing the publication of content* on page 722.
  - get all approvers to approve Submitted content, so its status changes to Published.

  Then, continue to the next step.
- If a folder inherits workflow from its parent folder, you are informed of that. To break inheritance, go to the folder's Permissions screen and uncheck **Allow this object to inherit permissions**. Then, continue to the next step.

6. From the **Select Workflow Type** drop-down, select a workflow to assign to this folder. See also: *Standard vs. custom workflow* on page 704
7. Assign a user or group to each approver. If you assign a group, any group member can approve or decline the content.

   Prerequisite

   Only users or groups who have read-only or greater permissions for the folder are available.

   Best Practice

   Assign user groups (not individual users) to a workflow. In this way, if someone is out of the office, any other group member can approve content.
8. For each approver, you can assign an escalation time period and user or group in the **Escalation** column. For example, after 3 days, if an approver has not acted on the approval request, it is assigned to the administrators group. See also: *How escalation affects the approval process* on page 705
9. Click **Save**.

Viewing an advanced workflow for a folder

To view a folder's workflow, click **View > Properties > Manage Approvals** ( ). If any content in the folder is in Submitted status, the following message appears instead of its workflow: **The workflow for this folder cannot be changed because some content is currently in an approval process**.

You can only view a folder's workflow if none of its content is in Submitted status. Typically, this occurs when the content is approved, although content also can be canceled or declined, which change the content's status to Checked In.

Editing an advanced workflow for a folder

You can change the following advanced workflow information for a folder:

- workflow
- list of approvers
- for each approver
  - escalation user or group
  - escalation time period

PREREQUISITES

- Only administrator group members and users assigned to the Folder User Admin Role screen can edit an advanced workflow See also: *Defining roles* on page 1464
- No content in the folder is in Submitted status. If it is, and you want to edit the workflow, your options are as follows:
  - cancel the approval process for each content item in Submitted status. See also: *Canceling an approval request in an advanced workflow* on page 721
  - force publish each content item in Submitted status. See also: *Forcing the publication of content* on page 722
  - get all approvers to approve Submitted content, so its status changes to Published.

To edit a folder's advanced workflow:

1. Go to the folder whose workflow you want to edit.
2. Choose **View > Language** and select the language of the workflow you want to edit.
3. Choose **View > Properties**.
4. Click **Manage Approvals** ( ).
5. From the **Select Workflow Type** drop-down, you can change the workflow type. See also: *Standard vs. custom workflow* on page 704
6. If desired, edit the user or group for each approver. If you assign a group, any member of the group can approve or decline the content.

   PREREQUISITE

Only users or groups who have read-only or greater permissions for the folder are available.

Best Practice

Assign user groups (not individual users) to a workflow. In this way, if someone is out of the office, any other group member can approve content.

7. For each approver, you can assign an escalation time period and user or group. See also: *How escalation affects the approval process* on page 705
8. Click **Save**.

Removing an advanced workflow from a folder

This section explains how to remove an advanced workflow from a folder, so that it has no workflow. If you want to switch an advanced workflow to basic workflow, see *Switching from advanced workflow to basic workflow* on page 718.

Because workflow is language-specific, the procedure explains how to delete a workflow for one language only. To remove workflow for multiple languages, repeat this procedure for each one.

Prerequisites

- Only administrator group members and users assigned to the Folder User Admin Role screen can remove an advanced workflow. See also: *Defining roles* on page 1464
- The folder does not inherit its workflow. If it does, you must break inheritance by viewing the folder's Permissions screen and unchecking the **Allow this object to inherit permissions** check box. See also: *Key workflow concepts* on page 689
- No content in the folder is in Submitted status. If it is, and you want to remove a workflow, your options are as follows:
  - cancel the approval process for each content item in Submitted status. See also: *Canceling an approval request in an advanced workflow* on page 721
  - force publish each content item in Submitted status. See also: *Forcing the publication of content* on page 722
  - get all approvers to approve Submitted content, so its status changes to Published.

To remove an advanced workflow from a folder:

1. Go to the folder whose workflow you want to remove.
2. Choose **View > Language** and select the language of the workflow.
3. Choose **View > Properties**.
4. Click **Manage Approvals** ( ).
5. Click **Remove Workflow** ( ).

Setting up an advanced workflow for content

Assigning an advanced workflow to content consists of several steps.

- Select a workflow type. (Your developer creates workflow types. See also: *Creating a custom advanced workflow* on page 724)
- Choose users or groups who approve submissions.
- Optionally assign an escalation time period and user or group. See also: *How escalation affects the approval process* on page 705

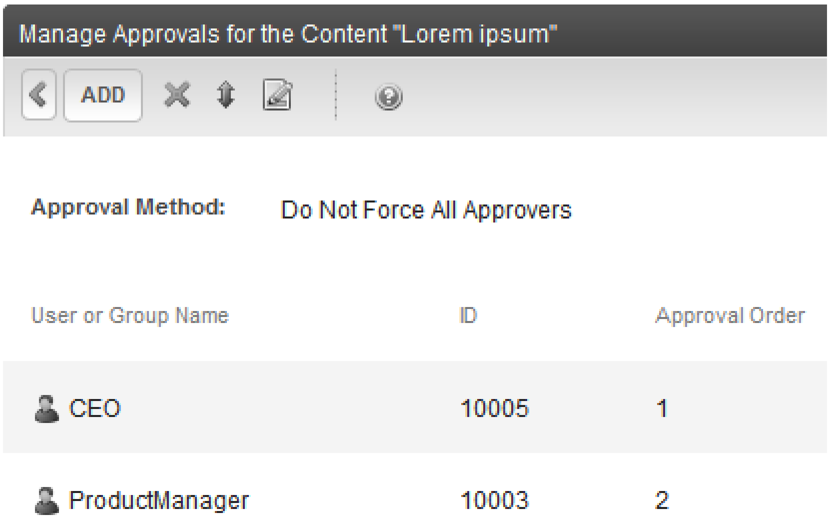
PREREQUISITES

- Only administrators group members and users assigned to the Folder User Admin Role screen can assign an advanced workflow. See also: *Defining roles* on page 1464
- Advanced workflow is enabled. See *Enabling and disabling advanced workflow* on page 706

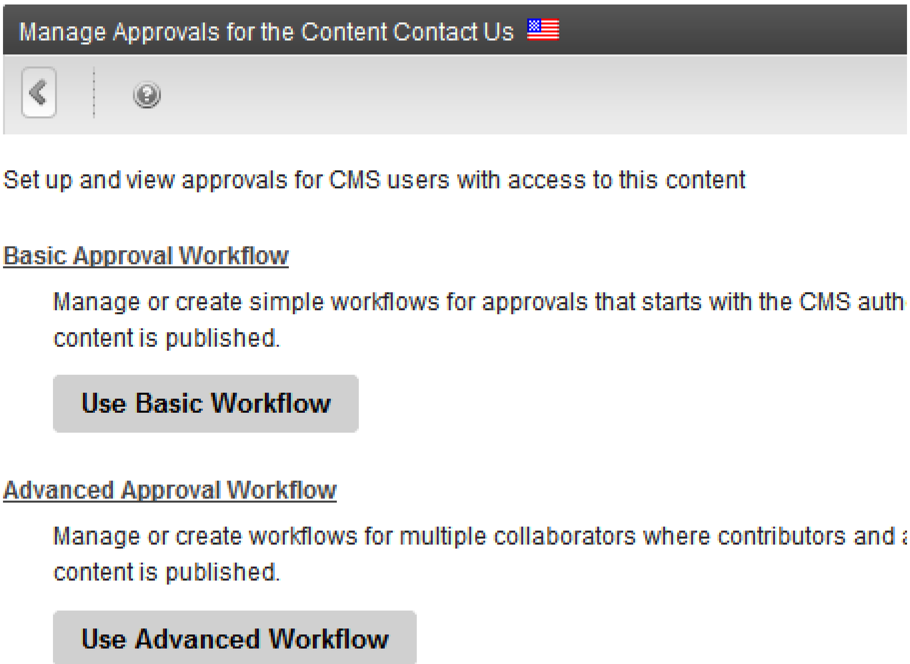
Creating an advanced workflow for content

1. Go to the folder that contains the content to which you want to assign an advanced workflow.
2. Choose **View > Language** and select the content's language.
3. Select the content item and choose **View > Properties**.
4. Click **Manage Approvals** ( ). Several things can happen:
   - If the content inherits workflow from its parent folder, you are informed of that. To break inheritance, view the content's Permissions screen and uncheck the **Allow this object to inherit permissions** check box. Then, continue to the next step.
   - If the content is in Submitted status, you see **The workflow for this content cannot be changed because some content is currently in an approval process**
     If you still want to assign a workflow, your options are as follows:
     - cancel the approval process for the content. See also: *Canceling an approval request in an advanced workflow* on page 721
     - force publish the content. See also: *Forcing the publication of content* on page 722
     - get all approvers to approve the content, so its status changes to Published.

     Then, continue to the next step.
   - If a basic workflow is assigned to the content, see *Switching from basic workflow to advanced workflow* on page 703. Then, continue to the next step.



- If no workflow is assigned to the content, a screen prompts you to assign **Basic** or **Advanced** workflow.



Choose **Advanced**. The Manage Approvals screen appears.

5. From the **Select Workflow Type** drop-down, select a workflow to assign to this content. See also: *Standard vs. custom workflow* on page 704
6. Assign a user or group to each approver. If you assign a group, any group member can approve or decline the content.

BEST PRACTICE

Assign user groups (not individual users) to a workflow. In this way, if someone is out of the office, any other group member can approve content.

PREREQUISITE

Only users or groups who have read-only or greater permissions for the folder are available.

7. For each approver, you can assign an escalation time period and user or group in the **Escalation** column. See also: *How escalation affects the approval process* on page 705
8. Click **Save**.

Viewing an advanced workflow for content

To view a content item's workflow, click **View > Properties > Manage Approvals** ( ). If any content in the folder is in Submitted status, the following message appears instead of its workflow: **The workflow for this folder cannot be changed because some content is currently in an approval process**.

You can only view a folder's workflow if none of its content is in Submitted status. Typically, this occurs when the content is approved, although content also can be canceled or declined, which change the content's status to Checked In.

If a content item inherits workflow from its folder, this message appears: **Approval workflow for this content is currently inherited. You can break this inheritance in the "View Permissions" screen for** *content title*. To view the workflow assigned to the content's folder, choose the folder's **View > Properties** menu option, then click **Manage Approvals** ( ).

Editing an advanced workflow for content

You can change the following advanced workflow information for a content item:

- workflow
- list of approvers
- for each approver
  - escalation user or group
  - escalation time period

PREREQUISITES

- Only administrator group members and users assigned to the Folder User Admin Role screen can edit an advanced workflow. See also: *Defining roles* on page 1464
- The content does not inherit its workflow. If it does, you must break inheritance by viewing its Permissions screen and unchecking **Allow this object to inherit permissions**.
- The content is not in Submitted status. If it is, and you want to edit the workflow, your options are as follows:
  - cancel the approval process. See also: *Canceling an approval request in an advanced workflow* on page 721

- force publish the content item. See also: *Forcing the publication of content* on page 722
- get all approvers to approve the Submitted content, so its status changes to Published.

To edit a content item's advanced workflow:

1. Go to the folder that contains the content whose workflow you want to edit.
2. Choose **View > Language** and select the workflow's language.
3. Click the content to access its View Content screen.
4. Click **Manage Approvals** ( ).
5. From the **Select Workflow Type** drop-down, select a workflow to assign to this content. See also: *Standard vs. custom workflow* on page 704
6. You can edit the user or group for each approver. If you assign a group, any member of the group can approve or decline the content.

   BEST PRACTICE

   Assign user groups (not individual users) to a workflow. In this way, if someone is out of the office, any other group member can approve content.

   PREREQUISITE

   You can only choose users or groups who have read-only or greater permissions for the folder.

7. For each approver, you can enter or modify an escalation time period and user or group in the **Escalation** column. See also: *How escalation affects the approval process* on page 705
8. Click **Save**.

Removing an advanced workflow from content

You can remove an advanced workflow from a content item, so that it has no workflow. If you want to switch an advanced workflow to basic workflow, see *Switching from advanced workflow to basic workflow* on the next page.

Because workflow is language-specific, the procedure explains how to delete content workflow for only 1 language. To remove workflow for multiple languages, repeat this procedure for each one.

PREREQUISITES

- Only administrator group members and users assigned to the Folder User Admin Role screen can remove an advanced workflow. See also: *Defining roles* on page 1464
- The content does not inherit its workflow. If it does, you must break inheritance by viewing its Permissions screen and unchecking **Allow this object to inherit permissions**. See also: *Key workflow concepts* on page 689

- The content is not in Submitted status. If it is, and you want to remove a workflow, your options are as follows:
  - cancel the approval process. See also: *Canceling an approval request in an advanced workflow* on page 721
  - force publish the content. See also: *Forcing the publication of content* on page 722
  - get all approvers to approve the content, so its status changes to Published.

To remove an advanced workflow from a content item:

1. Go to the folder that contains the content whose workflow you want to remove.
2. Choose **View > Language** and select the language of the workflow.
3. Choose **View > Properties**.
4. Click the content to access its View Content screen.
5. Click **Manage Approvals** ( ).
6. Click **Remove Workflow** ().

Switching from advanced workflow to basic workflow

See also: *Switching from basic workflow to advanced workflow* on page 703

PREREQUISITES

- No content in the folder is in an approval process. If it is, and you want to switch a workflow, your options are as follows:
  - cancel the approval process for each content item in Submitted status. See also: *Canceling an approval request in an advanced workflow* on page 721
  - force publish each content item in Submitted status. See also: *Forcing the publication of content* on page 722
  - get all approvers to approve Submitted content, so its status changes to Published.
- You have permission to edit the folder or content item being switched.
- All approvers for the basic workflow have at least read-only permission for the folder or content.

1. If the folder or content item whose workflow you want to switch inherits workflow, break inheritance. *Breaking inheritance* on page 162
2. Within the Workarea, go to the folder or content item.
3. Click **View > Properties**.
4. Click **Manage Approvals** ( ).
5. Click **Remove Workflow** ( ).
6. When the Manage Approvals screen reappears, click **Use basic workflow**.
7. Follow *Creating a basic workflow for a folder* on page 692.

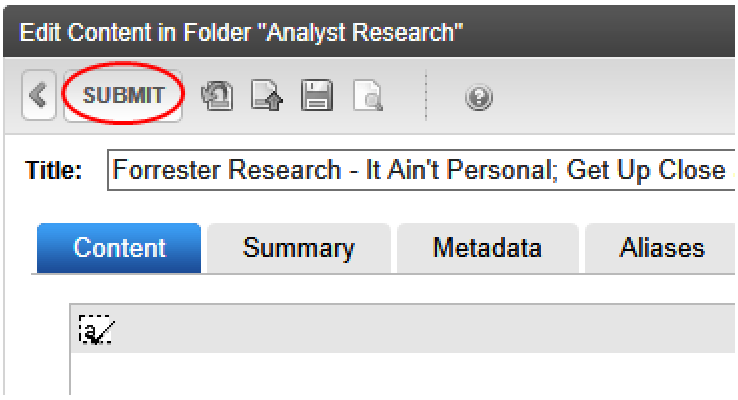
Managing content in an advanced workflow

After you set up an advanced workflow, read the following sections to learn how to manage content through the approval process.

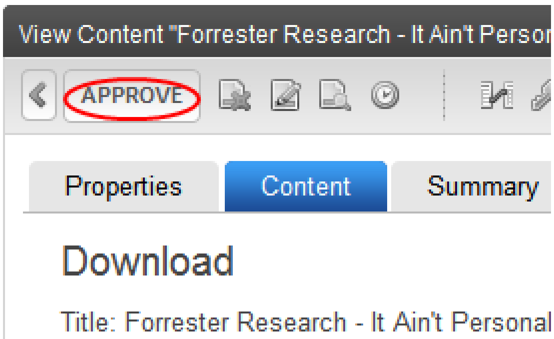
Submitting content into an advanced workflow

To submit content into the workflow process, a content author uses the **Submit** button (on the editor toolbar) or menu option; the content status changes to Submitted.

NOTE: If no workflow is assigned to a folder or content, a **Publish** button appears instead of the **Submit** button.



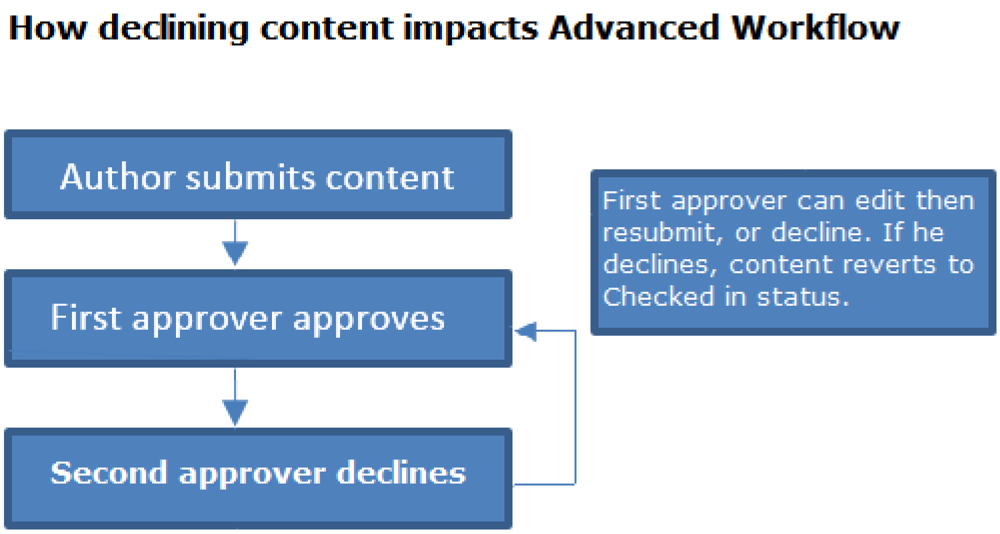
When content is submitted, the workflow's next approver or group is notified by email that content awaits their approval. That user can go to the content, then review and approve it using the **Approve** context menu option or toolbar button on the View Content screen.



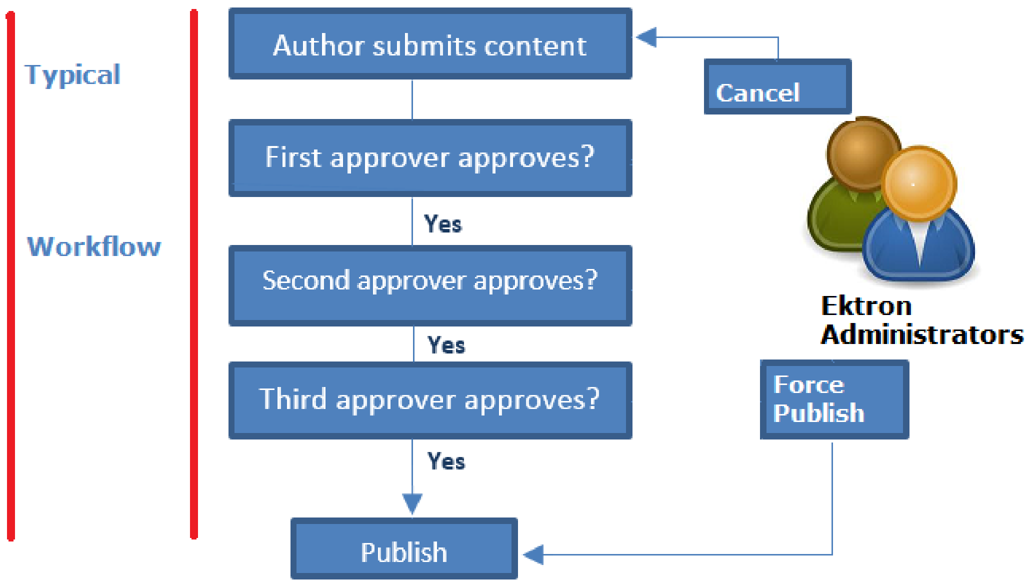
Alternatively, the approver can use the *Approval report* on page 975 or *Submitted content report* on page 977 to find, review and approve content. Upon approving the content, the approver is prompted to enter an optional comment. If one is entered, it is included in the notification email.

- If an escalation time period is assigned to an approver or group, and an approver does not act on the content within that time period, approval responsibility transfers to the escalation user or group. See also: *How escalation affects the approval process* on page 705

- If not satisfied with the content, any approver can decline it. If declined, approval responsibility reverts to the previous approver, who can edit then resubmit the content or decline it. See also: *Declining content in an advanced workflow* on page 723



- An administrator can bypass the approval process at any time, either by force publishing or canceling.

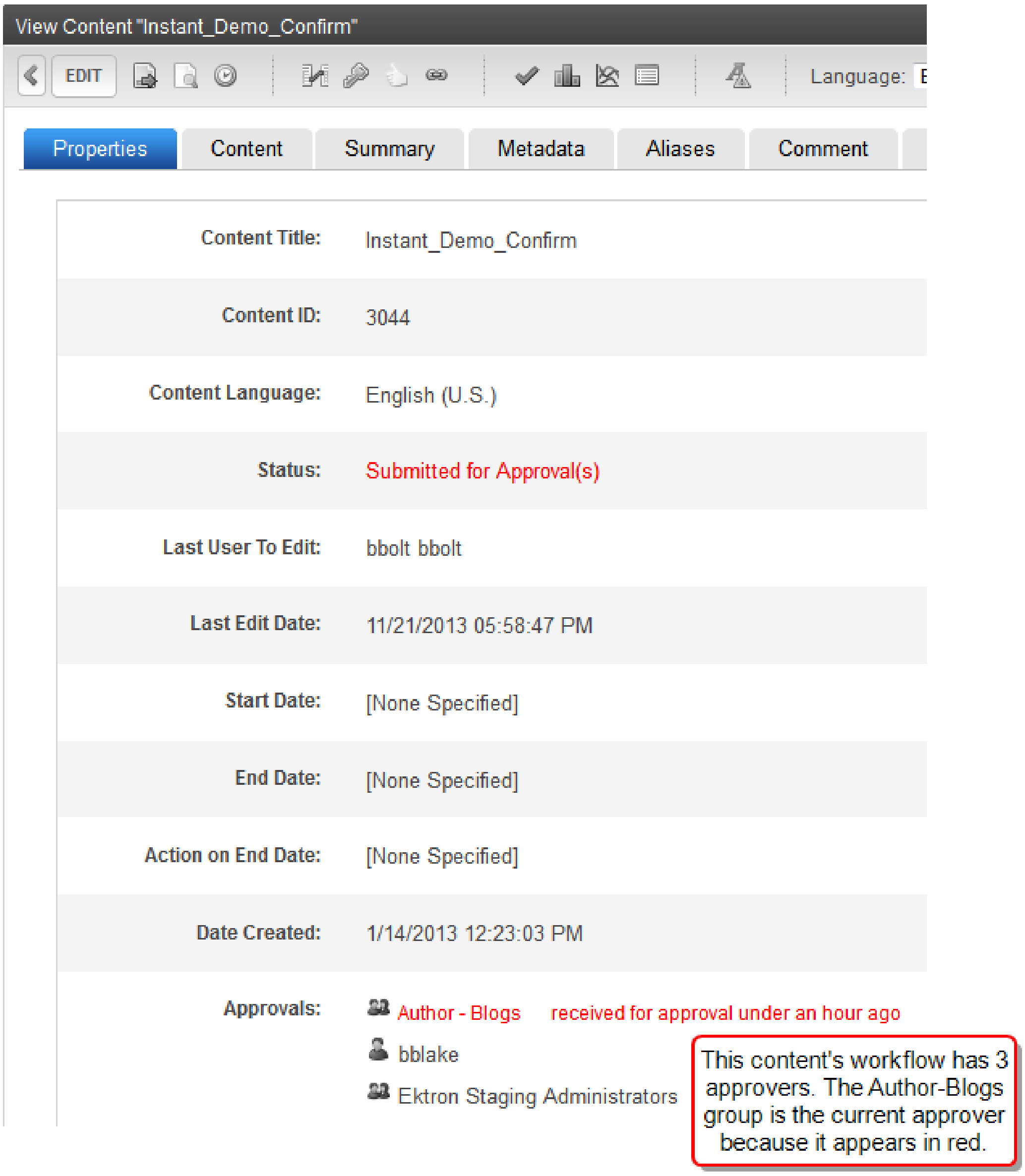


See also: *Canceling an approval request in an advanced workflow* on the facing page, *Forcing the publication of content* on page 722

Monitoring content in an advanced workflow

To see any content item's workflow and current approver, view its properties screen. Red text indicates the current approver. Next to that approver is an indication of how long ago the approval request was assigned.

NOTE: If a content item's approval request is escalated, the escalation user or group does not appear on the View Content screen. See also: *How escalation affects the approval process* on page 705



To see *all* content

- awaiting your approval; use the *Approval report* on page 975.
- in Submitted status; use the *Submitted content report* on page 977.
- via desktop widgets; *Managing content from the Smart Desktop* on page 612
  - Content Awaiting Approval (a shortcut to the *Approval report* on page 975).
  - Content In Workflow. All content in Submitted status (a shortcut to the *Submitted content report* on page 977).

Canceling an approval request in an advanced workflow

You can cancel an approval request for any Submitted content item. It does not matter if anyone has approved the content yet.

For example, you want to change one of the users assigned to a workflow, and can only do this if no content is in Submitted status. Upon cancellation, the content's status reverts to Checked In.

PREREQUISITES

- Content status is Checked in (I), Submitted (S) or Checked out (O)
- You are a member of the administrators group, or assigned to both of these roles. See also: *Defining roles* on page 1464
  - folder user admin
  - content workflow admin

To cancel an approval request for a Submitted content item:

1. Go to the folder that contains the content whose approval request you want to cancel.
2. Choose **View > Language** and select the content's language.
3. Click the content to access its View Content screen.
4. Click **Manage Approvals** ( ).
5. Click **Cancel Workflow**. A confirmation appears.
6. Click **OK**. The content's status changes to Checked In.

Forcing the publication of content

You can force the publishing of a content item, bypassing its workflow. Upon publication, the content's status changes to Approved. For example, you want to change one of the users assigned to a workflow, and can only do this if no content is in Submitted status.

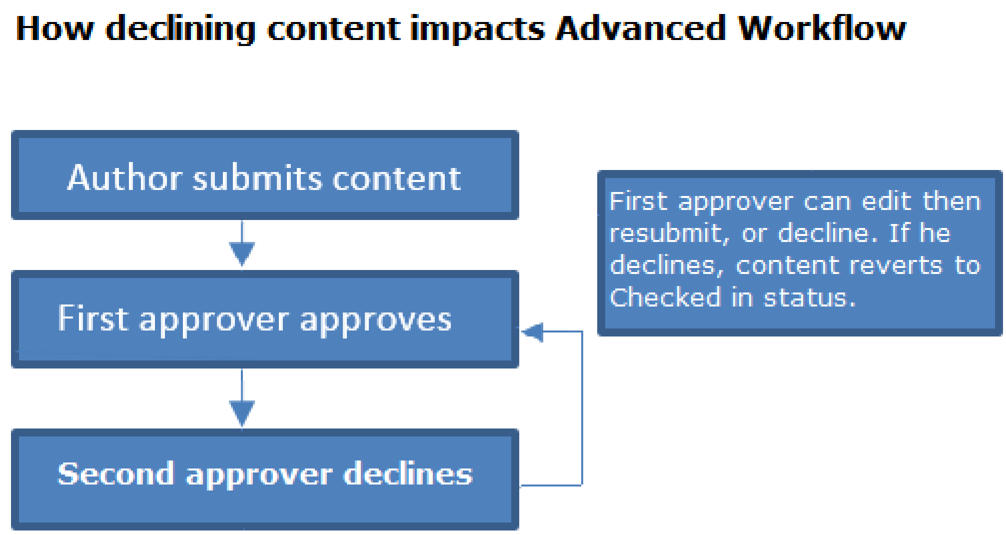
NOTE: On PageBuilder pages, **Force Publish** ( ) only appears after the content is submitted. The button does not appear on the initial PageBuilder dialog when creating a new page.

- Content status is Checked in (I), Submitted (S) or Checked out (O).
  - You can force publish content upon creating it.
- You are a member of the administrators group, or assigned to both of the following roles. See also: *Defining roles* on page 1464
  - content workflow admin
  - folder user admin

To force the publishing of a content item:

1. Go to the folder that contains the content that you want to force publish.
2. Choose **View > Language** and select the content's language.
3. Click the content to access its View Content screen.
4. Click **Force Publish** ( ). The content's status changes to Approved.

Declining content in an advanced workflow



Only the current approver (or user group member) can decline content. This would typically be done if the content was unsatisfactory. Upon declining, the user is prompted to enter a comment. The next action depends on that user's workflow position.

- If the user *is* the first approver, the content reverts to Checked In status, and is removed from the workflow process.
- If the user is *not* the first approver, approval responsibility reverts to the previous approver or group. Only that user or group member can work with the content. The previous approver can edit it then submit again, or decline it.

  The previous approver is notified by email that the content was declined. The notification includes the comment. *Notifying users of advanced workflow activities* on page 707

Deleting content in an advanced workflow

You can delete content only if the status is Checked In, Approved, or Pending Go Live Date. If the content status is Submitted and you need to delete it, your options are:

- Cancel the approval process. See also: *Canceling an approval request in an advanced workflow* on page 721
- Force publish. See also: *Forcing the publication of content* on the previous page
- Get all approvers to approve the content, so its status changes to Published.

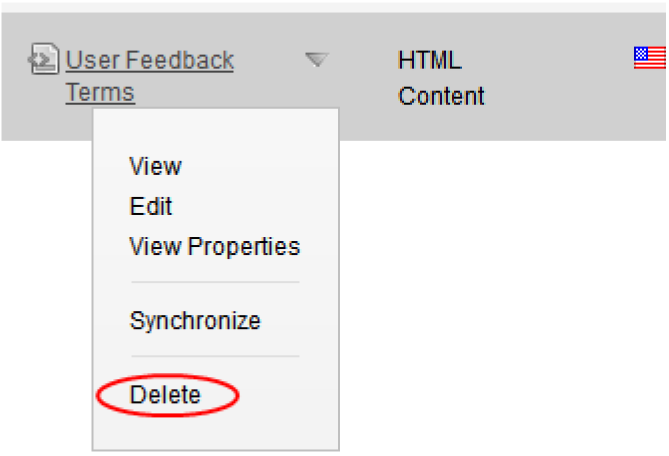
Content controlled by an advanced workflow is deleted immediately—no approval is required. In this way, the procedure is different from the deletion of content controlled by basic workflow, which requires approval.

For additional guidelines, see *Deleting content* on page 631.

PREREQUISITE

You are a member of the Administrators group, or are assigned to the Content Workflow Admin role and have delete permission for the content.

1. Go to the folder that contains the content that you want to delete.
2. Click the triangle to the right of the content to display its context menu.
3. Click **Delete**.



NOTE: If you do not see a Delete button or menu option, either you lack permission to delete, or the content status is not Checked In, Approved, or Pending Go Live Date.

Editing content in an advanced workflow

If you are the current approver and have edit permission for Submitted content, you can edit it. Otherwise, you can edit content with the status of Checked In, Approved, or Pending Go Live Date only.

If you want to edit Submitted content but are not the current approver, your options are as follows:

- Cancel the approval process. See also: *Canceling an approval request in an advanced workflow* on page 721
- Force publish. See also: *Forcing the publication of content* on page 722
- Get all approvers to approve the content, so its status changes to Published.

PREREQUISITE

You are a member of the Administrators group or have edit permission for the content.

1. Go to the folder that contains the content that you want to edit.
2. Click the triangle to the right of the content to display its context menu.
3. Click **Edit**.

Creating a custom advanced workflow

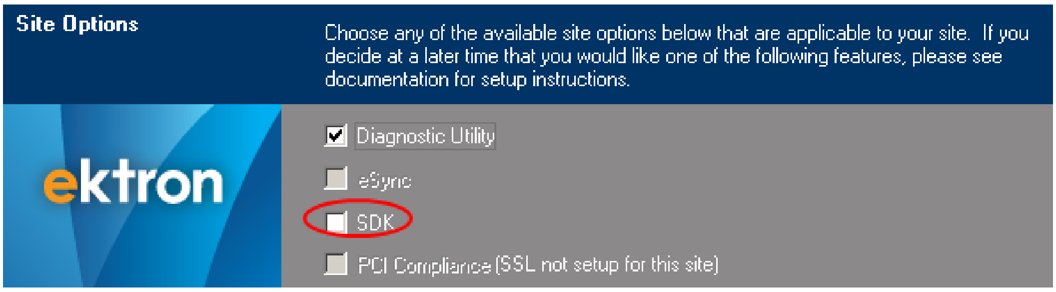
This section explains how a developer can customize an advanced workflow so that it meets the needs of your business processes. To customize, Ektron recommends saving the sample workflow installed with the product under a different name, then customizing the copied file using the following instructions.

PREREQUISITES

- Visual Studio 2012 (full version with developer tools, and so on)
- .NET 4.5
- Knowledge of Windows Workflow Foundation
- Permission to edit files on the Ektron server

Step 1: Install Ektron’s SDK

To install Ektron's Software Development Kit (SDK) during installation, choose **SDK** on the Site Options screen.



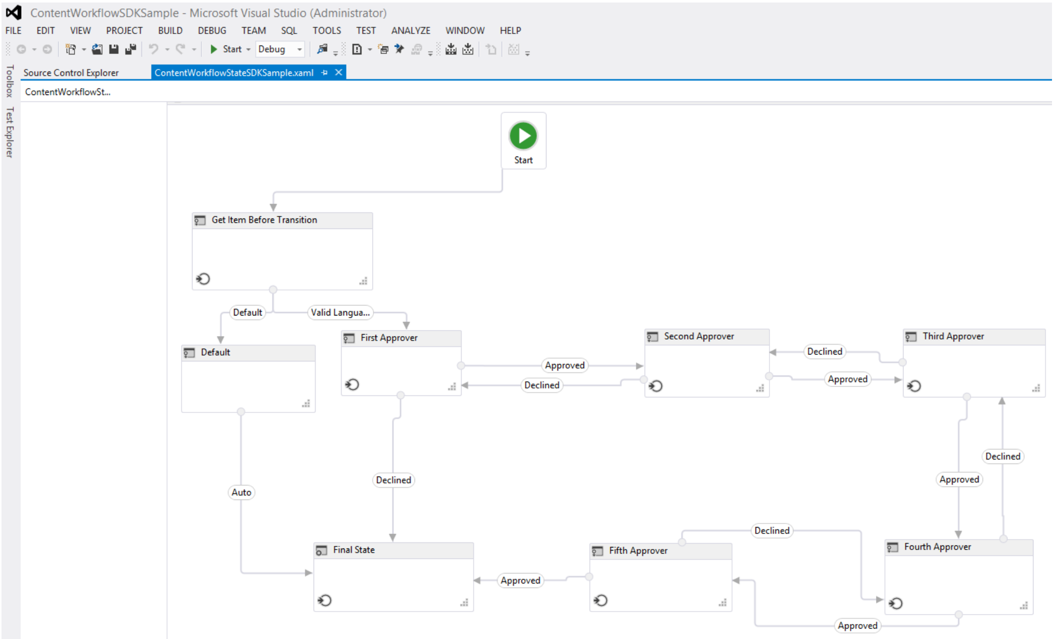
If **SDK** is not selected during installation, you can install the SDK in either of the following ways:

- Windows **Start** button > All Programs > Ektron > Cms400vx.x > Utilities > CMS400SDK install
- `C:\Program Files (x86)\Ektron\CMS400vx.x\Utilities\CMS400SDK_Setup.exe`

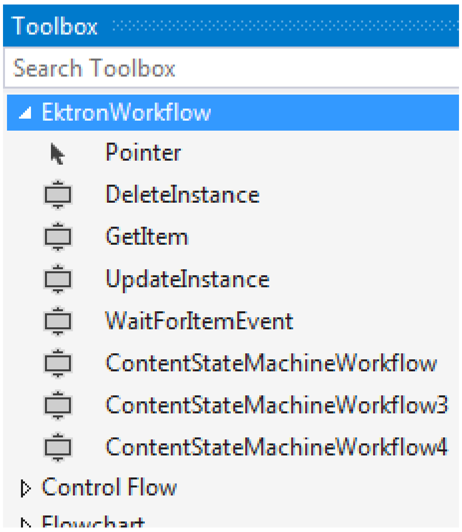
The SDK's workflow components are installed to `C:\Program Files (x86)\Ektron\CMS400SDK\Contentworkflow\code`.

Step 2: Open the sample workflow file

1. Launch Visual Studio 2012.
2. Open `C:\Program Files (x86)\Ektron\CMS400SDK\Contentworkflow\code\ContentWorkflowSDKSample.sln`.
3. In Solution Explorer, click `ContentWorkflowStateSDKSample.xaml`. The sample workflow file opens.



4. Add Ektron Workflow controls to the Visual Studio toolbox.
   a. Open the Visual Studio Toolbox.
   b. Add a tab and name it **Ektron Workflow**.
   c. Right click and select **Choose Items...**.
   d. Click **Browse**.
   e. Choose `C:\Program Files (x86)\Ektron\CMS400SDK\Contentworkflow\code\CMS\Ektron.Cms.ContentWorkflow.dll.`
   f. Click **OK**. The controls appear on the tab.

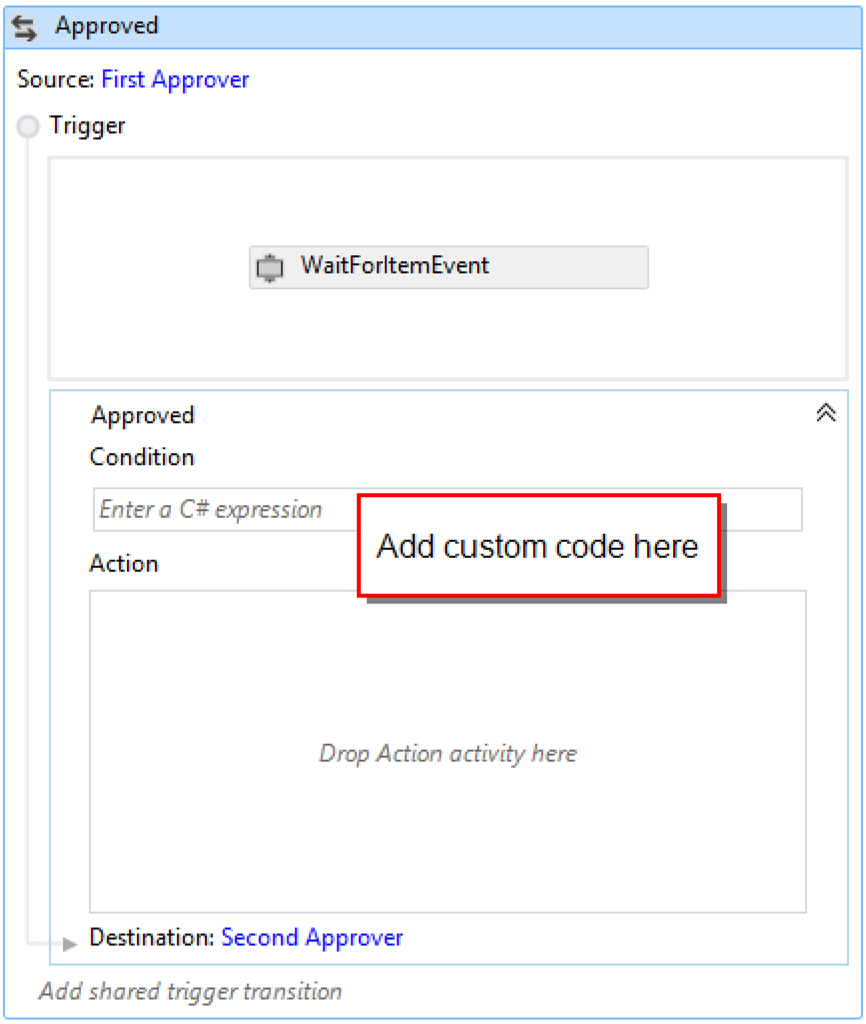


Step 3: Edit the sample workflow file

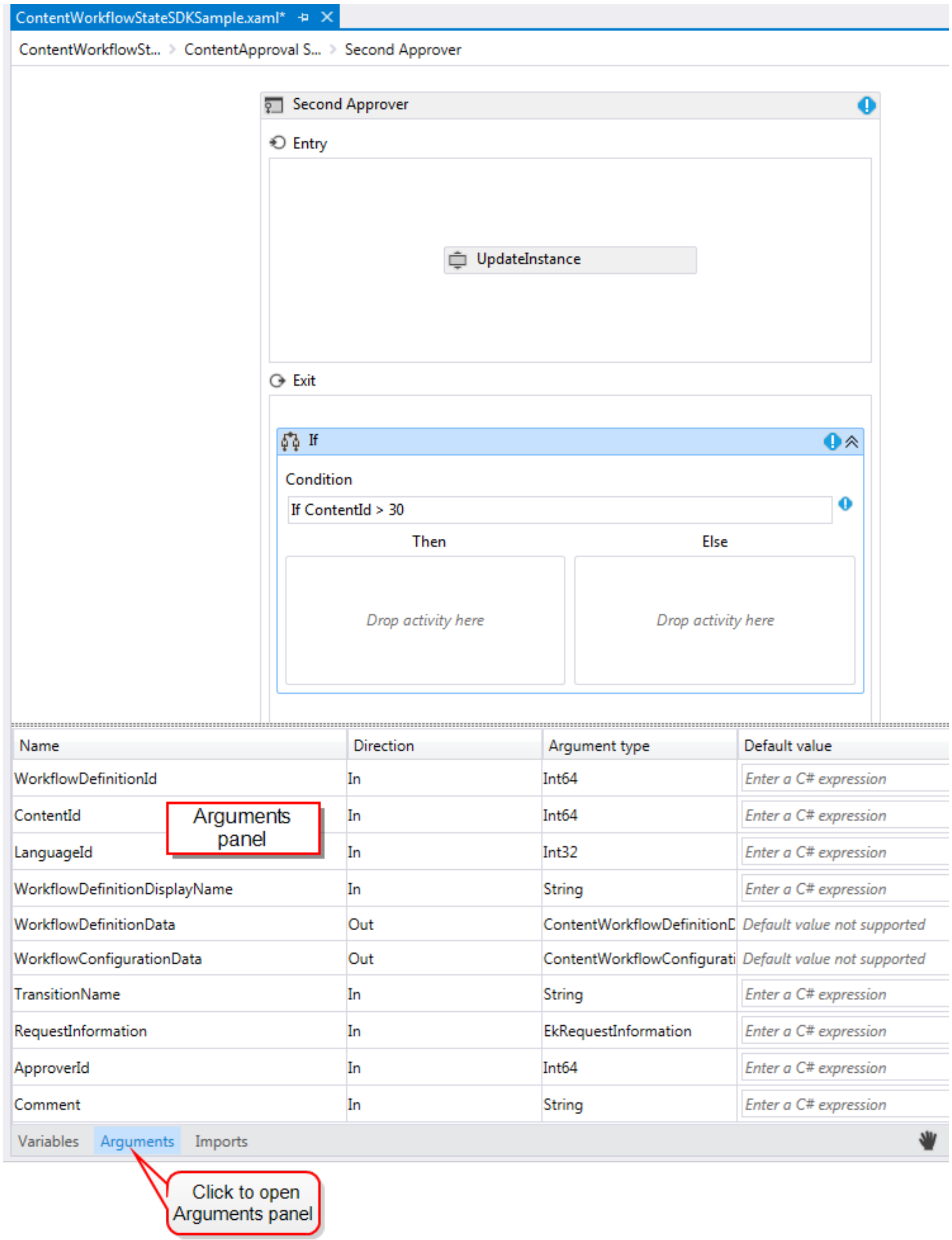
IMPORTANT: Save the sample workflow file under a different name, then customize the copy of the file.

Rules for working with the sample workflow file

- Only statemachine workflowis supported.
- Each workflow approver is represented by one workflow state.
- Transitions
  - Approver states have two transitions: Approved and Declined.
    - Upon approval, the transition destination is the next workflow activity. Upon approval by the last approver, the transition destination is Final State.
    - Upon decline, the transition destination is the previous workflow activity.
  - Final State has no transitions.
- Do not delete or edit the Get Item Before Transition state.
- Do not delete the Final State.
- You can add code to customize the behavior of any state or transition.

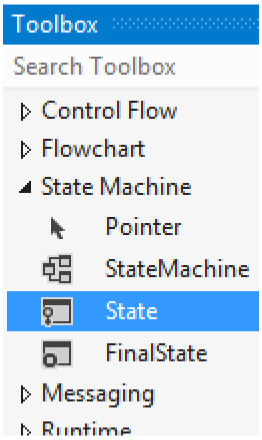


To see the arguments for use in custom code, open the **Arguments** panel.

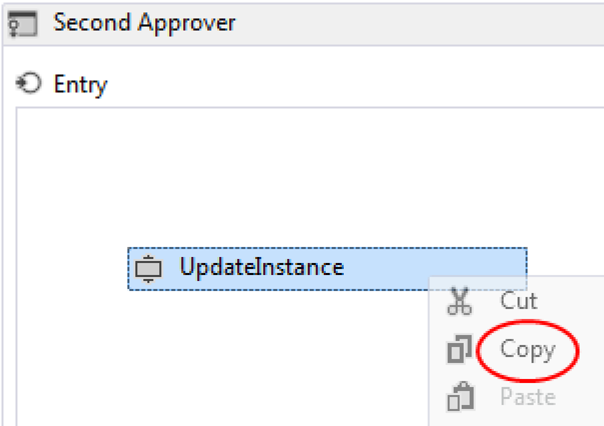


Step 3a: Adding an approver

1. From the Visual Studio toolbox, drag and drop a **State machine** > **State** control.

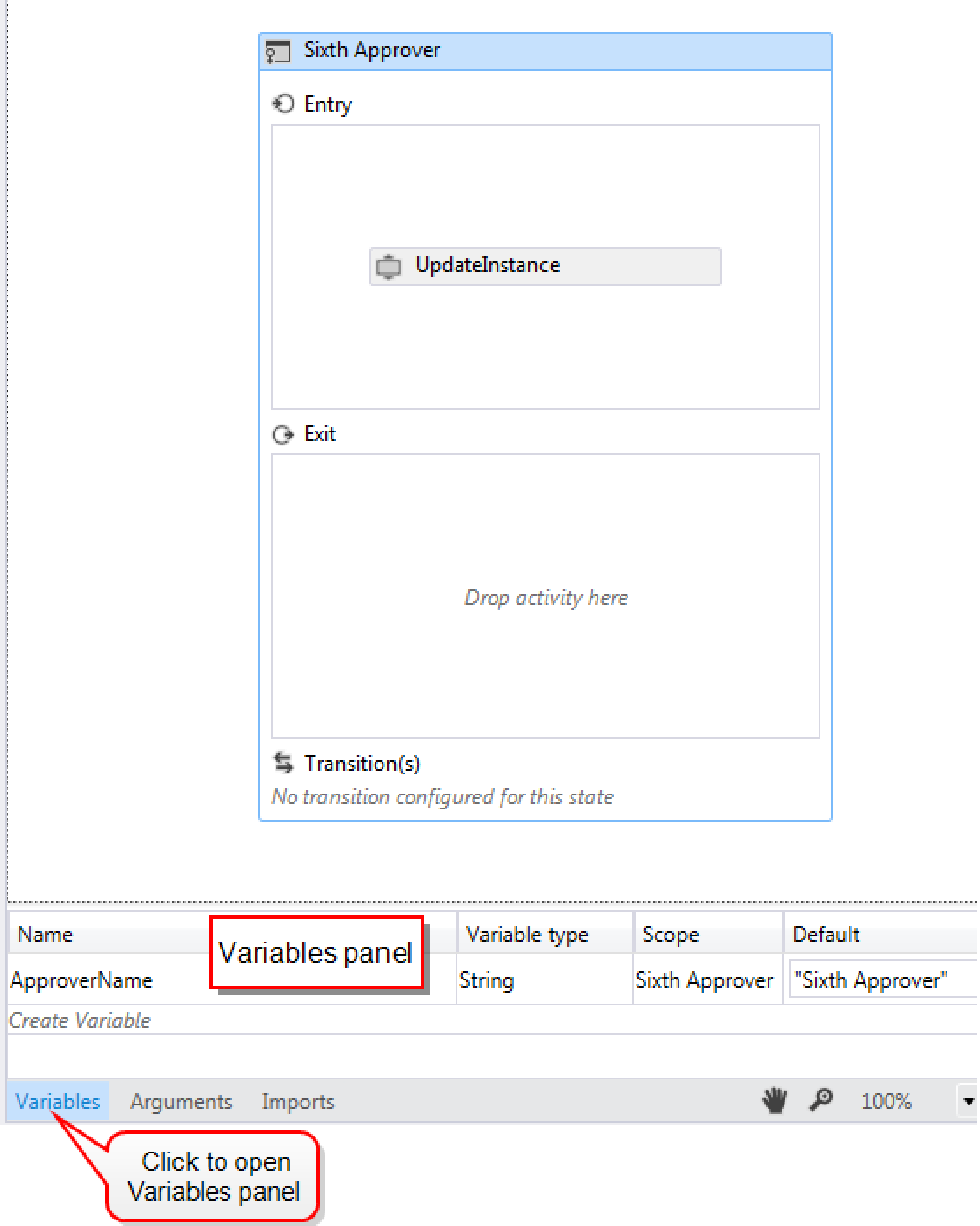


2. Drag the new state near other states with which it will connect.
3. Open an existing workflow activity, such as Second Approver.
4. Right click and copy its **UpdateInstance** activity.



5. Click to open the new state.
6. Within the **Entry** box, right-click **Drop activity here** and paste the **UpdateInstance** activity.
7. In the title bar, select the default text, **State1**, and replace it with the new state's name. For example, **Sixth Approver**.

8. At the bottom of the screen, click **Variables** to open that panel.



9. Enter these values into the Variables panel.
   - **Name**. ApproverName
   - **Variable type**. String
   - **Scope**. copied from the name you assigned in Step 7.
   - **Default**. Within quotes (""), enter the name you assigned in Step 7.
10. Create an Approved transition between the new state and its next state.
    a. Click an existing Approved transition to open its dialog.
    b. Copy its `WaitForItemEvent`.

c. Create a transition by dragging a line from the side of the new state to its approval destination state. For example, drag a line from the Sixth Approver state to the Final State.
d. Click the transition to open its dialog.
e. Within the **Trigger** box, right-click **Drop trigger activity here** and paste the **`WaitForItemEvent`** activity.
f. In the title bar, select the default text, **T***number*, and replace it with **Approved**.

11. Create a Declined transition between the new state and its previous state.
    a. Click an existing Declined transition to open its dialog.
    b. Copy the `WaitForItemEvent`.
    c. Drag a line from the side of the new state to its declined destination state. For example, drag a line from the Sixth Approver state to the Fifth State.
    d. Click the transition to open its dialog.
    e. In the top box, right-click **Drop trigger activity here** and paste the **`WaitForItemEvent`** activity.
    f. In the title bar, select the default text, **T***number*, and replace it with **Declined**.

Step 3b: Removing an approver

1. Drag the transitions of the state being removed to new states.

   For example, if you are removing the Fourth Approver in a Five Approver workflow, move the Fifth Approver's declined transition to Third Approver. Then, move the Third Approver's Approved transition to the Fifth approver.

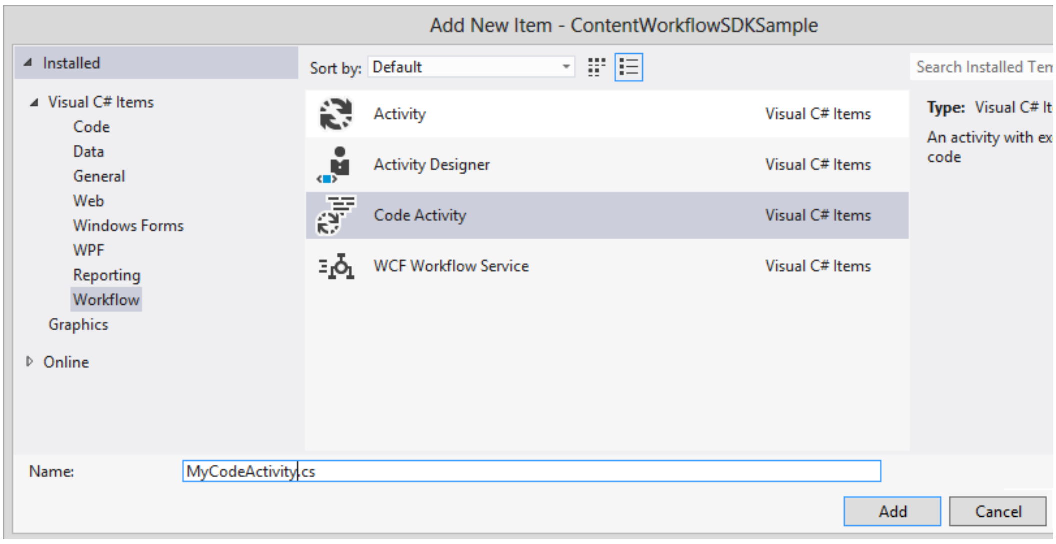
2. Rename the approver that follows the approver being deleted. To continue the above example, change the name of Fifth Approver to Fourth Approver.

   IMPORTANT: Do not change the name of the Final State.

3. Select the approver state that you want to delete.
4. Right click and choose **Delete**.

Step 3c: Adding a custom activity to a workflow

1. In `ContentWorkflowSDKSample.sln`, add a new Code Activity item to the project.



2. In the new Code Activity file, add custom code. In the following example, a simple content block is created.

IMPORTANT: Use Try Catches around your code.

```
using Ektron.Cms.Framework;
using System.Diagnostics;

namespace Ektron.Cms.ContentWorkflowSDKSample
{

    public sealed class MyCodeActivity : CodeActivity
    {
        // Define an activity input argument of type string
        public InArgument<string> Text { get; set; }

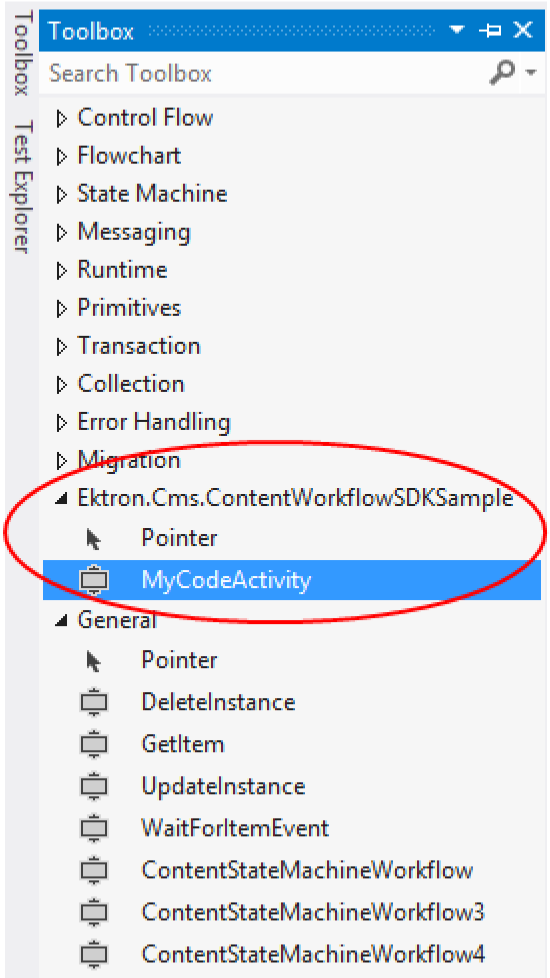
        // If your activity returns a value, derive from CodeActivity<TResult>
        // and return the value from the Execute method.
        protected override void Execute(CodeActivityContext context)
        {
            // Obtain the runtime value of the Text input argument
            string text = context.GetValue(this.Text);

            //Custom Code Starts Here
            Ektron.Cms.Framework.Content.ContentManager cMan = new Framework.Content.ContentManager();
            Ektron.Cms.ContentData cData = new ContentData();

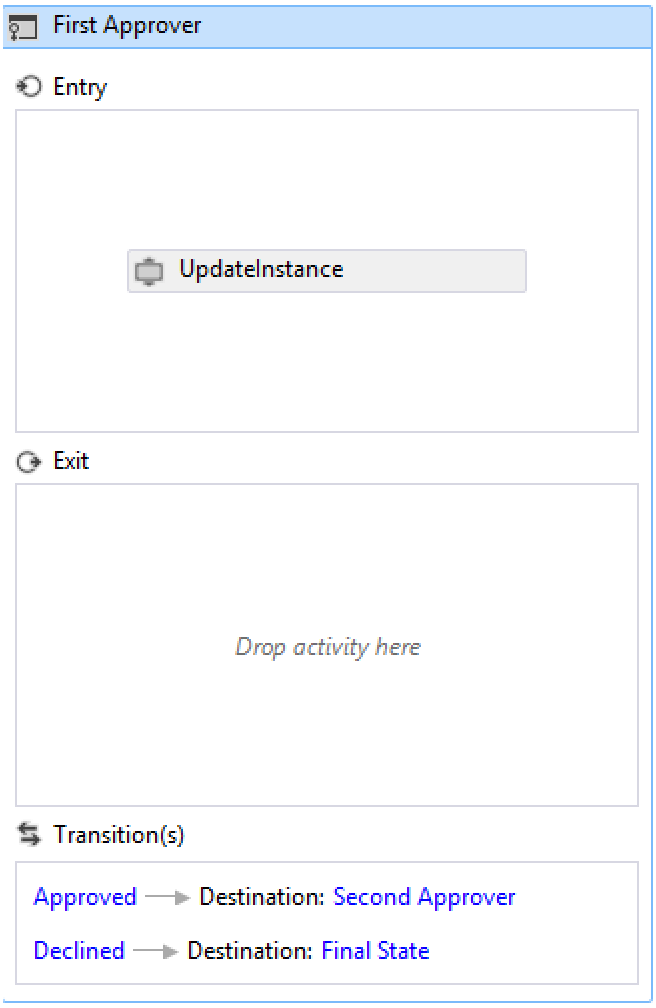
            cMan.ApiMode = ApiAccessMode.Admin;

            cData.FolderId = 0;
            cData.Html = "This is my content HTML";
            cData.Title = "This was created via an activity";
            cData.IsPublished = true;
            try
            {
                cMan.Add(cData);
            }
            catch (Exception ex)
            {
                EventLog eLog = new EventLog();
                eLog.WriteEntry(ex.Message);
            }
        }
    }
}
```

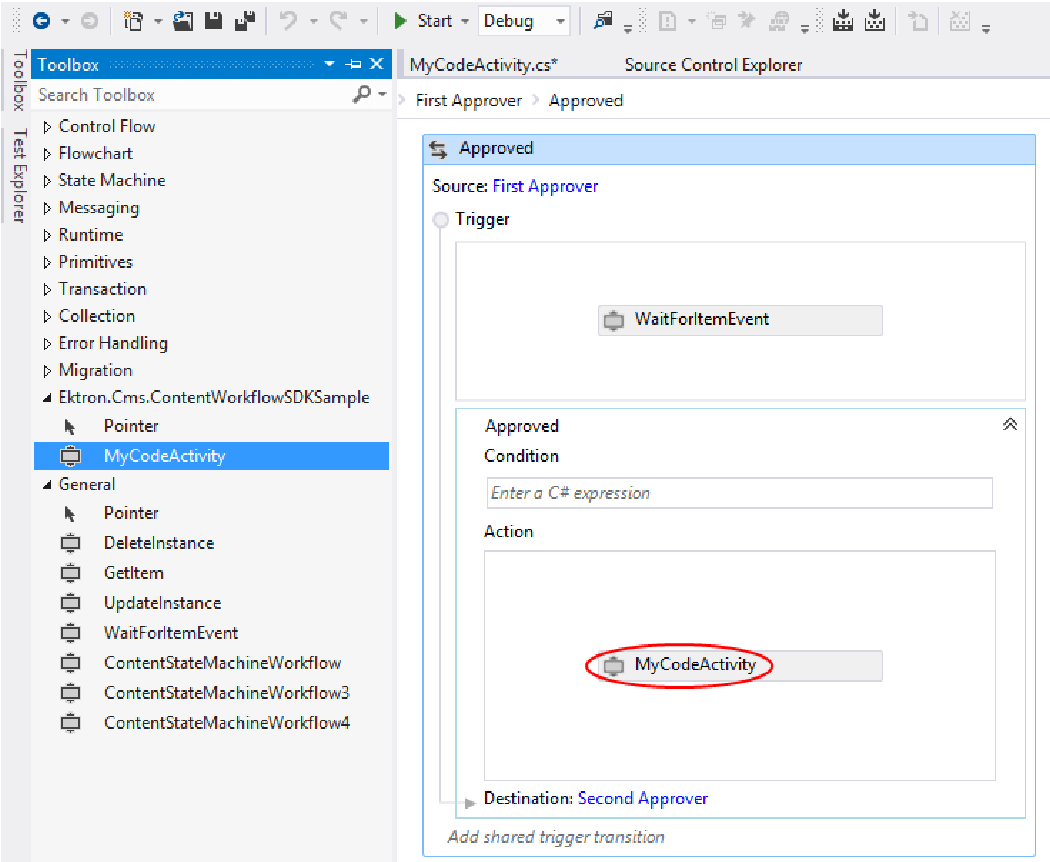
3. After saving the Code Activity file, you can find it in the Visual Studio Toolbox. By default, it appears under the name of your assembly, **Ektron.Cms.ContentWorkflowSDKSample**.



You can place the activity anywhere you see **Drop activity here**.



In the following example, the activity is placed in the Approved transition between First Approver and Second Approver.

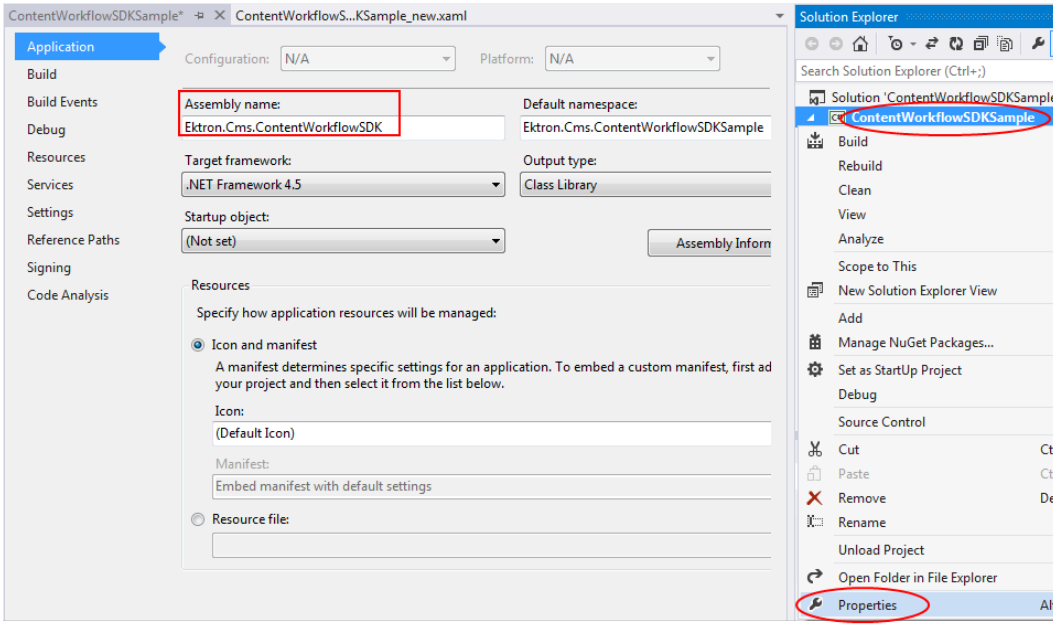


Step 4: Update the Ektron.cms.contentworkflow.config file

After you customize the sample workflow file and save it to a different name, edit `Ektron.cms.contentworkflow.config`. Ektron references this file to determine the properties of your advanced workflows.

1. In Solution Explorer, right click the **ContentWorkflowSDKSample** project and choose **Properties**.

2. Copy the **Assembly name**.



3. In Solution Explorer, select the .xaml sample workflow file that you edited in *Step 3: Edit the sample workflow file* on page 726, right click, and choose **View Code**. The xml version of the file appears.
4. Copy the value of `x:Class` in the top line.

```
<Activity mc:Ignorable="sap sap2010 sads"
x:Class="Ektron.Cms.ContentWorkflowStateSDKSample"
xmlns="http://schemas.microsoft.com/netfx/2009/xaml/activities"
xmlns:av="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
xmlns:ecc="clr-namespace:Ektron.Cms.Common;assembly=Ektron.Cms.Common"
```

5. Open `siteroot\Ektron.Cms.ContentWorkflow.config`. In this file, each workflow activity contains the following XML structure. Each workflow has several "activities" (approvers or states), and each state has several transitions (typically, a decline and an approve).

```
<Workflow>
   <Activities>
        <Activity ActivityName="First Approver"  AssignUser="true">
           <Transitions>
               <Transition TransitionName="Approved" BookmarkName = "First Approver Approved"
                  Destination="Second Approver" />
               <Transition TransitionName="Declined" BookmarkName = "First
Approver Declined"
                  Destination="Author" />
           </Transitions>
       </Activity>
   <Activities>
</Workflow>
```

6. To add a new workflow:
   a. Copy and paste an existing workflow. A workflow is surrounded by `<Workflow> </Workflow>` elements.

b. Modify the pasted workflow as follows:
    i. Change its `DisplayName` to the name you want to appear in the Ektron Workarea.
    ii. Replace `ClassName` with the class name you copied in Step 4 of this procedure.
    iii. Replace `AssemblyName` with the assembly name you copied in Step 2 of this procedure.
    iv. To add an activity, copy and paste an existing one. For example, if the new workflow has 5 steps, copy and paste the "4 Step Approval" activity.
    v. Update the copied `<Activity>` properties to match the new workflow. To continue the example:
        - Change `DisplayName` to "5 Step Approval."
        - Within the "Fifth Approver" `<Activity>` element, update the approved and declined transition values to match the .xaml file.
        - Modify the properties of other activities to match the .xaml file. For example, change the Fourth Approver's `Destination` from "Final State" to "Fifth Approver".

7. To remove an existing workflow:
    a. Select and delete the beginning (`<Workflow>`) and ending (`</Workflow>`) elements.
    b. Modify the properties of other activities to match the .xaml file. For example, change the third Approver's `Destination` from "Fourth Approver" to "Final State".

Step 5: Move the compiled .dll file to siteroot\bin folder

1. With the sample project open in Visual Studio, click the menu option **Build > Build Solution**. The project starts to build.

   The build creates a new .dll file in `C:\Program Files (x86)\Ektron\CMS400SDK\Contentworkflow\code\bin\Debug`. The file name matches the assembly name that you copied in Step 2 of *Step 4: Update the Ektron.cms.contentworkflow.config file* on page 735.

2. Copy the .dll file to the `siteroot\bin` folder.

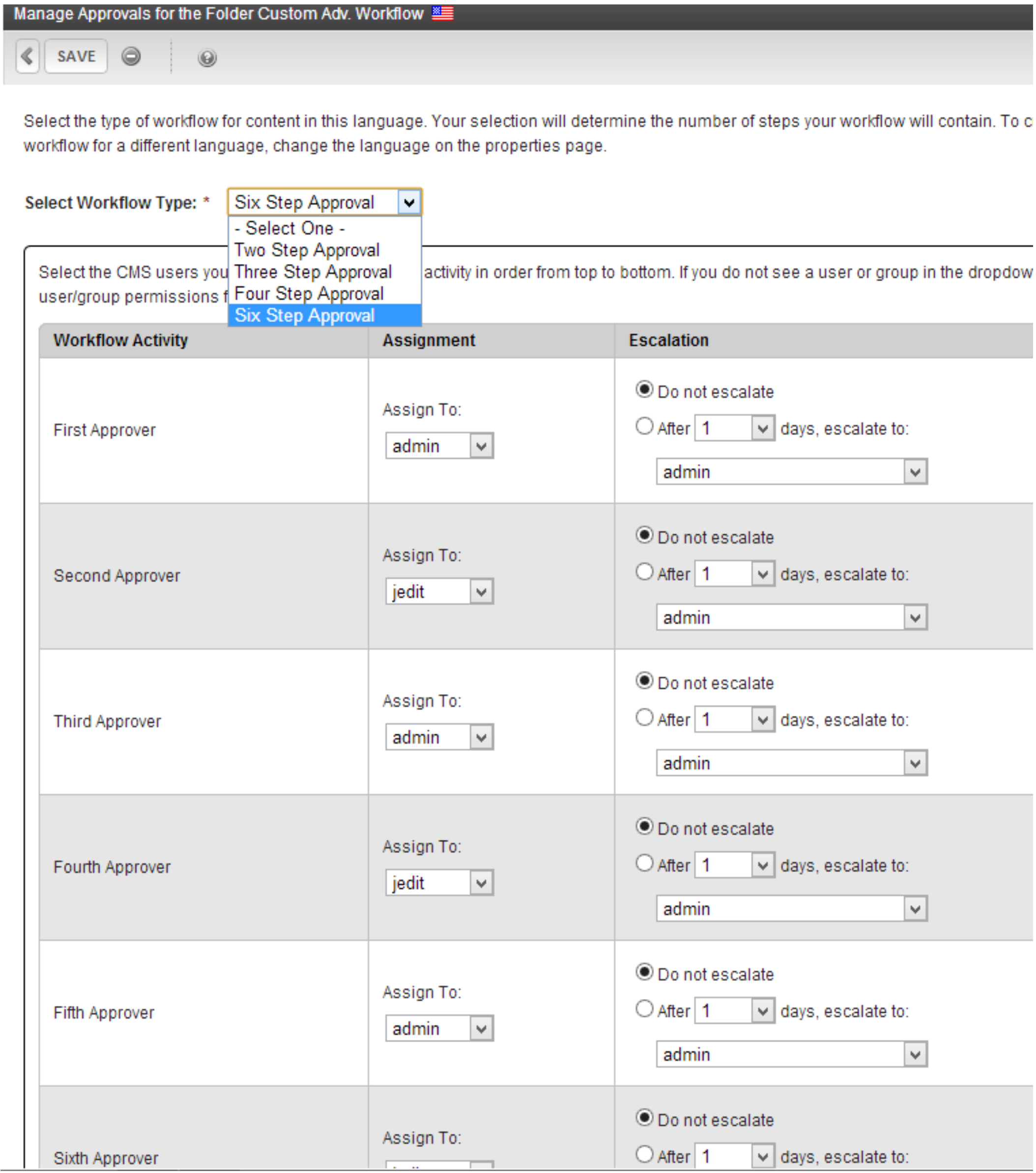
Step 6: Publish affected content

Before using the new workflow file, publish content that will be affected by it.

1. Identify every folder or content item to which you want to apply the new workflow.
2. Publish content in those folders, and affected content items. You can either ask approvers to approve the content, or (if you are an Administrators Group member) use the **Force Publish** button. See also: *Forcing the publication of content* on page 722

Step 7: Test the new workflow in the Ektron workarea

Ektron Workarea users can select the new workflow on the Manage Approvals screen.



Try out the new workflow in a test environment before moving it to a live system.

Removing a custom advanced workflow

Use this procedure to remove advanced workflows that are delivered with Ektron, or any that are created for your site.

PREREQUISITE

You have permission to edit files on the Ektron server.

1. In the Ektron Workarea, review folders and content to make sure that the advanced workflow you want to delete is not currently assigned to any of them.

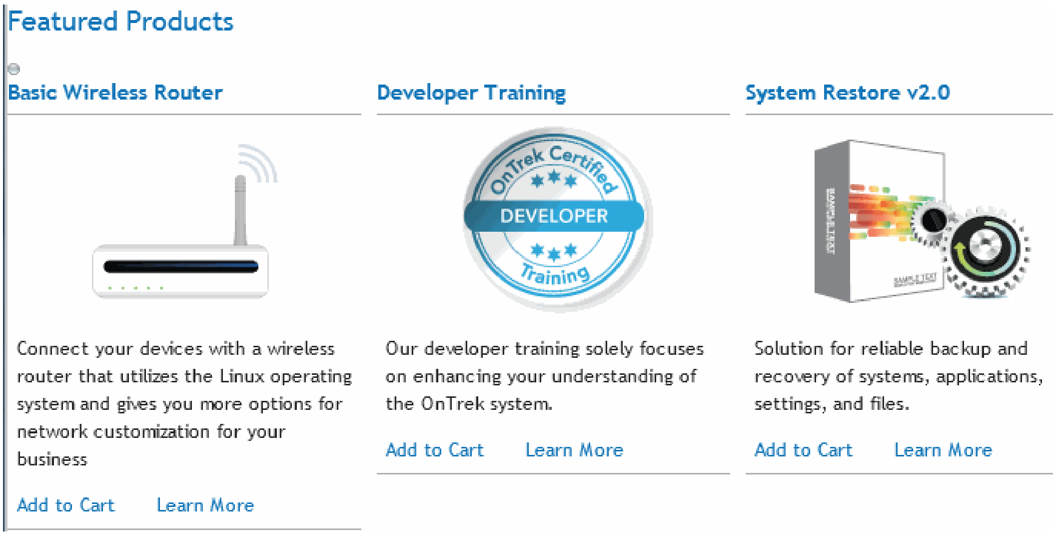
2. Open `siteroot\Ektron.Cms.ContentWorkflow.config`.
3. Select the opening and closing `<Workflow>` tags of the workflow you want to remove.

```
<Workflow DisplayName = "Two Step Approval"
  ClassName = "Ektron.Cms.ContentWorkflow.ContentStateMachineWorkflow"
  AssemblyName = "Ektron.Cms.ContentWorkflow" >
  <Activities>
     <Activity ActivityName="First Approver">
       <Transitions>
          <Transition TransitionName="Approved" BookmarkName = "First Approver
Approved"
              Destination="Second Approver" />
          <Transition TransitionName="Declined" BookmarkName = "First Approver
Declined"
               Destination="Author" />
        </Transitions>
     </Activity>
     <Activity ActivityName="Second Approver">
        <Transitions>
           <Transition TransitionName="Approved" BookmarkName = "Second Approver
Approved"
                Destination="Final State" />
            <Transition TransitionName="Declined" BookmarkName = "Second Approver
Declined"
                 Destination="First Approver" />
        </Transitions>
      </Activity>
   </Activities>
</Workflow>
```

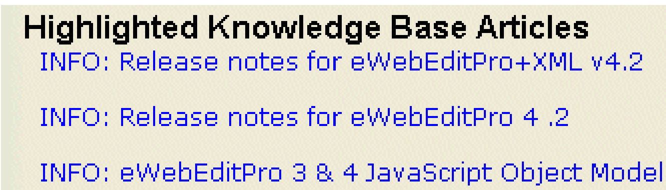
4. Delete or comment out the unwanted workflow.

Working with collections

A collection is a list of content links offered to readers of a Web page. The following illustration shows a collection.



You can use a collection to display any listing, such as job postings, press releases, and knowledge base articles. The following is a collection within Ektron’s Knowledge Base.



This section explains how to find, create, and manage collections. Your developer then creates or updates a Web page to display them using the Collection server control or Collection widget.

Comparing menu, collection, list summary, and taxonomy features

Menu, collection, list summary, and taxonomy features are similar because they let you add a list of links to a Web page. The following table compares the features to help you understand which one is best suited to your needs.

NOTE: To implement these features, the assistance of a developer is required.

IMPORTANT: Starting from release 8.6, the ListSummary server control was replaced by the FrameworkUI: <ektron:ContentView> templated server control. If you are already using the ListSummary server control, you can continue to do so, but Ektron recommends using current versions of functionality.

	Menu	Collection	List Summary	Taxonomy
Display *all* content in a folder. As folder's content changes, display changes.	✓ (folder items appear on a menu)		✓	✓
Can display all content in a folder's subfolders			✓	
Display *selected* content	✓	✓		✓
Display external hyperlinks	✓			
Display library files	✓			✓
Display content summary (optional)		✓	✓	✓
Display additional content information: • comment • last modified date • start date • end date • user who last edited it • ID number • path relative to your site's root		✓		
Can be multi-leveled	✓		✓ (recursive folders)	✓

	Menu	Collection	List Summary	Taxonomy
Main purpose is navigation	✓	✓	✓	✓
Main purpose is classification				✓

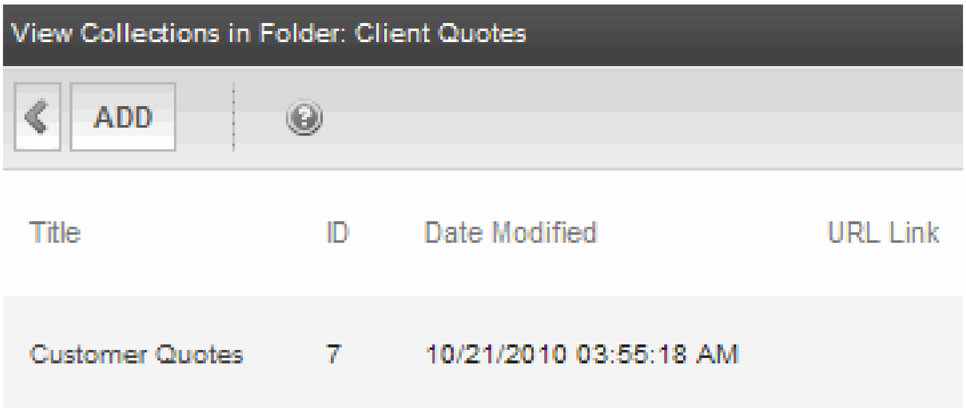
Finding collections

Every collection is assigned to a folder. You can find collections in the following ways.

Finding collections by folder

To find collections in a folder:

1. Click the content folder that contains the collection.
2. If you are using Ektron's multi-language support features, select a language by choosing **View > Language**. See also: *Working with multi-language content* on page 1393
3. Choose **View > Collection**. The View Collections screen appears.

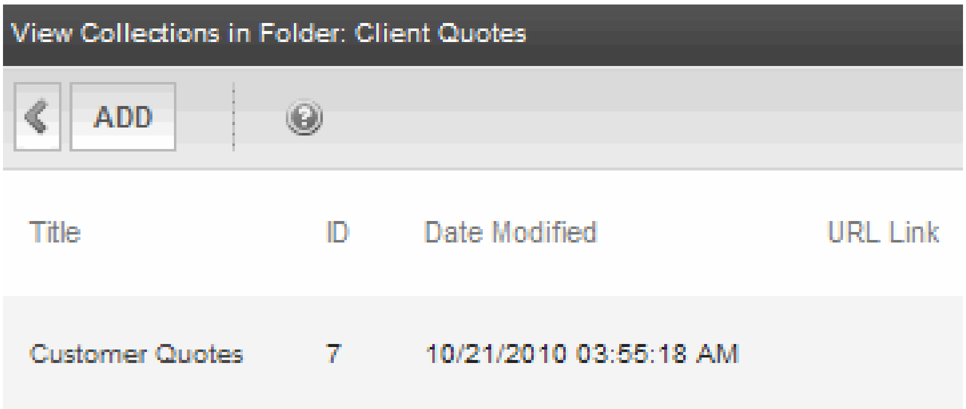


Finding all collections

The **Content** tab has a **Collections** panel that displays *all* collections, regardless of folder. To view *all* collections in *all* content folders:

1. From the Workarea, click **Content > Collections > Collections**. The View Collections screen appears.

2. Select a collection.



If you have a large number of collections, use the screen's **Search** box to find one.

Creating a collection

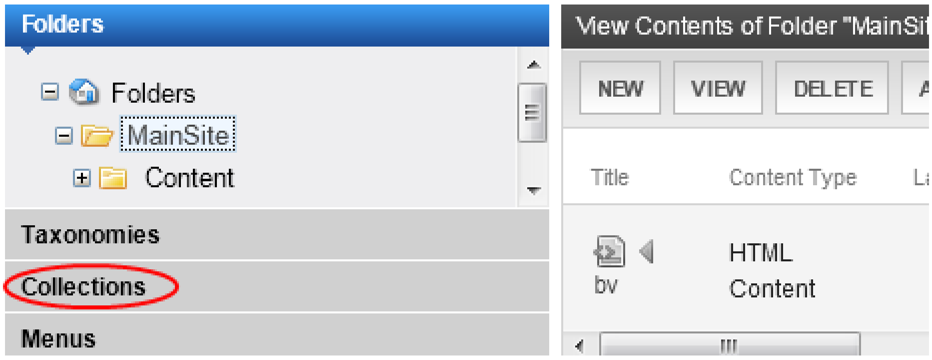
This section explains how to create a collection in a site that does not support multiple languages. To create collections in several languages, see *Working with a collection in a multi-language system* on page 752.

PREREQUISITES

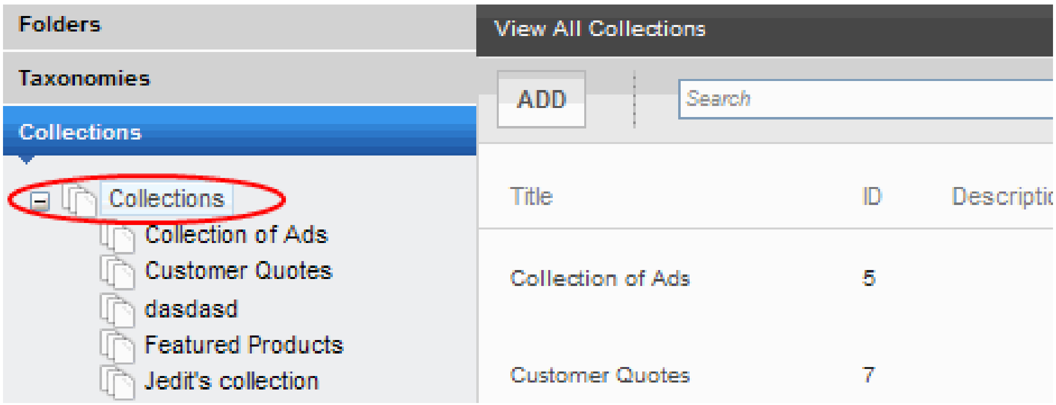
To create, edit, remove, delete, or reorder a collection, you must have one of these criteria.

- Administrators group member
- assigned one of these roles See also: *Defining roles* on page 1464.
  - Collection and Menu Admin
  - Collection Admin
  - Folder User Admin
  - Collection Approver
- granted Collections permission for the collection’s folder. Permission is granted on the folder Permission screen > **Advanced** tab. See also: *Managing folder and content permissions* on page 160.

NOTE: Only users assigned to the Administrators group, Collection and Menu Admin role, Collection Approver, or Collection Admin role can work with Collections via the **Collections** tab. Users who do not belong to one of these groups can work with collections (if they have Collections permission for the collection’s folder) by selecting a folder then **New > Collection** or **View > Collection**.

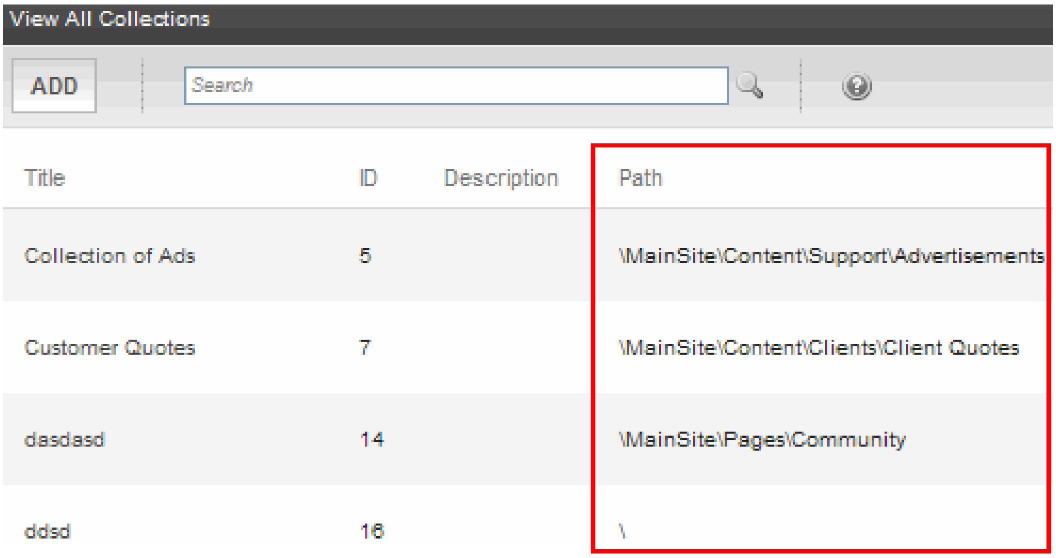


1. To create a new collection, use one of these methods. The Add Collection screen appears.
   - To create a collection in a specified folder, go to it, and choose **New > Collection**.
   - To create the collection in the root folder, choose **Content > Collections > Collections** then click **Add**.



2. Hover the cursor over **Collections** (see previous image), right click the mouse, and click **Add Collection.** Complete the screen using the following information.
   - **Title**. Assign a unique title to the collection.
   - **Template**. Enter the default template for the collection. This template displays the content of the links generated if no template is assigned in the custom function. If left blank, the links use their respective Quicklinks. See also: *Creating a collection* on the previous page
   - **Description**. Add a more detailed description for the collection.
   - **Include Subfolders**. Check if you want to be able to add to the collection content in subfolders of the collection's content folder.
   - **Approval is Required**. See *Setting up collection approval* on page 752
3. Click **Save** when finished.

A collection’s folder appears on the **Content > Collections > View All Collections** screen, in the **Path** column. No value (****) indicates root folder.



After creating the collection, you typically add content to it. See *Creating content for a collection* below and *Assigning content to the collection* on page 747.

Deleting a collection

1. From the Workarea, go to **Content > Collections**.
2. Click the collection you want to delete.
3. Click **Delete** ( ).

   Alternatively, hover the cursor over the Collection, right click the mouse, and click **Delete *collection name***.

   If this collection requires approval, and the user who is deleting cannot approve changes, the following occurs. See also: *Setting up collection approval* on page 752.

   - The collection's status changes to Marked for Deletion (M), and an email notification is sent to all approval users for the collection. One of the approval users must open the Edit Collection screen and click the **Delete** or **Decline** button.
   - If an approval user clicks **Delete** ( ), the collection is removed from your website.
   - If an approval user clicks **Decline** ( ), the user who submitted the deletion is notified by email but no website changes are made.

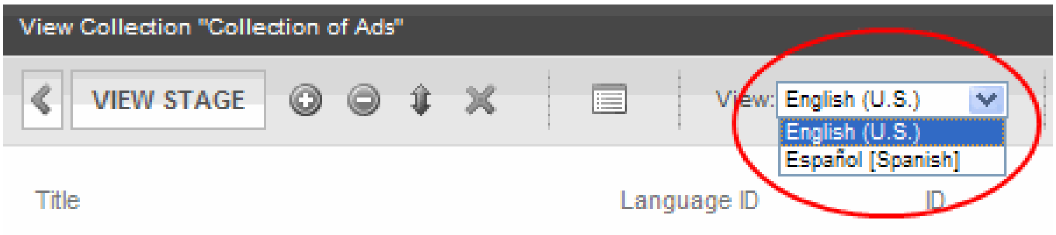
   NOTE: Any user with permission to edit a collection can perform the undo function until the content is approved

4. Click **OK** to proceed.

Creating content for a collection

To create new content while adding content links to a collection:

1. Go to the content folder containing the collection.
2. Choose **View > Collection**. The View Collections screen appears. Alternatively, choose **Content > Collections > Collections**.
3. Choose a collection.
4. Accept or change the language.



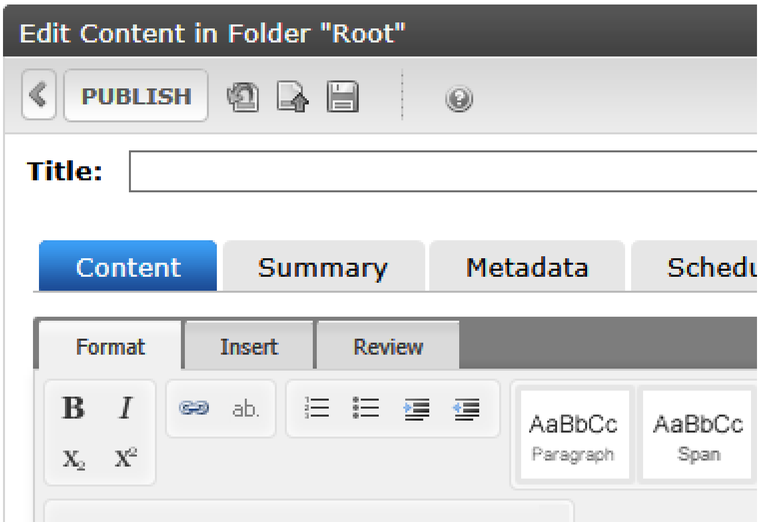
5. Click **Add Items**. The Add Items to Collection screen appears, displaying all subfolders within the selected folder and content in the folder that is not part of the collection. (Subfolders are available if the **Include subfolders** checkbox was checked for the collection.)

   Alternatively, hover the cursor over the collection in the left panel, right click the mouse, and click **Add Items**.

   NOTE: If your collection includes subfolders and you want to add the content to one of them, go to that subfolder. Otherwise, proceed to the next step.

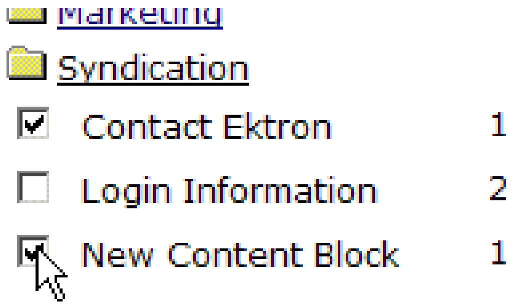
6. Click **Add Content** ( ). The Add Content screen appears.

   NOTE: If you are using Ektron's multi-language support, the content's language appears next to the title. The language is derived from the collection's language and cannot be changed.



7. Create the content.
8. Click a workflow option in the Add Content screen, such as Publish. The Add Content screen closes, and the new content link appears.

9. Check the content you created and other content.



10. Click **Add**.

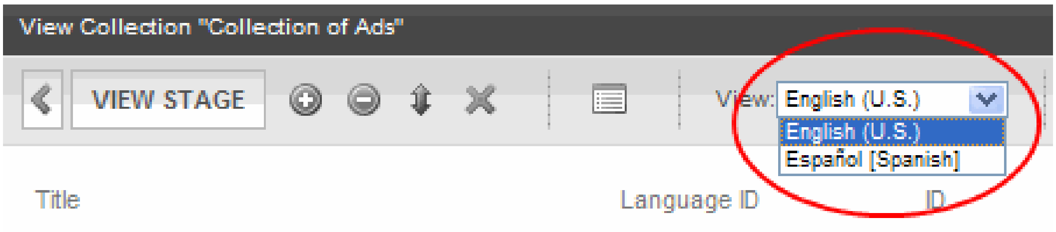
Assigning content to the collection

After creating a collection, you assign content to it as described in the following steps.

NOTE: When viewing a Collection on the website, a site visitor sees the last published version of content. If it was never published, nothing appears.

---

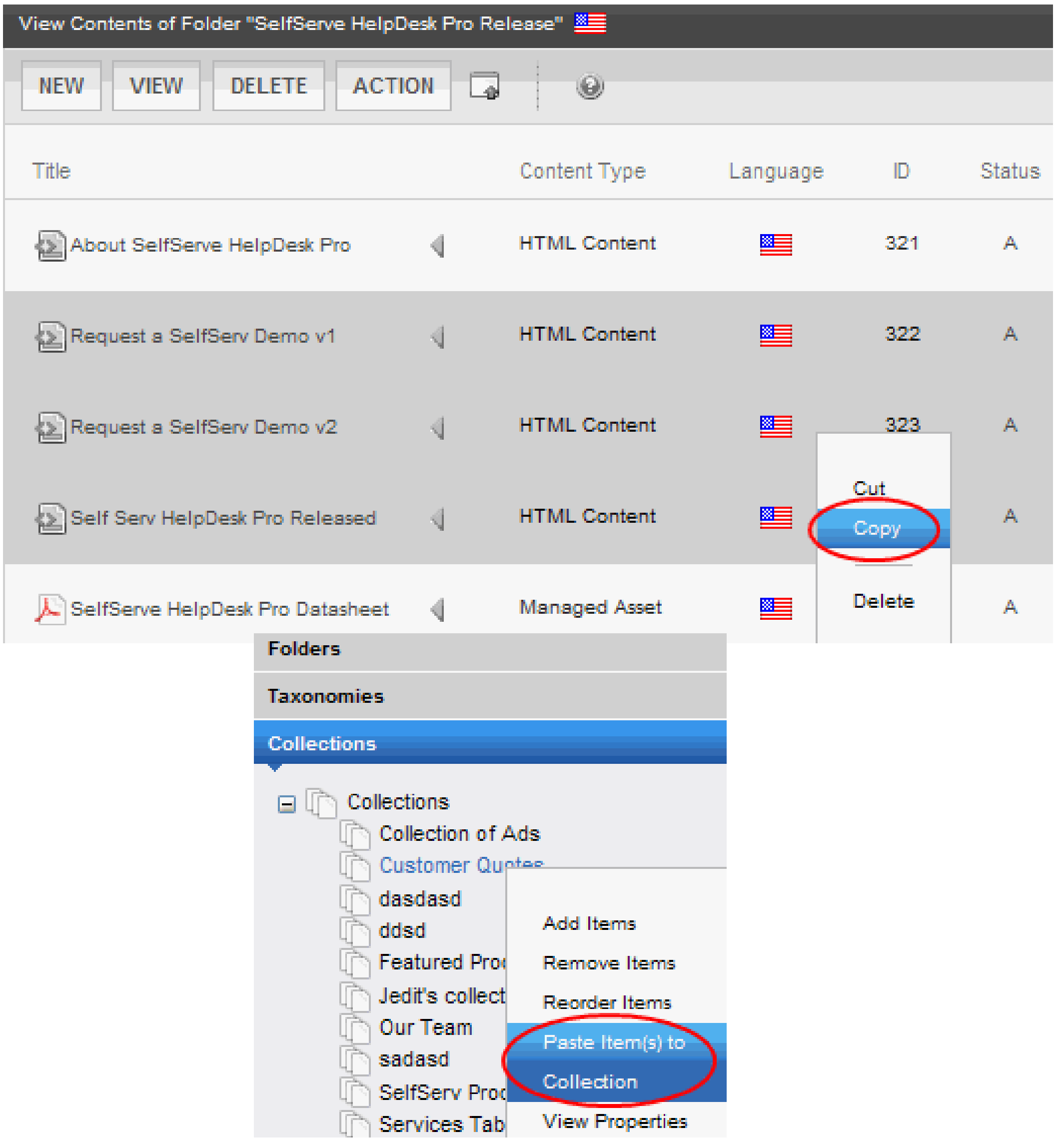
1. Go to the content folder containing the collection to which you want to add content.
2. Choose **View > Collection**. The View Collections screen appears. Alternatively, choose **Content > Collections > Collections**.
3. Choose a collection.
4. Accept or change the language.



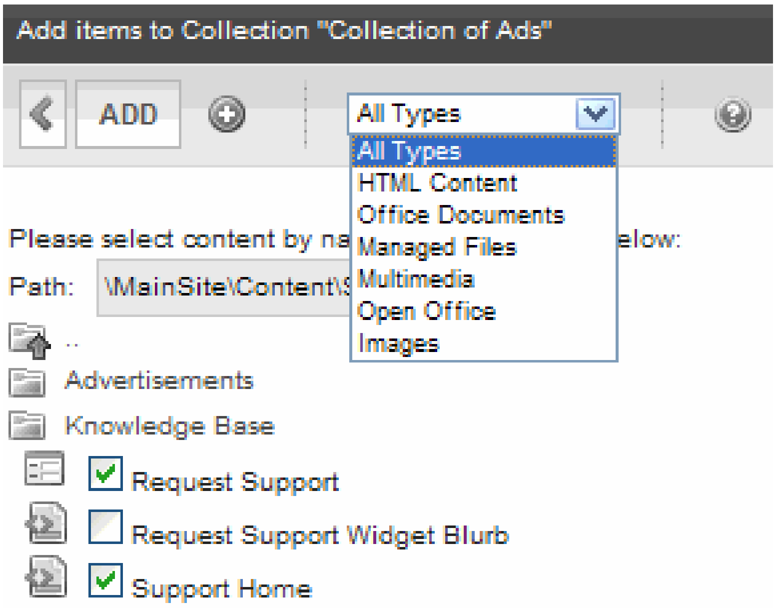
5. Click **Add Items**. The Add Items to Collection screen appears, displaying all subfolders within the selected folder and content in the folder that is not part of the collection. (Subfolders are available if the **Include subfolders** checkbox was checked for the collection.)

   Alternatively, hover the cursor over the collection in the left panel, right click the mouse, and click **Add Items**.

   As another alternative, go to a content folder, click items to be assigned, right click the mouse and select **Copy**. Then, locate the collection, right click the mouse, and select **Paste Items to Collection**.



NOTE: The file types pulldown remembers your most recent choice and can filter which files appear. You can change the selection if desired.



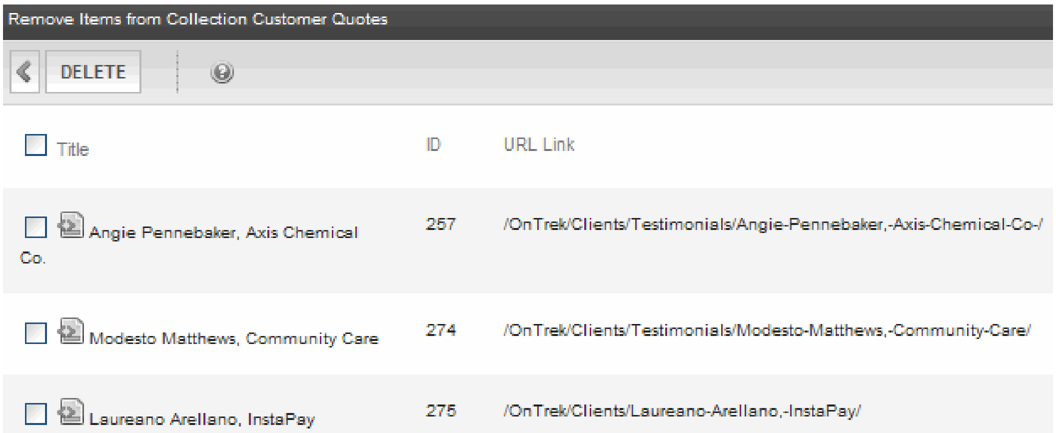
6. Check content to add to the collection. You can only add content from the selected folder or its subfolders. (Subfolders are available if the **Include subfolders** checkbox is checked for the collection.)
   - Click a subfolder to view its content.
   - To return to the parent folder, click the folder with the up arrow ( ).
   - Navigating between subfolders deselects content.
7. Click **Add** to add selected content to the collection.

Editing content in a collection

1. Go to the content folder that contains the collection that you want to edit.
2. Choose **View > Collection**. The View Collections screen appears.
   Or from the **Content** tab, click **Collections**.
3. Click the collection whose information you want to change.
4. Select a language.
5. Click **Properties** ( ).
6. Click **Edit**.
7. Change any field values.
   - **Title**. Assign a unique title to the collection.
   - **Template**. Enter the default template for the collection. This template displays the content of the links generated if no template is assigned in the custom function. If left blank, the links use their respective Quicklinks. See also: *Creating a collection* on page 743
   - **Description**. Add a more detailed description for the collection.
   - **Include Subfolders**. Check if you want to be able to add to the collection content in subfolders of the collection's content folder.
   - **Approval is Required**. See *Setting up collection approval* on page 752

Removing content from a collection

1. Go to the content folder that contains the collection and click **View > Collection**.
   Or from the **Content** tab, click **Collections**.
2. Click a collection.
3. Click **Remove Items** (). The Remove Items from Collection screen appears.
   Alternatively, hover the cursor over the Collection, right click the mouse, and click **Remove Items**.
4. Check boxes next to content you want to delete.



5. Click **Delete**.

Reordering a collections list

After a collection is created, and more than one content item is assigned to it, you can reorder a collection list as described in the following steps.

1. From the Workarea, go to **Content > Collections**.
2. Click the collection you want to reorder.
3. Click the **Reorder** button (). The Reorder Collection screen appears.
   Alternatively, hover the cursor over the Collection, right click the mouse, and click **Reorder Item**.
4. Click the content whose order you want to change.
5. Click the up or down arrow to move the content.
6. When you have the desired order, click **Update**.

Using a default template vs. quicklinks for a collection

You can specify a template that determines the screen display for a collection when it is published on a Web page. You also can disable the template and, instead, use quicklinks to determine the page template. (See also: *Viewing quicklinks or forms* on page 687)

- If you use *quicklinks*, every page in the collection uses its original template. As a result, the surrounding information may change for every content item in the collection.

  The following example shows links using Quicklinks. Notice that content uses several templates. As a result, when a user clicks content in the collection, the screen information around the content is determined by its template.

Title	ID	URL Link
Home Page Content	1	/CMS400Demo/index.asp?id=1
Support Page	8	/CMS400Demo/index.asp?id=8
Plastic Molder #123	13	/CMS400Demo/hr.asp?id=13
RC Cheetah	5	/CMS400Demo/products.asp?id=5
RC Redstar	7	/CMS400Demo/products.asp?id=7
New Content Block	17	/CMS400Demo/index.asp?id=17
Contact Ektron	15	/CMS400Demo/index.asp?id=15

- If you use a *template*, all content in the collection uses the template other than the specific content. For example, the page header, footer and information in the right frame of the screen are all the same.

  The following example show links when you use a template named `index.asp`.

Title	ID	URL Link
Home Page Content	1	/CMS400Demo/index.asp?id=1
Support Page	8	/CMS400Demo/index.asp?id=8
Plastic Molder #123	13	/CMS400Demo/index.asp?id=13
RC Cheetah	5	/CMS400Demo/index.asp?id=5
RC Redstar	7	/CMS400Demo/index.asp?id=7
New Content Block	17	/CMS400Demo/index.asp?id=17
Contact Ektron	15	/CMS400Demo/index.asp?id=15

NOTE: If a collection item is a form, **ekfrm** is used instead of **id** to denote form block.

To toggle between a default template and Quicklinks:

1. Access the Edit Collection screen for the collection you want to edit.
2. Modify the **Template** field.
3. Click **Update**.

Working with a collection in a multi-language system

In a multi-language Ektron system, you can create a language-specific edition of each collection. When a site visitor selects a language, then goes to a page with a collection, Ektron displays the collection in the selected language if available. If not, Ektron displays nothing.

NOTE: Notice the contrast between the collections and content: if a collection is not available in a selected language, nothing appears. However, if content is not available in the selected language, content in the other languages may appear.

IMPORTANT: You can only add content in the language of a collection. So, create content first, then create a collection that links to it.

When you create a collection for a foreign language, decide from the following:

- Create a foreign edition of an existing collection to provide several versions of a single page that change depending on the language selected by the user.
  1. Form the Workarea, go to **Content > Collection**.
  2. Click the Collection that you want to create in another language.
  3. From the View drop-down list, select the language of the new collection.
  4. Using **AddItems**, select content to add to the collection. Go through the folders to the content you want to add. You can only add content in the selected language.
- Create a new collection in a foreign language to appear only on a foreign language page, and no other edition of the collection appears on your site.
  1. Go to the folder in which you will create the collection.
  2. Click **View > Language** and select the language of the collection.
  3. Click **New > Collection**. The Add Collections screen appears.
  4. Click **Add** and enter basic information about the collection.
  5. Using **AddItems**, select the content to add to the collection. Go through the folders to the content you want to add. You can only add content in the selected language.

Setting up collection approval

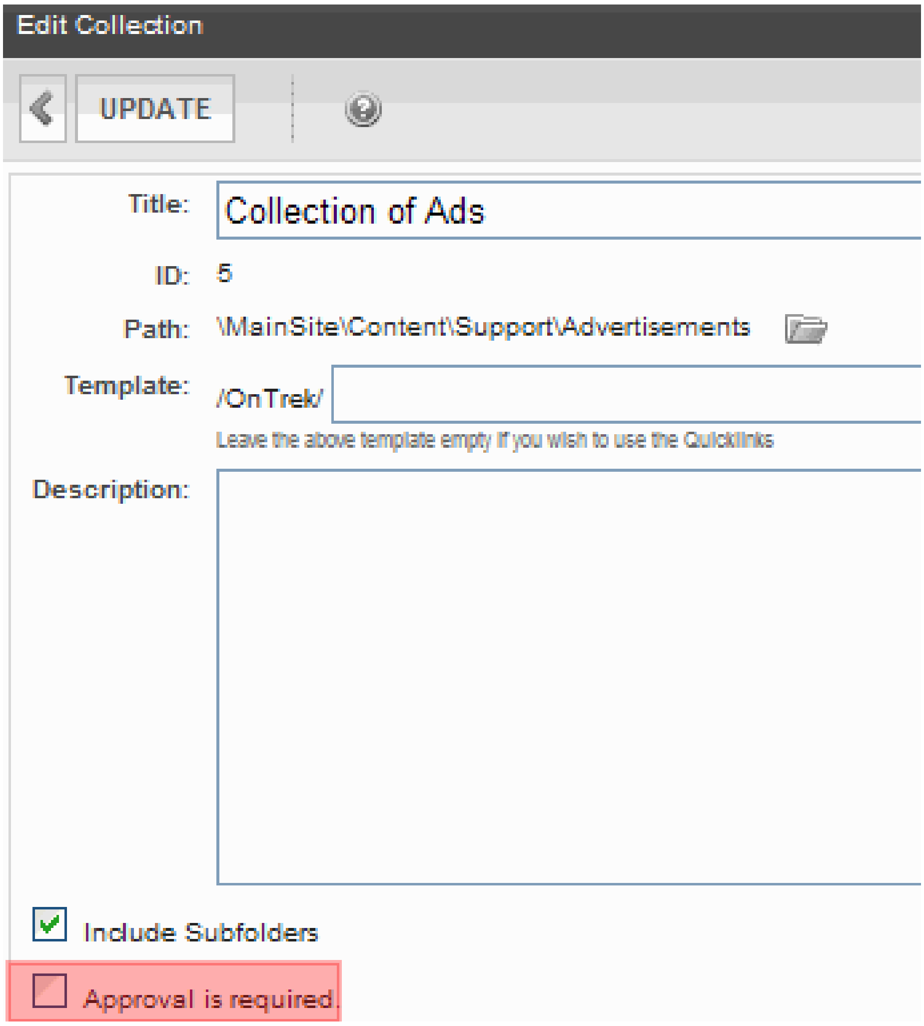
If you require a collection to be approved, only the following users have permission to create or edit a collection and can approve a change to a collection.

- a member of the Administrators group
- users to whom the Collection Approver role has been assigned and who have permission to work with the collection
- users to whom the Folder User Admin role has been assigned and who have permission to work with the collection

You can set up an approval system for any collection. As with content workflow, you specify users to approve changes to a collection before it can be published.

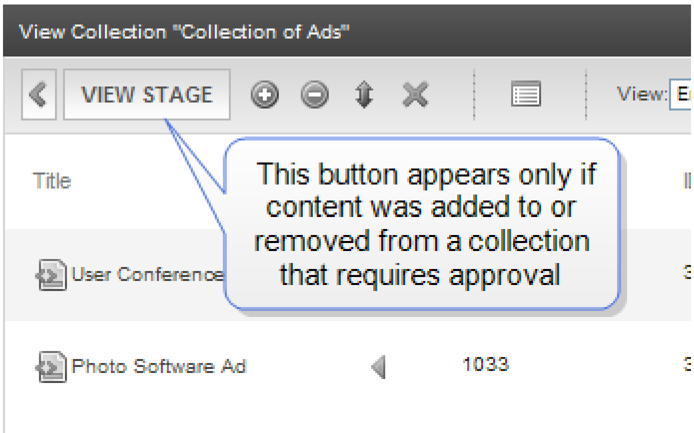
- While content can have a chain of approvers, a collection has a list of approvers. *Any collection approver can publish or decline changes for a collection*.
- While content workflow is folder-specific, collection approval is not. When set up, collection approval affects the collection to which it was assigned, regardless of its folder.
- If a user who is not an approver tries to delete a collection, that action also requires approval.

Only administrators or users to whom the folder-admin role has been assigned see the **Approval is Required** checkbox on the Add and Edit Collection screens.



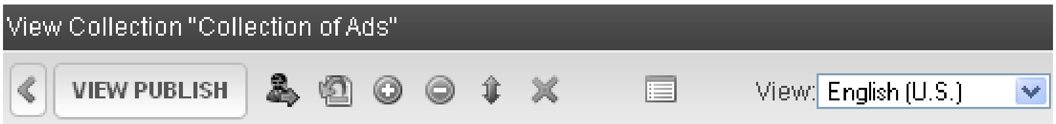
What happens when someone submits changes to a collection

Whenever anyone changes a collection that requires approval (by adding or removing content items), the toolbar on the View Collection Screen changes.



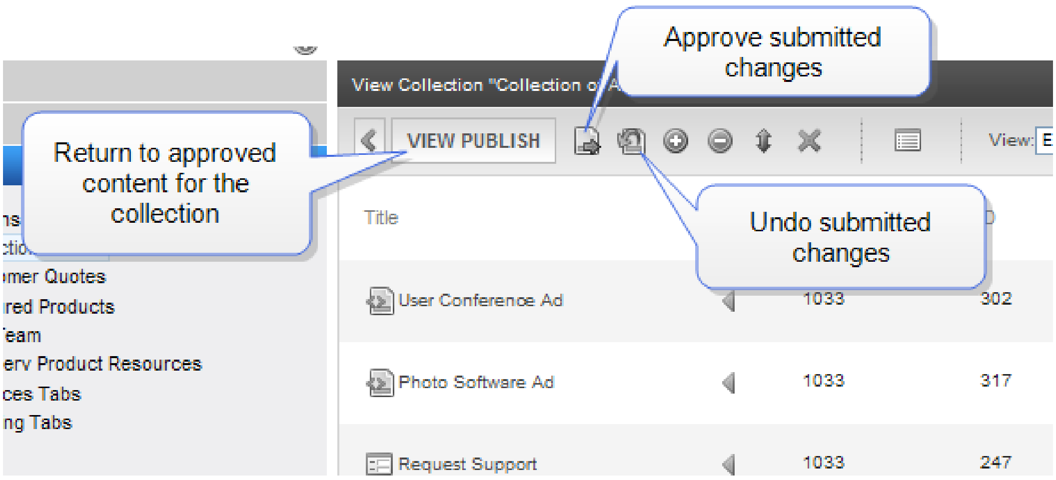
By default, you only see approved collection items. To see unapproved items, click **View Stage**.

After changing a collection's contents, if a user has permission to edit collections but not approve changes, he sees the following toolbar.



That user should click **Submit** ( ). This action triggers an email notification to all approval users for the collection. It also changes the collection’s status to checked out. No other users can edit it in this status.

A user with permission to approve changes sees the following toolbar after clicking **View Stage**.



If the user clicks **Publish** ( ), the new version of the collection is published to your website.

Any user with permission to edit a collection can go to the screen and click **Undo Checkout** () any time before the approval. In this case, the submitted changes are deleted, and the collection reverts to its original state.

Working with Metadata

Metadata is information about a content item, such as its title and language. Ektron provides extensive and flexible support for metadata, which is used in both standard and innovative ways.

You can add the following kinds of metadata content.

Metadata types

- **Searchable**. Metadata that can be found by Ektron's search and the Workarea Search screen. *Creating and deploying a Search tag definition* on page 759
- **Meta tag**. Resides in a content's source code, helping search engines find it. *Creating and deploying a Meta tag definition* on page 758
- **HTML tag**. Information about content used by a Web browser. For example, `<title>` identifies the content in the screen title, favorites list, and browser history. *Creating and deploying a Title tag definition* on page 759
- **Related content**. A related content item, collection, List Summary, or library item that accompanies a content item on a Web page. *Creating and deploying a related content definition* on page 762.
- **Content tags**. Keywords that can be assigned to content and library items. Content tags allow for tag-based searching. *Applying content tags* on page 767
- **Image**. Not part of a metadata definition; automatically appears for every content item and lets you assign an image to that content. *Assigning an image to metadata* on page 768
- **Simple Dublin Core**. Fifteen standard fields that cover the most useful information about content. *Applying Simple Dublin Core metadata* on page 768

BEST PRACTICES

- When anyone creates a new Metadata definition, it is assigned the next available ID number. The ID numbers determine the order in which metadata definitions are arranged on the Folder properties screen's **Metadata** tab. By planning ahead, you can enter metadata definitions in logical groupings, which make it more intuitive for the person assigning the metadata to pick the correct ones.
- You can use metadata as a search criterion for your website content, but the metadata definition name cannot include a space. Eliminate spaces from metadata definition names.

You define metadata in the Workarea at **Settings > Configuration > Metadata Definitions**, but you assign metadata in the Content area.

PREREQUISITE

Only Administrator group members and those defined in the Manage Members for Role: Metadata-Admin screen can view, add, or edit metadata definitions. See also: *Using the roles screens* on page 1465

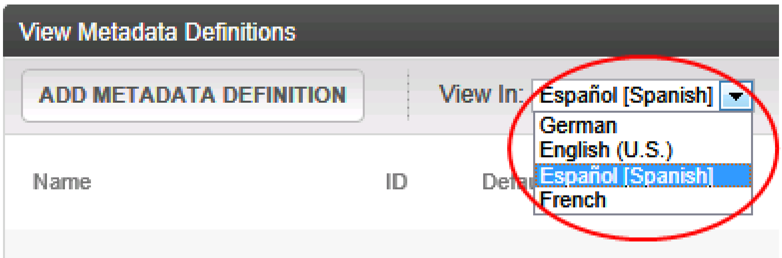
Adding a metadata definition

Use the Add Metadata Definition screen to define metadata (such as keywords and title). You can define as many instances of metadata as you wish. If your site supports multiple languages, you create metadata definitions for each supported language.

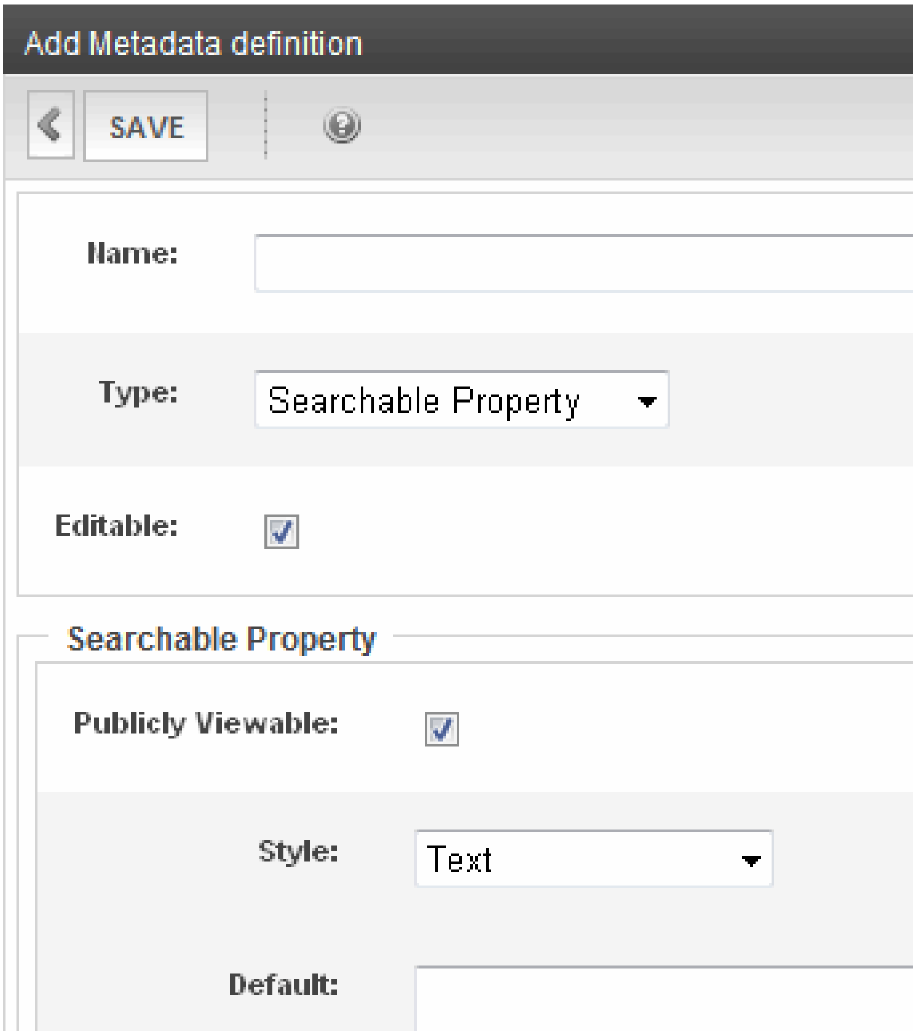
IMPORTANT: After creating a definition, you assign it to folders, whose content uses it. See also: *Assigning metadata to a folder* on page 764

To add a metadata definition:

1. **Settings > Configuration > Metadata Definition**. The View Metadata Definitions screen appears.
2. From the language drop-down, select the primary language of the metadata definition. You may apply other languages to the definition on the Add Metadata Definition screen.



3. Click **Add Metadata Definition**. The Add Metadata Definition screen appears.



   - **Name**. Enter a name to identify this metadata. Do not include spaces. Ektron reserves a list of names that you cannot use. If you enter one, a message appears.
   - **Type**. Select a metadata type from the drop-down list. The type determines which fields appear on the lower part of the screen. See also: *Working with Metadata* on page 755
   - **Editable**. Check this box to allow users to edit metadata when applying it to content. Do not check this box if you want uniform metadata text for each content item that uses this metadata.
   - For documentation of the next screen section, see the selected **Type**.
     - *Creating and deploying a Meta tag definition* on the next page
     - *Creating and deploying a Title tag definition* on page 759
     - *Creating and deploying a Search tag definition* on page 759
     - *Creating and deploying a related content definition* on page 762
4. To let users apply this metadata definition to content in languages other than the primary one (which you selected in Step 2), check each allowed language. See

also: *Creating multi-language metadata while creating a metadata definition* on page 1400

IMPORTANT: You can apply additional languages *only* when creating a metadata definition. You *cannot* apply them when editing.

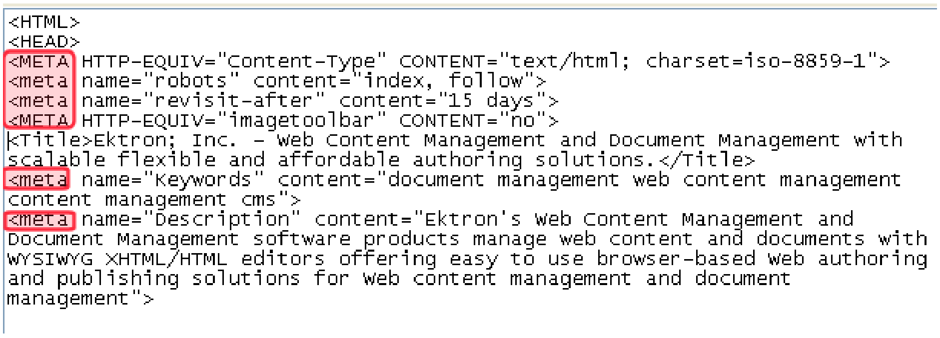
5. Complete the fields and click **Update**.

Creating and deploying a Meta tag definition

The following definition was copied from www.w3.org/MarkUp/html-spec/html-spec_5.html.

The META element is an extensible container for use in identifying specialized document meta-information. Meta-information has 2 main functions:

- *to provide a means to discover that a data set exists and how it might be obtained or accessed*
- *to document the content, quality, and features of a data set, indicating its fitness for use*



```
<HTML>
<HEAD>
<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=iso-8859-1">
<meta name="robots" content="index, follow">
<meta name="revisit-after" content="15 days">
<META HTTP-EQUIV="imagetoolbar" CONTENT="no">
<Title>Ektron; Inc. - Web Content Management and Document Management with
scalable flexible and affordable authoring solutions.</Title>
<meta name="Keywords" content="document management web content management
content management cms">
<meta name="Description" content="Ektron's Web Content Management and
Document Management software products manage web content and documents with
WYSIWYG XHTML/HTML editors offering easy to use browser-based web authoring
and publishing solutions for web content management and document
management">
```

1. Complete the steps in *Adding a metadata definition* on page 756.
2. Complete the Meta Tag description fields.
   - **Style**. Select from the drop-down list to indicate whether you want the style to be **name** or **http-equiv**. For more information, see The Meta Element
   - **Remove Duplicates**. Check this box to remove duplicate words or phrases from the metadata.
   - **Case Sensitive**. Check this box to remove duplicates only if the letters and case of each letter match.
   - **Separator**. Enter a character to separate the metadata values. The default is a semicolon (;).
   - **Selectable Metadata**. Check this box to force users to select from the options specified in the **Allow Selectable Text** and **Default Text** fields. If you do not check this box, users can create their own metadata.
   - **Allow Multiple Selections**. Check this box to let users select multiple metadata values instead of one. If multiple values are allowed, use the separator character to delimit them. If this box is not checked, all values appears in a drop-down list, and the user selects the correct one. This field is only active if the **Selectable Metadata** box is checked.

- **Allowed Selectable Text**. Enter standard metadata that can be selected by users. Separate each option by the separator specified for the metadata definition. This field is only active if the **Selectable Metadata** box is checked.
- **Default Text**. Enter default content for the metadata tag.

3. Click **Save**.
4. Add the definition to all applicable folders by editing the properties of the folder and checking the metadata boxes on the Metadata tab and clicking **Update**.
5. Edit the metadata on content items in the folder and click **Save** or **Publish**.
6. Add a metadata server control to every Web form (.aspx page) on which the content will appear. See the Metadata server control.

Creating and deploying a Title tag definition

The following definition was copied from www.w3.org/MarkUp/html-spec/html-spec_5.html.

The title should identify the contents of the document in a global context. A browser may display the title of a document in a history list or as a label for the window displaying the document.

```
<HTML>
<HEAD>
<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=iso-8859-1">
<meta name="robots" content="index, follow">
<meta name="revisit-after" content="15 days">
<META HTTP-EQUIV="imagetoolbar" CONTENT="no">
<Title>Ektron; Inc. - Web Content Management and Document Management with
scalable flexible and affordable authoring solutions.</Title>
<meta name="Keywords" content="document management web content management
content management cms">
<meta name="Description" content="Ektron's Web Content Management and
Document Management software products manage web content and documents with
WYSIWYG XHTML/HTML editors offering easy to use browser-based web authoring
and publishing solutions for web content management and document
management">
```

1. Complete the steps in *Adding a metadata definition* on page 756.
2. Enter default content for the HTML tag. For example:

```
content="document management web content management content management cms"
```

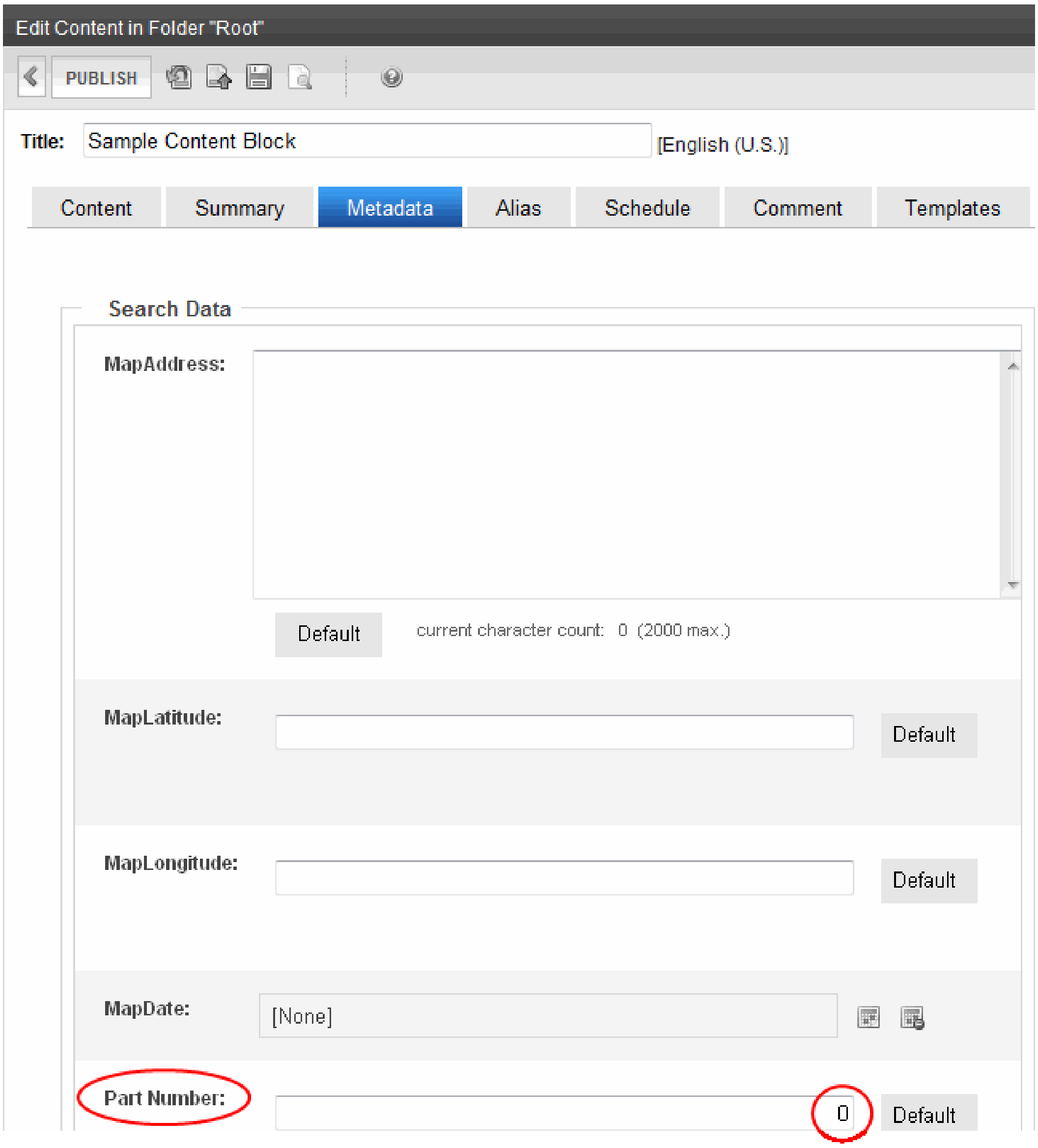
3. Click **Save**.
4. Add the definition to all applicable folders by editing the properties of the folder and checking the metadata boxes on the Metadata tab and clicking **Update**.
5. Edit the metadata on content items in the folder and click **Save** or **Publish**.
6. Add a metadata server control to every Web form (.aspx page) on which the content will appear. See the Metadata server control.

Creating and deploying a Search tag definition

Searchable metadata allows content to be found by a search phrase that you add to the content’s metadata. The content is typically found by either a website search or a Workarea search.

For example, each DMS document has a unique part number. To let site visitors and Ektron users locate the document by its part number, you need to:

a. Add a custom metadata definition called **Part Number**, and specify a type of number.
b. Add that metadata definition to all folders that contain the documents.
c. When you add a document, click its **Metadata** tab, and insert the part number for the document. Then, anyone searching your website can find that document by its part number.



1. Complete the steps in *Adding a metadata definition* on page 756.
2. Complete the Searchable Property description fields.
   - **Publicly Viewable**. If you check the box, site visitors can find the metadata value when searching your website. Otherwise, site visitors cannot find the metadata value.

> **NOTE:** Regardless of whether this is checked, content to which this metadata value is applied can be found using the Workarea’s Search Content Folder screen > **Advanced Search** tab > metadata field. Also, if you have set up an Ektron search (using the Solr or SharePoint provider), Publicly Viewable and Searchable metadata is searchable if you use property queries.

- **Style**. Select the style of the response field from these choices (available in a drop-down list). You are specifying the *type* of information that a user adding searchable properties to content will enter.
    - **Text**. The user enters free text to describe the content.
    - **Number**. The user enters a number to describe the content.
    - **Byte**. 1 byte. 0 through 255 (unsigned)
    - **Double**. 8 bytes. -1.79769313486231570E+308 through -4.94065645841246544E-324 † for negative values; 4.94065645841246544E-324 through 1.79769313486231570E+308 † for positive values
    - **Float**. (single-precision floating-point) 4 bytes. -3.4028235E+38 through -1.401298E-45 † for negative values; 1.401298E-45 through 3.4028235E+38 † for positive values
    - **Integer**. 4 bytes. -2,147,483,648 through 2,147,483,647 (signed)
    - **Long**. 8 bytes. -9,223,372,036,854,775,808 through 9,223,372,036,854,775,807 (9.2...E+18 †) (signed)
    - **Short**. 2 bytes. -32,768 through 32,767 (signed)
    - **Date**. The user enters a date to describe the content.
    - **Yes or No**. The user answers yes or no to describe the content. For example, if the content describes automobile parts, the user could select **Yes** to include new and used parts, or **No** to search for new parts only.
    - **Select from a list**. The user picks a from a list to describe the content.
    - **Multiple selections**. The user selects an item from a drop-down list.
- **Default**. If desired, enter the most common response to this definition. The default value is automatically applied to content within folders to which this definition is assigned. While editing content that uses this definition, a user can change the default value if desired.

3. Click **Save**.
4. Add the definition to applicable folders by editing folder properties, checking boxes on the **Metadata** tab, and clicking **Update**.

> **NOTE:** Child folders inherit from their parent folders by default. So you only need to apply metadata to the top-level folder, not all folders beneath it. See also: *Inheriting metadata by folder* on page 765

5. Edit the metadata on content items in the folder and click **Save** or **Publish**. The next time you visit the Workarea search screen, you will see the new field.

6. If you want site visitors to use this field when searching your website, ask your developer to use the Framework API's `Ektron.Cms.Search.SearchMetadataProperty` class.

Creating and deploying a related content definition

You can set up a Web page so that whenever a source content item appears, related information appears next to it by associating the following types of content with a content item.

- another content item
- a collection
- a list summary
- a menu
- a user
- image, hyperlink, or file library item

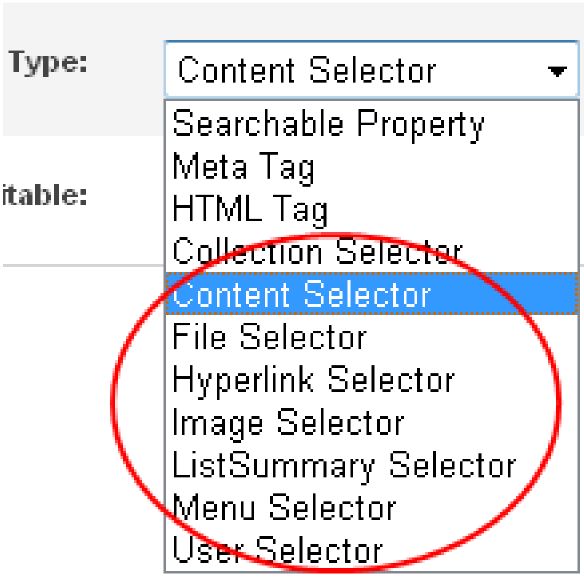
For example, your website sells motorcycle helmets. On a page that shows a particular helmet, the left column lists a collection of motorcycle drivers who wear that helmet. Another example might show the profile of a user when a certain content item appears.

Related content lets you connect a content item with several types of related content (see list above), and is associated with a content item, not a Web form. For example, you can display a library image of the company logo on a page whenever content in a certain folder appears. For content in a different folder, a different logo could appear.

NOTE: This capability is similar to the MetadataList Server control except that MetadataList shows a link to *every* content item with a selected term in the keywords or title. Also, a MetadataList is associated with a Web form (.aspx page), not a content item.

To create and deploy a related content definition:

1. Complete the steps in *Adding a metadata definition* on page 756. Choose a type that ends in **Selector**.



2. Add the definition to all applicable folders by editing folder properties, checking metadata boxes on the **Metadata** tab, and clicking **Update**.
3. Edit the metadata of content in the folder (associating related content) and click **Save** or **Publish**. The next time you visit the Workarea search screen, you will see the new field.
4. Have your Web developer add code to each page on which the related item appears.

IMPORTANT: If you are using **Collection Selector** type, only users with permission to work with collections can select a collection. Also, if you are using **Image, Hyperlink or File Selector** type, only users with permission at least read-only Library permissions can select a library item. See also: *Managing folder and content permissions* on page 160.

Changing the style of a metadata definition

If you create a metadata definition, assign it to a folder, then users apply metadata information to content, the information takes on the characteristics of the metadata definition. For example, if the metadata is **title** and its type is **HTML tag**, this is how it appears in the Web page's source code.

```
<title>CMS Developer</title>
```

If you later change its type from **HTML tag** to **Meta**, the following occur:

- metadata to which the definition is *already assigned* maintains the previous style definition. For example, <title>CMS Developer</title>.
- *new* content that uses the metadata definition is assigned the new style. For example, <meta name="title" content="CMS developer">.

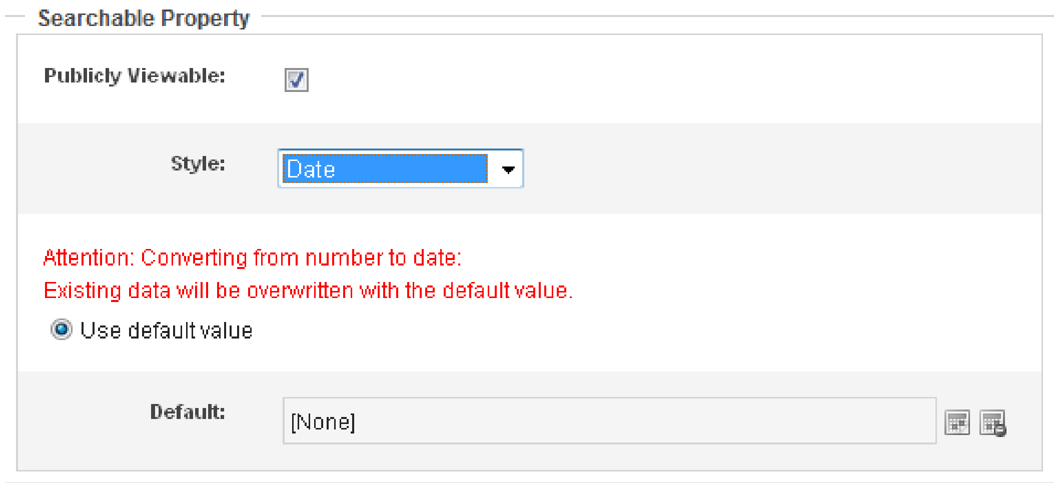
NOTE: For information about metadata, see The Meta Element.

When you change the style of searchable property type metadata, Ektron attempts to maintain data stored in content that uses the definition. For example, if data style was number but you change it to text, the number stored in that metadata definition is converted to text and maintained in the content that uses it.

However, sometimes Ektron cannot maintain the data when you change the style. For example, if you change a metadata definition style from number to date, Ektron cannot convert those styles, in which case any data stored in metadata definitions is lost. Data is maintained in the following conversion scenarios; data is lost for other conversions.

- **Text**. Data is maintained when converted to Number or Date.
- **Number**. Data is maintained when converted to Text.
- **Date**. Data is maintained when converted to Text.
- **Boolean**. Data is maintained when converted to Text.
- **Single Select**. Data is maintained when converted to Text or Multiple Select.
- **Multiple Select**. Data is maintained when converted to Text.

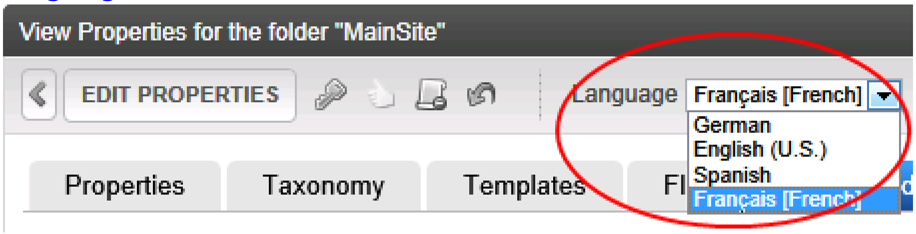
When you change metadata definition's style, the screen lets you use existing data (if possible) or the default value. Following these choices is a field that lets you define a default value. If you want to replace existing data, select **Use default value** and enter the new value in the **Default** field. If the data is convertible and you want to maintain existing data if possible, select **Use existing data if possible, else default**. Then, enter a default value.

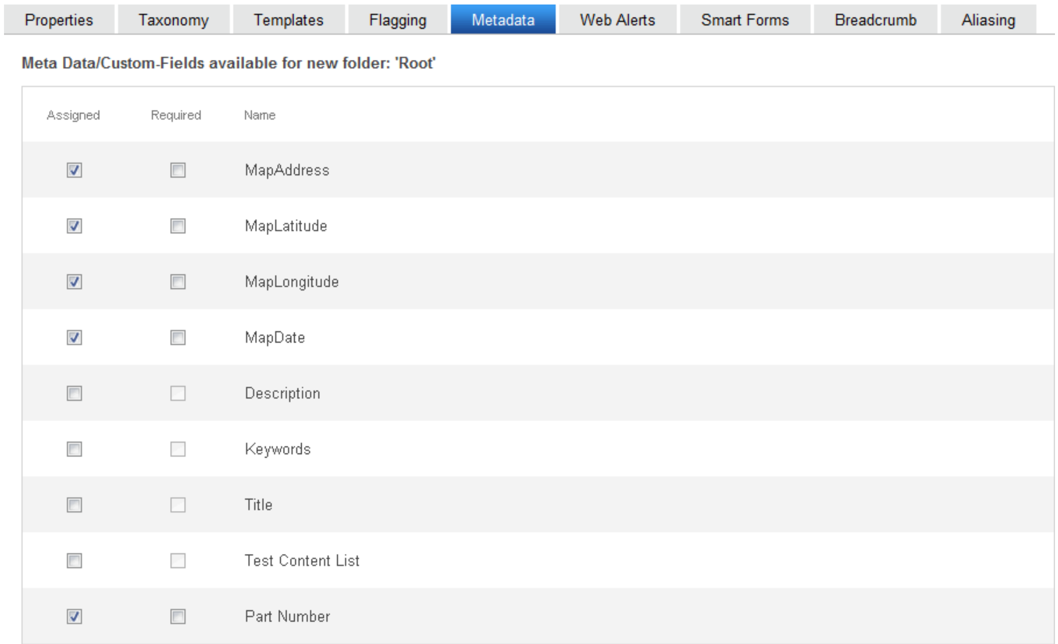


Assigning metadata to a folder

After you create a metadata definition, assign it to folders whose content will use it. To do that, use the folder's properties screen's **Metadata** tab > **Assigned** boxes to assign metadata definitions to a folder.

NOTE: Only metadata definitions created for the language in which you are viewing the folder are available. Use the language drop-down to choose a language.





Requiring users to assign metadata to content

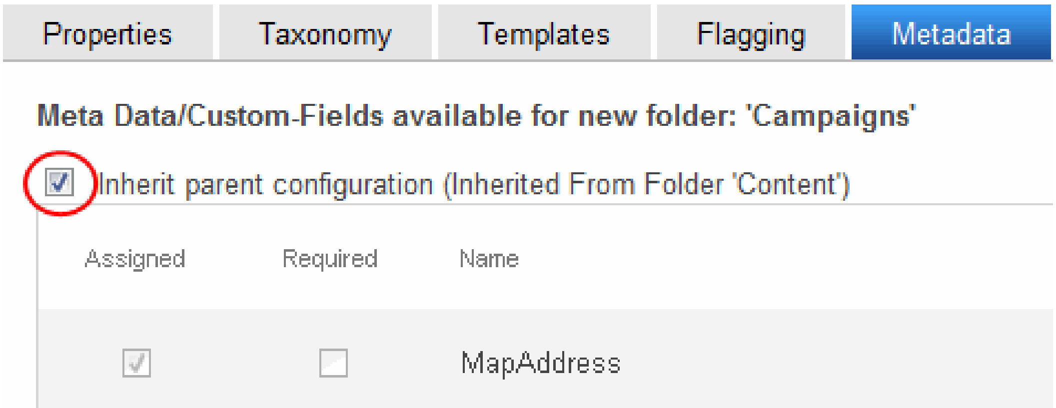
You can require a metadata value to be inserted before content can be saved (see the **Required** checkboxes in the illustration above). If applied, the requirement is enforced when content is added or edited. Also, on the Edit Content screen's **Metadata** tab, a required metadata field has a red label and includes an asterisk (*).

NOTE: If a default value is supplied for a required metadata field, that value is used when the content is saved. The user is not prompted to enter a value.

Inheriting metadata by folder

Each folder can inherit metadata fields from its parent folder or have a unique set of them. The information includes metadata definitions that are *assigned,* and which are *required*. For example, you could assign the top folder (Content) all metadata definitions, while you assign the Contacts folder (directly below it) none.

On every folder property's **Metadata** tab, use the **Inherit Parent Configuration** check box to determine if metadata definitions are inherited from the parent folder or unique. By default, **Inherit Parent Configuration** is checked, meaning that metadata definitions are inherited. If you uncheck **Inherit Parent Configuration**, you can change the settings as desired.



Adding metadata to content

When a user creates or updates content, he can define its metadata within the assignments specified for its folder. Default metadata values are applied without user intervention.

PREREQUISITE

- Content status must be Published, Checked In, or Checked Out by you.
- A metadata definition has been created in the content's language *Adding a metadata definition* on page 756.
- That definition is assigned to the content's folder See also: *Assigning metadata to a folder* on page 764.

To enter or edit content's metadata:

1. Access the Edit Content screen for the content whose metadata you want to enter or edit.
2. Click the **Metadata** tab. The Edit Metadata screen opens with the current metadata displayed.
3. Edit the metadata.
   - Required field labels are red and marked with an asterisk (*). You must place at least one response before you can save.

- Your system administrator may prevent you from editing a field. In this case, the field has a gray background, and you cannot place the cursor there.
- Fields may appear in 2 columns, labeled **Not Included** and the other **Included**. In this case, the system administrator provides a list of terms that you can apply to the content. You can select terms from the list or enter free text. Move terms between lists by clicking **Add** and **Remove**.
- You may see a list of terms in one box, and a field labeled **Text** above it. You can:
    - add a new term by typing it into the **Text** field and clicking **Add.**
    - remove any term by selecting it and clicking **Remove**.
    - modify any term by selecting it. It appears within the **Text** field, where you can change it. Then, click the **Edit** button.
    - restore the terms to default settings by pressing the **Default** button.
    - change the order of terms by selecting one then pressing the up and down arrows.
- If *related content* metadata is available for the content, its name appears followed by **None Selected (ID)** **ChangeClear**. Click **Change** to display a window of choices. For example, if the related content type is a collection, all collections appear in the popup. Select the appropriate data for this content. Selected items appear in the bottom of the screen. You can reorder them by selecting an item then clicking the up and down arrows. To remove items from the bottom of the screen, select them and click **Delete** ( ). If the related content type is content item or library image, hyperlink, or file, a window appears when you click **Change** where you can select related content.
    a. Select a folder from the left frame.
    b. Double click the related-content item from the top right frame. The item appears in the lower right frame
    c. When all items are in the lower right frame, click **Save**.
- If default metadata values area defined, you can click **Default** at the bottom of each field to restore it.

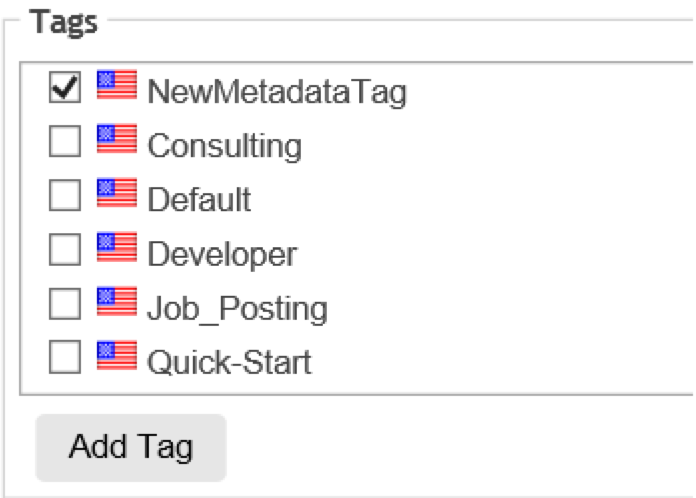
4. Click **Save**. The View Content screen reappears. The content is now in a checked out state to you. For the changes to take effect on the website, check in the content and submit it to the workflow. See also: *Approving content for publication* on page 689

Applying content tags

Use content tags to apply terms by which you want users to find content when the terms are not in the content. The search can use the tags to find content.

Default content tags appear on the **Metadata** tab of every content item. Check any tag that you want to apply to a content item. You can also create a new tag and apply it to a content item. You cannot reapply that tag to other content.

When you display metadata tags, the tags are listed alphabetically. However, when you add a new tag, it is listed at the top of the list until you display the list again.



Assigning an image to metadata

You can assign an image to any content item's metadata from a standard field that is available to every content item; it is not a definition in the Metadata fields. Use the Image field to identify an image that can be retrieved by Ektron Markup Language's (EkML) `[$Image]` and `[$ImageThumbnail]` variables.

For an example of using Image data, assume that your site promotes a soccer team. A list summary shows every player on the team. Next to each player's name is an image.

Applying Simple Dublin Core metadata

Simple Dublin Core is a set of fifteen standard names for metadata fields designed to cover the most useful items of information on a document. From the Dublin Core site FAQ: "Dublin Core metadata provides card catalog-like definitions for defining the properties of objects for Web-based resource discovery systems." For more information, refer to the Usage Guide: Using Dublin Core.

To generate Dublin Core metadata, set the `GenerateDublinCore` property to True. This creates 7 of the fifteen Dublin Core metadata fields. These fields are automatically filled with the information from the equivalent Ektron property. The following list shows the 7 fields and their Ektron equivalent. For more information on the Metadata Server Control, see the Metadata server control.

- **DC.title**. Content block title
- **DC.description**. Plain text version of a content summary
- **DC.contributor**. Content block last editor name
- **DC.date**. Content block last edit date
- **DC.format**. "text/html"
- **DC.identifier**. URL of current page (from ASP.NET Server.Request object)

- **DC.language**. CMS language cookie / current site language, expressed as a .NET System.Globalization Culture Name

To fully comply with the Simple Dublin Core metadata element set, the administrator must create the remaining 8 Dublin Core fields as standard Ektron Metadata definitions and apply them to all Ektron folders. Next, Ektron users complete the appropriate values for each content block.

IMPORTANT: When creating Dublin Core metadata fields in the Metadata section of the Workarea, you do not need to create the first 7 fields above. In addition, the names of the fields you create must match the names in the following list. For example, in the name field, enter "DC.subject". **DC** identifies it as Dublin Core metadata.

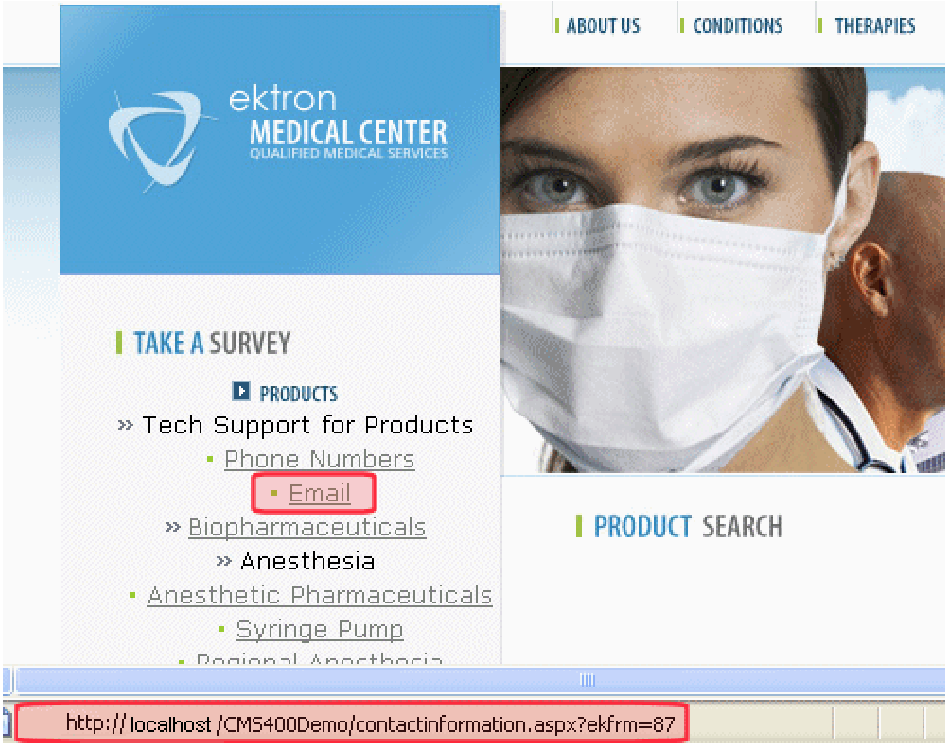
These descriptions are from the Dublin Core Metadata Initiativesite.

- **DC.subject**. The topic of the content of the resource. Typically, a subject is expressed as keywords, key phrases, or classification codes that describe the topic of the resource.
- **DC.type**. The nature or genre of the content of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content.
- **DC.source**. A reference to a resource from which the present resource is derived. For example, DC.source="Image from page 54 of the 1922 edition of Romeo and Juliet"
- **DC.relation**. A reference to a related resource.
- **DC.coverage**. The extent or scope of the content of the resource. Coverage typically includes spatial location (a place name or geographic co-ordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Examples: DC.coverage="1995-1996", DC.coverage="Boston, MA", DC.coverage="17th century" or DC.coverage="Upstate New York".
- **DC.creator**. An entity primarily responsible for creating the content.
- **DC.publisher**. The entity responsible for making the resource available.
- **DC.rights**. Information about rights held in and over the resource. Typically, a Rights element contains a rights management statement for the resource, or reference a service providing such information.

Working with templates

While setting up your Ektron website, you create templates for your Web pages. A template typically includes page headers, footers, and placeholders for content, forms, summaries, and other page elements; a place to display content items from content lists, menus, collections, and so on through hyperlinks.

The following image shows a template where the top of the screen contains headers that appear on several pages. This image also shows that, when a user selects the **Email** hyperlink, content item (ID 87) displays within the `contactinformation.aspx` template. A developer can modify content within these areas.



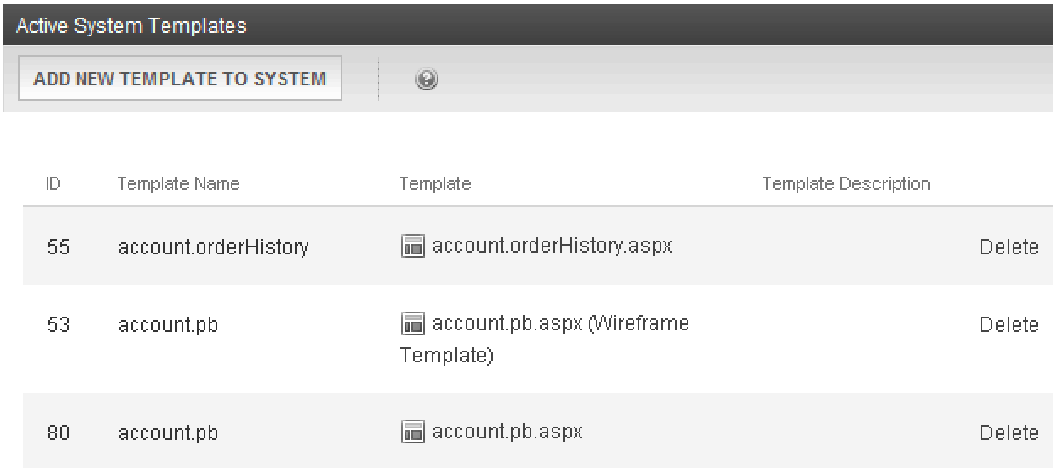
NOTE: To learn more about creating templates, see Setting Up a Template.

Declaring a template

PREREQUISITE

> You are a member of the Administrators group or assigned to the Manage Members for Role: Template Configuration screen. See also: *Defining roles* on page 1464.

After creating templates, declare them within Ektron. To do this, go to the Active System Templates screen, available from **Settings > Configuration > Template Configuration**.


Active System Templates

ADD NEW TEMPLATE TO SYSTEM

ID	Template Name	Template	Template Description	
55	account.orderHistory	account.orderHistory.aspx		Delete
53	account.pb	account.pb.aspx (Wireframe Template)		Delete
80	account.pb	account.pb.aspx		Delete

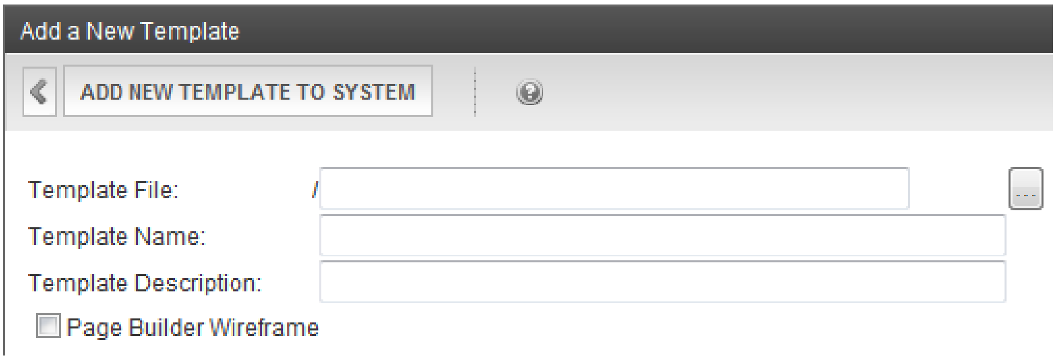
From this screen, you can add new templates, or delete or update existing ones.

Adding a template

PREREQUISITE

A developer created the template in Visual Studio. See also: [Creating a Template in Visual Studio].

1. Go to **Workarea > Settings > Configuration > Template Configuration**.
2. Click **Add New Template to System**. The Add a New Template screen appears.



3. Enter the path to and name of the new template or click the ellipsis button (...) and go to it.
4. Enter a name and description for the template.
5. If you want to let content authors use this template within the Content Dashboard, check **Enable Toolbar**. See also: *Managing content from the Content Dashboard* on page 603.
6. To allow this template be used to create PageBuilder pages, check **Page Builder Wireframe**. See also: *Creating a PageBuilder page from your website* on page 993.
7. To learn about the **Specify Templates for Device Groups** section, see *Setting*

up a mobile template on page 461.

8. Click **Add New Template to System**.

Deleting a template

You can only delete a template if it is not assigned as any folder’s default template. If you choose a template that is assigned as a default, a screen tells you why you cannot delete it and lists the folders for which it is the default.

To delete a template:

1. Go to **Workarea > Settings > Configuration > Template Configuration**.
2. Click **Delete** (✖) in the appropriate template row.

Updating a template

The **update** procedures lets you change all references from an old to a new template. For example, your old template is named `MyTemplate.aspx`. You can want to replace all references to it to `Updatetemplate.aspx`.

1. Within the Workarea, go to **Settings > Configuration > Template Configuration**.
2. Click the template that you want to update. A new screen appears.
3. Choose the new template file. You may also update the name or description.
4. Click **Update Template**.
5. Update that content's quicklink in the library. See also: *Working with library files* on page 680.

NOTE: This screen has additional fields when mobile device detection is on and mobile configurations exist. For more information, see *Using mobile templates* on page 460

Assigning a template to a folder

Each folder must have at least one template, and one template must be chosen as the default. The list of available templates is managed through the Active System Templates screen. See *Adding a template* on the previous page.

If you change a folder’s default template, existing template assignments remain, but new content added or moved to the folder assumes the new default template.

Template inheritance

By default, folders below the root folder inherit templates from their parent. However, you can assign unique templates to a folder by overriding the inheritance. To do this, go to the Edit Folder Properties screen and uncheck the **Inherit Parent Configuration** box. If you break inheritance, the inherited templates are assigned to the folder. You can then remove unwanted templates or add new ones.

Adding a template to a folder

PREREQUISITE

At least one template is defined in the Active System Templates screen.

1. In the Workarea, go to the folder to which you want to apply the template.
2. Choose **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Templates** tab.
5. Uncheck **Inherit Parent Configuration** (if checked).
6. Click the down arrow next to **Select Template**.
7. Choose the template to apply to this folder.
8. Click **Add** ( ).
9. Click **Update**.

Removing a template from a folder

- If you try to delete a template that is the default for a folder, you are notified that you must assign a new default before you can delete it.
- If you try to delete a template that is assigned to a content block, you are notified via the following message: **If you wish to continue and delete this template, the above content will be set to their parent folder's default template. Do you wish to continue?**

1. In the Workarea, go to the folder to which you want to apply the template.
2. Choose **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Templates** tab.
5. Uncheck **Inherit Parent Configuration** (if checked).
6. Click **Remove** that appears on the same row as the template
7. Click **Update**.

Assigning a template to content

A folder’s default template is automatically applied to all content in the folder. However, you can change a content item’s template to any of those assigned to the folder.

The template assigned to the content is used whenever a hyperlink is created to it.

PREREQUISITE

At least one template is defined in the Active System Templates screen.

1. In the Workarea, go to a content item to which you want to apply the template.
2. From the content's View menu, choose **View Properties**. The View Content screen appears.
3. Click **Edit**.
4. Click the **Templates** tab.

5. Click the arrow next to **Template:** and choose a template to apply to this content.
6. Click **Publish**.

Working with HTML forms

Ektron provides powerful online form capabilities, letting you create an online dialog with visitors. Anyone can create and deploy Web forms. A form has the following components.

- **Form** (title, ID number, whether the form data is sent as email, and/or saved to a database, and so on.)
- **Content** information (title, start and/or end date, status, postback message, and so on.)
- **Form fields** (text field, password field, text area, hidden text, choices, checkbox, select list, calendar, submit button, and so on.)

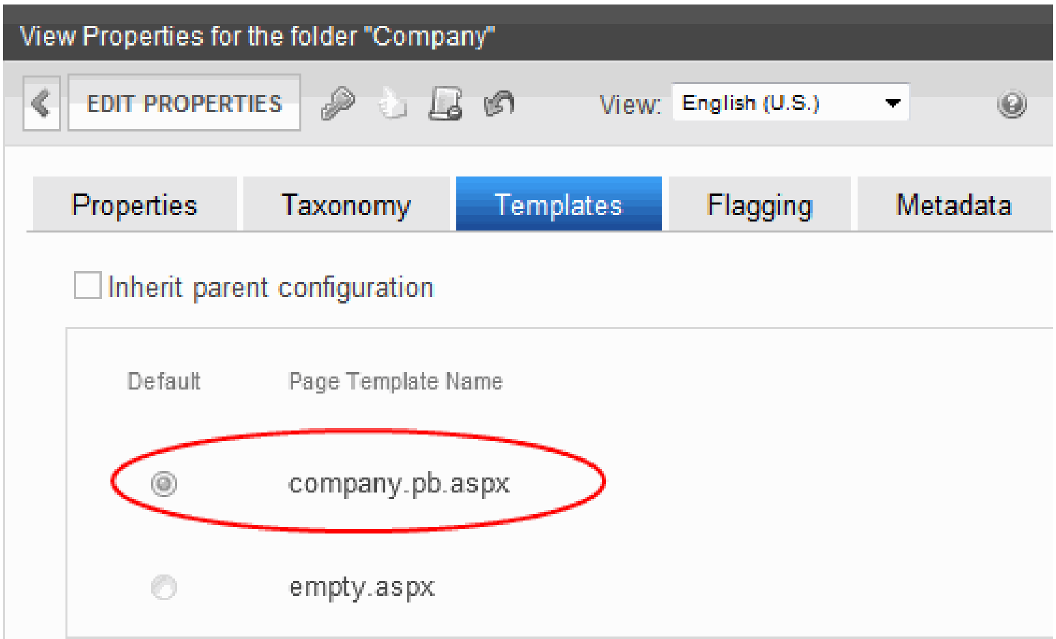
By default, form permissions are inherited from a form’s folder. To customize permissions for any folder that contains forms, access the corresponding folder under Content and assign permission as described in *Managing folder and content permissions* on page 160.

Similar to content, users in the administrator user group have full control over form features. You *must* be a member of the administrator group to add, edit, or delete a form, or assign content to a form. You may also perform all actions on a form’s content. Users who are not members of the administrator user group can add, edit, delete, and restore form content if granted these permissions for the content folder or item.

Creating a form

Ektron provides sample forms to start with and then customize. Forms are saved to a database by default, but not emailed. To change either setting, use the Edit Properties screen.

You should only create HTML forms in a folder whose template uses a FormBlock or Poll server control. For example, in the OnTrek sample site, the Company folder uses the `company.pb.aspx`. template.



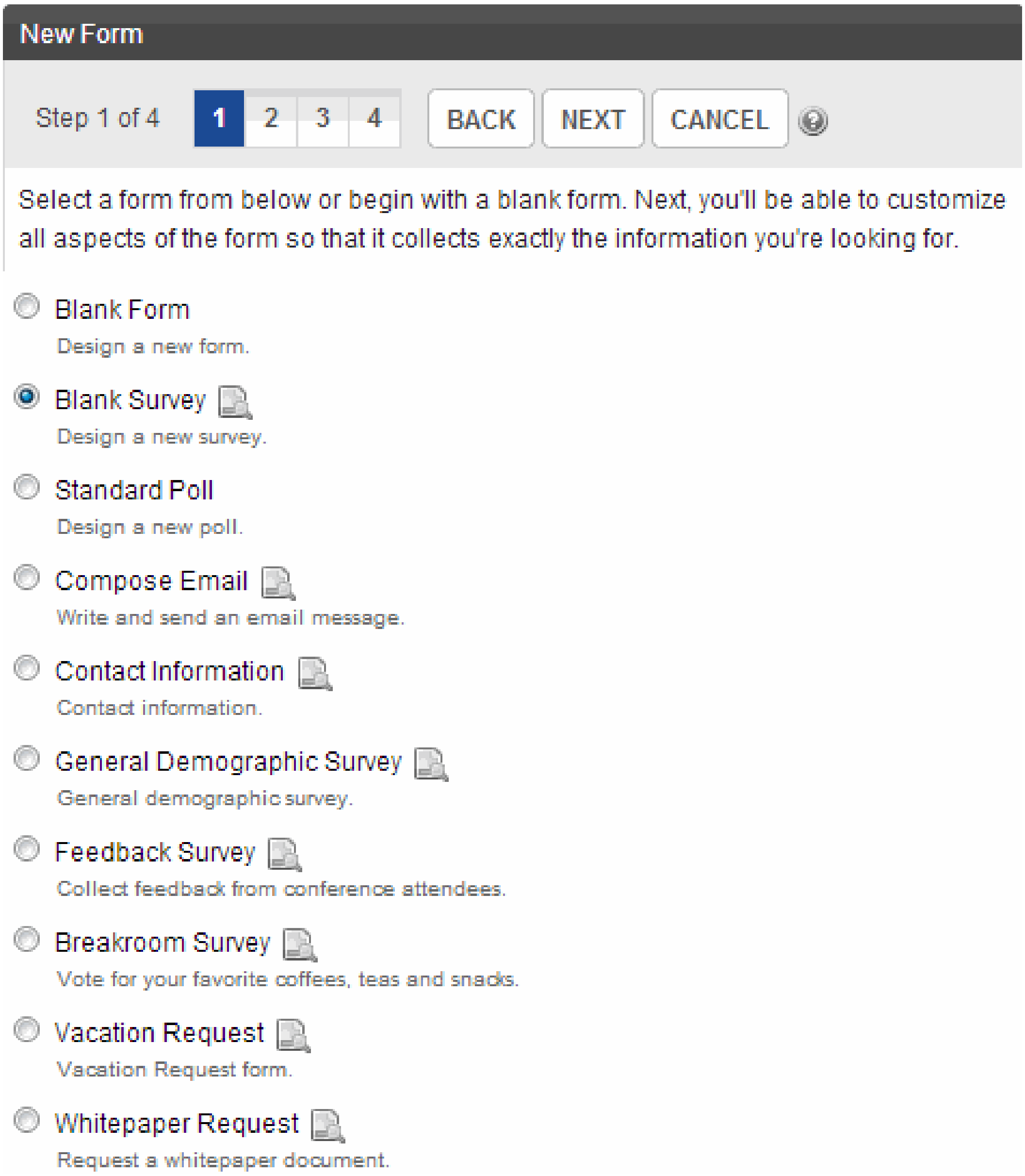
You can modify this template as needed or create a form template and assign it to any folder through its Folder Properties screen. Because folders inherit properties from their parent folder by default, new folders created under a parent folder use the correct template. Of course, you can break inheritance and assign a custom template for any folder. Consult with your Ektron administrator about the folders in which you should create forms.

To create a new form:

NOTE: You can also create a new edition of a form in another language by copying an existing form and translating it. For more information, see *Translating content into another language* on page 640.

1. From the Workarea, go to the folder in which you will create the form.
2. From the **View** menu, click **Language**, and select the language in which to create the form.

3. Click **New** > **HTML Form/Survey**. The New Form screen appears.



4. Choose the form that you want to begin with. You can click **preview** ( ) next to any sample form to see it before choosing it. Select a sample that most closely matches the form you want to create. After creating the form, you can add/remove fields, modify possible responses, and so on.
5. Click **Next**.
6. Enter or edit the form’s **Title** and **Description**.
   - **Title**. used to reference the form within the Workarea (required)
   - **Description**. an extended description of the form
   - **DXH Mapping**. (Appears if DXH is installed and enabled.) Check this box if you want to map this form to DXH.

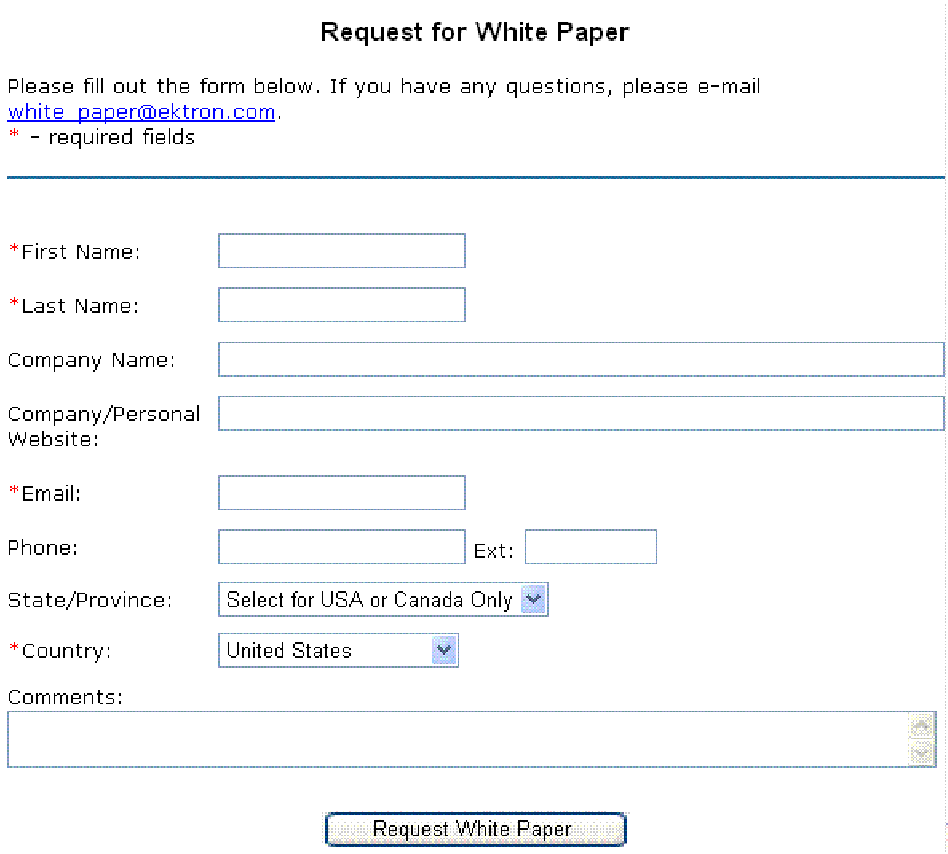
7. The next screen lets you assign a task to a user or user group. If you do, a task will be created every time a site visitor submits this form. See *Assigning a task to a form* on page 813.
8. A new screen lets you determine what happens after a site visitor completes the form. The choices are:
   - **Display a message**. See *Choosing a format to display form data* on page 809.

     IMPORTANT: If your form/survey/poll uses either **Redirect** option, your Web developer must use a FormBlock server control to display this form on a Web page. The Web developer cannot use a Poll server control when redirecting to an action page.

   - **Redirect to form data to an action page**. See *Redirecting form data to an action page* on page 805.
   - **Report on the form**. See *Letting site users see the form results* on page 807.
   - **Redirect to a file or page**. Identify a file or a page on your website that is launched when the visitor completes the form.
     - sample file. a white paper (PDF format)
     - sample page. prompts visitor to download your product
9. After completing the form information, you enter its content.

Creating a form's content

Here is an example of form content that you can create.



Some fields are required, and some provide a drop-down list of choices.

The final screen lets you arrange the form fields. Then, add a button that lets the user submit the data.

NOTE: The form can also contain explanatory text, lines, images, and so on. To lay out fields in columns, insert a table and place the fields within table cells.

The following list explains each field type you can enter.

- **Checkbox**. User's response is either checked or unchecked; see *Inserting a checkbox field* on the next page.
- **Text**. Free text field; user cannot format text; see *Inserting a text field* on page 785.
- **Choices**. Several choices appear on screen. User checks any number of appropriate responses. See *Inserting a Choices field* on page 781.
- **Calendar**. Lets user insert a date by clicking a calendar; see *Inserting a Calendar field* on page 783.
- **Insert Button**. Button with no text. You can easily add text to it. When a site visitor completing the form presses this button, the data on the screen is submitted to your Web server. See *Inserting buttons* on page 794.

- **Insert Reset**. Button with **Reset** as its text. When a site visitor completing the form presses this button, the form's field values are set to their state when the form first loaded. See *Inserting buttons* on page 794.
- **Insert Submit**. Button with **Submit** as its text.When a site visitor completing the form presses this button, the data on this screen is submitted to your Web server. See *Inserting buttons* on page 794.

Next, click **Save** and **Submit** or **Publish**. After you complete and save the form, it may need to go through the workflow process. When that is complete, add it to the site by assigning it to a page template.

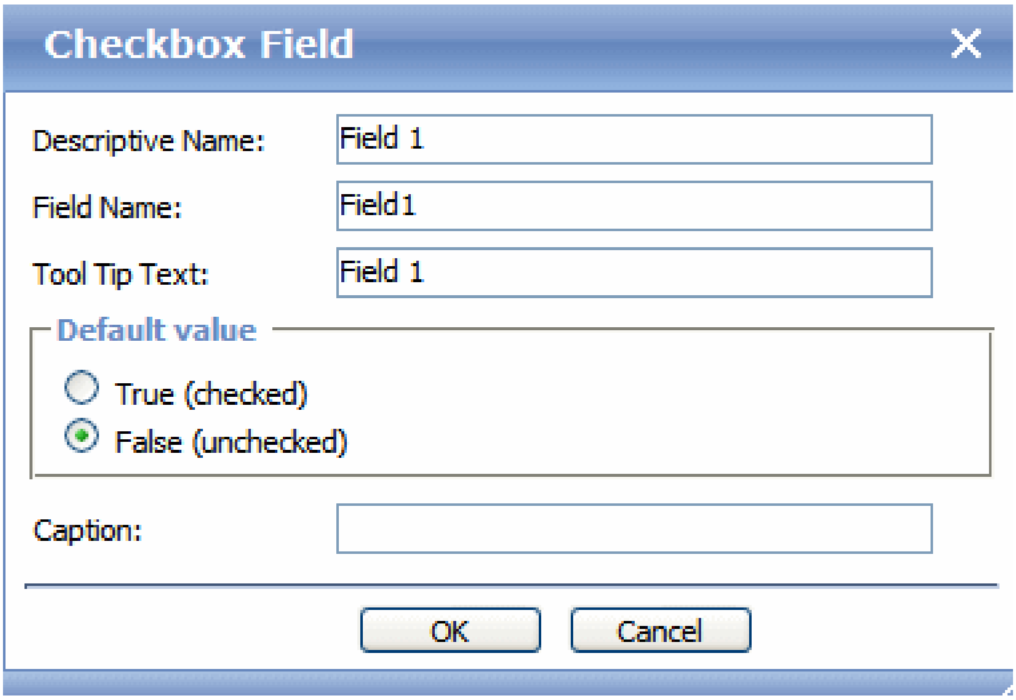
Inserting a checkbox field

A Checkbox field is one character wide and is checked or unchecked. For example:

Check if you are over 65 ☐

To insert a checkbox field:

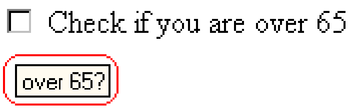
1. Place the cursor where you want the check box field to appear.
2. Click the Checkbox field button (☑). A dialog box appears.



- **Descriptive Name**. Enter a descriptive name for this checkbox.
- **Field Name**. Enter a name for this checkbox. This text identifies the field in the database and in email (if the form is mailed).

NOTE: You cannot enter spaces nor most special characters (!@#$%^&*()+=<>,.:;'"{}[]|`~) into this field. If you do, they are replaced by underscores.

- **Tool Tip Text**. Enter text that appears when a site visitor hovers the cursor over this field (circled).



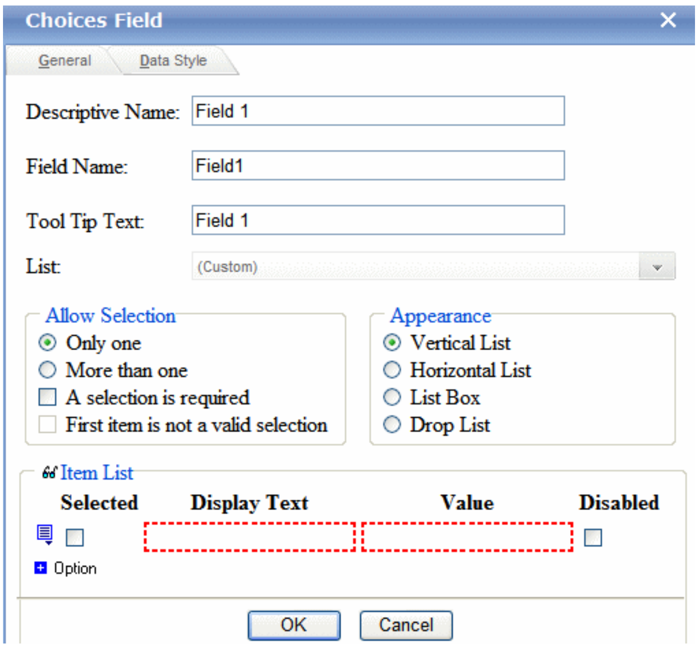
- **Default value**. If you want this field to be checked when the screen first appears, click **True**. Otherwise, click **False**. A site visitor can change the default value while completing the screen.
- **Caption**. Enter text to guide the user's response to this field. The caption appears on the screen to the right of the checkbox. To continue the above example, the caption would be **Check if you are over 65**.

Inserting a Choices field

Use a Choices field when you want a site visitor to select from a predetermined list. You can let a site visitor select only one or more than one choice. You can also determine the list's items and appearance.

To insert a choices field:

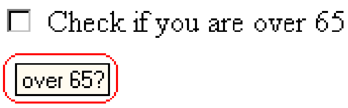
1. Enter a field label. For example, **Country**.
2. Click **Choices** ( ). The following dialog appears.



- **Descriptive Name**. Enter a description of the field. This text describes the field on form reports.
- **Field Name**. Enter a name for this field. This text identifies the field in the database and in email if the form is mailed.

NOTE: You cannot enter spaces nor most special characters (!@#$%^&*()+=<>,.:;'"{}[]|`~) into this field. If you do, they are replaced by underscores.

- **Tool Tip Text**. Enter text that appears when a site visitor hovers the cursor over this field (circled).

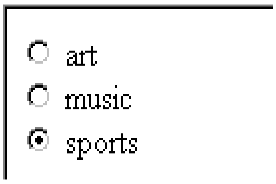


- **List**. One of the following:
  - **Custom**. You create your own set of choices. Use the **Item List** area to do this.
  - **Languages**. A standard list of languages
  - **Countries**. A standard list of countries
  - **U.S States and Territories**. A standard list of United States of America states and territories
  - **Canadian Provinces**. A standard list of Canadian provinces
  - **Age Ranges**. A standard list of age ranges
  - **Numeric Ranges**. A standard list of numeric ranges
  - **Years**. A standard list of years
  - **Gender**. Male or female
  - **Marital Status**. A standard list marital statuses
- **Allow Selection**. Click **More than one** to let a site visitor select more than one item for this field. Otherwise, click **Only one** to limit the user to one choice.
- **A selection is required**. Check this box if the user must select at least one item.

  First item is not a valid selection. You can use the first list item to prompt the user to make a selection instead of being a valid response. For example, the first item may say **Select from the list**. To do so, check this box. If you do, the site visitor must choose any selection except the first item. If the site visitor tries to file the screen without choosing a different item, this error message appears:**First item is not a valid selection.**

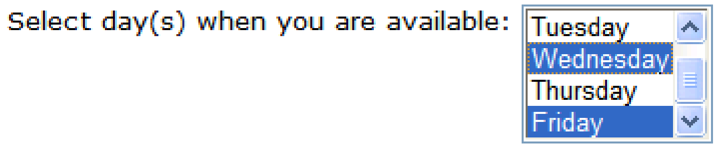
  This option is only available if **Appearance** is set to **Drop List**.

- **Appearance**. One of the following:
  - **Vertical List**. arranges choices vertically

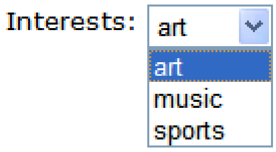


  - **Horizontal List**. arranges the choices horizontally

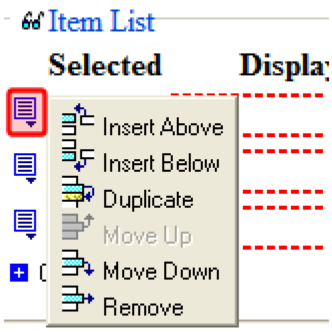
- List Box. displays all choices in a box. If more than 4 choices are available, the user scrolls to see additional options.



- **Drop List**. displays all choices in a drop-down list. When the user clicks the down arrow, all entries appear.



- **Item List**. This section of the screen displays the list items. It is only editable if the list type is Custom.
  - **The Context-Sensitive Menu**. Buttons to the left of each item display a menu. The menu lets you remove items, rearrange them, and insert additional items anywhere on the list.

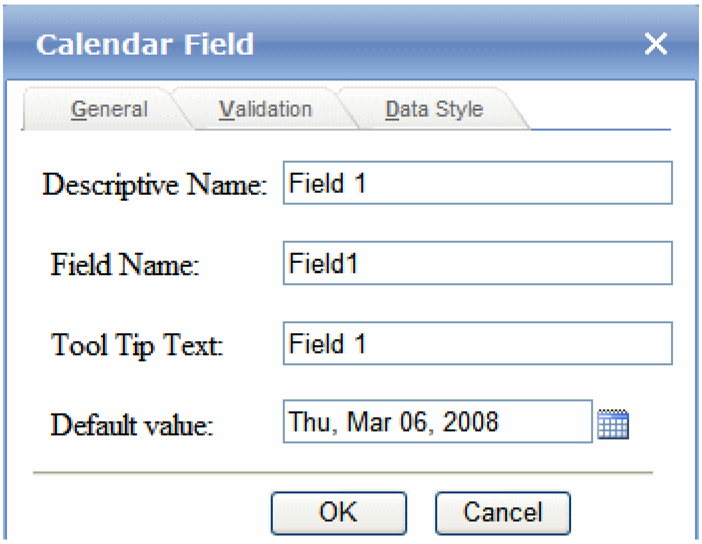


  - **The Selected Box**. Place a check in the box of any item to be checked by default on the data entry screen. If you do, the user can accept the default or uncheck the item by clicking in the checkbox. Note that if **Only One** is selected under **Allow selection** (above), only one item can be selected. If the **Appearance** is set to Drop-Down list, this value is ignored.
  - **Display Text**. Enter text to describe this item on the data entry screen.
  - **Value**. Enter the value that is collected when the site visitor selects this item. For example, if **Interests** appears in the Name field, and you want `music` to be collected when the data entry user selects this item and saves the page, enter **music** here.
  - **The Disabled Checkbox**. Check the box next to any selection that you want to disable. If you do, the option appears on the form but the user cannot select it.
  - **Option**. Click this button to add a row to the bottom of the list.

Inserting a Calendar field

To insert a field that lets a site visitor select a date, use a Calendar Field. To do that:

1. Enter a field label. For example, **Expiration Date**.
2. Click **Calendar** field ( ). The following dialog appears.

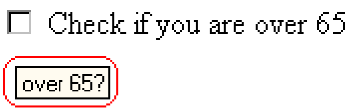


Calendar Field dialog—General tab

- **Descriptive Name**. Enter a description of the field. This text describes the field on form reports.
- **Field Name**. Enter a name for this field. This text identifies the field in the database and in email if the form is mailed.

  NOTE: You cannot enter spaces nor most special characters (!@#$%^&*()+=<>,.:;'"{}[]|`~) into this field. If you do, they are replaced by underscores.

- **Tool Tip Text**. Enter text that appears when a site visitor hovers the cursor over this field (circled).

- **Default value**. If you want to set a default date, enter it here. The site visitor can change the default value while completing the screen.
- **Validation**. Select the kind of validation to apply to this field. The choices are:
  - **No validation**. response is not checked
  - **Cannot be blank**. Response is required. The format of the response is not checked. If you assign **Cannot be blank**, the field is surrounded by red dashes when it appears on your website.
  - **Custom**. See *Custom validation* on page 789
- **Error Message**. Enter text that appears if a site visitor's response does not satisfy the validation criterion. For example, if the validation criterion is **Cannot be blank**, the error message could be **Please enter a response**.

By default, the error message is the same as the validation criterion. Use this field to customize its text.

NOTE: You can only enter double-byte characters if your Windows settings include that language. If you enter characters that are not in a language defined in your Windows settings, question marks (?) appear instead of the characters.

Calendar Field dialog—Validation tab

- **Descriptive Name**. Enter a description of the field. This text describes the field on form reports.
- **Validation**. Select the kind of validation to apply to this field. The choices are:
    - **No validation**. response is not checked
    - **Cannot be blank**. Response is required. The format of the response is not checked. If you assign **Cannot be blank**, the field is surrounded by red dashes when it appears on your website.
    - **Custom**. See *Custom validation* on page 789
- **Message**. Enter text that appears on the screen if the site visitor's response does not satisfy the validation criterion. For example, if the validation criterion is **Cannot be blank**, the error message could be **Please enter a response**. By default, the error message is the same as the validation criterion. Use this field to customize it.

NOTE: You can only enter double-byte characters if your Windows settings include that language. If you enter characters that are not in a language defined in your Windows settings, question marks (?) appear instead of the characters.

Calendar Field dialog—Data Style tab

These are the same as *Creating a form* on page 775

Inserting a text field

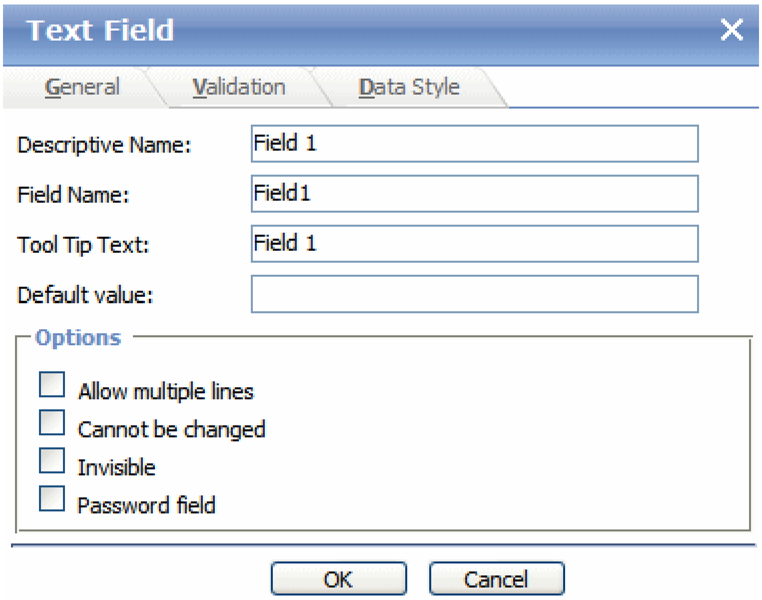
Use a text field when you want the user to enter a free text response, or to display text on the screen. There are many variations you can apply to such a field, such as

- a default value
- text can be read-only or hidden
- the field can expand to accommodate user input
- *validation*, requiring user input to meet criteria such as a non-negative whole number or a zip code

To insert a text field:

1. Enter a field label. For example, **Name**.
2. Place the cursor where you want the text field to appear.
3. Click **Text field** ( ). The following dialog appears.

Text Field dialog—General tab

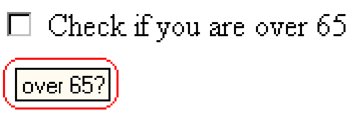


NOTE: If you are using FireFox, you cannot enter text into a text field while creating or editing the form. If you need to prefill a text field with text, use the field's **Default Value** property.

- **Descriptive Name**. Enter a description of the field. This text describes the field on form reports.
- **Field Name**. Enter a name for this field. This text identifies the field in the database and in email if the form is mailed.

  NOTE: You cannot enter spaces nor most special characters (!@#$%^&*()+=<>,.:;'"{}[]|`~) into this field. If you do, they are replaced by underscores.

- **Tool Tip Text**. Enter text that appears if a site visitor hovers the cursor over this field (circled).

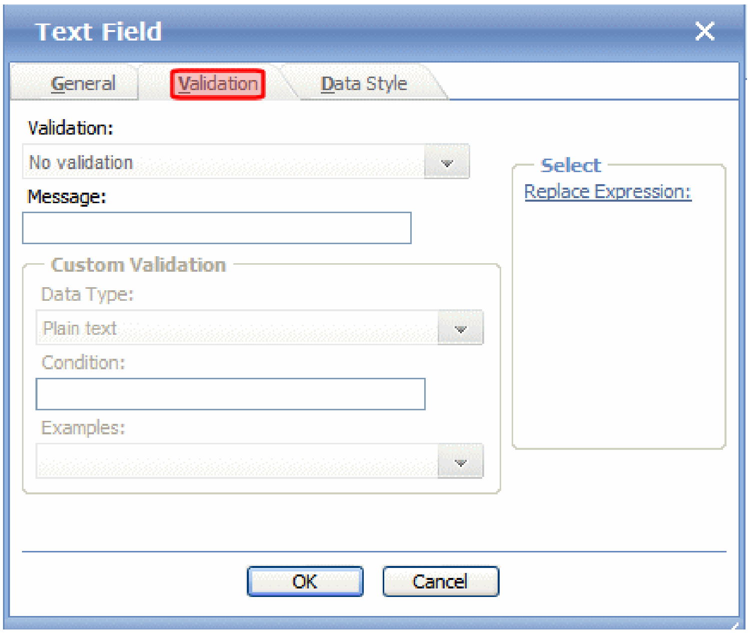
  

- **Default value**. If you want to set a default value for this field, enter it here. For example, if this field collects a city, and most users enter New York, enter **New York** as the value. A site visitor can change the default value while completing the screen.
- **Allow multiple lines**. Check this box if you want this field to scroll vertically to allow the person completing the form to enter as much text as needed.

  NOTE: This setting cannot be applied if this is a **Password field**.

- **Cannot be changed**. Check this box to prevent the person completing this field from changing its content. For example, you want to display a license agreement. Below this field, you might place a check box prompting the site visitor to check it to indicate the agreement was read. As another example, you could provide instructions for completing the screen.

- **Invisible**. Check to make this field hidden. This option lets you store unseen information in each document. An example might be putting a version number on the form. f you apply this property to a form, the **Allow multiple lines** and **Cannot be changed** fields are automatically checked and cannot be unchecked. Also, the **Validation** tab is disabled.
- **Password field**. Use a password field when you want the user to enter a password. A password is like a text field but the user's entry is disguised. This prevents an onlooker from seeing the password. Passwords cannot exceed 18 characters.



- **Validation**. Select the kind of validation to apply to this field. See *Validation Options* on the next page. Your system administrator determines whether a user can save an invalid document.
- **Message**. Enter text that appears on the screen if a site visitor's response violates the validation criterion. For example, if the validation criterion is telephone number, the error message could be **Please enter 7 or 10 digits**. It would appear if the user entered, for example, S061882. By default, the error message matches the selected validation criterion. Use this field to customize the text.

NOTE: You can only enter double-byte characters if your Windows settings include that language. If you enter characters that are not in a language defined in your Windows settings, question marks (?) appear instead of the characters.

- **Custom Validation**. See *Custom validation* on page 789.

Validation Options

All of the following options are used with the text field. Only **No validation** and **Cannot be blank** are also used with the calendar field.

- **No validation**. Response is not checked.
- **Cannot be blank**. Response is required. The format of the response is not checked.
- **Allow Maximum of 1000 characters**. Response cannot exceed 1000 characters. (Only available if text field is set to **Allow Multiple lines**.)
- **Minimum of 8 characters with at least one digit**. Site visitor's entry must be at least 8 characters and include one digit. (Only available if text field is set to **Password field**.)
- **Non-negative whole number or blank**. A positive whole number *or* no response.
- **Non-negative whole number (required)**. A positive whole number.
- **Decimal number or blank**. A decimal number (for example, 12.345 or 12) or blank. A leading minus sign "-" is allowed. The decimal point must be a period (.), even in locales that normally use a comma (,).

  NOTE: Decimal numbers include whole numbers because the decimal point is implied. That is, 12 is 12.0000.

- **Decimal number required**. A decimal number (it cannot be blank) of 0, 1, or 2 decimal places. A leading minus sign "-" is allowed. The decimal point must be period (.), even in locales that normally use a comma (,).

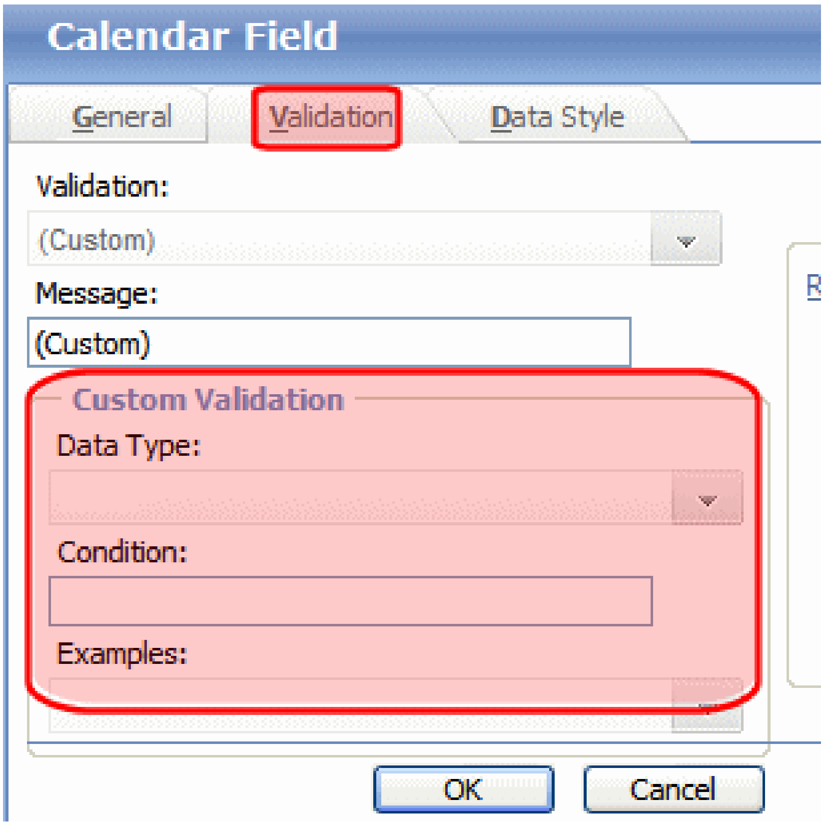
  NOTE: Decimal numbers include whole numbers because the decimal point is implied. That is, 12 is 12.0000.

- **Percent: (0-100) required**. A whole number from 0 to 100. A response is required.
- **email address**. *a@a*, where a is one or more characters.
- **email address required**. *a@a*, where a is one or more characters. A response is required.
- **email address list**. Several email addresses. Each address's format is *a@a*, where *a* is one or more characters. The user must separate each address with a semicolon (;).
- **email address list required**. Several email addresses. Each address's format is *a@a*, where a is one or more characters. The user must separate each address with a semicolon (;). A response is required.
- **Zip code (US)**. 5 (*nnnnn*) or 9 digits. If 9, a dash appears after the fifth (*nnnnn-nnnn*).
- **Zip code (US) required**. 5 (*nnnnn*) or 9 digits. If 9, a dash appears after the fifth (*nnnnn-nnnn*). A response is required.
- **Social Security (US)**. Nine digits in this pattern: *nnn-nn-nnnn.*

- **Social Security (US) required**. Nine digits in this pattern: *nnn-nn-nnnn.* A response is required.
- **Postal Code (Canada)**. *ana nan*, where *a* is an alphabetic character and *n* is numeric.
- **Postal Code (Canada) - (required)**. *ana nan*, where a is an alphabetic character and n is numeric. A response is required.
- **Social Insurance Number (Canada)**. A 9-digit number in the format: *nnnnnnnnn.*
- **Social Insurance Number (Canada) Required**. A 9-digit number in the format:*nnnnnnnnn.* A response is required.
- **Telephone number (US and Canada)**. A 7 or 10 digit number in the format*nnnnnnn* or *nnnnnnnnnn*. The site visitor can insert separator characters, such as dashes (-), between numbers.
- **Telephone number (US and Canada) (required)**. A 7 or 10 digit number in the format*nnnnnnn* or *nnnnnnnnnn*. The site visitor can insert separator characters, such as dashes (-), between numbers. A response is required.
- **URL**. A website address.
- **ISBN**. ISBN*is a 10 or 13-digit number that uniquely identifies books and book-like products published internationally. When printed, the ISBN number is preceded by the letters ISBN.* (Copied from www.isbn.org.)
- **ISSN**. *The ISSNis an 8-digit number which identifies periodical publications as such, including electronic serials. The ISSN takes the form of the acronym ISSN followed by 2 groups of 4 digits, separated by a hyphen. The eighth character is a control digit calculated according to a modulo 11 algorithm on the basis of the 7 preceding digits; this eighth control character may be an "X" if the result of the computing is equal to "10", in order to avoid ambiguity. (Copied from www.issn.org.)*

Custom validation

The Text and Calendar field dialog's **Validation** tab features a validation area.

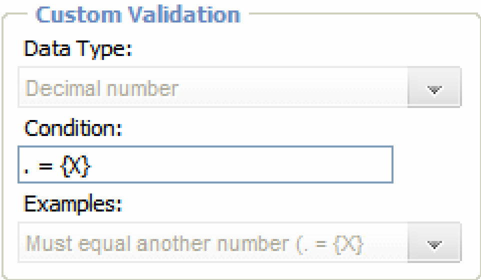


The validation feature can ensure the following aspects user input.

- The data type—the default types are
  - text
  - URL
  - whole number
  - decimal number
  - floating point number (Floating point includes scientific notation, so is appropriate for scientific numbers. Decimals usually suffice for business numbers.)
  - date (calendars only)
- The field value has one of the following relationships with another field, a number, or an expression. The default expressions are
  - between 2 values (either another field or a number that you specify)
  - less than
  - equal to
  - not equal to
  - maximum length (usually for text responses)

Your system administrator determines if a user can save the invalid data.

When the **Custom Validation** option is selected from the **Validation** field, the Custom Validation screen area becomes active.

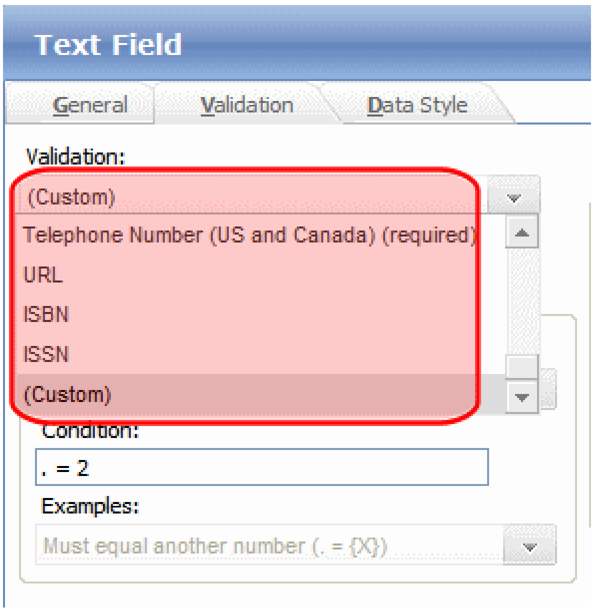


- The **Data Type** field is the value's basic type, for example, text, number, or URL.
- The **Condition** field displays the validation logic.
- The **Examples** drop-down list shows validation expressions that you can apply to the field.

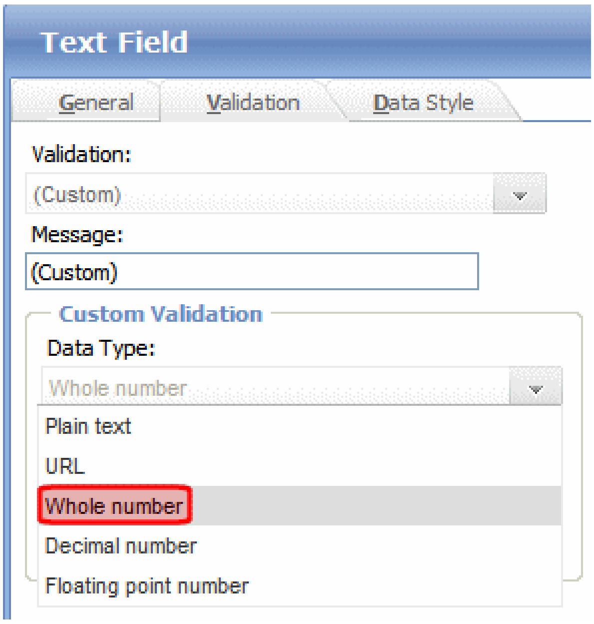
Example of creating custom validation

As an example of custom validation, assume that a field collects telephone numbers, and you want to make sure the user enters 10 digits. To accomplish this:

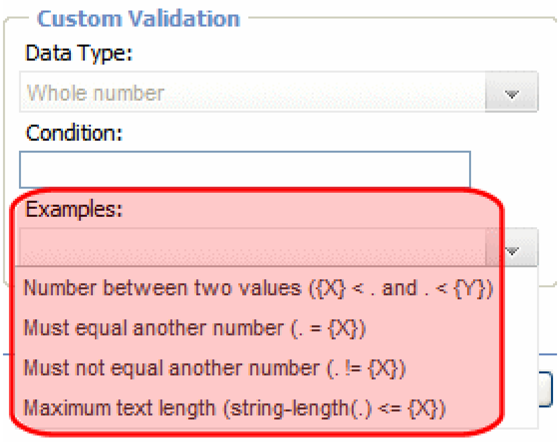
1. Insert a Text Field.
2. Complete the Text Field dialog's **General** tab.
3. Click the **Validation** tab.
4. In the **Validation**drop-down list, select **(Custom)**.



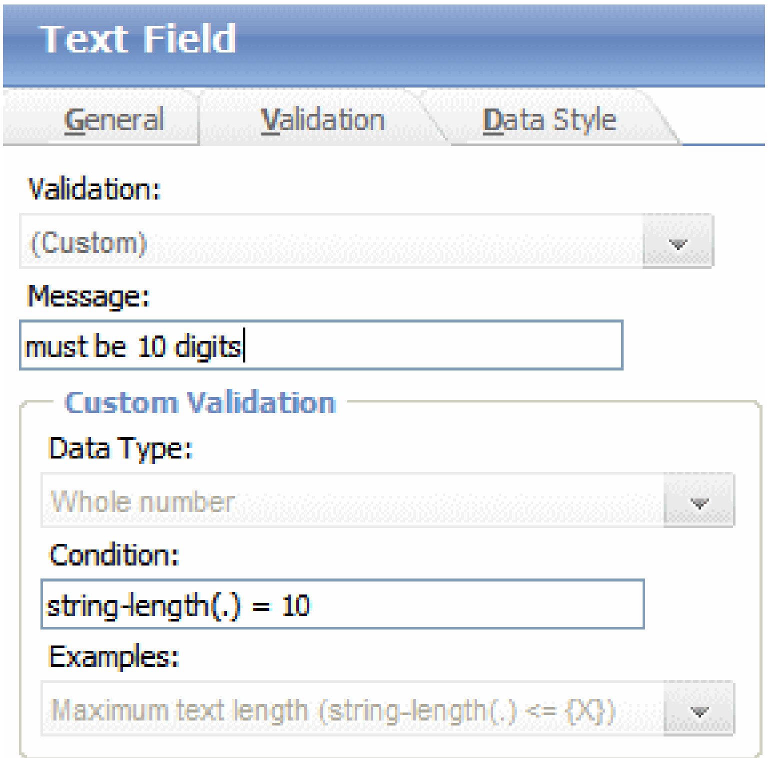
5. In the **Data Type** field, select **Whole Number** from the drop-down list. This ensures that the user can only enter digits.



6. Click the down arrow to the right of the **Examples** field to see sample logic.



7. Click **Maximum text length...**. This option lets you specify the length of the user's response.
8. `string-length(.) <= {X}` appears in the **Condition** field.
9. Because you want the user's input to equal 10, remove the less than sign (<) from the calculation. Now it looks like this:`string-length(.) = {X}`.
10. Replace the `{X}` with 10. Now, it looks like this: `string-length(.) = 10`.
11. Move the cursor up to the **Message** field and compose a relevant error message. For example: `must be 10 digits`.

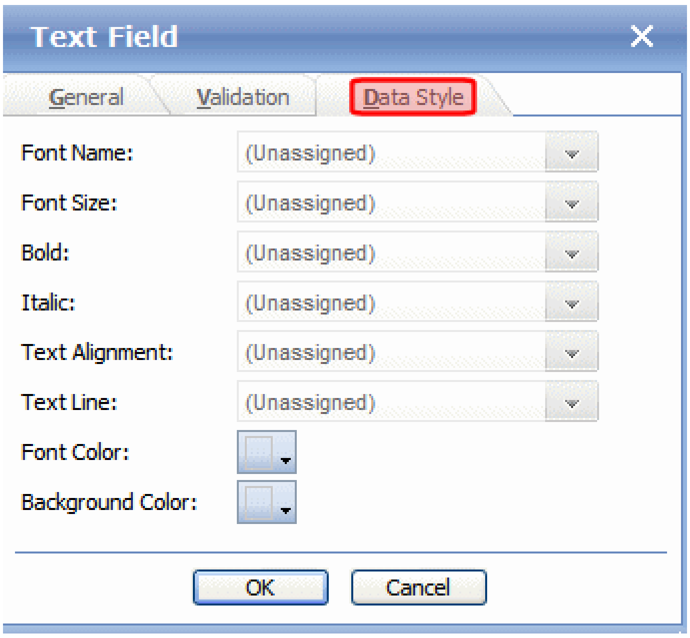


12. Click **OK**.

Text Field dialog—Data Style tab

Click the **Data Style** tab to apply formatting to a field that accepts user input.

When you do, the following tab appears.



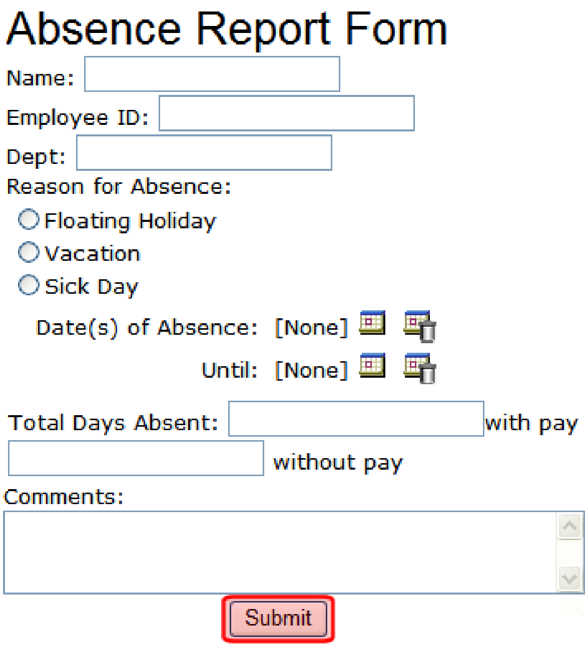
Use the tab to assign the following formatting attributes to a response field.

- Font style and size
- Bold and italic

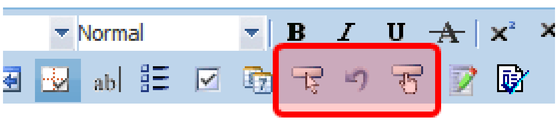
- Text alignment (especially helpful for formatting dollar amounts in a plain text field)
- Underline or strikethrough
- Font color and/or background color

Inserting buttons

A form typically includes one or more *buttons*, which let a site visitor submit a completed form.



You can place 3 buttons on a form.



- **Insert**. Submits form information to your Web server. By default, it has no text. To learn how to add button text, see *Editing a button's properties* below.
- **Reset**. Changes a form's field values back to their state when the form first loaded.
- **Submit**. Submits form information to your Web server. Its default text is **Submit**.

Editing a button's properties

After you insert a button, you may want to enter or change its properties, such as its text, height, and width. To edit a button's properties:

1. Click the button so that it is selected. A selected button is surrounded by small squares. Below the editor screen, several fields appear.

2. Update the button fields as needed.
   - **Name**. Give the button a unique name.
   - **Id**. If needed, give the button a unique ID.
   - **Width**. Enter or change the button's width in pixels.
   - **Height**. Enter or change the button's height in pixels.
   - **Value**. Enter or change the button text.
   - **Tooltip**. Enter or change the button's *tooltip* (that is, text that appears in a small window when someone hovers the mouse over the button).
   - **Classname**. Enter or change the style sheet class assigned to the button.

Entering additional form information

Link other Ektron content, you use tabs on the Edit Content screen to enter the following information about the form:

- Metadata. *Working with Metadata* on page 755
- Aliases. *Creating user-friendly URLs with aliasing* on page 1293
- Schedule. *Scheduling content* on page 640
- Comment.
- Templates. Be sure to apply a template that uses a FormBlock or Poll server control. For example, in the OnTrek sample site, the Company folder uses the `company.pb.aspx`. template. See also: *Working with templates* on page 769
- Map to DXH.

Viewing form properties

After a form is created, you can view its information in the Forms folder. To view a form:

1. Access the folder that contains the form you want to view.
2. Click the form you want to view. The View Form screen displays.
3. Click the **Form Properties** tab.
   - **Form Title**. Title used to reference the form.
   - **FormID**. ID number automatically assigned to form.
   - **Status**. The form's current status.
   - **Description**. Extended description for the form.
   - **Form Data**. The type of form data: Mail or Database.
   - **Form Submissions**. The maximum number of times a user can submit the form. This is typically used with polls and surveys to limit one user's influence over the results.
   - **Assign Task to**. Users and groups to whom a task will be automatically assigned whenever a site visitor completes the form.
   - **Content Properties**. Displays the properties of the form's content.

- **Content Title**. Title of content associated with form.

NOTE: The content name is the same as the Form name.

- **Content ID**. Content ID number assigned to content.
- **Status**. The status of the content.
- **Last Editor**. Last user to edit the content.
- **Start Date**. Date and time when content will go live on website (if set for future date).
- **End Date**. Date and time when content will be removed from website (if set for future date).
- **Action on End Date**. What happens to a form when its end date is reached.
- **Date Created**. Date and time when content was created.

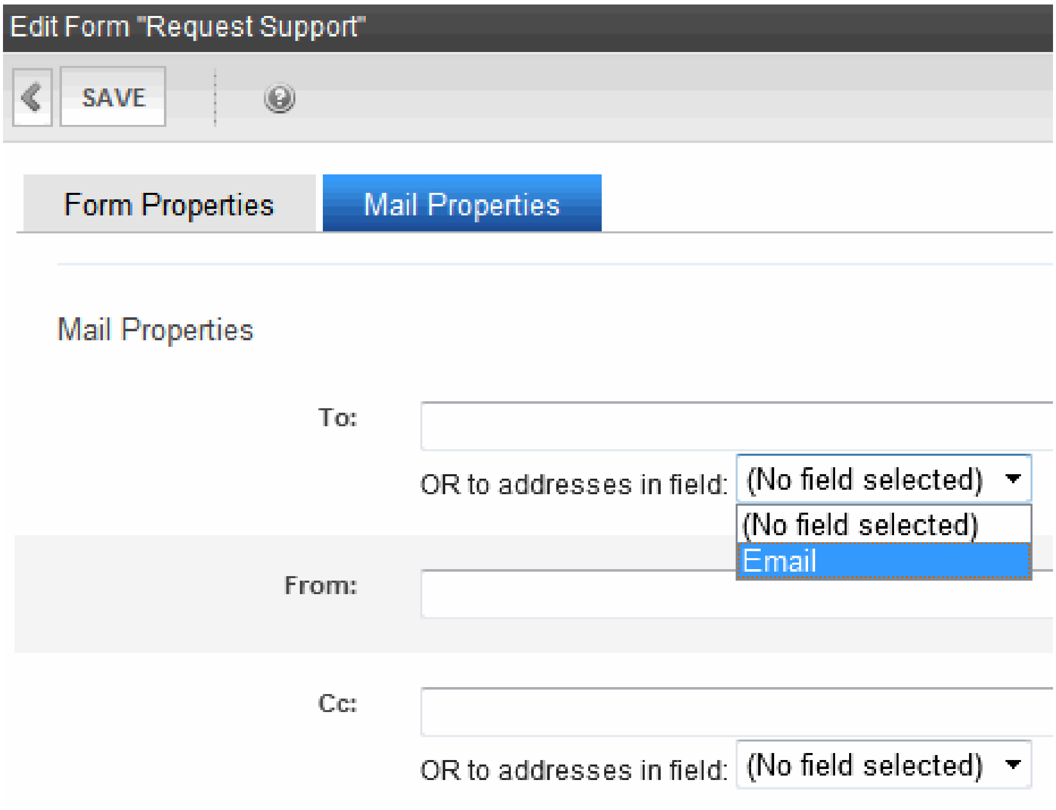
Editing a form's properties

To update additional form information that does not appear on the View Form screen, go to the form's View Form screen and click **Form Properties** ( ). The Form Properties screen displays a subset of form information.

- Title and Description.
- Database or Mail. If form data is emailed whenever a site visitor submits it, enter mail property information.
- Autofill form values. Checked by default, this allows the form's fields to fill automatically when a logged-in site visitor has previously completed the form.
- Limit Submission. When checked, you can enter the number of times a user can submit a form in the **Number of Submissions** text field.
- Assign task to users and groups to whom a task will be automatically assigned whenever a site visitor completes the form.
- Form block's ID number.
- Mail properties.
    - **To**. Email address to which the form is sent when submitted.
    - **From**. Text that appears in the email's **From** field.
    - **CC**. Text that appears in the email's **CC** field.
    - **Subject**. Text that appears in the email's subject field.
    - **Preamble**. Beginning text of the email.
    - **Send data in XML Format**. A green check means email data will be in a structured XML packet. A red **X** means the email data will be in a standard mailto format.

Retrieving an email address from a submitted form

In the **Mail Properties** section of the Edit Form screen, you can select email addresses submitted on the form to be inserted into the To, From, and CC **Mail Property** fields. Instead of entering a static email address, it can be dynamically retrieved from the user's form submission. For example, you want to retrieve the "from" field of an email from the information a user enters when completing the form. To do this, use the **OR to addresses in field** drop-down lists. These lists contain fields that dynamically retrieve data from the submitted form.



Note that the **To** and **CC** fields can accept fields whose validation type is **email address** or **email address list**. On the other hand, the **From** field can only accept fields whose validation type is **email address** (that is, a single email address).

To set up email address retrieval:

1. Add a form field whose **Validation** type is **Email address** or **Email address list**. The field prompts the user completing the form to enter an email address. Label the field something like **Enter your email address**. If the field allows more than one address, add on-screen instructions to separate each address with a semicolon (;).

2. Go to the **Edit Form** screen > **Mail Properties** section.
3. Move to the field labeled **From:**.

4. At the drop-down list following **OR to addresses in field**, select the field you created in Step 1.

When a user completes the form, the value entered in the field created in Step 1 is used for the email's From address.

Retrieving form data Into the subject and preamble fields

You can retrieve data from a submitted form directly to the form's **Subject** and **Preamble** fields. (The subject is a standard mail field, and the preamble is text that appears at the beginning of the email.)

For example, the form may provide a list of your products. While the user is completing the form, the user selects a product that the user is interested in. The product then becomes the subject line of the email.

> **NOTE:** Because a Textarea field can span multiple lines, it can only be used with the preamble. However, a plain text field can be used with both the subject and preamble.

To retrieve data dynamically from a form field into the email's subject line or preamble:

1. Add a form field that collects the information you want to insert into the email's subject line or preamble.
2. Go to the **Edit Form** screen > **Mail Properties** section.
3. Move to the field labeled **Subject** or **Preamble**.
4. At the drop-down list following **OR use text in field**, select the field you created in Step 1.

Creating surveys and polls

Surveys and polls are a type of form. All of the same functionality is available and applies.

- *A survey* is usually multiple questions and appears on your site for a longer time than a poll.
- A *poll* is generally one question and appears on a site for a very short time: an hour or a day.

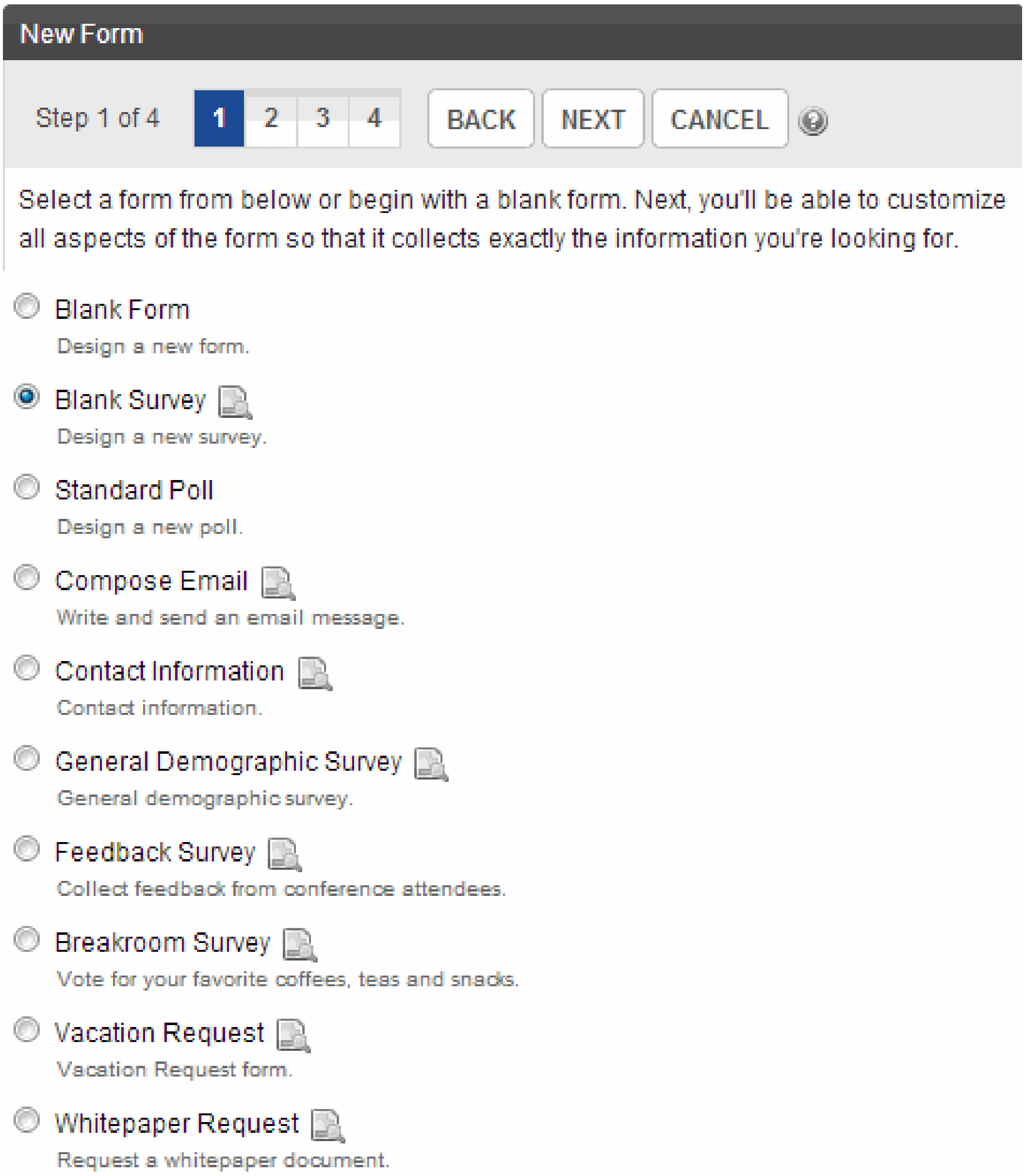
Surveys and polls can show ongoing results to site visitors after they submit their answers. For information about how to display a poll or survey on a website, see Poll server control.

Creating a survey

> **NOTE:** You can also create a new edition of a survey in another language by copying an existing form and translating it. For more information, see *Translating content into another language* on page 640

To create a new survey:

1. From the **View** menu, click **Language**, and select the language in which to create the form.
2. Click **New > HTML Form/Survey**. The New Form screen appears.



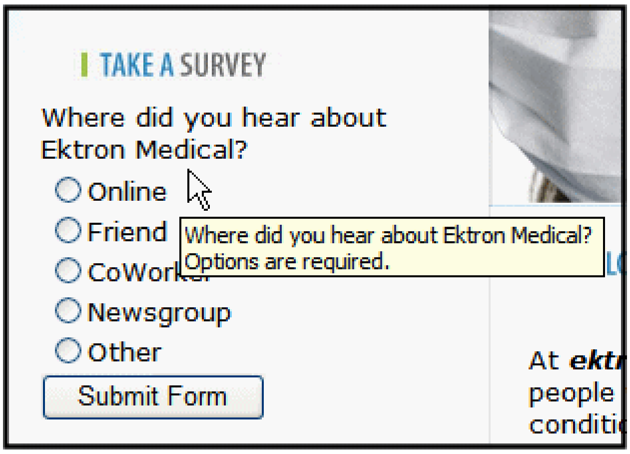
NOTE: When you choose Standard Poll or Blank Survey, the number of steps in the Forms Wizard changes from 5 steps to 4 steps. This happens because the Assign Tasks step is removed.

3. Choose **Blank Survey**. You can click **preview** ( ) next to any sample form to preview it before choosing it.
4. Click **Next**.
5. Enter or edit the form's **Title** and **Description**.
   - **Title**. used to reference the survey within the Workarea (required)
   - **Description**. an extended description of the survey.

6. Click **Next**. This screen lets you determine what happens after the site visitor completes the survey. The choices are:
   - **Display a message**. See *Creating a postback message* on page 803
   - **Redirect to a file or page**. Identify a file or a page on your website that is launched when the visitor completes the form. An example of a file is a white paper (a common file format is .PDF) that the visitor requested. An example of a page is one that lets the visitor download your product.
     - **Redirect to an action page and forward form data**. See *Redirecting form data to an action page* on page 805
     - **Report on the form**. See *Letting site users see the form results* on page 807
7. Click **Next**. A screen indicates that you have entered basic information about the survey and should click **Done** to enter the survey's content. This procedure is described in *Managing form responses* on page 803.

Creating a poll

The following example shows a poll. Note that when a site visitor hovers over the poll, the question also appears as Tooltip text.

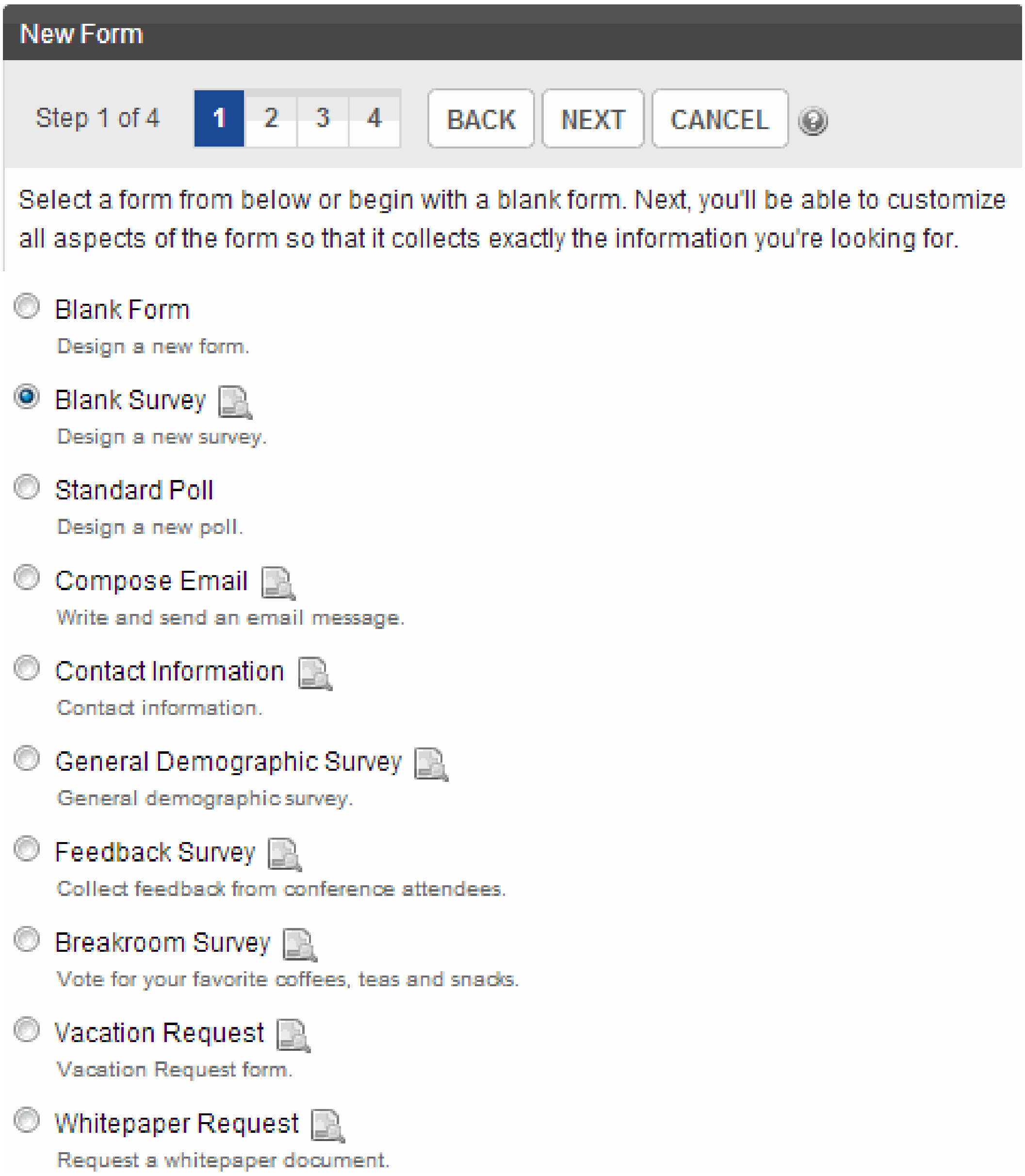


To create a new poll:

NOTE: You can also create a new edition of a poll in another language by copying an existing poll and translating it. For more information, see *Translating content into another language* on page 640.

1. From the **View** menu, click **Language**, and select the language in which to create the poll.

2. Click **New > HTML Form/Survey**. The New Form screen appears.



3. Choose **Standard Poll**. You can click **preview** ( ) next to any sample form to preview it before choosing it.
4. Click **Next**.
5. Enter or edit the form's **Title** and **Description**.
   - **Title**. used to reference the poll within the Workarea (required)
   - **Description**. an extended description of the poll
6. Click **Next**. You can add a poll question and up to 8 replies. If you have more than 8 replies, you can add them in the forms editor after clicking **Done**.
7. Click **Next**. This screen indicates that you have entered the basic poll information and should click **Done** to further edit and view the form's fields. After clicking **Done**, the form editor launches so you can edit existing fields and properties. In addition, you can set post back and schedule information, add

metadata and comments, change the title, and submit the poll for publication. From this screen, you can add more replies to your poll by right clicking on the choices field and clicking properties.

Editing a poll from a website

WARNING! If you are logged into the site and create a new poll by right clicking on a poll selecting **New**, the existing poll is replaced by the new one.

To edit an poll on a website:

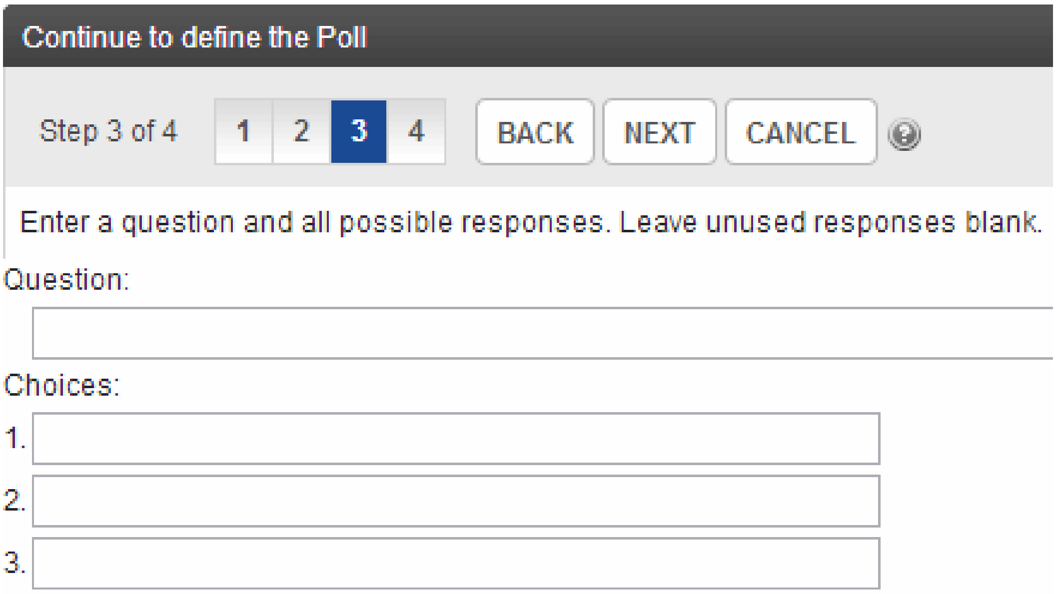
1. Click the access point ( ) or menu ( ) on the poll you want to change and choose **Edit**.
2. Make changes to the poll using the Forms editor.
3. Submit the poll to the workflow.

Replacing a poll from a website

When logged into Ektron, you can right click on a poll and choose **New Poll** to replace the current one. The title of the poll, its ID, and properties stay the same. Only the questions and answers change.

To replace a poll:

1. At the location of the poll, click the access point ( ) or menu ( ) and choose **New Poll**. The Workarea opens, indicating you are at step 3 of the Poll Wizard.



2. Add a new question to the **Question** text box.
3. Add possible responses to the **Choices** text boxes.
4. Click **Next**.
5. Click **Done**. The form editor launches, allowing you to edit the fields and properties. In addition, you can set post back and schedule information, add

metadata and comments, change the title and submit the poll for publication. When published, the updated poll appears on the site.

Editing the poll results bar chart

To edit the style and appearance of the bar chart, modify the following files:

- `siteroot/workarea/csslib/reportchart.css`
- `siteroot/workarea/controls/forms/HistogramReportPoll.xslt`

Those files include extensive comments that explain how to customize the bar chart's appearance.

NOTE: You cannot edit pie charts.

Managing form responses

Applying validation rules to a form

You can apply validation rules to text or calendar field types. Validation rules ensure that the information entered by site visitors meets your criteria. For example, a validation rule specifies that a response to the **Telephone** field is 10 digits. If the response does not conform, an error message indicates the problem. The input must conform before the form can be submitted.

Validation rules are applied when a site visitor submits an entire form, not when the input is entered. If an invalid response is found, the error message that you define appears.

The site visitor must change the response to conform to the validation rule; then, the next field is checked and, if that is invalid, its error message appears, and so on.

NOTE: If you apply validation rules to more than one field, include the field name in the error message. For example, enter **The name field only allows text**. This is good practice because error messages only appear *after* a form is submitted. If the message does not identify the field, the user may not know which field needs correction.

Creating a postback message

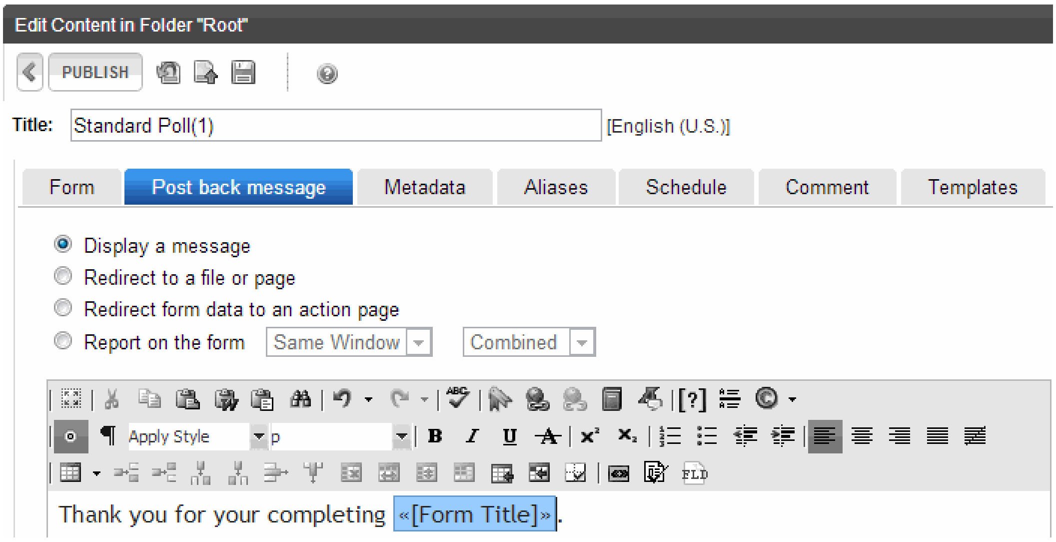
The postback message is HTML content, so can contain text or graphics. Typically, the message acknowledges a site visitor’s completion of the form. For most sample forms provided, sample text appears in the editor. Modify it as you wish, using Ektron’s editor to change the style sheet class, insert library items, and so on. You can also insert fields into the Postback Message that retrieve form information. For example, your postback message may be:

```
Thank you «Full Name» for completing the «[Form Title]».
```

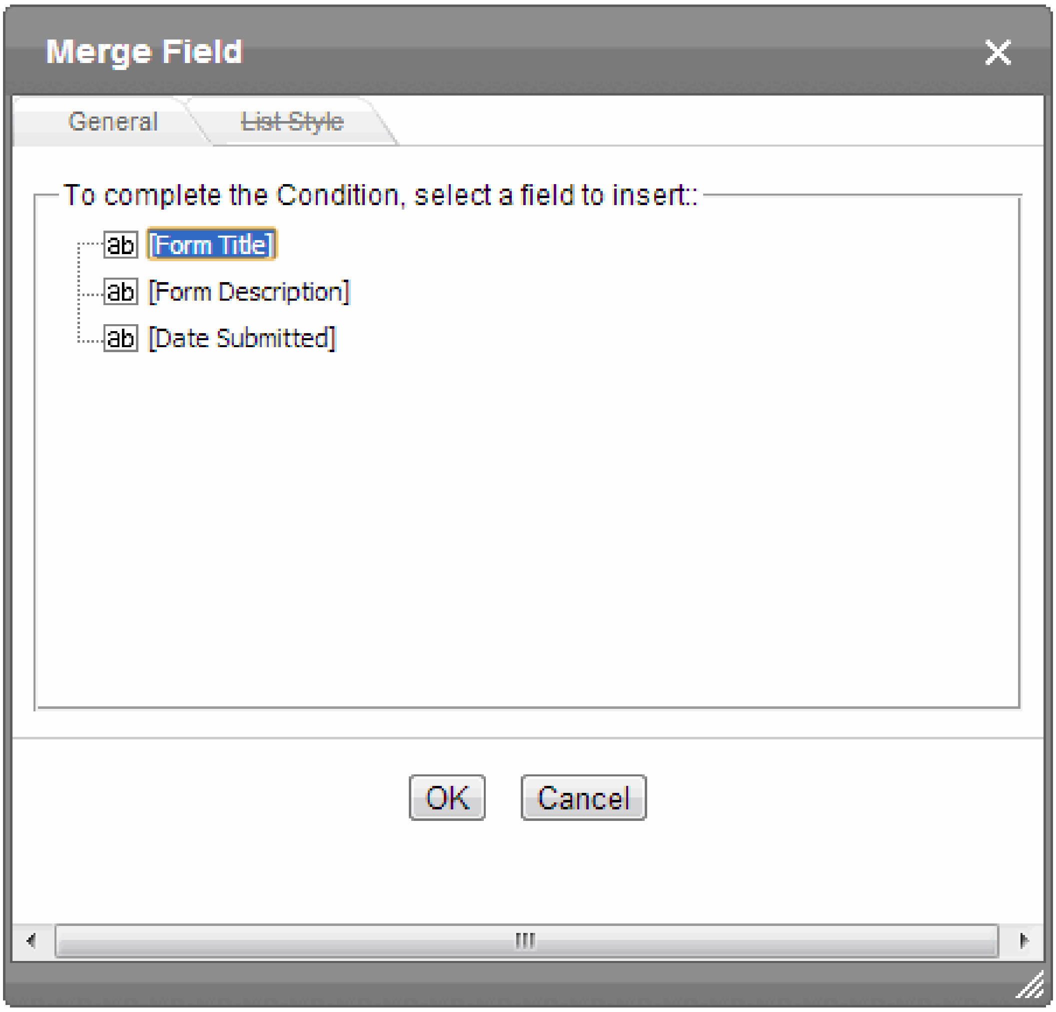
When the message appears, it looks like this.

```
Thank you Jay Kohler for completing the breakroom survey.
```

When you click the **Post back message** tab and select **Display a message**, the **Merge Field** button ( ) appears on the toolbar.



When you click that button, a dialog box appears.



The list includes all fields on the form plus the following fields.

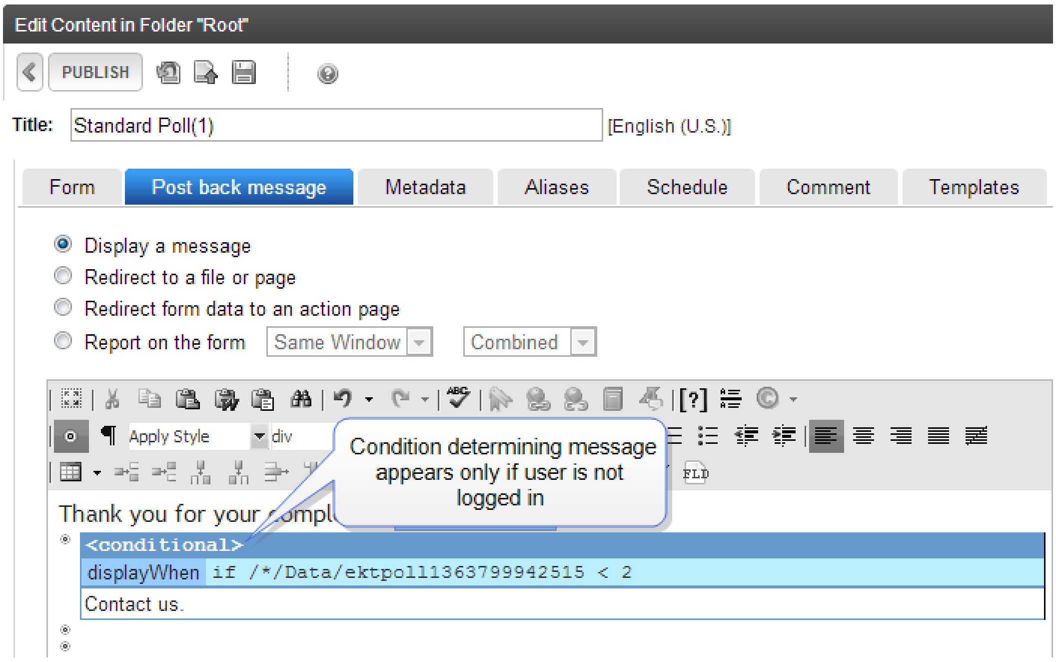
- Form title
- Form description
- Date submitted

Click any field to insert it into the form. The postback message retrieves the field's value and displays it within the message.

Specifying conditional text in the postback message

You can apply conditions to any portion (or all) of a postback message. For example, you can display one paragraph if the user browsing your Web page is using a smart phone, and different text if the user is not on a smart phone. As another example, you could display a postback message only if the user is not logged into the website as an Ektron author.

The following image shows the message content after a condition is applied.



To designate a condition within a postback message, select it then click **Conditional Section** ([?]).

Redirecting form data to an action page

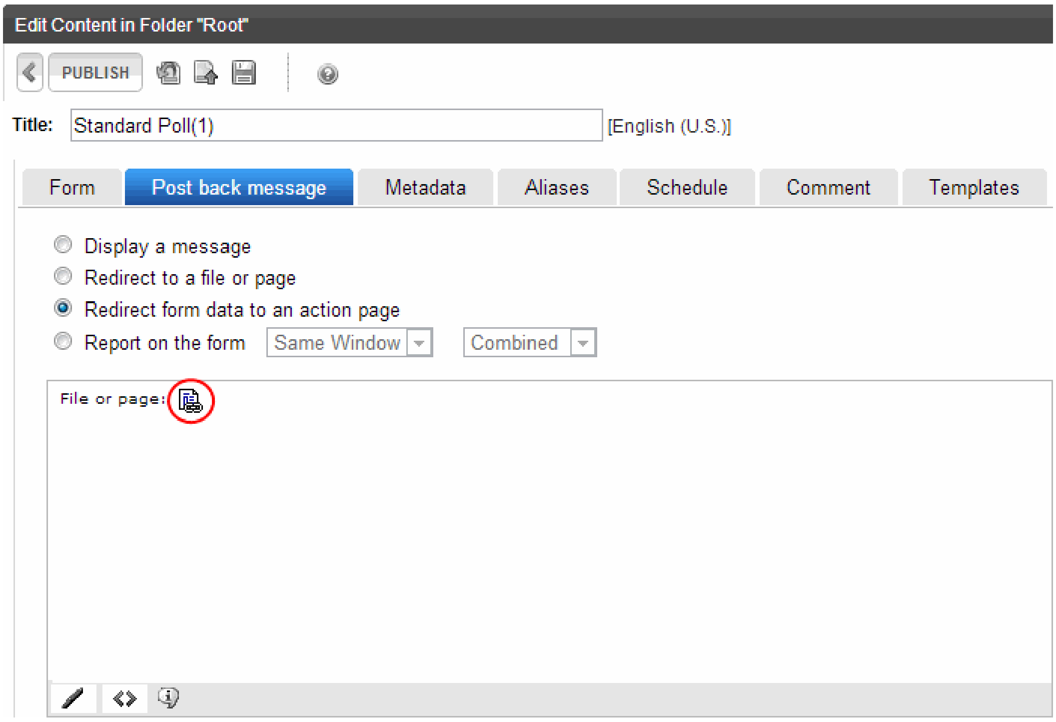
PREREQUISITE

Obtain the folder and hyperlink name from your administrator who set up an action page.

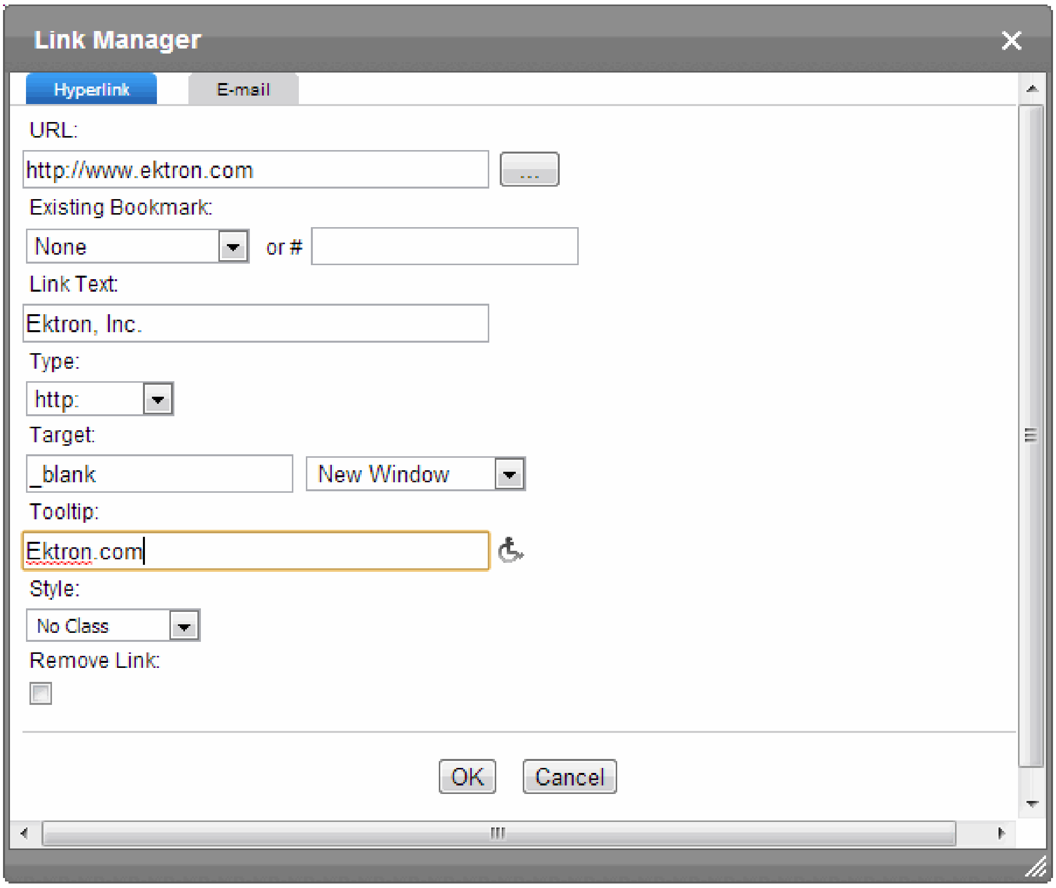
To redirect submitted form data to an action page:

1. Go to the page on which you determine the form’s response.
2. To modify an existing form, select the form’s folder, then the form. Next, select Edit and click the **Post back message** tab.

3. Select **Redirect form data to an action page**.



4. Click the icon next to **File or page**. The Link Manager screen appears.



5. Fill in the fields and click **OK**. The hyperlink is inserted.

Letting site users see the form results

When you create polls and surveys, you can choose to display the results after a site visitors completes the form. The results can display in the same window or a new window. In addition, you can choose how to chart the data. See *Chart types* below.

To show site visitors poll/survey results:

1. Go to the page on which you determine the form's response. If this is a new form, it is page 4 of the Forms Wizard. To modify an existing form, select the form's folder, then the form. Next, select Edit and click the **Post Back Message** tab.
2. Select **Report on the form**.
3. Choose whether you want the results to appear in the **Same Window** or a **New Window**.
4. Choose the style of the report. (Bar Chart, for example.)

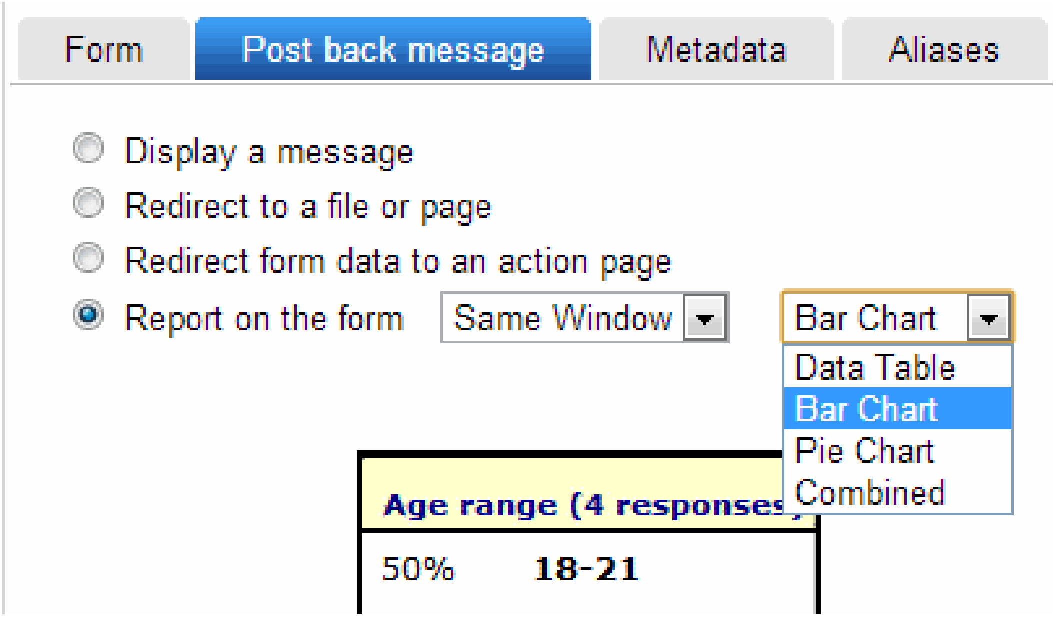
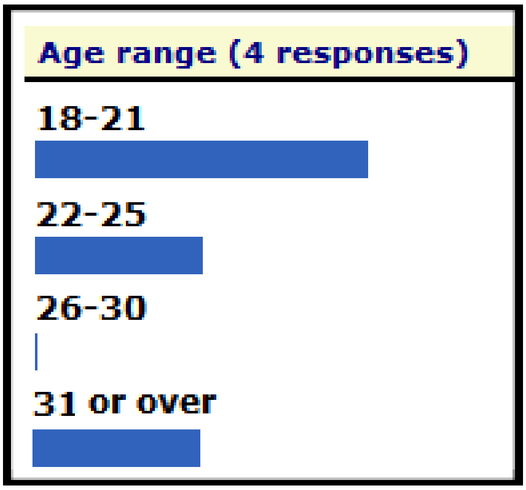


Chart types

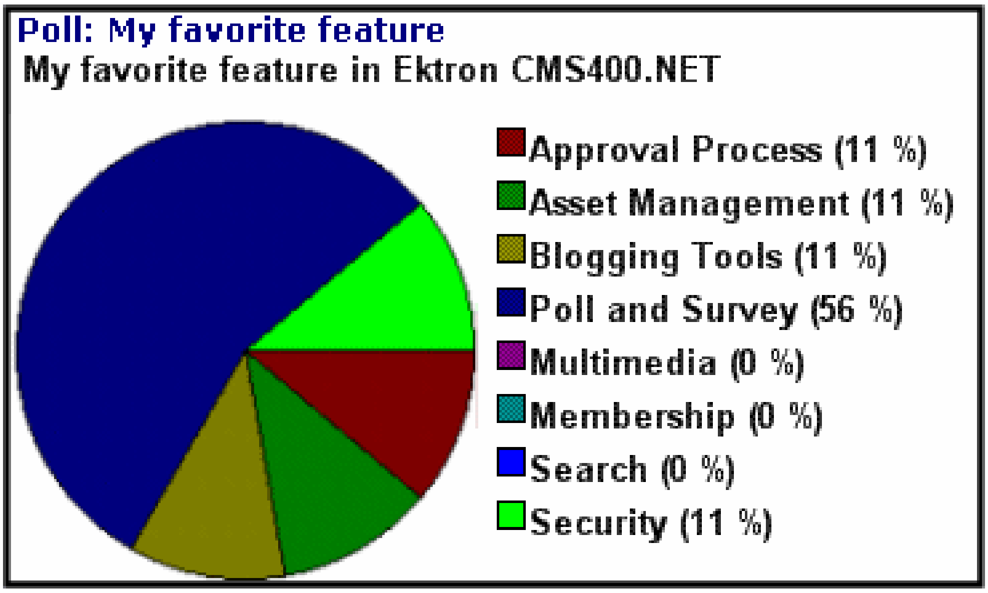
- **Data Table**. Poll/survey answers, with the percentage of users who responded to each item.

Age range (4 responses)	
50%	**18-21**
25%	**22-25**
0%	**26-30**
25%	**31 or over**

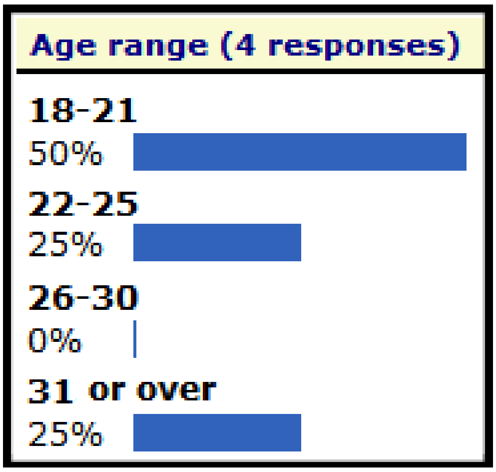
- **Bar Chart**. Poll/survey answers as a bar graph. Provides a quick, visual representation of responses.



- **Pie Chart**. Standard pie chart. Poll/survey answers are color coded, and percentage of people who chose each answer is shown.



- **Combined**. Combines Data Table and Bar Chart.



NOTE: Data entered into a text box cannot be charted. For example, if one choice in a poll is **Other**, and the survey has a text box for site users to enter additional information, the text in the box is not charted. However, the fact that a user chose **Other** is charted.

Viewing form reports

If a form is set to store data in the database, you can run a report that displays the submitted data.

To view a form report:

1. Go to the folder for which you want to view the report. The View Contents of Folder screen appears.
2. Click the form you want to view. (If you do not see your form in the folder, make sure the Content Type drop-down box is set to **All Types** or **Forms**.)
3. Click **View Reports** ( ). The View Forms Report screen appears.
   - **Start Date**. If desired, specify a start date. The report displays only forms that were submitted on or after the start date.
   - **End Date**. If desired, specify an end date. The report displays only forms that were submitted on or before the end date.
   - **Report Display**. Specify the format to display the report. See also: *Choosing a format to display form data* below.
   - **Select Legacy Report**. Specify the version of the form or poll for which to get a report. Using this option lets you see the results from previous polls and forms.
4. Click **Get Report** to display the report.

Choosing a format to display form data

The submitted form data can be viewed in any of these formats.

Table with totals

The table of values shows the following information for each completed form.

- a checkbox that lets you delete the response
- an internal identification number of the response
- the name of the user who submitted the form, if the user signed into Ektron beforehand. If the user did not sign in, **anonymous** appears.
- date response was submitted
- The name of each field on the survey
    - under each field name is the submitted response for the each user
- the bottom line sums the numerical and percentage totals for each response

General Demographic Survey

(Delete)	ID	Submitted By	Date Submitted	Gender		Age range			Education Level		An
☐				Male	Female	22-25	26-30	31-40	High School/GED	Master's Degree	$30,000-$39,999
☐	22	Member, John	12/6/2005 4:18:50 PM	✓		✓			✓		
☐	23	anonymous	12/6/2005 4:22:58 PM		✓			✓		✓	
☐	24	Edit, John	12/6/2005 4:23:40 PM	✓			✓		✓		✓
			Total:	2	1	1	1	1	2	1	1
			Average (3 rows):	66.67%	33.33%	33.33%	33.33%	33.33%	66.67%	33.33%	33.33%

Summary of selected choices

This format totals, for choice and select type fields, the number of times each choice was selected. Only choices that were selected at least once appear.

General Demographic Survey

Field	Value	Count
Age range	22-25	1
	26-30	1
	31-40	1
Annual Income	$30,000-$39,999	1
	$40,000-$49,999	1
	$70,000-$79,999	1
Education Level	High School/GED	2
	Master's Degree	1
Father's Education Level	High School/GED	1
	Master's Degree	1
	Some College	1
Gender	Female	1
	Male	2
Household Income	$100,000-$149,000	1
	$30,000-$39,999	1
	$60,000-$69,999	1
Marital Status	Legally Separated	1
	Married	1
	Single	1
Mother's Education Level	High School/GED	2
	Master's Degree	1
Race	African-American	1
	Native American	1
	White	1

Table of values

The table of values shows the following information for each completed form.

- a checkbox that lets you delete the response.
- an internal identification number of the response.
- the name of the user who submitted the form, if the user signed in to Ektron beforehand. If the user did not sign in, **anonymous** appears.
- date response was submitted.
- descriptive name of each form field appears in the column header; the value entered for each field appears below the header.

General Demographic Survey

(Delete) ☐	ID	Submitted By	Date Submitted	Gender	Age range	Education Level	Annual Income	Household Income	Marital Status	Religious
☐	22	Member, John	12/6/2005 4:18:50 PM	Male	22-25	High School/GED	$40,000-$49,999	$60,000-$69,999	Legally Separated	Evangelical Christian
☐	23	anonymous	12/6/2005 4:22:58 PM	Female	31-40	Master's Degree	$70,000-$79,999	$100,000-$149,000	Married	Protestant Christian
☐	24	Edit, John	12/6/2005 4:23:40 PM	Male	26-30	High School/GED	$30,000-$39,999	$30,000-$39,999	Single	Other

List of submitted values

The List of Submitted Values format provides the same information as the Table of Values, but is formatted vertically rather than horizontally.

General Demographic Survey

(Delete) ☐	ID	Submitted By	Date Submitted	Field	Value
☐	22	Member, John	12/6/2005 4:18:50 PM	Gender	Male
				Age range	22-25
				Education Level	High School/GED
				Annual Income	$40,000-$49,999
				Household Income	$60,000-$69,999
				Marital Status	Legally Separated
				Religious	Evangelical Christian
				Other Religious Affiliation	
				Race	African-American
				Mother's Education Level	High School/GED
				Father's Education Level	Some College
☐	23	anonymous	12/6/2005 4:22:58 PM	Gender	Female
				Age range	31-40
				Education Level	Master's Degree
				Annual Income	$70,000-$79,999
				Household Income	$100,000-$149,000
				Marital Status	Married
				Religious	Protestant Christian

Submitted data as XML

Displays the results of the form in an XML format. The following information is included:

- **<Title>**. Title of the form block

> **NOTE:** You can create a new poll question to replace an existing poll question. By default, the poll still has the same Title, ID, and other properties. You can change the title of a new poll question when you are editing the poll.

- **<Description>**. Description of the form
- **<SubmittedData>**. Information that was submitted

```
<Form>
<Title>Where did you hear about Ektron Medical?</Title>
<Description>Poll for finding out where visitor's heard about
our site</Description>
<SubmittedData>
<Date value="2006-05-16T17:25:35">5/16/2006 5:25:35 PM</Date>
<User id="1" member="false">
<Name><FirstName>Application</FirstName>
<LastName>Administrator</LastName></Name>
<Username>admin</Username>
<Email></Email>
</User>
<Data form_data_id="250">
<ektpoll1147812046505>Navigation_2</ektpoll1147812046505>
</Data>
</SubmittedData>
<SubmittedData>
<Date value="2006-05-16T16:48:22">5/16/2006 4:48:22 PM</Date>
<Data form_data_id="248">
<ektpoll1147812046505>Everything_4</ektpoll1147812046505>
```

Exporting a form's raw data

After generating a report, you can export its data to a Microsoft Excel spreadsheet file (.xls) for further analysis. If a form uses an XML structure, each XML tag becomes a column header in the spreadsheet.

1. Access the View Form Reports screen for the report you want to export.
2. Generate the report.
3. Click **Export Report**. A File Download dialog box appears. Choose the option that best suits your needs.
4. After the data is exported, you can analyze and modify the .xls file.

> **IMPORTANT:** If you are using version 9.00 SP2 update 14 and above *or* 9.10, you cannot choose the file's format—it is **.htm**. To open it, open Microsoft Excel, then choose **File > Open** and select the downloaded file.

Assigning a task to a form

While tasks typically help Ektron users track content activities, you can also assign a task to users or user groups whenever a form is submitted.

For example, your website offers a free product demonstration to anyone who completes a form. Whenever a site visitor submits the form, a task is assigned to your sales department's administrative assistant who uses the form information to schedule a demonstration. The sales manager can review the task history to audit sales leads and ensure demonstration requests are being handled in a timely manner.

To set up a task that it is assigned to users or groups whenever a site visitor completes the form:

NOTE: You should be familiar with tasks before beginning this procedure. See also: *Assigning and managing tasks* on page 1339

1. If you are creating a new form, assign the task using the Forms Wizard.
   - If you are editing a form, assign the task on the form's Edit Properties screen.
   - In either case, you identify only users and groups to whom the task will be assigned whenever a site visitor completes the form. Ektron assigns the remaining task information.
2. Complete the form and make it available on your website.

   When a site visitor completes and submits the form, Ektron creates a task and assigns it to users and groups you identified in Step 1. The task created upon form submission has the following information.

   - **Title**. Form title, as entered by the author
   - **Assigned to**. As set up by the user who created or edited the form
   - **Assigned by**. User who created or last edited form
   - **Priority**. Normal
   - **Task Category**. Form Submission Task Category
   - **Task type**. Form Submission Task
   - **Created by**. User who created or last edited form
   - **State**. Not specified
   - **Due date**. Not started
   - **Start date**. Not specified
   - **Description**. Data from form "*form name*" was received on *date time*.
   - ***form description***. Name of every field on the form: value submitted by user into that field

An email is automatically sent to every specified user who has a valid email address in the User Information Screen. The email's subject line is the form name. The body of the email contains a name and a value submitted by the user for each field on the form.

Working with Smart Forms

Use Smart Form configurations to display, save, and validate the content properly. Smart Form configurations use XML tags (that are hidden from users) and serve content to various presentation devices (PDAs, mobile phones, and so on), which saves users from creating duplicate content. An XML schema validation ensures the accuracy and format of your Web content, which reduces review and revision time.

PREREQUISITE

> Only members of the Administrators group or those defined in *Manage Members for Role: Smart Forms Admin screen* can create Smart Form configurations.

Ektron Smart Forms provide the following benefits:

- Strictly enforce content and page layout with Ektron's editor, XSLT, and WYSIWYG templates for content contributors
- Deliver content to multiple devices (for example, PDAs, mobile phones, and so on)
- Easily share content across B2B transactions
- Advanced XML authoring: Ektron's highly-acclaimed XML editor lets developers hide XML tags from content contributors and provides an easy-to-use WYSIWYG editing interface

The following are examples of industries that can benefit from XML Indexing.

- Health Care—A cardiologist whose practice is located in your city
- Human Resources—Sick time policy
- Real Estate—A house with a zip code of 03031 priced under $200,000
- Hospitality—A hotel in the city
- Online Retail—Fleece gloves for men
- Educational—A course in .NET programming

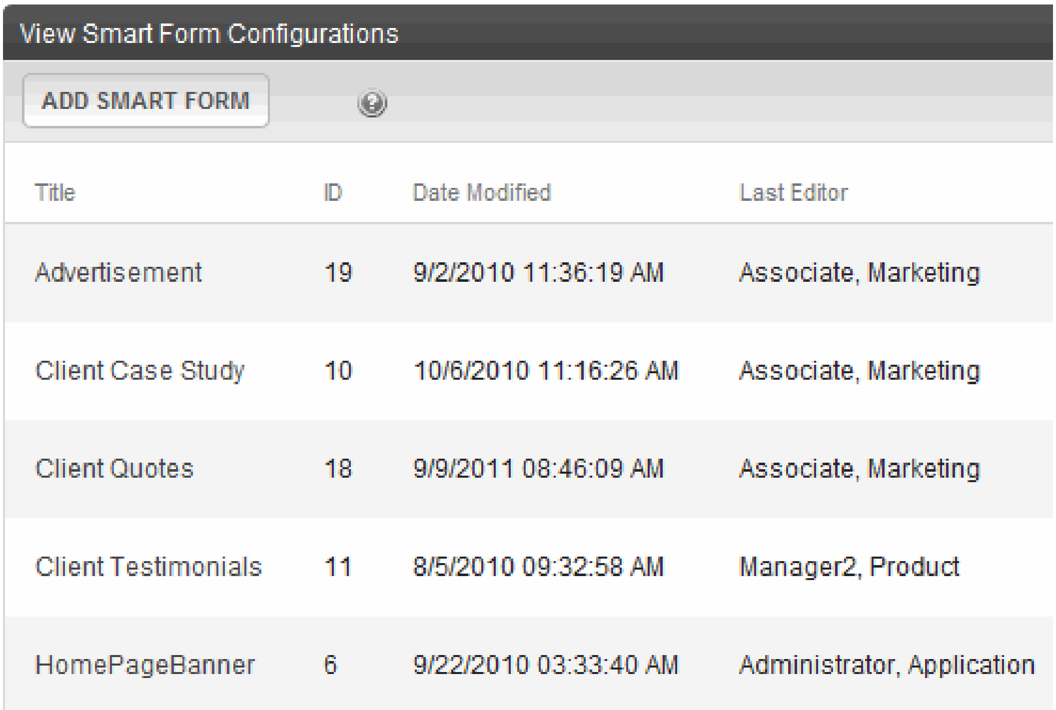
You should use XML content whenever possible because of the following advantages.

- Standardized format for capturing content
  - You can create an XML Smart Form then require anyone creating content in a folder to use the form. The result is more uniform and consistent information.
  - Within an XML Smart Form, you can require authors to complete fields in a specified format. So, for example, if you want the author to enter a date, XML can ensure that it’s captured in a standard format. Several standard formats are provided (email address, zip code), and you can create your own.

- Superior control over content display
  - Authors contribute XML content but have virtually no control over its format. The Web administrator determines the format through an XSLT file. By customizing the XSLT, you can exert maximum control over your website's appearance.
  - Because one file controls several (even hundreds of) pages, you can update just that file to efficiently change the look of all pages whose content is based on the Smart Form.
- Improved search capabilities
  - Because XML data is captured in individual fields, you can focus a search on relevant fields. For example, if your XML content captures data about books, you can place an author search on your website. Because that search only looks through content in the Author field, it is much faster and returns more reliable results than a search of HTML content.

Accessing Smart Form configurations

To access the Smart Form section of the Workarea, go to **Settings > Configuration > Smart Form Configuration**. The View Smart Form Configurations screen appears.

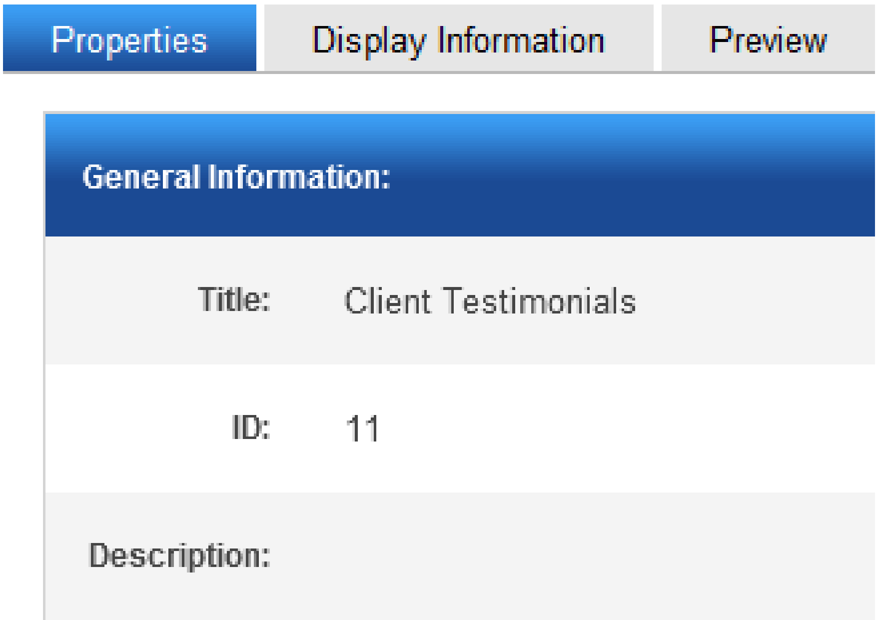


When you click a Smart Form configuration to view its information, you can do the following:

- **Edit**. Edit a Smart Form configuration
- **Data Design**. Open Data Designer

- **Add Smart Form**. Create a new Smart Form configuration from scratch or based on an existing one
- **View XSLT**. Display a Smart Form configuration's XSLT
- **DeleteAssociated Content**. Delete content assigned to Smart Form configuration
- **Delete**. Delete Smart Form configuration (only available if no content is assigned to configuration) See also: *Deleting a Smart Form configuration* on page 832
- **Back**. Return to previous screen

Properties tab



- **Title**. Name given to Smart Form configuration.
- **ID**. ID number assigned by Ektron upon creation of the configuration.
- **Description**. Detailed description of configuration given by creator or last editor.

> **NOTE:** If the Smart Form configuration was created using external XML files (instead of the Data Designer), the following information also appears:

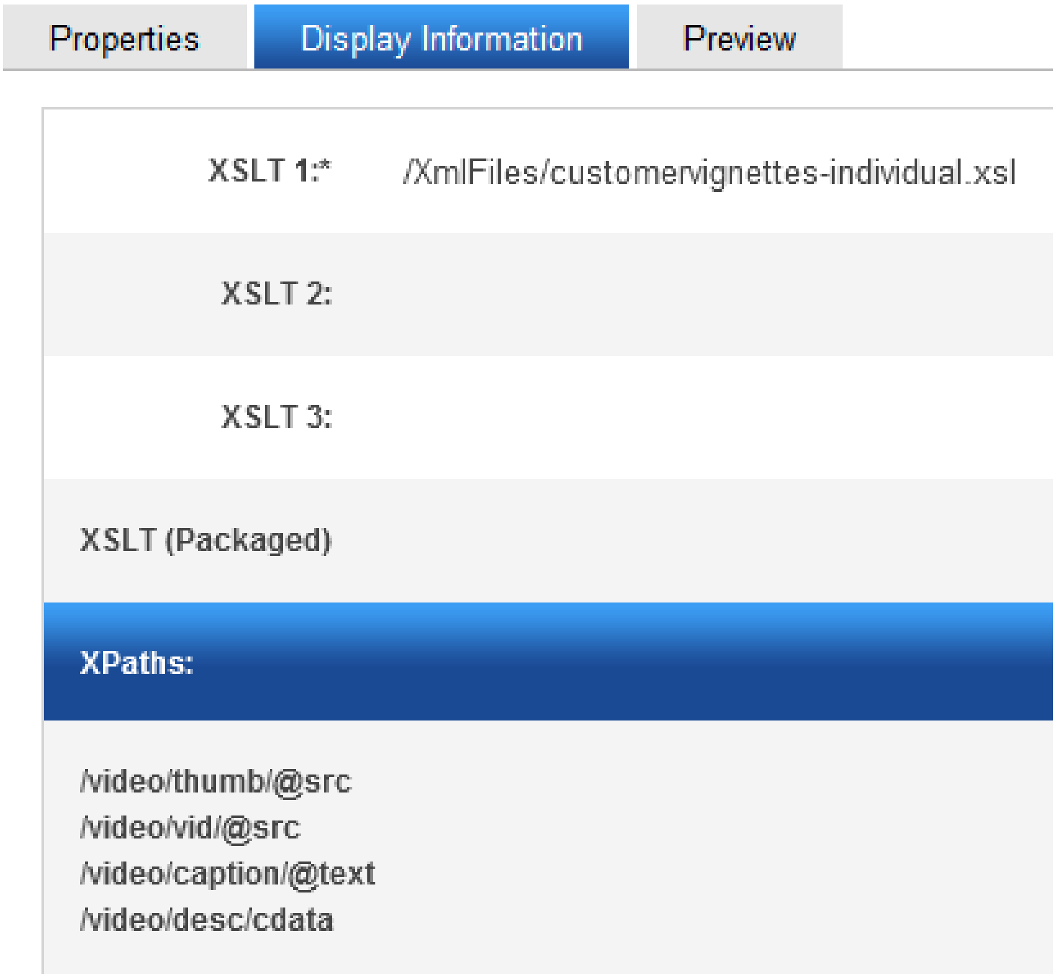
- **Edit XSLT**. XSLT applied to the content when being edited.

> **NOTE:** If no edit XSLT is specified, the Edit Data Design option is enabled in the toolbar.

- **Save XSLT**. XSLT used to transform the XML created in the editor when the Smart Form is saved to the database.
- **Advanced Configuration**. XML file that contains display information, schema validation, and other advanced XML data.

- **XML Schema**. Specify the .xsd file used to validate the XML content that the Smart Form will be assigned to.
- **Target Namespace**. Specify the default namespace used for outgoing XML.

Display Information tab



The display information tab lists the XSLTs that are used when displaying XML in the respective environment.

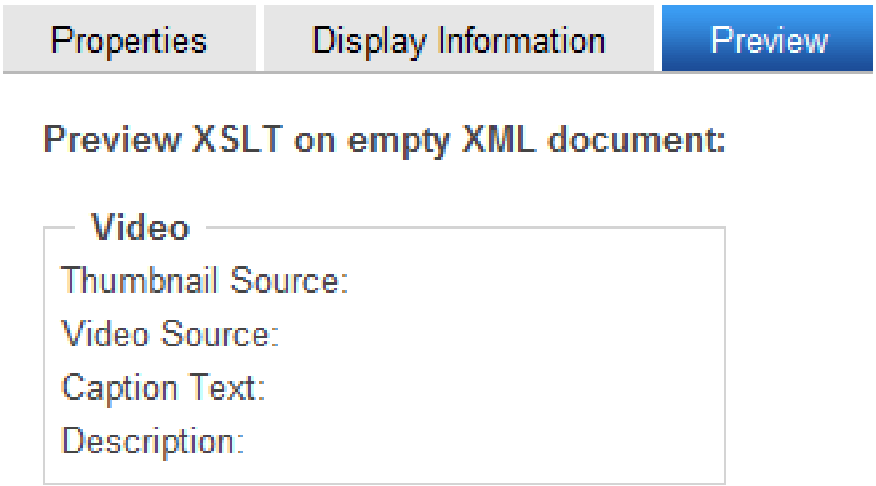
- **XSLT1**. Display XSLT 1
- **XSLT2**. Display XSLT 2
- **XSLT3**. Display XSLT 3
- **XSLT (Packaged)**. Display XSLT Package (created using the Data Designer)
- **XPaths**. Location of the XSLT

NOTE: When a Smart Form configuration is created using the Data Designer, a default display XSLT is also created which looks similar to the edit XSLT created in the editor. This default XSLT can be applied to the XML content.

An asterisk (*) denotes a Smart Form's default XSLT.

Preview tab

The **Preview** tab displays the XSLT applied to the editor when XML content is created. This is the XSLT that was created for the Smart Form configuration.



Adding a Smart Form configuration

If you need to make major changes to a Smart Form configuration, copy it and modify the copy so that you do not affect the content controlled by the original configuration. To copy a Smart Form:

1. Choose **Workarea > Settings > Configuration > Smart Form Configurations**.
2. Click a Smart Form configuration.
3. Click **Add Smart Form**. The Add Smart Form Configuration screen appears.
4. Specify a Title for the copy of the Smart form and click **Add Smart Form**. The new title appears in the Smart Forms list and its description shows that it was derived from an existing Smart form.
5. Click **Update**.
6. Design your Smart Form configuration in the Data Designer. See *Creating a Smart Form* on page 823 for information about creating XSLTs using the Data Designer.
7. You are ready to assign the Smart Form configuration to a folder or content item. See *Assigning a Smart Form to a folder* on page 831 for more information.

A verification button ( ) appears to the right of some fields on the Add Smart Form screen. After you identify an XSLT or schema, you can click this button to verify that the file exists in the location specified and contains well-formed XML.

NOTE: The XML Verification feature does *not* validate the contents of the XML file.

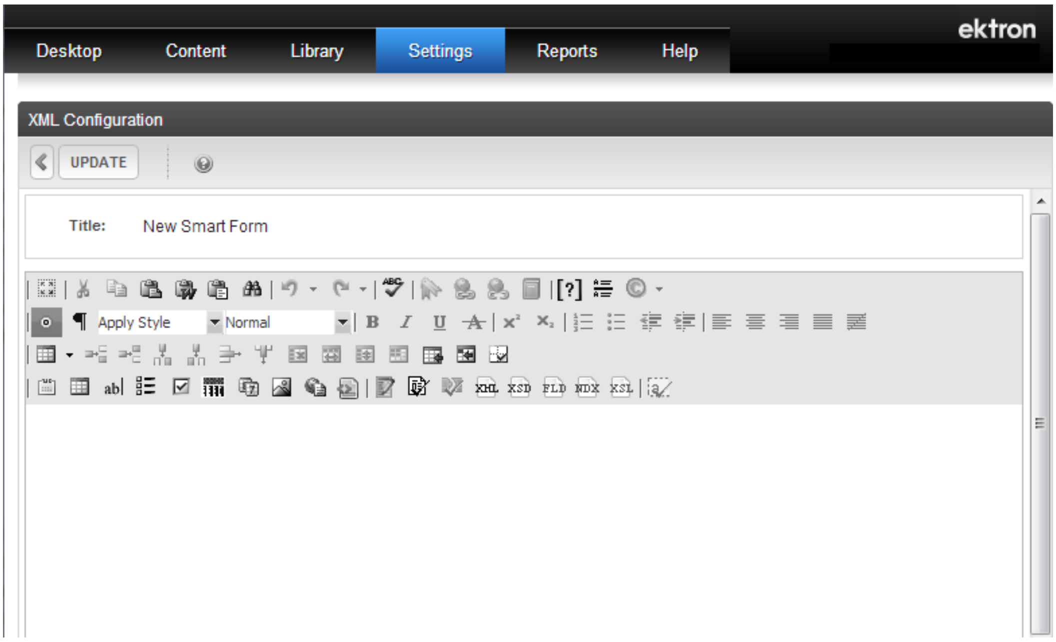
Possible results when clicking the verification button:

- **Verified**. File passes all verification parameters.

- **Not Verified**. The file either does not exist in the specified location, or does not contain well-formed XML. Review current settings. Ensure the file is in the proper location, and that it contains well-formed XML

Adding a Smart Form configuration using the Data Designer

1. Choose **Workarea > Settings > Configuration > Smart Form Configurations**.
2. Click **Add Smart Form**. The Add Smart Form configuration screen appears.
3. Enter a **Title** for the Smart Form configuration and click **Save**. The Smart Form Data Designer screen appears.



4. Design your Smart Form configuration in the Data Designer. See *Creating a Smart Form* on page 823 for information about creating XSLTs using the Data Designer.
5. Click **Update**.

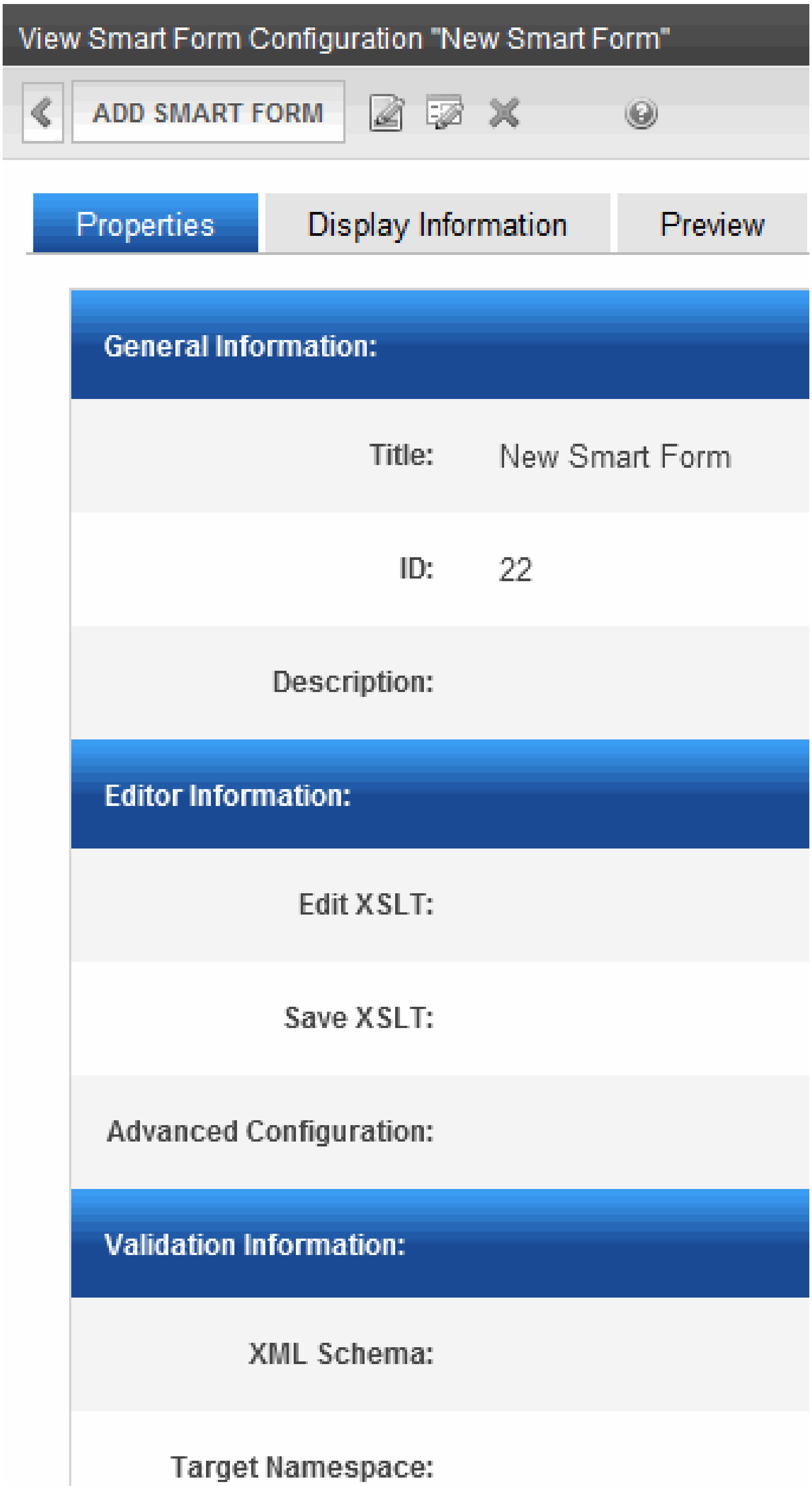
You are ready to assign the Smart Form configuration to a folder or content item. See *Assigning a Smart Form to a folder* on page 831 for more information.

Adding a Smart Form configuration using external XML files

NOTE: If you want users to insert Smart Form information using eWebEdit400, you cannot create or edit Smart Forms using external files. However, you can access eWebEdit400's source view, paste the external file's XML, then return to design view.

To add a Smart Form configuration using external XML files:

1. Choose **Workarea > Settings > Configuration > Smart Form Configurations**.
2. Click **Add Smart Form**. The Add Smart Form configuration screen appears.
3. Enter a **Title** for the Smart Form configuration.
4. Click **Save**. The Smart Form Data Designer screen appears.
5. Click **Backarrow** () to exit. The View Smart Form screen for the new Smart Form configuration appears.



6. Click **Edit** ( ). The Edit Smart Form screen appears.

7. Enter the following information.

General Information

- **Title**. Name given to Smart Form configuration.
- **ID**. (display only)ID number assigned when configuration is created.
- **Description**. Detailed description given to configuration by its creator or last editor.

Editor Information

- **Edit XSLT**. XSLT applied to content while being edited.
- **Save XSLT**. XSLT used to transform the XML when saved to the database.
- **Advanced Configuration**. XML file that contains display information, schema validation, and other advanced XML data.

Validation Information

- **XML Schema**. The .xsd file used to validate the XML content.
- **Target Namespace**. The default namespace used for outgoing XML.

Display Information

- **XSLT1**. XSLT 1 applied to XML data when viewed on a device.
- **XSLT2**. XSLT 2 applied to XML data when viewed on a device.
- **XSLT3**. XSLT 3 applied to XML data when viewed on a device.
- **XSLT (Packaged)**. XSLT package applied to XML data when viewed on a device.

> **NOTE:** When a Smart Form configuration is created using the Data Designer, a default XSLT is created based on the configuration. To learn about modifying the packaged XSLT, see *Editing a Smart Form's XSLT* on page 830.

8. Specify the default display XSLT for the configuration by clicking the corresponding radio button.
9. Click **Update**.

Creating a Smart Form

For each field on the screen:

1. Insert a field label.
2. Place the cursor at the desired location.
3. Click the button corresponding to the desired field type.

Ektron provides several options that let you insert or edit fields in the editor.

- Data Field Types ()

> **NOTE:** For information about these data field types, see *Using data field types* on page 840.

- **Calculated**. Performs calculations using other fields on the screen. See *Calculated* on page 841.
- **Calendar**. Lets user insert a date by clicking a calendar. See *Calendar* on page 847.
- **Checkbox**. User’s response is either checked or unchecked. See *Checkbox* on page 850.
- **Choices**. Several choices appear on screen. User checks appropriate boxes. All user choices are inserted as values within single XML tag. See *Choices* on page 851.
- **Group Box**. Groups related fields, which can be surrounded by a box and have a caption. See *Group Box* on page 855.
- **Image Only**. Lets user insert an image. See *Image Only* on page 868.
- **Link Field**. Lets user insert a link to a file, such as a PDF document. See *Link* on page 870.
- **Resource Selector**. Lets user place content or folders on a Smart Form. See *Resource Selector* on page 873.

IMPORTANT: You can place content from folders of the following types on a Smart Form: standard, root, site, blog, and eCommerce catalog. You **CANNOT** place content from Community, Discussion Board, or WebCalendar folders on a Smart Form.

- **Tabular**. Same as Group Box, but fields can be presented in a table format. See *Tabular Data* on page 877.
- **Text**. Lets user insert and format free text using editor See *Text* on page 883.

- **Check Compatibility**. Checks the design against existing data.
- **Field Properties**. Lets you change a field's properties. Select field then click this button. This option is also available on the right click menu.
- **View Data as...**
  - The XML data document

```
- <root>
- <Information>
<LastName />
<FirstName />
<MiddleName />
<Gender>male</Gender>
<Address />
<city />
<state>MA</state>
<Zip />
<SSN />
<BDate />
<HomeTel />
<WorkTel />
```

```
<x-ray />
- <Dental_Insurance>
<Field1 />
<OtherInsurance>N/A</OtherInsurance>
<Account_Number>N/A</Account_Number>
</Dental_Insurance>
<medication />
<lastAppointment />
<clincal />
</Information>
</root>
```

- The structure, content, and semantics of an XML document

```
<xs:schema elementFormDefault="qualified"
  attributeFormDefault="unqualified"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="root">
  <xs:complexType>
  <xs:sequence>
  <xs:element name="Information">
  <xs:complexType>
  <xs:sequence>
<xs:element name="LastName">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:minLength xmlns:xs="http://www.w3.org/2001/XMLSchema" value="1" />
    </xs:restriction>
  </xs:simpleType>
</xs:element>
  <xs:element name="FirstName">
  <xs:simpleType>
  <xs:restriction base="xs:string">. .. ..
```

- A list of all fields and information about them (as XML)

```
<fieldlist>
<field name="LastName" datatype="string" basetype="text"
  xpath="/root/Information/LastName" title="Last Name">Last Name</field>
<field name="FirstName" datatype="string" basetype="text"
  xpath="/root/Information/FirstName" title="First Name">First Name</field>
<field name="MiddleName" datatype="string" basetype="text"
  xpath="/root/Information/MiddleName" title="Middle Name">Middle
Name</field>
<field name="Gender" datatype="choice" basetype="text"
  xpath="/root/Information/Gender" datalist="IDAPK3KC">Gender</field>
  . .. .. ..
```

- xpath information for any indexed field on the screen

```
<indexable>
  <xpath type="string">/root/Information/SSN</xpath>
  <xpath type="string">/root/Information/HomeTel</xpath>
  <xpath>/root/Information/WorkTel</xpath>
</indexable>
```

- The Data Design document’s presentation XSLT

```
<xsl:stylesheet version="1.0"
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
```

```
  <xsl:output method="xml" version="1.0"
    omit-xml-declaration="yes" indent="yes" encoding="utf-8" />
  <xsl:strip-space elements="*" />
  <xsl:variable name="ektdesignns_fieldlist"
    select="/*/ektdesignpackage_list/fieldlist" />
- <xsl:template match="/" xml:space="preserve"> <p> </p>
- <fieldset id="Information" title="Demographic Information">
    <legend>Patient Information</legend>
- <div>
- <p> <strong>Last Name</strong> <xsl:text> </xsl:text>
<xsl:value-of select="/root/Information/LastName" />
    <strong>First Name</strong>
<xsl:text> </xsl:text>
<xsl:value-of select="/root/Information/FirstName" />
.. .. ... ..
```

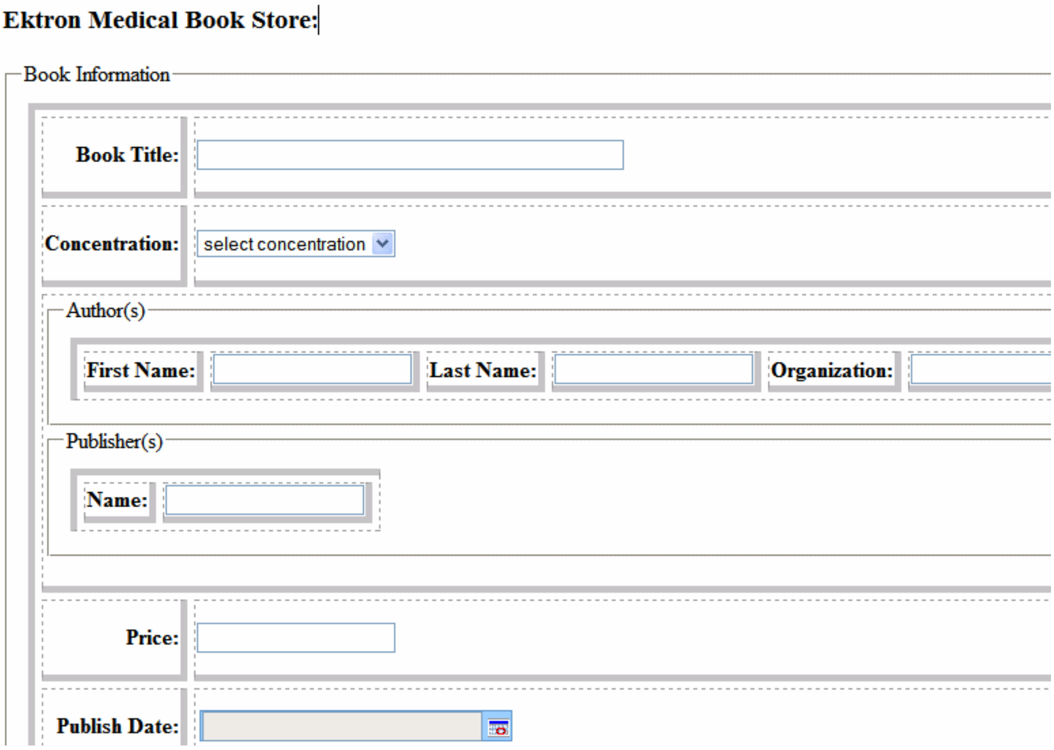
- **Validate**. Validates data when previewing data entry. This button is available in data entry and data design modes.

Buttons at the bottom of the Data Designer screen let you edit the content several ways.

- **Data Design** mode. Lets you insert and remove fields from the screen.
- **XML** mode. Lets you edit the XML source code. If the edited source XML is not well-formed, you are notified and must remain in source view until you fix it.
- **Data Entry** mode. Simulates the screen's appearance during data entry.

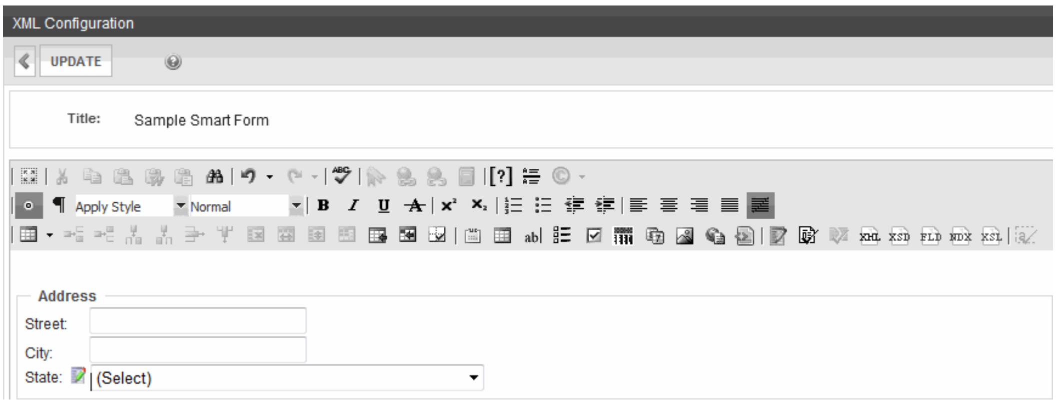
To edit any field's properties, select it, right click the mouse, and select **Field Properties**.

You also can use Ektron's rich formatting capabilities to design the screen. For example, you can format text, and use tables, images and hyperlinks to guide the user through the data entry process. The following sample screen was created with the Data Designer.



Creating a simple data entry screen

The following example shows how to create a simple data entry screen that has a Group Box with 2 text fields and a choices field.



PREREQUISITE

You must be a member of the Administrators group or a Smart Form administrator. See also: *Defining roles* on page 1464

1. **Workarea > Settings > Configuration > Smart Form Configurations**.
2. Click **Add Smart Form**.
3. Assign the form a title and click **Save**. For example, `Sample Smart Form`. The screen refreshes and the editor appears.
4. Click **Group Box** ( ).

5. Type `Address` in the **Descriptive Name**, **Field Name**, and **Caption** fields and click **OK**. The Address Group Box appears on the form.
6. Click in the **Address** box and type the label "`Street:` " then click **Text Field** ( ).
7. Type `Street` in the **Descriptive Name**, **Field Name**, and **Tool Tip** fields and click **OK**. The text field box appears on the form inside the Address Group Box.
8. Under the Street label, type the label "`City:` " then click **Text Field** ( ).
9. Type `City` in the **Descriptive Name**, **Field Name**, and **Tool Tip** fields and click **OK**. The text field box appears on the form inside the Address Group Box.
10. Under the **City** label, type the label "State:" then click **Choices Field** ( ).
11. Type `State` in the **Descriptive Name, Field Name, and Tool Tip** fields.
12. Choose **U.S. States & Territories** from the List menu.
13. Click **OK**. The field box appears on the form inside the Address Group Box.

Inserting a conditional section

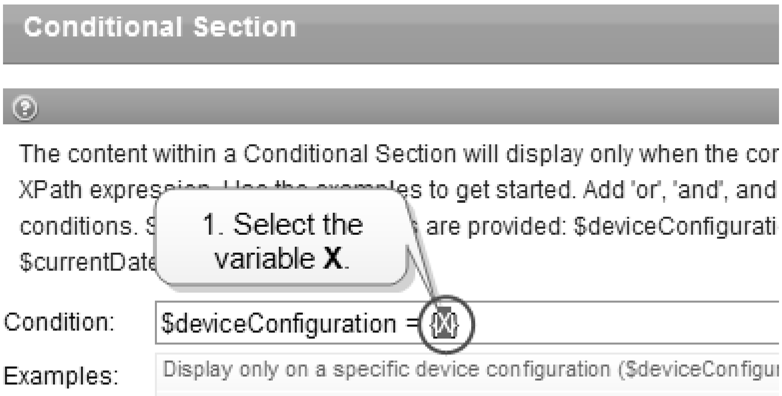
You can specify a field or group of fields to appear on a Smart Form configuration only under certain conditions. For example, a Winter outdoor image does not appear until November, and drops off on April 1. As another example, one group of fields appears if the user is using a mobile device (such as a smart phone), and a different set of fields appears if the user is not on a mobile device.

1. After you insert the fields on a Smart Form configuration, click **Conditional Section** ([?]). The Conditional Section dialog appears.
2. Specify the condition. The **Examples** pull-down has sample conditions that you can insert then modify.
   - The user is viewing the Web page on a Smart Phone
     ```
     $deviceConfiguration = 'Smart Phones'
     ```
   - The user is viewing the Web page on a device that is not a smart phone
     ```
     not($deviceConfiguration = 'Smart Phones')
     ```
   - The user is viewing the Web page on January 1, 2011 or later
     ```
     $currentDate >= '2011-01-01'
     ```
   - The person viewing the Web page is a logged-in Ektron user
     ```
     $userId != '0'
     ```

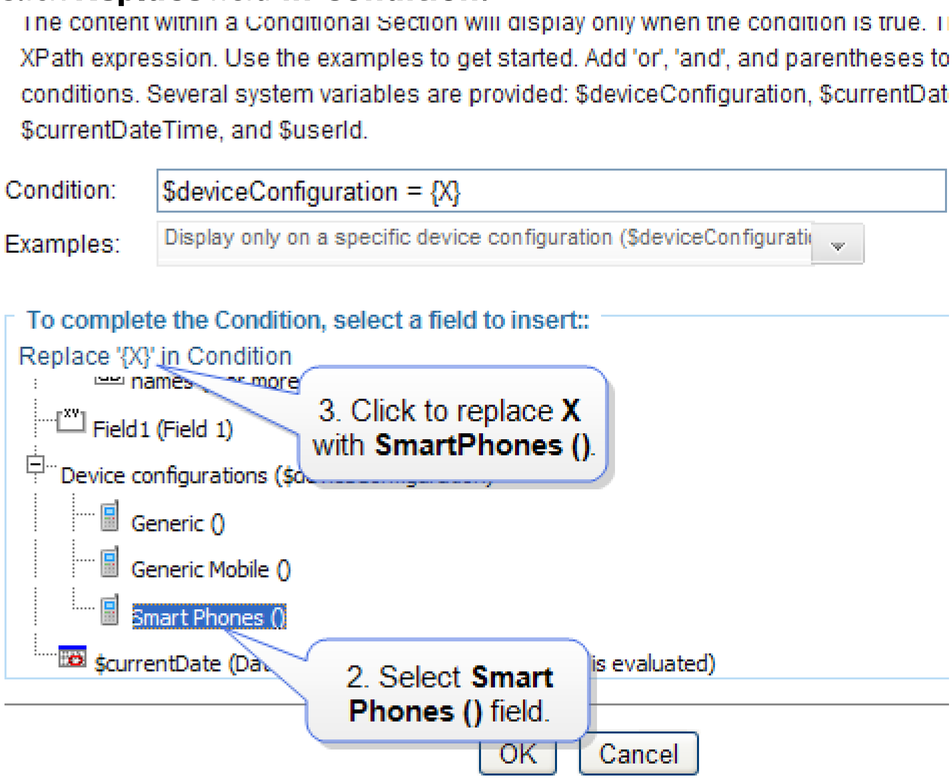
   Use xpathto build the expression. For example, `$deviceConfiguration = 'Smart Phones'`. You can click **View Data as Index** ( ) to see the configuration's xpath structure.

   NOTE: Developers can modify the examples by editing `workarea/ContentDesigner/ConditionalExamples.xml`.

3. Select a variable to replace. For example, select **X**.

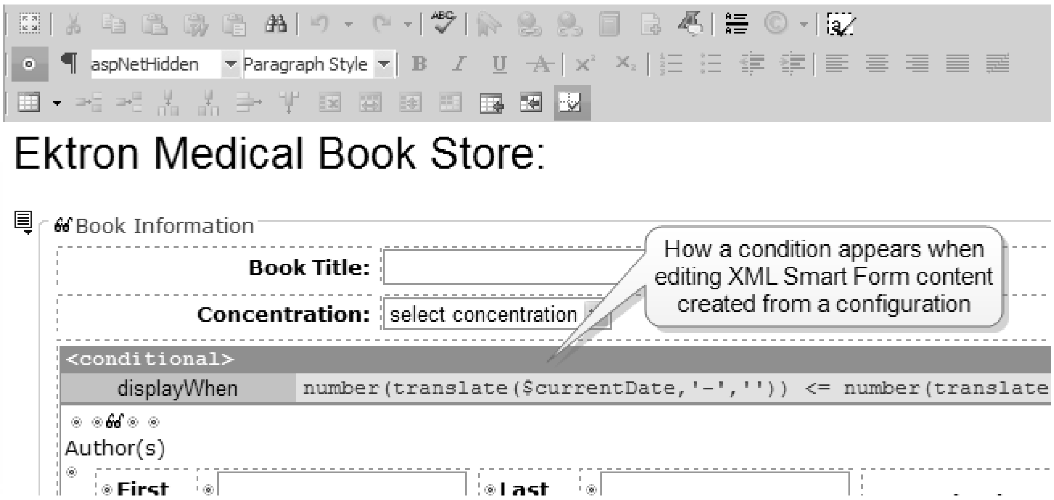


4. Select a field from the lower section of the dialog. For example, select **Smart Phones**.
5. Click **Replace** *field* **in Condition**.



The expression looks like this: `$deviceConfiguration = 'Smart Phones'`

- You cannot apply a conditional section to a rich area field.
- You can only apply a conditional section to a Smart Form configuration. You *cannot* apply a conditional section to Smart Form content created from a configuration. But, authors working that content see conditions



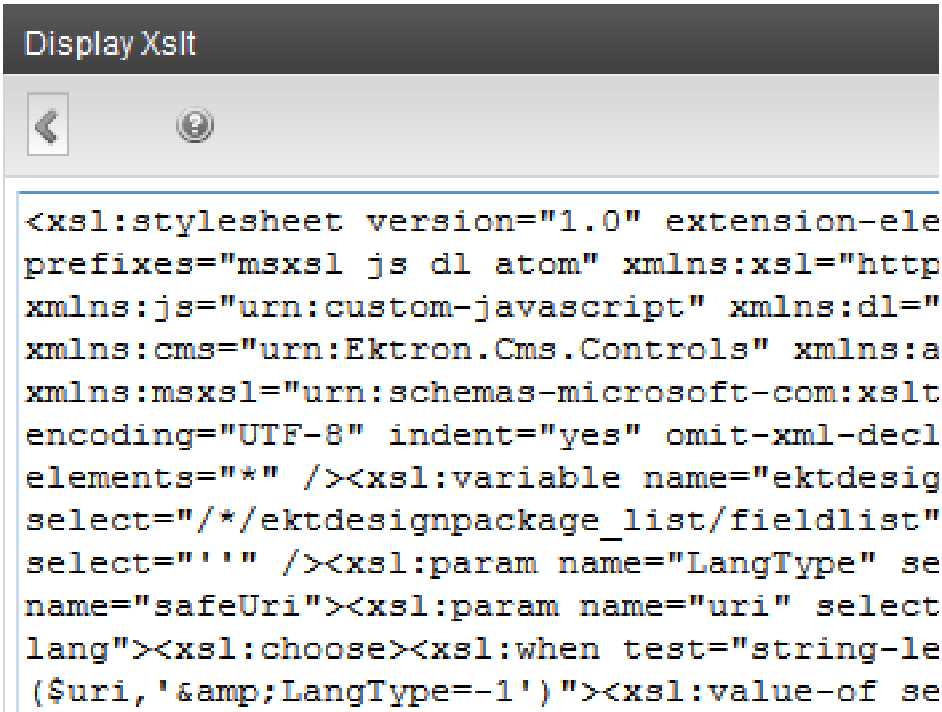
Editing a Smart Form's XSLT

Every Smart Form configuration has a packaged XSLT, which is a default XSLT created from the configuration’s display information. To modify the Smart Form’s appearance:

1. Go to **Settings > Configuration > Smart Form Configurations**.
2. Click the Smart Form configuration whose XSLT you want to customize.
3. Click **View XSLT** ( ).
4. Select and copy the XSLT and paste it into an XSLT editor.
5. Customize the file.
6. Save it with an `.xslt` extension to your site *root*/`xmlfiles` folder.
7. Return to the Smart Form configuration you selected in Step 2 and click **Edit**.
8. In the **XSLT1** field, enter the Xslt you saved in Step 6.
9. Click the radio button next to **XSLT1**.
10. Click **Update**.

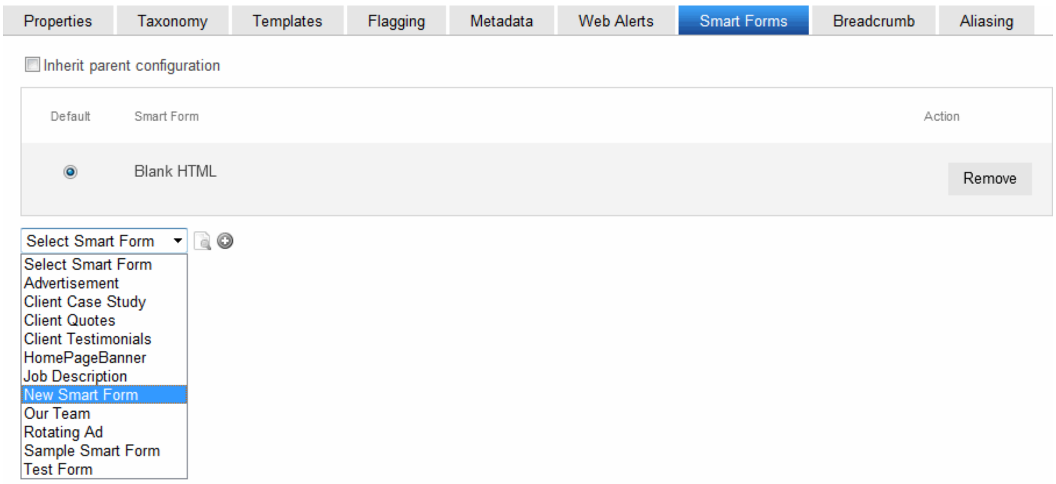
You can edit the custom XSLT at any time. The changes immediately affect the appearance of the Smart Form on your website. So, the XSLT is quite different from other aspects of the Smart Form configuration, which generally cannot be edited for existing content.

To view a Smart Form's XSLT, click ( ). The View XSLT screen appears. You can use this information to create your display XSLT.



Assigning a Smart Form to a folder

If you break inheritance on the Smart Forms tab of the folder properties screen, you can select the Smart Form configurations to be assigned to content in the folder.



- To preview a Smart Form configuration, click **Preview** ( ).
- To add a Smart Form configuration, select it from the drop-down list and click **Add** ( ). To learn how smart from configurations are created, see *Creating a Smart Form* on page 823.
- To remove a Smart Form configuration, click **Remove**.
- To specify that only Smart Forms can be created in a folder, check **Require Smart Forms**. If you do, the user can only choose enabled Smart Forms when viewing that folder's **New** menu—all other content types are suppressed.

Deleting a Smart Form

You may delete a Smart Form in the same way that you delete other content. See *Deleting content* on page 631.

Deleting a Smart Form configuration

You can delete a Smart Form Configuration *only* if no content is assigned to it. If no content is assigned, click **Delete** ( ) to delete a configuration. If content is assigned, you must first delete all assigned content.

Deleting assigned content

PREREQUISITE

You have permission to delete the assigned content. See also: *Managing folder and content permissions* on page 160.

1. From the Smart Form Configuration screen, click **Associated Content** ( ) to access the Delete Contents of Smart Form screen.
2. Delete content assigned to the Smart Form.
3. The Smart Form Configuration screen appears. Click **Delete** ( ) to delete the configuration.

Searching XML information

XML indexing lets site visitors search XML information collected from Smart Forms and view the results. The results appear as a list of topic titles, optionally followed by the content summary. The Ektron Windows Service manages the background processing that creates XML indexes. See also: *Handling background processing functions with the Ektron Windows Service* on page 128.

There are 2 ways that XML indexing can make XML content available to your site visitors.

- *Present a screen of search criteria.* A site visitor uses the screen to select the desired kind of information. For example, your site sells outdoor clothing, and a user searches for wool hats under $20.00.
- *Determine the search and display criteria programmatically using a custom function*. Your Web developer inserts a control that specifies search and display criteria. For example, your site sells books. A site visitor sees a navigation link **Find books under $5.00**. When the link is clicked, the control searches your XML content and returns all books whose price is less than $5.00.

You can choose the XML fields to index with the Data Designer. You can also validate those fields to be numbers, dates, Boolean, or string values. After you identify fields to be indexed, a search dialog is created. Where appropriate, the dialog automatically populates drop-down lists from the indexed data.

Important notes:

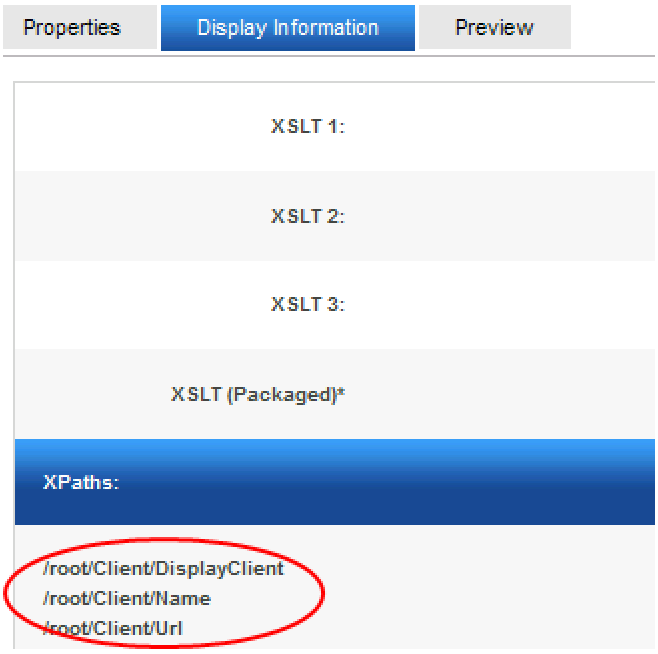
- XML indexing is only available for information collected on XML Smart Forms. It cannot find information in other types of content.
- Ektron content has a **Content Searchable** check box, which you must check if you want the Index Search to find Smart Form content. See also: *Making content searchable* on page 346
- Do not insert a calendar field into a Smart Form that allows multiple entries (using the **Allow more than One** option on the dialog). If you do, you cannot search the Smart Form using that field.
- For Smart Form fields to searchable, they must be stored as elements *not* attributes.If you are upgrading to version 7.5 or higher, inspect your Smart Forms and change field properties as needed so they are stored as elements not attributes.

Setting up a Smart Form search

To create a search:

1. Select a Smart Form.
2. Assign indexing to each field to be searched. You can index the following types of fields: Checkbox, Plain Text, Choices, List, Calculated, Image Only, Link, Calendar.
   a. Choose **Workarea > Settings > Configuration > Smart Form Configuration**.
   b. Select a Smart Form configuration that you want to index and open its Data Design.
   c. Move the cursor to the first field you want to index, right click the field, and choose **Field Properties**. A dialog box appears.
   d. Check **Indexed**.
   e. Repeat these steps for every field by which you want site visitors to search the Smart Form.

   IMPORTANT: If a Smart Form configuration field's xpath exceeds 64 characters, Microsoft Search Server 2010 cannot search it. So, if you need to index such a field, reduce the length of its xpath to less than 64 characters.
   To see a configuration's XPaths, click the **Display Information** tab.



3. Set up the search screen.
   - **Xpath**. The xpath to each indexed field.
   - **Label**. The index field’s field name, as defined on its dialog.
   - **Multiple**. Check this box if you want to allow the user performing the search to select more than one value. This checkbox only appears with List and Choice fields.
4. When you save a Data Design form, a dialog appears that lets you view all and modify indexed fields.

   - **Xpath**. The xpath to each indexed field.
   - **Label**. The index field’s field name, as defined on its dialog.
   - **Multiple**. Check this box if you want to allow the user performing the search to select more than one value. This checkbox only appears with List and Choice fields.

NOTE: To select more than one value on the search screen, the user holds down the **Ctrl** key while selecting additional options.

If you choose **NoSelection** in a search field, the search disregards that field when compiling results. However, you must select a value (or range of values) in at least one field to get results.

Validation

Validation ensures that the user completing an XML form enters the right type of data. You can decide if the user's input should be a number, boolean, date, string, zip code, and so on. If you do not specify type attributes using validation data, the field is a string.

Validation is especially important when users search XML data, because it helps the search find the correct information. For example, if a field collects a zip code but you set its type to plain text, a user completing the form can insert anything into the field. If the user inserts the letter "o" instead of the number zero (0), the field accepts that input but the search will not find that record. On the other hand, if you set validation to zip code, the user can only insert 5 or 9 digits—any other entry is rejected.

User-selected versus developer-selected search criteria

There are 2 ways that XML Indexing can make XML content available to your site visitors.

- *Present a screen of search criteria.* A site visitor uses the screen to select the desired kind of information. For example, your site sells outdoor clothing, and a user searches for wool hats under $20.00.
- *Determine the search and display criteria programmatically using a custom function*. Your Web developer inserts a control that specifies search and display criteria. For example, your site sells books. A site visitor sees a navigation link **Find books under $5.00**. When the link is clicked, the control searches your XML content and returns all books whose price is less than $5.00.

NOTE: The Ektron Windows Service manages the background processing that creates XML indexes. See also: *Handling background processing functions with the Ektron Windows Service* on page 128.

Ektron content has a **Content Searchable** check box, which must be checked if you want the Index Search to find Smart Form content. See also: *Making content searchable* on page 346

Types of search criteria

XML Indexing allows multi-dimensional searches on all types of XML data.

- **Plain text**. Use an exact phrase, or any word or letter in a phrase
- **Numerical and date information**. Use expressions such as greater than, less than, or between 2 values
- **List and choice fields**. Display the field values and let the user select relevant ones.

  NOTE: Choices field values can consist of single letter.

- **Image Only**. Use the `alt` or `src` attribute value
- **Link**. Use the text or `href` attribute value

For every search field, **NoSelection** is a value. If this is chosen, the search disregards that field when compiling results. However, the user must select a value (or range of values) in at least one field to get results.

IMPORTANT: Do not insert a calendar field into a Smart Form that allows multiple entries (using the **Allow more than One** option on the dialog). If you do, you cannot search the Smart Form using that field.

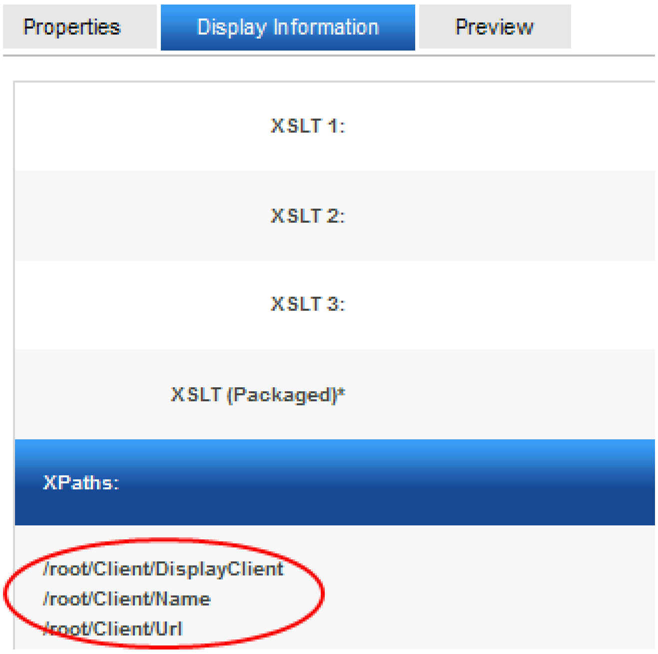
For Smart Form fields to searchable, they must be stored as elements *not* attributes. If you are upgrading to version 7.5 or higher, inspect your Smart Forms and change field properties as needed so they are stored as elements not attributes.

Specifying which XML elements are indexed

XML indexing allows multi-dimensional searches on all types of XML data.

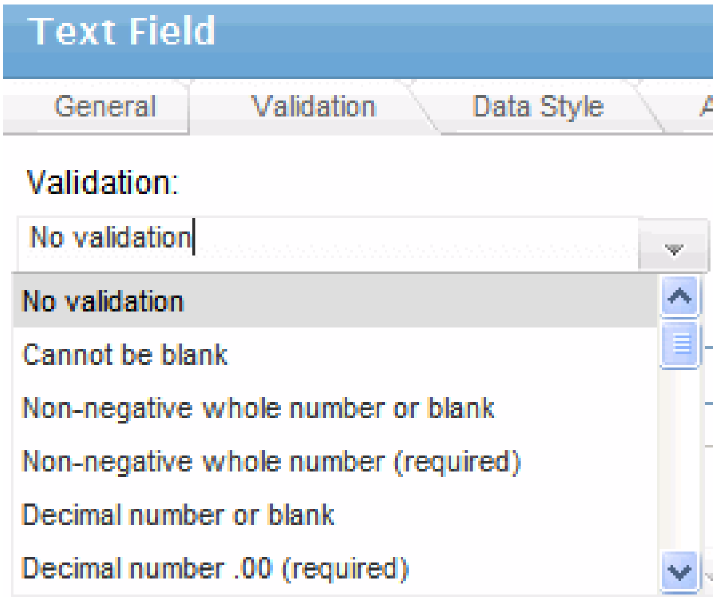
- **Plain text**. Use an exact phrase, or any word or letter in a phrase
- **Numerical and date information**. Use expressions such as greater than, less than, or between 2 values
- **List and choice fields**. Display the field values and let the user select relevant ones. Choices field values can consist of single letter.
- **Image Only**. Use the `alt` or `src` attribute value
- **Link**. Use the text or `href` attribute value

If a Smart Form configuration field's xpath exceeds 64 characters, Microsoft Search Server 2010 cannot search it. So, if you need to index such a field, reduce the length of its xpath to less than 64 characters. To see a configuration's XPaths, click the **Display Information** tab.



Adding standard validation options

By default, the Data Designer provides several standard validation options. You can see them by clicking the down arrow to the right of the **Validation** drop-down.



Creating custom validation criteria

If the standard validation options do not provide the flexibility you want, use the custom validation feature to ensure the following about the user’s input.

- The data type—the default types are
  - text
  - URL
  - whole number
  - decimal number
  - floating point number (Floating point includes scientific notation, so is appropriate for scientific numbers. Decimals usually suffice for business numbers.)

  NOTE: Your system administrator may customize the choices.

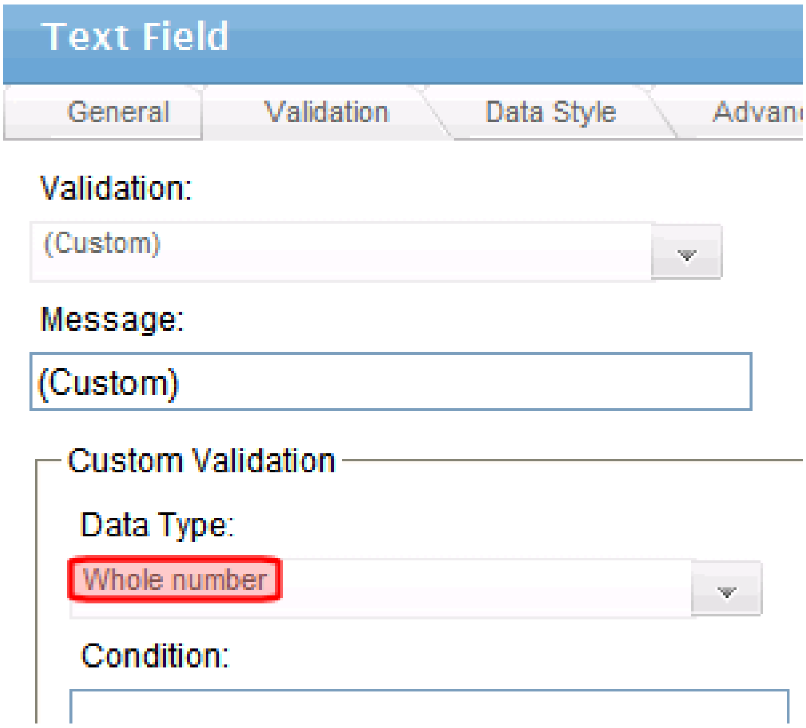
- The field value has one of the following relationships with another field, a number, or an expression—the default expressions are
  - between 2 values (either another field or a number that you specify)
  - less than
  - equal to
  - not equal to
  - maximum length (usually for text responses)

  NOTE: Your system administrator may customize the choices.

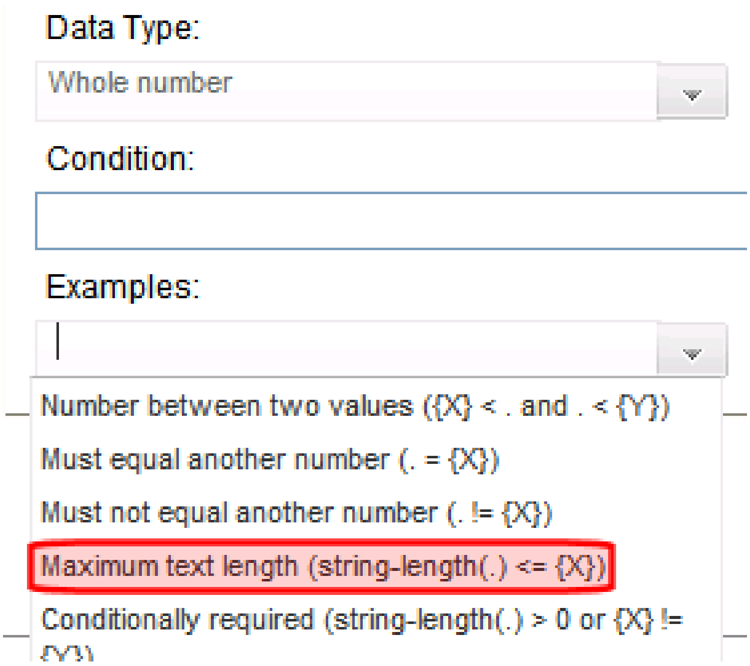
If the user's response fails to meet the criteria, you can compose an error message that appears when that happens. Your system administrator determines if a user can save the invalid data.

As an example of custom validation, assume that a field collects telephone numbers, and you want to make sure the user enters 10 digits. To accomplish this:

1. Click the Plain Text Field dialog and complete the screen.
2. In the validation section, click **Custom Validation**. The Custom validation screen appears.
3. In the **Data Type** field, select **Whole Number** from the drop-down list. This ensures that the user can only enter digits.



4. Click the down arrow to the right of the **Examples** field to see sample logic.

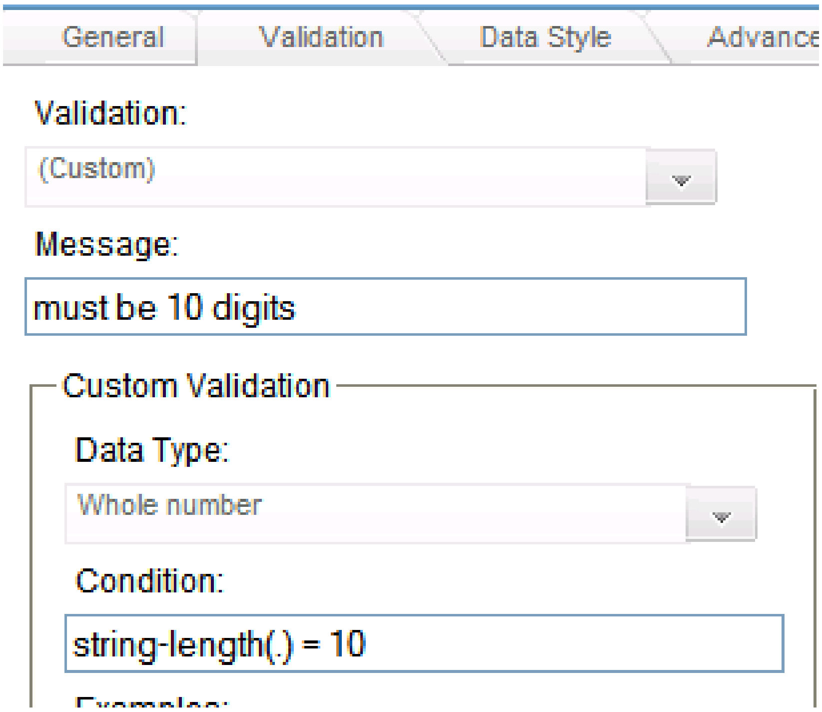


5. Click **Maximum text length...**. This option lets you specify the length of the user’s response.

   `string-length(.) <= {X}` appears in the **Condition** field.

6. Because you want the user’s input to equal 10, remove the less than sign (<) from the calculation. Now it looks like this: `string-length(.) = {X}`.
7. Replace the `{X}` with 10. Now, it looks like this: `string-length(.) = 10`.

8. Move the cursor to the **Error Message** field and compose a relevant error message. For example: `must be 10 digits`. Your screen should look like this.



9. Click **OK** and return to the **Plain Text** field dialog.
10. Click **OK** to save that dialog and test the validation on the phone number field. To do this, switch to Data Entry mode and enter more or fewer than 10 digits, as well as non-digit characters to verify that validation works as expected.

Using data field types

You can insert the following data field types into a data entry screen.

IMPORTANT: For Smart Form fields to searchable, they must be stored as elements or attributes not content. If you are upgrading to version 8.5 or higher, inspect your Smart Forms and change field properties as needed so they are not stored as content.

- *Calculated* on the facing page
- *Calendar* on page 847
- *Checkbox* on page 850
- *Choices* on page 851
- *Group Box* on page 855
- *Image Only* on page 868
- *Link* on page 870
- *Resource Selector* on page 873
- *Tabular Data* on page 877
- *Text* on page 883

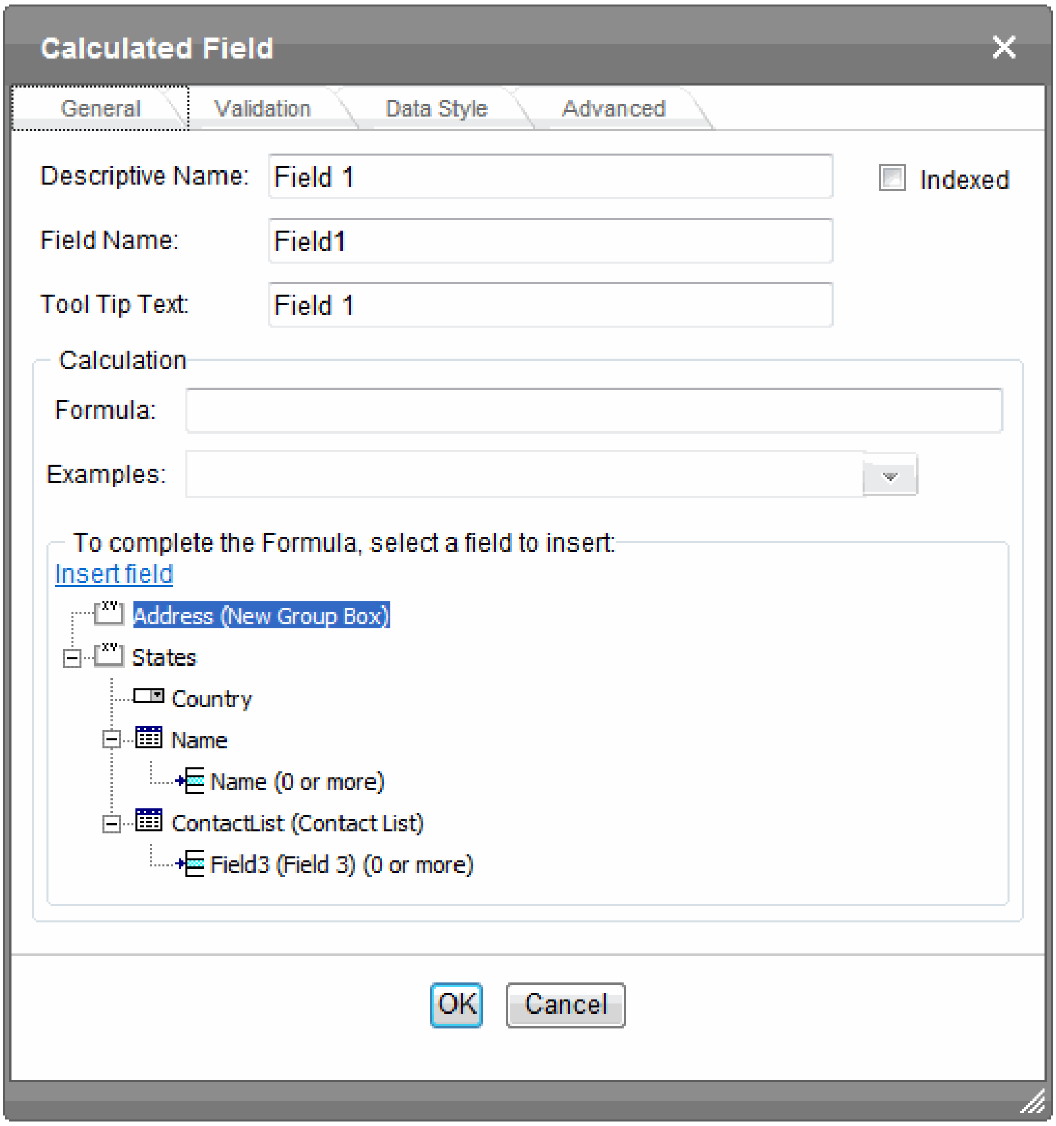
Calculated

Use a calculated field to perform a calculation based on values in other fields. For example, if your screen collects mortgage information, you could create one field to collect the mortgage and interest payment and another to collect taxes and insurance. The calculated field could sum those 2 numbers and display the monthly payment.

You can validate a calculated field. For example, you can require a positive number between 100 and 1,000.

Calculated fields are display only.

IMPORTANT: If a field is referenced in a calculation, use validation to require a value. This forces the user to enter a number used in the calculation.



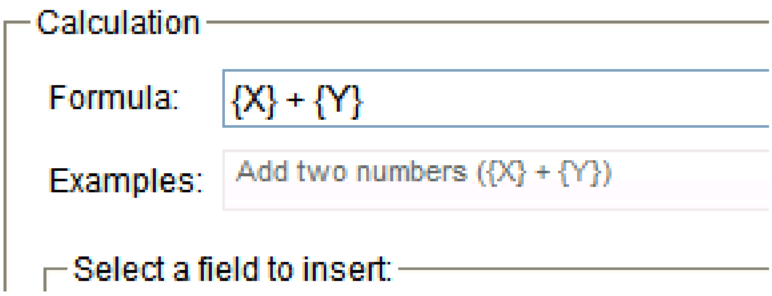
- **Descriptive Name**. Enter the name of the field.

- **Indexed**. Check if you want to index this field. For more information, see *Searching XML information* on page 832. The **Indexed** field may or may not appear, depending on how your administrator has set up your system.
- **Field Name**. Enter the field's element name. This defines the field in the XML.
- **Tool Tip Text**. Enter the text that appears when a user hovers the cursor over this field.
- **Formula**. Enter the calculation that this field will perform. See also: *Using the Formula Field* below
- **Select Field**. Click this button to select a field to reference in the calculation.
- **Examples**. Click the down arrow next to this field to see sample calculations. If you select an example, it is copied into the **Formula** field. See also: *Formula examples* on page 844
- **Validation**. Select the kind of validation to apply to this field. Your choices are:
  - **No validation**. the user's response is not checked
  - **Non-negative number (required)**. the result of the calculation must be a positive number
  - **Custom Validation**. See *Creating custom validation criteria* on page 837

  If you assign any value other than **No validation**, the field is surrounded by red dashes in Data Entry mode. If the user's response does not meet the validation criteria, the field remains surrounded by red dashes. Your system administrator determines if a user can save a screen with invalid data.
- **Error message**. If you select **Non-negative number**, insert text that appears on the screen if the user's response does not meet this criterion.
- **Advanced tab**. This is the same as the *Group Box Advanced tab* on page 858.

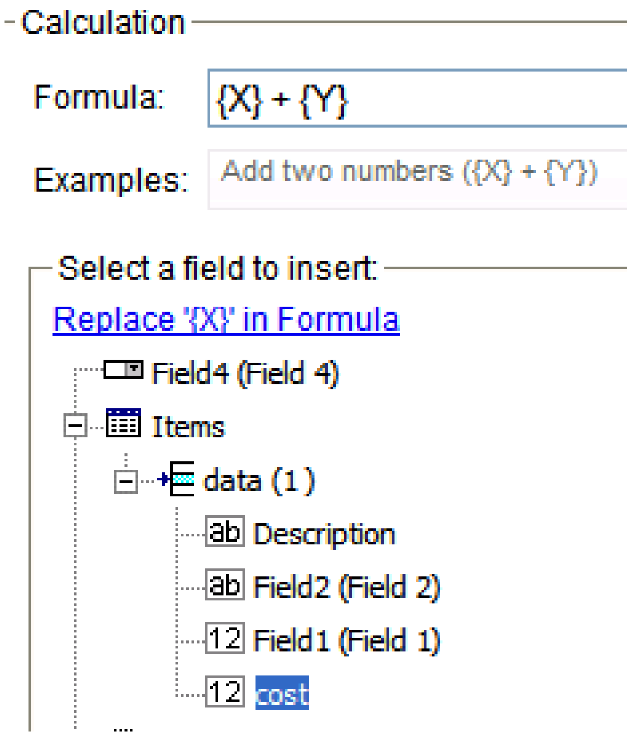
Using the Formula Field

1. Copy a sample calculation into the **Formula** field by clicking the **Examples** field.
2. Select an operation from the drop-down list. For example, if you click **Examples Add 2 numbers {X}+{Y}**, **{X}+{Y}** appears in this field.



3. Replace the variables with fields on the screen. Be sure to select the curly brackets ({}) with the letter between them. Then, when the user enters data into those fields, the calculation is performed using the current field values.
4. Select the first variable to replace. To continue the example, select **{X}**.

5. Select a field to replace that variable in the calculation.



6. Click **Replace X in Formula**.
7. Replace all variables in the formula.

Important information about calculated variables

- If the user does not replace *all* variables, validation will fail.
- If a variable appears more than once in a formula (for example, `{X} * number ({X}<= {Y}) + {Y} * number({X}>{Y})`, you only need to replace the first occurrence—the editor replaces subsequent occurrences for you.
- If a calculated field tries to perform a numerical calculation with a value that is blank or contains letters, `NaN` appears in the field. (`NaN` stands for "not a number.")
- If a calculated field tries to divide by zero, `Infinity` appears.
- If an XML document contains several occurrences of a field that is referenced in a formula, the value is derived as follows:
  - When using the XPath functions `sum()` and `count()`, all values with the field name are considered. For example, a document includes 3 books whose prices are $10, $20 and $30. In this case, `sum`'s value is $60.
  - When using all other functions, the first value is used. For example, a document includes 3 books whose prices are $10, $20 and $30. If a calculation formula refers to <price>, its value is $10.
- You can replace a variable with a number instead of a field. For example, replace `{X} * {Y}` with `../price * 1.15`.
- The expression can be complex, such as `(round(Field1 * 0.80) + (1 div Field2)) - 2`.

- You can use a string expression that creates a text message. For example, to calculate a full name from its parts: `concat( title, ' ', givenname, ' ', familyname)`, which could produce "Dr. Jonathan Smythe".
- A calculated field can only reference other calculated fields that appear before it in a document. For example, a document collects a series of numbers.
  - One calculated field counts the number of numbers.
  - Another totals their values.
  - A third computes the average by dividing the total by the count.

  In this example, you must place the third field below or to the right of the first 2 fields. Calculated fields that are defined later in a document do not appear in the Select Field or Group dialog.

Formula examples

These formulae appear in the **Examples** drop-down list of the Calculated Field dialog. Your system administrator can customize the list.

- **Add 2 numbers**. Add the value in the first field (X) to the value in the second field (Y).
```
{X} + {Y}
```
- **Subtract 2 numbers**. Subtract the value in the second field (Y) from the value in the first field (X).
```
{X} - {Y}
```
- **Multiply 2 numbers**. Multiply the value in the first field (X) by the value in the second field (Y).
```
{X} * {Y}
```
- **Divide 2 numbers**. Divide the value in the first field (X) by the value in the second field (Y).
```
format-number({X} div {Y},'0.###')
```
- **Format as a percentage**. Determine what percentage one number (X) is of another (Y). For example, if {X}=10 and {Y}=100, the result of the calculation is 10%.
```
format-number({X} div {Y},'#0%')
```
- **Absolute value of a number**. The number regardless of the sign (negative or positive).
```
{X} * (number({X} > 0)*2-1)
```
- **Minimum of 2 numbers**. The smaller of 2 field values.
```
{X} * number({X} <= {Y}) + {Y} * number({X} > {Y})
```
- **Maximum of 2 numbers**. The larger of 2 field values.
```
{X} * number({X} >= {Y}) + {Y} * number({X} < {Y})
```
- **Zero if subtraction is negative**. Subtract one number (Y) from another (X). If the difference is less than zero, insert zero.
```
({X} - {Y}) * number(({X} - {Y}) >; 0)
```

- **Multiply by another number if checkbox is checked**.

  ```
  {X} * ( {Y} * number( {Z} ='true') + number( {Z} !='true'))
  ```

  - X is a numeric field.
  - Y is another numeric field to multiply by X if a checkbox is checked.
  - Z is the checkbox.

  For example, {X}=2 and {Y}=3

  - if the checkbox is checked, the result is 2 * 3, which is 6
  - If the checkbox is not checked, the result is 2
- **Round a decimal number**. Rounds the number to the nearest integer. For example, `round(3.14)`. The result is 3.

  ```
  round({X})
  ```
- **Round up a decimal number**. Returns the smallest integer that is greater than the number. For example, `ceiling(3.14)`. The result is 4. For negative numbers: ceiling(-3.14) = -3

  ```
  ceiling({X})
  ```
- **Round down a decimal number**. Returns the largest integer that is not greater than the number argument. For example, `floor(3.14)`. The result is 3. For negative numbers: floor(-3.14) = -4

  ```
  floor({X})
  ```
- **Format decimal number 0.00**. Rounds a value either up or down to the hundredth place. As examples, 100 becomes 100.00, and 3.14159265 becomes 3.14.

  ```
  format-number({X},'0.00')
  ```
- **Total numeric values from multiple fields**. Add the values in all referenced fields. Only elements that contain a value are summed. Empty elements are excluded.

  ```
  sum({X}[text()] | {Y}[text()] | {Z}[text()]))
  ```
- **Total a list of numeric values**. Total all values in a single repeating field.

  ```
  sum({X}[text()])
  ```

  For example:

  Plain Text Field properties

  - Name: Miles
  - Allow: more than one
  - Validation: non-negative whole number

  XML Data

  ```
  <root>
              <Miles>89</Miles>
              <Miles>12</Miles>
    <Miles>23</Miles>
    <Miles>19</Miles>
  </root>
  ```

```
Sum(Miles) equals 89+12+23+19=143
```

Only elements that contain a value are summed. Empty elements are excluded.

- **Average a list of numeric values**. Calculate the average of all values in a single repeating field.

  ```
  format-number(sum({X}[text()]) div count({X}),'0.###')
  ```

  To continue the example from the **Total a list of numeric values field**:

  Plain Text Field properties

  - Name: Miles
  - Allow: more than one
  - Validation: non-negative whole number

  XML Data

  ```
  <root>
    <Miles>89</Miles>
    <Miles>12</Miles>
    <Miles>23</Miles>
    <Miles>19</Miles>
  </root>
  ```

  ```
  Average=89+12+23+19=143
  ```

  divided by the number of values (4)= 35.75

  Only elements that contain a value are summed. Empty elements are excluded.

- **Count the number of values in a list**. Calculate the number of values in a single repeating field.

  ```
  count({X})
  ```

  To continue the example from the **Total a list of numeric values field**:

  Plain Text Field properties

  - Name: Miles
  - Allow: more than one
  - Validation: non-negative whole number

  XML Data

  ```
  <root>
    <Miles>89</Miles>
    <Miles>12</Miles>
    <Miles>23</Miles>
    <Miles>19</Miles>
  </root>
  ```

  ```
  Count = 4
  ```

- **Lowercase text**. Replace all uppercase characters with the lowercase version of that character.

  ```
  translate({X},'ABCDEFGHIJKLMNOPQRSTUVWXYZ','abcdefghijklmnopqrstuvwxyz')
  ```

- **Uppercase text**. Replace all lowercase characters with the uppercase version of that character.

```
translate({X},'abcdefghijklmnopqrstuvwxyz','ABCDEFGHIJKLMNOPQRSTUVWXYZ')
```

- **Remove extra spaces**. Remove extra space characters from content.

```
normalize-space({X})
```

- **Concatenate text**. Link text strings together into a single string. For example, `concat('The',' ','XML')` yields `The XML`.

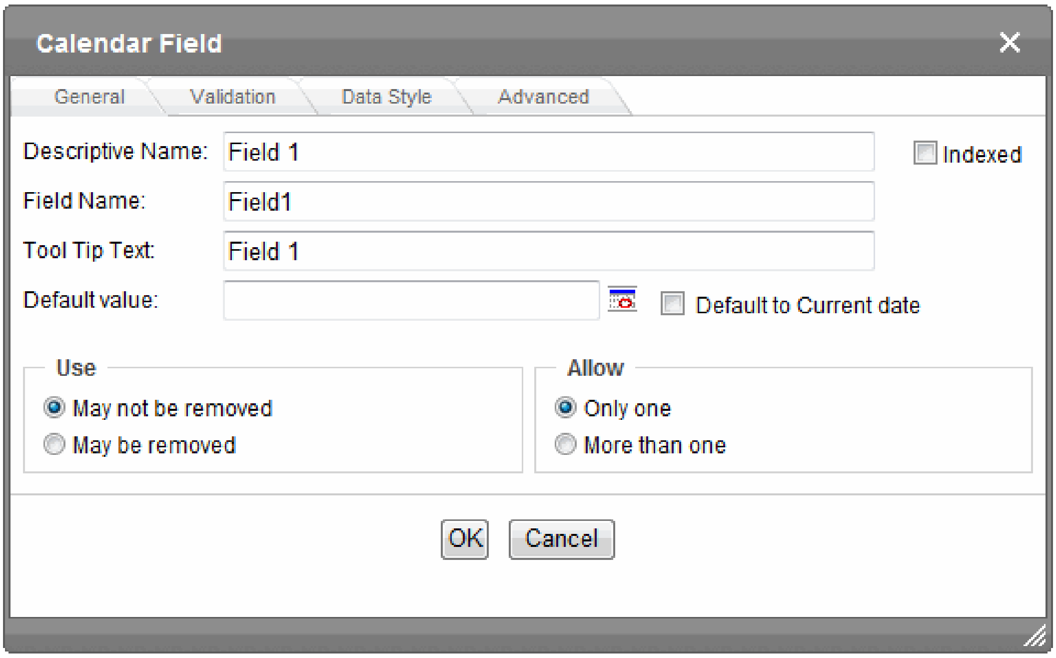
```
concat({X}, ', ', {Y})
```

- **Size of a text string**. Count the number of characters in a selected field's value. For example, if the referenced field's value is Hello, string-length = 5.

```
string-length({X})
```

Calendar

Insert a calendar field when you want a Smart Form to include a date field. You may use the current date or click one from a calendar. Because users cannot enter digits, a standard date format is ensured. The date is stored as a standard XML date (in the format yyyy-mm-dd), and localized to the computer of the user viewing it.



- **Descriptive Name**. Enter the name of the field.
- **Indexed**. Check if you want to index this field. For more information, see *Searching XML information* on page 832. The **Indexed** field may or may not appear, depending on how your administrator has set up your system.
- **Field Name**. Enter the field's element name. This defines the field in the XML.
- **Tool Tip Text**. Enter the text that appears when a user hovers the cursor over this field.
- **Default value**. If you want this screen to have a default date when the user first sees it, click the calendar icon to the right and select a date. The user can change the date in Data Entry mode. Check **Default to Current date** if you want to use the date on which the content is created or edited.

NOTE: If you enter a default date, you cannot later remove it. You can change it. If necessary, you can delete the field and enter a new one.

- **Use**. Click **May not be removed** if this field must be included on the screen. Otherwise, click **May be removed**.

  If you check **May be removed**, when this field appears on a data entry screen, an icon () appears to the left of the field. If the user clicks the icon, a drop-down menu provides an option to remove the field.

  If the user removes the field, *field name* replaces the field on the data entry screen to indicate that the field was removed and can be re-added if necessary. For example, if the field's display name is `street address`, and the user removes the field, add Street Address appears in place of the field.

NOTE: The menu icon () can also indicate that the user can add instances of a field (see the Allow field). So, if a field is required, the icon could appear but omit a **Remove** option.

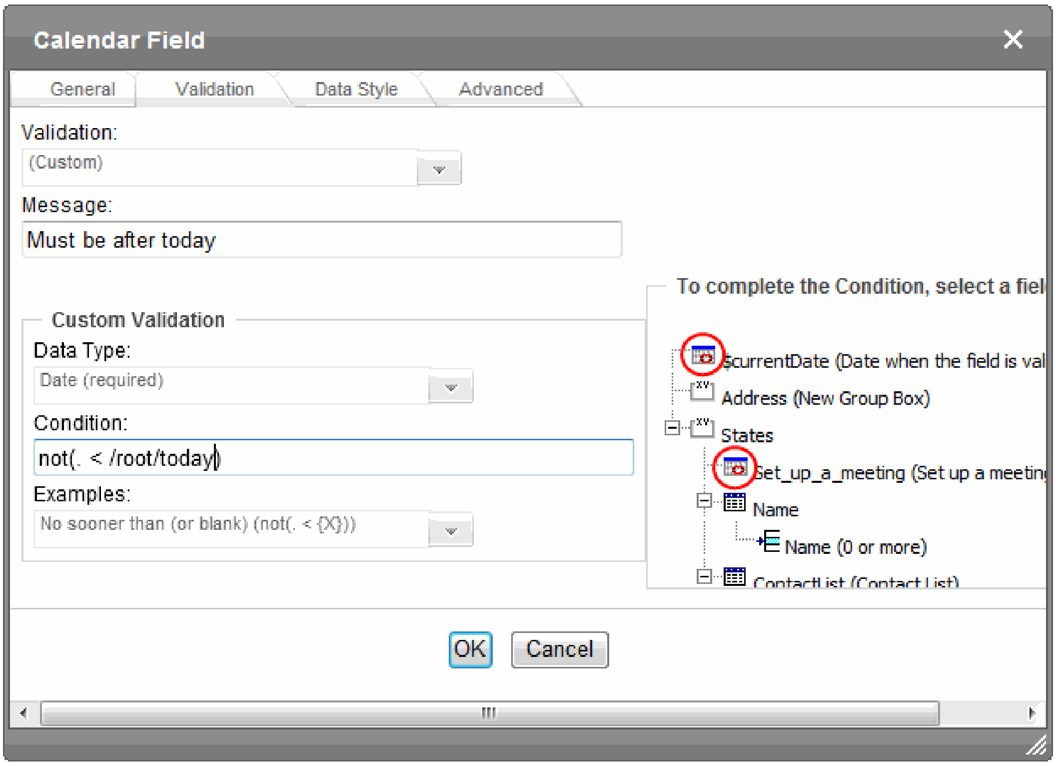
- **Allow**. Check **more than one** if you want to let the user entering data add instances of this field. Otherwise, check **only one**. For example, if a screen is collecting names and addresses and you want to let the user enter several of them, check **more than one**. If you check **More than one** here, you are allowing the user to insert an entirely new table, not an additional table row.

IMPORTANT: Do not insert a calendar field into a Smart Form that allows multiple entries (using the **Allow more than One** option on the dialog). If you do, you cannot search the Smart Form using that field.

  If the user entering data clicks , a menu appears, which lets the user click **Duplicate** to add instances of the field to the screen.

NOTE: The menu icon () can also indicate that the user can remove a field (see the Use field). So, even if a field allows only one instance, the icon could appear but the menu would only display **Remove**.

- **Validation**. If you want to require the user using the calendar to enter a response, click the down arrow to the right of this response field and select **Cannot be blank**. You can also choose a date in the past/future option or **Custom**.
- **Error Message**. If you select **Cannot be blank**, insert text that appears on the screen if the user's response does not meet this criterion.
- **Custom Validation**. You can ensure the user's input is greater or less than the date you are inserting on the Data Design screen.



- **Message**. Displays in Data Entry mode when the user inserts an invalid value. Your system administrator determines if a user can save the invalid data.
- **Data Type**. Shows **Date**.
- **Condition**. Displays the validation logic.
- **Examples**. Drop-down list shows validation expressions that you can apply to the field.
- **Select a Field to Insert** area. Displays fields that can be inserted into the **Condition** field. You must choose a calendar type field (note the calendar icon to the left of these fields).

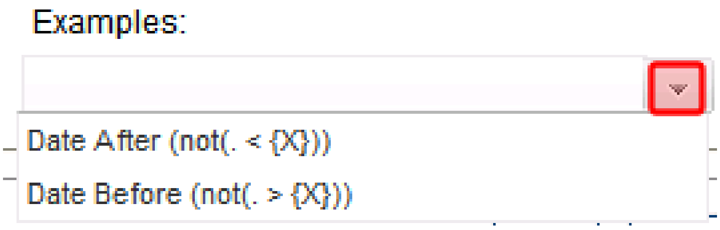
- **Advanced tab**. This is the same as the *Group Box Advanced tab* on page 858.

Creating a custom validation

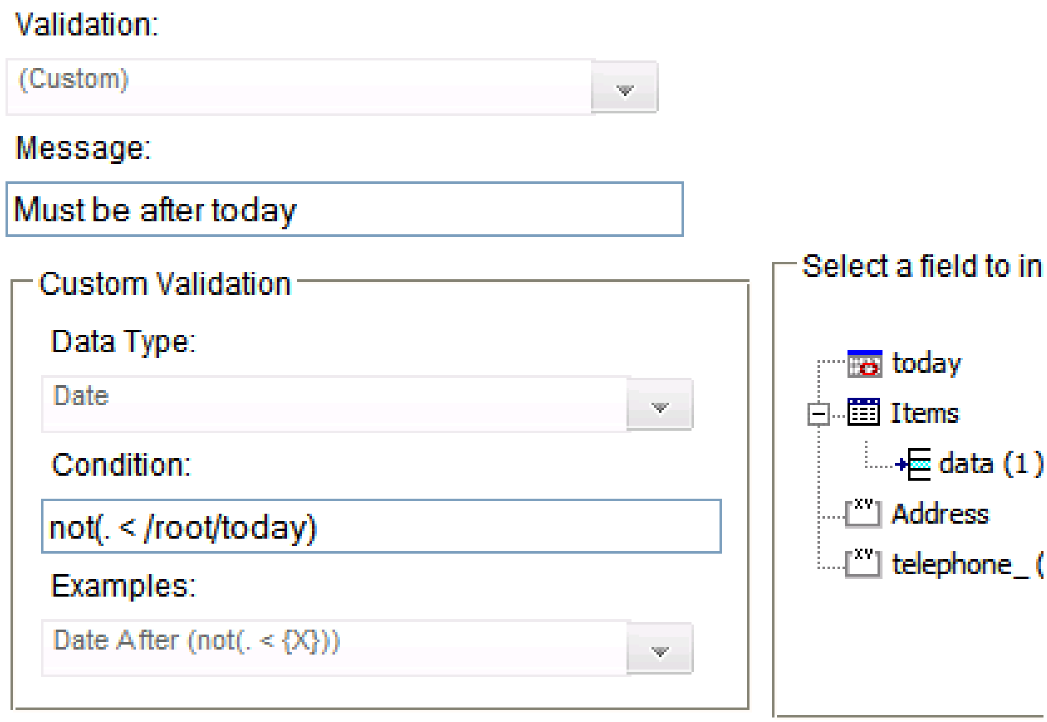
As an example of custom validation, assume a field collects the date when a patient's health insurance policy expires. You want to make sure the date is later than today. To accomplish this:

1. Create a calendar field that prompts for today's date.
2. Create another calendar field that prompts for a patient's health insurance policy expiration date.
3. While creating the second field, in the **Validation** section, click **Custom Validation**. The Custom validation screen appears.

4. Click the down arrow to the right of the **Examples** field to see sample logic.



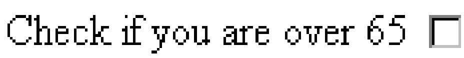
5. Click **Date After (not(. >={X})**. This option lets you specify that the user's response must be later than a specified date.
6. In the **Condition** field, select **{X}** and click the **Select Field** button. The Select Field or Group screen appears.
7. Select the field that prompts for today's date, which you created in Step 1. That field replaces **{X}** in the **Condition** field.
8. Move the cursor to the **Error Message** field and compose an error message. For example: `Must be after today`. Your screen should look like this.

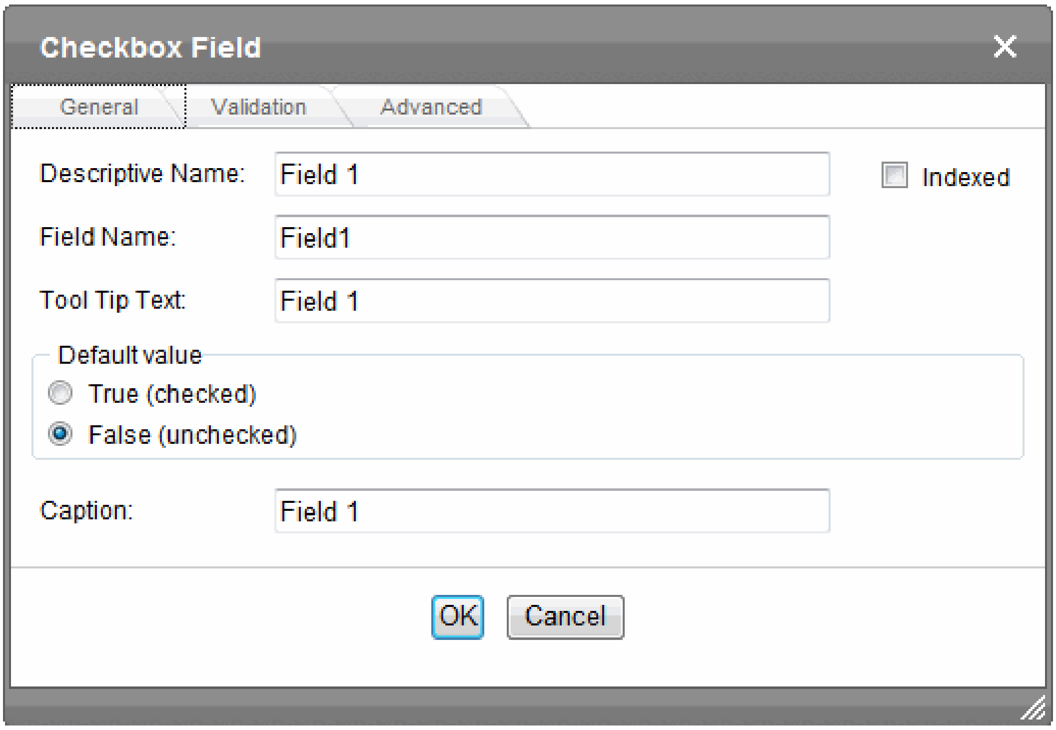


9. Click **OK**.
10. Click **OK** to save that dialog and test the validation on the date field. To do this, switch to Data Entry mode and enter a date earlier than today to verify that validation works as expected.

Checkbox

A Checkbox field is only one character wide and accepts one of 2 possible values: checked or unchecked. For example:





- **Descriptive Name**. Enter text to guide the user's response to this field. To continue the example, the caption would be **Check if you are over 65**. After you insert this field onto the screen, the Descriptive Name appears to the right of the checkbox. You can use the editor's formatting capabilities to modify its size, font, color, and other attributes.

  NOTE: The Descriptive Name field only appears on this dialog when you create the Check Box field. If you later try to edit the field, it is not on the dialog. However, you can edit the Descriptive Name text within the editor.

- **Indexed**. Check if you want to index this field. See also: *Searching XML information* on page 832. The **Indexed** field may not appear, depending on how your administrator set up your system.
- **Field Name**. Enter the field's element name. This will define the field in the XML.
- **Tool Tip Text**. Enter text that appears when a user hovers the cursor over this field.
- **Default value**. If you want this field to be checked when the screen first appears, click **True**. Otherwise, click **False**.
- **Validation tab**. You can use this screen to specify if the checkbox must be checked or unchecked.
- **Advanced tab**. This is the same as the *Group Box Advanced tab* on page 858.

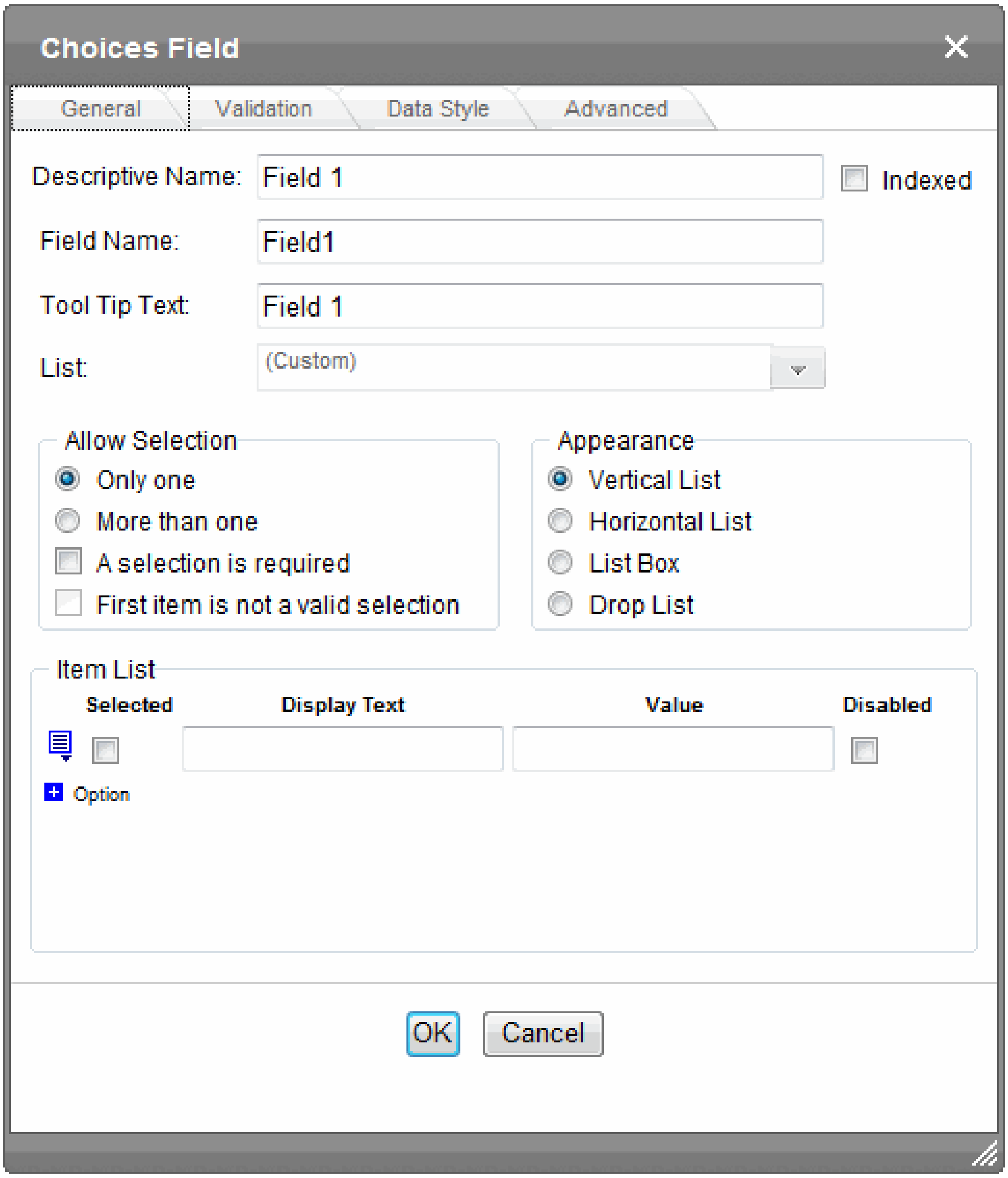
Choices

Use a Choices field to give a data entry user several options. For example, you create a Choices field named **Interests** that lists these options. The data entry user could check the first 2 and leave the third blank.

- music
- art
- sports

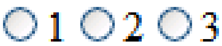
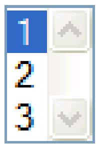
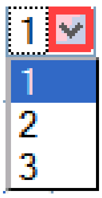
You can do the following with a Choices field.

- Limit a user's response to one item, or allow more than one.
- Require a response.
- Determine the list's appearance.
- Choose from a standard list of choices (such as Languages, Countries, and so on) or create your own list.



- **Descriptive Name**. Enter the name of the field.

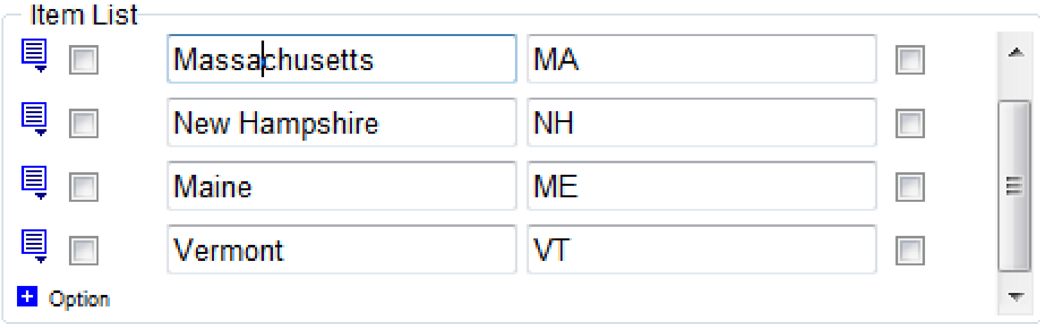
- **Indexed**. Check if you want to index this field. For more information, see *Searching XML information* on page 832. The **Indexed** field may or may not appear, depending on how your administrator set up your system.
- **Field Name**. Enter the field's element name. This defines the field in the XML.
- **Tool Tip Text**. Enter the text that appears when a user hovers the cursor over this choice list.
- **List**. Select from a standard list or choose Custom to create your own.
- **Allow selection**. Click **More than one** to let the data entry user select more than one item on the data entry screen. Otherwise, click **Only one**. For example, if you click **More than one**, and the choices are: music, art, sports, the user could select all 3 choices.
    - **A selection is required**. Check this box if the user must select at least one list item.
    - **First item is not a valid selection**. Check here if the first list item is text that prompts the user to respond to the field. An example of such text for a list of states is **Select a state**. If you check this box and the user selects the first value on the list (most likely by default), an error appears when he tries to save the screen.
- **Appearance**. Determine the style of list.

List type	Example	Description
vertical		All choices appear, arranged vertically.
horizontal		All choices appear, arranged horizontally.
list box		All items appear. The default one is selected when the screen first appears, but can be changed.
drop list		Only the top item appears. To its right, a down arrow appears (circled). The user clicks the arrow to display all items and select one.

- **Item List**. See *Creating a custom choice list* below.
- **Value**. Enter the value collected when a data entry user selects this item. For example, if **Interests** appears in the Name field, and you want `music` to be collected when the data entry user selects this item and saves the page, enter **music** here.
- **Advanced tab**. This is the same as the *Group Box Advanced tab* on page 858.

Creating a custom choice list

To create your own set of list options, accept the List field's default value, **Custom**. Then, enter the list values using the **Item List** section of the screen.



To indicate an option is the default choice, check the **Selected** checkbox.

- In the **Display Text** field, enter text to describe this item on the data entry screen. After you insert this field onto the screen, you can format it. For example, you can apply bold, assign a style, and so on.
- In the **Value** field, enter the value that is collected when the data entry user selects this item.

  For example, if Interests appears in the **Name** field, and you want music to be collected when the data entry user selects this item and saves the page, enter **music** here.

To add a new choice, delete an existing choice, or move a choice up or down within the list, click the menu icon () next to that choice. Then select a menu option.

Creating a custom choice list in a configuration file

Although you can create a custom list of choices using the **Item List** area of the Choices Field dialog, that list is only available in that field of that screen. If you want to insert the same list in another section of the screen or a different screen, you must re-enter all options. However, if you create a list according to the following steps, your custom list is stored in the configuration file (along with the standard choice lists, such as **Countries**). As a result, any user connected to your server can insert the list into any **Choices Field** on any screen.

To insert a custom list of choices:

1. Open the Ektron configuration file, `siteroot/workarea/contentdesigner/DataListSpec.xml`.
2. Insert the new list following the pattern of the other lists in the file, like the following list.

```
<datalist name="MyNewList">
  <schema datatype="string" />
  <item default="true" value="Green" />
  <item value="Red" />
  <item value="Blue" />
</datalist>
```

NOTE: You can specify a data type of value: string, nonNegativeInteger, date, decimal. You also can specify a default value (as shown in the third line).

Creating a dynamically populated choice list

You specify the elements of the custom options list described in the configuration data. You can also create a dynamically-populated list from any XML source. The source can be on your server or on a remote website. Follow these steps to add a dynamic data list to the **Choices** field.

1. Open the Ektron configuration file, `*siteroot*/workarea/contentdesigner/DataListSpec.xml`.
2. Insert the new list following the pattern of the other lists in the file, like the following list.

```
<datalist name="MyNewList">
  <schema datatype="string" />
  <item default="true" value="Green" />
  <item value="Red" />
  <item value="Blue" />
</datalist>
```

3. Insert a new datalist item according to this pattern.

```
<datalist
  name="MyNewList"
  src="{url to xml data source}"
  select="{xpath to data item element}"
  captionxpath="{relative xpath to data item's display text}"
  valuexpath="{relative xpath to data item's value}">
```

IMPORTANT: The `datalist name` must match the `listchoice data` attribute.

For example

```
<datalist
  name="USPS-CA"
  src="[eWebEditProPath]/uspsca.xsd"
  select="/xsd:schema/xsd:simpleType/xsd:restriction/xsd:enumeration"
  captionxpath="xsd:annotation/xsd:documentation"\
  valuexpath="@value"
  namespaces="xmlns:xsd='http://www.w3.org/2001/XMLSchema'"
  validation="select-req">
```

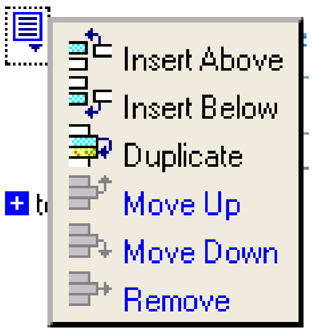
In this example, the data list is stored in the `uspsca.xsd` file, located within the `ewebeditpro` folder. However, it could be in any XML data source.

Group Box

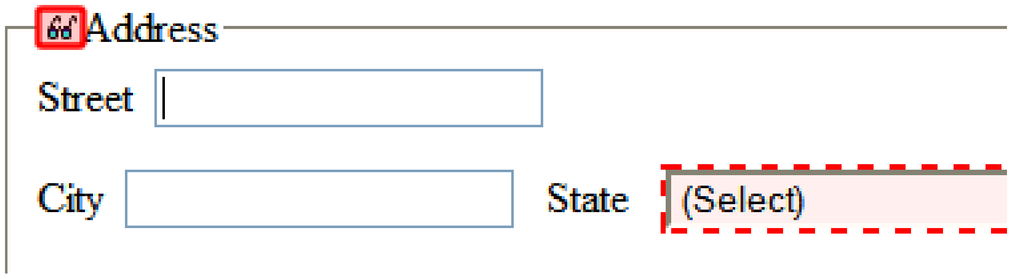
A Group Box field lets you group related fields together by surrounding them with a box and optionally placing a caption above them. After you insert a Group Box field, to insert other kinds of fields within the box, place the cursor inside the box then select a field type button.

NOTE: The tabular data field type might better accommodate your needs. See *Tabular Data* on page 877.

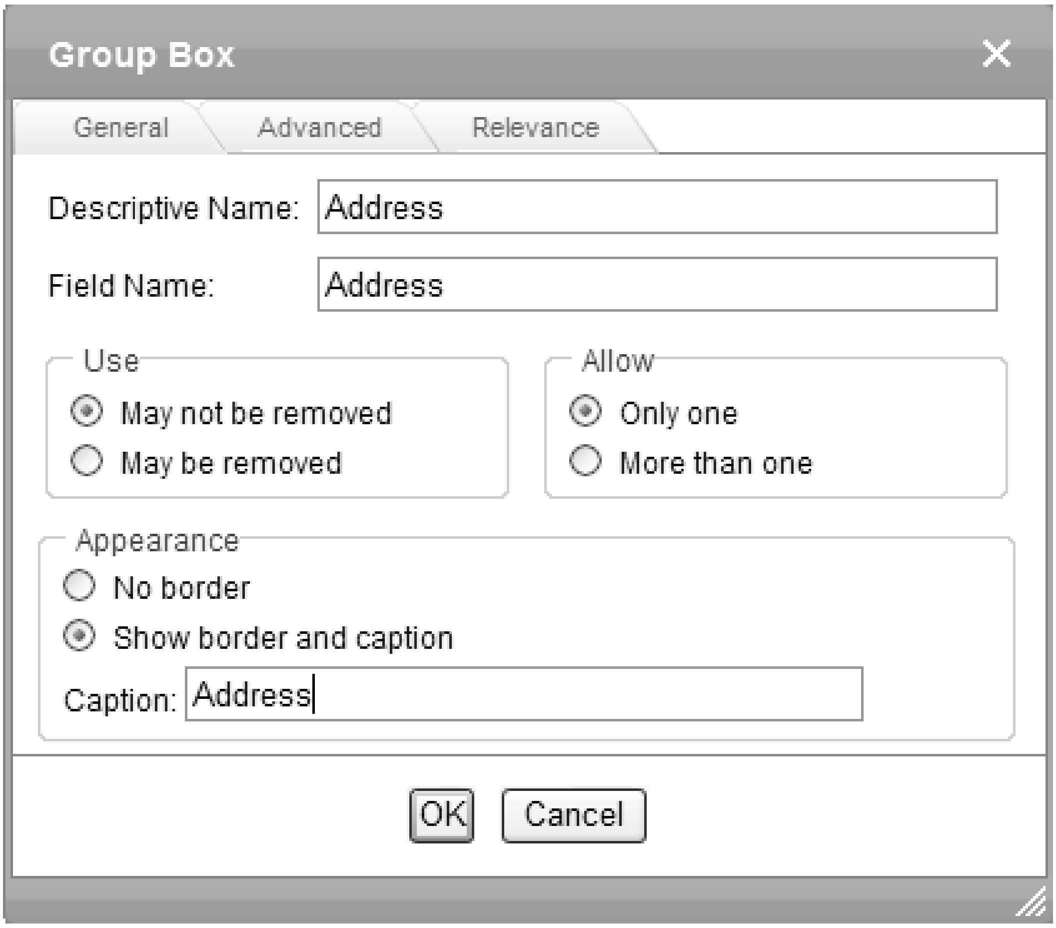
Grouping fields in Data Entry mode lets you add another instance of a group. For example, if a screen collects information about each telephone call, you can click **Insert Below** to insert a new group of fields, ready to collect information about the next call.



Use the eyeglass icon to expand or collapse fields within a group.



You also can suppress a group of irrelevant fields. For example, assume a screen includes 2 groups of fields that collect information about hardcover and paperback books. When adding information about a hardcover book, you can collapse paperback book questions because they are not relevant.



Group Box General tab

- **Descriptive Name**. Enter the name of this field, which is used internally as the field's caption. By default, the Data Designer assigns a name made up of **Field** followed by the next available number. So, the first field's default name is **Field1**, the second field's default name is **Field2**, and so on. You can change the default if you want.
- **Field Name**. Enter the field's element name. This defines the field in the XML.
- **Use**. Click **May not be removed** if this field must be included on the screen. Otherwise, click **May be removed**.

  If you check **May be removed**, when this field appears on a data entry screen, an icon ( ) appears to the left of the field. If the user clicks the icon, a drop-down menu provides an option to remove the field.

  If the user removes the field, *field name* replaces the field on the data entry screen to indicate that the field was removed and can be re-added if necessary. For example, if the field's display name is `street address`, and the user removes the field, add Street Address appears in place of the field.

> **NOTE:** The menu icon ( ) can also indicate that the user can add instances of a field (see the **Allow** field). So, if a field is required, the icon could appear but omit a **Remove** option.

- **Allow**. Check **more than one** if you want to let the user entering data add instances of this field. Otherwise, check **only one**. For example, if a screen is collecting names and addresses and you want to let the user enter several of them, check **more than one**. If you check **More than one** here, you are allowing the user to insert an entirely new table, not an additional table row.

  IMPORTANT: Do not insert a calendar field into a Smart Form that allows multiple entries (using the **Allow more than One** option on the dialog). If you do, you cannot search the Smart Form using that field.

  If the user entering data clicks , a menu appears, which lets the user click **Duplicate** to add instances of the field to the screen.

  NOTE: The menu icon () can also indicate that the user can remove a field. So, even if a field allows only one instance, the icon could appear but the menu would only display **Remove**.

- **Appearance**. Click **Show border and caption** if you want to surround the fields in this group with a box. You can also create a caption to appear in the top line of the box. Click **No border** if you do not want to surround the fields in this group with a box.
- **Caption**. If desired, enter text to describe this group of fields on the data entry screen. For example:

  After you insert this field onto the screen, you can use the editor's formatting capabilities to modify its size, font, color, and other attributes.

  NOTE: The Caption field only appears on this dialog when you create the Group Box field. If you later try to edit the field, the Caption field is not on the dialog. However, you can edit Caption text within the editor.

- **Advanced tab**. See *Group Box Advanced tab* below.
- **Relevance**. See *Group Box Relevance tab* on page 861.

Using a tag other than <root>

By default, Ektron surrounds your Data Design with <root> tags. To replace <root> tags with another element name:

1. After creating a new Data Design screen, insert a Group Box as the first field.

2. In the Group Box dialog’s **Field Name** field, enter the root text.

3. On the Group Box Dialog box, click the **Advanced** tab.

4. In the **Root tag** section, select **Use this element as the Root tag** and press **OK**.

5. Place all other screen elements within the Group Box field.

Group Box Advanced tab

The Advanced tab lets you generate XML microformats made up of standard XHTML tags and attributes that contain a specific structure and values.

For example, the microformat of an event looks like this.

```
<span class="event">
<a class=
  "url" href="https://www.lisa.org/events/2006nyc/
  package_registration.html?from=fn1206 ">
  LISA Global Strategies Summit</a>
</span>
```

NOTE: If the element is a Group Box or table, its type must be **Element** because it surrounds other elements. If the element is a Rich Area field, its type must be **Element** or **Content**.

- **Element**. A unique tag. The user's response to the field becomes its value.

  ```
  <Lastname>Rogers</Lastname>
  ```

- **Attribute**. An attribute of the containing field. The containing field is typically a Group Box. If you insert an **Attribute** field type, the Field Name field on the dialog box is grayed out. The field name and type can only be edited on the Advanced Field properties screen.

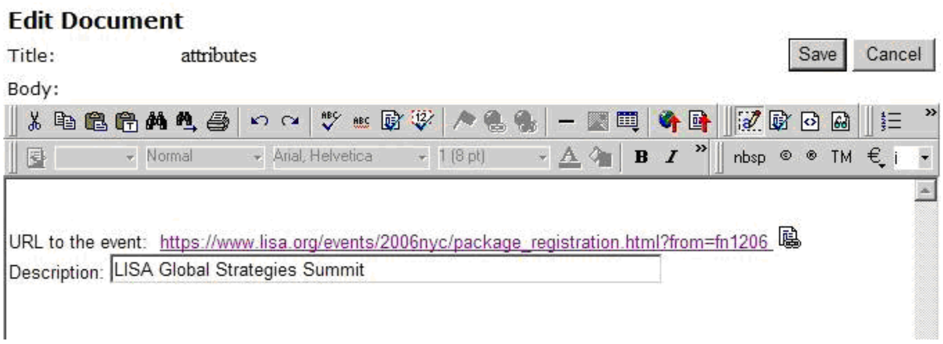
  ```
  <PtInformation Lastname="Rogers">
  </PtInformation>
  ```

- **Content**. The content of the containing field, typically a Group Box. Note that, in this case, field name is not used (it's is grayed out). The field name and type can only be edited on the Advanced Field properties screen. Because most fields define their own content, this option is typically used to define a value to a Group Box that contains other fields defined as attributes.

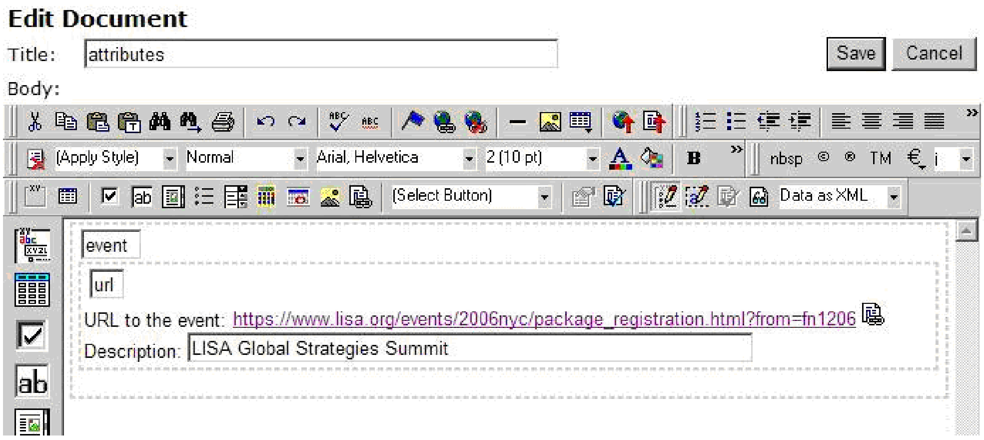
  NOTE: Only one Content type field is valid within a containing field.

  ```
  <PtInformation>
  Rogers
  </PtInformation>
  ```

Data entry view



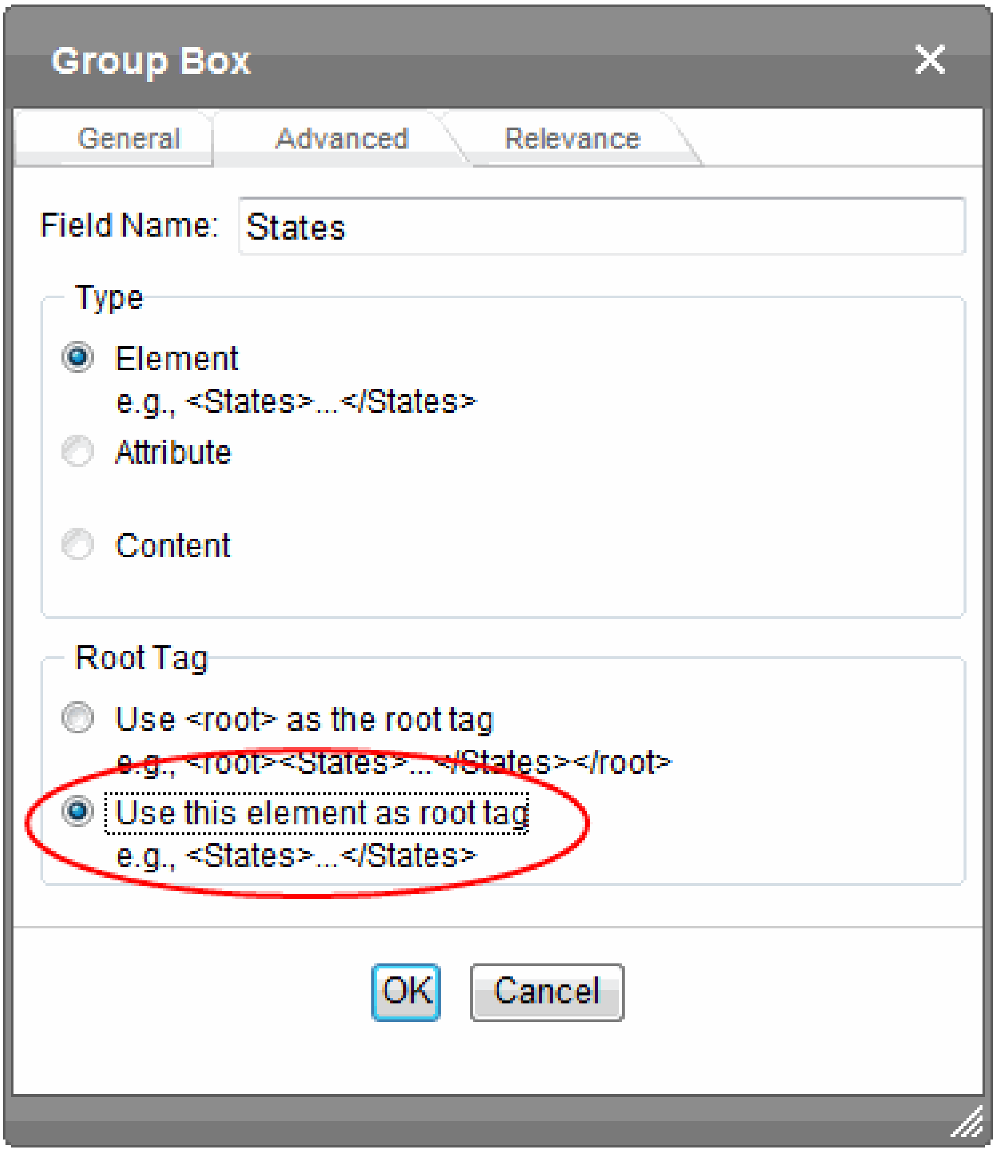
Data design view



Replacing the XML <root> tag

By default, Ektron surrounds your Data Design with `<root>` XML tags. You can replace the `<root>` tags with another element name by following these steps.

1. After creating a new Data Design screen, insert a Group Box as the first field.
2. In the Group Box dialog box **Field Name** field, enter the root text. For example, "state" to replace <root> with <state>.
3. Click the **Advanced** tab.
4. In the Root tag section of that screen, select **Use this element as the Root tag** and click **OK**.



5. Place all other screen elements within the Group Box field.

Group Box Relevance tab

The **Relevance** tab allows a group of fields to appear or disappear according to the value of other fields in the configuration. It appears on both the Group Box and Tabular Data Box dialogs.

Here are some example uses.

- Questions about pregnancy that appear only if the patient is female.
- A list of states that appears only if the user selects **United States** as the person's country.
- A list of car manufacturers. When a user chooses one, all of its models appear in a second list.

Fields that can be used in relevance conditions

Only the following field types can be used in a Relevance condition.

- Check box
- Text
- Calculated
- Choices

NOTE: If using a **Choices** field, in the **Appearance** area of the dialog, you can only choose **List Box** or **Drop Box**. **Vertical List** and **Horizontal List** are not supported.

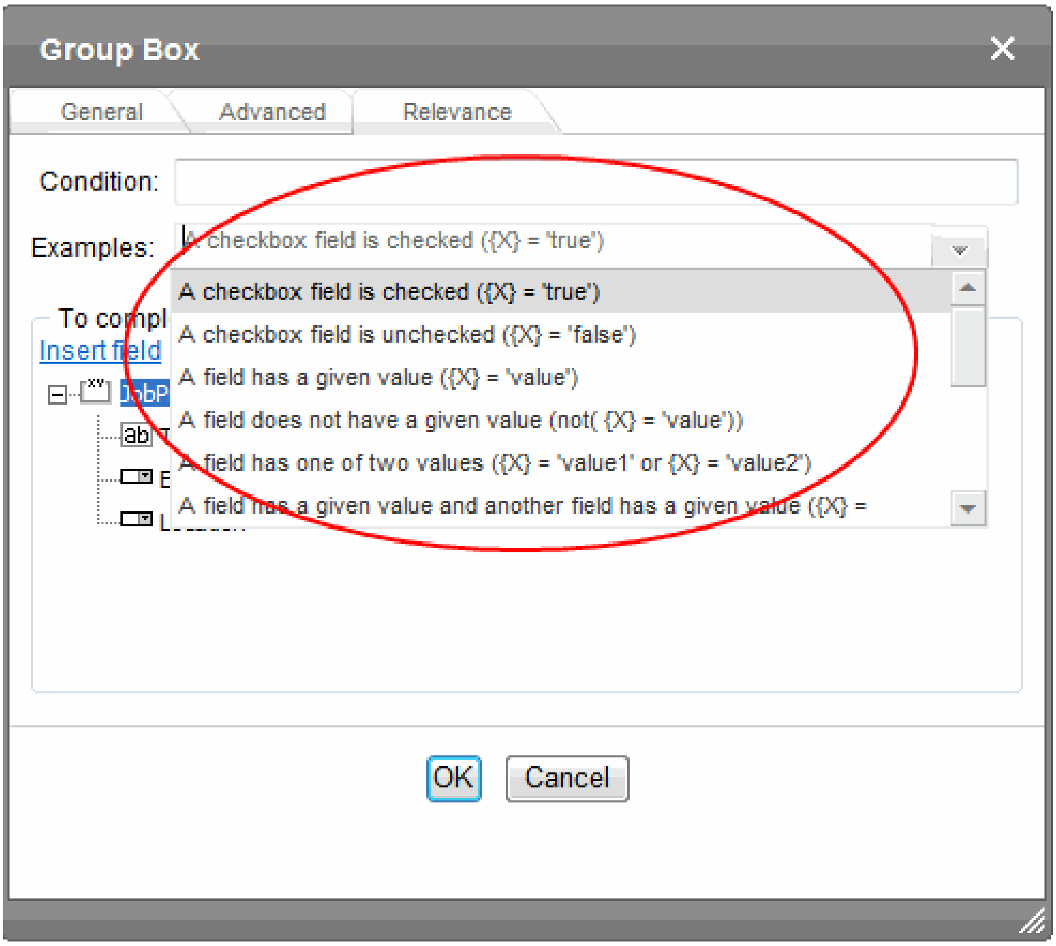
To apply relevance to a Group Box field:

Applying relevance to a Group Box field

1. Edit a Smart Form configuration in Data Design mode to which you want to apply Relevance.
2. If necessary, insert the field(s) on which the Group Box's appearance depends.
3. Insert a Group Box field. See also: *Group Box* on page 855

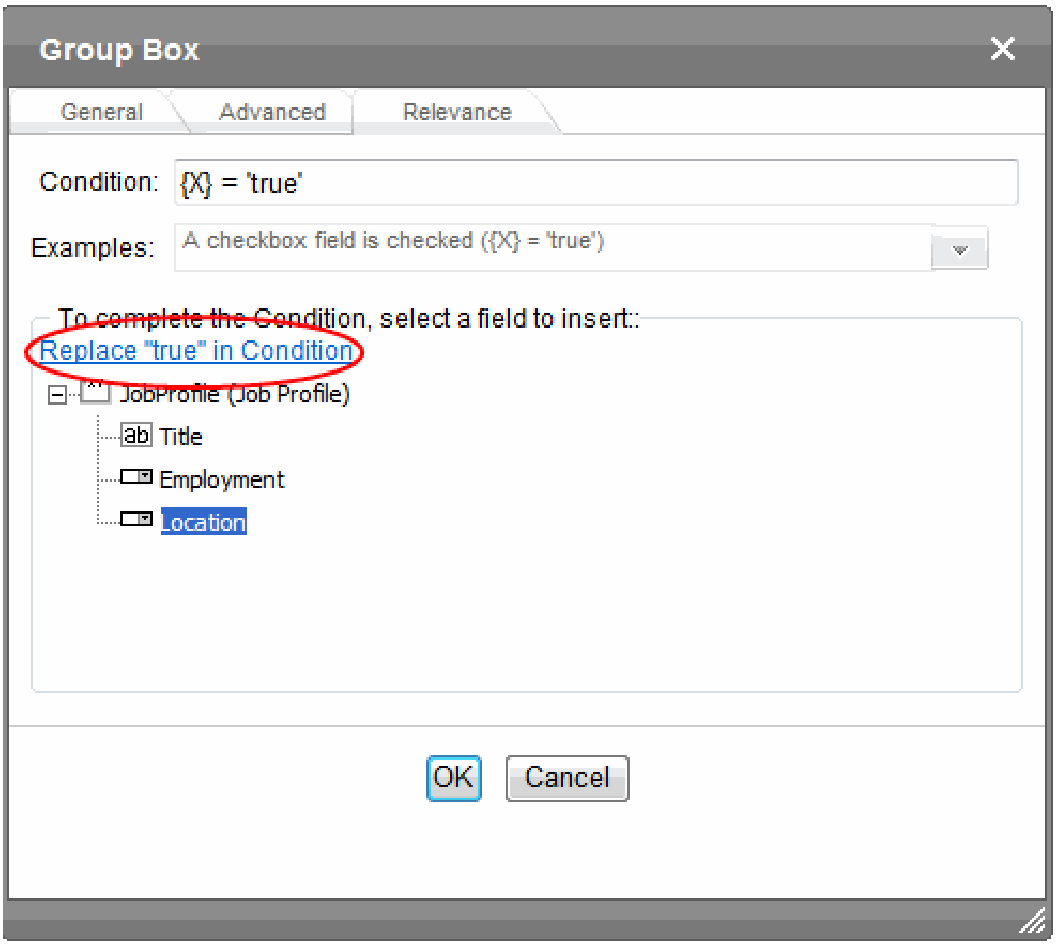
   NOTE: The location of the Group Box field is independent of the location of the fields to which you will apply conditions.

4. Click the Group Box dialog's **Relevance** tab.
5. The **Relevance** tab appears.
6. Scroll through the list of sample conditions to determine which one best fits your situation.

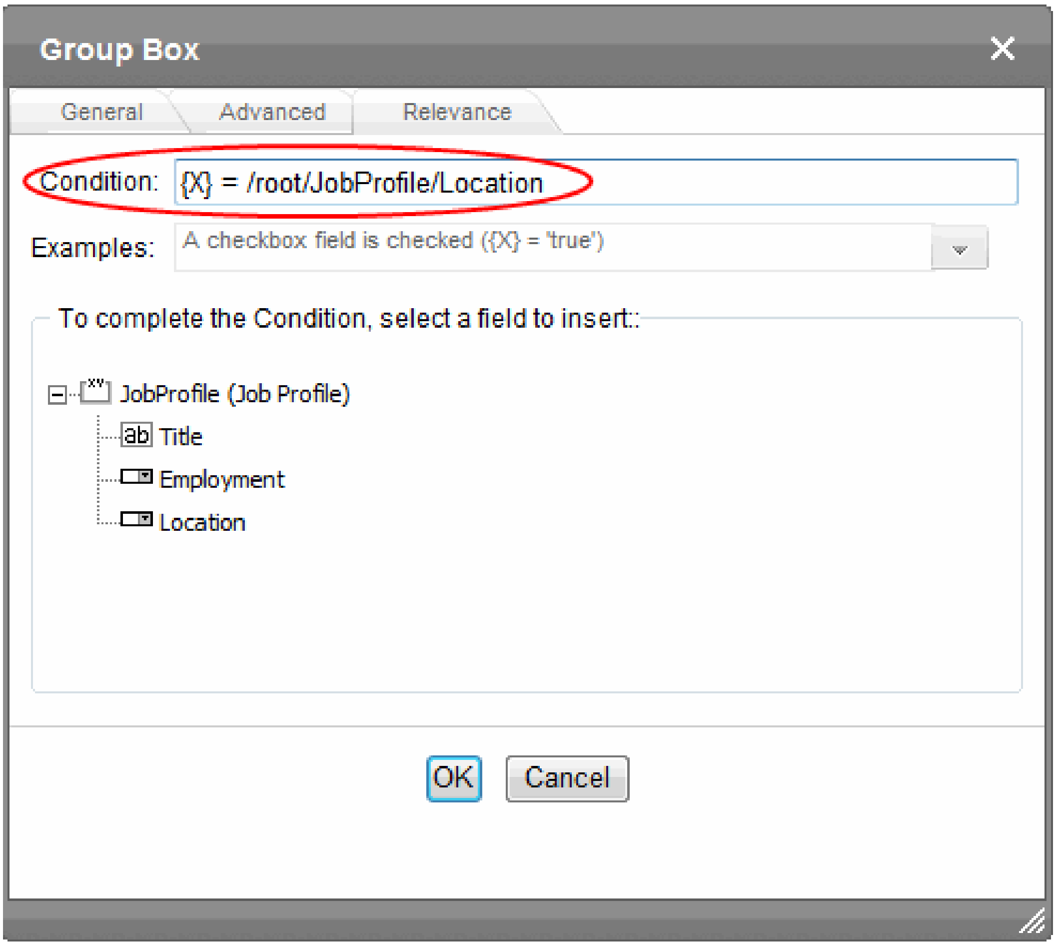


7. Select a field from the lower half of the screen to replace the first variable (X or Y) in the condition. For example, if the condition is `A checkbox field is checked ({X} = 'true')`, click the check box field whose value must be `true` for this group to appear.

8. Click **Replace {X} in Condition**.



9. Notice that, in the **Condition** field, the variable was replaced by the selected field.

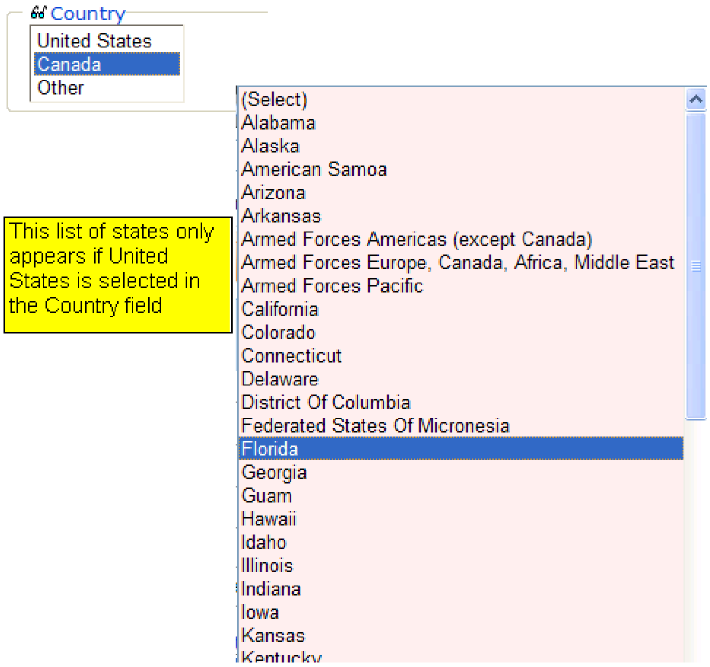


10. If the condition has another variable, repeat Steps 7 and 8.
11. Click **OK**.

You should switch to Data Entry mode and test the Relevance conditions.

Example of applying relevance to a Group Box field

Assume you want a list of states in the United States to appear only if a user selects United States from the Country field.

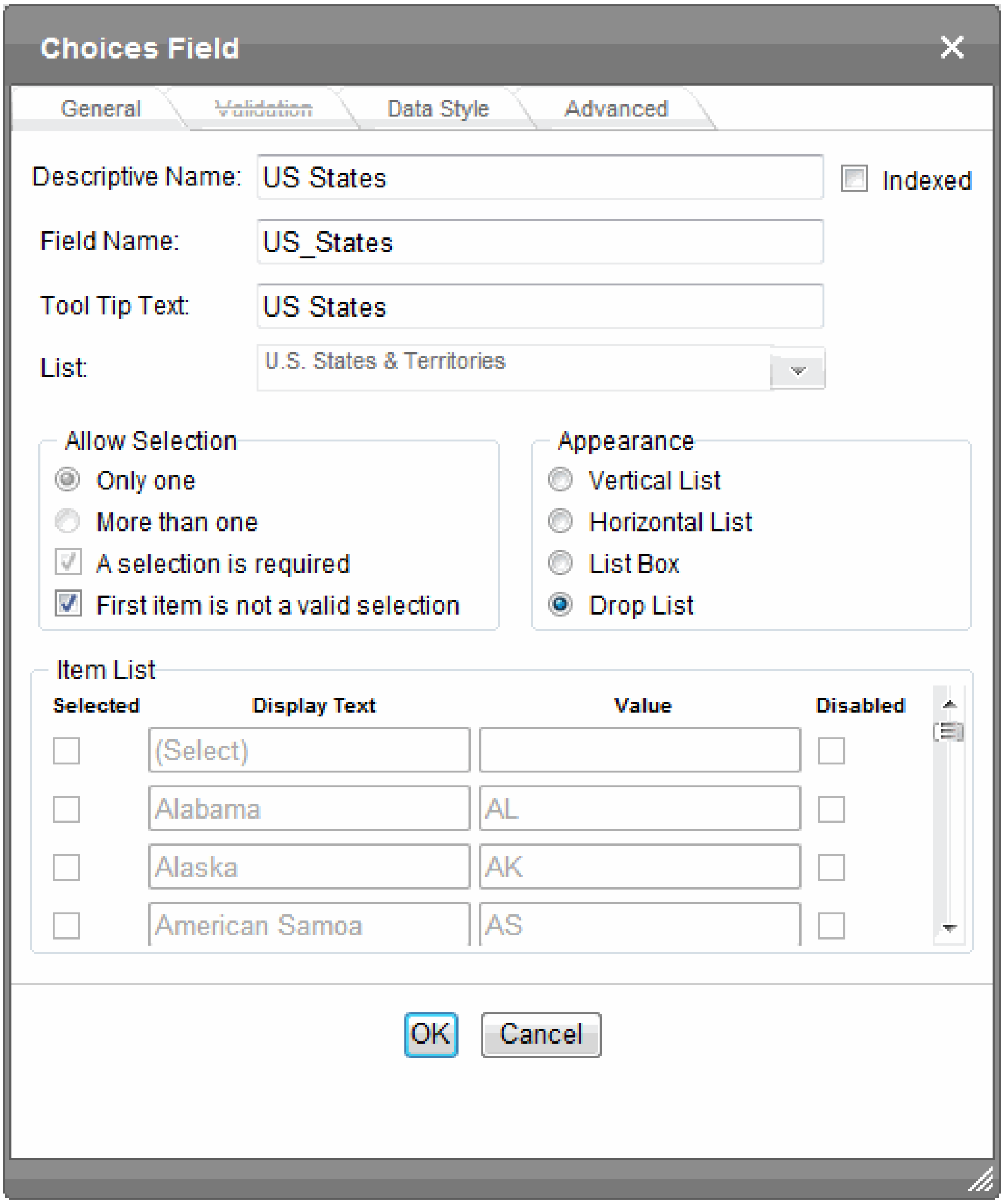


To accomplish this:

1. Create a Choices field and assign it 3 values:
   - United States
   - Canada
   - Other

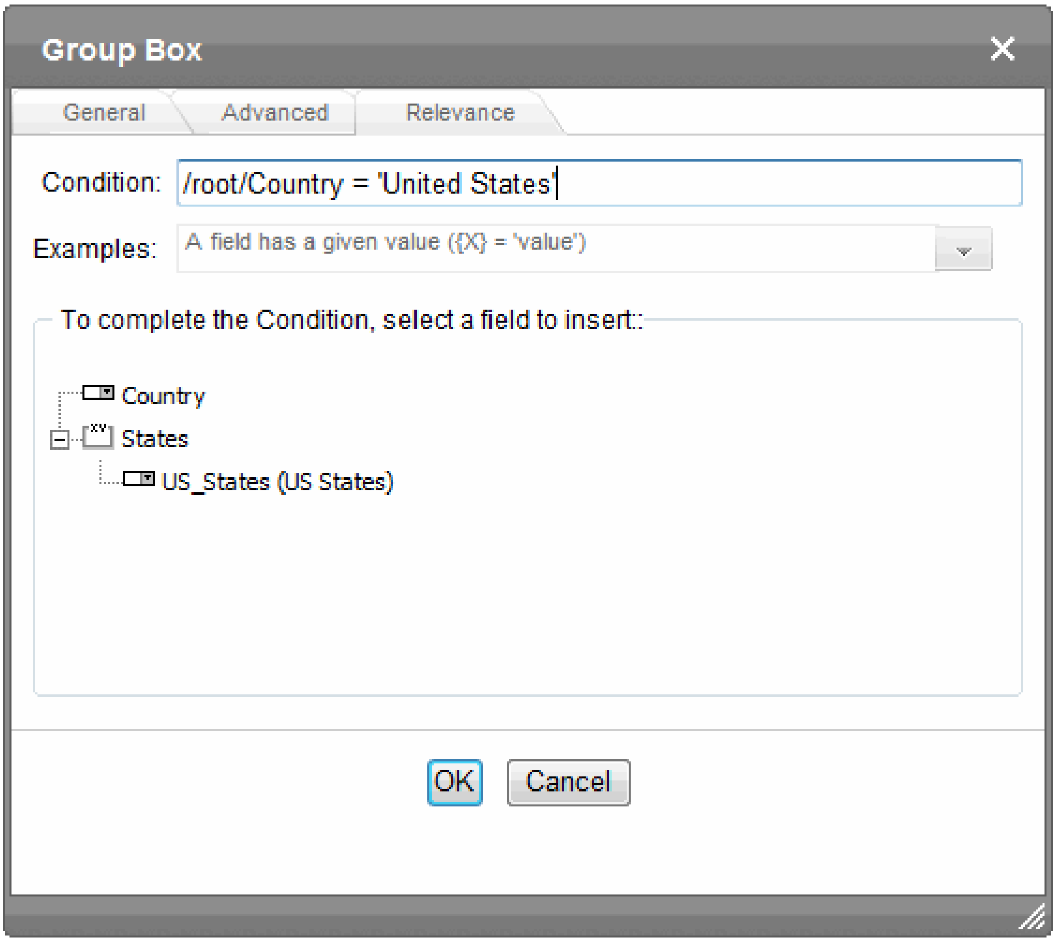
   See also: *Choices* on page 851
2. Create a Group Box field and name it **States**.
3. With that Group Box field, create a new Choices field.
   - Name it **US States**.
   - In its **List** field, select **U.S. States & Territories**.
   - In **Allow Selection**, check **First item is not a valid selection**
   - In the Appearance field, select **Drop List**.

4. Click **OK**. The field appears on the form.



5. Place the cursor on the **States** Group Box field and click **Group Box**.
6. Click its **Relevance** tab.
7. Pull down the **Examples** list.
8. Click `A field has a given value ({X} = 'value')`.
9. Scroll through the lower half of the screen until you see the **country** Choices field.
10. Click **Replace '{X}' in Condition**. Notice that the Condition field now reads /root/Country **= 'value'**.

11. In the **Condition** field, replace **Value** with **United States**.



IMPORTANT: The text that replaces **Value** must *exactly* match the desired value of the selected field.

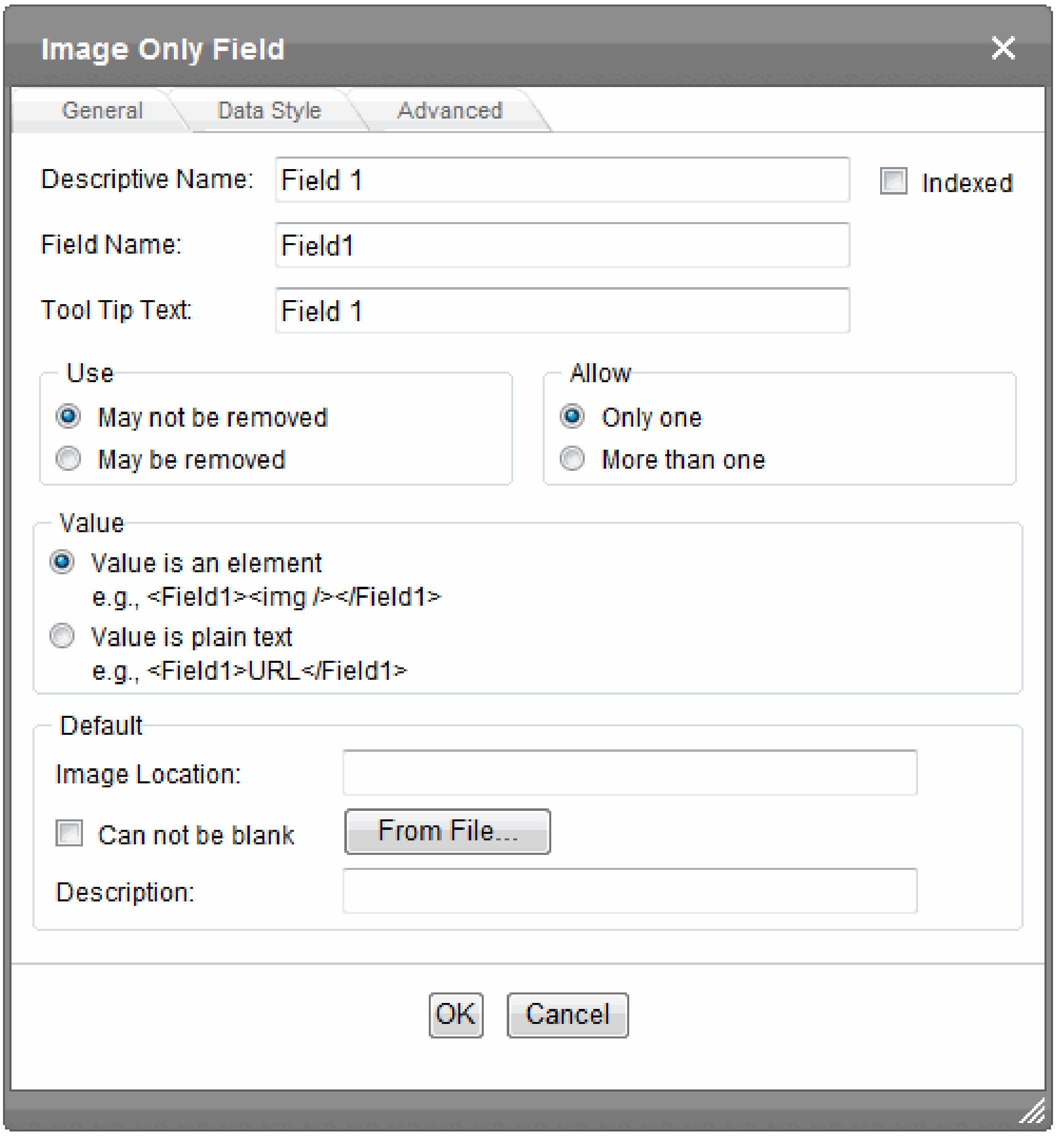
12. Click **OK**.

Image Only

Use an Image Only field to place an icon on the screen, which the user can click to insert an image into the content. You can insert a default image if desired. To let the user insert any file, such as a Microsoft Word document, use a *Link* on page 870 field.

In Data Entry mode, the image's caption appears, followed by a default image (if you specify one) and this icon:

NOTE: The user can only insert a file whose extension is defined within the `<validext>` element of the configdataentry.xml file. Your system administrator can help you do this.



- **Descriptive Name**. Enter the name of the field.
- **Indexed**. Check if you want to index this field. For more information, see *Searching XML information* on page 832. The **Indexed** field may or may not appear, depending on how your administrator has set up your system.
- **Field Name**. Enter the field's element name. This defines the field in the XML.
- **Tool Tip Text**. Enter the text that appears when a user hovers the cursor over this field.
- **Use**. Click **May not be removed** if this field must be included on the screen. Otherwise, click **May be removed**.

  If you check **May be removed**, when this field appears on a data entry screen, an icon () appears to the left of the field. If the user clicks the icon, a drop-down menu provides an option to remove the field.

  If the user removes the field, *field name* replaces the field on the data entry screen to indicate that the field was removed and can be re-added if necessary.

For example, if the field's display name is `street address`, and the user removes the field, add Street Address appears in place of the field.

NOTE: The menu icon ( ) can also indicate that the user can add instances of a field (see the Allow field). So, if a field is required, the icon could appear but omit a **Remove** option.

- **Allow**. Check **more than one** if you want to let the user entering data add instances of this field. Otherwise, check **only one**. For example, if a screen is collecting names and addresses and you want to let the user enter several of them, check **more than one**. If you check **More than one** here, you are allowing the user to insert an entirely new table, not an additional table row.

IMPORTANT: Do not insert a calendar field into a Smart Form that allows multiple entries (using the **Allow more than One** option on the dialog). If you do, you cannot search the Smart Form using that field.

If the user entering data clicks , a menu appears, which lets the user click **Duplicate** to add instances of the field to the screen.

NOTE: The menu icon ( ) can also indicate that the user can remove a field. So, even if a field allows only one instance, the icon could appear but the menu would only display **Remove**.

- **Value**. Whether the value is an element or plain text.
  - **Value is an element** renders the field as `<img src="url" alt="text" />` for an image.
  - **Value is plain text** renders the field as just the url.
- **Default Image Location**. If desired, you can insert a default image, which might be the most common image or a reminder that an image needs to be inserted. To find the image, click **From File** and go to image file. The image file's extension must appear between the `<validext>` tags in the configdatadesign.xml file. For example:

```
<validext>gif,jpg,png,jpeg,jpe,doc,txt

</validext>
```

- **Cannot be blank**. To require the user to enter a response, check this box.
- **Description**. Enter the image's alt text, which is used as a replacement for an image whenever it cannot be seen. For example, a visually impaired person is using a screen reader.
- **Advanced tab**. This is the same as the *Group Box Advanced tab* on page 858.

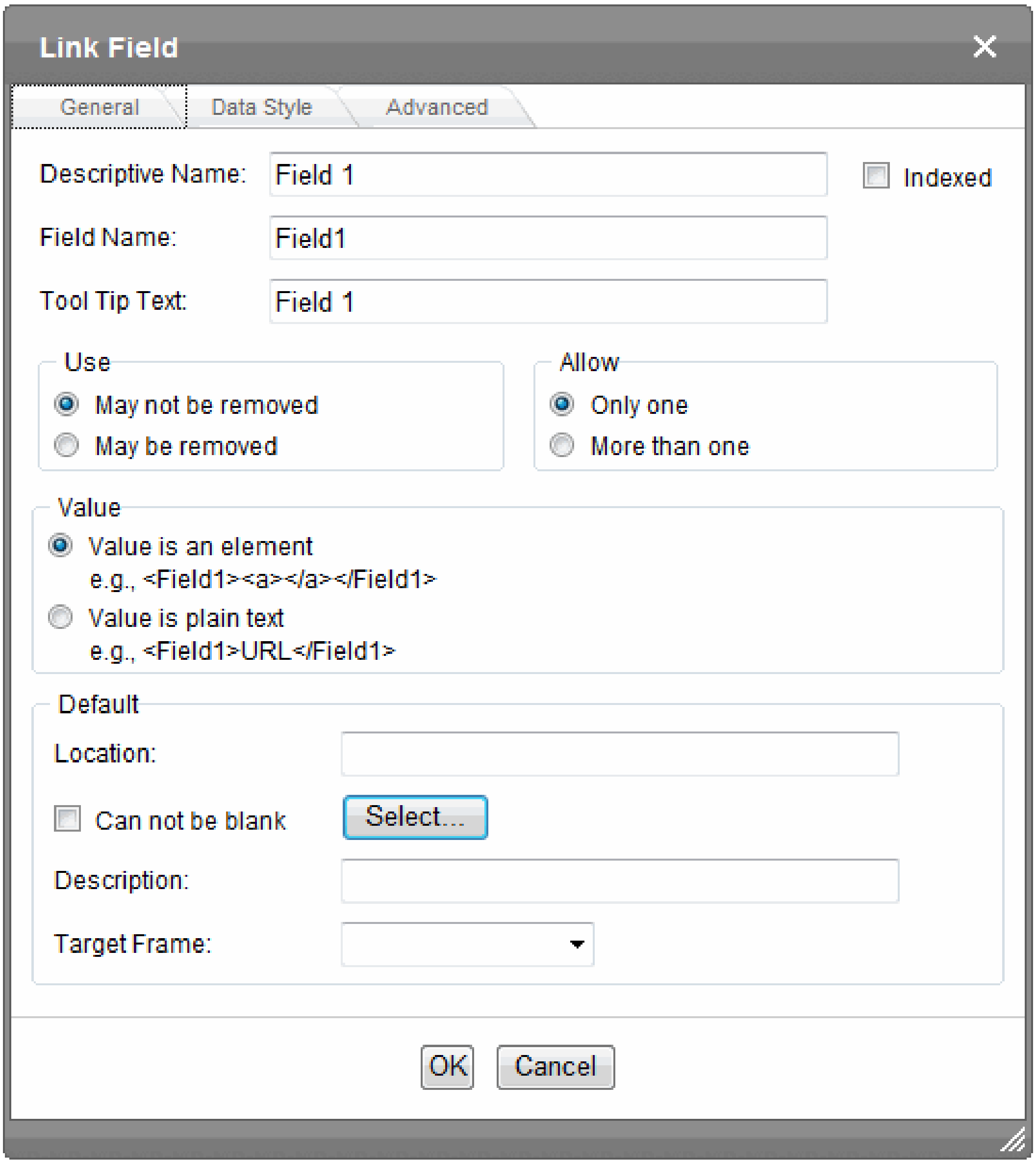
Link

Use a Link field to place an icon on the screen. A user in Data Entry mode can use the icon to link to any Library file, such as a Microsoft Word document or a .gif image file. (You can also use an Image Only field to let the user insert an image. See also: *Image Only* on page 868)

The File Link field does *not* let you link to Ektron assets.

In Data Entry mode, the file link field's caption appears, followed by this icon: . When the user clicks the icon, a hyperlink screen prompts you to specify information about the link.

NOTE: Only insert a file whose extension is defined within the `<validext>` element of the configdataentry.xml file. Your system administrator can help you do this.



- **Descriptive Name**. Enter the name of the field.
- **Indexed**. Check if you want to index this field. For more information, see *Searching XML information* on page 832. The indexed field may or may not appear, depending on how your administrator has set up your system.
- **Field Name**. Enter the field's element name. This defines the field in the XML.
- **Tool Tip Text**. Enter the text that appears when a user hovers the cursor over this field.

- **Use**. Click **May not be removed** if this field must be included on the screen. Otherwise, click **May be removed**.

  If you check **May be removed**, when this field appears on a data entry screen, an icon () appears to the left of the field. If the user clicks the icon, a drop-down menu provides an option to remove the field.

  If the user removes the field, *field name* replaces the field on the data entry screen to indicate that the field was removed and can be re-added if necessary. For example, if the field's display name is `street address`, and the user removes the field, add Street Address appears in place of the field.

  > **NOTE:** The menu icon () can also indicate that the user can add instances of a field (see the Allow field). So, if a field is required, the icon could appear but omit a **Remove** option.

- **Allow**. Check **more than one** if you want to let the user entering data add instances of this field. Otherwise, check **only one**. For example, if a screen is collecting names and addresses and you want to let the user enter several of them, check **more than one**. If you check **More than one** here, you are allowing the user to insert an entirely new table, not an additional table row.

  > **IMPORTANT:** Do not insert a calendar field into a Smart Form that allows multiple entries (using the **Allow more than One** option on the dialog). If you do, you cannot search the Smart Form using that field.

  If the user entering data clicks , a menu appears, which lets the user click **Duplicate** to add instances of the field to the screen.

  > **NOTE:** The menu icon () can also indicate that the user can remove a field. So, even if a field allows only one instance, the icon could appear but the menu would only display **Remove**.

- **Value**. Whether the value is an element or plain text.
  - **Value is an element** renders the field as `<img src="url" alt="text" />` for an image.
  - **Value is plain text** renders the field as just the url.
- **Default Location**. If desired, you can insert a default link, which can be the most common link or simply an example. To help find the link, click the **Select** button and go to a file. You can only insert a file whose extension appears between the `<validext>` element of the configdatadesign.xml file. For example:

  `<validext>gif,jpg,png,jpeg,jpe,pdf,doc</validext>`
- **Cannot be blank**. If you want to require the user completing this field to enter a response, click this check box.
- **Description**. If desired, enter text that the user can click to access the linked file.
- **Target Frame**. Use this field to indicate how the hyperlinked files will appear when clicked.
  - **New Window(_blank)**. In a new browser window, on top of the current browser.

- ◦ **Same Window(_self)**. In the same position within the browser window. The new window replaces the current one.
  - ◦ **Parent Window(_parent)**. If your page contains frames, in the frame that contains the frame with the hyperlink.
  - ◦ **Browser Window(_top)**. If your page contains frames, in the full display area, replacing the frames.
- **Advanced tab**. This is the same as the *Group Box Advanced tab* on page 858.

Resource Selector

A Resource Selector field lets you place elements of Ektron content, taxonomies, collections or folders on a Smart Form. For example, on the following page, content in a selected folder appears.

IMPORTANT: You can place content from these folder types on a Smart Form: standard, root, site, blog, and eCommerce catalog. You *cannot* place content from Community, Discussion Board, or WebCalendar folders nor PageBuilder pages on a Smart Form.

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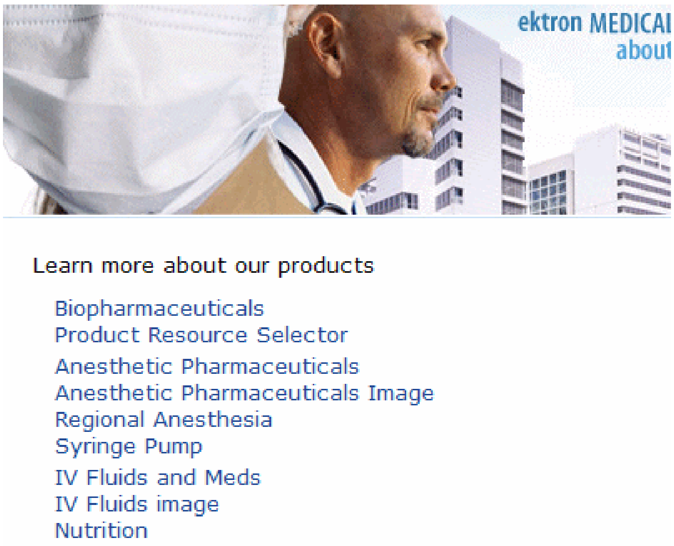
Each content item in the folder is represented as a hyperlink followed by its summary. A site visitor can click the link to view the content. An alternative display showing hyperlinks only appears as follows.



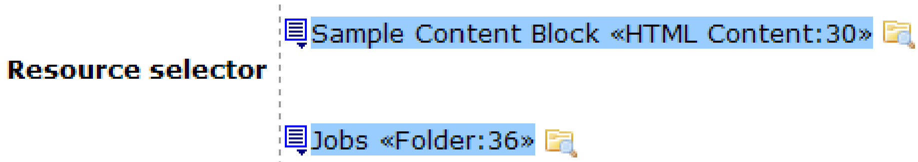
A Resource Selector field acts like server controls that let you place content on a Web page, such as the Content Block and List Summary server controls. The advantages of the Resource Selector field are:

- You can add individual content or all content in a folder, collection or taxonomy category to a Smart Form. So, you can position resources then surround them with text, images, and so on, to place them into proper context.
- Management is handled within the Workarea. So, Ektron administrators can display content via a Smart Form without needing a developer to create/modify templates and server controls.

These steps summarize how to use a Resource Selector on a Smart Form.

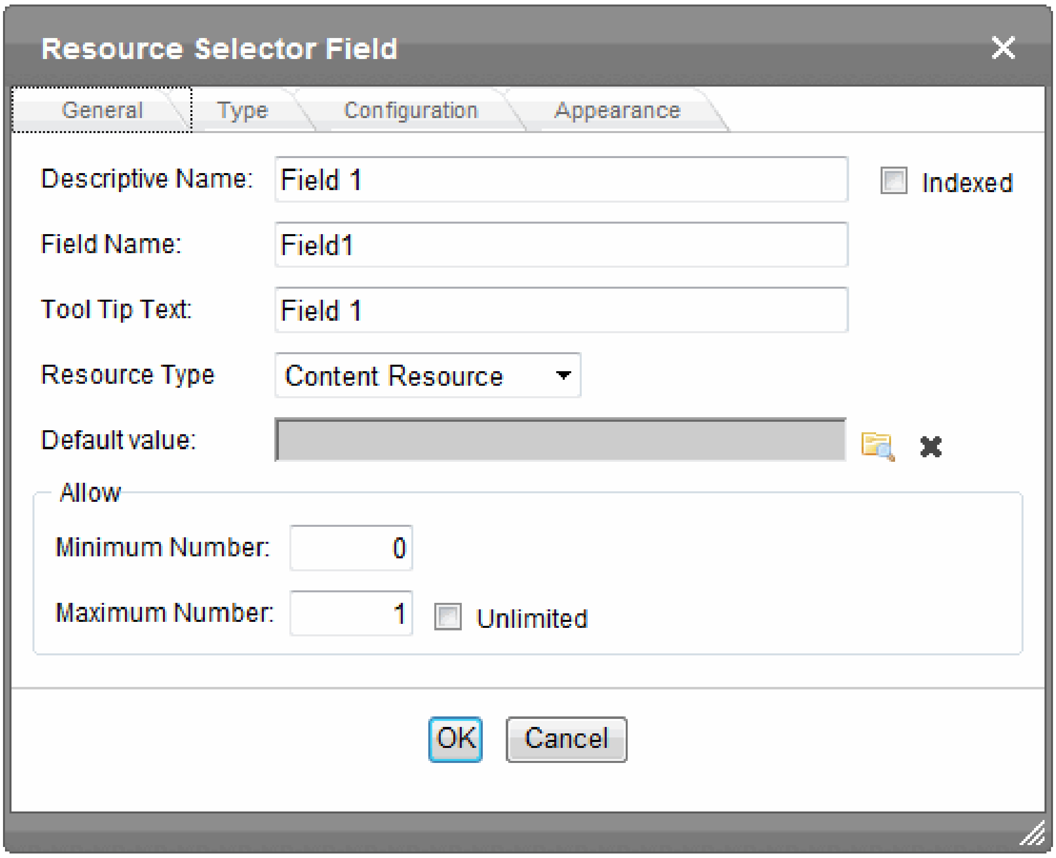
1. Create a Smart Form configuration.
2. Edit its Data Design, placing a Resource Selector field on it.
3. Set the Resource Selector properties. For example, determine whether the content author can select content, a taxonomy category, a collection, or a folder.
4. Assign the configuration to an Ektron folder. See also: *Assigning a Smart Form to a folder* on page 831
5. An author creates a Smart Form based on that configuration.
6. The author adds content, a collection, a taxonomy category, or a folder to the Smart Form, along with other field types.
7. A site visitor browses to the page and views the assigned content.

To a content author, a Smart Form's Resource Selector fields appear as follows.



The upper field lets the author select content (ID 30 is the default), and the lower one lets the person select a folder (ID 36 is the default). To select either one, click the folder to its right, then select. If working with content, the tabs that appear on the dialog are determined when the resource is placed on the Smart Form configuration.

NOTE: If someone changes the title of content used in a Resource Selector field, the title is not updated on the Smart Form. In the illustration, if someone changed the title of content ID 30, you would still see **Sample Content Block** when viewing the Resource Selector field.

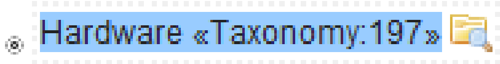


General tab

- **Descriptive Name**. Enter the name of this field. Internally, the name is used as the field's caption. By default, the Data Designer assigns the name **Field** followed by the next available number. So, the first field's name is **Field1**, the second field is **Field2**, and so on. You may change the default.
- **Field Name**. Enter the field's element name. This defines the field in the XML.
- **Tool Tip Text**. Enter the text that appears when a user hovers the cursor over the field.
- **Resource Type**. Select Content, Folder, Taxonomy, or collection.

  IMPORTANT: You can place content from these folder types on a Smart Form: standard, root, site, blog, and eCommerce catalog. You *cannot* place content from Community, Discussion Board, or WebCalendar folders on a Smart Form.

- **Default Value**. Select the default content, folder, taxonomy or collection item by clicking the folder icon and selecting. The following example shows a taxonomy default item. The author can accept the displayed default or change it by clicking on the folder icon.



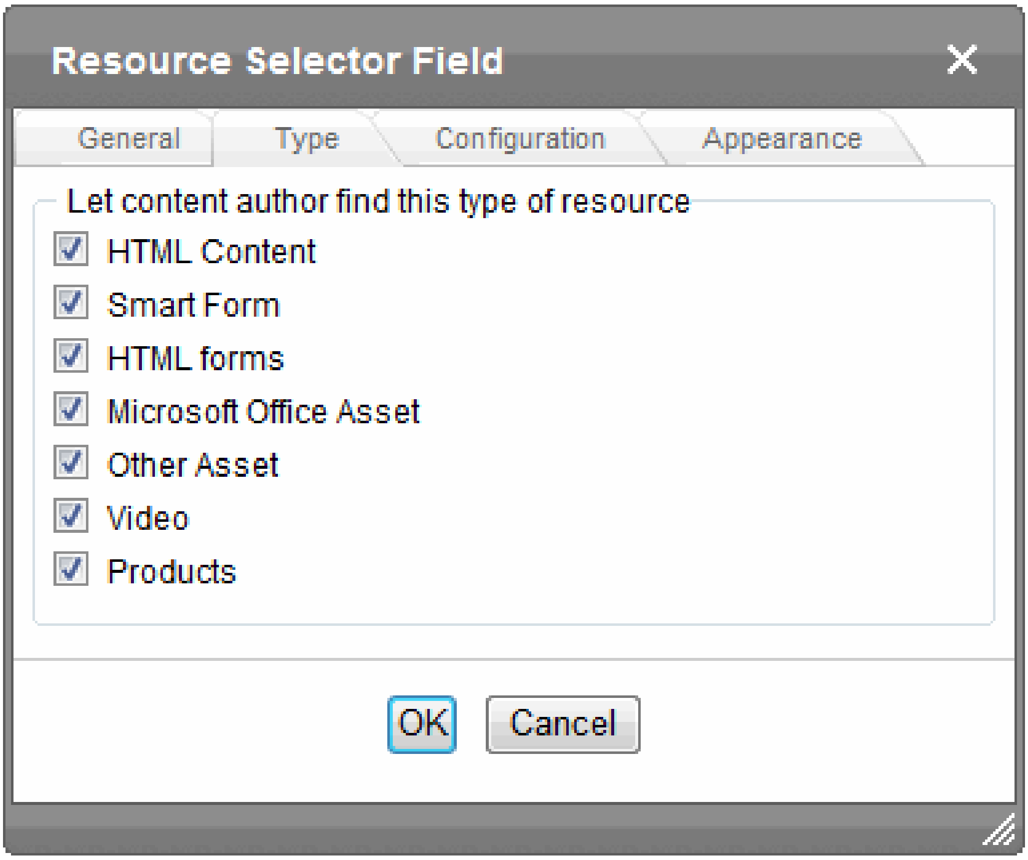
- **Minimum Number**. Define the minimum number of content items that can appear where you insert the Resource Selector.
- **Maximum Number**. Define the maximum number of content items that can appear where you insert the Resource Selector.

  These settings affect the content author's work with this field on a Smart Form in the following way. Assume you set a minimum of 1 and a maximum of 2. After the content author adds 2 content items for this resource selector, the only options are to remove or rearrange fields; you cannot add more.

Type tab

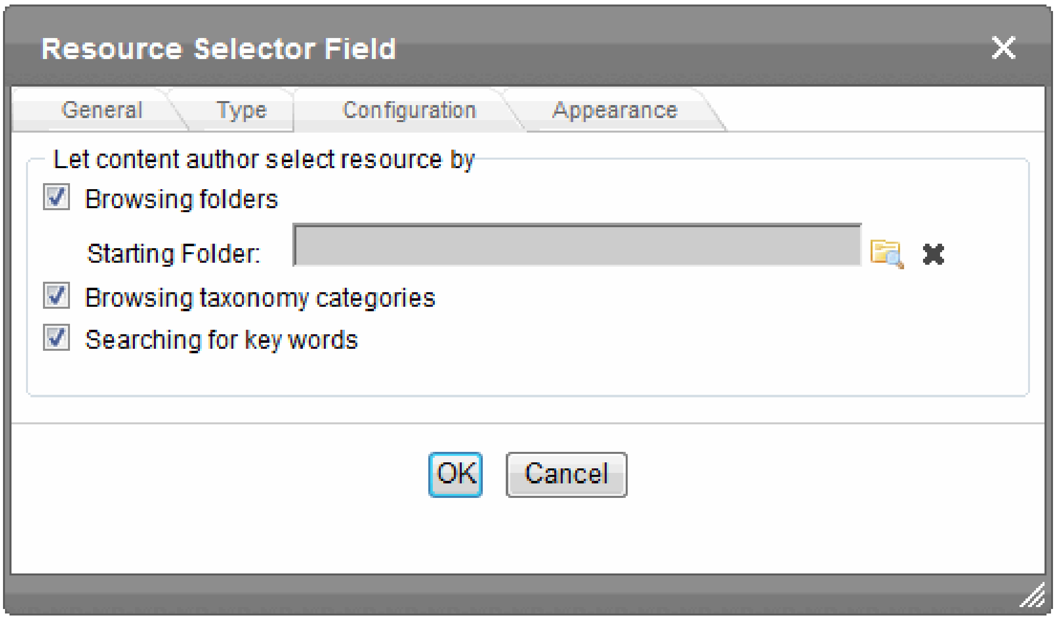
Use the **Type** tab to limit the type of content that a content author may choose. It is available only if the Resource type is **Content Resource**.

NOTE: eCommerce products are also known as catalog entries.



Configuration tab

The Configuration tab determines how a content author may select content or a folder on a Smart Form. It is available only if the **Resource Type** is Content or Folder.



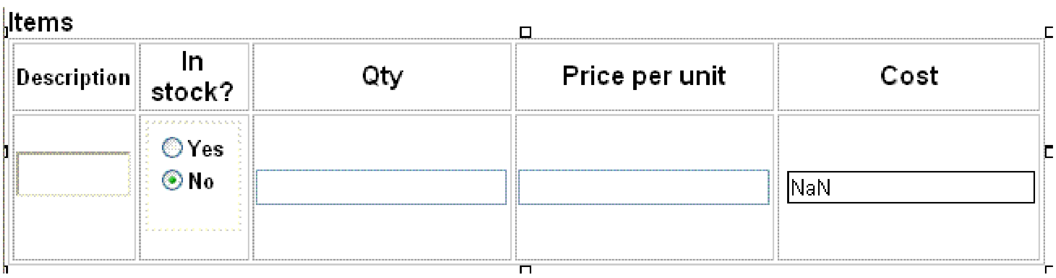
- Check **Browsing folders** to let content authors select content or a folder by browsing through folders.
  - If you want to set a beginning folder from which an author can browse, use the **Starting Folder** field. Otherwise, browsing begins at the Root folder.
- Check **Browsing taxonomy categories** to let a content author select content by browsing through taxonomies. (Available only if the **Resource Type** is Content.)
- Check **Searching for key words** to let a content author select content using the Workarea search. (Available only if the **Resource Type** is Content.)

Appearance tab

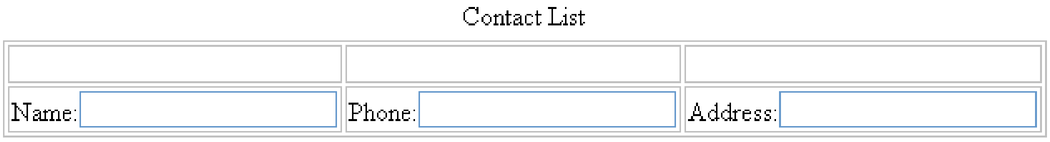
The Appearance tab determines the default appearance of the resource on your website.

Tabular Data

The Tabular data button inserts a table into which you can place other types of fields. It's similar to a Group Box but its advantage over a Group Box is that it lets you place fields in columns. After you insert a table, you can insert an appropriate field type into each column. For example, the **Description** field type is plain text, while the **In Stock?** field type is a choice.



If you insert a field into a table and its caption appears to the left of the data entry region, move the caption to the column header.

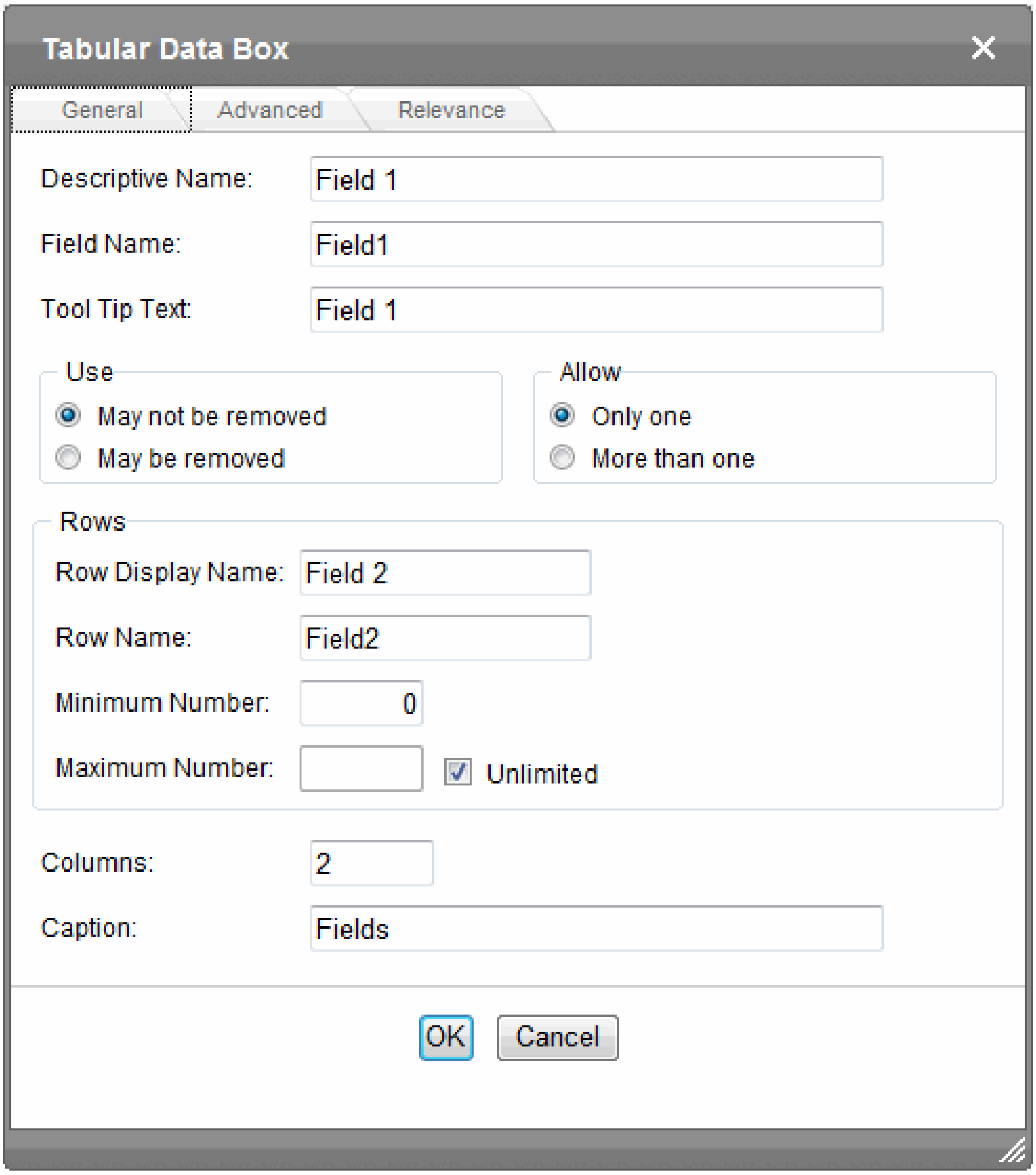


- To access table commands (such as add row and add column), place the cursor inside a table cell and right click the mouse.

  NOTE: To delete a column, place the cursor in the column, right click the mouse, and select **Delete Column**. You cannot reduce the number of columns by editing the Tabular Data dialog's **Columns** field.

- To edit tabular data, hover the cursor over a table border line until you see a 4-headed arrow. Then, click the right mouse button and select **Field Properties**.

  IMPORTANT: Only table cells into which you place a field are available to visitors of your Web page.



- **Descriptive Name**. Enter the name of this table. By default, the Data Designer signs a name made up of **Field** followed by the next available number. So, the first field's default name is **Field1**, the second field's default name is **Field2**, and so on. You can change the default if you want.
- **Field Name**. Enter the table's element name. This will define the table in the XML. See also: *Tabular data creates 3 levels of XML tags:* on page 881
- **Tool Tip Text**. Enter the text that appears when a user hovers the cursor over the table's column headers.
- **Use**. Click **May not be removed** if this field must be included on the screen. Otherwise, click **May be removed**.

  If you check **May be removed**, when this field appears on a data entry screen, an icon () appears to the left of the field. If the user clicks the icon, a drop-down menu provides an option to remove the field.

If the user removes the field, *field name* replaces the field on the data entry screen to indicate that the field was removed and can be re-added if necessary. For example, if the field's display name is `street address`, and the user removes the field, add Street Address appears in place of the field.

NOTE: The menu icon ( ) can also indicate that the user can add instances of a field (see the Allow field). So, if a field is required, the icon could appear but omit a **Remove** option.

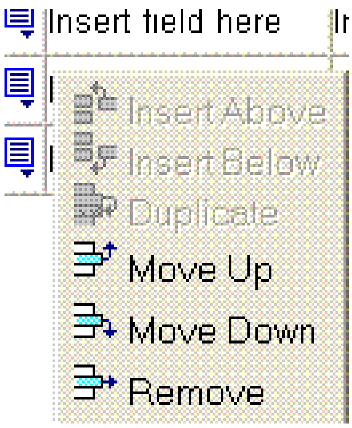
- **Allow**. Check **more than one** if you want to let the user entering data add instances of this field. Otherwise, check **only one**. For example, if a screen is collecting names and addresses and you want to let the user enter several of them, check **more than one**. If you check **More than one** here, you are allowing the user to insert an entirely new table, not an additional table row.

IMPORTANT: Do not insert a calendar field into a Smart Form that allows multiple entries (using the **Allow more than One** option on the dialog). If you do, you cannot search the Smart Form using that field.

If the user entering data clicks , a menu appears, which lets the user click **Duplicate** to add instances of the field to the screen.

NOTE: The menu icon ( ) can also indicate that the user can remove a field. So, even if a field allows only one instance, the icon could appear but the menu would only display **Remove**.

- **Row display name**. Enter the text that appears when a user hovers the cursor over the table's cells. Use this field to describe the kind of information to be inserted into the table's cells.
- **Row name**. Enter the name of the XML tag used to collect data for each entry in the table.
- **Minimum number**. If desired, enter the minimum number of rows for this table. If you enter a number and the data entry user tries to save the screen without inserting at least the minimum number of rows, the user is informed that **Element content is incomplete according to the DTD/Schema**. By default, the user is allowed to cancel or save the screen anyway. However, the system administrator determines whether or not the user can save an invalid document.
- **Maximum number**. If desired, enter the maximum number of rows for this table. If you don't want to assign a maximum number, check **Unlimited**. When this table appears on a data entry screen, if a user adds the maximum number of rows, the **Insert Above** and **Insert Below** menu options are grayed out.



- **Columns**. Enter the number of columns to appear in the table.
- **Caption**. Optionally enter text to describe this table on the data entry screen. The caption appears centered above the table. After you insert this field onto the screen, you can use eWebEditPro+XML's formatting capabilities to modify the caption's size, font, color, and other attributes.
- **Advanced tab**. This is the same as the *Group Box Advanced tab* on page 858.
- **Relevance**. This is the same as the *Group Box Relevance tab* on page 861.

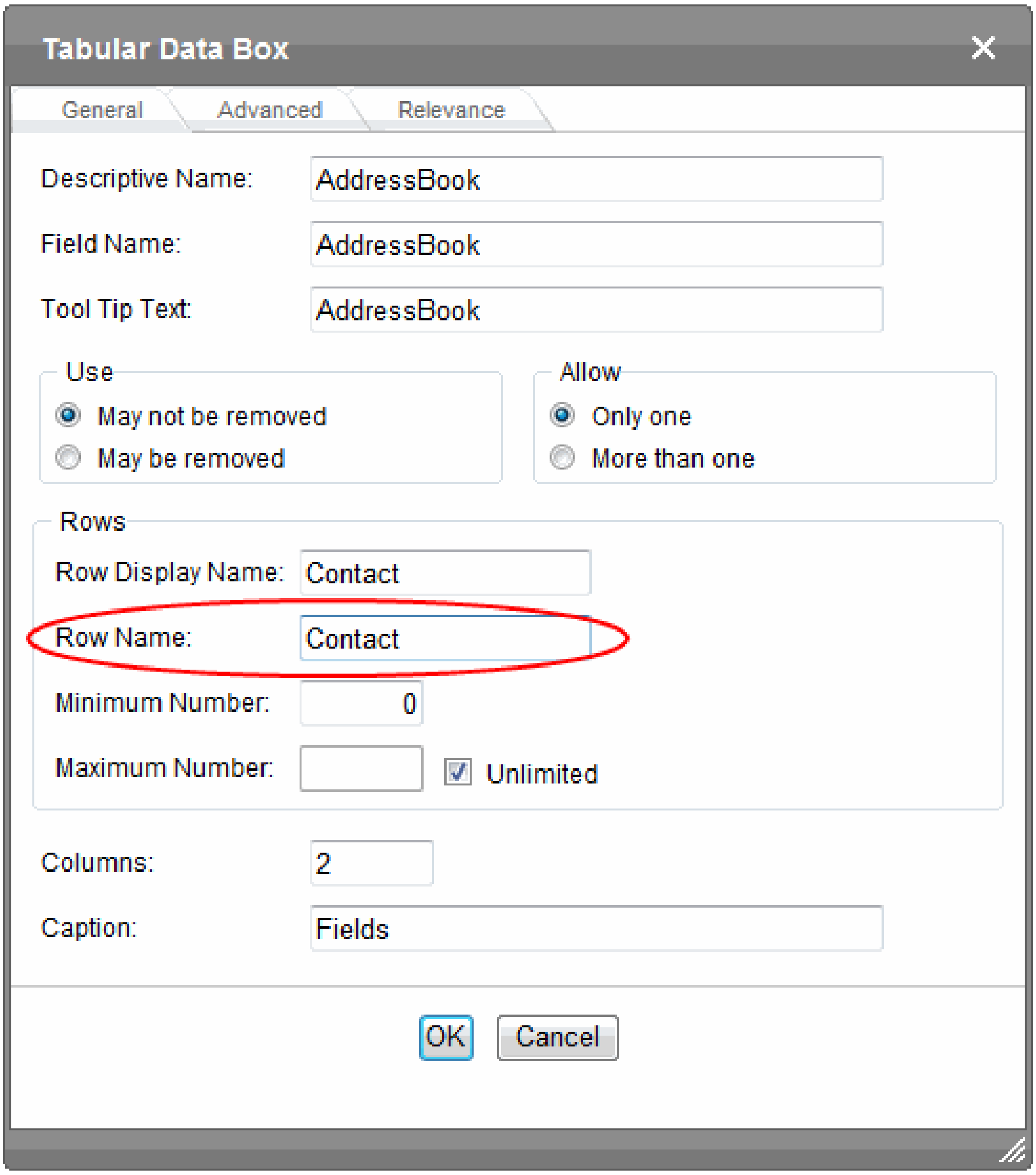
Tabular data creates 3 levels of XML tags:

- inner level: each field in the table
- middle level: each row in the table
- outer level: the entire set of table data

To explain how this works, use the following contact list as an example.

- John Doe, 555-1212, john.doe@example.com
- Mary Smith, 555-8765, msmith@example.net

When you insert a field into a table, a dialog helps you define the field type. For example, when inserting a plain text field, the Plain Text Field dialog appears. On that dialog, the value of the **Phone** field defines the tags that enclose that field's contents.



To continue the example, every contact is represented in XML as:

```
<Name>John Doe</Name>
<Phone>555-1212</Phone>
<Email>john.doe@example.com</Email>
       and
<Name>Mary Smith</Name>
<Phone>555-8765</Phone>
<Email>msmith@example.net</Email>
```

Each row of the table collects information for one contact. On the Tabular Data Box dialog, the **Row Name** field defines the XML tag that groups information for *each contact*. For example, the **Row Name** field value is **Contact**.

```
<AddressBook>
  <contact>
    <Name>John Doe</Name>
    <Phone>555-1212</Phone>
    <Email>john.doe@example.com</Email>
```

```
  </contact>
  <contact>
    <Name>John Doe</Name>
    <Phone>555-1212</Phone>
    <Email>john.doe@example.com</Email>
  </contact>
  <contact>
    <Name>Mary Smith</Name>
    <Phone>555-8765</Phone>
    <Email>msmith@example.net</Email>
  </contact>
</AddressBook>
```

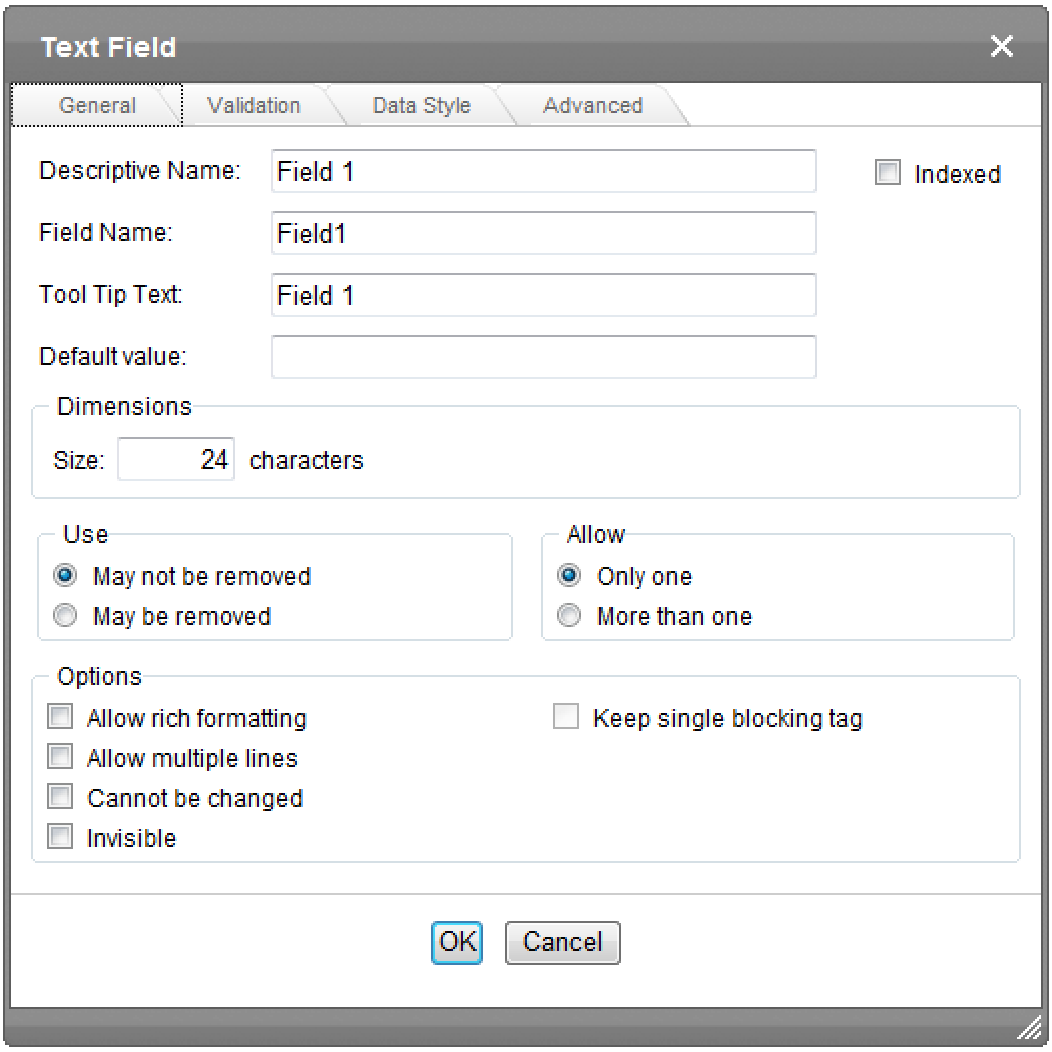
Text ab|

Use a text field when you want the user to enter a text response.

NOTE: If a plain text field tries to perform a numerical calculation with a value that is blank or contains letters, `NaN` appears in the field. (`NaN` stands for "not a number.")
If a plain text field tries to divide by zero, `Infinity` appears.

The following capabilities are available with a text field.

- Text can be read-only or hidden
- Can allow plain text only, or let the author apply formatting
- Can consist of one or several lines



- **Descriptive Name**. Enter the name of the field.
- **Indexed**. Check if you want to index this field. For more information, see *Searching XML information* on page 832. The **Indexed** field may or may not appear, depending on how your administrator set up your system.
- **Field Name**. Enter the field's element name. This defines the field in the XML.
- **Tool Tip Text**. Enter the text that appears when a user hovers the cursor over this field.
- **Default Value**. If you want to set a default value for this field, enter it here. The default value appears in Data Entry mode, where the user can accept, change, or delete it. For example, if this field collects a city, and most users enter New York, enter `New York` as the value.
- **Dimensions**. Set the size of the text field in characters.
  - **Size** (or **Width**). Enter the width of this textbox in characters. This field is available only if **Allow Rich Formatting** is not checked.
  - **Height**. Enter the height of this textbox in characters. This field is available only if **Allow Multiple Lines** is checked and if **Allow Rich Formatting** is not checked.

- **Use**. Click **May not be removed** if this field must be included on the screen. Otherwise, click **May be removed**.

  If you check **May be removed**, when this field appears on a data entry screen, an icon ( ) appears next to the field. If the user clicks the icon, a menu provides a remove option.

  If the user removes the field, *field name* replaces the field on the screen to indicate that the field was removed and can be re-added if necessary. For example, if the field's display name is `street address`, and the user removes the field, add Street Address appears in place of the field.

  NOTE: The menu icon ( ) can also indicate that the user can add instances of a field (see the Allow field). So, if a field is required, the icon could appear but omit a **Remove** option.

- **Allow**. Check **more than one** if you want to let the user add instances of this field. Otherwise, check **only one**. For example, if a screen is collecting names and addresses and you want to let the user enter several of them, check **more than one**. If you check **More than one** here, you allow the user to insert a new table, not an additional table row.

  IMPORTANT: Do not insert a calendar field into a Smart Form that allows multiple entries (using the **Allow more than One** option on the dialog). If you do, you cannot search the Smart Form using that field.

  If the user entering data clicks , a menu appears, which lets the user click **Duplicate** to add instances of the field to the screen.

  NOTE: The menu icon ( ) can also indicate that the user can remove a field (see the Use field). So, even if a field allows only one instance, the icon could appear but the menu would only display **Remove**.

- **Allow Rich Formatting**. Check this box if you want to let the Smart Form author format text in this field. If you do not check the box, the author can enter plain text only.
  If you allow rich formatting, a content author uses the editor selected in either the web.config file's `ek_EditControlWin` key (for Windows computers) or the `ek_EditControlMac` key (for Apple computers). Or, if `UserPreferred` is the `web.config` value, the author uses the editor selected in the user profile.
- **Keep Single Blocking Tag**. This checkbox is active only if **Allow Rich Formatting** is checked. Check this box if you want the editor to maintain `<p>` tags around a single line of text. Uncheck this box if you want the editor to strip `<p>` tags from a single line of text.

  NOTE: This checkbox has no effect if text that allows rich formatting consists of more than one line.

  Sample Results
  Checked: `<p>Here is sample text</p>`
  Unchecked: `Here is sample text`

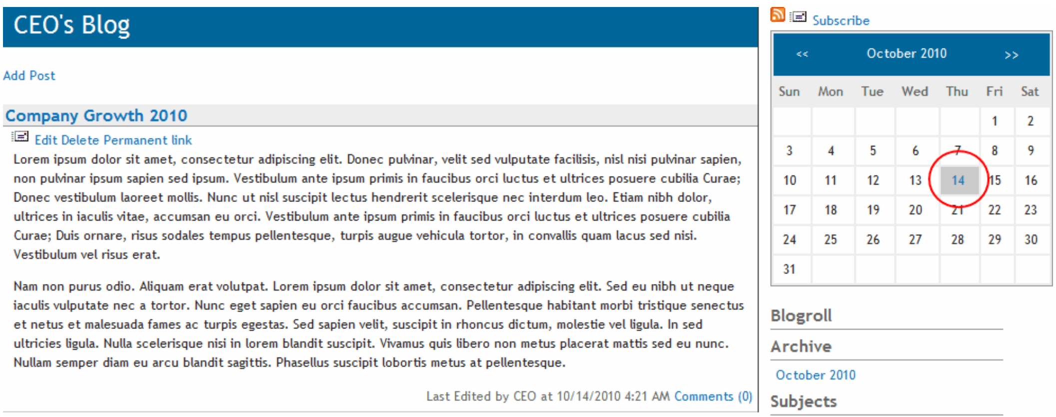
- **Allow Multiple Lines**. Check here to let this text box expand to accommodate the user's input. If you do not check this box, a single line box appears on the screen to accept user input.
- **Cannot be Changed**. Check here to make this field read-only. You might use this option to provide instructions for completing the screen.
- **Invisible**. Check to make this field hidden in Data Entry mode. This option lets you store unseen information in an XML document. An example might be putting a version number for the data design so that XML documents can be upgraded to newer versions using an XSL transform.
- **Validation**. Select the kind of validation to apply to this field. Your choices are:
  - **No validation**. the user's response is not checked.
  - **Cannot be blank**. the user must enter a response.
  - **Custom**. You can create custom validation. See also: *Creating custom validation criteria* on page 837

  If you assign to this field any value other than **No validation**, the field is initially surrounded by red dashes in Data Entry mode. If the user's response does not meet the validation criterion, the field remains surrounded by red dashes. The system administrator determines whether or not the user can save an invalid document.
- **Advanced tab**. This is the same as the *Group Box Advanced tab* on page 858.

Working with blogs

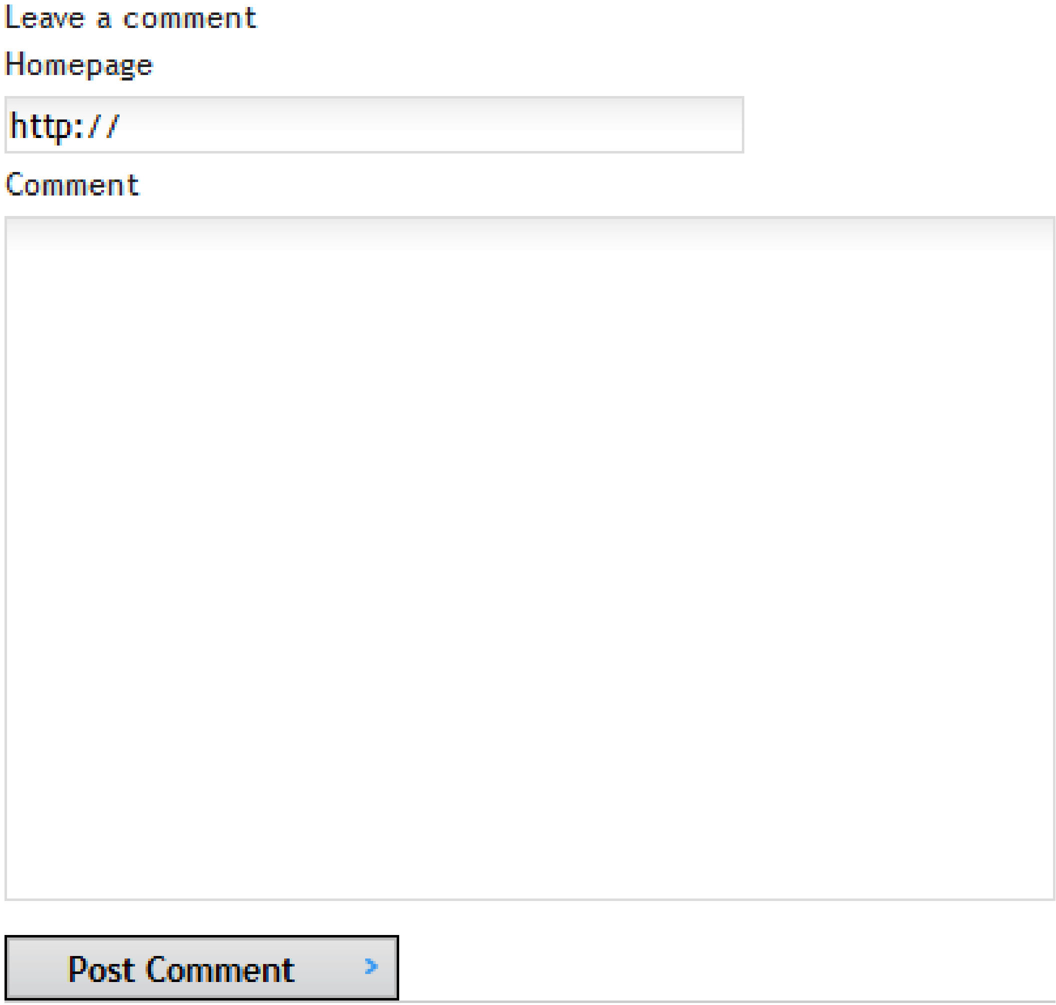
A blog is a form of online information sharing. You create a main blog post, and others can comment on it. Or, you can use a blog to create an online diary of everyday life. Your most recent blog post appears at the top with associated blogs following. Some blogs display a calendar on which days when blogs were created are highlighted. The blog workflow is as follows:

1. An administrator creates a blog in the Workarea, assigns blog subjects, creates a blog roll, and decides how comments are handled. In the Workarea, a blog looks like a content folder but has a distinct icon ( ). See *Adding a blog* on page 891.
2. A developer adds the blog to a Web form using blog server controls, then publishes the form. See the Blog server controls.
3. Ektron users can add blog posts, either from the Workarea or the website. Depending on permissions, the post is either published immediately or submitted to the blog's workflow. See *Working with blog posts* on page 902.



4. When published, site visitors can view the post and add comments. See

Controlling blog comments on page 897.



You can use a Smart Form to implement *structured blogging*, which provides a form for the blogger to complete instead of free-form writing. For example, you create a book review blog and want to make sure that an author submitting a review provides:

- Title
- Author
- Date of review
- Review text

For information about working with Smart Forms, see *Working with Smart Forms* on page 815.

NOTE: Unlike the Smart Forms you can assign to regular folders, you cannot require the user to select a Smart Form when creating a new post. It is only an option.

Blog elements

The following list shows elements commonly found in a blog.

NOTE: In Ektron 9.10, a new web.config parameter was created—`ek_enableLegacyBlogFields`—that determines whether the Summary tab displays the fields for Traceback URL and Pingback, and Tags when you create a blog post. In Ektron 9.10, the default is false.

```
<add key="ek_enableLegacyBlogFields" value="false" />
```

- **Blog Title**. The name of your blog as you want it to appear on the site. For example, "My Life Story."
- **Blog Post**. The main entry for each topic. A blog post consists of these elements. See *Working with blog posts* on page 902.
  - **Headline**. title of the post
  - **Commentary**. details of the post
  - **Comment Link**. links to a comments page, where site visitors can view or add comments
  - **TrackBack URL**. a URL visitors can use to notify you when they discuss the post on their site. See also: Trackback (Wikipedia)
  - **PingBack**. Pings back any URLs in the blog post See also: Pingback (Wikipedia)
  - **Images**. add images to a blog post the same way you add them to content. See also: *Adding a library file to content* on page 683
- **Blog Comments**. A Comments link appears at the end of the blog post. The link includes a number (for example (3)) that denotes how many comments have been made. Click this link to move to the comments page, where you can read comments on the post and possibly enter your own. See *Controlling blog comments* on page 897.
- **Blog Roll**. Other blogs that the blog's creator wants site visitors to view. See *Adding blog roll links* on page 894.
- **Blog Subjects**. Subjects associated with the blog. If you click a subject, links to all posts associated with the subject appear. See *Adding blog subjects* on page 893.
- **Calendar**. Indicates when blog posts were made. This lets site visitors go your blog by clicking a day that has blog posts.

A blog folder has the same functionality and features as other folders in the following areas:

- Permissions
- Workflow
- Purge history
- Language support
- Search

For more information, see *Approving content for publication* on page 689 and *Managing folder and content permissions* on page 160.

Editing blog properties

PREREQUISITE

You have permission to **Edit Folders** on the blog's Advanced Permissions screen.

To edit blog properties:

- Workarea
  1. Go to the blog folder.
  2. Click **View > Properties**.
  3. Click **Edit Properties**.
- Website
  1. Log in.
  2. Go to the blog.
  3. Open the menu for the blog.
  4. Select **Properties**.

You have more options when you edit the properties of a blog than when you create it. This saves time when you are creating multiple blogs on a site. You can set the following properties when you create or edit a blog.

- **Create Blog**
  - **Name**. The name of your blog as it appears in the content folder tree.
  - **Title**. The title of your blog as it appears on the website blog. It only appears if the `ShowHeader` Blog server control property is set to `true`.
  - **Visibility**.
    - **Public**. any site visitor can view the blog
    - **Private**. Membership and Ektron users must log in to see the blog.
  - **Comments**. Choose how to handle comments by checking the appropriate boxes. For more information, see *Controlling blog comments* on page 897.
- **Edit Blog**
  - **Name**. The name of your blog as it appears in the content folder tree.
  - **Title**. The title of your blog as it appears on the website blog. It only appears if the `ShowHeader` Blog server control property is set to `true`.
  - **Visibility**.
    - **Public**. any site visitor can view the blog
    - **Private**. Membership and Ektron users must log in to see the blog.
  - **Tagline**. A line of additional information that describes the blog. It appears below the title if the `ShowHeader` Blog server control property is set to `true`. For example, the title of a blog is "John's Blog Page." The tag line could be "A place to learn about John's past, present, future, and his current state of mind!"
  - **Post Visible**. The number of posts visible on the blog page. If the number of posts exceeds this number, only this many of the most recent posts appear. For example, if this property is set to 10 and you add 11 posts, only

the 10 most recent posts appear. This number can be from 1 to 999. If you leave this field blank, all posts made during the current day are visible.

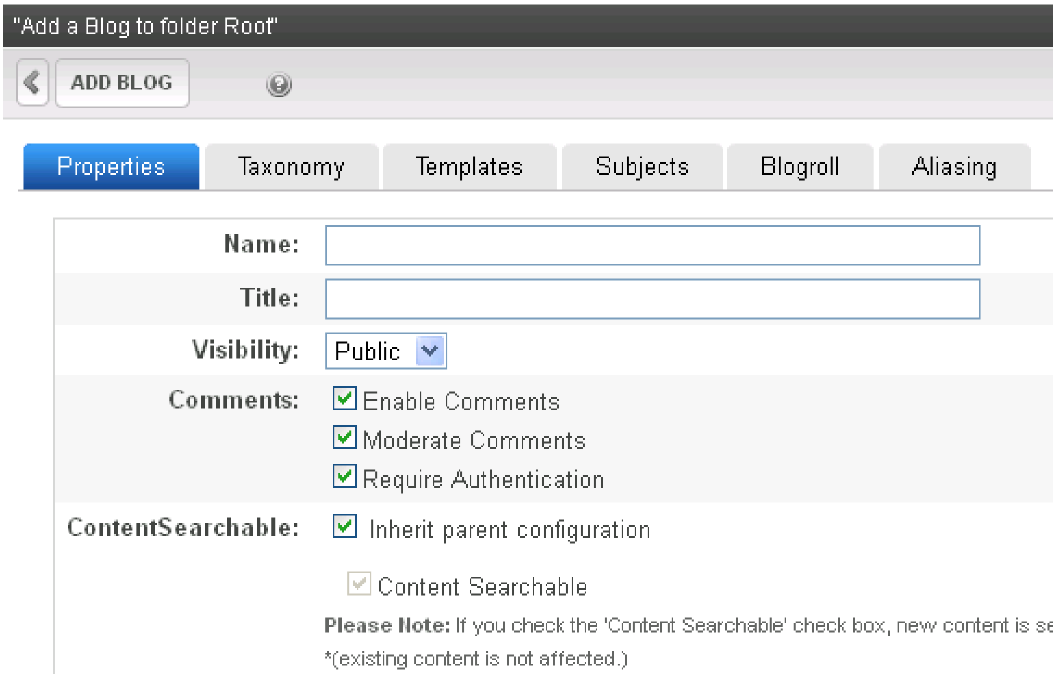
- **Comments**. Choose how to handle comments by checking the appropriate boxes. For more information, see *Controlling blog comments* on page 897.
- **Update Services**. Enter a service that notifies a blog search site when blog posts are added to your blog site. These blog search sites allow Web users to search content contained in blogs around the world. To use this feature, check the **Notify blog search engines of new posts** box and enter a path to a search site. An example path is: `http://rpc.technorati.com/rpc/ping`.
- **Style sheet**. If you want to provide a custom style sheet for the blog, enter the path to it relative to the site root. For example, `WorkArea/csslib/my_custom_blogs.css`. Leave this field blank to inherit the default style sheet, blogs.css, located in `Workarea/csslib`. You can customize the default style sheet but your modifications will get overwritten when you upgrade Ektron.
- **Content Searchable**. Specify whether the blog can be found through site searches.
- **Display Settings**. Specify the tabs that you want displayed when you create or edit blog content.

Adding a blog

PREREQUISITE

You have permission to **Add Folders** on the blog's Advanced Permissions screen.

1. From the Workarea, choose **Content**.
2. Click the folder in which the blog will reside.
3. Choose **New > Blog**. (You also can right click on a content folder and choose **Add Blog**.) The **Add a Blog** screen appears.



4. Complete the **Properties** tab.
   - **Name**. The name of your blog as it appears in the content folder tree.
   - **Title**. The title of your blog as it appears on the website.
   - **Visibility**. Choose whether the blog is private or public. If private, only logged-in site visitors can see it.
   - **Comments**. Choose how to handle comments by checking the appropriate boxes. See *Controlling blog comments* on page 897.
   - **Taxonomy** tab. Select taxonomy categories to apply to the blog. See also: *Organizing content with taxonomies* on page 1253
   - **Templates** tab. Select templates to apply to the blog. See also: *Working with templates* on page 769
   - **Subjects** tab. Add subjects to the blog. See also: *Adding blog subjects* on the facing page
   - **Blog Roll** tab. Add blog sites that you want blog readers to visit. See also: *Adding blog roll links* on page 894
5. Specify the information in the tabs, and click **Add Blog**.

Deleting a blog

PREREQUISITE

You must be logged in and have permission to **Delete Folders** on the blog's Advanced Permissions screen.

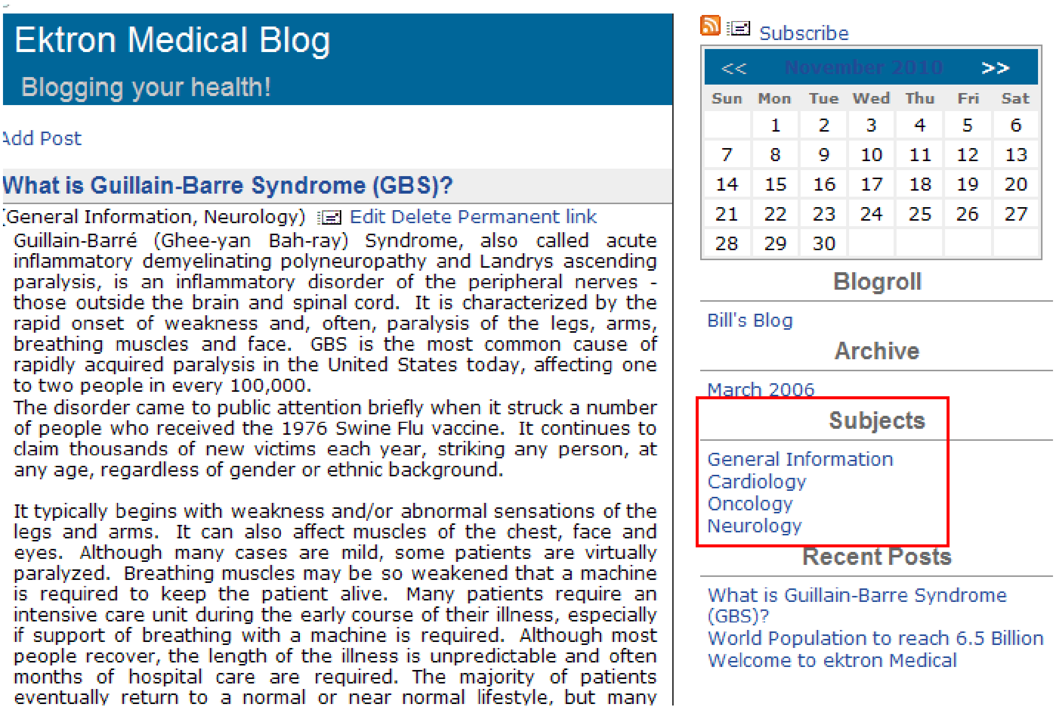
1. In the **Workarea**, go to **Content** then the blog folder. (From the website, open the menu for the blog and click **Properties**.)
2. Choose **Delete > This Blog**. A dialog box asks you to confirm.
3. Click **OK**.

WARNING! Deleting a blog removes the blog and all of its posts, comments, and quicklinks. After a blog is deleted, you cannot retrieve its posts, comments, or quicklinks.

Adding blog subjects

Subjects make it easier for site visitors scanning a blog page to find posts that interest them. An author assigns one or more subjects to a blog post. When the post is published, a list of subjects assigned to all posts appears in a column. A site visitor can click a subject to see all related posts.

For example, a blog's subjects are General Information, Cardiology, Oncology, and Neurology. A blog is written about the importance of screening and then assigned to the Oncology subject. When a user clicks Oncology, the screening blog appears with other blogs related to Oncology. By default, a blog's subjects appear with other blog components when a Blog Server control is placed on a Web page. A developer can place a list of blog subjects only on a Web page via the BlogCalendar server control.



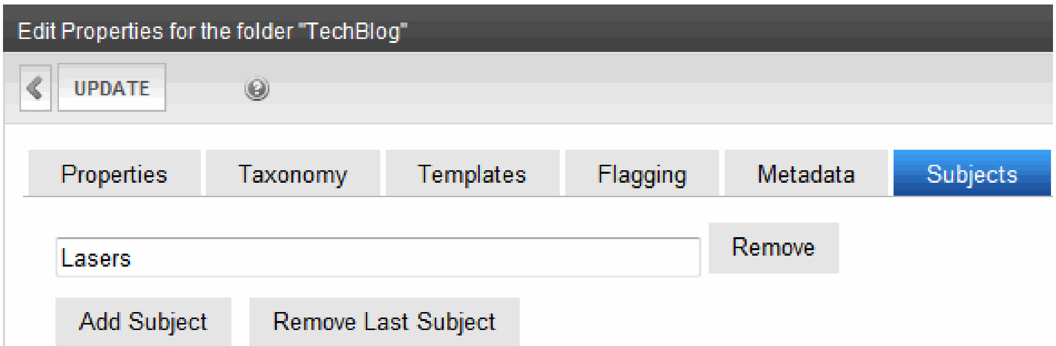
A subject only can be assigned to the blog in which it is created—it cannot be reused with other blogs. With each new blog, you must create new subjects. This gives you the flexibility to tailor unique subjects to each blog.

To add or edit a blog subject:

NOTE: To add a blog subject from the website, you must be logged in.

1. In the Workarea, go to the blog folder. (From the website, open the menu for the blog and click **Properties**.)
2. Choose **View > Properties**.
3. Click **Edit Properties**.

4. Click the **Subjects** tab, then **Add Subject**.

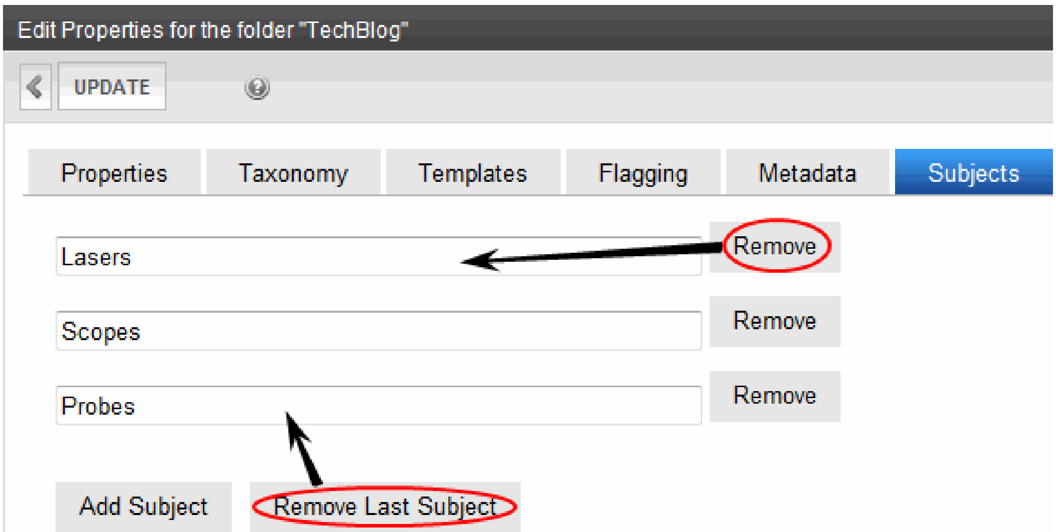


5. Enter the subject. Add as many subjects as you want by clicking **Add New Subjects**.
6. Click **Save**.

Removing blog subjects

NOTE: To remove a blog subject from the website, you must be logged in.

1. In the Workarea, go to the blog folder. (From the website, open the menu for the blog and click **Properties**).
2. Choose **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Subjects** tab.
5. Click **Remove Last Subject** to remove the subject from the end of the list, or click **Remove** to remove a specific subject.



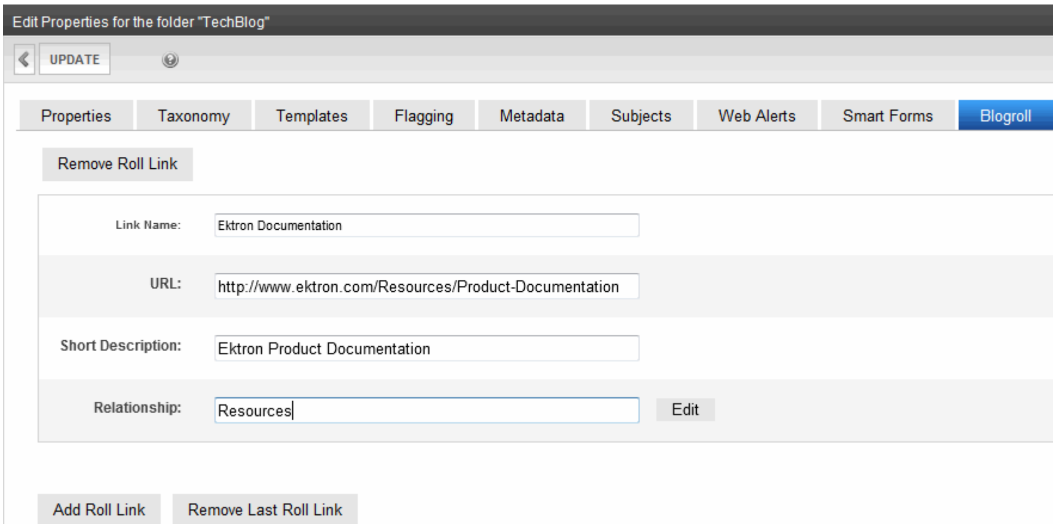
6. Click **OK** to confirm removal of the last subject. You can continue to remove subjects at the end of the list by clicking the **Remove Last Subject** link.
7. Click **Save** to save your changes.

Adding blog roll links

A blog roll lists website links to your blog page; a list of related blogs, or blogs that you want your visitors to view. See also: BlogRoll server control.

NOTE: To add a blog roll link from the website, you must be logged in.

1. In the Workarea, go to the blog folder. (From the website, open the menu for the blog and click **Properties**.)
2. Choose **View > Properties**.
3. Click **Edit Properties**.
4. On the **Blog Roll** tab, click **Add Roll Link**. The **Add Blog Roll Link** form appears.

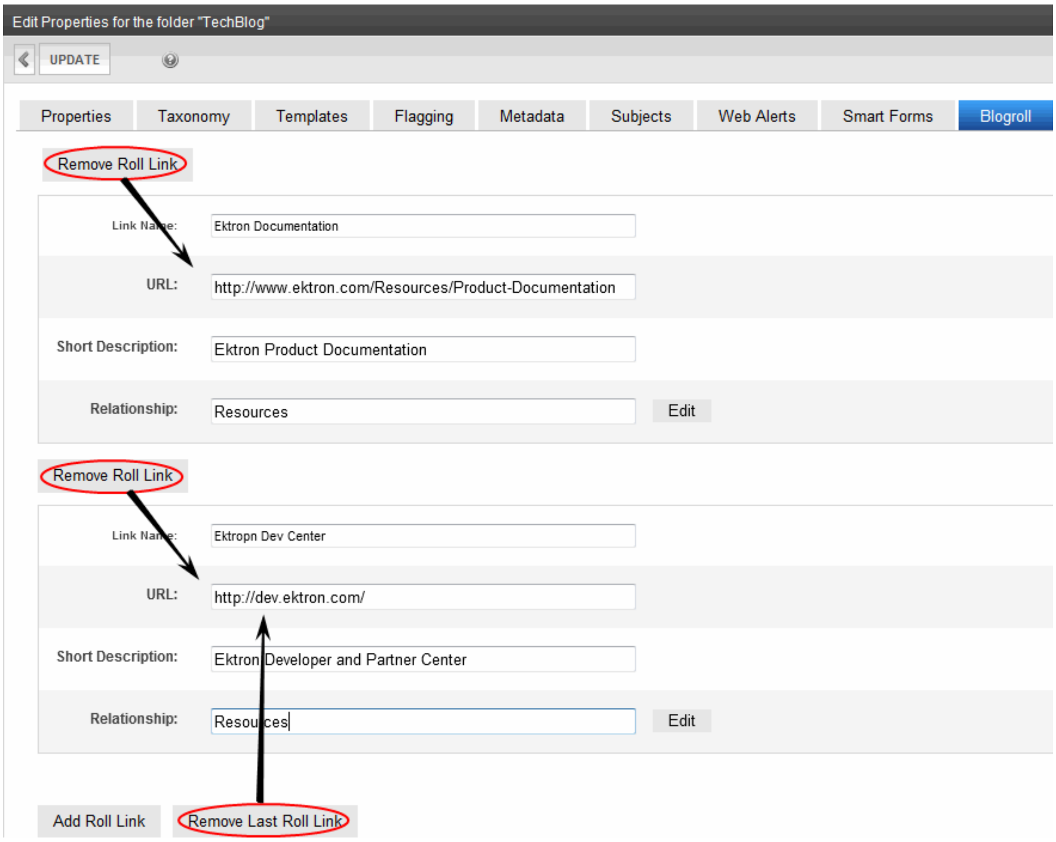


5. Fill out the form. Add as many links to the blog roll as you would like.
   - **Link Name**. Describes the link in the blog roll.
   - **URL**. Enter the URL of the blog you are adding to the blog roll. It must begin with `http://`.
   - **Short Description**. Add a short description of the site.
   - **Relationship**. Enter the relationship of the blog roll link to you or to the site. For example, brother. Click **Edit** for a pop up screen that helps you choose the site's relationship.
     - **URL**. Check this box if the address is owned by the same person or company.
     - **Friendship**. Choose your level of friendship with the site owner.
       - Contact
       - Acquaintance
       - Friend
       - None
     - **Physical**. Check this box if you have physically met the person who owns this blog.
     - **Professional**. Check if the site owner has a work relationship with you. Select all that apply.
       - Co-worker
       - Colleague
       - Geographical—Select one.
       - co-resident
       - neighbor
       - none
     - **Family**. If the site owner is a family member, select the relationship.
       - Child
       - Parent
       - Sibling
       - Spouse
       - Kin
       - None
     - **Romantic**. Check your feelings toward the site owner.
       - Muse
       - Crush
       - Date
       - Sweetheart
6. Click **Save**.

Removing blog roll links

NOTE: To remove a blog roll link from the website, you must be logged in.

1. In the Workarea, go to the blog folder. (From the website, access the blog's menu from the site and click **Properties**.)
2. Choose **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Blog Roll** tab.
5. Click **Remove Last Roll Link** to remove the roll link from the end of the list, or click **Remove Roll Link** to remove a specific roll link.



6. Click **OK** to confirm removal of the last blog roll link.
7. Click **Save**.

Controlling blog comments

Blog comments let site visitors add their thoughts about a blog post.

IMPORTANT: Do not confuse blog comments with history comments. You can add a history comment to the blog post by clicking the **Comment** tab. This is not the same as adding a comment to a blog post on a site. When you add a history comment, it has the same properties as a comment associated with content.

The blog administrator controls commenting by deciding who can add comments and whether a comment requires approval for publication. By default, comments are fully controlled. This means they are enabled, must be approved, and a site visitor must log in to create them. The following blog properties control comments. See also: *Editing blog properties* on page 889

- **Enable Comments**. Allows user in Workarea and site visitor to add blog comments. Also displays comments on site and in Workarea.

  NOTE: An Administrators group member can add comments, regardless of how this checkbox is set.

- **Moderate Comments**. Determines if comments must be approved before they appear on site. If this field is checked, only Ektron users with permission to edit the post can approve comments. If a user without edit permission adds comments, they only appear on the website after being approved by someone with edit permission.
  An unapproved comment is indicated by a red exclamation point ( ). If a user with edit permission logs in, comments are automatically approved.

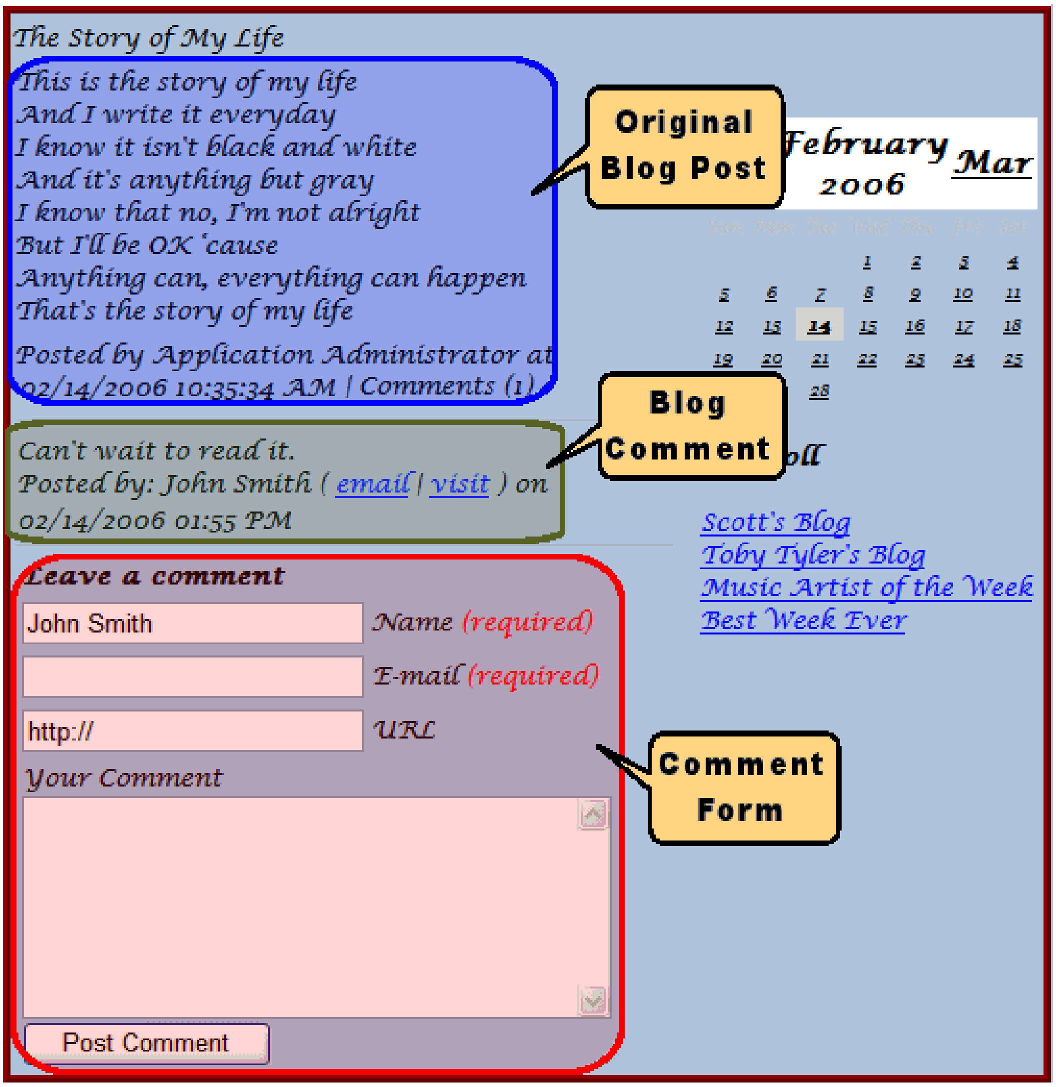
  NOTE: Membership users cannot approve blog comments.

- **Require Authentication**. Determines if a user must be logged in as an Ektron or membership user to add comments via the website.

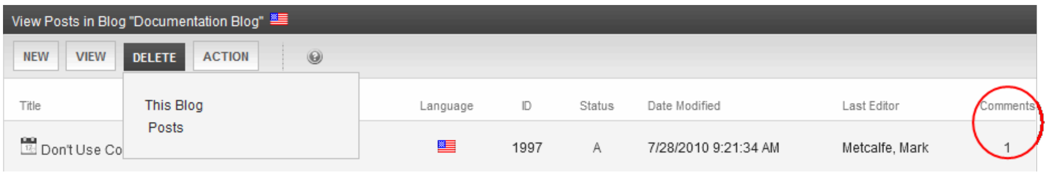
If comments are enabled but not moderated, any site visitor can add a comment. If you want to ensure comments on your site meet certain criteria, moderate them.

IMPORTANT: If comments are not moderated, they appear on your site as soon as a site visitor submits them.

On the site, blog post comments appear when you click the Comments link or the Title of the blog post. The comment page contains the original post, any comments, and a form to post new comments. Depending on how the page is designed, the calendar and blog roll also may appear.



The Workarea's View Posts in Blog screen lets you add, view, approve, edit, and delete comments for a blog post. The Comments column indicates the number of comments. An unapproved comment is indicated by a red exclamation point (!).



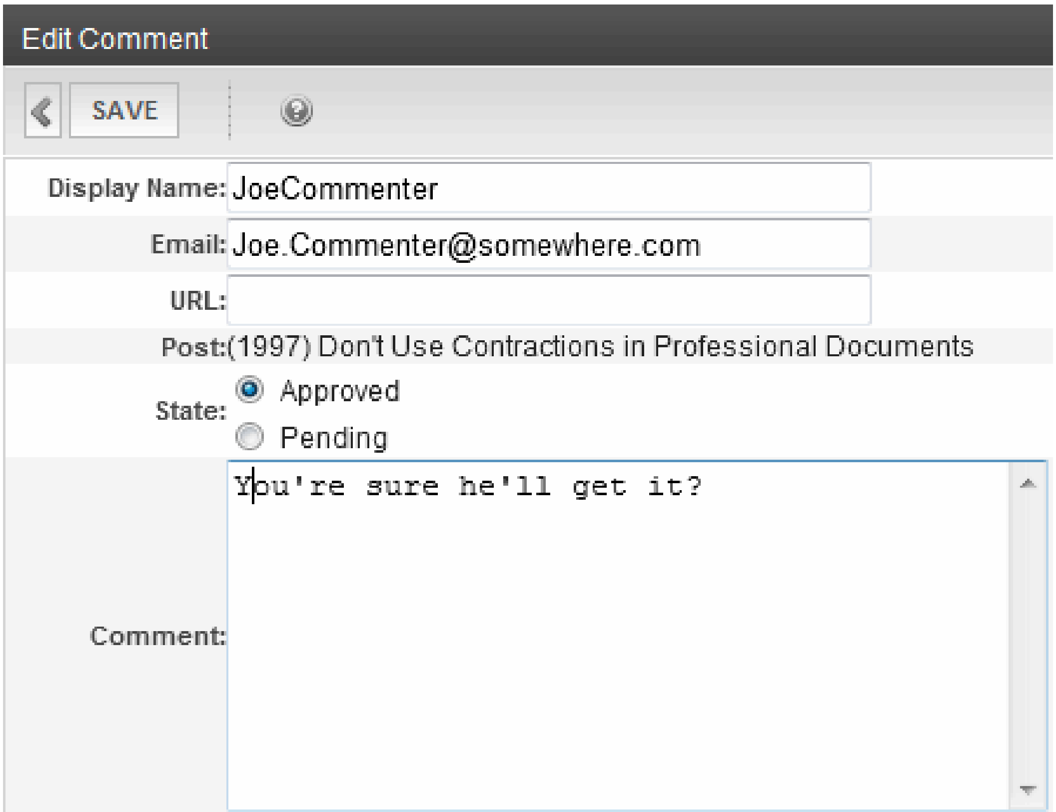
Adding a blog comment

PREREQUISITE

> You must have **Add** permission on the blog's Standard Permissions screen.

To add or edit a blog post comment from the Workarea:

1. From the **Content** area, go to the blog and find the post that you want to edit.
2. Click the number in the **Comments** column. The View Comments for Post screen appears.
3. Choose **New > Comment**. The Add Comment screen appears.



- **Name**. The person submitting the comment. This information is required.

  NOTE: This text box appears only when a site visitor, who is not a regular user or membership user, is adding a comment. If a regular user or membership user adds a comment, their name and email address is taken from their user profile.

- **Email**. The email address of the person submitting the comment. This information is required.

  NOTE: This text box appears only when a site visitor, who is not a regular user or membership user, is adding a comment. If a regular user or membership user adds a comment, their name and email address is taken from their user profile.

- **Homepage**. A URL for the person’s website.
- **State**. Set the comment’s state to approved or pending.
  - *Approved* comments appear on the site immediately.
  - *Pending* comments must be approved before they appear.
- **Comment Section**. A text area to insert comments about the post.

- **Post Comment** button. Post a comment by clicking this button. Depending on the comment's settings, it either posts immediately or is submitted for approval.

Deleting a blog comment

When a comment is deleted, you cannot retrieve it.

1. From the **Content** area, go to the blog.
2. Find the post that you want to edit.
3. Click the number in the **Comments** column. The View Comments for Post screen appears.
4. Click **Delete**. A dialog box asks you to confirm.
5. Click **OK** to delete the comment.

Approving a blog comment

Comments can require approval if:

- they are submitted from the website and **Moderate Comments** is checked in the blog's folder properties.
- a user submits the comment from the Workarea and sets its state to **Pending.**

Only users with permission to edit content (posts) within the blog folder can approve comments.

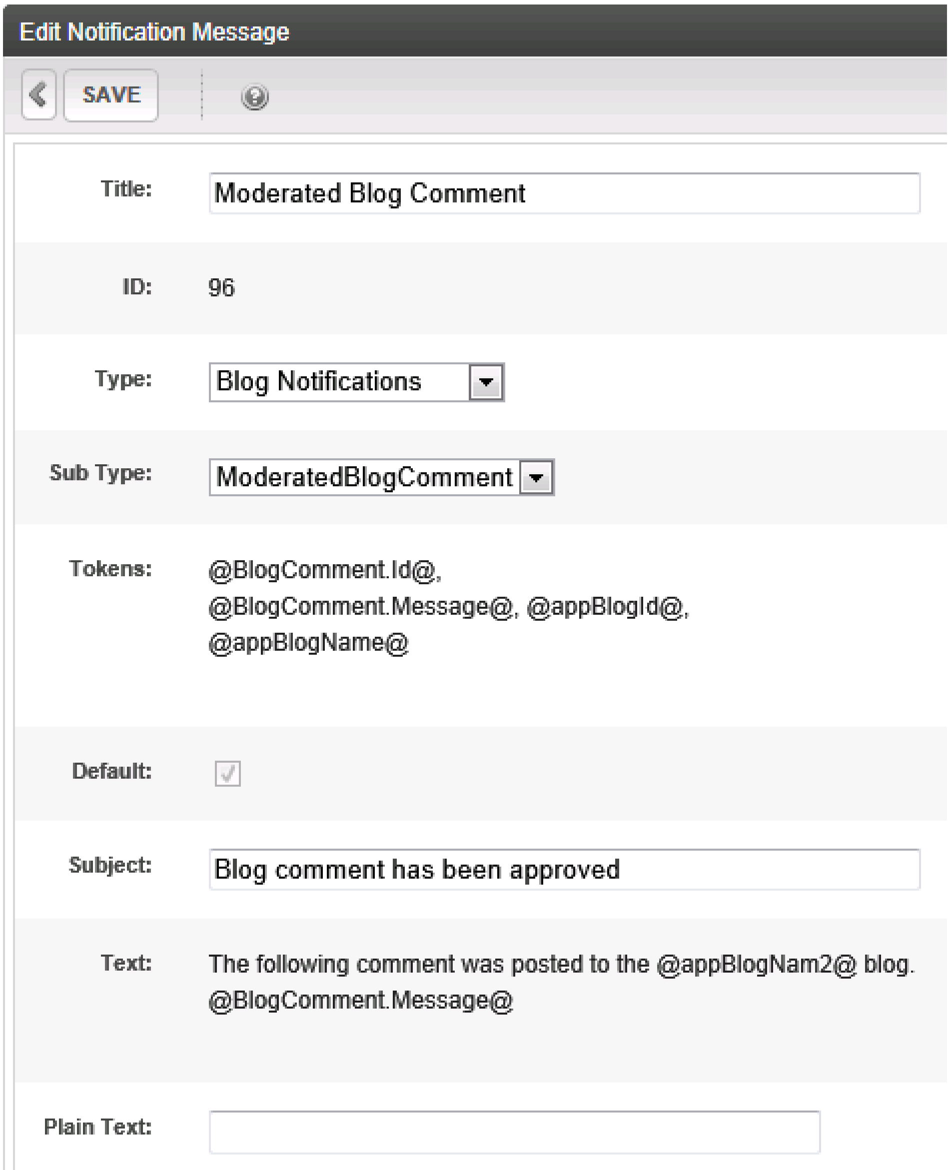
To approve a comment:

1. From the **Content** area, go to the blog.
2. Find the post that has a comment that requires approval.
3. Click the number in the **Comments** column. The View Comments for Post screen appears.
4. Click **Approve**.
5. The comment's status changes to approved.

Notification of moderated blog comments

Whenever a moderated blog comment is published, the Notification system can notify interested recipients. See *Sending notifications to a community* on page 1543.

Upon the posting a moderated blog comment, a `Moderated Blog Comment` message may be generated.



Working with blog posts

Your website displays only Published blog posts. However, the Workarea displays all blog posts, regardless of status. In the Workarea, you can also create, edit, delete, and archive blog posts in the same way you work with content. See also: BlogPost server control.

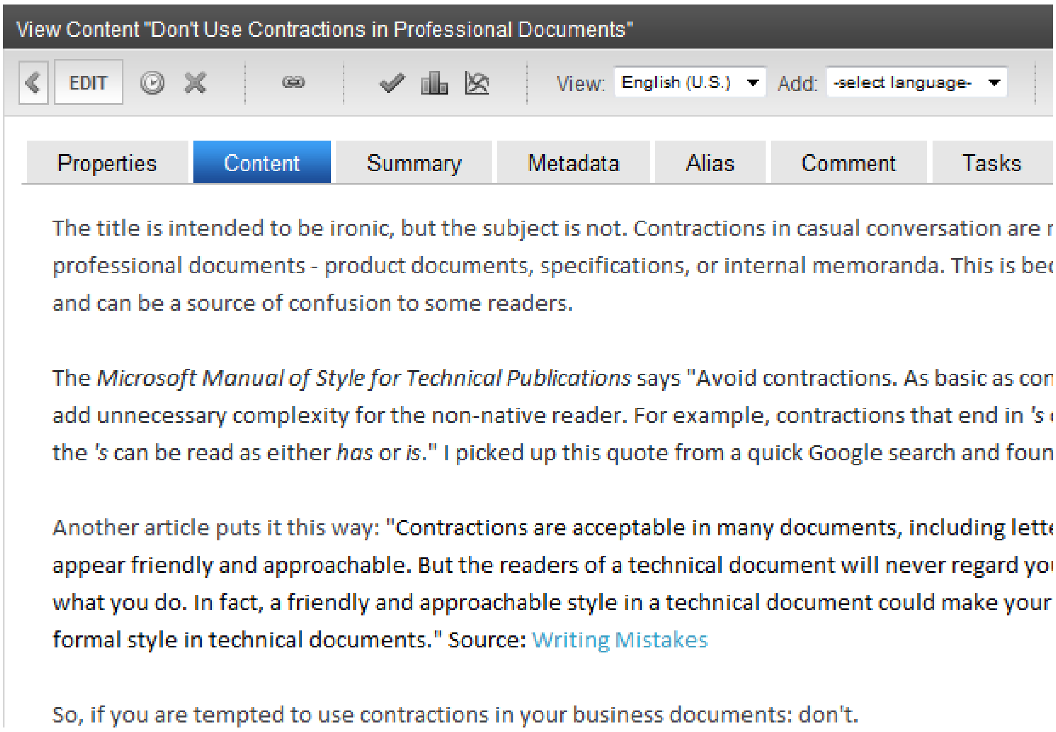
Blog posts on the website

You can view Published blog posts on the website. A blog post has a Title, Content, Comments Link, Post Time, Date, and Editor Information.

- **Title**. The headline of the post. Usually what a site visitor scans through to find a post to read.
- **Permanent Link**. If you click this link, a new screen displays the *permanent link* to this blog post. As long as the blog post is active within Ektron, you can access it via the URL in the browser's address bar. Most blog pages show only recent posts. After a post is moved off the blog's front page, it is still accessible via this link.
- **Content**. The body of the post.
- **Comments Information**. The comments link shows the number in parentheses of comments for a post . When this link is clicked, a new page of comments for the post appears. Also on the page is a form to add comments about the post. The comments only appear if a site visitor has logged in or authentication is not required for blog comments.
- **Editor Information**. The person who created or last edited the blog post.
- **Post Time and Date**. The date and time a blog post was created or last edited.

Blog posts in the Workarea

Viewing a blog post in the Workarea is similar to viewing content in the Workarea. Go to the folder that contains the blog then click the title of the blog post in the View Posts in Blog screen.



The View Posts in Blog screen shows the following information about each blog post.

- **Title**. The headline of the post. Usually what a site visitor scans through to find a post to read.
- **Comments Information**. The comments link shows the number in parentheses of comments for a post . When this link is clicked, the View Comments for Post screen appears. If a red flag ( ) appears next to the comments icon, they are awaiting approval.
- **Editor Information**. The person who created or last edited the blog post.
- **Post Time and Date**. The date and time the blog post was created or last edited.
- **Status**. The status of the blog post. For example, if the blog post is checked in, the status is **I**.

From this screen, you can perform all functions with a blog post that you can with content. You can give it a summary, add metadata, associate a task, assign Web Alerts, and so on. You must have Edit permission for the blog to perform these functions.

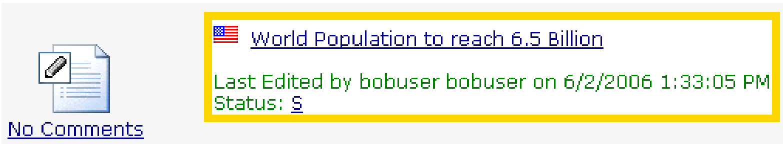
NOTE: You can also add a history comment to a blog post by clicking the **Comment** tab. This is not the same as adding a comment to a blog post on a site. A history comment has the same properties as a comment associated with content.

Adding a blog post

PREREQUISITE

To add a blog post, you must have **Add** permission on the blog's Standard Permissions screen. To add a blog post from the website, you must be logged in.

1. In the Workarea, go to the blog folder and choose **New > HTML Post**. (From the website, open the menu for the blog then choose **New Post**.)
2. When the Add Content screen appears, use the editor to create the blog post. You create a blog post the same way you create content. See also: *Editing in Ektron* on page 553
   If you are a member of the blog's workflow, it is published immediately. If not, the post is surrounded by a yellow border. A workflow approver must approve it before it appears on the website



When the post is published, it appears within the blog on the website.

You can add tags to a blog post to further define information about it for blog search engines. For example, you create a blog post about your favorite band and enter the following tags:

- Music
- Guitars
- Rock & Roll

When a person visiting a blog search site searches for Rock & Roll music, your blog post appears. Some blog search sites have a page specifically for searching blog tags.

Editing a blog post

PREREQUISITE

- You have **Edit** permission on the blog's Standard Permissions screen. To add a blog post from the website, you must be logged in

NOTE: If another editor changes a blog post, the posting information reflects the new editor, the date, and the time the information was changed. This is important to remember if you want the original person who posted the blog to get credit for the post.

1. In the Workarea, go to the blog folder. (From the website, open menu for the blog then choose **Properties**, then choose the post.)
2. Click the blog post title you want to edit.
3. Click **Edit**.
4. Change the blog post. When the blog is published, the changes appear in the blog post on the website.

Approving a blog post

If someone who is not a member of the blog's workflow creates or edits a blog post, its status is set to Submitted. It only appears on the website after a member of the workflow approves it. While its status is Submitted, it has yellow border on the View Posts in blog screen. To approve a blog post, see *Approving content for publication* on page 689.

Deleting a blog post

PREREQUISITE

- You have **Delete** permission on the blog's Standard Permissions screen. To delete a blog post from the website, you must be logged in.

1. In the Workarea, go to the blog folder. (From the website, log in, open the menu for the blog, choose **Properties** and then choose the post.)
2. From the menu, choose **Delete > Posts**. The **Delete Contents** screen appears.
3. Click the check box next to each post you want to delete. To select all posts, click the check box next to **Title**.
4. Click **Delete Contents** (). A dialog box asks you to confirm.
5. Click **OK**.

Adding or editing blog posts with Windows Live Writer

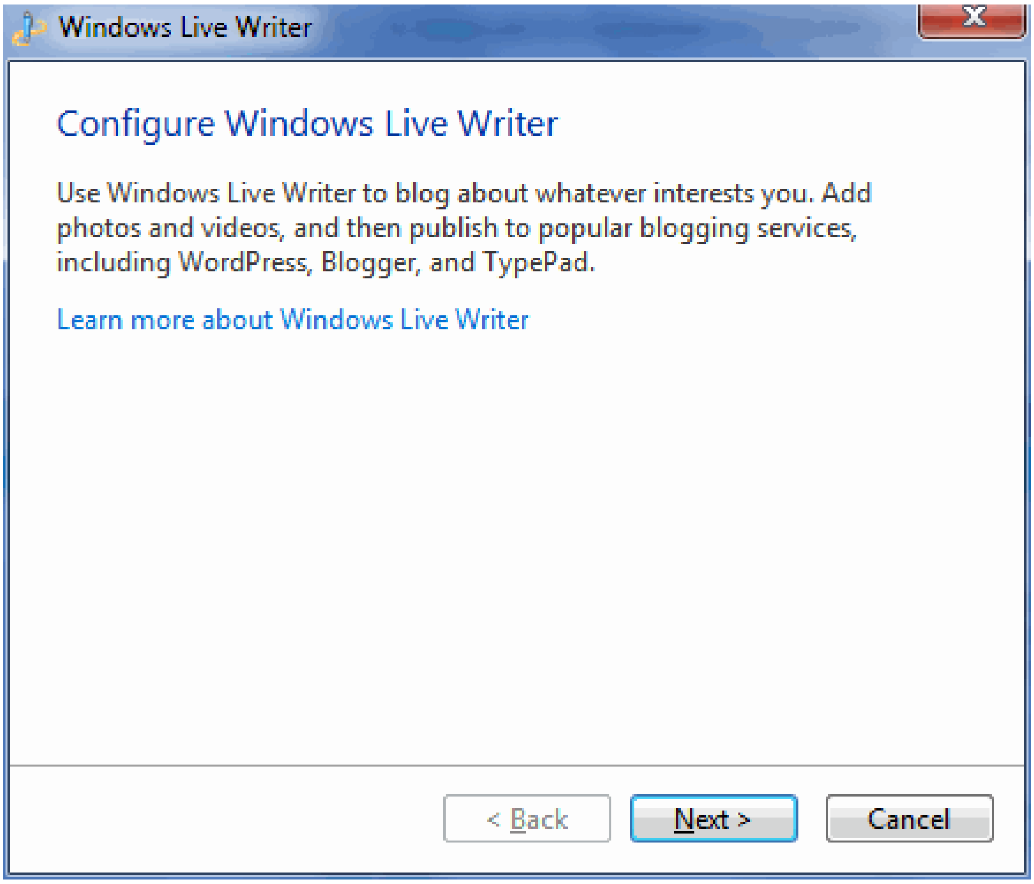
Ektron authors and membership users can use Windows Live™ Writer to add and edit blog posts to your site. If users have the proper permissions, they upload images and attach files from their system. For additional Windows Live Writer help from Microsoft, click hereand sign into the Microsoft website.

NOTE: Ektron only supports the 2010 version of Live Writer.

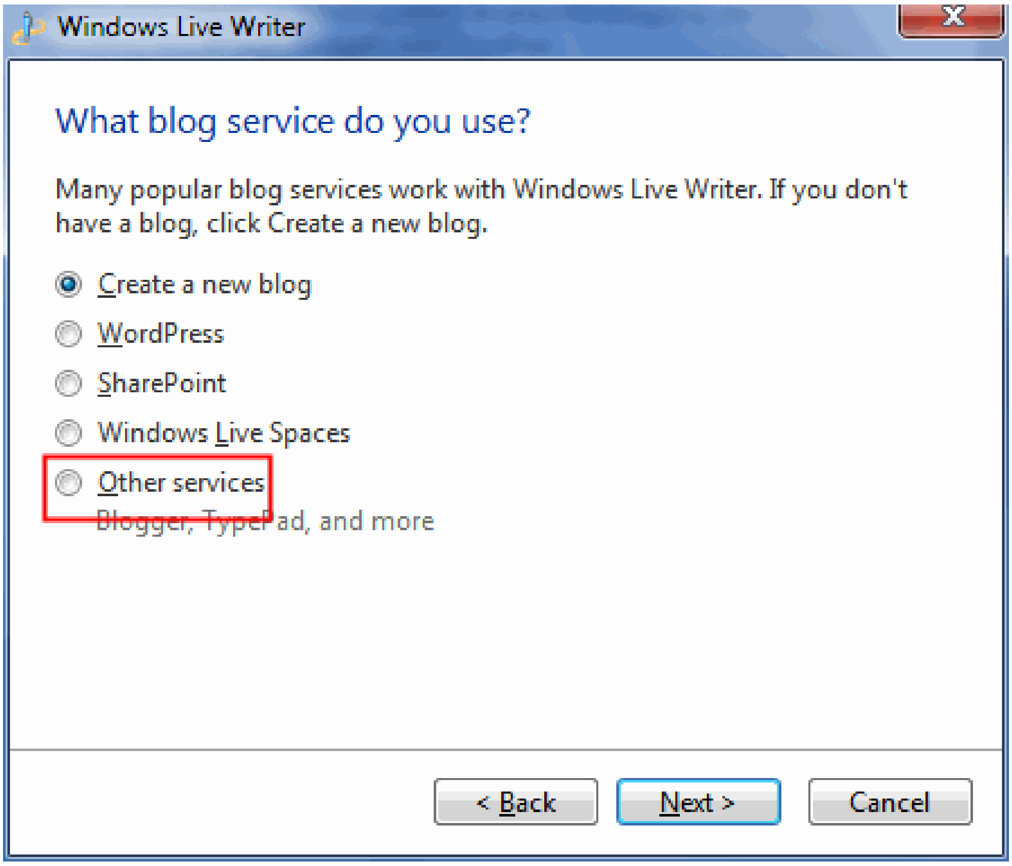
If you have previously set up Windows Live Writer, choose **Weblog > Edit Weblog Settings**. Then, skip to step 4.

To set up Windows Live Writer to work with your Ektron blog:

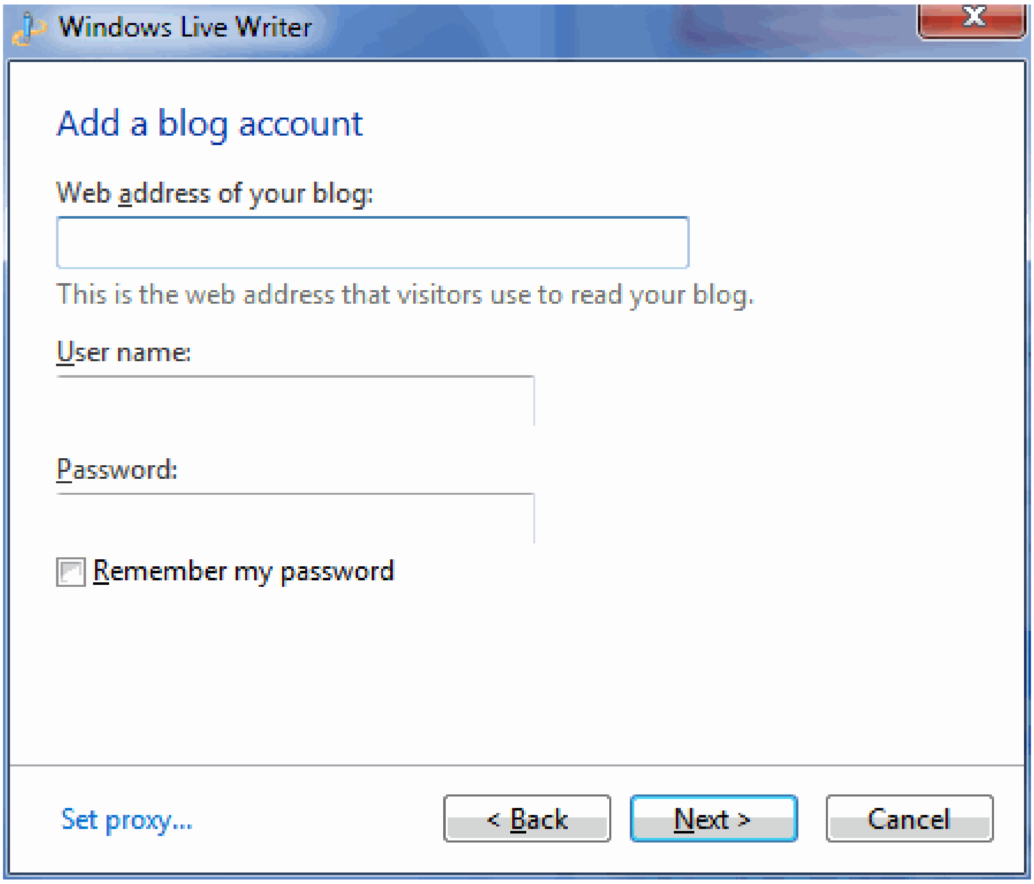
1. Go to Windows Essentials: Other Programsand download Windows Live Writer.
2. Begin to install Live Writer. The Welcome window appears. Click **Next**.



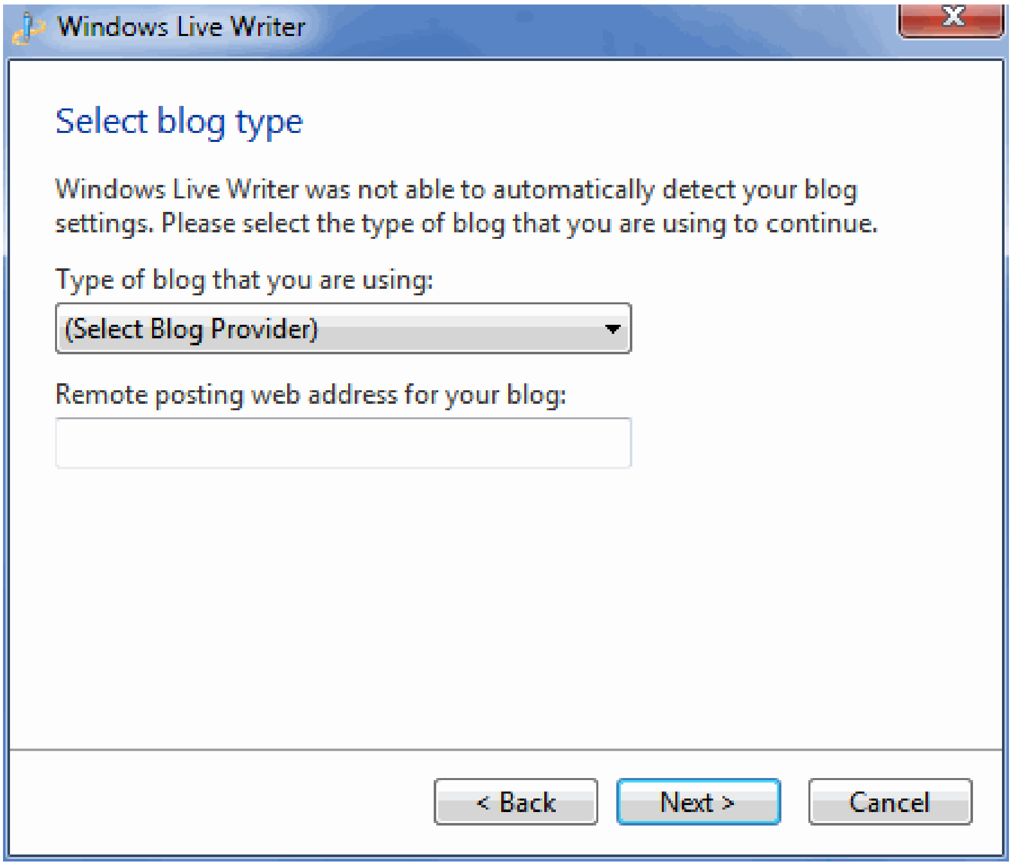
3. In the What blog service do you use? window, select **Other services**, then click **Next**.



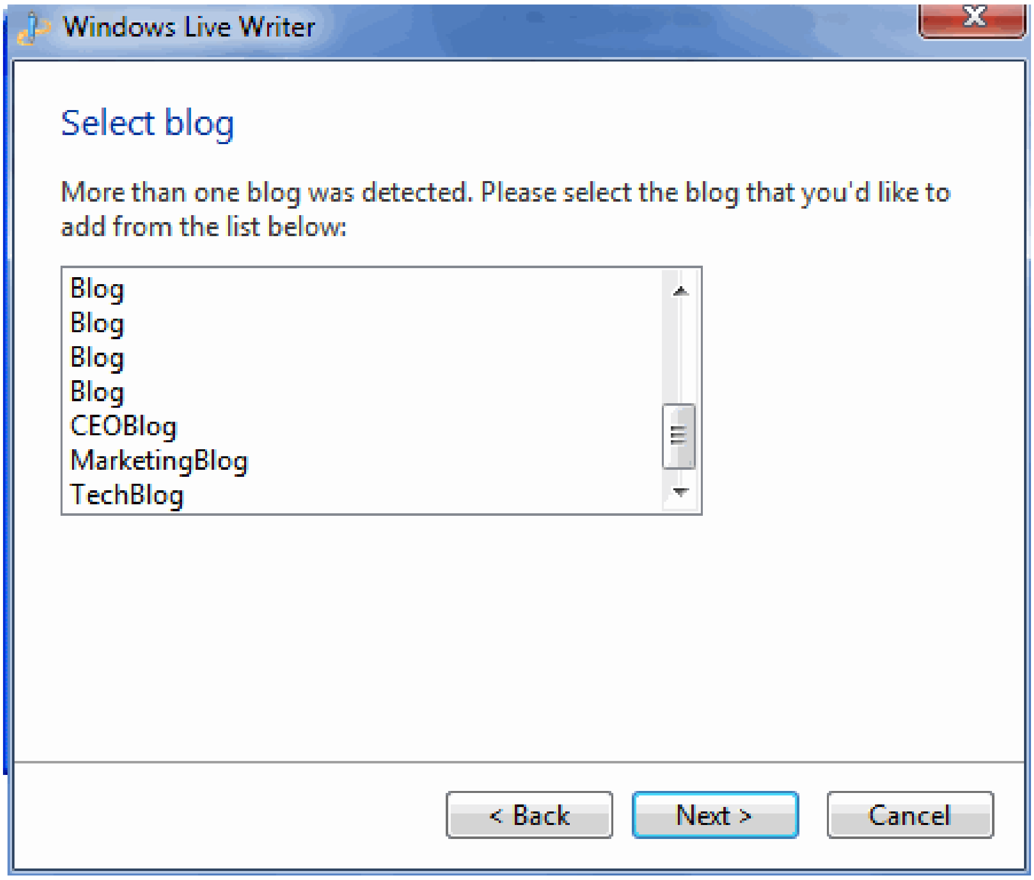
4. In the Add a blog account window, enter the following information:
   - **Web address of your blog**. the page that contains the blog. For example, http://<your site>/CMS400Min/blogs.aspx.
   - **Username**. your username to log on to the Ektron site.
   - **Password**. your password to log on to the Ektron site.
   - **Set Proxy...**. if needed, edit the proxy settings, then click **Next**.



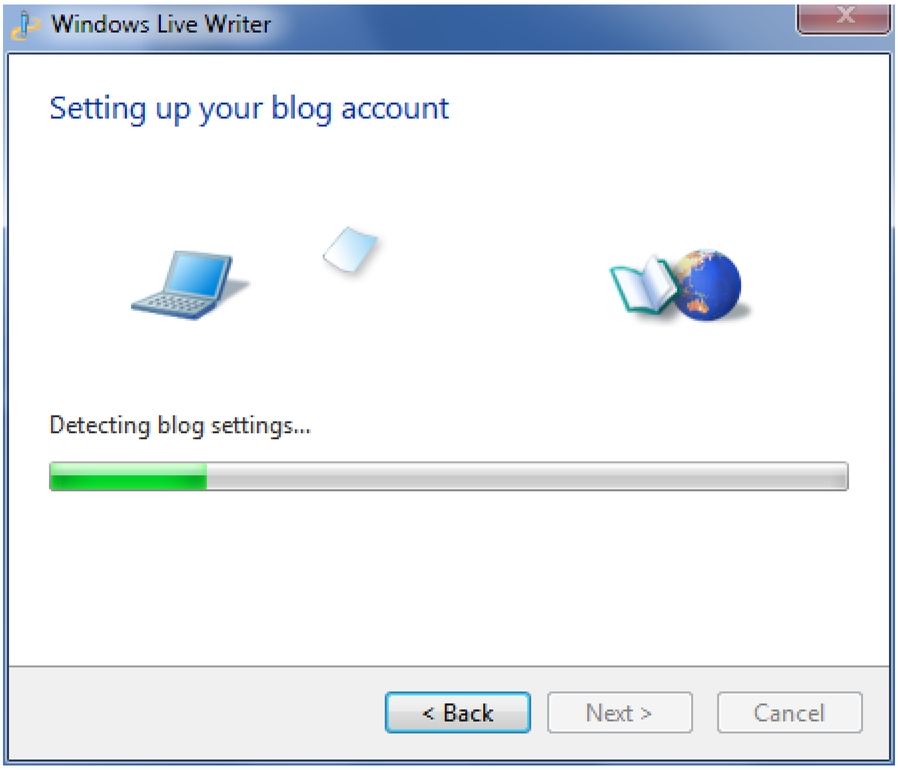
5. In the Select blog type window, from the **Type of weblog that you are using** drop-down, choose **Custom (Metaweblog API)**.

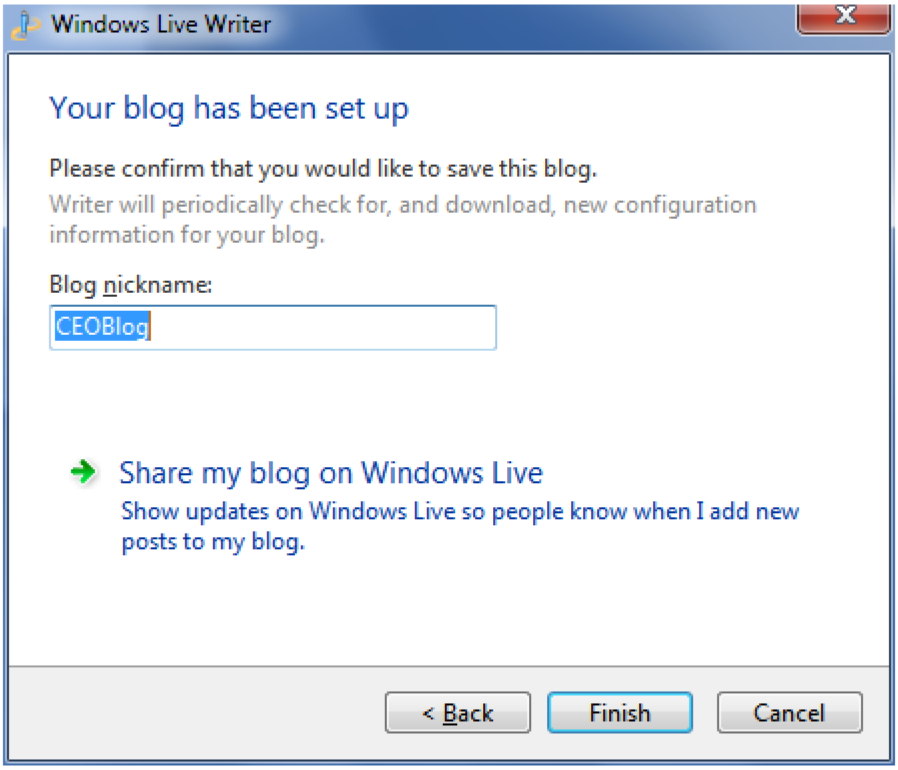


6. In the **Remote posting web address for your blog** field, enter the path to the site's `xmlrpc.aspx` file. The default location is `http://`*`site root`*`/Workarea/Blogs/xmlrpc.aspx`. Then click **Next**.
7. The Select Blog window appears. Select the Ektron blog that you will edit with Live Writer, then click **Next**.



8. Windows Live Writer is installed.





Subscribing or unsubscribing to a blog or blog post

Logged-in site users and Membership users can subscribe to a *blog* or a *blog post*.

- By subscribing to a blog, you are notified whenever posts are added to it.
- By subscribing to a blog post, you are notified whenever comments are added to a post.

If you want to stop receiving notices, you can unsubscribe.

To subscribe to a blog or blog post:

1. Go to the blog on the site.
2. Click **Subscribe** ( ). The Subscribe/Unsubscribe screen appears.
3. Select the Notification Type.
4. Click **Add Subscription**.

To unsubscribe to a blog or blog post:

1. Go to the blog on the site.
2. Click **Subscribe** ( ). The Subscribe/Unsubscribe screen appears.
3. Select a **Notification Type**.
4. Check the **Unsubscribe** check box.
5. Click **Update Subscription**.

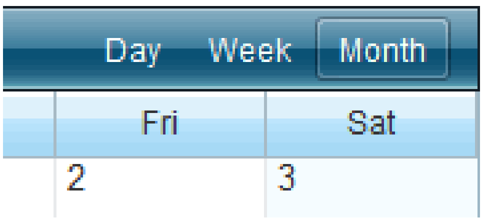
Working with calendars

Web Calendars keep site visitors informed about upcoming events. Any authorized user can add events to a calendar. Ektron has System, User, and Group calendars. The calendar type determines where events are stored in the database, and what permissions are needed to edit them. See also: WebCalendar server control.

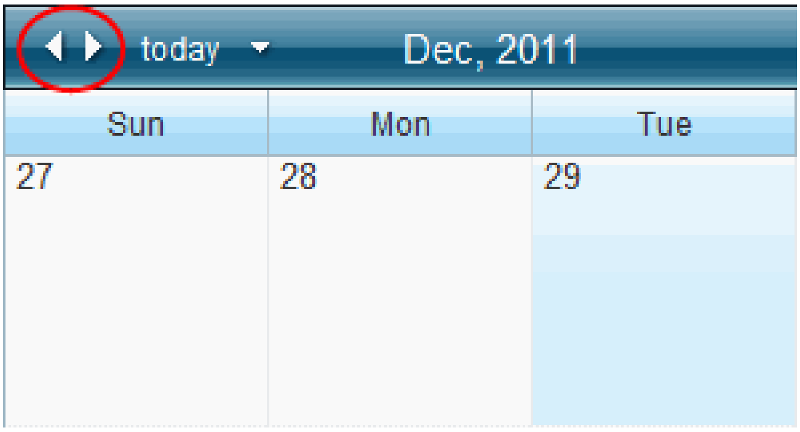
	System Calendar	User Calendar	Group Calendar
Where events are stored	Workarea > Content > Calendar Folder	Community User Calendar	Community Group Calendar
Where events are added or edited	The Web page or Workarea folder	The community user's profile Web page	The community group's Web page
Where permissions are set	Folder Permissions	Community Users and Colleagues	Community Group Membership
How it appears on a Web page	Web page with Server Control or widget		
For more information, see	*Adding a calendar* on the next page	*Creating a calendar in my profile* on page 921	*Creating a calendar in a group* on page 923

When first viewed, a Web calendar shows the current day, month, or week, whether you are on a Web page or in the Workarea. After logging in, you can add or edit calendar eventsif you have permission to do so.

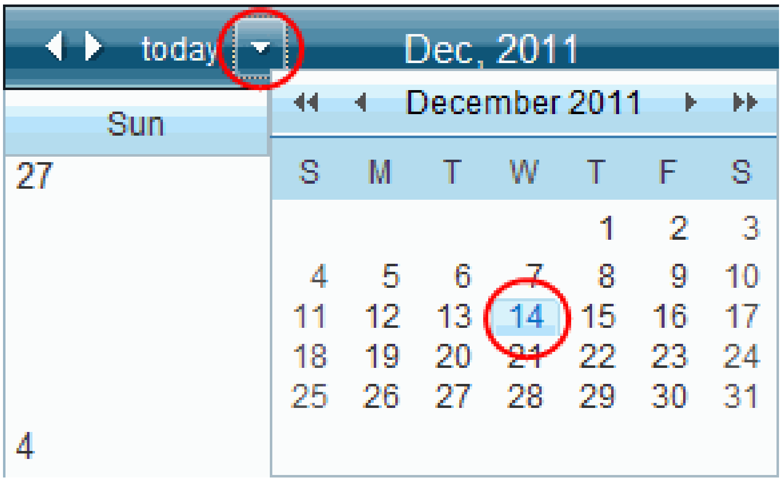
- To select the Day, Week or Month View, click a button in the top right corner to choose the view. (The WebCalendar server control's `DisplayType` property determines the appearance of these buttons.)



- To select the previous or next period, click the left or right arrow to move the calendar forward or backward one period of time.



- To choose a date, click the arrow to open the Date popup. Then, click a date to show on your calendar.



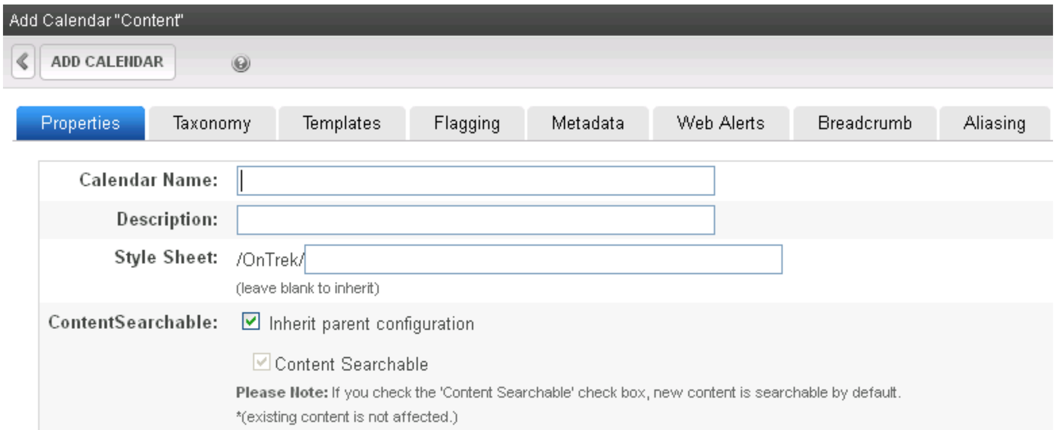
Adding a calendar

PREREQUISITE

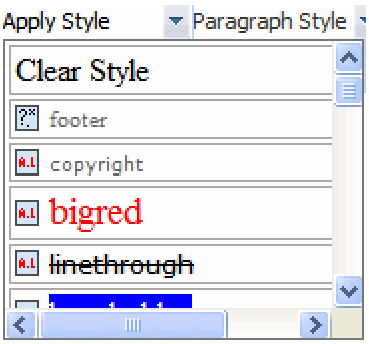
> To add, edit or delete a calendar, you must be a member of the Administrators Group or have permission to **Add, Edit**, and **Delete** folders on the Advanced Permissions screen. See also: *Managing folder and content permissions* on page 160.

To create a system calendar:

1. In the Workarea, click **Content** > the folder to which you want to add a calendar.
2. Click **New > Calendar**. The Add Calendar screen appears.



3. Enter the **Calendar Name**.
4. Enter the **Description**.
5. Enter a **Style Sheet**. Specify a style sheet that defines styles that may be applied to event content in this folder. The style sheet must reside in the site root folder. Or, leave this field blank to inherit the parent folder's style sheet. The style sheet populates the style drop-down list within the editor.



NOTE: This style sheet affects event content being edited. It does not necessarily affect the content's appearance on your website. To set or edit the style sheet that determines your Web pages' appearance, open the page's Web form and place a `<link rel="stylesheet"...` tag within its `<HEAD>` tags. If desired, you can identify the same style sheet in both locations. To include user-selectable styles, they must be generic classes.

6. Set the **Content Searchable** value. See also: *Making content searchable* on page 346
   - **Calendar Properties Template Tab**
     - **Inherit Parent Template Configuration**. Check this box to inherit the template from the parent content folder. Or, do not check this box and specify one or more templates.
     - **Page Templates**. Specify one or more templates for Calendar events in this folder. This folder's content uses the specified template when appearing on your website.

- **Other Calendar Properties Tabs**
  - **Taxonomy tab**. If you want this folder to inherit taxonomy configurations from the parent folder, check **Inherit Parent Taxonomy Configuration**. If you uncheck **Inherit Parent Taxonomy Configuration**, you can then select taxonomies that can be applied to content in this folder. If you want all content in this folder to be assigned at least one taxonomy category, check **Required at least one category selection**. See also: *Organizing content with taxonomies* on page 1253.
  - **Flagging tab**. Check this box if content in this folder inherits a flagging definition from its parent folder. If you do not check the box, use the drop-down list to apply a flagging definition to content in this folder. See also: *Defining flags for content* on page 1590, *Assigning a flagging definition to a folder* on page 1592
  - **Metadata tab**. See *Working with Metadata* on page 755.
  - **Web Alerts tab**. See *Assigning a Web Alert to a folder or content* on page 1383.
  - **Breadcrumb tab**. See *Creating a sitemap breadcrumb trail* on page 1322

7. Click **Add Calendar**. Note that the system calendar icon is unique ( ).

After creating a calendar, you may add events.

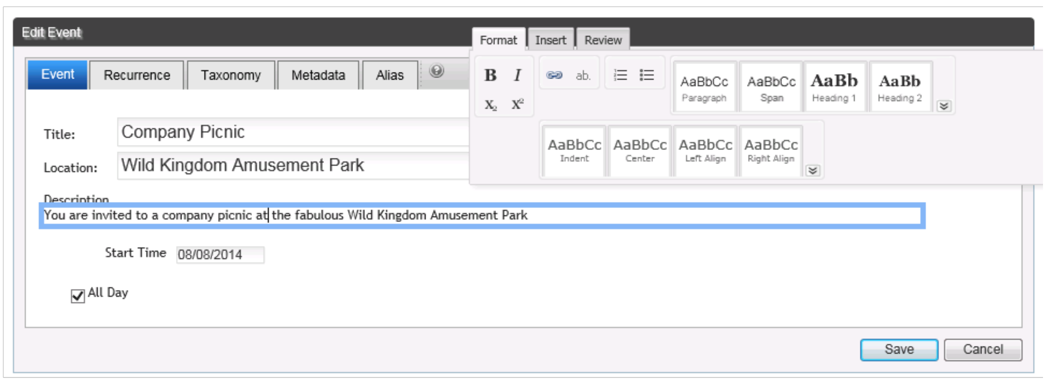
Adding system calendar events

PREREQUISITE

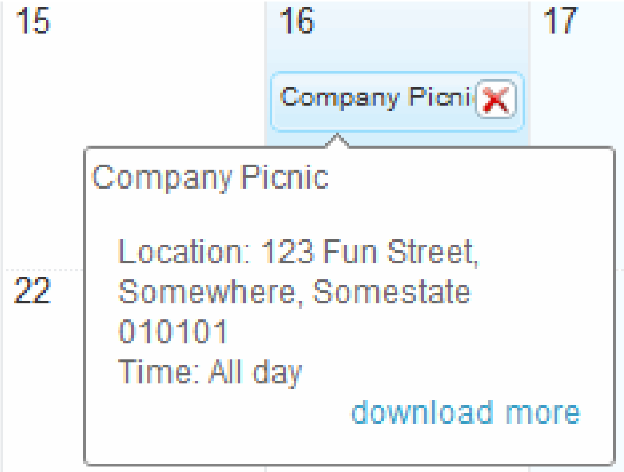
You logged into Ektron and have edit permission for the calendar. Calendars have the same permission and workflow settings as folders. See also: *Managing folder and content permissions* on page 160,*Approving content for publication* on page 689.

To add or edit a system calendar event:

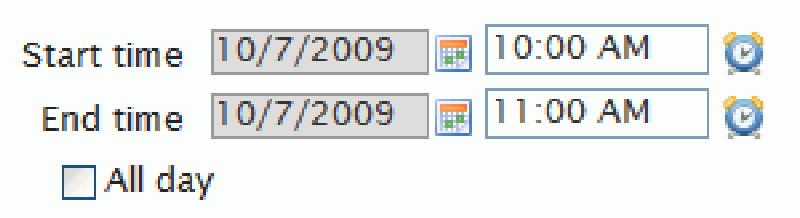
1. Go to your calendar from the Web page containing it or the **Workarea > Content** tab.
2. Click any day. (You can also click **New** > **Add Calendar Event**.) The Edit Event screen appears.



- Enter the event title into the **Title** text box. “Company Picnic” for example. The title appears on the calendar and in the pop-up information. To customize this pop-up, see *Working with calendars* on page 913.



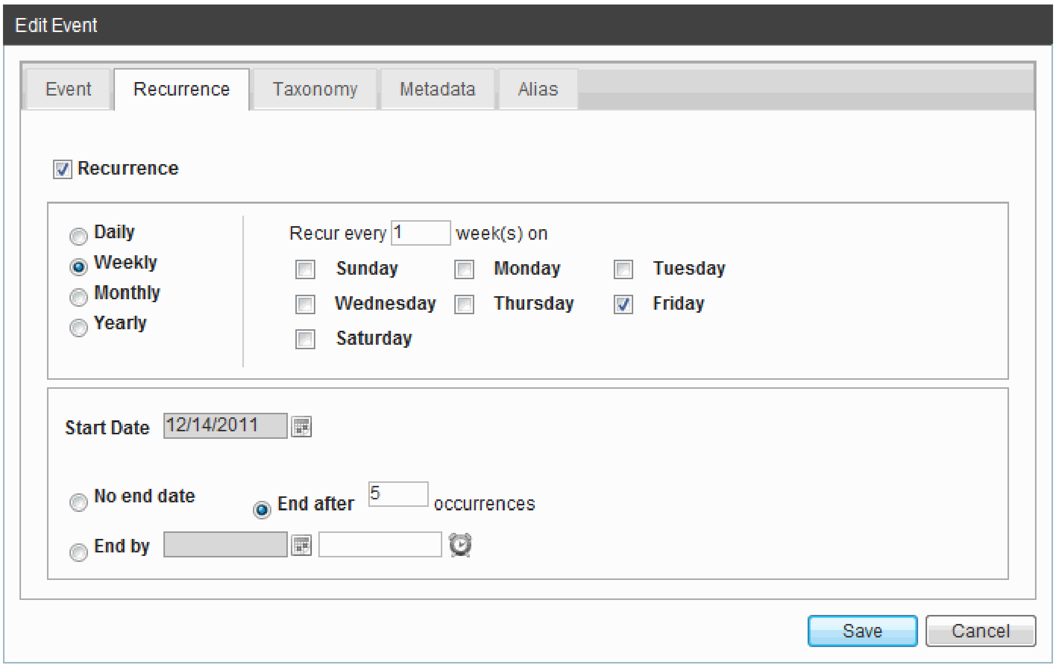
- Enter the **Location**.
- Enter the **Description**.
- Specify the **Start time** and the **All day** options at the bottom of the Edit Appointment page.



  - For start date, click **Calendar** ( ) and set the start date.
  - For start time, enter the time text or click **Clock** ( ).

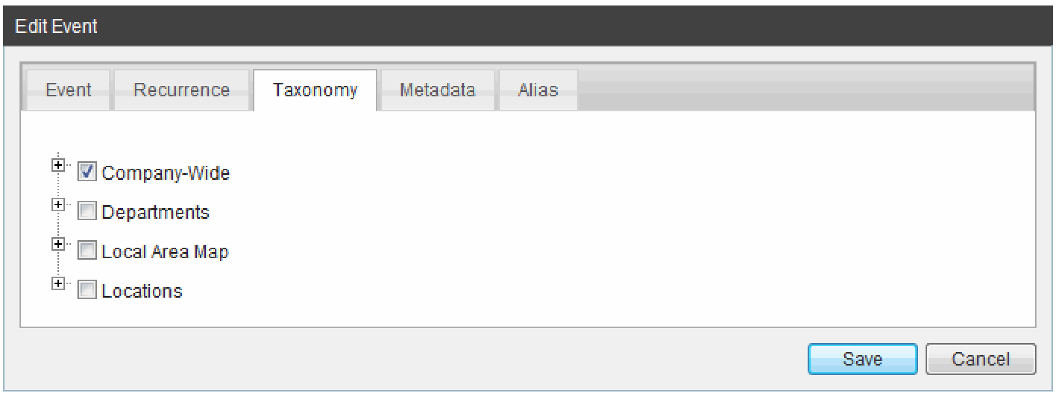
  Ektron stores event times as UTC (also known as Greenwich Mean Time—GMT). For members or visitors that login, events show in the member’s time zone. For visitors that do not log in, events show in the Web server’s time zone. For information about setting the user time zone, see *Time zone field* on page 1460.

3. If appropriate, set recurrences. Appointments can recur daily, weekly, monthly, or yearly. They can be spaced at various intervals and have a finite duration or recur indefinitely. For example, you can set a recurring event for each Friday for the next 5 weeks.



When editing a recurring event, you are prompted to edit either the single occurrence or the series.

4. Select a Taxonomy category. A typical calendar taxonomy screens events that a site visitor might wish to see. For example, a college sports website shows all sports, but a visitor only wants football games. To show only events related a specific category on your calendar page, use a Taxonomy. See also: *Using taxonomy with Web calendars* on page 931.



5. If desired, set Metadata for the event. See also: *Working with Metadata* on page 755.
6. If desired, set the event alias. See also: *Creating user-friendly URLs with aliasing* on page 1293
7. Click **Save**. The event appears on the calendar.

Exporting appointments to other calendars using iCal

You can export Web calendar appointments to any calendar that accepts an iCalendar *.ics file. This is helpful if you want to track appointments on your Web calendar and a mobile device calendar, for example.

NOTE: Ektron uses accepted standards for producing the iCalendar ics file. This does not mean that all calendar types use the recurring appointment data properly. Contact your calendar vendor if iCalendar support is needed.

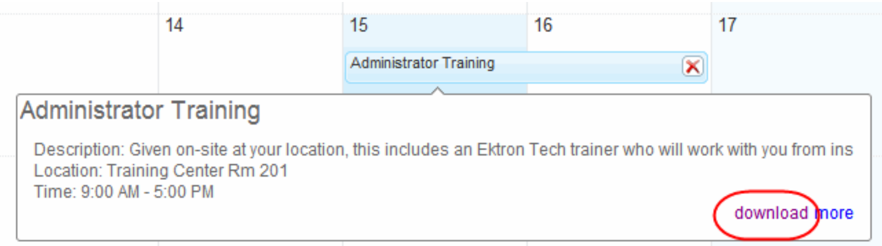
IMPORTANT: Changes to recurring appointments do not work correctly for iCal files used in Microsoft Office 2003.

PREREQUISITES

You are logged into the Ektron website and are a member of the Administrators group or assigned the Calendar-Admin role

To export a Web Calendar event to another calendar:

1. Hover over an event on the Web calendar.



2. Click **download**. The File Download screen appears.
3. Click **Save** and save to a folder on your computer.
4. After the file is downloaded, click **Open Folder**.
5. Double click the .ics file you saved. When you do, the appointment setting page for your default calendar opens. For example, this file name was `event-997.ics`.

   NOTE: If you are adding the appointment to a calendar other than the default calendar on your PC, first open that calendar and import or add the *.ics file to it. For example,when using a Google Calendar, click **Add** then choose **import**. See your calendar's instructions for importing iCalendar appointments.

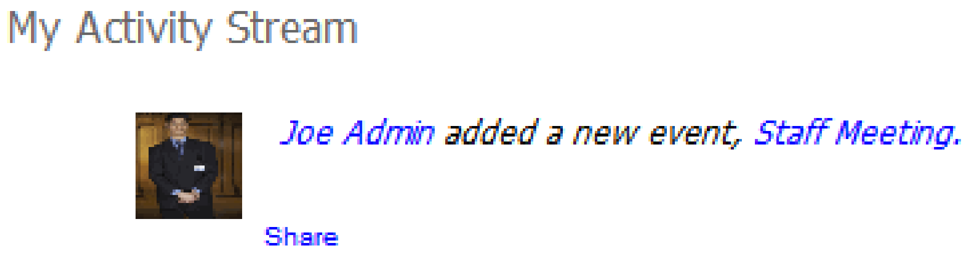
6. Save and close this appointment. It will now appear on your calendar.

Showing calendar events on activity streams

A new or updated Calendar event appears on a Community Activity Stream if the following notification settings are checked on a user's or Membership Group's Profile > **Activities** tab. For more information, see *Notification activities and recipients* on page 1544.

- Add Calendar Event
- Update Calendar Event
- Add Calendar Event

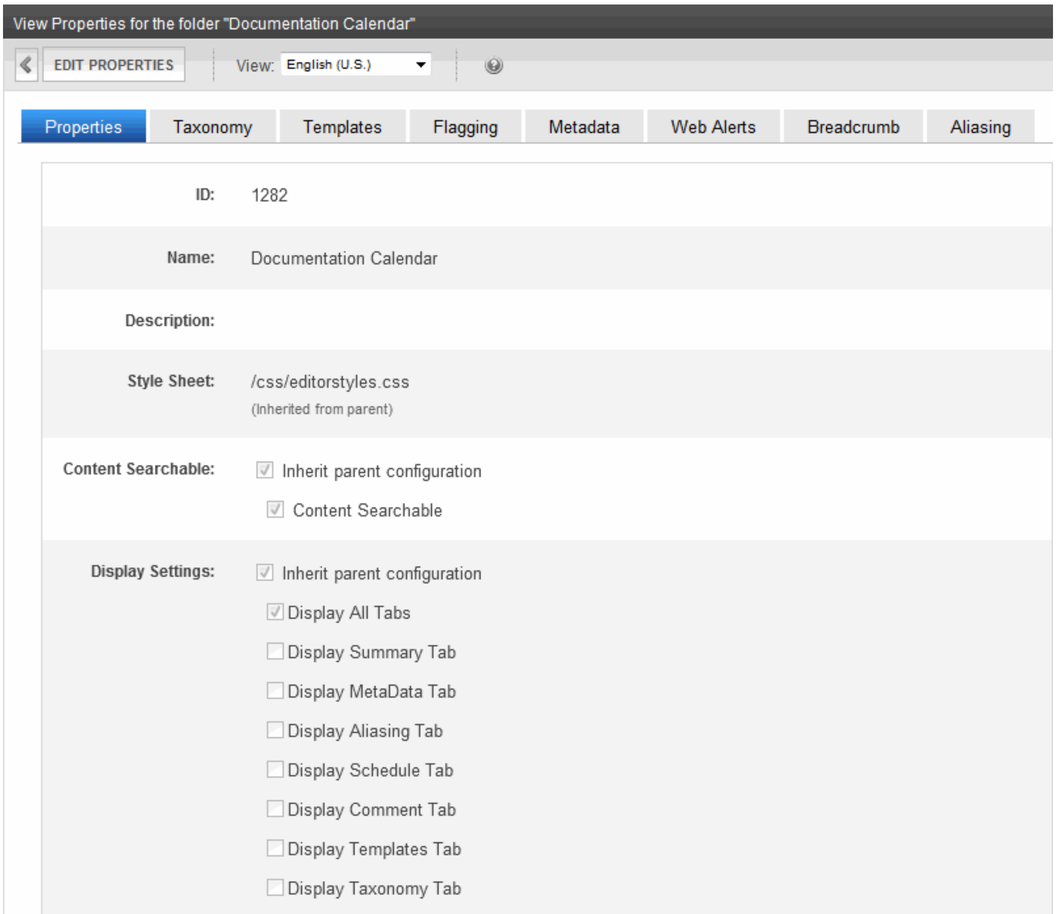
- Update Group Calendar Event



Viewing system calendar properties

The Calendar properties screen lets you set permissions as well as modify the calendar’s metadata, taxonomy, templates, flagging, Web Alerts and Breadcrumbs. To view a system calendar's properties:

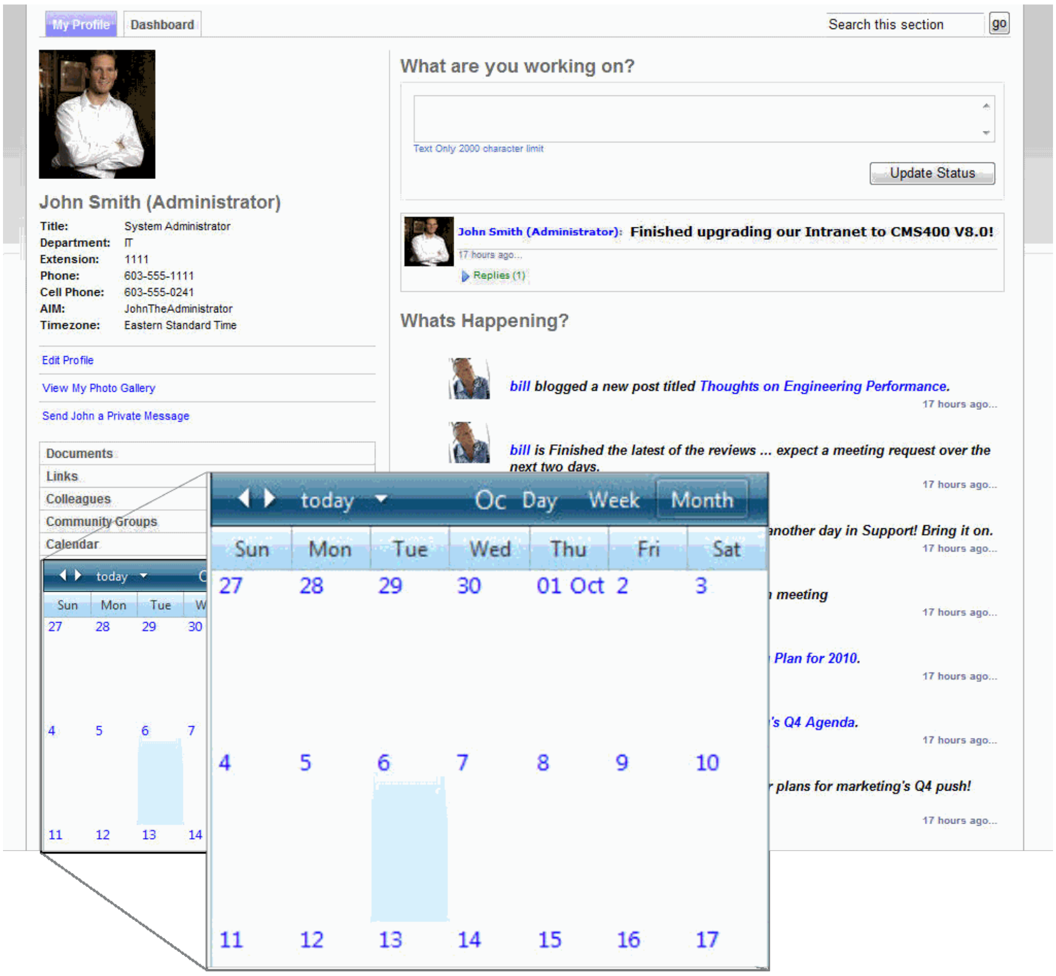
1. From the Workarea, choose **Content**.
2. Click the calendar you wish to view. The View Events screen appears.
3. Click **View > Properties**. The View Properties screen appears. (To edit the properties, click **Edit Properties**.)



To learn more about the properties, see *Adding a calendar* on page 914

Using community Web calendars

Both community group and community user profile pages can display a Web Calendar. The following example shows a user profile page with a personal calendar.



The calendar on a personal community page obeys the same community rules as other features in the community. You can restrict the visibility of your events to only colleagues or make them public.

Creating a calendar in my profile

You can place a Web calendar on a user profile to track personal appointments. The following code places a WebCalendar server control on a User Profile template. You must set `sourceType` and `dynamicParameter` as shown.

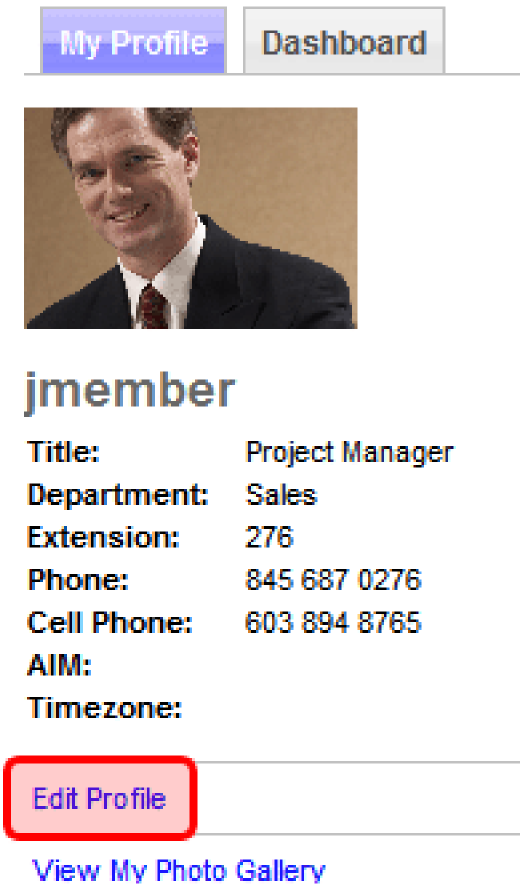
```
<CMS:WebCalendar ID="WebCalendar1" runat="server" >
  <DataSource>
    <CMS:CalendarDataSource sourceType="UserCalendar" dynamicParameter="id” >
  </DataSource>
</CMS:WebCalendar>
```

Creating the user calendar in the database

To use a personal calendar, you must add it to the database. Each user needs to do this when they decide to use a calendar on their profile.

To add a user calendar to the database:

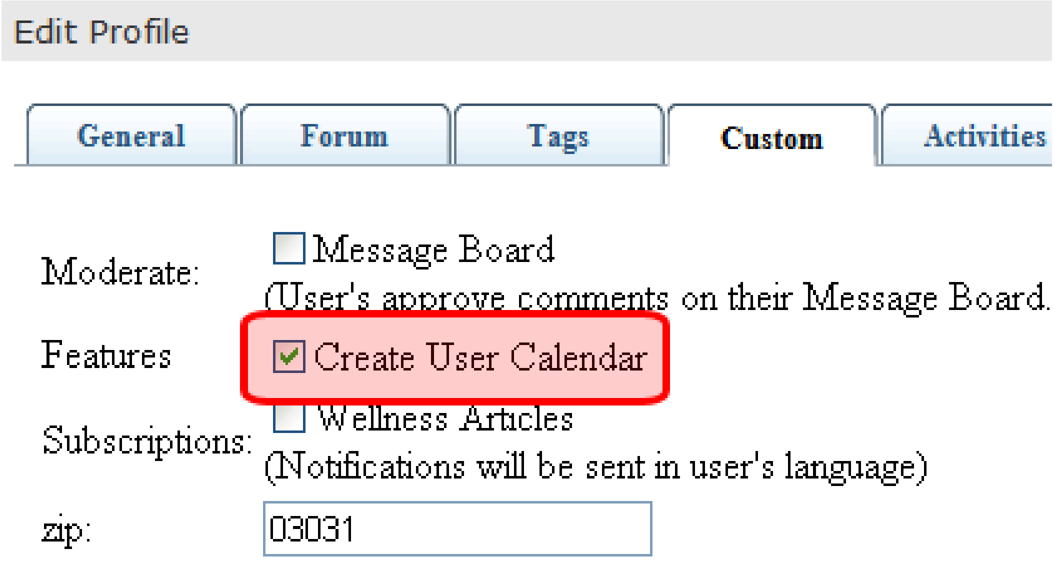
1. Log in to your website.
2. Go to your personal Web page or your profile.
3. Click **Edit Profile**. In this example, **Edit Profile** is on a personal profile page of the eIntranet Starter Site.



   Alternatively, you can log into the Workarea then go to **Settings > Users > User Profile**.

4. When the Edit Profile window appears, click the **Custom** tab.

5. Check **Create User Calendar**to create a user calendar in the database.

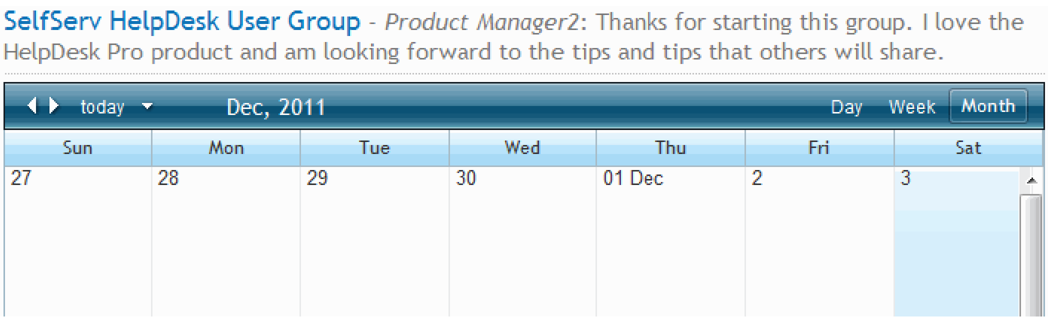


WARNING! After you save this profile, you cannot later uncheck this option.

6. Click **Save**. Your calendar appears on your profile page.

Creating a calendar in a group

You can add a Web Calendar to any Ektron community group. The following is a sample calendar on a group page.



The calendar on a community group page obeys the same community rules as other community features. You can restrict the visibility of group events to group members, or make the calendar public.

NOTE: An alternate way to use group calendars is using the WebCalendar widget on a group dashboard. See *Adding a calendar to the WebCalendar widget* on the next page for more information.

The following example provides the code for placing a WebCalendar server control on a Group Profile template. You must set `sourceType` and `dynamicParameter` as shown for `CalendarDataSource`.

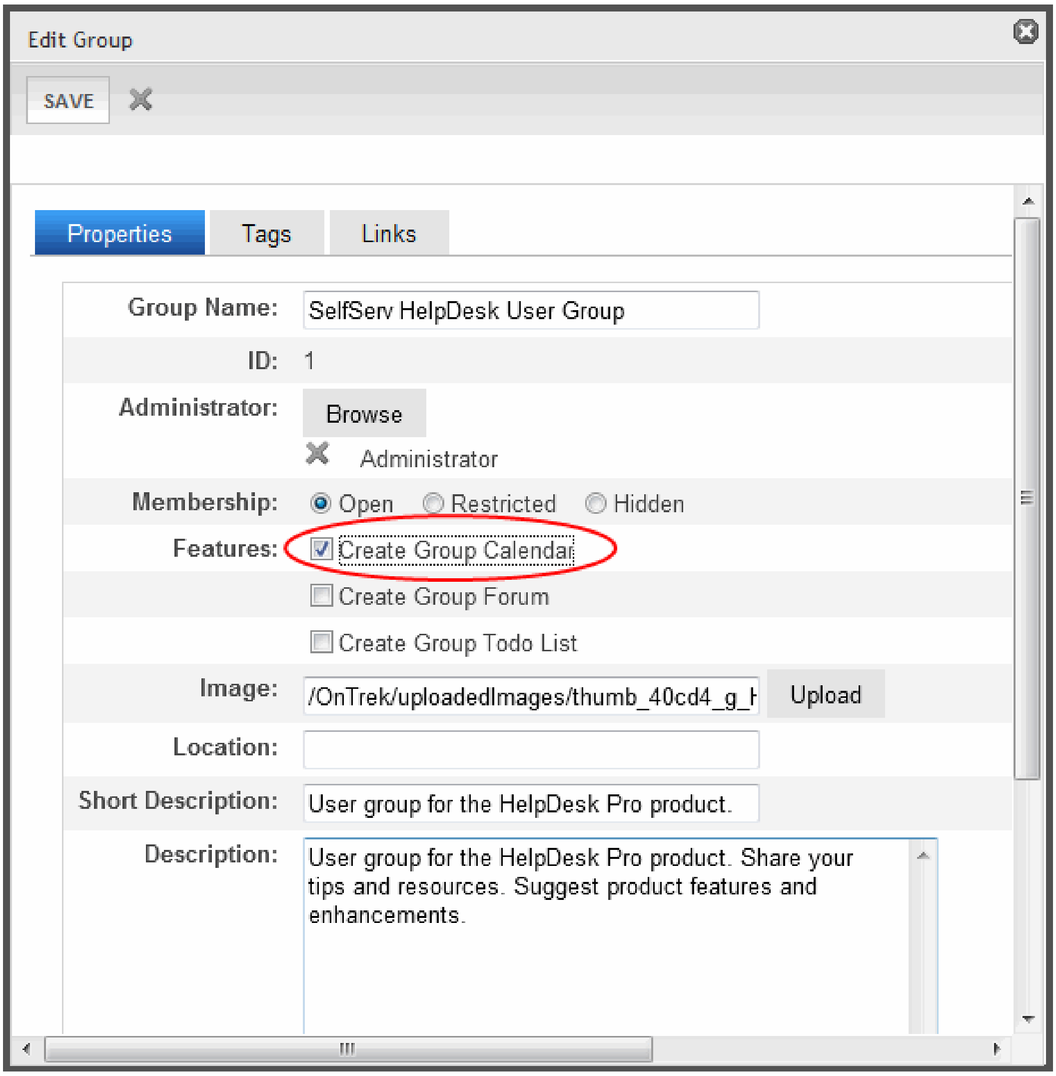
```
<CMS:WebCalendar ID="WebCalendar1" runat="server">
 <DataSource>
    <CMS:CalendarDataSource sourceType="GroupCalendar" dynamicParameter="id”/>
```

```
  </DataSource>
</CMS:WebCalendar>
```

To use a group calendar, you must add it to the database. Each group needs to do this once when they decide to have a calendar for their group.

To add a group calendar to the database:

1. Log in to your website.
2. Go to your group Web page.
3. Choose **Manage > Edit Group**.
4. When the Edit Group window appears, check the **Create Group Calendar** checkbox to create a group calendar in the database.



WARNING! After you save this profile, you cannot later uncheck this option.

5. Click **Save**. A group calendar exists in the database and can appear on the group page.

Adding a calendar to the WebCalendar widget

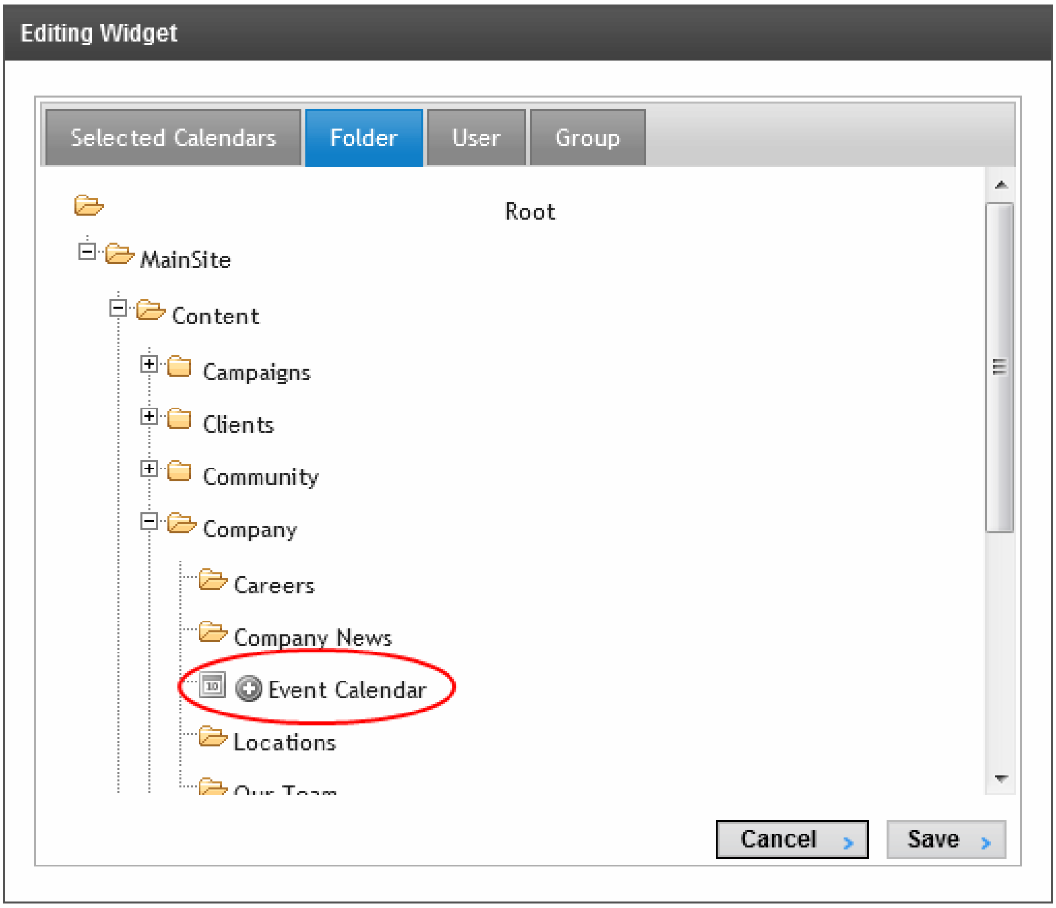
The WebCalendar widget can display a combination of system, user, and group calendars. You place a Web calendar on a Web page by using either a WebCalendar server control or a WebCalendar widget. A WebCalendar widget is an easy way to add a calendar to a PageBuilder page or Smart Desktop (See also: *Managing content from the Smart Desktop* on page 612.)

Adding a system calendar to a WebCalendar widget

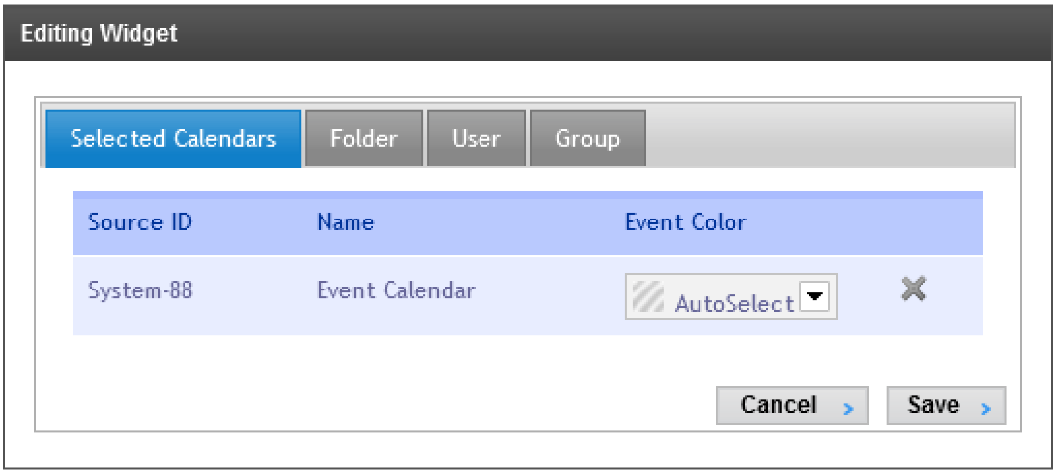
A system calendar is one that is managed within Workarea. For more information, see *Adding a calendar* on page 914.

To add a system calendar to a WebCalendar widget:

1. Click **Edit** () in the upper right corner of the WebCalendar widget.
2. Click the **Folder** tab.
3. Locate the calendar to add. Note its unique icon.

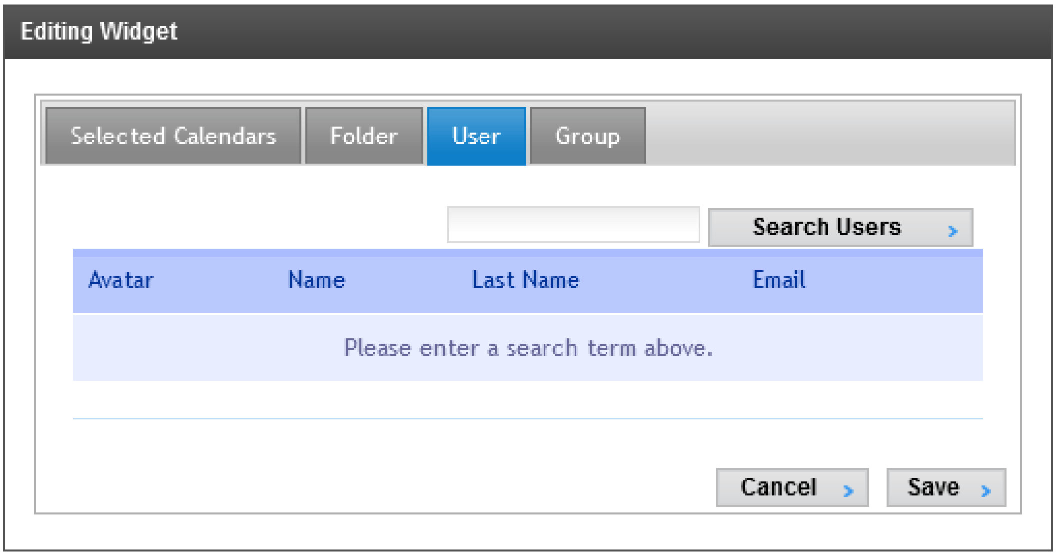


4. Click **Save**. The calendar is added to the **Selected Calendars** list.

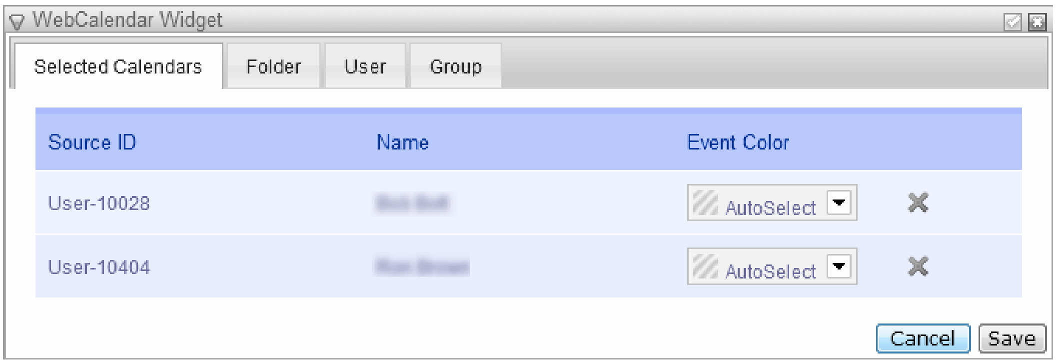


Adding a user calendar to a WebCalendar widget

1. Click **Edit** ( ) in the upper right corner of the WebCalendar widget.
2. Click the **User** tab.



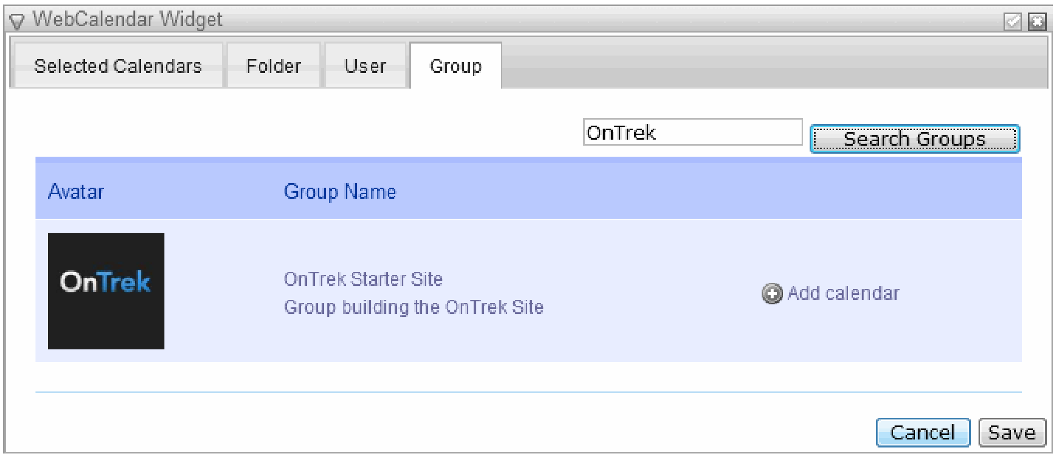
3. Specify a user that has a calendar set up and click **Search Users** to find a person's calendar (that is available to you).
4. Click **Add Calendar** ( ) to add the calendar to the Calendar widget list.



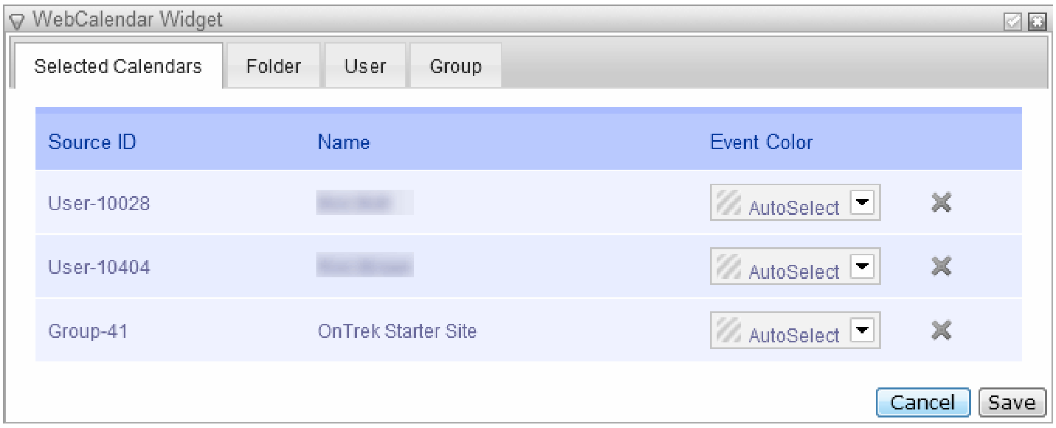
5. You can choose colors for events from each user's calendar to differentiate each use on your calendar. **AutoSelect** uses the next available color.
6. To remove any calendar, click **Remove** ( ).
7. Click **Save**.

Adding a group calendar to a WebCalendar widget

1. Click **Edit** ( ) in the upper right corner of the WebCalendar widget.
2. Click the **Group** tab.
3. Search for other group calendars by entering a group name and clicking **Search Groups**.



4. Click **Add Calendar** ( ) next to a calendar you want to add. All chosen group calendars appear on the **Selected Calendars** tab.



5. You can choose colors for events from each user's calendar to differentiate each use on your calendar. **AutoSelect** uses the next available color.
6. To remove any calendar, click **Remove** ( ).
7. Click **Save**.

Combining Web calendars (mashups)

A Calendar Mashup combines events from different calendars into one calendar view. As an example, you could combine company meetings from one calendar with a special seminar series from another.

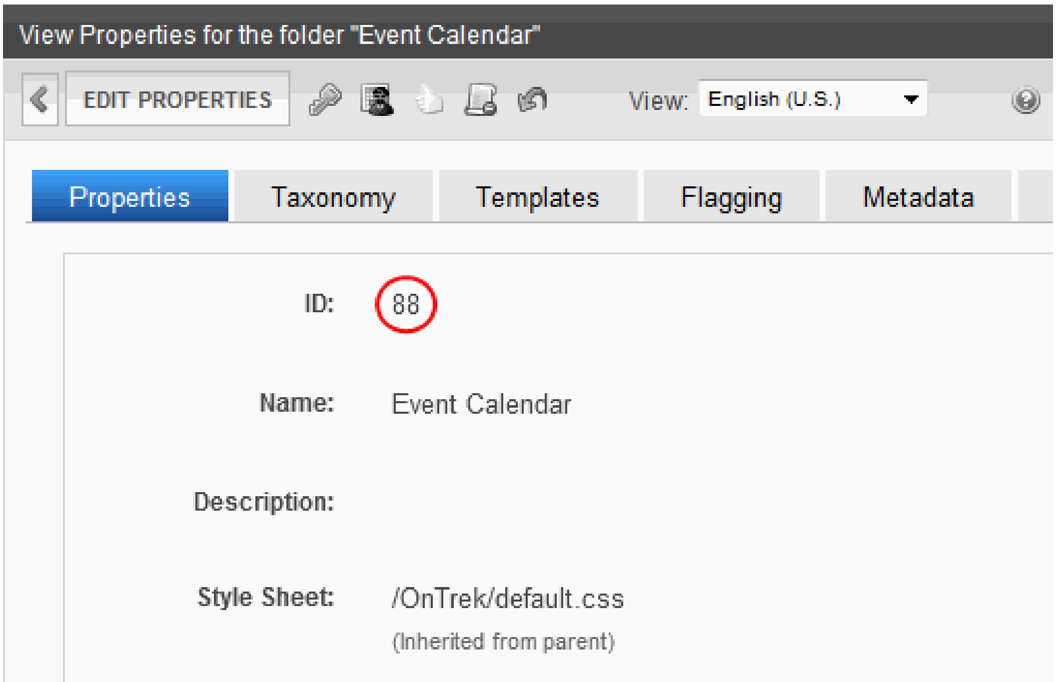
Combining calendars using the dynamic method

The dynamic method uses the URL query string parameter to specify a calendar. This method maintains one calendar template that can display many calendars on your site. The following example uses the EktronTech starter site. The exercise combines calendars using a URL whose query parameter is **cal2**:

```
http://<servername>/ektrontech/calendar.aspx?cal2=376
```

To combine 2 calendars:

1. Create 2 calendars in the Workarea. See also: *Adding a calendar* on page 914
2. Determine each calendar's ID number by examining its properties. This example uses calendar folder IDs 88 and 376.



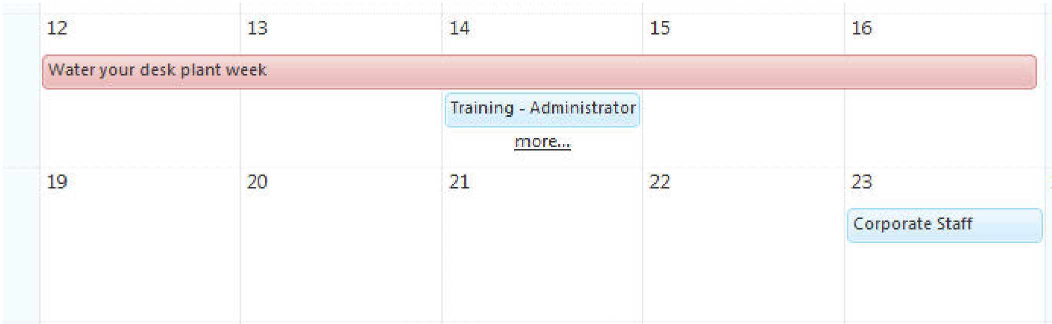
3. Edit the calendar.aspx template that contains the Web calendar. In this example, the template is located on the Web server in this folder: d:\inetpub\wwwroot\EktronTech.
4. Add 2 CalendarDataSource tags: one for a static calendar, the other for a dynamic calendar.
   - In the first (static) CalendarDataSource property, add defaultId = “88”.
   - In the second (dynamic) CalendarDataSource property, add queryParam = “cal2”. This lets you display any calendar referenced in the query string.
5. In both CalendarDataSource tags, set the sourceType = “SystemCalendar” property. The finished code looks like this.

```
<cms:WebCalendar ID="webcalendar" runat="server"
  DynamicParameter="calendar_id" DisplayType="All" SuppressWrapperTags="True">
```

```
<cms:WebCalendar ID="webcalendar" runat="server"
  DynamicParameter="calendar_id" DisplayType="All" SuppressWrapperTags="True">
  <DataSource>
    <cms:CalendarDataSource defaultId="88" sourceType="SystemCalendar"/>
    <cms:CalendarDataSource queryParam="cal2" sourceType="SystemCalendar"/>
  </DataSource>
</cms:WebCalendar>
```

6. Save `calendar.aspx`.
7. Enter the following URL to see the calendar:
   `http://<servername>/ektrontech/calendar.aspx?cal2=376`

   You see the combined calendar events. If there are too many events to show on a date, clock **more...** to see all events.



Combining calendars using the static method

The static method of combining calendars "hard codes" calendar id numbers instead of using a query string parameter. This method creates a calendar whose event source does not change dynamically.

1. Create 2 calendar folders in the Workarea. See also: *Adding a calendar* on page 914
2. Determine the ID number for each calendar by examining the Calendar Folder properties.
3. Edit the `calendar.aspx` template.
4. In the `CalendarDataSource` properties, add defaultId values for each calendar as shown.

```
<cms:WebCalendar ID="webcalendar" runat="server"
 DynamicParameter="calendar_id" DisplayType="All"
 SuppressWrapperTags="True">
 <DataSource>
   <cms:CalendarDataSource defaultId="88" sourceType="SystemCalendar"/>
   <cms:CalendarDataSource defaultId="376" sourceType="SystemCalendar"/>
 </DataSource>
```

   In this example, events for calendars 88 and 376 are combined on the `calendar.aspx` page.

Combining a static mashup and dynamic parameter

The following example displays a calendar according to a dynamic parameter in the query string. If the query string parameter is not used, the calendar shows a mashup of 3 calendars. The following example assumes you created 3 calendars with IDs 88, 374, and 376.

This is the code for the `events.aspx` template.

```
<cms:WebCalendar ID="webcalendar1" runat="server">
  <DataSource>
    <cms:CalendarDataSource sourceType="SystemCalendar" >
    </cms:CalendarDataSource>
  </DataSource>
</cms:WebCalendar>
```

This is the code-behind which tests for a query parameter. If none is found, display a static calendar mashup.

VB events.aspx.vb

```
'This code is located in the Page_Load event
Protected Sub Page_Load(ByVal sender As Object,
  ByVal e As System.EventArgs) Handles Me.Load
  'Create a CalendarDataSource instance and set the sourceType and queryParam
  Dim cds As New Ektron.Cms.Controls.CalendarDataSource()
  cds.queryParam = "calid"
  cds.sourceType = Ektron.Cms.Controls.SourceType.SystemCalendar
  'Add the DataSource object
  webcalendar1.DataSource.Add(cds)
  'If the queryString is used, show that calendar,
    otherwise show the following mashup
  If (Request.QueryString("calid") = String.Empty) Then
    'Create three CalendarDataSource instances and
    add the sourceType and defaultId for each.
    cds = New Ektron.Cms.Controls.CalendarDataSource()
    cds.sourceType = Ektron.Cms.Controls.SourceType.SystemCalendar
    webcalendar1.DataSource.Add(cds)
    cds = New Ektron.Cms.Controls.CalendarDataSource()
    cds.sourceType = Ektron.Cms.Controls.SourceType.SystemCalendar
    cds.defaultId = 88
    webcalendar1.DataSource.Add(cds)
    cds = New Ektron.Cms.Controls.CalendarDataSource()
    cds.sourceType = Ektron.Cms.Controls.SourceType.SystemCalendar
    cds.defaultId = 376
    webcalendar1.DataSource.Add(cds)
  End If
'Fill and return
webcalendar1.Fill()
End Sub
```

C# events.aspx.cs

```
//This code is located in the Page_Load event
protected void Page_Load(object sender, System.EventArgs e)
{
```

```
  //Create a CalendarDataSource instance and set the sourceType and queryParam
    Ektron.Cms.Controls.CalendarDataSource cds =
      new Ektron.Cms.Controls.CalendarDataSource();
    cds.queryParam = "calid";
    cds.sourceType = Ektron.Cms.Controls.SourceType.SystemCalendar;
  //Add the DataSource object
    webcalendar1.DataSource.Add(cds);
  //If the queryString is used, show that calendar,
  //otherwise show the following mashup
    if ((Request.QueryString("calid") == string.Empty)) {
      //Create three CalendarDataSource instances and add the
      //sourceType and defaultId for each.
      cds = new Ektron.Cms.Controls.CalendarDataSource();
      cds.sourceType = Ektron.Cms.Controls.SourceType.SystemCalendar;
      webcalendar1.DataSource.Add(cds);
      cds = new Ektron.Cms.Controls.CalendarDataSource();
      cds.sourceType = Ektron.Cms.Controls.SourceType.SystemCalendar;
      cds.defaultId = 88;
      webcalendar1.DataSource.Add(cds);
      cds = new Ektron.Cms.Controls.CalendarDataSource();
      cds.sourceType = Ektron.Cms.Controls.SourceType.SystemCalendar;
      cds.defaultId = 376;
      webcalendar1.DataSource.Add(cds);
    }
    //Fill and return
    webcalendar1.Fill();
}
```

To see a single calendar such as 376, use this URL:

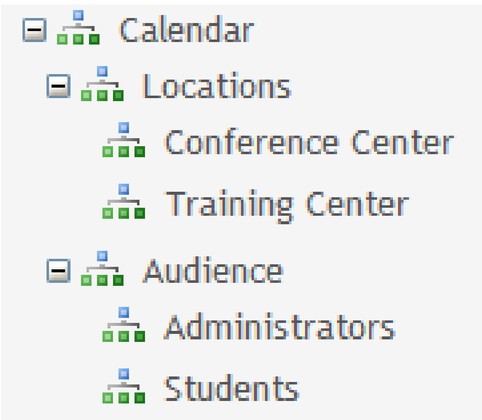
```
http://<server>/cms400developer/events.aspx?calid=376
```

To see all calendars together, do not use the query string parameter.

```
http://<server>/cms400developer/events.aspx
```

Using taxonomy with Web calendars

You can use taxonomy categories to filter calendar events. Calendar categories could include meeting rooms, audience, or whether the event should appear on a special public calendar. The following example organizes events based on locations and audience. See also: *Creating a taxonomy and its associated categories* on page 1255



After you create a taxonomy, you can assign its categories to events.

Use a `CategoryID` value in the `CalendarDataSource` to filter events according to taxonomy categories. In the following example, the calendar shows events for the Training Center (category 123) or Administrators (category 124).

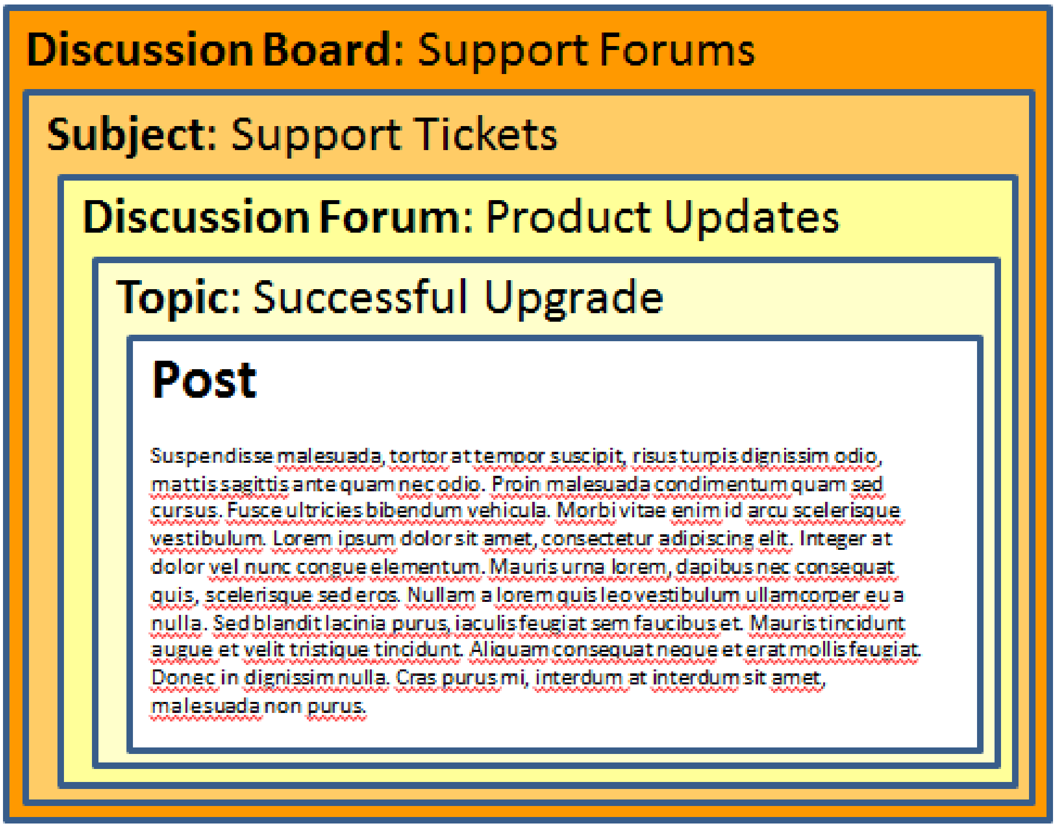
```
<cms:WebCalendarID="webcalendar"runat="server">
  <DataSource>
    <cms:CalendarDataSourcedefaultId="726"sourceType="SystemCalendar">
    <CMS:CategoryIDcategoryId="123"/>
    <CMS:CategoryIDcategoryId="124"/>
    </cms:CalendarDataSource>
  </DataSource>
</cms:WebCalendar>
```

By using an ID of a higher category in the taxonomy tree, you can show all events under it. For example, this taxonomy has 2 higher level branches with ID 100 and 200.

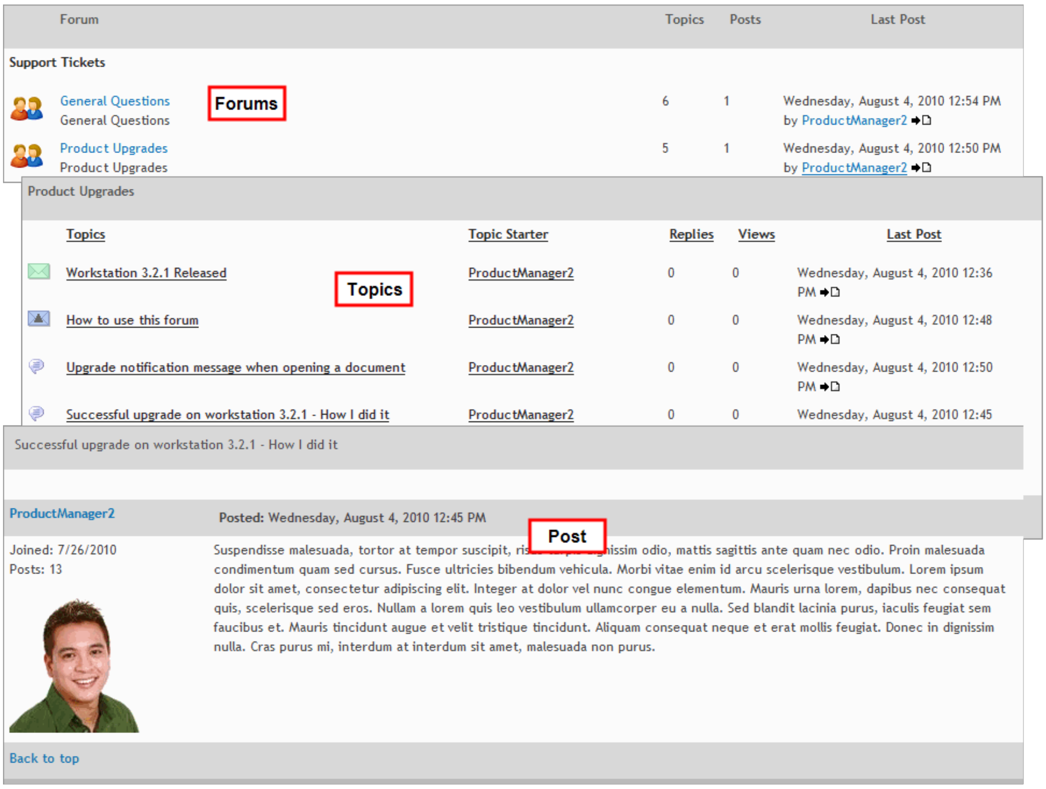
If you set the category ID to 100, you see any events associated with categories 100, 111 or 112.

Working with discussion boards

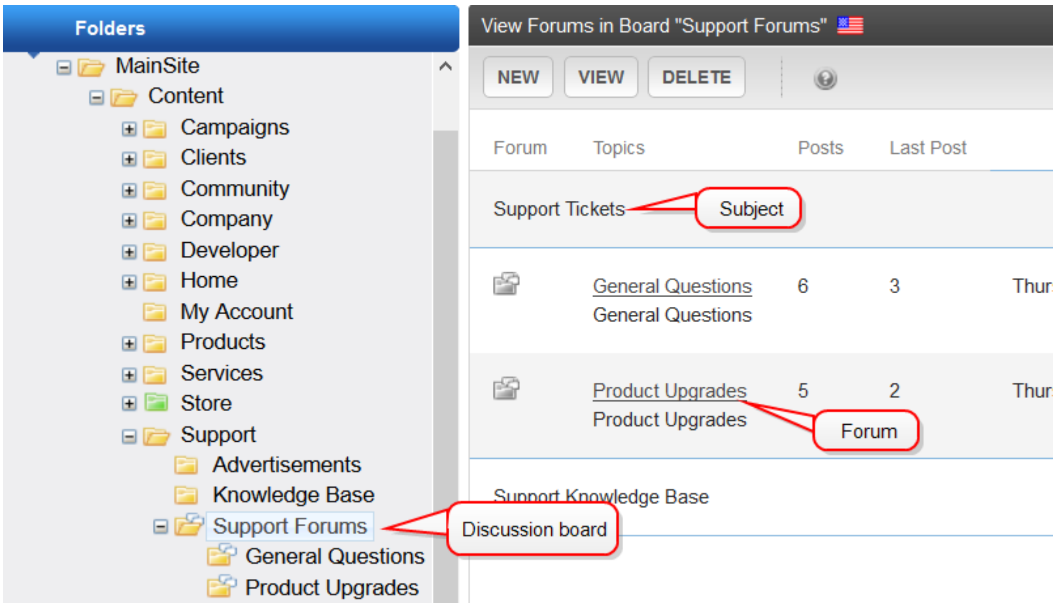
The discussion board feature provides topic discussions on your website. A site or membership user with Add Topic permission creates a topic and posts a starter question. Site visitors can then reply. Ektron supports an unlimited number of discussion boards. A discussion board consists of a hierarchy. The following example shows the hierarchy with sample data, to illustrate how each element is used.



On the website, if you click a discussion forum, its topics appear. If you click a topic, its posts appear.



In the Workarea, a discussion board appears as a top-level folder ( ) in the folder structure. Forums appears under them. If you click a discussion board, its subjects and forums appear in the right panel.



Administering discussion boards in the Workarea

To implement a discussion board into your website, place a Forum server control on a Web page. Then, select a discussion board. *All* subjects and forums within that board appear on the Web page. You cannot selectively suppress subjects or forums. Keep this in mind when determining the contents of a discussion board.

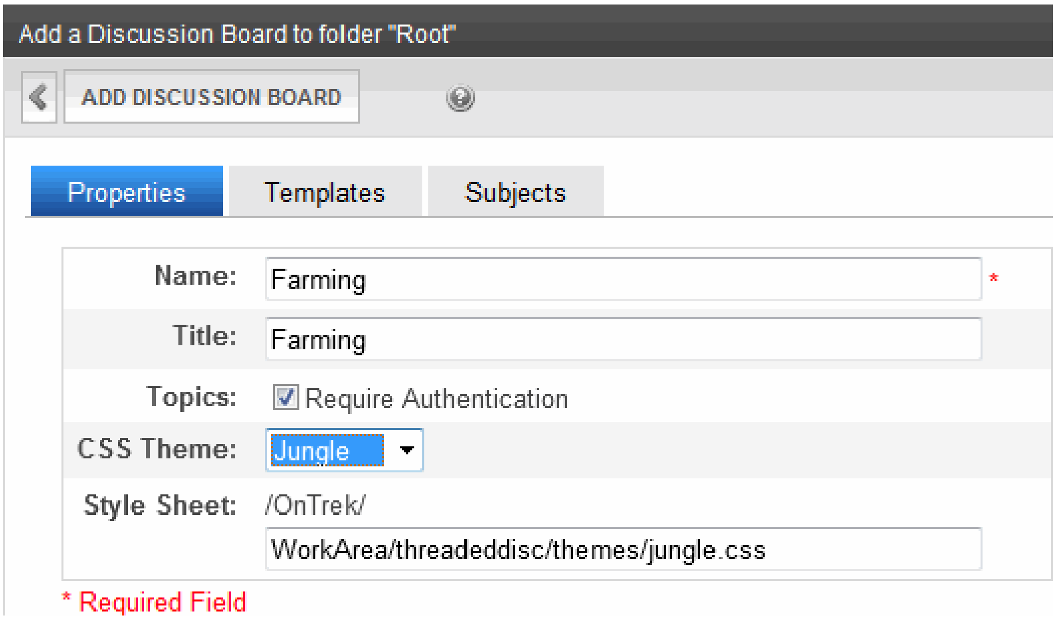
To view a discussion board, select it from the folders display. When viewing the board, you see all of its forums. Click any forum to see its details.

An administrator determines the following discussion board features.

- The subjects being discussed
- A starter post that initiates a discussion
- If users must sign in before posting to the forum
- If a post appears as soon as someone submits it, or must be approved first.
  - If a post requires approval
    - you can edit or delete it before it appears
    - authorized users can edit, delete, or reply to a post from the Workarea

Creating a discussion board

1. From the Workarea's **Content** tab, go to the folder in which to place the discussion board.
2. Click **New > discussion board**. (You also can hover the cursor over the folder, right click the mouse, and select **Add discussion board**.) The **Add a discussion board to folder** screen appears.



3. Complete the properties.

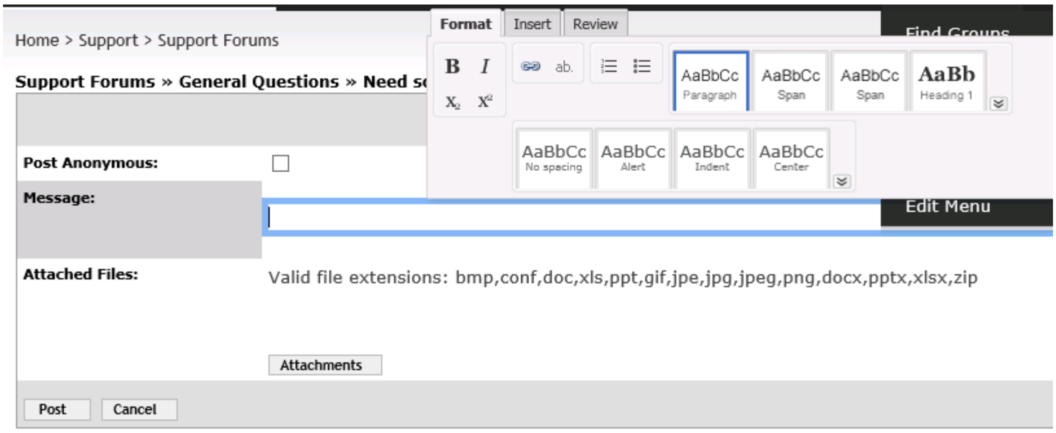
IMPORTANT: Some fields appear only when editing a discussion board's properties.

- **Name** (Enter, Edit). Enter the name of the discussion board. This text describes the board within the Workarea and on your website.
- **Title** (Enter, Edit). Enter the title of the board.

- **Accepted HTML** (Enter, Edit). A comma-delimited list of HTML tags allowed in the eWebEdit400 editor. When left blank, all tags are available. Site visitors posting to the forum can apply these tags to content if the forum editor is eWebEdit400. See Also: *Using the eWebEdit400 editor* on page 1919. The default list is: `br, hr, b, i, u, a, div, ol, ul, li, blockquote, img, span, p, em, strong, font, pre, h1, h2, h3, h4, h5, h6, address, embed`

  NOTE: If you want to allow users to insert WMV files into their posts, add the **embed** tag.

- **Accepted Extensions** (Edit only). A comma-delimited list of file extensions that can be uploaded. You can enter the extension with or without the period (.). Use a comma to separate each extension.
  The list appears at the bottom of the editor screen, notifying the person entering a post which file types can be attached. The default list is: `bmp, conf, doc, gif, jpe, jpg, jpeg, png`



- **Max File Size** (Edit only). The maximum size of a file, in bytes, that a user can upload. The default is 200000 bytes (.19 megabytes).
- **CSS Theme** (Enter, Edit). Choose a style sheet to determine the appearance of the discussion board on your website. Select any theme available in the CSS Theme drop-down. The default is *siteroot*`/Workarea/threadeddisc/themes/standard.css`. Alternatively, enter a path below the site root folder to your custom CSS file in the path box.

  NOTE: If you edit a CSS file, you should save it under a new name. This prevents your changes from being overwritten during an upgrade.

- **Require Authentication** (Enter, Edit).

  Effect of this Field on the Website

  Check this box if a site visitor must sign in to post to the discussion board. If the user cannot access a login screen, the user cannot post. If this box is unchecked, site visitors can post without signing in.

  Effect of this Field in the Workarea

If this field is checked, only users with Add Topic or Edit Topic permissions for the discussion board can create or reply to posts. See also: *Modifying discussion board permissions* on page 939.

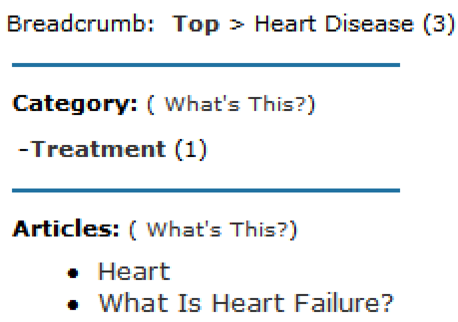
- **Lock** (Edit only). Check this box if you want to prevent all posting to this discussion board. You can do this temporarily or permanently. If a Board is locked, only Administrator user group members can post to it, or edit or delete posts. Those users can post from the website or the Workarea. You can alternatively lock any forum underneath this Board via the forum properties screen.
- **Page Template** (Enter, Edit). Lets you specify a template for the forum. If you do not specify a template, the search results do not link properly to the forum. See also: *Working with templates* on page 769. To preview what the forum looks like within the selected template, click **preview** ( ) to the right.
- **Taxonomy: Require category selection** (Edit only). If you want all topics in this discussion board to be assigned a taxonomy category, check **Require category selection**. If you do, a signed-in user must select a taxonomy category when creating a topic. This checkbox has no effect when creating new topics within the Workarea.
    - **Taxonomy**. Select a taxonomy whose categories will be assigned to forum topics. The Taxonomies are applied on the **Taxonomy** tab. The discussion board's taxonomy represents another way to organize the forum's posts.

    Effect of Assigning Taxonomy Categories to a Topic

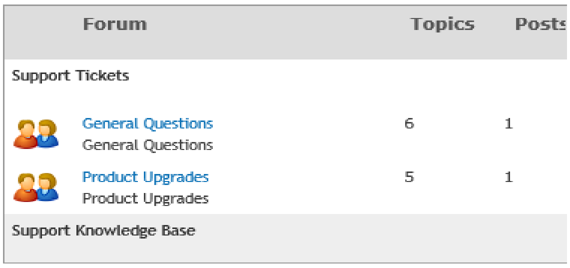
    When a discussion board server control is placed on a Web page, its display includes a taxonomy icon.

    When a site visitor clicks this icon, taxonomy categories are displayed. When the user selects a category, the user sees its subcategories followed by all forum posts assigned to that category. The following example shows a discussion board's posts organized by taxonomy category.



- **Subjects Tab** (Enter, Edit). You *must* create at least one subject for each discussion board. In the following sample forum, **Support Tickets** and **Support Knowledge Base** are subjects.



NOTE: You can also add a subject by selecting a discussion board then selecting **New > Subjects**.

- **Subject Sort Order.**

  Subjects are sorted alphabetically unless you use the **Sort Order** field. **The Sort Order** field accepts a number and uses it to sort a discussion board's subjects. The lowest numbers appear near the top of the page.

  To access the **Sort Order** field:

  1. Save the discussion board.
  2. Click the discussion board in the Workarea.
  3. Click **View > Properties**.
  4. Click the **Subjects** tab.
  5. Modify the **Sort Order** field as needed.

- **Terms & Conditions Tab** (Edit only). Add Terms & Conditions for using the discussion board. By entering text in this box and saving, you activate the Terms and Conditions feature. See also: *Defining terms and conditions* on page 943

Editing a discussion board

1. Click the Workarea's **Content** tab.
2. From the folder structure in the left frame, go to the discussion board.
3. Click **View > Properties**.

4. Click **Edit Properties**. To learn about the fields, see *Creating a discussion board* on page 935.
5. Update the screen as needed.
6. Click **Save Board Properties**.

Deleting a discussion board

When you delete a discussion board, its subjects, forums, and posts are also deleted. Once deleted, they cannot be retrieved.

1. Click the Workarea's **Content** tab.
2. From the folder structure in the left frame, go to the discussion board.
3. Click **Delete > This folder**. A confirmation message appears.
4. Click **OK**.

Modifying discussion board permissions

Discussion boards have a Permissions Screen that lets you determine functions users can perform. (See *Managing folder and content permissions* on page 160.) Because discussion boards have different functions than folders, the Permissions Screen is slightly different from regular folders.

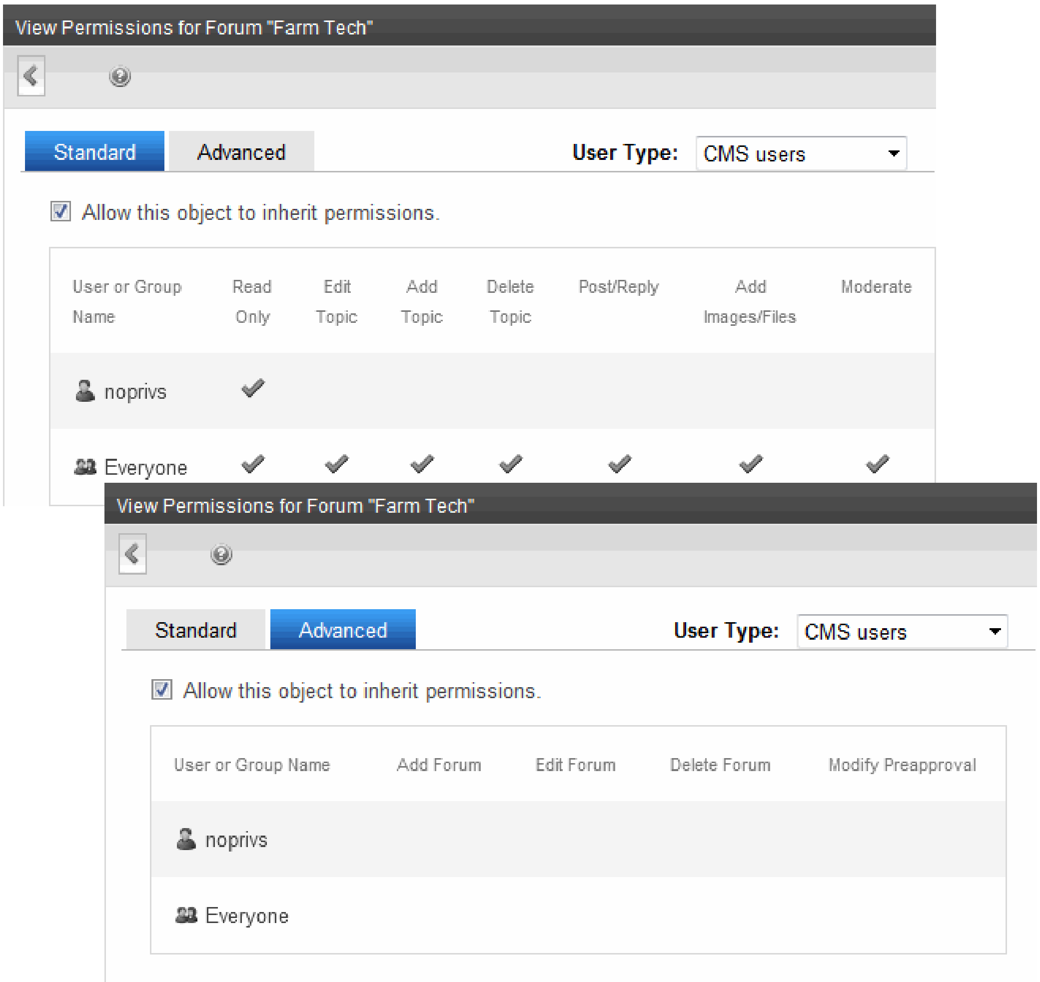
In addition, each Forum has permission settings. By default, a forum inherits permissions from its parent discussion board, but you can break inheritance and customize forum permissions.

To access a discussion board's Permissions Screen, go to and click the board. Then, click **View > Permissions**.

PREREQUISITE

Only Administrators group members can access the discussion board Permissions Screen.

The following example shows a discussion board Permissions Screen for regular users. Membership users have fewer permissions.



When you create a discussion board, it inherits permissions from the parent folder. But from then on, it is disconnected from the parent folder's Permissions Screen, so subsequent changes to the parent folder's permissions have no effect on discussion board permissions.

The Permissions Screen inherits the following initial values from the parent folder (Parent Folder Permission—Discussion Board Permission):

- Read only. Read only
- Edit. Edit Topic
- Add. Add Topic
- Delete. Delete Topic
- Add Folders. Add Forum
- Edit Folders. Edit Forum
- Delete Folders. Delete Forum

NOTE: Because there are no corresponding permissions for the discussion board's **Moderate** and **Post/reply** permissions, their initial value is blank.

For example, if user JSmith has permission to perform all functions for a folder, and a discussion board is created in that folder, JSmith initially receives the default permissions for the discussion board. You can modify these permissions.

The following table lists permissions you can grant to regular users. A subset of these permissions can be granted to membership users.

Permission	Allows user to	Can be assigned to membership users
Read only	View forums and posts; cannot submit a post	Yes
Edit Topic	Edit a topic’s title (*Editing a topic title* on page 957)	No
Add Topic	Add new topics (*Adding a topic to a forum* on page 955)	Yes
Delete Topic	Delete a topic (*Deleting a topic* on page 959)	No
Post/Reply	Post a new topic or reply to an existing one, either from the Workarea or the site. (*Adding a topic to a forum* on page 955 and *Replying to a post* on page 959)	Yes
Moderate	Approve and delete posts and topics. Also, receive notifications when a post is reported using the report post feature; only applicable if the forum’s properties field **Moderate Comments** is checked. (*Moderating from the control panel* on page 967) **NOTE:** Everyone who has Moderate permission will receive notifications when a post is reported. See also: *Setting up post reporting* on page 968	Yes
Add Forum	Create a new forum (*Creating a forum* on page 945)	No
Edit Forum	Edit a forum (*Editing a forum* on page 947)	No
Delete Forum	Delete a forum (*Deleting a forum* on page 947)	No

Modifying discussion board permissions for membership users

By default, membership users are assigned these permissions:

- Read only
- Add Topic
- Post Reply

They cannot be granted Edit or Delete topic nor Add, Edit, or Delete forum. However, if a membership user creates a new topic, that user can delete it.

To modify a membership user's default permissions:

1. Go to and click the discussion board so it appears in the Workarea.
2. Click **View > Permissions**.
3. Click the **User Type** drop-down field and choose **Membership Users**.
4. The View Permissions for Board screen appears.
5. Add new member users and groups, remove existing ones, or change permissions.

Granting discussion board permissions

1. Go to and click the discussion board so it appears in the Workarea.
2. Click **View > Permissions**.
3. Click **Add Permissions**. All users and groups who are not currently assigned permissions appear.
4. Click any users or groups then **Save**. The Add Permission screen appears with the selected users or groups.
5. Assign appropriate standard and advanced permissions.
6. Click **Save**.

Editing discussion board permissions

1. Go to and click the discussion board so it appears in the Workarea.
2. Click **View > Permissions**.
3. Click the user or group whose permissions you want to edit. The Edit Permissions Screen appears.
4. Change the settings as appropriate.
5. Click **Update**.

Removing discussion board permissions

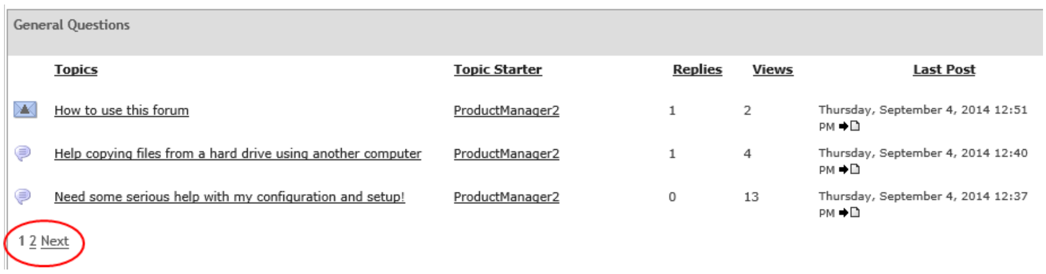
1. Go to and click the discussion board.
2. Click **View > Permissions**.
3. Click **Delete** ().

4. Select a user or group whose permissions you want to remove.
5. Click **Remove Permissions for Folder**.

After you remove a user, discussion boards do not appear in that user's Workarea.

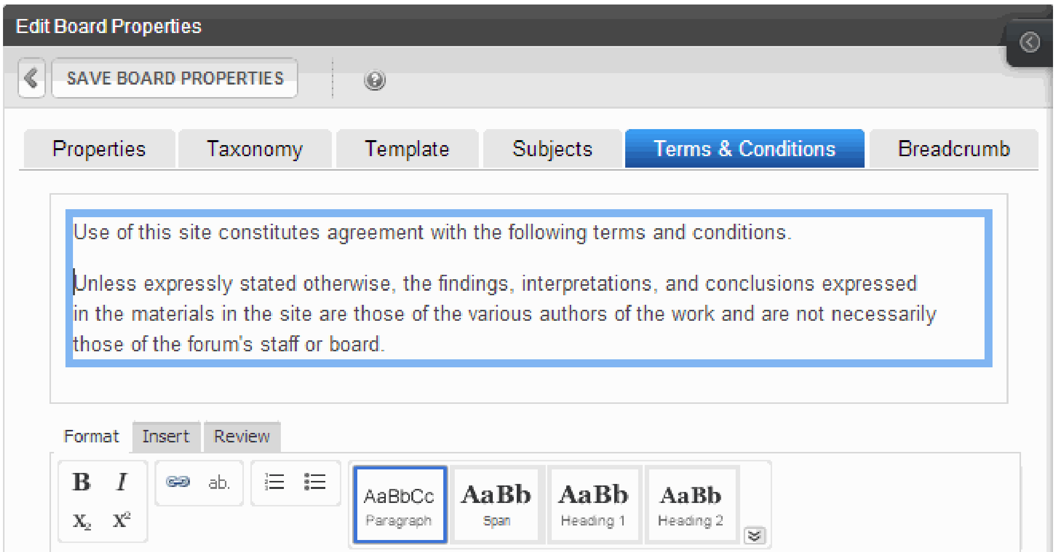
Changing page size for discussion boards

You can change the number of topics or posts shown on a page by changing the [ek_PageSize]() value in the *siteroot*\web.config file.
This value affects other Ektron pages.



Defining terms and conditions

A discussion board's Terms & Conditions convey your expectations to its users. If you add Terms & Conditions, anyone posting to the board sees the following screen the first time a post or reply is sent to a forum. Users can only post after agreeing to the Terms & Conditions.



NOTE: You cannot add Terms & Conditions when creating a discussion board—you can only add them after a discussion board has been created.

To add terms and conditions text to a discussion board:

1. Workarea **Content** tab **>** go to the discussion board to which you want to add terms and conditions.
2. Click **View > Properties**.

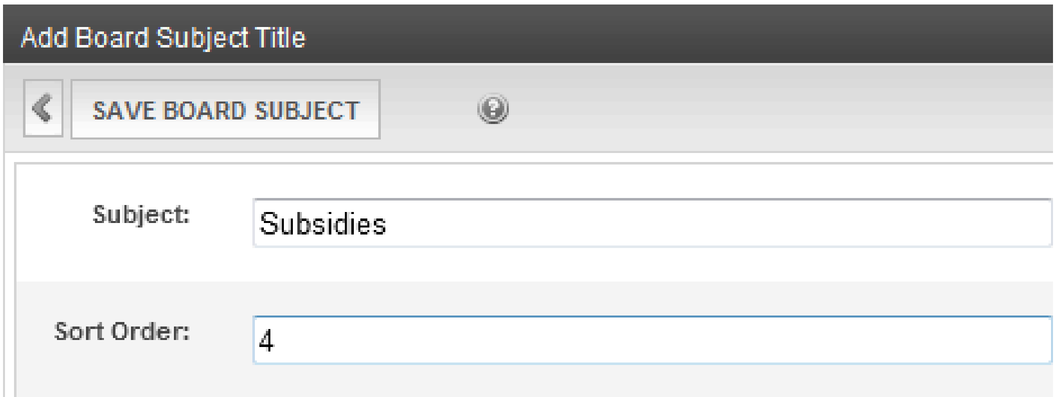
3. Click **Edit Properties**.
4. Click the **Terms & Conditions** tab.
5. Add the terms and conditions text.
6. Click **Save Board Properties**.

Working with subjects

This section explains how to create and edit discussion board subjects.

Creating a subject

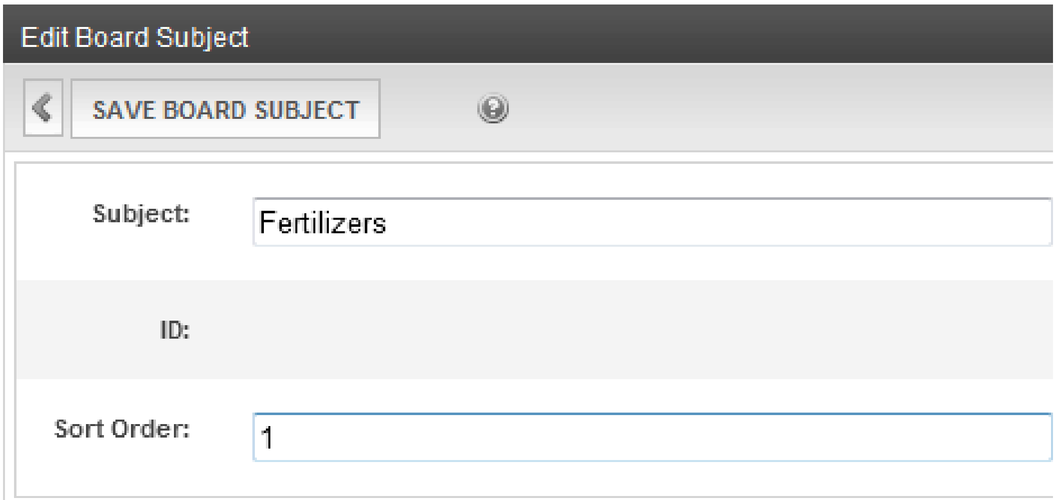
1. Workarea **Content** tab **>** go to the discussion board to which you want to add a subject.
2. Click **New > Subject**.
3. Enter a subject name and sort order. See Also: *Subject Sort Order.* on page 938



4. Click **Save Board Subject**.

Editing subject name and sort order

1. Workarea **Content** tab **>** go to the discussion board that contains the subjects.
2. Click **View > Properties**.
3. Click the **Subjects** tab.
4. Click the subject that you want to edit. The current subject name and sort order appear on a new screen. Edit as needed. See Also: *Subject Sort Order.* on page 938



5. Click **Save Board Subject**.

Working with forums

A forum is a thread within a discussion board. For each forum, you define:

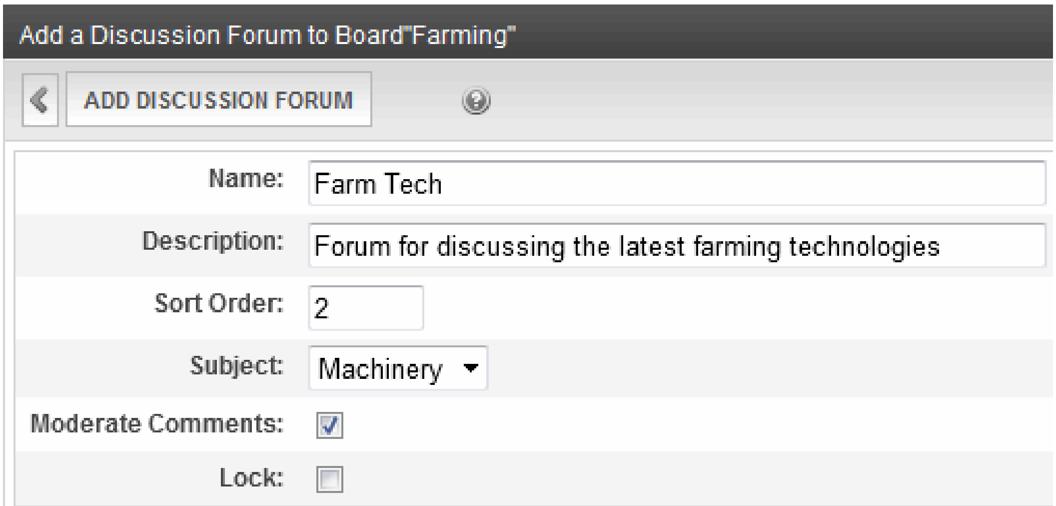
- name and description
- whether its posts must be approved before appearing on your website
- if it accepts new posts
- its sort order, which determines the sequence on the Web page within its subject
- its subject

Creating a forum

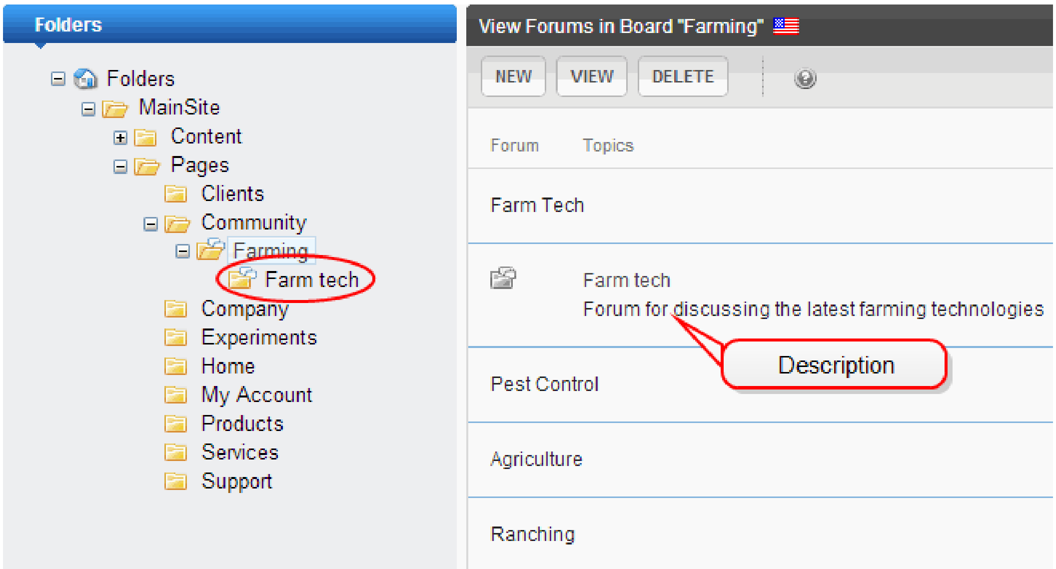
PREREQUISITE

- At least one subject.
- You are a member of the Administrators group or have Add Forum permission for a discussion board

1. Workarea **Content** tab **>** go to the discussion board for which you want to create a forum.
2. Select a discussion board.
3. Click **New > Discussion Forum**. The **Add a Discussion Forum to Board** screen appears.



4. Complete the fields.
   - **Name**. Enter the name of the discussion forum. The name identifies the forum in the left side of the Workarea, next to a forum icon ( ). The icon distinguishes it from content and blog folders. The name also appears on the website.



   - **Description**. Enter a more detailed description of the forum. The description appears in the Workarea, as illustrated above.
   - **Moderate Comments**. Check this box if comments require approval before appearing on the website, and if you want every comment to be reported to all forum moderators. See also: *Setting up post reporting* on page 968. Only users with **Moderate** permission can approve comments, thereby allowing them to be published.

     The Smart Desktop has a **Forum Topics and Posts** category, which indicates how many posts currently require your approval.
   - **Lock Forum**. Check this box to prevent all posting to this forum. You can do this temporarily or permanently. If a forum is locked, only Administrators

group members can post to it, or edit or delete posts. Those users can perform those tasks from the website or the Workarea.

A discussion board can also be locked. If a board is locked, a message on this screen indicates that. In that case, no posting is allowed to this forum regardless of this setting.

- **Sort Order**. Enter a number if you want to arrange the sequence of forums within the subject. If you do not, forums appear in alphabetical order within subject. See Also: *Subject Sort Order.* on page 938.
- **Subject**. Enter the subject within which this forum will appear on the website.

5. Click **Add Discussion Forum**.

Editing a forum

PREREQUISITE

- You are a member of the Administrators group or have Edit Forum permission for a discussion board

1. Click the Workarea’s **Content** tab.
2. From the folder structure in the left frame, click the discussion board that contains the forum.
3. Click the forum.
4. Click **View Properties** ()
5. Click **Edit Forum Properties**.
6. Update the screen as needed. See also: *Name. Enter the name of the discussion forum. The name identifies the forum in the left side of the Workarea, next to a forum icon (). The icon distinguishes it from content and blog folders. The name also appears on the website.* on the previous page.
7. Click **Save**.

Deleting a forum

PREREQUISITE

- You are a member of the Administrators group or have Delete Forum permission for a discussion board

Authorized users can delete any forum. When you do, its topics and posts are also deleted. Once deleted, they cannot be retrieved.

1. Workarea **Content** tab **>** go to the discussion board that contains the forum.
2. Click the forum.
3. Click **Delete Forum** (). A message asks you to confirm.
4. Click **OK**.

Modifying forum permissions

You can use the discussion board permission features with any forum. See also: *Modifying discussion board permissions* on page 939.

1. Workarea **Content** tab **>** go to the discussion board that contains the forum.
2. Click the forum.
3. Click **View Permissions** (). A Permissions Screen appears.

   When you first view a forum's Permissions Screen, you see a check box that lets you maintain inheritance or break it. A forum initially inherits (that is, copies all permissions from) its parent discussion board's permission settings.
4. If you *break* inheritance by unchecking the **Allow this object to inherit permissions** box, the forum Permissions Screens changes from view-only to edit. At this point, you can modify the permissions.

   To later *restore* inheritance, check the box. When you do, the parent discussion board's permissions overwrite any forum-specific changes, and the forum reverts to a read-only state. While inheritance is enabled, you can only make permission changes at the discussion board level.

Blocking an IP address from a forum

If you are not using forum authentication and want to block a site visitor from posting, use the Restricted IP feature.

NOTE: In addition to using Restricted IPs for a specific forum, you can access the Restricted IP feature from the **Workarea > Settings > Configuration > Discussion Board > Restricted IPs**. If you have more than one forum, this lets you select the discussion boards to which the Restricted IPs are applied.

Adding an IP address to the restricted list

1. In the Workarea, click the **Content** tab.
2. Select a forum from the folder structure.
3. Click **New > Restricted IP**.
4. Enter the IP Address to be blocked in the Block IP field.
5. Click **Save**. A list of restricted IP addresses appear.

Editing a restricted IP address

1. In the Workarea, click the **Content** tab.
2. Select a forum from the folder structure.

3. Click **View > Restricted IPs**. A list of restricted IP addresses appears.
4. Click the IP address to be edited.
5. Click **Edit**.
6. Edit the IP address in the **Block IP** text box.
7. Click **Save**.

Deleting a restricted IP address

1. In the Workarea, click the **Content** tab.
2. Select a forum from the folder structure.
3. Click **View > Restricted IPs**. A list of Restricted IP addresses appears.
4. Click the IP address to be deleted.
5. Click **Delete** (). A dialog asks if you are sure you want to delete the restricted IP address.
6. Click **OK** to continue. A list of the remaining restricted IP addresses appear.

Ranking forum users

The User Ranking feature lets you recognize active forum contributors. You can create a ranking system that moves a contributor to the next level after submitting a specified number of posts. This is known as a *ladder system*, which lets forum contributors build credibility. For example:

- New User. 1 to 9 posts
- Intermediate User. 10-19
- Expert User. 20 and up

To each rank, you can assign an image that appears below the user’s name on any post. The image also appears on a user’s forum profile.

IMPORTANT: Contributors must submit at least one post before you can move them to the ladder system.

You can also create ranks that are independent of the ladder system. Such ranks have no relationship to a contributor's number of posts. For example, after a forum user acquires Ektron Developer Certification, the user is assigned the Ektron Developer rank.

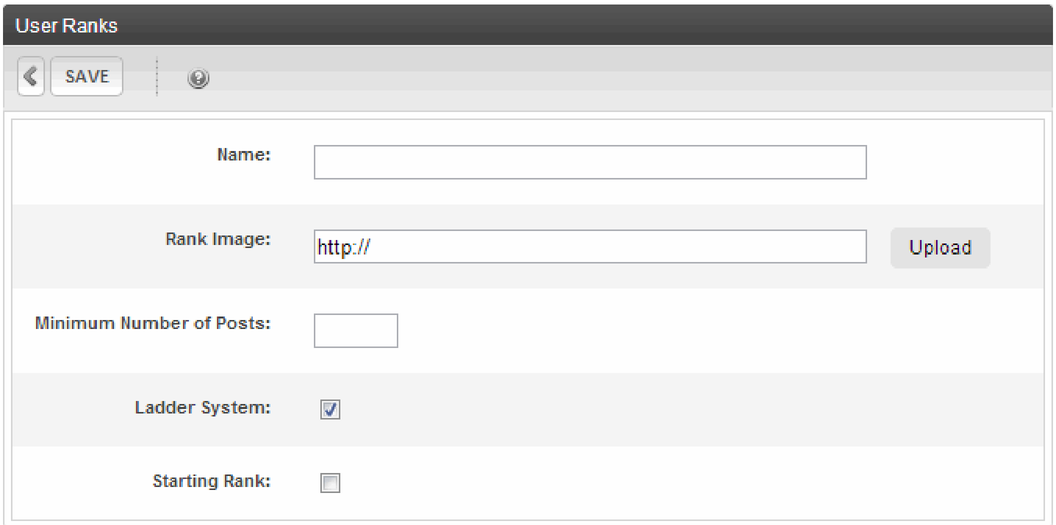
You can move contributors from a non-ladder rank to the ladder system and vice versa. Whether or not a contributor is in a ladder system, Ektron keeps a tally of posts. So, if a user is moved into a ladder system at any time, he is assigned the correct rank.

Adding a user rank

To add a user rank:

NOTE: You can also access the User Ranks screen from **Workarea > Settings > Configuration > Discussion Board > User Ranks**. If you have more than one forum, this screen lets you pick the discussion board to which a rank is assigned.

1. In the Workarea, click the **Content** tab.
2. Select a discussion board.
3. Click **New > User Rank**. The User Ranks screen appears.



- **Name**. The name of the rank. For example, New User, Expert User, Developer, or Associate.
- **Rank Image**. Click **Upload** to select an image to upload. When uploaded, the image path appears in the text box.
  Images are optional. If you assign an image, it appears below the user's name on any post.
- **Minimum Number of Posts**. Enter the number of posts it takes to reach this rank. If the **Starting Rank** box is checked, the number is 1 and cannot be changed.
- **Ladder System**. Check this box if this rank is part of a *ladder system*. That is, a rank based on the number of posts a user has submitted to this discussion forum. If you uncheck **Ladder System**, **Starting Rank** and **Number of Posts** become inactive, since they manage the ladder system.

- **Starting Rank**. If you are using a ladder system, use this box to designate this as the Starting Rank. A user is assigned to this rank after submitting the first post. A discussion forum can only have one Starting Rank. Also, if this is the Starting Rank, you cannot enter a minimum number of posts.
- **Applies To**. If you accessed this screen from **Workarea > Settings > Configuration > Discussion Board > User Ranks**, select the discussion forum to which this rank applies.

4. Click **Save**.

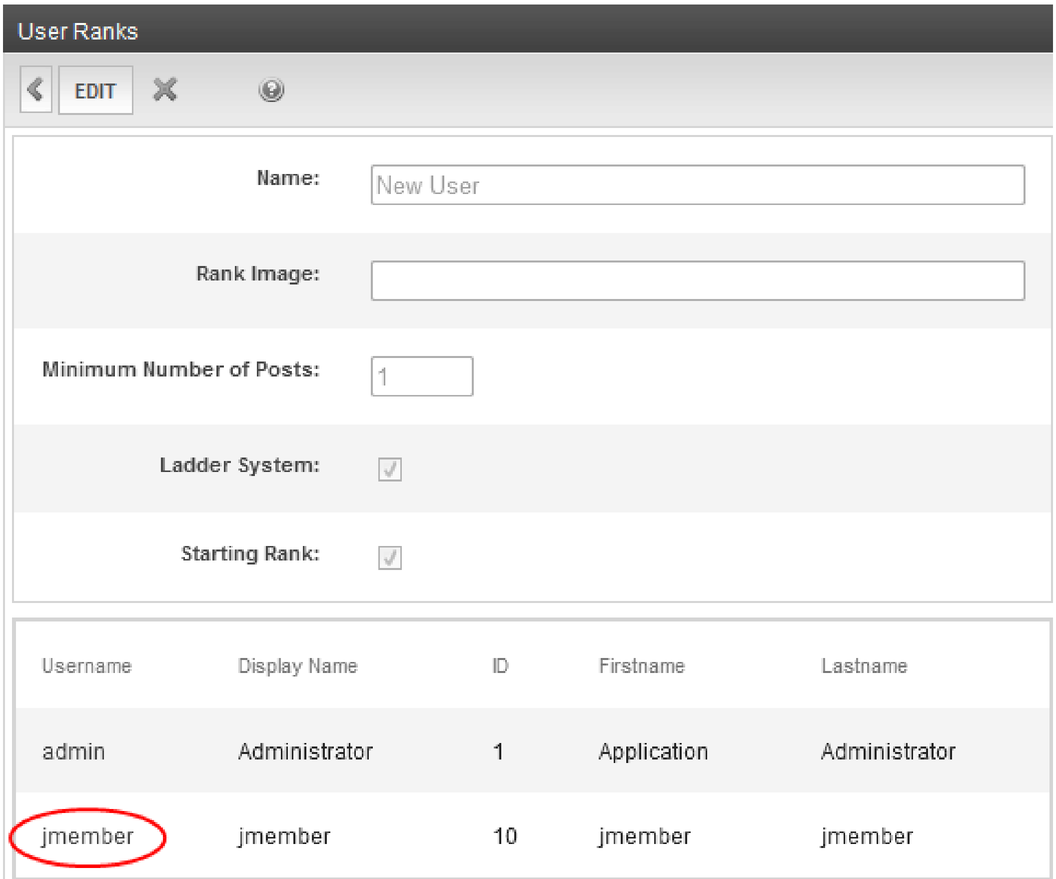
Deleting a user rank

1. In the Workarea, click the **Content** tab.
2. Select a discussion board.
3. Click **View** > **User Ranks**.
4. Select the rank you want to delete.
5. Click **Delete** ().
6. Click **OK** to the confirmation message.

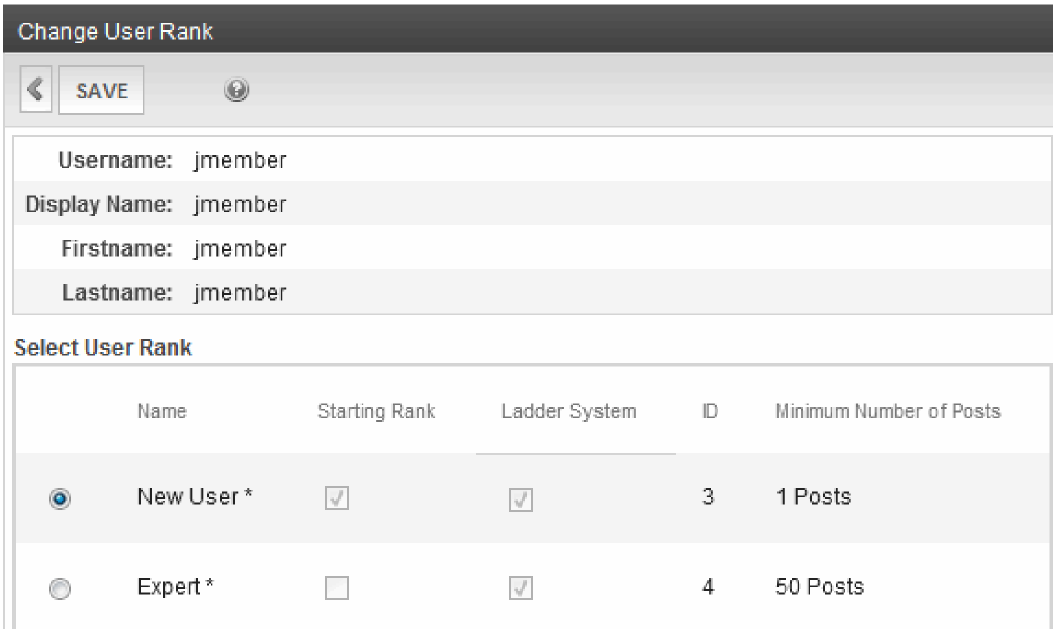
Changing a user's rank

A user's rank appears below the user name on any submitted post. To change a user's current rank, you must know what it is. To change a user's rank:

1. In the Workarea, go to **Content** and go to the forum to which the user has posted.
2. Click **View > User Ranks**.
3. Select the rank that you want to move the user out of. The User Ranks screen appears. The lower half shows all users assigned that rank.



4. Click the user that you want to move out of the rank. The screen displays all ranks. The current one is selected.



5. Click next to the desired rank.
6. Click **Save**.

Sending notifications of forum activity

The discussion board's Email Notification feature generates email for registered users when certain forum activities occur. For example, you want to be notified when a new forum post is created. When that event occurs, registered users receive an email with a link to the new post. After the messages are set up, you don't need to do anything—everything happens in the background.

Creating the email message

You can create an email message to be sent when these discussion board events occur.

- a new post is added
- a new topic is added
- someone reports a post See also: *Setting up post reporting* on page 968.

An editor lets you apply XHTML formatting the message. To create a message:

1. **Workarea > Settings > Configuration > Discussion Boards > Messages**.
2. Click **Add**.
3. Enter a title that describes the message.
4. At the **Type** field, select a message type: **NewForumTopic**, **ReportForumPost**, or **ForumPost**.
5. Select whether to make the email message a Default message.
6. Enter the message **subject**.
7. In the editor, enter the message text. See *Including variables in the default message* below to include information about the about the new post or topic in the message.
8. Click **Save**.

Including variables in the default message

Message text can include variables that retrieve information about a new post or topic. The variables are surrounded by at signs (@). For example:

```
@appPosterDisplayName@ has created a thread you have subscribed to.
```

In the email, this text might read:

```
Alan Administrator has created a thread you have subscribed to.
```

Use these variables in discussion board email notifications.

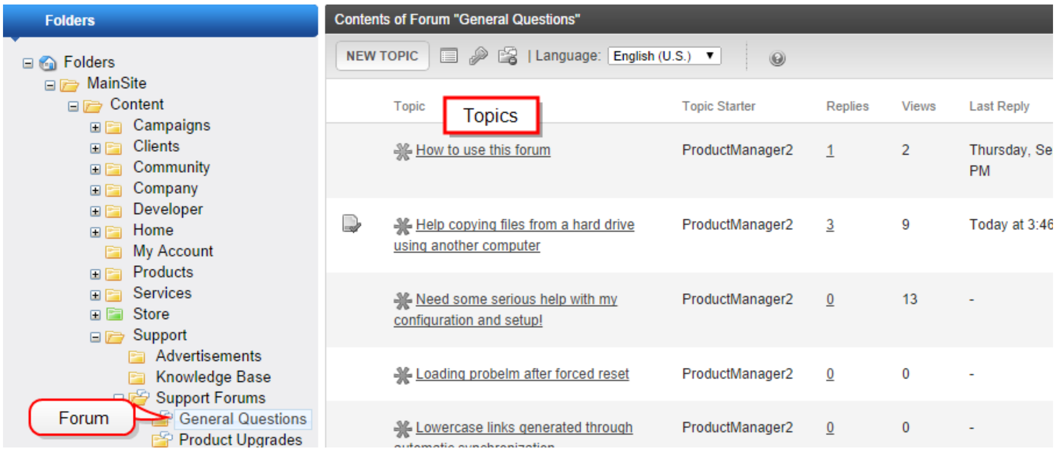
- **@appTopicTitle@**. The title of the topic.
- **@appTopicId@**. The integer ID of the topic.
- **@appRecipientDisplayName@**. The display name of the email recipient.
- **@appRecipientId@**. The email recipient's integer ID.
- **@appRecipientFirstName@**. The first name of the email recipient.
- **@appRecipientLastName@**. The last name of the email recipient.

- **@appRecipientEmail@**. The email address of the email recipient.
- **@appHostUrl@**. The host site's URL.
- **@appForumUrl@**. The forum's URL.
- **@appPostMessage@**. The text of the message posted to the discussion board.
- **@appPosterId@**. The integer ID of the person who posted.
- **@appPosterDisplayName@**. The display name of the person who posted.
- **@appPosterProfileUrl@**. The profile URL of the person who posted.
- **@appPostUrl@**. The URL of the post on the website.

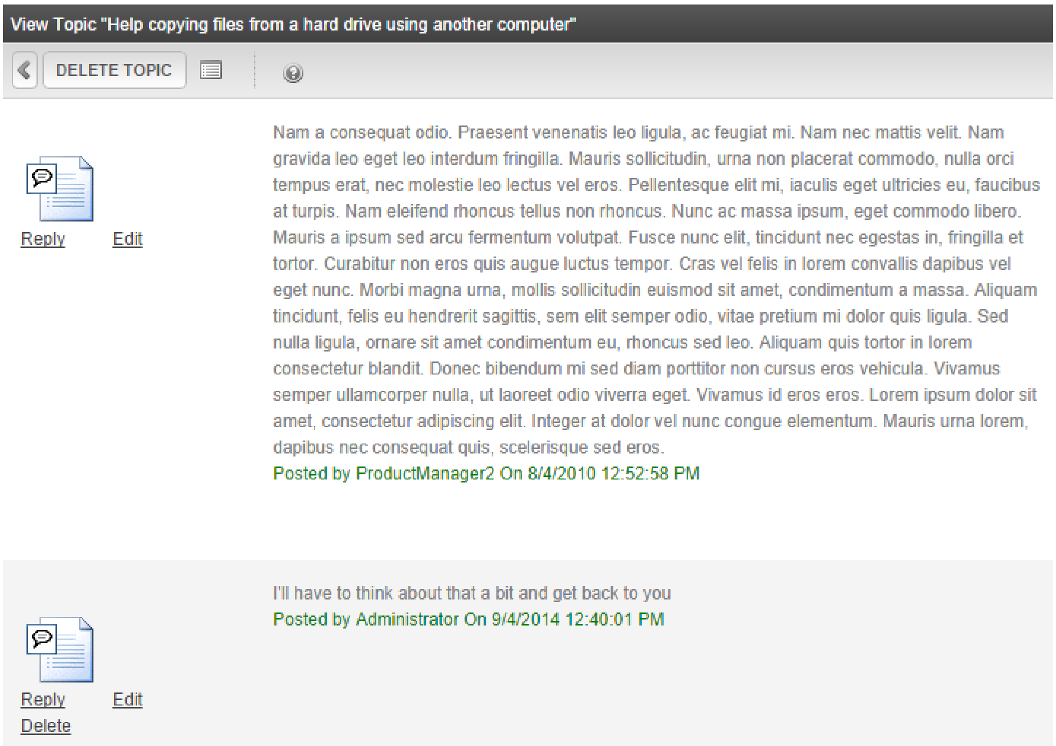
Working with topics

A topic is a specific issue to be discussed in a forum. For example, in a medical research forum, a topic might be *New Cancer Treatments*. Before creating a topic, you must create a forum into which to place it. To view a topic from the Workarea:

1. **Workarea > Content > Folders >** *select a discussion board*.
2. Select a forum from the folder structure.
3. The forum's topics appear in the right frame. Click the one that you want to view.



4. The topic's posts appear.



If an option is *underlined*, you may perform it; if not, you cannot. For example, if a post's status is approved, approve is not underlined because the topic is already approved.

Adding a topic to a forum

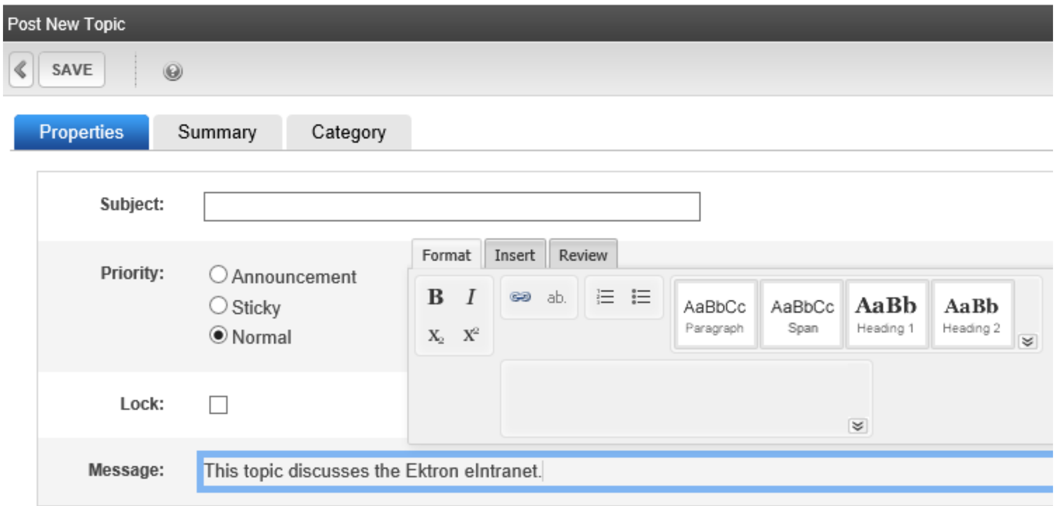
When you create a new topic, its first post is created from the topic message. If you add a topic but are not a forum moderator, you only see the topic in the Workarea after it is approved.

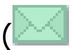
NOTE: You also can create new topics from the OnTrek user interface (Support > Support Forums).

To create a topic:

1. **Workarea > Content > Folders >** *select a discussion board*.
2. Select a forum.

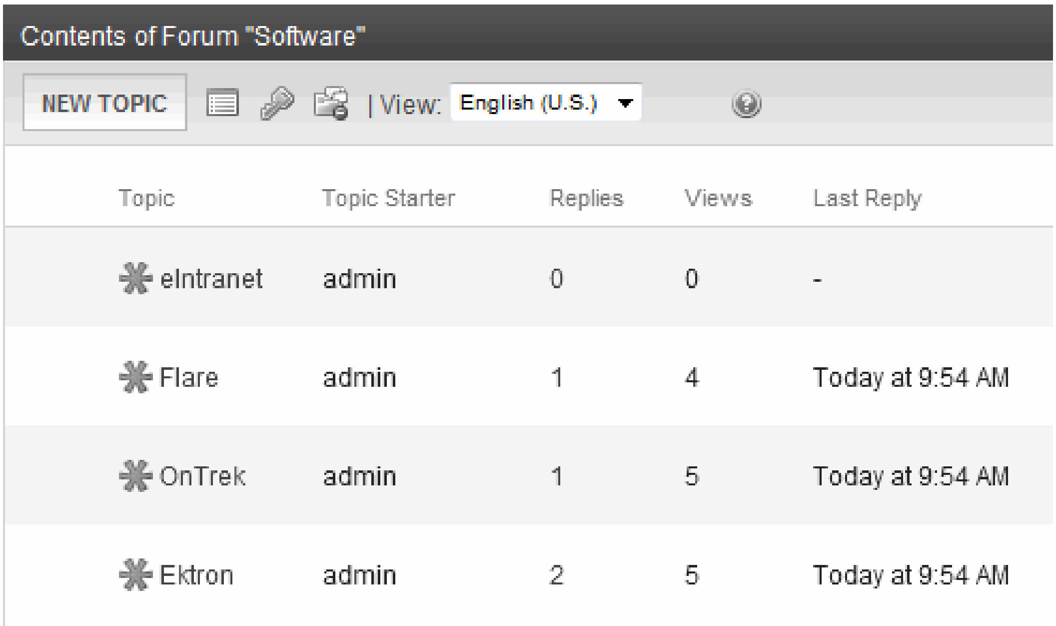
3. Click **New Topic**. The Post New Topic screen appears.



- **Subject**. Enter a short description of the topic. The topic subject appears on the forum page.
- **Priority**. Set the topic's priority, which determines where the topic appears in the topic list on the site. The default setting is Normal.
  - **Announcement**. topic always appears at the top of the list. If a list has more than one announcement, they are sorted by date with most recent on the top. The announcement icon () indicates its priority to the left of the title.
  - **Sticky**. topic appears near the top of the list, just below announcements. If a list has more than one sticky topic, they are sorted by date with most recent on the top. The Sticky icon () indicates its priority to the left of the title.
  - **Normal**. topics follow Announcements and Sticky topics. The Normal icon () next to the topic indicates its priority.
- **Lock**. Check this box to prevent posting of replies to this topic. You can do this temporarily or permanently. If a topic is locked, only Administrator user group members can post to it, or edit or delete posts. Those users can post from the website or the Workarea.
- **Message**. Enter the topic text. This text appears on a new Web page after a website visitor clicks a topic’s subject line.

4. If desired, enter a summary and a taxonomy category for the topic.

5. Click **Save**. The new topic appears in the list.



Editing a topic title

The only aspect of a topic that you can edit is its title.

1. In the Workarea, click the **Content** tab.
2. Select a discussion board, then select a forum. The forum's topics appear in the right frame.
3. Click the topic that you want to edit.
4. Click **View Properties** (). The Edit Topic screen appears.
5. Modify the title as needed.
6. Click **Save**.

Approving a topic in the Workarea

A topic needs approval if created by a user without moderate permissions for the forum. Unapproved topics only appear in the forum upon approval. In the Workarea, an unapproved topic is surrounded by a yellow border.

To approve a topic:

1. In the Workarea, click the **Content** tab.
2. Select a discussion board, then select a forum. The forum's topics appear in the right frame.

3. Click the one that you want to approve. The View Topic screen appears.

4. Click **approve**.The topic is approved.

Setting a topic priority

In a forum, topics are sorted by *priority*, which determines a topic's sequence within the topic list on the site. You can set a topic's priority when you create it. A forum moderator can change a topic's priority. To set a topic property:

1. In the Workarea, click the **Content** tab.
2. Select a discussion board, then a forum from the folder structure.
3. Click a topic.
4. Click **View Properties** ( ).
5. Click **Click here to Edit the Properties of this Topic**. The Edit topic screen appears.
6. Choose a priority.
   - **Announcement.** topic always appears at the top of the list. If a list has more than one announcement, they are sorted by date with most recent on the top. The Announcement icon ( ) indicates its priority to the left of the title.
   - **Sticky.** topic appears near the top of the list, just below the announcements. If a list has more than one sticky topic, they are sorted by date with most recent on the top. The Sticky icon ( ) indicates its priority to the left of the title.
   - **Normal.** topics follow Announcements and Sticky topics.. The Normal icon ( ) next to the topic indicates its priority.
7. Click **Save**.

Locking a topic

Locking a topic prevents users from posting a reply to it. For example, you might create an announcement, but don’t want people to reply to it. Or, you might decide that a topic has had enough discussion and want to stop further replies. If a topic is locked, only Administrator user group members can post to it, or edit or delete posts from the website or the Workarea. To lock a topic:

1. In the Workarea, click the **Content** tab.
2. Select a discussion board, then a forum from the folder structure.
3. Click a topic.
4. Click **View Properties** ( ).
5. Click **Click here to Edit the Properties of this Topic**. The Edit topic screen appears.
6. Check the **Lock** check box. (To unlock a topic, remove the check mark.)
7. Click **Save**.

Deleting a topic

When you delete a topic, its posts are deleted, too. When deleted, they cannot be retrieved.

1. In the Workarea, click the **Content** tab.
2. Select a discussion board, then select a forum from the folder structure. The forum's topics appear in the right frame.
3. Click the topic that you want to delete. The View Topic screen appears.
4. Click **Delete**.
5. Click **OK**.

Working with posts

When a new topic is created, a first post is also created from the topic's message. Posts to a topic are replies to the first post. You can search posts by clicking **Search**.

Replying to a post

- From the website:
  1. Go to the Web page that hosts the discussion board.
  2. Click the forum of interest.
  3. Click **Add Reply**.
  4. Enter the text of your post.
  5. Click **Post**. If a topic is moderated, a message appears stating that your reply is pending moderator approval.
- From the Workarea:
  1. In the Workarea, click the **Content** tab.
  2. Go to a discussion board, then a forum. The forum's topics appear in the right frame.
  3. Click the topic with the post to which you want to reply. The next screen, View Topic, displays all posts to the selected topic.
  4. Find the post to which you want to reply.
  5. Click **Reply**.

6. In the **Message** field, enter the text of your post.
7. Click **Save**.

Editing a post

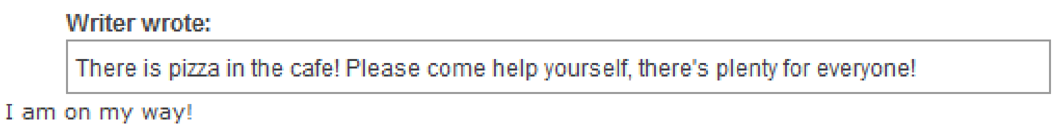
You can edit the text of a post but you cannot edit its title.

- From the website
  1. Go to the Web page that hosts the discussion board.
  2. Click the forum of interest.
  3. Find the topic you want to edit.
  4. Click **Edit**.
- From the Workarea
  1. In the Workarea, click the **Content** tab.
  2. Select a discussion board, then a forum from the folder structure.
  3. The forum’s topics appear in the right frame. Click the one that has the post that you want to edit. The View Topic screen displays all posts to the selected topic.
  4. Find the post that you want to edit and click **edit** under the post icon. The Edit Reply screen appears.
  5. Update the text as needed.
  6. Click **Save**.

Quoting a post

Quoting a post means that your reply begins with the original post. You can then add comments and even edit the quoted post. For example, you can include only the portion on which you are commenting. To quote a post:

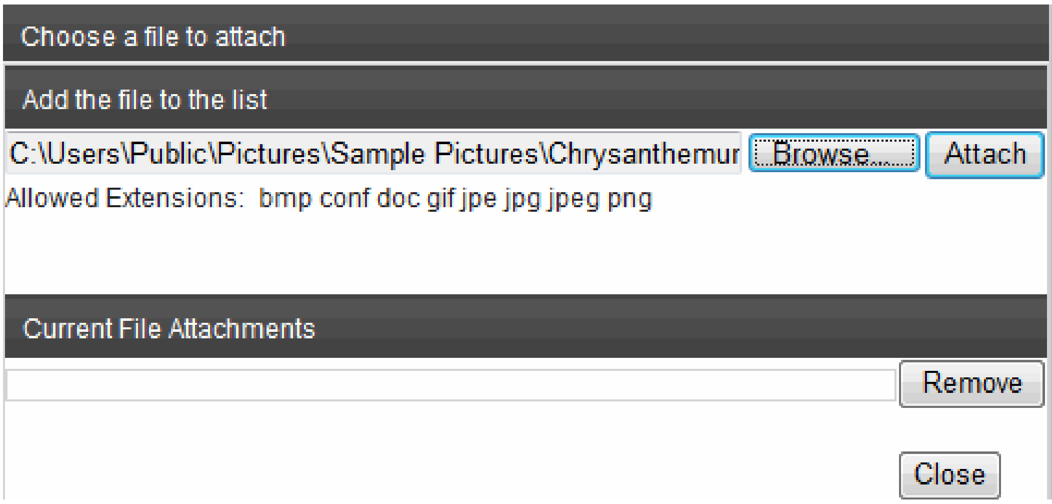
1. Go to the Web page that hosts the discussion board.
2. Click the forum of interest.
3. Click a topic.
4. Find the post you want to quote.
5. Click **Quote**.
6. The editor appears with the quoted text at the top. You may edit the quoted post.
7. Add your comments below the quote.
8. Click **Post**.



Attaching images and files to a post

You can attach a file to a post. The **Attached Files** field displays allowed file types. The list of file extensions and maximum file upload size are defined for the discussion board. See Also: *Creating a discussion board* on page 935.

1. Go to the Web page that hosts the discussion board.
2. Click the forum of interest.
3. Click a topic.
4. Create a new post or reply to an existing post.
5. Click **Attachments**. The Attachments window appears.



6. Click **Browse...** and go to the file that you want to attach. It must be one of the allowed file types.
7. Click **Open**.
8. Click **Attach** to attach the file to the post. The file appears in the list of Current File Attachments.
9. After you add all attachments, click **Close**.

To remove a file from the list of attachments:

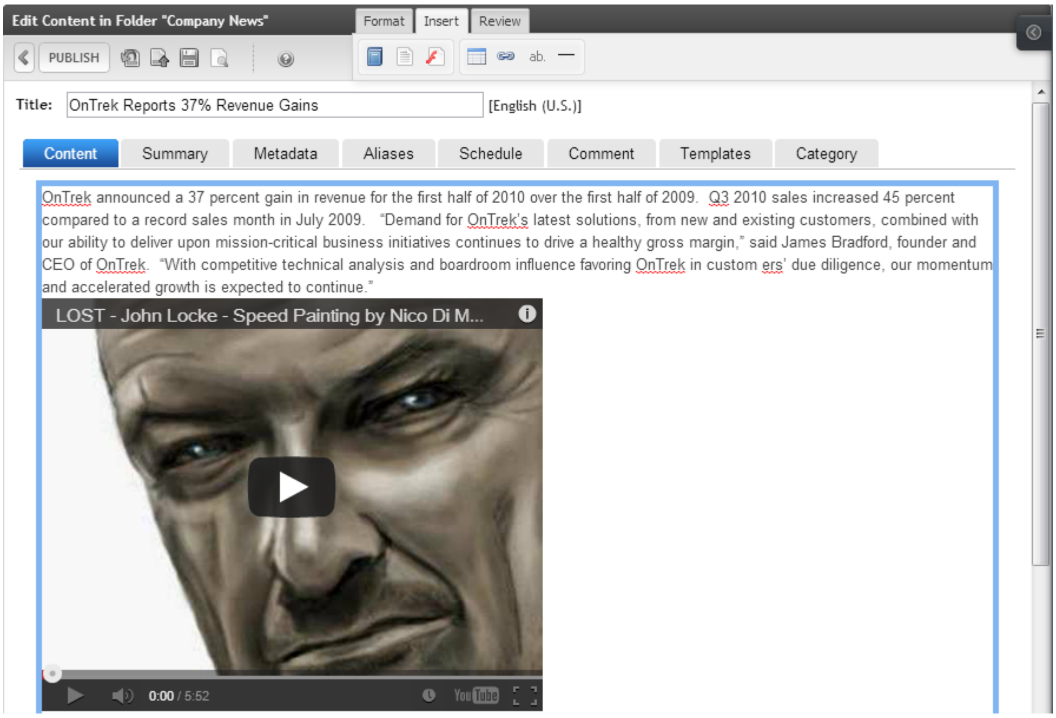
1. Click **Attachments** below the editor.
2. Highlight the attached item.
3. Click **Remove**.
4. Click **Close**.

Adding a video to a post

Administrator's note: By default, the **Insert Embedded Video** button does not appear on the editor toolbar. To learn how to add it, see *Modifying editor plug-ins* on page 582.

1. Click **Insert Embedded Video** ( ) in a forum post. The Insert Embedded Media screen appears.
2. For details about embedding videos, see *Editing in Ektron* on page 553.

3. Click **Insert**. The video is embedded in the content.



Deleting a post

- From the website
  1. Go to the Web page that hosts the discussion board.
  2. Click the forum of interest.
  3. Find the topic you want to delete.
  4. Click **Delete**.
- From the Workarea
  1. In the Workarea, click the **Content** tab.
  2. Select a discussion board, then a forum from the folder structure. The forum's topics appear in the right frame.
  3. Click the one that has the post you want to delete. The View Topic screen displays all posts to the selected topic.
  4. Find the post that you want to delete and click **delete** under the post icon.

Moving a topic and its posts to another forum

To move a topic and its associated posts in one forum to another, the forum to which you want to move the topic and posts must exist.

1. Access a page on your website that has a login button.
2. Sign in as a member of the Administrators group or as a Moderator of the board.
3. Go to a page with discussion board and select a forum.
4. Go to a topic page.
5. Click the **Move to...** drop-down list.

6. Select the topic to which you want to move.
7. Confirm that you want to move all posts.

Replacing words in a post

You can configure Ektron to replace unwanted words in a post, such as obscene or indecent words that should not appear on your site. You also can fix commonly misspelled words. For example, *the* can replace *teh*.

The Replace Words feature works with exact matches but does not append words. For example, if you replace *car* with *auto*, the sentence *I bought the car from the cartel* becomes *I bought the auto from the cartel*. Note that "cartel" did not change to "autotel" even though "car" appears in "cartel."

Using regular expressions

If you want the Replace Words feature to modify words that contain a word you want to replace, use Regular Expressions. A Regular Expression, often referred to as regex, is a pattern of metacharacters placed around a word that describe a string. Used for string manipulation, regex lets you detail a succinct description of a group of words without having to detail each word in the group.

- **.**. Matches any character, similar to a wildcard. For example, .ar matches any 3-letter word ending in *ar*, such as car, bar, tar or far.
- **|**. An *or* operator. For example, `steak|stake` finds steak or stake.
- **[ ]**. Matches one character between the brackets. For example, [rst] matches *r*, *s* or *t*. [d-g] matches *d*, *e*, *f*, or *g*. Another example, [bc]ar matches *bar* and *car*. If you need to match a dash (-), use it a the beginning or end of the group. For example, [xyz-] or [-xyz].
- **[^]**. Matches one character not in the group. For example, [^rst] matches any character other than *r*, *s* or *t*. Another example, [^bc]ar does not match *bar* or *car*, but does match *tar* and *far*.
- **^**. Matches the beginning of any line. For example, ^[bc]ar matches *bar* or *car*, but only at the beginning of a line.
- **$**. Matches the end of any line. For example, ^[bc]ar matches *bar* or *car*, but only when it appears at the end of a line.
- **( )**. Marks a sub expression. For example, alt(a|e)r finds *altar* or *alter*.
- *****. When an expression is followed by *, it matches zero or more versions of the expression. For example, [rst]* finds *(blank)*, *r*, *s*, *t*, *rs*, *sr*, *rt*, *tr*, *st*, *ts*, *rst*, *rts*, *srt*, *str*, *trs* and *tsr*.
- **+**. When an expression is followed by +, it matches one or more versions of the expression. This differs from * because it does not match *(blank)*. It must match at least one character. For example, r+ matches *r*, *rr*, *rrr* and so on.
- **{**x,y**}**. Must match at least *x* times and not more than *y* times. For example, s{2,4} matches *ss*, *sss* and *sss*. You can also use {*x*} to specify an exact match. For example, s{3} matches *sss*. You can use {*x*,} to specify that the match is at least *x* amount of times. For example, s{4} matches *ssss*, *sssss*, *ssssss* and so on.

- **?**. Must match the preceding character zero or one times. For example, Boa?rder matches *boarder* and *border*.

Viewing replacement words

1. In the Workarea, click the **Content** tab.
2. Select a forum from the folder structure.
3. Choose **View > Replace Words**. A list of word to be replaced appears.

Adding a replacement word

NOTE: In addition to using Replace Words for a specific forum, you can access the Replace Word feature from the **Workarea > Settings > Configuration > Discussion Board > Replace Words**. If you have more than one forum, this allows you select to which discussion boards the Replace Words feature is applied.

1. In the Workarea, click the **Content** tab.
2. Select a forum from the folder structure.
3. Click **New > Replace Word**. The Replace Words screen appears.
4. Click **Add**.
5. Add the word to be replaced in the **Old Word** textbox.
6. Add the replace word in the **New Word** textbox.
7. Select the language for the Replace Word.
8. Click **Save**.

Editing a replacement word

1. In the Workarea, click the **Content** tab
2. Select a forum from the folder structure.
3. Click **View > Replace Words**.
4. Click either the Old Word or the New Word to edit.
5. Click **Edit**.
6. Change the Old Word, New Word or Language.
7. Click **Save**.

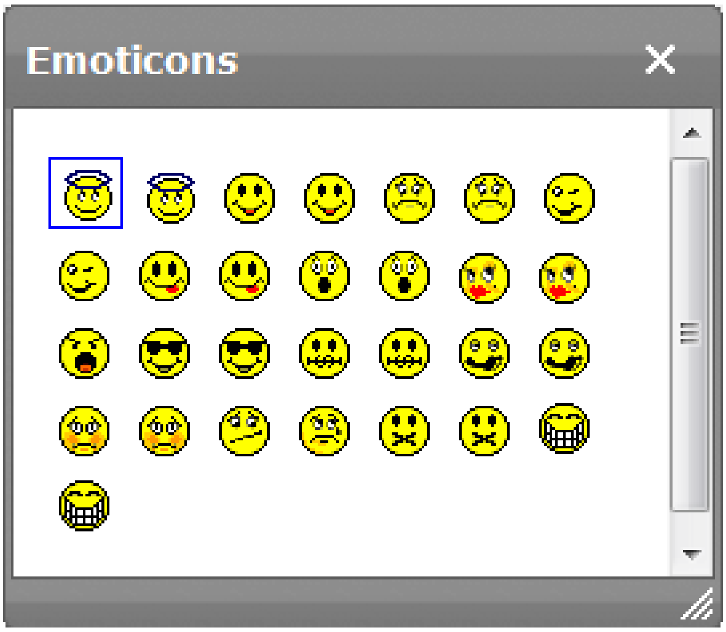
Deleting a replacement word

1. In the Workarea, click the **Content** tab.
2. Select a forum from the folder structure.
3. Click **View > Replace Words**.
4. Click either the Old Word or the New Word to delete.
5. Click **Delete**. A dialog box asks if you are sure you want to delete.
6. Click **OK**.

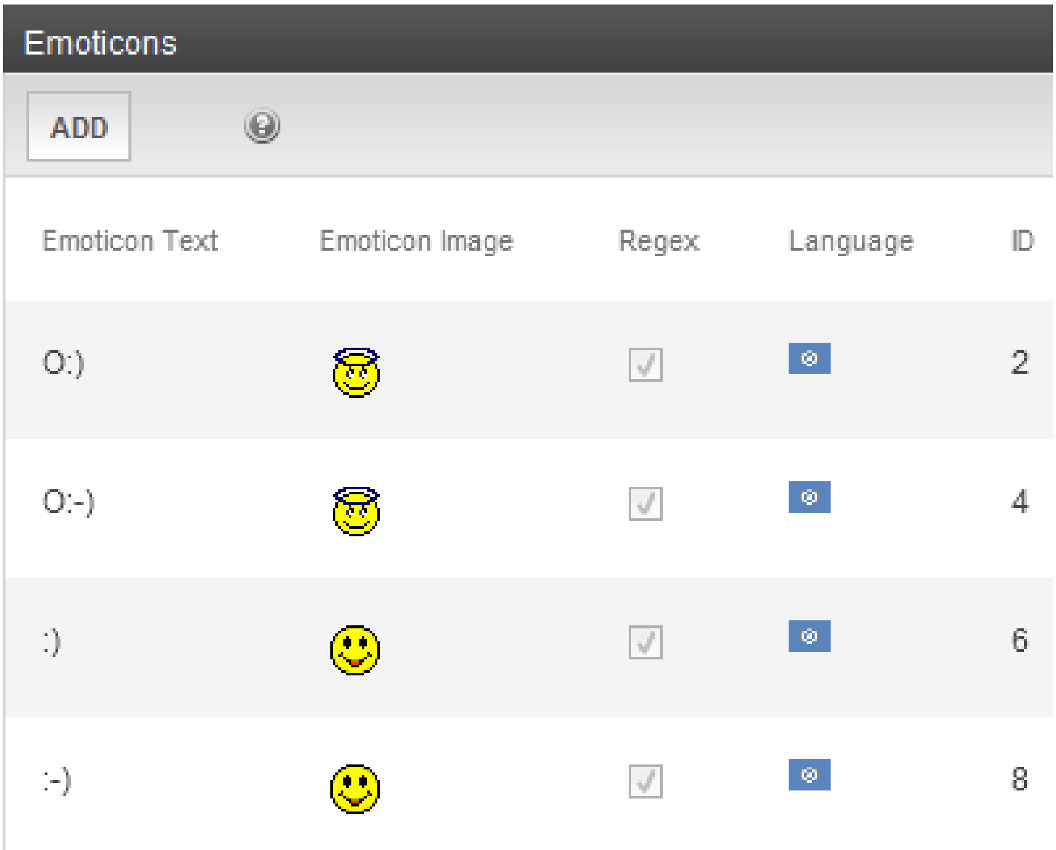
Adding emoticons to a post

IMPORTANT: This topic applies to the eWebEdit400 editor only.

An emoticon is an icon used to express emotion in a forum post. In the post editor, click the emoticon () symbol.



You can also enter a few characters that resemble the image. For example, to insert , enter `O:\)`. While working in a post, the user only sees the text. But when the post is saved, Ektron converts the text to an emoticon. In all subsequent work with the post, users see only the emoticon. You can add new emoticons at **Settings > Configuration > Discussion Boards > Emoticons**.



Creating or editing an emoticon

1. Within the Workarea, go to **Settings > Configuration > Discussion Boards > Emoticons**.
2. Click the emoticon text or image that you want to edit.
3. Click **Add** or **Edit**.
   - **Emoticon Text**. Enter or update the characters a forum participant enters to insert this emoticon.
   - **Emoticon Image**. Enter the name of the image file that appears after a user enters the above **Emoticon text** and saves the post.
   - **Regex**. See *Using regular expressions* on page 963.
   - **Language**. Select the emoticon's language from the drop-down list. If a forum is language-specific, only emoticons assigned to that language or all languages are available.

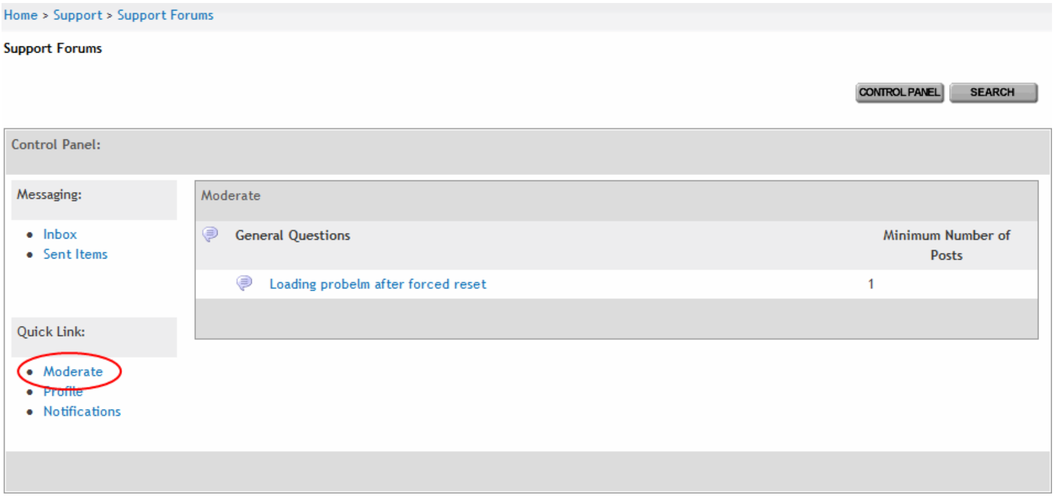
Deleting an emoticon

1. Within the Workarea, go to **Settings > Configuration > Discussion Boards > Emoticons**.
2. Click the emoticon that you want to delete.
3. Click **Delete**.
4. Reply to the confirmation message.

Moderating from the control panel

Users with forum moderate permissions can do so from the Control Panel by clicking the **Moderate** link.

1. Log in to the site and go to the forum.
2. Click **Control Panel**.
3. Click the **Moderate** link. The forum’s control panel appears with a list of items requiring approval.



4. Click the item you want to approve. From this screen, you can edit, approve, or delete a post.

Approving a post

PREREQUISITE

Users must be assigned the **Moderate** permission.

When defining a forum, you can check the **Moderate Comments** field. If you do, forum posts must be approved before they appear on the website. There are 2 ways to approve a post.

- From the website:
  1. Log into the site and go to the forum.
  2. Click **Control Panel**. The Control Panel appears.
  3. Click the **Moderate** link.
  4. Click the topic. The topic appears.
  5. Click **Approve**.
- From the Workarea's discussion board:
  1. In the Workarea, click the **Content** tab.
  2. Select a discussion board, then a forum.
  3. The forum’s topics appear in the right frame. Click the one that has the post that you want to reply to. (Unapproved posts have an Approval Needed icon in the left column.)

4. The next screen, View Topic, displays all posts to the selected topic.
5. Find the post you want to reply to. Unapproved posts have a yellow border.
6. Click **approve** under the post icon.

Setting up post reporting

You can let site visitors report inappropriate posts, such as spam or offensive posts.

When you set up forum post reporting, you add a **Report Post** button to the bottom of each post to let site visitors report posts. When a site visitor clicks **Report Post**, an email notification is sent to all forum moderators. Any moderator can review the post and decide to edit, delete, or leave it alone.

NOTE: Your Ektron Web server must be set up to send emails. See *Installing Ektron* on page 9.

1. From the Workarea, choose **Content**.
2. In the left panel, select a discussion board from the folder structure.
3. Select a forum.
4. Click **Properties** ( ).
5. Click **EditForum Properties**.
6. Check the **Moderate Comments** box.
7. Click **Save**.

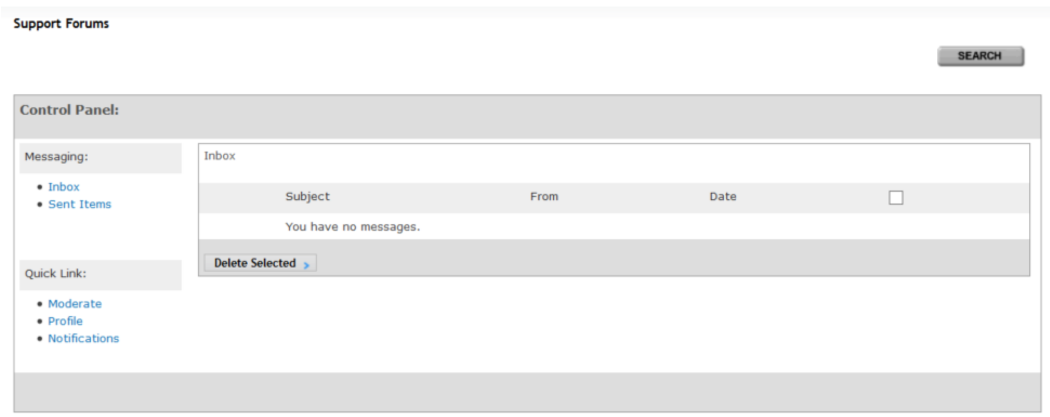
To edit the report post message, go to the Workarea and choose **Settings > Configuration > Discussion Boards > Messages** and select **ReportForumPost**.

Managing a discussion board on your website

This section explains how to manage a discussion board on your site.

Using the control panel

The Control Panel lets logged in users view your profile, read, reply to, and delete private messages. It also lets users with moderate permissions moderate the forum. The **Control Panel** button is located at the forum level.



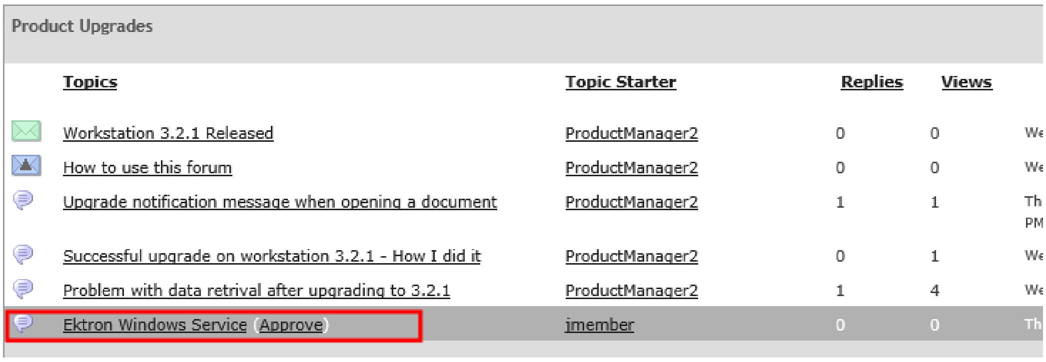
The Inbox view appears by default. From it, you can...

- read a message by clicking on it. A read message's icon changes from unread ( ) to read ( ).
- view information about the message sender by clicking the name.
- delete the message by clicking the corresponding check box then the **Delete** button.
- switch to a different view.
- check your subscriptions.
- reply to a message by clicking **Reply** ( ).

IMPORTANT: When replying to a private message, you add your response to the existing message. Only one message is created.

Approving a topic on your website

If a user who lacks moderate permission for a forum adds a topic, it needs to be approved. When viewing topics on a Web page, those requiring approval have a different background color.

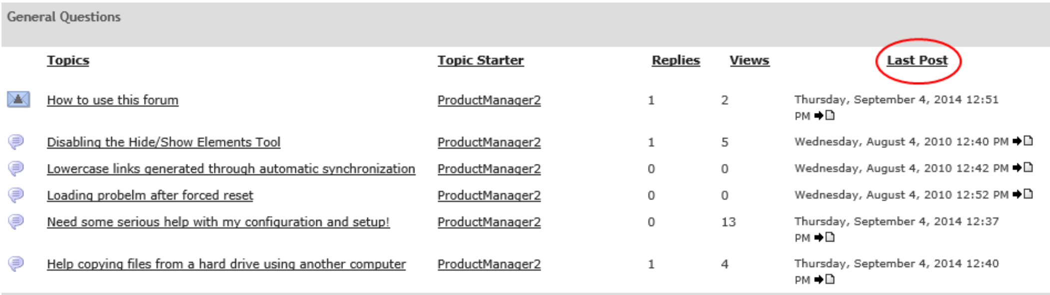


From this screen, you can click **Approve** next to the topic’s title. You could also click the topic’s title to view it and click **Approve** on that screen.

Sorting topics

1. Go to the Web page that hosts the discussion board.
2. Click the forum of interest.
3. Click a column title to sort by alpha or numerical order.

   On first click, items are sorted first by numeric (1-10) values, then by alpha values (A to Z). Click a column title a second time to sort the items in reverse. When first viewed, the list is sorted by **Last Post** date and time.



General Questions

	Topics	Topic Starter	Replies	Views	Last Post
	How to use this forum	ProductManager2	1	2	Thursday, September 4, 2014 12:51 PM
	Disabling the Hide/Show Elements Tool	ProductManager2	1	5	Wednesday, August 4, 2010 12:40 PM
	Lowercase links generated through automatic synchronization	ProductManager2	0	0	Wednesday, August 4, 2010 12:42 PM
	Loading probelm after forced reset	ProductManager2	0	0	Wednesday, August 4, 2010 12:52 PM
	Need some serious help with my configuration and setup!	ProductManager2	0	13	Thursday, September 4, 2014 12:37 PM
	Help copying files from a hard drive using another computer	ProductManager2	1	4	Thursday, September 4, 2014 12:40 PM

Deleting a topic

PREREQUISITE

Forum topics can be deleted by users who created them or users with the Moderate permission. This includes Membership users.

WARNING! When you delete a topic, its replies and posts are also deleted.

1. Go to the Web page that hosts the discussion board and click the forum of interest.
2. Click the topic you wish to delete.
3. Click **Delete Topic**. A dialog asks you to confirm.
4. Click **OK**.

Suppressing user information from the forum profile display

Generally, anyone browsing a discussion forum can view contributor information by clicking the user name. However, if the forum server control's `HideUserProfile` property is `true`, non-administrator users cannot see the profile, even if the **Private Profile** setting is set to Public. See also: Forum.

Administrators can see the profile, regardless of the `HideUserProfile` setting. The profile contains the following user information.

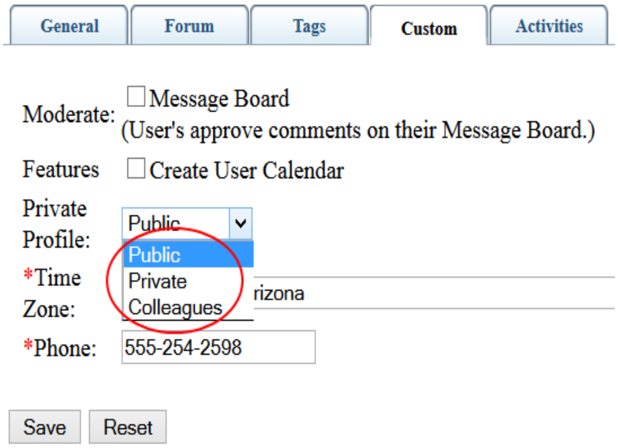
- **First Name**
- **Last Name**
- **Email**. email address
- **Joined**. date the user joined
- **Last Visit**. date the user last visited the site
- **Number of Posts**. the number of posts a user has contributed
- **Post History**. a list of the user's posts

How users control their profile's visibility

Users can determine if their profile is viewable via the **Private Profile** drop-down box on the Membership Registration screen and the Edit Profile screen.

NOTE: The Membership Registration screen appears where your developer inserts the Membership Server Control.

If **Private Profile** is set to **Private**, profile information is suppressed. If it is set to **Colleagues**, only a user’s colleagues can see the person's profile. If set to public, everyone can see a user’s profile information.



How administrators control the visibility of user profiles

If you want to suppress the display of user names as an administrator:

1. If the user is an Ektron*user*, go to **Settings > Users** and select a user.

   If the user is a *membership user*, go to **Settings > Community Management > Memberships > Users** and select a user.
2. In the User Properties area of the screen, check the **Private Profile** checkbox.

Outputting a forum as an RSS feed

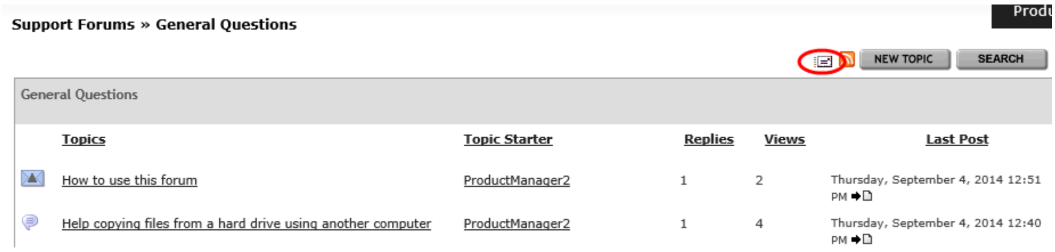
You can output a forum as an RSS feed by clicking the RSS feed button ( ). Each level of the forum has an RSS feed button. This lets you output a specific topic as an RSS feed.

```
<?xml version="1.0" encoding="UTF-8" ?>
- <rss version="2.0">
<!-- Generated by Ektron -->
- <channel>
  <title>Ektron Medical Center Forum</title>
  <link>http://test/webform.aspx</link>
  <description>Ektron Medical</description>
  - <item>
<title>Research</title>
<link>http://test/webform.aspx?g=topics&f=108</link>
  - <description>
<![CDATA[ Latest medical research ]]>
</description>
<pubdate>Mon, 7 Feb 2012 09:56:00 GMT</pubdate>
  </item>
```

```
</channel>
</rss>
```

Subscribing to a discussion board

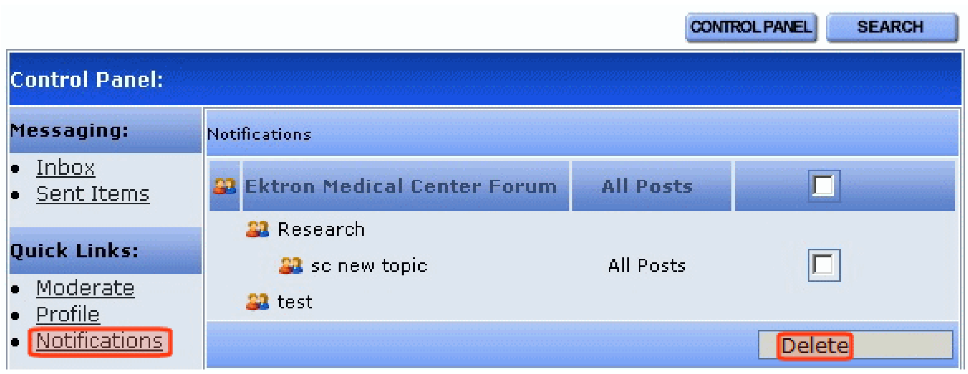
1. After logging into a discussion board, you can subscribe to a forum by clicking **Subscribe** (). The button appears at each discussion board level, so a user can subscribe to forums and topics of interest.



2. Select a notification type, listed below.
   - **All Posts**. notifies you when any post or reply is added
   - **Replies to Me.** notifies you when someone replies to your post
3. Click **Add Subscription**.

Reviewing subscriptions

To review forum subscriptions, go to the Control Panel and click **Notifications** in the lower left corner. A screen indicates each discussion board level to which you have subscribed.



Deleting a subscription

To delete a subscription, check the corresponding box and click **Delete**.

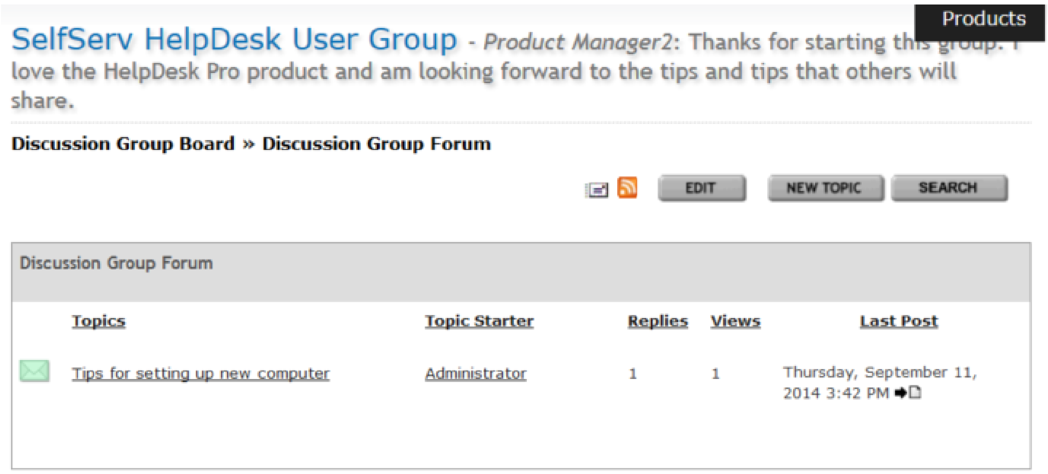
Sending a private message to a forum member

Logged-in users can send a private message to the person who created a post or reply. Only the sender and receiver can view private messages. This requires both users to be an Ektron or membership user.

1. Go to a post and click the user's name.
2. When the User Profile appears, click **Message**. The Message screen appears.
3. The **To:** field is filled automatically. You cannot add additional members.
4. Enter a subject.
5. Enter a message.
6. Click **Post**.

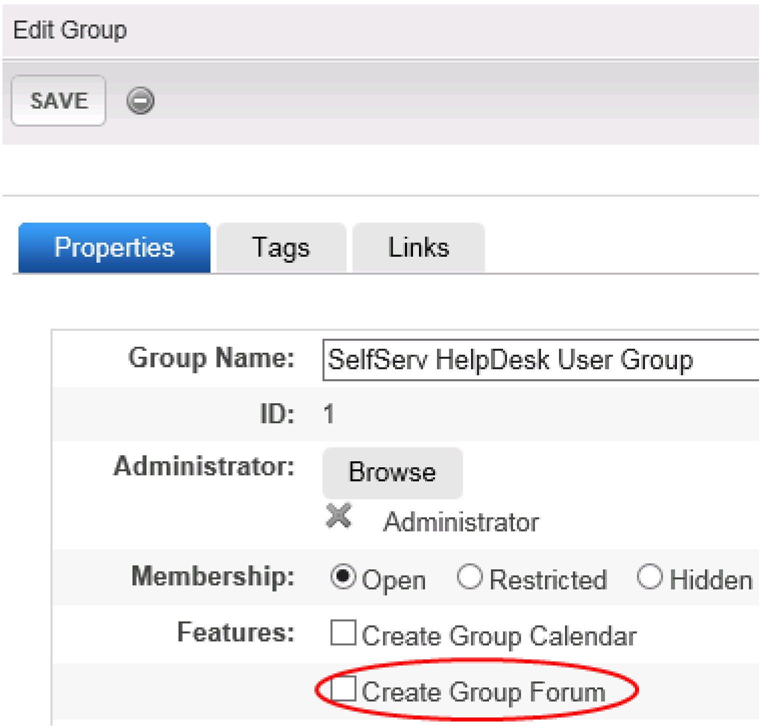
Managing a discussion board in a community group

A Community Group can have a discussion board, which supports community-based discussions that are limited to forum members. All discussion board features are available to a community group forum. See image below.



To use a group discussion board, first add it to the database. Each group needs to do this once. To add a group discussion forum database:

1. Log in to your website.
2. Go to your group Web page.
3. Click **Manage > Edit Group**. The Edit Group Link appears.
4. On the **Properties** tab, check the **Create Group Forum** box. After the group forum database is created, you cannot uncheck this box.



5. Click **Save**.

Discussion board server controls

Ektron provides 3 server controls for use with discussion boards.

- Forum. Places a discussion board on a Web page
- ActiveTopics. Displays the most active or most recent topics and posts
- PostHistory. Displays a user's list of posts

After creating at least one hierarchy of discussion board elements within the Workarea, place a Forum server control on a Web page. If you want to require site visitors to authenticate, that Web page should also contain:

- a Membership server control (or a link to page that has one). This lets site visitors/membership users register for discussion boards.
- a Login server control that lets the site visitor/membership user log in

NOTE: Add text below the Login server control to remind site visitors to enter their email address at the **User** field.

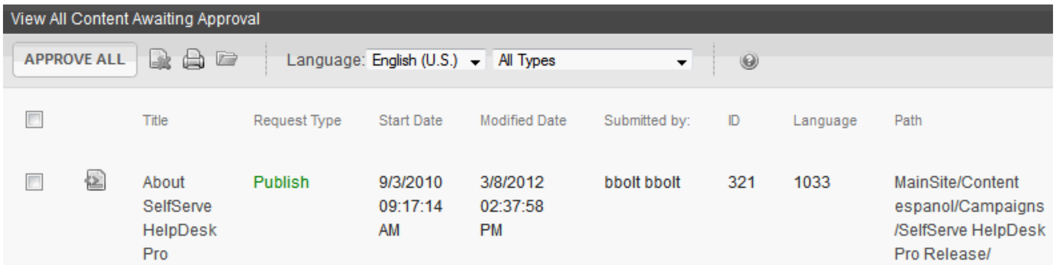
Working with content reports

The Workarea's **Reports > Contents** folder contains reports to help you manage the workflow of Ektron content. In most cases, you choose a report that corresponds to a content status, then view content in that status. If appropriate, you can perform tasks on the content. For example, you can check in checked-out content.

This chapter explains how to access the Workarea's reports folder, set criteria that determine the information on the reports, and actions you can perform on them.

Approval report

All content awaiting your approval appears on this report. Thus, you can quickly find all such content without searching every folder.



- **Title**. Title of content.
- **Request Type**. **Publish** or **Delete**.
- **Start Date**. Start date, if any, assigned to the content. Determines when approved content will go live on website.
- **Date Modified**. Date the content was most recently changed.
- **Submitted By**. User who submitted content for approval.
- **ID**. Content ID number.
- **Language**. Content language.
- **Path**. Path to folder where content resides.

From the approvals report, you can approve or decline content submitted to you.

1. Go to the **Workarea > Reports > Contents** screen.
2. Click the content you want to approve or decline. The View Content Awaiting Approval page appears.
3. Perform an action.
   - **Publish**. Accept content changes and publish.

     If there is a subsequent approver in the content's workflow, a **Submit** button appears instead. If you click **Publish** but the content has an incomplete task assigned to another user, the content cannot be published. Instead, a message appears.

   - **Decline**. Reject changes and keep current content on website.
     You are prompted to enter a comment for the decline. The author who made

the change is notified by email.

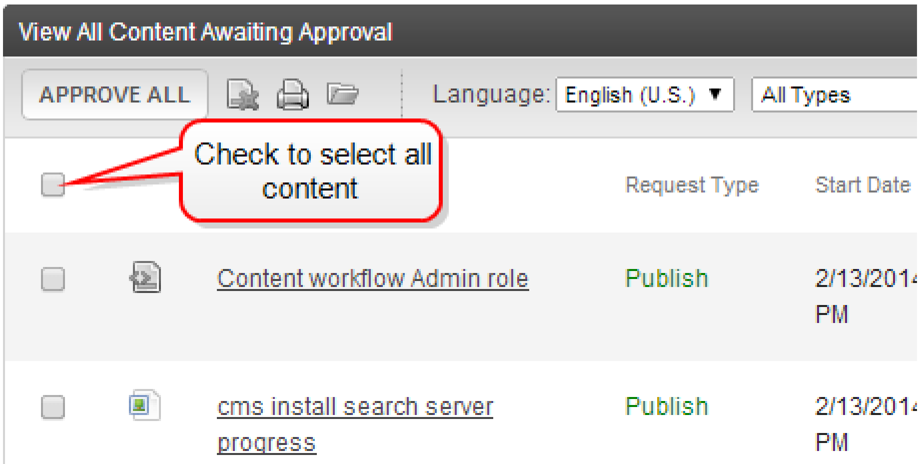
The content as edited by the last editor remains in the file. If you do not want that content to remain, choose **Edit**.

- **Edit**. Check out content and change it if desired.
- **View Published/Staged**. Toggle between Published and Submitted versions of content. This can help you compare differences.

The content is either submitted to the next publisher, published immediately, or deleted, depending on its workflow.

Approve All option

You can approve several content items at once. To do so, check the box in the header row then click **Approve All**.



You are prompted to insert a comment, which is included in the notification email. The comment cannot begin with a special character.

Checked in content report

Displays all the content currently in a checked-in status.

- **Title**. Title of content.
- **ID**. ID number assigned to content by Ektron.
- **Last Editor**. Last user to edit the content.
- **Date Modified**. Date and time content was last edited.
- **Path**. Folder location of content in Ektron website.

Checked out content report

Displays all content currently in a checked out status.

- **Title**. Title of content.
- **ID**. ID number assigned to content by Ektron.
- **Last Editor**. Last user to edit the content.

- **Date Modified**. Date and time content was last edited.
- **Path**. Folder location of content in Ektron website.

After selecting content, check it in using the **Checkin** button.

New content report

Displays content in a *new* state, that is, it was created and saved but never published.

- **Title**. Title of content.
- **ID**. ID number assigned to content by Ektron.
- **Last Editor**. Last user to edit the content.
- **Date Modified**. Date and time content was last edited.
- **Path**. Folder location of content in Ektron website.

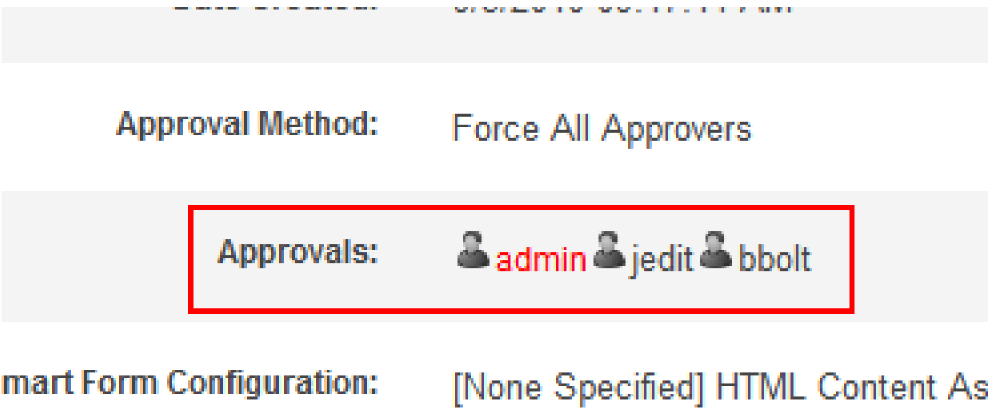
Submitted content report

Displays all content in a submitted state. The report contains the following information.

- **ID**. ID number assigned to content by Ektron.
- **Last Editor**. Last user to edit the content.
- **Date Modified**. Date and time content was last edited.
- **Path**. Folder location of content in Ektron Workarea.

While viewing the Submitted Content report, you can view the content's position is its workflow. Then, ask those individuals to complete their approval.

1. From the Submitted Content Report, click the content title. The View Content page appears.
2. Click the **Properties** tab. The **Approvals** line indicates the content's position in the workflow. Red text indicates the current approver.



Content pending start date report

Displays all content that was approved, but whose start dates haven't occurred. Each content item on the report contains the following information.

- **Title**. Title of content.
- **ID**. ID number assigned to content by Ektron.
- **Last Editor**. Last user to edit the content.
- **Start Date**. Date and time content will go live on website.
- **Path**. Folder location of content in Ektron website.

You may edit content on the Pending Start Date Content report by clicking the content you want to view and using the toolbar at the top of the page, perform any action available.

See also: *Scheduling content* on page 640

Refresh reminder report

Displays all content whose end date has passed and whose archive option is set to **Refresh Report**. This content is still visible on the website. Its appearance on this report indicates that it is due for review.

- **Title**. Title of content.
- **ID**. ID number assigned to content by Ektron.
- **Last Editor**. Last user to edit the content.
- **Date Modified**. Date and time the content was last updated.
- **Path**. Folder location of content in Ektron website.

If you review content and decide it should no longer appear on your site, follow these steps to remove it. The content will be visible if you browse to it through the Workarea, but won't appear to site visitors.

1. From the Refresh Reminder Report, click the content.
2. From the View Content screen, click **Edit** ().
3. Click the **Schedule** tab.
4. Under **Action on End Date:**, click **Archive and remove from site (expire)**.

See also: *Scheduling content* on page 640

Expired content report

Displays all content whose end date has passed. Such content is no longer visible on the website.

- **Title**. Title of content.
- **ID**. ID number assigned to content by Ektron.
- **Last Editor**. Last user to edit the content.
- **End Date**. Date and time the content expired.
- **Path**. Folder location of content in Ektron website.

You may edit any content on the Expired Content report by clicking the content you want to view and using the toolbar at the top of the page to perform any action available.

See also: *Scheduling content* on page 640

Content to expire report

Lists all content whose end date will occur between today and a number of days that you specify. For example, if today is January 1 and you select 10 days, the report lists all content whose end date is January 1 through January 10.

After viewing the report, you can click any content and proceed to the View Content screen for it. From there, you can edit information about it, including its end date if desired.

- **Title**. Title of content.
- **ID**. ID number assigned to content by Ektron.
- **Last Editor**. Last user to edit the content.
- **End Date**. Date and time the content expired.
- **Path**. Folder location of content in Ektron website.

To select the report’s date range, you have 2 options:

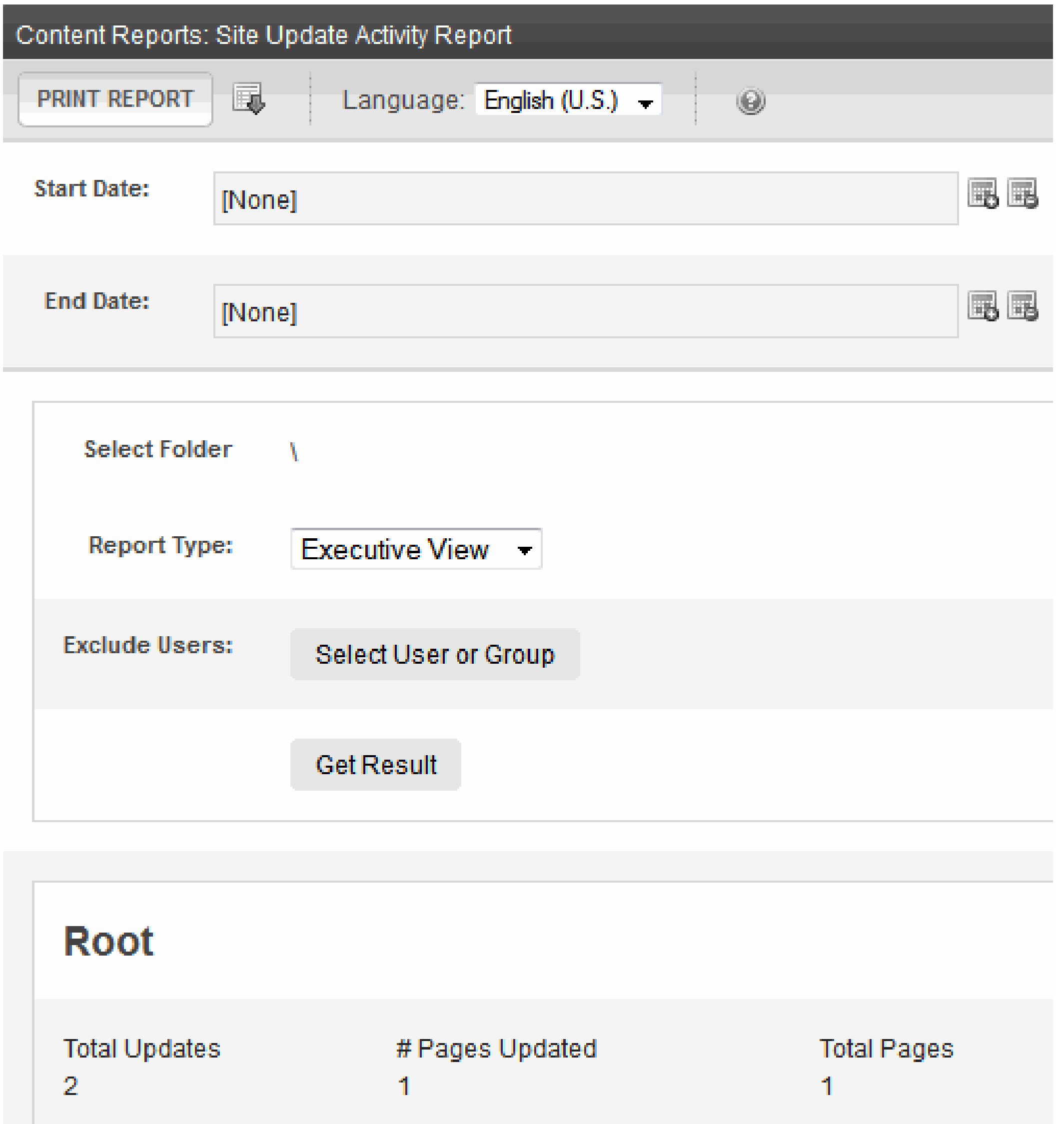
- Enter a number in the **Days** field. Then click **View Reports** ( ).
- Select a number from the drop-down list under the **Days** field

After selecting a number of days, click **view** ( ) to see all content that will expire within that time frame.

See also: *Scheduling content* on page 640

Site update activity content report

Provides a snapshot of the freshness of your website content. Specifically, it lists how many content items were published within a folder and date range you select, organized by folder. For example:



To choose which content items appear on the report:

1. Choose a **Start Date** by clicking the calendar icon. You also can choose an **End Date** using the same procedure. (Today is the default end date.)
2. At the **Select** field, choose a folder. The Root folder is the default selection. (Only folders for which you have read-only or greater permission appear.) To change that selection, click the folder name. To select all folders on the screen, click the **Select All** checkbox. Otherwise, select folders by clicking the corresponding checkbox. There is also an option to **Include Sub-folders** of the selected folders.
3. Choose the **Report type**, which determines the information you will see on the report.
   - Executive View
     - name of each page that was published
     - how many times it was published
     - date it was last published

- users who published page
- total numbers are *not* provided

- Detail View Example

Root

Total Updates	# Pages Updated	Total Pages
1	1	1

Page Name	Updates	Last Updated	User Name
Sample Content Block	1	2009-08-26	John Edit

- Combined View. Combination of Executive and Detail views.

4. To exclude users or user groups from the report, use the **Exclude Users** field. For example, you want to see all updates other than those you have completed. When you click **Exclude Users**, an alphabetical list of users appears, followed by user groups.
5. Click **Get Result**.

Asynchronous log file report

When the Message Queuing and Asynchronous Process are set up and running, you can access a report of any problems with the Asynchronous Processor. You can also email it to any Ektron user.

PREREQUISITE

Define the path to your website's asynchronous processor service on the **Settings > Configuration > Setup** screen's **Asynchronous Processor Location** field.

To access the Asynchronous Process log:

1. From the Workarea, click **Reports**.
2. Click **Contents > Asynchronous Log File Report**.
3. Any problems appear on the screen.

Log File

```
Date: Tuesday, November 01, 2005 4:16:31 PM
Exception Message: Access to Message Queuing system is denied.
Stack Trace: at System.Messaging.MQCacheableInfo.get_ReadHandle()
at System.Messaging.MessageQueue.StaleSafeReceiveMessage(UInt32 time
at System.Messaging.MessageQueue.ReceiveCurrent(TimeSpan timeout, Int3
at System.Messaging.MessageQueue.Receive()
at Ektron.Services.EktronAsyncProcessor.a.a()

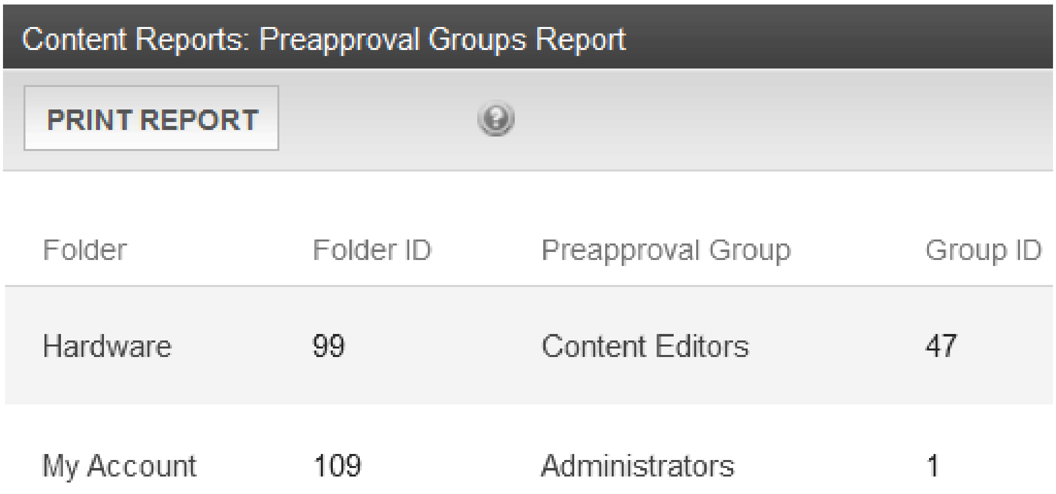

Date: Tuesday, November 01, 2005 4:16:33 PM
Exception Message: Access to Message Queuing system is denied.
Stack Trace: at System.Messaging.MQCacheableInfo.get_ReadHandle()
at System.Messaging.MessageQueue.StaleSafeReceiveMessage(UInt32 time
at System.Messaging.MessageQueue.ReceiveCurrent(TimeSpan timeout, Int3
at System.Messaging.MessageQueue.Receive()
at Ektron.Services.EktronAsyncProcessor.a.a()
```

Search phrase report

See *Using a search phrase report* on page 376.

Preapproval groups report

Lists all preapproval groups assigned to folders within Ektron. To access it, go to **Workarea > Reports > Contents > Preapproval Groups**. See also: *Setting up an automatic task for pre-approving content* on page 1356


Content Reports: Preapproval Groups Report

PRINT REPORT

Folder	Folder ID	Preapproval Group	Group ID
Hardware	99	Content Editors	47
My Account	109	Administrators	1

Bad link report

Lists invalid links to external URLs within your content. (An invalid link returns an error code to your browser.) The report lists the following information about each item that contains a bad link.

- title
- error description
- Source, that is, item type followed by information about the item
  - if the error is in a content block, you see **Content** followed by its id number and language locale id
  - if the error is in a Smart Form, you see **Smart Form** followed by its ID number
  - if the error is in a menu, you see **Menu Item (11,0,1033)**. The parameters are: menu ID, menu item ID, and language ID.
  - if URL Aliasing is on, you see **ASPX Template** followed by the template name
- the anchor (`<a>`) tag to which the bad link is assigned
- URL that cannot be resolved (labeled **Invalid Link**)

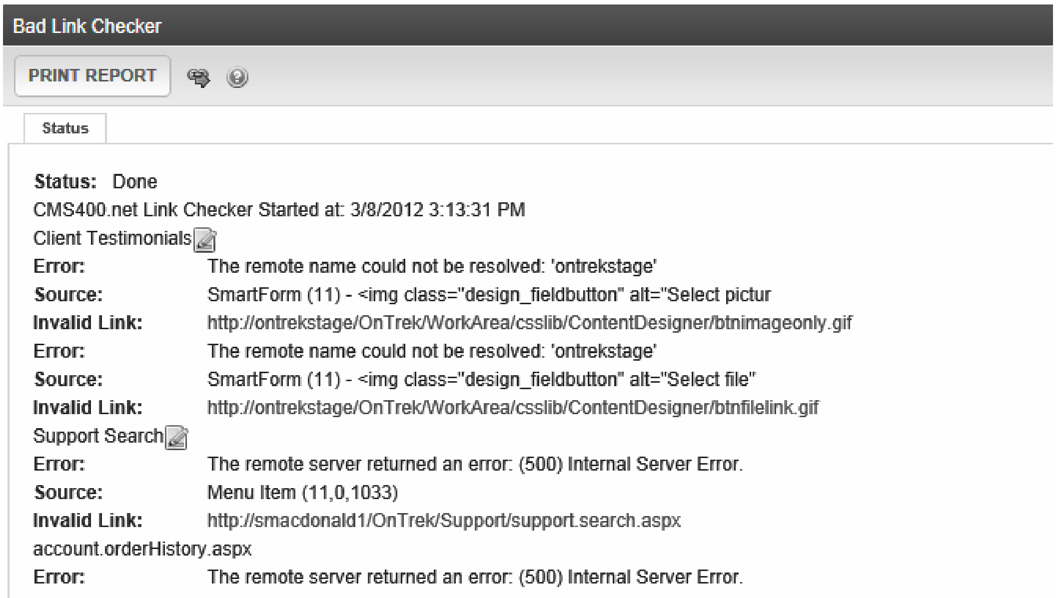
NOTE: The report does not check quicklinks embedded in the content.

The report scans the following types of content.

- Published HTML content
- Published XML content
- HTML forms
- XML Smart Forms
- menus
- active system templates

When the scan is complete, the report lists any item that includes an invalid URL. From the list, you can click a button to access the item, then update or remove the bad link.

To run the Bad Links Report, go to **Reports > Contents > Bad link report**. You immediately see its status, either Done or Running.

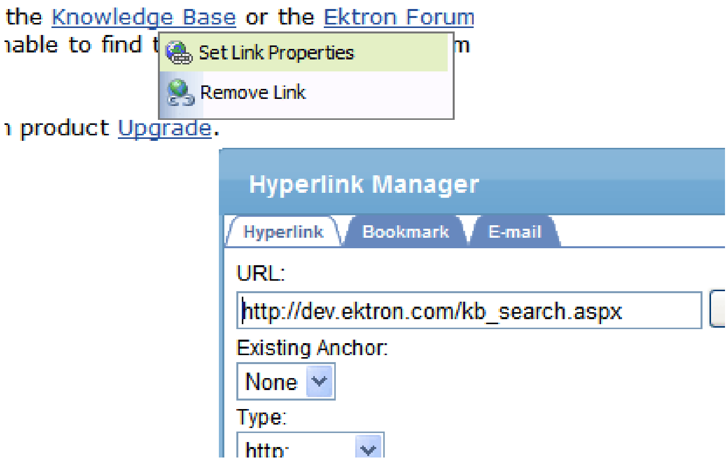


- To begin, click **Check Links**. As the report progresses, existing data is replaced by new data.
- While the report scans content, you can work in other areas of Ektron and even sign off. These actions have no effect on the collection of data.
- After content is scanned, the report’s status changes to **Done**. If desired, print the report by clicking **Print**.
- To launch the broken link in a browser, move the cursor over it and click when the cursor turns into a hand.

Fixing a bad link

1. Click **Edit** ( ).
2. Select the indicated text.
3. Right-click and select **Set Link Properties** to access the hyperlink dialog.
4. Update or remove the bad link.

5. Save your changes.



Excluding pages from the bad link report process

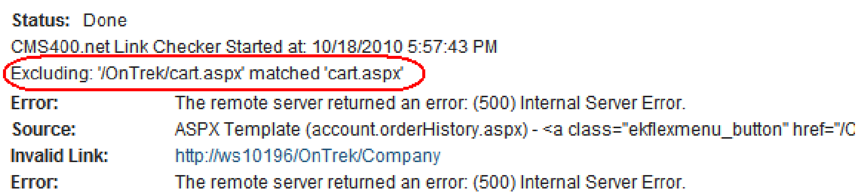
You can exclude links or pages from the Bad Link Report process because it is unnecessary or undesirable to test them. For example, you want to exclude pages with

- links that log out of the site or Workarea
- links that go to Pay-per-Click
- links that start another process or register an event
- links to new content you have not published

To exclude pages from this process:

1. Edit the file `[siteroot] > Workarea > ekbadlinkrpt.excludes`.
2. Enter a string to exclude—one per line. Any URL that contains this string is excluded.
   Examples:
   - *gif* would exclude all links ending with *.gif*
   - */commerce/cart* excludes links to */commerce/cart.aspx* and /commerce/mycart.aspx.
3. Save the file.

The following shows an excluded URL on the Bad Link Checker status page.



Content flags report

Display a list of flags assigned to content. See also: *Defining flags for content* on page 1590

Content reviews report

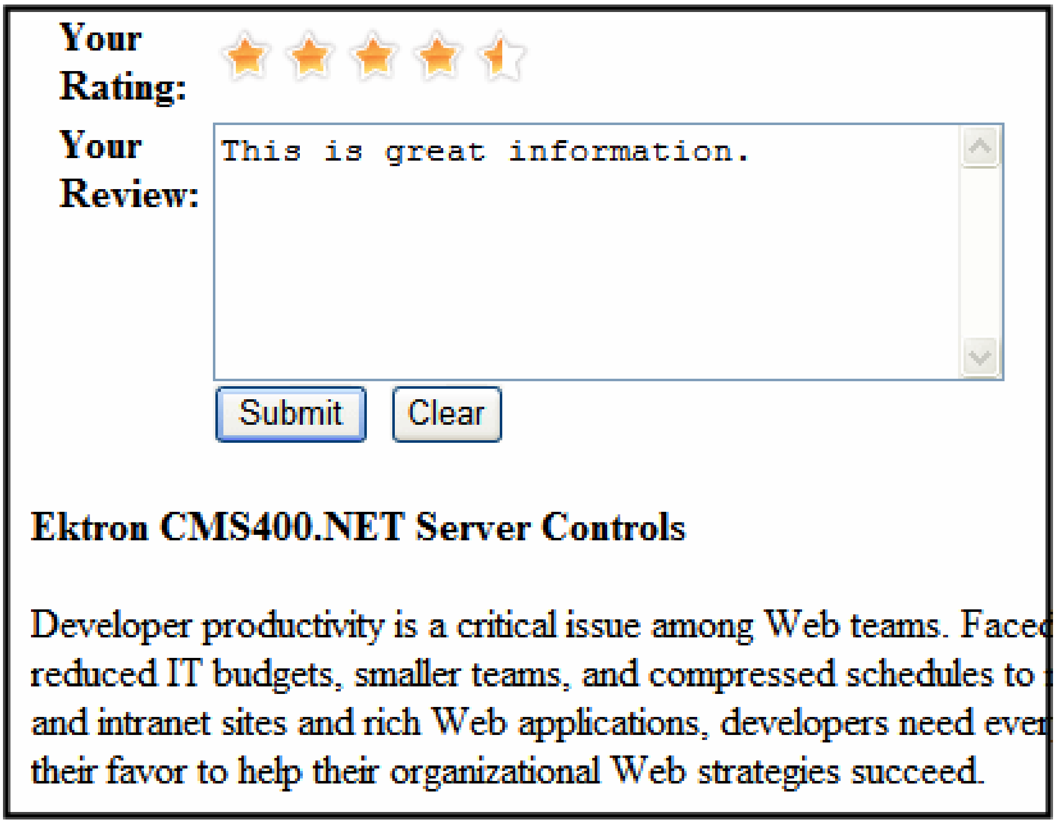
Has pending reviews. See *User-ranking of content* on the next page for more information. See also: *Viewing pending reviews* on page 988

User-ranking of content

The Content Review feature lets you:

- place a star-based scale on any page of your website
- let users apply full or half-star rating increments and a comment
- add reviews, depending on how the feature is used
- moderate the review comments
- display reviews and comments next to content for others to see
- run reports to find the highest-rated content; tweak poorly-rated or reviewed content to achieve optimal ratings
- control which reviews get posted through a moderation feature

The ContentReview server control enables Ektron users, membership users, and site visitors to rate and review content on a Web page, and lets you display the reviews on your site.

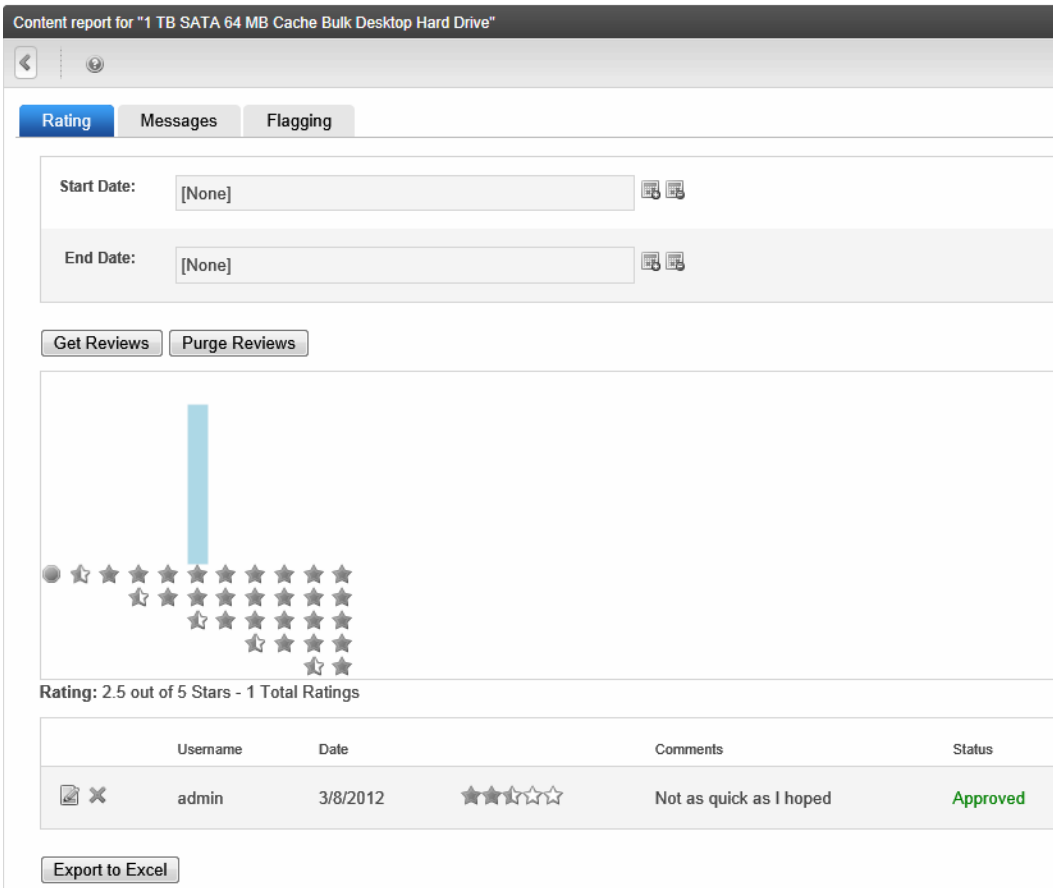


Ektron restricts users to one review per page. If a regular or membership user logs in before rating a piece of content, Ektron remembers the user ID. For any other site visitor, Ektron places a cookie on the person's computer. So, when a page with a ContentReview server control is visited, Ektron checks the user ID and cookie. If neither exists, it displays a rating scale. If the user already rated the page, the user can edit the review but not enter a new one.

NOTE: If you are not logged in as an Ektron or membership user, the browser must have cookies enabled to submit a content review.

Viewing a history of reviews

1. Go to **Workarea > Content >** the folder that contains the content.
2. Click the content item.
3. Click **View Content Reports** (). (For an eCommerce catalog entry, select **Reports > Content Statistics**.) The **Rating** tab is selected by default. If desired, enter a range of start and end dates.



4. Click **Get Reviews**.
5. If Microsoft Excel is installed on your computer, you can export the ratings detail to Excel for further data manipulation. To do so, click **Export to Excel** at the bottom of the Content Report.

Moderating reviews

Ektron lets you *moderate* reviews. This means that a review must be approved by an Ektron user who has Edit permission for the content before it appears on your site. You enable or disable this capability via each ContentReview server control's

`Moderate` property. The options for authorized users to moderate reviews are as follows.

- **Workarea > Smart Desktop > Content Reviews**
- **Workarea > Reports > Contents > Content Reviews**
- **Content Rating** screen associated with a content item

Upon viewing a pending review, an authorized user has 3 choices.

- Approve it. Your website displays the review
- Decline it. It is stored with the content's review history but is not visible on your site
- Edit it. Update then approve it; your website displays the edited version

If a ContentReview server control is moderated, the following occurs.

- a site visitor sees a submitted review only after it is approved.
- an Ektron user can view the status of his or her review by logging into the Workarea and clicking **Reports > Contents > Content Reviews**.

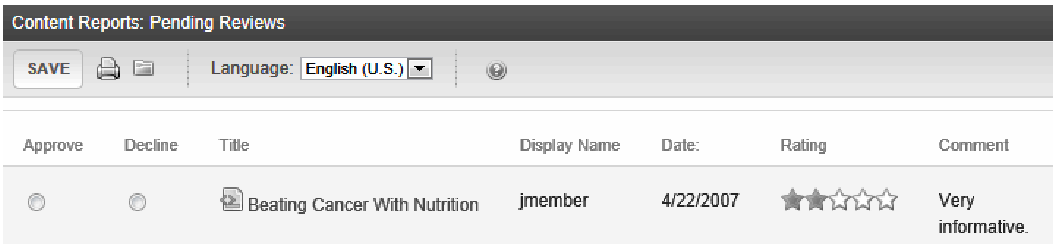
If a review was rejected or has been pending for too long, the user can submit another.

Viewing pending reviews

1. From the Smart Desktop, click the Content Review widget.

   You can approve or decline reviews from the Content Review widget. But if you click **View All>** and proceed to the Pending Reviews screen, you have additional options.

2. Click **View All>**. The Pending Reviews screen appears. You can also access the Pending Reviews screen from the **Workarea > Reports > Contents > Content Reviews**.
3. From there, you can:
   - Approve or decline a review. Click the appropriate radio button

   - Edit a review's rating, review, or status. click its title and an edit screen appears. Change as needed.
   - Print pending reviews. click **Print** ().
   - Email. Click **Email** () to email this report to Ektron users. Next, select recipients, then click **Email** ().
   - Filter reviews by folder. Click **Folder** () and go to the folder that contains pending reviews. Then, click **Save**.

- Filter reviews by language. from the Language drop-down, select the language of the pending reviews.

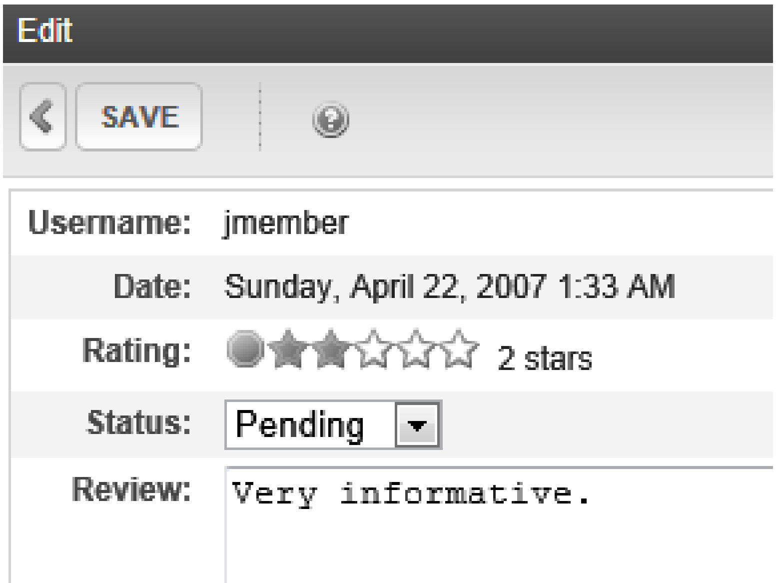
> **NOTE:** To delete a review, use the Content Review Screen. See also: *Moderating reviews from the content review screen* below

4. After you approve or decline reviews, click **Save**. Approved reviews appear on the site.

> **NOTE:** A site visitor can change his or her review at any time, even if its status is pending or rejected; then, the information is updated in the Workarea, and the review's status changes to pending.

Moderating reviews from the content review screen

1. In the Workarea, go to the content item.
2. Click **View Content Reports** ( ).
3. Click the **Rating** tab.
4. Click **Get Reviews.** A list of reviews appear for the content.
5. Click the date of content to be moderated. The View Content Review screen appears.



- To change information on this screen, click **Edit**. From the Edit screen, you can change the rating, review and status. When finished, click **Save**.
- To delete the review, click **Back** ( ) then **Delete** ( ).

Purging review data

1. Within the Workarea, go to the content.
2. Click **View Content Reports** ( ).

3. Select the date range of the data you want to purge using **Start Date** and **End Date**.
4. Click **Purge Reviews**.
5. Click **OK** to the confirmation message.

14

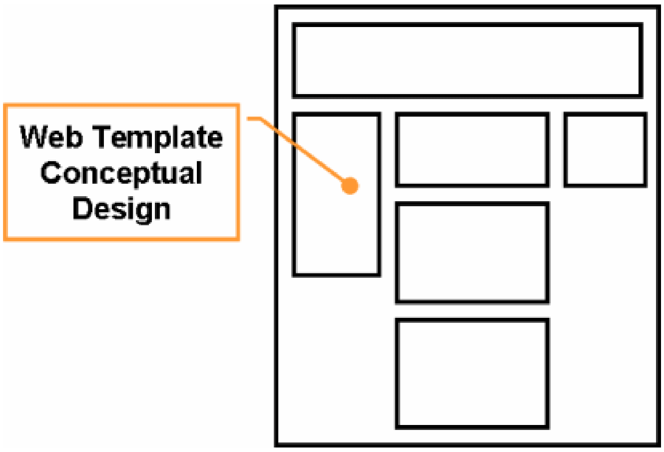
Creating Web pages with PageBuilder

PageBuilder lets you easily create new pages on your website. The page template that you choose is initially created by a developer, but you provide final content, design, and placement of functionality on the Web page.

The PageBuilder work flow has the following stages:

1. Define the "look and feel" for your website.

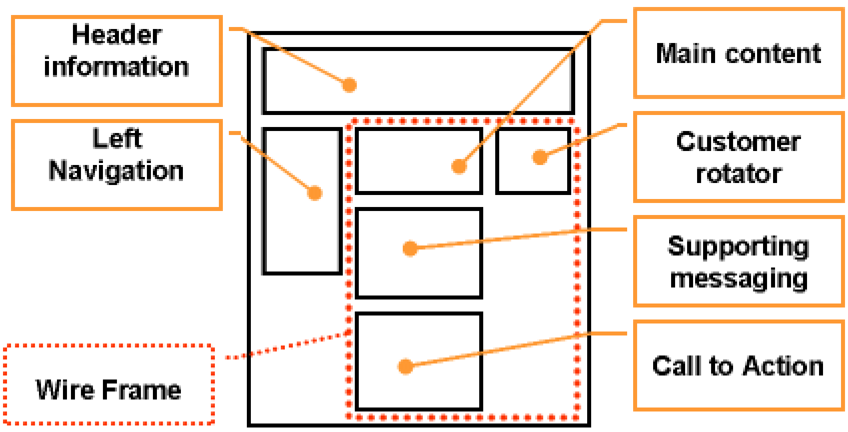
   Stakeholders may include the CIO, the marketing team, Ektron administrators, Web designers, and developers. When a consensus is reached, the marketing team defines the page layout and presents it to the whole team for review and approval.

2. Create the wireframe templates.

   A developer creates a wireframe template, which is the basic architecture for a Web page. The developer adds dropzone user controls where non-technical users into which content authors place functional widgets and manage the content, design, and messaging.

   Developers manage the level of control non-technical users have. For example, a developer can configure limits for the width of dropzones. The developer should understand the requirements and use, modify, or build widgets based on the requirements. PageBuilder lets IT develop the back-end of a system and address the technical nuances that today’s websites generate.

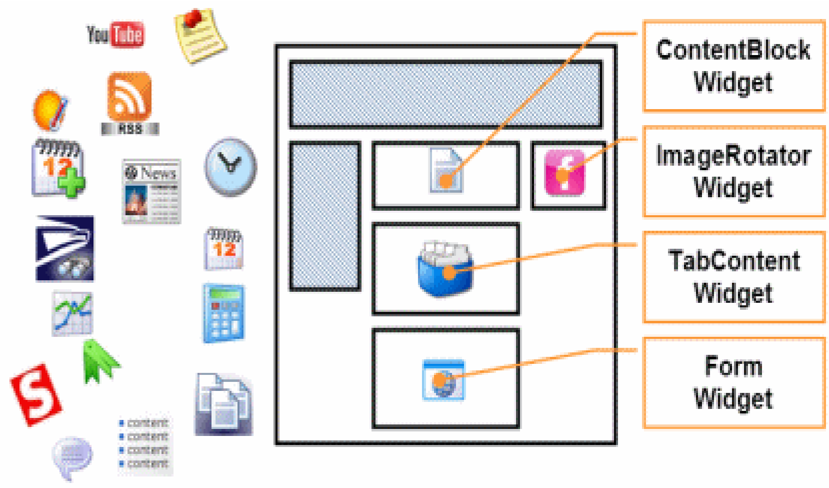
   

3. Create permissions for content authors.

   After a wireframe is created, an administrator assigns the wireframe to a folder, creates a page, and chooses the widgets that user can place on the page.

4. Build and maintain Web pages.

   When wireframe templates are available, you choose the page template you want to use and create new pages, drag-and-drop widgets, edit properties, and so on. You create and maintain content.



PageBuilder pages have the same business-level controls as content blocks. Like other Ektron content, PageBuilder pages maintain permissions, approval chains, enable SEO (through metadata), taxonomy, Aliasing, and allow users to view histories and restore past versions.

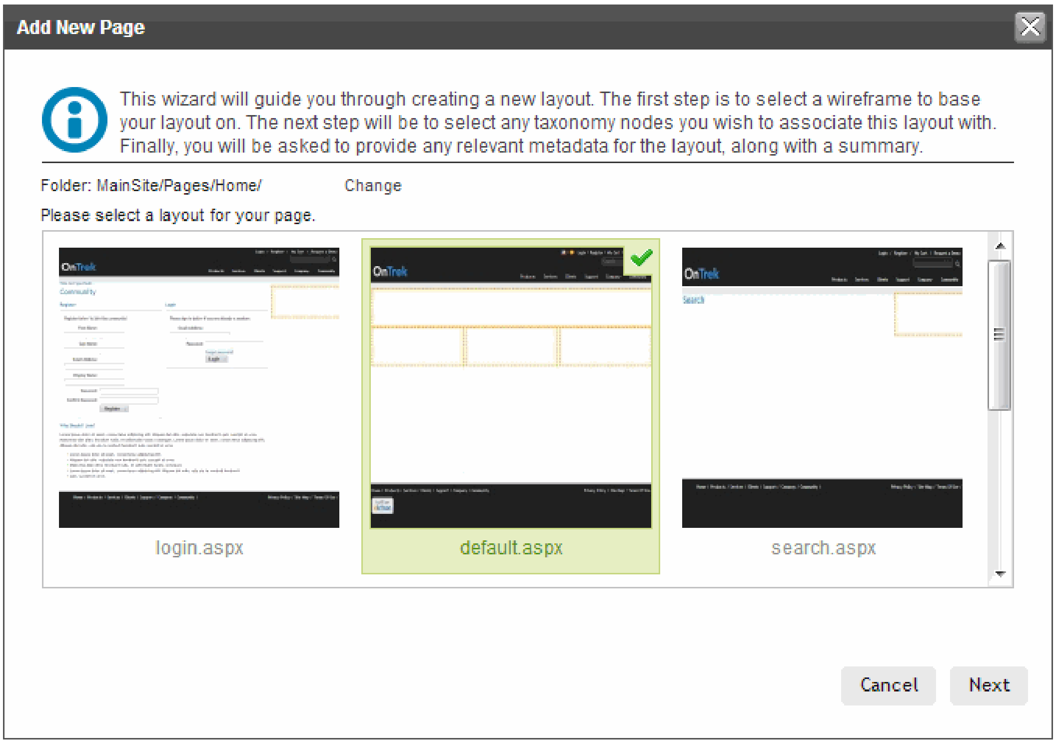
Approvers can preview PageBuilder pages before they go live, and pages can be cloned and then modified to maintain consistency across campaigns or to support A/B split testing.

Creating PageBuilder pages

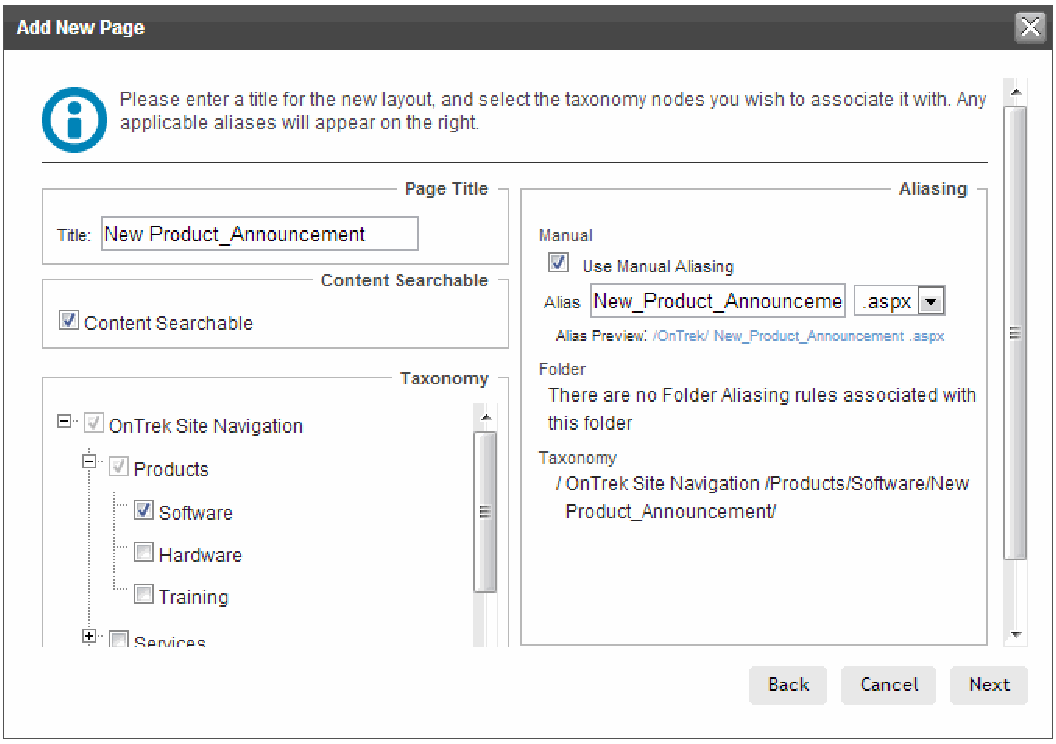
You can create a new PageBuilder page from the PageBuilder menu on your website, or from the Workarea. You must have permissions as a content author to log in and make changes to your website. See *Defining roles* on page 1464

Creating a PageBuilder page from your website

1. Log into your website.
2. Open the PageBuilder menu and choose **File > New Page**. The Add New Page wizard appears.



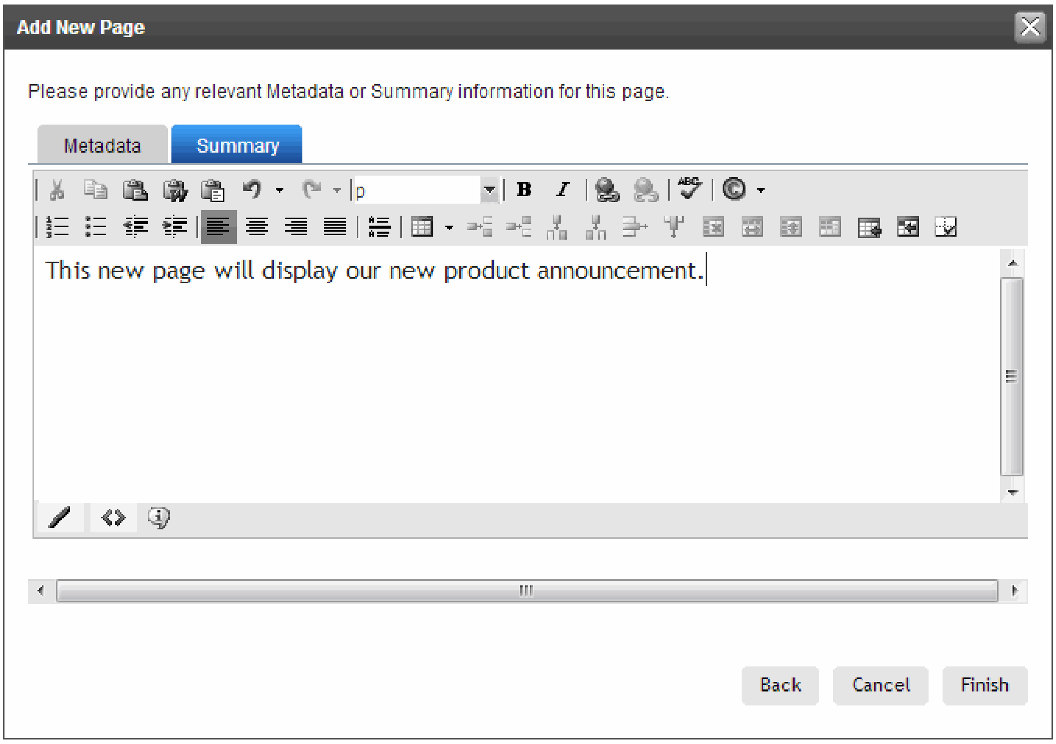
3. Click on your choice of template. It is highlighted and shows a check mark on it.
4. Click **Next**. The wizard shows fields to define your new page.



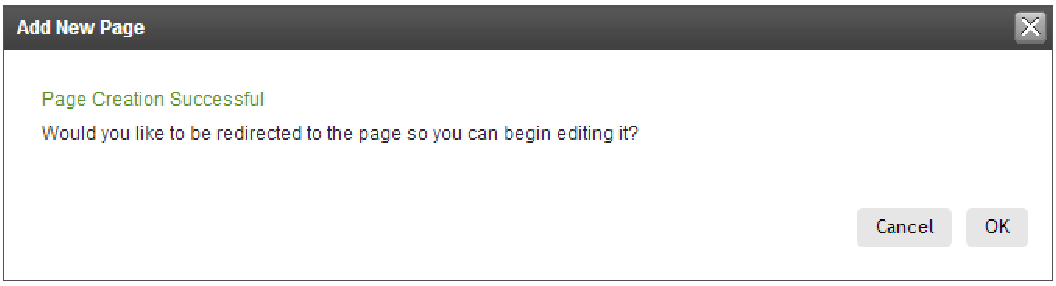
5. Enter a title in the **Title** field, enable **Content Searchable**, and choose a taxonomy. By default, the Manual Alias matches the **Page Title**.

IMPORTANT: You should use automatic aliasing in most cases because you cannot standardize an aliasing pattern with manual aliasing. Automatic aliasing standardizes alias naming. See *Creating automatic URL alias rules* on page 1308 for information about automatic aliasing.

6. Click **Next**. The wizard shows metadata and summary information that you can enter.



7. Click **Finish**. A confirmation dialog box appears.



8. Click **OK** to start editing the page.

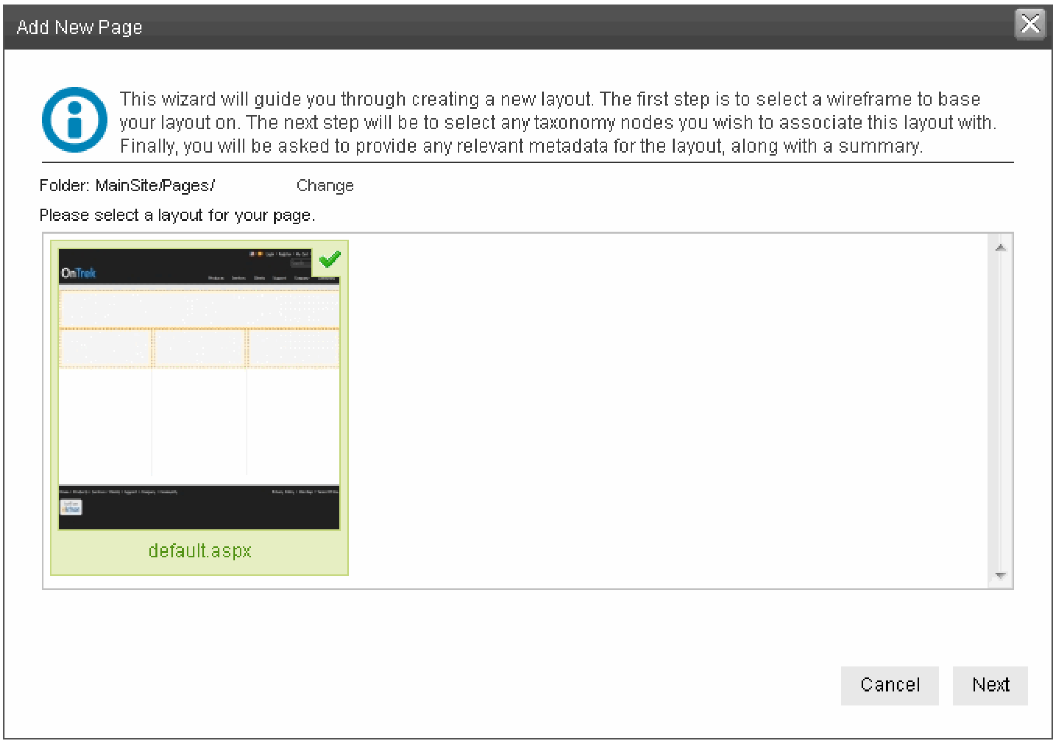
Creating a PageBuilder page in the Workarea

PREREQUISITE

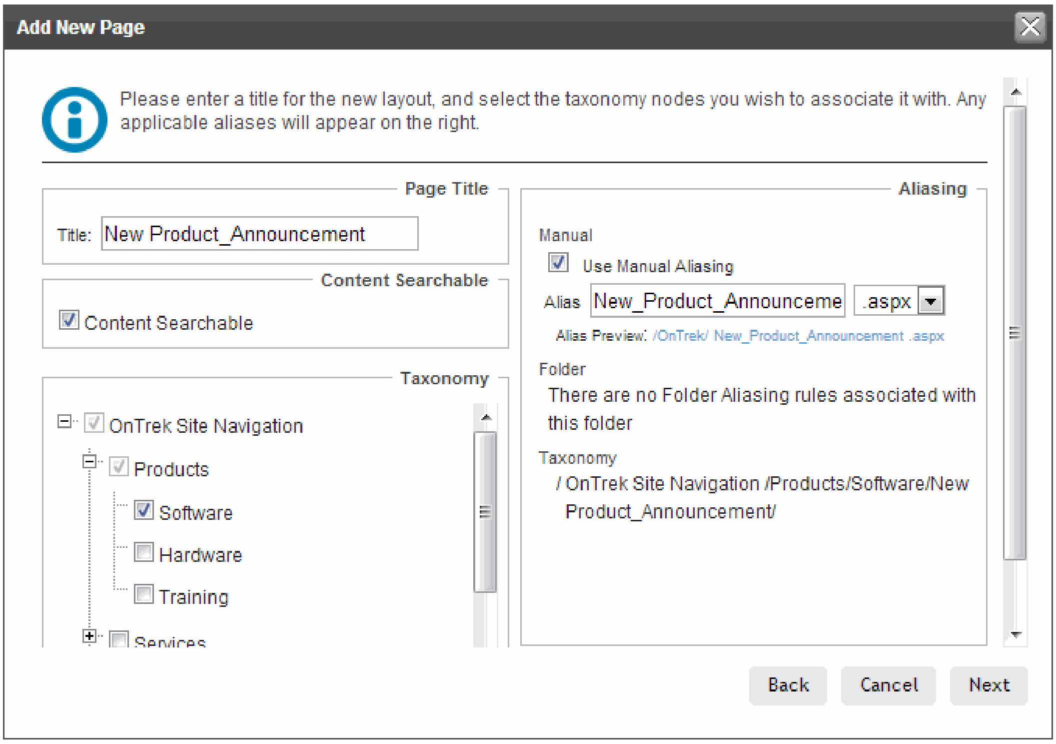
You must have wireframes already created in a folder. See *Assigning the PageBuilder wireframe to a folder* on page 1017.

1. Click on the Pages folder (or one of its subfolders) where you want to add the new page.
2. Choose **New > Page Layout**.

3. The Add New Page screen appears. (Because only one template is assigned to the folder, it appears as the default.)

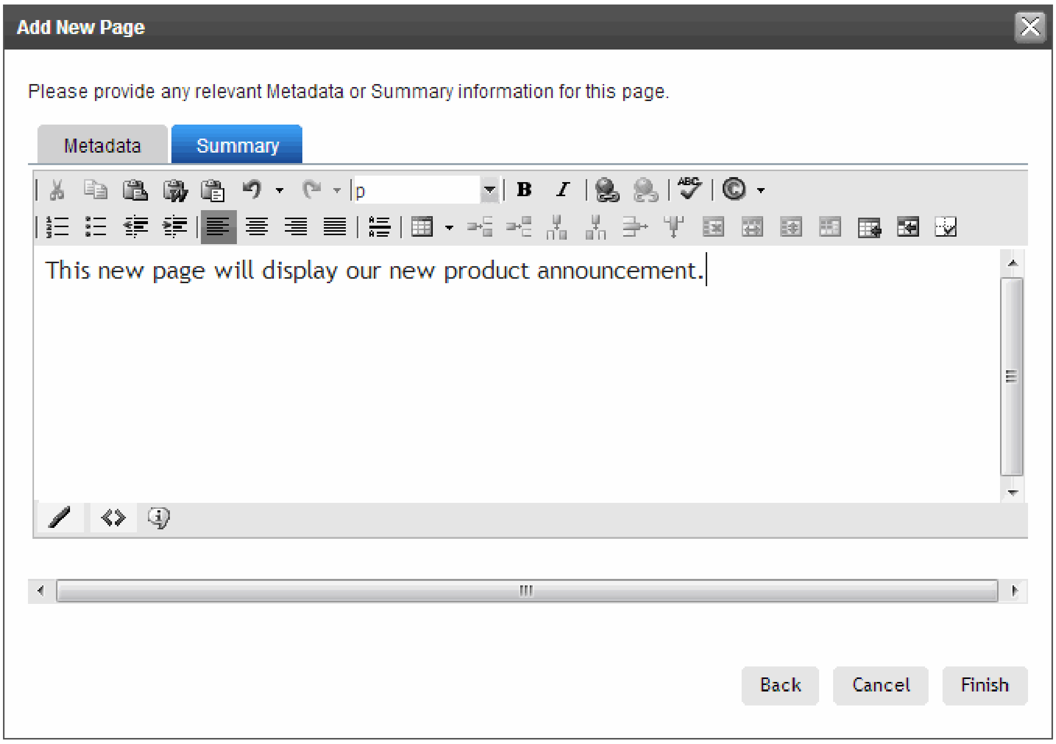


4. Click **Next.** A new screen appears, which lets you assign a title, Taxonomy, and aliasing information to the page.

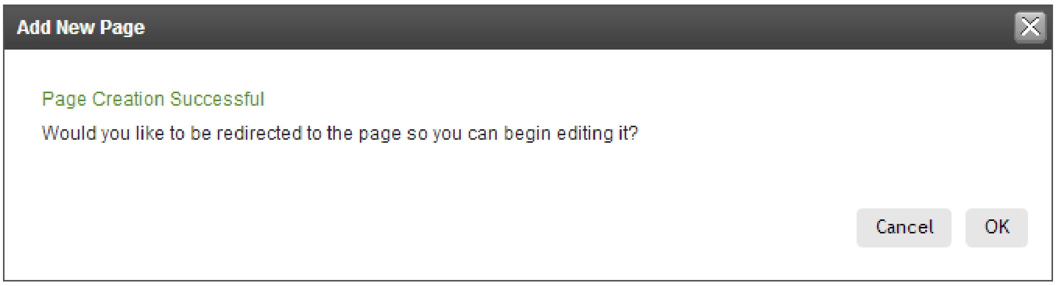


5. Enter a title in the **Page Title** field
6. By default, the Manual Alias matches the **Page Title**.

7. Click **Next**. The following screen appears, which lets you assign metadata and a summary to the page.



8. Click **Finish**. A confirmation dialog box appears. Click **OK** to start editing the page.

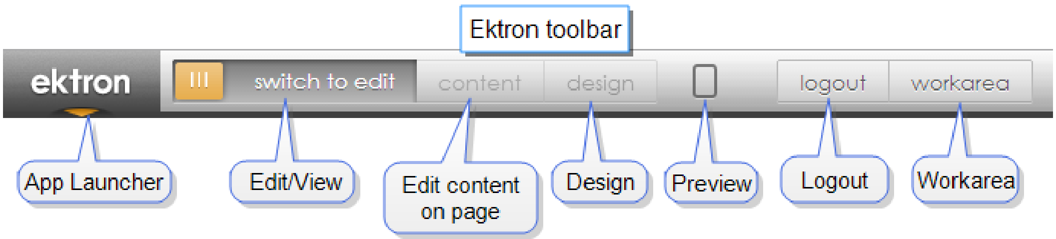


Editing content on a PageBuilder page

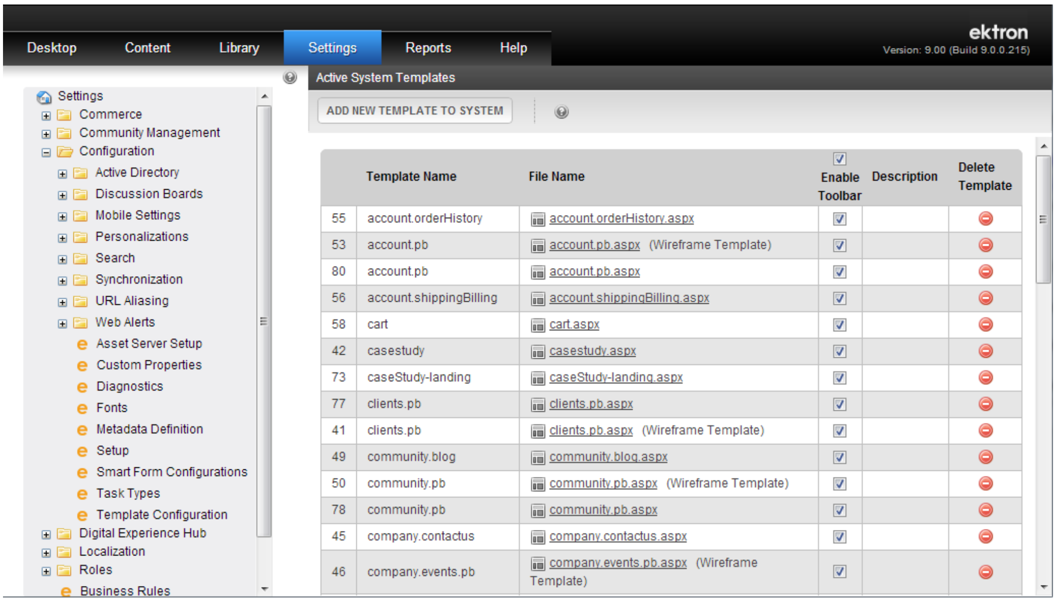
After the page is created, a new page opens where you can design the page and other actions, such as check in, view properties, and drop widgets onto the page.

NOTE: For information about how to create a widget, see *Creating the "Hello World" widget* on page 1175.

HTML5 CSS3-compliant browsers may have the Ektron toolbar if it is enabled in the Workarea. PageBuilder actions are available when you click **Design**. See also: *Editor toolbar options* on page 554.

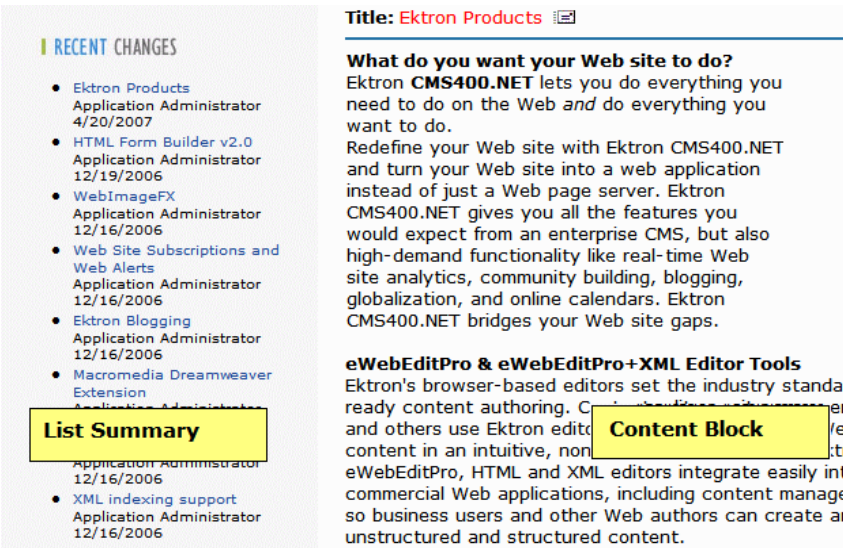


You can specify which templates have toolbar access at **Workarea > Settings > Configuration > Template Configuration**.



The following image shows a page with a 2-column layout.

- The left column, 35% wide, displays a list of content in the Marketing folder. website visitors use the list to access Marketing collateral.
- The right column, 65% wide, displays one content block.



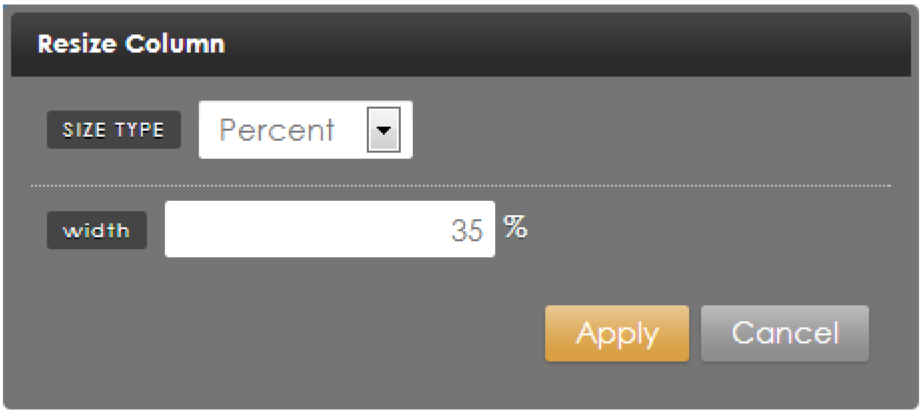
Step 1: Add column and set column widths

NOTE: If your developer sets dropzone column widths programmatically (as explained in *Setting a dropzone's column width programmatically* on page 1024), you cannot add a column as described here. Many developers disable this option because it gives end users liberty to resize columns when you may want to standardize your layout. If your developer has disabled this option, go to Step 2.

Add a second column to the right of the top one. Then, set the width of both columns.

1. Click **Add Column** ( ). A new column appears to the right of the existing one.
   See also: *Using responsive frameworks with PageBuilder* on page 1001.
2. Click **Resize** ( ) on the first column. The Resize form appears.

   You can customize the Resize form so that you can choose Pixel, Em, Percent, Bootstrap, Foundation, or other frameworks for creating columns. See *Customizing the PageBuilder.config file* on page 1022.
3. This example uses Percent. Set the left column width to 35%, as follows:
   a. Select **Percent** from the Size Type drop-down field.
   b. Enter **35** into the Width field.
   c. Click **Apply**.



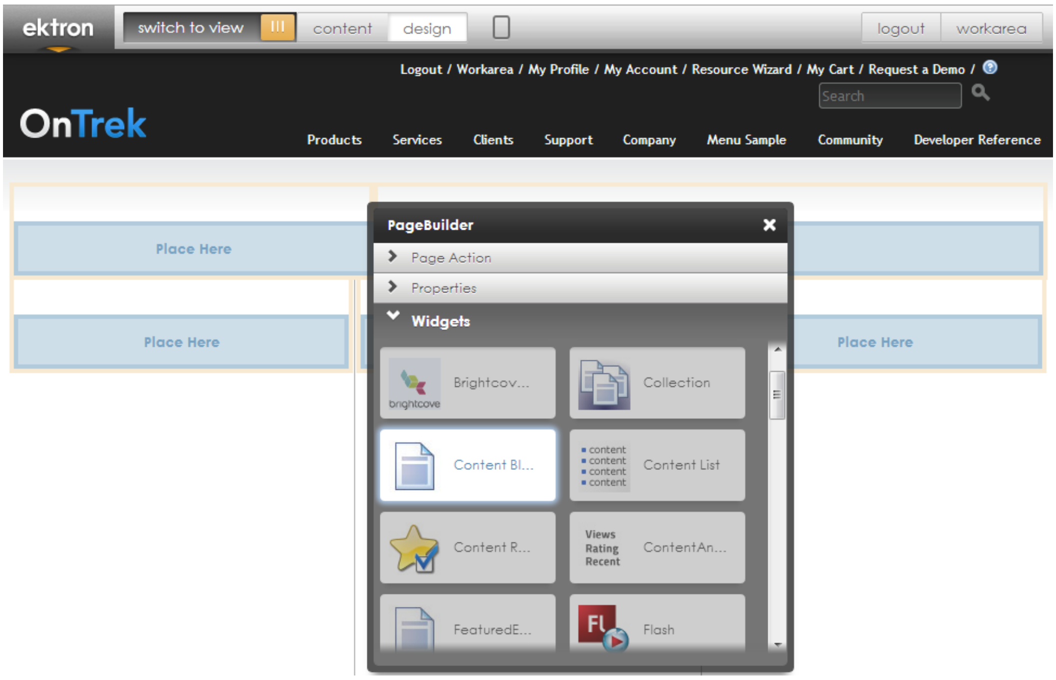
4. Set the right column to 65% width by clicking the pencil icon, changing its width to **65 Percent**, and clicking **Apply**.

Step 2: Insert Content Block widget into a column

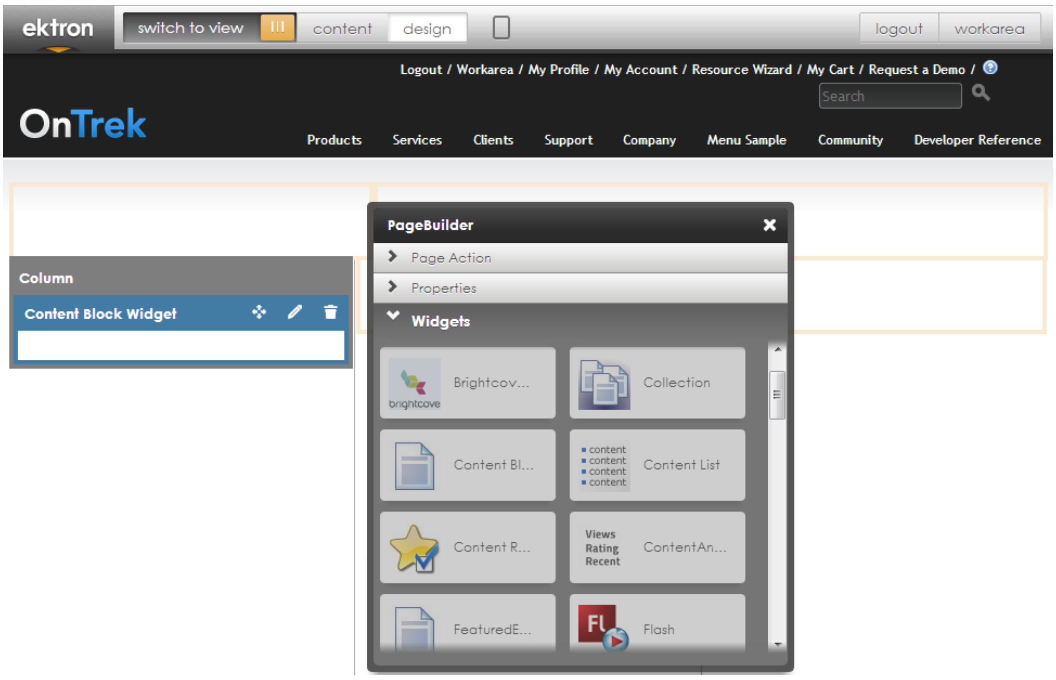
When the columns are set, insert a ContentBlock widget into a column.

1. From edit mode in the tool bar, click **Design**. The PageBuilder window appears.
2. Open the Widgets menu and click on the Content Block widget; it highlights and areas on the page appear where you can place the widget.

   NOTE: For information about how to set the widgets that display in the Widgets menu, see Adding Widgets to the Wireframe Template.

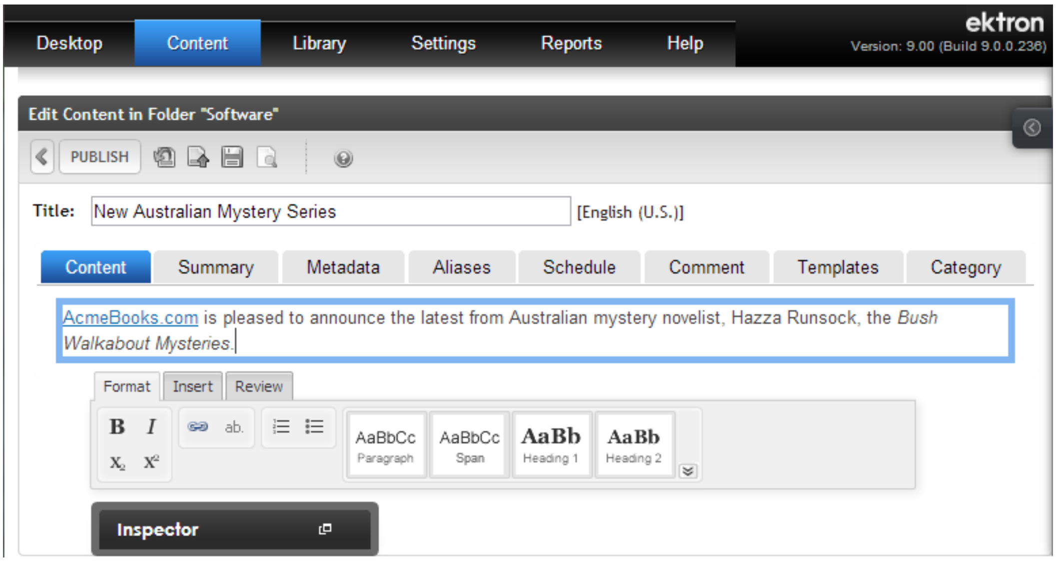


3. Click on any **Place Here** block. The Content Block widget appears in the block.

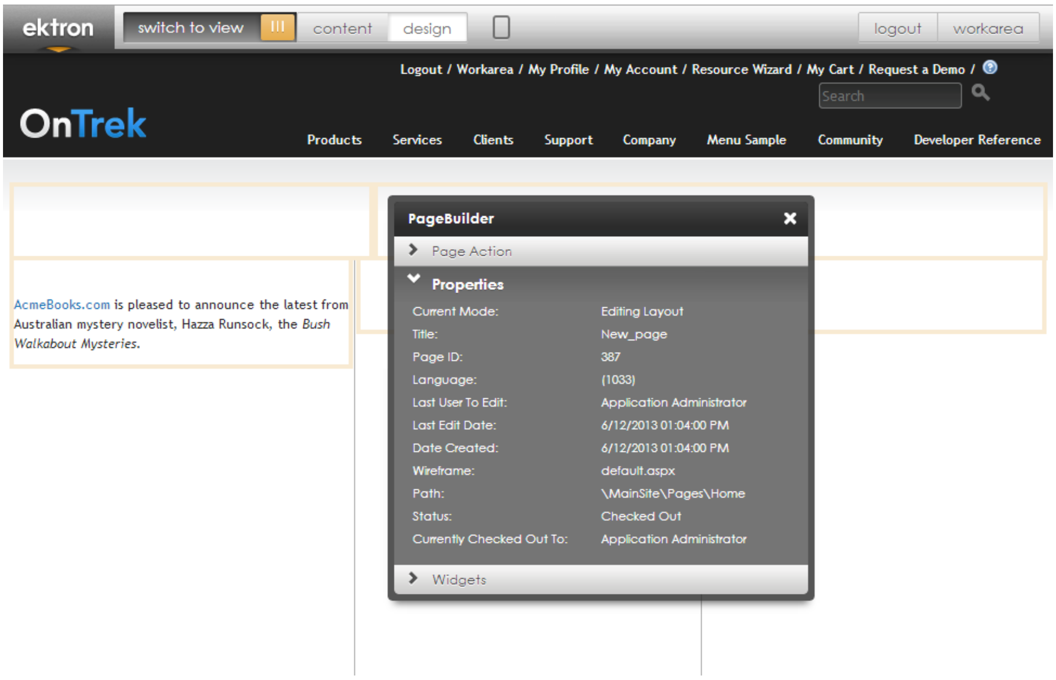


4. Click **Edit** ( ). The Content Block Widget editing screen appears.
5. On the Select File tab, choose **Root > Mainsite > Content > Products > Software** and click **New** to place the new content in the Software folder. The Edit Content screen appears.
6. Add a **Title**.

7. In the content area, enter some text and click **Publish**.



When saved, the content appears in the column.

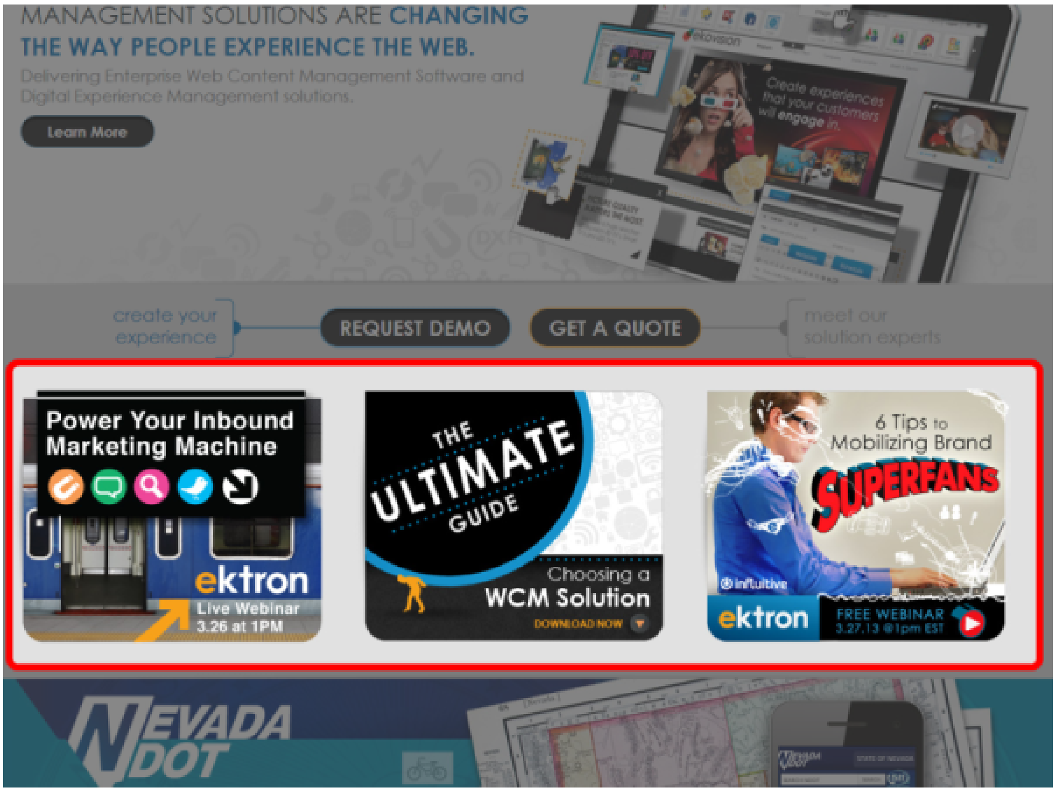


8. Choose **Page Action > Publish** to publish the content to the Web page.

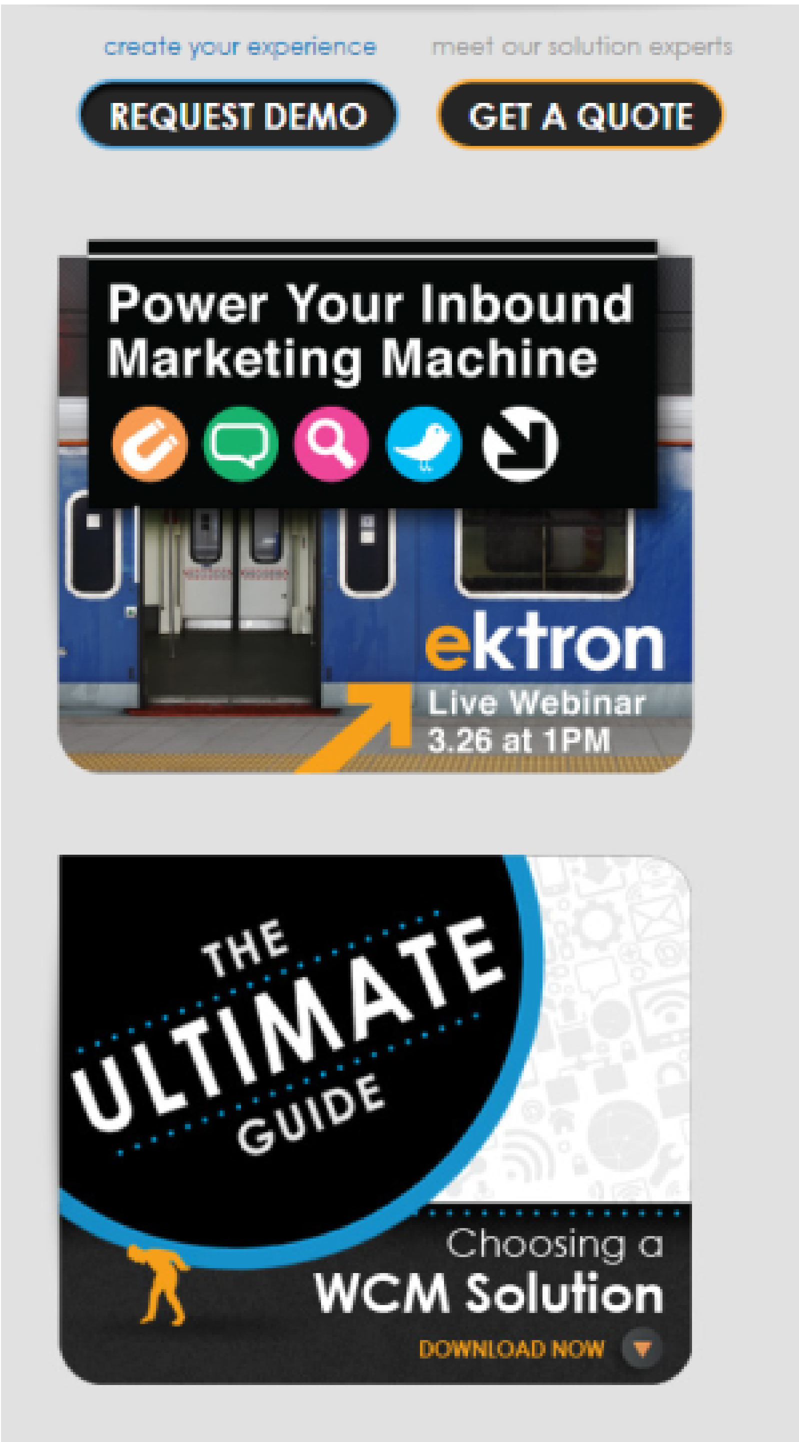
Using responsive frameworks with PageBuilder

You can modify the look of a page by adding columns that can contain dropzone elements. Each column that you add responds according to the design rules that are applied to your site. For Ektron releases prior to Version 8.7, when you added a column to a PageBuilder page, you selected a unit of measurement (pixel, em, percent) and number of units (for example, 200). With Version 8.7 and beyond, you also can choose your site's CSS framework (for example, Bootstrap).

Responsive Web Design (RWD) lets columns fit in a window without horizontal scrolling. The following image shows a Web page built with the Twitter Bootstrap framework and PageBuilder. The highlighted section displays 3 columns within 1 PageBuilder dropzone. Each column displays a different widget.

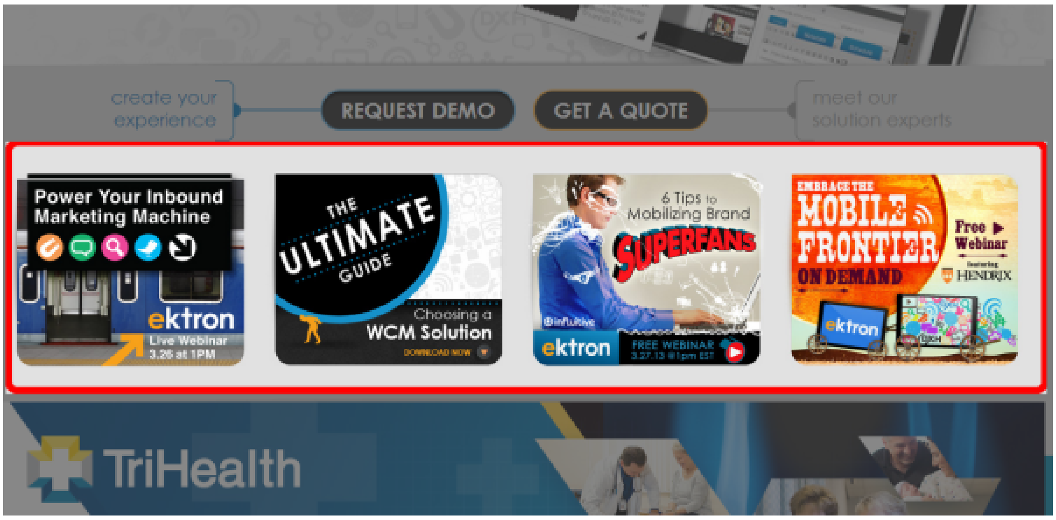


When this page is resized, styles rearrange the columns so that they fit without horizontal scrolling.



If you want to add another column and more widgets to a row, apply styles to the column according to the website's CSS framework.

To continue the example, the row now has 4 columns. Apply to each column a value of `Span3`, so the combined width totals `span12`, the maximum width of a Bootstrap page. Now, 4 columns (each containing widgets) fit into this section of the page. If the browser is resized, each column is sized according to the Bootstrap styles.



If you view this page on a smart phone, the columns are rearranged.

You can use a variety of RWD frameworks, such as:

- **Twitter Bootstrap**. A free collection of tools for creating websites and Web applications that contains HTML and CSS-based design templates for typography, forms, buttons, charts, navigation, other interface components, and optional JavaScript extensions. See the Twitter Bootstrap website.
- **Foundation**. A light-weight framework for rapidly building prototypes and production websites. See the Foundation website.

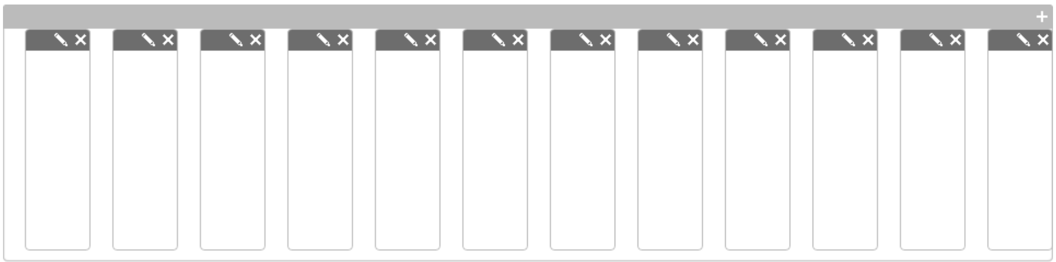
- **Skeleton**. A small collection of CSS files for rapid development of sites that look beautiful at any size. See the Skeleton website.

IMPORTANT: The `pagebuilder.config` file contains sample data from the Twitter Bootstrap and Foundation frameworks. If you use a different RWD framework (such as Skeleton), add the necessary CSS style sheets to your site, and update `pagebuilder.config` with the framework's class names and CSS paths. See *Customizing the PageBuilder.config file* on page 1022.

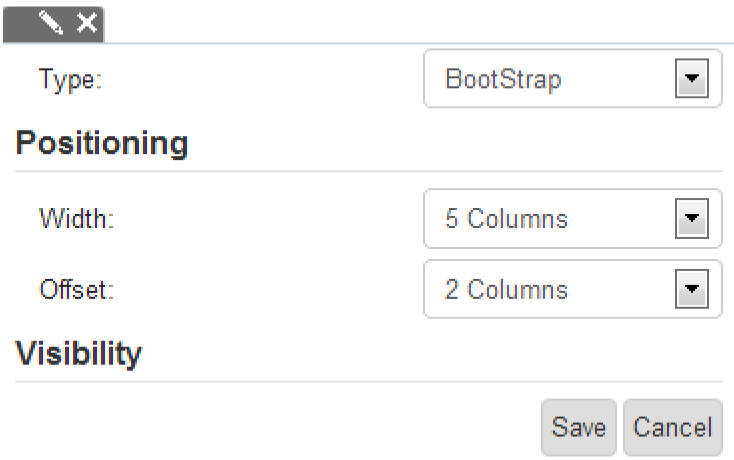
Any element on the page can take as many columns as it needs, but all elements in a row must not exceed the maximum number of columns. Twitter Bootstrap and Foundation have a grid system of 12 columns per row; Skeleton has 16 columns per row. For example, the following patterns represent how many columns each element uses in a row. No pattern exceeds 12 (unless you use Skeleton's 16 columns); periods indicate offset columns (spaces). An offset pushes a column to the right. See the following examples.

```
1 1 1 1 1 1 1 1 1 1 1 1 — 12 single columns
4 4 4                   —  3 columns (4 columns-wide each)
1 1 2 3 4 1             —  6 columns (varying column widths)
6 6                     —  2 columns (6 columns-wide each)
4 . . . . 4             —  2 columns (4 columns-wide, with a 4-column offset)
. . . 3 . . . 3         —  2 columns (3 columns-wide, with 2 offsets)
. . . . 8               —  1 column  (8 columns-wide, with a 4-column offset)
. . 5 . . . . .         —  1 column  (5 columns-wide, with a 2-column offset)
```

The following result occurs from adding 12 columns of Type: **Bootstrap**.



When you add a column to a PageBuilder page and click **Resize** (), then chooses the Type: **Bootstrap**, the following Resize form appears.



The following result occurs from choosing Type: **Bootstrap**, Width: **5 Columns**, Offset: **2 Columns** (which leaves 5 columns to the right).

The following result occurs from adding a column to the previous example, and choosing Type: **Bootstrap**, Width: **4 Columns**, Offset: **1 Column** for the new column. (Pattern: `. . 5 . 4`)

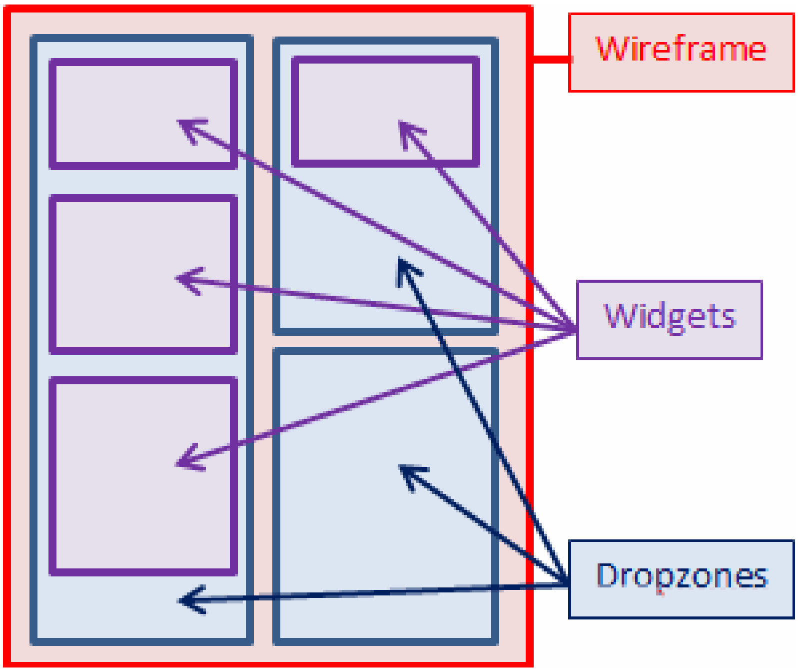
Note that if you shrink the window from right to left, the second column gets moved under the first, as follows:

Developing wireframe templates

NOTE: Internet Explorer cannot accommodate more than 32 style sheets in one page. This problem can affect PageBuilder pages, because each widget may include one or more style sheets, and a page can host any number of widgets.

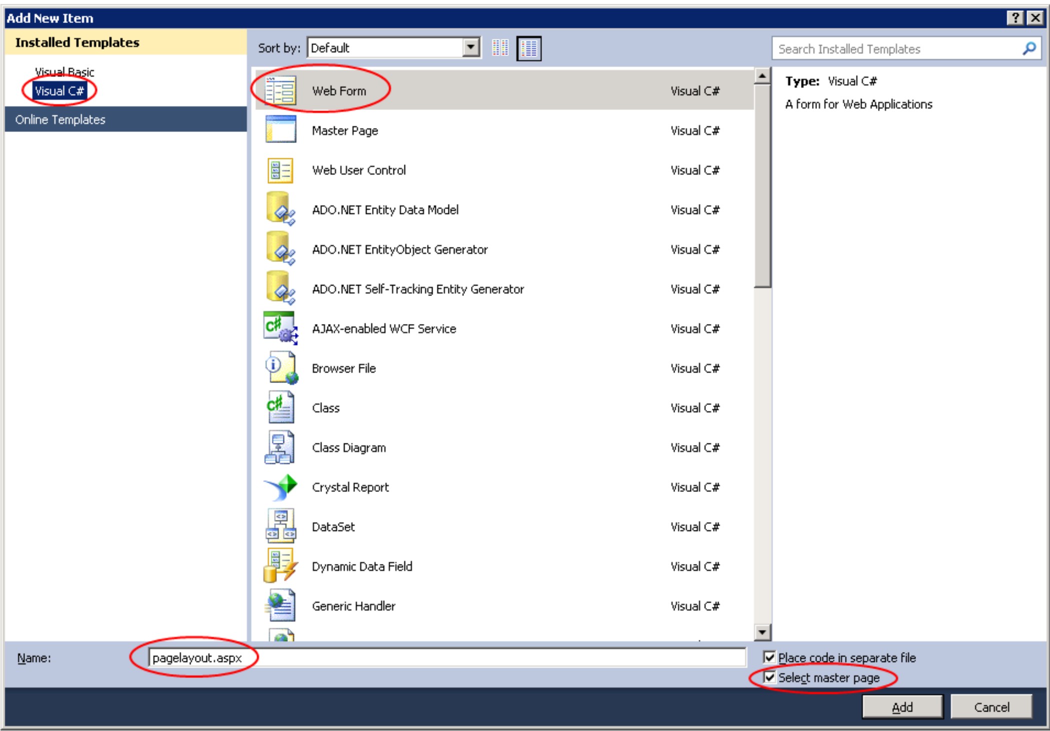
Creating a PageBuilder wireframe

You first create a wireframe. Next, define the dropzone, one or more areas of the page on which a content creator drags and drops *widgets*. The relationship between a wireframe, a dropzone, and a widget is illustrated in the following image.



To create a wireframe that contains one dropzone:

1. Open the website in Visual Studio.
2. Choose **Web Site > Add New Item** to add a new Web form to the site.
3. Select **Web Form**.
4. Set the **Name** to `PageLayout.aspx`, the **Language** to Visual C#, and check **Select master page**.



5. Click **Add**.

6. When prompted to select a master page, choose from the directory *siteroot*/components/templates.
7. Register the user controls directly below the @Page directive (at the top of the file).

```
<%@ Register Assembly="Ektron.Cms.Controls"
Namespace="Ektron.Cms.Controls" TagPrefix="CMS" %>
<%@ Register Src="~/Workarea/PageBuilder/PageControls/PageHost.ascx"
  TagPrefix="PH" TagName="PageHost" %>
<%@ Register Src="~/Workarea/PageBuilder/PageControls/DropZone.ascx"
  TagPrefix="DZ" TagName="DropZone" %>
<%@ Register Assembly="Ektron.Cms.Widget"
  Namespace="Ektron.Cms.PageBuilder" TagPrefix="PB" %>
```

8. Add code for a PageBuilder Menu (PH: PageHost) and Dropzone. To do this, locate the ContentPlaceHolder1 and enter this code.

IMPORTANT: When inserting the following code, begin the <ColumnDefinitions> statements with the TagPrefix on the widget assembly registration line (PB in the example above). Do *not* use IntelliSense when entering <ColumnDefinitions> statements—it may insert an incorrect prefix.

```
<PH:PageHost ID="PageHost1" runat="server" DefaultPageID="937"
  SelTaxonomyID="94" />
<DZ:DropZone ID="DropZone2" runat="server" >
<ColumnDefinitions>
<PB:ColumnData columnID="0" unit="custom" CssFramework="bootstrap"
  CssClass="span4"></PB:ColumnData>
<PB:ColumnData columnID="1" unit="custom" CssFramework="bootstrap"
  CssClass="span4"></PB:ColumnData>
<PB:ColumnData columnID="2" unit="custom" CssFramework="bootstrap"
  CssClass="span4"></PB:ColumnData>
</ColumnDefinitions>
</DZ:DropZone>
```

This control lets a content author drop widgets on the page. It also provides the save/check in/publish functions, and lets the author preview the page when it is published. The content author uses a Dropzone control as a placeholder, into which you insert widgets. You also can use it to insert additional placeholders as needed.

BEST PRACTICE

Assign an appropriate value for the SelTaxonomyID property. See *Assigning a default page to a wireframe* on page 1018 and *Assigning a default taxonomy category to a wireframe* on page 1019.

9. Open the code-behind page, PageLayout.aspx.cs.
10. Add a reference to the PageBuilder namespace by adding the following line after the last using statement.

```
using Ektron.Cms.PageBuilder.
```

11. Inherit the PageBuilder class instead of System.Web.UI.Page. To do this, change:

```
public partial class PageLayout : System.Web.UI.Page
```

To:

```
public partial class PageLayout : PageBuilder
```

12. Add the following code after the Page_Load event to handle errors and notifications.

```
public override void Error(string message)
{ jsAlert(message);
}
public override void Notify(string message)
{ jsAlert(message);
}
public void jsAlert(string message)
{ Literal lit = new Literal();
  lit.Text = "<script type=\"\"
  language=\"\">{0}</script>";
  lit.Text = string.Format(lit.Text, "alert('" + message + "');");
  Form.Controls.Add(lit);
}
```

You do not need to use the jsAlert system defined here. But if you do not, you must add overrides to handle errors and notifications.

The code page for `pagelayout.aspx.cs` looks like this.

```
using System.Web.UI.WebControls.WebParts;
using System.Web.UI.HtmlControls;
using Ektron.Cms.PageBuilder;

public partial class PageLayout : PageBuilder
{
    protected void Page_Load(object sender, EventArgs e)
    {
    }
    public override void Error(string message)
    {
        jsAlert(message);
    }
    public override void Notify(string message)
    {
        jsAlert(message);
    }
    public void jsAlert(string message)
    {
        Literal lit = new Literal();
        lit.Text = "<script type=\"\" language=\"\">{0}</script>";
        lit.Text = string.Format(lit.Text, "alert('" + message + "');");
        Form.Controls.Add(lit);
    }
}
```

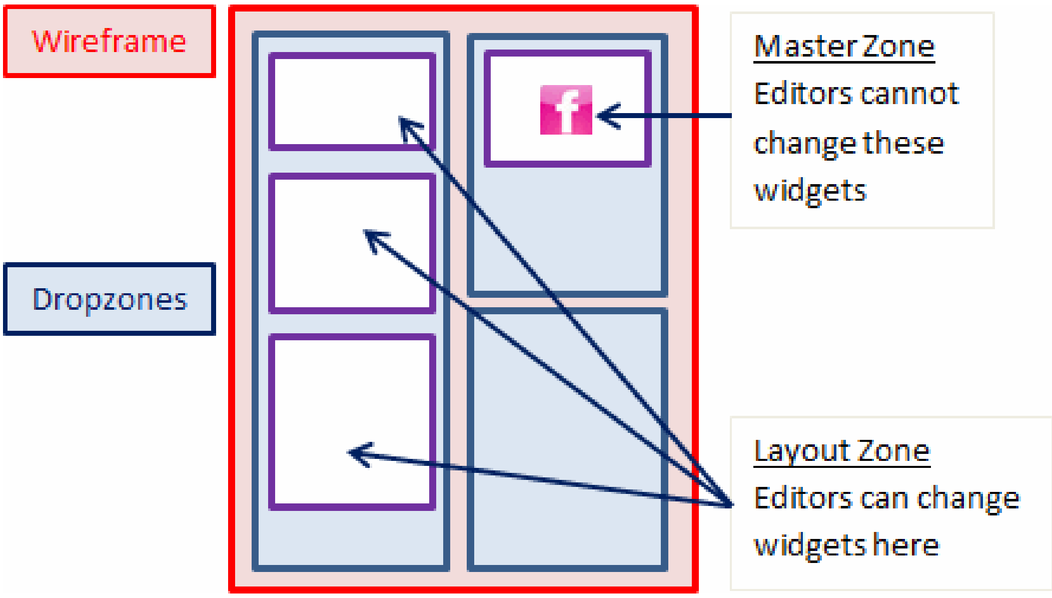
13. Save the `PageLayout.aspx` and `PageLayout.aspx.cs` files.

Creating a PageBuilder master layout

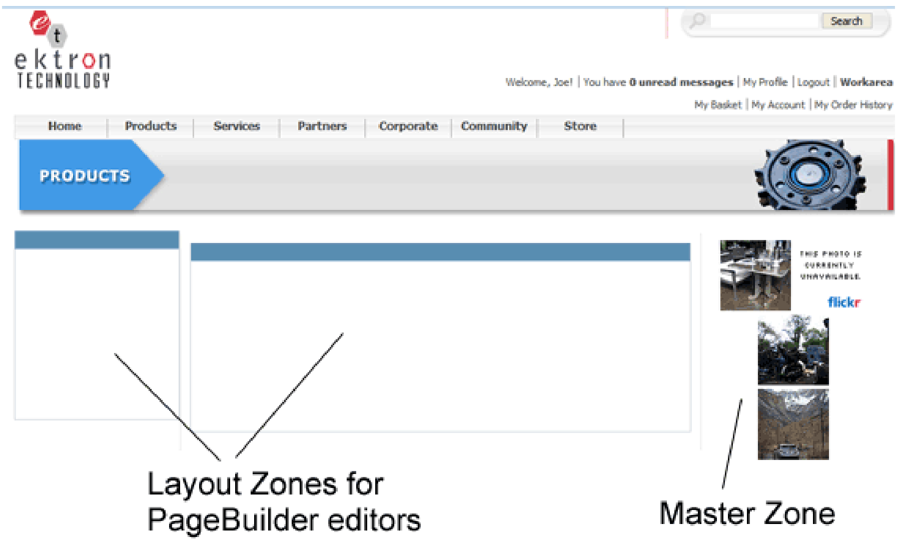
A *Master Layout* is a special type of PageBuilder template that may include a special kind of dropzone called a *Master Zone*. A *Master Zone* is only editable by users assigned to the Administrators group or the MasterLayout-Create role. All other dropzones on a *Master Layout* template are called *Layout Zones*. Anyone can edit them.

An example use of this template is: a department head reserves one Master Zone on the department pages for content that only the department head may edit. Content authors may drag and drop a widget into other dropzones, but cannot edit the Master Zone.

The following diagram shows a Master Layout template that contains 2 dropzones and 4 widgets. In the following example, the Master Zone contains a Flckr widget.

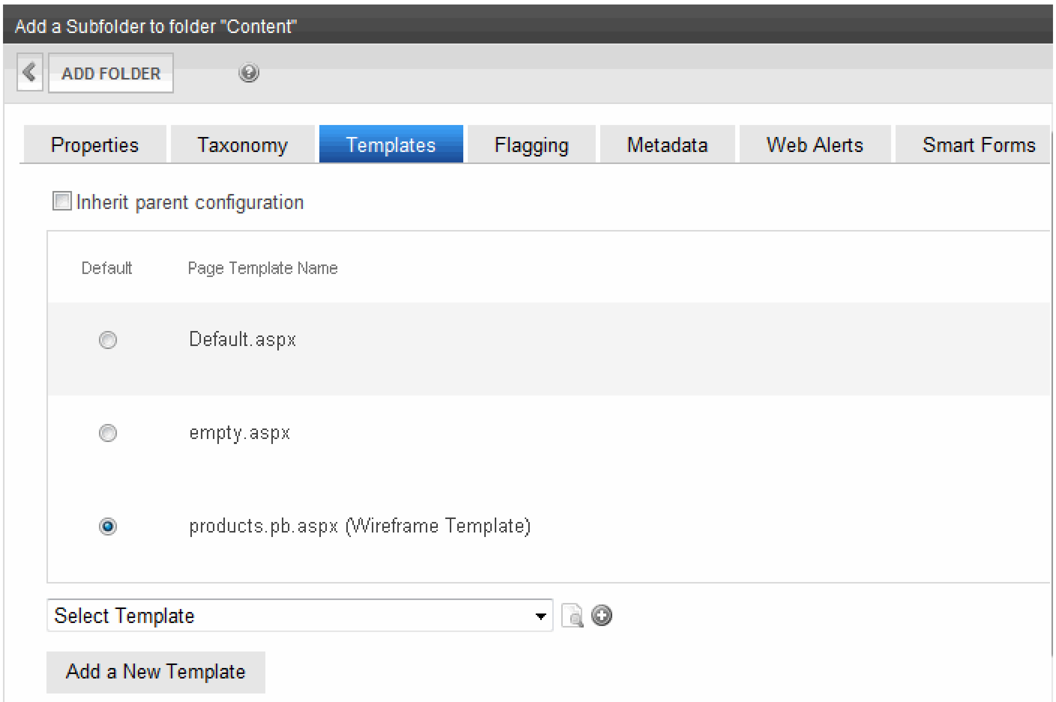


When a Master Layout is published, you can use it like any other template. The following figure shows a sample page that uses a Master Layout.



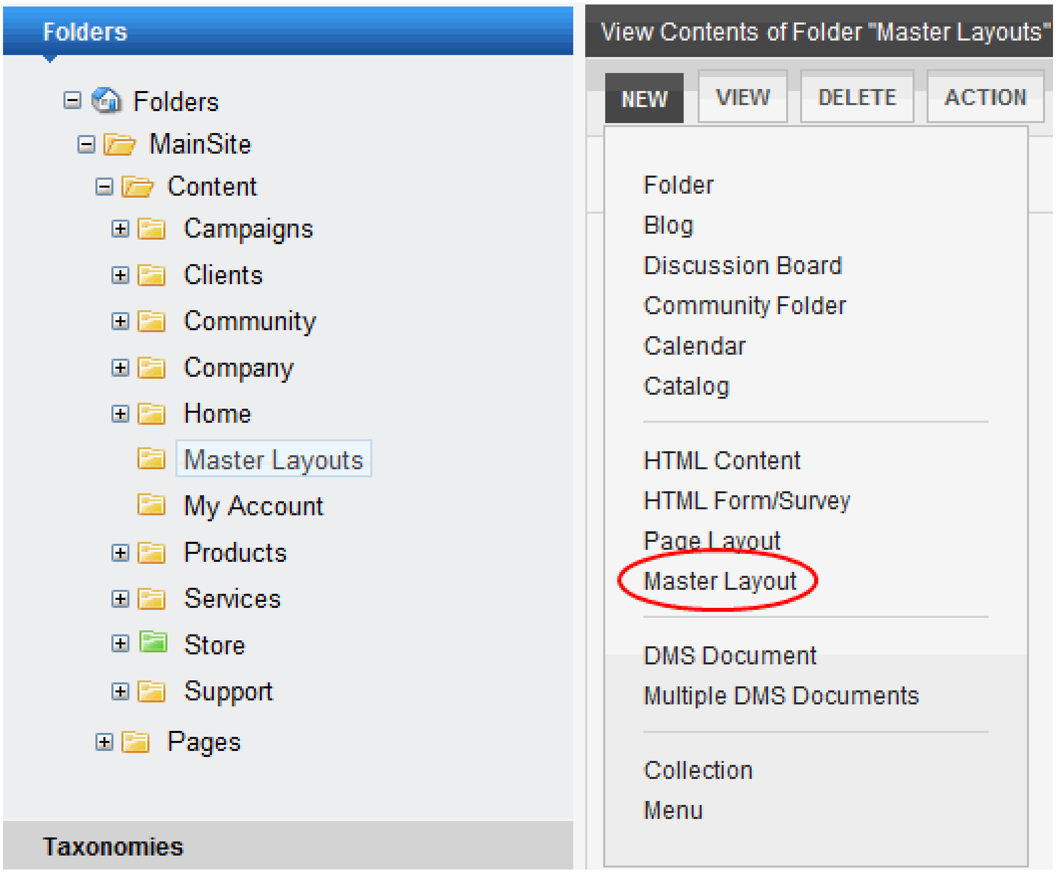
After you created a wireframe with 2 dropzones, both of which are editable, you can set a dropzone so that others may not edit it.

1. Workarea **Content** panel, choose **New > Folder**. The Add folder screen appears.
2. In the **Name** field, type `Master Layouts`.
3. In the **Templates** tab, uncheck **Inherit parent configuration**. Then, select a wireframe template from the list of templates. For example, *products.pb.aspx (Wireframe Template)*.
4. Click **Add** ( ) next to the **Select Template** field. The template is added to the list.
5. Click the radio button next to the selected template to make it the folder's default template.

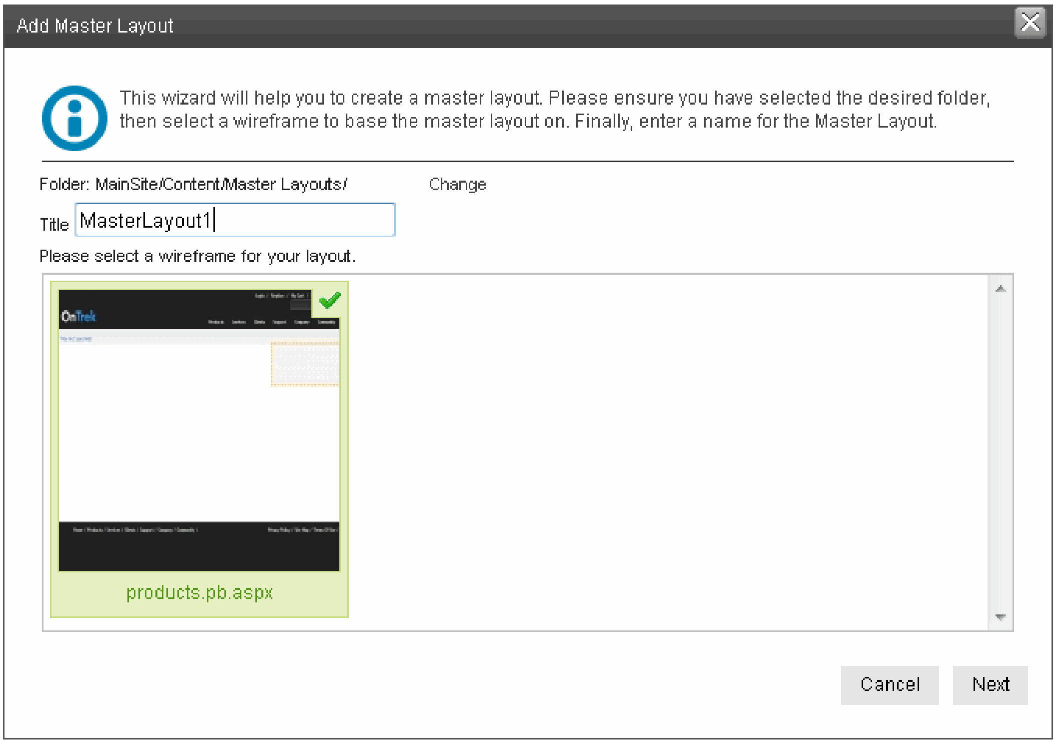


6. Click **Add Folder**.
7. In the folders screen, click the new Master Layouts folder.

8. Choose **New>Master Layout**.



9. Set the title to **MasterLayout1**.
10. Click **Next**.



11. Set metadata, summary, and taxonomy categories if desired, then click **Finish**.

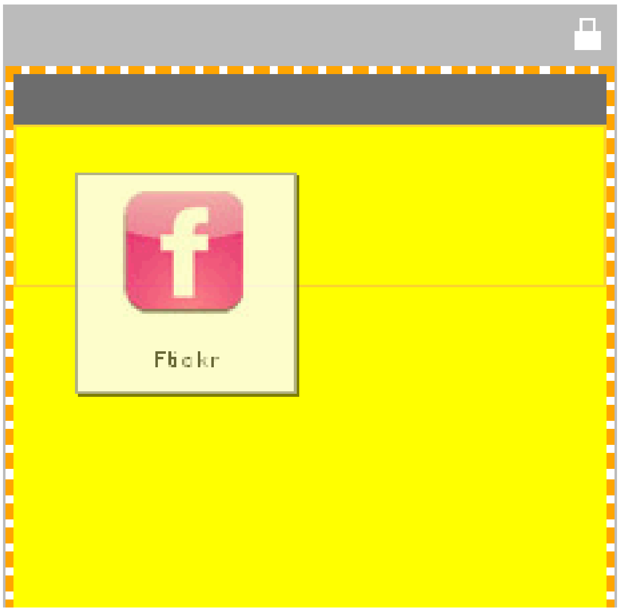
Setting a dropzone to a master zone type

After the wizard finishes, you see a new Master Layout page with dropzones that can be used for Master Layout areas. You must unlock a dropzone to convert it to a Master Zone. The following figure shows a Master Layout with dropzones.

1. Click **Lock** ( ) to change a dropzone from *Layout Zone* to *Master Zone*. A warning appears. Click **OK**.

   IMPORTANT: Unlocking this dropzone deletes columns and widgets that are on templates based on this master layout. Click **OK** to unlock this dropzone.

2. Drag and drop appropriate widgets into the Master Zone. The figure illustrates dropping a Flickr widget.



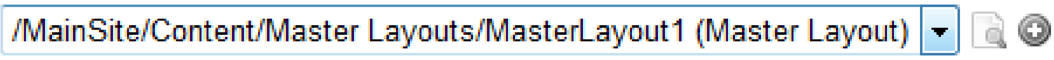
3. On the PageBuilder menu, select **File** > **Publish**.

Assign a master layout to the Pages folder

Before creating a PageBuilder page based on the Master Layout, you must add it to the templates available to the Pages folder. To do this:

1. In the Workarea, choose **Folders > Mainsite > Pages**.
2. On the View Content screen, choose **View** > **Properties**.

3. Click **Edit Properties**.
4. Click the **Templates** tab.
5. Select the Master Layout.



6. Click **Add** ( ) to add it to the template list.
7. Click **Update**.

Using a master layout to create a page

After you create the Master Layout page and assign it to the Pages folder, you can use it for other PageBuilder pages. To do this:

1. In the Workarea, choose **Folders > Mainsite > Pages**.
2. On the View Content screen, choose **New** > **Page Layout**. The Add New Page screen appears.
3. Select the new Master Layout and click **Next**.
4. Complete the settings for Title, Taxonomy, and Aliasing and click **Next**.
5. Enter Metadata and a Summary and click **Finish**.

   You can now place widgets in the PageBuilder page's Layout Zones.

Changing a master zone to a layout zone

PREREQUISITE

You must be an Administrators group member or assigned to the MasterLayout-Create role

You may want to convert a Master Zone back to a Layout zone. To do this:

1. Access the Master Layout page that you want to edit.
2. From the PageBuilder menu, choose **File > Edit**.
3. On the layout zone, click **Lock** ( ) to change the dropzone type from Master Zone to Layout Zone. A warning appears.

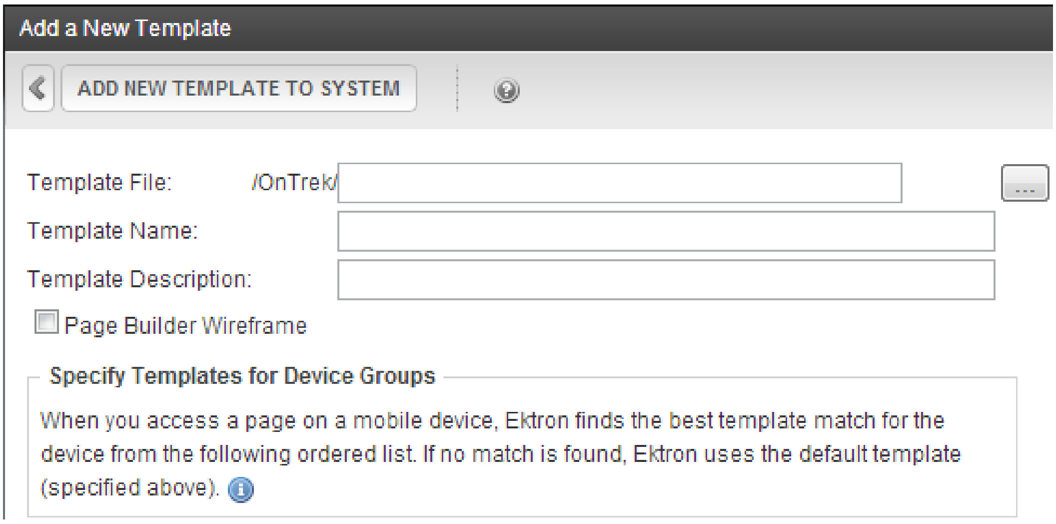
   WARNING! Locking this dropzone deletes columns and widgets in the master zone, and affects all templates based on this Master Layout.

4. The Master Zone now appears Locked. PageBuilder editors can use this Layout Zone for widgets on PageBuilder pages derived from this Master Layout.

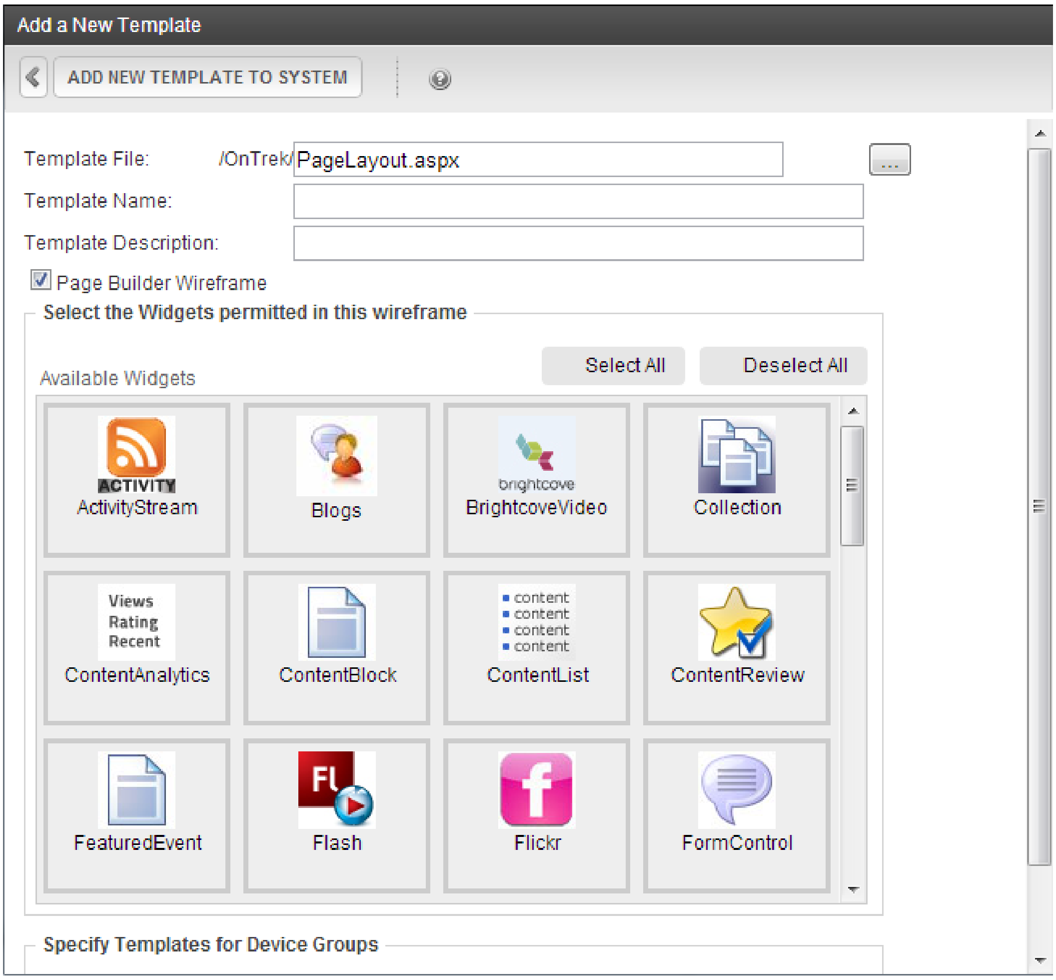
Adding the wireframe and widgets into Ektron

An Ektron administrator uses the wireframe that a developer made, and determines which widgets will be available to the wireframe.

1. In the Workarea, choose **Settings > Configuration > Template Configuration**.
2. Click **Add New Template to System**. The Add a New Template screen appears.



3. Click **Browse** (...) and go to `PageLayout.aspx`, the wireframe you created earlier in *Creating a PageBuilder wireframe* on page 1007.
4. Click the **PageBuilder Wireframe** check box, which indicates that this template may be used to create a PageBuilder page. Widgets that can be applied to the template appear. Ektron provides many standard widgets. See *Creating and using widgets* on page 1171.

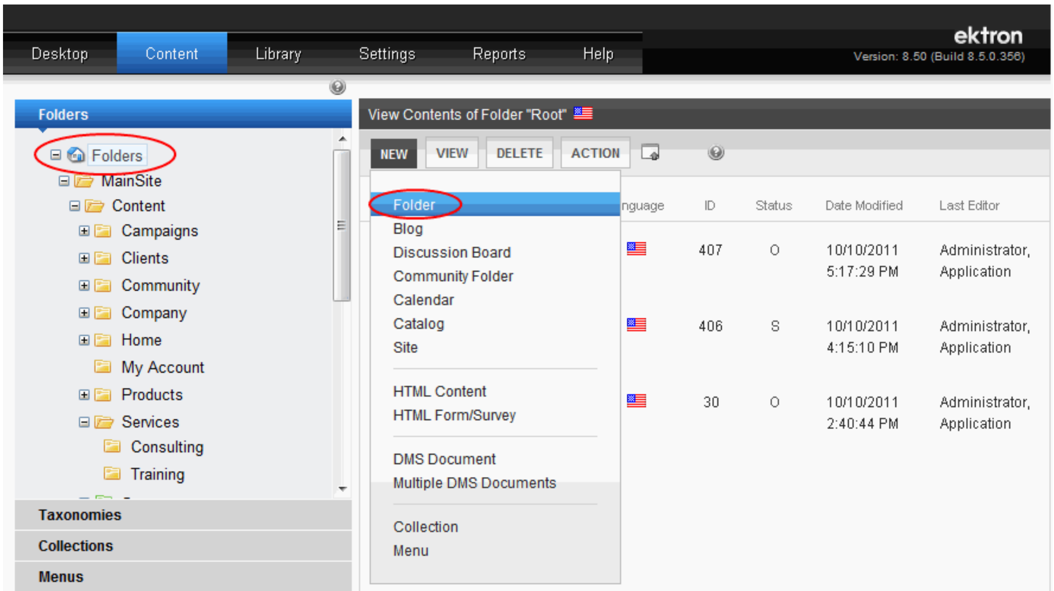


5. Click any of the widgets (for example, ContentBlock or ContentList). The background color changes indicating that they are selected.
6. Click **Add New Template to System**.

Assigning the PageBuilder wireframe to a folder

Create a folder for the content that appears on the new page by performing these steps.

1. Choose **Workarea > Content > Folders**. The View Contents screen appears.
2. Choose **New > Folder**.



NOTE: You should keep content and PageBuilder pages in separate folders, so you can later create and configure a folder called "Content." The content folder will contain content blocks, assets, and sub-folders.

3. On the Properties tab, type `Pages` in the **Name** field.
4. On the Templates tab, if **Inherit parent configuration** is checked, uncheck it.
5. Select the template that you created in *Adding the wireframe and widgets into Ektron* on page 1016as the default (and only) template for this folder. This ensures that only PageBuilder pages can be created in this folder.
6. Click **Add** (⊕) to the right of the pull-down menu. `PageLayout.aspx` is added to the list of page templates.
7. Create a corresponding content folder. However, instead of assigning `pagelayout.aspx` as the template, assign a template for creating Ektron content.

Assigning a default page to a wireframe

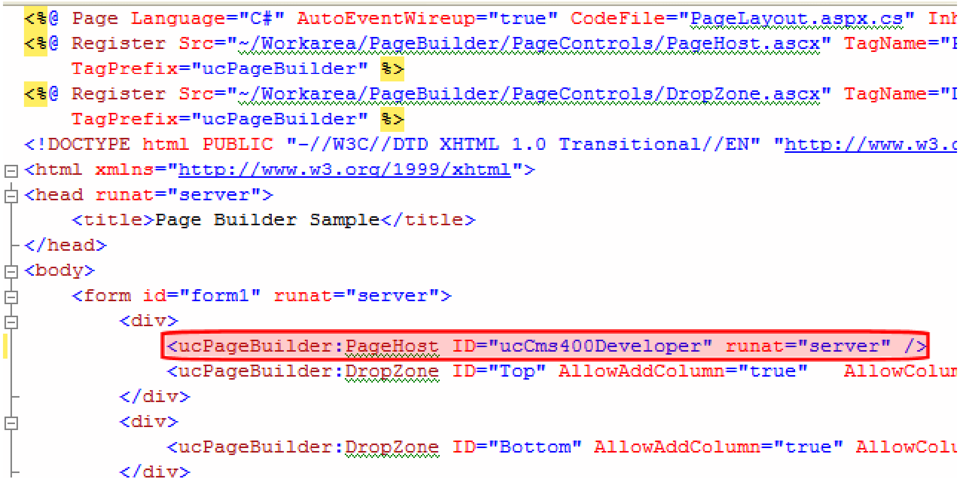
You can assign a default page to a wireframe. If you do, and a site visitor enters a URL with a path to that wireframe that lacks a query string ID, the default page appears. The following example explains this feature.

- The following URL returns PageLayout ID 1036 in the PageBuilder folder:
  `http://`
  `siteroot`
  `/cms400developer/developer/PageBuilder/PageLayout.aspx?pageid=1036`
- The following URL returns the Page Layout page identified in the `PageLayout.aspx` file's PageBuilder menu user control `DefaultPageID` property.

`http://`
`siteroot/cms400developer/developer/PageBuilder/PageLayout.aspx`
(Note lack of query string parameter)

To assign a default page to a wireframe:

1. In the Workarea, create a PageBuilder page that will be used as the default pageid for a wireframe.
2. In *Visual Studio*, open the wireframe file assigned to that folder.
3. Find the PageBuilder menu user control.



```
<%@ Page Language="C#" AutoEventWireup="true" CodeFile="PageLayout.aspx.cs" Inh
<%@ Register Src="~/Workarea/PageBuilder/PageControls/PageHost.ascx" TagName="P
    TagPrefix="ucPageBuilder" %>
<%@ Register Src="~/Workarea/PageBuilder/PageControls/DropZone.ascx" TagName="I
    TagPrefix="ucPageBuilder" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.c
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Page Builder Sample</title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <ucPageBuilder:PageHost ID="ucCms400Developer" runat="server" />
            <ucPageBuilder:DropZone ID="Top" AllowAddColumn="true"  AllowColur
        </div>
        <div>
            <ucPageBuilder:DropZone ID="Bottom" AllowAddColumn="true" AllowColu
        </div>
```

4. Add a new property, `DefaultPageID`.
5. For the property's value, enter the ID of the page you created in Step 1.

   Here is an example of that line with the `DefaultPageID` property added.

```
<ucPageBuilder:PageHost ID="ucCms400Developer" DefaultPageID="1035"
runat="server" />
```

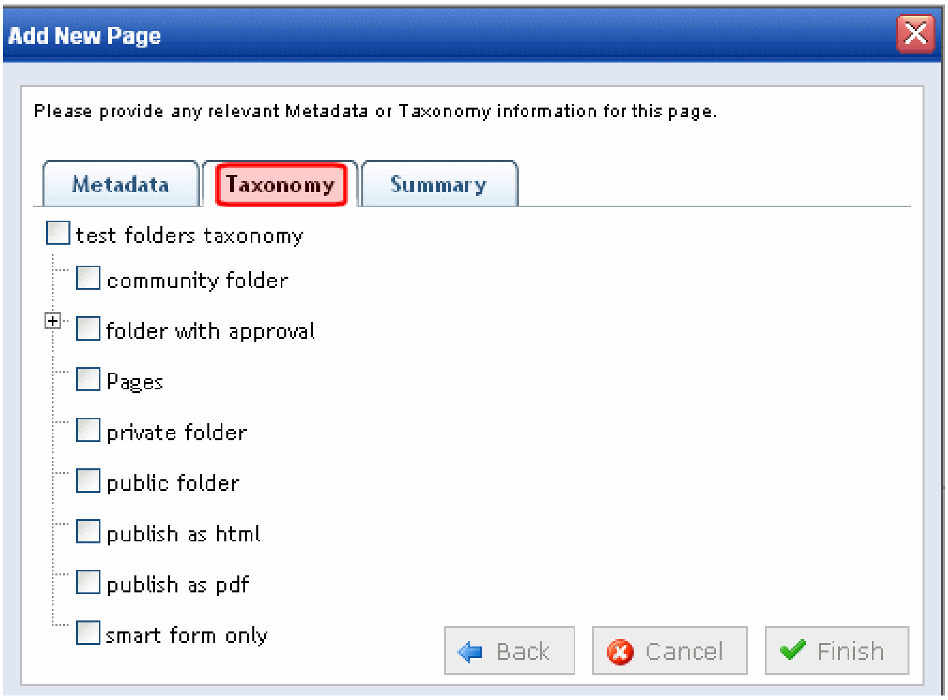
6. Save your changes.

   To continue the above example, if someone opens a browser and enters `http://`
   `siteroot/cms400developer/developer/PageBuilder/PageLayout.aspx`, the person is redirected to

   `http://sitroot/cms400developer/developer/PageBuilder/PageLayout.aspx?pageid=1035`

Assigning a default taxonomy category to a wireframe

While creating a new PageBuilder page in the Workarea, the user can assign one or more taxonomy categories that are set in the page's folder properties. See the following example.



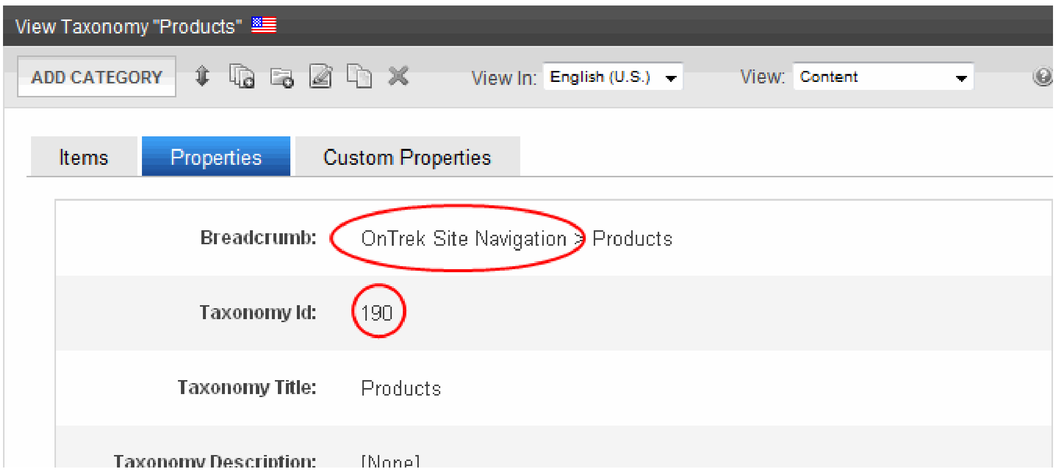
As a developer, you can assign a *default* taxonomy category to a wireframe. If you do, and the user creating a page using that wireframe makes no changes, the default category is assigned to the page. However, the user can change the taxonomy when the Add New Page screen appears.

NOTE: Default taxonomies are applied only when a user logs into a website and adds a new page -- they are *not* applied when creating new pages within the Workarea.

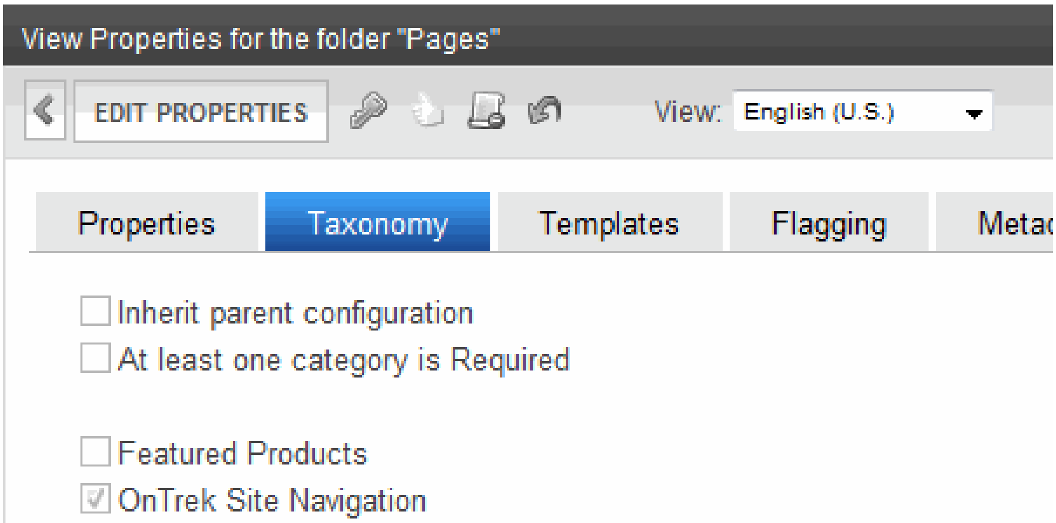
To assign a default taxonomy category to a wireframe:

PREREQUISITE

The ID number and the name of the top-level parent taxonomy for the default taxonomy category. For example, the screen shows that the Products category ID is 190, and its parent taxonomy is OnTrek Site Navigation.



1. In the Workarea, go to the folder properties screen of the folder to which the wireframe is applied.
2. Click **Edit Properties**.
3. Locate the **Taxonomy** tab of the Edit Folder properties screen.



4. Check the box of the top-level taxonomy to the wireframe you want to assign.
5. Check the box of the parent taxonomy of a taxonomy *category* that you want to assign; that is, a child node below a top-level taxonomy.
6. Click **Update** to save your changes to folder properties.
7. Open *Visual Studio*.
8. Open the wireframe to which you will assign a default taxonomy.
9. Find the PageBuilder menu user control.

```
<%@ Page Language="C#" AutoEventWireup="true" CodeFile="PageLayout.aspx.cs" Inh
<%@ Register Src="~/Workarea/PageBuilder/PageControls/PageHost.ascx" TagName="P
    TagPrefix="ucPageBuilder" %>
<%@ Register Src="~/Workarea/PageBuilder/PageControls/DropZone.ascx" TagName="I
    TagPrefix="ucPageBuilder" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.c
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Page Builder Sample</title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <ucPageBuilder:PageHost ID="ucCms400Developer" runat="server" />
            <ucPageBuilder:DropZone ID="Top" AllowAddColumn="true"   AllowColur
        </div>
        <div>
            <ucPageBuilder:DropZone ID="Bottom" AllowAddColumn="true" AllowColu
        </div>
```

10. Add the property `SelTaxonomyID`.
11. For the property’s value, enter the ID of the default taxonomy or category.
    Here is an example of that control with the `SelTaxonomyID` property added.

```
<ucPageBuilder:PageHost ID="ucCms400Developer"
  SelTaxonomyID=”13” runat="server" />
```

12. Save your changes.

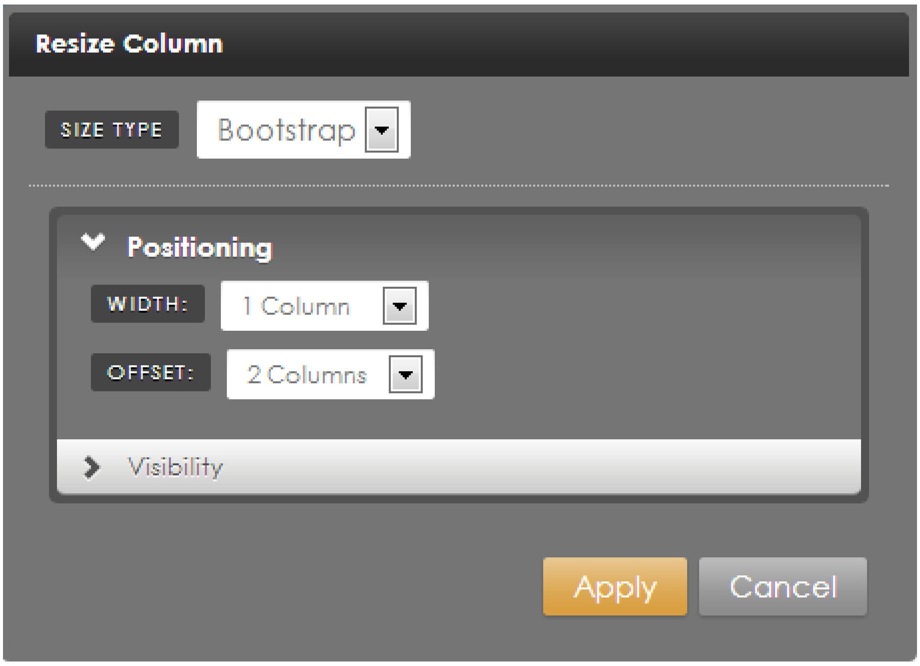
Continuing the example, the next time someone creates a page based on that wireframe, taxonomy ID 13 will be the page's default taxonomy category. If desired, the user can change it by navigating to the **Taxonomy** tab and assigning different or additional categories.

Customizing the PageBuilder.config file

The `PageBuilder.config` file defines what an end user can do with a PageBuilder page. For example, when a user clicks **Resize** () in a dropzone, a form appears that lets the user choose the type of measurements to be used in setting the column layout.

The Resize form has several appearances based on its definition in `PageBuilder.config`. The default `PageBuilder.config` file has the following size types: **Pixel**, **Em**, **Percent**, and **Bootstrap**. You can add custom types in the `PageBuilder.config` file which is located in the *siteroot* folder.

PageBuilder allows RWD measurement types, such as Bootstrap, Foundation, and anything else that allows CSS classes, which give end users more flexibility in building their Web pages, and site visitors a better Web experience. To see how and end user uses the responsive PageBuilder types, see *Using responsive frameworks with PageBuilder* on page 1001.



In the following code sample, the Name property identifies types that can show up on the Resize form (when Enabled is set to true).

```
<SizeType Name="Pixels" EnumVal="0" Label="Width in pixels:" Enabled="true" />
<SizeType Name="Em" EnumVal="1" Label="Width in em:" Enabled="true" />
<SizeType Name="Percent" EnumVal="2" Label="Percent width:" Enabled="true" />
<SizeType Name="BootStrap" EnumVal="3" Label="BootStrap" Enabled="true"
  DropZoneOuterClass="container" DropZoneClass="row">
<SizeType Name="Foundation" EnumVal="3" Label="Foundation" Enabled="true"
  DropZoneOuterClass="" DropZoneClass="row" ColumnClass="columns">
```

IMPORTANT: Any type that uses a CSS class (such as Bootstrap and Foundation) should set EnumVal to **3**.

SizeType properties

```
<SizeType Name="Pixels" EnumVal="0" Label="Width in pixels:" Enabled="true" />
```

SizeType. lets you set the size or CSS Classes for a column within a PageBuilder page. Each SizeType appears as a separate option in the PageBuilder interface. You can have as many SizeTypes as you want.

- **Name**. Specifies the name of the SizeType. This attribute is used only to provide reference about a SizeType, and does not affect the functionality of PageBuilder in any way.
- **EnumVal**. Determines how to handle the particular SizeType.
  - 0 (Pixels). Specify the width of a column using Pixels as a unit of measurement.
  - 1 (Em). Specify the width of a column using Ems as a unit of measurement.
  - 2 (Percent). Specify the width of a column as a percentage of the entire page width.
  - 3 (Any custom CSS classes or CSS Frameworks). You can have any number of SizeType noes with EnumVal set to 3. For example, you could have a CSS Framework such as Bootstrap enabled in this file and also define custom classes. Both of these should have an EnumVal set to 3.
- **Label**. The value of this attribute appears in the PageBuilder user interface, indicating which SizeType should be applied for a column.
- **Enabled**. Specifies whether a SizeType appears as an option in the PageBuilder interface.

  NOTE: Bootstrap is disabled by default.

- **DropZoneOuterClass**. Applies the class to an outer <DIV> tag of a PageBuilder dropzone.

  NOTE: This attribute has a default value of “container” for the Bootstrap CSS Framework. If you do not want to have this class applied to any outer <DIV> tags, set this value to an empty string.

- **DropZoneClass**. Applies a CSS Class to the dropzone containing a column when a page author applies a CSS class from this SizeType to a column within the dropzone.

  NOTE: This attribute has a default value of “row” for the Bootstrap CSS Framework. If you do not want to have this class applied to any dropzones, set this value to an empty string.

- Sub-Nodes
  - **Group**. Ektron supports an unlimited number of CSS Classes to be applied to PageBuilder columns. For a given SizeType, the “Group” node will specify the different types of classes that can be applied.

The options within the “Group” node will be displayed within a Dropdown list. The DropDown sub-node contains all of the available CSS Classes for a group.

- **CSSInclude**. This attribute provides the ability for specific stylesheets to be registered within a PageBuilder page whenever CSS classes that exist within a SizeType are applied to the page. Ektron provides the ability to apply an unlimited number of stylesheets for a SizeType.

The code in `PageBuilder.config` for the Positioning section (Width and Offset drop-downs) is as follows:

```
<Group Name="positioning" Label="Positioning">
  <DropDown Name="width" Label="Width:">
    <CssClass ClassName="span1" Label="1 Column" />
    <CssClass ClassName="span2" Label="2 Columns" />
    <CssClass ClassName="span3" Label="3 Columns" />
    <CssClass ClassName="span4" Label="4 Columns" />
    <CssClass ClassName="span5" Label="5 Columns" />
    <CssClass ClassName="span6" Label="6 Columns" />
    <CssClass ClassName="span7" Label="7 Columns" />
    <CssClass ClassName="span8" Label="8 Columns" />
    <CssClass ClassName="span9" Label="9 Columns" />
    <CssClass ClassName="span10" Label="10 Columns" />
    <CssClass ClassName="span11" Label="11 Columns" />
    <CssClass ClassName="span12" Label="12 Columns" />
    <CssClass ClassName="rowsplit" Label="Split Row" />
  </DropDown>
  <DropDown Name="offset" Label="Offset:">
    <CssClass ClassName="" Label="No Offset" />
    <CssClass ClassName="offset1" Label="1 Column" />
    <CssClass ClassName="offset2" Label="2 Columns" />
    <CssClass ClassName="offset3" Label="3 Columns" />
    <CssClass ClassName="offset4" Label="4 Columns" />
    <CssClass ClassName="offset5" Label="5 Columns" />
    <CssClass ClassName="offset6" Label="6 Columns" />
    <CssClass ClassName="offset7" Label="7 Columns" />
    <CssClass ClassName="offset8" Label="8 Columns" />
    <CssClass ClassName="offset9" Label="9 Columns" />
    <CssClass ClassName="offset10" Label="10 Columns" />
    <CssClass ClassName="offset11" Label="11 Columns" />
  </DropDown>
</Group>
```

Customizing a PageBuilder .aspx page

Setting a dropzone’s column width programmatically

To set a dropzone’s column widths programmatically:

1. Add the following `Register` statements to the page's `<head>` tags.

   IMPORTANT: The Widget and Dropzone assemblies must have the same Tag Prefix. See example.

```
<%@ Register Assembly="Ektron.Cms.Widget"
  Namespace="Ektron.Cms.PageBuilder" TagPrefix="PB" %>
<%@ Register Src="~/Workarea/PageBuilder/PageControls/PageHost.ascx"
  TagPrefix="PB" TagName="PageHost" %>
<%@ Register Src="~/Workarea/PageBuilder/PageControls/DropZone.ascx"
  TagPrefix="PB" TagName="DropZone" %>
<%@ Register Assembly="Ektron.Cms.Widget"
  Namespace="Ektron.Cms.PageBuilder" TagPrefix="PB"%>
```

2. Within the page's `<body>` tags, add the following code. The following example adds 3 columns that span 4 each of the 12 available column spaces.

```
<PH:PageHost ID="PageHost1" runat="server" DefaultPageID="937" SelTaxonomyID="94"
/>
<CMS:DropZone ID="DropZone2" runat="server" >
<ColumnDefinitions>
<PB:ColumnData columnID="0" unit="custom" CssFramework="bootstrap"
CssClass="span4"></PB:ColumnData>
<PB:ColumnData columnID="1" unit="custom" CssFramework="bootstrap"
CssClass="span4"></PB:ColumnData>
<PB:ColumnData columnID="2" unit="custom" CssFramework="bootstrap"
CssClass="span4"></PB:ColumnData>
</ColumnDefinitions>
</CMS:DropZone>
```

Overriding the default folder where pages are saved

By default, when a site user creates a new PageBuilder page from an existing one, it is saved to the same Ektron folder. For example, consider this folder/content structure.

```
-Root (folder id 0)
--Products (folder id 20)
---PageLayout: "Omaha Mailorder Steaks" (content id 35)
--Services (folder id 30)
```

If you are viewing `content id` 35 and click **New Page** or **Copy/Save as**, the new page is saved to that content's folder (`Products, folder id= 20`).

NOTE: When you create a new page layout from the Workarea, you first select a folder then begin creating the page layout.

Use the PageBuilder control's `FolderID` property in the .aspx page to override the default and specify an Ektron folder to which new pages are saved. Here is an example of that property:

```
<ucPageBuilder:PageHost ID="ucPageHost1" FolderID="25" runat="server" />
```

When a user is working on a page that hosts this PageBuilder control, and he saves a new page, it is saved to `folder id` 25.

Setting a cache interval

Use the `CacheInterval` property to cache a page and its widgets that represent Ektron server controls, such as a Collection widget. This property sets the amount seconds for which data is cached. The default is 0 (zero).

```
<ucPageBuilder:PageHost ID="ucPageHost1" CacheInterval="25" runat="server" />
```

Letting users add columns to a dropzone

Use the `AllowAddColumn` property to let users add columns to a dropzone.

```
<ucPageBuilder:DropZone ID="ucDropZone1"
  AllowAddColumn="true"
  AllowColumnResize="true" runat="server" />
```

For example, a Dropzone initially contains one column, but the page creator wants 3. If this property is set to `true`, this change is possible. This property's default value is `true`.

NOTE: If you set dropzone's column widths programmatically (as explained in *Setting a dropzone's column width programmatically* on page 1024), the user cannot add a column, regardless of this setting.

Letting users resize a dropzone

Use the `AllowColumnResize` property to let users change the width of columns in a dropzone.

```
<ucPageBuilder:DropZone ID="ucDropZone1"
  AllowAddColumn="true"  AllowColumnResize="true" runat="server" />
```

For example, column width is 100% by default. A page creator wants to change it to 50%. If this property is set to `true`, this change is possible. This property's default value is `true`.

NOTE: If you set dropzone's column widths programmatically (as explained in *Setting a dropzone's column width programmatically* on page 1024), the user cannot add a column, regardless of this setting.

PageBuilder code samples

The following shows a complete example of `AcmeBooksMasterPage.master`, `PageLayout.aspx`, and `PageLayout.aspx.cs`.

AcmeBooksMasterPage.master

```
<%@ Master Language="C#" AutoEventWireup="true"
  CodeFile="AcmeBooksMasterPage.master.cs"
  Inherits="AcmeBooksMasterPage" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
  <title>Acme Books</title>
  <asp:ContentPlaceHolder id="head" runat="server">
  </asp:ContentPlaceHolder>
</head>
<body>
  <form id="form1" runat="server">
  <div>
    <asp:ContentPlaceHolder id="ContentPlaceHolder1"
      runat="server">
    </asp:ContentPlaceHolder>
  </div>
  </form>
</body>
</html>
```

PageLayout.aspx

```
<%@ Page Language="C#"
  MasterPageFile="~/AcmeBooksMasterPage.master"
  AutoEventWireup="true"
  CodeFile="PageLayout.aspx.cs"
  Inherits="PageLayout" Title="Untitled Page" %>
<%@ Register
  Assembly="Ektron.Cms.Controls"
  Namespace="Ektron.Cms.Controls" TagPrefix="CMS" %>
<%@ Register
  Src="~/Workarea/PageBuilder/PageControls/PageHost.ascx"
  TagPrefix="PH" TagName="PageHost" %>
<%@ Register
  Src="~/Workarea/PageBuilder/PageControls/DropZone.ascx"
  TagPrefix="DZ" TagName="DropZone" %>
<%@ Register
  Assembly="Ektron.Cms.Widget"
  Namespace="Ektron.Cms.PageBuilder"
  TagPrefix="PB" %>
<asp:Content ID="Content1"
  ContentPlaceHolderID="ContentPlaceHolder1" runat="Server">
  <PH:PageHost ID="PageHost1" runat="server"
    DefaultPageID="937" SelTaxonomyID="94" />
  <DZ:DropZone ID="Middle" runat="server"
    AllowAddColumn="false" AllowColumnResize="false">
    <ColumnDefinitions>
      <PB:ColumnData width="100" columnID="0" unit="pixels"></PB:ColumnData>
      <PB:ColumnData width="100" columnID="1" unit="pixels"></PB:ColumnData>
      <PB:ColumnData width="100" columnID="2" unit="pixels"></PB:ColumnData>
    </ColumnDefinitions>
  </DZ:DropZone>
</asp:Content>
```

PageLayout.aspx.cs

```
using System;
using System.Data;
```

```
using System.Configuration;
using System.Collections;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Web.UI.HtmlControls;
using Ektron.Cms.PageBuilder;
public partial class PageLayout : PageBuilder
  { protected void Page_Load(object sender, EventArgs e)
      {}
    public override void Error(string message)
      {jsAlert(message);}
    public override void Notify(string message)
      {jsAlert(message);}
    public void jsAlert(string message)
      { Literal lit = new Literal();
        lit.Text = "<script type=\"\" language=\"\">{0}</script>";
        lit.Text = string.Format(lit.Text, "alert('" + message + "');");
        Form.Controls.Add(lit);
      }
  }
```

15

Ektron's social business software

Social Business changes everything.

- how employees collaborate, enabling better communication, innovation, and productivity
- customer support, allowing customers to support each other in vibrant online communities.
- commerce, providing authentic customer-driven ratings and reviews that build trust.

Is your company ready for the social revolution?

With Ektron Social Business Software, create vibrant social communities for employees and customers. Socialize key business processes including Sales, Support, Marketing, and Innovation. Ektron Social Software powers many well-known customer communities, delivering enhanced customer satisfaction and loyalty. Social is not a feature, it is a business strategy. Implement your social strategy with Ektron Social Business Software.

Ektron's Social Business Software consists of the following components.

- *Working with discussion boards* on page 933 (includes Forums and Message Boards)

  The discussion board feature provides topic discussions on your website. A site or membership user with Add Topic permission creates a topic and posts a starter question. Site visitors can then reply. Ektron supports an unlimited number of discussion boards. A discussion board consists of a hierarchy. The following example shows the hierarchy with sample data, to explain how each element is used.

- User Profiles

  A membership user can access his or her profile page only from the website. An Ektron user can access his or her profile from the Workarea or the website.

- *Activity streams* on page 1581

  An activity stream is a series of chronologically-arranged notification messages describing activities within Ektron's Community Feature.

- *Managing a blog platform* on page 1141

  A blog is a form of online information sharing. You create a main blog post, and others can comment on it. Or, you can use a blog to create an online diary of everyday life. Your most recent blog post appears at the top with associated blogs following. Some blogs display a calendar on which days when blogs were created are highlighted.

- *Managing calls to action* on page 1099
- *User-ranking of content* on page 986
  - place a star-based scale on any page of your website
  - let users apply full or half-star rating increments and a comment
  - add reviews, depending on how the feature is used
  - moderate the review comments

- display reviews and comments next to content for others to see
- run reports to find the highest-rated content; tweak poorly-rated or reviewed content to achieve optimal ratings
- control which reviews get posted through a moderation feature

- *Managing community groups* on page 1530

  Community groups are another aspect of a community sites. Group members can easily meet people with similar interests, such as *car racing* for example. Groups have similar features and functions to user features. For example, a community group can have a Message Board, Discussion Board, maintain a membership list, and keep a group journal. You can manage community groups from the website or the Workarea.

- *Sending notifications to a community* on page 1543

  Ektron's notification system creates and transmits a notification message to recipients through various agents, based on Ektron activities. The activities may be performed by a community group, membership user, or an Ektron user. For example, a membership user wants to notify colleagues whenever a documented is uploaded to the profile page. When this occurs, an Ektron event is triggered, which causes a notification agent to send an email to the person's colleagues.

- *Logging in through Facebook* on page 115

  Facebook Login, an alternative to Ektron's standard login, lets users log in using their Facebook username and password instead of creating an Ektron username and password.

- *Targeting content with GeoIP information* on page 1781

  GeoIP support lets you target your messaging to specific audiences based on current geographical location. Ektron uses a site visitor’s IP address to detect the location. For example, your website may have a special sale on snow blowers. That information is relevant to people in colder climates but of no interest to those living in the tropics. As another example, a site visitor uses a cell phone to find the nearest store location. In this case, Ektron Map server control displays a map of nearby stores based on the user's current latitude and longitude.

- *Creating surveys and polls* on page 798

  Surveys and polls can show ongoing results to site visitors after they submit their answers.

  Surveys and polls are a type of form. All of the same functionality is available and applies.

  - *A survey* is usually multiple questions and appears on your site for a longer time than a poll.
  - A *poll* is generally one question and appears on a site for a very short time: an hour or a day.

- Micro-messaging server control

  The Micro-messaging server control lets users post brief messages. It resembles micro-blogging services like Twitter.

- SocialBar server control

  The SocialBar server control lets users of a community website bookmark colleagues, community groups, and content. It provides access to Twitter, Facebook, YouTube, and so on.

- TagCloud server control

  The TagCloud server control shows a weighted list of tags assigned to users, community groups, content, or library items. Tag sizes are proportional to the number of times they are assigned. For example, there are 2 tags, *Software* and *Programming*. If the *Software* tag is used 5 times and the *Programming* tag is used 2 times, the *Software* tag is approximately twice as large.

16

Ektron's marketing suite

Ektron's marketing suite is digital marketing software that delivers results by driving leads and increasing conversion rates. Ektron's marketing suite provides a seamless transition of your existing content management system with an intuitive, easy-to-use authoring experience and built-in mobile support. Convert your site into an inbound marketing powerhouse.

Ektron's marketing suite provides easy-to-use tools for marketing campaign managers, lead generation managers, digital marketers, and content marketing managers. Ektron's marketing suite helps your content get found faster, provides relevant and personalized messaging to your visitors to increase engagement, and boosts campaign performance, converting more visitors to leads and customers. Boost productivity, get your message to your target market, and deliver a rapid return on investment with dynamic results to your content, inbound, and digital strategy.

Ektron's marketing suite consists of the following components.

- *Creating personalized Web experiences with personas* on page 1047

  Leverage categories of users (personas) who fit a targeted demographic, attitude, or behavior. With personas, you can create a personalized Web experiences based on common interests, which increases visitor engagement and drives marketing qualified leads (MQLs) to your sales team.
- *Connecting visitors with targeted content* on page 1063

  Personalize a site visitor's experience by providing content that matches his or her interests. For example, you can use the search keywords that were used to find your site to determine the best offer to show a prospect. You can use other criteria, such as user profile information, or a submitted survey.
- *Measuring Web experiences with multivariate testing* on page 1087

  Multivariate testing lets you offer several variations of the same page, then measure site visitors' reactions to each variation. The one that generates the most conversions is automatically promoted to the design for that page, thereby maximizing your website's ROI.
- *Analyzing websites* on page 483

  The Business Analytics feature lets you track statistics about visits to your website. You can use it to determine the following kinds of information:
  - how often your content was viewed
  - how many site visitors viewed for first time, and how many returned
  - the most popular referral pages (that is, the Web page from which visitors clicked to arrive on your site)
- SEO (Search Engine Optimization)

  The SEO server control analyzes your website for W3C compliance, what information Google has about the page, Alexa rankings, image alt text, keyword density and metadata. SEO lets you know how (and if) you have set these values.

- *Managing calls to action* on page 1099

  A CTA is a user interface element that prompts a site visitor to touch or click it to proceed on a path toward conversion from site visitor to customer. Some examples include buttons and links that say *Add to cart*, *Locate Store*, *Free Coupon*, and so on. See also

- *Managing landing pages* on page 1107

  A landing page should accomplish a singular conversion goal of your marketing campaign, such as getting the contact information of your MQL. A page layout should be concise, avoid scrolling, and keep important information near the top. You typically create a landing page before a CTA because you will link the CTA to the landing page.

- *Managing a blog platform* on page 1141

  A blog platform contains a list of blog authors, their blogs pages, and analytics for evaluating blog posts and authors.

- *Setting up an ExactTarget connection to collect the form data* on page 1044

  If you are an ExactTarget cloud marketing platform customer, you can download the Ektron Marketing Suite app from the ExactTarget HubExchange into your ExactTarget account.

- *Personalizing a Web page* on page 1327

  Personalization is fast becoming an integral part of websites like iGoogle and Facebook, and organizations see personalization as a way to make their sites "stickier" and more engaging. Ektron provides tools to let membership users personalize their experience on your site, bringing relevant information to their fingertips. By letting users add widgets, applications, and feeds to a website, Ektron provides a framework on which to easily build true, personalized portals.

Traditional outbound marketing advertises a product or service to potential customers using television and print media, yet traditional advertising delivers the fewest Marketing Qualified Leads (MQLs) of any form of marketing.

- Given the opportunity, almost everyone would skip television commercials.
- Almost half of direct mail is never opened.
- 84% of 25-to-34-year old people actually left a website they enjoyed because of intrusive or irrelevant ads.

Site visitors have little patience for generic Web experiences that ignore the context of their visit. The opportunity for marketers is to connect content with context, to deliver personal Web experiences that deliver business results.

Ektron's marketing suite empowers marketers to create relevant, personalized Web experiences that deliver better business results. Engage customers with targeted marketing to drive them to take action. Maximize conversion rates through sophisticated multivariate testing. Analyze site performance by connecting your Web analytics data to your marketing teams in real time. Create business agility by empowering marketing with both data and tools with the Ektron's marketing suite.

Inbound marketing attracts customers to a website with relevant and useful content. Inbound websites are agile and responsive, and are specifically designed to optimize your inbound, content, and digital marketing strategy.

- In 2013, 60% of companies will have some sort of inbound strategy.
- 34% of leads will come as a result of an inbound marketing strategy.

Inbound marketing follows these stages:

1. **Connect** (get found). Develop an SEO strategy (moving beyond target keywords) by having meaningful conversations over social channels that add value to your community (and not just talking about yourself). Maintain a high level of quality and consistency over time.
2. **Engage** (turn a visitor into a lead). Create a great first impression, identify what is important to a visitor to your website and what that visitor wants to do next, and persuade the visitor to take the next step. If your website provides the answer your visitor is looking for, provide more value to engage the visitor. If the visitor comes to a landing page with a lead capture form, have a compelling offer that encourages the visitor to proceed.
3. **Convert** (convert a lead to sales). A visitor is searching the Web, comparing solutions and trying to learn on their own. Help them by offering the best content on your website to the person who is engaged in an opportunity. Get the visitor to take a direct action to validate the relationship and achieve specific results.
4. **Retain** (develop a loyal customer). Help a visitor get the most out of the visit and encourage the visitor into ongoing interaction with your website; make a visitor a return customer.
5. **Analyze** (and continuously improve). Inbound websites connect with analytic systems, marketing automation, and CRM systems, and help marketers use that information to improve conversion results. Start small (for example offer a webinar based on the industry of your visitor), gain understanding, improve your results, and grow the impact across more of your website, while you continue to grow and measure your progress.

Your inbound marketing strategy should include the following:

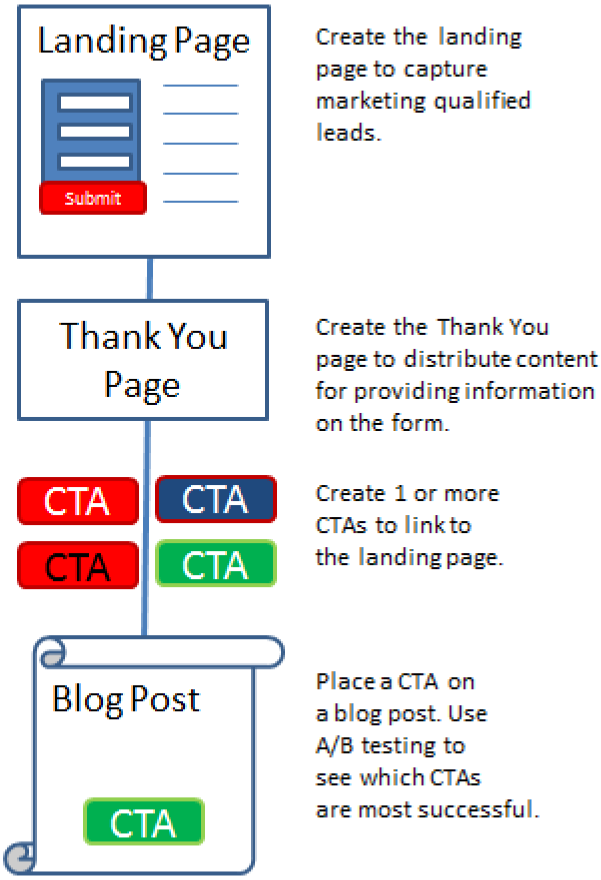
- Start with the results that you want to obtain, (for example, *increasing the amount of new pipeline*), then develop strategies to accomplish those results.
- Engage site visitors with strong content that is easily found by search engines.
- Test combinations of offers to see which produce the best results.
- Define the personas that you want to reach, then develop a visitor's journey, and map the content strategy to the journey.

Using landing pages and CTAs to optimize your marketing campaign

You can build and manage landing pages and calls-to-action (CTA) to control, organize, and optimize marketing campaigns.

The following example shows 1 way you can convert a visitor to a Marketing Qualified Lead (MQL). Your CTA could be on a social media page, a website page, or a blog page; anywhere your target persona may search for information.

Typically, you create this process starting with a marketing campaign. By first creating the landing pages for the campaign, you can drive traffic and leads to your marketing program. You then can create the Thank You page to keep the lead engaged and continue in the funnel. Additionally, you create the CTA to be promoted to best attract the visitor based on their digital behavior—whether that is on several key traffic pages of your corporate site, blog posts, or social media channels.



To create the content marketing experience, you create a campaign with the following steps:

1. Create landing pages that help you identify Marketing Qualified Leads (MQLs); someone who is more likely to become a customer versus others who are "browsing but not buying." MQLs can be identified through analysis of activity data. See *Managing landing pages* on page 1107.
   You also create a "Thank You" page that provides content or further information to your MQL for providing contact information.

   You can perform the following actions for landing pages.

   - Actions on a landing page list
     - Create New
     - Edit Properties
     - Go to Thank You Page
     - Go to Landing Page
     - Clone
     - Delete
   - Actions on a landing page
     - Edit Content
     - Edit Page Template

- Actions on a Thank You page
    - Edit Content
    - Edit Page Template
2. Create and place call-to-action (CTA) elements (images and text links) on your pages that encourage a person proceed on a path toward conversion from site visitor to customer. For example, links that say *For more information...*, *Add to cart*, or *Buy now*. Allow your CTAs to be shared on social media (through embed code). See *Managing calls to action* on page 1099.

   You can take the following actions for CTAs.

   - Actions on the CTA list
       - Create New
       - Edit
       - Delete
       - Embed Code
3. Create a list of blog authors, using the Blog Authors app, to write content that people are looking for, and will find when they search for it. As authors create blog posts, add relevant and contextual CTAs to take the site visitor to a landing page. See *Managing a blog platform* on page 1141.

   Combine the elements of your inbound and content marketing strategy. For example, if a potential student is reading a blog post about your university, make sure that the post has a CTA offer to go on a virtual tour, or check out another piece of content. This helps the potential student become more familiar with your school and moves them further down the funnel, therefore making the prospect more likely to apply.

   You can take the following actions for blogs.

   - Actions on an authors list
       - Create New
       - Go to Author’s Blog
       - Edit
       - Disable
       - Delete
   - Action on an author’s blog page
       - Go to blog post
       - Edit Content
       - Add New Post
       - View Analytics
       - Edit Page
       - Subscribe via RSS
       - Share on social media
       - Search

- Actions on a blog posts
  - Edit Content
  - View post analytics
  - Add CTA
  - Add Comment
  - Share on Social media
  - Search
  - Go to author's blog

4. Analyze the effectiveness of your CTAs, landing pages, and channel data based on your success criteria. For example, *how does your email campaign compare to your advertisement on social media*? See *Analyzing blog traffic* on page 1156.

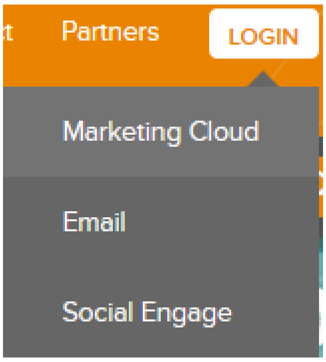
Setting up Ektron's marketing suite in ExactTarget

NOTE: The ExactTarget feature is part of *Ektron's marketing suite* on page 1033.

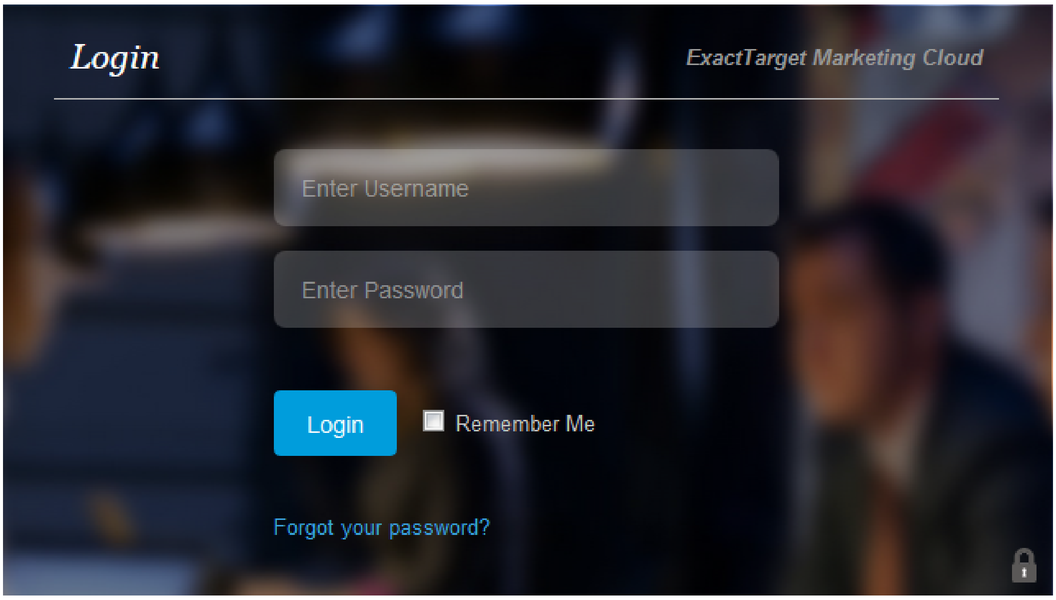
If you are an ExactTarget customer, you can download the Ektron Marketing Suite app from the ExactTarget HubExchange into your ExactTarget account.

> *ExactTarget is a leading cloud marketing platform. The company's solutions enable marketers to integrate customer data from any source to power digital marketing campaigns across multiple channels, all while leveraging sophisticated marketing automation capabilities. More than 6,000 companies around the world, including Coca-Cola, Gap and Nike, rely on ExactTarget's solutions to drive customer engagement, increase sales and improve return on marketing investments.—*
> http://www.exacttarget.com/salesforce/faqs

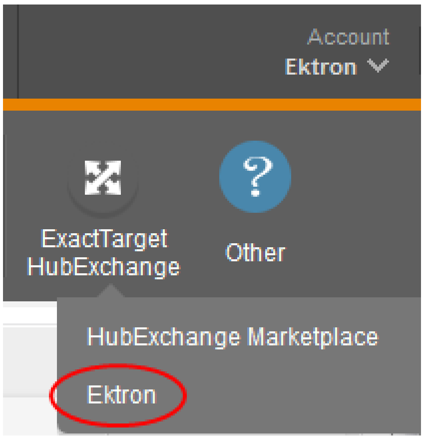
1. Login to the ExactTarget Marketing Cloud (**Login > Marketing Cloud**). The login screen appears.



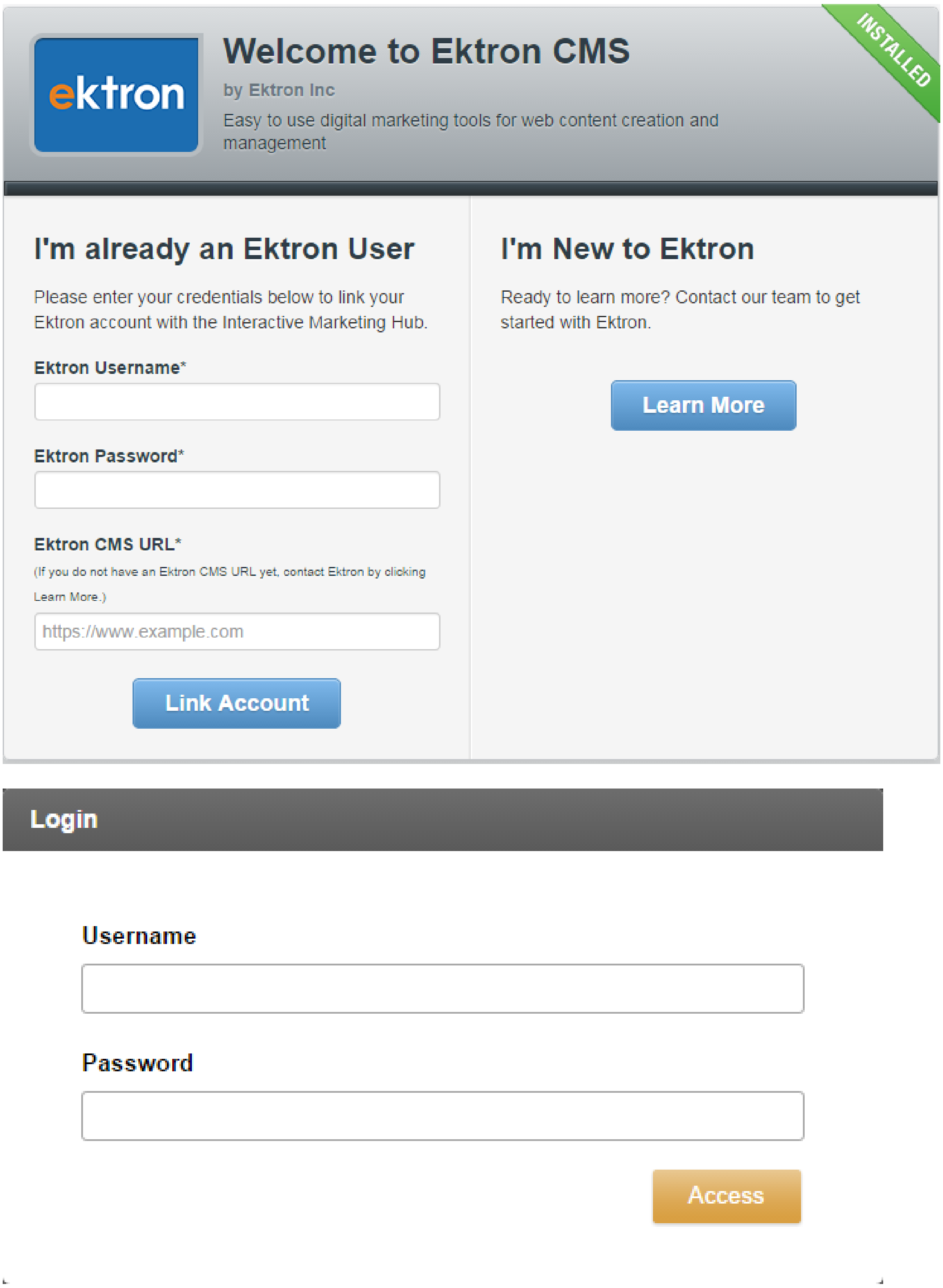
2. Enter your ExactTarget username and password, and click Login.



3. On your ExactTarget dashboard, choose **ExactTarget HubExchange > Ektron**.



4. If this is the first time that you are logging into Ektron from ExactTarget, the following login screen appears. If you are a returning user, you will see a simple login screen.



a. Enter your Ektron Username.

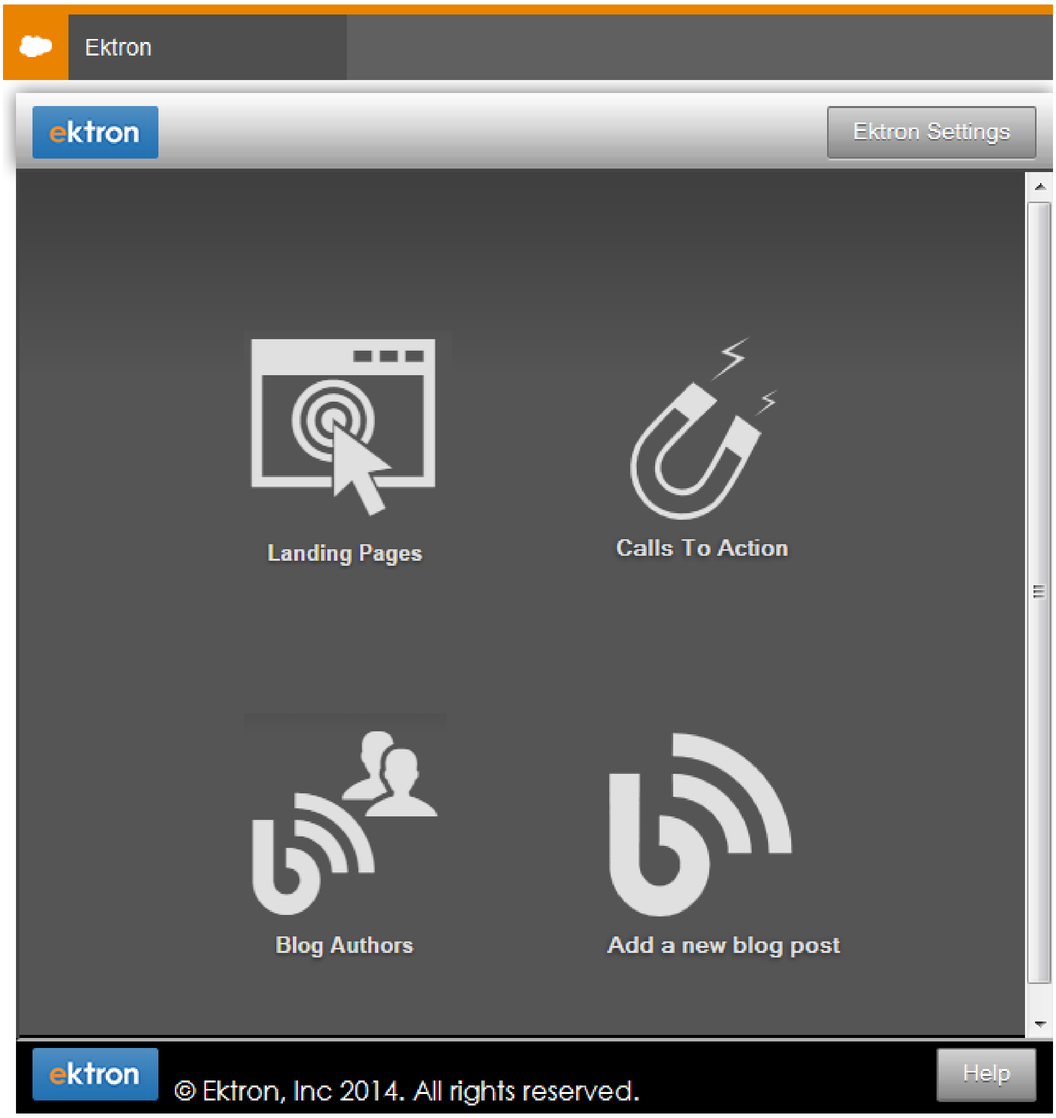
> **IMPORTANT:** Your ExactTarget and Ektron account email addresses should match. (For example, `user@example.com` for both email addresses.)

b. Enter your Ektron Password.

c. Enter your Ektron URL.

NOTE: If you do not have an Ektron URL, click **Learn More** to contact Ektron and request a demonstration of Ektron.

5. Click **Link Account**. Ektron is added to your ExactTarget apps and the Ektron App launch screen appears.



If you are an administrator, the **Ektron Settings** button appears in your toolbar. Click **Ektron Settings** to change to another URL.

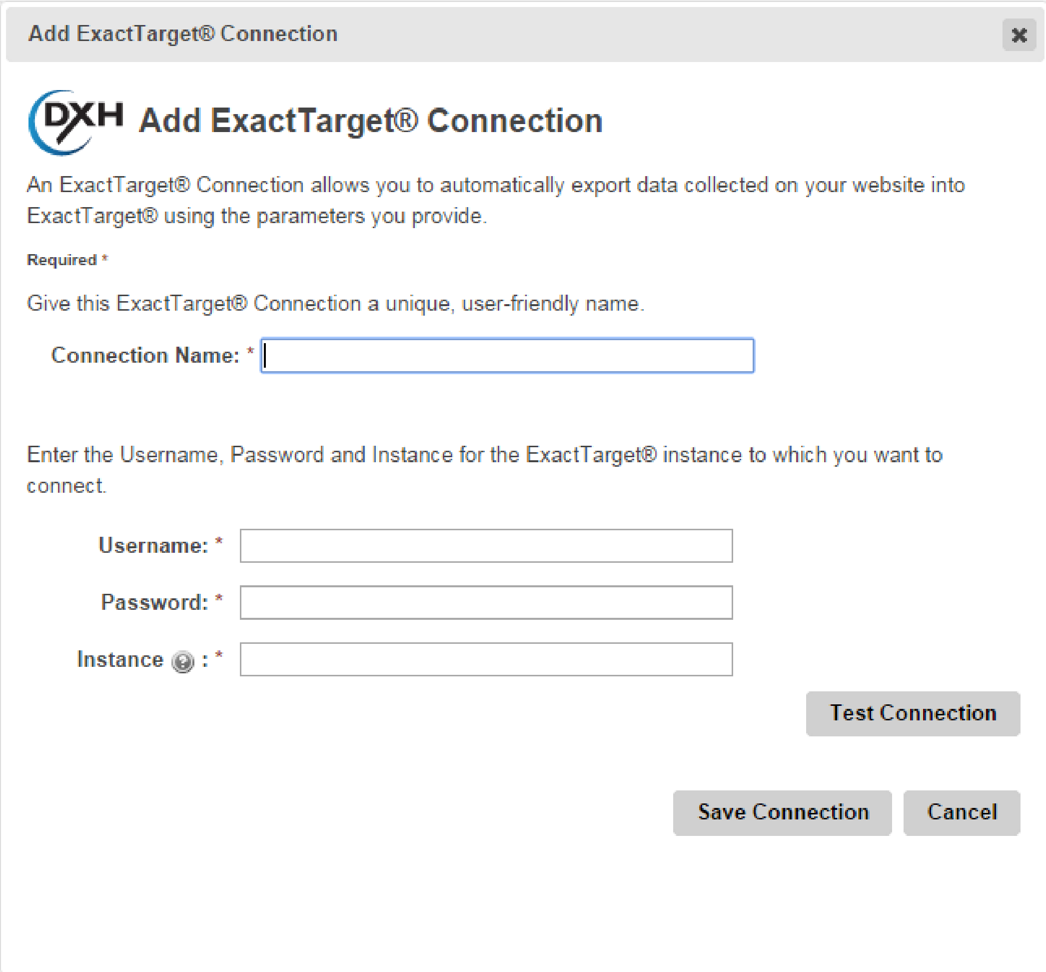
Setting up an ExactTarget connection to collect the form data

PREREQUISITE

> This procedure requires that you have already set up the Digital Experience Hub (DXH). For complete information about setting up and using DXH with Ektron, see Setting Up the Digital Experience Hub.

Before your website forms can send you data, you must set up an inbound connection.

1. Go to **Workarea > Settings > Settings > Digital Experience Hub > Connections**. The View All Digital Experience Hub Connections screen appears.
2. Click **Add Connections > Add ExactTarget Connection**. The Add ExactTarget Connection screen appears.
   - **Connection Name**. Enter a unique name for this inbound connection. You should have 1 inbound connection for each site from where you want to collect data.
   - **Username**. Enter the username of the person who will manage the data.
   - **Password**. Enter the password of the person who will manage the data.
   - **Instance**. Enter (copy and paste) the cloud server instance identifier that ExactTarget emailed to you. Instructions for determining which instance you are on is located at Accessing the ExactTarget Application.



3. Click **Test Connection**. If the connection information passes the test, click **Save Connection**. The Connection is added to the View All Digital Experience Hub Connections screen.

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17

Creating personalized Web experiences with personas

NOTE: The Personas feature is part of *Ektron's marketing suite* on page 1033.

A persona is a category of user that fits a targeted demographic, attitude, or behavior. When a person visits your website, Ektron tracks the activity and matches the behavior pattern to a defined persona. You can present relevant content, information, or products that match your visitor's unique interests (based on the persona criteria), thereby driving more marketing qualified leads (MQLs) to your sales team that may result in a conversion.

A persona should reflect your site visitors' attributes, goals, and behaviors. You should conduct user interviews and field observations to gather information about how visitors interact with your site. Analyze what distinguishes some users from others by asking questions such as the following:

- What is the target site visitor’s role?
- What goals or tasks does a site visitor want to achieve by coming to your site?
- How can you position your content to get this person to take a desired action?

For example, a persona could be *Ted the Technical Decision Maker*. You know Ted’s title, and a few pieces of data to identify him, such as his industry, business challenges, and so on. From this information, you can design a persona to target the current stage in a site visitor's decision-making process. For each persona you create, define a personalized set of site features and content to guide the person through the sales process and, ultimately, have the person perform the desired outcome.

A persona is assigned to a site visitor, and tracked, as follows:

1. On initial page load, the Persona Management HTTP module launches an asynchronous process that...
   a. Checks caches for persona matches and returns personas that match the current user.
   b. If no matches are found, the user's visitor context is recorded and cached.
   c. The page is loaded.
2. On second page load, personas are retrieved from cache.
   a. If persona matches are found, they are added to cookies.

      A persona uses the `VisitorContext` data class in the `Ektron.PersonaManagement.Common.dll` to represent a site visitor's context and passes collected site visitor information, including any third-party IDs, to Persona Management. The `VisitorContext` data class has the following properties.

      - `Cookies`—The current user's cookies. By default, persona providers can use a site visitor's cookies.
      - `Headers`—All HTTP headers associated with the current Web request. As of now, no persona providers use them.
      - `URL`—The current URL being browsed. As of now, no persona providers use this.

- `UrlReferrer`—The current user's IP address. As of now, no persona providers use this.
- `Properties`—Can be used for any additional visitor information.

b. If the page is a PageBuilder page that has a Targeted Content widget, the first Targeted Content rule that includes a matched persona determines the visitor's site experience. See also: *Creating a personalized site experience for persona (for marketers)* on page 1052.

c. The first persona match is sent to Google Analytics. See also: *Setting up analytic tracking for personas (administrators)* on page 1060.

Creating a persona (for marketers)

A persona consists of a title, description, attributes, and rules. A persona bridges the gap between what your internal systems know about site visitors, and what the site knows about them. By building rules that connect persona names and descriptions to attributes that define those personas, you can target content and learn more about the visitors who are using your site.

1. If you are logged on to the server on which Persona Management was installed, click Windows **Start** button **> All Programs > Ektron > Persona Management > Persona Management**.

   If you're using Windows 8 or 2012, press the **Windows** key () **/Q** then enter **Persona Management**.

   NOTE: Your system administrator provides sign-on instructions.

2. Click **Add** (). A new persona is created with the title **Anonymous Persona**, and generic description text.
3. Edit the title and description by clicking on each. A **persona description** identifies the demographics and story of a persona to help create targeted content that is appropriate to the persona. The description is optional.

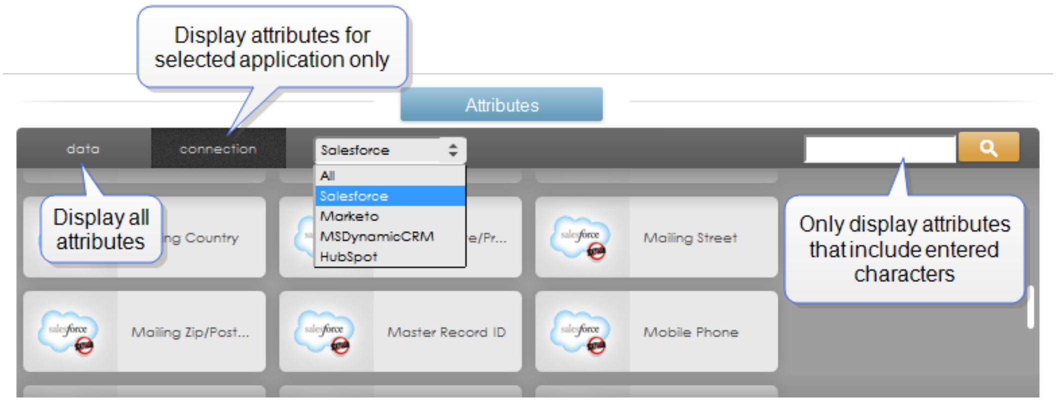
4. To apply attributes to the persona, click **Attributes**. The attributes panel opens.

 Attributes are data fields that define the qualities of a persona, using information stored in your CRM (such as Salesforce), marketing automation system (such as Marketo), or any other DXH connection. Examples of persona attributes include the following:
 - industry = healthcare
 - annual revenue = $10 million
 - position = Chief Technology Officer

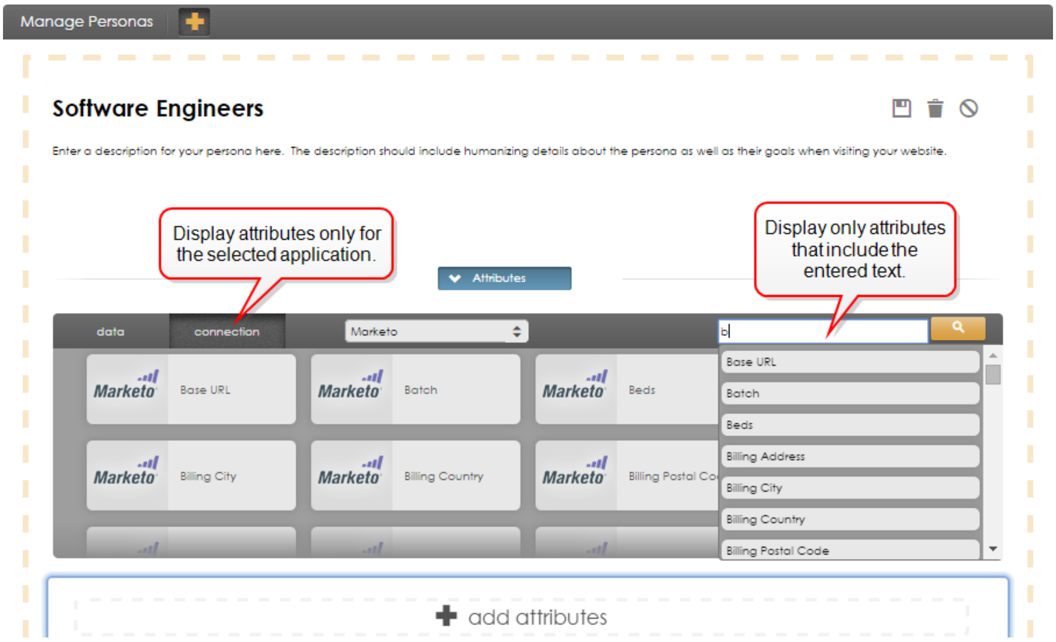
 If you determine that a site visitor with those qualities fits the profile of an important buyer of your products or services, create a persona rule using those criteria. Alternatively, you may use a persona in other marketing channels and want to track those users as site visitors.

 You can choose from among the following attributes:

 - **data**. Display all attributes.
 - **connection**. Display attributes for one enterprise application.
 - **Search**. Display attributes that include certain characters only.



You can combine the connection criteria with the search field. For example, you can find Marketo attributes that include **b**.



NOTE: By default the **Connection** drop-down lists all connectors, even those that are not enabled in DXH. To suppress unused connectors, your administrator should open `C:\inetpub\PersonaManagement\ektron.persona.app.config` and comment them out.

If you see no attributes for a connection, and you previously saw them, ask your administrator to research possible problems with the connection. For example, is its license still valid?

Even if a connection is missing, you can still remove rules that use its attributes.

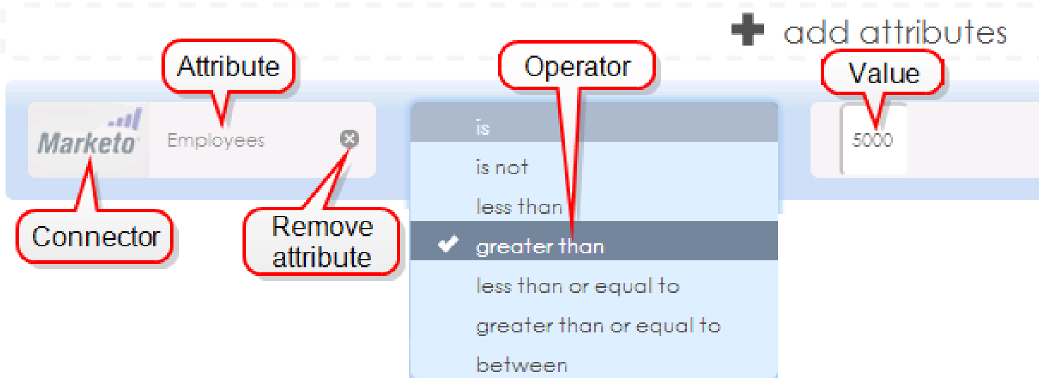
---

5. Click an attribute that defines this persona and it appears below **+ add attributes**.
6. Choose an operator and value(s) to complete the rule.

   Rules are logical statements that include a connection, attribute, operator, and value. For example:

```
(Connection) (Attribute)   (operator)   (value)
 Marketo      Employees   greater than   5000
```

   - The *connection* is type of connector from which you are collecting data.
   - The *attribute* is a field in the connector.
   - The *operator* indicates how to match the field and value. Operators correspond to the attribute's content type. For example, if the content type is string, operators are: `is`, `is not`, `contains`, `starts with`, `ends with`. The enterprise application determines an attribute's content type.
   - The *value* represents possible choices for the field in the connector.



7. Add rules until you define the persona completely.
8. Click **Save** ( ).

Editing a persona

1. Click the title of the persona that you want to edit. It opens up.
2. Click **Attributes**.
   - To delete a rule, click its field then click **Delete** ( ).
   - To cancel editing (and undo your changes since you started editing), click **Cancel** ( ). If you do, current edits are ignored, and the persona collapses.

Deleting a persona

To delete a persona, click **Delete** ( ). Then confirm your decision.

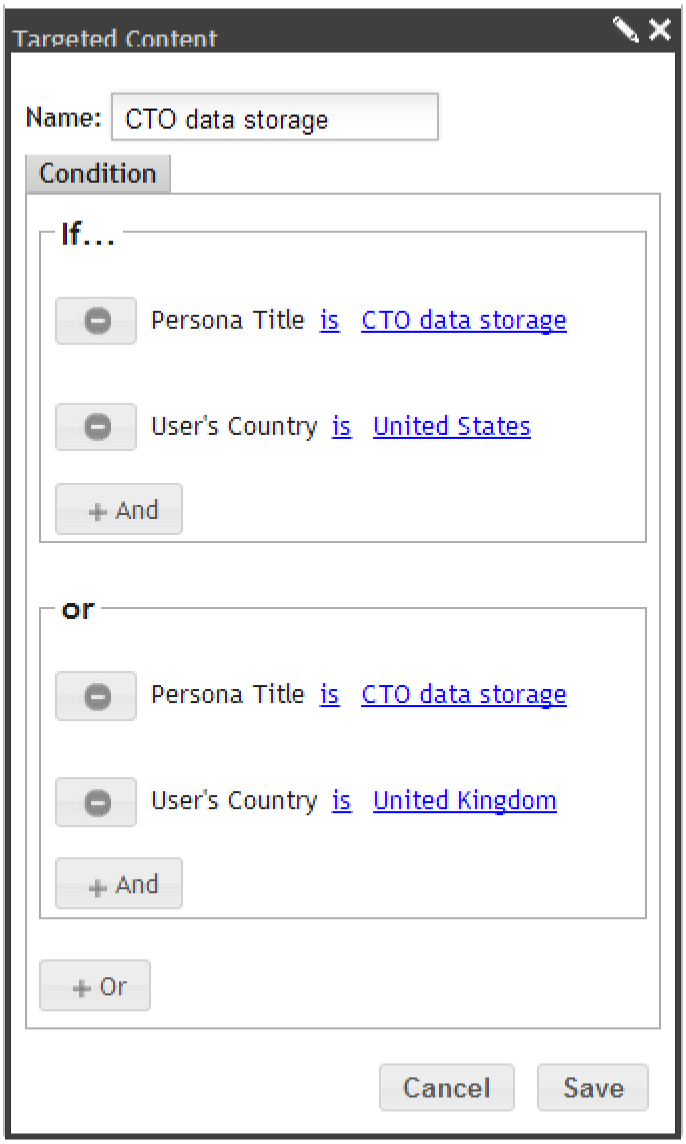
You can delete a persona whether it is open or closed.

Creating a personalized site experience for persona (for marketers)

After you create a personas, an Ektron site administrator can use it with the Targeted Content widget, to develop personalized site experiences that move individuals through the marketing funnel. The Targeted Content widget uses personas and other criteria to customize the experience for that person. For example, if the persona is CTO in the data storage industry, you may offer a white paper to download called, *Widespread adoption of flash in the enterprise data center.* On the other hand, if the persona is CTO in the Web Analytics industry, you may offer a white paper to download called, *Latest research in Web analysis, conversion optimization, funnel analysis and decision support systems*.

1. Log into your website and go to the PageBuilder page on which you want to display personalized content for a persona.
2. Place a Targeted Content widget onto the page.

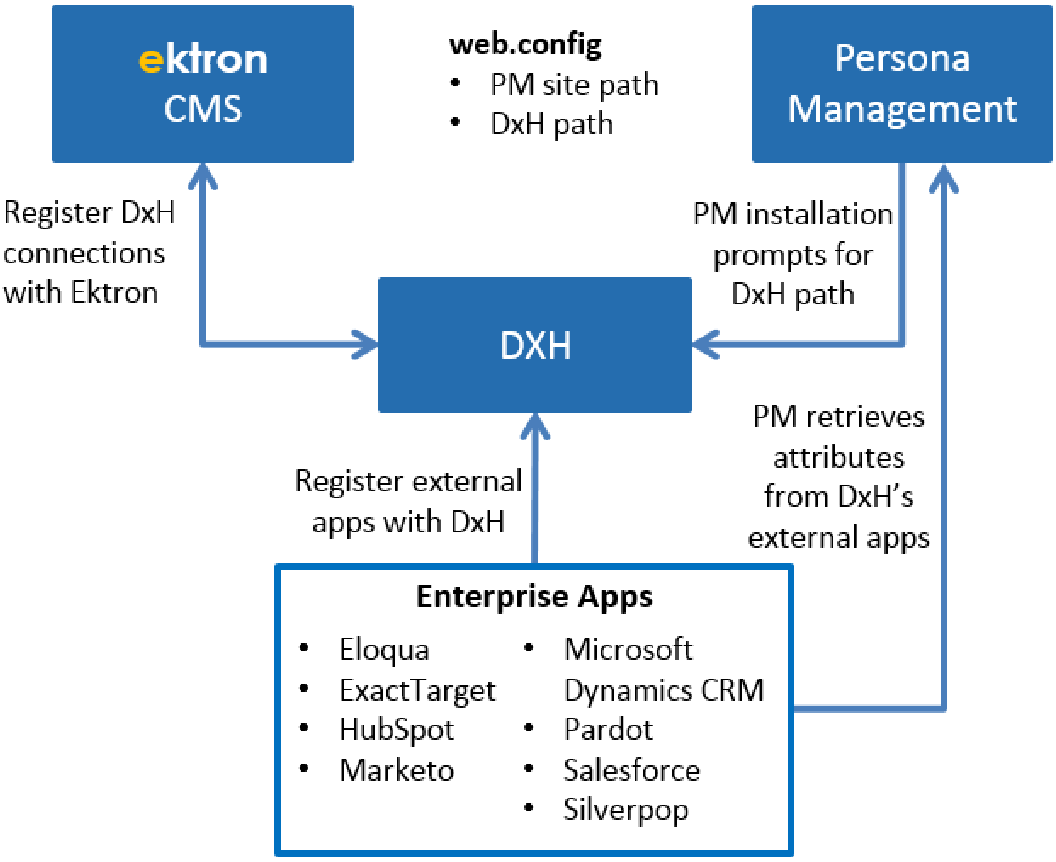
3. In 1 or more Targeted Content widget conditions, use a persona that you created.



4. You can add fields to each condition to further identify the site visitor who will receive personalized content. In the example, the site visitor's country must be United States or United Kingdom. If a site visitor matches more than one targeted content rule, the first matching rule (as ordered in the Targeted Content widget) determines which content appears.
5. You also can place widgets in the Targeted Content Widget, which appear only if the site visitor matches the conditions. For information about adding widgets to the Targeted Content widget, see *Creating a targeted content configuration* on page 1082.

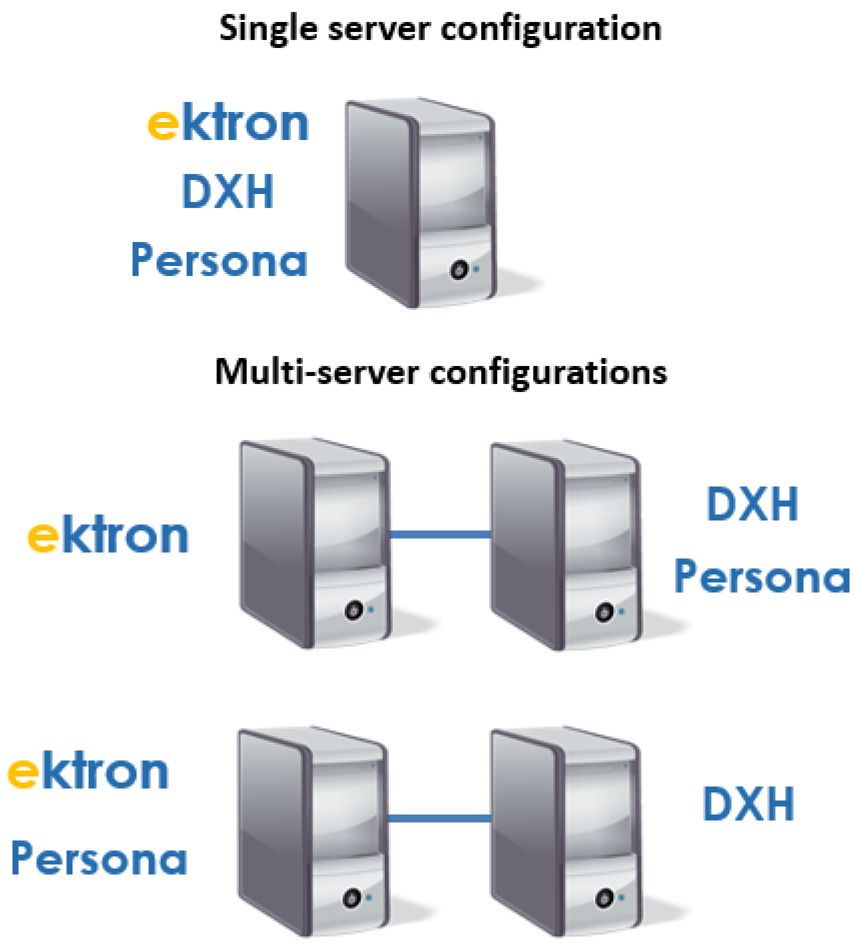
Installing persona management (administrators)

You can install Persona Management (PM) on the DXH or Ektron server. Consult a certified Ektron partner when planning a Persona Management deployment. The following image shows setup tasks for communicating between Ektron, DXH, and Persona Management.



- You can install Ektron, DXH, and Persona Management on the same server.
- You can install Ektron on one server, and DXH and Persona Management on another.
- You can install Ektron and Persona Management on one server, and DXH on

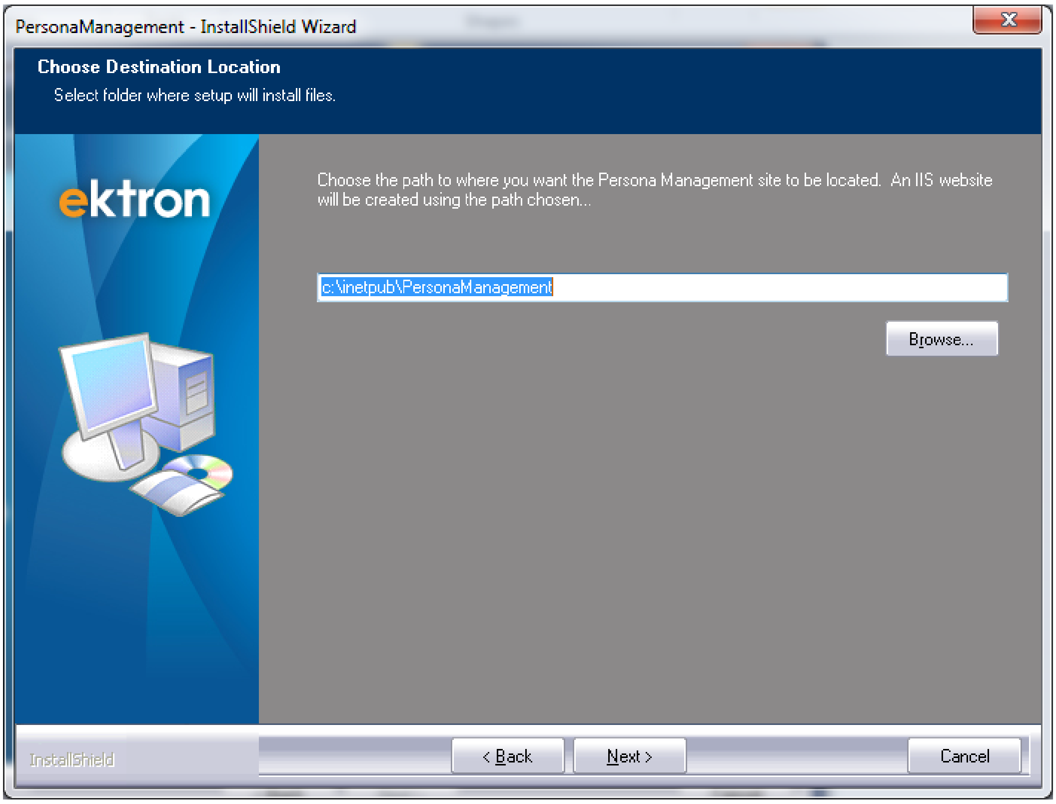
another.



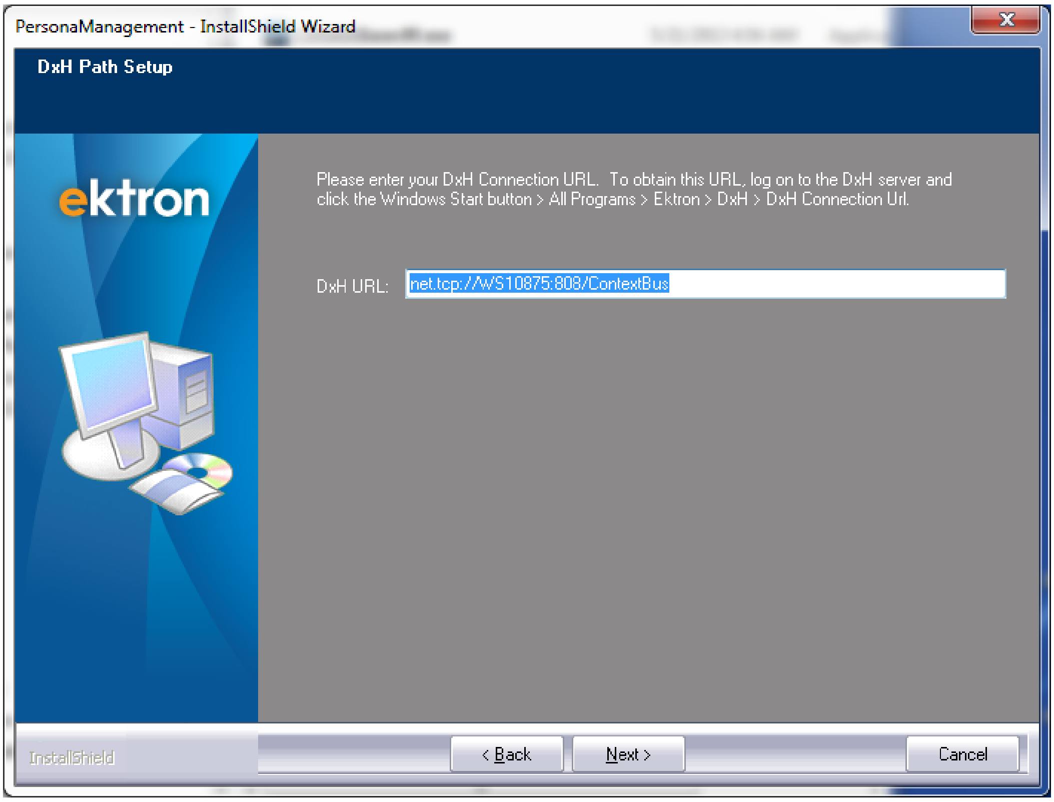
PREREQUISITE: PERSONA MANAGEMENT REQUIREMENTS

- An HTML5 CSS3-compliant browser.
- A server that meets the Ektron System Requirements.
- Ektron 9.00 or higher. See also: *Installing Ektron* on page 9.
- DXH 2.0 or higher.
- A connection established for every enterprise application whose attributes you will use on the Manage Personas screen.

1. Contact your Ektron account manager to obtain a link to download the Persona Management installation file.
2. Download and run the Persona Management installation file as an administrator.
3. Accept the license agreement.
4. Click **Next**. Select a folder in which to save Persona Management installation files.

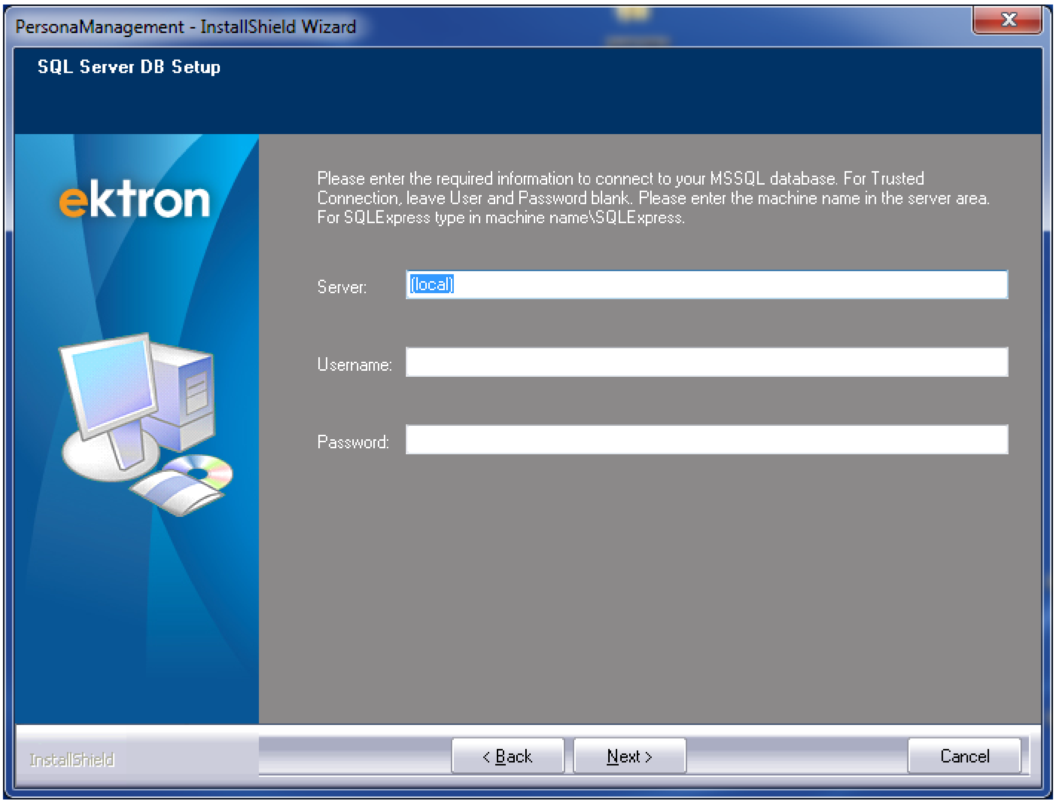


5. Click **Next**. Enter the path to the DXH with which Persona Management will connect, which you can obtain by logging onto the DXH server and clicking the Windows **Start** button **> All Programs > Ektron > DXH > DXH Connection Url**. (If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **DXH Connection Url**.)



NOTE: If you need to change this path, open `C:\inetpub\PersonaManagement\web.config` and edit the value of the `ContextBusEndPointUrl` element.

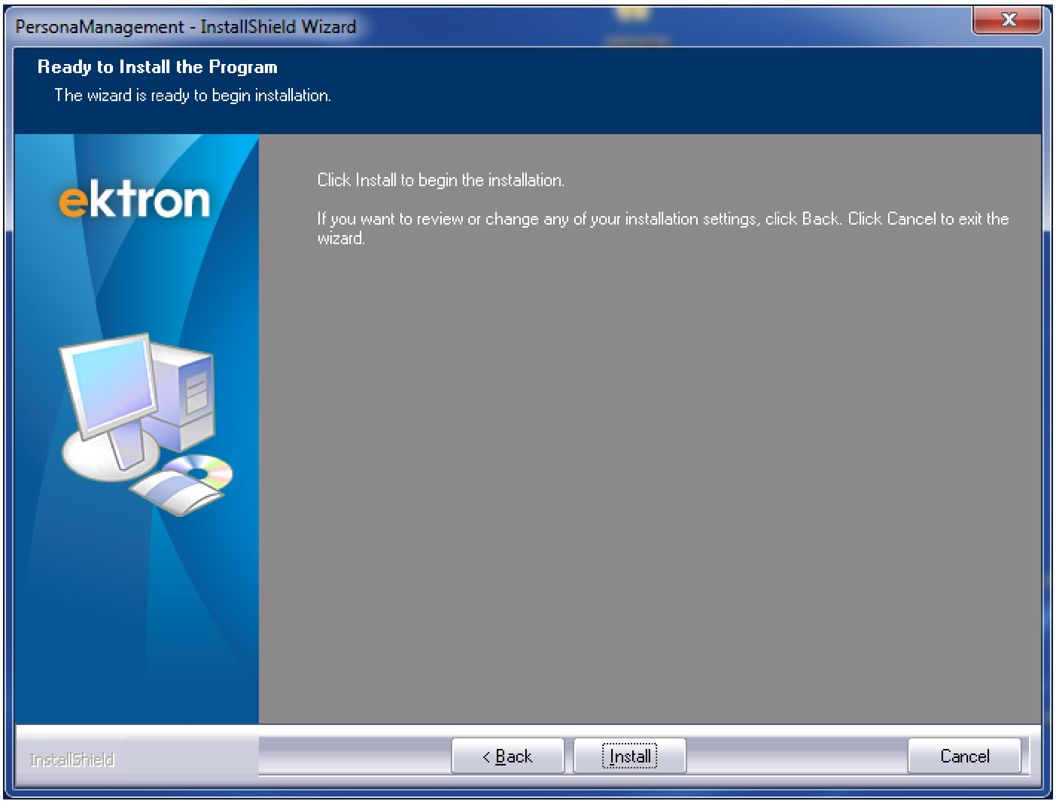
6. Click **Next**. Enter database connection information.



- **Server**. Enter a database server in which to store Persona Management information. To set up the database on this server, accept the default. Otherwise, enter a SQL or SQL Express server that already exists. For a local SQL, this would typically be `(local)`. For SQL Express enter `(local)\SQLExpress`.
- **Username**. Enter the user name that will be used to access the database.
- **Password**. Enter the password that will be used to access the database.

> **NOTE:** If you want to use NT authentication and set up a trusted connection, leave the user name and password blank.

7. Click **Next**. You are prompted to click **Install** to begin installing files.



Click **Install** to complete the installation.

8. On the Ektron server, open the Ektron *siteroot folder*`/web.config` file.
9. Remove the comment (`<!--` and `-->`)from the following tag.

```
<!--<add key="PersonaManagementEndPointUrl" value="http://localhost"/>-->
```

10. For the value of `PersonaManagementEndPointUrl`, enter the path to the Persona Management application, which you can obtain by clicking the Windows **Start** button **> All Programs > Ektron > Persona Management > Persona Management**. Make sure the path has no trailing slash (/).

    If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Persona Management**.

11. Remove the comment (<!-- and -->) from the following tag.

```
<!--<add name="PersonaManagementMatchesModule"
 type="Ektron.Cms.PersonaManagement.HttpModules.PersonaMatchesModule,
 Ektron.Cms.PersonaManagement" preCondition="integratedMode" />-->
```

12. Save `web.config`.

After installing Persona Management, you have 2 options to grant access to users who will manage personas.

- Install Persona Management on an internal server, and restrict access to authorized users.
- Use Windows authentication to control access to the Persona Management site.

Controlling persona attributes (administrators)

The following data sources and objects populate the Persona Management attributes list.

- **ExactTarget**. Subscriber
- **HubSpot**. Contacts
- **Marketo Lead Management**. Lead
- **Pardot**. Prospects
- **Salesforce**. Lead, Contact, Account
- **Microsoft Dynamics CRM**. Lead, Contact, Account. Within these Microsoft Dynamics forms, Ektron supports only these field types: `Bool, Customer, DateTime, Float, Integer, Status, Lookup, Memo, Picklist, PrimaryKey, State, String`

Modifying the attributes list

To add or remove *supported* objects from the attributes list for a data source:

1. Open `persona.app.config` in the directory where Persona Management was installed.
2. Find the data source that you want to modify. For example, Salesforce.

```
<add dataSourceId="Salesforce" dataSource="Salesforce"
  type="Ektron.PersonaManagement.DXH.SalesForceAttributeProvider,
  Ektron.PersonaManagement.DXH.DataSources"
  whiteListObjectNames="Contact"
  blackListObjectNames=""/>
```

   - To *add* objects to the attributes list, edit the `whiteListObjectNames` property. After any existing objects, insert a comma (,) then object names.
   - To *exclude* objects from the attributes list, edit the `blackListObjectNames` property.
   - If both properties are left blank, the data source's objects are available.

Removing data sources from the attributes list

You may want to eliminate data sources from the Persona Management screen. For example, if your site does not use HubSpot, there is no need to see HubSpot attributes in the list.

1. Open `persona.app.config` in the directory to which Persona Management is installed.
2. Comment out the data source, as shown in the following example.

```
<!-- <add dataSourceId="Salesforce" dataSource="Salesforce"
 type="Ektron.PersonaManagement.DXH.SalesForceAttributeProvider,
  Ektron.PersonaManagement.DXH.DataSources"
  whiteListObjectNames="Contact"
  blackListObjectNames=""/> -->
```

Setting up analytic tracking for personas (administrators)

Google Analytics lets you track persona activity on your site. You can discover the following information about users who match a persona:

- visit duration, bounce rate
- geographic location, language
- new vs. returning visitors
- paths visitors took through your site
- browser, network information
- top content, top landing and exit pages

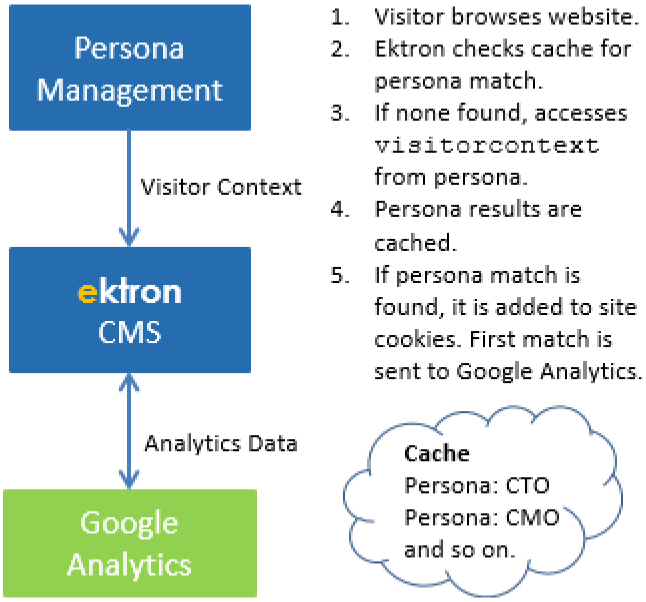
You can use analytic information to refine a persona's Web experience, and with other Ektron features like Multivariate Testing, ultimately increase their conversion rate.

When you tracks analytic activity with persona data, these events typically occur.

1. An Ektron website visitor completes an HTML form that maps to an enterprise application, such as Salesforce.
2. If a field value on the form matches a persona, a cookie is placed on the person's device. For example
   - On the HTML form, the user entered **Chief of Operations** into the Title field.
   - The persona definition contains attribute=Title, operator=contains, and value=Chief.

   NOTE: If a site visitor matches more than one persona, only the first one (as ordered on the Persona Management screen) is applied to that user's activity.
3. Google Analytics uses the cookies to track the user's activity, and categorizes it under the identified persona.
4. Within Ektron, use the Google Analytics feature to track persona activity.

The following image shows communications between Ektron, DXH, and Persona Management.



To set up analytic tracking for personas:

1. Create a Google Web Analytics account, if you do not already have one.
2. Open *siteroot/*`web.config`.
3. Add the following key under `<appsettings>`.

```
<add key="Persona_GoogleAccountId" value="UA-*****-**" />
```

4. Replace the `value` parameter with your Google AccountId.
5. Also, uncomment the following element.

```
<add name="PersonaManagementMatchesModule"
  type="Ektron.Cms.PersonaManagement.HttpModules.PersonaMatchesModule,
  Ektron.Cms.PersonaManagement" preCondition="integratedMode"/>
```

6. Register `Ektron.PersonaManagement.Analytics.js` in the master page(s) or any page on which you want to track persona, using this code.

```
<script
src="Workarea/FrameworkUI/js/Ektron/Ektron.PersonaManagement.Analytics.js">
</script>
```

(This page intentionally blank.)

18

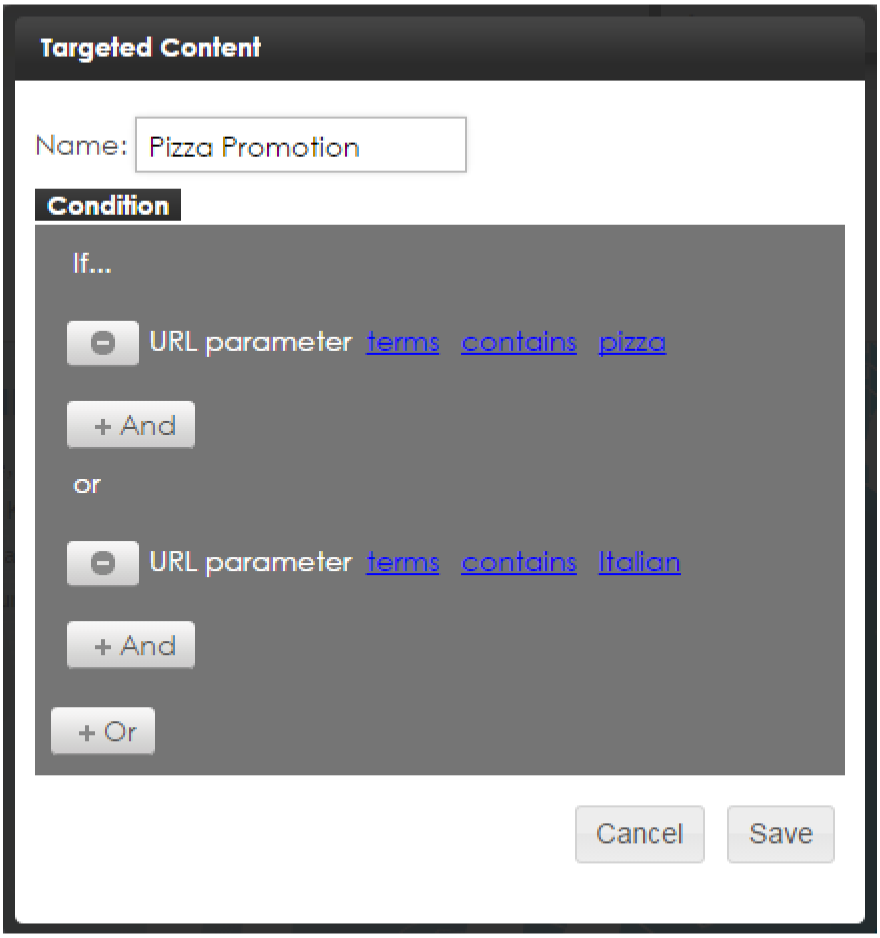
Connecting visitors with targeted content

NOTE: The Targeted Content widget feature is part of *Ektron's marketing suite* on page 1033.

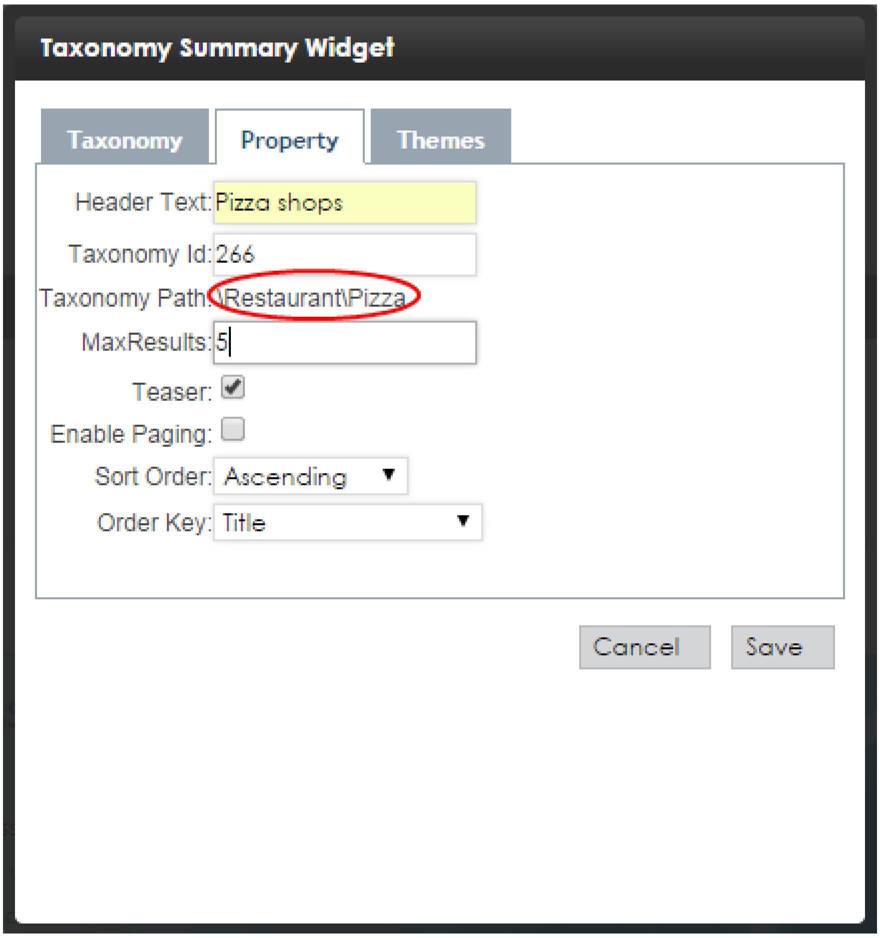
You can personalize a site visitor's experience by providing content that matches their interests. This places your site information in the context of your users. For example, the search keywords used to find your site might determine the best offer to show a prospect. Or, site members might explicitly state their interests by adding to their user profile, or by filling out a survey.

The Targeted Content widget lets you gather information from each interaction, and use that information to direct visitors to content that relates to their specific interests.

Each Targeted Content widget has 1 or more conditions, and each condition can have 1 or more criteria. For example, a condition may stipulate that the **URL parameter** `terms contains pizza` or `terms contains Italian`.



After assigning conditions to a Targeted Content widget, you assign one or more widgets to it, which appear on the page only if a condition evaluates to true. To continue the example, if the page has a URL parameter that contains "pizza," you display a Taxonomy Summary widget that shows content to which the taxonomy category "pizza" is assigned.



You can assign any number of conditions to the Targeted Content widget. As soon as one is true, its associated widgets appear, and any remaining conditions are ignored.

The Targeted Content widget can evaluate the following information about a site visitor.

- *search engine* or *URL* that directed the visitor to the page
- the page's *URL parameters*
- the visitor's device, such as a Smart Phone
- the page from which the visitor was directed
- GeoIP regional information about the visitor: U.S. state or country
- Facebook profile information, such as marital status
- whether a certain *cookie* is on the person's computer
- if logged in
  - *user or membership group* to which the visitor belongs
  - any *custom user properties* that match your criteria
- the current *date and time* on the Ektron server

The following examples show how you can use the Targeted Content widget.

- Your jewelry store is promoting gold necklaces. You create a hyperlink with a Campaign ID of gold. For example, `http://www.mystore.com/product.aspx?cid=gold`. In the Targeted Content widget, set the condition **URL Parameter CID contains gold**.

If condition = true, the Targeted Content widget displays a ContentBlock widget that promotes gold necklaces.

- You are promoting a race to NASCAR fans. Your site has a membership group for NASCAR fans, and anyone visiting the site can join. In the Targeted Content widget, create a condition **If user is in Group NASCAR**.

  If condition = true, the Targeted Content widget displays a WebCalendar widget that lists upcoming NASCAR races.

- On Sunday Feb. 28, you are running a sale: all couches are 50% off. In the Targeted Content widget, set **Date is 2013-02-28**.

  If condition = true, the Targeted Content widget displays a TaxonomySummary widget that lists all couches and the discounted price.

- Display the "Engineering" Community Group's activity stream to its members. You have a Community Group for the Engineering Department. In the Targeted Content widget, set **User is In GroupEngineering**.

  If condition = true, the Targeted Content widget displays an Activity Stream widget, set up as follows:

  - `ObjectID`= ID of the Engineering group
  - `FeedType` = **Community Group**

- If the referring page is a Search Engine and its keywords include Pizza, you want to show a list summary of Pizza shops. Assume your content includes restaurant listings, and taxonomy categories are applied to this content. One category is pizza. In the Targeted Content widget, set **Search Engine Keywords is Pizza**.

  If condition = true, the Targeted Content widget displays a TaxonomySummary widget that lists all content assigned to the category Restaurants > Pizza.

- If a site visitor's Facebook profile "likes" Ektron, display Ektron products. In the Targeted Content widget, set the condition **Facebook Info: Likes contains Ektron**.

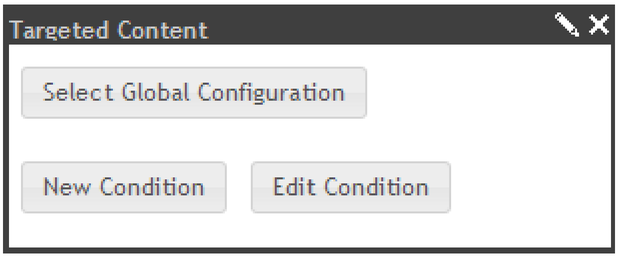
  If condition = true, the Targeted Content widget displays a ContentBlock widget that promotes Ektron products.

Specifying criteria for a Targeted Content widget

PREREQUISITE

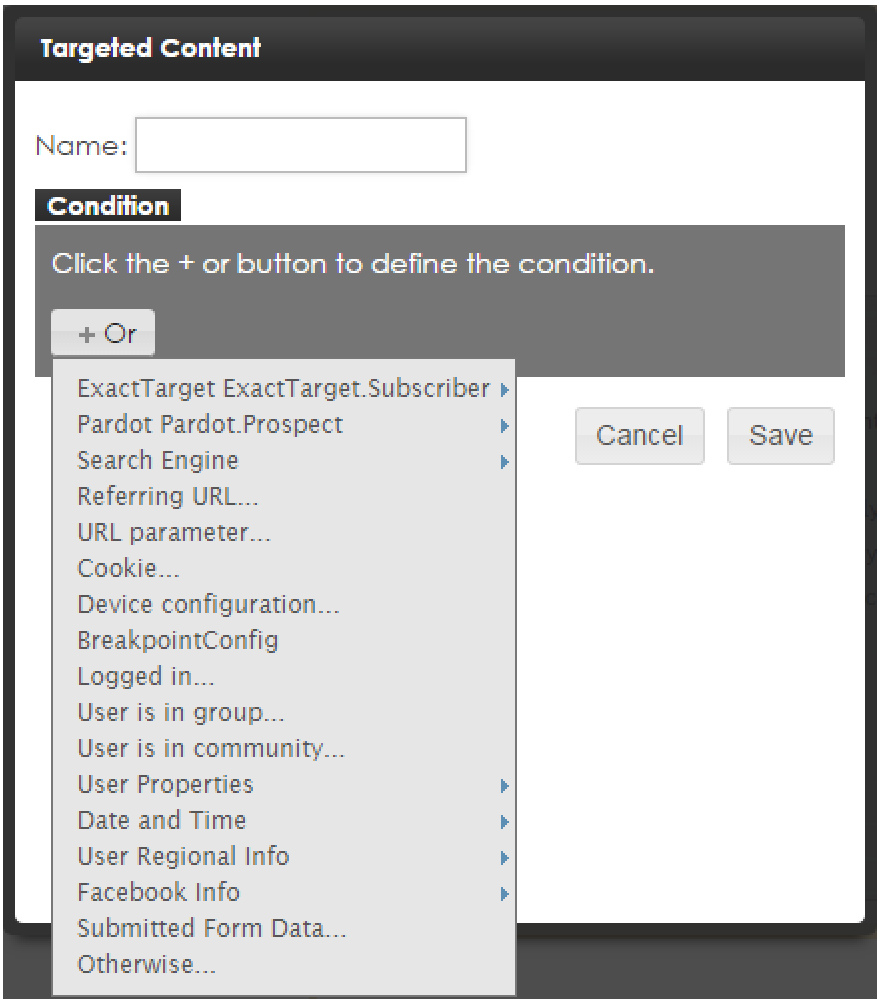
The Targeted Content widget must be in the list of widgets assigned to the page's template. See *Adding the wireframe and widgets into Ektron* on page 1016.

1. Place the Targeted Content widget onto a PageBuilder page.
2. Click **New Condition**.



> **NOTE:** Global configurations are created and stored in the Workarea. If they are already created, you can click Select Global Configuration and select one for use. See *Choosing a targeted content configuration* on page 1084 and *Creating a targeted content global configuration* on page 1082.

3. Enter a condition name.
4. Click **+or** to set up the first condition and select an option from the drop-down list of condition criteria. See also: *Using multiple criteria in a condition* on page 1074.



- **ExactTarget ExactTarget.Subscriber**. Displays if the connector is installed.

  - Email Address
  - Full Name
  - Marital Status
  - Age
- **Hubspot Hubspot.Contact**. Displays if the connector is installed.
  - Email Address
  - Company
  - First Name
  - Last Name
  - Address
  - City
  - State
  - Country
- **Marketo Activity**. Displays if the connector is installed.
  - Opened Email
  - Sent Email
- **MSDynamicCRM Lead**. Displays if the connector is installed.
  - Company Name
  - Industry
  - Number of Employees
  - Revenue
  - Promotion
  - Score
- **Pardot Pardot.Prospect**. Displays if the connector is installed.
  - Email Address
  - Company
  - First Name
  - Last Name
  - Address 1
  - Address 2
  - City
  - State
  - Country
- **Salesforce Lead**. Displays if the connector is installed.
  - Company Name
  - Industry
  - Number of Employees
  - Revenue
  - Products Owned

- Product Interest
- Score

- **Search Engine**. Use to specify widgets that appear
  - If a site visitor was referred to this page from any search engine (or not)
  - If the search engine from which the site visitor was referred is one of the following
    - Google
    - Bing
    - Yahoo
    - Other
    - None
  - If the search engine's keywords are (are not, contain, start with, or end with) a specified value
- **Referring URL**. The referring host matches a string value (for example, `www.example.com`). Use this to determine the visitor 's originating site, such as a Facebook fan page.
- **URL parameter**. The current page contains the specified URL parameter. For example, you create a campaign selling gold jewelry and base its content on the URL parameter `cid=gold`.

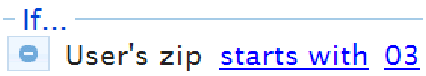
  If the URL of the page that hosts the Targeted Content widget contains `cid=gold` (for example, *`http://www.mystore.com/product.aspx?cid=gold)`*, then display widgets assigned to that Targeted Content widget.

- **Cookie**. A cookie matching the specified pattern is found on the site visitor's computer. Cookies are generally stored as name/value pairs, such as `UserID—A9A3BECE0563982D`. When checking for a cookie, you complete 3 fields.
  - cookie ID
  - logic (is, is not, contains, starts with, ends with)
  - a value
- **Device Configuration**. The user's device matches a Device Groups that you specify. For example, a content block displays only if a user accesses your website with a Smart Phone. See also: *Adding a group by device model* on page 470.
- **BreakpointConfig**. The user's device matches a breakpoint that was defined in *Adding a group by breakpoint* on page 467.
- **Logged in—**The user is or is not logged in.
- **User is in group**. Only applies to logged-in users. User is member of an Ektron User or Membership Group that you select from drop-down list.See also: *Membership users and groups* on page 1507, *Managing users and user groups* on page 1439

- **User is in community**. Only applies to logged-in users. User is a member of an Ektron Community Group that you select from drop-down list. See also: *Managing community groups* on page 1530
- **User Properties**. Only applies to logged-in users. The value of the logged-in user's custom property satisfies the logic for the value you specify. See also: *Creating custom user properties* on page 1451

  Example:

  Zip code is a Custom User Property. You want to display a list of stores in New Hampshire for users whose Zip Code begins with 03.

  - Condition / result
  - Zip code = 03458 true
  - Zip code = 02103 false
- **Date and Time: Day**. The actual date (according to the Web server's clock) and a date you enter satisfy the specified logic.

  Logic operators:

  - is
  - is not
  - less than
  - greater than
  - equal to or less than
  - equal to or greater than

  Examples:

  - Assume today's date is 2010-01-01
  - Condition / result
  - Date = 2010-01-01 true
  - Date < 2010-01-01 false
  - Date >= 2009-12-01 true
- **Date and Time: Day of Week**. The current day (according to the Web server's clock) satisfies the specified logic.

  Logic operators:

  - is
  - is not

  Examples:

  - Assume today's date is 2010-03-01 (Monday)
  - Condition / result
  - Day of week is Monday true

- Day of week is Tuesday false
- Day of week is not Tuesday true

- **Date and Time: Day of Month**. The actual date (according to the Web server's clock) and a date you enter satisfy the specified logic.

  Logic operators:

  - is
  - is not
  - less than
  - greater than
  - equal to or less than
  - equal to or greater than

  Examples:

  - Assume today's date is 2010-03-01 (Monday)
  - Condition / result
  - Day of month is 01 true
  - Day of month is not 01 false
  - Date >= 2009-12-01 true
- **Date and Time: Hour of Day**. The actual hour (according to the Web server's clock) and number between 1 and 23 you enter satisfy the specified logic. The numbers are based on a 24 hour clock so, for example, 5 p.m. is 17.

  Logic operators:

  - is
  - is not
  - less than
  - greater than
  - equal to or less than
  - equal to or greater than

  Examples:

  - Assume current time is 18:30:00
  - Condition / result
  - *Hour of day* is 18 true
  - *Hour of day* is 23 false
  - *Hour of day* >= 12 true
- **User Regional Info**. Enter the user's country or state, or both. State selections are limited to states in the United States. This information is retrieved from the IP address of the person who is using your website. To retrieve this information, see *Targeting content with GeoIP information* on page 1079.

- **Facebook Info**. If the criterion matches information in the user's Facebook profile, display the widgets inserted into this condition. For example, if the criterion is **Marital Status is Single** and the user's Facebook Profile matches that value, display the assigned widgets. This criterion only works with users who log in via *Logging in through Facebook* on page 115. You can apply any of these Facebook fields.
    - Age
    - Gender
    - Marital Status
    - Likes
    - Employment

  Use Contains with Free Text Fields

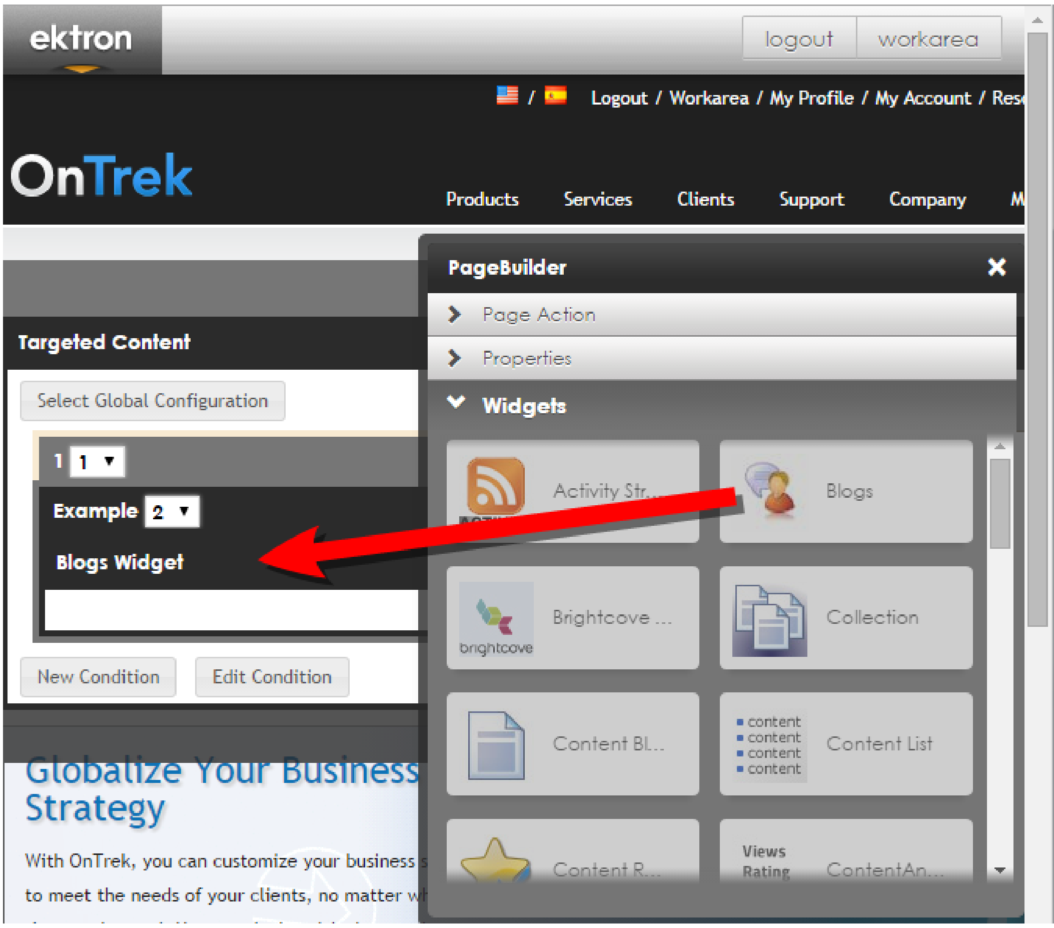
  On fields that use free text (such as Likes), you should use the **contains** operator, as opposed to **is** or **is not**. **Contains** is more flexible and finds a partial match. For example, if the user likes **U.S. Soccer** and you enter the term **soccer** and the **contains** operator, a partial match is made, so the user sees the related widget. On the other hand, if the user likes **U.S. Soccer** and you enter the term **soccer** and the **is** operator, an exact match is not made, so the user does not see the related widget.

  The Likes Field

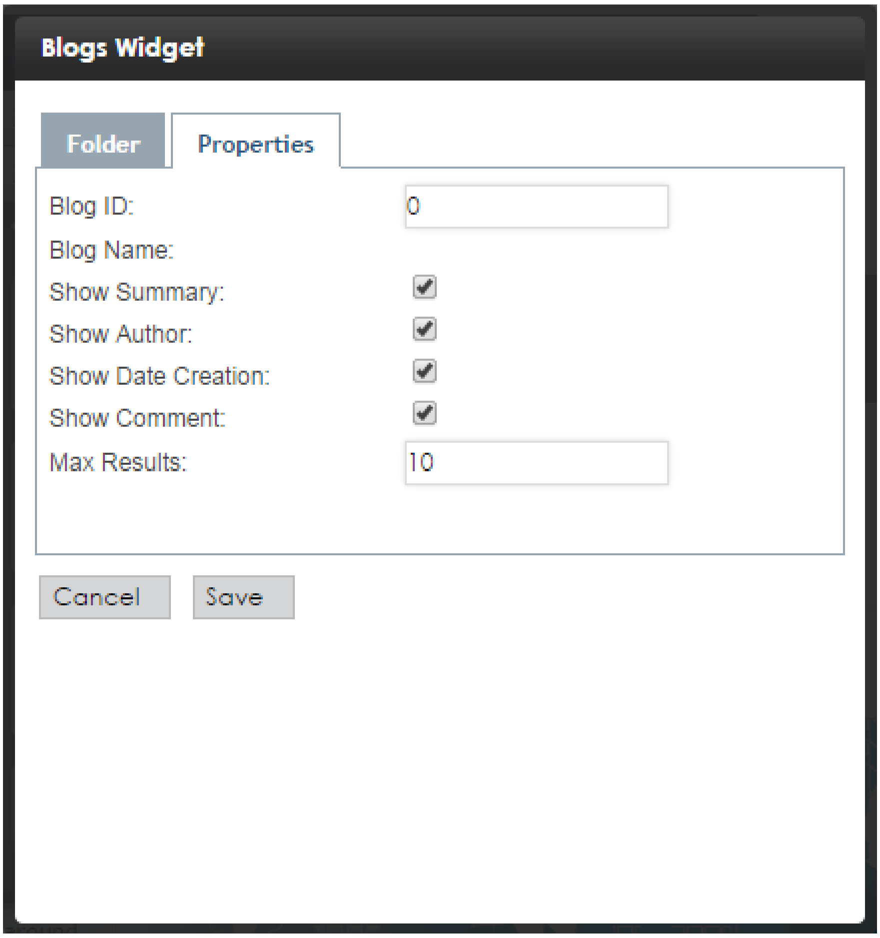
  The **Likes** field lets you search through users' Facebook profile **Likes and Interests**. Or, you can narrow it down to a specific like/interest. For example, you could display a widget promoting Red Sox merchandise if, in their Facebook profile, users like a **Sports Team** that **contains Red Sox**.
- **Submitted For Data**. Uses field and value for a form (by ID).
- **Persona Title**. The site visitor matches the persona that you define in this condition. See also: *Creating personalized Web experiences with personas* on page 1047.
- **Otherwise**. No condition evaluates to true.

  NOTE: You would typically use this criterion last, since it always evaluates to true. Any conditions below this are ignored.

5. Add additional criteria as desired.
6. Click **Save**.
7. Click a widget and place it into the Targeted Content widget. You can place more than 1 widget into the Targeted Content widget. If the condition is true, the widgets you place there appear.

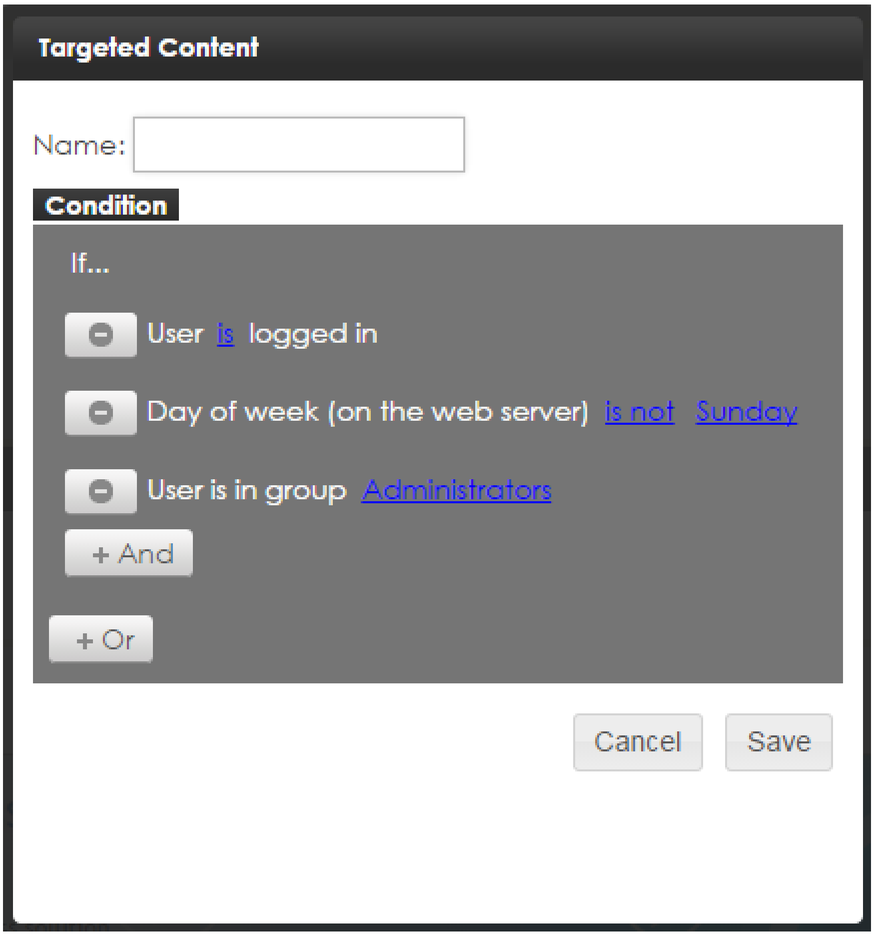


8. If the widget requires you to fill out properties, click **Edit** (✎) and complete the screen.



Using multiple criteria in a condition

A condition can have several criteria joined by and an AND operator.



In the following example, all conditions must be true for the widgets assigned to this Target Content widget to appear.

- the user is logged in
- today's day must not be Sunday
- the user is a member of the Ektron user group Administrators

If any of these condition is *not* true, the next condition assigned to the widget is evaluated, if one exists.

If *all conditions are true*, the widgets assigned to this Targeted Content widget appear. Additional conditions assigned to this widget are ignored.

You can also specify an OR relationship among criteria in one condition. To do so, click **+or** below any condition, then enter the OR condition.

For example, assume you want the user's country to be only the Bahamas or Bermuda.

Each set of criteria is evaluated independently. If any criteria set is true (that is, all of its statements are true), the widgets assigned to this Targeted Content widget appear. Additional conditions assigned to this widget are not evaluated. If none of the criteria sets is true, the next condition assigned to the widget is evaluated, if one exists.

Targeting content with Salesforce data

The Targeted Content widget personalizes a Web page by displaying content based on information from a user-completed form. When a user submits a form, the external application connector (such as Salesforce) writes a user ID for that user's login back to Ektron. This enables the delivery of targeted content based on the user's identity. For example, if the Salesforce MQL's industry is healthcare, the page may display content of interest to healthcare professionals.

1. Determine Targeted Content widget criteria from the external application forms and fields in the `siteroot/dxhTargetingRules.config` file. The following sample shows the default portion of this file.

```
<dxhRules>
  <Adapter name="Salesforce">
    <AdapterObject name="Lead">
      <add name="Company Name" value="Company"/>
      <add name="Industry" value="Industry"/>
```

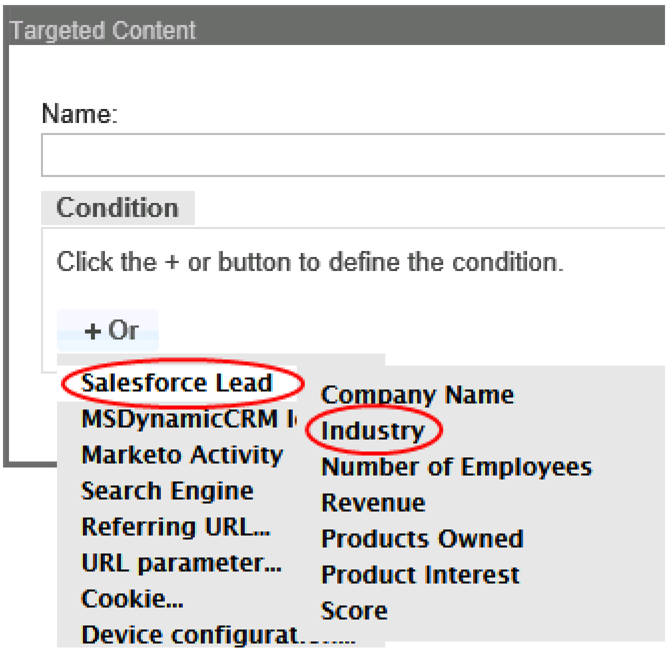
```
      <add name="Number of Employees" value="NumberOfEmployees"/>
      <add name="Revenue" value="AnnualRevenue"/>
      <add name="Products Owned" value="Products Owned"/>
      <add name="Product Interest" value="ProductInterest"/>
      <add name="Score" value="Rating"/>
    </AdapterObject>
  </Adapter>
```

Tag Descriptions

- **<dxhRules>**. The file's root tag.
- **<Adapter name>**. The adapter for which to display object rules, such as `Salesforce` or `MSDynamics`. It is *not* the connection name (for example, `marketingSF`).
- **<AdapterObject>**. The system name of the object within the specified adapter. For example, to enter a Salesforce lead, insert the system name `Lead` (case-sensitive).
- **<add ...>**. The field. The `name` attribute contains text that the end user sees (as shown in the following image). The `value` attribute contains the system name of the field.

NOTE: The field's datatype is recognized and automatically surfaced into the correct rule type; numeric rule for an integer or decimal, string rule for a string, a multi-select rule for a pick list, and so on.

2. Access either a Targeted Content widget or a Targeted Content configuration.
3. Click the **Or+** button to add a criterion for the widget.



4. Select an adapter and field. For example, **Salesforce Lead > Industry**.
5. Enter additional fields as you would in any Targeted Content widget or configuration.
6. Save the widget and test it.

See also: *Creating personalized Web experiences with personas* on page 1047.

Targeting content with GeoIP information

GeoIP support lets you target your messaging to specific audiences based on current geographical location. Ektron uses a site visitor’s IP address to detect the location. For example, your website may have a special sale on snow blowers. That information is relevant to people in northern climates but of no interest to those living in the tropics. Or, a site visitor uses a cell phone to find the nearest store location, and the Ektron Map server control displays a map of nearby stores based on the user's current latitude and longitude.

Ektron maintains GeoIP information in a cookie only while a visitor uses the site. When the visitor exits, Ektron deletes the cookie. Ektron obtains the following information from the IP address of your site visitors. (The values are only examples.)

- IP Address—208.32.120.10
- Country code and name. United States
- Region. NH (New Hampshire)
- US area code. 603
- US metro code. 506
- City. 506
- US zip code. Nashua
- Latitude and longitude. 42.7551/-71.4853
- Organization. Sprint
- Domain name. www.example.com

Ektron includes GeoLite data created by MaxMind. You can purchase more accurate GeoIP databases from MaxMind.

Ektron retrieves the IP address information from a site visitor's IP address via 3 databases. The databases are installed to your site root's `App_data` folder and listed in your site's `web.config` file.

NOTE: The tilde character (~) in the `value` element represents the site root folder.

- ```
  <!-- GeoIP City Database -->
  <add key="GeoIpCityDatabase" value="~/App_Data/GeoLiteCity.dat"/>
  ```

  Returns the following information, based on IP address:

  - Area code
  - City
  - US State
  - Country code and name
  - Latitude and Longitude
  - MetroCode
  ```

    - PostalCode
    - Telephone area code

- `<!-- GeoIP Organization Database -->`

  `<add key="GeoIpOrgDatabase" value="~/App_Data/GeoIPOrg.dat"/>`

  Returns the organization name, based on IP address.

- `<!-- GeoIP Domain Database -->`
  `<add key="GeoIpDomainDatabase" value="~/App_Data/GeoIPDomain.dat"/>`

  Returns the domain name, based on IP address.

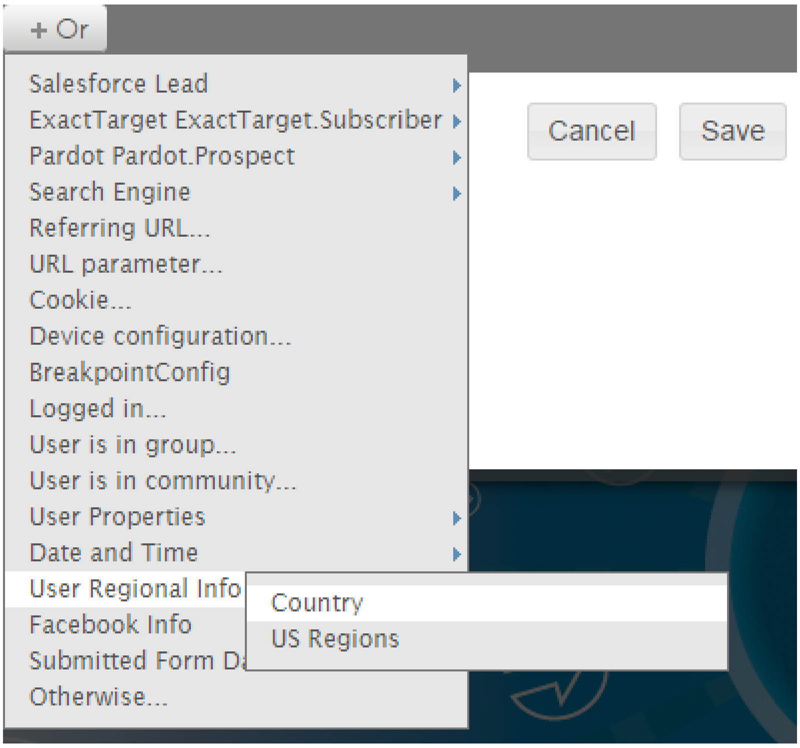
If you want to move the databases to another folder, you must update their `web.config value` elements to the new location.

BEST PRACTICE

> You should keep the GeoIP databases in the App_data folder, because this folder prevents unauthorized copying of the database.

Using GeoIP information in the Targeted Content widget

Among the Targeted Content widget's criteria is **User Regional Info**, which has 2 options: **Country** and **US Regions**.



If you choose **US Regions**, you can select from states in the United States.

User Regional Info data uses GeoIP information. See also: *Specifying criteria for a Targeted Content widget* on page 1066.

Using GeoIP information in the Map server control

You can center a map on a specific location by using the Map server control's `latitude` and `longitude` properties. You also can use GeoIP information to obtain a user's latitude and longitude, based on IP address. For example, if a site visitor searches for a chain restaurant, the map can indicate restaurants near the user.

The following code shows how to set up the Map server control to populate latitude and longitude with GeoIP information.

Sample .aspx page, showing the placement of the Map server control.

```
<cms:Map ID="uxMap" runat="server" />
```

Code-behind page in C#

```
Ektron.Cms.UserLocationData userLocationData =
  Ektron.Cms.UserContext.GetCurrentUserLocationInfo();
        if(userLocationData != null)
        {
               uxMap.Latitude = userLocationData.Latitude;
               uxMap.Longitude = userLocationData.Longitude;
        }
```

Accessing GeoIP information with the API

The following API code demonstrates the retrieval of a user's GeoIP information. Note that `Ektron.Cms.UserContext.GetCurrentUserLocationInfo()` returns the `Ektron.Cms.UserLocationInfo()` object, which provides access to all elements listed in retrieving IP address information except IP address.

To obtain the IP address, use `Ektron.Cms.UserContext.IP`.

```
Ektron.Cms.UserLocationData userLocationInfo =
  Ektron.Cms.UserContext.GetCurrentUserLocationInfo();
   //If GeoIpCity.dat/GeoIpLiteCity.dat file is present in webconfig
     int AreaCode = userLocationInfo.AreaCode;
     string City = userLocationInfo.City;
     string CountryCode = userLocationInfo.CountryCode;
     string CountryName = userLocationInfo.CountryName;
     double Distance = userLocationInfo.Distance(userLocationInfo);
     int DMACode = userLocationInfo.DMACode;
     double Latitude = userLocationInfo.Latitude;
     double Longitude = userLocationInfo.Longitude;
     int MetroCode = userLocationInfo.MetroCode;
     string PostalCode = userLocationInfo.PostalCode;
     string Region = userLocationInfo.Region;
     string RegionName = userLocationInfo.RegionName;
  // If GeoIpOrg.dat file and GeoIpCity.dat/GeoIpLiteCity.dat file
  // is provided in web config
     string Organization = userLocationInfo.Organization;
  // If GeoIpDomain.dat and GeoIpCity.dat/GeoIpLiteCity.dat file
  // is provided in web config
```

```
string Domain = userLocationInfo.Domain;
```

Creating a targeted content global configuration

A *Targeted Content Global Configuration* is a Targeted Content widget that you create and store in the Ektron Workarea. When users drop a Targeted Content widget onto a PageBuilder page, they can select any configuration defined in the Workarea. A configuration lets you reuse the same Targeted Content widget on any number of pages.

After choosing a Targeted Content Global Configuration, you cannot edit its conditions on that page. You can edit the configuration only in the Workarea. If you later change a configuration setting, all widgets using that configuration are automatically changed. See *Editing a targeted content configuration* on the facing page.

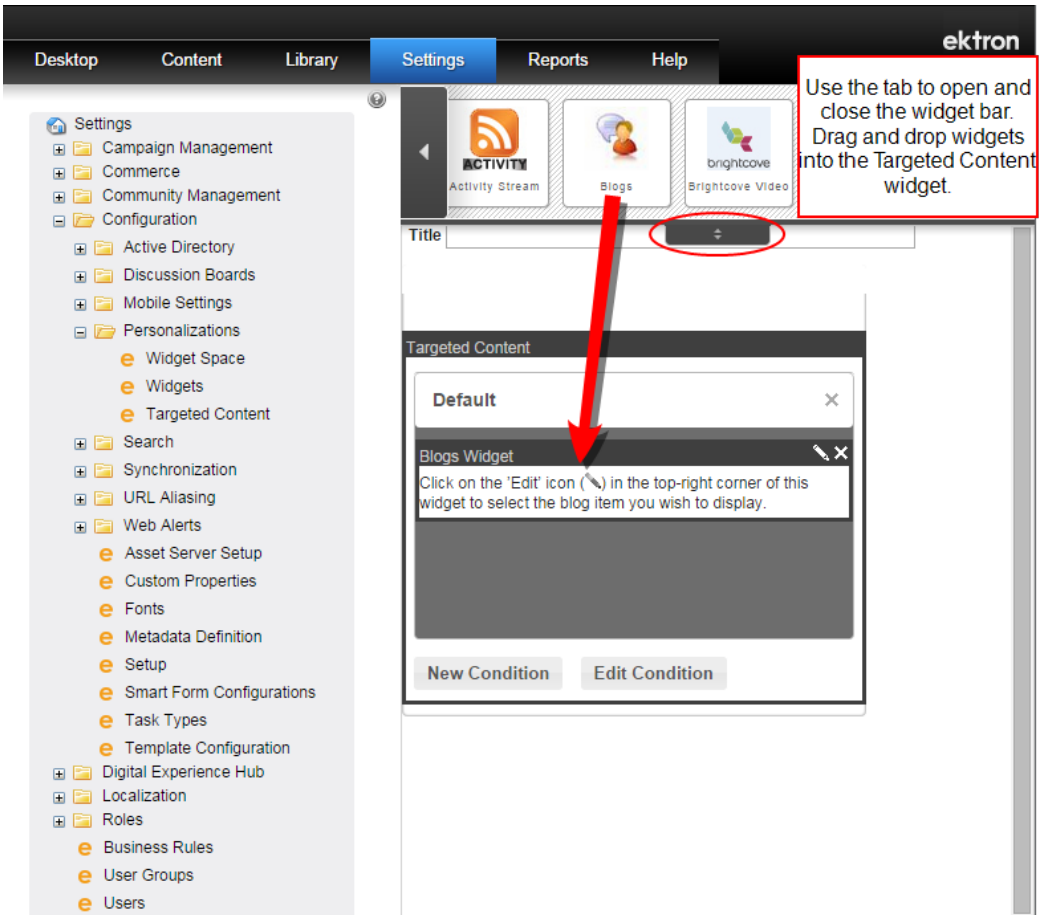
IMPORTANT: If you apply no conditions to a configuration and reference it in a Targeted Content widget on a PageBuilder page, nothing appears on the page.

Creating a targeted content configuration

PREREQUISITE

To access this screen, you must be a member of the Administrators group.

1. Go to **Workarea > Settings > Configuration > Personalizations > Targeted Content**.
2. Click **Add**. The Add Target Content Configuration screen appears.
3. Enter a **Title**.
4. See *Specifying criteria for a Targeted Content widget* on page 1066 to complete the Targeted Content Configuration. You can add widgets to each Targeted Content Configuration using the widget tray that is attached to the Workarea menu bar.



5. Click **Save**.

Editing a targeted content configuration

If you edit a Targeted Content Configuration that is placed on one or more PageBuilder pages, the pages show the changes after you publish the page.

PREREQUISITE

To access this screen, you must be a member of the Administrators group.

1. Go to **Workarea > Settings > Configuration > Personalizations > Targeted Content**.
2. Click **Edit** ( ) to the left of the configuration you want to edit. The widget appears.
3. See *Specifying criteria for a Targeted Content widget* on page 1066 to edit the widget.
4. Click **Save**.

Deleting a targeted content configuration

IMPORTANT: After you delete a Targeted Content Configuration that was placed on a PageBuilder page, the page displays a blank area where the widget was dropped.

PREREQUISITE

To access this screen, you must be a member of the Administrators group.

1. Go to **Workarea > Settings > Configuration > Personalizations > Targeted Content**.
2. Click **Delete** ( ).
3. Check the box to the left of the configuration you want to delete.
4. Click **Delete**.

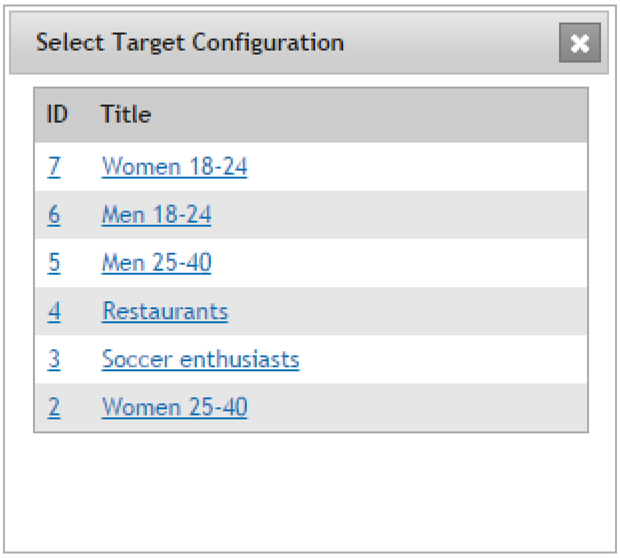
Choosing a targeted content configuration

To reuse a Targeted Content Configuration:

PREREQUISITE

The PageBuilder page must include the Targeted Content widget.

1. Edit a PageBuilder page.
2. Place a Targeted Content widget onto the page.
3. Click **Select Global Configuration**.
4. Choose the Targeted Content Configuration you want to place on the page.



If you select **Restaurants**, for example, it appears in the Targeted Content widget.

5. Save, check in, or publish the page.

NOTE: You can apply a global configuration to an existing widget. If you do, the global configuration replaces all conditions and results you previously applied.

Customizing the Targeted Content widget

To create a custom version of the Targeted Content widget (for example, to add rule templates):

1. Open the *`siteroot`*`/widgets/Edit TargetedContent.ascx.cs` file.
2. Create a class, (for example, `MyRuleTemplate`), that inherits `Ektron.RuleEditor.RuleTemplate` in `#region Rule Templates`.
3. Modify `private void AddAllRuleTemplates`.
4. Add an instance of your class to the rest of the rule templates. For example, `AddRuleTemplate(new MyRuleTemplate());`

(This page intentionally blank.)

19

Measuring Web experiences with multivariate testing

NOTE: The Multivariate Testing feature is part of *Ektron's marketing suite* on page 1033.

Multivariate testing lets you offer several variations of the same page, then measure site visitors' reactions to each variation. The reaction that generates the most conversions during the testing period is automatically promoted to the design for that page, thereby maximizing your website's ROI.

For example, the marketing manager wants to know which of 3 ads produces the most visits to a registration page.

- The *experiment page* contains ads that link to a registration form.
- A *target* page contains the registration form.

- When a visitor goes to a special page called the target, it is logged as a *conversion*. (A conversion might be a donation, registration, sales lead, and so on.)

Conversions are tracked, and when the target number of conversions occurs, the variation achieving the best results automatically becomes the permanent page on the site, without intervention by the website administrator.

You can create variations for a number of page elements (images, copy, buttons, form fields, and so on) to find the combination that most effectively compels site visitors to take the next step. You can use actual, timely data to drive decisions.

Multivariate testing is easy to implement, requiring no help from a developer or designer.

IMPORTANT: The Multivariate Testing feature requires the use of PageBuilder templates. For more information, see *Developing wireframe templates* on page 1007.

Setting up a multivariate experiment

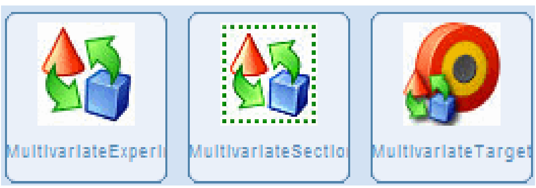
PREREQUISITE

To set up and run a Multivariate experiment, you must be an Administrator or have the Multivariate Tester Role assigned. See also: *Defining roles* on page 1464.

To set up a Multivariate experiment:

1. Create a target page that contains the Target widget. See also: *Creating a multivariate target page* on the next page.
2. Create an experiment page that contains the content variations with the Experiment and Section widgets. See also: *Creating a multivariate experiment page* on page 1091.
3. Run the experiment until it ends automatically or you stop it. See also: *Running a multivariate experiment* on page 1095.

Use these PageBuilder widgets for Multivariate Testing.



- **Multivariate Target** widget. Place this on the Web page that contains the content that you want people to find. When a page view occurs on a page that contains this widget, the conversion count increases.
- **Multivariate Experiment** widget. Controls the experiment and its data, all information about the variations in an experiment, the Start and Stop buttons, and conversion limits. Use only one Experiment widget per PageBuilder page.

NOTE: The Multivariate Experiment widget temporarily stores data in server memory before writing to the database in batches of 100, by default. If you want to change the batch size, insert the following key into the *siteroot*\`web.config` file, within the `<appsettings>` tags: `<add key="ek_MultivariateThreshold" value="100"/>`.
Change the `value` to adjust the batch size.
If logging is enabled and the key is missing from `web.config`, Ektron creates a warning and provides the key in the event viewer.

- **Multivariate Section** widget. Contains the content of the experiment. By using a variety of content combinations, the experiment tests the best content arrangement to accomplish the desired conversion goals.

Creating a multivariate target page

The target page is the Web page you want your visitors to view. It contains the Multivariate Target Wizard. Visitors arrive here by clicking links on the experiment page.

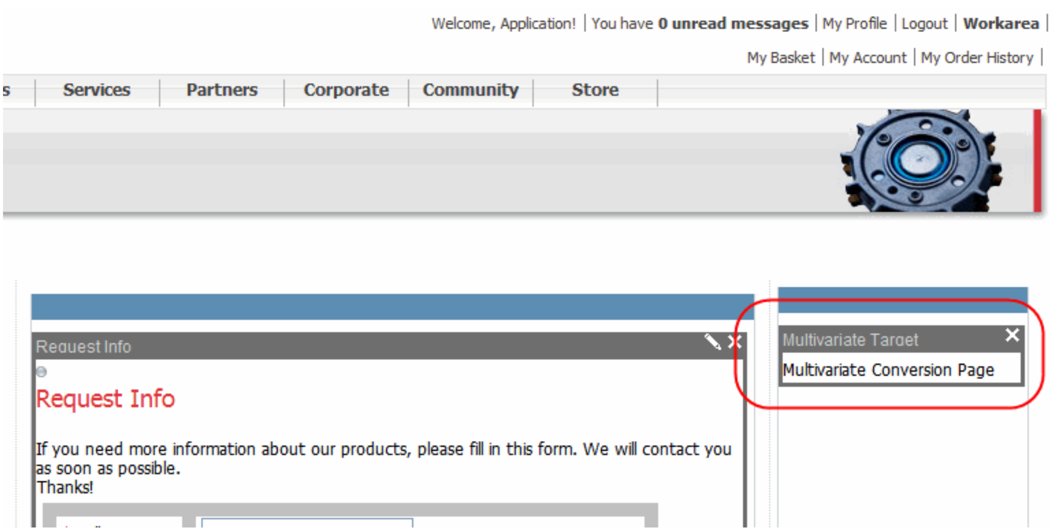
To create the target page:

1. Create or edit the PageBuilder page with the target content. See also: *Creating Web pages with PageBuilder* on page 991.
2. Note and record the ID of the content on this page. (For example: 948.) You use this number in Step 2 of *Creating a multivariate experiment page* on the facing page.
3. Place the Multivariate Target widget anywhere on the page.

   Whether you arrive at the target page by browsing to the variations page first or by browsing to the target page directly, the views are counted with the following exceptions:

   - if you are logged in
   - if you have not first visited the experiment page to receive the cookie
   - if you have cleared the cookies before visiting the target page

NOTE: Logged in users are counted as a page view of the experiment page, but not as a conversion on the target page.



4. Publish the page

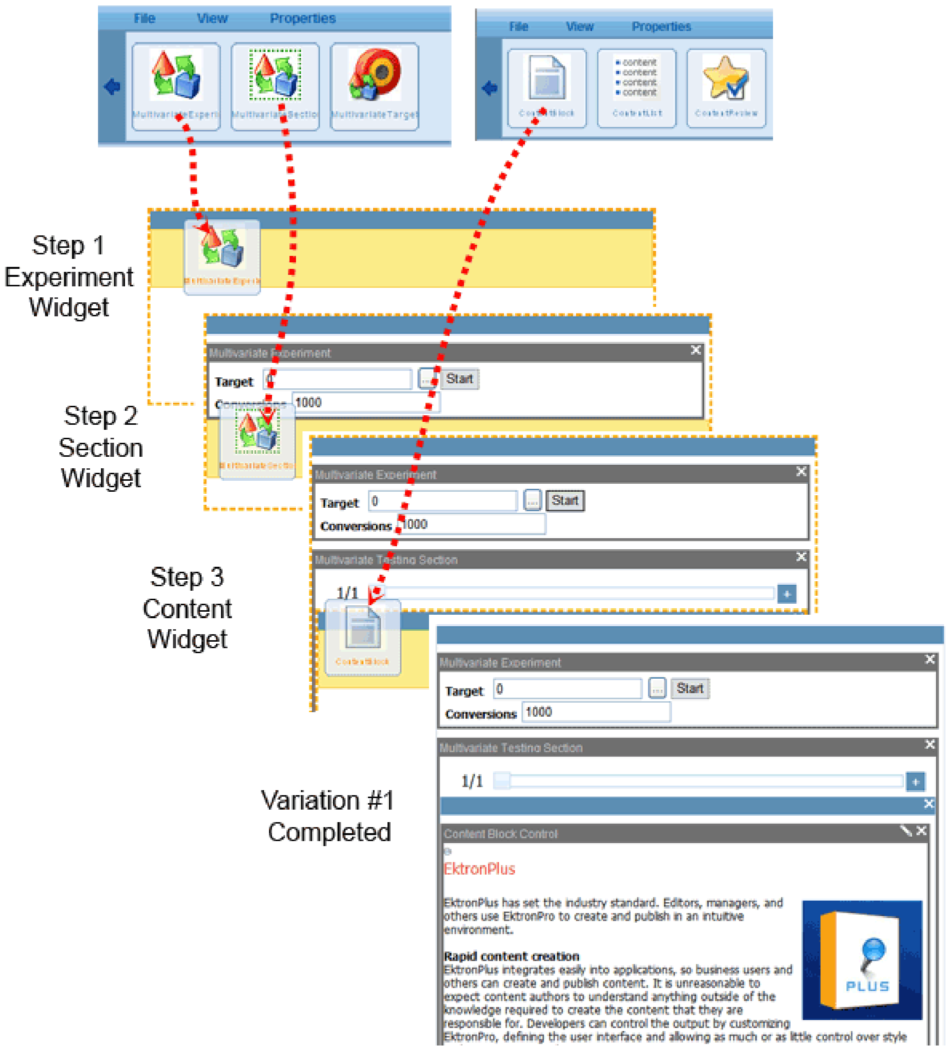
Next, create the Multivariate Experiment Page.

Creating a multivariate experiment page

The Experiment page contains:

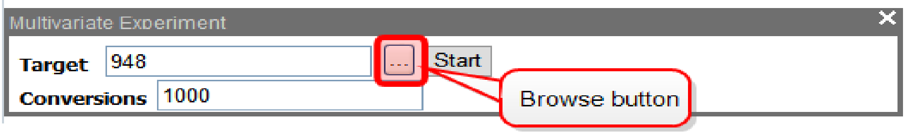
- an Experiment widget
- one or more Section widgets
- content variations

The following illustration shows steps for creating an experiment page with Multivariate Test widgets.



To create a multivariate experiment page:

1. Create or edit the PageBuilder page you want to use during the experiment. See also: *Creating Web pages with PageBuilder* on page 991.
2. Place the Multivariate Experiment widget anywhere on the page. Multivariate Test widgets do not appear on a Web page when you are not logged in; only the content shows. The following screen appears:

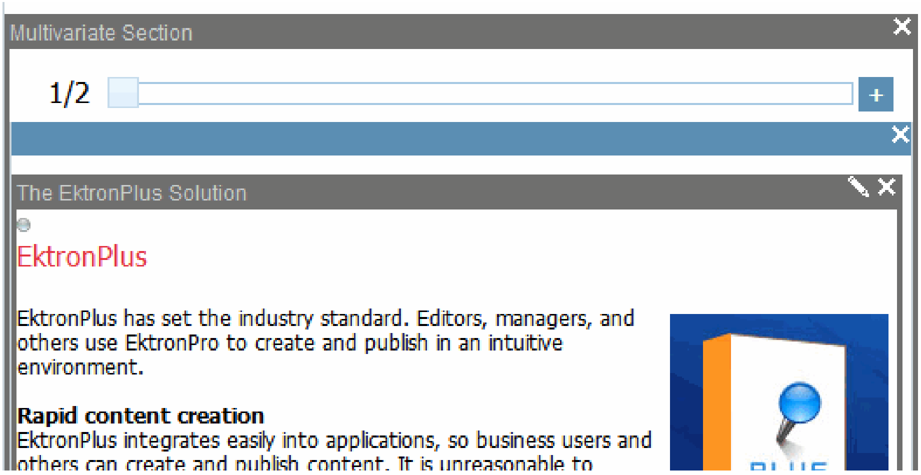


- **Target**. Enter the content ID of the target page. You created this page in *Creating a multivariate target page* on page 1090. If you do not know the number, click **Browse** (...).
- **Conversions**. Enter the number of conversions any variation must have before the experiment is stopped. For example, if you enter **1000**, the experiment ends when a variation reaches 1000 conversions.

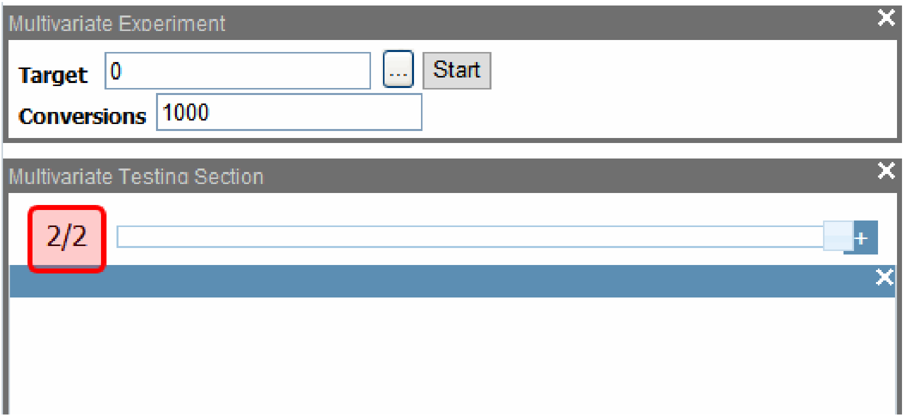
NOTE: During an experiment, you can choose a specific variation to be the page that all visitors see and end the experiment.

The experiment widget also indicates how each variation has performed during the experiment.

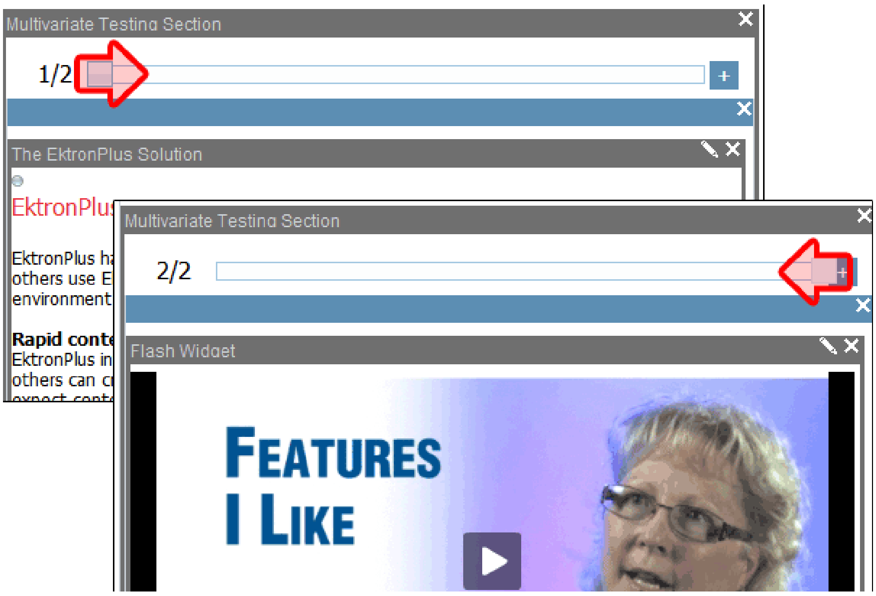
3. Place at least 1 Multivariate Section widget into the location where content variations should appear. Use a variety of content combinations to discover the best arrangement to accomplish your conversion goals. Add 1 or more Section widgets per PageBuilder page.
4. Drag a content widget into the Multivariate Section widget.



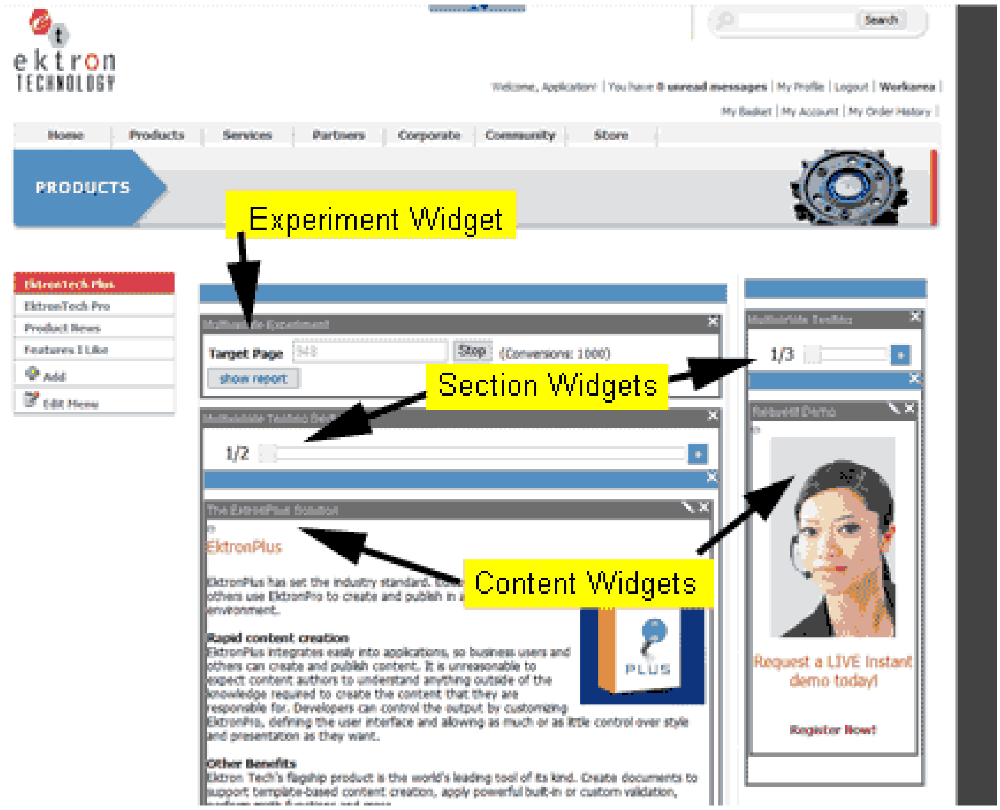
5. Configure the content widget with the appropriate settings. (You can use any widget inside the Multivariate Section widget. The Content widget was chosen for this example.)
6. Add another variation by clicking **Add Variations** (+) and repeat steps 4 and 5. You now have variation 2 of 2.



Use the slider control to select content used in each variation. The following sample shows the slider control for variations 1/2 and 2/2.



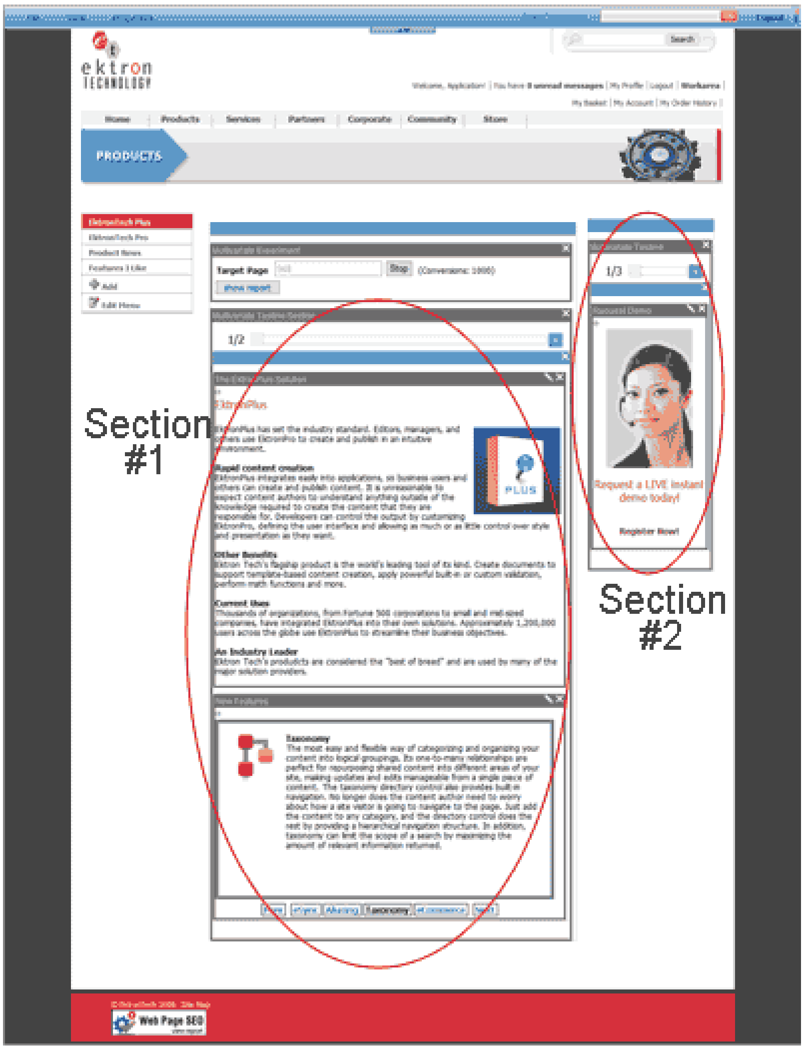
7. To add another section and variations, go back to step 3 and continue. The following image shows a completed experiment page with 2 Section widgets.



8. Publish the PageBuilder page. You are ready to run the experiment.

Testing combinations of content

You can create a PageBuilder page with more than one Multivariate Section widget. This arrangement helps identify content and images that provide the best conversion results. The following page contains 2 Multivariate Section widgets.

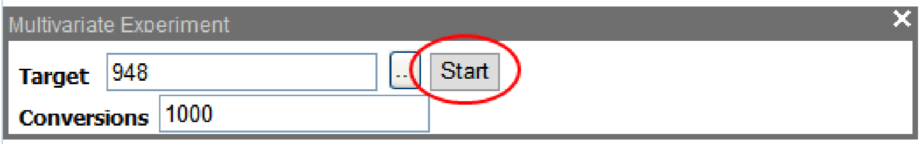


The content inside the Section widgets are part of the variations shown randomly during the experiment. The number of variations in a Multivariate Experiment grows exponentially as you add sections and variations. For example, if you have 2 sections with 3 variations in each section, there are 8 (2^3) pages to be tested. If you increase this to 4 variations each, there are 16 (2^4) pages.

Running a multivariate experiment

After you create the Target Page and Experiment Page:

1. Select the PageBuilder page that contains the Multivariate Experiment widget.
2. Click **File > Edit** to see the Experiment widget.
3. On the Experiment widget, click **Start**.



After you click **Start**, you see **Stop** and **Show Report**.

When an experiment is running, visitors see a randomly-chosen page variation. When visitors view the experiment page, a browser cookie is set, which indicates the variation seen by the visitor. From this point forward, if the visitor next visits the target page, this cookie is read and the proper variation counter is increased. The visitor continues to see this variation until the experiment is ended.

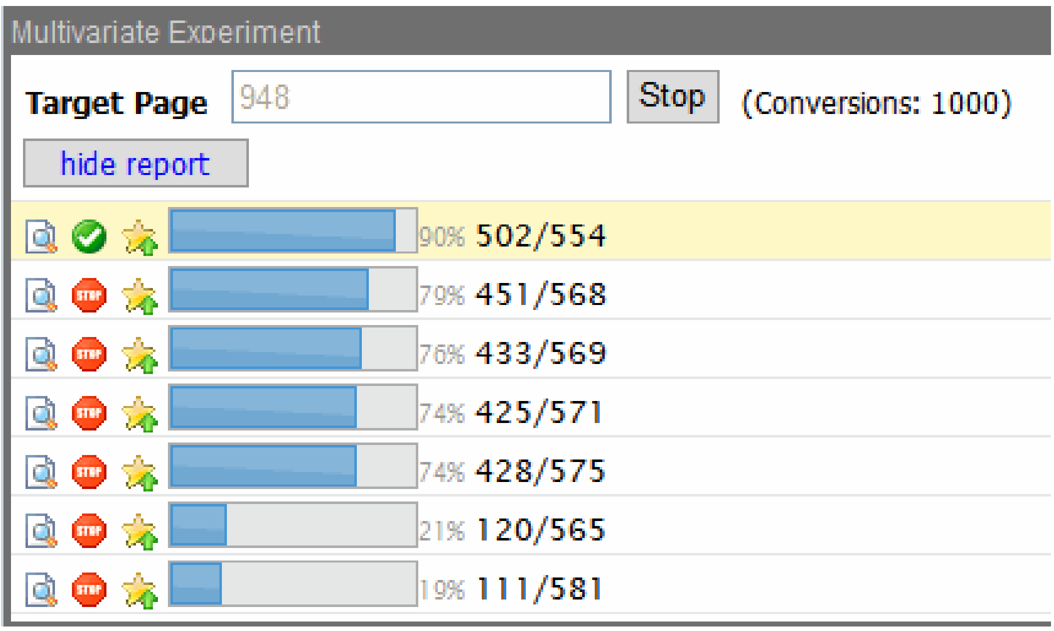
A cookie persists forever or until the cookies are removed from the browser cache. The cookie gives a visitor a consistent page variation each time they revisit during the experiment. If a visitor's browser blocks cookies, that visitor sees random variations each time they visit the page; they are not counted in conversions.

NOTE: During an experiment, testers can modify variations and content within the Multivariate Section widget.

Viewing reports during an experiment

Click **Show Reports** to see the experiment's progress. The reports shows:

- the percentage of conversions compared to visits
- the number of conversions
- the total number of visits to each variation



The bar graph shows the conversion percentage. The numbers to the right of the bar graph show 2 values.

- The first value is the *percent of conversions* compared to the total number of visits to the experiment page. On variation #2 above, **79%** means that 568 visitors to this variation have successfully reached the target page 451 times.

- The numbers after the percentage show *actual conversions*. The first number before the slash (/) indicates the total number of conversions during the experiment. The second number is the total number of times this variation was viewed by a visitor. Logged in users are counted as a page view to the experiment page but not counted on the target page as a conversion.

The following list describes the buttons.

- **Preview**. Shows page configurations for this variation. Notice that the content in the Multivariate Section wizards change, and the slider number changes too.
- **Variation Enabled**. This variation is currently running. Click this button *to disable* this variation.
- **Variation Disabled**. This variation is currently not running. Click this button *to enable* the variation.
- **Promote**. Click this button to promote this variation to the page seen by all visitors. All other variations are disabled and the experiment is ended.

Enabling or disabling a variation

At any time during the experiment, you can disable any variation. Do this by clicking **Enable** (). The variation becomes disabled and cannot be viewed by site visitors. When a variation is disabled, visitors who have seen this page see another variation instead.

You can re-enable a variation by pressing **Stop** (), which currently shows the variation as disabled. The variation then becomes enabled.

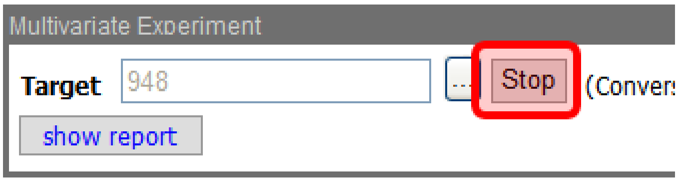
Scheduling an experiment

The PageBuilder page has the same properties as other content types, including the Schedule property. To set the beginning and ending date of the page, edit the PageBuilder page and follow the procedure for setting content schedules as described in *Scheduling content* on page 640.

Be sure to set the **Schedule End Date** to be long enough past the time you believe the experiment will automatically end.

Stopping an experiment

At any time during the experiment, click **Stop** on the Experiment widget. This suspends the experiment. Counters stop incrementing, even though visitors continue to see the page variations.



While the experiment is stopped, cookies are neither set nor read. For more information about cookies, see *When an experiment is running, visitors see a randomly-chosen page variation. When visitors view the experiment page, a browser cookie is set, which indicates the variation seen by the visitor. From this point forward, if the visitor next visits the target page, this cookie is read and the proper variation counter is increased. The visitor continues to see this variation until the experiment is ended.* on page 1096. When you stop an experiment, the Multivariate Section widget remains on the experiment page.

You can restart the experiment by pressing **Start**. Counters are reset to 0 and restarted.

When one variation reaches the target number of conversions, it automatically becomes the page variation that all visitors see; the other variations are disabled.

You can stop the experiment by promoting a specific variation. When you click **Promote** ( ), the selected variation becomes the page variation all visitors see; the other variations are disabled.

When the experiment automatically or manually ends, the Multivariate Section widget is removed from the experiment page.

Repeating an experiment

To repeat an experiment after it has ended, first restore the history of this page by following steps in *Restoring a previous version* on page 647. After restoring the previous version, you can edit the parameters of the experiment, modify the content, and run the experiment again.

Testing a target page outside your website

If the target page is outside your website, you must create an intermediate page that contains the Target widget, and redirect the visitor to the outside address.

For example, to test visitors from your page to `http://www.NFL.com`:

1. Create a new PageBuilder page.
2. Add the target widget to it.
3. Add the code to redirect the visitor from this page to `www.NFL.com`.
4. Create content with links to the target page you just created.

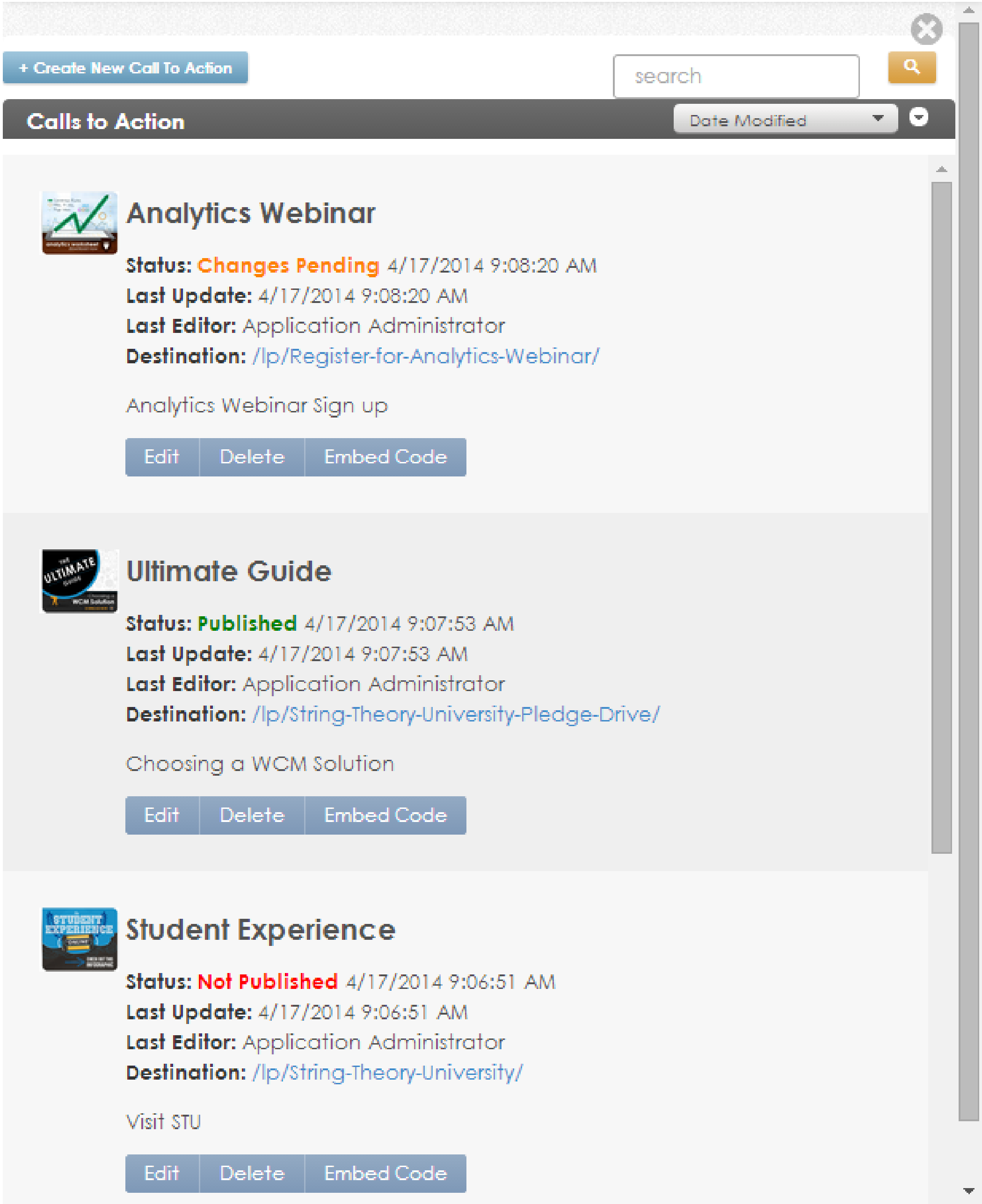
While the experiment is running, the experiment page links the visitor to the intermediate page, and the conversion is counted. Then, the redirect takes the visitor to the external page.

20

Managing calls to action

NOTE: The Calls to Actions feature is part of *Ektron's marketing suite* on page 1033.

Launch the Calls to Action app by clicking on the icon. Click **Calls to Action** in the toolbar to see the list of available calls to action (CTAs). Using the pulldown menus on the list page, you can sort the list by type of data (date modified, title, status, date created, and first or last name of the last person to edit the page) or by order (ascending or descending).



A CTA is a user interface element that prompts a site visitor to touch or click it to proceed on a path toward conversion from site visitor to customer. Some examples include buttons and links that say:

- Add to cart
- Locate store
- Free coupon
- Share your experience
- Join our mailing list
- Get more information...
- Buy now!

Each CTA has a toolbar from which you can perform actions.

- **Edit**. Make changes to the CTA.
- **Delete**. Remove the CTA.
- **Embed Code**. Opens a window for you to specify custom campaign attributes. When you click **Generate Embed Code**, another windows appears in which you can copy and paste embed code to share your CTA on another site, such as a social media site. See *Creating a CTA* below for a description of the campaign attributes.

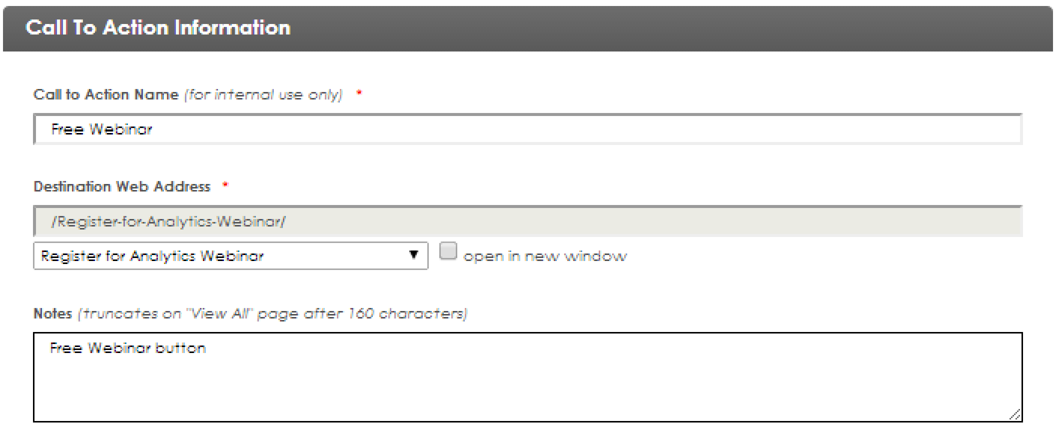
TIPS

- Use contrasting colors to draw attention to your CTA.
- Focus on gain instead of effort. For example, *Get*, *View*, *Enjoy*, *Discover*, *See*, *Play* instead of *Submit*, *Start*, *Activate*, *Learn*, *Pay*.
- Encourage people to place your CTA (embed code) on their social media.
- Use A/B testing to find CTA "winners" by having 2 CTAs go to 1 landing page. (Use multivariate testing to test page elements.)

Creating a CTA

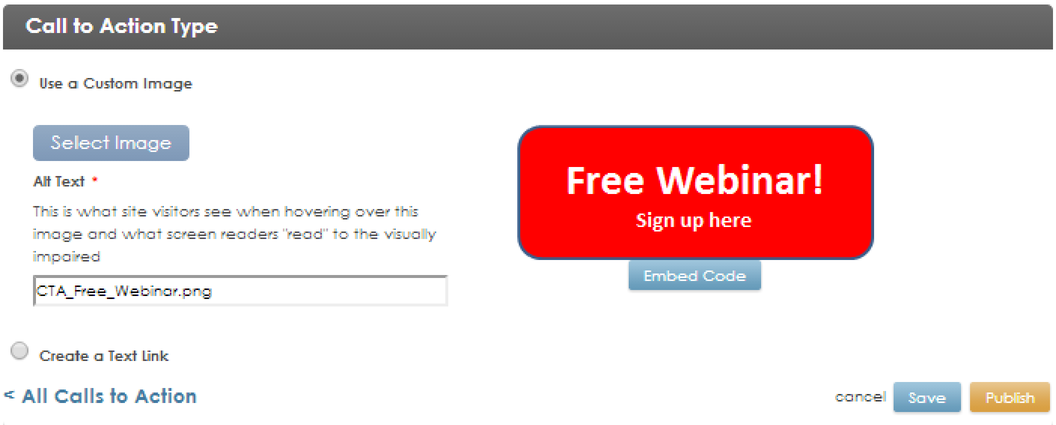
To create a CTA, click **Calls to Action** in the toolbar, then click **Create New Call to Action**. The Call to Action Information form appears.

1. **Call to Action Information**



- **Call to Action name**. Identify the CTA. You can give it a name similar to the landing page with which you intend to associate it.
- **Destination Web Address**. Enter a Web address that appears when the site visitor clicks on the CTA. You also can use the drop-down menu to select the landing page. If you want the landing page to open in a new browser window, check the box.
- **Notes**. Specify information (up to 160 characters) that will show up on the Calls To Action list with this CTA. (You can specify as much information as you want, but up-to-160 characters are displayed in the Calls To Action list.)

2. **CTA Type**



- **Use a Custom Image**. Choose this option if you want your CTA to be a clickable image. Click **Select Image** to browse for an image. The Alt Text field lets you specify what a site visitor sees when hovering a cursor over the image, and what screen readers say to the visually impaired.
- **Create a Text Link**. Choose this option if you want your CTA to be clickable text (a hyperlink).
- **Embed Code**. Only appears when you edit a published CTA, and opens a window in which you can copy and paste embed code to share your CTA on another site, such as a social media site. (**Embed Code** always appears on the CTA list page.) See *Generating embed code for a CTA* below.

Generating embed code for a CTA

An **Embed Code** button appears on the CTA list page or when you edit a published CTA.

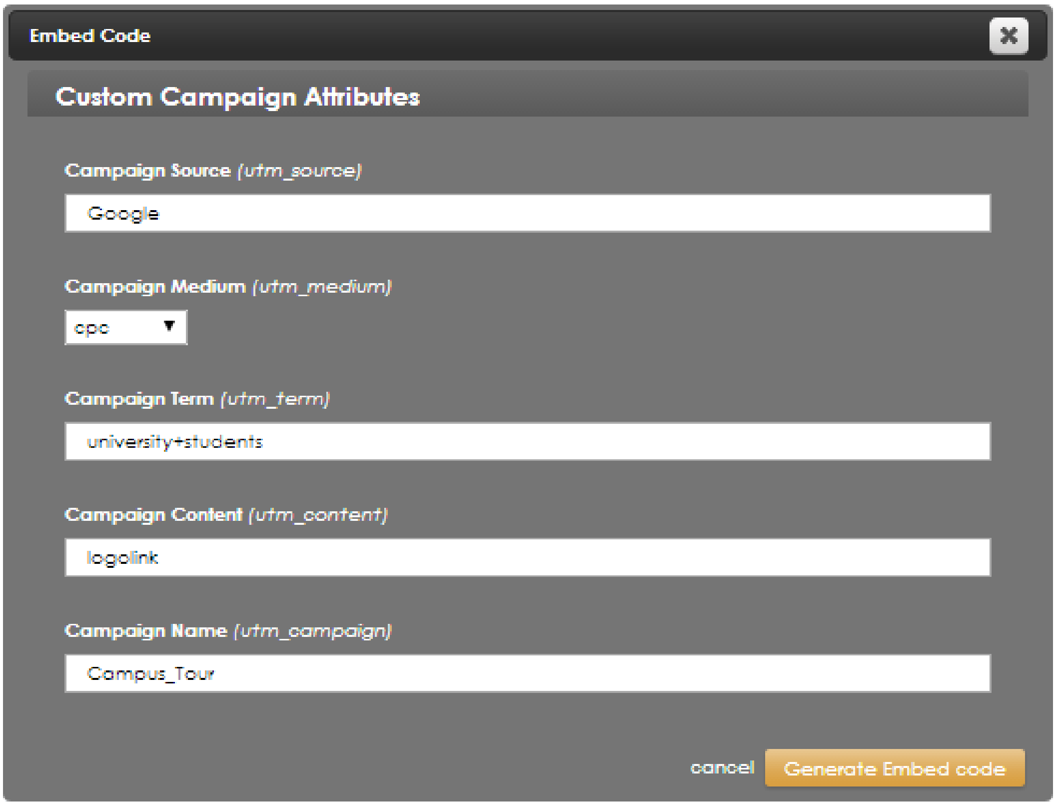
When you click **Embed Code** an Embed Code window appears. Enter values for the following field and click **Generate Embed Code**.

- **Campaign Source**. Enter a search engine, newsletter name, or other source.
- **Campaign Medium**. Choose **website**, **email**, **cpc** (cost-per-click), or **banner**.

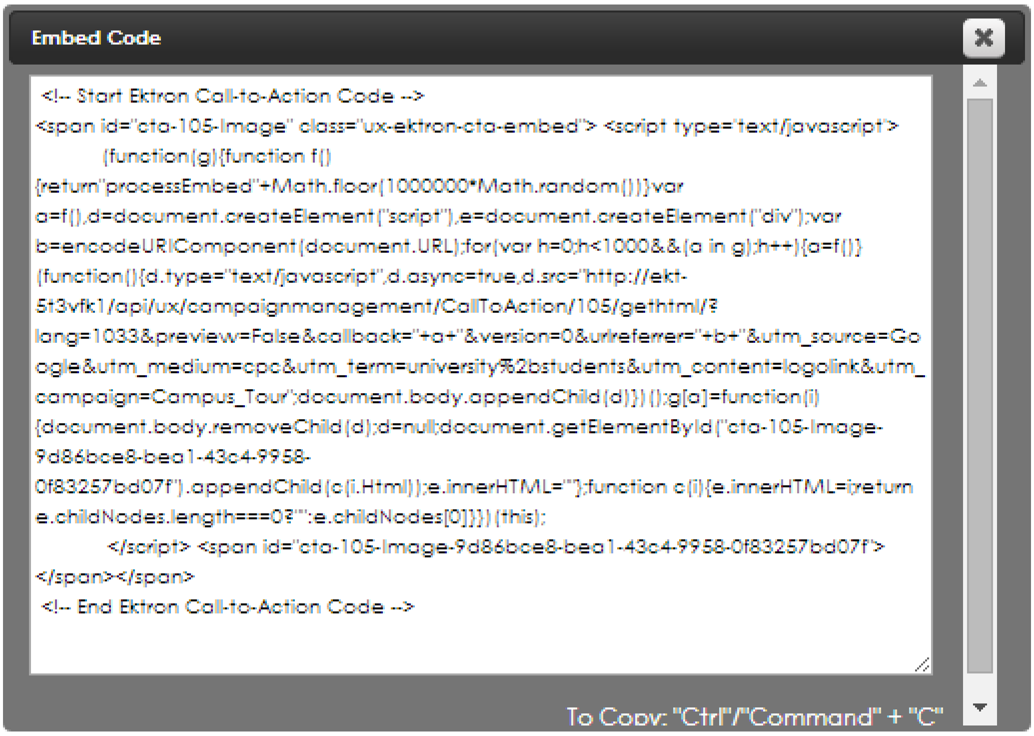
> **NOTE:** Choosing **email** generates HTML embed code. The other options generate JavaScript embed code.

- **Campaign Term**. Enter keywords for this landing page.

- **Campaign Content**. Enter an identifier that differentiates ads or links that point to the same URL. (Used for A/B testing and content-targeted ads.)
- **Campaign Name**. Enter a name for a specific product promotion or strategic campaign.



Copy and paste the generated embed code to share your CTA on another site, such as a social media site.



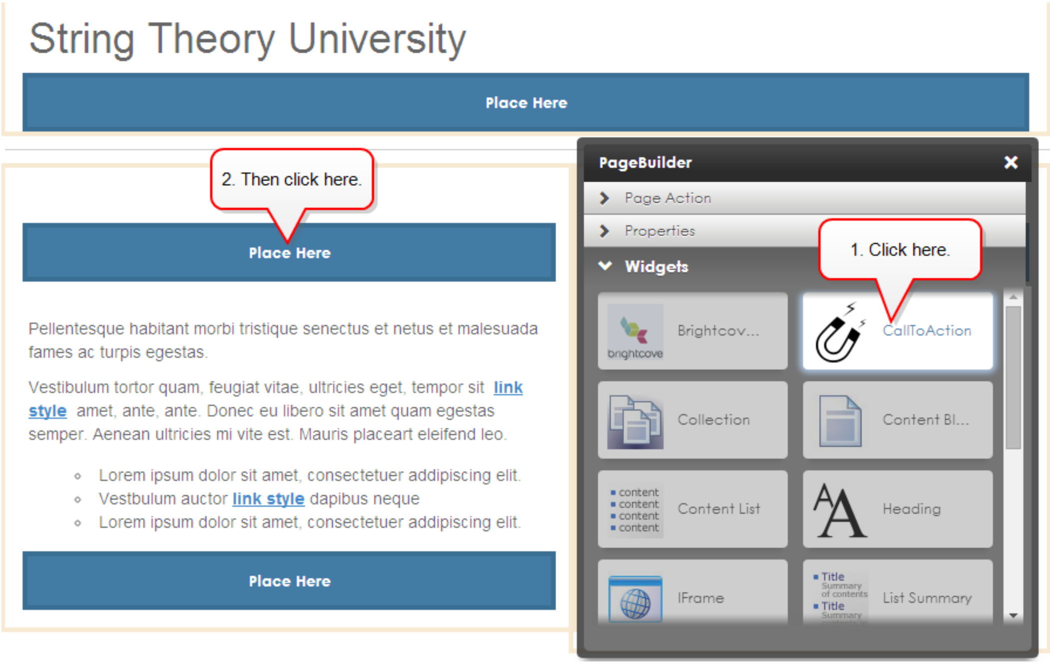
Placing a CTA on a page

NOTE: You also can place a CTA on a blog page through the Metadata tab when the blog is created or edited (*Adding a call to action to a blog post* on page 1150) and also by using the *BlogPostCallToAction* on page 1199 widget.

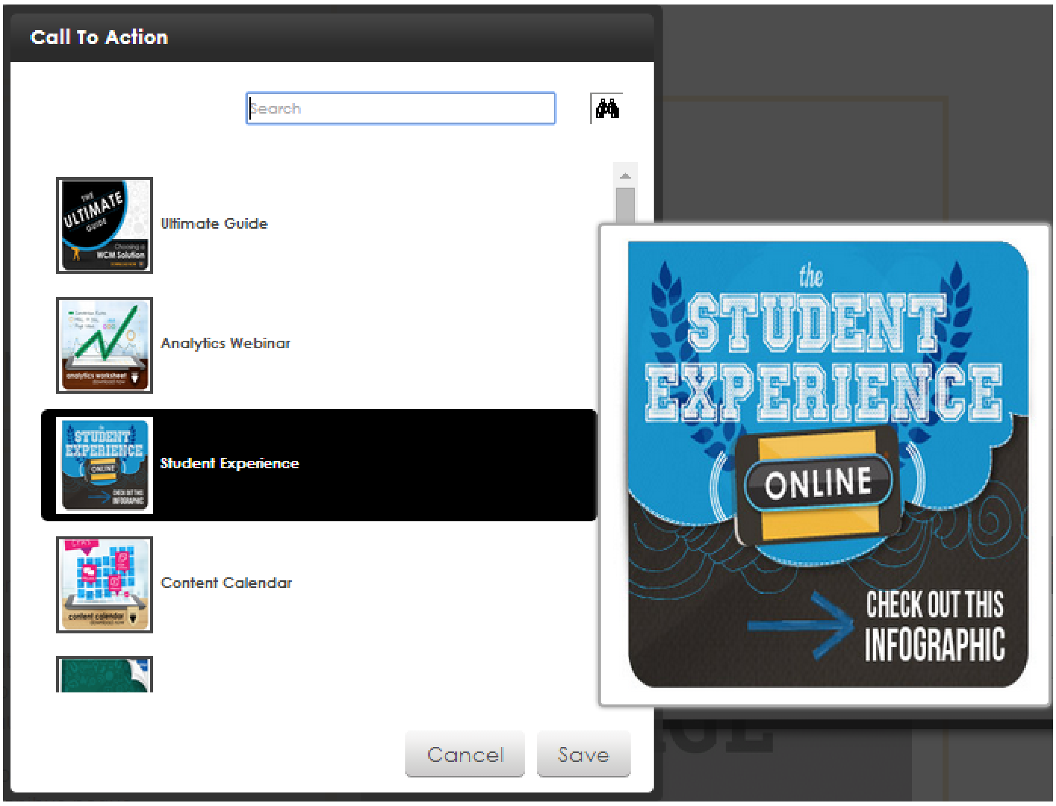
1. Go to a page and swipe **Switch to Edit**. The editable fields appear in the window.
2. Click **Design**. The PageBuilder menu appears.
3. Choose **Page Action > File > Edit**.
4. Open the Widgets panel in the PageBuilder menu. The available widgets appear.

   NOTE: If you do not see the CTA widget in the **PageBuilder > Widgets** menu, an administrator can enable it by following the instructions in *Determining which widgets appear on a wireframe* on page 1175.

5. Click **Call to Action**. The widget is highlighted and the page displays **Place Here** fields.



6. Click in any **Place Here** field to drop the widget.
7. Choose **Edit** () on the Call to Action widget. A window appears with available CTAs.



8. If you have a lot of CTAs in the list, enter the name of the CTA you want in the Search box and click **Search** (). Double click on the CTA you want; it is placed on the page.

(This page intentionally blank.)

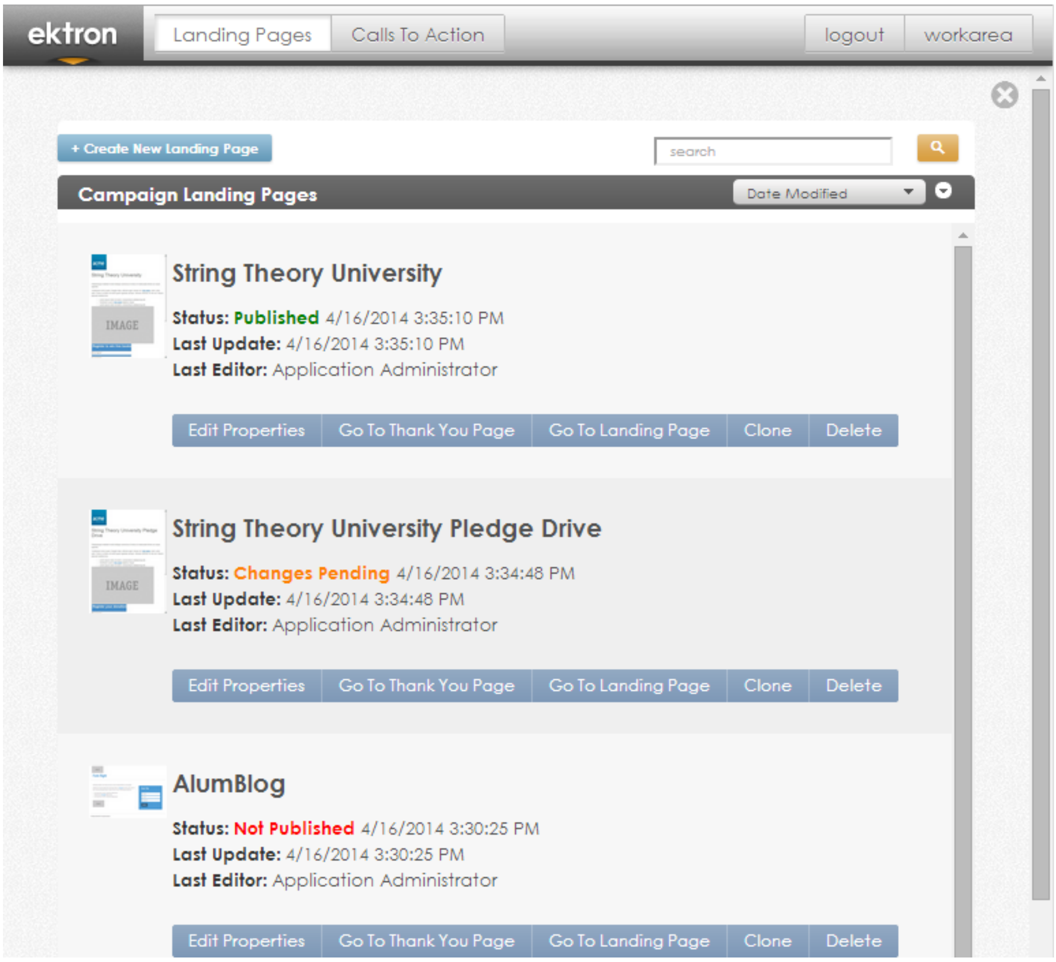
21

Managing landing pages

NOTE: The landing pages feature is part of *Ektron's marketing suite* on page 1033.

A landing page should accomplish a singular conversion goal of your marketing campaign, such as getting the contact information of your MQL. A page layout should be concise, avoid scrolling, and keep important information near the top. You typically create a landing page before a CTA because you will link the CTA to the landing page.

Launch the landing page app by clicking on the icon. Click **Landing Pages** in the toolbar to see the list of available landing pages. Using the pulldown menus on the list page, you can sort the list by type of data (date modified, title, status, date created, and first or last name of the last person to edit the page) or by order (ascending or descending). Each landing page list item has a toolbar that lets you perform actions on the item.



- **Edit Properties**. Make changes to the landing page specifications (name, URL, and so on).
- **Go to Thank You Page**. Make changes to the results page. You should follow up every landing page with a thank you message for clicking through.
- **Go to Landing Page**. Make changes to the landing page.

- **Clone**. Create a copy on the landing page and open edit mode to make the landing page unique.
- **Delete**. Remove landing page.

Creating a landing page

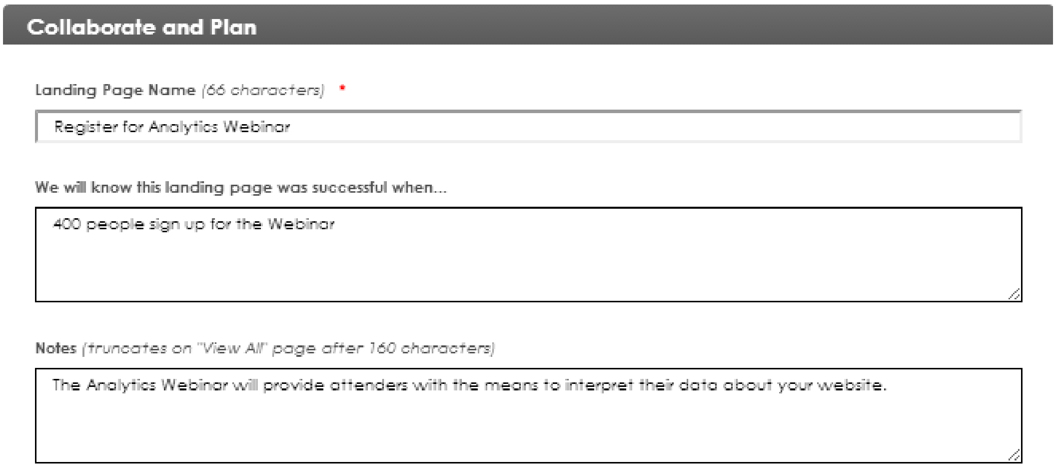
Best Practices

Before you create a landing page, an administrator should set up the forms you will use, and map the form fields using DXH. For information about setting these up, see the following sections.

- *Editing the properties of a landing page* on page 1114
- *Setting up an inbound connection to collect the form data* on page 1131
- *Setting up a Salesforce connection to collect the form data* on page 1132
- *Mapping form data between DXH and an external application* on page 1134

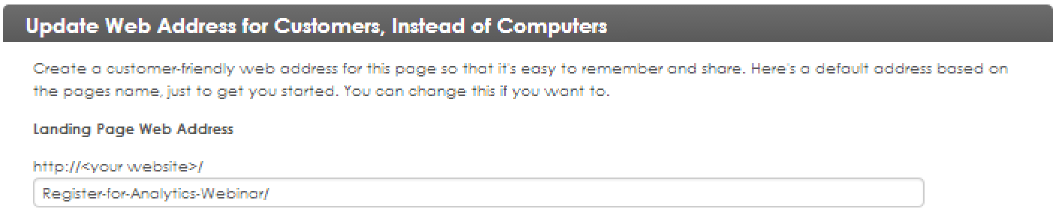
To create a landing page, click **Landing Pages** in the toolbar, then click **Create New Landing Page**. The new landing page form appears.

1. **Collaborate and Plan**



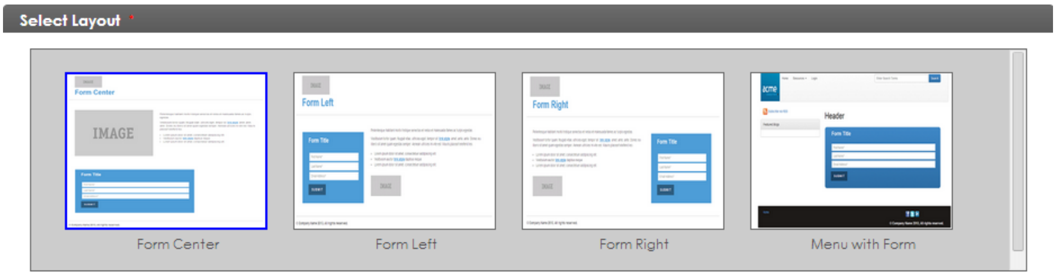
- **Landing Page Name**. Identify your landing page.
- **Success Criteria**. Specify what this landing page should accomplish so that you can assess its effectiveness through analysis.
- **Notes**. Specify information (up to 160 characters) that will show up on the landing page list with this landing page. (You can specify as much information as you want, but up-to-160 characters are displayed in the landing page list.)

2. **Update Web Address for Customers (Instead of Computers)**



- Create a customer-friendly Web address for the landing page. You also can choose the default address that is based on the landing page name, and is already loaded in the field.

3. **Select Layout**



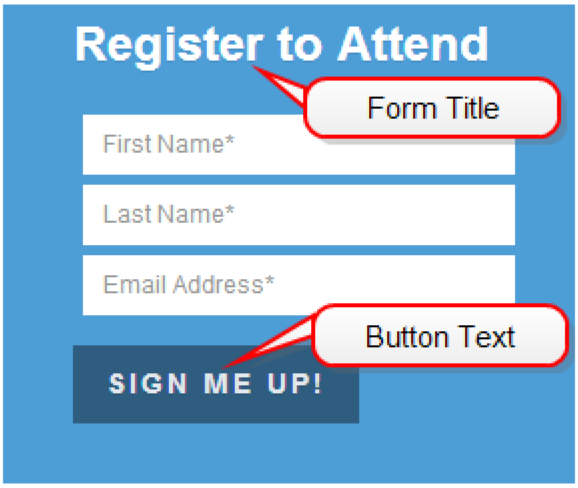
- **Layout Images**. Choose from the available layouts by clicking on the template image. Ektron provides a Basic and Advanced template that you can modify.

  You can create your own landing page templates with PageBuilder and display it in the template list. See *Setting up a landing page layout* on page 1121. For additional information, see *Creating Web pages with PageBuilder* on page 991.

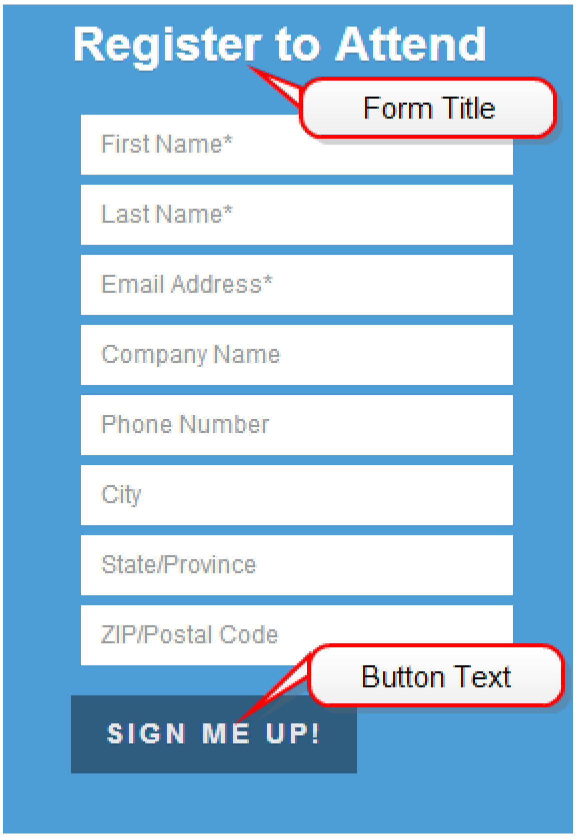
  - **Form Center**. A visitor data form appears below the content.
  - **Form Left**. A visitor data form appears to the left of the content.
  - **Form Right**. A visitor data form appears to the right of the content.
  - **Menu with Form**. A visitor data form appears below a menu bar and above a footer on the page.

- **Form template**. Choose one of the following. See also *Editing the properties of a landing page* on page 1114.

  - **Basic Form Template**. The data capture form has First Name, Last Name, and Email Address.

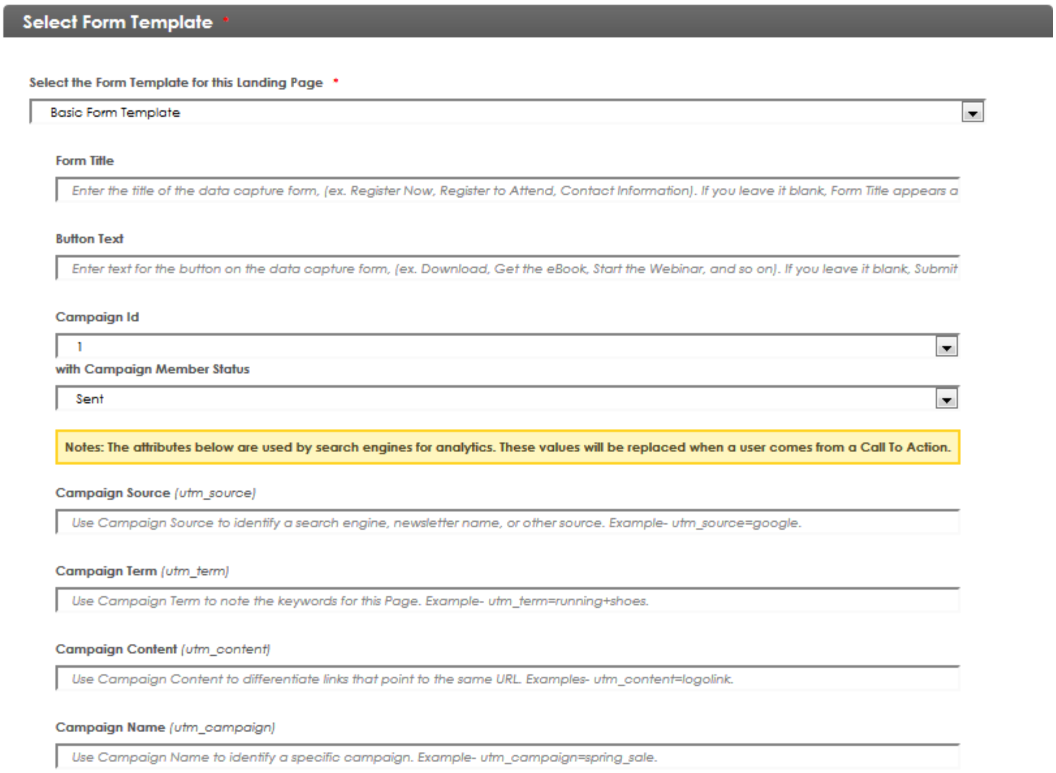


- **Advanced Form Template**. The data capture form has First Name, Last Name, Email Address, Company Name, Phone Number, City, State/Province, and Zip/Postal Code.



- **Form Title**. Specify the title of the data capture form.
- **Button Text**. Specify text to appear on the data capture form button (*Get the eBook*, *Start the Webinar!*, and so on).

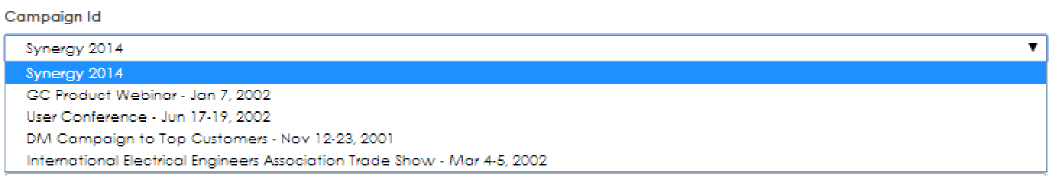
4. **Select Form Template**



IMPORTANT: The following fields are hidden fields that let you collect data for Google Analytics. They do not appear on the landing page. After you have created a landing page, you cannot change the campaign attributes by editing the properties screen. However, you can modify (or add) these values from the landing page by editing the Form Block of the data capture form.

- **Campaign ID**. Enter an identifier that associates the data capture form with a campaign. The ID determines which CTA was used to access this landing page, which helps you determine the best CTAs to use. If you leave it blank, the default ID is `CampaignIdA1`.

  NOTE: If you are using Salesforce with DXH, this field becomes a drop-down selector from which you can choose an available campaign. Each form can have its own set of campaign options based on what each has been mapped to.

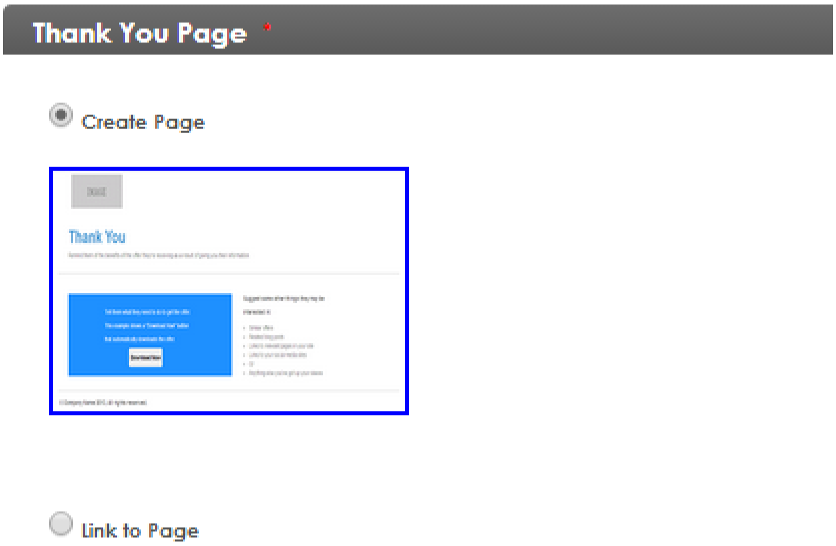
- **with Campaign Member Status**. This field appears only if you are using Salesforce with DXH. The drop-down shows the statuses established in the Salesforce account for a selected Campaign ID. It has a Cache Refresh time of 10 minutes. That is, if the end user edits a campaign in Salesforce and adds a new member status, it will get reflected in the new drop-down within

10 minutes.

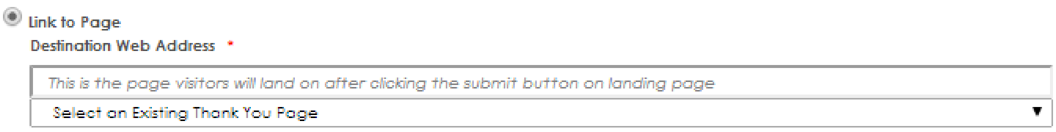
IMPORTANT: The following attributes are used by search engines for analytics and are replaced when a user comes from a call to action.

- **Campaign Source**. Enter a search engine, newsletter name, or other source.
- **Campaign Term**. Enter keywords for this landing page.
- **Campaign Content**. Enter an identifier that differentiates ads or links that point to the same URL. (Used for A/B testing and content-targeted ads.)
- **Campaign Name**. Enter a name for a specific product promotion or strategic campaign.

5. **Thank You Page**
   - **Create Page**. Choose this option to create a new Thank You page. The page is created, associated with the landing page, and accessed from the landing page list.
   - **Link to Page**. Choose this option to specify a URL to an existing page.



If you choose **Link to Page**, select an existing thank you page, or specify a path to a custom thank you page. See also: *Editing an existing Thank You page* on page 1116 and *Creating a custom Thank You page* on page 1118.



6. Click **Save** to save the landing page properties. Click **Save & Go to Page** to edit (and publish) the landing page.

IMPORTANT: If you click **Save & Go to Page**, the page appears in a new window, unless you have pop-ups blocked. If the page does not appear in the new window, check your browser's security settings and allow pop-ups for Ektron sites.

After the page is created, it appears in the landing Page list. You can change its specifications by clicking **Edit Properties**.

Editing a landing page

There are 3 aspects to editing a landing page.

- *Editing the properties of a landing page* below—Click **Edit Properties** to modify the specifications of an existing landing page.
- *Editing content on a landing page* below—Editable content appears when you hover over section of the page.
- *Editing a PageBuilder template for a landing page or Thank You page* on the facing page—The landing page form contains elements that you want to repeat on other landing pages; for example, your company logo, a consistent form, and so on. For information about PageBuilder, see *Creating Web pages with PageBuilder* on page 991.

TIPS

- Keep important information high and avoid scrolling.
- Keep information brief and focused. Avoid overloading the reader.
- Represent your brand (logo) consistently
- Make your landing page consistent with your call to action so that a site visitor correlates the CTA to the landing page.
- The Thank You (or response) page reinforces the site visitor's action. You can place additional CTAs on the Thank You page.

Editing the properties of a landing page

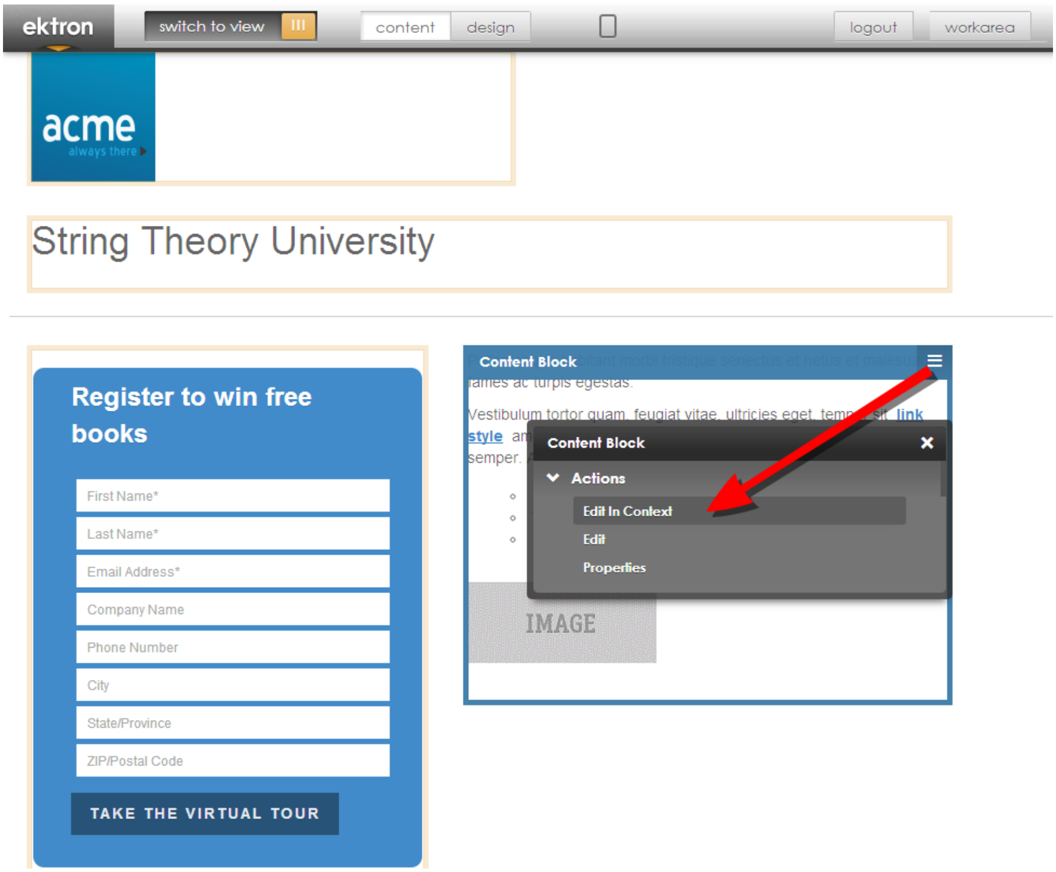
To edit the properties of a landing page, click **Edit Properties** on the Landing Page list page.

The properties of a landing page are described in *Creating a landing page* on page 1109. Because of the set up that occurs when you create a landing page, if you edit a landing page or its properties, be aware of the following effects.

- If you want to change the Layout of a landing page (from Form Center to Form Left, for example), you will have to re-edit your landing page because the PageBuilder format cannot be automatically re-adjusted; you must do this manually. Any widgets that you have already placed on the landing page will be moved to column 1 where you can place them again on the modified landing page.
- After you create a landing page, you cannot change the campaign attributes from the properties screen. However, you can modify (or add) these values from the landing page by editing the form template of the data capture form.

Editing content on a landing page

1. Swipe **Switch to Edit**. Content view is the default, and the editable fields appear in the window.
2. Hover over an editable area and click the menu (). An action box appears.
   - **Edit in Context** (where available) lets you modify the content on the screen. When done, click **Save** ().
   - **Edit** opens a content editor where you can add information such as summary, metadata, publishing schedule and so on. When done, click **Publish**.



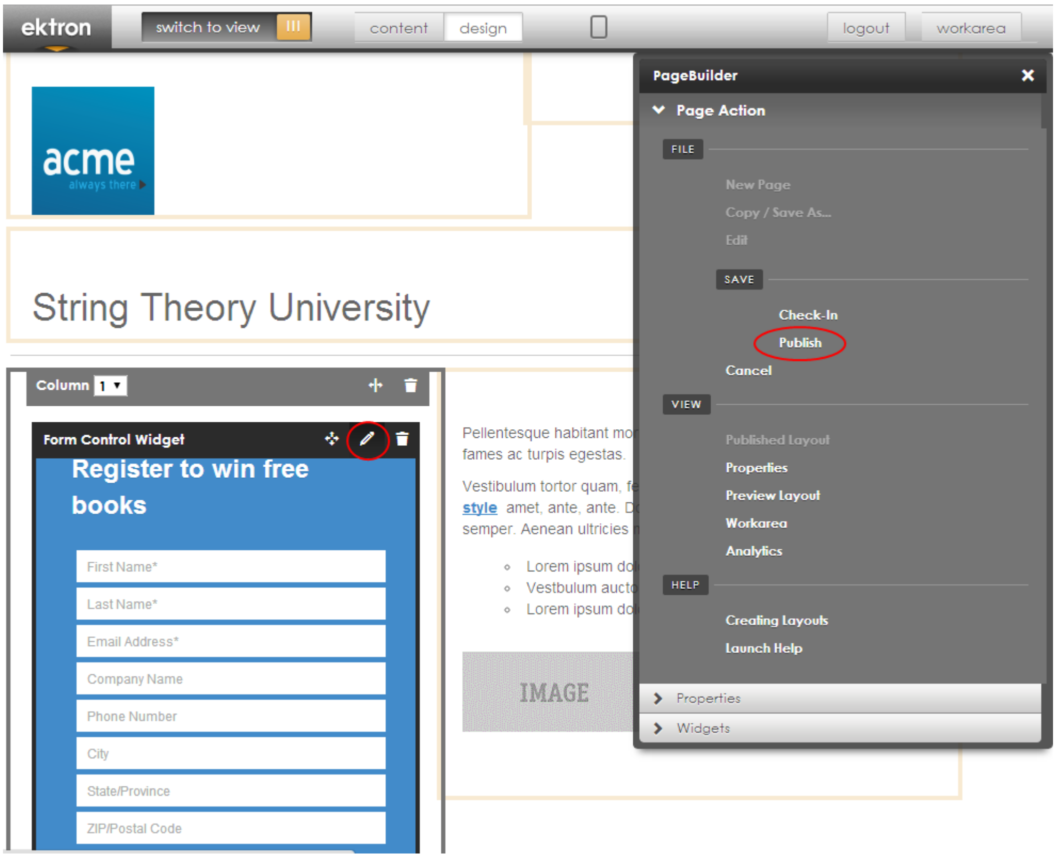
Editing a PageBuilder template for a landing page or Thank You page

These instructions apply to landing pages and thank you pages.

1. Swipe **Switch to Edit**. The editable fields appear in the window.
2. Click **Design**. The PageBuilder menu appears.
3. Choose **Page Action > File > Edit**. The page components become editable. For example, you can move a form from column 1 to column 2, or place widgets on the page. For information about widgets, see the *Creating and using widgets* on page 1171.

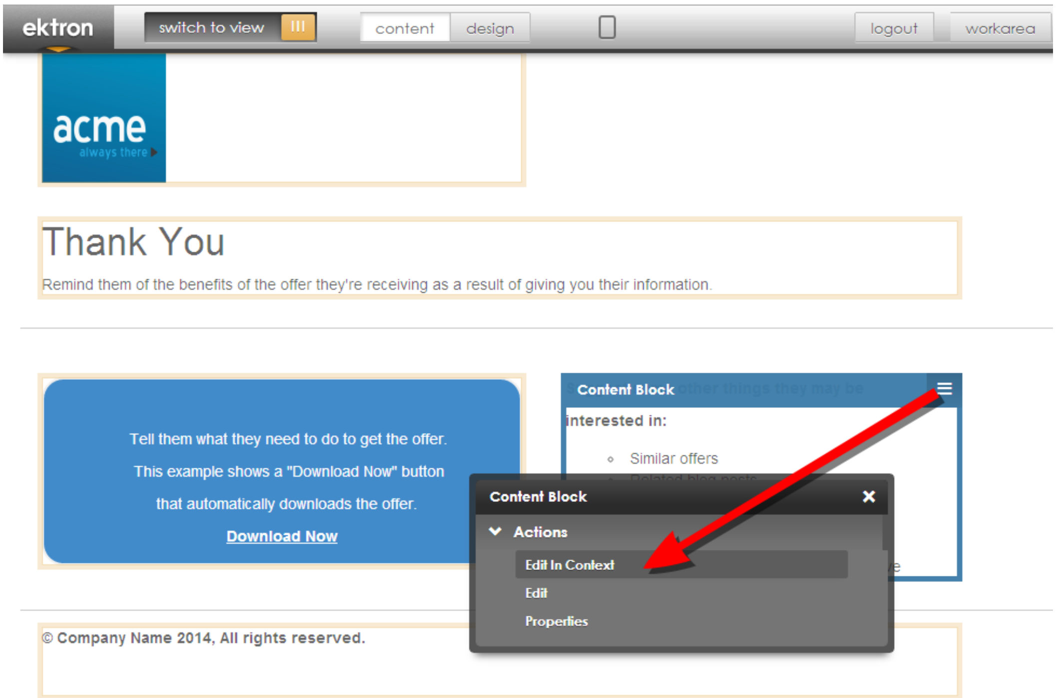
4. When finished, click **Publish** in the PageBuilder menu.

   See *Setting up a landing page layout* on page 1121 if you want to create additional landing page layout (you need administrator permissions). For information about PageBuilder, see *Creating Web pages with PageBuilder* on page 991.



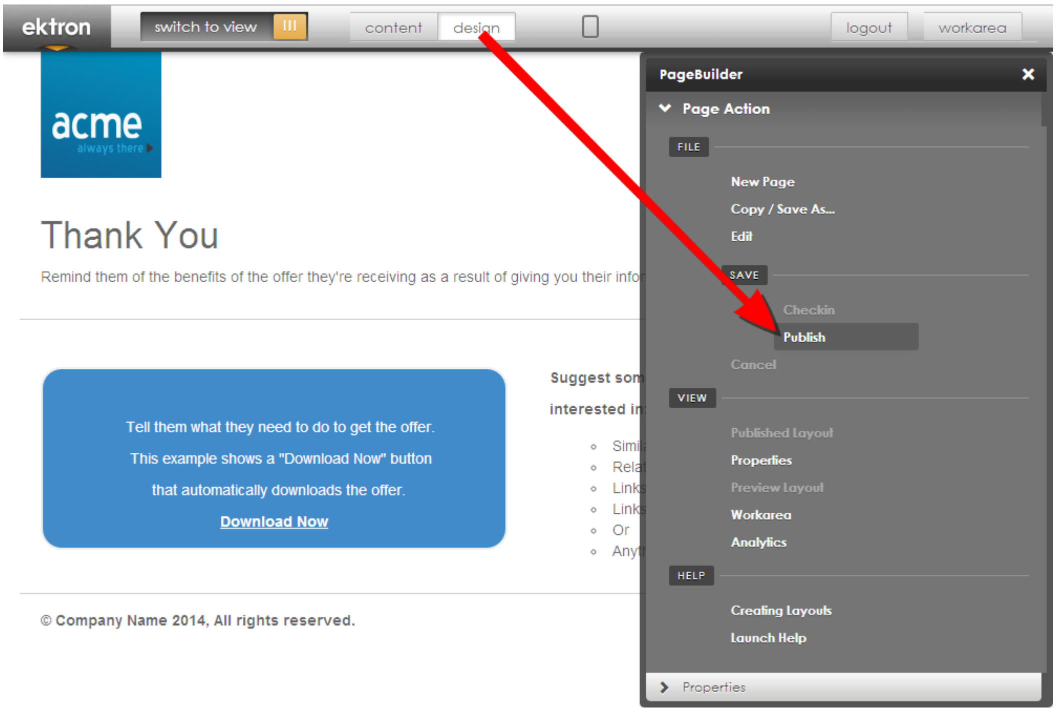
Editing an existing Thank You page

A confirmation page (Thank You) reinforces the action that the user took. You can place additional CTAs on the confirmation page such as a way to share the experience with social media. Ektron provides a default Thank You page that you can edit.



1. On the landing page list, click **Go To Thank You Page** for its associated landing page. The Thank You page appears.
2. To edit the page, swipe **Switch to Edit**, and click on **Content**.
3. Hover over an editable area and click the menu (☰). An action box appears.
4. Choose **Edit in Context** (or **Edit**).
   - **Edit in Context** (where available) lets you modify the content on the screen. When done, click **Save** (💾).
   - **Edit** opens a content editor where you can add information such as summary, metadata, publishing schedule and so on. When done, click **Publish**.
5. Make the modifications that you want and click **Save** (💾) (from the File menu of the in-context editor).
6. When you are finished editing the page components, choose **Page Action**

> File > Save > Publish from the PageBuilder menu.



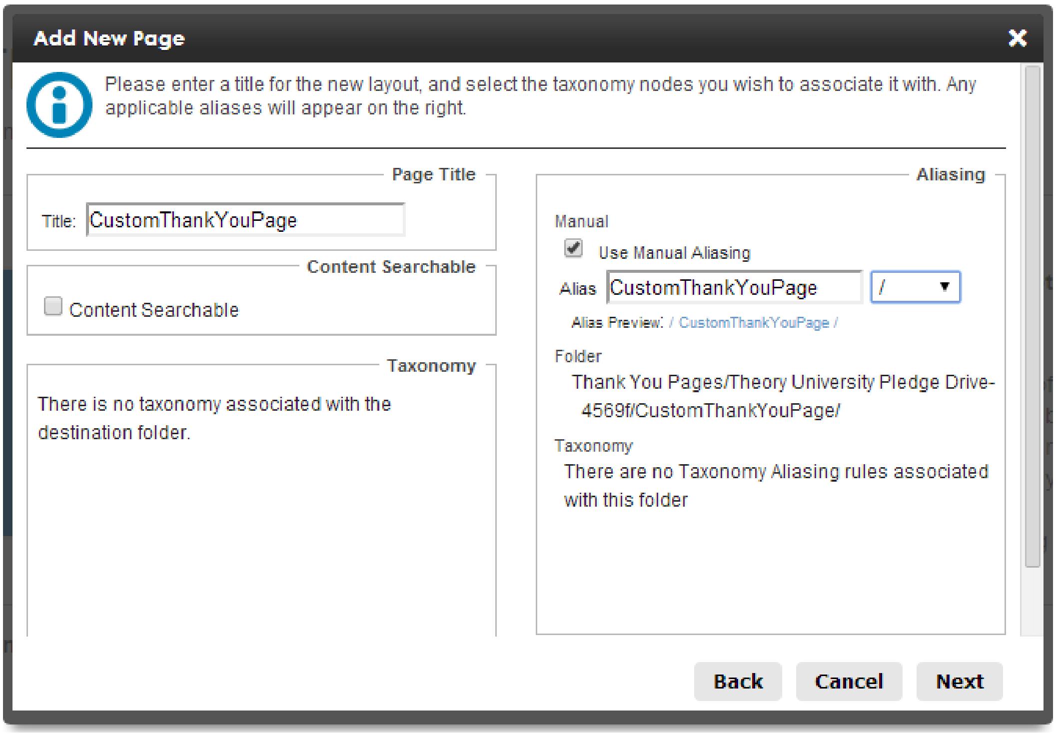
Creating a custom Thank You page

1. Choose **Campaign Management** from the Ektron app launcher.
2. Click **Landing Pages**. The landing page list appears.
3. Choose any landing page and click on **Go To Thank You Page**. The thank you page appears.

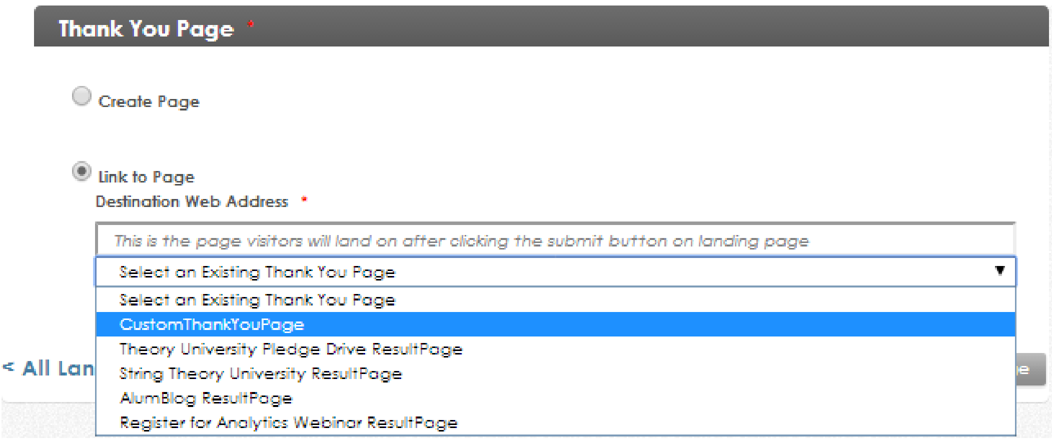
> **NOTE:** You can create a new thank you page from a landing page, but you can add a custom thank you page to the **Link to Page** drop-down list only when you create a page from an existing thank you page. If you create a thank you page from a landing page, you will need the URL to enter into the **Link to Page** field.

4. Swipe **Switch to Edit** and click **Design**. The PageBuilder menu appears.
5. Choose **Page Action > File > New Page**. The Add New Page wizard appears.
6. Click **Next** (accepting the default template).
7. Enter a **Title**. An alias is automatically entered from the title you give. You can change it.

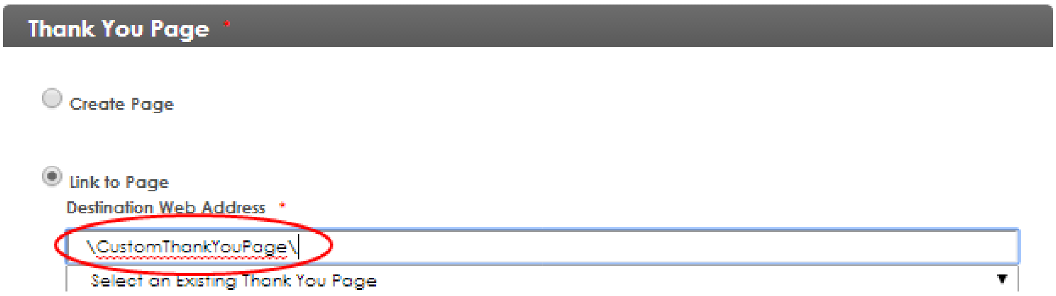
8. Select the slash (/) next to the Alias field and click **Next**.



9. Optionally add Metadata and Summary information, then click **Finish**. The Add New Page confirmation screen appears.
10. Click **OK** to go to the new page to start editing it. A new thank you page is completely blank.
11. Swipe **Switch to Edit** and click **Design**.
12. Modify the page, add widgets, and so on.
13. When your editing is done, click **PageBuilder > Page Action > File > Save > Publish**. The custom thank you page appears in the **Link to Page** selection list when you create a new landing page.

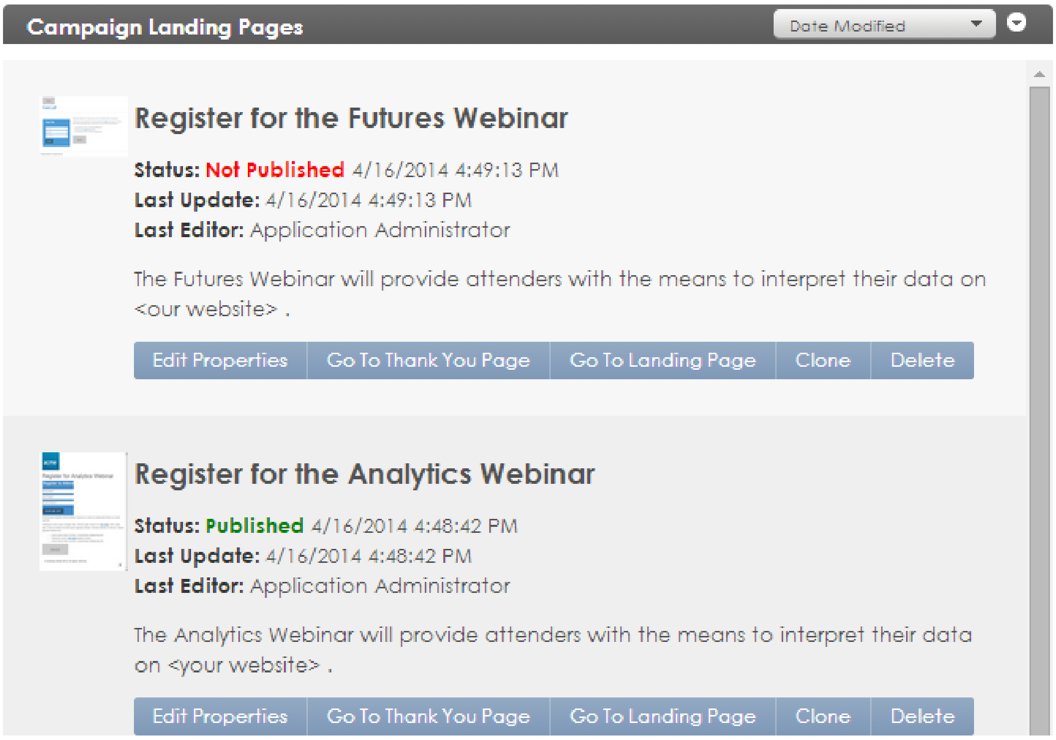


If you created a thank you page from a landing page, use the URL from the created page and enter it into the Link to Page field.



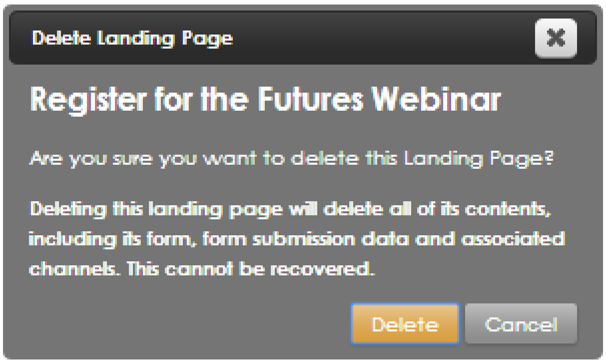
Cloning a landing page

From the landing page list, click **Clone** to make a copy of a landing page. For example, if you have a series of webinars that follow a similar format, clone the webinar landing page and then modify a few fields to create a unique landing page.



Deleting a landing page

From the landing page list, click **Delete** remove an existing landing page. A confirmation dialog box appears.



Setting up landing pages as an administrator

Administrators have additional access and control to the landing page resources. For example, you may want to apply your own cascading style sheet (CSS) to your site, or set up a DXH connection to collect your form data.

Setting up a landing page layout

Ektron provides several landing pages (*Form Center*, *Form Left*, *Form Right*, and *Menu with Form*). They are listed in the Select Layout section of the Create Landing Page screen. You can create additional landing pages to select for use, using the following procedure.

1. Create a modified page.
   a. Open an existing landing page, swipe **Switch to Edit** and click **Design**.
   b. Choose **PageBuilder > Page Action > New Page**. The Add New Page wizard appears.

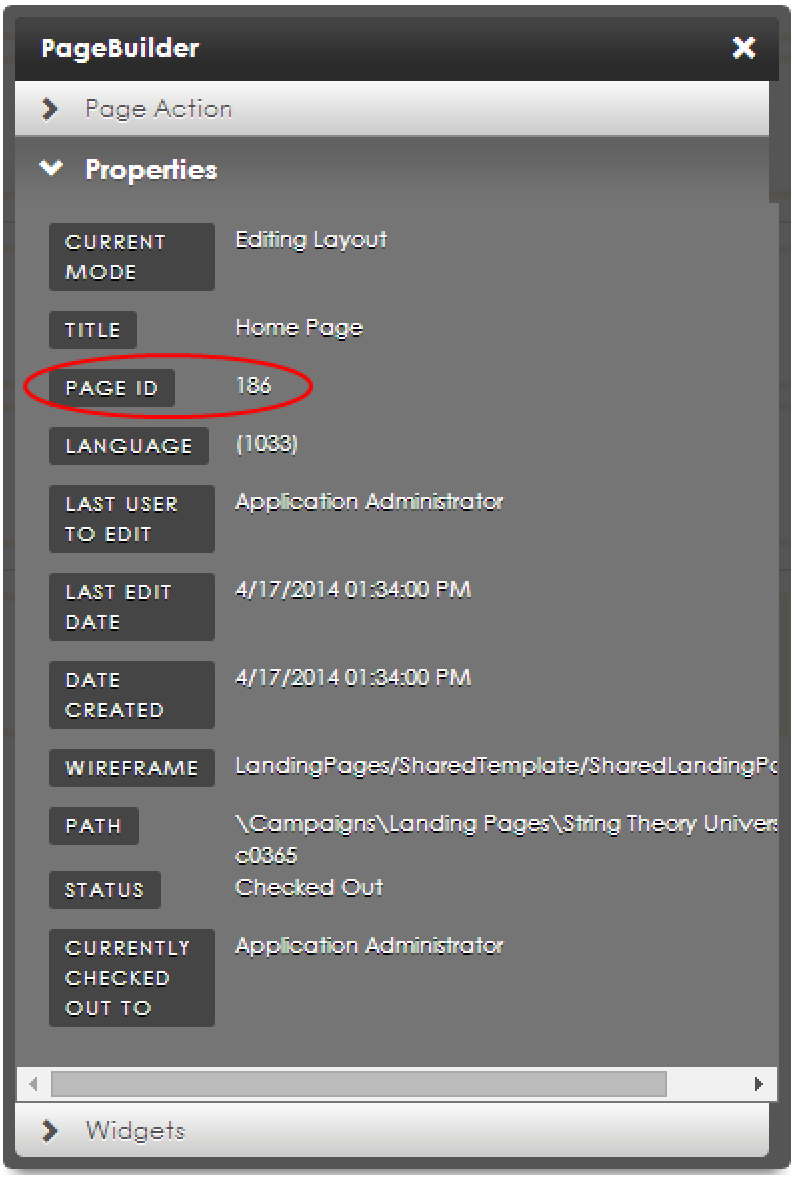
      NOTE: *Creating Web pages with PageBuilder* on page 991 describes how to create new pages.

   c. Choose `LandingPages/SharedTemplate/SharedLandingPage.aspx` wireframe and click **Next**.
   d. Enter a title (for example, *Home Page*) for the new page and click **Next**.

      IMPORTANT: Each name must be unique. You cannot name your layout *Form Center*, *Form Left*, *Form Right*, or *Menu with Form* (with or without spaces) because these are the default layouts.

   e. Optionally enter additional data and click **Finish**. A dialog box appears asking if you want to go to the new page.
   f. Click **OK** to go to page. *`Home-Page`*`.aspx` is displayed.
   g. Swipe **Switch to Edit** and click **Design**.

h. Note the Page ID on the **PageBuilder > Properties** screen.

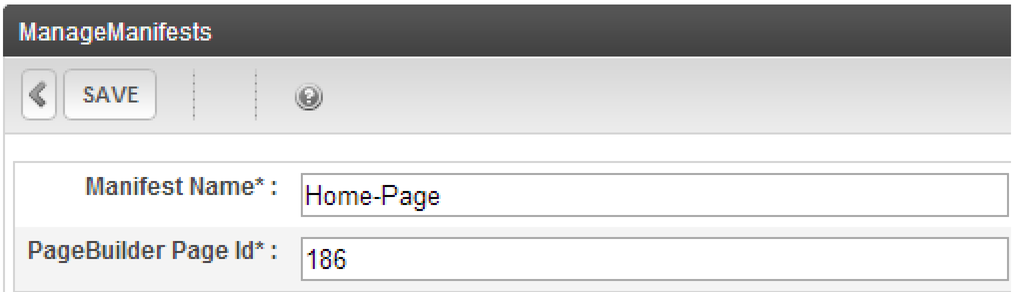


i. Go to **PageBuilder > Page Action > File > Save** and click **Publish**.

2. Go to **Workarea > Settings > Campaign Management > Manage Manifests**. The Manage Manifest screen appears.

NOTE: In the Workarea, a landing page layout has a *manifest*, which is a collection of page attributes that comprise the new landing page.

3. Click **Add Custom Manifest**. The Create Manifest screen appears.



- **Manifest Name**. Enter a unique name for the new manifest.
- **PageBuilder Id**. Enter the ID of the new manifest. You can find it as follows:
  a. Go to your modified page and swipe **Switch to Edit**.
  b. Click **Design**.
  c. Choose **PageBuilder > Properties** and view the Page ID.

  NOTE: In the Workarea, the Page ID is the Content ID in the properties view.

4. Click **Save**. The Manage Manifests screen appears with the new manifest. When a user creates a new landing page, the user can select the new layout from the Select Layout section of the Create Landing Page screen.

Applying a cascading style sheet

Applying a system-wide CSS

Ektron provides several system-wide CSS options from which you can choose.

1. Login to your Ektron website.
2. Go to **Workarea > Content > Folders > Blog Hub > Settings**. The View Content screen appears in the right panel.
3. Click **Site Configuration** in the right panel. The View Content "Site Configuration" screen appears in the right panel.
4. Click **Edit**.
5. In the Content tab, find the **Theme** drop down and select 1 of the themes (**Default**, **Amelia**, **Cyborg**, **Flatly**, **Journal**, **United**, or **Custom**). If you choose **Custom**, place your CSS file in d:\Sites\<YourSite>\content\bootstrap\Custom.
6. Click **Publish**.
7. Reload your website.

Applying a local CSS to your landing page and thank you page

You can apply a local CSS to your site pages, overriding the system-wide CSS. If you have a specific CSS that you want to use, upload it to d:/Sites/*<your_site>*/*<local_folder>*. For example:

```
d:/Sites/YourSite/MyThankYou/
  MyThankYou.aspx
  MyThankYou.css
  MyThankYou.js
  MyThankYou.jps
```

Setting up a landing page alias prefix

When you create a landing page, the landing page Web address defaults to `http://<your_website>/<name_of_landing_page>`. In some cases, you may want to indicate in your URL that landing pages are in the same URL path. For example:

```
http://<your_website>/LP/<name_of_landing_page_001>
  ...
http://<your_website>/LP/<name_of_landing_page_00n>
```

Adding a prefix gives your URL more definition, and also lets you easily set up a redirect alias to a proxy service.

The following procedure shows how to set the prefix.

1. Go to **Workarea > Settings > Campaign Management > Settings**. The Campaign Management Setting screen appears.
2. Click **Edit**.
3. Specify the values you want:
   a. **Landing Pages Alias Prefix**. Enter the prefix you want to show on the landing page Web address.
   b. **Campaign Medium**. Choose a medium that will indicate how a site visitor came through to your landing page.
      - **website**
      - **email**
      - **cpc** (cost-per-click)
      - **banner**
   c. **Add**. Enter a name to add to the Campaign Medium options and click **Add**.
4. Click **Save**.

Setting up a data form

Ektron provides Basic and Advanced data forms. The forms contain the following information. You can modify these or create your own.

- **Basic Form Template**. Form title, first name, last name, and email address.
- **Advanced Form Template**. Form title, first name, last name, email address, company name, phone number, city, state/province, and ZIP/postal code.

Creating a form template from an existing form template

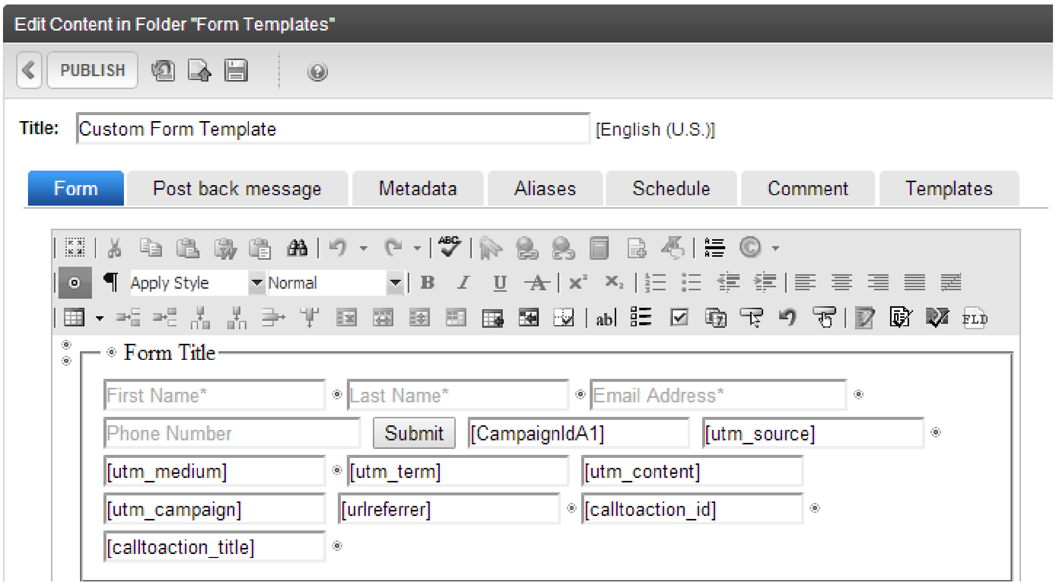
1. Go to **Workarea > Content > Folders > Campaigns > Form Templates**.
2. Instead of changing an existing template, create a copy by clicking on the **Advanced Form Template** template, then choose **Action > Copy**.

3. Choose **Action > Paste**. The copied form template appears in the list as **Advanced Form Template (1)**.
4. Click on the new template name, and click **Edit**.
5. Change the **Title** and modify the form. For example, enter `Custom Form Template` and remove several fields from the form so that only first name, last name, email address, and phone number appear on the form.

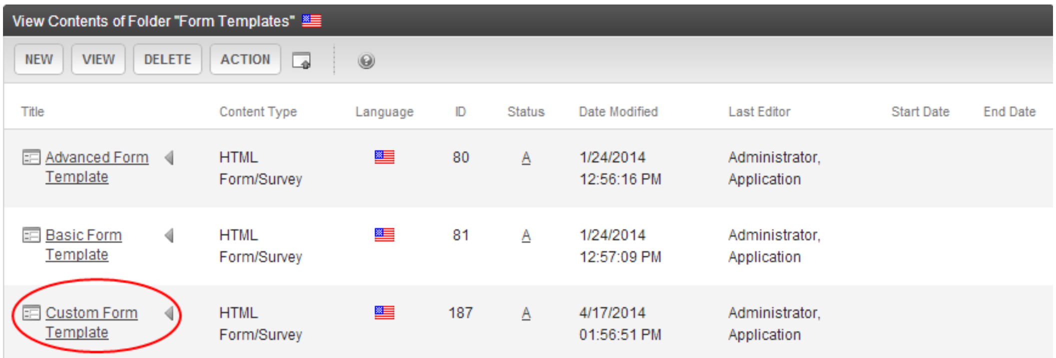
IMPORTANT: If you create a drop-down list in the HTML form, the (case-sensitive) field values must match exactly when you map the external application's field values through DXH.

NOTE: The following hidden fields do not display on the published form but collect Google Analytics:

```
[CampaignIdA1]
[utm_source]
[utm_medium]
[utm_term]
[utm_content]
[utm_campaign]
[urlreferrer]
[calltoaction_id]
[calltoaction_title]
```

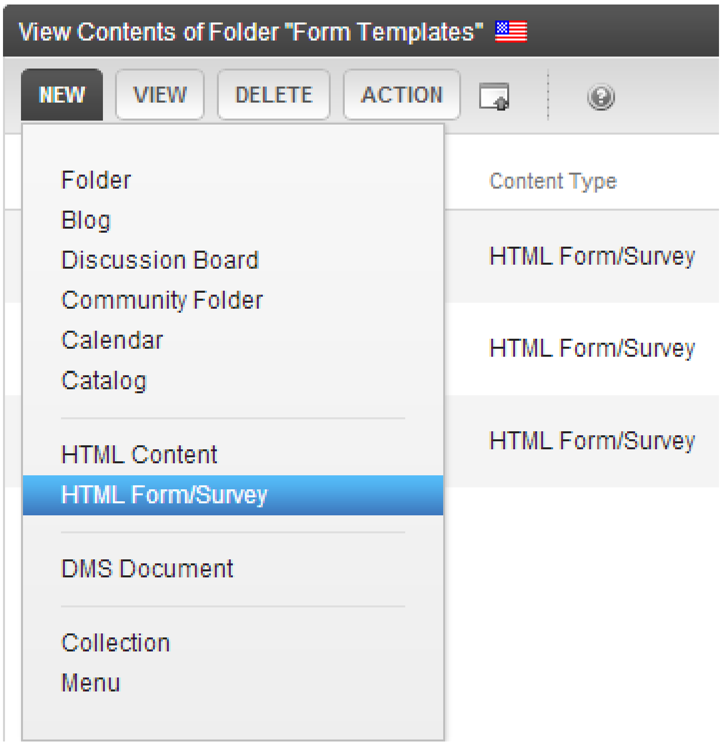


6. Click **Publish**. The new template appears in the list.

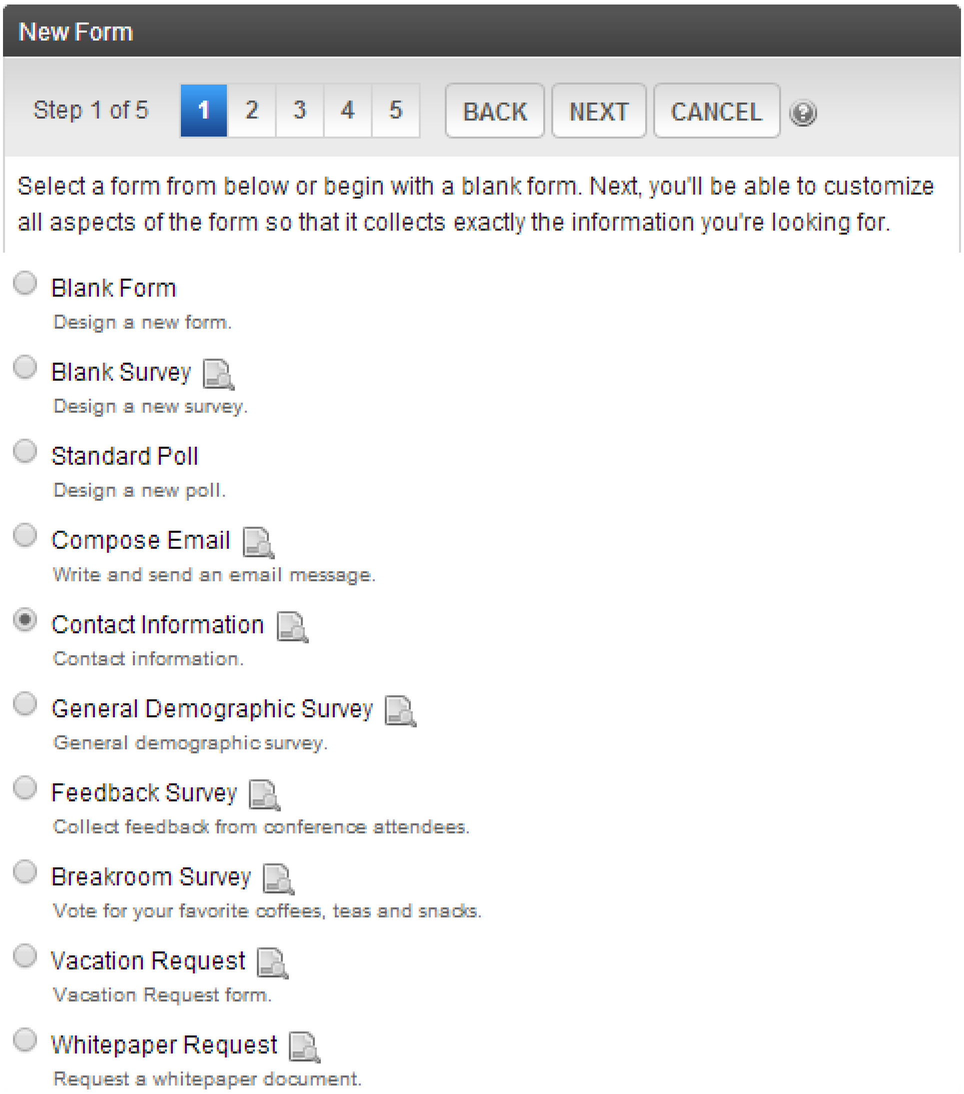


Creating a new form template

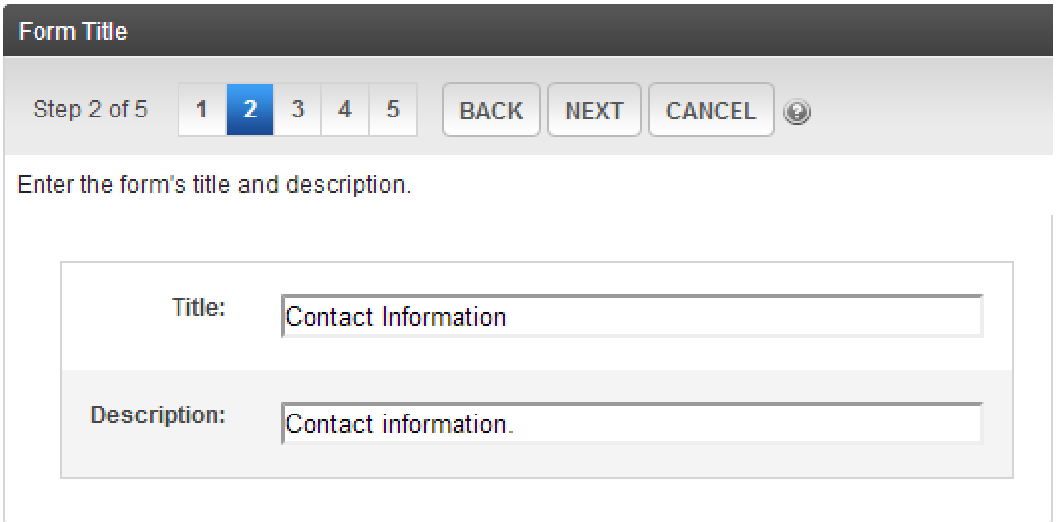
1. Go to **Workarea > Content > Folders > Form Templates**. The View Folder screen appears.
2. Click **New > HTML Form/Survey**. The New Form wizard appears.



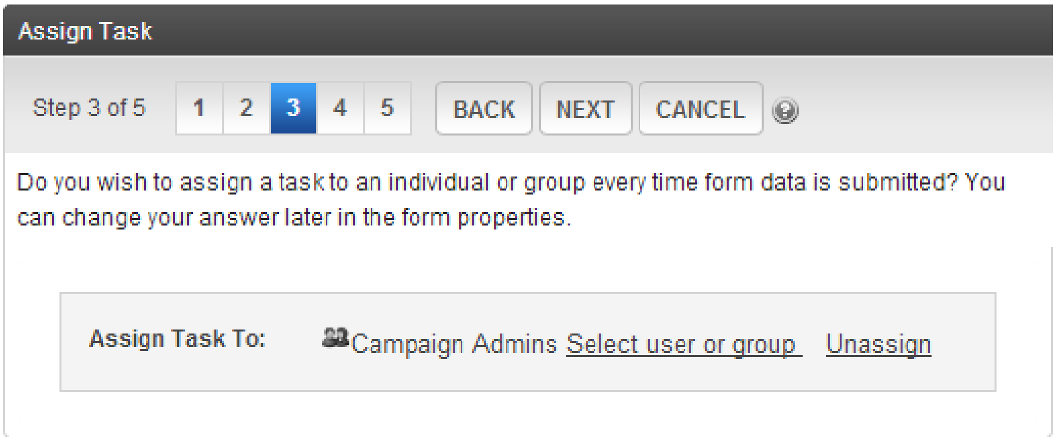
3. Choose **Contact Information** and click **Next**. The Form Title Screen appears.



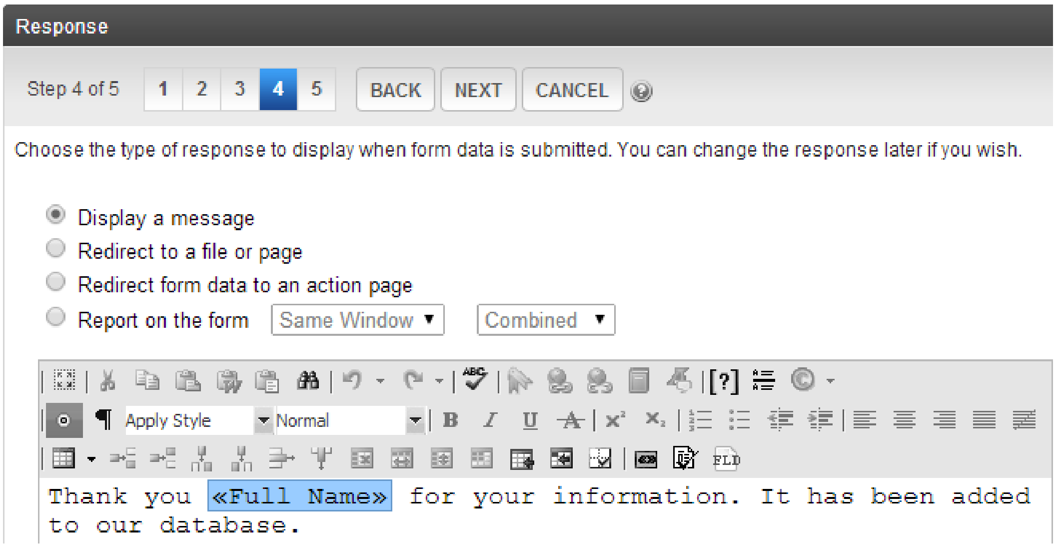
4. Enter the title of the new data form template and description, then click **Next**. The Assign Task screen appears.



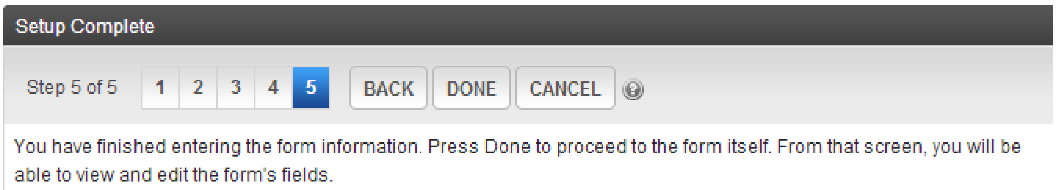
5. You can assign a task to a person or group whenever the form is submitted. Click **Next**. The Response screen appears.



6. Choose and edit a type of response, and click **Next**. The Setup Complete screen appears.

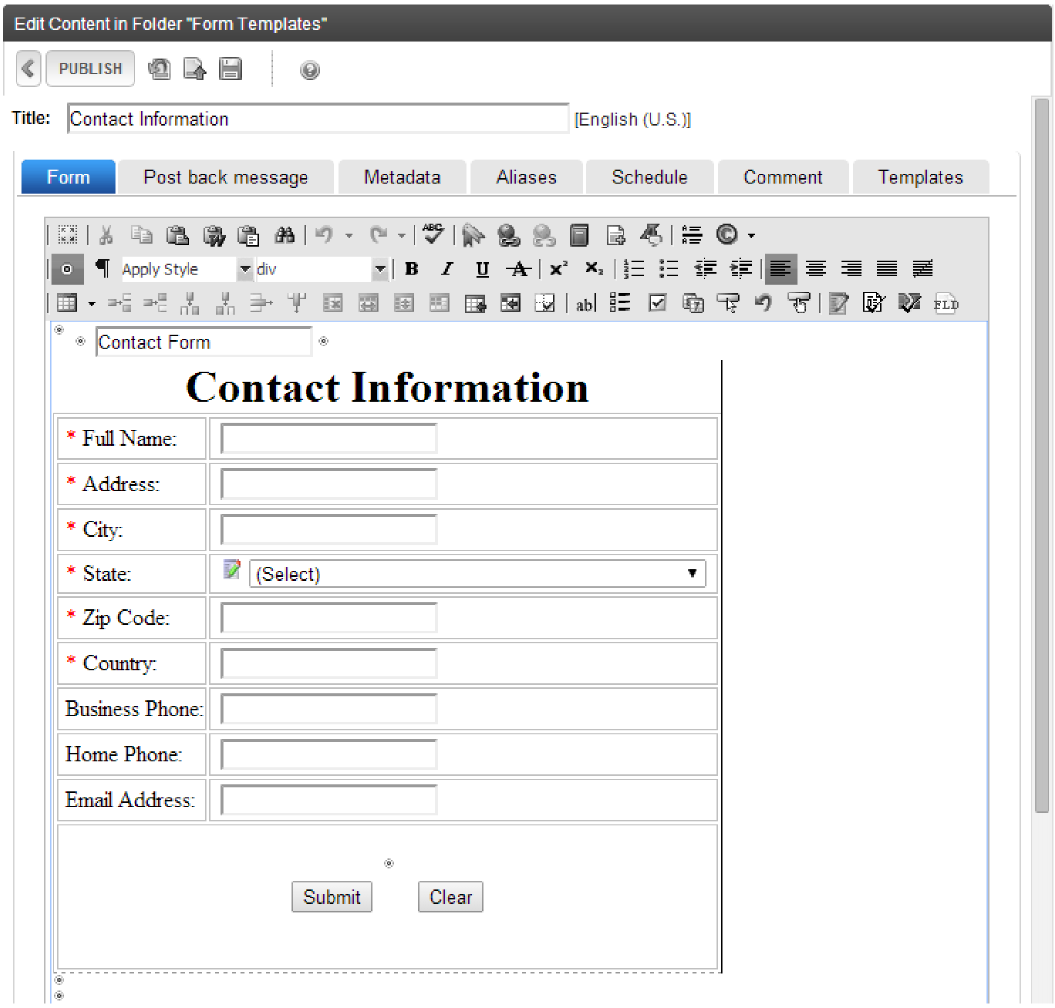


7. Click **Done**. The Edit Content screen appears.



8. Modify the template and click **Publish**.

IMPORTANT: If you create a drop-down list in the HTML form, the (case-sensitive) field values must match exactly when you map the external application's field values through DXH.

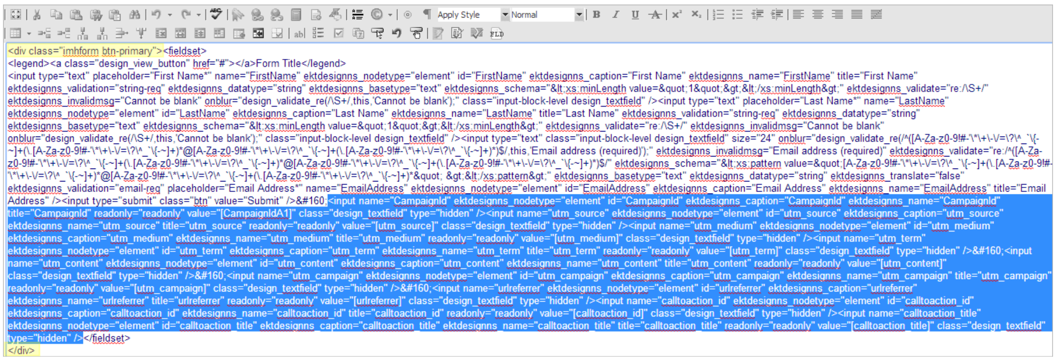


9. If you want to collect Google Analytics in your new form template, you must add the following hidden fields to it:

```
[CampaignIdA1]
[utm_source]
[utm_medium]
[utm_term]
[utm_content]
[utm_campaign]
[urlreferrer]
[calltoaction_id]
[calltoaction_title]
```

   a. Go to **Workarea > Content > Folders > Campaigns > Form Templates**.
   b. Click on either the Basic Form Template or the Advanced Form Template, then click **Edit**. This example uses the Basic Form Template.
   c. Click on **HTML** (<>) at the bottom of the screen to view the source code.

d. Copy the highlighted section (perhaps to Notepad, for example).



Here is unpacked code:

```
<input name="CampaignId" ektdesignns_nodetype="element"
  id="CampaignId" ektdesignns_caption="CampaignId"
  ektdesignns_name="CampaignId" title="CampaignId"
  readonly="readonly" value="[CampaignIdA1]"
  class="design_textfield" type="hidden" />
```

```
<input name="utm_source" ektdesignns_nodetype="element"
  id="utm_source" ektdesignns_caption="utm_source"
  ektdesignns_name="utm_source" title="utm_source"
  readonly="readonly" value="[utm_source]"
  class="design_textfield" type="hidden" />
```

```
<input name="utm_medium" ektdesignns_nodetype="element"
  id="utm_medium" ektdesignns_caption="utm_medium"
  ektdesignns_name="utm_medium" title="utm_medium"
  readonly="readonly" value="[utm_medium]"
  class="design_textfield" type="hidden" />
```

```
<input name="utm_term" ektdesignns_nodetype="element"
  id="utm_term" ektdesignns_caption="utm_term"
  ektdesignns_name="utm_term" title="utm_term"
  readonly="readonly" value="[utm_term]"
  class="design_textfield" type="hidden" />
```

```
<input name="utm_content" ektdesignns_nodetype="element"
  id="utm_content" ektdesignns_caption="utm_content"
  ektdesignns_name="utm_content" title="utm_content"
  readonly="readonly" value="[utm_content]"
  class="design_textfield" type="hidden" />
```

```
<input name="utm_campaign" ektdesignns_nodetype="element"
  id="utm_campaign" ektdesignns_caption="utm_campaign"
  ektdesignns_name="utm_campaign" title="utm_campaign"
  readonly="readonly" value="[utm_campaign]"
  class="design_textfield" type="hidden" />
```

```
<input name="urlreferrer" ektdesignns_nodetype="element"
  id="urlreferrer" ektdesignns_caption="urlreferrer"
  ektdesignns_name="urlreferrer" title="urlreferrer"
  readonly="readonly" value="[urlreferrer]"
  class="design_textfield" type="hidden" />
```

```
<input name="calltoaction_id" ektdesignns_nodetype="element"
  id="calltoaction_id" ektdesignns_caption="calltoaction_id"
```

```
  ektdesignns_name="calltoaction_id" title="calltoaction_id"
  readonly="readonly" value="[calltoaction_id]"
  class="design_textfield" type="hidden" />
```

```
<input name="calltoaction_title" ektdesignns_nodetype="element"
  id="calltoaction_title" ektdesignns_caption="calltoaction_title"
  ektdesignns_name="calltoaction_title" title="calltoaction_title"
  readonly="readonly" value="[calltoaction_title]"
  class="design_textfield" type="hidden" />
```

e. Close the form.

f. Click on the form you created, then click **Edit**.

g. Click on **HTML** (<>) at the bottom of the screen to view the source code.

h. Paste the copied code just before the `</div>` tag.

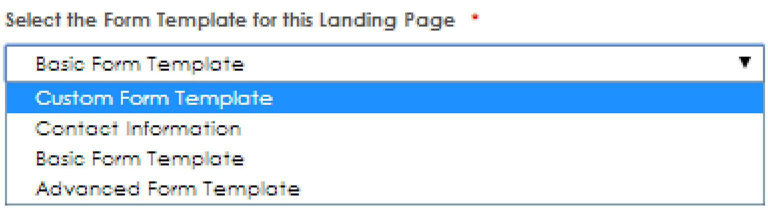
10. To apply a CSS theme, wrap the form code with the following tags:

```
<div class="imhform btn-primary">
...
</div>
```

NOTE: The default theme is `imhform btn-primary`, but you can insert your own CSS theme.

11. Click **Publish**.

When you create a new landing page, you can select among the Form Template options, which includes the newly created forms as shown in the following image:



Setting up an inbound connection to collect the form data

PREREQUISITE

This procedure requires the Digital Experience Hub (DXH) to be already set up. For complete information about setting up and using DXH with Ektron, see *Ektron Digital Experience Hub release notes* on page 453.

Before your website forms can send you data, you must set up an inbound connection.

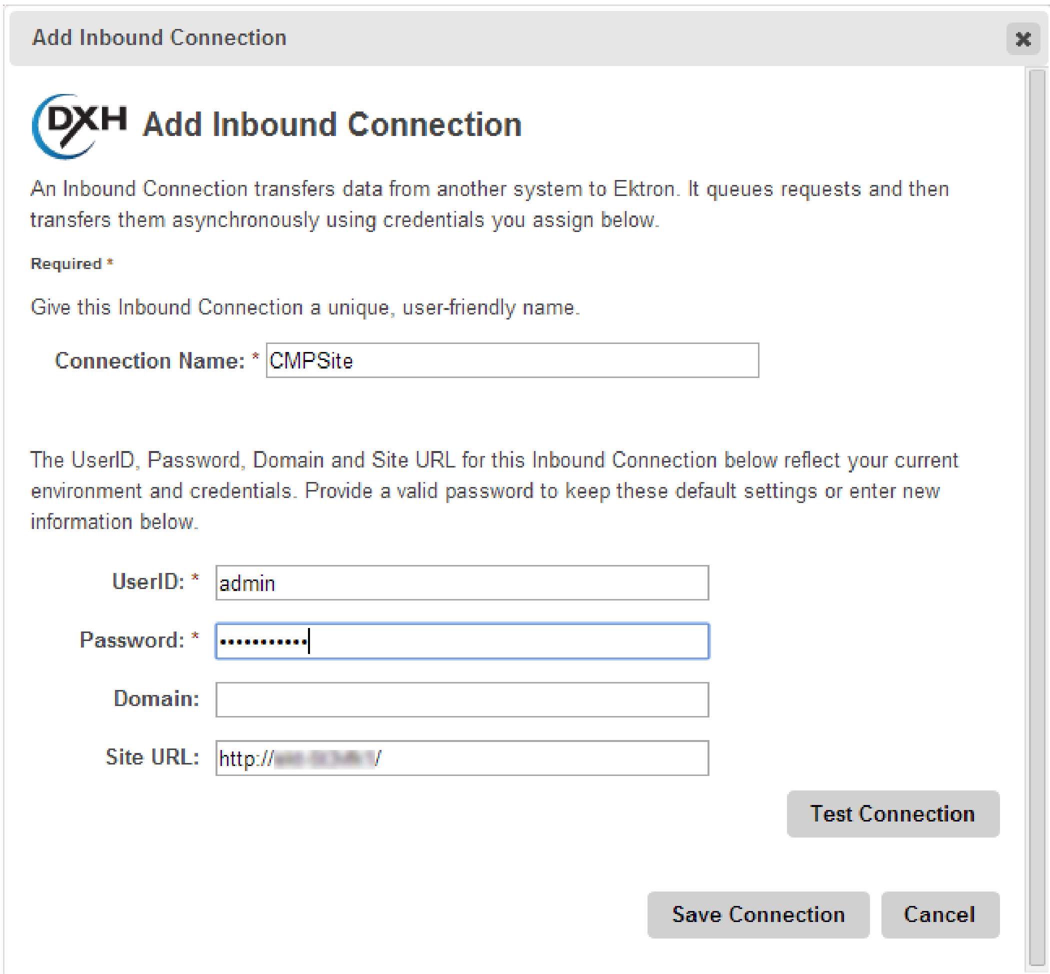
1. Go to **Workarea > Settings > Settings > Digital Experience Hub > Connections**.

   The View All Digital Experience Hub Connections screen appears.

2. Click **Add Connections > Add Inbound Connection**.

   The Add Inbound Connection screen appears.

- **Connection Name**. Enter a unique name for this inbound connection. You should have 1 inbound connection for each site from where you want to collect data.
- **UserID**. Enter the name of the user who will manage the data.
- **Password**. Enter the password of the user who will manage the data.
- **Domain**. Enter the domain name; leave blank if the domain is the same as the 1 you are on.
- **Site URL**. Enter the site URL from which the data is collected.



3. Click **Test Connection**. If the connection information passes the test, click **Save Connection**.
   The Connection is added to the View All Digital Experience Hub Connections screen.

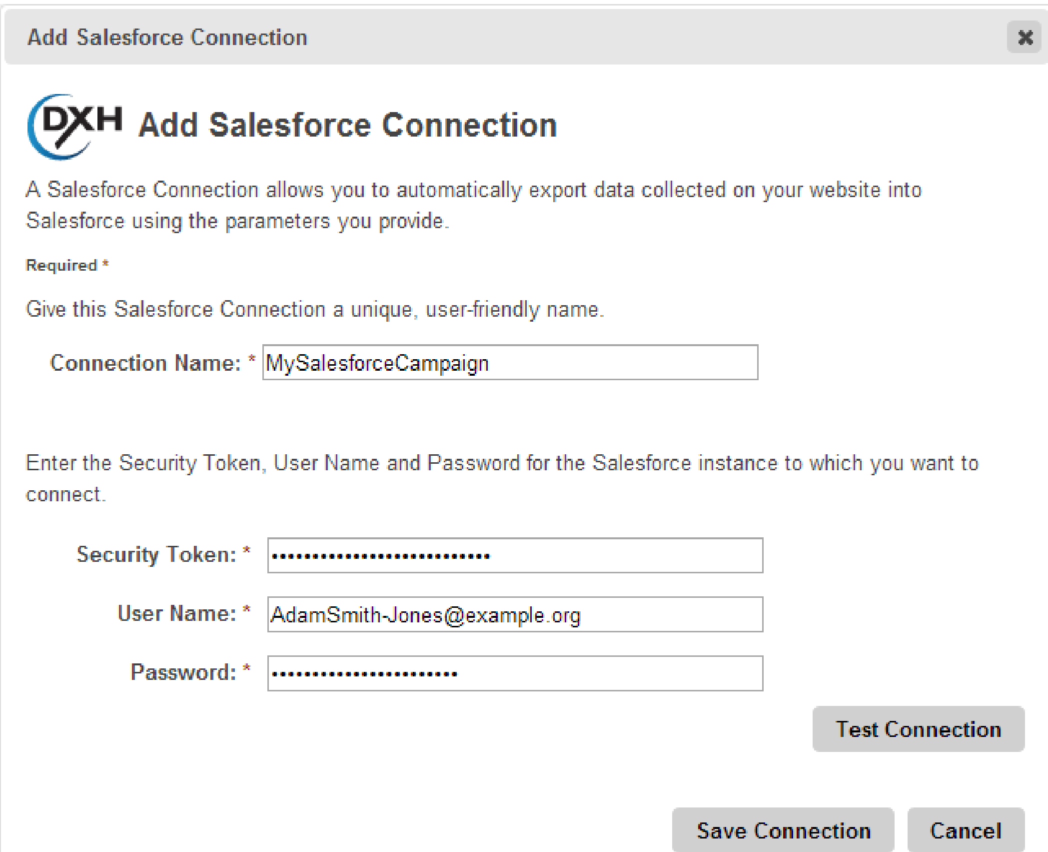
Setting up a Salesforce connection to collect the form data

PREREQUISITE

This procedure requires the Digital Experience Hub (DXH) to be already set up. For complete information about setting up and using DXH with Ektron, see *Ektron Digital Experience Hub release notes* on page 453.

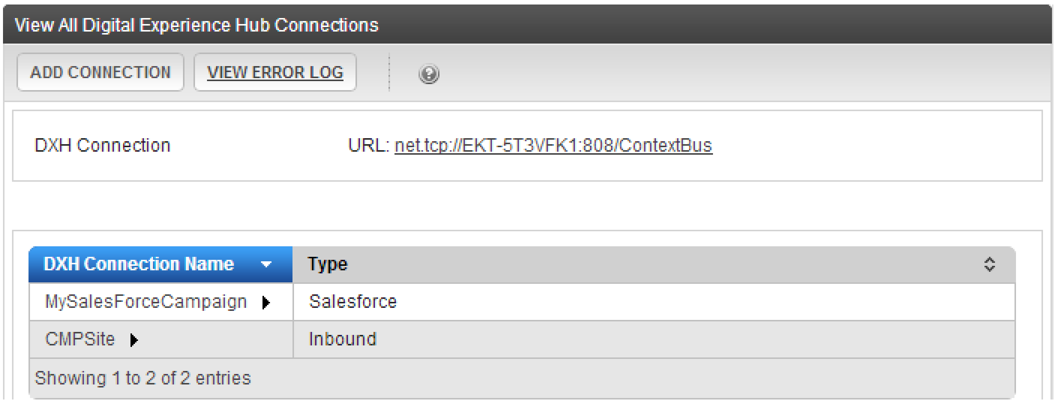
Before your website forms can send you data, you must set up an inbound connection.

1. Go to **Workarea > Settings > Settings > Digital Experience Hub > Connections**. The View All Digital Experience Hub Connections screen appears.
2. Click **Add Connections > Add Salesforce Connection**. The Add Salesforce Connection screen appears.
    - **Connection Name**. Enter a unique name for this inbound connection. You should have 1 inbound connection for each site from where you want to collect data.
    - **Security Token**. Enter (copy and paste) the identifier that Salesforce emailed to you.
    - **Password**. Enter the password of the user who will manage the data.



3. Click **Test Connection**. If the connection information passes the test, click **Save Connection**. The Connection is added to the View All Digital Experience

Hub Connections screen.



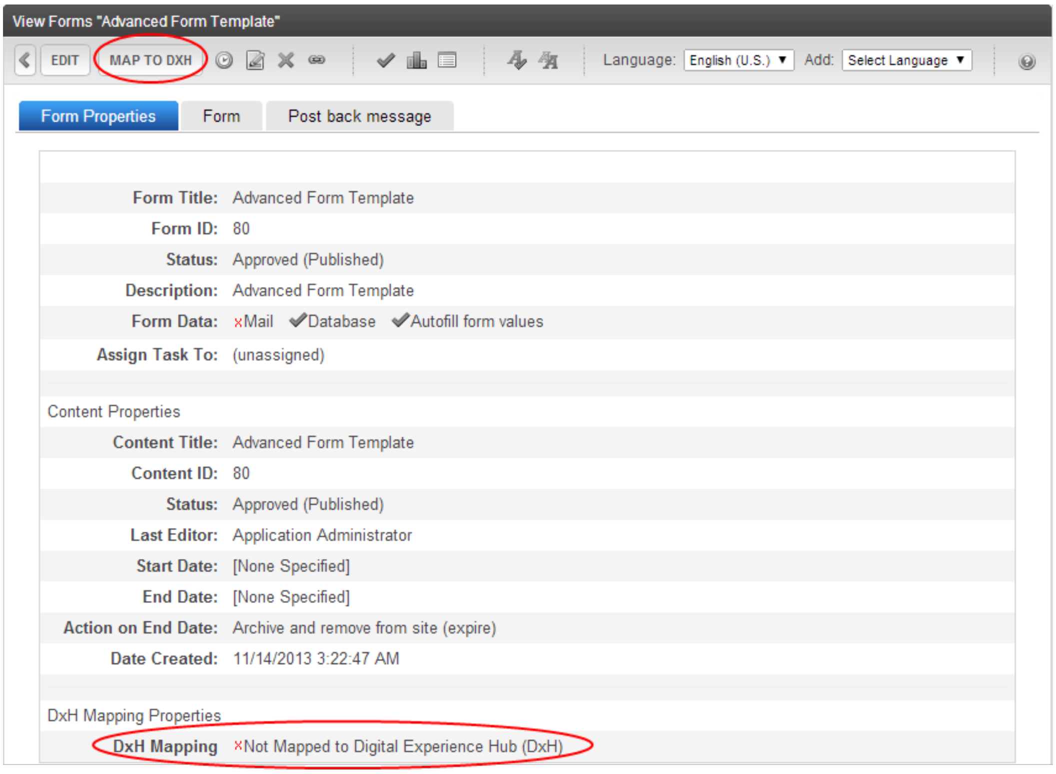
Mapping form data between DXH and an external application

PREREQUISITE

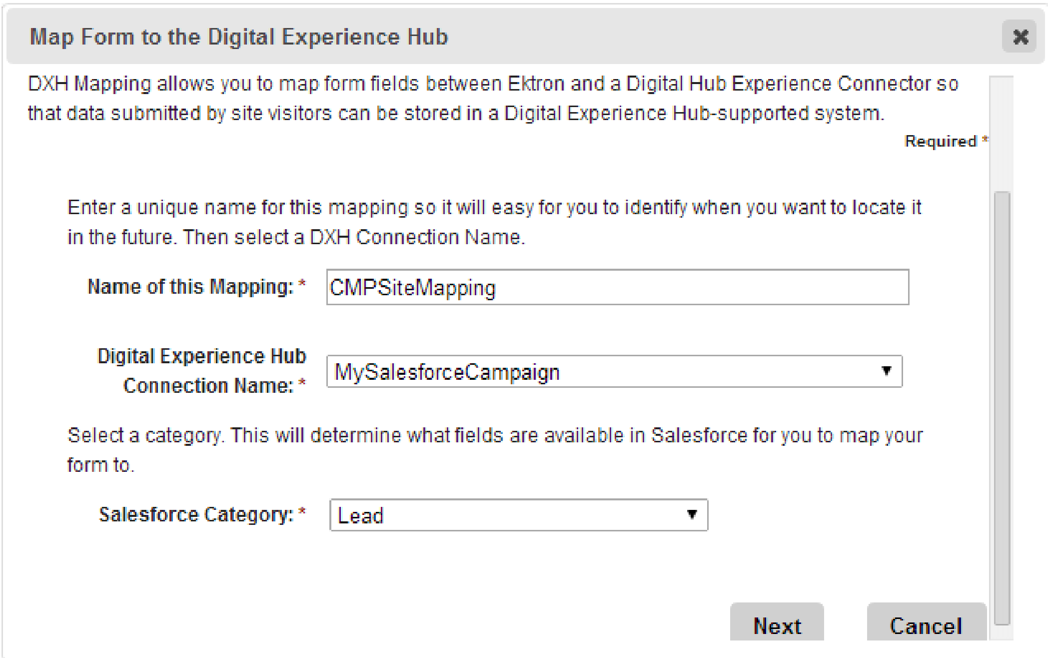
This procedure requires the Digital Experience Hub (DXH) to be already set up. To set up and use DXH with Ektron, see *Ektron Digital Experience Hub release notes* on page 453. You should also have an inbound connection set up: see *Setting up an inbound connection to collect the form data* on page 1131.

If you have DXH, you can map the Advanced and Basic Form Templates, and any other forms that you create (see *Editing the properties of a landing page* on page 1114). After you map the fields for a template, DXH maintains the mappings for any landing page that you create that uses the mapped form template. (You do not need to map the fields again for new landing pages.)

1. Go to **Workarea > Content > Folder > Campaigns > Form Templates**.
2. Click the form. The View Form screen appears. For example, click on the Advanced Form template and note the DXH items on the screen.



3. Click **Map to DXH**. The Map Form to the Digital Experience Hub dialog appears.

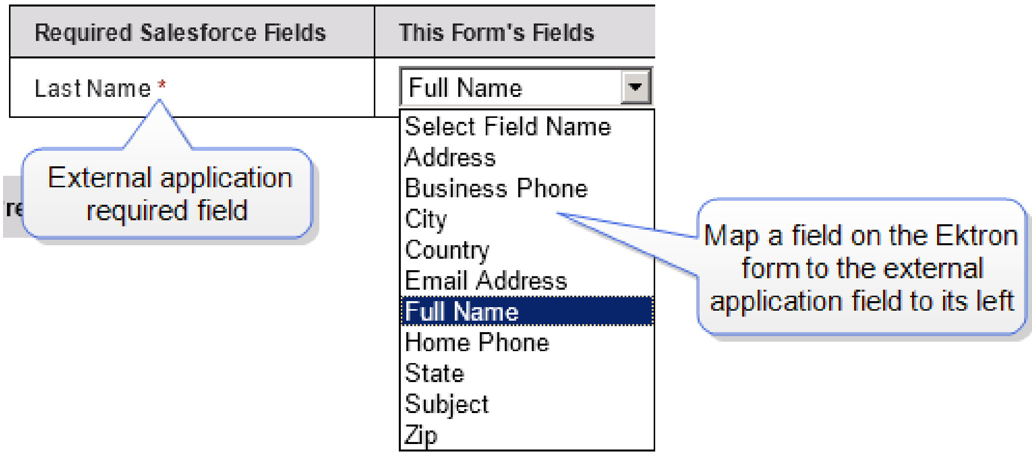


4. Enter a unique and easy to recognize name in **Name of this Mapping**.
5. In **Digital Experience Hub Connection Name**, select the connection to the external application. The form adjusts to the type of application you select. For example, if you choose a Salesforce campaign connection, a **Salesforce Category** field will appear. The following forms are supported:

- **Marketo Lead Management**. Lead
- **Salesforce**. Lead, Contact, Account
- **Microsoft Dynamics CRM**. Lead, Contact, Account
- **HubSpot**. Contact

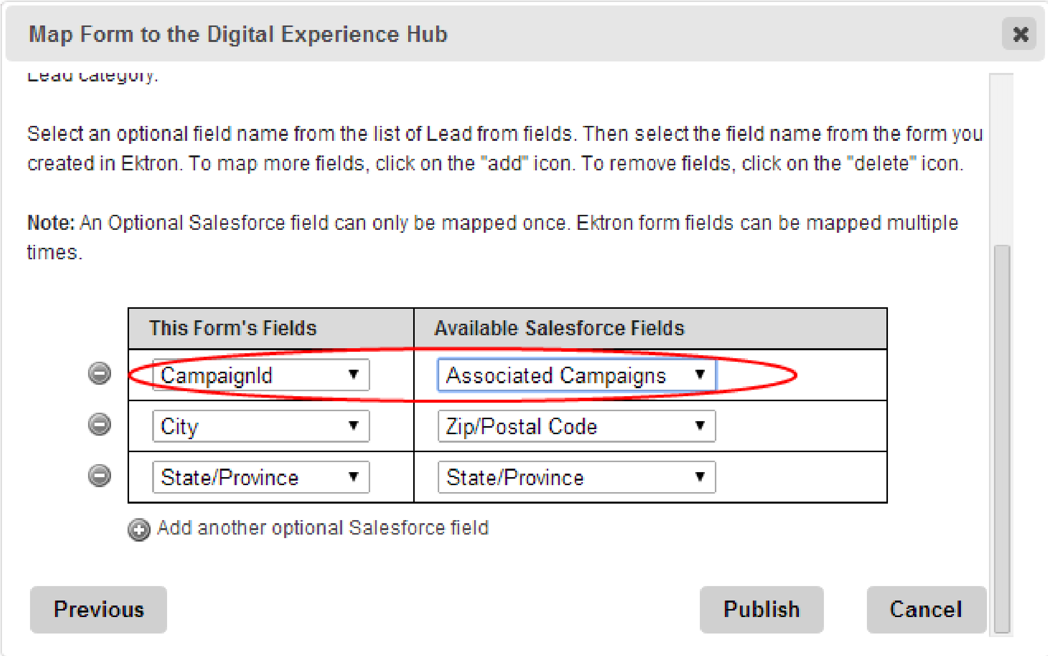
6. Click **Next**. The Map Required Form Fields screen appears. All required external fields appear in the left column. Use the drop-down in the right column to map one Ektron form field to each required field.

IMPORTANT: The external application field's data type must match the Ektron form field.

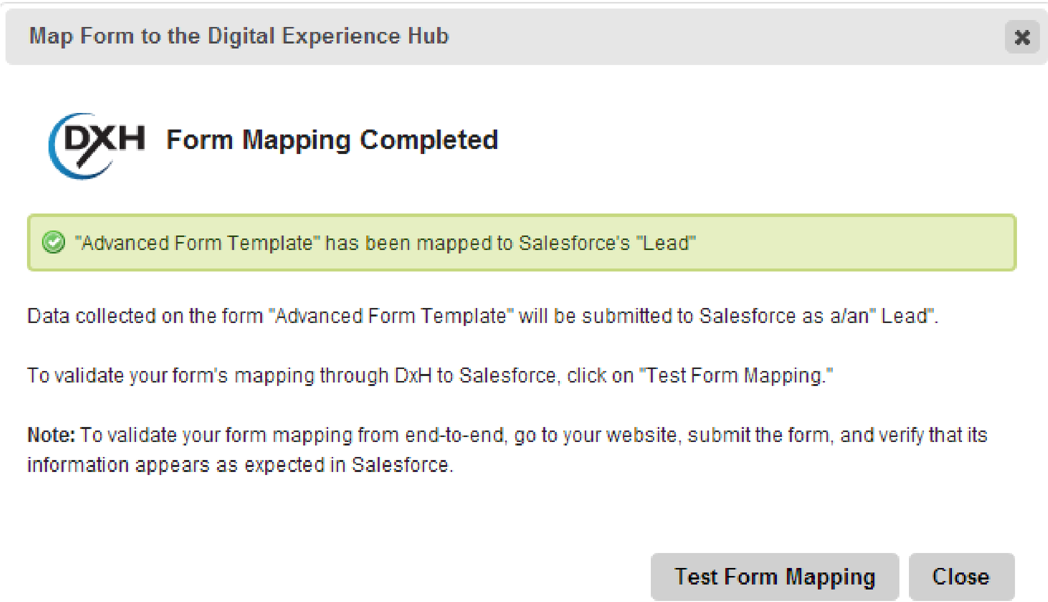


7. When you click **Next**, you can click **Add another optional (application) field** (⊕) to map other Ektron form fields to optional external fields.

NOTE: For Salesforce campaigns, map the **CampaignId** field as shown in the following image. (**Associated Campaigns** is available only in the Lead and Contact categories of Salesforce.)

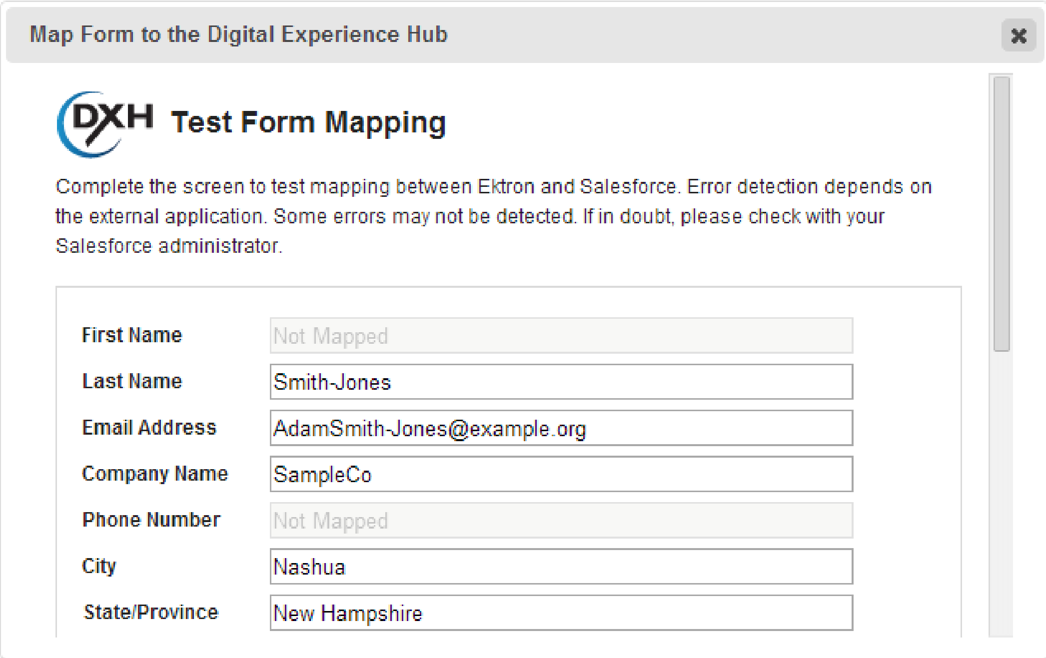


8. When your mapping is complete, click **Publish**. The Form Mapping Completed screen appears.

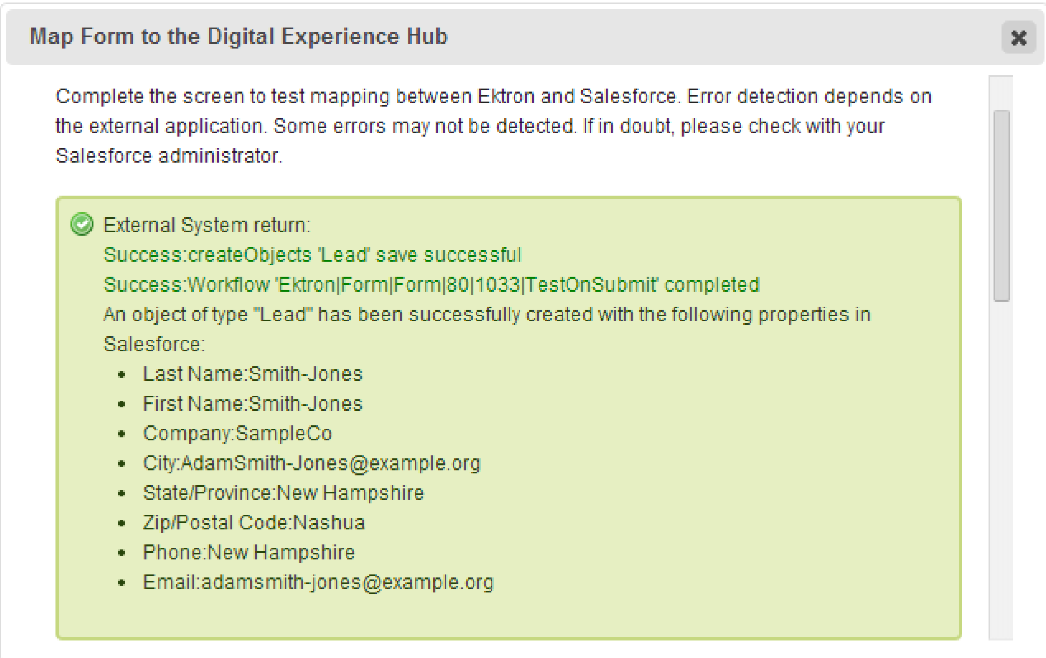


9. Click **Test Form Mapping**. A new form appears, showing fields that you mapped.
10. Enter sample data into each field and click **Test Mapping** at the bottom of the form. You are notified if the sample data is valid.

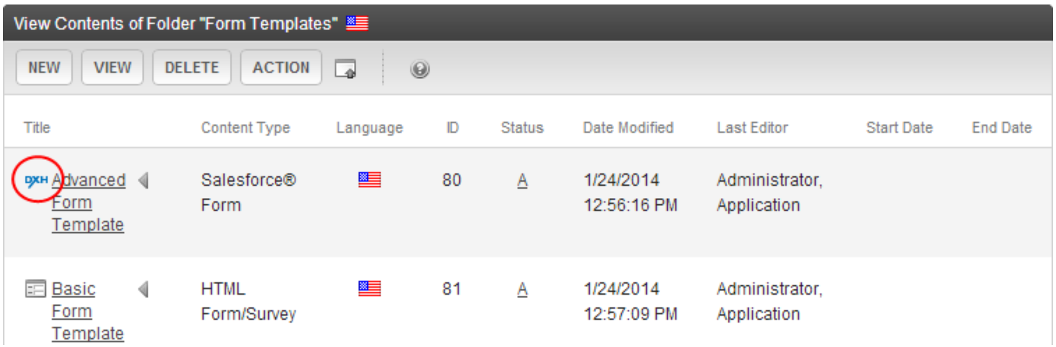
Test Form Mapping



Test Form Mapping Success



11. Click **OK**. The View Contents screen shows the DXH icon next to any forms that are mapped.


View Contents of Folder "Form Templates"
NEW
VIEW
DELETE
ACTION
Title
Content Type
Language
ID
Status
Date Modified
Last Editor
Start Date
End Date
DXH
Advanced Form Template
Salesforce® Form
80
A
1/24/2014 12:56:16 PM
Administrator, Application
Basic Form Template
HTML Form/Survey
81
A
1/24/2014 12:57:09 PM
Administrator, Application

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22

Managing a blog platform

NOTE: The blogs feature is part of *Ektron's marketing suite* on page 1033.

To launch the Blog app, click on the icon and the author page appears.

A blog platform contains a list of blog authors, their blogs pages, and analytics for evaluating blog posts and authors.

- Credentialed authors can create and edit their blog posts and online profiles.
- Guest authors do not have access; their profile is created by an administrator. Guest authors send blog material to an administrator to post on their behalf.

NOTE: You can sort the Author, Email, and Type columns by clicking the headings (circled).

Authors

Author	Email	Type	Actions
Amanda Lynne	A.Mandolin@example.org	Author	Edit Disable Delete
Arthur Wrytus	ArthurWrytus@example.org	Author	Edit Disable Delete
Buck Hunter	BuckHunter@example.org	Author	Edit Disable Delete
Chuck L. Lightly	ChuckLLightly@example.org	Guest	Edit Disable Delete
Fester McAllister	FesterMcAllister@example.org	Author	Edit Disable Delete
Ilene Leeward	IleneLeeward@example.org	Author	Edit Disable Delete
Norman Average	NormanAverage@example.org	Guest	Edit Disable Delete

Each blog author has links on the Authors page to perform the following actions.

- Click an author's name to go to that author's blog page.
- **Edit**. Make changes to the author's profile.
- **Disable**. Removes access from an author while keeping existing blog posts. An administrator still has access and the ability to post on the author's behalf.
- **Delete**. Removes an author and associated posts.

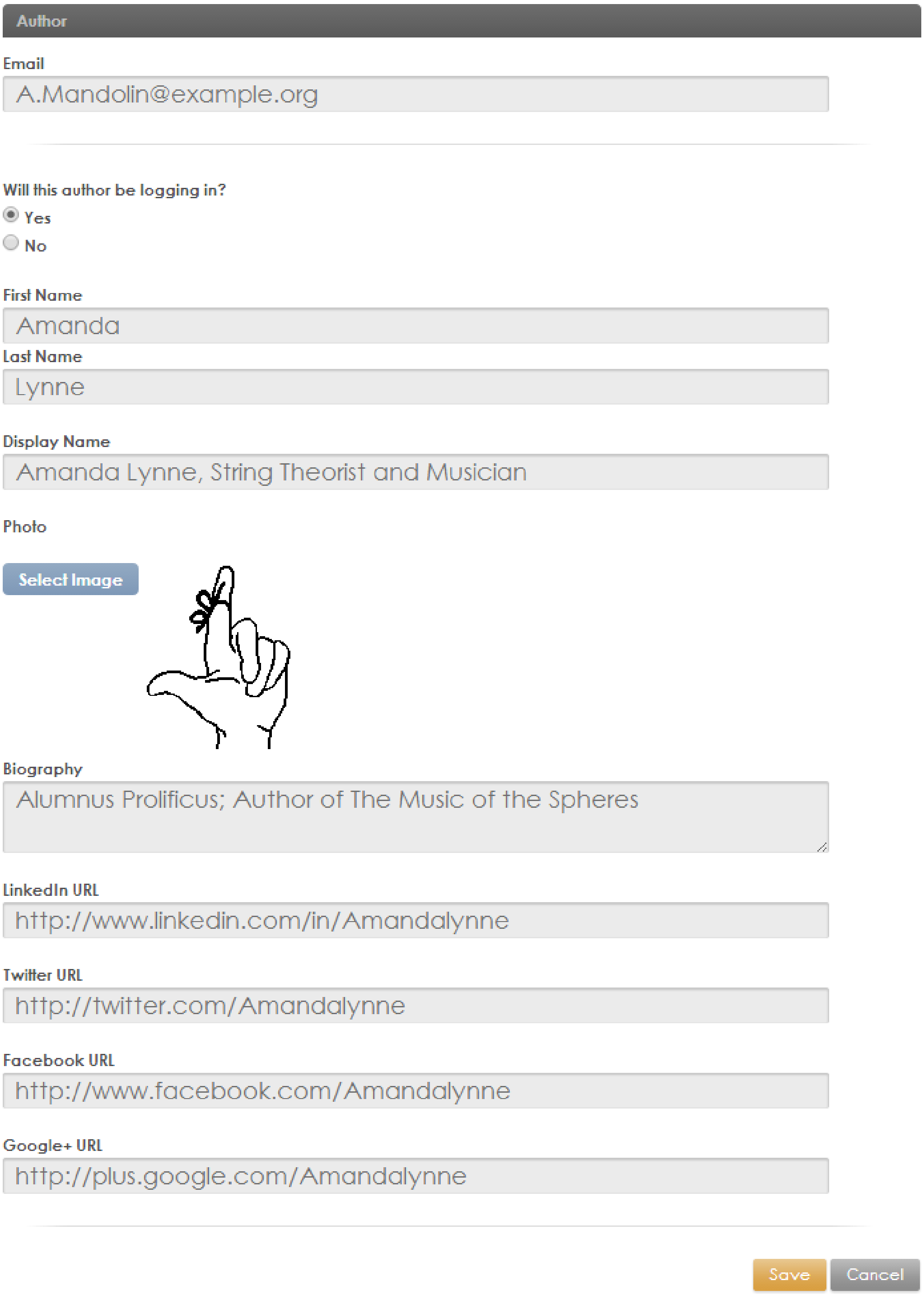
Adding an author

PREREQUISITE

An administrator must set up email notification in `web.config` to send a password to the email address.

```
<add key="ek_SMTPServer" value="server.intra.xxxxxx.com" />
<add key="ek_SMTPPort" value="25" />
<add key="ek_SMTPUser" value="" />
<add key="ek_SMTPPass" value="" />
<add key="ek_SMTP_EnableSsL" value="false" />
```

On the Authors page, click **Add Author**. The Author form appears. After you save new author information, the author appears in the author list.



- **Email**. Specify an email address for the blog author. The email address is used as the author's log in username. A password is sent to the email address.
- **Logging in?**. If you require the author to log in, choose **Yes**; otherwise **No**.
  - **Yes**. This credentialed author type can manage his or her own blog posts.
  - **No**. This author type (Guest) is created for attribution purposes; this author cannot create or manage his or her blog postings. The guest is generally created by an administrator author. The guest sends a blog post to the administrator author to publish on the guest author's behalf. For example,

in a company blog, you create a guest account for an industry expert from outside your company.

NOTE: If you choose **Yes**, a CMS user is created for the author in **Workarea > Settings > Users**. If you choose **No**, a guest author does not have a corresponding user created in the Workarea.

- **First Name**. Specify the first name of the author.
- **Last Name**. Specify the last name of the author.
- **Display Name**. Specify the name you want people to see on blog posts from this author.
- **Photo**. Optionally add a photograph (or other image) of the author.
- **Biography**. Optionally specify biographical information that people can read about the author.
- **LinkedIn URL**. Optionally specify the author's LinkedIn address to show with the author's blog information. For example, `http://www.linkedin.com/in/Ektron`.
- **Twitter URL**. Optionally specify the author's Twitter address to show with the author's blog information. For example, `http://twitter.com/Ektron`.
- **Facebook URL**. Optionally specify the author's Facebook address to show with the author's blog information. For example, `https://www.facebook.com/Ektron`.
- **Google+ URL**. Optionally specify the author's Google+ address to show with the author's blog information. For example, `https://plus.google.com/s/Ektron`.

Logging in as an author

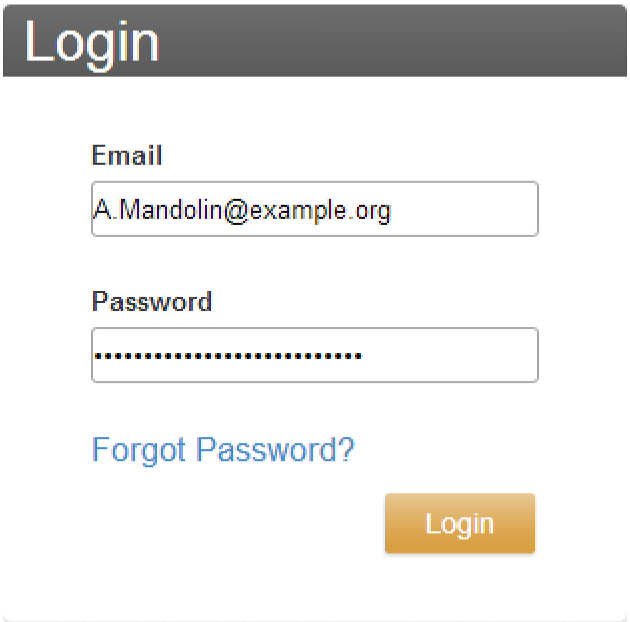
The administrator determines whether login links and login screens appear on the website. See *Setting up login and logout* on page 1159 for information about how the administrator does this.

- If you do not see login links, you can login by entering the following URL:

```
http://[www.site.com]/login.aspx
```

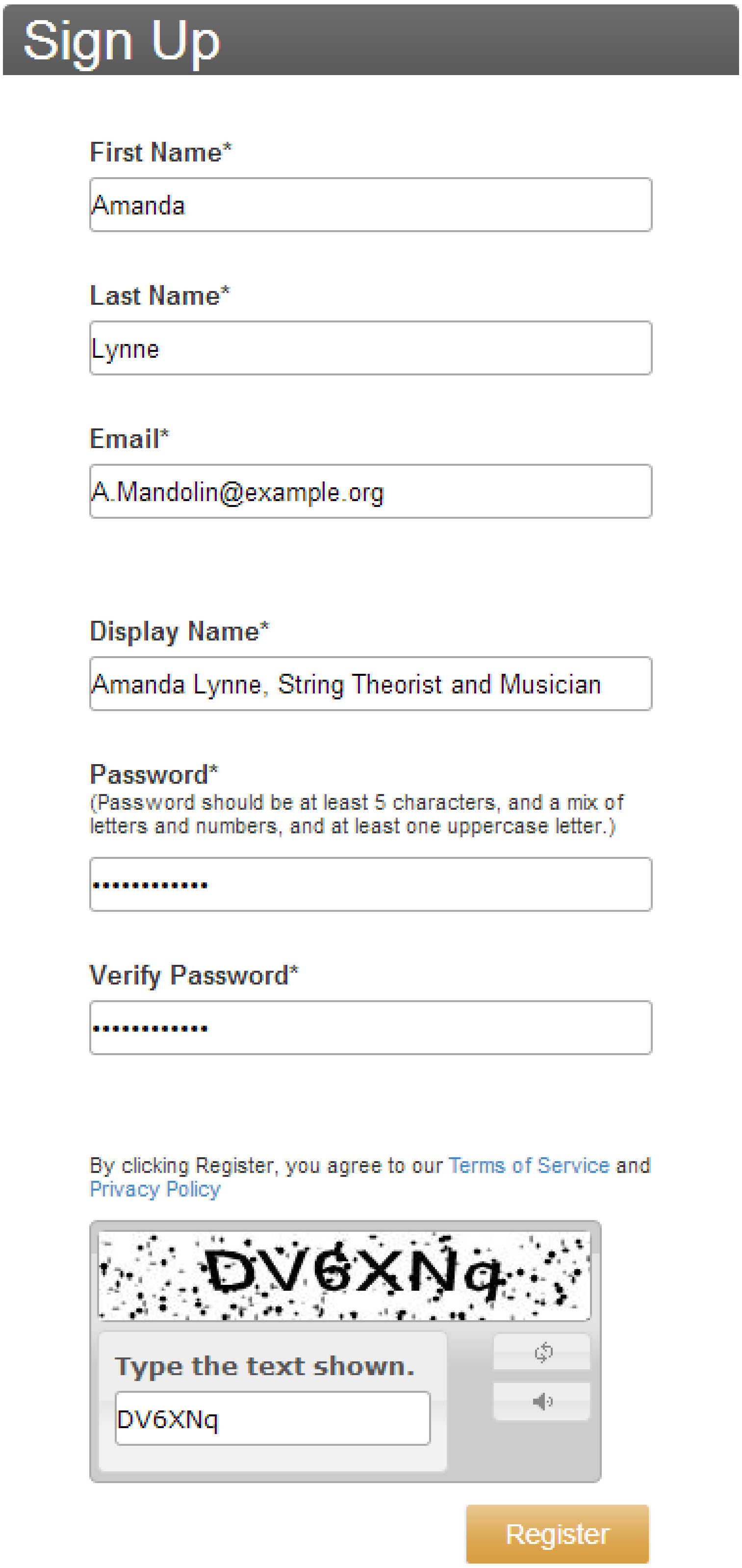
- If you have login links, and already have an account, you can log in with your Email (username) and Password.

IMPORTANT: Email notification to send a password to the email address must be set up by an Ektron administrator in `web.config`. Check your email for notification of your password. If you did not receive this email, contact your Ektron administrator.

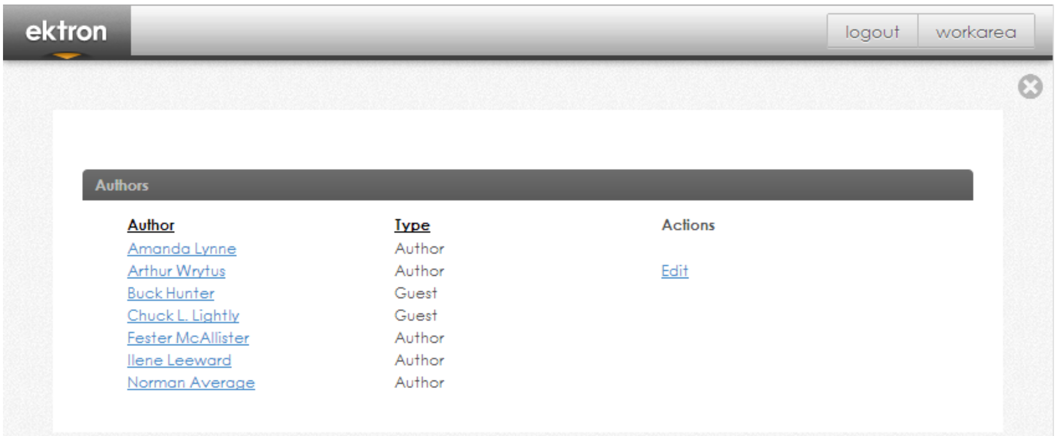


If you do not have an account, you can sign up.

NOTE: If you want to hear the captcha code, click on the audio icon. The system administrator must set up audio for you to hear it. For information, see *Setting up sound for the Captcha control* on page 1161.

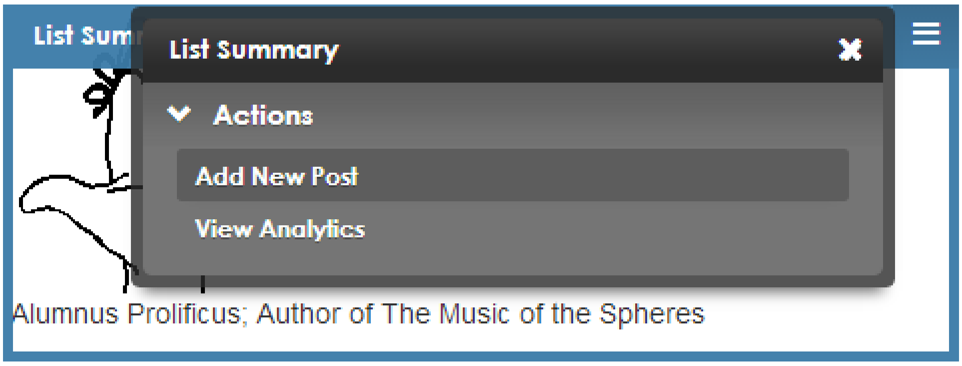


The following image shows the author's view of the author's list. Note that author, *Arthur Wrytus*, can only edit his own profile.

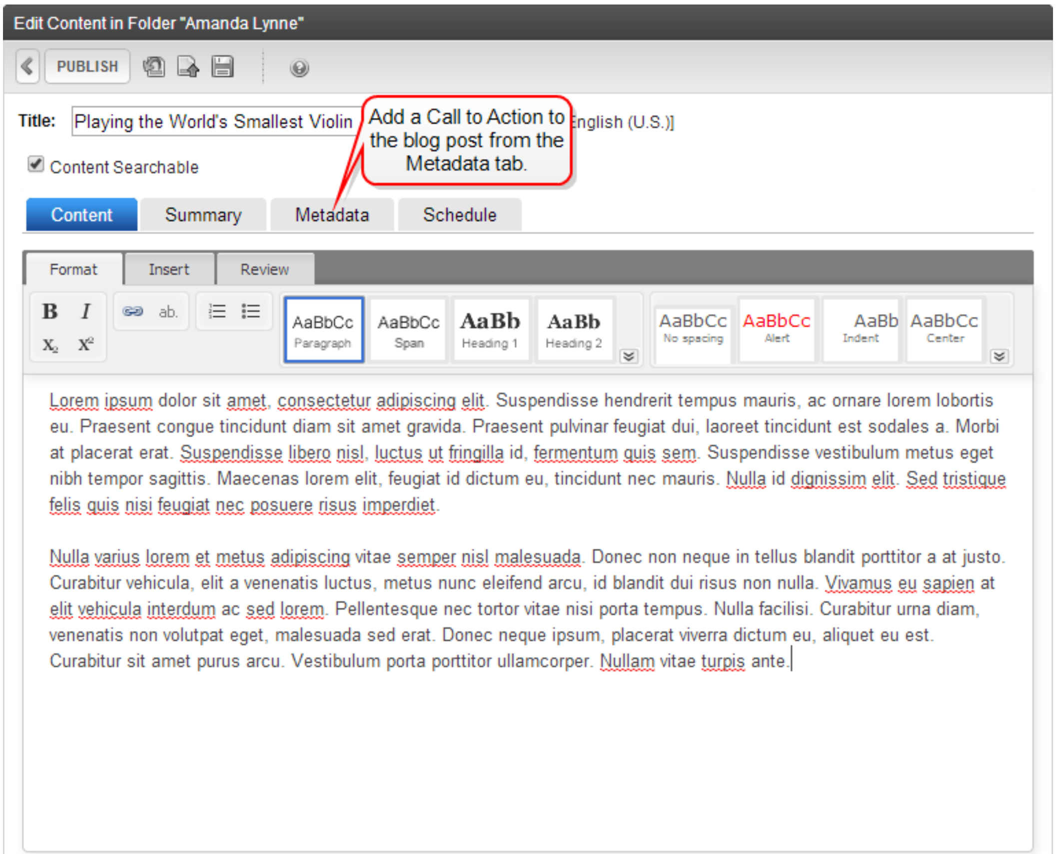


Creating a blog post

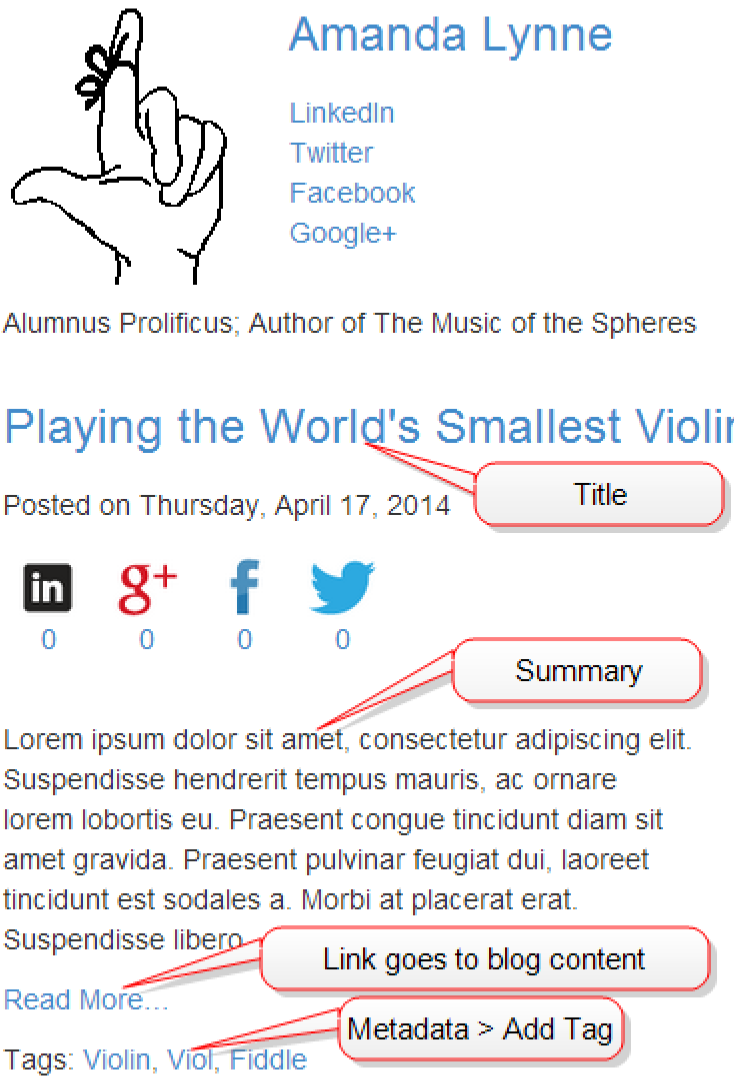
1. In the Author's list, click a blog author's name. The blog author's page appears.
2. Swipe **Switch to Edit** and click **Content**.
3. Hover over the blog author's name. A List Summary box appears.
4. Click the menu (). The List Summary action box appears.



5. Choose **Add New Post**. An Edit Content screen appears.



6. Enter a title, content, a summary (that appears with the blog title on the blog page) and other information about the post. When finished, click **Publish**. The post appears on the blog author's page. The following image shows where the data is displayed.



You also can enhance your blog post with the following actions:

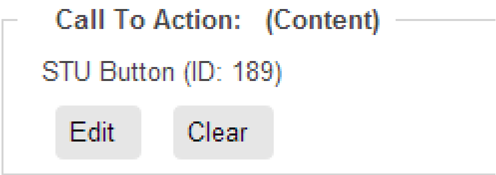
- *Adding a call to action to a blog post* on the next page
- *Adding tags to a blog post* on page 1151
- *Analyzing blog traffic* on page 1156
- *Managing a blog platform* on page 1141

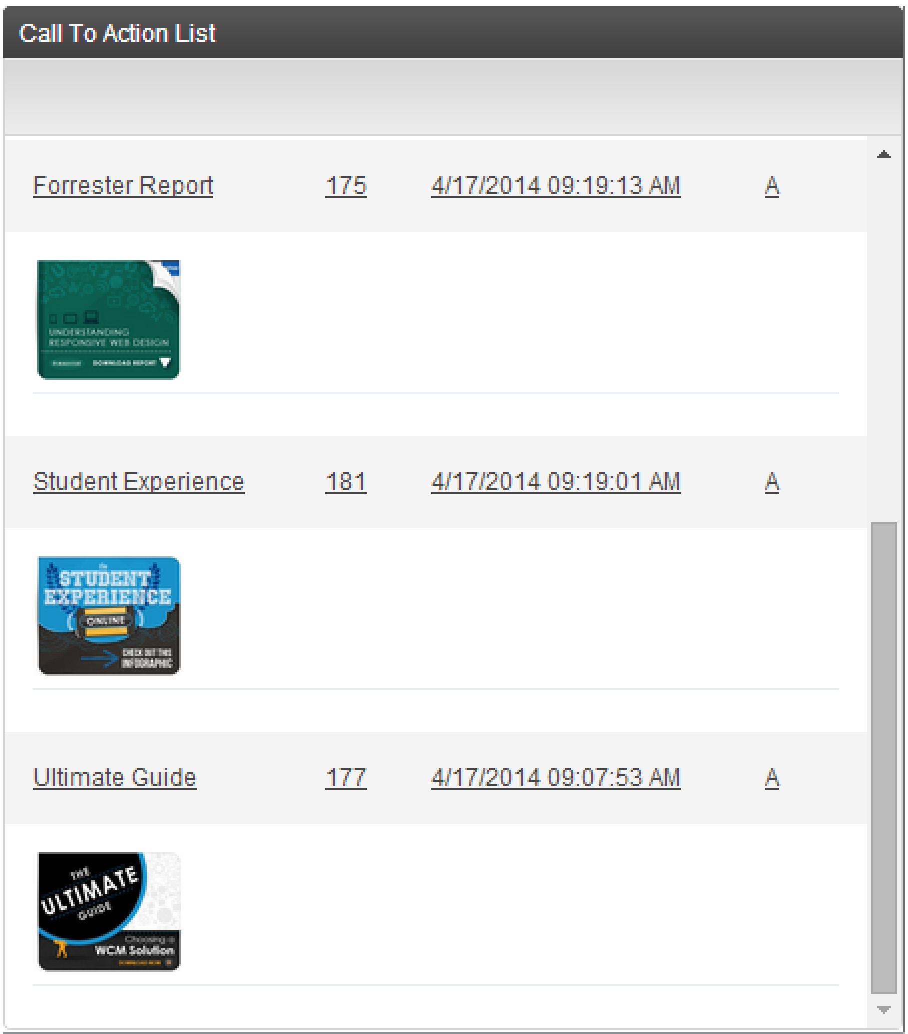
Editing a blog entry that is already posted

1. On the blog page, click the blog post that you want to edit. The blog post appears.
2. Swipe **Switch to Edit**.
3. Hover over the blog title. A Content Block box appears.
4. Click the menu (). The Content Block action box appears.
5. Choose **Edit**. A list of blog posts and the author profile appears.
6. Edit the content and metadata (perhaps adding a CTA), and then click **Publish**.

Adding a call to action to a blog post

1. Go to your blog post and swipe **Switch to Edit**.
2. Choose **Content**.
3. Hover over the blog title. A Content Block box appears.
4. Click the menu (). The Content Block action box appears.
5. Choose **Edit**. Your blog appears in an editor.
6. Click the **Metadata** tab.
7. Choose **Call to Action** and click **Edit**. A selection window appears





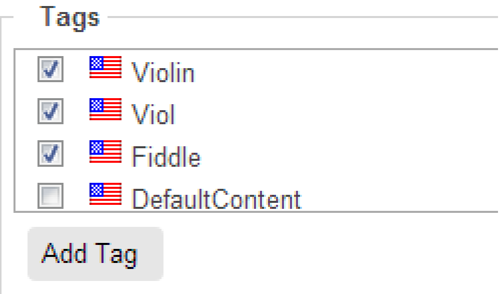
8. Double click a CTA. The ID appears in the Metadata tab.
9. Click **Publish**. The CTA appears on the blog page.

See also: *Placing a CTA on a page* on page 1104

Adding tags to a blog post

Tags are keywords that you can assign to users, groups, content, and library items. On a website, tags for a user or group appear in a profile, helping site visitors learn about a user or group. For complete information about tags, see *Tagging content, library items, users, and groups with keywords* on page 1596.

1. Go to your blog post and swipe **Switch to Edit**.
2. Choose **Content**.
3. Hover over the blog title. A Content Block box appears.
4. Click the menu (). The Content Block action box appears.
5. Choose **Edit**. Your blog appears in an editor.
6. Click the **Metadata** tab.
7. Choose **Call to Action > Tags > Add Tag**. A window appears.
8. Enter the name of the tag and click **Save**. Repeat this until you have specified all the tags you want.



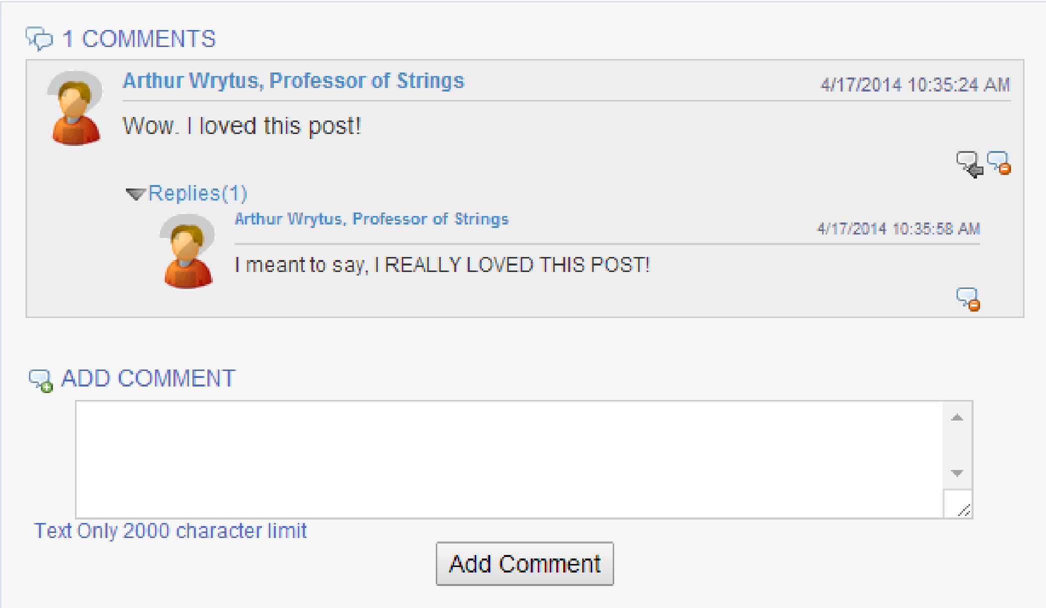
Sharing a blog on social channels

If a blog reader participates in social networks, the reader can click a social channel icon. A form appears from that social channel to let you share the blog link with friends and colleagues. By encouraging social amplification, you can reach many more MQLs.

NOTE: When a person shares a blog using 1 of the social channels, the count display may not show immediately. Some services take more time than others to reflect a change in the count.

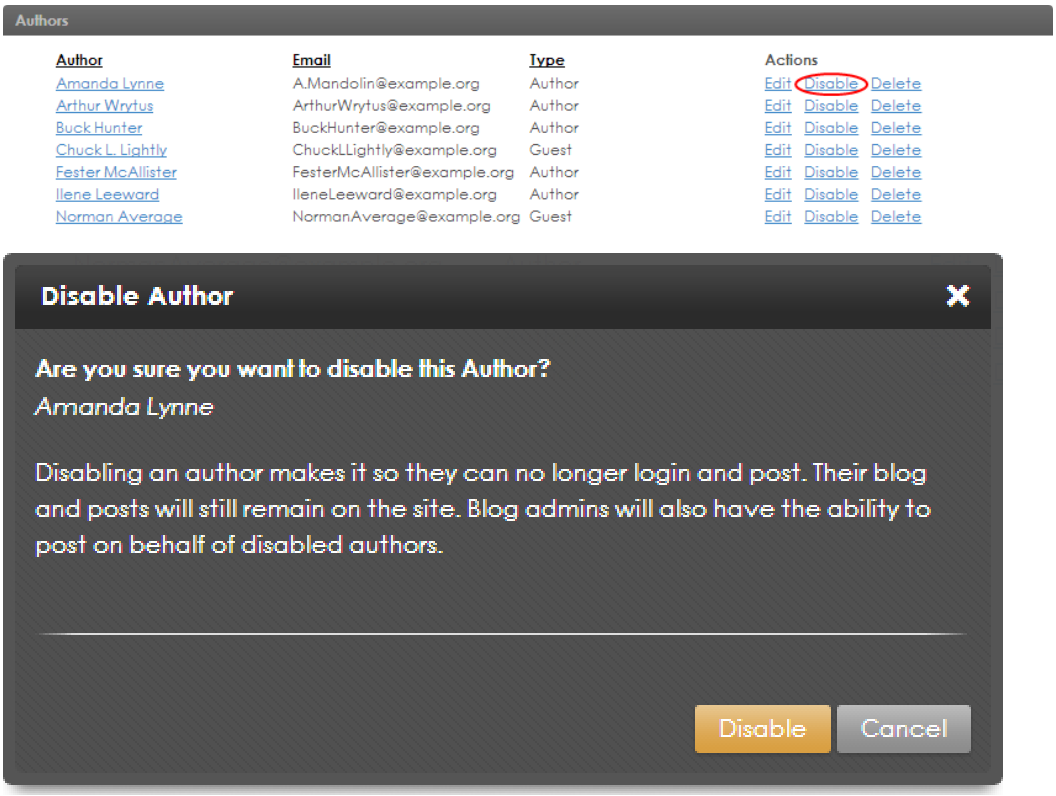
Making comments about a blog

A readers of a blog post can enter comments, as shown in the following image. You can reply to comments, too, by clicking **Reply** ( ).



Disabling a blog author's access

1. In the author's list, click **Disable** in the Actions column next to the author's name. A confirmation box appears.

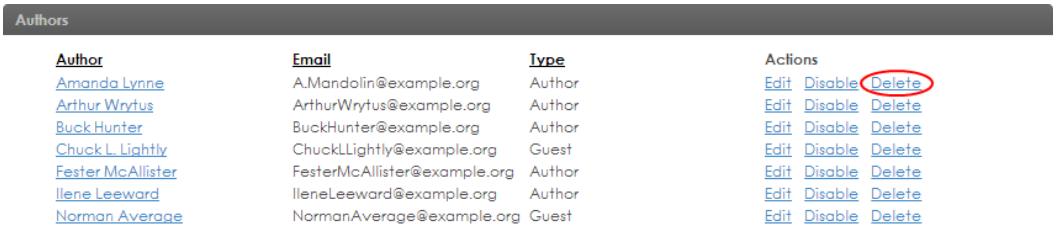


2. Click **Disable** to confirm.

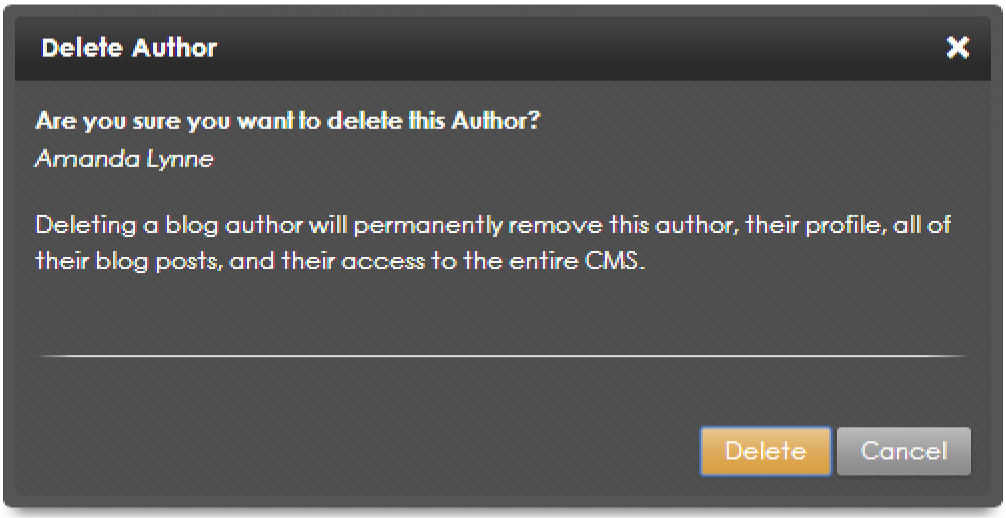
NOTE: You can restore an author's access by clicking **Enable** in the **Actions** column of the author list.

Deleting a blog author and his or her blog posts

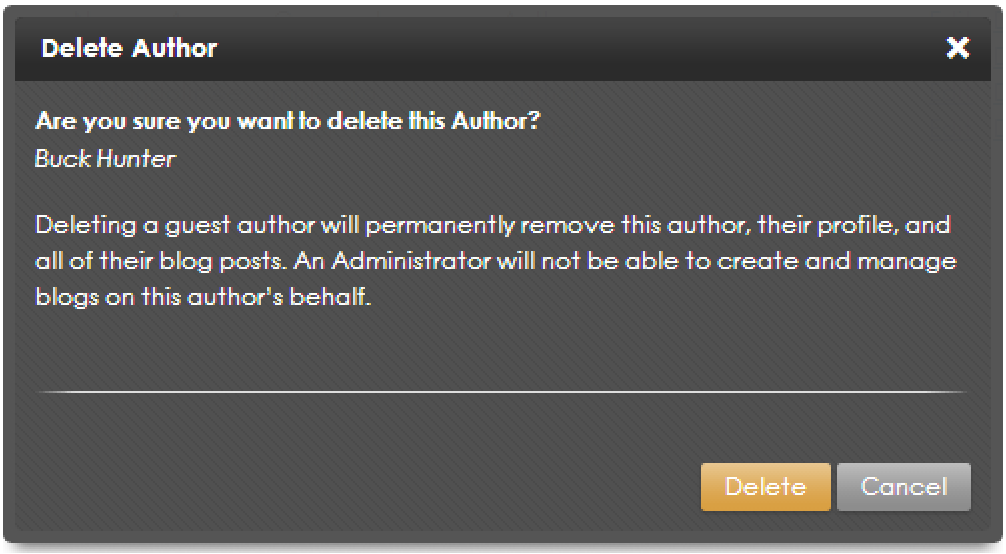
1. In the author's list, click **Delete** in the Actions column next to the author's name. A confirmation box appears.



Delete CMS Author



Delete Guest Author

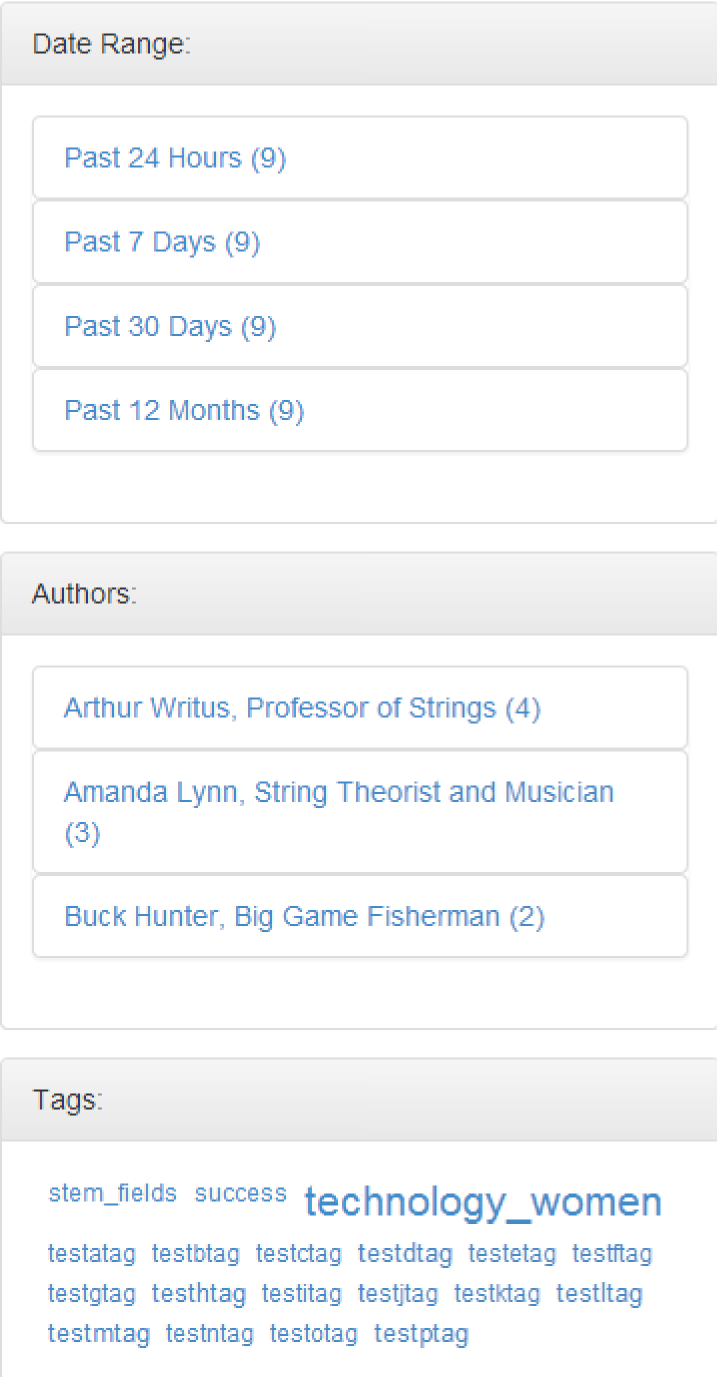


2. Click **Delete** to confirm.

Searching blogs

When you enter search terms in the Search field, a list of blogs appear that contain the search terms you specified. If this list is long, you can sift through the results using the Refinement panels on the side. Refinements include the number of posts that contain the search term for the following categories:

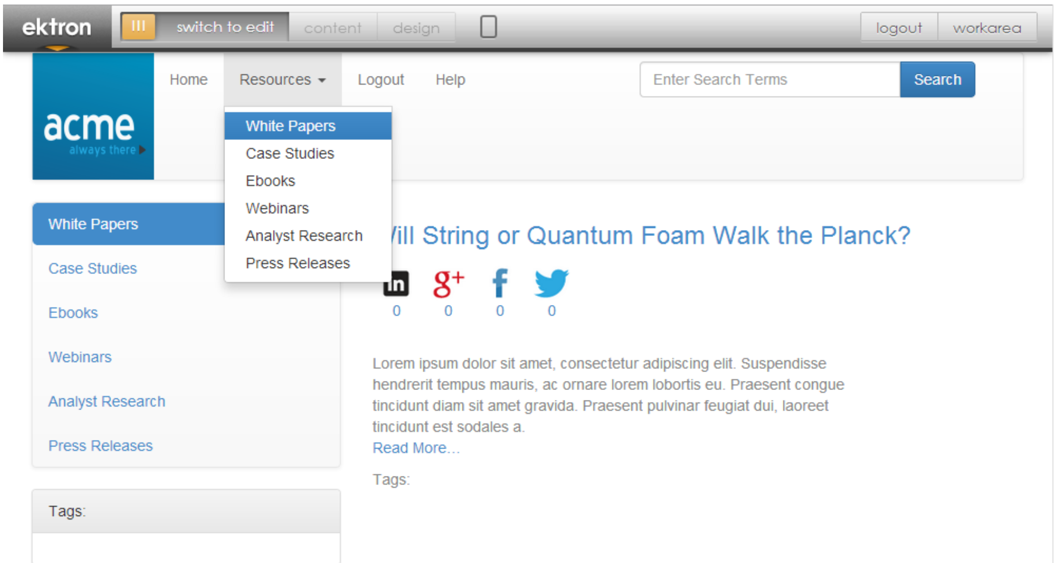
- all posts that were published within the past 24 hours, week, month, and year.
- posts by author
- posts by tags



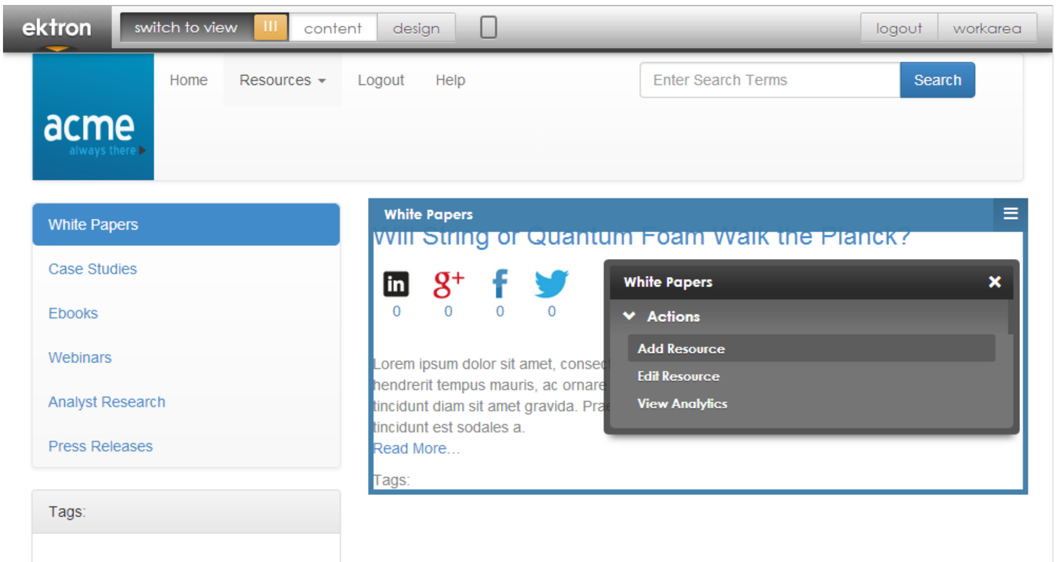
Adding resources to the blog site

You can add resources that do not (necessarily) belong to any of the blog authors or may be outside of the context of a blog post. A resource can be any content. Ektron has several types of resources built in: White Papers, Case Studies, Ebooks, Webinars, Analyst Research, and Press Releases.

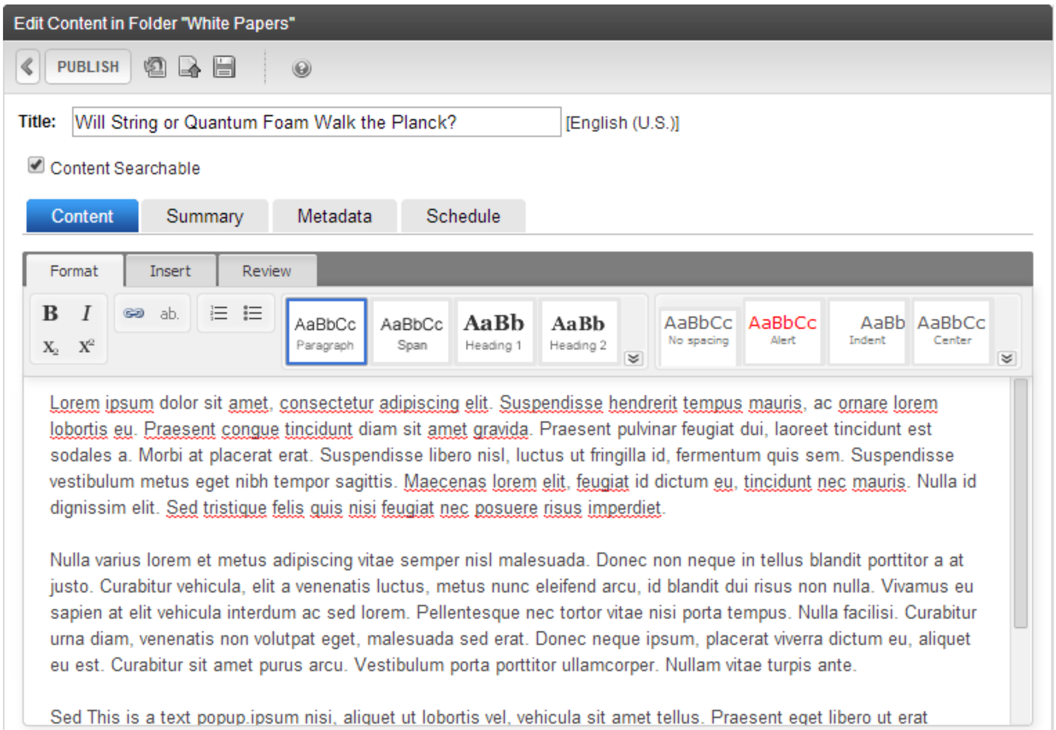
NOTE: An administrator can create additional resource pages. See *Creating a new resource page* on page 1161 and *Removing a resource page* on page 1165.



1. On a website page, choose **Resources > White Papers**. (You can choose any of the other resource pages.) The resource page appears.
2. Swipe **Switch to Edit**. Editable blocks appear on the page.
3. Hover over the resource block (for example, White Papers) and click the menu ( ). The menu appears.
4. Choose **Add Resource**. The Edit Content screen appears.



5. Enter a title and content. You also can specify **Summary**, **Metadata**, and **Schedule** information.



6. Click **Publish**. The resource appears on the Web page.
7. Swipe **Switch to View**.

Analyzing blog traffic

Authors have access to analytic data only for their own blog posts, if analytics is set up.

Administrators can view analytic data for authors and blog post traffic. You must also have Google Analytics 3.0 with the OAuth2.0 protocol. See *Setting Up Google Analytics* on page 1168. See also *Setting up the OAuth2.0 authorization protocol for Google Analytics 3.0* on page 517 if you want to set up OAuth2.0.

PREREQUISITETIPS

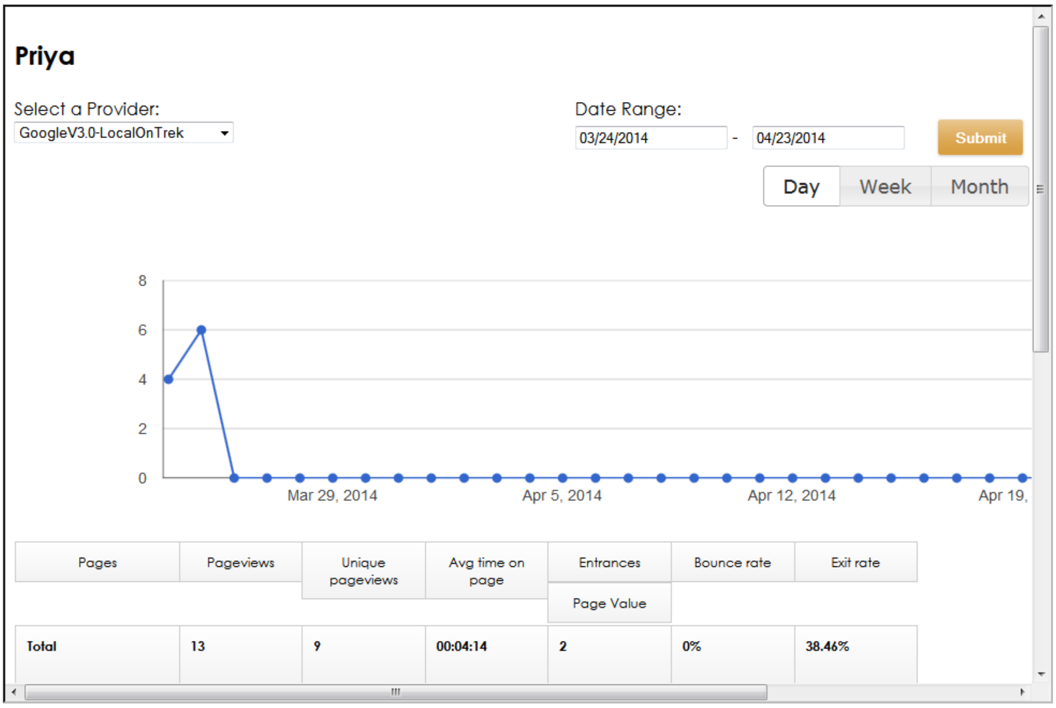
- Analyze to promote good performers and remove poor performers.
- Wait for statistical confidence; when it is unlikely that data occurred by chance.
- Incorporate the search phrases that your visitors used to find your pages into the landing page.

Analyzing blog post traffic (authors)

Authors can analyze activity for each blog post.

1. On your blog post, swipe **Switch to Edit**.
2. Click **Content**.

3. Hover over the blog post and click menu (☰). The Content Block menu appears. If analytics are set up, a **View Analytics** menu item appears.
4. Choose **Actions > View Analytics**. An analytics screen appears.



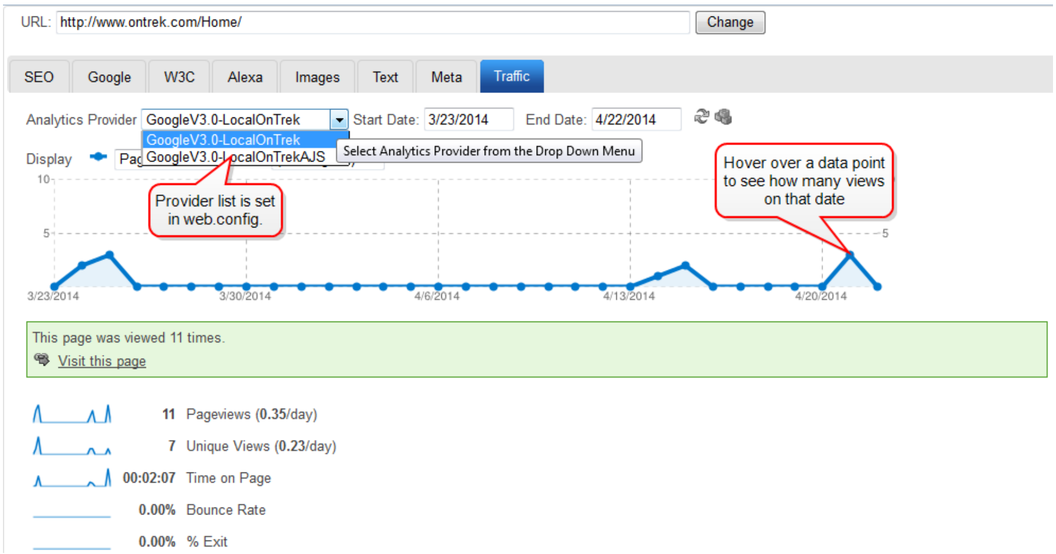
- By default the data collection range is 30 days. You can modify this range by clicking in the date field and choosing another date, then clicking **Submit** to update the data.
- You can view data captured by the day, week, or month.
- Hover over a data point to see the number of blog views on that date.
- Additional data is displayed at the bottom of the window.

Analyzing author and blog post traffic (administrators)

Administrators also can analyze activity for each blog post, or by author.

1. Swipe **Switch to Edit**. The editable fields appear in the window.
2. Click **Design**. The PageBuilder menu appears.

3. Choose **Page Action > View > Analytics**. An analysis page appears.



Important administrator notes

- By default the data collection range is 30 days. You can modify this range by clicking in the date field and choosing another date, then clicking **Submit** to update the data.
- You can view data captured by the day, week, or month.
- Hover over a data point to see the number of blog views on that date.
- Additional data is displayed at the bottom of the window.
- The analytics provider list is set in `web.config`.
  - If every analytics provider in `web.config` contains empty values, you see all providers in the drop-down but you also get an error: `The hostname does not report any statistics`. The following example shows an analytics provider with empty settings:

```
<add name="GoogleV3.0"
  type="Ektron.Cms.Analytics.Providers.GoogleAnalyticsProviderv3,
  Ektron.Cms.BusinessObjects"
  EmailAddress=""
  KeyFilePassword=""
  KeyFilePath=""
  Username=""
  Password=""
  ProfileId=""
  SiteURL=""
  UserAccount=""
  Endpoint="https://www.googleapis.com/analytics/v3/data/"
  ApiKey=""
  CacheInterval="0"

GoogleAnalyticsTrackingCodePath="Analytics\template\googletrackingcode.ascx"
  Version="3.0" />
```

  - If any provider is correctly filled out, any of the correctly filled-out providers are shown in the drop-down list on the analysis page. The following example shows a filled-out provider (with modified values).

```
<add name="GoogleV3.0-LocalOnTrek"
  type="Ektron.Cms.Analytics.Providers.GoogleAnalyticsProviderv3,
  Ektron.Cms.BusinessObjects"
  EmailAddress="username@yourplace.com"
  KeyFilePassword="SeCure38^!paSsWorD"
  KeyFilePath="/Key/xx11x1xxx1x11x11x1111xxx1x1xxx1-privatekey.p12"
  Username=""
  Password=""
  ProfileId="12345678"
  SiteURL="www.yoursite.com:85"
  UserAccount="xx-12345678-9"
  Endpoint="https://www.googleapis.com/analytics/v3/data/"
  ApiKey=""
  CacheInterval="0"
  GoogleAnalyticsTrackingCodePath=
    "Analytics\template\googletrackingcodewithanalyticsjs.ascx"
  Version="3.0" />
```

Subscribing or unsubscribing to a blog or blog post

Logged-in site users and Membership users can subscribe to a *blog* or a *blog post*.

By subscribing to an author's blog, you are notified whenever posts are added to it.

- If you subscribe from the home page, you subscribe to all authors' blog posts.
- If you subscribe from an author's blog page or blog post, you subscribe only to that author.

If you want to stop receiving notices, you can unsubscribe.

To subscribe to a blog or blog post:

1. Go to the blog on the site.
2. Click **Subscribe via RSS**. The Subscribe/Unsubscribe screen appears.
3. Select a **Notification Type**.

   NOTE: Each browser may have a different field.

4. Click **Add Subscription**.

Performing administrator tasks

Administrators have additional access and control to the blog hub resources. For example, you may want to apply your own cascading style sheet (CSS) to your site.

Setting up login and logout

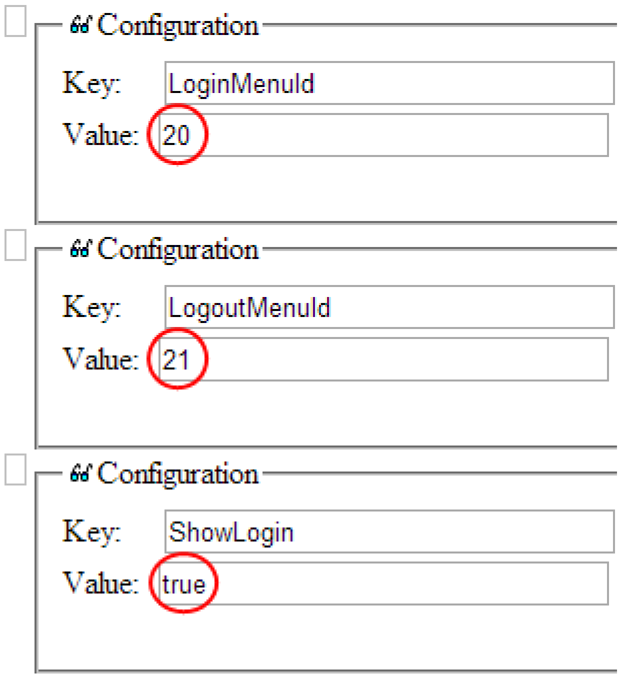
If you do not want to show a login screen, a user can login by specifying the following URL:

```
http://[www.site.com]/login.aspx
```

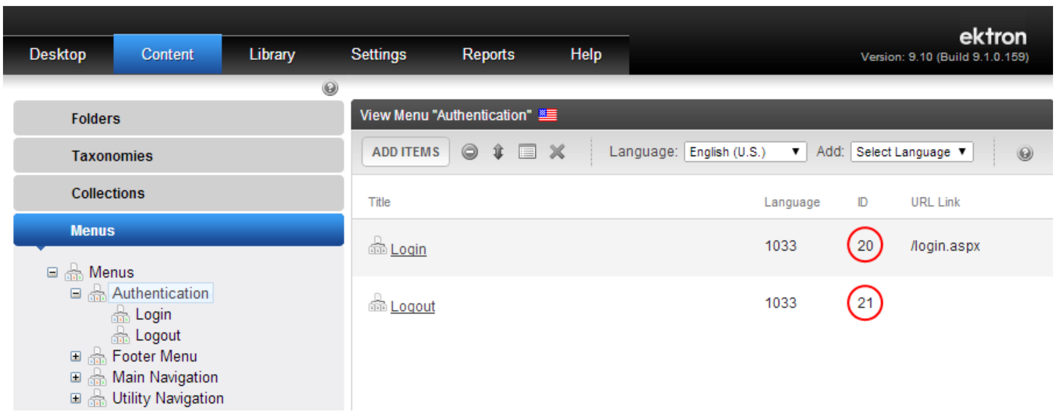
See *Logging in as an author* on page 1144 for information about logging in.

If you want to display login screens, follow these steps.

1. Go to **Workarea > Content > Folders > Blog Hub > Settings**. The View Contents screen appears.
2. Click **Site Configuration**.
3. Click **Edit**.
4. Scroll down to find `LoginMenuID`, `LogoutMenuId`, and `ShowLogin` configurations.



The `LoginMenuId` and `LogoutMenuId` values come from the ID properties in **Workarea > Content > Menus > Authentication**. If you create your own, enter the ID property of the menu into the `LoginMenuId` and `LogoutMenuId` Value fields.



5. To remove the Login screens, and the Login link from the website pages, set the `ShowLogin` key **Value** to `false`.
6. Click **Publish**.

Setting up sound for the Captcha control

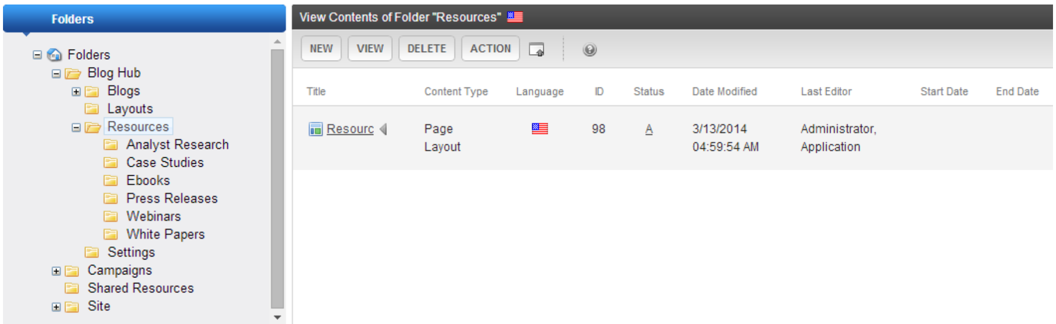
If you want people to have the option to hear the Captcha code (in addition to viewing it):

1. In Windows Explorer, go to `siteroot/WorkArea/FrameworkUI/Templates/EktronUI/Captcha`. The `soundmanager` folder appears.
2. Right click on the `soundmanager` folder and choose **Properties**. The soundmanager Properties screen appears.
3. Click on the **Security** tab.
4. Select **SYSTEM** from the Group or User Names box, then click **Edit**.
5. Enable (check) the **Full Control - Allow** box, and click **OK**.

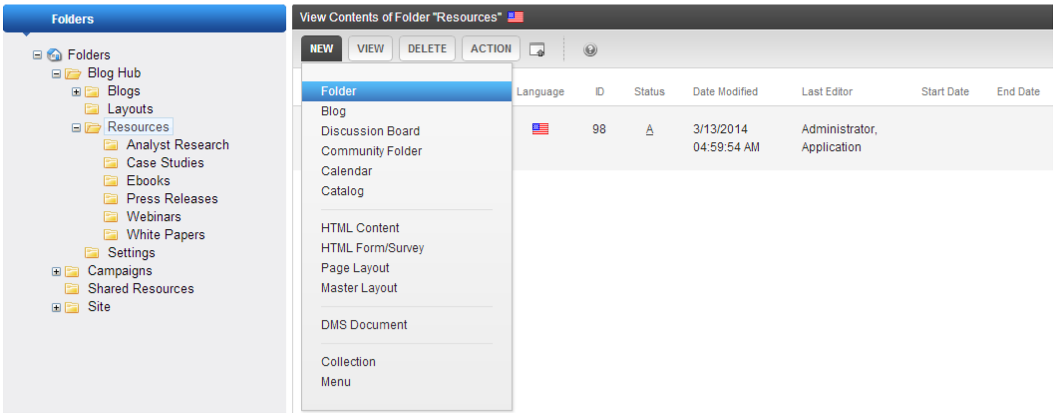
Creating a new resource page

You can create additional resource pages. For example, you may want a page where you can display *Essay Submissions*. See also *Adding resources to the blog site* on page 1155.

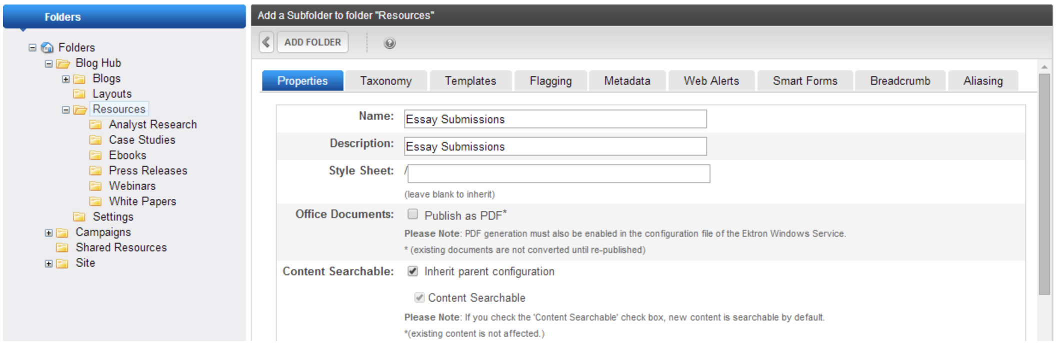
1. Go to **Workarea > Content > Folders > Folders > Blog Hub > Resources**.



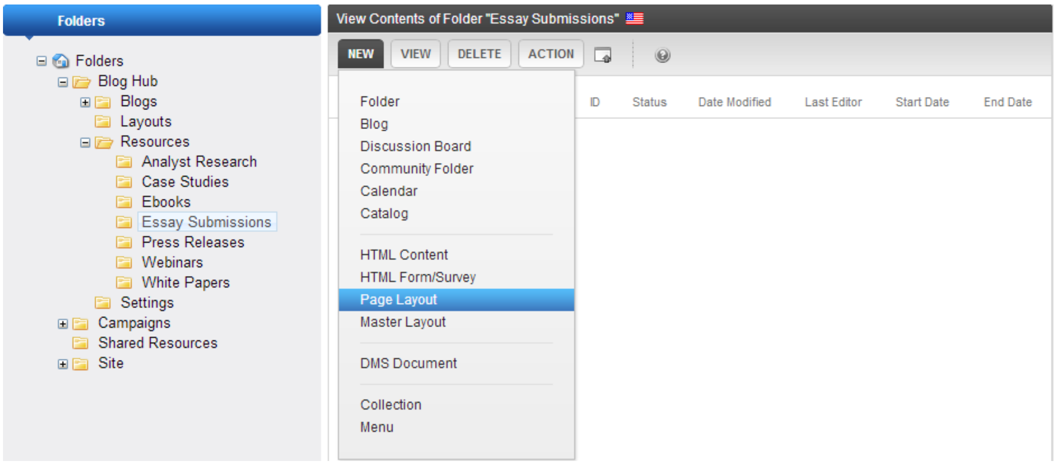
2. Choose **New > Folder**. The Add a Subfolder screen appears.



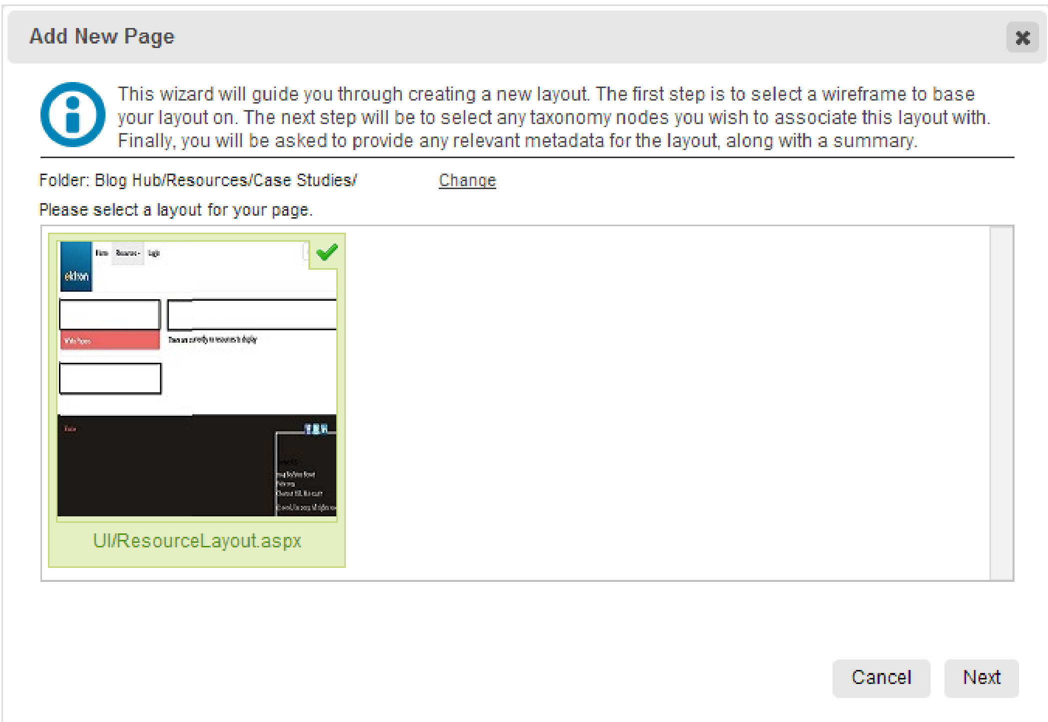
3. Enter the name and description and click **Add Folder**. For example, `Essay Submissions`. You will be using the exact name that you specify in other steps in this procedure.



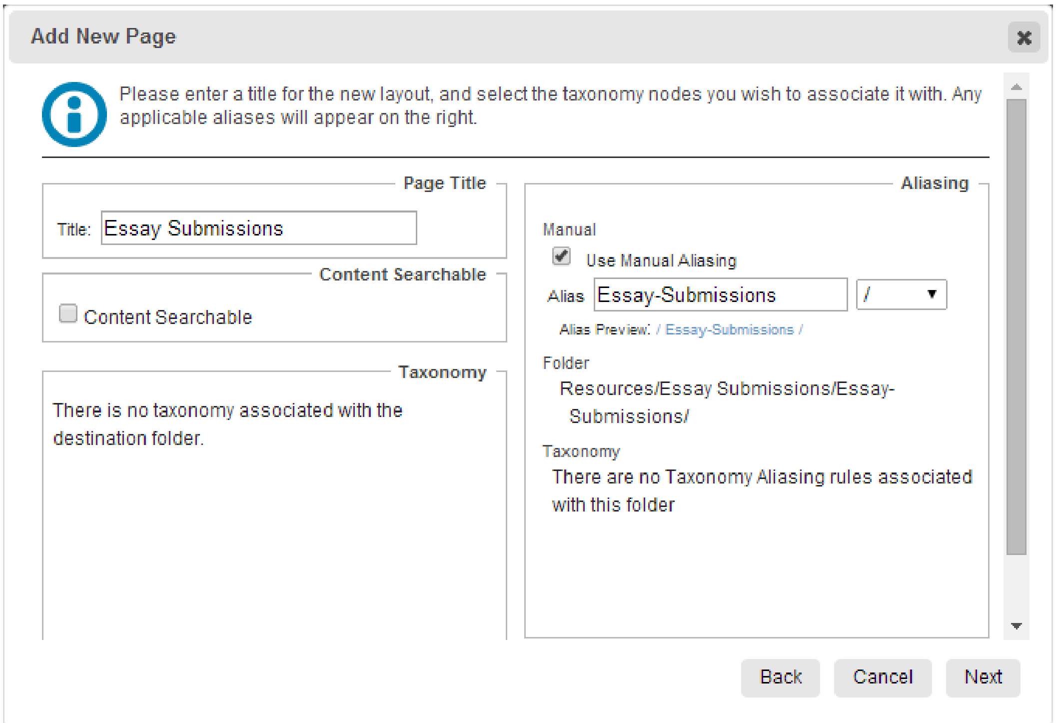
4. Go to the new folder that you just created. (**Workarea > Content > Folders > Folders > Blog Hub > Resources > Essay Submissions**)
5. Choose **New > Page Layout**. The Add New Page wizard appears.



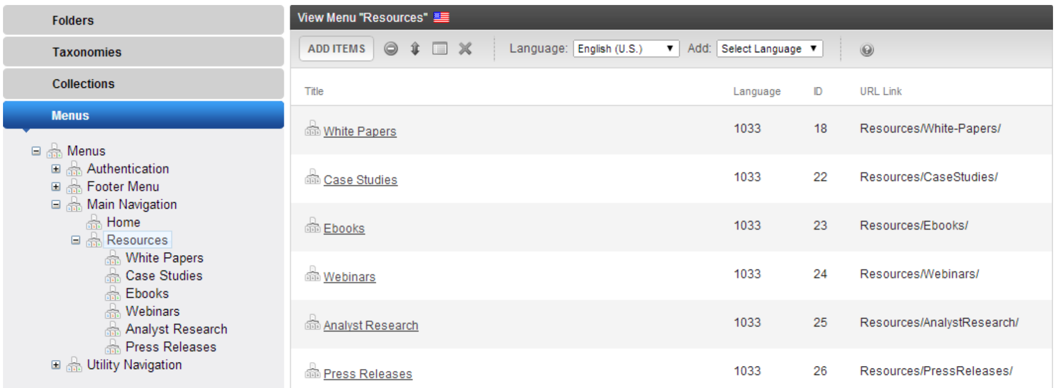
6. Choose the **UI/ResourceLayout.aspx** layout and click **Next**.



7. Enter the exact name of the folder that you created in the Title field. For example, `Essay Submissions`. The Alias field is automatically filled in.
8. Choose the slash (`/`) from the drop-down menu next to the Alias field and click **Next**.

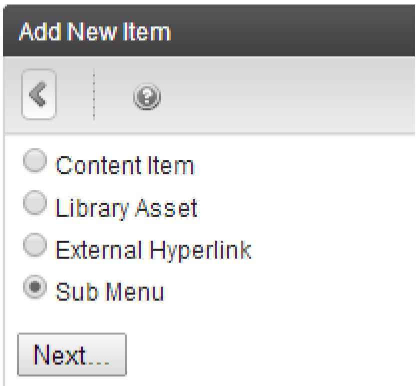


9. Optionally enter additional information and click **Finish**. A confirmation screen appears to redirect you to the page so that you can edit it.
10. Go to **Workarea > Content > Menus > Main Navigation > Resources**. The View Menu "Resources" screen appears.

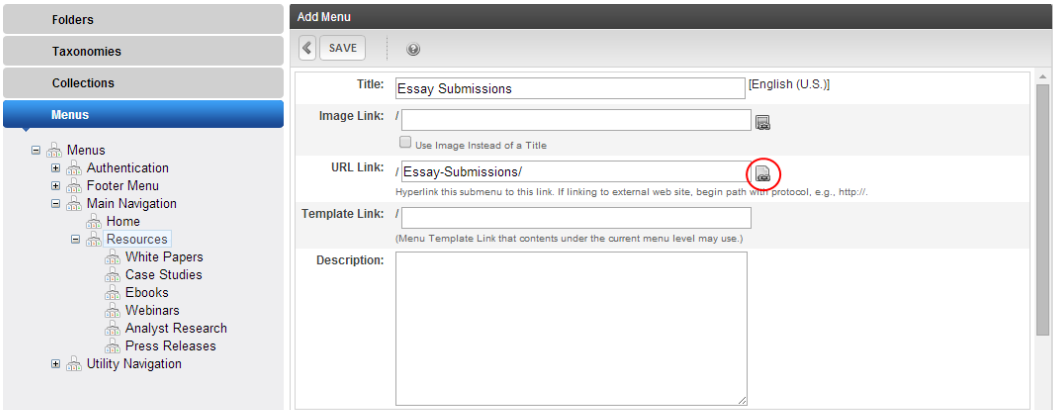


11. Click **Add Items**. The Add New item screen appears.

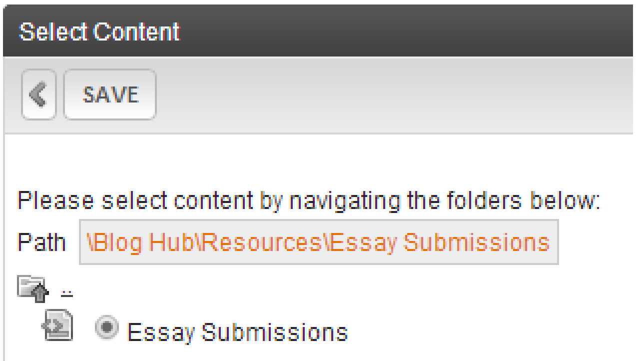
12. Click **Sub Menu** and click **Next**.



13. Enter the exact name of the folder that you created in the Title field. For example, `Case Studies`.
14. Click the URL Link hyperlink icon ( ).

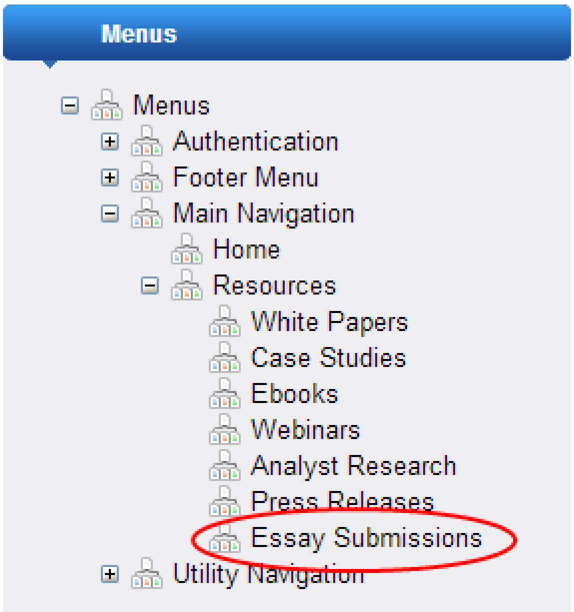


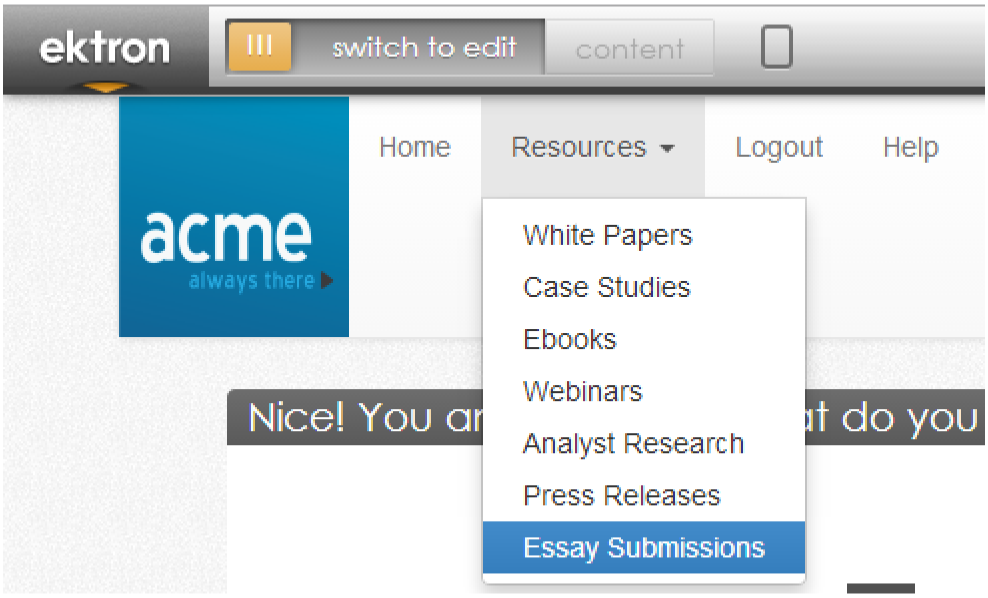
15. Go to the folder you created and enable the radio button to fill in the URL Link field, and click **Save**.



16. Optionally specify the other fields, and click **Save**. The new menu appears in the menu tree and on the Web site when you refresh the page.

NOTE: You can sort the order of Resource menu items by clicking **Reorder** ( ) on the View Menu screen at **Workarea > Content > Menus > Menus > Main Navigation > Resources**.





Removing a resource page

1. Go to **Workarea > Content > Folders > Folders > Blog Hub > Resources**.
2. Right click on the resource folder you want to remove and click **Delete <foldername>**. The resource page is removed.
3. Go to **Workarea > Content > Menus > Menus > Main Navigation > Resources**.
4. Right click on the resource menu you want to remove and click **Delete <foldername>**. The menu item is removed from the Resource Menu.

Creating a blog post from the Workarea

1. Go to **Workarea > Content > Folders > Blog Hub > Blogs > <*blog author*>**. The View Contents window appears in the right panel.
2. Choose **New > HTML Content**.
3. Enter a title, content, and other information (such as a call to action on the Metadata tab).

   NOTE: If you select a CTA, but it does not show up on the blog post, check to see if the CTA was published because only published CTAs appear.

4. When finished, click **Publish**. The blog entry is added to the author's page.

Setting up approvals for publishing blog posts

This section shows you how to set up a process for approving blog posts for publication. By setting the permissions on the folder, any content created by the folder's author must be reviewed before publication is granted or denied.

NOTE: For complete information about setting up a workflow for an approval process, see *Approving content for publication* on page 689.

1. Go to **Workarea > Content > Folders > Blog Hub > Blogs > <*author folder*>**.
2. Choose **View > Properties**. The View Properties screen appears.
3. Click **View Permissions** () because workflow initially matches the parent folder's workflow.

   If you want this folder to have different permissions from its parent folder, uncheck **Allow this object to inherit permissions**. A confirmation box appears. Click **OK**, then click **Back** ().

   IMPORTANT: By enabling permissions for another author's folder, a CMS author can post a blog in the other author's name.

4. Click **Manage Approvals** (). A screen prompts you to assign a basic or advanced workflow.
5. Click **Use Advanced Workflow** if no workflow is assigned to the folder. The Manage Approvals screen appears.

   If any content in the folder is already in Submitted status, a message appears:

   ```
   The workflow for this folder cannot be changed because
   some content is currently in an approval process.
   ```

   If you still want to edit the workflow, your options are as follows:

   - Cancel the approval process all content in Submitted status.
   - Force publish content in Submitted status.
   - Get approvers to approve Submitted content, so its status changes to Published.

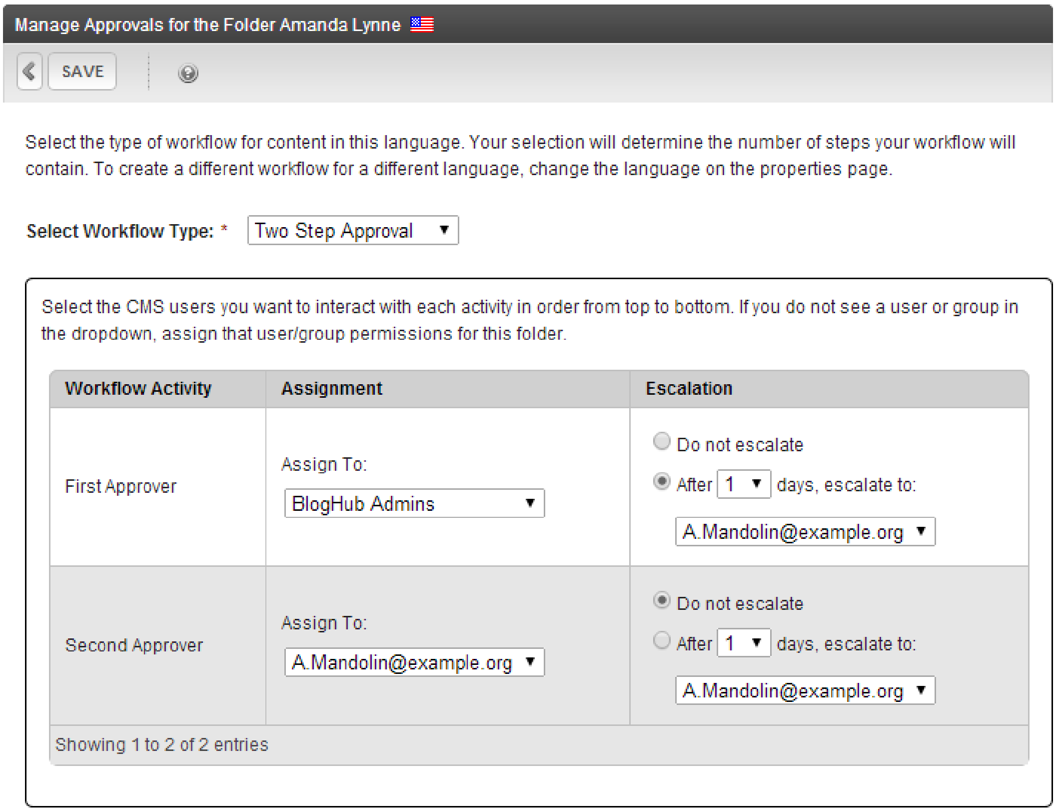
6. From the **Select Workflow Type** drop-down, select a 2-, 3-, or 4-step approval.

7. Assign a user or group to each approver. (Available users or groups have read-only or greater permissions for the folder.)

BEST PRACTICE

If you assign a group, any group member can approve or decline the content. Assign user groups (not individual users) to a workflow. In this way, if someone is out of the office, any other group member can approve content.

8. For each approver, you can assign an escalation time period and user or group in the Escalation column. For example, after 1 day, if an approver has not acted on the approval request, it is assigned to an administrator.



9. Click **Save**.

Applying a cascading style sheet

Applying a system-wide CSS

Ektron provides several system-wide CSS options from which you can choose.

1. Login to your Ektron website.
2. Go to **Workarea > Content > Folders > Blog Hub > Settings**. The View Content screen appears in the right panel.
3. Click **Site Configuration** in the right panel. The View Content "Site Configuration" screen appears in the right panel.
4. Click **Edit**.

5. In the Content tab, find the **Theme** drop down and select 1 of the themes (**Default**, **Amelia**, **Cyborg**, **Flatly**, **Journal**, **United**, or **Custom**). If you choose **Custom**, place your CSS file in d:\Sites\<YourSite>\content\bootstrap\Custom.
6. Click **Publish**.
7. Reload your website.

Applying a local CSS to your blog hub

You can apply a local CSS to your site pages, overriding the system-wide CSS. If you have a specific CSS that you want to use, upload it to d:/Sites/*<your_site>*/*<local_folder>*. For example:

```
d:/Sites/YourSite/MyThankYou/
  MyThankYou.aspx
  MyThankYou.css
  MyThankYou.js
  MyThankYou.jps
```

Changing the default logo

1. Go to **Workarea > Content > Folders > Blog Hub > Settings**. The View Contents screen appears.
2. Click on **Site Configuration**.
3. Click **Edit**.
4. Click **Image** ( ) in the Home Logo field. The Image Properties window appears.
5. Click **Browse** (...) next to the Image Src field. The CMS400 Library window appears.
6. Select an image from the library. The image appears as the Home Logo.

   You can also upload an image from the file system to the library and select it.

   a. Click **Add Library**. The upload screen appears.
   b. Enter a Title.
   c. Click **Choose File** and select a file from the file system.
   d. Enter a description for the new image.
   e. Click **Add Library**. The Image Properties window reappears.
   f. Click **OK**. The image appears as the Home logo.
7. Click **Publish**.

Setting Up Google Analytics

Google Analytics lets an administrator analyze activity for each blog post, or by author using either Classic Google Analytics (GA.js) or Universal Google Analytics (Analytics.js).

IMPORTANT: Google is promoting Analytics.js for upgrading classic Google analytics "Standard" accounts to "Universal Analytics" accounts in 4 phases. "Premium" account holders cannot do this until Phase 3. **If you have not**

upgraded to Google Universal Analytics, you cannot use `Analytics.js`. For information about upgrading to Universal Analytics and using `Analytics.js`, see the Google website at the Universal Analytics Upgrade Center.

Also, before you upgrade to Universal Analytics, check How can I tell if I have Universal Analytics or classic Google Analytics.

To implement Google Analytics tracking, you need to enable `GA.js` or `Analytics.js` in `web.config` with the following keys. You can enable both to use them concurrently and send the data to separate properties to avoid merging or transferring data.

GA.JS

```
<add name="GoogleV3.0-LocalOnTrek"
  type="Ektron.Cms.Analytics.Providers.GoogleAnalyticsProviderv3,
    Ektron.Cms.BusinessObjects"
  EmailAddress=" " KeyFilePassword="notasecret" KeyFilePath=" "
  Username="" Password="" ProfileId="" SiteURL=" " UserAccount=" "
  Endpoint="https://www.googleapis.com/analytics/v3/data/"
  ApiKey="" CacheInterval="0"
  GoogleAnalyticsTrackingCodePath=
    "Analytics\template\googletrackingcode.ascx"
  Version="3.0" />
```

Analytics.JS

```
<add name="GoogleV3.0-LocalOnTrek"
  type="Ektron.Cms.Analytics.Providers.GoogleAnalyticsProviderv3,
    Ektron.Cms.BusinessObjects"
  EmailAddress=" " KeyFilePassword="notasecret" KeyFilePath=" "
  Username="" Password="" ProfileId="" SiteURL=" " UserAccount=" "
  Endpoint="https://www.googleapis.com/analytics/v3/data/"
  ApiKey="" CacheInterval="0"
  GoogleAnalyticsTrackingCodePath=
    "Analytics\template\googletrackingcodewithanalyticsjs.ascx"
  Version="3.0" />
```

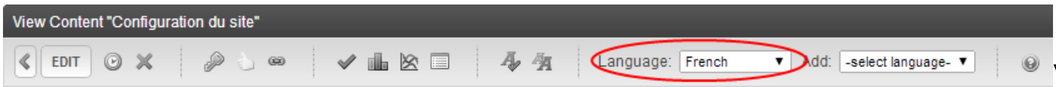
If you choose to use `Analytics.js`, you also need to perform the following procedure.

1. Log into your Google Analytics account as the administrator of the account.
2. Choose the account and property that was created (or upgraded) for Universal analytics.
3. In the Property column, click **Custom Definitions > Custom Dimensions**. The Property screen appears.
4. Click **New Custom Deminsion** and enter the following values:
   - **Name**: `Member`
   - **Scope**: `Session`
   - Enable the **Active** check box.
5. Click **Save**.

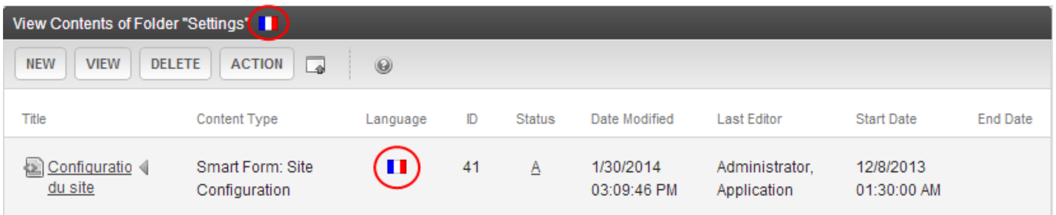
Setting up multiple languages for your blog hub

You can set up the blog hub with multi-language support by adding available languages to the Settings, Layouts, and Menus folders, as described in the following procedure. If you set up a language that is not supported by the website, the default language is displayed.

1. Go to **Workarea > Content > Folders > Blog Hub > Settings** and click on **Site Configuration** in the right panel. The View Content screen appears.
2. In the menu bar, open the Add drop-down and select a language. The Edit Content screen appears.
3. Change the **Title** and click **Publish**. The View Content screen reappears.
4. In the menu bar, open the Language drop-down and select the language you just added. The View Content screen reappears in the selected language.



The View Contents of Folder screen also reflects the selected language.

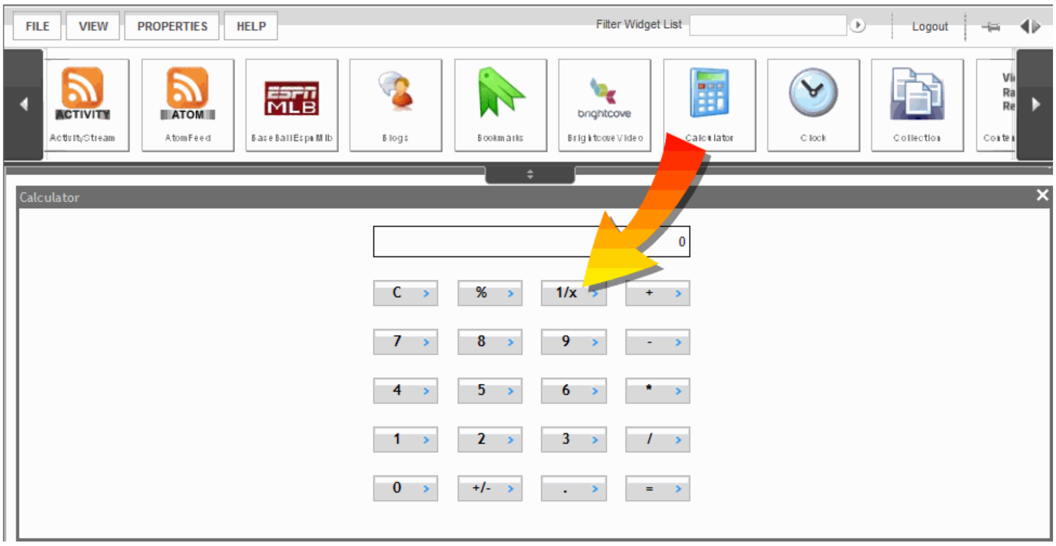


5. Go to each of the following content items and repeat steps 2 through 4 for each item:
   - **Workarea > Content > Folders > Blog Hub > Layouts >**
     - **404**
     - **500**
     - **Blog Author Page**
     - **Blog Post Details Page**
     - **Blog Post Listing Home Page**
     - **Resource Page**
     - **Search**
   - **Workarea > Content > Menus >**
     - **Footer Menu** (folder)
     - **Footer Menu > Home**
     - **Main Navigation** (folder)
     - **Main Navigation > Home**
     - **Main Navigation > Resources**
     - **Main Navigation > Login**
     - **Utility Navigation** (folder)
     - **Utility Navigation > Community**
     - **Utility Navigation > Support**

23

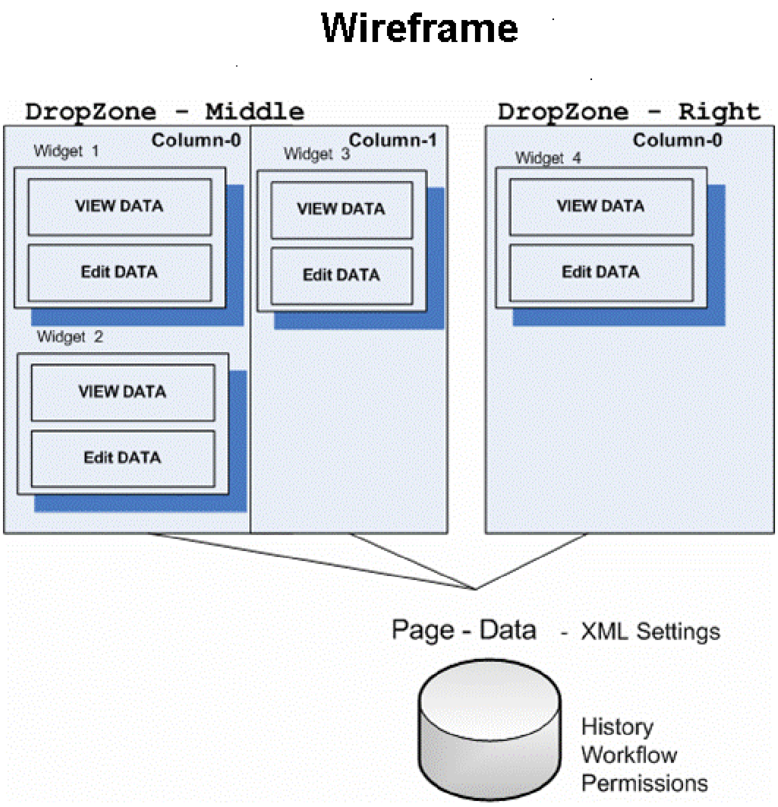
Creating and using widgets

A widget is a mini-application that can provide either specific functionality (search, social bars, and so on) or areas into which you can add Ektron content (content blocks, list summaries, collections, and so on). You can drag and drop widgets onto a page using a wireframe, dropzones, and widgets.



The following figure shows the relationship between a wireframe, dropzones, and widgets.

- A wireframe can have several dropzones.
- Each dropzone can have several columns.
- Each column can have several widgets.



A widget consists of 3 file types.

- `.ascx`. contains a widget's source code
- `.ascx.cs` or `.vb`. contains widget's code-behind
- `.ascx.jpg`. image that represents a widget in the widget selection tool

When you create a widget, save the widget files to the *siteroot*/widgets folder. This folder path is defined in the site *root*/web.config file, so if you change the folder name or path, you must update the following web.config element:

```
<add key="ek_widgetPath" value="Widgets/" />.
```

NOTE: Your widget might use additional files, such as .css or .js files.You should place these files in a folder within *siteroot*/widgets, and give the folder the same name as the custom widget.

Ektron stores each page's data (a serialized XML string) as a type of content in the Ektron Workarea. The string is stored like other content types, such as HTML content and XML Smart Forms.

After you integrate widgets into Ektron, you can add them to a *dashboard* in your profile page or a community group's page. You also can drag-and-drop these building blocks onto a PageBuilder page or a Personalized Web page. See also: *Creating Web pages with PageBuilder* on page 991 and *Personalizing a Web page* on page 1327.

Content authors open the widget bar from the PageBuilder menu by clicking the up/down ( ) or down ( ) controls.

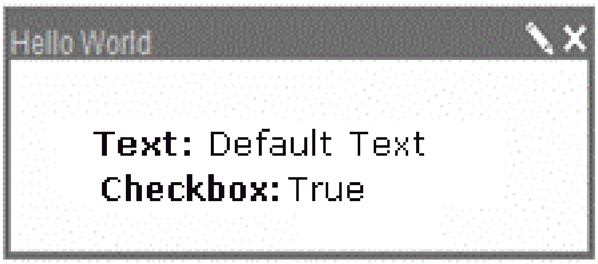
For HTML5 CSS3-compliant browsers:

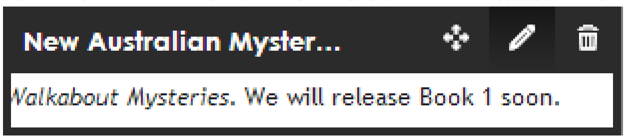
1. Click **Switch to Edit**, then **Design**. The PageBuilder menu appears.
2. Open the **Widgets** panel.
3. Click the desired widget to select it.
4. Click a **Place Here** area to insert the widget onto the page.

Widget states on a Pagebuilder page

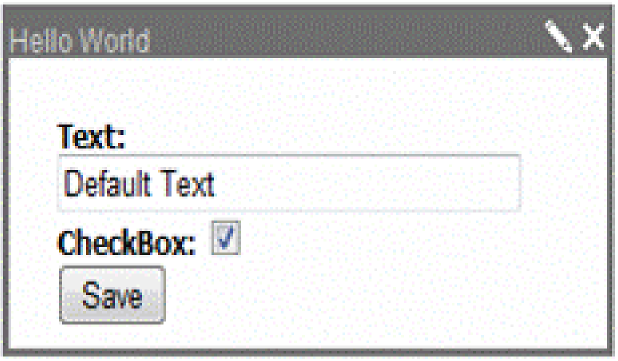
Widgets placed on a PageBuilder page have 3 possible combinations of states.

- Edit page mode+View widget mode. Widget can be placed on the page, moved, and deleted. For example:

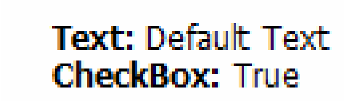




- Edit page mode+Edit widget mode. User defines widget information. For example:



- View page mode+View widget mode. Widget content appears on page. For example:



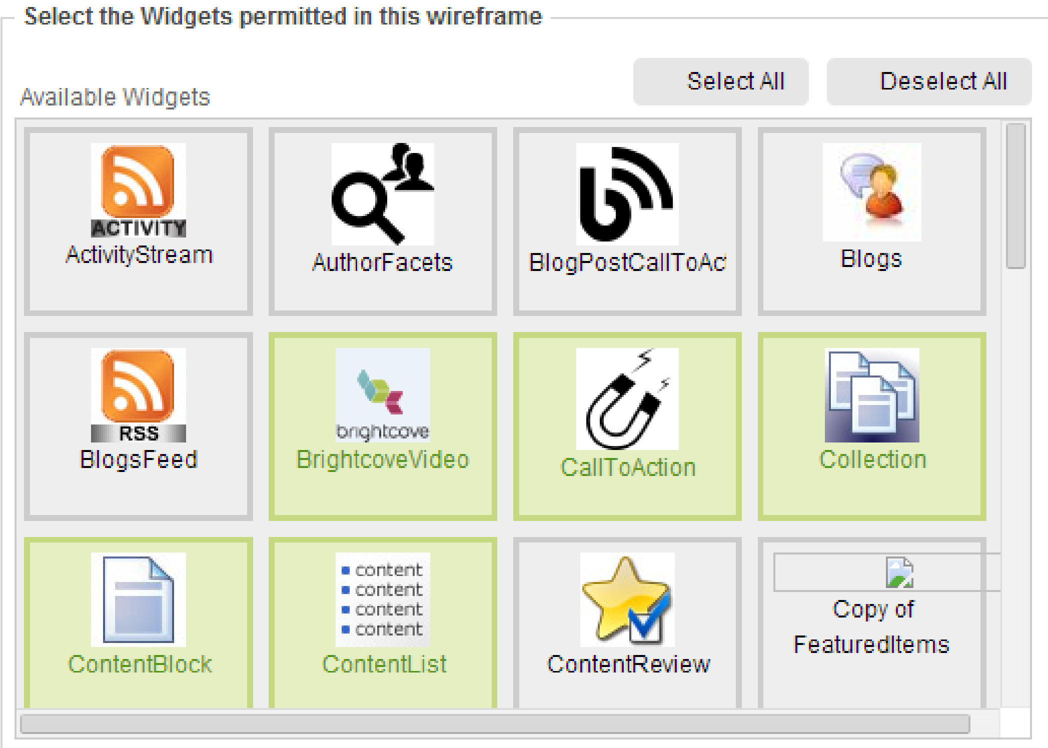
In a widget's user control file, you create an `asp:MultiView` element that determines available actions when a widget is in View mode and Edit mode.

```
<%@ Control Language="C#" AutoEventWireup="true"
  CodeFile="HelloWorld.ascx.cs" Inherits="widgets_HelloWorld" %>
<%@ Register Assembly="System.Web.Extensions, Version=1.0.61025.0,
  Culture=neutral, PublicKeyToken=31bf3856ad364e35"
  Namespace="System.Web.UI" TagPrefix="asp" %>
  <asp:MultiView ID="ViewSet" runat="server" ActiveViewIndex="0">
  <asp:View ID="View" runat="server">
  <!-- You Need To Do .............................. -->
    <asp:Label ID="HelloTextLabel" runat="server"></asp:Label><br />
    <asp:Label ID="CheckBoxLabel" runat="server"></asp:Label>
  <!-- End To Do .............................. -->
    </asp:View>
    <asp:View ID="Edit" runat="server">
    <div id="<%=ClientID%>_edit">
      <!-- You Need To Do .............................. -->
        <asp:TextBox ID="HelloTextBox" runat="server" Style="width: 95%">
          </asp:TextBox><br />
        <asp:CheckBox ID="MyCheckBox" runat="server" Checked="false" />
          <br /><br />
      <!-- End To Do .............................. -->
        <asp:Button ID="CancelButton" runat="server" Text="Cancel"
          OnClick="CancelButton_Click" />   
        <asp:Button ID="SaveButton" runat="server" Text="Save"
          OnClick="SaveButton_Click" />
    </div>
  </asp:View>
  </asp:MultiView>
```

Determining which widgets appear on a wireframe

An administrator can determine which widgets can appear for use on a wireframe.

1. Go to **Workarea > Settings > Configuration > Template Configuration**. The Active System Templates appears with a list of wireframe templates.
2. Click on a wireframe template file name. The Update Template screen appears.
3. Select the widgets you want to make available for this wireframe template by clicking on the widget icons, highlighting or de-highlighting them. You can also select or deselect all widgets.



4. Click **Update Template**.

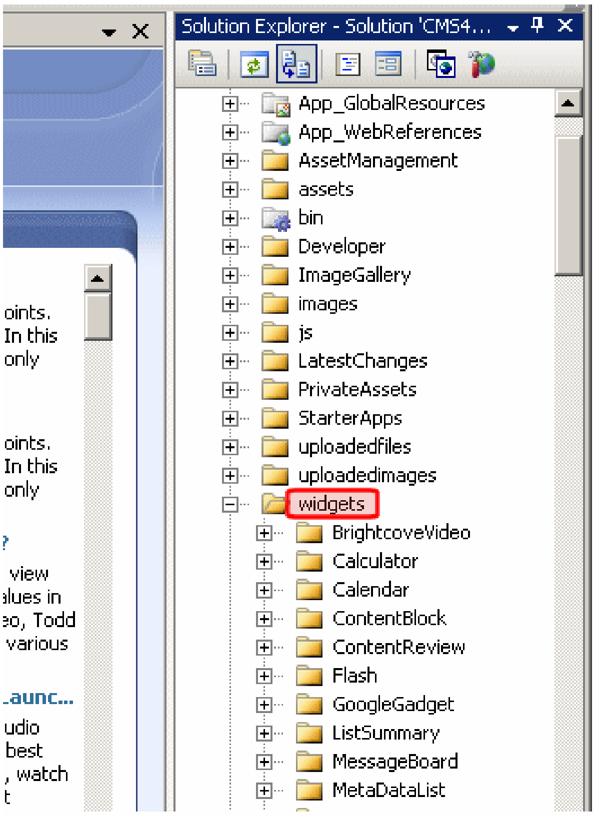
Creating the “Hello World” widget

To learn how to create a widget, create a simple widget in the `siteroot/widgets` folder. This widget is based on the Hello World widget that is installed with the sample site with the following files:

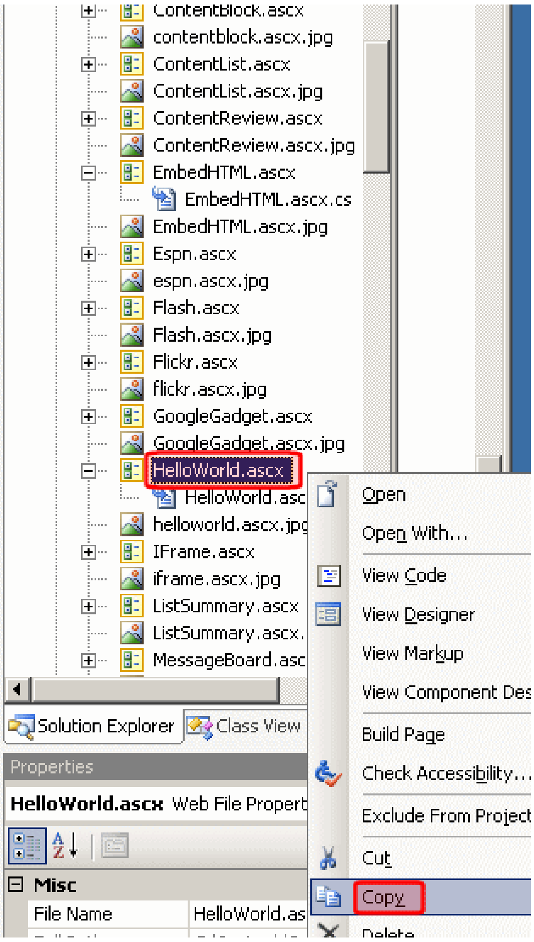
- `HelloWorld.ascx`. user control file
- `HelloWorld.ascx.cs`. user control code-behind file
- `HelloWorld.ascx.jpg`. image that represents this control on the widget menu

Step 1: Copy, paste, and rename HelloWorld.ascx and HelloWorld.ascx.jpg

1. Open your website in Visual Studio.
2. In the Visual Studio Solution Explorer, open the `widgets` folder.

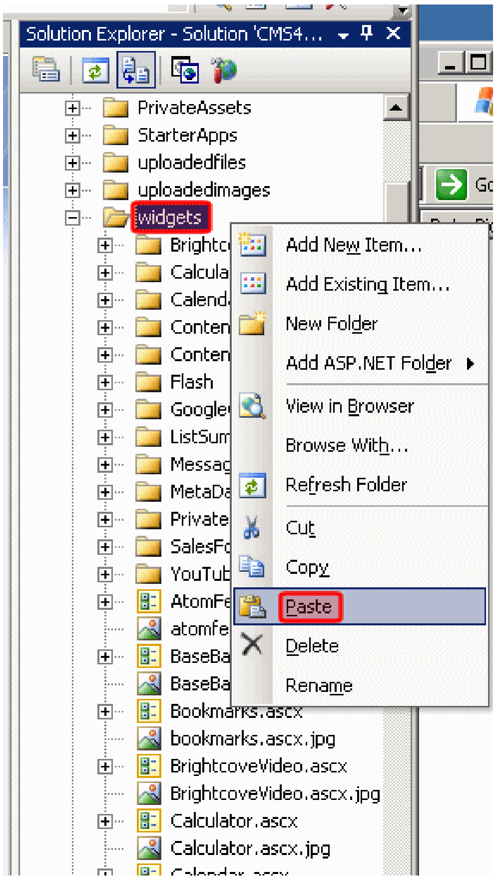


3. Within that folder, scroll down to and select `HelloWorld.ascx`.

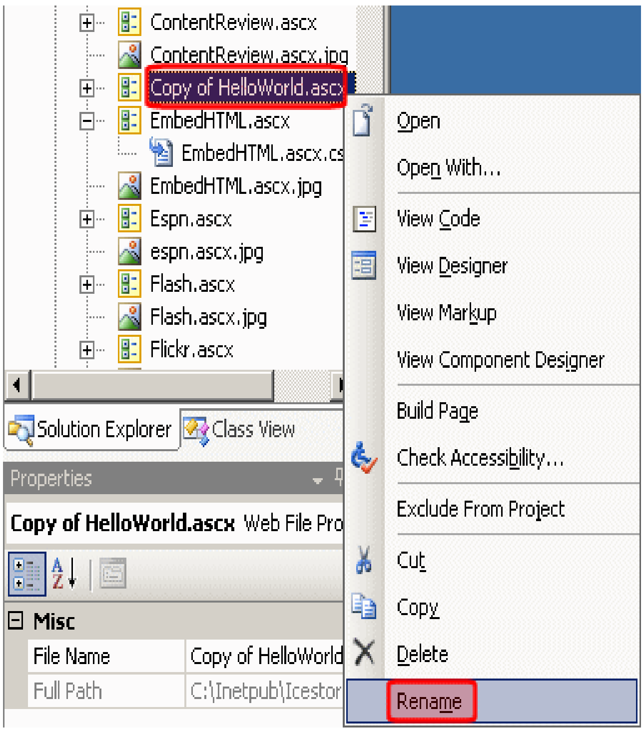


4. Right click the mouse and choose **Copy**.
5. Scroll up to the `widgets` folder.

6. Right click the mouse and choose **Paste**.



7. Scroll down until you see `Copy of HelloWorld.ascx`.
8. Right click and choose **Rename**.



9. Rename the file `new_widget.ascx`. Visual Studio automatically renames the code-behind file to `new_widget.ascx.cs`.
10. Copy, paste, then rename the `helloworld.ascx.jpg` file to `new_widget.ascx.jpg`. The image file is 48 x 48 pixels and 72 dpi. Ektron administrators and content authors drag a widget's image onto the page.

Step 2: Update the class names in the new files

1. Double click on `new_widget.ascx` to open it.
2. On the first line of that file, replace the reference to `HelloWorld` (circled) with `new_widget`.

3. Double click on the code-behind file, `new_widget.ascx.cs`.
4. Replace the class `HelloWorld` with `new_widget`.

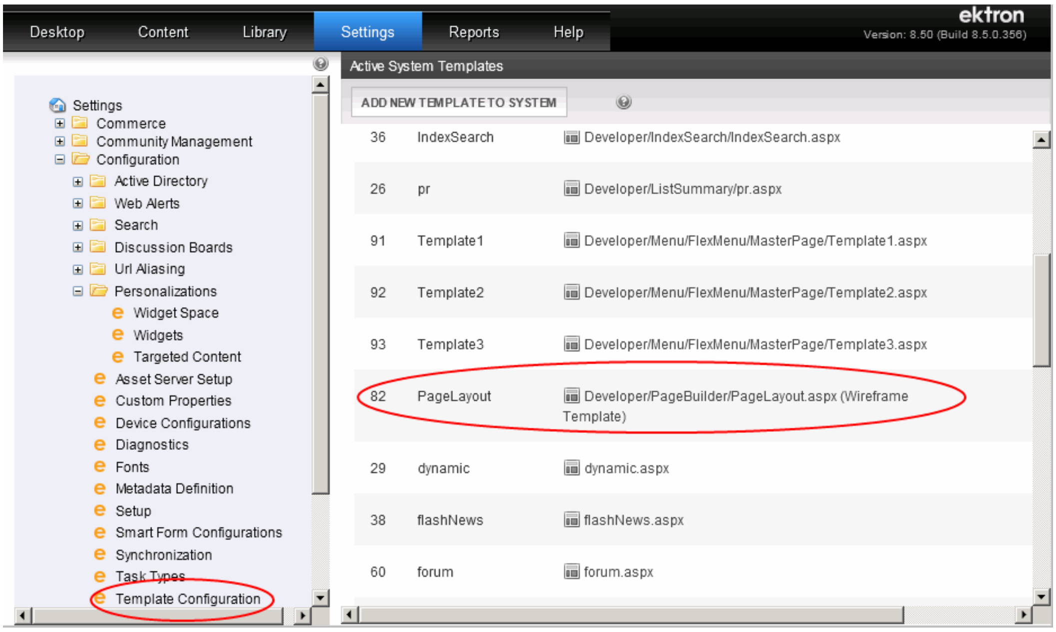
5. Save `new_widget.ascx` and `new_widget.ascx.cs`.
6. Check for errors by choosing **Build > Build Page** for each file. Correct any errors before proceeding.

Step 3: Add the widget to the wireframe template

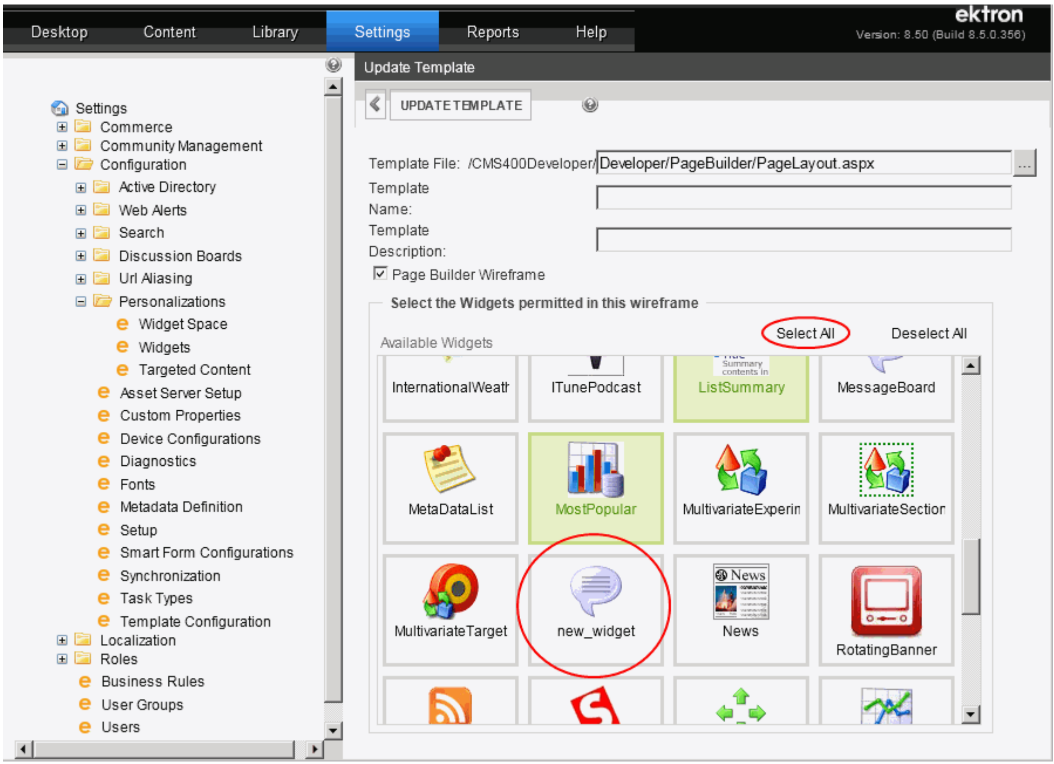
NOTE: Use this procedure to select (or restrict) any widget that you want to be available to use on a wireframe template. When the template is used, the selected widgets appear in the PageBuilder Widgets menu.

1. Open the Workarea.
2. Choose **Settings > Configuration > Personalizations > Widgets**.

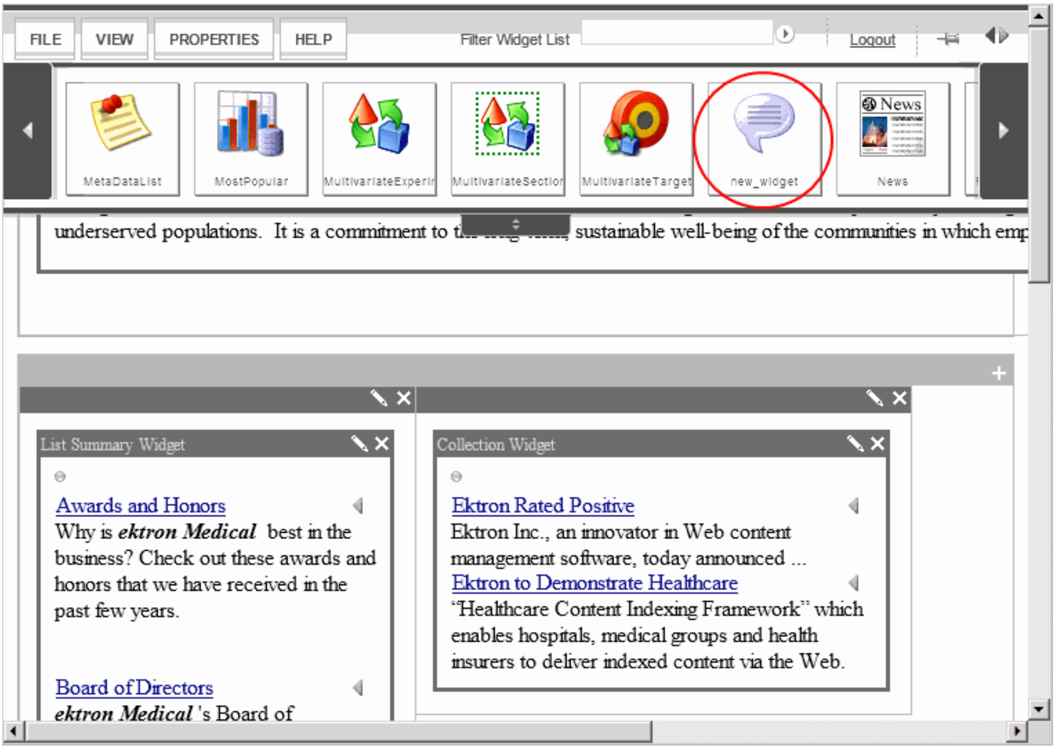
3. Click **Synchronize**. The new user control file, `new_widget.ascx`, appears in the list.
4. Choose **Settings > Configuration > Template Configuration**.
5. Find the template that you created in *Developing wireframe templates* on page 1007, `PageLayout.aspx`. Or, any wireframe template that you are using to create a PageBuilder page.



6. Click **Update Template**. On the Update Template screen, scroll down until you see the new widget.



7. Click **Select All** (circled in the figure).
8. Click **Update Template**. For directions on creating a PageBuilder page, see *Developing wireframe templates* on page 1007.
9. Go to Content and select a folder that has a PageBuilder page.
   a. Choose **Content > Folders > PageBuilder** and click on PageLayout.
   b. Click **Edit Page Layout**.
10. Open the widget menu. Make sure your new widget appears on the menu.



After you create a new widget and enable it in the Workarea, you can begin to customize it. For more information about customizing widgets, see *Customizing a widget* on page 1185.

Understanding the user control (.ascx) file

Here is the `new_widget.ascx` file that is the basis of the widget.

```
<%@ Control Language="C#" AutoEventWireup="true"
  CodeFile="new_widget.ascx.cs" Inherits="widgets_new_widget" %>
<%@ Register Assembly="System.Web.Extensions,
  Version=1.0.61025.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"
  Namespace="System.Web.UI" TagPrefix="asp" %>
    <asp:MultiView ID="ViewSet" runat="server" ActiveViewIndex="0">
        <asp:View ID="View" runat="server">
            <!-- You Need To Do ..............................  -->
<asp:Label ID="TextLabel" runat="server"></asp:Label><br />
<asp:Label ID="CheckBoxLabel" runat="server"></asp:Label>
            <!-- End To Do ..............................  -->
        </asp:View>
        <asp:View ID="Edit" runat="server">
            <div id="<%=ClientID%>_edit">
```

```
                 <!-- You Need To Do ............................  -->
<asp:TextBox ID="TextTextBox" runat="server" Style="width: 95%">
</asp:TextBox><br />
<asp:CheckBox ID="MyCheckBox" runat="server" Checked="false" />
<br />
                 <!-- End You Need To Do ........................  -->
<asp:Button ID="CancelButton" runat="server" Text="Cancel"
  OnClick="CancelButton_Click" />
<asp:Button ID="SaveButton" runat="server" Text="Save"
  OnClick="SaveButton_Click" />
          </div>
      </asp:View>
</asp:MultiView>
```

Notice the following elements of the file.

- The `asp:MultiView` element declares that the control has 2 possible modes: View and Edit.

```
<asp:MultiView ID="ViewSet" runat="server" ActiveViewIndex="0">
```

- in *view* mode, the marketing team can see the control but not change it.
- in *edit* mode, the developers can change the control's content and properties.
- Between the `multiview` tags is information about the control in view mode. It has 2 fields: one is a text field, and the other is a check box.

```
<asp:View ID="View" runat="server">
<asp:Label ID="HelloTextLabel" runat="server"></asp:Label><br />
<asp:Label ID="CheckBoxLabel" runat="server"></asp:Label>
</asp:View>
```

- Also between the `multiview` tags is information about the control in edit mode. In edit mode, a text box, a check box, and a Save button appear. The text box and check box collect end-user input, and the Save button saves that input to the database.

```
<asp:View ID="Edit" runat="server">
<div id="<%=ClientID%>_edit">
<!-- You Need To Do ............................. -->
<asp:TextBox ID="HelloTextBox" runat="server" Style="width: 95%">
</asp:TextBox><br />
<asp:CheckBox ID="MyCheckBox" runat="server" Checked="false" /> <br />
<!-- End You Need To Do ............................. -->
<asp:Button ID="CancelButton" runat="server" Text="Cancel"
  OnClick="CancelButton_Click" />
<asp:Button ID="SaveButton" runat="server" Text="Save"
  OnClick="SaveButton_Click" />
```

Understanding the code-behind (.ascx.cs) file

Review the code-behind file,`new_widget.ascx.cs`.

- A series of `using` statements are at the top of the file. Notice the Ektron ones in particular:

```
using Ektron.Cms.Widget;
using Ektron.Cms;Marketing team
using Ektron.Cms.API;
```

```
using Ektron.Cms.Common;
using Ektron.Cms.PageBuilder;
using System.Text.RegularExpressions;
```

- Next, note a widget host class, which inherits the `system.Web.UI.UserControl` and `IWidget` classes.

```
public partial class widgets_new_widget: System.Web.UI.UserControl, IWidget
```

The following figure summarizes the remaining elements of the code-behind file.

- In the next line, notice the widget's properties: a string for the text field, and a boolean for the check box. You define the variables and their type here. Possible types are string, integer, long and date.

```
#region properties
private string _HelloString;
private bool _CheckBoxBool;
[WidgetDataMember(true)]
public bool CheckBoxBool { get { return _CheckBoxBool; }
  set { _CheckBoxBool = value; } }
[WidgetDataMember("Hello Wolrd")]
public string HelloString { get { return _HelloString; }
  set { _HelloString = value; } }
#endregion
```

- The following is a widget host declaration.

```
private IWidgetHost _host;
```

- The following is the widget's `page_init` events.

```
protected void Page_Init(object sender, EventArgs e)
  { _host = Ektron.Cms.Widget.WidgetHost.GetHost(this);
    _host.Title = "Hello World Widget";
    _host.Edit += new EditDelegate(EditEvent);
    _host.Maximize += new MaximizeDelegate(delegate() { Visible = true; });
    _host.Minimize += new MinimizeDelegate(delegate() { Visible = false; });
    _host.Create += new CreateDelegate(delegate() { EditEvent(""); });
    PreRender += new EventHandler(delegate(object PreRenderSender, EventArgs Evt)
      { SetOutput(); });
    ViewSet.SetActiveView(View);
  }
```

Comments about the page_init code

- The `gethost` method returns a reference to the container widgethost for this widget. This is the case in both Personalization and PageBuilder.
- The `Title` property is the title of this widget. By setting it in `page_init` for the widget, we inform the host what text to put in the title bar above the widget. This works in both PageBuilder and Personalization.
- The events below `host.Title` are raised by the widgethost. It's up to the widget to subscribe to them. In all cases, if we don't subscribe to them, the icons don't show up. This is a method of attaching widget code to button clicks and other events that occur outside the widget.
- For `PreRender`: Ektron renders the contents of this widget on pre-render, thus ensuring a single render event. Another option is to call `SetOutput` on the Load event, but you can only do that if the widget is not in edit mode currently.
- The final line sets the view to display mode.
- The following is the declaration of the widget's `edit` events.

```
void EditEvent(string settings) {
string sitepath = new CommonApi().SitePath;
ScriptManager.RegisterClientScriptInclude(this, this.GetType(),
  "widgetjavascript", sitepath + "widgets/widgets.js");
ScriptManager.RegisterOnSubmitStatement(this.Page, this.GetType(),
  "gadgetescapehtml", "GadgetEscapeHTML('" + HelloTextBox.ClientID + "');");
HelloTextBox.Text = HelloString;
MyCheckBox.Checked = CheckBoxBool;
ViewSet.SetActiveView(Edit);
}
```

Comments about the edit code

IMPORTANT: You must register JavaScript and cascading style sheet (css) instructions in an external file.

- The Edit event is triggered by the widgethost, and if you subscribed to it already, it will call the delegate here.
- Use `sitepath` to ensure that the correct path for included files is used across installations.
- Ensure that it works inside update panels by calling the `scriptmanager` to include the script. Alternatively, you can use

```
Ektron.Cms.Api.Js.RegisterJSInclude
ScriptManager.RegisterOnSubmitStatement(this.Page, this.GetType(),
"gadgetescapehtml", "GadgetEscapeHTML('" + HelloTextBox.ClientID +
"');");
```

- The `onsubmitstatement` is JavaScript that is run when the widget is submitted. It calls escape html, which cleans the submitted text to avoid any XSS.
- Notice the editing fields, so users can see the existing data.

  HelloTextBox.Text = HelloString;

  MyCheckBox.Checked = CheckBoxBool;

  ViewSet.SetActiveView(Edit);
- The following code is the widget's `save` events.

```
protected void SaveButton_Click(object sender, EventArgs e)
  { HelloString = ReplaceEncodeBrackets(HelloTextBox.Text);
    CheckBoxBool = MyCheckBox.Checked;
    _host.SaveWidgetDataMembers();
    ViewSet.SetActiveView(View);
  }
```

- The following code is the widget's `SetOutput` events.

```
protected void SetOutput()
  { HelloTextLabel.Text = HelloString;
// client javascript remove brackets, server side adds back
    CheckBoxLabel.Text = CheckBoxBool.ToString();
  }
```

- The following code is the widget's `Cancel` events.

```
protected void CancelButton_Click(object sender, EventArgs e)
  { ViewSet.SetActiveView(View); }
```

- The following code is for greater than and less than signs.

```
protected string ReplaceEncodeBrackets(string encodetext)
  { encodetext = Regex.Replace(encodetext, "&lt;", "<");
    encodetext = Regex.Replace(encodetext, "&gt;", ">");
    return encodetext; }
```

Customizing a widget

The following topics let you further customize widget behavior.

Working with JavaScript and cascading style sheets

You can use JavaScript or a cascading style sheet to add custom functionality or styling to a widget. To do this, place the JavaScript or cascading style sheet (css) instructions in an external file, then register it in the code-behind file.

Example of including a JavaScript file.

```
void EditEvent(string settings)
JS.RegisterJSInclude(this, _api.SitePath +
  "widgets/contentblock/jquery.cluetip.js", "EktronJqueryCluetipJS");
```

Example of including a .css file.

```
Css.RegisterCss(this, _api.SitePath
  + "widgets/contentblock/CBStyle.css","CBWidgetCSS");
```

WARNING! You must register JavaScript and .css files in an external file, as shown above. If you do not, the OnSubmit event places HTML in the TextArea field in encoded brackets (< >) and generates a dangerous script error.

The `JS.RegisterJSInclude` and `Css.RegisterCss` functions take 3 arguments.

- **1**. A reference to the control that needs the script or style sheet on the page. Typically, 'this' or 'me'. For example:
  - `this`
- **2**. The URL of the script or style sheet being included. You should prefix the URL with a site path so it can be used with URLs like `http://localhost/ektrontech` and `http://ektrontech`. For example:
  - `_api.SitePath + "widgets/contentblock/jquery.cluetip.js"`
  - `_api.SitePath + "widgets/contentblock/CBStyle.css"`
- **3**. A unique key. Only include the script specified by a key once. Your organization should develop a standard way to define JavaScript and .css keys. For example:
  - `"EktronJqueryCluetipJS"`
  - "CBWidgetCSS"

NOTE: Widgets use an update panel for partial postbacks. As a result, the ASP.NET tree view and file upload controls do not work with widgets. Ektron has workarounds for these functions. For an example of a tree view, see the content block widget (`*siteroot*/widgets/contentblock.ascx`). For an Ajax file uploader, see the flash widget (`*siteroot*/widgets/flash.ascx`).

Verifying that a page is a PageBuilder page

Whenever your code is interacting with a widget, you need to verify that it is on a PageBuilder page (as opposed to another Ektron page that hosts widgets, such as personalization).

To check for this, insert the following code:

```
Ektron.Cms.PageBuilder.PageBuilder p = (Page as PageBuilder);
If(p==null) // then this is not a wireframe
When you want to check the mode, use code like this.
If(p.status == Mode.Edit) // we are in edit mode
```

Applying global and local properties to a widget

Global and local widget properties reduce your development effort by eliminating settings data classes. While you can still use these classes and manage your own serialization, for the vast majority of types, the built-in engine performs the necessary work.

Global properties apply to every instance of a widget. *Local* properties apply to one instance. If both local and global values are assigned to a property, local overrides global.

As an example of using a local property to override a global, consider a ListSummary widget. You may want its sort mostly by modified date in descending order, but in certain instances you want to sort by title in ascending order.

- Global. **Workarea > Settings > Configuration > Personalizations > Widgets**

```
[GlobalWidgetData()]
public string NewWidgetTextData {
get {return _NewWidgetTextData;} set {_NewWidgetTextData = value;
}}
```

- Local. Drop the widget onto PageBuilder page, then click edit (Pencil icon).

```
[WidgetDataMember()]
public string NewWidgetTextData
  { get { return _NewWidgetTextData; } set { _NewWidgetTextData = value; } }
```

Setting global properties for a widget

A *global* property lets an Ektron developer or administrator assign properties and values that apply to all instances of a widget. You apply a global property to the widget's code-behind page. Administrators could then set or update the property's value in the Workarea's Widgets screen.

For example, the Brightcove Video widget requires a player ID. You could insert that in the widget's code-behind file. Then, an administrator could review and possibly update that information in the Workarea widgets screen. Whenever a user drops a Brightcove Video widget onto a page, the player ID is already assigned.

If the developer does *not* set a default value in code-behind, an administrator must set one on the Workarea's Widgets screen.

If the developer *does* set a default value in code-behind, it will be applied unless changed by an administrator on the Workarea's Widgets screen.

To set global properties:

1. Open the widget's code-behind file, which is located in the `siteroot/widgets` folder.
2. In the `properties` section, insert the `GlobalWidgetData` attribute (as shown) to set the global property's name and type.

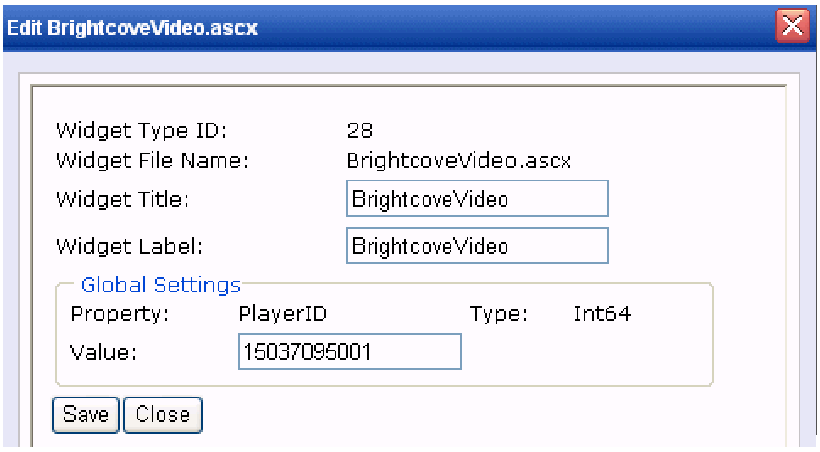
```
[GlobalWidgetData()]
public string NewWidgetTextData
  { get { return _NewWidgetTextData; } set { _NewWidgetTextData = value; } }
```

```
public partial class Widgets_BrightcoveVideo : System.Web.UI.UserControl, IWidget
{
    #region properties
    private long _PlayerID;
    public long _VideoID;
    [WidgetDataMember(15037095001)]
    public long PlayerID { get { return _PlayerID; } set { _PlayerID = value; } }
    [GlobalWidgetData(15053010001)]
    public long VideoID { get { return _VideoID; } set { _VideoID = value; } }
    public long publisherID = 14459838001;  // Your company Publisher ID Get from
    public string token = "R2tftyEmD8Kn3M3zoXFj9gA7rax2BIzZDijTcsUCkJ15tXA8c-hgwQ
    #endregion
```

The supported types for `GlobalWidgetData` are:

- Date Time
- int
- long
- double
- boolean
- string
- any enumeration

3. Save the code-behind file.
4. In the Workarea, go to **Settings > Configuration > Widgets**.
5. Click **Edit** for the widget whose code-behind file you edited in Step 1. A dialog box lets you view and edit global properties set in code-behind.



Setting local properties for a widget

A *local* property lets an Ektron user assign property values that apply to a particular instance of a widget. For example, the Brightcove Video widget requires a Video ID, which identifies the video that appears where you drop the widget.

To set a local properties:

1. Open the widget's code-behind file, which is located in the *site root*/`widgets` folder.
2. In the `properties` section, insert the `WidgetDataMember` attribute to set the property.

```
[WidgetDataMember(150530105432)]1
public long VideoID
  { get { return _VideoID; } set { _VideoID = value; } }
```

3. If you want to set a default value for the widget, use the attribute's optional argument, which follows `[WidgetDataMember`. In the example above, the value is `150530105432`.
4. Save the settings in your properties by populating them as you normally would.
5. In the Save event, call `_host.SaveWidgetDataMembers();`.

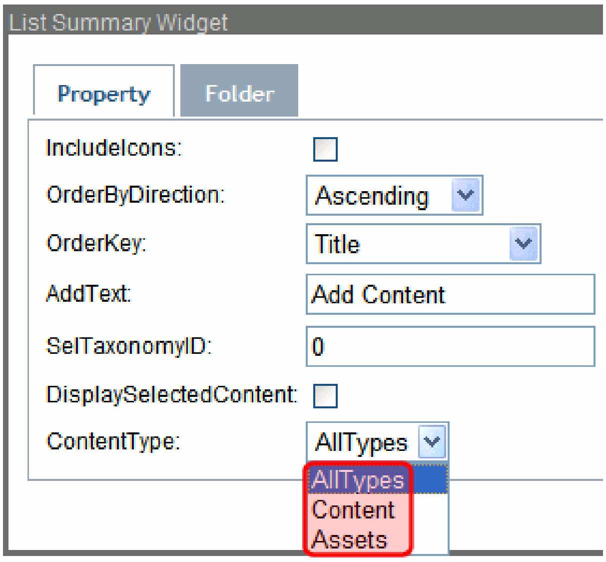
```
protected void SaveButton_Click(object sender, EventArgs e)
{
      VideoID = Int64.Parse(tbData.Text);
     _host.SaveWidgetDataMembers();
     ViewSet.SetActiveView(View);
}
```

Adding a field to a widget

You can add a Content type drop-down to the ListSummary widget. The drop-down lets the person dropping the widget on the page select from these choices.

- all types of content
- HTML content only
- assets only

The drop-down appears as follows after it is implemented.



To add this drop-down to the ListSummary widget:

1. In Visual Studio, open the ListSummary widget, *siteroot*`/widgets/ListSummary.ascx`.
2. Find the text `DisplaySelectedContent`.
3. Below `DisplaySelectedContent`, add the following code to create a drop-down list for the `ContentType` property.

```
<tr>
  <td>DisplaySelectedContent:</td>
  <td>
    <asp:CheckBox ID="DisplaySelectedContentCheckBox" runat="server" />
  </td>
</tr>
<tr>
  <td>ContentType:</td>
  <td>
    <asp:DropDownList ID="ContentTypeList" runat="server">
    <asp:ListItem Value="AllTypes">AllTypes</asp:ListItem>
    <asp:ListItem Value="Content">Content</asp:ListItem>
    <asp:ListItem Value="Assets">Assets</asp:ListItem>
    </asp:DropDownList>
  </td>
</tr>
```

4. Save the `ListSummary.ascx` file.
5. Open the code-behind file, `ListSummary.ascx.cs`.
6. In the properties region, declare a string variable for the `ContentType` property:

```
private string _ContentType;
```

7. Create a local property with default setting of `AllTypes`:

```
[WidgetDataMember("AllTypes")]
public string ContentType { get { return _ContentType; }
  set { _ContentType = value; } }
```

8. In the `EditEvent` area, set the select list's value to `ContentType`:

```
ContentTypeList.SelectedValue = ContentType;
```

9. In the `SaveButton_Click` event, set `ContentType` as the select list's value:

```
ContentType = ContentTypeList.SelectedValue;
```

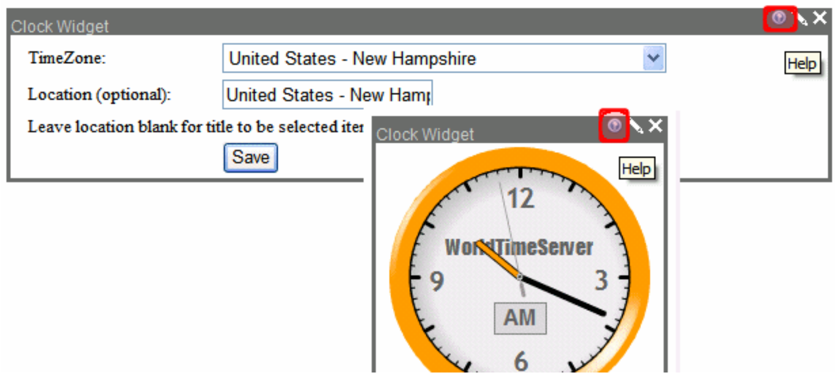
10. In the `SetListSummary()` function, set the List Summary server control's `ContentType` to the `CMSContentType` property:

```
ListSummary1.ContentType =
  (CMSContentType)Enum.Parse(typeof(CMSContentType), ContentType);
```

11. Save the `ListSummary.ascx.cs` file.

Including help for a widget

You can include help for any widget that has the help icon ().



The help icon only appears when a user is editing a PageBuilder page. The icon appears both when a user is viewing a widget and editing its properties. It is not available to a page's site visitors.

To create a widget's help file:

1. Create an HTML file with information for users who will drop the widget on the PageBuilder page.

   You could create a content block within Ektron then switch to source view, copy the content into a word processor (like Notepad), and save it with an HTML extension.

2. Save the help file to the folder that contains the widget.
3. Add the WidgetHost's `HelpFile` property to the code-behind of the page that hosts the widget.

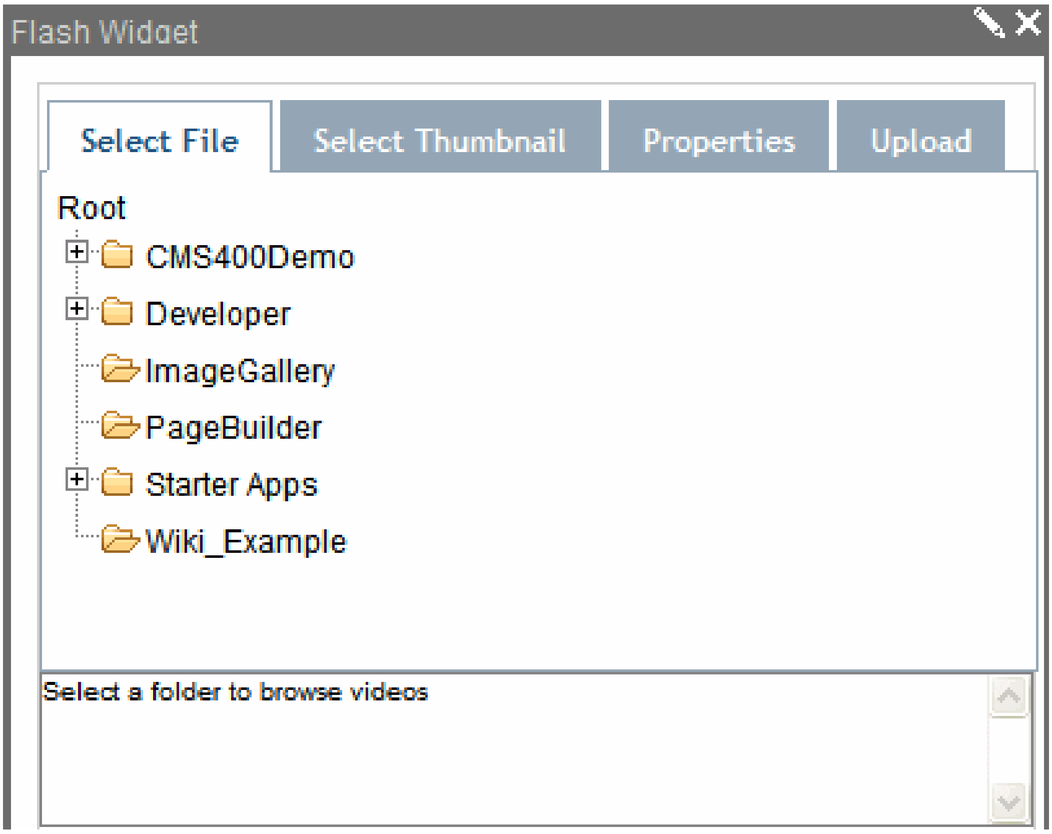
```
protected void Page_Init(object sender, EventArgs e)
{
  _host = Ektron.Cms.Widget.WidgetHost.GetHost(this);
  _host.HelpFile = "~/widgets/myWidget/help.html";
```

Deleting a widget

If you want to remove a widget, follow these steps. After you do, the widget is removed from the list of widgets, and from the dashboard of users and community groups.

1. Open the the /*siteroot*/widgets/ folder.
2. Delete the widget's files.
3. Go to **Settings > Configuration > Personalizations > Widgets** and click **Synchronize**.

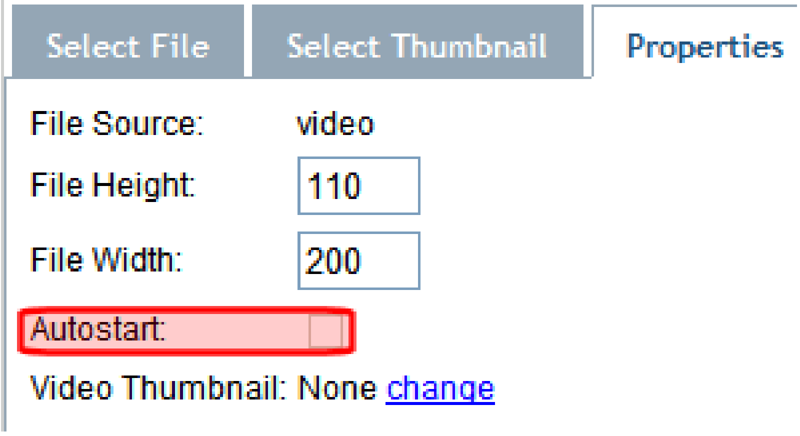
Using the Flash widget



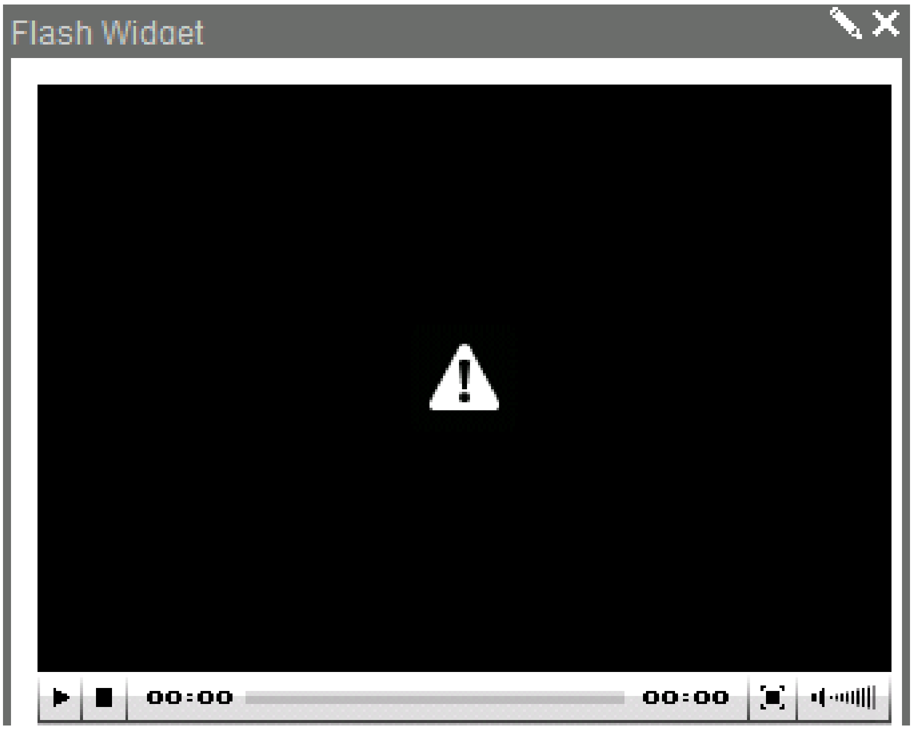
- This widget supports both .flv and .swf file types.
- If you will use .flv files, make sure it is added as a file type. See also: *Supported types of assets* on page 650
- If the Flash file you want to display *has* already been added to Ektron, use the Select File tab to it.
- If the file has *not* been added to Ektron, first use the Select File tab to select a folder for the Flash file. Then, use the Upload tab to go your computer's file system, and upload the file to the selected folder.
- The thumbnail feature only works with .flv file types. If you select a Thumbnail, it appears within the Flash player when the page loads.

- The thumbnail is only applied to this instance of the widget—not the Flash file. If you apply this video to a different widget on this page, you must reapply a thumbnail.
- The thumbnail is an image file that was dropped into Ektron as an asset. It cannot be a library image.

- The autostart feature works only with .flv files.



- If you log in then upload a flash file, and certain requirements are not met for that file, you see the following image where the widget appears.



The following conditions cause this image to appear.

  - The flash file’s folder properties require certain metadata and/or a taxonomy category to be applied, and they have not.
  - The folder has a workflow, and this content has not been approved.

Using the Brightcove Video widget

IMPORTANT: You need an account on Brightcoveto show videos in the Ektron Brightcove Video widget.

Your Brightcove.comaccount lets you upload, store, and play videos on your Web page with the Ektron Brightcove Video widget.

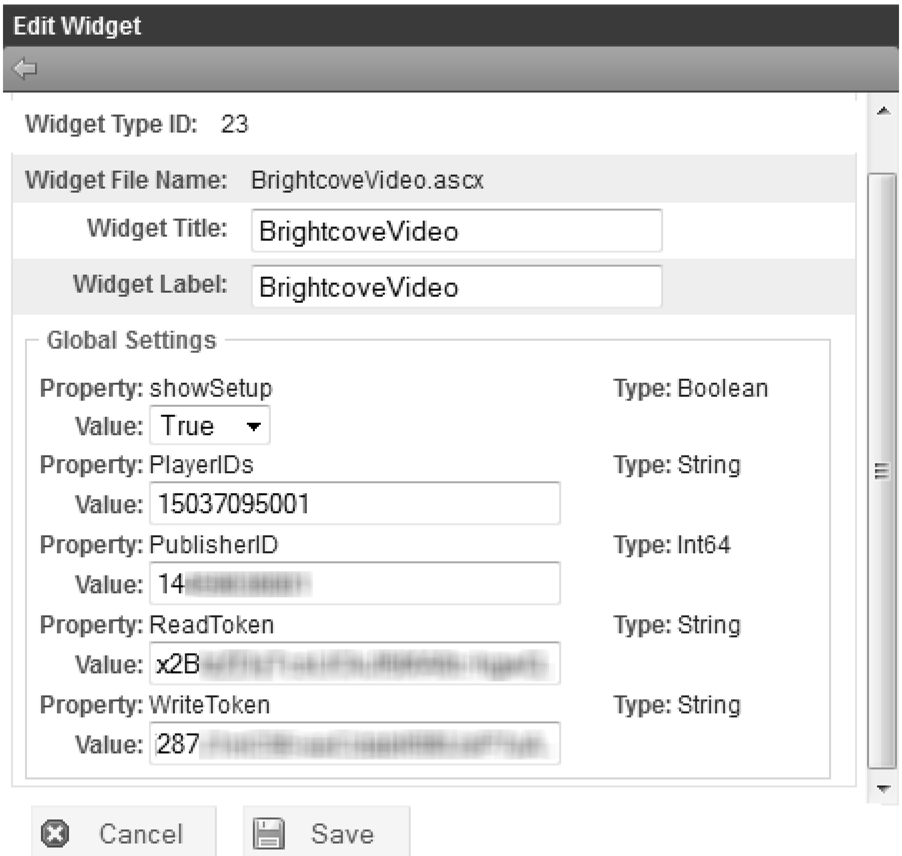
Setting up your account information for the first time

You see the following screen the first time you use a Brightcove Video widget if you have not entered account information in the Workarea. Enter your Brightcove account information here. After you successfully save your account data, this screen does not appear again.

Adding the Brightcove Video widget

Follow these steps to play videos with the Brightcove Video widget.

1. Set the Brightcove Video widget Configuration in the Workarea if you did not use the first timer screen shown in the previous section.
   a. From the Workarea, choose **Settings > Configuration > Personalizations > Widgets**.
   b. Click **Edit** () next to **BrightcoveVideo.ascx** to set the properties.



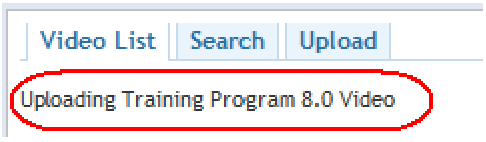
> **NOTE:** Brightcove provides the values for the Global Settings for this widget on your Brightcove Account pages. Log in to Brightcoveand go to Account Settings > API Management.

   c. Click **Save**.

2. Place the Brightcove widget on a PageBuilder page.
   a. Edit a PageBuilder page.
   b. Drag and drop the Brightcove widget into a dropzone.
      See *Editing content on a PageBuilder page* on page 997 for more information about PageBuilder and widgets.
3. Upload Videos Using the Brightcove Video widget.

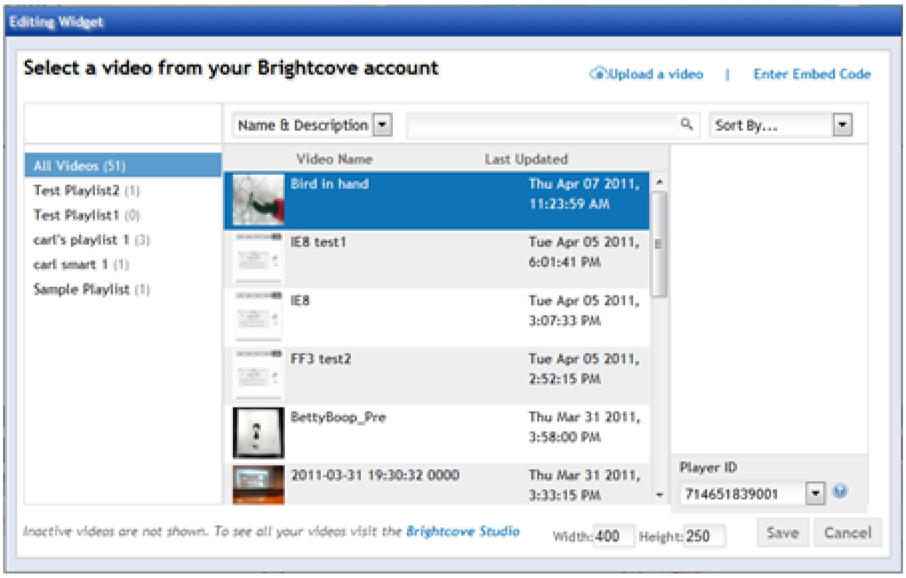
   NOTE: You can upload your video using your Brightcove.com account or follow these steps and upload a video using the Ektron Brightcove Video widget.

   a. Click **Edit** ( ) on the Brightcove Video widget.
   b. Notice there are 3 tabs across the top—Video **List**, **Search**, and **Upload**.
   c. Click **Upload**.
   d. Enter **Video Name**.
   e. Enter **Video Description**.
   f. Click **Browse** and choose the video file to upload.
   g. Click **Upload**.
      A message on the Edit window shows that the Video is being uploaded. In this example, we are uploading the *Training Program 8.0* video.

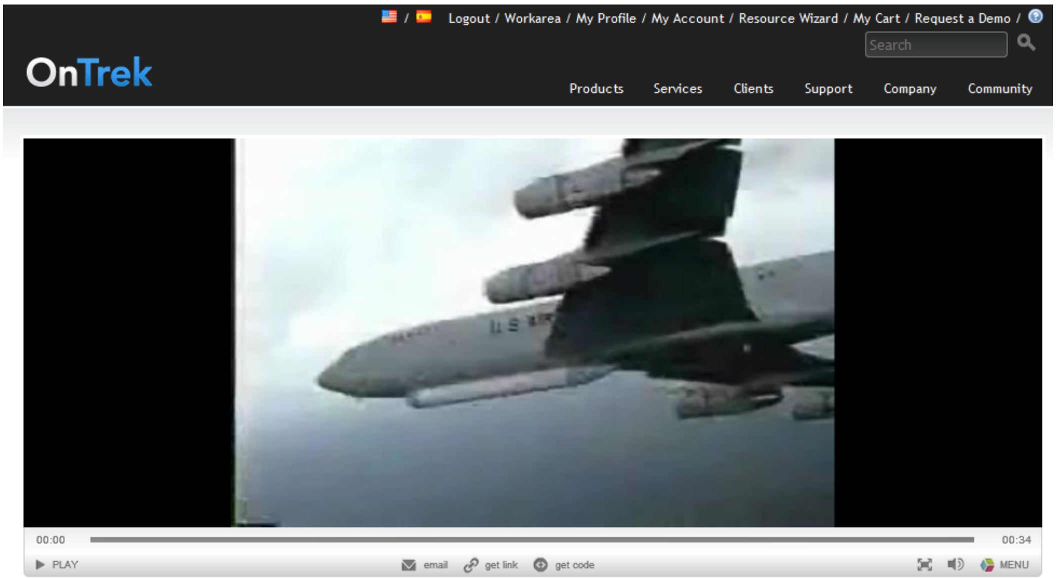


NOTE: Your video may not be available to view immediately after uploading. Allow time for Brightcove to publish it or check its status on your Brightcove Account page.

4. Choose the Video to Play in the Brightcove Video widget.
   a. Click **Edit** ( ) on the Brightcove Video widget.
   b. Click either the picture or title of the video you want to show in this widget.



The following image is an example of the Brightcove Video widget on an Ektron OnTrek website page.



Additional Brightcove information

- Brightcove Documents: http://support.brightcove.com/en/docs
- Brightcove: Setting Your HTML5 Video Delivery Options
- Brightcove: Delivering Video with HTML5 and Smart Players
- Brightcove: Test Your Browser for Brightcove HTML5 Video Player

Troubleshooting the Brightcove Video widget

If your videos do not show in the Brightcove Video widget, check the following topics.

- Did the video upload succeed?
  Check the status of your video by logging into your account on Brightcove and looking for it in the Media Library.
- Is the video encoded according to requirements from Brightcove?
  According to Brightcove's article Uploading Videos with the Media Module, "Your video files can use most available file formats; if your files are not already encoded as VP6 (FLV—Flash video) or H.264, Brightcove transcodes them into one of those formats."
- Do you see the video on the widget when editing the PageBuilder page but not when you publish the page?
  Check the **publisherID** setting in the widget Configuration.

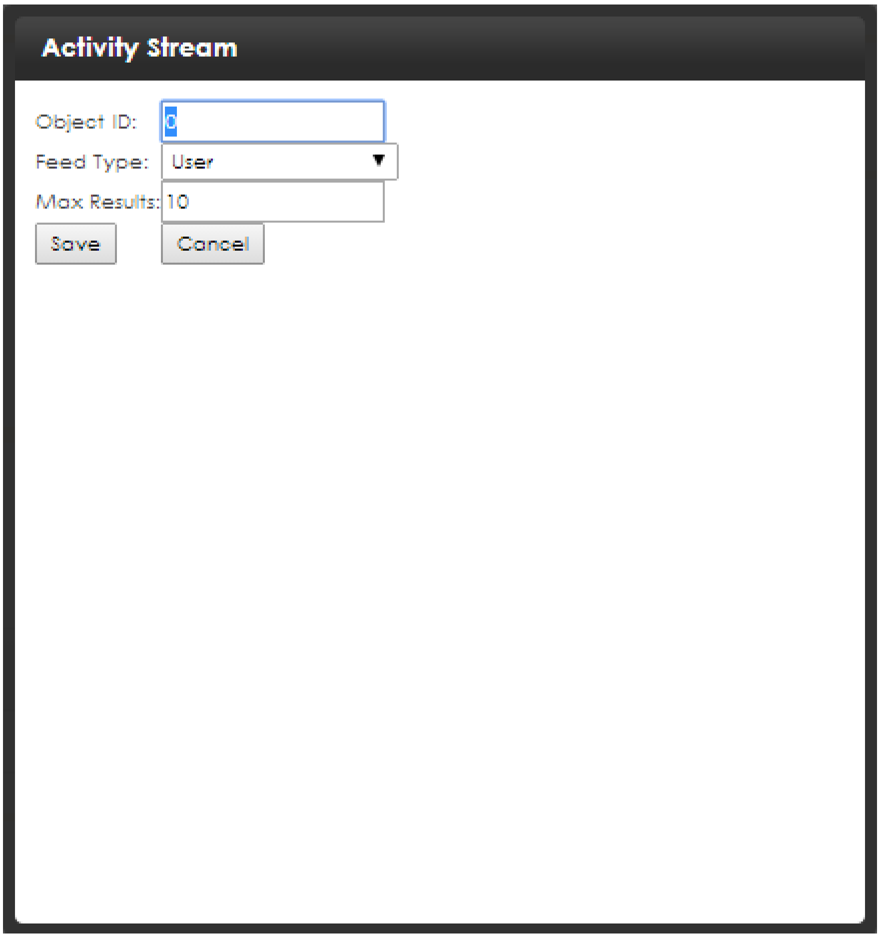
Widget reference

Widgets are located in the Ektron `webroot/`*`siteroot`*`/widgets/` folder. Ektron assigns standard names to widgets, but Ektron administrators can change a widget's name on the Synchronize Widgets Screen.

ActivityStream

Displays activities of a user or group, depending on the type of page on which it is placed. See also *Using the ActivityStream widget* on page 1583.

- **Object ID**. Enter the user’s or community group’s ID.
- **Feed Type**. Select User or Community Group.
- **Max Results**. Enter the number of results you want to display at a time.



AuthorFacets

Place this widget on the page to display a list of authors' blog posts.

- **Details-Page Mode**. Ignore this checkbox.

Author Facets output

BlogPostCallToAction

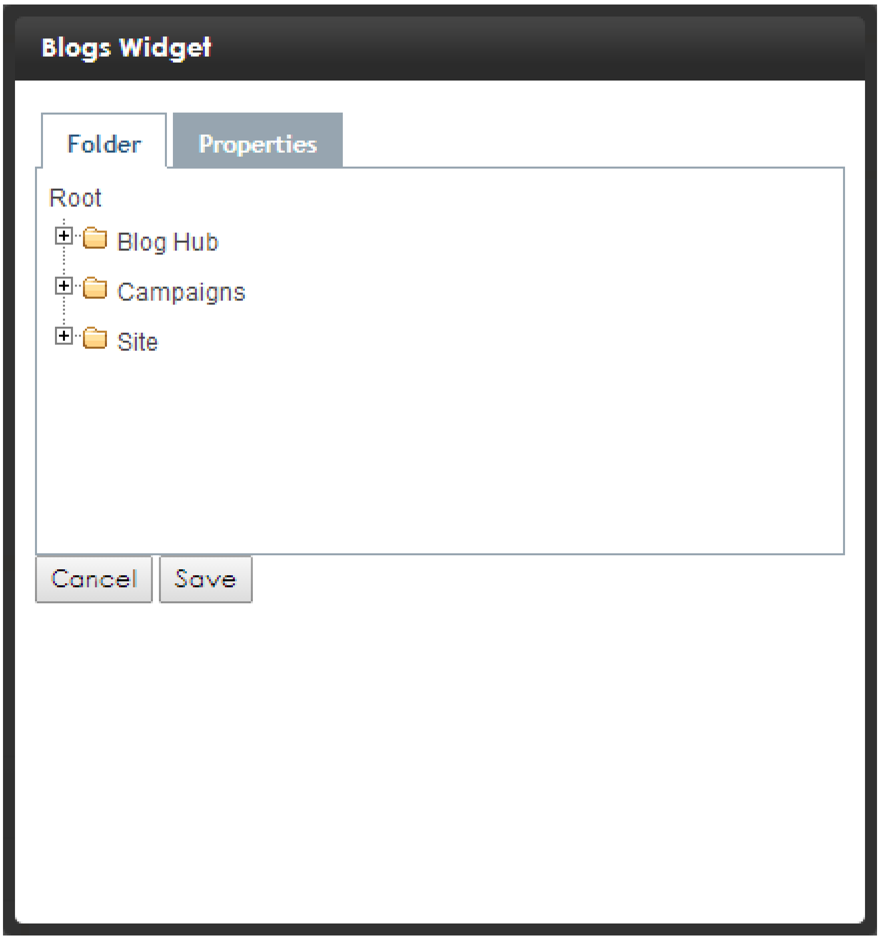
Place this widget on the page and whatever CTA is selected for the blog (on the Metadata tab) will automatically appear on the page with the blog.

Blogs

After you select a blog ID, displays posts from that blog.

Properties Tab:

- **Blog ID**. ID number of the blogs.
- **Blog Name**. Name of the blog.
- **Show Summary**. Check to display.
- **Show Author**. Check to display.
- **Show Date Creation**. Check to display.
- **Show Comment**. Check to display.
- **Max Results**. Enter the number of blogs to display.



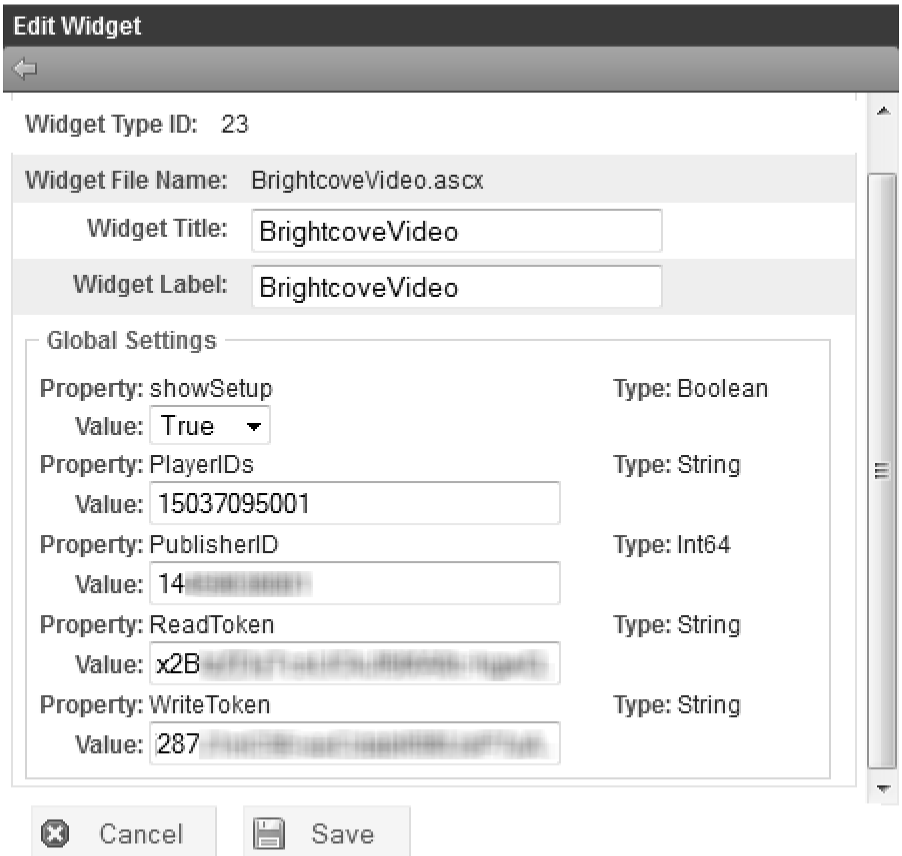
BlogsFeed

- **Page Size**. Enter how many lines to show in the feed.
- **Feed URL**. Enter the URL of the blogs. The default is the current blog page.
- **Link Text**. Enter the text label to click on to obtain the blogs feed.
- **Feed Type**. Choose the type of feed—**Rss** or **Atom**—from the drop down.

BrightcoveVideo

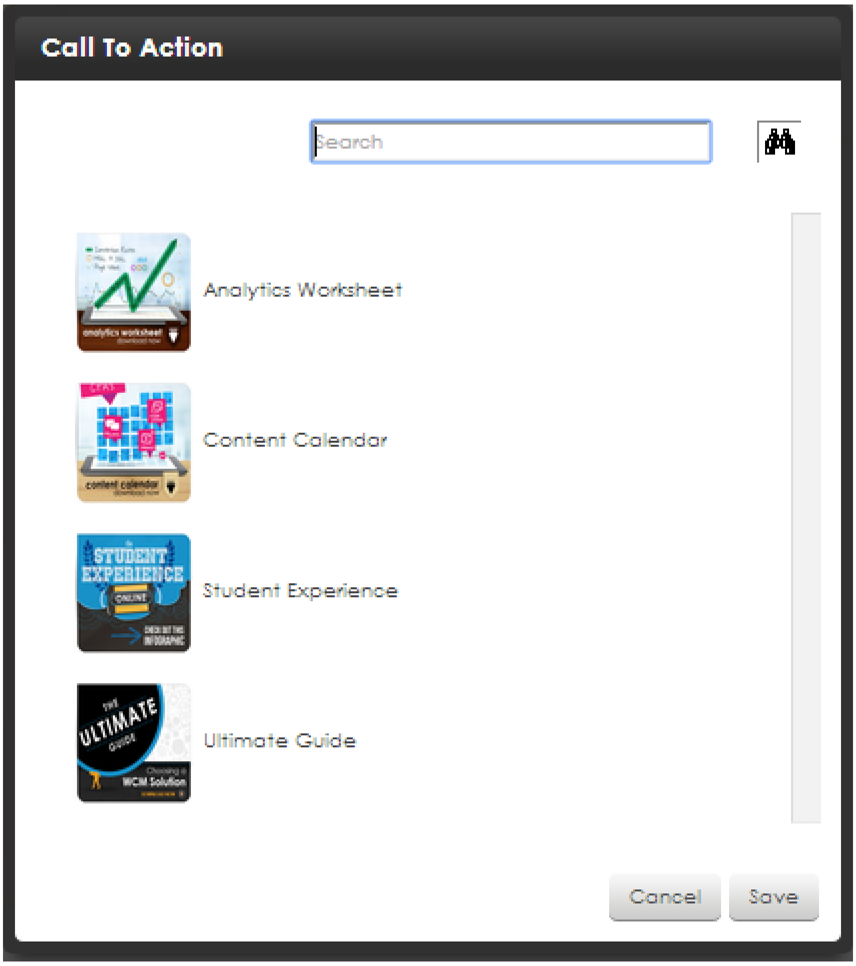
Plays a Brightcove video. You must have a Brightcove account to add a video with the widget.

See *Using the Brightcove Video widget* on page 1193 for information about using the BrightCove widget.



CallToAction

Double click on the CTA that you want on the page. If you have a lot of CTAs in the list, enter the name of the CTA you want in the Search box and click **Search** ().

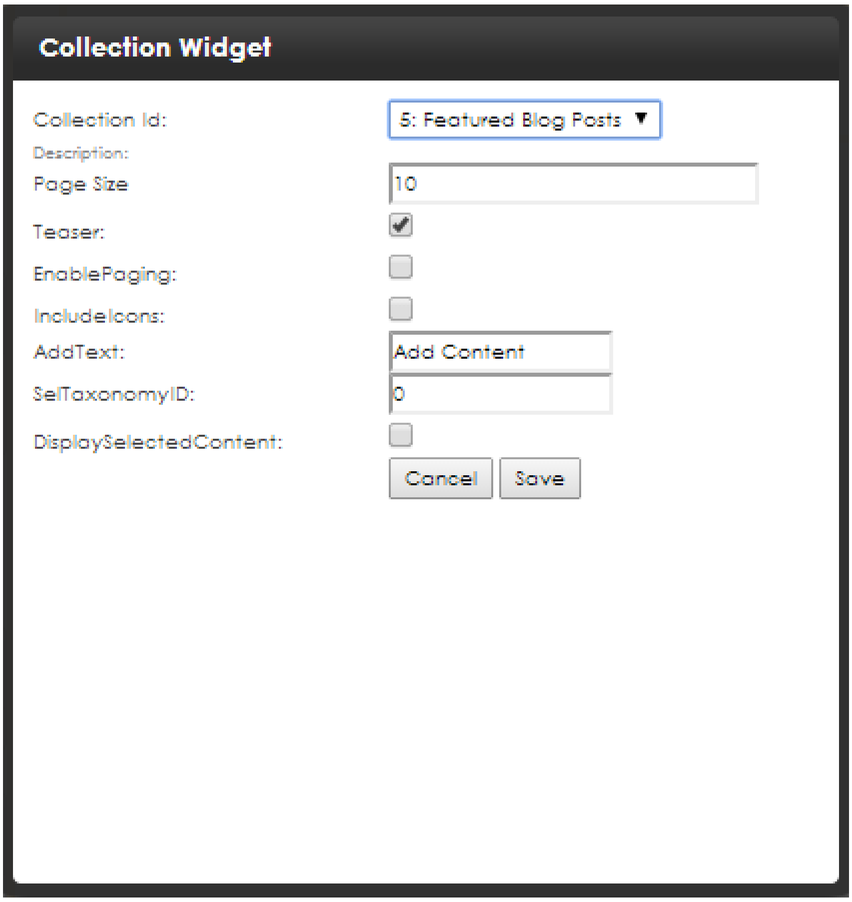


Collection

Displays a collection. You select a Collection ID. See *Working with collections* on page 740.

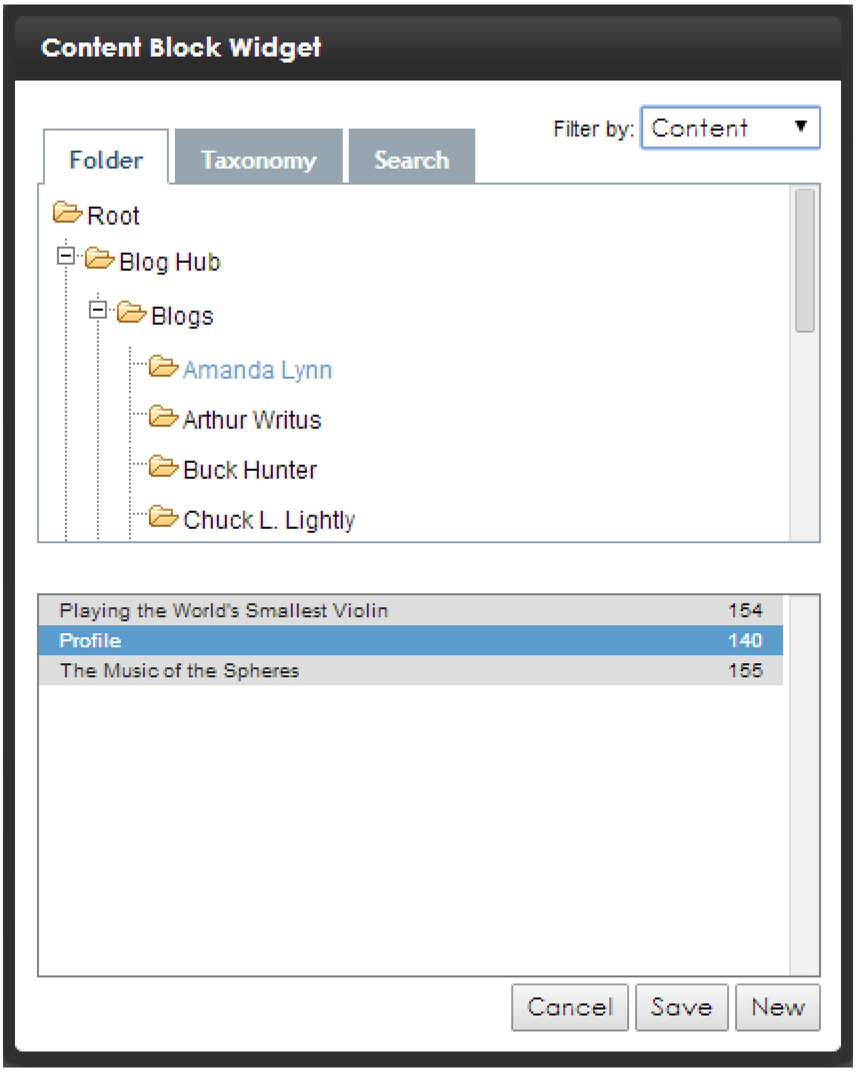
- **Collection Id**. Choose the ID of the collection you want to display.
- **Page Size**. Enter the number of items you want to display.
- **Teaser**. Check if you want to display a 1-line excerpt from the content item.
- **Enable Paging**. Check if you want to page through the specified number of titles. Leave unchecked for an infinite scrolling of blog titles.
- **Include Icons**. Check if you want icons to display next to their associated blog posts.
- **Add Text**. Enter text that the widget will display when adding a new item to the widget (rather than going directly in the Workarea and modifying the collection itself.)
- **SelTaxonomyID**. Choose the taxonomy ID that you want to associate with this collection. Zero (0) means no association.

- **Display Selected Content**. Check if you want to show the blog content in the collection on the page.



ContentBlock

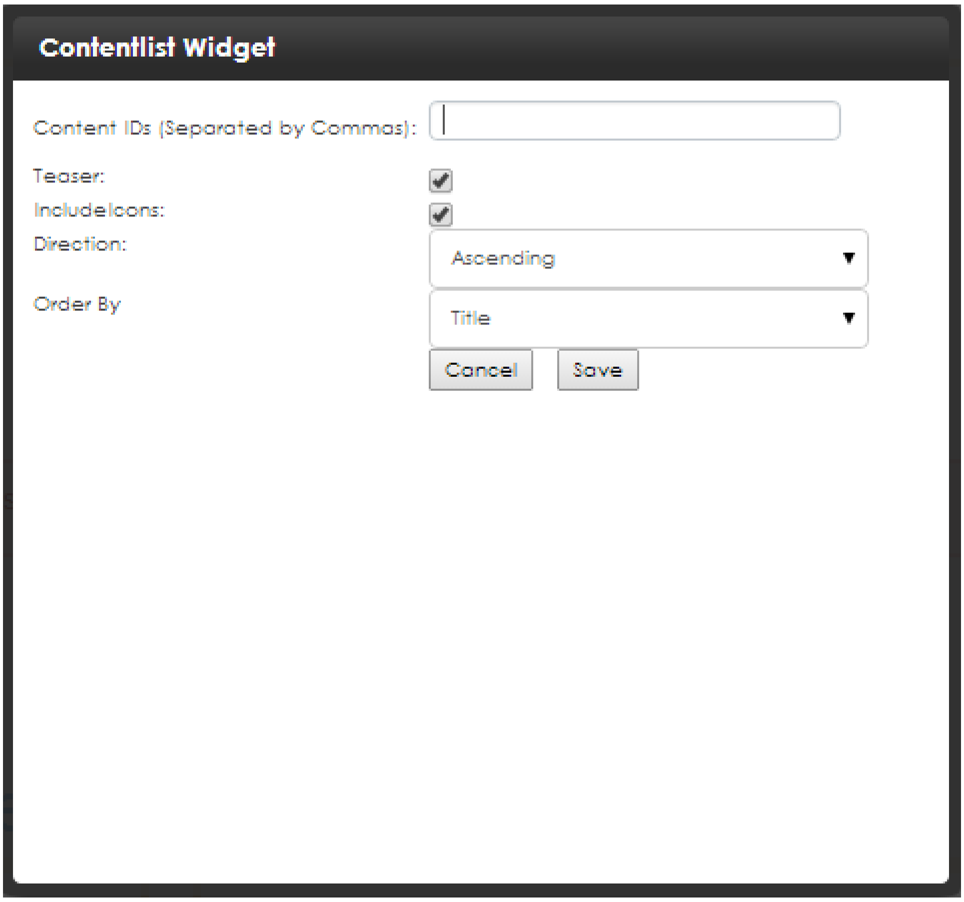
Go to a folder and choose a content item (by ID) to display that content in the widget. Alternatively, you can create new HTML content from the widget by clicking **New**.



ContentList

Displays a list of content blocks. In contrast to a List Summary, where content must be in a specified folder, the ContentList control displays content from any Ektron folder.

- **Content IDs**. Enter a comma-separated list of ID numbers for the content you want to display.
- **Teaser**. Check if you want the summary information to display with each blog post title.
- **Include Icons**. Check if you want icons to display next to their associated blog posts.
- **Direction**. Choose **Ascending** or **Descending** order.
- **Order By**. Choose to order the data by title, order of the content IDs, date modified, date created, and first or last name of the last person to edit the page.



ContentReview

Lets site visitors rate and review the current page.

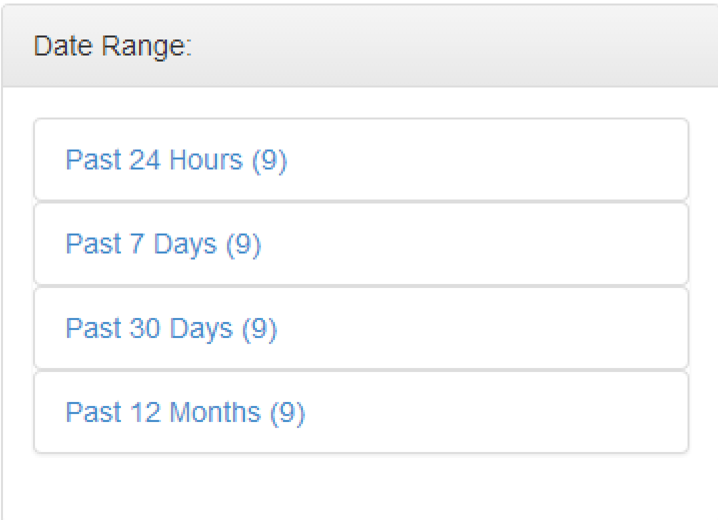
- **Star Style**. Choose 1 of the following:
  - Ajax 5 Stars
  - Ajax 5 Stars Comment
  - Ajax 5 Stars with Increments
- **Hide Review List**. Check to hide the list.
- **Review Page Size**. Enter the size (in lines) of the page.

DateFacets

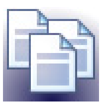
Place the DateFacets (Date Range) widget on the page to display a list of blog posts and resources that were posted during various time periods.

- **Details-Page Mode**. Ignore this check box.

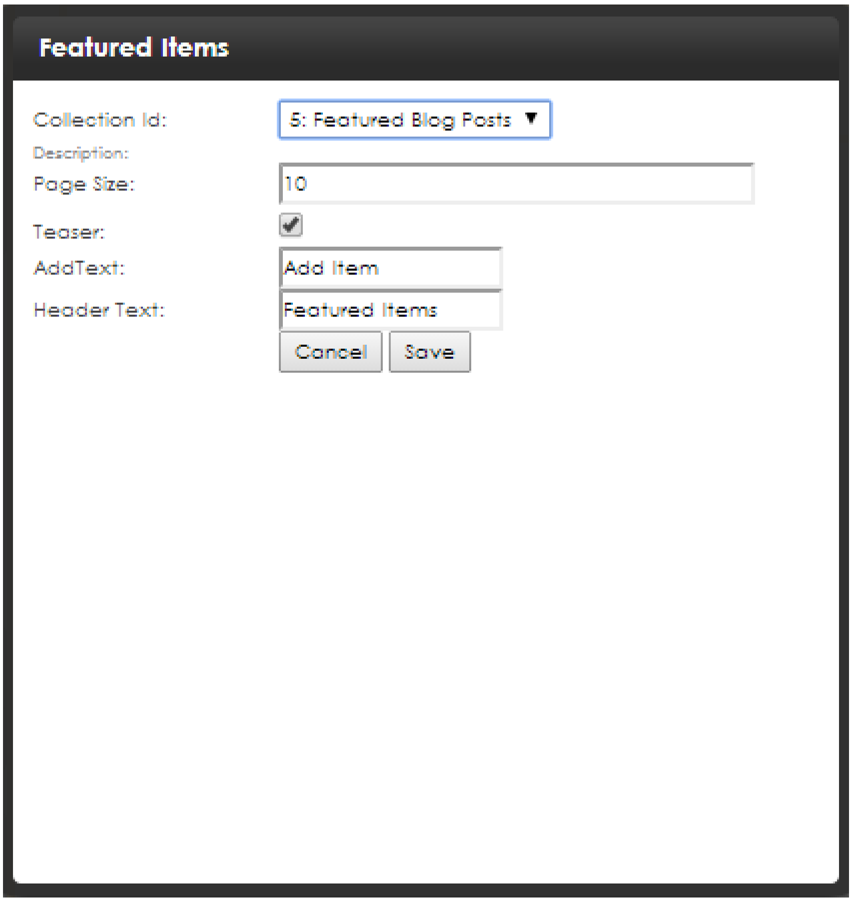
Date Facets output



FeaturedItems

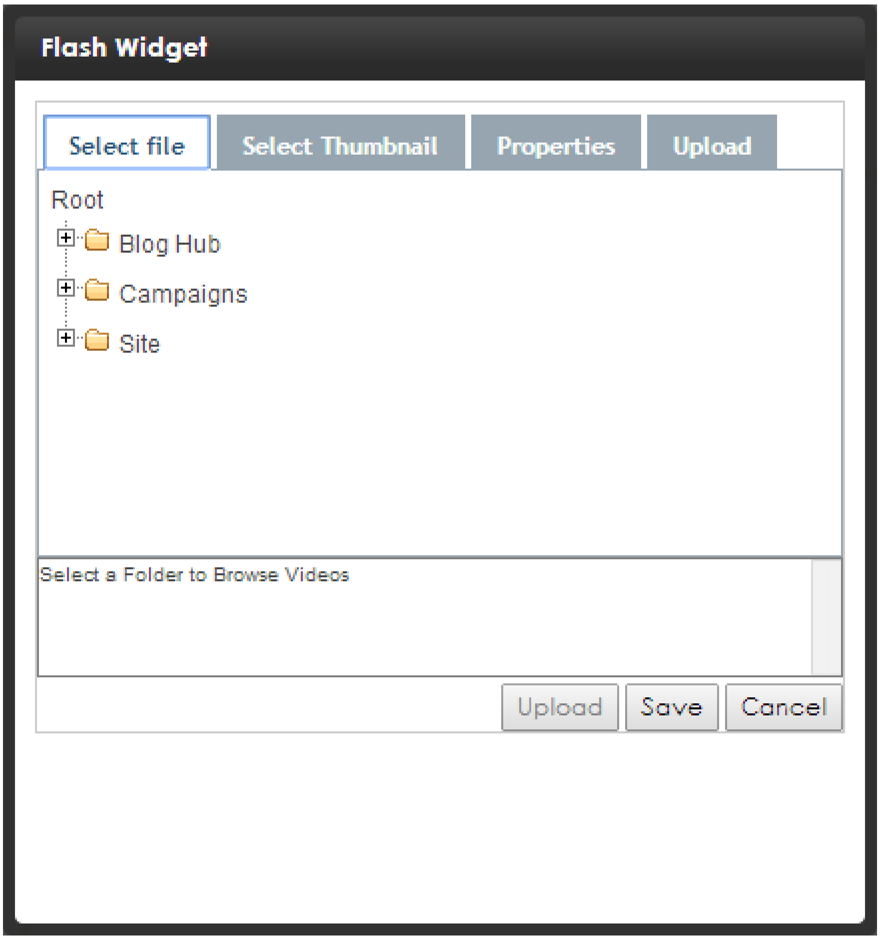


- **Collection Id**. Choose the ID of the collection you want to display.
- **Page Size**. Enter the number of items you want to display.
- **Teaser**. Check if you want to display a 1-line excerpt from the content item.
- **Add Text**. Enter text that the widget will display when adding a new item to the widget (rather than going directly in the Workarea and modifying the collection itself.)
- **Header Text**. Enter the text you want as your featured items headline.



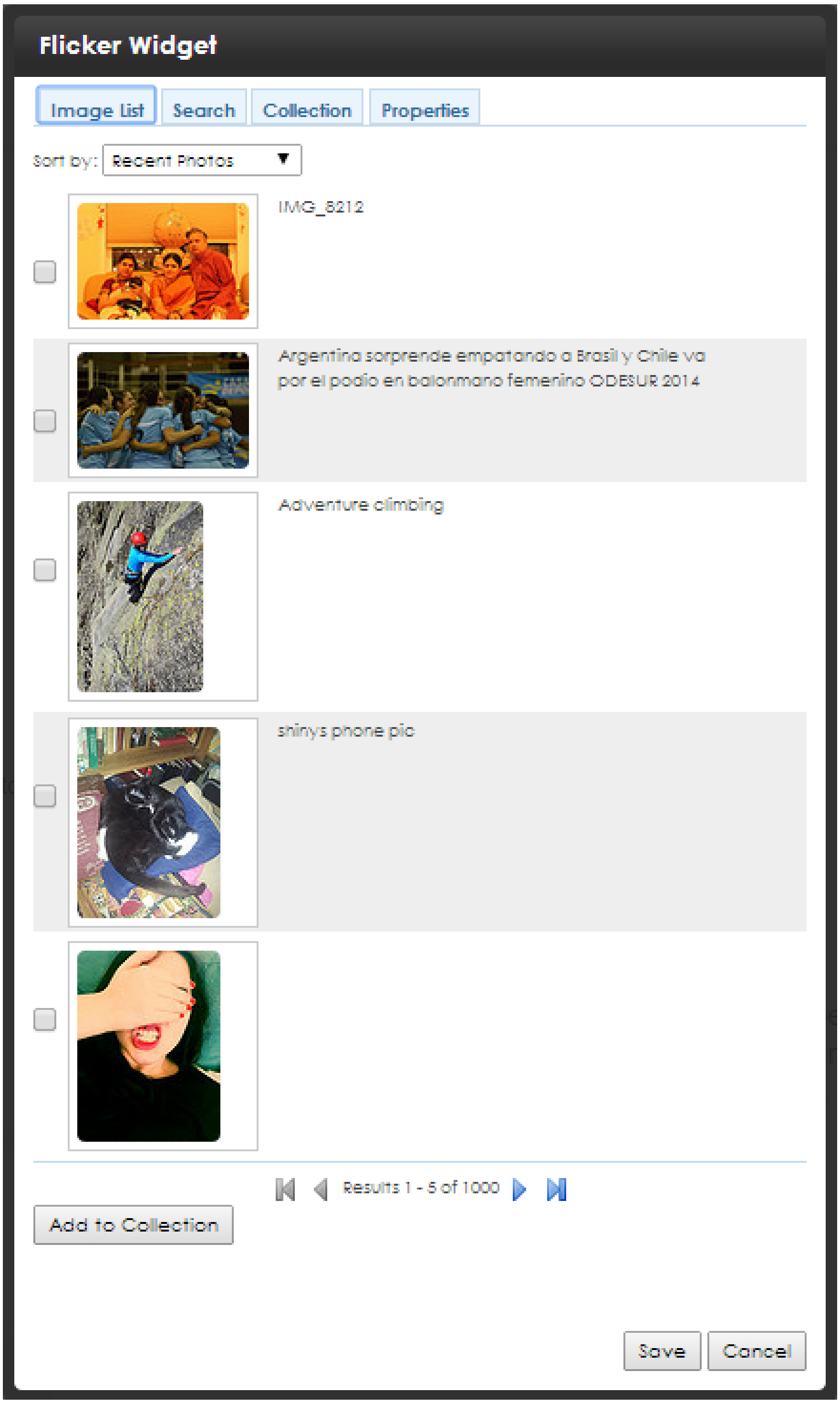
Flash

Displays a selected Flash file which resides in Ektron. You can also set the display's height and width. See *Using the Flash widget* on page 1191.



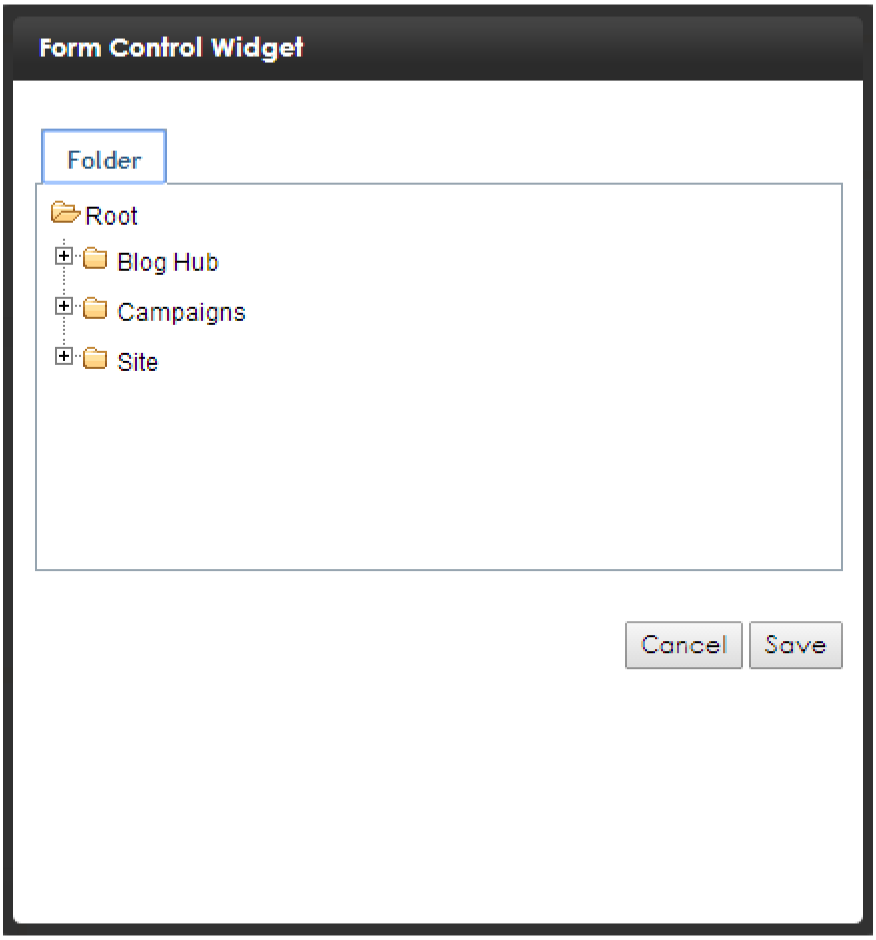
Flickr

Display Flickr's Most Recent or Most Interesting photos. The user also can select the number of rows and columns for the image display.



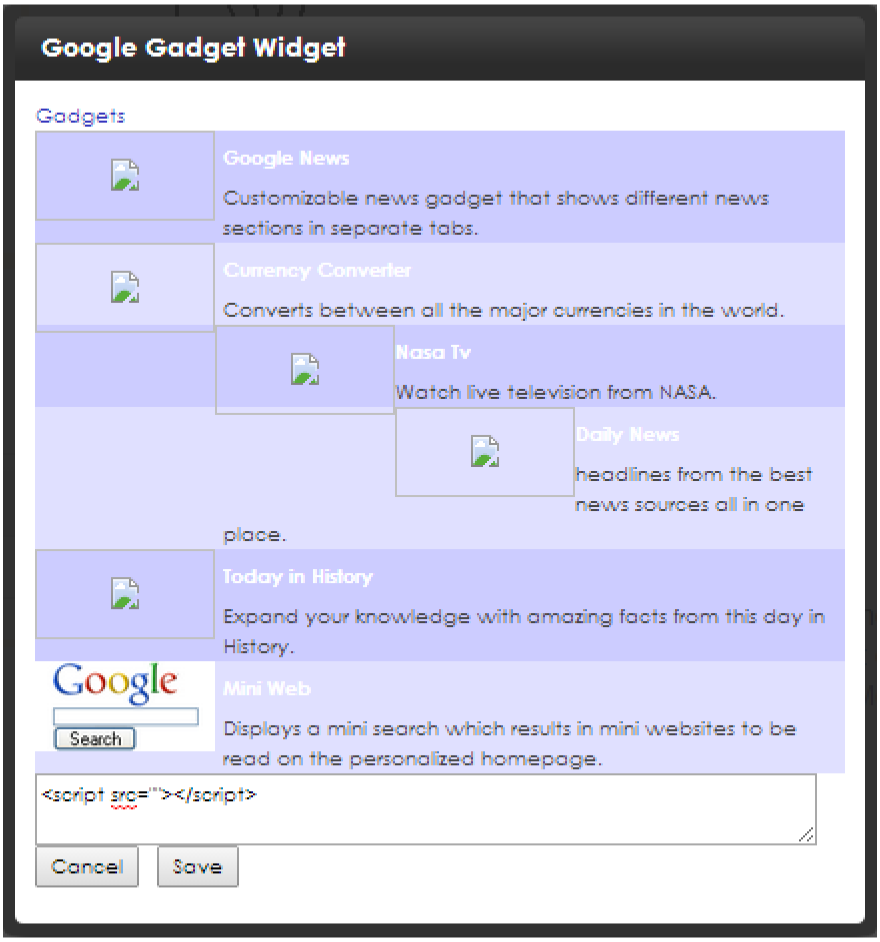
FormControl

Go to a folder and choose a form (by ID) to display in the widget.



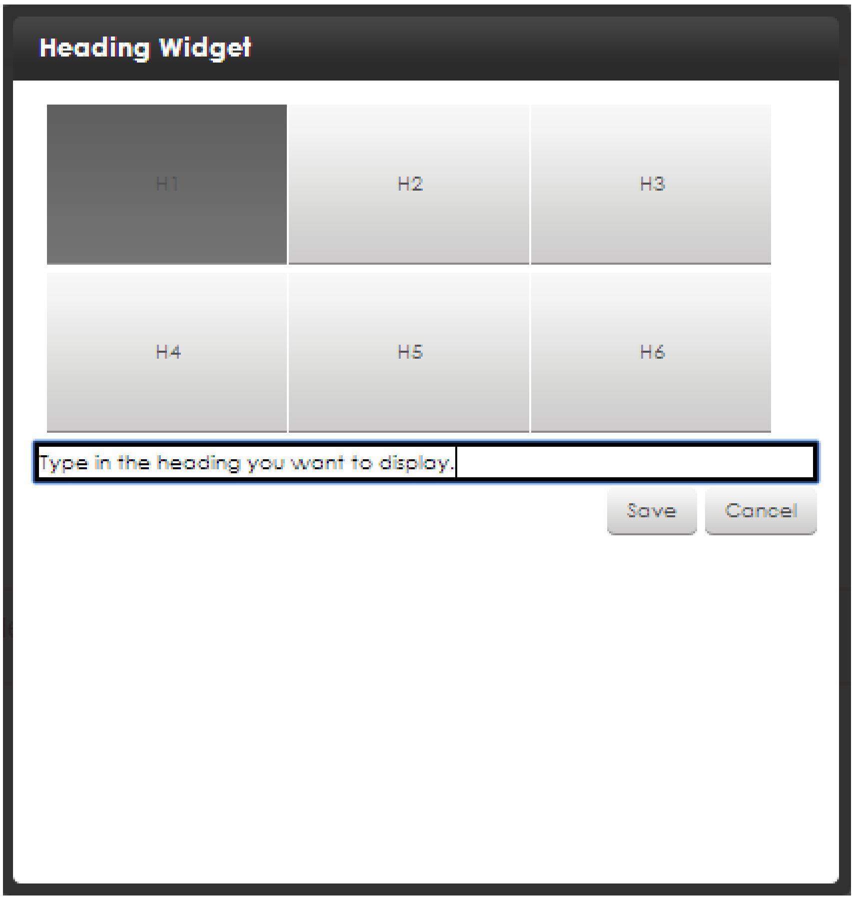
GoogleGadget

Select from several Google feeds to display in the widget.



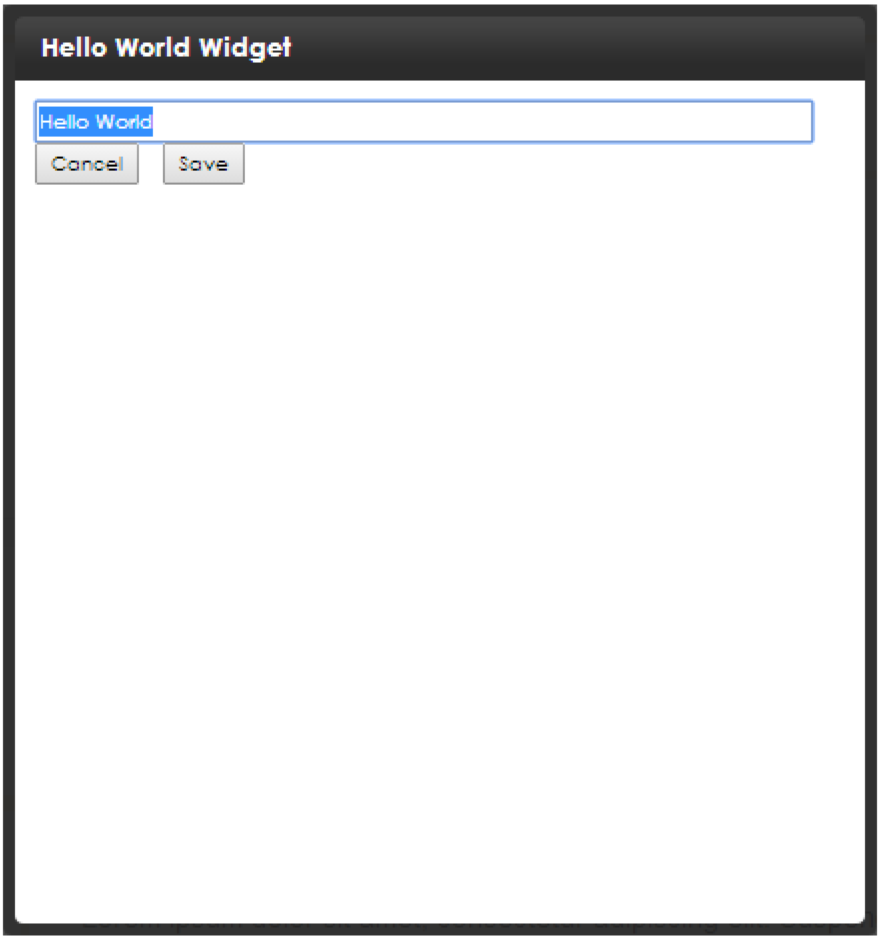
Heading

Click on the heading size you want, then type the heading text in the text entry box. Click **Save**.



HelloWorld

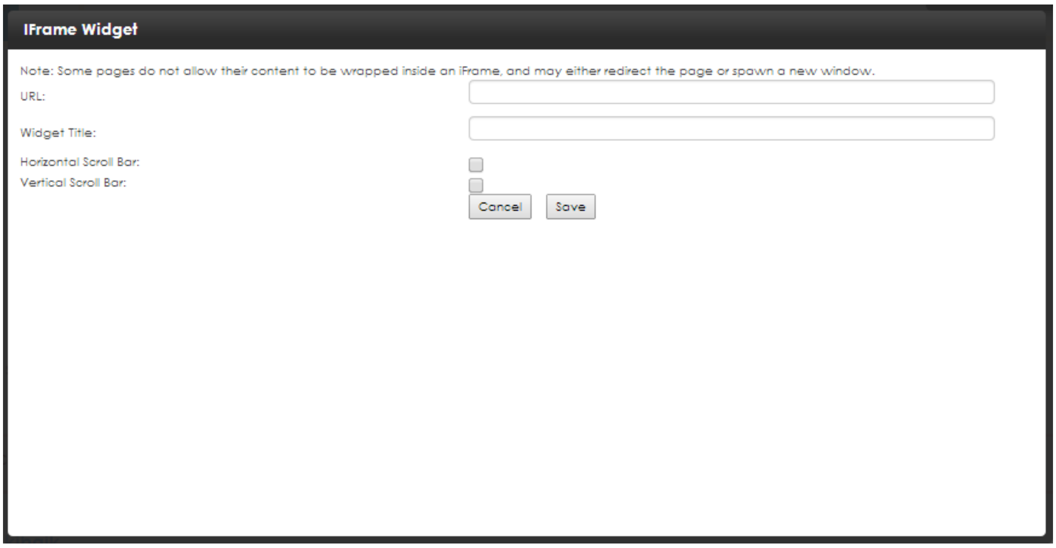
Created by Ektron to help developers understand how to create their own widgets.



iFrame

Lets you enter a path to a Web page or an item on the Web page.

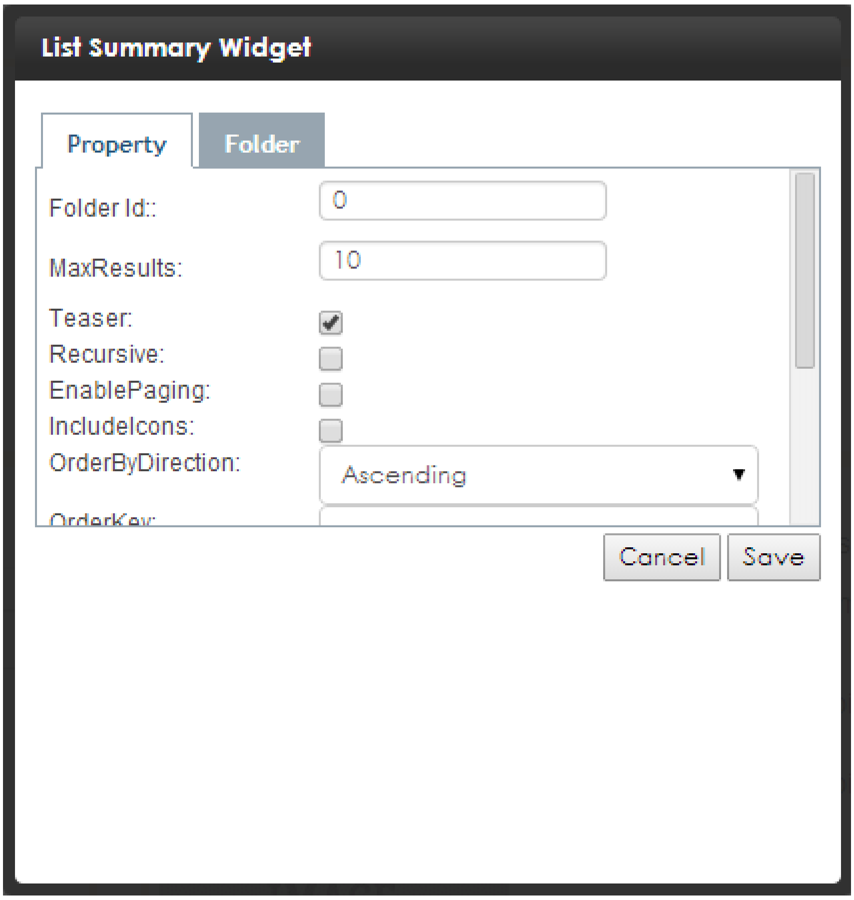
- **URL**. Enter the URL of the website you want to display in the iFrame.
- **Widget Title**. Enter text to introduce the content.
- **Horizontal Scroll Bar**. Check to enable horizontal scrolling of the content.
- **Vertical Scroll Bar**. Check to enable vertical scrolling of the content.



ListSummary

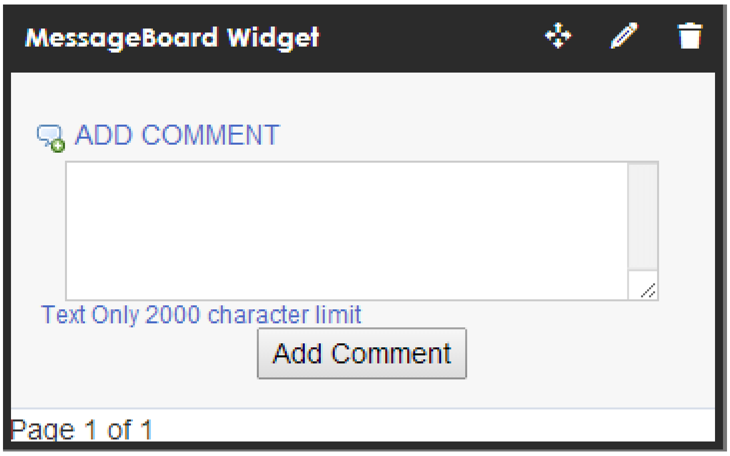
Displays an Ektron List Summary, a list of certain types of content in a selected folder. You can click on the Folder tab and go to the content or click on the Property tab and specify the following fields.

- **Folder Id**. Enter the number of the folder you want to display in the list.
- **MaxResults**. Enter the number of items you want to display in the list.
- **Teaser**. Check if you want the summary information to display with each blog post title.
- **Recursive**. Check if you want subfolders to be included in the list.
- **Enable Paging**. Check if you want to page through the specified number of titles. Leave unchecked for an infinite scrolling of blog titles.
- **Include Icons**. Check if you want icons to display next to their associated blog posts.
- **OrderByDirection**. Choose **Ascending** or **Descending** order.
- **OrderKey**. Choose to order the data by title, date modified, date created, and first or last name of the last person to edit the page.
- **ContentType**. Choose the type of content that you want, filtering the results to 1 of the following: AllTypes, Content, Forms, Archive_Content, Archive_Forms, Assets, Archive_Assets, LibraryItem, Multimedia, Archive_Media, NonLibraryContent, DiscussionTopic, CatalogEntry.
- **Add Text**. Enter text that you want to introduce the collection.
- **SelTaxonomyID**. Choose the taxonomy ID that you want to associate with this collection. Zero (0) means no association.
- **Display Selected Content**. Check if you want to show the blog content in the collection on the page.



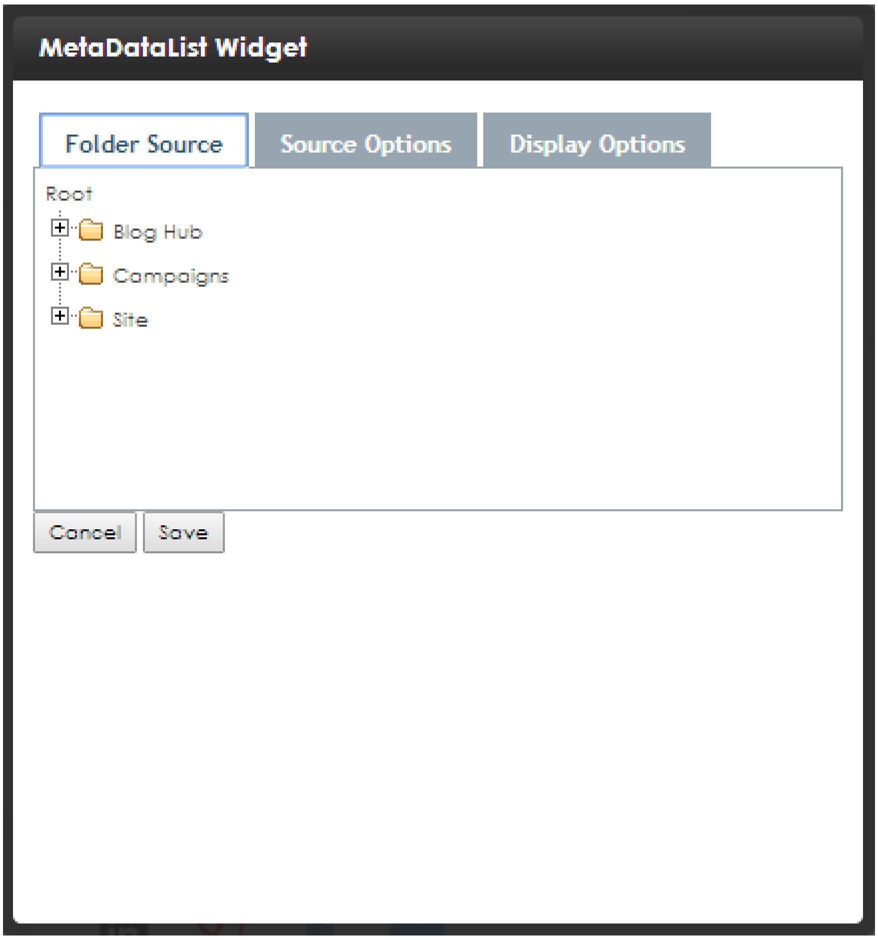
MessageBoard

Lets a site visitor leave comments on the page.



MetaDataList

Displays content whose metadata fits a selected folder location and keywords.



MostPopular

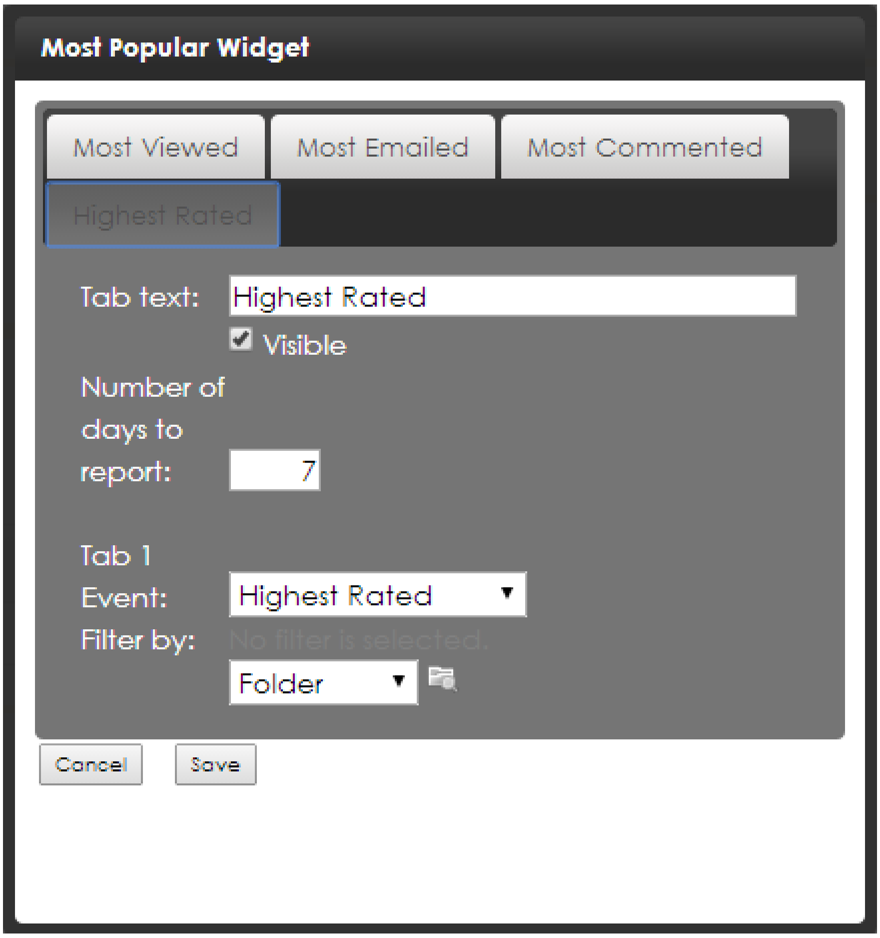
Reports on the following categories of content on your website: Most Viewed, Most Emailed, Most Commented, or Highest Rated. See also the *Most popular widget* on page 494.

- **Tab text**. The text that appears on this tab. In the above example, the left tab's text is the default Most Viewed.
- **Visible**. Determines if the tab you are editing appears on the widget. At least one tab must appear. Checked is the default.
- **Number of days to report**. The number of days for which to display the data. The default is 7.
  - The current day is not counted, since it is incomplete. So if you enter 1, you see information for all of yesterday and today.

- The date calculation is based on the clock on the website's server.

NOTE: You can change this to any number you wish. However, the widget can only show data for days for which data is stored in your database.

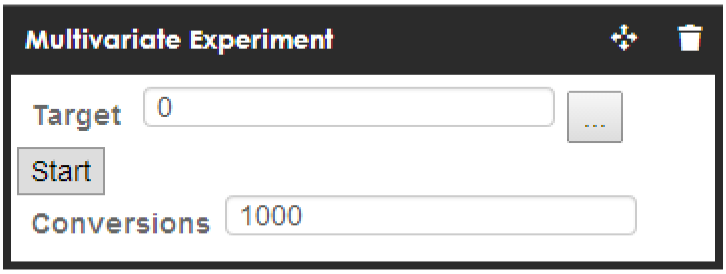
- **Tab 1 Event**. Determines the information appears when a tab is clicked.
  - Click Event
  - Most Emailed
  - Most Commented
  - Highest Rated
  - Most Viewed
- **Filter By**. You can restrict the content appears on this widget by selecting a folder (default) or a taxonomy.



MultivariateExperiment

This controls the experiment. Settings include the target content number, start/stop button and the Report hide/show button. See also *Measuring Web experiences with multivariate testing* on page 1087.

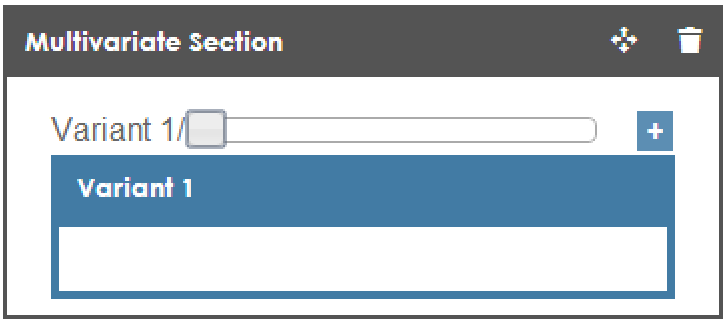
- **Target**. Enter the content ID of the target page. To help find the content, browse the content folders by clicking Browse (...).
- **Start/Stop**. Click this button to start or stop the experiment.
- **Conversions**. the number of conversions any variations must have before the experiment is automatically stopped. For example, 1000 tells the experiment to automatically end when one variation has reached 1000 conversions.



MultivariateSection

Drag any type of content widget into the Multivariate Section widget. These produce the variations used during the experiment. See also *Measuring Web experiences with multivariate testing* on page 1087.

- **Variant 1**. Place a content widget into Variant 1 and specify its content.
- **Variant *n***. Click on the Plus icon to add another variant.

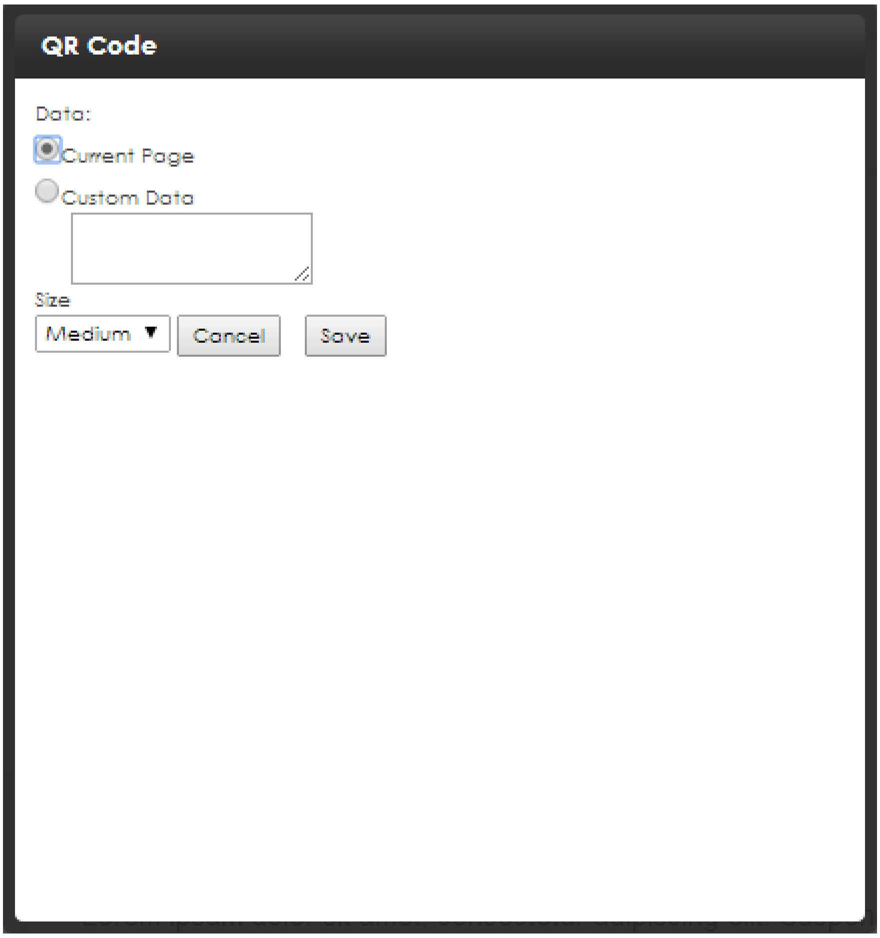


MultivariateTarget

When a page view occurs on a page containing this widget, the conversion count is increased. See also *Measuring Web experiences with multivariate testing* on page 1087.

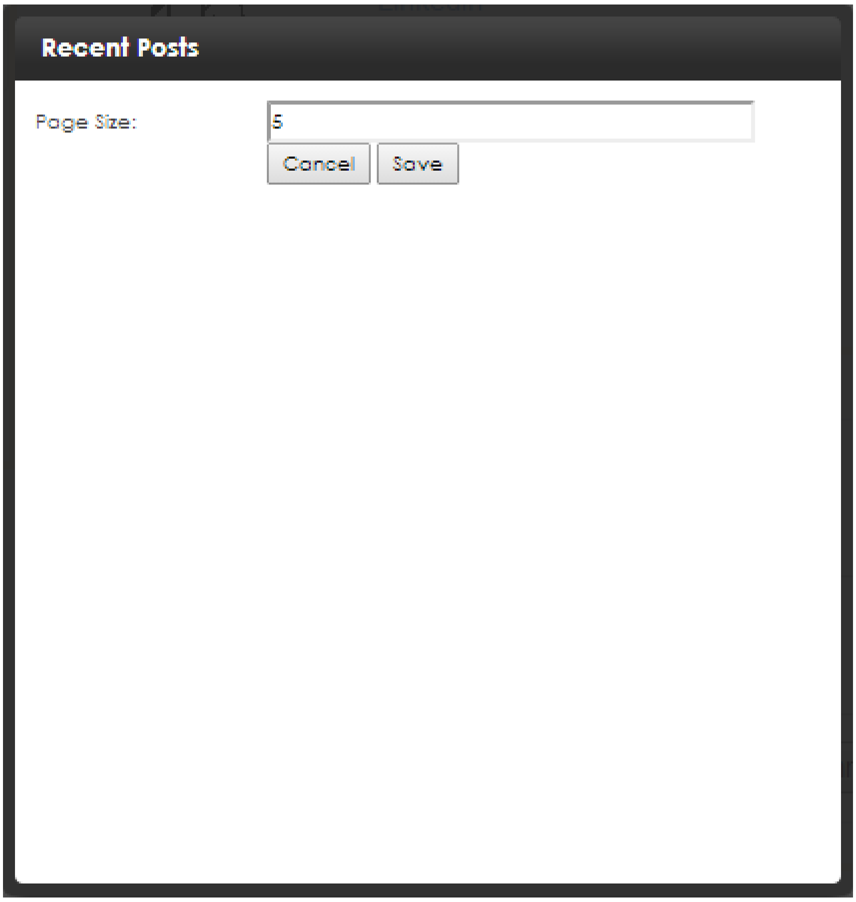
QRCode

Generates a QR code based on the information you provide.

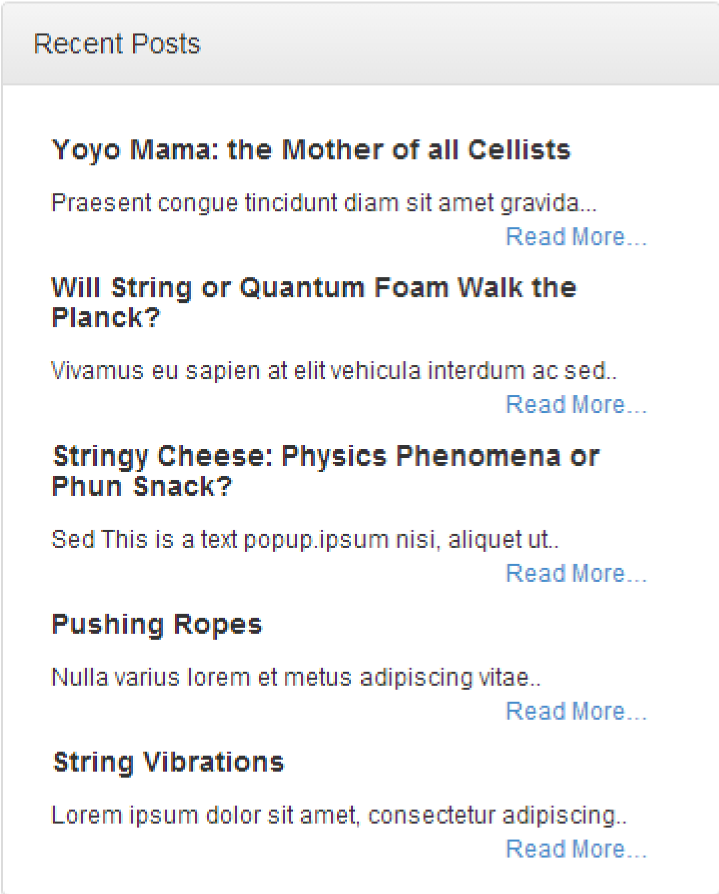


RecentPosts

- **Page Size**. Enter the maximum number of items to show.



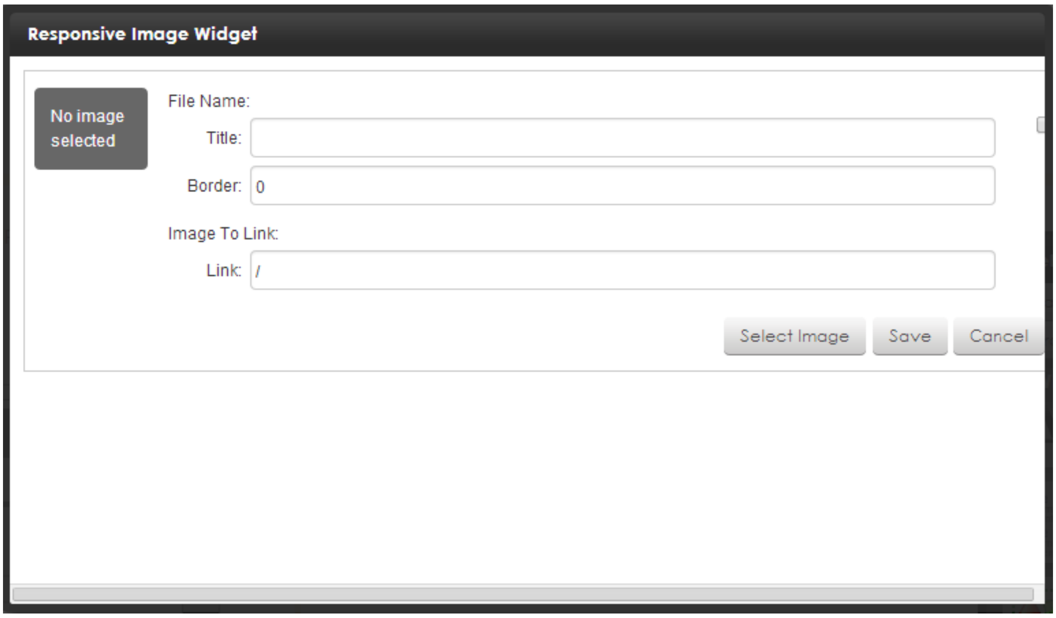
Recent Posts Output



ResponsiveImage

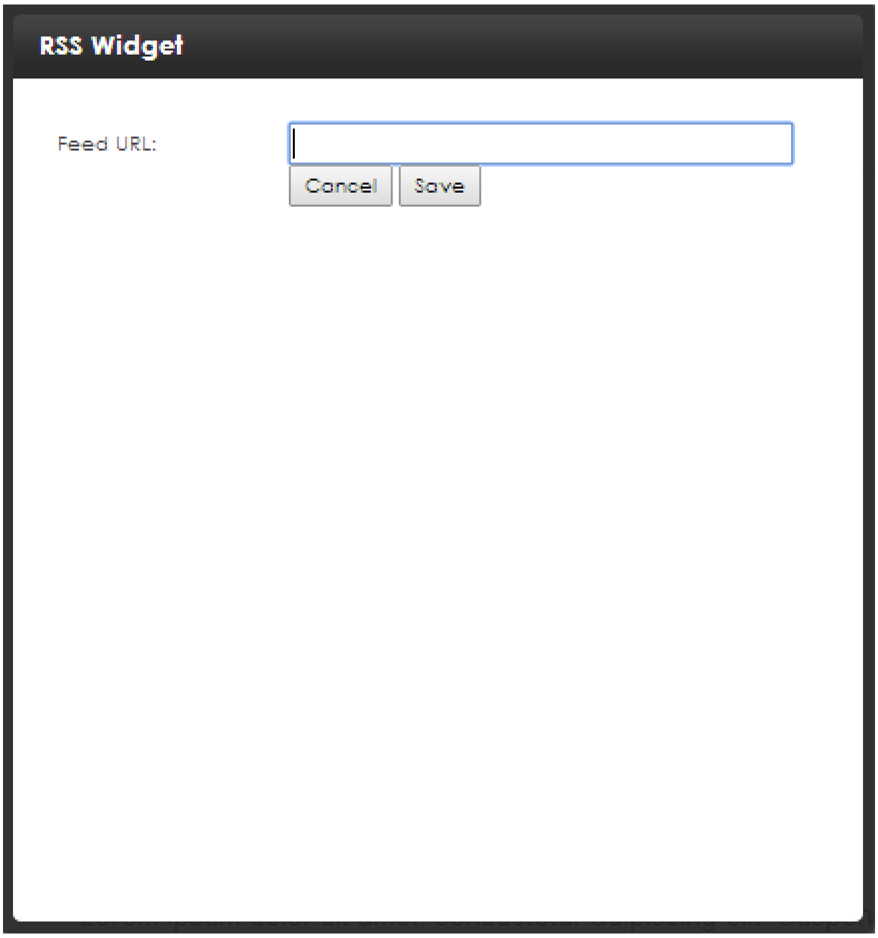
Adds a responsive image to a page. Click **Select Image** to browse for an image in the Library.

- **Title**. Enter the text that you want to appear when you hover over the image.
- **Border**. Enter the number of pixels you want the image border to have.
- **Link**. Enter a URL that you want to load when the image is clicked on.

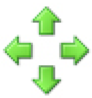


RSSFeed

Lets you enter the path of an Really Simple Syndication (RSS) feed.

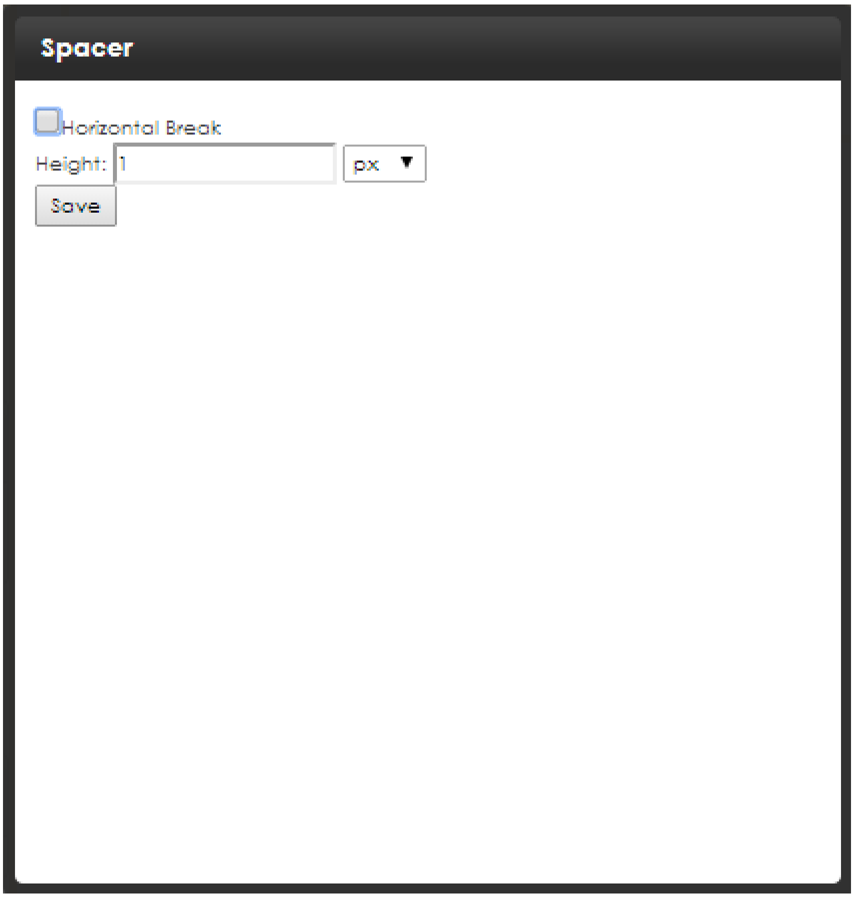


Spacer

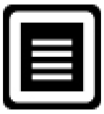


Lets you create an unused space on the Web page.

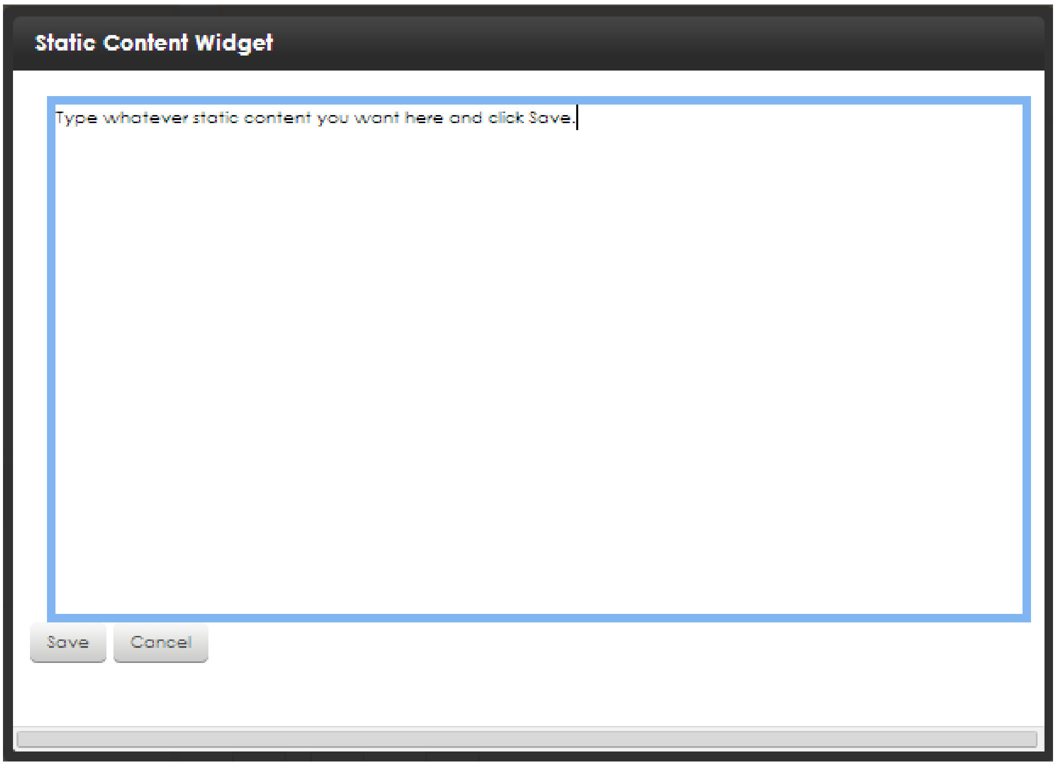
- **Horizontal Break**. Check to display a line in the space.
- **Height**. Choose the height of the space in em, pixel (px), or point (pt) values.



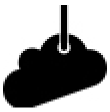
StaticContentBlock



Type static content into the text entry box and click **Save**. The text is displayed on the page.



TagCloud

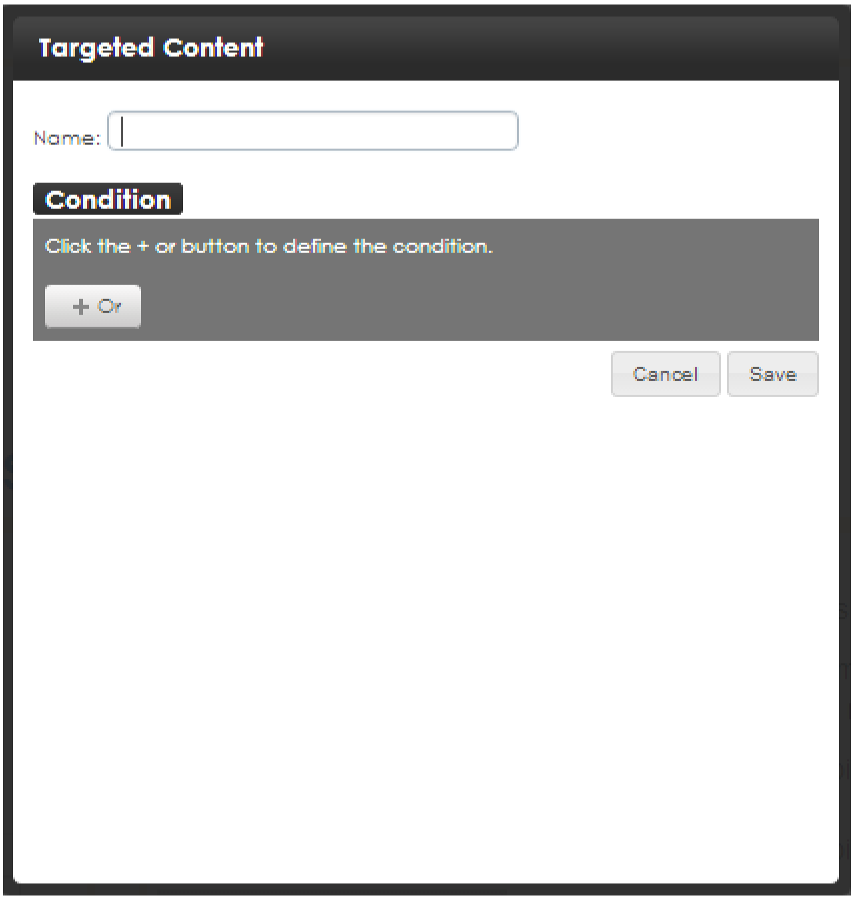


- **Minimum Font Size**. Enter the point size of the smallest font to be displayed in the tag cloud.
- **Maximum Font Size**. Enter the point size of the largest font to be displayed in the tag cloud.

TargetedContent

Lets you create a set of conditions. As soon as any condition evaluates to true, an appropriate widget appears. See *Connecting visitors with targeted content* on page 1063 for information about the TargetedContent widget.

- **Name**. Give a name to the set of criteria for your targeted content.
- **Condition**. Click on the +Or button to specify 1 or more criteria. For example, a condition may stipulate that the URL parameter terms contains either "pizza" or "Italian."



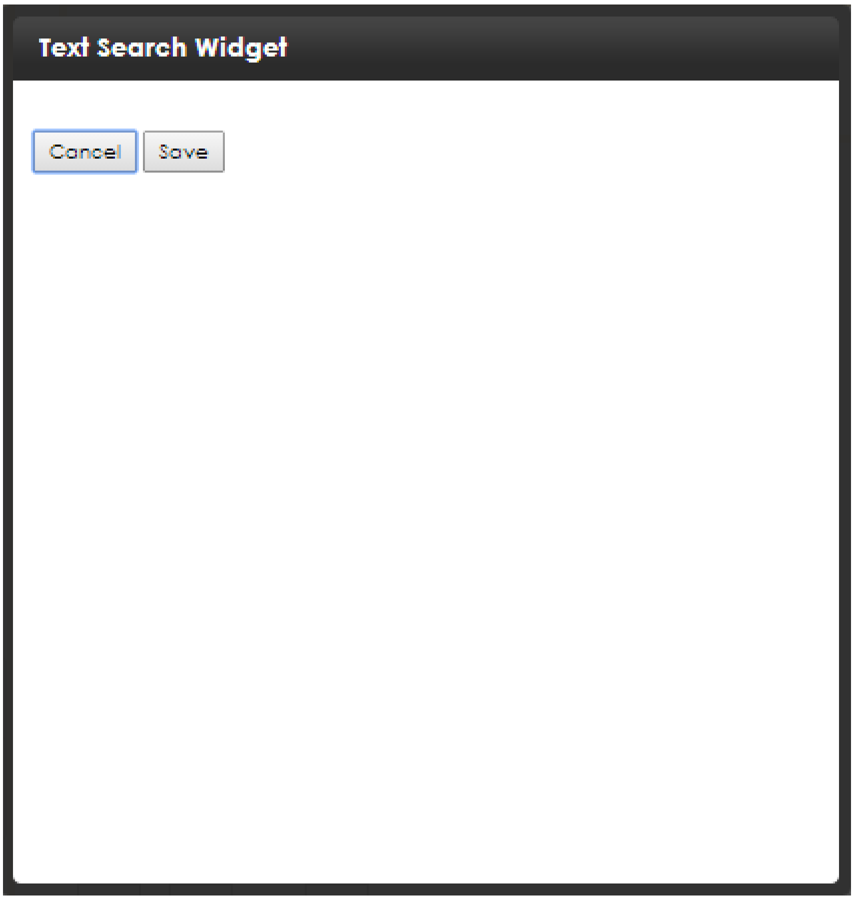
TaxonomySummary

Displays content assigned to a taxonomy category.

See also *Organizing content with taxonomies* on page 1253.

TextSearch

Place on a PageBuilder page to add a search box to the page.



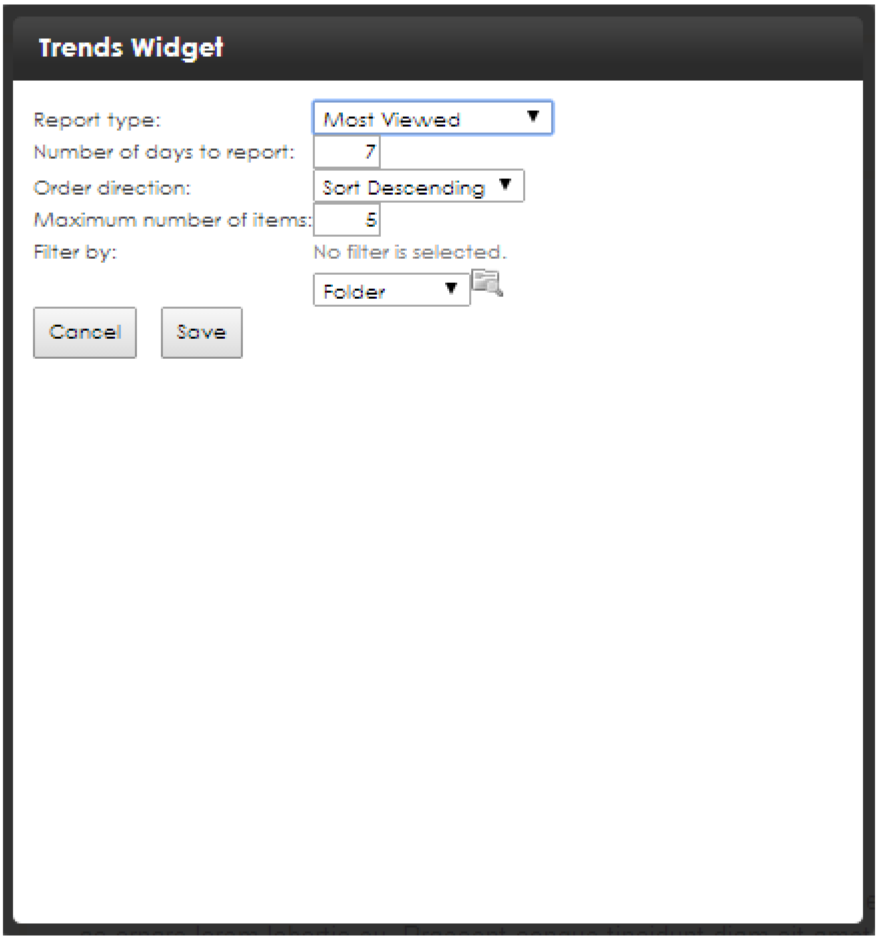
Trends

By default, the Trends widget shows the Most Viewed content on your website. You can edit the widget so it displays any of these content categories instead: Most Emailed, Most Commented, or Highest Rated.

- **Report Type**. Report types are:
  - Most Viewed (default)
  - Most Emailed
  - Most Commented
  - Highest Rated
- **Number of days to report**. The number of days for which to display the data. The default is 7.
  - The current day is not counted, since it is incomplete. So if you enter 1, you see information for all of yesterday and today.
  - The date calculation is based on the clock on the website's server.

    NOTE: You can change to any number you wish. However, the widget only shows data for days for which data is stored in your database.

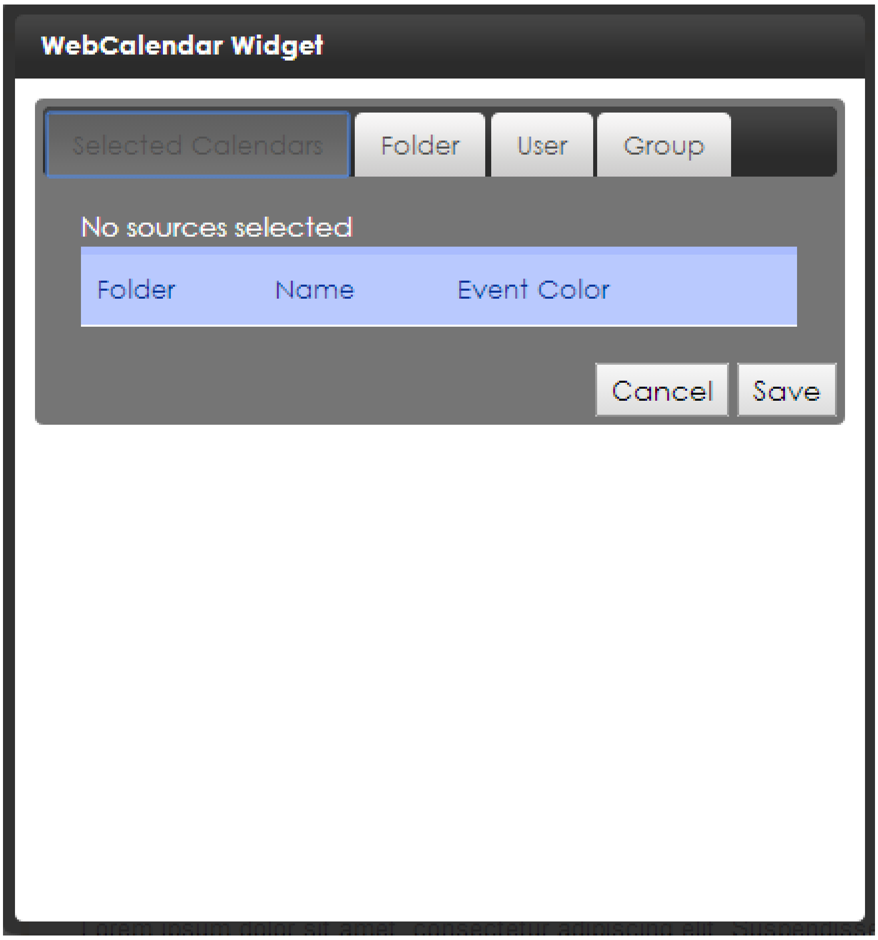
- **Order Direction**. The direction in which search results are sorted. The default is Descending.
  - Ascending. Alphabetical results from A to Z; numeric values low to high; dates from oldest to most recent
  - Descending. Alphabetical results from Z to A; numeric values high to low; dates from most recent to oldest
- **Maximum Number of Items**. Enter the maximum number of content items that may appear on the Trends widget. The default is 5. The Ektron database maintains a count (number of hits) for each content item, for each date. When you select a number of days, the Trends widget displays the content with the most hits during that date range, up to the number you set in this field.
- **Filter By**. You can filter which content appears on this widget by selecting a folder or a taxonomy.



WebCalendar

Provides full calendar functionality, including adding events.

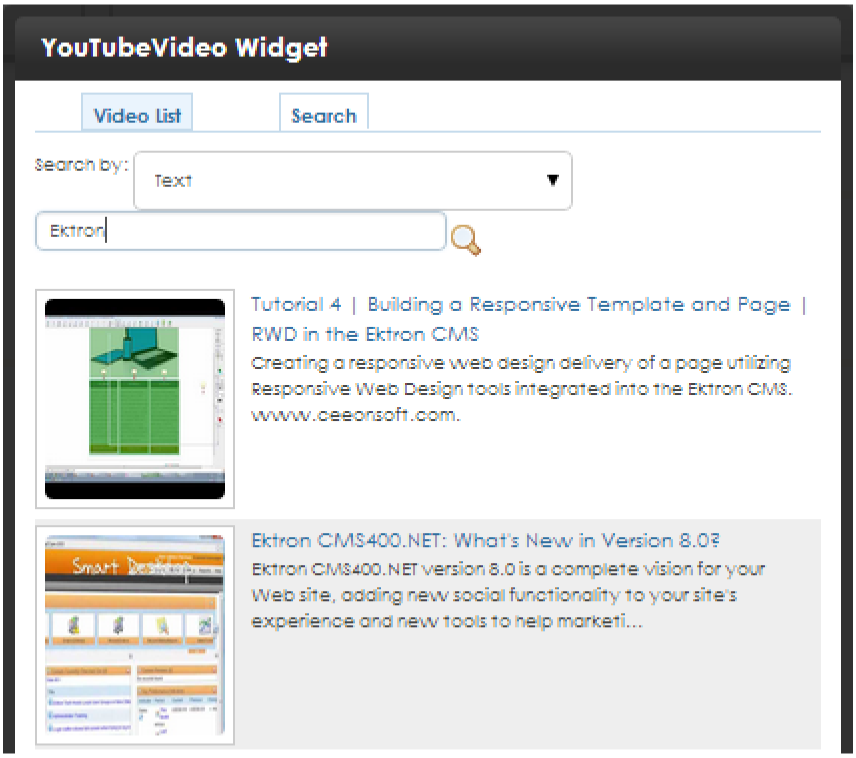
See also *Working with calendars* on page 913.



YouTubeVideo

Lets you embed code for any YouTube video.

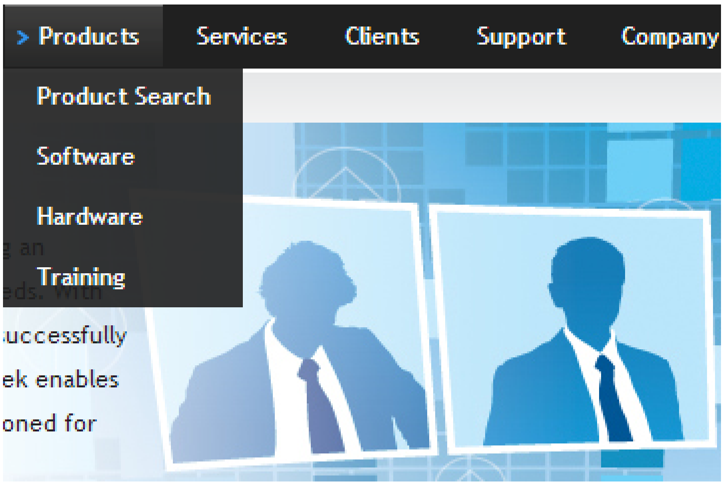
- **Video List**. Click on this tab to display videos based on the Sort By drop-down.
- **Sort By**. Choose 1 of the following sort criteria: recently featured, top rated, top favorites, most viewed, most popular, most recent.
- **Search**. Click on this tab to display videos based on what is found by the Search By field.
- **Search By**. Enter text to search for videos.


YouTubeVideo Widget
Video List
Search
Search by:
Text
Ektron
Tutorial 4 | Building a Responsive Template and Page | RWD in the Ektron CMS
Creating a responsive web design delivery of a page utilizing Responsive Web Design tools integrated into the Ektron CMS. www.ceeonsoft.com.
Ektron CMS400.NET: What's New in Version 8.0?
Ektron CMS400.NET version 8.0 is a complete vision for your Web site, adding new social functionality to your site's experience and new tools to help marketi...

24

Creating menus for your website

Ektron lets you create and maintain a drop-down menu system for your website. The menu options can link to content, library files, external hyperlinks, and submenus. The following image shows an open Products menu on the Ektron Ontrek sample site.



You must be one of the following users to work with menus.

- a member of the Administrators user group
- assigned the Collection and Menu Admin role; See also: *Defining roles* on page 1464
- assigned the Menu Admin role

An Ektron developer can use the MenuView templated server control to place a menu on a Web form. See MenuView.

NOTE: If you choose to hide the border that surrounds content when you are logged in, the **Add** and **Edit** options are also hidden. This lets you view the page as it appears when not logged in. If the page is set to show borders and you still do not see **Add** and **Edit**, the feature may be turned off. Ask your administrator or website developer for more information.

Adding a menu

You can add a menu to a content folder, or to the root folder through **Workarea > Content > Menus**. When you add a menu to a content folder, the menu is associated with that folder. After creating the menu, you can assign items to it. See *Adding a menu item* on page 1241.

Adding a menu to a content folder

1. Go to a content folder.
2. The current language appears as a flag next to the screen title. To create the menu in this language, proceed to the next step. To change the new menu's language, click **View > Language** and select the new language.
3. Click **New > Menu**. The Add Menu screen appears. For information about the

fields on this screen, see *Filling out the Add menu and Edit menu screens* below.

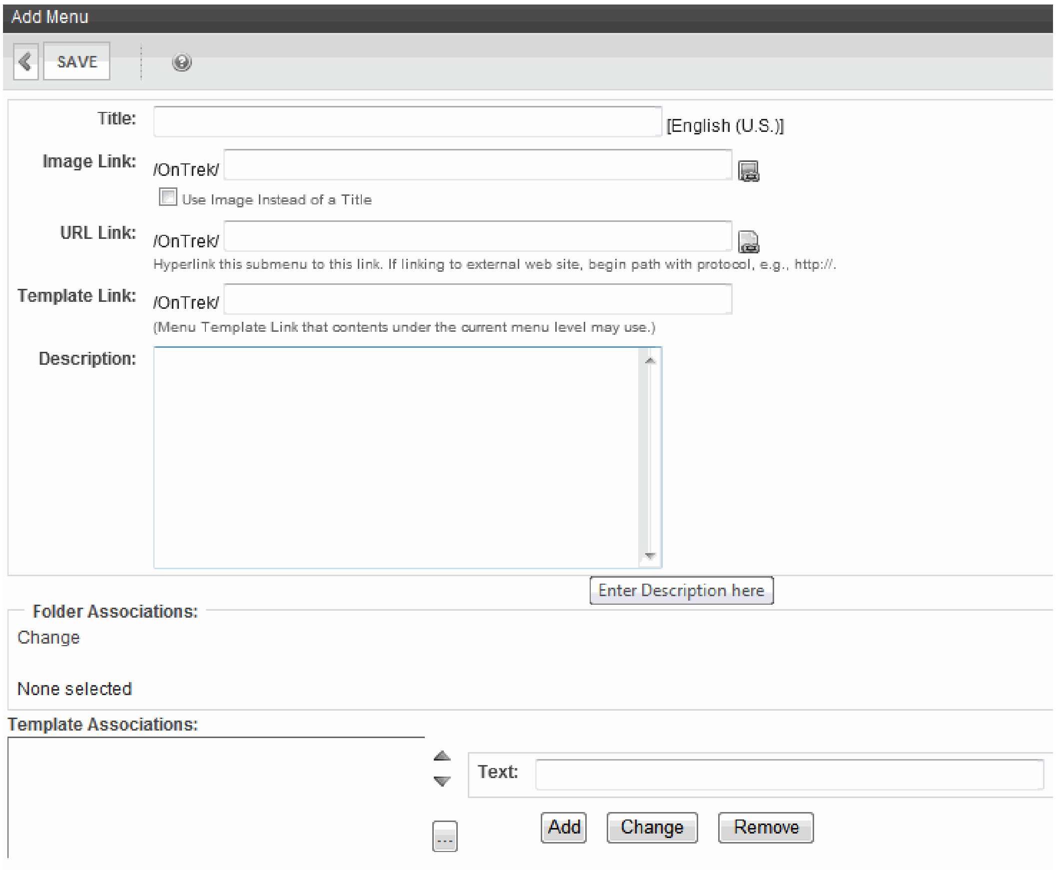
4. Click **Save**.

Adding a menu to the root folder through the Menus tab

1. Choose **Workarea > Content > Menus > Menus**.
2. The current language appears in the **Language** field. To create the menu in this language, proceed to the next step. To change the new menu's language, select one from the **Language** field drop-down.
3. Click **Add**. The Add Menu screen appears.For information about the fields on this screen, see *Filling out the Add menu and Edit menu screens* below.
4. Click **Save**.

Filling out the Add menu and Edit menu screens

The Add Menu and Edit Menu screens have the same information.

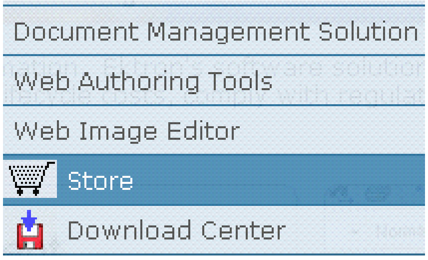


The following list describes the fields for both screens.

- **Title**. The name of the new menu that appears on the Web page.
- **Image Link**. You can have an image appear next to or instead of the menu title. The image must reside in the library. If it does not, add it before proceeding. For

more information, see *Adding a file to the library* on page 680.

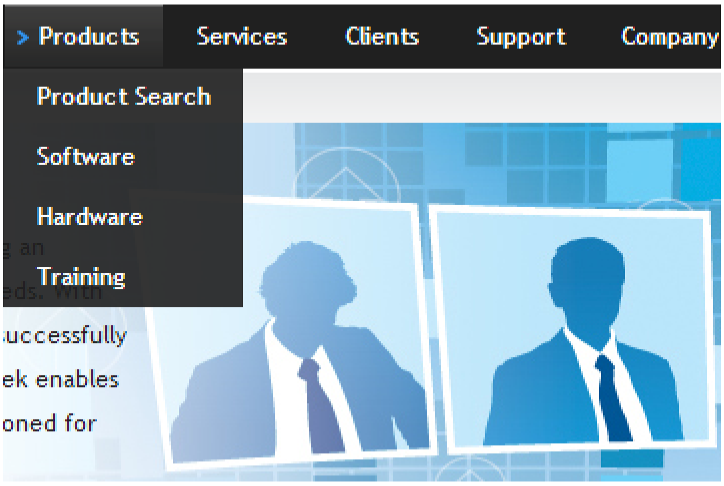
For example:



To do this:

1. Click the icon to the right of the **ImageLink** field ( ). The library window opens.
2. Go to the folder that contains the image you want to use.
3. Click **Insert**.
4. You can replace menu text with an image so that only the image appears on the menu by checking the **Use image instead of a title** box.

- **URL Link**. After you create a menu, your developer links it to text or an image on a Web page by modifying a page template. When a site visitor moves the cursor over the text or image, the menu appears. In the following image, the menu appears when the site visitor moves the cursor over **Products**.



You can also assign a URL link to a menu using this field. If you do, and the user *clicks* the link text or image, he jumps to the specified page.

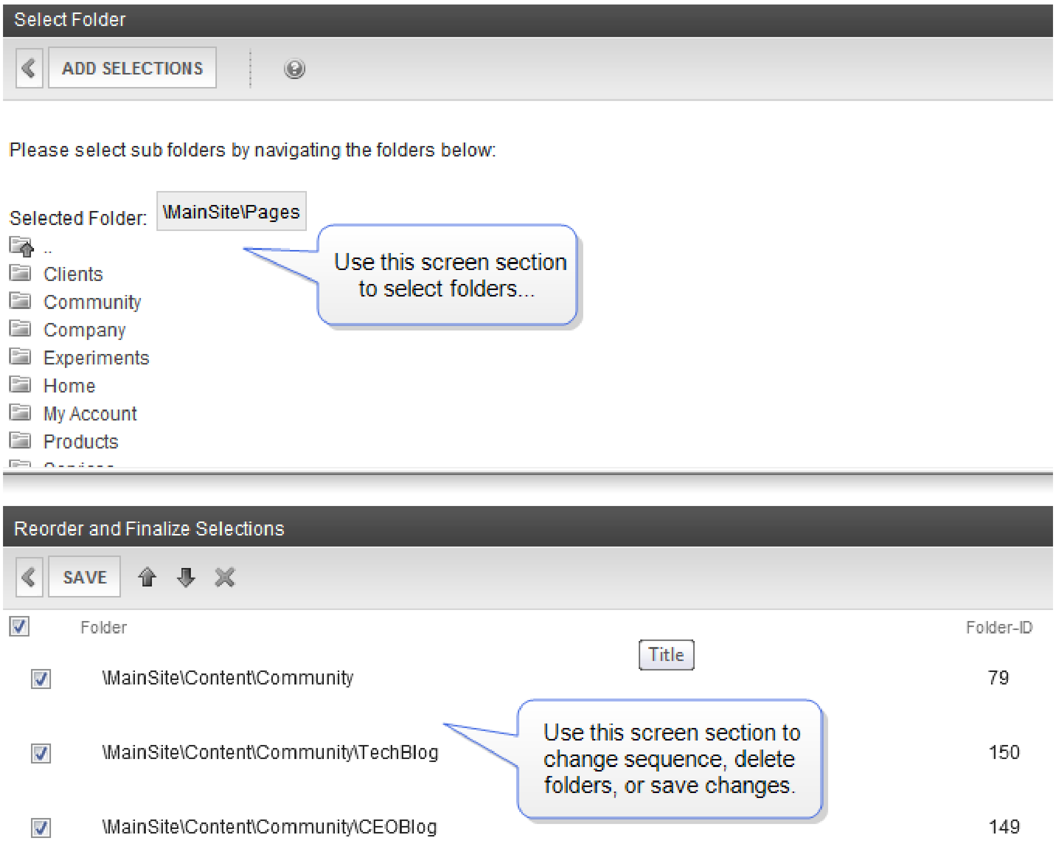
For example, in this field, you assign the product landing page, `siteroot/products.aspx`. In the illustration above, if the user *moves the cursor* over **Products**, the assigned menu appears. However, if the user *clicks***Products** , he jumps to `siteroot/products.aspx`. The path may be....

- relative to site root, such as `siteroot/jobs.aspx`
- a static template path or a dynamic path, such as `wellness.aspx?id=40&wellness=Hemophilia`
- an external hyperlink, such as `http://www.example.com`.

- **Template Link**. If you want to apply a template to this menu, enter it here. If you do, content on this menu uses this template when selected from the menu. If you do not, this menu's content uses the template specified in its Quicklink.

> **NOTE:** This field applies to content only. It has no effect on other types of menu items (such as images). Also, this field only affects content that dynamically references a content block, such as `/CMS400Min/therapies.aspx?id=84`. If the menu option is a template that includes content (for example, `/CMS400Min/news.aspx`), the template identified here is ignored.

- **Description**. Add a more detailed description for the menu.
- **Folder Associations**. When you click **Change**, the Select Folder screen appears. See also: *Assigning a folder or template to a menu* on the next page



  - You can assign 1 or more folders to a menu by choosing a folder and clicking **Add Selections**. When you are done, click **Save** in the lower part of the screen (Reorder and Finalize Selections screen). You can click **Cancel** (

) to exit without saving your changes.
  - To reorder a folder on the Reorder and Finalize Selections screen, click on a folder (highlighting it) and use the up and down arrows.
  - To remove a folder from the list, check the box next to the folder on the Reorder and Finalize Selections screen, and click **Delete** ( ).

- **Template Associations**. Enter the name of 1 or more templates in the Text field and click Add. The template name appears in the Template Associations box. You can also click **Browse** (...) to select a template from the CMS. when you have more than template associated, you can reorder them, remove them, or change the names (to another valid template name). See also: *Assigning a folder or template to a menu* below.

Assigning a folder or template to a menu

When you assign a folder or template to a menu, it exposes a menu whenever a content item that resides in a selected folder appears, or a content item that uses 1 or more of the selected templates appears. As a result, a user looking for a specific item sees similar items. For example, if your website sold books, your folders or templates may be organized by genre. One of your folders or templates is *Teen Fiction*. You create a submenu that contains the top 5 sellers in *Teen Fiction*. You then associate the *Teen Fiction* folder or template with that submenu. When a site visitor finds views a book in that category, a Flex Menu in the page's left column displays the top 5 Teen Fiction titles.

All of the following conditions must be true for the Flex Menu to automatically display selected items on an associated submenu.

- You assign a folder or template to a menu.
- A user goes to a content item that resides in the folder, or content that uses the template.

  NOTE: Navigation to the content can consist of clicking a quicklink, a menu option, a content list, the result of a search, and so on.

- A Flex Menu whose `EnableSmartOpen` property is `true` appears on the screen.

Deleting a menu

1. Open the View Menu screen.
2. Click the menu you want to delete.
3. Click **Delete** ( ).
4. Click **OK** to delete the menu.

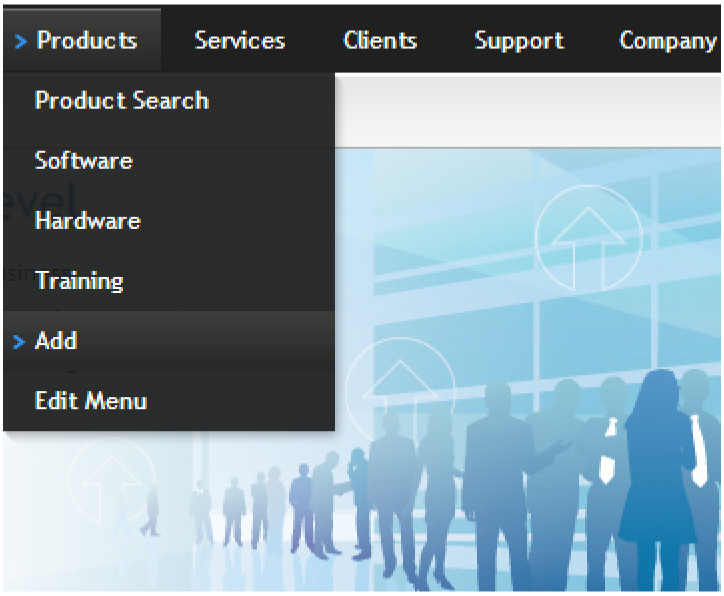
NOTE: Deleting a menu automatically deletes all menu items associated with it. Do not confuse the menu link with the item itself. For example, deleting a menu deletes its *links* to content but has no effect on the content.

NOTE: Only certain users are allowed to delete menus. See *Auditing changes* on page 632.

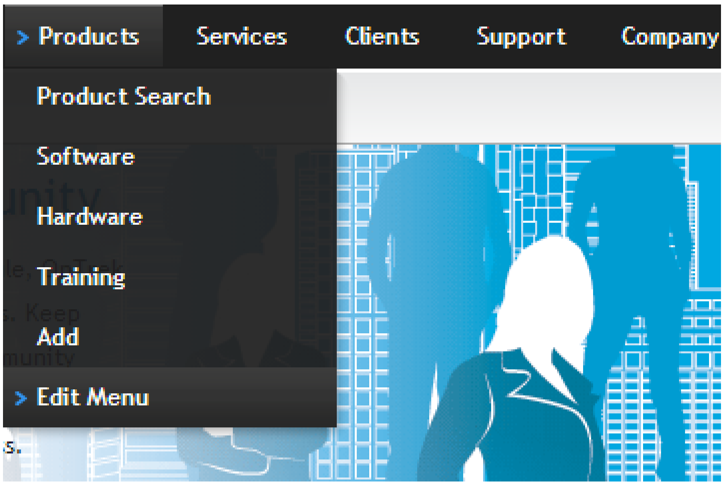
Adding a menu item

You can add menu items in the following ways:

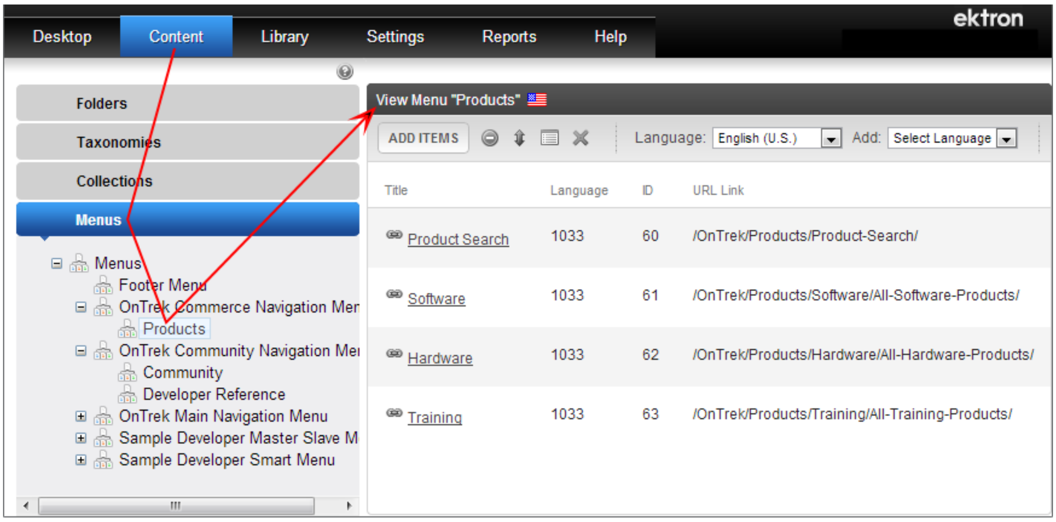
- Choose the website's **Add** option on a menu. The Add New Item screen appears.



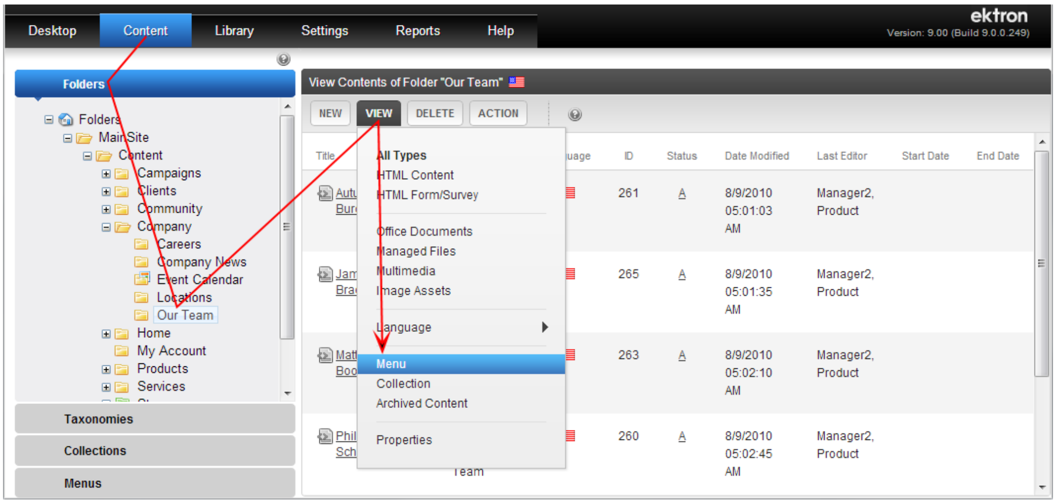
- Choose the website's **Edit Menu** option and then edit its menu items on the View Menu screen.



- Choose **Workarea > Content > Menus > {Menu}** and then edit its menu items on the View Menu screen.



- Choose **Workarea > Content> Folders > {folder} > View > Menu** and then edit its menu items on the View Menu screen.



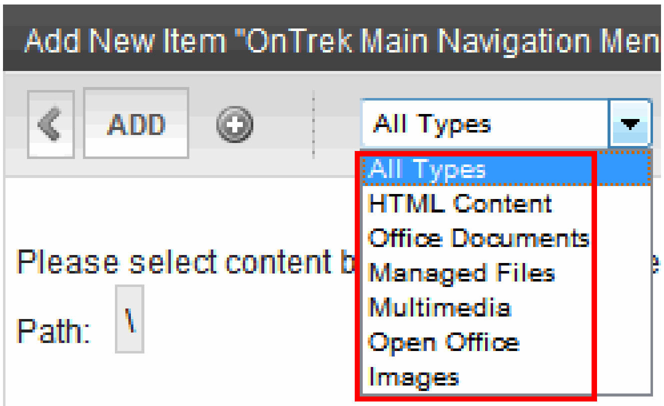
You can add the following types of menu items.

- **Content Item**. Choose content from the CMS to display when the menu item is selected. The menu item title is the content name by default, but you can edit it after you create the menu item.
- **Library Asset**. Choose a library asset to display when the menu item is selected. The menu item title is the asset name by default, but you can edit it after you create the menu item.
- **External Hyperlink**. Specify a menu item title and URL. Selecting the menu item takes the visitor to the URL.
- **Submenu**. Create a menu item that is a submenu. Then create menu items for the submenu.

Adding a menu item that opens a content item

1. From the View Menus screen, choose **Add Items**.
2. Click **Content Item**.

3. Click **Next...** The Add New Item screen appears, listing all content folders.
4. By default, All Types of content are available. You can narrow your selection (for example, HTML content), by choosing a filter from the drop-down.



5. Open the folder you want in the folder tree.
6. Check 1 or more folders to add each folder to the menu as separate menu items.

IMPORTANT: If you check items then go to another screen before clicking **Add**, the items on the first screen are not added to the menu.

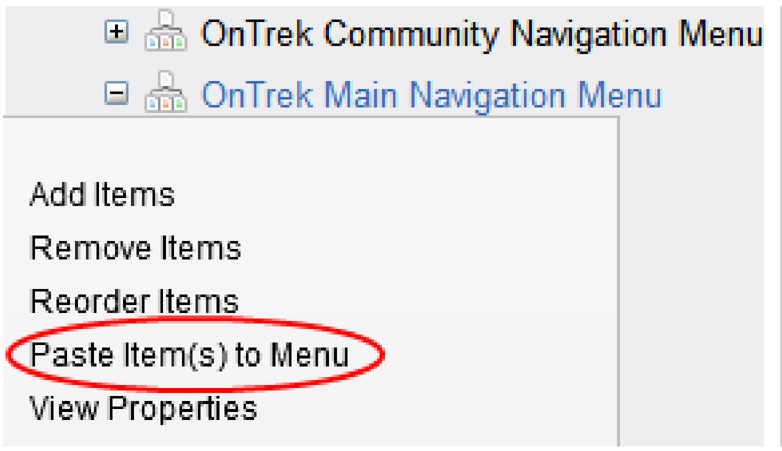
7. Click **Add**.

   You can assign addition information to the menu item by editing the menu from the View Menu screen.

Tip—Alternate Method for Creating a Menu Item

You can use the following alternative method for creating a menu item.

1. Go to a content folder.
2. Click items to be assigned.
3. Right click the mouse and select **Copy**.
4. Locate the menu, right click the mouse, and select **Paste Items to Menu**.



The View Menu screen reappears, showing the new content.

Adding a menu item that opens a library asset

1. From the View Menus screen, choose **Add Items**.
2. Click **Library Asset**.
3. Click **Next**. The Add New Item screen appears.
4. Enter a title for the library file that appears on the menu.
5. Click **Browse Library**. The Library Folder screen appears.
6. Select the type of file to insert (Files, Hyperlinks, Images).
7. Go to a folder that contains assets.

> **NOTE:** To insert assets, the menu's folder must contain library assets. However, you can insert library assets from other folders for which you have permission.

8. Select a library asset and click **Insert**. The Add New Item screen reappears with the asset displayed in the Title field.
9. Click **Save**.

Adding a menu item that goes to a URL

1. From the View Menus screen, choose **Add Items**.
2. Click **External Hyperlink**.
3. Click **Next**. The Add New Item screen appears.
4. Enter the title of the new menu item.
5. In the Link field, Enter the URL for the menu item.
   Examples
   - `https://world.episerver.com/ektron/` (external link)
   - `/news/pr.aspx` (root of the website)
   - `pr.aspx` (relative path)
6. Click **Save**.

> **NOTE:** When you add an external hyperlink menu item, the URL does not get added to the library nor is an ID assigned to it. So, when you save the menu item, it is not added to the Ektron database nor can it be retrieved for future use.

Adding a submenu

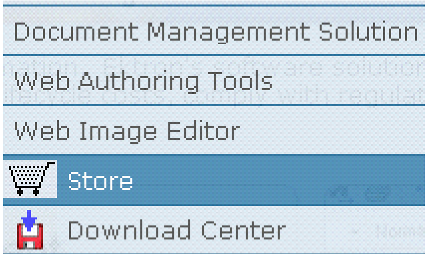
1. From the View Menus screen, choose **Add Items**.
2. Click **Sub Menu**. The Add Menu screen appears.
3. Click **Next**. The Add Menu screen appears. To complete the fields on the Add Menu screen, see *Filling out the Add menu and Edit menu screens* on page 1237.
4. Click **Save**. The View Menu screen reappears. The Submenu items look like this: .

Editing a menu item

To edit a menu item, click on its name in the View Menu screen. The Edit Menu Item screen appears.

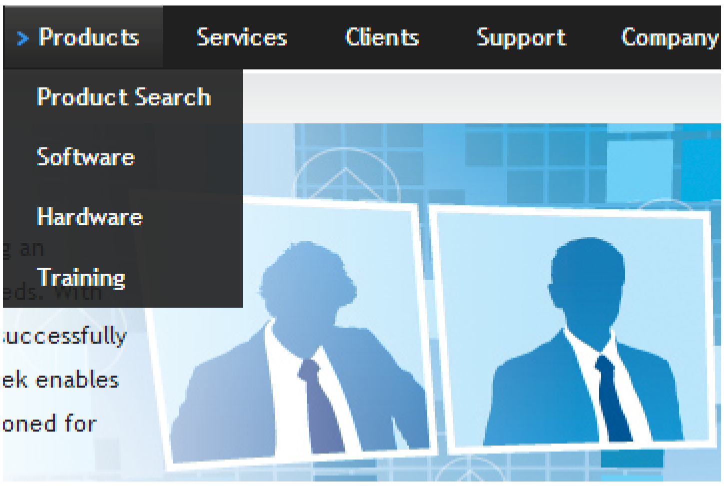
When you edit a menu item, you can make the following specifications:

- **Title**. The name of the menu item. It appears on the Web page to indicate the item.
- **Image Link**. You can have an image appear next to or instead of the menu title. The image must reside in the library. If it does not, add it before proceeding. See also: *Adding a file to the library* on page 680.
  For example:

  To do this:

  1. Click the icon to the right of the **ImageLink** field ( ). The library window opens.
  2. Go to the folder that contains the image you want to use.
  3. Click **Insert**.
  4. You can replace menu text with an image so that only the image appears on the menu by checking the **Use image instead of a title** box.
- **URL Link**. After you create a menu, your developer links it to text or an image on a Web page by modifying a page template. When a site visitor moves the cursor over the text or image, the menu appears. In the following image, the menu appears when the site visitor moves the cursor over **Products**.

You can also assign a URL link to a menu using this field. If you do, and the user *clicks* the link text or image, he jumps to the specified page.

For example, in this field, you assign the product landing page, `siteroot/products.aspx`. In the illustration above, if the user *moves the cursor* over **Products**, the assigned menu appears. However, if the user *clicks***Products** , he jumps to `siteroot/products.aspx`. The path may be....

 - relative to site root, such as `siteroot/jobs.aspx`
 - a static template path or a dynamic path, such as `wellness.aspx?id=40&wellness=Hemophilia`
 - an external hyperlink, such as `http://www.example.com`.

- **Description**. Add a more detailed description for the menu.
- **Target**.
- **Link**. Use this field if you want to override this content's menu template by using the template specified in its Quicklink.

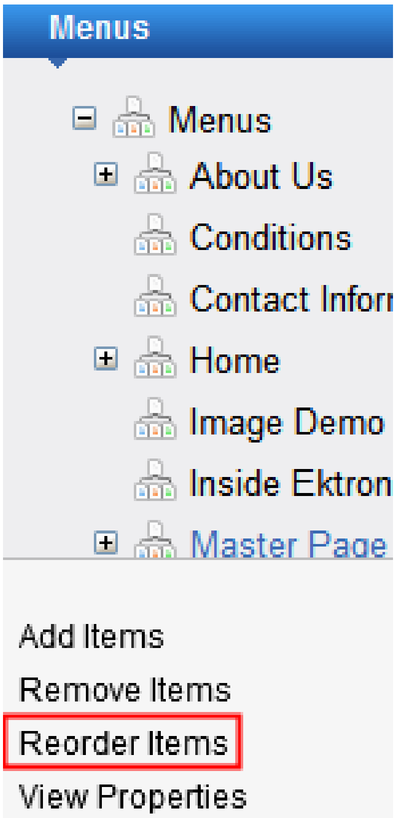
Deleting a menu item

1. Go to the View Menu screen for the menu that you want to delete.
2. Click **Remove Items** ( ).
3. Check the box next to items that you want to remove.
4. Click **Remove**.

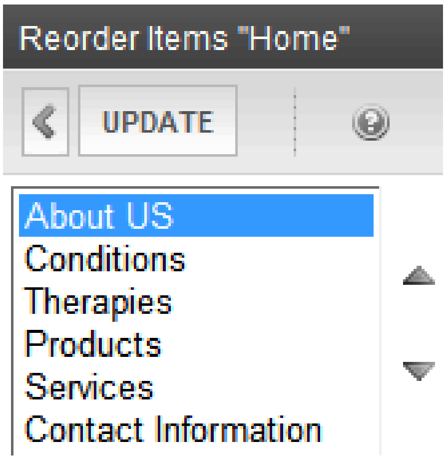
Reordering menu items

1. Go to the View Menu screen for the menu that you want to rearrange.
2. From the toolbar, click **Reorder** ( ).

   Alternatively, hover the cursor over the menu in the left panel, right click the mouse, and click **Reorder Items**.



The Reorder Items screen appears.



3. Click the item you want to move.
4. Click the up arrow to move it up, or the down arrow to move it down.
5. When finished, click **Save**.

Creating a menu in another language

NOTE: For information about supporting multiple languages on your website, see *Working with multi-language content* on page 1393.

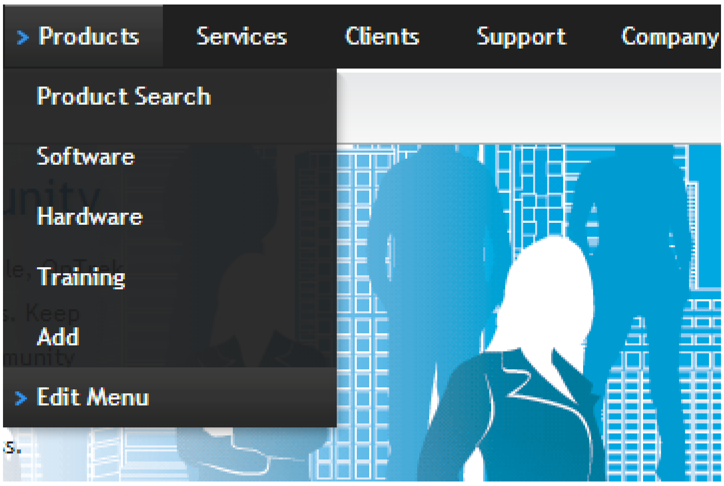
NOTE: To export menus to an XLIFF file for translation by an external agency, see *Exporting content to XLIFF* on page 1418.

You can create an edition of any menu in every supported language. When a site visitor selects a language and clicks a menu link, Ektron displays the menu in that language if it is available. If it is not available, nothing appears.

Before creating or translating a menu, you should create or translate all content that will be on the menu. In this way, you can link this content to the new menu. However, after creating a menu, you can add new items to it.

To translate a menu into any supported language, you can go to the menu on your website or from go to it in the Workarea.

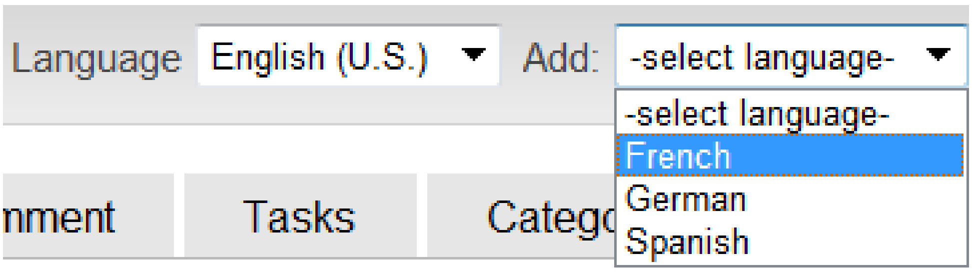
1. Go to the menu on your website or from go to it in the Workarea.
   - On your website, lick the menu and the **Edit Menu** option.



   - In the Workarea, click the menu you want to translate.

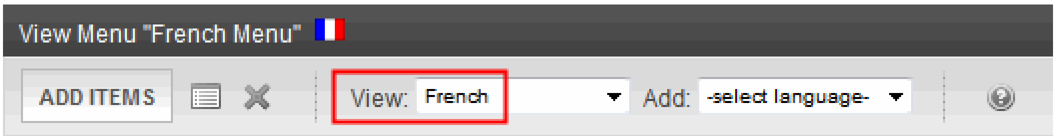
   The View Menu screen appears for the selected menu.

2. From the Add drop-down list, select the language into which you want to translate the menu.



   The Add Menu screen appears.

3. Complete the screen for the menu in the selected language. To complete the fields on the Add Menu screen, see *Filling out the Add menu and Edit menu screens* on page 1237.
4. Click **Save**. The View Menu screen reappears. The **View** drop-down displays the menu's new language.



5. To add items to the menu, see *Adding a menu item* on page 1241. If you want to add a content menu item, you can insert an item in the selected language only.

Menu server controls

IMPORTANT: Starting from release 8.6, the Flex Menu and Menu server controls were replaced by the FrameworkUI: <ektron:MenuView> templated server control. If you are already using the Flex Menu and Menu server controls, you can continue to do so, but Ektron recommends using current versions of functionality.

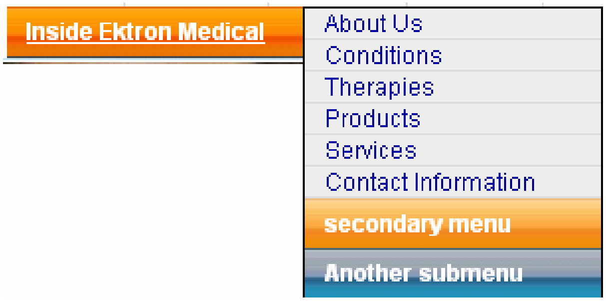
Managing menus is a two-step process. The previous section describes the first step, which is how Ektron users create and update menus. The second step involves a developer placing a menu server control on a Web form. The server control manages the display of the menu on your website. This section introduces concepts that affect all of them, and explains the differences between them.

Ektron provides 2 menu server controls: Flex Menu and Menu.

Contrasting menu server controls

Appearance

<table>
<tr><th>Type</th><th>Appearance</th></tr>
<tr><td>Flex</td><td>


or


(Other styles are available)</td></tr>
<tr><td>Menu</td><td>


</td></tr>
</table>

Properties

Property	Flex Menu	Menu
508 compliant	✓	

Property	Flex Menu	Menu
Shutter menu (When you click a menu, it opens directly below the menu title)	✓	
Secondary menu opens when cursor hovers over it	✓ (alternative: secondary menu opens when clicked)	
Starts out collapsed; expands as site visitor selects secondary menu	✓	
All menu levels open when page displays	✓ (optional)	✓
Can display secondary menu to the right of the root menu, instead of directly below it	✓ (optional)	
How appearance is modified	Server control properties and style sheet	Xslt and style sheet
How behavior is modified	Xslt	Xslt and style sheet
Option to launch menu links in a new window		

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25

Organizing content with taxonomies

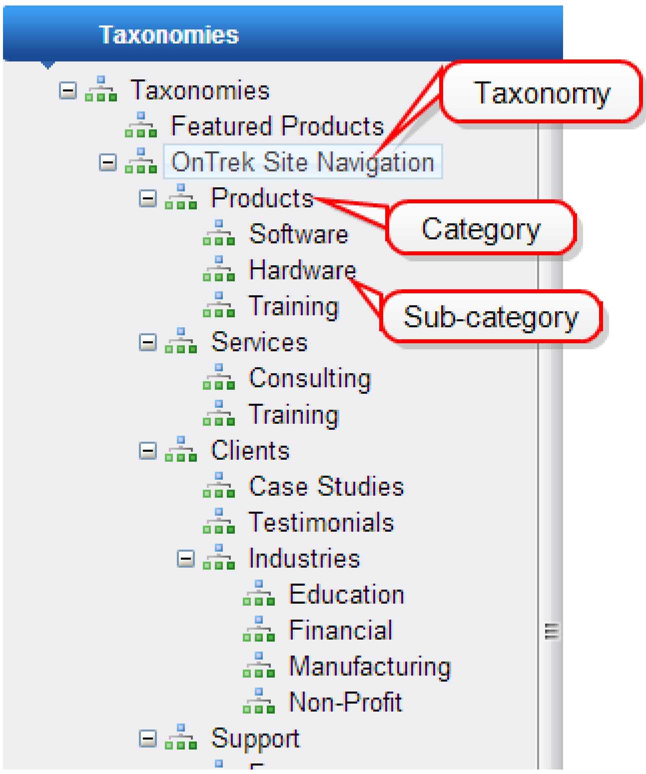
A taxonomy is a top-level navigation structure, independent of the folder structure. It provides site visitors with multiple access routes to content. A taxonomy contains 1 or more categories.

NOTE: A taxonomy is essentially the highest-level category. You can perform most of the same operations on a taxonomy that you can a category.

For example, a taxonomy about Books can have categories called Nonfiction, Entertainment, Mystery, and so on. A site visitor may look for a book about Ronald Reagan's acting career and find it in the Entertainment category. Another visitor may look for a book about his political career and find it in the Nonfiction category. Although you store all the books that were written about Ronald Reagan in 1 Workarea folder called *Famous People*, the taxonomy assignments let your site visitors access information in the way that they think about Ronald Reagan (such as Actor, US Governor, or US President).

- Books > Entertainment > Movies > Actors > Ronald Reagan
- Books > Nonfiction > US Politics > Federal > Presidents > Ronald Reagan
- Books > Nonfiction > US Politics > State > California > Governors > Ronald Reagan

The following example shows the hierarchy of a taxonomy and it categories and sub-categories. A category can have any number of sub-categories. In the OnTrek sample site, the *OnTrek Site Navigation* taxonomy has *Products*, *Services*, *Clients*, *Support*, *Company*, and *Community* categories. Similarly, the *Products* category has *Software*, *Hardware*, and *Training* sub-categories.



You can use taxonomies in many ways such as helping site visitors narrow shopping choices in the immediate vicinity with GeoMapping, or organizing a photo album by categories, or organizing group discussion board topics, and so on.

Best Practice—Design a Taxonomy before Creating it

It helps to design a taxonomy on paper before creating it in Ektron. This can let you determine relationships among the kinds of information before you try to implement the taxonomy.

Review the site content and decide which content items and folders to assign to taxonomy categories. Some categories might map directly to a folder. Other categories might refer to content from several folders. After you determine how content and folders should be assigned to taxonomy categories, log in to Ektron and set up those relationships.

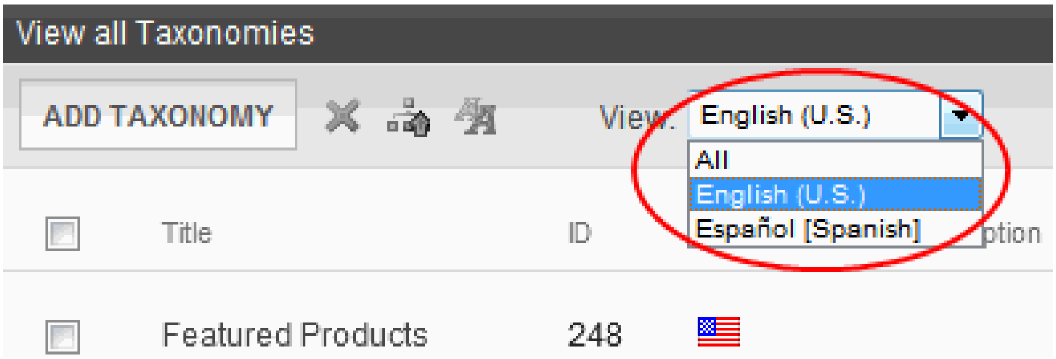
A taxonomy directory control can create the navigation on your website automatically. When the content is tagged with a category, it automatically shows up in the correct section of the site. The author does not need to know where the content is going to show up because the taxonomy tagging determines that. If you are managing large amounts of information, this use of taxonomy is especially powerful.

Creating a taxonomy and its associated categories

Prerequisite

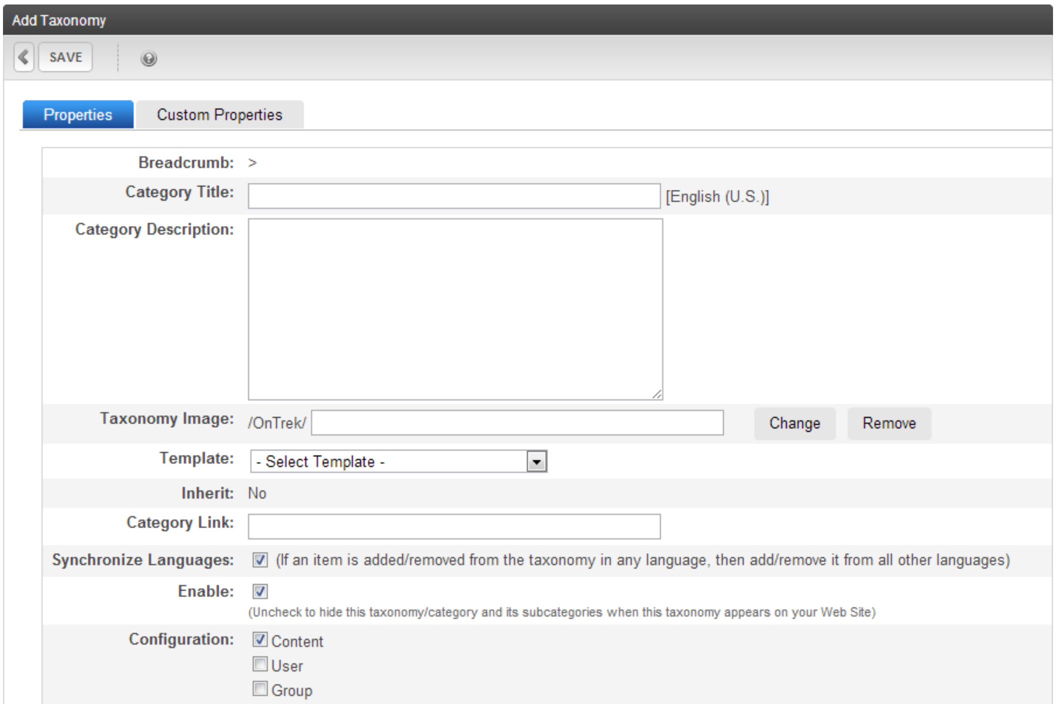
Only Administrators group members and those assigned the Taxonomy Administrator rolecan perform these actions.

1. Go to **Workarea > Content > Taxonomies > Taxonomies**.
2. Use the **View** > language selector to choose a language for the taxonomy.



See also: *Working with taxonomies in a multi-language environment* on page 1288

3. Click **Add Taxonomy**. The Add Taxonomy screen appears.



4. Complete the screen with the following information.
   - **Category Title.** Give the taxonomy a title. The title identifies the taxonomy wherever it appears. The title *cannot* contain these four characters: **<> , '**.
   - **Category Description.** If desired, enter a more complete description of the taxonomy. It appears only on the Edit Taxonomy screen.
   - **Taxonomy Image.** If desired, you can assign an image to this taxonomy. For example, in the eCommerce feature, you could display an image that indicates the type of products that make up the taxonomy.

     To display the taxonomy image, use Ektron's API.
   - **Template.** If desired, select a template to apply to the taxonomy or category. See also: *Creating a taxonomy-based search on a Web page* on page 1278.
   - **Inherit** (only appears when creating a category underneath a taxonomy). Check this box if you want this category to inherit its template from the parent category or taxonomy. If not, assign a template using the **Template** field (above).
   - **Category Link.** Use this field to direct a site visitor who clicks this taxonomy or category to a page on your website. For example, when someone is using your site's company directory and clicks Human Resources > Benefits, he is directed to that area of your site.

     Without a Category Link, if a site visitor clicks a taxonomy category, the results appear on the same page.

     Enter a path to a destination page relative to your site root folder. For example, `aboutus.aspx`. When a site visitor clicks this taxonomy or category, the site visitor is directed to `http://your-URL/siteroot/aboutus.aspx`.

You could also direct the user to a content ID, such as `aboutus.aspx?id=62`.

- **Synchronize Languages.** Check this box to *synchronize* all language versions of content assigned to this taxonomy. That is, maintain the same content in multiple language versions of a taxonomy. The maintenance only occurs when one of the affected content items is published.

  For example

  - there are English and Spanish versions of the taxonomy 'Press Releases'
  - content ID 406 exists in English and Spanish

  If you add content ID 406 to the English 'Press Releases' taxonomy then publish that content, Spanish content ID 406 is added to the Spanish 'Press Releases' taxonomy.

  Conversely, if you delete content ID 406 from the Spanish 'Press Releases' taxonomy then publish that content, content ID 406 is removed from the English 'Press Releases' taxonomy.

  As another example

  - there are English and a Spanish versions of the taxonomy 'Press Releases'
  - content ID 407 exists in English only

  If you add content ID 407 to the English 'Press Releases' taxonomy then publish that content, the Spanish 'Press Releases' taxonomy is not affected, since content ID 407 does not exist in Spanish.

  Conversely, if you delete content ID 407 from the English 'Press Releases' taxonomy then publish that content, the Spanish 'Press Releases' taxonomy is not affected, since content ID 407 does not exist in Spanish.

  If you choose to *not* synchronize languages, when you click publish, Ektron does *not* synchronize the taxonomy of the content with the same ID but different languages.

  NOTE: This setting is enabled by default. You must disabled it on each node to remove this functionality.

  See also: *Working with taxonomies in a multi-language environment* on page 1288

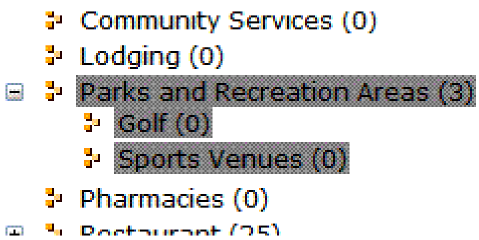
- **Create the Taxonomy in All Languages.** Check this box if, whenever a taxonomy is created in the default language, it is also automatically created in all other enabled languages.

  NOTE: This field only appears if you are creating a taxonomy or category and do not check **Synchronize Languages**. It does not appear on the Edit Taxonomy/Category screen.

- **Display to Users.** Check this box if you want this taxonomy or category, and its subcategories, to appear when this taxonomy appears on your website.

  Uncheck this box to block categories from appearing as part of this taxonomy. For example, you have not finished creating content for a category.

  If you uncheck this box, this node and its child nodes are indicated by a gray background in the Workarea.

  The gray background also appears when users work with this taxonomy or category on the Edit Content screen's **Category** tab.

  This setting does not prevent you from assigning taxonomies or categories in the Workarea.

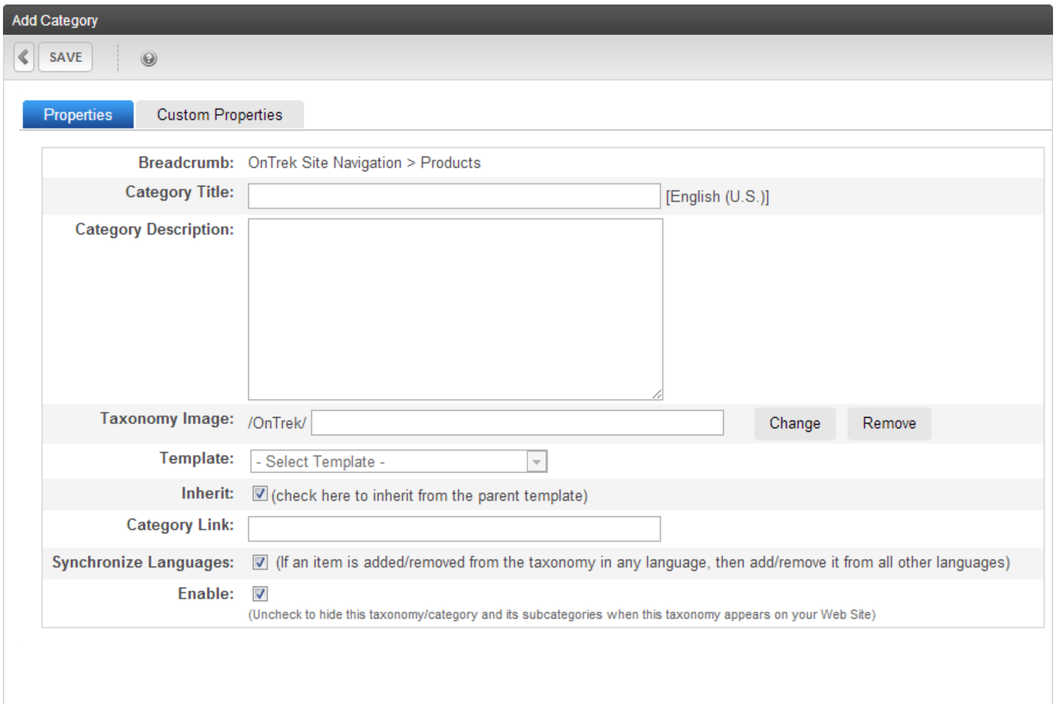
- **Apply display setting for all languages**. Check this box if you want the **Display to Users** field value to affect content in all languages, not just the currently-selected language.

- **Configuration.** Select a configuration with which to associate the taxonomy.
  - Content
  - User
  - Group

  NOTE: By default, a new taxonomy's configuration is **content**. Also, this field only appears for a taxonomy. It does not appear for categories, which are below the taxonomy.

  Custom Properties tab. Let you extend the taxonomy's functionality by creating custom fields to capture additional information.

5. Click **Save**. The View Taxonomies screen appears.
6. Add categories to the new taxonomy by clicking **Add Category**. The Add Category screen appears.



7. Enter the Category information. See Step 4 for information about these fields.
8. When finished, click **Save**.
9. Repeat this process for each category you want to add to this taxonomy.

NOTE: You can also assign a Taxonomy to content using the Edit Content in Folder screen's **Category** tab.

Assigning taxonomies and categories

You assign taxonomies and categories to content and folders. You also can do it the other way around: assign content and folders to taxonomies and categories.

NOTE: A taxonomy is essentially the highest-level category. You can perform most of the same operations on a taxonomy that you can a category.

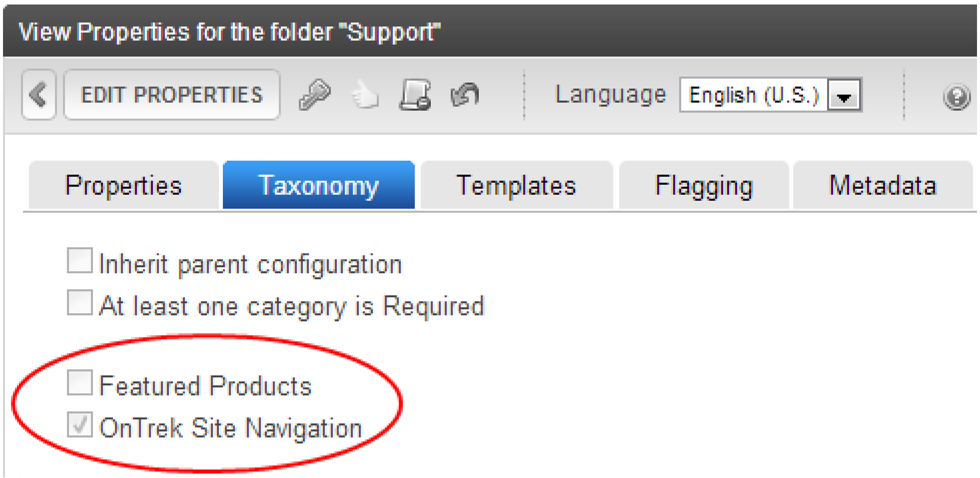
The following table shows you how to connect various types of content to categories.

To assign a taxonomy category to	Available methods	Prerequisites	For more information, see
Content **NOTE:** Regardless of the method you use to assign a taxonomy to content, the result is the same.	from the Edit Content in Folder screen	• Must be authorized to edit the folder's content • You can only select from taxonomies assigned to the content's folder	*Assigning a taxonomy to content* on the facing page
	from the Content Tab > Taxonomy screen	Must be member of administrators group or Taxonomy administrator	*Assigning content to categories* on page 1268
Ektron Users	from the Assign Item(s) to Taxonomy screen	Taxonomy's **Configuration > User** check box is checked	*Assigning categories to a user* on page 1266
Membership Users	• from the Assign Item(s) to Taxonomy screen • after logging into a Community site, editing the user profile	Taxonomy's **Configuration > User** check box is checked	*Assigning categories to a membership user* on page 1265

To assign a taxonomy category to	Available methods	Prerequisites	For more information, see
Community Group	• from the Workarea’s Assign Item(s) to Taxonomy screen • from the Workarea’s Community Group Area • after logging into a Community site, editing the community group profile	Taxonomy’s **Configuration > Group** check box is checked	*Assigning categories to a community group* on page 1263

Assigning a taxonomy to content

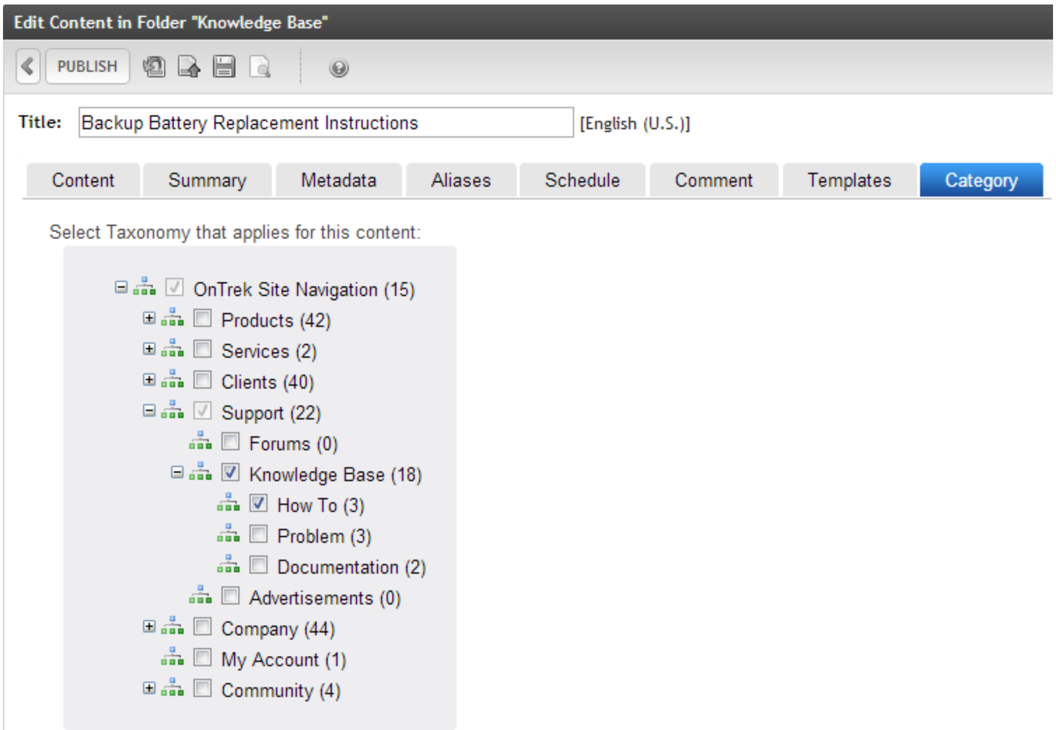
Use a folder property's **Taxonomy** tab to determine which taxonomies may be assigned to content in a folder. For example, to restrict Support team members to the OnTrek Site Navigation taxonomy, check the box next to it; those member cannot assign other categories from the Featured Products taxonomy.



Assigning categories to content

When you edit content, if you choose the **Category** tab, you see Taxonomy categories that you can apply to the content.

The number to the right of any taxonomy or category is the total items assigned to it. For example, the *Support* taxonomy has 22 items assigned to it. The number includes individual items plus all items in any assigned folders. So, for example, if 1 content item and 1 folder are assigned to a category, and the folder has 5 items, the category's number is 6.



Assigning categories to a folder

An administrator can make a taxonomy available to a folder.

1. Go to **Workarea > Content > Folders** and then click a folder.
2. Choose **View > Properties**.
3. Click **Edit Properties**.
4. On the **Taxonomy** tab, uncheck the **Inherit parent configuration** checkbox if it is checked.

   Unlike many folder properties, Taxonomy settings are not inherited from a parent folder by default. But you can cause them to be inherited if that is appropriate. If you are not working on the root folder and the appropriate set of Taxonomies is applied to a folder's parent folder, go to the folder's properties screen and check the **Inherit parent configuration** checkbox.
5. Check a taxonomy or categories that should be available to this folder.

From now on, users editing content in this folder can assign categories from the selected taxonomies.

Requiring the assignment of at least one category

In folder properties, you can require all content to be assigned at least one taxonomy category. If you do, when content in that folder is saved, Ektron verifies that at least one taxonomy category is assigned. If none is found, the user must assign a taxonomy category before saving the content.

NOTE: If a required category is assigned to an English content item, it also is required (for example) for its corresponding content items in other languages.

To set a folder-level requirement for content to be assigned a taxonomy category:

1. Go to the folder.
2. Choose **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Taxonomy** tab.
5. Enable the **At least one category is Required** checkbox.
6. Click **Update**.

Assigning categories to a community group

PREREQUISITE

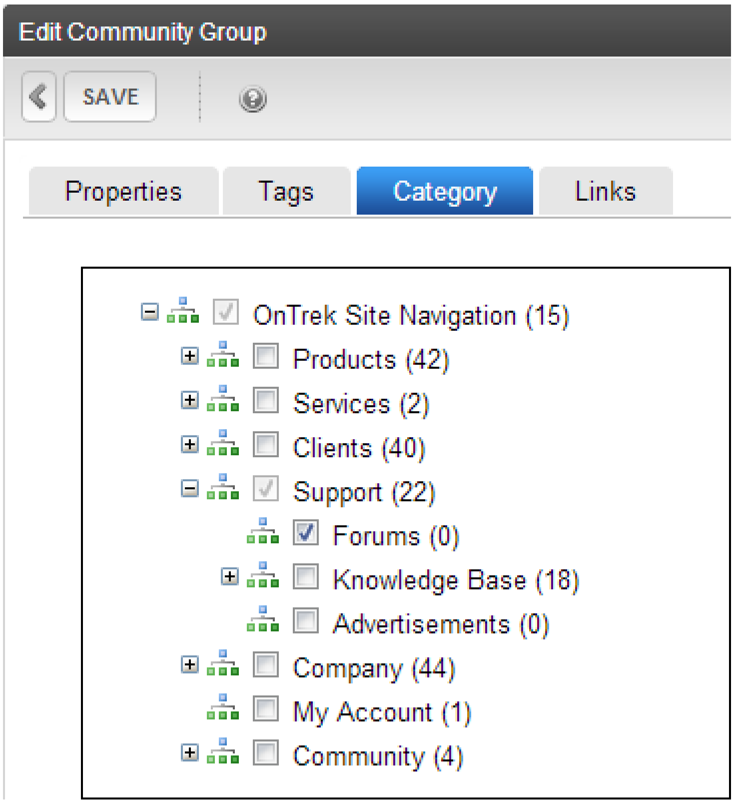
You can perform this procedure only if the **Group** box is enabled on a taxonomy properties screen (Configuration field). Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

You can assign a taxonomy or categories to a community group in the following ways.

Assigning categories to a community group from the community group area

1. Go to **Workarea > Settings > Community Management > Community Groups**.
2. Select a community group.
3. Click **Edit this Community Group**.
4. Click the **Category Tab**.

5. Check the taxonomies or categories to apply.

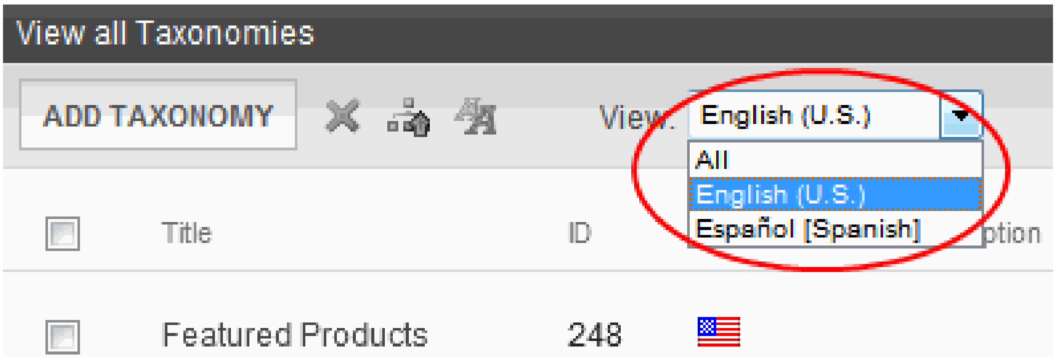


6. Click **Save**.

Assigning categories to a community group from the taxonomy area

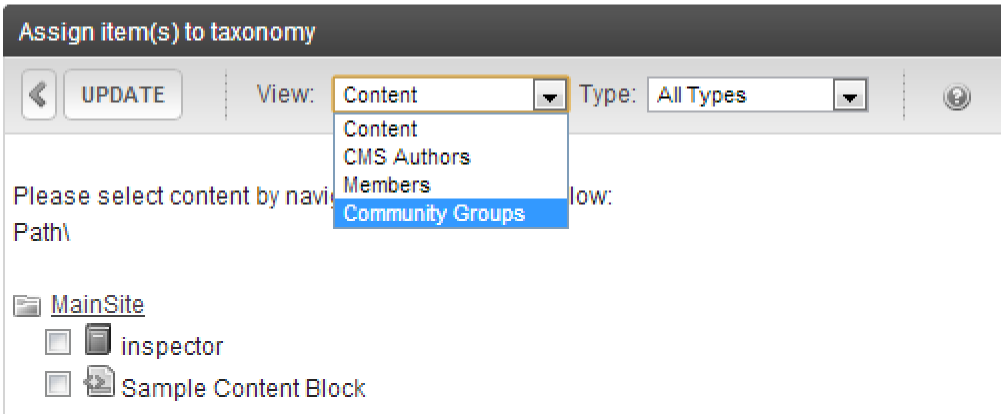
Members of the administrators group or taxonomy administrators can assign a taxonomy or categories to community groups via the View All Categories of Taxonomy screen. See also: *Defining roles* on page 1464

1. Go to **Workarea > Content > Taxonomies**.
2. Select a language whose taxonomies you want to work with. You can choose **All**.

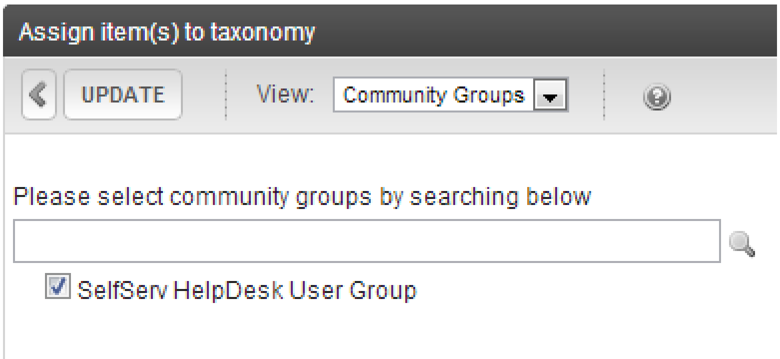


3. Select a taxonomy.
4. Select the category to which you want to assign content.

5. Click **Assign Items to Taxonomy** ().
6. From the View drop-down, choose **Community Groups**.



7. A search field appears. Click the search icon to see a list of all community groups. You also can enter one or more letters and only groups containing them appear.

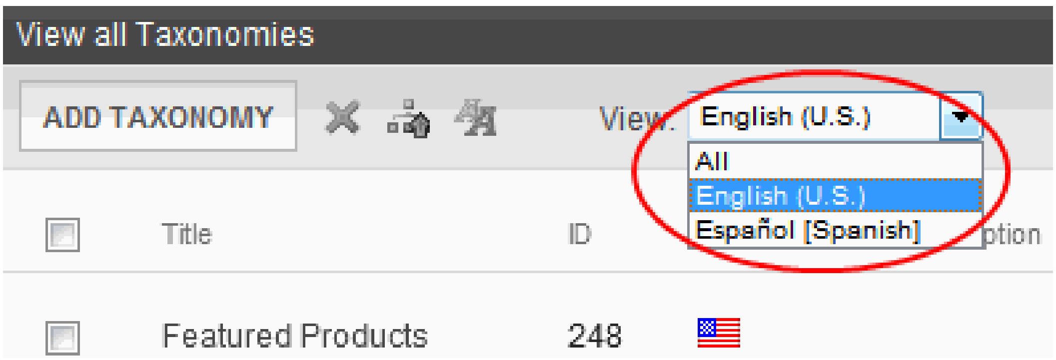


8. Check the box next to community groups you want to assign.
9. Click **Update**.

Assigning categories to a membership user

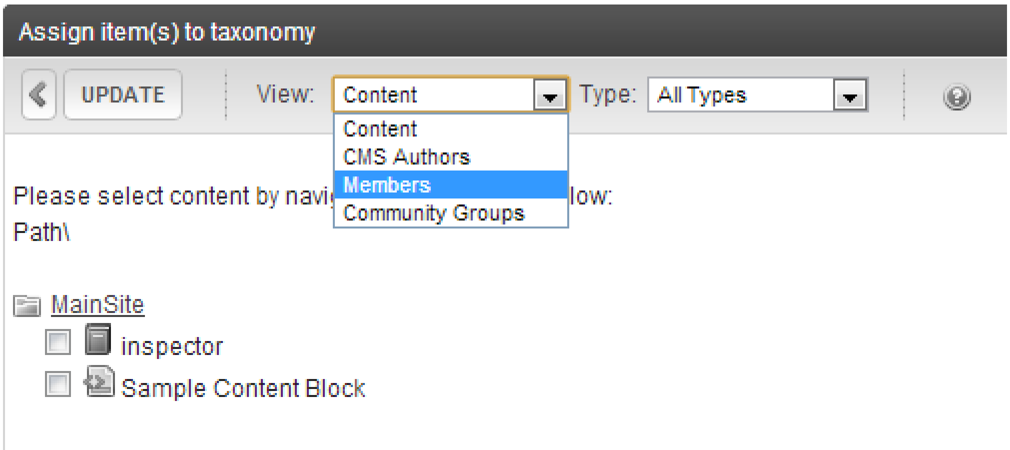
You can assign a taxonomy or categories to a membership user from the Workarea.

1. Go to **Workarea > Content > Taxonomies**.
2. Select a language whose taxonomies you want to work with. You can choose **All**.

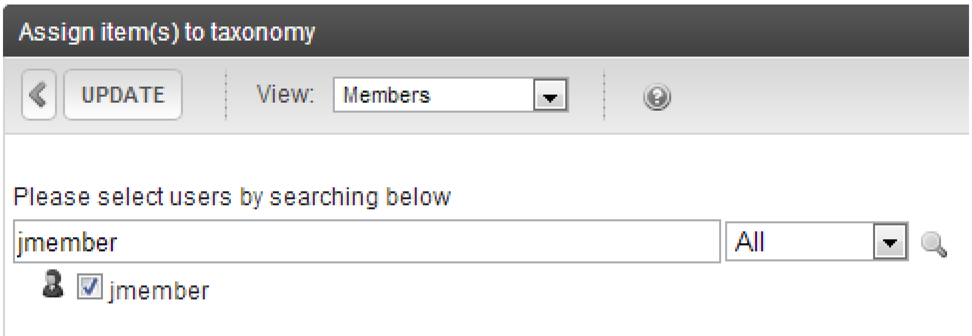


3. Select a taxonomy.

4. Select the category to which you want to assign content.
5. Click **Assign Items to Taxonomy** ( ).
6. From the View drop-down, click **Members**.



7. A search field appears. Click the search icon to see a list of all community members. Or, enter one or more letters, and only members containing them appear. You can use the drop-down to specify if you are searching the membership user's first name, last name or user name.



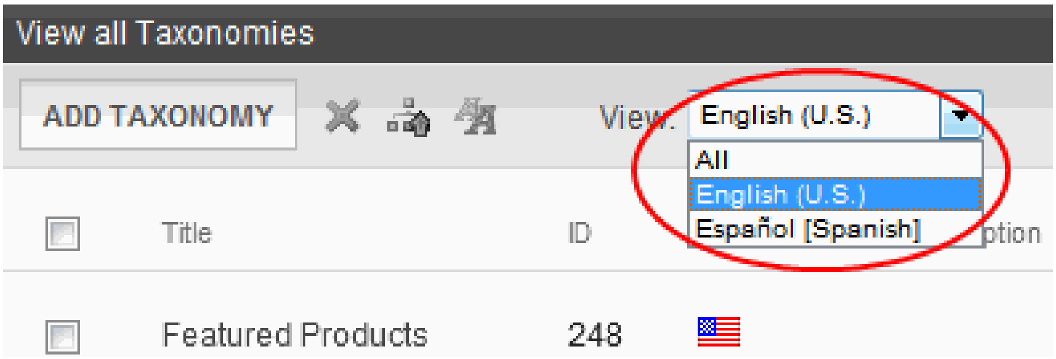
8. Check the box next to membership users you want to assign.
9. Click **Update**.

Assigning categories to a user

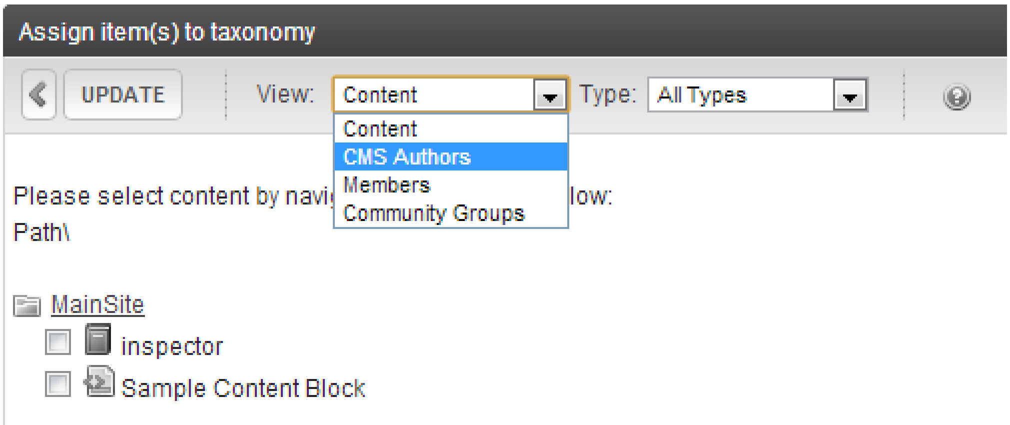
PREREQUISITE

Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

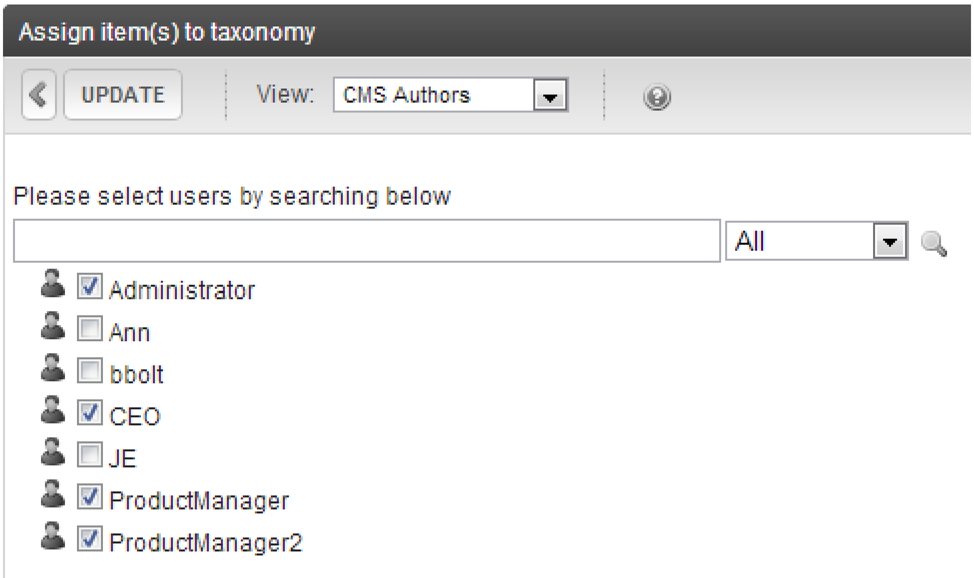
1. Go to **Workarea > Content > Taxonomies**.
2. Select a language whose taxonomies you want to work with. You can choose **All**.



3. Select a taxonomy.
4. Select the category to which you want to assign content.
5. Click **Assign Items to Taxonomy** ( ).
6. From the View drop-down, click **CMS Authors**.



7. A search field appears. Click the search icon to see a list of all Ektron users (that is, **authors**). Or, enter one or more letters, and only users containing them appear. You can also use the drop-down to specify if you are searching the user's first name, last name or user name.



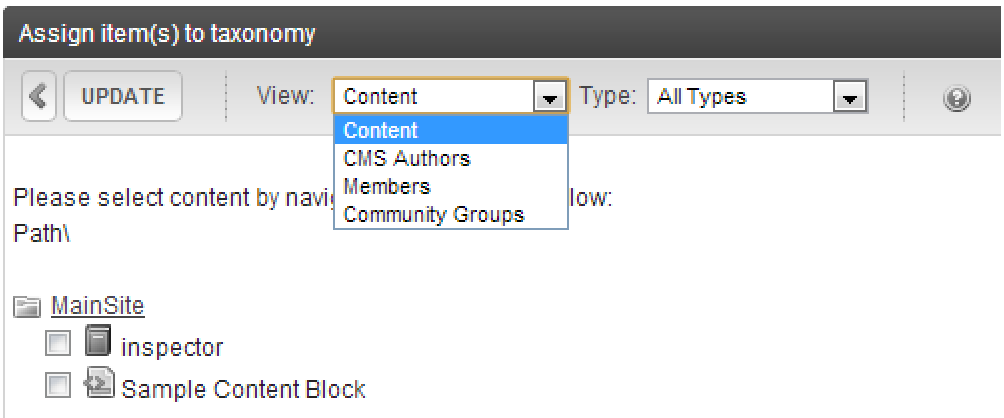
8. Check the box to the left of the users you want to assign.
9. Click **Update**.

Assigning content to categories

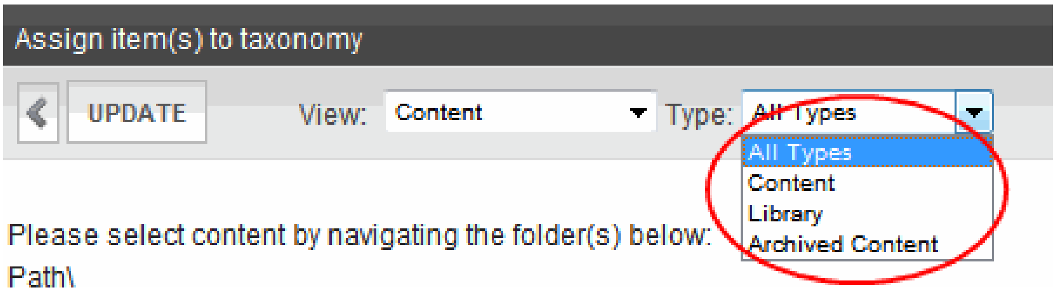
PREREQUISITE

You can perform these procedures only if the **Group** box is enabled on a taxonomy properties screen (Configuration field). Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

1. Go to **Workarea > Content > Taxonomies**.
2. Select a language whose taxonomies you want to work with.
3. Click a taxonomy.
4. Check a box next to the category to which you want to assign content.
5. Click **Assign items to taxonomy** ( ).
6. From the View drop-down, choose **Content**.

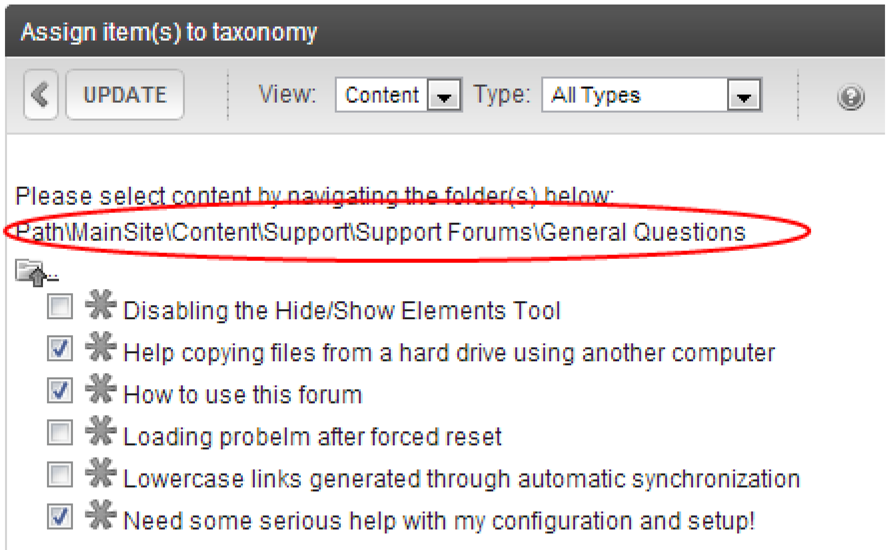


7. Choose the type of content you want to see via the **Type** drop-down.



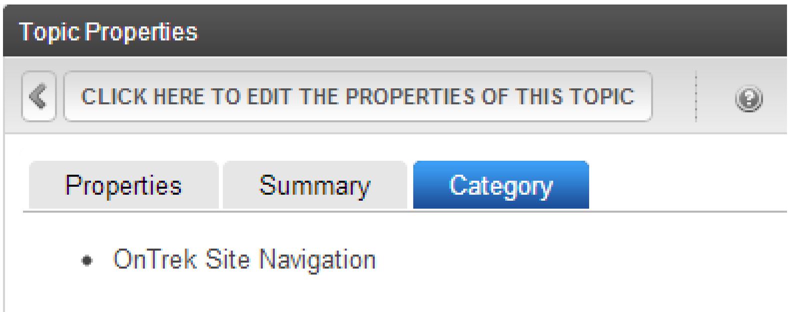
   - **All types**. Both archived and active content
   - **Content**. Active content only
   - **Library**.Library files
   - **Archived Content**. Only content that has been archived and set to remain on site.
8. Go to the folder that contains the content you want to assign to the taxonomy or category. The path shows on the screen. Folder content appears below the folder path.
9. Check the box to the left of content you want to assign. You can assign all types of content, even blogs.

NOTE: Only content in the selected language appears.



10. Click **Update**.

    You can verify that the content was assigned to a category by going to the content block and viewing the Category tab of its properties.



Assigning a folder to categories

PREREQUISITE

You can perform this procedure only if the **Content** box is enabled on a taxonomy properties screen (Configuration field). Only members of the Administrator user group or those assigned to the Taxonomy Administrator role can perform these actions.

NOTE: If you assign a folder, a relationship is established between the folder's *content* and the taxonomy category. The folder is only a convenience for creating this relationship.
Because there is no relationship between a folder and a taxonomy category, if you delete the folder from the taxonomy, the taxonomy category is still applied to the folder's content.

You can assign a folder to a taxonomy, thereby displaying published content in the folder *when the page is viewed*. As content is added to or deleted from the folder, the taxonomy on the Web page changes dynamically.

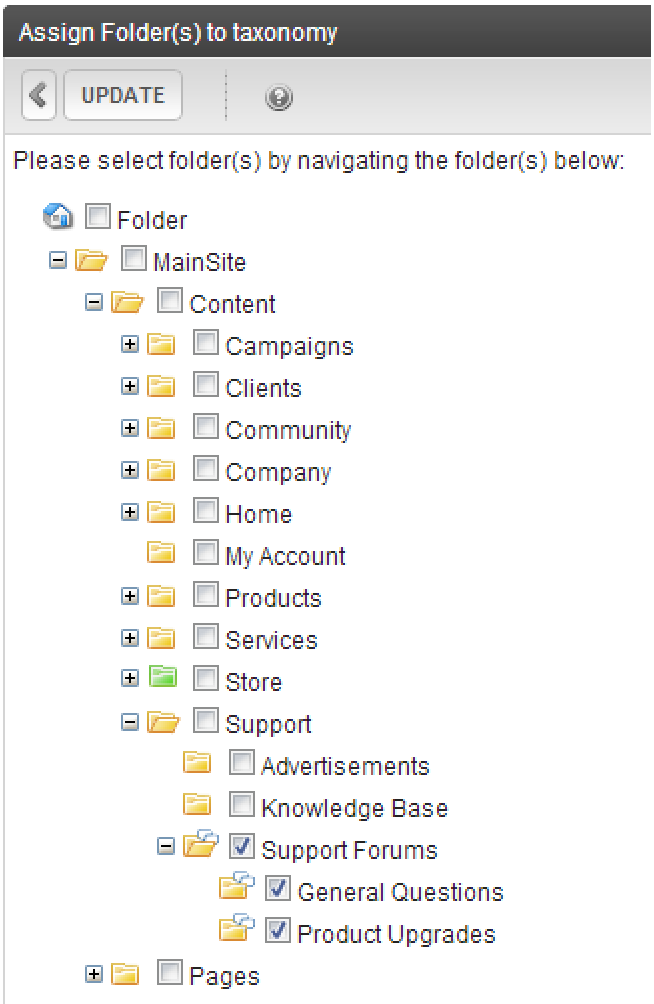
For example, you have a "Top News Stories" folder, in which newer news items are frequently added, and old ones are deleted. The taxonomy only shows the latest news items. The updating of the content is handled by the taxonomy automatically.

IMPORTANT: If you *move* content from a folder to which a taxonomy category is assigned, the category remains with the content in the new folder. If the new folder also has a taxonomy category assigned, the new category is also applied to the moved content.

To assign a folder to a taxonomy category:

1. Go to **Workarea > Content > Taxonomies**.
2. Select the language of the taxonomy on which to work.
3. Select the taxonomy or category to which you want to assign a folder.
4. Click **Assign Folders to Taxonomy** ().
5. Go to the folder you want to assign to the taxonomy or category.
6. Check the folders you want to assign.

   NOTE: Only checked folders are assigned to the taxonomy or category. Checking a parent folder has no effect on its child folders.

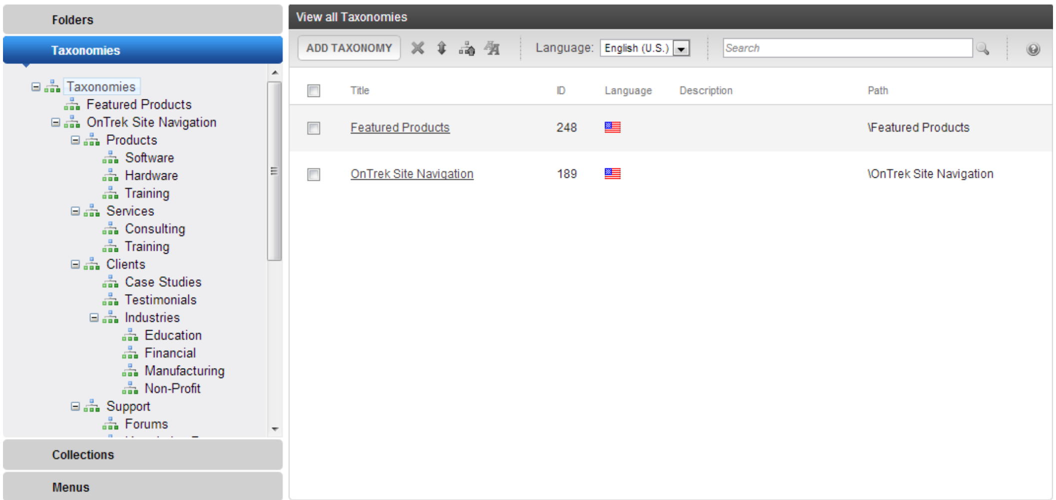


7. Click **Update**.

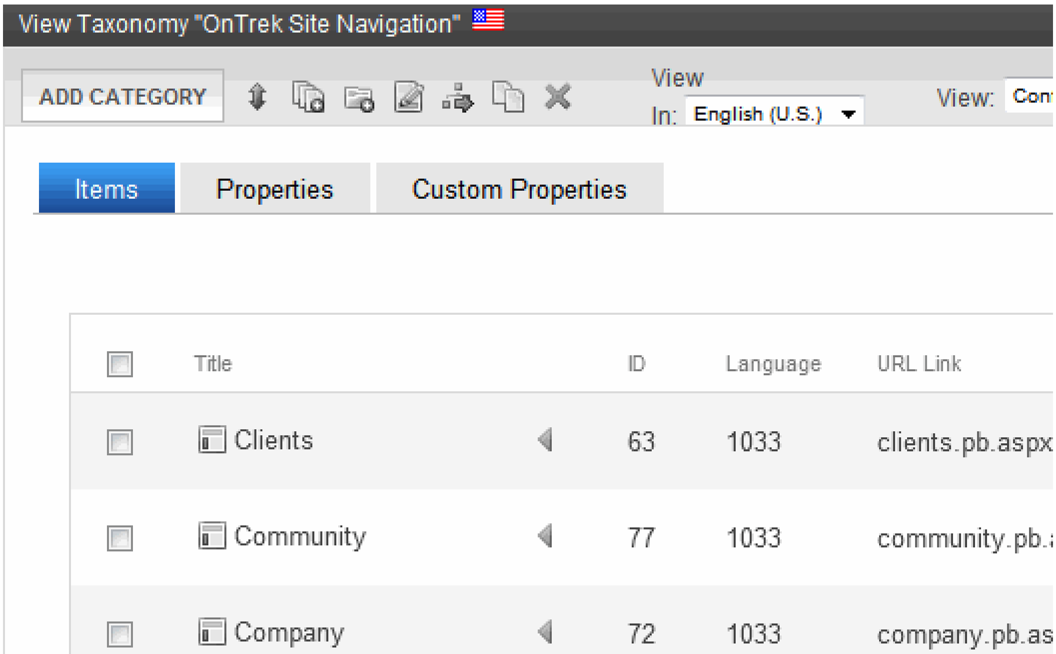
Additional tasks for taxonomies and categories

Viewing taxonomies

1. Go to **Workarea > Content > Taxonomies** and click on **Taxonomies**. The View All Taxonomies screen displays all taxonomies currently in Ektron. The language pull down lets you filter the list by a language.
2. To work with any taxonomy, select it. When you do, it appears within the View All Categories of Taxonomy screen.



3. Click a taxonomy to view the categories in it. The View Taxonomy screen appears.



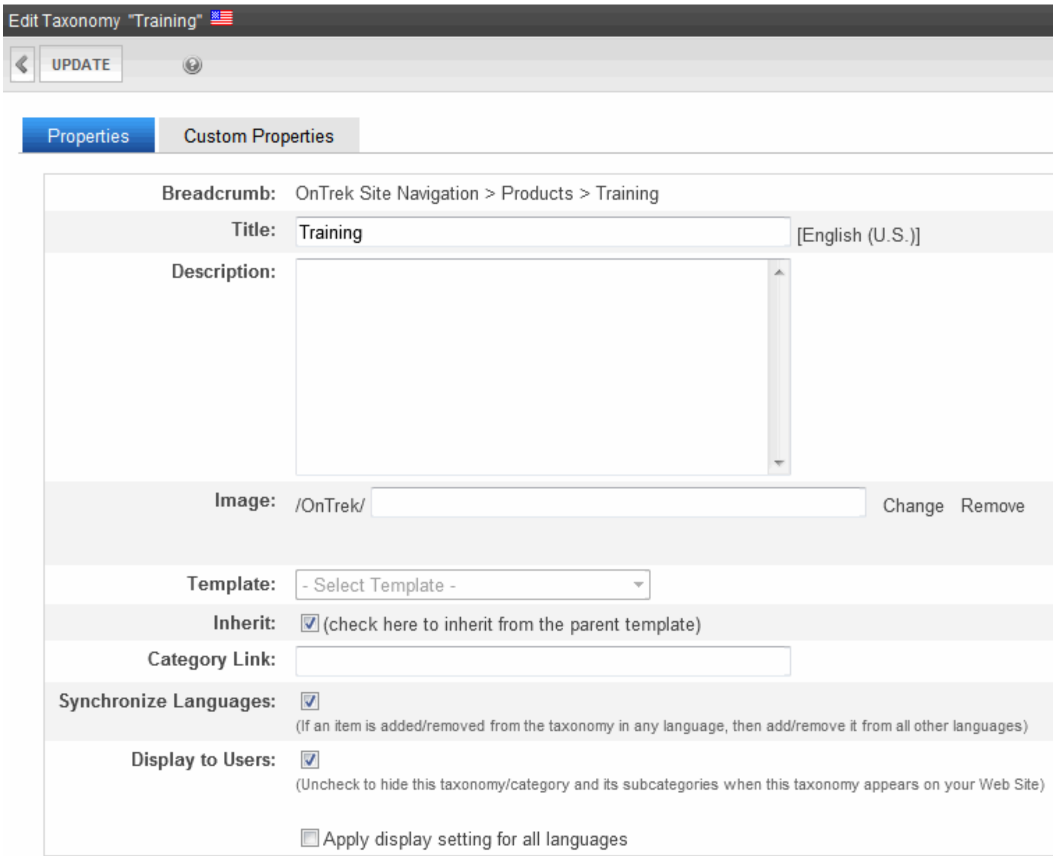
Editing a taxonomy

PREREQUISITE

Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

1. Go to **Workarea > Content > Taxonomies**.
2. Select the taxonomy from the list of taxonomies.

3. Click **Edit** ( ). The following screen appears.



For a description of these fields, see *Creating a taxonomy and its associated categories* on page 1255.

Adding a taxonomy or category

PREREQUISITE

Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

To add a category to a taxonomy, or to add a subcategory to a category:

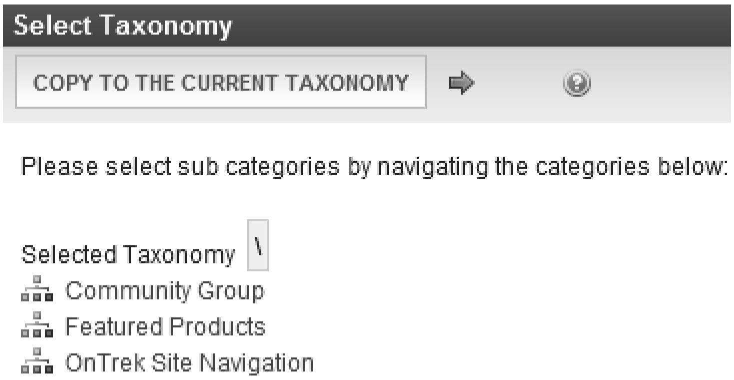
1. Go to **Workarea > Content > Taxonomies**.
2. Select the taxonomy or category under which you want to create a new category.
3. Click **Add Category**. The Add Category screen appears.
4. Complete the fields for the new category. For a description of these fields, see *Creating a taxonomy and its associated categories* on page 1255.
5. Click **Save**.

Copying and moving a taxonomy or category

You can move any taxonomy or category to any other taxonomy or category. There are 2 ways to do this.

Copying and moving a taxonomy or category using a toolbar button

1. Go to **Workarea > Content > Taxonomies** and open the category that you want to move or copy.
2. Click **Move/copy** ( ). A dialog appears.
3. Select a taxonomy category to which you want to move/copy the current category.



4. Click
   - right arrow ( ) to *move the* taxonomy or category to the new location
   - **Copy to the current Taxonomy** to *copy* the taxonomy or category to the new location

Copying and moving a category using menu options

1. From the left panel of the Taxonomy area, right click a category.
2. Choose **Cut *category name*** or **Copy *category name***.
3. Hover over the destination category
4. Click **Paste Taxonomy**.

Deleting a taxonomy or category

WARNING! When you delete a taxonomy, existing links to content (on the **Category** tab) are deleted. If a taxonomy was assigned to a folder (on the Folder Properties screen), it is no longer assigned.

NOTE: Only certain users are allowed to delete Ektron taxonomies. See *Auditing changes* on page 632.

Deleting a taxonomy from View All Taxonomies screen

PREREQUISITE

Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

1. Go to **Workarea > Content > Taxonomies**.
2. From the View All Taxonomies screen, check the box next to the taxonomy you want to delete.
3. Click **Delete** ( ).

> **NOTE:** The delete button does not appear if the language selector is set to **All**.

Deleting a category from View All Categories screen

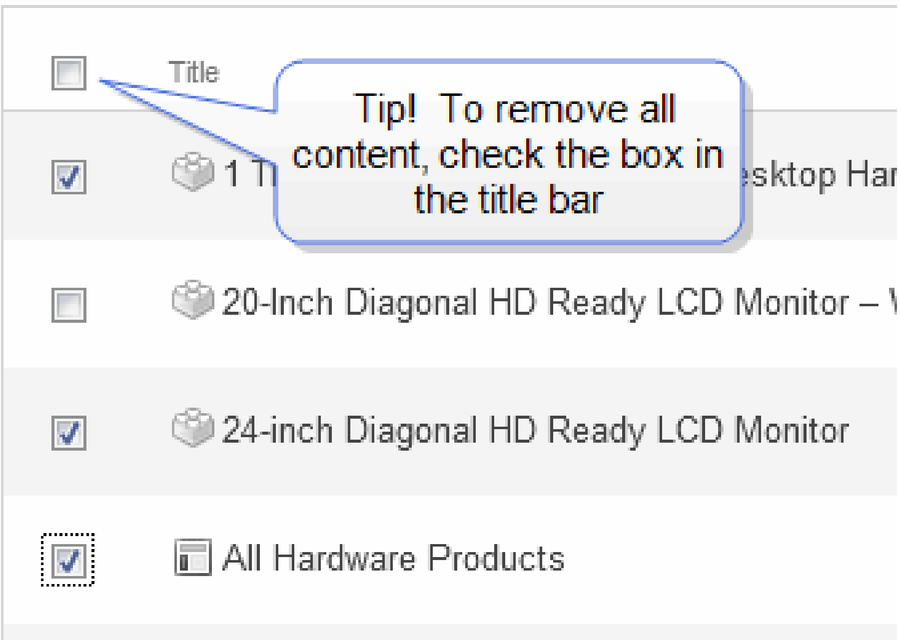
1. Go to **Workarea > Content > Taxonomies.**
2. Select a taxonomy from the list of taxonomies. The taxonomy items and properties appear on the right.
3. Click **Delete** ( ).
4. Click **OK**.

Removing content from a taxonomy or category

PREREQUISITE

Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

1. Go to **Workarea > Content > Taxonomies**.
2. Select a taxonomy or category.
3. Check the box to the left of content you want to remove.



4. Click **Remove Items**.

Removing a folder from a taxonomy or category

PREREQUISITE

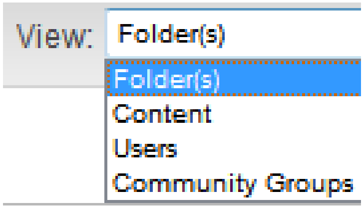
Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

If you assign a content folder to a taxonomy category, the internal relationship is between the folder's content and a taxonomy category. A folder is merely a convenience for creating this relationship. There is no data connection between a folder and a taxonomy category.

Therefore, if you delete a content folder from a taxonomy category, all content in that folder remains assigned to it. To remove the folder's content from the category, see *Removing content from a taxonomy or category* on the previous page.

However, after deleting a content folder, the connection between the folder and taxonomy category is broken. So, content subsequently added to the folder is not assigned to the taxonomy.

1. Go to **Workarea > Content > Taxonomies**.
2. Select the taxonomy or category that has the folder that you want to delete.
3. From the View drop-down, select **Folder(s)**.



4. Check the box next to folders you want to remove.

NOTE: To remove all folders, check the box in the title bar.

5. Click **Remove Items**.

Reordering categories

PREREQUISITE

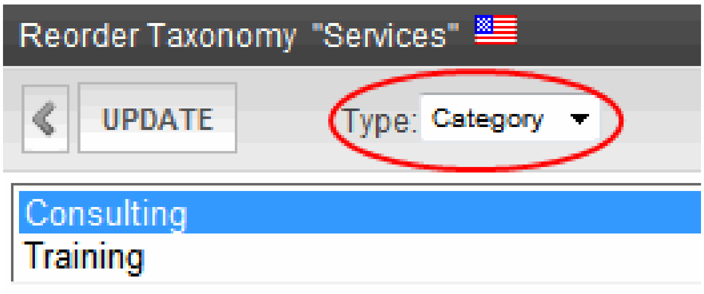
Only members of the Administrator user group or those assigned the Taxonomy Administrator rolecan perform these actions.

You can reorder the categories of a taxonomy or one of its categories. Reordered *subcategories* appear only within the Workarea.

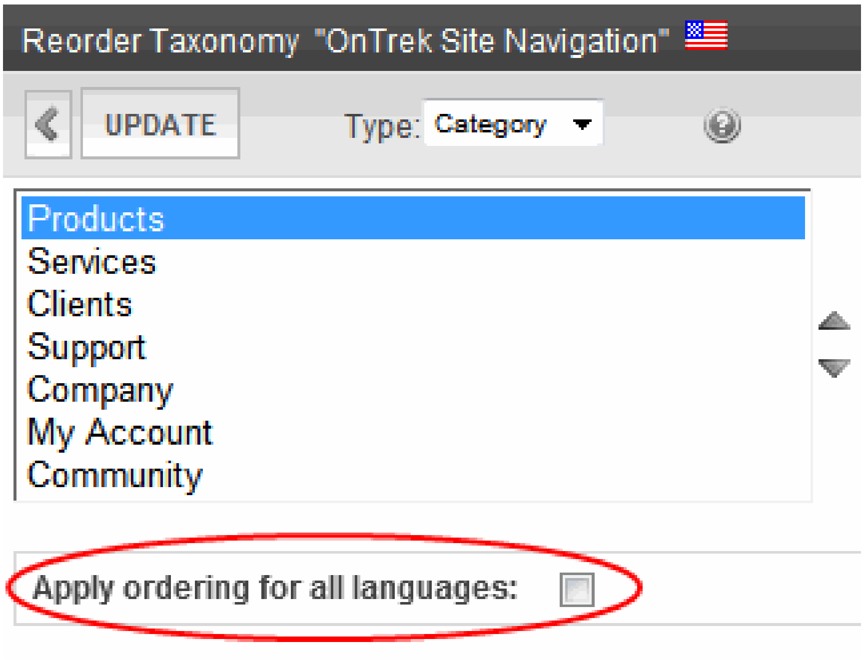
To reorder the categories assigned to a taxonomy or category:

1. Go to **Workarea > Content > Taxonomy**.
2. Select a taxonomy or category that has content that you want to reorder.
3. Click **Reorder** ( ).

4. Set the Type drop-down list to Category.



5. Select an item then click the up or down arrow to move it in that direction.
6. Continue step 5 until the content is in the desired order.
7. If there are several language versions of this taxonomy, you can automatically reorder all versions. To do that, check **Apply ordering for all languages**.



8. Click **Update**.

Reordering content assigned to a taxonomy category

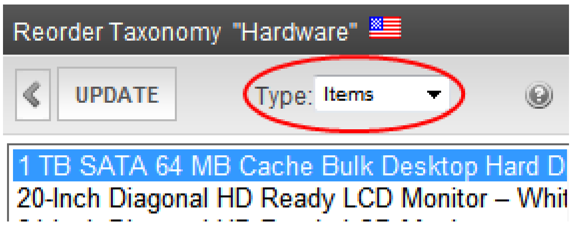
You can reorder (that is, change the sequence of) content within a category. Reordered *content* appears within the Workarea and can appear on your website of the Directory server control's `ItemSortOrder` property is set to `taxonomy_item_display_order`.

To reorder the content assigned to a category:

Prerequisite

Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

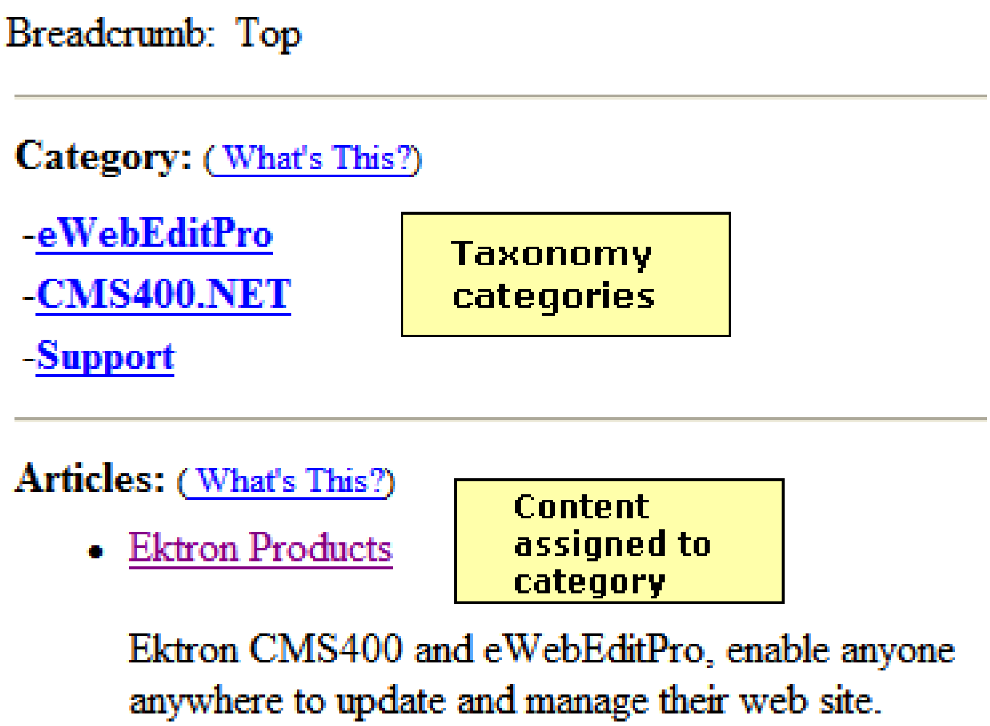
1. Go to **Workarea > Content > Taxonomies**.
2. Select the taxonomy or category that has the content that you want to reorder.
3. Click **Reorder** ( ).
4. Set the **Type** drop-down list to **items**.



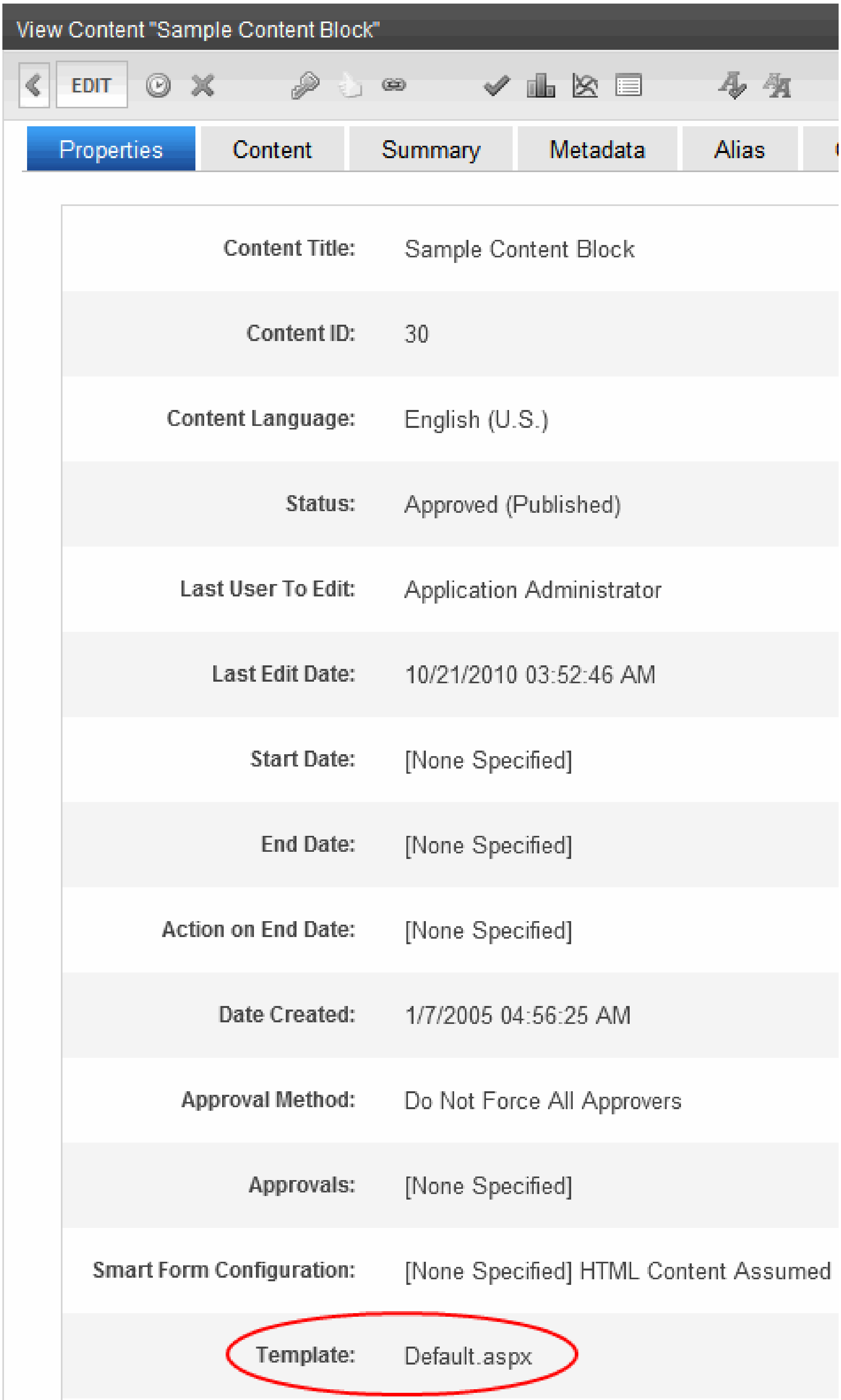
5. All items assigned to the category appear.
6. Select an item then click the up or down arrow to move it in that direction.
7. Continue step 6 until all content is in the desired order.
8. Click **Update**.

Creating a taxonomy-based search on a Web page

A site visitor can search your website by its taxonomy structure when a developer places a Directory server control on a Web page. The following image shows a taxonomy displayed through the Directory server control.



When a site visitor clicks a hyperlink on a Web page that has the Directory server control, it uses the template assigned to the linked content (such as `default.aspx` shown in the following example).


View Content "Sample Content Block"
EDIT
Properties
Content
Summary
Metadata
Alias
Content Title: Sample Content Block
Content ID: 30
Content Language: English (U.S.)
Status: Approved (Published)
Last User To Edit: Application Administrator
Last Edit Date: 10/21/2010 03:52:46 AM
Start Date: [None Specified]
End Date: [None Specified]
Action on End Date: [None Specified]
Date Created: 1/7/2005 04:56:25 AM
Approval Method: Do Not Force All Approvers
Approvals: [None Specified]
Smart Form Configuration: [None Specified] HTML Content Assumed
Template: Default.aspx

To display the linked content in a different template:

1. When creating or editing a taxonomy or category, select the appropriate template at the **Template** pull-down field.

   NOTE: Any category below the root level can inherit its parent's taxonomy template. Use the **Inherit** checkbox to do this.

   You may need a developer's help with the remaining steps.

2. In Visual Studio, open the .aspx page that contains the directory server control.
3. Look at the server control's **MarkupLanguage** property.
4. If the property is blank, open the following file: `siteroot/workarea/template/taxonomy/taxonomy.ekml`.

   If the property displays an EkML file, open that file. Its path may be listed in the property. If the .ekml file's path is blank, it is `workarea/template/taxonomy/`.

5. Find the following line: `[$HyperLink]<br/>[$Teaser]`
6. Replace it with the following: `<a href="[$TemplateQuickLink]">[$Title]</a><br/>[$Teaser]`
7. Save the .ekml file.

The content selected from this Directory server control will use the template assigned to the taxonomy or category.

Importing and exporting a taxonomy

You can *export* any taxonomy as an xml file. Then, you can reuse it or send it to someone else, who would *import* it to bring a copy of it onto their computer.

You can use the Export/Import feature like a "save as" feature. For example, you want to create a taxonomy that is similar to an existing one but has a few differences. The easiest way to do this is to export an existing one, import it under a new name, and edit it.

Note that imported categories have no content or folders assigned to them. The import and export only includes the category names, hierarchy, and properties.

The following example shows part of a taxonomy saved as an XML document.

```
<ArrayOfTaxonomyData
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <TaxonomyData>
    <TaxonomyId>959</TaxonomyId>
    <TaxonomyName>Bob Taxonomy</TaxonomyName>
    <TaxonomyLanguage>1033</TaxonomyLanguage>
     <TaxonomyLanguageName>English (U.S.)</TaxonomyLanguageName>
     <TaxonomyDescription>Sample</TaxonomyDescription>
     <Taxonomy>
       <TaxonomyData>
         <TaxonomyId>960</TaxonomyId>
         <TaxonomyName>Subnode</TaxonomyName>
         <TaxonomyLanguage>1033</TaxonomyLanguage>
```

```
        <TaxonomyLanguageName>English (U.S.)</TaxonomyLanguageName>

      </TaxonomyData>
    </Taxonomy>
  </TaxonomyData>
</ArrayOfTaxonomyData>
```

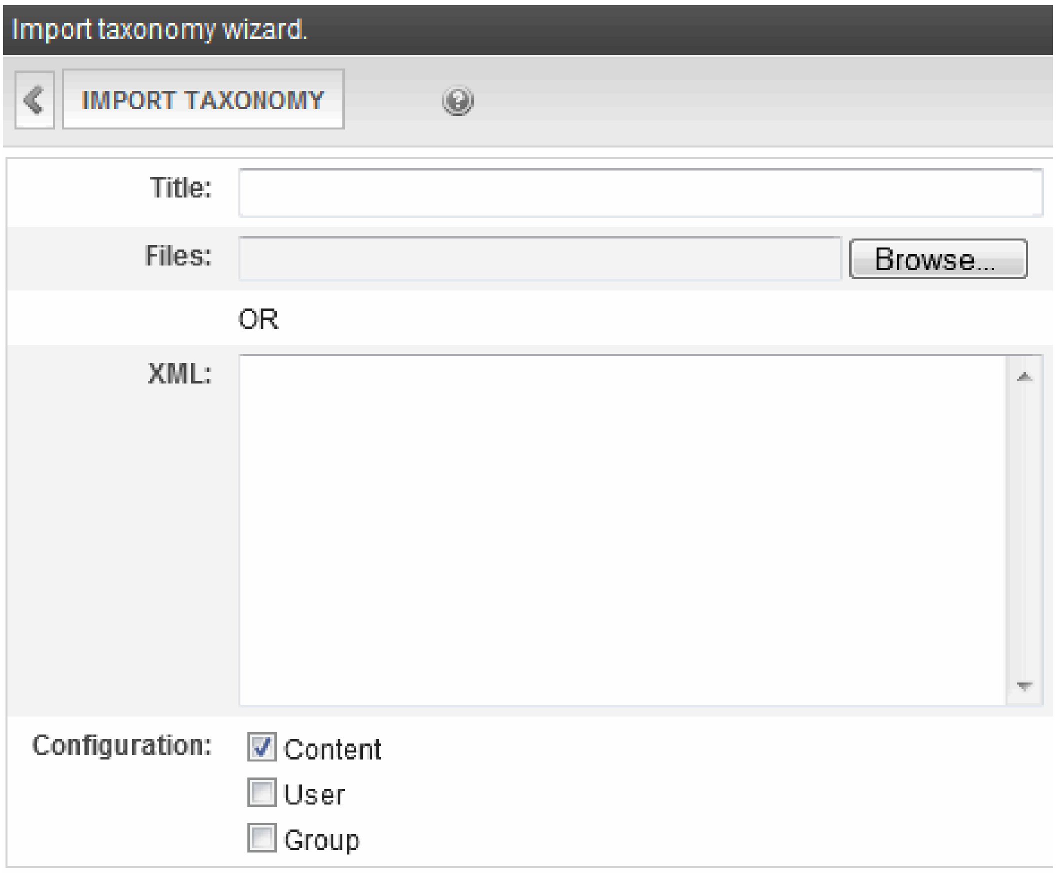
Exporting a taxonomy

Exporting a taxonomy means saving it as an .xml file on your computer or network drive. To export a taxonomy:

1. Go to **Workarea > Content > Taxonomies**.
2. Select the language of the taxonomy that you want to export.
3. All taxonomies in that language appear.
4. Click a taxonomy that you want to export.
5. Click **Export Taxonomy** ( ).
6. You are prompted to select a folder into which to save it.

Importing a taxonomy

1. Go to **Workarea > Content > Taxonomies > Taxonomies**.
2. Click Import Taxonomy ( ). The Import Taxonomy screen appears.



3. In the **Title** field, enter a name for the new taxonomy.
4. Click **Browse**.
5. Go to the taxonomy file you want to import. The path appears in the **Files** field.

NOTE: Alternatively, you can enter or paste the xml into the **XML** box.

6. Determine the taxonomy's configuration.
   - **Content**. Associate this taxonomy with content.
   - **User**. Associate this taxonomy with Ektron users or membership users.
   - **Group**. Associate this taxonomy with community groups. (See the **Category** tab of the Edit Community Group screen.)
7. Click **Import Taxonomy**.

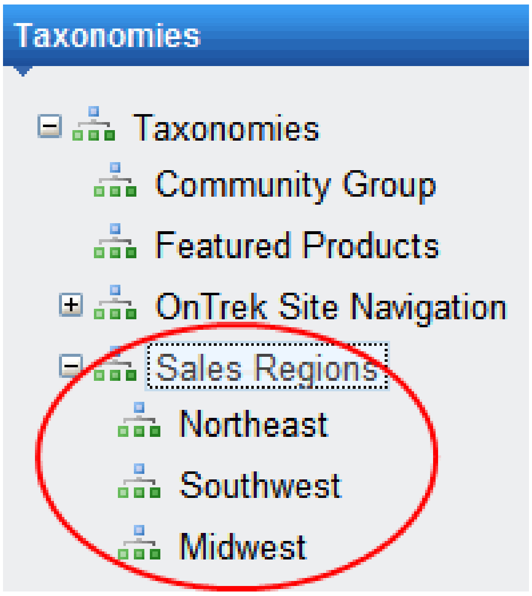
Creating and assigning taxonomy custom properties

PREREQUISITE

Only members of the Administrator user group or those assigned to the Taxonomy Administrator rolecan perform these actions.

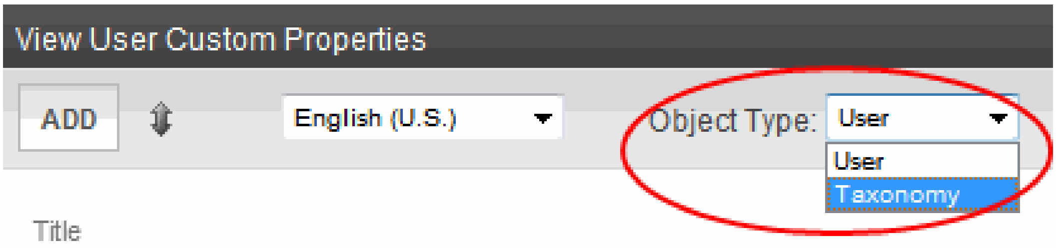
Custom properties let you extend the functionality of a taxonomy by creating custom fields to capture additional information. Custom properties act like metadata for taxonomies and categories.

For example, your organization manages a nationwide chain of retail stores. You create a Sales Regions taxonomy, where each category represents a different geographic region (Northeast, Southeast, and Midwest).

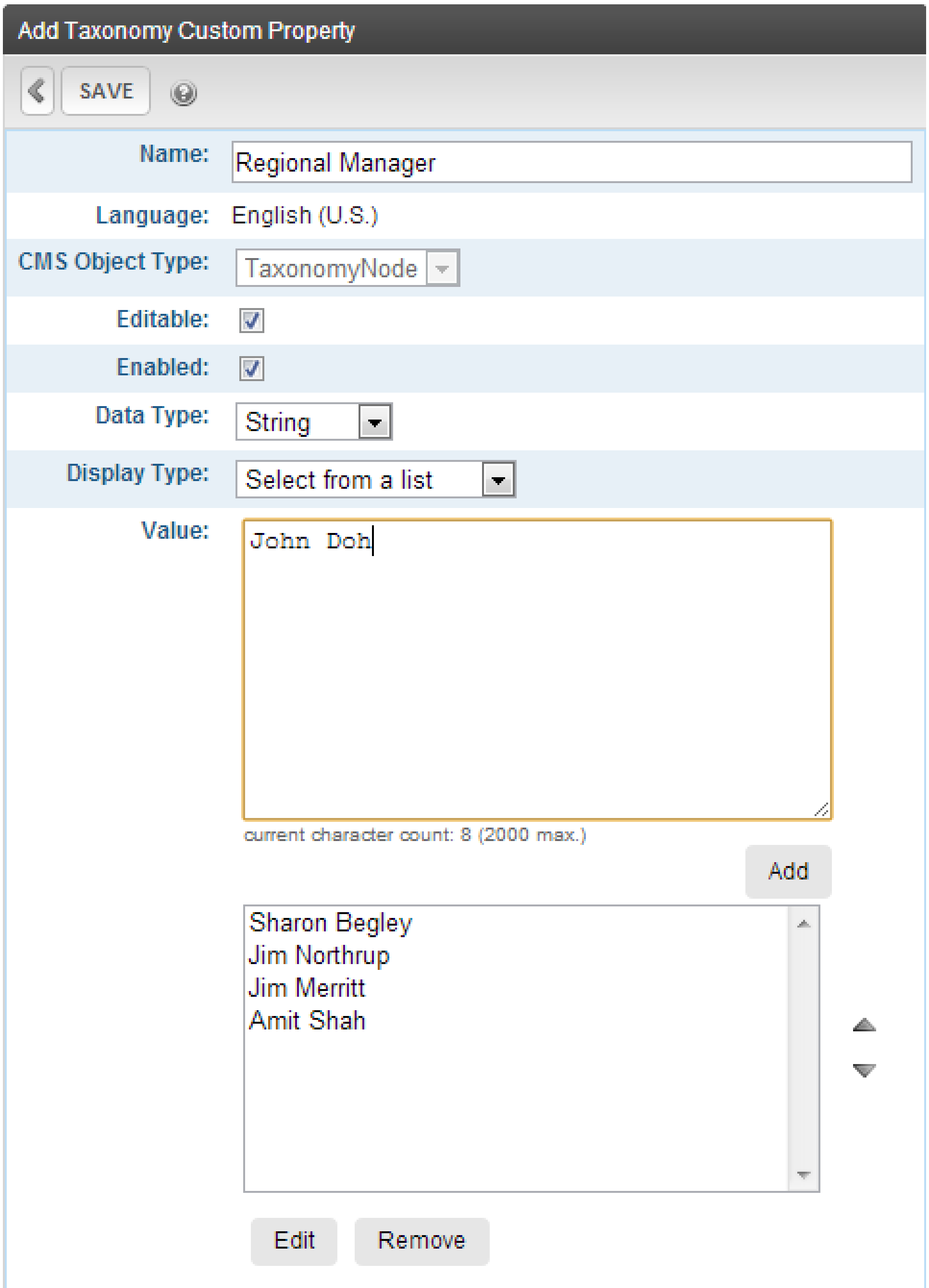


You can create a custom taxonomy property named **Regional Manager** and use it to create a list of regional managers.

1. Go to **Workarea >Settings > Configuration > Custom Properties**.
2. Select the language of the new custom property. You will only be able to apply the custom property to taxonomies/categories in this language.
3. From the **ObjectType** drop-down, click **Taxonomy**.



4. Click **Add.** The Add Custom Property screen appears.



- **Name.** Enter the custom property name. The name identifies the custom property on the Edit Taxonomy screen's Custom Properties tab.
- **Editable.** Check this box to let the user (who is applying this custom property) choose a value or edit the default value. Uncheck the box if the user cannot choose or edit the value. In this case, the user is only applying the property. If a property is *not* editable and has several values (type `string: select from list` or `boolean`), only the first or selected value is applied to the property.

  For example, assume you manage an auto parts stores and want a custom taxonomy property to indicate if a car can be repaired at a facility. You create a property named **Repair Services Available**, and make it boolean and editable. Then, the person applying that custom property to a taxonomy category can choose **Yes** or **No** to indicate if repair services are available.

- **Enabled.** Check this box if this property can be applied to a taxonomy or categories. If you uncheck this box, this property does not appear on the Edit Taxonomy screen's **Custom Properties** tab.
- **Data Type.**
  - **String**. a series of characters
  - **Boolean**. true (yes) or false (no)
  - **Numeric**. a series of numbers
  - **DateTime**. one or more dates and times selected from a calendar popup
- **Display Type/Value.** If the Data Type is String, Numeric or DateTime, you have 2 choices.

  NOTE: If the Data Type is boolean, select either **Yes** or **No**.

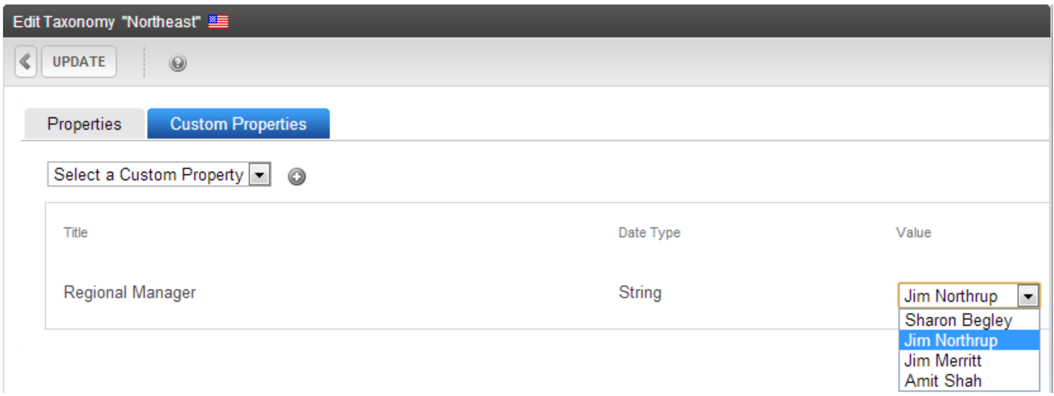
  - **Select a single value**. the property accepts one value
  - **Select from a list**. the property accepts several values. When you choose this option, a lower field appears. (See previous image.)

    In the top field, insert a value then click **Add**. When you do, the value moves to the lower field. Continue until all values are entered.

    If you want to edit the order of the values, select a value and then use the up/down arrows to the right of the lower field..

    NOTE: If **Editable** is checked and you insert several values, the user applying the custom property can choose the value. If **Editable** is not checked, the first value is applied to the custom property.

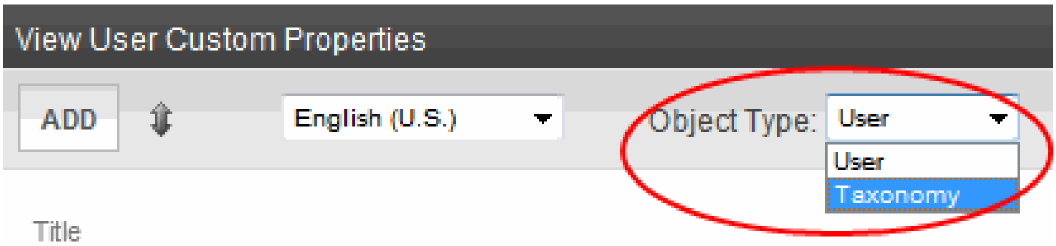
5. Click **Save**. The View Taxonomy Custom Properties Screen appears.
6. Go to **Content > Taxonomies > Sales Regions > {region}** and click **Edit** ( ). The Edit Taxonomy screen appears.
7. Click the Custom Properties tab.
8. Choose **Regional Manager** from the Select a Custom Property drop-down and click **Add** ( ).
9. Choose the manager from the Value drip-down that you want to assign to the selected region.



10. Click **Update**.
11. Access each region category, click the **Custom Properties** tab, and apply a manager to the region.

Editing a taxonomy custom property

1. Go to **Workarea > Settings > Configuration > Custom Properties**.
2. Select the language of the custom property.
3. From the **ObjectType** drop-down, click **Taxonomy**.



4. Click the **Title** of the custom taxonomy property you want to edit.
5. The Edit Custom Property screen appears.
6. Move to the field you want to change. You can edit the Name, Editable, Enables, and Value fields. For a description of these fields, see the Add Taxonomy Custom Property screen.

NOTE: You cannot edit the **ID, Language, CMS Object Type, Data Type,** or **Display Type** fields. If you need to change these fields, delete the custom property and create a new one.

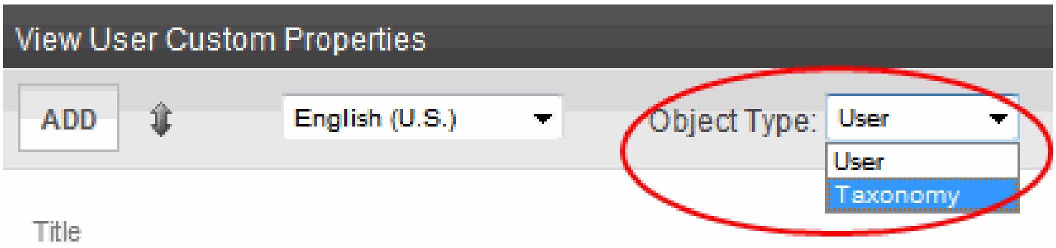
7. Click **Save**.

Deleting a taxonomy custom property

If you delete a taxonomy custom property, it cannot be assigned to additional taxonomy and categories, but it remains assigned to all taxonomy and categories to which it is assigned.

To delete a custom taxonomy property:

1. Go to **Workarea > Settings > Configuration > Custom Properties**.
2. From the **ObjectType** drop-down, click **Taxonomy**.

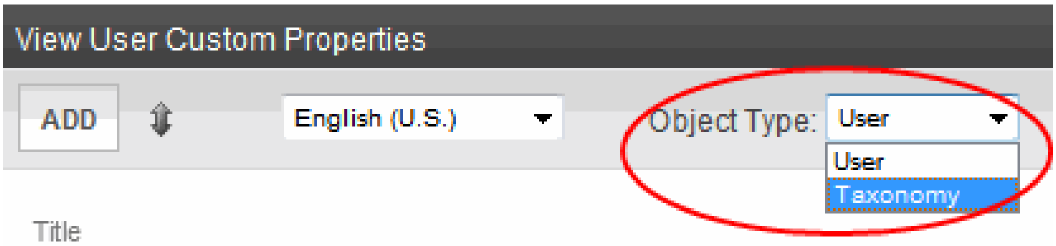


3. Select the language of the custom property.
4. Click the **Title** of the property you want to delete.
5. Click **Delete** ( ). A dialog box asks you to confirm.
6. Click **OK**.

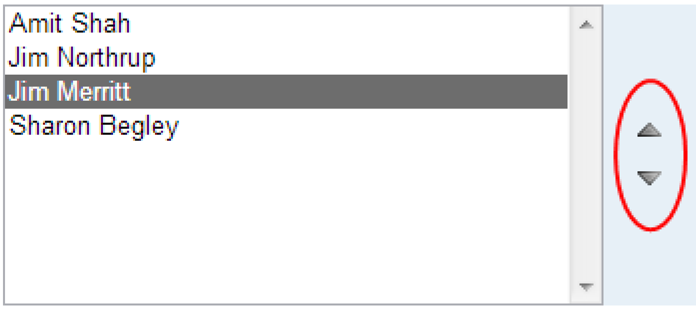
Reordering taxonomy custom property values

To set the order of values in a custom taxonomy property:

1. Go to **Workarea > Settings > Configuration > Custom Properties**.
2. From the **ObjectType** drop-down, click **Taxonomy**.



3. Select the language of the custom property.
4. Click the **Title** of the custom taxonomy property.
5. In the **Value** field, select item that you want to reorder.



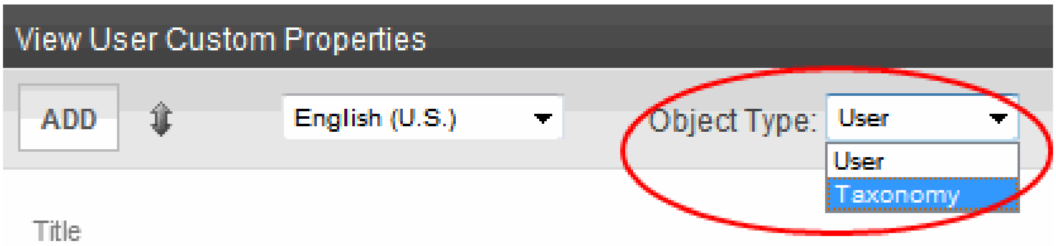
6. Click the **Up** or **Down** arrows to move the value up or down.
7. Click **Save**.

Saving a taxonomy custom property in a different language

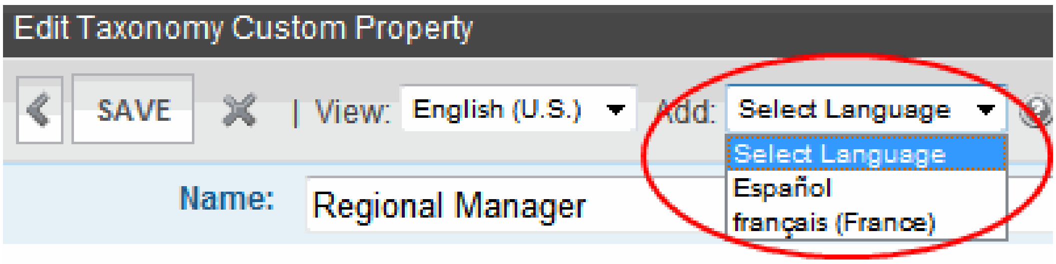
When you save a taxonomy custom property in a different language, Ektron creates a new (different language) version of the content that is not linked to the original content. If you edit or delete the original language version, your edits do not affect the new version. (However, the new version uses the same ID number as the original language version.)

To create a custom taxonomy property in another language:

1. Go to **Workarea > Settings > Configuration > Custom Properties**.
2. Select the language of the custom property.
3. From the **ObjectType** drop-down, click **Taxonomy**.



4. Click the **Title** of the custom taxonomy property to be created in another language.
5. From the **Add** drop-down, select the language in which you want to create the custom property.



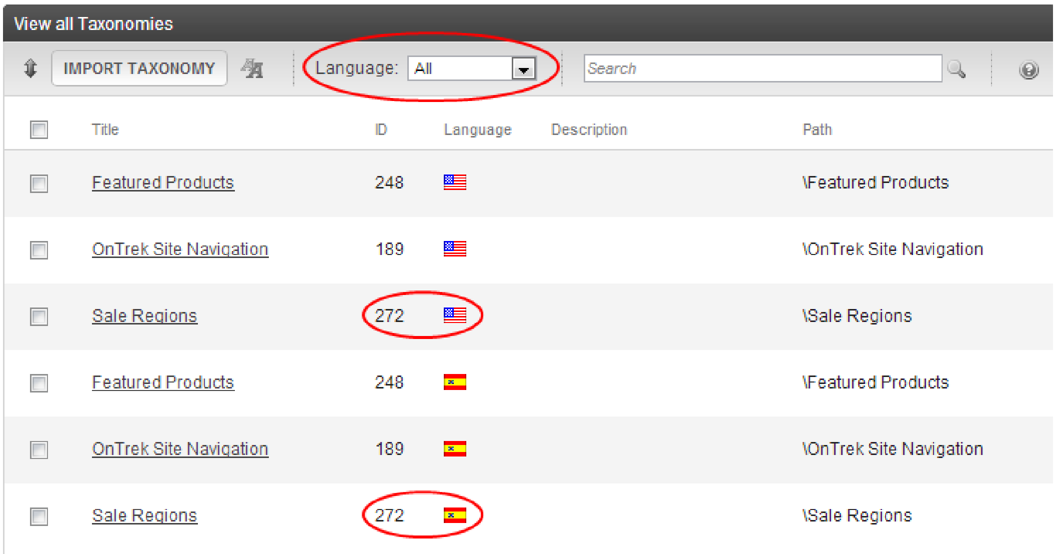
> **NOTE:** The **Add** drop-down shows enabled languages for which this custom property does not already exist.

6. Complete the fields for the new category. For a description of these fields, see the Add Taxonomy Custom Property screen.
7. Click **Save**.

Working with taxonomies in a multi-language environment

When creating a taxonomy, you select a language. At that point, a version of that taxonomy is created in each enabled language. For example, you create a taxonomy in English, and French and Spanish are also enabled (in the **Settings > Language Settings** screen). Ektron now has English, French, and Spanish versions of that taxonomy. Each taxonomy ID is the same—only the language IDs are different.

You do not need to use all language versions. And, if you add a new category to a taxonomy, it is automatically added to all language versions of that taxonomy. Also, if you enable a new Workarea language, a version of every taxonomy is automatically created in that language. If you disable a language, all of its taxonomies are deleted.



Edits to taxonomy properties

Initially, all related-language versions of a taxonomy inherit properties from the original language version. For example, if you create a taxonomy in English and French is enabled, the French taxonomy description is the same as the English one, as are the taxonomy image, taxonomy template, value of **Display?** checkbox, and so on.

After the initial creation of the related-language versions, changes to taxonomy properties affect the current language only—they do not affect the related-language versions.

Assigning content to a multi-language taxonomy

You can only apply content to a taxonomy category whose language matches the taxonomy language.

If the **Synchronize Languages** field on the Taxonomy Properties screen is checked, and you assign content to an English taxonomy, content with the same ID in the other languages is assigned to the other language versions.

For example, you apply content ID=30, **Ektron Server Controls** to 1 or more categories of an English language taxonomy. If that same taxonomy also exists in German, and there is corresponding German content (also ID=30), it is applied to the corresponding category in the related German taxonomy.

If you remove content from a taxonomy in any language, it is removed from all language-related taxonomies. However, if you remove a folder from its assignment to a taxonomy or category, the content in that folder is still applied.

WARNING! If you delete a taxonomy, all related language versions are also deleted.

Assigning a folder to a multi-language taxonomy

When you assign a folder to a taxonomy category, you indicate that all folder content is assigned to that node. Ektron folders are language-neutral, so the folder is also applied to the corresponding taxonomy category in every language. However, only folder content that matches the taxonomy's language is assigned to the taxonomy category.

For example, a folder has 3 content blocks.

- English content in folder—100, 101, and 102
- German content in folder—100

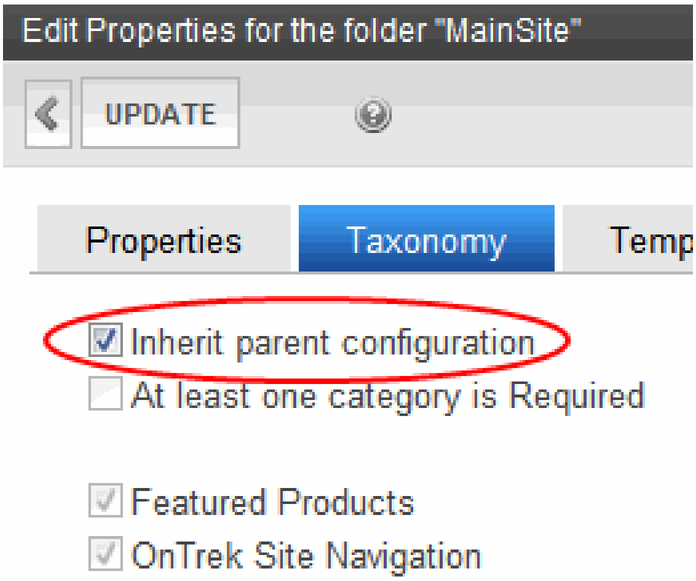
If you apply that folder to a taxonomy, the English version of the taxonomy gets 3 content blocks assigned, but the German version only gets 1 content block assigned (ID 100).

If content is later added to the folder, new English content is assigned to the English taxonomy, and new German content is assigned to the German taxonomy.

NOTE: If you apply a folder to a taxonomy, numbers on the View Taxonomy screen indicate how many content items are applied to it. Unless you have the same number of content items in each language, this number is different for every language.

Effect of multi-language on folder's taxonomy properties

If there are several language-related versions of a taxonomy and you select 1 of them then edit a folder's taxonomy properties, content in the related language inherits the taxonomy folder properties. For example, assume you select English, then apply a taxonomy or categories to a folder's properties. If you later edit Spanish content in that folder, the corresponding Spanish taxonomy categories are available to be assigned on the **Category** tab.



The value of the **At least one category is Required** check box is also inherited. See also: *Requiring the assignment of at least one category* on page 1262

Reordering content and categories

If you reorder *content* assigned to a taxonomy or category, there is no change to corresponding categories in other languages. This is because there is no guarantee that content that exists in 1 language exists in the other languages.

If you reorder *categories* assigned to a taxonomy or category, you have an option to apply the changes to all language-related categories. See also: *Reordering categories* on page 1276

Using taxonomies with social networking

If you have a community or social networking website, you can assign users and community groups to a taxonomy. This lets site visitors search for users and groups by category.

To enable a taxonomy-based search of users and community groups, a developer uses the CommunityGroupBrowser server control on your site, which lets a site visitor browse a taxonomy category for community groups. See also: *Assigning categories to a community group* on page 1263

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26

Creating user-friendly URLs with aliasing

Ektron's URL aliasing makes it easy to create descriptive, meaningful and SEO-friendly URL aliases consistently, maximizing your website's placement in search results. Use of words and phrases that actually define the page increases an aliases' search engine rankings. If you follow a pattern, you can scale your aliases across your sites as they grow. Search engines find URL aliases generated by Ektron. Ektron caches aliases to improve performance of your site.

If you have a static website (for example, all HTML pages) that is indexed in a search engine, create aliases for your site and retain complete content management without affecting your search engine ranking.

If you have a PHP site, alias PHP pages and use the same query string names to pass needed information to the new .aspx pages.

NOTE: Query strings appended to an aliased page pass to the .aspx page and may be used if necessary.

Existing sites migrate easily to Ektron, adopting the new aliasing scheme. Aliasing keeps old links valid and you do not have to make changes to `web.config`. When URL aliasing is configured and enabled, content inherits the new aliasing structure.

The following link, Creating User-friendly URLs with Aliasing, is a video that explains the various types of URL aliases.

Types of URL aliasing

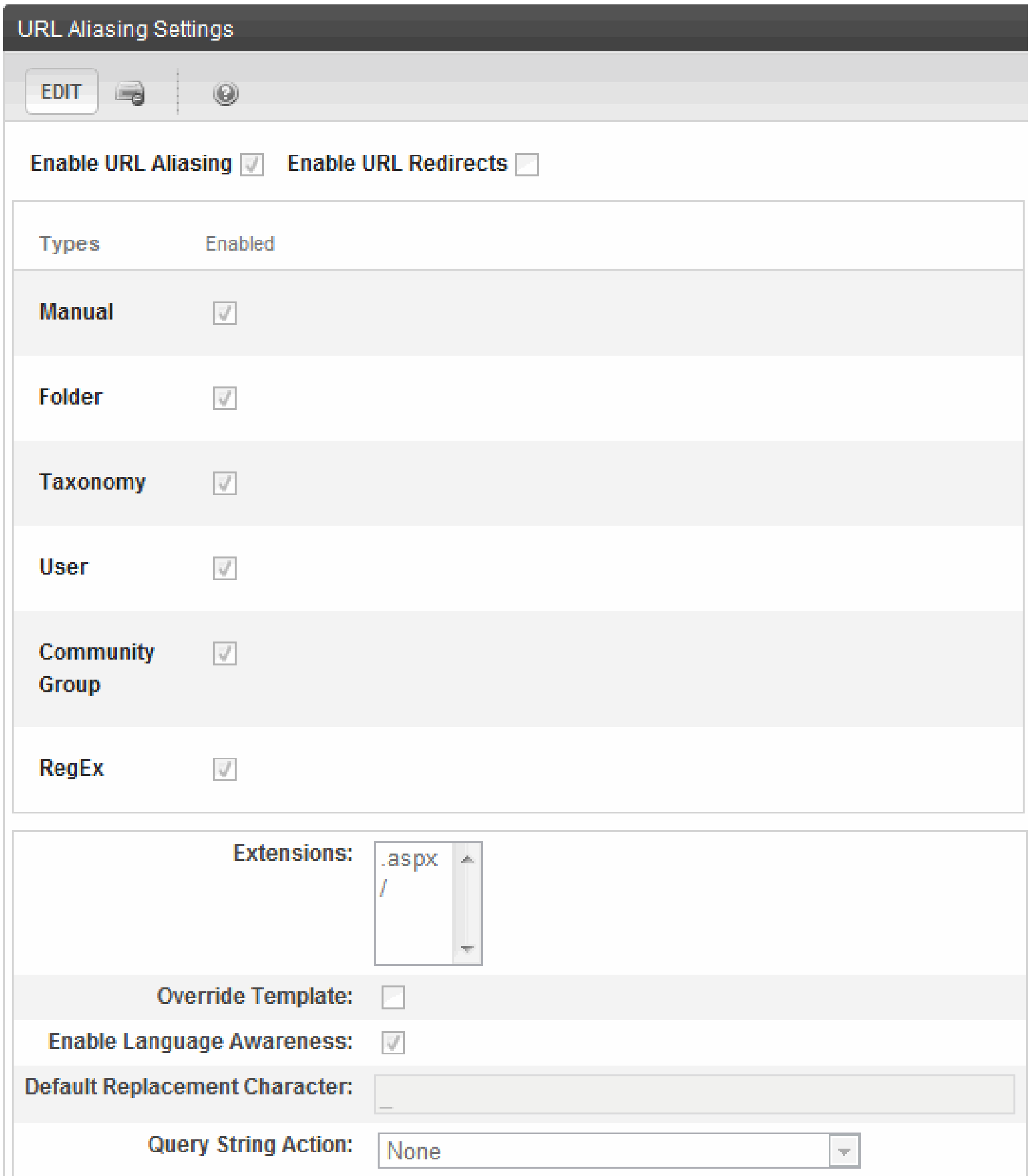
- **Manual URL Alias**. give a content block a unique name. You can assign several manual aliases to content then decide which one is the primary alias. If multiple alias types are provided for a content item, you can enter any alias into the browser address field to access that content. See *Creating a manual URL alias* on page 1304.
- **Automatic URL Alias**. create rules to be applied to the following types of CMS entities. When you add content to any of the following types, it inherits the URL alias rules. See *Creating automatic URL alias rules* on page 1308.
  - **Taxonomy**. create an alias that is based on the taxonomy in your CMS by using the levels of the taxonomy plus the title of the page. Because the alias is based on taxonomy, you can have multiple aliases that have relevancy to multiple search criteria.
  - **Folder**. create an alias that is based on the CMS folder structure. Descriptive folder names and a well-organized folder structure makes a URL more relevant to the content's actual location.
  - **User**. create an alias using the name of a user in the URL. For example, a friendly URL for Steve's profile page can be `www.example.com/steve`.
  - **Group**. create an alias using the name of a group to help make community pages within your Ektron website easy to remember and find. For example, a friendly URL for car enthusiasts would be `www.example.com/cars`.
- **Regular Expressions** (**RegEx**). create a URL match pattern that can redirect or transform a range of URLs with a single setting. See *Creating RegEx expressions* on page 1314.

- **Site Alias**. lets an existing site URL have more than one URL for the same site. For example, if your company's name just changed from *Bionics* to *NewGen*, (and the site is essentially intact), you can use site aliasing so your customers can get to the same site content from the old `www.bionics.com` address and the new `www.newgen.com` address. See *Creating a URL alias for a site* on page 1316.
- **URL Redirect Alias**. lets a link to an old URL find the new or changed URL that you want. You use this alias when you need to add, change, or modify an existing URL. See *Creating a URL redirect* on page 1319.

Configuring URL aliasing

Before you can set up aliases, you must enable the feature using the URL Aliasing Settings screen. Choose **Workarea > Settings > Configuration > URL Aliasing > Settings**. Then, click **Edit**.

IMPORTANT: If you performed a database sync and the site being synchronized uses URL aliasing, you must go to its URL Aliasing Settings screen and click **Clear Cache** ( ) to update its aliasing information. Also, If you enable or disable any alias type or caching, you must run a full crawl of your Search Server. See also: *Managing the search crawl* on page 368.

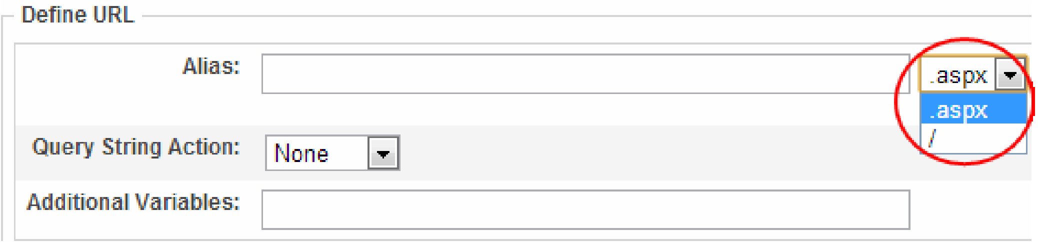


- **Enable URL Aliasing**. Let CMS users with permissions create URL aliases.
- **Enable URL Redirects**. Let CMS users with permissions create redirected URLs (for example, 301 redirects). See *Creating a URL redirect* on page 1319.
- **Manual**. Enable manual aliasing. See *Creating a manual URL alias* on page 1304.
- **Folder**. Allow automatic folder aliases to be generated.
- **Taxonomy**. Allow automatic taxonomy aliases to be generated.
- **User**. Allow automatic user aliases to be generated.
- **Community Group**. Allow automatic community group aliases to be generated.
- **RegEx**. Allow RegEx aliases to be generated.
- **Extensions**. Enter file extensions of pages for which aliases can be created and click **Add**. Begin each extension with a period (.). By default, Ektron supplies the following extensions (which cannot be removed).

- .aspx
- / (the slash is actually the lack of an extension at the end of a page's name)

Do not add any extension entered into the Handler Mapping list. See *Restrictions on extensions* on page 1301

The values in this field appear as drop-downs in the Add a New Manual Alias and Add a New Automatic Alias screens.



See also: *Defining unusual file extensions used in aliasing* on page 318

- **Override Template**. A template and an alias can have the same name, for example, `www.example.com/dynamic.aspx`. If this happens, and a site visitor types such an address into the browser, this check box determines if the template page or the alias appears. If this box is checked, the alias appears instead of the template.

NOTE: The template must be defined within the **Workarea Settings > Template Configuration** screen.

- **Enable Language Awareness**.
  - Off (unchecked).
    - URL exists in the site visitor's current language: show target.
    - URL does not exist in site visitor's current language: 404 File Not Found appears.
  - On (checked).
    - URL exists in the site visitor's current language: show target.
    - URL does not exist in site visitor's current language:
      - If the URL exists in a language listed in the language fallback chain: show target. (See *Setting the fallback locale* on page 1414.)
      - If the URL does not exist in the language fallback chain, but does exist in the site default: show target.
      - If the URL does not exist in the language fallback chain, and does not exist in the site default, but exists as an alias in any language: get the first URL match and show target.
      - If the URL does not exist in the language fallback chain, and does not exist in the site default, and does not exist as an alias in any language: 404 File Not Found appears.
- **Default Replacement Character**. replace spaces in taxonomy, folder, group or user path names with a default character (such as underscore, _). You can

specify replacement characters for other characters in the Replacement Character Map on the Add Aliasing Rule screen.

- **Query String Action**. Set up a rule to handle an alias's query string parameters. You can set one rule for your entire site (via this field), and separate ones that override the system-wide rule for specific manual aliases (using the Aliases screen). The following options are available.
  - **None**. If an aliased URL has a query string, it is ignored. Any query string on the target URL is used.
  - **Replace All Parameters within Alias**. replaces a target's query parameters with the alias' s query parameter. Example:

    ```
    alias's query string parameter:
    http://www.ektron.com/Contact.aspx?id=84
    Target: http://www.ektron.com/aboutus.aspx?id=35&Userid=1
    Result: http://www.ektron.com/aboutus.aspx?id=84
    ```

    (The target parameters `id=35&Userid=1` are replaced by the alias parameter `id=84`)
  - **Append Parameters to Alias**. appends the alias's parameters to the target URL. Example:

    ```
    Alias: http://www.ektron.com/Contact.aspx?id=84&lang=1033
    Target: http://www.ektron.com/aboutus.aspx?id=35&Userid=1
    Result: http://www.ektron.com/aboutus.aspx?id=35&Userid=1
      & id=84&lang=1033
    ```

    (The parameter from the alias is appended to the target)
  - **Resolve Matched Parameters within Alias**. Ektron tries to resolve matching parameters (it is case sensitive). If a match is found, the alias's query string parameter takes precedence. Example:

    ```
    alias's query string parameter:
    http://www.example.com/Contact.aspx?id=84
    Target: http://www.example.com/aboutus.aspx?id=35&UserId=10
    Result: http://www.example.com/aboutus.aspx?id=84&UserId=10
    ```

    (`id=35` is replaced by `id=84` since it matched the query string parameter. `UserId=10` was not affected because it did not match the alias query string parameter.)

Setting default documents for URLs

You can set the default document file (for example, `default.aspx`) in the `ek_DefaultPage` element of `siteroot/web.config` for client requests of a website that did not specify a document name. For example, if someone types `www.example.com/jobs`, and the default document is `default.aspx`, this URL resolves to `www.example.com/jobs/default.aspx`.

NOTE: The concept of default document is explained in the following Microsoft KB article: Configure the List of Default Documents in IIS 7

The `ek_DefaultPage` element determines your website's default document regardless of whether you are using URL aliasing.

If a site visitor enters an address without a page name, Ektron refers to `ek_DefaultPage`'s values. For example, the first page is `default.aspx`. If found, that page displays. If not, it looks for the second page listed, and so on. If no pages are found or a page is not specified in `ek_DefaultPage`, **Page not found** appears in browser.

Permissions for working with URL aliasing

- Alias-Admin privileges apply to members of the CMS Administrators group and CMS users with the Alias Administrator role.
- Alias-Author privileges apply to any CMS user with the Alias Author role.
- CMS User privileges apply to users that do not have the Alias-Author or Alias Administrators role applied.

NOTE: By default the Alias-Author role is applied to the *Everyone* group. This role can however be removed to further restrict the permissions to the CMS User state.

Task	Alias-Admin	Alias-Author	CMS User
View Settings Page	✓		
Edit Settings	✓		
View Rule List Pages	✓	✓	✓
View Rule	✓	✓	✓
Edit Rules	✓		
View Alias List Page	✓	✓	✓
View alias	✓	✓	✓
Add Aliases	✓	✓	
Edit Alias	✓		

Task	Alias-Admin	Alias-Author	CMS User
Delete Alias	✓	✓	
View Redirects Page	✓	✓	✓
Edit Redirects Page	✓		
View Alias on content tab	✓	✓	✓
Edit Alias on content tab	✓	✓	

Where aliasing cannot be applied

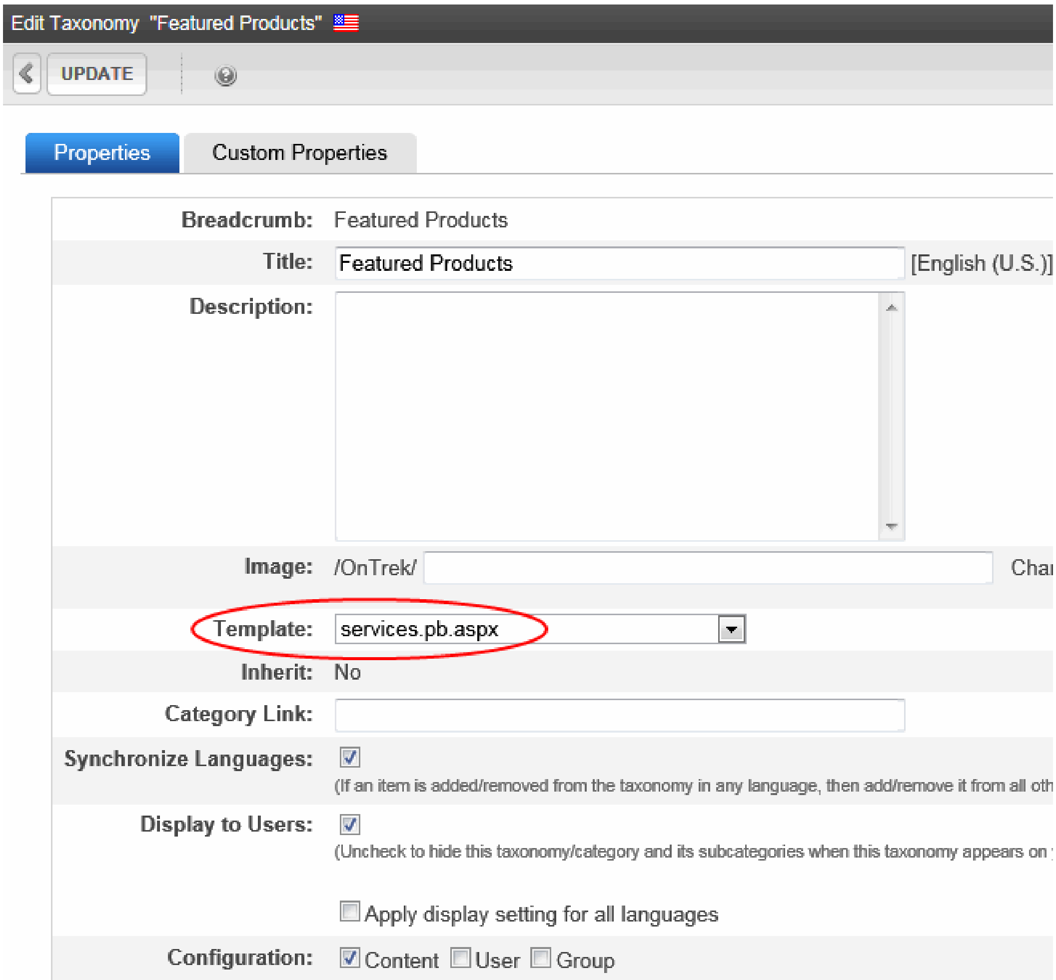
IMPORTANT: After you enable Aliasing, relative links embedded in your Web pages that are not preceded by a slash (/) may demonstrate symptoms such as run-time error notifications, broken images (you see a red **X** where the image should be), or missing text styling. The following Ektron Knowledge Base article analyzes this problem and presents solutions: Avoiding Style Problems, JavaScript Errors, and Broken Images When Using URL Aliasing.

You cannot apply aliasing to the following areas of Ektron.

- images
- content in root folder (cannot be automatically aliased, although you can alias it manually and by taxonomy)
- forums (discussion boards) (links within forum posts can be aliased)
- forms/polls/surveys—the form is aliased but the postback screen is not (for a workaround, see Tip/Trick: Url Rewriting with ASP.NET)
- a link to an HTML form
- eCommerce. Items in a Cart use an alias *unless* you assign an .aspx page in the control's `TemplateProduct` property. If you assign a page, it is used in the product's URL, not the alias.
- If you enable .asp as an extension, the alias does not appear when a site visitor hovers the cursor over assets. Instead, the actual file name appears.

  If a site visitor hovers the cursor over HTML content, the alias does appear.
- The alias does not appear when a site visitor viewing an RSS page hovers the cursor over *assets*. Instead, the actual file name appears.

- content links within the Directory server control. If a template is assigned to a taxonomy, the template takes precedence over an alias for content found by a Directory server control.

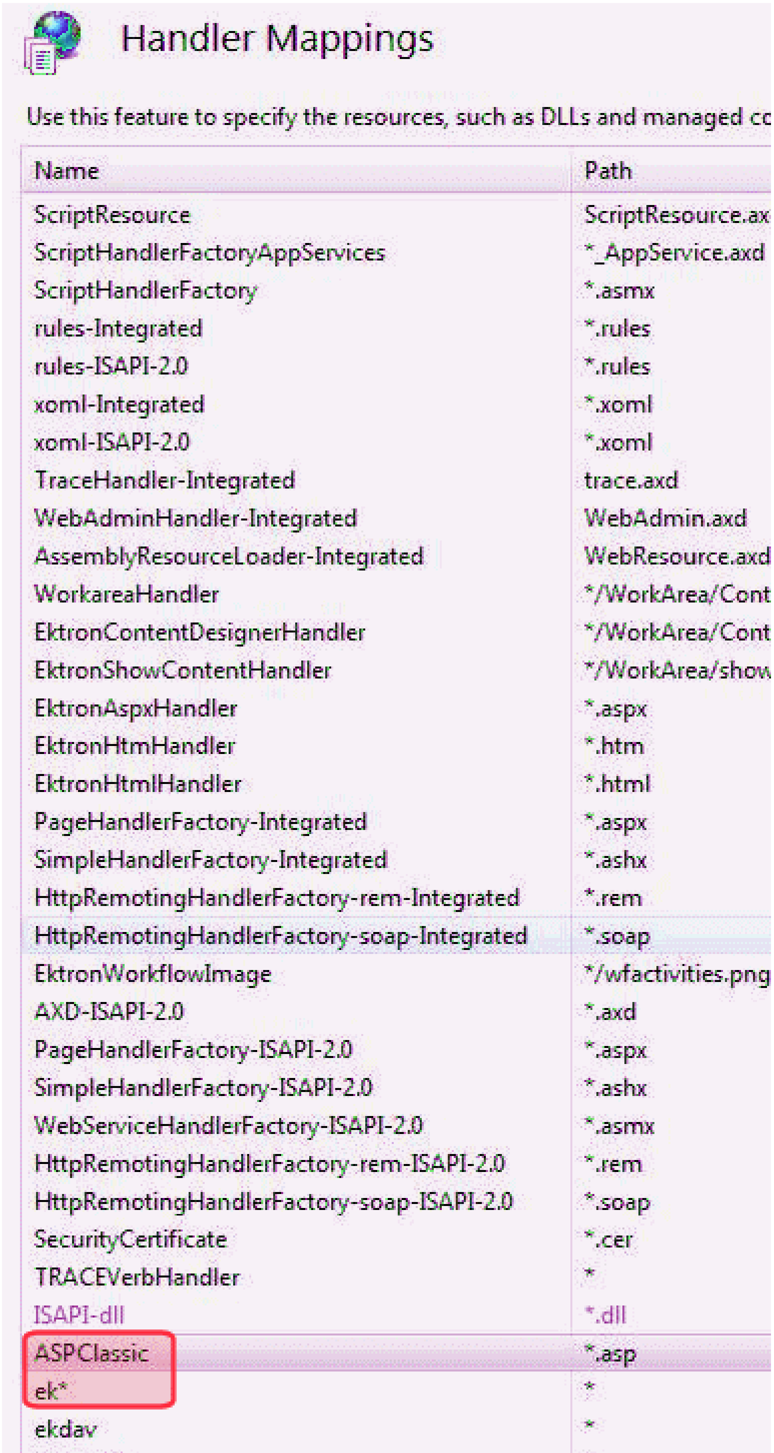


Restrictions on extensions

IIS7 handles Web page extensions other than .aspx. There are 2 scenarios.

- If your site has non-aspx pages, you need to modify the IIS7 Handler Mapping list. In the Handler Mapping list, extensions that are below **ek*** in the list are handled by aliasing. You need to move non-aspx extensions (for example, .asp, .php, .cfm) above the **ek*** extensions in the list.
  1. Open IIS7.
  2. Right click your website.
  3. Click **Handler Mappings**.
  4. Click **View Ordered List**.
  5. Move non-aspx extensions used on your site above **ek***. For example, if your site uses .aspx pages, move **ASPclassic** above **ek***.

NOTE: After you do this, you *cannot* use these extensions as part of an alias. So, do *not* enter them into the **Extension** field of the URL Aliasing Settings screen.



Handler Mappings

Use this feature to specify the resources, such as DLLs and managed co

Name	Path
ScriptResource	ScriptResource.ax
ScriptHandlerFactoryAppServices	*_AppService.axd
ScriptHandlerFactory	*.asmx
rules-Integrated	*.rules
rules-ISAPI-2.0	*.rules
xoml-Integrated	*.xoml
xoml-ISAPI-2.0	*.xoml
TraceHandler-Integrated	trace.axd
WebAdminHandler-Integrated	WebAdmin.axd
AssemblyResourceLoader-Integrated	WebResource.axd
WorkareaHandler	*/WorkArea/Cont
EktronContentDesignerHandler	*/WorkArea/Cont
EktronShowContentHandler	*/WorkArea/show
EktronAspxHandler	*.aspx
EktronHtmHandler	*.htm
EktronHtmlHandler	*.html
PageHandlerFactory-Integrated	*.aspx
SimpleHandlerFactory-Integrated	*.ashx
HttpRemotingHandlerFactory-rem-Integrated	*.rem
HttpRemotingHandlerFactory-soap-Integrated	*.soap
EktronWorkflowImage	*/wfactivities.png
AXD-ISAPI-2.0	*.axd
PageHandlerFactory-ISAPI-2.0	*.aspx
SimpleHandlerFactory-ISAPI-2.0	*.ashx
WebServiceHandlerFactory-ISAPI-2.0	*.asmx
HttpRemotingHandlerFactory-rem-ISAPI-2.0	*.rem
HttpRemotingHandlerFactory-soap-ISAPI-2.0	*.soap
SecurityCertificate	*.cer
TRACEVerbHandler	*
ISAPI-dll	*.dll
ASPClassic	*.asp
ek*	*
ekdav	*

- If your site previously had non-aspx pages but now it does not, set up aliases to the previous non-aspx pages so that a visitor's bookmarks will continue to work.
  1. Open IIS7.
  2. Right click your website.

3. Click **Handler Mappings**.
4. Click **View Ordered List**.
5. On the Handler Mappings screen, move non-aspx extensions that you want to alias below **ek***. For example, if your site uses .aspx pages, move **ASPclassic** below **ek***.
6. Enter the extensions in the **Extension** field of the URL Aliasing Settings screen. See also: *Types of URL aliasing* on page 1294

Clearing the cache

An alias is cached whenever anyone uses it. You should periodically clear the cache so that aliases are kept current.

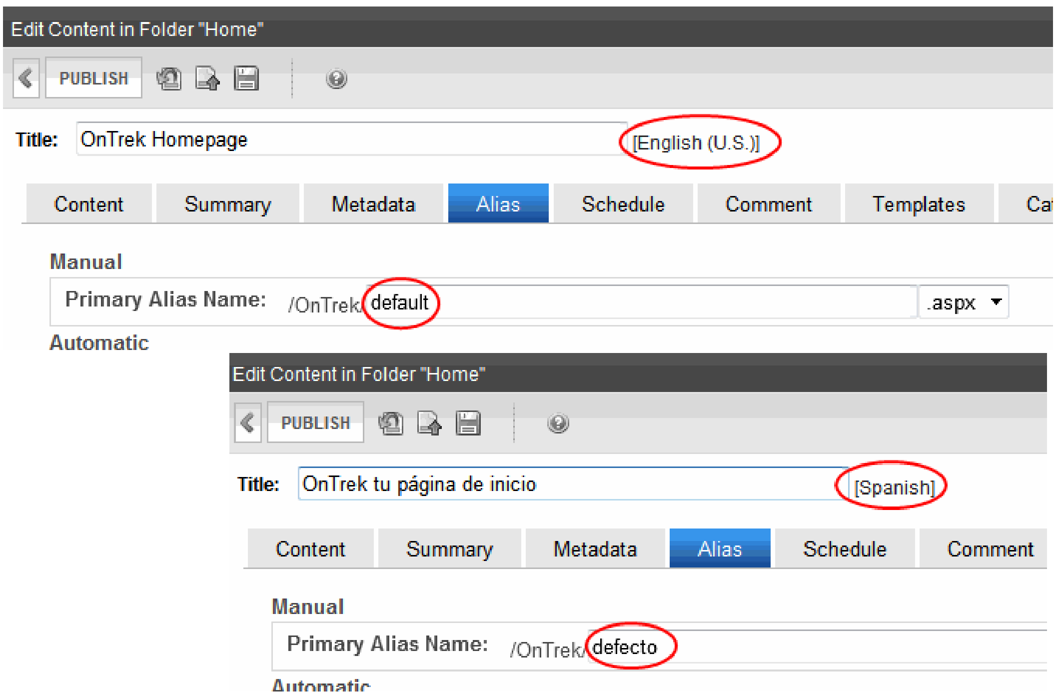
IMPORTANT: If your Ektron supports multi-site configurations, you must sign in to each site's Workarea, then manually clear its cache.

1. Choose **Settings URL Aliasing > Settings**.
2. Click **Clear Cache** ( ).

Assigning an alias to multi-language content

When a site visitor selects a language for viewing your site and enters the alias, Ektron displays the aliased content in the selected language. See also: the **Enable Language Awareness** field in *Configuring URL aliasing* on page 1295.

You can assign a different alias to each language version of content. To do this, select the content, language, go to the **Alias** tab, and assign a language-specific alias. For example, your English home page's alias is **default**, while your Spanish alias is **defecto**.



Also, alias names must be unique only within a language. So, for example, you cannot have 2 aliases named `Ektron` within U.S. English content. But, you can have 2 two aliases named`Ektron` if one is applied to U.S. English content, and the other applies to Spanish content.

Filtering aliases

You can have many aliases. Ektron lets you sort and filter the aliases to make it easy to isolate a subset of aliases, to work on, activate, deactivate, delete, and so on. The Aliases screen (**Workarea > Settings > Configuration > URL Aliasing > Aliases**) has the following features for filtering. You can combine these filters to narrow your focus.

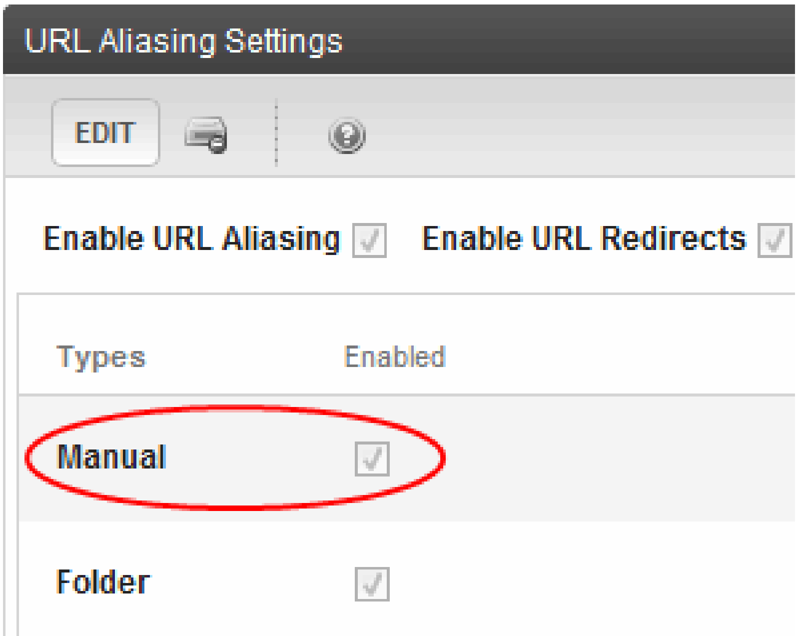
- **Type**. filters aliases by taxonomy, filter, manual, user, or group. For example, choose user and only user aliases appear.
- **Language**. filters aliases by the selected language. For example, choose Spanish, and only the Spanish aliases appear.
- **Default**. filters aliases by site, if you have multiple sites; otherwise, default.
- **Search**. Type in a string to filter the aliases.
- Sort column—Click on a column heading to sort the entries A-Z or Z-A.

Creating a manual URL alias

You can choose a page name that makes complex URLs easier to read and remember. For example, you can create an alias for `www.example.com/help.aspx?id=27` that resolves to `www.example.com/help.htm`. From then on, the content can be identified either by its original URL or its alias. You can create any number or aliases for a content block.

NOTE: You cannot apply an alias to the root website. For example, you cannot alias `www.example.com` with `www.example2.com`. However, you can alias anything below the root folder.
On multi-site environments, you can apply an alias to a folder on the root site, or to a folder on other sites, but not both. For example, you can have the alias `content.aspx` applied to a *root-folder*, but then the `content.aspx` alias cannot be used on a *site-folder* at the same time. However, if you apply `content.aspx` to *site1-folder*, you can also apply `content.aspx` to *site2-folder*.

To activate or disable manual aliasing, choose **Settings > Configuration > URL Aliasing > Settings**. The URL Aliasing Settings screen appears, which indicates if manual aliasing is on or off. To change its state, click **Edit**, check or uncheck the box, and click **Save**.



To view a manual URL alias:

1. Choose **Workarea > Settings > Configuration > URL Aliasing > Aliases**.
2. On Aliases screen, click the alias you want to view. The alias information appears.

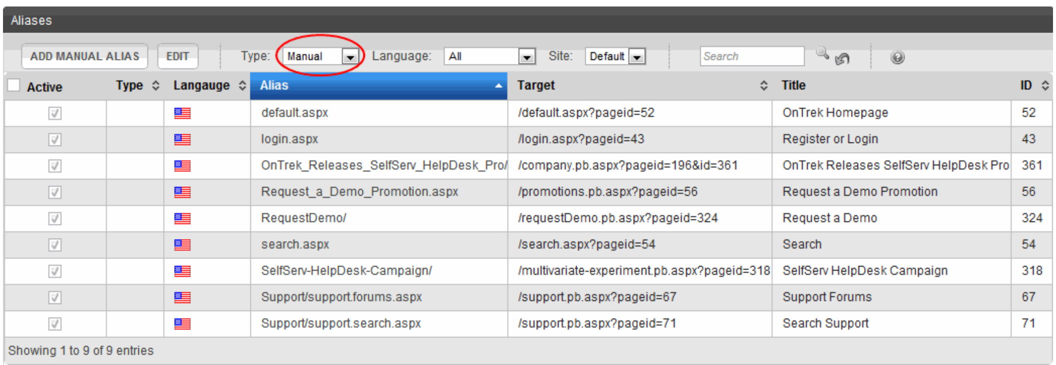
Adding/editing a manual URL alias

To add or edit a manual alias, manual aliasing must first be enabled.

1. Choose **Workarea > Settings > Configuration > URL Aliasing > Aliases**. The Aliases screen appears. You can specify the following filters, or go right to Step 2.

   NOTE: If there are many aliases, use the search to find one. You can filter by alias name, Content ID, and so on.

   a. Choose **Manual** from the Type drop-down field. The manual aliases appear in the Aliases screen.



Active	Type	Langauge	Alias	Target	Title	ID
			default.aspx	/default.aspx?pageid=52	OnTrek Homepage	52
			login.aspx	/login.aspx?pageid=43	Register or Login	43
			OnTrek_Releases_SelfServ_HelpDesk_Pro/	/company.pb.aspx?pageid=196&id=361	OnTrek Releases SelfServ HelpDesk Pro	361
			Request_a_Demo_Promotion.aspx	/promotions.pb.aspx?pageid=56	Request a Demo Promotion	56
			RequestDemo/	/requestDemo.pb.aspx?pageid=324	Request a Demo	324
			search.aspx	/search.aspx?pageid=54	Search	54
			SelfServ-HelpDesk-Campaign/	/multivariate-experiment.pb.aspx?pageid=318	SelfServ HelpDesk Campaign	318
			Support/support.forums.aspx	/support.pb.aspx?pageid=67	Support Forums	67
			Support/support.search.aspx	/support.pb.aspx?pageid=71	Search Support	71

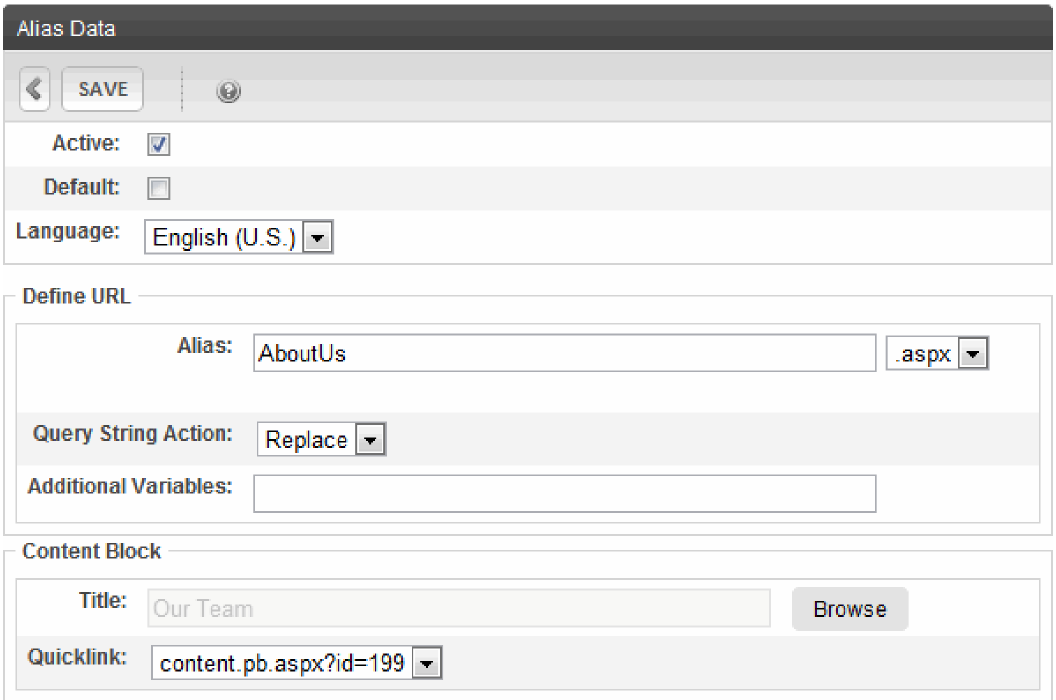
Showing 1 to 9 of 9 entries

   b. Choose the language from the Language drop-down field.

   c. If your Ektron version supports multi-site configurations, use the **Site** drop-down to choose the site.

2. To create a new alias, click **Add Manual Alias**. (To edit a manual alias, click an alias then **Edit**.) The Alias Data screen appears.

NOTE: After you enable manual aliasing, every content block includes an **Alias** tab. You can create a new alias by clicking **Add Manual Alias** from that **Alias** tab. However, if you insert/update an alias from the **Alias** tab, the alias is available only after you publish the content.
Also, a folder may require its content to have a manual alias. In this case, you must add a manual alias before you can check in or submit content.



3. Check **Active** to activate the alias when you save it.
4. Optionally, check **Default** if you want this alias to be the primary alias. Even if the content already has a primary alias, this alias will become primary.
5. Optionally select another language for this alias.
6. Enter a name in the **Alias** field. It must be unique within the site and language, and cannot include the following characters: `(comma)`, `(space)`, `\`, `<`, `>`, `“`, `:`, `|`.
7. To the right of **Alias** is a pull-down menu of valid extensions. Select an extension to apply to this alias. Extensions are defined on the URL Aliasing Settings screen.
8. Use the **Query String Action** field to set up a rule to handle an alias’s query string parameters. You can set one rule for your entire site (via this field), and separate ones that override the system-wide rule for specific manual aliases. 4 options are available.
   - **None**. If an aliased URL has a query string, it is ignored. Any query string on the target URL is used.

- **Append**. Ektron appends the alias's parameters to the target URL. Example:

```
Alias: http://www.ektron.com/Contact.aspx?id=84&lang=1033
Target: http://www.ektron.com/aboutus.aspx?id=35&Userid=1
Result: http://www.ektron.com/aboutus.aspx?id=35&Userid=1 |
  & id=84&lang=1033
```

  (The parameter from the alias is appended to the target)

- **Replace**. Ektron replaces a target's query parameters with the alias' s query parameter. Example:

```
Query string parameter: http://www.ektron.com/Contact.aspx?id=84
Target: http://www.ektron.com/aboutus.aspx?id=35&Userid=1
Result: http://www.ektron.com/aboutus.aspx?id=84
```

  (The target parameters id=35&Userid=1 are replaced by the alias parameter id=84)

- **Resolve**. Ektron tries to resolve matching parameters (it is case sensitive). If a match is found, the alias's query string parameter takes precedence. Example:

```
Query string parameter: http://www.example.com/Contact.aspx?id=84
Target: http://www.example.com/aboutus.aspx?id=35&UserId=10
Result: http://www.example.com/aboutus.aspx?id=84&UserId=10
```

  (`id=35` is replaced by `id=84` because it matched the query string parameter. `UserId=10` was not affected because it did not match the alias query string parameter.)

9. Enter the **Additional Variables**. These are used as query string parameters that can track how visitors arrived at the aliased page. You might use these in marketing campaigns to analyze the source of an aliased page's visitors. For example, the **Additional Variables** field has `?gclid=CO7gs_L0_ZICFRkTIgodBgV9CQ`. Your website's analytics software can track the source of the query through the variable.

   NOTE: Within the page load event that returns the query string parameters, use the `Request.RawURL()` property instead of `request.querystring`.

10. In the Content Block section, click **Browse**. The QuickLink Select window appears.

    NOTE: Content choices are affected by value of the Language field on the Add Manual Alias screen. Only content in the language of the selected alias appears. Also, only approved content appears.

11. Browse through the folder structure and click on the content to which you are assigning the alias. The Title and Quicklink fields are filled.

    NOTE: A folder's content appears below its subfolder list. You may have to scroll down to see the content.

12. Click **Save**.

Activating/deactivating a manual URL alias

1. Go to **Workarea > Settings > Configuration > URL Aliasing > Aliases**. The Aliases screen appears.
2. Click **Edit**.
3. In the Active column, check the box next to any alias to activate it; uncheck the box to deactivate it. Check the box next to the Active heading to activate all aliases in the list; uncheck to deactivate.
4. Click **Save**.

Removing a manual URL alias

1. Go to **Workarea > Settings > Configuration > URL Aliasing > Aliases**. The Aliases screen appears.
2. Select **Manual** from the Type drop down to display only manual aliases.
3. Click **Edit**.
4. In the **Delete** column, check the box next to any alias that you want to remove. Check the box next to the **Delete** heading to select all aliases in the list; uncheck to clear the check boxes.
5. Click **Save**.

Creating automatic URL alias rules

Automatic aliasing lets you create rules for several types of CMS entities, based on taxonomy, folder, user, or group designations. You can select additional elements of the alias pattern and save all information as a *configuration*. Because you can assign a single content block to several taxonomies, that content block can have many automatic aliases. When you activate an automatic alias configuration, any content added to the taxonomy, folder, user, or group in the future is assigned that alias (as long as the configuration is active).

To enable automatic aliasing, choose **Settings > Configuration > URL Aliasing > Settings**. The screen indicates if automatic aliasing for taxonomy, folder, community user, and community group is on or off. To change the state for any of these, click **Edit**, then check or uncheck the box, and click **Save**.

To view an automatic URL alias assigned to a content item, go to a content item and view the content, then click the **Alias** tab. Manual aliases appear near the top, followed by any automatic aliases.

Automatic URL alias pattern

Automatic URL alias pattern combines the following elements—separated by a slash (/)—in the following order.

1. *site root*
2. *taxonomy*, *folder*, *group*, or *user* path.
    - Spaces are replaced by the replacement character; the default is underscore (_). When you create a new rule, you can specify replacement characters in the **Replacement Character Map** field on the Add Aliasing Rule screen.

- A *taxonomy* path has taxonomy nodes from the top to the level at which content is assigned. For example: `www.example.com/Medical_Conditions/Kidney_Disease/`.
- A *folder* path has folders from the top-level to the folder that contains the content. For example: `www.example.com/CMS400Developer/CMS400Demo/About_Us/Company_Profile/Board_of_Directors.aspx`.
- A *group* path may identify the Marketing group: `http://www.example.com/Marketing/`.
- A *user* path may identify a community profile for a user: `http://<website>/John/`

3. *content name source*

   Spaces are replaced by the replacement character.

4. *extension*

NOTE: Aliases must be unique. If you try to create a duplicate alias, a value is appended to the alias to make it unique.

Examples:

Folder-based automatic alias

Suppose that you assign an automatic folder alias called "History" to the `MainSite/Content/Company/Company_News/` folder and you specify the additional rule that excludes some of the folder path from the URL. When you create `NewHistoryEvent.aspx` and put it in the `Company_News` folder, it has the following URL automatically generated:

```
www.example.com/Company_News/New_History_Event.aspx
```

Taxonomy-based automatic alias

Suppose that you create a new job posting called *SalesAdministrator* and give it the *Administration* and *Sales* taxonomy categories.

```
SiteNavigation
  Company
    Jobs
      [x] Administration
      [x] Sales
      [ ] Marketing
      [ ] Engineering
      [ ] Support
```

A taxonomy-based alias automatically generates the following URLs based on the taxonomy selections:

```
www.example.com/Jobs/Sales/SalesAdministrator
www.example.com/Jobs/Administration/SalesAdministrator
```

User-based automatic alias

A user alias can simplify a reference to someone's profile page.

```
www.example.com/member/steve
```

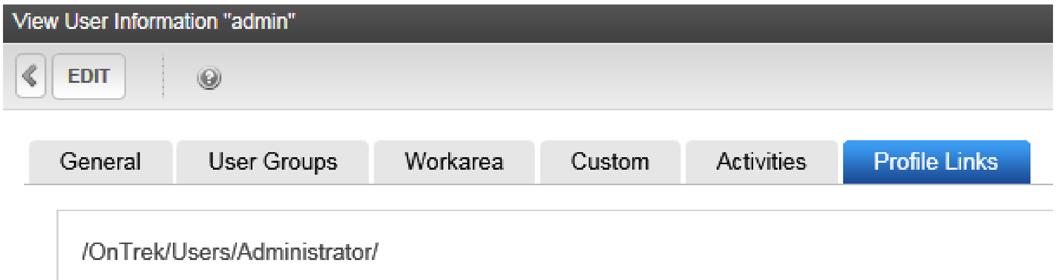
Group-based automatic alias

A group alias can simplify a reference to a group page.

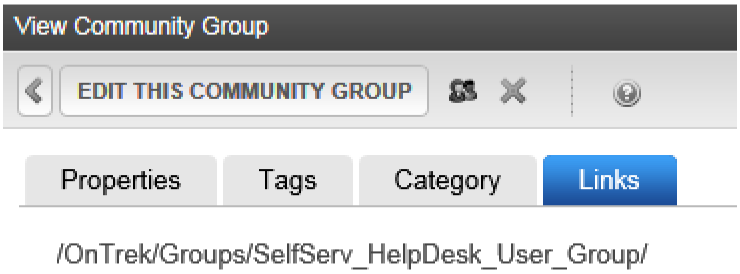
```
www.example.com/group_interest/sports_cars
```

NOTE: Activity streams, SMS, and email notification messages that include links to users or community groups use the community URL alias in their links. If you want to show the template alias, use the proper token in the message. For example, to use the alias for the SubjectUser, use the `@SubjectUser.TemplateAlias@` token in your message. See also: *Working with tokens* on page 1562.

If you enable a user-based community alias, community users display their alias name on their profile's **Profile Links** tab.



Similarly, if you enable a group-based community alias, community groups display their alias name on the profile's **Links** tab.



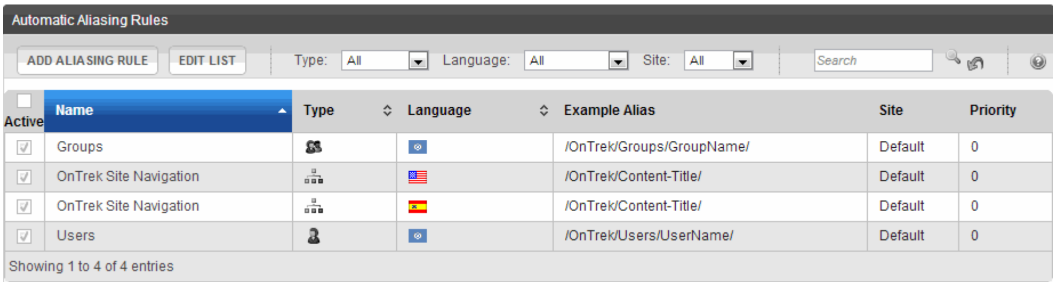
Creating/editing automatic URL aliasing rules

After enabling automatic URL aliasing, you can create rules in a *configuration*, which lets you

- identify the content source (that is, a taxonomy, folder, user, or group)
- choose elements of the aliasing pattern
- preview sample original and aliased URLs

NOTE: You cannot create a configuration whose values match an existing one.

1. Go to **Workarea > Settings > Configuration > URL Aliasing > Aliasing Rules > Automatic**. The Automatic Aliasing Rules screen appears.



2. Click on an existing rule, or click **Add Aliasing Rule**. A rules screen appears.
   a. Specify a unique name for the new automatic rule.
   b. Check the **Active** field if you want the rule to apply immediately after it is created.

   WARNING! If you uncheck this box, automatic aliases set up using this configuration are deleted from the associated content.

   c. If you have more than 1 site, choose the site to which the rule applies.
   d. Select the Source Type (Taxonomy, Folder, User, Group).
   e. Click **Next**. The rules screen appears. (The following image shows a sample Taxonomy rules screen.)
3. Specify the following rules:
   - **Alias Root** (Taxonomy, Folder). Go to and choose a taxonomy or folder to which you want to assign an automatic alias.
     - If you choose a **taxonomy**, the automatic alias is applied to all content assigned to it and its child nodes. Furthermore, if your Ektron supports multi-site configurations, the automatic alias applies to content in all sites. This is because taxonomy is site independent.
     - If you choose **folder**, the automatic alias applies to content in that folder and its subfolders. The taxonomy or folder is part of the automatic alias pattern.
   - **Exclude from Path** (Taxonomy, Folder). The automatic alias pattern displays folders or taxonomy levels from the top to the level you select. You can use this field to control which folders or taxonomy levels appear in the pattern. For example, if your Alias Root is based on the following folder path: `/CMS400Demo/About Us/Careers`, you can choose any option from the drop-down menu to indicate the folder or taxonomy path in the automatic alias pattern.
   - **Alias Prefix** (User, Group). Add a prefix to the alias.
   - **Alias Format** (Taxonomy, Folder). Use this field to help construct the automatic alias pattern. Choose 1 of the following items to identify the content within the alias.
     - **Content Title**. Example: `Sample Content Block`
     - **Content Id**. Example: `30`
     - **Content Id and Language**. Example: `30/1033`

- **Extension**. Use this field to help construct the automatic alias pattern. Choose an extension from the list to identify the end of the aliased URL. Extensions are defined in the **Extension** field of the URL Aliasing Settings screen.

  Do not add any extension entered into the Handler Mapping list. See *Restrictions on extensions* on page 1301.

- **Template** (Taxonomy). Choose **Taxonomy Template** or **Quicklink**. The alias target URL will be the template of the content item being aliased, along with any *querystring* parameters (for example, `content.aspx?id=123`). **Taxonomy Template** can have its own template assigned to the taxonomy node. When creating the automatic alias, this setting indicates which template to use for the target URL. **Quicklink** uses the behavior just described. **Taxonomy Template** uses the template assigned to the designated taxonomy along with the *querystring* parameters from the Quicklink. For example:
  - **Taxonomy Template**
    - Content ID 123, assigned to template `content.aspx`
    - Content assigned to Taxonomy X
    - Taxonomy X has a template `taxtemplate.aspx`
    - Taxonomy alias rule created targeting Taxonomy X
  - **Quicklink**
    - Quicklink = `/content.aspx?id=123`
    - Alias Target with Quicklink Template Field selected = `/content.aspx?id=123`
    - Alias Target with Taxonomy Template Field selected = `/taxtemp.aspx?id=123`

- **Query String Param** (Taxonomy, Folder). Enter the query string parameter for this alias. For example, if the alias uses a taxonomy, you could enter`taxid`. Here is an example of the parameter in a URL: `http://localhost/eIntranetv2/Blogs.aspx?id=238&blogid=115&taxId=28`

  IMPORTANT: Do *not* enter `id` here because that will clash with the content id.

  Do not enter more than one parameter.

- **Example Preview**. shows what the alias will look like. To see any content item's fully aliased URL, view the content and click the **Alias** tab; the alias is in the **Automatic** section.
- **Replacement Character Map**. Accept the default values, or enter the character that replaces prohibited characters in content titles when they appear within an automatic alias. Examples of prohibited characters are a space and question mark (?). So, for example, if the content title is `About Us`, and you enter an underscore (_) here, the aliased version of the title is `About_Us`. Specify other replacement characters in the Replacement

Character Map section.

You cannot enter one of the following as the replacement character: `[, \ / < > (Space): |? '] # * &%`

NOTE: If you're using IIS Admin, and specify a plus sign (+), you get this error: `HTTP Error 404.11 Not Found The request filtering module is configured to deny a request that contains a double escape sequence`. For a solution, see Error message when you visit a website that is hosted on IIS 7.0: "HTTP Error 404.11 – URL_DOUBLE_ESCAPED".

Deactivating an automatic URL aliasing configuration

If you deactivate an automatic alias configuration, automatic aliases created by that configuration are removed from content to which they are applied. The configuration is saved, so you can reactivate it.

1. Go to **Workarea > Settings > Configuration > URL Aliasing > Aliasing Rules > Automatic**.
2. Click the alias that you want to deactivate.
3. Click **Edit**.
4. Uncheck the **Active** checkbox.
5. Click **Save**.

Deleting an automatic URL aliasing configuration

If you delete an automatic aliasing configuration, automatic aliases are removed from content to which they are applied.

1. Go to **Workarea > Settings > Configuration > URL Aliasing > Aliasing Rules > Automatic**.
2. Click **Edit List**.
3. Check each configuration that you want to delete.
4. Click **Save**.

WARNING! No confirmation message appears when you save the Automatic Aliasing Rules screen, so be deliberate when checking the **Delete** boxes.

Troubleshooting group or user URL aliases

If you do not see the community alias when you hover over or click a link to a community group or user, check the following.

- The alias is set to Active.
- The alias is the primary alias.
- The server control that displays the link does not use the `TemplateUserProfile` setting. If it does, that value takes precedence over the URL alias.
- If you are using eSync, refresh the cache after a database sync.

Creating RegEx expressions

A RegEx (regular expression) lets site visitors enter a descriptive URL into the browser address field and transform that entry into the query string component of an Ektron page. This lets site visitors "guess" other pages based on a recognizable pattern. For example, a RegEx expression aliases `blogs.aspx?blogmonth=3&blogyear=2013&blogid=14` as `blogs/2013/03/14`. From that, a site visitor can infer that `blogs/2013/03/13` would display the previous post, and `blogs/2013/03` would display March 2013 posts, and so on.

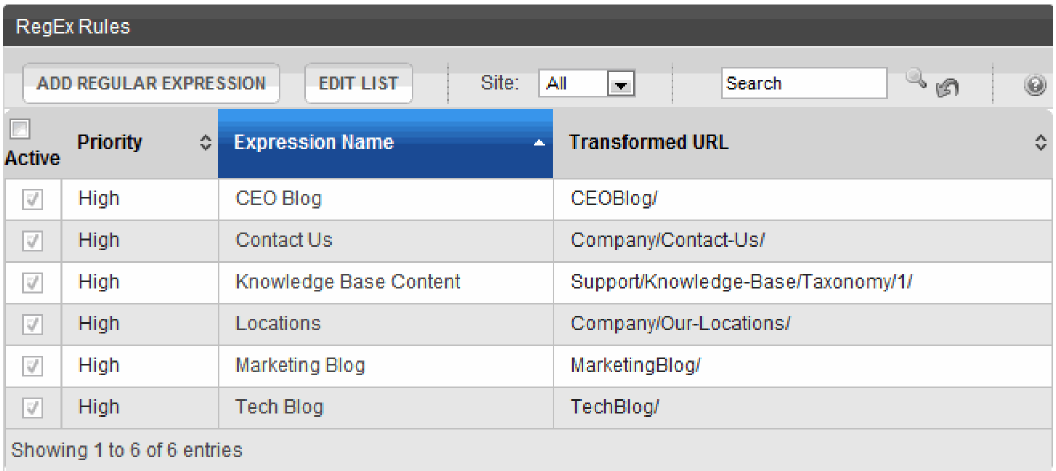
To view a RegEx, go to **Workarea > Settings > Configuration > URL Aliasing > Aliasing Rules > RegEx**, then click the expression that you want to view.

Creating/editing a RegEx expression

1. Find a site page (such as a blog) whose query string parameters let users guess similar pages using a pattern. For example:

```
http://ecmintranet/blogs.aspx?blogmonth=3&blogyear=2013
```

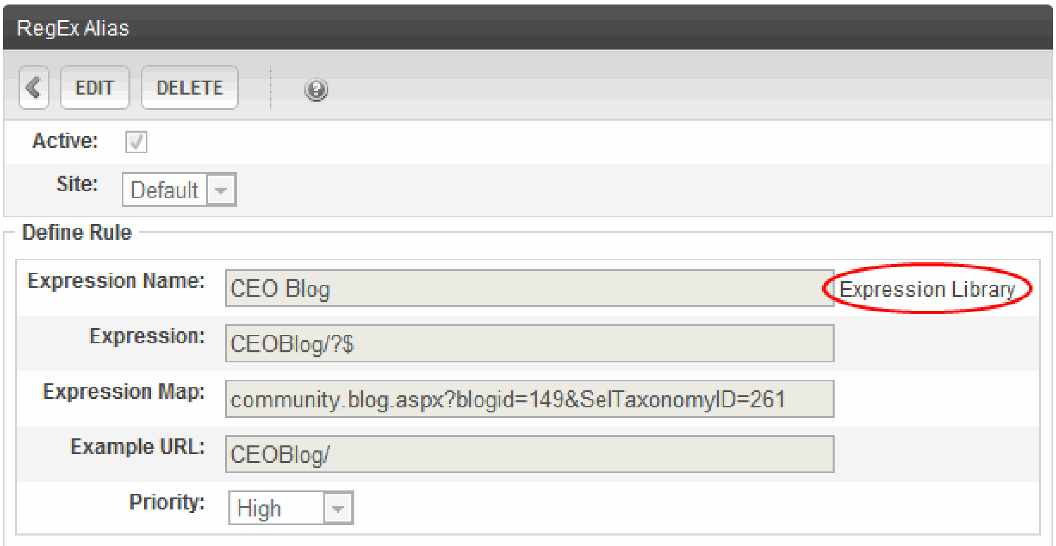
2. Go to **Workarea > Settings > Configuration > Url Aliasing > Aliasing Rules > RegEx**. The RegEx Rules screen appears.



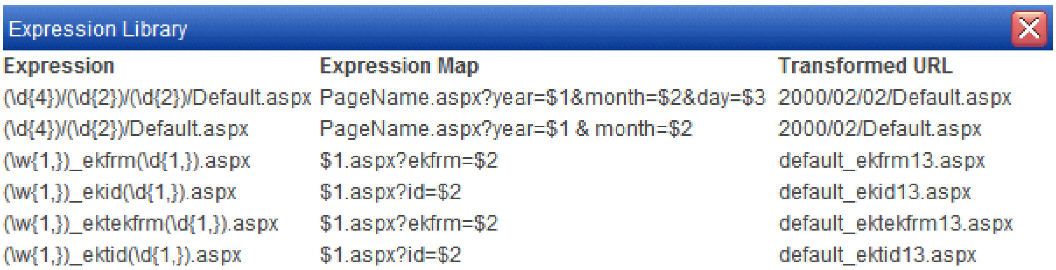
Active	Priority	Expression Name	Transformed URL
☑	High	CEO Blog	CEOBlog/
☑	High	Contact Us	Company/Contact-Us/
☑	High	Knowledge Base Content	Support/Knowledge-Base/Taxonomy/1/
☑	High	Locations	Company/Our-Locations/
☑	High	Marketing Blog	MarketingBlog/
☑	High	Tech Blog	TechBlog/

3. Do 1 of the following:
   - To create a new expression, click **Add a Regular Expression**. The RegEx Alias screen appears.
   - To edit an existing expression:
     a. Click **Edit List**.
     b. Click the expression you want to modify. The RegEx Rule screen appears.
     c. Click **Edit**.

4. Specify the following RegEx Alias parameters (example entries shown):



- **Active**. Check this box to activate the expression. If the expression is active, site visitors can enter an aliased URL to access a page on your site. For example, they can enter `www.example/com/blogs/2013/03/14 to access a blog page even though the actual URL is www.example/com/blogs/blogs.aspx?blogmonth=3&blogyear=2013&blogid=4`
- **Site**. If you have more than 1 site, choose the site to which this RegEx applies.
- **Expression Name**. Assign an easily recognizable name to this regular expression. It appears on the RegEx Rules screen to help users identify it.
- **Expression Library**. A link that displays sample expressions.



- **Expression**. Enter a RegEx expression that will replace the variables (for example, **$1, $2**, and so on.) in the Expression map. If you want to insert a question mark into the Expression, you must precede it with a backslash (\).
- **Expression Map**. Enter a map of original URL elements. The map lets you replace query string parameters with variables, such as **$1, $2**, and so on. As a result, a site visitor can identify other pages that use this pattern by changing the variable values. You can click **Expression Library** to view sample RegEx expression maps. To copy any map that resembles your page pattern, click it then modify it.

As another example, you can create a pattern without knowing in advance what URL a user may type, using a `querystring` variable. When a user types:

```
www.example.com/catalog/search/christmas
```

The alias can use a `querystring` variable after `catalog/search/` to see if content is available in the catalog using the following aliased URL:

```
www.example.com/catalogsearch.aspx?term=christmas
```

- **Example URL**. Displays an example Web page that follows this pattern.
- **Priority**. Assign a priority to this expression from the following choices.
    - high (assign to the most frequently-used expressions)
    - medium
    - low
    - none

  This field enhances the aliasing feature's response time—it first tries to match a site visitor’s entry with high priority expressions, then medium, then low.

Deleting a RegEx expression

1. Go to **Workarea > Settings > Configuration > URL Aliasing > Aliasing Rules > RegEx**.
2. Click **Edit List**.
3. Check the box in the **Delete** column next to any RegEx you want to delete.
4. Click **Save**.

Creating a URL alias for a site

If your site supports the multi-site feature, you can enter aliases for any site. For example, suppose that your company changed its name from *Bionics* to *NewGen*, but the content of your site remains essentially the same. By adding a site alias, along with appropriate DNS mappings and domain registration, customers can still get to your site with the `bionics.com` URL and now also with the new company URL `newgen.com`.

Note the following conditions for creating a site alias:

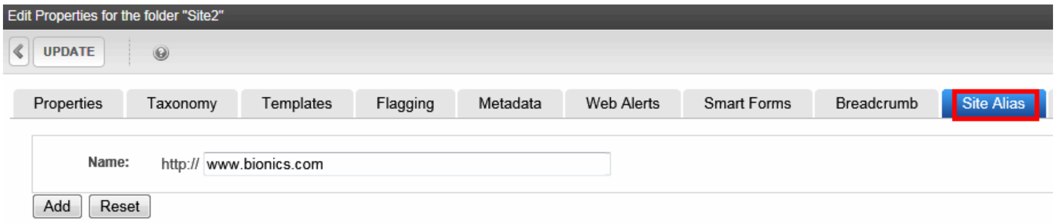
- If your Ektron supports multi-site configurations, an automatic alias assigned to a taxonomy will apply to content in all sites. This is because taxonomy is site independent.
- If the site being aliased resides in a folder under your server’s Web root folder (for example, `ser4325/min`), you must add the subfolder to the alias. For example, you could not enter `http://www.myalias.com` as an alias for that site. Instead, enter `http://www.myalias.com/min/`.
- You cannot apply an alias to the root website. For example, you cannot alias `www.example.com` with `www.example2.com`. However, you can alias anything

below the root folder. On multi-site environments, you can apply an alias to a folder on the root site, or to a folder on other sites, but not both. For example, you can have the alias `content.aspx` applied to a *root-folder*, but then the `content.aspx` alias cannot be used on a *site-folder* at the same time. However, if you apply `content.aspx` to *site1-folder*, you can also apply `content.aspx` to *site2-folder*.

To create a site alias:

1. Open the site folder for which you want to create aliases. (Site folders have a globe icon, like this: ).

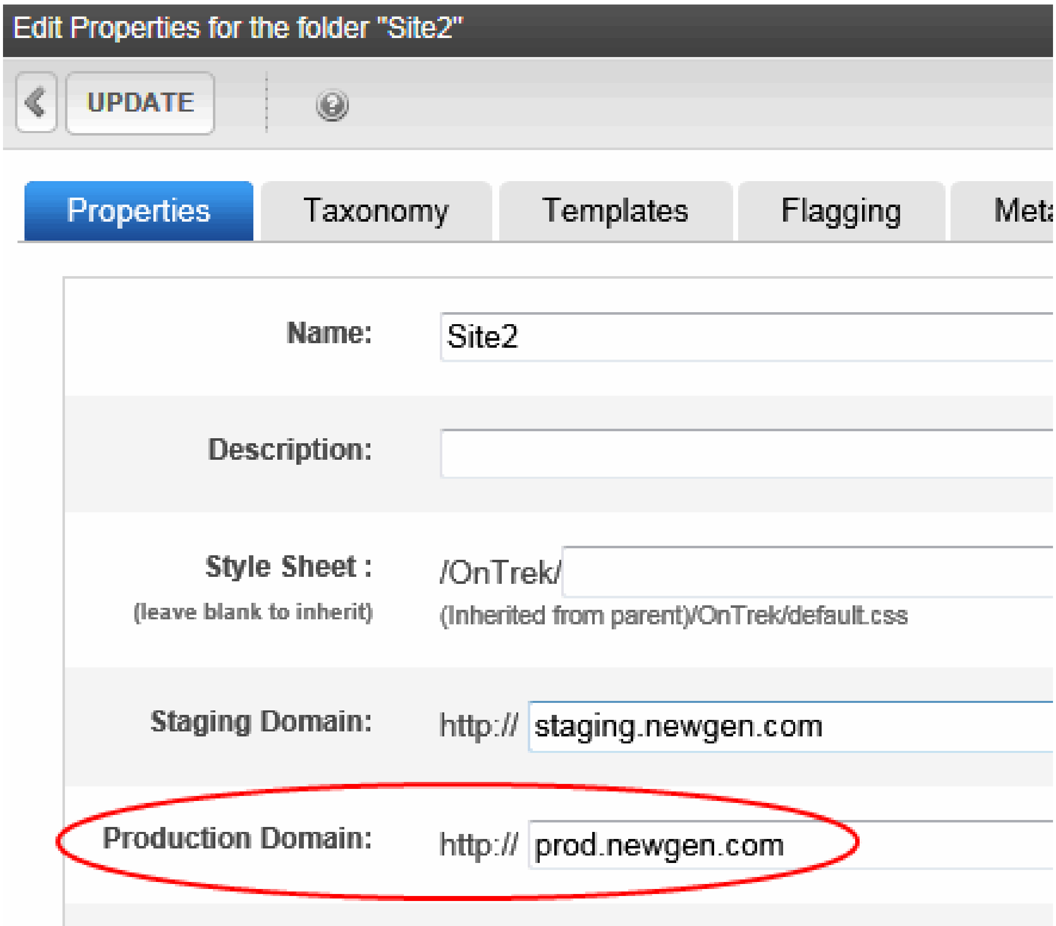
2. Click **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Site Alias** tab.



5. Enter the alias into the **Alias Name** field.

NOTE: The alias cannot end with a slash (/).

From now on, if a site visitor enters the alias into a browser address field, he is redirected to the site URL (set on the folder properties tab's **Production Domain** field).



6. Add each site alias as an IIS host. To learn how do this for your server, please consult IIS help.

Editing a site alias

1. Open the site folder for which you want to create aliases. (Site folders have an icon, like this: newgen).
2. Click **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Site Alias** tab.
5. Click the alias that you want to edit. When you do, it is highlighted and appears in the **Name** field.
6. Change the alias text.
7. Click **Save**.
8. Click **Update**.

Deleting a site alias

1. Open the site folder for which you want to create aliases. (Site folders have a globe icon, like this: newgen).

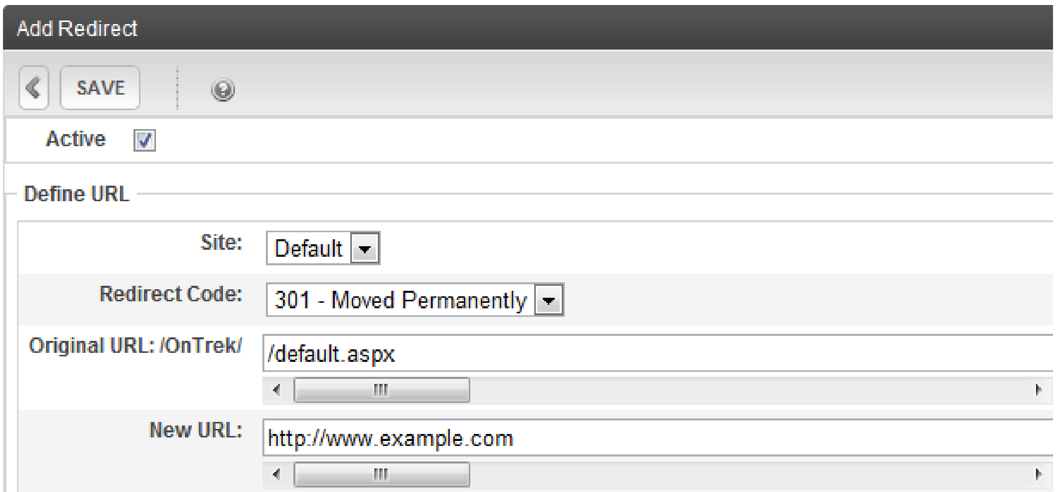
2. Click **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Site Alias** tab.
5. Click the alias that you want to edit. When you do, it is highlighted and appears in the **Name** field.
6. Click **Delete** ( ). The alias is deleted.

Creating a URL redirect

You may have an old or original URL that you want to continue to work after you have moved the content to a new URL. So, you create a URL redirect from an original URL to a new URL, essentially leaving a "forwarding address" to a new URL. For example, you can redirect an previously known link (`/OnTrek/default.aspx`) to a new one (`http://www.example.com/home/`).

NOTE: When adding a redirect, the 404 target URL field is optional. If you do not provide a target URL,a 404 error is handled by the configuration in either the `web.config` or IIS.

1. Go to **Workarea > Settings > Configuration > URL Aliasing > Settings**. The URL Aliasing Settings screen appears.
2. Ensure that **Enable URL Redirects** is checked. If it is not:
   a. Click **Edit**.
   b. Check the box
   c. Click **Save**. Redirects appears in the URL Aliasing folder.
3. Go to **Workarea > Settings > Configuration > URL Aliasing > Redirects**. The Redirects screen appears.
4. Click **Add Redirect**. The Add Redirect screen appears.



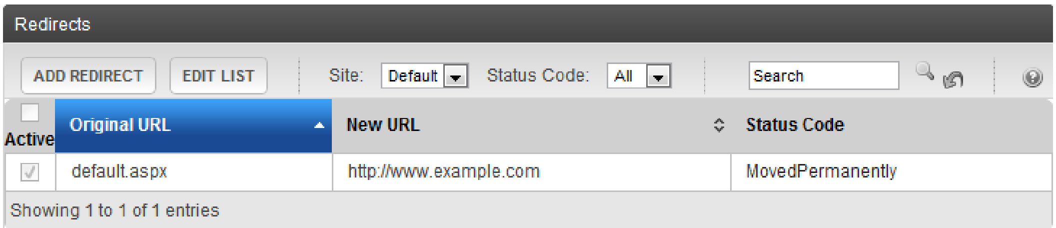
- **Active**. Check the box to activate the redirect.
- **Site**. If you have a multi-site environment, choose the site on which the redirect is active.

- **Redirect Code**. Choose the desired redirect code.
  - **200 - OK**. The original URL and new URL must be relative path URLs; returns a success status when a person accesses the original URL.
  - **301 - Moved Permanently**. Use this code to change from one URL to another. If a person tries to access the original URL, it is replaced with the new URL. The Original URL must be relative; the new URL can be a relative or absolute (fully qualified) path.

    IMPORTANT: Create separate 301 redirects for your http:// and http://www versions of your website. They are considered separate URLs.

  - **302 - Temporary Redirect**. Use this code to change from one URL to another URL, but some information is not passed to servers and Search engines. (This could affect SEO.) For example, if your website sold seasonal items, you can redirect each seasonal site to 1 URL, keeping each season separate, but having 1 branded face to your customer. The original URL must be relative; the new URL can be a relative or absolute (fully qualified) path.
  - **404 - File Not Found**. Use this code for a Web page that no longer exists, or to force the expiration of a page that may exist. Specify only the **Original URL**. If a person tries to access the page in Original URL, a 404 Not Found message is returned.
- **Original URL**. Enter the URL of the Web page that will be redirected to the new URL.
- **New URL**. Enter the URL of the Web page to which people will be redirected.

5. Click **Save**. The new URL redirect appears on the Redirects screen.



27

Navigating a website with breadcrumbs

A breadcrumb displays the path to the current page, providing another type of site navigation. A site visitor can click any link in a breadcrumb trail to jump to that page. For example, if a breadcrumb trail is **A > B > C > D > E**, a site visitor can click **B** and jump directly to that page.

You can create breadcrumbs based on *either* a site visitor's navigation history *or* the sitemap of your website.

- **History**. Display a trail of recently-visited pages.

  NOTE: There is no setup in the Workarea for history breadcrumbs.

  To create a history breadcrumb trail, you place a BreadCrumb server control on each Web form on which you want to display the trail. (To ensure that a breadcrumb trail appears on each Web page, add a BreadCrumb server control to every Web form in your site.)

- **Sitemap**. Display a site path to the current page.

  Sitemap breadcrumbs always show the same path to a page, regardless of how it was reached. You can use sitemap breadcrumb information to deploy a site map.

  Because you determine the organization of a sitemap breadcrumb, you must define the trail in the Workarea. To do that, see *Creating a sitemap breadcrumb trail* below.

  See the FolderBreadcrumb server control about how to place a sitemap breadcrumb on a template.

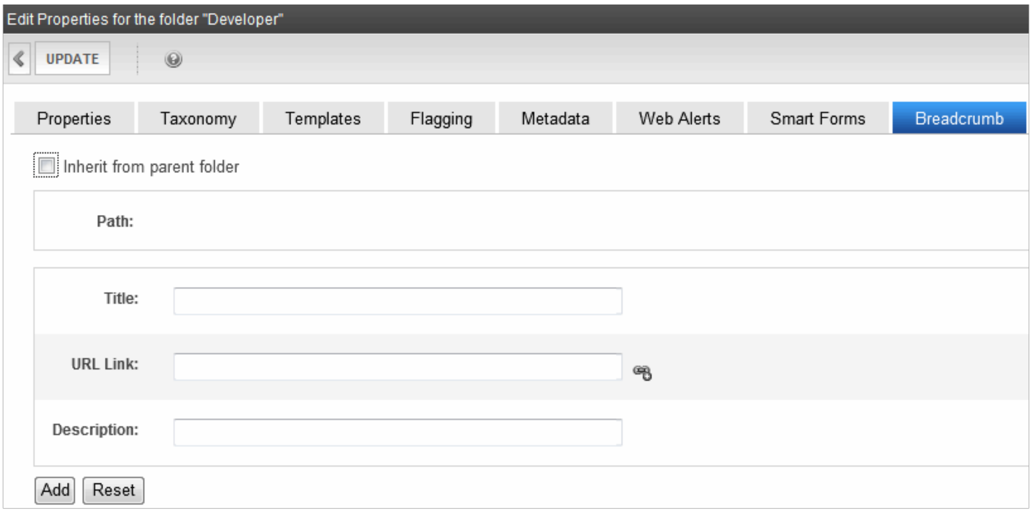
Creating a sitemap breadcrumb trail

PREREQUISITE

Determine which topics should appear on a Sitemap Breadcrumb trail for content in a folder. A trail typically consists of topics that introduce a folder's content, but you can create any sequence that makes sense. For example, on a university website, content that describes the women's swimming team has this trail: **Home > Athletics > Women's Athletics > Swimming**.

1. Go to the folder for which you want to add the breadcrumbs.
2. Choose **View > Properties**.

3. Select the language of the breadcrumbs. You must set up a separate breadcrumb path for every language for which you want to support breadcrumbs.
4. Click **Edit Properties**.
5. Click the **Breadcrumb** tab. The Edit Breadcrumbs screen appears.



6. If desired, uncheck the **Inherit from parent folder** box.

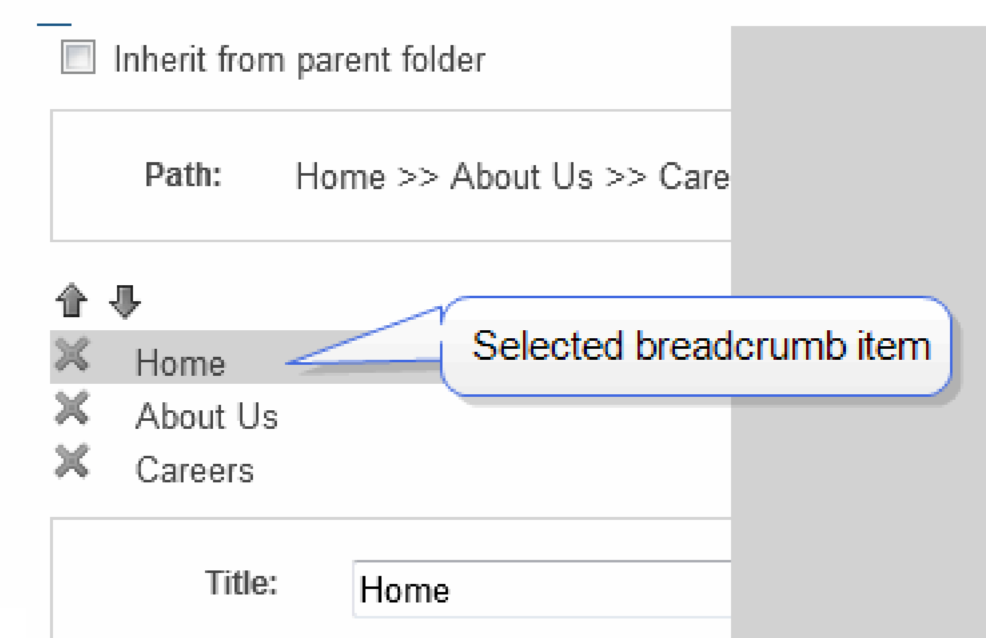
   A folder can inherit a sitemap breadcrumb path from its parent, or you can break inheritance and assign it a unique path.
7. Add the following information.
   - **Title**. The breadcrumb name as you want it to appear in the breadcrumb trail
   - **URL Link**. The URL path to the breadcrumb’s destination, typically an Ektron content item.
     - If you are not sure of the file path, click **Select quicklink** ( ) and select the breadcrumb's content item. Only content in the language selected in Step 3 is available. Alternatively, you can enter a URL, for example, `www.example.com`.
     - You typically enter items in the sequence in which you want them to appear in the breadcrumb trail. If you do not, you can easily change the sequence of items on this screen. See also: *Reordering sitemap breadcrumb items* below
   - **Description**. Add a description for the breadcrumb.
8. Click **Add**. The item in the breadcrumb path appears.
9. Repeat steps 7 and 8 for each item in the breadcrumb path.
10. Click **Update**.

Reordering sitemap breadcrumb items

1. Go to the folder for which you want to reorder breadcrumbs.
2. On the View Contents of Folder screen, choose **View > Properties**.

3. Click **Edit Properties**.
4. Click the **Breadcrumb** tab. The Edit Breadcrumbs screen appears.
5. Click a breadcrumb item.

WARNING! Clicking the Remove button deletes the breadcrumb item. See also: *Removing a sitemap breadcrumb item* on the facing page

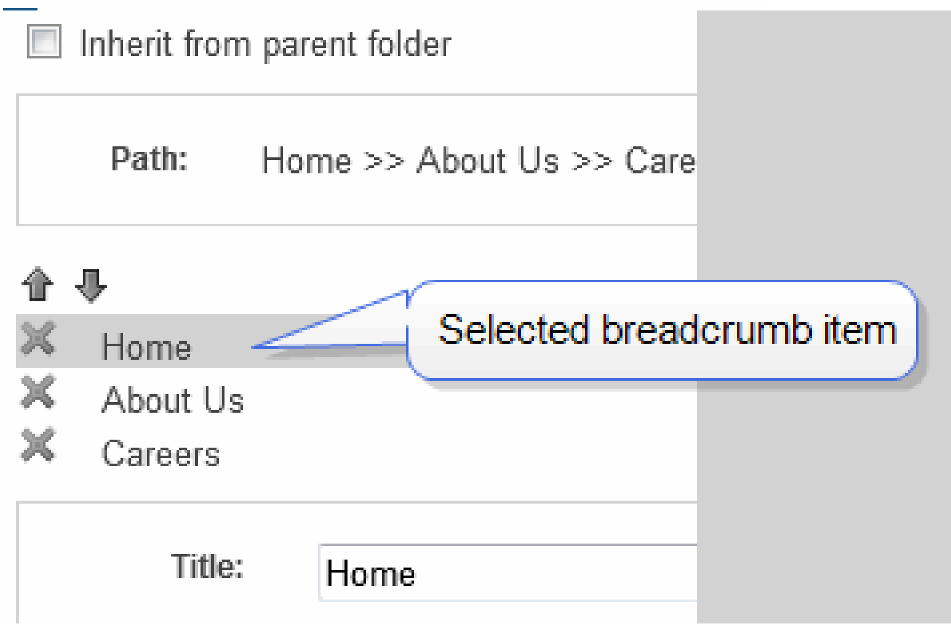


6. Click up and down arrows to move the item.
7. Click **Save**.
8. Click **Update**.

Editing a sitemap breadcrumb item

1. Go to the folder for which you want to edit breadcrumbs.
2. On the View Contents of Folder screen, choose **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Breadcrumb** tab. The Edit Breadcrumbs screen appears.

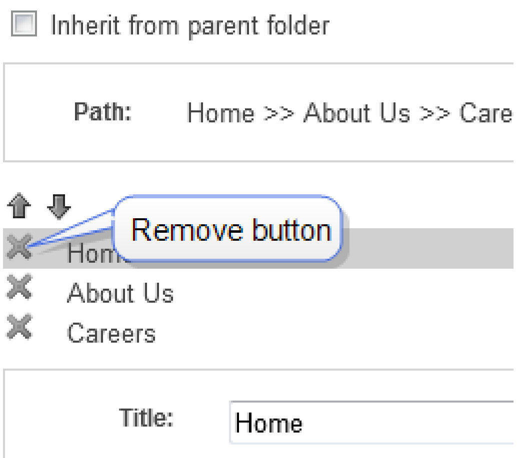
5. Click a breadcrumb item.



7. Edit the **Title**, **URL Link**, and **Description** information.
8. Click **Save**.
9. Click **Update**.

Removing a sitemap breadcrumb item

1. Go to the folder for which you want to remove a breadcrumb.
2. On the View Contents of Folder screen, choose **View > Properties**.
3. Click **Edit Properties**.
4. Click the **Breadcrumb** tab. The Edit Breadcrumbs screen appears.
5. Click **Remove** next to the breadcrumb item you want to remove. (You can do this only if the breadcrumb item does not have **Inherit from the parent folder** checked.)



6. Click **Update**.

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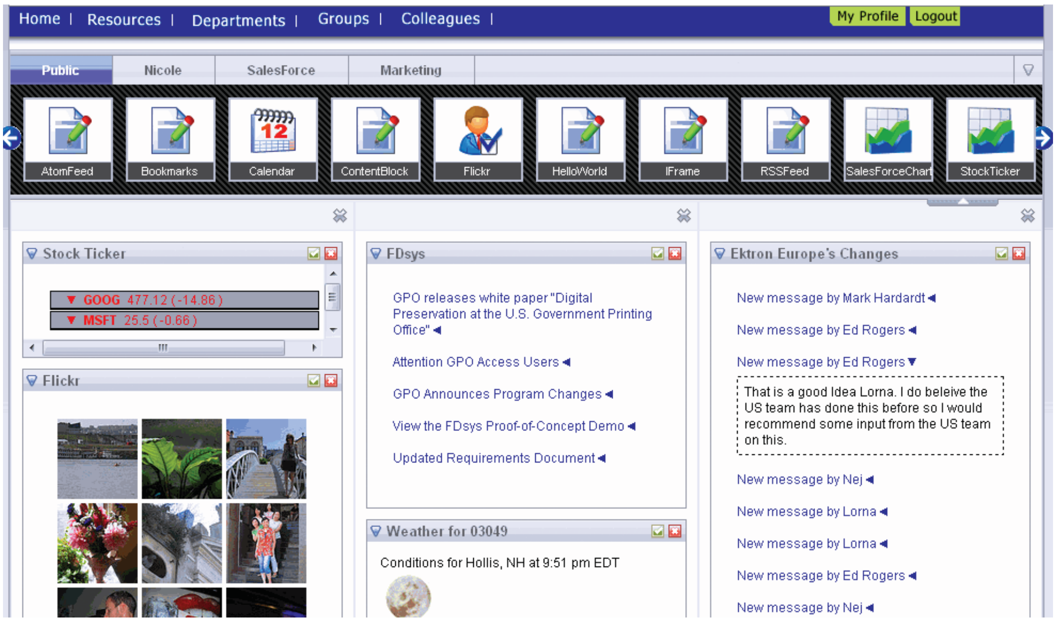
28

Personalizing a Web page

Personalization is an integral part of websites like iGoogle and Facebook, and organizations see personalization as a way to make their sites "stickier" and more engaging. Ektron provides a framework on which to easily build personalized portals. Ektron's portal functionality lets you create a more interactive, engaging experience by giving power to the user.

Your site becomes their site when membership users can personalize their experience by adding widgets, application, and feeds, choosing and organizing content on their digital dashboard. For example, a manager can use widgets to access information about the team. An HR representative can update job postings through a widget instead of navigating to the company's careers site. Building personalization into your intranet empowers employees with customization that fits their work and personal life.

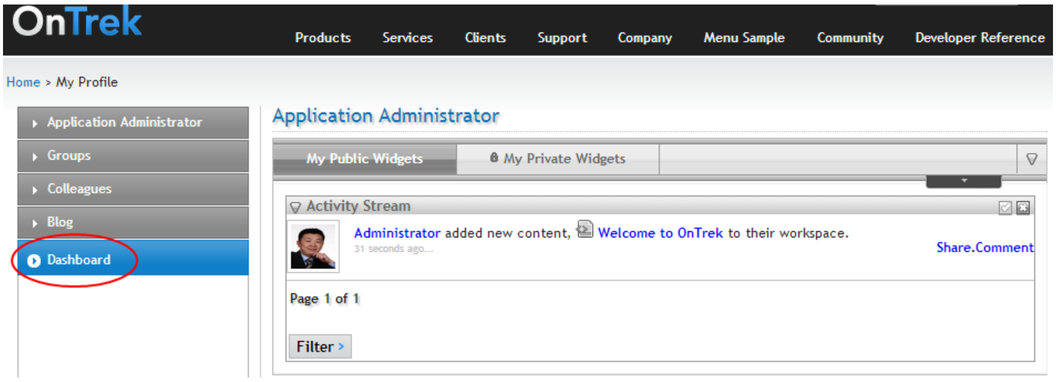
Widgets have many functions such as photos, local weather, news, a personal work calendar, a sales time line and tracker, or a feed to a discussion board about a new product release, and so on. See also: *Creating and using widgets* on page 1171.



You can create individual and group personalization pages.

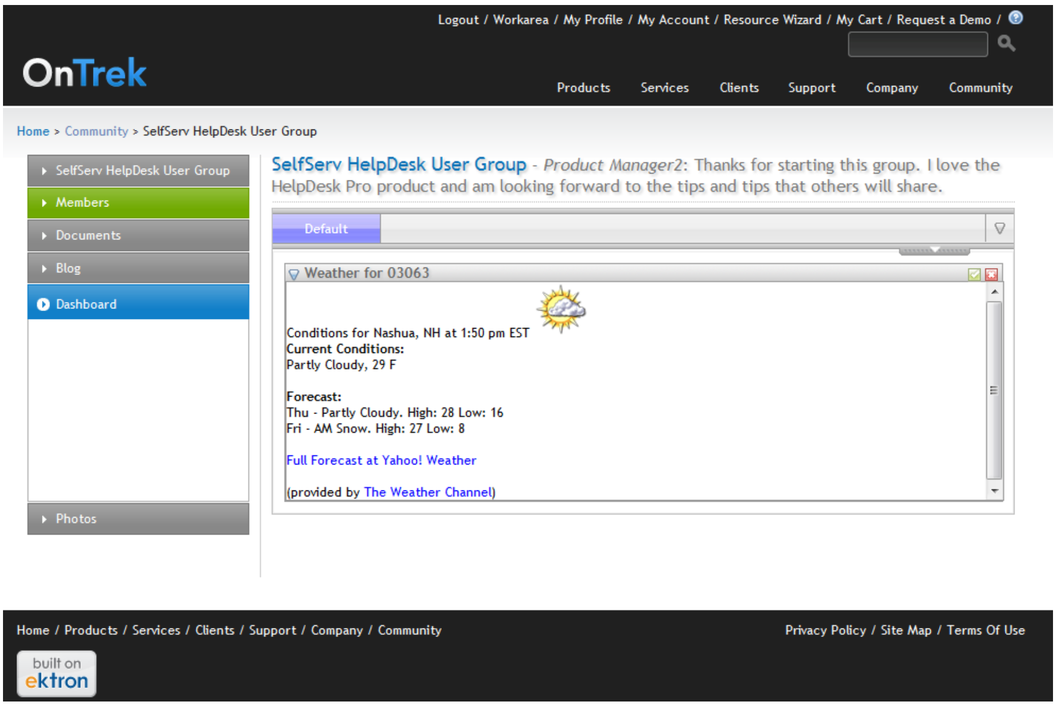
- An *individual* personalization page is used by a membership user or an Ektron user to personalize a page on your website. If a tab is *private*, only that user can view and edit it. If the tab is *public*, anyone can view it but only the signed-in user can create and edit the content.

  OnTrek site > Login > My Profile > Dashboard



- A *group* personalization page is used by group members to set up a portal page that addresses that group's needs. Any group member can view and create or edit the page's content. If a tab on a group page is *private*, only group members can view and create or edit it. If the tab is *public*, anyone can view it but only the group members can create and edit the content.

  OnTrek site > Login > Community > Community Groups > SelfServ HelpDesk User Group > Dashboard

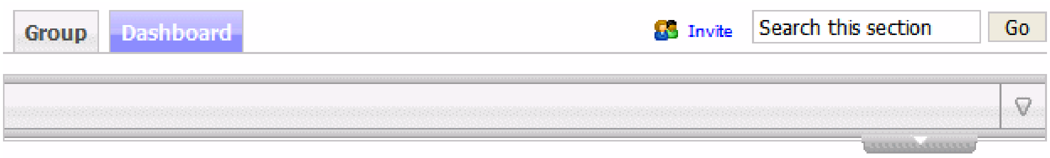


Using a personalization page

To access a personalization page, a membership user logs in then clicks **My profile > Dashboard**.

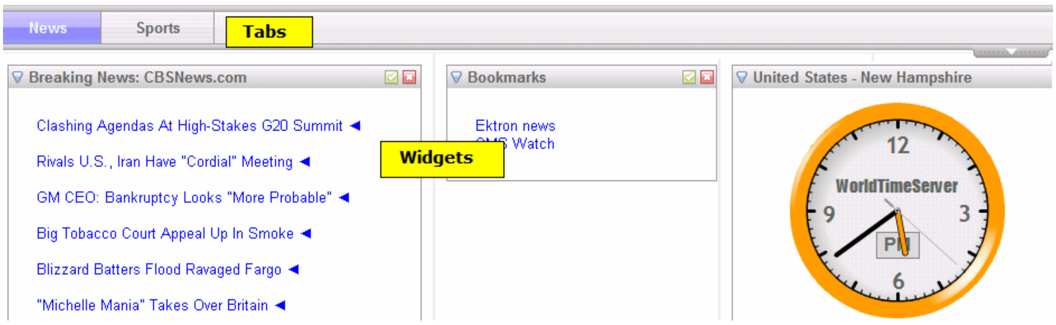
Individual page

Group page



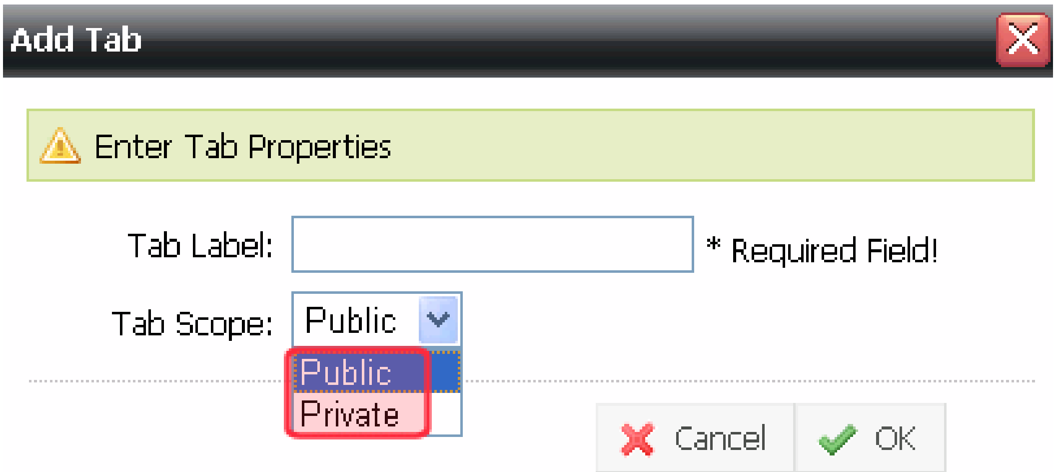
Adding a tab

On an Ektron website, you can create and add tabs to organize content by subject. Tabbed content can be public or private. For example, a tab that displays personal financial information can be private, so only you can see it. Each tab can have multiple columns, to further customize the view.



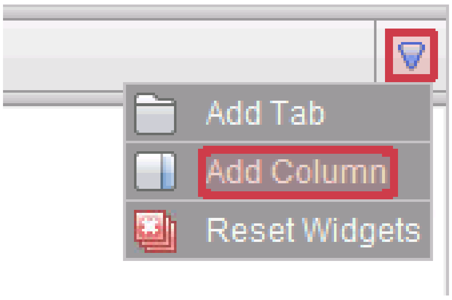
You add a tab by clicking the down arrow choosing **Add Tab** from the menu. You decide if the tab is *public* or *private*.

- Any logged-in user can see a user's *public* tab by visiting his or her profile and clicking **Dashboard**.
- A *private* tab is visible only to the user who created it.



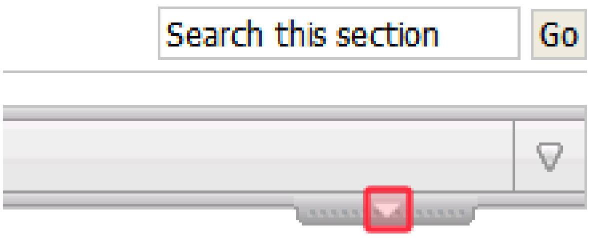
Adding a column

You must add at least one column by clicking the down arrow and choosing **Add Column**.



Adding widgets

Open the widget tray and select the widgets you want and place them on the page.



The selection of widgets that are available was determined when the widget space was created. See *Creating an individual personalization page* below

Creating an individual personalization page

After you create a personalization page, place a link to it on your site. Then, any authenticated membership user can use the page to create a personal portal.

A *widget space* declares which widgets a user or community group member can drop on a personalization page. Widgets appear in the personalization screen's widget tray when a membership user is personalizing a page. You can create and modify these types of widget spaces:

- **User space**. widgets that can be applied to a user's profile.
- **Group space**. widgets that can be applied to a community group. See also: *Creating a group personalization page* on page 1336

  For example, suppose you want a NASCAR community group members to be able to place only weather and news feed widgets onto the group's personalization page. You would:

  1. Create a widget space.
  2. Select only weather and news feed widgets.
  3. Sign on to Visual Studio to create the .aspx page.
  4. Place a Personalization user control onto the page.
  5. In the control's `widgetspaceID` property, identify the widget space you created in Step 1.

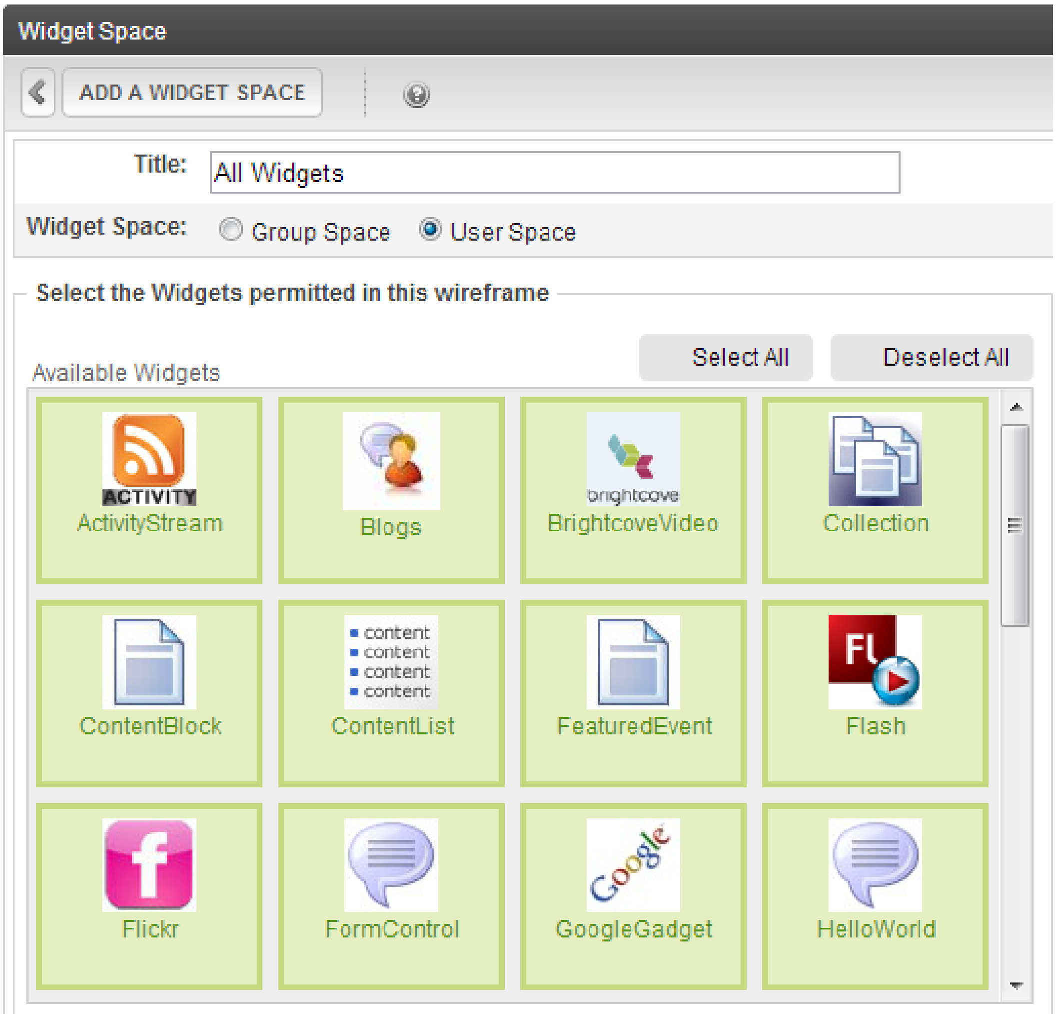
NOTE: Another type of widget space, *Workarea Dashboard*, determines which widgets are available to users when customizing their Smart Desktop.

PREREQUISITE

To access this screen, you must be a member of the Administrators group

1. Go to **Workarea > Settings > Configuration > Personalizations > Widgets**. See also: *Creating and using widgets* on page 1171
2. Click **Synchronize Widgets from the Website/Widgets Folder** to make sure all widgets are available.
3. Go to **Settings > Configuration > Personalizations > Widget Space**.
4. Click **Add a Widget Space**.
5. Enter a **Title**.
6. Click **Group Space** to use the widget space for a community group personalization page, or click **User Space** to use widget space for a user's personalization page.

7. Select widgets that authorized users will be able to place onto a page.



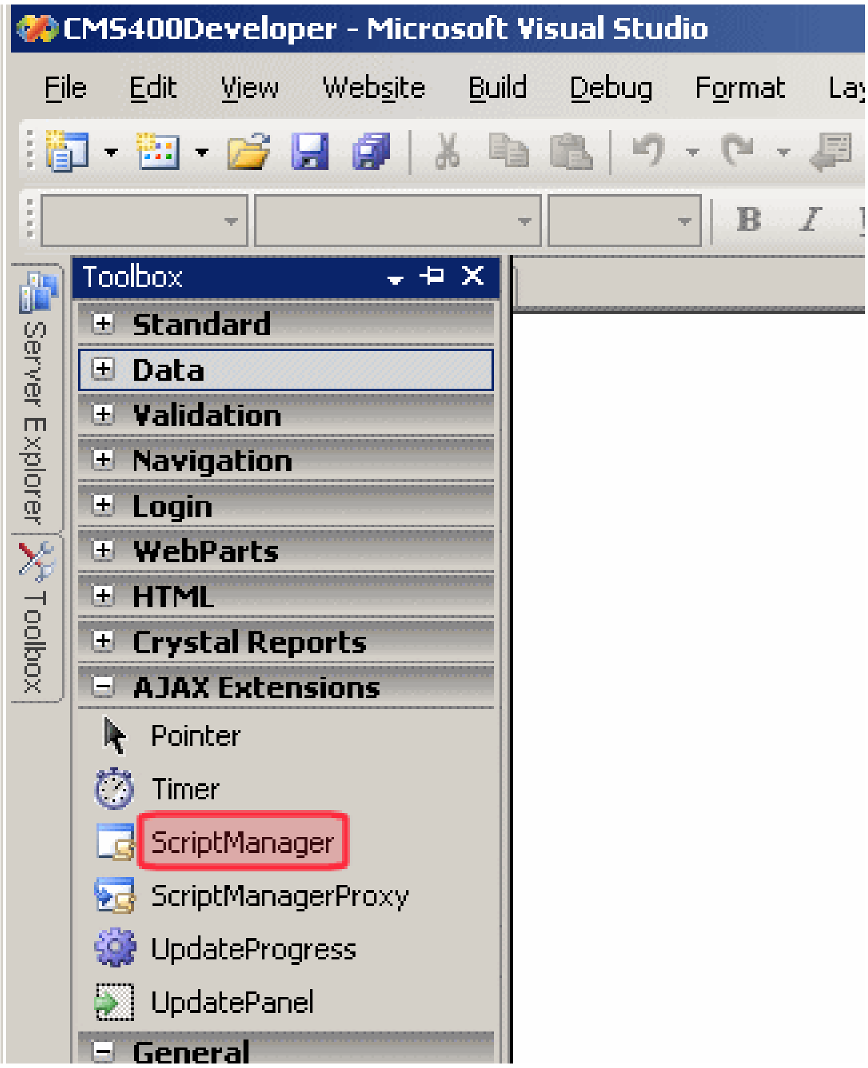
As you select a widget, its background color change

8. Click **Add a Widget Space**.

IMPORTANT: Remember your widget space's ID number. You need it when setting up the Personalization user control.

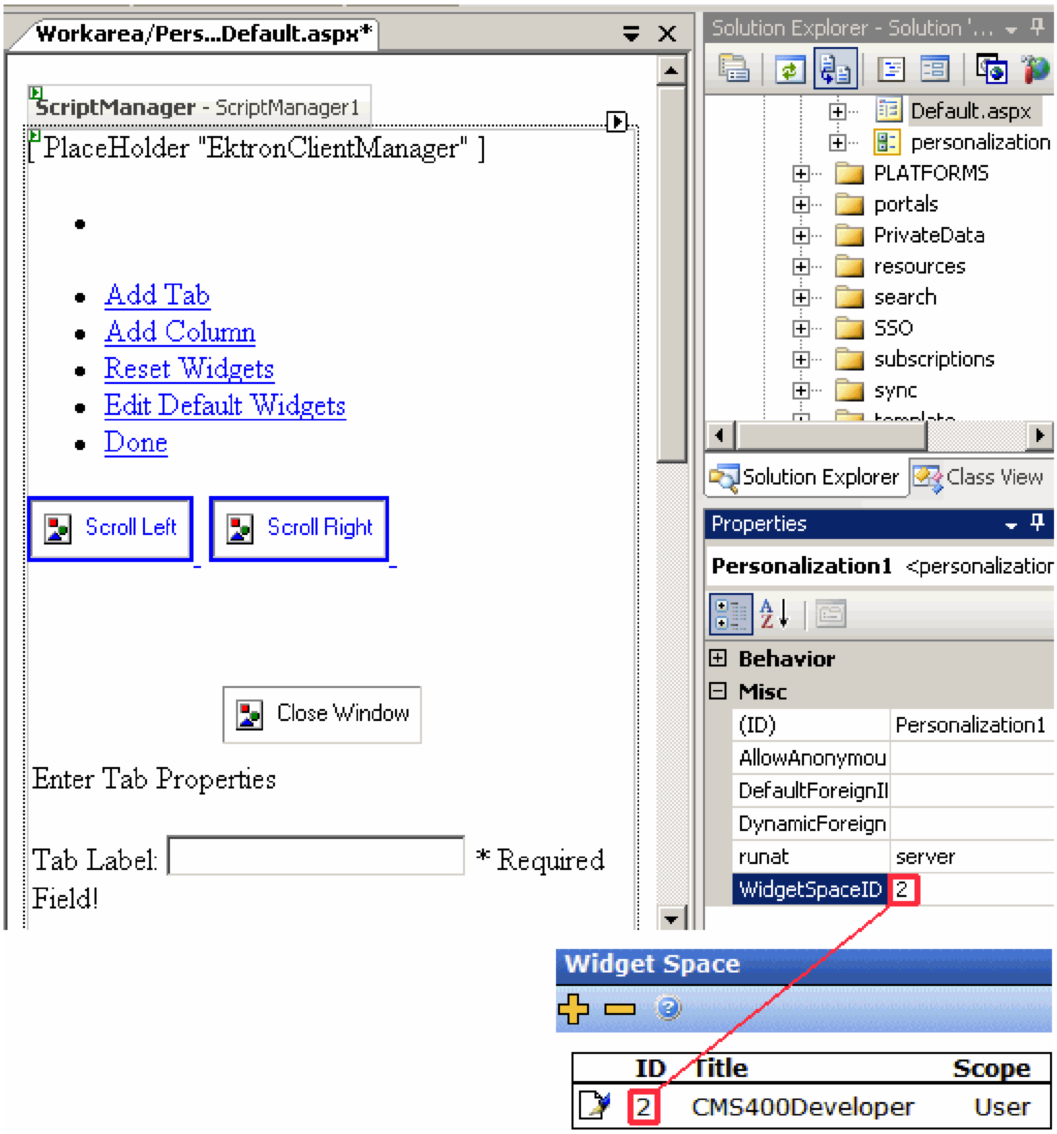
NOTE: The rest of this procedure explains how to create a personal portal for a membership user. To learn how to create a portal for a community group, see *Creating a group personalization page* on page 1336.

9. Open Visual Studio.
10. Create a new Web Form.
11. Switch to design view.
12. From the Toolbox, drag and drop an **Ajax Extensions > Script Manager** control.



NOTE: If you do not see a Script Manager control, install the Microsoft AJAX Library 3.5. To do this, go to Microsoft ASP.net Download.

13. In the Visual Studio folder browser, open the `workarea/personalization/` folder.
14. Drag and drop a Personalization user control (`personalization.ascx`).
15. Set the control's `widgetspaceid` property to the ID number of the widget space you added in Step 8.



16. Save the Web Form.
17. Your page should redirect the user to the personalization page, or use an ASP.NET panel to verify that user is authenticated. Here is sample code:

NOTE: The asp.net panels are implemented in eIntranet and Ektron Tech site.

Aspx.cs

```
// To check if user is logged in or not
Ektron.Cms.CommonApi IsUserLoggedIn = new Ektron.Cms.CommonApi();
if (IsUserLoggedIn.IsLoggedIn)
{
Response.Redirect("dashboard.aspx");
Or
pnlDashboard.Visible= true;
}
Else
{
```

```
pnlDashboard.Visible=false;
}
```

Aspx

```
<asp:Panel ID="pnlDashboard" runat="server" Visible="False">
<asp:ScriptManager ID="ScriptManager1" runat="server"
  EnablePartialRendering="true">
</asp:ScriptManager>
<ucEktron:Personalization ID="widgetSpace" WidgetSpaceID="1"
  DynamicForeignIDParameter="id" runat="server" />
</asp:Panel>
```

18. The Synchronize Widgets screen helps you synchronize widgets in your website's *siteroot*/widgets folder with those in your Workarea. If you need to make them available within the Workarea, click **Synchronize Widgets from the *Website*/Widgets Folder**.

    The Synchronize Widgets screen also lets you edit widgets by clicking the corresponding **Edit** button ( ). For most widgets, you can change only the title and label. However, you can change a few widgets' properties. For example, you can enter or update properties of the Brightcove video widget.

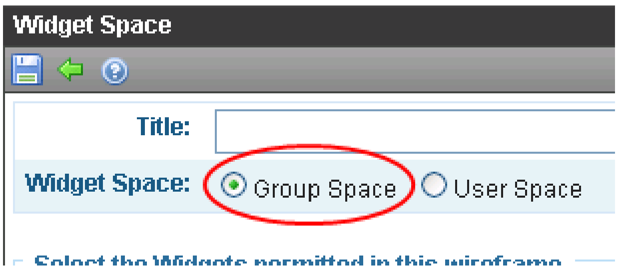
    After you click the button, you see new widgets on this screen and other Workarea screens that let you select widgets. Conversely, clicking this button removes any widgets that you delete from the *siteroot*/widgets folder.

Creating a group personalization page

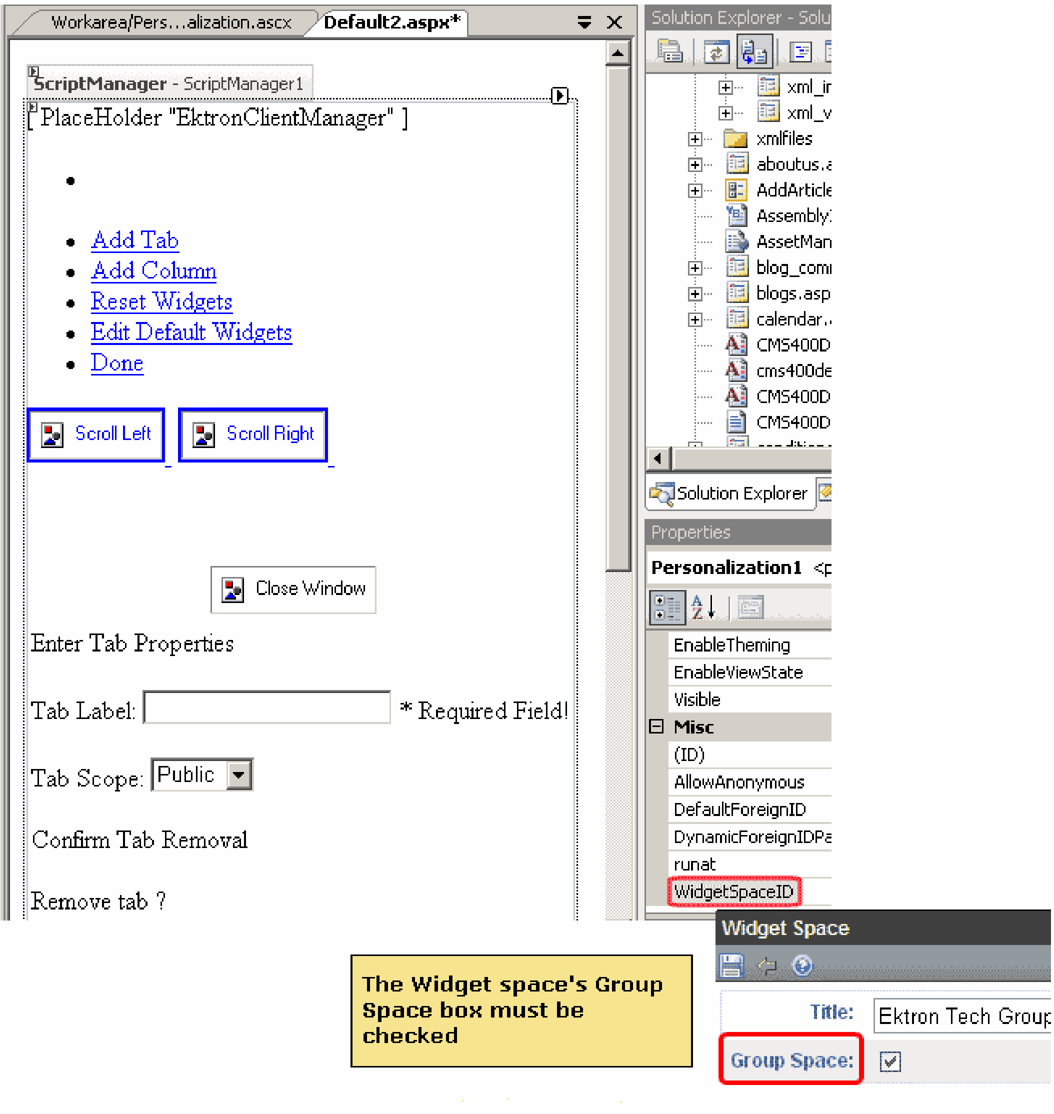
A community group personalization page is similar to an individual page. It lets group members customize a page's content by placing widgets.

To create a community group personalization page, follow the instructions in *Creating an individual personalization page* on page 1331, with the following differences.

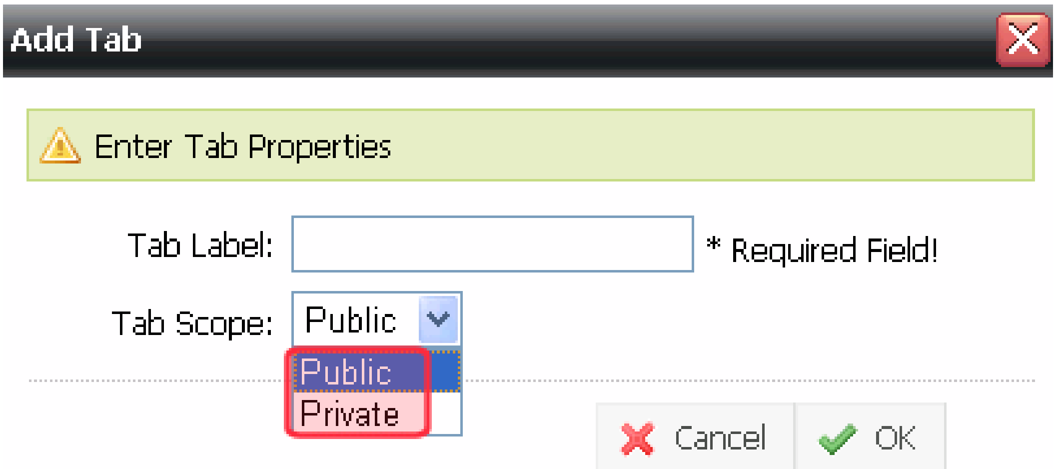
- When creating a widget space, check the **Group Space** radio button.



- When a developer creates an .aspx page and drops a personalization control, the selected widget space must be one whose **Group Space** box is checked.



- A private tab is visible only to *group* members.



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29

Assigning and managing tasks

A task is a required action within Ektron, such as updating or publishing content, reordering a collection, or updating an image. You can attach a task to a content item, so that as it progresses through editing and approval, a task tracks those activities.

When working with tasks, you need to understand the following.

- Permissions for creating, redirecting, editing, and deleting tasks.
    - You can create and view tasks for yourself.
    - Administrators can perform all task activities.
    - Others must have roles that let them create a task, redirect a task to another user or group, or delete a task.
    - Only Administrators group members and the user who created a task are authorized to edit it. This is because the Task feature is designed to restrict the actions that most users can perform on their tasks, so that tasks progress through a prescribed series of states.
- You can create and manage tasks from multiple places. For example:
    - If you are setting up tasks for a project that does not yet have content or for work items not related to specific content, create tasks through the **Workarea > Reports > Tasks** folder.
    - If you are browsing a website and notice that a content change is required, create a task from the website.
    - If you are reviewing Workarea content and recognize that a new task is needed, create one from the View Content screen.
- The difference between a task assigned to content and one not assigned to content.
- How task preapproval works.
- How to create and manage task categories and types, which are used to filter tasks.
- How to use task states to indicate the status of a content-associated task

Task states

Tasks are assigned one of the following states.

- Not Started
- Active
- Awaiting Data
- On Hold
- Pending
- Reopened
- Completed
- Archived
- Deleted
- Purged

Contrasting tasks assigned to content with tasks not assigned to content

There are 2 kinds of tasks. The difference between them involves how a task's state can change.

- **Tasks assigned to content**. Task state changes automatically as the assigned content's status changes. For example, if content is checked out, the task state changes to active. Administrators can manually change the task state at any time. See also: *How content events change a task's state* on page 1345
- **Tasks *not* assigned to content**. authorized users manually change a task's state at any time. For example, when a task is finished, you change its state to Completed. Ektron events do not affect these tasks.

Working with tasks assigned to content

This section explains how to work with tasks that are assigned to content items.

Creating a task assigned to content

PREREQUISITE

- Only members of the Administrators groups and users assigned to the Tasks-Create role can create tasks.

1. Create a task and assign it to content from any of these locations.

   NOTE: In the second and third options, you choose a content item then select a task. In these cases, you have already selected the task's content and language.

   - **Workarea > Reports > Tasks > Assigned by and to me >** click **Add**. The Add Task screen appears.
   - **Workarea > Content >** ***folder*** **>** ***content*** **>** View Content screen **>** click **Add Task** ( ).
   - a website by clicking the access point ( ) or content menu ( ) **> Add Task**.
2. Complete the Add Task screen.
   - **Title**. Enter a title for the task.
   - **Assigned To**. To assign the task to anyone who can edit the assigned content (**All Authors**), proceed to the next field. Otherwise, click **Select User or Group** and choose a user or group.

     NOTE: You can only assign a task to someone else if you are a member of the Administrators group or assigned the Tasks-Redirect role. If you do not have this capability, the task is assigned to anyone who can edit the assigned content (**All Authors**).
     The user to whom a task is being assigned must have edit permission for the content.

- **Language**. Select the language of the content to be assigned to the task. If you accessed the Add Task screen from the View Content screen or a website, the language is selected, and you cannot change it.
- **Content**. Click **Select**. A new window appears from which you can go to the content. You see only content in the selected language and for which you have at least read-only permission.
  If you accessed the Add Task screen from the View Content screen or a website, the content is selected, and you cannot change it.
- **Priority**. Select the priority of the task. Your choices are High, Normal, and Low. You can sort tasks by priority on the View Tasks screen.
- **Category**. If desired, select a category for the task. If you choose a Task Category, the Task Type drop-down box is auto-filled with task types associated with that category. See also: *Setting up task types and categories* on the facing page.
- **Type**. If desired, select the Task Type for this task. You must specify a Task Category before you assign a task type. See also: *Setting up task types and categories* on the facing page.
- **Add**. If you want to add Task Categories and Task Types, click **Add**. See also: *Setting up task types and categories* on the facing page

  WARNING! If you add a Task Category or Task Type while adding a task, the task information entered (Task Title, Assigned To, Language, and so on) is lost when the screen refreshes.

- **Edit**. By clicking the **Edit** link, you can edit the Task Type.

  WARNING! If you edit a Task Type while adding a task, the task information (Task Title, Assigned To, Language, and so on) entered will be lost when the screen refreshes.

- **State**. The state is set to **Not Started** and cannot be edited. You can sort tasks by state on the View Tasks screen. To learn more about the interaction of content status and task state, see *How content events change a task's state* on page 1345.
- **Start Date**. Using the calendar button, choose a start date for the task. The start date appears on the View Tasks screen, where users can sort tasks by start date.
- **Due Date**. Using the calendar button, choose the date by which the task needs to be completed. The due date appears on the View Tasks screen, where users can sort tasks by due date.

  If you see a mix-up of the month and date of your entry (for example, you select March 2 but see February 3), make sure the date format specified in the Windows Control Panel Regional Settings dialog matches your current language. Also, make sure the settings apply to the default user.

- **Description**. Add additional information to describe the task. The description appears on the View Task screen.

3. Click **Save**. If email notification is enabled, an email is sent to the user or group to which the task was assigned.

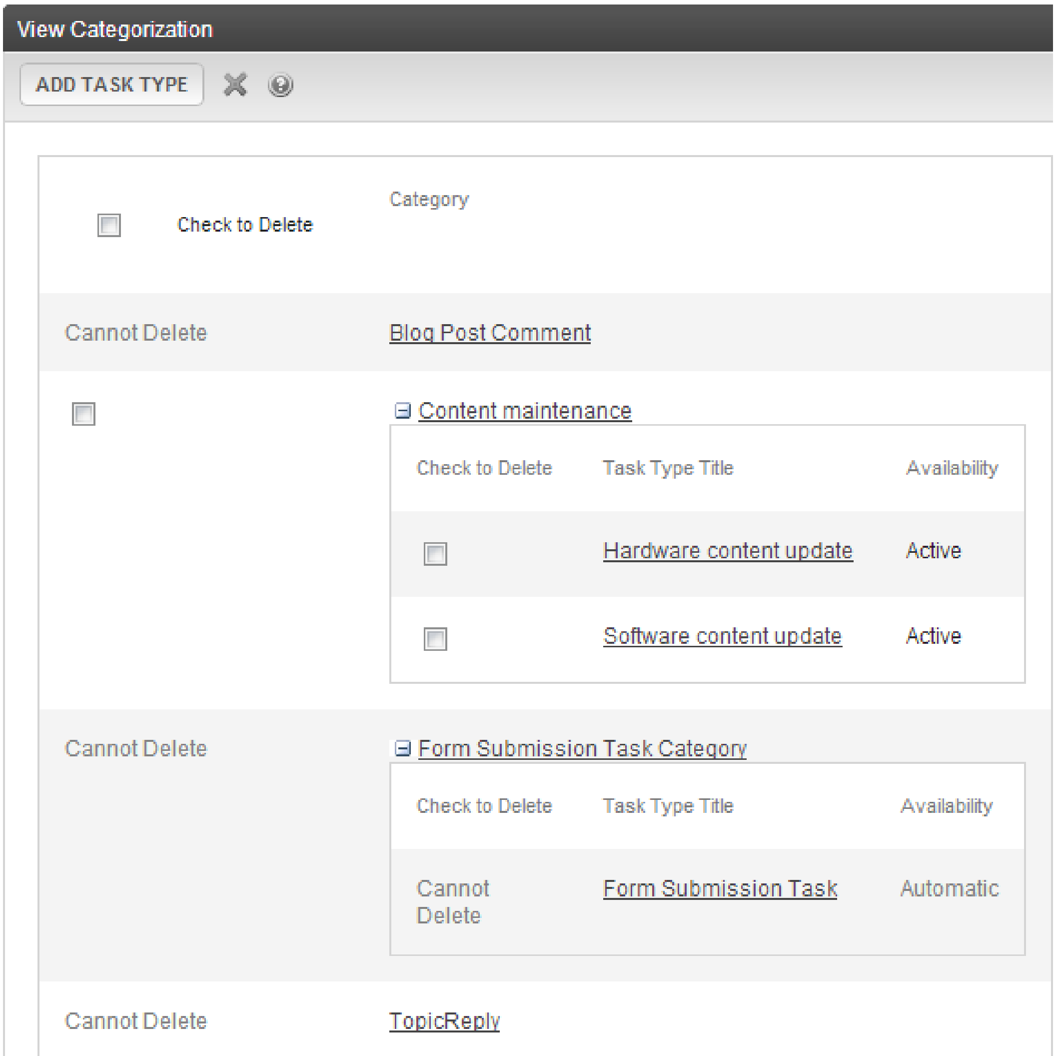
Setting up task types and categories

You can organize tasks by *category* and *type*. You can assign several types to each category. For example:

- Task Categories: Content Maintenance, Engineering, Sales, Documentation, Web Design, and so on.
- Task Types: Hardware content update, Software content update, Edit Content, Update Documents, Contact Customer, and so on.

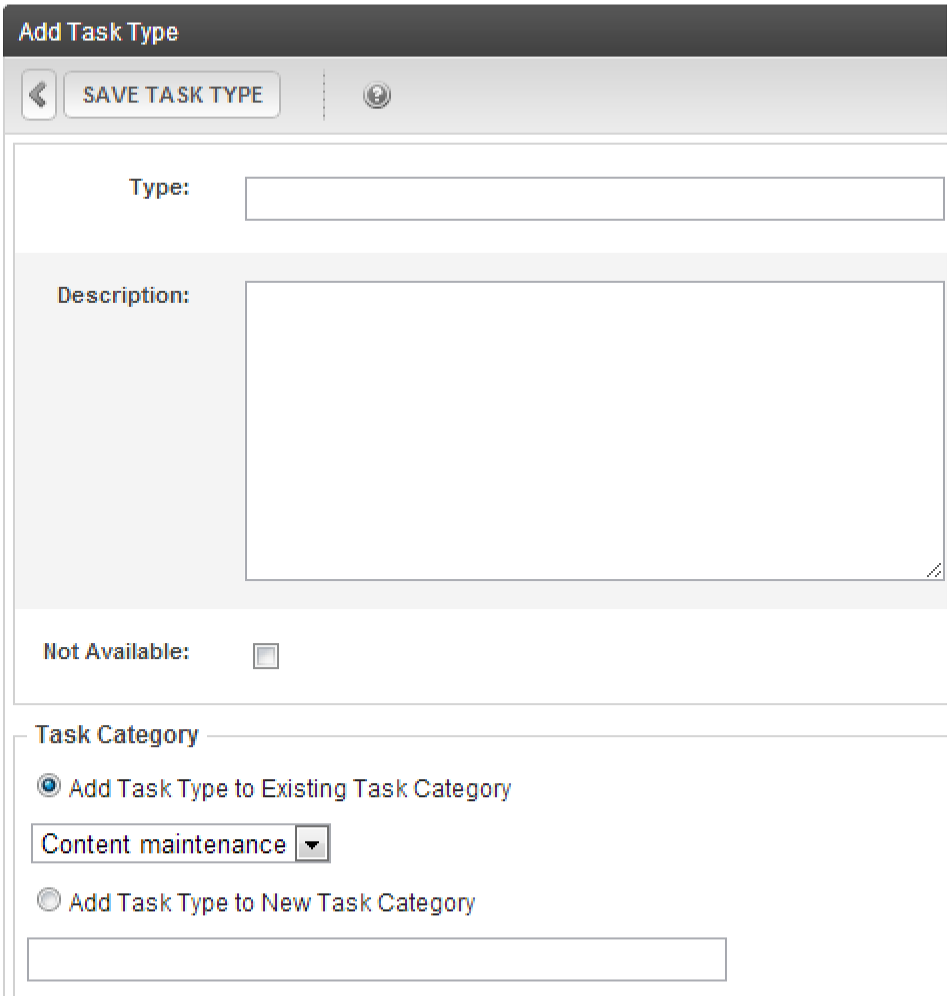
You can use task categories and types to filter tasks. See *Filtering tasks by task type on page 1351*.

1. Go to **Workarea > Settings > Configuration > Task Types**. To collapse a Task Category, click next to the Task Category name; to expand one, click .



NOTE: The View Categorization screen has a system-defined category (Form Submission Task) that can only be used with forms. You can change its name but cannot delete it. For more information, see *Working with HTML forms* on page 775.

2. From the View Categorization screen, click **Add Task Type**. The Add Task Type Screen appears.

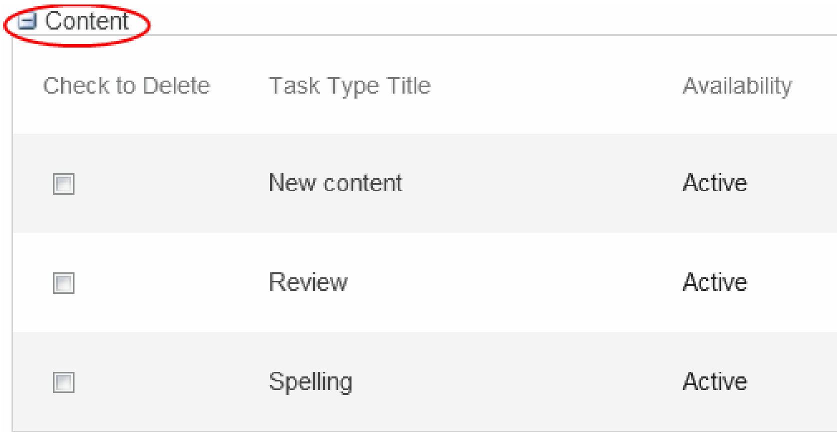


3. In the Task Category area, choose an existing Task Category from the drop-down menu, or enable the **Add Task Type to New Task Category** radio button and enter a new category name in the **text** field.
4. Add a Task Type name in the **Task Type** field.
5. Enter a **Task Type Description**.
6. Choose a Task Type Availability.

   You can hide Task Types from users by enabling **Not Available** in the Add Task Type and Edit Task Type screens. If you make a Task Type unavailable, the assigned task's **Type** and **Category** are changed to **Not Specified**.
7. Click **Save Task Type**.

Editing a task category

1. From the View Categorization screen, click the task category whose name you want to change.



2. In the text box screen next to the category name, enter the new name.

3. Click **Save Category** ().

Deleting a task category or task type

1. From the View Categorization screen, click the check boxes next to the Task items you want to delete.
2. Click **Delete** (). A confirmation box appears.
3. Click **OK**.

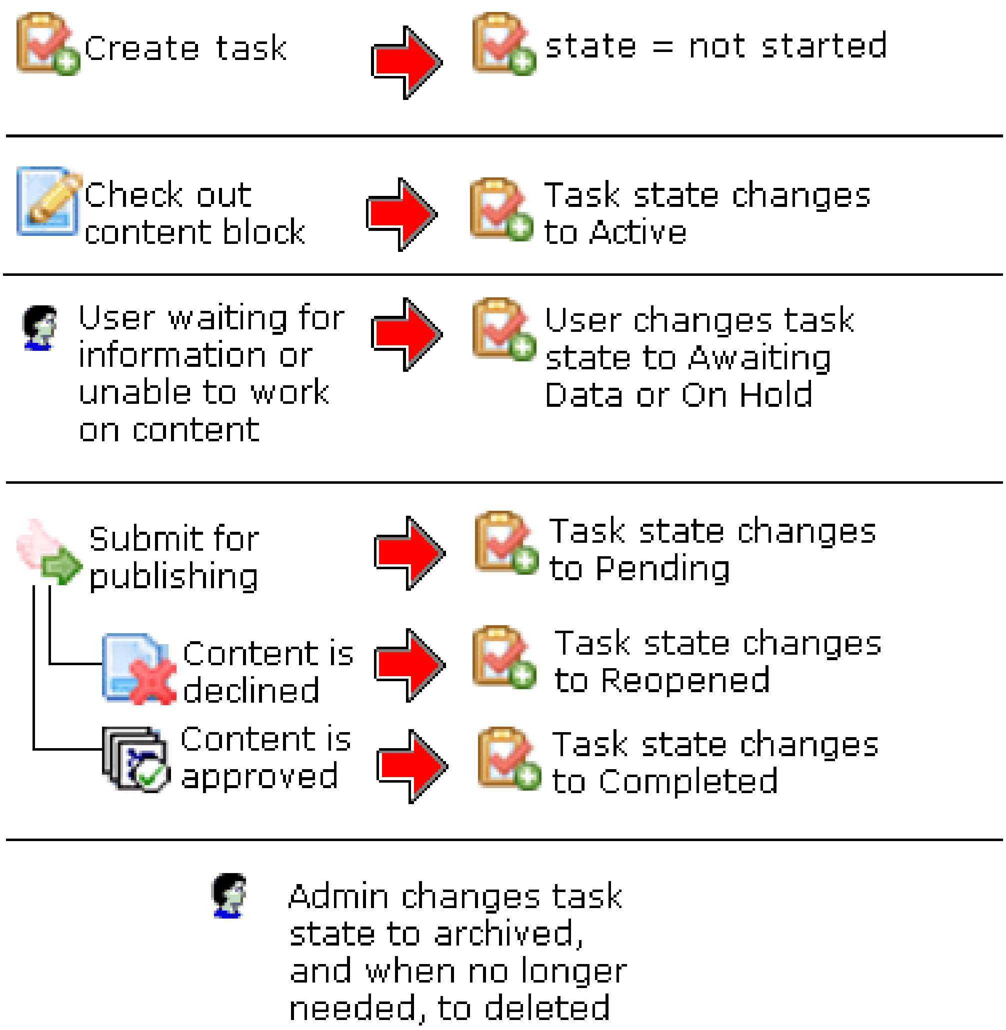
How content events change a task's state

A task assigned to content typically moves through a series of states, from creation to completion to removal. A task's history shows each state, when it was assigned, and who assigned it.

Many states are assigned automatically when associated content undergoes a change. For example, when content is submitted for approval, the task’s state changes to *Pending*. Some states are manually assigned by users.

IMPORTANT: At any time, an Administrators group member can change a task’s state to any other state.

Here is the sequence of user and system actions that change a task’s state.



Here is the progression of states for tasks assigned to content.

- **Not Started**. System action. Automatically assigned when task is created.
- **Active**. System action. The task's content was checked out at some point. It may currently be checked in.
- **Awaiting Data**. User action. The task is started but the assigned-to user is awaiting information from an external source. Use comments to indicate the data required for task reactivation.
- **On Hold**. User action. Task cannot be worked on at this time.
- **Pending**. System action. Content is submitted for approval.

  If the current approver edits content then submits it for approval, its status changes to **T** (awaiting completion of associated tasks), and all tasks assigned to the content are set to Pending. At that point, an authorized user must change the status of all assigned tasks to **Completed**. Then, all approvers must approve the content to publish it.
- **Reopened**. System action. Content is declined by an approver in the workflow. Or, if someone edits content whose task state is Pending, it changes to Reopened.

- **Completed**. System action. The content is published.
- **Archived**. User action. After a task is completed, administrators can assign this state. It no longer appears on open task lists but is kept for reviews and reports. Only the administrator can view Archived tasks. See *Archiving a task* on the next page.
- **Deleted**. User action. When an archived task is no longer needed for reporting or reviewing, administrators can assign this state. While in this state, the task remains in the database. See *Deleting a task* on page 1349.
- **(Purged*)**. User action. When you purge a task, it and all of its transactions are removed from the database, so the purged state does not actually show. Only administrators and users with Task-Delete role can purge. See *Purging a task* on page 1349.

You can receive email notification of changes in status for tasks and associated content. See *Enabling email notification* on page 98 to learn about setting up email notifications.

Editing a task

PREREQUISITE

Only Administrators group members and the user who created a task are authorized to edit it. If the person to whom a task is assigned is not authorized, that person can only view it and insert a comment. The Task feature restricts most users' ability to edit tasks, so that they progress through a prescribed series of states.

Authorized users can manually edit any task information (except **Assigned By, Task ID**, and **Created By**).

NOTE: System events automatically change a task's state. See also: *How content events change a task's state* on page 1345

1. Go to **Workarea > Reports > Tasks > All open Tasks**.
2. Click the task. The View Task screen appears.
3. Click **Edit**. The Edit Task screen appears.
4. Edit task information and click **Update**.

Adding comments to a task

PREREQUISITE

Only members of the Administrators group, the user who created a task, and the user to whom a task is assigned can add comments to it.

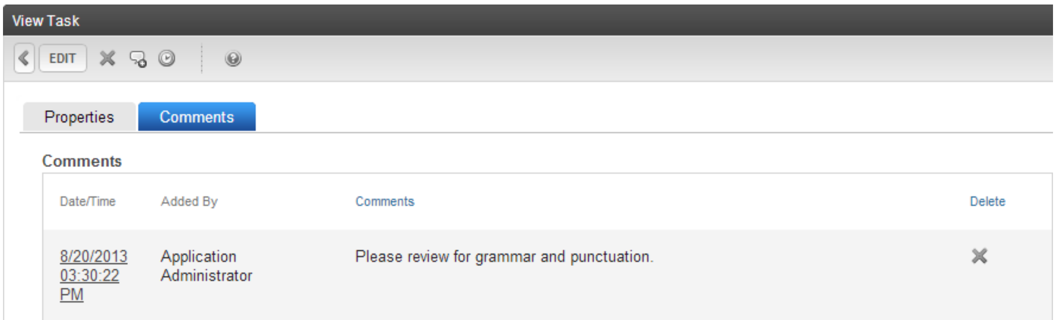
Comments can be added to a task to record its progress from assignment to completion.

Comments appear on the **Comments** tab of the View Task screen. If a task is assigned to content, and an approver approves or declines content from the Content

Awaiting Approval screen, the Add Comments to Task screen appears. The screen lets the approver add comments about the task associated with the content.

Authorized users also can add comments to a task at any time to provide additional information about its status. For example, if you update a task's status from *In progress* to *Waiting on Someone Else*, you can use a comment such as: *Please review for grammar and punctuation.*

1. Go to **Workarea > Reports > Tasks > All open Tasks** (or any other type of task).
2. Click **Add Comment** ( ). The Comments window appears.
3. Enter a comment.
4. Click **Insert**. The View Task screen reappears. The comment appears on the **Comments** tab.



To update a comment, click its **Date/Time** link.

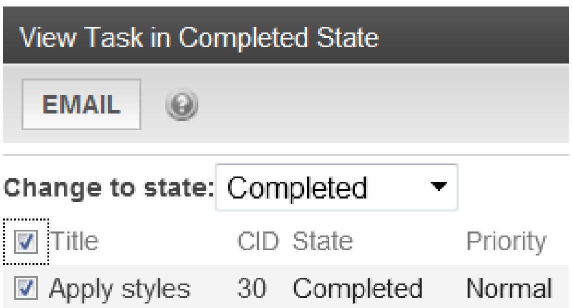
Archiving a task

PREREQUISITE

- Only members of the Administrators group or users to whom a task is assigned can change its status to archived.

To clean up completed tasks while keeping a record of the tasks, move selected tasks to the Archived Tasks list. This helps you focus on more recent task completions.

1. Go to **Workarea > Reports > Tasks** and choose the type of task that you want to archive. (Typically, you archive completed tasks.) The View Task screen appears.
2. Select tasks one at a time, or click the check box in the top left corner to select all.



3. In the **Change to State** field, choose **Archived** from the drop-down list.
4. Click **Set**.

Deleting a task

PREREQUISITE

- Only Administrators group members and users assigned to the Task-Delete role can delete a task.
- Users can only delete tasks that they can view. See *Determining which tasks are visible* on page 1351

You can delete a task that is no longer needed, such as after it is completed or archived, depending on your organization's policies.

1. Go to **Workarea > Reports > Tasks**.
2. Choose the type of task that you want to delete (for example, **All Open Tasks**). The View Task screen appears.
3. Click the task that you want to delete.
4. Click **Delete** ( ).
5. Click **OK**.

Deleting several tasks at once

1. Go to **Workarea > Reports > Tasks** and choose the state of tasks that you want to delete. The View Task screen appears.
2. Select 1 or more tasks, or click the check box in the top left corner to select all.
3. Choose **Deleted** from the **Change to State** drop-down.
4. Click **Set**.

Purging a task

PREREQUISITE

- Only members of the Administrators group or users to whom the Task-Delete role is assigned can purge a task.

WARNING! Purging removes a task and its history from the database.

1. Go to **Workarea > Reports > Tasks > Deleted**.
2. Select tasks one at a time, or click the check box in the top left corner to select all.
3. Click **Purge**.

Viewing a task

PREREQUISITE

- Only members of the Administrators group, the user who created a task, and the user to whom a task is assigned can view it. See also: *Determining which tasks are visible* on the facing page

You can view a task in the following ways.

- If a task is assigned to content
  1. Go to **Workarea > Content > *folder*** and click content associated with a task.
  2. Click the **Tasks** tab to see the content's tasks.
- Whether or not a task is assigned to content
  1. Go to **Workarea > Reports > Tasks > *type of task***. For example, **All open Tasks**.
  2. Click the task you want to view.
- Viewing a task's history

  Ektron maintains a history of events and comments in the life of a task. For example, the history shows when and by whom the task was created, when it changed to Active, was linked to content, its state changed, it was approved, and so on.

  NOTE: You can view a task’s history until it is purged.

  1. Go to **Workarea > Reports > Tasks > *type of task***. For example, **All open Tasks**.
  2. Click a task. The View Task screen appears.
  3. Click **History** (). The history of task events appears.

View Task History for Request Support

Date	Initiator	Activity	Information
13-Aug-2010	Marketing	Creation	
13-Aug-2010	Marketing	Assignment	Administrators
13-Aug-2010	Marketing	Language Change	English (U.S.)
13-Aug-2010	Marketing	Title Change	Request Support

Viewing task reports

The **Workarea > Reports > Tasks** folder displays all tasks, many filtered by task state.

PREREQUISITE

Only Administrators group members , the user who created or assigned a task, or the user to whom a task is assigned can view it. See also: *Determining which tasks are visible* on the facing page

The following list shows the types of tasks that authorized users can view, filter, and assign to other users.

- **All open Tasks**. shows all tasks whose status is one of the following:

  NOTE: Authorized users also can edit a task from this task state.

  - not started
  - active
  - awaiting data
  - on hold
  - reopened
  - pending
- **Assigned by and to me**. Tasks assigned to you, and tasks you assigned to yourself or someone else
- **Assigned to me**. Tasks assigned to you
- **Assigned by me**. Tasks you assigned to someone else
- **Created by me**. Tasks you created
- **Assigned to User**. Tasks you assigned to a user
- **Not started**. Tasks whose state is *Not started*
- **Active**. Tasks whose state is *Active*
- **Awaiting Data**. Tasks whose state is *Awaiting Data*
- **On Hold**. Tasks whose state is *On Hold*
- **Pending**. Tasks whose state is *Pending*
- **Reopened**. Tasks whose state is *Reopened*
- **Complete**. Tasks whose state is *Complete*
- **Archived**. Tasks whose state is *Archived*
- **Deleted**. Tasks whose state is *Deleted*

  NOTE: You can also purge tasks from the **Deleted** task state.

Filtering tasks by task type

Every View Task screen lets you filter tasks by type. Use the **Show Task Type** drop-down to choose a Task Type. Only Task Types that are applied to a task appear in the Show Task Type drop-down box.

NOTE: Words in ***bold italics*** are Task Categories. You cannot filter by Task Categories.

Determining which tasks are visible

To provide security, Ektron restricts which users can view which tasks. The following table shows the Viewing options by user or group.

View option	Administrator group member	User or group member to whom task assigned	User who assigned task	User who created task
All Open *	x			
Assigned by Me *			x	
Assigned to Me *		x		
Created by Me *				x
Assigned to User	x			
Not Started	all tasks in specified state	only tasks assigned to user in Not Started state		
Active	all tasks in specified state	only tasks assigned to user in Active state		
Awaiting data	all tasks in specified state	only tasks assigned to user in Awaiting data state		
On hold	all tasks in specified state	only tasks assigned to user in on hold state		
Pending	all tasks in specified state	only tasks assigned to user in Pending state		

View option	Administrator group member	User or group member to whom task assigned	User who assigned task	User who created task
Reopened	all tasks in specified state	only tasks assigned to user in Reopened state		
Completed	all tasks in specified state	only tasks assigned to user in Completed state		
Archived	all tasks in specified state			
Deleted	all tasks in specified state			

*—user can only view tasks in a not started, active, awaiting data, on hold, pending, or reopened state

Working with tasks unrelated to content

This section explains how to create tasks for activities that are unrelated to specific content items.

PREREQUISITE

- Only members of the Administrators groups and users assigned to the Tasks-Create role can create tasks.

1. **Workarea > Reports > Tasks > Assigned by and to me >** click **Add**. The Add Task screen appears.
2. Enter the following information.
   - **Title**. Enter a title for the task.
   - **Assigned To**. Click **Select user or group** and choose a user or group to assign to the task.
   - **Language**. Ignore.
   - **Content**. Ignore.
   - **Priority**. Select the priority of the task. Your choices are High, Normal and Low. The priority appears on the View Tasks screen, where a user can sort tasks by priority.

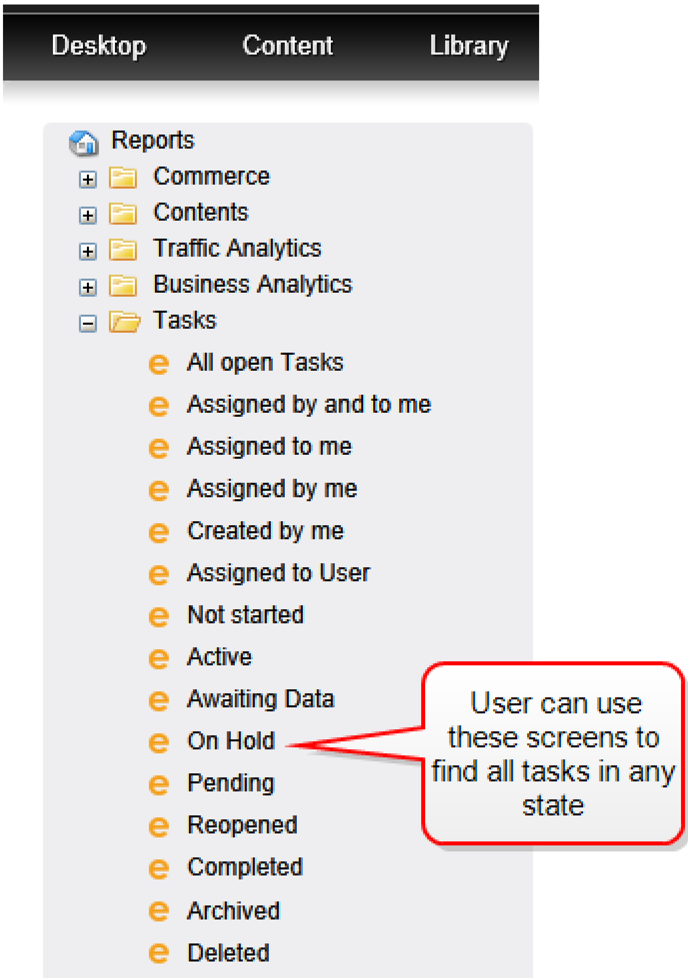
- **Category**. If desired, select a category for the task. If you choose a Task Category, the Task Type drop-down box is auto filled with task types associated with that category. See also: *Setting up task types and categories* on page 1343.
- **Type**. If desired, select the Task Type for this task. You must specify a Task Category before you assign a task type. See also: *Setting up task types and categories* on page 1343.
- **Add**. If you want to add Task Categories and Task Types, click **Add**. See also: *Setting up task types and categories* on page 1343

  WARNING! If you add a Task Category or Task Type while adding a task, the task information entered (Task Title, Assigned To, Language, and so on) is lost when the screen refreshes.

- **Edit**. By clicking the **Edit** link, you can edit the Task Type.

  WARNING! If you edit a Task Type while adding a task, the task information (Task Title, Assigned To, Language, and so on) entered will be lost when the screen refreshes.

- **State**. Select a task state to indicate the task's completion status. To find any task, users can select from options below the Tasks folder to view all tasks in that state.



- **Start Date**. Using the calendar button, choose a start date for the task. The start date appears on the View Tasks screen, where users can sort tasks by start date.
- **Due Date**. Using the calendar button, choose the date by which the task needs to be completed. The due date appears on the View Tasks screen, where users can sort tasks by due date.

  If you see a mix-up of the month and date of your entry (for example, you select March 2 but see February 3), make sure the date format specified in the Windows Control Panel Regional Settings dialog matches your current language. Also, make sure the settings apply to the default user.
- **Description**. Add additional information to describe the task. The description appears on the View Task screen.

3. Click **Save**. If email notification is enabled, an email is sent to the user or group to which the task was assigned.

What happens to a task unrelated to content after it is created

After a task is created, the user to whom it is assigned would typically perform some aspect of the task. Then, that user would use the **Assigned to me** screen to change its state as appropriate. For example, the user might change its state to Completed. Or, the user might change its status to On Hold and assign it to someone else.

The following activities can be performed on a task not related to content.

- *Setting up task types and categories* on page 1343
- *Editing a task* on page 1347
- *Adding comments to a task* on page 1347
- *Archiving a task* on page 1348
- *Deleting a task* on page 1349
- *Purging a task* on page 1349
- *Viewing a task* on page 1349
- *Viewing task reports* on page 1350

Setting up an automatic task for pre-approving content

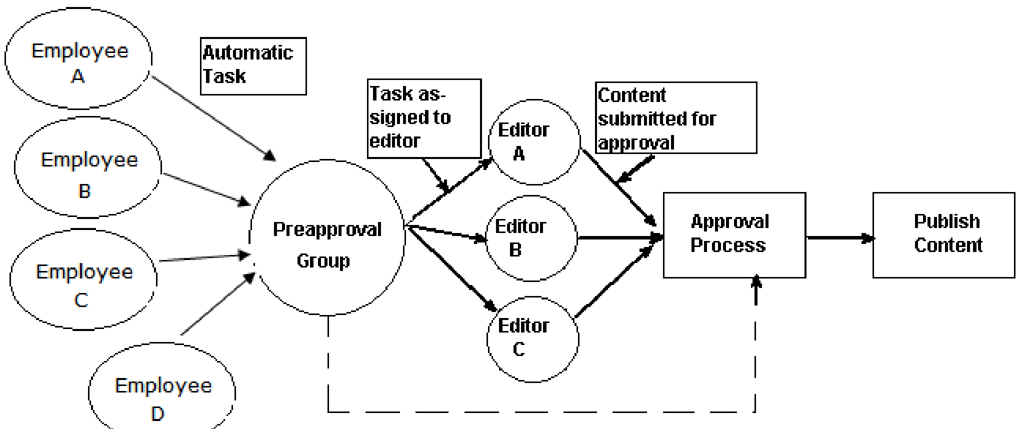
You can set up a preapproval task to require 1 or more users to approve content before it enters the regular workflow. See also: *Approving content for publication* on page 689

NOTE: You also can create a task automatically when a form is submitted. See also: *Assigning a task to a form* on page 813

When a user submits content for approval, Ektron checks to see if an open task exists for it. (An open task is one whose state is Not Started, Active, Awaiting Data, On Hold, or Pending.) If none exists but a preapproval group is assigned to its folder, a task is automatically created for the content. When the task is reviewed by any preapproval group member, there are 2 choices.

- Assign the task to another user, such as an editor. (The user to whom the task is being assigned must have permission to edit the content.) The editor reviews the content, updates it as needed, and submits it into the regular workflow.
- Review the content and submit it for publishing. This action completes the preapproval process and submits the content into the regular workflow.

NOTE: The user submitting the content does not need permission to create tasks. Also, the user assigned to the task should not change its state using the task system. Instead, the user should review and approve content using the content approval mechanism. That mechanism automatically changes the task's state.



The new task has the following default information.

- **Title**. A string formulated by joining the content title, content ID number, underscore (_), and `Task`. For example, `Private Content2_Task`.
- **Assigned to**. The preapproval group
- **Assigned by**. The user who submitted the content
- **Content**. The content submitted for approval
- **Priority**. Normal
- **State**. Not Started
- **Due date**. none
- **Start date**. none
- **Created by**. User who submitted content
- **Description**. none

The following list shows the sequence of changes to content and its associated task. All changes are logged in the task's history. Also, email is automatically generated for automatic tasks as it is for manually-created tasks.

Task/content statuses (author cannot approve)

- Content is created and checked in
  - Content status: Checked In
  - Task state: No auto task assigned
- Content is submitted for approval

  NOTE: This action creates an automatic task for the content.

  - Content status: Waiting for completion of associated tasks
  - Task state: Not Started
- Content is assigned by a preapproval group member to an editor
  - Content status: Waiting for completion of associated tasks
  - Task state: Not Started

- Editor updates content then checks it in
    - Content status: Checked In
    - Task state: Active
- Content is submitted for approval; it enters any workflow set for the folder or content

  NOTE: Because the task requires an approval, it appears in the task list of the current approver. When the content is approved, the task is moved to the next approver’s task list.

    - Content status: Submitted for Approval
    - Task state: Pending
- Approver denies request
    - Content status: Checked In
    - Task state: Reopened
- Approver approves content
    - Content status: Approved
    - Task state: Complete

Task/content statuses (author can approve)

- Content is created then checked in
    - Content status: Checked In
    - Task state: No auto task assigned
- Content is edited then checked in
    - Content status: Checked In
    - Task state: Active
- Content is submitted for approval

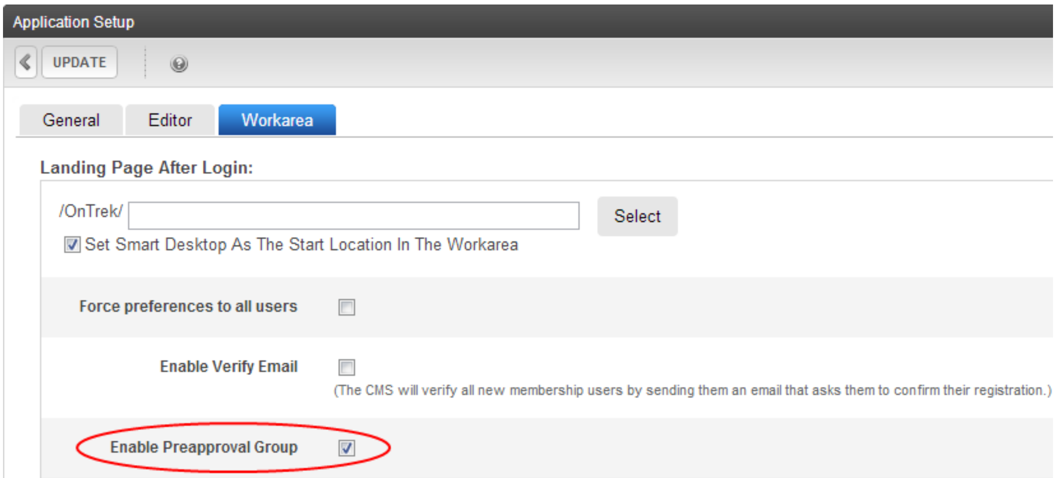
  NOTE: Although an author can approve content, the author must click **publish** twice: once to change content status to Awaiting Completion of Associated Task, and a second time to change it to Approved.

    - Content status: Pending
    - Task state: Not Started
- Content is published
    - Content status: Approved
    - Task state: Completed

Enabling task preapprovals

To set up an automatic preapproval group:

1. Go to **Workarea > Settings > Configuration > Setup > Application Setup > Workarea** tab **> Enable Preapproval Group** and check the box.

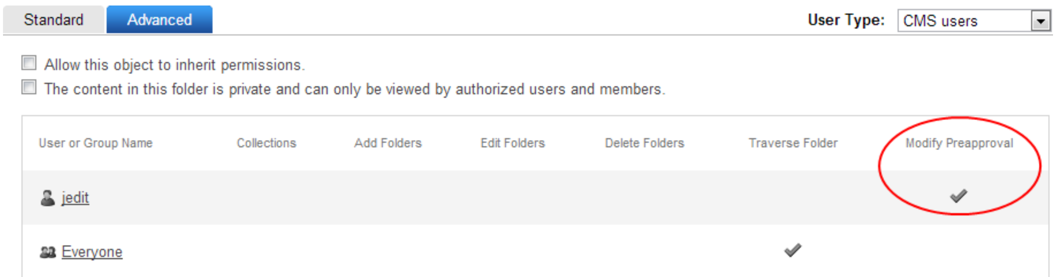


2. Assign user groups to folders whose content must complete the preapproval process before it enters the regular workflow.

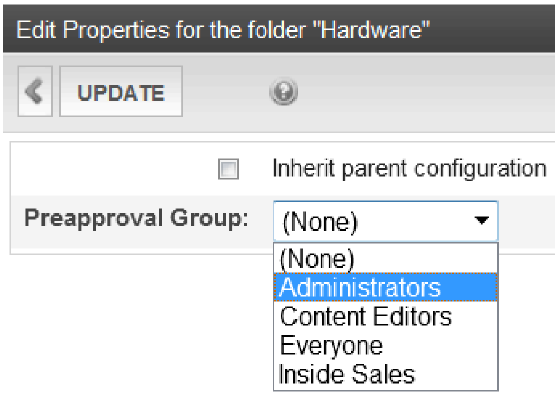
PREREQUISITE

You can choose (or update) a preapproval group only if these criteria are both true.

- The **Enable Preapproval Group** field is enabled (see Step 1 above)
- You are an administrator or a user that has the **Modify Preapproval** permission enabled on the Advanced tab of a folder's View Permissions screen. To view permissions, click a folder, then choose **View > Properties > Advanced > View Permissions** ( ).



a. Go to the folder's properties screen and click **Modify PreapprovalGroup** ( ) to access the **PreApproval Group** field. The Edit Properties screen appears.



b. Check the **Inherit parent configuration** box if you want this folder to inherit the preapproval group from its parent folder. If you choose a user group, an automatic task is assigned to that group whenever content in that folder is created or updated.

NOTE: The Preapproval Groups Report lists all preapproval groups assigned to Ektron folders. To access it, go to **Workarea > Reports > Contents > Preapproval Groups**.

30

Creating business rules for your website

PREREQUISITE

Only members of the Administrators user group and those defined in the Manage Members for Role: Add Role Member Business Rule Editor screen can work with Business Rules. See also: *Defining roles* on page 1464

Business Rules let you define conditions for Web pages on your site. You choose an action based on whether the conditions are true or false when a site visitor browses your site. For example:

- **Condition**. A site visitor visits your site for the first time.
- **Action**. Add a cookie to the site visitor's computer and display a welcome message.

With Business Rules, you do not write code to set conditions and initiate actions. You simply complete the Business Rules wizard, have your developer add a Business Rules server control to your Web form, and assign a Business Ruleset to the server control. See also: *Creating personalized Web experiences with personas* on page 1047 and the BusinessRules server control.

The following list shows several conditions and actions that are already defined for you.

Conditions

- Cookie Parameter = value
- Form Parameter = value
- QueryString Parameter = value
- Server Variable = value
- Custom Parameter = value

Actions

- Display a calendar
- Display a message
- Open a URL in a new window
- Pop up a message
- Redirect to a new URL
- Set a cookie value
- Display content

After you create a rule, you can add it to multiple rulesets. This is useful if several rulesets use a common rule.

Creating a business ruleset

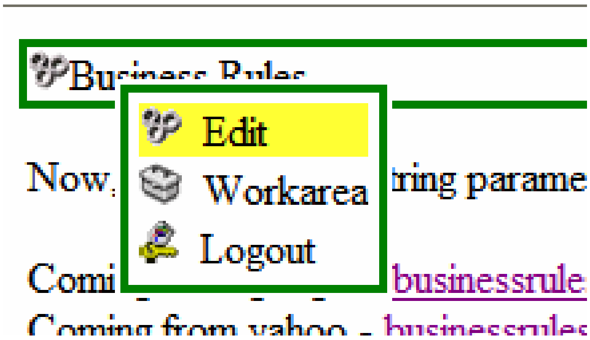
1. Go to **Workarea > Settings > Business Rules**. The Business Rulesets screen appears..
2. Click **Add New Ruleset**. The Add New Ruleset screen appears.
3. In the **Name** text box, add a unique, descriptive name for the ruleset.
4. Click **Save Ruleset**. The View Ruleset screen appears.

You can now add a rule (as described in *Adding a rule to a ruleset* below) or click **Back** ( ) and return to add a rule later.

After creating a ruleset, you typically add rules to it via the View Ruleset screen. This screen is the launch pad for working with existing rulesets or creating new rulesets.

Editing a business ruleset

You can edit a ruleset from 2 locations: the Web page or the Workarea. To edit a ruleset from the Web page, go to a Business Rule on a Web page while logged in. Then, right click the Business Rule icon and click **Edit**.



To edit from the Workarea:

1. Go to **Workarea > Settings > Business Rules**. The Business Rulesets screen appears.
2. Click the ruleset name.
3. Click **Action > Edit Ruleset**. The Edit Ruleset screen appears.
4. From this screen, you can make a rule inactive, remove a rule from the ruleset (*Removing a rule from a ruleset* on page 1368), or change the order in which rules are applied (*Changing the order of rules in the ruleset* on page 1367).

Deleting a business ruleset

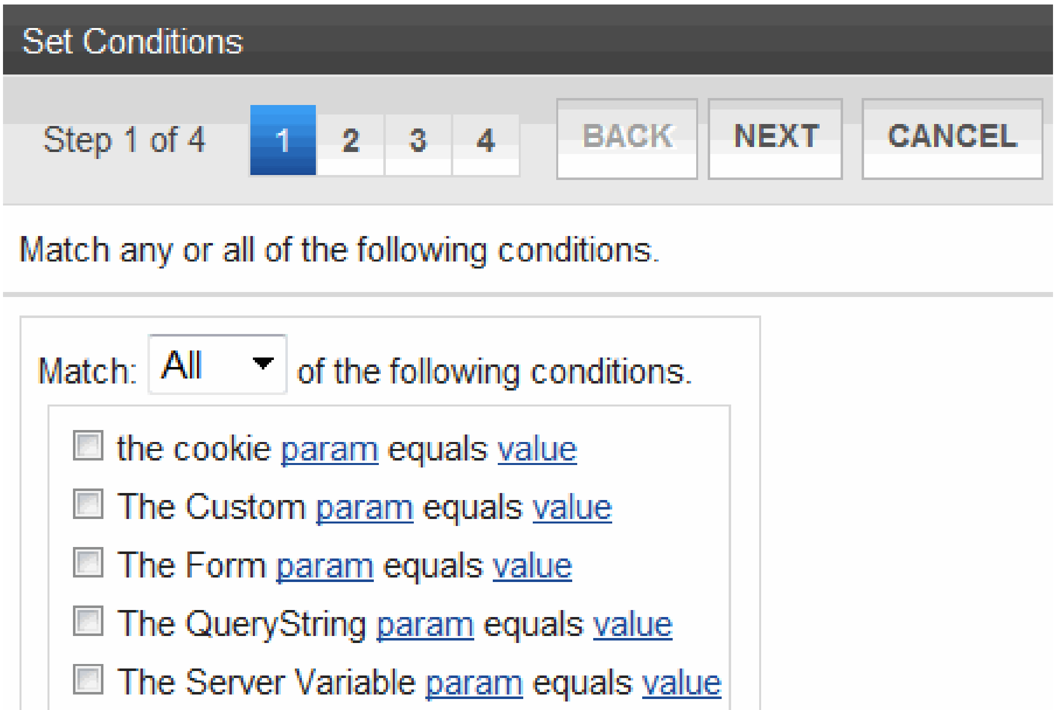
When you delete a Business Ruleset, the ruleset is removed from the system permanently. However, the rules in a Ruleset are not deleted because they may be used in other Rulesets.

1. Go to **Workarea > Settings > Business Rules**. The Business Rulesets screen appears.
2. Click the ruleset name.
3. Click **Action > Delete Ruleset**. A dialog asks you to confirm the deletion.
4. Click **OK**.

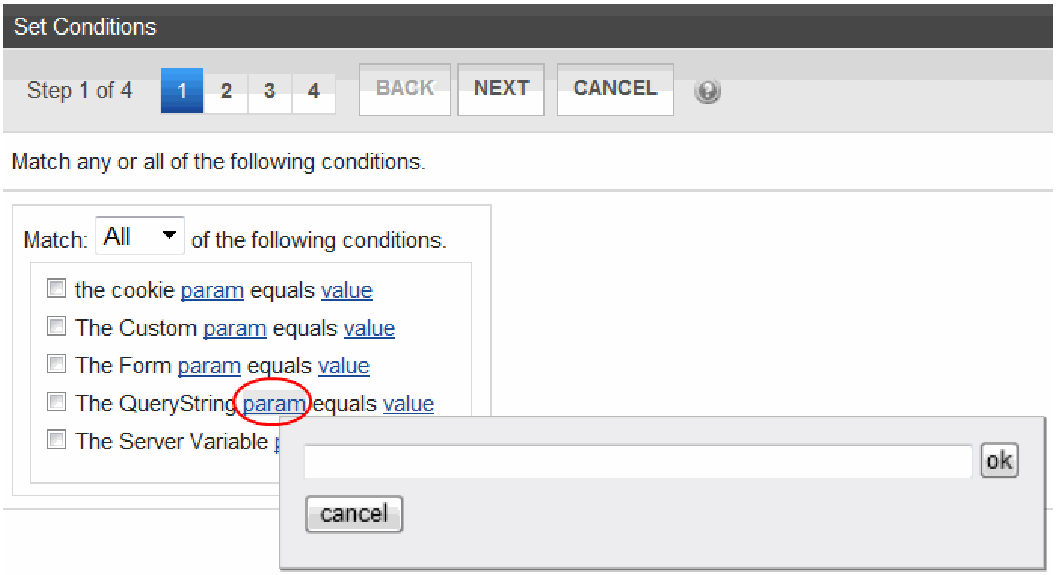
Adding a rule to a ruleset

1. Go to **Settings > Business Rules**. The Business Rulesets screen appears.
2. Click the Business Ruleset for which you want to create a new rule.

3. Click **New > Add New**. The Rules Wizard launches and helps you define a rule.



4. Wizard Step 1 prompts you to create conditions for the rule and decide whether a site visitor needs to match Any or All conditions. Click the param and value links to open a dialog to enter information.



5. Place a check next to any condition you want to use. Use the following list to help you complete the param and value fields.
   - Cookie param equals value. Use a cookie for this condition.
     - **param**. enter **Name** in this field.
     - **value**. enter the name of the cookie in this field.

     Does the site visitor's system have an Ektron cookie?

     Usage: Cookie param "Name" equals value "Ektron"

- Custom param equals value. Use custom parameters from the user. User parameters are defined in the code-behind of a Web page.
  - **param**. enter the name of a custom parameter. For example, AcctBlnc
  - **value**. the value associated with the parameter. For example, 1000

  Is the user's account balance $1000?

  Usage: Custom param “AcctBlnc” equals value “1000”
- Form param equals value. Use a form elements field name and match the value entered into the element.
  - **param**. enter a form’s element Field Name from a form.
  - **value**. enter the value you want the form element to match.

  A form has a Choices Field element with the Field Name “Favorite_Food” and choices of Pizza, Steak and Chicken. When a site visitor chooses Pizza and clicks **submit**, your rule launches a Pizza company’s website.

  Usage: Form param “Favorite_Food” equals value “Pizza”
- QueryString param equals value. Use the QueryString for this condition
  - **param**. the name of the QueryString. For example, ID.
  - **value**. the value associated with the parameter. For example, 18.

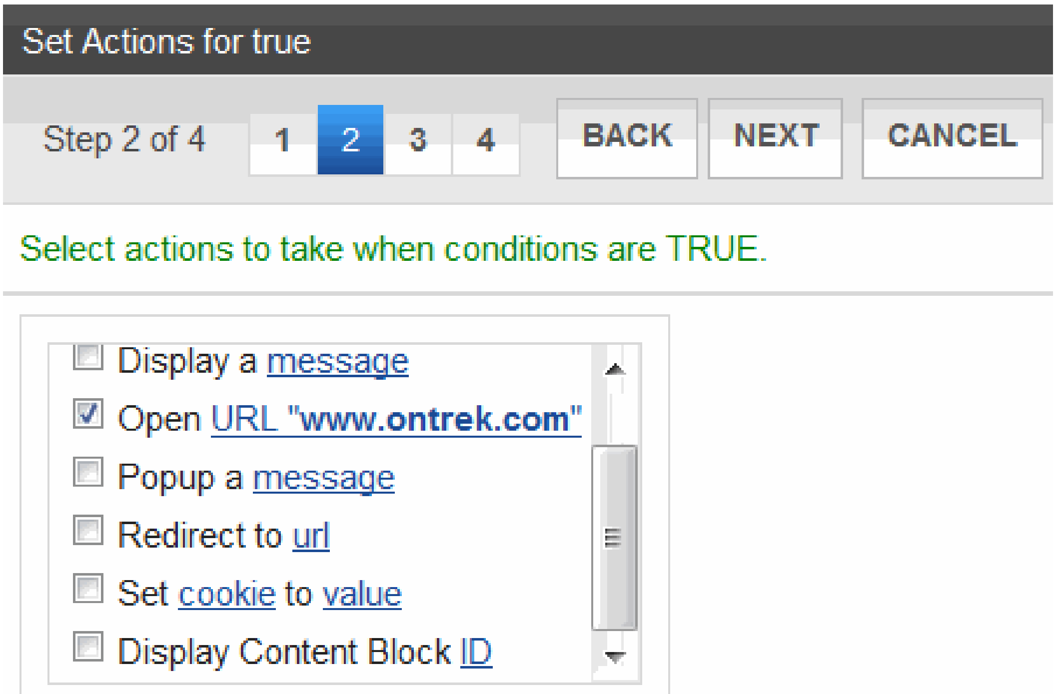
  Is content with the ID of 18 being displayed?

  Usage: QueryString param “ID” equals value “18”
- Server Variable param equals value. Use server variables from the site visitor.
  - **param**. enter the name of a server variable. For example, HTTPS.
  - **value**. the value associated with the parameter. For example, On.

  Is the site visitor’s browser using SSL?

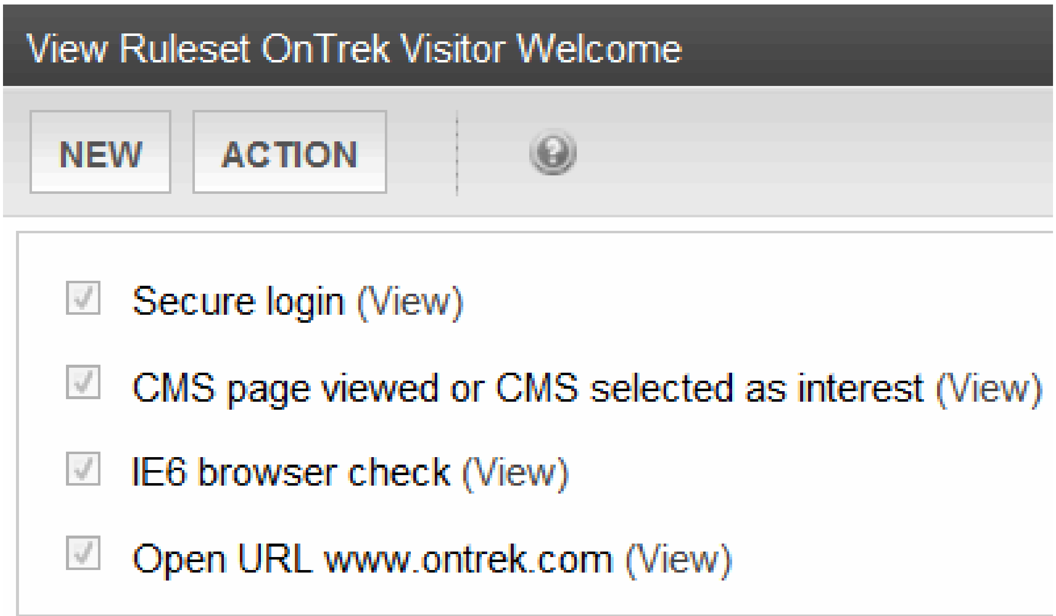
  Usage: Server Variable param “HTTPS” equals value “On”

6. Click **Next**. Wizard Step 2 prompts you select an action to take if conditions are true. Check the boxes for the actions to take. Click the blue links to add the appropriate information.



- **Display Calendar ID**. Enter an Ektron Calendar ID.
- **Display a Message**. Enter a message to be displayed.
- **Open URL**. Enter a URL. This opens a new window with the URL.
- **Popup A Message**. Enter a message that appears in a popup dialog box.
- **Redirect to a URL**. Enter a URL to redirect a the site visitor’s browser.
- **Set Cookie to Value**. Creates a cookie on the site visitor’s system. Enter **Name** for Cookie and the name of the cookie for Value.
- **Display Content Block ID**. Enter an Ektron content block’s ID.

7. Click **Next**. Wizard Step 3 lets you select actions to take when conditions are false. This works the same as Wizard Step 2.
8. Click **Next**. Step 4 of the Wizard asks you to enter a name for the rule in the text box.
9. Click **Done**. The View Ruleset screen appears. Your rule appears in the Ruleset box.



Editing a rule in a ruleset

1. Go to **Workarea > Settings > Business Rules**. The Business Rulesets screen appears.
2. Click on the Ruleset that contains the rule to be changed. The View Ruleset screen appears.
3. Click on the name of the rule to be changed. The rule is highlighted.
4. Choose **Action > Edit Rule**. The Rules Wizard appears with the rule loaded.
5. Edit as necessary. The Rules Wizard is explained in *Adding a rule to a ruleset* on page 1363.

Changing the order of rules in the ruleset

The order of rules in a Ruleset affects their application when a site visitor views a page. For example, you want to display a welcome message before a content item. To accomplish this, move the rule for the welcome message above the rule for a content item.

1. Go to **Workarea > Settings > Business Rules**. The Business Rulesets screen appears.
2. Click on the Ruleset that contains the rules you want to re-order.
3. Choose **Action > Edit Ruleset**. The Edit Ruleset screen appears.
4. Highlight the rule you want to reorder.
5. Click the up and down arrow buttons to move the rule within the list.
6. Click **Save Ruleset**.

Adding existing rules to another ruleset

You can add a rule to multiple Rulesets. To do so:

1. Go to **Workarea > Settings > Business Rules**. The Business Rulesets screen appears.
2. Click on the Ruleset to which you want to add existing rules.
3. Choose **New > Add Existing**. The Add an Existing Ruleset screen appears displaying the rules from other Rulesets.
4. Check one or more rules and click **Save Ruleset**. The rules are added to the current Ruleset.

Removing a rule from a ruleset

1. Go to **Workarea > Settings > Business Rules**. The Business Rulesets screen appears.
2. Click on the Ruleset that contains the rule you want to remove.
3. Choose **Action > Edit Ruleset**. The Edit Ruleset screen appears.
4. Click on the rule you want to remove, highlighting the rule.
5. Click **Remove Rule** ( ). A window indicates that the rule will be removed from this ruleset only.
6. Click **OK**. The rule is removed from the Edit Ruleset screen.
7. Click **Save Ruleset**.

31

Sending Web Alert emails to subscribers

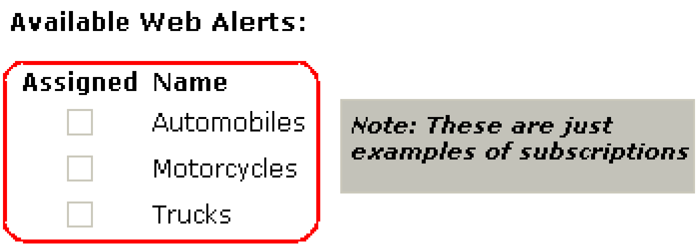
PREREQUISITE

Only members of the Administrator group or users assigned to the Folder User Admin rolecan work with Web Alerts.

You can set up automatic email notification for site visitors who register (or subscribe) to updates about new or changed information. When new or existing content is published, the subscriber receives an email with a link to the new or updated page.

A Web Alert is generated and sent to a subscriber in the following way.

1. Content is published.
2. Ektron checks the **Staging Server** checkbox on the **Settings > Configuration > Setup** screen.
   - If it is unchecked, proceed to the next step.
   - If the box is checked, no Web Alerts are issued for this server.
3. Ektron checks to see if any subscriptions are assigned to folders or content.
   - If no subscriptions are assigned, the **Web Alerts** tab does not appear when editing content.
   - If a subscription is assigned, Ektron checks to see if an email should be created for the content. (The settings appear under the **Web Alerts** tab. For example, some content only triggers email when first published, while other content always generates email.)
4. If an email should be generated, Ektron retrieves its information from the Folder Properties screen > **Web Alerts** tab > **Web Alert Contents** fields.
5. Ektron determines which subscription lists should receive the email. These are identified on the **Available Web Alerts** area of the **Web Alerts** tab. The lists contain subscribers' email addresses.



6. The email is sent.

This chapter explains how to set up the Web Alert feature.

1. Set up message queue and asynchronous processor.
2. Create messages—Define components of the email to be sent to subscribers.
3. Create subscriptions—Categories of information on your site. Site visitors can subscribe to be notified when content in a category is added or updated.
4. Assign Web Alert information to folders and content—For each folder or content item to which you assign subscriptions, determine
   - activities that trigger emails (for example, initial publishing of content)
   - the email content

- subscription lists to which the email is sent

5. Create and publish site visitor registration page—Create a new Web form and place the Membership server control onto it. Then, publish that form on your website.

   NOTE: This task is typically done by a developer.

6. Site visitors subscribe to lists of interest—Someone signs up to be notified when changes in a selected subscription (category) are published. (Ektron CMS users can also subscribe.)

   Subscribers are notified when content is first published or updated. If at least one subscription is assigned to the content or its folder, email is sent according the folder's Web Alert settings.

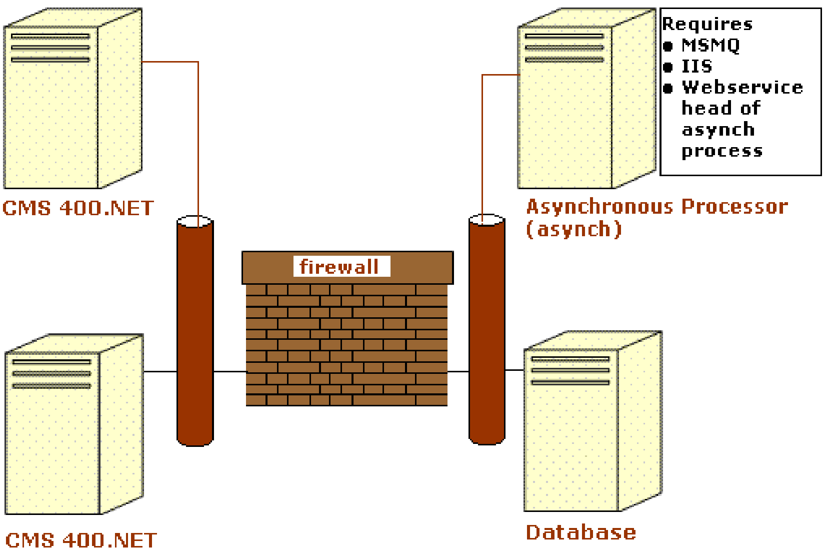
Setting up message queuing and the asynchronous processor

When Ektron is installed, the following directories and files are placed on your server to set up Microsoft Message Queuing and the Ektron Asynchronous Processor.

- `C:\Program Files (x86)\Ektron\CMS400`*`versionnumber`*`\EktronAsyncProcessor_Service\`
- `C:\inetpub\wwwroot\`*`siteroot`*`\bin\EktronAsyncProcessorWS.dll`
- `C:\inetpub\wwwroot\`*`siteroot`*`\Workarea\webservices\EktronAsyncProcessorWS.asmx`

NOTE: If you need to move Web services file, use the **Asynchronous Processor Location** field in the Configuration > Setup screen to specify the new folder location.

The following image and list shows a typical Web Alerts server configuration.



- **Firewall**. the Ektron business tier (which maintains the Ektron files) must have Web access to the asynchronous server. This configuration enables proper communication between Ektron and the asynchronous processor.
  - The asynchronous processor must have port 25 (SMTP) access to a valid mail server to send emails
  - The mail server (omitted from the illustration) must be allowed to send out port 25 (SMTP) traffic and can reside on the asynchronous server
- **Queuing**. Message queuing must be enabled on the asynchronous server.

  You must create a message queue on the asynchronous machine and record its name. The message queue is specified in the `exe.config` file for the service, and in the `web.config` file for the Web services interface.
- **CMS**. The `web.config` file includes a key for the location of the asynchronous processor. This needs to be verified as working.
- **Other**. IIS must be installed on the asynchronous processor. IIS allows a Web service call to schedule a file download and send commands.
  - The asynchronous machine should only allow HTTP traffic from Ektron servers. This provides additional security on the asynchronous processor.

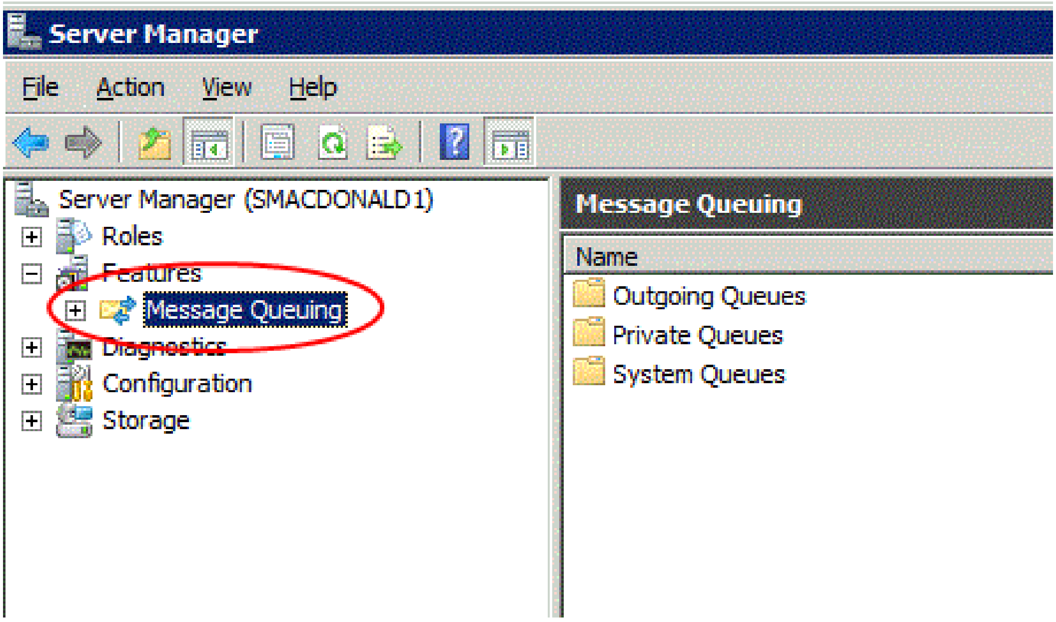
To set up message queuing services and the asynchronous processor:

1. On the server that hosts Ektron,
   - If you are using Windows 7 or 2008 R2, go to **Control Panel > Add/Remove programs > Add/Remove Windows Components**.

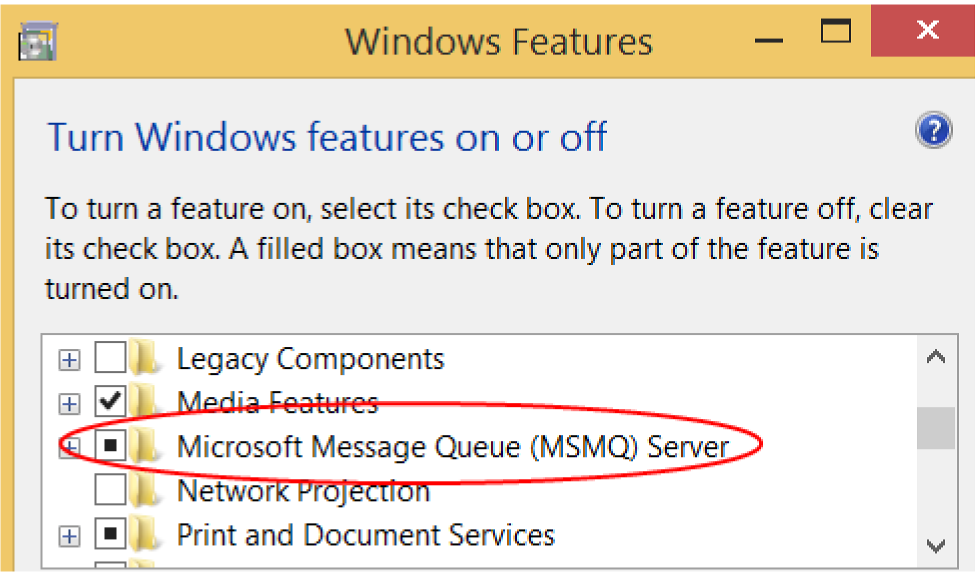
     NOTE: This procedure uses Microsoft Window 2008 R2. In some Windows versions, go to **Control Panel > Programs and Features > Turn Windows features on or off** then select **Microsoft Message Queue (MSMQ) Server**.

   - If you are using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **windows features** and choose **Turn Windows features on or off**.
2. If it is not checked, check **Message Queuing Services** or **Microsoft Message Queue Server**.

Windows 2008 R2



Windows 8 or 2012



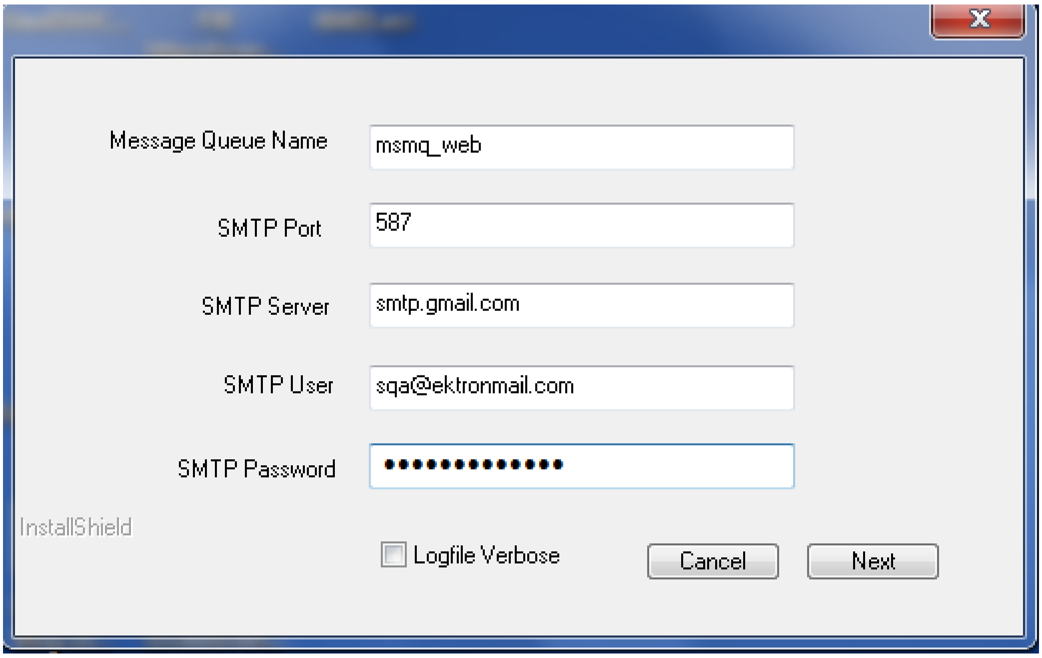
3. If **Message Queue** was checked when you viewed it, go to step 5. If it was not checked, click **OK**. A wizard creates the component.

   The rest of this procedure employs a wizard that saves several manual steps. If you have a problem using the wizard, or prefer to install Web Alerts manually so you can track the files being installed to your server, see *Manually setting up the message queue and asynchronous processor* on page 1375.

4. If you're using Windows 7 or 2008 R2, from the Windows **Start** menu, click **All Programs > Ektron > CMS400vxx > Utilities > Web Alert Setup**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Web Alert Setup**.

5. The Web Alert Wizard setup screen appears. Complete the following screen.



   - **Message Queue Name**. Enter the name of the message queue that will manage the Web Alert email.
   - **SMTP Port**. Enter the port number that sends Web Alert email.
   - **SMTP Server**. Enter the name of the server that hosts your Ektron website.
   - **SMTP User and Password**. Username and password used to send and receive email.
   - **Logfile Verbose**. Click if you want a detailed log file.
6. If your Asynchronous Processor service is not running, the following message appears. If you see this message, click **OK** then click **Finish**.

7. If you're using Windows 7 or 2008 R2, go to Windows **Start** menu **> Run >** enter **services.msc**. If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Services**.
8. Start the Ektron **Async Processor** service.
9. When specifying the **SMTP port** in Step 5, if you entered a port number other than 25

a. Open `C:\Program Files (x86)\Ektron\CMS400vxx\EktronAsyncProcessor_Service\Ektron.Services.EktronAsyncProcessor.exe.config`.

b. Change the value of `ek_SMTP_EnableSsL` to `False`.

Manually setting up the message queue and asynchronous processor

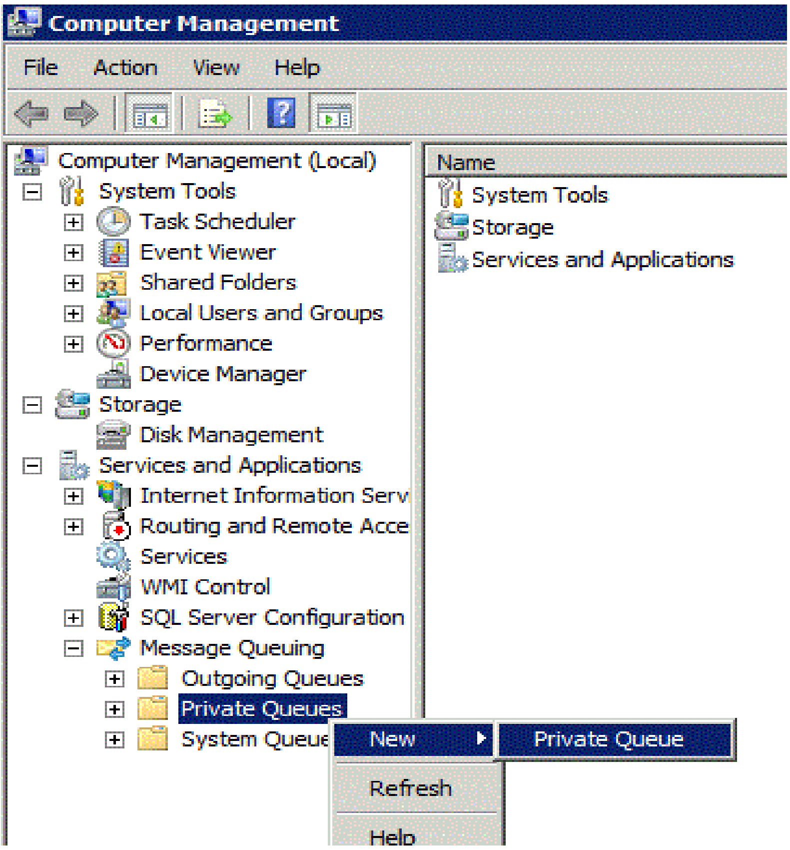
Use this procedure if you had a problem using the wizard, or if you want to know which files are being installed on your server.

1. Go to **Control Panel > Administrative Tools > Computer Management > Services and Applications > Message Queuing**.

 NOTE: In some Windows versions, you access this screen by clicking **Start > Computer > Manage**. Also, you may need to enable Message Queuing using the **Control Panel > Programs and Features > Turn Windows Features On or Off** option.

 If you're using Windows 8 or 2012, press the **Windows** key ()**/X** then choose **Computer Management**.

2. Click **Services and Applications > Message Queuing > Private Queues** folder and select **New > Private Queue**.



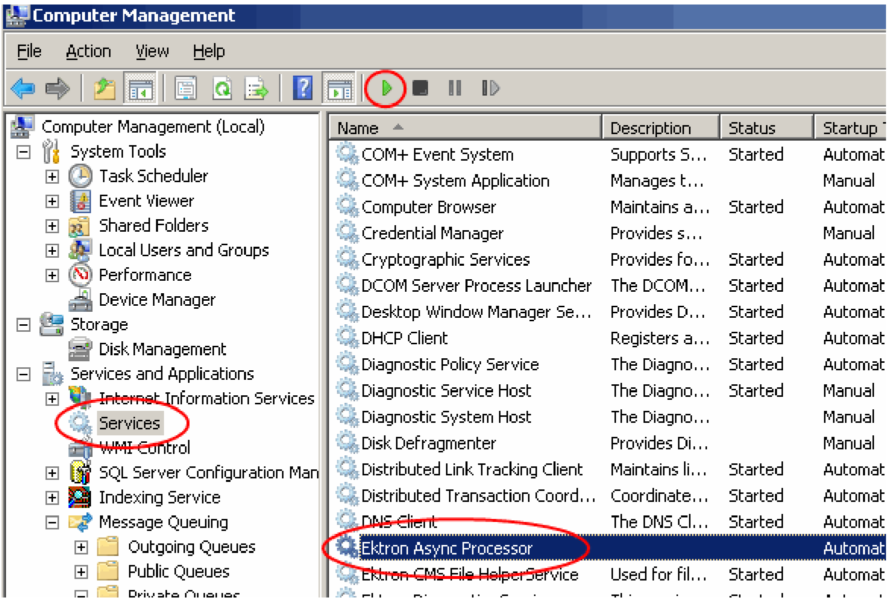
3. Create a private queue named `msmq_web`.
4. Right click `msmq_web` and select **Properties**.

5. Go to the **Security** tab. You can give the Everyone group Full Control if you are in a testing environment. If you are on a production server or want better security, delete the following permissions for the local system account (the account under which the EktronAsyncProcessor Service runs):
   - Receive Message
   - Peek Message
   - Send Message
6. Give the ASP.NET account (the account under which the Web services interface runs) **Send Message** permission.
7. Click **OK**.
8. Open the following file: `C:\Program Files (x86)\Ektron\CMS400vxx\EktronAsyncProcessor_Service\RegEktron.Services.EktronAsyncProcessor.bat`
9. Review and update as necessary the paths to the .NET directory and `Ektron.Services.EktronAsyncProcessor.exe` file.
10. Update the paths to the .NET Directory and the .exe file if necessary.
11. Execute the .bat file. Or, from a command line or **Start Menu > Run**, enter `C:\Program Files (x86)\Ektron\CMS400vxx\EktronAsyncProcessor_Service\Ektron.Services.EktronAsyncProcessor.exe`

    NOTE: If you see an error **Exception occurred while initializing the installation**, see Problem running RegEktron.Services.EktronAsyncProcessor.bat in 9.10.

12. Open the following file and enter your SMTP connection settings: `C:\Program Files (x86)\Ektron\CMS400vxx\EktronAsyncProcessor_Service\Ektron.Services.EktronAsyncProcessor.exe.config`.
13. Go to Windows **Start** menu > **Run** > enter **services.msc**. If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **view local services**.

14. Start the **Ektron Async Processor** Service.



Verifying connections

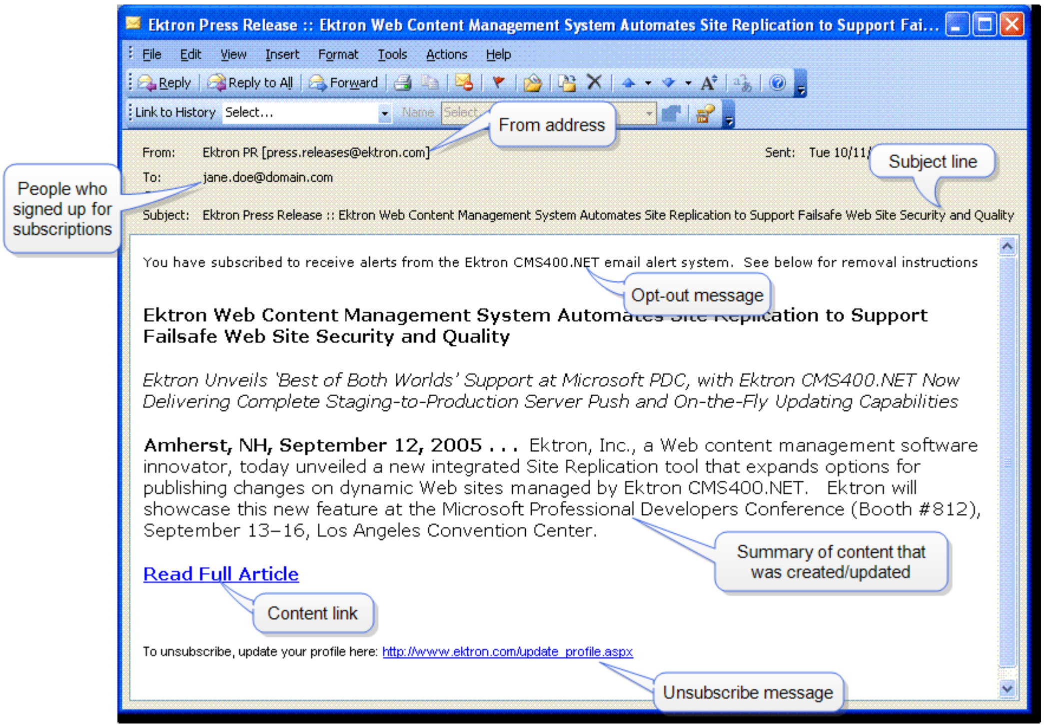
- To verify the Web services-to-queue connection:
  - Leave the Ektron asynchronous processor service off, submitting content with notifications, and verifying that a message arrived in the queue.
  - Turn on journaling for the queue. Submit a message in the queue. The Ektron asynchronous processor service picks it up and places it in the journaled messages.
  - Turn on logging for the Ektron asynchronous processor service.
- To verify the Ektron-to-Web service connection:
  - Open the asynchronous processor location inside a Web browser and test the Web services.
- To verify the writing of files:
  - Ensure that Ektron has write access to the `[sitepath]subscriptions` directory and submit content that will trigger notifications. This action places a file inside that directory.
- To verify that the Ektron asynchronous processor service can download a file:
  - Open a Web browser on the asynchronous machine and connect to the location of the notification command files. Attempt to download one.

Creating a Web Alert email message

A Web Alert email is made up of the following components, defined on the Folder properties **Web Alerts** tab. To use the Web Alert feature, you *must* define

- default message text
- 1 Opt-Out text

- 1 unsubscribe message
- 1 “from” address



NOTE: If you reached this screen while creating an eCommerce message, see *Sending eCommerce messages* on page 1726.

Web Alert components

A Web Alert email may include these components.

NOTE: To set or modify this information, you must have permission to edit the folder.

- **From address** (required). See *Creating the “From” addresses* on the facing page
- **Recipient** (required). Users who signed up for subscriptions that are enabled for the folder. See also: *Setting up a subscription* on page 1388
- **Subject line**. The **Subject** field on the **Web Alerts** tab of the Folder Properties screen.
  See *Assigning a Web Alert to a folder or content* on page 1383
- **Default message**. See *Creating the default message text* on the facing page.
- **Opt out message** (required). See *Creating the opt-out text* on page 1380
- **Content summary**. The summary of the content whose creation or change generates the email.

  NOTE: The Summary can include variables that retrieve information about the content. See *Including variables in the message* on the facing page.

- **Content link**. Link to content whose creation or change generates the email.

- **Any CMS content item**. You may include Ektron content in the email.
- **Unsubscribe message** (required). See *Creating the unsubscribe message text* on the next page.

Creating the “From” addresses

Web Alert emails must have a “from” address. Each folder has a set of properties, including a "from" email address. So for example, you want one "from" email address for marketing content, and another "from" email address for technical content.

1. Go to **Settings > Configuration > Web Alerts > Email From List**.
2. Click **New > Email From**.
3. Enter an email address to be used in the "From" field of Web Alert messages.
4. Click **Save**.

Creating the default message text

1. From the Workarea, choose **Settings > Configuration > Web Alerts > Messages**.
2. Click **Add Email Message**.
3. Enter a **Title** that describes the message.
4. At the **Type** field, select **DefaultMessage**.
5. In the editor, enter the message text. The message text can include variables.
6. Click **Save**.

Including variables in the message

A Web Alert email can include variables that retrieve content information into the message text. The variables are surrounded by at signs (@). For example

```
The following content was recently updated: @AppContentLink@
```

The email text might read:

```
The following content was recently updated: The Effect of Coumadin on
Cardiac Patients
```

Use the following variables in a Web Alert message.

- **@appContentTitle@**. The title of the content block.
- **@appCRLF@**. A carriage return. Moves text down one line.
- **@appContentLink@**. The link to the content block on the website.

  NOTE: You must be logged in to see the changes.

- **@appContentURL@**. The URL of the content, from the quicklink and domain.
- **@appSubscriptionNames@**. Comma separated list of subscriptions that a user selected.
- **@appComment@**. The comments for the content block.

- **@appSubmitterFirstName@**. The first name of the user who submitted the content block.
- **@appSubmitterLastName@**. The last name of the user who submitted the content block.

Creating the opt-out text

Opt-Out text appears as the first line of every email. It directs the reader to the Unsubscribe message at the bottom. Here is an example:

```
You have subscribed to receive alerts from the Ektron email alert system.
  See below for removal instructions.
```

The Opt-Out text may include variables. See also: *Including variables in the message* on the previous page

1. Go to **Settings > Configuration > Web Alerts > Messages**.
2. Click **Add Email Message**.
3. Enter a **Title** that describes the Opt-Out text.
4. At the **Type** field, select **OptOut**.
5. In the editor, enter the message text. The text may include variables. See also: *Including variables in the message* on the previous page
6. Click **Save**.

Creating the unsubscribe message text

An Unsubscribe message lets an email recipient remove himself or herself from the subscription list. You can include variables in the Unsubscribe text. See also: *Including variables in the message* on the previous page

1. Go to **Settings > Configuration > Web Alerts > Messages**.
2. Click **Add Email Message**
3. Enter a title that describes the Unsubscribe message.
4. At the **Type** field, select **OptOut**.
5. In the editor, enter the message text. The text may include variables. See also: *Including variables in the message* on the previous page
6. Click **Save**.

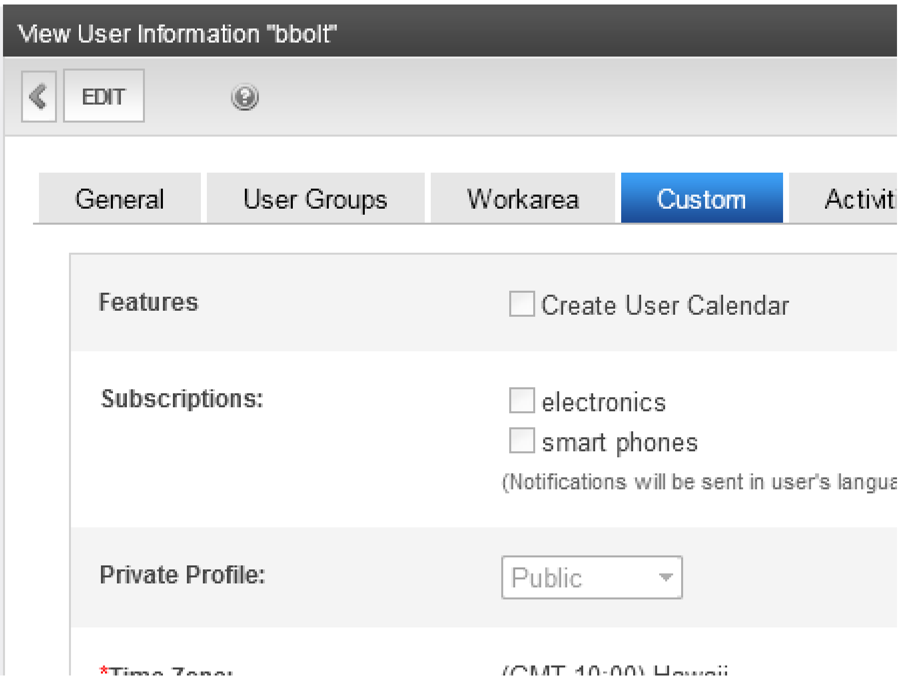
Creating a subscription

Create a subscription for each type of information about which site visitors might want to be notified. For example, if your site sells electronics, create one subscription for televisions, another for computers, and a third for smart phones. Site visitors then subscribe to areas of interest. Ektron and membership users can also sign up for subscriptions.

1. Go to **Settings > Configuration > Web Alerts > Subscriptions**.
2. Click **Add Subscription**.

3. Enter a name for the subscription.
4. Check the **Enabled** box if the subscription is active.
5. Click **Save**.

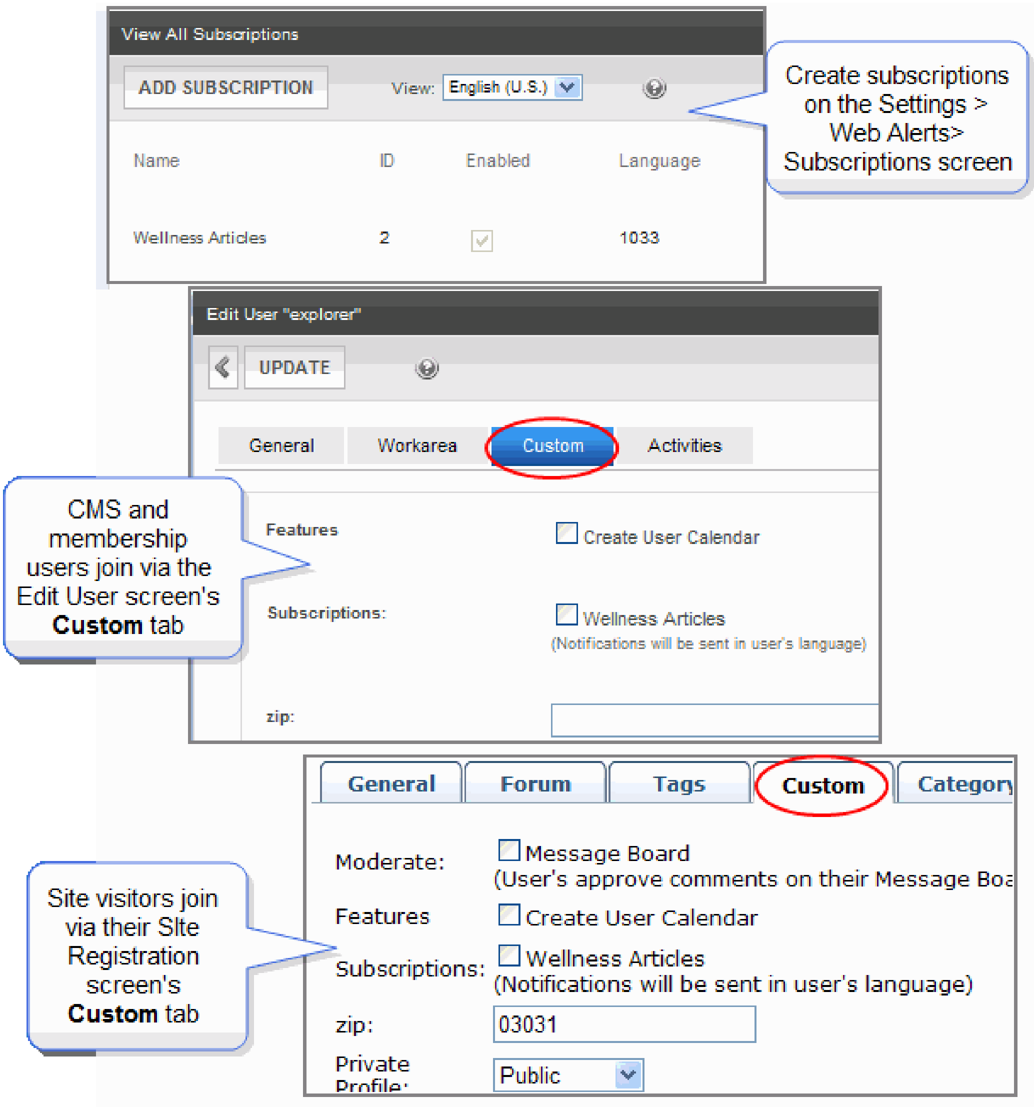
When you create and enable a subscription, a new entry appears on the User Properties screen's **Custom** tab. By default, its name is **Subscriptions**, and its type is **Category**.



Subscriptions appear on the

- Site Visitor Registration screen
- Membership user information screen > **Custom** tab
- User information screen > **Custom** tab
- User group information screen > **Custom** tab

The following graphic illustrates the relationship among Subscriptions, Custom Properties, and the Site Visitor Registration screen's **Custom** tab.



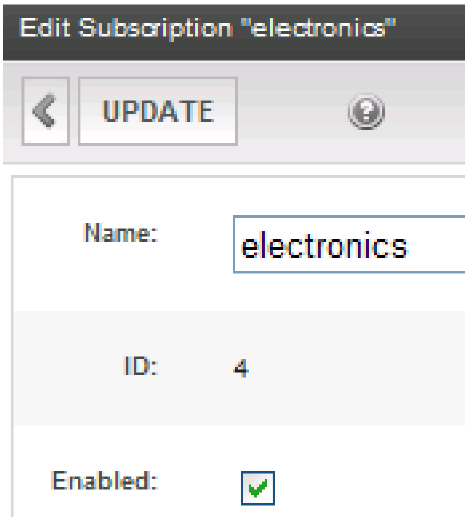
Changing the subscriptions label

By default, the label **Subscriptions** appears on the screen. To change it to something more helpful, such as **Select Areas of Interest**:

1. In the Workarea, go to **Settings > Configuration > Custom Properties**.
2. In the **Object Type** field, select **User**.
3. Click **Subscriptions**.
4. Edit the **Label** field.

Editing a subscription for a multi-language system

When you create a subscription, a version is created for every enabled language. You can edit the subscription name and **Enabled** value for any language, but cannot change the ID number.



1. Choose **Settings > Configuration > Web Alerts > Subscriptions**.
2. From the View Languages drop-down list, select the language into which you want to translate the subscription.
3. Click the subscription that you want to translate.
4. Click **Edit**.
5. In the **Name** field, enter the translation for the subscription name. If desired, you can check or uncheck the **Enabled** checkbox. Only enabled subscriptions appear.
6. Click **Update**.

Assigning a Web Alert to a folder or content

After creating messagesand subscriptions, identify folders whose content should trigger a Web Alert when it is updated. For example, new product announcements in the Marketing folder should trigger a Web Alert.

Like other Ektron folder-level information, Web Alert settings are inherited from a parent folder. However, you can break inheritance and customize these settings for any folder or content item.

You can assign the following Web Alert information to a folder:

- whether Web Alert information is *inherited* from a parent folder or customized
- *when* email is sent: always, on initial publication only, or never
- the *content* of the email
- the folder's subscriptions, which determine the email recipients.

IMPORTANT: Web Alert emails are not generated for files that are dragged and dropped into Ektron and immediately published. To generate email for these files, you must manually publish them. Also, the files must reside in a folder for which the Web Alert feature is enabled.

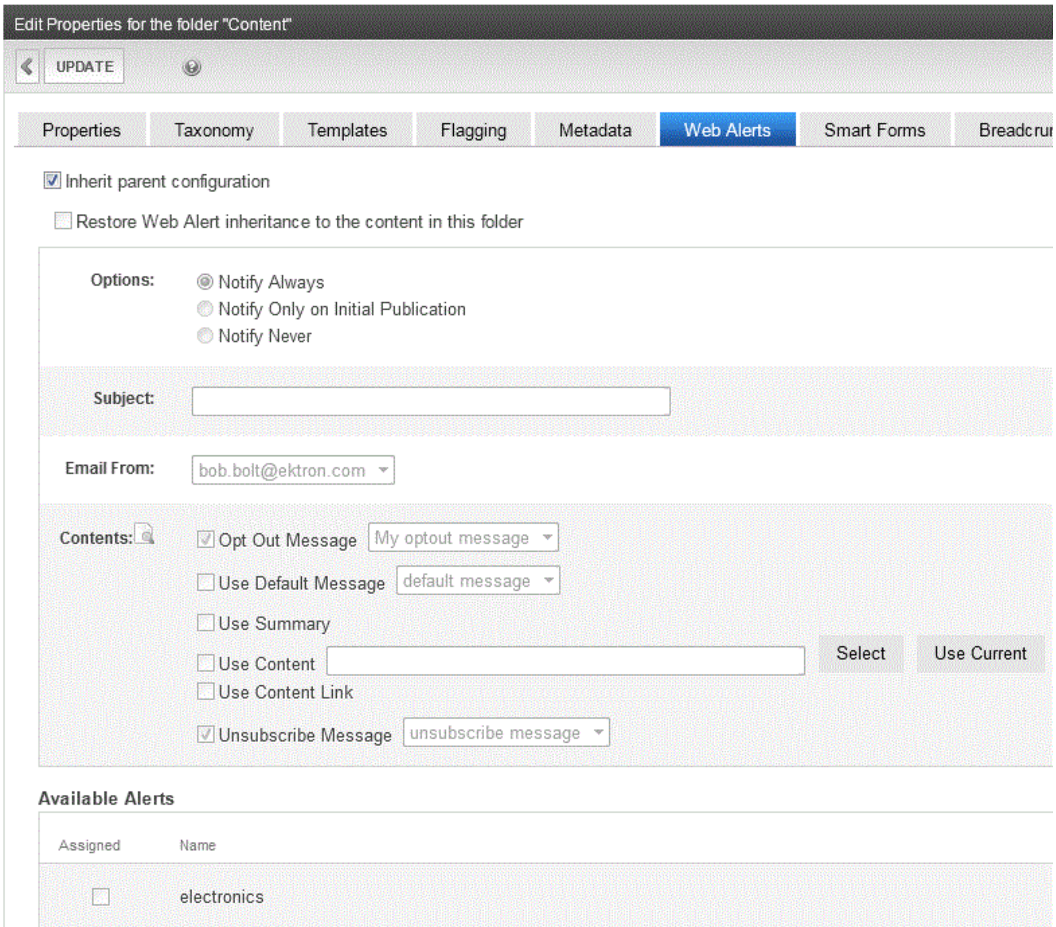
PREREQUISITE

- You defined Opt-Out text, an unsubscribe message, and a "from" address that is appropriate for content in this folder. See also: *Creating a Web Alert email message* on page 1377
- You created at least one subscription.
- You have edit permissions for the folder. See also: *Managing folder and content permissions* on page 160

Assigning a Web Alert to a folder

To modify folder-level Web Alert information:

1. Go to the folder whose Web Alert information you want to edit and click **View > Properties**.
2. Click the **Web Alerts** tab.



- **Inherit parent configuration**. To have this folder inherit Web Alert settings from its parent folder, leave this box checked. To customize this folder's Web Alert settings, uncheck this box.
- **Restore Web Alert inheritance to the content in this folder**. Check this box if Web Alert inheritance has been broken for some content in the folder, and you want to restore inheritance. If you do, all folder content uses this folder's Web Alert properties.

- **Options**. Check *when* Web Alert emails are sent.
  - **Notify Always**. when content in this folder is first published or updated
  - **Notify Only on Initial Publication**. only when content in this folder is first published.
  - **Notify Never**. never sent for this folder's content.
- **Web Alert Subject**. Enter the email's subject line.
- **Web Alert email From Address**. Select the address from which email for this folder is sent. See *Creating the "From" addresses* on page 1379.
- **Web Alert Contents**. Check the following components to determine the email content.
  - **OptOut Message**. see *Creating the opt-out text* on page 1380.
  - **Use Default message**. see *Creating the default message text* on page 1379.
  - **Use Summary**. include the content summary in the email
  - **Use Content**. include Ektron content in the email.

    NOTE: If the content item is an Office document or a managed file, a *link* to the item appears, not the item itself.

    - To select existing content, click **Select** next to the **Use Content** checkbox. Then, go to the content item.
    - To select the content whose creation or change triggers the Web Alert, click **Use Current**.
    - To create new content to be inserted into the Web Alert message for this folder, click **Select** next to the **Use Content** checkbox. When the folder navigation window appears, click **Add Content**. Then, see *Creating new content* on page 626.
- **Unsubscribe message**. See *Creating the unsubscribe message text* on page 1380.
- **Available Web Alerts**. All enabled subscriptions set up in the Subscriptions screen appear. Check those to be notified when content in this folder is added or updated. See also: *Creating a subscription* on page 1380

  IMPORTANT: If you uncheck all subscriptions, you disable the Web Alert feature for this folder and all of its content, even if unique subscription information is assigned to content within the folder.

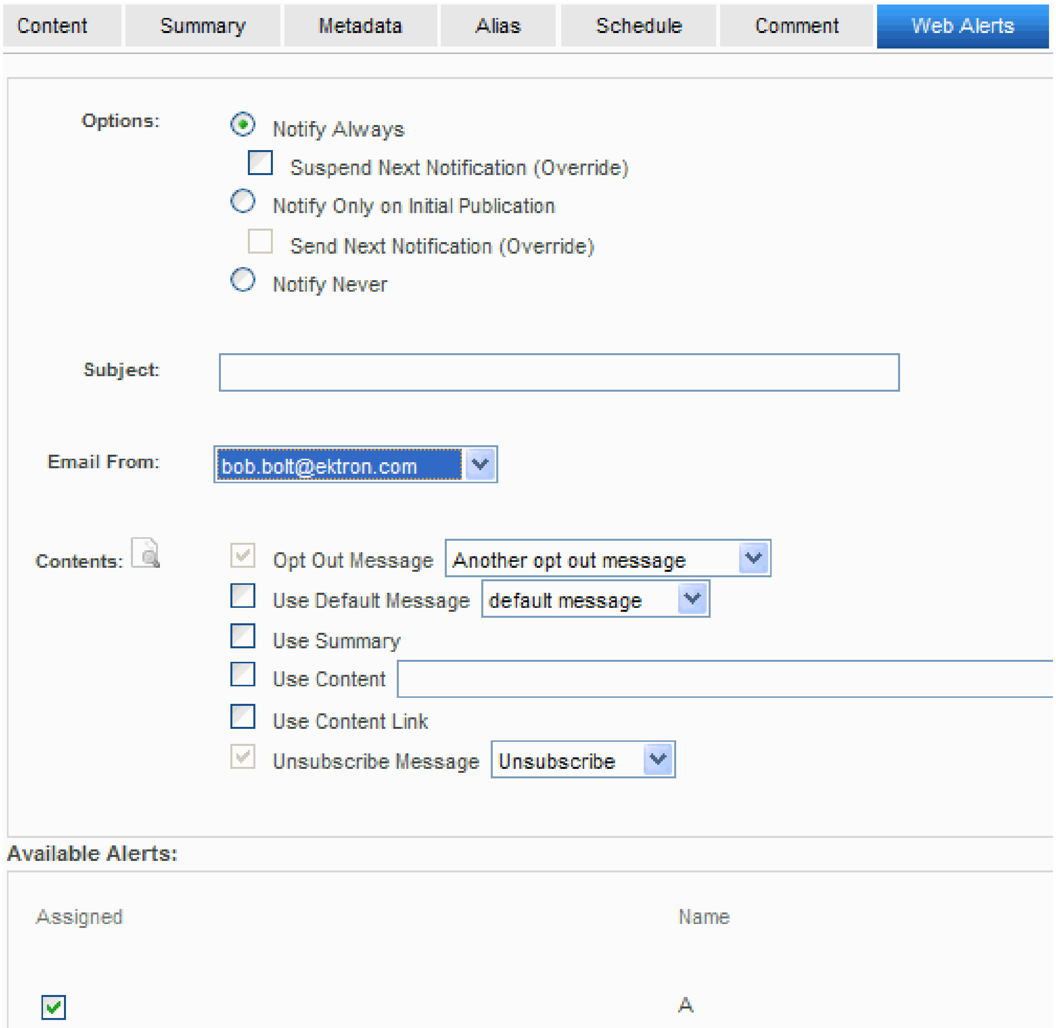
Assigning a Web Alert to content

To set a Web Alert for a content item, break the inheritance from its folder. From then on, the content's Web Alert settings are independent of the folder's settings.

IMPORTANT: If *all subscriptions* are unchecked for a folder, the Web Alert feature is disabled for all content in the folder, even if unique Web Alert information is assigned to content.

1. Go to the folder that contains the content.
2. Click the content. The View Content screen appears.
3. Click **Edit**.
4. Click the **Web Alerts** tab. The Web Alert settings for the content appear.

NOTE: The Web Alerts tab only appears if required messages, “from” email addresses, and at least one subscription are assigned to the content’s folder.



- **Options**. Check *when* Web Alert emails are sent as this content is published.
  - **Notify Always**. when this content is first published or updated
  - **Suspend Next Notification (override)**. check this box to suspend the next email to be sent for this content. You might use this feature if you noticed an error in the content and don’t want to notify subscribers that the page was updated.

    NOTE: This setting only applies until the next time this content is published. When that happens, this box is automatically unchecked.

   - **Notify only on Initial Publication**. only when this content is first published
   - **Send Next Notification (override)**. send email to all subscribers the next time this content is published. Use this checkbox to send a one-time mailing to all subscribers about content that was already published.

     NOTE: This setting only applies until the next time this content is published. When that happens, this box is automatically unchecked.

   - **Notify Never**. never send email for this content.
- **Subject**. Enter the email's subject line.
- **email From**. Select the address from which email for this folder is sent. See *Creating the "From" addresses* on page 1379.
- **Web Alert Contents**. Check the following components to determine the email content.
   - **OptOut Message**. see *Creating the opt-out text* on page 1380.
   - **Use Default message**. see *Creating the default message text* on page 1379.
   - **Use Summary**. include the content summary in the email.
   - **Use Content**. include Ektron content in the email.

     NOTE: If the content item is an Office document or a managed file, a *link* to the item appears, not the item itself.

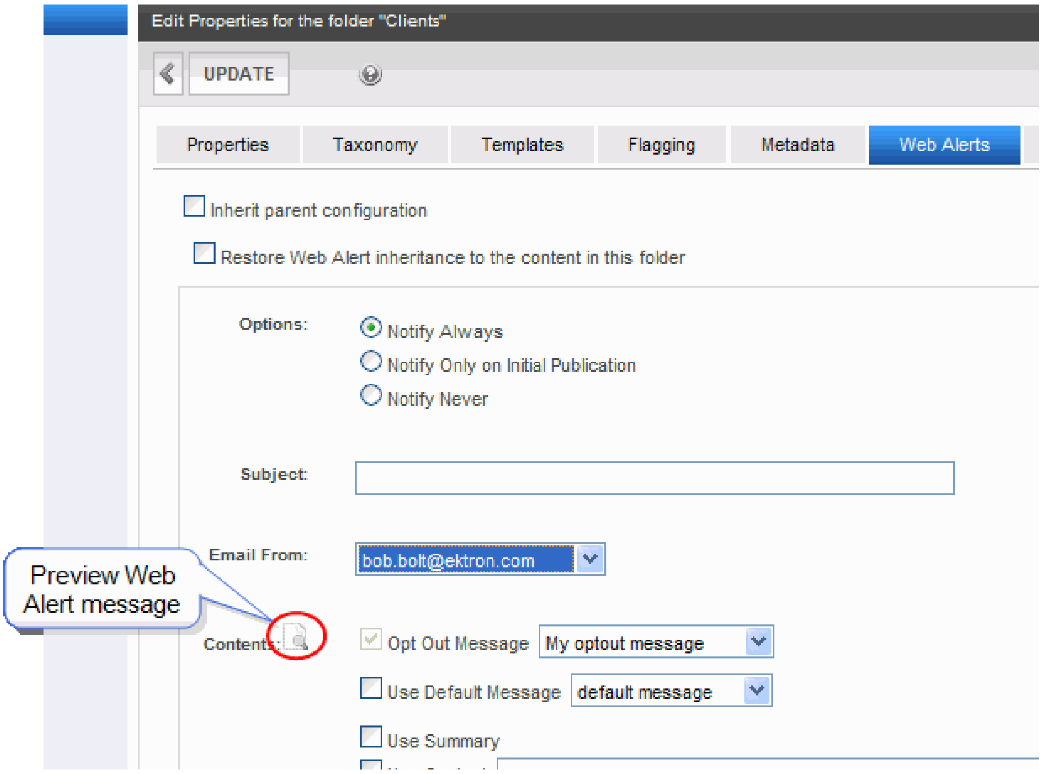
      - To select existing content, click **Select** next to the **Use Content** checkbox. Then, go to the content item.
      - To select the content whose creation or change triggers the Web Alert, click **Use Current**.
      - To create new content to be inserted into the Web Alert message for this folder, click **Select** next to the **Use Content** checkbox. When the folder navigation window appears, click **Add Content**. Then, see *Creating new content* on page 626.
- **Unsubscribe message**. See *Creating the unsubscribe message text* on page 1380.
- **Available Alerts**. All enabled subscriptions set up in the Subscriptions screen appear. Check those to be notified when this content is added or updated. See also: *Creating a subscription* on page 1380

Restoring folder-level Web Alert settings to content

If you customize Web Alert settings for content and later decide to standardize the settings for all content in a folder, check the **Restore Web Alert Inheritance** box on the folder properties **Web Alerts** tab. This action copies the folder's Web Alert settings to every content item in the folder, replacing any content-level settings.

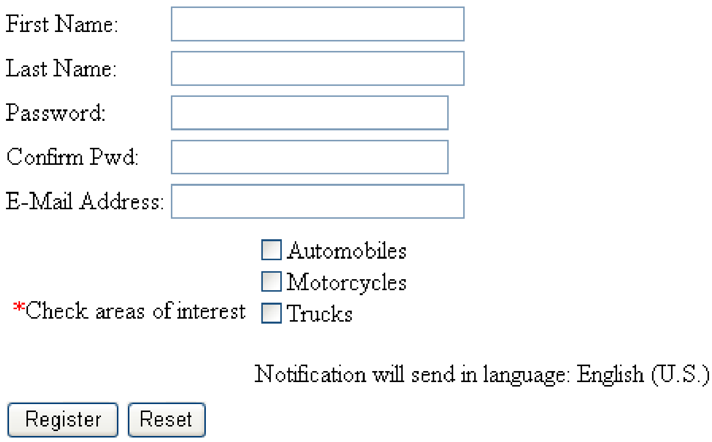
Previewing the email message

To preview the Web Alert email message, click **Preview** on a folder's **Web Alerts** tab.



Setting up a subscription

After you set up a Web Alert, create a Web page that lets site visitors subscribe to areas of interest.



To place this form on a Web page, your developer inserts a Membership server control.

Any user who subscribes via the sample screen becomes an Ektron membership user, and is automatically added to the *All Members* user group. See also: *Membership users and groups* on page 1507

NOTE: The email address collected on the screen is used as the membership **Username** field.

What happens next depends on the **Enable Verify email** check box in the Application Setup screen (shown in the following image).

- If the **Enable Verify email** checkbox is *not* checked, a person that signs up automatically becomes a membership user.
- If the **Enable Verify email** checkbox *is* checked, a person that signs up is placed on the *Users Not Verified* list and receive an email with content that is defined in **Workarea > Settings > Community Management > Messages**.

  The email should direct the unverified user to a Web page that asks for confirmation of the person's interest in the subscription. (This step prevents people from being subscribed without their permission.) To create this page, your Web developer creates or updates a Web Form using the Membership server control. Set the control's **DisplayMode** property to **AccountActivate**.

  New users are activated when the subscriber confirms interest.

NOTE: Users can also be manually activated or removed via the View Not Verified Users screen. For more information, see *Verifying a new subscriber* below.

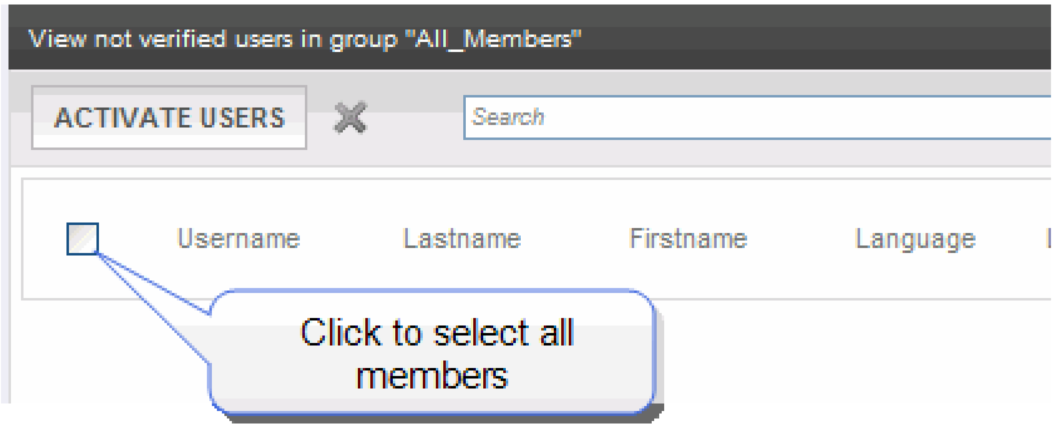
IMPORTANT: When using the Checkout server control on an eCommerce site, the **Enable Verify Email** setting must be unchecked. Otherwise, new users will receive an error message when they sign-up using this control. See also:

Verifying a new subscriber

A person that signs up for a subscription but has not yet been verified appears on the View Not Verified Users screen at **Workarea > Settings > Community Management > Memberships > Users not Verified**. You can activate accounts by selecting users then clicking **ActivateUsers**. Alternatively, you can delete members by selecting and clicking **Delete** ().

NOTE: The `ek_PageSize` setting in the `web.config` file determines the maximum number of users that can appear on a page before adding another page with the following navigational links:
Page 1 of 2 [First Page] [Previous Page] [Next Page] [Last Page]

To select all members, click the check box next to **Username**.



You can also change the way membership users are sorted, or use the **Search** button to find users that match your criteria (for example, users whose username includes *example.com*.)

Customizing the verification message

By default, Ektron supplies a generic message that asks the subscriber to confirm the password and directs the person to your website's `activateuser.aspx` page. To customize that message:

1. Go to **Workarea > Settings > Community Management > Messages**.
2. Click **Add Email Message**.
3. Assign a title to the message, such as **Verification Message**.
4. In the **Type** drop-down, select **Verification**.
5. Click the check mark in the **Default** box.
6. In the **Subject** field, enter a subject line for the message.
7. Enter the message. You must insert the `@appQueryLink@` variable in the message to create a link to the confirmation page. For example:

   ```
   Welcome to example.com. You registered to be notified of updates
   to our site. Before we can do this, you need to activate your
   account. To do so, please visit @appQueryLink@.
   ```

   The `@appQueryLink@` variable gets resolved as follows (one line):

   ```
   http://sitepath/workarea
     /activateuser.aspx?uid=[username]&acc=[accountID]
   ```

   For example (one line):

   ```
   http://www.example.com/Workarea
     /activateuser.aspx?uid=john.edit@example.com&acc=ce5w84o936477
   ```

   You can insert the following membership variables into the confirmation message.

   - **@appEmail@**. email address
   - **@appActivateId@**. Account ID
   - **@appUserName@**. UserName

- **@appFirstName@**. First name
- **@appLastName@**. Last name
- **@appDisplayName@**. Display name
- **@appAvatar@**. Avatar
- **@appSignature@**. Signature

Setting up other subscriber actions

You can set up other Web pages that let subscribers perform these actions:

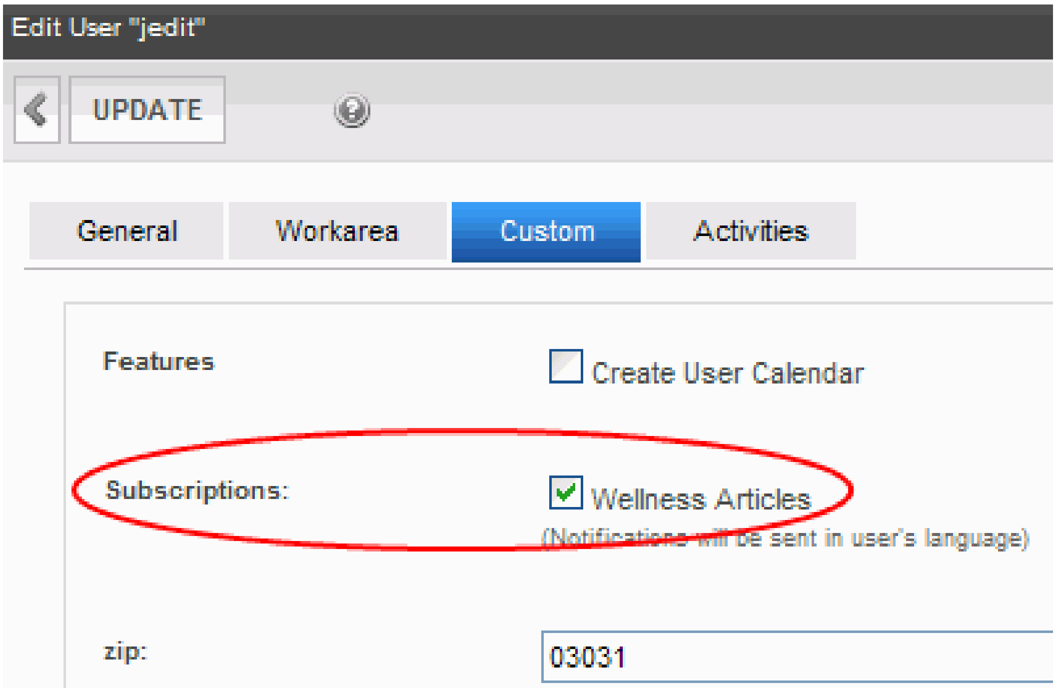
- Activate their account
- Reset their password
- Unsubscribe

To create these pages, place a Membership server control on the page. Then use its **DisplayMode** property to determine the kind of screen you want to place. For example, to create a screen that lets the user reset a password, set the control's **DisplayMode** property to **ResetPassword**. See also: Membership server control

Subscribing a CMS user

Ektron users can subscribe to any subscription list. This is particularly useful on an intranet where, for example, employees are notified when job-related information is updated.

Another example is your internet site. The Marketing manager can sign up to be notified whenever Marketing content is added or updated. To do so, go to **Settings > Users > Edit User > Custom tab**.



See also: *Using eSync with Web Alerts* on page 1886

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32

Working with multi-language content

Ektron enables authoring, organizing, publishing, and versioning of Web content—in multiple languages. Ektron has a fully-developed, Web content localization solution that combines Web content management with localization/translation management, and supports creating content in any language supported by the Unicode standard. Ektron provides multi-language support for the following areas:

- Content. Sseen by content contributors; visitors to your site.
- Spell check dictionary. Seen by visitors to your site.
- Special Character Encoding. Seen by visitors to your site.
- Workarea screen labels, alt text, system messages. Seen by content contributors.

Multi-language editions of the same content have the same ID number but are differentiated by a language attribute. As a result, a Web page template can link to a content item, but what appears is determined by the selected language. There are 2 ways that content's language can be selected:

- a language cookie, which is created when a visitor browses to your site and selects a language
- the link to another page includes the language (`langType`) parameter. For example, `mytemplate.aspx?LangType=1033`. For a list of the decimal values for each supported language, see Ektron **Workarea > Settings > Localization > Languages and Regions**.

Developers can use the following server controls for multi-language content:

- LanguageAPI. To specify a language for a site.
- LanguageSelect. To display a drop-down list of available languages.

The following Ektron components are affected by multi-language support:

- **Workflow.** You can set up a language-specific workflow. For more information, see *Approving content for publication* on page 689.
- **Metadata**. Can be set up as part of the xliff export/import process, so that its is translated along with text in the content, summary and so on. See *Creating multi-language metadata* on page 1399.
- **Calendars**. You can create calendars in any supported language. If you enter calendar event information in the non-default language, the day and month names automatically appear in that language. Also, regional conventions for first/last days of the week, and date and time formats are maintained. See *Working with calendars* on page 913.
- **Collections**. You can create a language-specific instance of each collection. See *Working with a collection in a multi-language system* on page 752.
- **Menus**. You can create an instance of any menu in every supported language so that site visitors can see a menu displayed in the user-selected language. (If a menu in the selected language is not available, nothing appears.) See *Creating a menu in another language* on page 1247.
- **Tasks**. If you create content then add a task to it, the task can be in any enabled language. This is helpful if you review English content then want to assign the

task of translating it into another language in that language. When assign content to a task, you can only choose from content in the language of the task. See *Assigning and managing tasks* on page 1339.

- **Taxonomies**. Multi-language support affects the way you create, maintain, and manage taxonomies. See *Working with taxonomies in a multi-language environment* on page 1288.

Setting Up a multi-lingual website

The following steps provide an overview for setting up a multi-lingual website.

1. Enable multi-lingual support in `web.config`.
   See *Enabling/disabling support for multiple language content* below
2. Enable languages that your site will support.
   See *Determining which languages are available* on the next page
3. Set a default content language, one that will be used by the majority of your site's content. If you had a previous version of Ektron and selected a default language on the Database Upgrade Utility, be sure that default language matches the one in `web.config`.
4. Add language selection function to templates so that your site can be viewed in another language.
   See *Viewing your site in another language* on page 1399
5. Create multi-language content.
   See *Creating multi-language content* on page 1407 and *Translating content into another language* on page 640
6. Modify page content based on language selection.
   See *Modifying page content based on language selection* on page 1408
7. Modify an image based on language selection.
   See *Modifying images based on language selection* on page 1409
8. Create a metadata definition for each supported language.
   See *Creating multi-language metadata* on page 1399.
9. Set up workflow for new content.
   See *Approving content for publication* on page 689
10. Set up multi-lingual collections.
    See *Working with a collection in a multi-language system* on page 752
11. Set up multi-lingual menus.
    See *Creating a menu in another language* on page 1247
12. Set up multi-lingual taxonomies.
    See *Working with taxonomies in a multi-language environment* on page 1288

Enabling/disabling support for multiple language content

1. Open *siteroot*\web.config.
2. Set the value of ek_EnableMultilingual to 1.

   NOTE: To disable, set the value to zero (0).

3. Save web.config.

Determining which languages are available

PREREQUISITE

Only members of the Administrator Group or those assigned to the XLIFF-Admin role can view, add, or edit language settings. See also: *Using the roles screens* on page 1465.

A locale consists of a language and a region. For example, English (United States) describes the variation of English used in the United States, as opposed to English (English U.K.) used in the United Kingdom.

Each locale's identifier consists of a language code and region code.

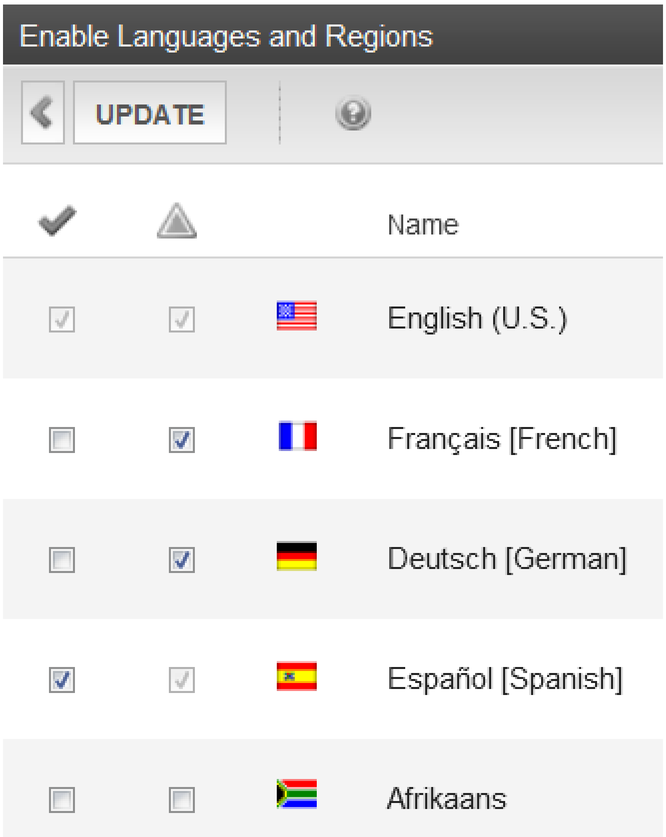
- **fr-FR** = Language:French + Region:France
- **pt-BR** = Language:Portuguese + Region:Brazil
- **es_419-AR** = Language:Latin American Spanish + Region Argentina

You can create a new locale, if needed.

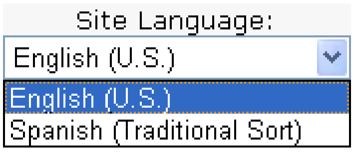
To determine which locales are available for creating content:

1. Go to **Workarea > Settings > Localization > Languages and Regions**. The Edit Language Details screen lists locales in which you can create content on your site.

2. Click **Enable**. The Enable Languages and Regions screen appears.

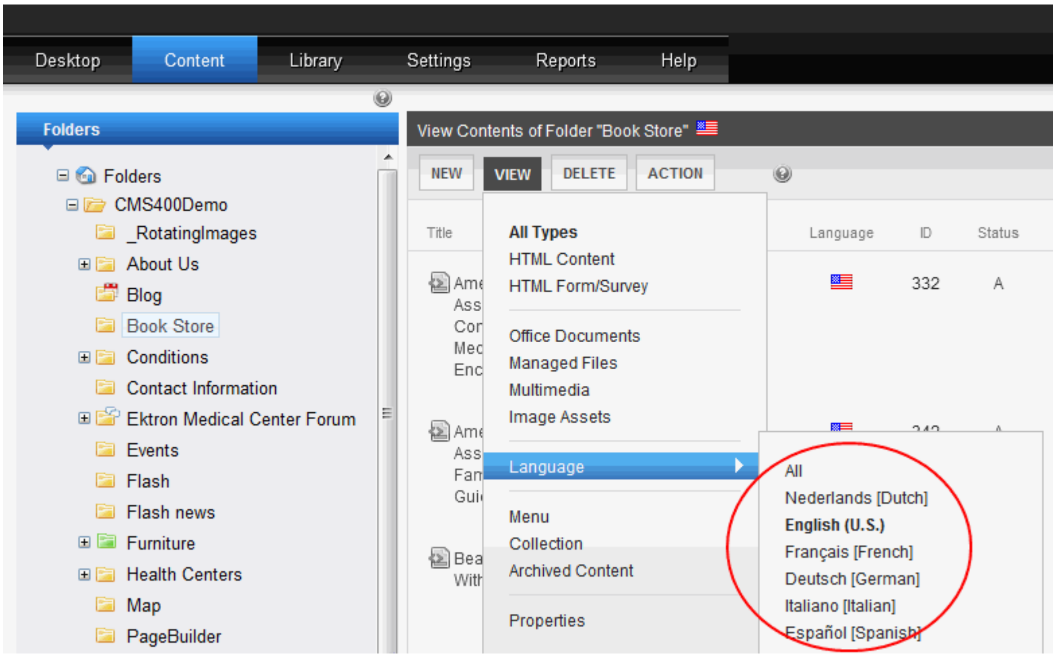


3. Each language has 2 check boxes:
   - To enable a language in the Workarea *and* let site visitors select it when viewing the site, check the box in the check mark ( ) column.



> **NOTE:** If you select , the box in the column is checked automatically. This is because, if you let users view the language on the site, it must be enabled in the Workarea.
>
> The default content language on a drop-down list is determined in the `ek_DefaultContentLanguage` element of the `web.config` file.

   - To enable a language in the Workarea only, check a box in the triangle ( ) column. The language populates the language drop-down lists in Ektron. So, you can enable languages in the column while you are translating the site but are not ready to publish that content. When you complete the translation, check the ✔ column.



If you enable only one language on the Enable Languages and Regions screen, fields that prompt the user to select a language do not appear in Ektron. Instead, all content is created in that language.

Disabling a language

To disable any language, uncheck its box in the ✔ column of the Enable Languages and Regions screen.

Before disabling the default language, you must assign a new one. If you disable a language for which content exists, that content remains in the database but no one can access it, either from within Ektron or when visiting your site, unless you later re-enable that language.

Setting the default language

When you install Ektron, the default language is US-English (1033). The default language determines which edition of content is displayed if a site visitor does not select a language, or a visitor selects a language other than the default and goes to page for which content does not exist in the selected language. In that case, Ektron looks for the selected language's Fallback Locales. For more information, see *Setting the fallback locale* on page 1414. If content is not available in any of its Fallback locales, Ektron displays that content in the default language (if available).

IMPORTANT: You must enable a language before setting it as the default. See also: *Determining which languages are available* on page 1396

To change the default language for your multi-language website:

1. Open *yourwebsite*\web.config.
2. Set the value of ek_DefaultContentLanguage to the locale id of the default language. For example, 1031 for German. For a list of locale ids, see Ektron **Workarea > Settings > Localization > Languages and Regions**.
3. Save web.config.

Viewing your site in another language

When a site visitor selects a language then goes to a page on your site, Ektron uses the following criteria to determine which language edition of content to display.

1. Display content in the selected language, if available.
2. If that edition is *not* available, check the language's **Fallback Locale**. If it is set and content is available in that language, display that. See also: *Setting the fallback locale* on page 1414.
3. If content is not available in the Fallback Locale, display it in the default language. See also: *Setting the default language* on the previous page.
4. If no editions are available, display nothing.

To let site visitors to view your site in any enabled language, your developer places a LanguageSelect server control on any template. See also: LanguageSelect

You can also indicate a language-edition by adding a language parameter to a quicklink. For example, products.aspx?LangType=1033 displays the English (US) edition of the products.aspx content. This syntax automatically sets the language cookie.

NOTE: For a list of the decimal value of each supported language, see Ektron **Workarea > Settings > Localization > Languages and Regions**.

Creating an external link to a page of foreign content

If another website links to a multi-lingual page on your site, the URL must include the language ID parameter. For example:

```
www.ektron.com/web-content-management-solutions.aspx?LangType=1036
```

Creating multi-language metadata

Part of managing a multi-language website involves creating and deploying multi-language metadata. There are 2 scenarios for doing this.

- Authors create content in the default language. Then, content is sent to a translation agency, translated, and imported back to Ektron. As part of that effort, text-based metadata is translated. To learn how to manage this multi-language metadata, see *Managing multi-language metadata* below.
- Authors create content is separate languages. For example, your site has French content for French site visitors, and different Spanish content for Spanish site visitors. To manage this multi-language metadata, see *Creating metadata for content in any language* on page 1405.

Managing multi-language metadata

This section explains how to set up the xliff export/import process so that text-based metadata is translated along with text in the content, summary, and so on. It is easiest to set this up while creating a metadata definition. However, if you already have metadata definitions in a source language and now want them translated along with content, procedures for that type of setup are also provided.

PREREQUISITES

- Target languages are enabled. See also: *Determining which languages are available* on page 1396
- Familiarity with creating metadata definitions. See also: *Adding a metadata definition* on page 756

Creating multi-language metadata while creating a metadata definition

To create multi-language metadata to be translated:

1. While creating a metadata definition in the source language, select all target languages (the languages into which content will be translated) at the bottom of the screen. See also: *Adding a metadata definition* on page 756

2. Apply multi-language metadata to each folder that will contain content to be translated.

NOTE: You can assign metadata to a parent folder, and let its child folders inherit the definitions.

To do that:

a. Go to the folder.
b. Click **View > Language >** target language.
c. Click **View > Properties > Edit properties > Metadata** tab.
d. Uncheck **Inherit parent configuration** (unless you want to inherit from the parent folder).
e. Check the metadata definition you created in Step 1.

3. Create the content. To do that:
   a. Go to the folder.
   b. Click **View > Language >** source language.
   c. Create the content. While doing this, fill out the metadata in the source language.
4. Export the content for translation. An agency translates it. See *Exporting content to XLIFF* on page 1418.
5. Import the translated content. The metadata is translated along with the content, summary, and so on. See *Importing translation files* on page 1422.

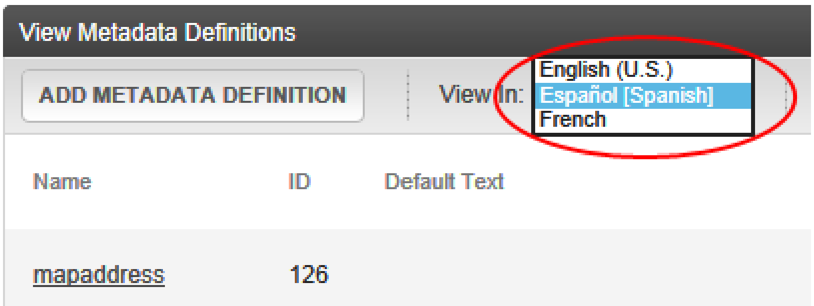
Enabling multi-language metadata after a definition is created

There are 2 ways to add support for multi-language metadata after a metadata definition is created.

Creating a new metadata definition in the target language

To create a new metadata definition in the target language:

1. Create the new metadata definition. Be sure to choose the *target* language. When you enter a name for the new definition, make sure it *exactly* matches the name of the source language metadata definition.



2. Make sure that all other fields on the screen (**Type**, **Editable**, and so on) match the source language metadata definition.

3. Ignore the bottom of the screen (circled in the following image).

4. Apply that metadata definition to each folder that will contain content to be translated. To do that:
   i. Go to the folder.
   ii. Click **View > Language >** target language.

iii. Click **View > Properties > Edit properties > Metadata** tab.
iv. Uncheck **Inherit parent configuration** (unless you want to inherit from the parent folder).
v. Check the metadata definition you created in Step 1.

5. From now on, if you export content for translation from that folder then import the translated files, the metadata is translated along with the content, summary, and so on. See *Exporting content to XLIFF* on page 1418, *Importing translation files* on page 1422.

Mapping metadata values between source and target languages

In this procedure, you use an .xml file to map metadata definitions in different languages. It assumes that, for a metadata definition that exists in a source language, you want to create a corresponding one in a target language. For example, consider these metadata definitions.

ID	Name	Language
102	Paper form number	en-US
106	Número de papel de la forma	es-ES

IDs 102 and 106 contain the same information in different languages.

An XML file contains the mapping, which informs the XLIFF export/import process that metadata ID 102 in English corresponds to 106 in Spanish.

PREREQUISITE

Locale codes for the source and target languages. See **Workarea > Settings > Localization > Languages and Regions**.

1. Go to **Settings > Configuration > Metadata Definition**.
2. Select the target language.
3. Add a new metadata definition. Assign it the same data type and other properties as the original. Note the new ID number.
4. Repeat Steps 2 and 3 for additional target languages.
5. Open `workarea/xslt/metadataDefinitions.xml`.
6. For each metadata definition, enter a `<dd>` element within the `<dl>` element. The `<dd>` element has the following form.

```
<dd title="Name of the metadata definition">
       <dfn id="ID" xml:lang="language-country code"/>
       <dfn id="ID" xml:lang="language-country code"/> :
</dd>
```

For example:

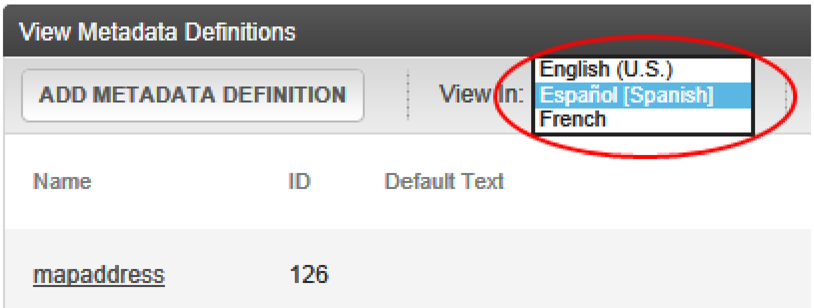
```
<dl>
    <dd title="Paper form number">
       <dfn id="102" xml:lang="en-US"/>
       <dfn id="106" xml:lang="es-ES"/>
    </dd>
</dl>
```

7. The XLIFF export/import process accesses the `metadataDefinitions.xml` file to determine which definitions in the source language correspond to target language definitions. From now on, if you export content for translation from that folder then import the translated files, the metadata is translated along with the content, summary, and so on. See *Exporting content to XLIFF* on page 1418, *Importing translation files* on page 1422.

Creating metadata for content in any language

Use this procedure if your authors create content in separate languages. There is no interaction between the content in the different languages

1. Create each metadata definition. Be sure to choose the correct language.



2. Complete the other fields on the screen but ignore the bottom of the screen (circled in the following image).

3. Apply that metadata definition to each folder that will contain content in that language. To do that:
   i. Go to the folder.
   ii. Click **View > Language >** choose the language.
   iii. Click **View > Properties > Edit properties > Metadata** tab.

iv. Uncheck **Inherit parent configuration** (unless you want to inherit from the parent folder).

v. Check the metadata definition you created in Step 1.

4. When creating content in that folder, authors access the metadata definition created in Step 1 on the **Metadata** tab.

Creating multi-language content

Use this procedure to create new content in a language other than the default language.

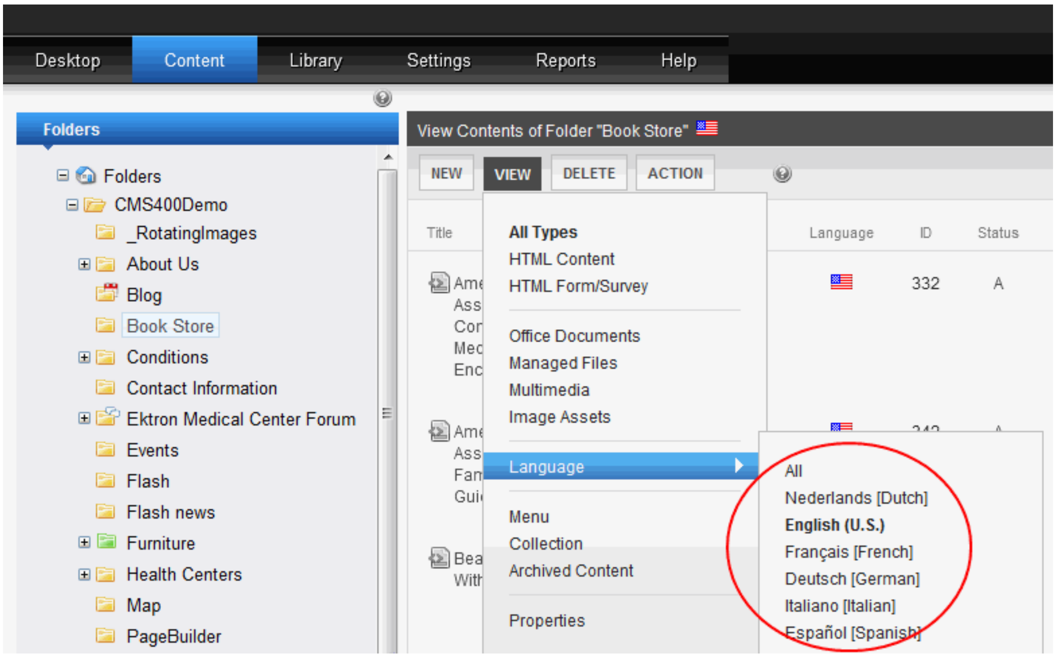
If you already have content in any language and want to create a new content item that contains a translated version of that content, see *Translating content* on page 1415.

PREREQUISITE

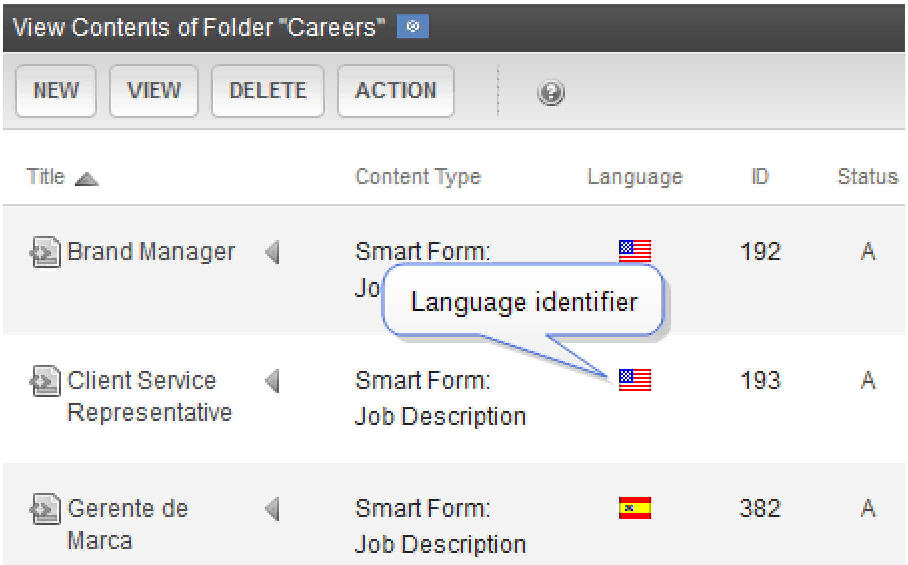
- You have permission to add content to the folder.
- The desired language is available. See also: *Determining which languages are available* on page 1396.

1. Go to the content folder in which you want to create the content.
2. Choose **View > Language** and select the language in which you want to create the content.

   You can also view *all* content in a folder, regardless of language. This menu option makes it easy to find content in a selected language.



The View Contents of Folder screen displays the language of each content item.



3. Click **Add Content** ( ) and create the content as you would any content. See also: *Creating new content* on page 626.
4. When applying metadata, you can only use metadata definitions created for the selected language. See also: *Working with Metadata* on page 755.

You can set up a separate workflow for each edition of a content, and can create collections, menus, taxonomy categories, and tasks in any supported language.

NOTE: Alternatively, you can designate certain sections of text within a content item to be included or excluded from certain languages. See also: *Creating one or more localized paragraphs* on page 1419

Modifying page content based on language selection

If a template's text should change according to a user's language selection, use a case statement to provide the language-specific content. Assume you want to create editions of the menu that runs under the header in 3 languages: English, French, and German.

1. In the template file, declare each menu option a variable. For example:

```
Dim t_search, t_products, t_support, t_news, t_careers,
  t_calendar, t_home, t_login, t_site_lang, t_contact,
  t_copyright, calendar_id
```

2. Enter case statements that provide the value of each variable in each language. (1031—German; 1036—French.) The following case statement is for the search menu option.

```
Select
  Case ContentLanguage
  Case "1031" t_search = "Suche"
  Case "1036" t_search = "Recherche"
  Case else t_search = "Search" End Select
```

When a user visits a page controlled by this template and selects French or German as the site language, the page is refreshed and the translated values appear on the template.

Modifying images based on language selection

Many Web page templates include images that require translation. To set up templates to invoke images in the user-selected language:

1. Add to the library each image that should change when the language changes. For example, if your company's tag line is translated into 3 languages, upload the 3 images into the library.

   Include the language in the title of the image. For example, tagline_English, tagline_French.
2. Create separate content for each language-specific image. Each content block must have a unique ID number.
3. Insert the appropriate image into the content block for each language. For example, insert the tagline_English image into the English content block.
4. Insert the content blocks into appropriate templates. For example, insert the English content block into the English template.

Setting up locales

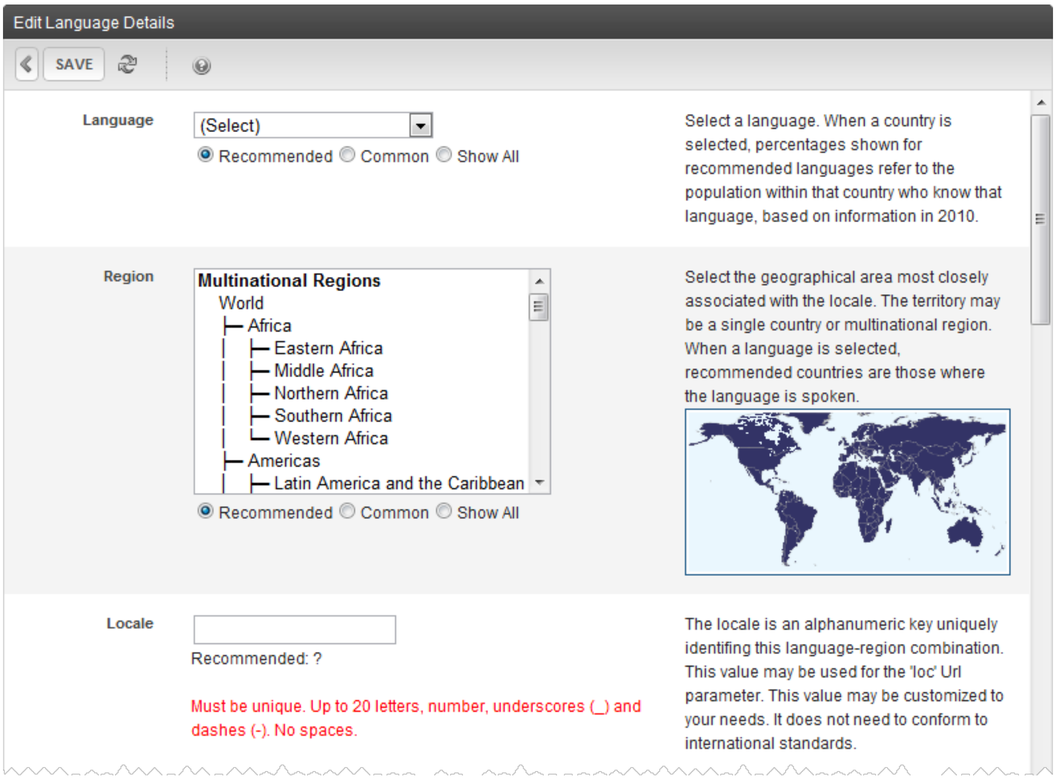
Ektron provides locales for every language and region supported by your Windows server.

You can create a new locale on the Edit Language Details screen by picking a combination of language and region, as defined by the Unicode Common Locale Data Repository. On Windows Vista and later versions, you can use the Microsoft Locale Builder to create custom, supplemental ASP.NET cultures. Custom cultures are helpful if no ASP.NET culture matches either the language or the region; for example, eo-150 (Esperanto in Europe). You also can create custom cultures for new combinations, for example, fr-US (French in U.S.). After you create a locale, Ektron authors can create content, menus, collections, and so on, in that locale, and site visitors can view content based on it.

Creating a new locale

1. Go to **Workarea > Settings > Localization > Languages and Regions**.
2. Click Add (⊕). The Edit Language Details screen appears. A partial image is

shown in the following image.



- **Language**. Can display the major languages in every country (via the **Show All** radio button), or the most common world languages (use the **Common** radio button). If you are unsure about which languages are used in a country, move to the **Region** field, select a country, and click the **Recommended** radio button. Then, go back to the **Languages** field; you will see all languages spoken in the selected country by percentage.
- **Region**. Provides several options for finding the new locale's region or country.
  - If you selected a language above, you can select from a list of countries that use the language. To do that, click **Recommended** and scroll below the list of multinational regions. Click the country of the locale you are defining.
  - To select from an alphabetical list of *all* countries, click **Show All** and scroll below the list of multinational regions.
  - If the language's locale is not tied to a specific country but is connected to a region, select the region from the regions list.
- **Locale**. Assign a locale ID to the new language. The locale ID must be unique, but is free-form, so you can customize it. It could be based on a target market, for example, “youth” for English US young adults (for example, youth-US), or “euro” for English in Europe (euro-UK), or even “klingon” (klingon-US). If you select a language, the field is filled in for you. Typically, the suggested value is adequate.
- **Fallback Locale**. For every language, you can set a **Fallback Locale**, a language in which content appears if it is not available in the selected language. If content is not available in the fallback locale, Ektron looks for content in the fallback locale's **Fallback Locale**. If content in *that* language is not found,

Ektron looks for up to 4 additional fallback locales. At that point, if content is still not found, Ektron tries to display the content in the default language.

For example, your website's default language is US English. You have some content in Swiss German (de-CH). The fallback language for that is Austrian German (de-AT), and the fallback language for Austrian German is German (de-DE). If the content on a page is not available in Swiss German, Ektron tries to find an Austrian German edition. If it cannot find that, it looks for a German edition. If that is not available, it tries to display an English edition. See also *Setting the fallback locale* on page 1414.

In certain situations, you may want no fallback locale. That is, you want to display nothing if content is not available in the selected language. To accommodate this, **None** is an option in the **Fallback Locale** drop-down list.

> **NOTE:** If you set **None** as the **Fallback Locale** for any language, and content is not available in the selected language, nothing appears on the page and no other languages are checked.

- **Language Tag**. Assign a language code to the language. This section of the screen contains important information about this field.

> **IMPORTANT:** Unlike the **Locale** field, the **Language Tag** field must conform to the IETF BCP 47(Best Current Practice).

- **Alphabet**. Some languages can be written in more than one alphabet. For example, Serbian can be written using the Latin or Cyrillic alphabet.
- **Custom Ext.** Choose between 2 strategies when exporting content for translation: machine translation and pseudolocalization.

Using a MachineTranslation Strategy

When you export content for translation and apply the MachineTranslation strategy, Ektron translates the content using machine translation then immediately imports it. See also: *Using machine translation* on page 1416

The following is an example of how to implement the strategy. See also: CMS Strategies.

```
<objectFactory>
  <objectStrategies>
    <add name="MachineTranslation">
    <strategies>
      <add name="MachineTranslationStrategyTemplate"
        type="Cms.Extensions.Templates
          .MachineTranslationStrategyTemplate,
          Cms.Extensions.Templates"/>
    </strategies>
    </add>
  </objectStrategies>
  <objectImplementations> </objectImplementations>
</objectFactory>
```

Using a pseudoLocalization strategy

> **NOTE:** For background information, see Pseudolocalization (Wikipedia).

When you export content for translation and apply the PseudoLocalization strategy, Ektron converts the content to pseudo-language text and the immediately imports it..

The following is an example of how to implement the strategy.

See also: CMS Strategies.

```
<objectFactory>
  <objectStrategies>
    <add name="MachineTranslation">
    <strategies>
      <add name="MachineTranslationStrategyTemplate"
        type="Cms.Extensions.Templates
          .MachineTranslationStrategyTemplate,
          Cms.Extensions.Templates"/>
    </strategies>
    </add>
  </objectStrategies>
  <objectImplementations> </objectImplementations>
</objectFactory>
```

```
<objectFactory>
  <objectStrategies>
    <add name="PseudoLocalization">
    <strategies>
      <add name="PseudoLocalizationStrategyTemplate"
        type="Cms.Extensions.Templates
          .PseudoLocalizationStrategyTemplate,
          Cms.Extensions.Templates"/>
      </strategies>
      </add>
    </objectStrategies>
    <objectImplementations> </objectImplementations>
</objectFactory>
```

Here is an example of how to override the `PseudoLocalize` method.

```
public override void
  PseudoLocalize(ref string content, PseudoLocalizationEventArgs
  eventArgs)
```

Here are the `PseudoLocalizationEventArgs` properties.

```
LocaleData
Locale
LocalizableCmsObjectType
ObjectType
long
ObjectId
```

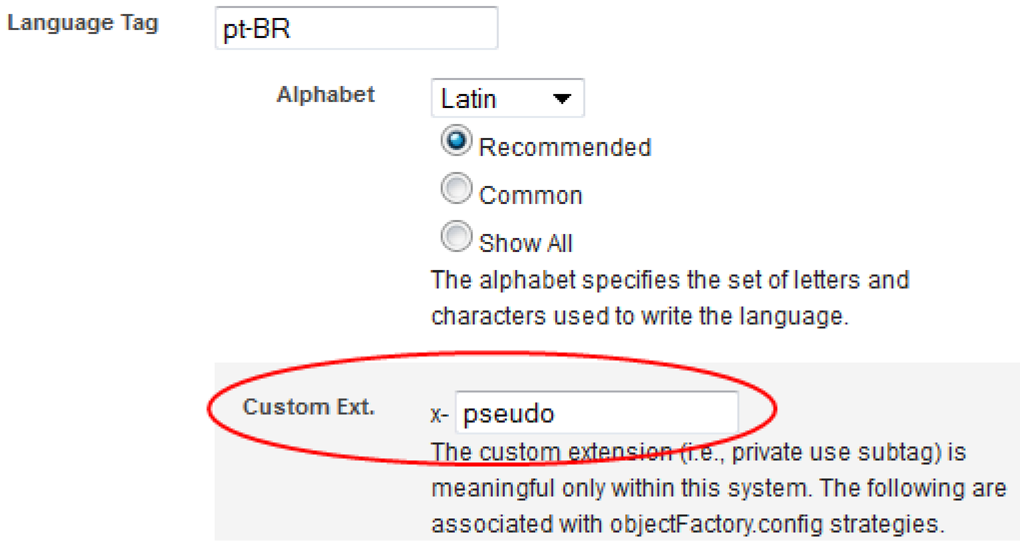
Developers use the `PseudoLocalize` property to write custom code that programmatically starts the export process. Here is an example: `Ektron.Cms.Localization.LocalizationExportJob.PseudoLocalize = true;`

Ektron applies the PseudoLocalization strategy if either of the following conditions is met:

- The target locale’s language tag contains `x-pseudo`.
- The export job’s `PseudoLocalize` property is `true`.

Applying PseudoLocalization strategy to a locale

You can apply PseudoLocalization Strategy to a locale's language tag in the Workarea. Use the **Settings > Localization > Languages and Regions** screen's **Custom EXT** field, as illustrated in the following figure. Programmatically, `LocaleData.XmlLang` contains `x-pseudo`.



Overriding the translate method

Here is an example of overriding the Translate method.

```
public override void
  Translate(ref string content, MachineTranslationEventArgs
  eventArgs)
```

The `MachineTranslationEventArgs` have intellisense, but the following is a list of its properties.

```
LocaleData SourceLocale
LocaleData TargetLocale
LocalizableCmsObjectType ObjectType
long ObjectId
```

Ektron applies the Machine Translation strategy if either of the following conditions is met.

- The target locale’s language tag contains `x-mt`
- The export job’s `MachineTranslate` property is `true`

Developers use the `MachineTranslate` property to write custom code that programmatically starts the export process. Here is an example:

```
Ektron.Cms.Localization.LocalizationExportJob.MachineTranslate =
true;
```

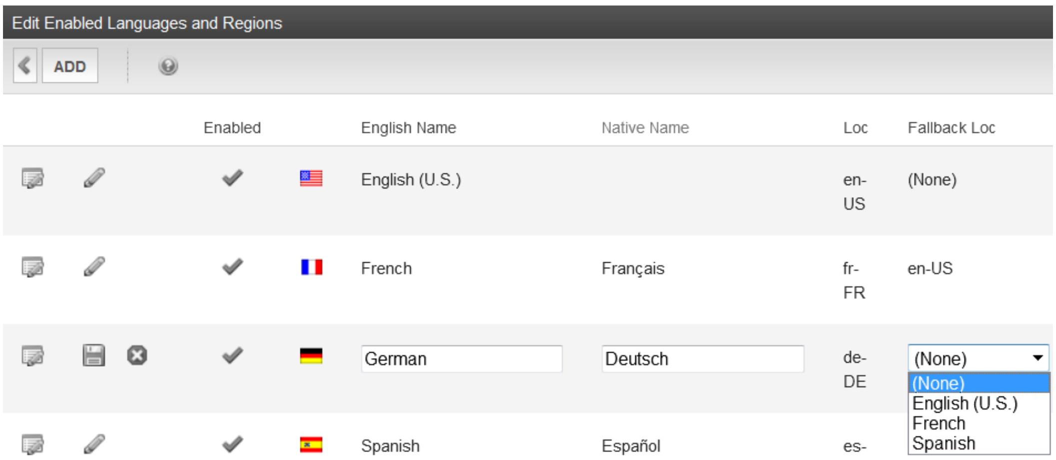
Applying machine translation strategy to a locale

You can apply Machine Translation Strategy to a locale's language tag in the Workarea. Use the **Settings > Localization > Languages and Regions** screen's **Custom EXT**field. Programmatically, `LocaleData.XmlLang` contains `x-mt`.

- **ASP.NET Culture**. Specifies the region for formatting dates, times, currencies, and so on. This value is assigned to the ASP.NET `Culture` property. See also: [How to: Set the Culture and UI Culture for ASP.NET Web Page Globalization]().
- **ASP.NET UICulture**. specifies the natural language of resource strings. This value is assigned to the ASP.NET `UICulture` property. See also: [How to: Set the Culture and UI Culture for ASP.NET Web Page Globalization]()
- **Flag Icon**. used in the Workarea as a quick, visual indicator of the locale, it is important for each locale to have a unique flag. Flag files must be 16x16 pixel .gif images. Ektron provides several flags, which are installed to the `/`*`siteroot`*`/WorkArea/images/application/flags/` folder. Any flags with elements in common with the locale's language and region appear as choices. If there is no flag next to the locale you are creating (for example fr-017, French in Africa), you can create an image, assign that name to it, and place it in the designated folder. Then return to this screen, select the locale, and select the image.
- **Native Name**. the name of the locale in its native natural language. That is, what the people in that locale call their own language and region.
- **English Name**. the name of the locale in English.

Setting the fallback locale

1. Go to **Workarea >Settings > Localization > Languages and Regions.**
2. Click **Edit** ( ).
3. Click **Rename or Change Fallback Locale** ( ) for the language of interest.
4. Use the pulldown in that language's **Fallback Loc** column to select a fallback locale.



NOTE: If you set a language's **Fallback Locale** to **None** and the language is part of a fallback chain, if content is not available in that language, the chain terminates there.

5. Click **Save** () in the row of the language you are changing.

Translating content

You have the following options for translating content.

- ***Translating content manually* below**. Copy original content to a new content item in new language, then translate content manually.
  - Only one content block at a time.
  - Error prone because some translatable text is hidden (such as 'alt' text in images). Also, some text might be translated that should not be translated (for example, Smart Form choice field values).
- ***Using machine translation* on the next page**. Use the computer-based translation tool provided with Ektron.
  - Readily available as a browser add-on.
  - Results in a poor quality translation.
- ***Exporting content to XLIFF* on page 1418**. **best option for translating**, whether in-house or outsourcing. Use an XLIFF editor.
  - Supports batch processing of several content blocks.
  - The XLIFF file is sent to a translation agency and returns translated to the new language(s). Then, import the translated files into Ektron.
  - Free XLIFF editors may not adequately support the XLIFF standard so may not be compatible.

IMPORTANT: Before using machine translation services, you must first register with Google Translation services and then add your Google key value into the following code in the `web.config` file:

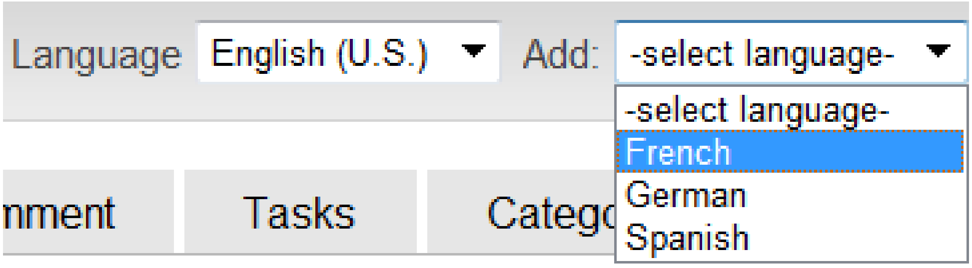
```
<machineTranslation>
  <add key="GoogleTranslator" value="[your Google key value],
    https://www.googleapis.com/language/translate/v2?key=" />
</machineTranslation>
```

Translating content manually

Use this procedure to initialize new foreign language content with content from a source language, then translate the content manually. The copying should facilitate the translation. For example, an editor translates content from French to German. The editor copies the French edition to new content whose language is German. As the editor translates the French edition into German, the French content is deleted. Any images in the content usually would remain, and all formatting (tables, bullets, and so on) is retained.

1. Go to the View Contents of Folder screen for the content you want to translate. Its status must allow editing (it cannot be submitted or pending).

2. Choose **View > Language** and select an original language.
3. Click the content you want to translate. It appears on the View Content screen.
4. Use the **Add** drop-down list in the upper right corner to select a language into which you want to translate the content. The original language content appears.



5. Translate into the new language then delete the original content. At this point, you can click **Translate Content** ( ) to have the software translate the content. You can then edit as needed to perfect the translation. When done, click the **Paste Content** button.

   NOTE: You cannot translate XML Smart Forms using the **Translate Content** ( ) button.

6. Translate the **Title** and **summary**.
7. To add metadata to content, metadata specifications must have been created for the selected language. See also: *Working with Metadata* on page 755
8. When you save the content, it is saved as the edition of that content in the selected language.

Using machine translation

Ektron includes a machine translation feature, which is powered by the Google Translation Service. To see a list of supported languages, go to http://translate.google.com/.

NOTE: Machine translation is not supported for all languages in the Language Settings screen. Also, you cannot translate XML Smart Forms using this method.

Like most software-based translation, someone fluent in the new language should verify that the translation is appropriate within the context of the page.

The machine translation feature lets you choose a glossary (that is, a field, industry, or subject area). This helps the software find the best translation for a term or phrase in that field.

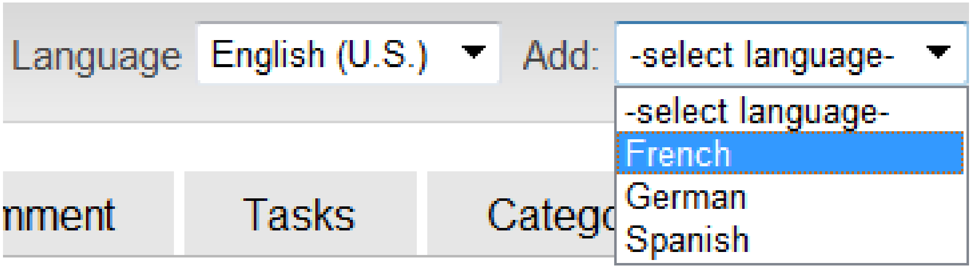
Follow these steps to use the machine translation feature.

PREREQUISITE

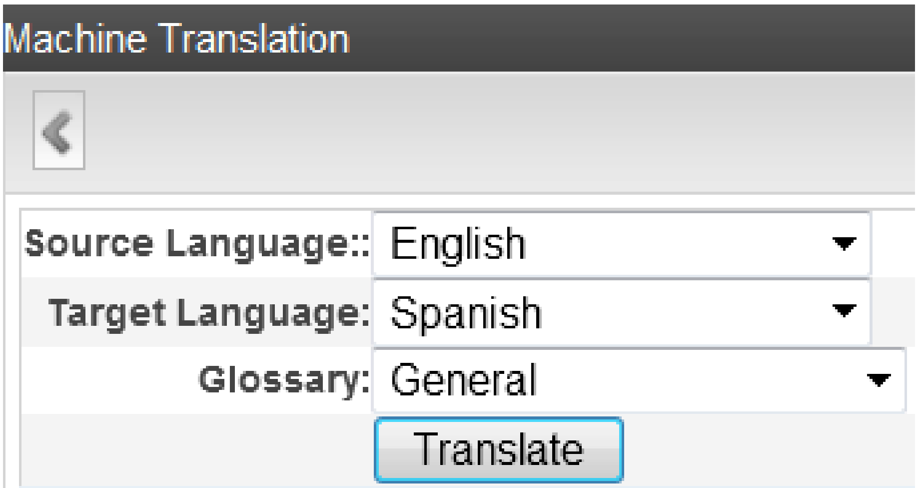
Your Ektron administrator has enabled the feature. See also: *Enabling machine translation* on page 1418

1. In the Workarea, open the folder that contains content to be translated.
2. Choose **View > Language** and select an original language (that is, the language from which it will be translated).
3. Click the content you want to translate. Its status must allow editing (that is, its status cannot be submitted or pending). It appears on the View Content screen.
4. Use the **Add** drop-down list in the upper right corner to select a new language for the content.

NOTE: If you do not see the language on the drop-down, you need to enable the language. See also: *Determining which languages are available* on page 1396



5. The original language content appears.
6. Edit the title if appropriate.
7. Click **Translate Content** ( ). The Translation screen appears.



8. Select the source (old) and target (new) languages.
9. If the content should refer to a specific glossary, select one from the drop-down list.
10. Click **Translate**. The translation appears.
11. If the translation looks OK, click **Paste Content**. The translated content replaces the original content in the editor. Modify as needed.
12. Translate the **Title** and **Summary**.
13. To add metadata to the content, metadata specifications must have been created for the selected language. See also: *Working with Metadata* on page 755

14. When you save, the content is saved as the selected language edition of the content.

NOTE: When the View Contents of Folders screen reappears, it is probably set to the source language. In this case, you do not see the new content in the target language. To see it, click **View > Language** and select **All** or the target language.

Enabling machine translation

Follow these steps to enable Ektron's machine translation feature.

1. Using the information on the Web page https://developers.google.com/translate/v2/faq, obtain a Google Translation API key.

   NOTE: The Google Translate API is only available as a paid service.

2. Open the Ektron siteroot folder\`web.config` file.
3. Find the following element:
```
<machineTranslation>
<!-- ex. value="[API_KEY_FROM_GOOGLE],
https://www.googleapis.com/language/translate/v2?key="-->
<add key="GoogleTranslator" value="" />
</machineTranslation>
```
4. Insert the API key you obtained in Step 1 into the `value` attribute.

Exporting content to XLIFF

You can copy content into XLIFF files that you can submit to a translation agency, or translate the content "in house." When the translation is complete, you import translated content to Ektron.

You can translate these kinds of Ektron information.

- content, including summary, comments, and metadata
- a portion of a content (see *Creating one or more localized paragraphs* on the facing page)
- forms, including response message, comments, and metadata
- all menus (you cannot choose individual menus)
- assets (Office documents, managed files, and so on. You *cannot* export. zip files.)
- taxonomy data

XLIFF (XML Localization Interchange File Format) is a format for exchanging localization data between participants in a translation project. This format lets translators concentrate on the text to be translated, without worrying about its layout. XLIFF is supported by a large group of localization service and tools providers. To learn more about XLIFF, visit these websites:

- [XML in localisation: A practical analysis]
- [OASIS XML Localisation Interchange File Format (XLIFF) TC]

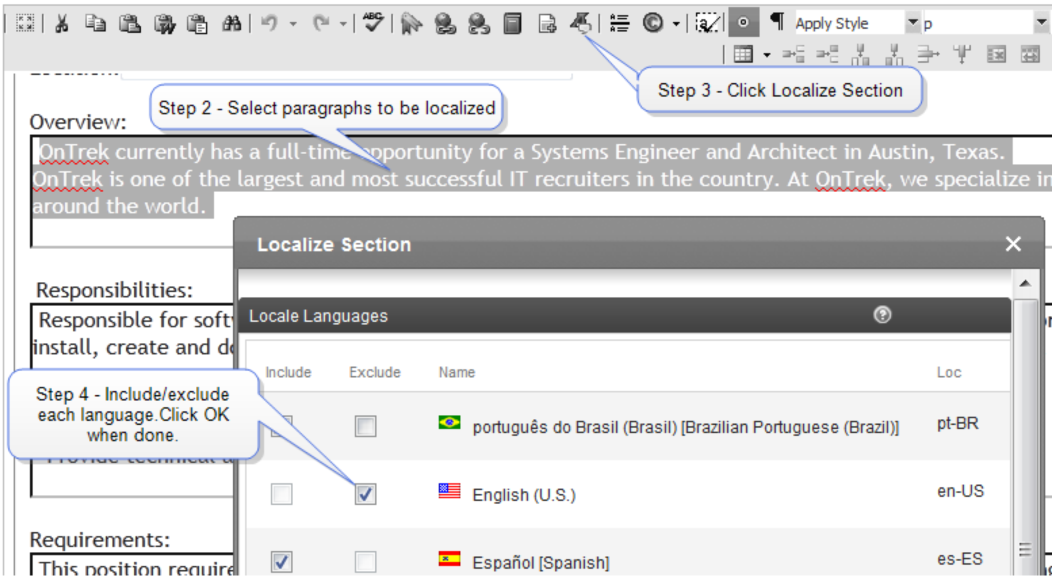
Ektron supports versions 1.0, 1.1, and 1.2 of the XLIFF standard. You specify the version you are exporting in the `web.config` file, using the `ek_XliffVersion` element. Any listed version can be imported.

Creating one or more localized paragraphs

IMPORTANT: This button is only available in the eWebEdit400 editor.

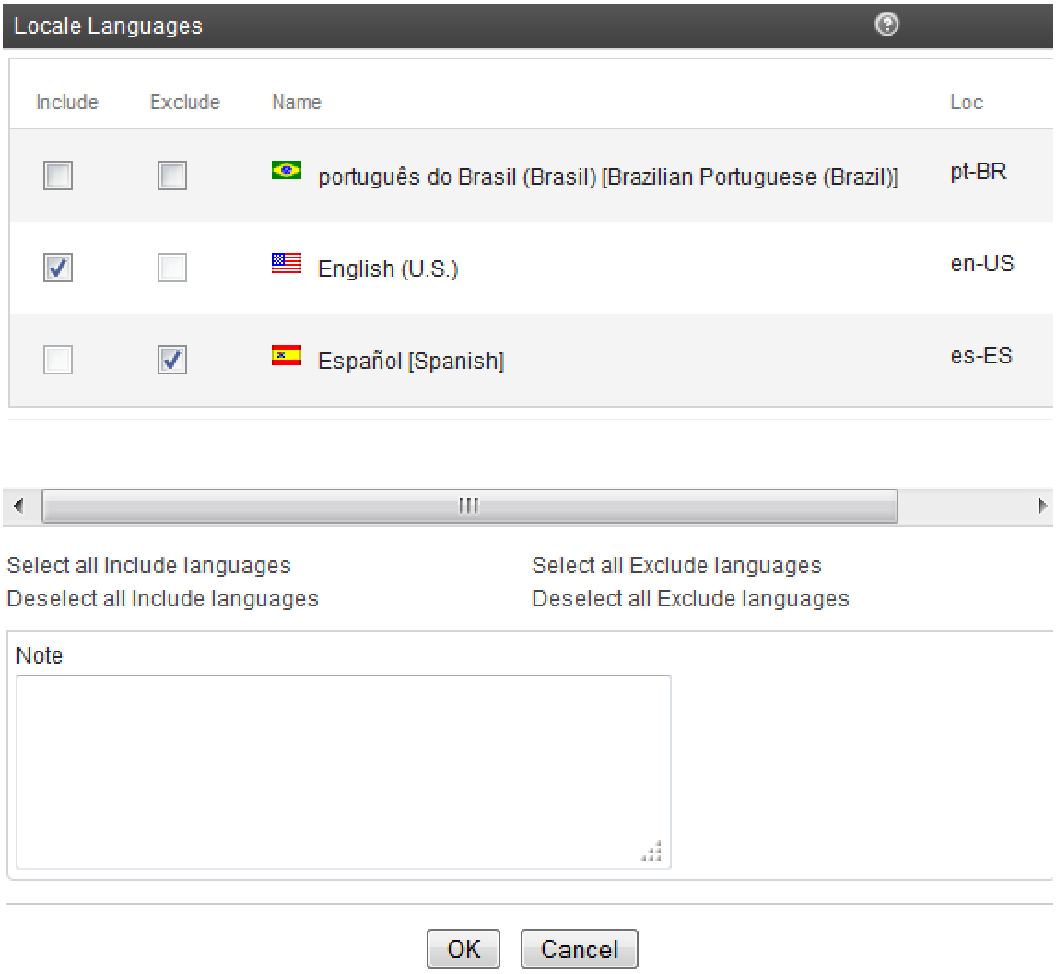
The Localize Section button ( ) lets you designate paragraphs to localize for the XLIFF translation process. For example, an author creates content in English, and does not want a specific paragraph to be translated into French. So, the author uses the Localize Section feature to exclude that paragraph from the French version of content. When the content is exported, the selected paragraph does not appear in the French XLIFF file.

1. Open the content with paragraphs that you want to localize.

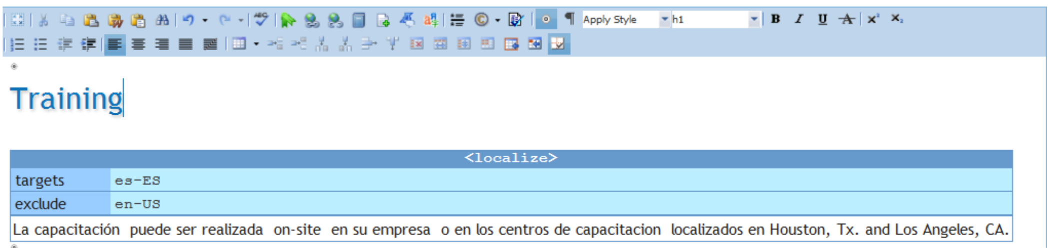


2. **Select** one or more paragraphs. You must select entire paragraphs. You cannot select individual words or sentences within a paragraph. Also, if the content is a bulleted or numbered list, you must select the entire list.

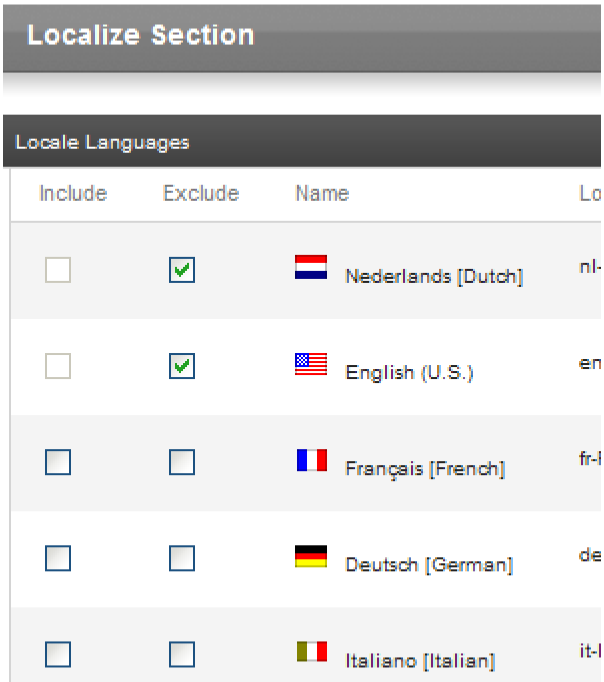
3. Click **Localize Section** ( ). The Localize Section dialog appears.



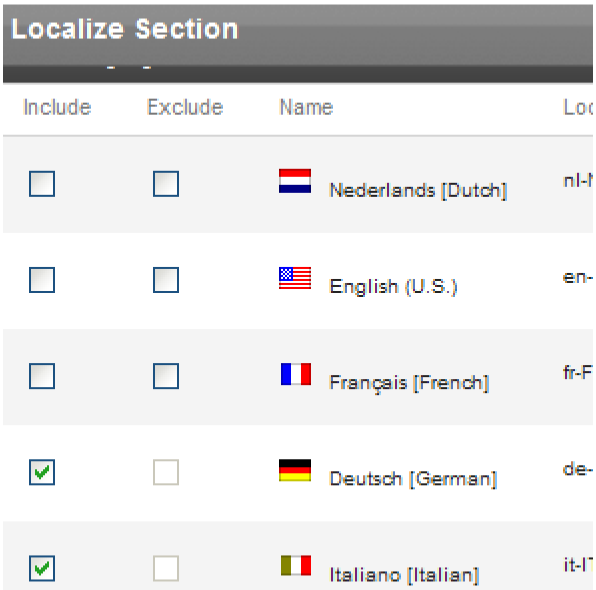
4. For each language on the list, **Include** or **Exclude** the selected text.
   - If you *include* one or more languages, all unchecked languages are *excluded*.
   - If you *exclude* one or more languages, all unchecked languages are *included*.
   - If you *include* some languages and *exclude* others, all unchecked languages are *excluded*.
5. Click **OK**. From now on, when editing that content, authors see a **<localize>** box that shows the localized sections that are exported/imported when using the XLIFF process.



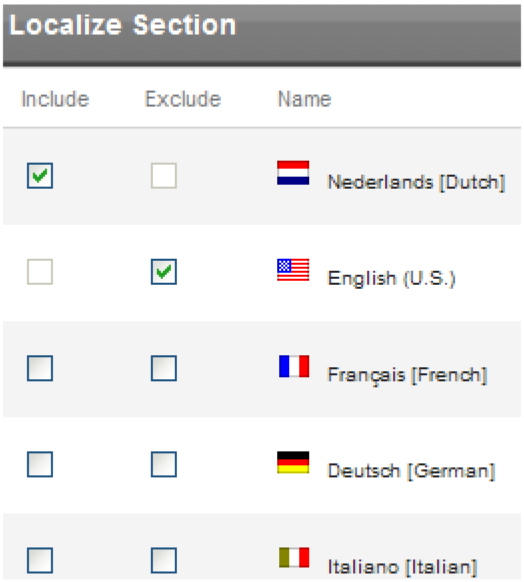
On the following sample screen, Dutch and U.S. English are excluded. This means that French, German and Italian are *included* even though the **Include** box is not checked.



On the following sample screen, German and Italian are included. This means that Dutch, U.S. English, and French are *excluded* even though the **Exclude** box is not checked.



On the following sample screen, Dutch is included and U.S. English is excluded. In this case, because one language is included and another is excluded, German, Italian, and French are *excluded* even though the **Exclude** box is not checked.



Editing a localized section

1. Edit the content that contains the localized section. A localized section looks like a table within the editor.
2. Place the cursor in the table header, near **`<Localize>`**.
3. Right click and choose **Localize Section**.
4. Choose Locale Languages to **Include** or **Exclude**.
5. Click **OK**.

Removing a localized section

1. Edit the content that contains the localized section. A localized section looks like a table within the editor.
2. Place the cursor in the table header, near **`<Localize>`**.
3. Right click and choose **Remove Localize Section**. The localization information is removed but the text remains.

Importing translation files

The following is an overview of importing translation files.

1. You select content to translate.
   - a content item
   - a folder—all content in the folder is selected; you may include its subfolders
   - all menus
   - all taxonomies

   Alternatively, select a Translation Package. See also: *Creating a multi-language translation package* on page 1428.
2. Ektron converts the selected content to XLIFF files. (Only content whose state is "Ready for translation" is converted to XLIFF format.) You can prepare files for

translation into several languages at once. A separate .xlf file is created for each language. Then, all .xlf files for each language are compressed into one .zip file.

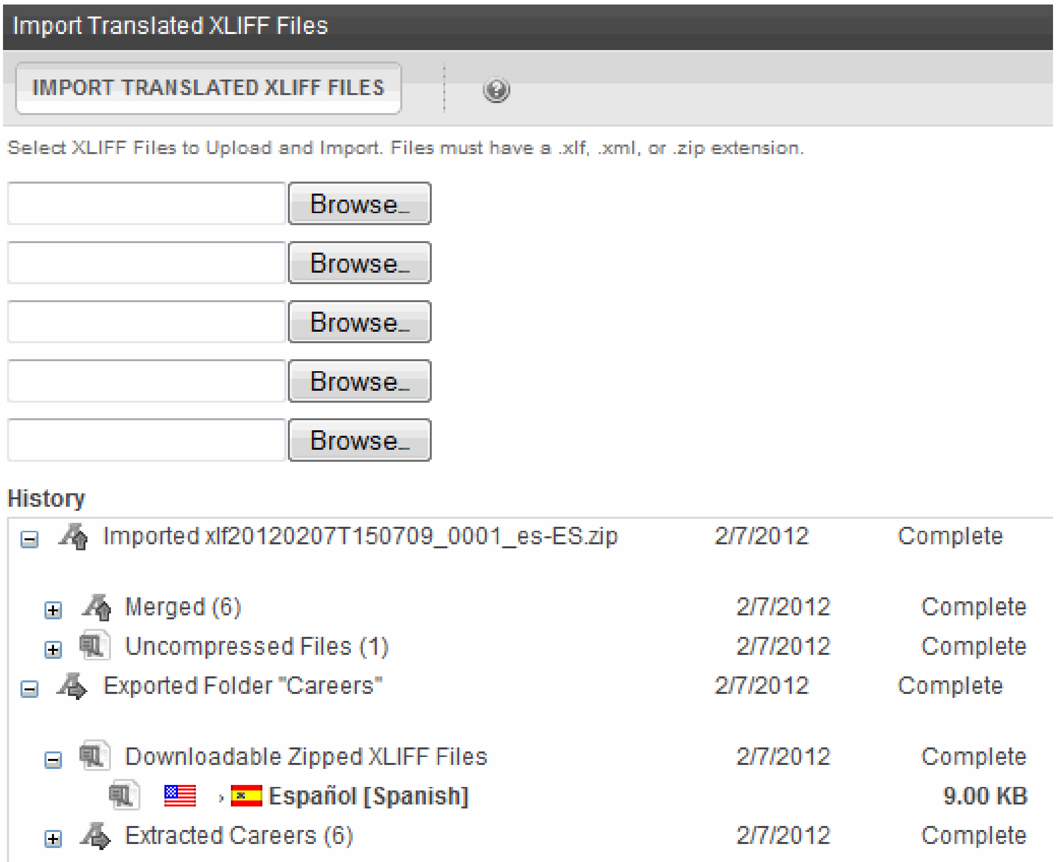
3. Transmit the .zip file to a translation agency.
4. The agency translates and returns the files. Alternatively, the files can be translated "in house."
5. Import the files to Ektron. If the content does not exist in the target language, it is created.

Prerequisite

Only members of the Administrator User Group and those defined in the Manage Members for Role: XLIFF-Admin screen can create or import XLIFF files. See also: *Using the roles screens* on page 1465

IMPORTANT: Make sure the files have been translated before you import them.

1. From the Workarea, choose **Settings > Localization > Import Translated Files**.
2. Click **Browse** and go to the folder that contains the translated files.
3. Select the files to import.
4. Click **Import Translated XLIFF Files**. Ektron creates new or updates existing foreign-language editions of the imported content/menu/taxonomy.
5. Information about the imported file appears in the history area of the screen. You can click plus signs (+) to see increasing levels of information about imported content.



For each new edition:

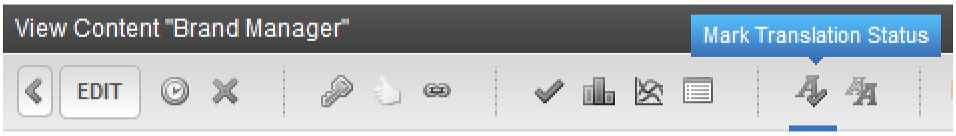
- If the content title is the same as the source edition, the next available number is appended to the title to distinguish it from the source. For example: **Henry Williams(1)**.
- Its status matches the source content's status. Typically, its status is checked out. When imported, the content can enter the workflow process just like other content.
- Its history indicates it was checked in at the time the report was run
- For content, the following properties are inherited from the original content:
  - Smart Form See also: *Working with Smart Forms* on page 815
  - content searchable See also: *Making content searchable* on page 346
  - approval method See also: *Setting the approval method* on page 694
- Date created and last edit date are captured from when the content is imported
- The last user to edit is captured by user who imported the file

Marking translation statuses

PREREQUISITE

Member of Administrators group, or assigned to the Translation State Admin or XLIFF Admin role See also: *Defining roles* on page 1464

Each Ektron content item has a translation status. Only content marked "ready for translation" is included when you create an .xlf file. Use **Mark Translation Status** on the View Content screen to mark translation status. See also: *Content statuses* on page 624



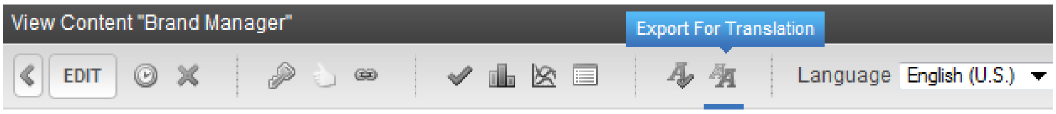
A content item's **Mark Translation Status** button may have any of 3 icons, which indicate the content's status.

- **Ready for translation**. Automatically applied when content status changes to Approved. Manually applied when authorized user clicks button and changes status to **Ready for Translation**.

  NOTE: You may apply this status to unapproved content if it needs translation before the site goes live.

- **Not ready for translation**. Automatically applied when content status changes to anything other than Approved. Translation status changes if
  - authorized user clicks button and chooses **Ready for Translation**
  - content's status changes to Approved
- **Do not translate**. Prevents content from being translated. Translation status changes only if authorized user clicks button and chooses **Ready for Translation**.

If you click Mark Translation Status ( ), a menu appears that lets you change its status. Note that **Export for Translation** ( ) appears on the toolbar only if the content's translation status is **Ready for Translation**.



If you create an .xlf file for a folder, only content whose translation status is ready is included in the file.

NOTE: The Localization Dashboardprovides an overview of translation activity within Ektron.

Applying Translated Metadata to Translated Content

If you follow the guidelines in *Creating multi-language metadata* on page 1399, key metadata fields are recognized in the XLIFF process and will be imported/exported.

After you import the translation files, Ektron removes them from the file system.

NOTE: If an error exists in any of the files, the erroneous files are moved into a subdirectory. The directory is created using a timestamp. For example: `uploadedFiles\localization\merged\xlf20060208T141841_u1\error\`.

Metadata that works with XLIFF export and import

The following metadata field names may be used for translation using the XLIFF export and import process.

- **XliffReferenceSource**. Content Selector
- **XliffReference**. Content Selector
- **XliffGlossary**. Content Selector
- **XliffNote**. Meta Data

Creating the .zip file

PREREQUISITE

Only members of the Administrator User Group or those assigned to the XLIFF-Admin role can create, export, or import XLIFF files. See also: *Using the roles screens* on page 1465.

To create one or more .zip files for translation:

1. Select the content to be exported:
   - To translate *one content item*, go to its folder then click it.
   - To translate *all content in a folder* (and, if desired, its subfolders), go to its View Contents of Folder screen.
   - To translate a menu, go to **Content Tab > Menus**.
   - To translate a taxonomy, go to **Content Tab > Taxonomy** and check taxonomies to translate.

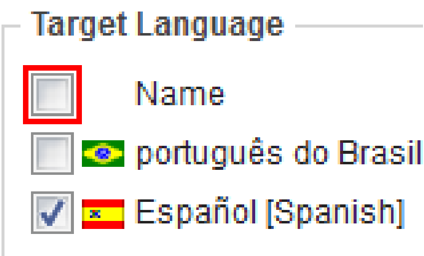
- To translate a Translation Package, see *Creating a multi-language translation package* on page 1428.

2. Click **Export for Translation** ( ). (On the View Contents of Folder Screen, choose **Action > Export for Translation**.) The Export for Translation screen appears.

NOTE: The **Include Subfolders** field appears only if you click **Export for Translation** from the View Contents of Folder screen.

3. To include content in all of a selected folder's subfolders, check **Include Subfolders**.
4. From the **Source Language** pull-down, select the language of items being translated.
5. All enabled languages are selected under **Target Language**. (See also: *Determining which languages are available* on page 1396).
6. To translate the content into *all* languages, proceed to the next step.

   To translate the content into *some* languages, uncheck the languages that you do not want. You can uncheck the box in the header row to uncheck all, then only check the ones you want.



7. Click **Create XLIFF Files for Translation**.
8. Ektron creates one .zip file for each language. The .zip file includes an XLIFF file for each selected content item. (If content in a target language was edited more recently than the source language edition, that content is excluded from the .zip file. Also, the content's translation status must be **ready**. See also: *Marking*

translation statuses on page 1424)

The **History** section of the Export for Translation screen displays the translated files.

The history lists the .zip file created for each language. The top of the history window displays the most recently exported/imported files. ZIP files are indicated by the WinZip icon ( ). To the right of the icon are:

- the source language's flag
- an arrow indicating the direction of the translation
- the destination language's flag and name
- the zip file size

9. To review items in a zip file, click **+** next to **Extracted**. When you do, each content item's ID number, title, and last edit date appear.
10. Click the .zip file icon (under Downloadable Zipped XLIFF Files). The File Download window appears. If you want to review the XLIFF files within the .zip file, click **Open**.
11. Click **Save**. The Save As window appears.
12. Go to the folder where you want to place the zip file and click **Save**.
13. Transmit the files to the translation agency.

NOTE: When the translation agency returns XLIFF files, their extension must be .xlf or .xml. Other than that, the file name is not important.

File naming patterns

XLIFF

- *item identifier*[*item ID*]_[*new language hexadecimal code*][*2 letter new language code*].xlf
  - *item identifier* options:
  - content: **cont**
  - form: **form**
  - menu: **s**
  - menu item: **s**
  - taxonomy: **t**
- *item ID* varies, depending on whether the item is content, a form, a menu, or a menu item

- content: content ID number
- form: form ID number
- Menu: menu ID number
- Menu item: menu ID number

ZIP

- xlf[*timestamp in format yyyymmddThhmmss*]_u[*user ID*] _ [*new language hexadecimal code*]-[*2 letter language code*].zip
  The user ID indicates which user performed the export or import.

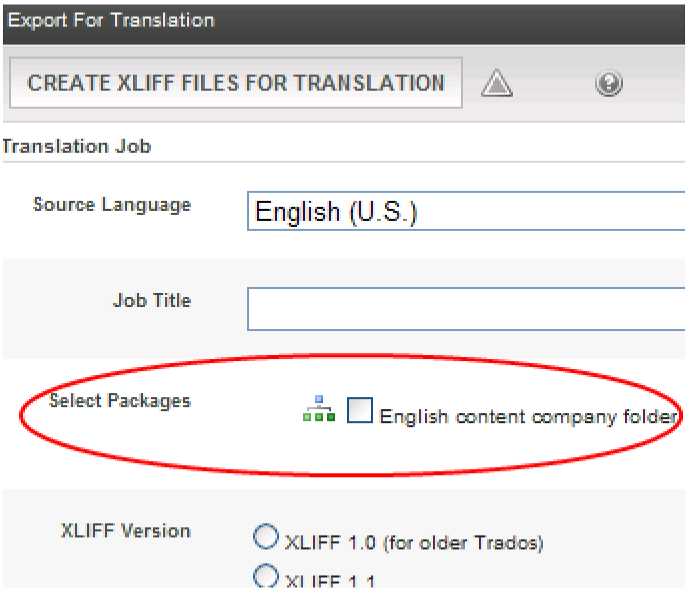
Creating a multi-language translation package

Use the Multi-language Translation Package to create and control groups of content that require translation. Translation packages contain any type of content managed by Ektron including

- HTML
- XML Smart Forms
- assets like Microsoft Word documents, PDFs
- images. Images (.gif, .png, .jpg and so on) are also managed with their associated source documents like Photoshop (.psd) files.

For ease of use, you may add content and folders to one or more Translation Packages.

After creating a Translation Package, you use the Export for Translation screen's **Select Packages** field to export the content for translation. See also: *Exporting content to XLIFF* on page 1418.



Only content that's selected for that package and marked "Ready for Translation" is exported. See also: *Marking translation statuses* on page 1424.

PREREQUISITE

You must be a member of the Administrators group or be assigned to the XLIFF Admin role. See also: *Defining roles* on page 1464.

Viewing translation packages

When you first view the Translation Packages screen, you see all packages in the default language. To view existing packages in any (or all) languages, change the language drop-down.

Adding a translation package

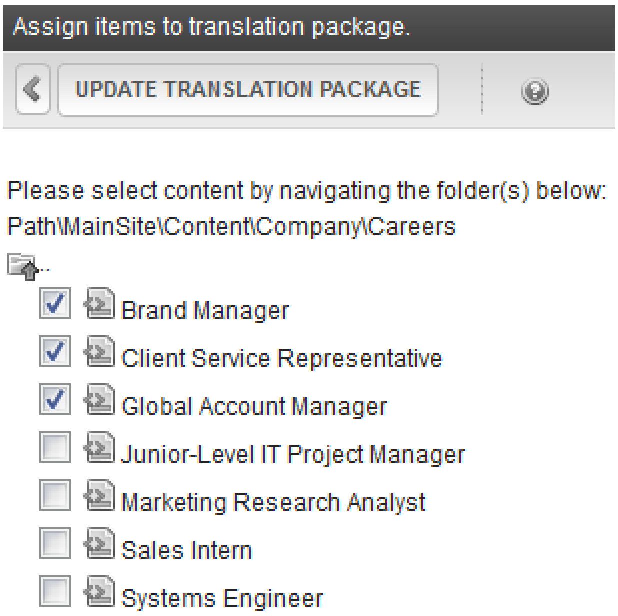
1. Go to **Workarea > Settings > Localization > Translation Packages**.
2. Choose a language for this Translation Package using the **View:** drop-down.
3. Click **Add Translation Package**. The Add Translation Package screen appears.
4. Enter a translation package title and description.
5. Click **Save**. The**Items** and **Properties** tabs appear.
6. Below the tabs, a screen appears. Use toolbar buttons to add items to the Translation Package.
   - . Assign languages to which the package's content is exported for translation. See *Creating the .zip file* on page 1425.
   - . Assign content to Translation Package. See*Assigning items to a translation package* below .
   - . Assign folders to Translation Package. See *Assigning folders to a translation package* on the next page.
   - . Edit Translation Package. Change the title or description. To change other package elements (content, folders, and so on), click the appropriate button.
   - Delete Translation Package.

Assigning items to a translation package

1. Go to **Workarea > Settings > Localization > Translation Packages**.
2. Choose a language for this Translation Package in the **View:** drop-down.

   NOTE: You can add more languages to the package after creating it.

3. Click a **Package Name** to view it.
4. Click **Assign Items** (). The following image shows an example of the `\Content\Company\Careers` folder.

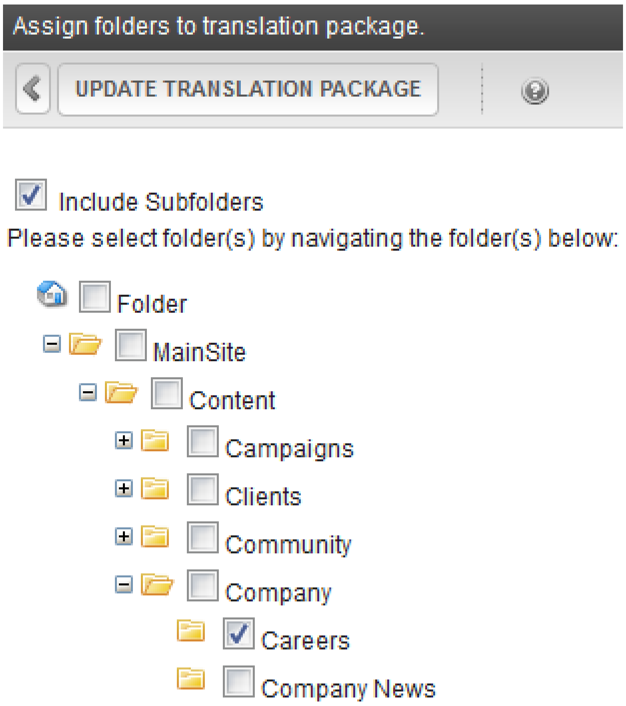


5. **Check** items to include in this package. Only content in the selected language appears.
6. Click **Update Translation Package**.

Assigning folders to a translation package

If you select a folder, only content in that folder that matches the Translation Package's source language is included. For example, you create a Translation Package in English. In that package, you select a folder which has 1 content item in English, 2 in Spanish, and 1 in German. When the package is exported for translation, it includes English content only.

1. Go to **Workarea > Settings > Localization > Translation Packages**.
2. Click on a **Package Name** to view it.
3. Choose a language for this Translation Package in **View:**.
4. Click **Assign Folders** (). The following image shows an example of the `MainSite\Content\Company\Careers` folder.



5. **Check** folders to include in this package.

   NOTE: To check subfolders, open the folder tree to show the subfolders then check the top folder. To exclude subfolders, do not open the folder tree or uncheck the specific subfolders.

6. Click **Update Translation Package**.

Linking a Photoshop source file to an image for translation

Complex images often contain text that you wish to translate. Because the image is a "flat" non-layered file, it is difficult to make text changes. However, the text may be on a layer within a Photoshop (.psd) file.

1. Create a Metadata definition called `XliffReferenceSource` of the type `Content Selector`.

   NOTE: The key name `XliffReferenceSource` is a reserved and recognized by the XLIFF import/export process.*Adding a metadata definition* on page 756

2. Assign *XliffReferenceSource* metadata to the folder that contains the images.
3. Add the Photoshop file as an asset in that folder.
4. Go to the Library and **edit** the image to which you associate the psd file.
5. Click the metadata tab and **add** the Photoshop file to the *XliffReferenceSource* field.
6. Click **Publish**.

Translating the Workarea

By default, the Workarea is in English. Ektron provides US English strings in a text file. Workarea text (that is, screen titles, Workarea menus, messages, alt text for buttons, and so on) is stored in a *resource file*. Resource files are installed to the `siteroot\Workarea\resources` directory. Workarea images that include text are stored in the `workarea/images/language` folder. For example, `Workarea\images\french_standard`.

Ektron provides a resource files for the following languages. The English resource file is complete, so translate the English file into the desired language. The others are partially complete.

- German
- English—United States
- Spanish
- French
- Italian
- Dutch—Netherlands
- Dutch—Belgium

A resource file is not human-readable. To make it so, use Microsoft's `resgen` utility, then translate the human-readable, .txt version of the file. The following example shows a portion of it.

```
add menu title=Add Menu
lbl ad serverip=Domain Controller IP
alt: remove collection items text=Click here to remove items
        from this collection
```

Each string has the following components:

- English description—includes information about where the text appears. For example, `btn` text appears on a button.
- an equal sign (=)
- English text—The text displayed on the screen, for example, a button label, menu item, or mouse-over text.

For each string, translate the text to the right of the equal sign. Then, run the `resgen` utility on the .txt file again, indicating the translate-to language. This converts the file back to a machine-readable format. Finally, move that file to the appropriate language folder under `workarea/images`, and enable the new language in the Workarea.

PREREQUISITES

- The alphabetical, 4-character identifier of the country/language into which you are translating. See CultureInfo Classfrom the MSDN website.
- The server that hosts Ektron must have Visual Studio.NET.

1. Copy the `resgen.exe` utility from `C:\Program Files (x86)\Microsoft SDKs\Windows\v8.0A\Bin\NETFX 4.0 Tools` to the `your-web-site\Workarea\resources` folder.

In Visual Studio, the `resgen.exe` utility is typically located in the `<SDK dir>\bin` directory, located via `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SDKs\Windows`.

NOTE: If your computer does not have a resgen.exe file, see the following article: http://msdn.microsoft.com/en-us/library/vstudio/ccec7sz1%28v=vs.110%29.aspx
Note that it says "This tool is automatically installed with Visual Studio."

2. Go to Windows **Start** button **> Microsoft Visual Studio 2010 > Visual Studio Tools > Visual Studio Command Prompt** to open a command window.

   If you're using Windows 8 or 2012, go to `C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Microsoft Visual Studio 2010\Visual Studio Tools\Visual Studio Command Prompt`.

3. In the command window, change the directory to the *siteroot*`\Workarea\resources` folder. For example, `cd C:\Inetpub\wwwroot\CMS400Min\Workarea\resources`.
4. Insert the following text: `resgen EKResource.en-US.resources` *anyfilename*`.txt`
   You can assign any name to the .txt file. A .txt file of resource strings converted to a human-readable format is created in the `resources` directory.
5. Open the .txt file.
6. Replace all single backslashes (\) with a double backslash (\\).
7. Translate the text following every equal sign (=). Be careful not to change any occurrences of **n** surrounded by double backslashes (`\\n\\`).
8. Save and close the .txt file.
9. Open the command window (as described in Step 2) and insert the following:

```
resgen anyfilename.txt EKResource.two-character country
  code-two-character language code.resources.
```

   Replace *anyfilename*`.txt` with the file you named in Step 4. In this example, the .txt file is named `span_translation.txt`. For example, to indicate that the Workarea is being translated into the Spanish/Spain, enter `resgen.exe span_translation.txt EKResource.es-ES.resources`.
   When the conversion is complete, **Writing Resource File ...Done** appears in the command window.

10. The `Workarea\resources` folder includes several resource files. If one exists for the translate-to language, it is overwritten. If one does not exist, it is created. To follow our example, the `EkResource.es-ES.resources` file was updated with your changes.
11. Your website's `Workarea\images` folder contains text images that need translation. If the country/language into which you are translating has subfolder within `Workarea\images`, inspect its images to see if they need translation. If the country/language into which you are translating does *not* have a subfolder within `Workarea\images`:

a. Create a new folder whose name is the language code into which you are translating.
b. Copy the files in the `Workarea\images\en` folder.
c. Paste those files to the folder you created in Step 10a.
d. Review the files in the folder you created in Step 10a. Translate text as needed.

12. Enable the new language in the Language Settings screen. See *Determining which languages are available* on page 1396.
13. Make the new language the default language in the Configuration Setup screen. See *Setting the default language* on page 1398.

Setting the spell checking language for eWebEdit400

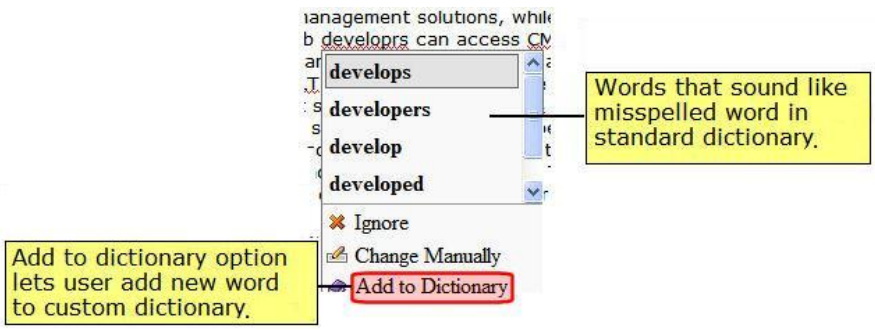
NOTE: If you use the default editor, your browser manages the spell checking.

Ektron's spell checker for eWebEdit400 refers to a *standard dictionary* of the content's language. So, for example, if the content is U.S. English, the U.S. English dictionary is referenced.

The spell checker also references a language-specific *custom dictionary*. Words are added to this list when a user stops at a misspelled word and chooses the **Add to Dictionary** option.

Both dictionaries reside on the server that hosts Ektron.

The spell checker compares each word against both sources. If a word is in either one, the spell checker moves to the next word. If a word is missing from both sources, the spell check options appear, and the user decides what to do.



Ektron provides the following standard dictionaries.

- uk-UA. Afrikaans
- ar-AR. Arabic
- bg-BG. Bulgarian
- cs-CZ. Czech
- da-DK. Danish
- de-CH. German (Switzerland)]

- de-DE. German
- en-GB. English (Great Britain)
- en-US. English (United States)
- es-ES. Spanish
- fr-FR. French
- he-IL. Hebrew
- it-IT. Italian
- nl-NL. Dutch
- nn-NO. Norwegian (Nynorsk)
- pl-PL. Polish
- pt-PT. Portuguese
- pt-BR. Portuguese (Brazil)
- ru-RU. Russian
- sl-SL. Slovenian
- sv-SE. Swedish
- uk-UA. Ukrainian

If Ektron does not have a dictionary that matches the content language, it proceeds through these steps in the following order:

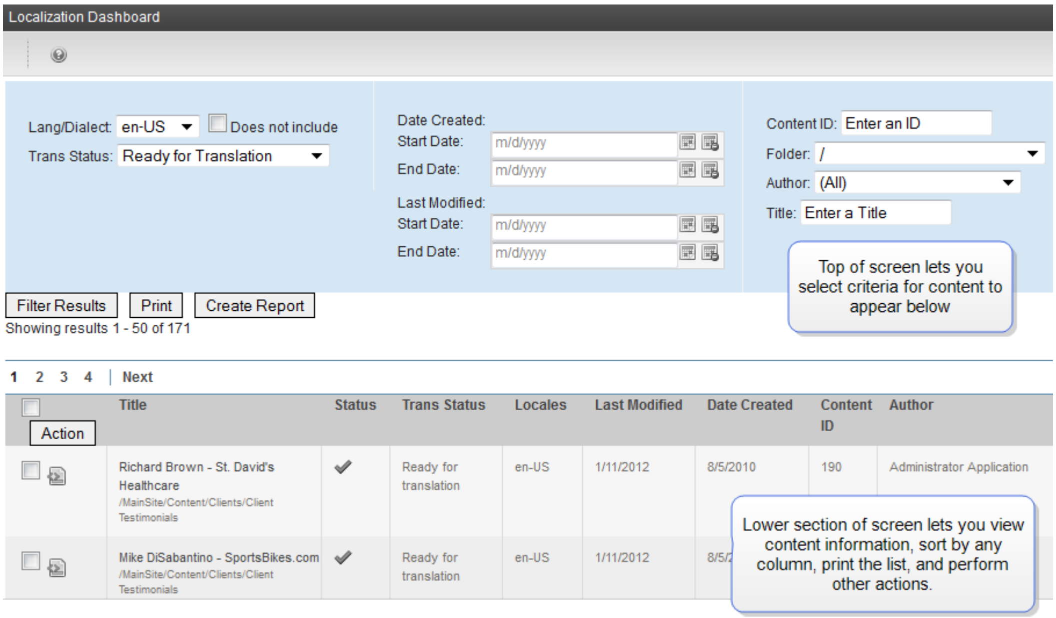
1. If the language begins with en (for example, en-AU), use the en-GB dictionary. If it begins with zh, use zh-CHS.
2. Each language has a *default version*, indicated by letters before the dash matching the ones after the dash. For example fr-FR. If the default version's dictionary is available, use it.
3. Use the first dictionary (alphabetically) that begins with the content language. For example, the content language is es-AR, but its dictionary does not exist. The first dictionary alphabetically beginning with es that is available is es-CO, so use that.
4. If none of the above is available, use en-US.

Using the localization dashboard

PREREQUISITE

You must be a member of the Administrators group or assigned to the XLIFF Admin role. See also: *Defining roles* on page 1464

The Localization Dashboard provides an overview of translation activity occurring in Ektron. To access the Localization Dashboard from the Workarea, go to **Settings > Localization > Dashboard**. The top of the screen lets you choose criteria. The lower section then displays content that meets the criteria. For example, you can find all US English content whose translation status is **Ready for Translation**, and resides in the `/Clients` folder. The lower section of the screen also lets you perform tasks on its content, such as print a list or change its Translation Status. See also: *Marking translation statuses* on page 1424



Selection criteria

The following list explains the fields at the top of the screen. After you enter the selection criteria, click **Filter Results** to apply the new selections.

IMPORTANT: These criteria have an AND relationship. This means that, if you select several criteria, only content that satisfies *all* appears in the lower section of the screen.

- **Lang/Dialect**. Select the language whose content you want to view. To ignore this field, choose **NULL**. Alternatively, you can select all content *not* in the selected language. To do that, check the **Does not Include** box.
- **Trans Status**. Select the translation status of content you want to view. To disregard this criterion, choose **(Any)**. See also: *Marking translation statuses* on page 1424
- **Date Created**. If desired, enter a range of content creation dates. If you do, only content created within those dates appears below.
- **Last Modified**. If desired, enter a range of content modification dates. If you do, only content edited within those dates appears below.
- **ContentID**. To see a particular content item, enter its ID number.
- **Folder**. If desired, select a folder whose content you want to view.
- **Author**. If desired, select the person who last edited the content you want to view.
- **Title**. If you know one or more words in the title of content that you want to view, enter them. You may enter one partial word and find all content whose title includes it.

Viewing content on the localization dashboard

When you open the Localization Dashboard, the lower section displays all content in the Default Application Language.

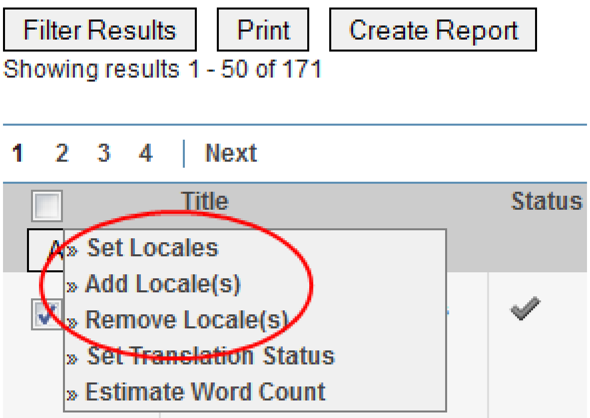
NOTE: The pagination of the content list is controlled by the `<add key="ek_PageSize">` element in your *siteroot*/`web.config` file.

On the lower section, you can:

- sort by any column in ascending or descending order by clicking on the column header
- view and work with any content item by clicking it, if you have permission to do so See also: *Managing folder and content permissions* on page 160
- print current results by clicking **Print**
- export current results to a Microsoft Excel spreadsheet by clicking **Create Report**
- edit the selected content's export languages
- change the content's Translation Status
- estimate the word count for one or more pieces of content

Editing the content's export languages

As described in *Creating the .zip file* on page 1425, when exporting content for translation, you select one or more target languages. You can add, edit, or remove target languages for content in the lower section of the Localization Dashboard using **Action** menu options.



The actions associated with the menu options are performed the next time the **Create XLIFF Files for Translation** button is clicked:

- **Set Locales**. View and modify locales into which selected content will be exported.
- **Add Locales**. Add locales into which selected content will be exported.
- **Remove Locales**. Remove locales into which selected content will be exported.

To change the target language assigned to content in the lower section of the Localization Dashboard:

1. Check the box next to each content item that you want to modify. To check all items, check the box in the header row.

2. Click **Action >** *menu option*. For example, **Action > Set Locales**.
3. Select desired locales and click **Save**.

Changing the content's translation status

To learn about Translation Status, see *Marking translation statuses* on page 1424.

1. Check the box next to each content item that you want to modify. To check all items, enable the check box in the header row.
2. Click **Action > Set Translation Status**.
3. Select the appropriate **Translation Status** and click **Save**.

Estimating the content's word count

1. Enable the checkbox associated with one or more pieces of content.
2. Choose **Action > Estimate Word Count**. The Estimated Word Count screen appears.
3. Click **Save**. The screen is dismissed. (Note that the word count is not saved.)

33

Managing users and user groups

NOTE: Only members of the Administrators User Group and those defined in the Manage Members for Role: User Admin screen can view, add, or edit users and user groups.

Users are people who administer the website, create content, or publish content. Without users, the website would be blank. In Ektron, you can add, edit, and delete users to and from the application through the Settings folder in the Workarea.

Every Ektron user belongs to a User Group. When you create a user, the user is added to the Everyone group by default. User groups are used when creating permissions and a workflow for content folders. User groups can be departments in your company (Human Resources, Sales, Engineering) or indicate a user's role (Publishers, Administrators, Editors, and so on).

All user and user group information is accessible from the Workarea.

To access the user folder in Ektron, go to **Workarea > Settings > Users**. The View Users screen appears. From this screen, you can add, edit, and delete users.

To access the user group folder in Ektron, go to **Workarea > Settings > User Groups**. The View User Groups screen appears. From this screen, you can add, edit, and delete user groups.

IMPORTANT: This chapter only applies to systems that do not use Active Directory Integration. If your system uses the Active Directory Integration Feature, see *Using Active Directory with Ektron* on page 1472 to learn about user management functions. If your system uses LDAP Authentication, see *Using LDAP with Ektron* on page 1498.

Managing users

Viewing a user

Go to **Workarea > Settings > Users** to display the View Users screen.

Creating a user

Before you can assign a user to a user group, you must add the user to the system.

1. Go to **Workarea > Settings > Users** to display the View Users screen.
2. Click **Add User**. The Add a New User to the System screen appears.

   NOTE: To learn about the lock and unlock buttons ( ), see Account Locked. The buttons provide a shortcut to that field for users with a check in the box to the left of their name.

3. Enter the following information about the user. A red asterisk (*) next to a field name indicates that the field is required and cannot be blank.
   General Tab (tabs only appear when editing)

✓—Editable by a non-administrator user. Non-admin users can edit their own profiles only, and only fields indicated.

- **Username**. Insert a username for the user you want to create.
- **Path**. This field is only available when using LDAP Authentication. See also: *Adding user information from an LDAP server to Ektron* on page 1501.
- **First Name**. Enter the first name of the user.
- **Last Name**. Enter the last name of the user.
- ✓**Display Name**. Enter the name that is used to identify a user in the Workarea and on the website. This can be different from the Username, which is the name used to log in.

  NOTE: The Display Name cannot be blank.

- ✓**Password**. Enter a password for the user. See also: *Ektron's password security policy* on page 111.
- ✓**Confirm Pwd**. Confirm the password by typing it again.
- ✓**User Language**. Select the language in which the user will view Ektron screens and messages. The language also determines the default value whenever a drop-down list of languages appears within Ektron.

  The drop-down list is derived from the Language Settings screen, available from the **Settings > Configuration** folder.

  Do not confuse the system language with the user's ability to create and edit foreign editions of content. This field does not prevent a user from working with multiple language content.

  See also: *Working with multi-language content* on page 1393.

  NOTE: If the selected language is not English, French or German, it is only supported after you download the Ektron Language Support Program from Ektron and translate the website.

- ✓**E-Mail Address**. Enter the email address of the user. Notification email is sent to this address unless the **Check to prevent workflow and task emails being sent to this user** box is checked. Also, this address identifies the user sending Instant email. See also: *Sending instant email* on page 106.

  NOTE: If the **Enable Sending of System Notification Email** box on the Application Setup screen is checked, and the **Check to prevent workflow and task emails being sent to this user** box on this screen is not checked, you must supply an email address.

- ✓**Account Locked**. Available in edit mode: Check this box to lock or unlock this user. Locked users cannot log in. For information on events that automatically lock a user out, see *Restricting login attempts* on page 108.

You can manually lock or unlock users via the lock buttons ( ) on the View Users in Groups screen.

- **Content and Forum Editor**. the default editor appears, and you cannot change it, unless your Ektron administrator set the *siteroot*/web.config file's `ek_EditControlWin` (for Windows computers) or `ek_EditControlMac` (for Macintosh computers) property to `UserPreferred`, in which case you may choose an editor.
- **Avatar**. An image or icon to represent you in the Forum.

  Insert a Web path to the image. For example: `http://www.example.com/smileyface.gif`. Alternatively, you can click **Upload** to browse to a file on your network.

- **Address**. Enter the address used to find this user's location when a search based on location is being performed. You can enter either a full address or a postal code.
- **Latitude, Longitude**. The Google GeoCoder strategy uses the information from the **Address** field to determine the user's latitude and longitude. These values are used to identify a user's location when someone performs a search based on location.

Custom Properties tab

- **Check to prevent workflow and task emails being sent to this user**. Check this box to disable workflow and task email notifications for this user. If you do, the user does not receive the notifications described in . However, this field has no effect on the user's ability to receive instant email.

  NOTE: The field appears only if the **Enable Sending of System Notification Email** box on the Application Setup screen is checked.

- ✓**Features**. Lets the profile owner edit events on a Web calendar. When this is checked, it cannot be unchecked. See also: *Working with calendars* on page 913
- ✓**Private Profile**. Choose from one of the following options to determine which other users can see the owner's community activities:
  - **Public**. The user information is accessible by others on the eIntranet.
  - **Private**. The user information is not accessible by others on the eIntranet.
  - **Colleagues**. The user information is accessible only by people on the eIntranet that are connected as colleagues.

  NOTE: Using the ActivityStream Widget on a PageBuilder Pageexplains how this setting affects other users' ability to see your activities.
- ✓**Time Zone**. Used by the Web Calendar feature, appointment times will show in the selected time zone.
- ✓**Phone**. Must consist of a 10 digits (String) in this pattern: nnn-nnn-nnnn.
- ✓**Moderate**. Check to make this user a moderator of a message board to approve and delete posts. Regular users in a group message board can create and delete only their own posts.

4. Click **Save**. The View Users in Group Everyone screen appears with the new user included in the table. When you add a new user, he is automatically placed in the Everyone user group. To assign users to other groups, see *Assigning a user to a user group* on page 1448.
5. Continue this process until you add all website users, or reach the maximum allowed by your license.

   NOTE: Contact Ektron Sales for pricing of adding more users to your license.

Editing a user

NOTE: If you are using Active Directory to edit a user, see *Adding and maintaining user information* on page 1488.

1. Go to **Workarea > Settings > Users** to display the View Users screen.
2. Click the **Username** of the user you want to edit. The View User Information screen appears.
3. Click **Edit**. The Edit User screen appears. The following lists describe the field descriptions.
   General Tab (tabs only appear when editing)

   ✓—Editable by a non-administrator user. Non-admin users can edit their own profiles only, and only fields indicated.

- **Username**. Insert a username for the user you want to create.
- **Path**. This field is only available when using LDAP Authentication. See also: *Adding user information from an LDAP server to Ektron* on page 1501.
- **First Name**. Enter the first name of the user.
- **Last Name**. Enter the last name of the user.
- ✓**Display Name**. Enter the name that is used to identify a user in the Workarea and on the website. This can be different from the Username, which is the name used to log in.

  NOTE: The Display Name cannot be blank.

- ✓**Password**. Enter a password for the user. See also: *Ektron's password security policy* on page 111.
- ✓**Confirm Pwd**. Confirm the password by typing it again.
- ✓**User Language**. Select the language in which the user will view Ektron screens and messages. The language also determines the default value whenever a drop-down list of languages appears within Ektron.

  The drop-down list is derived from the Language Settings screen, available from the **Settings > Configuration** folder.

  Do not confuse the system language with the user's ability to create and edit foreign editions of content. This field does not prevent a user from working with multiple language content.

  See also: *Working with multi-language content* on page 1393

  NOTE: If the selected language is not English, French or German, it is only supported after you download the Ektron Language Support Program from Ektron and translate the website.

- ✓**E-Mail Address**. Enter the email address of the user. Notification email is sent to this address unless the **Check to prevent workflow and task emails being sent to this user** box is checked. Also, this address identifies the user sending Instant email. See also: *Sending instant email* on page 106.

  NOTE: If the **Enable Sending of System Notification Email** box on the Application Setup screen is checked, and the **Check to prevent workflow and task emails being sent to this user** box on this screen is not checked, you must supply an email address.

- ✓**Account Locked**. Available in edit mode: Check this box to lock or unlock this user. Locked users cannot log in. For information on events that automatically lock a user out, see *Restricting login attempts* on page 108. You can manually lock or unlock users via the lock buttons ( ) on the View Users in Groups screen.

- **Content and Forum Editor**. The default editor appears, and you cannot change it, unless your Ektron administrator set the *siteroot*/web.config file's `ek_EditControlWin` (for Windows computers) or `ek_EditControlMac` (for Macintosh computers) property to `UserPreferred`, in which case you may choose an editor.
- **Avatar**. An image or icon to represent you in the Forum.

  Insert a Web path to the image. For example: `http://www.example.com/smileyface.gif`. Alternatively, you can click **Upload** to browse to a file on your network.

  By default, an avatar's maximum size is 200 kilobytes, and its height and width are reduced 125 pixels, preserving the aspect ratio.

- **Check to prevent workflow and task emails being sent to this user**. Check this box to disable workflow and task email notifications for this user. If you do, the user does not receive the notifications described in Automatic email Notification. However, this field has no effect on the user's ability to receive instant email.

  NOTE: The field appears only if the **Enable Sending of System Notification Email** box on the Application Setup screen is checked.

- **Address**. Enter the address used to find this user's location when a search based on location is being performed. You can enter either a full address or a postal code.
- **Latitude, Longitude**. The Google GeoCoder strategy uses the information from the **Address** field to determine the user's latitude and longitude. These values are used to identify a user's location when someone performs a search based on location.

- **Forum Signature**. Enter what you want to appear at the bottom of each forum post. You do not see the signature in the editor but it is added after you click **Post**.
- **Tags**. Click **Add Tag** and enter 1 or more tags that describe the profile owner. Tag keywords allow for tag-based searching. For example, you can add the tag *electronics* so that people can search for the profile owner who may be an electronics expert. See also: *Tagging content, library items, users, and groups with keywords* on page 1596.

Workarea tab

- **Full Screen**. When a check mark appears in this check box, the Workarea opens up to the size of the full screen. In addition, the Width and Height options are hidden. See *Workarea tabs* on page 610.
- ✓ **Landing Page after login**. See *Modifying setup information* on page 121.
- ✓ **Set smart desktop as the start location in the Workarea**. If you want the Smart Desktop to appear as soon as this user enters the Workarea, click this check box. See also: *Managing content from the Smart Desktop* on page 612. If you leave this check box blank, when this user enters the Workarea, he goes to the folder of the content specified at the **Landing Page after login** field.
- ✓ **Restore Default Preferences**. Restore the default Workarea settings specified by the Administrator.

Custom tab

- ✓ **Features**. Lets the profile owner edit events on a Web calendar. When this is checked, it cannot be unchecked. See also: *Working with calendars* on page 913
- ✓ **Private Profile**. Determines which other users can see the owner's community activities. For example, Using the ActivityStream Widget on a PageBuilder Pageexplains how this setting affects other users' ability to see your activities.
- ✓ **Time Zone**. Used by the Web Calendar feature, appointment times will show in the selected time zone.
- ✓ **Phone**. Must consist of a 10 digits (String) in this pattern: nnn-nnn-nnnn.
- ✓ **Moderate**. Check to make this user a moderator of a message board to approve and delete posts. Regular users in a group message board can create and delete only their own posts.

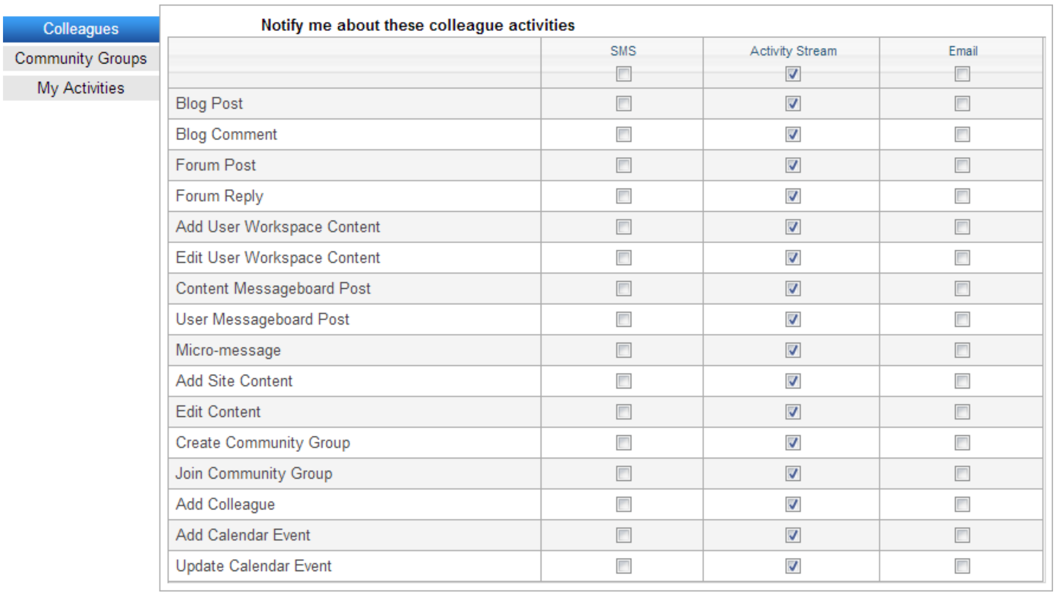
Activities tab

NOTE: If you disable Notifications, the **Activities** tab (which lets the user pick Notifications to receive and send) disappears.

- **Colleagues**. Select notifications you want to receive when a colleague performs an activity, and the agent that transmits the notification. For example, if you want to receive email notifications when a colleague posts a blog message, check inside the box for **Blog Post** in the email column. See also: *Sending notifications to a community* on page 1543
- **Community Groups**. This tab sets preferences for all community groups. Select notifications you want to receive when a community group member performs an activity relating to the group, and the agent that transmits the notification. For example, you want to receive email notifications when a community group member posts to group's blog. To enable this, check inside the **Group Blog Post** box in the email column. See also: *Sending notifications to a community* on page 1543

  For Developers: Ektron has created a UserGroupPreferences user control. If you add the control to a community group's profile page, users can specify notification preferences for individual groups. This control is installed with Ektron and is located in *siteroot*`\Workarea\Notifications\Controls`.
- **My Activities**. Select notifications you want publish when performing various activities on the website. For example, if you want to publish notifications when you post to your blog, check the box for **Blog Post** in the **Publish** column. See also: *Sending notifications to a community* on page 1543.
- **SMS**. A checked box indicates that the type of content will be sent to your cell phone Short Message Service (SMS).
- **Activity Stream**. A checked box indicates that the type of content will be displayed in the Activity Stream widget on the eIntranet pages.
- **Email**. A checked box indicates that the type of content will be sent to your

Email address, which is specified in the General tab of your profile.



Profile Links tab

This field displays the user's alias if community aliasing is set for users. See also: *Types of URL aliasing* on page 1294.

4. Make necessary changes to user information.
5. Click **Update**.

Deleting a user

NOTE: If you are using Active Directory to delete a user, see *Maintaining AD user information* on page 1484.

IMPORTANT: You cannot delete a user who is applied to any workflow. If you need to immediately disable a user, edit the user and check the **Account Locked** box. See also: *Approving content for publication* on page 689.

NOTE: Only certain users are allowed to delete Ektron users. See *Auditing changes* on page 632.

To delete a user from Ektron:

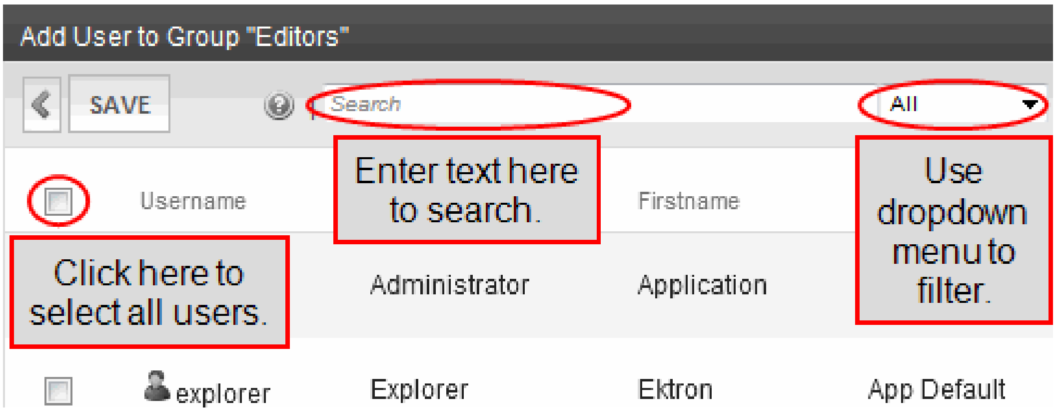
1. Go to **Workarea > Settings > Users** to display the View Users screen.
2. Click the **Username** of the user you want to delete. The View User Information screen appears.
3. Click **Delete** ( ).
4. Click **OK**.

WARNING! When a user is deleted, that action is permanent. The process cannot be undone.

Assigning a user to a user group

When you create a user group, no user is initially assigned to it. To add a user to a user group:

1. Go to **Workarea > Settings > User Groups** to display the View User Groups screen.
2. Click the user group to which you want to add a user. The View Users in Group screen appears.
3. Click **Add User**. Users who do not (yet) belong to the group appear.
4. Select 1 or more users to add to the group using 1 or more of the following methods:
   - To select specific users, check the box to the left of their name.
   - To select all users, check the box in the column header row.
   - Enter characters into the **Search** field and find only users that match them. For example, you could enter **bill**, click the **Search** button, and see only users with those characters in their name.
   - Use the drop-down menu to sort the display by **User Name**, **Last Name** or **First Name**.



5. Click **Save**.
6. Click **OK**. The selected users are now members of the selected group.
7. Continue this process until you add all users into User Groups.

Removing a user from a user group

NOTE: If you are using Active Directory to remove a user from a group, see *Maintaining AD user group information* on page 1487.

Removing a user from a user group does not delete the user from Ektron. Also, you cannot remove users from the Everyone group.

1. Go to **Workarea > Settings > User Groups** to display the View User Groups screen.
2. Click the name of the group that includes the user you want to remove. Members of the group appear.
3. Click **Remove** to the far right of the user that you want to remove.
4. Click **OK**.

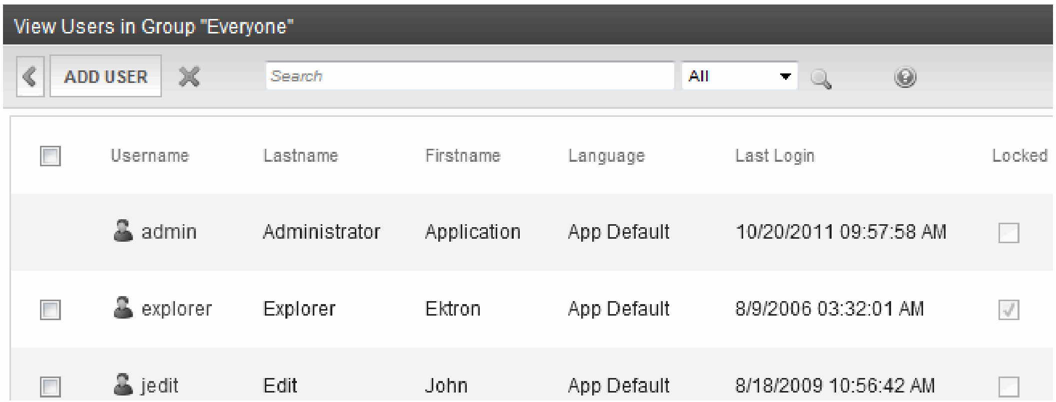
Managing user groups

NOTE: If you are using Active Directory to manage user groups, see *Setting up Active Directory integration mode* on page 1477.

Every Ektron user belongs to at least one User Group. User groups are used when creating permissions and workflow for content folders.

Viewing the users in a user group

1. Go to **Workarea > Settings > User Groups** to display the View User Groups screen.
2. Click the user group whose members you want to view. The View Users in Group screen appears with a list of users who are members of the group. From this screen, you can edit or delete user groups, as well as add and remove users to and from the user group.



Creating a user group

1. Go to **Workarea > Settings > User Groups** to display the View User Groups screen.
2. Click **Add User Group**. The Add a New User Group to the System screen appears.
3. Enter a name and brief description of the user group you want to create.
4. Click **Save**.

Editing a user group

When editing a User Group, you can only change its name.

NOTE: You cannot edit the default Administrators and Everyone user groups.

1. Go to **Workarea > Settings > User Groups** to display the View User Groups screen.
2. Click the User Group you want to edit. The View Users In Group screen appears.
3. Click **Edit** ( ). The Edit User Group screen appears.

4. Edit the group name as required.
5. Click **Update**.

Deleting a user group

When you do not need a User Group anymore, you can delete it from the system.

NOTE: You cannot delete the Administrator and Everyone groups.

IMPORTANT: You cannot delete a user group that is applied to any workflow. See also: *Approving content for publication* on page 689

1. Go to **Workarea > Settings > User Groups** to display the View User Groups screen.
2. Click the User Group you want to delete. The View Users In Group screen appears.
3. Click **Delete** ( ).
4. Click **OK**. The User Group is deleted from the Ektron website.

Assigning a user to a user group

See *Managing users and user groups* on page 1439.

Removing a user from a user group

See *Removing a user from a user group* on page 1449.

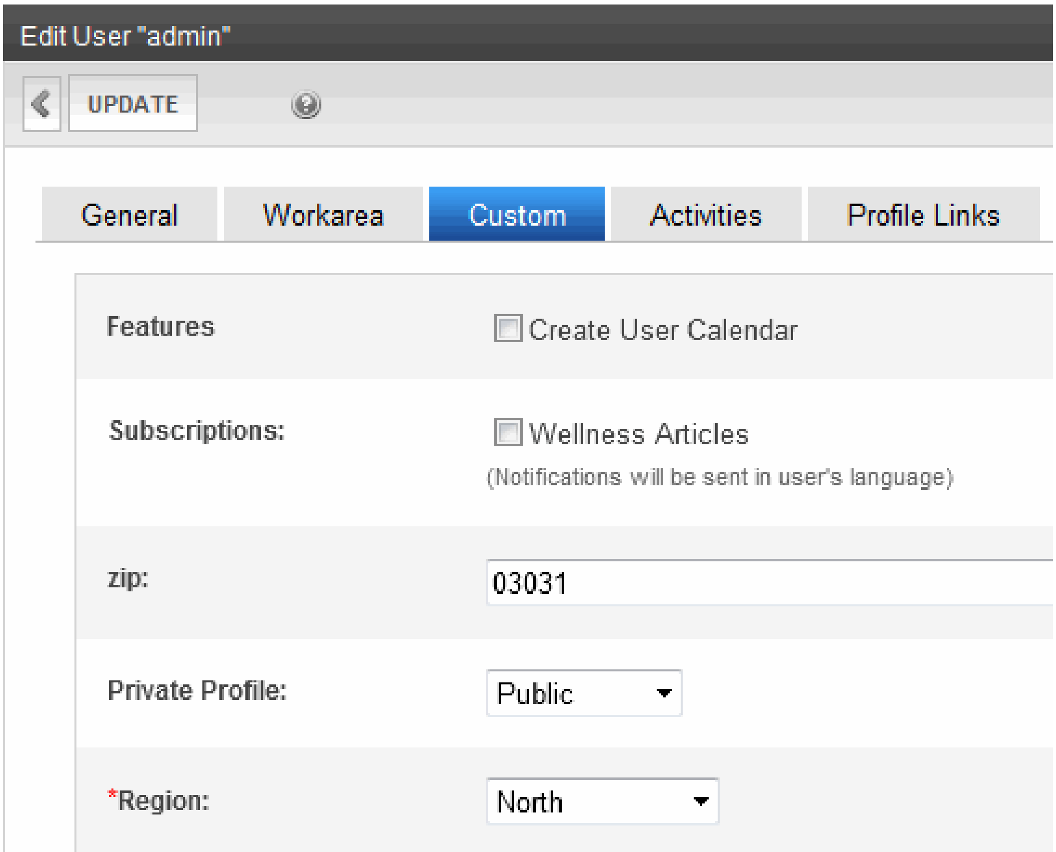
Creating custom user properties

PREREQUISITE

Only Administrators Group members can work with Custom User Properties.

Custom User Properties let you create custom fields that collect user information beyond the standard Ektron properties. Examples include employee ID, phone number, start date, position, department, and IP address. Once created, custom properties appear on the User Properties and Membership User Properties screens on the **Custom** tab, and on the Membership server control.

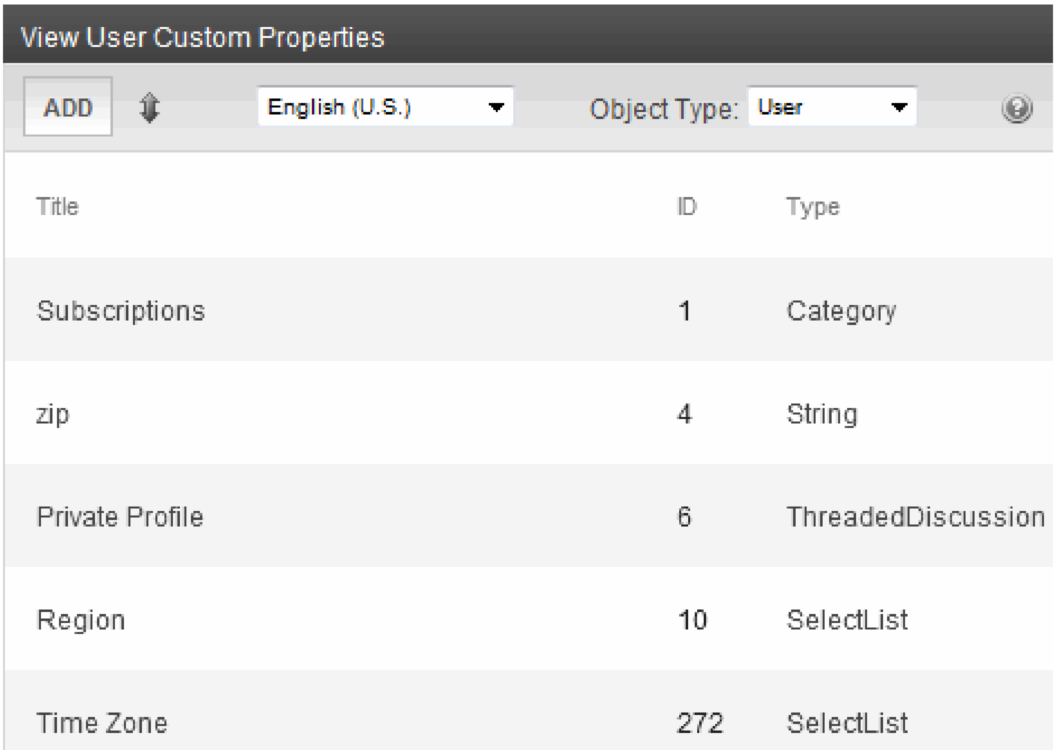
IMPORTANT: Custom properties are required fields, which means that a user must complete them in order to create a new or edit an existing user.



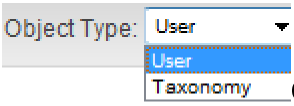
Viewing custom properties

Use the View Custom Properties screen (**Settings > Configuration > Custom Properties**) to create custom properties for users and membership users. From the View Custom Properties screen, you can:

- add a new custom property. See *Adding a custom user property* on the facing page.
- edit a custom property. See *Editing custom user properties* on page 1460.
- reorder the sequence of custom properties on the users and membership users screen. See *Setting the order of custom user properties* on page 1461.
- work with custom properties in different languages. See *Creating a non-English custom user property* on page 1462.



- **Add**. Add custom user properties. See *Adding a custom user property* below.
-  **Reorder**. Change the order of the custom user properties on the Users or Membership User Properties screen. See *Setting the order of custom user properties* on page 1461.
- 

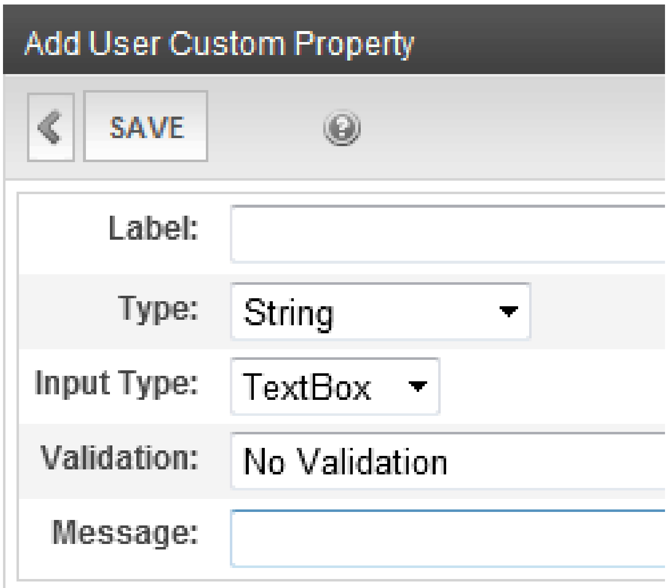
Language Selection drop-down list —lets you view custom user properties by language. See *Creating a non-English custom user property* on page 1462.
- 

Object Type drop-down list—lets you choose users or taxonomies whose custom user properties you want to manage. See *Adding a custom user property* below and *Creating and assigning taxonomy custom properties* on page 1282.
- **Title** field—Displays the title of a custom user property. When viewing by language, the title changes to the title used in a specific language if it has been defined. Click a **Title** to edit the property. See *Editing custom user properties* on page 1460.
- **Type field**. Shows the Type of a custom user property.

Adding a custom user property

1. Go to **Workarea > Settings > Configuration > Custom Properties**.
2. From the **Object Type** pulldown, select **User**.
3. Choose the standard language used in your Workarea.

4. Click **Add**. The Add User Custom Property screen appears.



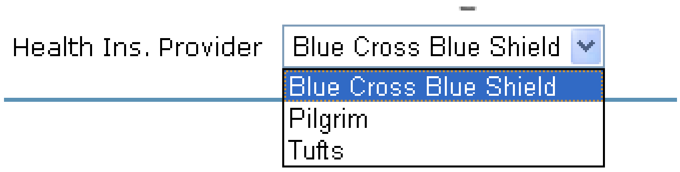
- **Label**. Title of the property you are adding. For example, Employee ID.

  NOTE: Title and Label are the same field. On some screens the word Title is used, on others the word Label is used.

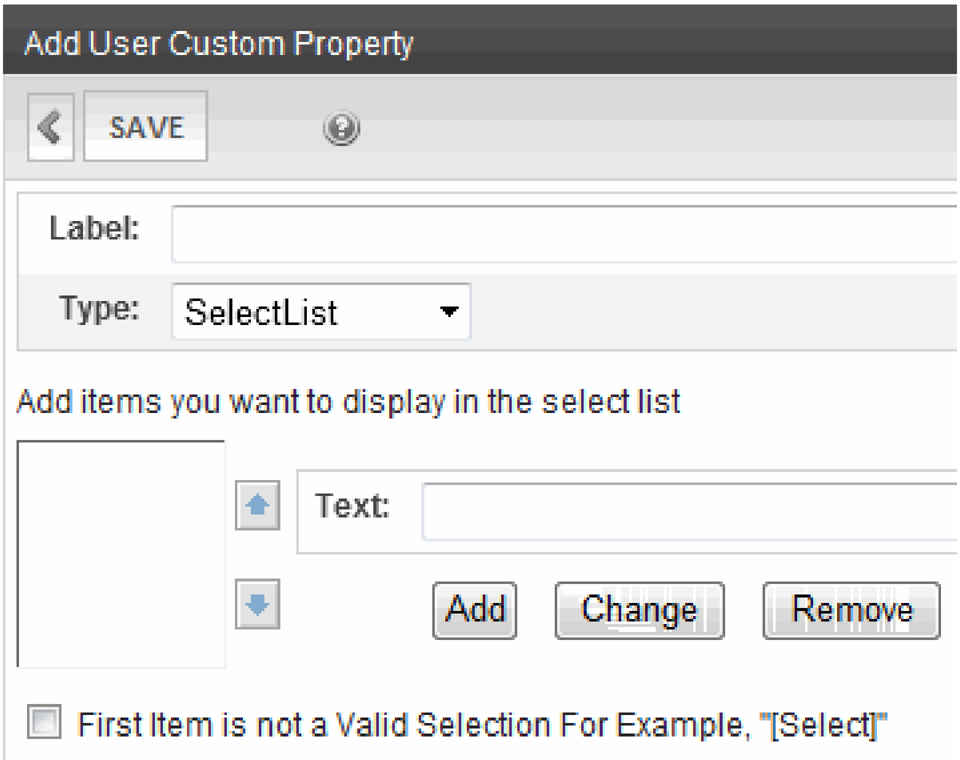
- **Type**. The property's data type. When a type is selected and saved, you cannot change it. You must delete the custom property and re-enter it.
  - **String**. Accepts all alpha, numeric, and symbol characters. Text Box, Text Area, and Hidden input types are available. All validations are available. See also: **"Validation" on page 15-23**
  - **Boolean**. Accepts a true or false response. Check Box and None input types are available.
  - **Numeric**. Accepts numbers only. The following input types are available.
    - Text Box
    - No Validation
    - Cannot be blank
    - Numeric Only
    - U.S. Zip Code
    - Dollar Amount
  - **Date**. Only a date can be entered. The following input types are available.
    - Text Box
    - No Validation
    - Cannot be blank
    - Date Only

- **SelectList**. Select a response from a list of choices.

  Use a **SelectList** field to present the user completing the User Information or Membership User Properties screen with a list of choices.



When you create a custom user property and specify its type to be **Select List**, the screen changes, allowing you to add, change, or remove list entries.



Completing a SelectList field entry

To add an item to the list, enter its text in the **Text** field, then click **Add** . Added items then appear in the larger box on the left. You can then:

- *remove* any item from the list by clicking it. It appears in the **Text** field. Click **Remove**.
- *change* the text of any list item by clicking it. It appears in the **Text** field. Make changes then click **Change**.
- *change the sequence* of list items by selecting an item then clicking the up or down arrow to move the item

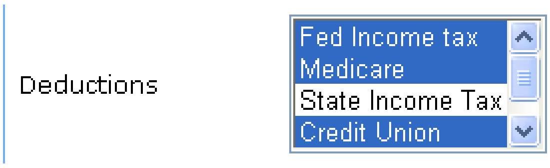
Using the first list item to prompt a response

You can use the first list item to prompt the user to make a selection instead of being a valid response. For example, the first list item may say **Select from a list of choices**. To do this, check the **First item is not a valid selection for example, "[Select]"** check box.

If this option is selected, the field has an asterisk (*) next to it (indicating it is required) on the User Information and Membership User Properties screens. The user completing the screen must choose any selection other than the first item. If he tries to file the screen without choosing a different item, the following error message appears: **Please fill in all required fields (*)**

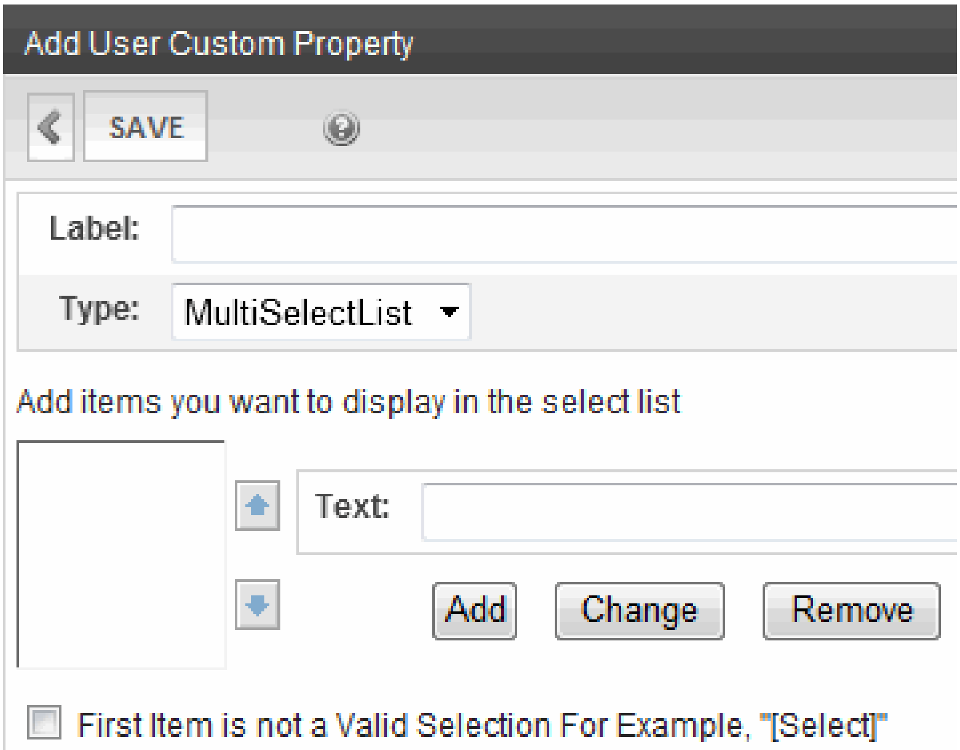
- **Multi SelectList**. Select any number of responses from a list of choices.

  Use a **MultiSelectList** field to present the user completing the User Information or Membership User Properties screen with a list of choices. The user can choose as many responses as appropriate.



Selected items are indicated by a blue background.

When you create a custom user property and specify its type to be **MultiSelect List**, the screen changes.



For information about completing the screen, see *Completing a SelectList field entry* on page 1455.

- **Category**. A system-defined type that appears when the first subscription is created. One entry covers all subscriptions. See also: *Creating a subscription* on page 1380.

- **Input Type**. Choose how a user is able to enter a response to the property.
    - **Text Box**. Creates a standard text box. Use this with a String, Numeric, or Date. For example:

    - **Text Area**. Creates a multi-lined area for entering text (String). Typically used when more than one line of text needs to be added. For example:

    - **Hidden**. Hides the input field (String). This can be used by an administrator to add additional values at postback time. This requires a developer to add client-side JavaScript. If you change a String field's **Input Type** from **Text Box** or **Text Area** to **Hidden**, then sign in as a member of the Administrators group, the field and its value still appear on the user's profile.
    - **Check Box**. Creates a boolean checkbox. Used when the field requires a boolean (true / false) response. For example:
- **Validation**. Ensures the right type of data is entered in a text box or text area.

Validation	Description	An Option When Used With
No Validation	The entry is not checked.	• String • Numeric • Date
Cannot be blank	A response must be entered.	• String • Numeric • Date
Numeric Only	The response must be a number.	• String • Numeric

Validation	Description	An Option When Used With
Text Only	The response must be characters (any combination of alpha, numeric, and symbol).	• String
Date Only	The response must be entered in the following format: `mm/dd/yyyy`.	• String • Date
Email Only	The response must be entered as an Email address. For example, `username@domain.domainextention`.	• String
Credit Card Only	The response must be entered as a credit card number. For example, `nnnn nnnn nnnn nnnn`	• String
Social Security Only	The response must consist of 9 digits in this pattern:`nnn-nn-nnnn`.	• String
U.S. State Code	A 2-letter state code. For example: NH = New Hampshire.	• String.
U.S. Zip Code	The response must consist of 5 (`nnnnn`) or 9 digits separated by a dash after the fifth (`nnnnn-nnnn`). **NOTE:** If you use the Numeric Type, you cannot have a dash or space when using a 9 digit Zip Code	• String • Numeric
Valid US Phone Number	The response must consist of a 10 digits in this pattern: `nnn-nnn-nnnn`.	• String
Canadian Postal Code	The response must consist of 6 (`xnx nxn`) alpha or numeric characters with a space after the first 3 characters.	• String

Validation	Description	An Option When Used With
Time HH:MM or HH:MM:SS or HH:MM:SS.mm	Time is entered in one of the following 3 formats. • `HH:MM`. Hours and Minutes 09:30 • `HH:MM:SS`. Hours, Minutes and Seconds 09:30:45 • `HH:MM:SS.mm`. Hours, Minutes, Seconds and milliseconds 09:30:45.002	• String
IP Address	The response must be in the form of an IP address.	• String
Dollar Amount	This validation works differently depending on the Type used. If used with the *String* Type, you can have a dollar sign ($) along with the money amount in the text field. When used with the *Numeric* Type, you are not allowed to have a dollar sign ($) in the text field. The following are examples of each type with validation: • **String**. $3.00 • **Numeric**. 3.00	• String • Numeric
Canadian Social Insurance Number	The response must consist of 9 digits in this pattern (`nnn nnn nnn`).	• String

- **Min Value**. If desired, enter the minimum value you want to allow. The Min Value only appears when the following Validation methods are used: Numeric Only, Date Only and U.S. Zip Code. The following is an example of a Date Only Min Value: **01/01/1900**.
- **Max Value**. If desired, enter the maximum value you want to allow. The Max Value only appears when the following Validation methods are used: Numeric Only, Date Only and U.S. Zip Code. The following is an example of a Date Only Max Value: **01/01/1987**.

- **Message**. A message that appears when information entered in a user property violates the validation criteria. For example, if the validation is U.S. Zip Code, you might use the following message: **Please enter a valid zip code**

Features field

This field is automatically included on the User or Member profile Custom Tab to let the profile owner edit events on a Web calendar. When this is checked, it cannot be unchecked. For more information about Web Calendar, see *Adding system calendar events* on page 916.

Private profile field

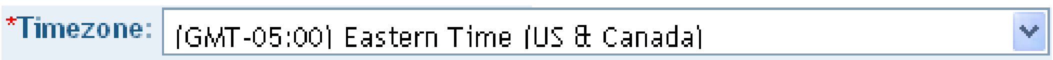
This field is automatically included on the User or Member profile Custom tab. It lets the profile owner determine which other users can see the owner's community activities. For example, *Using the ActivityStream widget on a PageBuilder page* on page 1587 explains how this setting affects other users' ability to see your activities.

The **Private Profile** field value also determines if a user's profile is visible on a forum. See also: *Managing a discussion board on your website* on page 968.

When a Micro-message server control is placed on a page in TimeLine mode, micro-messages only appear for users whose **Private Profile** setting is set to **Public**.

Time zone field

The **Time Zone** property field is a special field used by the Web Calendar feature.



Select the time zone of the User or Member here. When they are logged in, appointment times will show in this time zone. For more information, See also: *Adding system calendar events* on page 916.

5. Click **Save**. The new property appears on the View Custom User Properties screen.

Editing custom user properties

Click a custom user property’s title to display the Edit Custom Property Screen. From here, you can edit and delete a custom property or create a version in a non-default language.

When you save changes to a custom user property, the changes affect all users and membership users. These changes also affect any other language versions of the custom user properties that exist.

1. Go to **Workarea > Settings > Configuration > Custom Properties** to display the View User Custom Properties screen.

2. From the **Object Type** pulldown, select **User**.
3. Click the **Title** of the Custom User Property you want to edit.
4. Choose the field you want to change. You can edit the following fields:
   - Label
   - Input Type
   - Validation
   - Min Value
   - Max Value
   - Message
5. Click **Save**.
6. When you click a user or membership user, you see your changes. For descriptions of these fields, see *Creating custom user properties* on page 1451.

NOTE: You cannot edit the **Type** field. If you need to change the type, you must delete the custom user property and create a new one.

Deleting a custom user property

WARNING! If you delete a custom user property, it is removed from all users and membership users. Information that was collected for that property is lost. Also, all language versions of the property are deleted.

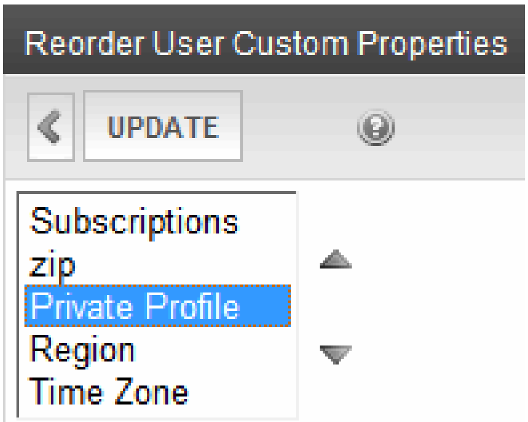
1. Go to **Workarea > Settings > Configuration > Custom Properties** to display the View User Custom Properties screen.
2. From the **Object Type** pulldown, select **User**.
3. Click the **Title** of the custom user property you want to delete.
4. Click **Delete** ( ).
5. A dialog asks you to confirm.
6. Click **OK**.

Setting the order of custom user properties

Use this procedure to change the sequence of user properties on the User and Membership User Custom Properties screens.

1. Go to **Workarea > Settings > Configuration > Custom Properties**.
2. From the **Object Type** pulldown, select **User**.

3. Click **Reorder** ( ).



4. Click a property.
5. Click the **Up** or **Down** arrows to move the property up or down the list.
6. Click **Save**.

Creating a non-English custom user property

Like content, custom user properties have a language attribute. This is useful if you have users or membership users that only use a specific language. It can also be used if you want a custom user property to appear in the language in which the user is signed in.

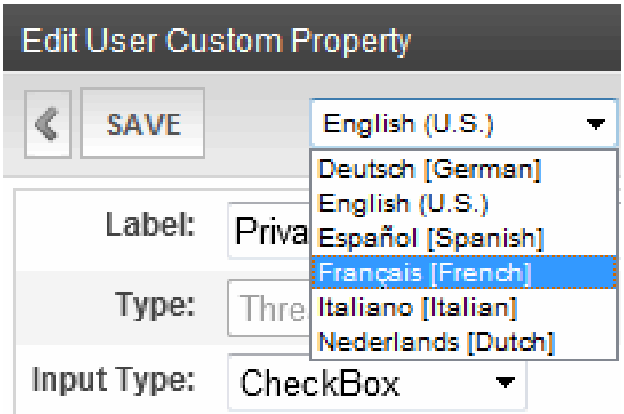
Unless a language other than English is defined for a custom user property, the property defaults to the English version. For example, if you have 2 properties called Birthday and Phone Number in English and you can translate the French version of Birthday to Anniversaire, when you view the properties in French, you see the English version of Phone Number and the French version of Birthday.

When creating a custom user property, it must be created in English then translated to the desired language. This is done by editing the property, changing languages, filling out the Translate Custom Property Label screen, and saving the property.

WARNING! All custom user properties in languages other than English are tied to the English version of the property. If you delete the English version of the property, all other language versions are deleted also. However, you can remove a non-English language version of a custom property without deleting the English version. See *Removing a non-English custom user property title* on the facing page.

To translate the Title/Label of a property into French.

1. Go to **Workarea > Settings > Configuration > Custom Properties** to display the View User Custom Properties screen.
2. From the **Object Type** pulldown, select **User**.
3. Choose a custom property to be defined in another language.
4. Choose a language from the language select drop-down box. The Translate Custom Property Label screen appears.

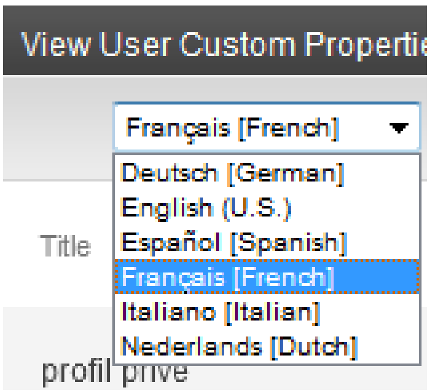


5. Enter a **Label** for the property in the language you have chosen. For example, if you are creating a French version of a Birthday custom user property, enter **Anniversaire** in the label text field. For information on the Label property, see *Adding a custom user property* on page 1453.
6. Click **Save**.

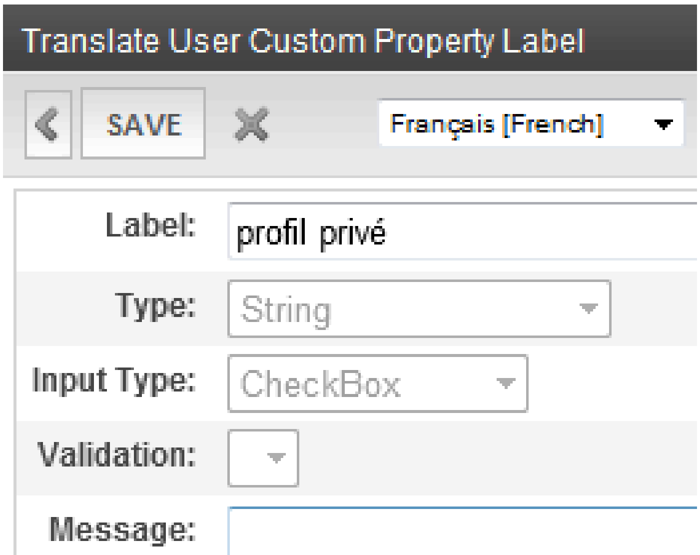
Removing a non-English custom user property title

Removing a non-English version of a custom user property title does not remove the English version of the property.

1. Go to **Workarea > Settings > Configuration > Custom Properties**.
2. From the **Object Type** pulldown, select **User**.
3. From the Language drop-down box, choose the language of the custom user property.



4. Click the Title you want to delete. The Translate User Custom Property Label screen appears.



5. Click **Delete** ( ). A dialog box asks if you want to remove the translated custom property title.
6. Click **OK**. The English version of the Edit Custom Property screen appears.
7. Click **Back** ( ).

WARNING! Do not click the delete button on the Edit Custom Property screen. This action deletes the English version of the custom user property. If you click the delete button, you lose all information collected by the property and all language versions of the property.

Defining roles

Ektron contains an Administrators User Group. Any member of that group automatically has full administrator privileges. The Roles feature lets you assign *limited* or *specific* administrator privileges to users who do not require full administrator privileges. For example, you can let certain users create, redirect, or remove tasks but deny them other privileges normally granted to administrators.

The Permissions screen lets you control which users can manage a folder's properties, its content, library items, and create or edit collections. (See also: *Managing folder and content permissions* on page 160) Together, the Roles feature and the Permissions screen enable you to assign administrative privileges to users who are not members of the Administrators group.

Best Practice

When creating new user groups to use with roles, assign names as a mnemonic aid for the role, especially for folder-specific rules. For example, the Marketing Folder Admins user group could be used for all role members who administer the marketing folder.

Administrator role privileges

Administrator privileges include access to the screens that appear when you select **Settings > Configuration**.

Administrators can also

- edit folder properties (including Web alerts, metadata, permissions, and the workflow)
- manage aliasing features, such as turn aliasing on or off, activate and deactivate manual aliases, and create automatic aliases
- manually alias content
- add, edit, or delete a calendar
- add, edit, or delete a business rule
- create, view, edit, and delete metadata definitions
- create, view, edit, and delete taxonomies
- create, redirect, and delete tasks
- require a collection to go through an approval process
- export content for translation to another language using XLIFF
- run an eSync
- access the eCommerce Module

Using the roles screens

Use the Roles screens to assign limited administrator privileges. To access the Roles screens, go to **Workarea > Settings > Roles > Built-In > Folder Specific** or **System-Wide**.

NOTE: In the Roles screens, you can select users or groups. However, you cannot select the Administrators group, because that group already has full permissions.

To view all roles assigned to any user, go to **Workarea > Settings > Users**. Then, select a user and click the **Roles** tab.

Folder-specific roles

When setting up users and groups for administrative access over folders, keep these guidelines in mind.

- After being identified on the Manage Members for Role: Folder User Admin screen, users or groups must also be given at least Read-Only permission for individual folders on the **Folder Properties > View Permissions for the Folder** screen. See also: *Managing folder and content permissions* on page 160.
- You *must* use the same identity on the Manage Members for Role: Folder User Admin and Folder properties screens. If a user group is listed for the role, use the same group when assigning folder permissions, not simply a group member. Conversely, if individual users are listed on the role screen, they must be specified in the folder permission.

- Ektron *strongly* recommends adding only user groups to the Folder User Admin role, not individual users. If you set up an individual user as a role member, he could accidentally receive administrative rights to other folders.

Folder-User admin

View and edit folder properties. These users can update properties, permissions, the workflow, metadata, Web alerts, purge history, and so on. For example, create a user group and give it permission to manage the top-level marketing folder. Group members can do everything to that folder and its subfolders, but cannot manage other folders. See also: *Creating a custom permissions role* on page 1470 and *Setting folder properties* on page 150.

Move or copy

Move or copy content. An Ektron best practice is to create a User Group for this purpose, then assign the group to this role. You should not assign the role to individual users. After assigning the User Group here, go to the folders whose content these users will be allowed to move or copy, and assign to that User Group at least Read Only and Traverse permissions. See also: *Managing folder and content permissions* on page 160 and *Moving or copying content* on page 629.

System-wide roles

Alias-Admin

Perform all URL Aliasing functions. See *Creating user-friendly URLs with aliasing* on page 1293.

Alias-Author

Perform all functions related to URL Aliasing *except* viewing and editing the URL Aliasing Setting screen and Editing aliasing rules.

Analytics Viewer

Can view:

- Web Traffic Analytics reports
- Analytics button on the View Content Screen
- Analytics from the website's Access point menu ( )
- Analytics from a PageBuilder page

See *Analyzing websites* on page 483.

Business Rule Editor

Create or edit business rules and rule sets. See *Creating business rules for your website* on page 1361.

Collection and Menu Admin

Create, edit and delete collections and menus via the **Content** tab.

NOTE: To manage permissions for creating collections via the folder's New > Collection or New> Menu option, use folder permissions. See also: *Managing folder and content permissions* on page 160

See *Working with collections* on page 740 and *Creating menus for your website* on page 1235.

Collection Admin

Create, edit and delete collections via the **Content** tab.

NOTE: To manage permissions for creating collections via the folder's **New > Collection** option, use folder permissions. See also: *Managing folder and content permissions* on page 160

See *Working with collections* on page 740.

Collection Approver

If approval is required for a collection, approve changes to it, including the deletion of a collection. See *Setting up collection approval* on page 752.

Commerce Admin

Use the eCommerce feature from the Workarea. See *Conducting eCommerce* on page 1605.

Community Admin

Perform the following community activities:

- Set system default preferences
- View and create new
  - Activity Types
  - Agents
  - Messages
- Enable or disable notifications

See *Sending notifications to a community* on page 1543.

Community Group Admin

Create, edit and delete and manage all community groups. These users have the same privileges as the group Administrator and members of the Administrators group. See *Managing community groups* on page 1530.

Community Group Create

Create and manage community groups. A user with this role can only manage community groups she or he has created. See *Managing community groups* on page 1530.

Content Workflow Admin

- Gets a **Force Publish** button on the Edit and View Content screens. This button only appears if the content is being edited or is in Submitted status. (User must also be assigned the folder user admin role.)
- Gets a **Cancel Workflow** button on the Edit and View Content screens. This button only appears if the content is being edited or is in Submitted status. (User must also be assigned the folder user admin role.)

DXH Connection Admin

Create and manage DXH connections via the **Workarea > Settings > Digital Experience Hub > Connect to DXH** screen.

DXH Connection User

Import and update DXH content into Ektron folders.

MasterLayout-Create

Create and edit PageBuilder Master Layouts. See *Creating a PageBuilder master layout* on page 1010.

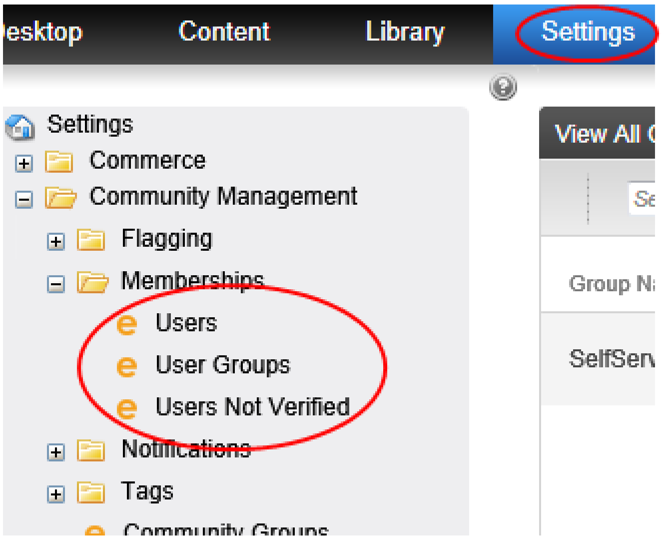
Menu Admin

Create, edit and delete menus.

See also*Creating menus for your website* on page 1235

Member Admin

Manage membership users and membership user groups. Member admin role members cannot work with Ektron users. Users assigned to this role can create, edit, and delete membership users and groups through the following screen.



See also: *Membership users and groups* on page 1507; *Membership groups* on page 1514

Message Board Admin

Approve pending comments or delete existing comments on a message board. See *Who can moderate message board* on page 1526

Metadata-Admin

View, create and edit metadata definitions. See *Working with Metadata* on page 755.

Multivariate Tester

Perform multivariate testing. *Setting up a multivariate experiment* on page 1089.

Search-Admin

Create and edit Synonym Sets, Suggested Results, Integrated Search Mappings, and the Search Status screen. See *Providing suggested results* on page 350, *Using synonym sets* on page 348, *Including external files in a search* on page 359.

Smart Forms Admin

Create and edit Smart Forms. See *Working with Smart Forms* on page 815.

Synchronization Admin

Access the **Workarea > Settings > Configuration > Synchronization** screen, which lets the user perform all synchronization activities, such as:

- manage sync configurations and profiles
- run a sync
- perform content and folder-level sync
- sync packages

See *Synchronizing servers using eSync* on page 1787.

Synchronization User

- Sync content and folders
- View Sync logs
- Run a sync
- Sync content and folders

See Synchronizing Servers Using eSync.

Task Create

Create tasks. See *Creating a task assigned to content* on page 1341.

Task Delete

Delete tasks. See *Deleting a task* on page 1349.

Task Redirect

Redirect tasks. See *Assigning and managing tasks* on page 1339.

Taxonomy Administrator

Create and manage taxonomies. See *Organizing content with taxonomies* on page 1253.

Template Configuration

View, create, update, and delete system templates. See *Working with templates* on page 769.

Translation State Admin

Change the translation status of content. See *Marking translation statuses* on page 1424.

User-Admin

Create, view, edit, and delete users and user groups. See *Managing users and user groups* on page 1439.

XLIFF-Admin

Use the Language Xport feature, which copies content into XLIFF files that can be submitted to a translation agency. Can change the translation status of content. See *Exporting content to XLIFF* on page 1418 and *Marking translation statuses* on page 1424.

Widget Synchronizer

Update widgets and edit their title, label, and parameters.

Creating a custom permissions role

The custom permissions role lets your Web developer create a site page, and then extend or restrict access to that page's content (or areas with a page) to users assigned to a custom role.

Items you could show and hide could be as simple as a content block. But they could be more complicated, such as displaying buttons and fields for one user group, and something completely different for another.

Custom roles have no effect inside the Workarea.

Examples of custom roles

- Most site visitors belong to different political parties, while some are registered with no party. By checking the user's ID against custom roles, you could present registered voters with selections for their party's primary, and prevent unregistered voters from participating.
- Your Ektron site visitors fall into 2 categories: suppliers and buyers. You could check the current user against a custom role and show buyers one set of data and suppliers a different set.

- On your eCommerce site, registered students see a list of coupons that are not displayed for anyone else. Or, only registered adults can order age-controlled items, such as tobacco or alcohol.
- Control your pages' background colors, images, and skins based on custom roles. For example, mothers get family-oriented background images while teenagers get rock images and related styling.

Setting up a custom role

1. Set up user groups and add to them users who will have some level of access to the custom page. See also: *Creating a user group* on page 1450
2. To continue the above example, create one group of auditors (who will have read-only access), and another group of administrators (who will have edit access).
3. Create a folder to hold the content that will appear on the custom page. Use the folder's Permissions screen to assign users and groups appropriate access to the folder's content. See also: *Managing folder and content permissions* on page 160
4. Go to **Workarea > Settings > Roles > Custom Permissions**.
5. Click **Add Custom Roles**. The Manage Custom Roles screen appears.
6. Enter a name for the custom role.
7. Click **Save**. The Manage Custom Roles screen appears, displaying the new custom role.
8. Click the name of the role you created. The Manage Members for Role screen appears.
9. From the Show drop-down menu, select the type of users you want to add to the role.
10. Click **AddRole Member**.
11. Check the box next to the users or groups that you want to add to the role.
12. Click **Save**. The Manage Members for Role screen appears.
13. Your Web developer creates the custom page.
14. You create content to appear on the custom page. Place the content in the folder you created in Step 2.

Information about custom roles for developers

The API provides 2 methods that determine if the current user is logged in, and if he is a member of the Administrators group. The methods let you test customizable roles with conditions outside the standard Is-Logged-In /Is-Admin tests.

- `GetRolePermissionSystem(RoleName As String, nUserId As Long)` is a Boolean value indicating if the user belongs to the system-wide custom role.
- `GetRolePermissionFolder(RoleName As String, nFolderId As Long, nUserId As Long)` is a Boolean value indicating if the user belongs to the custom role for the given folder.

Using Active Directory with Ektron

Active Directory lets you retrieve user and user group information from the Microsoft Windows Active Directory (AD) into Ektron. As a result, you can administer user information from 1 place, and users need to remember only 1 username/password combination to sign on to the network and Ektron.

Setting up Active Directory

IMPORTANT: Ektron strongly recommends configuring SSL, especially if you are using Active Directory Integration. SSL encrypts passwords that are otherwise sent as clear text to the Ektron server. See also: *Updating web.config to use SSL* on page 73.

You can set up Active Directory in the following ways:

- **Advanced Domains**. Set up through editing the `web.config` file and entering information in the Workarea. Use this method if:
  - You are using a firewall.
  - The Ektron server need not be part of an Active Directory domain.
  - You are connecting to multiple Active Directory domains, even ones that do not see each other.
- **Legacy**. The domain connects to the AD domain within the `web.config`. Use this method if you are using auto discovery.

Setting up Active Directory via the advanced domains method

1. Verify AD information because, after you enable AD integration, logon name and domain are imported to Ektron.
2. If your Active Directory forest has multiple domains, decide if you want Ektron to reference the listed domains or if you want to choose a specific one. (You will use this when completing the **Domain** field of the Active Directory Setup Screen.)
3. Edit the `web.config` file to the following values:

```
<add key="ek_ADEnabled" value="true"/>
<add key="ek_ADAdvancedconfig" value="true"/>
<add key="ek_AUTH_Protocol" value="LDAP"/>
<identity impersonate="false">
```

   NOTE: When using the Advanced Domains Method, the domains screen's credentials are used.

4. Set up your domains on the Edit Domains screen.
5. Configure the AD setup page. See *Setting up Active Directory* on page 1478.
6. Assign AD groups to Ektron user groups. See *Importing AD user group information* on page 1485.

Setting up Active Directory via the legacy method

1. Make sure each AD user to be used in Ektron is defined correctly in Active Directory. When you enable AD integration, logon name and domain are copied from AD to Ektron.
2. If your Active Directory forest has multiple domains, decide if you want Ektron to reference all domains, or if you want to choose a specific one. (You will use this when completing the **Domain** field of the Active Directory Setup Screen.)
3. Encrypt the domain account's Active Directory password using Ektron’s password encryption utility.

   To access that utility, go to the Windows **Start menu > All Programs > Ektron > *current release* > Utilities > Encrypt Email Password**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Encrypt Email Password**.
4. Set the following elements in the `web.config`.
   a. Set the `ek_ADEnabled` element to **true**. It should look like this:
   ```
   <add key="ek_ADEnabled" value="true"/>
   ```
   b. Make sure the `ek_ADAdvancedconfig` element is set to **False**. (This is the default value.)
   c. Set the `ek_AUTH_Protocol` element to **GC**. It should look like this:
   ```
   <add key="ek_AUTH_Protocol" value="GC"/>
   ```
   d. Declare a domain account through `ek_adusername` and `ek_adpassword`. It should look like this:
   ```
   <add key="ek_ADUsername" value="[username]@domain" />
   <add key="ek_ADPassword" value="YourPasswordHere" />
   ```
   e. For the `authentication` element, change the value of the `impersonate` attribute to **False**. It should look like this:
   ```
   <identity impersonate="false" userName="" password=""/>
   ```
5. Configure the AD setup page. See *Setting up Active Directory* on page 1478.
6. Assign AD groups to Ektron user groups. See *Importing AD user group information* on page 1485.

Implementing Active Directory

You can implement Active Directory in 1 of 2 modes.

- *Active Directory Integration* mode—the following information is shared between Active Directory and Ektron:
  - user logon name
  - domain
  - password
- *User authentication only* mode—the following information is shared between Active Directory and Ektron:

- user logon name
- domain
- password
- user’s first and last name
- email address
- user groups
- user’s group memberships

Implementing Active Directory integration mode

Active Directory Integration maintains consistent user and user group information between AD and Ektron. First, user information is imported from AD into Ektron. When this is complete, user group information is imported.

Ektron does not write to Active Directory; it only reads from it. This changes the way Ektron manages user and user group information.

- After you enable AD integration, many changes to user and user group information must be made in AD. Several fields on the Edit User and User Group screens become view-only.
- When adding new users or groups, you can only select from users and groups in AD. If a user or group does not exist in AD, create it there then import it to Ektron.
- Integration requires Read Membership Group Permissions within Active Directory.
- When using Integration, you must select a Administrator group. (There can only be one admin group per Ektron site.) Click the search option and select Domain users or an admin group created in AD specifically for Ektron.

Ektron imports the following AD user information.

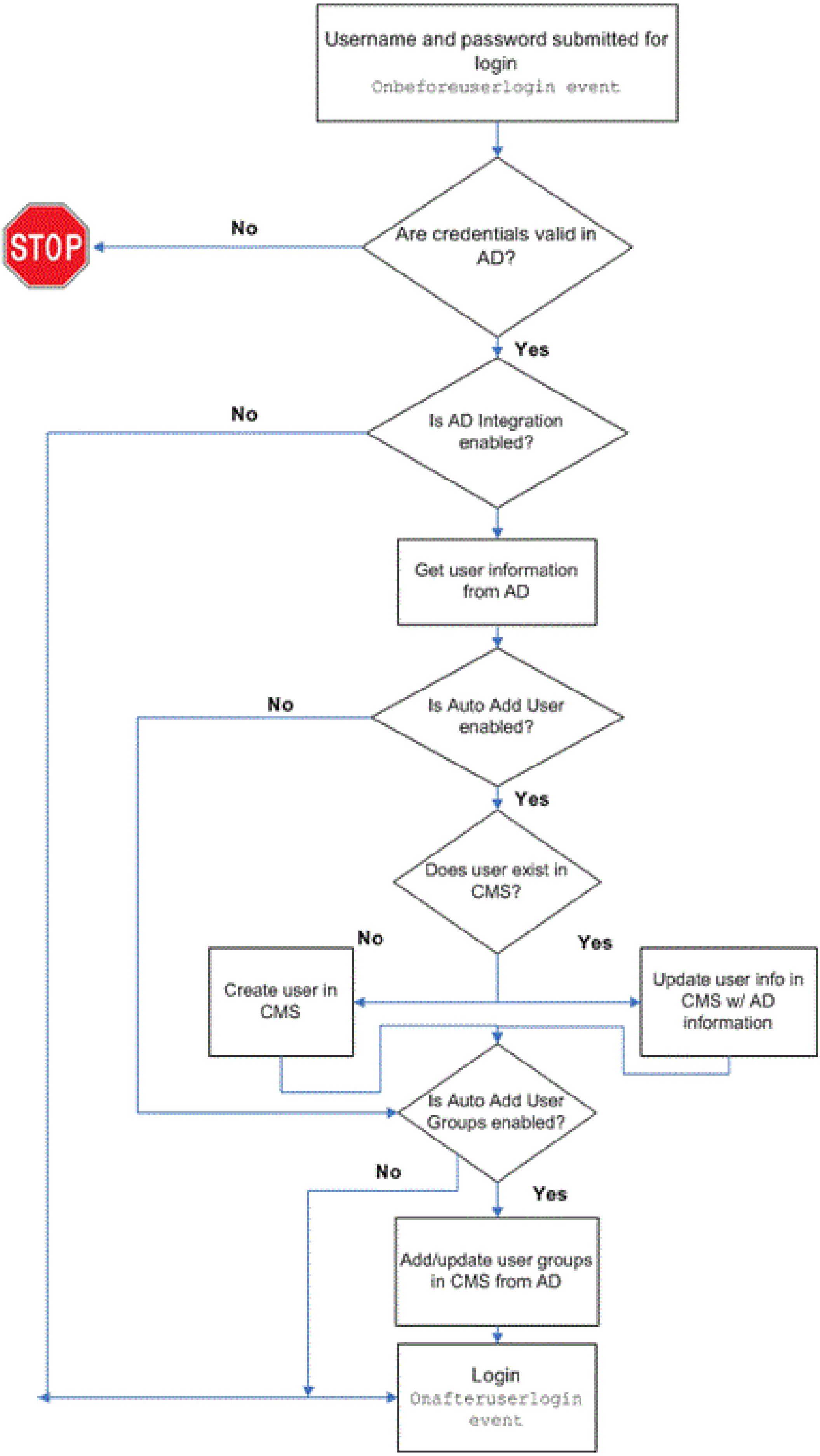
- Authentication (user logon name and domain) for signing in to Ektron. The AD password is not stored in Ektron. Ektron only refers to it during sign in.
- Group name (AD attribute cn), which corresponds to the Ektron domain and user group name.
- User information

AD Field	AD Attribute	Corresponding Ektron Field
User logon name (pre-Windows 2000)	sAMAccountName	Domain and Username
Last Name	sn	Lastname
First Name	givenName	Firstname

AD Field	AD Attribute	Corresponding Ektron Field
Email	mail	email Address

NOTE: Users and user groups can share a name in different domains, for example, juser@example.com and juser@example.net. Otherwise, user names must be unique.

The following diagram illustrates the Active Directory feature's components.


Username and password submitted for login
Onbeforeuserlogin event
Are credentials valid in AD?
No
STOP
Yes
Is AD Integration enabled?
No
Get user information from AD
Is Auto Add User enabled?
No
Yes
Does user exist in CMS?
No
Yes
Create user in CMS
Update user info in CMS w/ AD information
Is Auto Add User Groups enabled?
No
Yes
Add/update user groups in CMS from AD
Login
Onafteruserlogin event

Setting up Active Directory integration mode

The Active Directory feature uses multiple Ektron screens to edit domains, set up Active Directory, display AD status, and view and search for users and user groups.

Adding a domain to AD

Use the Edit Domains screen to identify each network domain you will use with Ektron's Active Directory Integration. The screen lets you add new domains, modify existing ones, or delete obsolete ones. Use this screen to define domains, as opposed to using auto discovery to find them.

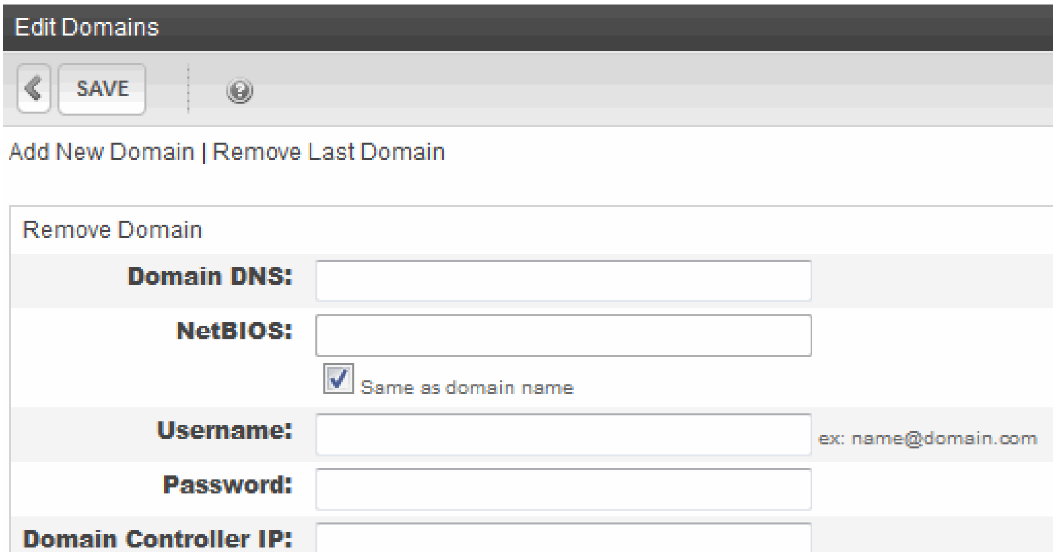
While signing on, users must select a domain in addition to username and password. Domains are also referenced when defining AD users and user groups that map to the Ektron users and groups.

PREREQUISITE

- Edit `web.config` as explained in *Setting up Active Directory via the advanced domains method* on page 1472.
- Your NetBIOS and setting, if it is different from your domain name. Contact your server administrator for this information.
- Your domain’s DNS. Contact your server administrator for this information.

To add a new domain:

1. Go to **Workarea > Settings > Configuration > Active Directory > Domains**.
2. Click **Edit**. The **Add New Domain** and **Remove Last Domain** options appear.
3. Click **Add New Domain**. The Edit Domains screen appears.



- **Domain DNS**. Enter the domain’s DNS. Contact your server administrator for this information. For example, **corp.example.com**.

- **NetBIOS**. If your NetBios is the same as your domain name, leave the box checked. Otherwise, uncheck the box and enter your NetBIOS setting in this field. Contact your server administrator for this information.
- **Username**. Enter the name of the user with permission to sign on to the domain server. The name is in the format *username@domainDNS.* For example, **jsmith@corp.example.com**.
- **Password**. Enter the password of the user.
- **Domain Controller IP**. Enter the IP address or DNS name of your domain controller. If using Active Directory with LDAP across a firewall, the IP address should be that of the firewall. On the firewall, traffic on port 389 (LDAP) should be allowed. Active Directory with GC uses different ports.

Setting up Active Directory

The Active Directory Setup screen lets you enable or disable AD and manage other AD settings, such as whether users and groups are automatically updated.

To enable AD and manage settings:

1. Go to **Settings > Configuration > Active Directory > Setup**. The Active Directory Setup screen appears.
2. Click **Edit**.
3. Enable options or enter information in fields as required.

   Active Directory installed

   - **Disable Active Directory and LDAP Authentication**. Disables the use of Active Directory and LDAP Authentication. See *Disabling AD integration* on page 1487.
   - **Enable LDAP Authentication**. If enabled, you must complete the LDAP-related fields (Type, LDAP Server, Port, Organization, Domain, Attribute, Use SSL, Path). See *Enabling LDAP* on page 1499.
   - **Enable Active Directory Authentication**. If enabled, user authentication is functional, and you can enable the following 3 fields. If you do not enable these fields, you are using *Implementing user authentication mode* on page 1488. For information on LDAP, see *Using LDAP with Ektron* on page 1498.
     - **Enable Active Directory Integration**. If enabled, the Active Directory Integration feature is functional and you can enable the next 2 fields.
     - **Enable automatic addition of user from AD**. If enabled, user information is imported from AD to Ektron when that user logs in or when the user is added to Ektron.
     - **Enable automatic addition of user to groups**. If enabled, a user's group membership is first imported from AD when a user logs in or is added.

   Auto Add

- **User Type**. Choose the type of user to be automatically added: Author or Member.

User Property Association

- **EmailAddr1**. Enter the Active Directory property that maps to the user's last name in Ektron. By default, this is `mail`, but you can change it to any AD property.
- **FirstName**. Enter the Active Directory property that maps to the user's first name in Ektron. By default, this is `givenName`, but you can change it to any AD property.
- **LastName**. Enter the Active Directory property that maps to the user's last name in Ektron. By default, this is `sn`, but you can change it to any AD property.

  For more information on user properties, see MSDN Library User Object User Interface Mapping (Windows).

Ektron Administrator Group Association

- **AD Group Name @ AD Domain**. Enter the Active Directory user group and domain name that map to the Ektron administrator group. If your AD does not have a user group that includes all Ektron administrators, you should create one then enter it here. See *Mapping the administrator group* on page 1486.
- **Domain**. If you want to restrict the search of new users and groups to one AD domain, select that domain. The Search Active Directory for Users and Search Active Directory for Groups screens let you search the selected domain only.

  Also, if any Ektron user or group names include a domain (for example, admin@saturn.example.com) that is excluded by your selection, those users/groups are flagged on the Active Directory Setup and Active Directory Status screens because the names include an invalid domain.

4. Messages may appear near the top of the Active Directory Setup screen to notify you that additional configuration steps are required. If either message appears, click it. The Active Directory Status screen appears, which helps you resolve the discrepancies.

   Active Directory Authentication is Enabled and Requires More Configuration. Some Ektron users are not associated with AD users. Also, if you are using full active directory integration mode, user groups and/or user group relationships may not be associated.

   Active Directory Authentication is disabled, but needs further configuration. Some Ektron users and/or groups are no longer unique. This happens because, in AD, users and groups can share a logon name as long as their domains are different. But, if AD authentication is disabled, 2 users or groups can no longer share a name—each must be unique.

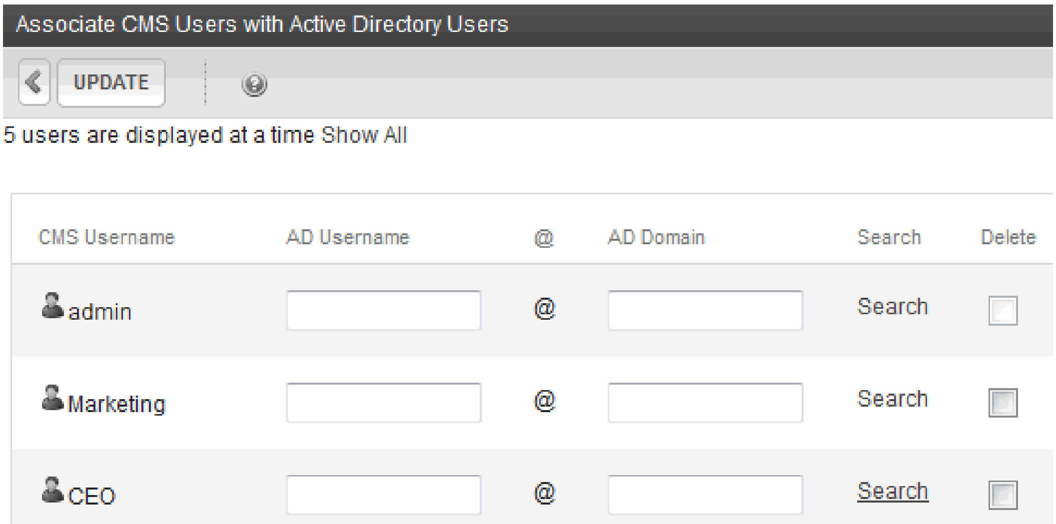
Displaying Active Directory status

Use the Active Directory Status screen to identify and resolve discrepancies between Ektron and AD.

- An Ektron user must be associated with an AD user.
- An Ektron user group must be associated with an AD user group.
- An Ektron user's group membership must be associated with the same AD user's group membership.

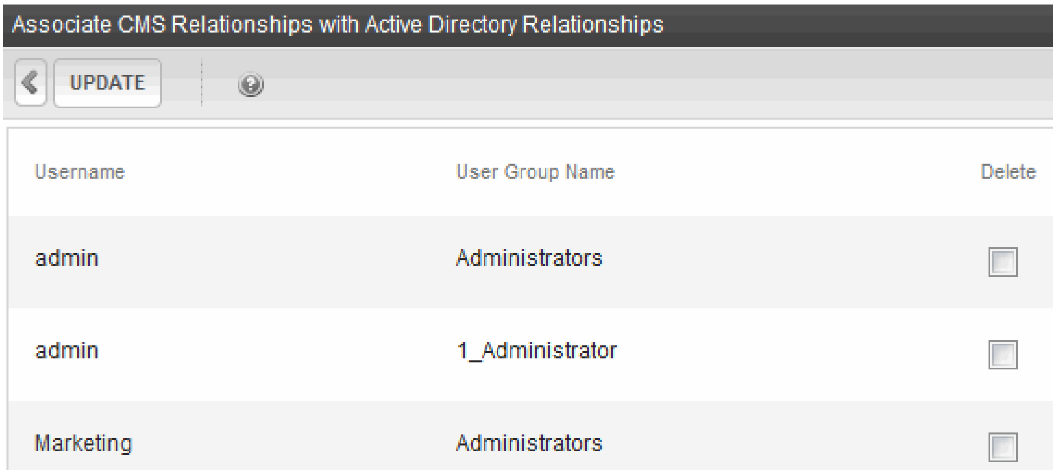
Any combination of messages may appear, depending on which issues require resolution. The following procedure provides steps to resolve all 3 issues.

1. Go to **Settings > Configuration > Active Directory > Status**.
2. Click a link on the Active Directory Status screen to display a new screen lets you resolve the discrepancy.
3. Click **CMS users need to be associated with Active Directory users** on the Active Directory Status screen. The Associate CMS Users with Active Directory Users screen appears. Use this screen to associate Ektron users with AD users.



4. Depending on the user, perform the appropriate action:
   - If a user with the same username exists in AD, that name and domain appear in the **AD Username** and **AD Domain** fields. If the user exists in more than one AD domain, select a domain from the pull-down list.
   - If there is no default and you know the AD user name to associate with an Ektron user, enter that in the **AD Username** and **AD Domain** fields. If you do not know the AD username, click **Search** to find the user in AD.
   - If you decide to change the username in AD to match the Ektron username, make the change in AD. Then, click **Refresh** ( ) to update Ektron and resolve the discrepancy.
   - If a user should not exist in Ektron, click the **Delete** box.
5. Click **Save**.
6. On the Active Directory Status scree, click **CMS relationships need to be associated with Active Directory relationships**. The Associate CMS Relationships with Active Directory Relationships screen appears. The screen

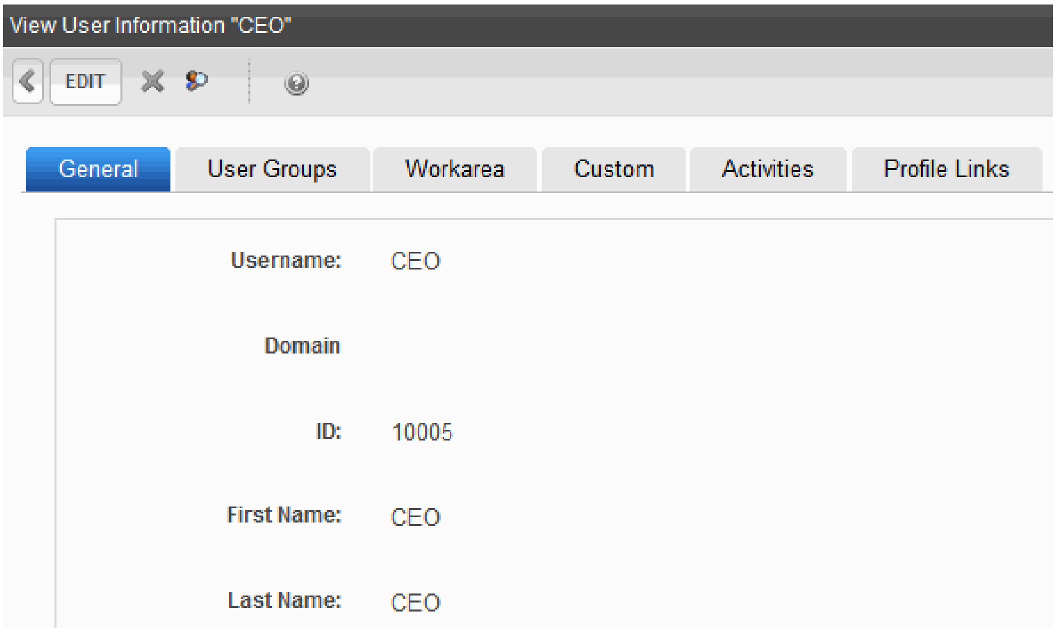
displays a user's group membership that exists in Ektron, but does not exist in AD. Use this screen to coordinate Ektron user group membership with AD user group membership.



7. After viewing the discrepancy, perform the appropriate action:
   - To associate the user with the same user group in AD, go to AD and assign the user to the group. Then, return to this screen and click **Refresh** ( ) to update user group information in Ektron. See also: *Importing a user's AD group information to Ektron* on page 1485.
   - To remove the user's group membership in Ektron, check the **Delete** box and
8. After you complete the changes, click **Save** ( ).
9. Click **CMS groups need to be associated with Active Directory groups** on the Active Directory Status screen, the Associate CMS User Groups with Active Directory Groups screen appears. Use this screen to associate Ektron groups with AD groups.
10. Depending on the group, perform the appropriate action:
    - If there is no default, enter that in the **AD Group Name** and **AD Domain** fields. If you do *not* know the AD group name, click **Search** to find the group in AD.
    - If a group should not exist in Ektron, click the box under the **Delete** column to delete the group.
11. After you complete the changes, click **Save**.

Viewing and searching for users

1. Click **Settings > Users** from the Workarea. The View users screen appears.
2. Click a user. The View User Information screen appears.



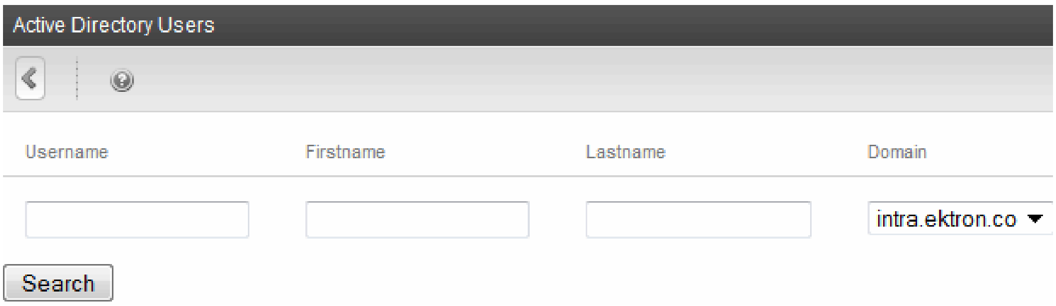
3. If you are using *user authentication mode*, **Username** and **Domain** can only be edited in AD. You can edit all other fields on this screen.

   If you are using *full AD Integration mode*, **Username**, **Domain**, **First Name**, **Last Name**, and **email Address** can only be edited in AD. You can edit all other fields on this screen.

   The screen also displays the following buttons.

   - **Edit**. Edit information on screen.
   - . Delete user.
   - . Retrieve latest information from AD into Ektron. This button is not displayed in user authentication mode.
   - . Replace Ektron user with a different AD User.
   - . Return to previous screen

   If you cannot easily find users on the View Users screen, use the search function.
4. Click **Add User**. The Search Active Directory for Users screen appears.

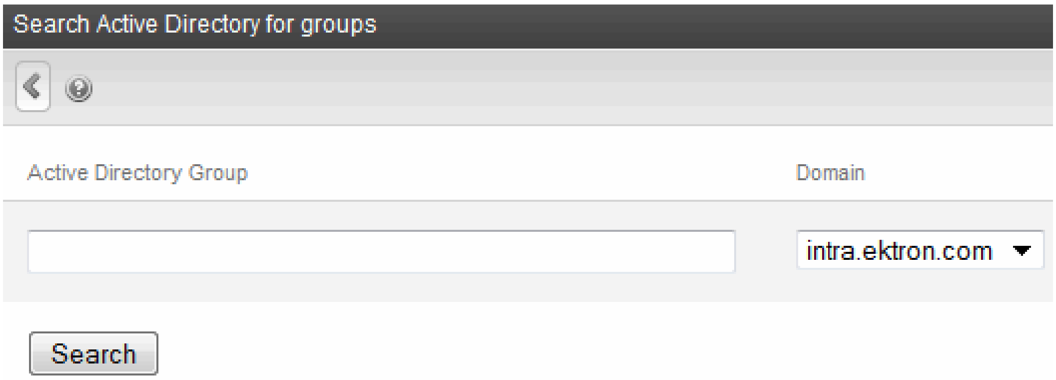


5. Enter as many search criteria as you know to reduce the number of users that the search returns. For example, if you know the user's last name is Jackson and he is in the planets domain, enter those criteria to get fewer results.
6. Click **Search**. The Active Directory Users screen appears.
7. Check the box next to each user you want to add to Ektron.
8. Click **Save** to import the information.

Viewing and searching for user groups

The View User Groups Screen displays all AD user groups that have been imported to Ektron.

1. Go to **Settings > User Groups**. The View User Groups screen appears.
2. Click the group name to display detailed information for the group. The View Users in Group screen appears, showing the following information for each user in the group:
    - username and domain
    - first and last name
    - language
3. To add AD groups to Ektron, click the toolbar button ( ) that lets you add AD groups to Ektron. The Search Active Directory for Groups screen appears.
4. If the Domain setting on the Active Directory Setup screen is set to restrict AD integration to one domain, you can only search for groups in that domain.



5. Click **Search**. A new screen appears that lists all AD groups that satisfy the search criteria.
6. Click the box next to groups you want to create in Ektron.
7. Click **Save** to import their information.

Importing AD user information to Ektron

This section explains importing AD *user* information when integration is first enabled and on an ongoing basis.

AD user information is initially imported to Ektron in different ways depending on whether:

- the Ektron database is already populated with users
- the Ektron database is not yet fully populated with users. (At least one user is always present because of the default admin user.)
- users are manually added to the Ektron database

For a *populated Ektron database*:

1. If **Enable automatic addition of user from AD** is checked on the Active Directory Setup screen, user information is imported from AD to Ektron when that user logs in or is added to Ektron. See also: *Setting up Active Directory* on page 1478.
2. At that time, AD information overwrites all Ektron information.
3. If 2 or more AD users have the same Ektron user logon name but different domains (for example, JDoe in `Eng.Example.com` and JDoe in `Mkt.Example.com`) and that username (JDoe) also exists in Ektron, the Active Directory Setup and Active Directory Status screens indicate this discrepancy via this message: **CMS users need to be associated with Active Directory users**.
4. Click the message to proceed to the Associate Ektron Users to Active Directory Users screen. From there, you can link an AD user to an Ektron user. See also: *Maintaining AD user information* below.

For a *Ektron database with only a few users*, go to the Search Active Directory for Users screen and select AD users that will use Ektron. You can only select AD users that do not exist in Ektron. Also, the Active Directory Setup screen can restrict AD integration to one domain. If it does, you can only search for users in that domain.When you add a user, AD information is imported to Ektron. See also: *Viewing and searching for users* on page 1481.

You can also *manually* add AD users to Ektron:

1. From the Workarea, click **Settings > Users**.
2. Click **Add Users**. The Active Directory Users screen appears.
3. From the **Domain** pull-down list, select the domain from which you want to add a user.
4. Enter as much information as you know into the other fields.
5. Click **Search**. A screen displays all users that satisfy the search criteria.
6. Check the box next to each user you want to add.
7. Click **Save**.

Maintaining AD user information

When AD integration has been established, new AD user information is imported to Ektron when either of these events occurs:

- the user logs in
- someone clicks **Refresh** () on the user's View User Information screen

Maintenance tasks include:

- **Editing**. Because Ektron does not write to AD, you can only change some fields on the Edit User screen. Edit read-only fields from AD.

- **Deleting**. If a user is deleted in AD, Ektron does not delete the user. However, the login fails because the user cannot be authenticated. To delete the user from Ektron, use the Delete User function described in *Deleting a user* on page 1448.

  If you mistakenly delete all users with administrative privileges, you can still sign in using the builtin user's username and password. For more information, see *Editing the builtin username and password* on page 110.

- **Replacing**. If you associate the wrong AD user with an Ektron user, you can replace the user. If you do, all Ektron permissions and approval process responsibilities transfer from the old to the new user.

1. Go to **Settings > Users**.
2. Click the user you want to replace.
3. Click **Associate CMS User with Different AD User** ( ).
4. Select a user to replace the previously selected user.
5. Click **Save**. The first user is deleted from Ektron.

Importing AD user group information

This section explains how a user's group membership is imported from AD to Ektron after integration is enabled. When assigned to a group, the user automatically receives all Ektron permissions and workflow responsibilities associated with it.

NOTE: Active Directory has 2 kinds of user groups: security and distribution. Ektron does not distinguish between them. As long as a user is a member of either kind of group, group information can be imported to Ektron.

Before using AD integration, import all AD groups you will use into Ektron:

1. From the Workarea, choose **Settings > User Groups**.
2. Click **Add Groups**. The Search Active Directory for Groups screen appears.
3. From the **Domain** drop-down list, select the domain of the user group you want to add.

   NOTE: The Active Directory Setup screen can restrict AD integration to one domain. If it does, you can only search within that domain.

4. Enter as much information as you know into the **Active Directory Group** field.
5. Click **Search**. A screen displays all groups that satisfy the search criteria.
6. Check the box to the left of each group you want to import to Ektron.
7. Click **Save**.

Importing a user's AD group information to Ektron

Users' membership in AD Groups are imported to Ektron in different ways depending on the state of existing Ektron user groups.

- **If CMS user groups already exist**. If **Enable automatic addition of user to groups** is checked on the Active Directory Setup screen, a user's group membership is imported from AD to Ektron when a user first logs in or is added. At this time, any AD group memberships overwrite Ektron group memberships *except* the Everyone group, to which all users belong.

In the case of a discrepancy between AD and Ektron user groups:

- If a user belongs to an AD user group that does not exist in Ektron, no action is taken. The AD Integration feature assumes that not all AD groups are meaningful in Ektron.
- If a user belongs to an Ektron user group that does not exist in AD, the discrepancy is flagged on the Active Directory Setup and Active Directory Status screens. From these screens, you can import AD group information into Ektron.
- If the user should belong to an AD group, add the group membership within AD. Then, refresh the user on the View User Information screen to import AD group information into Ektron.

- **If only default user groups exist in the CMS**. Follow the procedure described in *Importing AD user information to Ektron* on page 1483 to import AD user groups to Ektron. Then, as users in those groups are added to Ektron, their group memberships are applied.
- **After AD integration is enabled**. a user's group memberships in Ektron are updated when all of the following are true.
  - The **Enable automatic addition of user to groups** field is checked on the Active Directory Setup screen.
  - A user is added to Ektron or the user's AD group membership changes.
  - The user logs in or someone clicks **Refresh** ( ) on the user's View User Information screen.

Alternatively, if **Enable automatic addition of user to groups** field is *un*checked, you can add the user to (or remove the user from) groups independently of AD group memberships.

Mapping the administrator group

On the Active Directory Setup screen, you identify the AD group that maps to the Ektron Administrator group using a syntax of *AD group name@AD domain*. Members of this group receive administrator privileges.See also: *Administrator role privileges* on page 1464.

If such a group does not exist in AD, create it, then assign it on the Active Directory Setup screen.

Note that only one AD group can be mapped to the Ektron Administrator group. You cannot have an AD administrator group within each AD domain.

NOTE: Unlike other Ektron user groups, whose names are imported from AD, the Ektron Administrator and Everyone group names cannot be changed.

Maintaining AD user group information

Maintenance tasks include:

- **Removing users from a group**. If you delete a user from an AD group, the user is removed from the associated Ektron group the next time the user's information is updated.
- **Adding user groups**. If AD integration is enabled, you can only add user groups in AD. Then log on to Ektron and use the Search Active Directory for Groups screen to import the AD user group to Ektron as described in *Importing AD user group information* on page 1485.
- **Adding a user to a group**. You cannot add a user to a user group within Ektron; you must do so in Active Directory.
- **Replacing a group**. If you associated the wrong AD user group with an Ektron user group, replace the user group.
  1. From the Workarea, click **Settings >User Groups**.
  2. Click the user group that you want to replace.
  3. Click **Associate CMS Group with Different AD Group** ( ).
  4. Select a group to replace the group you selected in Step 2.
  5. Click **Save**.
- **Deleting a group**. You can delete a user group from AD or Ektron. When deleting user groups, consider the following behaviors:
  - If you delete a user group in AD and users are assigned to the group in Ektron, the group is *not* deleted in Ektron. However, any Ektron users who were members of the group are no longer members the next time their Ektron information is updated. The discrepancy is flagged on the Active Directory Setup and Active Directory Status screens.
  - If you delete a user group in Ektron and users are assigned to that group within AD, nothing happens. This is because AD Integration assumes that the Ektron administrator only maintains user groups that are meaningful to Ektron, and some AD groups are not meaningful to Ektron.

Disabling AD integration

When you disable AD integration, domain names are dropped, which may cause user and user group names to not be unique. For example, 2 users are named `JJackson@example.net` and `JJackson@example.com`. When AD is enabled, domain names make the users and user groups unique. However, when AD is disabled and domain names are dropped, the names are now identical. You need to make the users and user groups unique.

To disable AD authentication or integration:

1. Go to **Settings > Configuration > Active Directory > Setup**. The Active Directory Setup screen appears.
2. Enable the **Disable Active Directory and LDAP Authentication** radio button. If any users or groups have the same name with different domains, the

following message appears: **Active Directory Authentication is disabled, but needs further configuration**

3. Click the message. The Active Directory Status screen appears.
4. Click the **CMS users need to be made unique** message. The Make CMS Users Unique screen appears.

Username	@	Domain	New Unique Username
bbolt	@	intra.ektron.com	bbolt_@_intra.ektron.com
bbolt	@	bushwood.com	bbolt_@_bushwood.com
bfanny	@	intra.ektron.com	bfanny_@_intra.ektron.com
bfanny	@	bushwood.com	bfanny_@_bushwood.com
CCampbell	@	intra.ektron.com	CCampbell_@_intra.ektron.com
ccampbell	@	bushwood.com	ccampbell_@_bushwood.com

User group names are handled in the same manner. Click the **CMS user groups need to be made unique** message. The Make CMS Groups Unique screen appears.

User Group Name	@ Domain	New Unique User Group Name
Account Operators	@ planets.com	Account Operators_@_planets.com
Account Operators	@ saturn.planets.com	Account Operators_@_saturn.planets.com

5. Click **Save** to accept the suggested new names as recommended by Ektron. By accepting the suggested name, you allow the software to automatically associate AD and Ektron users or groups if you later decide to re-enable AD integration.

Implementing user authentication mode

In user authentication mode, AD is used only to authenticate users logging in to Ektron. User groups are managed within Ektron, not AD.

Transferring user information from AD to Ektron

Ektron does not write to AD; it only reads from it. This changes how usernames, domains, and passwords are handled in Ektron.

- Changes to user logon name, domain and password must be made in AD. You cannot update these fields in the Ektron Edit User screens.
- When adding a new user to Ektron, you can only select AD users. If the user does not exist in AD, create the user there and then import the user into Ektron.

Ektron refers to the following AD authentication information during sign-in: password, user logon name, and domain. Ektron does not store the password; Ektron only *refers* to it during sign-in.

Adding and maintaining user information

Adding user information in user authentication mode is the same as in AD integration mode.

If a user's *logon name* changes in AD, it no longer matches the Ektron logon name. This discrepancy is flagged on the Active Directory Setup and Active Directory Status screens. Go to the Associate CMS Users to Active Directory Users screen, where you can update the user information.

Alternatively, you could:

1. Go to the View User Information screen.
2. Select the user whose AD name changed.
3. Click **Associate the CMS user with Different AD user** ( ).
4. Select the AD user and domain.

See also: *Maintaining AD user information* on page 1484.

Editing user information in Ektron

Ektron does not write to AD. This means that you can only change the **Username** and **Domain** fields from AD. You can edit the following fields on the Ektron Edit User screen:

- First Name
- Last Name
- E-Mail Address
- User Language
- Disable Receiving of Workflow and Task Email

IMPORTANT: If you replace a user in user authentication-only mode, the user's first name, last name, and email address are not overwritten with information in AD.

Using AD integration screens in user authentication mode

Because the scope of user authentication mode is limited to authentication, only some fields on AD Integration screens are used:

- On the Active Directory setup screen, the only relevant fields are **authentication** and **domain**. See also: *Setting up Active Directory* on page 1478.
- On the Active Directory Status Screen, only one discrepancy message may appear:
  CMS user needs to be associated with an AD user
  See also: *Maintaining AD user information* on page 1484.
- The View Users Screen works the same for both modes. See also: *Viewing and searching for users* on page 1481.

Logging into a system that uses AD integration

Because AD usernames and passwords are stored by domain, the AD sign-on procedure requires the user to select a domain. When AD integration is enabled, the sign-on screen includes a domain drop-down list.

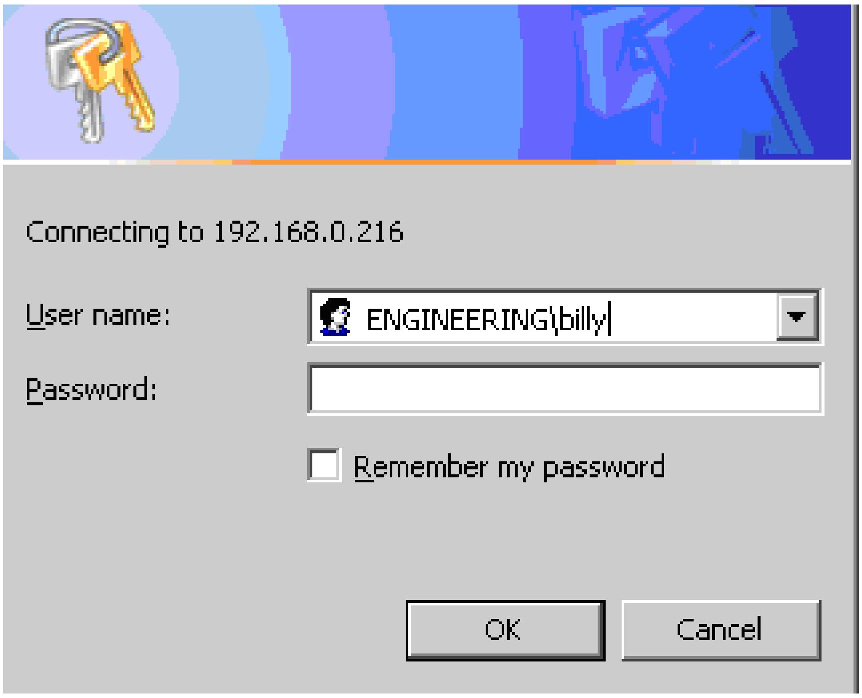
Single sign on

The single sign on feature retrieves a user's Active Directory login information to authenticate access to Ektron. The user does not need to enter a password. Upon clicking **Login**, the user is immediately logged in.

Single sign on uses a variable called `User.Identity.Name`. This maintains the user's account and domain in Active Directory and has the format `[domain]\[username]`. For example, `EKTRON1\ssmith`. The variable's value is set when a user authenticates against a Windows server.

When a user clicks the Login server control, if the variable passes successfully and Active Directory is enabled, the server control opens the `autologin.aspx` page. Next, the opening window refreshes like a normal login, except the user is not prompted for a username, password, and domain.

However, if the user's computer is not on a domain, not on the same domain as Ektron, or does not include the Ektron server as a trusted site, a login screen appears.



If Active Directory is not enabled, the normal `login.aspx` page appears.

Single sign on also uses the `autologin.aspx` page in the `workarea/SSO` directory. When set up, user authentication is enabled from any domain that this server can reach. For example, if Ektron is located in a third-level domain, users from third, second, and first level domains can authenticate.

NOTE: Single sign on may not work directly on servers, due to security settings on the server and its browser. Try a different machine and make sure it works elsewhere before troubleshooting further.

After completing the procedures in this section, enable Active Directory within Ektron (if it isn't already enabled). See also: *Setting up Active Directory* on page 1472. Within that, enable the automatic addition of users and groups.

Enabling membership users for single sign on

To allow membership users to use single sign on, see *Authenticating membership users with AD or LDAP* on page 1504. When enabling this functionality, create one login page for Ektron users and another for membership users. For example, use the membership user login as the front-facing login, and then secure a `/cmslogin.aspx` for Ektron users. Next, secure the login with IIS security because Windows authentication only allows the Ektron administrators group in AD to read permissions on the `/cmslogin.aspx` page.

Setting up single sign on

Follow these procedures to set up single sign on.

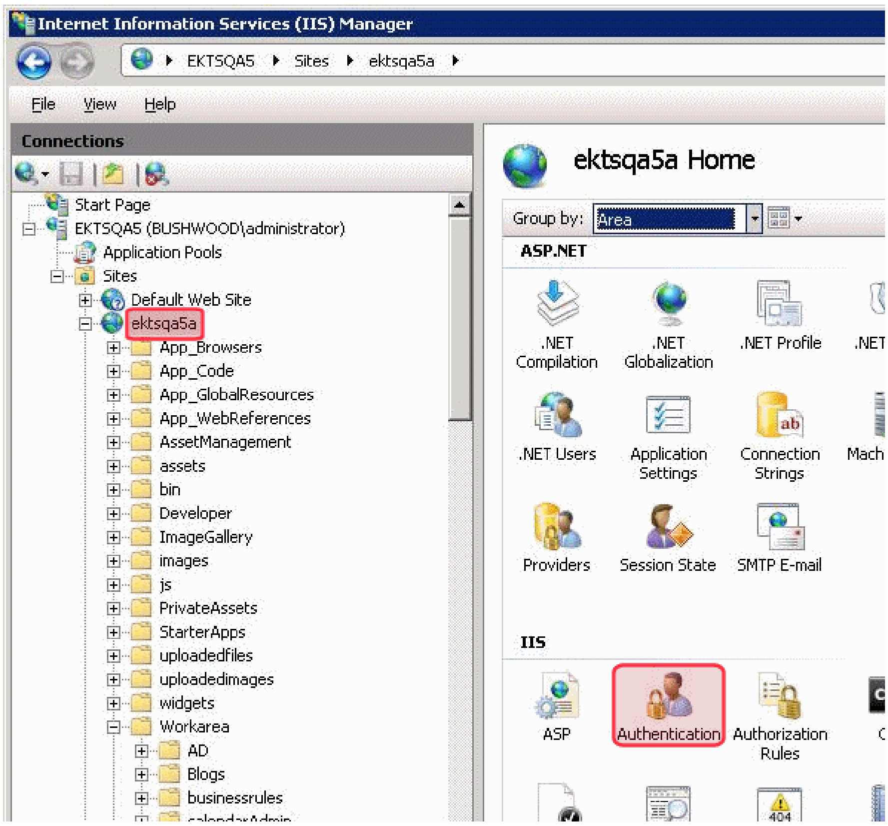
Modifying web.config for single sign on

1. Open *site root*/`Web.config`.
2. Find the `ek_AUTH_protocol` element and change its value to **LDAP**.
```
<add key="ek_AUTH_Protocol" value="LDAP" />
```
3. Find the `authentication` element and change the value of `authentication mode` to **Windows**.
4. Change the value of `impersonate` to **False**.
```
<authentication mode="Windows" />
<identity impersonate="false" userName="" password=""/>
```
5. If you want to allow membership users to authenticate using single sign on, set `ek_LDAPMembershipUser` to **true**.

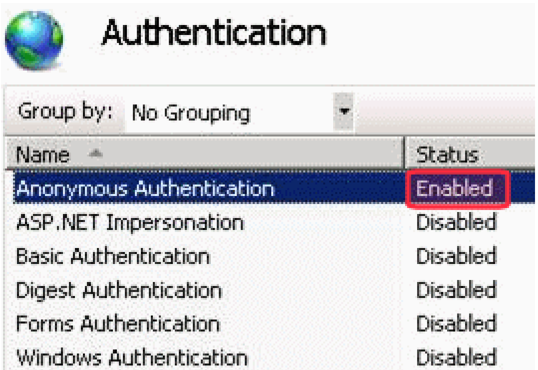
Adjust security on the site root folder

1. Go to **Start menu > Administrative Tools > Internet Information Services**. If you're using Windows 8 or 2012, click the **Windows** key ( )**/Q** the enter **INETMGR**.
2. Go to **Sites** and select your Ektron site.

3. From the center panel, select **Authentication**.

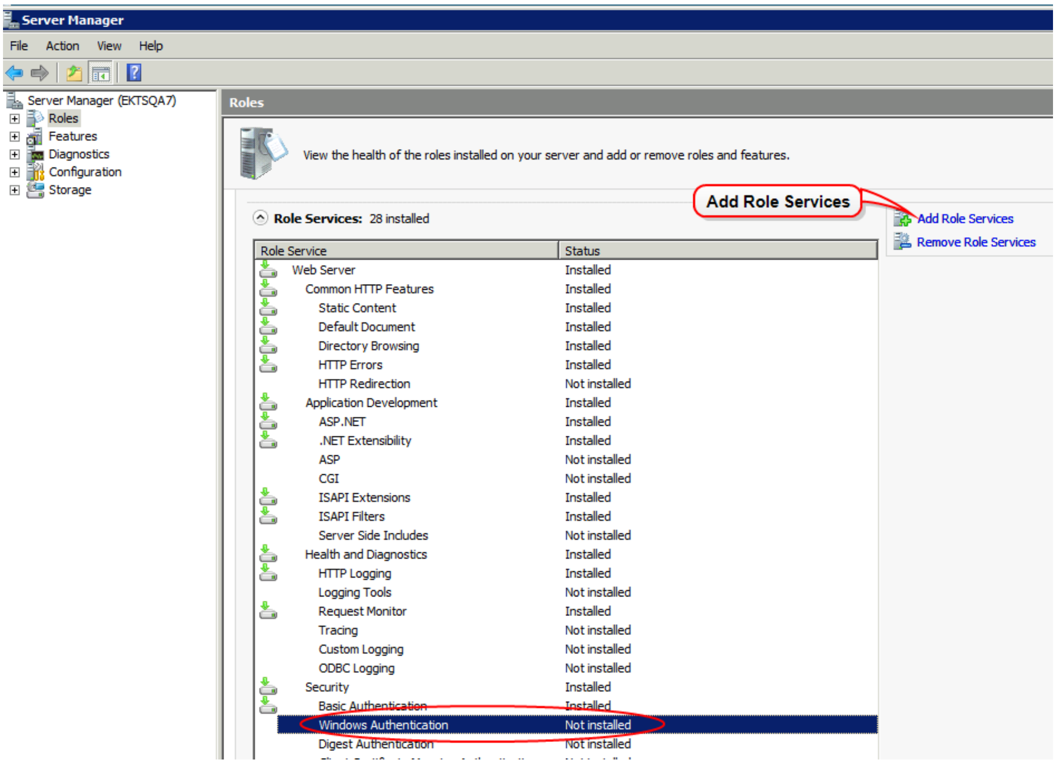


4. On the Authentication screen, enable **Anonymous Authentication**.



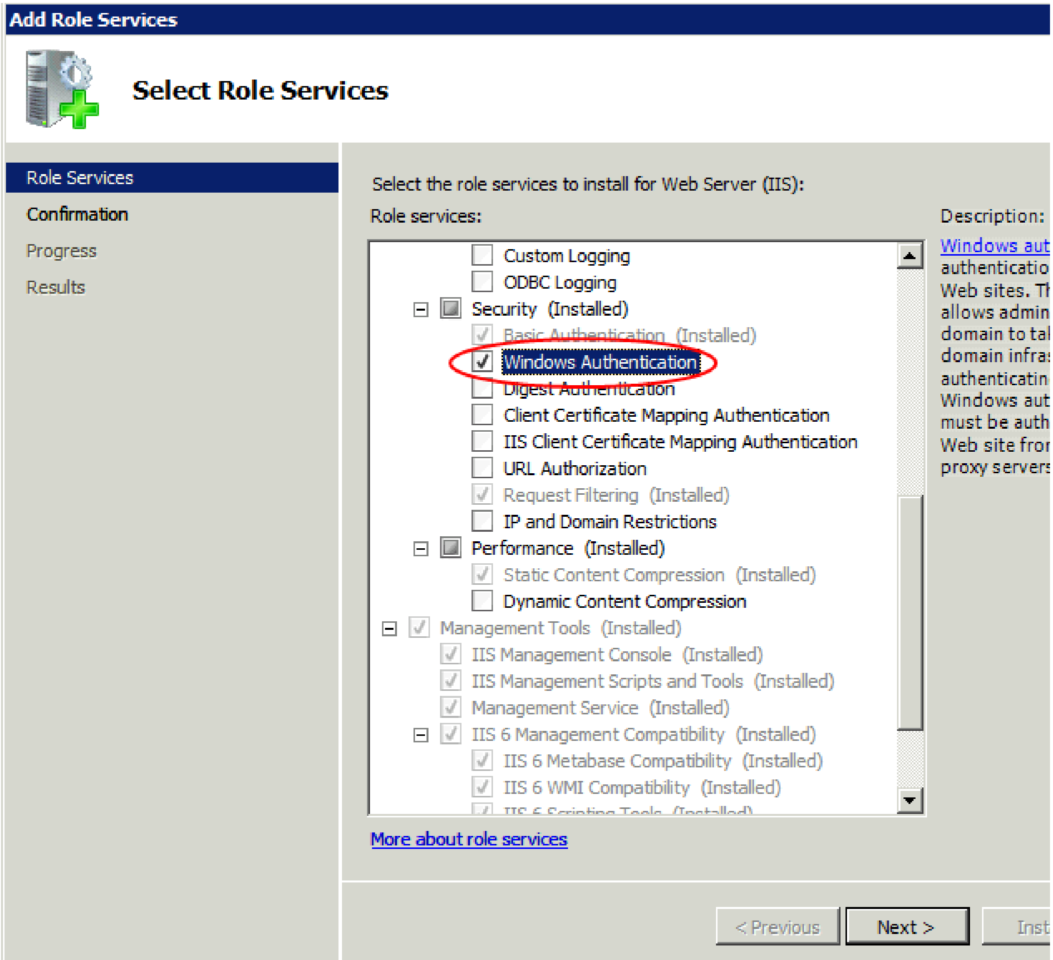
Adjust security for autologin.aspx

1. Verify that Windows Authentication is installed on this server.
   a. Click Windows **Start** menu **> Administrative Tools > Server Manager**.
   b. Click **Roles > WebServer (IIS) Role Services > Security > Windows Authentication**.



c. If the status of **Windows Authentication** is **Installed**, proceed to Step 2.

   If the status of **Windows Authentication** is **Not Installed**, click **Add Role Services**. The Add Role Services screen appears.

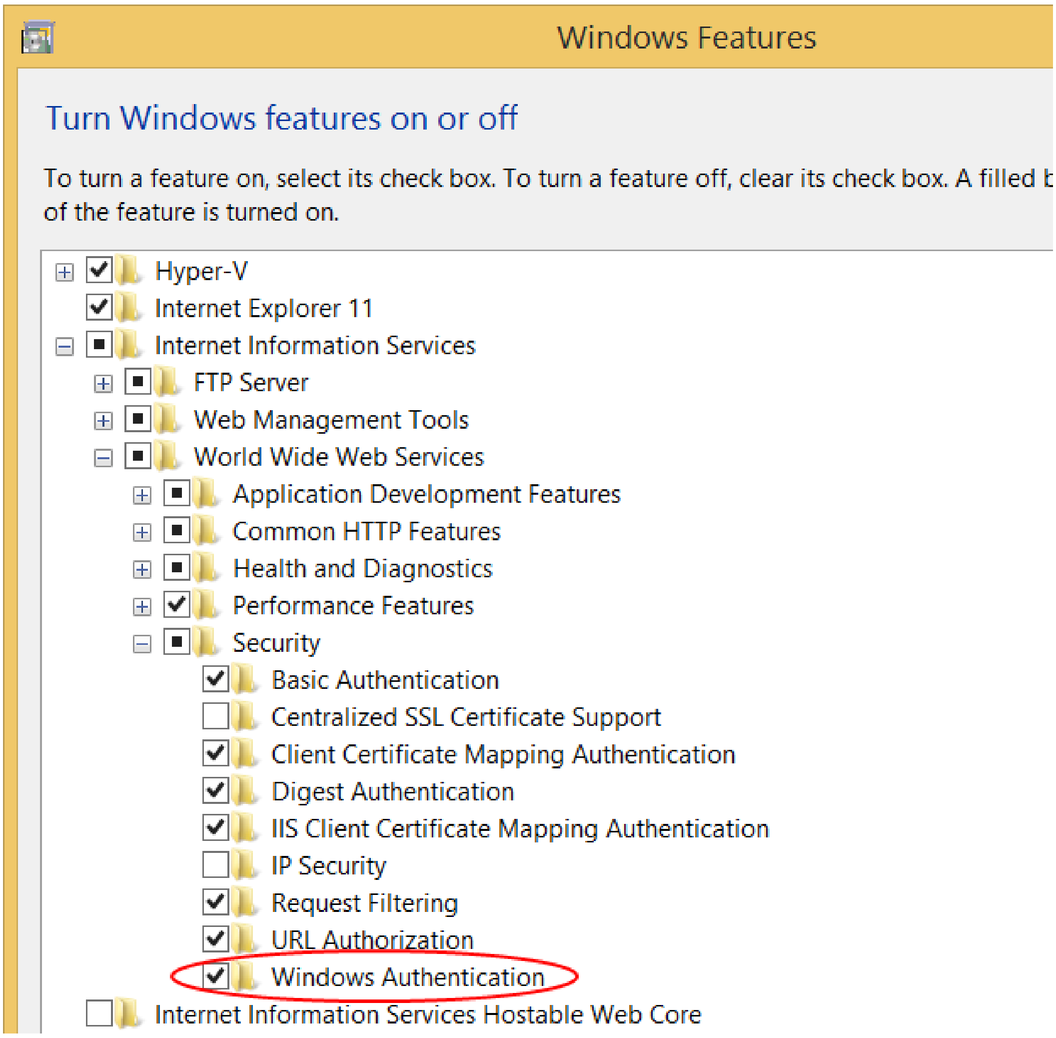


d. Check **Windows Authentication**.
e. Click **Next** and follow the prompts to install Windows Authentication.
f. Close Server Manager.

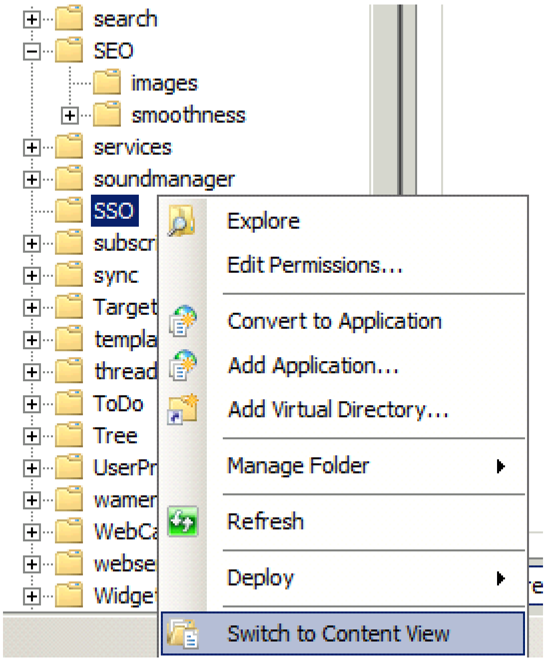
Windows 8 or 2012

a. Press the **Windows** key ()**/Q**.
b. Enter **Windows Features**.
c. Open Internet information Services > World Wide Web services > Security.

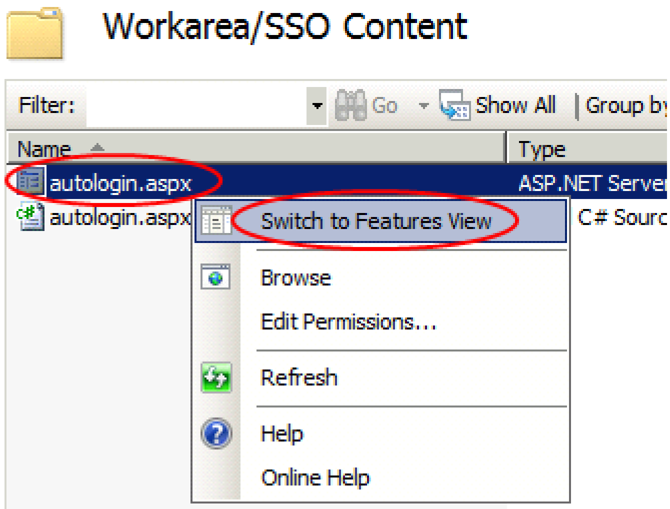
d. Check **Windows Authentication**.



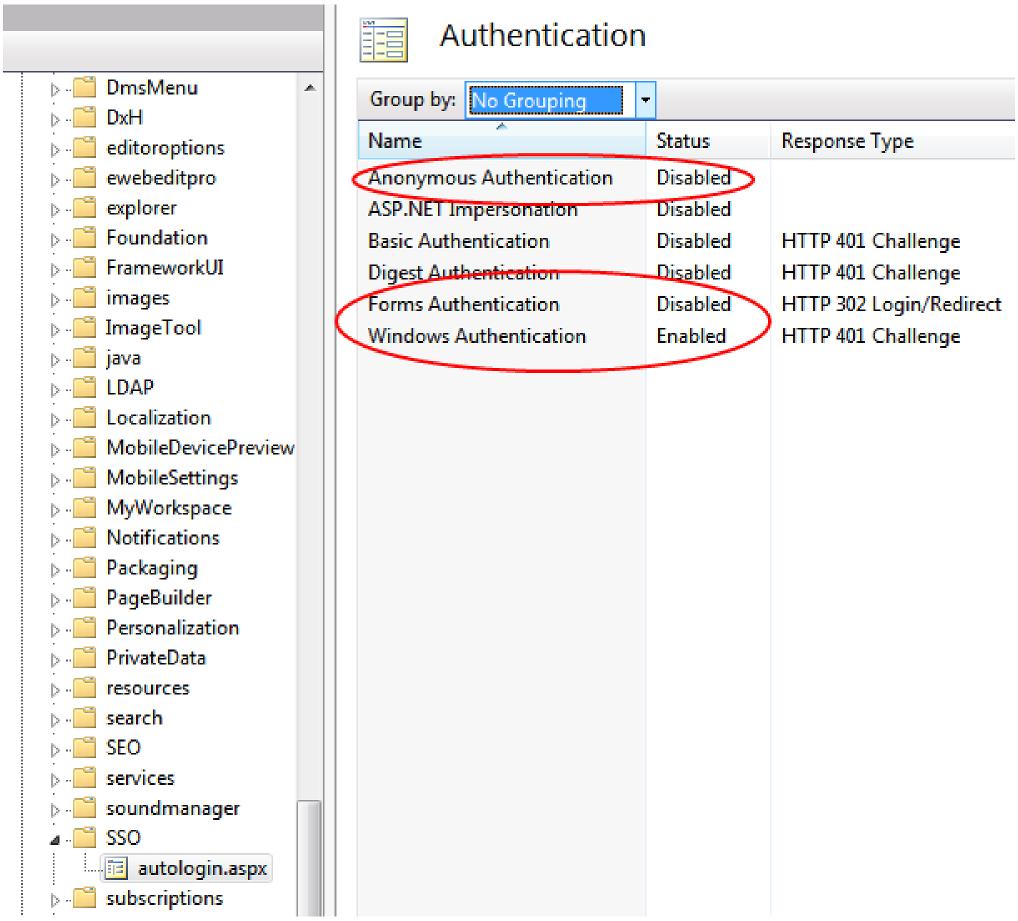
2. Open IIS Manager.
3. Go to **Sites >** ***your website's root folder*** **> Workarea > SSO** and right click **Switch to Content View**.



4. In the center panel, right click **autologin.aspx** and select **Switch to Features View**.



5. In the center panel, click **Authentication**.
6. From the center panel, check the status of **Windows Authentication**. If it is disabled, enable it by selecting it, right clicking, and choosing **Enable** from the menu.
   Windows Authentication passes credentials from the client’s browser to IIS then to Active Directory, allowing auto logins.



7. From the center panel, check the status of **Anonymous Authentication** and **Forms Authentication**. If either is enabled, disable it by selecting it, right clicking, and choosing **Disable** from the menu.

Updating the Login server control for single sign on

This sample shows how to modify the Login server control to accommodate single sign on.

```
<cms:login runat="server" AutoLogin="True"
AutoAddType="Author" id="cmslogin" />
```

Using Active Directory in a multi-site environment

If you want to use Active Directory in a multi-site environment, set the value of the `siteroot`\web.config element `ek_allowMultipleDomain` to `true`. When this setting is enabled, a user can log into one site then immediately access other sites without having to log in again.

If subdomains are deeply nested (for example, `uk.store.mycompany.com`), Ektron may be unable to identify the parent domain. In this case, users cannot use single sign on to access subdomains.

If that happens, use the siteroot\web.config element ek_UseDomain to explicitly specify the parent domain. Precede the parent domain value with a period (.). For example, `<add key="ek_UseDomain" value=".mycompany.com" />`.

Troubleshooting user login with single sign on

When troubleshooting user login with single sign on, use the following code-behind. If this .NET code cannot get the user login, then Ektron cannot either.

```
Response.Write("UserName:" & Request.ServerVariables
("LOGON_USER"))
```

Active Directory and eSync

An Active Directory configuration does not get synchronized.

In an eSync environment, add all users to one environment. Then, sync the users if multiple servers are using AD login.

Using LDAP with Ektron

Lightweight Directory Access Protocol (LDAP) is a set of protocols that enable the hierarchical arrangement of corporate directory entries in a structure, which may reflect geographic or organizational boundaries. Active Directory and LDAP are not the same. While they perform similar functions, LDAP (when used with Ektron) only verifies login information and creates the user in the Everyone group.

Ektron's LDAP feature lets you retrieve user login information from an LDAP server. As a result, you can administer user information from one place, and users only need to remember one password/username combination to sign on to the network and Ektron.

The hierarchical structure of LDAP authentication can be organized in several different ways. For example, with the following LDAP structure, the domain would typically span multiple countries.

NOTE: Abbreviations: CN = Common Name, OU = Organizational Unit, O = Organization, C= Country, DN = Distinguished Name.

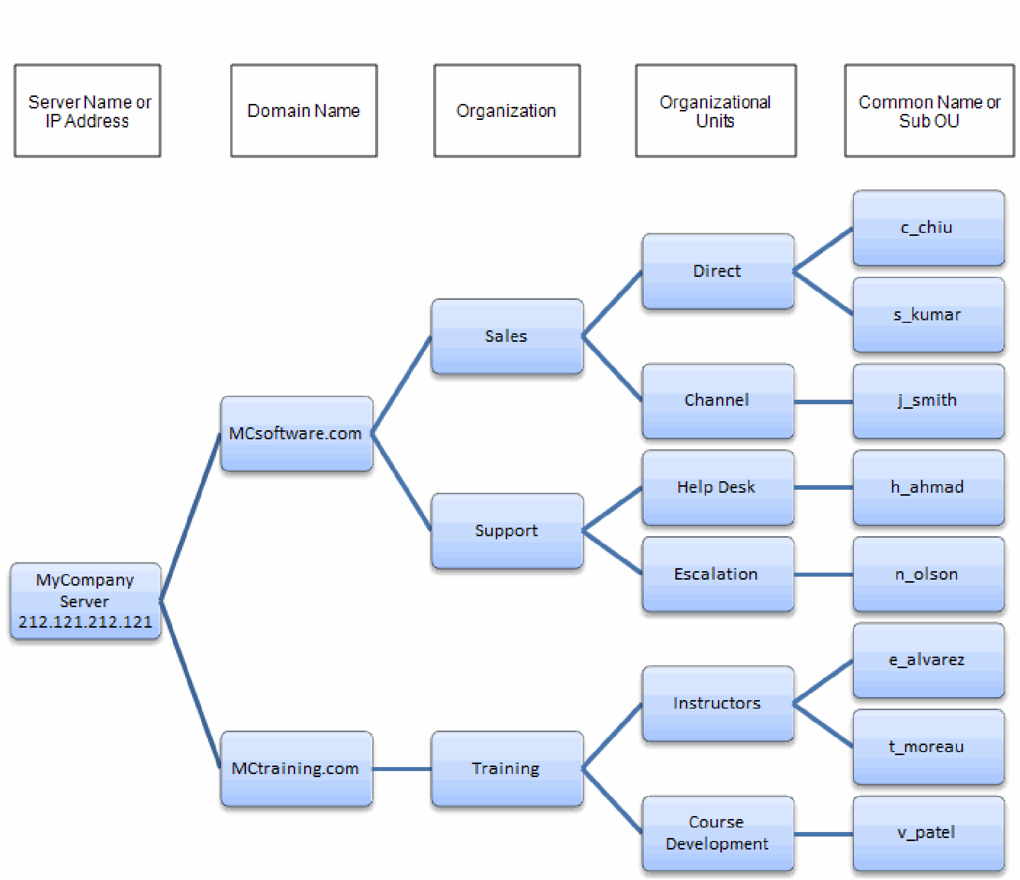
CN=j_smith, OU=Sales, O=MyCompany, C=US, DN=example.com

By changing the order of C and DN, the hierarchy indicates that the domain example.com is located in the US.

CN=j_smith, OU=Sales, O=MyCompany, DN=example.com, C=US.

In some instances, it may be necessary to have an Organization appear below an Organizational Unit. For example, your Organizational Unit has it own Organizations.

The following image shows a sample LDAP hierarchical structure.



Enabling LDAP

You enable LDAP by editing the `web.config` file and editing settings on the Active Directory Setup screen. See also: *Setting up Active Directory* on page 1478.

IMPORTANT: Before enabling LDAP in Ektron, make sure your LDAP server is ready for use and include an Ektron administrator account for yourself. After you enable LDAP, only the BuiltIn account can access Ektron without LDAP authentication. See also: *Editing the builtin username and password* on page 110.

---

1. In the *siteroot*`\web.config` file, change the `ek_AUTH_Protocol` property to GC:
   `<add key="ek_AUTH_Protocol" value="GC"/>`
2. Go to **Settings > Configuration > Active Directory > Setup**. The Active Directory Setup screen appears.
3. Click **Edit**.
4. Select **Enable LDAP Authentication**.
5. Complete the LDAP-related fields and click **Update**.
   - **Type**. Choose the type of LDAP authentication you are using. Depending on your choices, the fields below may be required or disallowed. The following choices are available:
     - **Active Directory (LDAP)**. Domain allowed, Organization is not. For more information, see *Using LDAP to connect to Active Directory* on the

next page.

   - **Novell eDirectory/NDS**. Organization allowed, Domain is not.
   - **Sun Iplanet/JSDS**. Domain allowed, Organization is not.
   - **Other**. Allows Domain and Organization
- **LDAP Server**. The IP address or name of the LDAP server.
- **Port**. The LDAP server port with which Ektron communicates. If you are unsure of the port number, consult your Directory Service documentation .
- **Organization**. The name of your company or organization. For example, Optimizely You can leave this field blank if you enter a domain in the **Domain** field.
- **Domain**. Your domain name. For example, www.ektron.com. This should be the name you used when purchasing your license key. You can leave this field blank if you enter an organization in the **Organization** field.
- **Attribute**. Enter the key value used to reference accounts inside LDAP. As examples: dn, sn, cn, uid, and so on.
- **Use SSL**. Check if you want to enforce a secure connection in traffic to the LDAP server.
- **Path**. The next levels below your Organization or Domain. These can include multiple levels of Organizational Units. For example, Content Editors, Marketing, East Coast. Click the **Expand** link to display the **Add** field.
- **Add**. Enter the path to which you would like access in the text field. Then click the **Add** link.

  When adding Organizational Units, paths are comma-separated and run from specific to general. For example, `ou=Amherst,ou=New Hampshire,o=US`. For more information, see *Adding an organizational unit during setup* on the facing page.

  Do not add individual Common Names here. Only add Organizational Units that contain people who should have access to Ektron. To add a single individual from a different Organizational Unit, see *Adding user information from an LDAP server to Ektron* on the facing page

NOTE: You can add additional Organizations below an Organization Units as long as the path on your LDAP server is the same.

Using LDAP to connect to Active Directory

1. In the `\web.config` file, add the Username and Password for `ek_ADUsername` and `ek_ADPassword`. For example:
   ```
   <add key="ek_ADUsername" value="mwright@ektron.com" />
   <add key="ek_ADPassword" value="mypasswordisthis" />
   ```
2. Go to **Settings > Configuration > Active Directory > Setup**. The Active Directory Setup screen appears.
3. Click **Edit**.

4. Use the following settings in the Active Directory Setup screen.
    - **Type**. Active Directory (LDAP)
    - **LDAP Server**. [IP Address of the AD domain controller]
    - **Port**. 389
    - **Organization**. [leave this blank]
    - **Domain**. [dns name of the AD domain]. For example: internal.domain.com
    - **Path (Organizational Units)**. [any OUs that you want to draw users from] For example: Support, Users, Ektron Corporate or Engineering, Users, Ektron Corporate

Adding an organizational unit during setup

Considerations when adding Organizational Units:

- Should everyone in the OU have access to Ektron?
- When LDAP is enabled, users are added to the Everyone group upon login. While everyone in the OU has access to Ektron, every user should not necessarily have permission to edit content. To control permissions, set up user groups, add users to groups, and assign permissions to the groups. See also: *Managing users and user groups* on page 1439 and *Managing folder and content permissions* on page 160.
- Do users in other Organizational Units need access?
- Sometimes, managers or editors are in a different OU. They need to be added manually, or you need to add their OU.
- When adding an Organizational Unit, several entries might cover the same hierarchical path. For example, you might have `ou=Sales`, `ou=Sales_Service`, and `ou=MyCompany`, which lets you authenticate users listed in Sales, Sales_Sevice, and MyCompany.

Adding user information from an LDAP server to Ektron

Users at each level are automatically available for adding to Ektron. You do not have to be at the OU or CN level to add a user. If a user is at the DC or OU level, they are available.

After LDAP is enabled, there are several ways to add LDAP user information to Ektron:

- The user logs in. As a result, the user appears in the Users list and is added to the Everyone group. After a user logs in, some fields on the Add User screen can be filled in manually, such as first and last name. For a description of these fields, see *Manually adding an LDAP user* on the next page.
- Search an LDAP server for LDAP users.
- Add the user's LDAP information manually.
- A combination of searching and manually completing the remaining fields.

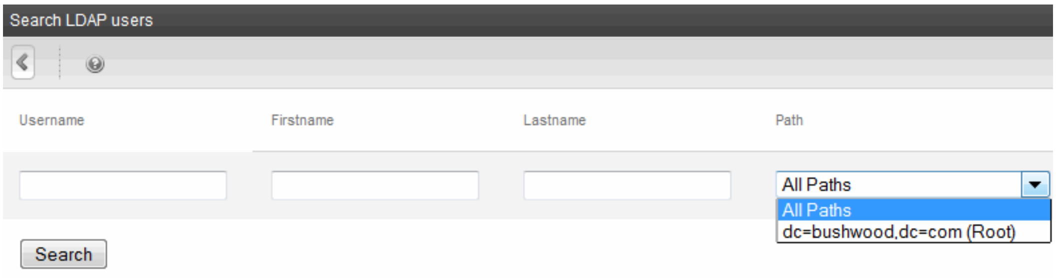
Searching an LDAP server for users

PREREQUISITE

LDAP is enabled. See *Enabling LDAP* on page 1499.

To search for a user on an LDAP server and add the user to Ektron:

1. From the Workarea, go to **Settings >Users**.
2. Click **Add Users**. The Add a New User to the System screen appears
3. Click **Browse LDAP** ( ). The Search LDAP Users screen appears.



4. Enter one or more search criteria.
   - **Username**. Username of the user on the LDAP server.
   - **Firstname**. First name of the user on the LDAP server.
   - **Lastname**. Last name of the user on the LDAP server.
   - **Path**. Select a path from the drop-down list. These paths were enabled when you configured Ektron for your LDAP server. If you select a path and enter no other information, you get all users in that path.
5. Click **Search**. The search returns users that match the submitted criteria.
6. Check each user to be added.

7. Click **Save**. The user is added to Ektron and the Everyone group. To assign the user to another user group, see *Assigning a user to a user group* on page 1448.

Manually adding an LDAP user

PREREQUISITE

LDAP is enabled. See *Enabling LDAP* on page 1499.

1. Go to **Settings > Users**.
2. Click **Add User**. The Add a New User to the System screen appears.
3. Fill out the fields according to *Creating a user* on page 1440.

4. Click **Save**. The View Users in Group Everyone screen appears, displaying the new user and the other Ektron users. To assign the user to another group, see *Assigning a user to a user group* on page 1448.

Using the Browse feature to add an LDAP user

The Browse LDAP feature provides a friendly and intuitive way to find usernames, domains/organizations and organizational units.

IMPORTANT: The default server IP/DNS name and port are taken from the settings specified in the **Configuration > Setup** page. These settings must be specified before connecting to the LDAP server.
Before using the browse feature, you must specify an Organizational Unit that can see the user in the **Configuration > Setup** page.

PREREQUISITE

LDAP is enabled. See *Enabling LDAP* on page 1499.

1. Go to **Settings > Users**.
2. Click **Add Users**. The Add a New User to the System screen appears.
3. Click **Browse LDAP** ( ). The LDAP Explorer appears.
4. Go the LDAP server's folders by clicking on the folder images. Each folder represents an Organizational Unit (OU). When you choose an OU level, its users appear.

   NOTE: In the LDAP Explorer, the Path and Org/Domain fields update dynamically as you go through the LDAP tree.

5. Select a user. The user is added to Ektron and the Everyone group. To learn how to assign this user to another group, see *Assigning a user to a user group* on page 1448.

Editing LDAP user information

It is important to note that Ektron does not write to the LDAP server. So, while you can change fields when editing a user in Ektron, you also need to make the same changes on the LDAP server.

1. Go to **Settings > Users**.
2. In the Username column, click a user to edit. The View User Information screen appears.
3. Click **Edit**.
4. Change the information as needed. For more information on the fields you can edit, see *Creating a user* on page 1440.
5. Click **Save**.

Deleting users

If a user is deleted on the LDAP server, Ektron does not automatically delete the user. However, the user’s login fails because the login cannot be authenticated. In this case, delete the user from Ektron using the Delete User function.

NOTE: If you mistakenly delete all users with administrative privileges, you can still sign in using the builtin user’s username and password. See also: *Editing the builtin username and password* on page 110.

Authenticating membership users with AD or LDAP

Usually Membership users are not included in AD or LDAP directories. Ektron's default settings ignore AD or LDAP f or membership authentication. If you want Membership users to authenticate with AD or LDAP, follow these steps.

1. Edit the *siteroot*\\`web.config` file.
2. Set `LDAPmembershipUser` to **true**.
   `<add key "ek_LDAPMembershipUser" value="true" />`
   If `ek_LDAPmembershipUser` is **false**, membership users are not authenticated with AD or LDAP.

Disabling LDAP authentication

To disable LDAP authentication or integration, edit the Active Directory Setup screen and select **Disable Active Directory and LDAP Authentication**.

See also: *Setting up Active Directory* on page 1478.

34

Managing user communities

A community is a group of people who network with each other to share information, ideas, likes and dislikes. Typically, community members are connected by a relationship. For example, they work for the same company, went to the same school, share values, or have a friendship.

When you visit a community site, look around to see the kind of information, people and groups on the site. Typically, you can see only limited information initially. To see all information, you need to become a member. When you sign up to be member, you enter information about yourself in a member profile. After becoming a member, you can:

- maintain a personal profile, including an avatar
- search for other members and add them to a friends list
- join or create a community group
- invite non-members to join a community and become a friend
- add photos and documents to a personal or group profile page
- determine which other users and groups can view and update those files
- update your status and share that update with selected members
- post public or private messages to another member’s message board
- keep a journal
- create a list of favorite Ektron content links
- have a list of content that you have added
- write content reviews
- flag content

Ektron's Community Platform feature lets users network socially on a website. Access to the community platform is available from the website or the Workarea, but only Ektron users and administrators can access their information via the Workarea. Administrators can manage Community Platform features from the Workarea. Membership users, Ektron users, and administrators can access their profile pages via a website.

This section also contains the following topics.

- *Membership users and groups* on the facing page
- *Accessing a user profile* on page 1524
- *Moderating a message board* on page 1524
- *Managing community groups* on page 1530
- *Distributing content to another Ektron folder* on page 1537
- *Sending notifications to a community* on page 1543
- *Generating email invitations for community management* on page 1577
- *Activity streams* on page 1581
- *Using Ektron's micro-messaging bookmarklet* on page 1601
- *Defining flags for content* on page 1590
- *Tagging content, library items, users, and groups with keywords* on page 1596

To learn about the server controls that let membership users log into an Ektron site, see Community Server Controls.

Membership users and groups

Membership users have limited privileges to Ektron. Unlike regular Ektron users, they cannot use the Workarea. When membership users log in, they can view, add and edit content from the website (as permitted) only—all other functionality is disabled.

Membership users can be allowed to view private content. This is helpful if your organization has partners who need access to Web pages that should not be visible to the general public. See also: *Making content private* on page 637.

If you have a Social Network or Community website, membership users can create an online area for themselves.

PREREQUISITE

> To work with membership users, you must be a member of the Administrators group or assigned to the member admin role. See also: *Defining roles* on page 1464.

Membership privileges

A typical membership scenario is a Partners section of your website that contains private content for partners only. Set up a membership user group with users from your partner's organization. The group is given add and edit permissions to the Partners section.

Membership privileges are:

- Create, edit, and view content after log in
- Subscribe to receive Web Alerts See also: *Sending Web Alert emails to subscribers* on page 1369
- View private content
- Use these Community features See also: *Managing user communities* on page 1505
    - Share Document Workspace and Photo Gallery with other site visitors
    - Join a community group
    - Mark content the member likes and allow site visitors to see the list of these Favorites
    - Designate other members or site users as Colleagues
    - Keep a Journal
    - Add and read Message Board comments
    - Send and receive messages with other registered users
    - If a Discussion Board requires sign in, they can view and post to them. See also: *Working with discussion boards* on page 933
- Post blog comments. See also: *Working with blogs* on page 887

- If a poll or survey is set up to track participating users, membership users' names appear on Form reports.

Viewing membership users

Use the Membership Module folder to add and edit membership users and user groups.

1. Go to the **Workarea > Settings > Community Management > Memberships**.
2. From that folder, you can access the following screens.
   - Users. You can sort the Username, Last Name, and First Name columns by clicking column headers.
   - Users not Verified. A site visitor can sign up to be a membership user. *Setting up a subscription* on page 1388
   - User Groups. *Membership groups* on page 1514

NOTE: The `ek_PageSize` setting in the `web.config` file determines the maximum number of users that can appear on a page before it "breaks." When a page breaks, additional entries appear on another screen, and the following text appears near the bottom of the list:
Page 1 of 2 [First Page] [Previous Page] [Next Page] [Last Page]

Adding membership users

Follow these steps to create a membership user. Alternatively, you can set up a Web page that lets membership users self-subscribe. See*Allowing membership users to self-subscribe* on page 1510.

1. From the Workarea, click **Settings > Community Management > Memberships > Users**.
2. Click **Add Membership User**. The Add Membership User screen appears.
3. Complete the form using the following for reference.
   - **Username**. Enter a unique username for the membership user.
   - **First Name**. Enter the first name of the user.
   - **Last Name**. Enter the last name of the user.
   - **Display Name**. The name used to identify a Membership user on the website. This can be different from the Username, which is the name you use to log into the Ektron website.

     IMPORTANT: This name needs to be unique inside Ektron and it cannot be blank.

   - **Password**. Enter a password for the user. See also: *Ektron's password security policy* on page 111
   - **Confirm Pwd**. Re-type the password to confirm it is correct.
   - **User Language**. Select the language in which the user viewsEktron screens and messages. The language also determines the default value

whenever a drop-down list of languages appears within Ektron. The drop-down list of choices at this field is derived from the Language Settings screen, available from the **Settings > Configuration** folder. Do not confuse the system language with the user's ability to create and edit foreign editions of content. This field does not prevent a user from working with multiple language content. See also: *Working with multi-language content* on page 1393. If the selected language is not English, French or German, it is only supported after you download the Ektron Language Support Program from Ektron and translate the website.

- **Email Address**. Enter the user's email address.
- **Forum Editor**. Determines which editor is used when this user replies to a Discussion Board. See also: *Managing a discussion board on your website* on page 968
- **Avatar**. Click **Click to upload your Avatar** and choose an image file for your profile. By default, an avatar's maximum file size is 200 kilobytes. Also, the avatar's height and width cannot exceed 125 pixels preserving the aspect ratio.
- **Address**. The address used to find your location when a user is performing a search based on location.
- **Latitude**. The latitude used to find your location when a user is performing a search based on location. Google maps provides a service that takes the address of user and returns its latitude and longitude. You don't need to use Google's automatic retrieval of latitude and longitude. Instead, you can enter the values manually.
- **Longitude**. The longitude used to find your location when a user is performing a search based on location. Google maps provides a service that takes the address of content and returns its latitude and longitude. You don't need to use Google's automatic retrieval of latitude and longitude. Instead, you can enter the values manually.

User Groups Tab (Tab only appears when editing). Lists user groups to which the user belongs. See also: *Assigning a user to a user group* on page 1448.

- **Custom Tab**. Lists any custom user properties. See also: *Creating custom user properties* on page 1451.

Activities Tab (Tabs only appear when editing)

NOTE: If you disable Notifications, the **Activities** tab (which lets the user pick Notifications to receive and send) disappears.

- **Colleagues Sub Tab**. Select the notifications you want to receive when a colleague performs an activity, and the agent that transmits the notification. For example, if you want to receive email notifications when a colleague posts a blog message, you would place a check mark in the box for **Blog Post** in the email column. See also: *Sending notifications to a community* on page 1543.

- **Community Groups Sub Tab**. Select notifications you want to receive when a member of a community group performs an activity relating to the group, and the agent that transmits the notification. For example, you want to receive email notifications when a community group member posts a blog message to group's blog. To enable this, place a check mark in the box for **Group Blog Post** in the email column. See also: *Sending notifications to a community* on page 1543.

  This tab sets preferences for all community groups.
  For Developers: Ektron has created a UserGroupPreferences user control. If you add the control to a community group's profile page, users can specify notification preferences for individual groups. This control comes with Ektron and is located in:

  ```
  [Drive:]\webroot\siteroot\Workarea\Notifications\Controls
  ```

  In this site, when a logged-in member of a community group accesses the group's profile page, there is an **Edit Group Notifications Preferences** link. Clicking this link opens the user control. When you select your preferences, they are stored for that group only.

- **My Activities Sub Tab**. Select notifications you want publish when performing various activities on the website. For example, if you want to publish notifications when you post a blog message to your blog, place a check mark in the box for **Blog Post** in the **Publish** column. See also: *Sending notifications to a community* on page 1543.

Profile Links Tab. Lists the user's alias if community aliasing is set for users. See also: *Types of URL aliasing* on page 1294.

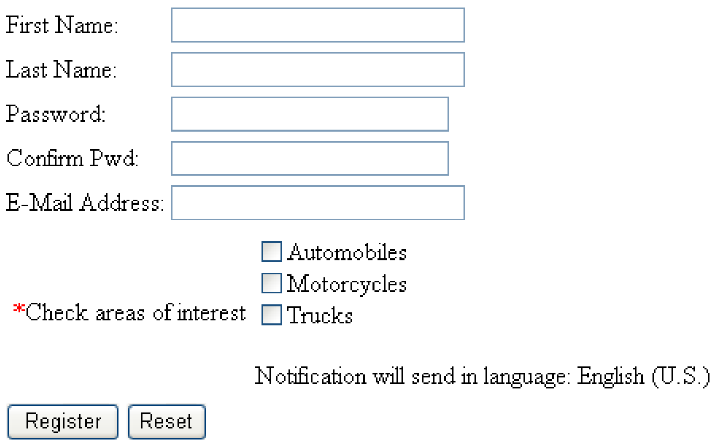
4. Click **Save**.

Deleting membership users

1. From the Workarea, click **Settings > Community Management > Memberships > Users**.
2. Check the boxes next to the users you want to delete.
3. Click **Delete** ().
4. Click **OK**.

Allowing membership users to self-subscribe

A developer can create a Web page that lets site visitors sign up to become membership users. (See the following example.) Interested users complete the form in order to participate in membership activities, such as community groups and message boards.



To place this form on a Web page, a developer inserts a Membership server control, setting the **DisplayMode** property to **User Registration**.

NOTE: The email address is used as the membership **Username** field.

What happens next depends on the **Enable Verify email** check box on the Application Setup screen's **Workarea** tab (shown in the following image). See also: *Modifying setup information* on page 121.

- If the **Enable Verify email** box is *not* checked, a site visitor who completes the form becomes a membership user.
- If the **Enable Verify email** box *is* checked, a site visitor who completes the form is placed on the *Users Not Verified* list. These users receive an email asking them to confirm their registration. Upon confirmation, the site visitor becomes a membership user. At the same time, an Ektron administrator can review the Users Not Verified list and either activate members or delete users from the list. See also: *Verifying a new subscriber* below.

  Ektron provides default text for the confirmation email. To customize the text, see *Customizing the verification message* on the next page.

IMPORTANT: When using the Checkout server control on an eCommerce site, the **Enable Verify Email** setting must be unchecked. Otherwise, new users will receive an error message when they sign-up using this control. See also: Checkout.

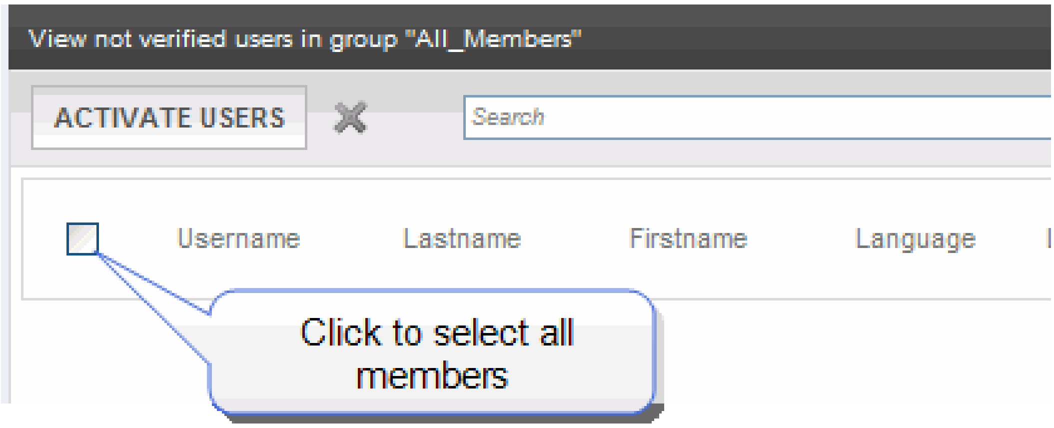
Verifying a new subscriber

If site visitors sign up to become membership users and verification is required, they appear on the View Not Verified Users screen (**Settings > Community Management > Memberships > Users not Verified**).

As explained in *Allowing membership users to self-subscribe* on the previous page, these users can confirm their registration and become membership users. Or, you can activate their membership by checking them on View Not Verified Users screen and clicking **Activate Users**. Alternatively, you can delete unverified members by checking them and clicking **Delete** ( ).

NOTE: The `ek_PageSize` setting in the `web.config` file determines the maximum number of users that can appear on a page before adding another page with the following navigational links:
Page 1 of 2 [First Page] [Previous Page] [Next Page] [Last Page]

To select all members, check the box next to **Username**.



You can also change the way membership users are sorted, or use the **Search** button to find users that match your criteria (for example, users whose username includes *example.com*.)

Customizing the verification message

You can customize the message that prompts site visitors to confirm their interest in becoming a membership user. This message is sent after a site visitor completes the membership form if the **Enable Verify email** checkbox is checked. See also: *Allowing membership users to self-subscribe* on page 1510.

The message should direct prospective members to your website's `activateuser.aspx` page, where they are asked to confirm their interest in becoming a member. This prevents people from becoming members without their permission.

PREREQUISITE

To complete Step 8, you must be a developer.

To customize the verification message:

1. Go to **Workarea > Settings > Community Management > Messages**.
2. Click **Add Email Message**.
3. Assign a title to the message, such as **Verification Message**.
4. In the **Type** drop-down, select **Verification**.
5. Click the check mark in the **Default** box.
6. In the **Subject** field, enter a subject line for the message.

7. Enter the message. Insert the `@appQueryLink@` variable in the message to create a link to the confirmation page. For example:

```
Welcome to example.com. You registered to be notified of updates
to our site. Before we can do this, you need to activate your
account. To do so, please visit @appQueryLink@.
```

The `@appQueryLink@` variable gets resolved as follows (one line):

```
http://sitepath/workarea
  /activateuser.aspx?uid=[username]&acc=[accountID]
```

For example (one line):

```
http://www.example.com/Workarea
  /activateuser.aspx?uid=john.edit@example.com&acc=ce5w84o936477
```

You can insert the following membership user variables into the message.

   - **@appEmail@**. email address
   - **@appActivateId@**. account ID
   - **@appUserName@**. username
   - **@appFirstName@**. first name
   - **@appLastName@**. last name
   - **@appDisplayName@**. display name
   - **@appAvatar@**. avatar
   - **@appSignature@**. signature
   - **@appQueryLink@**. link to confirmation page, as described above

8. On the `activateuser.aspx` page, your developer places a Membership server control. Set the control's **DisplayMode** property to **AccountActivate**.

Activating other membership actions

You can set up Web pages to let membership users perform these actions:

- Activate their account
- Reset their password
- Unsubscribe

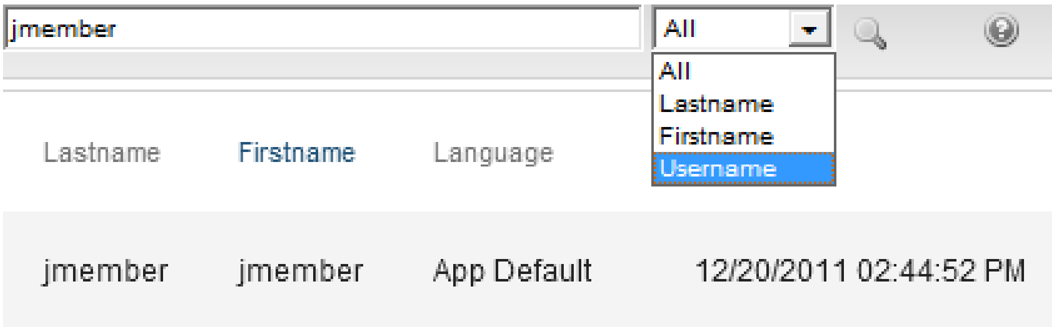
To create these pages, place a Membership server control and use the **DisplayMode** property to determine the mode in which the form appears. For example, to create a reset password form, set **DisplayMode** to **ResetPassword**.

See also: Membership server control, Ektron Knowledge Base article "Changing the Membership User Password Reset Message"

Searching for membership users

If there are many membership users, use the search to find users who meet your criteria. For example, find members whose username includes **@example.com**. Only users with those characters in that sequence in their username, first name, or last name appear. The search is case-insensitive, so **MI** produces the same results as **mi**.

You can also search by First and Last name.



Troubleshooting membership users and groups

If you get the following error:

```
Response object error 'ASP 0251 : 80004005'
Response Buffer Limit Exceeded
```

Increase the limit as follows:

1. Stop IIS.
2. Locate the file `%WinDir%\System32\Inetsrv\Metabase.xml`
3. Modify the AspBufferingLimit value. The default value is 4194304, which is about 4 MB. Changing it to 20MB (20971520).
4. Restart IIS.

Membership groups

You can use a membership group to group similar membership users, reducing the effort required to assign identical permissions to many users.

IMPORTANT: Membership Groups and Community Groups are different concepts. Community Groups let users with similar interest join together in a social networking environment. See *Managing community groups* on page 1530.

To make friendly URLs that are easy to use and remember for a community user and group, Ektron provides a **Community URL Aliasing** feature. See *Types of URL aliasing* on page 1294 for more information.

NOTE: Membership users may also be managed with Active Directory and LDAP. For more information, see *Authenticating membership users with AD or LDAP* on page 1504.

PREREQUISITE

To work with membership users, you must be a member of the Administrators group or assigned to the member admin role. See also: *Defining roles* on page 1464

Viewing users in a membership group

1. From the Workarea, click **Settings > Community Management > Memberships > User Groups**.
2. Click the membership user group you want to view. The View Users In Group screen appears.

Adding a membership group

1. From the Workarea, click **Settings > Community Management > Memberships > User Groups**.
2. Click **Add Membership Usergroup**. The Add a New User Group screen appears.
3. Enter a unique name for the group, and optionally add a description.
4. Click **Save**.

Deleting a membership group

1. From the Workarea, click **Settings > Community Management > Memberships > User Groups**.
2. Select the group you want to delete. The View user in Group screen appears.
3. Click **Delete** ( ).
4. Click **OK**.

Adding users to a membership group

NOTE: Only membership users can be added to membership user groups.

1. From the Workarea, click **Settings > Community Management > Memberships > User Groups**.
2. Click **Add Membership User**. The Add User to Group screen appears.

   NOTE: Only membership users who do not already belong to the group appear.

3. Click the user you want to add.
4. Click **Save**.

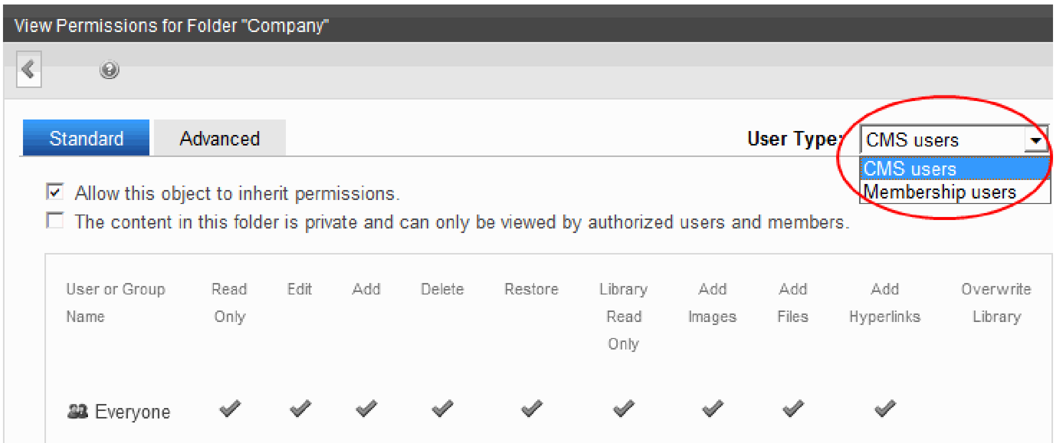
Deleting users from a membership group

1. From the Workarea, click **Settings > Community Management > Memberships > User Groups**.
2. Click the name of the membership user you want to remove. The View Users screen appears.
3. Check the boxes next to the users you want to delete.
4. Click **Delete** ( ).
5. Click **OK**.

Assigning membership permissions

After you create membership users and groups, you can assign them permissions for Community folders only. See also: *Community folders* on page 1520

1. Access the Permissions screen for the content or folder to which you want to assign membership permissions.
   - Content folders—*Managing folder and content permissions* on page 160
   - Content—*Setting permissions for content* on page 164
2. If necessary, break the inheritance for the content or folder.
3. If desired, set the folder or item to **Private**. See also: *Making content private* on page 637
4. Click **View Membership Users** on the right side of the Permissions screen. The membership users/user groups added to the Permissions screen appear.

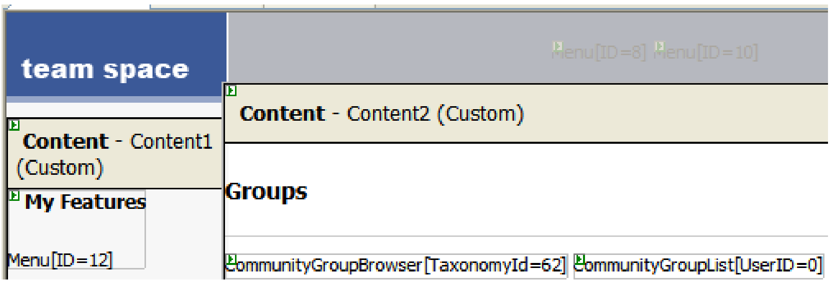


5. Click **Add**. The Add Permissions screen appears.
6. Click a username or user group name to add to the Permissions screen. The Add Permissions Options screen appears.
7. Check appropriate permissions for the membership user or group.
8. Click **Save**.

Assigning templates to groups and members

Ektron's Community Management feature supports both community and individual member pages. Like other Ektron content, Community Management content appears on a dynamic Web page. Page templates determine each page’s layout and location of elements (menus, content, blogs, and so on). The following samples show the Community Management template.

Sample group template in Visual Studio.NET



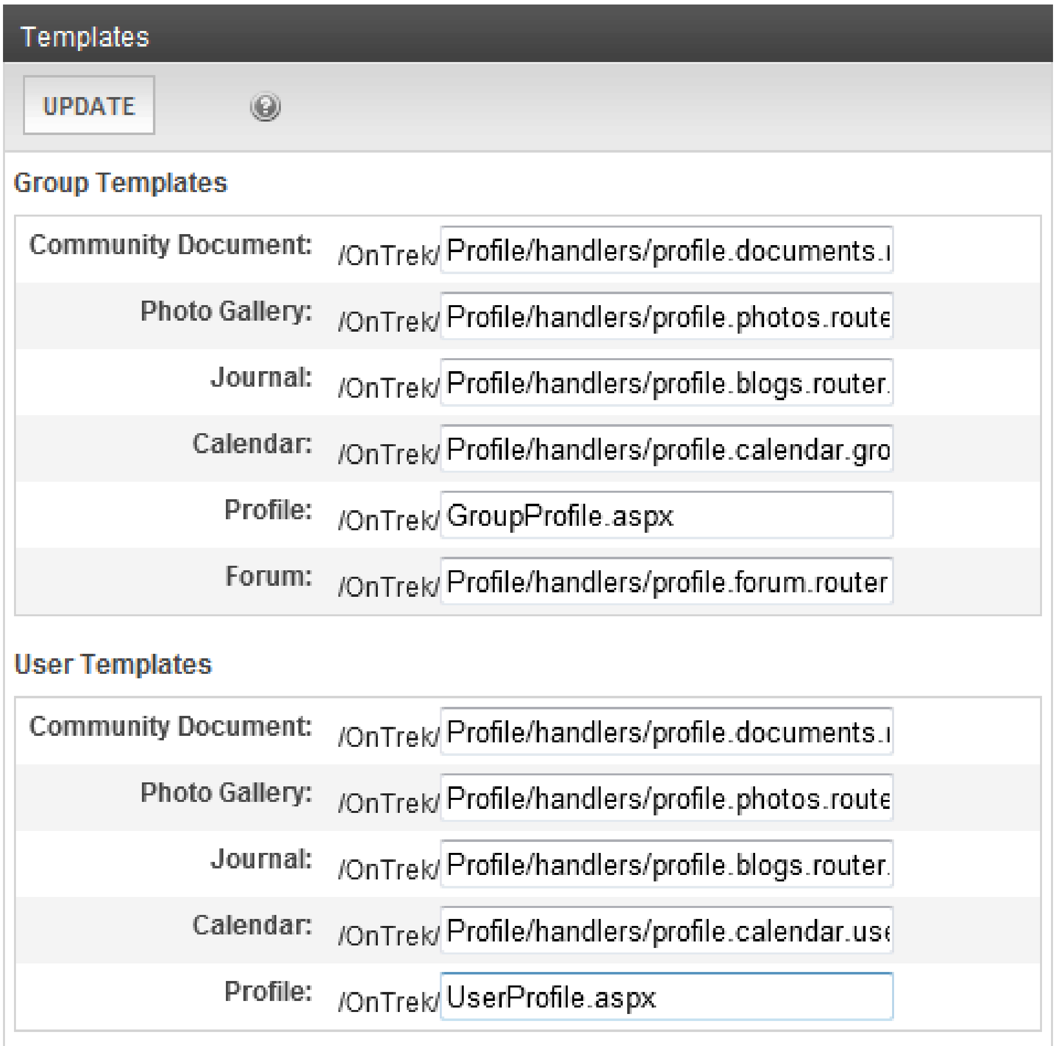
Sample group template on a Web page

The Community Management feature includes six templates:

- Community Group
  - documents
  - photos
  - journal
- User
  - documents
  - photos
  - journal

Ektron provides a sample for each template. You can use the sample or create your own. If you begin with a sample template and modify it, be sure to save it under a different name to prevent it from being overwritten when you upgrade.

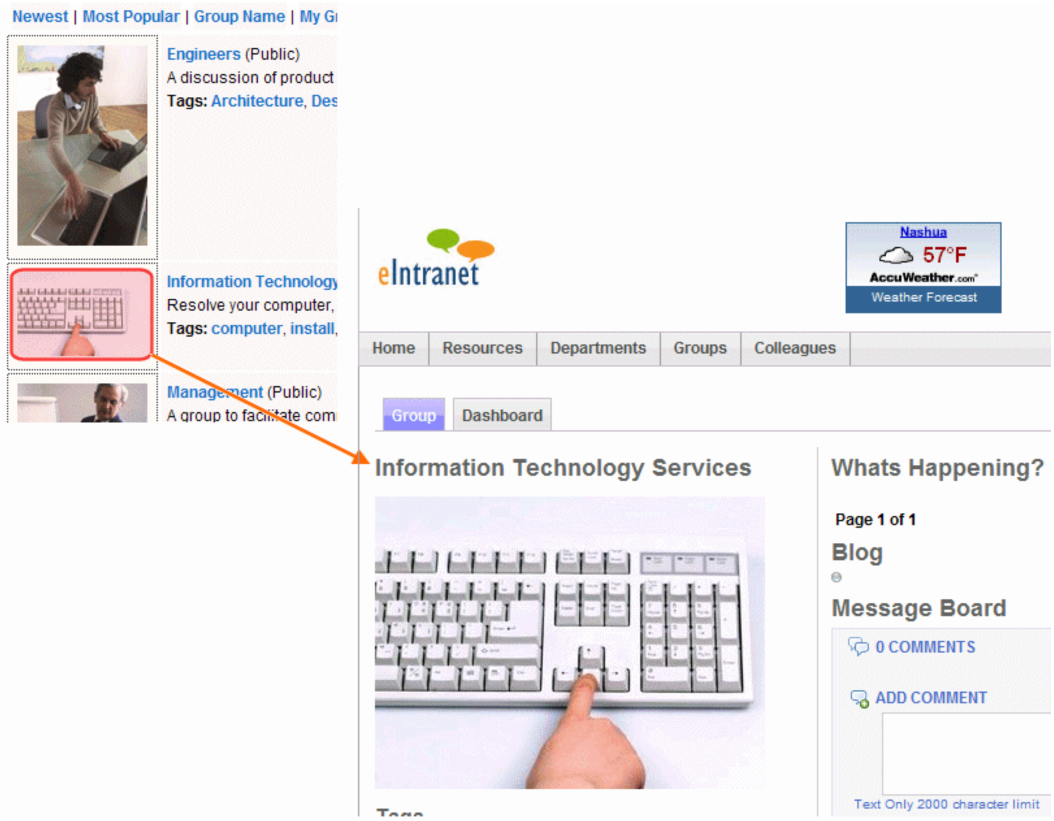
Use the Workarea **Settings > Community Management > Templates** screen to assign templates to Community Management pages.



Group templates

- **Community Document**. Page hosts the CommunityDocuments server control; ObjectType property is set to **Group**
- **Photo Gallery**. Page hosts the PhotoGallery server control; ObjectType property is set to **Group**
- **Journal**. Page hosts the Blog server control, and the blog was created for a group page
- **Profile**. Page that hosts a CommunityGroupProfile server control.

  Note, however, that a site visitor, while viewing a page, may click an icon to visit a community group profile from there.

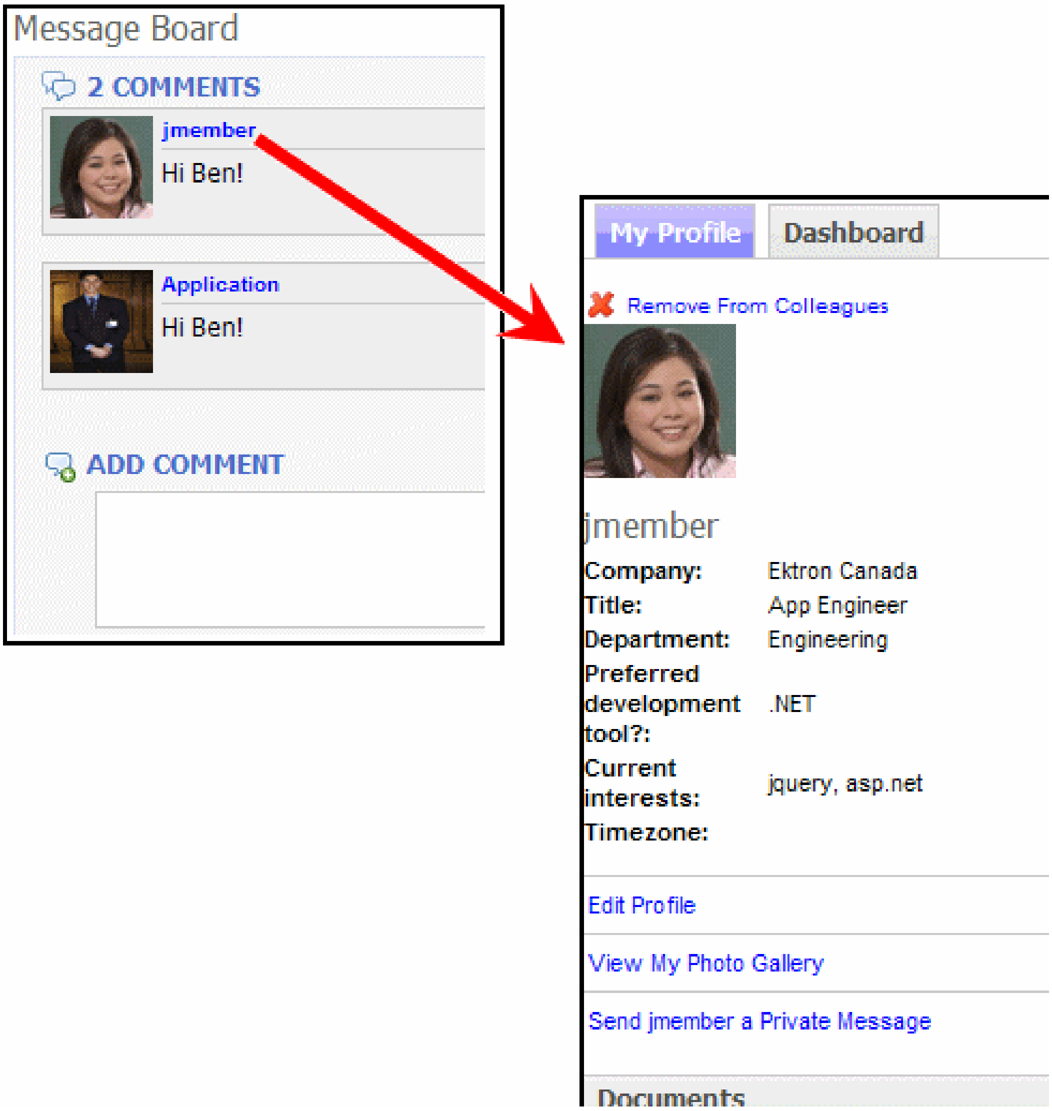


In this case, if the original control has a `TemplateUserProfile` defined, that value overrides this field and defines the template in which the community group profile appears.

User templates

- **Community Document**. Page hosts the CommunityDocuments server control; ObjectType property is set to **User**
- **Photo Gallery**. Page hosts the PhotoGallery server control; ObjectType property is set to **User**
- **Journal**. Page hosts the Blog server control, and the blog was created for a user page
- **Profile**. Page that hosts a User Profile server control.

  Note that a site visitor may click a user icon to visit a user profile from another page.



In this case, if the original control has a `TemplateUserProfile` property value defined, that value overrides this field and defines the template in which the user profile appears.

Community folders

Community folders resemble regular folders in most ways. The only difference is that membership users can add and edit content in these folders only. Community folders have a unique icon, which looks like 2 people ( ).

Membership users add and edit Community folder content after signing in to the website. They do not use the Workarea to add or edit content.

NOTE: Authorized Ektron users can also create and update Community folder content.

Creating a community folder

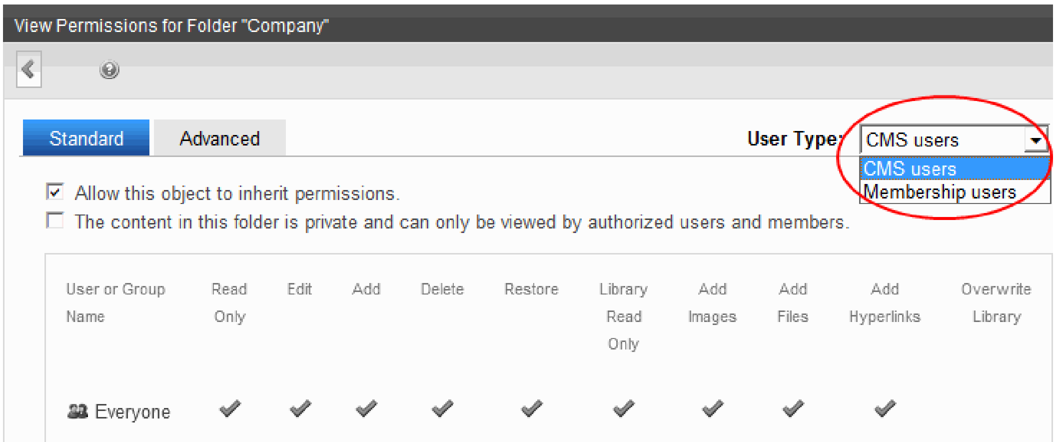
1. In **Workarea > Content**, go to the folder in which you want to create the community folder.
2. Select **New > Community Folder**. Alternatively, you can hover the cursor over the folder, right click the mouse, and choose **Add Community Folder**.
3. Assign properties as you would any other folder. See *Adding a folder* on page 149

NOTE: The folder properties screen lets you require metadata for any content item. However, membership users cannot enter metadata. Therefore, this requirement is ignored when membership users edit community folder content. If an Ektron user tries to edit that content, the user is required to enter a metadata value.

Assigning permissions for a community folder

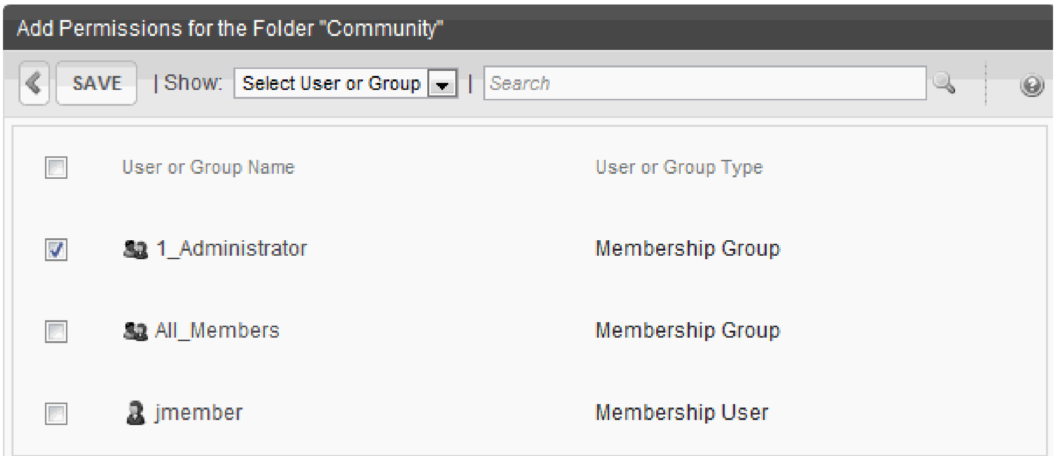
Because Community folders are intended for membership users, this section explains how to assign permissions for them. To assign folder permissions for regular users, see *Managing folder and content permissions* on page 160.

1. Go to the folder.
2. Choose **View > Properties**.
3. Click **View Permissions** ( ).
4. If necessary, uncheck the **Allow this object to inherit permissions** checkbox.
5. Click **User Type: Membership Users**.



6. Click **Add Permissions**.
7. Select the membership user or group to which you want to assign permission for this folder.

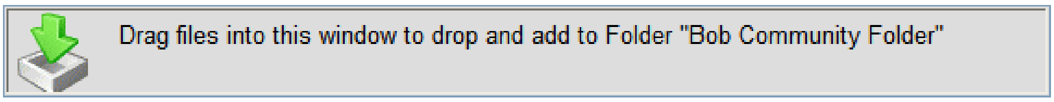
8. Check the permission boxes as appropriate.



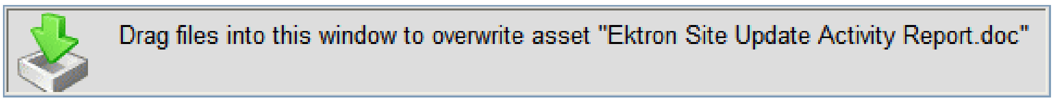
Adding and updating assets as a membership user

First, your developer must create a template, then drop an Asset server control onto it. While adding the Asset Server Control, the developer specifies **Add** at the **Upload Type** property, and the community folder to which the asset will be saved at the **DefaultFolderID** property.

When a membership user is authorized to add content goes to the page with the server control, the person sees an Asset control area like the one that appears when Ektron users add assets. The user then can drag and drop assets into Ektron.



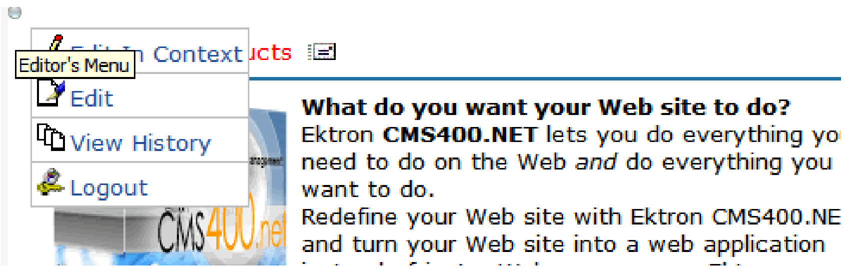
To update an asset, your developer adds the Asset Server Control, as previously described, but specifies **Update** at the **Upload Type** property, and a community folder to which the asset will be saved at the **DefaultFolderID** property. Then, the developer specifies an asset ID number at the **DefaultAsset ID** property. Using that control, the membership user can update the identified asset only.



Additional information about administering assets is found in *Working with assets in the Document Management System* on page 649.

Viewing and editing community folder content

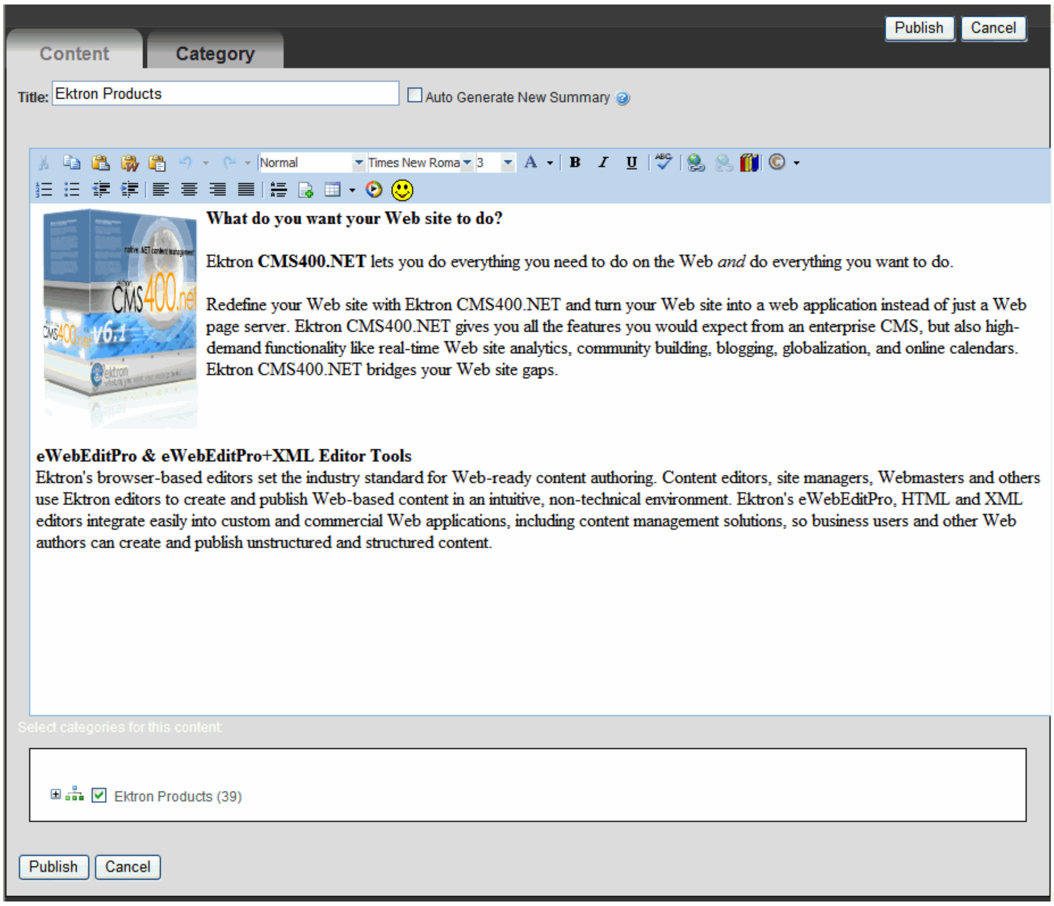
When a user with Read-only or higher permission goes to a page whose content is in a community folder, the user can view it. If the user has edit permission, a menu appears.



WARNING! Membership users can edit only HTML content and assets. They cannot edit other content types (HTML forms, Smart Forms, and so on).

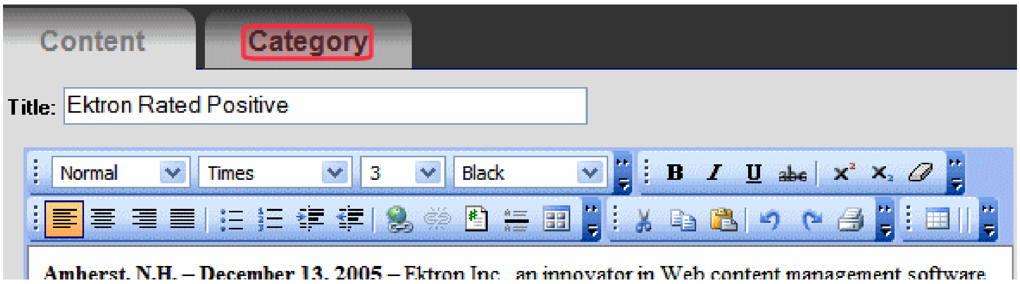
When a membership user clicks **Edit** (), a new window displays the content within an editor.

Other membership buttons are **View History** () and **Log out** ().



This editor has fewer capabilities than Ektron's editor. However, a membership user can

- add images and files via **library** () if the membership user has **Add Images** and **Add Files** permission. See also: *Working with the library* on page 673
- add a wiki using **page link**(). See also: *Using the wiki feature* on page 1931
- assign a taxonomy category to the content by clicking the **Category** tab. See also: *Organizing content with taxonomies* on page 1253



NOTE: The **Category** tab only appears if a Taxonomy is applied to the content's folder.

- replace the content summary with the first 40 words of the content, using the **Auto Generate New Summary** check box. See also: *Automatically creating a summary* on page 636

When a membership user finishes editing, the user clicks **Publish**. If the content's folder has a workflow, the content's status changes to Submitted, and the border color changes to yellow. If there is no workflow, the content is published.

Accessing a user profile

A profile stores and maintains information about a user.

- An Ektron developer inserts a profile on a page using the UserProfile server control.
- A membership user can access his or her profile page only from the website.
- An Ektron user can access his or her profile from the Workarea or the website. Go to **Settings > Users**. See *Managing users* on page 1440.

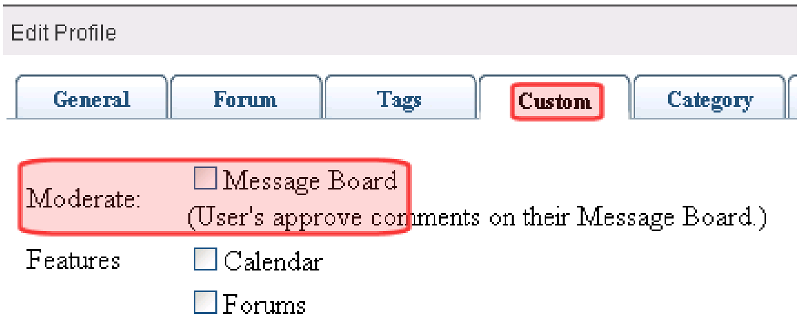
IMPORTANT: For Ektron users, some profile information in the Workarea's **View User Information** screen is not available on the website profile page. That information involves Workarea settings.

- An administrator can access user profiles from the Workarea. Go to **Settings > Community Management > Memberships > Users**. See *Membership users and groups* on page 1507.

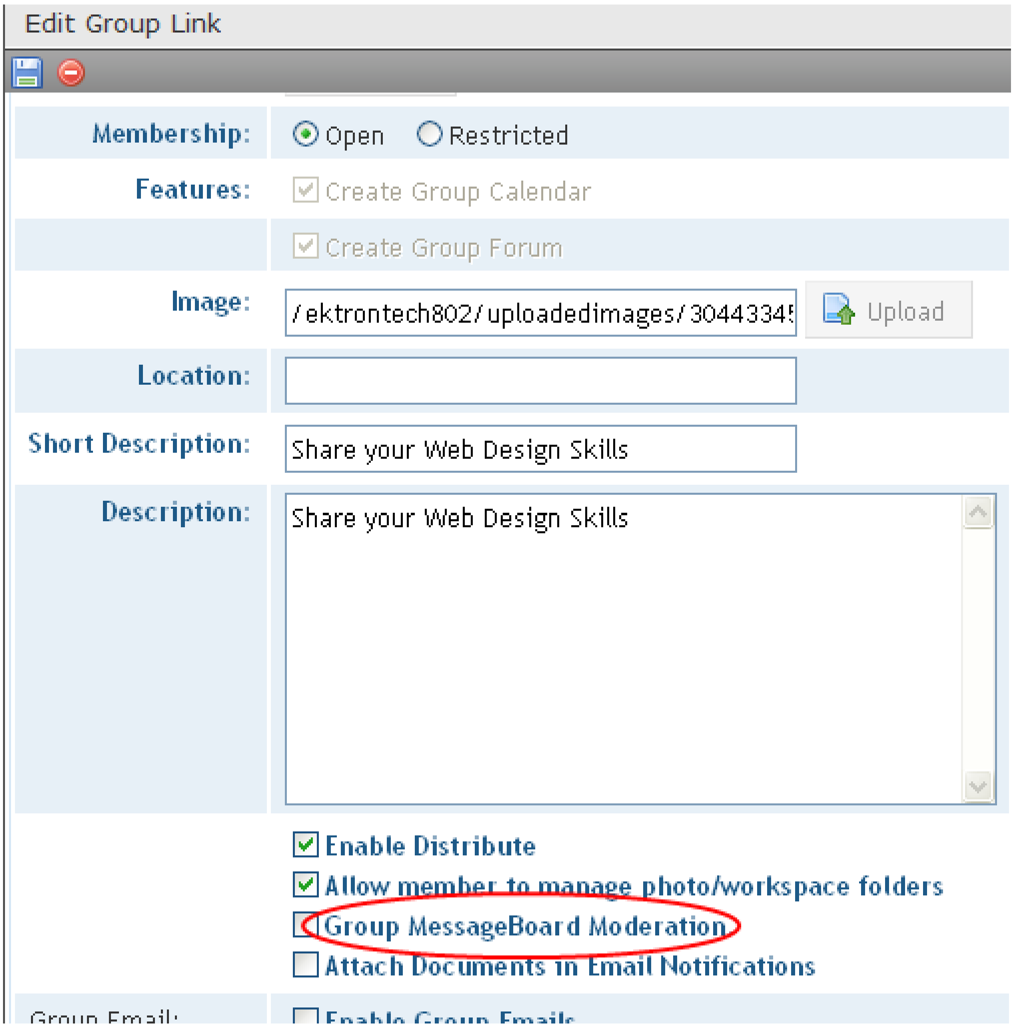
Moderating a message board

A Message Board can be *moderated*, which means that comments and replies must be approved by an authorized user before they appear. Those users can either approve or delete the comment/reply. To learn which users are authorized to moderate, see *Who can moderate message board* on page 1526.

You can force all message boards associated with a MessageBoard control to moderate comments/replies. To do this, set the `Moderate` property to `True`. On the other hand, you can allow the Message Board owners to decide if it will be moderated. To do this, set the control's `Moderate` property to `False`. If you do, users determine if their Message Board is moderated by checking their user or group profile’s **Moderate** check box.

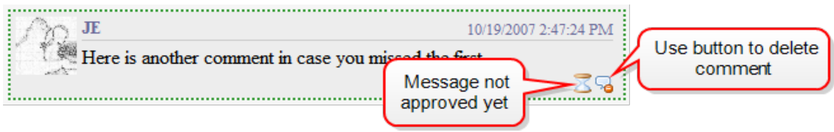


Community group members determine if a group's Message Board is moderated by editing the Group Profile's **Group MessageBoard Moderation** check box.



NOTE: If a Group administrator submits a comment to a moderated Group Message Board, it is automatically approved.

If a comment is submitted to a moderated Message Board, users who can see it notice a green dot border. The comment's author sees an hour glass icon () until it’s approved. At any time, the author can delete the comment using the delete button ( ).



Who is authorized to comment and reply to a message board

- **User**
  - the logged-in user
  - colleagues
  - users assigned to Message Board Admin role See also: *Defining roles* on page 1464
  - Administrators group member
- **Group**
  - group members
  - users assigned to Community Group Admin role; See also: *Defining roles* on page 1464
  - Administrators group member
- **Content item**
  - anyone who can view the content

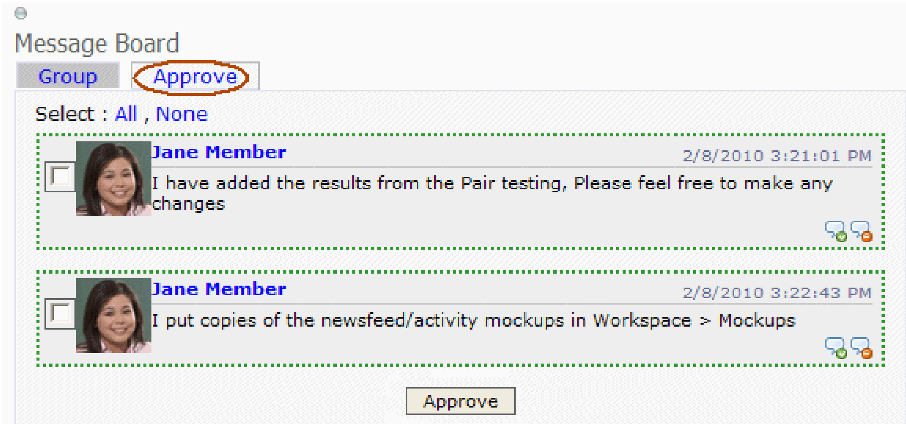
    For example, if a content item is set to private, a user must have at least Read-Only permission for the folder containing the content.

Who can moderate message board

- If you submit a comment or reply, you can view and delete it.
- Any of the following can view, delete, and approve pending comments or replies.
  - Administrator group members
  - If you or a group member owns the message board to which a comment or reply was added.
  - Community group administrator
  - User that is assigned to a Message Board Admin role

Approving message board comments

On a moderated message board, approval activity appears on the **Approve** tab. To *approve* a single Message Board comment, an authorized user clicks **Approve**. An authorized user any can approve several or *all* comments at once. To select several comments, place a check next to each, then click **Approve**. To select all comments, click **Select: All** then **Approve**.



To approve comments from the Workarea:

1. Go to **Settings > Community Management > Message Board**.
2. A list of all unapproved comments appears. You can restrict the list using the drop-down.
3. Place a check next to comments you want to approve. To select all comments, check the box next to **Messages** in the header row.
4. Click **Approve**.

Deleting message board comments

To *delete* a single comment, find the comment and click **Delete.**

Deleting unapproved comments from Workarea:

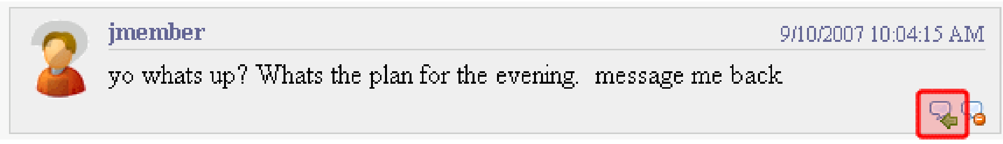
1. Go to **Settings > Community Management > Message Board**.
2. A list of all unapproved comments appears.
3. Select the comments that you want to delete. To select all comments, check the box next to **Messages** in the header row.
4. Click **Delete** ( ).

Replying to message board comments

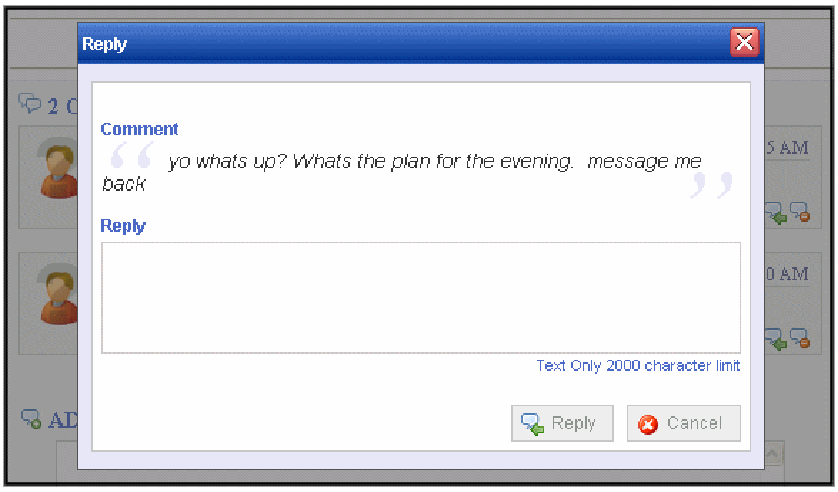
Users can reply to comments on a user's, community group's, or content item's Message Board. For community groups, the group must be public and not restricted; otherwise, only group members can reply.

NOTE: To learn which users are eligible to reply to Message Board comments, see *Who is authorized to comment and reply to a message board* on the previous page If you are in a load-balanced environment, the same reply may appear several times. If this problem occurs, stop the Ektron notification service on all but one of the servers in the cluster.

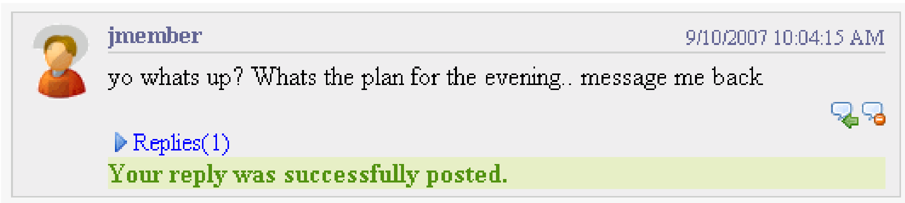
To add a reply, click **Reply** ( ) in a comment's lower right corner.



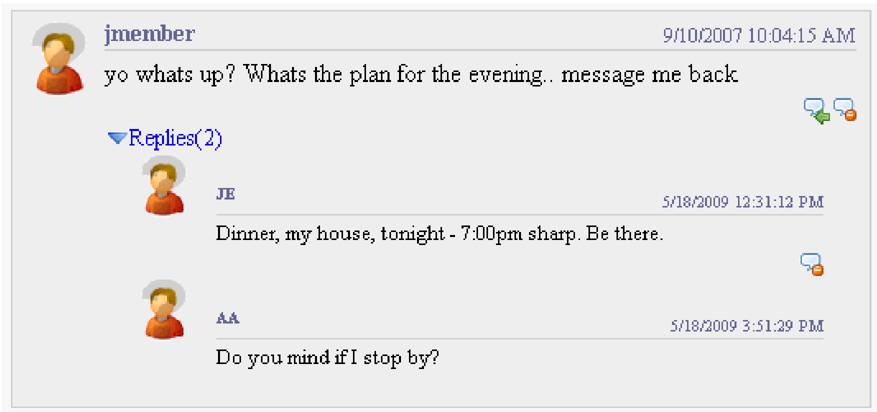
Next, a dialog box displays the original comment and a **Reply** field.



When the reply is submitted, a **Replies** link appears under the comment. The number of replies appears next to the link.



Click the link to view comments. They are arranged from oldest at top to newest at bottom.



If the message board is moderated, replies must be approved before everyone can see them.

Enabling message board notifications

You can send email notifications to Message Board owners and community group members whenever someone posts a comment to a board. If a comment is posted to a *community group's* Message Board, all group members are notified.

IMPORTANT: To receive email notifications, a user's profile must include a valid email address. See also: *Sending notifications to a community* on page 1543

You can turn this feature on or off in the *siteroot*/web.config file. By default, the feature is turned off. To turn it on, open the web.config file and set the following key's value to**True**.

```
<add key="ek_EnableMessageBoardEmail" value= "False"/>
```

When activated, this feature applies to all user and community group message boards.

Filtering spam

Ektron lets you filter spam from your message boards. Ektron defines *spam filtering* as setting the following limits in MessageBoard server control's SpamControlType property:

- **SameUserSameMessageSameDay**. Prevent a user from posting the same comment more than once a day.
- **SameUserTimeDelay**. set the SpamTimeSpan property to 1800 to prevent a user from posting any other comment for 30 minutes.
- **SameMessageTimeDelay**. set the SpamTimeSpan property to 7200 to prevent a user from posting identical comments for 2 hours.
- **Custom** (and add the code to the code-behind page of the template containing the MessageBoard server control). Use your own spam filter code.

You can create your own spam filter in the code-behind of the page that hosts the Message Board. To do this, set the `SpamControlType` property to `Custom`, call the `CustomSpamMethod` in the page load event, and point it to your custom spam filter method. Your method's signature must include the following parameters:

- `long objectId`—the numeric ID of the object defined in the object type
- `Ektron.Cms.Common.EkEnumeration.MessageBoardObjectType objectType`—the type of object with which the Message Board is associated.
- `long userId`—the numeric ID of a user. For example, you want to block a user with the ID 18 from posting to the board.
- `string messageText`—a string of text you want to block
- `int interval`—the amount of time, in seconds, to block posting on the Message Board. For example, if you want to block a user from posting for 30 minutes, set this property to 900.

The following C# example blocks the text `Hello World`.

```
                    using System;
using System.Data;
using System.Configuration;
using System.Collections;
using System.Web;
```

```
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Web.UI.HtmlControls;
public partial classWebformCB : System.Web.UI.Page
        {
protected void Page_Load(object sender, EventArgs e)
            {
                this.MessageBoard1.CustomSpamMethod(SpamControl);
            }
private bool SpamControl(long objectId,
  Ektron.Cms.Common.EkEnumeration.MessageBoardObjectType
  objectType, long userId, string messageText, int interval)
            {
if (messageText == "Hello World")
                {
return true;
                }
return false;
            }
        }
```

Associating message board comments with content in the Workarea

You can associate Message Board comments with content. So, for example, a site visitor can view content then comment on it. You can view these comments in the Workarea.

NOTE: Message Boards can also be associated with users and groups. See also: the MessageBoard server control. Message Board comments are not the same as the Comments tab on the View Content screen.

1. In the Workarea, go to the content block whose messages you want to view.
2. Click that content. The View Content screen appears.
3. Click **View Content Reports** ( ).
4. Click the **Messages** tab. A list of comments associated with the content appears.

Managing community groups

IMPORTANT: Membership User Groups and Community Groups are different concepts. Membership User Groups let an administrator create a group of membership users, thereby reducing the effort required to assign identical permissions to many users. See *Membership groups* on page 1514. Community Groups are explained in this section.

Community groups are another feature of Ektron's Community Platform. Group members can easily meet people with similar interests, such as car racing.

Groups have similar features and functions to user features. For example, a community group can have a Message Board, Discussion Board, maintain a membership list, and keep a group journal. You can manage community groups from the website or the Workarea.

You can assign a taxonomy category to a community group so that users can browse and search for groups by category. You also can assign tags to a community group, which let users find groups when searching by tag name.

You can access community group information in the following areas of the Workarea:

- **My Workspace > Community Groups**. displays groups to which you belong; also lets you remove yourself from them.
- **Workarea > Settings > Community Management > Community Groups**. displays all groups. You can define a group's details or add and remove members from the group when you are:
  - a group's leader (also known as a group administrator)
  - a member of the Ektron administrator's group
  - an Ektron user or Membership user with the Community Group Admin or Community Group Create role

To view a list of all community groups in the Workarea, click the **Settings > Community Management > Community Groups**.

The following server controls are associated with community groups:

- CommunityGroupBrowser. Lets you browse a taxonomy structure for community groups.
- CommunityGroupList. Displays a list of community groups, sorted by name, newest, most popular, and so on.
- CommunityGroupMembers. Displays a list of group members, as well as those who have been invited to join or requested to join the group.
- CommunityGroupProfile. Displays a group profile.

Viewing a community group's details

Any user with access to the Workarea can view a group's details but cannot see group members. Only the group leader (also known as a group administrator), a member of the administrators group, or an Ektron user with the Community Group Administrator role can edit the group's information, add and remove members, or delete the group.

1. Click **Settings > Community Management > Community Groups**.
2. Click **Group Name**. The group's detailed information appears.

Viewing community group members

Only the group leader (also known as a group administrator), a member of the administrators group, or an Ektron user with the Community Group Administrator role can view group members. These users can also add and remove members. And, if the group's membership is **Restricted**, you can accept or decline requests to join the group.

1. Click **Settings > Community Management > Community Groups**.
2. Click a group name.
3. Click **View Community Group Members** (). A list of group members appears.

Adding or editing a community group

1. Click **Settings > Community Management > Community Groups**.
2. If you are adding a new group, click **Add New Community Group**. If you are editing a group, click the group name then **Edit This Community Group**.
   - **Group Name**. The name of the group.
   - **Administrator**. A group administrator has privileges to delete a group and edit its properties. Members of the Administrators group and users assigned to the Community Group Admin role also have these privileges. By default, the person who creates the group is the group administrator. Click **Browse** to change the administrator.
   - **Membership**. Select whether the group is **Open** (anyone can join) or **Restricted** (only invited members can join). See also: *Accepting/declining requests to join a community group* on page 1534

     NOTE: Restricted groups can be found in the same way that open groups can. Also, their activities are published as notifications. For example, `Tom posted a reply to the forum topic titled 'RoboTech Acquisition'`. So, do not create a group or publish activities that you want to keep secret.

   - **Features: Create Group Calendar**. Click this radio button if you want to allow the group administrator to create a group calendar. See also: *Creating a calendar in a group* on page 923
   - **Features: Create Group Forum**. Click this radio button if you want to allow the group administrator to create a group forum. See also: *Managing a discussion board in a community group* on page 973
   - **Image**. Upload an image to use as an avatar for the group.
   - **Location**. The geographical location of the group.
   - **Short Description**. A brief description of the group.
   - **Description**. A full description of the group.
   - **Enable Distribute**. Check this box if you want the group and system administrator to be able to *distribute* content to any Ektron folder. See also: *Distributing content to another Ektron folder* on page 1537
   - **Allow member to manage photo/workspace folders**. Check this box to allow members to add, remove and control the sharing of folders in a community group's Photo Gallery or Document's Workspace. See also: *Allowing community group members to work with folders* on page 1534.

- **Group MessageBoard Moderation**. Check this box if you want the group's Message Board to be *moderated*. That is, comments and replies must be approved by an authorized user before they appear. See also: MessageBoard
- **Attach Documents in Email Notifications**. Check this box if you want set up activity message attachments for a community group. See also: *Enabling attachments to notifications* on page 1576
- **Group Email**. Check this box to allows emails to be sent to the group.
- **Group Tags** (Tags tab). From this screen, you can either create a new tag or select from a default list of community group tags. See also: *Assigning a tag to a community group* on page 1535
- **Category List** (Categories tab). The categories tab lists all taxonomy categories associated with the community group. This tab only appears if you have defined at least one taxonomy for community groups. See also: *Creating a taxonomy and its associated categories* on page 1255
- **Links Tab**. Displays the group's alias if aliasing is set for community groups. You can click the alias to view the community group page. See also: *Creating user-friendly URLs with aliasing* on page 1293

3. Click **Save**.

After you create a group, you can add members to it. See also: *Adding members to a community group* below and *Managing community groups* on page 1530

NOTE: The CommunityGroupBrowser server control also has a **Create Group** link, which lets you create a community group from the website. See also: CommunityGroupBrowser server control.

Deleting a community group

Only the Group Administrator, Ektron administrators, or Ektron users with the Community Group Administrator role can delete a group.

1. Click **Settings > Community Management > Community Groups**.
2. Click a group name.
3. Click **Delete This Community Group** ( ).

Adding members to a community group

Only the group leader (also known as a group administrator), administrators or Ektron users with the Community Group Administrator role can add members to a group.

1. Click **Settings > Community Management > Community Groups**.
2. Click on a group name.
3. Click **View Community Group Members** ( ). The View Community Group Members for the group screen appears.
4. Click **Add User(s) to Community Group**. The Add Members screen appears.

5. Using the drop-down box, select the type of name (Display name, Last name, First name, Username) for which to search.
6. Enter a name in the text box.
7. Click **Search**. The results are returned.

NOTE: If you leave the text box blank and click **Search**, all results for the name type are returned.

8. Place a check mark in the box next to each member to add.
9. Click **Add Selected User(s) to This Community Group**.

Removing members from a community group

Only the group leader (also known as a group administrator), Administrators, or Ektron Users with the Community Group Administrator role can remove members from a group.

1. Click **Settings > Community Management > Community Groups**.
2. Click a group name.
3. Click **View Community Group Members** (). The View Community Group Members for the group screen appears.
4. Check the box next to members you want to remove.
5. Click **Remove from Community Group** ().

Allowing community group members to work with folders

When you associate the CommunityDocuments or PhotoGallery server control with a community group, you can let members of the group add, remove, and control the sharing of folders in these controls.

1. In the Workarea, go to **Settings > Community Management > Community Groups**.
2. Click a community group.
3. Click **Edit This Community Group**.
4. Check the **Allow member to manage photo/workspace folders** box.
5. Click **Save**.

Accepting/declining requests to join a community group

If a group's membership is set to **Restricted** (on the Community Group screen), users must request to join the group. (If membership is **Open**, users join a group immediately.) In the Workarea's View Community Group Members screen, use the **Pending** tab to accept or decline a user's request to join a group.

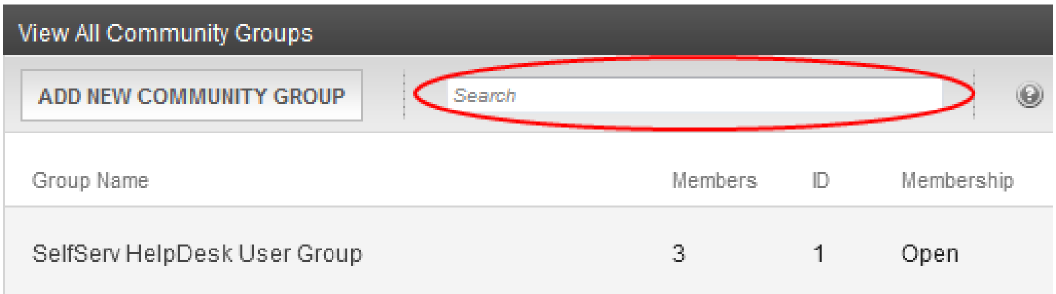
Only a Group Administrator, Ektron Administrator, or Ektron users with the Community Group Administrator role can do this.

To accept or decline a member's request to join a group in the Workarea:

1. Go to **Settings > Community Management > Community Groups**.
2. Click the group for which you want to accept or decline requests to join.
3. Click **View Community Group Members** ( ).
4. Click the **Pending** tab.
5. Check the box next to each member whose request you want to approve or decline.
   - To approve the request, click **Approve**.
   - To decline the request, click **Decline**.

Searching for a community group

You can search for a Community Group in the Workarea by using the View All Community Groups page's **Search** box.



To search for Community Groups, click **Settings > Community Management > Community Groups**. Enter text in the search box and press **Enter**. Community Groups that match the search term appear.

Assigning a tag to a community group

On the website, Tag information for a group appears in the Group’s profile. In the Workarea, Tag information is on the View Community Group’s > **Tag** tab. From this tab, you can either create a new tag or select from a list of group tags.

1. In the Workarea, go to the **Settings > Community Management > Community Group**.
2. Click the community group for which to create a new tag.
3. Click **Edit This Community Group**.
4. Click the **Tags** tab.
5. Click **Add Tag**.
6. Add a tag to the **Name** text box.
7. Select a language.
8. Click **Save**.

When the Tag is saved, it appears in the Group Tags area with a check mark in the check box, which means the tag is active for the community group. If you have several tags, use the check boxes to choose the default tags that you want associated with the group.

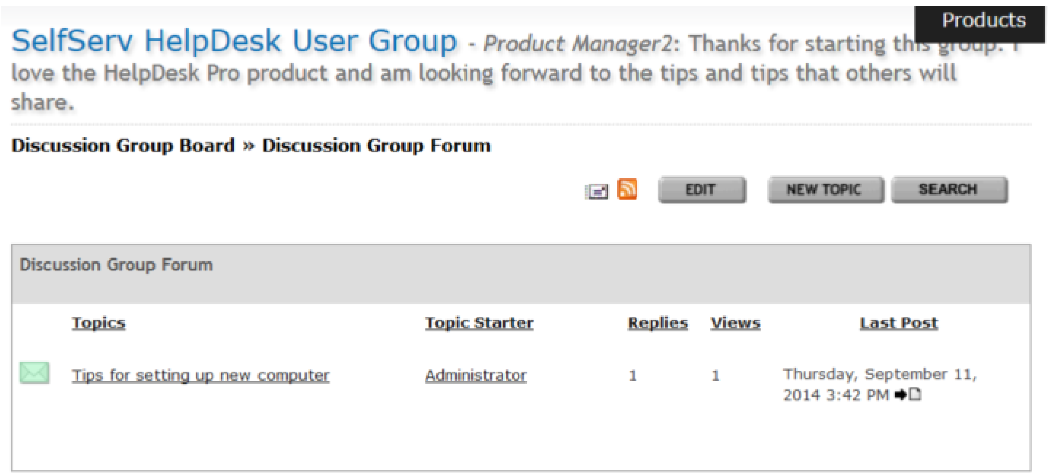
Using discussion boards for community groups

You can use the Discussion Board feature within a community group to provide Web-based discussions on topics of interest to a group. To use this feature, each group must add the Discussion Board for their group into the database before posts can be added. To do this, see *Using discussion boards for community groups* above.

Group discussions may include these topics:

- project requirements
- scope and scheduling
- team issues
- frequently asked questions

The following image shows a discussion board on a community group page.



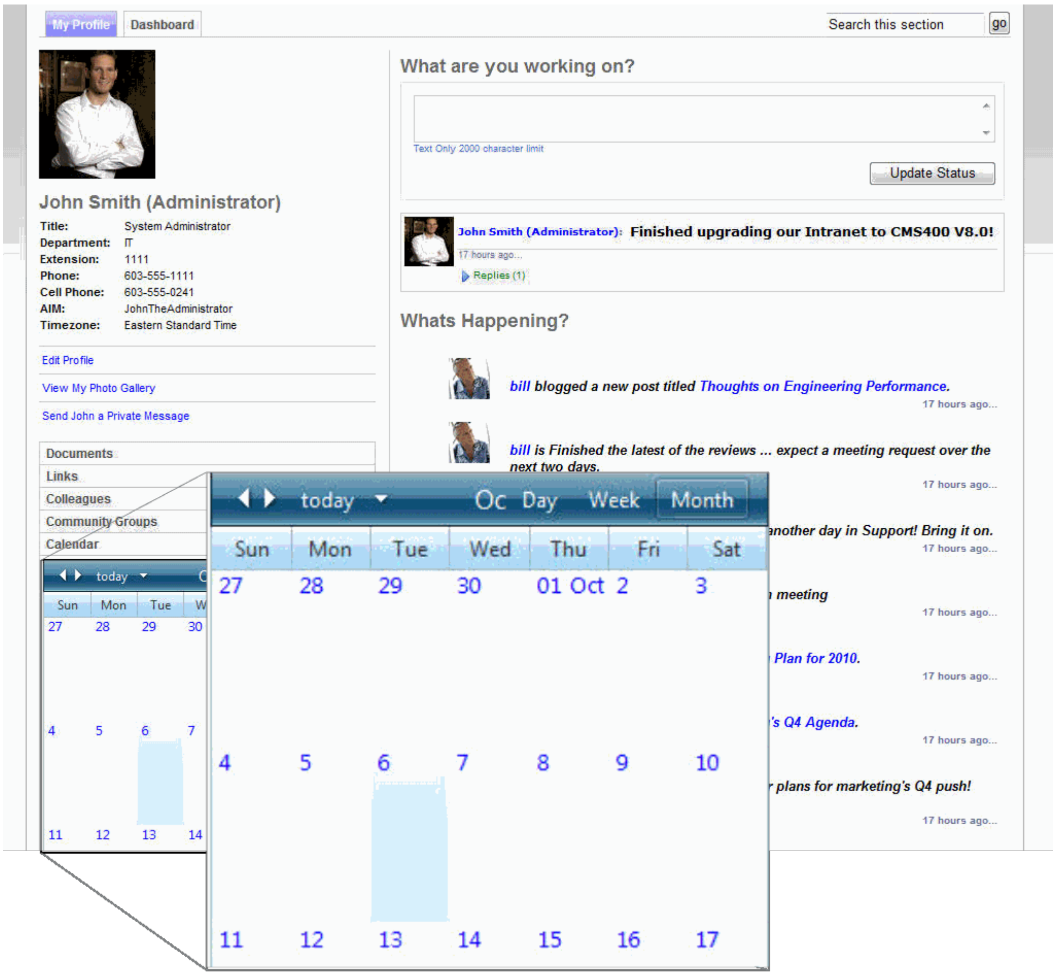
Using calendars for community users and groups

Ektron's Web Calendar keeps visitors informed about upcoming events. Combined with the powerful community features, the calendar enhances communication between individuals and groups. To use this feature, each group must add Calendar into the database before events can be added; see *Creating a calendar in my profile* on page 921.

Communities calendars events could include

- personal vacations
- special personal occasions
- group milestones
- group meetings

The following image shows a calendar on a personal profile page.



Distributing content to another Ektron folder

Ektron supports the *distribution* of a community document to any Ektron folder. For example, your Marketing Department uses the Community Documents server control to create and edit content. After completing a press release, they use the **Distribute** menu option to copy it from the private collaboration folder to a public content folder. From there, the document can pass through a workflow or be published immediately.

The Distribute option can insert new content or overwrite existing content.

Enabling the Distribute option

Only a member of the Ektron Administrators group can enable the Distribute option. Do this for every community group that will use it. You can do so from the Workarea or after logging in to the website.

From the Workarea

1. Go to **Settings > Community Management > Community Groups.**
2. Click the group for which you want to enable the Distribute option.
3. Click **Edit**.

4. Check the **Enable Distribute** box.
5. Click **Save**.

From the website

1. Log in to a site that uses the Community Management features as a CMS administrator or a Group Administrator.
2. Go to a Web page that hosts a Group Profile page.
3. Click **Edit Group**.
4. Check the **Enable Distribute** check box.
5. Click **Save**.

Distributing a community document

WARNING! After a community document is distributed the first time, the original document is forever linked to the destination document. You cannot break the link.

PREREQUISITES

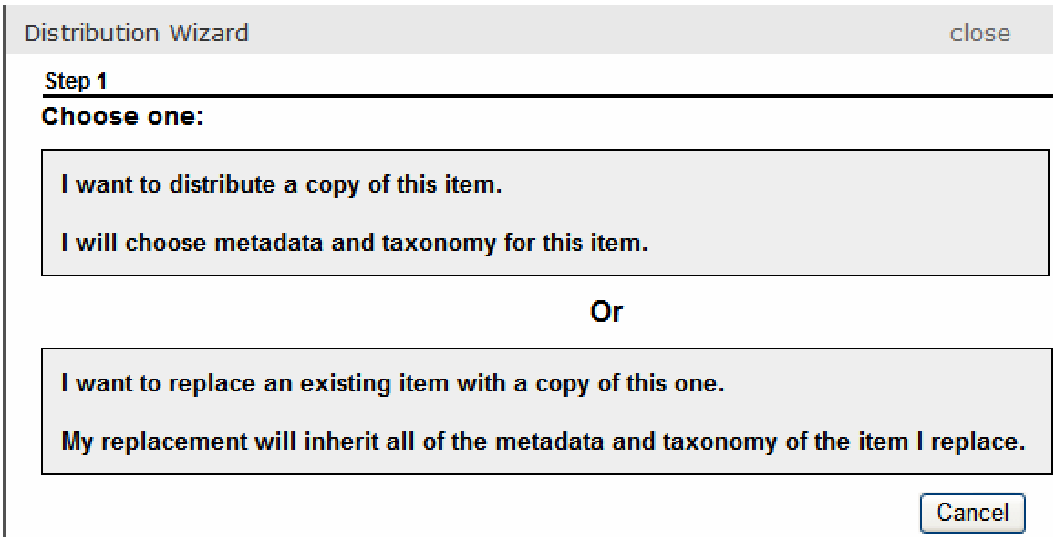
- You log in as one of the following
  - Administrator of the group whose documents are being distributed
  - Ektron user assigned Community Group Administrator role for that group
  - CMS administrator
- The content's status is Approved.
- You have permission to add, delete, and restore content to the destination folder. (If you do not, the folder doesn't appear on the folder selection screen.) See also: *Managing folder and content permissions* on page 160

Distributing a community document

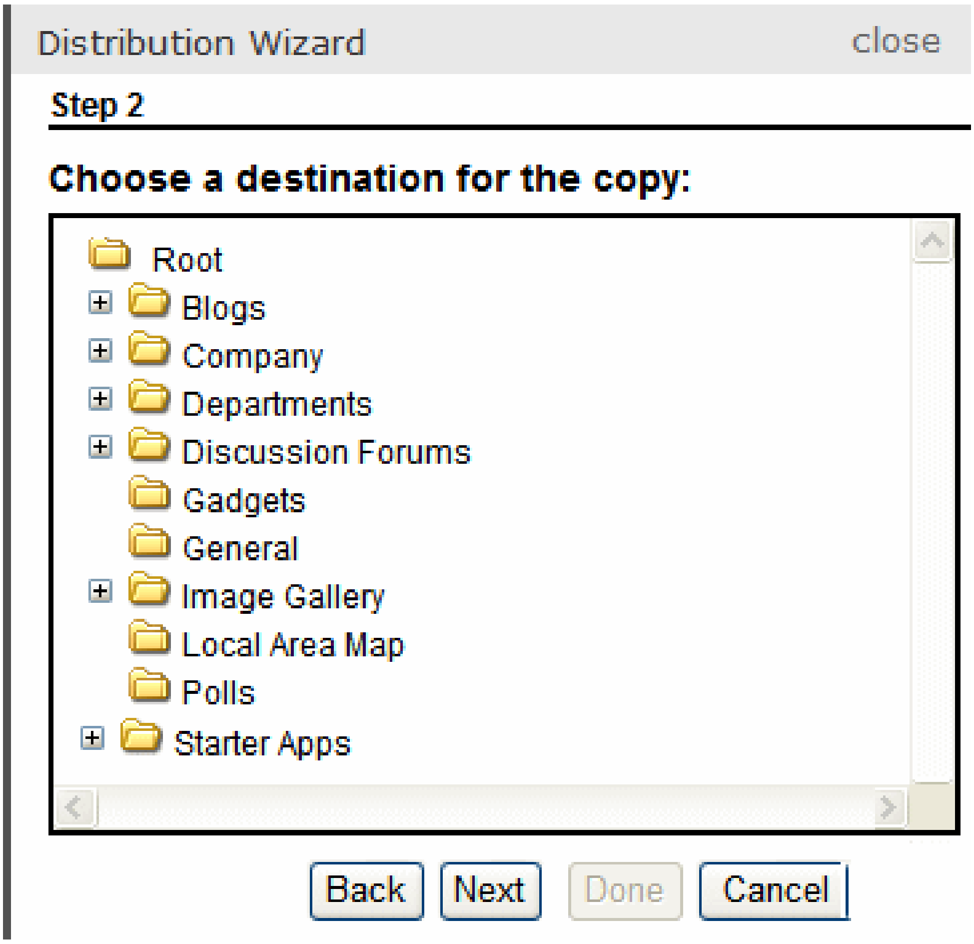
When you distribute a community document that does not exist in Ektron for the first time, you identify a destination folder and, if required, metadata and taxonomy categories. This information is collected through a series of screens that guide you through the process.

1. Log in to the website that contains content you want to distribute.
2. Go to the Web page that contains content you want to distribute.
3. Click the triangle to the right of the content or asset you want to distribute.

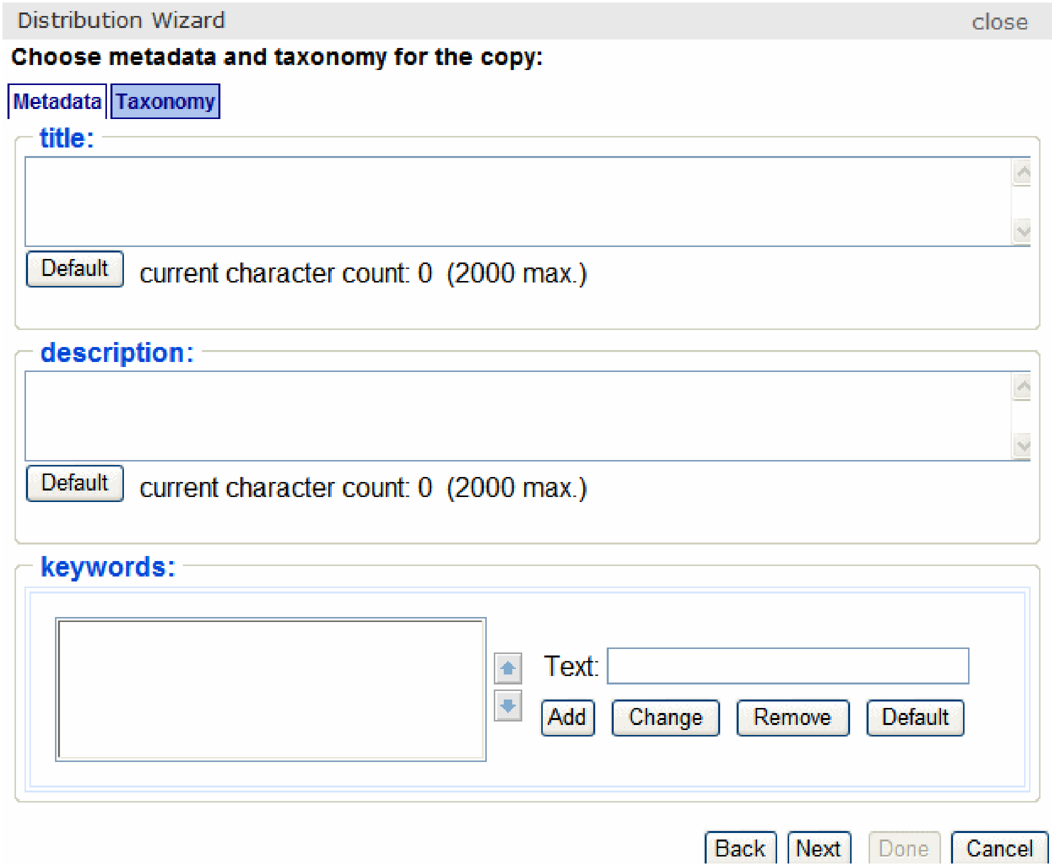
4. Click **Distribute** from the drop-down menu. The following screen appears.



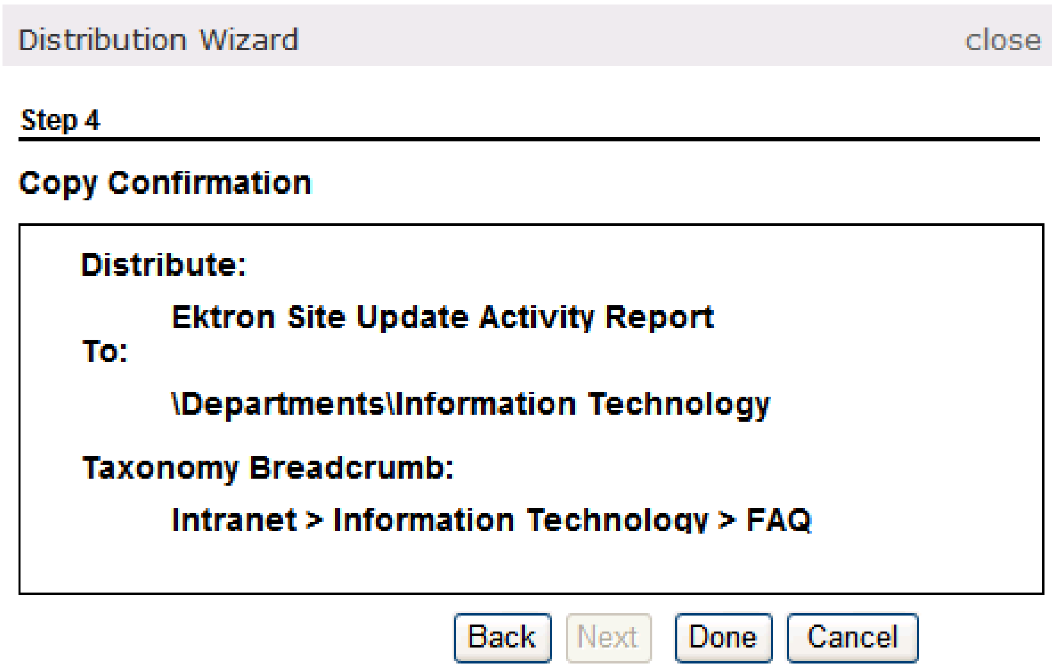
5. Click in the top box, which begins **I want to distribute a copy of this item**. The following screen appears.



6. Select the folder to which you want to distribute the content and click **Next**. The following screen appears if metadata or a taxonomy category is required for the folder.



7. Enter any required metadata or taxonomy.
8. Click **Done**. Ektron copies the selected document to the designated folder.



Distributing and overwriting a community document

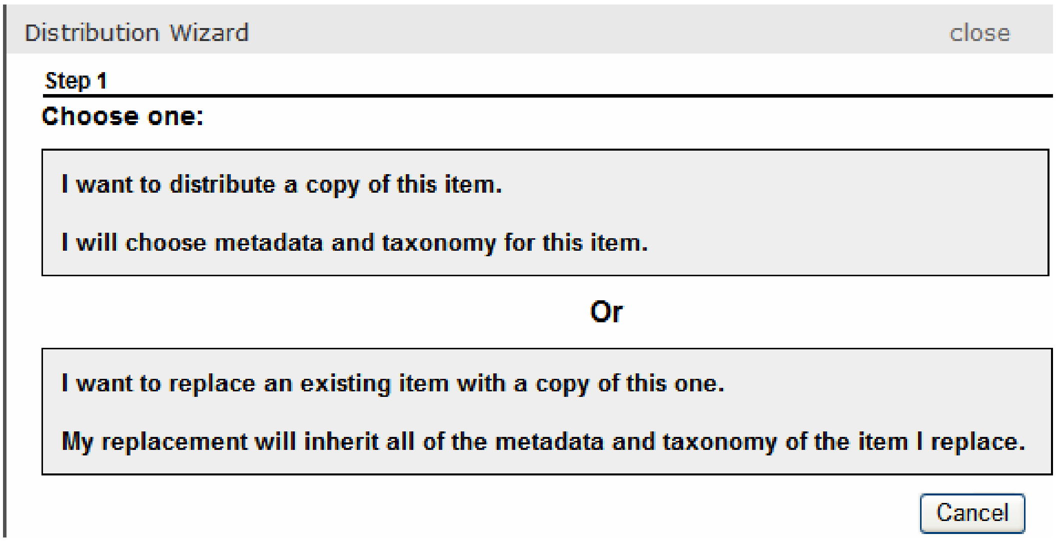
NOTE: This process only occurs the first time you overwrite a document. For a description of subsequent updates, see *Distributing content after the first distribution* on the next page.

During this procedure, you identify a destination folder and content to be replaced. Because the content's type that you are distributing must match the content being replaced, you only see content whose types match.

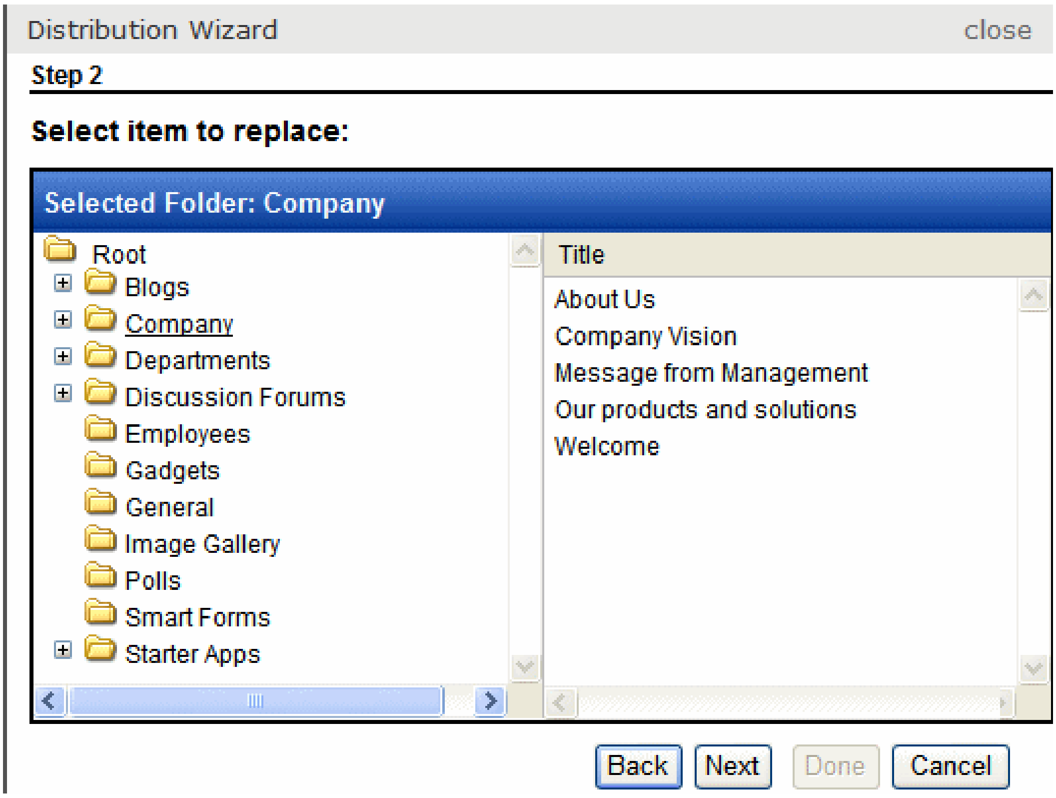
Upon replacing, any metadata and taxonomy categories applied to the existing content are applied to the new. Also, the content title and ID number from the existing content are maintained—they are not replaced by the title and ID number of the new content. Finally, the existing content's summary is maintained and can be edited if needed.

1. Log in to the website that contains the content you want to distribute.
2. Go to the page that contains that content.
3. Click the triangle to the right of the document you want to distribute. **Distribute** appears on the drop-down menu.
4. Click **Distribute**. The following screen appears.

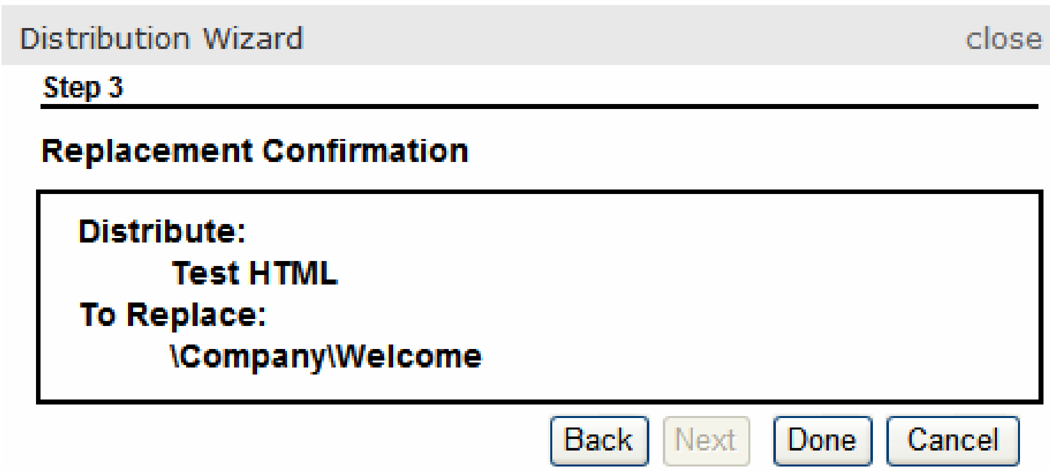
   NOTE: The following screen only appears the first time you overwrite a file. To overwrite the file subsequently, see *Distributing content after the first distribution* on the next page.



5. Click the lower box, which begins **I want to replace an existing item**. The following screen appears.



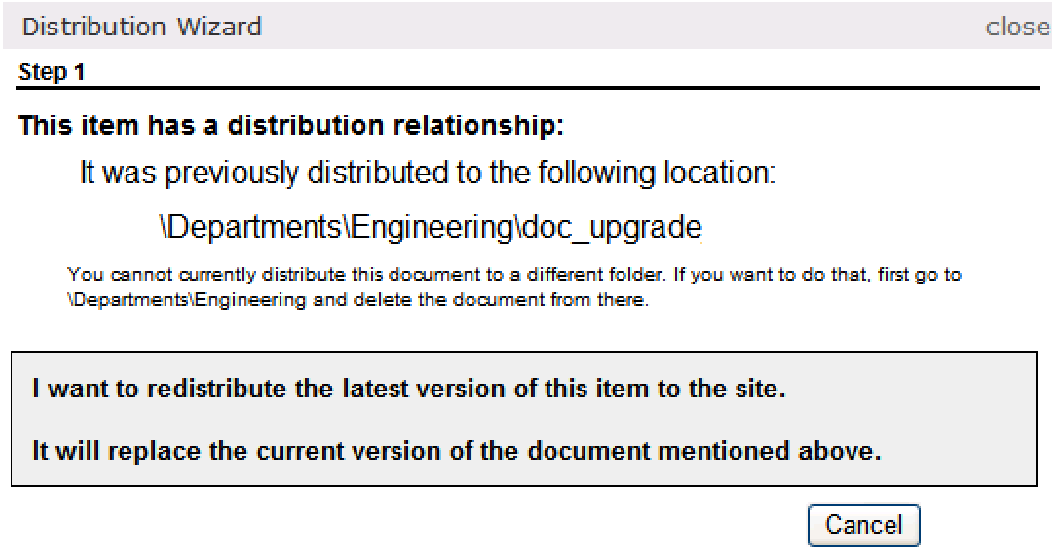
6. Go to and select the content you want to replace. Only content whose type matches the document you selected appears.
7. Click **Next**.
8. Click **Done**.



9. Ektron overwrites the selected document with the one you selected.

Distributing content after the first distribution

If you later try to **Distribute** the same document (whether you added a new document or overwrote an existing one), a screen like the following appears.



If you really must distribute the document to another folder, delete the document in the destination folder. This action breaks the link between documents. When the link is broken, you can distribute the document to another folder.

To copy the latest version of the document to the distribution folder, click the gray box whose text begins **I want to redistribute...** However, you cannot distribute the document to another folder. (If you want to do so, first delete the document from the destination folder. Then, you can use either procedure to distribute the document to any folder.)

When distributing content after the first time, its metadata and taxonomy categories appear on the Metadata/Category screen by default. You can change them if desired.

As with the replace option, the existing content’s title and ID number are maintained -- they are not replaced by the new content’s title and ID number. And, the existing content’s summary is maintained and can be edited if needed.

Sending notifications to a community

Notifications help you build a tighter, more robust community. They drive users to your site by notifying them of a recent event, then directing them to the affected page.

Ektron's notification system creates and transmits a notification message to recipients through various agents, based on Ektron activities. The activity may be performed by a community group, membership user, or an Ektron user. For example, a membership user wants to notify colleagues whenever a document is uploaded to his profile page. When this occurs, a notification agent sends an email to that user's colleagues.

Users can control the notification system by determining

- which activities generate notifications to their colleagues and community groups
- which notifications they want to receive from colleagues and community groups

The following notification system overview is for developers and Ektron administrators.

1. A user performs an activity in Ektron, which raises a corresponding event.
2. Activity data is written to the database's activity table.
3. Activity information is sent to the activity queue.
4. Ektron verifies that the notification system is enabled and that the user who performed the activity wants to notify others when it occurs.
5. The notification service compiles
   - the message associated with the activity
   - agents that send the message
   - recipients who chose to be notified when that user performs that activity
6. The notification service uses notification agents to send the message to appropriate recipients.

Notifications respect permissions and private content

The notification system respects Ektron's content permissions. As a result, content-related notifications are only sent to users with at least read-only permission for the content. See also: *Managing folder and content permissions* on page 160.

For example, Julia adds content to an Ektron folder for which her colleague, Tyler, does not have permission. Tyler is *not* notified when content is added, even though he signed up to be notified about colleagues' activities. However Kristin, another colleague who has permission to edit the folder's content and who signed up to be notified about colleagues' activities, does receive notification of that event.

Similarly, private content is only viewable by authorized CMS users or membership users with at least read-only permissions for it. See also: *Making content private* on page 637.

Notification activities and recipients

The following table lists Ektron notification activities, and the users and groups that receive each notification.

NOTE: As explained in *Personalizing notifications about your activities* on page 1554, users must elect to receive these notifications.

Activity	Notification recipients
Blog Post. user posts to the user's blog	User's colleagues
User or Community Blog Comment. user comments on a blog post	Posting user's colleagues

Activity	Notification recipients
Add/Update Site Calendar Event. event is added or changed on site Web calendar	User's colleagues
Add/Update User Calendar Event. event is added or changed on user Web calendar	User's colleagues
Add/Update Group Calendar Event. event is added or changed on group Web calendar	Community group members
Add Colleague. user adds a colleague	• Colleagues of user who adds • Added colleague
Create Community Group. user creates a community group	Colleagues of user who creates group
Join Community Group. user joins community group	• Community group members • Colleagues of user who joined
Add/Edit Group Content. user uploads or edits content in a community group workspace	Community group members
Group Blog Comment. user comments on a community group's blog post	Community group members
Group Blog Post. user posts to community group blog	Community group members
Group Messageboard Post. user posts to a community group message board	Community group members
Add/Edit Site Content. user adds or edits Ektron content	User's colleagues
Content Messageboard Post. user posts to a message board associated with content	Users who have per-mission to view the content

Activity	Notification recipients
Add/Edit User Workspace Content. user uploads content to the user profile	Depends on folder’s share setting, which can be • Public—all colleagues • Colleagues—all colleagues • Selected colleagues • Private—no notification
Forum Post. user posts to a forum	• Posting user's colleagues • Forum owner and owner's colleagues
Forum Reply. user replies to a forum post	Posting user's colleagues
Community group forum post. user posts to community group forum	• Posting user's colleagues • Community group members
Community group forum reply —user replies to community group forum post	• Responding user's colleagues • Community group members
Micro-message. user posts micro-message	User's colleagues
User Messageboard Post. user posts to a message board associated with a user	• Colleagues of user who posts • Message board owner and the owner's colleagues

Setting up notifications

This section explains how to set up community notifications.

Setting up Ektron to send notifications

PREREQUISITE

- You are a member of the Administrators group or assigned the Community Admin role.
- You have permission to edit files in the Ektron site folder.

1. Set up Ektron to send email notifications. See *Enabling email notification* on page 98 and *Automatic email notification* on page 101.
2. Go to **Settings > Community Management > Notifications > Settings > Edit**.
3. Check the **Publish Notifications** box and click **Save**.
4. In the *siteroot*/web.config file, you have 2 options for determining the SMTP server that sends notifications.
   - Use SMTP server information in the web.config file's `SMTP Server configuration` area. To do this, set the `<notificationAgent> <providers>` element as shown in the following code sample. Then, complete the `SMTP Server configuration` area if necessary. (You typically define SMTP server settings while enabling email notification. See *Enabling email notification* on page 98.)

     ```
     <notificationAgent>
      <providers>
       <add name="EktronEmail"
     type="Ektron.Cms.Notifications.Providers.EktronEmailAgent,
        Ektron.Cms.Providers" useSystemSettings="true" smtpServer="" smtpPort=""
        userName="" password="" fromEmail="" />
     ```

     By setting `useSystemSettings` to `true`, you indicate that you want notifications to use settings set in the `SMTP Server configuration` area of web.config. And, if you set `useSystemSettings` to `true`, you *must* go to the Application Setup screen's **General** tab and

     1. Define the sending email address at the **System E-Mail Address** field.
     2. Check the **Enable Sending of System Notification Email** box.
     3. In your server's Local Services window, restart the Ektron Notification service.
   - Set SMTP server information in the `<notificationAgent><providers>` element. Do this if you want to use a different SMTP server to send notifications. To do this, set the `<notificationAgent> <providers>` element as shown in the following code. Replace the coded values for `smptServer`, `smtpPort`, `userName`, `password`, and `fromEmail` with actual values.

     ```
     <notificationAgent>
      <providers>
     ```

```
  <add name="EktronEmail"
type="Ektron.Cms.Notifications.Providers.EktronEmailAgent,
   Ektron.Cms.Providers" useSystemSettings="false"
smtpServer="mailservervalue"
   smtpPort="port number" userName="email address of user authorized to use
mailserver"
   password="encrypted password of user authorized to use mailserver"
   fromEmail="sending email address" />
```

IMPORTANT: Whenever the web.config or the Ektron.Notification.Service.exe.config file is updated with changes affecting notifications, you must restart the Ektron Notification service.

5. Review, and modify if necessary, the default notification preferences. These determine which activities trigger notifications, and the agents that send them. See *Creating default notification settings* on page 1552.
6. Enable agents that transmit notifications. See *Working with notification agents* below.
7. Review the default text of the notification messages. Create new ones or edit existing ones if necessary. See *Managing notification messages* on page 1558.

   If you want to enable SMS messages, see *Setting up SMS* on page 1552.
8. If you are a developer, you can raise a custom activity, create a custom agent, set up SSL, and learn how to use notifications in a multi-site environment, and with eSync.

Working with notification agents

A notification agent sends notifications to eligible users when an Ektron activity occurs. After an agent is registered, users can choose notification preferences that use it.

Ektron's predefined agents are

- **email** notifications. Delivered to recipients' inboxes. See also: *Generating email invitations for community management* on page 1577.
- **SMS** notifications. Delivered to a cell phone or another device that receives SMS messages. See also: *Setting up SMS* on page 1552.
- **Activity Stream** notifications. delivered by ActivityStream server control.

NOTE: Ektron’s predefined agents are enabled by default.

You can customize these agents or create your own using the extendable notification agent architecture.

Enabling or disabling an agent

PREREQUISITE

- You are a member of the Administrators group or assigned to the Community Admin role.

1. Go to **Settings > Community Management > Notifications > Agents**.
2. Click the name of an agent.
3. Click **Edit**.
4. Check (or uncheck) the **Enabled** check box.
5. Click **Save**.

Removing an agent

PREREQUISITE

- You are a member of the Administrators group or assigned to the Community Admin role.
- You have permission to edit files in the Ektron site folder.

When you no longer need an agent, you can remove it. This can be a 2 step process, depending on the level of removal you want to achieve. First, remove the agent from the Workarea's list of agents. At this time, you can easily reactivate the agent. In the second step, you remove the agent from the `web.config` file. At this point, it is no longer available in the Workarea.

1. Workarea **> Settings > Community Management > Notifications > Agents**.
2. Click the agent's title.
3. Click **Delete** ( ).
4. In the Delete Agent dialog, click **OK**.

> **NOTE:** To completely remove the agent from Ektron, follow these additional steps.

5. Open the site root folder's `web.config` file.
6. Within the `<notificationagent> <providers>` elements, remove the agent. The following example shows agents that might appear in the `web.config` file.

```
<notificationAgent>
  <providers>
    <add name="CustomAgent1" type="Ektron.Cms.Notifications...
    <add name="EktronEmail" type="Ektron.Cms.Notifications...
    <add name="SMSAgent" type="Ektron.Cms.Notifications...
    <add name="ActivityFeed" type="Ektron.Cms.Notifications...
  </providers>
</notificationAgent>
```

Creating a custom agent

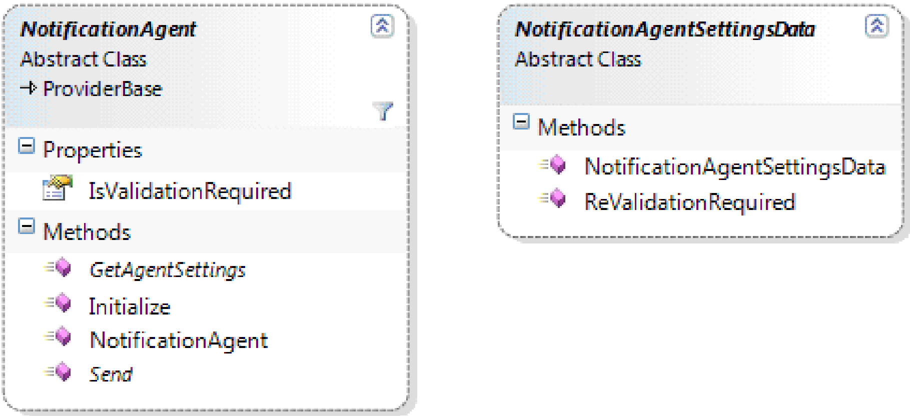
Ektron provides 3 standard notification agents: email, SMS, and Activity Stream. You can customize these agents or create your own using the extendable notification agent provider architecture. This section explains how to extend the object model to build a customized notification agent.

Each type of notification agent accepts configuration parameters. For example, email and SMS require an SMTP server, username, and password. These parameters can be specified in the `web.config` file, and read when the agent is initialized the first time.

Each agent may also require the ability to store settings for each user receiving notifications. For example, the SMS agent requires the user's cell phone number and carrier, which it stores as an SMS email address. To save these properties, each notification agent has an associated NotificationAgentSettingsData class. This class defines properties that must be supplied by a user. Ektron provides APIs for storing and retrieving this information, but the developer must create an interface for users to supply the information.

Implementing a custom agent

Object Model



The NotificationAgent is the abstract base class you must extend to implement a custom notification agent. Details about the class, available properties, and methods are as follows:

- `virtual void Initialize(string name, Amenable config);`

  The initialize method comes from the ProviderBase base class. It supplies all name value pairs specified in the Providers `web.config` section.

  If custom settings need to be provided to your agent, add them to your provider's `web.config` key, and the Initialize method provides them at runtime. If you have no custom settings, this class does not need to be overridden.

- `abstract NotificationAgentSettingsData GetAgentSettings();`

  This method should return a new instance of the NotificationAgentSettingsData class associated with your agent.

- `abstract void Send(NotificationMessageData message);`

  This method should send the actual notification. It is called by the notification engine for each user that needs to be notified.

  The NotificationMessageData has all the information you need for sending the notification, including

  - the message
  - the user to be notified

- the NotificationAgentSettingsData for the user to be notified

If your agent has a custom NotificationAgentSettingsData, you need to cast the supplied NotificationAgentSettingsData to the appropriate type so that you can access the appropriate properties.

Adding a custom agent

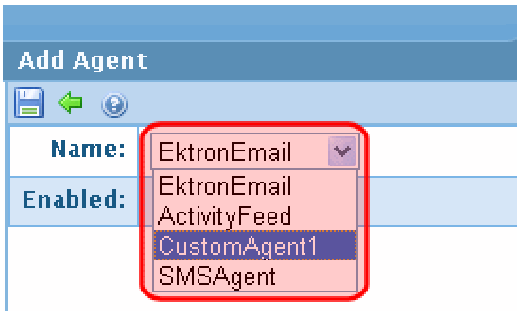
PREREQUISITE

- You have permission to edit files on the Ektron web server.
- You are either a member of the Administrators group or assigned to the Community Admin role.

1. Edit your *siteroot*/web.config file.
2. Insert the new agent between the <notificationAgent><providers> tags .

```
<notificationAgent>
  <providers>
    <add name="CustomAgent1"
      type="Ektron.Cms.Notifications.Providers.CustomAgent1,
      Ektron.Cms.Providers" setting1="" setting2=""/>
    <add name="EktronEmail"
      type="Ektron.Cms.Notifications.Agents.EktronEmailAgent,
      Ektron.Cms.BusinessObjects" useSystemSettings="false"
      smtpServer="amh010" smtpPort="25" userName="" password=""
      fromEmail="admin@example.com"/>
    <add name="SMSAgent"
      type="Ektron.Cms.Notifications.Agents.SMSAgent,
      Ektron.Cms.BusinessObjects" smtpServer="amh010" smtpPort="25"
      fromEmail="SMSAgent@example.com" validationRequired="true"/>
    <add name="ActivityFeed"
      type="Ektron.Cms.Notifications.Agents.ActivityFeedAgent,
      Ektron.Cms.BusinessObjects" validationRequired="false"/>
  </providers>
</notificationAgent>
```

After you add an agent to web.config, it appears in the Workarea's list of agents.



3. Go to **Settings > Community Management > Notifications > Agents**.
4. Click **Add**.

5. Select the custom agent from the **Name** drop-down box.

NOTE: If you do not see the custom agent in the **Name** drop-down, check the `web.config` file to verify it appears between the `<notificationAgent>` tags.

6. Check the **Enabled** box.
7. Click **Save**.

Setting up SMS

SMS sends notifications from the Ektron website to wireless devices, such as a cell phone or PDA. To set up this capability, configure several items.

- `web.config`. Add SMS agent information. See the following procedure.
- Cell phone. Verify your cell phone with your website. See *Sending notifications to a community* on page 1543.
- Select SMS as an agent for sending community messages**.** See also: *Enabling or disabling an agent* on page 1548.

To set up SMS agent information:

PREREQUISITE

You have permission to edit files on the Ektron web server.

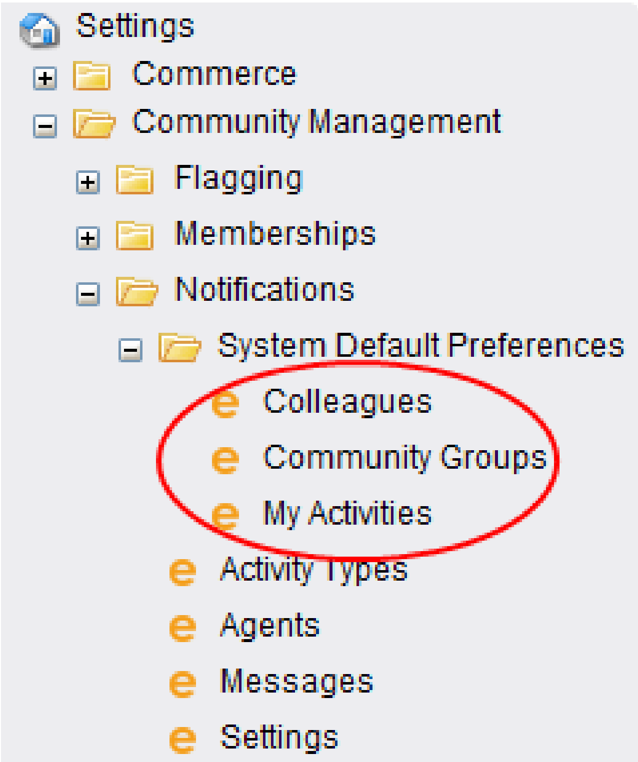
1. Open the *siteroot*\\`web.config` file.
2. Find the `SMSAgent` tag.
3. Enter the `smtpServer` value for the server that sends your organization's email. For example:
```
smtpServer="EKMAIL291.internal.mycompany.com"
```
4. Replace the value of `fromEmail` with the email address of the user from whom notifications are sent. For example:
```
fromEmail = "noreply@mycompany.com"
```
5. Save the file. The completed code looks like this.
```
<add name="SMSAgent"
  type="Ektron.Cms.Notifications.Providers.SMSAgent,
  Ektron.Cms.Providers" smtpServer="EKMAIL291.internal.mycompany.com" |
  smtpPort="25" fromEmail="noreply@mycompany.com" validationRequired="true" />
```

Creating default notification settings

Ektron lets an administrator create default notification settings. See also: *Sending notifications to a community* on page 1543. The default settings apply to all newly-created users, but any user or group can personalize them, as described in *Personalizing notification settings* on page 1554.

There are 3 types of default settings.

- **Colleagues**. Colleagues' activities about which a user wants to be notified
- **Community Groups**. Community group activities about which a user wants to be notified
- **My Activities**. User activities that send notifications to colleagues and community groups.



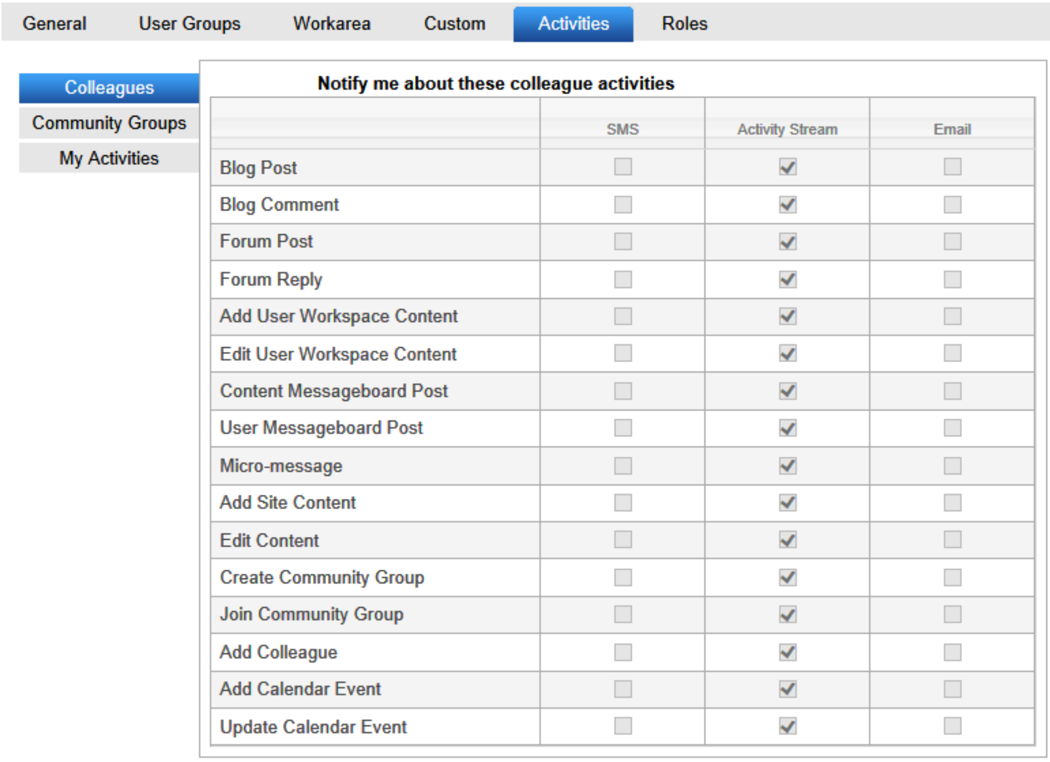
NOTE: By default, activities are checked for the Activity Stream agent only.

Prerequisite

- You are a member of the Administrators group or assigned to the Community Admin role.

1. Go to **Settings > Community Management > Notifications > System Default Preferences > Colleagues**.
2. Click **Edit**.

3. Check the box next to each default notification.



4. Click **Save**.

Personalizing notification settings

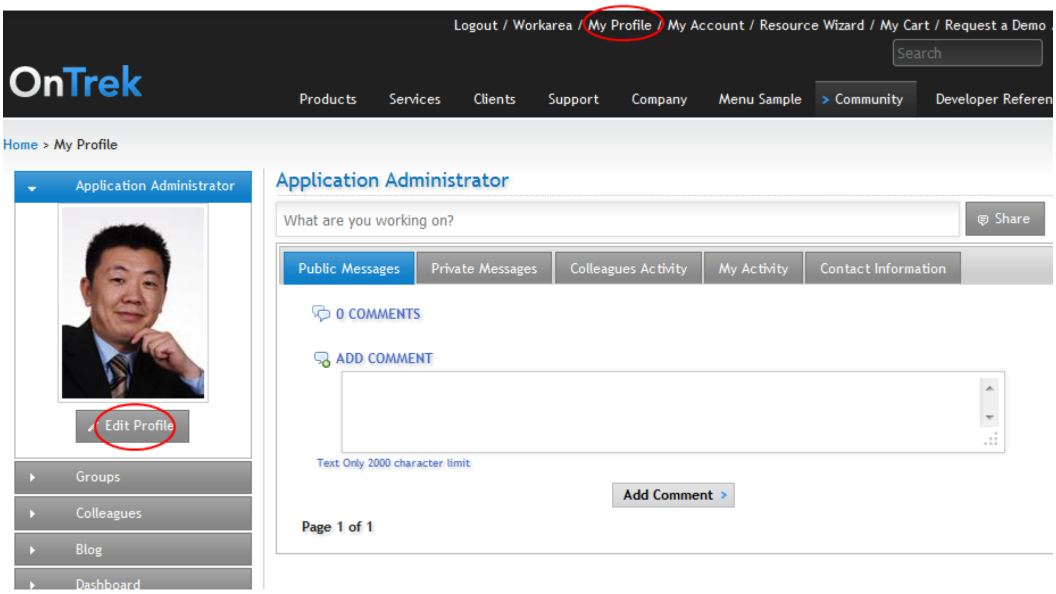
By default, a set of notification preferences is applied to each user's profile. Most users want to personalize these settings, so they send and receive notifications as they wish. Similarly, a community group member can access a community group profile and click **Edit Group Notification Preferences** to personalize the group's preferences.

Personalizing notifications about your activities

In your profile, enable only activities that you want to notify others about.

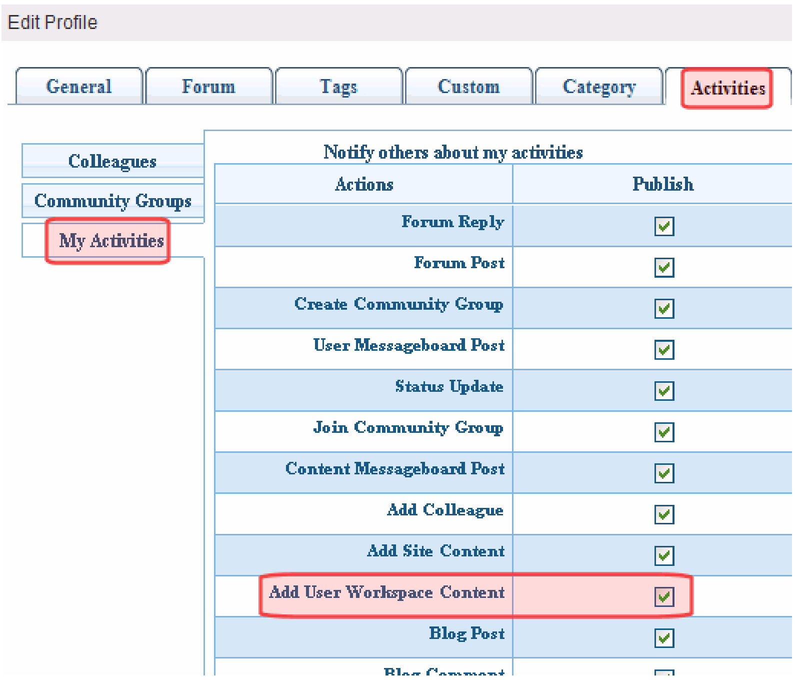
NOTE: The **My Activities** tab appears only after a user is registered and the **Workarea > Settings > Community Management > Notifications > Settings > Publish Notification** setting is checked.

1. Log into the Ektron site.
2. Go to your profile page.



Alternatively, log into the Ektron Workarea > **Settings > Users >** your username **> Profile Links** tab > click the link.

3. Click **Edit Profile**.
4. Click the **Activities** tab.
5. Click the **My Activities** sub tab.



6. Check the box of each activity that you want to notify other users about.
7. Click **Save**.

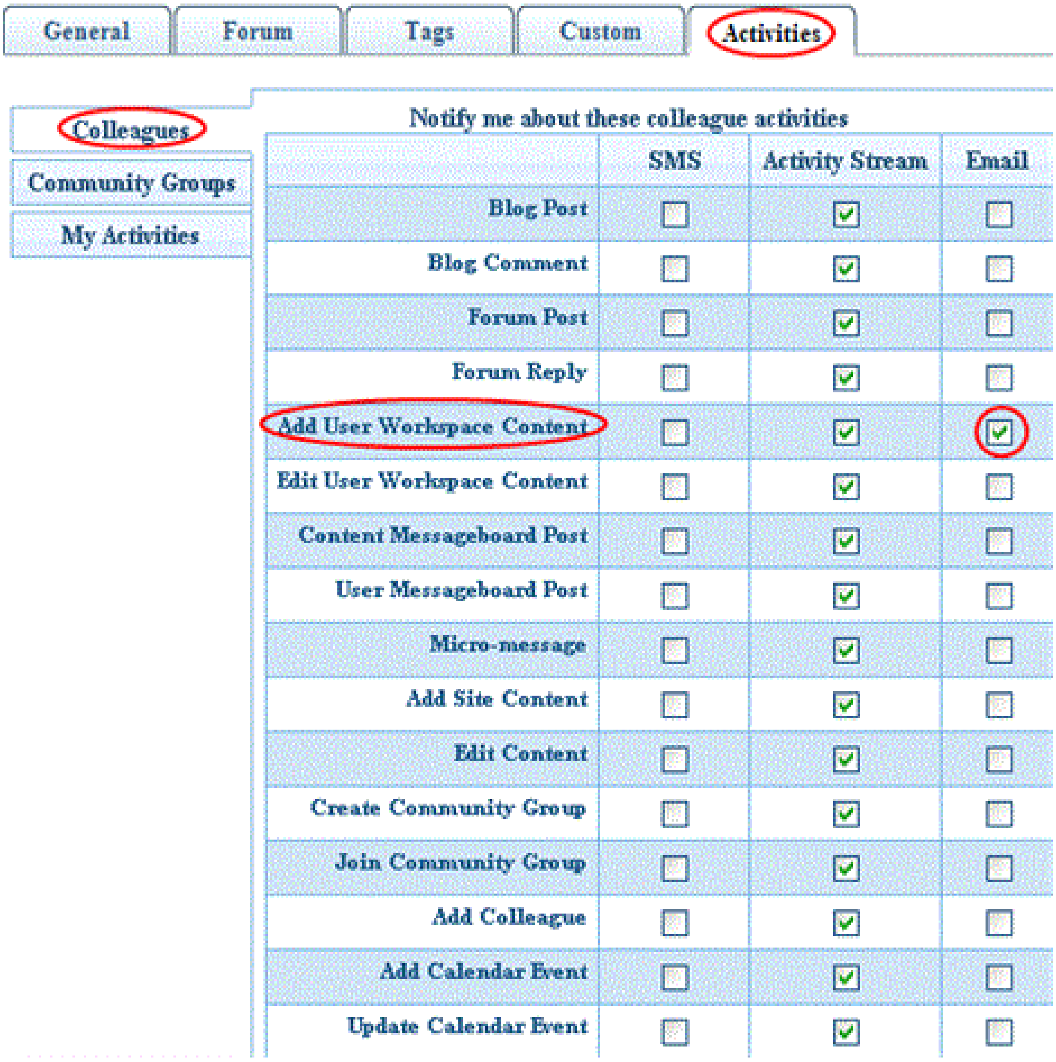
Personalizing the receipt of notifications

In your profile, enable only activities that you want to be notified about. Use the **Colleagues** tab to enable notifications for activities performed by colleagues, and the **Community Groups** tab to enable notifications for activities performed by group members.

1. Log into the Ektron site.
2. Go to your profile page.

   Alternatively, log into the Ektron Workarea > **Settings > Users >** your username **> Profile Links** tab > click the link.

3. Click **Edit Profile**.
4. Click the **Activities** tab.
5. Click the **Colleagues** sub tab.



6. Check the box of each activity that you want to be notified about, and the agent to notify you.
7. Click the **Community Groups** sub tab.

8. Check the box of each activity that you want to be notified about, and the agent to notify you.
9. Click **Save**.

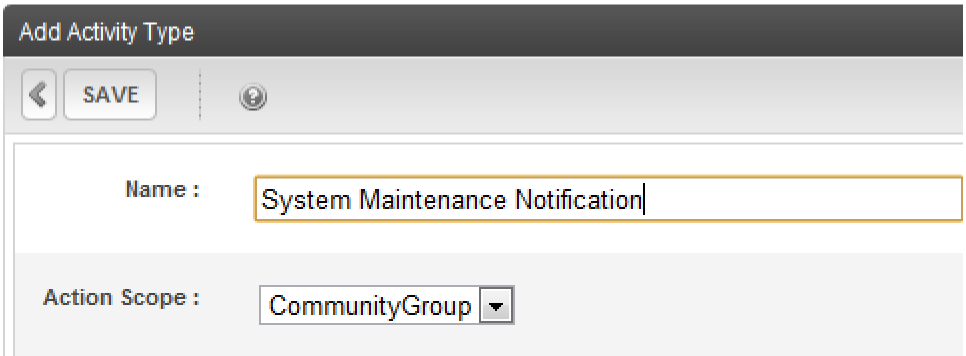
Raising a custom activity

PREREQUISITES

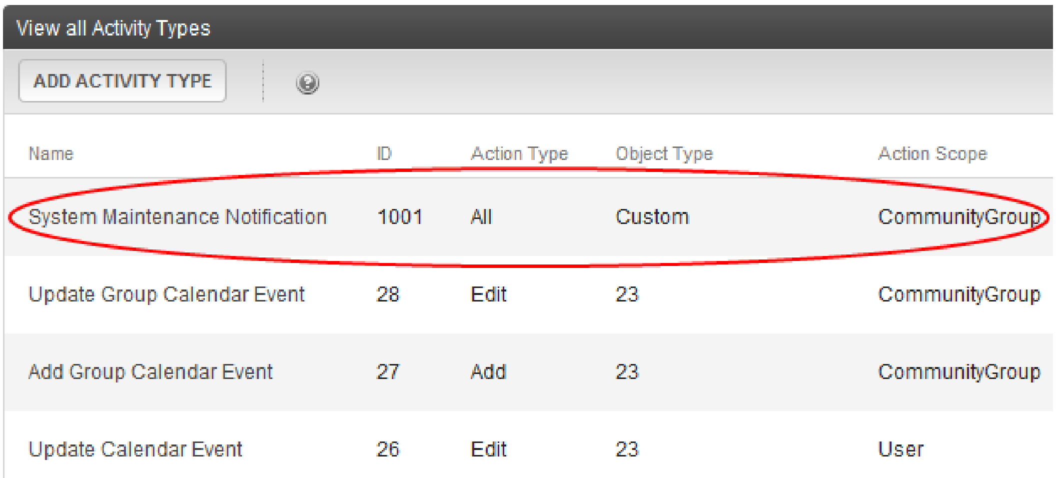
- You are a developer.
- You are a member of the Administrators group or assigned to the Community Admin role.

Ektron's notification system lets you create and raise custom activity types. Custom activity types can generate notifications, just like standard activity types.

1. In the Workarea, go to **Settings > Community Management > Notifications > Activity Types**.
2. Click **Add Activity Type**. The Add Activity Type screen appears.

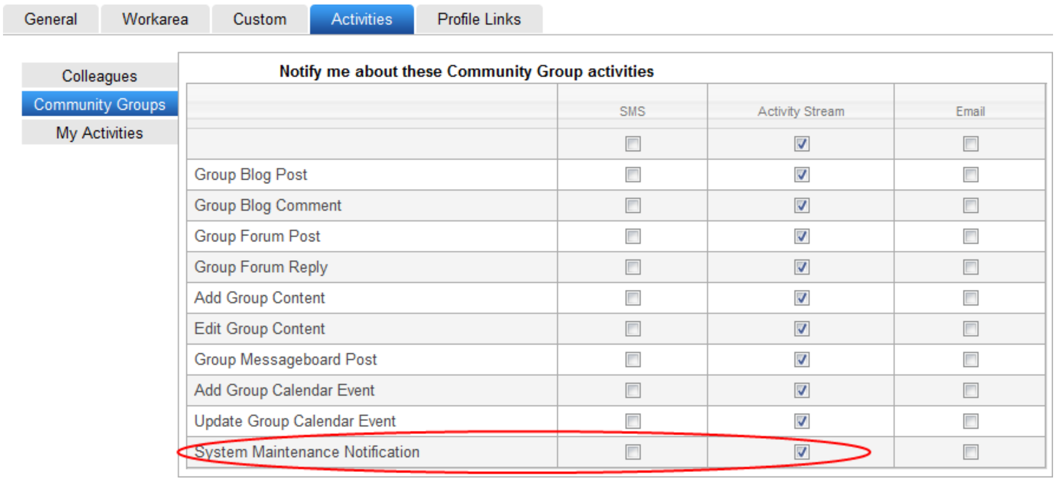


3. Enter a unique name.
4. Select an **Action Scope**, which describes the types of users who create the activity.
   - **User**. activity raised by an Ektron user
   - **CommunityGroup**. activity raised by a community group user
5. Save the screen. The following image shows a sample custom activity.



Name	ID	Action Type	Object Type	Action Scope
System Maintenance Notification	1001	All	Custom	CommunityGroup
Update Group Calendar Event	28	Edit	23	CommunityGroup
Add Group Calendar Event	27	Add	23	CommunityGroup
Update Calendar Event	26	Edit	23	User

6. Interested users go to their User Profile screen’s **Activities** tab to indicate if they want be notified when the custom activity occurs, and if they want to notify others.



7. To raise a custom activity, call the `Ektron.Cms.Framework.Activity.Activity.Publish` method. The method takes an `ActivityData` class. You supply the following:
   - the Id of the Activity Type you want to raise (**1001** in this example)
   - the user causing the activity
   - a message

   NOTE: Custom activity types cannot use Community Management messages as the standard Ektron activities do.

   Here is an example of that method.

```
Activity activityApi = new Activity();
ActivityUserInfo user = new ActivityUserInfo();
user.Id = activityApi.UserId;
ActivityData activityData = new ActivityData();
activityData.ActionUser = user;
activityData.ActivityTypeId = 1001;
activityData.Message = "John Doe just rated Ektron a buy!";
activityData.LanguageId = 1033;
activityApi.Publish(activityData);
```

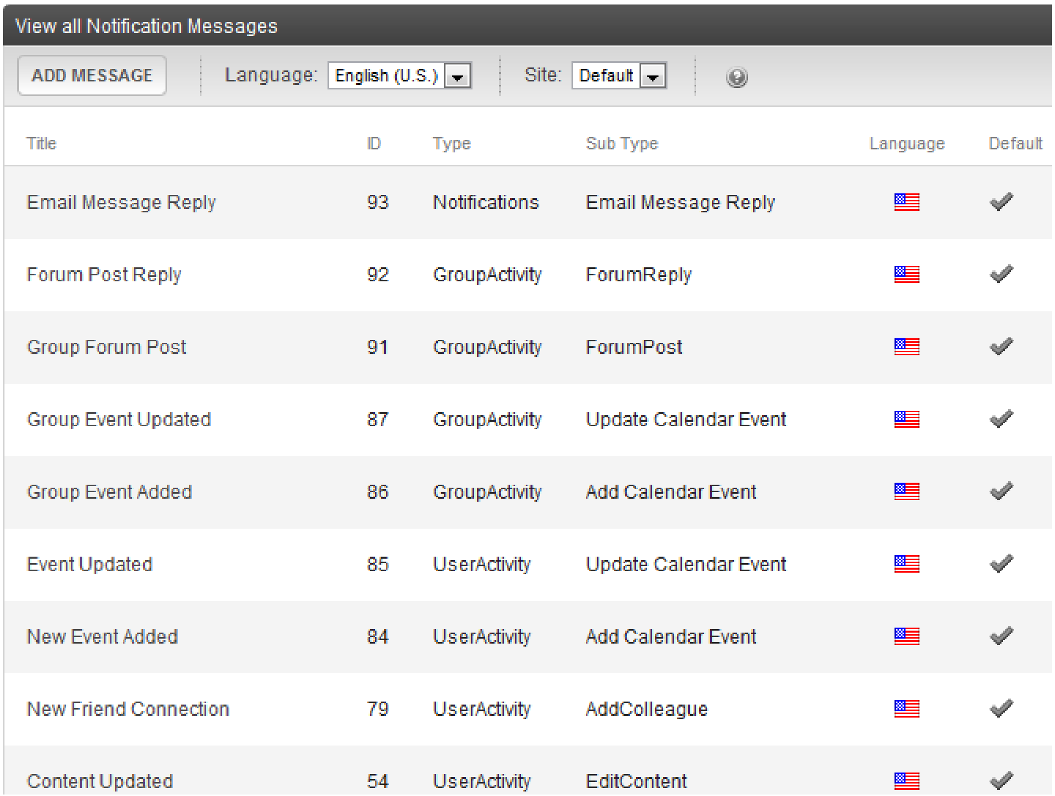
When `publish` is called, the notification service notifies users who signed up to be notified of this activity.

Managing notification messages

Ektron's notification system uses *messages* to communicate site activities. A message is sent if:

- it is the default for its activity type
- an activity occurs that matches the message's sub type
- the user or group that performs the activity chose to notify others about it in their notification preferences

You can view each activity’s message text on the **Workarea > Settings > Community Management > Notifications > Messages** screen.



Title	ID	Type	Sub Type	Language	Default
Email Message Reply	93	Notifications	Email Message Reply		✓
Forum Post Reply	92	GroupActivity	ForumReply		✓
Group Forum Post	91	GroupActivity	ForumPost		✓
Group Event Updated	87	GroupActivity	Update Calendar Event		✓
Group Event Added	86	GroupActivity	Add Calendar Event		✓
Event Updated	85	UserActivity	Update Calendar Event		✓
New Event Added	84	UserActivity	Add Calendar Event		✓
New Friend Connection	79	UserActivity	AddColleague		✓
Content Updated	54	UserActivity	EditContent		✓

For each activity, you can create an HTML-based and a plain text message. Typically, HTML messages are sent as email or to the ActivityStream server control, while plain text is used in SMS style messages. Messages can use text and tokens. See also: *Working with tokens* on page 1562

Creating or editing a message

As explained in *Managing notification messages* on the previous page, one message is provided for each activity type and sub type in the default language. You can edit the default message text as well as create new messages in non-default languages.

PREREQUISITE

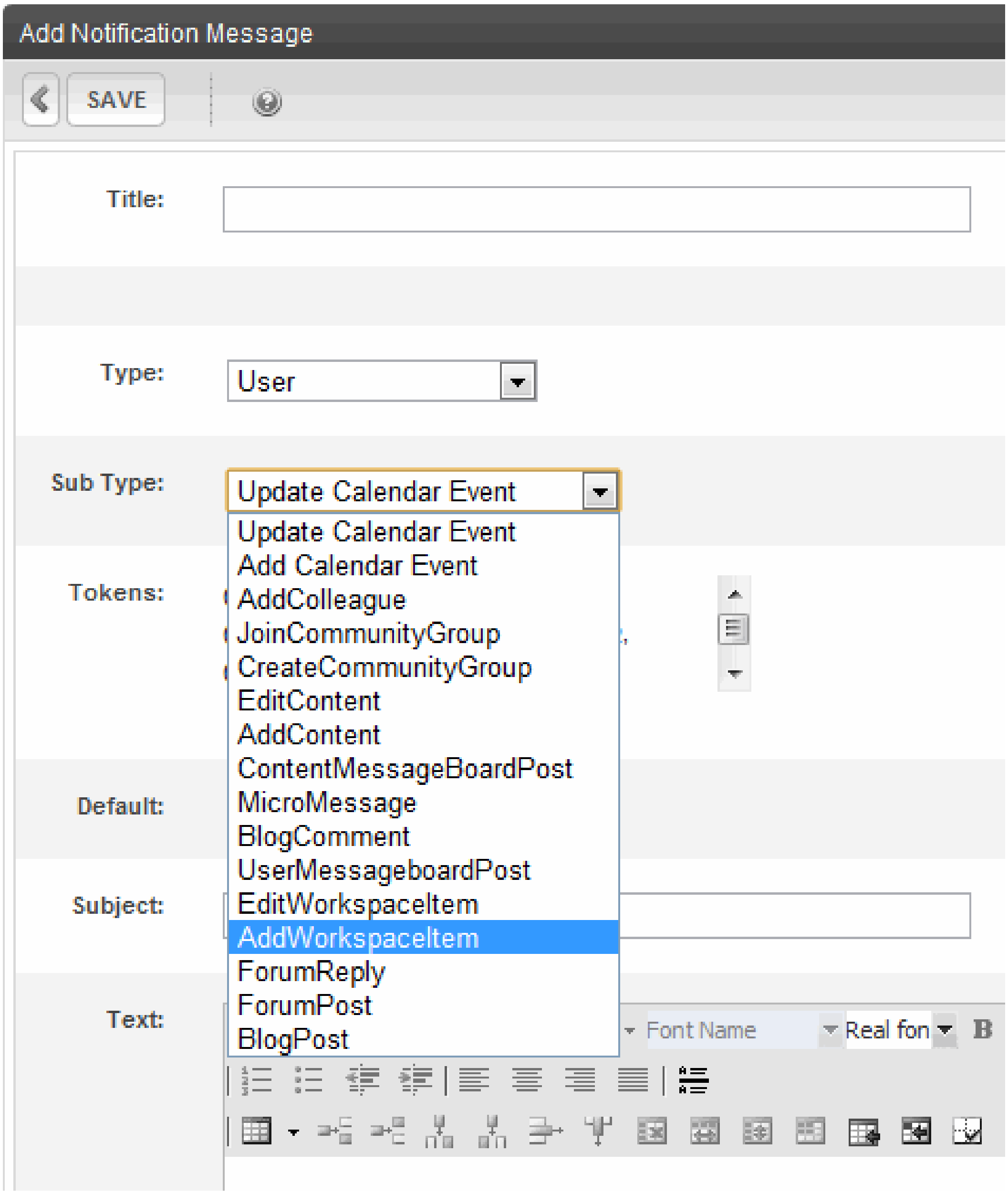
- You are a member of the Administrators group or assigned to the Community Admin role.

1. Go to **Settings > Community Management > Notifications > Messages**.
2. If you are using the multi-site feature, select the site with which this message will be associated.
3. Select the language of the message that you want to create or edit.
4. To create a new message, click **Add Message**. To edit an existing message, click its title then **Edit**.

5. Complete or update the following fields.
   - **Title**. Enter a name for the message.
   - **Type**. Select a message type. Choices are:
     - **User**. message sent when user activity occurs
     - **Community Group**. message sent when group activity occurs
     - **Blog Notifications**. message sent when blog activity occurs
     - **General Notifications**. message sent when activity is "email message reply"
   - **Sub Type**. Select the activity which triggers the sending of this message.

Choosing a message type

User and Community Group messages contains several message *sub types*. Sub type is the activity that triggers the message. For example, to edit the message that notifies colleagues when you upload a document to your Workspace, select **User** from the **Type** drop-down and **AddWorkspaceItem** from the **Sub Type** drop-down.



Only one default message is active for any sub type. So, if you create a new message, you must make it the default (via the Add Notification Message screen's **Default** check box) if you want it to be sent. If another message was the default for that type and sub type, it is no longer used. For a list of Sub types, see *Notification activities and recipients* on page 1544.

- **Tokens**. Tokens for the selected Sub Type appear. To insert a token into a message, highlight a token, then copy and paste it into the message. See also: *Working with tokens* on the next page.

WARNING! A message is limited to 3000 characters *after* its tokens are converted to text. Characters beyond 3000 are removed.

- **Default**. Check this box if you want the message to be the default one that is sent. See also: *Choosing a message type* on the previous page.

- **Subject**. Enter a subject to be used if the message is sent as email.
- **Text**. Enter the text and tokens that comprise the message. The editor lets you format the text. Use this field for HTML, email, and activity stream messages. See also: *Making a token into a hyperlink* on page 1570.
- **Plain Text**. Enter the text and tokens that comprise SMS and plain text messages. (If you already composed the message in the field above, you can copy and paste it into this field.)

  NOTE: Most SMS systems impose a 160-character limit on messages. If you create a plain text message greater than 160 characters, Ektron divides it into several smaller messages.

6. Click **Save**.

Removing a message

PREREQUISITE

- You are a member of the Administrators group or assigned to the Community Admin role.

1. Go to **Settings > Community Management > Notifications > Messages**.
2. Click the title of the message you want to delete.
3. Click **Delete** ( ).
4. Click **OK**.

Working with tokens

A token is an Ektron variable surrounded by at signs (@). When a message is generated, tokens retrieve information about CMS users, groups, and objects. For example, the following message:

```
@SubjectUser.FirstName@ added a new document, '@Content.title@', to the profile page.
```

might look like this:

"Paul added a new document, 'Best Practices for Writing Code', to the profile page."

In this example, `@SubjectUser.FirstName@` is the first name of the user performing the action. `@Content.title@` is the title of the object that was uploaded. See also: *Customizing Ektron email with tokens* on page 102

There are several token types.

- **SubjectUser tokens**. Represent a user who performs the activity
- **DirectObjectUser tokens**. Represent a user to which the activity is happening
- **Content tokens**. Represent content involved in the activity
- **CommunityGroup tokens**. Represent a community group involved in the activity
- **Blog tokens**. Represent blog use in the activity

- **webEvent tokens**. Represent a Web Calendar used in the activity
- **MicroMessage tokens**. Represent micromessages used in the activity

Message tokens: user and content-based

Add Calendar Event and **Update Calendar Event**

- @SubjectUser.DisplayName@
- @SubjectUser.Id@
- @SubjectUser.FirstName@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@
- @WebEvent.EndTime@
- @WebEvent.Id@
- @WebEvent.Quicklink@
- @WebEvent.StartTime@
- @WebEvent.Title@

AddColleague

- @DirectObjectUser.FirstName@
- @DirectObjectUser.Id@
- @DirectObjectUser.LastName@
- @DirectObjectUser.TemplateAlias@
- @DirectObjectUser.UserName@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@,
- @System.UserProfileTemplate@

AddContent

- @Content.Icon@
- @Content.Id@
- @Content.Quicklink@
- @Content.Title@
- @SubjectUser.DisplayName@

- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteURL@
- @System.UserProfileTemplate@

AddWorkspaceItem

- @Content.Icon@
- @Content.Id@
- @Content.Quicklink@
- @Content.Title@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteURL@
- @System.UserProfileTemplate@

BlogComment

- @BlogComment.Id@
- @BlogComment.Message@
- @SubjectUser.DisplayName@
- @SubjectUser.Id@
- @SubjectUser.FirstName@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

BlogPost

- @Content.Icon@
- @Content.Id@
- @Content.Quicklink@
- @Content.Title@
- @SubjectUser.DisplayName@

- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

CreateCommunityGroup

- @CommunityGroup.Id@
- @CommunityGroup.Name@
- @CommunityGroup.TemplateAlias@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

ContentMessageBoardPost

- @Content.Icon@
- @Content.Id@
- @Content.Quicklink@
- @Content.Title@
- @MessageBoard.Message
- @MessageBoard.ObjectId@
- @MessageBoard.ObjectType@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.UserName@
- @SubjectUser.TemplateAlias@
- @System.GroupProfileTemplate
- @System.SiteUrl@
- @System.UserProfileTemplate@

EditContent

- @Content.Icon@
- @Content.Id@
- @Content.Quicklink@
- @Content.Title@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

EditWorkspaceItem

- @Content.Icon@
- @Content.Id@
- @Content.Title@
- @Content.Quicklink@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl
- @System.UserProfileTemplate@

ForumReply

- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@
- @Topic.Id@, @Topic.Title@
- @Topic.Quicklink@
- @TopicReply.Id@

ForumPost

- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@
- @Topic.Id@, @Topic.Title@
- @Topic.Quicklink@
- @TopicReply.Id@

JoinCommunityGroup

- @CommunityGroup.Id@
- @CommunityGroup.Name@
- @CommunityGroup.TemplateAlias@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

MicroMessage

- @MicroMessage.Id@
- @MicroMessage.Message@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

UserMessageboardPost

- @DirectObjectUser.Id@
- @DirectObjectUser.FirstName@
- @DirectObjectUser.LastName@
- @DirectObjectUser.UserName@
- @MessageBoard.Message@
- @MessageBoard.ObjectId@
- @MessageBoard.ObjectType@
- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.UserName@
- @SubjectUser.TemplateAlias@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

Message tokens: community group-based

Add Calendar Event and **Update Calendar Event**

- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@,
- @System.UserProfileTemplate@
- @WebEvent.EndTime@
- @WebEvent.Id@
- @WebEvent.Quicklink@
- @WebEvent.StartTime@
- @WebEvent.Title@

AddWorkspaceItem

- @CommunityGroup.Id@
- @CommunityGroup.Name@
- @Content.Icon@
- @Content.Title@
- @Content.Id@
- @Content.Quicklink@

- @DirectObjectUser.FirstName@
- @DirectObjectUser.Id@
- @DirectObjectUser.LastName@
- @DirectObjectUser.UserName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteURL@
- @System.UserProfileTemplate@

BlogComment

- @BlogComment.Id@
- @BlogComment.Message@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.UserName@

BlogPost

- @Content.Id@
- @Content.Quicklink@
- @Content.Title@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.UserName@

CreateCommunityGroup

- @CommunityGroup.Id@
- @CommunityGroup.Name@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.UserName@

GroupMessageBoardPost

- @CommunityGroup.Id@
- @CommunityGroup.Name@
- @CommunityGroup.TemplateAlias@
- @MessageBoard.Message@
- @MessageBoard.ObjectId@
- @MessageBoard.ObjectType@

- @SubjectUser.DisplayName@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.TemplateAlias@
- @SubjectUser.UserName@
- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

JoinCommunityGroup

- @CommunityGroup.Id@
- @CommunityGroup.Name@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.UserName@

UserMessageboardPost

- @DirectObjectUser.FirstName@
- @DirectObjectUser.Id@
- @DirectObjectUser.LastName@
- @DirectObjectUser.UserName@
- @MessageBoard.Message@
- @MessageBoard.ObjectId@
- @MessageBoard.ObjectType@
- @SubjectUser.FirstName@
- @SubjectUser.Id@
- @SubjectUser.LastName@
- @SubjectUser.UserName@

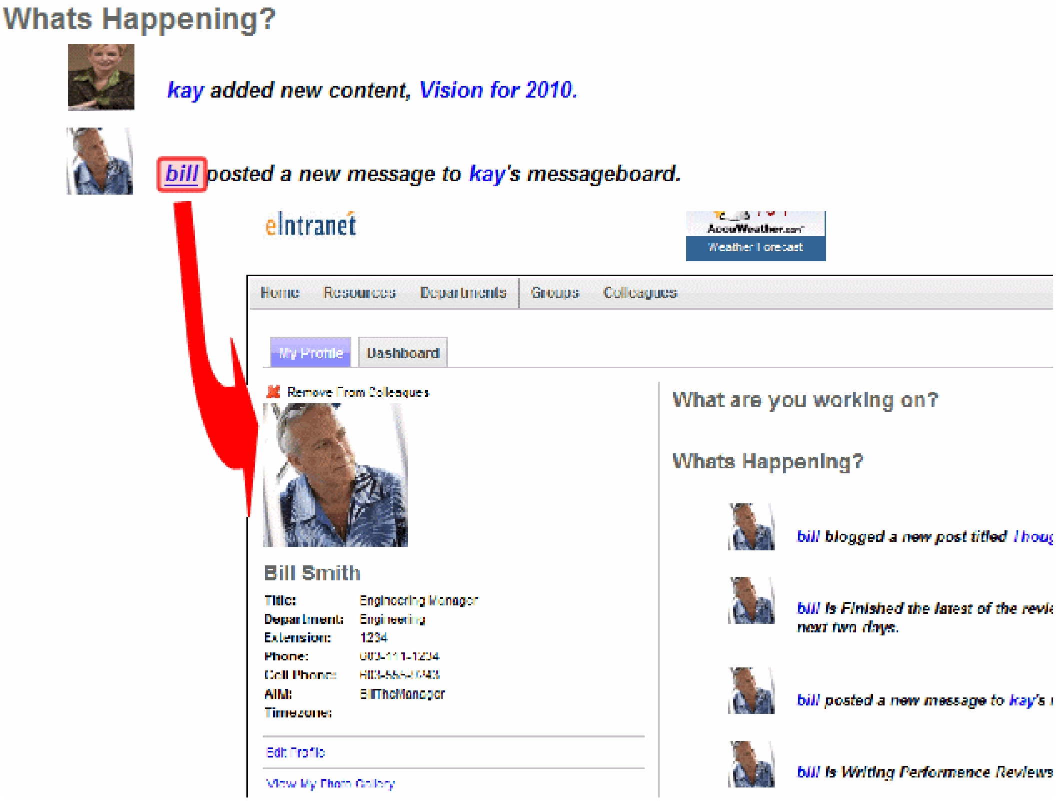
Message tokens: email reply message

Email Message Reply

- @System.GroupProfileTemplate@
- @System.SiteUrl@
- @System.UserProfileTemplate@

Making a token into a hyperlink

A message token represents Ektron content, users, or groups. It can become a link that, when clicked, forwards the site visitor to referenced content, a user’s profile, or a community group’s profile.

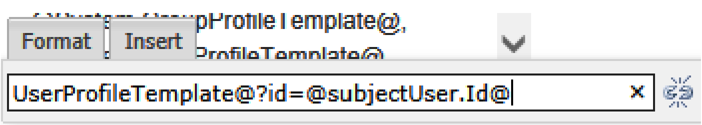


To make a token into a clickable link:

Prerequisite

The path to the page that displays the referenced content, user, or community group.

—Image—



1. Create the message, as described in *Creating or editing a message* on page 1559.
2. While editing message text, highlight a token and click **Insert Link** ( ).
3. In the **URL** field, enter the path to the page that displays the content, user, or community group.

   Be sure to include a QueryString parameter to identify the object. The parameter should point to an ID token. For example, an add colleague message might be:

   ```
   @SubjectUser.UserName@ and @DirectObjectUser.UserName@ are now colleagues.
   ```

   When creating a link for *@SubjectUser.UserName@*, insert into the **URL** field the path to the user's profile page. It might look like this.

   ```
   http://localhost/Intranet/UserProfile.aspx?id=@subjectUser.Id@
   ```

NOTE: The QueryString parameter (`?id=`) points to a token that represents the logged-in user's ID, `@subjectUser.Id@`.

For `@DirectObjectUser.UserName@`, enter the same path but change the dynamic parameter token to `?id=@DirectObjectUser.Id@`.

When hyperlinking content, insert into the **URL** field the path to its QuickLink token. For example, an add content message might look like this.

```
@SubjectUser.username@ added new content, @Content.Title@.
```

4. Click **OK**.

Managing email replies

The email reply feature consists of additional text within a notification message that prompts a recipient to reply. See the following example. If the recipient replies, the resulting email is posted to the group's message board.

To modify the reply message's text and start and end delimiters, see *Modifying email reply text* on page 1574.

Setting up the email reply feature

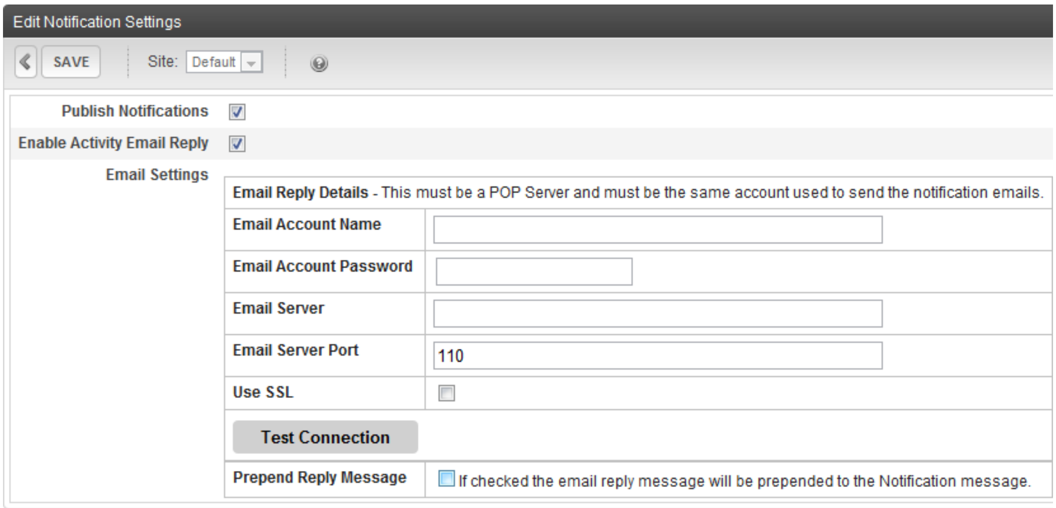
PREREQUISITE

- You are a member of the Administrators group or a community group administrator.
- You enabled community notification feature, as described in *Setting up Ektron to send notifications* on page 1547.

IMPORTANT: The Community email reply feature is only supported for group activities, such as uploading a document to a group workspace. It is not supported for user activities.

1. From the Workarea, choose **Settings > Community Management > Notifications > Settings**.
2. Click **Edit**.
3. Check **Enable Activity Email Reply**.

4. Specify the email reply feature's settings.

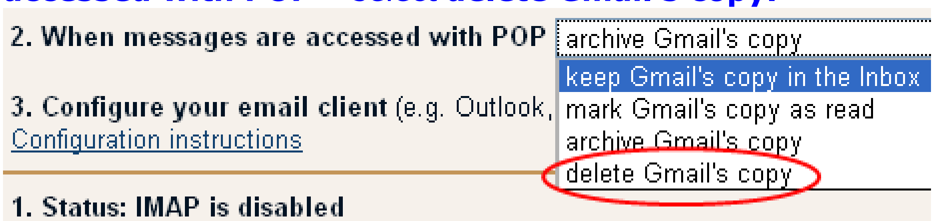


- **Email Account Name**. Enter the address that receives email delivered to your website. It must be the same as the account used to send email, which is defined in *Enabling email notification* on page 98.

IMPORTANT: Each community group's email address must be unique.

- **Email Account Password**. Enter the password for that email address.
- **Email Server**. Enter the POP mail server that retrieves email for this account.
- **Email Server Port**. Enter the port number used to retrieve email for this account.
- **Use SSL**. Check this box if SSL is used when retrieving email.
- **Test Connection**. Click this button to verify the information and the ability to connect to the mail server.

NOTE: If you are using Gmail as the SMTP server to fetch email replies, after the notification service processes the emails, you probably want to delete them from the Inbox. To set up automatic deletion of this email from the Inbox, got to Gmail's **Settings** screen > **Forwarding and POP/IMAP tab** > **Pop Download Area** > **2. When messages are accessed with POP** > select **delete Gmail's copy.**



5. Verify that all users who may receive an email reply have a valid email address in their user profile. While in each user profile, verify that the **Disable Receiving of Workflow and Task Email** box is unchecked.
6. Enable group email for each community group that may send an email reply. See also: *Creating a community group's email address* on page 1579.

7. Make sure that all users who may participate in the email reply are assigned to a user group mentioned in Step 6.

Modifying email reply text

PREREQUISITE

- You have permission to edit files on the Ektron web server.
- You are either a member of the Administrators group or assigned to the Community Admin role.

Community activity that generates an email can include a reply statement, as shown in the following example.

NOTE: The message text is determined by the activity. For example, if the activity is a blog post, the message text is retrieved from the New Blog Post notification message.

To review and modify email reply text:

1. In the Workarea, choose **Settings > Community Management > Notifications > Messages**.
2. Click **Email Message Reply**.
3. You cannot edit the **Title**, **Type**, **Sub Type** or **Default** check box. The **Subject** field is not used.
4. Edit the message **Text**. You can create an HTML-based and a plain text message for each activity. Typically, HTML messages are sent as email or to the ActivityStream server control, while plain text is used in SMS style messages.

   A line of dashes separates the activity message from the email reply. Messages typically combine text and tokens. See also: *Working with tokens* on page 1562.
5. Optionally change the message's start and end delimiters. By default, the email message reply begins with a new line character and ends with a line of dashes. If desired, change those defaults. For example, you want to limit the reply to a single paragraph.
   a. On the Ektron server, open `C:\Program Files (x86)\Ektron\EktronNotificationService\Ektron.Notification.Service.exe.config`.

b. Find the `<siteNotification> <sites>` element.

c. Insert the following properties at the end of the `<Add>` tag.
   - `replyStartDelimitter`. Marks the beginning of the reply.
   - `replyEndDelimitter`. Marks the end of the reply.

   For example:

```
<siteNotification>
  <sites>
    <add name="dev" url="http://localhost/eintranet"
      connectionString="server=.;database=eintranet;
      Integrated Security=TRUE;user=;pwd=;" services="All"
   replyExtractor="Ektron.Notification.Service.EktronReplyExtractor"
      replyStartDelimitter="^" replyEndDelimitter="\r\n" />
  </sites>
</siteNotification>
```

   Use RegEx expressions to indicate the start and end delimiters. In the above example, the start delimiter (^) is a new line, and the end delimiter (\r\n) is a page break. So, only the first paragraph in the email reply is used.

How email replies are handled

The following table shows how the notification system treats email replies.

Activity	How email reply handled
User adds a colleague	Comment on Activity Stream
User adds content to Ektron	Post to Content Message Board
Event is added or changed on Web Calendar	Comment on Activity Stream
User uploads content to community group Workspace	Post to Content Message Board
User comments on group workspace content or asset	Comment on Activity Stream
User uploads content to the user's profile	Post to Content Message Board
Comment on user workspace content or asset	Comment on Activity Stream
User comments on a blog post	Comment to same blog post
User posts to the user's blog	Comment on post

Activity	How email reply handled
User posts to a message board associated with content	Reply to post
User creates a community group	Comment on Activity Stream
User posts to a Forum	Reply to post
User replies to a Forum post	Reply to post
User comments on a community group’s blog post	Comment on same blog post
User posts to community group blog	Comment on post
User posts to a community group message board	Reply to post
User joins community group	Comment on Activity Stream
User posts micro-message	Comment on Activity Stream
User updates status	Comment on Activity Stream
User posts to another user's message board	Reply to post
Message board reply	Reply to same post

Enabling attachments to notifications

Ektron supports the attaching of community group assets to a notification. For example, a user uploads a Word document to a group workspace, which generates a **Group Content Added** notification. The Word document is attached to the notification. If you enable attachments and the email Reply feature, message recipients can

1. Download the attached asset.
2. Modify it.
3. Reply to the email, attaching the modified asset.
4. The modified asset replaces the original one.

If a group administrator does not want to keep the modified asset, the administrator uses the asset history to restore the original version. See also: *Restoring a previous version* on page 647.

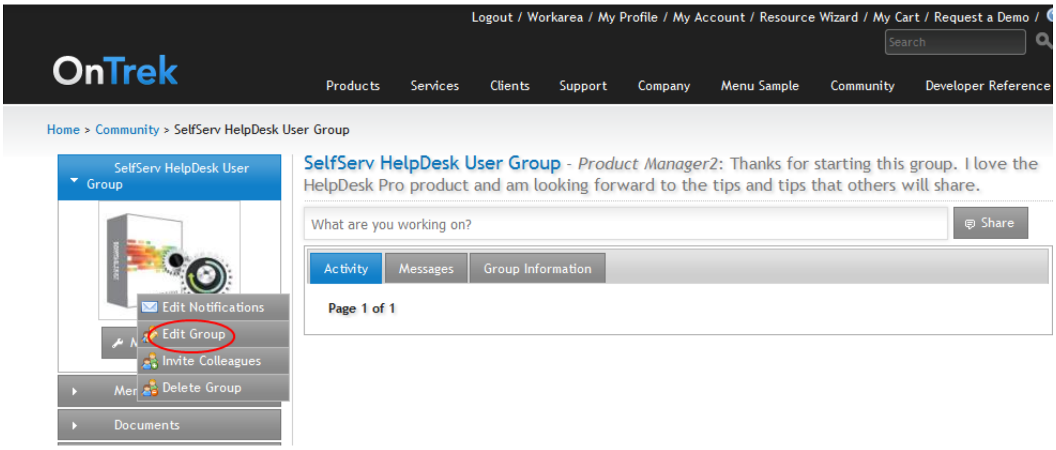
IMPORTANT: If a message's email signature includes an image, the email reply feature uploads it as a group asset. To avoid this, remove the image from the signature before replying.

To set up notification attachments for a community group:

PREREQUISITE

You are a member of the Administrators group or assigned to the Community Admin role.

1. From the community group page, click **Edit Group**.



   Alternatively, from the Workarea, choose **Settings > Community Management > Community Groups >** click a community group **> Edit**.

2. Near the bottom of the screen, check the **Attach Documents in Email Notifications** box.
3. Click **Save**.

Generating email invitations for community management

The notification system enables Ektron to generate email that invites other users to join a community group, join a site, or become a colleague.

To create a message:

1. Go to **Workarea > Settings > Community Management > Messages**.
2. Click **Add Email Message**.
3. Enter a title that describes the message.
4. At the **Type** field, click the drop-down arrow to choose the message type that will trigger a notification.
5. Select whether to make the email message the default message for the activity type. Only the default message is sent when the corresponding activity occurs. Non-default messages remain available on this screen in case you want to quickly change them in the future.
6. In the editor, enter the message text. Messages can include tokens, which retrieve information about the user sending the invitation or the link to join a group and display it in the message text. See also: *Working with tokens* on

page 1562.

- **@appFriendDisplayName@**. The recipient's name.
- **@appFromUserDeleted@**. Message is from a user that was deleted.
- **@appFromUserDisplayName@**. Name of user who sent message.
- **@appFromUserID@**. ID of user who sent message.
- **@appGroupName@**. The group that the recipient is invited to join.
- **@appInvitedEmail@**. The recipient's email address.
- **@appInviteId@**. Appends the invite ID to the registration URL. For example:

  Click here to accept.
- **@appMessage@**. Message text.
- **@appOptionalText@**. Text a user inserts into the **Optional Message** box on the Invite server control.
- **@appPrivateMessageID@**. The Ektron ID of a private message.
- **@appSenderName@**. The sender of the invitation.
- **@appSubject@**. The message's subject field.
- **@appToUserDisplayName@**. Name of message recipient.
- **@appToUserID@**. ID of message recipient.
- **@appToUserMessageID@**. Ektron ID of the recipient's message object.

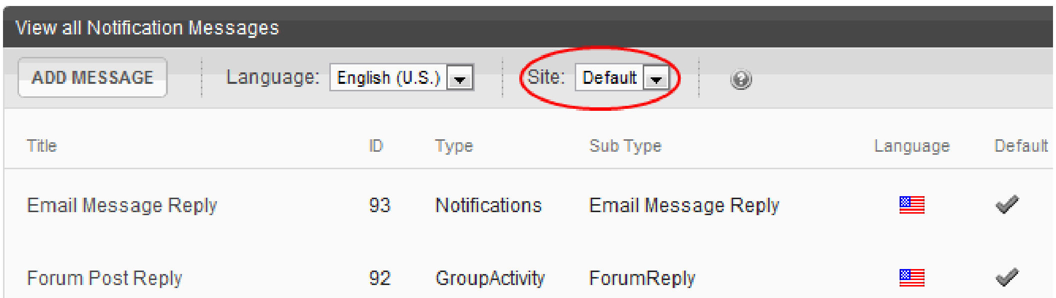
7. Click **Save**.

Managing notifications in a multi-site environment

In a multi-site environment, notifications stay within the site where the activity happened. For example, if there are 2 sites—an Intranet and Social Club site—when a user from the Intranet site performs an activity that generates a message, it does not trigger notifications on the Social Club site.

Exception: A user’s colleagues receive notifications regardless of the site from which the message originated.

When a message type is created, it becomes the default message used by all sites. But you can assign a different message of the same type to each site in your environment. To view the messages assigned to a site, go to the View All Notification Messages screen, click the **Site** drop-down, and select the site.



When creating notification messages in a multi-site environment, specify the site for the message. For example, you want a "Status Update" message targeted one way for an Intranet site and another way for your Social Club site. The Intranet site message might be:

```
                    @SubjectUser.username@ has an updated status on Intranet with the
following:
  @MicroMessage.Message@.
```

While your Social Club site might message be:

```
                    @SubjectUser.username@ has an updated status on the
Social Club with the following: @MicroMessage.Message@
```

Creating a community group's email address

To allow anyone to post email to a community message board, set up a community group email address.

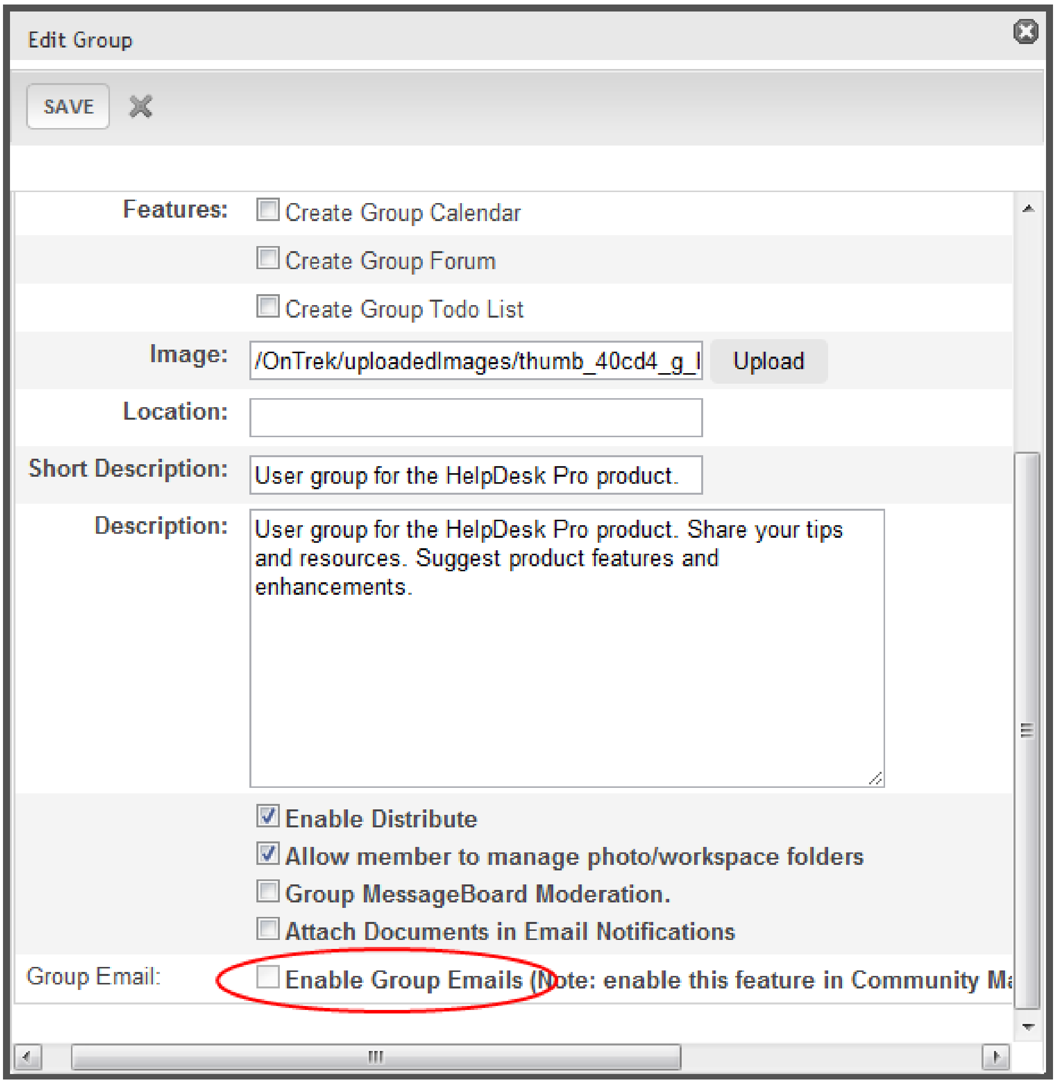
PREREQUISITE

- You are a member of the Administrators group or a community group administrator.
- You enable notification system, as described in *Setting up notifications* on page 1547.

To set up a community group's email address:

1. On community site's group page, choose **Manage > Edit Group**. The Edit Group screen appears.

   Or, from the Workarea, choose **Settings > Community Management > Community Groups**. Click the group.
2. Click the **Properties** tab.
3. Check the **Enable Group Emails** box.

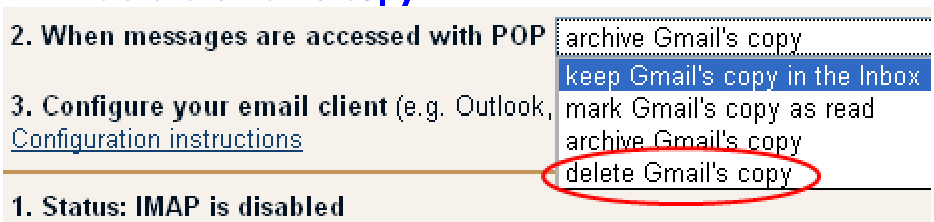


4. Complete the fields.
   - **Email Address**. Enter the email address that will be used to post email to this group's message board.

     IMPORTANT: Each community group's email address must be unique.

   - **Email Account Name**. Enter the email address that receives email delivered to this group's message board.
   - **Email Account Password**. Enter the password for that email address.
   - **Email Server**. Enter the POP mail server that retrieves email for this group's message board.
   - **Email Server Port**. Enter the port number used to retrieve email for this group's message board.
   - **Use SSL**. Check this box if SSL is used when retrieving email.
   - **Test Connection**. After you complete the above fields, click this button to verify the information and the ability to connect to the mail server.

NOTE: If you are using Gmail as the SMTP server to fetch email replies, after the notification service processes the emails, you probably want to delete them from the Inbox. To set up automatic deletion of this email from the Inbox, got to Gmail's **Settings** screen > **Forwarding and POP/IMAP tab** > **Pop Download Area** > **2. When messages are accessed with POP** > select **delete Gmail's copy.**



Using SSL with notifications

If your site uses SSL, you must update the Ektron notification service configuration file with that information. The file is typically located at `C:\Program Files (x86)\Ektron\EktronNotificationService\Ektron.Notification.Service.exe.config`.

Change the `url="http` value to include an **s** (http**s**).

```
<siteNotification>
  <sites>
    <add name="769723537"
      url="https://your server"
      connectionString="server=your server;
      database=Intranet2;
      Trusted_Connection=true;
      User ID=;Password=;" />
  </sites>
</siteNotification>
```

Restart the Ektron notification service to enable this change.

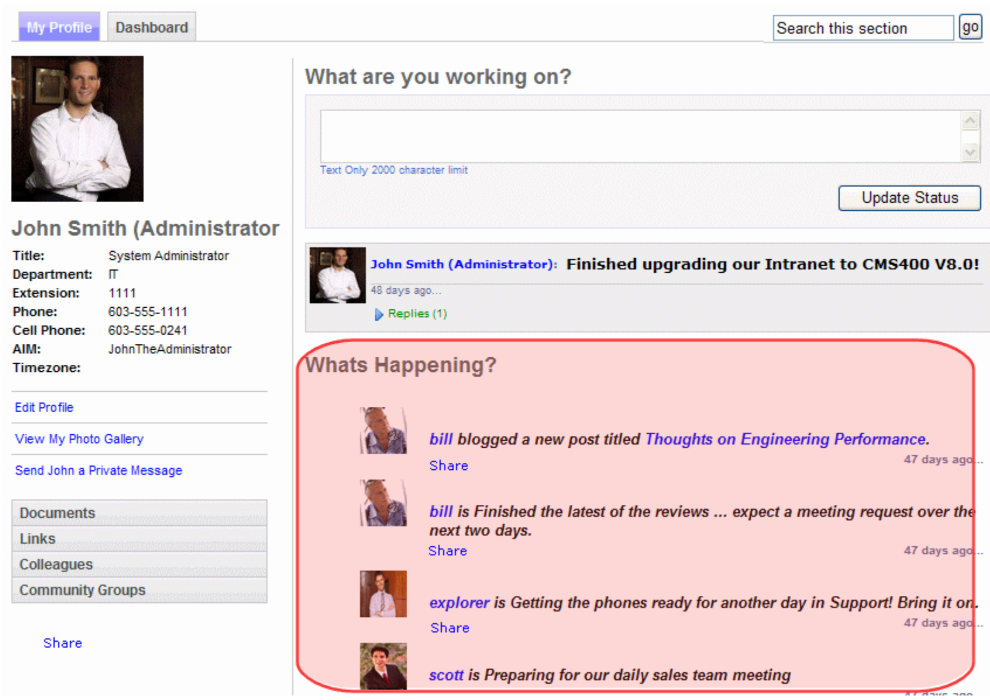
Using eSync with notifications

When using eSync with notifications, new agents are not synchronized. This means that you must manually add new agents to each server in your configuration.

If an agent exists on all servers in your configuration, eSync keeps them updated. For example, assume a membership user logs into the production server and updates the profile's **Activities** tab by changing the activities a custom agent will perform. eSync copies those changes to the staging server.

Activity streams

An activity stream is a series of chronologically-arranged notification messages describing activities within Ektron's Community Feature. See also: *Sending notifications to a community* on page 1543.



The following table describes the various ways of presenting an Activity Stream on your website.

For this kind of Web page	Use this	To see notifications for
.aspx	ActivityStream server control	The user or group identified in the page's query string. If none is identified, the logged-in user sees his or her own notifications.
PageBuilder	ActivityStream widget See also: *Using the ActivityStream widget on a PageBuilder page* on page 1587	
Ektron Personalization	ActivityStream widget See also: *Using the ActivityStream widget on a PageBuilder page* on page 1587	• Yourself • Your colleagues • Your community groups
Community Feature: your profile page	No action required—Activity Stream appears by default	Yourself

For this kind of Web page	Use this	To see notifications for
Community Feature: a colleague’s profile page	No action required—Activity Stream appears by default	Colleagues
Community Feature: group profile page	No action required—Activity Stream appears by default	Community group of which you are a member

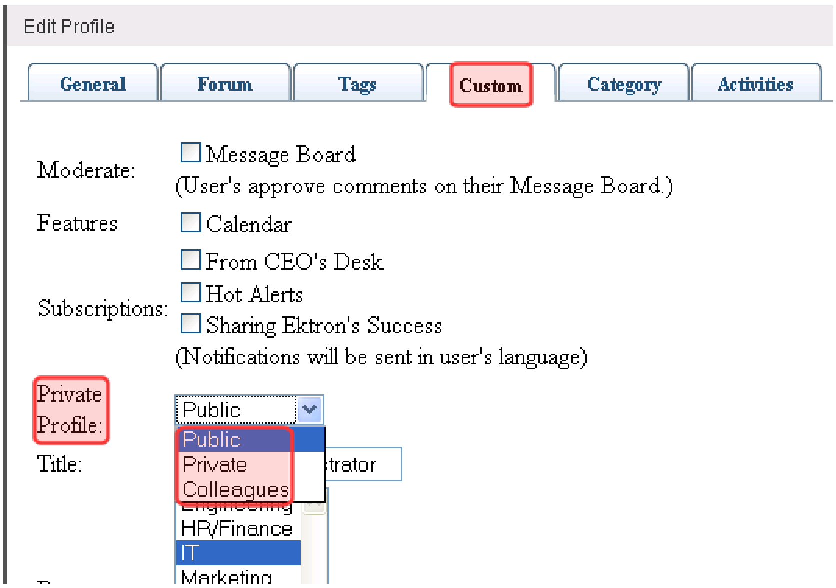
Using the ActivityStream widget

The ActivityStream widget is installed with Ektron.

When you drag and drop an ActivityStream widget onto a Personalization page, it displays activities performed by

- you, the logged-in user
- your colleagues
- community groups to which you belong

When you view *another user’s* personalization page containing this widget, the activities you see are controlled by that user’s **Private Profile** setting and whether that person is your colleague.

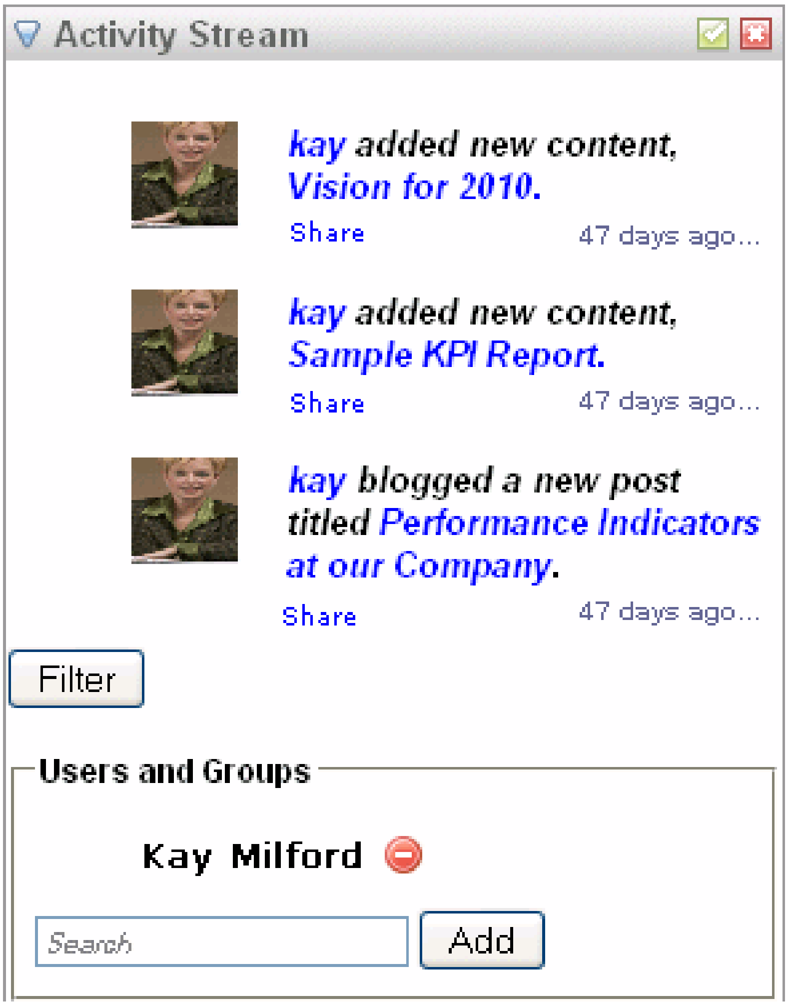


The following table describes when you can see another user’s Activity Stream.

If the user’s Private Profile setting is...	and the user is...	you can...
Public	a colleague	view the person's activities
Public	not a colleague	view the person's activities
Private	a colleague	view the person's activities
Private	not a colleague	only view the person's activities if you are an administrator
Colleague	a colleague	view the person's activities
Colleague	not a colleague	only view the person's activities if you are an administrator

If you can view another user’s activities, you see activities that person performs and activities that person's colleagues perform.

From this widget, you can filter the Activity Stream to view only activities from specific users and community groups. Filtering the ActivityStream widget means restricting notifications to those from selected users or groups. For example, you want to see only activities performed by Kay Milford. In the filter, select Kay Milford, and the ActivityStream widget shows messages only from her.



As another example, you are the head of the Engineering department and want to see your employees' activities. To accomplish this, add them as colleagues. Then, in an ActivityStream widget, create a filter with their names. That widget only shows your employees' activities.

If your department has a community group, you could add that group to the filter. Then, in addition to your employees' activities, you would see the group's activities.

This feature, combined with the ability to add multiple ActivityStream widgets to a page, lets you create separate activity streams that focus on people and groups of interest.

The following image shows 1 ActivityStream widget that displays a user's colleagues (on the left), and 3 other widgets with filters that focus on individual users.

You could take this example one step further. If Leah Mathis and Scott Markey both work in "Sales & Marketing" and Bill Smith, Works in "Engineering," you might only have 2 widgets, one for Scott and Leah and another for Bill.

Filtering the ActivityStream widget

1. Click **Filter** at the bottom of the widget.
2. In the **Users and Groups** box, enter the name of a user or community group by which to filter.
3. Click **Add**. Only activities performed by the selected user or community group members appear.

   IMPORTANT: A valid name is one that exactly matches a user's Display Name or community group's Group Name. If your entry does not match, the widget refreshes and no filter is added.

   Also, the selected users or community groups appear in the widget's filter area.

You can add as many users or community groups to the filter as you like, one at time. After you finish, you can hide the filter by clicking **Hide**.

Removing an entry from the ActivityStream widget filter

NOTE: If you remove all users and groups from the filter, the widget shows notifications from *all* users whose activities you can view.

1. If you cannot see the filter's users or community groups, click **Filter** at the bottom of the widget.
2. Click **Delete** ( ) next to the user or community group you want to remove. The ActivityStream widget refreshes, and the removed user or community group's activities disappear from the stream.

Using the ActivityStream widget on a PageBuilder page

NOTE: To learn about Ektron's PageBuilder functionality, see *Creating Web pages with PageBuilder* on page 991.

When used on PageBuilder page, the ActivityStream widget shows the logged-in user's activities by default. However, you can modify the widget to focus on another user's or community group's activities.

For example, you create a PageBuilder page about your company's CEO and want to display notifications about activities that the CEO, colleagues, and community groups perform on the site.

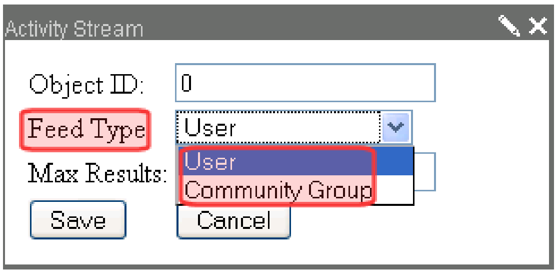
To accomplish this, add the ActivityStream widget to a "See what the CEO is Up To" page. While doing that, specify the user ID assigned to your CEO (available from the CEO's User Profile). Upon visiting the page, a user sees a list of the CEO's activities.

To display another user's or community group's activities in the ActivityStream widget:

PREREQUISITE

The ID number of the user or community group whose notifications will appear

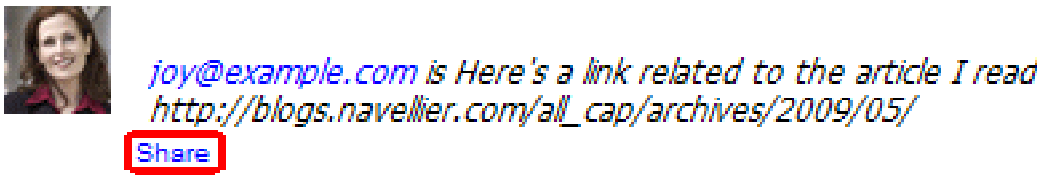
1. Drag and drop the ActivityStream widget. The following dialog appears.



2. Use the **Feed Type** drop-down to select **User** or **Community Group**.
3. In the **Object ID** field, enter the user's or community group's ID.
4. Click **Save**.

Sharing an activity stream event on your profile

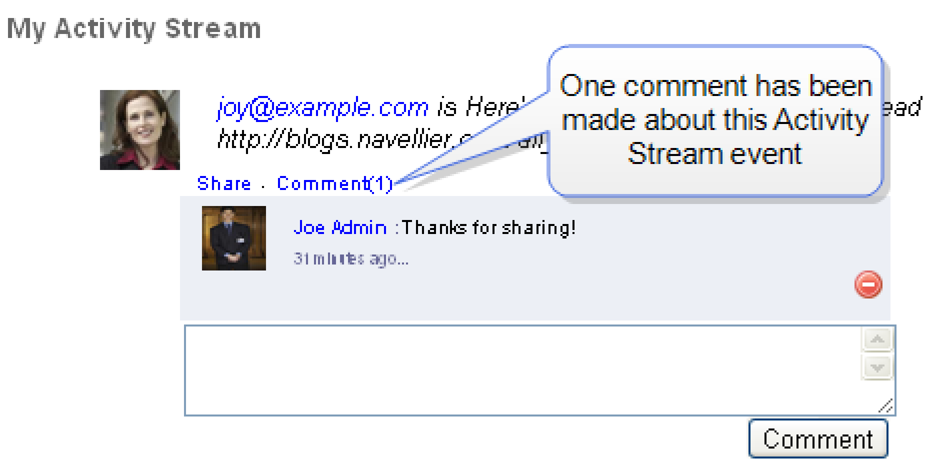
Each activity in a stream has a **Share** link under its text.



When you click **Share** on someone's status, it appears in your profile's status, too.

Commenting on an activity stream event

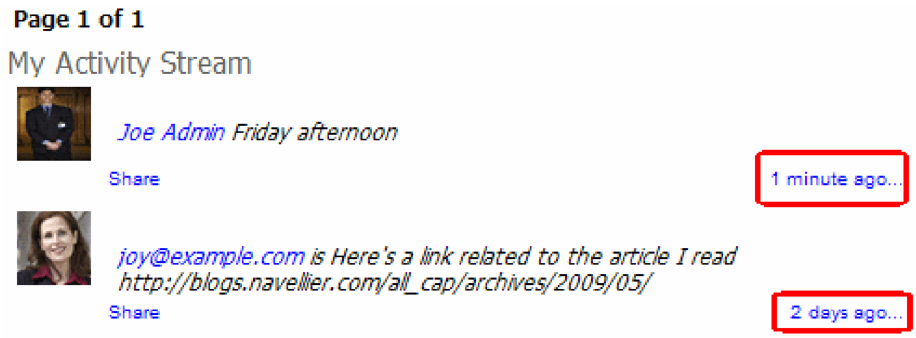
Each activity in a stream has a **Comment** link under its text. When you click it, a Comment box opens for you to add a comment. When you finish, the **comment** link displays the number of comments on that activity. Users can click the number to view the comments.



Only the user who made the comment or a member of the Ektron Administrators group can delete the comment.

Setting up a time display for activity stream events

You can set up an activity stream to assign a ***time* ago** link to each event.



When a site visitor clicks that link, the activity stream event is launched in a new browser. From there, the site visitor can use the page's URL to uniquely identify the event. For example, the user can forward the URL to other users to notify them about the event.

To add a ***time* ago** link to a page:

1. Create a Template Activity page. It must be an .aspx template with an activity stream server control that includes these properties.
   - `ObjectType`—enter `Activity`
   - `DynamicObjectParameter`—enter `id`
2. Open the template that hosts the ActivityStream server control to which you want to add a ***time* ago** link.
3. To the ActivityStream server control, add the `TemplateActivity` property. As the value for that property, enter the template page you created. That page appears when a site visitor clicks the ***time* ago** link.

   Here is an example of an Activity Stream server control with a sample value for that property.

```
<CMS:ActivityStream ID="ActivityFeed1"
  runat="server" EnablePaging="true" DynamicObjectParameter="id"
  TemplateUserProfile="profile.aspx" TemplateActivity="activity.aspx" />
```

Displaying RSS feed links

Ektron provides the following RSS feed links that can display activity stream events.

- `http://your website/workarea/webservices/feeds.svc/userstatuses/user ID number.rss`

  For example: http://*your zwebsite*/workarea/webservices/feeds.svc/userstatuses/*1*.rss

  Displays the specified user’s status updates. For example, `1.rss` shows all status updates of the user whose ID is 1.
- `http://your website/workarea/webservices/feeds.svc/publictimeline.rss`

  Displays all public status updates
- `http://your website/workarea/webservices/feeds.svc/publictimeline.rss?search=new`

  Displays all public status updates that include the term "new"

You can use these feeds with Ektron's API to access and display status updates.

Troubleshooting activity streams

Problem. Notifications do not appear in my Activity Stream and the configurations are set for Notifications and User/Group Activities. Also, the Application Event log shows the following error: *An exception occurred while enqueueing a message in the target queue. Error: 15404, State: 11, Could not obtain information about Windows NT group/user 'WIN-I2VJT0GQ8I2\Administrator', error code 0x534.*

This occurs when the person who created the database is not the same person who created the queues. This creates permission issues when trying to write to the queue.

Solution. Do 1 of the following:

- Set the user that writes to the queue with the permission level of "dbo."
- Run the script `sp_changedbowner` "sa" where "sa" is the user name who writes to the queue.

Defining flags for content

Flagging lets site visitors provide feedback about a piece of content, thereby enabling site visitors to moderate your site. This is especially important for sites with large amounts of visitor-generated content. Flagging also helps site visitors feel invested in the site.

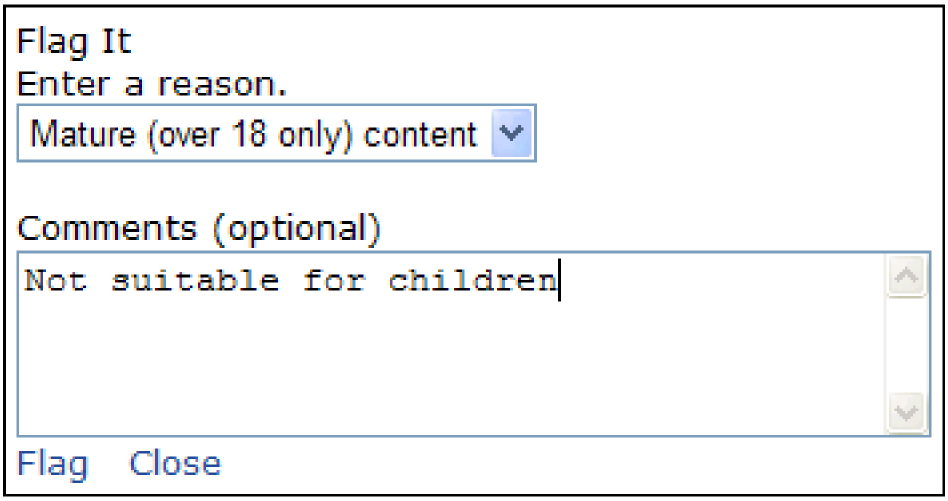
For example, a flagging list can describe types of inappropriate content, such as:

- Sexually Explicit
- Mature (over 18 only) content
- Graphic Violence
- Hate Speech

Flagging can also indicate the quality of content, so can help create a recommended content list. For example:

- I loved this content.
- I hated this content.
- I am neutral about the content.

Flagging is similar to the ContentReview server control, except flagging feedback is not displayed on the site. Also, the Flagging control provides a list of reasons for the flag. So, a flagging definition describes how a content item may be reviewed, and provides a list of reasons for the flag. For example:



After creating a flagging definition, you assign it to relevant folders. All content in those folders can be flagged with that definition.

IMPORTANT: As the final step in letting site visitors flag content, a developer adds a ContentFlagging server control to a Web page, and assigns to it the ID of the content being flagged.

Flagged content appears in the following Workarea locations.

- **ContentFlags** list on the Smart Desktop
- **Settings > Community Management > Flagging > Flagged Content**
- a content item's **View Content Reports > Flagging** tab

The Flagging Definitions screen is located in the **Workarea > Settings > Community Management > Flagging**. Here, you can view a list of flagging definitions, work with them, or create new ones.

This screen contains the following information about a flagging definition.

- **ID**. The ID of the flagging definition.
- **Name**. The name of the flagging definition.
- **Description**. A description of the flagging definition.
- **Language**. The national flag of the language. For example, American English is .
- **Items**. The number of flags in a definition. For example, the number is 4 if you have a flag definition for these movie ratings: G, PG, PG-13, and R.

Adding a flagging definition

1. In the **Workarea**, go to **Settings > Community Management > Flagging > Flagging Definitions**.
2. Select a language with which the flagging definition will be associated.
3. Click **Add New Flag Definition**. The Add Flagging Definition screen appears.
4. Enter a **Name** and **Description** for the flagging definition.
5. Click **Option** () to add a flag choice to this flagging definition.
6. Continue to click the **Option** button to add additional flag choices.
7. Optionally change the order of the flag choices by clicking the **Sorting** buttons ( ).
8. Click **Save**.

Editing a flagging definition

1. In the **Workarea**, go to **Settings > Community Management > Flagging > Flagging Definitions**.
2. Click the flagging definition **Name** link or the **ID** link.
3. Edit the options. If desired, you can change the order of the flagging options by clicking the Sorting buttons ( ).
4. Click **Save**.

Deleting a flagging definition

When a flagging definition is deleted, it is removed from all folders with which it was associated.

1. In the **Workarea**, go to **Settings > Community Management > Flagging > Flagging Definitions**.
2. Click the flagging definition **Name** link or the **ID** link.
3. Click **Delete** ().

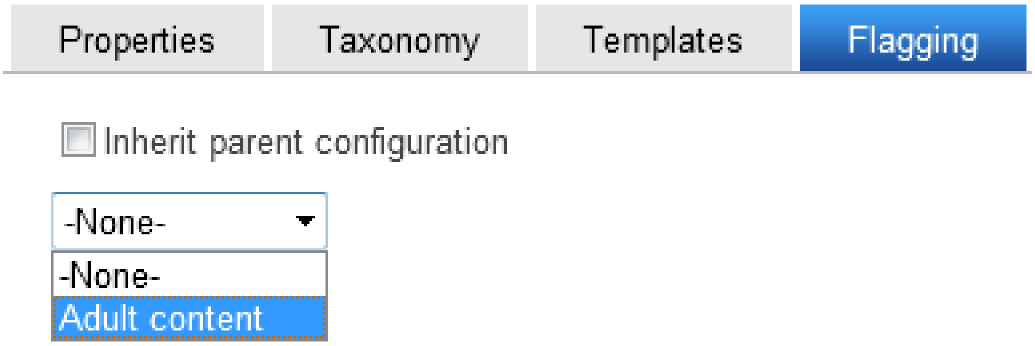
Assigning a flagging definition to a folder

After creating a flagging definition, you may assign it to folders. If you do, the flagging definition is applied to all content in that folder.

Like other folder properties, a folder's flagging definitions may be inherited by its child folders, although this does not occur by default.

To assign a flagging definition to a folder:

1. Create a flagging definition, as explained in *Adding a flagging definition* on the previous page.
2. Click the Workarea **Content** tab.
3. Go to the folder that contains the content to be flagged.
4. Select **View > Properties** from the View menu. The View Properties screen appears.
5. Click **Edit Properties**.
6. Click the **Flagging** tab.
7. Make sure the **Inherit Parent Flagging Configuration** check box is not checked.
8. Select a flagging definition from the **Flagging** drop-down.



9. Click **Update**.

Working with flagged content

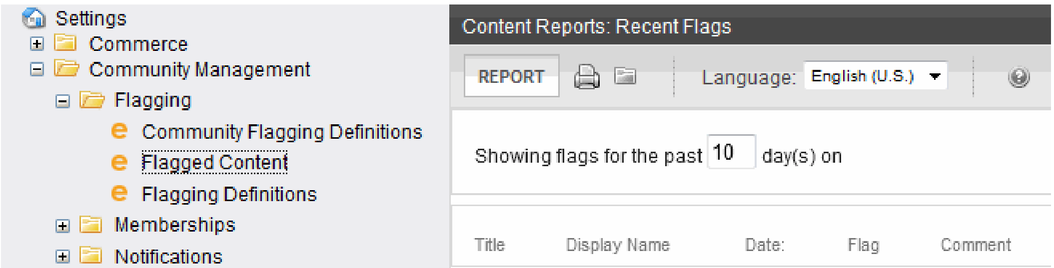
From the Smart desktop

To see content flags, you must add the Content Flags widget to your desktop. The Content Flags widget lists the 10 most recently-added content flags. From there, you can view a flag by clicking its title. To view all recent flags, click the **View recent flags** link. Clicking this link takes you to the Content Reports: Recent Flags screen.

From the settings tab

Settings > Community Management > Flagging > Flagged Content shows all flagged content.

NOTE: You can also access this report from the **Workarea > Reports > Contents > Content Flags**.



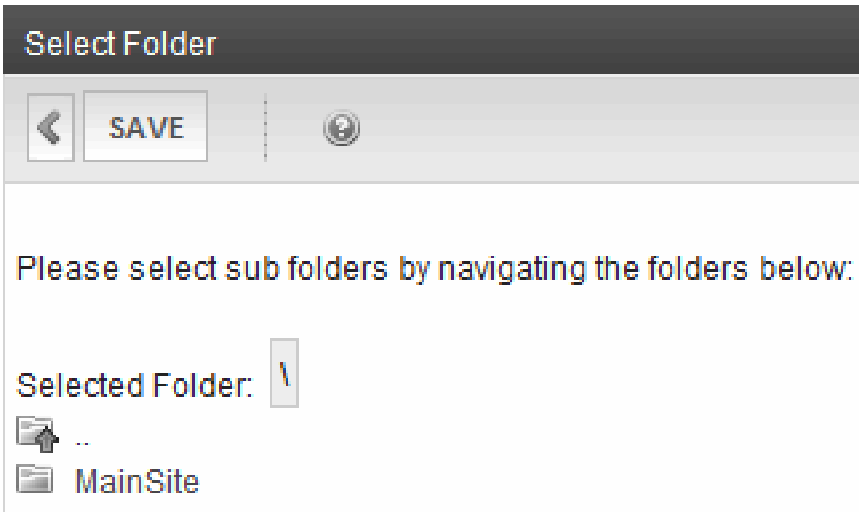
- **Showingflagsforthelast#days**. Enter a new number of days for which to show Flagged Content. Click **Report** to refresh the display.
- **Title**. The title of the content block being flagged. Clicking this link brings you to a detailed description of the content's flag.
- **Display Name**. The name of the user who flagged the content.
- **Date**. The date the content was flagged.
- **Flag**. The specific flag from the flagging definition for this content.
- **Comment**. Comments added by the site visitor who flagged the content.

To print the flagged content report, click **Print** ( ).

Filtering flagged content by folder

From the Content Reports: Flagged Content screen, you can filter flagged content by folder. To do so:

1. In the Workarea, go to **Settings > Community Management > Flagging > Flagged Content**.
2. Click **Filter Reports by Filter** ( ). The Select Folder screen appears.



3. Select a folder.
4. Click **Save**. The page refreshes, and any flagged content in the folder is shown.

NOTE: Only content flagged within the time frame for the **Showing flags for the past # days** field is shown. For example, if the field is set to 5, only content that's been flagged in the last 5 days appears.

Filtering flagged content by language

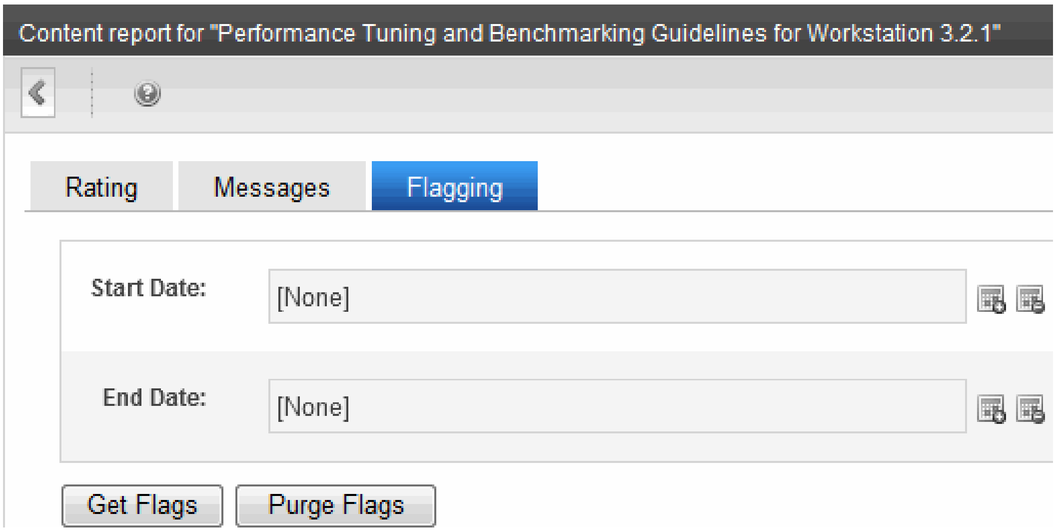
To see flagged content for a specific language, select the language from the **Language** drop-down box.

From the content report

You can also view flags for a content from the **Content Report** screen's **Flagging** tab. You can filter flags by a date range or see all flags associated with the content. This screen also contains a purge button, which removes all flags associated with this content.

Viewing flags applied to a content item

1. In the **Workarea**, find the content for which to retrieve content flags.
2. Click the content title. The **View Content** screen appears.
3. Click **Content Reports** (). The Content Report screen appears.



4. Click **Start Date** () and **End Date** () to select a date range.

NOTE: To retrieve all flags, leave Start Date and End Date blank.

5. Click **Get Flags**. A list of flags applied to that content within the selected date range appears.

Purging a content item's flags

1. In the Workarea, find the content block for which to purge content flags.
2. Click the content title. The View Content screen appears.
3. Click **Content Reports** ().
4. Click **Start Date** () and **End Date** () to select a date range.

NOTE: To retrieve all flags, leave Start Date and End Date blank.

5. Click **Purge Flags**.

Viewing the details of a flag

Viewing a flag's detail lets you read the entire comment, even if it is truncated in one of the lists. You can also edit or delete a flag from this screen.

1. Go to one of these area in the Workarea:
   - **Smart Desktop > Content Flags** widget
   - **Settings > Community Management > Flagging > Flagged Content**
   - **Reports > Contents > Content Flags**
2. Click either a flag's content title or its date. The flag's detail information appears.

Editing the details of a flag

Edit a flag when you want to change the selection or the comments of a flagged content item. This can be useful if a user selects a flag by mistake, or you want edit its comments. For example, a user selected the "Offensive Content" flag but the user meant to choose "Copyright Violation".

1. Go to one of these area in the Workarea:
   - **Smart Desktop > Content Flags**
   - **Settings > Community Management > Flagging > Flagged Content**
   - **Reports > Contents > Content Flags**
2. Click either a flag's content title or its date. The flag's detail information appears.
3. Click **Edit**.
4. Change the flag or edit the comments.
5. Click **Save**. The flag's information is changed.

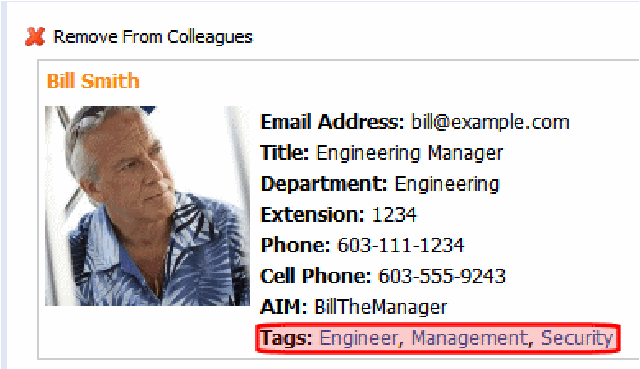
Deleting a flag

NOTE: To remove all flags for a content item, see *Purging a content item's flags* on the previous page.

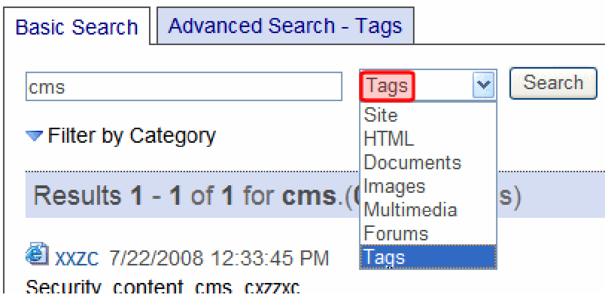
1. Go to one of these area in the **Workarea**:
   - **Smart Desktop > Content Flags**
   - **Settings > Community Management > Flagging > Flagged Content**
   - **Content Reports > Flagging tab** for a content item
2. Click either a flag's content title or its date. The flag's detail information appears.
3. Click **Delete** ().

Tagging content, library items, users, and groups with keywords

Tags are keywords that you can assign to users, groups, content, and library items. On a website, tags for a user or group appear in a profile, helping site visitors learn about a user or group.



You also can perform tag-based searching.



For example, you tag content related to a new product release with "Widgets 2.0." Anyone could enter that term into the Search box, click **Tags** from the drop-down list, then **Search** to find all related content.

Tags are used in these Workarea locations:

- User Information screen's **Tags** tab, for users or membership users
- Community Group screen's **Tags** tab
- A content item's **Metadata** tab > **Tags** area
- A library item's **Metadata** tab > **Tags** area
- **Settings > Community Management > Tags**

NOTE: The CommunityGroupBrowser, CommunityGroupProfile, and CommunityGroupList server controls can display group tags and link them to a list of all groups that share the tag. Also, the TagCloud server control displays a weighted list of tags.

Tag types

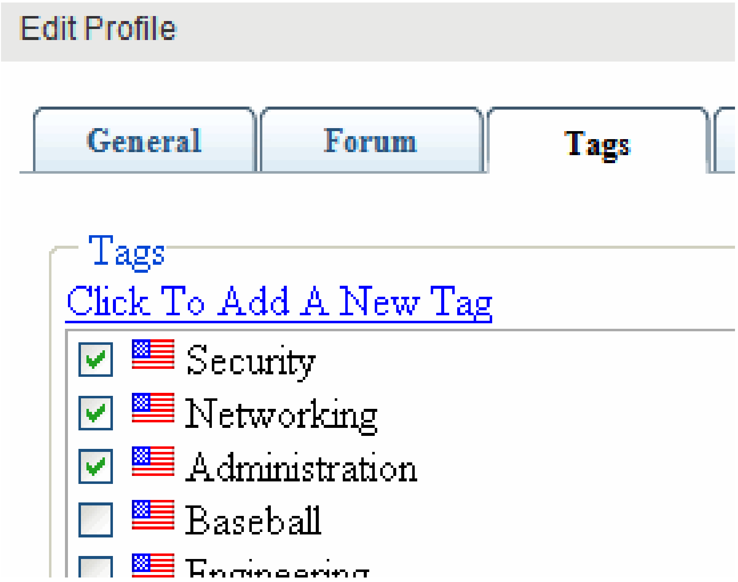
There are 2 tag types:

- Default
  - Created by system administrator in **Settings > Community Management > Tags** area
  - Appear as checkbox options where tags can be applied

- User-created
    - Created by user wherever tags can be applied

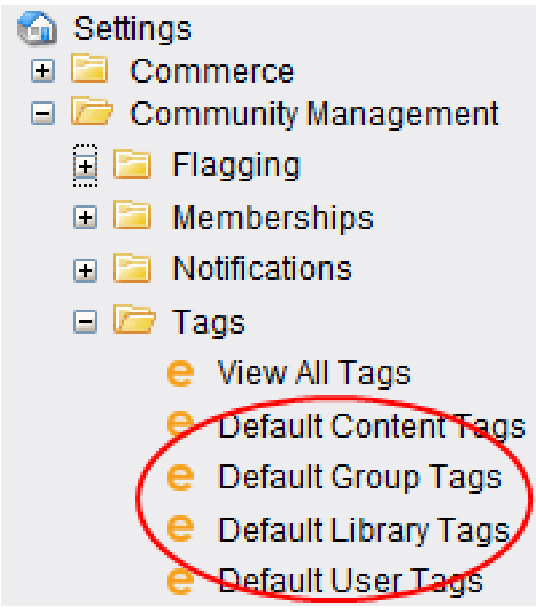
Creating default tags as administrator

An Ektron administrator can create default tags for each object (user, user group, content or library item). For example, you want to let users associate themselves with a favorite race car driver. You create a default user tag for each driver's name. When a user creates or edits an item for which you created the default tags, the tag appears and the user clicks check boxes to assign them.



Ektron provides screens for creating default tags for user groups, users, content and library items. They are available via **Settings > Community Management > Tags**.

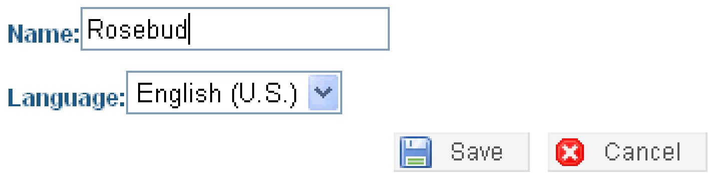
1. In the Workarea, go to **Settings > Community Management > Tags** and select on the default tag items.



2. Select a language for the tag.
3. Add the tag in the empty text box. If no empty box appears, click **Add** ( ) then enter the tag.
4. Click **Save Tag**.

Creating tags as end user

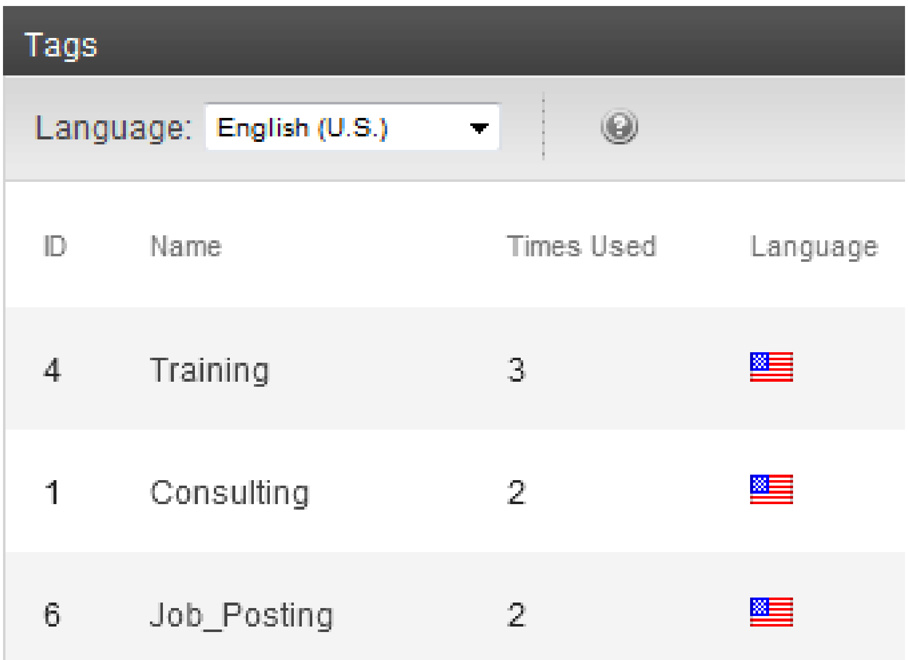
Users, community group leaders, and content editors can create their own tags. For example, while you are editing content, you decide that none of the default tags is correct. So, you create and assign a new tag: **Rosebud**. That tag is now applied to that content.



The tag also appears on the **Settings > Community Management > Tags** screen, where you can see its ID number. If someone creates another tag with the same name, it shares the ID number with the previous one, and the **Times Used** increases from **1** to **2**. However, the new tag does not appear as a default on any screen.

Managing tags

Administrators manage tags from the **Settings > Community Management > Tags** screen. This screen displays all default and user-created tags. You can filter the list by language. Click any tag's name to see its details.


Tags

Language: English (U.S.)

ID	Name	Times Used	Language
4	Training	3	
1	Consulting	2	
6	Job_Posting	2	

This screen displays the following information about each tag.

- **ID**. Tag's integer ID
- **Name**. Tag's title
- **Times Used**. The number of times a tag has been assigned
- **Language**. Its language. This appears as a national flag. For example, American English appears as .

When you click a tag’s name, its details appear on the View Tag screen.

- **ID**. Tag's integer ID
- **Language**. Tag's language
- **Name**. Tag's title
- **Tagged Type**. Shows how the tag is assigned: to a community group, user, content, or library item.
- **Times Used**. The number of times this tag is assigned to each Tagged Type

Deleting tags

To delete each tag type:

- **User-created**
  - Deleting a single tag
    1. Open the item’s **Tags** area. For example, for content, edit the **Metadata** tab.
    2. Uncheck the checkbox next to the tag.
    3. Publish the content.
  - Deleting all occurrences of a tag
    1. Go to the **Settings > Community Management > Tags** screen.
    2. Click the tag.
    3. Click **delete** ().
    4. Click **OK**.
- **Default**. There are 2 methods for deleting default tags. Each has different results.
  - **Deleting a Default Tag**
    - No longer available for assignment to users, content, and so on.
    - Existing links to it remain
    1. Go to **Settings > Community Management > Tags**
    2. Select the screen for the kind of tag you want to delete (group, user, content or library).
    3. Select the language.
    4. Click () to the right of the tag you want to delete. You are asked if you are sure. Click **OK**.
    5. Click **Save**.

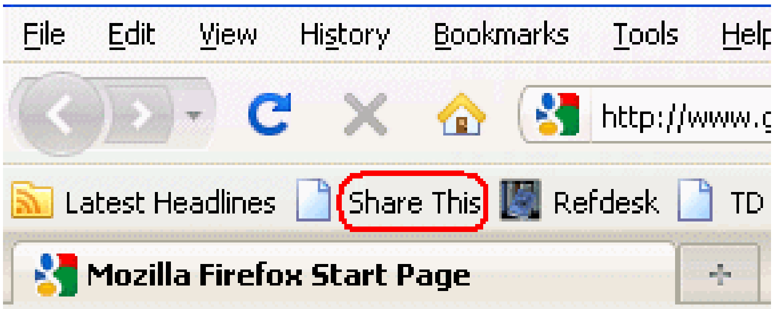
- **Deleting a Default Tag and All of its Links**
  - No longer available for assignment to users, content, and so on.
  - Existing links to it are deleted
  1. Go to the **Settings > Community Management > Tags** screen.
  2. Click the tag.
  3. Click **Delete** ( ).
  4. Click **OK**.

Using Ektron's micro-messaging bookmarklet

A micro-messaging bookmarklet, a feature of Ektron's Community Platform, lets you use a micro-message to inform colleagues about a Web page without leaving it. To create this micro-message:

1. Go to a Web page.
2. Click a **Share This** link on the browser's Bookmark or Favorites menu/toolbar.

NOTE: In Internet Explorer, these toolbar shortcuts are known as favorites. In Firefox, they are known as bookmarks. This documentation calls them bookmarks.



3. That action generates a link to that Web page as a micro-message. You can add a comment.

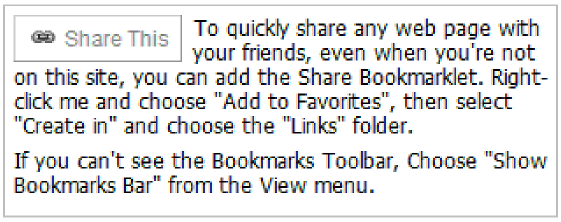
Submitting a Web page link as a micro-message

PREREQUISITE

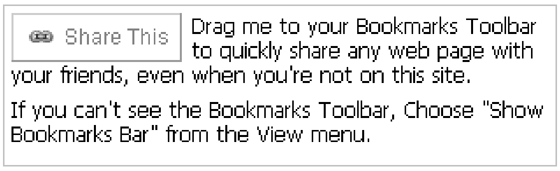
To enable the Bookmarklet feature, a developer places a Bookmarklet server control on a page and (if desired) *Review and modify the post to profile form* on the facing page.

Before you can use the Micro-messaging bookmarklet feature, add a Bookmarklet link to your bookmark toolbar or menu.

1. Go to a page that contains a Micro-messaging bookmarklet link.



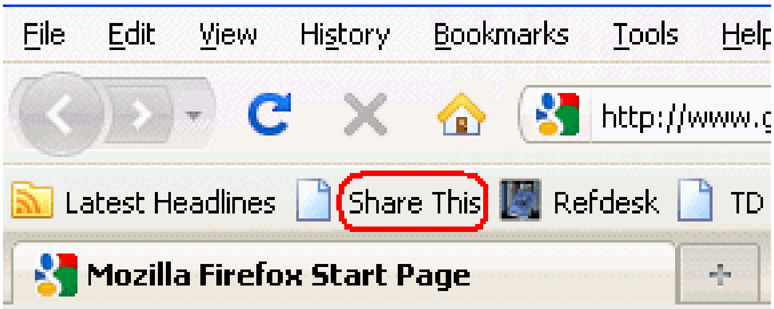
"Share This" button in Internet Explorer



"Share This" button in Firefox

NOTE: The text of the Micro-messaging bookmarklet link changes according to the user's browser. Also, the image above text reflects default text; developers can easily change it.

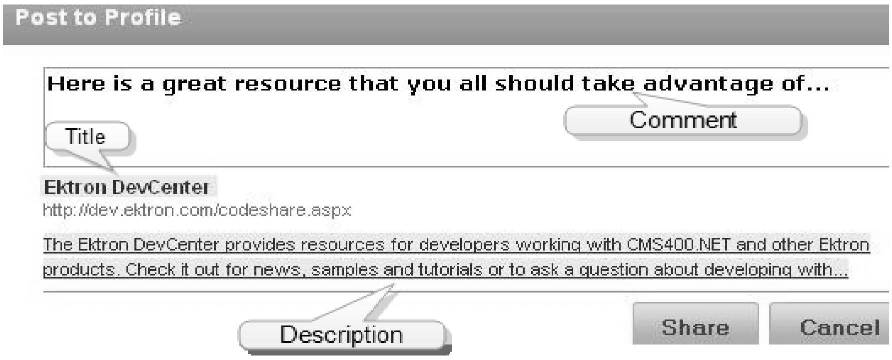
2. Right click a bookmarklet link and follow the screen instructions to add it as a Bookmark. The Bookmarklet appears on the toolbar.



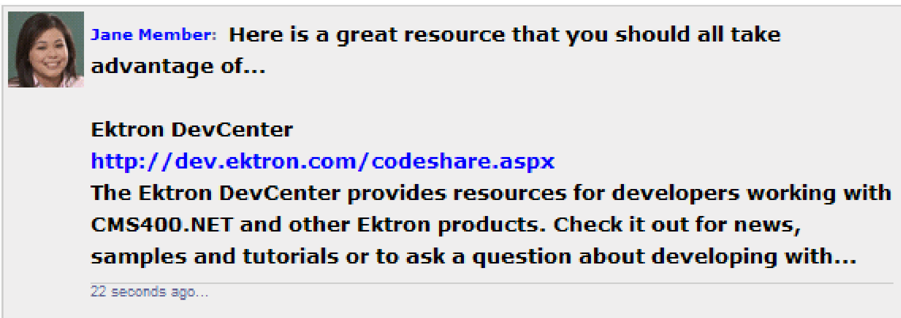
3. Go to a page that you want to post as a micro-message.
4. Click the bookmarklet link. The following screen appears.

NOTE: If you are not logged in to Ektron, you are prompted to do so.

5. Add comments to replace *What would you like to say?*
6. Click to edit the title and description.



7. Click **Share**. The post is shared in a micro-message with colleagues.



The micro-message appears in the user's Activity Stream if it is set up to track micro-messages.

Review and modify the post to profile form

Ektron provides the following sample form to appear when a user clicks the Micro-messaging bookmarklet link on the browser's Bookmarks menu.

The sample form is *siteroot*`/Workarea/share.aspx`. To modify this form or create your own, enter the new path into the Micro-messaging Bookmarklet server control's `FormURL` property.

Here are a few things to note about this form's behavior.

- If a user is not logged it, add a Login server control to prompt the person to do so.
- The form lets the user enter or update 3 fields
  - comment entered by user
  - title tag text
  - meta description
- All text on the form (including the URL) cannot exceed 2000 characters.
- The form accepts plain text only—no formatting or images are allowed.
- This size of the screen is determined by the Bookmarklet server control's `PopupHeight` and `PopupWidth` properties.
- The form generates a Micro-message, so it follows the conditions for how Micro-messages are published.

35

Conducting eCommerce

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

NOTE: eCommerce requires a special license from Ektron. Only members of the Administrators group or those assigned the Commerce Admin role can access the eCommerce screens within the Workarea. If you do not see the Commerce folder under **Settings** tab of the Workarea, it may be because your license does not support eCommerce. For licensing information, contact sales@ektron.com.

NOTE: While some earlier Ektron versions supported PCI compliance, version 9.10 does not offer PCI support. You may still enable PCI compliance mode in the web.config file if that helps your eCommerce site. To learn about enabling PCI compliance mode, see the 7.6 eCommerce Compliance Guide.

Ektron eCommerce gives you a tool set for building the online marketplace you want. Ektron lets you manage both your website and online marketplace from the same interface.

Ektron's eCommerce solution is a flexible and feature-rich platform that offers the functionality that shoppers expect in an online marketplace.

- eCommerce reuses many standard Ektron components, so you can leverage existing Ektron experience to quickly build the store and use server controls to create the Web pages that customers use to purchase goods and services.
- Administrators manage products, review inventory, and use Ektron's powerful taxonomy to enhance product SEO.
- Developers use the flexible and scalable API to import an existing store, configure a customized integration with a payment gateway, and integrate with financial software.
- You can sell memberships and/or access to premium content.
- State and local governments can process online vehicle registration and tax payments, and event sites can sell tickets.

eCommerce has the following features.

- Shared data. As a .NET application, eCommerce uses the same database as Ektron (to maximize efficiencies) and takes advantage of SQL cluster capabilities to be scalable. You do not need "glue code" to tie a third-party eCommerce application to your website. Ektron eCommerce integrates with an IT infrastructure using Ektron's existing customizability. Open architecture and a new `ektron.cms.commerce` API makes any commerce configuration possible, letting you connect it to your back-end systems.
- Imported data. Import existing product data into eCommerce using Ektron's API.
- Flexiblility. eCommerce supports single items, complex products (for example, movies that are available in DVD, Blu-ray®, or other formats), bundles, and kits.
- Enhance your SEO. You can enhance product SEO in the Smart Form by setting attributes, adding metadata, and including photos and other media.

    - eCommerce uses key Ektron technologies, including Smart Forms, taxonomy and search. Smart Forms standardize how product information is entered; information, attributes, and descriptive text are entered in one place and go into the database as structured XML data (making it easy to re-purpose this content wherever and whenever you need it).
    - Adding images of products automatically generates thumbnail images and gives you complete control over sizes and number of images, as well as a click-through image gallery. You also can define images for a product type via the taxonomy.
- Classify products in multiple ways. taxonomies help customers find what they are looking for by associating them with multiple categories. For example, a wireless mouse and an external hard drive may belong to a computer peripherals category but also to categories for mouses and disk storage. Control over your product catalog extends to cross-sell and upsell features.
- Web 2.0 controls. include memberships, ratings, forums and commenting that let you quickly implement an eCommerce site with the community-based information customers want when making buying decisions. Your customers can post opinions and ratings on products. The product search uses taxonomy, which you can filter by price, ratings, reviews, and more.
- eCommerce customer memberships. Customers can create and save shopping baskets for future purchases, or create wish lists and registries. Your site administrators can see which baskets are open.
    - When an order is reviewed and submitted (and payment is authorized), it can go through a simple or complex routing through your processing setup or plug-in to your existing CRM or ERP to process the order.
    - When an order is processed, the CRM/ERP notifies Ektron that it is complete. Online inventory is kept up-to-date; you can set properties so that when items on hand drop below a certain level, your inventory control system is notified.
    - You can display the checkout process on a single page or distribute it across multiple pages. Customers can save one or more shipping addresses, or check “same as billing” when they check out.
    - You can accept credit cards, checks, and PayPal accounts. Ektron also supports payment gateways (such as Payflow and Authorize.Net) to authorize and capture transactions. You can create your own payment gateway (that allows terms or other payment options, for example).
    - Connect with external providers to use real-time rates for shipping, or use your own rates by setting up an internal shipping provider. You can customize rates and set up rates by package size, product weight, and even product price ranges.
- Coupons, taxes, and pricing
    - eCommerce supports an array of pricing schemes: individual pricing, separate pricing within complex products, tiered pricing to support volume discounts, and more.

- Online coupon capability lets you set the type (dollar amount, percentage) and at what level coupons are applied (product level, basket level, and type of item).
- For global business opportunities, international currencies are available. You can use conversion rates to determine prices or set flat costs for each product. This goes hand-in-hand with the tax options available.
- Set tax classes, including country, state, and local (by postal code), and taxes for specific classes of goods.

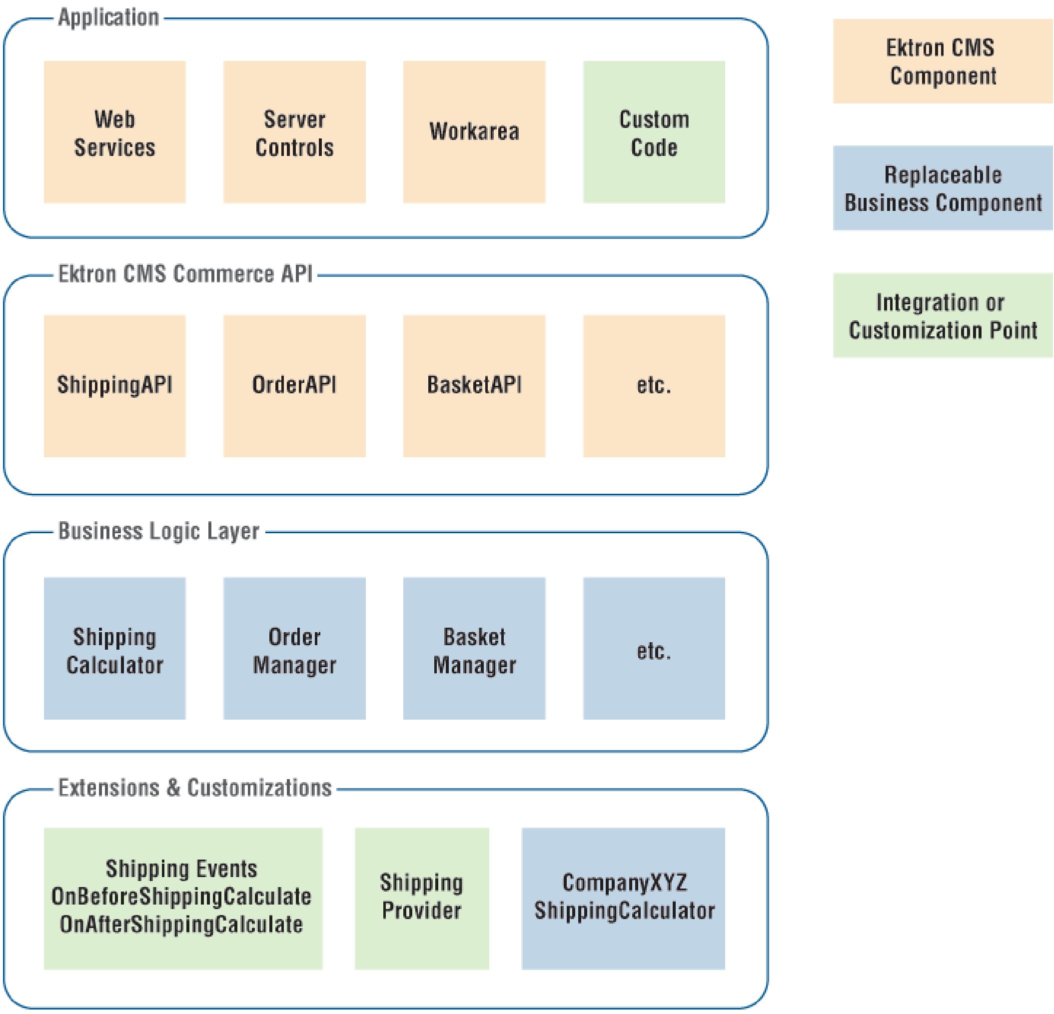
eCommerce architecture

The Ektron eCommerce architecture is composed of several key systems:

- Catalog/inventory system
- Order system
- Shipping system

The eCommerce API is situated within the core Ektron system with customization and integration points. The following figure shows the eCommerce API within the overall Ektron architecture.

Architecture



The following topics provide an overview of several key eCommerce systems.

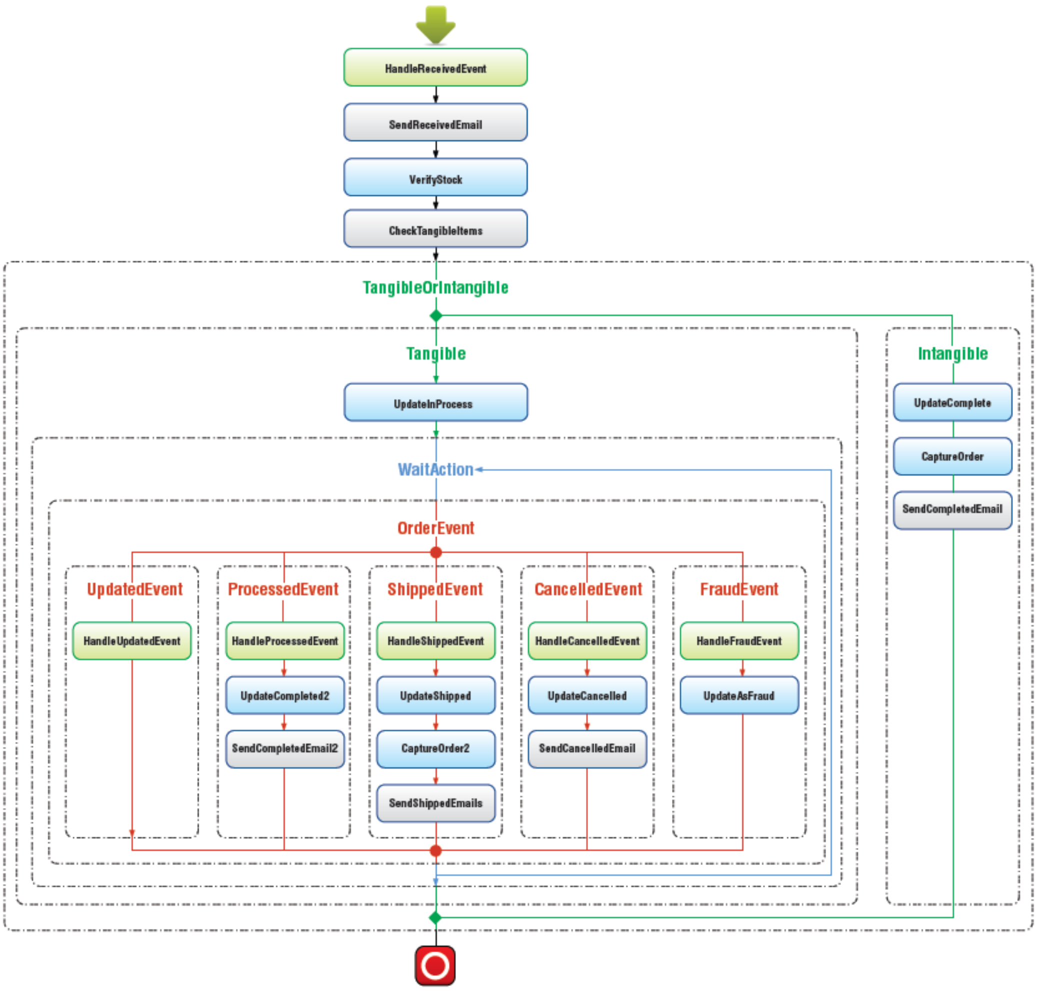
- *eCommerce workflow* below
- *eCommerce inventory process* on the next page
- *eCommerce order fulfillment* on page 1611
- *eCommerce subscription model* on page 1612
- *eCommerce shipping process* on page 1613
- *Conducting eCommerce* on page 1605

eCommerce workflow

Ektron leverages Windows Workflow Foundation for order processing.

Windows Workflow Foundation is a framework that lets you create system or human workflows. It consists of a namespace, an in-process workflow engine, and designers for Visual Studio. It comes with a programming model, a re-hostable and customizable workflow engine, and tools for quickly building workflow-enabled applications on Windows.

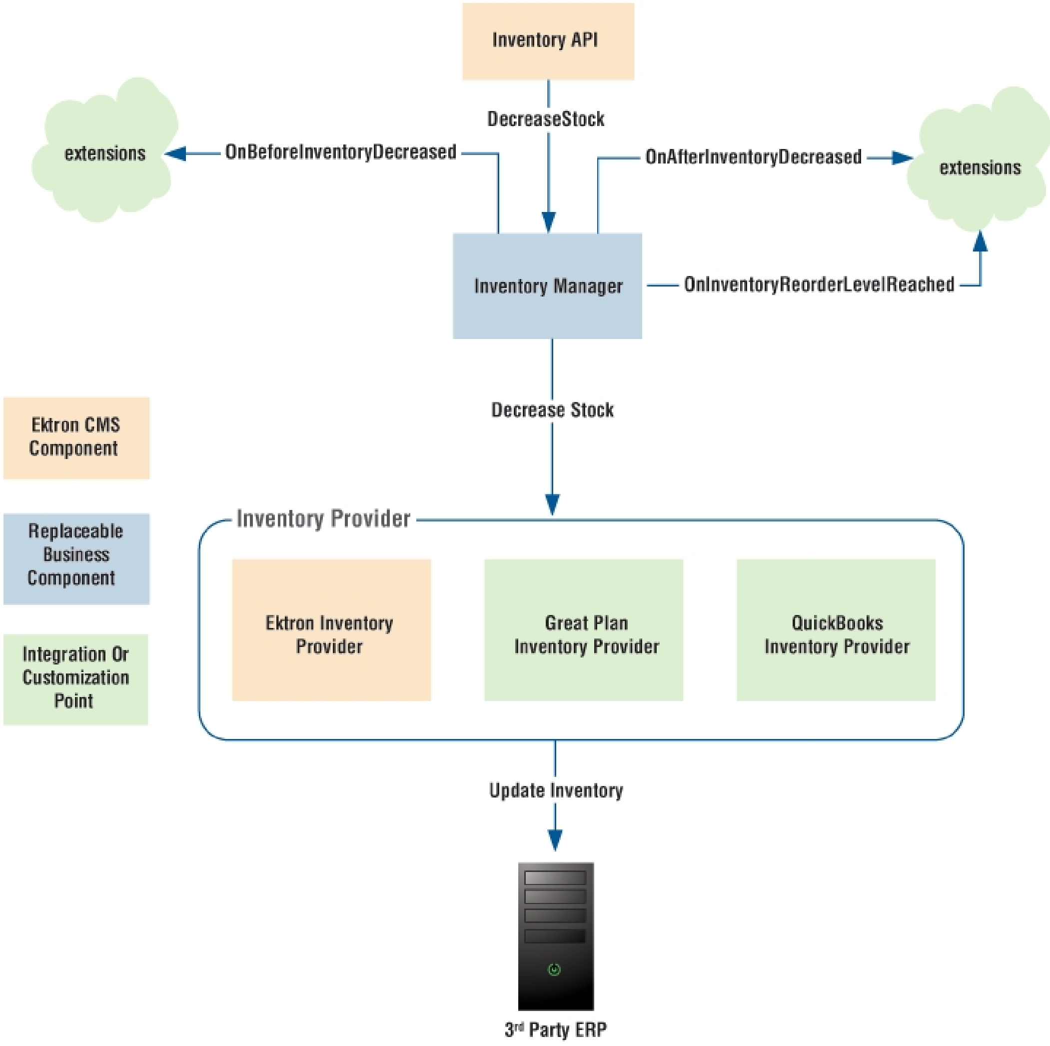
Windows Workflow Foundation gives site developers complete control over how your store "works." The workflow is extensible and can integrate with third-party ERP/CRM systems. There are default Ektron activities such as email notification and inventory checks. You can customize the workflow to match your organization's business processes.



eCommerce inventory process

The inventory process uses an inventory provider model. You can use the inventory system included as part of Ektron's eCommerce module, or plug into external systems. The inventory process is called from the order workflow and is extensible.

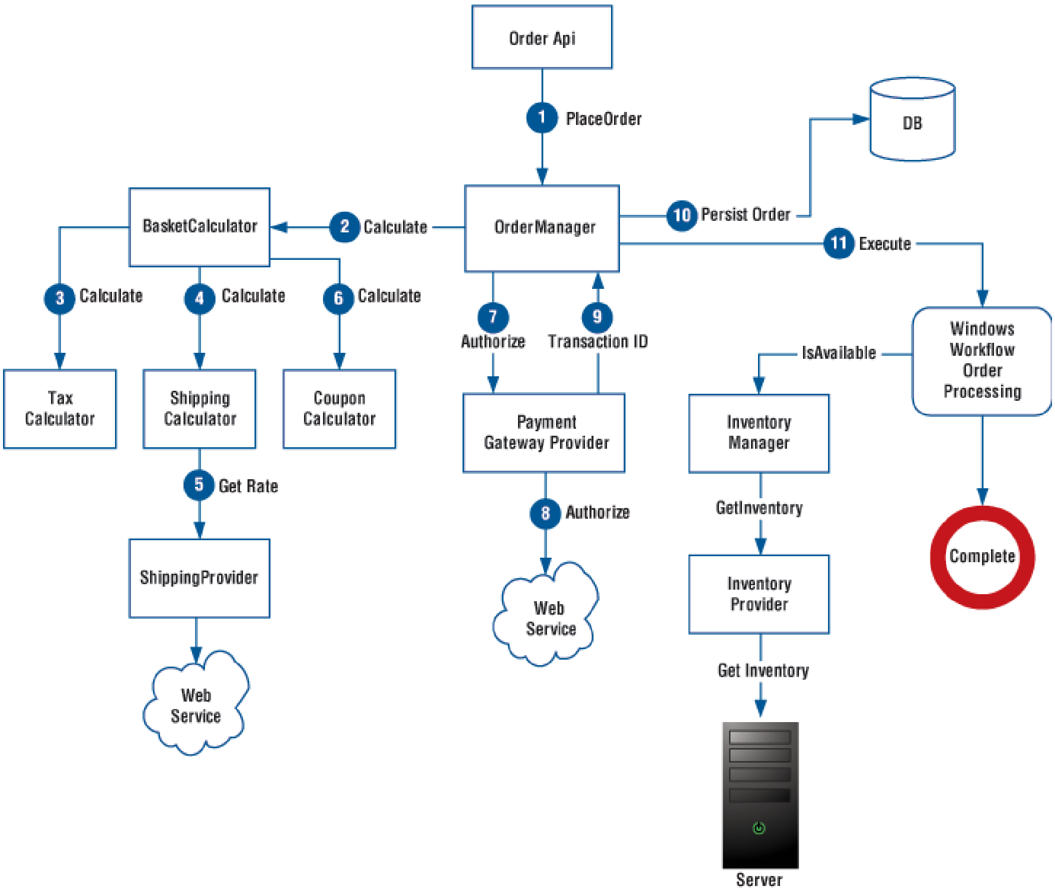
Inventory



eCommerce order fulfillment

Order processing in Ektron includes the management of custom coupons, shipping providers, tax calculation and payment providers.

Order Process

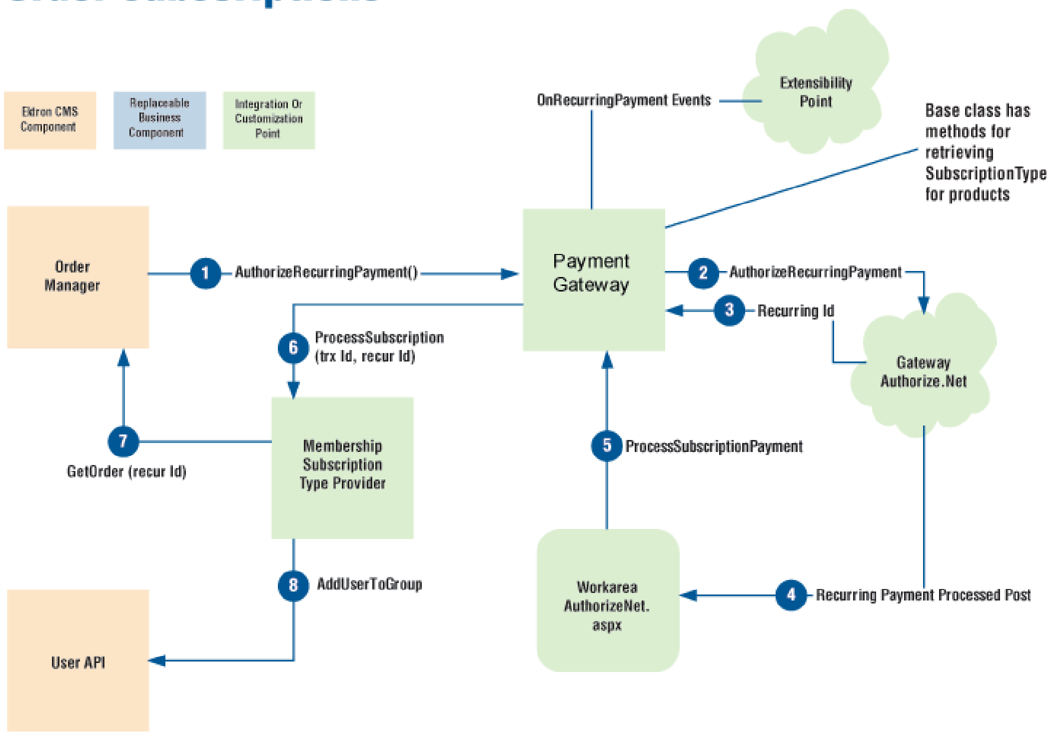


eCommerce subscription model

Ektron's eCommerce solution lets you not only sell durable goods, but also memberships and subscriptions. It uses a provider model, and the default implementation provisions users into groups.

You let shoppers buy membership directly on your site (access to assets or content) and configure recurring billing at any interval.

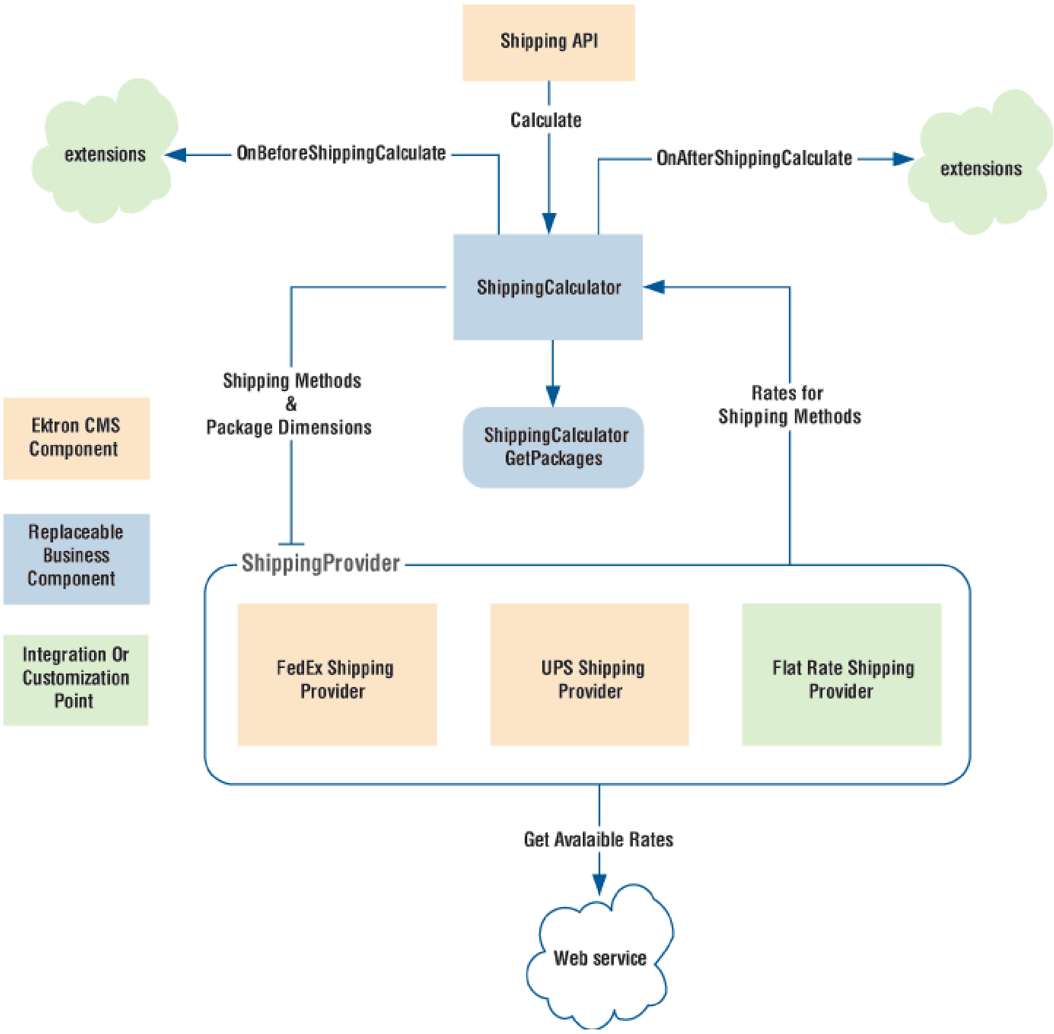
Order Subscriptions



eCommerce shipping process

The shipping system calculates real-time rates from FedEx or UPS by default. However, its provider model lets you configure the API to access rates from any provider. The shipping system is completely customizable and extensible.

Shipping



Trying a sample eCommerce site

Ektron OnTrek is a sample eCommerce site. Within that site, you can try out a customer shopping experience by going to `http://[siteroot]/OnTrek/`. Login to OnTrek and go to **Products > Software**. A product catalog screen appears. For information about Ektron OnTrek, see .

Click the **Add to Cart** link below a product. You can proceed through a sample checkout process. OnTrek uses the following eCommerce server controls to facilitate this process.

- Cart
- Checkout

Additional eCommerce topics

This chapter also contains the following topics.

See also: *Using eSync with eCommerce* on page 1886

Designing an eCommerce site

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

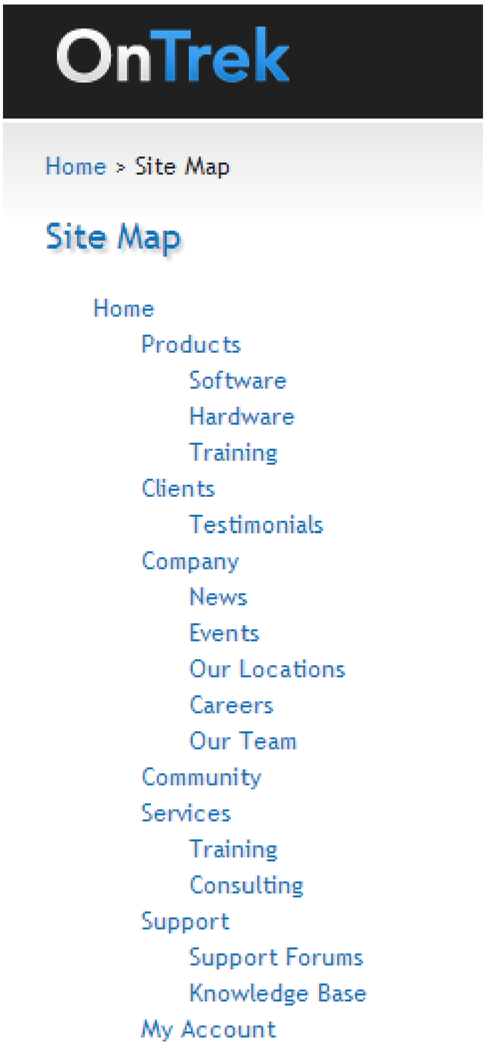
To demonstrate how to set up, build, and deploy an online marketplace using Ektron, the example site in this topic (EktronStore.com) sells furniture and accessories and leverages many eCommerce features.

Before you start building the EktronStore.com website, consider the goals of your online marketplace. Do you want to simply sell as many products as possible? Or, is the website a value-added component designed to enhance the customer (site visitor) experience? When considering the design and functionality, what you intend to sell plays a significant role. For example, are you selling durable goods? Subscriptions? Access to premium content? All of the above? These consideration can help you plan your website's layout.

Shipping options, payment methods, taxation, and the look-and-feel of your store's website also need to be determined. Be sure to address your store's general workflow—that is, how shoppers are guided through the shopping experience.

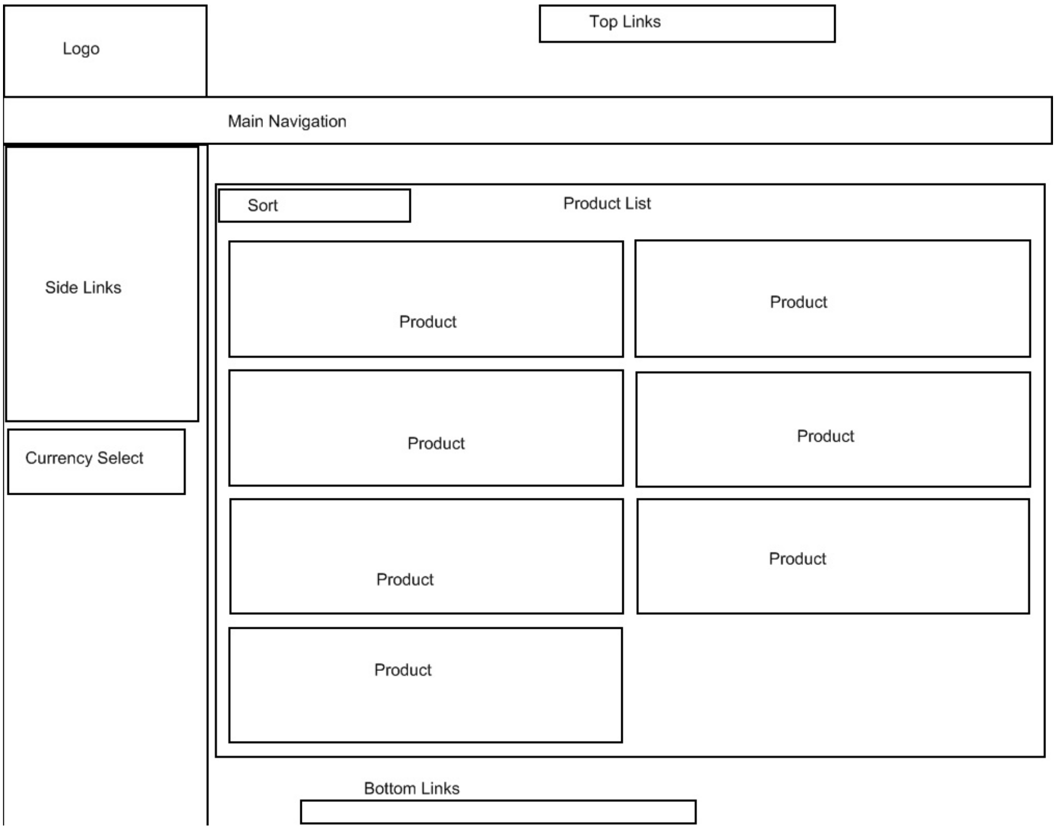
Designing the sitemap

A *sitemap* depicts the website's architecture, identifies the major pages, sections, sub-sections, and shared elements of the site, and is typically organized in hierarchical fashion. The following image is the sitemap for Ektron's sample site, OnTrek.



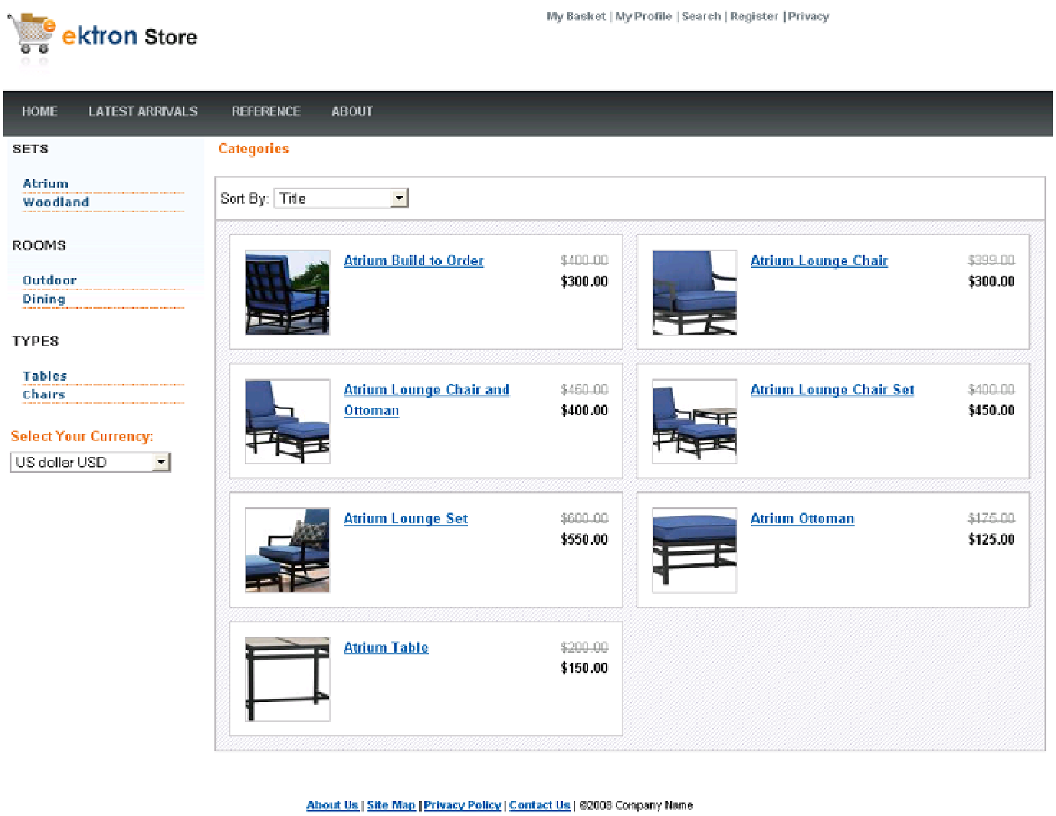
Designing the wireframes

Next, plan and scope out the major pages in your store. Using pencil and paper or software, sketch the basic architecture and components of individual store pages. This visual guide is referred to as a wireframe.



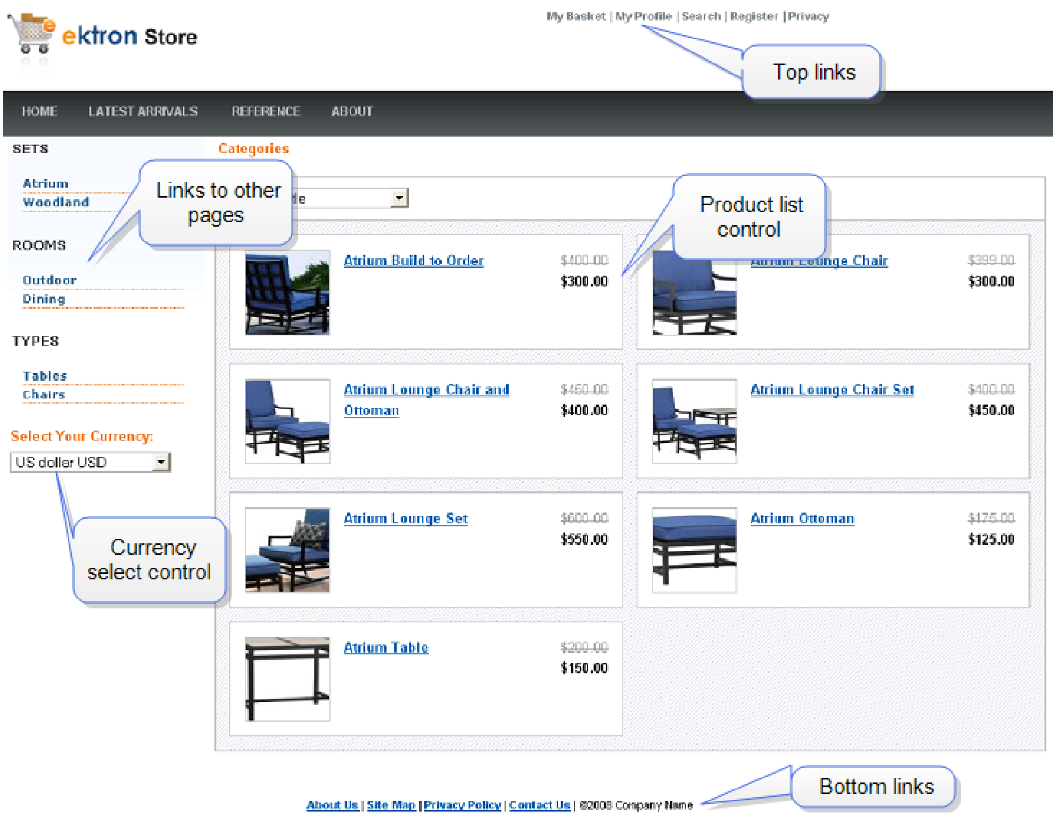
Creating mockups

The wireframe helps inform visual design. Typically, a graphic artist creates mockups (or visual preview) of store pages for stakeholders to review without actually building Web pages.



Creating callouts

Callouts help identify functional areas on store pages. Using mockups, identify navigation areas, locations for promotional information, header and footer details, and the location of Ektron controls.



Using images in eCommerce

When using eCommerce, a customer sees images that represent products or services for sale. The following list shows each image that appears on an eCommerce website, and its source.

- Product server control, main image, located on the catalog entry's **Content** tab.

  NOTE: The sample catalog entries are based on Product Types whose XML Smart Form includes an Image field. As a result, the product description (which appears at the top of the Product Server control) includes an image. This is not required, merely a suggested implementation.

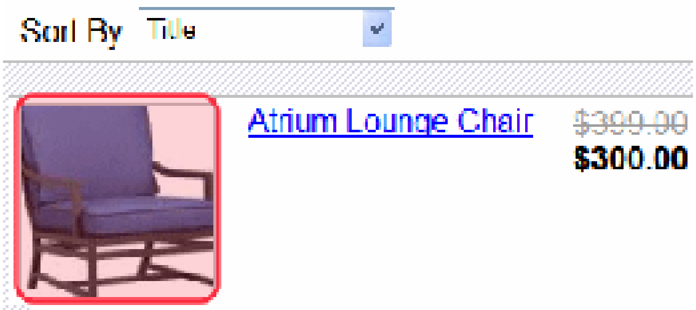
- Product server control, thumbnails, located on the catalog entry's **Media** screen.

> **NOTE:** To control the thumbnail display, use the XSLT files generated by the Product, Product List, Product Search, and Recommendation server controls.

When a customer clicks a thumbnail, the corresponding full image appears.

Because the Media screen can have several images, several thumbnails can appear. They appear left to right reflecting their sequence (top to bottom) on the **Media** screen. If an image's **Gallery Display** field is set to **Yes**, its smallest thumbnail appears on the Product server control, below the content area. (This assumes you are using the control's default XSLT.) See also: *Determining thumbnail size* on page 1701.

- ProductList, ProductSearch templated server controls, and Recommendation server controls located on the catalog entry's **Media** tab, the image designated as **Product Icon**.



Setting up an eCommerce website

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

This section describes how to set up a basic eCommerce website. This walkthrough explains everything you need to set in the `web.config` file and the Workarea. The section includes a list of needed templates and describes how to set up Ektron's eCommerce server controls on them.

Required templates

To create a basic eCommerce site, you need the following templates.

- **Master page**. Recommended, but not absolutely necessary. This template could contain any of the following:
  - **Select Currency**. Lets customers choose a currency with the CurrencySelect server control.
  - **View Cart** link. Links to the template containing the Cart server control.
  - **View My Account/Orders** link. Links to the template containing the MyAccount and OrderList server controls.
  - **Login** server control. Lets customers and users log in from any page.
- **Landing page**. This page should enable customers to start shopping and could contain a Product server control.
- **Product Display page**. Use the Product server control on a template to display the details of a catalog entry (product). If you are using the Cross Sell or Up Sell functionality, add a recommendation server control to this template.
- **Product Search page**. Use the ProductSearch templated server controls on a template to let customers search for product.
- **Cart page**. Use the Cart server control on a template to allow a customer to work with items they have selected to purchase.
- **Checkout page**. Use the Checkout server control on a template to facilitate the check out process.

- **My Account/Order History page**. Use the MyAccount and OrderList server controls to display a customer's account information and a list their order history.

Step 1. Set keys in web.config

WARNING! Do not change the settings for the default currency or measurement system after the site is live.

In the website's `web.config` file, set the following keys:

- <add key="ek_ecom_DefaultCurrencyId" value="840" />
  This key determines the base currency for your website. The default is 840 (the US dollar). If needed, change to the Numeric ISO code for the default currency. See a list of currencies and Numeric ISO codes on the **Workarea > Settings > Commerce > Configuration > Currencies** screen. The ID is the Numeric ISO code. See also: *The default currency* on page 1638.
- <add key="ek_MeasurementSystem" value="English" />
  For each item on your website, define a height, length, depth, and weight. If English, the units are inches and pounds. If Metric, the units are centimeters and kilograms. This information is used to calculate shipping costs. By default, this is set to English. Change to **Metric** to use the Metric system. See also: *Configuring packages* on page 1662.
- <add key="ek_ecom_ComplianceMode" value="false" />
  Set this key to "true" when you want your site to be Security Compliant. This means the Workarea will be encrypted in an SSL session, and logging is started.

Step 2. Select inventory system

Decide whether you want to use Ektron's inventory system or an existing inventory system. To use an existing system, add the custom provider between the web.config file's <providers> tags and enter the name of your custom inventory provider. For example:

<inventoryProvider defaultProvider="MyCustomInventoryProvider">

See also: *Customizing the inventory provider* on page 1772.

Step 3. Select a default payment gateway

1. Go to **Settings > Commerce > Configuration > Payment Gateway**.
2. Click a payment gateway's name.
3. Click **Edit**.
4. Add your User ID, password and any needed custom values.
5. Click the **Default** check box to make that selection the default.
6. Click **Save**.

NOTE: If you decide to use PayPal instead of one of the default payment options, see *Using PayPal with Ektron eCommerce* on page 1641.

If you are not using a gateway, create a custom payment provider and add it to the `web.config` file's `EktronPaymentGateway` element. Add the custom provider between the EktronPaymentGateway's <providers> tags. When added, the option should appear in the Workarea's Payment Gateway screen.

If you want to override the Workarea settings, change the default provider in the `web.config` file from "Automatic" to the name of the desired payment gateway. For example:

<EktronPaymentGateway defaultProvider="AuthorizeNet">

See also: *Configuring payment options* on page 1641.

Step 4. Set up a shipping provider

If you are not using the default flat rate shipping provider, open the shipment.config file and set the default provider set in <shipmentProvider defaultProvider="FlatRateShipmentProvider"> to either "FedExShipmentProvider" or "UPSShipmentProvider". If you are using either of these shipping methods, complete the following information in the <providers> tags. This information is provided by FedEx and UPS.

- key=""
- password=""
- accountNumber=""
- meterNumber=""

You can also add additional providers.

See also: *Configuring eCommerce shipping screens* on page 1660.

Step 5. Enable countries

Enabling a country where your website will sell its products:

- makes it available for customers in a shipping and billing address
- makes it available when you add a warehouse
- automatically enables its corresponding tax table in the Country Tax Table section of the Workarea

NOTE: The United States is enabled by default.

To enable a country:

1. Go to **Settings > Commerce > Configuration > Countries**.
2. Click a country's name.
3. Click **Edit**.

4. Click the **Enabled** check box.
5. Click **Save**.

See also: *Configuring countries* on page 1634.

Step 6. Add and enable regions

Add and enable regions for each country your eCommerce site will service.

NOTE: All US states are enabled by default.

Regions can represent states, provinces, territories, and so on and further define areas of a country. Adding and enabling a region:

- makes it available for customers in a shipping and billing address
- makes it available when you add a warehouse
- automatically enables its corresponding tax table in the Regions Tax Table section of the Workarea

To add and enable regions:

PREREQUISITE

The region's country is defined in the Countries screen.

1. Go to **Settings > Commerce > Configuration > Regions**.
2. Click **New > Region**.
3. Enter a name.
4. Click the **Enabled** check box.
5. In the **Code** box, enter an abbreviation for this region.
6. Select this region's country from the pull down list.
7. Click **Save**.

See also: *Configuring regions* on page 1635.

Step 7. Enable currencies

If your website is selling products in another country and you want to display prices in its currency, enable it in the Workarea:

NOTE: By default, U.S. dollar, Euro, and Australian dollar are enabled.

1. Go to **Settings > Commerce > Configuration > Currencies**.
2. Click a currency.
3. Click **Enable**.
4. Set the Exchange Rate. The default currency (set in the `web.config` file) is the base reference currency when setting an exchange rate.
5. Click **Save**.

See also: *Configuring countries* on page 1634.

Step 8. Select credit cards

Decide which credit cards your eCommerce site will accept.

Credit cards are used during the checkout process, by the Checkout server control, during the submit phase. During this phase, all enabled credit cards appear in a drop-down, which customers use to select their choice.

Add credit card types in the Workarea.

1. Go to **Settings > Commerce > Configuration > Credit Card**.
2. Choose **New > Credit Card** Type.
3. Enter the credit card's name; for example, Visa.
4. Check the **Accepted** check box.
5. Add an image.
6. Add a Regex Expression to validate the credit card number.
7. Click **Save**.

See also: *Configuring credit card types* on page 1658.

Step 9. Add or edit notification messages

Email notifications are sent to your customers after their order has been received, canceled, shipped or completed. Ektron provides 4 predefined messages, 1 for each event. For messages to be sent, content notifications must be enabled and the customer must enter a valid email address.

1. Go to **Settings > Commerce > Configuration > Messages**.
2. Click the title of the message.
3. Click **Edit**.
4. Change the properties and fields as necessary.
5. Change the text as needed.

See also: *Configuring countries* on page 1634.

Step 10. Create tax classes (optional)

If you are collecting taxes for transactions on your eCommerce site, create a Tax Class for each taxable category of products. For example, if your eCommerce site sells alcohol and tobacco, set up a tax class for each type. Ektron provides 4 default tax classes:

- Alcohol
- Goods
- Services
- Tobacco

Tax classes are applied to Postal, Regional and Country Tax Tables. In those tables, you define a separate rate for each Tax Class.

1. Go to **Settings > Commerce > Tax > Tax Classes**.
2. Choose **New > Tax Class**.
3. Enter a name; for example, Food.
4. Click **Save** .

See also: *Cataloging entries that can be taxed* on page 1670.

Step 11. Set tax rates

When your Tax Classes are set up, set a tax rate for each class in the Postal, Regional, or Country Tax Tables.

- **Postal Tax Tables**. Use when there is a city or county tax. If there are postal, regional and country taxes applied to a given area, roll them all into this table.
- **Regional Tax Tables**. Use when there is a state, provincial or territorial tax. If only regional and country taxes are applied to a given area, roll them into this table.
- **Country Tax Tables**. Use when there is country-wide tax. If only country level taxes are applied to a given area, use this table.

Ektron checks these tables in the following order: Postal, Regional, then Country. When it finds a tax, it stops. Therefore, if a postal zone has several taxes (for example, a local tax and a regional tax), build the combined percentage into the postal code tax. So, if New York City has a 4% tax, and New York state has a 3% tax, enter 7% into all Postal Tax Tables within New York City.

While you need to create each Postal Tax Table, Regional and Country Tax Tables are automatically generated when a country or region is added to Ektron. However, no tax rates are defined in these tables.

To create a new Postal Tax Table:

1. Go to **Settings > Commerce > Tax > Postal Tax Tables**.
2. Choose **New** > **Postal Code**.
3. Enter a Postal Code.
4. Select the Country and Region.
5. Enter a tax rate for each Tax Class as needed.
6. Click **Save**.

To edit a Region's or Country's Tax Table:

1. Go to **Settings > Commerce > Tax > Regional Tax Tables** or **Country Tax Tables**.
2. Click the **Id** or **Code** of the Region or Country.
3. Click **Edit**.
4. Change the information as needed.
5. Click **Save**.

See also: *Applying local taxes* on page 1671, *Configuring regional tax tables* on page 1672, and *Configuring country tax tables* on page 1674.

Step 12. Select shipping methods

When you set up a shipping provider, define your customers' shipping options. For example, if you use UPS, define whether to allow Next Day, 2nd Day, 3rd Day, Ground, World Wide Standard, and so on. When enabled, a Shipping Method appears in the Shipping Method phase of the Checkout server control.

1. Go to **Settings > Commerce > Shipping > Methods**.
2. Choose **New > Shipping Method**.
3. Enter a Name. This name represents the option in the Shipping Method phase of the checkout server control.
4. Click the **Active** check box to enable this method.
5. Click **View Options**.
6. From the Provider Service drop-down, select a shipping method.
7. Click **Save**.
8. Repeat these steps for all shipping methods.

See also: *Configuring shipping methods* on page 1663.

Step 13. Add a warehouse

Add a warehouse from which your products will be shipped. This does not have to be the actual shipping address for the products. Ektron uses this information to determine the “from” address when calculating shipping cost.

1. Go to **Settings > Commerce > Shipping > Warehouses**.
2. Choose **New > Warehouse**.
3. Complete the address information fields. Only countries and regions that have been enabled for eCommerce appear in the drop-down lists.
4. Click the **Default Warehouse** check box if you want this to be the default warehouse. Only the default warehouse is used in the checkout process.
5. Click **Save**.

See also: *Using a warehouse* on page 1661.

Step 14. Define package sizes

Define each package size your shipping department uses to ship your products. Tangible products have size and weight dimensions. Ektron’s shipping calculator uses this information to fit the order into the smallest-sized and fewest packages. It then passes packaging information (number, sizes and weight) to the shipping provider, which returns the order’s shipping costs.

1. Go to **Settings > Commerce > Shipping > Packages**.
2. Choose **New > Package**.
3. Enter a **Name**, **Length**, **Height**, **Width** and **Maximum Weight** a package can handle.

4. Click **Save**.
5. Repeat these steps for all package sizes your company uses.

See also: *Configuring packages* on page 1662.

Step 15. Create product type definitions

NOTE: The remaining steps in this example are based on selecting a Product for the Product Type Class.

Product types are applied to catalog folders and let you control the way product information is added to a catalog. This is similar to how Smart Form configurations, once applied to content folders, affect the way Smart Forms are created. You can apply multiple product types to a catalog.

1. Go to **Settings > Commerce > Catalog > Product Types**.
2. Choose **New > Product Type**.
3. Define the Product Type.
4. Click **Save** and move to the next step.

See also: *Creating product types* on page 1675.

Step 16. Create content page

After clicking **Save** from the previous step, a content editor appears and lets you enter XML Smart Form information. A user completes this Smart Form when creating a Catalog Entry (Product).

The information appears on a product's details page on your website.

You might want to create these fields on your smart form.

- Title
- Description
- Image

After you complete the Smart Form, click **Save**.

See also: *Creating product types and catalogs* on page 1675 and *Working with Smart Forms* on page 815.

Step 17. Create a catalog

A catalog folder is an Ektron folder designed to hold eCommerce catalog entries (products). This is similar to the way content folders hold HTML or Smart Form content. By assigning a product type to the folder, you can control the way products are added to the catalog.

1. Click the **Content** folder bar to display the list of content folders.
2. Choose **New > Catalog**.
3. Set the catalog's Properties, Metadata, Web Alerts and Breadcrumb information. (Similar to creating a Content Folder.)

4. On the Product Types Tab, select a Product Type from the drop-down list.
5. Click **Add**.
6. Click **Save**.

See also: *Creating a catalog folder* on page 1687 and *Assigning a catalog folder's product type* on page 1688.

Step 18. Add catalog entries

Catalog Entries are products you offer on your eCommerce website. For example, a catalog entry could be a CD, a subscription-based service, or a computer that a customer can customize and the price adjusts accordingly.

1. Go to a catalog folder.
2. Click **New** and select a product type.
3. In the **Title** field, enter a name for the catalog entry.
4. Fill out the fields in the Smart Form as necessary.
5. Select the **Summary** tab and add a summary. (Optional)
6. Select the **Properties** tab and enter an SKU and the number of units that equal one purchase.
7. Select a Tax Class.
8. If the product is a tangible product, click **Expand** next to Dimensions, click the **Tangible** check box and enter the product's physical dimensions. If you are using Ektron as your inventory system, click **Expand** next to Inventory and enter the information.
9. Select the **Pricing** tab and enter the product's list and sales price. If you offer a quantity discount, click **Add Pricing Tier** and add a quantity and a tier price. If you enabled multiple currencies, select a currency from the drop-down and add pricing information as needed.
10. Select the **Attributes** tab and fill out or change attributes as needed. (If you did not define attributes in *Step 15. Create product type definitions* on the previous page, the **Attributes** tab does not appear.)
11. Select the **Media** tab and click **Add Images** to associate images with the catalog entry.
12. The **Items** tab is used to create a complex product. This lets you offer variants of a product at different price points. For this example, we will skip this tab. See also: *Creating a complex product* on page 1680.
13. Enter information as needed on these tabs: **Metadata**, taxonomy and **Schedule**.
14. Choose **Action > Publish**.

To add Cross Sell or Up Sell items associated with this catalog entry, click its **Title** and then click **View > Cross Sell** or **Up Sell**. These items appear in the Recommendation server control when it is associated with this catalog entry.

See also: *Creating a catalog entry* on page 1689.

Step 19. Create a master page

Create a master page and add the following items to a header area or left side column.

- **CurrencySelect server control**. lets customers select from available monetary types. This control displays currencies that have been enabled in *Step 7. Enable currencies* on page 1624. A **My Cart link** that leads to a template containing the Cart server control. See also: *Configuring currencies* on page 1636.
- **My Account / Order History link**. leads to a template containing the MyAccount and OrderList server controls.
- **Product Search link**. (Optional) adds a link that leads to a template containing a ProductSearch server control.
- **Product Search server control**. (Optional) lets the user search for a product from anywhere on the site. Note: Adding this option is involves more than just dragging and dropping a server control to the header or the left side column. It includes advanced customizations and coding to pass a search term from one form to another. See also: ProductSearch templated server controls
- **Login server control**. (Optional) lets existing customers log in upon arrival at your site. If you only want customers logging in through this control, set the `OnlyAllowMemberLogin` property to True.

Step 20. Create a landing page

This template should be the first page a customer sees when arriving at your site. It should have a mechanism that lets customers start shopping. Make sure this page has one of the following:

- **ProductList server control**. display products by taxonomy, Catalog or ID. See also: *Creating product types* on page 1675.
  - To display a single taxonomy, set the `SourceType` property to Taxonomy and enter a single Taxonomy ID in the `SourceId` property.
  - To display multiple taxonomies, set the `SourceType` property to TaxonomyList and enter a comma-separated list of Taxonomy IDs in the `IdList` property.
  - To display a single catalog, set the `SourceType` property to Catalog and enter a single catalog ID in the `SourceId` property. If you want to display sub catalogs for a given ID, set the `Recursive` property to True.
  - To display multiple catalogs, set the `SourceType` property to CatalogList and enter a comma separated list of catalog IDs in the `IdList` property.
  - To display products by their ID, set the `SourceType` property to IdList and enter a comma-separated list of product IDs in the `IdList` property.
  - Set the `TemplateProduct` property to the template containing the Product server control.

- **ProductSearch server control**. lets customers search your website for products. If this control is not on your landing page or part of your master page, you should create a separate template containing this control.
  - Set the `CatalogId` property to the ID of the catalog to search.
  - Set the `TemplateCart` property to the template containing the Cart server control.
  - Set the `TemplateProduct` property to the template containing the Product server control.

    See also: ProductSearch templated server controls.

Step 21. Create a product page

This page allows a customer views a product's details. It contains a Product server control and optionally a Recommendation server control.

- **Product server control**. displays a product's details.
  - Make sure the `DynamicParameter` property is set to the parameter name used to pass product IDs to the QueryString.
  - If you want a default product to display when no ID is passed, set the `DefaultProductID` property to the ID of a product.
  - Set the `TemplateCart` property to the template containing the Cart server control.
- **Recommendation server control**. displays Cross Sell and Up Sell opportunities associated with a product. These are set in Workarea, under the View menu's Cross Sell and Up Sell selections for a catalog entry. See also: Recommendation server control.
  - Set the `RecommendationType` property to CrossSell or UpSell.
  - Make sure the `DynamicProductParameter` property is set to the parameter name used to pass product IDs to the QueryString.
  - If you want a product's default Cross Sell or Up Sell items to display when no ID is passed, set the `DefaultProductID` property to the ID of a product.
  - Set the `TemplateCart` property to the template containing the Cart server control.
  - Set the `TemplateProduct` property to the template containing the Product server control.

Step 22. Create a product search page

This page lets customers search for products on your website.

- **ProductSearch server control**. lets customers search your website for products. If this control is not on your landing page or part of your master page, you should create a separate template containing this control.
  - Set the `CatalogId` property to the ID of the catalog to search.
  - Set the `TemplateCart` property to the template containing the Cart server control.

- Set the `TemplateProduct` property to the template containing the `Product` server control.

  See also: ProductSearch templated server controls.

Step 23. Create a cart page

This template contains a Cart server control.

- **Cart server control**. lets a customer work with products they have selected to purchase. As a customer gos around your site selecting products to purchase, they are added to a cart. See also: Cart server control.
  - Set the `TemplateCheckout` property to the template containing the Checkout server control.
  - Set the `TemplateProduct` property to the template containing the Product server control.
  - Set the `TemplateShopping` property to the Landing page template or a template containing a ProductList or ProductSearch server control.
  - If you are using coupons, make sure the `EnableCoupons` property is set to **True**.

Step 24. Create a checkout page

-
  - Set the `TemplateCart` property to the template containing the Cart server control.
  - Set the `TemplateOrderHistory` property to the template containing the OrderList server control.
  - Set the `TemplateShopping` property to the landing page template or a template containing a ProductList or ProductSearch server control.
  - If you are using SSL Encryption, set the `IsSSLRequired` property to **True**.

WARNING! Use SSL Encryption for this page, because credit card information is entered into the Checkout server control.

Step 25. Create a My Account page

This template contains a MyAccount and an OrderList server control.

- **MyAccount server control**. Lets customers view billing, shipping and alternative shipping information associated with their account.
  - Set the `DefaultCountryID` property to the country you want to be the default selection in the Billing and Shipping address sections.
  - (Optional) Set the `CustomPropertyID` property to the ID or list of comma separated IDs that represent custom properties associated with users. Custom Properties are set up in Ektron's **Workarea > Settings > Configuration > Custom Properties**.

- **OrderList server control**. Lets customers view a list of their processed orders.
    - Make sure the `DynamicOrderParameter` is set to the parameter name used to pass order IDs to the QueryString.
    - Make sure the `DynamicProductParameter` is set to the parameter name used to pass product IDs to the QueryString.

Configuring eCommerce

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

This section describes the configuration screens located in the **Workarea** at **Settings > Commerce > Configuration** and **Settings > Commerce > Tax**.

Configuring countries

Use the Countries screen to modify existing country information or add new countries to eCommerce.

How countries are used

- **to define country tax tables**. For example, assume Canada has a national tax of 5% that applies to the sale of certain goods. National tax tables are defined in the Country Tax Tables screen.
- **to determine shipping costs**. In the checkout process, a purchaser selects a shipping address, which includes country. So, be sure to enable countries from which customers (site visitors) can enter orders. Countries are also part of the location on the Warehouse screen. An order's shipping cost is determined by the distance between the warehouse and the destination.

Default countries

By default, Ektron provides information for countries on the ISO list of English country names and code elements (ISO 3166-1-alpha-2 code).

The following is provided for each country.

- name
- numeric ISO code
- long alphabetical ISO code
- short alphabetical ISO code

The countries screen lets you enter new countries, and edit information for provided countries.

Creating a country

PREREQUISITE

The new country's ISO codes.

To add a new country:

1. From the Workarea, choose **Settings > Commerce > Configuration > Countries**.
2. Click **New > Country**.
3. Enter information in the following fields:
   - **Name**. Enter the country's name.
   - **Numeric ISO**. Enter the country's ISO 3166-1 3-digit numeric ISO code. See also: ISO 3166-1 numeric.
   - **Enabled**. Check this box if you want this country to be active. Only active countries can be selected on the Edit Billing Information screen, which appears during the Checkout procedure.
   - **Long ISO**. Enter the country's ISO 3166-1 alpha-3, 3-letter country code. See also: ISO 3166-1 alpha-3.
   - **Short ISO**. Enter the country's ISO 3166-1 alpha-2, 2-letter country code. See also: ISO 3166-1 alpha-2.
4. Click **Save**.

Editing a country

1. Go to **Workarea > Settings > Commerce > Configuration > Countries**.
2. Click the name of the country that you want to edit.
3. Click **Edit**.
4. Edit any of the fields, which are described in *Creating a country* on the previous page.

Deleting a country

1. Go to **Workarea > Settings > Commerce > Configuration > Countries**.
2. Click the name of the country that you want to delete.
3. Click **Delete** ( ).
4. Click **OK**. The country is deleted.

Configuring regions

The Regions screen lets you define geographic regions within countries that your eCommerce site services. For example, in the United States of America, each state is a region.

Regions are used in the same way that countries are used. See also: *How countries are used* on the previous page. By default, the Regions screen includes 50 United States of America, the District of Columbia, and 9 Canadian Provinces.

Creating a region

PREREQUISITE

The region's country is defined in the Countries screen

1. Go to Workarea > **Settings > Commerce > Configuration > Regions**.
2. Choose **New > Region**.
3. Use the following information to complete the screen.
   - **Name**. Enter the region's name.
   - **Enabled**. Check this box if you want this region to be active. Only active regions can be selected on the Edit Billing Information screen, which appears when customers enter billing information during the Checkout procedure.
   - **Code**. Enter an abbreviation for this region.
   - **Country**. Select this region's country from the pull down list. If the country is not there, exit this screen, and create the country using the Countries screen.
   - **Add another region to this country?**. This field saves the effort of selecting a country when entering several regions for one country.

     To add more regions for this country, check this box and press **Save**. When you do, the screen refreshes, and the most recently selected country appears as the default.
4. Click **Save**.

Editing a region

1. Go to Workarea > **Settings > Commerce > Configuration > Regions**.
2. Click the name of the region that you want to edit.
3. Click **Edit**.
4. Edit any of the fields, which are described in *Creating a region* on the previous page.

Deleting a region

1. Go to Workarea > **Settings > Commerce > Configuration > Regions**.
2. Click the name of the region that you want to delete.
3. Click **Delete** ().
4. Click **OK**.

Configuring currencies

eCommerce supports all currencies. However, customers can choose only enabled currencies. The Currency screen lets you enable and edit information for installed currencies.

Installed currencies

By default, Ektron provides currencies on the ISO 4217 Current Currency & funds code list.

The following information is provided for each installed currency.

- name
- enabled (yes or no)
- numeric ISO code
- alpha ISO code
- exchange rate

Enabling currencies

When users are setting prices in the Workarea or site visitors are shopping, they can only choose enabled currencies. When you install Ektron, the following currencies are enabled.

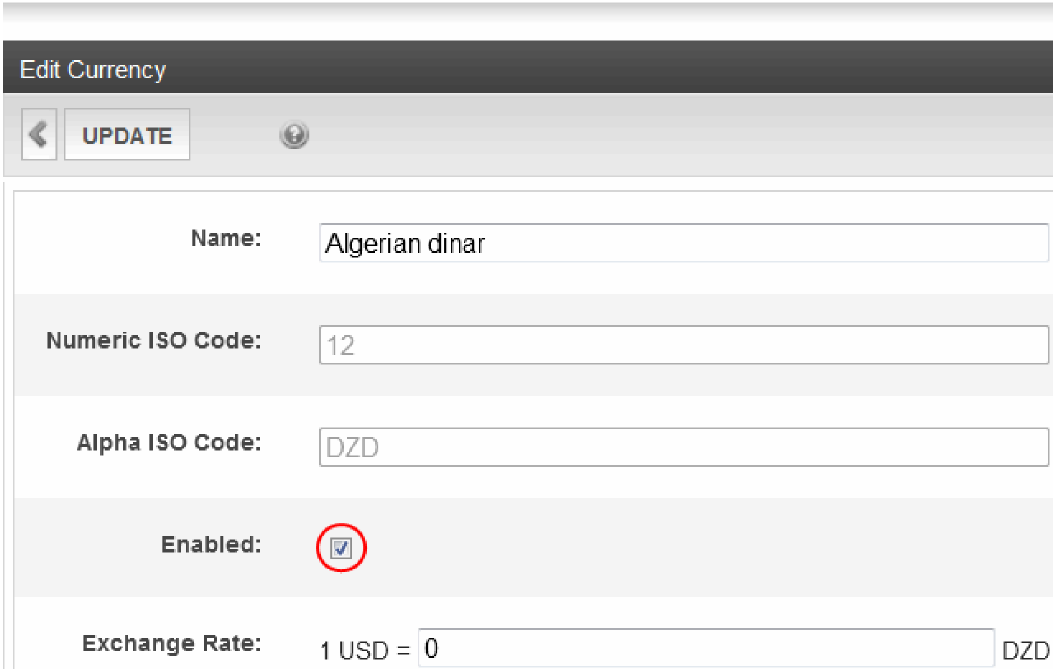
- U.S. dollar, the *default currency*. See also: *The default currency* on the next page.
- Euro
- Australian dollar

To see which currencies (other than the default) are enabled, click **Action > Edit Exchange Rates** from the Currencies screen. Only non-default, enabled currencies appear.

WARNING! The Euro and Australian dollar are shipped with a default exchange rate. If you will support these currencies, you should update the rate to its current value before going live. See also: *Defining and updating exchange rates* on page 1639.

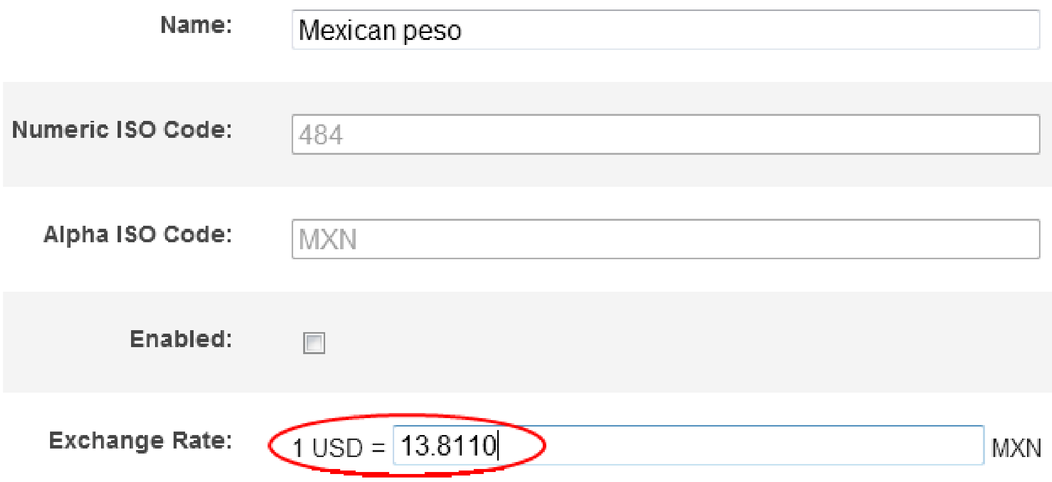
To enable any installed currency:

1. From the Workarea, choose **Settings > Commerce> Configuration > Currencies**.
2. Click the currency you want to enable. (Use the **Search** box to quickly find a currency.) The Edit Currency screen appears.
3. Check the **Enabled** check box.
4. Click **Update**.



The default currency

The default currency is the reference currency when setting the exchange rate on the Edit Currency screen. For example, if the default is US dollars, **USD** appears on the left of the exchange rate equation.



The default currency is also the default value in the CurrencySelect server control, and on the **Pricing** tab of the View/Edit Catalog Entry screen.

Viewing and changing the default currency

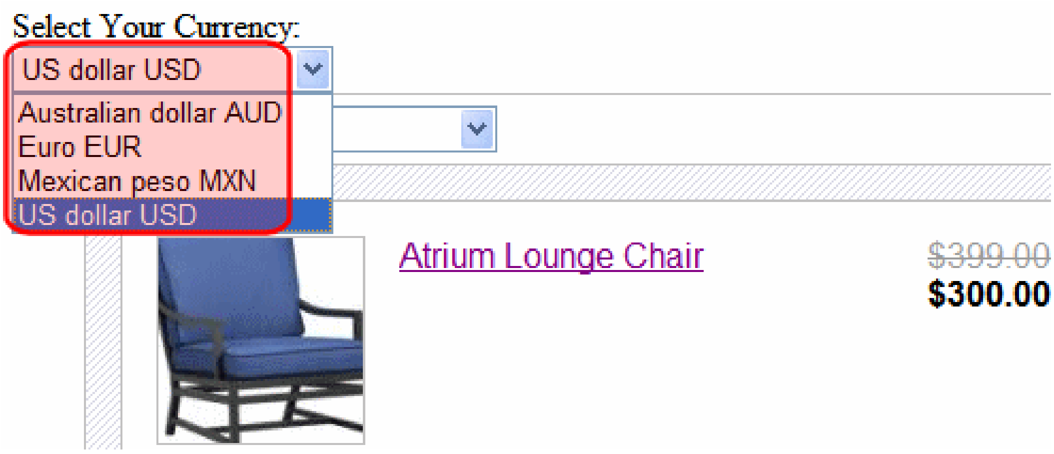
When you install Ektron, the default currency is U.S. dollars, indicated by the Numeric ISO code 840. At that time, you can change this by editing the value for the web.config file's `ek_ecom_DefaultCurrencyId` tag. You must enable the new default currency in the Workarea before changing it in the web.config file.

WARNING! After your eCommerce feature goes live, do **not** change the `ek_ecom_DefaultCurrencyId` value in `web.config`.

IMPORTANT: If you edit the siteroot/web.config file's `ek_ecom_DefaultCurrencyId` property, you must begin a manual crawl. See also: *Starting crawls manually* on page 368. You will only see the new default currency in search results when that crawl is complete.

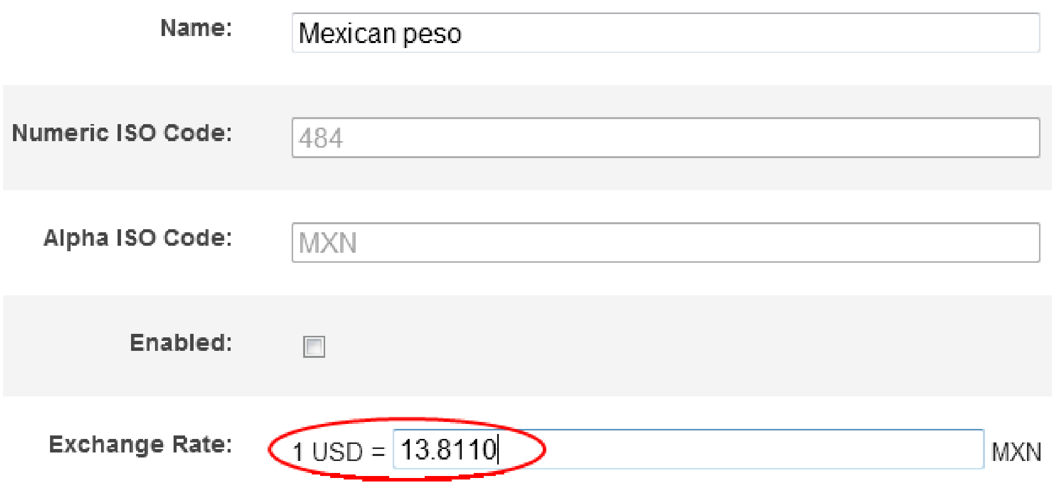
How currencies are used in the CurrencySelect server control

If your developer places a CurrencySelect server control on a page, a site visitor can use it to select any enabled currency.



Defining and updating exchange rates

The Edit Currency screen lets you define an exchange rate between the default and any other currency. A good website for finding exchange rates is http://www.xe.com.



The exchange rate can dynamically adjust prices when the rate changes. See also: *Alternate currency pricing* on page 1696.

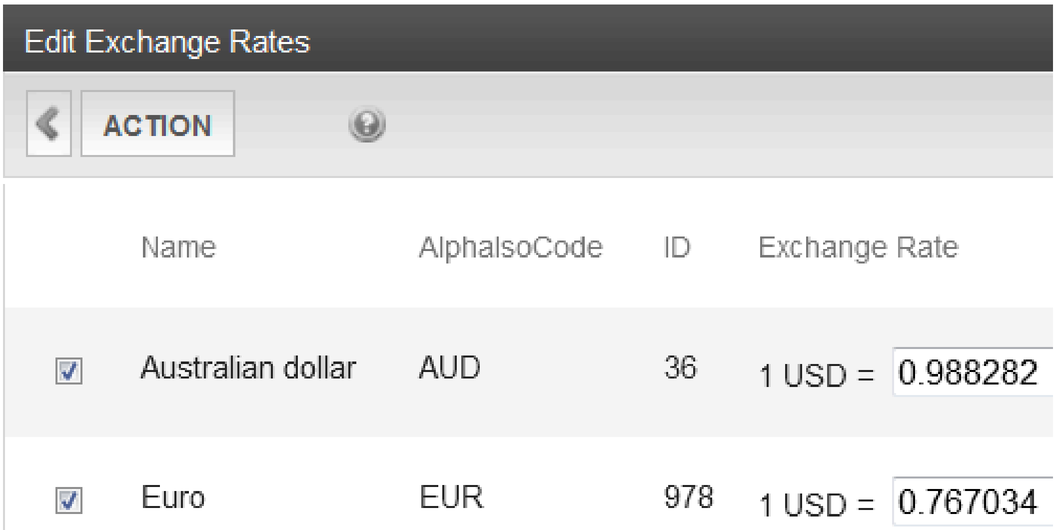
You can update the exchange rates using:

- the Ektron API
- the Edit Exchange Rates screen

The following Ektron API supports calling an exchange rate service to update rates automatically: `Ektron.Cms.Commerce.ExchangeRateApi`. For more information, see the Ektron API documentation (http://reference.ektron.com/developer/).

The Edit Exchange Rates screen lets you update the exchange rate for enabled currencies:

1. In the Workarea, go to **Settings > Commerce > Configuration > Currencies**.
2. Choose **Action > Edit Exchange Rates**. The Edit Exchange Rates screen appears, showing enabled currencies and their exchange rates.



3. Update rates as needed.
4. Choose **Action > Update**.

Editing a currency

1. Go to the Workarea > **Settings > Commerce > Configuration > Currencies**.
2. Click the currency you want to edit.
3. You can only edit the **Name**, **Enabled**, and **Exchange Rate** fields. The Numeric ISO Code and Alpha ISO Code are not editable and are determined by the currency selected.
   - **Name**. Enter the currency's name.
   - **Enabled**. Check this box to enable this currency.
   - **Exchange Rate**. Enter the exchange rate between this currency and the default one.
4. Click **Update**.

Deleting a currency

1. Go to the Workarea > **Settings > Commerce > Configuration > Currencies**.
2. Check the box next to the currency that you want to delete.
3. Choose **Action > Delete Selected**.
4. Click **OK**. The currency is deleted.

Configuring payment options

The Payment Options screen lets you determine which options are available for your customers to pay for their purchases.

- PayPal. The **PayPal** checkbox is not available for selection until you have set up a PayPal account. See also: *Using PayPal with Ektron eCommerce* below
- a payment gateway, such as AuthorizeNet. See also: *Configuring payment gateways* on page 1648

Both options can be enabled, but only one gateway can be enabled at a time.

PayPal payments work like checks in that they need to be settled. After an order is placed, the payment must be marked as "settled" for the workflow to proceed.

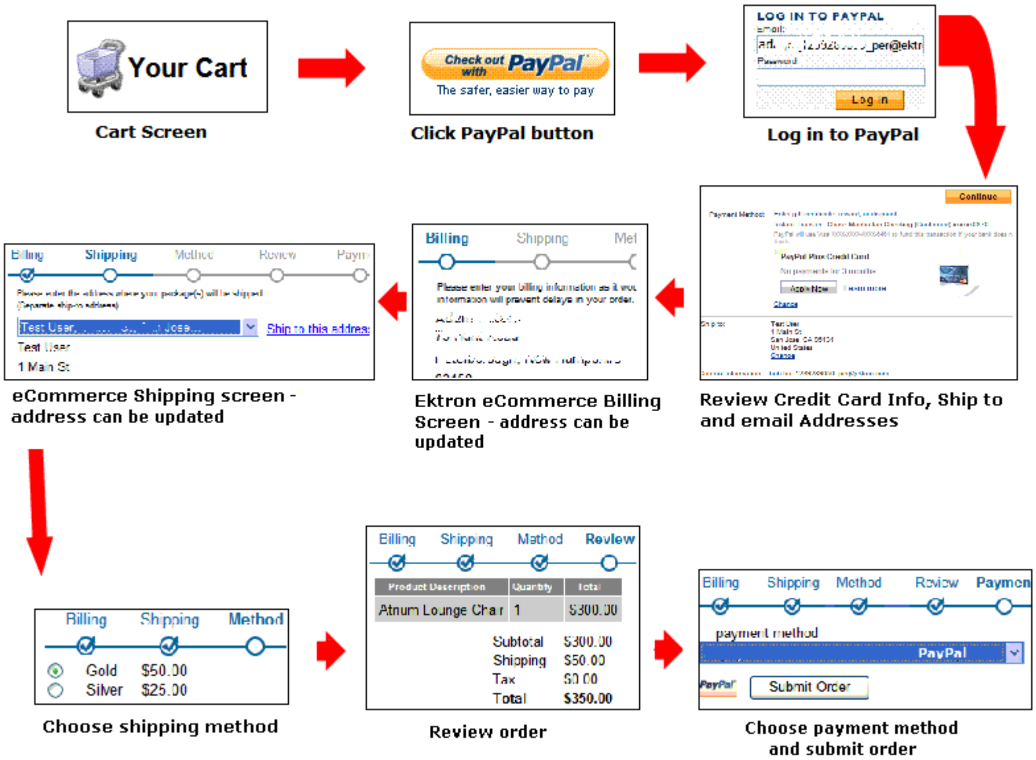
Using PayPal with Ektron eCommerce

Customers can use PayPal to pay for purchases from either of 2 points in the checkout process

- the shopping cart screen
- the payment screen

IMPORTANT: PayPal requires you to place the **Pay with PayPal** option on both the shopping cart and payment screens.

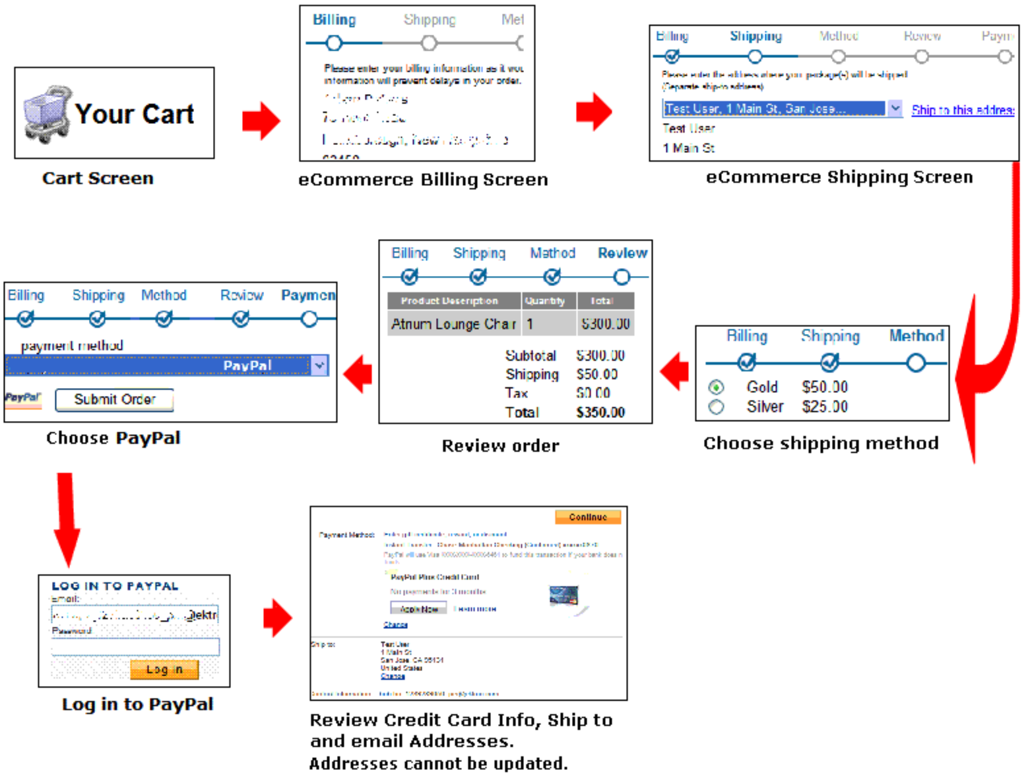
If you access PayPal via the shopping cart screen, you follow these steps.



Here is the sequence illustrated above.

1. From the Cart screen, a site visitor clicks **PayPal**.
2. The site visitor logs into his or her PayPal account.
3. Account information populates the shipping and billing addresses.
4. The site visitor can change addresses if needed. If the PayPal account address is used for the order, it is saved as part of the site visitor's eCommerce account information.
5. Shipping costs are added.
6. The order is confirmed.
7. Site visitor checks out via PayPal.

Alternatively, the site visitor can use the standard eCommerce checkout process, select PayPal on the payment screen, and complete the order using the PayPal payment screen. The following illustration shows the sequence.

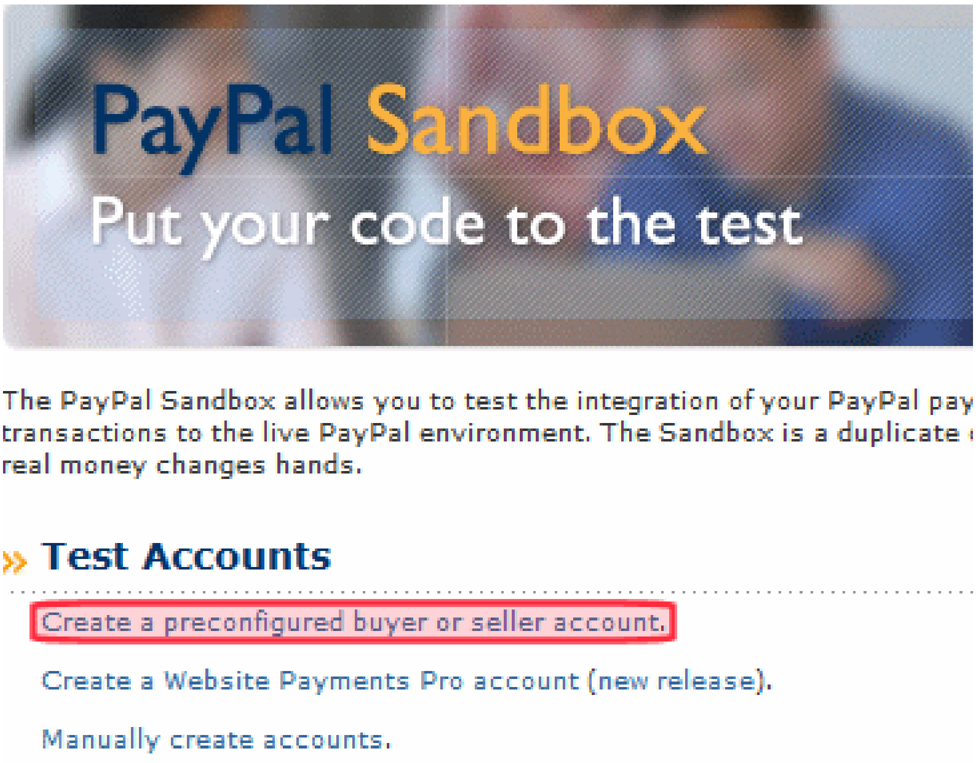


Enabling PayPal support

1. *Create a sandbox account* below. This step includes updating Ektron's web.config file.
2. *Begin Using PayPal* on page 1647
3. *Enable PayPal in the Workarea* on page 1648

Create a sandbox account

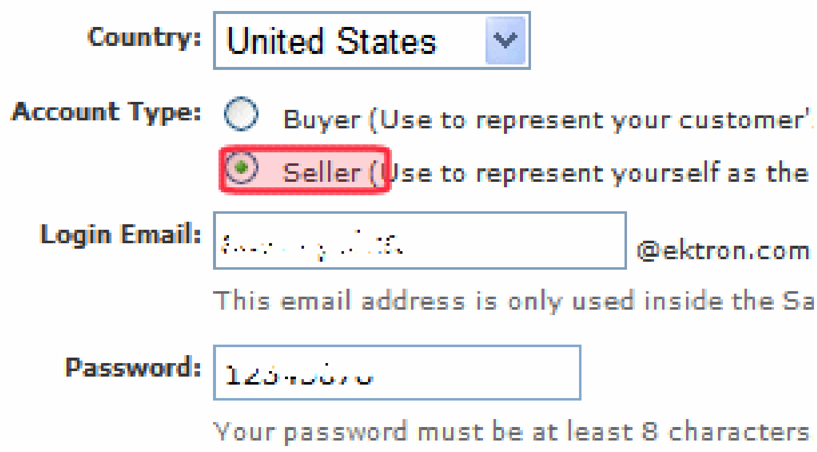
1. Sign on to PayPal Sandbox.
2. Sign up for an account.
3. You receive an email confirmation that directs you to another page.
4. Log in using the information you provided in Step 2.
5. Under **Test Accounts**, click **Create a preconfigured buyer or seller account**.



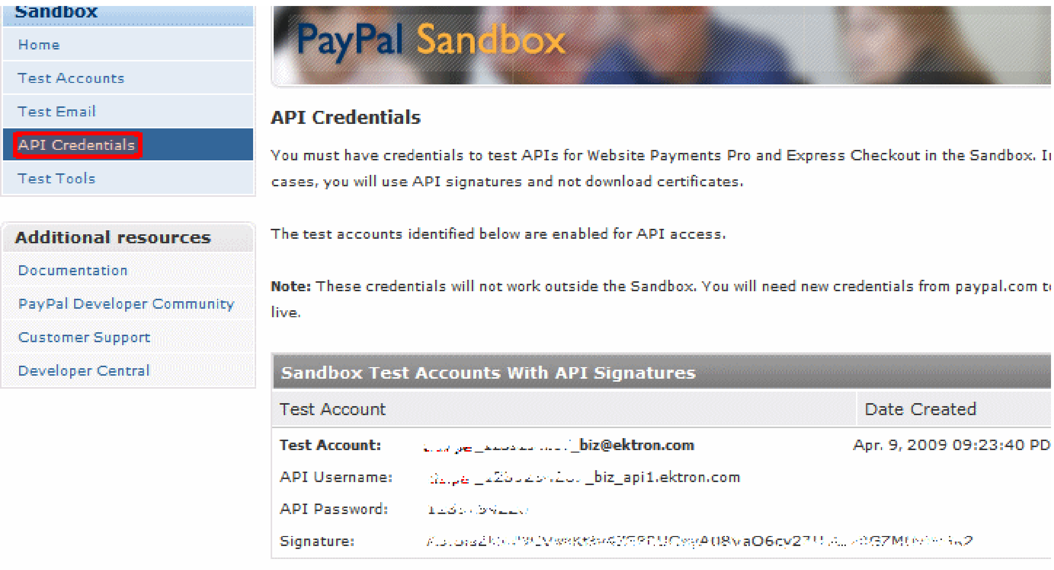
6. Create a buyer account. You will use this to test the customer experience.
7. Change the password to one you can easily remember.

8. Click **Home > Test Accounts > Create a preconfigured buyer or seller account**.

9. Click **Account Type Seller**.

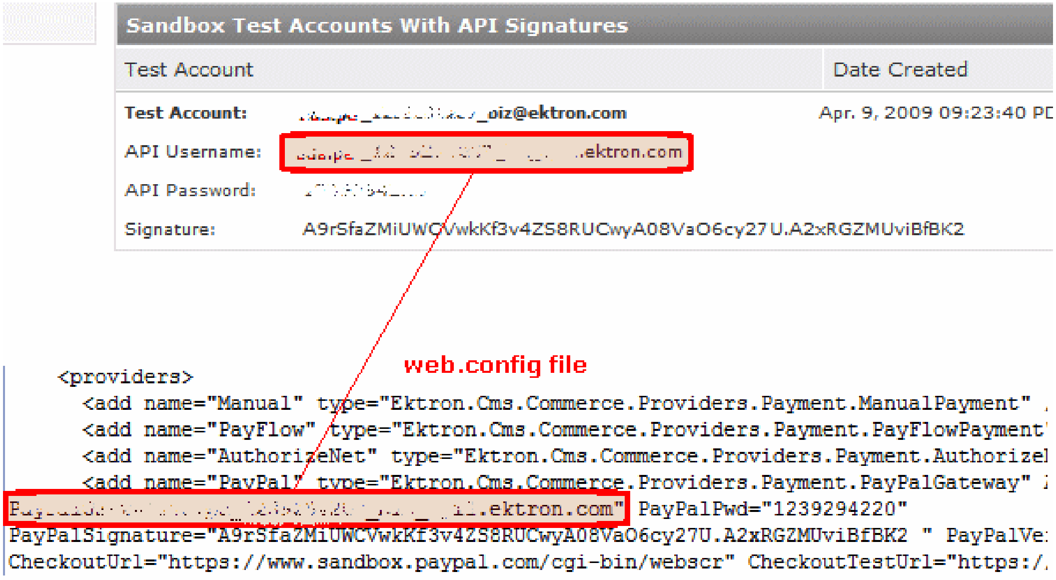


10. Create a seller account. You will use this to test the merchant experience.
11. Change the password to one you can easily remember.
12. In the upper left corner of the screen, click **API Credentials**.



13. Open your *siteroot*/`web.config` file.
14. Copy the following values from the API Credentials screen into the `web.config`'s `providers/paypal` element. Save `web.config`.
    - API Username > PayPalUser
    - API Password > PayPalPwd
    - Signature > PayPalSignature

The following illustration shows the PayPal API Username copied into the `web.config` file's `PayPalUser` property.

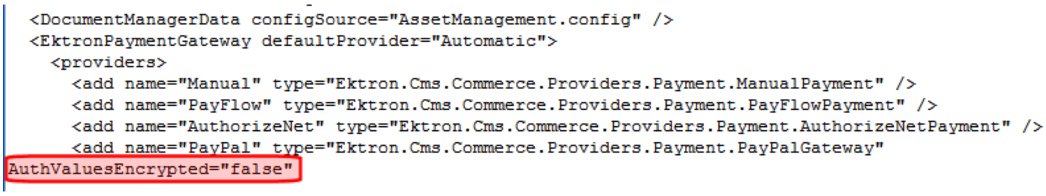


Encrypting PayPal authentication values

Follow these steps to encrypt the following values in the `web.config` file's `providers/paypal` element.

- PayPalUser
- PayPalPwd
- PayPalSignature

1. Open the *`siteroot`*`/web.config` file.
2. Set the `AuthValuesEncrypted` element to `true`.



3. Save and close `web.config`.
4. Open `C:\Program Files(x86)\Ektron\CMS400vxx\Utilities`.

5. Run EncryptEmailPassword.exe. The Encrypt Utility dialog appears.

6. Enter the PayPal user name into the **Text** field.
7. Click **Encrypt**. The screen displays encrypted text in the **Encrypted** field.
8. Copy the encrypted text and paste it into the `web.config` file’s `PayPalUser` element value.
9. Repeat Steps 6 through 8 for `PayPalPwd` and `PayPalSignature`.

Test the sandbox account

1. Sign into Workarea **> eCommerce > Cart**.
2. Click the **PayPal** button.
3. Enter the buyer account user name and password that you created in *Create a sandbox account* on page 1643. You proceed to the Ektron Checkout screen.

After completing these steps, you have verified your PayPal buyer experience and are ready to begin using PayPal.

Begin Using PayPal

1. Sign on to PayPal.
2. Create a new account.
3. Follow the instructions to obtain API credentials.
4. Copy the following values from the API Credentials screen into the `web.config`’s `providers/paypal` element. Save `web.config`.
   - API Username > PayPalUser
   - API Password > PayPalPwd

- Signature > PayPalSignature

5. If you want to encrypt these values, see *Encrypting PayPal authentication values* on page 1646.
6. *Enable PayPal in the Workarea* below.
7. If desired, customize the PayPal pageon your website.

Enable PayPal in the Workarea

1. From the Workarea, choose **Settings > Commerce > Configuration > Payment Options**.
2. Click **Action > Edit Payment options**. The Edit Payment Options screen appears.
3. Check **PayPal**.
4. Click **Save**.

Customizing the PayPal page

If you are using Ektron's sample site and PayPal is enabled, the login screen contains an Ektron logo for demonstration purposes.

You can replace the logo using the `apiparamHDRIMG` property of the `<providers> add name="PayPal"` element in the `web.config` file.

```
  <EktronPaymentGateway  defaultProvider="Automatic">
    <providers>
      <add name="Manual" type="Ektron.Cms.Commerce.Providers.Payment.ManualPaymen
      <add name="PayFlow" type="Ektron.Cms.Commerce.Providers.Payment.PayFlowPaym
      <add name="AuthorizeNet" type="Ektron.Cms.Commerce.Providers.Payment.Author
      <add name="PayPal" type="Ektron.Cms.Commerce.Providers.Payment.PayPalGatewa
 PayPalUser="ada.pe_1239294207_biz_api1.ektron.com" PayPalPwd="1239294220"
 PayPalSignature="A9rSfaZMiUWCVwkKf3v4ZS8RUCwyA08VaO6cy27U.A2xRGZMUviBfBK2" PayPal'
 CheckoutUrl="https://www.sandbox.paypal.com/cgi-bin/webscr" CheckoutTestUrl="http
 NVPUrl="https://api-3t.sandbox.paypal.com/nvp" NVPTestUrl="https://api-3t.sandbox
 apiparamHDRIMG="https://ektron.com/images/homepage-logo-small.jpg" />
    </providers>
  </EktronPaymentGateway>
```

To change the logo, change the referenced image.

When setting values in the `web.config`'s `providers/add name=" PayPal"` element, prefix any variable with `apiparam`. For example, to set the header background color, enter `apiparamHDRBACKCOLOR="FFF666"`.

Configuring payment gateways

A payment gateway provider is a pluggable component that is integrated into the Ektron eCommerce module. A payment provider handles eCommerce customer payments by using third-party payment gateways. Ektron eCommerce module accepts payments such as credit cards or checks. Then, it passes that information to a third-party service. The third-party service processes the payment and returns a transaction ID that is stored with the customer's order.

Your company needs to set up an account with a third party payment service before using the payment provider. Ektron provides 4 standard payment gateways: authorize.net, Payflow, Sage Pay and PayFlowWebsite Payments Pro along with manual. A manual gateway accepts credit cards. In this case, the merchant emails the credit card information to the credit card company. You can customize these providers or create your own using the extendable payment gateway Provider architecture. See *Customizing the Payment Gateway Provider* on page 1757.

In addition, not all payment gateways support recurring payments. Recurring payments let you create a payment that occurs at a given interval for a specified period of time. For example, a payment for $9.99 is posted on the first of every month for the next 12 months. This is something to consider if your site relies on a subscription service.

Ektron lets you edit information on any provided gateway as well as create a new one.

Processing credit card transactions via a gateway

The following sequence explains typical processing of credit card transactions. `(source: www.authorize.net)`

1. A customer purchases a product from your site and submits payment information.
2. Ektron passes the information to your payment gateway.
3. The payment gateway provider (PGP) receives secure transaction information and passes it via secure connection to the Merchant Bank's Processor.
4. The Merchant Bank's Processor submits the transaction to the Credit Card Interchange (a network of financial entities that manage credit card transactions).
5. The Credit Card Interchange sends the transaction to the customer's Credit Card Issuer.
6. The Credit Card Issuer approves or declines the transaction, based on the customer's available funds. It then passes the transaction results and, if approved, the appropriate funds back through the Credit Card Interchange.
7. The Credit Card Interchange relays the transaction results to the Merchant Bank's Processor.
8. The Merchant Bank's Processor relays the transaction results to PGP.
9. The PGP stores transaction results and sends them to the customer and/or the merchant. This communication process averages 3 seconds or less.
10. The Credit Card Interchange passes the transaction's funds from the Credit Card Issuer to the merchant's bank account.

Processing check transactions via a gateway

The following sequence explains how a payment gateway processes checks. `(source: www.authorize.net)`

1. Customer authorizes merchant to charge the customer's bank account for an amount.
2. Order and payment information is securely transmitted via the Internet to the payment gateway.
3. The transaction is accepted or rejected based on initial data validation and security criteria defined by the payment gateway.
4. If accepted, the transaction is sent to the ACH Network for settlement.
5. The ACH Network uses the transaction’s bank account information to determine the bank that holds the customer’s account (the RDFI).
6. The ACH Network instructs the RDFI to charge or refund the customer’s account.
7. The RDFI transfers funds from the customer’s account to the ACH Network. The RDFI also notifies the ACH Network of any returns (if funds could not be collected from the customer’s bank account) or charge backs (if a customer disputes a purchase).
8. The ACH Network transfers funds for the transaction to the payment gateway’s bank.
9. After a holding period, the payment gateway provider initiates a ACH transaction that deposits the funds into the merchant’s bank account.

Establishing a relationship with a payment gateway provider

You need to set up an account with a third-party payment service before using a payment provider. Each payment gateway provider accepts configuration parameters. For example, Authorize.NET requires a username and password, while PayFlow requires a Username, password, vendor, and partner.

In addition, some payment gateways do not support subscription payments. Consider this if your site relies on subscriptions. See also: *Creating a subscription* on page 1682.

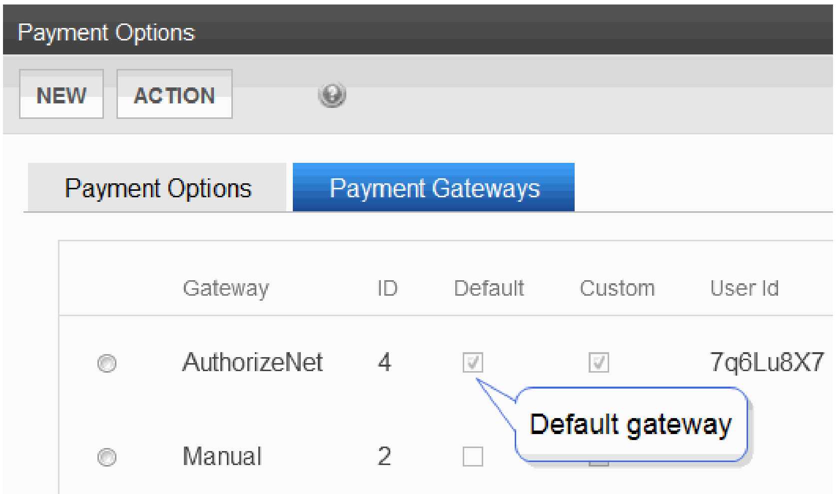
The default gateway

The eCommerce checkout uses the default gateway only. Additional gateways are unused unless one is changed to the default.

You cannot delete the default gateway. If you want to delete it, you must first make another gateway the default.

To change the default gateway:

1. Go to **Settings > Commerce > Configuration > Payment Options**.
2. Click the **payment gateways** tab. The currently-defined default has a check in the **Default** column.



3. Click the radio button next to the gateway you want to make the default.
4. Choose **Action > Mark as Default**.
5. Click **OK**.

Adding a payment gateway

NOTE: To create a new payment gateway provider, see *Customizing the Payment Gateway Provider* on page 1757.

1. In Ektron, go to **Settings > Commerce > Configuration > Payment Options**.
2. Choose **New > payment gateway**.
3. Enter information or select options for the following fields:
   - **Name**. Enter the name of the gateway.
   - **Default**. Check this box if this is the default gateway. If you do, and another gateway is currently the default, it is replaced by this one.
   - **User ID**. Enter your User ID. This ID will identify your account with this gateway provider.
   - **Password**. Enter the password for your account with this gateway provider.
   - **Expand Custom Values**. If this gateway provider needs additional fields of information, enter those values into the **Custom 1** and **Custom 2** fields.
   - **Credit Cards**. Check if this payment gateway accepts credit cards.
   - **Checks**. Check if this payment gateway accepts checks.

The following sections explain how to set up standard Payment gateways.

- *Setting up a PayFlow payment gateway* on the next page
- *Setting up a PayFlowWebsite Payments Pro payment gateway* on the next page
- *Setting up an Authorize.Net payment gateway* on page 1653
- *Setting up a SagePay payment gateway* on page 1654

NOTE: When setting up a payment gateway, you are asked to enter authentication codes, such as user name and password. To keep them safe, Ektron encrypts these values when saving them to the database.

Setting up a PayFlow payment gateway

NOTE: See PayFlow's websitefor additional instructions on setting up the PayFlow Gateway.

When setting up a PayFlow payment gateway:

1. Set up an account with PayFlow. To do this, go to Paypal: Payflow payment gateway. During this process, you should obtain a Login ID and password.
2. Go to **Settings > Commerce > Configuration > Payment Options**.
3. Choose **New > payment gateway**.
4. Enter information or select options for the following fields:
   - **Name**. Choose **Payflow**.
   - **Default**. Check this box to make PayFlow the default gateway.
   - **User ID**. Enter the user ID provided to you by the authorized PayPal Reseller who registered you for the Payflow SDK. If you purchased your account directly from PayPal, use PayPal.

     Limitations: 64 alphanumeric, case-sensitive characters.
   - **Password**. Enter the password you defined while registering for account.

     Limitations: 6- to-32 alphanumeric, case-sensitive characters
   - **Expand Custom Values**. Click this text to open the **Custom 1** and **Custom 2** fields.
     - **Custom 1**. Enter the merchant login ID sent to you when you registered the account.

       Limitations: 64 alphanumeric, case-sensitive characters.
     - **Custom 2**. Enter the Partner ID sent to you by the authorized PayPal Reseller who registered you for the Payflow SDK. If you purchased your account directly from PayPal, use PayPal.

       Limitations: 12 alphanumeric, case-sensitive characters.
   - **Credit Cards**. Check if this payment gateway accepts credit cards. You should verify that this payment gateway supports credit card payments.
   - **Checks**. Check if you will accept checks with this payment gateway. You should verify that this payment gateway supports check payments.

Setting up a PayFlowWebsite Payments Pro payment gateway

The PayFlowWebsite Payments Pro payment gateway is used in the United Kingdom and Australia.

1. Set up an account with PayFlowWebsite Payments Pro. To do this, go to Paypal: Payflow payment gateway.
2. In the Workarea, go to **Settings > Commerce > Configuration > Payment Options**.
3. Choose **New > payment gateway**.
4. Enter information or select options for the following fields:
   - **Name**. Choose **PayFlowWebsite Payments Pro**.
   - **Default**. Check this box to make PayFlow the default gateway. See also: *The default gateway* on page 1650
   - **User ID**. Enter the API username sent to you by the authorized PayPal Reseller who registered you for the Payflow SDK. For example, **sellUK_1271963915_biz_api1.ektron.com**. If you purchased your account directly from PayPal, use PayPal.

     Limitations: 64 alphanumeric, case-sensitive characters.
   - **Password**. Enter the API password you defined while registering for the account.For example,**1234567891**.

     Limitations: 6- to-32 alphanumeric, case-sensitive characters
   - **Expand Custom Values**. Click this text to open the **Custom 1** and **Custom 2** fields.
     - **Custom 1**. Enter the API signature sent to you by the authorized PayPal Reseller who registered you for the Payflow SDK. For example, AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA Limitations: 64 alphanumeric, case-sensitive characters.
     - **Custom 2**. Not used
   - **Credit Cards**. Check if this payment gateway accepts credit cards. You should verify that this payment gateway supports credit card payments.

After defining the payment gateway, you typically want to test it. See *Testing a payment gateway* on the next page

Setting up an Authorize.Net payment gateway

1. Set up an account with Authorize.Net using AuthorizeNet. During this process, you obtain an API login id and a transaction ID.
2. In the Workarea, go to **Settings > Commerce > Configuration > Payment Options**.
3. Choose **New > payment gateway**.
4. Enter information or select options for the following fields:
   - **Name**. Choose **Authorize.Net**.
   - **Default**. Check this box to make Authorize.Net the default gateway.
   - **User ID**. Enter the API login id you obtained when setting up an Authorize.Net account in Step 1.
   - **Password**. Enter the transaction ID you obtained when setting up an Authorize.Net account in Step 1.

- **Custom 1** and **Custom 2**. Not used.
- **Credit Cards**. Check if you will accept credit cards with this payment gateway. You should verify that this payment gateway supports credit card payments.

This gateway accepts only credit cards. No checks.

After defining the payment gateway, you typically want to test it. See*Testing a payment gateway* below

Setting up a SagePay payment gateway

NOTE: SagePay does not support recurring billing nor check payments.

1. Set up an account with SagePay. To do this, go to Sage Pay. During this process, you should obtain a Login ID and password.
2. Set up a SagePay simulator account using Sage Pay Account Registration.
3. From the Simulator Main Menu, click Account > Valid Currencies for this Account. Enable currencies set up in your Workarea's Currencies screen. See also: *Configuring currencies* on page 1636
4. In Ektron, go to **Settings > Commerce > Configuration > Payment Options**.
5. Choose **New > payment gateway**.
6. Enter information or select options for the following fields:
   - **Name**. Choose **SagePay**.
   - **Default**. Check this box to make SagePay the default gateway.
   - **User ID**. Enter the User ID you obtained in Step 1.
   - **Password**, **Custom 1**, **Custom 2**. Not used.
   - **Credit Cards**. Check if this payment gateway accepts credit cards. You should verify that the gateway supports credit card payments.
   - **Checks**. Not available with SagePay.

After defining the payment gateway, you typically want to test it. See*Testing a payment gateway* below and *Testing SagePay payment gateway* on the facing page

Testing a payment gateway

Typically, you test a default payment gateway before going live with it. eCommerce provides a test mode for this purpose. While eCommerce is in test mode, customers cannot purchase goods. So, disable test mode before going live with a new default payment gateway.

To test a payment gateway, open the `siteroot/web.config` file and set `<ektronCommerce> ek_ecom_TestMode` to `true`.

```
<ektronCommerce>
   <add key="ek_ecom_ComplianceMode" value="false" />
   <!-- This is used only when compliance mode is on, and cannot be less than 4. -->
   <add key="ek_ecom_PasswordHistory" value="4" />
   <add key="ek_ecom_OrderProcessingDisabled" value="false" />
```

```
<add key="ek_ecom_TestMode" value="true" />
 ....
```

When testing is done, change the value of `ek_ecom_TestMode` to `false`.

Testing SagePay payment gateway

Do not use the following cards with the SagePay test card number when testing the SagePay payment gateway:

- Japan Credit Bureau (JCB)
- Mastercard
- Visa Electron UK Debit
- Visa Delta Debit
- American Express

Because these cards do not have a cardholder field, the following error is displayed: `The CardHolder field should be between 1 and 50 characters long.`

To test the SagePay payment gateway:

1. Follow instructions in *Testing a payment gateway* on the previous page.
2. Open your `siteroot/web.config` file.
3. Set `<EktronPaymentGateway>/<providers> SagePay SimulatorMode` to `true`.

```
<EktronPaymentGateway defaultProvider="Automatic">
  <providers> . .
    <add name="SagePay"
      type="Ektron.Cms.Commerce.Providers.Payment.SagePayGateway"
      SagePayVersion="2.23" SimulatorMode="true"
      Description="Ektron CMS Order" />
  </providers>
</EktronPaymentGateway>
```

4. When testing is complete, change the value of `SimulatorMode` to `false`.

Editing a payment gateway

1. Go to Workarea > **Settings > Commerce > Configuration > Payment Options**.
2. Click the payment gateway that you want to edit.
3. Click **Edit**.
4. Edit any of the fields, which are described in *Adding a payment gateway* on page 1651.
5. Click **Save**.

Deleting a payment gateway

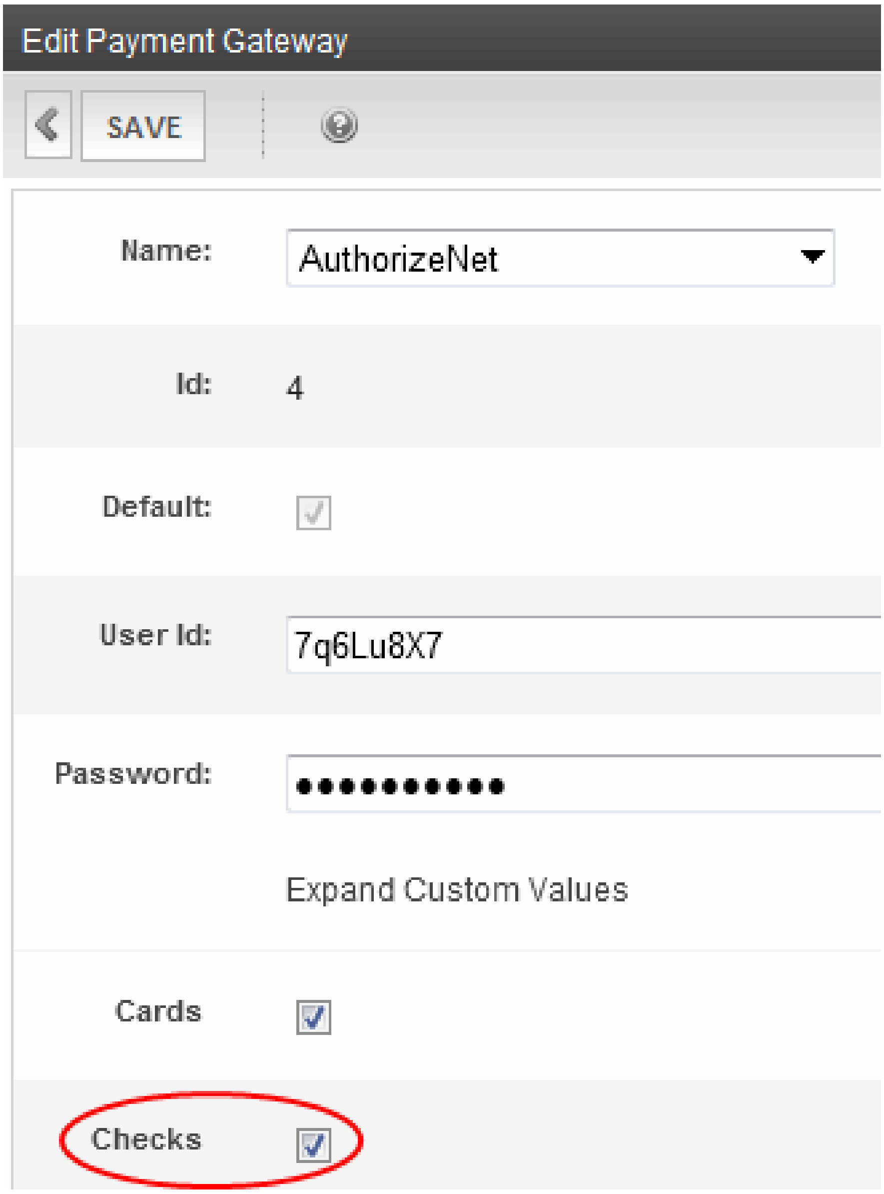
NOTE: You cannot delete the default gateway. If you want to delete it, you must first make another gateway the default.

1. From Workarea, choose **Settings > Commerce > Configuration > Payment Options**.

2. Click the payment gateway that you want to delete.
3. Click **Delete** ( ).
4. Click **OK**.

Check support

Payment gateways generally offer 2 payment mechanisms: credit cards and checks. You can enable or disable check support for a gateway via the **Settings > Commerce > Configuration > Payment options > Edit payment gateway** screen.



If checks are enabled for the default payment gateway, a site visitor can pay by **Check** on the payment screen. If check support is not enabled, the **Payment Method** field does not appear.

Check support integration documentation

Use the following resources to familiarize yourself with integrating checks into your eCommerce site.

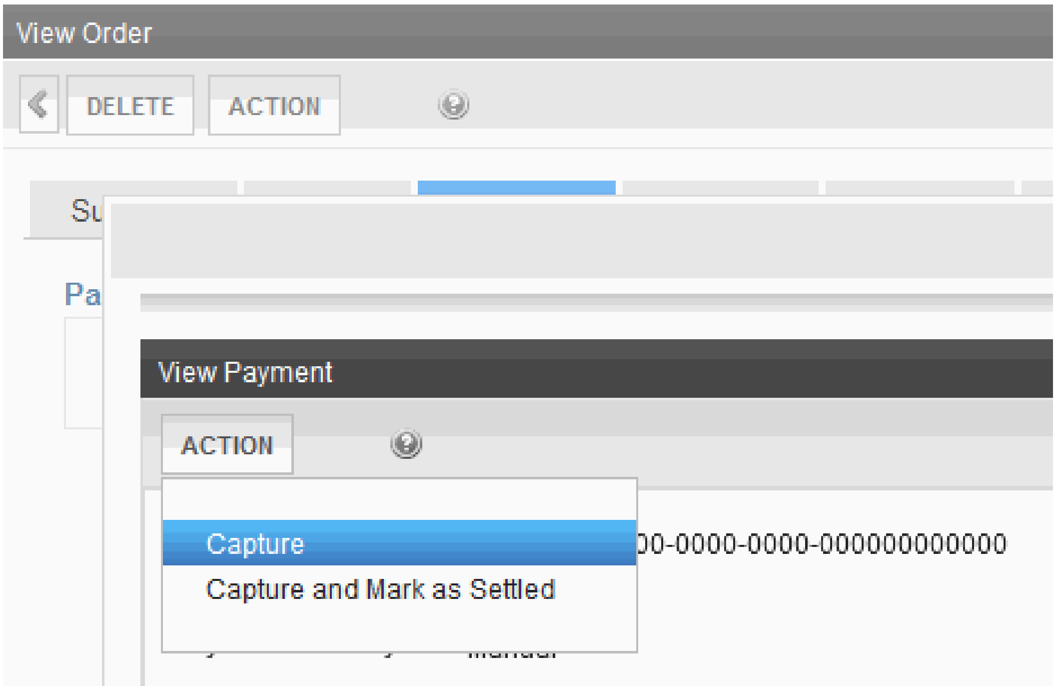
- Authorize.Net: eCheck.Net Operating Procedures and User Guide
- PayFlow: Payflow Link User’s Guide; see the chapter “Integrating TeleCheck Transactions.”

Effect of check payment on order processing

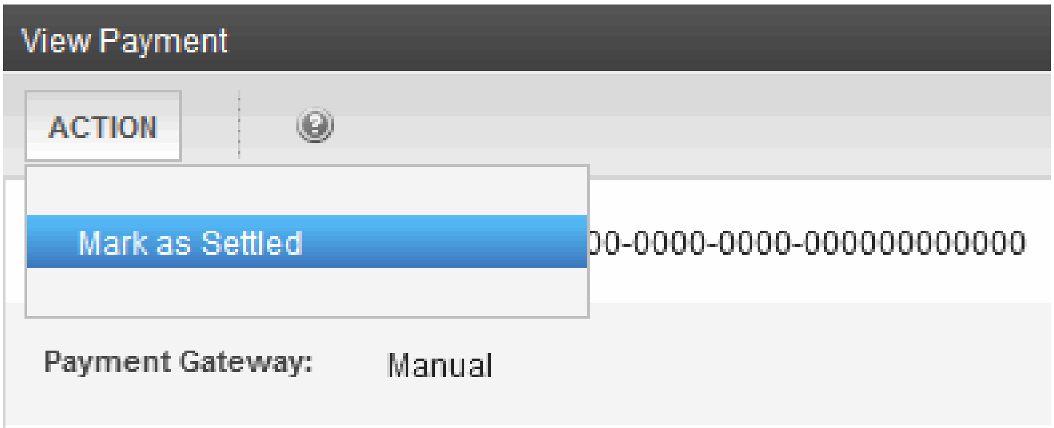
The following describes a typical sequence of events when processing a check for eCommerce payment.

However, Ektron is very flexible and does not enforce this sequence. For example, you can enter a tracking number and mark an order shipped even though its payment has not been captured yet.

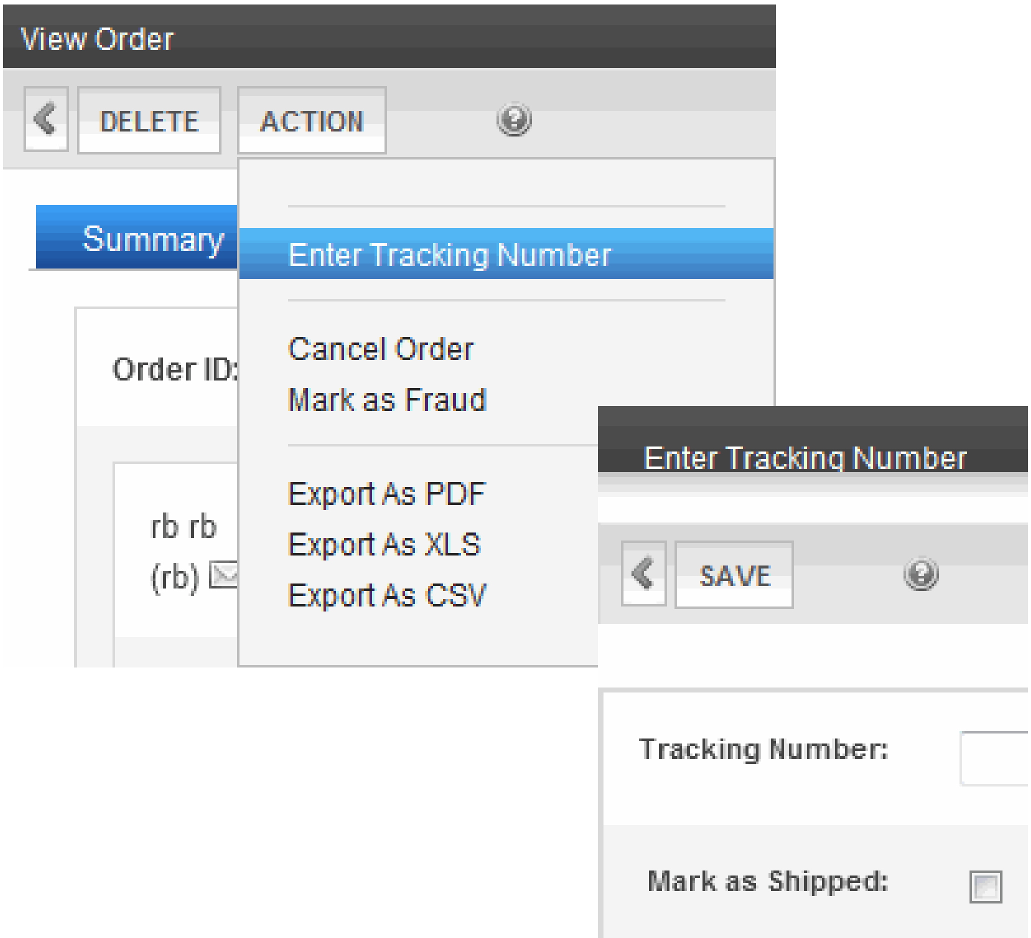
1. eCommerce user accesses the View Payment screen’s **Capture** option, which submits a payment request to the customer’s bank.



2. A few days later, the funds are transferred to the merchant’s account.
3. eCommerce user accesses the View Payment screen’s **Mark as Settled** option to confirm the receipt of funds.



4. If goods are *tangible*, eCommerce user ships the merchandise, using the View Payment screen's **Enter Tracking Number** option to insert the tracking number and confirm the shipment.



5. If goods are *not* tangible, the workflow sends the customer an email with purchase details, such as how to download it.

Configuring credit card types

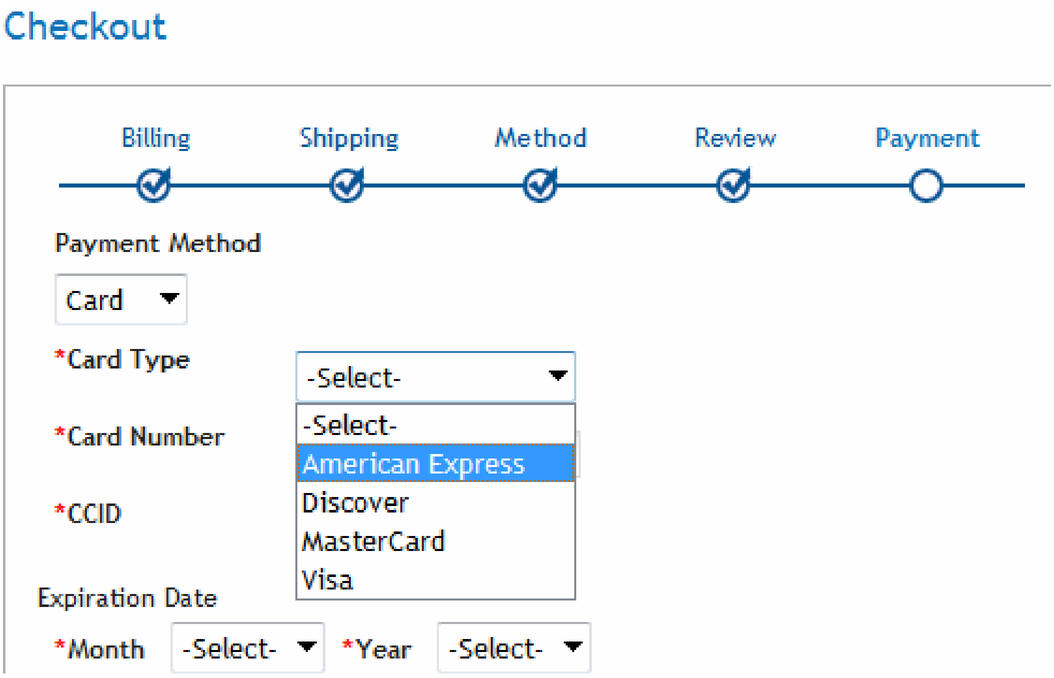
Use this screen to enter types of credit cards that your eCommerce system may use. By default, Ektron's sample sites provide the following card types.

- American Express
- Diners Club (not accepted by default)
- Discover
- MasterCard
- Visa

You can edit the information provided for these types or enter a new one.

Where credit card types are used

During the checkout process (managed by the Checkout server control), the Payment screen includes a drop-down list of enabled credit cards.



Creating a credit card type

To create a new credit card within Ektron:

1. From the Workarea, choose **Settings > Commerce > Configuration > Card**.
2. Choose **New > Card Type** to see the Add Card Type screen.
3. Enter the credit card's name in the **Name** field.
4. Enable the **Accepted** check box if site visitors can use this card to make purchases on your website.
5. Add an image for the credit card. The image must reside on your computer.The image does not appear on the standard checkout screen, but it is a field in the XML, so you can enable it using XSLT.

a. Click **Change**. The Library Upload screen appears.
b. Click **Add Library**.
c. Click **Browse** and go to the folder that contains the image.
d. Choose the image file.
e. Enter a title in the **Title** field.
f. Click **Add Library**. The file name appears in the Image field with the image directly below.

6. Enter a Regex expression. See also: *Using RegEx expressions for validation* below.
7. Click **Save**.

Using RegEx expressions for validation

A RegEx expression is a simple way to validate a credit card account number. (See also: http://regexlib.com/.) Validation occurs when a site visitor completes the Checkout procedure's Submit Order screen

RegEx prevents the submission of invalid account numbers to a payment gateway, which may charge a fee for such failures.

Ektron provides a RegEx expression for the credit cards supplied with the medical sample site. You can modify them as needed. If you enter a new credit card, you can enter a RegEx expression for it.

Editing a credit card type

1. From the Workarea, choose **Settings > Commerce > Configuration > Card**.
2. Click the Credit Card Type that you want to edit.
3. Click **Edit**.
4. Edit any of the fields, which are described in *Creating a credit card type* on the previous page.
5. Click **Save**.

Deleting a credit card type

1. From the Workarea, choose **Settings > Commerce > Configuration > Card**.
2. Click the Credit Card Type that you want to delete.
3. Click **Delete** ( ).
4. Click **OK**. The Credit Card Type is deleted.

Configuring eCommerce shipping screens

The eCommerce shipping screens let you specify information about where catalog entries are stocked, how they are packaged, and the available shipment methods.

This section contains the following topics.

- *Using a warehouse* below
- *Configuring packages* on the next page
- *Configuring shipping methods* on page 1663

Using a warehouse

Use the Warehouses screen to enter information about warehouses that stock your catalog entries. eCommerce uses this location as the "from" address when calculating shipping costs.

Only the default warehouse is used by the checkout process. Additional warehouses are unused until they are made the default. See also: *Changing the default warehouse* below.

PREREQUISITE

Regions and Countries must be set up.

Creating a warehouse

1. Go to **Settings > Commerce > Shipping > Warehouses**.
2. Choose **New > Warehouse**.
3. Enter information or select options as follows:
   - **Name**. Enter the warehouse's name.
   - **Street1, Street2**. Enter the warehouse's street address
   - **City**. Enter the warehouse's city.
   - **Postal Code**. Enter the warehouse's postal code.
   - **Country**. Select the warehouse's country from the pull-down list.
   - **State/Province**. Select the warehouse's state or province from the pull-down list.
   - **Default Warehouse**. This check box indicates if this is the default warehouse.
4. Click **Save**.

Changing the default warehouse

NOTE: You can also specify a warehouse as the default via the Edit Warehouse screen's **Mark Default Warehouse** toolbar button ( ).

1. Go to Workarea > **Settings > Commerce > Shipping > Warehouses**.
2. Click the radio button next to the warehouse that you want to make the default.
3. Choose **Action > Mark Default Warehouse**. A confirmation dialog appears.
4. Click **OK**.

Editing a warehouse

1. Go to Workarea > **Settings > Commerce > Shipping > Warehouses**.
2. Click the warehouse that you want to edit.

3. Click **Edit**.
4. Edit any of the fields as described in *Creating a warehouse* on the previous page.
5. Click **Save**.

Deleting a warehouse

You cannot delete the default warehouse. However, you can designate another warehouse as the default, then delete the one that was the default.

1. Go to Workarea > **Settings > Commerce > Shipping > Warehouse**.
2. Click the warehouse that you want to delete.
3. Click **Delete** ().
4. Click **OK**. The warehouse is deleted.

Configuring packages

How packaging information is used

Each item in an order has size and weight dimensions. The shipping calculator uses them to fit the order into the smallest-sized and fewest packages. It then passes packaging information (number, sizes and weight) to the shipping provider, which returns the order's shipping costs. If a catalog entry's dimensions exceed all box sizes, eCommerce passes those dimensions to the shipping provider.

NOTE: Some shipping providers, FedEx and UPS for example, have size and weight limits on packages. If the size or weight exceeds the limit, shipping rates may not be returned when a site visitor is checking out. In this case, a site visitor cannot continue the checkout process and an application error is logged in the Event Viewer.

Size and weight units of measure

By default, Ektron uses English units of measure (inches and pounds) for package size and weight. At the beginning of your eCommerce implementation, you can change to metric units of measure by updating the `web.config` file's `ek_measurementsystem` tag value to `metric`.

WARNING! After your eCommerce feature goes live, do *not* change the `web.config ek_measurementsystem` value.

Creating a new package

1. Go to **Settings > Commerce > Shipping > Packages**.
2. Click **New > Package**.
3. Enter package information in the following fields:
   - **Name**. Enter a text description of this package size.
   - **Length**. Enter the package's length in the units of measure that appear to the right (inches or centimeters). See also: *Size and weight units of measure* above.

- **Height**. Enter the package's height in the units of measure that appear to the right (inches or centimeters).
- **Width**. Enter the package's width in the units of measure that appear to the right (inches or centimeters).
- **Max Weight**. Enter the package's weight in the units of measure that appear to the right (pounds or kilograms).

4. Click **Save**.

Editing a package

1. Go to Workarea > **Settings > Commerce > Shipping > Packages**.
2. Click the package that you want to edit.
3. Click **Edit**.
4. Edit any of the fields, which are described in *Creating a new package* on the previous page.
5. Click **Save**.

Deleting a package

1. From the Workarea, choose **Settings > Commerce > Shipping > Packages**.
2. Click the package that you want to delete.
3. Click **Delete** ( ).
4. Click **OK**. The package is deleted.

Configuring shipping methods

Use the Shipping Methods to define choices your site visitors will have for delivering their purchases.

PREREQUISITES

- Default warehouse with an address
- A default shipping provider is defined in the `siteroot\shipment.config` file

Defining shipping providers

When you instEktron, several providers exist in the `siteroot\shipment.config` file:

- FedExShipmentProvider
- FlatRateShipmentProvider
- UPSShipmentProvider

However, the FedEx and UPS information is for testing purposes only. To use FedEx, UPS, or another shipping provider, obtain the following information from them. (The information can vary slightly for each provider.)

- service URL
- key

- password
- account number
- meter number
- transactionId

Then, enter that information into `shipment.config`, following the format of providers already in the file.

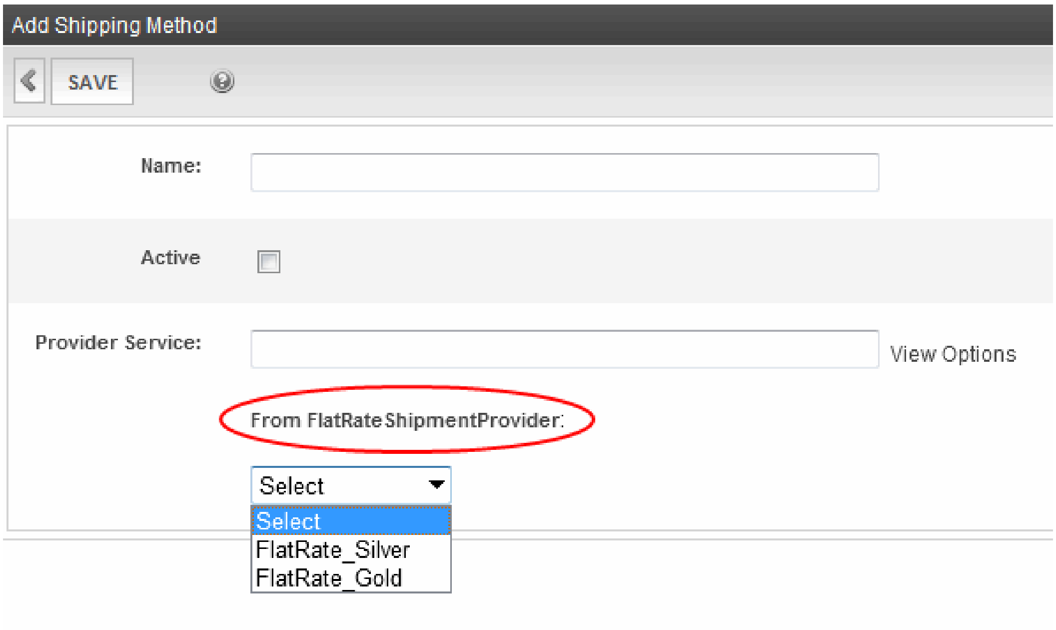
The `shipment.config` file also contains `name` and `type` properties for each provider. The specific text you insert is not important, but the name and type strings must match.

```
name="FedExShipmentProvider"
  type="Ektron.Cms.Commerce.Shipment.Services.FedExShipmentProvider,
    Ektron.Cms.Commerce"
```

To define a custom shipping provider, see *Customizing the shipment provider* on page 1764.

Defining the default shipping provider

While you can define any number of shipping providers in the shipment.config file, only one can be active. The active provider appears on the **Settings > Commerce > Shipping > Methods > New > Shipping Method** screen when you click **View Options**.



Specify the default shipping provider via the `defaultprovider` property in *siteroot*\shipment.config.

```
<?xml version="1.0" encoding="utf-8" ?>
<shipmentProvider defaultProvider="FedExShipmentProvider">
  <providers>
    <add name="FedExShipmentProvider" ...
</shipmentProvider>
```

Adding a shipping method

Use the Add Shipping Method screens to select shipping methods you will support. When a site visitor submits an order, these shipping choices appear on the Shipping screen.

1. Go to Workarea > **Settings > Commerce > Shipping > Methods**.
2. Choose **New > Shipping Method**. The Add Shipping Method screen appears.
3. Enter information or make selections in the following fields.
   - **Name**. Enter the name of the shipping method. Site visitors select a shipping method for their order using this name
   - **Active**. Check this box if you want site visitors to be able to select this shipping method.
   - **Provider Service**. As explained in *Defining the default shipping provider* on the previous page, a default shipping provider is defined in your site's shipment.config file. To view the methods offered by that provider, click **View Options**. Then, select from the drop-down list that appears.
4. Click **Save**.

Editing a shipping method

1. Go to Workarea > **Settings > Commerce > Shipping > Methods**.
2. Click the Shipping Method that you want to edit. The View Shipping Method screen appears.
3. Click **Edit** ( ).
4. Edit the fields described in *Adding a shipping method* above.

Deleting a shipping method

1. Go to Workarea > **Settings > Commerce > Shipping > Methods**.
2. Click the Shipping Method that you want to edit. The View Shipping Method screen appears.
3. Click **Delete** ( ).

Changing the order of the shipping method

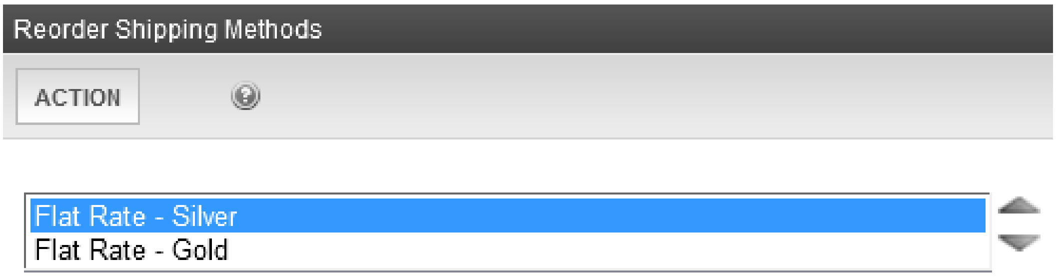
Each shipping method you define has an **Order** field. This determines the sequence in which shipping methods appear on the Shipping Rates screen when a site visitor is submitting an order.

The shipping method with **1** in the **Order** field appears at the top of the list.

By default, every shipping method's order is set to **1**. To set a sequence for shipping methods, follow these steps

1. Go to Workarea > **Settings > Commerce > Shipping > Methods**.
2. Choose **Action > Reorder Items**.

3. Use the selection bar and arrows to arrange methods in the desired sequence.



4. Choose **Action > Save**.

Configuring eCommerce tax screens

eCommerce provides a set of tax screens in the Workarea that lets you:

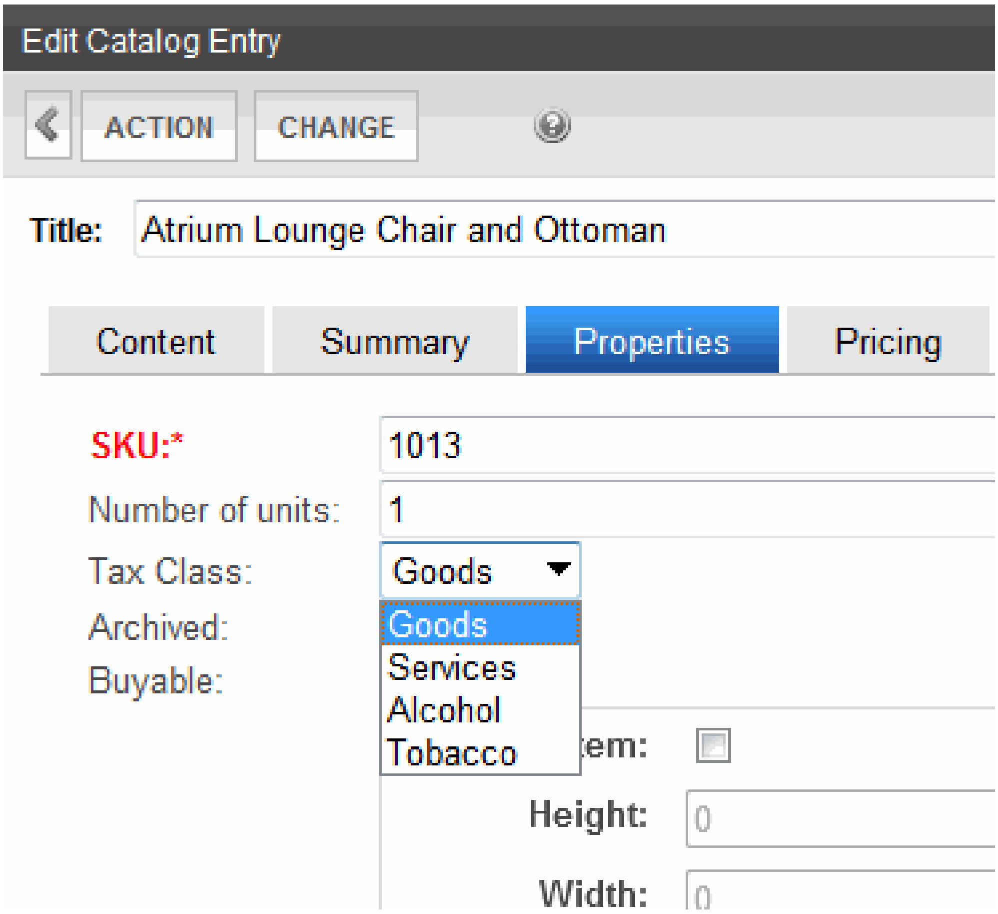
- set up tax classes (for example, goods, services, tobacco)
- define tax rates for these geographic entities (from most to least specific)
  - postal code
  - region
  - country
- apply tax classes
  - for tax classes except shipping
  - applying shipping taxes

This section also contains the following topics.

- *Applying tax classes to catalog entries* below
- *Calculating an order's tax amount* on the facing page
- *Creating a new tax class* on page 1671
- *Creating a new postal code tax table* on page 1671
- *Configuring regional tax tables* on page 1672
- *Configuring country tax tables* on page 1674

Applying tax classes to catalog entries

You assign a tax class (except shipping) to a catalog entry via its **Properties** tab's **Tax Class** field (Content tab > select catalog entry > **Action** > **Edit**).



Calculating an order's tax amount

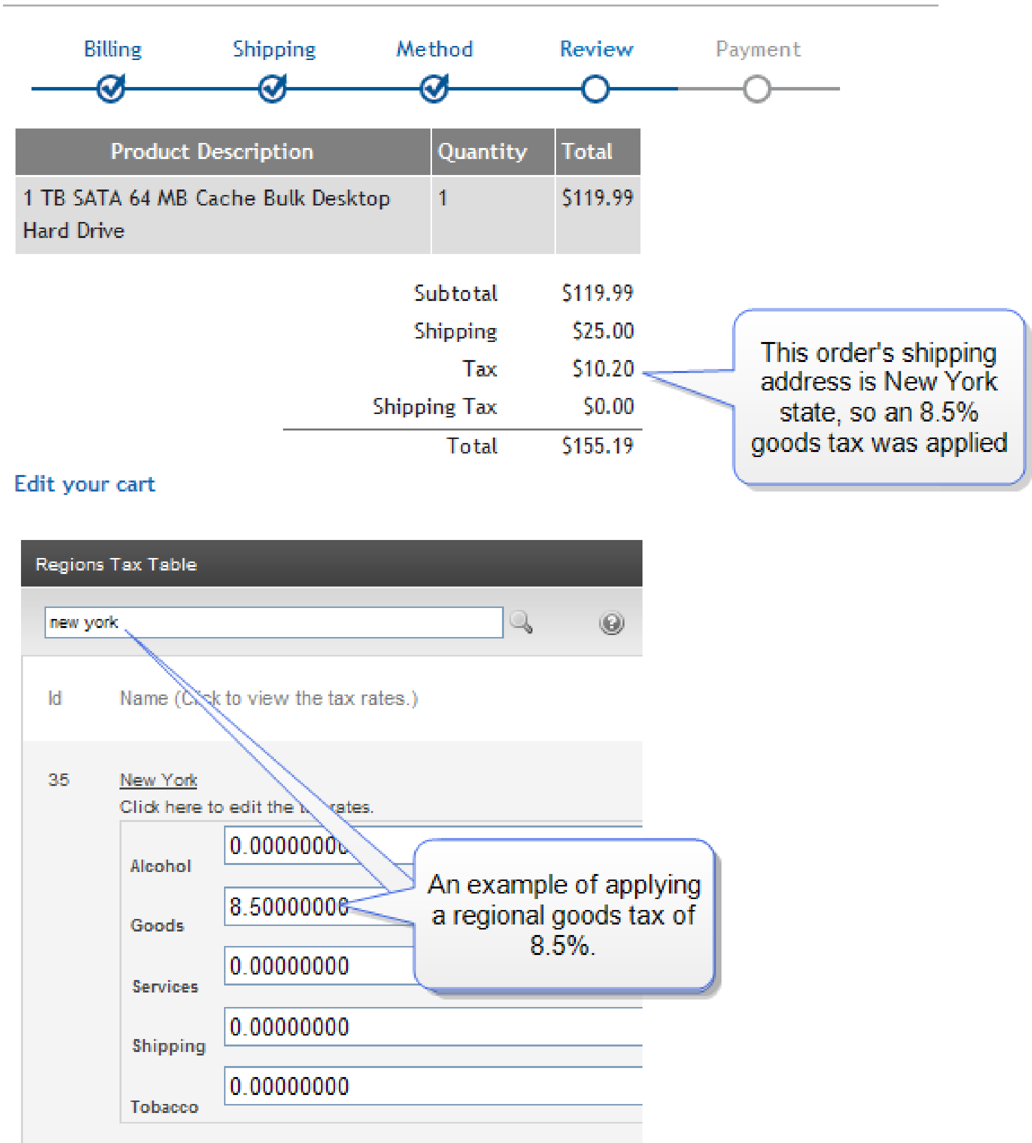
During checkout, Ektron tries to find a tax rate for each catalog entry's Tax Class and the shipping address's geographic entity.

Ektron checks the shipping address for each item's tax class	If it finds a tax rate for the geographic entity	If it does *not* find a tax rate for the geographic entity
1. Postal code	It adds that amount and stops. For example • an item costs $100.00 • the *postal code* tax rate = 5% • a tax of $5.00 is applied	It checks the shipping address for a regional tax code.

Ektron checks the shipping address for each item's tax class	If it finds a tax rate for the geographic entity	If it does *not* find a tax rate for the geographic entity
2. Region	It adds that amount and stops. For example • an item costs $100.00 • the **regional** tax rate = 7% • a tax of $7.00 is applied	It checks the shipping address for a country tax code.
3. Country	It adds that amount. For example • an item costs $100.00 • the **country** tax rate = 10% • a tax of $10.00 is applied	No tax is added to the order.

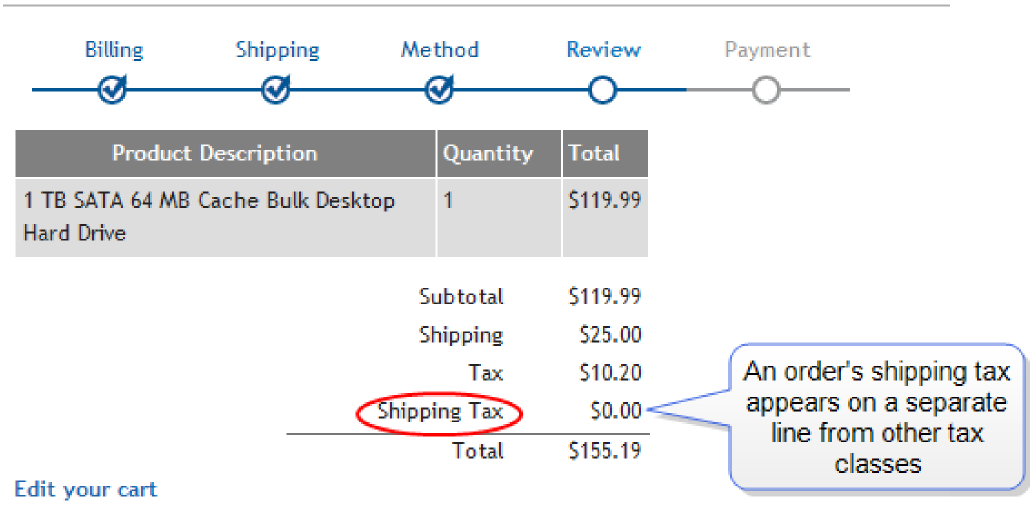
If a postal zone has several taxes (for example, a local tax and a regional tax), build the combined percentage into the postal code tax. So, assume New York City has a 4% tax, and New York state has a 3% tax. Enter a combined total of 7% into postal zones within New York City. See also: *Cataloging entries that can be taxed* on page 1670.

For example, the atrium chair is assigned to the **Goods** Tax Class. A person who lives in New York state purchases the chair. Although no postal tax class is defined for the shipping address, a regional tax of 8.5% is set up for New York state, and so is applied to the order.



Calculating an order’s shipping tax amount

The shipping tax is separate from the other taxes, and appears on a separate line of the order.



A shipping tax is applied to an order if

- shipping tax is enabled in `web.config` and
- a tax rate is applied to one of the geographic regions in which the shipping address falls.

Unlike the other tax classes, you do not apply shipping tax to catalog entries. Instead, you apply them to geographic regions only. However, each tax class compares an order's shipping address against regional tax tables to calculate the tax.

Enabling the shipping tax within Ektron

To enable the shipping tax, open your *siteroot*`/web.config` file and change the value of the `ek_ecom_ApplyTaxestoShipping` element to `True`.

Enabling the shipping tax for a geographic region

You apply a shipping tax to every applicable geographic region. As explained in *Calculating an order's tax amount* on page 1667, the eCommerce module first looks for a tax applied to the order's postal code. If one is found, that shipping tax is applied. If none is found, eCommerce looks for a shipping tax applied to the order's region. If no regional shipping tax is found, eCommerce looks for a shipping tax applied to the order's country.

Applying a shipping tax to a geographic region

You apply a shipping tax rate to geographic regions as you do with the tax classes. See also: *Creating a new postal code tax table* on the facing page, *Configuring regional tax tables* on page 1672, *Configuring country tax tables* on page 1674

Cataloging entries that can be taxed

Use the Tax Class screen to define classes of catalog entries that can be taxed. When you install eCommerce, the following tax classes are installed.

- alcohol
- goods
- service
- tobacco
- shipping

You can modify or delete all classes except shipping, which you can modify but not delete. You also can add new classes.

Creating a new tax class

1. Go to **Settings > Commerce > Tax > Classes**.
2. Choose **New > Tax Class**.
3. Enter the name of the tax class.
4. Click **Save**.

Editing a tax class

1. Go to **Settings > Commerce > Tax > Classes**.
2. Click the Tax Class that you want to edit.
3. Click **Edit**.
4. Edit the name of the tax class.
5. Click **Save**.

Deleting a tax class

If a tax class has been assigned to a catalog entry that appears on any order, the Delete button does not appear.

1. Go to **Settings > Commerce > Tax > Classes**.
2. Click the Tax Class that you want to delete.
3. Click **Delete** ( ).
4. Click **OK**. The Tax Class is deleted.

Applying local taxes

Use postal code tax tables to identify local areas (cities, counties, and so on) that apply taxes to eCommerce catalog entries. The areas are identified by their postal code. For example, London, England taxes alcohol delivered to addresses within it.

You only need to create a postal tax table if the area that applies the tax is smaller than a country's geographical *regions* (states, provinces, and so on). If an entire region applies a tax, use a regional tax table.

Creating a new postal code tax table

PREREQUISITE

The postal code’s country and region are defined in the Regions and Countries screens

1. Go to **Settings > Commerce > Tax > Postal Tax Tables**.
2. Choose **New > Postal Code**.
3. Enter information into the following fields:
   - **Postal Code**. Enter the postal code for which you want to enter a tax rate. If this is for a US state, the code must consist of 5 or 9 digits.
   - **Region**. Enter the geographic region (for example, state or province) in which the postal code resides.
   - **Country**. Enter the country in which the postal code resides.
4. Select the Tax Rates tab and specify values for the tax rates, for example, Alcohol, Goods, Services, Shipping, Tobacco. For any tax class, enter a tax rate as a whole number. For example, if the tax is 7%, enter **7**.
5. Click **Save**.

Editing a postal code tax table

1. Go to **Settings > Commerce > Tax > Postal Tax Tables**.
2. Click the ID of the tax table that you want to edit.
3. Click **Edit**.
4. Edit the fields described in *Creating a new postal code tax table* on the previous page.
5. Click **Save**.

Deleting a postal code tax table

1. Go to **Settings > Commerce > Tax > Postal Tax Tables**.
2. Click the ID of the tax table that you want to delete.
3. Click **Delete** ( ).
4. Click **OK**. The postal code tax table is deleted.

Configuring regional tax tables

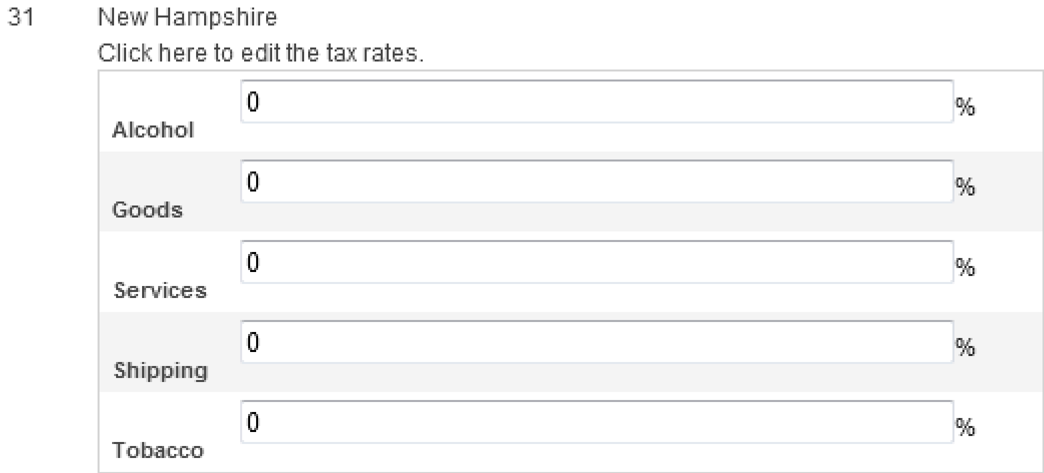
Use regional tax tables to identify regions (states, provinces, and so on) that apply taxes to eCommerce catalog entries. For example, within the United States of America, the state of New Jersey applies a 5% tax on goods purchased on the internet and shipped to it.

You only need to define a regional tax table if the area that applies the tax is smaller than a country. If an entire country applies a tax, use a country tax table.

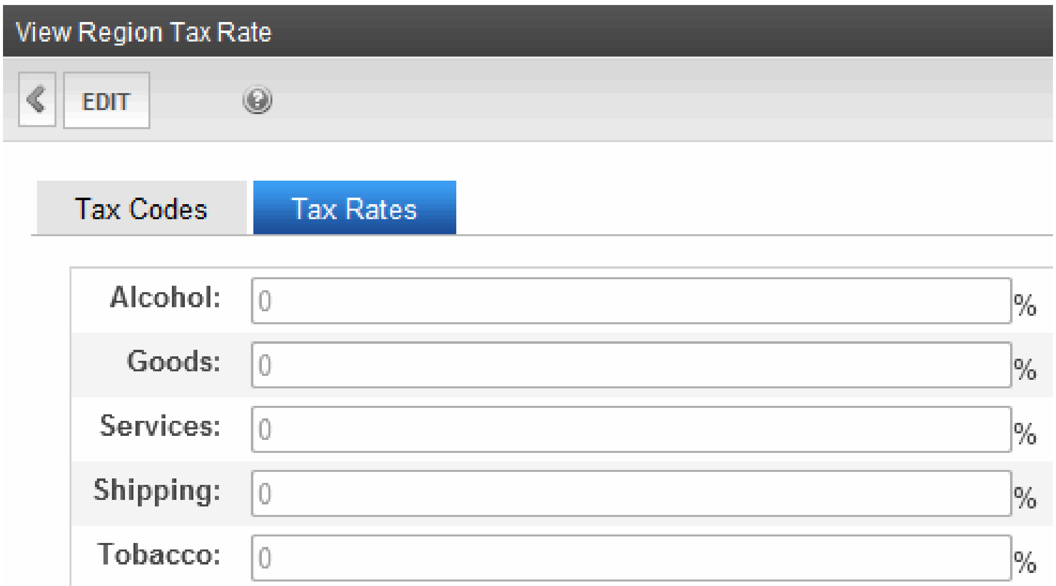
Editing a regional tax table

A regional tax table is automatically created for every existing region. By default, tax rates are zero (0). To change any tax rate:

1. Go to **Settings > Commerce > Tax > Regional Tax Tables**.
2. Click on the name of the region for which you want to set tax rates. The View Region Tax Rate screen appears.



3. Click **Click here to edit the tax rates**.



4. Click **Edit**.
5. Enter information into the following fields.
   - **Name**. Select the region for which you want to enter a tax rate.
   - **Enabled**. Enable or disable the regional tax entry as required.
6. Select the **Tax Rates** tab and specify regional tax rates by class. For example, Alcohol, Goods, Services, Tobacco, and Shipping. For any tax class, enter a tax rate.
7. Click **Save**.

Deleting a regional tax table

1. Go to **Settings> Commerce > Tax > Regional Tax Tables**.
2. Click the ID of the tax table that you want to delete.
3. Click **Delete** ( ).
4. Click **OK**. The regional tax table is deleted.

Configuring country tax tables

Use country tax tables to identify nations that apply taxes to eCommerce catalog entries. For example, Ethiopia applies a 5% tax on goods purchased on the internet and shipped to it.

Editing a country tax table

A country tax table is automatically created for every existing country. By default, tax rates are zero (0). To change any country tax rate:

1. Go to **Workarea > Settings > Commerce > Tax > Country Tax Tables**.
2. Select the country for which you want to edit a tax table. The View Country Tax Rate screen appears.
3. Click **Click here to edit the tax rates**.
4. Click **Edit**.
5. Select the Tax Rates tab and edit the tax rates, for example, Alcohol, Goods, Services, Tobacco, and Shipping. For any tax class, enter a tax rate.
6. Click **Save**.

Deleting a country tax table

1. Go to **Workarea > Settings > Commerce> Tax > Country Tax Tables**.
2. Click the ID of the tax table that you want to delete.
3. Click **Delete** ( ).
4. Click **OK**. The country tax table is deleted.

Creating product types and catalogs

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

After you configure the eCommerce site, build eCommerce products in the following order:

1. *Creating product types* below
2. *Creating a catalog folder* on page 1687
3. *Creating a catalog entry* on page 1689

Creating product types

Create a separate *product type* definition for each category of catalog entries that you sell. For example, you might have a product type for movies, another for books, a third for electronics, and so on.

When thinking about creating new product types, the most significant differences are the **Class** field and the content page, which defines the XML Smart Form for products you will create for a Product Type.

Product classes

A catalog entry's *product class* affects customers' purchasing options.

- **Kit**. Lets a customer (site visitor) select from any number of free-text options. Options can increase or decrease the overall price. See also: *Creating a kit* on page 1677.

  Example: A computer whose price changes as a customer selects RAM, hard drive, monitor, and so on.

- **Bundle**. A catalog entry consisting of several other catalog entries bundled together. Its pricing, shipping, images, and so on, are independent of the individual items. See also: *Creating a bundle* on page 1679.

  Example: A living room set: couch, end tables and lamps. Instead of buying each item separately, the customer buys all for a "package" price.

- **Product**. Simple or complex catalog entries. A complex product is a "wrapper" that provides links to related simple products. Each simple product has its own SKU, price, inventory data, and so on. See also: *Creating a complex product* on page 1680.

  Example: A movie in 3 formats and prices:

    - VHS ($12.95)
    - DVD ($14.95)
    - Blu-ray ($17.95)
- **Subscription**. A catalog entry which can provide access to designated site pages, and may billed on a recurring basis. See also: *Creating a subscription* on page 1682.

  Example: website content that is only available to subscribed members

How product types affect the creation of catalog entries

Catalog folders generally contain the same kind of catalog entries, such as DVDs or digital cameras. Some information applied to a catalog folder is inherited by all entries in the folder.

After you create product types, apply appropriate types to existing catalog folders using the Catalog Properties screen's **Product Types** tab. Then, when creating a new catalog entry, you first go to a catalog folder. Next, click **New** and choose a product type assigned to the folder. See also: *Assigning a catalog folder's product type* on page 1688

A product type determines the following aspects of the associated catalog entries:

- Product class. *Product classes* on the previous page.
- Attributes. *Step 1: Defining properties, attributes, and media defaults* below Attributes define additional information about catalog entries based on this product type. For example, if the Product Type is for movies, attributes might be Actors, Running Time, Rating, Year Released, and so on. In another example, you want an attribute that describes a chair's dimensions. You create a text-based attribute for the Product Type you will use to add chairs to a catalog. Then, whenever you add a new chair to the catalog, you enter its dimensions into the **Attributes** tab's **Dimensions** field. By default, Attributes appear on the Product server control.
- Media defaults (that is, size of thumbnail images added to a catalog entry). *Step 1: Defining properties, attributes, and media defaults* below
- Content page. *Step 2: Creating the content page* on page 1686

There are 2 steps to creating a product type.

- *Step 1: Defining properties, attributes, and media defaults* below
- *Step 2: Creating the content page* on page 1686

Step 1: Defining properties, attributes, and media defaults

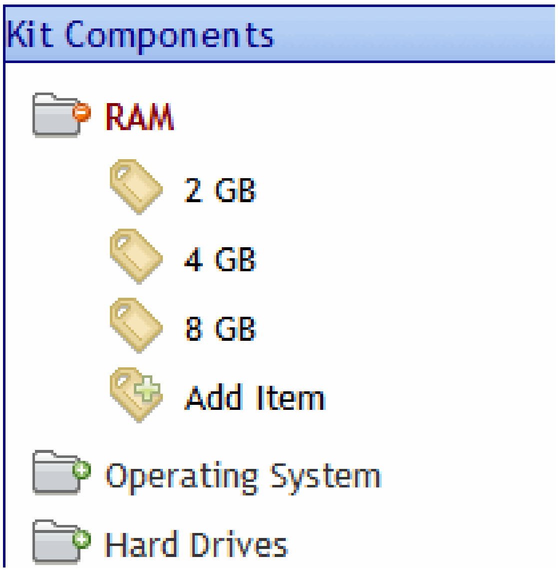
To create a product type:

1. Go to **Workarea > Settings > Commerce > Catalog > Product Types > New > Product Type**.
2. Click the **Properties** tab.
3. Enter a unique product type title in the **Title** field. The title identifies this entry on the View Product Types screen. Also, when creating a new catalog entry, users must pick a product type from the catalog's **New** menu.
4. Enter a description for the product type in the **Description** field.
5. Select a product class from the **Class** drop-down menu. For information about how class types affect how products are displayed, see *Creating a kit* below, *Creating a bundle* on page 1679, *Creating a complex product* on page 1680, and *Creating a subscription* on page 1682. In some cases, you will need to perform additional steps on other screens.
6. Click the **Attributes** tab.
7. Click **Add Attribute**. The Add Attribute dialog box appears.
8. Enter an attribute name in the **Name** field, such as **color**.
9. Choose a data type from the **Type** drop-down menu.
   - Text
   - Date
   - Number
   - Yes or No (boolean)
10. Click **OK**. When a customer views the chair's product page, the customer sees the attribute text below the thumbnails.
11. Click the **Media Defaults** tab.
12. Click **Add thumbnail**. The Add thumbnail dialog box appears.
13. Enter a name for the thumbnail in the Name field.
14. Specify the size if the thumbnail in pixels using the **Width** and **Height** fields.
15. Click **OK**.
16. Click Save. The XML Smart Form editor appears, as described in *Step 2: Creating the content page* on page 1686.

Creating a kit

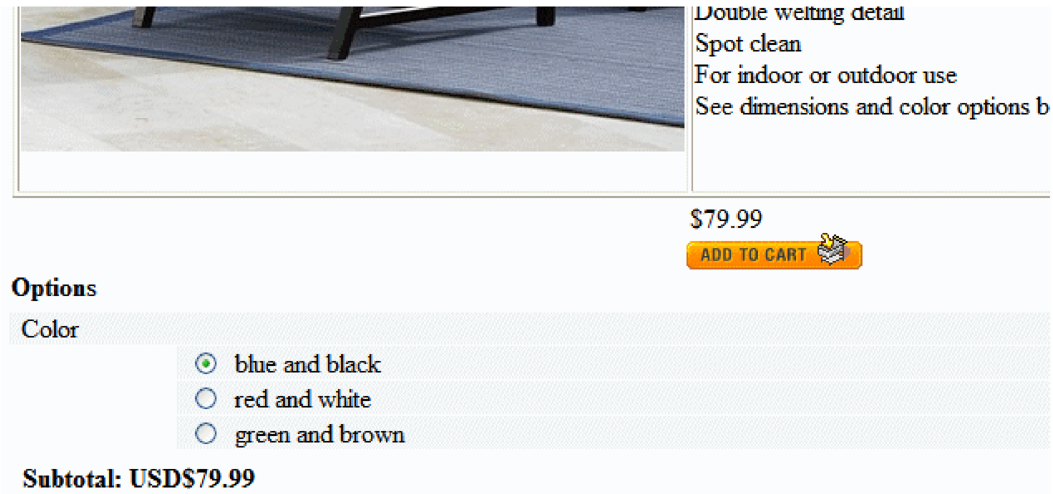
A kit is a type of catalog entry that allows a customer to select from free-text options, which can affect the item's price. The options can also be placed into logical groups.

For example, if a catalog entry is a laptop computer, one group may let you enter options for RAM, another for operating system version, and a third could present hard drive options.

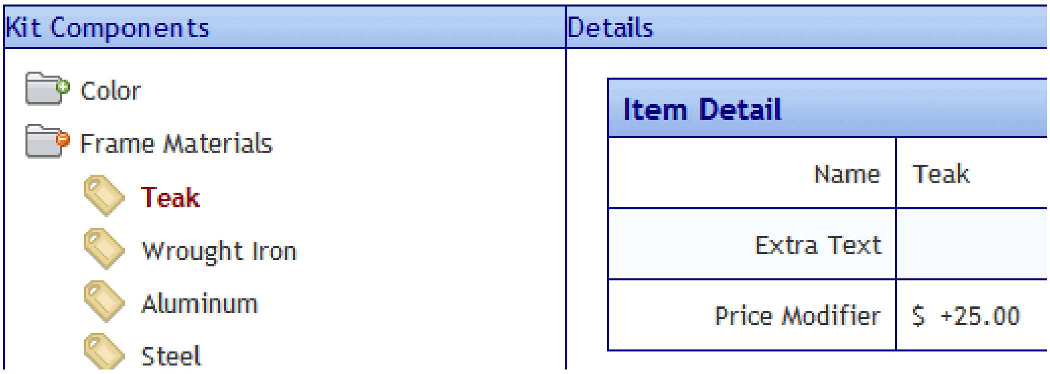


There is no limit to the number of groups you can add, nor the number of options in a group. All groups and options are simple text, created on a kit's **Items** tab as needed, and can accommodate a price modifier. The following example shows how to set up chair color combinations.

In this example, the options do *not* affect the price. Here is how the options appear on a product page.



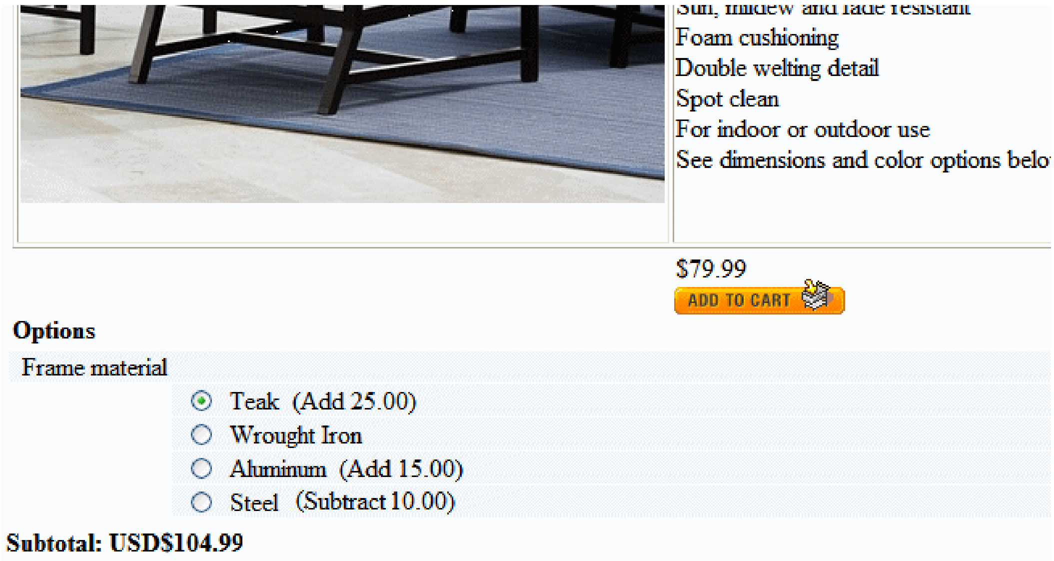
Consider another example in which the price does change. In this case, use the Item screen's **Price Modifier** field to adjust price based on the chair frame. For example, if the chair frame is teak, the sale price increases by $25.00.



Other chair materials might adjust the price.

- Wrought Iron. $0.00
- Aluminum. +$15.00
- Steel. -$10.00

Note how the **Price Modifier** can either increase or decrease the sale price. Here are these options on the product page.



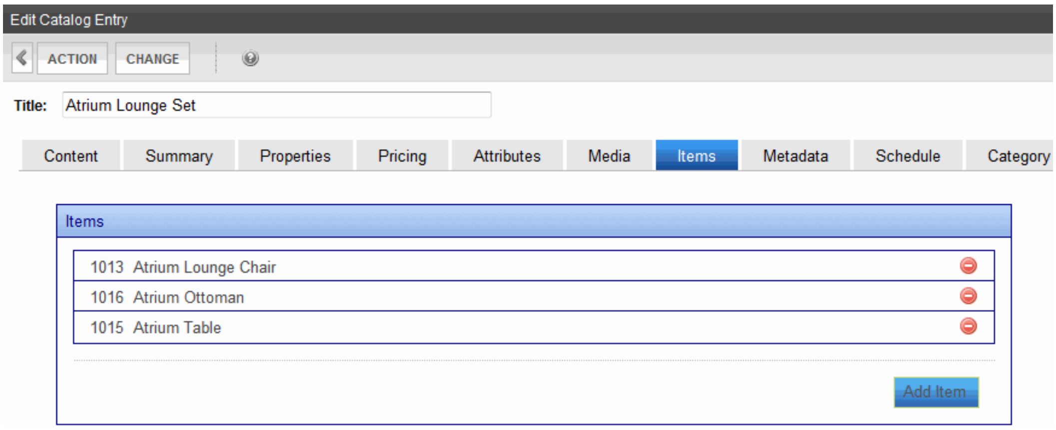
The chair's base price is $79.99, and the teak frame increases it to $104.99.

Creating a bundle

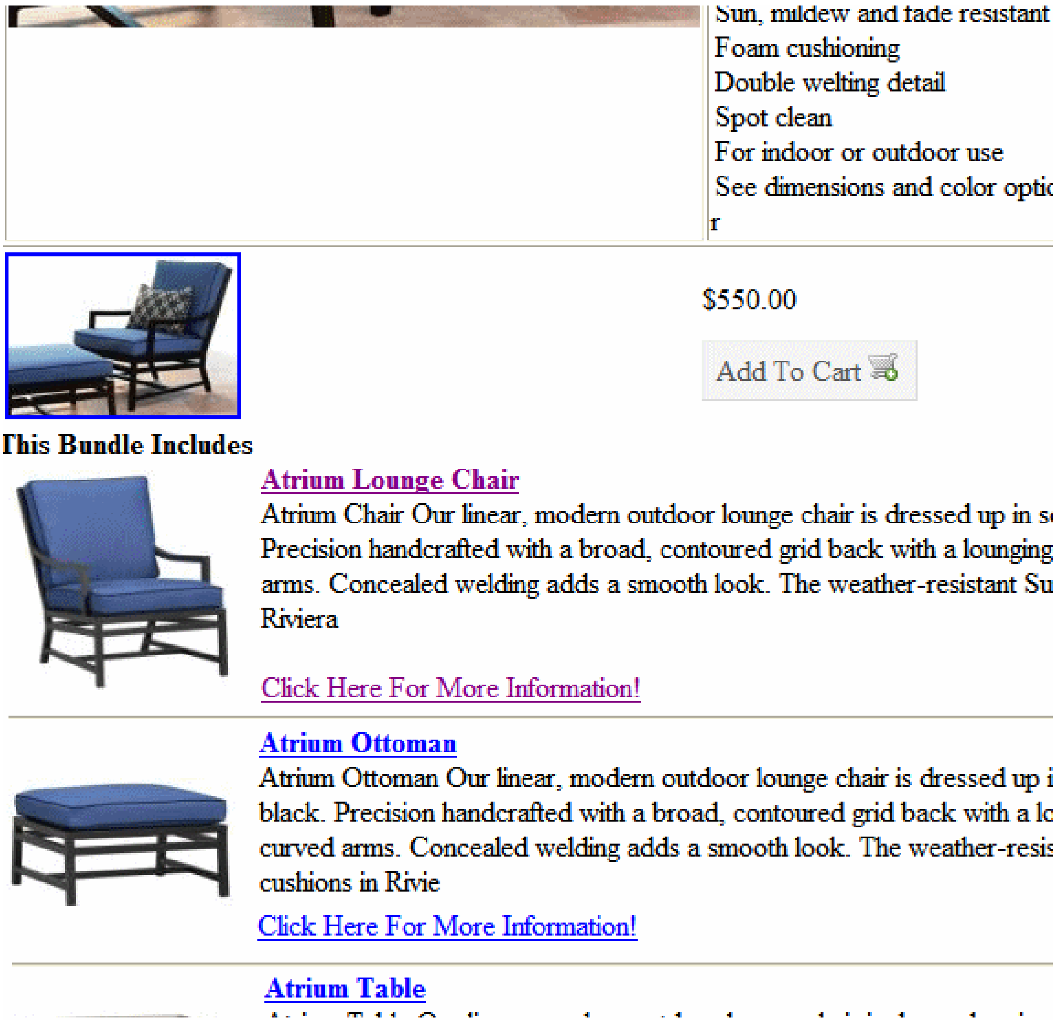
A bundle consists of several simple products. You would use it to combine several existing products into one "umbrella" catalog entry. That entry captures pricing, SKU number, shipping, and inventory information for the bundle. The information for the individual entries that make up the bundle are not affected when one is ordered.

As an example of a bundle using furniture, assume your eCommerce site sells a chair, a table, and an ottoman separately. You also sell them together as a set.

Use a bundle to define the set, add pictures, pricing, and so on. On the bundle's **Items** tab, you select the individual catalog entries that make up the bundle.



Here is how this bundle looks on a product page.



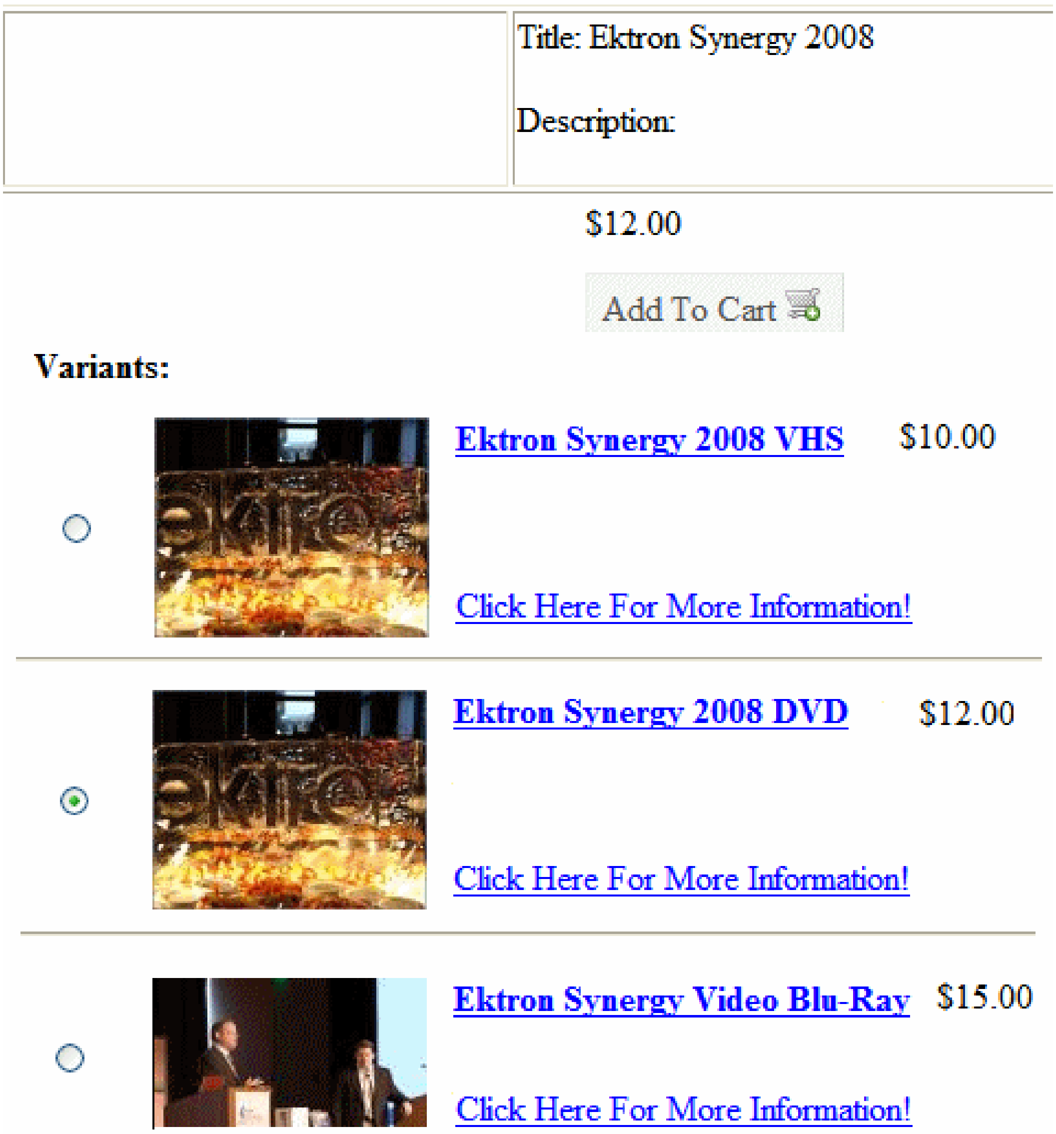
Creating a complex product

A Complex Product is similar to a bundle in that one catalog entry serves as an "umbrella" for other entries. However, unlike a bundle, a customer must select one of the catalog entries. So, the price is that of the selected entry, not the umbrella item.

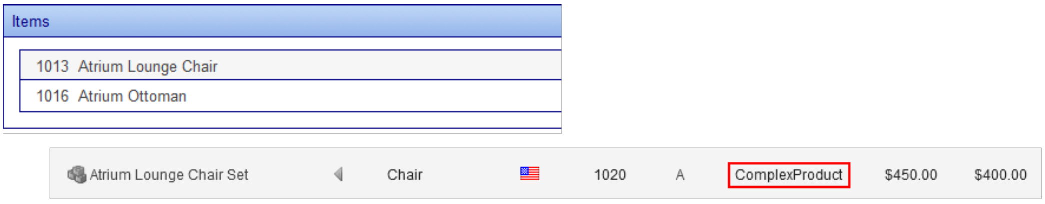
The advantage of a Complex Product is its ability to consolidate several related items under one title, yet lets customers choose the item they want. Because each item under the umbrella is its own catalog entry, it is priced and tracked separately.

For example, a site sells movies in 3 formats: VHS, DVD, and Blu-ray. Each is priced differently. To accommodate this, create catalog entries for the movie in each format, assigning images, SKU number, pricing, dimensions, and so on. Then, create a Complex Product, make its title the title of the movie, and use the **Items** tab to select the catalog entries of the individual formats.

The Product List or Product Search control displays the Complex Product, which is the movie title. When a customer selects that, the customer sees the product page, which lists the format and price of each assigned catalog entry. The customer can only choose one.



Unlike the Kit or Bundle, a complex product does not have its own product class. Instead, you create a catalog entry whose product class is **Product**, then assign other catalog entries to it via the **Items** tab. As soon as you assign one catalog entry via the **Items** tab, the original catalog entry is converted to a Complex Product.



Note that the price of the “umbrella” product appears on the Product List and Product Search server controls. This can be misleading, since the price of individual items within the complex product can vary.

You cannot apply tier pricing to a complex product. See also: *Tier pricing* on page 1697

Creating a subscription

A subscription is a good or service which

- can be billed on a one-time or a recurring basis
- places users who purchase it into a designated membership group, letting you grant them access to private content

Examples include

- content only available to members who purchase a subscription
- a gym membership
- a book club, in which a customer makes the same payment and receives a different book each month
- anti-virus software that expires after 12 months
- a 3-year maintenance contract on a digital television, payable yearly

If you use the recurring billing feature (a series of scheduled payments), the bill can be generated for any number of months or years, but no other time increments. Each payment must be the same for the subscription’s term. The term begins when a customer submits the order.

Customers cannot apply a cart-level coupon to a subscription-based catalog entry. See also: *Creating a coupon* on page 1708.

Creating a subscription-based catalog entry

Creating a subscription is the similar to creating a regular catalog entry:

1. Create a subscription-based Product Type. On the Product Type screen’s **Class** drop-down, select **Subscription**.
2. Assign the Product Type to a catalog folder. See also: *Creating a catalog folder* on page 1687.
3. In that folder, create a catalog entry for each subscription.

4. On the **Pricing** tab, enter the cost.

   If using recurring billing, enter the term of the subscription. To learn about **Recurring Billing** fields, see *Entering recurring billing information* below.

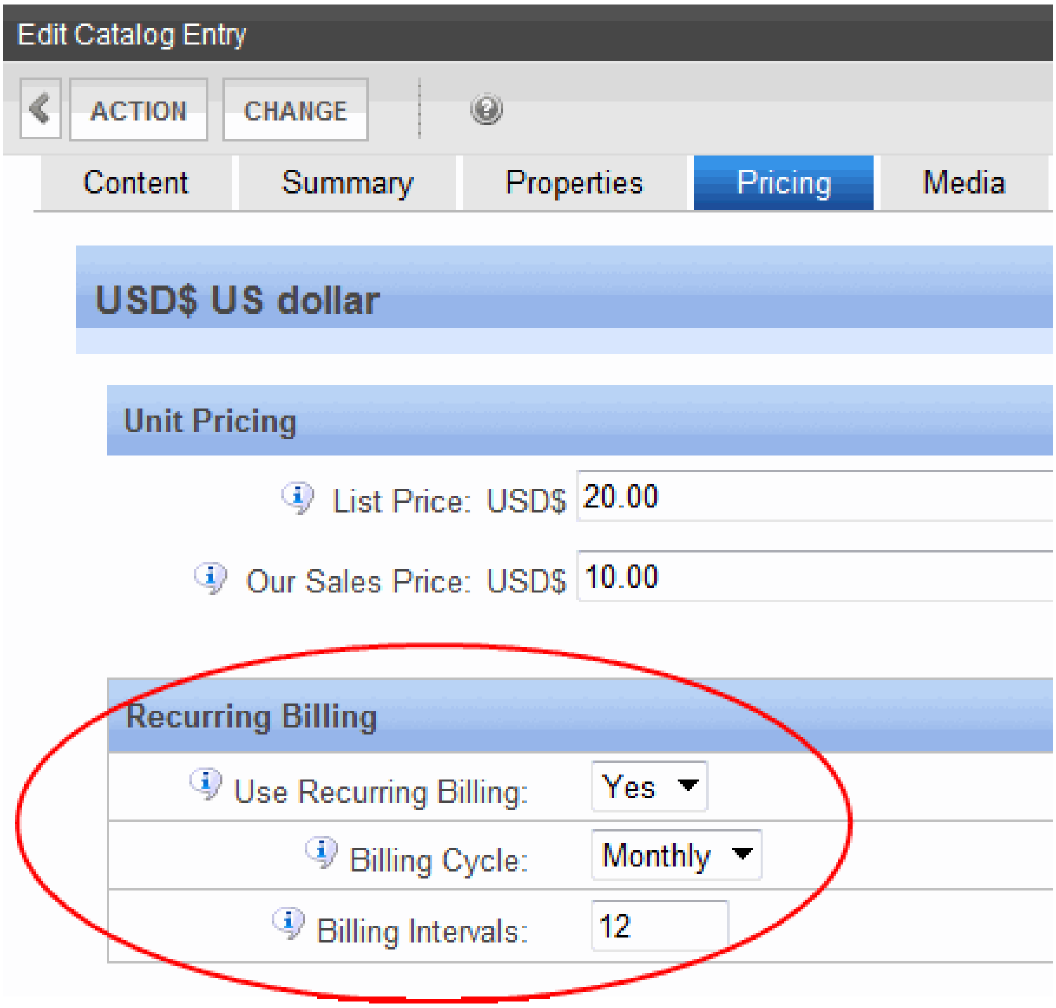
   If this product does not use recurring billing, click **No** at the **Use Recurring Billing** drop-down. To learn about the **Unit Pricing** fields, see *Entering a catalog entry's price information* on page 1695.
5. On the **Items** tab, assign membership and Ektron user groups. See also: *Assigning groups to a subscription-based catalog entry* on page 1685.
6. If a subscription provides access to Ektron content, use its folder Permissions screen to grant permission to the membership and Ektron user groups you defined in Step 5. See also: *Subscriptions involving Ektron content* on page 1686.

Subscription-based products do not support tier pricing. See also: *Tier pricing* on page 1697.

Entering recurring billing information

IMPORTANT: Due to differences in the way payment gateways work, you should test recurring payments with your gateway before processing live transactions.

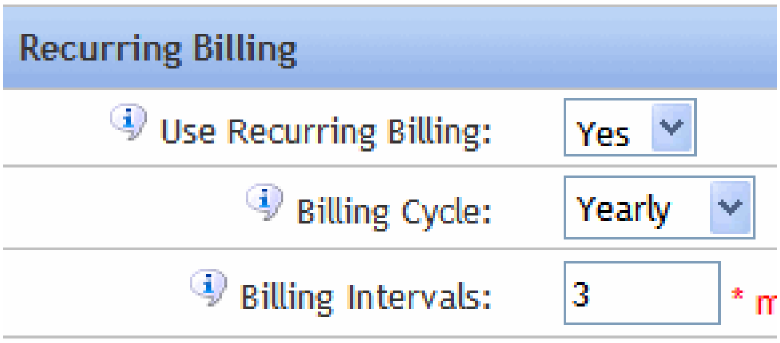
The **Pricing** tab's **Recurring Billing** area of a subscription-based catalog entry lets you determine if a subscription is billed on a one-time or a recurring basis. If recurring, it helps you define the terms.



To set up recurring billing:

1. Select **Yes** from the **Use Recurring Billing** drop-down. The recurring billing term begins when a customer submits an order, and is based on a number of months or years.
2. Select a time interval from the **Billing Cycle** drop-down.
3. Enter a number of **Billing Intervals** for which a customer is charged. For example, if a customer should be charged once a month for 12 months, complete the screen as shown above. If a customer purchases the item on June 1, 2013, the person's credit card will be billed on the first of each month from June 1, 2013 to May 1, 2014.

As another example, if a customer should be charged once a year for 3 years, complete the screen as shown.



If a customer purchases the item on June 1, 2013, the person's credit card will be charged on the following dates.

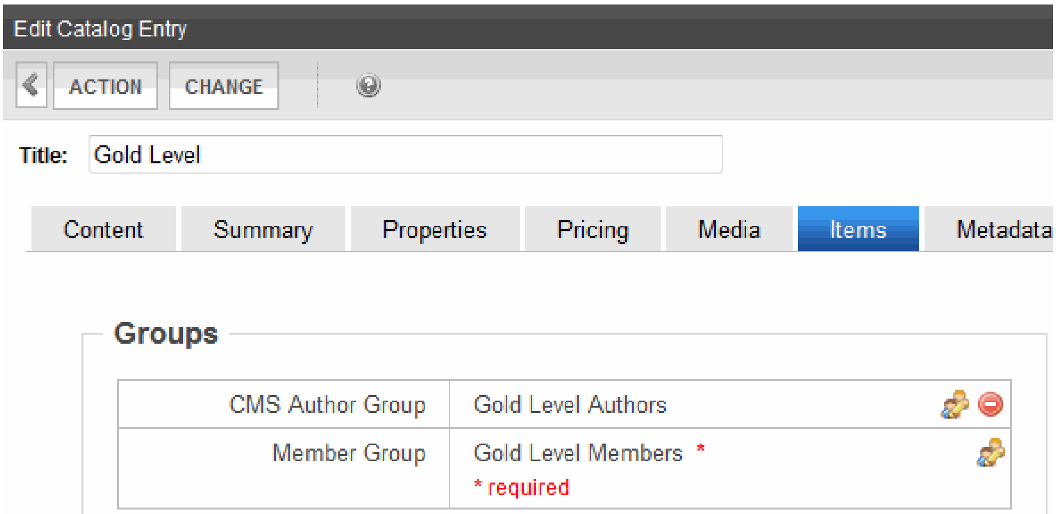
- June 1, 2013 (purchase date)
- June 1, 2014
- June 1, 2015

Assigning groups to a subscription-based catalog entry

You *must* assign a membership user group to a subscription-based catalog entry. Optionally, you *can* assign an Ektron user group. You assign groups via the subscription’s **Items** tab.

See also: *Membership groups* on page 1514

So, as part of setting up a subscription, you must either create new membership and (possibly user) groups, or use existing groups.



All users (identified by their email address) who purchase the product are automatically added to one of the groups. Ektron checks a user’s email address to determine if the user is an Ektron or a membership user.

- Ektron users are added to the group defined in the **CMS Author Group** field
- Non-Ektron users are added to the membership group defined at the **Member Group** field

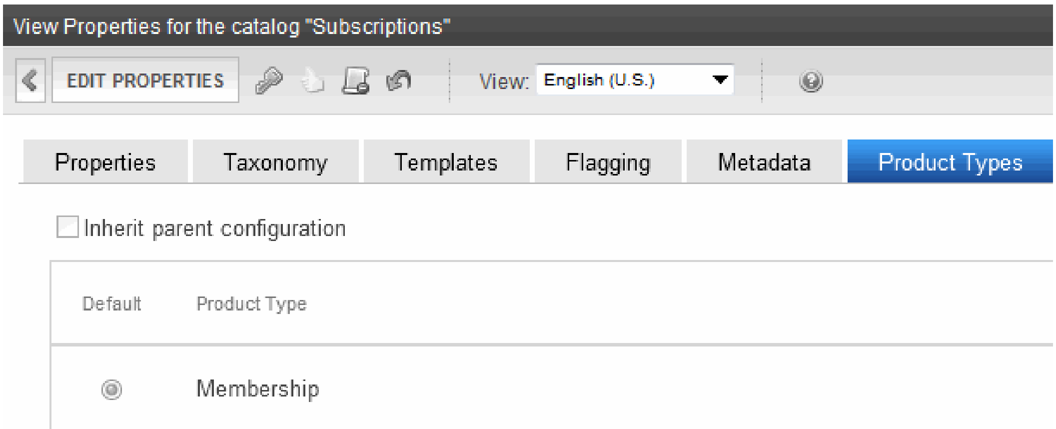
Subscriptions not involving Ektron content

If a subscription does not involve access to Ektron content, the membership group provides a list of customers who purchased the subscription. You can use the list to manage the accounts, notify them when the subscription is about to expire, and so on.

Subscriptions involving Ektron content

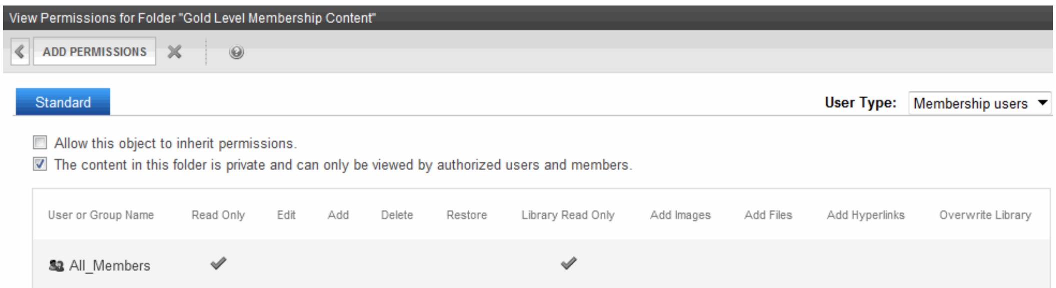
If a subscription involves access to Ektron content:

Create a folder and enable one or more subscription-based product types on its Product Type screen.



Place the subscription products in that folder. Customers shop for and purchase this content on your website as they do all products, via eCommerce server controls.

Then, create a regular content folder in which to create the confidential content. Next, use the content folder's Permissions screen to grant the subscription user groups access to that folder.



See also: *Managing folder and content permissions* on page 160 and *Assigning membership permissions* on page 1516

Step 2: Creating the content page

After you complete and save the Add Product Type screen, a new screen lets you enter XML Smart Form information. On this screen, you set up fields to collect information for the *content page* of catalog entries based on this product type.

The content page appears on the Product server control, describing this catalog entry to customers. The process of creating a product type content page is the same as creating an XML Smart Form, described in *Adding a Smart Form configuration* on page 819.

Editing a product type

1. In the Workarea, **go to Settings > Commerce > Catalog > Product Types**.
2. Click the product type that you want to edit.
3. See *Step 1: Defining properties, attributes, and media defaults* on page 1676.

NOTE: You cannot edit a Product Type's Class.

Viewing an attribute's published status

Each attribute has a publication status. To view attribute status, go to **Settings > Commerce > Catalog > Product Types**, select a product type and click the **Attributes** tab.

- **Active**. Attribute can be assigned to catalog entries
- **Inactive**. Attribute already assigned to one or more catalog entries, but can no longer be assigned. To make an attribute inactive, click the corresponding **Mark for Delete** ( ).
- **Not Published**. Attribute has been created but Product Type not saved yet
- **Active** (marked for delete with strike through). Attribute will be deleted when Product Type is saved.

You can delete an attribute only if it is *not* applied to a catalog entry. If you try to delete an attribute applied to a catalog entry, it is marked "Inactive." Inactive attributes can no longer be assigned.

Deleting a product type

PREREQUISITE

The product type is not assigned to any catalog entries.

1. In the Workarea, go to **Settings > Commerce > Catalog > Product Types**.
2. Click a product type you want to delete.
3. Click **Delete** ( ).
4. Click **OK**.

Although you cannot delete a product type that is being used, you can prevent users from creating new catalog entries based on it. To do this, go to each applicable folder's Catalog Properties > Product Types screen and remove that product type.

Creating a catalog folder

PREREQUISITE

One or more product types.

A catalog folder is a special kind of Ektron folder designed to hold eCommerce entries. Its unique icon ( ) distinguishes it from other folder types. If you are familiar with content folders, much of that information applies to catalog folders. See also: *Setting up your CMS folder structure* on page 141

A Catalog folder's properties screen has several tabs/screens. The following screens are the same as regular content folders.

- **Properties**. See *Setting folder properties* on page 150
- **Taxonomy**. See *Organizing content with taxonomies* on page 1253
- **Templates**. See *Working with templates* on page 769
- **Flagging**. See *Defining flags for content* on page 1590
- **Metadata**. See *Assigning metadata to a folder* on page 764
- **Breadcrumb**. See *Navigating a website with breadcrumbs* on page 1321
- **Aliasing**. See *Creating user-friendly URLs with aliasing* on page 1293

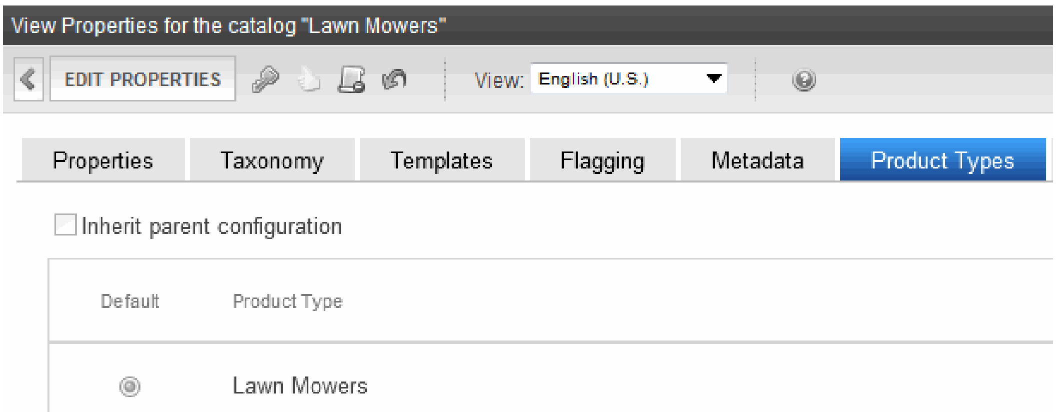
The unique screen is **Product Types**. See also: *Assigning a catalog folder's product type* below.

Like content folders, the following catalog folder information can be inherited from its parent or uniquely set for each catalog. You can only make changes after creating the catalog.

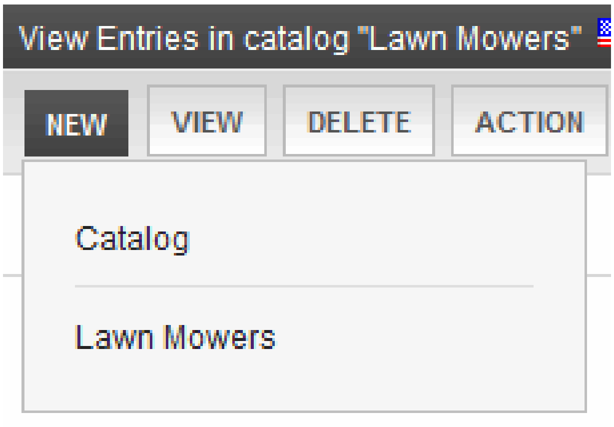
- **Permissions**. See *Managing folder and content permissions* on page 160
- **Approvals**. See *Approving content for publication* on page 689
- **Purge History**. See *Purging content history* on page 159
- **Restore Web Alert Inheritance**. See *Assigning a Web Alert to a folder or content* on page 1383

Assigning a catalog folder's product type

A catalog folder's **Product Types** screen lets you identify product types upon which catalog entries can be based. For example, you created a lawn mower Product Type, and want only lawn mowers to be entered in a catalog folder. In this case, open a catalog folder's **Product Types** tab, break inheritance if necessary, and select Lawn Mower as the catalog's only product type.



Then, when an Ektron user creates an entry in this catalog, the user must use the Lawn Mower product type.



Deleting a catalog folder

PREREQUISITE

No catalog entries in the folder have been placed on an order

1. Go to the folder that you want to delete.
2. Choose **Delete > This Catalog**.
3. Click **OK**.

Searching a catalog folder

Searching a Catalog folder is the same as searching any other type of Workarea folder. This procedure is described in *Searching the Workarea* on page 363.

Creating a catalog entry

PREREQUISITE

One or more catalog folders.

A *Catalog entry* is the eCommerce term that describes a product sold on your website. It is similar to content in the rest of Ektron, so those concepts also apply to catalog entries.

Catalog entries are built from Ektron XML Smart Forms, so use the same content and folder structure as other Smart Forms. See also: *Working with Smart Forms* on page 815

Catalog entries share the following features with regular content:

- content status
- workflow and permissions
- metadata
- schedule

- can be private
- history and the ability to restore previous versions
- search
- taxonomies to categorize products

Catalog entries also have unique information:

- Tax Class—Determines which taxes apply to item
- Physical dimensions—Used to calculate shipping costs
- Inventory tracking
- Pricing—Can be fixed or variable for any currency
  - *tier pricing*—Pricing adjusts when quantity reaches new plateau. For example, 1-9 items cost $500 each. But if 10 are sold, the price drops to $450 each.
- Images (full sized and thumbnail) to display the product on your website

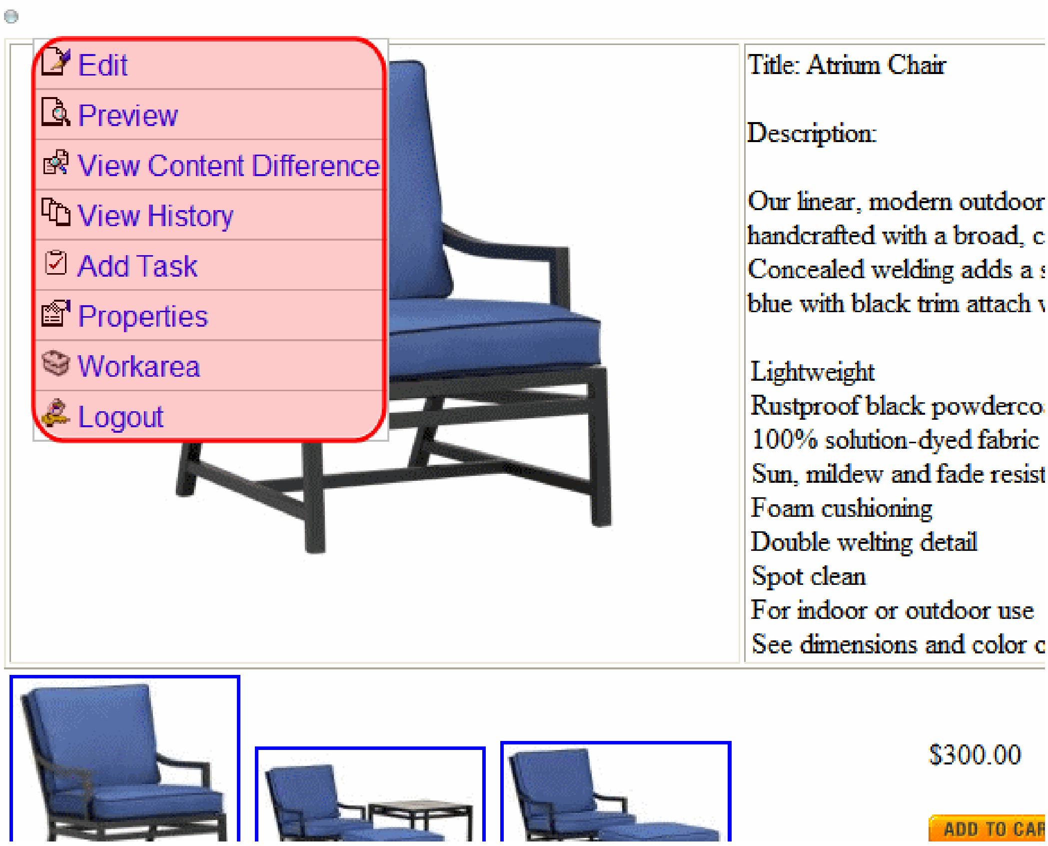
Because there is so much information to provide about managing catalog entries, this section takes 2 approaches:

- *Creating a catalog entry* on the previous page describes how to work with catalog entries: create them, delete them, and so on.
  - *Creating/updating catalog Ee* below
  - *Deleting a catalog entry* on the facing page
  - *Recommending related products to a customer* on page 1705
  - View and restore a previous version of a catalog entry—Go to **catalog folder > select catalog entry > View Menu > Content History option**. See also: *Managing versions of content* on page 643
  - Edit permissions for a catalog entry—To enable this, break permission inheritance. Then, assign permissions to selected users. See also: *Setting permissions for content* on page 164
  - Edit inherited workflow—First break permission inheritance, and assign permission to users who need to be in the workflow. Then, update the catalog entry's workflow. See also: *Approving content for publication* on page 689
  - Make a catalog entry private, so that the website search does not find it—See *Making content private* on page 637
  - Archive a catalog entry—See *Setting archive options* on page 642
  - *Displaying catalog entries on your website* on page 1704
- The following topics describe all accessible options (tables, menus, and so on) from the catalog entry screen
  - *Tabs on the catalog entry screen* on page 1692
  - *Menu options on the catalog entry screen* on page 1693
  - *Folder view menu options* on page 1702
  - *Content view menu options* on page 1703

Creating/updating catalog Ee

1. For information about the catalog entry screens, see *Tabs on the catalog entry screen* on the next page) The required fields are:
   - content **Title**
   - **Properties** tab > **SKU Number**
   - any fields on the content screen that your Ektron administrator has designated as required
2. Check in or submit/publish the content.

After signing in to your website, you can also update a catalog entry's information from there using the context menu.



If a new catalog entry is similar to an existing one, you might find it quicker to copy the existing entry then edit the fields that are different. Moving a catalog entry is the same as moving content. See *Moving or copying content* on page 629

Deleting a catalog entry

PREREQUISITES

- Catalog entry is not on an order, or checked out.
- You have delete permission for this catalog folder. See also: *Managing folder and content permissions* on page 160

BEST PRACTICE

Avoid deleting catalog entries due to the affect on your website. For example, if you delete an entry from your staging site, then run eSync, that entry is removed from all active carts on your live site. Instead of deleting entries, you should archive them using the **Properties** tab's **Archived** checkbox.

If you want to prevent customers from purchasing an item, but you cannot delete it because it has been placed on existing orders, you have 2 options.

- Uncheck its **Buyable** checkbox, located on the Properties screen. If you do, the product still appears on your website, but the **Add to Cart** button does not appear next to it.
- archive it, using the **Archived** check box on the Properties screen (circled above). In this case, the product does not appear on your website.

To delete a catalog entry:

1. Go to the catalog folder that contains the entry.
2. Click the entry.
3. Choose **Action > Delete**. A warning message appears.
4. Click **OK**. The catalog entry is deleted.

Tabs on the catalog entry screen

- **Content**. The entry's content page. See also: *Entering a catalog entry's content* on page 1694.
- **Summary**. The content summary, by default the first 40 characters of the content text. See also: *Entering a catalog entry's summary* on page 1694.
- **Properties**. eCommerce information about the catalog entry:
  - SKU number
  - Number of Units
  - Tax Class
  - Archived
  - Buyable
  - Dimensions
  - Inventory

  See also: *Entering a catalog entry's properties* on page 1694
- **Pricing**. Lets you define list and sales price
  - For each enabled currency, you can set a fixed price or have it float with exchange rate
  - Allows tier pricing
  - For subscription products, you enter recurring billing interval and term

  See also: *Entering a catalog entry's price information* on page 1695
- **Attributes**. Additional information to help describe a catalog entry. See also: *Entering a catalog entry's attributes* on page 1698

- **Media**. Lets you add images that appear on several eCommerce server controls. See also: *Entering a catalog entry's media* on page 1700
- **Items**. Catalog entries that you are adding to this "umbrella" item. See also:
  - If you add catalog entries to a simple product, it becomes a complex product. See also: *Creating a complex product* on page 1680
  - For bundles, add catalog entries that make up a bundle. *Creating a bundle* on page 1679
  - For kits, enter groups and their options. See also: *Creating a kit* on page 1677.
  - For subscription products, define membership and Ektron user groups to which users are assigned when they purchase the subscription. *Creating a subscription* on page 1682
- **Metadata**. Enter meta tags, title tags, and so on. *Working with Metadata* on page 755 When viewing the metadata screen in view mode only, you see the catalog entry's **Product Icon**. The product icon is set on the **Media** tab. See also: *Using images in eCommerce* on page 1619.
- **Alias**. View and edit the catalog entry's manual primary alias. View all automatic aliases assigned to this catalog entry. This tab only appears if Aliasing is enabled.See also: *Creating user-friendly URLs with aliasing* on page 1293
- **Schedule**. Lets you control when a version of a catalog entry becomes visible on the website. Similarly, you can remove a catalog entry on a predetermined date and time. The **Archive and remain on the site** option is not available with catalog entries. *Scheduling content* on page 640.
- **Comment**. View comments on changes made when editing a catalog entry. To view and edit catalog entry comments, open the editor and choose **Change > Comment**. The comment also appears on the View Content and Content History screens. Use it to help distinguish one version from another.
- **Tasks**. View tasks assigned to this catalog entry. To add a task from the View Entry screen, click **Action > Add Task**. See also: *Assigning and managing tasks* on page 1339.
- **Category**. Add a taxonomy category to the catalog entry. A list of available taxonomies and whether one is required are defined on the Catalog properties screen. This tab only appears if at least one taxonomy is assigned to the catalog folder. *Organizing content with taxonomies* on page 1253.

Menu options on the catalog entry screen

- **Action Menu**
  - **Save**. Saves the catalog entry without leaving the editor. It is a good idea to save your work frequently.
  - **Check in**. Save and check-in the document. This action returns the changed content to the database and exits the editor. It does not submit the content into the workflow. Rather, it allows you and other users to continue changing it.

- **Submit/Publish**
  - **Submit** the content into the workflow. This action also returns the new or updated content to the database and exits the editor.
  - **Publish** the content to the website. Only the last approver in the workflow sees this button. If no workflow is assigned to the content's folder, every authorized user sees this button. See also: *Approving content for publication* on page 689 This action also returns the changed content to the database and exits the editor.
- **Undo checkout**. Exit screen and do not save changes made since you began editing this catalog entry.
- **Change Menu**
  - **Comment**. Enter comments on changes made when editing a catalog entry. The comment also appears on the View Content and Content History screens. Use it to help distinguish one version from another.
  - **Template**. A folder's default template is automatically applied to all content in the folder. However, you can change a content item's template to any of those assigned to the folder.

Entering a catalog entry's content

The **Content** tab displays the content page of this catalog entry's product type. Because the format is customized for your system, this documentation cannot explain how to respond to the fields.

To learn about working with the editor, see *Editing in Ektron* on page 553.

Entering a catalog entry's summary

Creating summary information for a catalog entry is done the same as with any other type of content.

Entering a catalog entry's properties

The Properties screen collects eCommerce-specific information about your catalog entries:

- **SKU**. Enter a unique SKU code for this catalog entry. This is a required field that does not accept a value of zero (0) or a space character.
- **Number of Units**. If this item has a quantity other than one (1) for internal record-keeping purposes only, enter that number.

  For example, a 12 pack of soda. Set **Quantity** is 12 to represent the number of units. But a customer still orders 1 of the item.

  The quantity is not used when this item is ordered, nor does it affect inventory levels. It is used for clerical purposes only.
- **Tax Class**. Select the catalog entry's Tax Class. See also: *Configuring eCommerce tax screens* on page 1666.

- **Archived**. Check this box if you want to *archive* this catalog entry. When archived, customers can no longer see nor order it. Also, Ektron users cannot view an archived catalog entry in its catalog folder via the View Folders screen. To view it, open its catalog folder then select **View > Archive**.

  To make the entry available again on your website, open its archive folder, edit the entry by unchecking the **Archived** check box, and publish it.

  A catalog entry can also be set to Archived status if it reaches its expiration date and its **Schedule** tab > **Action on End Date** field is set to **Archive and remove from site (expire)**.
- **Buyable**. To let customers add this catalog entry to a shopping cart, check this box. Otherwise, uncheck it.

  If a product is *not* buyable, it can still be seen by customers, but its product page does not display an **Add to Cart** button.
- Dimensions—Used to calculate packaging containers and shipping costs. See also: Packages
  - **Tangible Item**.

    Check this box if the item is *tangible*, that is, it has dimensions, weight, and will be shipped to a customer. Examples of non-tangible items are services, warranties, and downloadable software. If a catalog entry is tangible, you must enter its height, width, length, and weight.
  - **Height**. Enter the catalog entry's height. The units of measure are specified in the `web.config` file's `ek_measurementsystem` property.
  - **Width**. Enter the catalog entry's width.
  - **Length**. Enter the catalog entry's length.
  - **Weight**. Enter the catalog entry's weight.
- **Inventory**. eCommerce's inventory system is a provider model, allowing you to connect with third-party inventory systems.
  - **Disable Inventory**. Check this box if you do not want to track inventory activity for this catalog entry. As examples, it is a service contract or a subscription to confidential content on your site.
  - **In Stock**. Enter the number of items on hand for this catalog entry. This number is automatically adjusted when an order containing this entry is submitted. For example, there are 100 items in stock. When an order for 10 is submitted, the **In Stock** value changes to 90. If the amount placed on an order exceeds the **In Stock** amount, the customer see this message "The item ... is not available for purchase. Please remove from cart before submitting order."
  - **On Order**. The number of items that have been ordered but not yet delivered appears.
  - **Reorder**. Enter the **In Stock** quantity at which you need to reorder this item. When the **In Stock** quantity reaches this level, an event is triggered which can be used by an external inventory system to generate a new order.

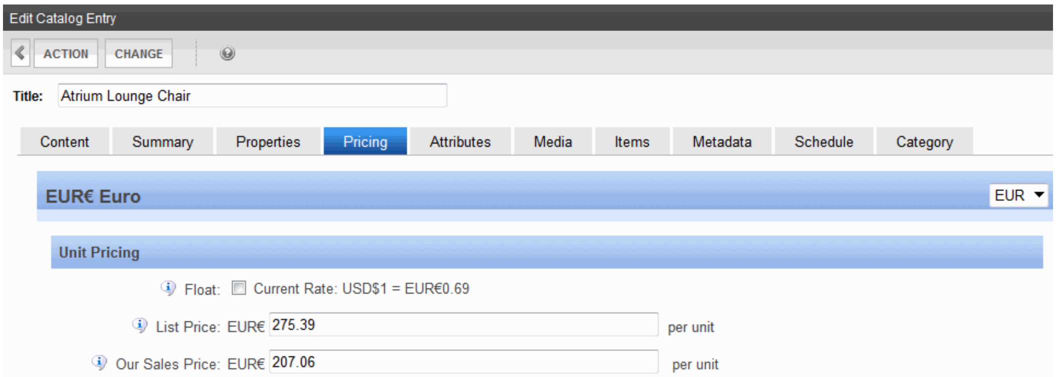
Entering a catalog entry's price information

Use the Pricing screen to enter price information for catalog entries.

- **Currency selector**. Use this drop-down to select a currency for the prices. See also: *Alternate currency pricing* below. Only enabled currencies appear. See also: *Enabling currencies* on page 1637.
- **List Price**. Enter the catalog entry's list, or manufacturer's suggested retail, price. The list price appears on most eCommerce controls but is *not* used in any calculations.
- **Our Sales Price**. Enter the catalog entry's sale price. This price is used to calculate line item totals, coupon discounts, shipping costs, and so on. The sales price appears on most eCommerce controls. .
- **Add Pricing Tier**. See also: *Tier pricing* on the facing page.
- **Recurring Billing** (appears only for subscription-based products). See also: *Creating a subscription* on page 1682.

Alternate currency pricing

By default, the Pricing screen converts prices to every enabled currency using the exchange rate. Customers who select a non-default currency see these prices. See also: *Defining and updating exchange rates* on page 1639.



The **Float** checkbox (checked by default) indicates that prices change as the exchange rate changes.

If you do not want to float a catalog entry's price, but instead fix it for a currency, select the currency, uncheck **Float**, edit the price, and publish. From then on, if a customer selects that currency and catalog entry, the price set on this screen is used. The exchange rate is ignored.

For example, a television costs 700 Euros, regardless of its cost in US dollars or the exchange rate. To incorporate this, do *not* check the **Float** checkbox.

When you first select **EUR** on the **Pricing** screen, the default currency's prices are converted using the exchange rate. For example, the television's sale price is $1000 US dollars, and today's exchange rate is .7811. When you select **Eur** from the **Pricing** screen's currency selector, the television's cost is set at 781.10 Euros. You change the price to 700.00 Euros.

From that point on, the Euro price only changes if an authorized user accesses this screen and changes it manually.

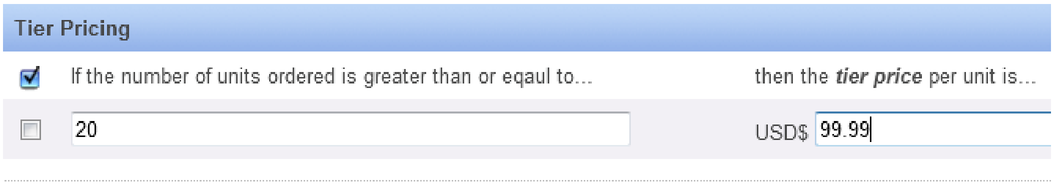
Tier pricing

eCommerce supports *tier pricing*, that is, a pricing schedule that adjusts according to order quantity. Typically, the price is reduced as more items are ordered. For example, if a visitor orders 1-5, items are $10.00 each; 6-10, $9.00 each; 11 or more, $8.50 each.

Tier pricing is not supported for subscription products, nor for complex products.

To set up tier pricing:

1. In the Workarea, open the catalog folder containing the entry to which you want to apply tier pricing.
2. Edit the catalog entry.
3. Click the **Pricing** tab
4. Click **Add Pricing Tier**. The Tier Pricing screen section appears.



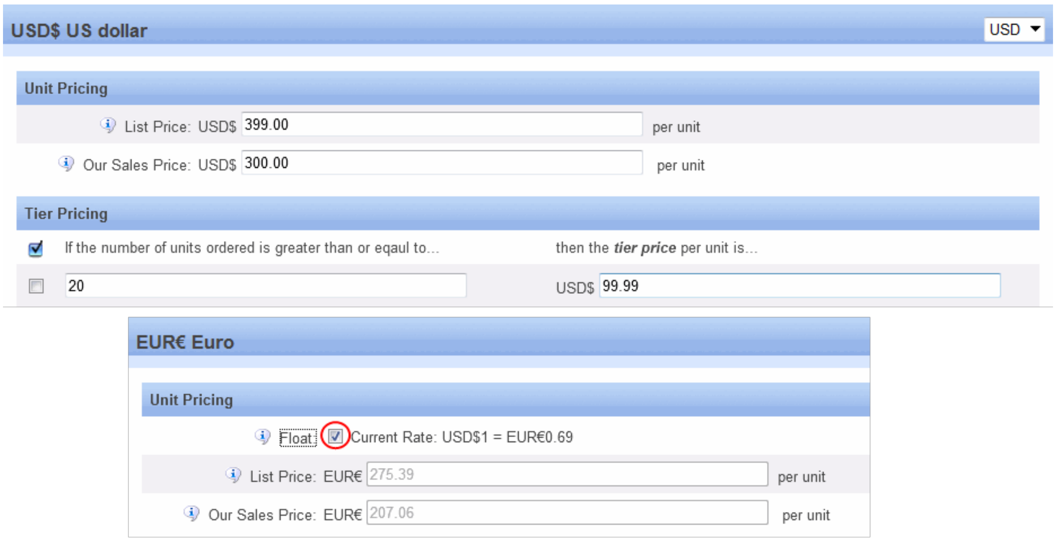
5. In the left column, enter the quantity of items above which the tier price is used.
6. In the right column, enter the price to be used when an order quantity *exceeds* the number in the left column.
7. Enter as many tiers as necessary.

NOTE: To remove a tier, check the box to its left, then click **Remove Pricing Tier**.

Tier pricing and non-default currencies: when floated

If a non-default currency is *floated*, then that currency's pricing tiers mirror the default currency's pricing tier values. The amounts are adjusted by the exchange rate.

These values appear on pricing screen in view-only mode and cannot be changed.



If pricing tiers are set up for the default currency and the user unchecks the **Float** box, the user is notified that the pricing tiers can now be edited. Next, Tier Pricing fields are loaded with the existing values but the user can change values, remove existing tiers, and add new ones.

Tier pricing and non-default currencies: when not floated

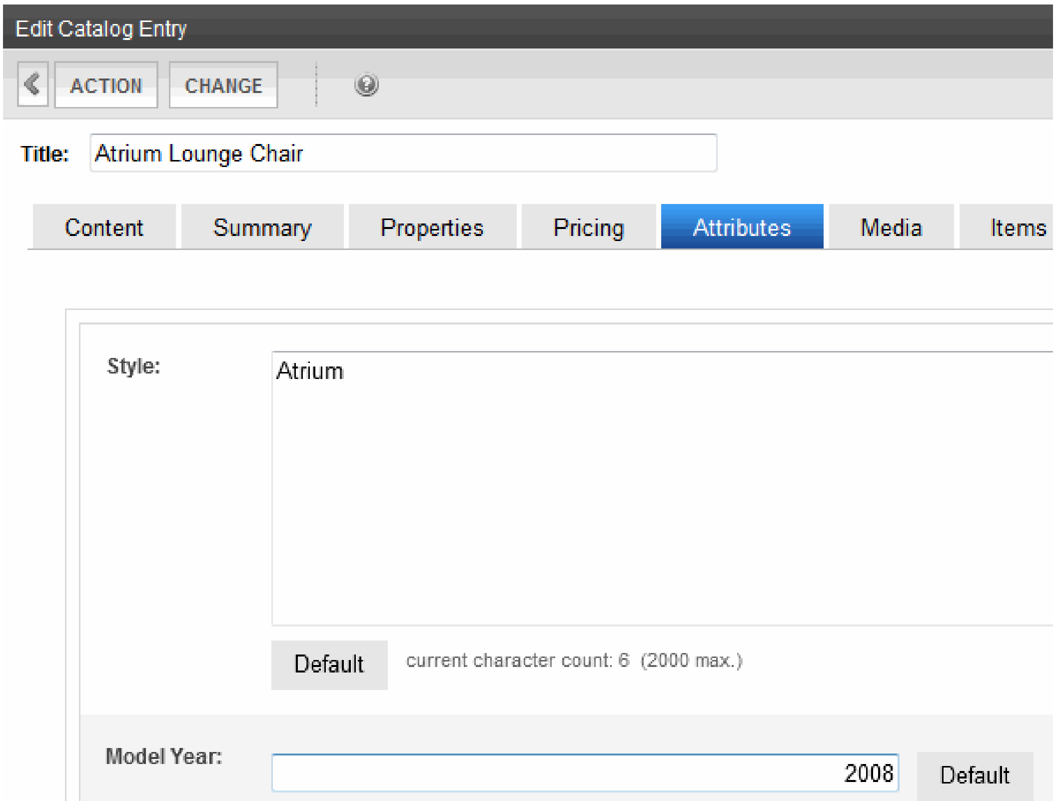
If a non-default currency is *not floated*, its pricing tiers are independent of the default currency's. That is, they do not exist initially regardless of whether they exist for the default currency. If the user clicks **Add Pricing Tier**, **Tier Pricing** fields appear and let the user enter number of units and corresponding tier price per unit.

If pricing tiers are set up for a non-default currency and the user checks the **Float** box, the pricing tiers are changed to mirror those of the default currency. If the default currency has no pricing tiers, then that currency has none. You cannot independently edit a non-default currency's pricing tiers if **Float** is checked.

Entering a catalog entry's attributes

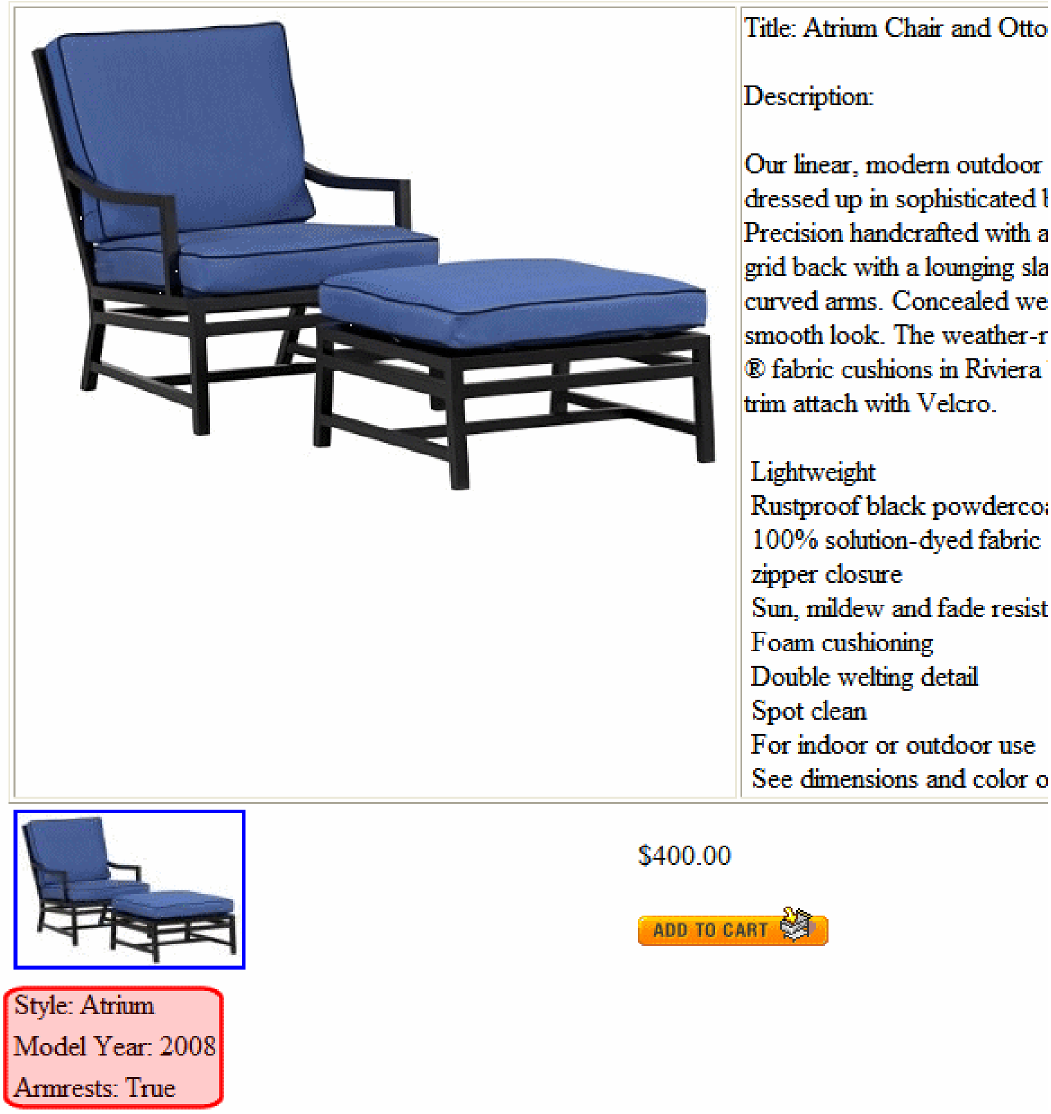
Attributes are additional pieces of information that help describe a catalog entry. Attribute fields, data types, and default values are created as part of a Product Type. When you create a catalog entry, you base it on a product type. The product type's **Attribute** information is imported to the catalog entry. Like metadata that follows Ektron content, if a catalog entry is moved to another folder, its attributes stay with it.

To illustrate the concept, the following attributes are applied to furniture in Ektron's sample site.



In the Workarea, you select a catalog entry then click the **Attributes** tab to enter or modify attribute values. If no attributes are assigned to the product type on which a catalog entry is based, you will not see an **Attributes** tab when working with that catalog entry. You could change model year to **2009**, or style to **Woodland**. You cannot however change fields, field names, or data types.

On your website, a catalog entry's Attribute field names and values appear by default on the Product server control.



Entering a catalog entry's media

Use the **Media** tab to add product images that appear on the following server controls.

- Product (the smallest thumbnail may appear)
- Product List
- Product Search
- Recommendation

See also: *Using images in eCommerce* on page 1619.

Adding a new image

1. Click the **Media** tab.
2. Click **Add New Image**. The add New Image dialog box appears.
3. Enter an image **Title** (required).
4. Enter the image's **Alt text** (required).

5. Click **Browse** and go to the image you want to add.
6. Click **Upload**. The image is uploaded to the *siteroot*/uploadedimages folder and you are returned to the Media tab. The uploaded image appears on the screen, below any existing images.
7. Determine if you want the image's smallest thumbnail to appear on the Product server control by selecting **Yes** or **No** next to **Gallery Display**.
8. If you want to designate the image as the *product icon*, click **Set as Product Icon**.

Image thumbnails and product icons are described in *Using images in eCommerce* on page 1619.

When an image is uploaded to the **Media** tab, the original image and any thumbnails associated with it are added to the Library. For example, if you add an image named "TestImage" (actual file name: "case.jpg") with a 150px and 50px thumbnails, you see the following entries in your library (*File Name - Path*):

```
TestImage - /~siteroot~/uploadedImages/case.jpg
case[filename]150 - /~siteroot~/uploadedImages/case[filename]150.jpg
case[filename]50 - /~siteroot~/uploadedImages/case[filename]50.jpg
```

If you assign several images to an eCommerce catalog entry, and want to allow searching for that catalog entry by image file name, the search only works with the *first* image assigned to the catalog entry.

Editing an existing image

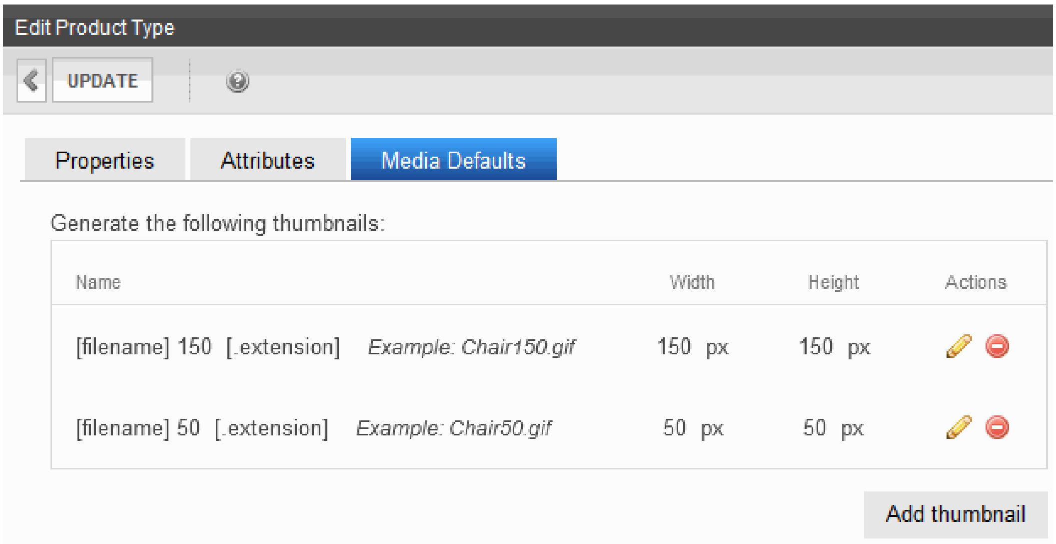
NOTE: You cannot change an existing image. If you need to do this, delete the image you do not want, then add the correct one. You can only edit the **Title** and **Alt Text**.

1. Click the **Media** tab.
2. Move the cursor to the field that you want to edit.
3. Click the pencil icon to the right of the field.>—Image—

4. Update the text as needed.
5. Click **OK** ( ).

Determining thumbnail size

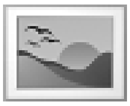
When you create a catalog entry, you base it on a Product Type. The selected product type's **Media Defaults** information determines the sizes of thumbnails created for each image assigned to the **Media** tab.



- If the image is *less than* both thumbnail dimensions (height and width), it appears full size.
- If the image is *greater than* the thumbnail's dimensions, the image is reduced proportionately, scaling its dimensions to the thumbnail size.

The default image

If you do not assign an image to a catalog entry, but one is assigned to appear on a server control, the following default image is used.



If you want to change the default image, edit the following file:

```
siteroot/WorkArea/images/application/Commerce/productImageBackground.gif
```

Entering a catalog entry's items

Use the **Items** tab to add additional information to the current entry. You can only choose a catalog entry whose language matches the language of the original item. It is used in these situations:

- to select the catalog entries that make a product into a complex product.
- to select the catalog entries that make up a bundle.
- to select the groups and their options that make up kits.
- to select a subscription-based catalog entry's user groups. See also: *Assigning groups to a subscription-based catalog entry* on page 1685.

Folder view menu options

New Menu

- **Catalog**. Create a new catalog folder underneath the current one. See also: *Creating a catalog folder* on page 1687.
- ***product types assigned to folder***. Create a new catalog entry based on one of the displayed product types. Your product types may not match the following product types. Product types are assigned to a catalog's via the Product Types screen. See also: *Creating product types* on page 1675.

View Menu

- **All types, Products, Kits, Bundles, Subscriptions**. Lets you change the display of catalog entries. You can see all entries in folder, or only those of a selected product class.
- **Language**. Limits display of catalog entries to one language. Also determines the language of any new catalog entries you create in this folder.
- **Archive**. Displays archived catalog entries.
- **Catalog Properties**. Lets you view and edit catalog folder information.

Delete Menu

- **This Catalog**. Lets you delete a catalog folder.
- **Entries**. Lets you delete a catalog entry within a folder. You cannot delete a catalog entry that has been placed on any order. The order's status is irrelevant.

Action Menu

- **Move entry**. Move catalog entry. You can only move catalog entries—you cannot copy them. See also: *Managing versions of content* on page 643
- **Search**. Search for a product. See also: *Searching the Workarea* on page 363

Content view menu options

Action Menu

- **Edit**. Edit the catalog entry.
- **Delete**. Delete a catalog entry.
- **Link Search**. Locates all content that includes a Quicklink to the displayed catalog entry. This feature is useful before deleting a catalog entry, because it informs you of every entry that will include a "dead" link if you delete that entry. You should then edit those catalog entries and remove or change the obsolete Quicklinks.
- **Add Task**. *Assigning and managing tasks* on page 1339

View Menu

- **Content History**. Lists every version of the content available in Ektron. After viewing the View Content History window, you can click any version to see its detail. See also: *Managing versions of content* on page 643
- **View Approvals**. Access the catalog folder's workflow. See also: *Approving content for publication* on page 689
- **View Permissions**. Access the catalog folder's permissions screen. See also: *Managing folder and content permissions* on page 160

- **Cross Sell**. Lets you assign cross sell items to this catalog entry. See also: *Recommending related products to a customer* on the facing page
- **Up Sell**. Lets you assign up sell items to this catalog entry. See also: *Recommending related products to a customer* on the facing page
- **View Properties**. Lets you:
  - view the catalog entry's product type
  - view the Flagging Definitions assigned to the catalog entry's folder
  - view and edit the Content Searchable setting See also: *Making content searchable* on page 346

Reports Menu

- **Content Statistics**. *User-ranking of content* on page 986
- **Analytics**. Provides a visual display of order information for a selected catalog entry. See also: *eCommerce analytics* on page 1739.

Editor view menu options

Action Menu

- **Save**. Save the content without leaving the editor. It is a good idea to save your work frequently.
- **Check in**. Save and check-in the document. This action returns the changed content to the database and exits the editor. It does not submit the content into the workflow. Rather, it allows you and other users to continue changing it.
- **Submit** or **Publish**. **Submit** the content into the workflow. **Publish** the content to the website. These actions also return the new or updated content to the database and exits the editor. Only the last approver in the workflow sees this button. If no workflow is assigned to the content's folder, every authorized user sees this button. See also: *Approving content for publication* on page 689
- **Undo Checkout**. Close the editor without saving changes.

Change Menu

- **Comment**. Briefly describe the content, or comment on changes made when editing content. The history comment appears on the View Content and Content History screens.
- **Template**. Lets you specify one or more templates for catalog entries in this folder. These entries use the specified template when appearing on your website. See also: *Working with templates* on page 769

Displaying catalog entries on your website

The eCommerce Module provides the following server controls for displaying catalog entries on your website.

- Product
- ProductList
- ProductSearch templated server controls

Recommending related products to a customer

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

Ektron eCommerce lets you recommend related products to a customer (site visitor) based on products they are currently viewing.

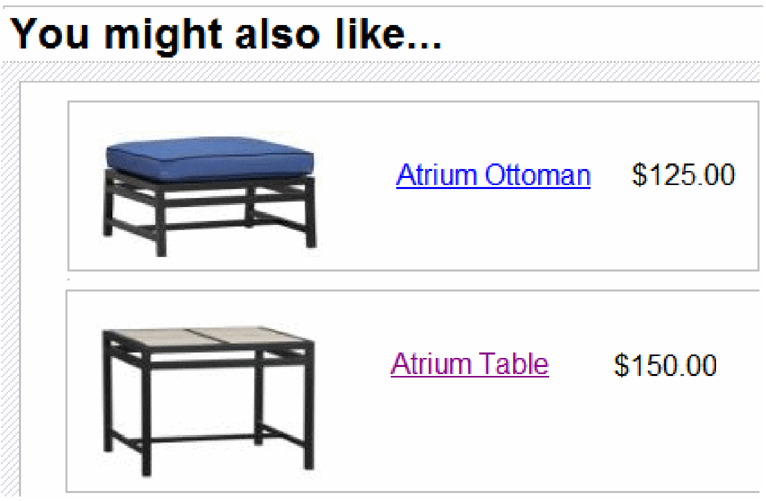
Cross sell and upsell tactics are designed to increase the amount of cart sales. Use the Recommendation server control to add cross sell and upsell offers.

Cross sell offers items related to a catalog entry. So, for example, if someone is purchasing a digital camera, cross sell items might be a carrying bag, digital photo printer, larger memory cards, additional warranty, and so on.

Up Sell refers to similar but more expensive items. So, for example, if someone is viewing a 7 megapixel digital camera, upsell items might be a 10 megapixel camera, or a digital SLR camera.

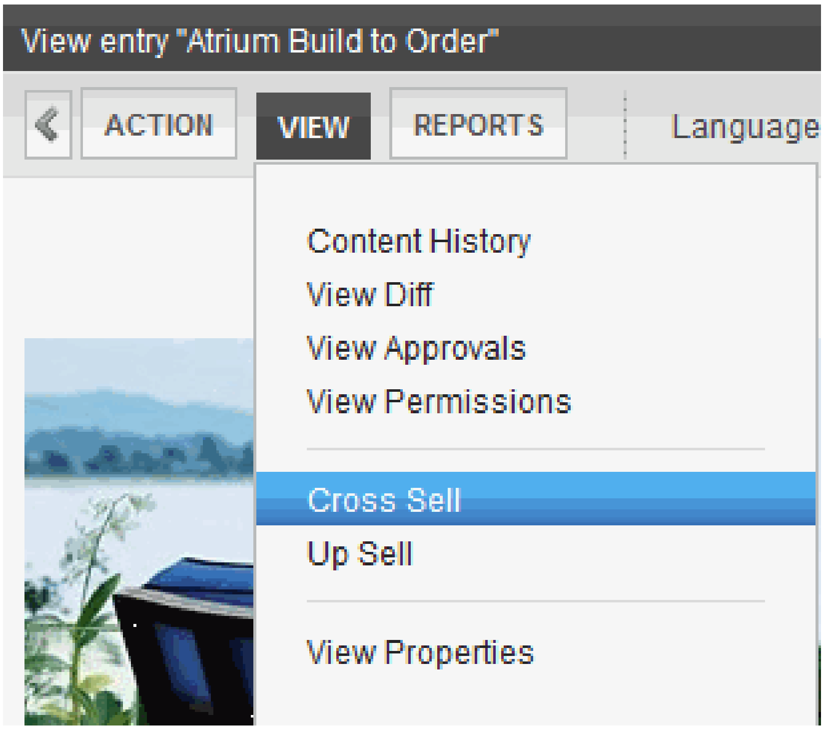
Displaying cross sell and upsell items on a website

Use the Recommendation server control to place cross sell or upsell items anywhere on a Web page. A single control can only show *either* cross sell *or* upsell items.

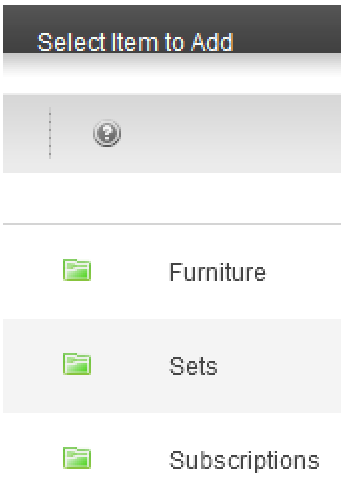


Assigning cross sell and upsell items to a catalog entry

1. Open the catalog folder containing the catalog entry to which you want to assign cross sell items.
2. Click that entry.
3. Click **View > Cross Sell** or **Up Sell**.



4. Click **Add**. A screen displays all catalog folders.



5. Open the folder that contains the cross sell or upsell catalog entry.
6. Click that catalog entry.
7. Click **OK**.

8. Enter additional cross sell entries as needed.
9. Choose **Action > Save**.

Using coupons

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

Most eCommerce sites periodically offer coupons to provide discounts to customers, either to attract new business or reward loyalty. Ektron's eCommerce feature lets you generate coupons with the features such as:

- percentage discounts—you can set a maximum coupon value regardless of the amount calculated by percentage.
- limit to catalog entries that you accept
- limit to most or least expensive entry
- limit to 1 use per customer
- limit from being used with other coupons
- limit to a date range when coupon is active
- specify a maximum number of redemptions
- specify a minimum order amount required to activate coupon

Creating a coupon

Create coupons in the Workarea by going to **Settings > Commerce > Catalog > Coupons**. To make it easy to complete the information, the screens are arranged in numbered steps. Subsequent screens are context-sensitive, so that you only see fields that are a logical result of previous decisions.

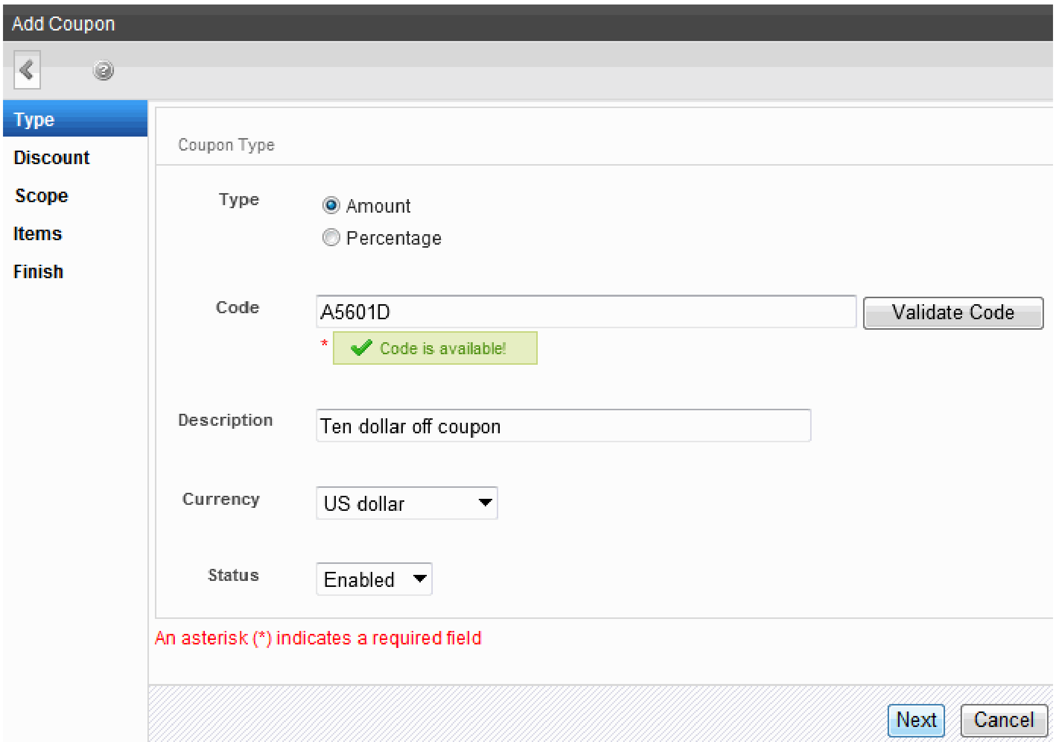
The following list summarizes the information collected on each screen.

1. Type Screen
   - whether discount is based on amount or percentage
   - code (unique identifier)
   - description
   - currency (for amount-based coupons only)
   - enabled or disabled
2. Discount Screen
   - if amount, dollar amount
   - if percentage, percentage and maximum coupon value
3. Scope Screen
   - applies to entire cart, accepted items only, most/least expensive item only
   - limit to one per customer
   - allow combination with other coupons
   - apply to subscription-based products
   - apply amount-based coupons on a "per quantity" basis

- limit maximum number of redemptions
- require minimum cart value
- start and end dates

4. Items Screen—if coupon is restricted to certain items, designate the items

Creating a coupon type



1. Select the type of coupon you are creating/editing using the **Type** radio buttons:
   - **Amount**. discount is a dollar amount. If you select this type, choose a currency at the **Currency** field. Then, enter the dollar amount on the **Discount** screen.
   - **Percentage**. discount is a percentage. If you select this type, enter the percentage on the **Discount** screen. That screen also lets you enter a maximum amount.
     Also, if the coupon type is **percentage**, the **Currency** field is disabled. Percentage-based coupons are currency neutral.
2. Enter the coupon code in the **Code** field. The code cannot contain
   - spaces
   - angle brackets (<, >)
   - single (') or double quotes (")
   - ampersand (&)
   - slash (/) or back slash (\)
   - plus sign (+)
3. Click **Validate Code**. When you do, Ektron verifies that the code contains the correct characters and is not already in use. Customers (site visitors) enter this

code to redeem the coupon on a page that hosts the Cart server control. The following page gives suggestions about eCommerce coupons, including coupon-naming strategies: ecommerce-guide

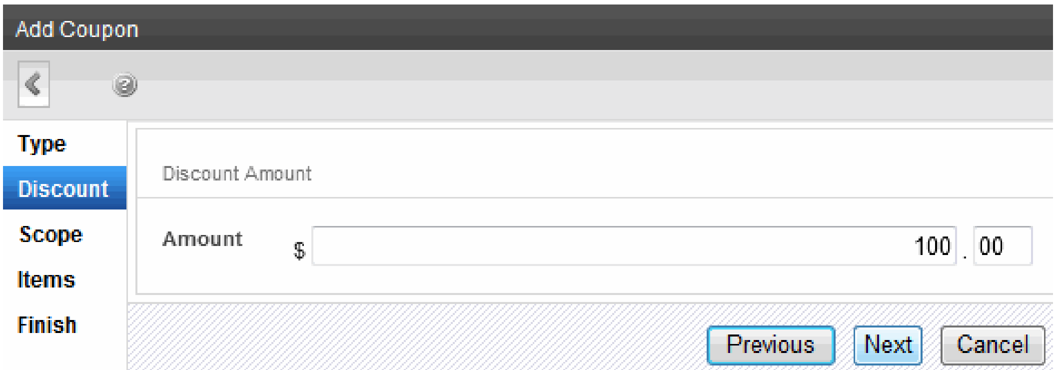
4. Enter a free text description of the coupon in the **Description** field. This helps describe it on the initial Coupons screen in the Workarea.
5. Select the currency to which this coupon applies from the Currency drop-down menu. If the coupon type is percentage, this field is disabled.See also: *Configuring currencies* on page 1636.

> **IMPORTANT:** The coupon is only valid if a customer selects this currency. So, for example, if you create a coupon for a USD amount, and a customer selects Euros when shopping on your site, the coupon is not accepted. To work around this restriction, create a coupon for every applicable currency.

6. Set the status pf the coupon using the **Status** drop-down. Set to **enabled** to let customers uses this coupon (providing all other conditions are met). Or, set to **disabled** to keep the coupon in the eCommerce feature but prevent it from being used.

Setting a discount

The discount screen displayed depends on the discount type selected in the first screen: amount or percentage. If an **amount** discount was selected, enter the coupon’s discount amount.



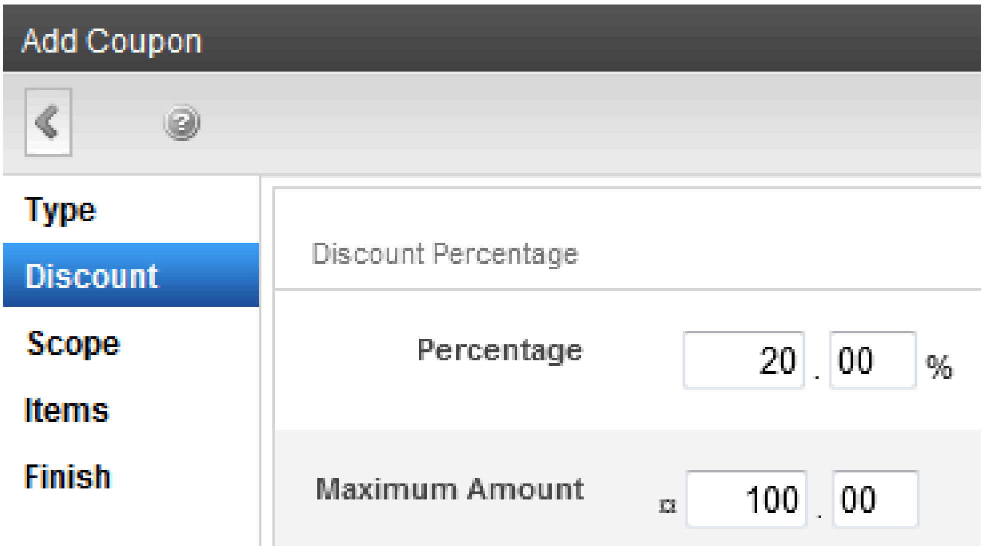
If the coupon amount exceeds the sum of all items to which it is applied, it is reduced to the sum of the items. For example, a coupon amount is $10.00 and applies to the least expensive item. If that item is $3.00, the amount changes to $3.00.

If a percentage discount was selected:

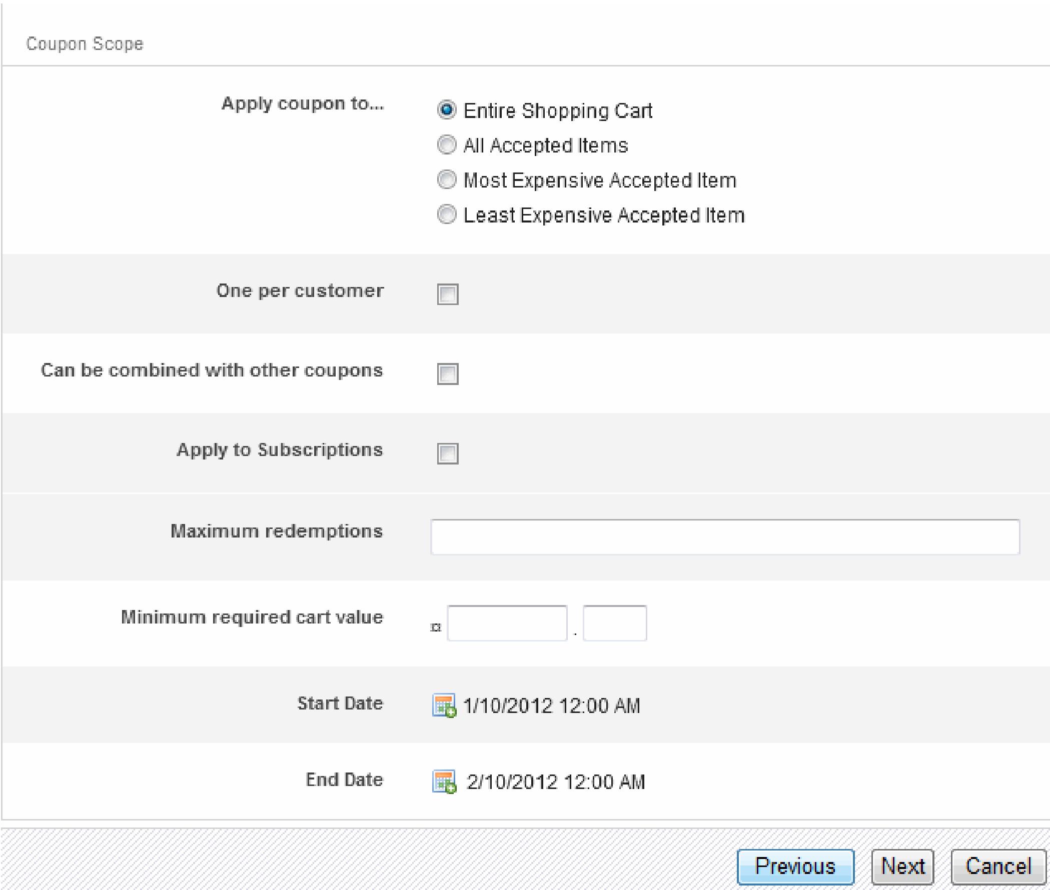
1. Enter the percentage of the discount in the **Percentage** field.
2. Enter the maximum value of this coupon in the Maximum Amount field.

   For example, if you set a discount of 10% and a **Maximum Amount** of $20.00, the discount will never exceed $2.00 (that is, 10% of the **Maximum Amount**) regardless of the amount of the goods ordered. Typically, you would include a

Maximum Amount in the email or announcement that describes the coupon.



Setting the coupon scope



1. Select an Apply Coupon to setting:
   - **Entire cart**. Coupon applies to all items in cart
   - **All accepted items**. Coupon applies all *accepted* items in cart.

- **Most expensive accepted item**. Coupon applies to most expensive *accepted* item in the cart.
- **Least expensive accepted item**. Coupon applies to least expensive *accepted* item in the cart.

IMPORTANT: If you select All accepted items, Most expensive accepted item, or Least expensive accepted item, you must identify accepted items on the Items tab. If you do not, the coupon is effectively inactive.

You cannot apply a *cart-level* coupon to a subscription product. However, you can apply an *item-level* coupon to a subscription product. (An an *item-level* coupon is one that applies to all accepted items, or the most or least expensive item.) See also: *Creating a subscription* on page 1682.

2. Check the **One per customer** box if you want to limit each customer to one use of the coupon. If you do and a customer completes an order with the coupon then tries to use it a second time, the customer is notified that the coupon is not valid.
3. Check the **Can be combined with other coupons** box if this coupon can be combined with other coupons in the same order. If you do not check this box and a customer tries to add this coupon to an order to which a coupon is already applied, the customer is notified that the coupon is not valid.
4. Check the **Apply to Subscriptions** box if customers can use this coupon to purchase subscriptions.

   Customers can use only coupons with subscription items that have a sale price and are set to recurring billing. See also: *Creating a subscription* on page 1682.

   Customers can apply only an *item-level* coupon to a subscription product. (An an *item-level* coupon is one that applies to all accepted items, or the most or least expensive item.) See also: *Select an Apply Coupon to setting:Entire cart. Coupon applies to all items in cartAll accepted items. Coupon applies all accepted items in cart. Most expensive accepted item. Coupon applies to most expensive accepted item in the cart.Least expensive accepted item. Coupon applies to least expensive accepted item in the cart.If you select All accepted items, Most expensive accepted item, or Least expensive accepted item, you must identify accepted items on the Items tab. If you do not, the coupon is effectively inactive.You cannot apply a cart-level coupon to a subscription product. However, you can apply an item-level coupon to a subscription product. (An an item-level coupon is one that applies to all accepted items, or the most or least expensive item.) See also: Creating a subscription on page 1682.* on the previous page

5. Check the **Apply to Quantities** box if you want the coupon amount to discount each accepted item in a cart. For example, if a coupon amount is $1.00, and a customer purchases 5 of one item, the discount is $5.00.

   If you do not check this box, the discount would be $1.00, regardless of the quantity of an item purchased. This field is only available for an amount based coupon.

6. If desired, enter a maximum number of times this coupon can be used in the **Maximum Redemptions** field. It does not matter which customers use the coupon. If you set a maximum, and the coupon is applied that number of times, the next time someone tries to use the coupon, the customer is informed it is not valid.
7. If desired, enter the minimum order amount required to activate this coupon in the **Minimum Required Cart** Value field. The order amount does not include tax or shipping charges. For example, enter **$50.00**. If a shopping cart total is $40.00, and a customer adds this coupon to an order, the customer is informed the coupon is not valid.
8. Enter the date range within which this coupon is valid using the **Start Date** and **End Date** selectors..

   For example, you enter a **Start Date** of January 1, 2013 and an **End Date** of December 31, 2013. If a customer inserts this coupon on February 9, 2014, the customer is informed the coupon is not valid.

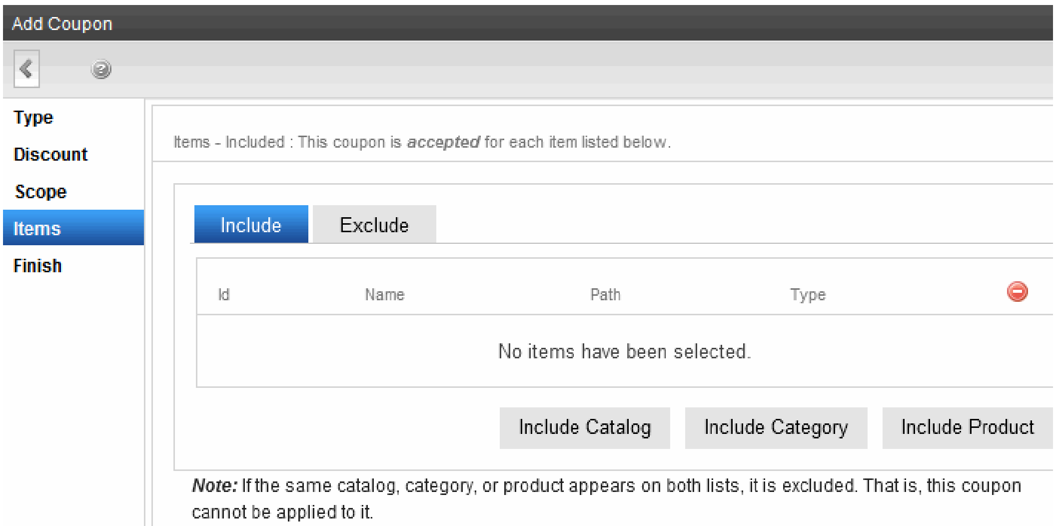
Defining the coupon items

PREREQUISITE

The Coupon Scope screen's **Apply Coupon to** field must be set to one of the following:

- All accepted Items
- Most Expensive accepted Item
- Least Expensive accepted Item

Use this screen to identify items to which this coupon applies. If Entire Shopping Cart was selected, the following message appears: This coupon is accepted for all items.



IMPORTANT: Item-level coupon types apply *only* to items selected on this screen. If a customer orders a catalog entry that's not defined on this screen, an item-level coupon does not apply to the item.

For example, you create a coupon worth 10% off any digital camera. The coupon is only applicable if a digital camera is in the shopping cart. Typically, the email or announcement that describes the coupon includes item restrictions. The discount is applied to each accepted item in the cart. For example, a coupon provides a 10% savings on items 1, 3, and 5 but not 2 and 4 because 2 and 4 are not on the accepted items list.

Selecting a coupon's accepted items

There are 3 ways to select items for the Include or Exclude list:

- **Individual items**. Click **Include Product** and go through the Ektron folder system to that content. You can only select items in a category folder (which are blue to distinguish them from regular folders).
- **All items in a catalog folder**. Click **Include Catalog** and go through the Ektron folder system to that folder. You can only select items in a category folder (which are blue to distinguish them from regular folders).

  NOTE: If you choose a parent catalog, its child catalogs are not selected. Only products in the parent catalog are eligible for the coupon.
  If you want to select a parent catalog and its child catalogs, first select the child catalogs. Then, go to the parent catalog and select it.

- **All items in a taxonomy or category**. Click **Include Category** and go through the Ektron taxonomies to the desired taxonomy or category. All content applied to the category will be eligible for the coupon.

Include vs. exclude

You can both include and exclude using any of the criteria listed above. If any product appears on both lists, it is *excluded* from coupon eligibility.

So for example, one of your folders contains 500 digital cameras that your site offers. You want the coupon to apply all but a few cameras.

On the **Include** tab, select the cameras folder. Then, use the **Exclude** tab to select the few cameras to which the coupon does not apply. In this way, you can easily select the majority of items but exclude a few.

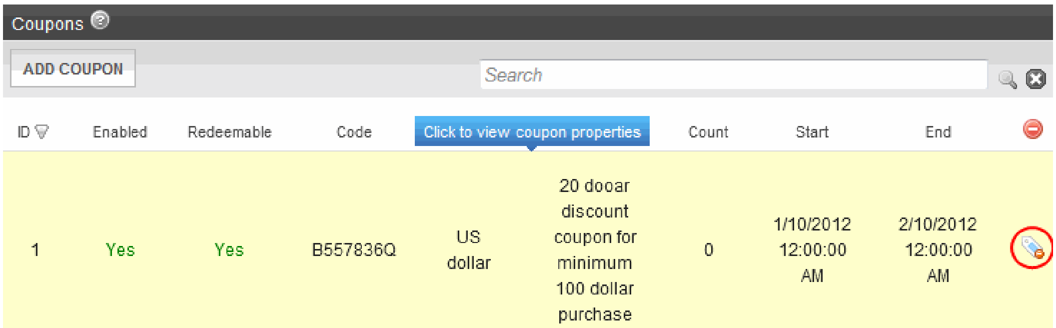
Deleting a coupon

If a coupon is applied to an order, you cannot delete it but you can disable it.

To delete a coupon that is not applied to an order:

1. Go to Ektron **Workarea > Settings > Commerce > Coupons**.
2. Locate the coupon that you want to delete.

3. Click **delete** on the far right of the coupon information.



4. A strikethrough line appears over all coupon text, and **Restore** ( ) replaces **Delete**. If you change your mind and do not want to delete the coupon, click **Restore**.
5. Click **Save**.

If the coupon cannot be deleted, it remains on the main Coupons screen and **No** appears in the **Enabled** field. This coupon can no longer be used.

Disabling a coupon

When the coupon's status is Disabled, customers can no longer apply it to an order. Coupons can be disabled automatically (according to a schedule) or manually.

Using an expiration date to disable a coupon

When you create a coupon, a default end date is set for 10 years from the end of the current year. At that time or at any time the coupon is active, you can change its end date.

When the coupon's end date is reached, its status changes to Disabled.

Manually disabling a coupon

1. Go to Ektron **Workarea > Settings > Commerce > Coupons**.
2. Locate and click on the coupon that you want to delete. The Coupon Propties screen appears and the Type tab is selected.
3. Choose **Disabled** from the Status drop-down.

Managing customer orders

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

The fulfillment aspect of eCommerce involves:

- tracking submitted orders, including
  - order status
  - charge capture
  - shipping
  - cumulative sales information on customers
- customer information, such as
  - orders submitted
  - addresses
  - current shopping carts

PREREQUISITES

To process orders, the Distributed Transaction Coordinator (DTC) Windows service must be running. It is started by default when you install Ektron.

Order workflow

Ektron uses Microsoft's Windows Workflow Foundation to create and implement order process workflows to handle the ordering process. The workflow can be as simple or complex as your business requires.

For example, you have a simple workflow that sends one email to the customer when an order is received, and another to your shipping department. Or, you could have a more complex workflow that:

- sends an email to the customer when the order is received
- checks to see whether the item is a tangible product or a virtual product. Then, continues down the workflow path that's appropriate for the item.
- handles shipping notifications and updates the account throughout the shipping process
- handles the order if it is canceled
- handles the order if it is determined to be fraudulent
- marks the order as complete when activities are finished

For more information about workflows, see *Customizing workflows* on page 1741.

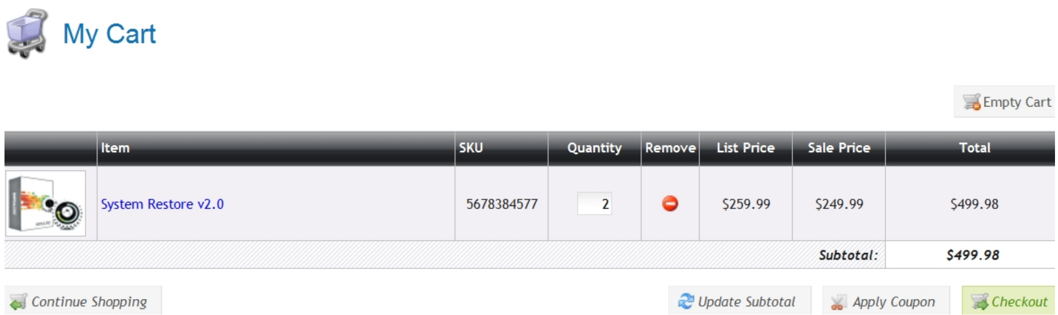
Creating the order process

This section summarizes the shopper experience using Cart and Checkout for information about the Cart and Checkout server controls used to implement the order process.

1. As a shopper, you can add items (physical goods, subscriptions, or soft goods) to your cart by clicking **Add to Cart**.

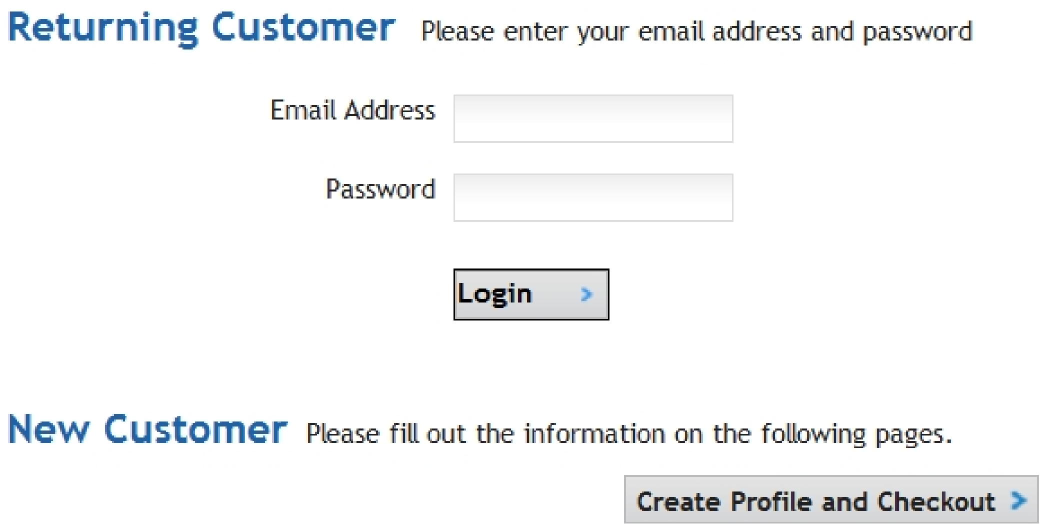
2. When you are ready to pay, click **Checkout** to begin the checkout process.

NOTE: Shoppers have the option of checking out using PayPal's checkout system. Order information is exported, and you can use your PayPal account to fund the purchase. See also: *Configuring payment options* on page 1641.



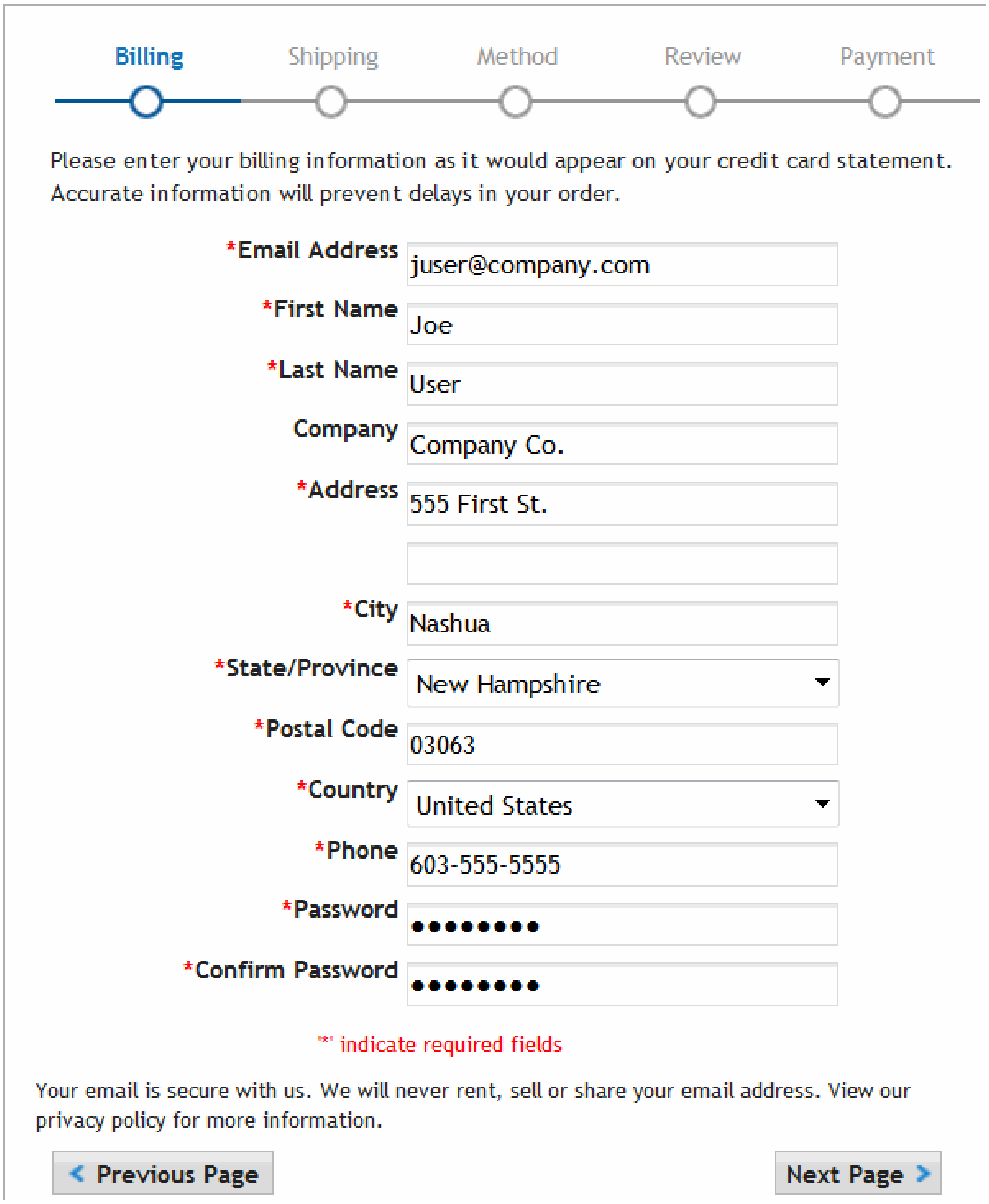
3. When you return, you can log into your account and continue the checkout

process. Your shipping and billing information appears.

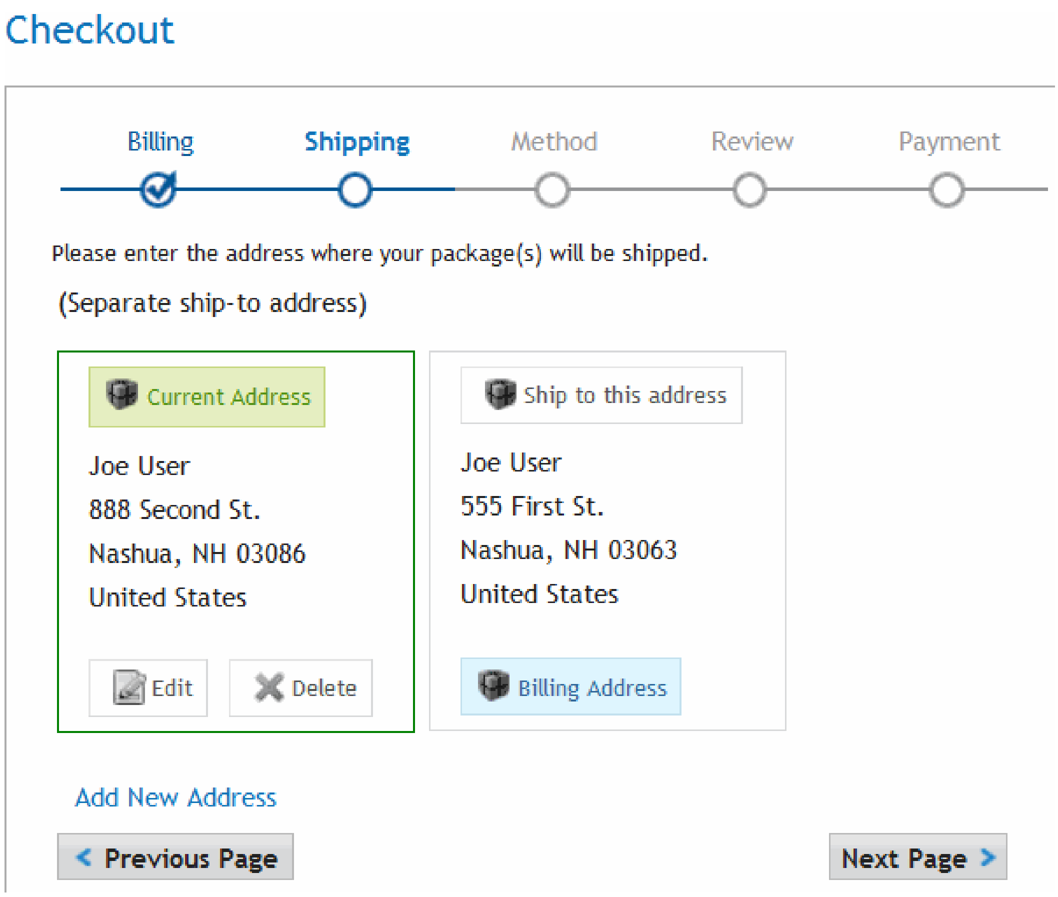


4. Click **Create Profile and Checkout** and complete the Billing Page.

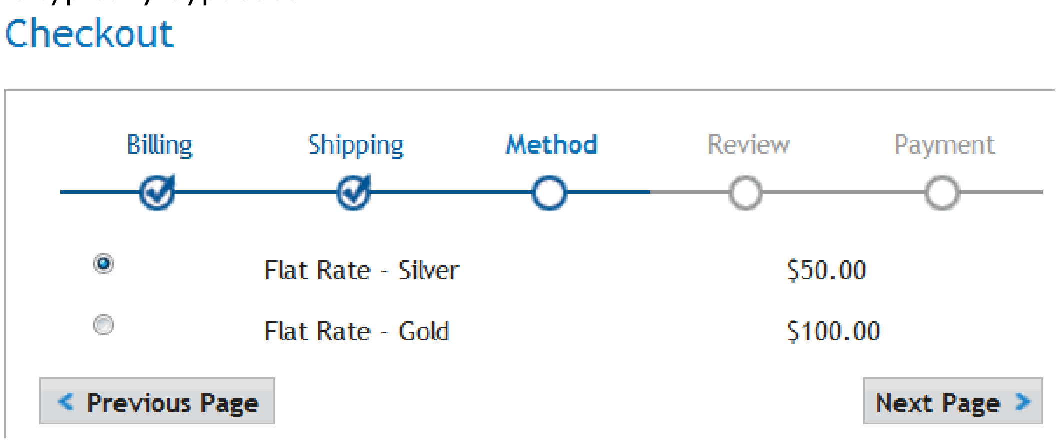
Checkout



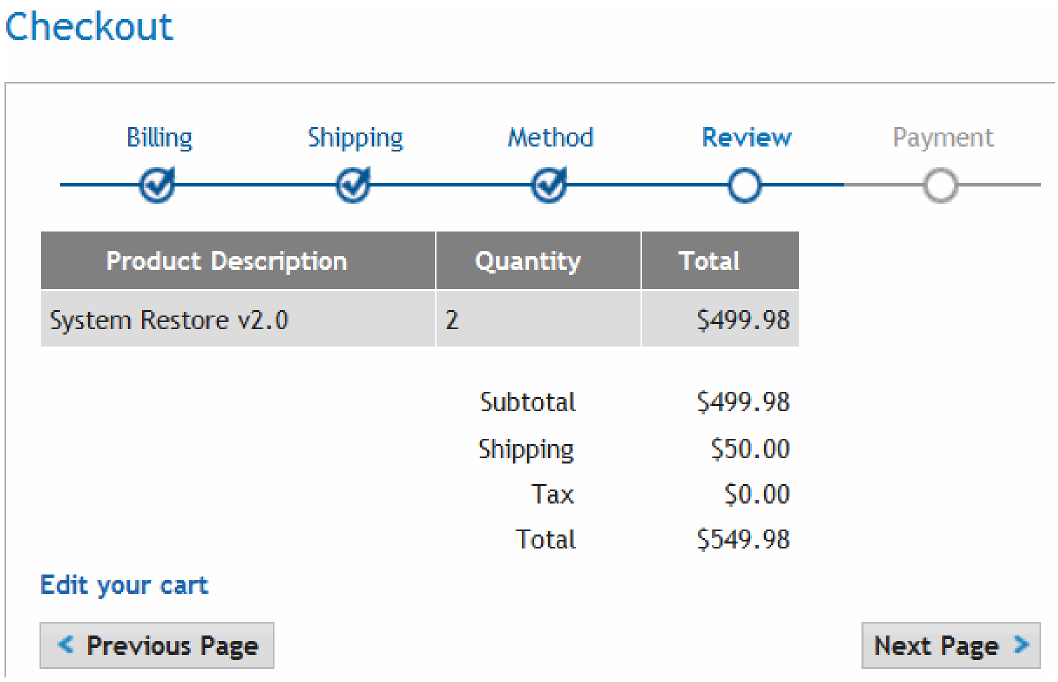
5. Click **Next Page** to create an account. After confirming the information, you can enter a different shipping address.



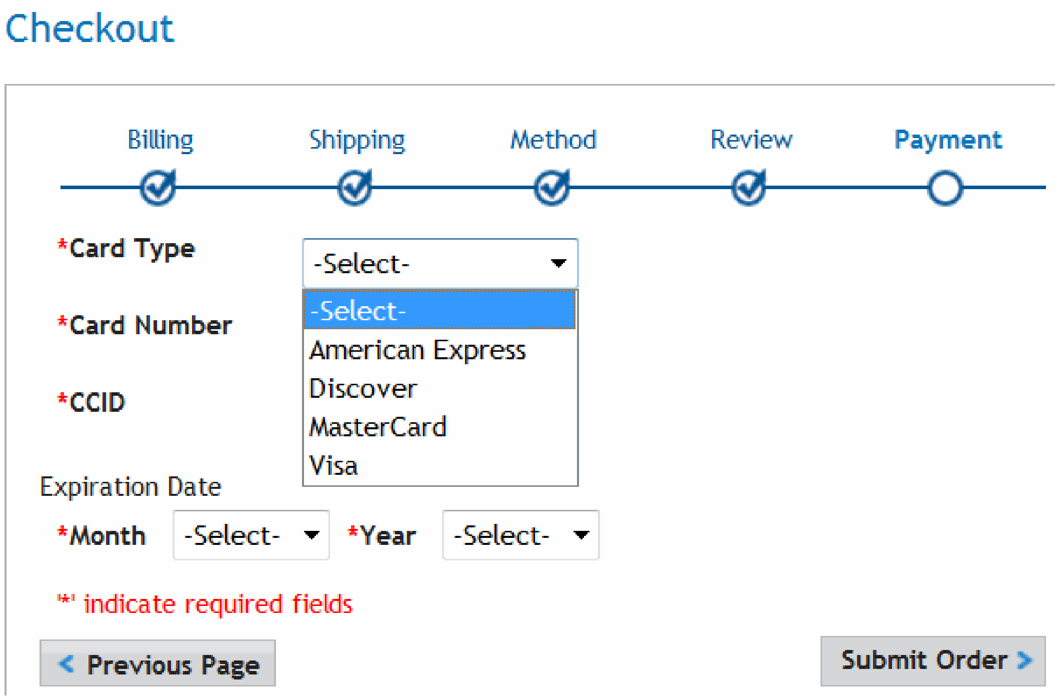
6. When you click **Next Page**, you can select the delivery method. If the cart contains a subscription or soft goods (such as downloadable software), this page is typically bypassed.



7. On the Review Page, you can modify the order by clicking **Edit your cart**. Otherwise, move forward to the Payment options page.



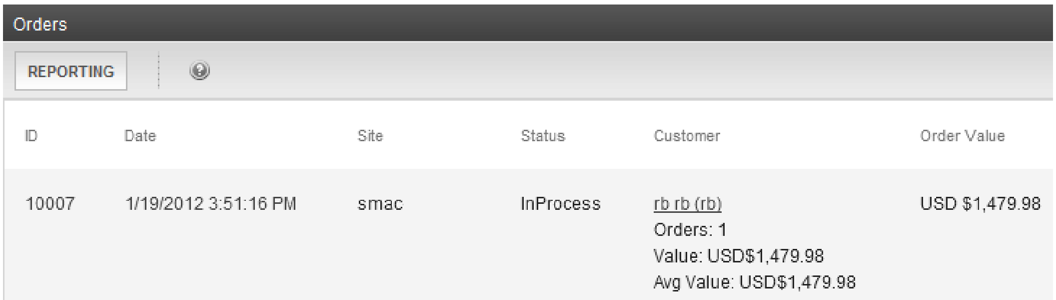
8. Specify payment information and submit the order.



An order invoice page displays to confirm the order. If the order was for a subscription or downloadable software, additional information appears.

Processing orders

The orders screen provides information about all orders in your eCommerce system. To access it, go to **Workarea > Settings > Commerce > Fulfillment > Orders**.



Initially, orders are sorted by submission date and time, with the most recent at the top.

Selecting orders by criteria

You can select orders by any of the following criteria.

- entry date range
- customer
- catalog entry

To use any filter, choose **Reporting** then the appropriate filter option:

- **Most Recent**. This is the the default select and sort order: all orders with the most recent on top.
- **By Date(s)**. If you choose to view orders **By Date(s)** and want to view orders for today, enter tomorrow as the ending date.
- **By Customer**
- **By Product**
- **By ID**

Order statuses

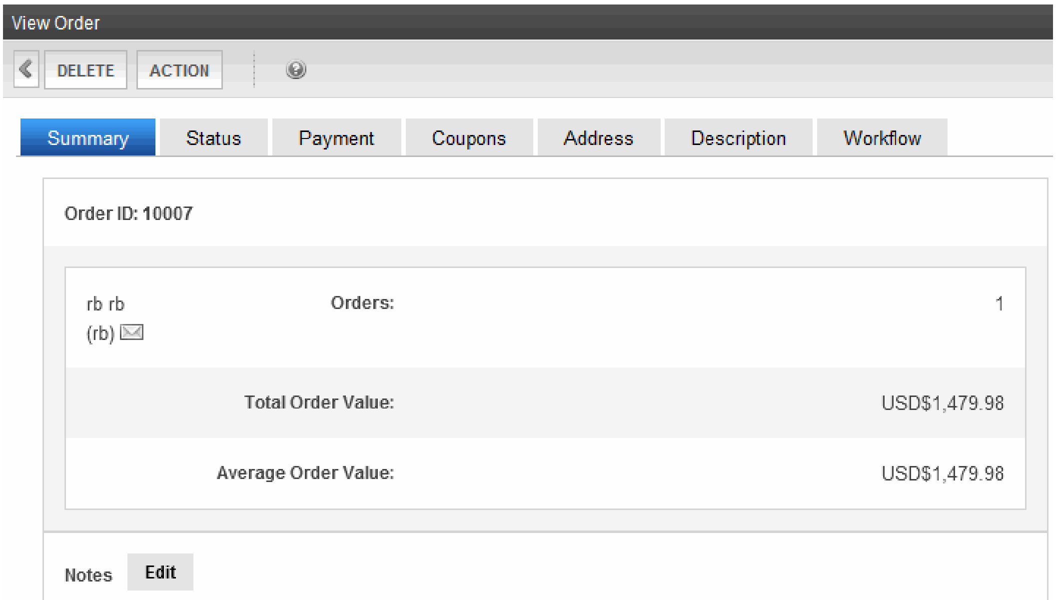
NOTE: The following table assumes you use the default workflow installed with eCommerce. If you customize the workflow, the following table may be inaccurate. See also: *Customizing workflows* on page 1741.

Status	Description	How to Set
Received	Order has been submitted.	Customer submits order
Fraud	Your organization has determined that the order is fraudulent.	**View Order Screen > Action Menu > Mark as Fraud**

Status	Description	How to Set
Shipped	Order has been shipped. This status can be the workflow's end point. You do not need to use the Completed status.	**View Order Screen > Action Menu > Ship Order** or **View Order Screen > Action Menu > Enter/Edit Tracking Number > CheckMark as Shipped** checkbox and save
Completed	All order activities are finalized. No events can occur to a Completed order.	**View Order Screen > Action Menu > Process Order**
Cancelled	Order has been canceled.	**View Order Screen > Action Menu > Cancel Order**
InProcess	Automatically assigned when order is submitted.	Order placed but not yet captured

Viewing orders

To view the details of any order, click it. When you do, the View Order screen appears.



If the **Workflow** tab does not display a flowchart, verify that the server's Distributed Transaction Coordinator (DTC) Windows service is running. It is started by default when you install Ektron, but if it stops for some reason, the Workflow does not appear on this screen.

Capturing orders

It is important to distinguish between authorization and capture in relation to orders:

- *Authorization* occurs while a customer is using the Checkout server controls. It submits a customer's payment information to a payment gateway, bank, or PayPal, and returns either an approval with an authorization number (transaction ID) or a decline along with an explanation.
- *Capture* is the process of submitting encrypted order information (including the transaction ID) to a payment gateway account, bank, or PayPal. At this time, the account is charged for the order amount.

Take into account the following:

- In many states, you must ship an item before you can charge a customer's credit card for it.
- Items that are not tangible are automatically captured if paid by PayPal or a credit card.

After an order has been captured, you receive confirmation from the paying agency that the money has been deposited to your account and is available. At this time, you use the **Mark as Settled** option to inform the eCommerce feature that payment has been received. This changes the order status to Complete. Confirmation occurs:

- PayPal or credit card—when the goods are shipped.
- Check—When the check clears.

See also: *Configuring payment options* on page 1641.

Capturing an order

1. From the Workarea, choose **Settings > Commerce > Fulfillment > Orders**.
2. Click the order that you want to capture.
3. Click the **Payment** tab.
4. Click the payment to display. The View Payment screen appears, showing information about the transaction captured when the customer (site visitor) submitted payment information.
5. Choose **Action > Capture**. You are asked to confirm the action.
6. Click **OK**.

Canceling an order

Click **Action > Cancel Order** to stop all processing on the order. If you do, the order's status changes to Canceled.

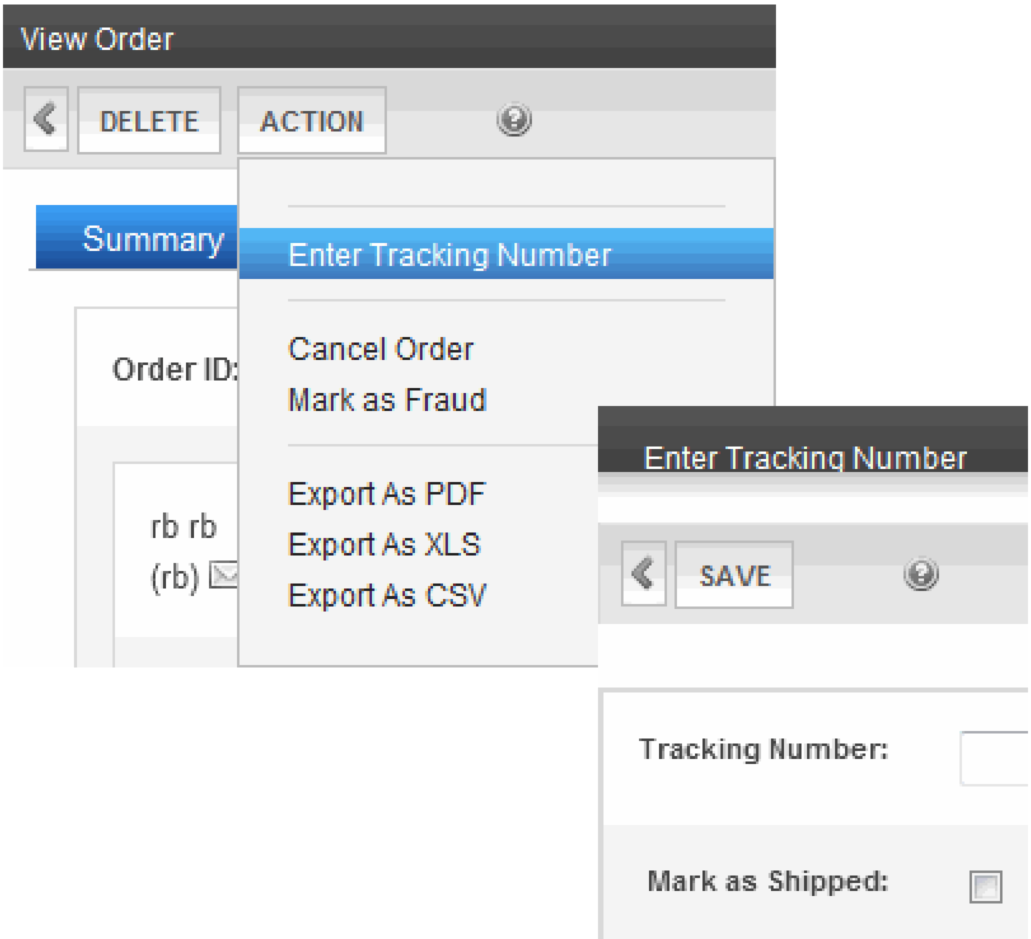
Deleting an order

To delete any order, select it from the Orders screen then click **Delete** ().

After deleting an order, you cannot recover its information.

Entering a tracking number

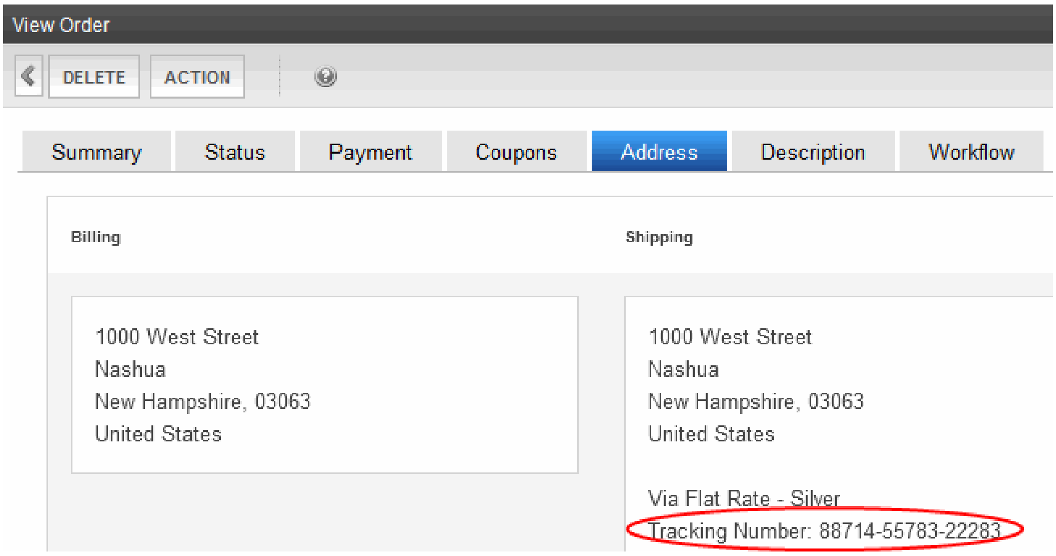
When an order is shipped, the shipping provider typically provides a tracking number to help locate the shipment within the delivery chain. Use the **Enter Tracking Number** option to enter this part of the order information.



After entering the tracking number, you can indicate whether the order has shipped.

Viewing the tracking number

You can display an order's tracking number on the View Order screen by clicking the Address tab and looking under the Shipping Address.



Marking the order as shipped

When you enter an order's tracking number, the screen lets you mark it as shipped. See also: *Entering a tracking number* on the previous page.

If you did not mark the item as **shipped** at that time, a **Ship Order** option appears on the Action menu. To denote that such an order has shipped:

NOTE: If that order has not yet been captured, it will be captured as part of the shipping of the order.

1. From the Workarea, choose **Settings > Commerce > Fulfillment > Orders**.
2. Click the order that is being shipped.
3. Choose **Action > Ship Order**.

Marking the order as fraudulent

Use this option if your organization determines that the order is fraudulent. These orders cannot be processed any further.

Entering order notes

After selecting an order, you are allowed to submit a note about it. You can use the note to record information about the item, the buyer, shipping irregularities, and so on.

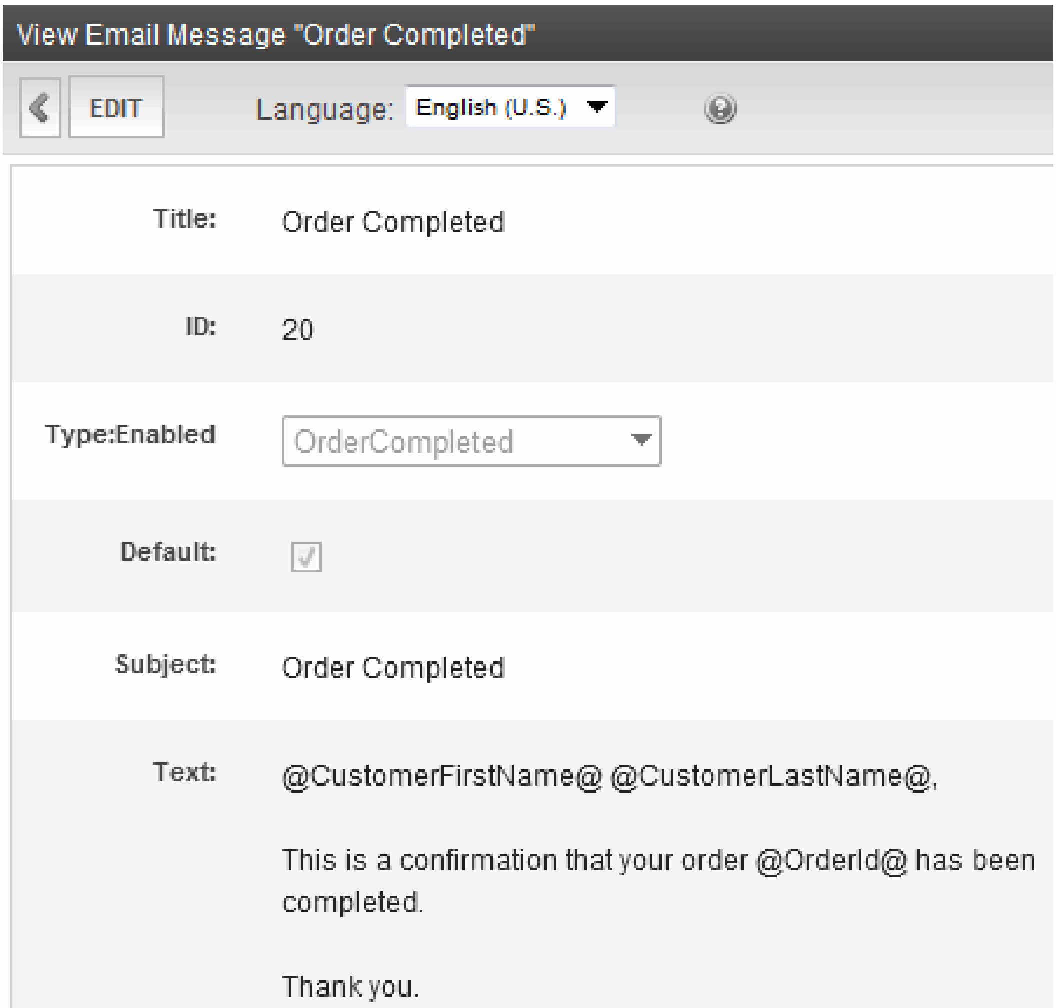
Only one note can be saved per order. If you edit and save a note, the previous note text is permanently removed.

Sending eCommerce messages

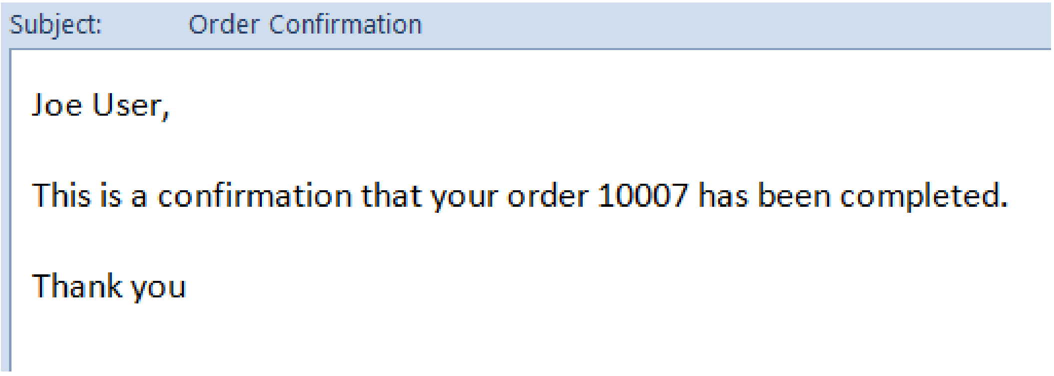
Ektron's eCommerce feature provides a messaging feature that can notify a purchaser or the Ektron administrator when the following events occur. Each message has a unique type that corresponds to an event and, in one case, a recipient.

- OrderReceived message type sends email to the purchaser when an order is submitted.
- OrderReceivedToAdmin message type sends a message to the Ektron administrator when an order is submitted.
- OrderCancelled message type sends email to the purchaser when am order is cancelled.
- OrderShipped message type sends email to the purchaser when an order is shipped.
- OrderComplete message type sends email to the purchaser when an order is completed.

You can create any number of messages for each event, assigning one as the default. Only the default message is sent when the corresponding event occurs. Here is a sample message as set up within Ektron.



Here is a portion of the same message as delivered to a recipient's inbox.


Subject: Order Confirmation

Joe User,

This is a confirmation that your order 10007 has been completed.

Thank you

How messages are created and generated

Ektron provides sample text for each type of message. To view and edit a message, go to the **Workarea > Settings > Commerce > Configuration > Messages**.

The Message Type determines the event that causes a message to be sent. For example, the *Orderreceived* message is sent to a purchaser when the order is submitted.

If content notification emails are being generated, the site visitor provided an email address, and a message is defined for the event, emails are sent when eCommerce events occur. No additional set up is required.

NOTE: eCommerce messages are distributed in the same way as content notification emails. For information on setting this up, see *Installing Ektron* on page 9.

Creating or editing an eCommerce message

1. From the Workarea, choose **Settings > Commerce > Configuration > Messages**.
2. If a message of the type you want to create already exists, select it. Otherwise, click **Add Email Message**.
3. Assign a Title, Subject (for the email subject line), Message Type, and message text.
4. When the message is complete, click **Save**.

Message variables

An eCommerce message can include the following variables, which pull order information into the message:

- **@CustomerFirstName@**. Customer’s first name
- **@CustomerLastName@**. Customer’s last name
- **@OrderCouponTotal@**. The order’s coupon discounts
- **@OrderId@**. The order’s ID number
- **@OrderItemQuantity@**. The quantity of any item on the order
- **@OrderItemSalePrice@**. The sale price of any item on the order

- @**OrderItemStart@** and **@OrderItemEnd@**. Use the start and end markers to show information for ordered items.

  The markers show no information by themselves. Instead, they repeat the variables between them for every item on the order.So, for example, assume an order has 10 items, and your message looks like this:

  ```
  @OrderItemStart@
  @OrderItemTitle@
  @OrderItemQuantity@
  @OrderItemSalePrice@
  @OrderItemTotal@
  @OrderItemEnd@
  ```

  The message prints the title, quantity, sale price, and total for each item on the order.
- **@OrderItemTitle@**. The title of any item on the order
- **@OrderItemTotal@**. The total cost of one item. For example, if `orderItemSalePrice` = $10 and `orderItemQuantity` = 2, `orderItemTotal` = $20.
- **@OrderShippingTotal@**. The order's shipping cost
- **@OrderSubTotal@**. The order's subtotal, that is the amount of ordered items prior to shipping costs, taxes, and coupon discounts
- **@OrderTaxTotal@**. The order's tax amount
- **@OrderTotal@**. The order's final cost (which includes taxes, shipping, and coupon discounts)
- **@TrackingUrl@**. The link to a Web page that tracks your package. It is usually a combination of the shipper's URL and the tracking number.

Setting up a recipient for the OrderReceivedToAdmin message

The OrderReceivedToAdmin message type requires additional setup. Specifically, you must update the following values in the `web.config` file.

- **adminEmail**. email address of eCommerce administrator to receive order confirmation message
- **ek_ecom_SendOrderReceivedEmailToAdmin**. Set to **true** to enable this functionality. Set to **false** to disable it.

Viewing customer information

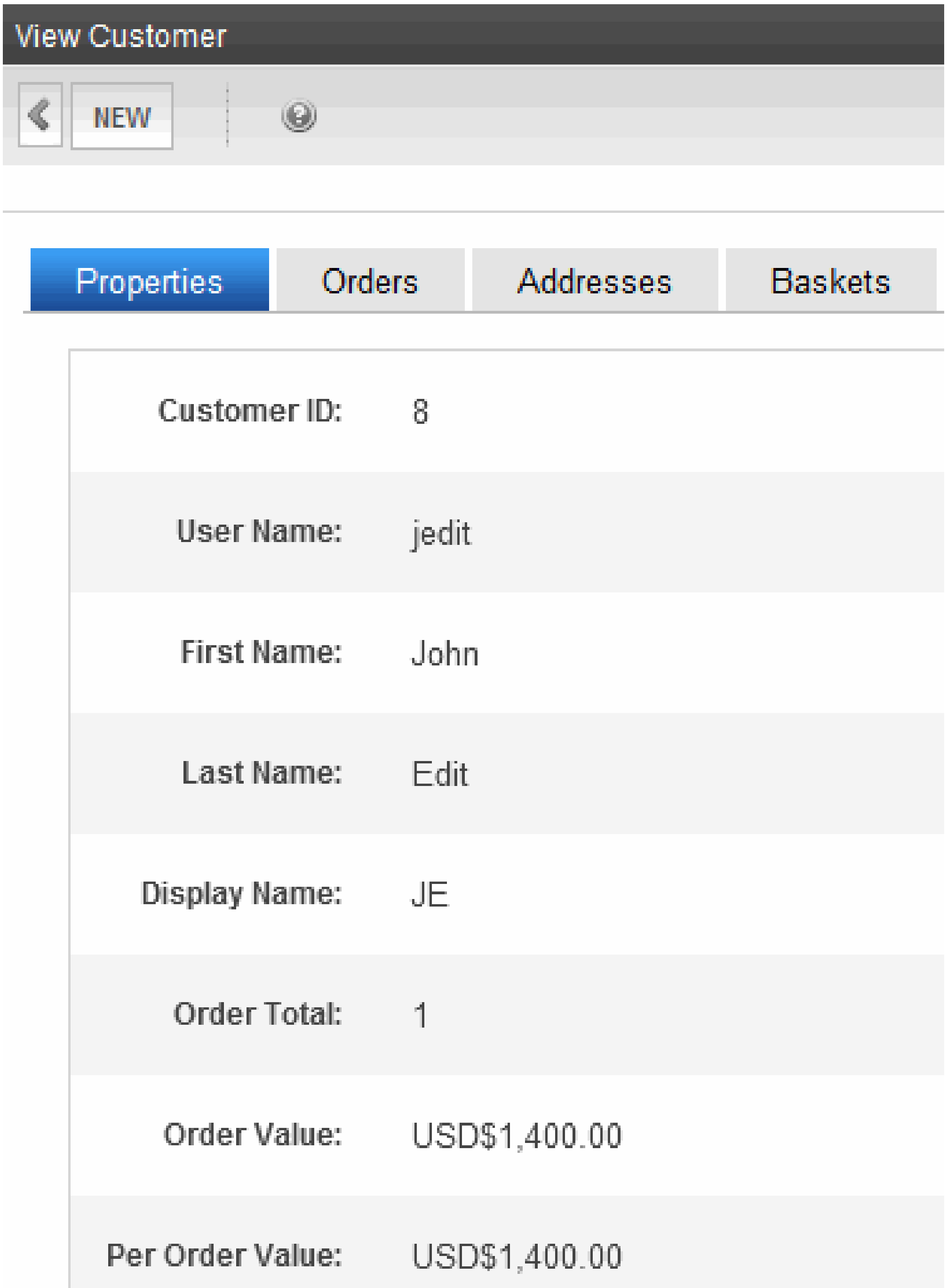
IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

Customers create an account the first time they complete the checkout procedure. The Customers screen provides information about all customers who order from your website. The first screen presents the

- customer ID number
- user name
- number of orders
- amount of all orders
- average order amount

You can click any customer’s ID number or name to see more details about the person's order history. The View Customer screen provides information about the customer’s

- summary information (name, number of orders, total of all orders, average order amount).
- orders (see *Processing orders* on page 1721) .
- addresses (you can edit any address or enter a new one) .
- whenever a user creates a new order and enters a new or selects an existing billing/shipping address, that becomes the new default.
- shopping carts (see *Creating the order process* on page 1716).


View Customer
NEW
Properties
Orders
Addresses
Baskets
Customer ID: 8
User Name: jedit
First Name: John
Last Name: Edit
Display Name: JE
Order Total: 1
Order Value: USD$1,400.00
Per Order Value: USD$1,400.00

Generating eCommerce reports, widgets, and logs

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

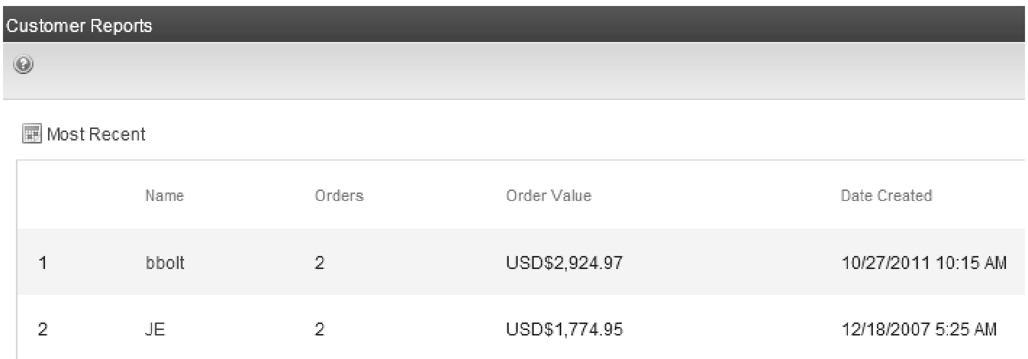
eCommerce provides several ways to measure and monitor your commerce activity:

- View a set of standard reports by choosing **Settings > Commerce > Reports**. These are also found in the **Reports > Commerce** section.
- View a log of your eCommerce activity in **Workarea > Settings >Commerce > Audit**.
- View a visual display of order information for a selected catalog entry by viewing the entry and choosing **Reports > Analytics**.

The eCommerce reports are also available as widgets for the Smart Desktop. See also *Managing content from the Smart Desktop* on page 612.

Customer report

The Customer Report shows 5 customers ranked according to account date, total sales, or orders.


Customer Reports

Most Recent

	Name	Orders	Order Value	Date Created
1	bbolt	2	USD$2,924.97	10/27/2011 10:15 AM
2	JE	2	USD$1,774.95	12/18/2007 5:25 AM

The report contains the following fields:

- **Name**. Customer first and last name
- **Orders**. Total number of orders by this customer
- **Order Value**. Total amount of sales to this customer
- **Date Created**. The date this person first became a customer

To change the report type, follow these steps.

1. Click **Most Recent**.
2. Select the type of report to view:
   - **Most Recent**. the newest customers joining the site
   - **Most Valuable**. customers ranked by order value
   - **Most Active**. customers ranked by number of orders

Inventory report

The Inventory Report displays the following information for each catalog entry.

- amount in stock
- amount on order (number of items were been ordered but not delivered)
- amount on reorder (quantity at which you need to reorder this item). When the In Stock quantity reaches this level, an event is triggered which an external inventory system can use to generate a new order.
- inventory status of item (enabled or disabled)

Inventory

REPORTING

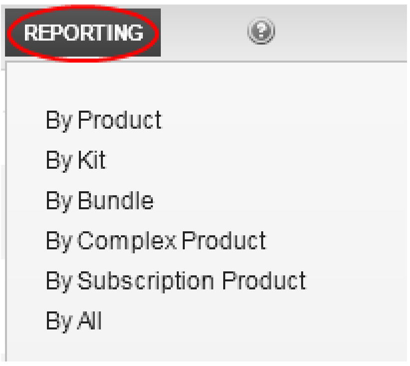
Title	In Stock	On Order	Reorder	Status
1 TB SATA 64 MB Cache Bulk Desktop Hard Drive	1999	0	0	Enabled
20-Inch Diagonal HD Ready LCD Monitor – White	2000	0	0	Enabled
24-inch Diagonal HD Ready LCD Monitor	2000	0	0	Enabled
Basic Wireless Router	1999	0	0	Enabled
Professional Photo Retouch DS4	2000	0	0	Enabled

The screen also lets you edit any amount and the inventory status. Any changes made on the screen update the inventory fields on the catalog entry's **Properties** tab.

See also: *Entering a catalog entry’s properties* on page 1694

Sorting the inventory report

You can restrict the display to catalog entries in a selected Product Class. To do this, click the **Reporting** button. For example, you can display complex products only.



See also: *Product classes* on page 1675.

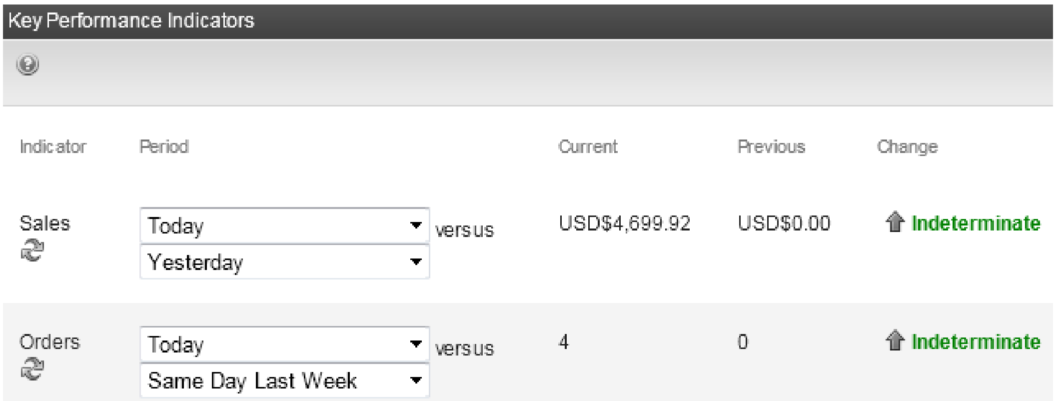
Editing inventory information

You can edit any catalog entry's inventory information. To do so, select it from the Inventory Reports screen then click **Edit**.

NOTE: When editing the **In Stock** field, select a plus (**+**) or minus (**-**) sign from the drop-down menu then enter the adjustment amount. The screen automatically recalculates the in-stock amount for you.

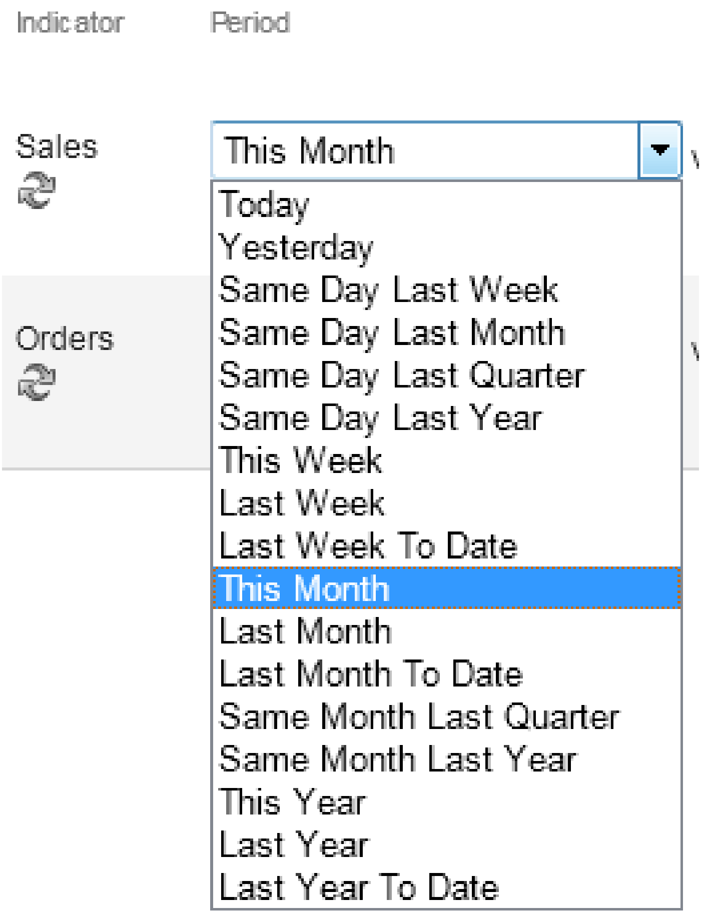
Key performance indicators report

The Key Performance Indicators report compares sales and orders for 2 time periods.



To change the periods to compare:

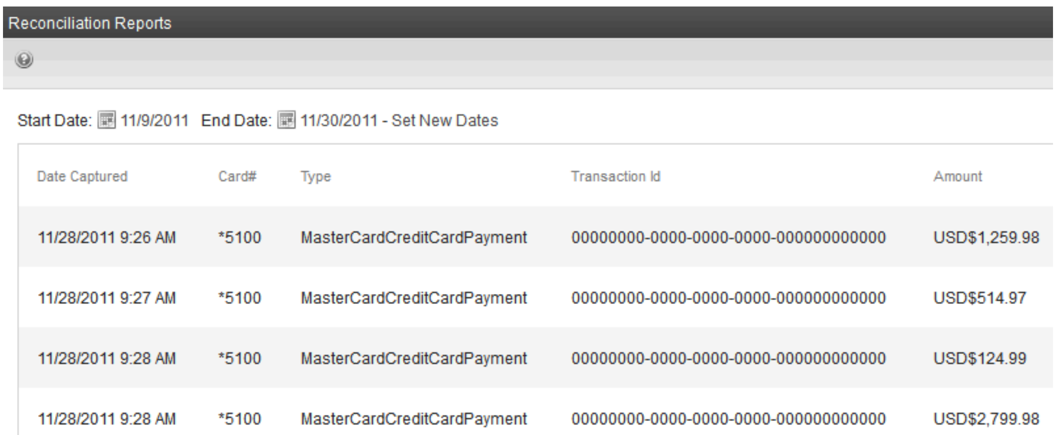
1. In the **Period** column, click **This Month**.



2. Click the first period for which you want to compare performance.
3. Repeat steps 1 and 2 for the second period with which you want to compare performance.
4. Click **Refresh** ( ).

Reconciliation reports

The Reconciliation report lists payments for a specific time period. Your accounting department may used it reconcile bank statements with the order system.



The report includes the following fields:

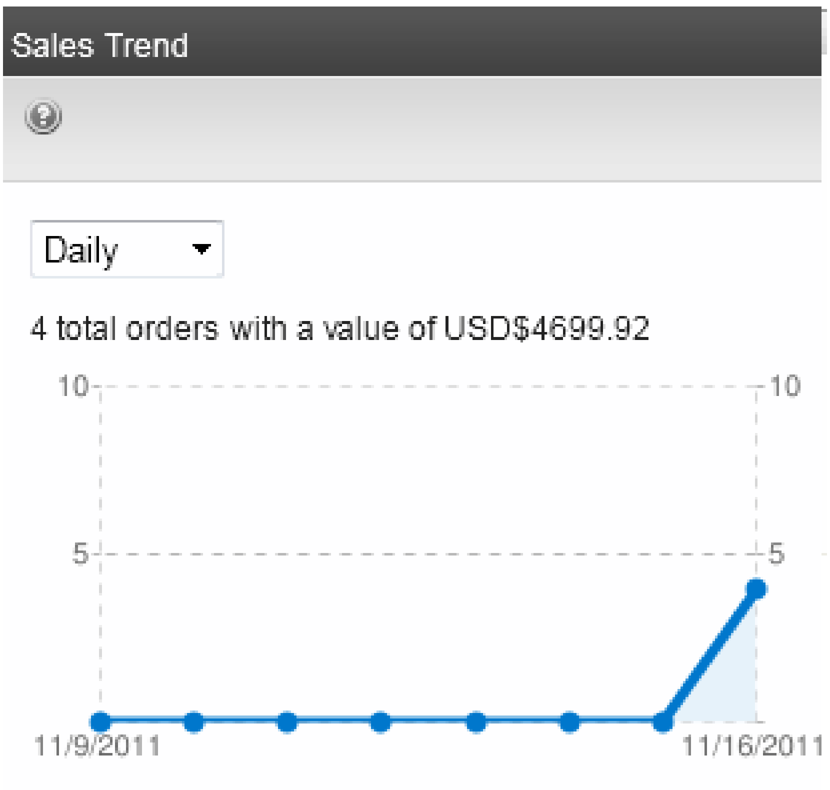
- **Date Captured**. Date the payment was captured. See also: *Capturing orders* on page 1724.
- **CardID**. The last 4 digits of the credit or debit card used for payment.
- **Type**. Type of payment used. See also: *Configuring payment options* on page 1641.
- **TransactionId**. The unique number returned from the Payment Provider for this payment.
- **Amount**. Total amount of the payment for this transaction.
- **Voided**. Total amount voided in the transaction.

To run a report, follow these steps.

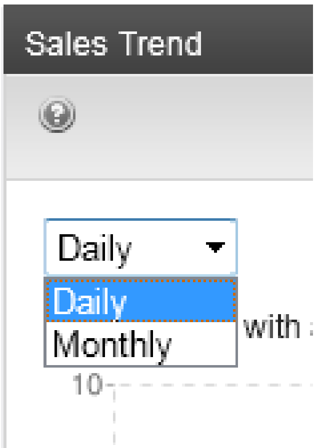
1. Click **Calendar** ( ) next to **Start Date** to open the calendar.
2. Click a date to set the start date.
3. Click **Calendar** ( ) next to **End Date** to open the calendar.
4. Click a date to set the end date.
5. Click **Set New Dates** to refresh the report.

Sales Trend report

The Sales Trend reports graphs the number of orders for the past 8 periods. You can choose monthly or daily orders. The top of the graph display the total number of orders and sales.

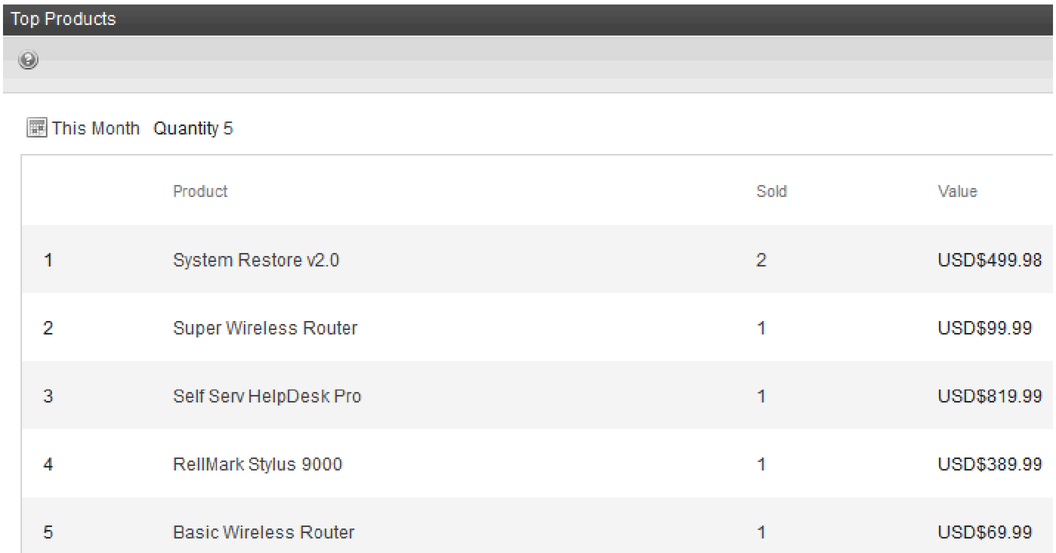


To change the graph's duration, click a time period from the drop-down.



Top Products report

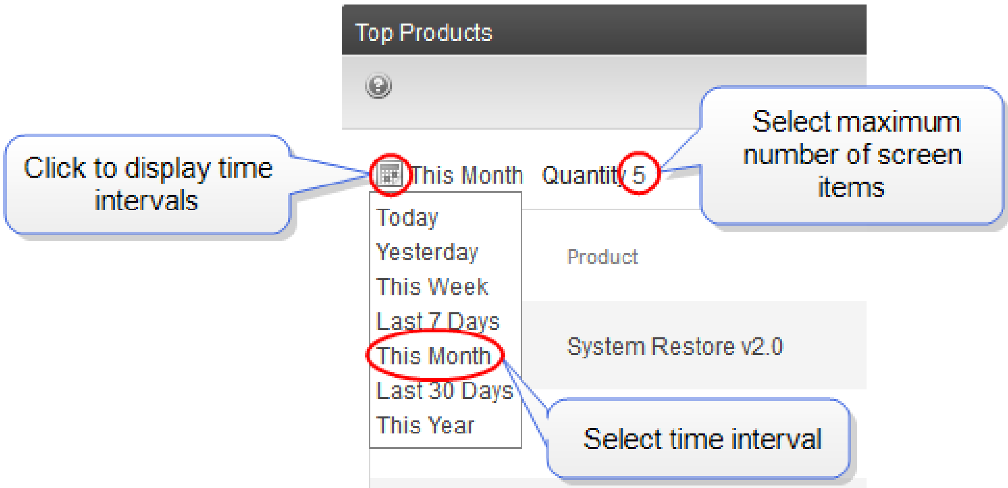
The Top Products reports shows the most popular products on your site.



	Product	Sold	Value
1	System Restore v2.0	2	USD$499.98
2	Super Wireless Router	1	USD$99.99
3	Self Serv HelpDesk Pro	1	USD$819.99
4	RellMark Stylus 9000	1	USD$389.99
5	Basic Wireless Router	1	USD$69.99

To create the report:

1. Click the link text next to the calendar icon.
2. Select the time period of sales from the drop-down.



3. To change the maximum number of products to show, click the value next to **Quantity**, enter a value, and click **Update.**

eCommerce audit log

As an administrator, you should regularly review the eCommerce Audit Log. This is vital to keeping your site secure and, if data is compromised, the log helps you determine the source.

While it is important that Ektron captures this information, it is even more important that you review, analyze and use it. For example, while reviewing the Audit Log, you might find that one eCommerce administrator has an unusually large number of login failures. This could indicate that someone is trying to break into your system.

You can view a log of your eCommerce activity in the **Workarea > Settings > Commerce > Audit**.

To enable eCommerce logging, open the website's `web.config` file and change the following key to **True**:

```
<addkey="ek_ecom_ComplianceMode" value="false"/>
```

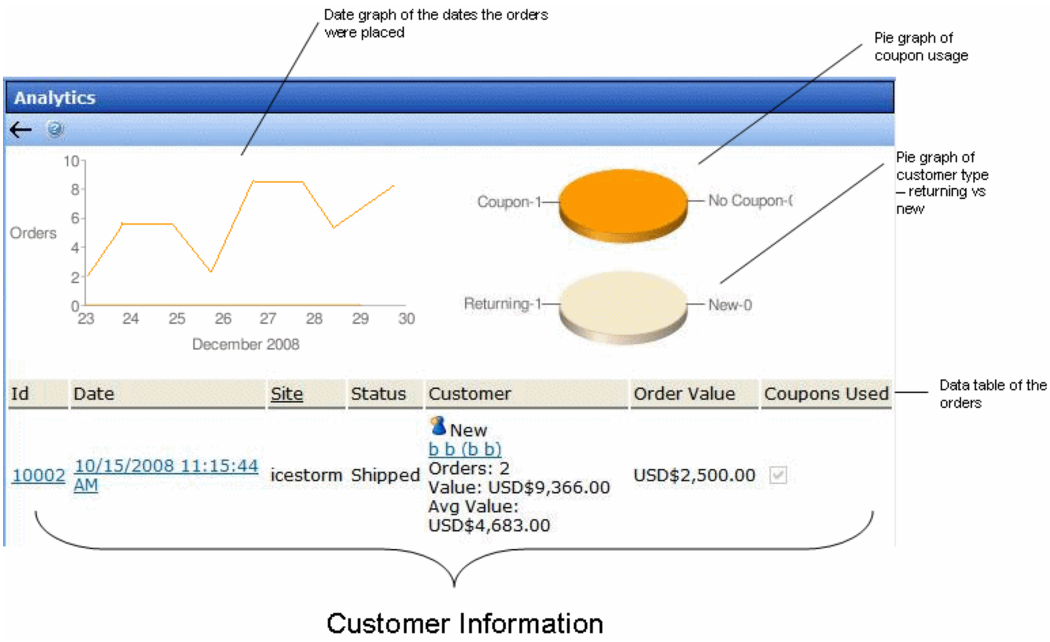
When compliance mode is turned on, Ektron logs and displays the following events.

- Actions affecting administrators (Administrator Group member, Commerce Admin Role, Builtin Account).
    - An administrator logs in or out
    - An administrator's login attempt fails
    - An administrator password is changed
- Actions affecting an Ektron user's rights to eCommerce.
    - Adding a user to the Commerce Admin Role
    - Removing a user from the Commerce Admin Role
    - Adding a user to the Admin group
    - Removing a user from the Admin group

- Actions affecting order information.
  - Updates to an order's address
  - The transaction ID and response from the payment gateway
  - Any action conducted with the payment gateway. For example, when capturing a previously authorized transaction.
  - Workflow activities. For example, sending an email.
  - Whenever the default gateway or payment options are changed in the Workarea.

eCommerce analytics

The eCommerce Analytics screen provides a visual display of order information for a selected catalog entry. Display a catalog entry and choose **Reports > Analytics**.



- Top left section graphs the quantity of this catalog entry ordered over the past 7 days
- Top right charts the number of orders that used a coupon versus the number that did not
- Below that pie chart is another that shows the number of returning customers versus the number of new ones
- The lower part of the screen shows the following order information
  - order number
  - date/time when order was entered
  - site from which order was entered
  - order status
  - customer information: new or returning, name, number of orders entered, value of all orders entered, average order monetary value

- order monetary value
- if a coupon was used

Customizing eCommerce

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

Ektron's eCommerce Module lets you set up an eCommerce website, which delivers a full set of functionality for building an online marketplace.

As a developer, you can use Ektron's standard functionality and out-of-the-box server controls to quickly create an eCommerce website. See eCommerce Server Controls for more information.

Ektron also lets you customize your website. For example, you can customize your site's order process workflow.

Customizing workflows

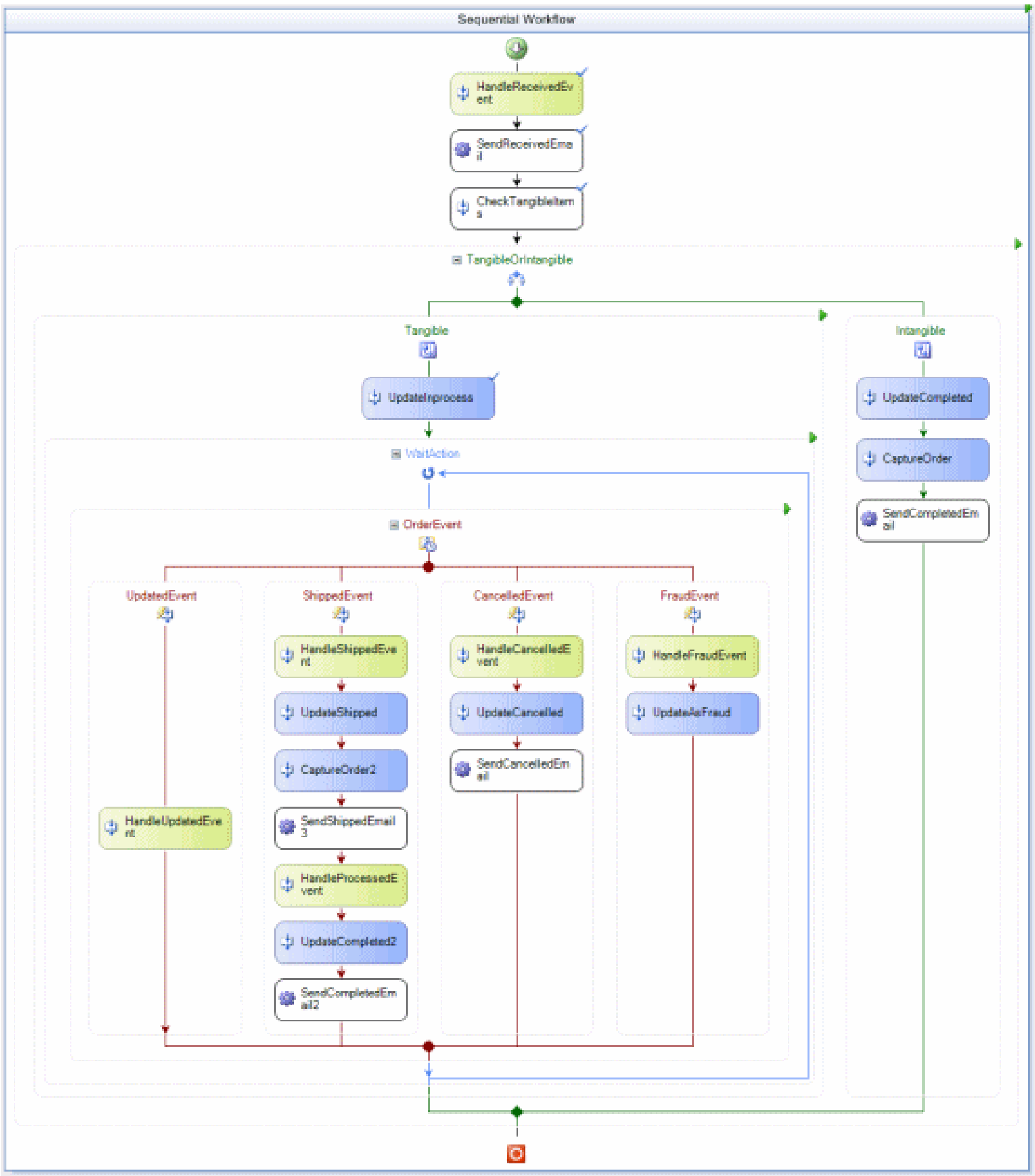
IMPORTANT: If you customize the workflow then upgrade to a new version of Ektron, you need to point to the new references then compile the workflow.

Ektron uses Microsoft's Windows Workflow Foundation to create and implement order process workflows in Ektron. Within Ektron eCommerce functionality, you use a workflow to handle the ordering process after your site has received an order. The workflow can be as simple or complex as your business requires.

For example, you could have a simple workflow that sends an email to the customer when their order is received, and sends another to the person shipping product for you. Or, you could have a more complex workflow that:

- sends an email to the customer when the order is received
- checks to see whether the item is a tangible product or a virtual product. Then, continues down the workflow path that's appropriate for the item.
- handles shipping notifications and updates the account throughout the shipping process
- handles the order if it is canceled
- handles the order if it is determined to be fraudulent
- marks the order as complete once all activities are finished

The following illustration shows Ektron's default sample workflow.



Windows Workflow Foundation (Released with Microsoft's .NET 3.0) is a development tool that lets you create activities-based workflow that can persist over a given length of time or be paused and restarted depending on events. For more information on WF, visit Windows Workflow Foundation.

Workflows are comprised of activities; each activity represents a portion of your Business Process. When activities have finished within a workflow, it terminates. There are 2 types of activities:

- **Activities**. executed inside the workflow once the activity is reached. For example, an email might be sent to a customer once their order is received by using the AdvancedEmailActivity placed after the OrderReceivedEventActivity. This email is automatically sent with no human interaction needed, and the workflow would continue.
- **Event Activities**. pauses the workflow until the event occurs. When the event takes place, the associated activity is executed. Think of events as road blocks in

the workflow that are not opened unless a matching action happens. When the event happens, the workflow follows the path associated with that event.

For example, an OrderFraudEventActivity in a workflow would keep the workflow from going through the Fraud Event portion of the workflow unless the order is marked as fraud.

- *AdvancedEmailActivity* on page 1749. Send an email based on the order ID and a specified message type.
- *BasicEmailActivity* on page 1751. Send a generic email message when this activity is reached in the workflow.
- *CaptureOrderActivity* on page 1752. Customize the handling of an order when it is captured.
- *CheckStockActivity* on page 1753. Verify whether the item is an in-stock item or not.
- *OrderCancelledEventActivity* on page 1753. Customize the handling of an order when it is canceled.
- *OrderCapturedEventActivity* on page 1754. Customize the handling of an oder when it is captured.
- *OrderFraudEventActivity* on page 1754. Customize the handling of an order when it's marked as fraud.
- *OrderProcessedEventActivity* on page 1755. Customize the handling of an order when it's being processed.
- *OrderReceivedEventActivity* on page 1755. Customize the handling of an order when it's marked as received.
- *OrderShippedEventActivity* on page 1756. Customize the handling of an order when it's marked as shipped.
- *OrderUpdatedEventActivity* on page 1756. Customize the handling of an order when it's updated.
- *UpdateOrderActivity* on page 1757. Update the order when this activity is reached.

Ektron supports Sequential Workflows and State Machine Workflows. Sequential Workflows are structured; a step-based process where one activity leads to the next. State Machine Workflows typically move from one activity to another when their state changes.

You can have multiple workflow projects associated with your eCommerce site and change workflow projects at any time. However, only 1 workflow project can run at a time. When an order process starts with a specified workflow, it continues through that Workflow.

Installing Ektron's sample workflow template

PREREQUISITE

Ektron SDK is installed See also: Using Ektron's Developer SDK.

Ektron provides a C# workflow template sample for a sequential workflow. You can modify this sample or use it to create new workflows. It is based on the Ektron default workflow.

To install Ektron's sample workflow template, copy and paste the Ektron Ordering Sequential `Flow.zip` file using the following **From** & **To** information.

From:

```
C:\Program Files(x86)\Ektron\CMS400SDK\Commerce\Workflow\Templates\VS2010
```

To:

```
C:\Documents and Settings\~user name~\My Documents\
  Visual Studio 2010\Templates\ProjectTemplates\Visual C#\Workflow
```

NOTE: Make sure you replace ***~user name~*** in the path with the user name under which Visual Studio project templates are saved.

Extract the .zip file in the **To** location. Then, you can work with a sample workflow. See also: *Working with the sample workflow* below.

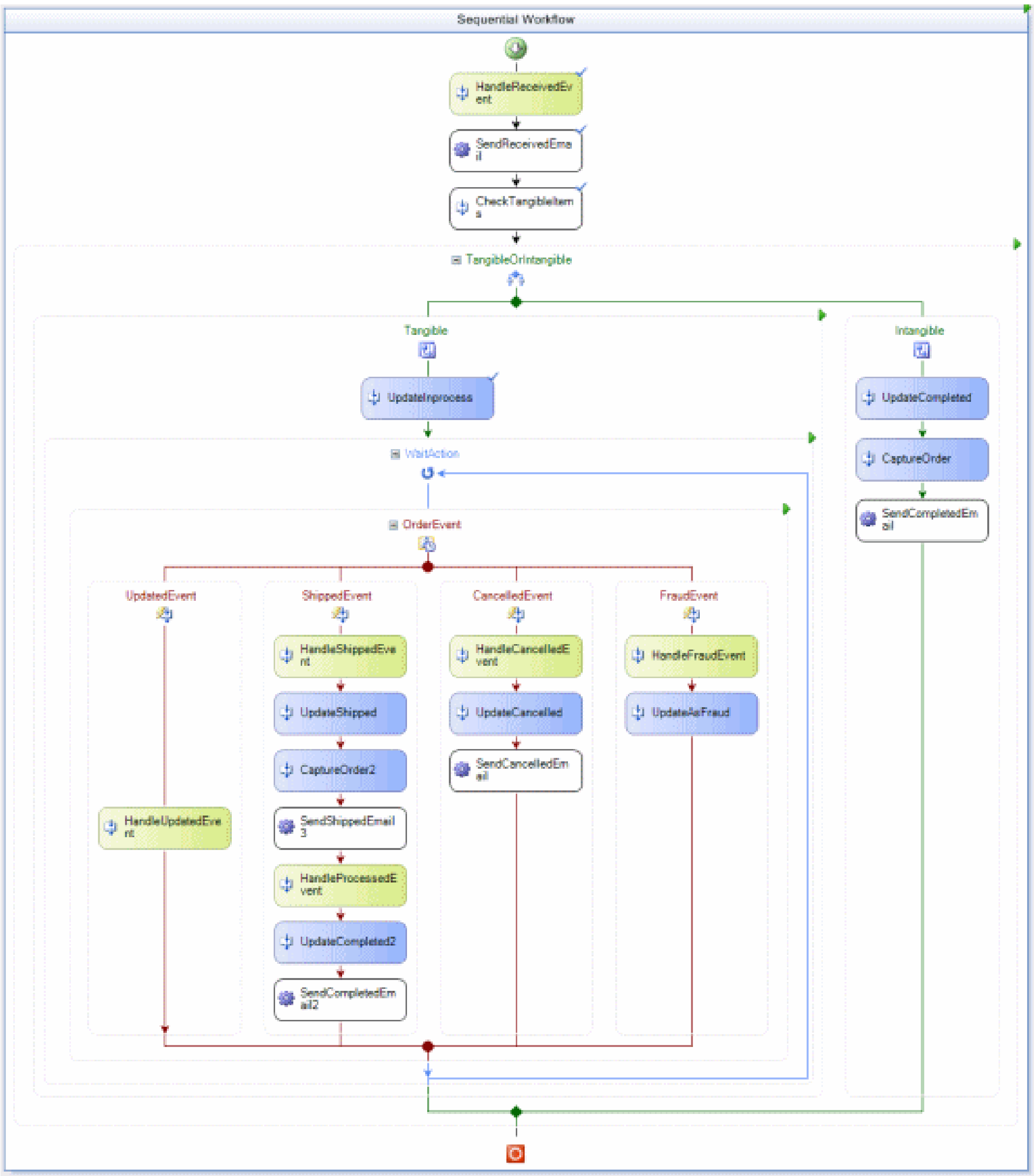
Working with the sample workflow

PREREQUISITE

You installed Ektron's sample workflow template. See *Installing Ektron's sample workflow template* on the previous page.

1. Open Visual Studio.
2. Choose **File > New > Project**.
3. If you are using C#, expand the Visual C# project type. Otherwise, expand the Visual Basic project type.
4. Click **Workflow**.
5. From the My Templates area, select **Ektron Ordering Sequential Flow**.
6. Select a new Name. If necessary, change the Location, Solution and Solution Name.
7. Click **OK**.
8. If a prior version of the software developer's kit (SDK) is installed, the assemblies in the sample may be older than those in your site. To avoid an issue:
    a. From your project's `bin` folder, remove `Ektron.Cms.Common.dll` and `Ektron.Workflow.dll`.
    b. Copy those files from the `bin` folder of your Ektron site to the `bin` folder of the newly-created workflow project.
    c. Re-establish the References to these dlls from the project's `bin` folder.

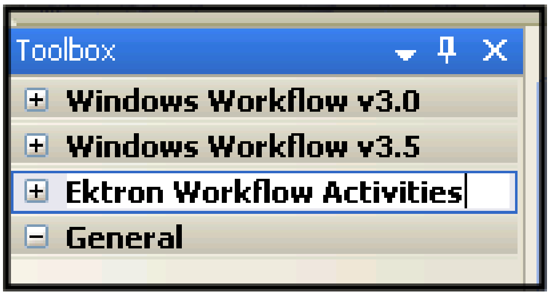
9. Open the **Workflow.cs** file in the Solution Explorer.



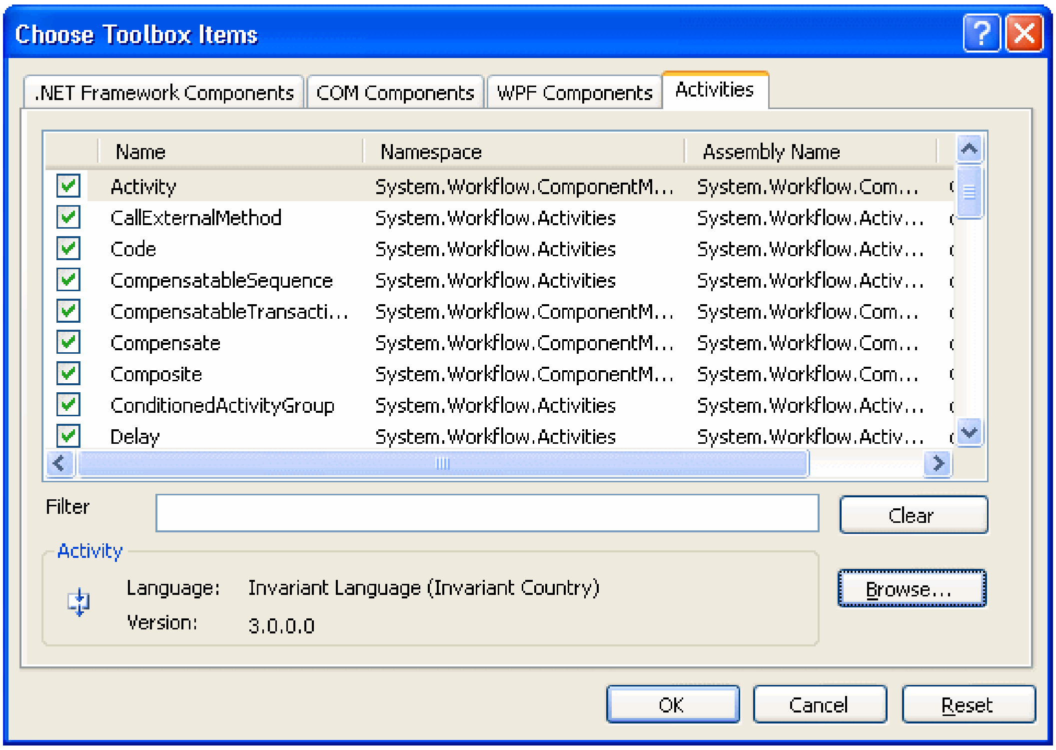
10. Make any necessary changes to the workflow.
11. Debug as needed.
12. Build the workflow. This creates a DLL of the workflow and places it in the project's bin/debug folder.
13. Go to the DLL's folder. For example, `C:\Documents and Settings\`*`~user name~`*`\My Documents\Visual Studio 2010\Projects\MyWorkFlow\MyWorkFlow\bin\Debug`.
14. Move or copy the new workflow DLL file to your website's bin folder.

Adding workflow activities to your toolbox

1. Open or create a Workflow in Visual Studio. See *Installing Ektron's sample workflow template* on page 1743.

2. Display the Toolbox (**View > Toolbox**).
3. Right-click the mouse within the Toolbox and choose **Add Tab**.
4. Type **Ektron Workflow Activities** then press **Enter**.
5. 

6. Click the **Ektron Workflow Activities** tab.
7. Right-click the mouse in the empty area and choose **Choose Items**. The Choose Toolbox Items dialog appears.



8. In Visual Studio 2010, select the **.NET Framework Components** tab.
9. Browse to `webroot\siteroot\bin\Ektron.Workflow.dll` file. This file provides access to Ektron's workflow activities.

   NOTE: Alternatively, you could use the following location: `C:\Program Files(x86)\Ektron\CMS400vxx\bin`. The file is identical in both places. Using the bin folder in your site provides better speed. However, if you use the bin folder in Program Files, you do not have to worry about deleting the .dll file if you change or delete your site.

10. Click **OK**.

For easier viewing, right-click the workflow activities and select **Sort Items Alphabetically**.

NOTE: Ektron's workflow activities appear only when the workflow is opened in design mode.

Removing workflow activities

1. Display the Visual Studio toolbox (**View > Toolbox**).
2. Right-click the mouse within the Toolbox.
3. Click **Choose Items**.
4. Click the **Activities** or **.NET Framework Components** tab.
5. Click **Namespace** or **Assembly Name** to sort Workflow Activities.
6. Uncheck all boxes that begin with `Ektron.Workflow.Activities`.
7. Click **OK**.
8. Right-click the **Ektron Workflow Activities** tab.
9. Click **Delete Tab**.

Updating workflow activities

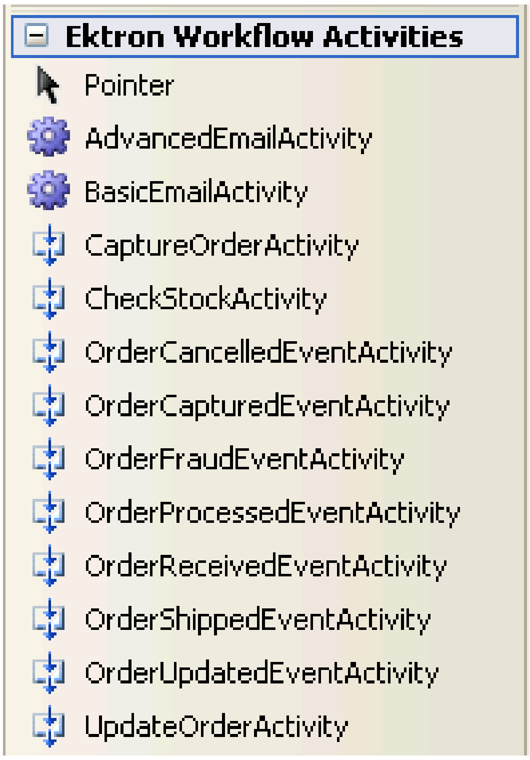
To update workflow activities, remove the existing ones in Visual Studio, then add new ones.

- For information on removing workflow activities, see *Removing workflow activities* above.

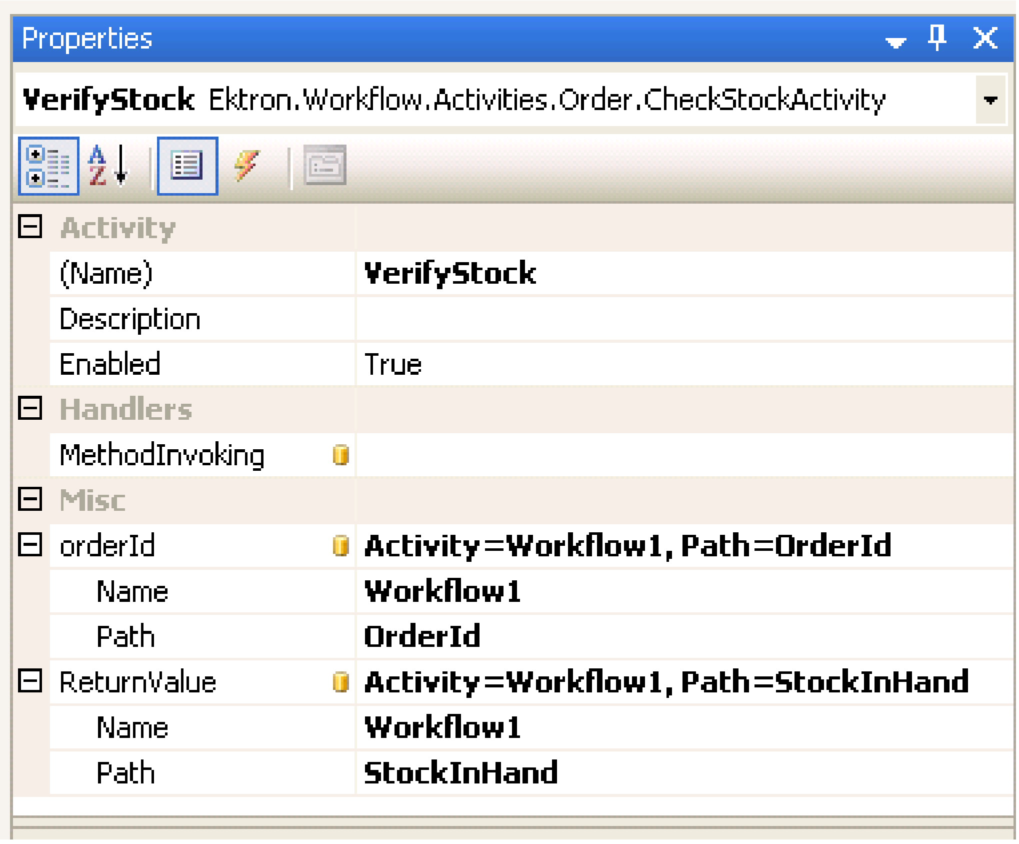
Inserting workflow activities using drag and drop

Because Visual Studio is a visual environment, lines that connect events and activities change as you add or remove them. To add an activity to a workflow:

1. Display the Visual Studio toolbox (**View > Toolbox**).
2. Click the **Ektron Workflow Activities** tab. Ektron's Workflow Activities appear.



3. Drag an activity and drop it into the desired location in the Workflow.
4. As desired, modify the activity's properties using Visual Studio's **Properties** area.



AdvancedEmailActivity

Send an email notification, based on an order ID in Ektron, after an event takes place in the workflow. For example, after an order is shipped, you might choose to send an email that notifies customers when their orders are shipped. Or, you might send an email to a customer when their order is received.

With this activity you can choose to send a predefined email message. These messages are defined in the Workarea under **Settings > Commerce > Configuration > Messages**. See also: *Sending eCommerce messages* on page 1726.

Two event handler properties in this activity let you add custom code to `SendingEmail` and `SentEmail` events. The SendingEmail event fires immediately before the email is sent. The SentEmail event fires immediately after the email sent.

Key properties of this activity are:

- `EmailArgs`. Set this property to `OrderId` to associate the activity with orders in Ektron.
- `MessageTypes`. Set this property to the type of email message this activity sends.

Associate email activity with orders in Ektron. You can either supply information such as, To:, From:, Body:, and so on. or use information associated with the order. It also lets you specify the type of message type that’s sent. (The `BasicEmailActivity`, on the other hand, is a generic email activity where you specify To:, From:, Body:, and other email information.)

Activities

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). True (default), enable the activity; False, disable.

Email Message

- **Bcc** (String). A blind carbon copy of the email is sent to the address entered in this property. If you select `OrderId` for the `EmailArgs` property, the `Bcc` property is dynamically populated with the order's information.
- **Body** (String). Enter the main content of the email. If you select a parameter from the `MessageType` property, the `Body` property uses the corresponding content for that message type.
- **CC** (String). A carbon copy of the email is sent to the email address entered in this property. If you select `OrderId` for the `EmailArgs` property, the `CC` property is dynamically populated with the order's information.
- **From** (String). The address from which the email is sent. If you select `OrderId` for the `EmailArgs` property, the `CC` property is dynamically populated with the order's information.
- **HtmlBody** (Boolean). Select whether to send the email in HTML or plain text. True (default), use HTML; False, use plain text.
- **ReplyTo** (String). Specify the address to which the recipient of the email replies.
- **Subject** (String). Enter subject information for the email. If you select a parameter from the `MessageType` property, the `Subject` property uses the subject information for that message type.
- **To** (String). The email is sent to the address in this property. If you select `OrderId` for the `EmailArgs` property, the `To` property is dynamically populated with the order's email information.

Email Server

- **Port** (Integer). Set this value to the port your system uses access to retrieve email. In most cases, the port is set to 25. If that is not the case, see your System Administrator. The default is **25**. If blank, this property uses the `ek_SMTPPort` value in the site's `web.config` file.
- **SmtpHost** (String). The address of the server hosting the email system. If blank, this property uses the `ek_SMTPServer` in the site's `web.config` file.

Handlers

- **SendingEmail** (String). Event handler to add custom code to the sending email event. This event fires right before the email is sent.
- **SentEmail** (String). Event handler to add custom code to the sent email event. This event fires right after the email is sent.

Misc

- **EmailArgs**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select `OrderId` from the list.
- **MessageType**. Select the type of message that is sent for this activity. If you select None, the message is sent with the text in the `Body` property.
  - **None** (default). uses the text in the `Body` property.
  - **OrderReceived**. Sends the Order Received email defined in the **Workarea** > **Settings** > **eCommerce** > **Configuration** > **Messages** screen when an order is received.
  - **OrderCancelled**. Sends the Order Cancelled email defined in the **Workarea** > **Settings** > **eCommerce** > **Configuration** > **Messages** screen when an order is received.
  - **OrderShipped**. Sends the Order Confirmation email defined in the **Workarea** > **Settings** > **eCommerce** > **Configuration** > **Messages** screen when an order is received.

For information on defining the messages, see *Sending eCommerce messages* on page 1726.

BasicEmailActivity

Send an email after an event takes place in the workflow. These emails are usually generic and contain the same information for To:, From:, Subject, Body, and so on.

There are 2 event handler properties in this activity that let you add custom code to the `SendingEmail` and `SentEmail` events. The SendingEmail event fires right before the email is sent. The SentEmail event fires right after the email sent. For example, you want to notify a supervisor when orders are received, but you don't want the notification to contain any order specific information.

Key properties of this activity are:

- `To`. enter the address to receive the email.
- `From`. enter the address from which the email is being sent.
- `Subject`. enter a brief summary for the email.
- `Body`. enter the main subject text of the email.

BasicEmailActivity sends a generic email. In the activity, you specify To:, From:, Body:, and other email information. (The `AdvancedEmailActivity`, on the other hand, lets you send an email associated with orders in Ektron.) You can either supply information such as, To:, From:, Body:, and so on, or use information associated with the order. It also lets you specify the type of message type that's sent.

Activities

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). True (default), enable the activity; False, disable.

Email Message

- **Bcc** (String). A blind carbon copy of the email is sent to the address entered in this property.
- **Body** (String). Enter the main content of the email.
- **CC** (String). A carbon copy of the email is sent to the email address entered in this property.
- **From** (String). The address from which the email is sent.
- **HtmlBody** (Boolean). Select whether to send the email in HTML (**True**) or plain text (**False**).
- **ReplyTo** (String). Specify the address to which the recipient of the email replies.
- **Subject** (String). Enter a brief summary for the email.
- **To** (String). The email is sent to the address in this property.

Email Server

- **Port** (Integer). Set this value to the port your system access to retrieve email. In most cases, the port is set to 25. If that is not the case, see your System Administrator. The default is **25**. If blank, this property uses the `ek_SMTPPort` value in the site's `web.config` file.
- **SmtpHost** (String). The address of the server hosting the email system. If blank, this property uses the `ek_SMTPServer` in the site's `web.config` file.

Handlers

- **SendingEmail** (String). Event handler to add custom code to the sending email event.
- **SentEmail** (String). Event handler to add custom code to the sent email event.

CaptureOrderActivity

Initiate the capture of an order in Ektron. When the Workflow reaches this activity, the process of submitting encrypted order information (including the transaction ID) to a payment gateway account happens. At this time, the account is changed for the order amount.

Use this activity when you want the capture to take place automatically in the Workflow. This activity is the same as an Ektron user going to the Workarea and marking an order as Captured. For information on how a Capture works in the Workarea, see *Capturing orders* on page 1724.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). True (default), enable the activity; False, disable.

Handlers

- **MethodInvoking**. Select a method to call before the order is captured.

Misc

- Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId** from the list.

CheckStockActivity

Verify the quantity of items ordered is available for shipping. When the workflow reaches this activity, the quantity of each product in the order is checked. If the required quantity exists for each item, the activity returns True. Otherwise, the activity returns False.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). True (default), enable the activity; False, disable.

Handlers

- **MethodInvoking**. Select a method to call before the stock level is checked.

Misc

- **orderId**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId** from the list.
- **ReturnValue** (Boolean)
  - **True**. the quantity of each product ordered is in stock.
  - **False** (default). there is not enough product in stock to fulfill the order.

OrderCancelledEventActivity

Block the workflow from going down a cancel path until the order actually has been canceled.

This activity does not cancel the order. It waits for a user, API code or `UpdateOrderActivity` to mark the order canceled in Ektron before it continues down the order cancel path. Think of it as gate that's waiting for a certain event to happen before it can continue. When the event happens, the path is opened in the workflow. For information on how to cancel an order in the Workarea, see *Canceling an order* on page 1724.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). True (default), enable the activity; False, disable.
- **Roles**.

Handlers

- **Invoked** (String). Specify code that executes when the order is canceled.

Misc

- Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId** from the list.

OrderCapturedEventActivity

Block the workflow from continuing down a path until the order actually has been captured.

This activity does not capture the order. It waits for a user or API code to mark the order as captured in Ektron before it continues down the path. Think of it as gate that's waiting for a certain event to happen before it can continue. When the event happens, the path is opened in the workflow. For information on how an order is captured in the Workarea, see *Capturing orders* on page 1724.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). True (default), enable the activity; False, disable.
- **Roles**.

Handlers

- **Invoked** (String). Specify code that executes when the order has been captured.

Misc

- **OrderId**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId** from the list.

OrderFraudEventActivity

Block the workflow from going down a path that handles fraudulent orders until the order actually has been marked as fraud.

This activity does not mark the order as fraudulent. It waits for a user, API code or the `UpdateOrderActivity` to mark the order as fraud in Ektron before it continues down the path. Think of it as gate that's waiting for a certain event to happen before it can continue. When the event happens, the path is opened in the workflow. For information on how to mark an order as fraud in the Workarea, see *Marking the order as fraudulent* on page 1726.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). True (default), enable the activity; False, disable.
- **Roles**.

Handlers

- **Invoked** (String). Specify code that executes when the order has been marked as fraud.

Misc

- **OrderId**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId** from the list.

OrderProcessedEventActivity

Block the workflow from going down an order process path until the order actually has been processed. This is a generic event activity that lets you specify custom code to somehow process the order.

This activity does not start the process. It waits for a user, API code or the `UpdateOrderActivity` to kick off the Process Order action in Ektron before it continues down the path. Think of it as gate that's waiting for a certain event to happen before it can continue. When the event happens, the path is opened in the workflow. For information on how to cancel an order in the Workarea, see *Canceling an order* on page 1724.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). True (default), enable the activity; False, disable.
- **Roles**.

Handlers

- **Invoked** (String). Specify code that executes when the order has been processed.

Misc

- **OrderId**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId** from the list.

OrderReceivedEventActivity

Usually the first item in an order workflow, this activity does not mark the order as received, but instead waits for Ektron to register a new order. When the order is received, this activity allows the workflow to start. Think of it as gate that's waiting for a certain event to happen before it can continue. When the event happens, the path is opened in the workflow.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). **True** (default), enable the activity; **False**, disable.
- **Roles**.

Handlers

- **Invoked** (String). Specify code that executes when the order has been received.

Misc

- **OrderId**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId** from the list.

OrderShippedEventActivity

Block the workflow from going down a shipped order path until the order actually has been shipped.

This activity does not mark the order as shipped. It waits for a user, API code or `UpdateOrderActivity` to mark the order as shipped in Ektron before it continues down the path. Think of it as gate that's waiting for a certain event to happen before it can continue. When the event happens, the path is opened in the workflow. For information on how to mark an order as shipped in the Workarea, see *Marking the order as shipped* on page 1726.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). **True** (default), enable the activity; **False**, disable.
- **Roles**.

Handlers

- **Invoked** (String). Specify code that executes when the order is shipped.

Misc

- **OrderId**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId**. from the list.

OrderUpdatedEventActivity

Block the workflow from going down an updating order path until the order actually has been updated.

This activity does not update the order as shipped. It waits for a user, API code or `UpdateOrderActivity` to update an order inEktron before it continues down the path. Think of it as gate that's waiting for a certain event to happen before it can continue. When the event happens, the path is opened in the workflow.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). **True** (default), enable the activity; **False**, disable.
- **Roles**.

Handlers

- **Invoked** (String). Specify code that executes when the order has been updated.

Misc

- **OrderId**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId**. from the list.

UpdateOrderActivity

Automate updating of an order's status. This activity is the same as an Ektron user going to the Workarea and performing any of the above actions on an order. For information on how to manually complete these tasks in the Workarea, see *Managing customer orders* on page 1716.

Activity

- **Name** (String). Enter a name for the Activity.
- **Description** (String). Enter a description for the Activity.
- **Enabled** (Boolean). **True** (default), enable the activity; **False**, disable.

Handlers

- **MethodInvoking**. Select a method to call before the stock level is checked.

Misc

- **OrderId**. Select `OrderId` to dynamically associate this activity with orders in Ektron. Click **Browse** (...) and select **OrderId**. from the list.
- **orderStatus**
  - **Received** (default). marks an order as received
  - **InProcess**. marks the order as in process
  - **Shipped**. marks the order as shipped
  - **Completed**. marks the order as completed
  - **Canceled**. marks the order as canceled
  - **OnHold**. puts the order on hold
  - **Fraud**. marks the order as fraud

Customizing the Payment Gateway Provider

A Payment Gateway Provider is a pluggable component that is integrated into Ektron's eCommerce module. A Payment provider handles eCommerce customer payments by utilizing third party payment gateways. Ektron's eCommerce module accepts payments such as credit cards. Then, it passes that information to a third party service. The third party service processes the payment, and returns a transaction ID that's stored with the customer's order.

NOTE: Your company needs to set up an account with a third party payment service before utilizing the payment provider. This includes payment providers such as Authorize.NET and PayFlow, which are included with Ektron’s eCommerce Module.

Ektron comes with several payment providers, including Authorize.NET and PayFlow. You can customize these providers or create your own using the extendable Payment Gateway Provider architecture.

Each type of payment gateway provider accepts configuration parameters. For example, Authorize.NET requires a username and password while PayFlow requires a username, password, vendor, and partner.

In addition, some payment gateways may support recurring payments, while others may not. Recurring payments provide the ability to create a payment that recurs at a given interval for a specified period of time. For example, you could create a payment for $9.99 that occurs on the first of every month for the next 12 months. This is something to consider if your site relies on a subscription service. Contact your provider to find out if they support recurring payments.

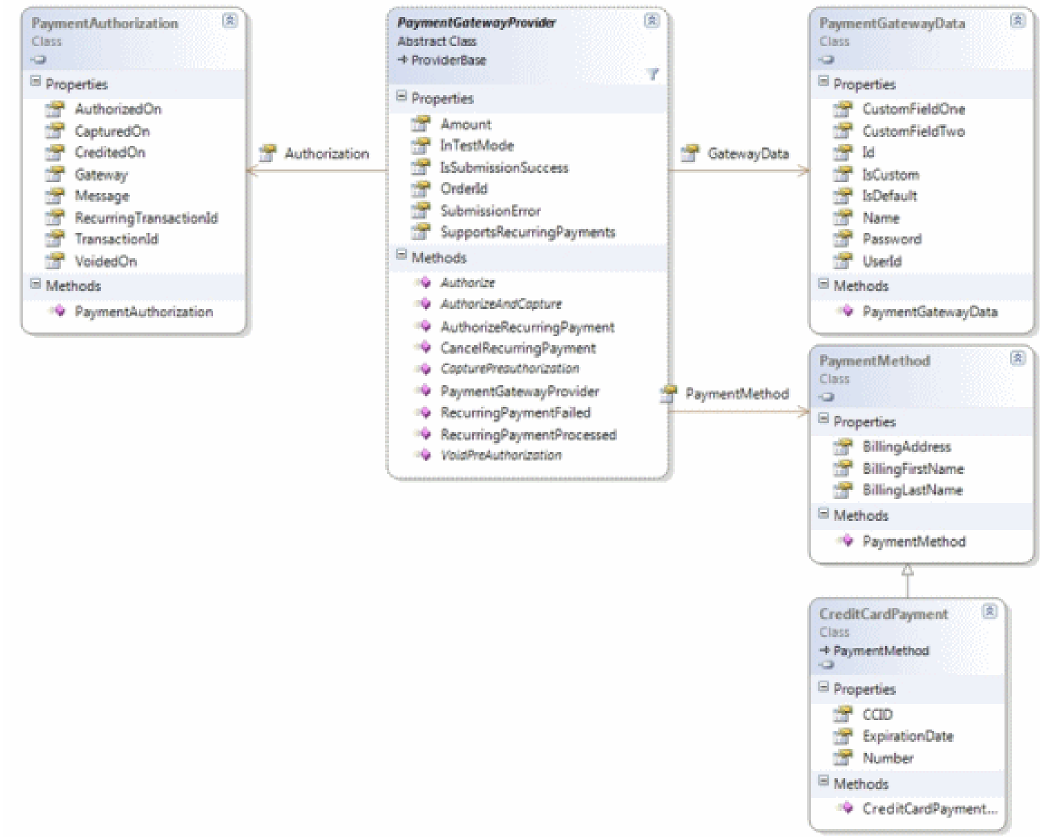
The following scenario shows the flow of payment information for a customer purchasing a product from your site through you receiving the money in your account.

1. A customer purchases a product from your site and submits payment information.
2. Ektron passes the information to your payment gateway.
3. Your payment gateway provider passes the information to your bank’s processor.
4. The bank’s processor submits the information to a credit card interchange for processing, clearing and settlement.
5. The interchange notifies the customer’s credit card company of the transactions details.
6. The credit card company accepts or declines the transaction based on the customers account information.
7. If the transaction is approved, the funds are transferred to the interchange.
8. The credit card interchange sends information about whether the transaction is approved to your bank’s processor.
9. This information is passed to your payment gateway provider.
10. The provider notifies your site of the information. The results of the transaction are displayed on the page the customer is viewing.
11. The credit card interchange sends funds to your merchant account.

This section explains how to extend Ektron’s Payment Gateway Provider Architecture to build your own customized Payment Gateway Provider.

See also: *Configuring payment options* on page 1641.

The following figure shows the Object Model for Ektron’s Payment Gateway Provider.



The PaymentGatewayProvider is the abstract base class you must extend to implement your own payment gateway. Details and descriptions of the PaymentGatewayProvider API can be found in the Ektron API Reference Manual's **Providers API** > **PaymentGatewayProvider** section.

Creating a Custom Payment Gateway Provider

In addition to the out-of-the-box payment gateways providers shipped with Ektron, you can create your own custom payment providers that connect with any payment gateway you choose. When you create a custom gateway provider, you need the following basic code steps to complete. Additional code examples used by Ektron to create the PayFlow and Authorize.NET providers are located in: `C:\Program Files (x86)\Ektron\CMS400SDK\Commerce\Providers\Commerce.Providers\PaymentGateways`

The complete C# code sample used in this example is available at the end of this section. See *CustomGatewayProvider code example* on page 1763.

1. Create a class library project in Visual Studio.
2. Add references to these DLLs:
   - `Ektron.Cms.Commerce`
   - `Ektron.Cms.Common`
   - `Ektron.Cms.ObjectFactory`
   - `Ektron.Cms.Instrumentation`
   - `System.Configuration`

- Add these using statements to the code-behind:

```
using System;
using System.Collection;
using System.Collection.Specialized;
using Ektron.Cms;
using Ektron.Cms.Common;
using Ektron.Cms.Commerce;
```

3. Change the namespace to:

```
namespace Ektron.Cms.Extensibility.Commerce.Samples
```

4. Rename your class and inherit:

```
public class CustomPaymentProvider:
  Ektron.Cms.Commerce.PaymentGatewayProvider.PaymentGatewayProvider
```

5. Add the following constructor.

```
#region constructor, member variables
public CustomPaymentProvider() { }
#endregion
```

6. Add the methods required by the PaymentGatewayProvider base class. The **Initialize** method reads configuration information, the others are related to the payments and will be completed later in the example.

```
public override void
  Initialize(string name,
  System.Collections.Specialized.NameValueCollection config)
{ if (config == null)
  { throw new ArgumentNullException("config");
// Assign the provider a default name if it does not have one
  if (String.IsNullOrEmpty(name)) name = "CustomPaymentProvider";
  if (string.IsNullOrEmpty(config["description"]))
    { config.Remove("description");
      config.Add("description", "CustomPaymentProvider");
    }
// Call the base class's Initialize method
    base.Initialize(name, config);
// Throw an exception if unrecognized attributes remain
  if (config.Count > 0)
    { foreach (string key in config.AllKeys)
      { EkException.WriteToEventLog("Unrecognized Payment Gateway
        Provider attribute: " + key,
        System.Diagnostics.EventLogEntryType.Warning);
      }
    }
  }
}
public override string Authorize()
{
}
public override string AuthorizeAndCapture()
{
}
public override string CapturePreauthorization(string transactionId)
{
}
```

```
public override string VoidPreAuthorization(string transactionId)
{
}
```

7. Implement the **Authorize** method that you added in the previous step. This method is called to authorize a given amount of money when an order is submitted.

```
public override string Authorize()
{ if (PaymentMethod.GetType() != typeof(CreditCardPayment))
  throw new Ektron.Cms.Commerce.Exceptions
    .AuthorizationException("Invalid Payment Type");
  CreditCardPayment creditCard = (CreditCardPayment)this.PaymentMethod;
  if (creditCard.ExpirationDate.IsExpired())
    throw new Ektron.Cms.Commerce.Exceptions.Payment.CreditCard
      .CardExpiredException("Card Is Expired");
  IsSubmissionSuccess = true;
  Authorization.AuthorizedOn = DateTime.Now;
  Authorization.TransactionId = new Guid().ToString();
  return Authorization.TransactionId;
}
```

In this example, the card number and card holder name are not checked. In a real world scenario, there would be additional validation (for example, via checksum) and the authorization may be obtained via Web services or HTTP post.

NOTE: If the authorization fails, you can choose to either throw an exception or manually set the failure. For example:

```
SubmissionError = "Not enough Funds";IsSubmissionSuccess =
false;
```

8. Implement the **AuthorizeAndCapture**, **CapturePreauthorization** and **VoidPreAuthorization** methods you added earlier.
9. **AuthorizeAndCapture** requires that **Authorization.CapturedOn** be set, as the capture occurs at the same time as the Authorization.
10. For **CapturePreauthorization** and **VoidPreAuthorization,** set the appropriate dates for these actions, so they are recorded in the system properly.

```
public override string AuthorizeAndCapture()
{ IsSubmissionSuccess = true;
  Authorization.AuthorizedOn = DateTime.Now;
  Authorization.CapturedOn = DateTime.Now;
  Authorization.TransactionId = new Guid().ToString();
  return Authorization.TransactionId;
}
public override string CapturePreauthorization(string transactionId)
{ IsSubmissionSuccess = true;
  Authorization.CapturedOn = DateTime.Now;
  return Authorization.TransactionId;
}
public override string VoidPreAuthorization(string transactionId)
{ IsSubmissionSuccess = true;
  Authorization.VoidedOn = DateTime.Now;
```

```
  return Authorization.TransactionId;
}
```

11. Save and build the project.
12. Copy your project's DLL file to your Ektron website's **bin** directory.
13. Register the provider in your site's `web.config` file. The `web.config` file provides the facility to manage payment gateway providers within Ektron.
14. To do this, locate the **EktronPaymentGateway** section and change the **defaultProvider** parameter to the name of your custom provider. Note that changing this from "Automatic" to the name of your provider overrides the settings in **Workarea > Settings > Commerce > Configuration > Payment Gateways**. Ektronnow will use the new provider.
15. If you start your search from the top of the file, it is the second instance.

```
<EktronPaymentGateway defaultProvider="CustomPaymentProvider">
```

16. Add your custom payment provider between the EktronPaymentGateway's `<providers>` tags. Note that the name defined here must match the `defaultProvider` from the previous step.

```
<providers>
  <add name="CustomPaymentProvider"
    type="Ektron.Cms.Extensibility.Commerce.Samples.CustomPaymentProvider,
    CustomPaymentProvider" />
</providers>
```

17. Save the `web.config` file.
18. Next, add the payment gateway to the Workarea.
    a. Go to **Workarea > Commerce > Configuration > Payment Options**.
    b. Select **New > Payment Gateway**.
    c. In the Name drop-down, select **customerPaymentProvider**.
    d. Check both **Cards** and **Checks** checkboxes.
    e. Save these changes. Your custom payment provider is now the default provider. Whenever a payment provider needs to be contacted, the information routes through the new custom provider.

Displaying a custom provider an option in the Workarea

In the example above, you changed the `web.config` file's EktronPaymentGateway defaultProvider parameter to the name of your custom payment provider. This overrides the payment provider settings in the Workarea. To manage all payment providers from the **Workarea > Settings > Commerce > Configuration > Payment Gateways** screen:

1. In the `web.config` file, locate the **EktronPaymentGateway** section and make sure the **defaultProvider** parameter is set to `Automatic`.

```
<EktronPaymentGateway defaultProvider="Automatic">
```

2. Save the `web.config` file.

3. Go to the **Workarea > Settings > Commerce >Configuration > Payment Gateways** screen.
4. Choose **New > Payment Gateway**.
5. From the **Name** drop-down list, select the name of the your new custom gateway.
6. Check the **Default** box if you want this to be the default payment gateway. The default payment gateway is the gateway all payment information is routed through.
7. Enter the **User ID** for this payment gateway. This ID will identify your account with this gateway provider.
8. Enter the password for your account with this gateway provider.
9. If this gateway provider expects additional parameters when contacting it, click the **Expand Custom Values** link and enter those values into the Custom 1 and Custom 2 fields.
10. Click **Save**. The custom gateway provider has been added and can now be managed from the Workarea.

CustomGatewayProvider code example

WARNING! Copying, pasting, and using the following code without modification to create a DLL will not result in a working custom payment provider. This code is provided as an outline of what is needed to create an actual custom payment provider.

```
using System;
using System.Collections;
using System.Collections.Specialized;
using System.Configuration.Provider;
using Ektron.Cms;
using Ektron.Cms.Common;
using Ektron.Cms.Commerce;
namespace Ektron.Cms.Extensibility.Commerce.Samples
  {
  public class CustomPaymentProvider :
    Ektron.Cms.Commerce.PaymentGatewayProvider
    {
    public CustomPaymentProvider() { }
      public override void Initialize(string name,
      System.Collections.Specialized.NameValueCollection config)
      {
      if (config == null throw new ArgumentNullException(;
      // Assign the provider a default name if it does not have one
      if (String.IsNullOrEmpty(name))
      name = CustomPaymentProvider"
      if string.IsNullOrEmpty(config(["description"]))
        {
        config.Remove("description");
        config.Add("description", "CustomPaymentProvider";
        }
        // Call the base class's Initialize method
        base.Initialize(name, config);
```

```
        // Throw an exception if unrecognized
          attributes remain
        if (config.Count > 0)
        {
        foreach (string key in config.AllKeys)
          {
          EkException.WriteToEventLog("Unrecognized
            Payment Gateway Provider attribute:
            " + key,
            System.Diagnostics.EventLogEntryType.Warning);
          }
        }
      }
    public override string Authorize()
    {
    if (PaymentMethod.GetType() != typeof(CreditCardPayment))
      throw new Ektron.Cms.Commerce.Exceptions.
        AuthorizationException("Invalid Payment Type");
      CreditCardPayment creditCard = (CreditCardPayment)
        this.PaymentMethod;
      if (creditCard.ExpirationDate.IsExpired())
      throw new Ektron.Cms.Commerce.Exceptions.Payment.CreditCard.
        CardExpiredException( "Card Is Expired";
      IsSubmissionSuccess = true;
      Authorization.AuthorizedOn = DateTime.Now;
      Authorization.TransactionId = new Guid().ToString();
      return Authorization.TransactionId;
    }
    public override string AuthorizeAndCapture()
      {
      IsSubmissionSuccess = true;
      Authorization.AuthorizedOn = DateTime.Now;
      Authorization.CapturedOn = DateTime.Now;
      Authorization.TransactionId = new Guid().ToString();
      return Authorization.TransactionId;
      }
    public override
      string CapturePreauthorization(string transactionId)
      {
      IsSubmissionSuccess = true;
      Authorization.CapturedOn = DateTime.Now;
      return Authorization.TransactionId;
      }
    public override string VoidPreAuthorization(string transactionId)
      {
      IsSubmissionSuccess = true;
      Authorization.VoidedOn = DateTime.Now;
      return Authorization.TransactionId;
      }
    }
  }
```

Customizing the shipment provider

A Shipment Provider is a pluggable component integrated into Ektron's eCommerce module. The Shipping provider handles eCommerce real-time shipping rate retrieval by utilizing third party shipping services such as FedEx or UPS, or you can create your own fixed rate logic. Ektron's eCommerce shipping module calculates the package(s) needed for an order and then passes the following information to the company providing the shipping services via a Shipping Provider.

- **package information**. For example, how many, height, width, depth and weight of each package.
- **warehouse address**. The address from which the items will be shipped. A warehouse’s information can be set in the **Workarea > Settings > Commerce > Shipping > Warehouses** screen.
- **destination address**. The shipping address a customer entered when making the purchase.
- **desired shipping options**. For example, if you have Next Day, 2-Day Ground and 3-Day Ground as shipping options, you can pass the option chosen by the customer.

Ektron comes with several shipping providers, including FedEx and UPS. You can customize these providers or create your own using the extendable Shipping Provider architecture.

Your company will need to set up or have an existing account with a third party shipping service before utilizing the shipping provider. This includes shipping providers such as, FedEx or UPS, which are included with Ektron's eCommerce Module.

Each type of shipping provider accepts configuration parameters. For example, FedEx requires a username, password, account number, and meter number while UPS requires a Username, password, and account number. These configuration parameters along with the provider definitions are stored in the `SiteRoot/shipment.config` file. The following example shows a provider definition for FedEx.

```
<add name="FedExShipmentProvider"
  type="Ektron.Cms.Commerce.Providers.Shipment.FedExShipmentProvider,
  Ektron.Cms.Commerce.Providers"
  serviceUrl="https://gatewaybeta.fedex.com/web-services"
  key="" password=""
  accountNumber=""
  meterNumber=""
  transactionId="Ektron FedEx v3"
```

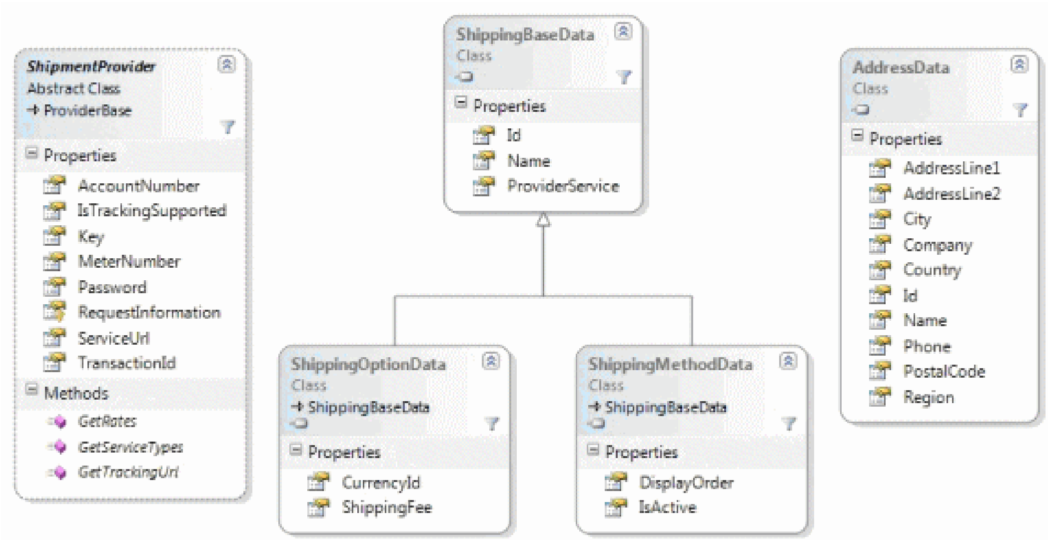
The following steps show the flow of shipping calculations for a customer purchasing a product from your site.

1. A customer adds 2 books to the cart and clicks checkout.
2. The shipping calculator looks for the smallest possible package that will fit the items.
3. The shipping calculator calls the registered shipping provider for each package in the order.

4. The shipping calculator combines all the rates received if more than one package is being shipped and returns the shipping method rates to the checkout control.
5. The customer selects the desired shipping method and it is saved with the cart.

NOTE: Many Ektron settings affect your shipping calculations. A default warehouse must be defined with a valid shipping address. Shipping methods you would like to offer customers must be defined. For example, the FedEx provider supports over 10 possible shipping methods, but you may only be concerned with Priority, 2 Day, and Ground. This must be defined in Ektron. You can also define the shipping packages your business uses. The Shipping calculator will try and fit the order items into any packages defined in Ektron. If no packages are defined, the item's dimensions are passed to the provider instead.

The following figure shows the Object Model for Ektron's Shipment Provider.



The ShipmentProvider is the abstract base class you must extend to implement your own Shipping Provider. Details and descriptions of the ShipmentProvider API can be found in the Ektron API Reference Manual's **Providers API > Shipment > Provider > ShipmentProvider**.

Creating a custom shipment provider

In addition to the out-of-the-box shipment providers that come with Ektron, you can create a custom provider that connects with any shipping company you choose. When you create a custom shipping provider, you need the following basic code steps. Additional code examples used by Ektron to create FedEx, Flat Rate and UPS shipment providers are located in:

```
C:\Program Files(x86)\Ektron\CMS400SDK\Commerce\Providers\Commerce.Providers\Shipping
```

The complete C# code sample used in this example is available at the end of this section. See *CustomShipmentProvider code example* on page 1770.

1. Create a class library project in Visual Studio.
2. Add references to these DLLs:
```
Ektron.Cms.Commerce
Ektron.Cms.Common
Ektron.Cms.ObjectFactory
Ektron.Cms.Instrumentation
Ektron.Cms.Contracts
System.Configuration
```
3. Add these using statements to the code-behind:
```
using System.Configuration.
using Ektron.Cms.Commerce.Shipment.Provider;
using Ektron.Cms.Commerce using Ektron.Cms.Instrumentation
```
4. Change the namespace to:
```
namespace Ektron.Cms.Extensibility.Commerce.Samples
{
```
5. Rename your class and inherit:
```
public class CustomShipmentProvider : ShipmentPovider
{
```
6. Add the following constructor private variables and properties. The items added to the `shippingOptionList` are the shipping methods exposed as a service type in the management screen inside the Workarea.
```
#region constructor, member variables
public CustomShipmentProvider()
{ IsTrackingSupported = false;
  _shippingOptionList = new List<string>();
  _shippingOptionList.Add("CustomOption_1");
  _shippingOptionList.Add("CustomOption_2");
}
private List<string> _shippingOptionList;
#endregion
```
7. Add the following methods required by the ShipmentProvider base class.
   - **Initialize**. reads configuration information
   - **GetServiceTypes**. returns a List <string> of the shipping options available
   - **GetTrackingUrl**. exposes tracking support
   - **GetRates**. returns a list of shipping rates for the items being shipped. The contents of this method will be added in the next step.
```
#region ShipmentProvider Implementation
public override void
  Initialize(string name,
  System.Collections.Specialized.NameValueCollection config)
{ if (config == null)
  { throw new ArgumentNullException("config");
// Assign the provider a default name if it does not have one
  if (string.IsNullOrEmpty(name)) name = "CustomShipmentProvider";
  if (string.IsNullOrEmpty(config["description"]))
    { config.Remove("description"); config.Add("description",
      "CustomShipmentProvider Provider"); }
// Call the base class's Initialize method
```

```
    base.Initialize(name, config);
// Throw an exception if unrecognized attributes remain
  if (config.Count == 0) throw new
    ProviderException("Shipment provider attribute missing.");
  else {
//read all config attributes.
    ServiceUrl = config["serviceUrl"];
    Key = config["key"];
    Password = config["password"];
    AccountNumber = config["accountNumber"];
    MeterNumber = config["meterNumber"];
    TransactionId = config["transactionId"];
        }
      }
public override List<string> GetServiceTypes()
  { return _shippingOptionList;
  }
public override string GetTrackingUrl(string trackingId)
  { return "";
  }
public override List
  <ShippingOptionData>GetRates(IEnumerable
  <ShippingMethodData>
  expectedOptions, AddressData origin, AddressData destination,
  Weight weight, Dimensions dimensions)
  {
 }
#endregion
```

8. Implement the GetRates method. Add this code to public override for GetRates which was added during the previous step. (This example uses flat rates for your shipping methods. In a real world scenario, the shipping methods and their corresponding rates can be obtained via FedEx, UPS, a third party application or Web services.) When complete, the code should look like this.

```
public override List <ShippingOptionData>
  GetRates(IEnumerable<ShippingMethodData>
    expectedOptions, AddressData origin, AddressData destination,
    Weight weight, Dimensions dimensions)
{ List <ShippingOptionData> availableOptions =
    new List <ShippingOptionData>();
  try
    { foreach (ShippingMethodData expectedOption in expectedOptions)
      { Log.WriteInfo("Custom Shipping Provider.ExpectedOption:" +
        expectedOption.Name);
        switch (expectedOption.ProviderService.ToLower())
        { case "customoption_1": ShippingOptionData customOption1 =
          new ShippingOptionData();
          customOption1.Id = expectedOption.Id;
          customOption1.Name = expectedOption.Name;
          customOption1.ShippingFee = 25.00M;
          customOption1.ProviderService = "CustomOption_1";
          availableOptions.Add(customOption1);
          break;
          case "customoption_2":
            ShippingOptionData customOption2 = new ShippingOptionData();
```

```
            customOption2.Id = expectedOption.Id;
            customOption2.Name = expectedOption.Name;
            customOption2.ShippingFee = 50.00M;
            customOption2.ProviderService = "CustomOption_2";
            availableOptions.Add(customOption2);
            break;
        }
      }
    }
  catch (Exception e)
    { Log.WriteError("Custom Shipping Provider: Error retrieving shipping
      rates." + e.Message); throw;
    }
  return availableOptions;
}
```

9. You can use the GetRates method to restrict countries to which you ship. For example, if you want to prevent shipping to all countries except Canada, add these lines of code to the GetRates method.

```
if (destination.Country.Id != 124)
  throw new Ektron.Cms.Commerce.Exceptions.Shipping.InvalidAddressException
  ("We ship only to Canada.");
```

10. Save and build the project.
11. Copy your project's DLL file to your Ektron website's **bin** directory.
12. Register the provider in your site's **shipment.config** file. This file provides the facility to manage shipping providers within Ektron. Locate the **shipmentProvider** section and change the **defaultProvider** parameter to the name of your custom provider.

```
<shipmentProvider defaultProvider="CustomShipmentProvider">
```

13. Add your custom shipping provider between the shipmentProvider's `<providers>` tags. Note that the name defined here needs to match the name defined as the defaultProvider in the previous step.

```
<providers>
  <add name="CustomShipmentProvider"
    type="Ektron.Cms.Extensibility.Commerce.Samples.CustomShipmentProvider,
      CustomShipmentProvider" serviceUrl="" key="" password=""
      accountNumber="" meterNumber=""
      transactionId="CustomShipmentProvider based transaction" />
</providers>
```

14. Save the `web.config` file.
15. Your custom shipping provider is now the default provider. Whenever you need to obtain shipping rate information, the information routes through the new custom provider.
16. Add the shipping methods that are available for your provider in the **Workarea > Settings > Commerce -> Shipping > Methods** screen.
    a. Select **New > Shipping Method**.
    b. Enter a name. This is what a customer sees during the checkout process. An example is “Ground” or “Next Day”. For this example, use “Custom1”.
    c. Check the **Active** checkbox.

d. Click **View Options** and select **CustomOption_1** from the list.
e. Click **Save**).
f. Repeat this process for the **CustomOption2** shipping method type.

The options are now available in the checkout process, and are shown on the shipping method selection screen.

CustomShipmentProvider code example

WARNING! Copying, pasting, and using the following code without modification to create a DLL does not result in a working "real time" shipping provider. This example uses fixed rates and should be modified to meet your needs.

The following code example is used in *Creating a custom shipment provider* on page 1766.

```
using System.Configuration.Provider;
using Ektron.Cms.Commerce.Shipment.Provider;
using Ektron.Cms.Commerce;
using Ektron.Cms.Instrumentation;
namespace Ektron.Cms.Extensibility.Commerce.Samples
{
  public class CustomShipmentProvider : ShipmentProvider
  {
    #region constructor, member variables
    public CustomShipmentProvider()
      {
        IsTrackingSupported = false;
        _shippingOptionList = new List<string>();
        _shippingOptionList.Add("CustomOption_1");
        _shippingOptionList.Add("CustomOption_2");
      }
    private List<string> _shippingOptionList;
    #endregion
    #region ShipmentProvider Implementation
    public override void Initialize(string name,
      System.Collections.Specialized.NameValueCollection config)
    {
      if (config == null)
        throw new ArgumentNullException("config");
        // Assign the provider a default name if it does not have one
      if (string.IsNullOrEmpty(name))
        name = "CustomShipmentProvider";
      if (string.IsNullOrEmpty(config["description"]))
      {
        config.Remove("description");
        config.Add("description", "CustomShipmentProvider Provider");
      }
    // Call the base class's Initialize method
    base.Initialize(name, config);
    // Throw an exception if unrecognized attributes remain
    if (config.Count == 0)
      throw new ProviderException("Shipment provider attribute missing.");
    else
      {
```

```
        //read all config attributes.
        ServiceUrl = config["serviceUrl"];
        Key = config["key"];
        Password = config["password"];
        AccountNumber = config["accountNumber"];
        MeterNumber = config["meterNumber"];
        TransactionId = config["transactionId"];
      }
    }
    public override List<string> GetServiceTypes()
    {
      return _shippingOptionList;
    }
    public override string GetTrackingUrl(string trackingId)
    {
      return "";
    }
    public override List<ShippingOptionData>
      GetRates(IEnumerable<ShippingMethodData>
        expectedOptions, AddressData origin, AddressData destination,
        Weight weight, Dimensions dimensions)
    {
      List<ShippingOptionData> availableOptions = new List<ShippingOptionData>();
      try
      {
        foreach (ShippingMethodData expectedOption in expectedOptions)
        {
        Log.WriteInfo("Custom Shipping Provider.ExpectedOption:"
          + expectedOption.Name);
        switch (expectedOption.ProviderService.ToLower())
        {
          case "customoption_1":
            ShippingOptionData customOption1 = new ShippingOptionData();
            customOption1.Id = expectedOption.Id;
            customOption1.Name = expectedOption.Name;
            customOption1.ShippingFee = 25.00M;
            customOption1.ProviderService = "CustomOption_1";
            availableOptions.Add(customOption1);
            break;
          case "customoption_2":
            ShippingOptionData customOption2 = new ShippingOptionData();
            customOption2.Id = expectedOption.Id;
            customOption2.Name = expectedOption.Name;
            customOption2.ShippingFee = 50.00M;
            customOption2.ProviderService = "CustomOption_2";
            availableOptions.Add(customOption2);
            break;
        }
        }
      }
      catch (Exception e)
      {
        Log.WriteError("Custom Shipping Provider:
          Error retrieving shipping rates." + e.Message);
        throw;
      }
```

```
      return availableOptions;
    }
    #endregion
  }
}
```

Customizing the inventory provider

An Inventory Provider is a pluggable component that's integrated into Ektron's eCommerce module. An Inventory Provider handles the retrieving and updating of inventory information for products within Ektron. Out of the Box, Ektron comes with a default Ektron Inventory Provider that tracks inventory within its database.

If your business has an Accounting or Enterprise Resource Management solution that manages inventory, you can create a custom Inventory Provider that retrieves and updates inventory information directly from that system. Inventory data can be stored in any number of locations, including databases, ERP or CRM systems, or even XML files.

The following figure shows the Object Model for Ektron's Inventory Provider.

The InventoryProvider is the abstract base class you must extend to implement your own Inventory Provider. Details and descriptions of the InventoryProvider API can be found in the Ektron API Reference Manual's **Providers API > Inventory > Provider > InventoryProvider**.

Creating a custom inventory provider

In addition to the out-of-the-box inventory provider that comes with Ektron, you can create your own custom provider that connects with an existing inventory system. When you create a custom inventory provider, you need the following basic code steps. A code example for the inventory provider used by Ektron is located in:

```
C:\Program Files
(x86)\Ektron\CMS400SDK\Commerce\Providers\Commerce.Providers\Inventory
```

The complete C# code sample used in this example is available at the end of this section. See *CustomInventoryProvider code example* on page 1774.

1. Create a class library project in Visual Studio.
2. Add references to these DLLs:
   - Ektron.Cms.Commerce
   - Ektron.Cms.Common
   - Ektron.Cms.ObjectFactory
   - System.Configuration
3. Add these using statements to the code-behind.

```
using Ektron.Cms.Commerce.Inventory.Provider;
using Ektron.Cms.Commerce.Data;
using Ektron.Cms.Commerce; using Ektron.Cms.Common;
using Ektron.Cms.Extensibility;
using Ektron.Cms.Extensibility.Commerce;
```

4. Change the namespace to:

```
Ektron.Cms.Extensibility.Commerce.Samples {
```

5. Rename your class and inherit:

```
CustomInventoryProvider InventoryPovider
```

6. Add the following constructor, private variables and properties.

```
Public CustomInventoryProvider() { } private CmsInventory _inventory;
protected CmsInventory Inventory
  { get
    { if (_inventory == null)
      { _inventory = CmsInventory(RequestInformation);
      } return_inventory;
    }
  }
```

7. Override the following methods. These methods area called when the inventory system is queried.
   - **GetInventory**. returns an InventoryData data class for a given product id.
   - **SaveInventory**. persists updates to the stock levels inside the inventory system.

     In this example, we trigger Ektron extensibility events, such as `OnBeforeInventorySave()` and `OnAfterInventorySave()`. In a real world scenario, your existing inventory system may have its own inventory events that are used.

```
public override InventoryData GetInventory (long entryId)
  { return Inventory.GetInventory(entryId); }
public override void SaveInventory(InventoryData inventory)
  { OnBeforeInventorySave(inventory);
    Inventory.SaveInventory(inventory);
    OnAfterInventorySave(inventory);
    if (inventory.UnitsInStock < inventory.ReorderLevel)
      { OnInventoryReorderLevelReached(inventory); }
  }
```

8. Save and build the project.
9. Copy your project’s DLL file to your Ektron website’s **bin** directory.

10. Register the provider in your site's `web.config` file. The `web.config` file provides the facility to manage inventory providers within Ektron. Locate the **InventoryProvider** section and change the **defaultProvider** parameter to the name of your custom provider. If you start your search from the top of the file, it will be the second instance.

```
<inventoryProvider defaultProvider="CustomInventoryProvider">
```

11. Add your custom payment provider between the EktronPaymentGateway's `<providers>` tags. Note that the name defined here needs to match the name defined as the defaultProvider in the previous step.

```
<providers>
  <add name="CustomInventoryProvider"
    type="Ektron.Cms.Extensibility.Commerce.Samples.CustomInventoryProvider,
    CustomInventoryProvider"/>
</providers>
```

12. Save the `web.config` file.

Your custom inventory provider is now the default provider. Whenever the inventory is queried, the call routes through the new custom provider.

CustomInventoryProvider code example

WARNING! Copying, pasting, and using the following code without modification to create a DLL does not result in a working "real time" shipping provider. This example uses fixed rates and should be modified to meet your needs.

The following code example is used in *Creating a custom inventory provider* on page 1772.

```
using Ektron.Cms.Commerce.Inventory.Provider;
using Ektron.Cms.Commerce.Data;
using Ektron.Cms.Commerce;
using Ektron.Cms.Common;
using Ektron.Cms.Extensibility;
using Ektron.Cms.Extensibility.Commerce;
namespace Ektron.Cms.Extensibility.Commerce.Samples
  {
    public class CustomInventoryProvider : InventoryProvider
    {
      public CustomInventoryProvider() { }private CmsInventory _inventory;
      protected CmsInventory Inventory
      {
        get
        {
          if (_inventory == null)
          {
            _inventory = new CmsInventory(RequestInformation);
          }
        return _inventory;
        }
      }
      public override InventoryData GetInventory(long entryId)
      {
        return Inventory.GetInventory(entryId);
```

```
    }
    public override void SaveInventory(InventoryData inventory)
    {
      OnBeforeInventorySave(inventory);
      Inventory.SaveInventory(inventory);
      OnAfterInventorySave(inventory);
      if (inventory.UnitsInStock < inventory.ReorderLevel)
      {
        OnInventoryReorderLevelReached(inventory);
      }
    }
  }
}
```

Customizing shipping calculations

The shipping system provides an easy and extensible way to override the shipping calculations inside Ektron. This example sets up a custom shipping calculator to get shipping rates with a different source location for a class of products. It has 2 major parts.

- *Creating the calculator code* below
- *Registering the event with the system* on page 1779

Creating the calculator code

1. Create a class library project in Visual Studio named `Commerce.CustomShippingCalculator`. You need to import the necessary Ektron namespaces. To do this, add references to:
   - `Ektron.Cms.Api`
   - `Ektron.Cms.Commerce`
   - `Ektron.Cms.Common`
   - `Ektron.Cms.Instrumentation`
   - `Ektron.Cms.ObjectFactory`
   - `Microsoft.Practices.EnterpriseLibrary.Validation`
   - `System.Configuration`
2. Add the following using statements.

```
using System.Collections.Generic;
using Microsoft.Practices.EnterpriseLibrary.Validation;
using Ektron.Cms;
using Ektron.Cms.Common;
using Ektron.Cms.Commerce;
using Ektron.Cms.Commerce.Shipment.Provider;
using Ektron.Cms.Extensibility;
using Ektron.Cms.Extensibility.Commerce;
using Ektron.Cms.Instrumentation;
using Ektron.Cms.Commerce.Exceptions;
using Ektron.Cms.Commerce.Exceptions.Shipping;
```

3. Change the namespace to `Ektron.Cms.Extensibility.Commerce.Samples`. Then, rename your class to `CustomShippingCalculator` and inherit from the

`ShippingCalculatorStrategy` class.

```
namespace Ektron.Cms.Extensibility.Commerce.Samples
  { public class CustomShippingCalculator : ShippingCalculatorStrategy
  {
```

4. Add a few helper variables, properties, and functions. The function `GetFlatPackageList` "flattens" the items in the basket, returning 1 for each item quantity. So, if we have 4 widgets, we'll have 4 packages, each with one widget.
5. The following logic fits the goods into packages, adding a function to get another warehouse location. (It is hard-coded in this example.)

```
namespace Ektron.Cms.Extensibility.Commerce.Samples
{ public class CustomShippingCalculator : ShippingCalculatorStrategy
  { private EkRequestInformation _requestInfo;
    private IShippingMethod _shippingService;
    protected EkRequestInformation RequestInformation
    { get
      { if (_requestInfo == null)
        { _requestInfo =
          ObjectFactory.GetRequestInfoProvider().GetRequestInformation();
        }
        return _requestInfo;
      }
    }
  }
  protected IShippingMethod ShippingService
  { get
    { if (_shippingService == null)
      { _shippingService = ObjectFactory.GetShippingMethod();
      }
      return _shippingService;
    }
  }
  protected List<ShippingMethodData> GetActiveShippingMethodList()
  { Criteria<ShippingMethodProperty>
    criteria = new Criteria<ShippingMethodProperty>
      (ShippingMethodProperty.DisplayOrder,
      EkEnumeration.OrderByDirection.Ascending);
    criteria.AddFilter(ShippingMethodProperty.IsActive,
      CriteriaFilterOperator.EqualTo, true);
    return ShippingService.GetList(criteria);
  }
  protected List<ShippingPackageData>
    GetFlatPackageList(List<AdjustedBasketItem> basketItems)
  { List<ShippingPackageData> flatList = new List<ShippingPackageData>();
    foreach (AdjustedBasketItem item in basketItems)
    { if (item.IsTangible)
      { for (int x = 1; x <= item.Quantity; x++)
        { ShippingPackageData package =
          new ShippingPackageData(item.Dimensions, item.Weight);
          package.Items.Add(item);
          flatList.Add(package);
        }
      }
```

```
    }
    return flatList;
  }
  private AddressData GetWarehouseAddressData()
  { AddressData address = new AddressData();
    address.Name = "Ektron";
    address.AddressLine1 = "542 Amherst St.";
    address.City = "Nashua";
    address.Country = new CountryData();
    address.Country.Id = 840;
// USA
    address.Region = new RegionData();
    address.Region.Id = 31;
// NH
    address.PostalCode = "03063";
    return address;
  }
}
```

6. Override the `OnBeforeCalculate` method, which is called when shipping is calculated for the basket.

```
public override void OnBeforeCalculate(BasketCalculatorData basketData,
  ShippingMethodData shippingMethod, CancellableEventArgs eventArgs) { }
```

7. In this method, add code to ship items with a tax class id of 4 from another warehouse, versus the default one specified (`package.Items[0].TaxClassId == 4`).

```
public override void OnBeforeCalculate(BasketCalculatorData basketData,
  ShippingMethodData shippingMethod, CancellableEventArgs eventArgs))
  { bool hasTangibles = basketData.Basket.HasTangibleItems;
    List<ShippingMethodData>
      availableShippingMethods = GetActiveShippingMethodList();
    List<ShippingPackageData>
      shippingPackages = GetOrderPackages(basketData.AdjustedItems);
//convert list of items into flat list - all 1 quantity.
  List<ShippingPackageData>
    shippingPackages = FlattenItemsIntoPackages(basketData.AdjustedItems);
    if (shippingPackages.Count == 0)
      { Log.WriteInfo("No packages to calculate shipping for.");
        return;
      }
      Dictionary<string, int> rateCount = new Dictionary<string, int>();
//Get Rate for each package
  foreach (ShippingPackageData package in shippingPackages)
    { List<ShippingOptionData> shippingRateList;
      Log.WriteVerbose(string.Format("Shipping package:
      {0} x {1} x {2} {3}, {4} {5}", package.Dimensions.Height,
      package.Dimensions.Length, package.Dimensions.Width,
      package.Dimensions.Units.ToString(), package.TotalItemWeight.Amount,
      package.TotalItemWeight.Units.ToString()));
//Get rate for each available option and populate the
// BasketCalculatorData.ShippingRates list.
  if (package.Items[0].TaxClassId == 4) shippingRateList =
    ShipmentProviderManager.Provider.GetRates(availableShippingMethods,
    GetWarehouseAddressData(), basketData.ShipTo, package.TotalItemWeight,
```

```
    package.Dimensions);
  else shippingRateList = ShipmentProviderManager.Provider.GetRates
    (availableShippingMethods, basketData.ShipFrom, basketData.ShipTo,
    package.TotalItemWeight, package.Dimensions);
    if (shippingRateList.Count == 0)
      { EkException.ThrowException(new NoRatesAvailableException
        ("No shipping rates are available for the supplied item."));
      }
//add rates to basket.ShippingRates
  foreach (ShippingOptionData rate in shippingRateList)
    {
//if there are multiple packages, we need to total up rates for each
//shipping method.
//NOTE: we can only return rates that are applicable to ALL packages.
//For example, package 1 has rates for ground, priority, freight
// package 2 has rates for ground, priority
//only return rates for ground and priority since freight will only be
//a partial quote.
//check if this shipping method has already been added.
      ShippingOptionData existingMethodRate =
        basketData.ShippingRates.Find(delegate(ShippingOptionData match)
        { return match.ProviderService == rate.ProviderService; });
      if (existingMethodRate == null)
        { basketData.ShippingRates.Add(rate); }
      else
        { existingMethodRate.ShippingFee += rate.ShippingFee; }
//need to keep count of how many times this shipping method rate is added
//to make sure we have a method rate for each package.
      if(rateCount.ContainsKey(rate.ProviderService))
        { rateCount[rate.ProviderService]++; }
      else
        { rateCount.Add(rate.ProviderService, 1); }
    }
  }
//default exchange rate
  ExchangeRateData exchangeRate = new ExchangeRateData(0, 0, 1m, null);
  if (basketData.ShippingRates.Count > 0
    && basketData.ShippingRates[0].CurrencyId
    != RequestInformation.CommerceSettings.CurrencyId)
    { IExchangeRate rateService = ObjectFactory.GetExchangeRate();
      exchangeRate = rateService.GetCurrentExchangeRate();
      if (exchangeRate == null)
        { Log.WriteError(string.Format("No exchange rate found for
          current currency {0}. Shipping rates could not be converted
          to current currency.",
          RequestInformation.CommerceSettings.CurrencyId));
          EkException.ThrowException(new CmsException(string.Format
           ("No exchange rate found for current currency {0}. Shipping
           rates could not be converted to current currency.",
           RequestInformation.CommerceSettings.CurrencyId)));
        }
    }
//go through all shipping methods and remove any that do not have rates
//for packages.
  for(int x = 0; x < basketData.ShippingRates.Count; x++)
```

```
    { bool removed = false;
    if(rateCount[basketData.ShippingRates[x].ProviderService]
      < shippingPackages.Count)
      { basketData.ShippingRates.RemoveAt(x); x--;
//need to decrement loop counter so we do not skip any as we loop through
        removed = true;
       }
       if (!removed)
         { if (basketData.ShippingRates[x].CurrencyId
           != RequestInformation.CommerceSettings.CurrencyId)
           {
//if shipping rate currency is not current currency, convert it
            basketData.ShippingRates[x].ShippingFee
     = exchangeRate.ConvertPrice(basketData.ShippingRates[x].ShippingFee);
           }
//is this the selected shippingmethod for basket? If so, set shipping cost
//on basket
  if (shippingMethod != null
    && shippingMethod.ProviderService
    == basketData.ShippingRates[x].ProviderService)
    { basketData.TotalShippingCost
      += basketData.ShippingRates[x].ShippingFee;
    }
  }
}
if (basketData.ShippingRates.Count == 0 && hasTangibles)
  { basketData.ValidationResults.AddResult(new ValidationResult
    ("No shipping rates are available for the supplied item.", this,
      "", "", null)); } eventArgs.IsCancelled = true;
  }
```

8. When shipping is calculated for the basket, the above function runs first. Setting the `IsCancelled` property to true on `eventArgs` instructs Ektron to stop further execution of the shipping calculations. This, in effect, overrides the shipping functionality.
9. Build the project, and copy the assembly into the Ektron site's bin directory.

Registering the event with the system

After you create the event assembly and place it inside the bin directory, you need to register the event. Use the `objectfactory.config` file to register custom events within Ektron. To do that:

1. Open the *`siteroot`*`/objectfactory.config` file.
2. Find the `objectStrategies` section of the file.
3. Within that section, locate or add this key: `name="ShippingCalculator"`.
4. Add a reference to the class created earlier in the `<strategies>` key.

```
<objectStrategies>
  <add name=ShippingCalculator">
<strategies>
  <add name="CustomShippingCalculator"
  type="Ektron.Cms.Extensibility.Commerce.Samples.CustomShippingCalculator,
  Commerce.CustomShippingCalculator"/>
```

```
</strategies>
</add>
</objectStrategies>
```

36

Targeting content with GeoIP information

GeoIP support lets you target your messaging to specific audiences based on current geographical location. Ektron uses a site visitor's IP address to detect the location. For example, your website may have a special sale on snow blowers. That information is relevant to people in northern climates but of no interest to those living in the tropics. Or, a site visitor uses a cell phone to find the nearest store location, and the Ektron Map server control displays a map of nearby stores based on the user's current latitude and longitude.

Ektron maintains GeoIP information in a cookie only while a visitor uses the site. When the visitor exits, Ektron deletes the cookie. Ektron obtains the following information from the IP address of your site visitors. (The values are only examples.)

- IP Address. 208.32.120.10
- Country code and name. United States
- Region. NH (New Hampshire)
- US area code. 603
- US metro code. 506
- City. 506
- US zip code. Nashua
- Latitude and longitude. 42.7551/-71.4853
- Organization. Sprint
- Domain name. www.example.com

Ektron includes GeoLite data created by MaxMind. You can purchase more accurate GeoIP databases from MaxMind.

Ektron retrieves the IP address information from a site visitor's IP address via 3 databases. The databases are installed to your site root's `App_data` folder and listed in your site's `web.config` file.

NOTE: The tilde character (~) in the `value` element represents the site root folder.

- ```
  <!-- GeoIP City Database -->
  <add key="GeoIpCityDatabase" value="~/App_Data/GeoLiteCity.dat"/>
  ```

  Returns the following information, based on IP address:

  - Area code
  - City
  - US State
  - Country code and name
  - Latitude and Longitude
  - MetroCode
  - PostalCode
  - Telephone area code
- ```
  <!-- GeoIP Organization Database -->
  <add key="GeoIpOrgDatabase" value="~/App_Data/GeoIPOrg.dat"/>
  ```

Returns the organization name, based on IP address.

- `<!-- GeoIP Domain Database -->`
  `<add key="GeoIpDomainDatabase" value="~/App_Data/GeoIPDomain.dat"/>`

  Returns the domain name, based on IP address.

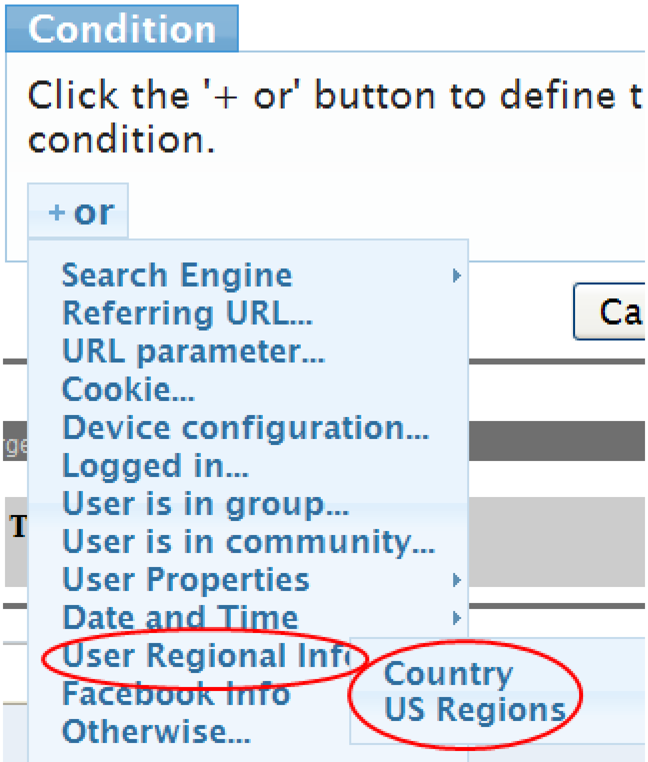
If you want to move the databases to another folder, you must update their `web.config` `value` elements to the new location.

BEST PRACTICE

You should keep the GeoIP databases in the App_data folder, because this folder prevents unauthorized copying of the database.

Using GeoIP information in the Targeted Content widget

Among the Targeted Content widget's criteria is **User Regional Info**, which has 2 options: **Country** and **US Regions**.



If you choose **US Regions**, you can select from states in the United States.

User Regional Info data uses GeoIP information. See also: *Creating and using widgets* on page 1171

Using GeoIP information in the Map server control

You can center a map on a specific location by using the Map server control's `latitude` and `longitude` properties. You also can use GeoIP information to obtain a user's latitude and longitude, based on IP address. For example, if a site visitor searches for a chain restaurant, the map can indicate restaurants near the user.

The following code shows how to set up the Map server control to populate latitude and longitude with GeoIP information.

Sample .aspx page, showing the placement of the Map server control.

```
<cms:Map ID="uxMap" runat="server" />
```

Code-behind page in C#

```
Ektron.Cms.UserLocationData userLocationData =
  Ektron.Cms.UserContext.GetCurrentUserLocationInfo();
        if(userLocationData != null)
        {
               uxMap.Latitude = userLocationData.Latitude;
               uxMap.Longitude = userLocationData.Longitude;
        }
```

Accessing GeoIP information with the API

The following API code demonstrates the retrieval of a user's GeoIP information. Note that `Ektron.Cms.UserContext.GetCurrentUserLocationInfo()` returns the `Ektron.Cms.UserLocationInfo()` object, which provides access to all elements listed in retrieving IP address informationexcept IP address.

To obtain the IP address, use `Ektron.Cms.UserContext.IP`.

```
Ektron.Cms.UserLocationData userLocationInfo =
  Ektron.Cms.UserContext.GetCurrentUserLocationInfo();
   //If GeoIpCity.dat/GeoIpLiteCity.dat file is present in webconfig
     int AreaCode = userLocationInfo.AreaCode;
     string City = userLocationInfo.City;
     string CountryCode = userLocationInfo.CountryCode;
     string CountryName = userLocationInfo.CountryName;
     double Distance = userLocationInfo.Distance(userLocationInfo);
     int DMACode = userLocationInfo.DMACode;
     double Latitude = userLocationInfo.Latitude;
     double Longitude = userLocationInfo.Longitude;
     int MetroCode = userLocationInfo.MetroCode;
     string PostalCode = userLocationInfo.PostalCode;
     string Region = userLocationInfo.Region;
     string RegionName = userLocationInfo.RegionName;
  // If GeoIpOrg.dat file and GeoIpCity.dat/GeoIpLiteCity.dat file
  // is provided in web config
     string Organization = userLocationInfo.Organization;
  // If GeoIpDomain.dat and GeoIpCity.dat/GeoIpLiteCity.dat file
```

```
// is provided in web config
   string Domain = userLocationInfo.Domain;
```

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37

Synchronizing servers using eSync

Ektron’s eSync keeps websites up-to-date efficiently. From single sites, global multi-sites, and server farms, eSync provides scalable, geo-synchronization capabilities that let you easily update exactly what you want, when you want to update it.

Ektron’s eSync lets users update content anywhere safely by employing certificate-based authentication to secure your website, whether it is on a production server or a development environment. Also, your updates can take place on the safe side of your firewall before being moved to the live site. Within complex IT infrastructures, eSync can synchronize content, assets, HTML pages and other website components, whether they are managed by Ektron or not.

eSync efficiently makes updates and eliminates site downtime by moving only the changes you want to move, from single pieces of content to entire sites. With its intelligent synchronization technology, eSync securely moves selected content bidirectionally: Web 2.0 sites have a wealth of user-generated content and membership information which can be synchronized back to the development side of the firewall. To track changes to Ektron data between syncs, eSync creates a `c:\sync` folder structure that mirrors your site’s Windows folder structure. This structure is created on each server when sync relationships are first established. No Ektron files reside in the `\sync` folders. Instead, each folder has four `.sync` files that monitor changes to Ektron files in the corresponding folder.

eSync manages content *dependencies*, that is references to other files such as images. eSync automatically handles the synchronizing of dependencies, so you do not need to worry about these extra files. *Adjusting relationship settings* on page 1850 explains how to sync content dependencies.

You can synchronize at any time with single or multiple servers; strategic times that assure optimal performance, while facilitating site updates; low-traffic times to coordinate global multi-site setups. You also can schedule time-sensitive events.

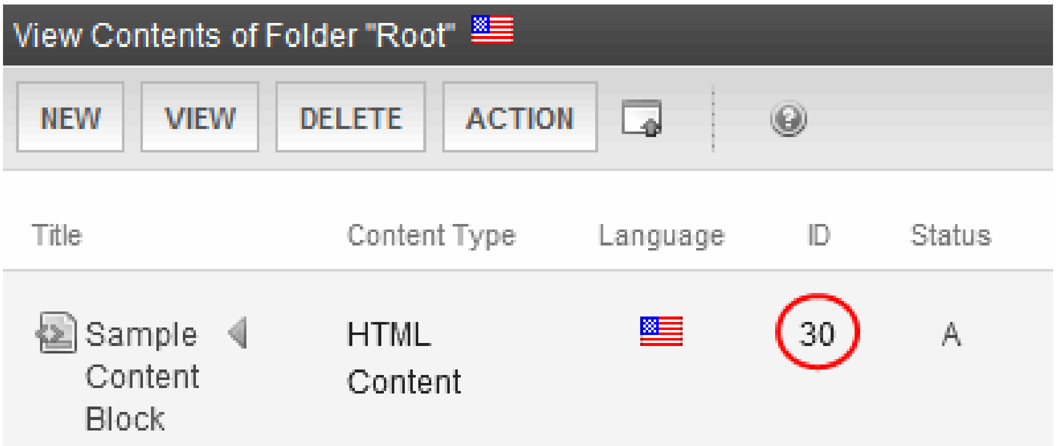
If conflicting versions of content exist, eSync’s configurable conflict resolution engine preserves your most recent content. The version that isn’t posted is saved in a history log (along with other previous versions), letting you track changes or restore if necessary.

If you have multiple development servers, eSync can create a copy of the live site to work with. As your developers change the site, their updates can by synchronized to the staging and production servers. eSync also can support advanced infrastructures, including load balancing and failover server configurations.

Every server in a sync relationship is assigned a unique number. The originating server is 1, the first server with which it establishes a relationship is 2, and so on. The server number is stored in the `c:\sync\serverinfoXX.xml` file.

```
<SyncServerInfoList>
  <SyncServerInfo IsSyncRunning="false" Migrated="false" MaxId="2" ServerNumber="1"
 ...
```

All Ektron data is assigned a unique ID number to distinguish it from similar objects. Examples are content (see illustration), folders, menus, users, and so on.



When you create a sync relationship, Ektron applies a new ID numbering range to each server to ensure that, from then on, objects created on either server have a unique ID. This prevents collisions when synchronizing between servers. For example, since membership users created on a production server have a different ID number range from those created on the staging server, eSync does not overwrite them.

To view a server's ID number range, open its `C:\sync\serverinfo`*`XX`*`.xml` file, and check the `MaxId` value as shown in the following example.

```
<SyncServerInfoList>
  <SyncServerInfo IsSyncRunning="true" MaxId="3" ServerNumber="1"....
```

Multiply that number by 1 trillion to get the largest ID number which that server can assign. For example, if `MaxId` = 3, ID numbers range from 2,000,000,000,001 to 3,000,000,000,000.

Setting up eSync

This section explains several scenarios for installing and setting up eSync.

- *Scenario 1: Synchronizing 2 sites on the same server* on page 1795
- *Scenario 2: Synchronizing a local server with a remote server* on page 1797
- *Scenario 3: Setting up a development > staging > production environment* on page 1808

Prerequisites for Using eSync

To use eSync, you must have the following:

- Ektron software and files
  - Ektron Version 8.5 or higher

    IMPORTANT: The version of Ektron on every server in the sync relationship must match. You can neither upgrade nor downgrade Ektron using eSync.

  - An Ektron base installation file (for example, `cms400Base9x.exe`). Use to install a second site with which to sync your current site.

 - Ektron licenses that support Enterprise or Professional with eSync on every server being synchronized.
 - Matching security certificates on every server being synchronized. See also: *Managing eSync security certificates* on page 1838.

 NOTE: If you upgrade, your initial sync must be to a min database.

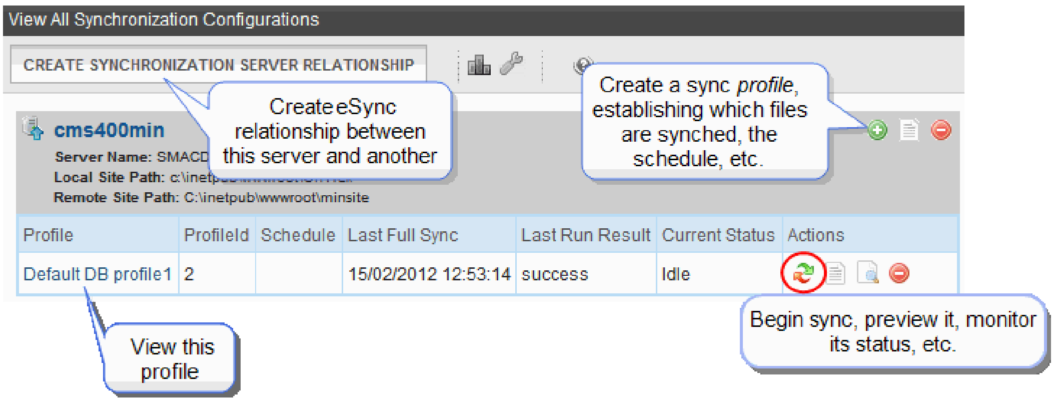
- Microsoft Software
 - See Ektron System Requirements.
 - Microsoft Sync Framework 2.1

 NOTE: It is not a problem if your templates were created using the 2.0 Framework.

 - Database servers may use different SQL server versions. (For example, your development server uses SQL 2008 Express, and your production server uses SQL Server 2008 R2.)
- User Permissions
 - You are a member of the Ektron Administrators group or assigned the Synchronization Admin role. See also: *Defining roles* on page 1464.
 - The user performing the sync is assigned the following SQL database roles
 - db_owner (needed for initial sync only; after that is complete, you may remove this role)
 - db_datawriter
 - db_executor (created by Ektron installer when setting up database)
 - db_ddladmin
 - db_datareader
- Server
 - GMT time on each server's clock must be within 5 minutes of each other.

Characteristics of eSync

You administer eSync through the **Workarea > Settings > Configuration > Synchronization > Profiles** screen. The screen lets you establish a sync *relationship* between 2 websites, then specify any number of sync *profiles* for each relationship.



You can sync immediately by clicking **Sync** ( ).

You create profiles to sync these kinds of data.

- database objects (content, menus, users, and so on)
- Workarea folder files
- remaining site files

File types or individual files can be included or excluded from a sync profile. Alternatively, you can sync content or folders. See also: *Synchronizing content and folders* on page 1855.

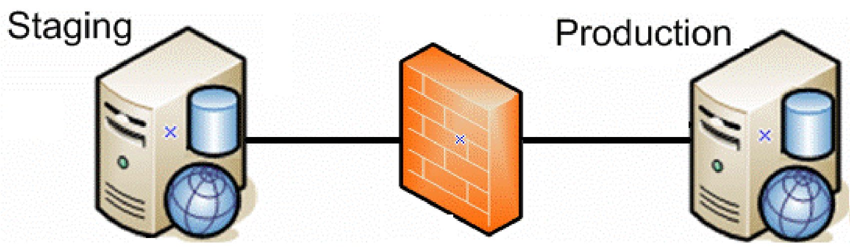
Sync relationships

You can synchronize any server to or from any other server with one important exception: *you cannot initiate a sync from a server outside the firewall*. You can only initiate a sync from a server inside the firewall because an outside server does not know the address of servers inside the firewall. However, your staging server can push to and pull from a production server.

IMPORTANT: eSync transmissions use port 8732. This is not configurable.

Relationship 1: One staging server, one production server

The most basic eSync relationship involves a staging and a production server. Each server has a database and one site.

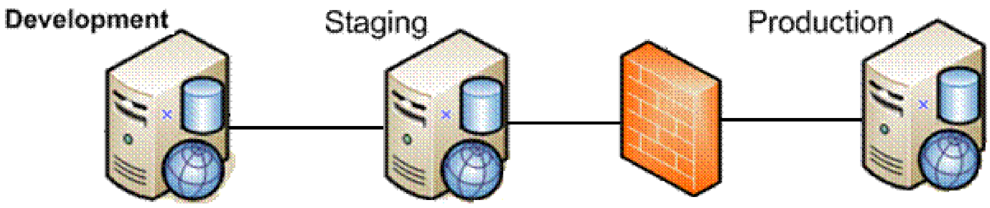


eSync can automatically create a production server from your staging server. See also: *Initializing a new site* on page 1794.

For installation instructions for this relationship, see *Scenario 2: Synchronizing a local server with a remote server* on page 1797.

Relationship 2: One development, one staging, one production server

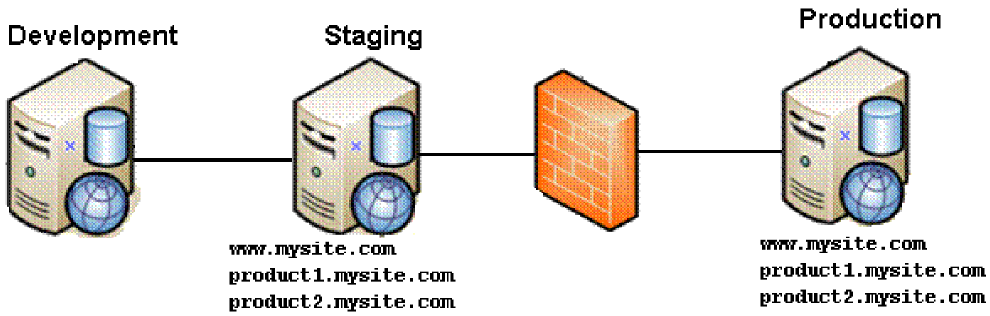
This relationship includes a development server. Developers can use it to create new features and modify existing ones. When they are done, they can sync changes to the staging server, where they can be verified before being moved to production.



For installation instructions for this relationship, see *Scenario 3: Setting up a development > staging > production environment* on page 1808.

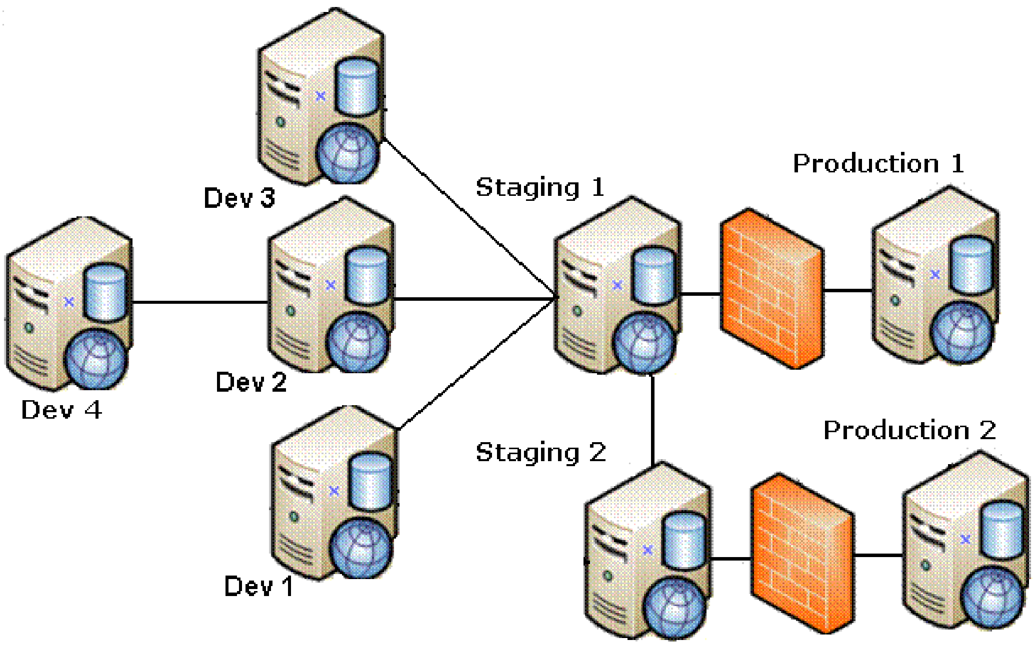
Relationship 2a: Multi-site staging and production servers

The following relationship illustrates synchronizing several sites on a staging server with those sites on production.



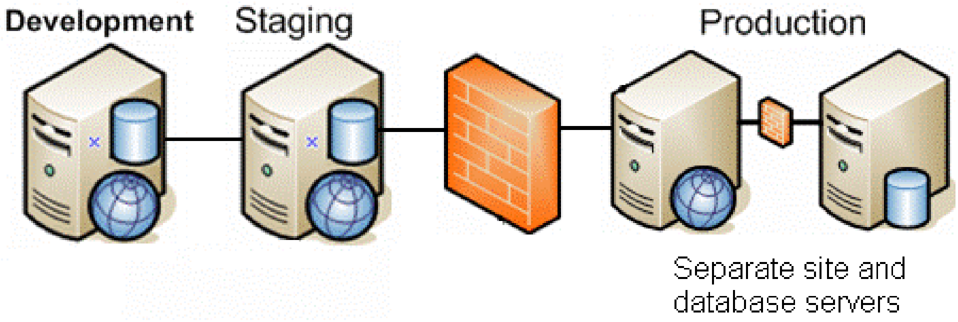
Relationship 3: Several dev. servers, one staging, one production server

As shown in the illustration, any number of development servers can sync to each other and your staging and production servers.



Relationship 4: One dev., one staging, one production site, one production DB server

In this relationship, the production site has 2 servers: one for site files, and another for the database.

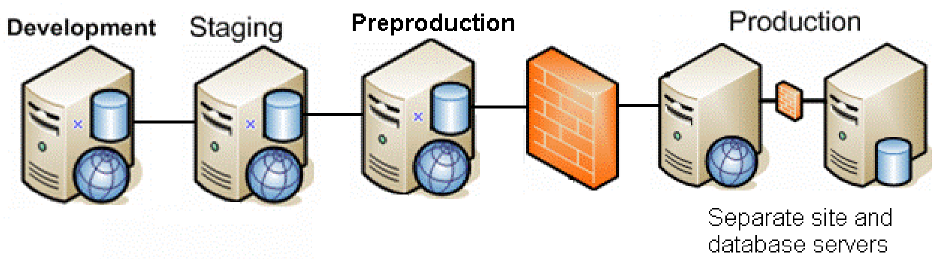


To synchronize these servers, set up several eSync profiles. One syncs the database, assets, and templates to the production database server. Another profile syncs the staging server's Workarea files with the production site server.

NOTE: When using separate site and database servers, assets are stored on the site server.

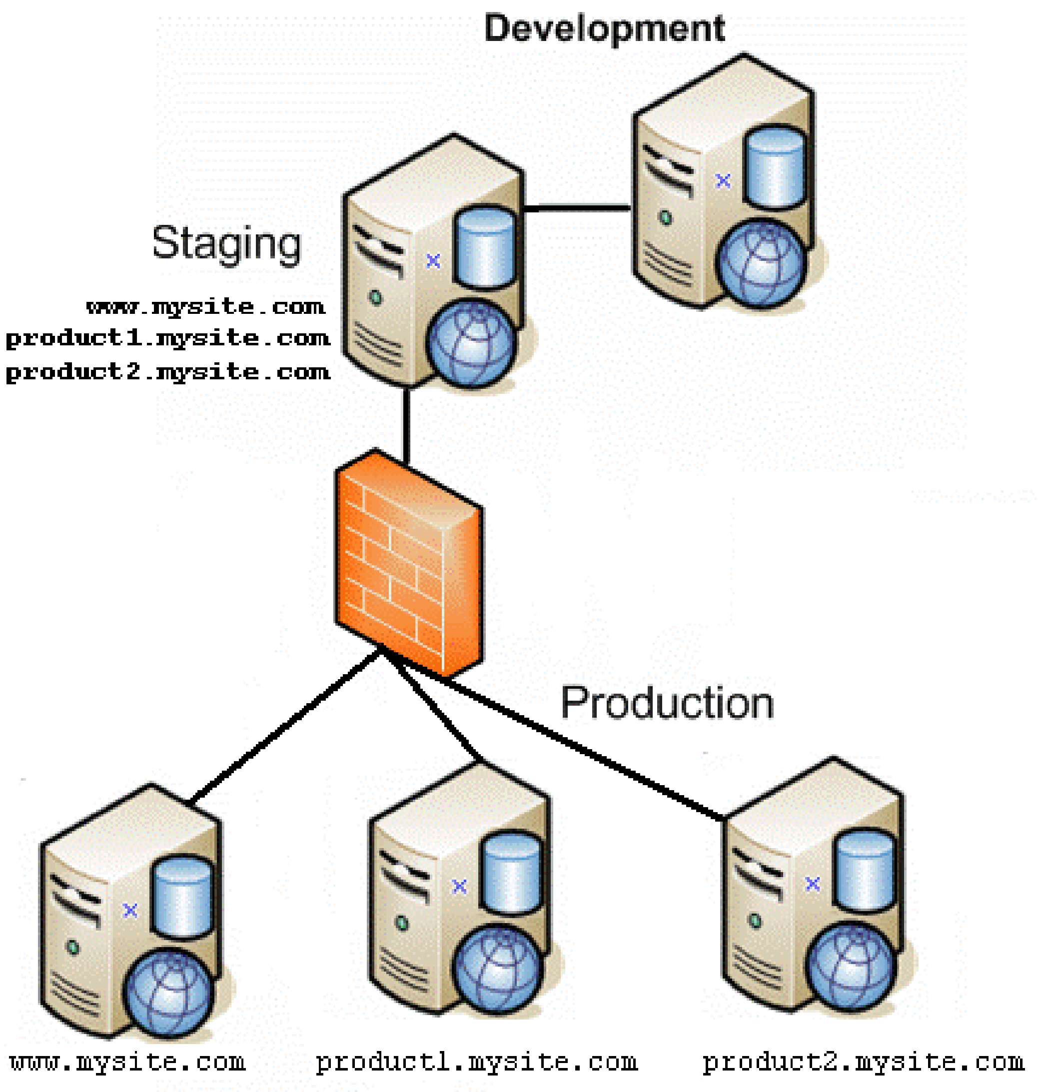
Relationship 5: Relationship 4 plus pre-production server

This relationship adds a server between staging and production. The preproduction server can be used for review and testing of changes before they are moved to production.



Relationship 6: Multi-site: each Site and DB on own production server

In this relationship, each production server has its own database plus the site files. As an alternative, you could have a separate server for each production database, with all sites on one production server.



NOTE: The above relationship also supports separate site and database servers.

To synchronize this type of relationship, set up several eSync profiles, one for each site.

- 3 database and template profiles
- 3 Workarea profiles

Initializing a new site

Typically, before you begin using eSync, one server hosts an Ektron website, and you want to bring other servers into the relationship. After the servers are synchronized, one is the *staging server*, the one on which content is created or updated, then published. Another server, *production*, hosts your live website.

IMPORTANT: The names of the site and all folders *must* match on both servers. This is because paths to images, XSLT files, and so on, refer to a site and its folders. If the names do not match, the links break.

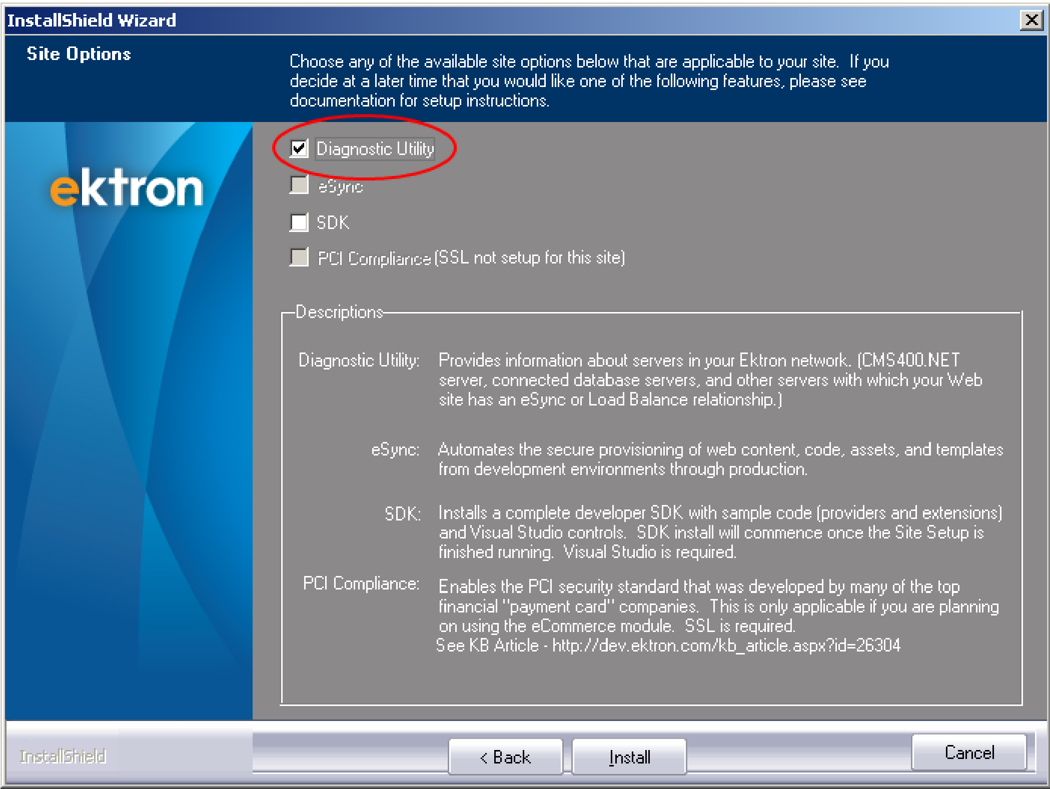
First, use eSync to initialize new servers from the existing one. Afterward, use eSync to periodically sync updated content, folders, users, menus, and so on.

Scenario 1: Synchronizing 2 sites on the same server

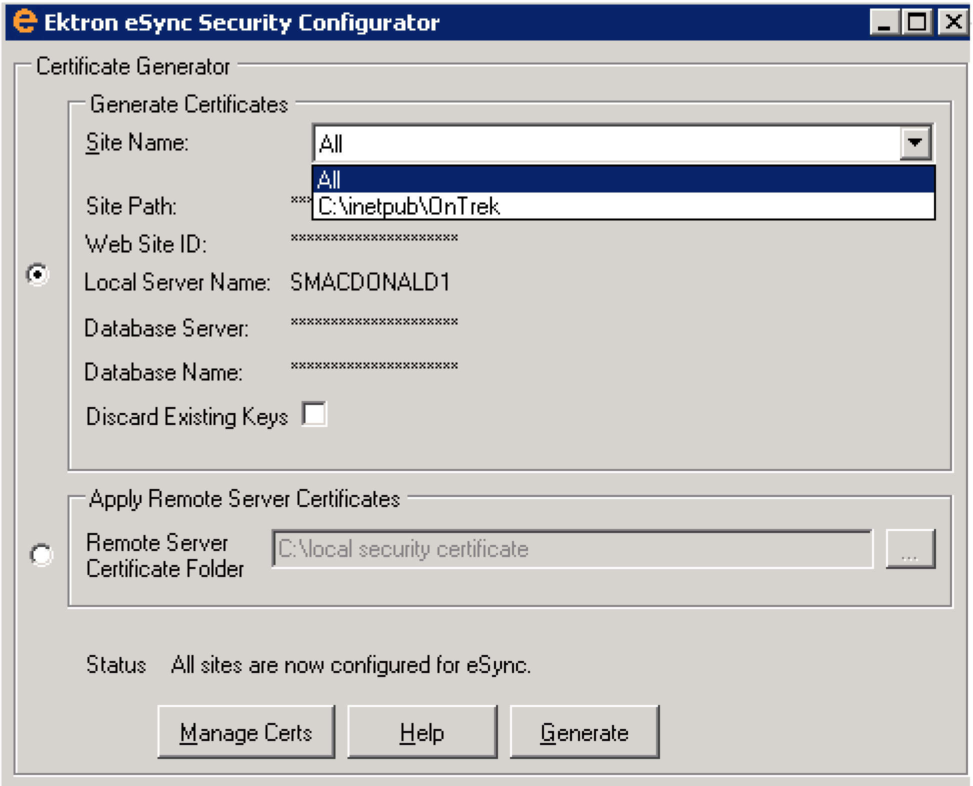
It is unlikely that you will use this relationship in "real-life" situations, but it provides the simplest way to begin testing and learning eSync.

IMPORTANT: Only use this scenario in a test environment. For a live environment, use either *Scenario 2: Synchronizing a local server with a remote server* on page 1797 or *Scenario 3: Setting up a development > staging > production environment* on page 1808.

1. Log into your Ektron server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
2. Begin to install the first site. See also: *Installing Ektron* on page 9.
3. During installation, when the following dialog appears, check **eSync**.



4. Near the end of the installation, the following dialog appears.



   a. At the **Site Name** drop-down, select the site you just installed.
   b. Check the radio button next to **Generate Certificates**.
   c. Click **Generate**.

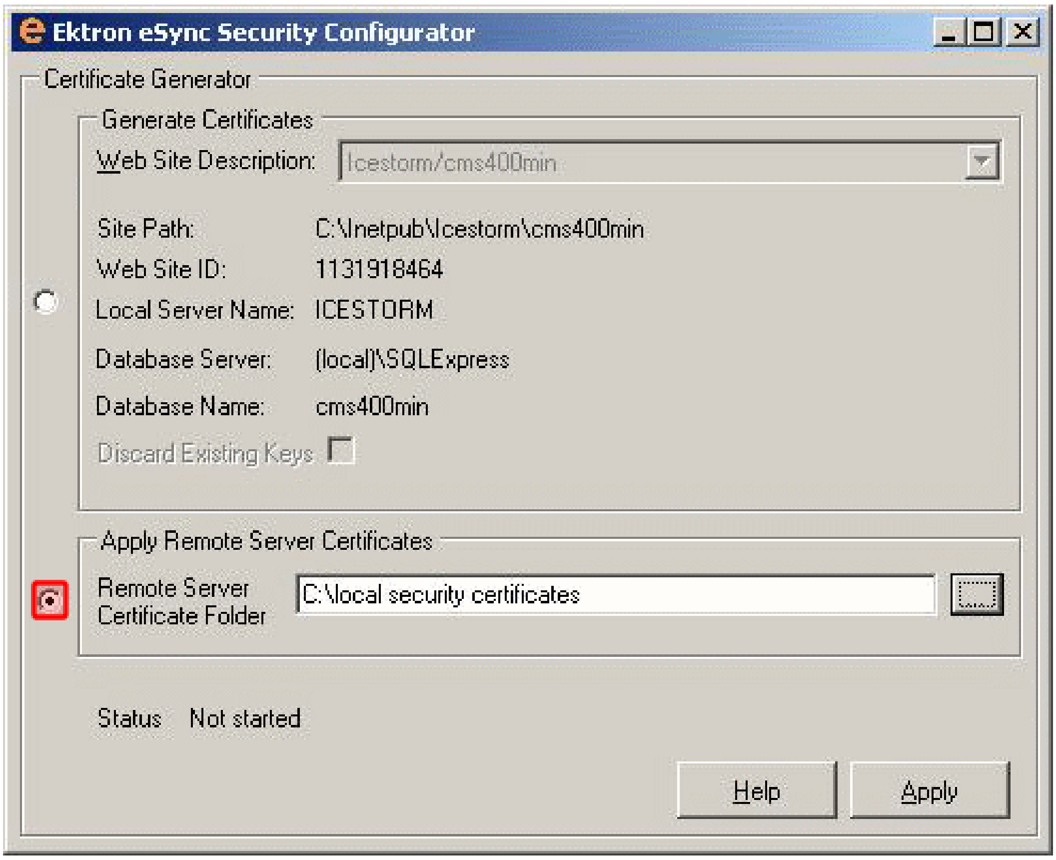
5. Install a second site on the same server, again using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.

   IMPORTANT: Install both sites to a physical folder relative to the root folder. Do not install one site to a physical folder relative to the root folder and the other site to a virtual directory.

6. Repeat Steps 2 and 3 above for the second site.
7. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

   The security configurator screen appears.



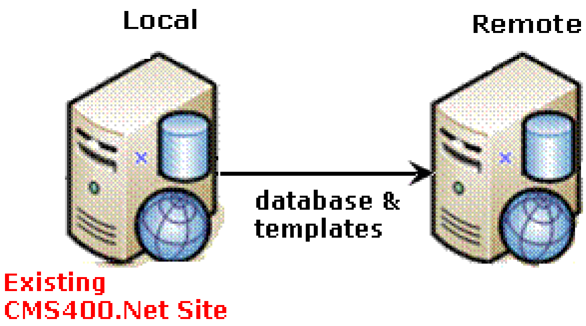
8. In the **Web Site Description** drop-down, select the first site.
9. Click **Apply Remote Server Certificates**.
10. Click **Browse** next to that field.
11. Browse to `C:\Program Files (x86)\Ektron\CMS400vxx\Utilities\SecurityConfig\SecurityConfigurator`.
12. Click **Apply**.

NOTE: Ektron Windows Services stop and restart at this point.

13. Repeat Step 7 through 11 for the second site.

Now that both sites' security certificates are configured, continue from *Part 3: Connect local and remote servers* on page 1802.

Scenario 2: Synchronizing a local server with a remote server



To sync a local to a remote server, install a minimal Ektron site to a new, remote server. Next, use eSync to upload your Ektron site from the local to the remote server. After the you complete the initial and template syncs explained in this chapter, the 2 sites are mirror images of each other.

Follow these steps to configure 2 servers to sync with each other.

PREREQUISITE

See *s for Using eSync* on page 1789

Here's a preview of the steps you will follow.

- *Part 1: Set up a Min site on the remote server* below
- *Part 2: Generate and copy security certificates* below
- *Part 3: Connect local and remote servers* on page 1802
- *Part 4: Upload the local server's database and resources to the remote server* on page 1803
- *Minimizing the time of the initial sync* on page 1805
- *Part 5: Upload local server's templates to remote server* on page 1806

Part 1: Set up a Min site on the remote server

1. Upgrade the local server to the latest version of Ektron if necessary.
2. On the remote server, install a minimum Ektron site whose version matches the local server by running the Ektron base installation file (`CMS400Base9x.exe`). For more information, see System Requirements.

   IMPORTANT: Install both sites to a physical folder relative to the root folder. Do not install one site to a physical folder relative to the root folder and the other site to a virtual directory.

3. If the local site is pre-compiled, you must also pre-compile the remote site.

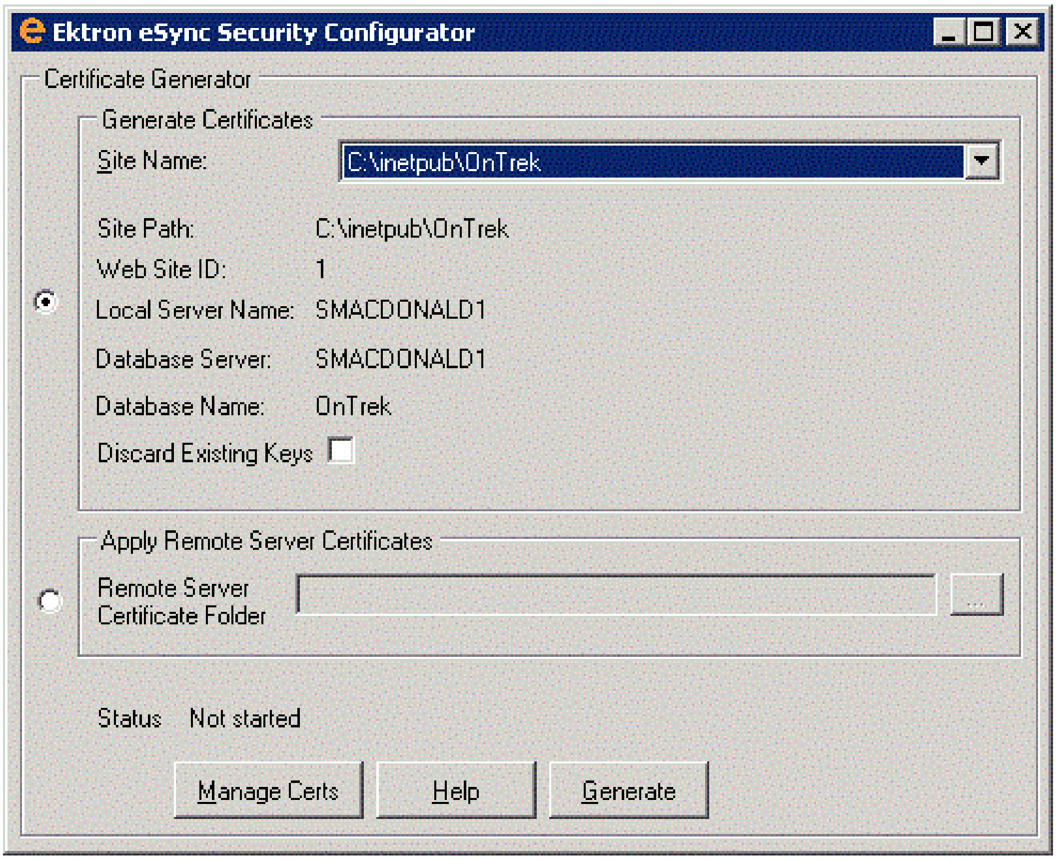
Part 2: Generate and copy security certificates

Security certificates authorize file synchronization between servers. In this part, you generate security certificates on the local server, then copy them to the remote.

IMPORTANT: Near the end of the installation procedure, you are prompted to generate security certificates. If you completed that screen, skip steps 2 through 6.

1. Sign on to the local server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
2. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.
3. The following screen appears.



4. At the **Web Site Description** field, select the website on the local server.
5. Click **Generate**.
6. Click **Yes**. The certificates are created on the local server.

   NOTE: Ektron Windows Services stop and restart at this point.
7. Close the dialog.

8. Open 2 Windows Explorer windows side-by-side: one showing the local server's file system, and the other showing the remote server's file system.
9. In the remote server window, create a folder underneath the root folder. Name the folder **local security certificate**.

> **WARNING!** Do not create the new folder under the Web root, C:\inetpub\wwwroot.

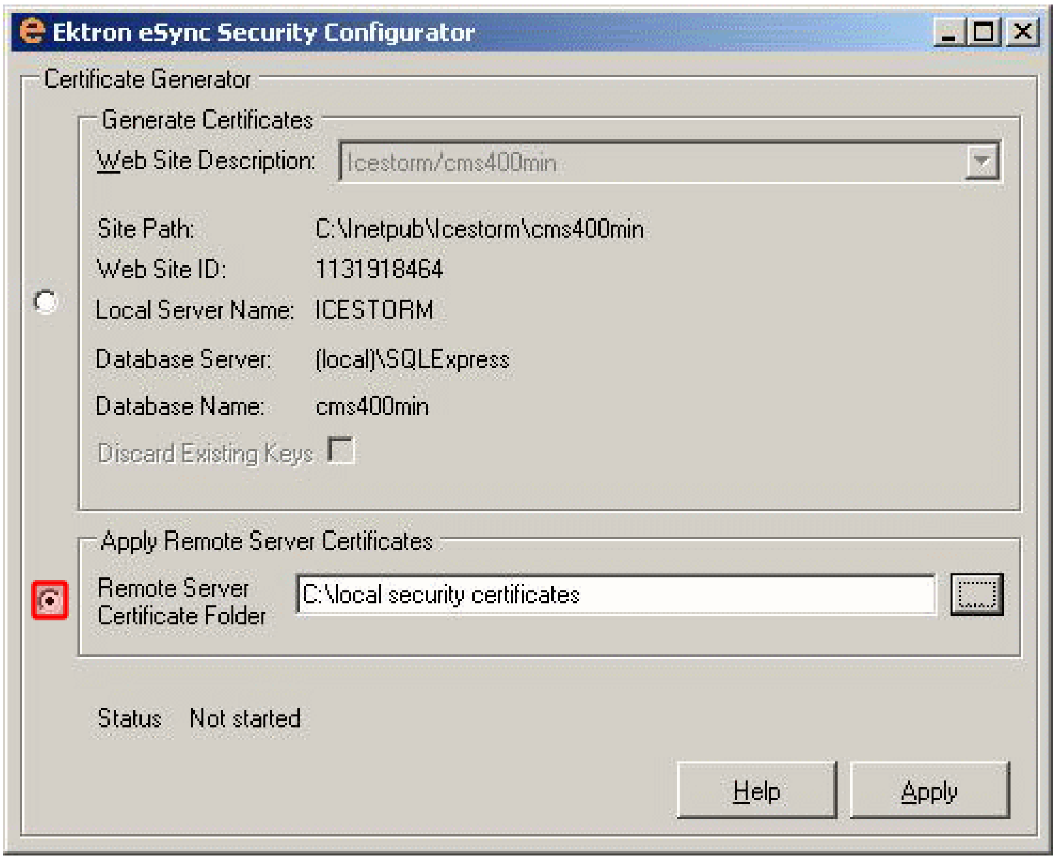
10. In the local server window, open the following folder:
    32-bit:
    `C:\ProgramFiles\Ektron\CMS400vxx\Utilities\SecurityConfig\SecurityConfigurator`
    64-bit:
    `C:\ProgramFiles (x86)\Ektron\CMS400vxx\Utilities\SecurityConfig\SecurityConfigurator`
11. From that folder, copy these files.
    - *servername*_SyncClient.pfx
    - *servername*_SyncClient.pvk
    - *servername*_SyncClient.cer
    - *servername*_SyncServer.pfx
    - *servername*_SyncServer.pvk
    - *servername*_SyncServer.cer
12. Paste the files into the remote folder you created in Step 8. Make sure there are no other security files in the folder.
13. Close both windows you opened in Step 7.

> **NOTE:** After copying security certificates to the remote folder, they need to be registered and moved to the correct folders. The Security Configurator screen does this.

14. Sign on to the remote server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
15. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

    If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

16. The security configurator screen appears.



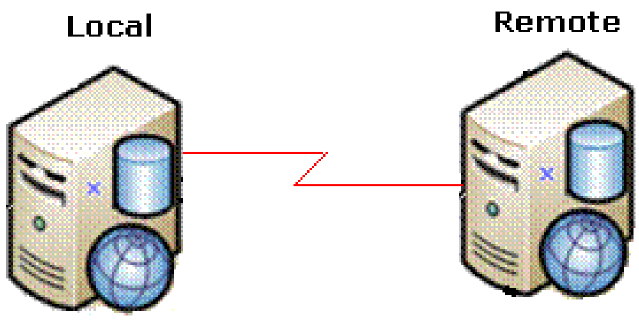
17. Click **Apply Remote Server Certificates**.
18. Click **Browse** next to that field.
19. Browse to the **local security certificate** folder where you pasted the security certificates in Step 11.
20. Click **Apply**.

NOTE: Ektron Windows Services stop and restart at this point.

21. Click **Yes** to continue.
22. The security configurator copies the certificates you pasted in Step 11 to the correct folder, and configures them for the remote server.
23. Click **OK** when you see **All sites are now configured for eSync**.
24. Next, generate security certificates on the remote server, then copy them to the local.

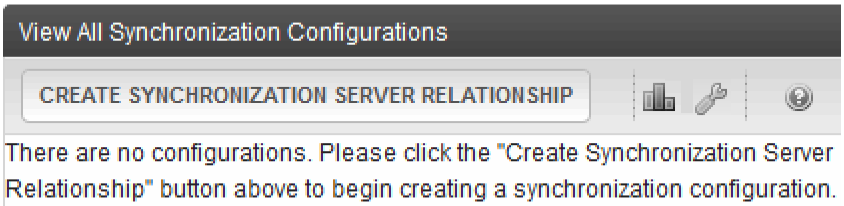
To accomplish this, repeat the steps in *Part 2: Generate and copy security certificates* on page 1798, but this time, treat the remote server as the local server and vice versa.

Part 3: Connect local and remote servers

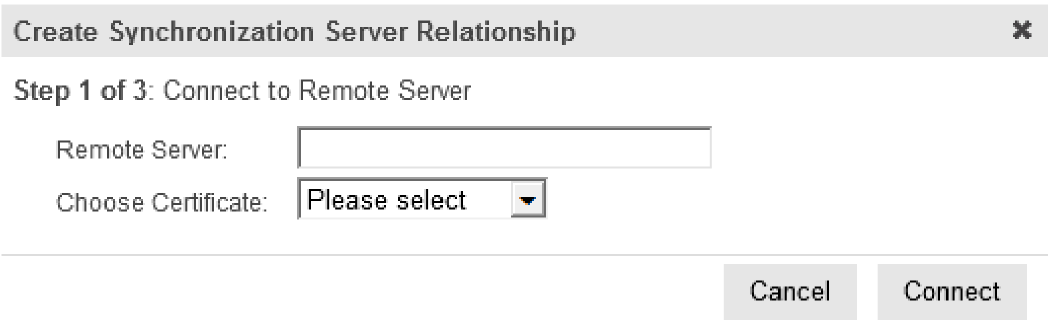


WARNING! Back up your database before beginning this procedure.

1. On the local server, sign on to the Workarea **> Settings > Configuration > Synchronization > Profiles**. The View All Synchronization Configurations screen appears.

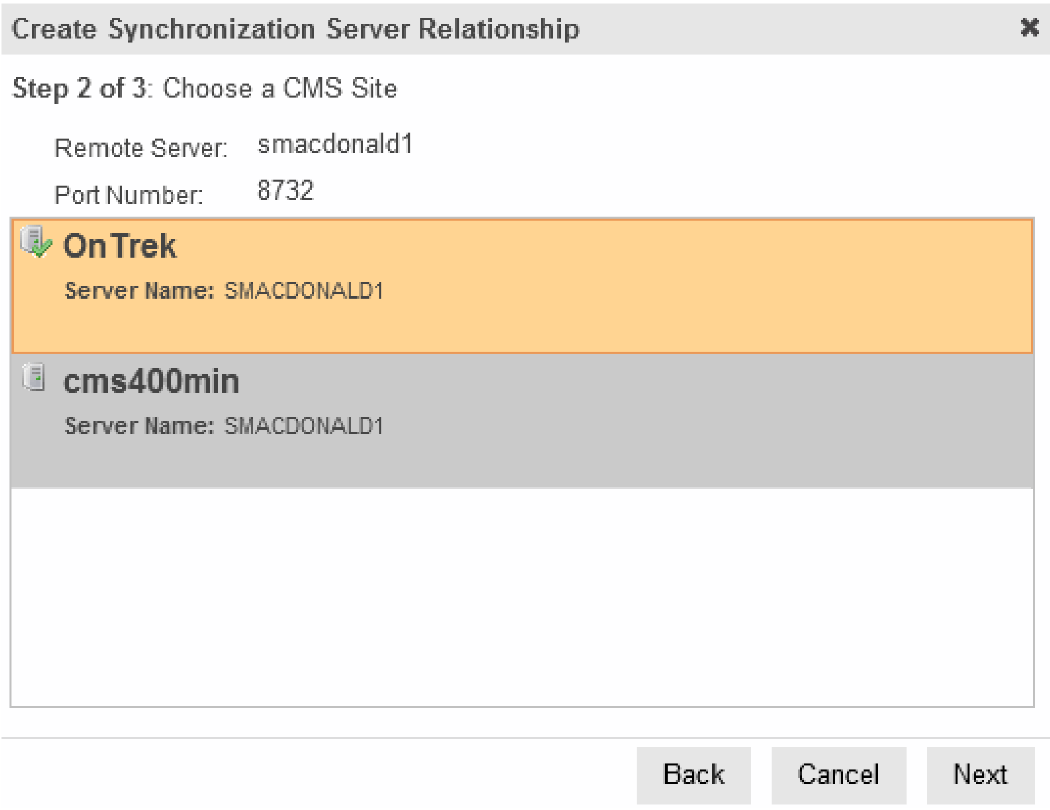


2. Click **Create Synchronization Server Relationship**. This screen appears.



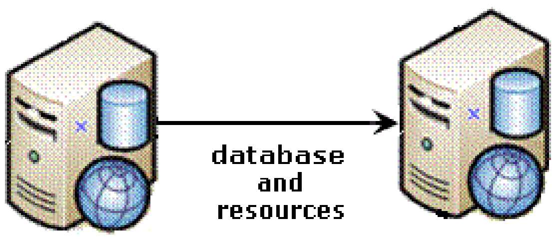
3. At the **Remote Server** field, enter the remote server name. The remote server appears in the **Choose Certificate** field.

4. Click **Connect**. A screen shows the remote server's databases.



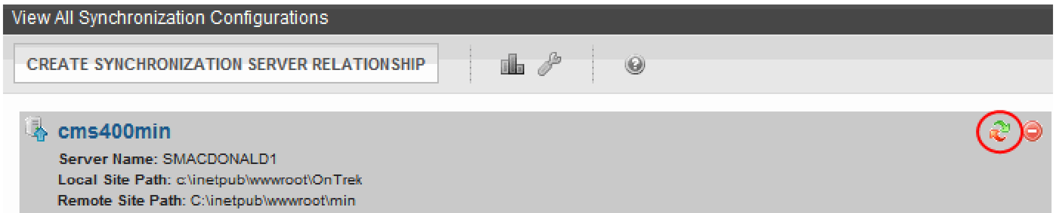
5. Click the database with which you want to sync then **Next**. A screen appears, showing both servers.
6. Click **Switch Synchronization Direction**. The screen indicates that the database will be uploaded from your local server to the remote server.
7. Click **Create**. This action connects the local and remote servers.

Part 4: Upload the local server’s database and resources to the remote server

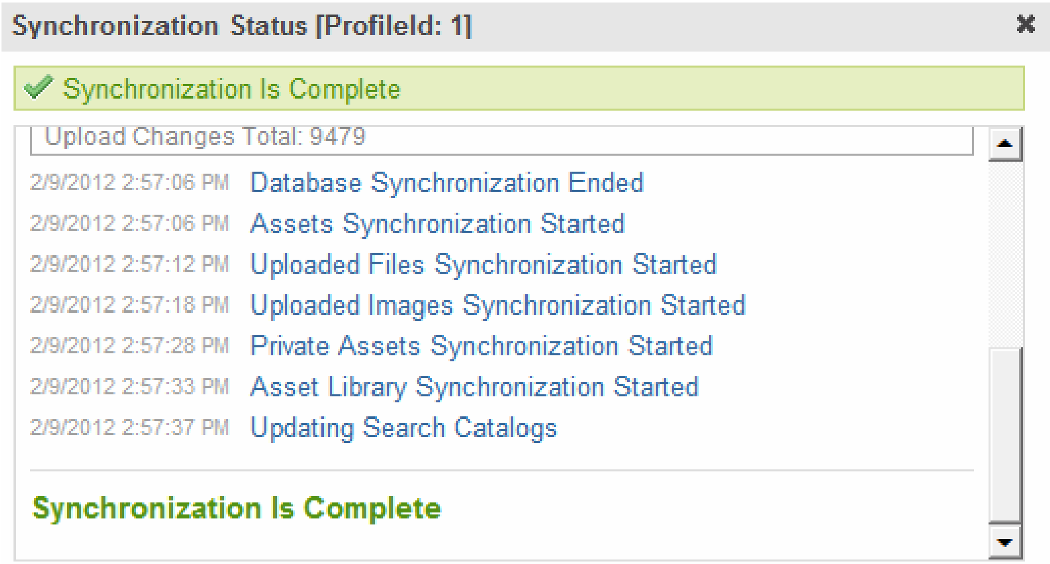


NOTE: If your Ektron has a very large database or number of assets, and you want to reduce the time required to complete the initial sync, see *Minimizing the time of the initial sync* on page 1805.

1. From the View All Synchronization Configurations screen, click **Start Initial Sync** ().



2. The initial sync uploads the local server's database and resources to the remote server. A screen tracks the progress.



3. When the sync is finished, **Synchronization is Complete** appears.

   The initial sync creates a *default database profile*. You can reuse this profile to sync database/resource files in the future.

Minimizing the time of the initial sync

Use the following procedures if you have a large database or number of assets and want to minimize the time to complete an initial sync. In both cases, you use a tool other than eSync for the initial copy. From then on, use eSync to sync your servers.

Copying the initial database

To quickly copy a database between servers:

1. On your Ektron server, open the folder `C:\Program Files (x86)\Ektron\EktronWindowsService40`.
2. Open Ektron.ASM.Services40.exe.config.
3. Set the `<add key="skipDataSyncChanges">` element to **true**.
4. Restart the Ektron Windows Service.

5. Back up the database of the local server.
6. Restore that backup to the remote server.
7. Run an initial sync.
8. Restart the Ektron Windows Service.
9. Update your license key.
   For example, if the original database is backed up from staging and restored on production, the license key in the database may be for the `Staging.abc.com` domain. But, on the production server, you need a production domain key, such as `abc.com`. See also: *License keys* on page 10.
10. Change the <add key="skipDataSyncChanges"> element to **false**.

Copying initial assets

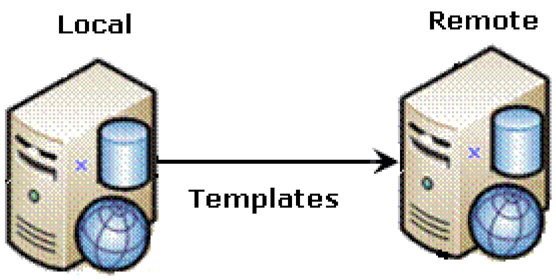
Assets consist of files in these folders:

- *siteroot*/assets
- *siteroot*/privateassets
- *siteroot*/uploadedfiles
- *siteroot*/uploadedimages
- C:/assetlibrary

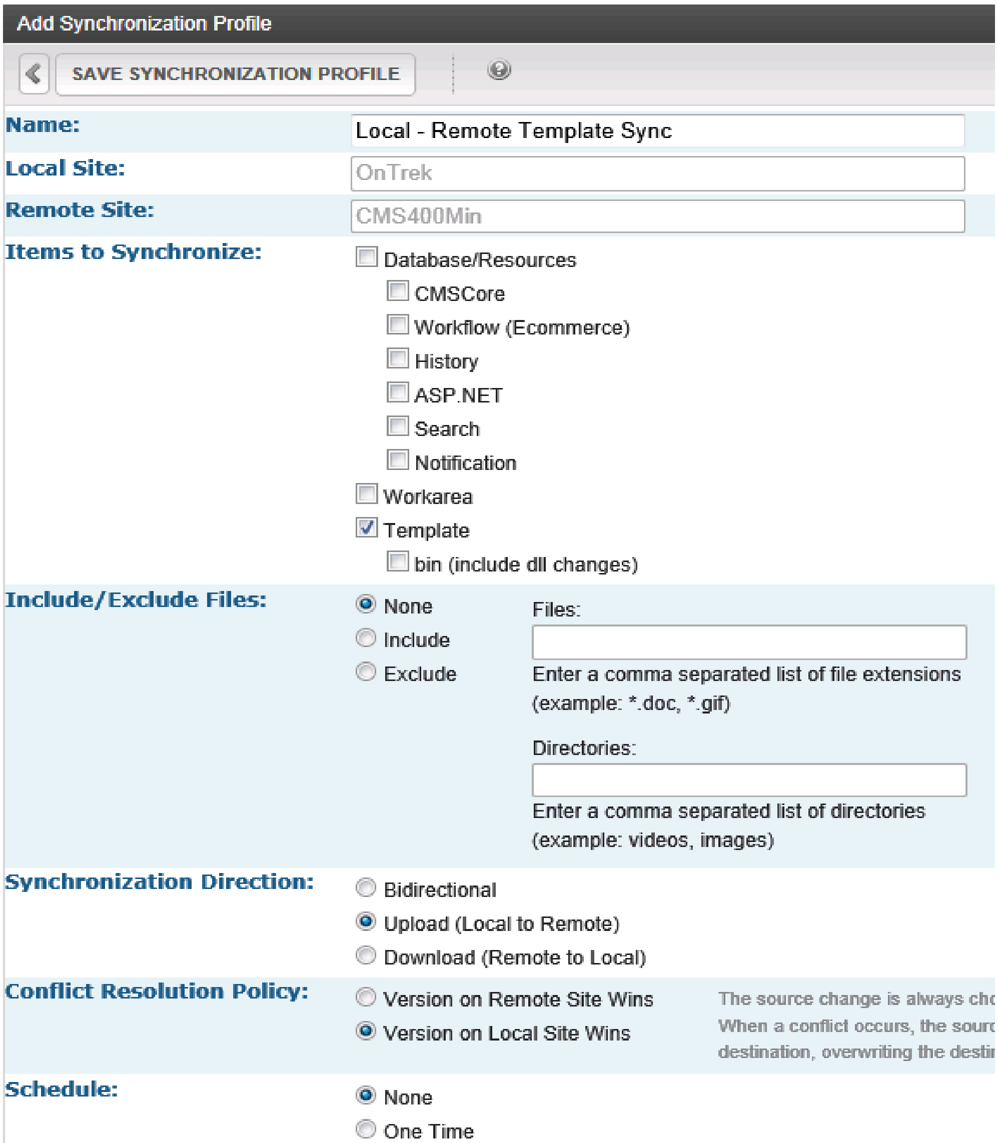
If your Ektron has a large number of assets, you may want to reduce the initial sync time. To copy asset files between servers quickly:

1. On your Ektron server, open `C:\Program Files (x86)\Ektron\EktronWindowsService40\Ektron.ASM.Services40.exe.config`.
2. Set the <add key="skipFileSyncChanges"> element to **true**.
3. Restart the Ektron Windows Service.
4. Using Windows Explorer, copy the folders listed above from the local to the corresponding folders on the remote server.
5. Run an initial sync.
6. Change the <add key="skipFileSyncChanges"> element back to **false**.
7. Restart the Ektron Windows Service.

Part 5: Upload local server’s templates to remote server

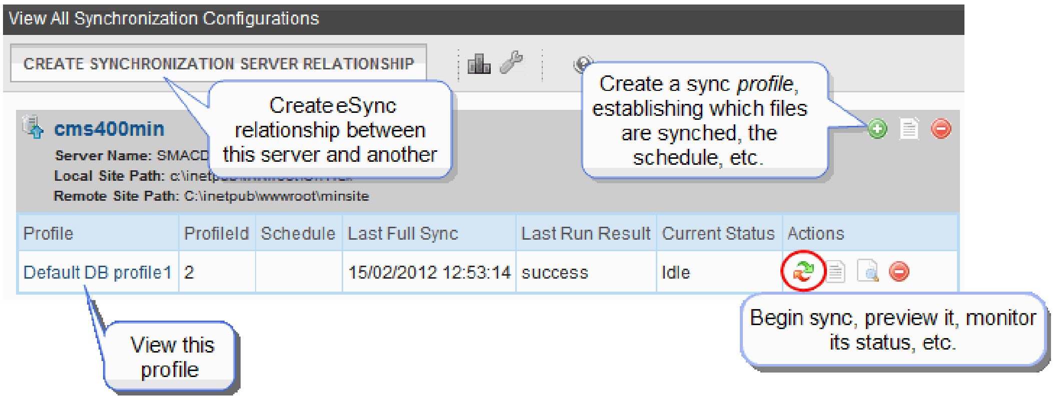


1. From the View All Synchronization Configurations screen, click **Add Sync Profile**. The Add Synchronization Profile screen appears.



2. At the **Synchronization name** field, give this profile a name, such as Local - Remote Template Sync.
3. At the **Items to Synchronize** field, select **Template**.
4. Check **bin** to include dlls and assembly changes.
5. For **Synchronization Direction**, choose **Upload**.
6. For **Schedule**, choose **None**.
7. Save the profile.

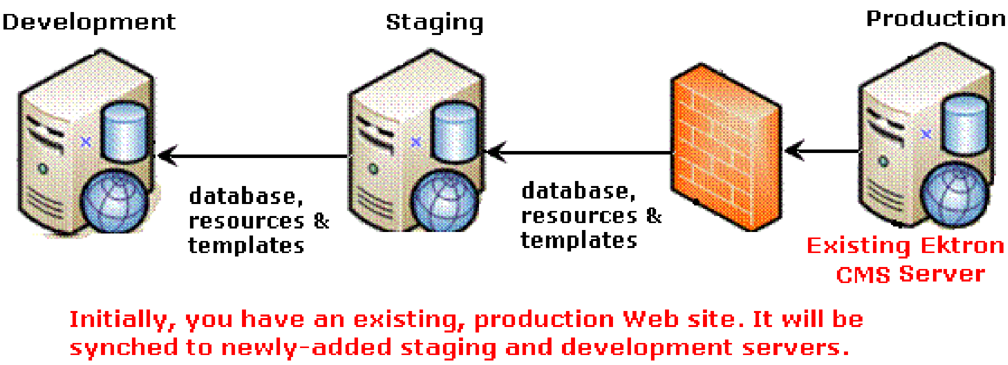
8. Click **Sync** ( ) to the right of the template profile.



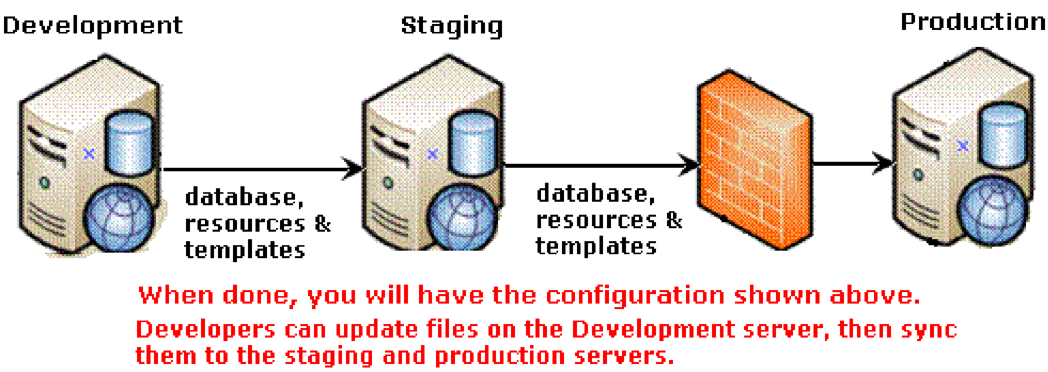
9. A screen tracks the sync's progress. When it is complete, **Synchronization is Complete** appears. You can use the template profile to sync templates in the future.

Scenario 3: Setting up a development > staging > production environment

Before



After



In this scenario, Ektron initially resides on one server. Consider that your production server and use it to initialize the staging and development servers.

NOTE: In this scenario, you cannot sync between the development and production servers. The sync can only be run between Development and Staging or Staging and Production.

Here's a preview of the steps you will follow.

- *Part 1: Set up min site on the staging and development servers* below
- *Part 2: Generate and copy security certificates* below
- *Part 3: Connect staging and production servers* on page 1816
- *Part 4: Download production server database to staging server* on page 1818
- *Part 5: Download the production server's templates to staging* on page 1820
- *Part 6: Connect development and staging servers* on page 1822
- *Part 7: Download staging server database to development server* on page 1824
- *Part 8: Download staging server templates to development* on page 1826

PREREQUISITE

See *s for Using eSync* on page 1789

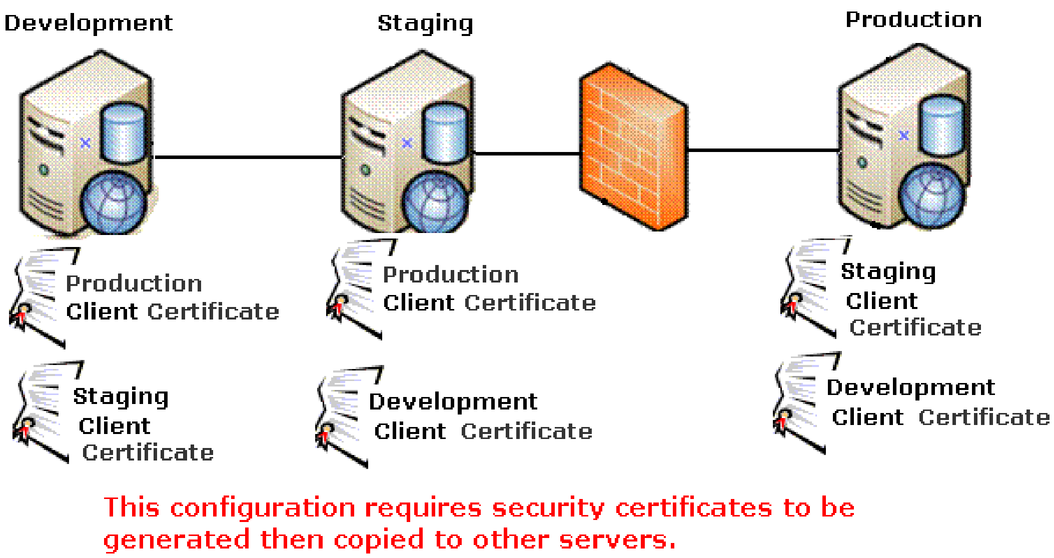
Part 1: Set up min site on the staging and development servers

1. Upgrade your server to the current version of Ektron if necessary.
2. Install a minimum site on the staging and development servers by running the Ektron base installation file (cms400Base9x.exe). See System Requirements.

IMPORTANT: Install both sites to a physical folder relative to the root folder. Do not install one site to a physical folder relative to root and the other sites to virtual directories.

Part 2: Generate and copy security certificates

Security certificates authorize synchronization between servers. In an eSync relationship, every server needs a security certificate from every other server.

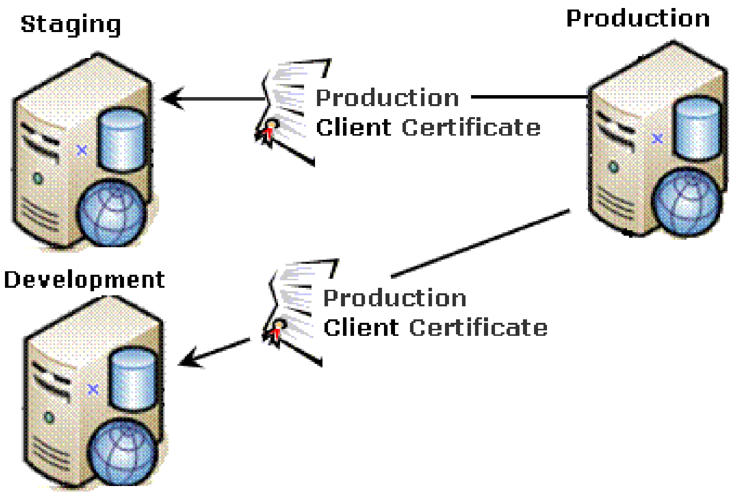


To generate and copy these certificates:

- *2a. Generate certificates on production and copy to staging and development* below
- *2b. Generate certificates on staging and copy to development and production* on page 1812
- *2c. Generate certificates on development and copy to staging and production* on page 1814

2a. Generate certificates on production and copy to staging and development

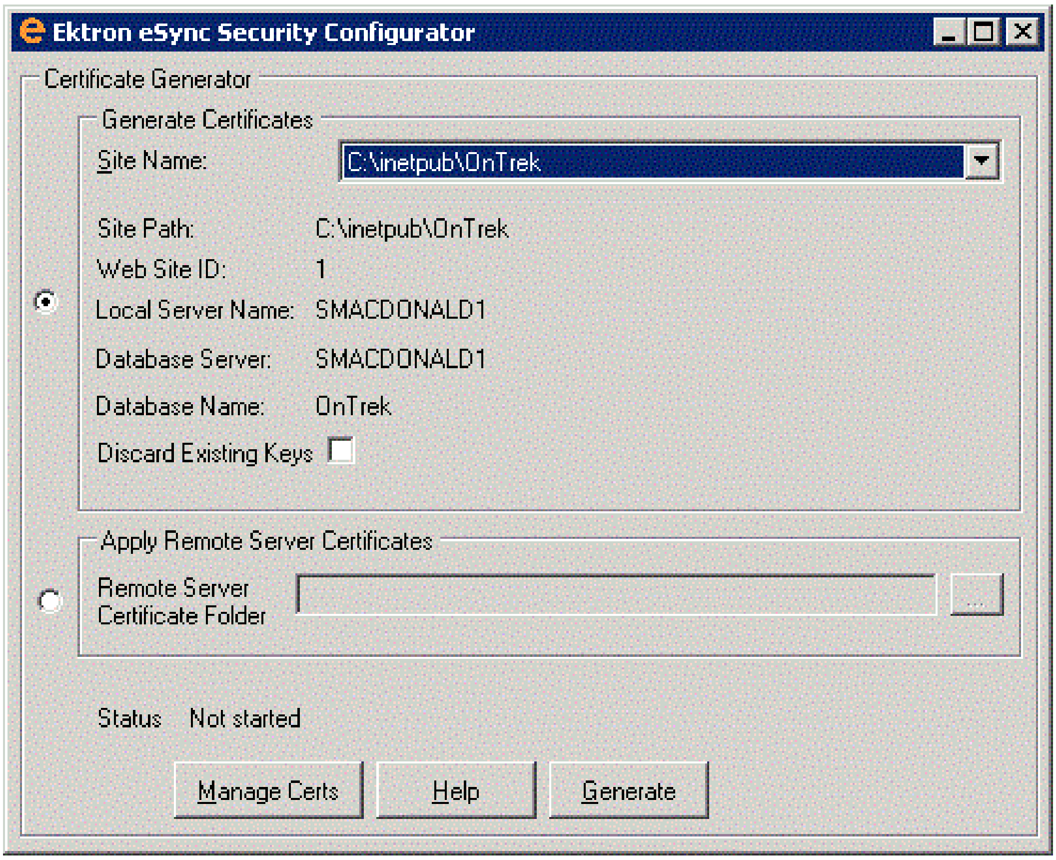
IMPORTANT: Near the end of the installation procedure, you are prompted to generate security certificates. If you completed that screen, skip steps 2 through 4.



1. Sign on to the production server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
2. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

   The following screen appears.



3. In the **Web Site Description** field, select the production server website.
4. Click **Generate**. The certificates are created on the production server.
5. Open 2 Windows Explorer windows: one showing the production server's file system, and the other showing the staging server's file system.
6. In the staging server window, create a folder underneath the root folder. Name the folder **Prod security certificates**.

WARNING! Do not create the new folder under the Web root, C:\inetpub\wwwroot.

7. In the production server window, open the following folder: `C:\ProgramFiles\Ektron\CMS400vxx\Utilities\SecurityConfig\Security Configurator`.
8. From that folder, copy these files.
   - *servername*_SyncClient.pfx
   - *servername*_SyncClient.pvk
   - *servername*_SyncClient.cer
   - *servername*_SyncServer.pfx
   - *servername*_SyncServer.pvk
   - *servername*_SyncServer.cer
9. Paste the files into the folder you created in Step 6. Make sure there are no other security files in the folder.

10. Close both windows.

    After copying security certificate files to the staging folder, they need to be registered and moved to the correct folders. The Security Configurator screen does this.

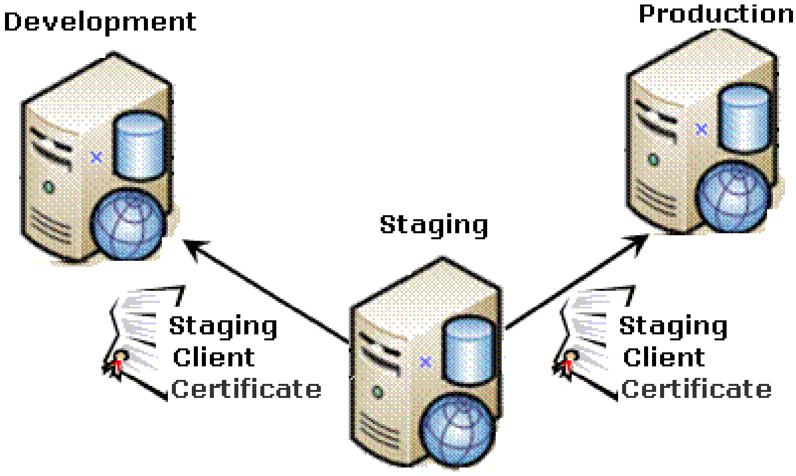
11. Sign on to the staging server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
12. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

    If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

    The security configurator screen appears.

13. Click **Apply Remote Server Certificates**.
14. Click the browse button next to that field.
15. Browse to the folder to which you pasted the security certificates in Step 9.
16. Click **Apply**. The security configurator copies the certificates you pasted in Step 9 to the correct folder, and configures them for the staging server.
17. Follow the same procedure to move production certificates to the development server. To do this, begin at Step 6 and follow all steps. Wherever the instructions mention a staging server, substitute the development server.

2b. Generate certificates on staging and copy to development and production



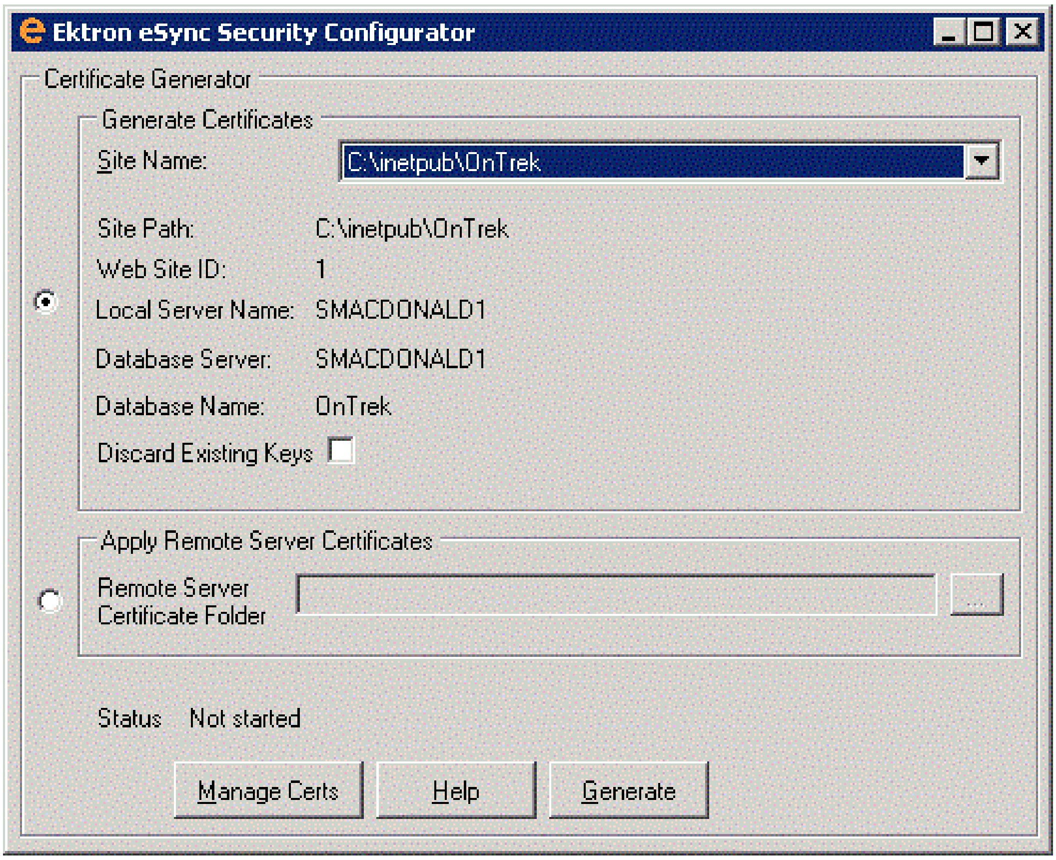
1. Sign on to the staging server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.

    IMPORTANT: Near the end of the installation procedure, you are prompted to generate security certificates. If you completed that screen, skip steps 2 through 4.

2. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

   The following screen appears.



3. At the **Web Site Description** field, select the staging server website.
4. Click **Generate**. The certificates are created on the staging server.
5. Open 2 Windows Explorer windows: one showing the staging server's file system, and the other showing the production server's file system.
6. In the production server window, create a folder underneath the root folder. Name it **staging security certificates**.

WARNING! Do not create the new folder under `C:\inetpub\wwwroot`.

7. In the staging server window, open the following folder: `C:\ProgramFiles\Ektron\CMS400vxx\Utilities\SecurityConfig\Security Configurator`.
8. Copy these files.
   - *servername*_SyncClient.pfx
   - *servername*_SyncClient.pvk
   - *servername*_SyncClient.cer

- *servername*_SyncServer.pfx
- *servername*_SyncServer.pvk
- *servername*_SyncServer.cer

9. Paste the files into the folder you created in Step 6. Make sure there are no other security files in the folder.
10. Close both windows opened in Step 5.

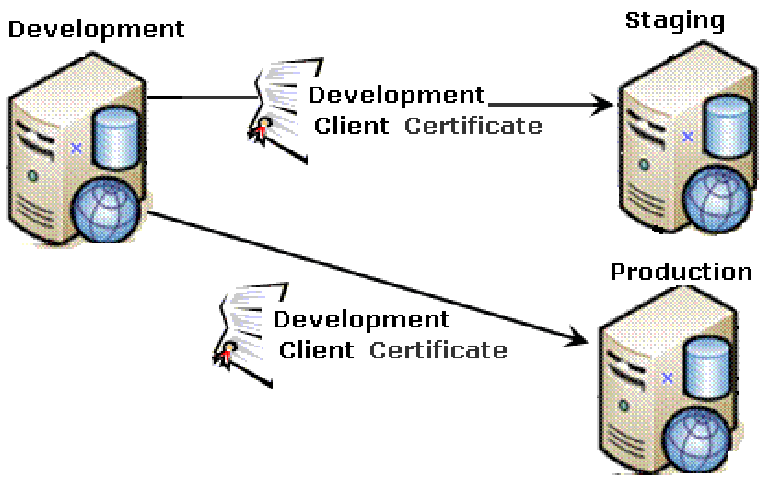
NOTE: After copying the security certificate files to the production folder, they need to be registered and moved to the correct folders. The Security Configurator screen does this.

11. Sign on to the production server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
12. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

    If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

    The security configurator screen appears.
13. Click **Apply Remote Server Certificates**.
14. Click the browse button next to that field.
15. Browse to the folder to which you pasted the security certificates in Step 9.
16. Click **Apply**. The security configurator copies the certificates you pasted in Step 9 to the correct folder, and configures them for the production server.
17. Follow the same procedure to move staging certificates to the development server. To do this, begin at Step 6 and follow all steps. Where the instructions mention a production server, substitute the development server.

2c. Generate certificates on development and copy to staging and production



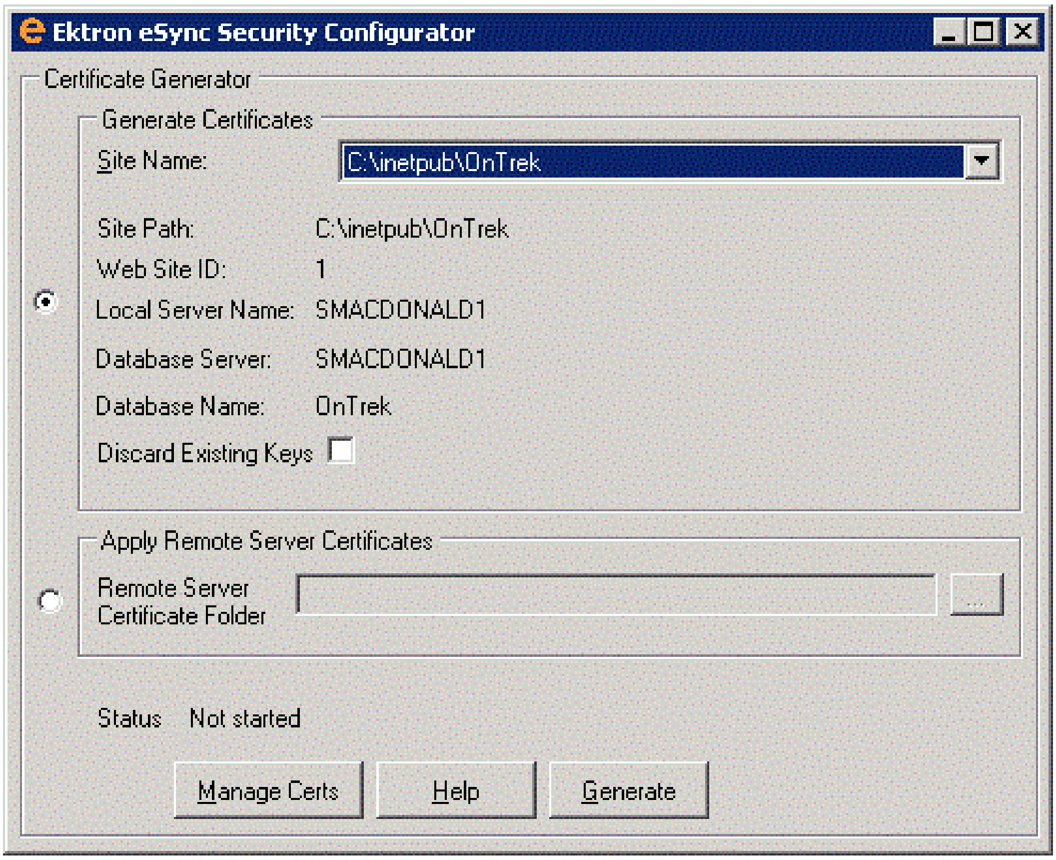
1. Sign on to the development server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.

IMPORTANT: Near the end of the installation procedure, you are prompted to generate security certificates. If you completed that screen, skip steps 2 through 4.

2. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

   The following screen appears.



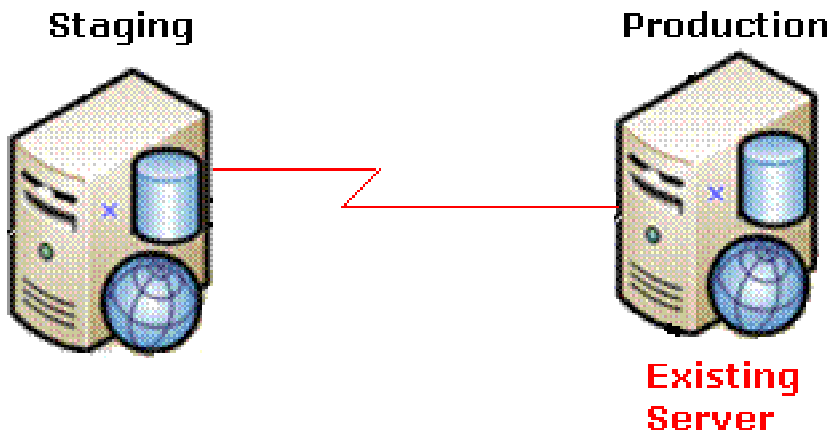
3. At the **Web Site Description** field, select the website on the development server.
4. Click **Generate**. The certificates are created on the development server.
5. Open 2 Windows Explorer windows: one showing the development server’s file system, and the other showing the staging server’s file system.
6. In the staging server window, create a folder underneath the root folder. Name the folder **Dev security certificates**.

WARNING! Do not create the new folder under `C:\inetpub\wwwroot.`

7. In the development server window, open the following folder: `C:\ProgramFiles\Ektron\CMS400vxx\Utilities\SecurityConfig\Security Configurator`.
8. Copy these files.
   - *servername*_SyncClient.pfx
   - *servername*_SyncClient.pvk
   - *servername*_SyncClient.cer
   - *servername*_SyncServer.pfx
   - *servername*_SyncServer.pvk
   - *servername*_SyncServer.cer
9. Paste the files into the staging server folder you created in Step 6. Make sure there are no other security files in the folder.
10. Close both windows you opened in Step 5.
11. After copying the security certificate files to the staging folder, they need to be registered and moved to the correct folders. The Security Configurator screen does this.
12. Sign on to the staging server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
13. Click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**. Right click and choose **Run As Administrator**.

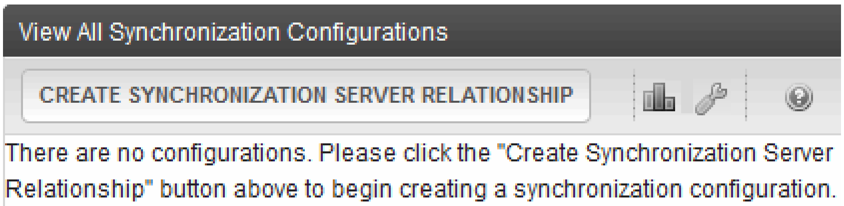
    If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.
14. Click **Apply Remote Server Certificates**.
15. Click the browse button next to that field.
16. Browse to the folder you created in Step 6.
17. Click **Apply**.
18. The security configurator copies the certificates you pasted in Step 9 to the correct folder, and configures them for the staging server.
19. Follow the same procedure to move development certificates to the production server. To do this, begin at Step 6 and follow all steps. Wherever the instructions mention a staging server, substitute the production server.

Part 3: Connect staging and production servers

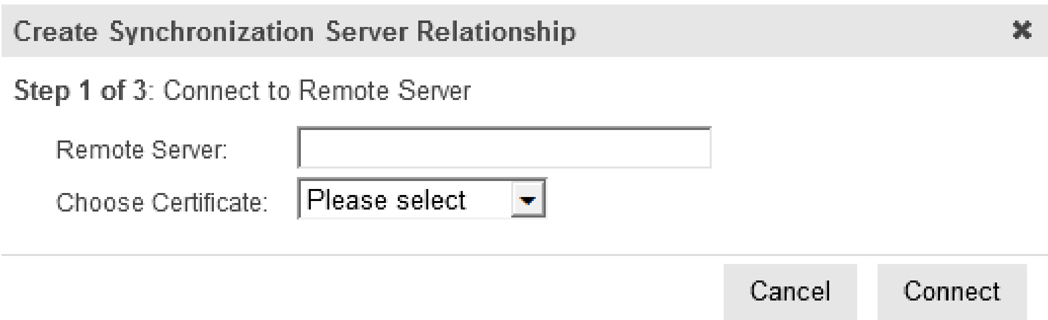


WARNING! Back up your database before beginning this procedure!

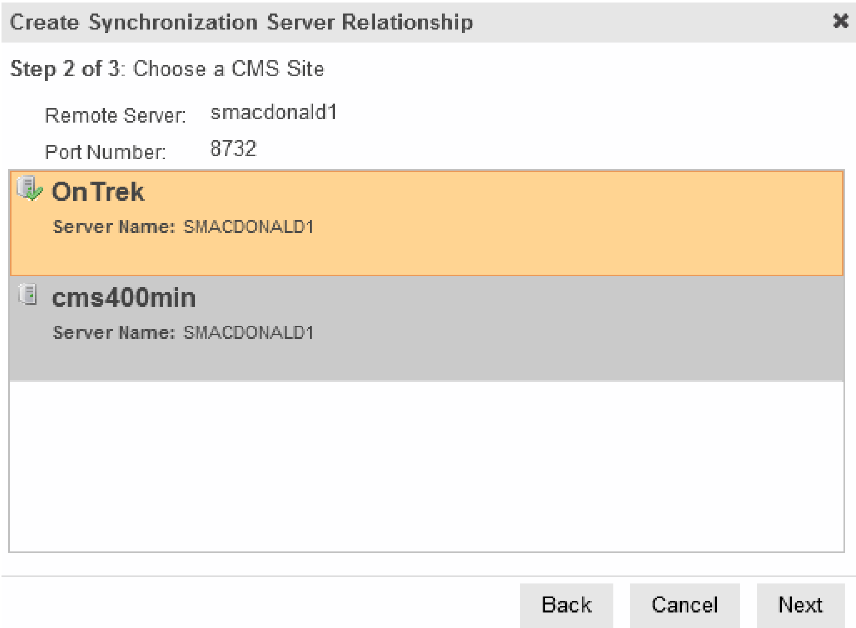
1. On the staging server, sign on to Ektron.
2. In the Workarea, go to **Settings > Configuration > Synchronization > Profiles**. The View All Synchronization Configurations screen appears.



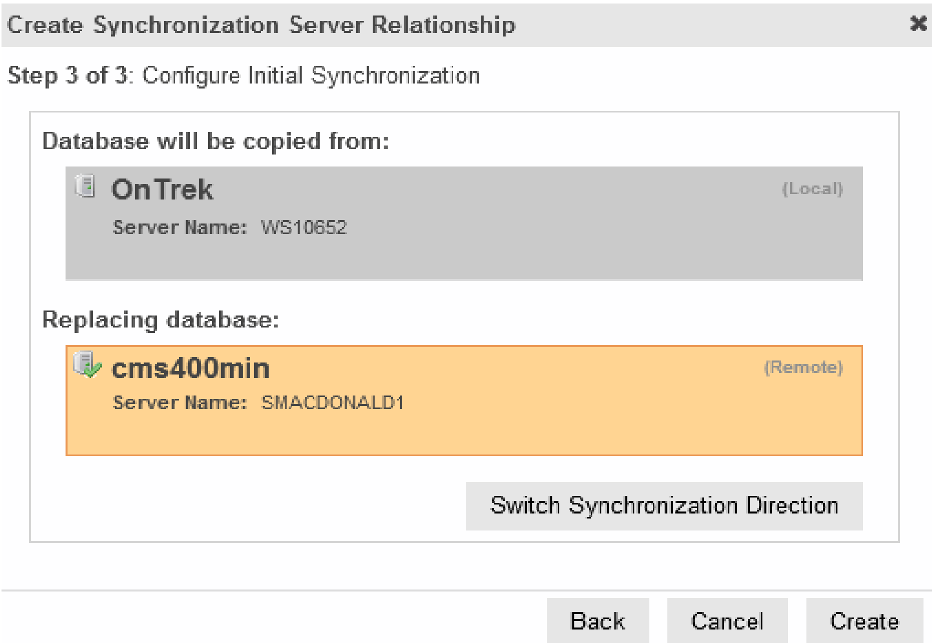
3. Click **Create Synchronization Server Relationship**. That screen appears.



4. In the **Remote Server** field, enter the production server.
5. In the **Choose Certificate** field, the name of the production server appears.
6. Click **Connect**. This action connects the staging with the production server. A new screen appears showing the production server's database.

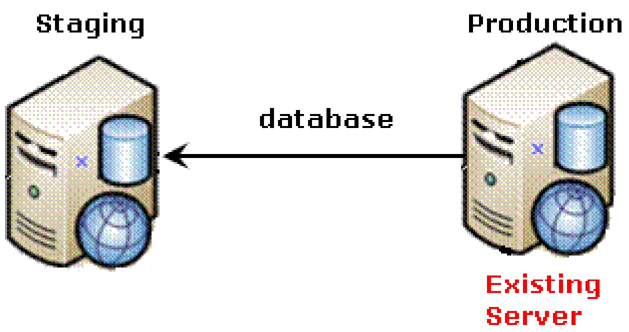


7. Click **Next**. A new screen appears, showing both servers.



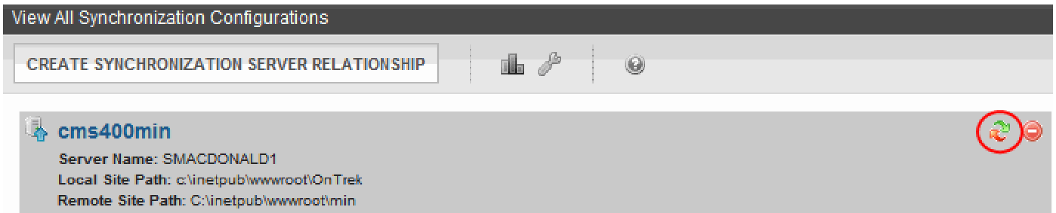
8. Click **Create**. This action connects the staging and production servers.

Part 4: Download production server database to staging server

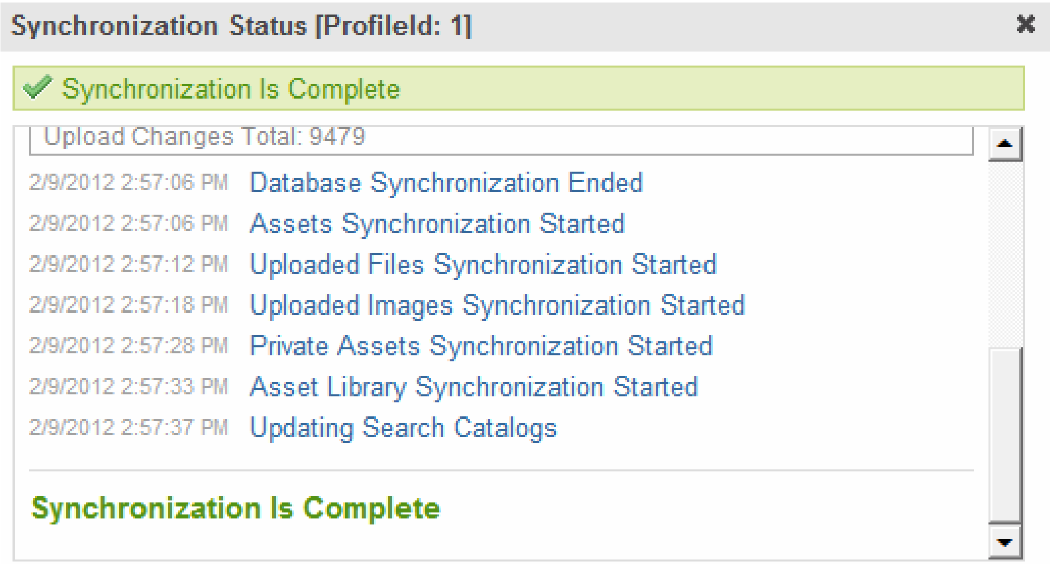


NOTE: If your Ektron has a very large database or number of assets, and you want to reduce the initial sync time, see *Minimizing the time of the initial sync* on page 1805.

1. From the View All Synchronization Configurations screen, click **Start Initial Sync** ( ).



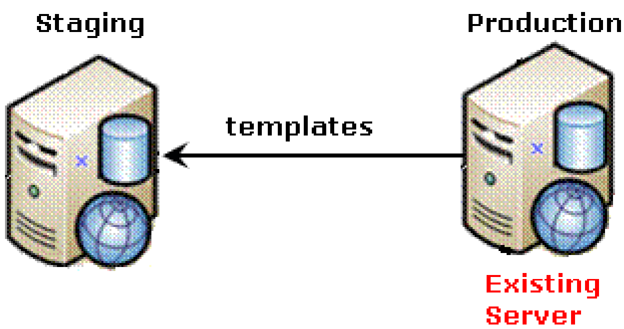
2. The initial sync downloads the production server's database and resources to the staging server. A screen tracks progress.



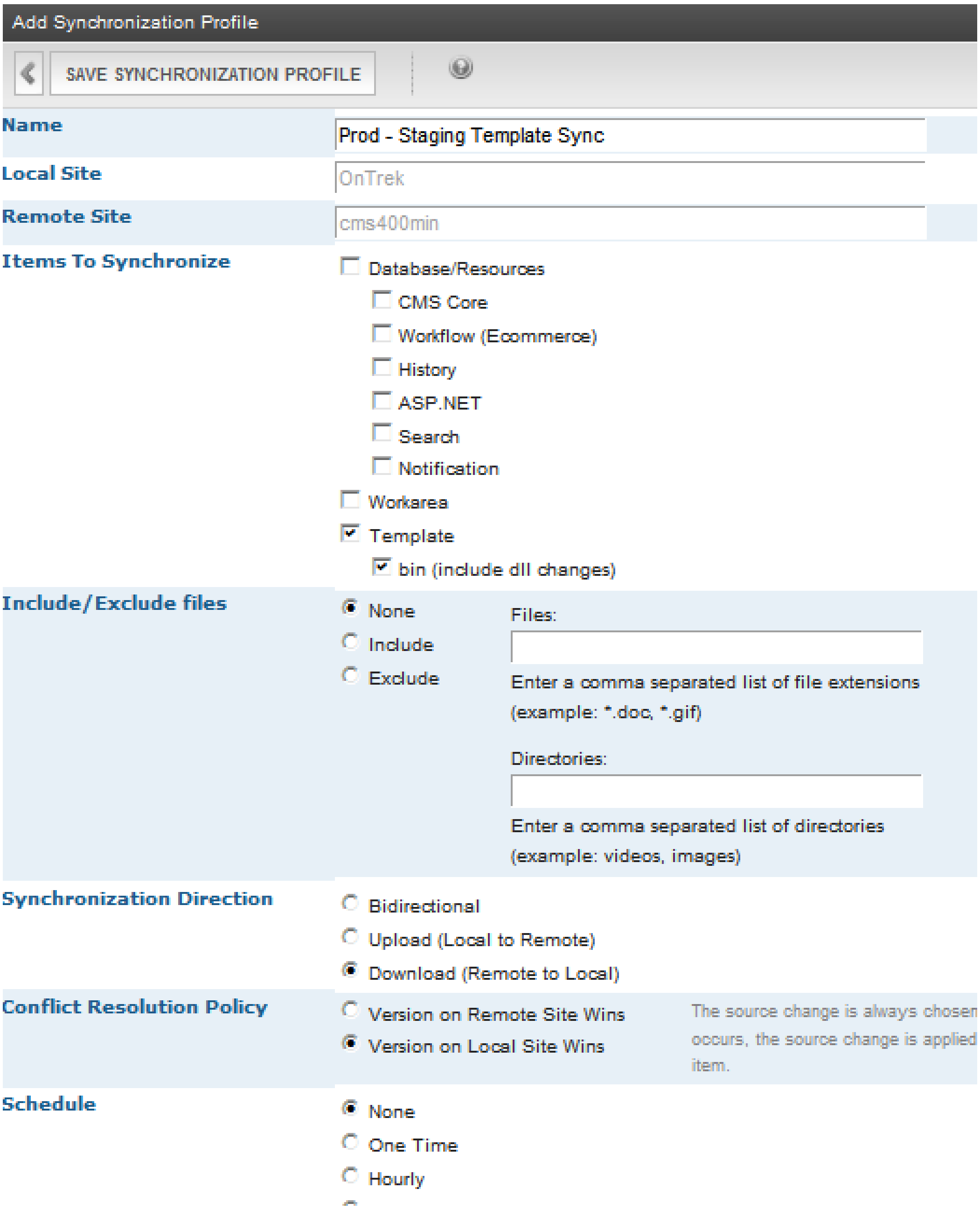
3. **Synchronization is Complete** appears.

   The initial sync creates a *default database profile*. You can use the profile to run database/resource syncs in the future.

Part 5: Download the production server’s templates to staging

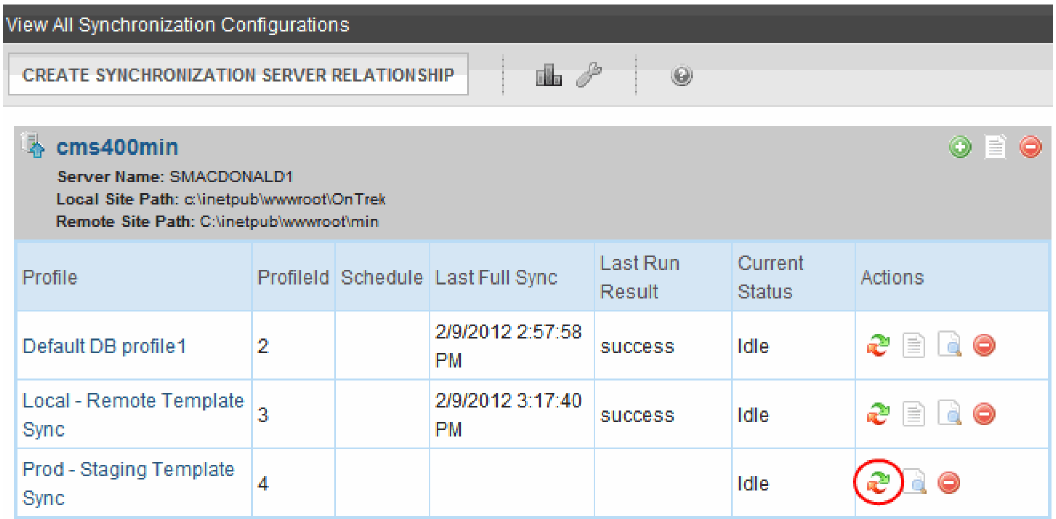


1. From the View All Synchronization Configurations screen, click **Add Sync Profile**. The Add Synchronization Profile screen appears.
2. At the **Synchronization name** field, give this profile a name, such as Prod - Staging Template Sync.
3. At the **Items to Synchronize** field, select **Template**.
4. Check **bin** to include dlls and assembly changes.
5. For **Direction**, choose **Download**.
6. For **Schedule**, choose **None**.



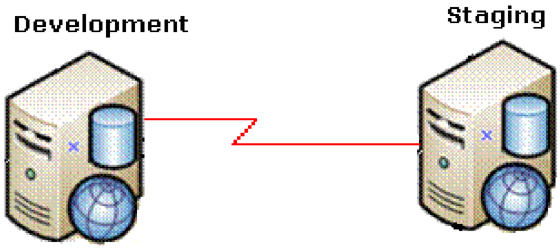
7. Save the profile.

8. Click **Sync** ( ) to the right of the profile. A screen tracks the sync's progress.

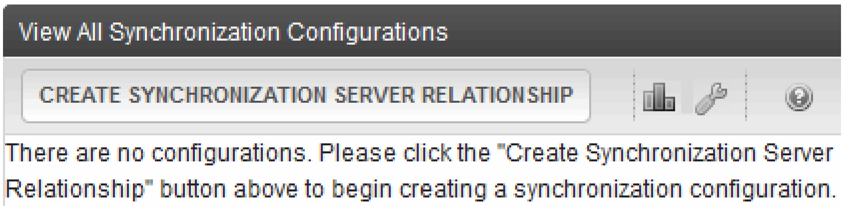


9. When the sync is complete, **Synchronization is Complete** appears. You can reuse the template sync profile in the future.

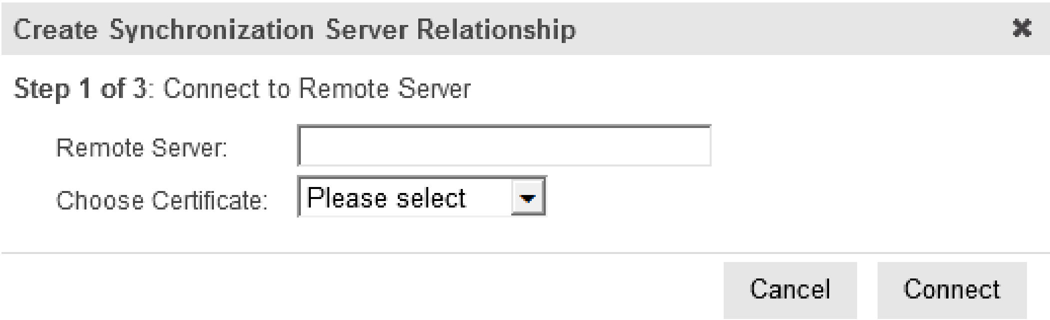
Part 6: Connect development and staging servers



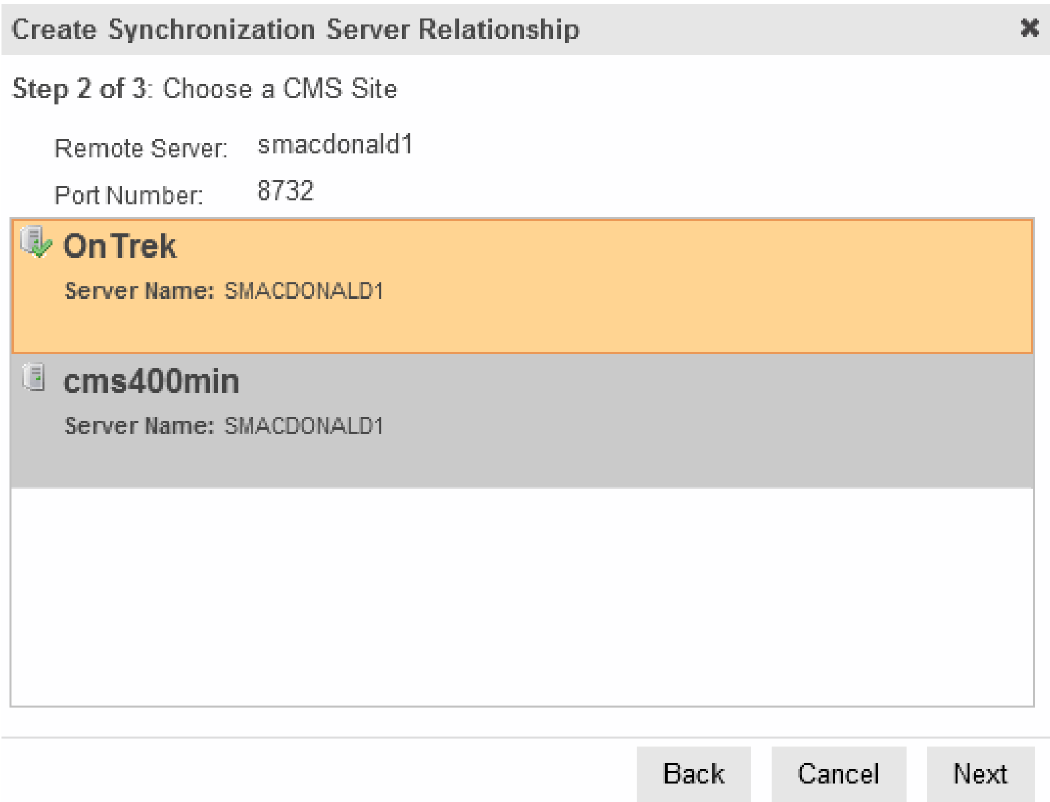
1. Sign on to Ektron development server.
2. In the Workarea, go to **Settings > Configuration > Synchronization > Profiles**. The View All Synchronization Configurations screen appears.



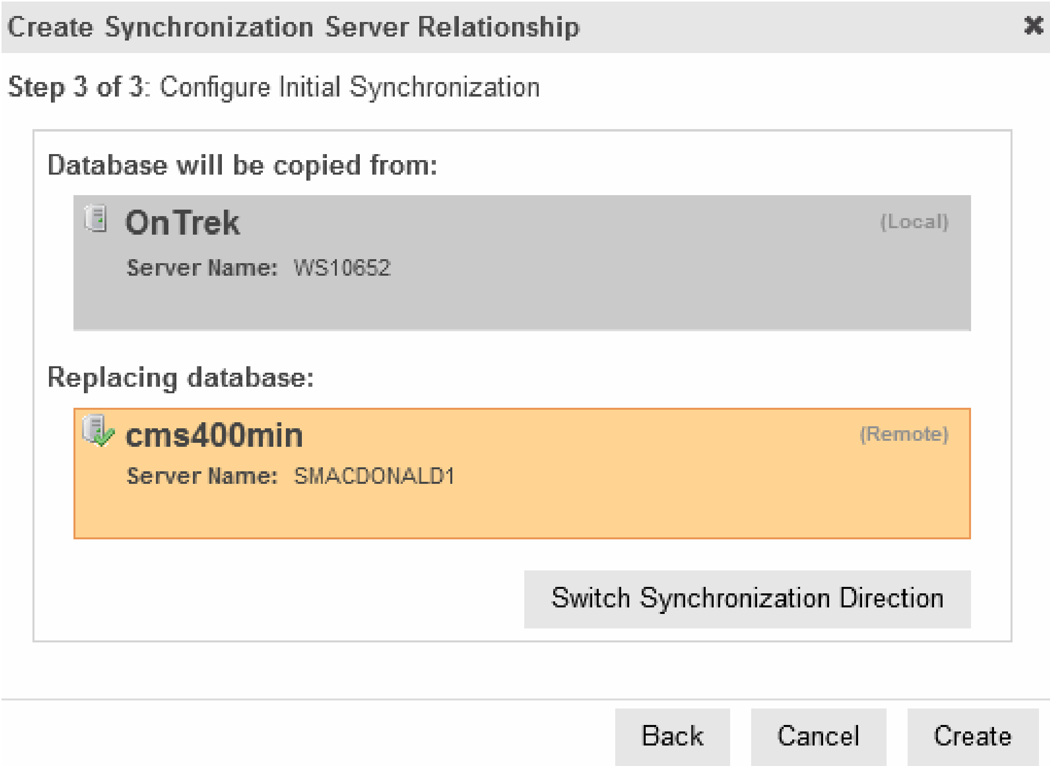
3. Click **Add** ( ). The Create Synchronization Server Configuration screen appears.



4. At the **Remote Server** field, enter the name of the staging server.
5. At the **Choose Certificate** field, the name of the staging server appears.
6. Click **Connect**. This action connects the development with the staging server. After you connect to the staging server, a new screen appears showing its database.

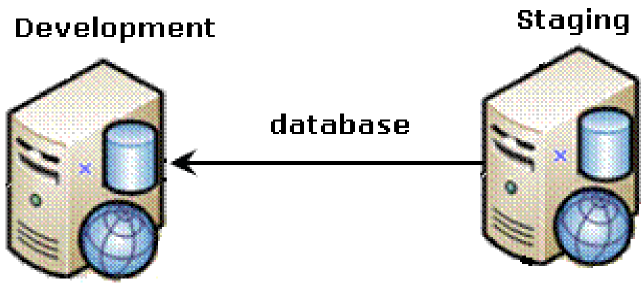


7. Click **Next**. A new screen appears, showing both servers.



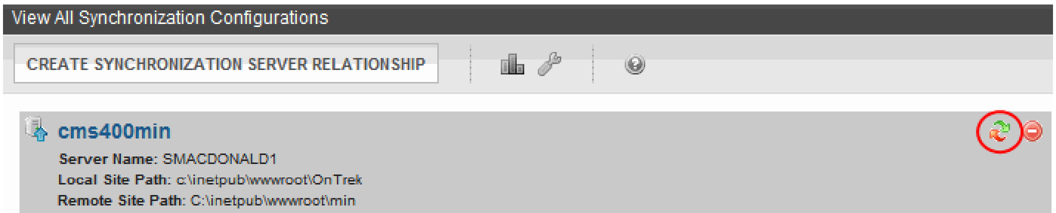
8. Click **Create**. This action connects the development and staging servers.

Part 7: Download staging server database to development server

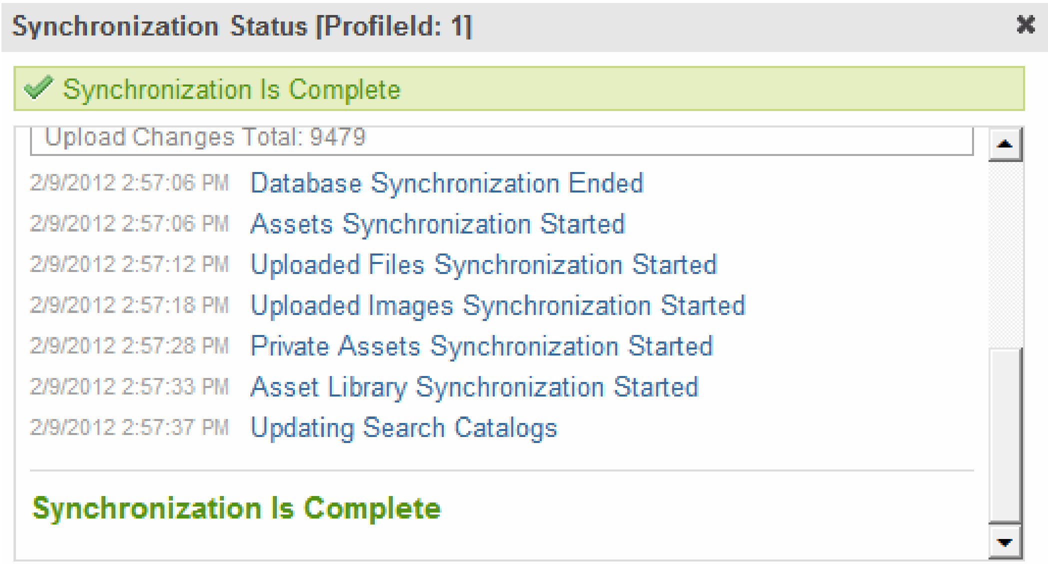


NOTE: If your Ektron has a very large database or number of assets, and you want to reduce the initial sync time, see *Minimizing the time of the initial sync* on page 1805.

1. From the View All Synchronization Configurations screen, click **Start Initial Sync** ( ).



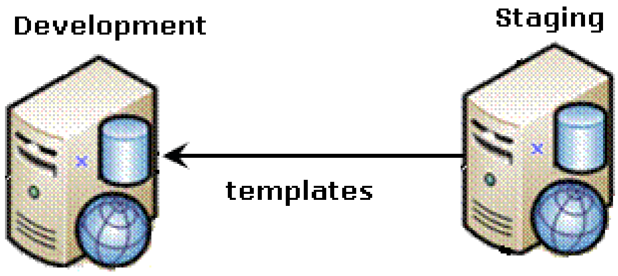
The initial sync downloads the staging server's database and resources to the development server. A screen tracks the sync's progress.



2. When the sync is complete, **Synchronization is Complete** appears.

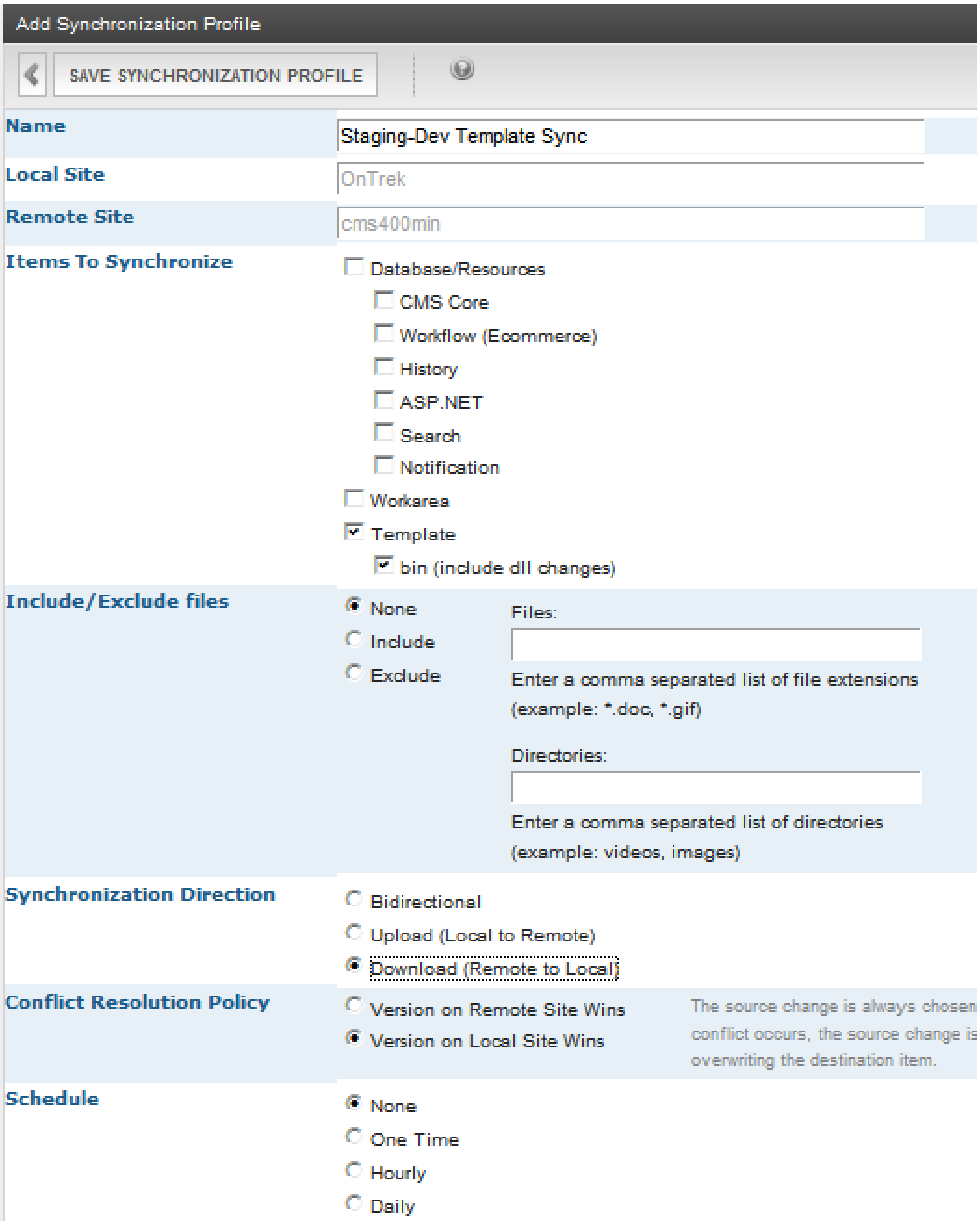
   The initial sync also creates a *default database profile*. You can reuse this profile to sync the database/resources between these 2 servers at any time in the future.

Part 8: Download staging server templates to development



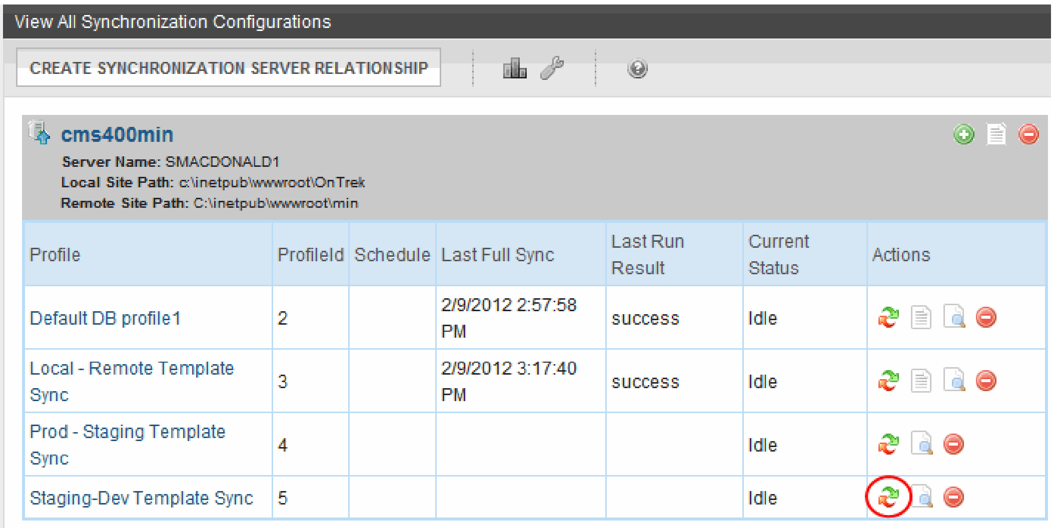
1. From the View All Synchronization Configurations screen, click **AddProfile**. The Add Synchronization Profile screen appears.
2. At the **Name** field, give this profile a name, such as Staging-Dev Template Sync.
3. At the **Items to Synchronize** field, select **Template**.
4. Check **bin** to include dlls and assembly changes.
5. For **Direction**, choose **Download**.

6. For **Schedule**, choose **None**.



7. Save the profile.

8. Click **Sync** ( ) to the right of the profile. A screen tracks the sync's progress.



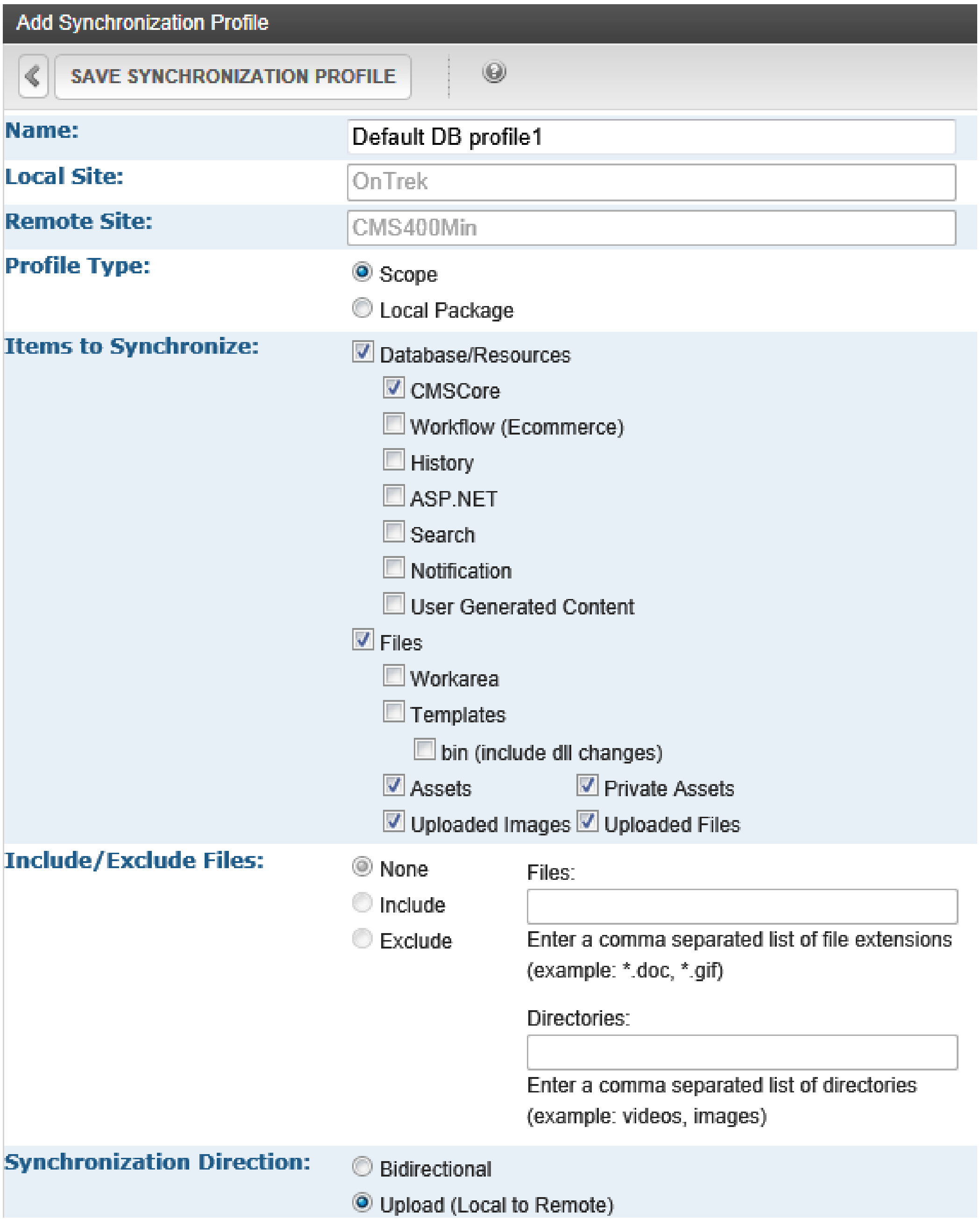
9. When the sync is complete, **Synchronization is Complete** appears. You can reuse the profile to sync templates in the future.

Setting up eSync profiles

To minimize data entry, eSync saves job specifications in a *profile*. After you enter specifications once, select the profile to sync again using the same details. A profile contains the following information:

- source and destination databases
- type of data being synchronized
- files to include/exclude
- direction
- schedule

Use the Add/Edit Synchronization Profile screen to manage eSync profiles.



While *Setting up eSync* on page 1789, you created a default database and a template profile. This section explains how to modify those profiles and create new ones.

To sync a website, you need at least 2 profiles: one for the `siteroot/Workarea` folder, and another for all other site files. To create a profile for

- your `Workarea` folder, check **Items to Synchronize > Workarea**
- all other site files, check **Items to Synchronize > Database/Resources**, **Template**, and **bin**

The following list explains which files are synchronized by each grouping under **Items to Synchronize**.

- **Database/Resources**. Synchronizes database tables plus the following site root folders. See also: *Setting up a profile to Sync a database* below.
  - assets
  - PrivateAssets
  - uploadedimages
  - uploadedfiles
- **Workarea**. Synchronizes files in the site's `Workarea` folder. See also: *Setting up a profile to sync workarea files* on page 1834.
- **Template**. Synchronizes files in the site root folder. See also: *Setting up a profile to sync template and bin files* on page 1835.

IMPORTANT: If you run a template sync and **Bin** is checked, and one server is running is 32-bit mode while the other is running in 64-bit mode, users will not be able to drag and drop DMS files on the staging server.

NOTE: If you perform an initial sync of a recently-installed min site with your staging site, the min site's templates could overwrite templates on your staging site. This is because, when 2 templates have the same name, the most recently-modified one overwrites the other.
To avoid this, rename the only template installed with the min site (login.aspx) before performing the initial template sync. You should also rename login.aspx's supporting files, such as login.aspx.vb.

- **Bin**. Synchronizes the *siteroot*/bin folder, including DLLs and assemblies.

The following file types are *not* synchronized by default.

- .config files
- .txt files
- .sln files

You may add these file types to a Workarea or Template profile via the **Include/Exclude Files** field.

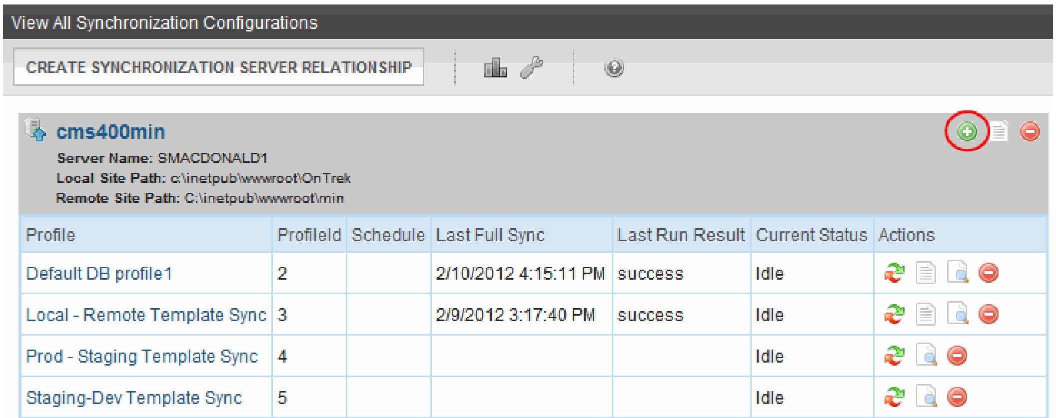
Setting up a profile to Sync a database

PREREQUISITES

- You created a Sync relationship and ran an initial sync. See also: *Setting up eSync* on page 1789.
- If your profile is based on an eSync package, it has been set up. See also: *Synchronizing servers using eSync* on page 1787.

To set up a profile:

1. Go to the **Settings > Configuration > Synchronization > Profiles** screen.



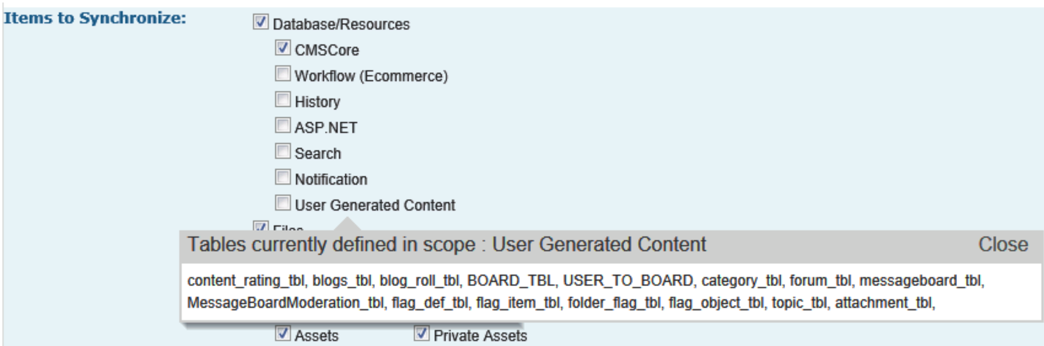
2. Click **Add Sync Profile**. The Add Synchronization Profile screen appears.
3. At the **Name** field, enter a name for this profile.
4. At the **Profile Type** field, choose **Scope** or **Local Package**.
   - To define a **Scope**, continue through the steps.
   - To define a **Local Package**, see *Synchronizing servers using eSync* on page 1787. After selecting the package, you still choose a **Synchronization Direction**, **Conflict Resolution Policy**, and a **Schedule**.
5. At the **Items to Synchronize** field, select **Database/Resources**.

   The following list describes the database scope filter checkboxes.

   NOTE: The **Include/ExcludeFiles** field is available only for Workarea, Template, or bin syncs.

   Use these checkboxes to choose groups of database tables. You must choose one scope if you check **Database/Resources**.

   NOTE: Click any label under **Database/Resources** to see the list of database tables synchronized by that scope.



   - **CMS Core**. essential Ektron tables; includes Targeted Content rules
   - **Workflow (eCommerce)**. eCommerce event history
   - **History**. content history. Lets users on the destination server review content changes (edited, published, and so on).
   - **ASP.NET**. Microsoft .NET ASP provider

- **Search**. tables to support search functionality:
  - *Using synonym sets* on page 348
  - *Providing suggested results* on page 350
  - *Including external files in a search* on page 359
- **Custom**. Custom tables (if defined) See also: *Synchronizing custom SQL database tables* on page 1858.
- **Notification**. Notification activities See also: *Sending notifications to a community* on page 1543.
- **User Generated Content**. Content created by membership users and other site visitors. For example:
  - A membership user logs in and creates a new account
  - A site visitor rates content
  - Community members reply to forum questions and blog posts
  - A Community member creates a community folder

  Whenever user-generated content is synchronized, the profile of the user who created the content is also synchronized.

  User-generated content is a subset of CMS Core, so you would not choose both for the same sync. But you may select user-generated content with any other scope.

  When you set up a sync profile for user-generated content, you typically choose **Bidirectional** as the direction. In this case, if a membership user updates his or her profile on the production server, eSync copies the changes to staging. On the other hand, if your administrator changes that information on staging, the next eSync copies it from staging to production.

  NOTE: Since notifications are part of the User Communities feature, they are automatically checked if you check **User Generated Content**.

6. For the **Include/Exclude** files field, see *Include/exclude files field* on the next page.
7. At the **Synchronization Direction** field, select the direction of the copy. Your choices are:
   - **Bidirectional**. Changed data on either server is updated on the other. See also: *Choosing a bidirectional sync* on page 1837.
   - **Upload**. database is copied from the local server (the one to which you signed on) to the remote server (specified at the **Remote Site** field above). Items on the remote server are overwritten.
   - **Download**. database is copied from remote to local server. Items on the local server are overwritten.
8. At the **Conflict Resolution Policy field**, decide what to do if the same data changed on both servers since the last sync. Your choices are:
   - **Version on Remote Site Wins**
   - **Version on Local Site Wins**

Effect of Choosing Conflict Resolution Policy

To understand these choices, see table below.

	Synchronization Direction		
	Bidirectional	**Upload**	**Download**
Version on Remote Site Wins	remote version overwrites local version	remote version is retained; nothing is copied	remote version overwrites local version
Version on Local Site Wins	local version overwrites remote version	local version overwrites remote version	local version is retained; nothing is copied

9. If desired, select a schedule on which sync runs automatically. The choices are
   - **None**. Don't set up a schedule. Sync as needed via the Sync Profile screen's **Sync Now** button.
   - **One Time**. specify a start time and date. The profile runs once at that date/time.
   - **Hourly**. specify a start minute. The profile runs every hour at this minute.
   - **Daily**. specify a start time. The profile runs every day at this time.
   - **Weekly**. specify a start time and weekday. The profile runs on this day every week at this time.
   - **Monthly**. specify a start time and calendar day (numbers 1 through 31). After the start date, the profile runs on this day every month at this time.

   NOTE: If you enter a date greater than 28, the sync will not run in a month that does not include that date. For example, if you enter 31, the sync will not run in February, April, June, September, and November.

Setting up a profile to sync workarea files

Setting up a profile to sync Workarea files is the same as *Setting up a profile to Sync a database* on page 1831 with the following exceptions:

- At the **Items to Synchronize** field, select **Workarea.**
- You may use the **Include/ExcludeFiles** field to refine the files to be synchronized. See also: *Include/exclude files field* below.

Include/exclude files field

Use the **Include/Exclude Files** field to include files not normally synchronized, or exclude files or directories that are synchronized by default. This screen section is active only if you choose a **Template** or **Workarea** sync and no **Database/Resources** scopes.

NOTE: By default, eSync ignores .config and .txt files.

For example, .txt files are not normally synchronized, but you want to sync several of them. In this case, check **Include** and enter ***.txt** into the **Files** field.

Examples of the **Exclude Files** option:

- you do not want to sync Flash (.swf) files. If you check the **Exclude** button, and enter .swf into the **Files** field, eSync ignores them.
- you do not want to sync files in the widgets folder. If you check the **Exclude** button, and enter widgets into the **Directories** field, eSync ignores them.

You can exclude file types *and* directories. eSync ignores files that satisfy either criterion.

Files excluded from the Workarea sync

Workarea synchronizes all files in the site's `Workarea` folder, *except* files in these subfolders:

- ewebeditpro
- explorer
- ewebdiff
- foundation
- resources
- sync

Setting up a profile to sync template and bin files

Setting up a profile to sync Workarea files is the same as *Setting up a profile to Sync a database* on page 1831 with the following exceptions:

- At the **Items to Synchronize** field, under **Files**, select **Templates and Bin**.
- You may use the **Include/ExcludeFiles** field to refine the list of files to be synchronized.

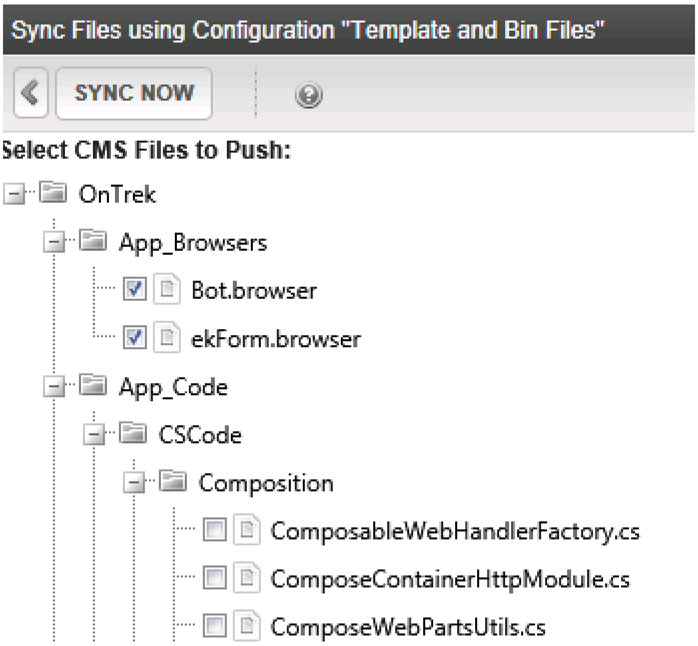
Regardless of how you complete the **Include/ExcludeFiles** field, the following siteroot folders are *not* synchronized:

- App_GlobalResources
- App_WebReferences
- Workarea
- assetlibrary
- assets, privateassets, uploadedfiles, uploadedimages (individual checkboxes under **Files**)
- latestchanges

Choosing files and file types via include/exclude files

Within a template/bin sync's folders, you can select individual files. For example, you updated template files and related .css files on the staging server, and want to update the production server without moving everything else.

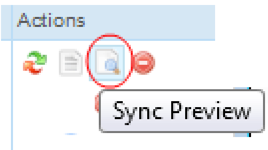
After saving the profile, click **Synchronize files** ( ) from the View Profiles screen to access the Sync Files screen. Here, you can select individual files. If you *included* files types, only they are available for selection. If you *excluded* file types or directories, they are unavailable.



IMPORTANT: If you select one or more files on the Sync Files screen, the profile includes only those files. If you select no files, the profile includes all files indicated by your responses to the **Include/Exclude Files** field.

Previewing a sync

Before running a sync, you can view what will be synchronized by clicking **Sync Preview**.



Ektron recommends this feature to help confirm that tables, assets, private assets, uploaded files, uploaded images and assetlibrary files that you delete, add, or change will be synchronized between servers as you expect. Also, you can predict how long a sync will take, because the preview takes the same amount of time.

The Sync Preview produces Sync Log files. See also: *Viewing eSync activity* on page 1866.

NOTE: You cannot preview a sync profile that includes only Workarea files.

Pausing the sync schedule

If a sync profile has a schedule, you can pause it by clicking the profile's pause/play button.

Sync Profile	Schedule	Last Full Sync	Last Run Result	
My Synchronization Profile	Hourly Next Sync Time: 3/25/2010 10:50:00 AM	Never		

While paused, the sync will not run. To resume the schedule, click the pause/play button again.

For example, a sync is scheduled to run every hour @ :50: 1:50, 2:50, 3:50, and so on. At 10:30 a.m., you pause the sync profile. So, at 10:50 a.m., the sync does not run. At 12:00 noon, you click the pause/play button again. The next sync starts at 12:50 p.m.

Choosing a bidirectional sync

Although most Ektron data is created and updated on the staging server, some data is collected on the production server. This information can be viewed and edited on the staging server. Here are some examples:

- membership users
- content ratings
- forum and blog posts
- community folders

When you set up a profile to sync this kind of data (maintained in the database), you typically choose **Bidirectional** as the direction, and **Notifications** and **User Generated Content** under **Database/Resources**. So, if a membership user updates his or her profile on the production server, eSync copies the changes to staging. On the other hand, if your administrator changes that information on staging, the next eSync copies it from staging to production.

If the same file on both servers was updated since the last sync, your conflict resolution policy determines which data is saved.

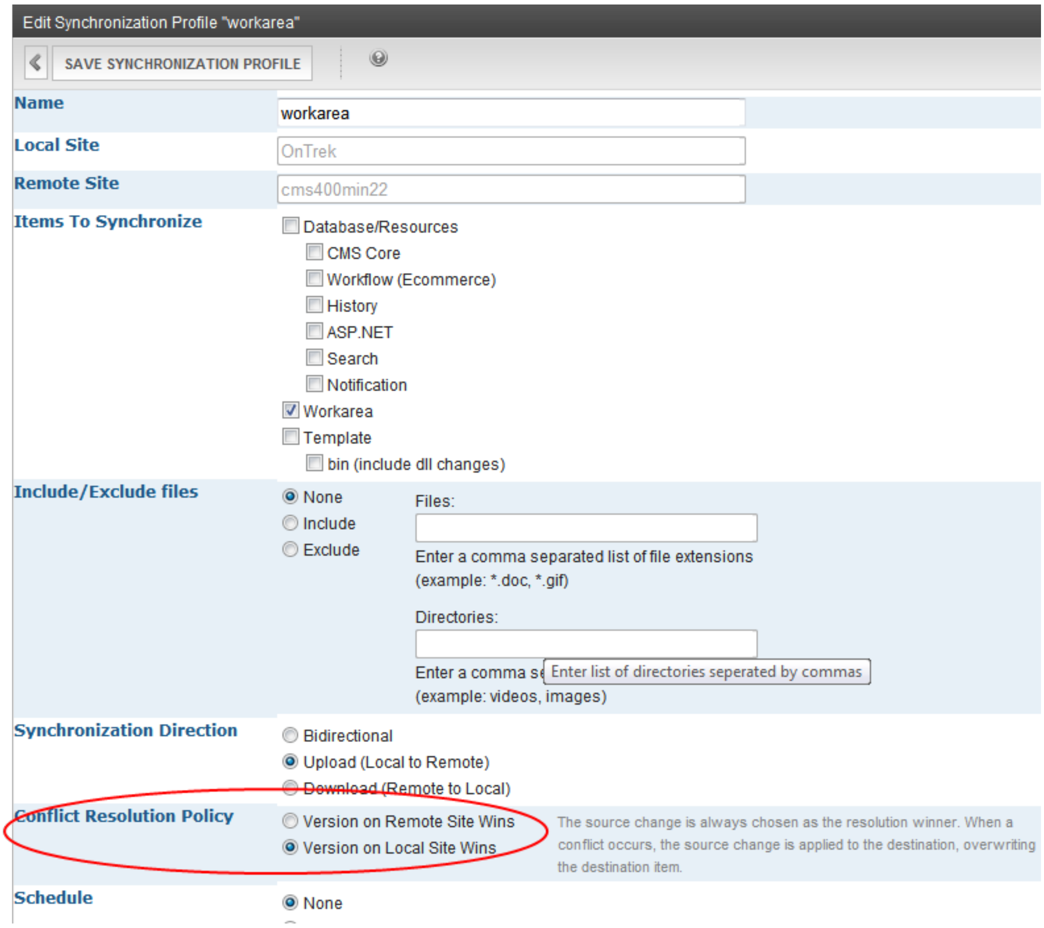
NOTE: The first time you run a sync for templates or Workarea files, the sync is bidirectional, regardless of the direction you specify on the Synchronization Direction screen.

If you are using a bidirectional sync, and the same item changed on both servers since the last sync, eSync must decide which version to keep, and which version to overwrite.

NOTE: If you use bidirectional sync and only one version was updated since the last sync, the updated version overwrites the unchanged version.

Use the Synchronization Profile screen's **Conflict Resolution Policy** field to determine which version ends up on both servers after synchronization. The choices are:

- **Version on Remote Site Wins**. the remote version overwrites the local
- **Version on Local Site Wins**. the local version overwrites the remote



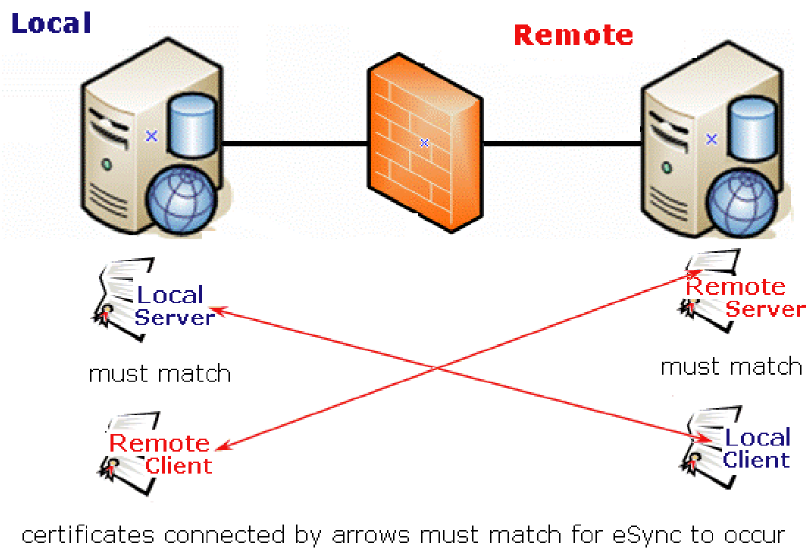
Managing eSync security certificates

eSync uses security certificates to secure communication between servers. All servers in an eSync relationship must have matching, encrypted security certificates to establish an eSync relationship.

NOTE: If your relationship includes separate database servers, you do not need to install security certificates on them. You only need to install certificates on servers that host Ektron.

See also: *Create eSync security certificates for a load-balanced cluster* on page 1880.

Before you can establish an eSync relationship between servers, each server must have its own (local) security certificates *and* certificates from every other server in the relationship.



As another example, if an eSync relationship consists of 5 servers, each server requires 5 security certificates: one local and 4 remote.

Each server creates 2 certificates: a server and a client. Then, you copy the client certificate to the other servers in the relationship. The local machine's *server* certificate must match a *client* certificate on the remote server, and vice versa.

You typically copy certificates only when establishing an eSync relationship between servers. After that, any eSync activity triggers a background check, and you can only proceed if certificates match.

Each certificate consists of these files.

- Server certificate
  - *servername*_SyncServer.pfx
  - *servername*_SyncServer.pvk
  - *servername*_SyncServer.cer
- Client certificate
  - *servername*_SyncClient.pfx
  - *servername*_SyncClient.pvk
  - *servername*_SyncClient.cer

The security certificates can apply to one site or all sites on a server. You determine this when installing them.

Viewing security certificates

Use Certificate Manager to view security certificates installed on your server. Check marks indicate the certificates. You can also delete all certificates for a server.

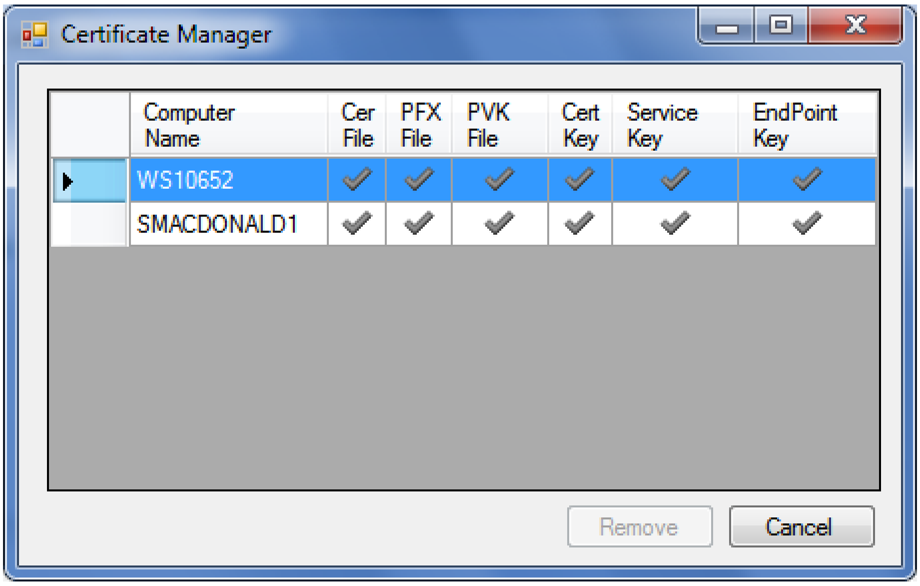
NOTE: You can only remove certificates from remote servers. You cannot remove them from the server to which you are logged in.

To view (and delete) certificates:

1. Click the Windows **Start** button **> All programs > Ektron > CMS400vxx > Utilities > Security Configurator** > right click **Run as Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

2. Click **Manage Certs**. Your server's security certificates appear.



3. To remove a remote server's certificates, select that row and click **Remove**.

Installing security certificates

PREREQUISITE

Permission to copy and paste files between local and remote servers

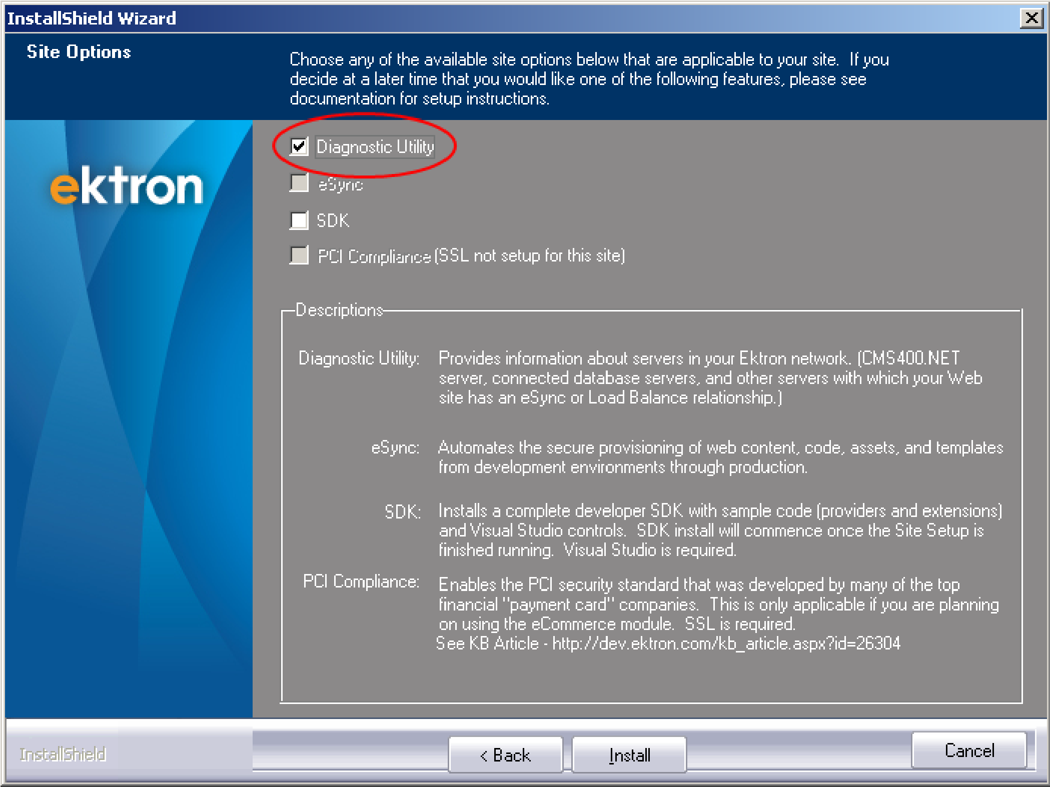
To create and place eSync security certificates in the correct locations:

- *Step 1: Create security certificates on your local server* below
- *Step 2: Create security certificates on the remote server* on page 1842
- *Step 3: Copy local client certificate to remote server* on page 1843
- *Step 4: Copy remote client certificate to local server* on page 1845
- *Step 5: Test the security certificates* on page 1845

Step 1: Create security certificates on your local server

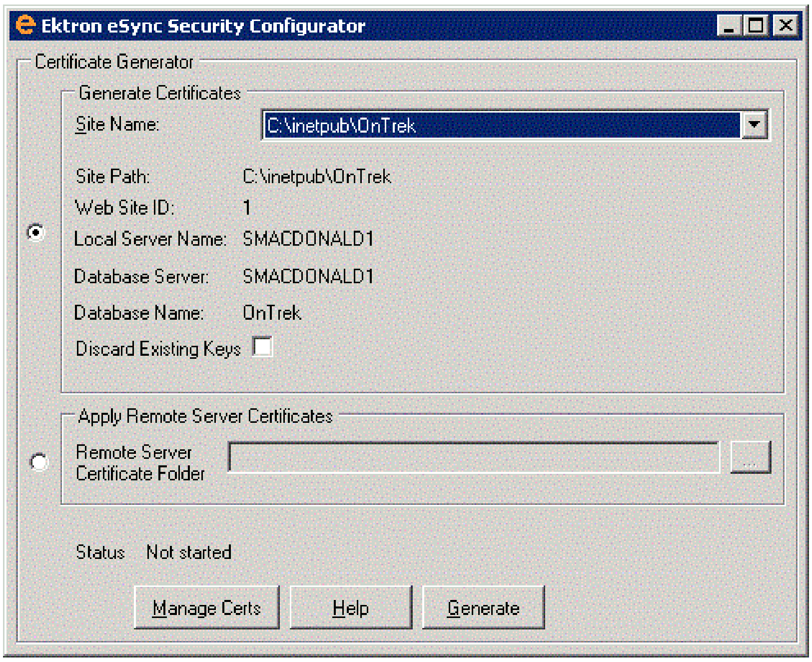
1. Log on using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.

2. During the Ektron installation, you are asked if you want to install eSync security certificates. The **eSync** checkbox (second from the top) is only accessible if your license key contains an eSync modifier.



3. If you check **eSync,** near the end of installation, the following screen prompts you to create the certificates.

> **NOTE:** You can access this screen at any time screen by clicking the Windows **Start** button **> All programs > Ektron > CMS400 vxx > Utilities > Security Configurator** > right click and choose **Run as Administrator**.
>
> If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

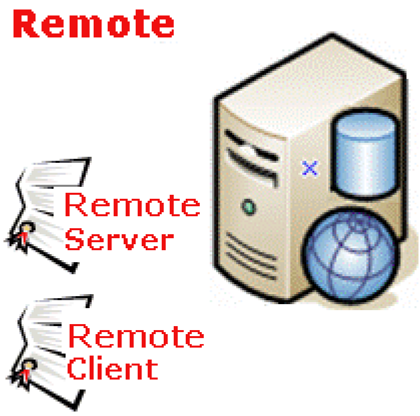


4. Use the following information to understand this screen.
   - **Generate Certificates**. Use this screen area to create security certificates that must be copied to a remote server with which you want to sync.
   - **Site Name**. If more than one site is installed on this server, use the pull-down list to select the website for which you are installing security certificates. Or, click **All** to apply certificates to all sites on the server.
   - **Apply Remote Server Certificates**. Use this screen area to apply security certificates that were copied from a remote server to your local server. See also: *Step 3: Copy local client certificate to remote server* on the facing page.
5. Click **Generate**.
6. Local security certificates are created and configured.

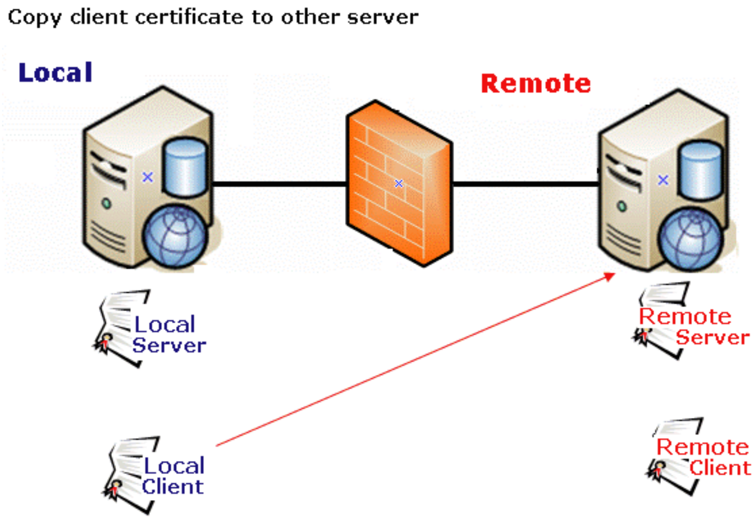
NOTE: Only click **Generate** once. The status field at the bottom of the screen updates as it progresses. If you click **OK** more than once, you delay the certificates' creation.

Step 2: Create security certificates on the remote server

1. Sign on to the remote server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
2. Generate security certificates for the remote server, following instructions in *Step 1: Create security certificates on your local server* on page 1840.



Step 3: Copy local client certificate to remote server



1. On the local server, open 2 Windows Explorer windows: one showing the local server's file system, and the other showing the remote server's file system.
2. On the remote server window, create a folder underneath the root folder. The folder name is not important.

   IMPORTANT: Do not create the folder under the Web root folder, for example `C:\inetpub\wwwroot`.

3. In the local server window, open the following folder: `C:\ProgramFiles\Ektron\CMS400vxx\Utilities\SecurityConfig\Security Configurator`.
4. Copy the following files.
   - servername_SyncClient.pfx
   - servername_SyncClient.pvk

- servername_SyncClient.cer
- servername_SyncServer.pfx
- servername_SyncServer.pvk
- servername_SyncServer.cer

NOTE: These files were created when you completed the eSync Security Configurator Screen in Step 1.

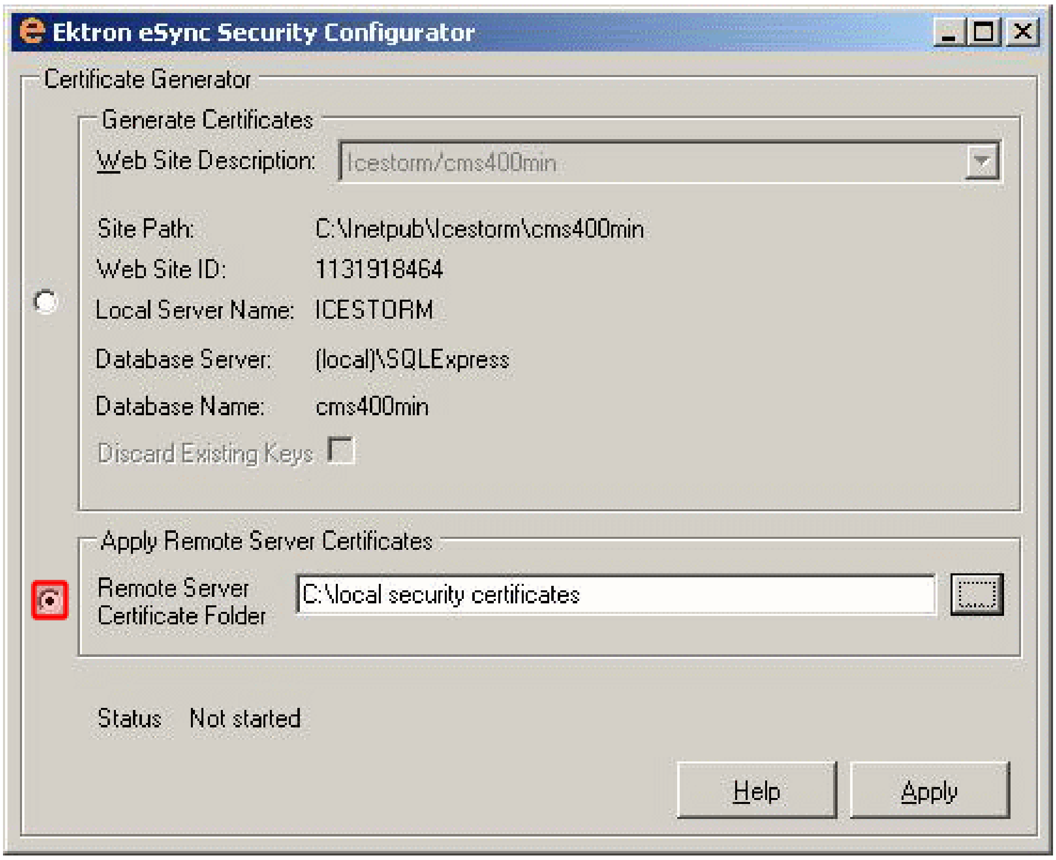
5. Paste the files to the remote server folder that you created in Step 2. Make sure there are no other security files in the folder.

   After you copy the local server's security certificates to the remote server, they need to be registered and moved to the correct folders. The Security Configurator screen does this.

6. Log into the remote server, using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
7. Open the security configurator screen using this path: Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator** > right click and choose **Run as Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

8. The security configurator screen appears.

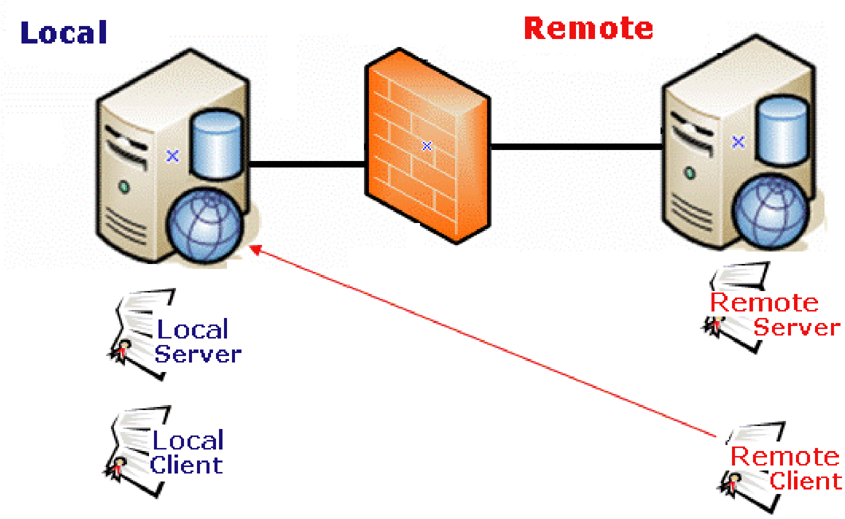


9. Click **Apply Remote Server Certificates** (circled above).

10. Click the browse button next to that field.
11. Browse to the folder to which you pasted the security certificates in Step 5.
12. Click **Apply**.
13. The utility copies the security certificates you pasted in Step 5 to the correct folder, and configures them for the remote server.

Step 4: Copy remote client certificate to local server

Copy client certificate to other server



1. Sign on to the remote server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
2. Follow the steps described in *Step 3: Copy local client certificate to remote server* on page 1843, except substitute remote for local.

Step 5: Test the security certificates

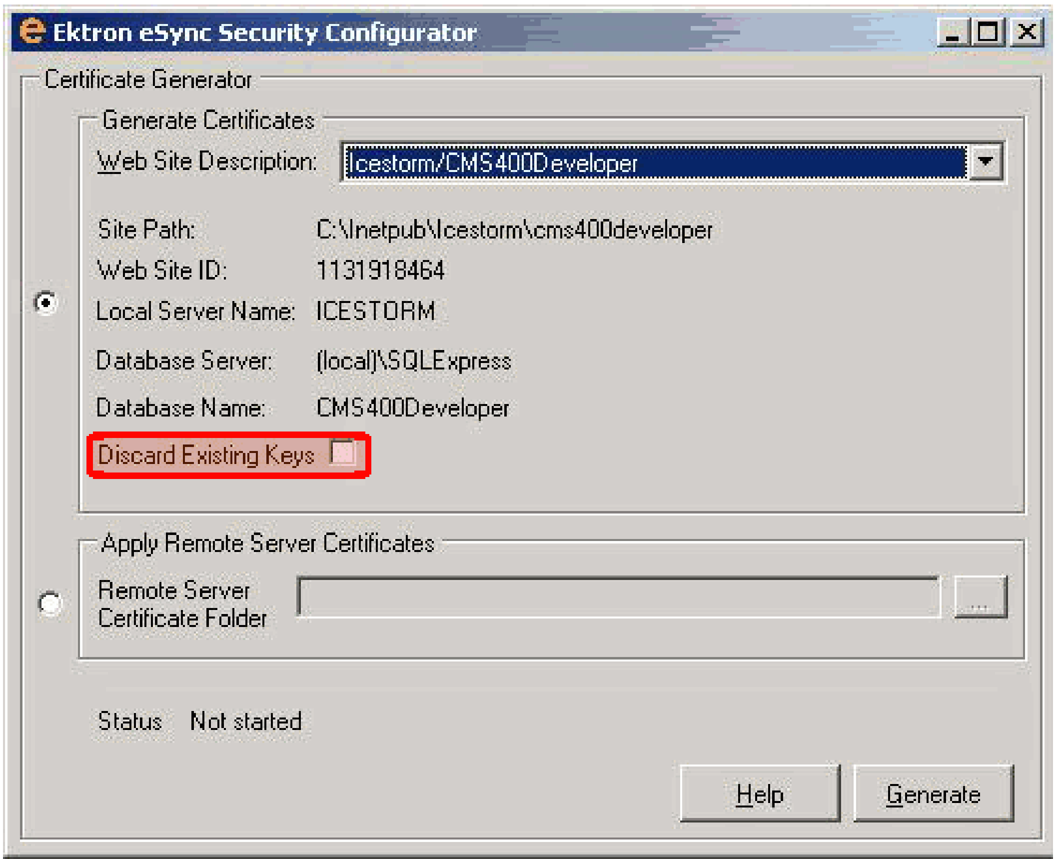
1. From the local server, sign on to Ektron using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
2. In the Workarea, go to **Settings > Configuration > Synchronization > Profiles**.
3. Click **Create Synchronization Server Configuration**.
4. Enter the name of the **Remote Server**.
5. Select the security certificate you are testing.
6. Click **Connect**. If the next screen appears, the security certificates are working properly.

Regenerating security certificates

Follow these steps to regenerate security certificates. You would do this if they stop working, or you are concerned about a security breach.

1. Log into the Ektron server using the credentials of the service account used by Ektron Windows Service 4.0 and your site's App Pool.
2. Access the eSync Security Configurator screen via Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator** > right click and choose **Run as Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.
3. Use the **Web Site Description** field to select a site on your server, or choose **All** sites.
4. Check the **Discard Existing Keys** box.

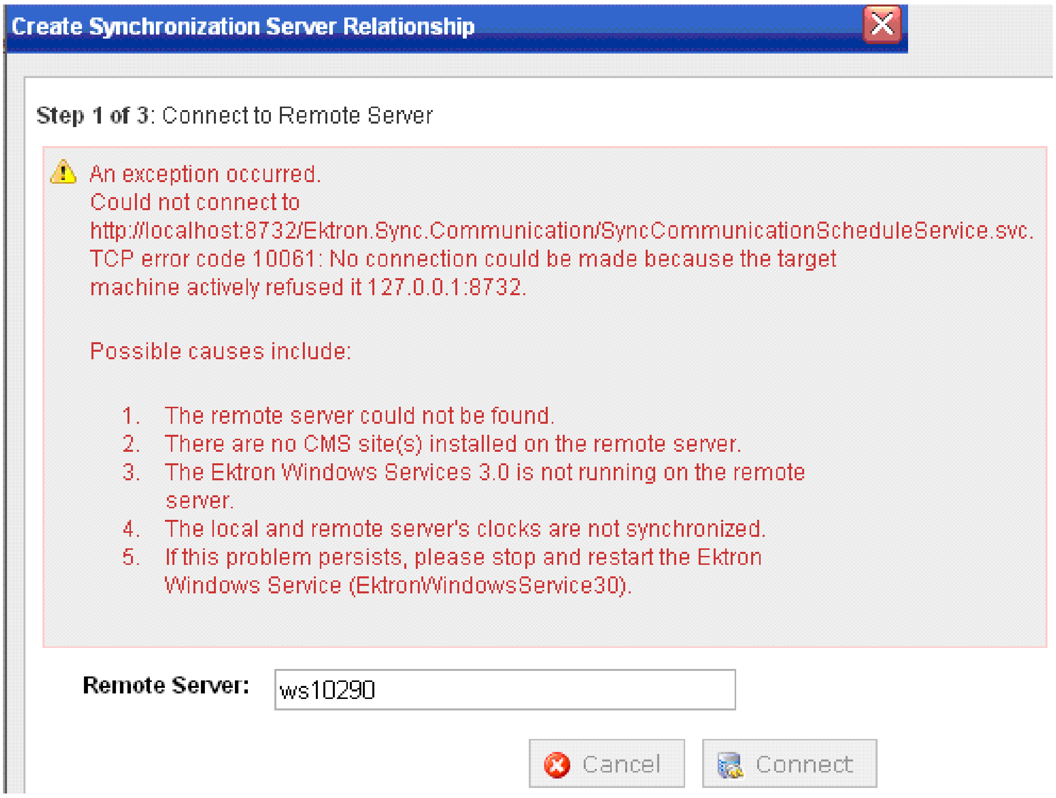


5. Click **Generate**. Security certificates are removed from your local server.
6. Reopen the Security Configurator screen.
7. Choose the correct website, verify the other settings, and click **Generate**. See also: *Step 1: Create security certificates on your local server* on page 1840. This action creates new security certificates on your server.
8. Copy the new certificates to all other servers in the eSync relationship. This is explained in *Step 3: Copy local client certificate to remote server* on page 1843.

Troubleshooting security certificates

Could not connect error

When trying to connect to a remote server, after selecting a security certificate, you may see the following message.



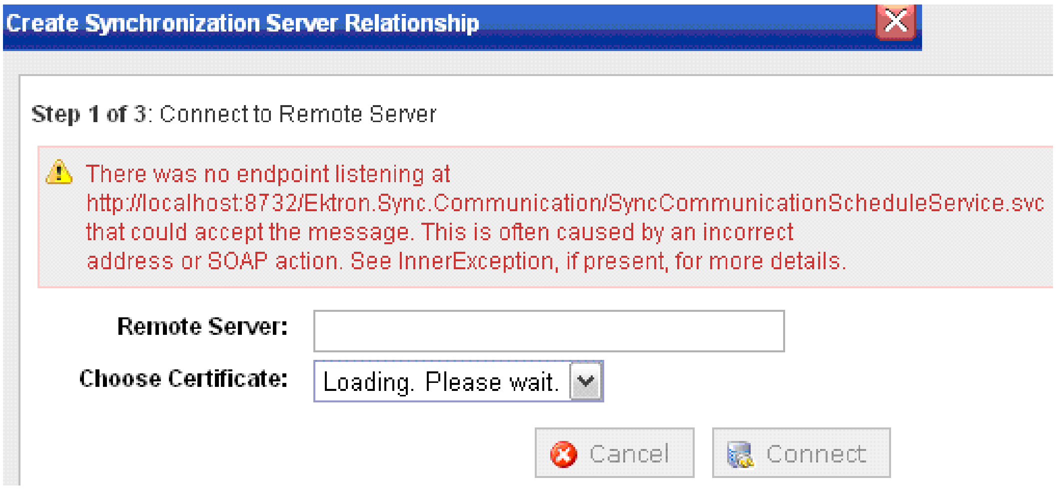
To resolve the problem:

- Check the Windows Event Viewer > EktronL2 log for the error. If the service is hosted but already exists, stop then start the service (do not restart).
- The certificates may be corrupted. To resolve this, see *Regenerating security certificates* on page 1845.

No endpoint error

The following endpoint error indicates that

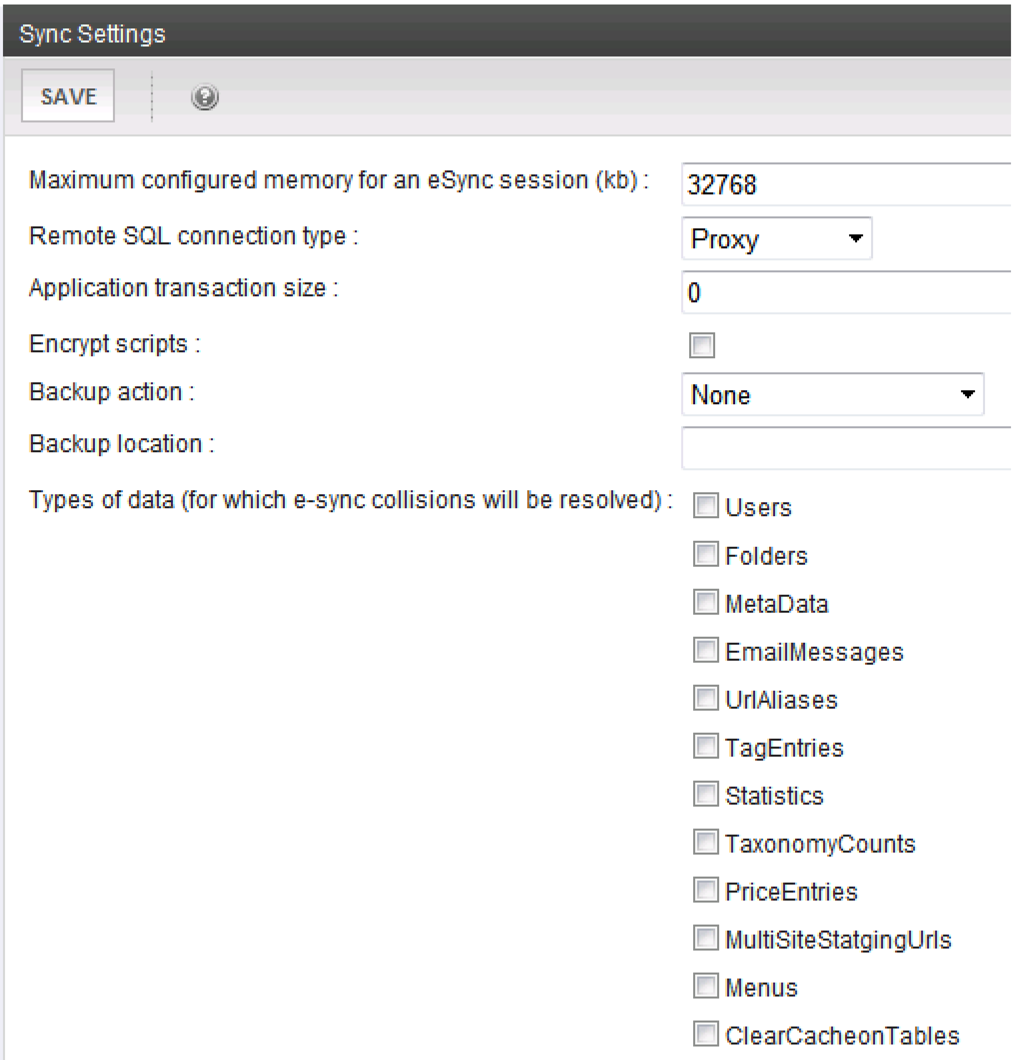
- the remote site may not be on the same Ektron version as the local site, *or*
- the Ektron Windows Service is not started



Specifying eSync settings

The eSync Settings screen lets you define many eSync settings.

Workarea > Configuration > Synchronization > Settings.



- **Maximum configured memory for an eSync session (kb).** Define a maximum amount of memory that your server uses during a sync. The default is 32 MB. You can change it to any size up to the amount of RAM in your eSync server.
- **Remote SQL connection type**. Data sync runs in one of 3 contexts: Direct, Proxy, or Auto detect.
  - Auto detect: Try to connect using TCP. If successful, the mode is switched to direct. Otherwise, the mode is proxy. Auto detect is the default.
  - Proxy: Use Windows Communication Foundation (WCF) service.
  - Direct: Direct SQL Connection (direct TCP connection used instead of WCF connection)
- **Application transaction size**. This value is typically the same as **Maximum configured memory for an eSync session**. The commit occurs after the data reaches this size.
- **Encrypt scripts**. If you check this box, all stored procedures and triggers are encrypted.

  The default value is false because Azure does not support encryption. You should only check this box if you are using eSync in an on-premises environment.
- **Backup action, Backup location**. Define when you want to run the backup (only initially or each time) and the backup file location. See also: *Backing up the destination server during an eSync* on page 1854.
- **Types of data (for which e-sync collisions will be resolved)**. Select data types for which you want to resolve collisions. See also: *Determining which collisions are resolved* on page 1872.

Running eSync

IMPORTANT: The names of the site and all folders *must* match on both servers. This is because paths to images, xslt files, and so on, refer to a site and its folders. If the servers' site and folder names do not match, the links break.

NOTE: Syncs can be queued so they run 1 after the other. See also: *Managing the eSync queue* on page 1865.

Optional steps before running a sync

You may want to adjust the `web.config` and `db.config` settings before running a Sync. The following topics explain eSync features that you control via the .config files.

- *Synchronizing content and folders* on page 1855
- *Using eSync with Web Alerts* on page 1886
- *Using eSync with eCommerce* on page 1886

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

- *Forcing the initial sync* on page 1852
- *Replacing the file sync* below
- *Adjusting relationship settings* below

Replacing the file sync

Some Ektron customers prefer a tool other than eSync to sync assets; for example RoboCopy. To disable eSync's asset sync:

1. On your Ektron server, open `C:\Program Files (x86)\Ektron\EktronWindowsService40\Ektron.ASM.Services40.exe.config`.
2. Set the `<add key="disableFileSyncProvider">` element to **true**.
3. Save `Ektron.ASM.Services40.exe.config`.
4. Restart the Ektron Windows service.

From now on, eSync does not copy assets. Set up your replacement tool to do that.

Adjusting relationship settings

You can modify settings in the Ektron Windows service (EWS) config file (`C:\ProgramFiles (x86)\Ektron\EktronWindowsService40\Ektron.ASM.EktronServices40.exe.config`) to accommodate your preferences. The settings are:

- **DebugEnabled**. By default, this is set to zero (0). If PDB files are present in the EWS folder or it is a DEBUG build, this value is set to **1**. Setting this value to **2** works as in version 8.5.
- **DependencyImageSyncExtensSprtForThumbnls**. All valid image file extensions. This list determines if a content item being synchronized is an image. If true, a thumbnail is also synchronized. If this value is BLANK, no thumbnails are synchronized while synchronizing dependent images (including the file sync retry and content dependency sync).
- **DependencySyncRecursionDepth**. The depth of recursion for the content dependency sync. Zero (0) indicates that *all* dependencies are evaluated, regardless of the number of recursions necessary. If you enter a number more than zero, EWS only evaluates as far as the specified depth.
- **DownloadFileStreamsInParallel**. If this is set to true on a server with more than 1 processor,, then it will download file streams from the remote server in parallel, using as many threads as specified in MaxNumberOfParallelThreads. Ensure that BOTH the local and remote server has enough resources to handle normal load if the number of MaxNNumberOfParallelThreads processors run at 100% CPU.
- **EnableMetadataEvalInDependencySync**. If set to **True**, metadata evaluation occurs during the content dependency sync. If set to **False**, files

specified in metadata are not synchronized during a content sync. Default value is **True**.

- **EnableRecursiveDependencySync**. If set to **True**, recursive dependency sync is enabled for content sync. This means that if a content's metadata or HTML references other content blocks, their dependencies are also evaluated and synchronized. Default value is **True**. See also: *Resource Selector* on page 873, *Creating and deploying a related content definition* on page 762.
- **EnableSiteFileHashIndexingAtStartup**. If set to true AND if UseFileHashForFolderSyncChangeDetection OR UseFileHashForFilteredFolderSyncChangeDetection are also true, then the EWS will start indexing all the files in the site which are synchronized using file sync, without using high CPU. This process starts 5 minutes after the service starts.
- **FileSyncFailureMaxRetries**. The maximum number of times the EWS tries to sync a file that was not synchronized in the initial try. Default value is **5**.
- **FileSyncFailureSleepBetweenRetriesInSeconds**. The time (in seconds) the EWS "sleeps" before it attempts to retry a failed file sync. Default value is **5**.
- **LoadFileStreamsInParallel**. If this is set to true on a server with more than 4 processors, eSync loads file streams locally, in parallel, using as many threads as specified in MaxNumberOfParallelThreads. Ensure that the server has enough resources to handle a normal load if the number of MaxNumberOfParallelThreads> processors run at 100% CPU.
- **MaxNumberOfParallelThreads**. Specifies the maximum number of threads created. You should increase this value if you have an adequate CPU resources to significantly improve performance.
- **UploadFileStreamsInParallel**. If this is set to true on a server with more than 1 processor, eSync uploads file streams to the remote server in parallel, using as many threads as specified in MaxNumberOfParallelThreads. Ensure that *both* the local and remote servers have enough resources to handle normal load if the number of MaxNumberOfParallelThreads processors run at 100% CPU.
- **UseFileHashForFilteredFolderSyncChangeDetection**. Similar to UseFileHashForFolderSyncChangeDetection, but used for file syncs where folder sync is filtered by file name.
- **UseFileHashForFolderSyncChangeDetection**. Runs file sync in CompareFileStreams mode as described here: FileSyncOptions Enumeration. This is set to false by default because file hash mode can fail when the file is locked for reads.

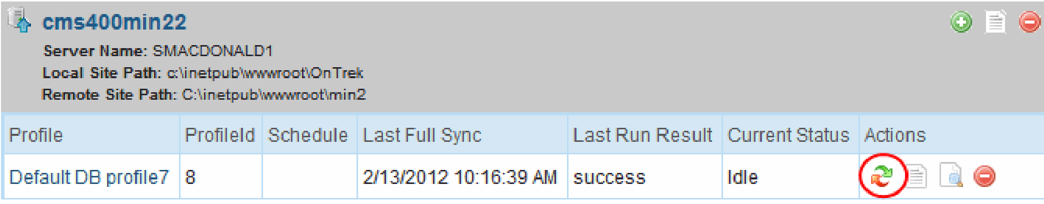
Prerequisites for Running a Sync

- *s for Using eSync* on page 1789
- You created an eSync relationship and profiles. See *Setting up eSync* on page 1789.
- You are not signed on to a production server that is outside the firewall. You cannot sync *from* a production server outside the firewall to other servers—you can only sync *to* this production server.

Beginning a sync

You can run eSync on a schedule, or on demand. To sync a profile immediately:

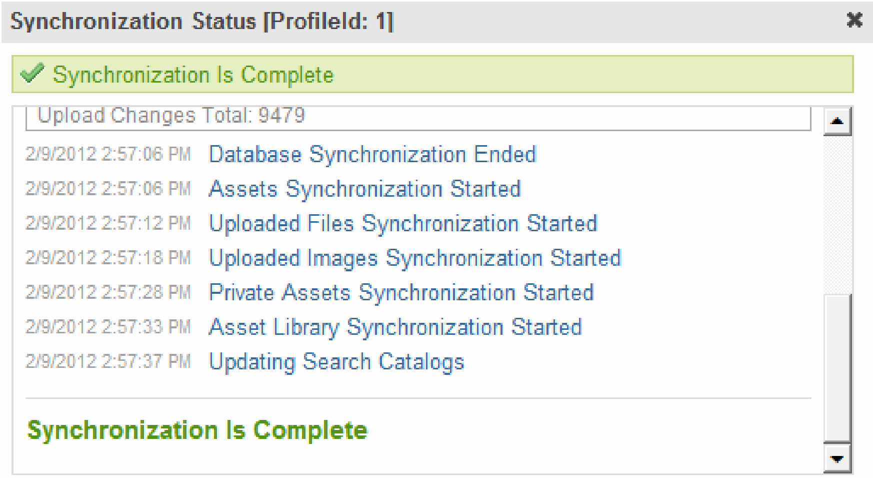
1. Go to the **Settings > Configuration > Synchronization > Profiles** screen.
2. If a profile is ready to sync, a sync button ( ) appears in the right column.



3. Click **Sync** ( ).

NOTE: If another sync is running, and you have enabled the eSync Queue, this sync is queued and will be synched after all other syncs in the queue are run. See also: *Managing the eSync queue* on page 1865.

4. A screen monitors progress and indicates when the sync is complete.

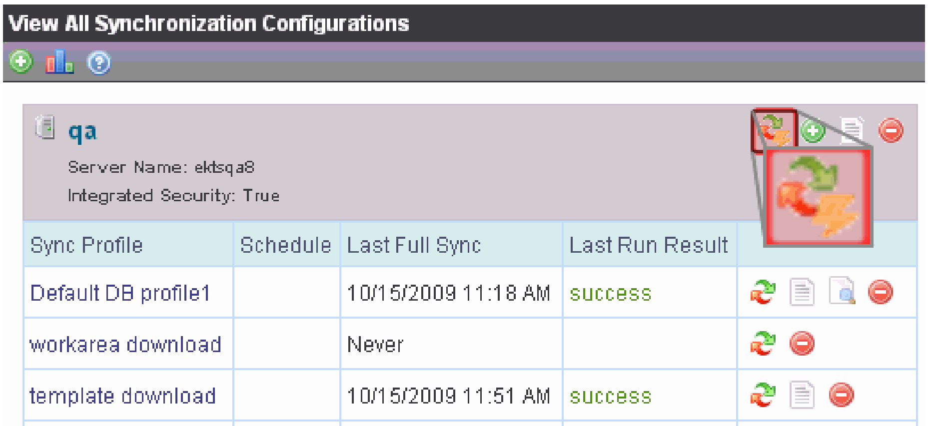


NOTE: You can close the status window and reopen it at any time by clicking **Sync** ( ). If you do, the sync's current status appears.

IMPORTANT: If you performed a database sync and the site being synchronized uses URL aliasing, you must go to its URL Aliasing Settings screen and click **Refresh** ( ) to update its aliasing information.

Forcing the initial sync

Use the Force Initial Sync button to reinitialize a server that was previously initialized.



Here is an example of when to use Force Initial Sync.

1. You initialized a test server from your current Ektron server.
2. You experimented on the test server by adding content, deleting content, and so on.
3. You no longer want the test server's database. Instead, you want to reinitialize the test server from your current Ektron server.

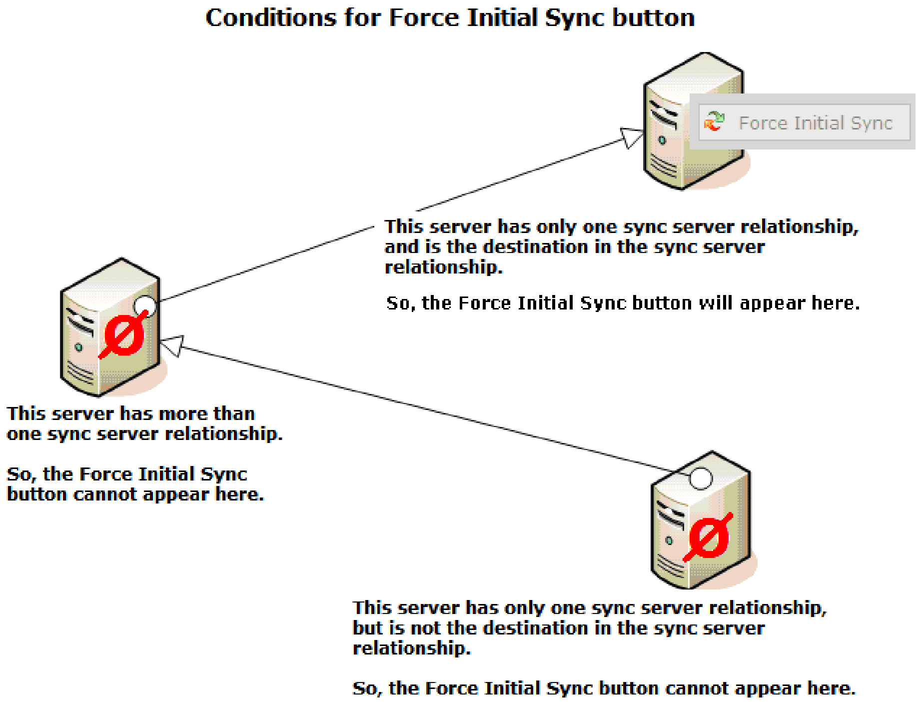
   To accomplish step 3, use the **Force Initial Sync** button. The button only appears when all of these conditions are present.

PREREQUISITE: FORCING INITIAL SYNC CONDITIONS

The Force Initial Sync feature requires these conditions.

- The server's `web.config` file's `ek_ForceReInit` property is set to `true`.
- The site is not part of a multi-site relationship.
- The server has only one sync server relationship.
- The server is the *destination* (that is, on the download side) of the sync server relationship.

The following image illustrates the last 2 conditions.



NOTE: The Force Initial Sync procedure ignores these checks that are normally made prior to synchronization:
* the destination database is smaller than the source database
* the site was not previously staged

Backing up the destination server during an eSync

You can create a backup of the destination server's database. If you do and problems occur during the sync, the database is restored to its pre-backup state. You can specify the backup to occur on the initial sync only, or every time you sync.

NOTE: No backup is made when you sync a package, folder, content. See also: *Synchronizing content and folders* on the facing page, *Synchronizing servers using eSync* on page 1787.

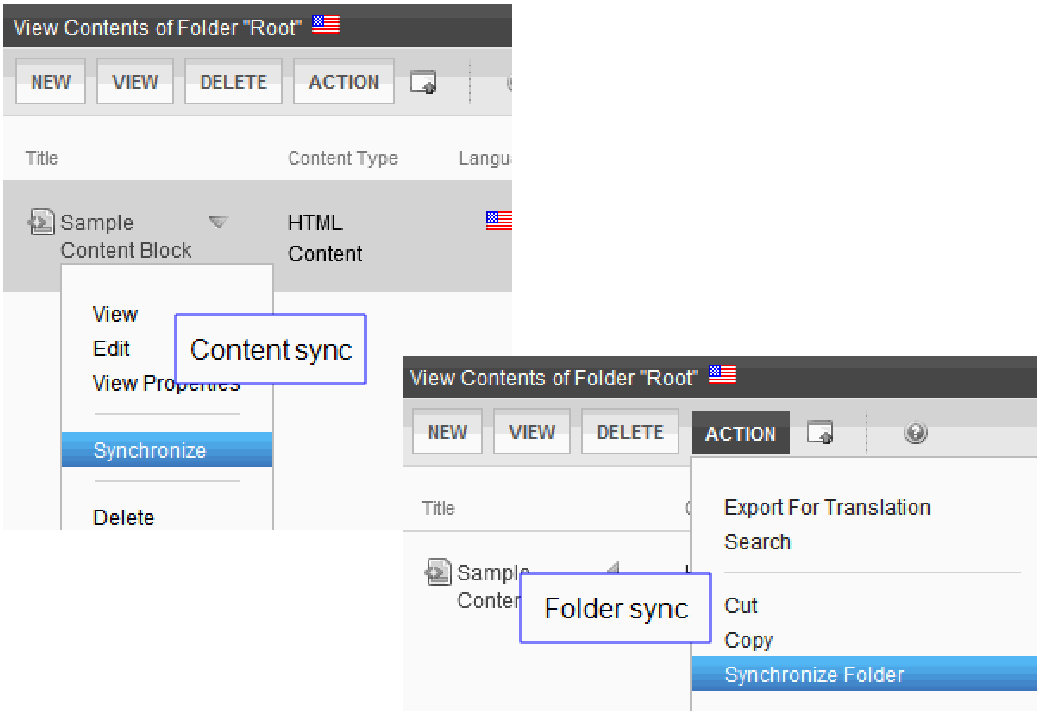
To set up database backup:

1. Go to **Workarea > Settings > Synchronization > Settings**.
2. At the **Backup action** field, select an option.
   - **Before initial sync**. Run backup before the initial sync only.
   - **Before each sync**. Run backup before each sync.
3. At the **Backup location** field, enter a local or network path to the folder to which the backup file will be saved. The user account that runs the Ektron Windows Service must have read and write permission to the folder.
4. Click **Save**.

The backup file format is `[dbname][yyyy][mm][dd][hh][mm][ss][mmm].[product].bak`. For example: `cms400min20120216075946765.esync.bak`.

Synchronizing content and folders

This section explains how to sync content and folders using context menu options.



Prerequisites for content/folder sync

See also: Prerequisites for Using eSync.

- You are a member of the Administrators group or assigned the Synchronization Admin Role.
- Content/folder sync is enabled.
  Set up content and folder sync
  1. On the server on which content editors will sync content and folders, open the *site root*/`web.config` file.
  2. In the following area, set `eSyncEnabled` to `true`.
     ```
     <eSyncSettings>
     <!-- Set this key to true to enable content/folder sync if the eSync feature
     is available -->
     <add key="eSyncEnabled" value="false"/>
     </eSyncSettings>
     ```
  3. Save.
- The server has a sync relationship and its initial sync has been run.

Rules governing folder and content sync

Content sync

- You can only sync content whose status is Approved.
- If you try to sync content, and its folder was created or modified since the last full sync, you are warned that you must sync the folder before synching the content.
  - An example of folder modification is the assignment of a new metadata value.
- If new *tags* or *taxonomy categories* were added to content since the last full sync, you must run a folder sync before you can sync that content. You must also run a full sync for all other sync profiles that use those tags or taxonomy categories. See also: *Tagging content, library items, users, and groups with keywords* on page 1596.
- Forum posts are not synched.
- When you sync a content item, all physical files (DMS assets and library files) in the content's folder are also synchronized.

Folder sync

- blogs and forum posts are not synched.

Synchronizing a content item

Content sync copies selected content to another server. The sync also copies all entities on which the content is dependent, such as

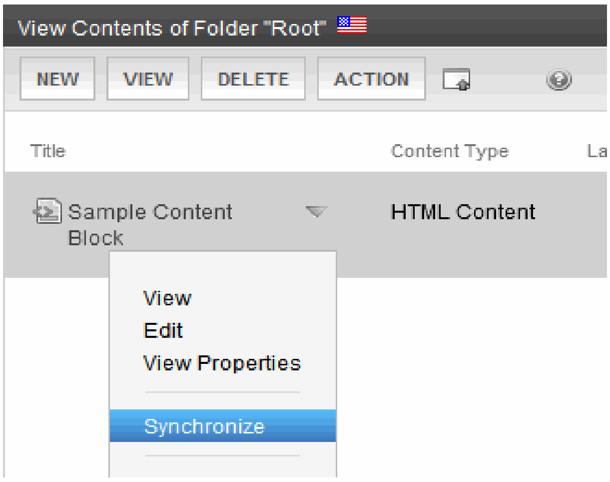
- library resources within the content, such as images and quicklinks
- content selector metadata, file selector metadata, image selector metadata See also: *Creating and deploying a related content definition* on page 762.
- aliases

NOTE: When you sync one content item, all physical files (DMS assets and library files) in the content's folder are also synchronized.

See also: *Synchronizing content and folders* on the previous page.

To sync a content item:

1. In the Workarea, go to the content.
2. Click the arrow to its right to see its drop-down menu.

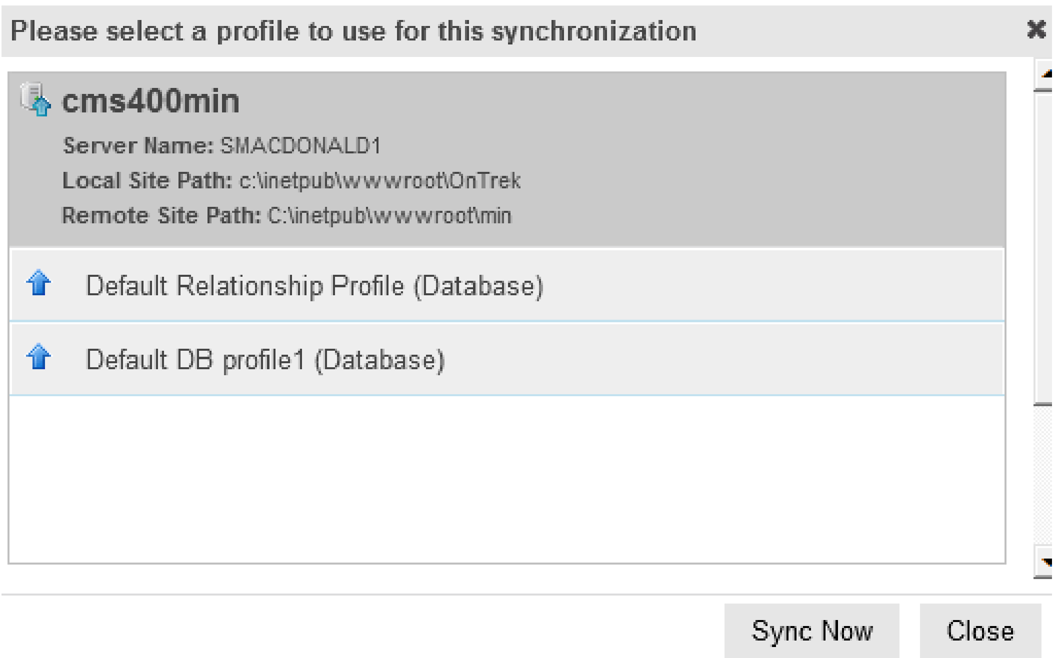


3. Click **Synchronize**.

NOTE: Alternatively, use the Synchronize button on the View Content screen.

---

4. All profiles whose direction is **Upload** or **Bidirectional** appear. Select the appropriate one.



5. Click **Sync Now**. The content is synchronized with the selected database.

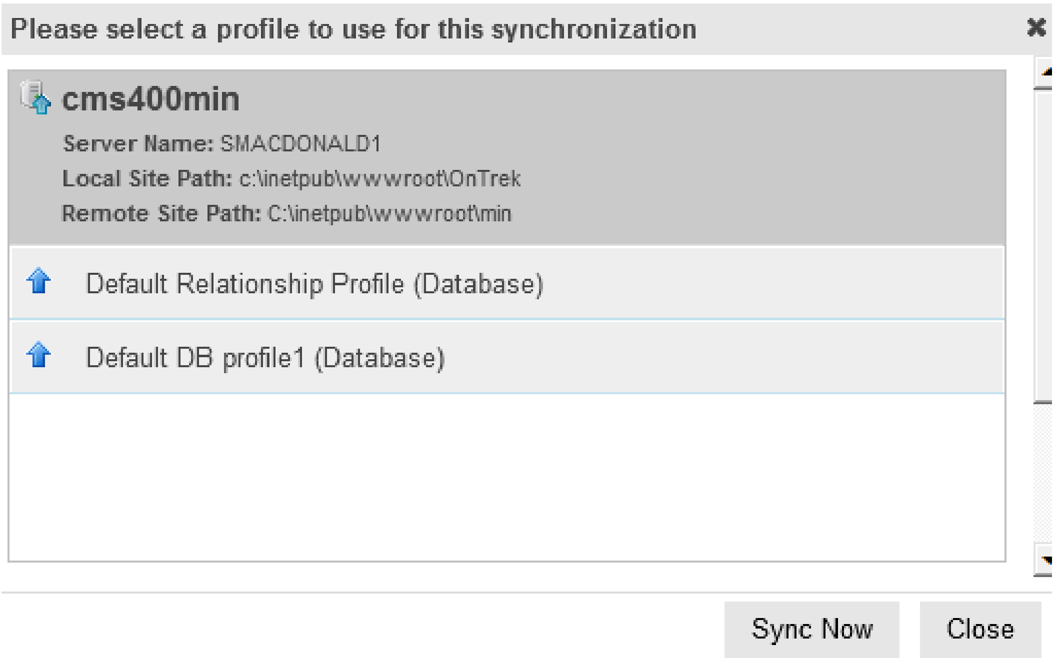
NOTE: If another sync is running, and you have enabled the eSync Queue, this sync is queued and will be synched after all other syncs in the queue are run. See also: *Managing the eSync queue* on page 1865.

Synchronizing a folder

The folder sync updates folder properties and all content in the folder with the same folder in another server. It does not affect content in folders underneath the selected folder. See also: *Synchronizing content and folders* on page 1855.

To sync a folder:

1. Go to the folder.
2. Choose **Action > Synchronize Folder**. A screen asks you to select a sync profile.



3. Click **Start Sync**. All content in the folder is synchronized with the selected database.

NOTE: If another sync is running, and you have enabled the eSync Queue, this sync is queued and will be synched after all other syncs in the queue are run. See also: *Managing the eSync queue* on page 1865.

Synchronizing custom SQL database tables

You can use eSync to synchronize custom SQL database tables. To do this, you must create the custom table on all servers. eSync does not create the tables, but will follow rules for populating records in them.

IMPORTANT: Table names, which are case sensitive, must be identical on all servers.

Adding an empty custom table to your database on the source and destination servers

Run the following SQL Query on the database. The table must have a primary key and cannot use `identity` columns.

Here is an example of a valid table.

```
Create table foo3(Id int not null primary key clustered,
  Id2 int not null, company nvarchar(50) null)
```

Here are examples of *invalid* tables, which incorrectly use identity columns.

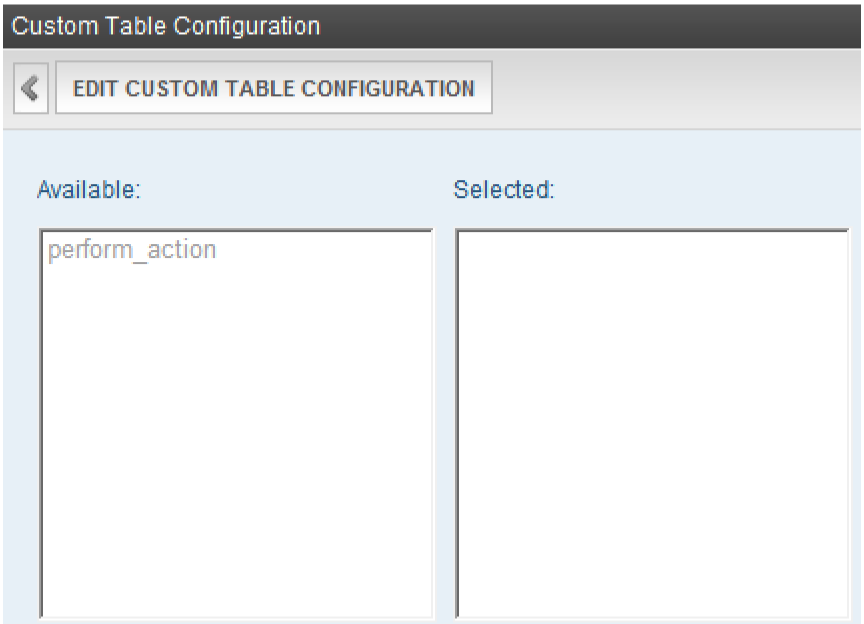
```
create table foo1(Id int not null identity(1,1) primary key clustered,
  company nvarchar(50) null)
create table foo2(Id int not null primary key clustered,
  Id2 bigint not null identity(1,1),
  company nvarchar(50) null
```

Adding a custom table to an eSync configuration

NOTE: The Manage Custom Table Configuration button ( ) appears only if your database has custom tables.

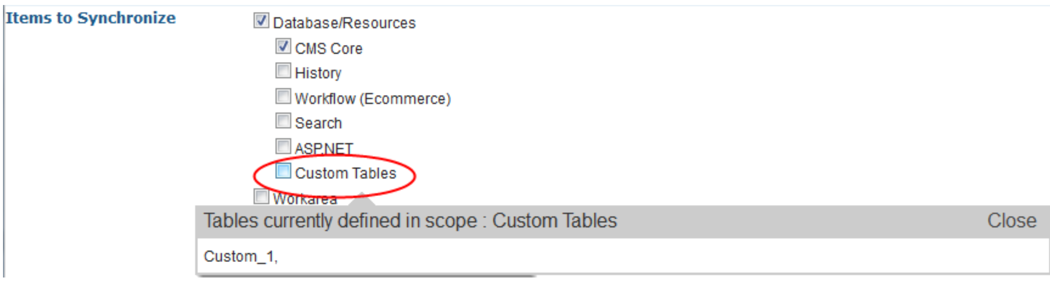
To add custom tables to an eSync Configuration, follow these steps on the source server.

1. Go to **Workarea > Settings > Configuration > Synchronization > Profiles**.
2. Click **Manage Custom Table Configuration** ( ). The Manage Custom Table Configurations screen appears.



3. Click **Edit Custom Table Configuration**.
4. Click a custom table from the **Available** column to select it.
5. Click the **right arrow** button to move it to the **Selected** column.
6. Click **Save Custom Table Configuration**.

After you add a custom table, your eSync profile displays a new Database/Resource scope, **Custom Tables**. Select it to sync custom tables.



Synchronizing a package

You can group Ektron objects (content, folders, taxonomies, and so on) into a *package*, which can be synchronized at any time without having to run a complete sync. Advantages of a sync package include:

- Quicker than a full sync
- More granular control over which items are synchronized
- Can sync individual items even if their dependencies were modified

NOTE: As described in *Prerequisites for content/folder sync* on page 1855, a content and folder sync has restrictions and dependencies. A sync package, on the other hand, includes modifications to parent objects. So, a package *can* sync content and folders whether or not a parent folder's properties were edited recently.

- Can sync various object types in a single action

For example, you are developing a new marketing campaign which consists of content in 2 folders, all library files in those folders, and 2 menus. After assembling the items into a sync package, you can sync it from development to production at any time without affecting other site files.

For a video tutorial on eSync packages, see eSync Packages (Ektron 8.6.1).

A package may include these objects.

- Folders
- Content
- Library images and files
- Files within the site root folder and its children (for example, .css and .js files)
- Taxonomies. Includes all assigned categories, content, users, and groups
- Menus. Includes submenus along with content assigned to any menu in the "tree"
- Collections. Includes all assigned content
- Other package definitions—. Do *not* include objects in those packages

Package sync limitations

301 redirects are not synchronized automatically with a package.

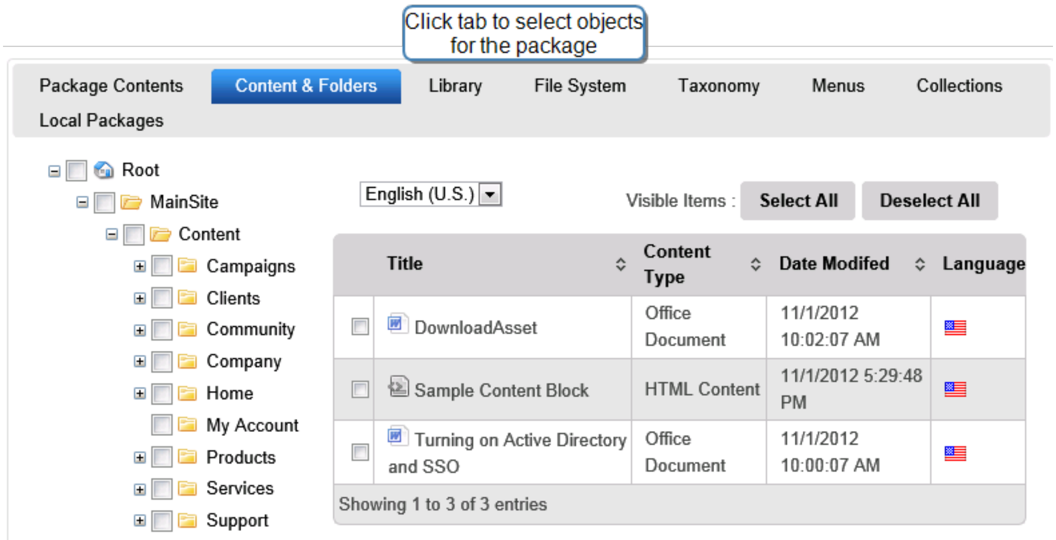
Creating a package

PREREQUISITES

- You are a member of the Administrators group or assigned to the Synchronization Admin role.

1. **Workarea > Settings > Configuration > Synchronization > Packages**.
2. Click **Create Package**.
3. Enter a unique **Name** and optional **Description**.

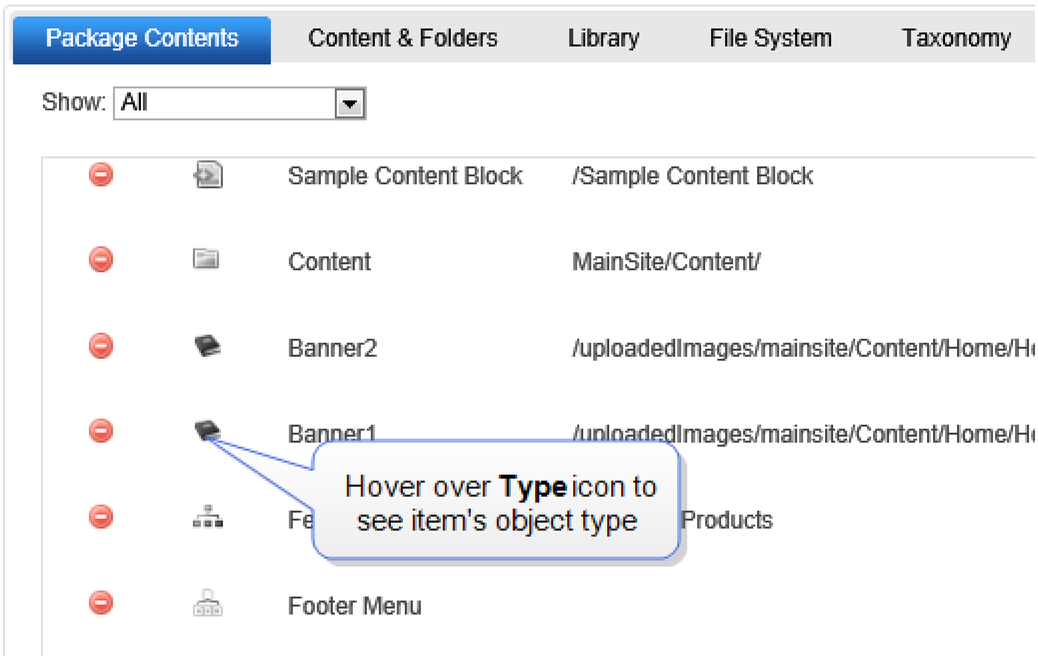
4. Click the tab of objects you want to add to the package.



5. Check items to include in the package.

Notes on the packages screen

- An item is added to the package as soon as you check it. There is no submit button. Click **Save Package** to save all items in a package.
- To view a package's contents at any time, click the **Package Contents** tab.
- When you view a tab, items in the package are checked.
- The **Package Contents** tab lists all objects in the package. Use the **Show** drop-down to display only objects of a selected type.

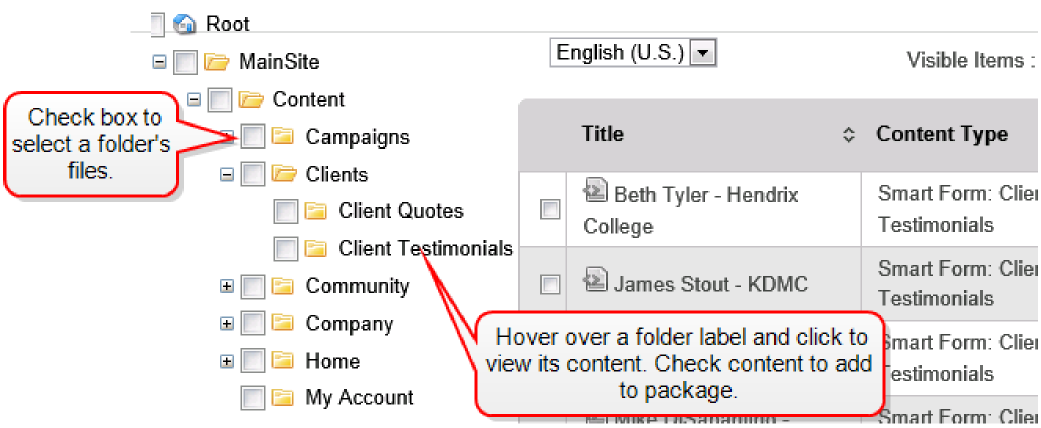


  - Use **Delete** ( ) to remove items. You can also remove an item by clicking its tab and unchecking it there.

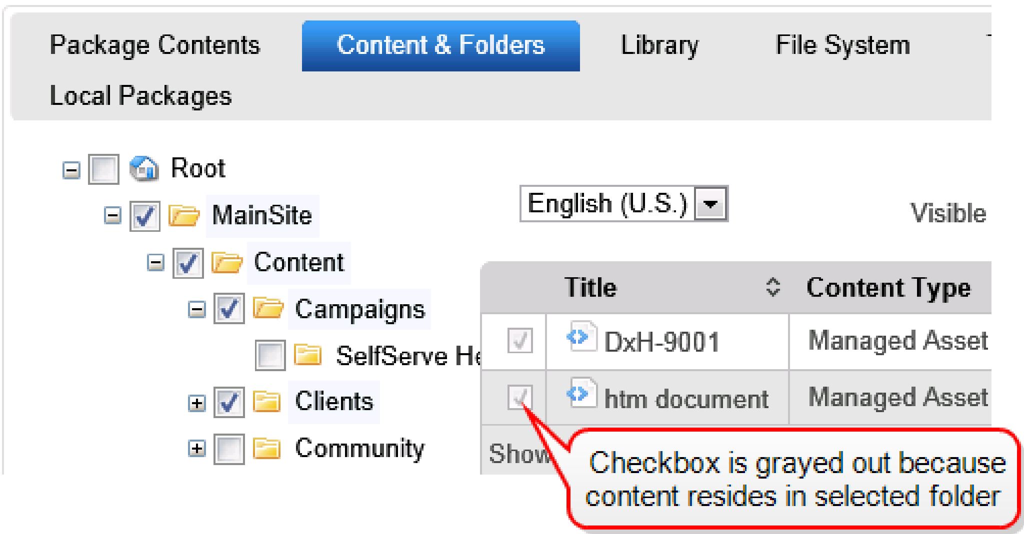
- If you choose a taxonomy, menu, or collection, only the top-level object appears on the **Package Contents** tab. However, all child objects (taxonomy categories, submenus, and so on) and all assigned content, users and groups are synchronized with the package.

- **Content and Folders** tab lets you select folders or content within them.

IMPORTANT: You cannot select eCommerce catalog folders.



- Unlike content sync, content status does not affect your ability to sync it within a package.
- If you select a folder, the package includes its content in all languages at the time the package sync is run.
  - If you view a folder, its content is checked and grayed out. This indicates that the package includes the folder's content.



- Folder selection is not recursive. So, you must select each child folder.

- **Library** tab lets you select library images or files. Do not choose those inserted into selected content, since they are automatically included.
  - All folder attributes (described in **Content and Folders**, above) apply to library folders.

- **File System** tab lets you select files within the siteroot folder and its children.
    - **Exception.** You cannot add these file types to a package: thumbs.db, .cer, .pfx, .pvk, .refresh, .ekt, .config, .dll, .exe, .metadata, .sln, .svn, .tekt, ._ svn, .log, metaconfig.doc. They do not appear in the selection grid.
- **Taxonomy** tab lets you select top-level taxonomies only. You cannot select categories within them. By selecting a taxonomy, you also add the following to the package
    - all categories below it
    - all content, users and groups assigned to the taxonomy and its categories

  As a taxonomy's content changes, the package automatically includes the current files.

  NOTE: By adding a taxonomy to a package, you automatically select all language versions of that taxonomy.
- **Menus** tab lets you select top-level menus only. You cannot select submenus. By selecting a top-level menu, you also add to the package
    - all of its submenus
    - all items assigned to the menu and its submenus: content, library assets, hyperlinks, and additional submenus

  As a menu's content changes, the package automatically includes the current files.

  Folders assigned to menus are not synchronized with them. See also: *Assigning a folder or template to a menu* on page 1240.

  NOTE: By adding a menu to a package, you automatically select all language versions of that menu.
- **Collections** tab lets you select any collection. By selecting a collection, you also add to the package all content assigned to it. As a collection's content changes, the package automatically includes the current files.
- **Local Packages** tab lets you include other package definitions in the package. This lets you re-use the packages on other servers in your eSync relationship. Other package definitions do not include objects assigned to them (content, folders, and so on).
- **Orphan Items** tab lists records referenced in a package which, for some reason, are not in the database.

Synchronizing a package

To sync a package, add it to a sync profile, then sync the profile.

IMPORTANT: The package sync requires but does not validate identical folder structure on both servers. You must verify matching folder structures on both servers before beginning a package sync.

PREREQUISITES

- One or more eSync packages. See also: *Creating a package* on page 1861.
- You are a member of the Administrators group or assigned to the Synchronization Admin role.

1. From the View All Synchronization Configurations screen, click **Add Sync Profile**. The Add Synchronization Profile screen appears.
2. In the **Profile Type** field, check **Local Package**.
3. Use the **Select Package** drop-down to choose the package.
4. Complete the remaining fields, which are documented in *Setting up a profile to Sync a database* on page 1831.
5. Click **Save Synchronization Profile**.
6. From the View All Synchronization Configurations screen, click the profile.
7. Click **Sync Now** ( ).

NOTE: If another sync is running, and you have enabled the eSync Queue, this sync is queued and will be synched after all other syncs in the queue are run. See also: *Managing the eSync queue* below.

Deleting a package

PREREQUISITE

- You are a member of the Administrators group or assigned to the Synchronization Admin role.

1. **Workarea > Settings > Configuration > Synchronization> Packages**.
2. Click **Delete** in the right column of the package that you want to delete.

Managing the eSync queue

The eSync queue holds profiles waiting to be synched. A profile is added to the queue in FIFO order (first in—first out) if a sync process is running when you try to sync a profile. To view the eSync queue, go to **Workarea > Settings > Configuration > Synchronization > Queue**. The queue screen lets you

- view profiles in the queue, in order
- view each profile's state (in process or ready)
- remove profiles from the queue

NOTE: You cannot remove a profile whose state is "in process."

- move profiles up or down in the queue

You can only view the eSync queue for the site to which you are logged in.

If you enable queuing for several sites on the same server, the eSync queue consumes a significant amount of server resources. So, you should carefully consider hardware resources when using the eSync queue in a hosted environment.

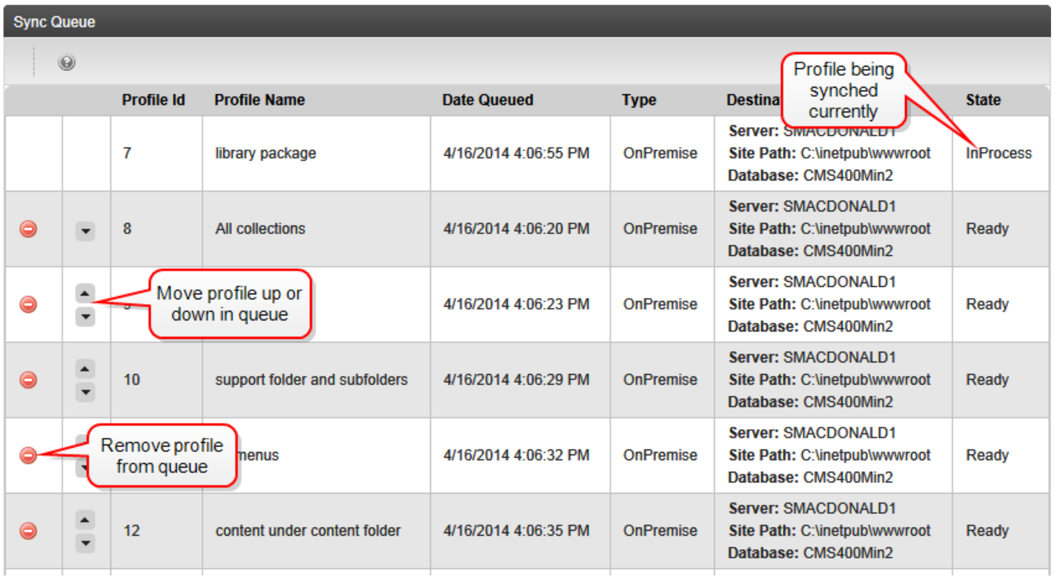
Enabling the eSync queue

To enable the eSync queue, open the following 2 files and change value of `EnableSyncQueue` to `true`.

- `siteroot\web.config`
- `C:\Program Files (x86)\Ektron\EktronWindowsService40\Ektron.ASM.EktronServices40.exe.config`

eSync queue tasks

Within the eSync queue, you can remove a profile or move it up or down (unless its state is "In Process"). If you want to sync a removed profile at a later time, return to the View All Synchronization Configurations screen and click **Sync** ( ) again.

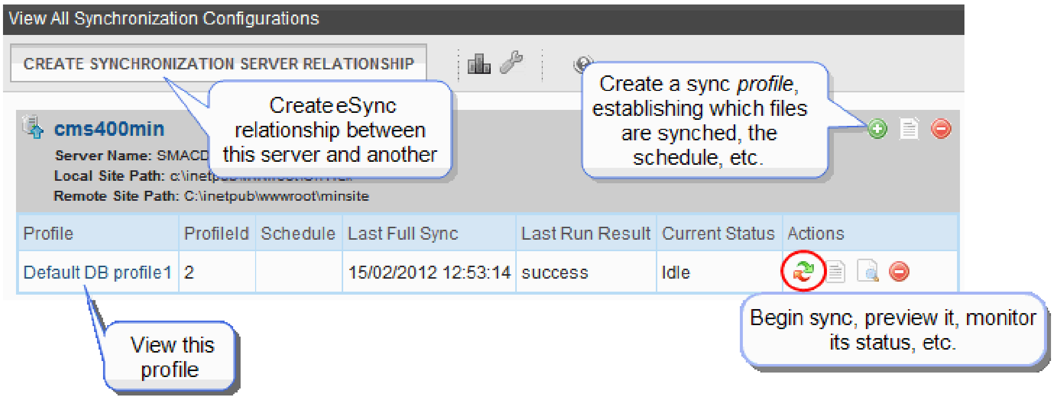


Viewing eSync activity

eSync provides the following logs of sync activity.

Viewing synchronization configurations

The View All Synchronization Configurations screen lets you perform the following eSync-related activities.

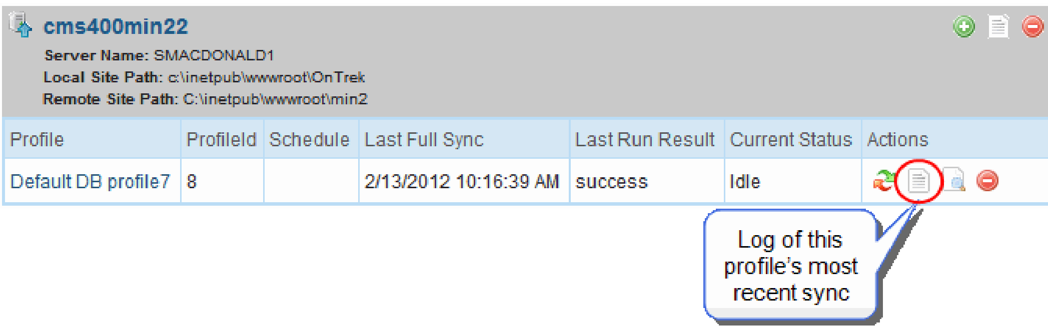


- Work with eSync *relationships*
  - Create a new one See also: *Setting up eSync* on page 1789.
  - Run the initial sync for one See also: *Initializing a new site* on page 1794.
  - View information about
  - Delete
- Work with eSync profiles See also: *Setting up eSync profiles* on page 1829.
  - Create
  - View and edit
  - Sync a profile See also: *Running eSync* on page 1849.
  - Delete
- Review Resolved Collisions

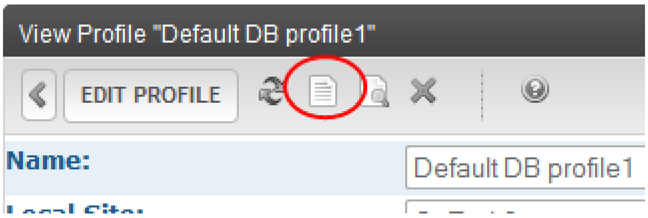
Viewing a profile’s most recent sync

To view a log of a profile’s most recent sync:

1. Go to **Workarea > Settings > Configuration > Synchronization** > **View All Synchronization Configurations** screen.
2. Click **Get Status** ( ) next to the profile.

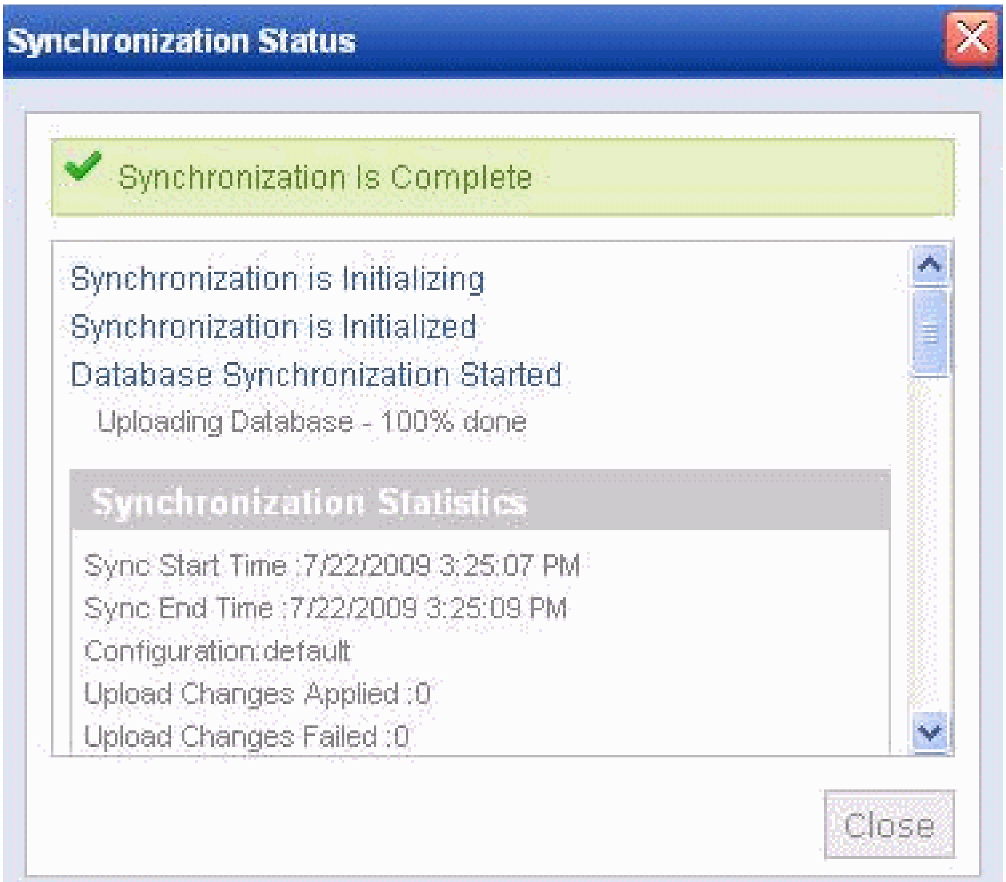


This button also appears on the View Profile screen.



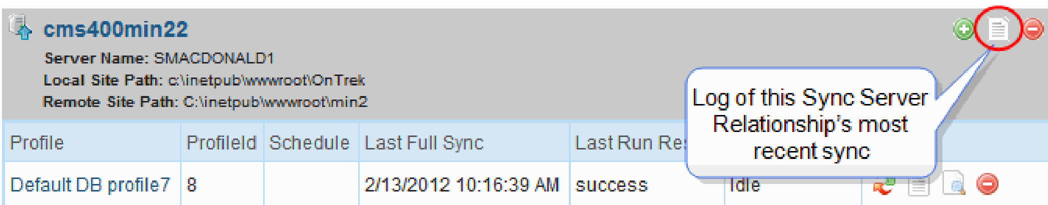
Get Status ( ) appears only for previously-synchronized profiles.

The sync log appears upon completing a sync (see following image).



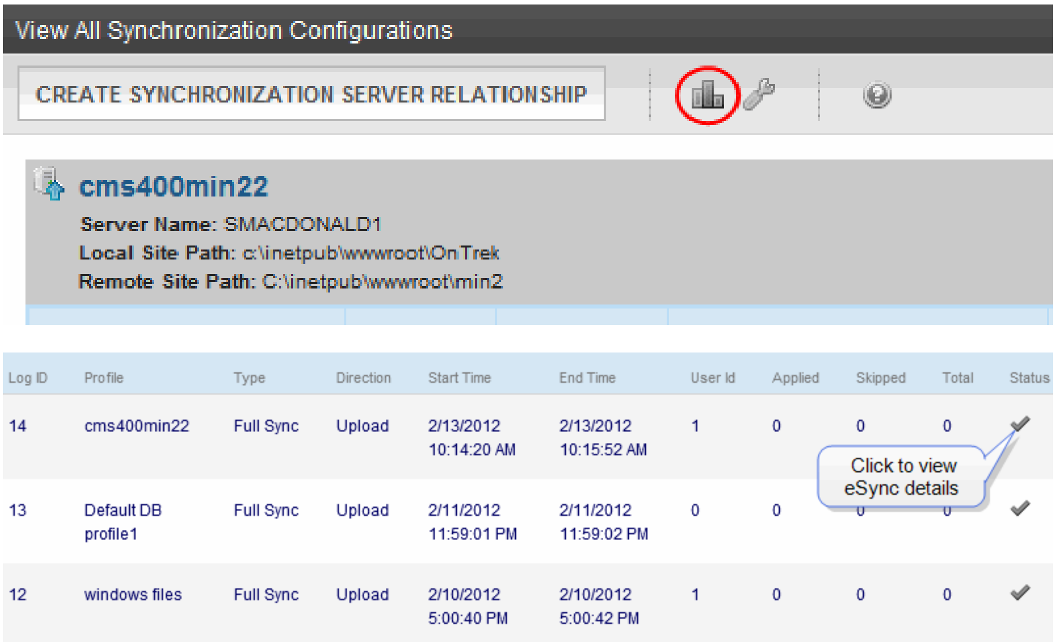
Viewing a log of a sync server relationship's most recent sync

You can view a log of a Sync Server Relationship's most recent sync by clicking **Get Status** ( ) in the header section of the screen.



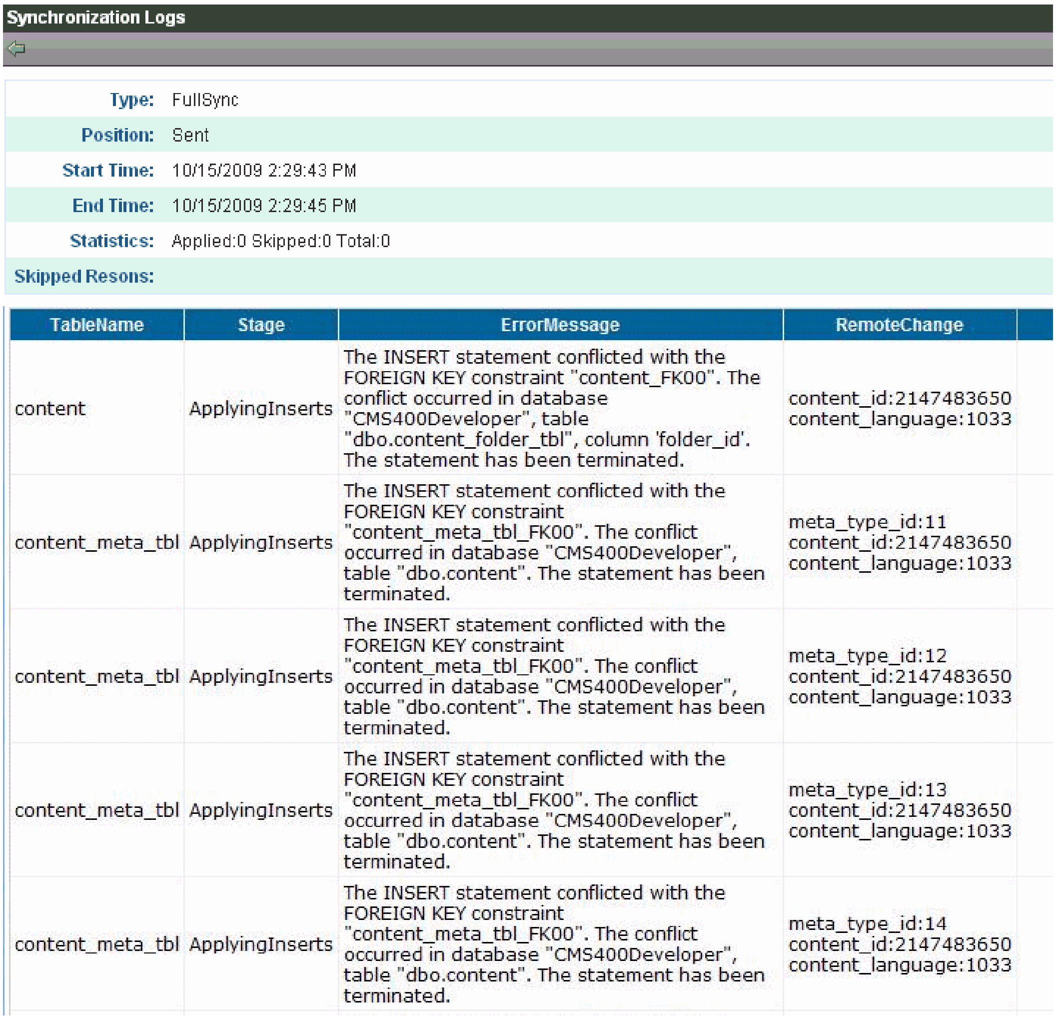
Viewing a log of all syncs for a sync server relationship

The View All Synchronization Relationships screen provides a Synchronization Logs button ( ) that displays a chronological log of all syncs on your server, with the most recent at the top.



Click the icon in the **Status** column to view any sync's details. If the column contains a check mark, the sync was successful.

If the column contains a warning ( ), the sync failed for some items. If you click the icon, a screen lists causes for the failure. Ektron support can use this log to troubleshoot the problem.



Synchronization Logs

Type:	FullSync
Position:	Sent
Start Time:	10/15/2009 2:29:43 PM
End Time:	10/15/2009 2:29:45 PM
Statistics:	Applied:0 Skipped:0 Total:0
Skipped Resons:	

TableName	Stage	ErrorMessage	RemoteChange
content	ApplyingInserts	The INSERT statement conflicted with the FOREIGN KEY constraint "content_FK00". The conflict occurred in database "CMS400Developer", table "dbo.content_folder_tbl", column 'folder_id'. The statement has been terminated.	content_id:2147483650 content_language:1033
content_meta_tbl	ApplyingInserts	The INSERT statement conflicted with the FOREIGN KEY constraint "content_meta_tbl_FK00". The conflict occurred in database "CMS400Developer", table "dbo.content". The statement has been terminated.	meta_type_id:11 content_id:2147483650 content_language:1033
content_meta_tbl	ApplyingInserts	The INSERT statement conflicted with the FOREIGN KEY constraint "content_meta_tbl_FK00". The conflict occurred in database "CMS400Developer", table "dbo.content". The statement has been terminated.	meta_type_id:12 content_id:2147483650 content_language:1033
content_meta_tbl	ApplyingInserts	The INSERT statement conflicted with the FOREIGN KEY constraint "content_meta_tbl_FK00". The conflict occurred in database "CMS400Developer", table "dbo.content". The statement has been terminated.	meta_type_id:13 content_id:2147483650 content_language:1033
content_meta_tbl	ApplyingInserts	The INSERT statement conflicted with the FOREIGN KEY constraint "content_meta_tbl_FK00". The conflict occurred in database "CMS400Developer", table "dbo.content". The statement has been terminated.	meta_type_id:14 content_id:2147483650 content_language:1033

Reviewing collisions

To verify the accuracy of data being synchronized, eSync may check for and resolve collisions between the following *matching* items.

- user names
- folder names
- metadata definitions
- messages
- eCommerce products
- URL aliases
- tag entries
- tag statistics
- taxonomy counts
- eCommerce price entries
- multi-site staging URLs
- menus

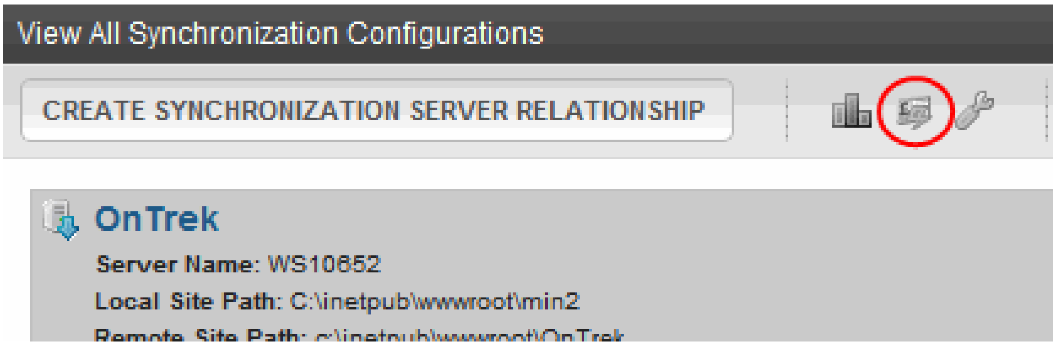
For example, on the staging server, a user creates a folder under the root folder called `Marketing`, and a user on the production server does the same.

NOTE: * Folders only match if they have the same name *and* folder path.
* Ektron and membership users are included.

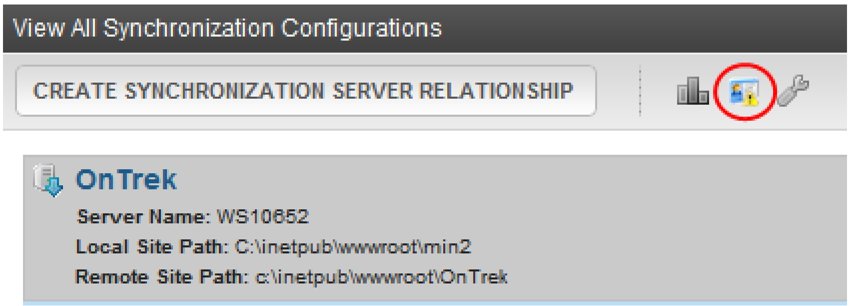
A collision only occurs if both items were created since the last synchronization.

Although matching items have different ID numbers, their names are the same, so users may be unable to distinguish them. To avoid confusion, eSync appends a number to the more recently-created item. For example, the `Marketing` folder becomes `Marketing11329`. This is an example of a *resolved collision*.

To track resolved collisions, the View All Synchronization Configurations screen has a button ( ) that appears only after a collision is resolved. If the eSync direction is download, the collision resolution information appears on the local server; if upload, it appears on the remote server; if bi-directional, it appears on both servers.



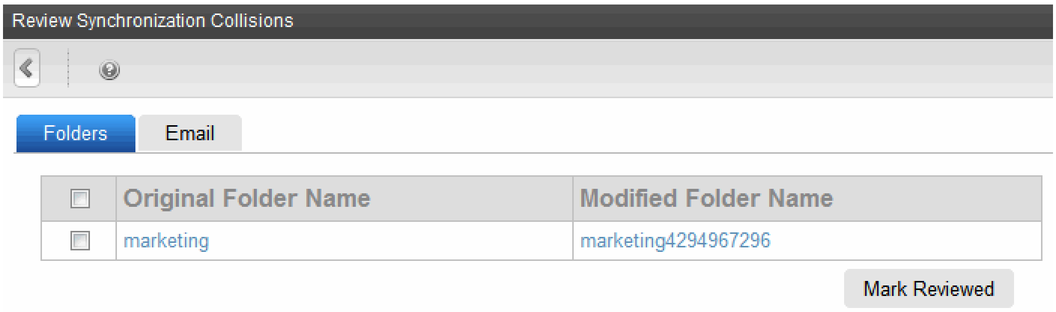
When you click the button, you are prompted to review resolved collisions. If you click **Resolve**, the following button appears on the toolbar.



Click that button to see the Review Synchronization Collisions screen, showing the original and changed items.

Reviewing resolved collisions

The Review Synchronization Collisions screen shows resolved collisions. Upon viewing it, you should notify appropriate content authors, who may want rename the items.



After noting these changes, you can check the box in the left column, then click **Mark Reviewed** to remove it.

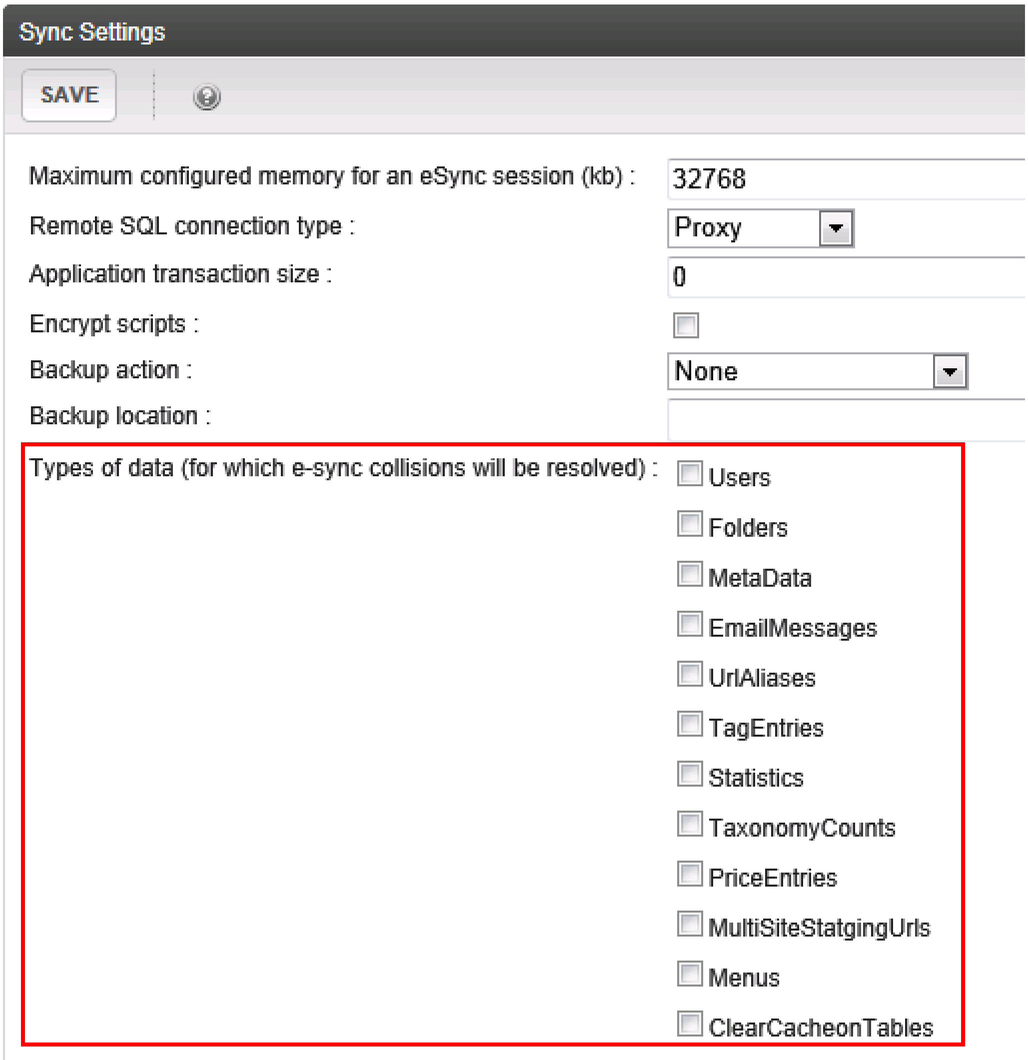
The **Users** tab has an additional button, **Mark Reviewed and Email**. Use it to remove the user from the screen and send an email to the user (using the address from the Add/Edit User screen’s **E-Mail Address** field).

```
lbl sync collision email subject = Your username has been changed
lbl sync collision email body = For security purposes, your username has been
  changed.
Your new username is {0}.  You will need to use this new username the next time
  you login.  Thank you.
```

NOTE: You can change the email text in the resource file. To learn about editing it, see *Translating the Workarea* on page 1431.

Determining which collisions are resolved

On the eSync Settings screen, use the **Types of data** field to identify items for which you want to resolve collisions. Unchecked items are ignored.



Ektron recommends disabling the **Resolve Collisions during Synchronization** boxes for everyday use, because resources required to search for collisions may negatively impact your website's performance. When activity that might cause collisions occurs, you may temporarily enable checkboxes. Then, disable them again once the activity is complete.

Using performance counters to monitor the Ektron Windows Service

You can use the Windows Performance Counter to view the progress of a file sync without affecting the EWS's performance. You can also use the Performance Counter to debug and monitor the EWS.

You can set up the Performance Counter to write to a file, so that you may monitor its activity over a few days or weeks.

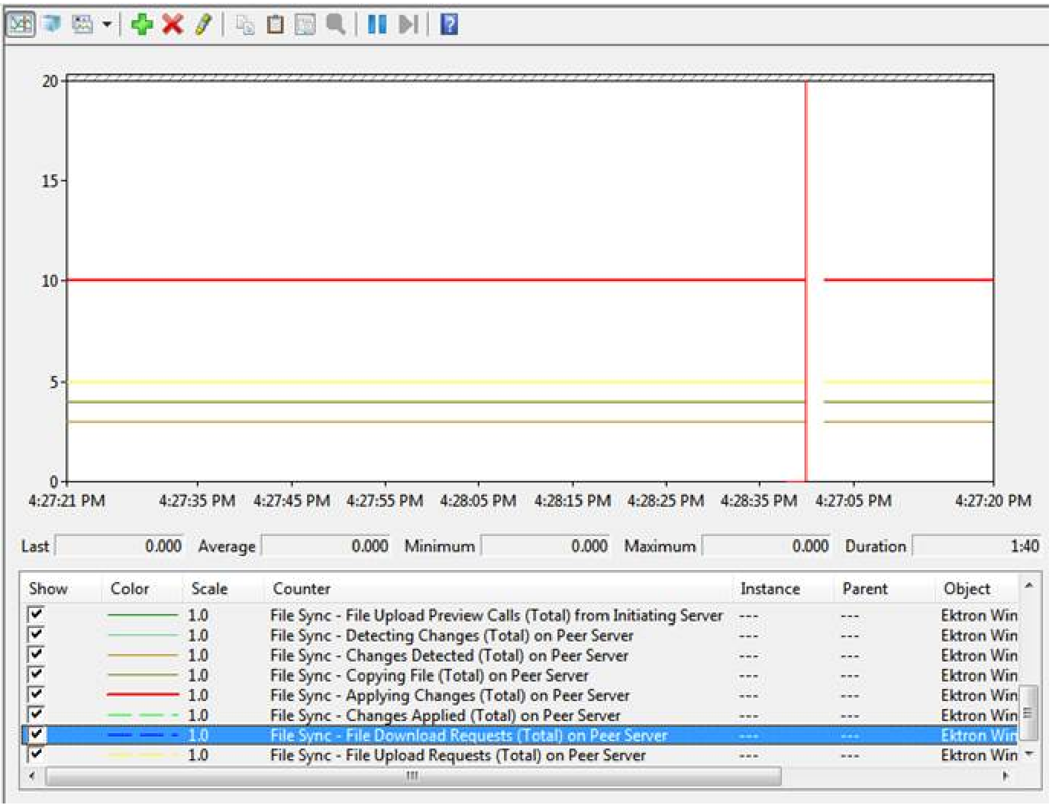
The Performance Counter helps you monitor a sync's progress, especially if it has been running for a long time. If the counter's values stop changing, nothing is happening. This information can help you determine that it is safe to stop the service.

Performance counter notes

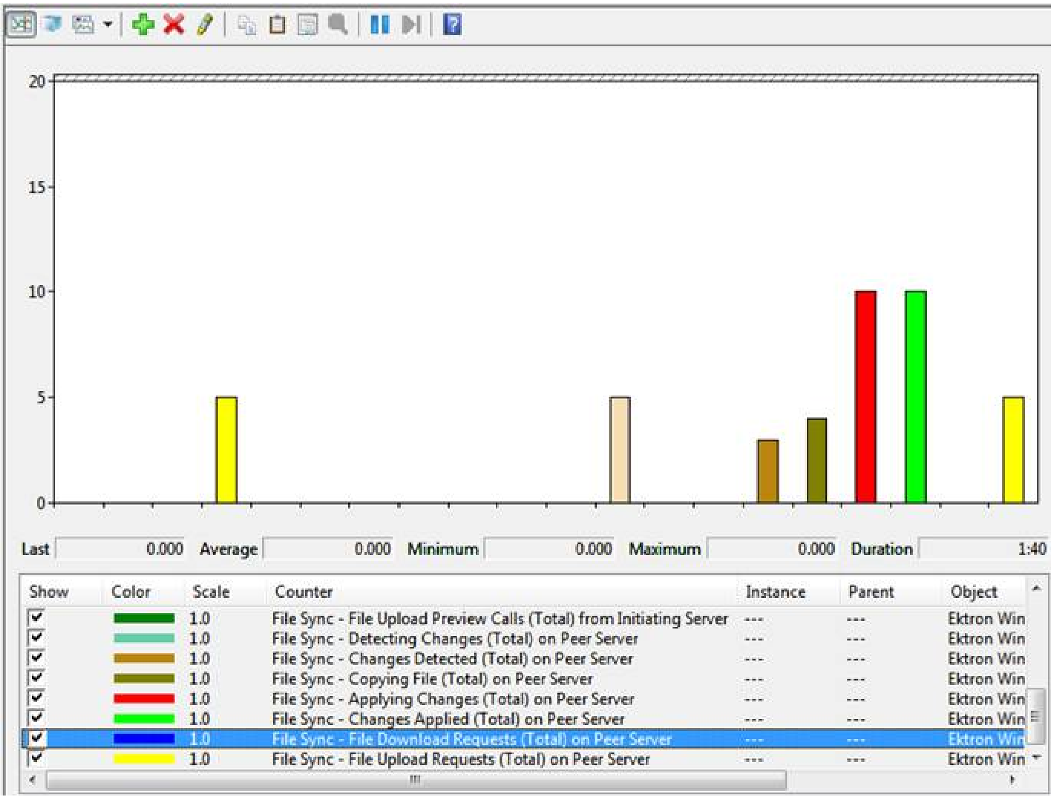
- Most counters increment over time—they do not rise and fall.
- Restarting the service resets the counters.

Performance counter display options

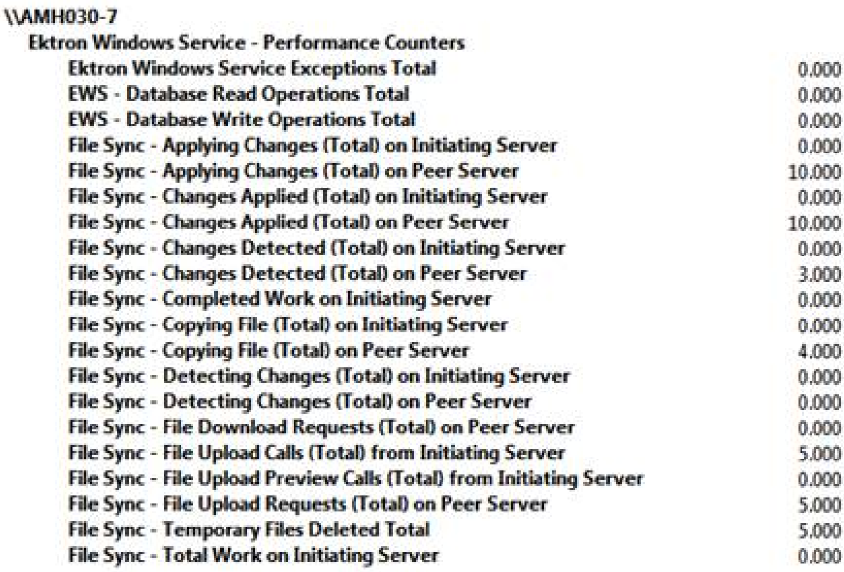
- Line



- Histogram



- Report



\\AMH030-7
Ektron Windows Service - Performance Counters

Ektron Windows Service Exceptions Total	0.000
EWS - Database Read Operations Total	0.000
EWS - Database Write Operations Total	0.000
File Sync - Applying Changes (Total) on Initiating Server	0.000
File Sync - Applying Changes (Total) on Peer Server	10.000
File Sync - Changes Applied (Total) on Initiating Server	0.000
File Sync - Changes Applied (Total) on Peer Server	10.000
File Sync - Changes Detected (Total) on Initiating Server	0.000
File Sync - Changes Detected (Total) on Peer Server	3.000
File Sync - Completed Work on Initiating Server	0.000
File Sync - Copying File (Total) on Initiating Server	0.000
File Sync - Copying File (Total) on Peer Server	4.000
File Sync - Detecting Changes (Total) on Initiating Server	0.000
File Sync - Detecting Changes (Total) on Peer Server	0.000
File Sync - File Download Requests (Total) on Peer Server	0.000
File Sync - File Upload Calls (Total) from Initiating Server	5.000
File Sync - File Upload Preview Calls (Total) from Initiating Server	0.000
File Sync - File Upload Requests (Total) on Peer Server	5.000
File Sync - Temporary Files Deleted Total	5.000
File Sync - Total Work on Initiating Server	0.000

These performance counters are available.

NOTE: Definitions:
Initiating Server. The server from which file sync is initiated (via the website).
Peer Server. The other server(s) in a sync relationship.

Ektron Windows Service data

- **EWS Approximate Total Number of Threads Alive Currently**. if eSync is running, at least one thread is alive
- **EWS Approximate Total Number of Timers Alive Currently**. increases as the number of scheduled syncs increases
- **EWS Database Write Operations Total**. increases when the EWS inserts/ updates or deletes rows in a site’s database.
- **EWS Database Read Operations Total**. increases when the EWS reads rows from a site’s database.
- **EWS Exceptions Total**. if eSync or load balancing exceptions occur while the service is running, they increment the performance counter and appear on the graph. A continual increase indicates a problem.

eSync data

- **eSync. Total Number of Remote WCF Calls Made from Service.** increases when the EWS makes network calls to other EWS instances on the network.

File Sync data

- **File Sync. Applying Changes (Total) on Initiating and Peer Servers.** incremented when a file change is about to be attempted
- **File Sync. Changes Applied (Total) on Initiating and Peer Servers.** counter is incremented when a file change is applied
- **File Sync**. **Changes Detected (Total) on Initiating and Peer Servers.** counter is incremented when a change detection pass is completed
- **File Sync. Changes Skipped (Total) from Initiating and Peer Servers.** eSync was supposed to do something but the action was skipped. This may occur if, for example, a file is locked.
- **File Sync. Completed Work on Initiating Server.** amount of work completed out of total work to be done
- **File Sync. Conflicts Detected (Total) from Initiating and Peer Servers.** indicates conflicts between servers in a sync relationship. This number always increases, never decreases unless someone restarts the EWS.
- **File Sync. Copying File (Total) on Initiating and Peer Servers**. incremented periodically to show progress while a file is being copied
- **File Sync. Detecting Changes (Total) on Initiating and Peer Servers.** incremented for every directory , including the root directory, during a change detection pass. This is incremented before change detection begins for that folder.
- **File Sync**. **File Download Requests (Total) on Peer Server**. total number of download requests
- **File Sync. Files Skipped Change Detection (Total) from Initiating and Peer Servers.** eSync was supposed to do something but the action was skipped. This may occur if, for example, a file is locked
- **File Sync**. **File Upload Calls (Total) from Initiating Server.** indicates the total number of upload calls from the initiating server to the remote EWS server

- **File Sync**. **File Upload Requests (Total) on Peer Server**. total number of upload requests received on the peer server
- **File Sync. File Upload Preview Calls (Total) from Initiating Server**. total number of upload preview calls made from the initiating server
- **File Sync. Temporary Files Deleted Total.** total number of temporary files deleted by EWS so far. This number should never be zero (0) on the destination server while a sync is running.
- **File Sync. Total Work on Initiating Server.** total work to be done by file sync

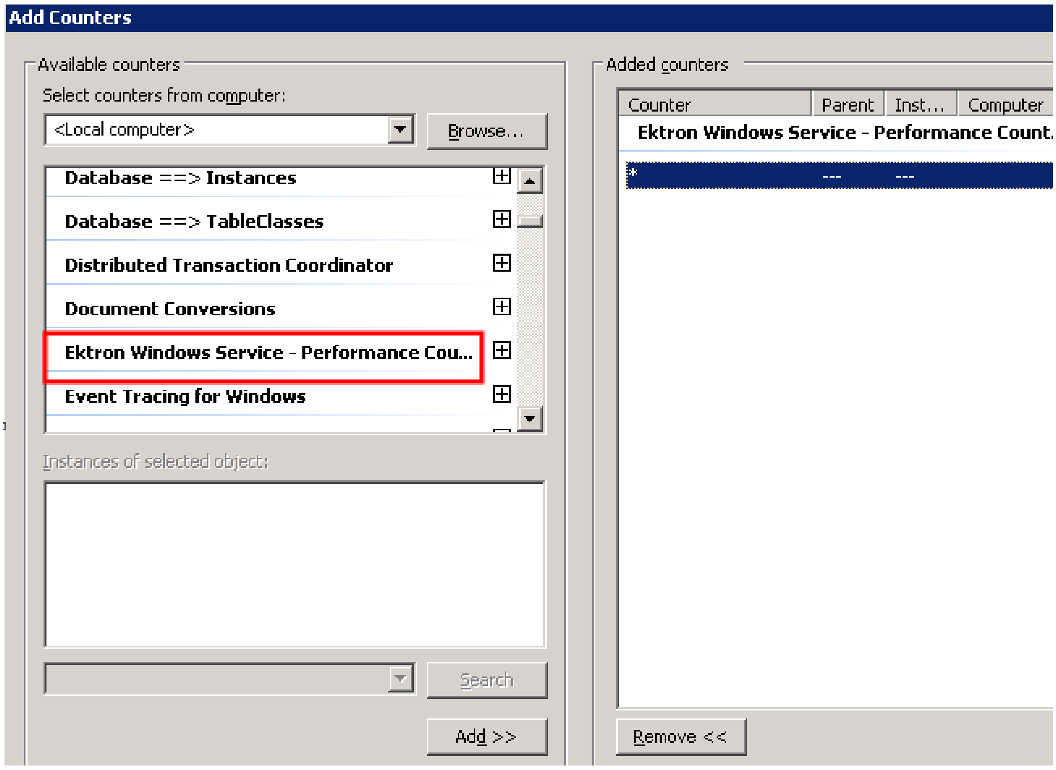
Setting up the performance counter display

To set up the display of the Ektron Windows Service performance counter:

1. Click the Windows **Start** button > **Administrative Tools** > **Performance Monitor**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **perfmon.msc**. Right click and choose **Run as Administrator**.

2. Click **Add** ().
3. In the upper left corner, click **Ektron Windows Service - Performance Counter,** then **Add** and **OK**.



Sync status email notification

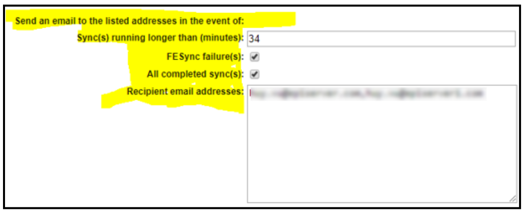
Provides email notifications when the following important sync events occur.

- A sync goes longer than a specified duration.
- A sync fails.
- A sync completes.

In the screen settings, you determine which events trigger an email notification.

To use this feature:

1. Go to **Settings > Configuration > Synchronization > Settings page**.
2. Set the values:



   - **Sync(s) running longer than (minutes)**. Specify the number of minutes before sending an email notification .
   - **FE Sync failure(s)**. Enable if you want an email notification to be sent if an FE sync failure occurs.
   - **All completed sync(s)**. Enable if you want an email notification to be sent when a sync completes.
   - **Recipient email addresses**. Specify the email addresses of notification recipients.

   NOTE: Separate email addresses with a comma (,).

3. Open `Ektron.ASM.EktronServices40.exe.config` file.
4. Find following entry keys. Here, set the SMTP information for sending email.

```
<add key="CEIPSmtpServer" value="ektexch01" />
<add key="CEIPKey" value="" />
<add key="CEIPSmtpUserName" value="your-ID" />
<add key="CEIPSmtpPassword" value="************" />
<add key="CEIPSmtpEnableSSL" value="false" />
<add key="CEIPSmtpPortNo" value="25" />
```

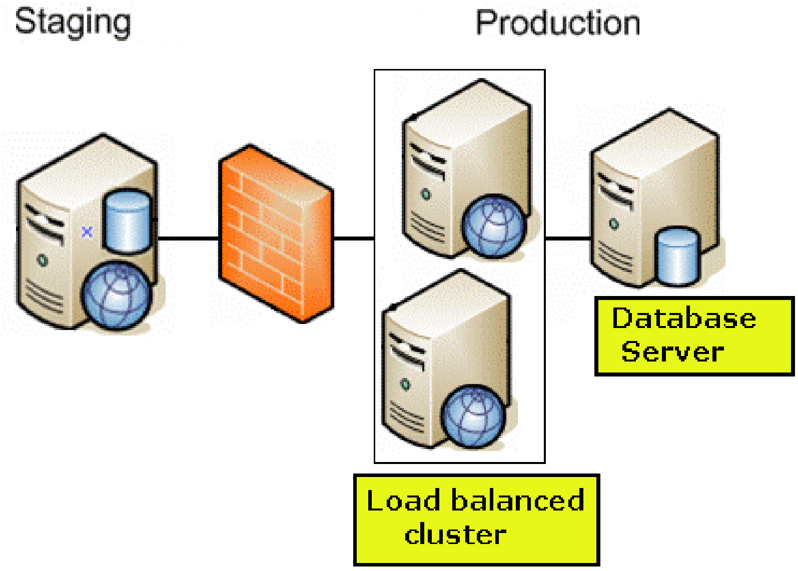
Using eSync with other Ektron features

eSync in a load-balanced environment

Ektron supports a load-balanced environment, in which several servers share your website's processing load. See *Balancing the load on your servers* on page 94.

If your site uses load balancing, you can set up eSync so that, after one server in a load balance cluster is synchronized, the other servers are automatically synchronized. Note that if a separate database server is outside the load balance cluster, eSync only synchronizes documents and files used by the search among the clustered servers. It does not touch the database.

Beginning with Ektron version 8.5, the load-balance chain of servers is updated automatically, and servers that are not available are removed. The following illustration shows a typical load balanced cluster.



IMPORTANT: In a load balanced environment, only update templates on the staging server. Do not update them on the production server and assume they will be synchronized with the staging server.

IMPORTANT: Assume your load balanced cluster consists of 2 staging servers (S1 and S2) and 2 production servers (P1 and P2).
If you add/modify/delete a file on S1, to get the file to S2, you must run either a download sync on S2, or an upload sync on S1, or a bidirectional sync from either server. If you run a download sync on S2, you also need to run an upload sync to push the file to P2, which will then Load Balance with P1.
The best way to make sure that the added/modified/deleted file is changed on all servers is to initiate the sync from the server on which the file was changed. In this example, since you changed the file on S1, if you initiate a sync from S1, it will be automatically updated on S2, P1, and P2.

PREREQUISITES

- The connection string on all servers in the cluster matches
- You *must* initiate eSync relationships and the sync from a staging server
- If your staging servers are clustered, you must remove one from the cluster before you can sync

Follow these steps to set up this capability.

Install a min site on every server in the cluster

1. Upgrade each server to the same version of Ektron. If Ektron is already installed on one server, install a minimum site on the others. To do this, run the Ektron base installation file (cms400Base9x.exe). See also: *Installing the Ektron base*

on page 13.

2. If the site with which you will sync is precompiled, precompile all min sites.

Update Assetmanagement.config

1. Sign on to the first server in your load balanced cluster.
2. In the site root folder, open `assetmanagement.config`.
3. Change the value of `LoadBalanced` to **1** and save.
4. Do this on every server in the cluster.

Update the Ektron Windows Service config file

1. Sign on to the first server in your load balanced cluster.
2. Open `C:\ProgramFiles (x86)\Ektron\EktronWindowsService40\Ektron.ASM.EktronServices40.exe.Config`.
3. Change the value of `LoadBalanced` to **1**.
4. Change the value of `AssetsLoadBalanced` to **1**.
5. Change the value of `LibraryLoadBalanced`to **1**.
6. Save the file.
7. Do this on every server in the cluster.
8. **Stop** and then **Start** the Ektron Windows Service on every server in the cluster.

Create eSync security certificates for a load-balanced cluster

You should be familiar with eSync security certificates before beginning this procedure. See also: *Managing eSync security certificates* on page 1838.

Assume the load balance cluster has 3 servers: `mach1`, `mach2`, and `mach3`.

Part one: Generate security certificates

In this part, create the security certificates.

1. Sign on to `mach1` using an account with administrative privileges and generate security certificates. To do this, click the Windows **Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator** > right click and choose **Run as Administrator**.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

2. The security configurator screen appears. See *Managing eSync security certificates* on page 1838. Select the **Generate Certificates** radio button. Click the **Generate** button then click **OK** when the Ektron Windows Service’s warning dialog appears.
   This action creates security certificates for your server and applies them to all the sites on the server. Optionally, you can select a single site from the **Web Site Description** drop-down to install certificates to a selected site.

3. Create a new folder (for example, `mach1_certitificates`) on the desktop.
4. Open the following folder:
`C:\ProgramFiles\Ektron\CMS400vxx\Utilities\SecurityConfig\Security Configurator.`
5. Copy the following files from the SecurityConfigurator folder into the folder you created in Step 3.
   - *mach1*_SyncClient.pfx
   - *mach1*_SyncClient.pvk
   - *mach1*_SyncClient.cer
   - *mach1*_SyncServer.pfx
   - *mach1*_SyncServer.pvk
   - *mach1*_SyncServer.cer
6. Repeat steps 1 to 5 for every server in your load balance cluster.

Part Two: Apply security certificates

In this part, copy then apply the certificates to all other servers in the cluster.

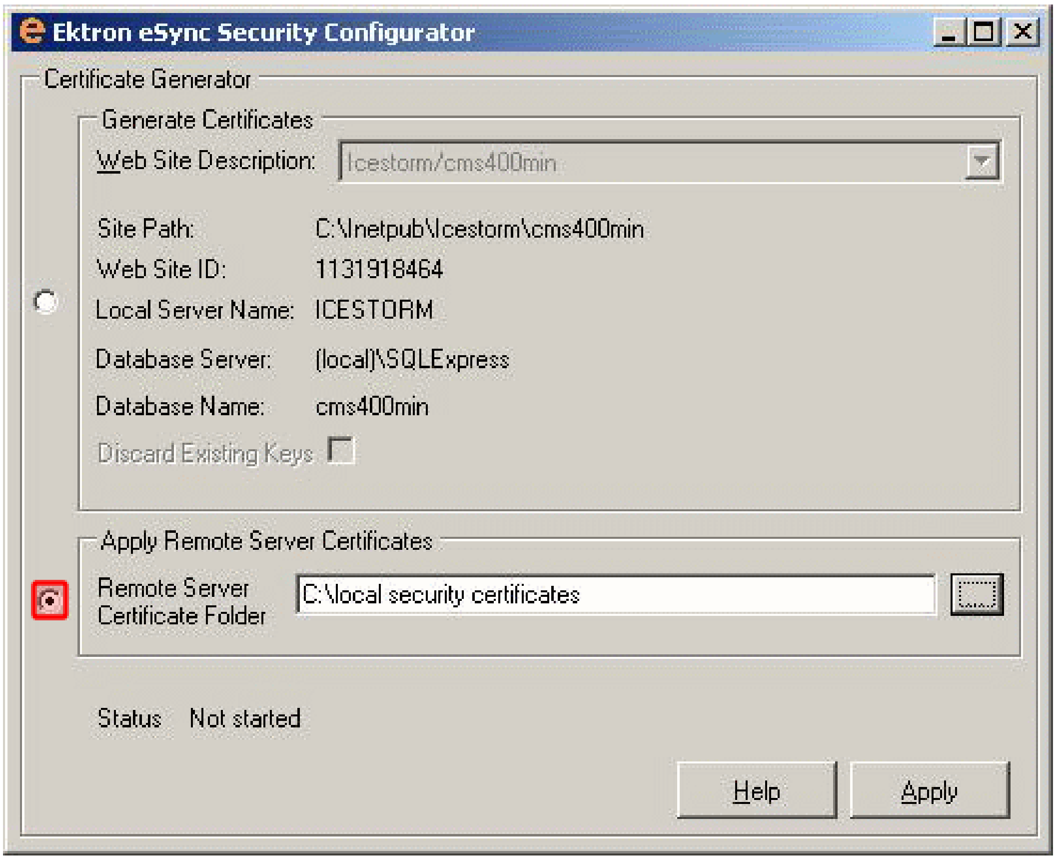
1. Copy each server's certificates folder to the other servers in the cluster.
2. Run the Security Configurator (**Start** button **> All programs > Ektron > CMS400 v9x > Utilities > Security Configurator**) and apply the certificates from every other server in the cluster.

   If you're using Windows 8 or 2012, press the **Windows** key ()**/Q** then enter **Security Configurator**. Right click and choose **Run as Administrator**.

   For example, apply certificates from *mach2* and *mach3* on *mach1;* and apply certificates from *mach1* and *mach3* on *mach2*.

   To apply certificates, follow these steps.

a. Select the **Apply Remote Server Certificates** radio button.



b. Click the browse button next to that field.

c. Browse to the remote server's certificates folder (which you copied in Step 1).

d. Click the **Apply** button. Then, click **OK** when the Ektron Windows Service warning dialog appears.

e. Repeat the above steps for all remote server certificate folders.

f. Repeat steps on every server in the load balance cluster.

Set up and run eSync

Once load balanced servers are configured to sync assets, configure eSync as normal between your staging server and one production server. When you sync with the production sever, the Load Balance feature pushes those files to the other servers in the LB configuration.

Using eSync in a multi-site environment

If you want to use eSync in a multi-site environment, you *must* do so before the initial synchronization of a relationship. That is, you cannot set up a eSync relationship in a single-site environment and then later change to multi-site. You can set up a new relationship at any time. See also: *Supporting multi-site configurations on page 86*.

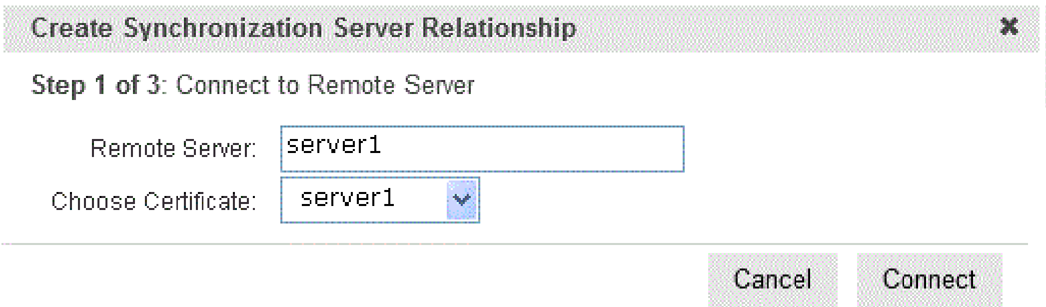
Limitations on using eSync in a multi-site environment

- In a multi-site environment, you cannot create a staging site from a production site (as described in *Initializing a new site* on page 1794). You must first create all sites on the staging server, then set up production sites with which they sync.
- You should log into the main site then synchronizing it and all multi-sites from there.

Setting up eSync in a multi-site environment

WARNING! Back up your database before beginning this procedure!

1. Set up all sites on the staging server, following the instructions in *Supporting multi-site configurations* on page 86.
2. Install an Ektron min site on each production server that will host a site. To do this, run the Ektron base installation file.
3. Install security certificates between the staging server and all production servers. This procedure is described in *Managing eSync security certificates* on page 1838.
4. Sign on to the staging server.
5. In the Workarea, go to **Settings > Configuration > Synchronization > Profiles**.
6. The View All Synchronization Configurations screen appears. Click **Create Synchronization Server Configuration**. The screen appears.



NOTE: If you see the following error, **The system cannot find the file specified**, you must set up security certificates. See also: *Managing eSync security certificates* on page 1838.

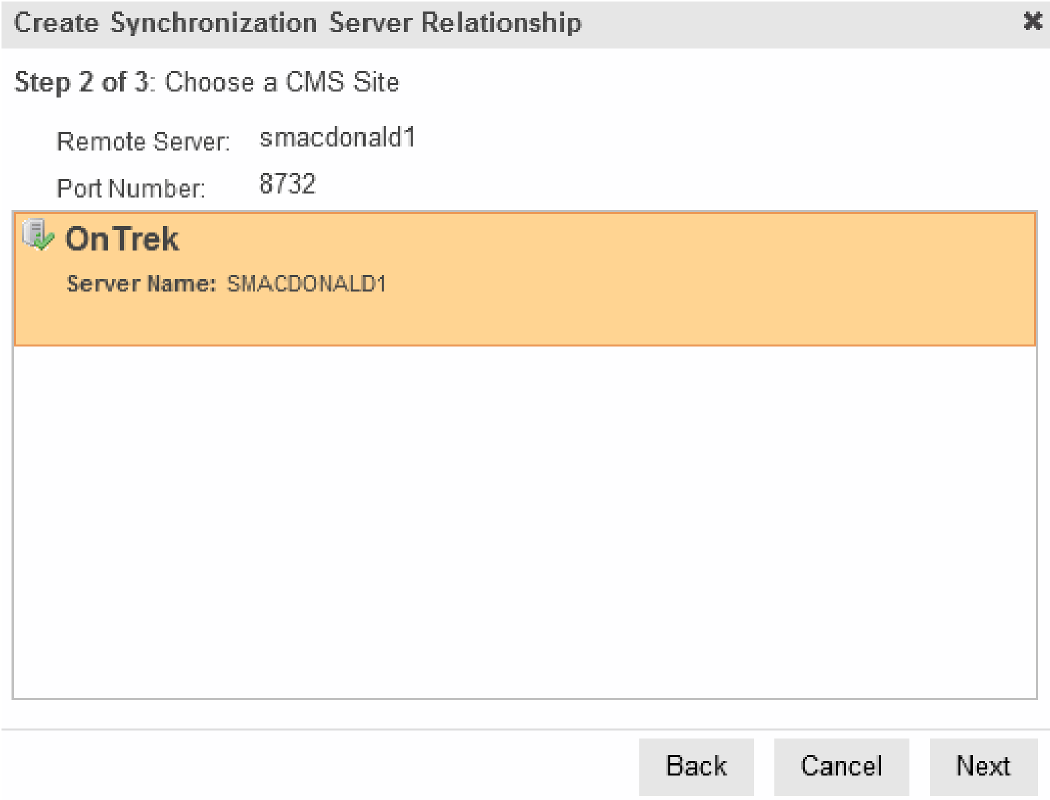
7. Use the following information to complete the screen.

WARNING! The first time you sync an Ektron website, all of its data is overwritten. Make sure that no important information resides on the production server before beginning the first sync.

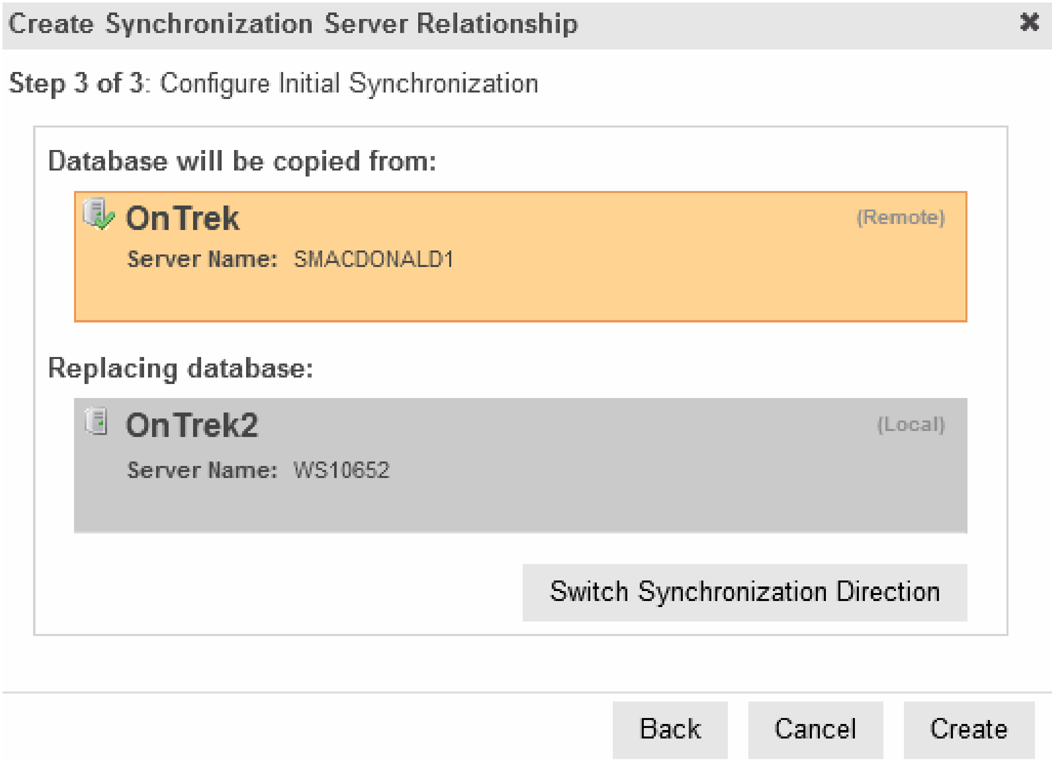
8. **Remote Server**. Select a production server by choosing the path to the site's physical location on the remote server.
9. **Choose Certificate**. If you selected a single server above, its name appears here. Proceed to the next step.

   If you selected a domain or IP address above, click the drop-down arrow to view all servers whose client security certificates reside on this server. Then, select the server with which you want to set up an eSync relationship.

10. Click **Connect**. After you connect to the production server, all eligible databases on it appear. The top one has a green check mark, indicating it is selected by default.



11. Click the database with which you want to sync. When you do, a green check mark appears on it, and its background color changes.
12. Click **Next**.
13. A new screen appears, showing both servers and allowing you to change the direction of the initial database copy. Make sure you are copying from staging to production. Because the staging server is multi-site, the staging server area has a **Site Path** pulldown field, which lets you select a site.



14. When you are satisfied, click **Create**. This sets up the server relationship but does not launch the initial sync.
15. The View All Synchronization Configurations screen appears with the new relationship. If you are ready to overwrite the production database with the staging one, click **Start Initial Sync** ( ).
16. A screen monitors the sync’s progress.
17. The initial sync creates a default profile, which appears on the View All Synchronization Configurations screen.
18. Set up and launch sync profiles to sync Workarea files and templates on the staging server with those on the production server. (This is described in *Setting up eSync profiles* on page 1829 and *Running eSync* on page 1849.) For synchronization direction, choose *Running eSync* on page 1849.

Setting up staging multi-sites

By default, if you sign on to a staging server then insert library items (images, quicklinks, and so on) into content, the path to those items includes the production server. For example, your server setup includes 2 multi-sites: sales.ektron.com and support.ektron.com.

NOTE: Multi-site names are defined in the site’s folder properties screen’s **Production Domain** field, as described in *Supporting multi-site configurations* on page 86.

So, library links in the sales.ektron.com site’s content look like this: `http://sales.ektron.com/template?id=id number`. However, you may wish to change library links so they refer to the staging server. This would help you verify that the linked items exist on it.

To change library links to refer to your staging server:

1. Go to **Settings > Configuration > Setup**.
2. Click **Edit**.
3. Check the **Staging Server** checkbox.
4. Click **Update**.
5. Go to **Content** > the staging site folder.
6. Choose **View > Properties**.
7. Click **Edit Properties**.
8. Scroll down to the section labeled **Multi-Site Domain Configuration**:
9. In the **Staging Domain** field, enter the URL of your staging server.
10. Click **Update**.

From now on, when a user signs on to the staging server and works with library links, the links include the staging server instead of the production server.

Using eSync with Web Alerts

The Web Alert feature enables Ektron to generate email for a list of registered users whenever content is created or updated. See also: *Sending Web Alert emails to subscribers* on page 1369.

In an eSync environment, you need to determine which servers send Web Alerts. For example, Web Alerts should probably not be generated when content is published on a *staging* server, but you would want them when content is published on a *production* server.

To determine if a server generates Web alerts, use the following property of each website's `web.config` file.

```
<add key="ek_DisableWebAlerts" ..... />
```

Set the property's value to **true** to suppress Web Alerts on a server.

Set the property's value to **false** to generate Web Alerts to on a server.

Also, the server clock on the download side of the eSync relationship must be exactly the same time as or slightly ahead of the clock on the sending server.

Using eSync with eCommerce

IMPORTANT: Ektron has discontinued new development on its eCommerce module. If you have a license to eCommerce, you will continue to receive support, but if you need to upgrade, contact your account manager for options.

When using eSync with an eCommerce site, you need to prevent orders from being processed on your staging server to prevent orders from being processed twice.

For example, a customer on your production site purchases a product. If the staging server and production server are synchronized before the credit card is processed, it might be charged twice: once from the production server and again from the staging server.

To prevent orders from being processed on your staging server, edit your staging site's `web.config` file and set the following property to true:

```
<add key="ek_ecom_OrderProcessingDisabled" value="true" />
```

When the property is set to true, you cannot process or edit orders from the Workarea's View Order screen on the staging server. Also, if you try to create an order from the staging server's website, you receive the following message.

"*We're sorry, an error occurred while processing your request. Please try again later...*"

It is important to note that all other eSync functions still work properly. For example, when you create catalog entries on a staging server and perform a sync, the entries are moved to the production server. The `ek_ecom_OrderProcessingDisabled` key only affects order processing.

Using eSync with notifications

When using eSync with notifications, new agents are not synchronized. This means that you must manually add new agents to each server in your relationship.

When an agent exists on all servers in your relationship, eSync keeps them updated. For example, assume a membership user logs into the production server and updates the profile's **Activities** tab by changing the activities a custom agent will perform. eSync will sync those changes with the staging server.

See also: *Adding a custom agent* on page 1551; *Sending notifications to a community* on page 1543.

Running Ektron 8.5 and Ektron 9.10 SP3 eSync

If you install an Ektron 9.10 SP3 site to a server that is also running an Ektron 8.5 version, the Ektron 9.10 SP3 Windows Service (EWS) replaces the 8.5 version. Also, the `dbSync.config` file was removed for Ektron 9.10 SP3. To manage settings you previously configured in `dbsync.config` file, run the following script.

```
IF(NOT EXISTS(SELECT NAME FROM SYS.OBJECTS WHERE (NAME='sync_settings') AND
(type='u')))
begin
create table [dbo].[sync_settings]
(
    profile_id bigint not null,
    memory_data_cache_size int not null default (32768),
    remote_sql_connection tinyint not null default(2),
    application_tran_size bigint not null default (0),
    script_encryption bit not null default (0),
    collision_action bigint not null default(0),
    backup_action tinyint not null default(0),
```

```
    backup_device nvarchar(max) null,
    log_retain_count int not null default(50),
    CONSTRAINT [PK_sync_settings] PRIMARY KEY CLUSTERED (profile_id)
)
end
go
if(not(exists(select 1 from sync_settings where profile_id=0)))
begin
insert into sync_settings(profile_id)values(0)
end
go
```

The following list describes some lines in the script.

- `memory_data_cache_size int not null default (32768)`. Define a maximum amount of memory that your server uses during a sync. The default is 32 MB. You can change it to any size up to the amount of RAM in your eSync server.
- `remote_sql_connection tinyint not null default(2)`. 0-direct; 1-proxy; 2-autodetect
  - autodetect is generally the best solution
- `application_tran_size bigint not null default(0)`. if changes are expected in multiple batches, set this value to `memory_data_cache_size`
- `collision_action bigint not null default(0)`. The value of the **Resolved Collisions during Synchronization** field, which specifies types of data for which collisions will be resolved. See also: *Determining which collisions are resolved* on page 1872.
  - 0=NONE
  - 1=USER
  - 2=FOLDERS
  - 4=METADATA
  - 8=EMAIL MESSAGE
  - 16=URL ALIAS
  - 32=TAG ENTRIES
  - 64=STATISTICS ON TAG
  - 128=TAG REGENERATION
  - 256=TAXONOMY COUNTS
  - 512=PRICE ENTRIES
  - 1024=MULTISITE STAGING URL
  - 2048=MENU
- `backup_action tinyint not null default(0)`. 1-backup always; 2-backup only before initial sync; determines when to back up destination database before a sync
- `backup_device nvarchar(max) null`—backup location
- `log_retain_count int not null default(50)`. set the number of logs retained in the database.

Troubleshooting eSync

Problem: Sync not working with custom table

You created a custom table and try to sync it to the destination server, but eSync does not synchronize the source and destination servers.

Solution: As stated in *Synchronizing custom SQL database tables* on page 1858, you must create the custom table on all servers. eSync does not create the tables, but will follow rules for populating records in them.

Problem: Synchronization has failed

There was no endpoint listening at `http://alphatest:8732/Ektron.Sync.Communication/SyncCommunicationScheduleService.svc` that could accept the message. This is often caused by an incorrect address or SOAP action. See InnerException, if present, for more details.

One server in the relationship cannot resolve the address of the other server. This may be due to security restrictions or because the Ektron Windows Service (EWS) is off.

Solutions:

- Modify the hostname of the other server so that it can be found.
- Restart EWS
- Reconfigure security

Problem: The identity check failed for the outgoing message. The expected identity is *xxx* for the *xxx* target endpoint.

Local site cannot communicate with service.

Solution:

1. Load the security Configuration utility:
   `C:\Program Files (x86)\Ektron\CMS400vxx\utilities\SecurityConfig\SecurityConfigurator\securityconfigurator.exe.`
2. Select the website that is failing.
3. Click **OK**. This recopies client certificates to the site and updates `web.config` to use them.

Problem: No viable CMS sites were found on the remote server specified. Please check the remote server and try again.

No Ektron site exists on the remote server.

Possible Solution: Install an Ektron min site on the remote server.

Using eSync strategies

eSync Strategies are described in CMS Strategies. These strategies let you plug into the EWS , so developers can implement functionality like sync notifications, data modifications, and cache invalidation.

Design goals

The strategies' design goals explain the intent and functionality available through the API.

- The API is as similar as possible to the framework API.
- Events are synchronous.
- The API classes are decoupled from the internal implementation.
- Events may be canceled.
- Sample strategies are provided with the EWS.
- Documentation is embedded within the code.
- Strategies have minimal impact on eSync stability, scalability, and performance.
- The data transform strategy, which has some performance penalty, is activated only when it is implemented (to prevent undue performance impact).
- You cannot break eSync by modifying parameters which do not make sense to be modified via an API. Not all properties are writable.
- Errors in the strategies do not crash the EWS.
- The website progress always shows strategy execution details.

Limitations

- The API does not isolate events when multiple sites exist on the same server in a co-located scenario.
- Parameter changes cannot be propagated back to eSync from peer events.
- Peer events are not available for load balancer strategies.
- Whenever new strategies are registered, restart the EWS .
- Data transform strategy notes.
  - Data transform strategy cannot modify deleted rows. See also: *ESyncDataTransformStrategy* on page 1898.
  - Changes to detached or unchanged (DataRow state) rows do not propagate back in the data transform strategy.
  - eSync parameter changes in the data transform strategy do not affect or modify eSync.
  - Not all eSync parameters are available to the data transform strategy.

Tips for working with eSync strategies

- Enable the sample strategy in the out-of-the-box `ObjectFactory.config` file (`C\Program Files (x86)\Ektron\CMS400v` *versionnumber* `\Utilities\EWSUpdates\EktronWindowsService40\ObjectFactory.config`). After you do, each event is logged to the event viewer. Review the event viewer to learn the order in which events fire.

- eSync strategies run in the context of the EWS, as opposed to a site. So, by default, strategies run for every eSync on a server, whether the sync is incoming or outgoing. To restrict a strategy to certain syncs and sites, use validation. For an example, see *Notification strategy example* on page 1893.
- Tips for creating .dll files.
  1. With the project open in Visual Studio:
     a. Open Solution Explorer.
     b. Right-click your project.
     c. Choose **Properties**.
     d. Set the **Target Framework** to **.NET Framework 4.5**.

     IMPORTANT: The following .dlls require .NET 4.5.
  2. Add references to `Ektron Windows Services/Ektron.Cms.Contracts.dll` and `Ektron.Cms.ObjectFactory.dll`.
  3. Add these namespaces:

     ```
     using Ektron.Cms.Extensibility;
     using Ektron.Cms.CoreService;
     ```
- After you create .dll files, place them in the `C\Program Files (x86)\Ektron\CMS400v` *releasenumber*`\Utilities\EWSUpdates\EktronWindowsService40` folder. Then, when adding project references, reference .dlls in that folder, not .dlls in the site folder.
- Stop the EWS before building the project. Otherwise, Ektron locks the .dll. So the process is:
  1. Stop EWS.
  2. Build the project.
  3. Move .dlls into the EWS folder.
  4. Start EWS.

  It may take 30-60 seconds to start the EWS with the new .dll. To know when EWS has started, open the Event Viewer\Applications and Services Logs folder and monitor the EktronL4 log. There are 2 messages:
  - **Service initialized successfully**. you've told EWS to start.
  - **Service started successfully**. only begin a new sync to test the latest build after you see this message.

Events

The basic events are

- **APIStrategy: ESyncNotificationStrategy See also:** ***ESyncNotificationStrategy* on the facing page**
  - Local Database Sync Run Start. API Event Name: OnAfterDatabaseSyncRunStartFromLocal
  - Local Database Sync Run Completed. API Event Name: OnAfterDatabaseSyncRunCompleteFromLocal
  - Local Database Sync Run Error. API Event Name: OnAfterDatabaseSyncRunErrorFromLocal
  - Local Folder Sync Run Start. API Event Name: OnAfterFolderSyncRunStartFromLocal
  - Local Folder Sync Run Completed. API Event Name: OnAfterFolderSyncRunCompleteFromLocal
  - Local Folder Sync Run Error. API Event Name: OnAfterFolderSyncRunErrorFromLocal
  - Local Esync Run Start. API Event Name: OnAfterESyncRunStartFromLocal
  - Local Esync Run Completed. API Event Name: OnAfterESyncRunCompleteFromLocal
  - Local Esync Run Error. API Event Name: OnAfterESyncRunErrorFromLocal
  - Peer Esync Run Start. API Event Name: OnAfterESyncRunStartFromPeer
  - Peer Esync Run Completed. API Event Name: OnAfterESyncRunCompleteFromPeer
  - Peer Esync Run Error. API Event Name: OnAfterESyncRunErrorFromPeer
  - Peer Database Sync Run Start. API Event Name: OnAfterDatabaseSyncRunStartFromPeer
  - Peer Database Sync Run Completed. API Event Name: OnAfterDatabaseSyncRunCompleteFromPeer
  - Peer Database Sync Run Error. API Event Name: OnAfterDatabaseSyncRunErrorFromPeer
  - Peer Folder Sync Run Start. API Event Name: OnAfterFolderSyncRunStartFromPeer
  - Peer Folder Sync Run Completed. API Event Name: OnAfterFolderSyncRunCompleteFromPeer
  - Peer Folder Sync Run Error. API Event Name: OnAfterFolderSyncRunErrorFromPeer
  - Local Database Sync Progress. API Event Name: OnLocalDatabaseSyncProgress
  - Local File Sync Progress. API Event Name: OnLocalFileSyncProgress
  - Peer Database Sync Progress. API Event Name: OnPeerDatabaseSyncProgress
  - Peer File Sync Progress. API Event Name: OnPeerFileSyncProgress
- **APIStrategy: LoadBalancerStrategy See also:** ***LoadBalancerNotificationStrategy* on page 1899**

    - Load Balance Run Start. OnAfterRunStart
    - Load Balance Run Completed. OnAfterRunComplete
    - Load Balance Run Error. OnAfterRunError
- **APIStrategy: ESyncDataTransformStrategy See also:** ***ESyncDataTransformStrategy* on page 1898**
    - Row synchronized during eSync. OnAfterDataRowSelected

ESyncNotificationStrategy

This is an abstract class, since it has no default functionality.

The eSync Notification strategy lets me detect events, such as when a database sync is completed.

```
ESyncNotificationStrategy
    OnAfterDatabaseSyncRunStartFromLocal(SyncProfile, SyncCommandEventArgs) : void
    OnAfterDatabaseSyncRunCompleteFromLocal(SyncProfile) : void
    OnAfterDatabaseSyncRunErrorFromLocal(Exception, SyncProfile) : void
    OnAfterFolderSyncRunStartFromLocal(FolderSyncProfile, SyncProfile, SyncCommandEventArgs) : void
    OnAfterFolderSyncRunCompleteFromLocal(FolderSyncProfile, SyncProfile) : void
    OnAfterFolderSyncRunErrorFromLocal(Exception, FolderSyncProfile, SyncProfile) : void
    ESyncNotificationStrategy()
    OnAfterESyncRunStartFromLocal(SyncSpecificDetails, SyncProfile, SyncCommandEventArgs) : void
    OnAfterESyncRunCompleteFromLocal(SyncSpecificDetails, SyncProfile) : void
    OnAfterESyncRunErrorFromLocal(Exception, SyncSpecificDetails, SyncProfile) : void
    OnAfterESyncRunStartFromPeer(PeerServerDetails, SyncSpecificDetails, SyncProfile) : void
    OnAfterESyncRunCompleteFromPeer(PeerServerDetails, SyncSpecificDetails, SyncProfile) : void
    OnAfterESyncRunErrorFromPeer(Exception, PeerServerDetails, SyncSpecificDetails, SyncProfile) : void
    OnAfterDatabaseSyncRunStartFromPeer(PeerServerDetails, SyncProfile) : void
    OnAfterDatabaseSyncRunCompleteFromPeer(PeerServerDetails, SyncProfile) : void
    OnAfterDatabaseSyncRunErrorFromPeer(Exception, PeerServerDetails, SyncProfile) : void
    OnAfterFolderSyncRunStartFromPeer(PeerServerDetails, FolderSyncProfile, SyncProfile) : void
    OnAfterFolderSyncRunCompleteFromPeer(PeerServerDetails, FolderSyncProfile, SyncProfile) : void
    OnAfterFolderSyncRunErrorFromPeer(Exception, PeerServerDetails, FolderSyncProfile, SyncProfile) : void
    OnLocalDatabaseSyncProgress(DatabaseSyncProgress, SyncProfile) : void
    OnLocalFileSyncProgress(FileSyncProgress, SyncProfile) : void
    OnPeerDatabaseSyncProgress(DatabaseSyncProgress, SyncProfile) : void
    OnPeerFileSyncProgress(FileSyncProgress, SyncProfile) : void
```

There are two sets of methods: “FromLocal” and “FromPeer”.

- **FromLocal** is called by the EWS, which manages eSync; it refers to the service on the same server as the site from which the eSync call was made.
- **FromPeer** methods are raised on the peer server, which may receive or send data. These methods are called when EWS makes a WCF call to the peer EWS which, in turn, raises this event. Note that, unless otherwise mentioned, the “FromPeer” method is analogous to the “FromLocal” method raised on the peer server.

Notification strategy example

Comments on this sample notification strategy follow the example.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Diagnostics;
using Ektron.Cms.Extensibility;
using Ektron.Cms.CoreService;
namespace ProcessTaxonomy
     {
       public class WriteToXml : ESyncNotificationStrategy
        {
          public override void OnAfterDatabaseSyncRunCompleteFromPeer
(PeerServerDetails peerDetails, SyncProfile syncProfileData)
             {
                if (syncProfileData.RemoteSiteConfig.SitePath.ToLower().StartsWith
(@"c:\inetpub\syncreceiver") && (syncProfileData.SyncConfig.Direction ==
SyncDirection.Upload || syncProfileData.SyncConfig.Direction ==
SyncDirection.BiDirectional))
                 {
                   WriteTaxonomyToXml();
                 }
              }
       public void WriteTaxonomyToXml()
        {
           string path =
@"C:\inetpub\ConsoleApps\CreateTaxonomyXML\CreateTaxonomyXML\bin\Debug\CreateTaxonomy
XML.exe";
           Process proc = new Process();
           proc.StartInfo = new ProcessStartInfo(path, "");
           if (!IsProcessOpen("CreateTaxonomyXML"))
              {
                try
                 {
                  proc.Start();
                  EventLog.WriteEntry("CreateTaxonomyXml - Start",
proc.StartTime.ToString(), EventLogEntryType.Information);
                  proc.WaitForExit();
                  EventLog.WriteEntry("CreateTaxonomyXml - End",
proc.ExitTime.ToString(), EventLogEntryType.Information);
                 }
                 catch (Exception ex)
                 {
                   EventLog.WriteEntry("CreateTaxonomyXml - Error", ex.Message,
EventLogEntryType.Error);
                 }
             }
             else
             {
                EventLog.WriteEntry("CreateTaxonomyXml - Info", "Process already
running.", EventLogEntryType.Information);
             }
           }
           public bool IsProcessOpen(string name)
             {
               try
                {
```

```
                  var procs = Process.GetProcessesByName("CreateTaxonomyXML");
                  if (procs.Any())
                        return true;
                }
                catch (Exception ex)
                {
                   EventLog.WriteEntry("CreateTaxonomyXml - Warning", "Error finding
process.", EventLogEntryType.Warning);
                        return false;
                }
                return false;
             }
        }
   }
```

1. The following code overrides a method that is triggered after a database sync completes. This example runs immediately upon completing the DB sync, even if the sync has other tasks to complete, such as a file sync.

```
public override void
  OnAfterDatabaseSyncRunCompleteFromPeer(PeerServerDetails
  peerDetails, SyncProfile syncProfileData)
```

2. The following conditional validates that the sync runs only for the desired site and direction. This example runs only if a certain site *receives* data, either through an upload or bidirectional sync. The sitepath distinguishes this site from others on the server. Alternatively, you can check for a DB name in the connection string, as shown in the following example.

```
(syncProfileData.RemoteSiteConfig.SitePath.ToLower()
  .StartsWith(@"c:\inetpub\syncreceiver")
  && (syncProfileData.SyncConfig.Direction
  == SyncDirection.Upload
  || syncProfileData.SyncConfig.Direction
  == SyncDirection.BiDirectional))
{
  WriteTaxonomyToXml();
}
```

3. The following strategy executes a companion console application whenever a database sync is completed. Here is the local path to the console application.

```
string path =
@"C:\inetpub\ConsoleApps\CreateTaxonomyXML\CreateTaxonomyXML\bin\Debug\CreateTax
onomyXML.exe";
```

4. The following standard .NET code executes a console application. Remember that your EWS user (often Local System) must have execute permission for the application.

```
proc = new Process();
```

5. Specify that you want to start the process at the following path. No arguments are used.

```
proc.StartInfo = new ProcessStartInfo(path, "");
```

6. Check if the process is already running.

```
(!IsProcessOpen("CreateTaxonomyXML"))
{
 try
```

```
{
proc.Start();
```

7. The following code gets the process name above. It must be run after the process starts.

```
EventLog.WriteEntry("Process Name", proc.ProcessName,
  EventLogEntryType.Information);
```

NOTE: `EventLog.WriteEntry` methods write to the Event Viewer's Application log, not the EWS log.

8. Log the process' start time.

```
EventLog.WriteEntry("CreateTaxonomyXml - Start",
  proc.StartTime.ToString(),
  EventLogEntryType.Information);
```

9. Wait for the process to end, to determine how long it takes to run the process.

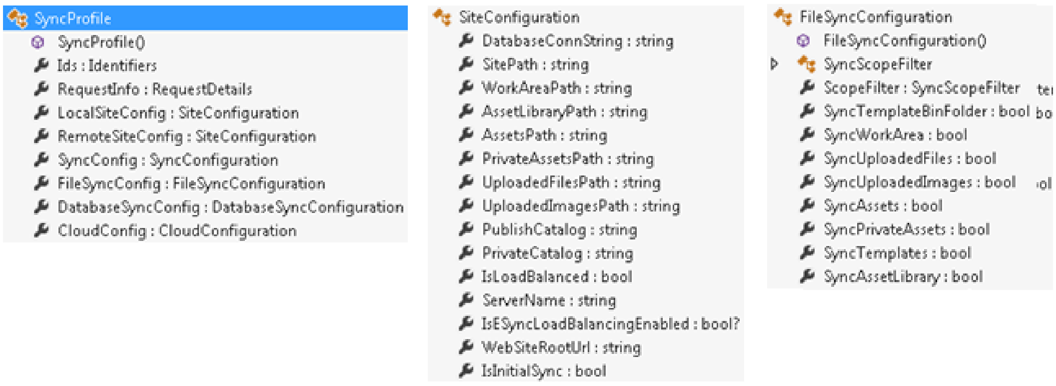
```
proc.WaitForExit();
```

10. Log the process' end time.

```
EventLog.WriteEntry("CreateTaxonomyXml - End",
  proc.ExitTime.ToString(),
  EventLogEntryType.Information);
```

SyncProfile class

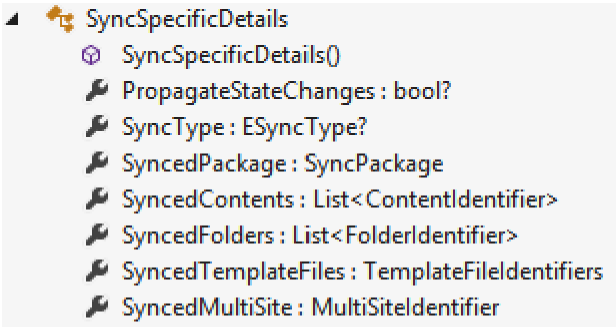
SyncProfile is the basic parameter class for eSync strategies. Its properties are neatly categorized and have self-documenting names.

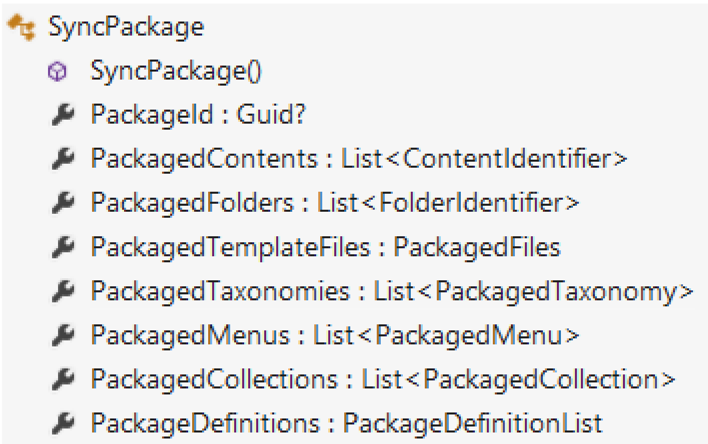


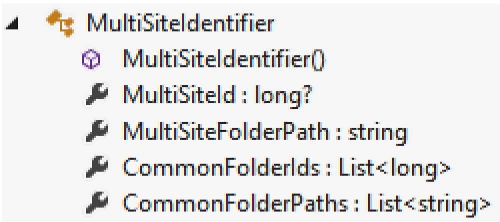
SyncSpecificDetails class

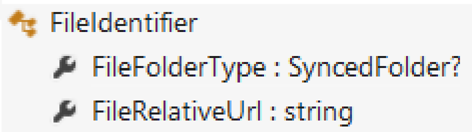
The SyncSpecificDetails class contains all sync details for a sync type (such as template, folder, content, or package sync).

All properties of regular, profiled syncs are in the `SyncProfile` class. The `SyncSpecificDetails` class is for extra properties that are only present in a specific sync type.



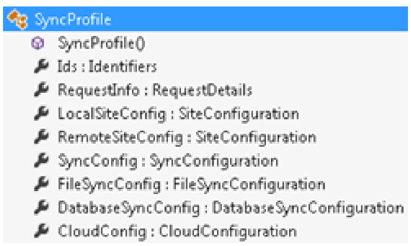


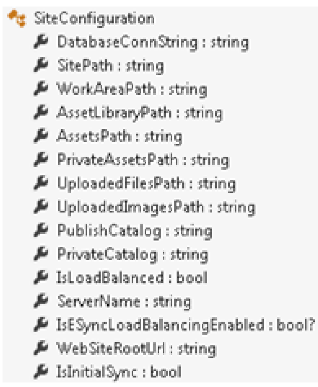


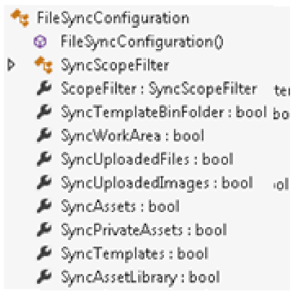


SyncProfile class

SyncProfile is the basic parameter class for eSync strategies. Its properties are neatly categorized and have self-documenting names.







SyncSpecificDetails class

The SyncSpecificDetails class contains all sync details for a sync type (such as template, folder, content, or package sync).

All properties of regular, profiled syncs are in the `SyncProfile` class. The `SyncSpecificDetails` class is for extra properties that are only present in a specific sync type.

```
SyncSpecificDetails
    SyncSpecificDetails()
    PropagateStateChanges : bool?
    SyncType : ESyncType?
    SyncedPackage : SyncPackage
    SyncedContents : List<ContentIdentifier>
    SyncedFolders : List<FolderIdentifier>
    SyncedTemplateFiles : TemplateFileIdentifiers
    SyncedMultiSite : MultiSiteIdentifier
```

```
SyncPackage
    SyncPackage()
    PackageId : Guid?
    PackagedContents : List<ContentIdentifier>
    PackagedFolders : List<FolderIdentifier>
    PackagedTemplateFiles : PackagedFiles
    PackagedTaxonomies : List<PackagedTaxonomy>
    PackagedMenus : List<PackagedMenu>
    PackagedCollections : List<PackagedCollection>
    PackageDefinitions : PackageDefinitionList
```

```
MultiSiteIdentifier
    MultiSiteIdentifier()
    MultiSiteId : long?
    MultiSiteFolderPath : string
    CommonFolderIds : List<long>
    CommonFolderPaths : List<string>
```

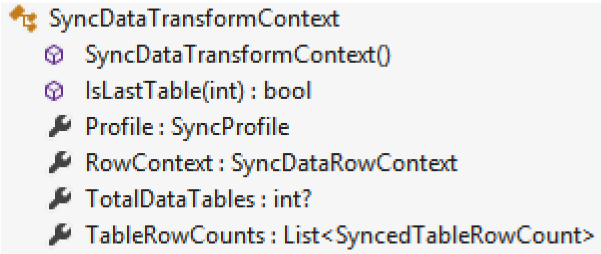
```
FileIdentifier
    FileFolderType : SyncedFolder?
    FileRelativeUrl : string
```

ESyncDataTransformStrategy

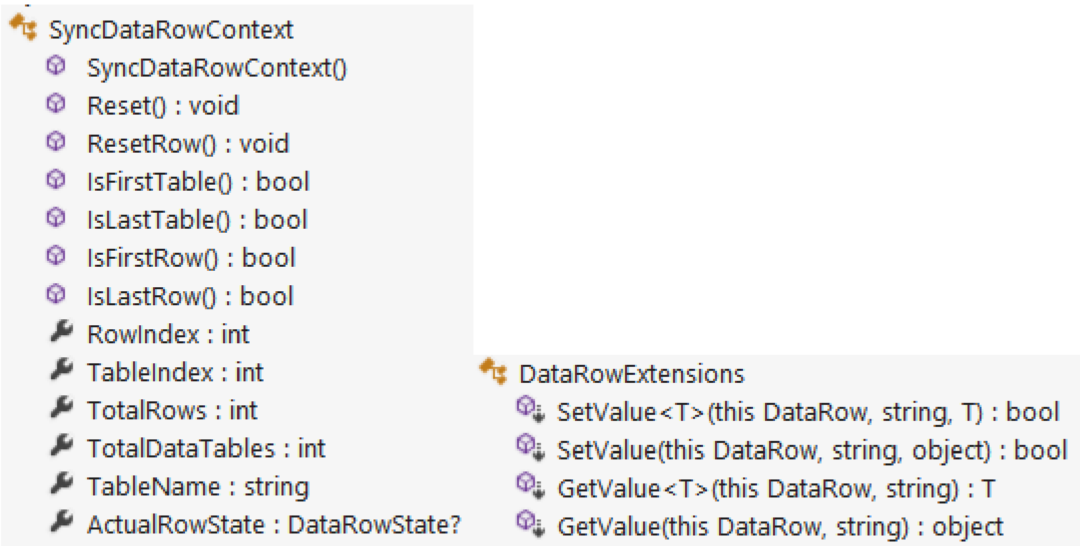
This strategy lets you plug into database sync and modify columns within the records being synchronized. Addition or deletion of records is not supported.

```
ESyncDataTransformStrategy
    ESyncDataTransformStrategy()
    OnAfterDataRowSelected(DataRow, SyncDataTransformContext) : void
```

Only one method is called per record for each table that will be synchronized.



The `SyncDataRowContext` class provides context about the row being sent in the event. The class is used in the sample strategy to make it easier to perform data row actions.



LoadBalancerNotificationStrategy

This strategy provides a mechanism to get notified about local load balancer events. It provides comprehensive information about them.

- LoadBalancerNotificationStrategy
  - LoadBalancerNotificationStrategy()
  - OnBeforeRunStart(List<LoadBalancedFile>, LoadBalanceProfile) : void
  - OnAfterRunError(Exception, List<LoadBalancedFile>, LoadBalanceProfile) : void
  - OnAfterRunComplete(List<LoadBalancedFile>, LoadBalanceProfile) : void

- LoadBalanceProfile
  - LoadBalanceProfile()
  - GetSendingServerName() : string
  - GetReceivingServerName() : string
  - InitiatedByFileWatcher() : bool
  - InitiatedByESync() : bool
  - ESyncProfile : LoadBalancerESyncProfile
  - FileWatcherProfile : LoadBalancerFileWatcherProfile

- LoadBalancerESyncProfile
  - LoadBalancerESyncProfile()
  - SendingServerName : string
  - ReceivingServerName : string
  - SyncedFolders : List<LoadBalancerSyncedFolder>
  - SendingSitePhysicalPath : string
  - ReceivingSitePhysicalPath : string

- LoadBalancedFile
  - FullFileName : string
  - FileName : string
  - WatchedFolderFullName : string
  - WatchedFolderType : FileWatchedLoadBalancedFolder?
  - ChangeType : WatcherChangeTypes
  - EventReceivedTime : DateTime?

- LoadBalancerFileWatcherProfile
  - LoadBalancerFileWatcherProfile()
  - SendingServerName : string
  - ReceivingServerName : string
  - SyncedFolders : List<string>
  - SyncedFiles : List<string>

- SyncedFolderSource
  - Unknown
  - SendingServer
  - ReceivingServer
- LoadBalancerSyncedFolder
  - FolderSource : SyncedFolderSource
  - FullName : string

Implementing strategies within the Ektron Windows Service

The EWS includes a sample strategy that writes to the event log on the sending and receiving servers.

Internal classes used by the EWS are not exposed via the API. All API classes are present along with the rest of the CMS API classes in the `Ektron.Cms.Contracts` assembly.

Internal EWS classes are, however, converted into API classes. By decoupling the API from the EWS classes, the API cannot be changed inadvertently as Ektron changes the EWS. The decoupling also ensures that the API is more developer-friendly, usable, and self-documenting.

Strategies are raised only when they are configured to be raised in the objectFactory.config file, within the EWS root folder. The following image files are modified for strategy implementation.

- app.config
- ektron.cms.framework.unity.config
- objectFactory.config

Define a strategy within the objectFactory.config file, as shown in the following image.

```
<objectFactory>
  <objectStrategies>
    <add name="ESync">
      <strategies>
        <add name="ESyncTemplate" type="Cms.Extensions.CoreService.ESyncSampleStrategy, Cms.Extensions.CoreService"/>
      </strategies>
    </add>
  </objectStrategies>
</objectFactory>
```

The `ESyncStrategyLocalHandler` class executes local strategies one by one, logging any errors. The class also makes a WCF call to the remote EWS to execute strategy there.

The peer server strategy contains a `PeerServerDetails` parameter that lets you determine which server sent the request. On the remote server, the strategy execution is straightforward, as shown in the following example.

The sample strategy shows records in the system event log, as shown in the following example. These records clarify the order in which events fire on the local server.

Information	3/20/2013 3:32:06 PM	ESyncNotificationSampleStrategy - OnAfterRunCompleteFromLocal()
Information	3/20/2013 3:31:56 PM	ESyncNotificationSampleStrategy - OnLocalFileSyncProgress()
Information	3/20/2013 3:31:34 PM	ESyncNotificationSampleStrategy - OnLocalFileSyncProgress()
Information	3/20/2013 3:31:18 PM	ASP.NET 4.0.30319.0
Information	3/20/2013 3:30:39 PM	ESyncNotificationSampleStrategy - OnLocalDatabaseSyncProgress()
Information	3/20/2013 3:30:39 PM	ESyncNotificationSampleStrategy - OnLocalDatabaseSyncProgress()
Information	3/20/2013 3:30:38 PM	ESyncNotificationSampleStrategy - OnAfterRunStartFromLocal()

The remote server shows peer events.

Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:31:43 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 3:30:36 PM	ESyncNotificationSampleStrategy - OnAfterRunStartFromPeer()	0	None

Database events raised on the peer server also appear.

Information	3/20/2013 4:43:21 PM	ESyncNotificationSampleStrategy - OnAfterRunCompleteFromPeer()	0	None
Information	3/20/2013 4:43:19 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 4:43:19 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 4:43:19 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 4:43:15 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 4:43:14 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 4:43:14 PM	ESyncNotificationSampleStrategy - OnPeerFileSyncProgress()	0	None
Information	3/20/2013 4:42:40 PM	ESyncNotificationSampleStrategy - OnPeerDatabaseSyncProgress()	0	None
Information	3/20/2013 4:42:23 PM	ESyncNotificationSampleStrategy - OnAfterRunStartFromPeer()	0	None

Progress events for database and file sync

Progress events provided for database and file sync let you track a sync operation's progress. These events have both local and peer methods, because all types of Ektron Sync have two sync orchestrators: one runs on the initiating server, and the other runs on the peer server. Since progress is reported by both orchestrators, both are exposed by the API.

The quality of information provided by the local/peer event is determined by the sync direction and the initiating server. So, some properties may not be available in one method or the other.

Load-balancer events

Load-Balancer events are exposed via a separate *LoadBalancerNotificationStrategy on page 1899*, which provides information through the API about what is being synchronized to which server. This strategy provides extensive information about the load balancer, and is useful to end users.

38

Viewing network server diagnostics

Ektron's diagnostics utility provides the following comprehensive information about your network's servers that are related to the website to which you are logged on. (An Ektron network consists of your Ektron server, connected database servers, and other servers with which your website has an eSyncor Load Balancerelationship.)

- status of all services
- version information for Windows, SQL, IIS, Visual Studio, and so on
- event log
- database connection status, test query, server, and so on
- for each server: drive capacity and available space; available memory, and so on
- eSync information, such as remote certificates for this server

NOTE: Most diagnostics fields are read-only but the utility lets you perform a few actions.

The following video link provides additional information about the diagnostics utility: The Making of Ektron eSync Diagnostics.

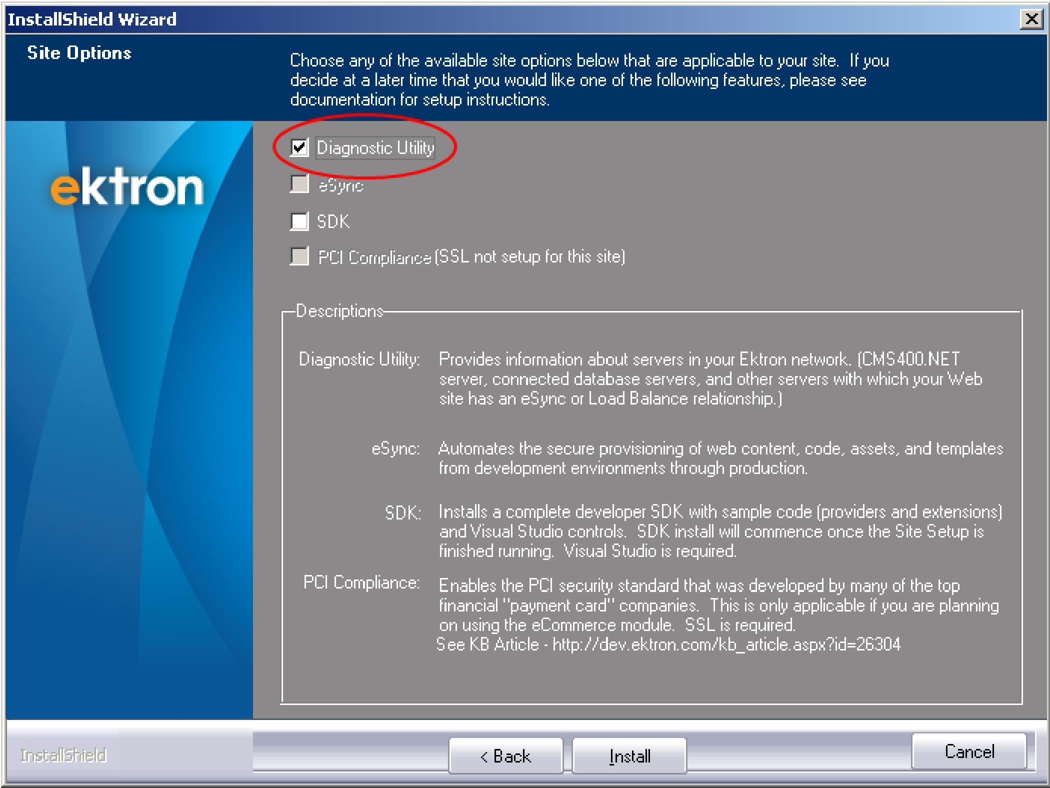
The following list shows how the diagnostic utility works:

1. The diagnostics utility uses Workarea Web services that is installed to the Ektron server. This service runs independently of the Ektron Windows Service and your Ektron website.
2. That Web service routes requests to the Ektron Diagnostics Service.
3. The Ektron Diagnostics Service collects diagnostic information from the database, website files, and other locations like the event log. It also scans for other known Web servers (eSync servers, load balance servers, and multi-site servers).
4. If any other servers are found, the Diagnostics Windows Service opens a connection to the destination server's Diagnostics service. The Diagnostics Service uses the same port as the Ektron Windows service.
5. The Ektron Diagnostics Service returns the collected data to the Silverlight viewer, which dynamically builds the network that appears on the screen.

Installing the diagnostics utility

You should install the utility to every website and server in your Ektron network. This includes Ektron Web servers, as well as servers used in Load Balance and eSync configurations. You do *not* need to install the utility on client workstations.

You can install the diagnostics utility as a site option during the installation or upgrade of Ektron (see **Diagnostic Utility** checkbox).



If **Diagnostic Utility** was not checked during installation, you can install it by going to Windows **Start** button **> All Programs > Ektron > CMS400vxx > Utilities > Ektron Diagnostic Utility**.

The diagnostics utility installs the following files on each server.

- `web.config` file additions
- the Ektron Diagnostics Windows service

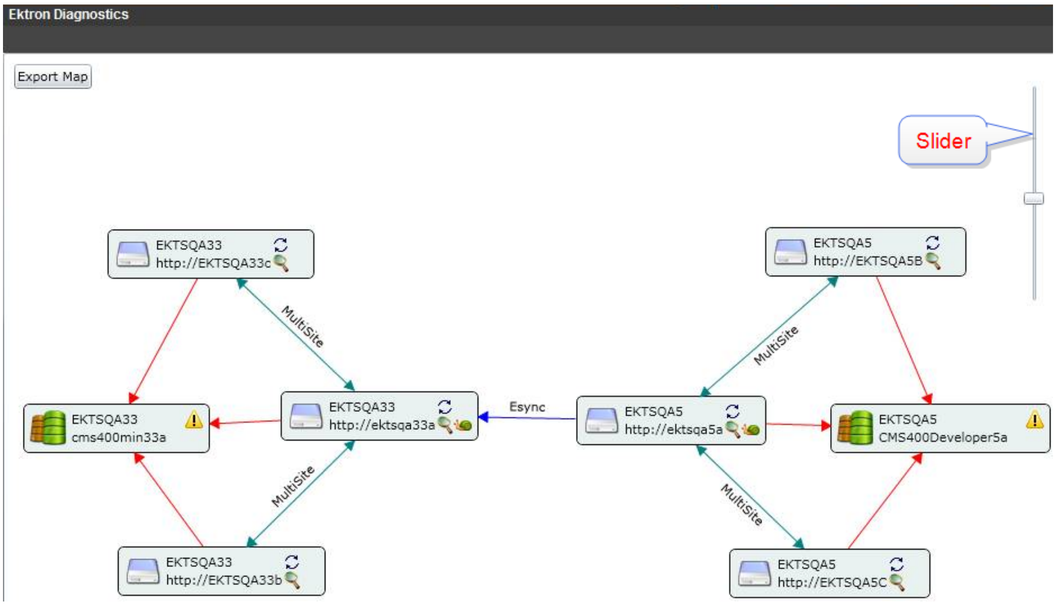
NOTE: If the diagnostics utility is *not* installed on a server, a node for that server appears, but information about it is not available in the lower section of the screen, and additional relationships are not visible.
For example, you have an eSync relationship between development and staging servers, and between staging and production servers. If the diagnostics utility is installed on the development server but not on staging, and you view the network from the development Workarea, you see nodes for development and staging, but not production. You can view details for development, but not staging.

Running the diagnostics utility

Prerequisites

- You are a member of the Ektron Administrator's group
- The diagnostics utility was installed on every server with which your website has an eSync or Load Balance relationship
- The diagnostics utility requires Silverlight 4. If a client does not have it, you are prompted to install it before you can view the screen.

To access the diagnostics utility, go to **Workarea > Settings > Configuration > Diagnostics**. The Diagnostics screen consists Ektron network nodes connected by lines that indicate relationships. Use the slider on the right side to adjust the zoom level.



You may drag the nodes around for easier viewing.

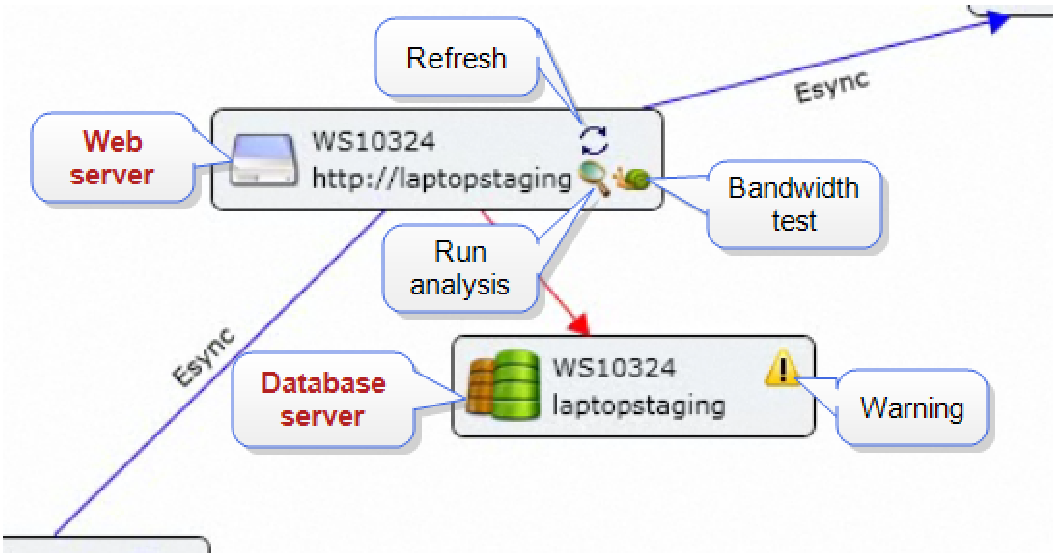
Connecting lines on the diagnostics screen

A connecting line's color indicates the type of relationship that exists between nodes.

- **Blue**. **eSync**
  The arrowhead direction indicates the direction of the profiles. For example:
  - no arrowheads. no profiles
  - 2 arrowheads. one upload and one download profile exists between servers
- **Red**. **Database server**
  Appears even if the database resides on the same server with Ektron.
- **Green**. **Load balance**
- **Teal**. **Multi-site**

Network node icons

The following icons may appear in a network node.

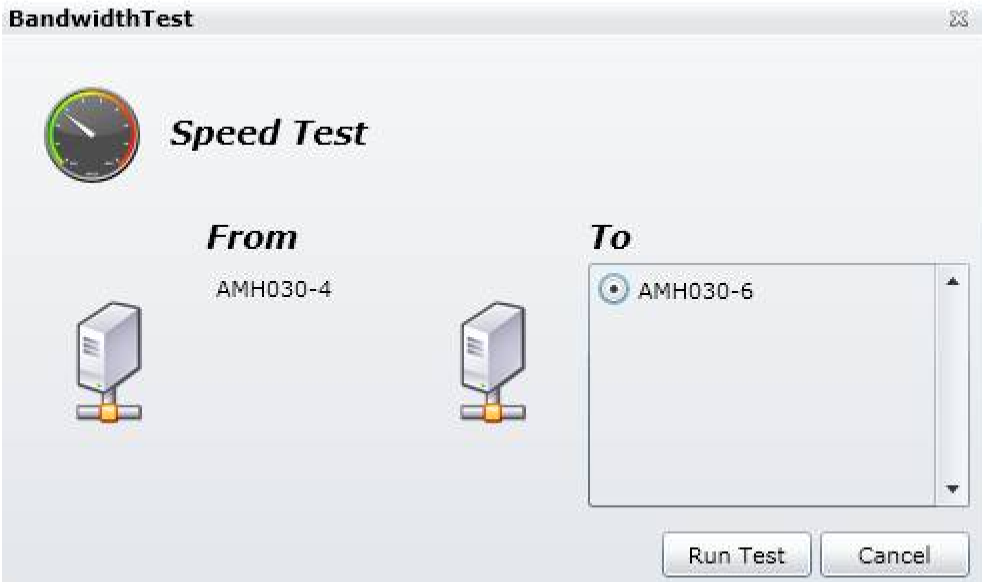


- **Analysis**. Reports server's installed memory, available memory, and available disk space. Click the icon for more information. See also: *Analyzing system memory and disk space* on the next page
- **Bandwidth test**. Reports speed of server's connections. Click the icon for more information. *Testing bandwidth* below
- **Refresh**. For selected node, load or reload *Viewing diagnostic details* on page 1909. Click the icon for more information.
- **Warning**. When hovered over, displays a warning about the node. For example, if your database resides on an Ektron server, you are advised to move the database to its own server.
- **Web server**. Hosts Ektron.
- **Database**. Hosts MS SQL Server.

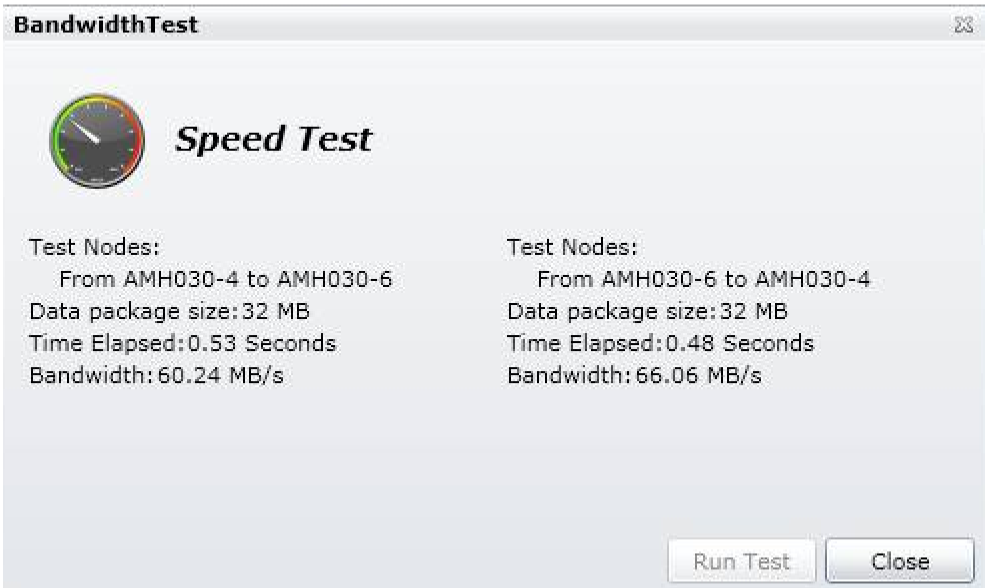
Testing bandwidth

You can run a bandwidth test between any 2 network nodes. The test checks the speed of the selected server's connections. To accomplish this, the test sends a 32 MB file in both directions then reports the transfer time.

Before



After

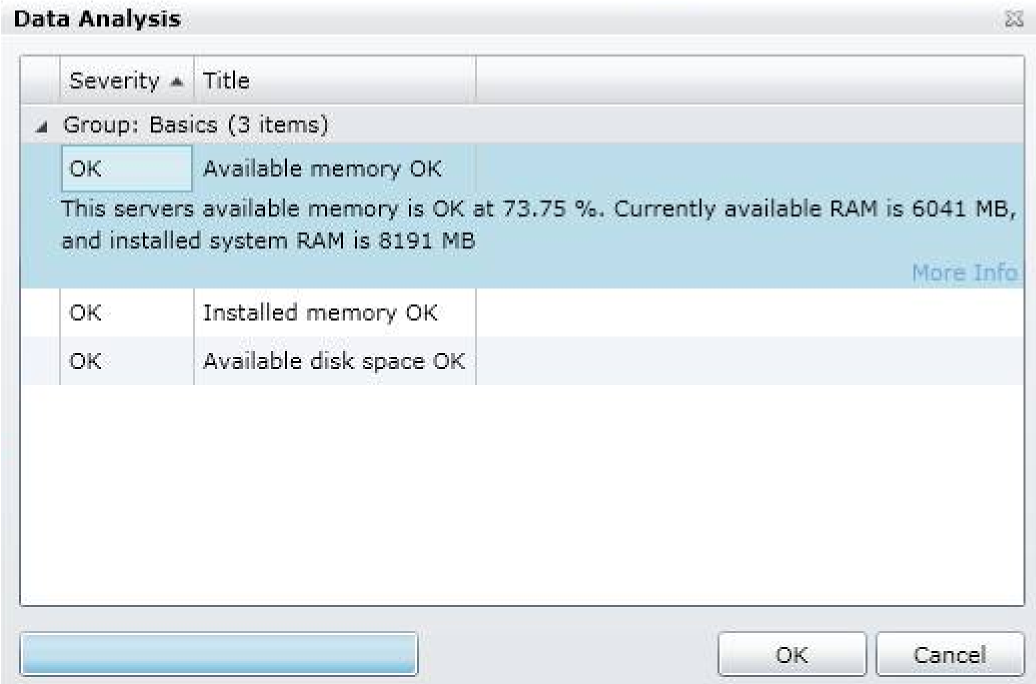


As an example of when you would conduct a bandwidth test, assume it takes a long time to sync a production server with a staging server. Use a bandwidth test to diagnose the problem.

Analyzing system memory and disk space

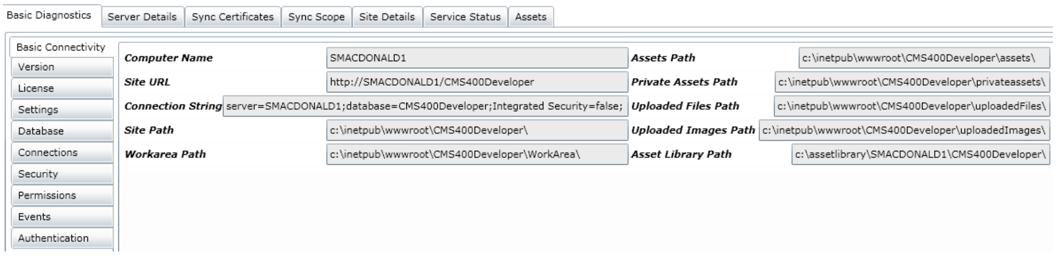
The Analysis function reports a selected server's installed memory, available memory, and available disk space.

Each item is assigned a status of critical, warning, and OK. By default, the items are sorted in that order. To change the sort order, click the **Severity** column header.



Viewing diagnostic details

The diagnostics utility screen has tabs in the lower section that provides many details about your Ektron network.

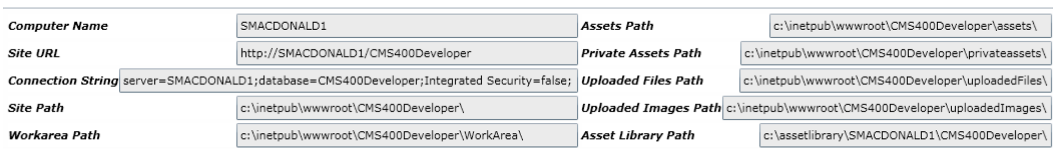


Basic diagnostics

IMPORTANT: The Diagnostics screen runs as a Windows Service. So, that service must have administrator access to perform the tests and retrieve the necessary information.

The basic diagnostics screen has several subtabs:

- **Basic Connectivity**. Displays server name, site URL, connection string, paths to site, Workarea, assets, private assets, uploaded files and images, asset library



- **Version**. Installed version of Ektron, Windows service, IIS, Visual Studio

CMS Version	8.5.0.273	Ektron Windows Service 4.0	4.0.0.0
Ektron Windows Service 2.0	Not installed	IIS Version	7.5
Ektron Windows Service 3.0	Not installed	Visual Studio Version	Visual Studio Not installed on this server

- **License**. License key, status, expiration date, enabled features, maximum users

License Key	smacdonald1(exp-2011-07-03)(EN)(E)(XML)(users-unlimited)?1281072441123725254603027174-8		
License Key Status	OK	Enabled Features	eWebEditPro+XML
Expiration Date	7/3/2011 12:00:00 AM	Maximum Users	unlimited

- **Settings**. Active Directory, SMTP port, and DMS settings

SMTP Server	localhost	Active Directory User	
SMTP Port	25	Active Directory Pass	
SMTP User		DMS Storage Location	c:\assetlibrary\SMACDONALD1\CMS400Developer\
SMTP Pass		DMS Catalog Location	
Active Directory Enabled	true	DMS Catalog Name	
Active Directory Advanced Config	false	DMS User	
Active Directory Authentication Protocol	None	DMS User Domain	SMACDONALD1

- **Database**. Connection status, Test query, SQL version, Database server, Database name, Integrated Security (true/false).

Connection	OK	Database Server	SMACDONALD1
Test Query	OK, 1 rows returned from Settings table	Database Name	CMS400Developer
SQL Version	Microsoft SQL Server 2008 R2 (RTM) - 10.50.1600.1 (X64) Apr 2 2010 15:48:46 Copyright (c) Microsoft Corporation Developer Edition (64-bit) on Windows NT 6.1 <X64> (Build 7600:)	Integrated Security	false

- **Connections**. Status of the following services:
  - server controls Web service
  - content Web service
  - content service
  - indexing service
  - Windows services 2.0, 3.0, and 4.0

Server Controls Web Service	Connected	Windows Services 2.0	Service not found
Content Web Service	Error, unexpected return from service	Windows Services 3.0	Service not found
Content Service	Error, unexpected return from service	Windows Services 4.0	Service status: Running
Indexing Service	Service status: Running		

- **Security**. Information for the 10 default accounts installed with an Ektron sample site.
  - if user exists
  - if default password was changed

  See also: *Securing Ektron* on page 53

Admin	User exists with default password.	*explorer*	User exists with default password.
Admin2	User does not exist.	*spanish*	User does not exist.
Admin3	User does not exist.	*jedit*	User exists with default password.
jadmin	User does not exist.	*jmember*	User exists with default password.
vs	User exists with default password.	*supermember*	User exists with default password.

- **Permissions**. User permission settings for these DMS folders:
  - asset library*servername**site name*
  - *siteroot*\\assetmanagement\\dmdata
  - *siteroot*\\assets

  See also: *Checking document management permissions* on page 665

Permissions for Key Directories

Account	Full Control	Modify	Create Files	Create Folders	Delete	Read	Read Data	Read Attributes	Read Extended Attributes	Write	Write Attributes	Write E
Folder: c:\assetlibrary\SMACDONALD1\CMS400Developer\ (5 items)												
NT AUTHORITY\NETWORK SERVICE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BUILTIN\Administrators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
CREATOR OWNER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
NT AUTHORITY\SYSTEM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BUILTIN\Users	☐	☐	☐	☐	☐	✓	✓	✓	✓	☐	☐	
Folder: c:\inetpub\wwwroot\CMS400Developer\AssetManagement\dmdata (7 items)												
Folder: c:\inetpub\wwwroot\CMS400Developer\assets (7 items)												

- **Events**. The Windows Event Log
  - each event includes: event, event type, time of occurrence, description, source
  - sorted by log name

Event Log Entries

Type	Time Generated	Description (Click for more)	Source
LogName: Application (50 items)			
Warning	6/8/2011 12:51:56 AM	Failed to connect to server. Error: 0x80070005	MsiInstaller
Information	6/8/2011 12:51:56 AM	Windows Installer reconfigured the product. Product Name: Mi	MsiInstaller
Warning	6/8/2011 12:51:56 AM	Failed to connect to server. Error: 0x80070005	MsiInstaller
Information	6/8/2011 12:51:56 AM	Windows Installer reconfigured the product. Product Name: Mi	MsiInstaller
Warning	6/8/2011 12:51:56 AM	Failed to connect to server. Error: 0x80070005	MsiInstaller
Information	6/8/2011 12:51:56 AM	Windows Installer reconfigured the product. Product Name: Mi	MsiInstaller

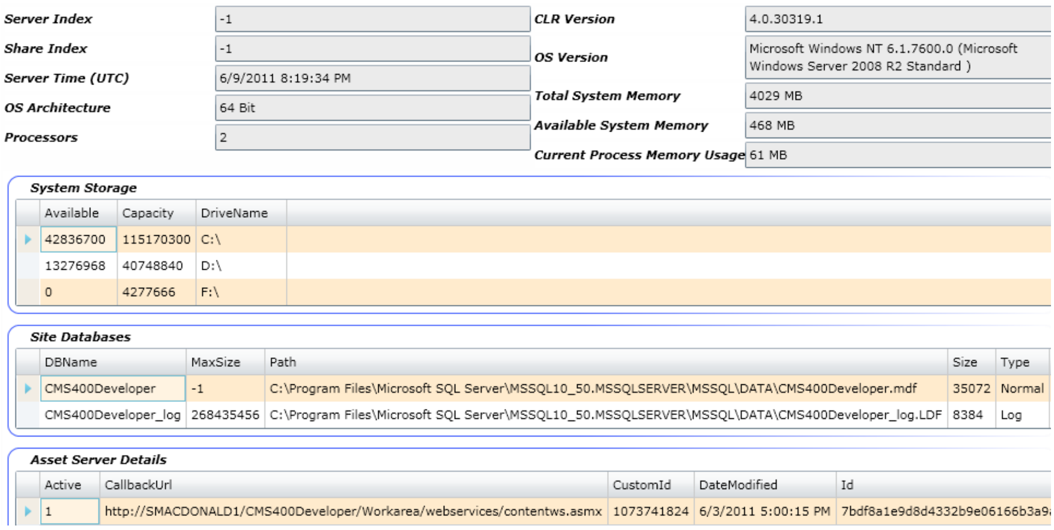
- **Authentication**. Active Directory and LDAP settings

  See also: *Using Active Directory with Ektron* on page 1472, *Using LDAP with Ektron* on page 1498

Active Directory		**LDAP**	
Enabled	true	*Enabled*	true
Integration	False	*Authentication*	False
Advanced Enabled	false		
Authentication	False		

Server details

The **Server Details** tab provides information about the selected server.

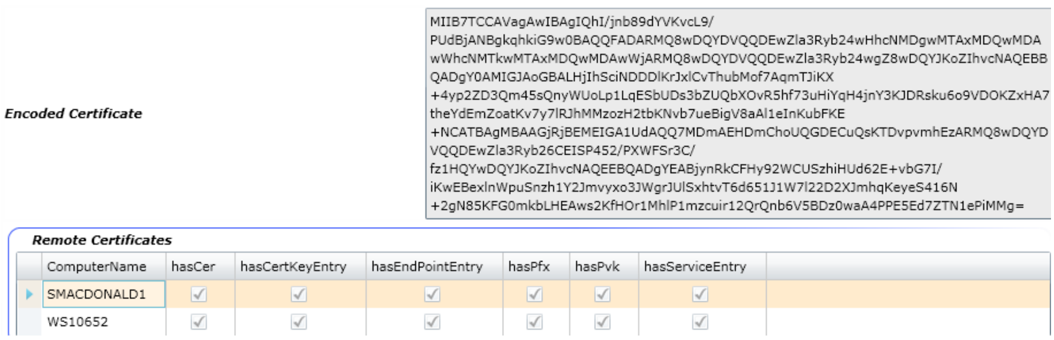


The tab displays the following information.

- Server index
- Share index
- Server time (UTC)
- OS architecture (32 or 64 bit)
- Number of Processors
- CLR Version
- OS version
- Memory: total, available, current process usage
- System storage: for each drive, the capacity and available space in megabytes
- Site databases: name, Maximum size, location, size and type
- Your website's asset server: callback URL, ID, date modified, and so on.

Sync certificates

Use this tab to view the site's encoded eSync certificate, copied from the `web.config` file.

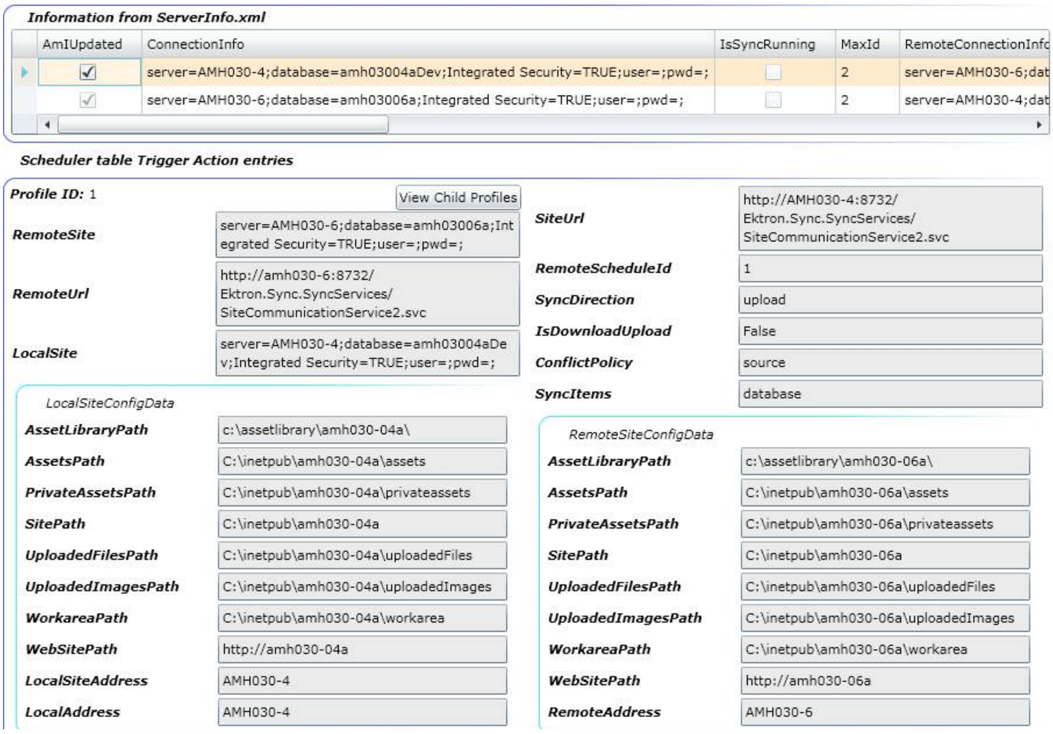


The tab also displays all remote certificates for this server. Checks in the lower section indicate the presence of certificate files on all servers. See also: *Managing eSync security certificates* on page 1838.

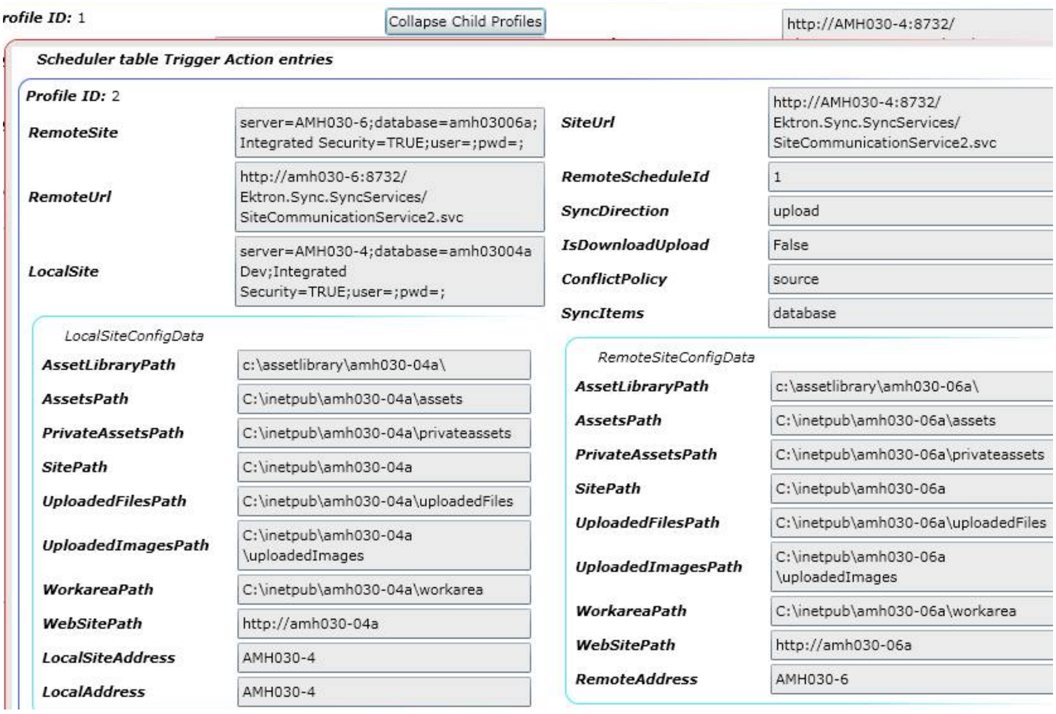
NOTE: The tab does not indicate if the certificates on the servers in the sync relationship match.

Sync scope

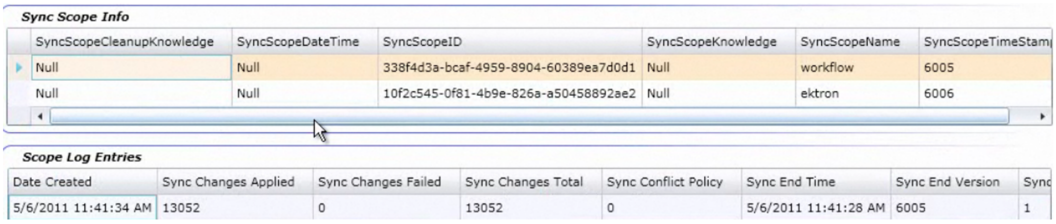
The Sync Scope tab retrieves details from the serverinfo.xml file. The tab also shows information about saved eSync profiles. See also: *Setting up eSync profiles* on page 1829.



Here is an example of what appears when you click **View Child Profiles**.



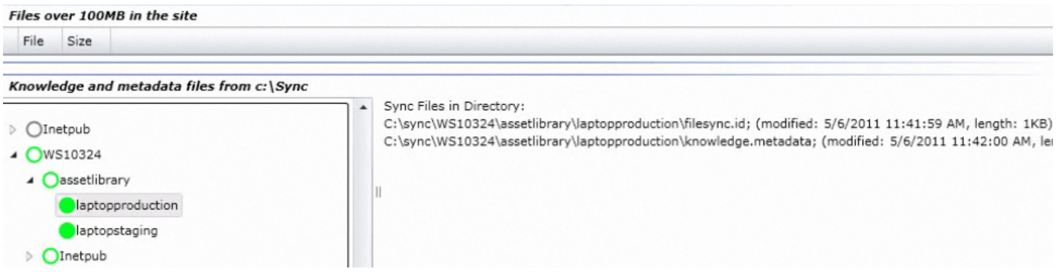
The bottom section of the **Sync Scope** tab shows information for the eSync Logs. See also: *Viewing eSync activity* on page 1866.



Site details

The Site Details tab shows Files over 100 MB in the site and the Knowledge and Metadata Files Screen.

- Gray circle. No files to view
- Green circle. You can view files under that server and its folders



Files over 100 MB in the site

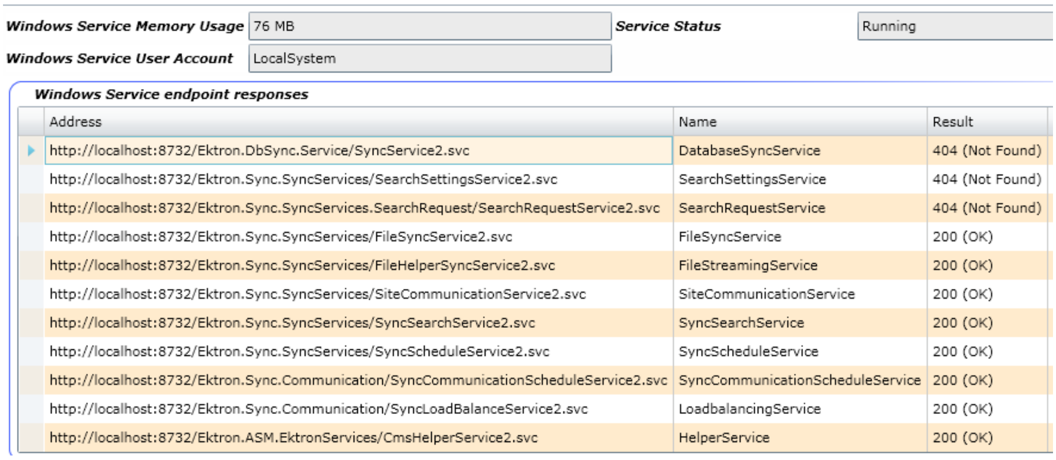
This tab highlights website files that exceed 100 MB. Files of this size may cause problems when synchronizing or Load Balancing. This tab makes it easy to locate such files.

Knowledge and Metadata Files screen

Use this section to view eSync Knowledge and Metadata files, which can be used to troubleshoot problems with eSync relationships.

Service status

The Service Status tab provides information about EWS (Ektron Windows Service). It also lets you stop and start the service. See also: *Handling background processing functions with the Ektron Windows Service* on page 128



Windows Service Memory Usage	76 MB	**Service Status**	Running
Windows Service User Account	LocalSystem		

Windows Service endpoint responses

Address	Name	Result
http://localhost:8732/Ektron.DbSync.Service/SyncService2.svc	DatabaseSyncService	404 (Not Found)
http://localhost:8732/Ektron.Sync.SyncServices/SearchSettingsService2.svc	SearchSettingsService	404 (Not Found)
http://localhost:8732/Ektron.Sync.SyncServices.SearchRequest/SearchRequestService2.svc	SearchRequestService	404 (Not Found)
http://localhost:8732/Ektron.Sync.SyncServices/FileSyncService2.svc	FileSyncService	200 (OK)
http://localhost:8732/Ektron.Sync.SyncServices/FileHelperSyncService2.svc	FileStreamingService	200 (OK)
http://localhost:8732/Ektron.Sync.SyncServices/SiteCommunicationService2.svc	SiteCommunicationService	200 (OK)
http://localhost:8732/Ektron.Sync.SyncServices/SyncSearchService2.svc	SyncSearchService	200 (OK)
http://localhost:8732/Ektron.Sync.SyncServices/SyncScheduleService2.svc	SyncScheduleService	200 (OK)
http://localhost:8732/Ektron.Sync.Communication/SyncCommunicationScheduleService2.svc	SyncCommunicationScheduleService	200 (OK)
http://localhost:8732/Ektron.Sync.Communication/SyncLoadBalanceService2.svc	LoadbalancingService	200 (OK)
http://localhost:8732/Ektron.ASM.EktronServices/CmsHelperService2.svc	HelperService	200 (OK)

This screen tells you

- how much memory the service is using
- the user account under which it runs
- its status
- the name, address, and status of each internal Web service that EWS is running

Assets

The Assets tab display a recursive list of assets under each folder.

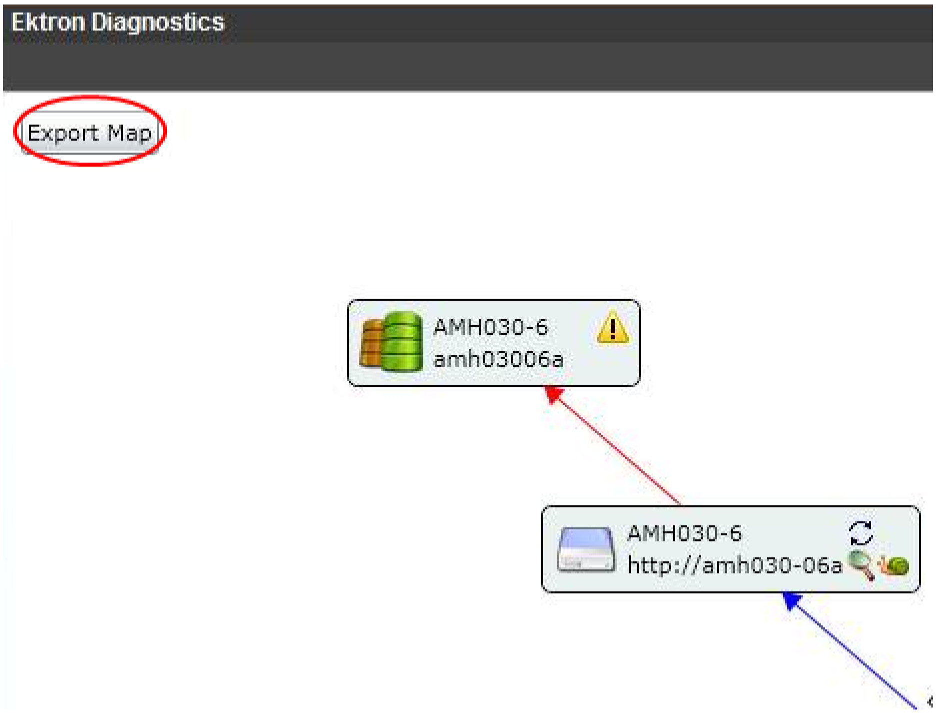
Recursive file count in root folders:

Folder	RecursiveFileCount
c:\inetpub\wwwroot\CMS400Developer\widgets	837
c:\inetpub\wwwroot\CMS400Developer\Developer	763
c:\inetpub\wwwroot\CMS400Developer\StarterApps	476
c:\inetpub\wwwroot\CMS400Developer\uploadedimages	165
c:\inetpub\wwwroot\CMS400Developer\bin	162
c:\inetpub\wwwroot\CMS400Developer\images	137
c:\assetlibrary\SMACDONALD1\CMS400Developer\	65
c:\inetpub\wwwroot\CMS400Developer\assets	64
c:\inetpub\wwwroot\CMS400Developer\App_Code	61
c:\inetpub\wwwroot\CMS400Developer\AssetManagement	61
c:\inetpub\wwwroot\CMS400Developer\App_WebReferences	47
c:\inetpub\wwwroot\CMS400Developer\ImageGallery	37
c:\inetpub\wwwroot\CMS400Developer\PrivateAssets	7
c:\inetpub\wwwroot\CMS400Developer\App_Data	4

Exporting diagnostic information

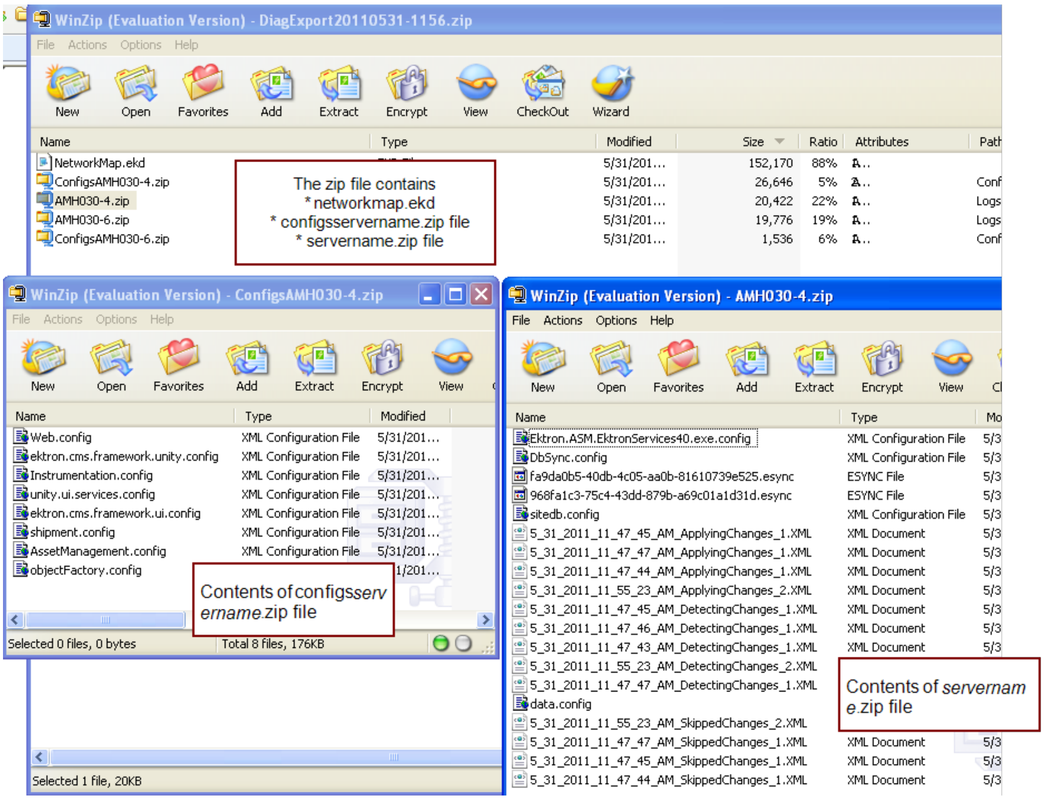
You can capture, save, and export diagnostic information for comparison with previous and future versions, or send it to Ektron's Support staff for diagnosis.

To capture Diagnostics information, click **Export Map**.



The exported file also includes a copy of configuration files and logs for servers in your website's network. This information is packed into a .zip file for easy storage and transfer. The .zip file contains the following information:

- other zipped files, which contain the captured configuration and log files.
- a `NetworkMap.ekd` file. You can load this file in the Diagnostic utility, in the Silverlight viewer, or in a text editor, such as Notepad (the saved data is XML.)



Viewing exported diagnostic information

PREREQUISITE

The location of the exported map file on your computer. The file's name is `DiagExportdate-time.zip`.

1. Go to **Workarea > Settings > Configuration > Diagnostics > Load Save**.
2. Go to the saved `DiagExportdate-time.zip` file.
3. Click **Open**.
4. Click any node to view its information.

NOTE: You can also use the `C:\Program Files (x86)Ektron\EktronDiagnosticsService\Tools\EktronDiagnosticsWPF.exe` to view a `networkmap.ekd` file.

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39

Using the eWebEdit400 editor

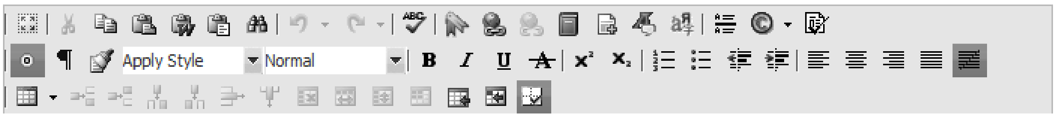
The eWebEdit400 editor is a Web content editor designed for dynamic websites that lets you create and publish Web content. You can use the eWebEdit400 editor on Windows and Macintosh operating systems.

Although you can still use the eWebEdit400 editor, it is not the default editor since Ektron Version 8.7. For information about the default editor, see *Editing in Ektron* on page 553.

To learn how to select an editor for users, or let them choose it themselves, see *Changing the default editor* on page 582.

Working with tables in eWebEdit400 on page 1940 has more information about working with tables in the eWebEdit400 editor.

eWebEdit400 Toolbar



When you cut, copy and paste from *Microsoft Word*, you can preserve the styles, class attributes, and HTML tags by following these steps:

1. In the Workarea, choose **Settings > Configuration >Setup**. The Application Setup screen appears.
2. Click **Edit**.
3. Click the **Editor** tab.
4. Check the boxes: **Preserve MS-Word Styles** and **Preserve MS-Word Classes**.

eWebEdit400 functions

- **Select All** (**Ctrl/a**). Select all content
- **Cut** (**Ctrl/x**). Remove selected text and graphics. Place that data into temporary memory, also known as the "clipboard." (If you later cut or copy more information onto the clipboard, the new information overwrites the original information.)
- **Copy** (**Ctrl/c**). Copy selected text and graphics into temporary memory. Leave selected data where it is. (If you later cut or copy more information into memory, the original information is lost.)
- **Paste** (**Ctrl/v**). Insert the most recently cut or copied text and graphics at the current cursor location.
- **Paste from Word**, Cleaning Fonts & Styles. Designed for pasting Microsoft Word content, this button strips fonts and classes. For example, if you use the Paste button, Word content contains these tags.

```
<p class="MsoNormal" style="MARGIN: 0in 0in 0pt">
<span style="BACKGROUND: lime; mso-highlight: lime">
```

```
<font size="3">
<font face="Times New Roman">
```

But if you paste that content using this button, only `<p>` tags are preserved.

- **Paste Plain Text**. Paste the clipboard's contents as plain text. That is, all HTML tags (including images) are stripped out. This button is helpful when you want to eliminate HTML formatting from the copied text.
- **Find and Replace**. Launch the Search and Replace dialog box. The dialog searches for (and lets you optionally replace) text that you specify. See *Finding and replacing text* on page 1924.
- **Print** (**Ctrl/p**). Print the editor content.
- **Undo** (**Ctrl/z**). Reverse the most recent action, as if it never occurred. You can undo as many actions as you wish.
- **Redo** (**Ctrl/y**). Reverse the undo action.
- **Spell Check**. Begin spell checker. See *Checking spelling* on page 1926.
- **Anchor Tag**. Insert a bookmark anchor. See *Using bookmarks* on page 1926.
- **Add/edit Hyperlink**. Change information about a hyperlink. *Using hyperlinks* on page 1928.
- **Remove Hyperlink**. Remove a hyperlink.
- **Library**. Insert a library file. See *Working with files in the library* on page 673.
- **Add Wiki Link**. Create a wiki link. See *Using the wiki feature* on page 1931.
- **Localize Section**. Designate sections of content for certain languages only. *Creating one or more localized paragraphs* on page 1419.
- **Translate**. Translate content into another language. See *Using machine translation* on page 1416.
- **Horizontal Line**. Insert a horizontal line.
- **Insert Symbol**. Insert symbols and special characters.
- **Validate**. Check content for adherence to XHTML and accessibility standards.
- Hide/Show Elements. Toggle to show/hide temporary markers in content.
- Apply CSS Cl **Apply CSS Class**. Display a list of style sheet classes. Users can select from the list to apply a class to selected text. The list can change depending on the selected text. Your Webmaster determines which styles are available.
- Normal **Paragraph Style**. Display a list of paragraph styles. Users can select from the list to apply a style to selected text. The list can change

depending on the selected text. Your Webmaster determines which styles are available.

- **Bold** (**Ctrl/b**). Make selected text **bold**.
- **Italic** (**Ctrl/i**). Make selected text *italic*.
- **Underscore** (**Ctrl/u**). Make selected text underlined.
- **Strikethrough**. Apply strikethrough to selected text. For example: ~~Here is some text~~
- **Superscript**. Make selected text appear smaller and above text line.
- **Subscript**. Make selected text appear smaller and below text line.
- 2 **Relative Font Size**. Change the relative font size. Your Webmaster determines which relative font sizes are available.
- Verdana **Font Style**. Change the font style. Your Webmaster determines which fonts are available.

NOTE: If more than one font appears in a selection, the browser on the reader's PC tries to display text using the first font. If the browser cannot find that font, it tries to use the second, and so on. Your system administrator can enable or disable the font toolbar buttons (style, size, color, and background color).

- 10pt **Font Size**. Change the font size in points. Your Webmaster determines which font sizes in points are available.
- **Font Color**. Change the font color.
- **Background Color**. Change the background color of the selected content.
- **Number**. Begin the line on which the cursor rests with a number. If the line above this line is:
  - not numbered, assign this line 1
  - numbered, assign a number one more than the line above

NOTE: The Number toolbar button applies a number to each paragraph. If you want to switch to regular (that is, non-numbered) paragraphs, click the button a second time

- **Bullet**. Begin the line on which the cursor rests (or all selected lines) with a bullet.

NOTE: The Bullet toolbar button applies a bullet to each paragraph. If you want to switch to regular (that is, non-bulleted) paragraphs, click the button a second time.

- **Indent**. Increase or decrease the current line's distance from the left margin.

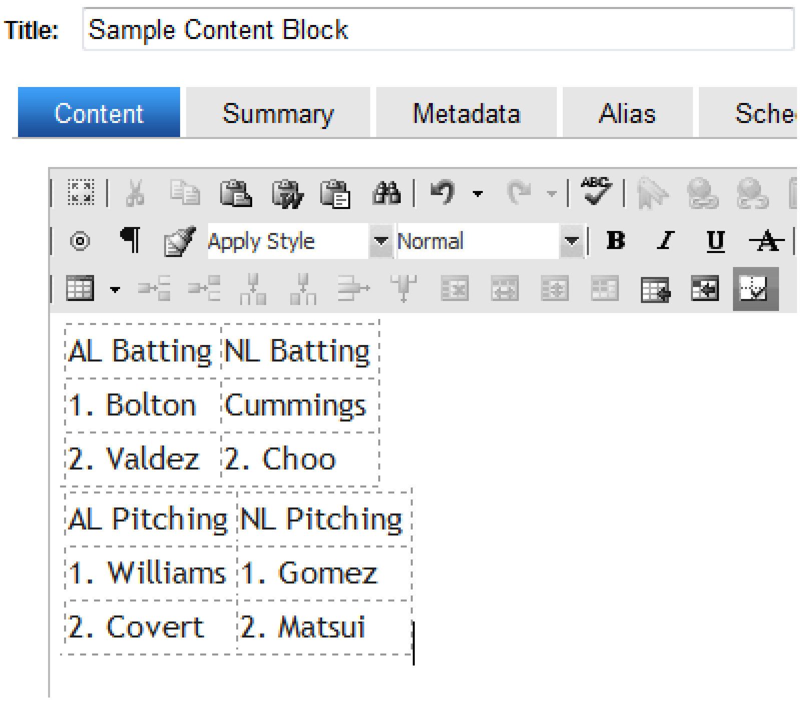
- **Left, Center, and Right Justify**. Align paragraph so that it is arranged evenly on the...
  - left side (uneven on the right)
  - in the center of each line
  - evenly on the right side (uneven on the left)
  - evenly on right and left side

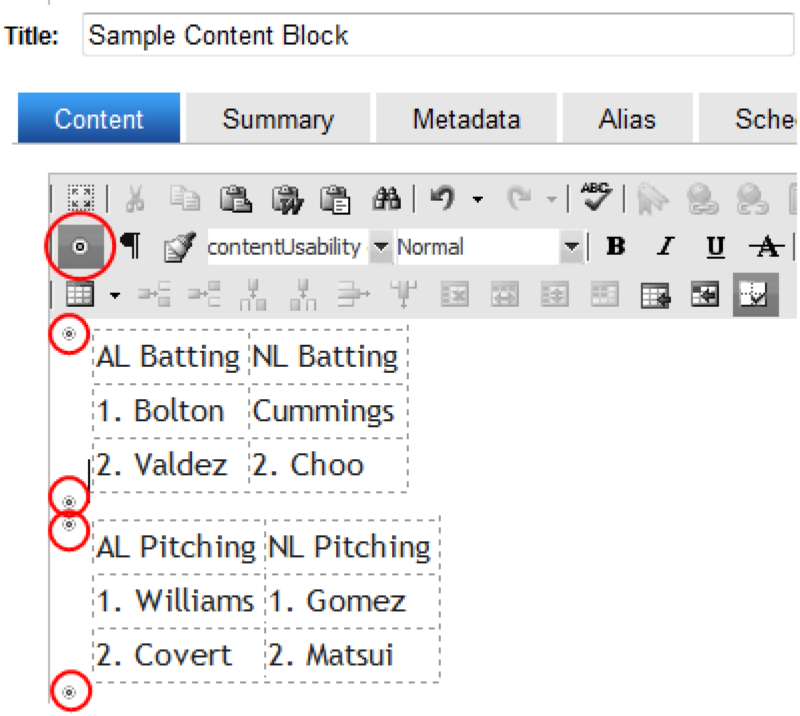
  Use the last button to remove justification.
- **Insert table**. Insert a table. See: *Working with tables in eWebEdit400* on page 1940
- **Insert row above**. Insert a new row above current one (that is, the one in which the cursor currently resides).
- **Insert row below**. Insert a new row below current one (that is, the one in which the cursor currently resides).
- **Insert column left**. Insert a new column to the left of the current one.
- **Insert column right**. Insert a new column to the right of the current one.
- **Delete row**. Delete current row.
- **Delete column**. Delete current column.
- **Delete cell**. Delete current cell.
- **Merge cells horizontally**. Merge current cell with cell to its right.
- **Merge cells vertically**. Merge current cell with cell below it.
- **Split cell**. Divide a cell into two. After you split, each cell occupies one half the size of the original cell.
- **Table properties**. Adjust a table's properties.
- **Cell properties**. Adjust properties of current cell.
- **Show/hide border**. Display/suppress internal table border.

Using temporary markers

Temporary markers let you insert your cursor in a place that is otherwise inaccessible. For example, if 2 tables are adjacent to each other, you cannot insert text between them without temporary markers. You can click on any marker and begin inserting new content. When you save, temporary markers are removed.

To toggle temporary markers on and off, click **Hide/Show Elements** ().

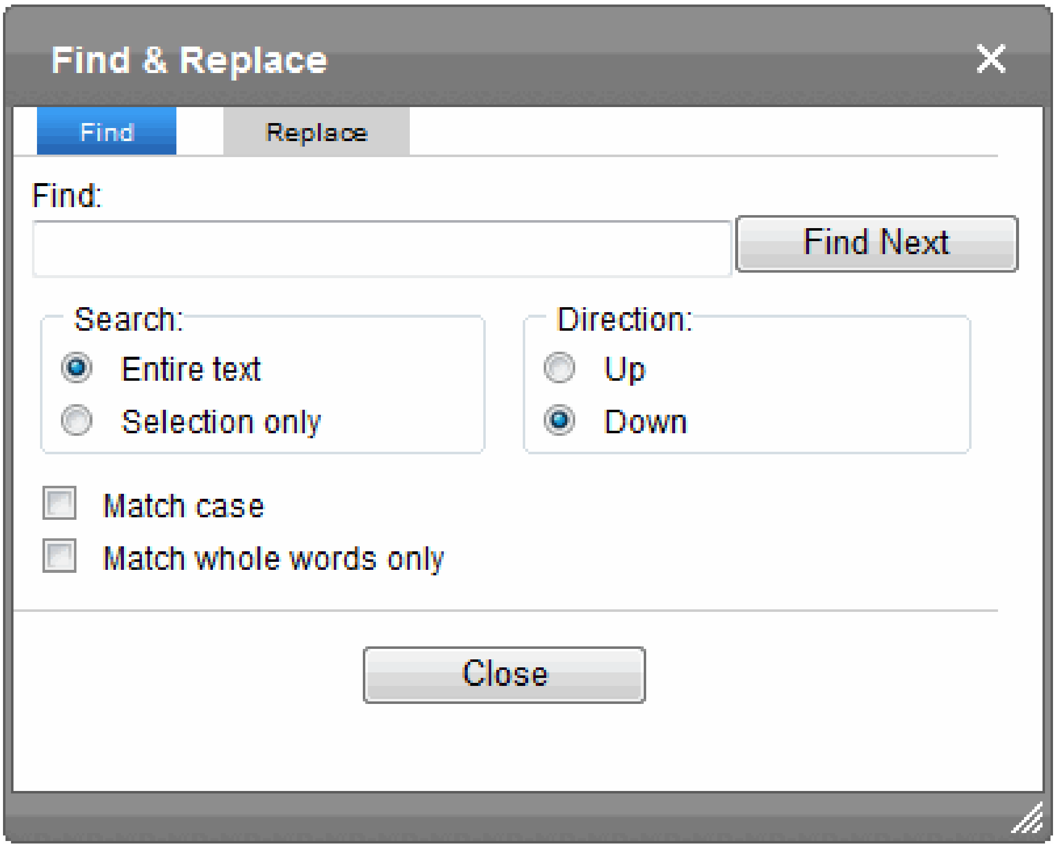




NOTE: Your Ektron system administrator can use the `siteroot/web.config` file's `ek_ShowTemporaryMarkers` element to enable (`true`) or disable (`false`) temporary markers for all users.

Finding and replacing text

To find (and optionally replace) text, click **Find and Replace** (). The Find and Replace dialog box appears.



In the **Find** field, type the text you want to find.

1. Click the **Replace** tab.
2. In the **Replace With** field, type the replacement text.
3. Set dialog box options.
   - **Selection only**. operates on a selected portion of content.
   - **Direction**. Search from the current cursor location up (backwards) or down (forwards).
   - **Match case**. The search must match the string exactly.
   - **Match whole words only**. Find only whole words. By default, the search finds any occurrence of the text that you type into the **Find** field. For example, if you enter *the*, the search finds the word *the*, as well as those letters embedded in other words, such as o*the*rs and *the*ater.
4. If you want to...
   - replace all occurrences of the "find" text with the "replace" text, click **Replace All**.

     NOTE: You can undo replacements one at a time using the Undo button ( ).

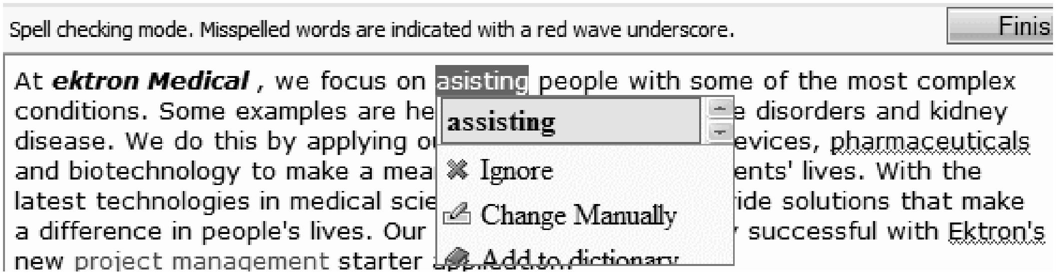
   - replace only the highlighted term with the "replace" text, click **Replace**.
   - find the next occurrence of the "find" text (and optionally replace it with the "replace" text), click **Find Next**.

- change the highlighted term using the editor, exit the Find and Replace dialog, move to the term and edit as needed. To restart the search, press the Find button ().

Continue to find and optionally replace or edit until you reach the end of the text.

Checking spelling

To begin spell checking, click the spell check button (). eWebEdit400 puts a red line under each word that's not in the dictionary. Then, it stops at the first misspelled word and displays your options for fixing the problem. Instead of stopping at every misspelled word, you can place the cursor on any highlighted word. When you do, its spelling options appear.



NOTE: The FireFox browser has its own spell check software. To eliminate confusion between eWebEdit400's and Firefox's spell checker, you can disable Firefox's by choosing **Tools > Options dialog > General Tab** and unchecking the **Check my spelling as I type** check box.

If you are done before fixing every misspelled word, click **Finish spell checking** from the toolbar. Your changes are saved, and you return to edit mode. If you want to exit the spell checker and ignore all changes you have made since beginning it, click **Cancel** (circled above) at any time.

Using bookmarks

A bookmark lets you "jump" from any word or phrase to another place in the same content block. On your Web page, text appears in a different color to indicate the bookmark. Bookmarks are helpful if your page is long.

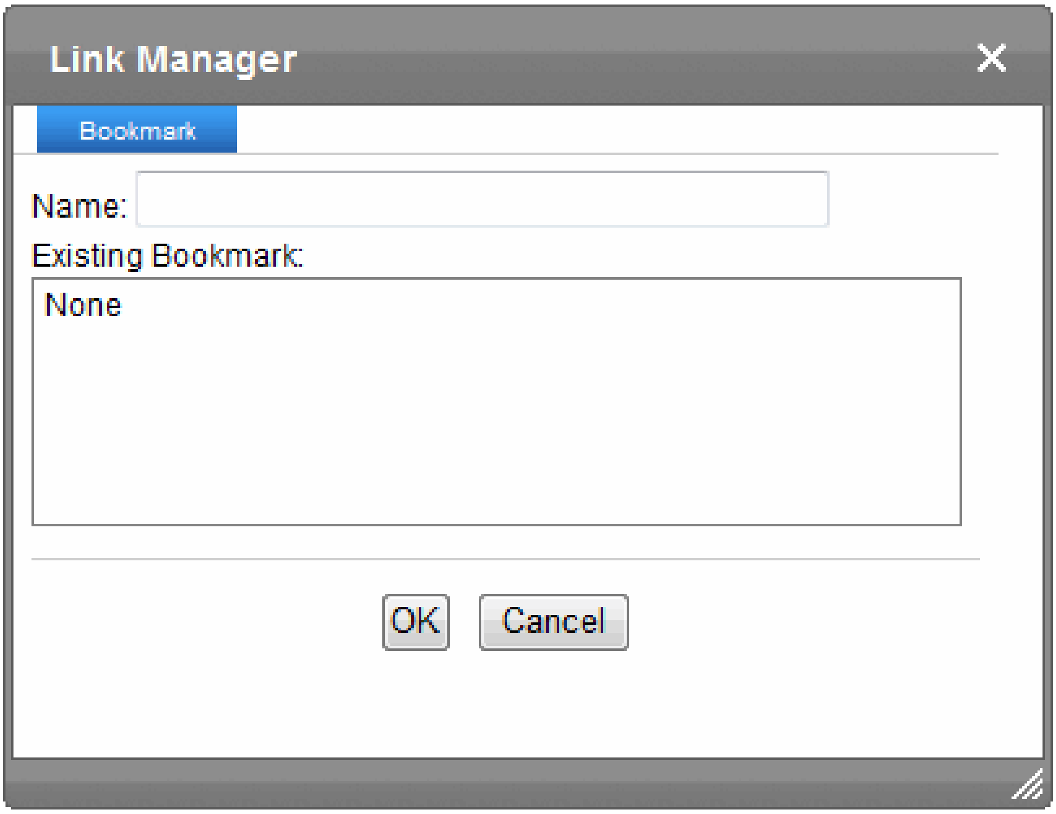
To create a bookmark, you must specify:

- a *source*—the text a user clicks to move to the bookmark
- a *bookmark*—the destination to which the cursor jumps when a user clicks the source

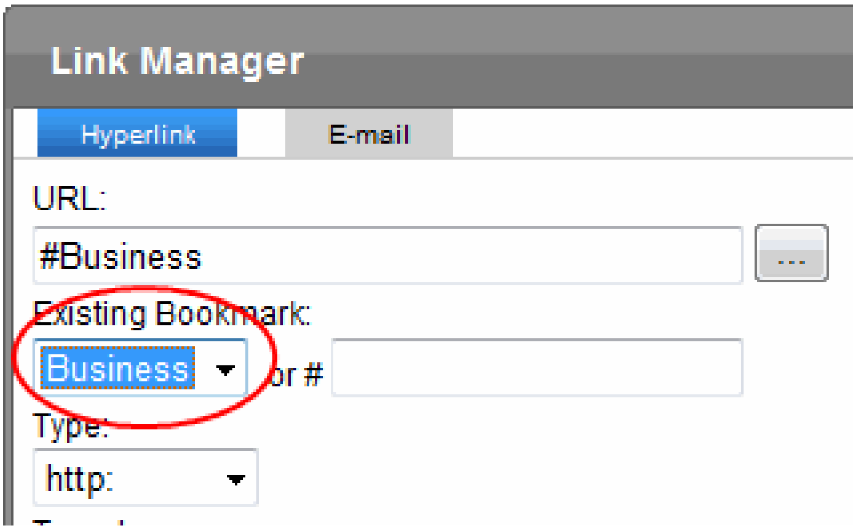
For example, if your Web page contains minutes from several meetings, the top of the page could list the meeting dates. You could then assign a hyperlink (source) to each date and a bookmark to each set of minutes. The user sees that a date is in a different color, so clicks it to "jump" (using the bookmark) to the correct minutes.

To create a bookmark:

1. Place the cursor where you want to create the bookmark..
2. Click **Insert Bookmark** ( ). The Link Manager dialog appears with the **Bookmark Tab** selected.



3. Enter a name for the bookmark and click **OK**. The editor screen redisplays. (The bookmark does not appear on the page.)
4. Select the source text that will link to the bookmark that you created..
5. Click **Hyperlink Manager** ( ). The Hyperlink Manager dialog appears with the **Hyperlink** tab selected.
6. Click the down arrow on the **Existing Bookmark** field and click the bookmark you created.



7. Optionally set the **Target Frame** field on the Hyperlink Manager dialog to change the window that displays the destination page.
   - **New Window**. Appears in a new browser window, on top of the current browser.
   - **Same Window** (default). Appears in the same position within the browser window. The new window replaces the current one.
   - **Parent Window**. Appears if your page contains frames, in the frame that contains the frame with the hyperlink.
   - **Browser Window**. Appears if your page contains frames, in the full display area, replacing the frames.
8. Click **OK**.

Using hyperlinks

A hyperlink lets you "jump" from any word or phrase to another Web page. The page can be within your network (that is, on an intranet) or anywhere on the internet.

To create a hyperlink, specify:

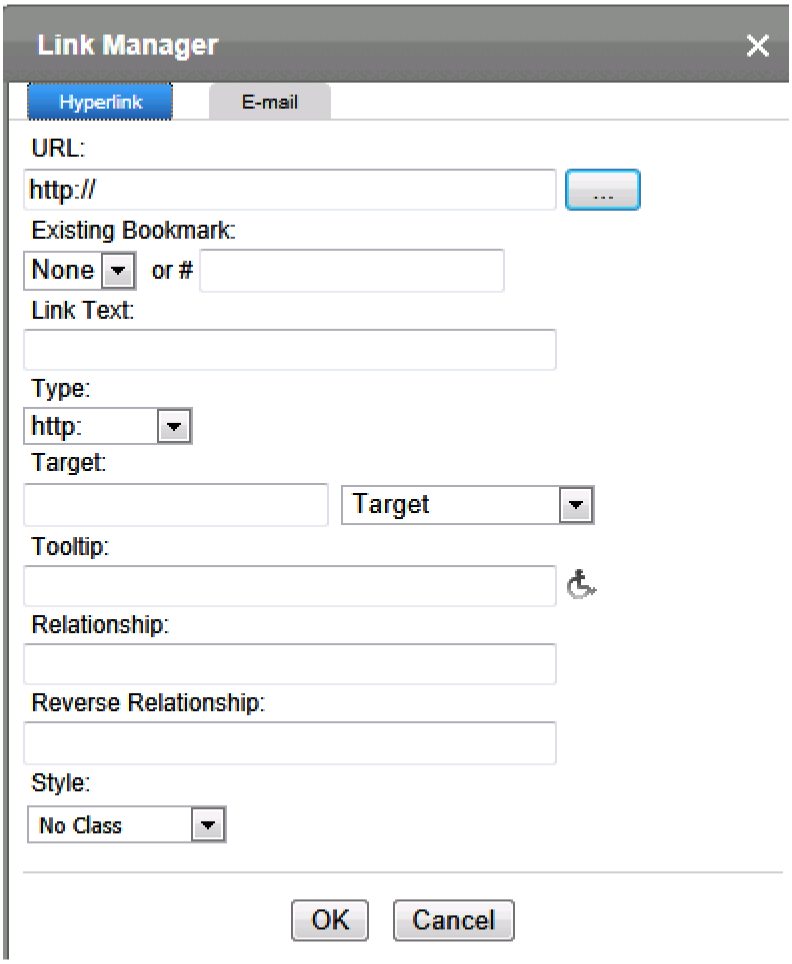
- a *source*—the text a user clicks to move to the bookmark
- a *destination*—the destination to which the cursor jumps when a user clicks the source

NOTE: To create jumps within a content block, see *Using bookmarks* on page 1926.

Creating a hyperlink

To create a hyperlink:

1. Select the source text. (You can also select an image as a hyperlink.)
2. Click **Hyperlink Manager** ( ). The Link Manager dialog appears.

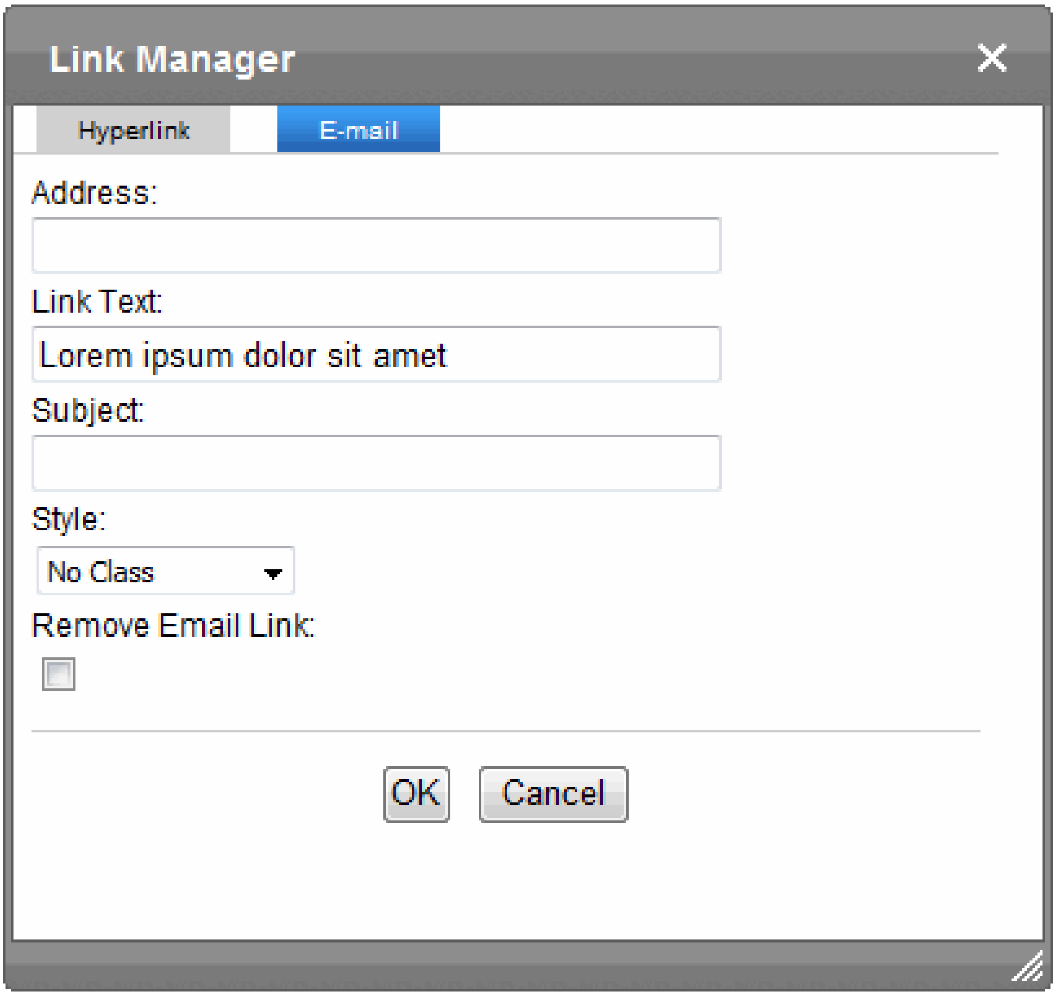


3. In the **URL** field, after `http://`, enter the address of the destination Web page. For example, `world.Optimizely.com/ektron/`. If your Ektron library includes a hyperlink that you want to apply, click the ellipsis button (...) to browse the library and choose one.
4. Optionally set the **Target Frame** field to change the window in which the destination text appears. If you leave the **Target Frame** field blank, the new window replaces the current window.
5. Optionally enter "hover over" text in the **Tooltip** field.
6. If desired, use the **Relationship** field to set the link's `rel` attribute. See also: HTML <a> rel Attribute. And use the **Reverse Relationship** field to set the link's `rev` attribute. See also: HTML <link> rev Attribute
7. The hyperlink's style is normally determined by the style sheet assigned to the content’s page template. However, if you want to apply a special style sheet class to this link, select it from the **Style** drop-down.
8. Click **OK**.

Creating an email hyperlink

An email link resembles a hyperlink. When a site visitor clicks the link, instead of opening a Web page, the person's email application is launched. To create an email hyperlink:

1. Select the source text. (You can also select an image as an email hyperlink.)
2. Click **Hyperlink Manager** ( ). The Link Manager dialog appears.
3. Click the **E-mail** tab. The selected text appears in the **Link Text** field.



4. In the **Address** field, enter the email address of the message recipient.
5. In the **Subject** field, enter default text for the email's Subject line. The user sending the mail can edit it.
6. Click **OK**.

Editing a hyperlink

To change a hyperlink's destination Web page or target frame:

1. Right click on hyperlinked text and choose **Set Link Properties**. The Link Manager dialog appears.
2. Edit the fields as needed and click **OK**.

Removing a hyperlink

- To remove a hyperlink from text, select the text and click **Remove Link** ().
- If you enter a URL or an email address into eWebEdit400, it automatically becomes a hyperlink. To avoid this, select the text and click **Remove Link** ().

Using the wiki feature

The Wiki feature lets registered site visitors (that is, membership users) and Ektron users insert hyperlinks to other content. The hyperlinks can connect to existing content or to content that doesn't exist yet. This collaborative authoring style is used in wiki sites such as Wikipedia, where any author can contribute new content and articles.

There are 2 ways to create a wiki link.

- Surround text with double square brackets (`[[ ]]`). This is quick.
- Use the wiki button (). This has the following advantages:
  - Can link to existing content or create new content
  - Can choose new content's folder

    NOTE: Membership users cannot choose a folder. The new content is created in the same folder as the content being edited.

  - Can change title of new content
  - Can select new window's target frame

To create a wiki link using the wiki button, select the text to which you want to assign a wiki hyperlink. It can be one or several words and click **Add Wiki Link**.

NOTE: The Wiki button only appears if you have permission to add content to the folder that contains the current content.

The Add/Edit Wiki Link screen appears. It has 2 tabs.

- **New Content** tab. Create new content to which you will add information later. The new content item will appear when a site visitor clicks the link text.

  If you want to place the new content item in the folder that contains the text you are editing, do nothing. To place new content in a different folder, click **Change** and go to that folder. You can also edit the **Title** and the **Target Frame**.

  NOTE: Membership users cannot assign a folder. New content is saved to the folder that contains the source content.

- **Related Content** tab. Link to existing content. If you click this tab, Ektron uses the selected text to search your website. All content with that text then appears on the screen. Each content item's title appears followed by its summary. Click the radio button next to the content you want to link to.

To indicate that a wiki has been applied to new content, the text color changes to blue and bold, and small dots appear under the wiki text.

- If you applied a link to related content, a regular hyperlink appears.
- If you link to existing content, the link is the same as quicklink.
- If you are creating new content, Ektron assigns a `<span>` tag to the selected text. For example:

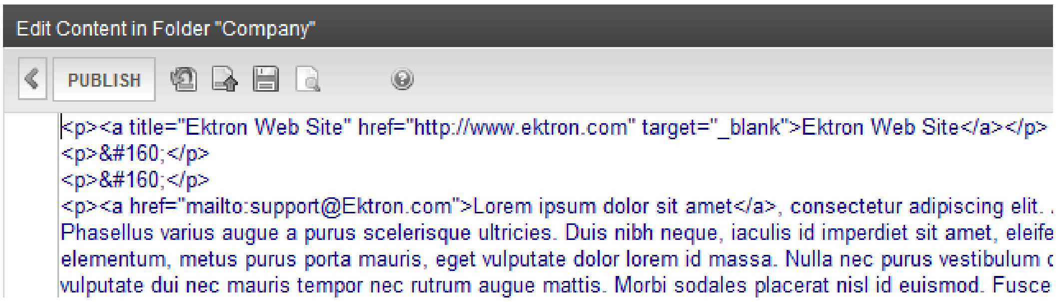
```
<Span class = "makelink">selected text here</span>
```

When the content is published, Ektron does the following:

- Detects the `<span class = "makelink">` tag.
- Finds text surrounded by the `<span>` tag.
- Creates a new content block in the selected folder.
  - its name is typically the selected text. However, if the user used the wiki button, the user can modify the new content block's title on the Add/Edit Wiki Link screen.
  - its initial text is New Content: content for selected text. (Fill in the topic text as you or other collaborators have time.)
- Gets the quicklink for the newly-created content block.
- Opens the original content and replaces the `<span>` tag with the quicklink to newly-created content.

Working with HTML

You do not need to know HTML to use eWebEdit400. However, if you know HTML, you can view, insert or edit your Web page's HTML code by clicking at the bottom of the editor. The HTML code appears.



To return to normal view, click .

Working with images

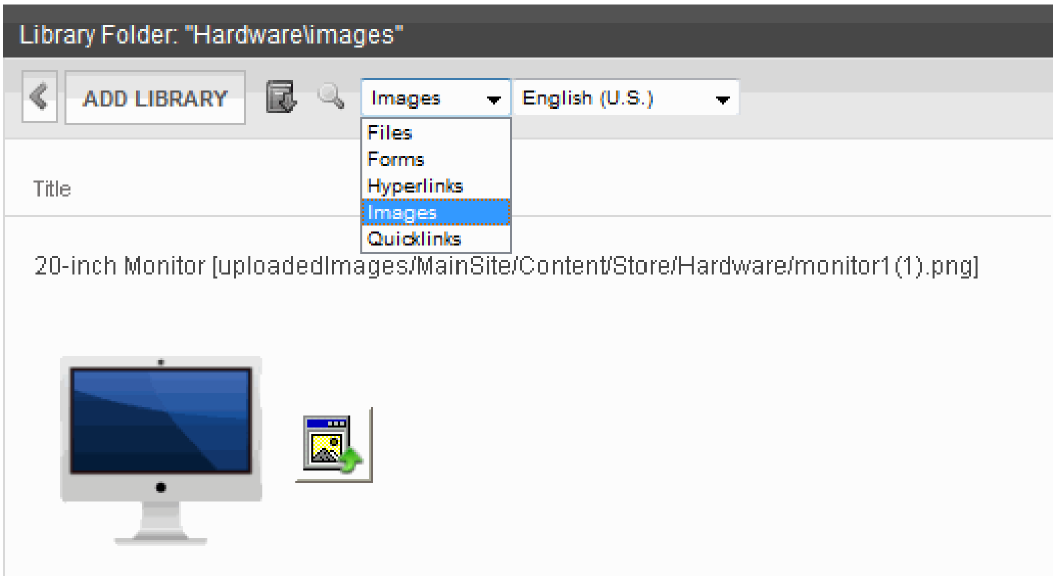
PREREQUISITE

Before you can insert an image into eWebEdit400, the image must be either uploaded to the Library or imported as an asset.

- *Moving or copying content* on page 629 explains how to upload an image to the Library.
- *Methods for importing assets* on page 654 explains how to import an asset.

Inserting an image into the editor

1. Place the cursor where you want the image to appear.
2. Click Library ().
3. From the left panel's folder display, select the folder that contains the image you want to insert. If you don’t know the image’s folder, use the search button () to find the image by title, description, or internal file name.
4. Select **Images** from the content type drop-down.



NOTE: If you are inserting an asset, its content ID number (for example, `assets/1062.jpg`) appears in the Insert Library Item screen.

5. Select an image to insert.
6. Click **Insert** ( ). The image is inserted into the content.

   Alternatively, you can insert a miniature version of the image, called a *thumbnail*, by clicking the thumbnail button ( ). When the thumbnail appears on a Web page, a site visitor can click it to view a full-sized image.

   NOTE: You can change the thumbnail image by right clicking it, selecting **Set Image Properties** and editing the **Image Src** field. If you do that, however, and someone clicks it, the original full-sized image appears. If you want to change both the thumbnail and the full-sized image, delete it then enter a new thumbnail.

To delete an image, click it and click **Cut** ( ).

Editing an image

To edit an image, right click it and choose **Image Modification Tool**.

NOTE: The Image Modification Tool is not available in the default editor. To edit image properties in the default editor, choose **Review > Inspect Properties**, then click the image. The Inspector shows the properties you can edit.

- . Save changes
- . Exit without saving changes
- . Crop image. Drag the box around the area you want to keep and click **Done**.
- . Change image size. Specify the width and height. Check the box to keep the aspect ratio.
- . Rotate image
- . Adjust brightness. Move slider to left to lighten image; to right to darken it.

Setting a border on an image

To add a border around a picture, enter the border's thickness in pixels in the **Border Width** field on the Image Properties dialog.

1 pixel border

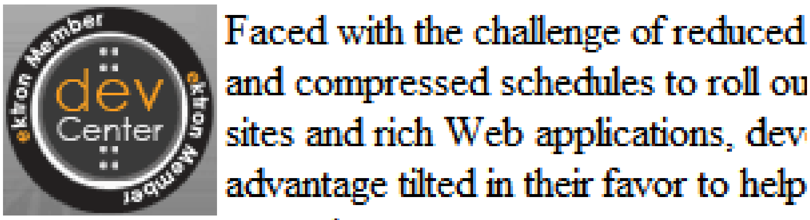
10 pixel border

If the picture is not a hyperlink, its border is black. If the picture is also a hyperlink, the border is the same color as a hyperlink (for example, blue or purple if visited).

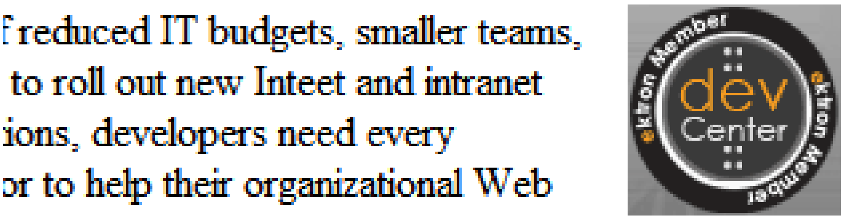
Aligning an image

To align an image , use the **Image Alignment** field on the Image Properties dialog.

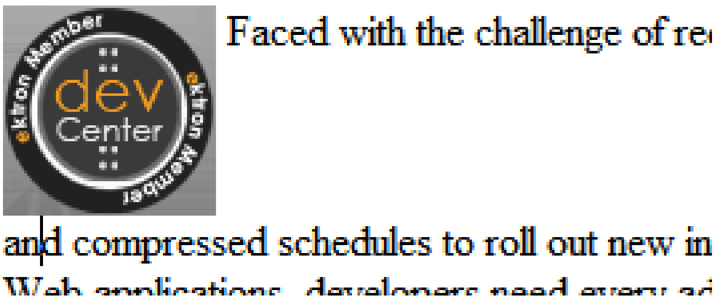
- . The picture on the left margin, allowing subsequent text to wrap around it



- . The picture on the right margin, allowing subsequent text to wrap around it

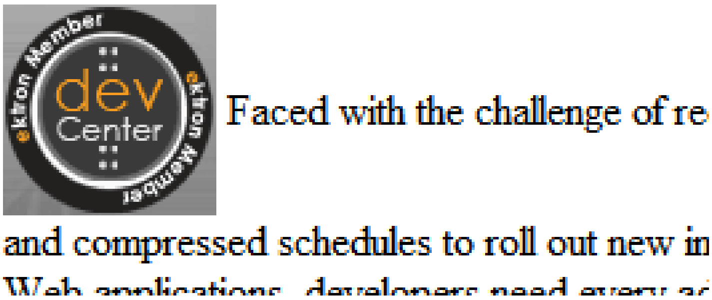


- . The top of the picture with the first line of text

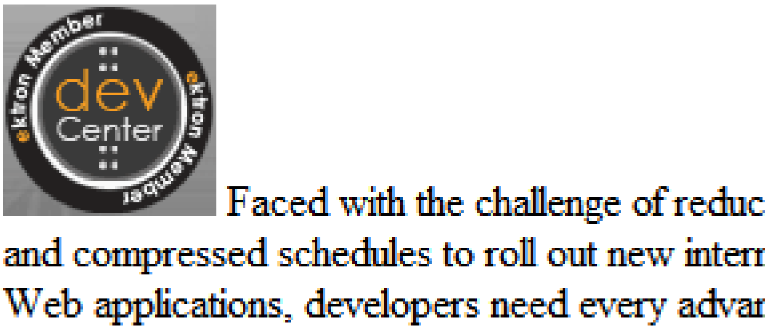


image

- . The vertical center of the picture with the first line of text

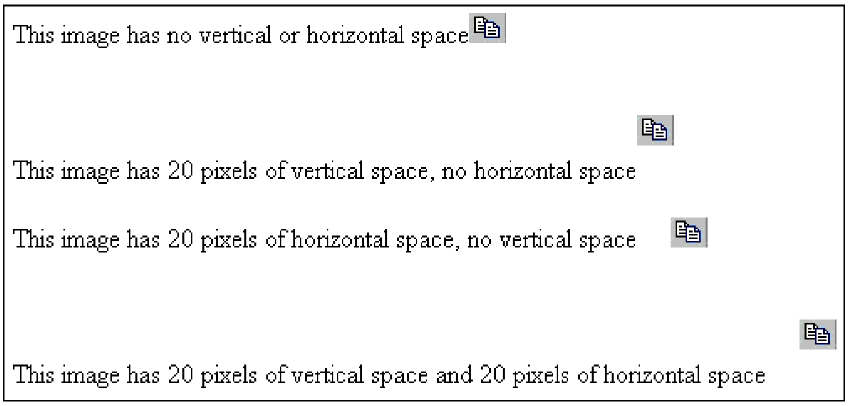


- . The bottom of the picture with the first line of text



Adding space around an image

On the Image Properties dialog box, you can use the **Spacing** fields (**Horizontal** and **Vertical**) to add space around the picture. You enter a number of pixels to determine spacing value.

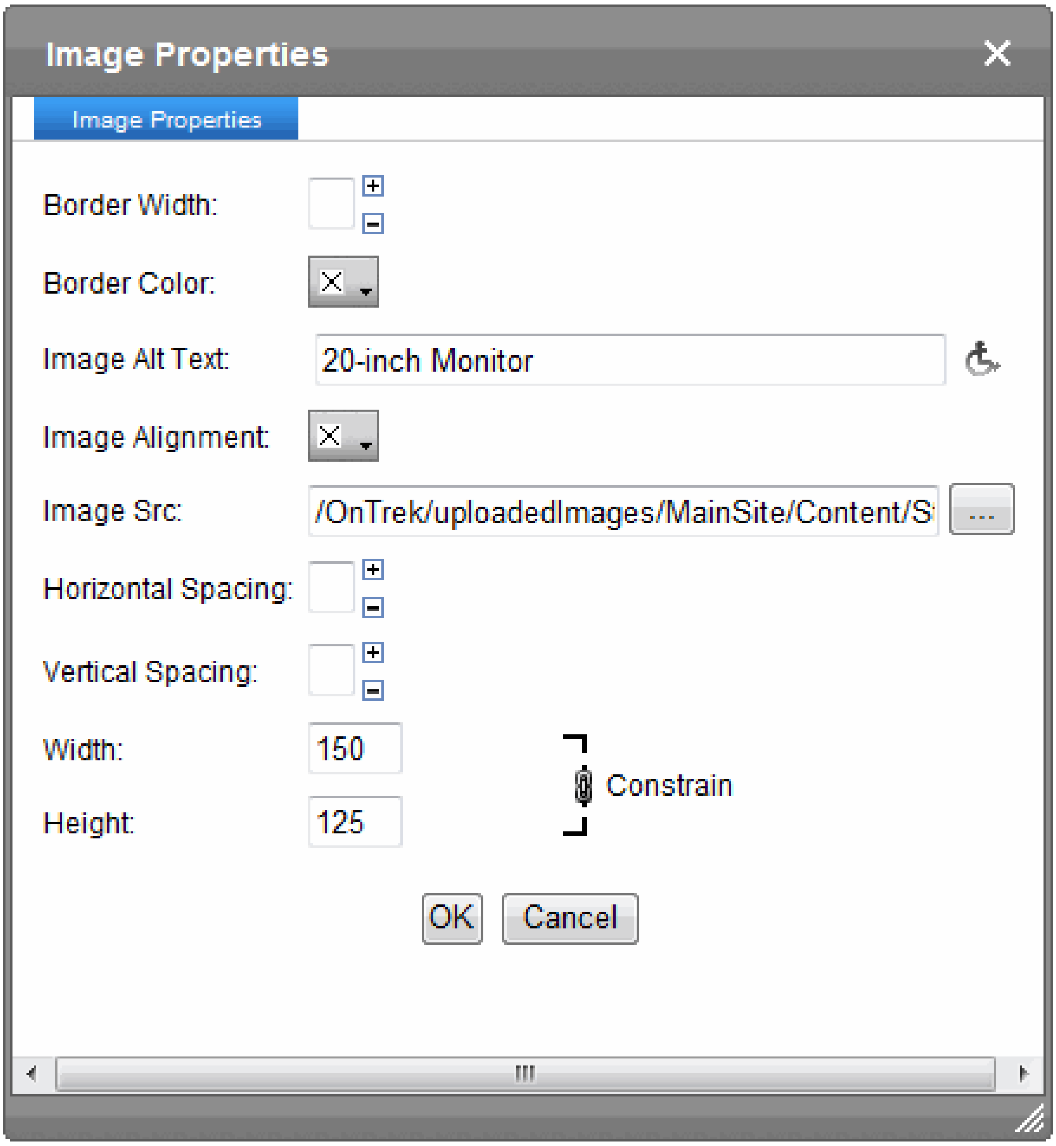


NOTE: When you save an image, a version is placed in the `siteroot/uploaded images/CMS folder` folder. The version is named *filename.nextnumber.file extension*.
For example, if a library image is named ektronlogo.png, and someone inserts it into content and saves it, a new version is created and named `ektronlogo.1.png`. If someone later saves that image in another content block (or even another section of the same content), that version is named `ektronlogo.2.png`. Also, whenever someone edits and saves the image, a new version is created and assigned the next highest number.
These edits have no effect on the original image stored in the library.

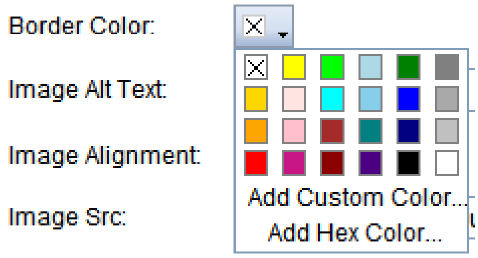
Editing image properties

After an image in inserted, you can adjust the image properties by right clicking on the image and choosing **Set Image Properties**.

NOTE: To edit image properties in the default editor, choose **Review > Inspect Properties**, then click the image. The Inspector shows the properties you can edit.



- **Border Width**. Set the width of the image's border in pixels. See also: *Setting a border on an image* on page 1935
- **Border Color**. To set the color of the image's border, click the **X** circled below. When you do, a palette of colors appears. Click the border color from the palette.



If a color has already been assigned, it appears next to this field label. To change it, click down arrow next to the color to display the color palette.

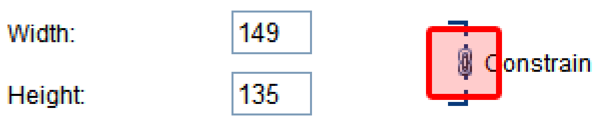
- **Image Alt Text**. The image's title is used as the default `alt` text. Change if desired.

  The `alt` text appears in place of the image on the Web page if the image does not display. Examples of when an image does not display include:

  - a speech browser (for example, a visually impaired person)
  - a text-only browser (for example, browsing from a mobile phone)
  - a graphical browser with images turned off
- **Image Alignment**. The alignment of the image relative to adjacent text and images. If you choose left or right alignment, the text wraps around the image. For more information, see *Aligning an image* on page 1936
- **Image Src**. The path to the image.

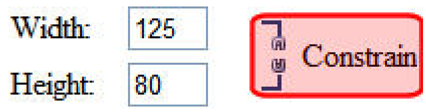
  If you want to change the image, click the ellipsis (...) button to open the library. From there, select a replacement image.
- **Horizontal Spacing, Vertical Spacing**. The amount of horizontal and vertical space around the picture. See also: *Adding space around an image* on page 1937
- **Width**. The width of the picture in pixels. See also: *Working with images* on page 1933

  NOTE: The **Width** and **Height** settings determine the area on a Web page in which the image appears. To display an image correctly, its height and width settings should match its actual size (set using the resize button). See also: *Working with images* on page 1933
- **Height**. The height of the picture in pixels.
- **Constrain**. The constrain feature lets you determine if an image's height and width can be adjusted independently. Typically, you want Constrain on, as shown.



In this state, if one dimension is adjusted, the other is automatically adjusted in proportion to it. For example, if you change the height from 100 to 200, the width is also doubled.

To turn Constrain off, click it. When you do, it looks like this.

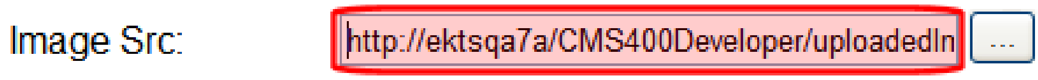


When Constrain is off, the adjusted picture can be disproportionate.

NOTE: If you substantially adjust a picture's height and/or width, the picture may be distorted when users view your Web page.

Deleting an image from an XML Smart Form and eWebEdit400

If you want to remove an image from content created from an XML Smart Form and eWebEdit400 is your editor, click **image** ( ), open the Image Properties dialog, and delete the image path.



NOTE: If you begin editing an image then click **cancel** ( ), and later try to edit that image, you may see a small, red **x** instead of the image. (This problem only occurs if your browser is Internet Explorer.) To remedy the problem, go to **Tools > Internet Options > Browsing History > Settings** (or **Temporary Files > Settings** in Internet Explorer 6). Set **Check for newer versions of stored pages** to **Every Visit**.

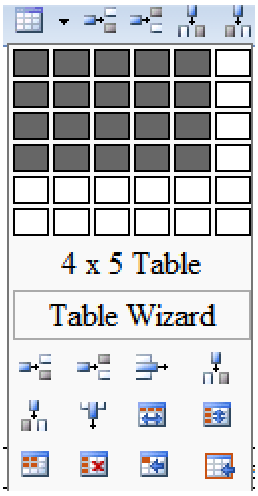
Working with tables in eWebEdit400

You can do the following tasks with tables. For information about tables in the default editor, see *Working with tables* on page 563.

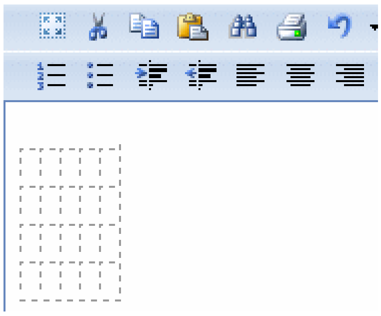
Creating a table

Creating up to 6 rows by 6 columns

1. Click **Table** ( ). A table dialog box appears.
2. Drag the cursor over rows and column to indicate the size of the table.



3. Click the mouse.

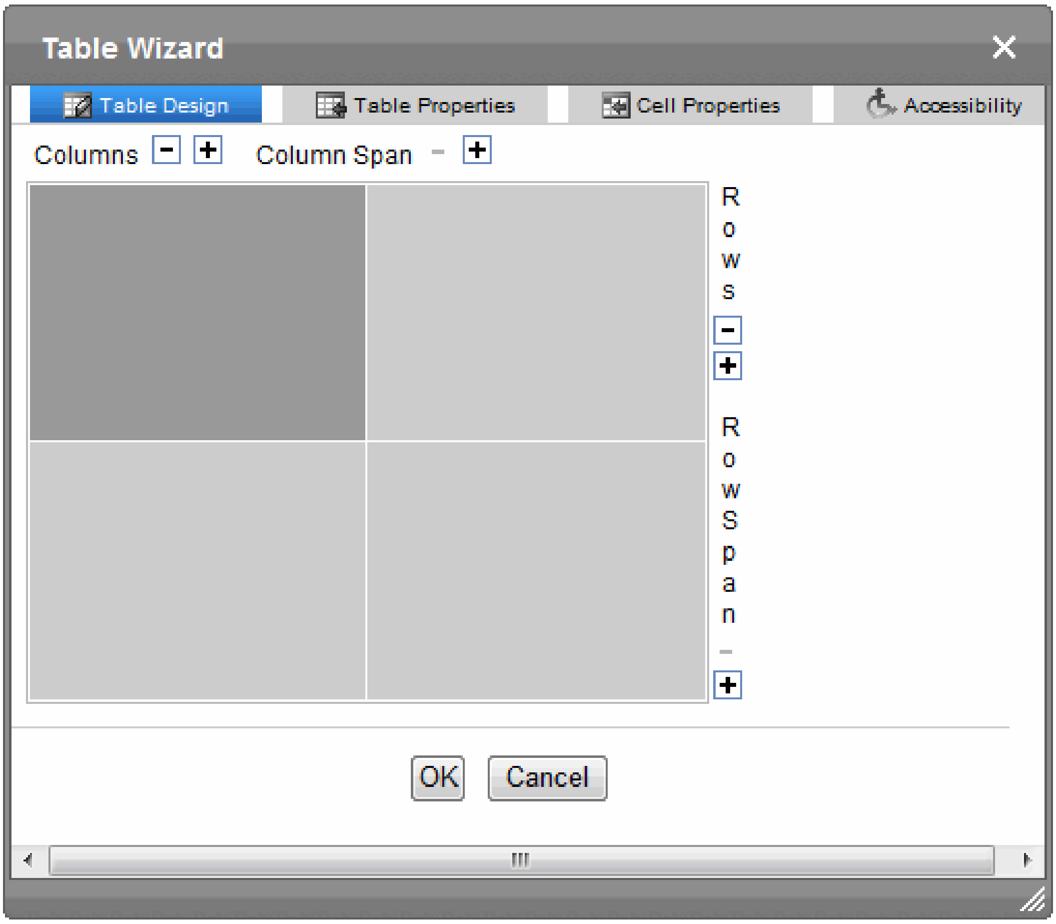


4. Enter text and images in the table cells. You can also select the table and drag its right border to the right and/or down to enlarge it for ease of use.

NOTE: You can create a table within a table by clicking Table ( ) inside a table cell. To modify an inner table, click inside a cell and use right click menu options, such as **Set Table Properties**.

Creating more than 6 rows by 6 columns:

1. Click **Table** (). A table dialog box appears.
2. Click **Table Wizard**. The Table Wizard dialog box appears.

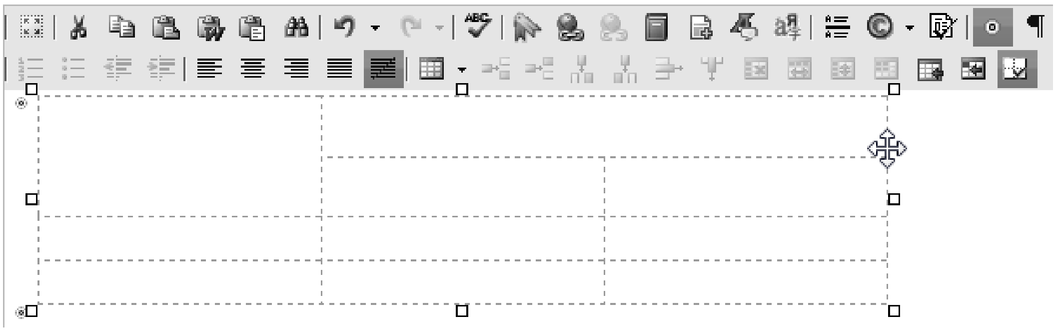


3. To change the number of columns or rows, click the plus or minus signs (**+ -**) next to **Columns** and **Rows**. The image adjusts to show the number of rows and columns.
4. Press **OK**.
5. Enter text and images into the table cells.

NOTE: You can create a table within a table by clicking Table () inside a table cell. To modify an inner table, click inside a cell and use right click menu options, such as **Set Table Properties**.

Deleting a table

1. Move the cursor over the table until the cursor becomes a 4-headed arrow ().
2. Click the mouse button. The table becomes selected (small squares appear around it).



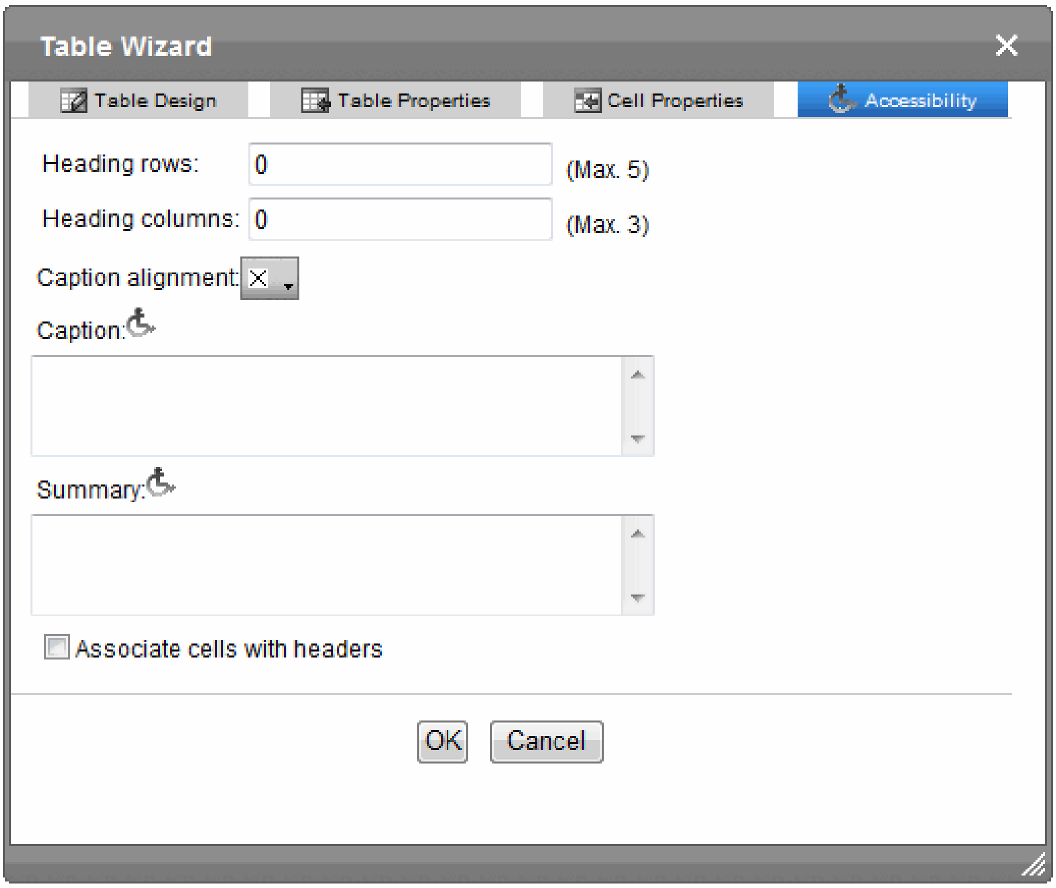
3. Press **Delete**.

Creating a section 508-compliant table

Narrative software uses the information from the Accessibility table fields (heading rows, columns, caption alignment and summary) to produce a Tooltip message for each table cell. Users with impaired vision can see those Tooltips as they hover over the cells.

To create a 508-compliant table:

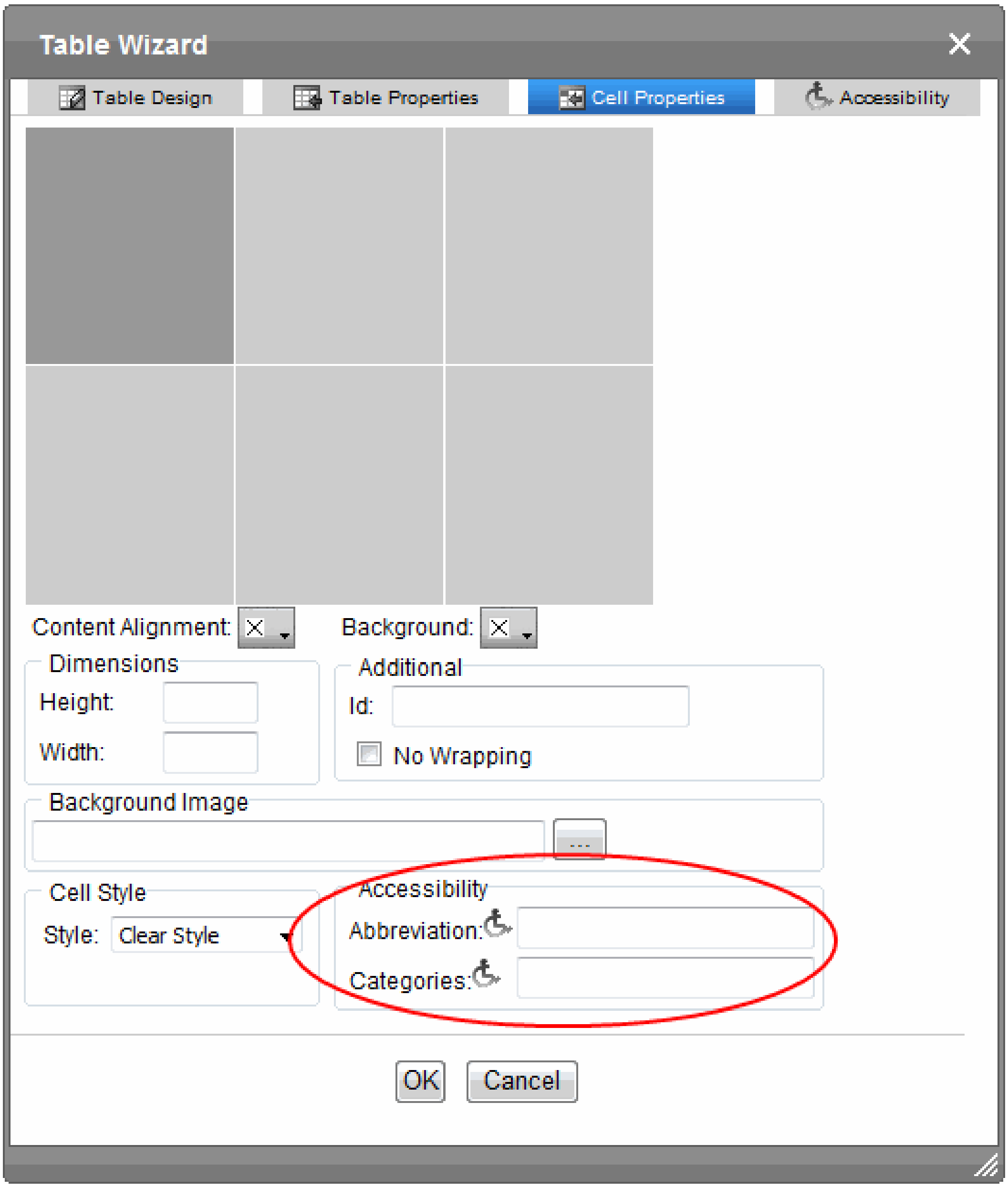
1. Create a new table or edit an existing one.
2. Right click in the table and choose **Set Table Properties**. The Table Properties dialog appears.
3. Click the **Accessibility** tab.



- **Heading Rows**. If you want your table to have a horizontal header, enter the number of rows that it should occupy. The number cannot exceed five. Beginning with the top, all cells in the specified number of rows are designated as table headers.
- **Heading Columns**. If you want your table to have a header, enter the number of columns that it should occupy. The number cannot exceed 3. Beginning with the left column, all cells in the specified number of columns are designated as table headers.
- **Caption Alignment**. To choose the caption's alignment, click the down arrow next to this field. Click the box that represents the alignment style you want.
- **Caption**. Enter a table caption. The caption appears above the table. The caption's alignment is set in the **Caption Alignment** field.
- **Summary**. Enter the table summary. Non-visual browsers use the summary to explain the table's contents. From HTML Techniques for Web Content Accessibility Guidelines 1.0:

  "A summary of the relationships among cells is especially important for tables with nested headings, cells that span multiple columns or rows, or other relationships that may not be obvious from analyzing the structure of the table but that may be apparent in a visual rendering of the table. A summary may also describe how the table fits into the context of the current document. If no caption is provided, it is even more critical to provide a summary."
- **Associate Cells with Headers**. Check this box if you want to associate the table's data cells with the appropriate headers. See also: H43: Using id and headers attributes to associate data cells with header cells in data tables

4. Click on the **Cell Properties** tab to set the **Abbreviation** and **Categories** fields.



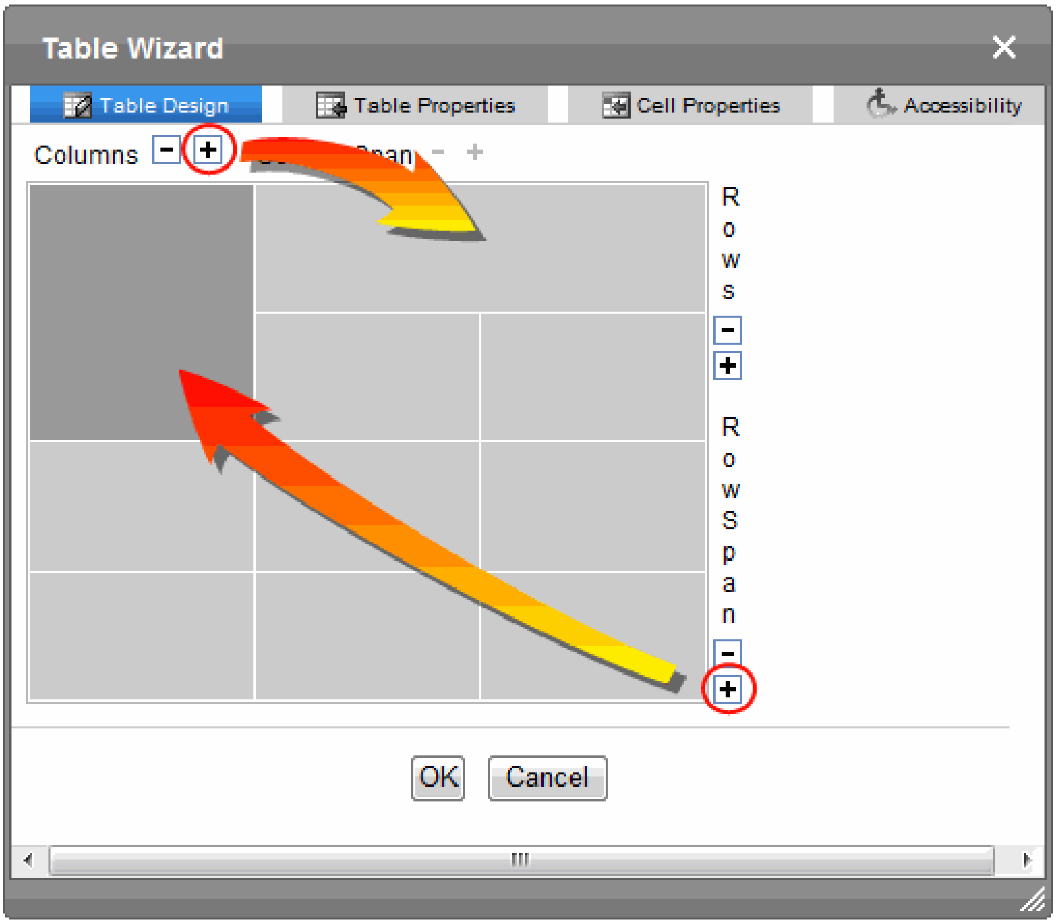
- **Abbreviation**. Sets or retrieves abbreviated text for the content in the tag. Can be used to render non-visual media, such as speech or Braille. For more information, see abbr attribute | abbr property
- **Categories**. Sets or retrieves a comma-delimited list of conceptual categories associated with that tag. Can be used to render non-visual media, such as speech or Braille. For more information, see axis attribute | axis property

5. Click **OK** to make the table Section 508-compliant.

Formatting tables

Merging and splitting table cells

- Merge cells in the table wizard.

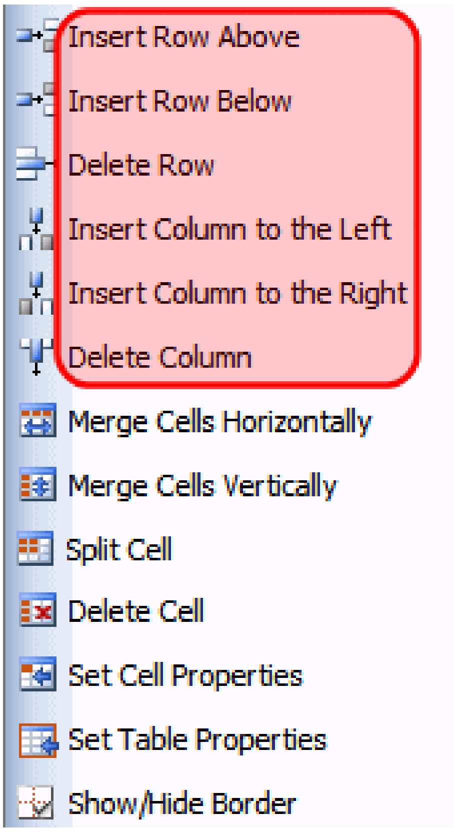


- Merge cells in a the editor by clicking in a cell, then right clicking and choosing **Merge Cells Horizontally** (row span) or **Merge Cells Vertically** (column span).
- Split a previously merged cell by clicking in a cell, then right clicking and choosing **Split Cell**.

Inserting and deleting rows and columns

1. Place the cursor in the cell from which you want to add or delete rows or columns.

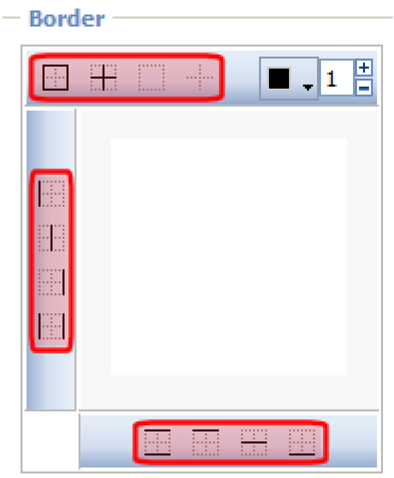
2. Right click the mouse. A menu appears.



NOTE: These options are also on the toolbar.

Setting table borders

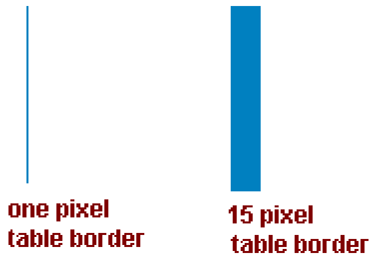
1. Right click in the table and choose **Set Table Properties**.
2. Click the **Table Properties** tab.
3. Use the icons within the Border area to indicate which border lines should appear. Each icon has tooltip text that explains its function.



NOTE: To view the selected borders on the dialog, a border color must be assigned.

Setting the exterior border of a table

1. Right click in the table and choose **Set Table Properties**.
2. Click the **Table Properties** tab.
3. Enter a number of pixels in the **Border** field.



Setting the color of a table border

1. Right click the table and choose **Set Table Properties**.
2. Click the **Table Properties** tab.
3. Click the **Border Color**drop-down. A color selection box appears.
4. Click a color to apply to the table’s border.

Excursion	Cost ($USD)	Number of Days
Costa Rica	$3450	14
Bermuda	$1835	7

Deleting cells from a table

To delete one or more cells, right click in the cell you want and choose **Delete Cell**. Cells to the right of the deleted cell shift left to occupy the vacant space.

Before

a	b cursor	c
d	e	f

After

a	c	
d	e	f

Aligning the contents of a cell

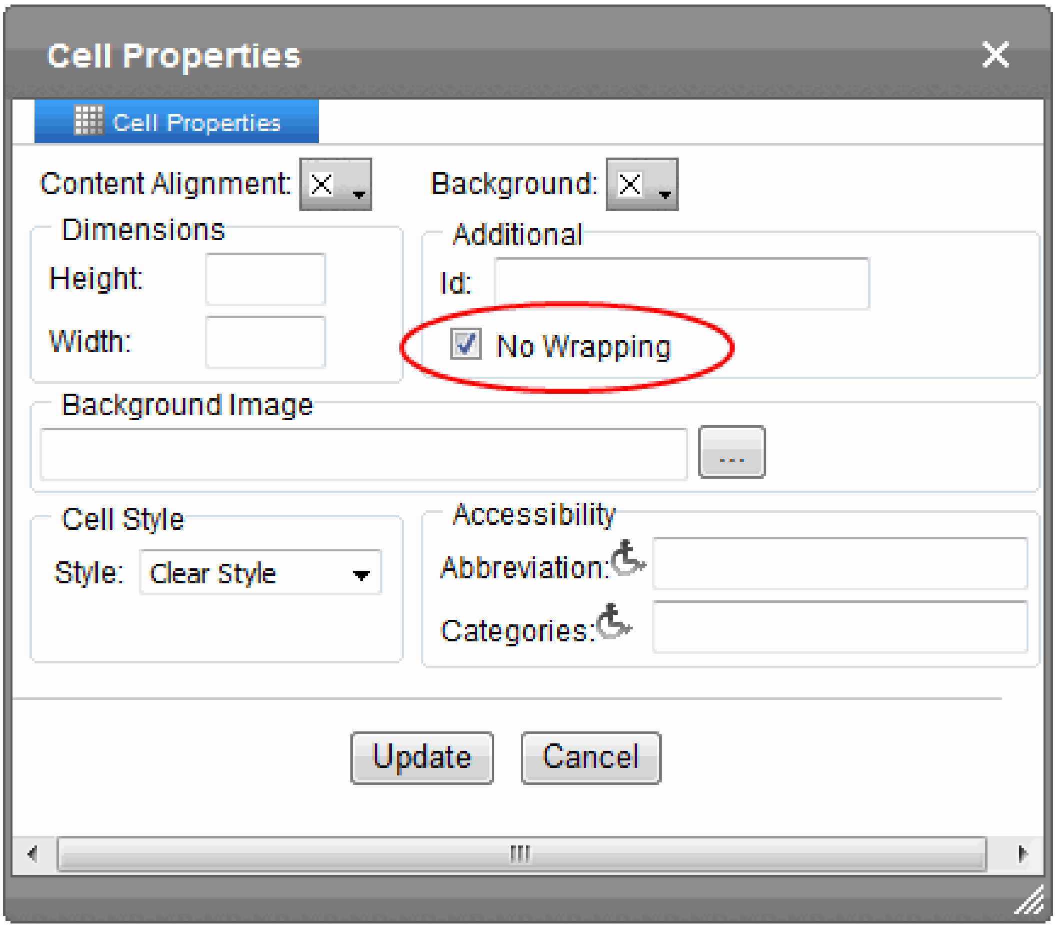
1. Right click the cell you want and choose **Set Cell Properties**. The Cell Properties dialog appears.

2. Click the down arrow to the right of **Content Alignment**. The alignment choices appear.

3. Click your alignment choice.
4. Click **Update**.

Setting the word wrap feature

1. Right click in the cell you want and choose **Set Cell Properties**. The Cell Properties dialog box appears.
2. To turn off Word Wrap, click the **No Wrapping** checkbox.



Horizontal Alignment	Sets the horizontal position of the entire table. For example, left, center, right.
Border Color	Sets the color of the table borders unless *Use Default Color* is checked.

Horizontal Alignment	Sets the horizontal position of the entire table. For example, left, center
Border Color	Sets the color of the table borders unless *Use Default Color* is checke

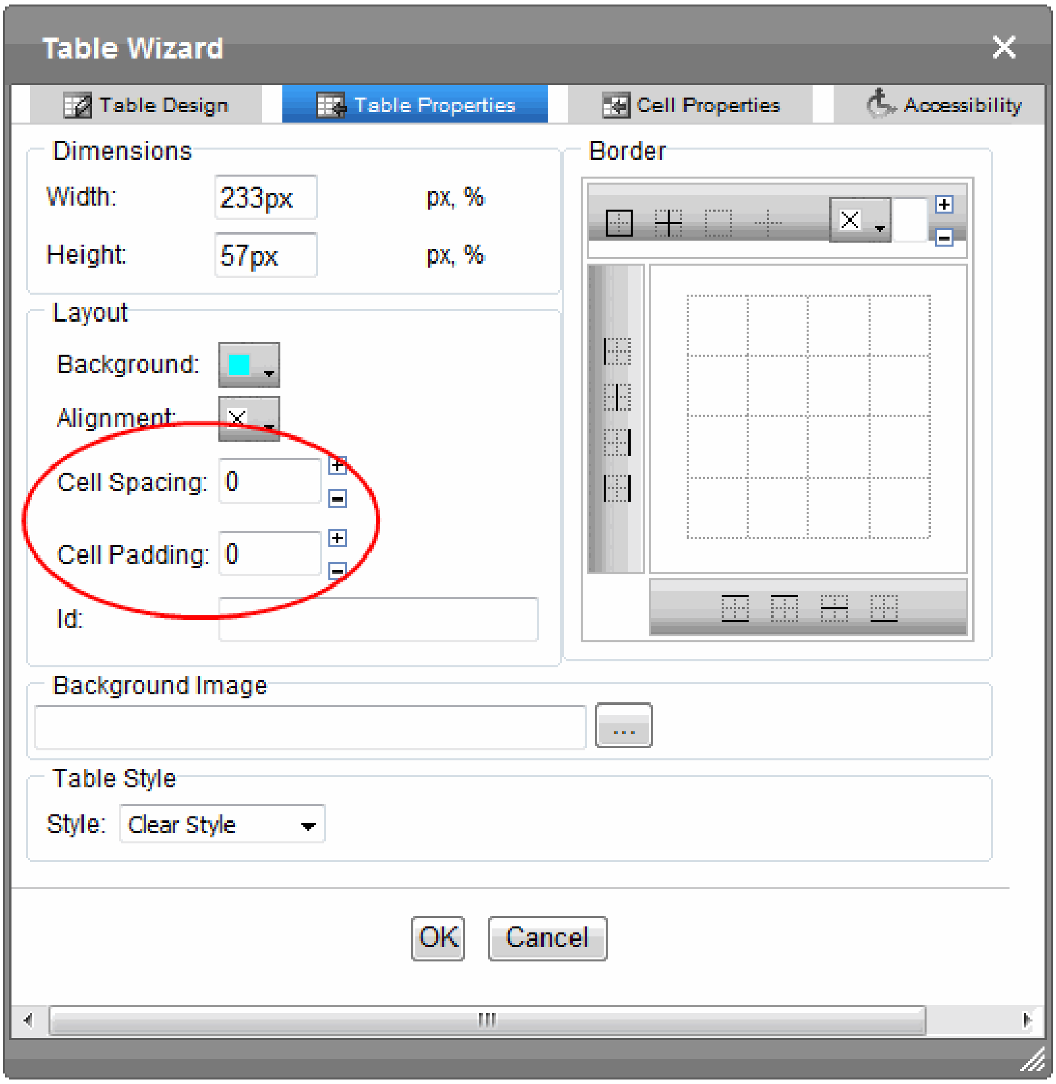
3. Click **Update**.

Word Wrap causes text to move down to the next line when the width of the characters on a line equals the column width. By default, all cells have the Word Wrap feature turned on.

If Word Wrap is turned off, text stays on one line until you press **Enter**.

Setting cell padding and spacing

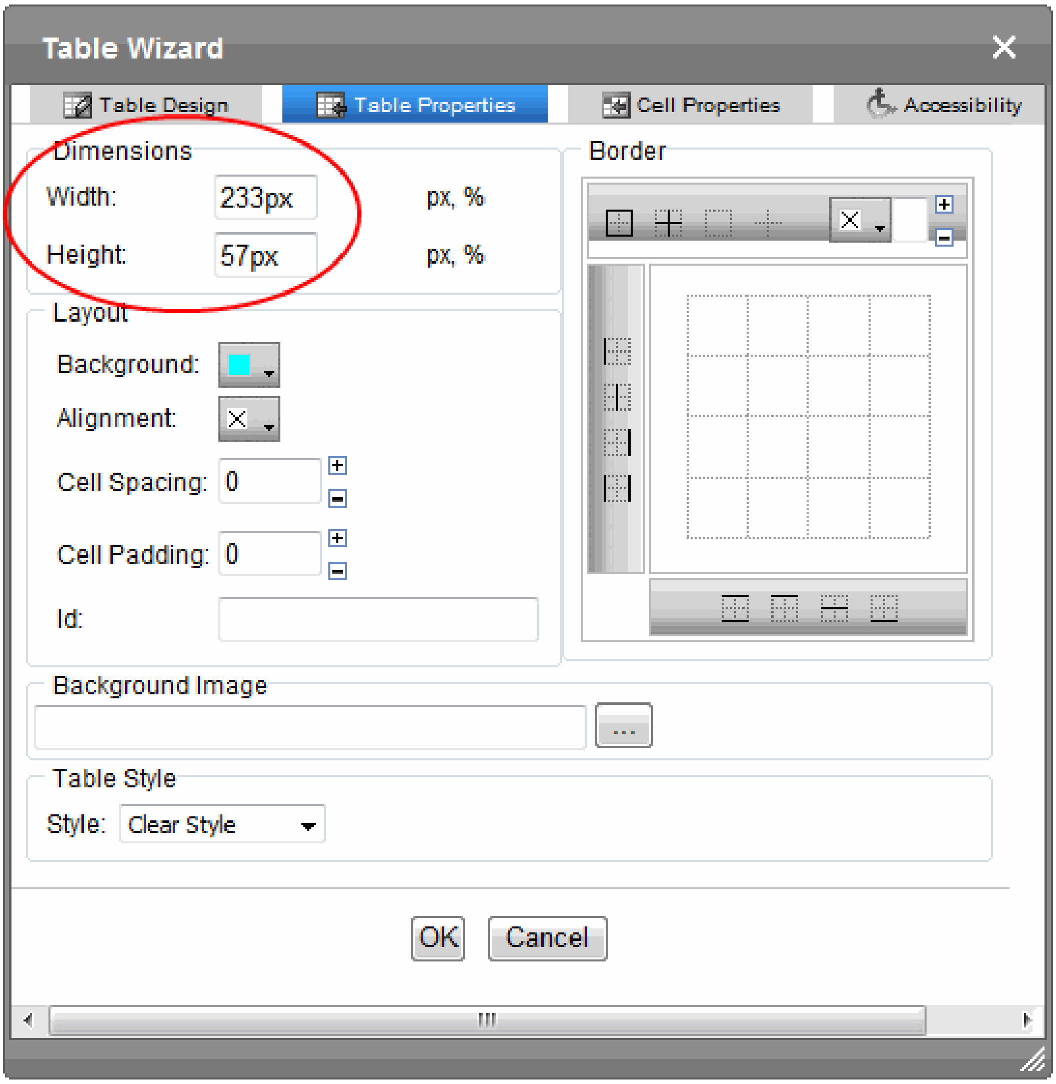
1. Right click in the cell you want and choose **Set Table Properties**. The Table Properties dialog appears.
2. Click the **Table Properties** tab.
3. In the **Cell Padding** and **Cell Spacing** fields, enter the number of pixels.



4. Click **Update**.

Setting the minimum height and width of a cell

1. Right click on the cell you want and choose **Set Cell Properties**.
2. Click **Cell Properties**. The Cell Properties dialog appears.



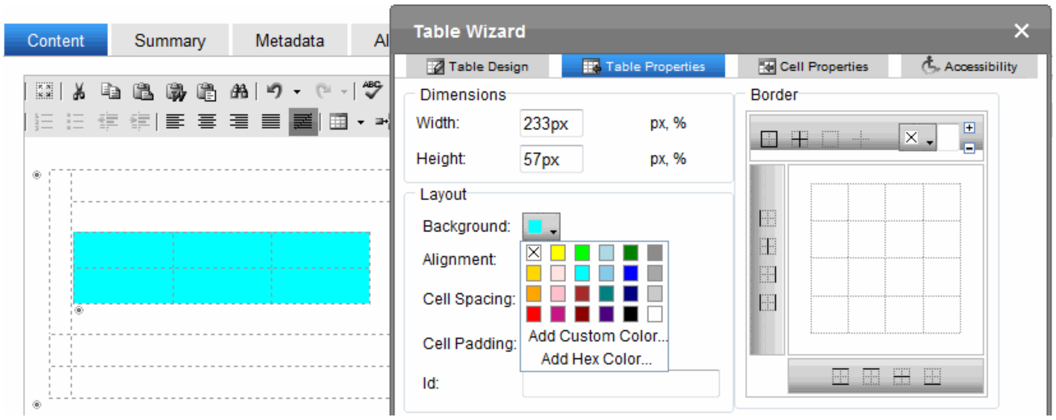
3. Enter the cell width and height in the fields. You can enter the width in pixels or percentage.

> **NOTE:** When you set a cell width, there is no guarantee that the cell will occupy that width when displayed in a browser. This is because the cell is part of a column, and changes to other cells in the column can affect the cell whose width you set. Setting cell width only guarantees that the cell will not be *less than* the width you specify.

4. Click **Update**.

Setting a background color for a table or a cell

1. Right click in a table cell and choose **Set Table Properties**.
2. Click the **Table Properties** tab (or the **Cell Properties** tab).
3. Click the **Background** drop-down list. A selection of colors appears.

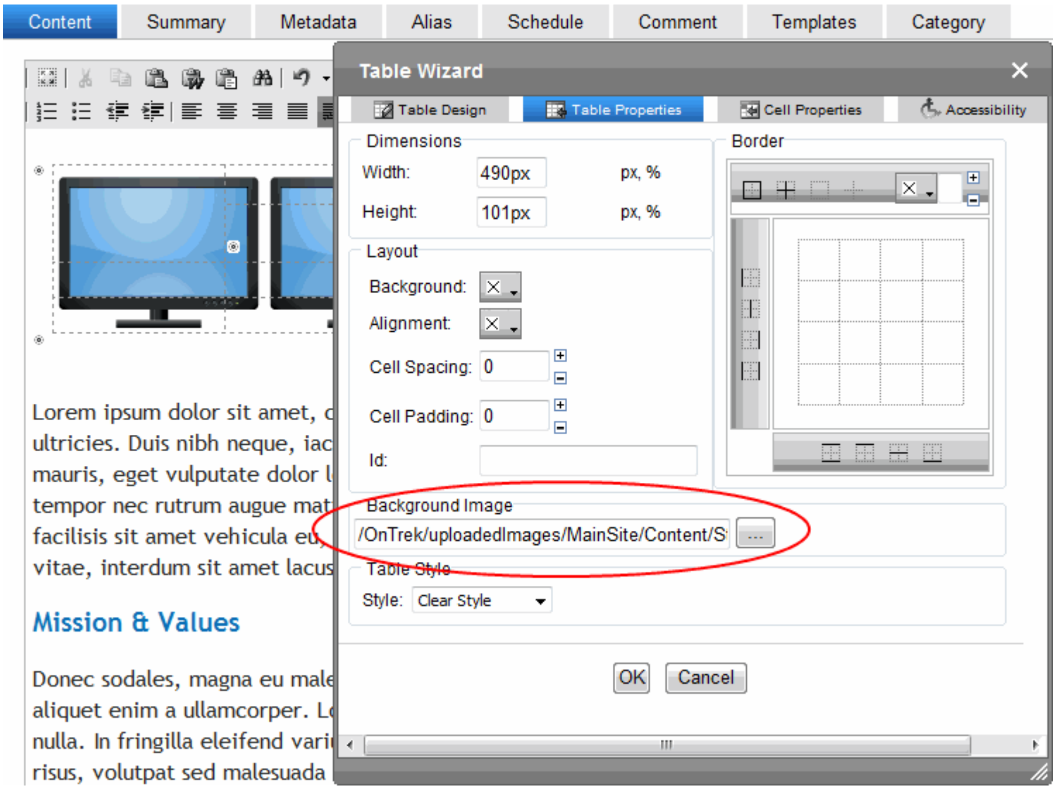


4. Click a color for the table's background. To choose no color, click the X color box.

NOTE: From the drop-down, you can add custom colors by selecting a color patch or entering a color's hex value. Follow these steps to get help on how to use the color box. The custom colors box is only available with Internet Explorer. If you are using Firefox or Google Chrome, you can enter a custom color by its hexadecimal value.

Setting a background image for a table or a cell

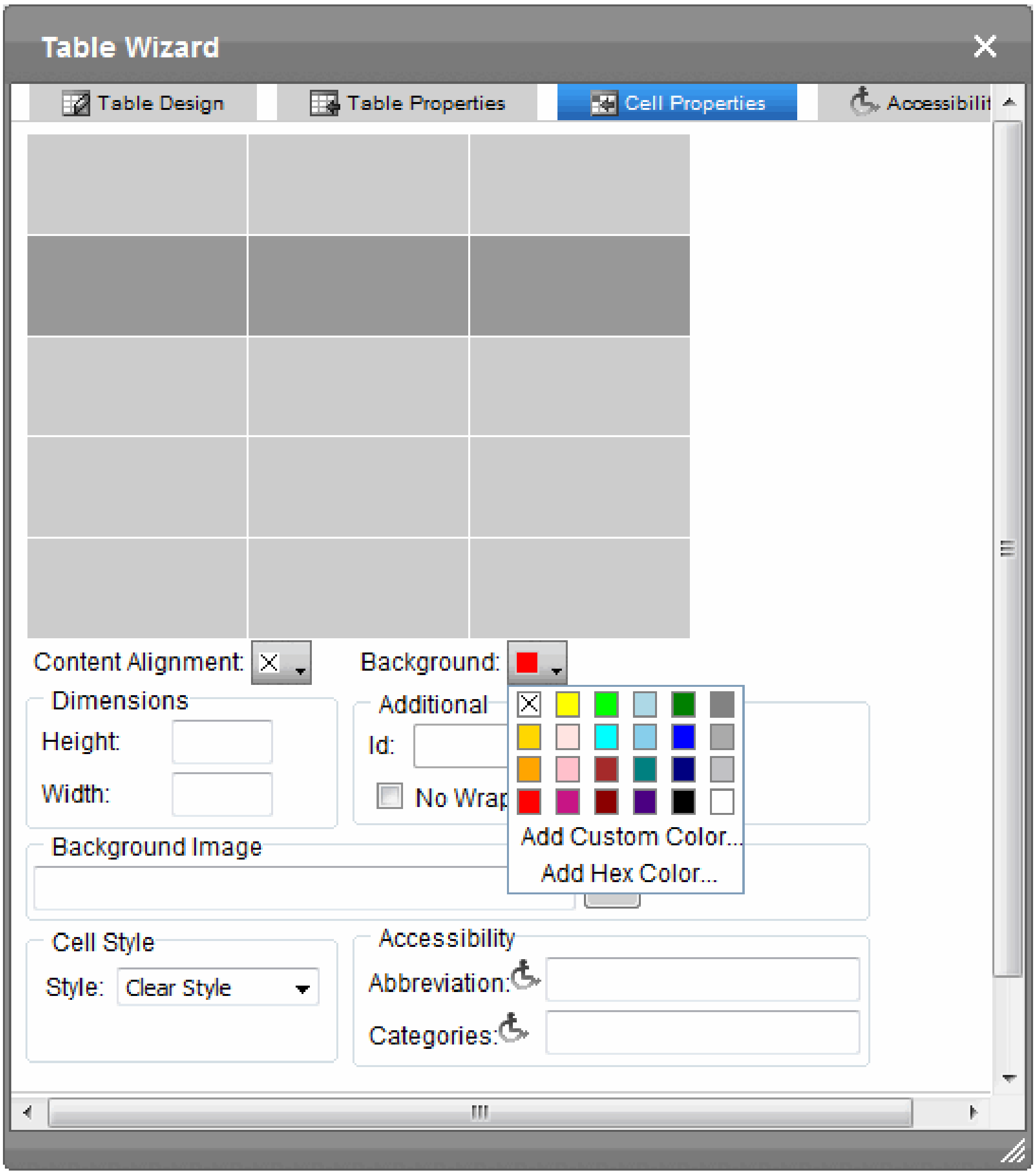
1. Place the cursor within the table.
2. Right click the mouse.
3. Select **Set Table Properties**.
4. Click the **Table Properties** tab (or the **Cell Properties** tab).
5. In the **Background Image** field, click the ellipsis button (...) to open the Library. From there, select an image for the table's background.



6. Click **Update**.

Setting a background color for a table row or column

1. Right click on a table cell and choose **Set Table Properties**.
2. Click the **Cell Properties** tab.
3. Within the Table Wizard dialog, hold down **Ctrl** while clicking all cells in the row. In the following image, the second row from the top is selected (dark gray) and red is chosen for the background color.



4. Click a color for the table's background.
5. Click **OK**.

40

Glossary

41

Index

5

A

B

C

D

E

F

G

H

M

N

O

P

Q

R

S

T

U

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