Ektron

Redefining Web Content Management

Ektron CMS400.NET Setup Manual

Version 4.8, Revision 3

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Version 4.8, Revision 3, May 6, 2005

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System Requirements

The following components are required when developing or viewing an Ektron CMS400.NET based application. programmatically

Component	Requirements
Browsers for viewing	All major browsers including: • Microsoft ® Internet Explorer 3.0 or higher • Netscape Navigator ® Version 3.0 or higher • Mozilla® • Mozilla Firefox
Browsers for editing	• Mozilla Firefox 1.0 or higher • Microsoft® Internet Explorer 5.0 or higher • Netscape ® 7 or higher Note: If using Netscape browser, IE 5.0 or later must be installed.
Web Server Operating System	Microsoft ® Windows® 2000/2003/XP Professional Note: XP Home does not support IIS.
Hardware	Any IBM-PC compatible system (suggested minimum requirements: Pentium 166 MHz or faster with at least 64MB of RAM)
Web development tools	Visual Studio .NET™2003
Web application servers	Microsoft .NET ™ Framework 1.1 and above. Ektron CMS400.NET only supports ASP.net platform.

Component	Requirements
Web server	Microsoft® Internet Information Server (IIS) 4.0 or higher
Database	• SQL™ 2000 • Microsoft ® MSDE 2000

Preparing for Windows XP SP2

Microsoft Windows XP Service Pack 2 includes significant changes affecting **Ektron CMS400.NET** security, especially in regard to the installation of the eWebEditPro ActiveX control. The most significant change affects the eWebEditPro+XML editor in data design or data entry modes. To work around this change, configure **Ektron CMS400.NET** to allow pop-up windows for automatic download and installation.

More Information on Windows XP Service Pack 2

For more information on Windows XP Service Pack 2, visit the Microsoft site at www.microsoft.com/technet/prodtechnol/winxppro/maintain/winxpsp2.mspx. One article on that site of particular interest to developers is "Changes to Functionality in Microsoft Windows XP Service Pack 2". Part 5 of that article, "Enhanced Browsing Security," details changes to Internet Explorer.

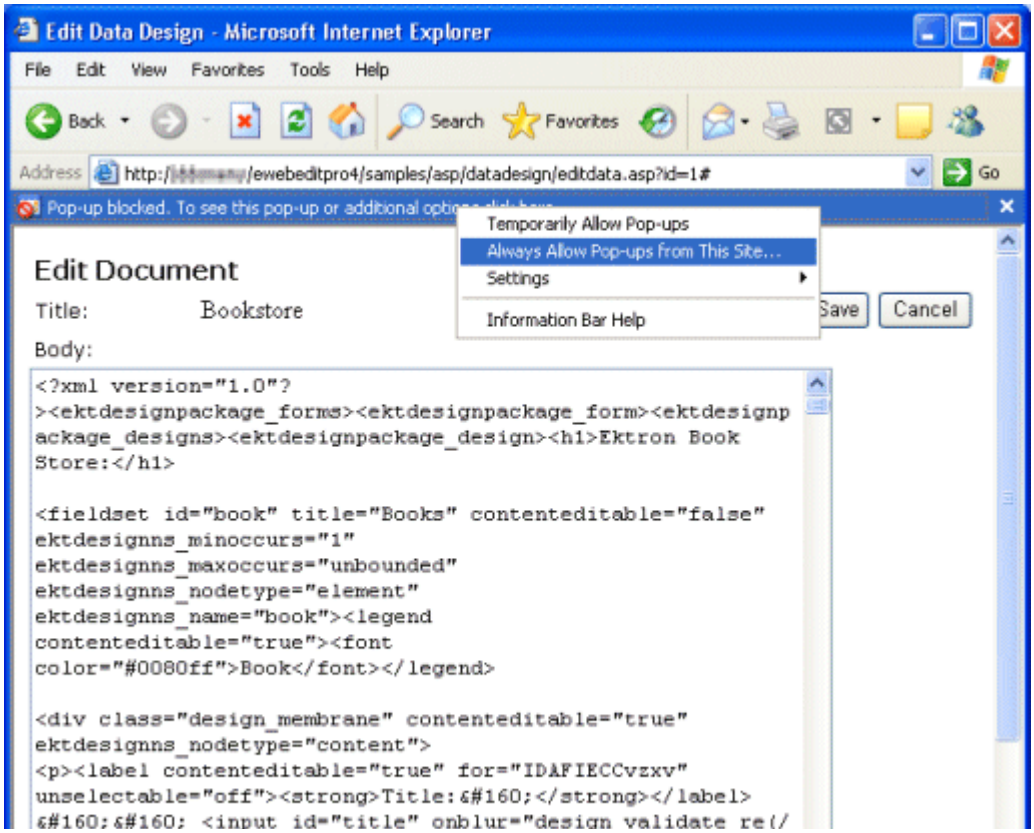
Disabling the Popup Blocker

Pop-up windows are used to initially install the editor in Internet Explorer (IE) and by other features, such as selecting an image and setting Section 508 Data Table properties. By default, Windows XP SP 2 blocks pop-up windows. For Ektron products to operate effectively, allow pop-up windows for web sites that host Ektron products.

Enabling Popup Windows

When a Web page in IE running on Windows XP Service Pack 2 (XPSP2) attempts to open a pop-up, the Information Bar appears at the top of the page. The message on the Information Bar is **Pop-up blocked. To see this pop-up or additional options click here...**.

To allow proper operation of the editor, enable pop-up windows for the Web site. To do so, click the Information Bar and select **Always Allow Pop-ups from This Site**.



For easier administration, add the Web site as a Trusted site. By default, this change disables the pop-up blocker.

Download and Installation with Windows XP SP2

The installation of the Ektron editor is only required the first time it is used and for every upgrade. The automatic installation supported in IE uses a pop-up to walk the user through the process. Therefore, the first step is to enable pop-up windows (see ”Enabling Popup Windows” on page 3). An additional step to install the editor requires an extra mouse click by the user.

If you are an administrator, you may want to configure client computers to avoid these extra steps. One simple way is to add the Web site that hosts Ektron products as a Trusted Site.

When installing the editor, the user should follow these steps.

1. When the Automatic Download and Installation page appears, click the **Install** button.
2. When the next window appears, the Information Bar displays this message:

   To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer. Click here for options...
3. In place of the editor, the following message appears.

   Click here to install the following ActiveX control: 'eWebEditPro' from 'Ektron Inc'...
4. Click on either message and select **Install ActiveX Control...**.

http://www.ektron.com - eWebEditPro Installation - Micros...
To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer. Click here for options...
eWebEditPro
Automatic
Download and Installation
If successful, the words "Installation complete" will appear in the box below.
Click here to install the following ActiveX control: 'eWebEditPro' from 'Ektron Inc'...
Install ActiveX Control...
What's the Risk?
If a small red X appears, try downloading the client installation program and running it.
Error loading DoneMsg
Internet

Upgrading Ektron CMS400.NET

The upgrade procedure copies **Ektron CMS400.NET**'s latest features to your Web server. Unlike previous Ektron upgrades (which replaced the existing version with the new one), version 4.8 is installed to its own folder, `CMS400v48`. This means the 4.8 can coexist on the same machine with previous versions -- the template directories are independent.

The Base Folder

The upgrade installs a base folder (`C:\\Program Files\Ektron\CMS400v48`), which provides a template for setting up **Ektron CMS400.NET** Web sites. The Site Setup utility uses the files in the base folder to create and upgrade **Ektron CMS400.NET** sites.

The base folder contains the following subfolders.

Subfolder	Includes
Bin	Required .net assemblies for **Ektron CMS400.NET**
Documentation	Documentation. The site setup procedure copies this directory to the `cms400scripts` directory when setting up a site.
SiteSetup	The sitesetup.exe utility and the needed database setup scripts
CMS400Scripts	Scripts used for the Workarea
Utilities	Utilities for • database upgrade • database application strings update • email encrypt password tool • a setup Sharepoint Portal

Subfolder	Includes
CMS400example	A sample site that demonstrates the use of **Ektron CMS400.NET**
CMS400Min	A minimal set of files site that is best for new integrations

NOTE The contents of this folder are later copied to a Web site folder, typically in the Web server's web root. The sample provides a good way to learn how to work with an **Ektron CMS400.NET** site.
An alternative is the minimum database. Use this when you understand how to create a site and do not want to place extra, sample files on your server.

The Upgrade Procedure

Upgrading involves the following tasks.

1. Install the new files to the new directories. *See Also:* "Running the Installation and Setup Program" on page 37
2. Copy these folders to the site directory.
   - bin
   - CMS400scripts
   - CMS400example
   - Documentation
3. Update the web.config file with new settings.
4. Update your databases using the upgrade and language update utilities. *See Also:* "Performing the Upgrade" on page 9
5. Create a new DSN for each database. See "Creating a New DSN" on page 30
6. Modify the site to use the server controls. *See Also:* **Ektron CMS400.NET** Developer Manual section "Ektron CMS400.Net Server Controls" > "Making the Server Controls Available" > "Updating the Server Controls".

This chapter walks you through the upgrade process.

Performing the Upgrade

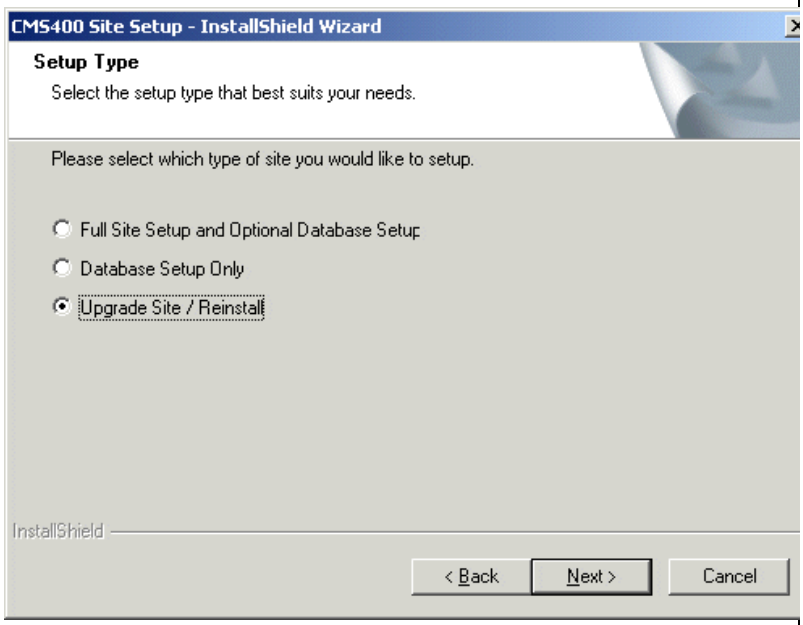
This section explains how to perform an Ektron CMS400.NET upgrade.

1. Follow the first eight steps of the installation procedure, "Running the Installation and Setup Program" on page 37. These steps instruct you to install **Ektron CMS400.NET** and restart your server.

2. The Setup wizard appears. Choose **Upgrade Site/ Reinstall**.

   (If this screen does not appear, launch it by following this path from the Windows Start menu:

   Start > Programs > Ektron > CMS400 > Utilities > Site Setup)



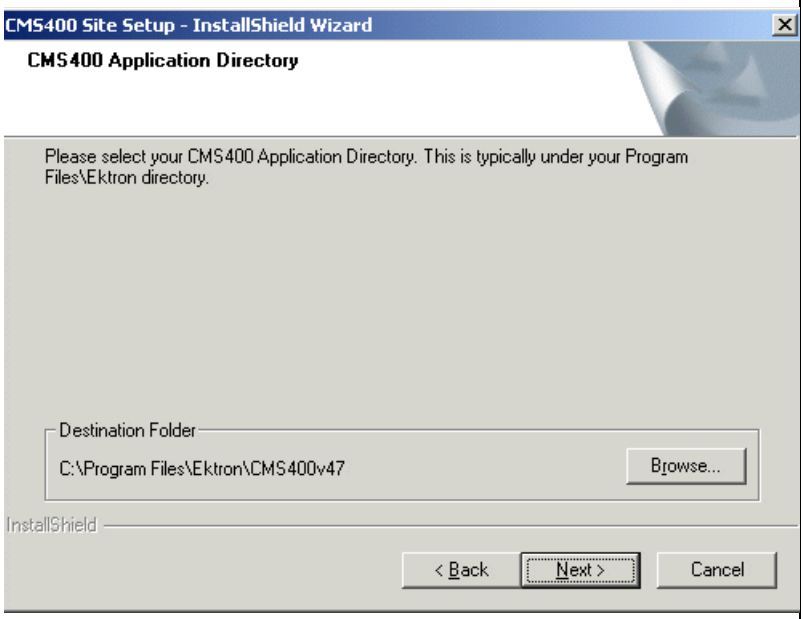
3. A message recommends backing up your Web site before proceeding.

   Important! Ektron strongly urges you to do this.

   If you back up and then encounter any problems during installation, you can return your site to its state before the installation. After backing up your site, click **OK** to proceed.

4. Choose an application directory. If you are not sure, use the default (`C:\\Program Files\Ektron\CMS400v48`).

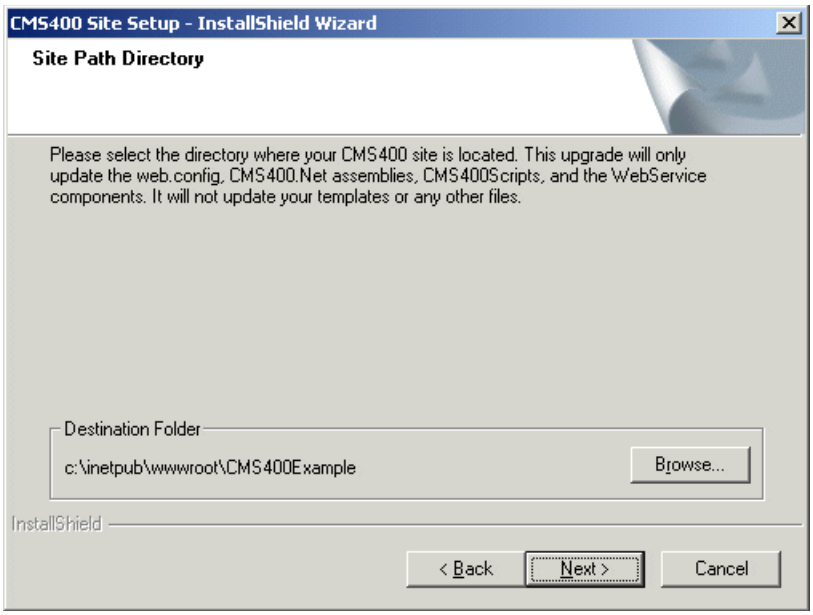
   This directory stores **Ektron CMS400.NET** components and utilities.



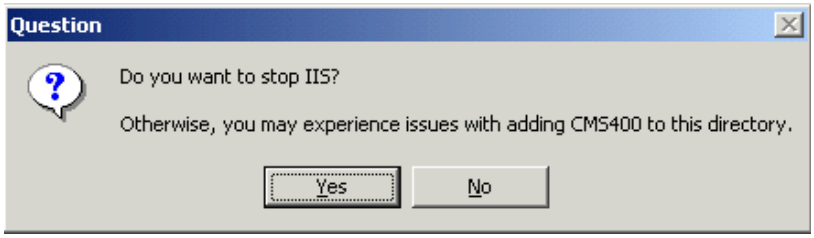
5. Choose a site path directory. If you are not sure, use the default (`webroot/CMS400Example`).

   The site directory maintains Web site templates, the CMS400scripts directory, etc.

   Note that the upgrade only updates the web.config file, **Ektron CMS400.NET** assembly files, **Ektron CMS400.NET** script files, and Web Service components. It does not update your templates nor other files not mentioned above.



6. You are prompted to stop IIS. Ektron recommends doing so.



7. The screen on the right appears. Click **Yes** if you want to use the new interface. Otherwise, click **No**.

   For information about the new interface, see the **Ektron CMS400.NET** User Manual section "Introduction to Ektron CMS400.NET" > "What is a Content Block?" > "The Floating Toolbar." The new interface use the vertical toolbar style.

Note: Clicking **Yes** changes the value of `ek_MenuDisplayType` in the web.config file to **1**.

8. You are notified that files are moving to the sample site directory.

9. Your web.config file is updated with information needed to run **Ektron CMS400.NET**.

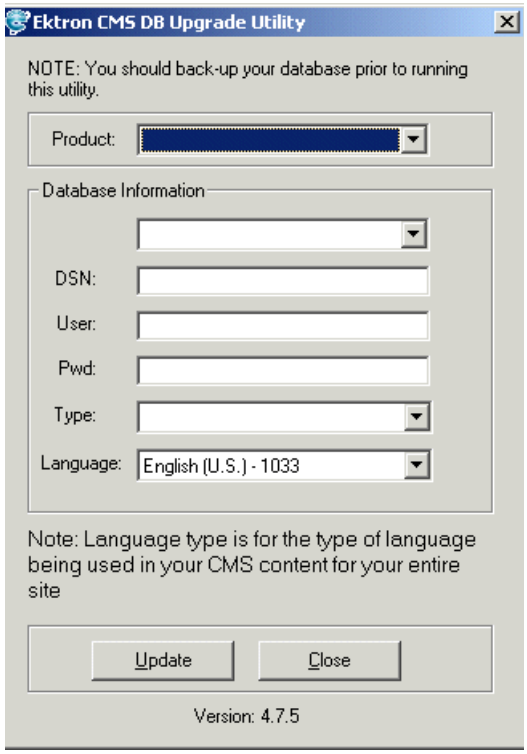
   Only the section of the file between the `<appsettings>` tags and the section within `<http modules>` tags are affected. If other applications use the web.config file, the upgrade does not affect their sections.

Note: In the web.config file, the default setting for `EnableMultilingual` is off. Also, the `DefaultContentLanguage` is English (1033).

10. You are prompted to upgrade the database. Click **OK**.

11. **Ektron CMS400.NET** attempts to create an ODBC connection. If the upgrade fails to create one, follow the directions in "Creating a New DSN" on page 30. Then, continue with the next step.

    If it can create an ODBC connection, the screen in the right column appears.
12. From the **Product** dropdown list, select **CMS400**. When you do, the database type (**MS SQL**) appears in the **Type** field.
13. Select the DSN for the database from the drop down list.
14. Specify the username and password that are needed to access the DSN, if required.



15. Select the **Language** of your content blocks. If your content blocks are in several languages, select the language of the majority of them.

    After upgrading your database, all content blocks are assigned the language that you select. If some should not be in that language, find those content blocks and change their language. For more information, see the **Ektron CMS400.NET** Administrator manual section **Special Features** > **Multi-Language Support** > **Working with non-English Content** > **Resolving Conversion Issues**.

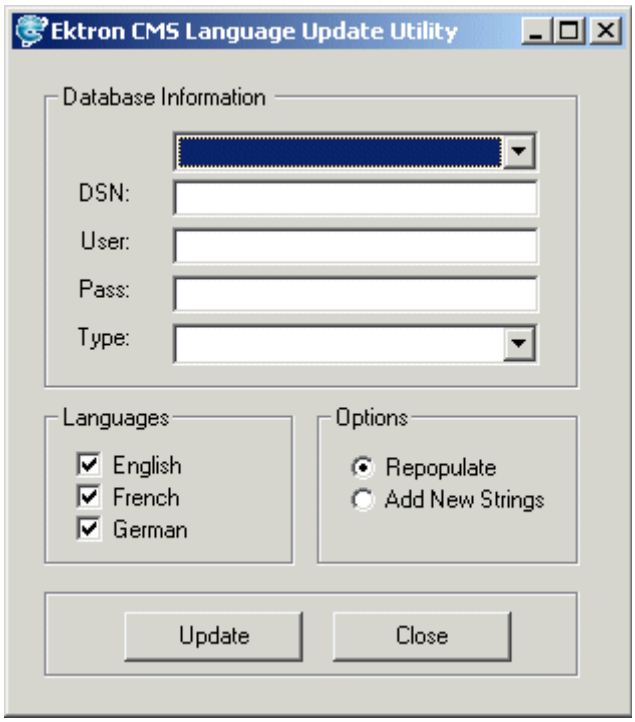
Warning!
If you select a language other than English, you must also open the webroot\`CMS400Example\web.config` file. Then, change the `ek_DefaultContentLanguage` variable to the language to which you assigned the content via the **Language** field above. In web.config, you must enter the new language's locale ID value. A list of supported languages and their locale id values is in "Appendix A: List of Supported Languages," in the Ektron CMS400.NET Administrator manual.

16. Click the **Update** button to execute the database upgrade utility.

17. After the database is upgraded, you are prompted to update the database with new messages.

    Click **Yes** to continue, or **No** to update the strings at a later time.

For information about updating the strings later, see "Updating Application Messages" on page 24.



18. A screen indicates that the upgrade is complete. Click the Finish button to end the upgrade.

19. Rebuild the site solution in Visual Studio.NET.

What Happens Next?

After upgrading your site and rebuilding the solution, you are ready to use **Ektron CMS400.NET**.

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.

Upgrading Your Database

If the database upgrade was unsuccessful during installation, or you chose to do it outside of the install, you need to manually upgrade your database. Use the Database Upgrade utility supplied with the installation program to do so.

Prerequisites

Before you can upgrade your database, be sure the following conditions are met:

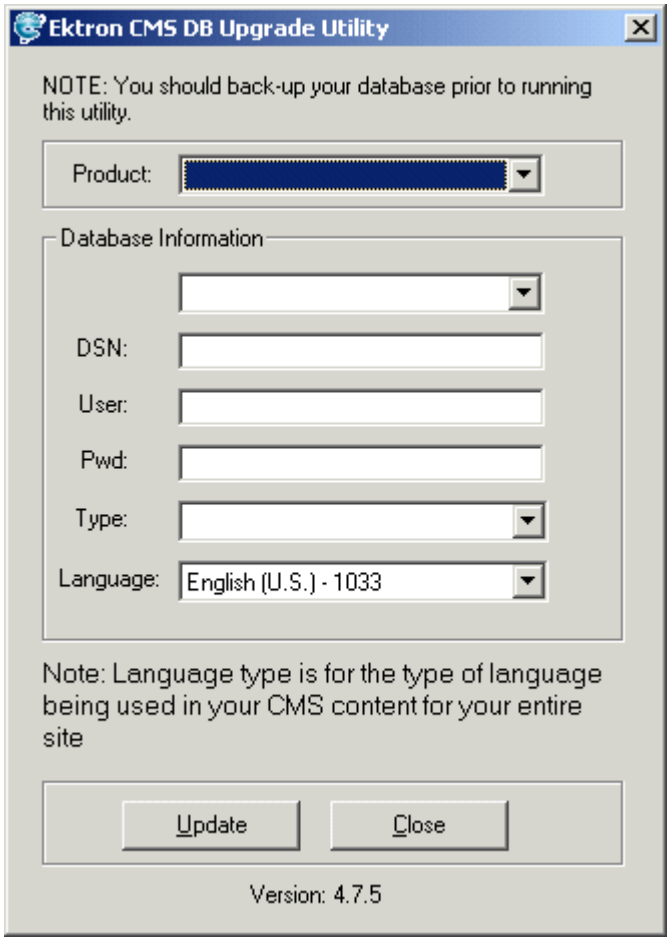
- Ektron CMS400.NET is installed on your server.
  See ”Installing Ektron CMS400.NET” on page 35 or ”Performing the Upgrade” on page 9 for more information.
- A DSN exists on your server that points to the old database. If one does not, see ”Creating a New DSN” on page 30.

With these two conditions met, you can upgrade your database.

Performing the Database Upgrade

To perform the database upgrade:

1. Click the Windows Start button then follow this path: **Programs > Ektron > CMS400 > Utilities > Database Upgrade**. (If this path does not work, click the dbupgrade.exe file, located under the `C:\Program Files\Ektron\CMS400v48\Utilities` folder.)
2. The Ektron CMS400.NET Database Upgrade utility opens.



For information on backing up a database, see"Backing Up Databases" on page 16

3. Follow directions beginning with "Select the DSN for the database from the drop down list." on page 12.
4. Click the **Close** button to close the dialog.

Backing Up Databases

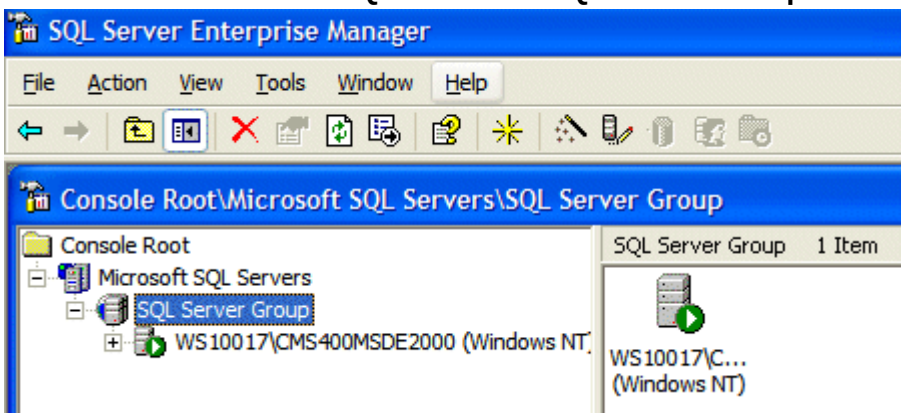
To protect information contained within the database, it is recommended that you back it up before performing a database upgrade. This section describes how to backup and restore Microsoft SQL and MSDE2000 databases. The steps to perform each are in the following sections:

- "Backing Up a Microsoft SQL Database" on page 16.
- "Restoring a Microsoft SQL Database" on page 20.
- "Backing Up an MSDE2000 Database" on page 23.
- "Restore an MSDE2000 Database" on page 23.

Backing Up a Microsoft SQL Database

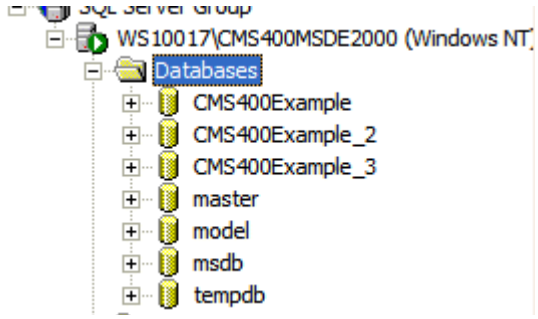
The following is an example of the steps to create a backup of a Microsoft SQL database.

1. Open Microsoft SQL Server Enterprise Manager.
2. Click on **Microsoft SQL Servers > SQL Server Group**.

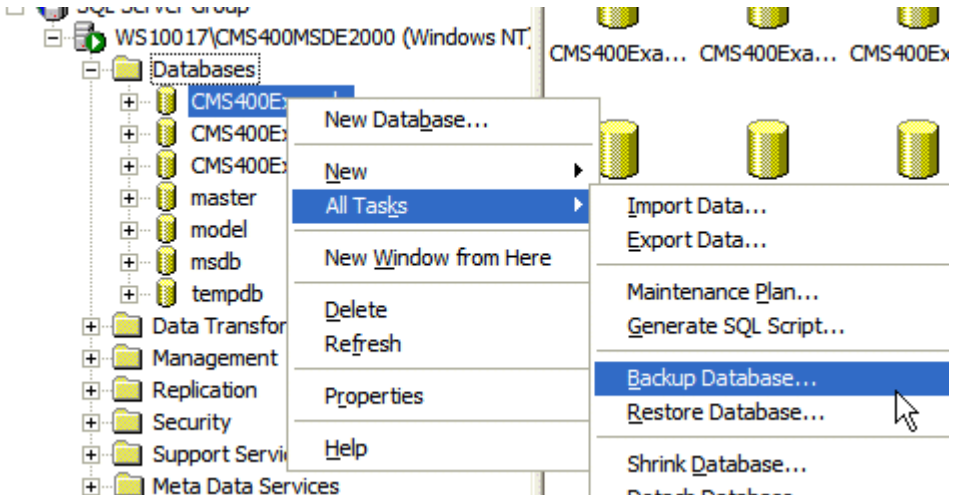


3. Click on the server where the database is located.

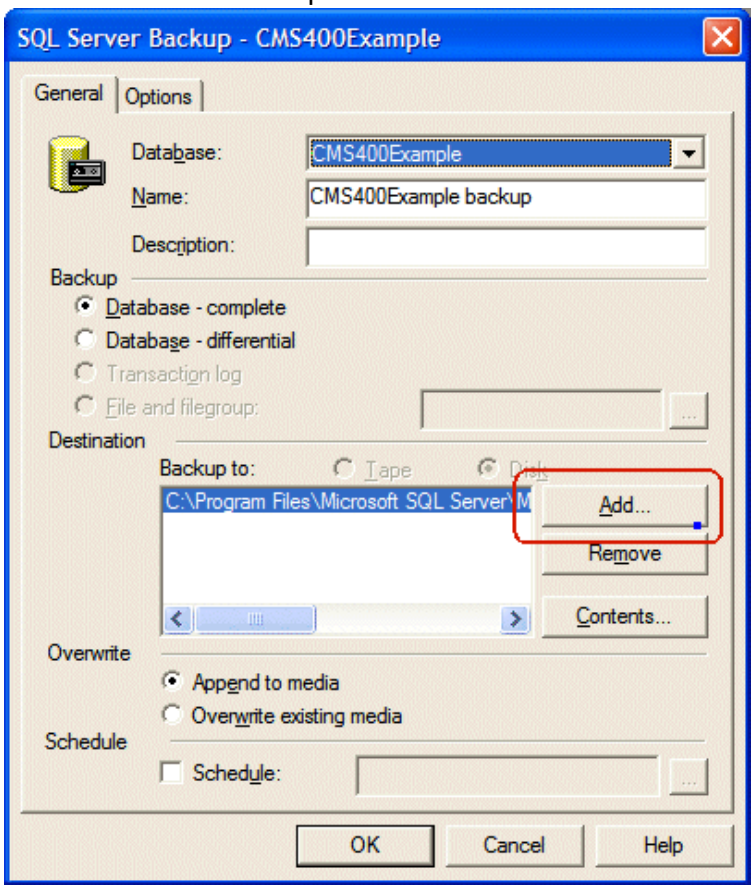
4. Click on **Databases**.



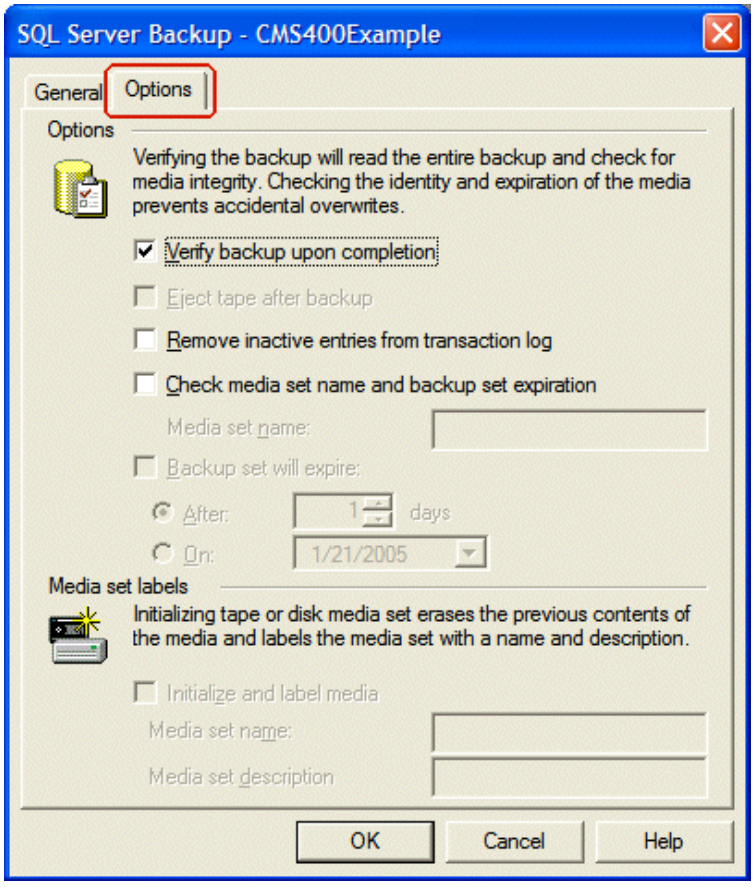
5. Choose the database to backup.
6. Right click on the **Database** and click **All Tasks > Backup Database**.



7. Add a location to back up the file.

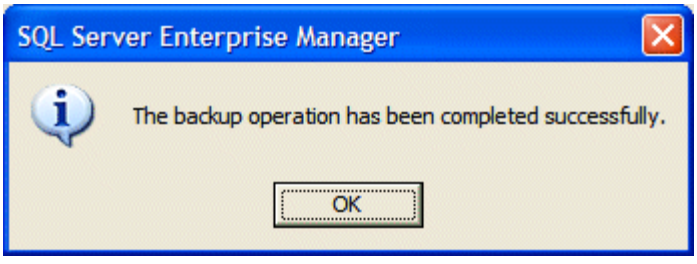


8. Set any options.



9. Click **OK**.

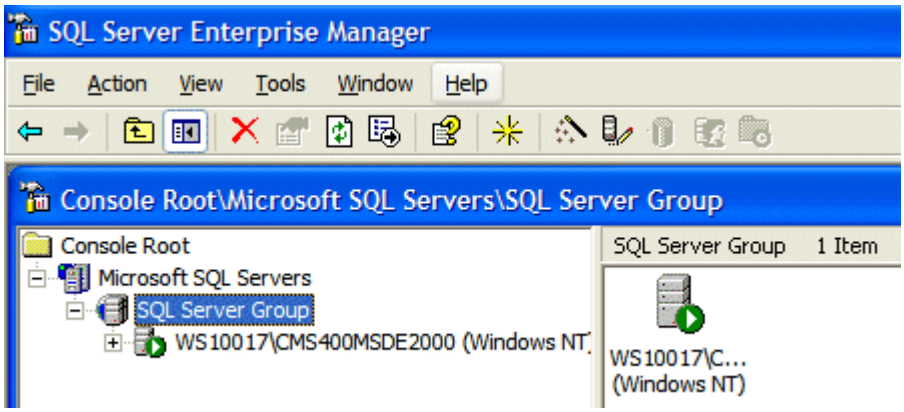
If the Backup is successful, this window appears.



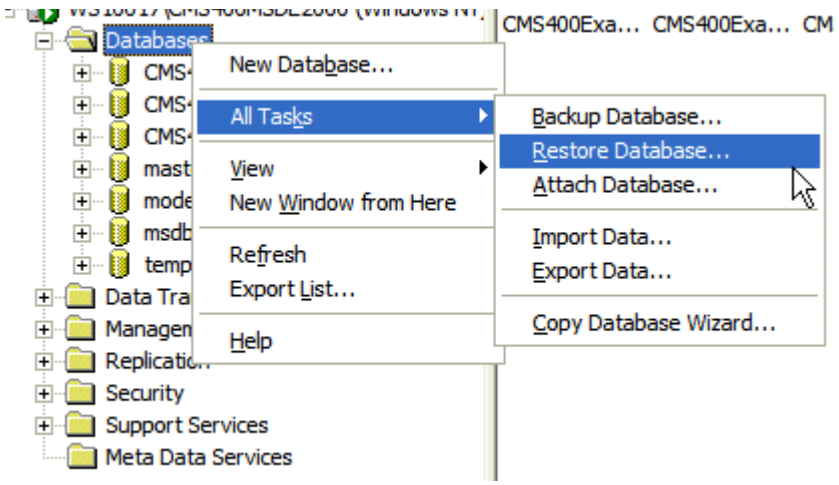
Restoring a Microsoft SQL Database

The following is an example of the steps to restore a backup copy of a Microsoft SQL Database.

1. Open Microsoft SQL Server Enterprise Manager.
2. Click on **Microsoft SQL Servers > SQL Server Group**.

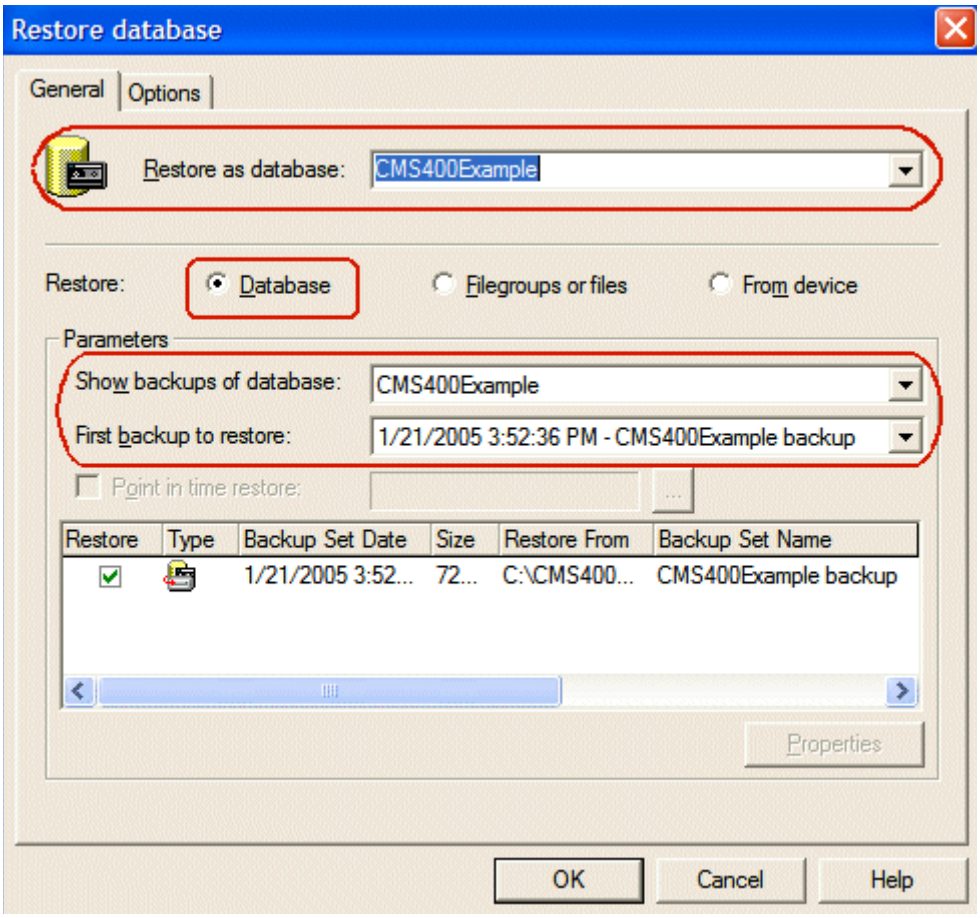


3. Click the server you want to restore the database to.
4. Right click **Databases > All Tasks > Restore Databases**.

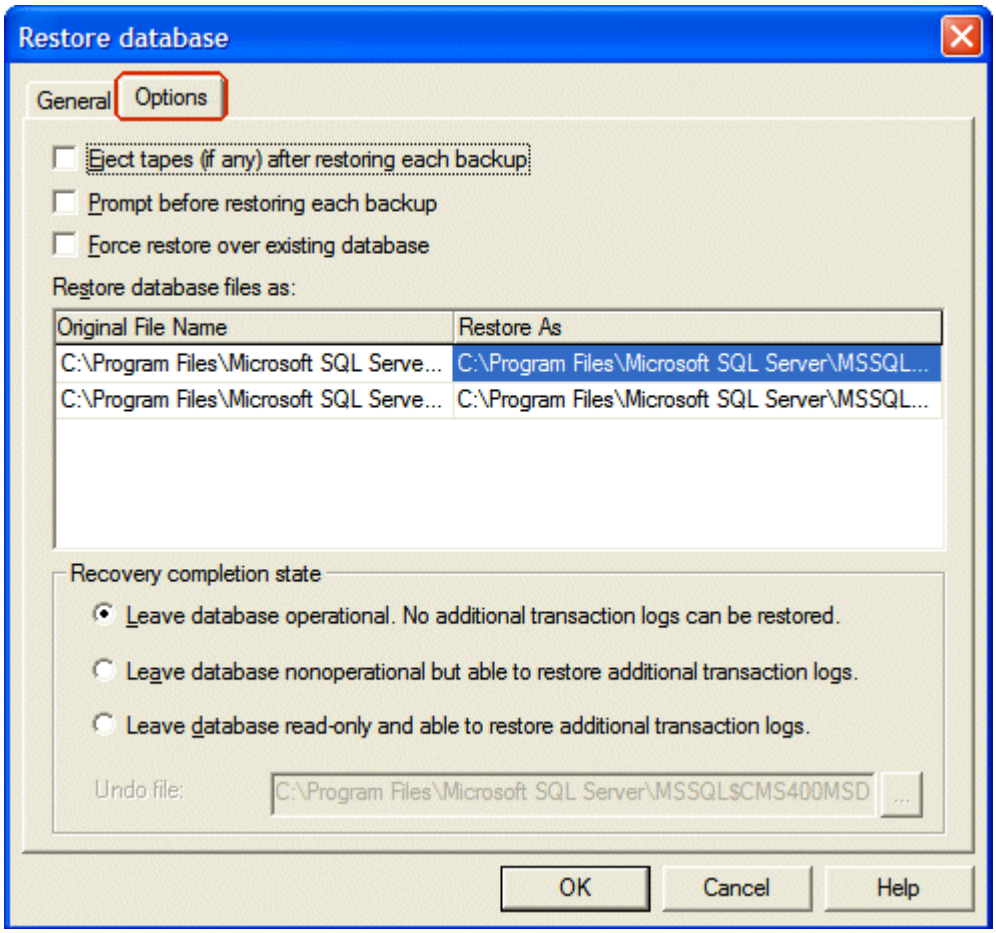


5. In the **Restore as database** field, type the name you want the database to be restored as.
6. Choose the **Database radio button**.

7. In **Parameters**, choose a backup to restore.

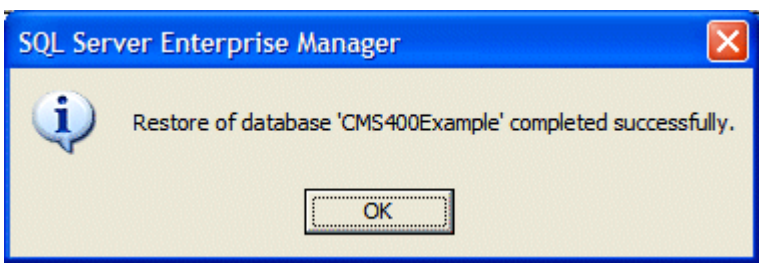


8. Set any options.



9. Click **OK**.

If the restore is successful, this window appears.



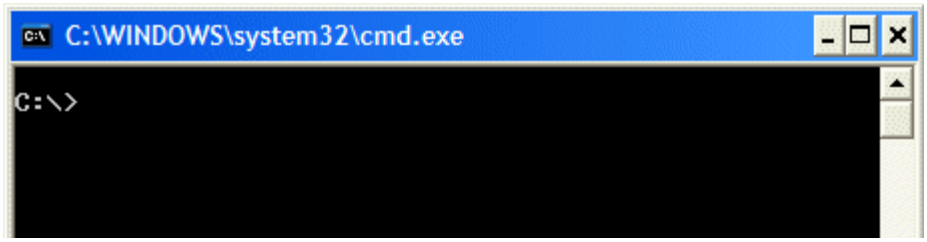
Backing Up an MSDE2000 Database

Below are examples of syntax to backup your database and create a log of your backup. You may need to modify them or add switches based on the configuration of your database. To find a list of switches and their definitions, type **osql -?** at the prompt.

NOTE Switches used by OSQL are case sensitive.

To backup an MSDE2000 database, follow these steps.

1. Open a command window.



2. Add the following line after the prompt.

```
osql -d CMS400Example -E -n -Q "BACKUP DATABASE CMS400Example TO DISK = 'c:\CMS400Example.bak'"
```

3. Press <Enter>.
4. To make a log of the backup, add the following line after the prompt.

```
osql -d CMS400Example -E -n -Q "BACKUP LOG CMS400Example TO DISK = 'c:\CMS400Example _log.bak'"
```

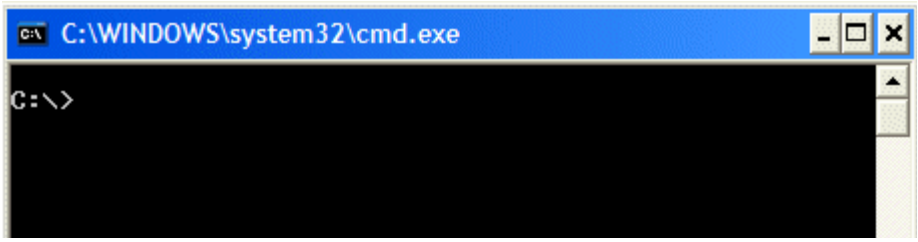
5. Press <Enter>.

Restore an MSDE2000 Database

Below is an example of syntax to restore your database. You may need to modify it or add switches based on the configuration of your database. To find a list of switches and their definitions, type **osql -?** at the prompt.

To restore an MSDE2000 database, follow these steps.

1. Open a command window.



2. Add the following line after the prompt.

```
osql -d master -E -n -Q “RESTORE DATABASE CMS400Example FROM DISK = ‘c:\CMS400Example.bak’”
```

3. Press <Enter>.

Updating Application Messages

Ektron CMS400.NET provides language support for French and German. If you are upgrading from a previous version and are using your old database, the translated strings are not included. Because of this, the installation includes a utility that lets you populate your old database with the translated strings.

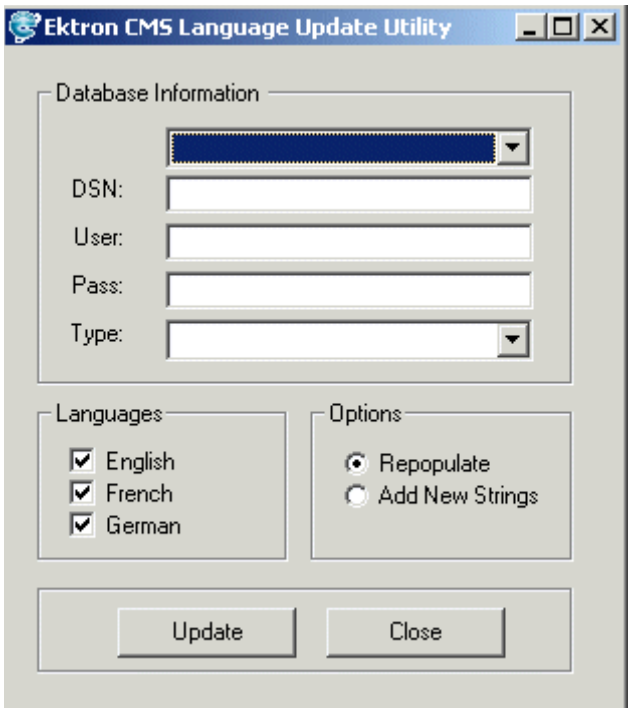
Prerequisites

Before using the language upgrade utility, you must upgrade your version of Ektron CMS400.NET. For information on this, see ”Performing the Upgrade” on page 9. During the upgrade, if you opt to keep your previous database, proceed with this section.

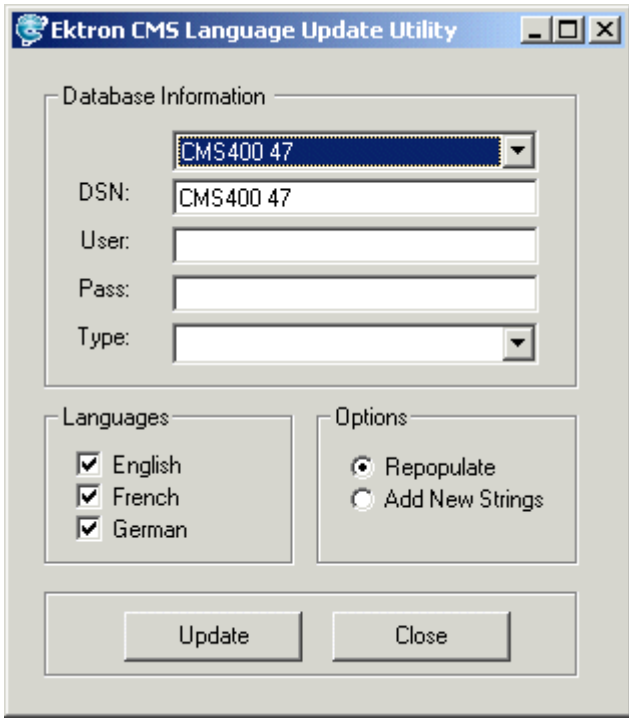
Using the Language Update Utility

To use the language update utility, follow these steps.Programs >

1. Go to **Start > Programs > Ektron > CMS400 > Utilities > Application Strings Update**.

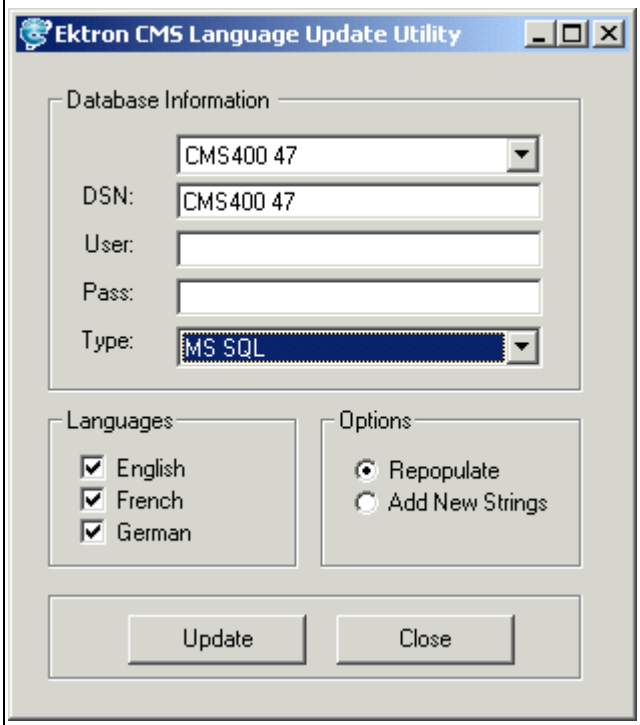
2. The Language Update Utility opens.	

3. Select the DSN for the database from the drop down list.



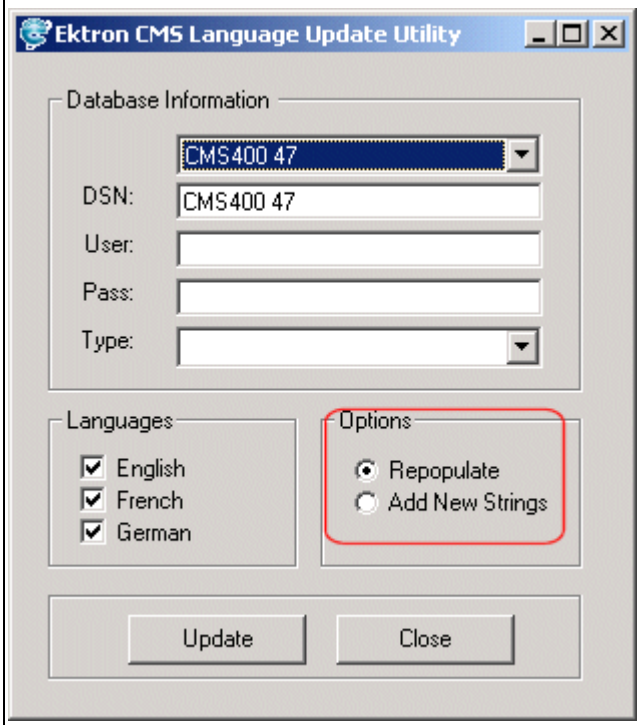
4. Enter a username and password with permissions to the DSN if required.

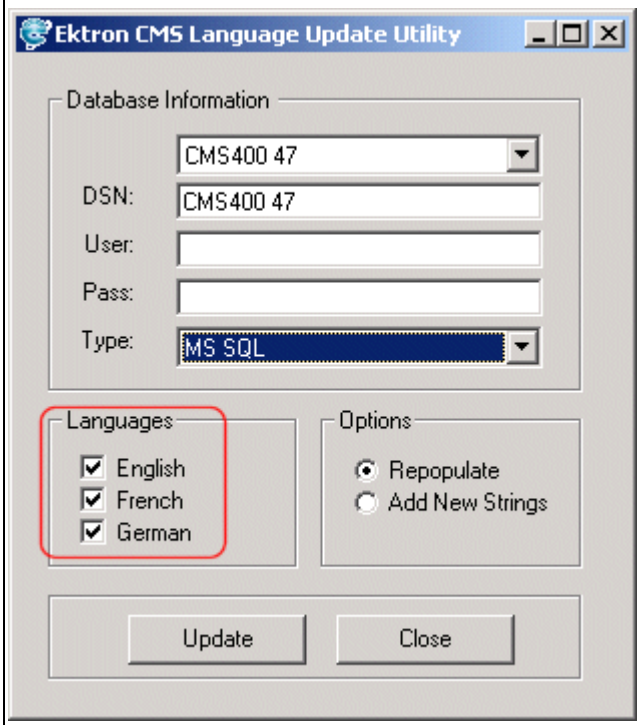
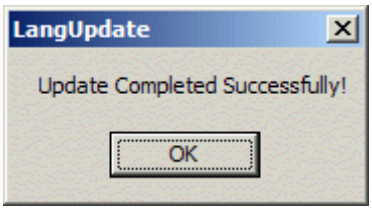
5. Select the type of database you are using. It will be updated with the language strings.



6. Select the action you want to perform.

- **Repopulate** - deletes all strings and repopulates the database
- **Add New Strings** - adds only new strings in the current release of Ektron CMS400.NET. (Recommended if you changed existing strings)

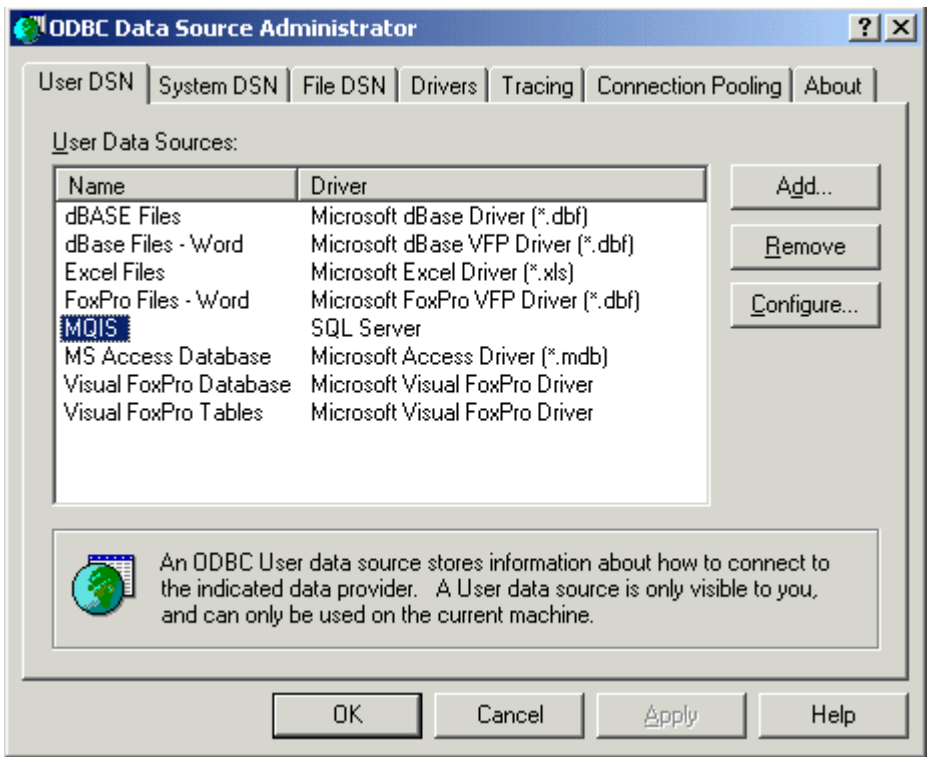


7. Select the languages that you would like to be updated/added to the database.	
8. Click the **Update** button.	
9. When the language update is complete, the following screen appears.	
10. Click **OK** to close the window.	
11. Click **Close** on the Languages Update Utility window.	

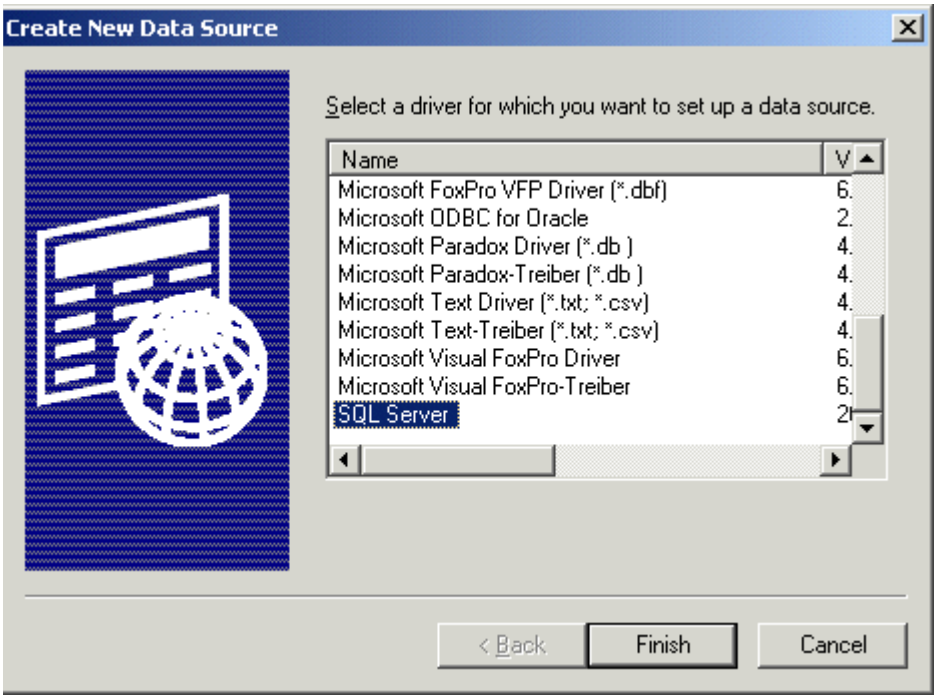
Creating a New DSN

If a DSN was not automatically created during installation/upgrade, follow this procedure to access the ODBC Manager and point the DSN to the new database.

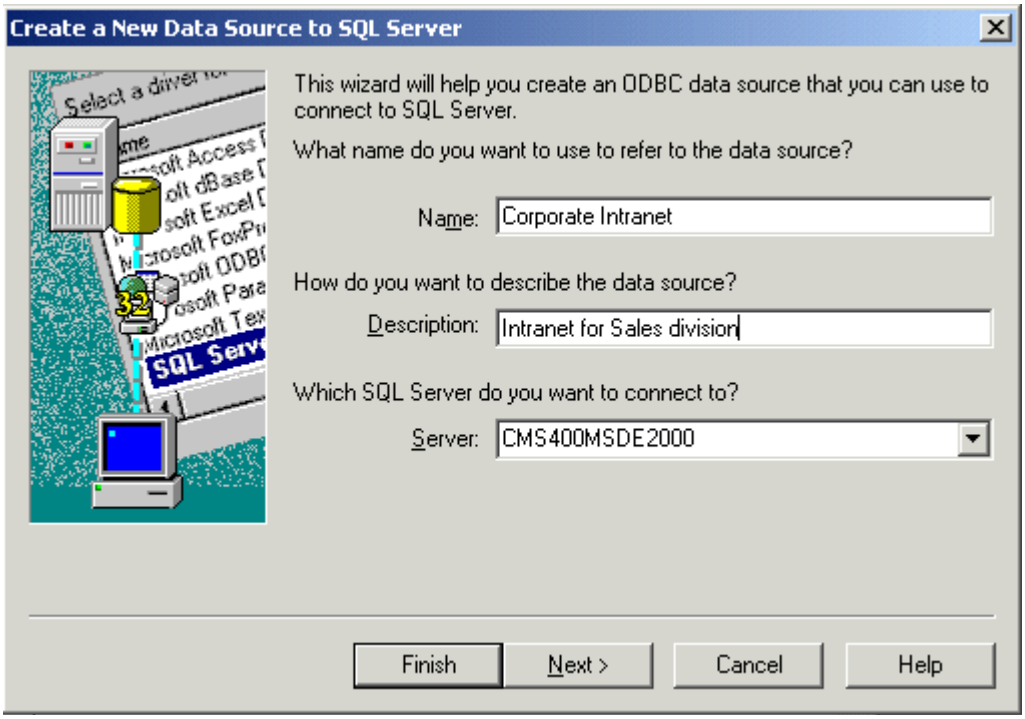
1. Access the ODBC Manager from the Control Panel.
2. The ODBC Data Source Administrator dialog is displayed.



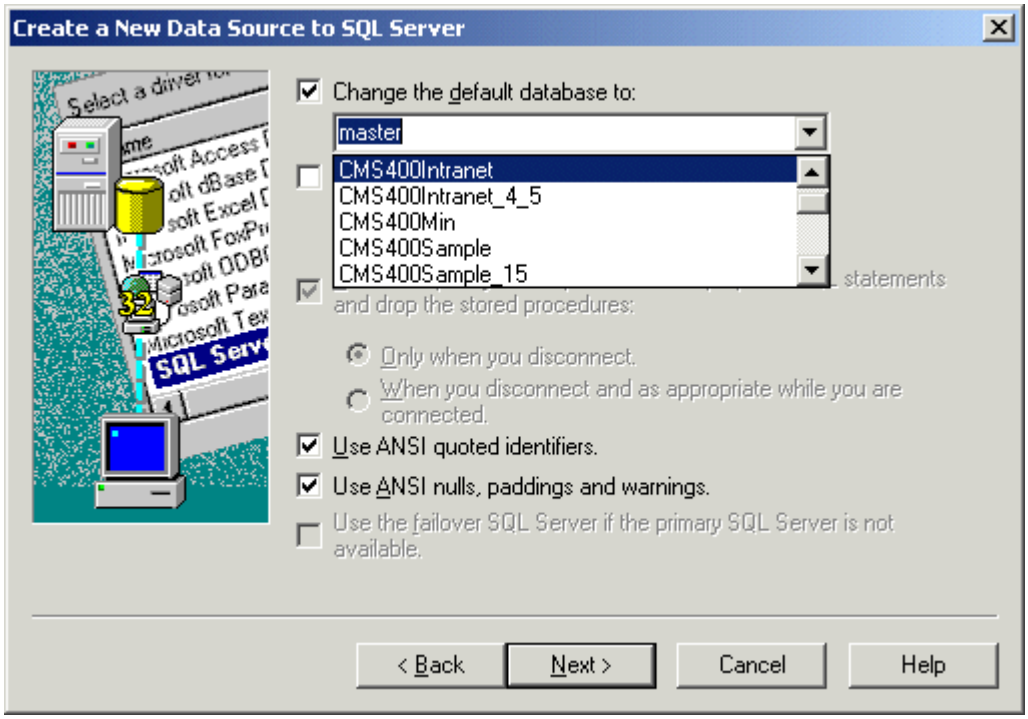
3. Click the **System DSN** tab.
4. A list of system data sources appears.
5. Click **Add**.
6. The Create New Data Source window appears.



7. Select the driver that best suits your version of MS-SQL server.
8. Click **Finish**.
9. The Create a New Data Source to SQL Server window opens.
10. Specify a name, description, and choose the SQL server to connect to.
11. Click **Next >**.

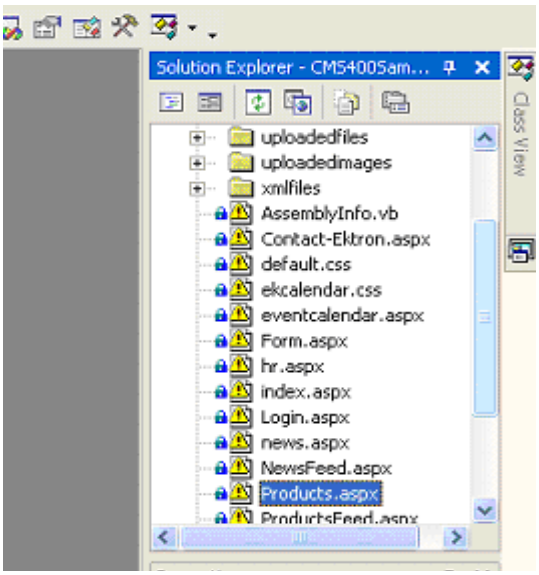


12. The next screen appears. Enter the necessary information about the authentication for the DSN, then click **Next >**.
13. The next screen appears.
14. Change the default database to the one that you created. Make any other adjustments on this screen if necessary. Then click **Next >**.



15. The next screen appears. Choose whichever options you would like for the DSN, then click **Finish**.
16. The ODBC Microsoft SQL Server Setup window displays a summary of your settings.
17. Click **Test Data Source** to verify the data source.
18. If the DSN is good, you receive a message that the test completed successfully. If not, edit the DSN and make sure that everything is set up properly.
19. To finish, click the **OK** button at the bottom of the screen, and close the ODBC Manager.

Troubleshooting Upgrade Problems

Problem	Solution
After upgrade, Ektron CMS400.NET does not load properly. Also, an error icon appears next to your templates when you open the project in Visual Studio.NET, as illustrated below. The problem is that your .NET references need to be updated. 	To verify the problem, open the Ektron CMS400.NET solution file in Visual Studio.NET (`webroot\CMS400Example\CMS400Example.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\CMS400Example\bin` folder.
When viewing a page containing CMS400.NET 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.	See Ektron Knowledge Base article “ERRMSG: Compiler failed with Error Code 2000” (`www.ektron.com/developers/cms400kb.cfm?id=2029`)

Installing Ektron CMS400.NET

This section explains how to install **Ektron CMS400.NET** through the following topics:

- ”Before You Install” on page 35
- ”Performing the Installation” on page 35
- ”Results of Installation” on page 54
- ”Changes to the web.config File” on page 55
- ”After Installation” on page 56
- ”Setting Up an Additional Site” on page 56

Before You Install

Prior to installing Ektron CMS400.NET, complete these tasks.

1. Install Internet Information Server. For more information, see http://localhost/iisHelp/iis/misc/default.asp.
2. Install and configure your Web Application Server. For more information, see http://www.asp.net.

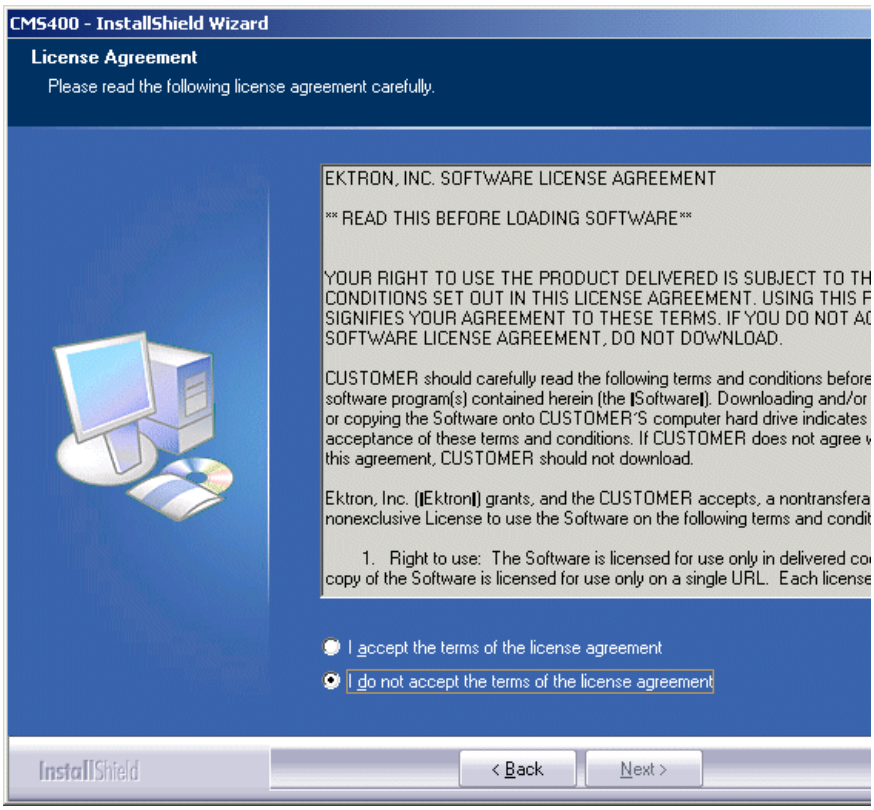
Performing the Installation

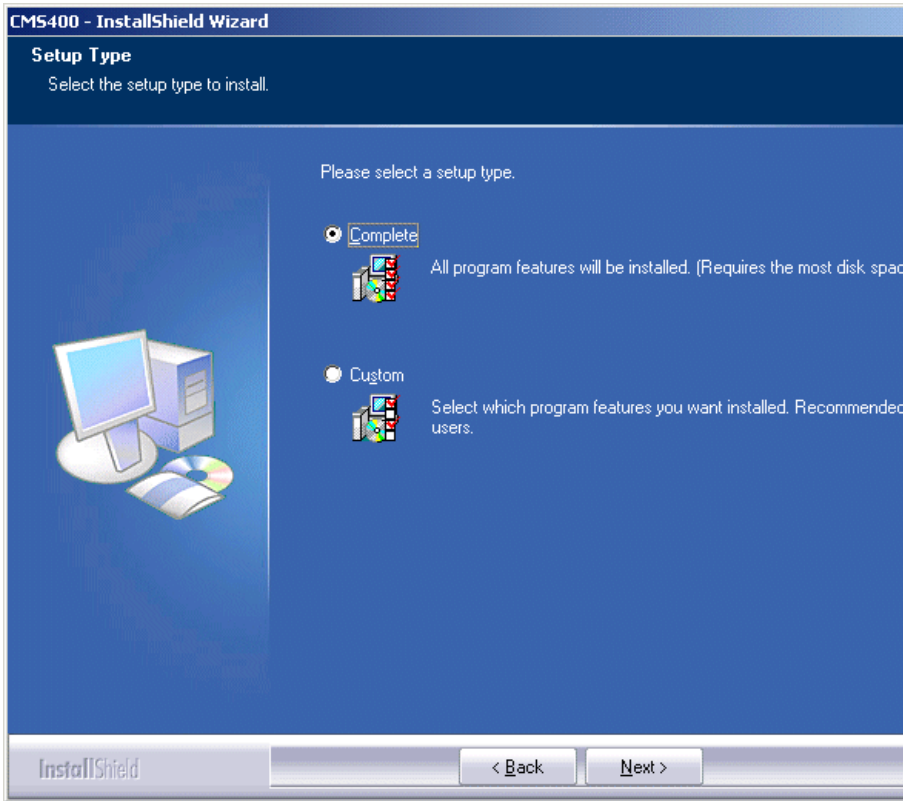
NOTE The installation program checks to see if MSSQL is installed on your server. If it is not, MSDE2000 is installed.

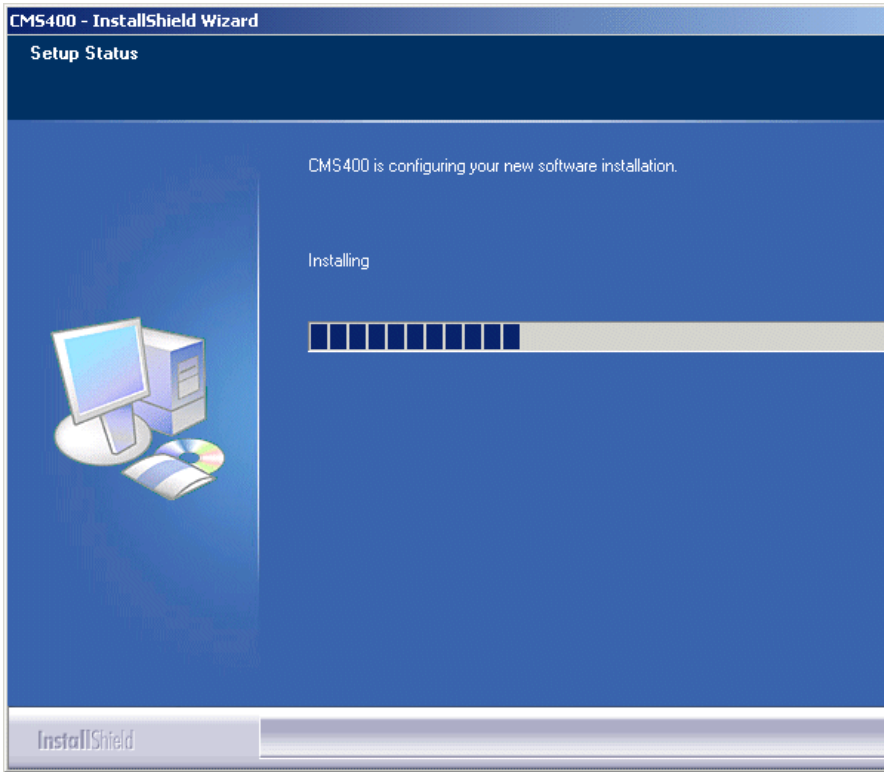
Installing **Ektron CMS400.NET** involves three actions. The installation program guides you seamlessly through them.

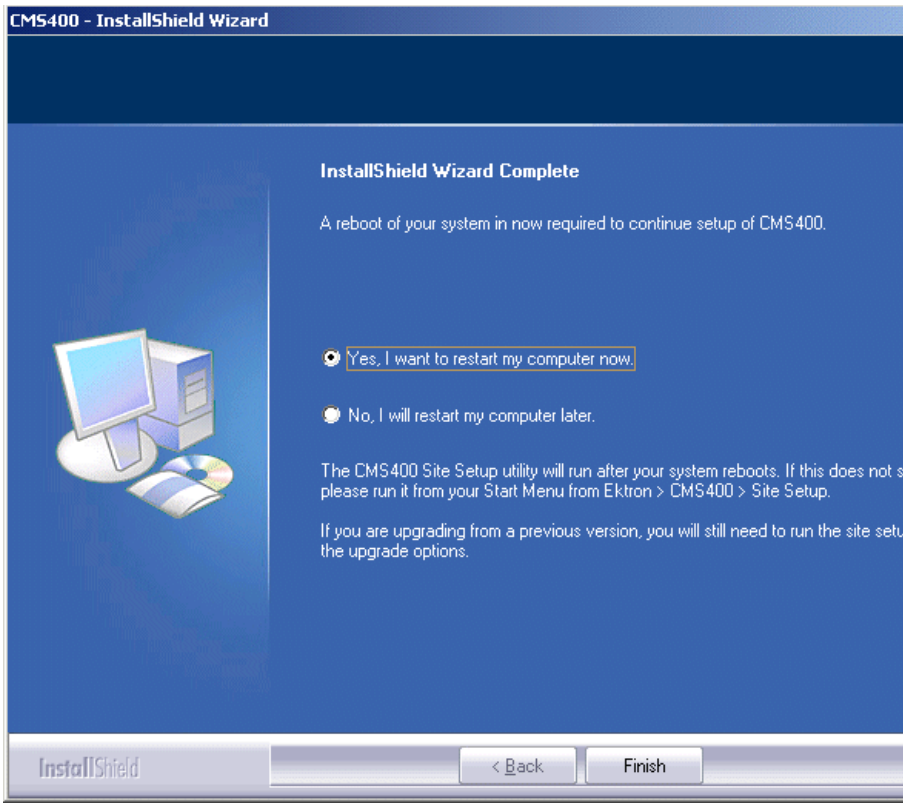
Action	What it does	For details, see
Copy installation files to `C:\Program Files`	• ensures system requirements • installs non-working copy of files needed to set up site	"An introductory screen appears. Click Next to proceed." on page 37
Set up a site	• moves files based on selected Web folder • creates IIS application directories • sets upload folder permissions • updates web.config (path, version, and build number)	"Setting up a Site" on page 40
Set up a database	• references database folder for scripts needed to create a database • creates new tables and populates them • adds and sets user permissions • updates the web.config file • tests database connection	"Setting up a Database" on page 45
Set up a user (MS SQL only)	• set up SQL user information	"Set Up a User for the Database" on page 50
Create a new DSN	• Create a new DSN that points to the MS-SQL database	"Creating a New DSN" on page 30

Running the Installation and Setup Program

Step	Setup Screen
1. Go to the Ektron Web site (http://www.ektron.com/download.cfm?product_id=260&purchase=0) and download version 4.7 of **Ektron CMS400.NET**.	
2. Double click the downloaded Ektron CMS400.NET executable file.	
3. An introductory screen appears. Click **Next** to proceed.	
4. A screen displays Ektron's License Agreement. Please read the agreement. • Click **I Accept...** to accept the agreement. • Click **I do not accept.** if you do not accept the agreement. This action ends the setup program.	

Step	Setup Screen
5. Select **Complete** to install all possible components. Or select **Custom** to select which components to install.	

Step	Setup Screen
6. The installation program copies the necessary files to the `C:\Program Files` folder. During this process, the installation grants the Everyone user group write permissions to the following system folders: • `\CMS400Example\UploadedImages` • `\CMS400Example\UploadedFiles` • `\CMS400Example\Databases` After completing the installation, you should further configure your permissions based on your network security model before using Ektron CMS400.NET.	

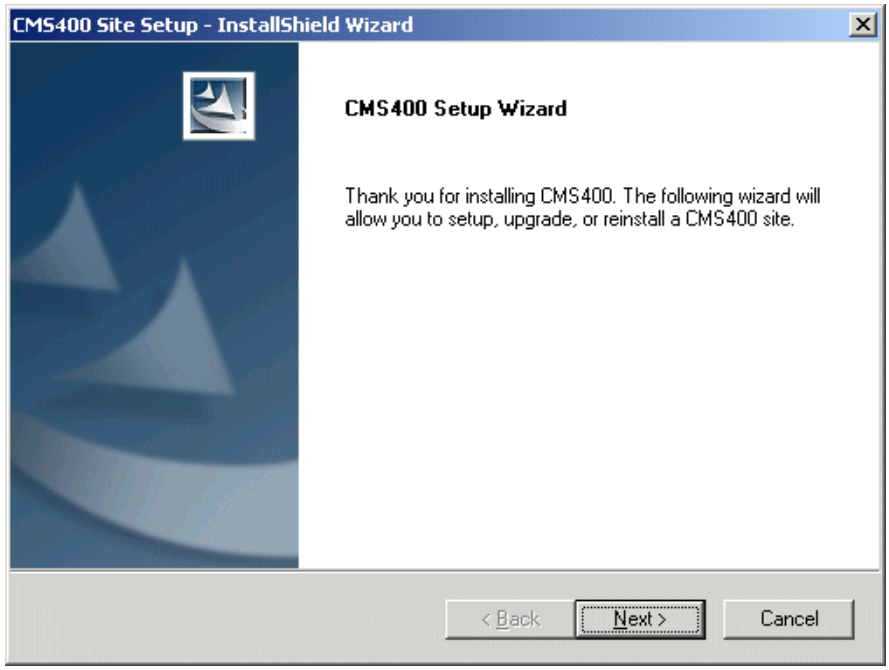
Step	Setup Screen
7. A screen indicates that the installation is complete. 8. If you have an MS-SQL database, proceed to "Setting up a Site" on page 40. If you are installing an MSDE database, you are prompted to restart your computer. Ektron recommends doing a restart now, before continuing the installation.	

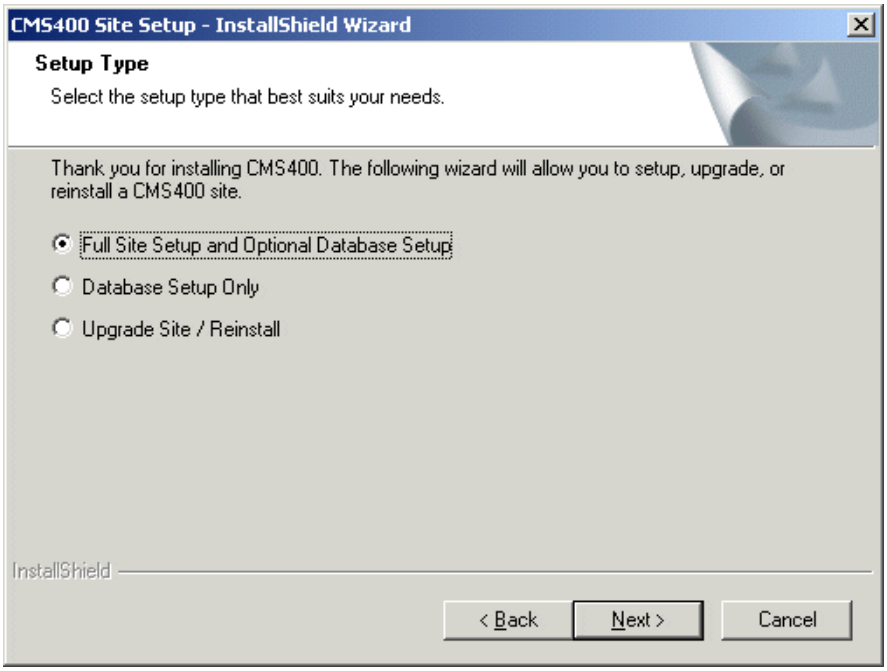
If you restart now, the site setup procedure begins immediately upon completion of the restart.

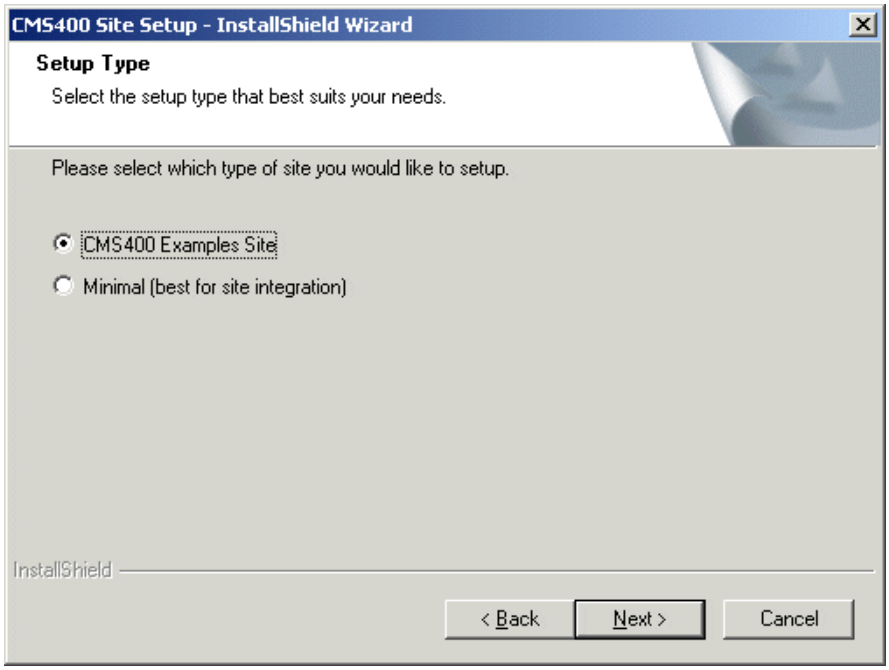
If you restart later, you can launch the site setup from **Start > Programs > Ektron > CMS400 > Utilities > CMS400 Site Setup**.

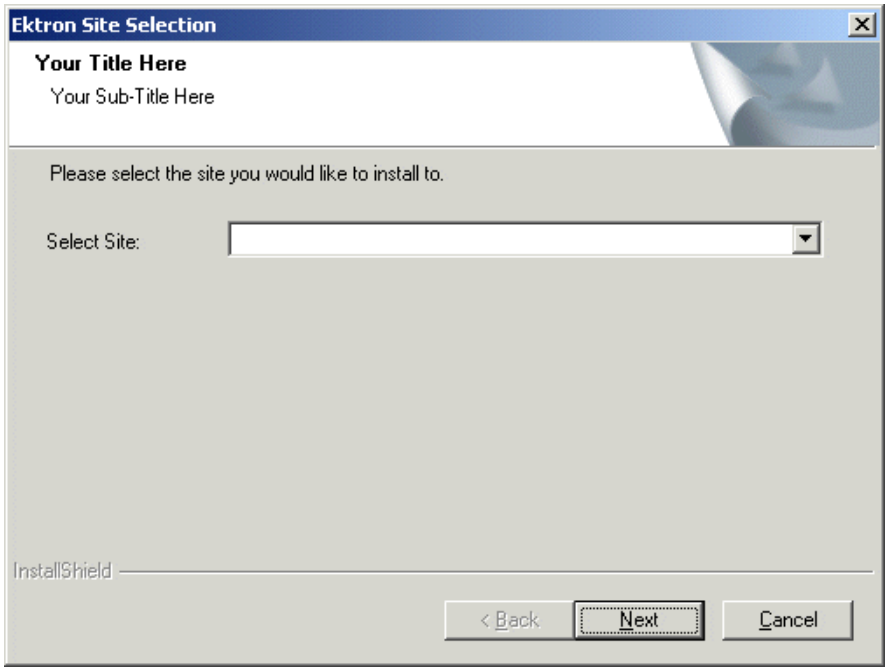
Note: If you have any problems installing MSDE, you can download it directly from Microsoft's Web site at `http://www.microsoft.com/sql/msde/downloads/download.asp`.

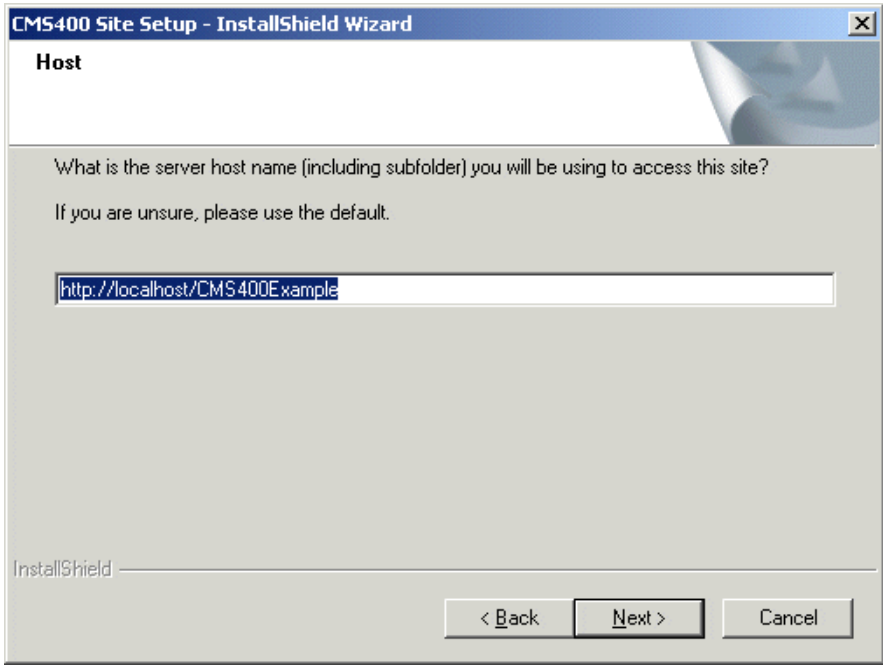
Setting up a Site

Step	Setup Screen
9. This screen appears. It lets you set up a Web site. To set up a site, the installation copies the following folders from `C:\Program Files\Ektron\CMS400v48` to the Web root folder you specify: • BIN • CMS400 scripts • documentation • uploaded files and uploaded images • a login page • the VS.NET solution file	

Step	Setup Screen
10. Select the type of site you want to install: • **Full Site Setup and Optional Database Setup**- installs templates and supporting files for the sample site. • **Database Setup Only** - Sets up just a database in selected folder. You can choose sample or minimal database. *See Also:* "Setting up a Database" on page 45 • **Upgrade Site/ Reinstall** - Use if you have an earlier version of **Ektron CMS400.NET**. *See Also:* "Upgrading Ektron CMS400.NET" on page 7	

Step	Setup Screen
11. Select the type of site you want to install: **Example site** or **Minimal**. The sample site contains • Two users - 1 administrator, 1 editor • Sample content • Sample images • Fonts The minimal site lacks sample content and images. It only includes necessary files and the default administrator (admin/admin).	

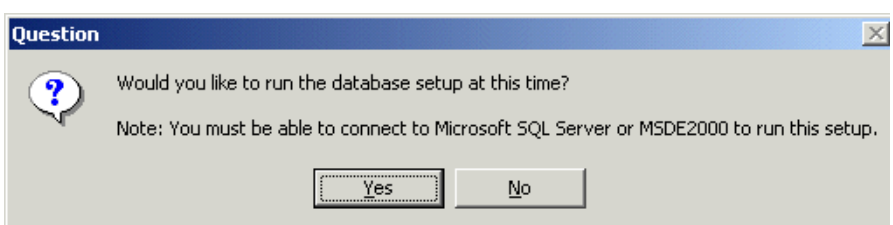
Step	Setup Screen
12. If your server operating system accommodates multiple Web sites (for example, Windows Server 2003), select the site to which you want to install **Ektron CMS400.NET** from the dropdown list. Otherwise, accept the default.	

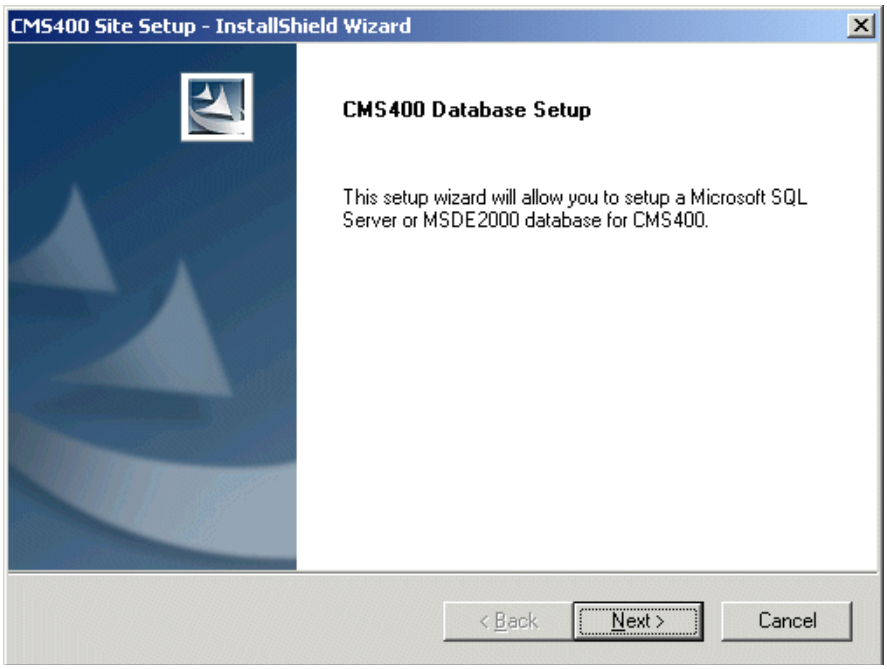
Step	Setup Screen
13. On the Host screen, specify the host name (which defines the URL) that will be used to access your Web site. The host name also configures variables during the installation. It can be any of the following: • An IP address (123.456.7.890) • A server name (WebServer1234) • A domain name (www.ektron.com)	

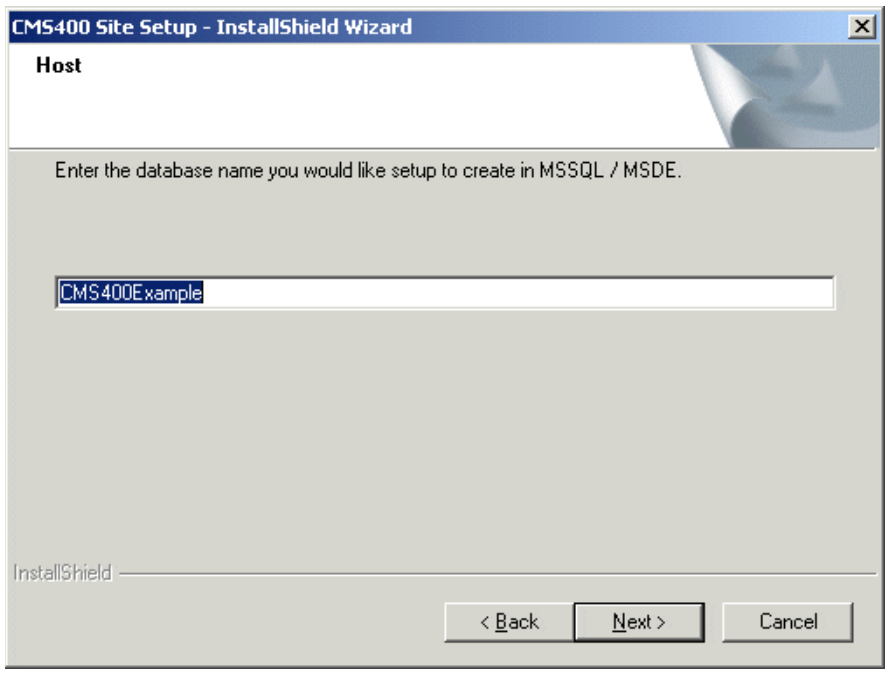
Setting up a Database

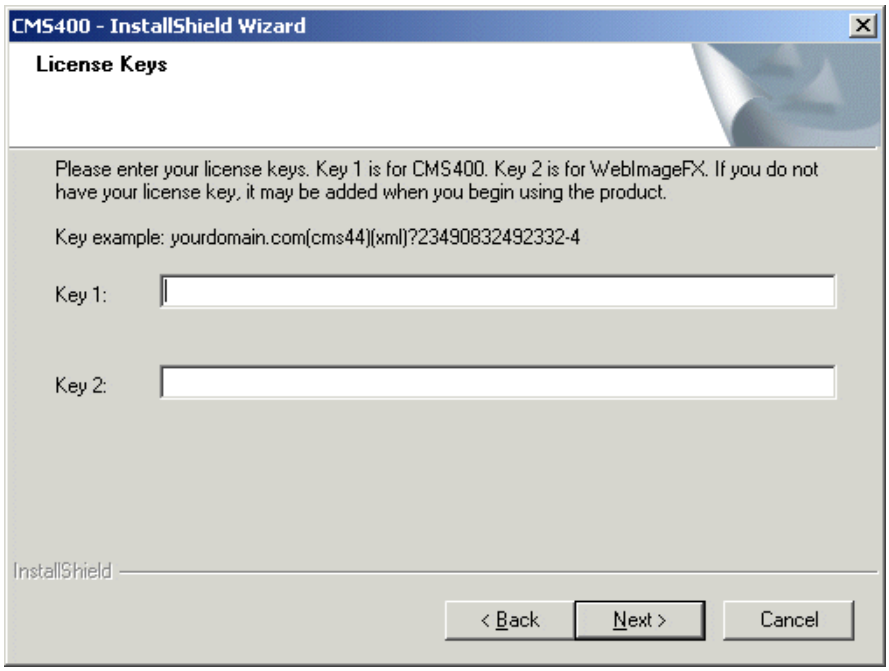
Your database contains information such as users and content blocks. **Ektron CMS400.NET** is compatible with the following databases:

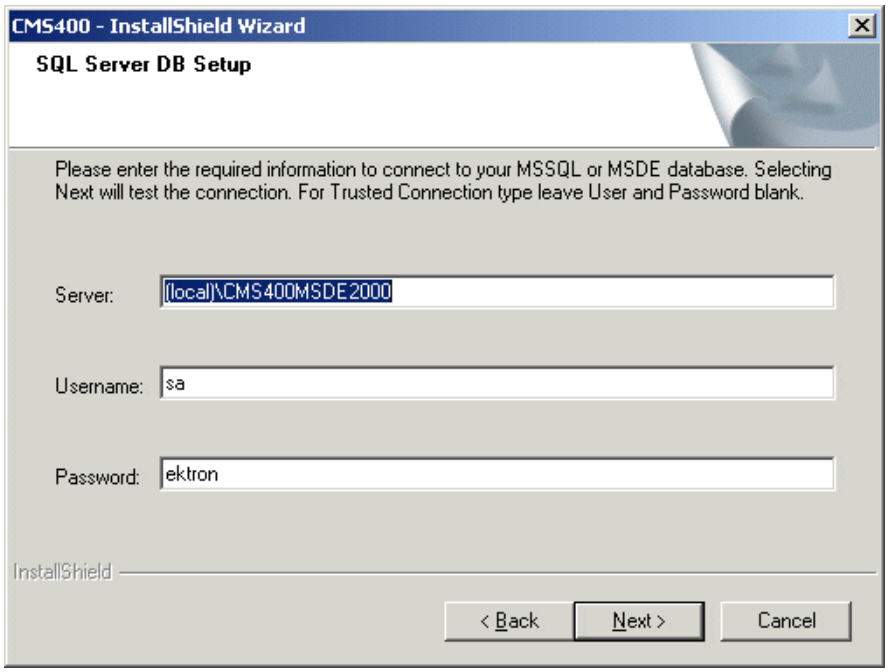
- SQL Server 2000
- Microsoft MSDE 2000 (a free, scaled-down version of SQL database. For more information see, http://www.microsoft.com/sql/msde/default.asp.). If your server does not have SQL Server 2000 or MSDE, MSDE is installed.

14. You are asked if you want to set up a database. Click **Yes** to do so.	

Step	Setup Screen
The database setup program • checks for MSDE or SQL server. If SQL is installed on your server, a SQL database is set up. If MSDE is installed, an MSDE database is set up. If neither is detected, MSDE is installed then an MSDE database is set up. • loads database tables • updates the web.config file with information about your database connection, based on your responses	

Step	Setup Screen
15. Enter the name of the database you are creating. If you are installing the sample site, accept the default. If you are setting up your own site, assign a different name.	

Step	Setup Screen
16. Enter license keys for the **Ektron CMS400.NET** and WebImageFX, if you have them. License keys are typically emailed to your organization when you request a copy of the application. When cutting and pasting license keys, keep the full license key intact without adding or deleting characters. If you do not have the license keys now, you can insert them later. See "Configuring **Ektron CMS400.NET**" in the Administrator manual for details.	

Step	Setup Screen
17. This screen prompts for database connection information. **Server** - **(local)\CMS400MSDE2000** is the default value for the MSDE server installed with **Ektron CMS400.NET**. To install this, accept the default. Otherwise, enter a SQL or MSDE server that already exists. For SQL, this would typically be **(local)**.	

Username - Enter the username you will use to access the database. If you are installing the MSDE database delivered with **Ektron CMS400.NET**, the username is **sa**.

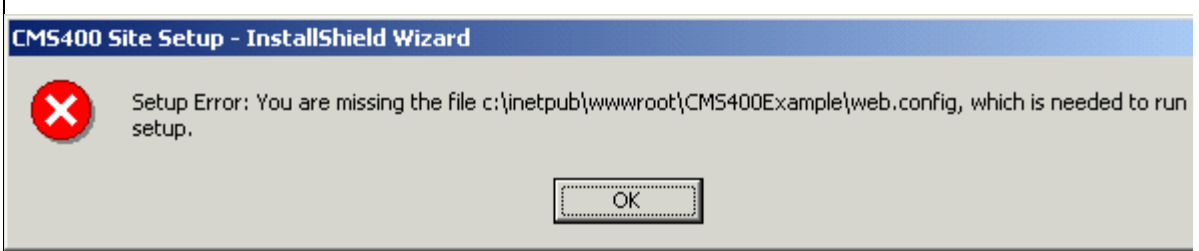
Password - Enter the password you will use to access the database. If you are installing the MSDE database delivered with **Ektron CMS400.NET**, the password is **ektron**.

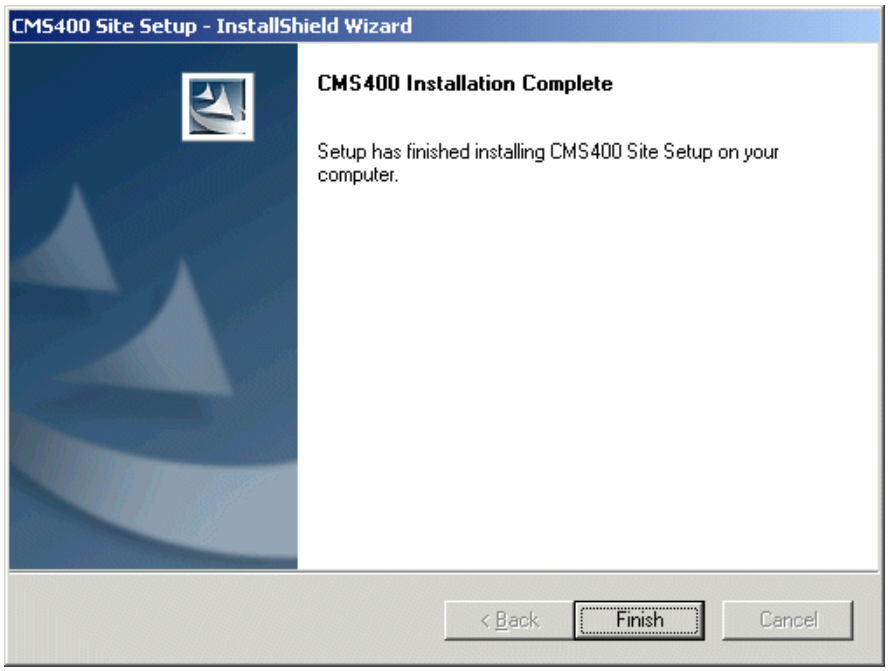
Note: If you want to use NT authentication, leave the username and password blank. This will set up a trusted connection.

After you complete the screen, the installation program creates a database using the provided information. Then, it tests the database connection to verify that the information is valid and that you can save content.

If the database name was used previously, you are informed and asked to assign a different name.

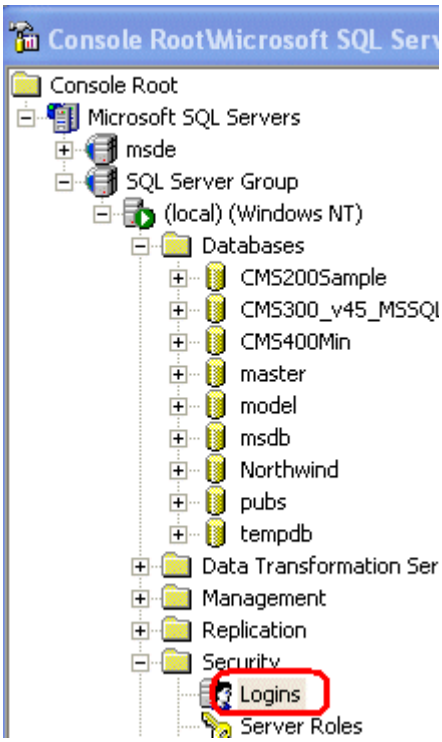
If you see the following error message, change the **Destination Folder** to `program files\ektron\cms400v48\sitesetup\database`.

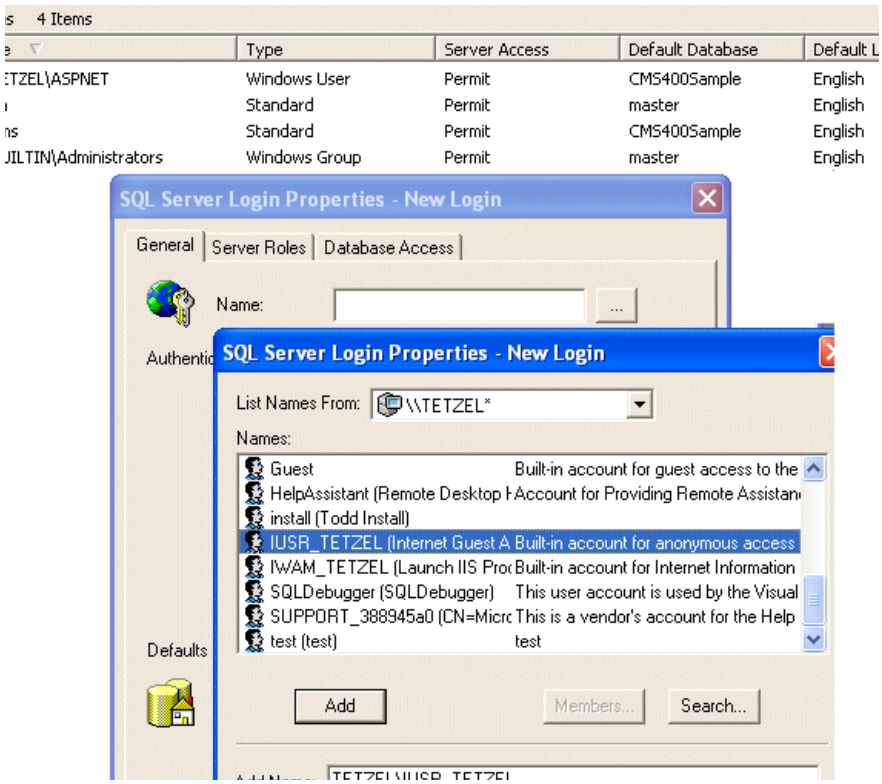


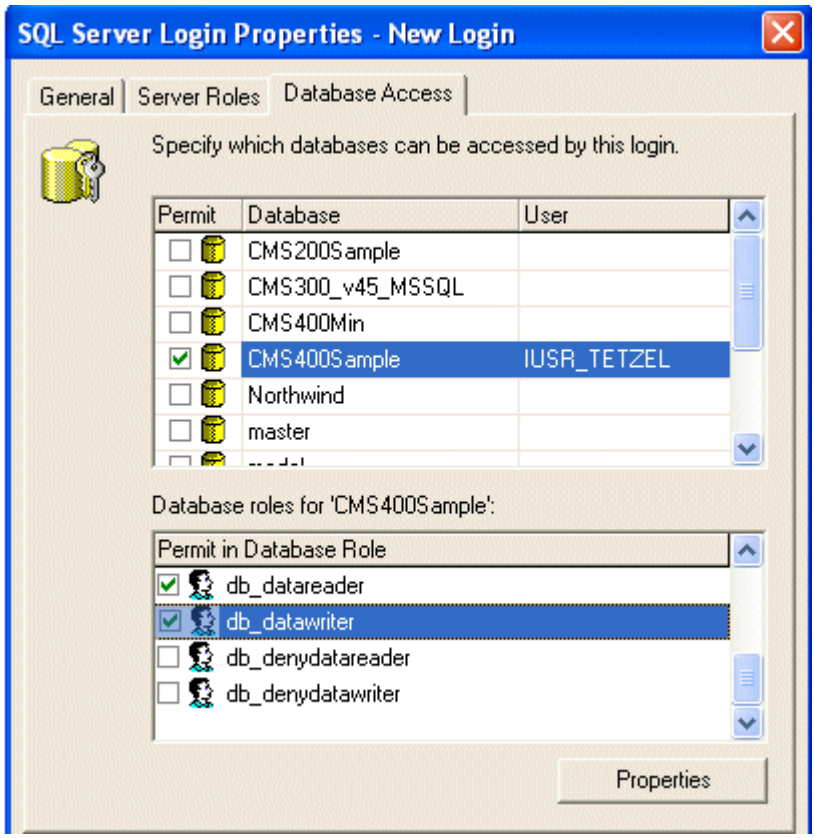
Step	Setup Screen
18. The setup program installs the necessary files to complete the setup.	

Set Up a User for the Database

The installation automatically sets up user information based on the data collected during setup. However, if there is a problem creating the user, this section describes how to set up a user manually.

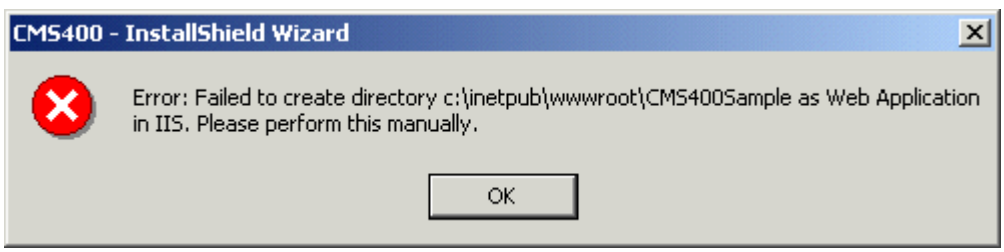
Step	Setup Screen
1. In the SQL Enterprise manager, select **Security > Logins**.	

Step	Setup Screen
2. On the Login Properties dialog, select **New Login**. From the New Login dialog, click **IUSER**, **Add** and **OK**.	

Step	Setup Screen
3. On the **Database Access** tab, click the CMS400Example database. Then, assign permission to read and write to that database (as illustrated.)	

Possible Error Messages During Installation

Error



Possible Causes and Solutions

Possible cause	Suggested solution
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
IIS is not running	Restart IIS. For information on how to, read IIS help topic "Starting and Stopping Sites." http://localhost/iishelp/iis/htm/core/iiststp.htm
Host is not localhost	Install **Ektron CMS400.NET** on localhost machine only.

Results of Installation

File Locations

By default, the installation inserts files into two locations on the server:

- `C:\Program Files\Ektron\CMS400v48`: sample and minimal databases, documentation, utilities, site setup files (for creating additional sites)
- `C:\Inetpub\wwwroot\CMS400Example`: bin folder, Web Services, scripts, supporting files, uploaded files and images, graphics used in the application, CustomAPI (used to customize **Ektron CMS400.NET**), etc.

NOTE The bin folder stores Ektron CMS400.NET's binary executable files. The .NET environment automatically searches this folder when looking for dll files.

File Permissions

During installation, the everyone group is given permission to create folders in the following directories:

- `C:\Inetpub\wwwroot\CMS400Example\uploadedfiles`

- `C:\Inetpub\wwwroot\CMS400Example\uploadedimages`

Ektron recommends setting up .NET user accounts to authorize users to add, edit, and delete folders in the installation folder, `C:\Inetpub\wwwroot\CMS400Example\`.

Changes to the web.config File

See Also: "Managing the web.config File" on page 65

After you install **Ektron CMS400.NET**, the web.config file is updated as follows.

web.config setting	Assigned this value by installation
ek_sitePath	*webroot*/CMS400Example
ek_buildNumber	current build number of **Ektron CMS400.NET**
ek_version	current version of **Ektron CMS400.NET**

After you run the database setup utility, the web.config file is updated as follows.

Line	Description	Value (if default accepted)
ek_dbCatalog	the database name you assigned	
ek_dbServer	the database server name (MSSQL or MSDE)	(local)\CMS400MSDE2000
ek_dbConnectionType	database connection type (MSDE or SQL)	sql
ek_dbUsername	user from CMS400 database (only used for SQL)	sa
ek_dbPassword	password from CMS400 database (only used for SQL	Ektron

Line	Description	Value (if default accepted)
ek_dbTrustedConnection	**false** - (default) sets authentication to **SQL Server**. Username and password are required. **true** - sets authentication to **Windows**. Windows handles security when connecting to database.	false
ek_sitePath	path from the root of web server	

After Installation

Ektron strongly recommends configuring a secure socket layer (SSL), especially if you are using Active Directory Integration. SSL encrypts passwords that are otherwise sent as clear text to the Ektron CMS400.NET server. See ”Configuring SSL” on page 79 for more information.

Setting Up an Additional Site

After installing **Ektron CMS400.NET**, 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 would typically install a minimal site and database, then create your Web page templates. Later, you can add users and content.

To set up an additional site, follow these steps.

- ”Step 1: Set up New Site” on page 57
- ”Step 2: Set up New Database” on page 57
- ”Step 3: Create Project in Visual Studio.NET” on page 58

Step 1: Set up New Site

1. Create a new folder in the Web root folder to contain the site files.
2. From the Windows Start menu, follow this path:

   Start > Programs > Ektron > CMS400 > Utilities > SiteSetup
3. Follow the steps for creating a new site, as described in ”Setting up a Site” on page 40. When prompted to select a folder to which you want to install the files, choose the folder you created in Step 1.

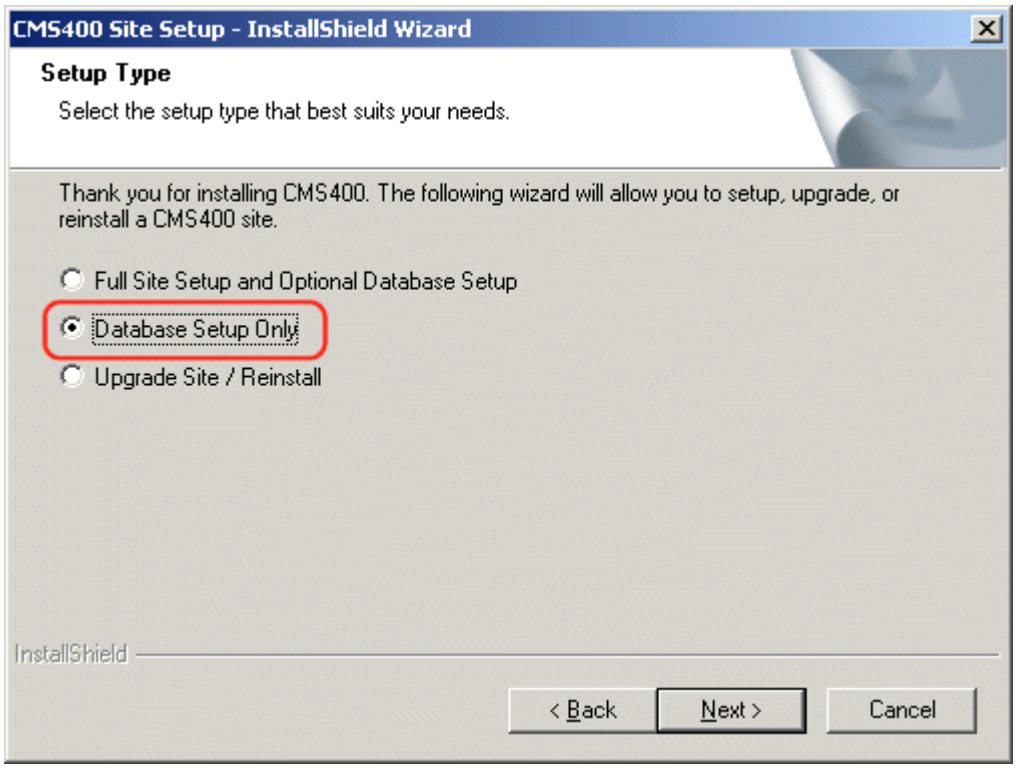
Step 2: Set up New Database

After installing an **Ektron CMS400.NET** site, it is easy to create a new, starter database. You can create either a sample or minimal database. If you want to create a database for your content, you typically install a minimal database.

To set up a database, follow these steps.

1. From the Windows Start menu, follow this path:

   Start > Programs > Ektron > CMS400 > Utilities > SiteSetup
2. On the first screen that appears, choose **Database Setup only**.



3. Follow the steps for creating a new database, as described in "Setting up a Database" on page 45. Be sure to assign the database a name other then the default. Also, when asked to enter a SQL or MSDE server, enter the server name or IP address.

WARNING! Do *not* use the instance name (`CMS400MSDE2000`) -- it will cause an error.

Step 3: Create Project in Visual Studio.NET

To work with the new site in Visual Studio.NET, you need to create a new project for it. To do that, follow these steps.

1. Navigate to the folder of the new site you created.
2. Double click on **Ektron CMS400.NET**'s solution file. If you are using the minimal database, the file is `CMS400Min.sln`. If you are using the sample database, the file is `CMS400Example.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, you can use the builtin account: the username is builtin and password is builtin.

WARNING! 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 CMS400.NET.

To learn about creating templates and using server controls, see the **Ektron CMS400.NET** Developer's Manual section "Ektron CMS400.NET Server Controls."

Converting CMS300 to Ektron CMS400.NET

Many customers who purchase **Ektron CMS400.NET** are upgrading from Ektron CMS300. Converting Ektron CMS300 to **Ektron CMS400.NET** is explained in the following sections:

-
- ”Migrating Your Database For Use with Ektron CMS400.NET” on page 60
- ”Converting CMS300 Files to Ektron CMS400.NET” on page 62

IMPORTANT For more information on migrating your site to **Ektron CMS400.NET**, see ”Migrating Your Site to Ektron CMS400.NET” on page 104.

Migrating Your Database For Use with Ektron CMS400.NET

NOTE Ektron CMS400.NET 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 CMS400.NET” on page 35.

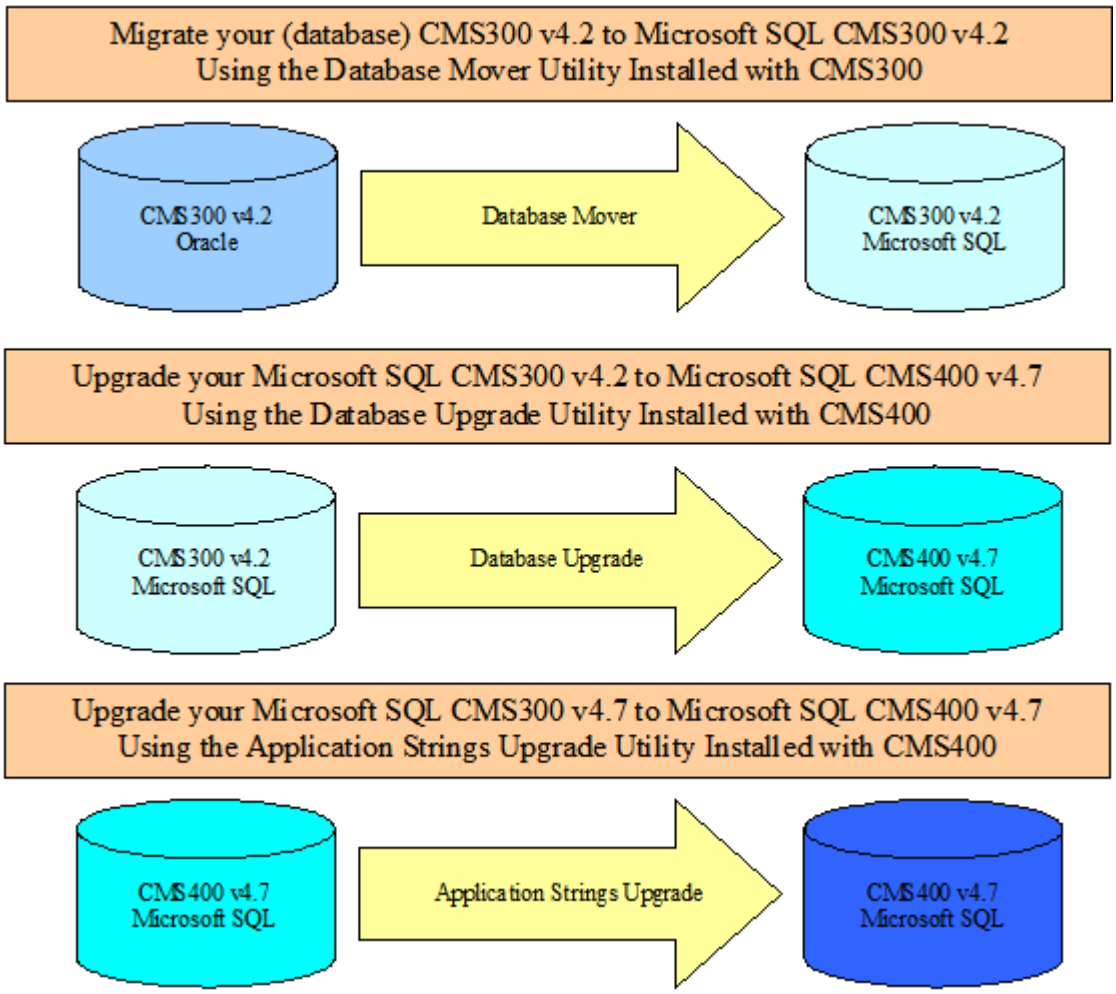
There are three things that need to happen to your database before you can use it with Ektron CMS400.NET.

- It needs to be a Microsoft SQL database.
- It needs to be the same CMS version.
- It needs to have the Application Strings updated.

This should be done in the following order.

1. ”Migrate Database to Microsoft SQL” on page 61.

2. "Upgrade Database to Ektron CMS400.NET" on page 62.
3. "Upgrade the Application String" on page 62.



Migrate Database to Microsoft SQL

You must migrate your database in the same CMS it currently resides in. For example, if you are using CMS300 and have an Oracle Database you need to upgrade to Microsoft SQL in CMS300. You can migrate your database to Microsoft SQL from the following programs:

- Microsoft Access
- Oracle
- MySQL

You can migrate your database to Microsoft SQL by using the Database Mover program. To use this program, click **Start > Programs > Ektron > CMS300 > Utilities > Database Mover**.

Upgrade Database to Ektron CMS400.NET

Upgrade your Microsoft SQL database from Ektron CMS300 to Ektron CMS400.NET. If your Ektron CMS300 version number matches the Ektron CMS400.NET version number you do not need to perform this step.

To upgrade, use the Database Upgrade program installed with Ektron CMS400.NET. To use this program, click **Start > Programs > Ektron > CMS400 > Utilities > Database Upgrade**.

Upgrade the Application String

Use the Application String Upgrade utility to configure Languages in the Application for Ektron CMS400.NET.

To run the Application String Upgrade utility, click **Start > Programs > Ektron > CMS400 > Utilities > Application String Upgrade**.

Converting CMS300 Files to Ektron CMS400.NET

Many customers who purchase **Ektron CMS400.NET** are upgrading from Ektron CMS300. This section explains how to convert your CMS300 templates so they work with **Ektron CMS400.NET**.

Each page to be converted must undergo the following changes.

1. Copy the template to the CMS400Example folder
2. ”Add the Top Two Lines” on page 63
3. ”Create the Prefix Object” on page 63
4. ”Use Response.Write” on page 63

5. "Surround Parameters with Parentheses" on page 64

Add the Top Two Lines

The top two lines of every **Ektron CMS400.NET** template must consist of the following

```
<%@ Page Language="vb" AutoEventWireup="false" %>

<%@ Import Namespace="Ektron.Cms.UI.CommonUI" %>

<html>
```

NOTE All .apsx files installed to `webroot\CMS400Example` begin with these lines.

These lines call the Ektron .Net assembly object to allow the page to function properly. They *must* remain at the top of the file.

The first line is a generic .Net line of code and should not be changed.

```
<%@ Page Language="vb" AutoEventWireup="false" %>
```

The second line, `<%@ Import Namespace="Ektron.Cms.UI.CommonUI" %>`, is an import statement that calls the namespace Ektron.CMS.UI.CommonUI to display information from the .Net assembly file.

Create the Prefix Object

Another important line near the top of the file is:

```
Dim AppUI As New ApplicationAPI
```

This line creates an object, AppUI, as a new application. You then prefix every method call with this object. Here's an example:

```
<%=AppUI.ecmContentBlock(24) %>
```

Use Response.Write

Another important difference between CMS300 and **Ektron CMS400.NET** is that, while the CMS300 ecmContentBlock method could alter a page directly, a CMS400 method cannot write directly to the page. Instead, it returns a string. Here are examples of `response.write` statements you can include.

```
<% response.write (AppUI.ecmContentBlock(24)) %>

<% =AppUI.ecmContentBlock(24) %>

<% =( AppUI.ecmContentBlock(24)) %>
```

Surround Parameters with Parentheses

Since **Ektron CMS400.NET** is a native .NET environment, it requires parentheses around any method's parameters. For example,

```
AppUI.ecmListSummary ("\Marketing\News",0,1,"","Title,asc","DateModified",0,"","")
```

The parentheses are highlighted in red to illustrate the point.

Managing the web.config File

Ektron CMS400.NET's web.config file lets you control many key functions of the content management system. When you install **Ektron CMS400.NET**, web.config is placed into `webroot/CMS400Example`.

This section explains the settings in the web.config file.

NOTE In CMS300 and CMS200, most web.config settings were handled in the setup.xxx file.

If your server is currently running another .NET application, you must merge that web.config file with this one.

Note that all **Ektron CMS400.NET** settings begin with ek_ and reside within the `<appSettings>` tags of the web.config file. This prefix distinguishes **Ektron CMS400.NET**'s tags from any others.

Settings in the web.config File

Setting	Description
ek_dbCatalog	The name of the SQL database you are using.
ek_dbServer	The name of the database server to which **Ektron CMS400.NET** is installed. If installed locally, the value is **localhost**. This value is set during installation, at the Host screen.
ek_dbConnectionType	Should be SQL for SQL authentication.
ek_dbDatabase	MSSQL is currently the only supported database

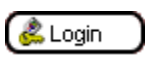
Setting	Description
ek_dbUsername	If required, specify the username used to connect to the DSN. This user account must have at least read and write permissions to the database. Note: This value can be blank if you are using Windows authentication.
ek_dbPassword	If required, specify the password for the username given. It should match your database name Note: This value can be blank if you are using Windows authentication.
ek_dbUseTransactions	not used currently -- for future use
ek_dbTrustedConnection	For SQL authentication, set to **false**. In this case, username and password are required. For Windows authentication, set to **true**. If set to **true**, Windows handles security when connecting to the database. In this case,.NET impersonates the user coming from IIS, eliminating the need for the ASPNET account.
ek_dateFormat	Enter a pattern describing how dates and times are stored in your database.
ek_sitePath	The location of **Ektron CMS400.NET** relative to the Web root. This value is set during installation at the Site Path Directory screen. If you move **Ektron CMS400.NET** to another folder, you must update this value.
ek_buildNumber	This value is set by the installation program. You typically would not change it.
ek_version	This value is set by the installation program. You typically would not change it.
ek_appPath	This element is prefixed by the ek_sitePath value and describes the location of the cms400scripts folder. This file stores external applications (such as eWebEditPro and eWebDiff), templates, and the images folder.

Setting	Description
ek_xmlPath	The location of the xmlfiles directory. The ek_sitePath path is prefixed to this location. You would only change this value if you want to move the location of the xml files relative to the Web root.
ek_pluginDir	not used currently -- for future use
ek_appName	The name of the application, CMS400. You typically would not change this value.
String Values - These strings appear in **Ektron CMS400.NET** before the user logs in. They are placed here because this file is outside the database. Edit them if you want to translate them to another language or to make them more specific to your installation.	
String	**Default Text**
ek_String_1	Login
ek_String_2	Invalid username or password.
ek_String_3	Please try again.
ek_String_4	User:
ek_String_5	Pwd:
ek_String_6	Enter your username and password.
ek_String_7	Click here to close this window
ek_String_8	Click here to log in
ek_String_9	All the words
ek_String_10	Any of the words
ek_String_11	Exact Phrase
ek_String_12	Match Partial Words
ek_String_13	The search resulted in zero matches
ek_String_14	The following error occurred while trying to login:

Setting	Description
ek_String_15	Domain
ek_appImagePath	The folder that stores the images within **Ektron CMS400.NET**, such as toolbar icons. You would only change this value if you need to move the images folder to another location. Note that this value is prefixed by the value set in the ek_appPath variable. By default, ek_appPath is set to *webroot*/CMS400Example/Cms400Scripts/. So, by default, this folder is set to *webroot*/CMS400Example/Cms400Scripts/images/application/.
ek_appeWebPath	The folder that stores eWebEditPro, **Ektron CMS400.NET**'s editor. You would only change this value if you need to move the editor to another location. Note that this value is prefixed by the value set in the ek_appeWebPath variable. By default, ek_appeWebPath is set to *webroot*/CMS400Example/Cms400Scripts/. So, by default, this folder is set to *webroot*/CMS400Example/Cms400Scripts/ewebeditpro.

Images - Similar to text strings, these images appear before the user signs in, so cannot be stored in the database. Update as needed.

Their location is set in the ek_appImagePath variable. *See Also:* "ek_appImagePath" on page 68

Setting	Description
ek_Image_1	close button
ek_Image_2	small login button 
ek_Image_3	big login button

SMTP server configuration - See "Configuring SMTP Settings" on page 75

Setting	Description
ek_SMTPServer	The server that processes email
ek_SMTPPort	The port your system uses to retrieve email
ek_SMTPUser	The username set up to send and receive email

Setting	Description
ek_SMTPPass	The password set up to send and receive email
SSL Support - See "Updating the web.config File" on page 82	
ek_UseSSL	Determines if server will use SSL for security
ek_SSL_Port	SSL port used by Web server.
Mail Format	
ek_MailFormat	The format of the email created in **Ektron CMS400.NET**. A value of **HTML** generates email in HTML format, while a value of **Text** generates plain text email.
Active Directory Server Configuration	
ek_ADEnabled	Whether your **Ektron CMS400.NET** uses Active Directory support.
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_UserMenuType	Determines the appearance of the menu that appears within every content block after the user signs in. **0** - New dynamic menu - menu only appears when user moves cursor over content block **1** - Old classic menu - menu always appears *See Also:* **Ektron CMS400.NET** Administrator Manual section "Introduction to Ektron CMS400" > "Getting Started" > "Recognizing Content Blocks" > "The Floating Toolbar"
ek_MenuDisplayType	This setting only works if `ek_UserMenuType` is set to zero (0). Determines the appearance of the menu that appears within every content block after the user signs in. 0 - Horizontal - menu icons are arranged horizontally 1- Vertical - menu icons are arranged vertically and include the tooltip text *See Also:* **Ektron CMS400.NET** Administrator Manual section "Introduction to Ektron CMS400" > "Getting Started" > "Recognizing Content Blocks" > "The Floating Toolbar"

Setting	Description
Multilingual Settings	
ek_EnableMultilingual	Enable or disable support for multilingual content 1- enable 0 -disable *See Also:* **Ektron CMS400.NET** Administrator Manual section "Multi-Language Support" > "Working with Multi-Language Content" > "Enabling/Disabling Support for Multiple Language Content"
ek_DefaultContentLanguage	Sets the four-digit, decimal representation of the default content language. For example, American English is 1033. If you have another version of an Ektron CMS (e.g., CMS200) or an earlier than 4.7 version of CMS400, all content blocks are set to this value during the upgrade. *See Also: See Also:* **Ektron CMS400.NET** Administrator Manual section "Multi-Language Support" > "Working with Multi-Language Content" > "The Default Language"
ek_ServerURL	Mainly used in Web services to determine the location of a remote server. 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.
WSPath	Determines the location of the Web services page used by the server controls at design time.

Configuring E-Mail Notifications

An email is sent to notify users when a task (such as approving a content block or submitting a form) was performed or needs to be performed. This section explains the steps needed to use Microsoft's SMTP service to enable e-mail notification in Ektron CMS400.NET.

CDOSYS

To process email, **Ektron CMS400.NET** uses the CDOSYS model. Using the Simple Mail Transport Protocol (SMTP) and the Network News Transfer Protocol (NNTP) standards, CDOSYS enables applications based on Windows XP, Windows 2000 or Windows 2003 to route e-mail and USENET-style news posts across multiple platforms.

CDOSYS, the successor to CDONTS, is as easy to use as CDONTS but is more powerful by letting authors create and view sophisticated emails using html and data sources.

NOTE If the SMTP server that is processing email does not find CDOSYS installed, it tries to use CDONTS as a mail server protocol.

Set up SMTP Server

For CDOSYS to work, set up the SMTP server on your local system (to which you installed **Ektron CMS400.NET**) or a remote system that sends and receives email.

NOTE To access an SMTP server on a local or remote system, consult the system administrator who manages email in your organization. This administrator may not be the same as the Ektron CMS400.NET administrator.

- **Local** - Before setting up an SMTP server on your local system, install IIS. The SMTP server settings on a local system would be something like this:

```
“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. The SMTP server on a remote system can be something like this:

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

“ek_SMTPServer" value= “yourserver.com”
```

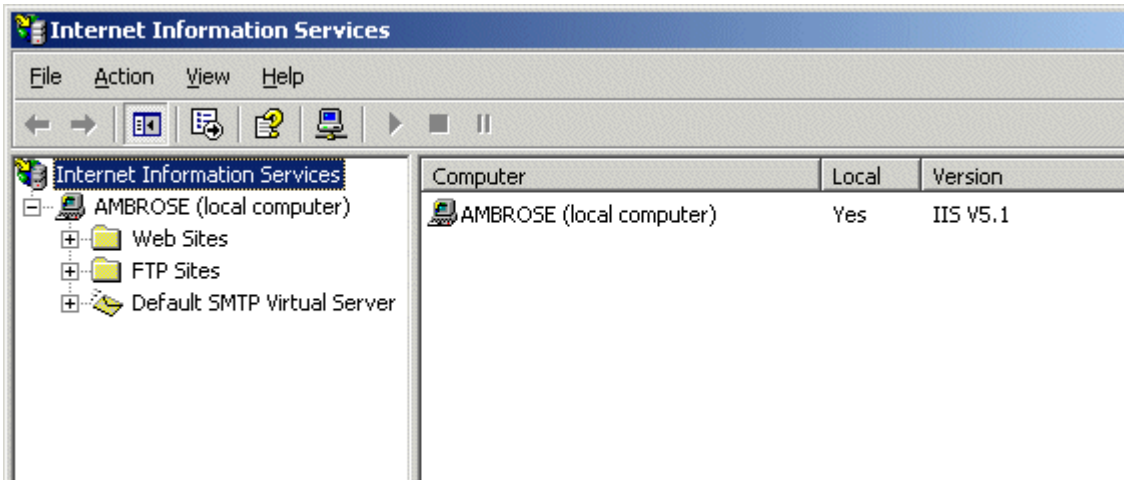
After the SMTP server is set up, configure it as described in ”Verification for Relay” on page 72.

Verification for Relay

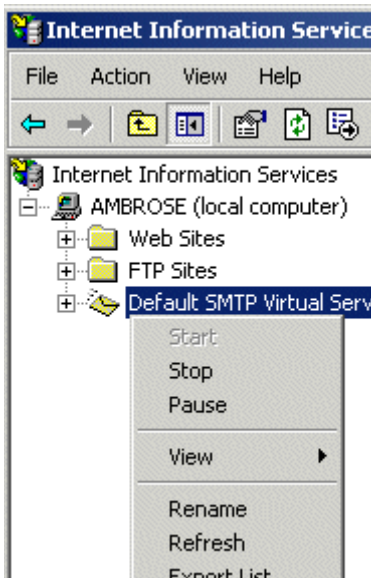
To verify that your Ektron CMS400.NET Web server’s IP address supports relay through your SMTP server, follow these steps.

NOTE The WWW and SMTP components of IIS must be installed on the Web server to which Ektron CMS400.NET is installed.

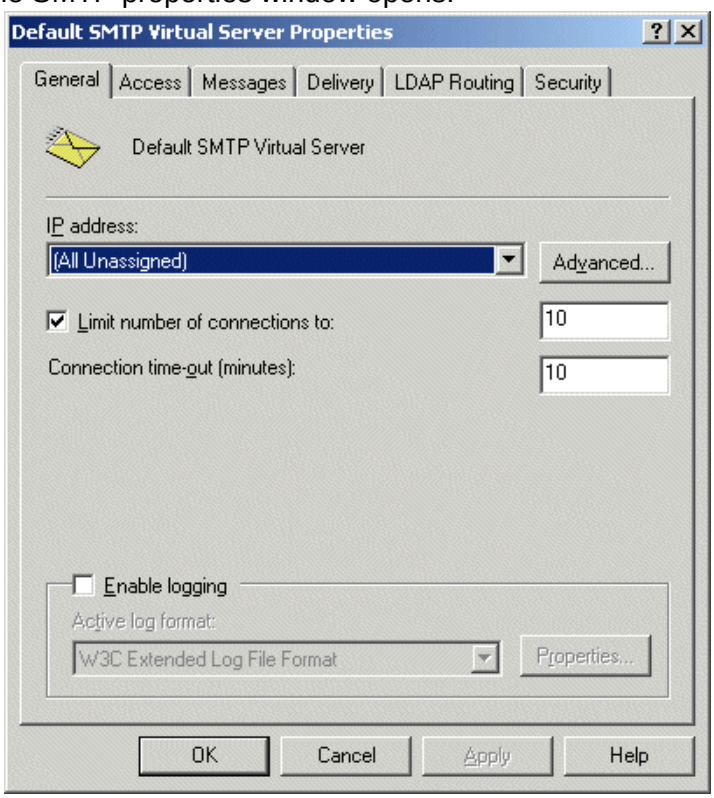
1. On your SMTP server, access your Internet Services Manager in the Administrative Tools.



2. In the IIS Management Console, select the SMTP virtual server.
3. On the Action menu, click **Properties**.

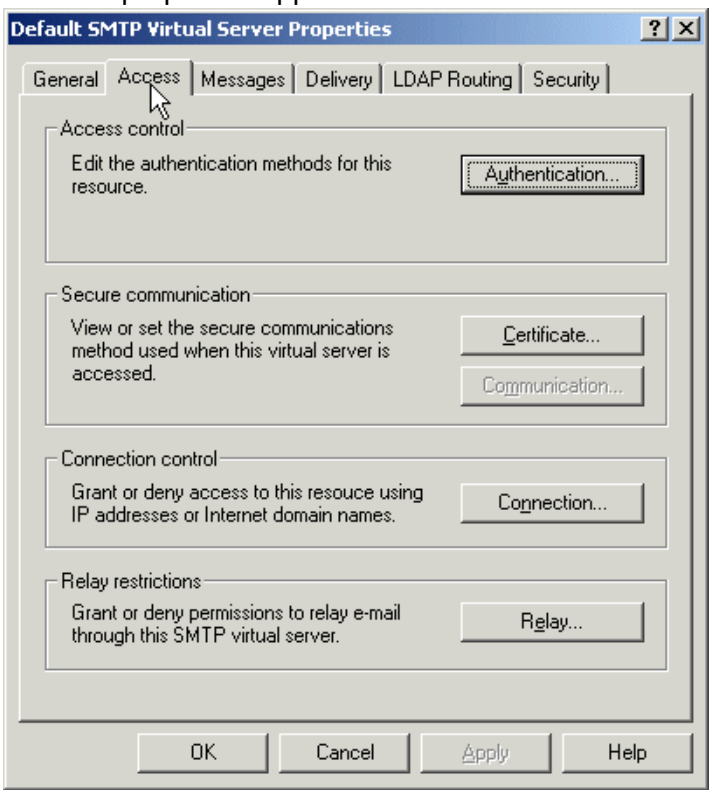


4. The SMTP properties window opens.

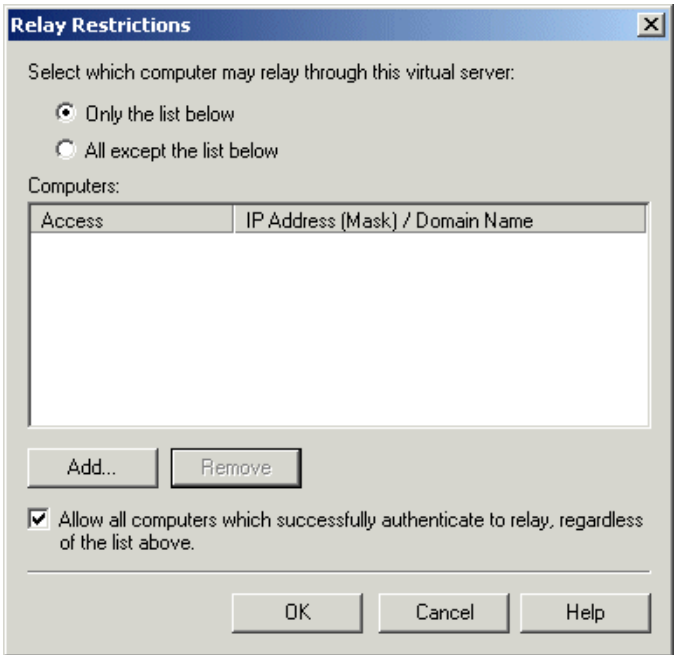


5. Click the **Access** tab.

6. The access properties appear.



7. In the Relay Restrictions section, click the **Relay...** button.
8. The Relay Restrictions window opens. Set or remove relay restrictions.



NOTE For more information, see "Setting or Removing Relay Restrictions from a Virtual Server" from this Web page: <http://www.microsoft.com/WINDOWS2000/en/professional/help/moc04_57.htm>

Configuring SMTP Settings

Next, configure Ektron CMS400.NET to use SMTP.

1. Open the web.config file. (See "Managing the web.config File" on page 65.)
2. Move to the section of the file that has 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="" />
```

3. Set the `ek_SMTPServer` value. See "Set up SMTP Server" on page 71.

4. Set the `ek_SMTPPort` value to the port your system will access to retrieve email. In most cases, the port is set to 25. If that is not the case, see your System Administrator.

5. Set the `ek_SMTPUser` value to the username that is set up for the SMTP Server to send and receive emails. Typically, the username takes the form of an email address, such as “`ek_SMTPUser`“ `value=`“`yourname@companyname.com`“.

   This retrieval of email is based on how basic authentication is set up for you, though 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 the `"ek_SMTPPass"` value to the password that is set up for the SMTP server to send and receive emails. This password is based on the basic authentication. By default, the **Ektron CMS400.NET** only accepts passwords in the encrypted form.

   To encrypt the password, Ektron provides a password encrypting tool. See ”The Encrypt Password Utility” on page 76.

The Encrypt Password Utility

To use the utility tool EncryptEmailPassword.exe, follow these steps.

1. Open `C:\Program Files\Ektron\CMS400\Utilities`
2. Run EncryptEmailPassword.exe.
3. The Encrypt Utility dialog appears.

4. Enter your SMTP password in the Text field.
5. Click the **Encrypt** button.
6. The screen displays an encrypted password in the **Encrypted** field.
7. Copy the encrypted password and paste it into the web.config file after `"ek_SMTPPass" value=`.

Error Messages

When submitting a form or a content block in 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 CMS400.NET**.

- **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@company.com [CBR SendMail R1] [CBR R1] [DIO R36]**

What's Next?

After you set up the mail server, you can begin using **Ektron CMS400.NET**. For e-mail notification to work properly in Ektron CMS400.NET, the following criteria must be met.

- Valid system email address
- Email notification is enabled in the settings table
- Valid user email address
- User email notification is enabled

For information about these settings, refer to the Administrator Manual.

Configuring SSL

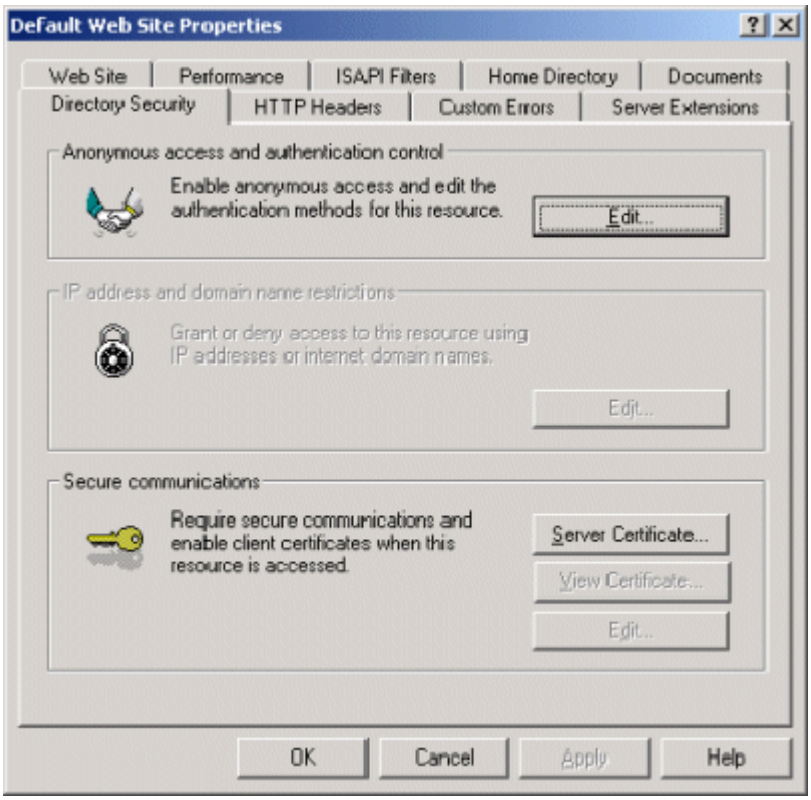
In **Ektron CMS400.NET**, you can use SSL when users log in to your Web site. SSL encrypts the username and password during transmissions to the server.

When you set up the SSL certificate, and configure Ektron CMS400.NET to use it, the login page is launched in a Secure Socket Layer. This section explains how to set up SSL for Ektron CMS400.NET.

Setting Up the Certificate

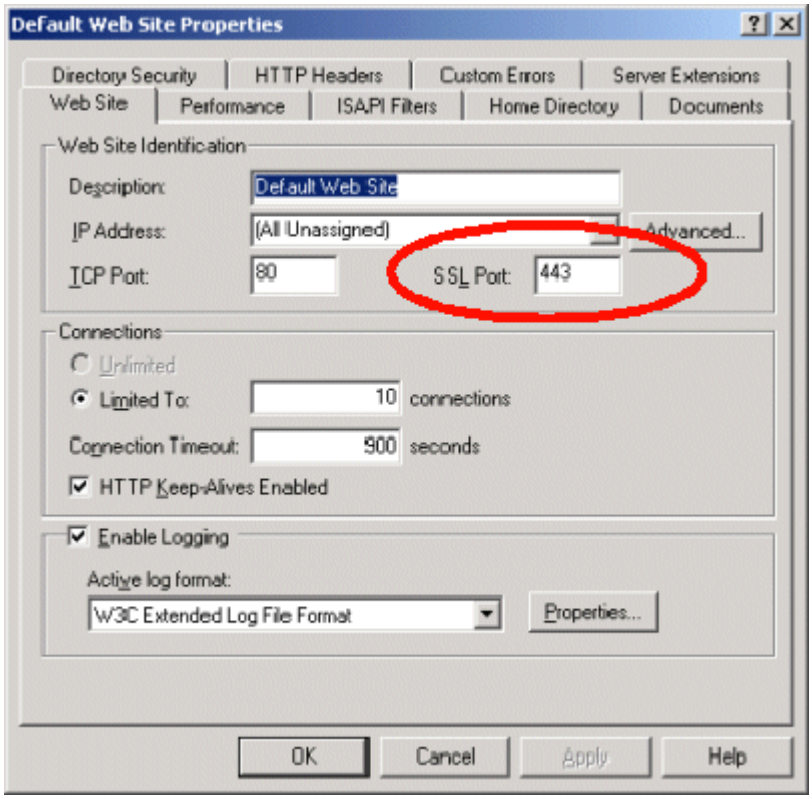
If your Web server does not have a certificate installed, you need to install one. To do so, follow these steps.

1. Access the Internet Information Server Administrator Console on your Web server.
2. Navigate to the computer and Web site to which Ektron CMS400.NET is installed.
3. Right click on the Web site.
4. Click **Properties**.
5. Click the **Directory Security** tab.



6. In the Secure communications area, click the **Server Certificate** button.

7. Use the wizard to set up a certificate for your Web site.
8. Close the wizard. You return to the Properties window.
9. Click the **Web Site** tab at the top of the Properties window.



10. Set the **SSL Port** that the Web server will use.
11. Click **OK**.

Updating the web.config File

Next, configure Ektron CMS400.NET to use the SSL certificate.

1. Open the web.config file. (See "Managing the web.config File" on page 65.)
2. Move to the section of the file that has these settings.

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

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

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

WARNING! If the ek_UseSSL value is **true**, but you did not install the certificate to the Web Server, you cannot log into Ektron CMS400.NET.

4. Set the ek_SSL_Port value to **443** (unless you specified another SSL port).
5. Save and close the file.

You are ready to use the SSL support for **Ektron CMS400.NET**.

Customizing Ektron CMS400.NET

The following chapter contains information about customizing your **Ektron CMS400.NET** application. The topics that are discussed are:

- ”Customizing Ektron CMS400.NET Emails” on page 85
- ”Branding Ektron CMS400.NET” on page 90

Customizing Ektron CMS400.NET Emails

Introduction

Ektron CMS400.NET can send email notification to users, informing them that actions have either taken place or are requested of them. For example, a content contributor receives an email that his content has been published to the Web site.

These emails are stored in and received from the app_messages table in the database. In that table, each email consists of one string for the subject and one for the body. Ektron CMS400.NET does not currently support HTML emails, however the messages are fully customizable.

The body of an email often includes variables, which are between the @ symbols. Ektron CMS400.NET replaces these variables on the fly 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.

These emails can be customized. The variables can be taken out or moved around. More text can be added; text can be rewritten or reorganized.

Before	"**@appContentTitle@"** has been deleted from the XYZ Web site.
After	"About Us" has been deleted from the XYZ Web site.

Each message is called in the presentation layer by its message title.

Carriage Return/Line Feeds are represented by the variable **@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!

Variables

The following table lists variables you can use to customize email messages. When the email is sent, the corresponding description replaces the variable.

Variable	Inserts
@appCRLF@	A carriage return.
@appContentTitle@	The title of the content block.
@appDeletionDateTime@	The date and time the content will be deleted from the Web site.
@appChangeDateTime@	The date and time changes will be updated on the Web site.
@appDeclinerFirstName@	The first name of the user who declined the content block.
@appDeclinerLastName@	The last name of the user who declined 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.
@appFolderPath@	The location of the content block in the folder tree in the Ektron CMS400.NET Workarea.
@appContentLink@	The link to the content block on the Web site. Note: You must be logged in to see the changes.

Variable	Inserts
@appSubmitterDateTime@	The date and time the content block was submitted.
@appApprovalList@	The current approval list that the content block must pass through.
@AppComment@	Displays the comments for the content block.

List of Ektron CMS400.NET Emails

Notify Approval Process Complete

Because of the logic, there are four emails for notifying that the approval process is complete.

Deletion of Content Approved

Message Title: email subject: content deletion approved.

Message Text: Deletion of content has been approved.

Message Title: email body: content deletion approved.

Message Text: The deletion of the content "**@appContentTitle@**" has been approved. The content deletion will occur on: **@appDeletionDateTime@**.

Immediate Deletion of Content

Message Title: email subject: content has been deleted.

Message Text: Content has been deleted.

Message Title: email body: content has been deleted.

Message Text: The deletion of the content "**@appContentTitle@**" has been approved. The content was deleted immediately.

Approved Content Awaiting Go Live Date

Message Title: email subject: content changes approved.

Message Text: Content changes have been approved.

Message Title: email body: content changes approved.

Message Text: The changes to the content "**@appContentTitle@**" have been approved. The content changes will occur on: **@appChangeDateTime@**.

Approved Content Published Immediately

Message Title: email subject: content has been changed.

Message Text: Content changes have been made.

Message Title: email body: content has been changed.

Message Text: The changes to the content "**@appContentTitle@**" have been approved. The content changes went live immediately.

Decline Approval Request

Message Title: email subject: approval request declined.

Message Text: Content approval request declined.

Message Title: email body: approval request declined.

Message Text: Your submitted approval request for the content "**@appContentTitle@**" has been declined by "**@appDeclinerFirstName@ @appDeclinerLastName@**".

Send Approval Message

Message Title: email subject: request for approval.

Message Text: Request for content approval.

Message Title: email body: request for approval.

Message Text: The content "**@appContentTitle@**" has been submitted for your approval by "**@appSubmitterFirstName@ @appSubmitterLastName@**".**@appCRLF@@appCRLF@**To locate the content, the folder path in your workarea is: **@appFolderPath@**.**@appCRLF@@appCRLF@**The following link will

take you to the submitted content block on the Web site: **@appContentLink@**.**@appCRLF@@appCRLF@**Please Note: You must login and select the preview icon to view the changes.**@appCRLF@@appCRLF@**The content was submitted for approval on: **@appSubmittedDateTime@.@appCRLF@@appCRLF@**Approvals: **@appApprovalList@@appCRLF@@appCRLF@**Comment: **@appComment@.**

Branding Ektron CMS400.NET

Ektron CMS400.NET can be branded by a Web Developer. Through the use of a style sheet and replacing Ektron CMS400.NET's default graphics, the application can take on a different look that is fully customizable. Developers can incorporate a company logo, institute company colors, and control the look and feel of the application to create a personalized, web-based, content management solution.

Style Sheet

Ektron CMS400.NET's style sheet, global.css, is located in the **/csslib** folder under the **CMS400scripts** directory.

Using widely accepted style sheet classes and class attributes, you can modify the application, including colors, spacing, fonts, etc. Also, if you later upgrade or re-install **Ektron CMS400.NET**, you can reuse this file and retain your changes.

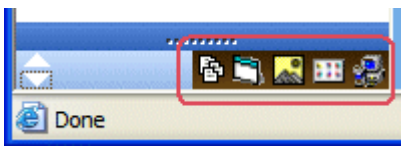
Class Explanation

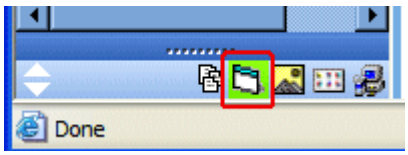
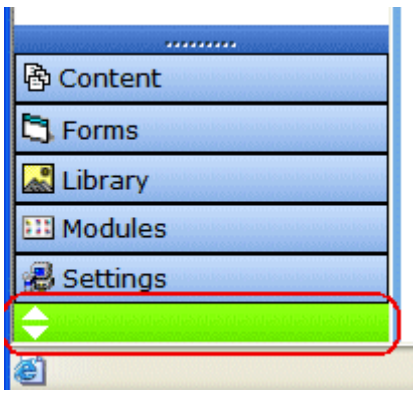
General Classes

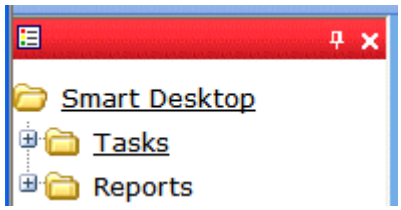
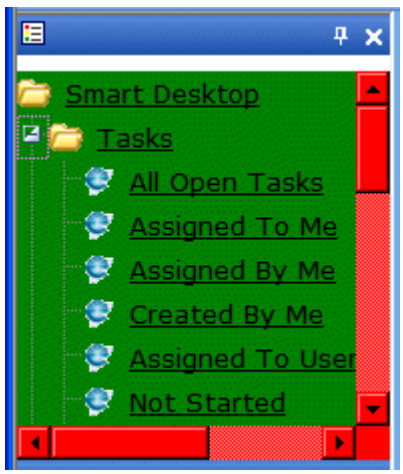
Class	Description
.titlebar	Located at the top of every page in the application, this class is used for page explanations or location explanation. While navigating through Ektron CMS400.NET, this page header or "titlebar" tells the user where he is (for example, Viewing content in content.asp).
.titlebar-error	Very similar to titlebar, this class is used to display error messages.
.input-box-text	In front every input box is text explaining its purpose. This class controls that text.
.title-header	Used under the titlebar when information is going to be listed. For example, it is used for column headers.
.info	Any important information that should stand out gets the info class. An example of this class can be seen in the content page when showing the attributes of the content block.
.info-header	Very similar to the info class, this is used for information that should stand out but starts a new section on a page. An example is the word "metadata" or "summary" on the content block properties page
.toolbar	The background of the toolbar. Note: Only change this class if you are changing all toolbar icons.

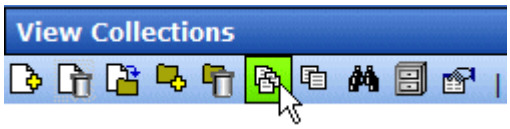
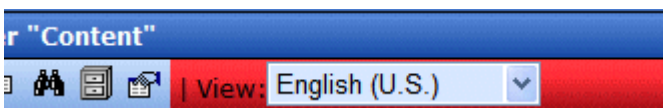
Workarea Classes

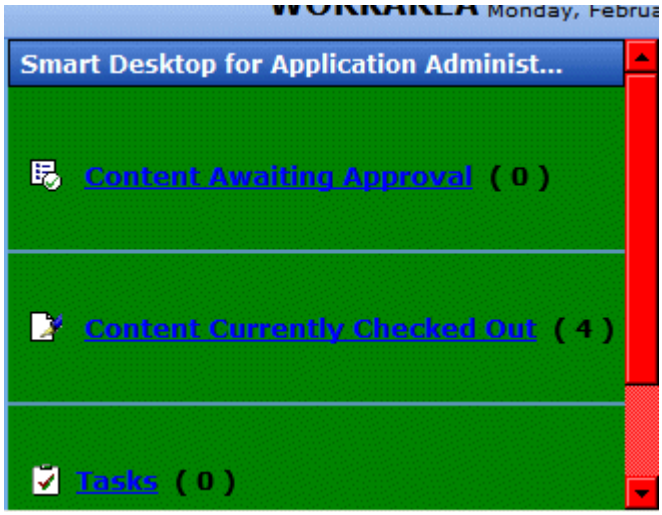
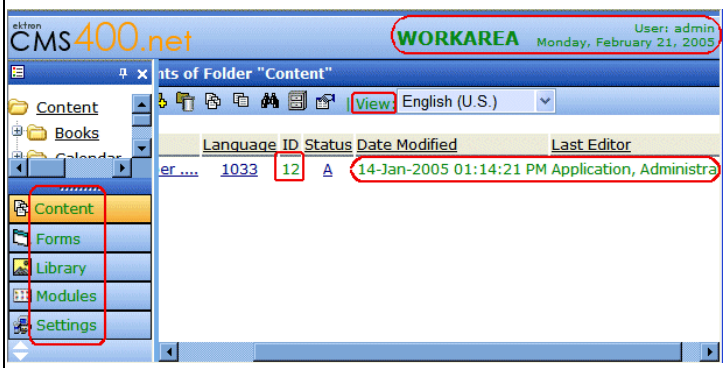
Class	Description
.workarea	The background color of the workarea.
td.FolderButtonBarNm	Text of top-level folders that appear in the lower left corner of the Workarea (Content, Forms, Library, Modules and Settings)

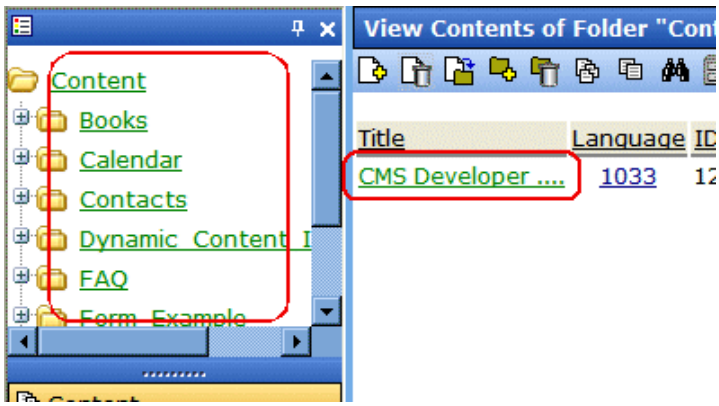
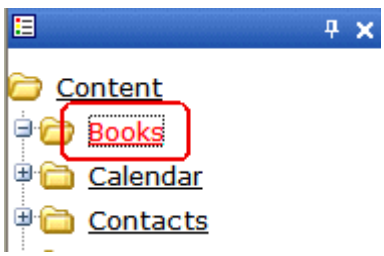
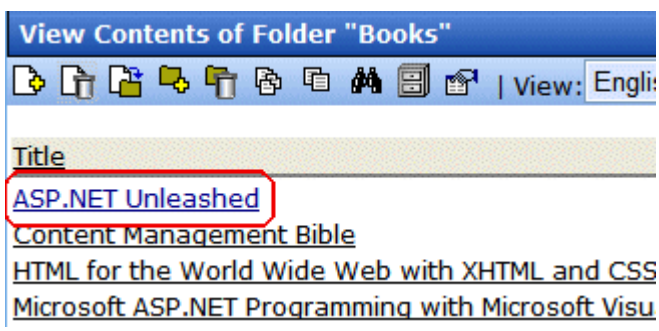
Class	Description
td.FolderButtonBarOver	Text that appears when you hover the cursor over top-level folders that appear in the lower left corner of the Workarea (Content, Forms, Library, Modules and Settings)
td.FolderButtonBarSelectedOver	Selected text in the lower left corner of the Workarea (Content, Forms, Library, Modules and Settings)
td.FolderButtonBarSelected	Text that appears when you hover cursor over selected text of top-level folders that appear in the lower left corner of the Workarea (Content, Forms, Library, Modules and Settings)
td.FolderResizeBar	The bar at the top of the top-level folders that appear in the lower left corner of the Workarea (Content, Forms, Library, Modules and Settings). Use this bar to switch the display of folders between icons and full buttons.
td.NavIconBarNm	Defines the minimized top level folder icons properties. The following example shows, the minimized icons with a brown background. 
td.NavIconBarOver	Defines the minimized top level folder icons hover over properties. The following example shows, the Forms icon with an light orange background, while hovering over it.

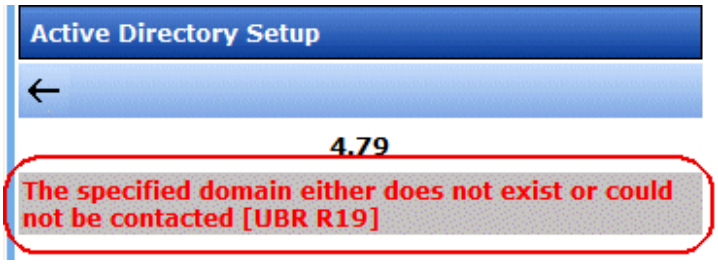
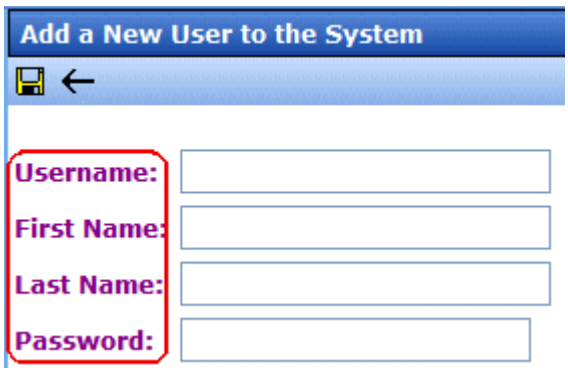
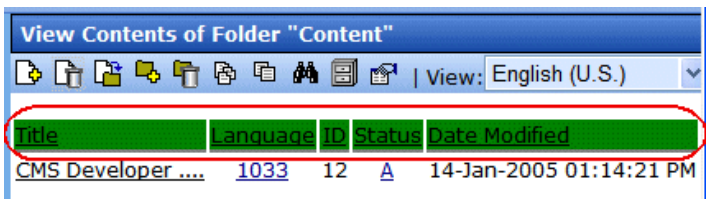
Class	Description
td.NavIconBarSelectedOver	Defines properties of the minimized top level folder icons when selected then hovered over. The following example shows, the Forms icon with a dark blue background, while selected and hovering over it.
td.NavIconBarSelected	Defines the minimized top level folder icons properties, when selected. The following example shows, the Forms icon with a green background when selected. 
body.FolderIconBar	The bottom bar the minimized top level folder icons appear in. The following example shows the bar green. 

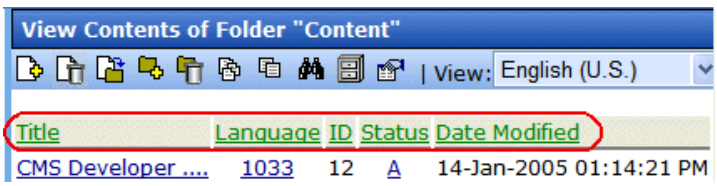
Class	Description
table.FolderToolbar	The top left bar where the Smart Desktop and pin buttons are located. The following example shows the bar red. 
body.FolderArea	Defines the folder area on the left of the screen. The following is an example of a green background with red scrollbars. 
.WorkareaToolbar-nm	Defines the workarea toolbar properties for the buttons section. the following is an example of a red background.

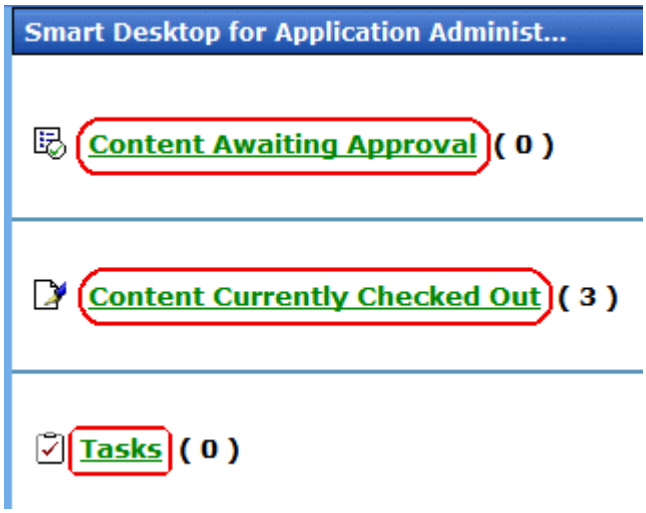
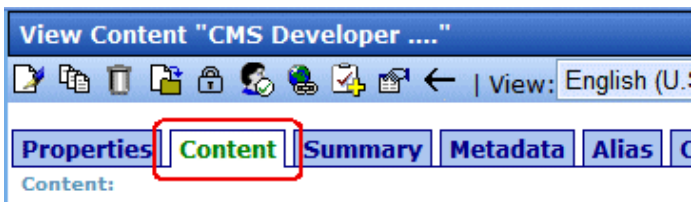
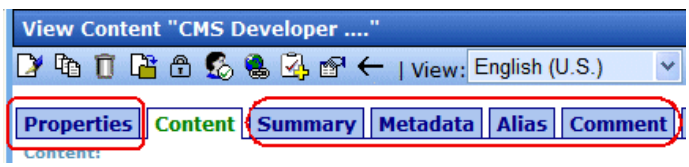
Class	Description
.WorkareaToolbar-ovr	Defines the workarea toolbar icon hover over properties. The following is an example of View Collections background being green when hovered over. 
.ToolbarImage-nm	Sets the size of the workarea toolbar icons. The following is an example of setting the height and width to 35px. The following example has the height and width set to default 22px.
.WorkareaToolbar-bk	Defines the workarea toolbar properties for the non-button section. The following is an example of a red background. 
.WorkareaTitlebar	Sets the properties of the titlebar in the workarea. The following example show a red background with black letters.

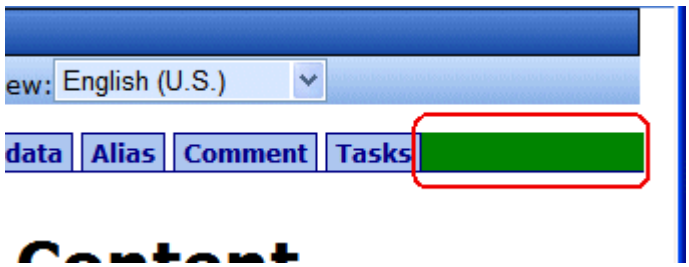
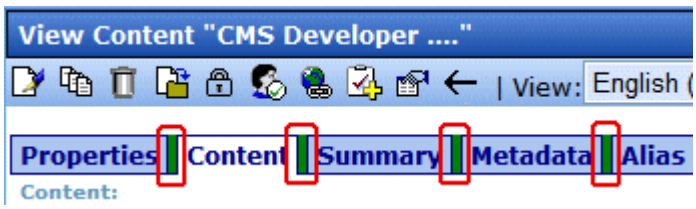
Class	Description
body.UiMain	Defines the properties of the user interface area. The following example shows a green background with a red scrollbar. 
TD	Defines the default fonts in the logo bar area, the toolbar area, the folder buttons, and user interface area. In the following example, the font is green. 

Class	Description
A	Defines properties of links in the workarea, before the links have been selected. The following example shows the links in green. 
A:ACTIVE	Defines properties for links currently active. The following example shows the active link red. 
A:Visited	Defines properties for links visited. The following example shows the visited links in navy blue. 

Class	Description
TD.titlebar-error	Defines error display properties. The following example shows the error displayed with a silver background and red font. 
TD.input-box-text	Defines the properties of the text that appears before a text box. The following example shows the text color purple. 
TD.title-header TR.title-header	Defines the column head properties in the workarea. The following example shows the column head backgrounds in green. 

Class	Description
A.title-header	Defines the font properties in the column heads. The following example shows the column heads with green fonts. 
TD.info	Defines description information title properties. the following example shows the information titles in purple.
TD.info-header	Defines the information header label. The following is an example of the information header in green.

Class	Description
.moreinfo	Defines the font used on the Smart Desktop in the workarea. The following example shows the font in green. 
td.tab_actived	Defines the active tab properties in the work area. The following example shows the active tab with a green font. 
td.tab_disabled	Defines the non-active tab properties in the work area. The following example shows the non-active tabs with a dark blue font and blue background 

Class	Description
td.tab_last	Defines the properties of the space at the end of the tabs. The following example shows the space at the end of the tabs with a green background. 
td.tab_spacer	Defines the properties of the space between the tabs. The following example shows the spaces as green. 

History Classes

Class	Description
.history-list	This class is used for two attributes. The TD controls the active date or the version that is presently published. The Anchor class is for the other versions of the content block.

Login Classes

Class	Controls
.login	The background color of the login and logout screen.

Folder Control Classes

Class	Controls
.folder	The font attributes of the folder control. NOTE: The font size cannot be controlled by the style sheet. It is set by the browser.

Library Classes

Class	Controls
.library	The background color of the three panels in the library.

Calendar Classes

The calendar uses the calendar.css style sheet, which is installed by default to the Web root directory.

Images

Application Images

To change the look **Ektron CMS400.NET** via a logo, you must change two images.

- **workarea_logo.gif** - the logo of the application. It presently displays the Ektron CMS400.NET logo. It lives under `\cms400scripts\images\application` directory.

  By changing this image, the application can be branded to display any other graphic or logo. You must use the same size attributes of 155 pixels wide by 77 pixels high. Alternate size attributes will cause the application to look wrong.

- **navigation_edit.gif**. This also resides in the application folder. This image is used for the left bar in the edit content, edit metadata, edit summary, and add content work areas. This image can also be changed but must retain the same size attributes of 128 pixels wide by 500 pixels high.

A third image, **workarea_back.gif,** makes up the blue/gray background at the top of the workarea. The size attributes are 50 pixels wide by 77 pixels high. This image cannot be less than 50 pixels wide as Netscape and Firefox do not repeat it correctly.

Language Images

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 `\cms400scripts\images\English folder`. You can modify these images as needed.

Migrating Your Site to Ektron CMS400.NET

This chapter explains how to migrate your Web site to Ektron CMS400.NET. This chapter explains

- What to copy to your Web site
- Setting up and deploying templates

This chapter assumes you installed Ektron CMS400.NET and have read the Ektron CMS400.NET Administrator Manual so that you have an understanding of basic concepts, some of which are mentioned here.

Initial Steps

The following section describes tasks you need to perform before migrating your Web site.

Installation

Ektron CMS400.NET 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 CMS400.NET" on page 35.

Verify Installation

After you install Ektron CMS400.NET, verify that it is properly installed by using the sample site. By default, the sample Web site is located at the following address on the machine to which Ektron CMS400.NET is installed.

```
http://localhost/CMS400Example/default.aspx
```

If you can browse the sample site and it works properly, **Ektron CMS400.NET** is properly installed.

> **Best Practices**
>
> Ektron recommends keeping a working version of the sample site. This can be used to help you debug problems.
>
> For instance, if you encounter errors on your site, you can refer to the sample site to see if the same errors occur. If they do, that may indicate a problem with the installation. If they do not, the installation is probably OK and an external factor is causing the problem.

Setting up Your New Site

NOTE You can use the Site Setup utility to perform these tasks. To launch this utility, go to **Start > Programs > Ektron > CMS400 > Utilities > Site Setup**. To read about it, go to "Setting up a Site" on page 40.

Copy Application Core Files

Copy the application core files from the `/CMS400Scripts` folder into your site's folder. (These files operate the workarea, library, and content functions.) They reside in the `CMS400Example/CMS400Scripts` directory.

Set up the Database

Since the content is stored in a database, you need to create one. To learn how to set up a database, see "Setting up a Database" on page 45.

Modify Application Parameters

After you install and create the Ektron CMS400.NET database, modify the web.config file that installed to the directory to which you installed **Ektron CMS400.NET**.

Edit that file and modify the following settings

Setting	Type in...
ek_dbDatabase	The type of database you are using.

Setting	Type in...
ek_dbUsername/ ek_dbPassword	The username and password, if your database requires one.
ek_sitePath	The relative path from Web root to the scripts folder.

NOTE If you are using SSL, the settings you need to modify are explained in "SSL Support" on page 31.

Creating a Login Page

Now that everything is set up, you can create a login page. You can either copy the one from the sample site or create your own.

A list of the content tags can be found in the Ektron CMS400.NET Developer's Reference Manual.

Log In

To log into your Ektron CMS400.NET Web site, follow these steps.

1. Browse to the login page you created and click the **Login** button.
2. A login dialog box opens asking for a username and password.
3. Enter the default username (**admin**) and password (**admin**) and click **Login**.
4. You are logged into Ektron CMS400.NET

NOTE If you get a message that the application is locked, log in using the username and password **builtin/builtin**. You get the message if your license key is invalid or has not been entered yet.

Modifying Configuration Settings

After you log in, access the Workarea by clicking on the Workarea button. From there, you can modify the configuration 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 “Active Directory Integration” in the Administrator Manual.

Modify the Setup Screen

The Ektron CMS400.NET setup section is located under the **Settings > Configuration** folder. The setup section allows you to configure items such as your license key, style sheet support, max content size, and default language.

See 'Configuring Ektron CMS400” in the Administrator manual for more information.

Set up Meta Data

Ektron CMS400.NET 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 “Metadata” in the Administrator manual for more information.

Set up XML Configurations

You can also set up your XML configurations. You create XML files externally or via the Data Designer. Next, an XML configuration is assigned to content blocks and folders.

See “Managing XML” in the Ektron CMS400.NET Administrator Manual for additional information.

Creating Ektron CMS400.NET Users

If you are not using Active Directory support, add your 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.

NOTE If you exceed the licensed number of users, you may get locked out of Ektron CMS400.NET.

Every user must belong to a group. When you first add a user, he or she is automatically added to the Everyone group. You can create more user groups and add users to them as desired.

For more information, see “Managing Users & User Groups” in the Administrator manual.

Configuring Content and Forms Folders

Next, 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.

> **Best Practices**
>
> Keep your folder structure simple so it’s easy for your users to navigate. Organize folders in a way that makes sense to the users who will navigate through them. So, you may have 6 or so top level folders, and each folder may go 4 or so deep.
>
> This folder structure is replicated under the Library folder.

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 CMS400.NET 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 the approval process.

> **Best Practices**
>
> Limit permissions for the “Everyone” group, as this gives every user permissions to that content. Similarly, you should limit the “Everyone” group’s inclusion in the approval chain if you want to restrict which users can publish content.

Creating your Templates

Now you can create your templates. Templates contain the look and feel of the site. Masthead, navigation, and footer graphics are all part of the template. Use server controls to insert **Ektron CMS400.NET** content into a template. A list of server controls is in the Developer's Manual.

You can add as many server controls per template as you want, but you can only have one dynamic tag per template.

> **Best Practices**
>
> Since 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.

Migrating/Creating Content

At this point, you can begin to create/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 CMS400.NET editor.

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

Deployment

Deployment from development to production is as simple as moving the files over. To properly deploy your new Ektron CMS400.NET Web site, following these steps.

1. Copy all assets (templates, images, files, etc.) from your development box to your production machine.
2. Move the database. You have two choices

- point your data source on the production machine to the database you were using

- copy the database, move it to your production box, and point a data source to that

Advanced Features

The previous information allows you to create a basic Ektron CMS400.NET Web site from scratch. This section explains some advanced features that you may implement, although they are not needed for the Web site to function properly.

Email Notification

For email notification to work in Ektron CMS400.NET, make sure the SMTP service is setup and running in IIS, and that it points to a valid mail server.

Refer to ”Configuring E-Mail Notifications” on page 71 for additional information.

Other

Other items, such as Load Balancing, can be configured in Ektron CMS400.NET. Please see the special features section of the Administrator Manual for more information.

Moving Content from Staging to Production Server

Overview

Before **Ektron CMS400.NET**, HTML files were deployed to a Web site in a three-stage process.

1. An author updates content on a staging server, which has a copy of the Web site.
2. A reviewer checks and possibly modifies the content.
3. The approved content is moved to a production server, which hosts the live Web site.

An Ektron Content Management System (CMS) provides a *virtual staging server*, which lets authors work directly on a production server yet prevents site visitors from viewing modifications until they are approved.

Here's how it works. An author edits one or more content blocks and submits them for approval. Authorized reviewers preview the changes and decide to publish or reject them. Reviewers can also edit the content then publish. All of this can occur on a single server, which acts as a virtual staging and a production server.

Ektron CMS400.NET also supports the traditional model of separate staging and production servers. This section describes options for managing servers and suggests best practices for a successful deployment.

Best Practice

Ektron's suggested best practice is a combination approach, using both a virtual and a physical staging server.

- Use a *virtual staging server* for the majority of your Web updates. Ektron takes this approach with its site, `www.ektron.com`.

  Most of the time, authoring occurs on the production server, which acts as a virtual staging server. The CMS workflow controls how content is updated to the live site, so content will only go live when it's ready.

- When the Web site is undergoing is a significant architectural change, use a *physical staging server*. An example of such a change would be one or more new templates. For more information, see "Managing an Architectural Change" on page 112

Managing an Architectural Change

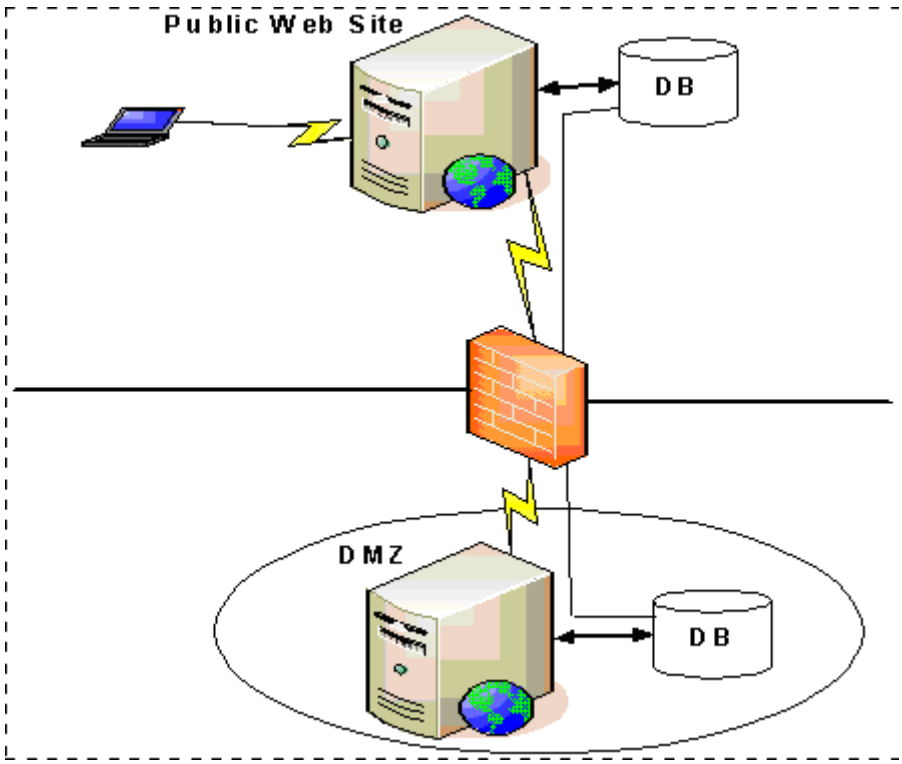
Sometimes, the changes to your site are so substantial that the use of separate staging and production servers is warranted. Examples would be the release of new templates, or a redesign of the site.

When making such a change, follow these guidelines.

1. Copy the staging server content to the production server. For more information on moving files from the staging to the production server, see "Deploying Separate Staging and Production Servers" on page 113
2. Disable authoring on the production server. At this point, changes are permitted on the staging server only. For more information, see "Disabling Authoring on the Production Server" on page 115.
3. Test the new architecture on the staging server. Modify as needed until you are satisfied with the results.

   The test should involve a full QA sweep to determine that the staging site is acceptable for release in production. Included are functional testing, usability (as necessary), application integration, and bug fixes.
4. Move the updated files from the staging to the production server.Enable authoring on the production server.

Deploying Separate Staging and Production Servers



Ektron CMS400.NET can support multiple servers. For example, as illustrated above, you can have a staging server inside the DMZ, and a production server outside the DMZ to host the public Web site.

Several methods are available for moving information between servers.

- ”Basic Deployment” on page 114
- ”SQL Replication and CMS Load Balancing” on page 114
- ”Deploying with MS Application Center” on page 114

Basic Deployment

This scheme provides the most rudimentary methods for transferring data from a staging to a production server.

To move the database, back it up on the staging server and restore it on the production server.

To move the non-database files (library assets, .dlls, etc.), use FTP to transfer from the staging to the production server.

SQL Replication and CMS Load Balancing

To move the database, use database replication techniques to copy changes from staging to production server. Doing this via Microsoft Application center is explained in ”Deploying with MS Application Center” on page 117.

To move non-database files from staging to production server, enable load balancing support in the CMS. When used properly, load balancing is an extremely efficient and time-saving tool for your Ektron CMS300 site. Instead of uploading an image or file on each Web server that makes up your Web site, you only need to upload once. The load balancing feature replicates the image or file in each directory specified by Ektron CMS300. For more information, see the “Load Balancing” chapter of the **Ektron CMS400.NET** Administrator Manual.

Deploying with MS Application Center

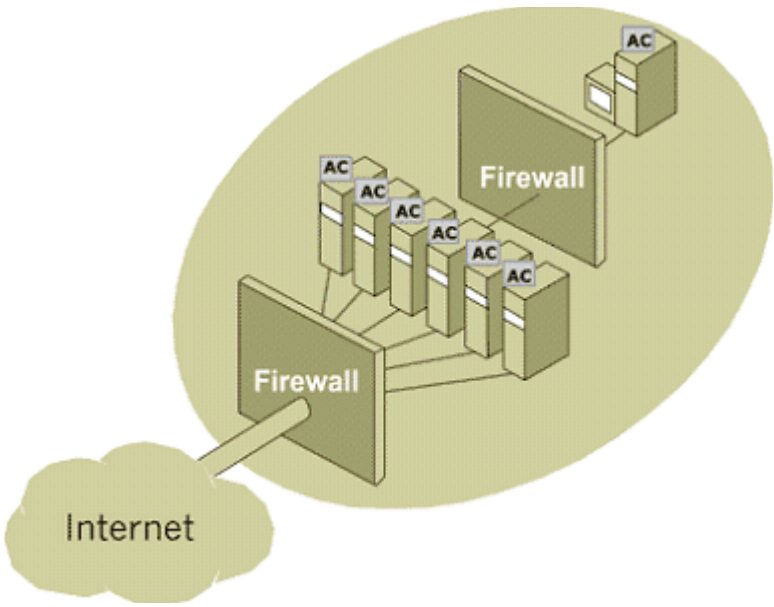
Application Center 2000 is Microsoft's deployment and management tool for high-availability Web applications built on the Microsoft Windows® 2000 and Windows Server™ 2003 operating systems. Application Center 2000 makes managing groups of servers as simple as managing a single computer. It was designed to replicate content from one server to many.

You can move Ektron CMS files, templates, assets (uploaded images & files), DLLs, registry entries, and even DSNs from one server to another using Microsoft's Application Center. Use SQL Server to move the database content. This strategy lets you move a staging version to a production server with a click of a button.

Application Center 2000 divides Web site content and code into *applications* that can be updated independently. These

applications can consist of any combination of HTML and ASP files, COM+ components, .NET components, Windows registry settings, and Internet Information Services (IIS) settings. Each server in the cluster hosts a copy of the application, which Application Center keeps synchronized.

Microsoft Application Center 2000 is deployed on each server in a cluster. In a typical development environment, Application Center is also deployed to a staging server that is not a member of the cluster. This staging server acts as the drop-off point for Web content and application developers. With Application Center, you can move content and configuration settings from the staging server to the cluster with an easy, point-and-click interface.



Application Center can deploy content to foreign clusters, so that network administrators can easily move content and applications from a staging server to a production cluster of multiple servers. The staging server does not need to be a member of the production cluster. For more information, see ”Deploying with MS Application Center” on page 117.

Disabling Authoring on the Production Server

Follow these steps to disable authoring on the production server.

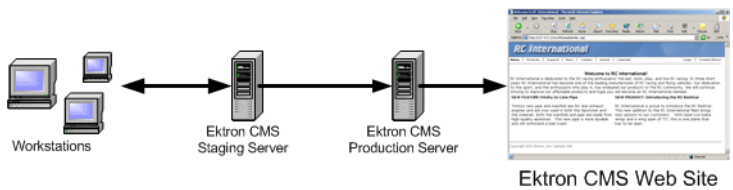
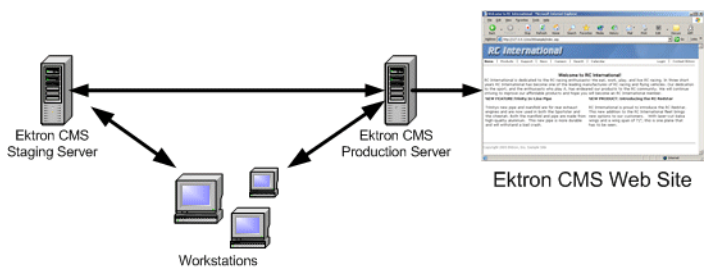
1. Hide login buttons by setting the Login Server Control's `visible` property to **false**.
2. Add a message to the login page, explaining that the system is under maintenance.
3. Apply the "denydatawriter" restriction to the database user in SQL server to actively stop any updating of the system. This restriction should even prevent updating through Web services and direct database writes.

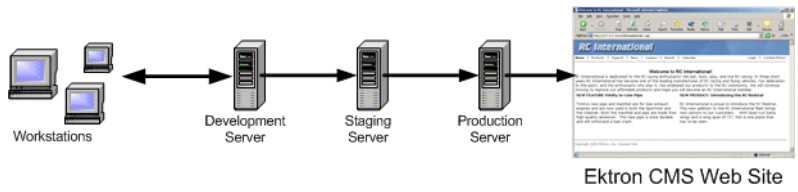
Deploying with MS Application Center

Overview

By default, Ektron CMS400.NET is installed directly on a production server and a virtual staging server manages changes to the Web site's content and assets. This model works for most users, but other methods can be used for staging.

Three major uses of staging are listed below.

Description	Flowchart
A staging to production model, where no changes are made on the production server.	
A staging to production model, where changes are made to both servers then merged.	

Description	Flowchart
A development to staging to production model.	

This chapter explains how to deploy Ektron CMS400.NET in different models.

What is Deployment?

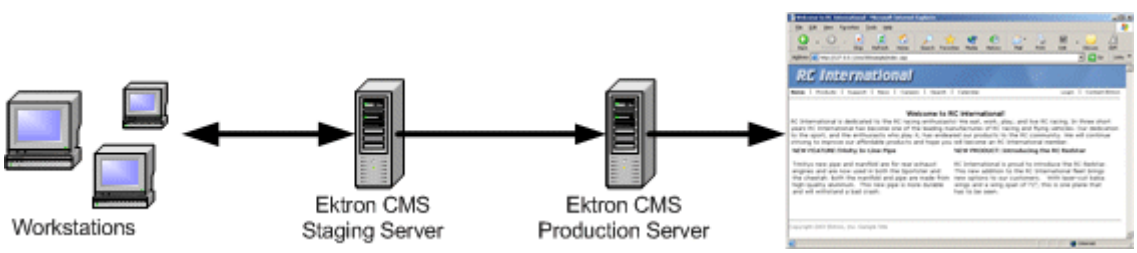
The premise of deployment is that the following can be moved from one server to another using Microsoft's Application Center:

- application files
- templates
- assets (that is, uploaded images and files)
- registry entries
- DSNs

Then, a SQL server can move the database content.

This model requires at least two servers, each having a different role. One server is a staging server, and the other is a production server that publishes files and data to the live Web site.

Displayed below is an example of this model.



In this example, Ektron CMS400.NET users changes content and files on the staging server. When desired, the necessary files are deployed using MS Application Center, and the data stored in the database is synchronized, using MS SQL Server, to the production server to be viewed by visitors.

Other Configurations

Several staging servers could be used to further stage Web site content. Reverse publishing may also be used to make a staging server match the production server.

Audience

Since the deployment model relies heavily on Microsoft Application Center and Microsoft SQL Server, you should have some knowledge of them. Although the basic steps needed to configure the deployment model are explained in this chapter, prior experience with these applications helps you make better decisions.

Requirements

The requirements include:

- Ektron CMS400.NET
- Windows 2000 Server or Higher
- Microsoft SQL Server
- Microsoft Application Center

Prerequisites

Before you can perform the configuration, complete these tasks.

1. Obtain two similar server machines with the following configurations:
   - Pentium-compatible 400 MHz or higher processors
   - 256 MB Ram (minimum)

NOTE The more differences between the two machines (for example, RAM, speed, brand, etc.), the greater the chance problems may occur.

2. Install Windows 2000+ (or higher) Server operating system on both machines.
3. Enable IIS on both servers.
4. Install MS-SQL server on both servers.

NOTE Be sure the security is configured properly by using either Windows or SQL Server authentication. Refer to your MS-SQL documentation for more information.

5. Install Microsoft Application Center on both servers.

Once the prerequisites are met, you can configure staging and production servers to deploy Ektron CMS400.NET.

Deployment Model Configuration

The following section explains the steps required to successfully configure your servers for Ektron CMS400.NET deployment.

Configuration Overview

Here is an overview of the steps for configuring deployment.

1. Install Ektron CMS400.NET on the staging server.
2. Set up a MS-SQL database for Ektron CMS400.NET.
3. Configure Application Center on the staging server.
4. Configure Application Center on the production server.
5. Deploy the Files.
6. Configure MS-SQL databases.
7. Synchronize the Databases.

Installing Ektron CMS400.NET on the Staging Server

First, install Ektron CMS400.NET on the staging server. (For more information, see "Installing Ektron CMS400.NET" on page 35.) During the installation, you are given the option of creating an MS-SQL database.

Setting Up a MS-SQL Database for Ektron CMS400.NET

To create an MS-SQL database, follow these steps.

1. Create an empty MS-SQL database. See ”Setting up a Database” on page 45.
2. Run the Ektron CMS400.NET SQL script against the database to create the necessary tables.
3. Move content to the new database.
4. For more details on this procedure, see the readme.txt file that is installed to `C:\Program Files\Ektron\CMS400\Database`.

Modifying web.config

After performing the above steps, update your web.config file to reflect the changes. Below is a list of changes to be made.

Line	Value
ek_dbDatabase	Replace the current DBType with **SQL**
ek_dbUsername	If required, specify the username needed to connect to the DSN
ek_dbPassword	If required, specify the password for the username given.

Configuring Staging Server’s Application Center

After you install Ektron CMS400.NET and it functions properly with the MS-SQL database, configure Application Center on the staging server. To do so, follow these steps:

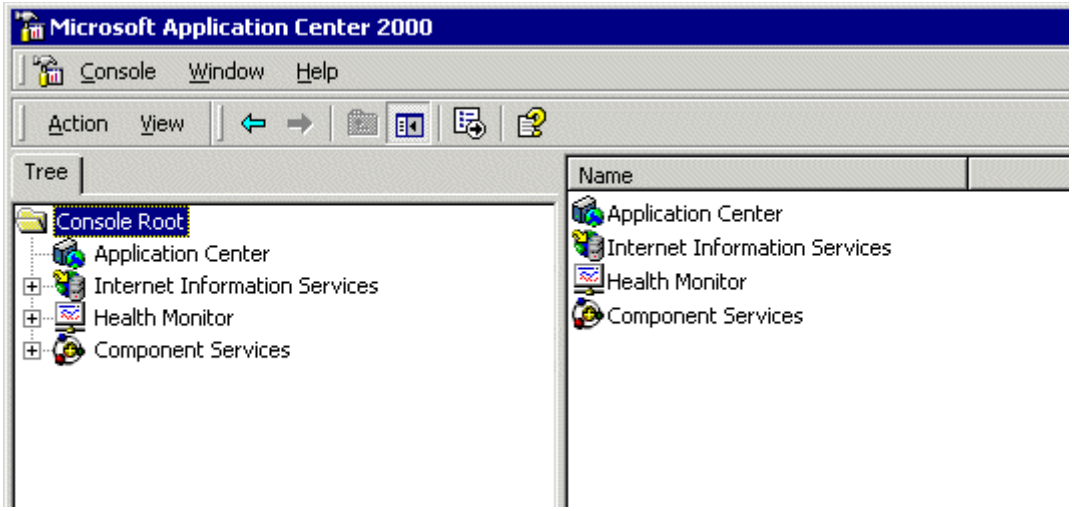
1. Connect to the staging server via Application Center.
2. Create a new cluster including the staging server.
3. Configure application settings on the staging server.
4. Add the production server to the cluster.
5. Push all files from the staging server to the production server.

The following sections explain these tasks.

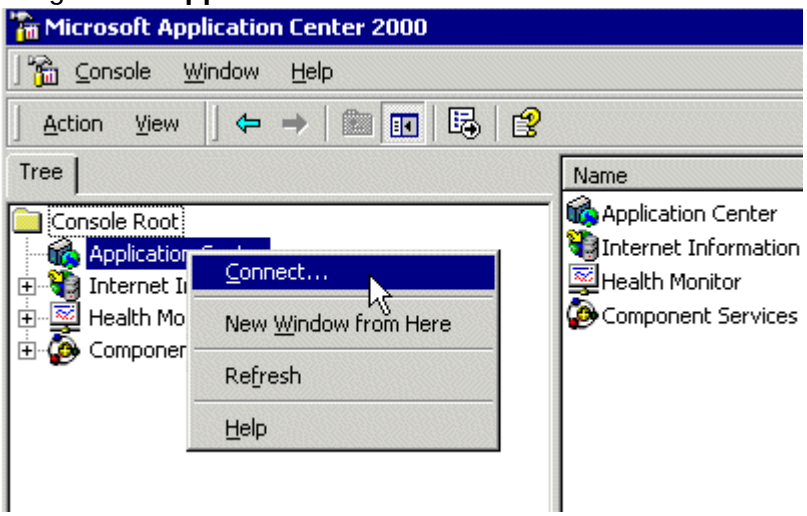
Connecting to the Staging Server's Application Center

To connect to Application Center on the staging server, follow these steps.

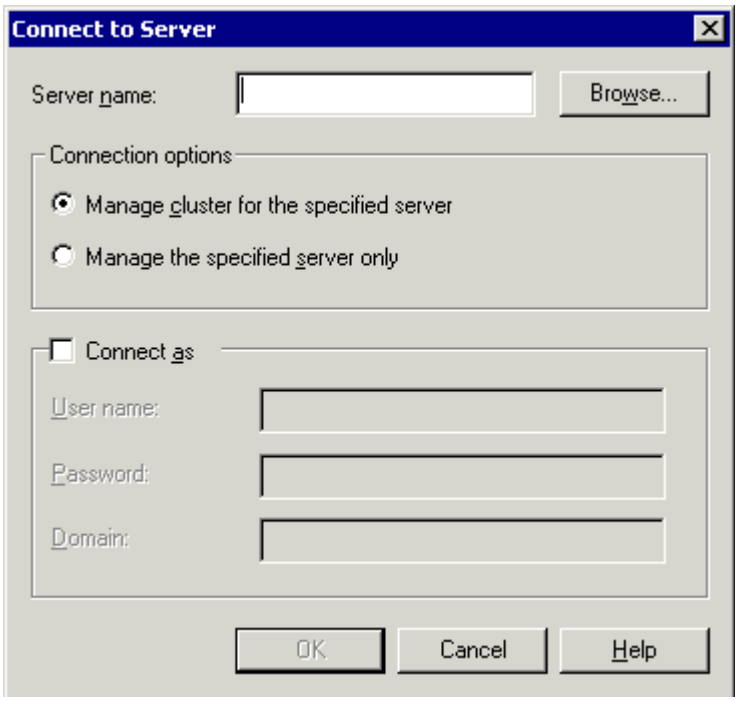
1. On the staging server, open Application Center.
2. The Application Center snap-in appears.



3. Right click **Application Center** and click **Connect...**



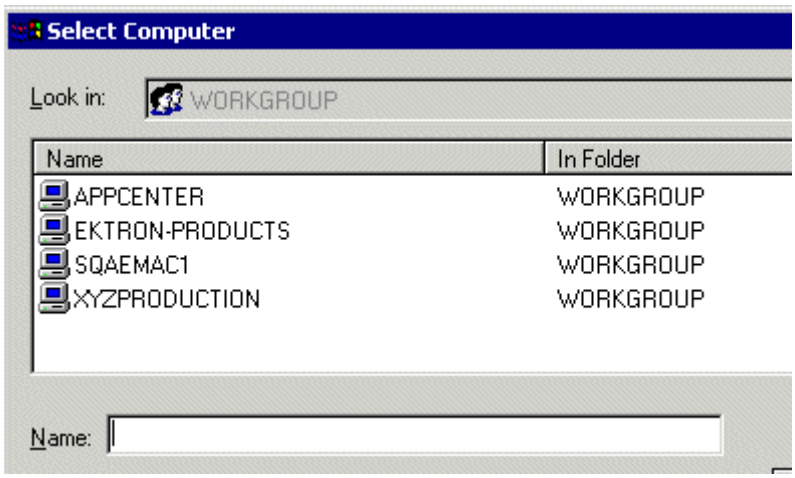
4. The Connect to Server dialog box appears.



5. Click **Browse** to locate the server you want to connect to.

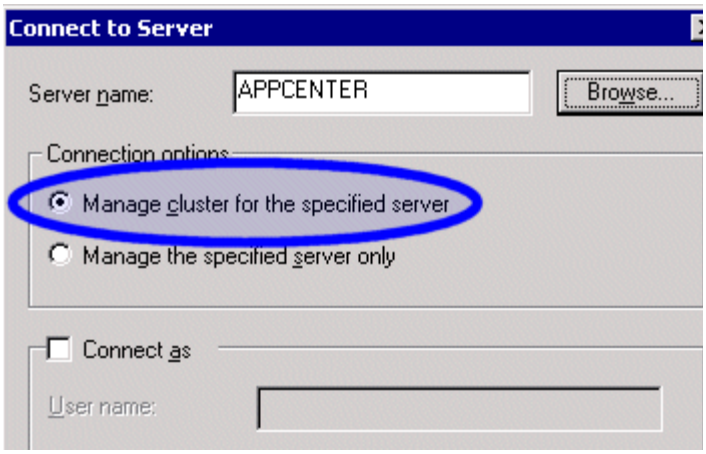
NOTE If you know the name of the server, you can type it into the Sever name field.

6. The Select Computer screen appears with a list of available servers.

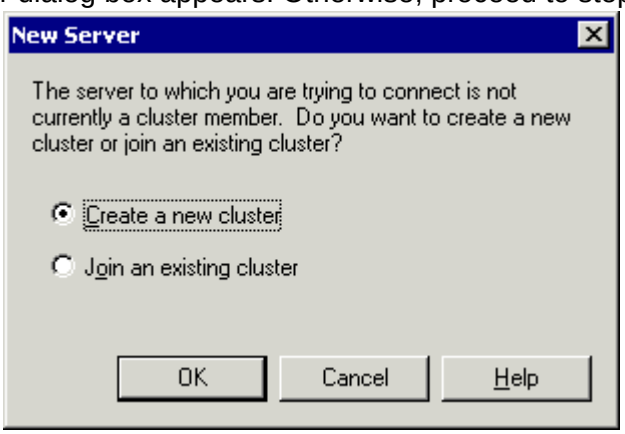


7. Select the Ektron CMS400.NET staging server, then click **OK**.

8. The select computer screen closes, and the Connect to Server screen contains the selected server's name.
9. Choose **Manage cluster for the specified server**.



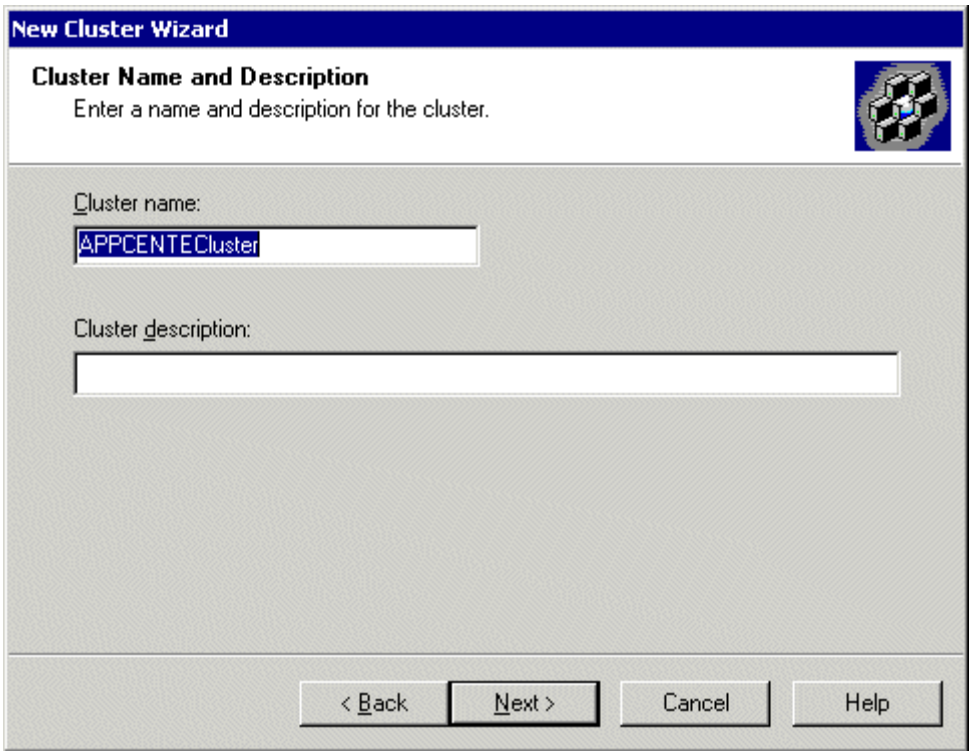
10. If needed, check the **Connect As** box and enter the proper information.
11. Click **OK** to submit the information and attempt to connect to Application Center.
12. If this is the first time you are connecting to the server, the New Server dialog box appears. Otherwise, proceed to step 15.



13. Choose **Create a new cluster** then click **OK.**

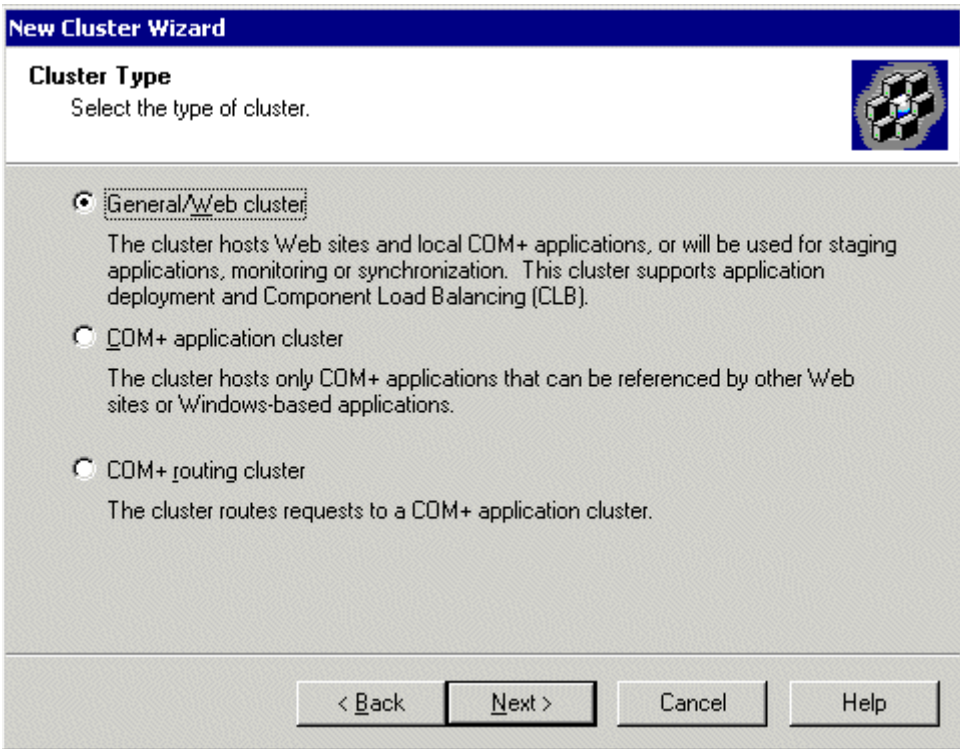
14. The New Cluster Wizard opens.

15. Click **Next**.
16. The wizard analyzes the server configuration and displays the Choose Name and Description screen.



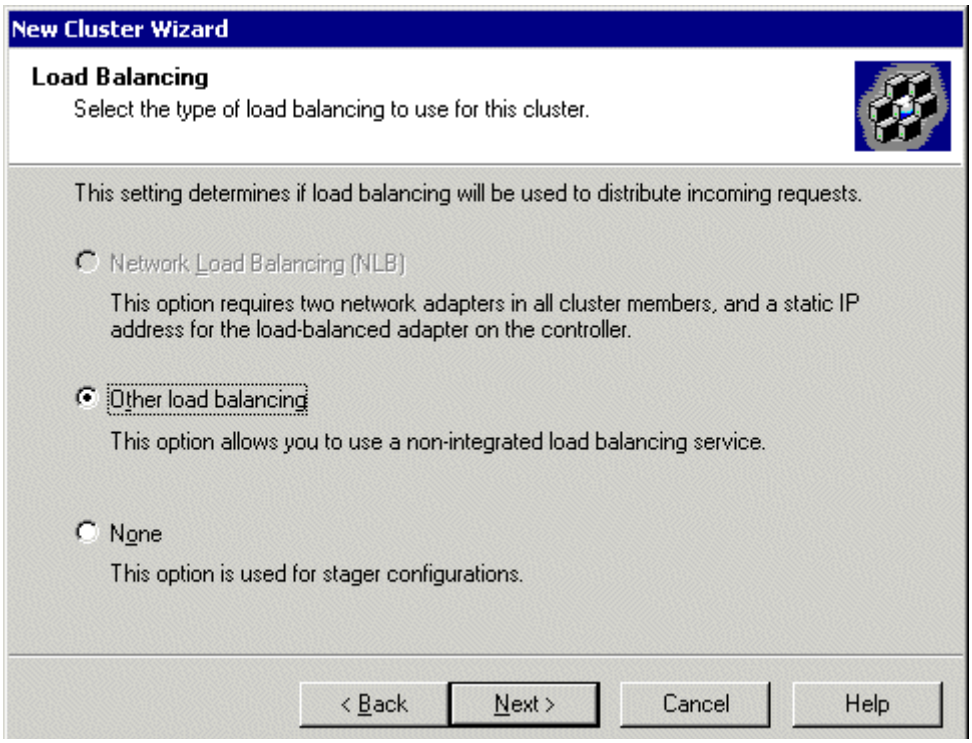
17. Give the new cluster a name and description, then click **Next**.

18. The Cluster Type screen appears.



19. Select **General/Web cluster** then click **Next**.

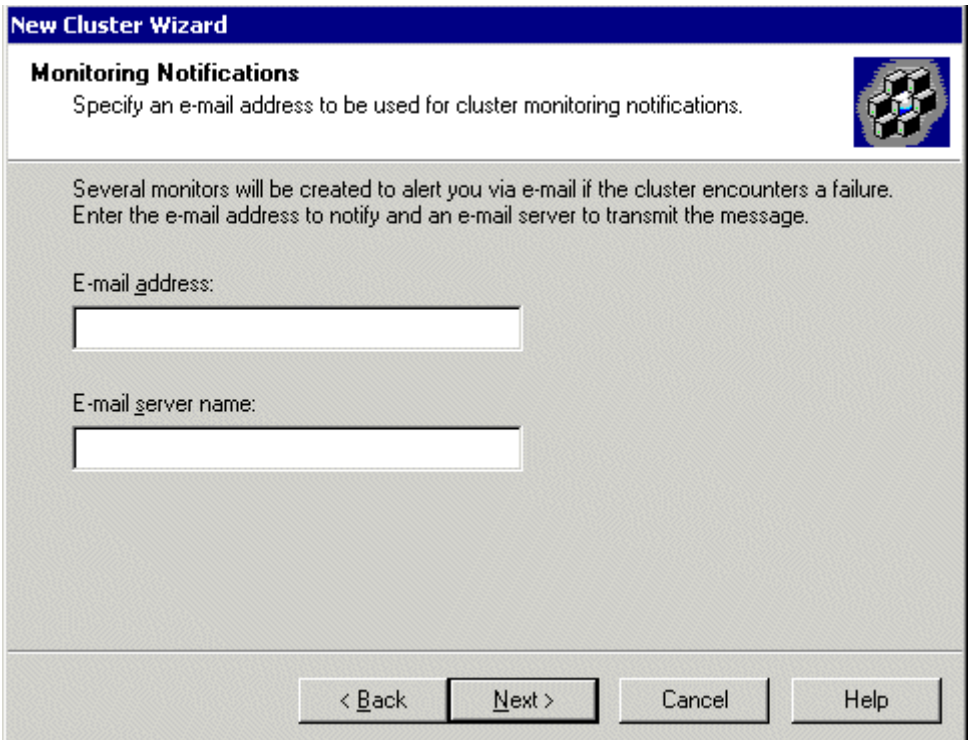
20. The Load Balancing screen appears.



21. Since load balancing is not required for the configuration, choose **None** and click **Next**.

NOTE If you are familiar with Load Balancing and Application Center, then you may choose another option.

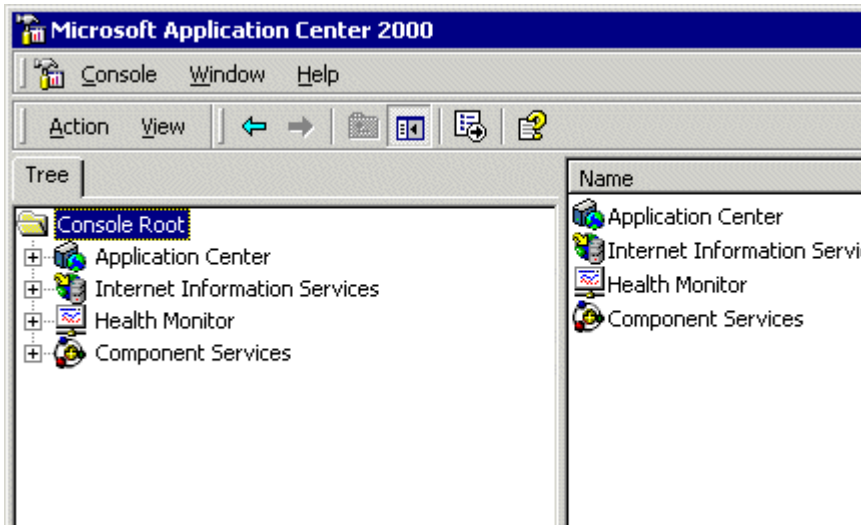
22. The Monitoring Notifications screen appears.



23. Enter a valid e-mail address and server name, then click **Next**.
24. The Completing the New Cluster Wizard screen appears.

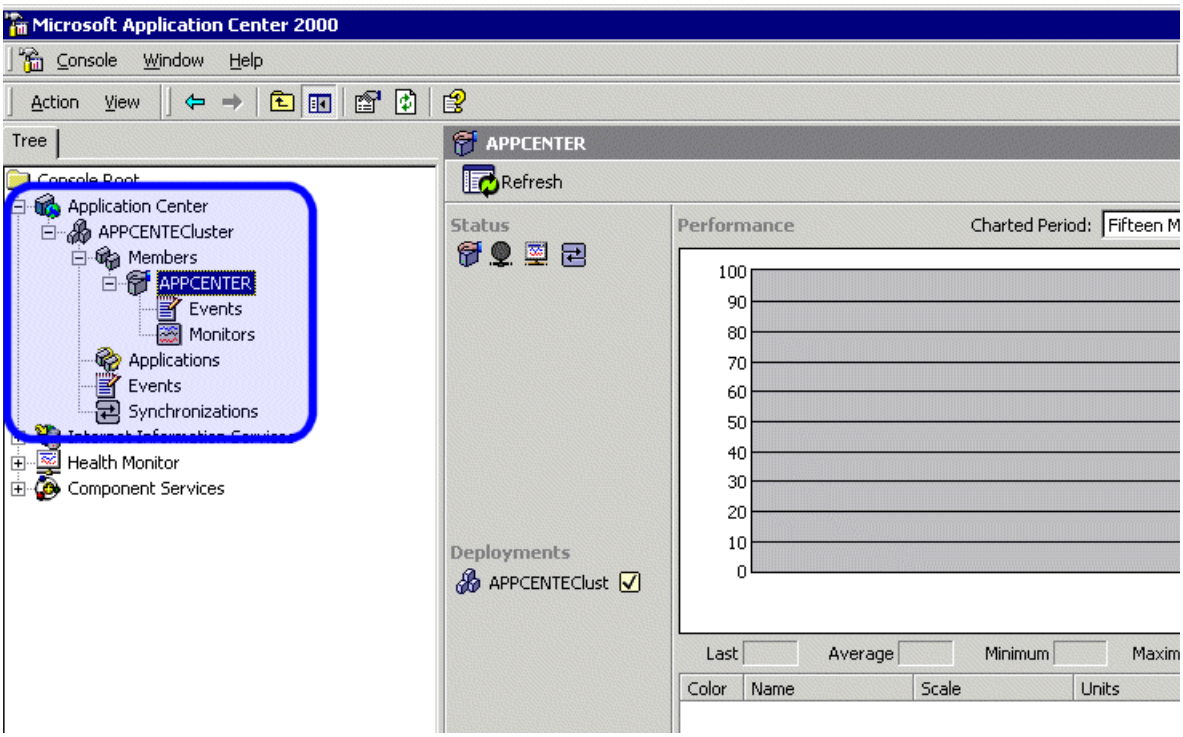
25. Click **Finish** to complete the wizard and connect to the Application Center.

26. The Application Center snap-in appears.



NOTE If you cannot connect, make sure all information is correct.

27. After expanding the Application Center tree, you should see a cluster with one member, the staging server.

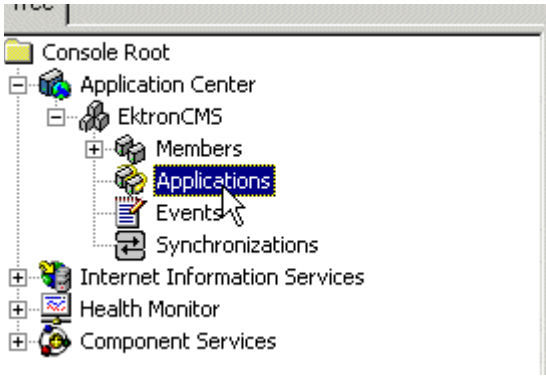


Now that you have connected to Application Center on the staging server, and created a cluster, you can configure the application settings for the cluster.

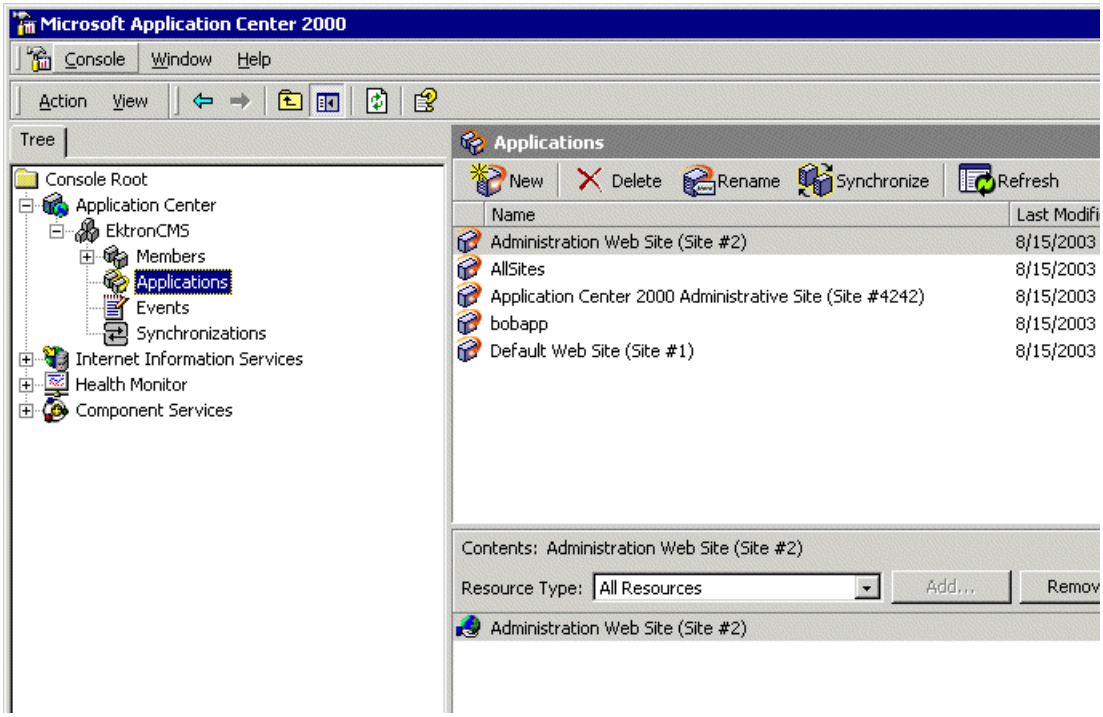
Configuring the Application Settings for the Cluster

To add Ektron CMS400.NET application information to the cluster, follow these steps.

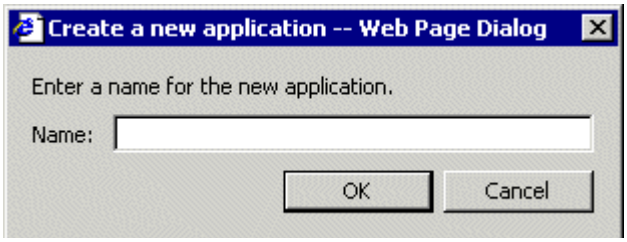
1. Connect to the cluster you created in ”Connecting to the Staging Server’s Application Center” on page 122.
2. Click **Applications** in the cluster tree.



3. The applications page appears on the right side of the snap-in.

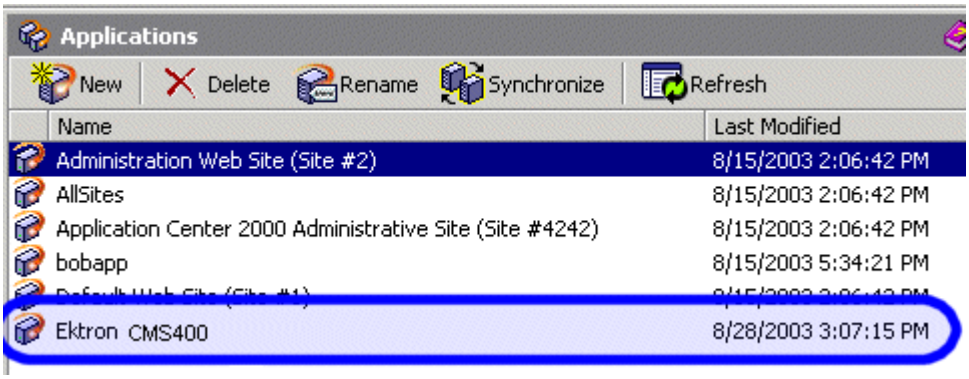


4. Click New ( ) in the toolbar at the top of the applications section.
5. The Create a New Application dialog box appears.



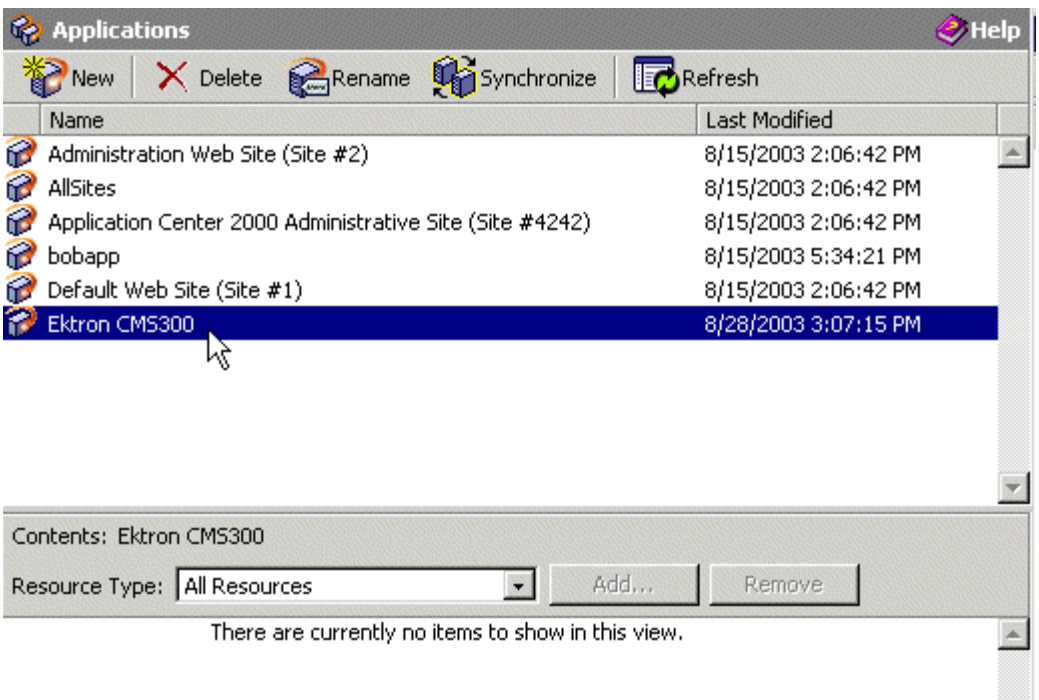
6. Enter a name for the new application in the displayed field and click **OK.**

7. The dialog box closes, and the applications list is updated with the new application.



Now that the application is added, you must add resources to it.

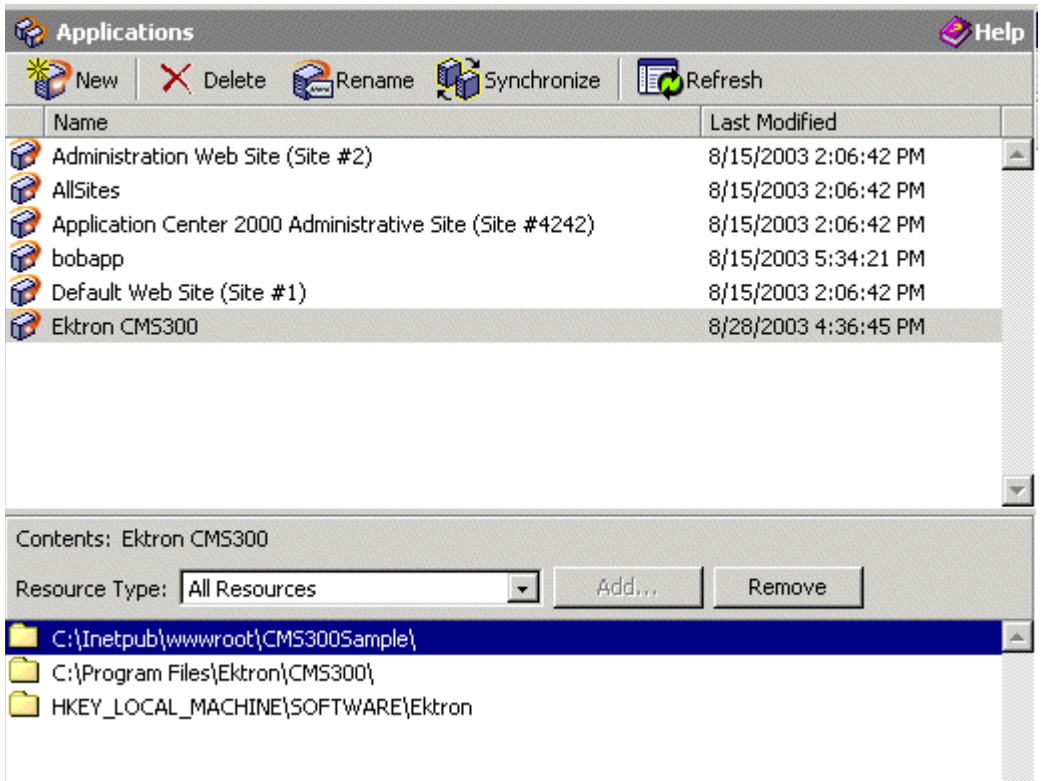
8. Click the Ektron CMS application that you created.
9. A list of resources assigned to the application appear in the lower right pane.



10. Use the following table to help you assign necessary resources to the application:

Resource Type	Folder Path	Description
Registry Keys	HKEY_LOCAL_MACHINE\SOFTWARE\Ektron	Registry keys for Ektron CMS400.NET to function properly.
File System Paths	C:\Inetpub\wwwroot\CMS400Example\	Location of your Ektron CMS400.NET Web site.
File System Paths	C:\Program Files\Ektron\CMS400	Location of the necessary components for Ektron CMS400.NET.

Displayed here is the result of adding these resources to the application.

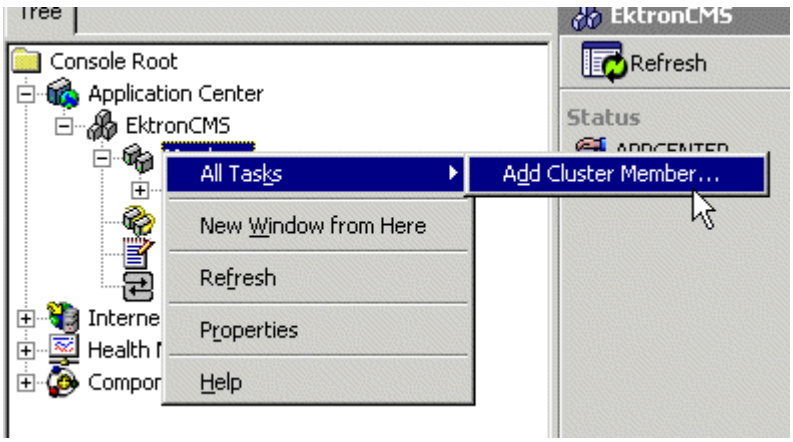


NOTE You can also add Registry keys, etc. here. The three resources listed above are *required*.

Adding the Production Server to the Cluster

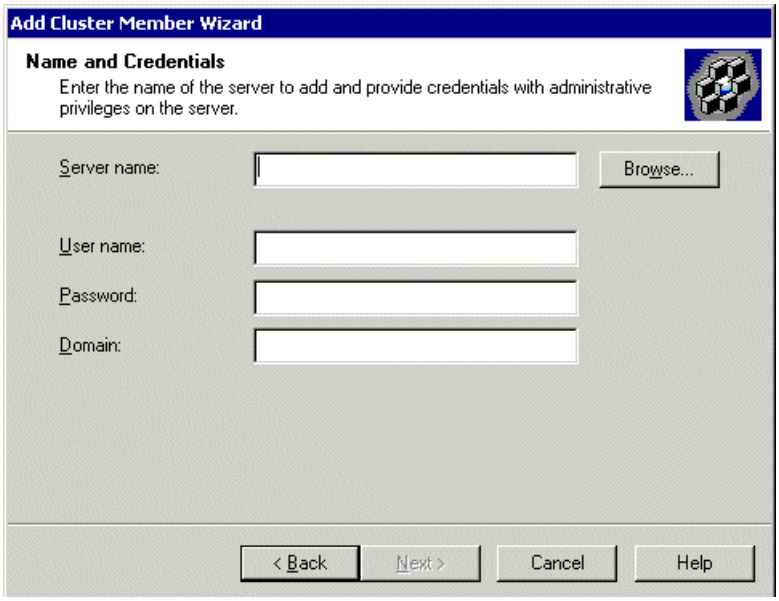
The next step in configuring Application Center on your staging server is to add the production server to the cluster. To do so, follow these steps.

1. Connect to the cluster you created in "Connecting to the Staging Server's Application Center" on page 122.
2. Right click on **Members** in the cluster tree.
3. Click **All Tasks > Add Cluster Member**.



4. The Add Cluster Member Wizard opens. Click **Next** to proceed.

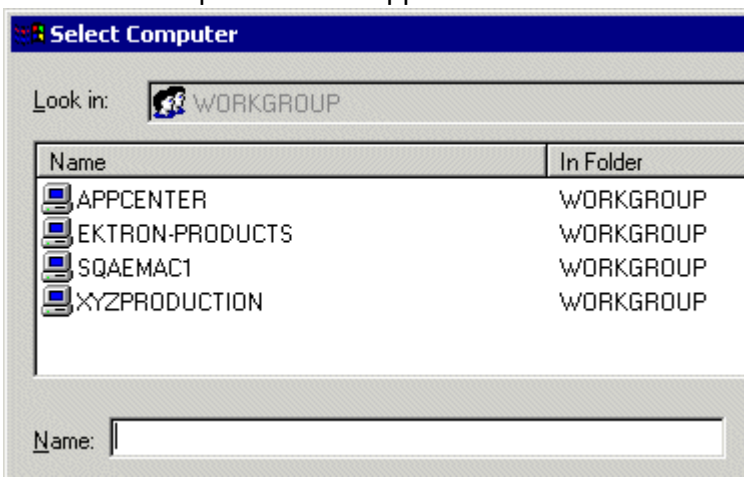
5. The Name and Credentials screen appears.



6. Click **Browse** to locate the server to add to the cluster.

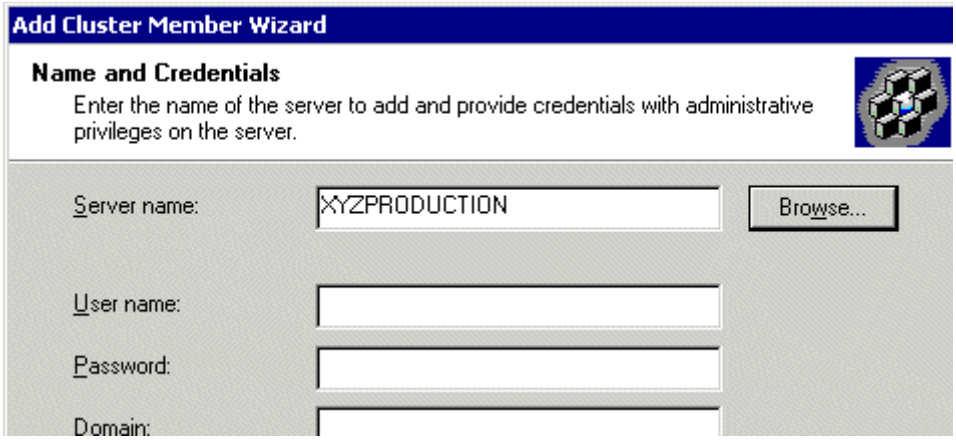
NOTE If you know the name of the server you want to connect to, enter the name of the server in the field and skip this step.

7. The Select Computer screen appears.

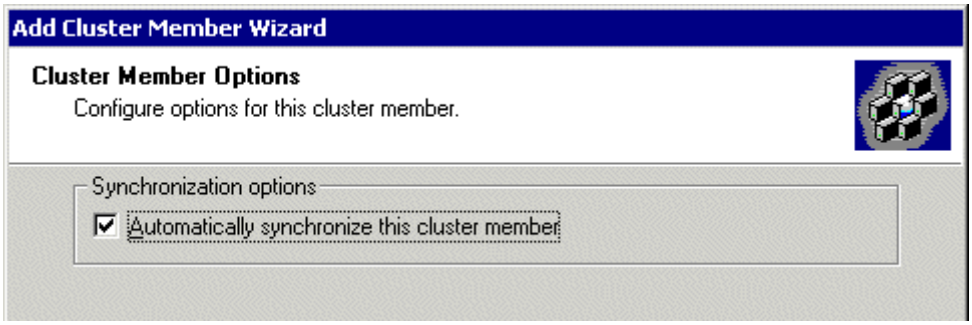


8. Select the Ektron CMS400.NET **Production Server** from the list of available servers, then click **OK.**

9. The select computer window closes, and the Name and Credentials screen appears with the selected computer in the Server Name field.

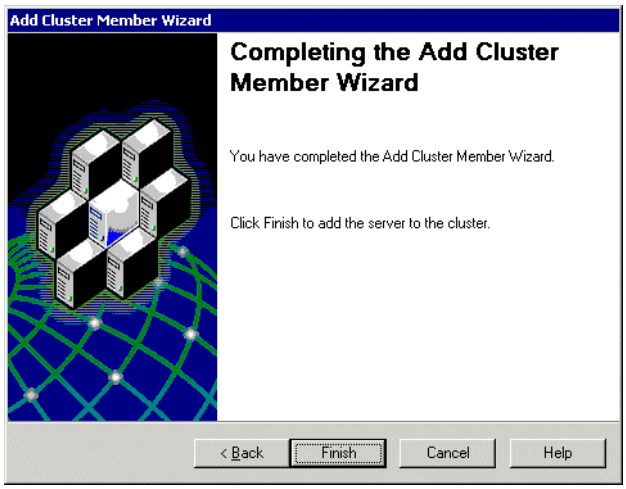


10. Enter the required information needed to successfully connect to the server then click **Next.**
11. Application Center analyzes the server configuration, and then displays the Cluster Member Options screen.

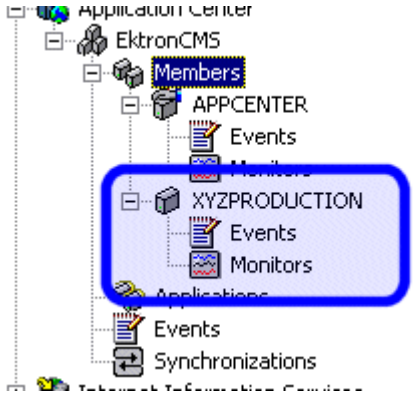


12. Leave the default and click **Next.**

13. The Completing the Add Cluster Member Wizard page appears.



14. Click **Finish** to complete the wizard and add the server to the cluster. The server is now a member of the cluster.



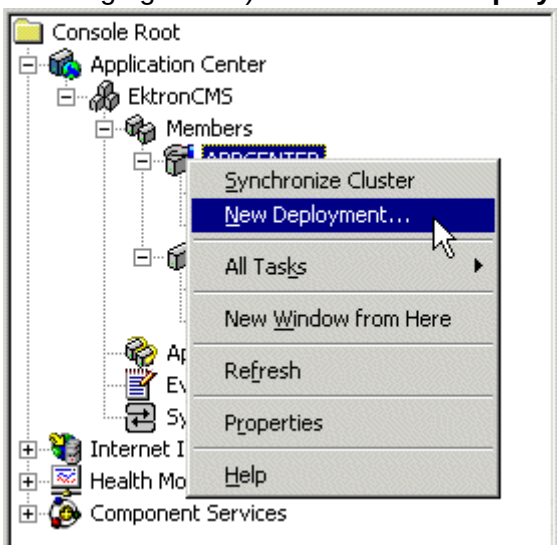
Now that the cluster is complete, you can now “push” files from the staging server to the production server.

Deploying the Files

Once the cluster has been configured properly, you can deploy Ektron CMS400.NET from the staging server to the production server.

To create a new deployment, follow these steps,

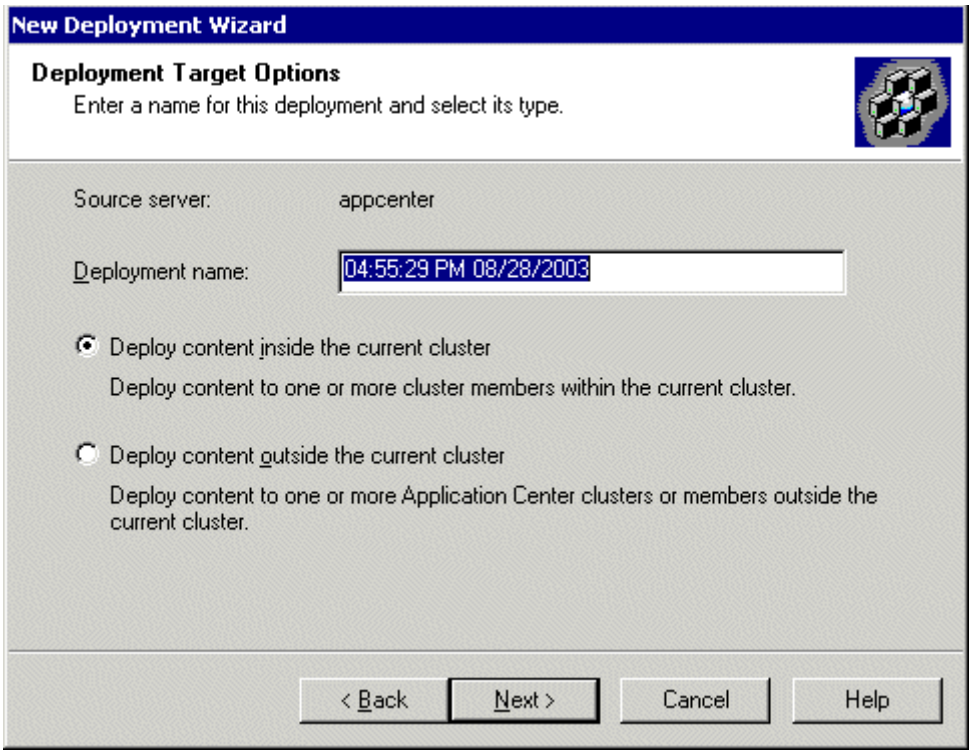
1. Connect to the cluster you created in "Connecting to the Staging Server's Application Center" on page 122.
2. Right click the cluster member acting as the cluster controller (which is the staging server) and click **New Deployment...**



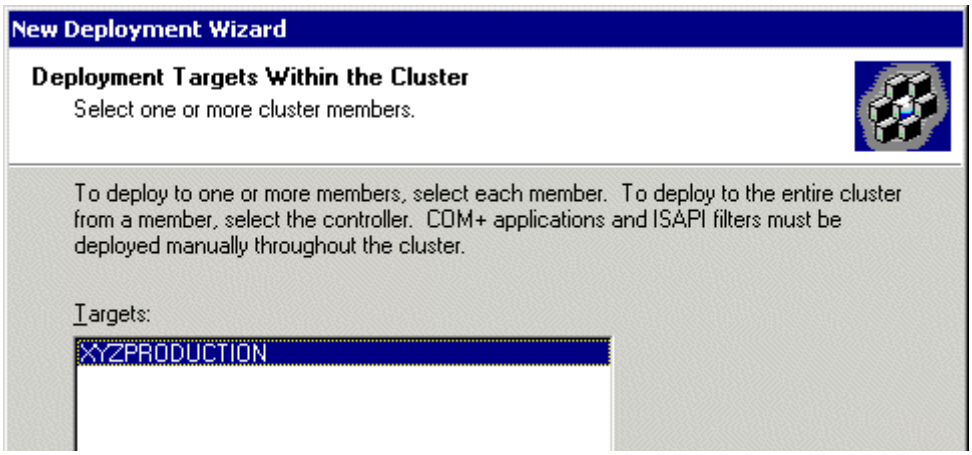
3. The New Deployment Wizard opens.

4. Click **Next** to proceed.

5. The Deployment Target Options screen appears.

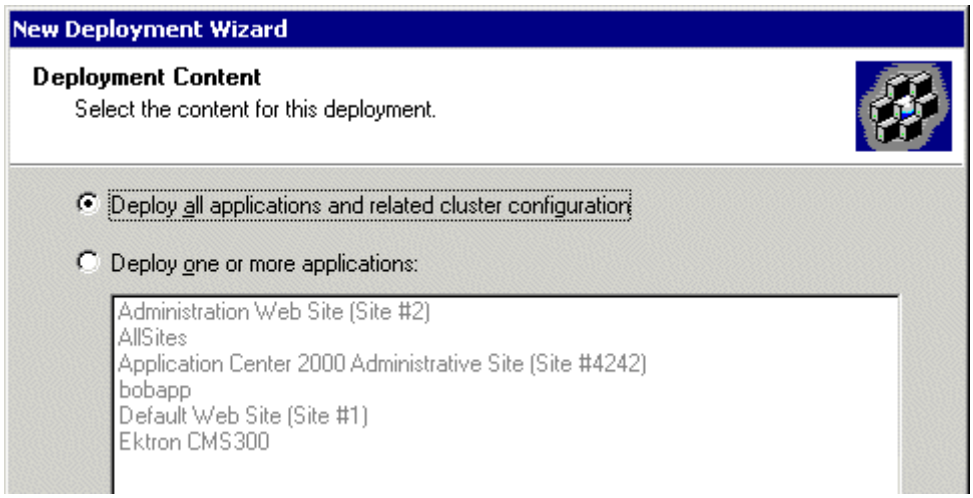


6. Enter a name for the deployment, or leave the default, choose the **Deploy content inside the current cluster** option, then click **Next**.
7. The Deployment Targets Within the Cluster screen appears.

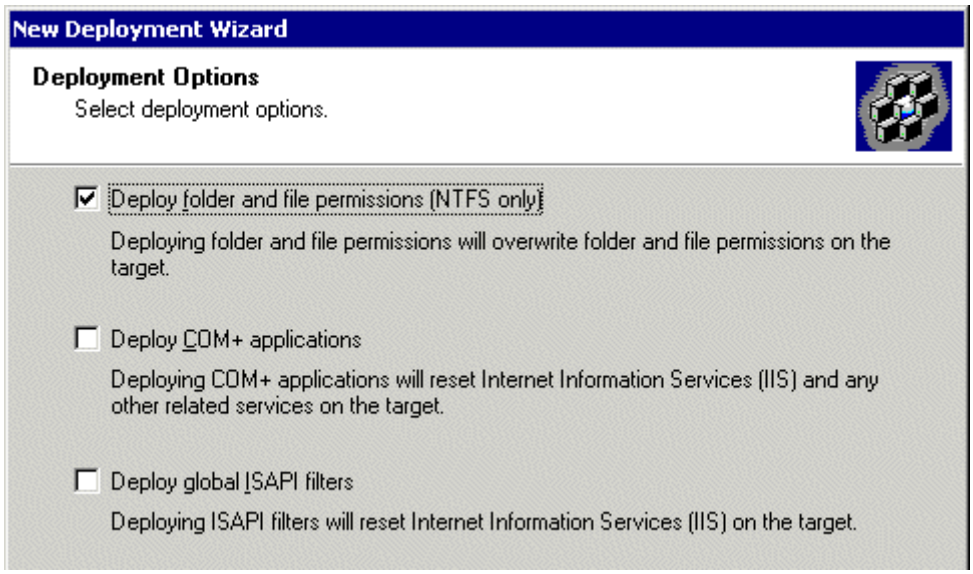


8. Select the targets to which to deploy the content, then click **Next**.

9. The Deployment Content page appears.



10. Either choose to **deploy All Applications** or choose the **One or More** option and select the Ektron CMS400.NET application from the list. Then click **Next**.
11. The Deployment Options screen appears.



12. Check off **Deploy Folder and File Permissions (NTFS Only)**, then click **Next.**

NOTE If desired, you can choose other options. However you must choose the first one.

13. The Completing the New Deployment Wizard screen appears.

14. Click **Finish** to complete the new deployment wizard.

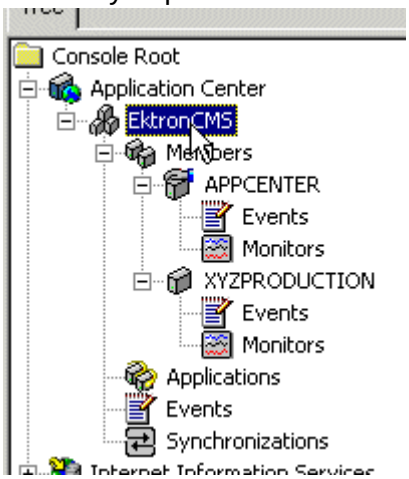
After you complete this initial deployment, all necessary files, registry keys, and DSNs have been copied to the production server in our cluster.

Viewing The Results

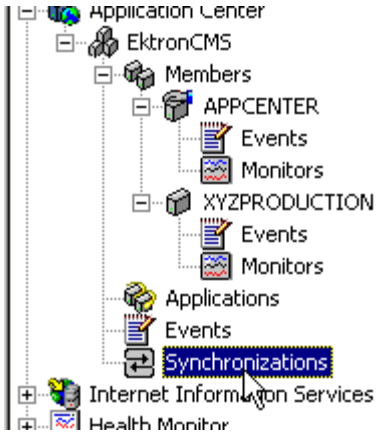
Each time an event occurs, a log is created in the Synchronizations section of Application Center.

To view the results of the initial deployment, follow these steps.

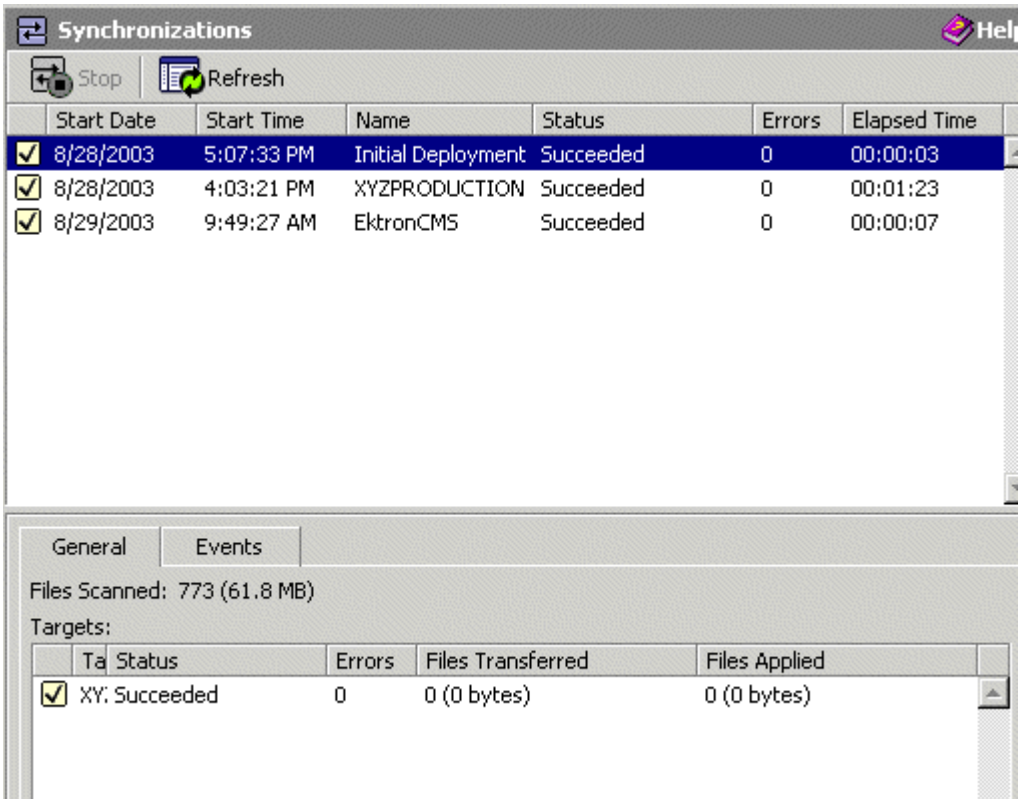
1. Connect to the cluster you performed the initial deployment on.



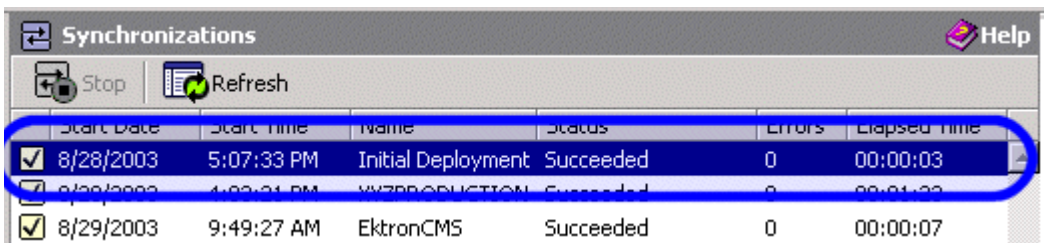
2. Click **Synchronizations** on the cluster tree.



3. The synchronization information appears on the right side of the screen.



4. The most recent record shows that the initial deployment task completed successfully.



Configuring the Production Server

Now that the staging server has been configured, and the initial deployment performed, you must perform these tasks to the Production server in the cluster:

- Create a blank MS-SQL database for Ektron CMS400.NET
- Create a DSN for MS-SQL database

The following sections explain how to perform these tasks.

Before You Configure the Production Server

Before you configure the production server, be sure the following directories have been copied over during the initial deployment:

- `C:\Inetpub\wwwroot\CMS400Example`
- `C:\Program Files\Ektron\CMS400`

Creating Blank MS-SQL Database

A blank MS-SQL database for Ektron CMS400.NET needs to be created on the production server. When the deployment configuration is complete, this database has a pull subscription to the database on the staging server.

For information about creating a blank database on the production server, use the steps in ”Setting up a Database” on page 45. In step 4, choose **Minimal**.

NOTE The database name does not have to match the database name of the staging server.

Configuring MS-SQL Database

The last step in setting up the deployment model is to configure the MS-SQL databases on the staging and production servers.

In our model, the staging server’s database will publish content that the production server will subscribe to.

The following tasks must be performed to successfully configure the MS-SQL databases.

1. Register the production MS-SQL in the MS-SQL Enterprise Manager on the staging server (optional)

NOTE This step is not required, but is recommended to make managing the databases easier.

2. Configure the staging server’s database to be a publication database.

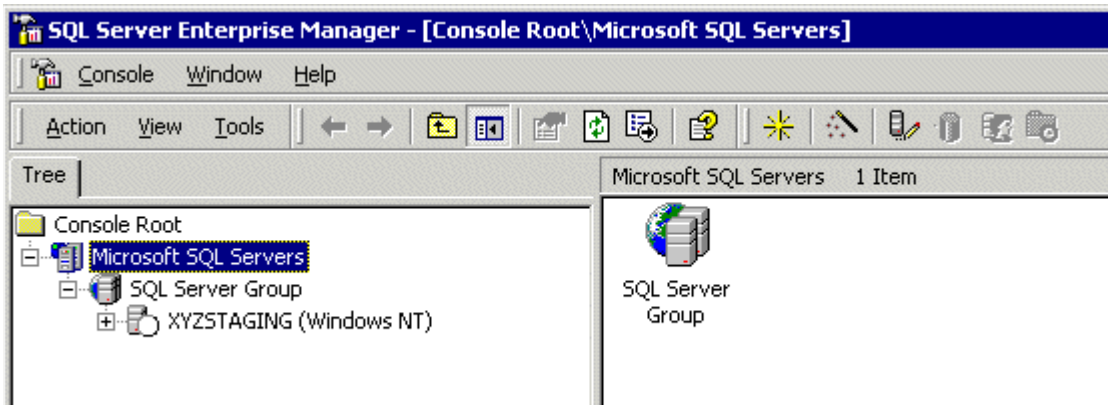
3. Configure the production server's database to subscribe to the staging server's database.
4. Perform an initial synchronization.

These steps are explained in the following sections.

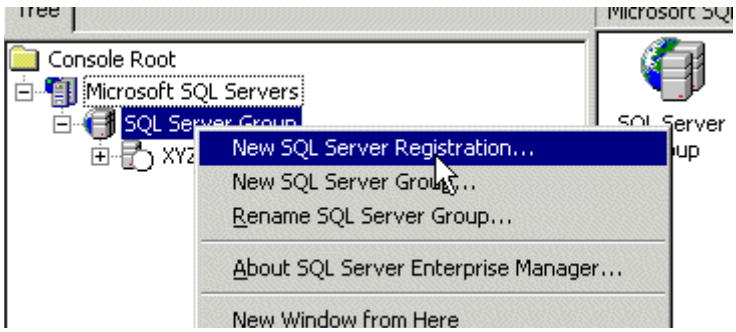
Registering Production Server's MS-SQL Server

By registering the production server's MS-SQL server in the staging server's MS-SQL Enterprise Manager, you can perform tasks on both services from one area instead of accessing both machines. To do so, follow these steps.

1. On the staging server, access the MS-SQL Enterprise manager.

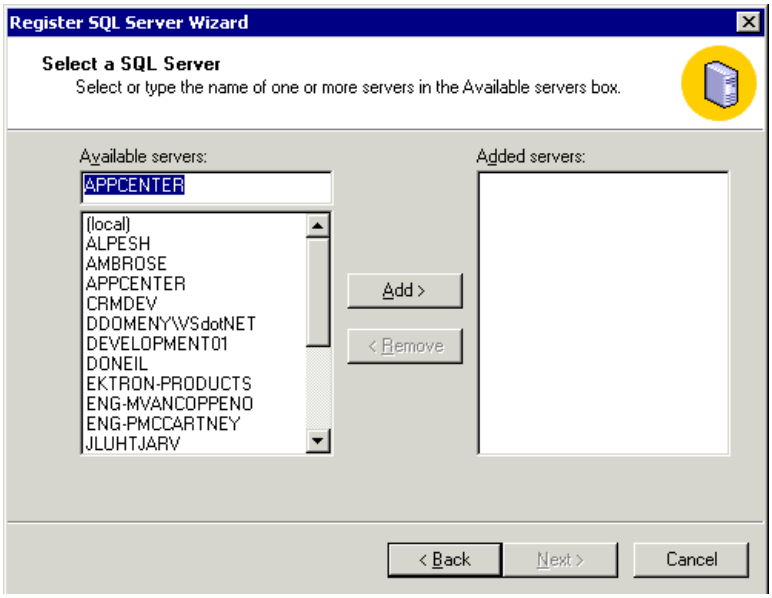


2. Right click on **SQL Server Group** and click **New SQL Server Registration.**



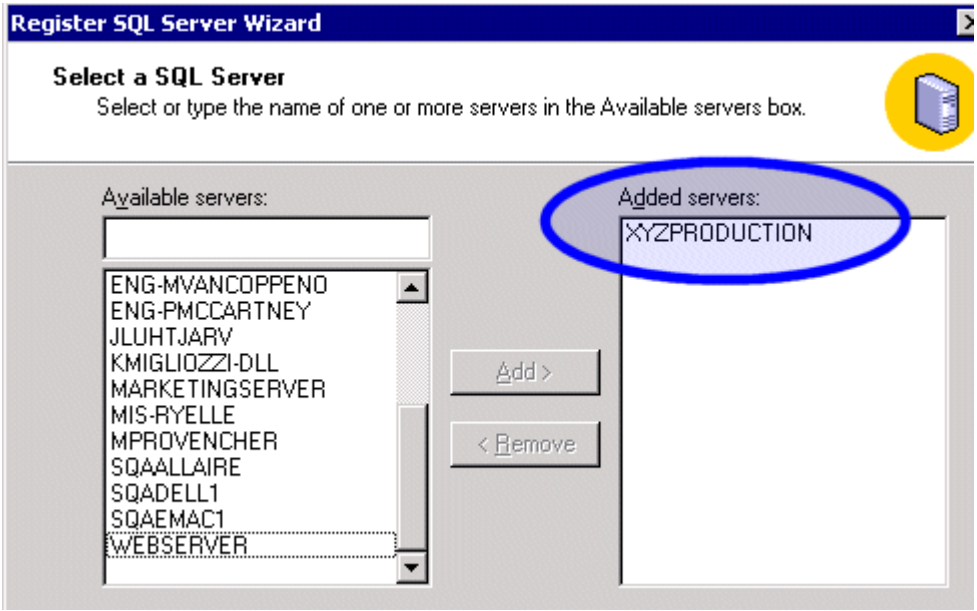
3. The Register SQL Server Wizard opens.

4. Click **Next**.
5. The Select SQL Server screen appears.

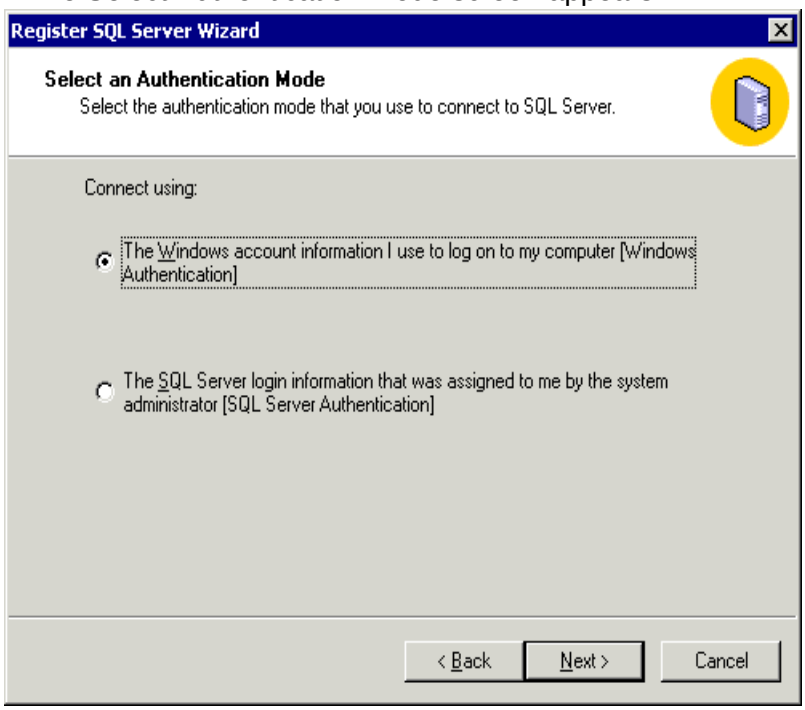


6. In the Available Servers list, select the name of the production server. Then click **Add.**

7. The production server appears in the Added Servers column.



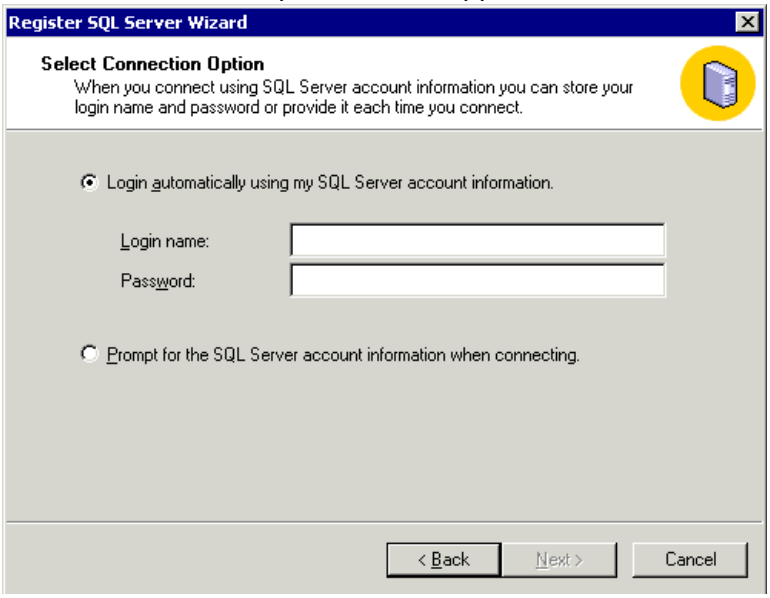
8. Click **Next**.
9. The Select Authentication Mode screen appears.



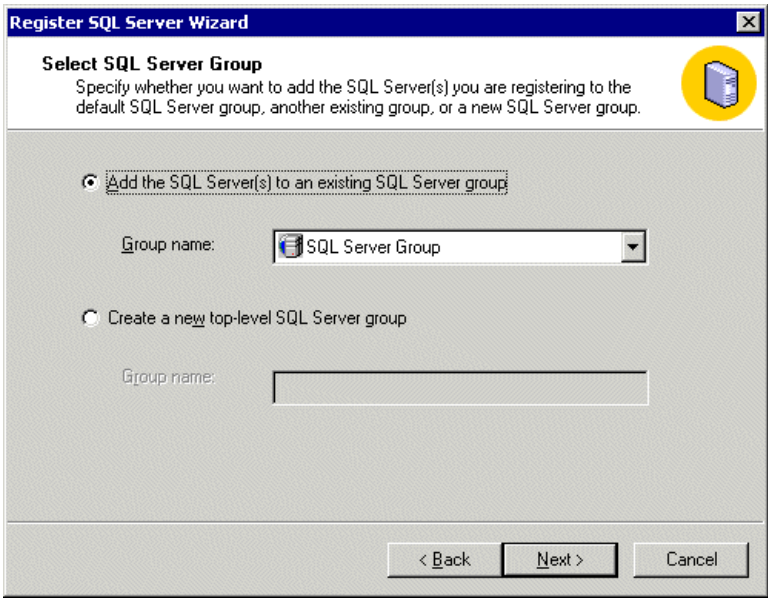
10. Choose the authentication mode you want to use. Then click **Next**.

NOTE This example uses SQL Server authentication. If you chose Windows Authentication, skip to step 14.

11. The Select Connection Option screen appears.



12. Choose the type of connection you want. Then, click **Next**.
13. The Select SQL Group screen appears.

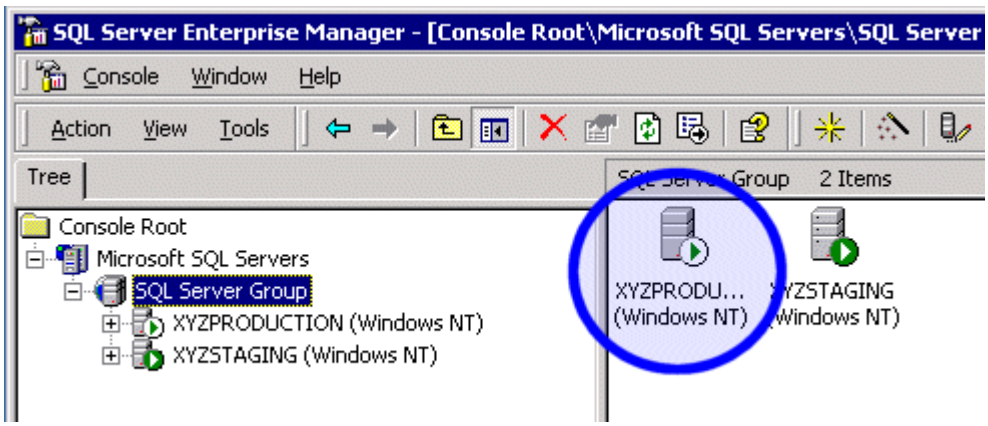


14. Choose the SQL Server group, or add a new one you want to register the new SQL server to. Then click **Next.**

NOTE This example adds the new SQL server to the default SQL Server group.

15. The Completing the Register SQL Server WIzard screen appears.

16. Click **Finish**.
17. The SQL Server is registered and a confirmation message appears.
18. Click **Close**.
19. The confirmation closes, and the new SQL Server is registered to the SQL Enterprise Manager



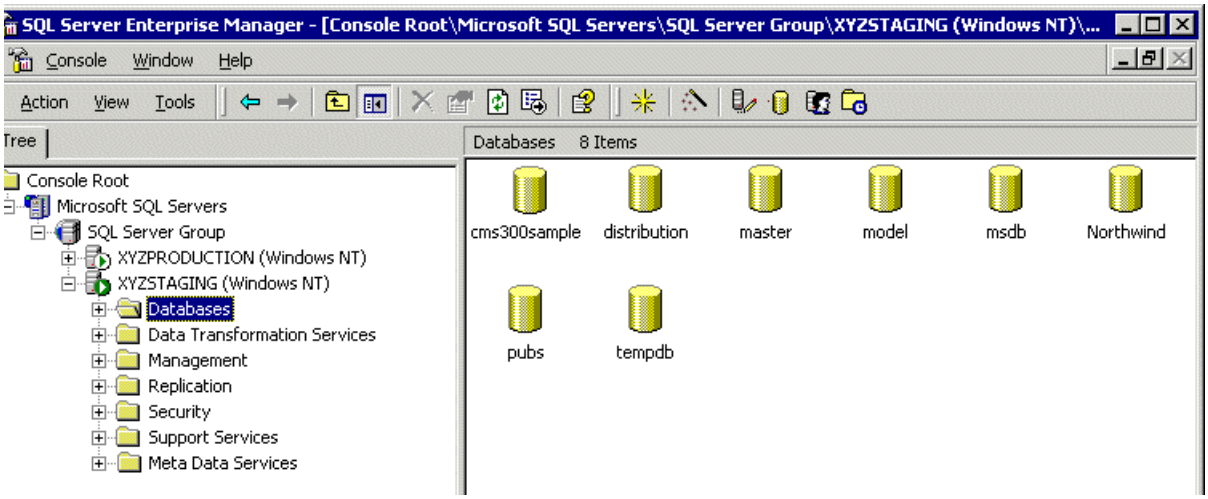
Now that the production server is registered, we can configure the two databases.

Configuring the Staging Server's Database

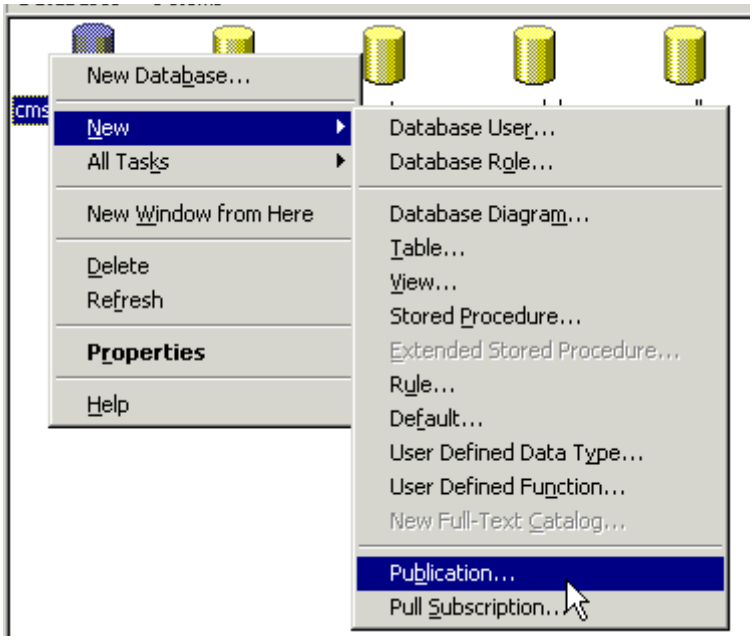
The staging server's database publishes all content in the Ektron CMS400.NET Web site. The production server's database pulls data from that database and stores it as well.

To configure the staging server's database to publish the data, follow these steps.

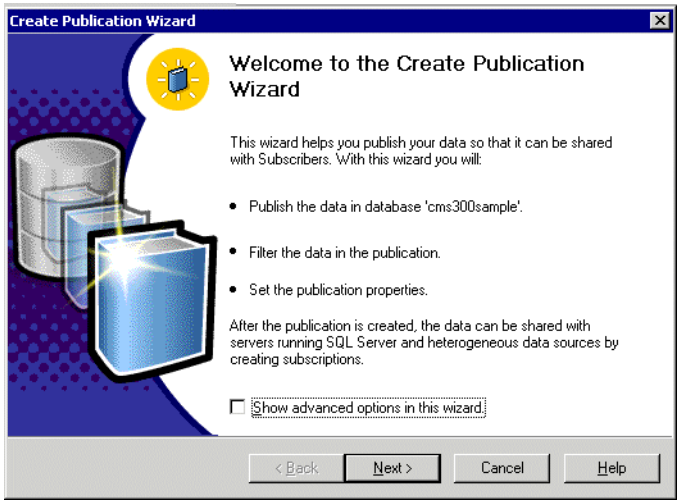
1. In the SQL Enterprise Manager on the staging server, connect to the staging server's SQL server and access the Databases folder.



2. Right click the **CMS400Sample** database and click **New > Publication...**

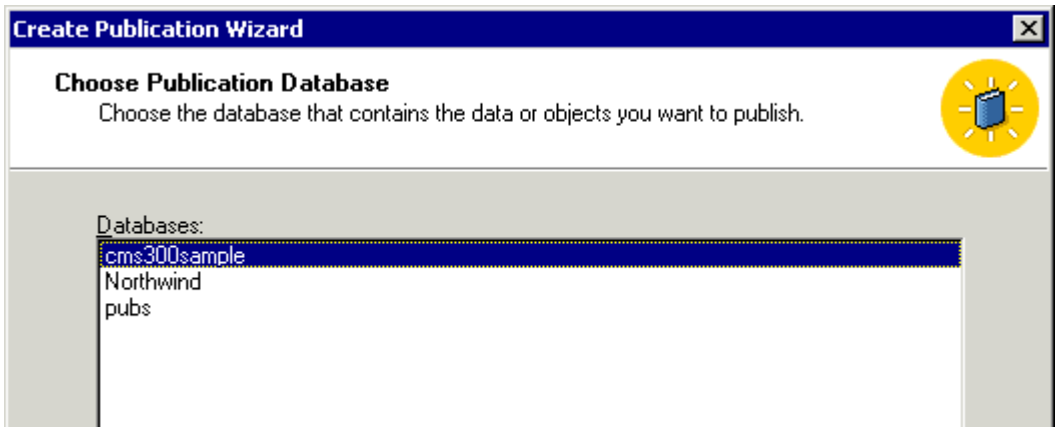


3. The Create Publication Wizard opens.

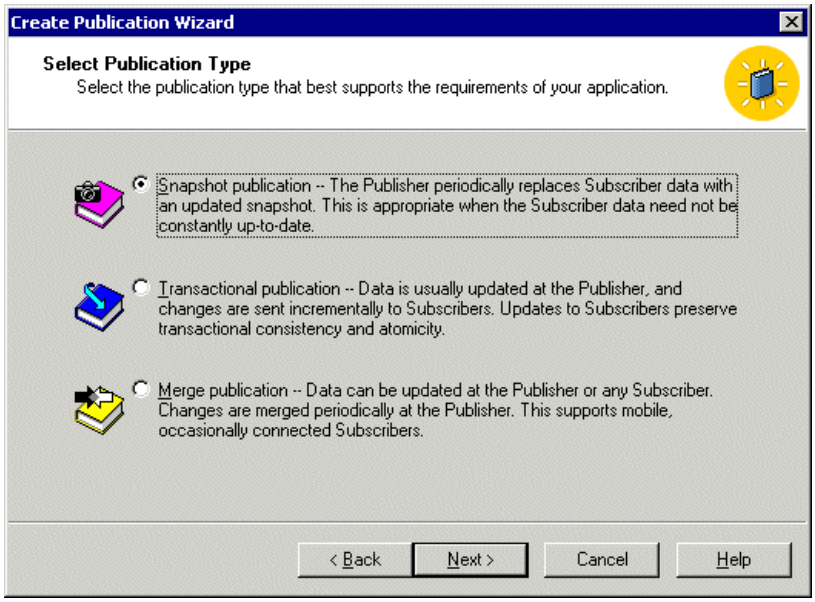


4. Click **Next** to begin.

5. The Choose Publication Database screen appears.

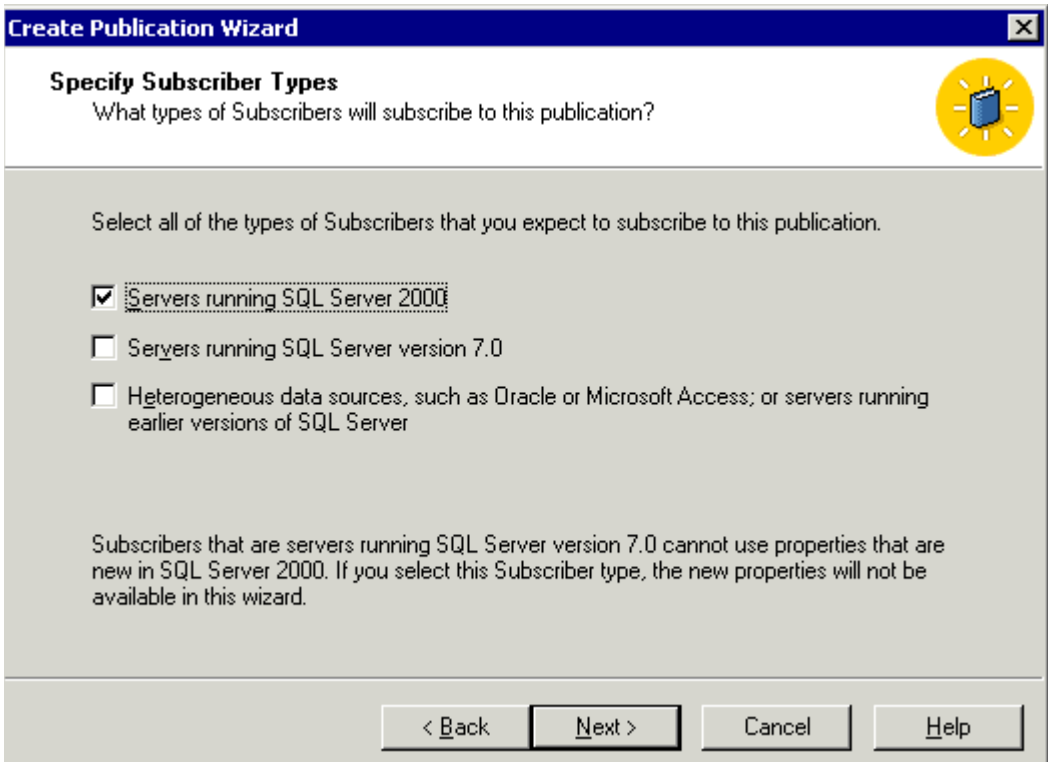


6. Choose the Ektron CMS400.NET database and click **Next.**
7. The Select Publication Type screen appears.



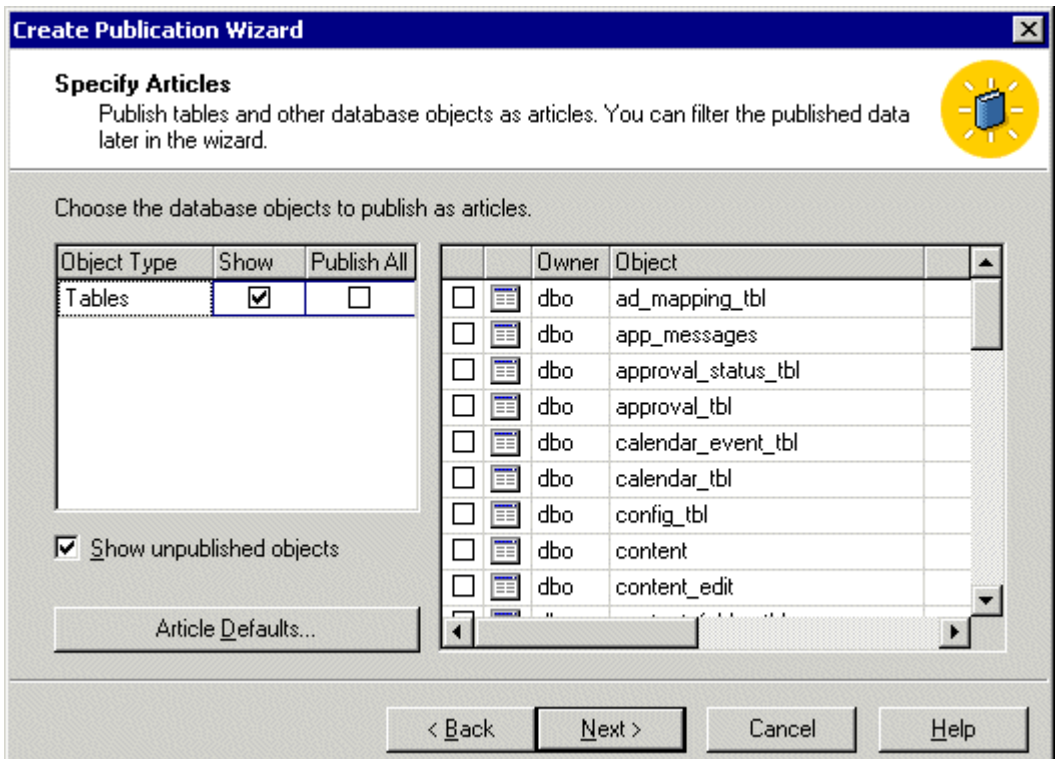
8. Choose **Snapshot Publication** then click **Next**.

9. The Specify Subscriber Types screen appears.



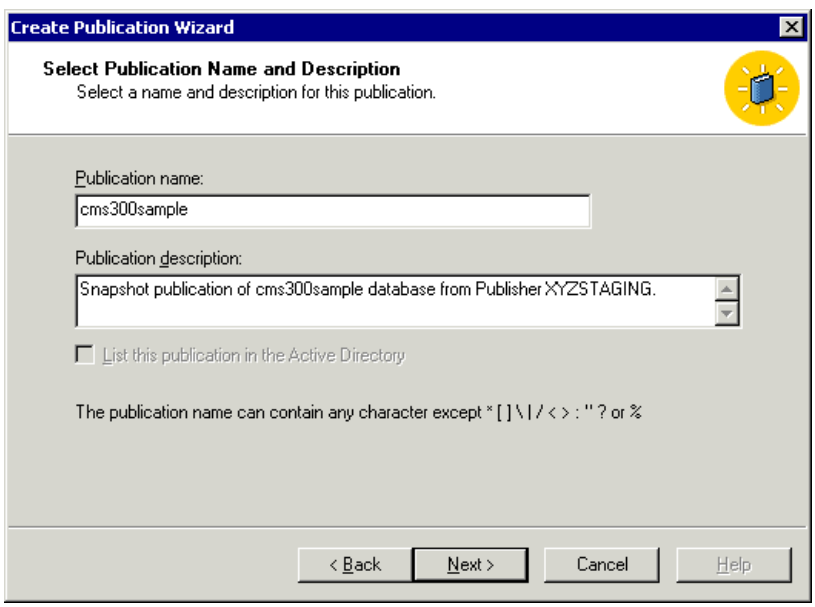
10. Check the box next to the version of MS-SQL that the production server is running and click **Next**.

11. The Specify Articles screen appears. Check the **Publish All** option.

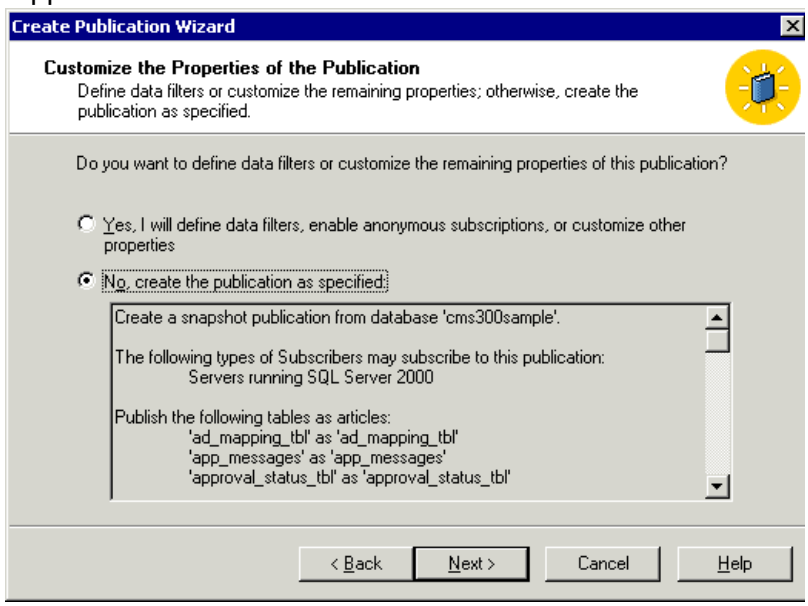


12. Click **Next** to continue.

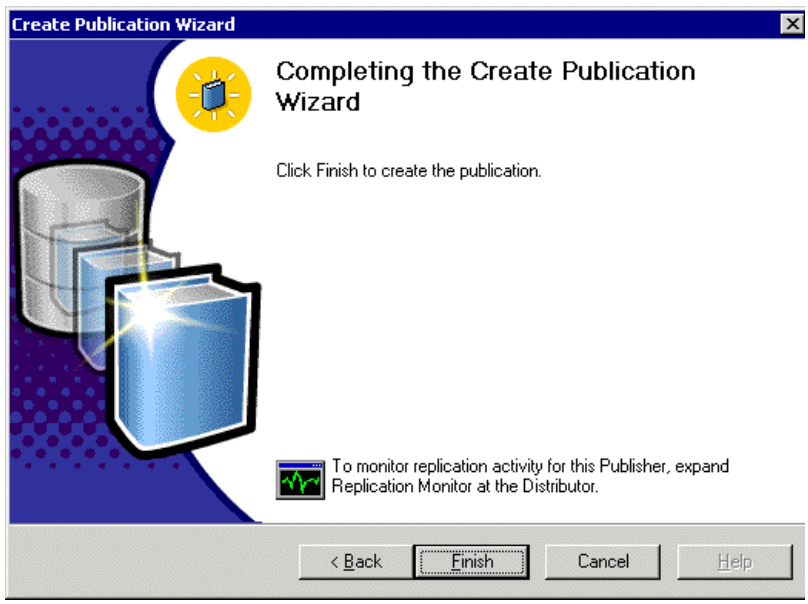
13. The Select Publication Name and Description page appears.



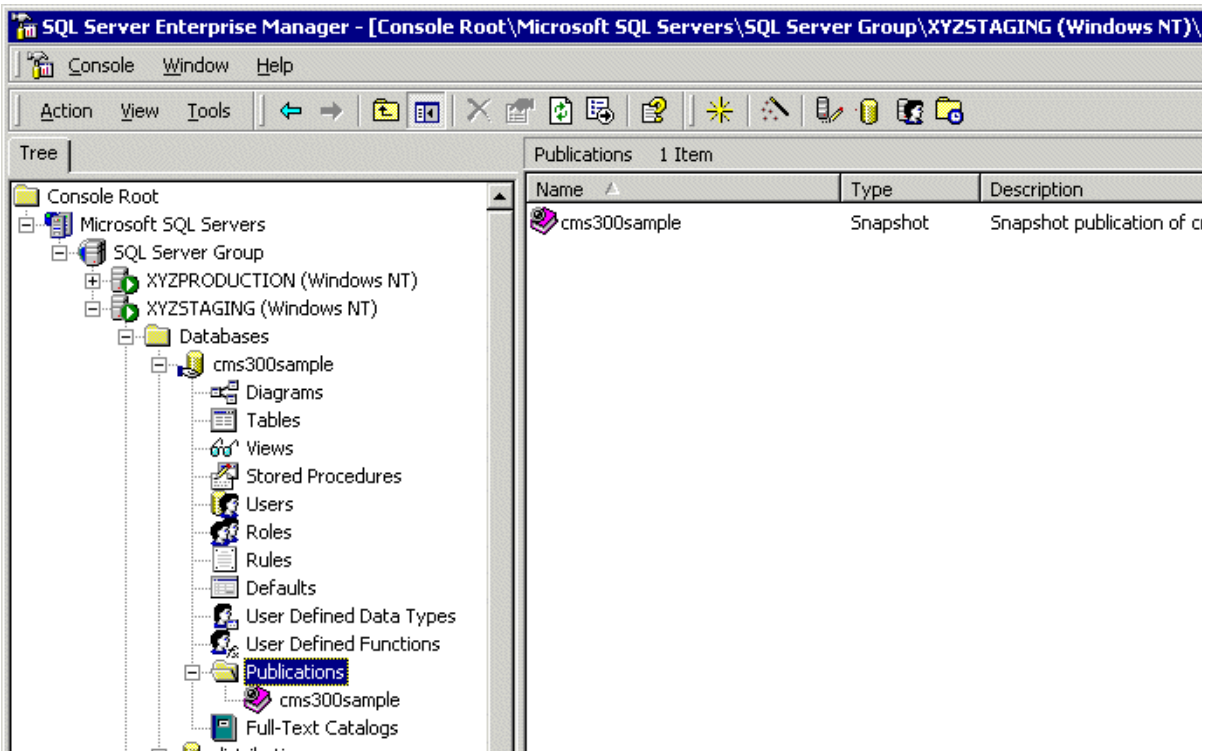
14. Enter a name and description for the publication, then click **Next**.
15. The Customize the Properties of the Publication screen appears.



16. Choose **No, Create the publication as specified** then click **Next.**
17. The Completing the Create Publication Wizard screen appears.



18. Click **Finish.**
19. A Publications folder is added to the database tree, and the new publication is added to it.

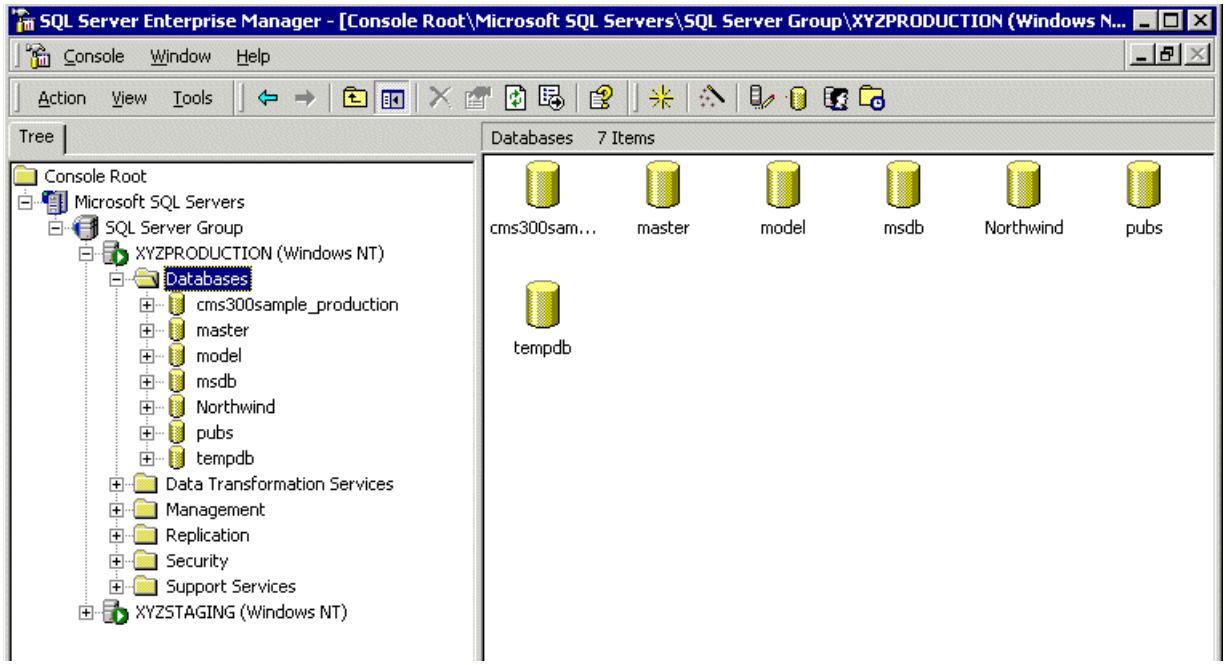


Now that the staging server's database is configured as a publication database, we can configure the production database to subscribe to it.

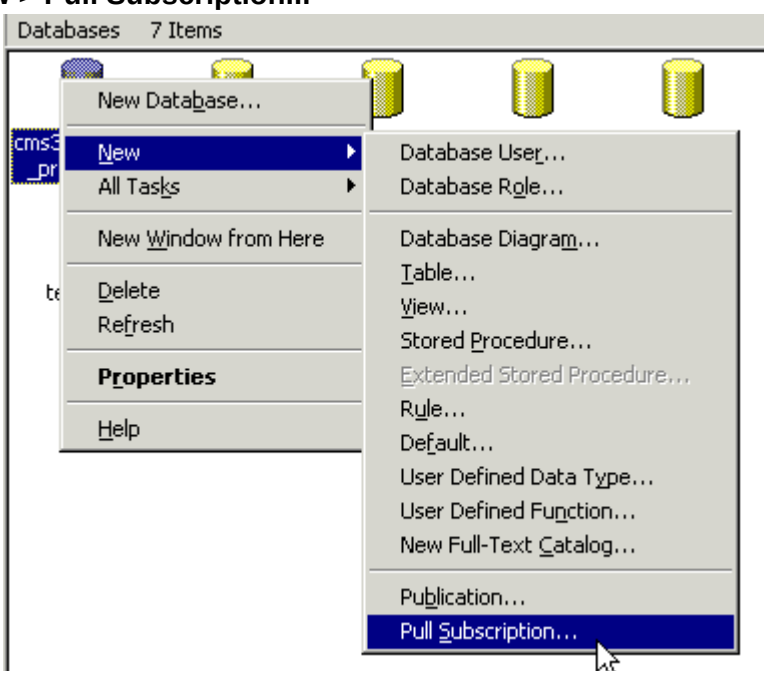
Configuring the Production Server's Database

To configure the production server's database to subscribe to the staging server's database, follow these steps.

1. On the staging server's SQL Server Manager, connect to the production server's SQL server and access the databases folder.

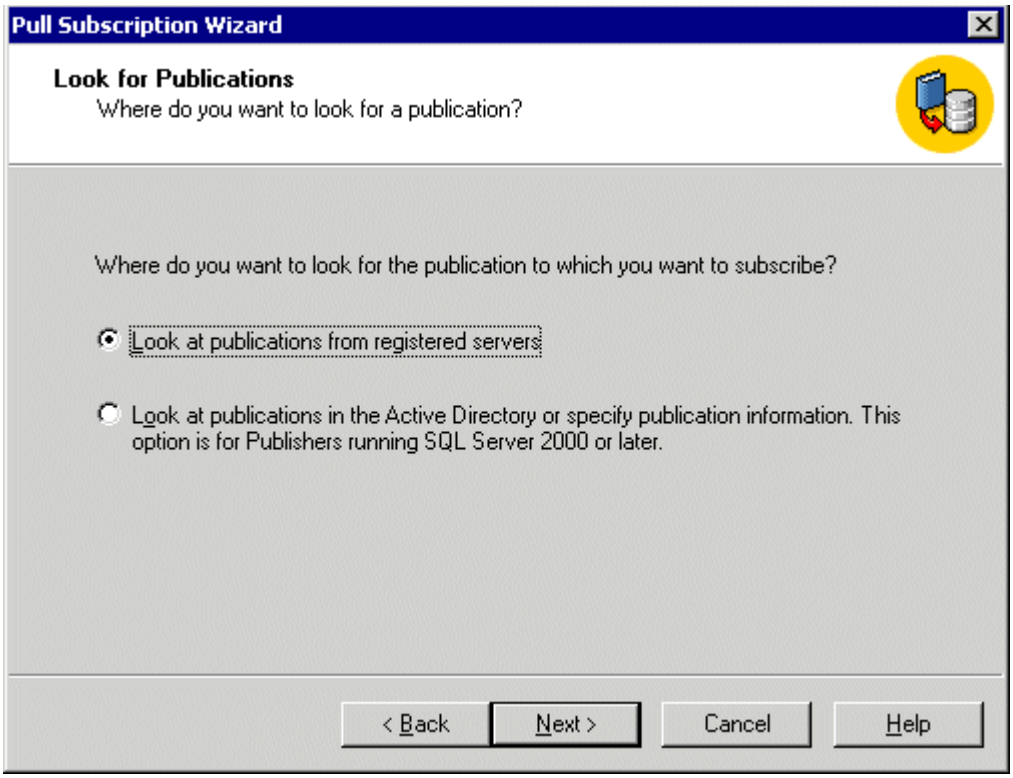


2. Right click the blank Ektron CMS400.NET database and click **New > Pull Subscription...**



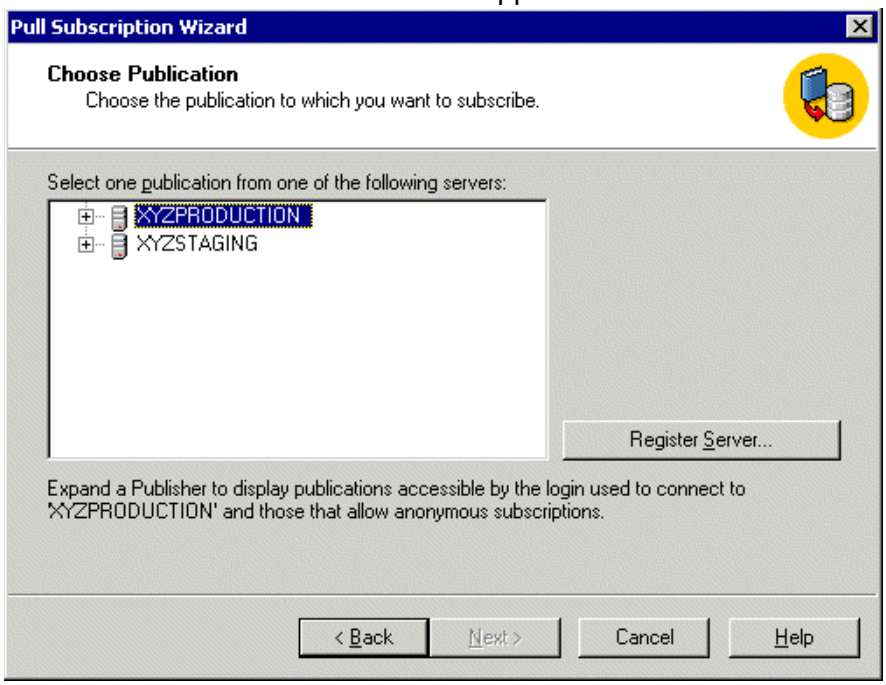
3. The Pull Subscription Wizard opens. Click **Next** to begin.

4. The Look for Publications screen appears.

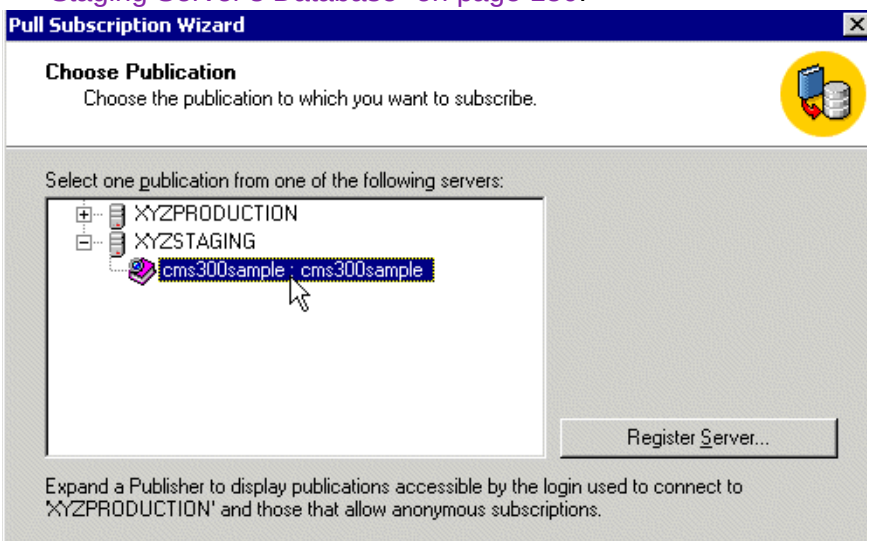


5. Choose **Look at publications from registered servers** and click **Next**.

6. The Choose Publication screen appears.



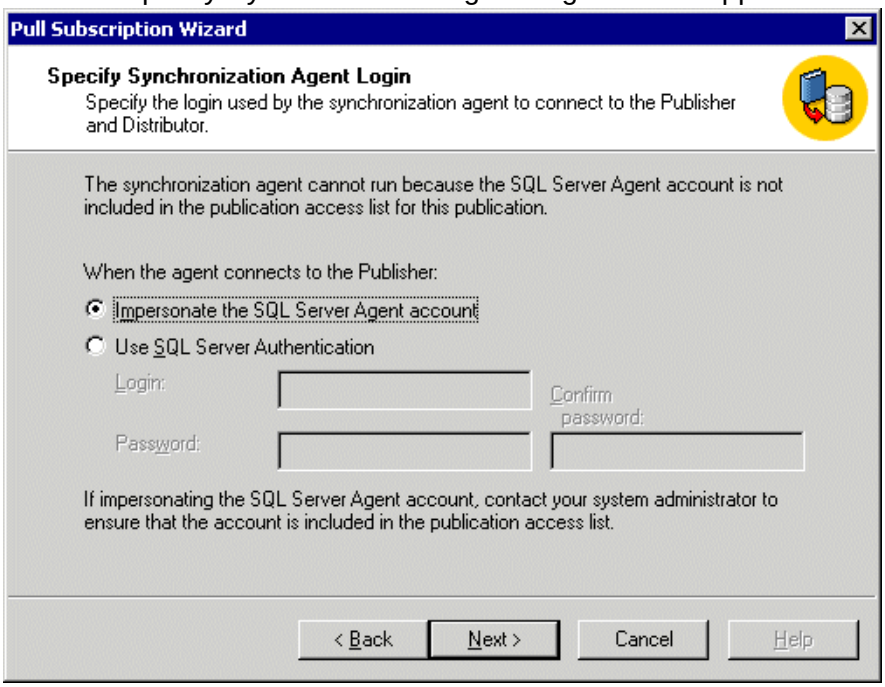
7. Expand the Staging Server's tree and select the Ektron CMS400.NET Publication that was created in "Configuring the Staging Server's Database" on page 150.



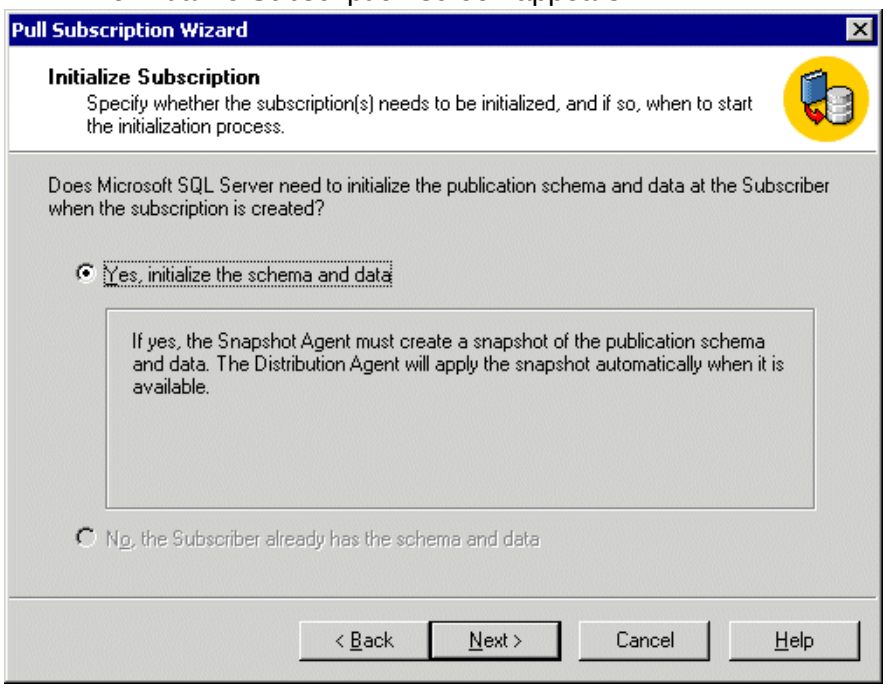
NOTE If the Ektron CMS400.NET publication does not appear under the staging server, make sure the publication was created properly.

8. Click **Next** to continue.

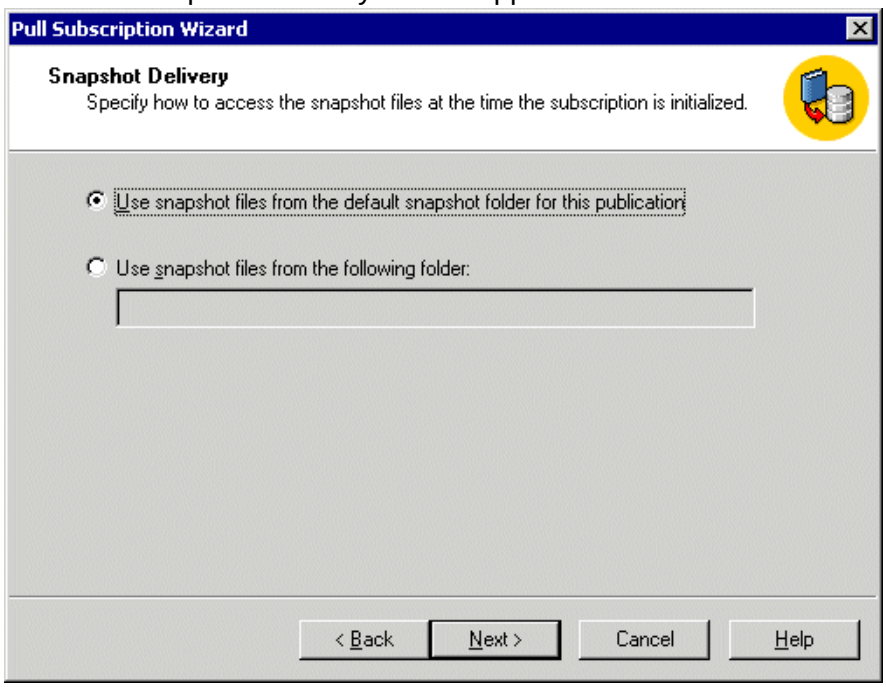
9. The Specify Synchronization Agent Login screen appears.



10. Choose which option you want to use to connect to the publisher. Then, click **Next**.
11. The Initialize Subscription screen appears.

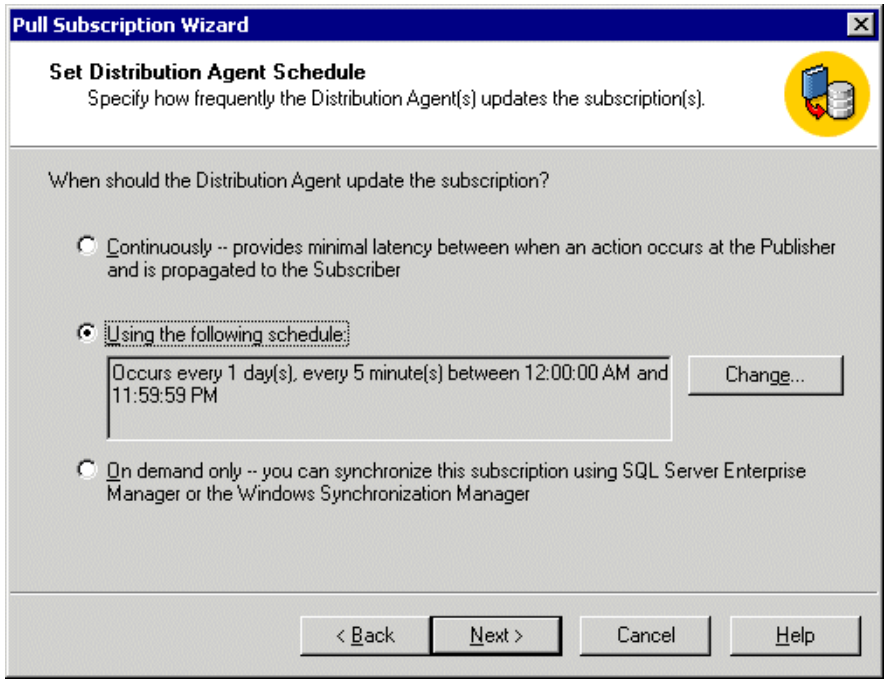


12. Choose **Yes, initialize the schema and data**, then click **Next.**
13. The Snapshot Delivery screen appears.



14. Choose **Use snapshot files from the default snapshot folder for this publication.** Then, click **Next**.

15. The Set Distribution Agent Schedule screen appears.



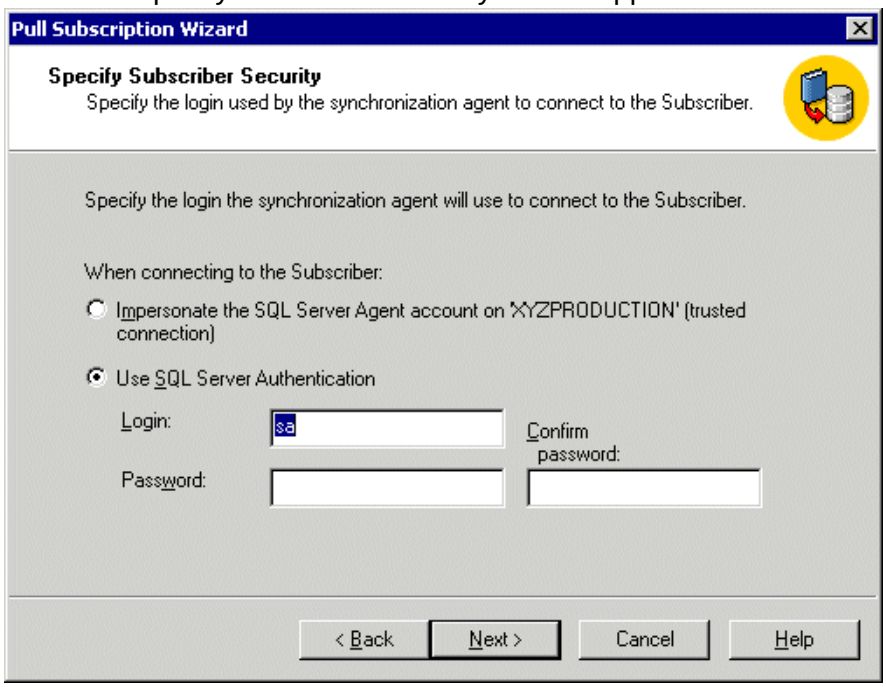
16. Choose an option using the following table for reference.

Option	Result
Continuously	Propagates data modifications between Publisher and Subscriber immediately.
Schedule	Runs the Distribution Agent hourly (default), or daily, weekly, or monthly. Choosing a frequency other than **Continuously** increases the latency between the Subscriber and Publisher.
On-Demand	Run the Distribution Agent only when specifically requested.

For demonstration purposes, we choose **On-Demand** so we can synchronize the databases with a click of a button

17. Click **Next** to continue.

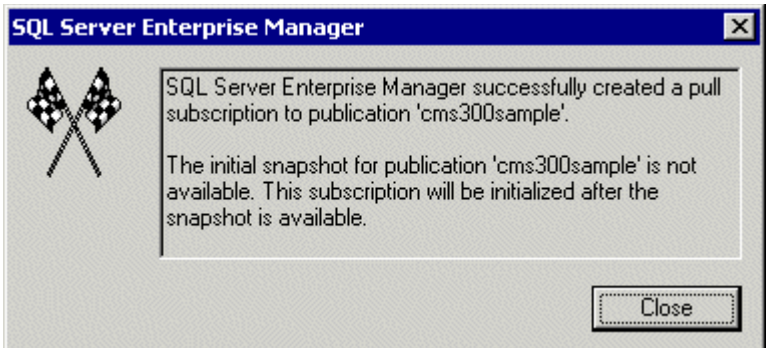
18. The Specify Subscriber Security screen appears.



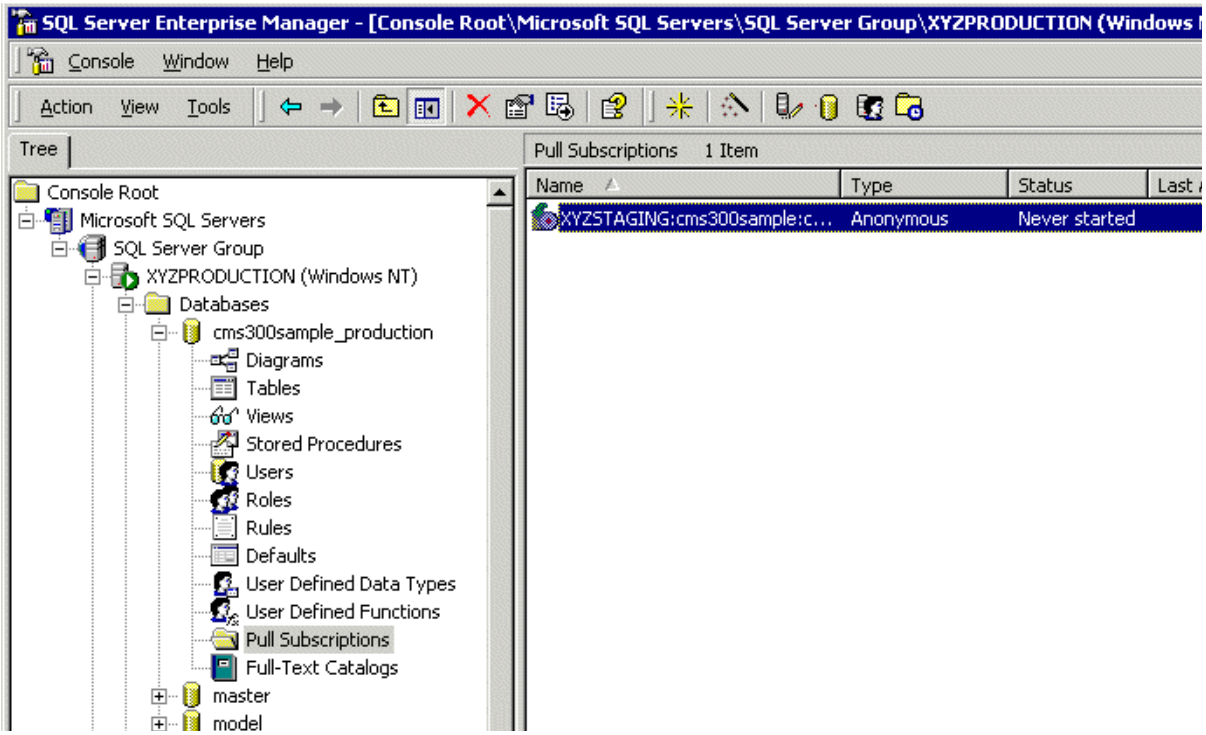
19. Specify the login used by the synchronization agent to the subscriber. Then, click **Next**.
20. The Completing the Pull Subscription Wizard appears.

21. Click **Finish** to complete the wizard.

22. A message informs you that the pull subscription was created successfully.



23. Click **Close** to close the dialog box.
24. The box closes.
25. A Pull Subscription folder appears on the database's data tree with the new pull subscription added.



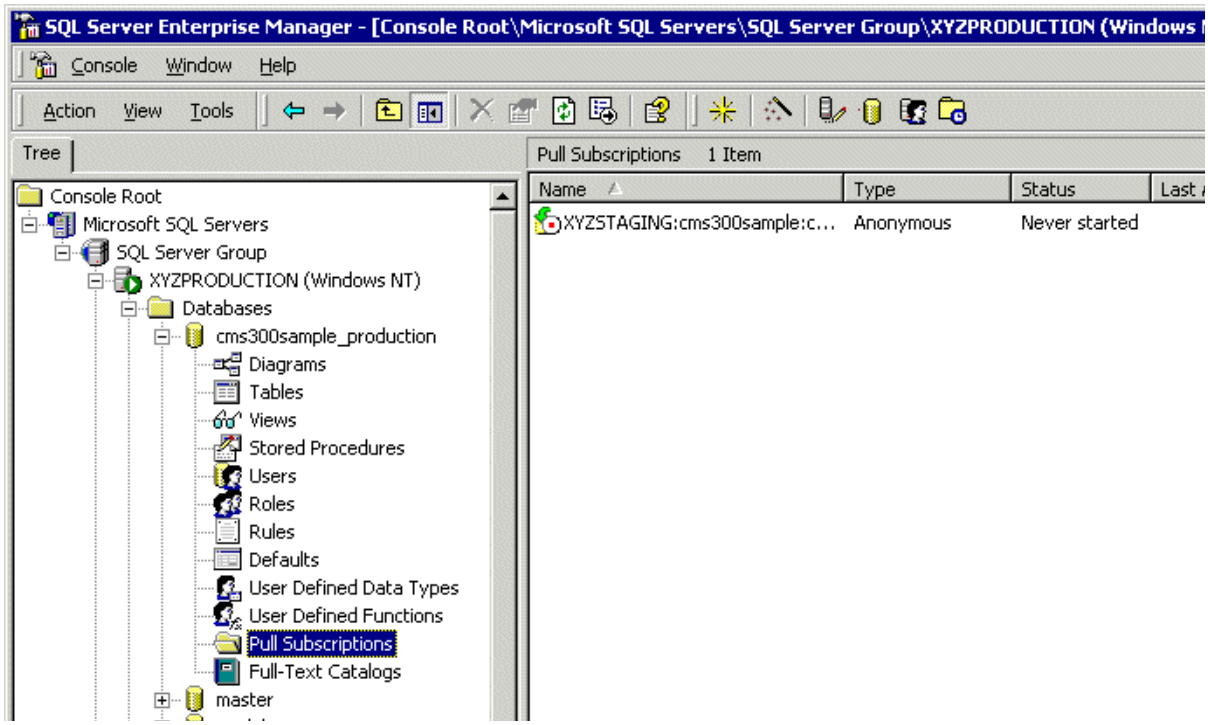
Now that the publication and subscription have been created, we can perform our initial synchronization for the databases.

Synchronizing the Databases

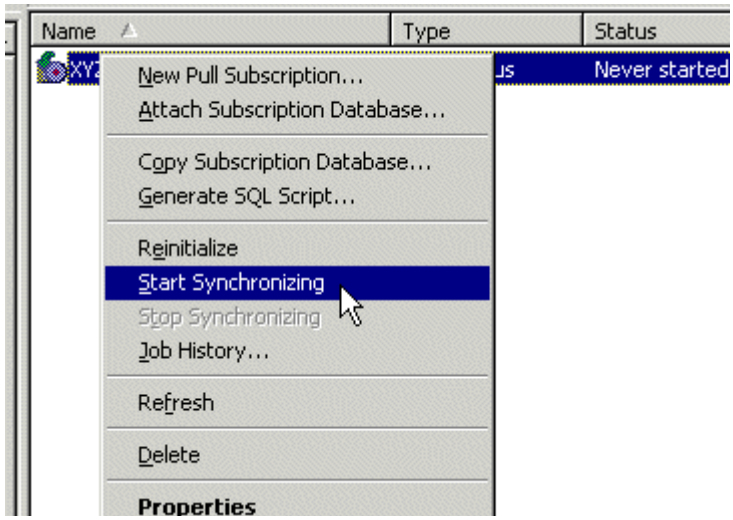
The initial synchronization moves all data from the publication database (staging server) to the subscribing database (production server).

To perform the initial synchronization, follow these steps.

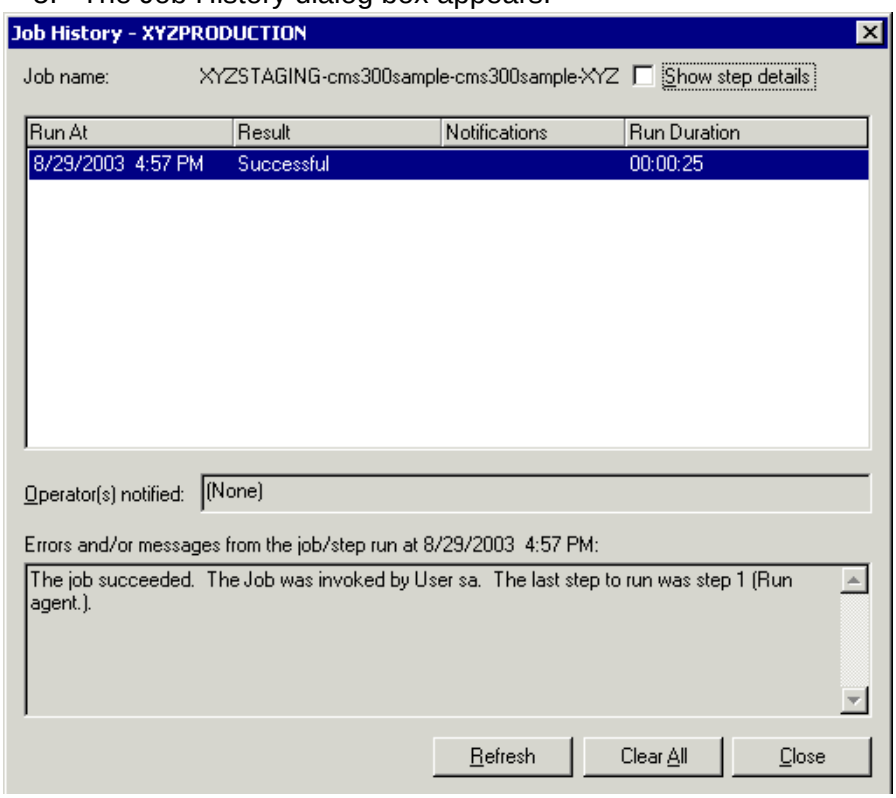
1. In SQL Enterprise manager, connect to the production server's database and locate the pull subscription that was created in "Configuring the Production Server's Database" on page 156.



2. Right click the pull subscription record and click **Start Synchronizing.**

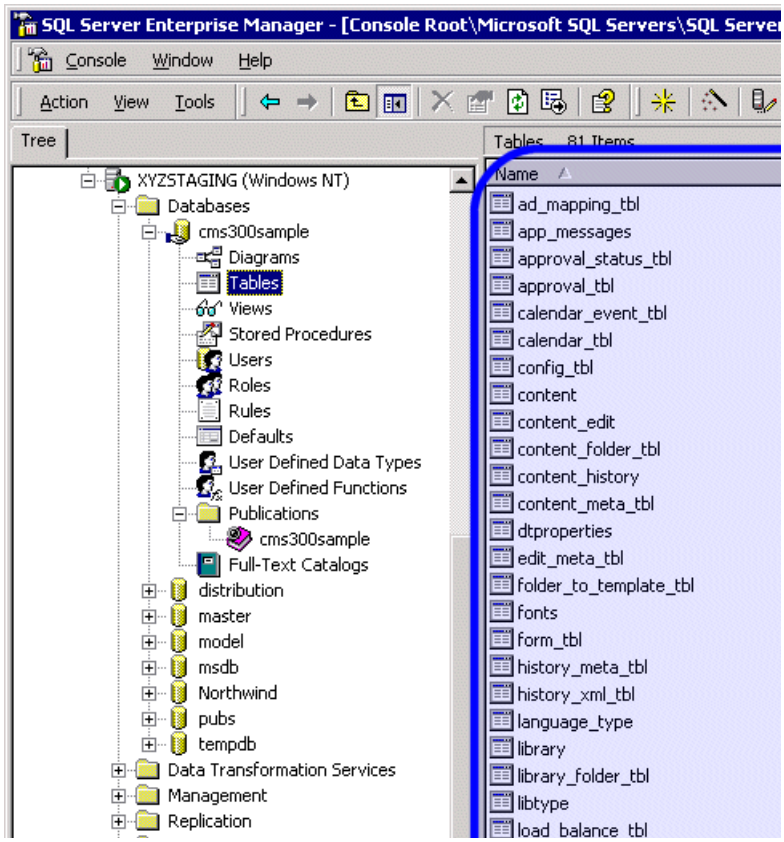


3. The synchronization is performed.
4. To view results of the initial synchronization, right click on the pull subscription and click **Job History**.
5. The Job History dialog box appears.



NOTE If you receive a message other than a successful notification, re-check the settings and try again.

Also, the Ektron CMS400.NET tables from the staging server are included in the production database.



What's Next?

The deployment configuration is complete! The next section explains how to use it.

Using the Deployment Model

Now that the deployment model has been configured, you can easily make changes on your staging server and move the contents to the production server with a click of the mouse.

The following two tasks must be performed to use the deployment model.

Task...	Use...~	More Information...
Deploy Files	MS Application Center	”Deploying the Files” on page 137
Synchronize Databases	MS SQL Server	”Synchronizing the Databases” on page 165

Additional Information

Supporting Documents

You can find more detailed information about Ektron CMS400.NET in the following documents:

- *Ektron CMS400.NET Administrator Manual, Version 4.8*
- *Ektron CMS400.NET Developers Reference Manual, Version 4.8*
- *Ektron CMS400.NET User Manual, Version 4.8*

Support

If you are experiencing trouble with any aspect of Ektron CMS400.NET, please contact the Ektron Support Team via our Web Site, or by e-mail:

support@ektron.com

http://www.ektron.com/support/index.aspx

Sales

For questions and answers about purchasing Ektron CMS400.NET from Ektron, contact the sales department by sending an e-mail to:

sales@ektron.com

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