



Upgrading Software from the ACNS 5.1 Software Release

This chapter explains how to upgrade software in a centrally managed environment. This chapter contains the following sections:

- [Determining the Current Software Version in the ACNS 5.1 Content Distribution Manager GUI, page 7-2](#)
- [Registering a Meta File URL in the ACNS 5.1 Content Distribution Manager GUI, page 7-2](#)
- [Upgrading the Software Using the ACNS 5.1 Content Distribution Manager GUI, page 7-5](#)
- [Upgrading an ACNS 5.1 Standby Content Distribution Manager, page 7-9](#)



Note

Before installing new software, always review the release interoperability issues and requirements in [Chapter 1, “Introduction to Upgrading Your ACNS Software.”](#)

To upgrade or downgrade from the ACNS 5.1.x software release to another ACNS 5.x.x software release, choose between using the Content Distribution Manager GUI or the CLI.

From the Content Distribution Manager GUI, you can perform these tasks:

- Determine the current version of ACNS software.
- Register a meta file containing the software file URL in the Content Distribution Manager.
- Perform a software upgrade for Content Engines and Content Routers in your ACNS network.

From the CLI, you can perform these tasks:

- Determine the current version of ACNS software.
- Perform a software upgrade for individual Content Distribution Managers, Content Engines, and Content Routers.



Note

ACNS 5.1 software does not support upgrading the Content Distribution Manager using the Content Distribution Manager GUI. To upgrade the Content Distribution Manager, follow the procedure in the [“Installing the Software File Using the CLI”](#) section on page 3-2.

If you have two Content Distribution Managers in your network, one primary and one standby, follow the upgrade procedure in the [“Upgrading an ACNS 5.1 Standby Content Distribution Manager”](#) section on page 7-9.

Determining the Current Software Version in the ACNS 5.1 Content Distribution Manager GUI

To determine the current ACNS software version from the Content Distribution Manager GUI, follow these steps:

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- Step 1** To view the current software version running on the Content Distribution Manager, choose **Devices > CDM**.
 - Step 2** Click the **Edit** icon next to the name of the device. The Modifying Content Distribution Manager window appears, listing the software version.
 - Step 3** To view the current software version running on a Content Engine, choose **Devices > Content Engines**.
 - Step 4** Click the **Edit** icon next to the name of the Content Engine. In the Contents pane, choose **CDN Settings > Status**. The software version number is displayed under the Device Information heading.
 - Step 5** To view the current software version running on a Content Router, choose **Devices > Content Routers**. Click the **Edit** icon next to the name of the Content Router and choose **CDN Settings > Status**.



Note The software version is not updated until a software upgrade has been successfully completed. If a software upgrade is in progress, the version number displayed is the base version, not the upgraded version number.

- Step 6** Alternatively, in the Contents pane for any given device, choose **Show/Clear Commands > Show Commands**. Choose **version** and click **Submit**. A secondary window pops up and displays the CLI output for the **show version** command.
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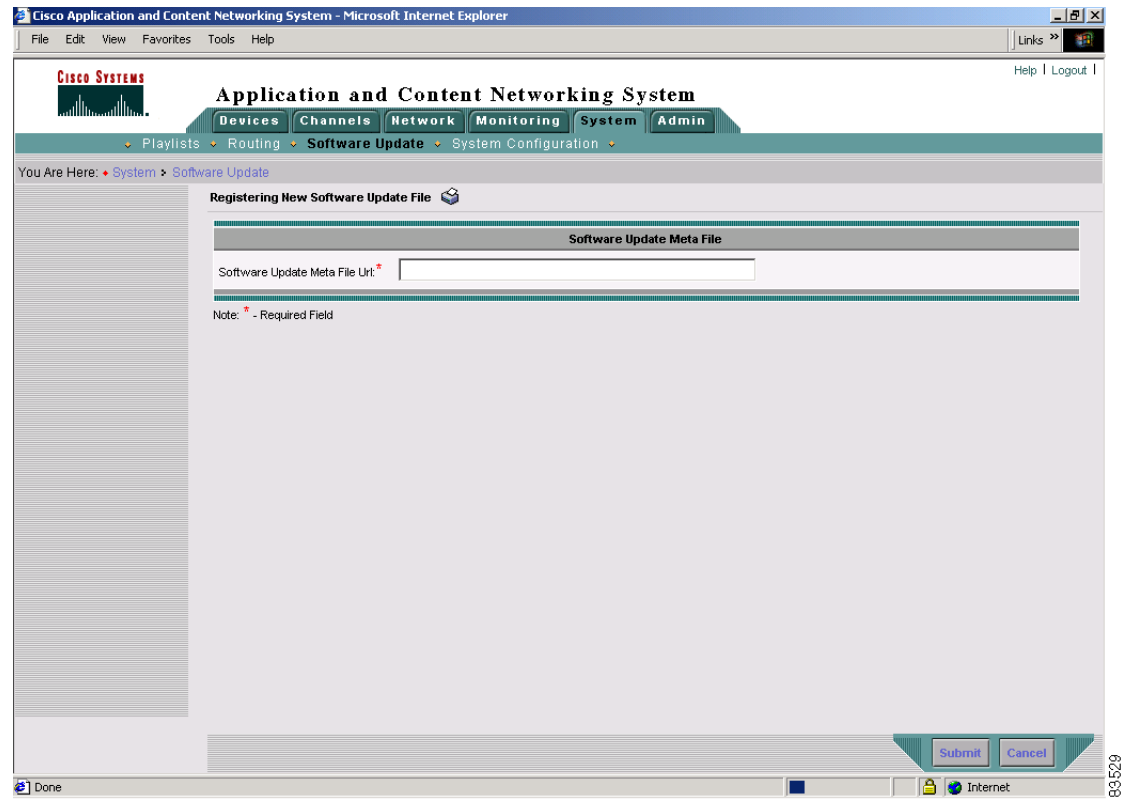
To determine the current ACNS software version from the CLI, use the **show version EXEC** command.

Registering a Meta File URL in the ACNS 5.1 Content Distribution Manager GUI

To upgrade software using the Content Distribution Manager GUI, you must first register the URL of a meta file with the Content Distribution Manager. A meta file contains a pointer to the software file that you want to register for upgrading your device, as well as other descriptive information. (See [Table 7-1](#) for a description of meta file contents.)

To enter the meta file URL, follow these steps:

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- Step 1** Launch the Content Distribution Manager and log in using an administrative username and password.
 - Step 2** From the Content Distribution Manager GUI, choose **System > Software Update**. The Software Update File Registration window appears.
 - Step 3** To register a new meta file, click the **Add Software Update File** icon. The Registering New Software Update File window appears. (See [Figure 7-1](#).)

Figure 7-1 Registering New Software Update File Window

Step 4 Paste the URL for the meta file on your web server into the field provided.

See the “[Obtaining a Meta File from Cisco.com](#)” section on [page 2-2](#) for a sample meta file and field descriptions. For example, a valid URL might look like this:

`http://internal.mysite.com/acns/ACNS-version.meta`

where *ACNS-version* is the version number of the software upgrade.



Note Do not attempt to link directly to the software file (.upg or .bin file). The relative location of the software file is provided by the meta file.

Step 5 Click **Submit**.

The meta file that you want to use is now registered with the Content Distribution Manager. When you perform the software upgrade, the meta file URL that you just registered becomes one of the choices available in the Update Software window. (See [Figure 7-2](#).)



Note The meta file URL remains the same even if the software file that it points to has been changed on your web server, such as for a patch release. When you attempt to register the new meta file, the GUI rejects it because the meta file appears to be already registered. This situation occurs because the meta file URL

is the same, even though other contents of the meta file might have changed. Therefore, to upgrade a previously registered meta file, you must first delete the existing entry and then register the new meta file.

To remove a registered meta file, follow these steps:

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- Step 1** From the Content Distribution Manager GUI, choose **System > Software Update**. The Software Update File Registration window appears.
 - Step 2** Click the **Edit** icon next to the target meta file. The Modifying Software Update File window appears.
 - Step 3** Click the **Trash** icon.
 - Step 4** At the prompt, click **OK** to confirm your decision.
- You can now register the new meta file.
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Sample Meta File

The following is a sample meta file for upgrading between ACNS 5.x software releases.

```
updateFileSize=97205475
version= 5.1.0.b.26
description= testing
updateFileUrl= ftp://vista.cisco.com/ACNS-5.1.3-K9.bin
user=anonymous
password=user-email-name@cisco.com
```

Table 7-1 describes the meta file line items.

Table 7-1 Meta File Line-Item Descriptions

Field	Description
updateFileSize	Size of the image file in bytes.
version	Target software version to which you want to upgrade or downgrade.
description	Comments about the meta information. (Optional.) These comments are displayed in the Content Distribution Manager GUI.
updateFileURL	URL of the image location. This can be either an FTP URL or an HTTP URL. Note For HTTP URLs, authenticated servers are not supported, and only port 80 is supported.
user	Login username. (Applies only to FTP URLs.)
password	Login password. (Applies only to FTP URLs.)

The following sample meta file is for downgrading to ACNS 4.2 software:

```
updateFileSize=97205475
version= 4.2.0.b.1
description= testing
updateFileUrl= ftp://vista.cisco.com/ACNS-5.x.x-TO-4.2.1-K9.bin
user=anonymous
password=user-email-name@cisco.com
CDM-IP=1.1.1.1
```

The CDM-IP field is the IP address of an ACNS 4.x Content Distribution Manager after the software is downgraded to ACNS 4.x. (This field is optional and applies only for downgrades to ACNS 4.x software.) After the downgrade, the Content Engine is registered to the Content Distribution Manager with the IP address specified in this field.

Upgrading the Software Using the ACNS 5.1 Content Distribution Manager GUI

You can upgrade software on your Content Engines and Content Routers using the Content Distribution Manager GUI. When upgrading, begin with Content Engines and Content Routers before upgrading the Content Distribution Manager.



Note

See the [“Upgrade, Downgrade, and Interoperability Considerations”](#) section on page 1-2 for the correct order in which to upgrade devices.



Note

ACNS 5.1 software does not support upgrading Content Distribution Managers using the Content Distribution Manager GUI. All upgrades to Content Distribution Managers must be performed using the CLI. To upgrade a single Content Distribution Manager, follow the procedure in the [“Installing the Software File Using the CLI”](#) section on page 3-2. To upgrade primary and standby Content Distribution Managers in the ACNS 5.1 network, follow the procedures in the [“Upgrading an ACNS 5.1 Standby Content Distribution Manager”](#) section on page 7-9.

The Content Distribution Manager reboots at the conclusion of the upgrade procedure, causing you to temporarily lose contact with the device and the GUI. After the Content Distribution Manager has upgraded its software and rebooted, it may be unable to communicate with devices running different versions of the ACNS software.

Multiple Device Upgrades for Content Engines Using Device Groups



Note

This procedure is for Content Engines only. Content Routers and Content Distribution Managers cannot be associated with device groups.

To upgrade your software from an ACNS 5.1.x software release to another ACNS 5.x software release on multiple Content Engines, follow these steps:

- Step 1** From the ACNS 5.1 software Content Distribution Manager GUI, choose **Devices > Device Groups**. The Device Group window appears, listing all the device groups in your ACNS network.
- Step 2** Click the **Edit** icon next to the name of the device group and click **Status** in the Contents pane to check the software version.
Verify that the devices you are choosing are not already running the version that you plan to upgrade to, and that the current version has an upgrade path to the version that you plan to upgrade to.
- Step 3** In the Contents pane, choose **CDN Settings > Software Upgrade/Downgrade**. The Update Software window appears.



Note Always upgrade Content Engines before you upgrade the associated Content Distribution Manager.

Step 4 Choose the meta file URL from the drop-down list.

Step 5 Click **Submit**.

Step 6 To view progress on an upgrade, go to the Device Group window. (See [Step 1](#).)

Software upgrade status messages are displayed in Software Version column. These intermediate messages are also written to the system log on Content Engines.

[Table 7-2](#) shows the status messages that are displayed in the Software Version column in the Device Groups window on the Content Distribution Manager GUI during requests for pre-positioned software files for software upgrades.

Table 7-2 Channel Status Messages

Condition	Status Message
The URL has been determined to be for a pre-positioned software file.	Proceeding with Prepositioned Download
A request for a pre-positioned software file has been made and is being processed. "Completed" indicates the number of megabytes processed.	Prepositioned Download in Progress (Completed ...)
A request for a pre-positioned software file was processed successfully.	Prepositioned Download Successful
A request for a pre-positioned software file was not able to be processed. Troubleshooting is required.	Prepositioned Download Failed



Note The channel status messages are meant only for pre-positioned software files for software upgrades. These messages will be displayed only when a software upgrade is in progress.

Single Device Upgrades Between ACNS 5.1 Releases

To upgrade software from one ACNS 5.1 software release to another ACNS 5.x software release on your individual Content Engines and Content Routers, follow these steps:

Step 1 From the ACNS 5.1 software Content Distribution Manager GUI, choose **Devices > Content Engines**. The Content Engines window appears, listing all the Content Engines in your ACNS network.

For Content Routers, choose **Devices > Content Routers**. The Content Routers window appears.

Step 2 Click the **Edit** icon next to the name of the device and click **Status** in the Contents pane to check the software version.

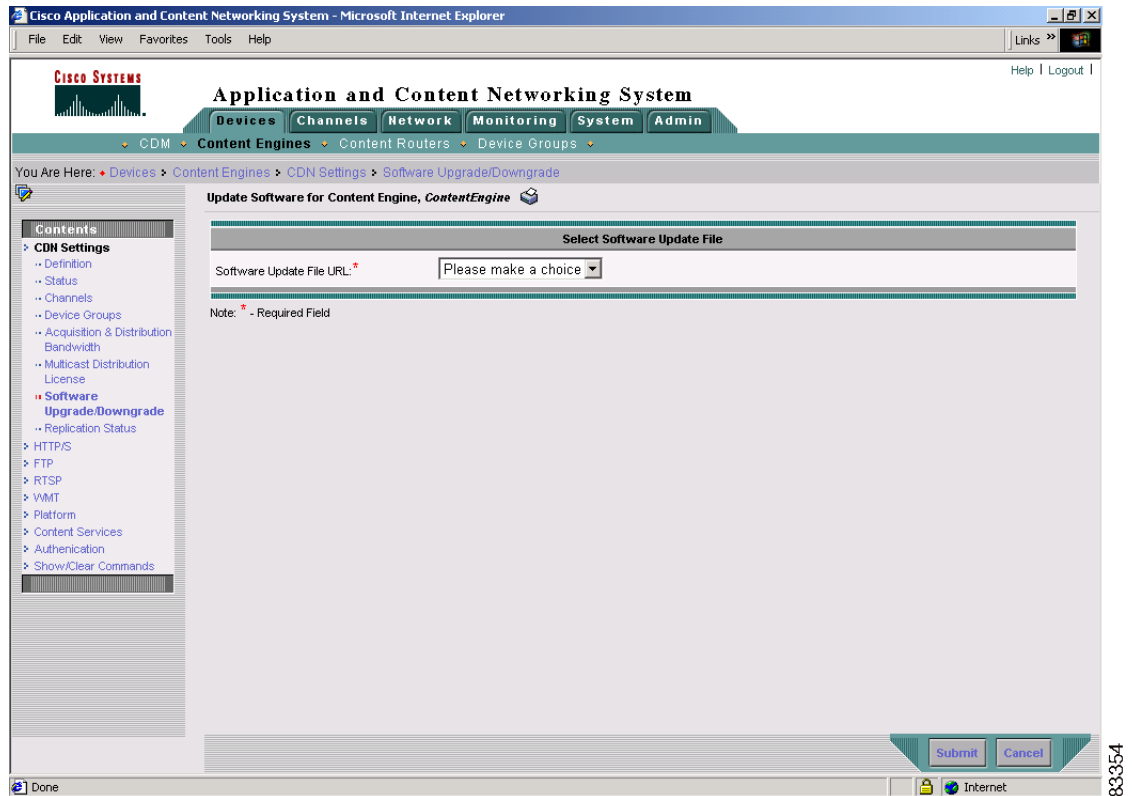
Verify that the devices you are choosing are not already running the version that you plan to upgrade to, and that the current version has an upgrade path to the version that you plan to upgrade to.

Step 3 In the Contents pane, choose **CDN Settings > Software Upgrade/Downgrade**. The Update Software window appears. (See [Figure 7-2](#).)



Note Always upgrade Content Engines and Content Routers before you upgrade the associated Content Distribution Manager.

Figure 7-2 Update Software for Content Engine Window



Step 4 Choose the meta file URL from the drop-down list.

Step 5 Click **Submit**.

Step 6 To view progress on an upgrade, go to the Content Engines or Content Routers window. (See [Step 1](#).) Software upgrade status messages are displayed in Software Version column (see [Table 7-2](#)). These intermediate messages are also written to the system log on Content Engines.



Note The channel status messages are meant only for pre-positioned software files for software upgrades. These messages will be displayed only when a software upgrade is in progress.

Deleting an Upgrade File from the ACNS 5.1 Content Distribution Manager GUI

To delete an upgrade file from the ACNS 5.1 Content Distribution Manager GUI, follow these steps:

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- Step 1** In the Update Software window (see [Figure 7-2](#)), if there are multiple files to choose from, click the button next to the upgrade file that you want to delete. Otherwise, proceed to the next step.
- Step 2** Click **Delete**. You are prompted to confirm your decision to delete the upgrade file.
- Step 3** Click **OK**. You are returned to the Software Update window with the selected upgrade file removed from the ACNS network.
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Note

When upgrading Content Distribution Managers or Content Engines and Content Routers using the CLI, follow the procedures in [“Installing the Software File Using the CLI”](#) section on page 3-2.

If you have standby Content Distribution Managers in your network, use the upgrade procedure in the [“Upgrading an ACNS 5.1 Standby Content Distribution Manager”](#) section on page 7-9.

Downgrading from ACNS 5.1 Software to ACNS 4.2.9 Software Using the Content Distribution Manager GUI

To downgrade to ACNS 4.2 software using the ACNS 5.1 Content Distribution Manager GUI, follow these steps:

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- Step 1** Obtain the correct software file from Cisco.com.
See the [“Obtaining a Software File from Cisco.com”](#) section on page 2-1 for information.
- Step 2** Obtain the correct meta file (acns4_cdm_ip.meta) from Cisco.com.
See the [“Obtaining a Meta File from Cisco.com”](#) section on page 2-2 for information.
The meta file contains the information necessary for the Content Engine to be automatically registered with the ACNS 4.2 Content Distribution Manager after the downgrade is completed.
- Step 3** Edit the meta file using any text editor and save it.
- In the updateFileUrl field, replace the URL with the URL to the ACNS-5.1.x.x-TO-4.2.9-K9.bin software file that you downloaded from Cisco.com.
 - Edit the username and password.
- See the [“Editing the Meta File”](#) section on page 2-3 for more information.
- Step 4** Register the meta file URL with the Content Distribution Manager.
- Follow the procedure in the [“Registering a Meta File URL in the ACNS 5.1 Content Distribution Manager GUI”](#) section on page 7-2.
 - In the Software Update Meta File URL field (see [Figure 7-1](#)), enter the URL of the downgrade meta file.

- Step 5** To complete the downgrade, follow the procedure in the “[Upgrading the Software Using the ACNS 5.1 Content Distribution Manager GUI](#)” section on page 7-5.
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To downgrade from ACNS 5.1 software to ACNS 4.2.9 software using the CLI, follow the procedure in the “[Downgrading from ACNS 5.x Software to ACNS 4.2.9 Software Using the CLI](#)” section on page 3-2.

Upgrading the ACNS 5.1 Content Distribution Manager

ACNS 5.1 software does not support upgrading the Content Distribution Manager using the Content Distribution Manager GUI. To upgrade the Content Distribution Manager, follow the procedure in the “[Installing the Software File Using the CLI](#)” section on page 3-2. Always upgrade the Content Distribution Manager software last.

If you have two Content Distribution Managers in your network, one primary and one standby, follow the upgrade procedure in the next section. Primary and standby Content Distribution Managers must be running the same version of ACNS software. If they are not, the standby Content Distribution Manager detects this and will not process any configuration updates it receives from the primary Content Distribution Manager. When you upgrade Content Distribution Managers from the ACNS 5.1 software release using the CLI, we recommend that you upgrade your primary Content Distribution Manager first, and then upgrade your standby Content Distribution Manager.

Upgrading an ACNS 5.1 Standby Content Distribution Manager

Cisco ACNS 5.1 software implements a standby Content Distribution Manager feature that allows a second Content Distribution Manager to receive updates from a primary Content Distribution Manager and therefore maintain a copy of the ACNS network configuration. If the primary Content Distribution Manager fails, the standby can be used to replace the primary.

For interoperability, when a standby Content Distribution Manager is used, it must be at the same software version as the primary Content Distribution Manager in order to maintain the full Content Distribution Manager configuration.

When upgrading an ACNS 5.1 network containing a standby Content Distribution Manager, use the following procedure:

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- Step 1** Stop the standby Content Distribution Manager using the **no cms enable** command.
- Step 2** Stop the primary Content Distribution Manager using the **no cms enable** command.
- Stopping the Content Distribution Manager does not affect the other ACNS network content request or content pre-positioning services.
- Step 3** Install the new software version on the primary Content Distribution Manager using the **copy ftp install {hostname | ip-address} remotefiledir remotefilename EXEC** command.
- The primary Content Distribution Manager will reboot as part of the installation procedure.
- Step 4** After the reboot, copy the Content Distribution Manager database backup that is made as part of the software upgrade to a safe place.

These backups are made in the `/local/local1` directory and have a `.dump` file extension. These files can be copied to another location using the `copy ftp disk {hostname | ip-address} remotefiledir remotefilename localfilename EXEC` command.

- Step 5** Restart the primary Content Distribution Manager using the `cms enable` command.
 - Step 6** Ensure that the status of devices is “online” in the Content Distribution Manager device lists and that the ACNS network is working with the new Content Distribution Manager software.
 - Step 7** Upgrade the standby Content Distribution Manager using the `copy ftp install {hostname | ip-address} remotefiledir remotefilename` command.
The standby Content Distribution Manager will reboot as part of the installation process.
 - Step 8** Restart the standby Content Distribution Manager using the `cms enable` command.
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Downgrading a Content Distribution Manager

When downgrading a Content Distribution Manager, you must restore a previous database backup before installing the downgraded software version. To downgrade a Content Distribution Manager, follow these steps:

- Step 1** If a standby Content Distribution Manager is present, stop it using the `no cms enable` command.
- Step 2** Stop the primary Content Distribution Manager using the `no cms enable` command.
Stopping the Content Distribution Manager does not affect the other ACNS network content request or content pre-positioning services.
- Step 3** Back up the existing primary Content Distribution Manager database if you want to retain the current configuration data by using the `cms database backup` command. This action creates a database `.dump` file in the `/local/local1` directory.
- Step 4** After the backup is complete, you must clear the existing database of all tables that are present in it. To delete the embedded database files, use the `cms database delete` command.
- Step 5** Restore the database backup that matches the version of the downgraded software to the primary Content Distribution Manager using the `cms database restore filename` command.
This database backup must be present on the Content Distribution Manager to use the `cms database restore filename` command. When the Content Distribution Manager is upgraded, a database backup `.dump` file will be created in the `/local/local1` directory. To copy the database backup file to the device, use the `copy ftp disk {hostname | ip-address} remotefiledir remotefilename localfilename` command.
- Step 6** Install the downgraded software version on the primary Content Distribution Manager, using the `copy ftp install {hostname | ip-address} remotefiledir remotefilename EXEC` command.
The primary Content Distribution Manager will reboot as part of the installation procedure.
- Step 7** After the reboot, restart the CMS processes using the `cms enable` command.
- Step 8** If there is a standby Content Distribution Manager, create a database backup of the existing database by using the `cms database backup` command. This will create a database `.dump` file in the `/local/local1` directory.
- Step 9** Install the downgraded software version on the standby Content Distribution Manager using the `copy ftp install {hostname | ip-address} remotefiledir remotefilename EXEC` command.

The software version must match the version of the primary Content Distribution Manager. The standby Content Distribution Manager will reboot as part of the installation procedure.

Step 10 After the reboot, you must recreate the standby Content Distribution Manager CMS database so that the database definition matches the version of the software.

- Remove the old software version database in the standby Content Distribution Manager by entering the **cms database delete** command.
- Create the matching database definition in the standby Content Distribution Manager by entering the **cms database create** command.

Step 11 Restart the CMS on the standby Content Distribution Manager by using the **cms enable** command.

The standby Content Distribution Manager will request a full data update from the primary Content Distribution Manager.
