



Upgrading and Downgrading the Software

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 5.0 Content Distribution Manager GUI, page 10-1](#)
- [Obtaining a Software File from Cisco.com, page 10-2](#)
- [Obtaining a Meta File from Cisco.com, page 10-3](#)
- [Registering a Meta File URL in the ACNS 5.0 Content Distribution Manager GUI, page 10-5](#)
- [Upgrading the Software Using the ACNS 5.0 Content Distribution Manager GUI, page 10-7](#)
- [Upgrading or Downgrading the ACNS 5.0 Content Distribution Manager, page 10-10](#)

To upgrade or downgrade from the ACNS 5.0 software release to another ACNS 5.x software release, you can choose between one of two methods: you can use the Content Distribution Manager GUI or you can use the CLI.

From the Content Distribution Manager GUI, you can do the following:

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

From the CLI, you can do the following:

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

Determining the Current Software Version in the ACNS 5.0 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 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.

To determine the current ACNS software version from the CLI, use the **show version EXEC** command.

Obtaining a Software File from Cisco.com

To obtain a software file from Cisco.com, follow these steps:

- Step 1** Launch your preferred web browser and point it to:
<http://www.cisco.com/kobayashi/sw-center/sw-content.shtml>
- Step 2** When prompted, log in to Cisco.com using your designated username and password. The Content Networking window appears, listing the available software products.
- Step 3** Choose a link to the content networking software product that you want. The Software Download window appears.
- Step 4** Click the **Download ACNS Software images (contains strong encryption)** link. The Content Networking window for Cisco ACNS Cryptographic Software appears.
- Step 5** Click the link to the ACNS cryptographic software release that you want. The window refreshes, listing all the software files (and meta files) available for that release.
- Step 6** Locate the software file that you want to download by consulting the Release column for the proper release version of the software.

The software files will have names similar to the following: ACNS-5.x.x-K9.bin

- Step 7** Click the link for the software file that you want to download.
- The Enter Network Password dialog box pops up. Enter your username and password and click **OK**.
- If this is the first time you have downloaded a software file from Cisco.com, the Encryption Software Export Distribution Authorization form appears.
 - Fill out the form and click **Submit**. The Cisco Systems Inc., Encryption Software Usage Handling and Distribution Policy appears.
 - Read the policy and click **I Accept**. The Encryption Software Export/Distribution Form appears.

- If you previously filled out the Encryption Software Export Distribution Authorization form and read and accepted the Cisco Systems Inc., Encryption Software Usage Handling and Distribution Policy, these forms are not displayed again. Instead, the Encryption Software Export/Distribution Form appears after you click **OK** in the Enter Network Password dialog box.
- Step 8** Read the Encryption Software Export/Distribution Form, click the **Yes** or **No** radio button, and click **Submit**. A security alert dialog box pops up.
- Step 9** Click **Yes** in the Security Alert dialog box. The Software Download window reappears.
- Step 10** Right-click the software file link to download the software and use the **Save Link As** or the **Save Link Target As** option to save the file to your FTP or HTTP server.
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Obtaining a Meta File from Cisco.com

A meta file is a text file that contains information about the location of the software file and other descriptive information about the software file. In ACNS 5.0 software, a meta file is required for updating software using the Content Distribution Manager GUI.

To obtain a meta file from Cisco.com, follow these steps:

- Step 1** Launch your preferred web browser and point it to:
- <http://www.cisco.com/kobayashi/sw-center/sw-content.shtml>
- Step 2** When prompted, log in to Cisco.com using your designated username and password. The Content Networking window appears, listing the available software products.
- Step 3** Choose a link to the Content Networking Software product for which you want to obtain a meta file. The Software Download window appears.
- Step 4** Click the **Download ACNS Software images (contains strong encryption)** link. The Content Networking window for Cisco ACNS Cryptographic Software appears.
- Step 5** Click the link to the ACNS cryptographic software release for which you want to obtain a meta file. The window refreshes, listing all the meta files (and software files) available for that release.
- Step 6** Locate the meta file that you want to download by consulting the Release column for the proper release version of the software.

The meta files will have names similar to the following: ACNS-5.x.x-K9.meta

- Step 7** Click the link for the meta file that you want to download.
- The Enter Network Password dialog box pops up. Enter your username and password and click **OK**.
- If this is the first time you have downloaded a meta file or software file from Cisco.com, the Encryption Software Export Distribution Authorization form appears.
 - Fill out the form and click **Submit**. The Cisco Systems Inc., Encryption Software Usage Handling and Distribution Policy appears.
 - Read the policy and click **I Accept**. The Encryption Software Export/Distribution Form appears.
 - If you previously filled out the Encryption Software Export Distribution Authorization form and read and accepted the Cisco Systems Inc., Encryption Software Usage Handling and Distribution Policy, these forms are not presented again. Instead, the Encryption Software Export/Distribution Form appears after you click **OK** in the Enter Network Password dialog box.

- Step 8** Read the Encryption Software Export/Distribution Form, click the **Yes** or **No** radio button, and click **Submit**. A security alert dialog box pops up.
- Step 9** Click **Yes** in the Security Alert dialog box. The Software Download window reappears.
- Step 10** Right-click the software file link to download the software and use the **Save Link As** or the **Save Link Target As** option to save the file to your FTP or HTTP server.

Editing the Meta File

The meta file contains a pointer to the software file for updating your device, as well as other descriptive information. The following is a sample meta file from Cisco.com for upgrading between ACNS 5.x software releases:

```
updateFileSize=139872690
version=5.0.17.b.6
description=Meta file to install ACNS5.0.17.b.6 (from ACNS5.x.x)
updateFileUrl=ftp://ftp.cisco.com/cisco/crypto/3DES/content-delivery/acns/5.0/
ACNS-5.0.17.-K9.bin
user=<your server login>
password=<your server password>
```

The meta file that you download from Cisco.com needs to be edited so that it points to the new location of the software file that you saved to your FTP or HTTP server. To edit the meta file, open the file in any text editor, make the appropriate changes, and save the file. You must edit the following line items:

- `updateFileUrl=`
Replace the URL in this line with the new URL that the Content Engine will use to fetch the software file.
- `user=`
Replace the username for logging in to the Cisco.com server with the username for logging in to your FTP or HTTP server.
- `password=`
Replace the password for logging in to the Cisco.com server with the password for logging in to your FTP or HTTP server.

Table 10-1 describes the meta file line items.

Table 10-1 Meta File Line-Item Descriptions

Field	Description
updateFileSize	Size of the software 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 software file 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.

Table 10-1 Meta File Line-Item Descriptions

Field	Description
user	Login username.
password	Login password.

The following sample meta file is for downgrading to ACNS 4.2 software from an ACNS 5.x software release:

```
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 registers to the Content Distribution Manager with the IP address specified in this field.

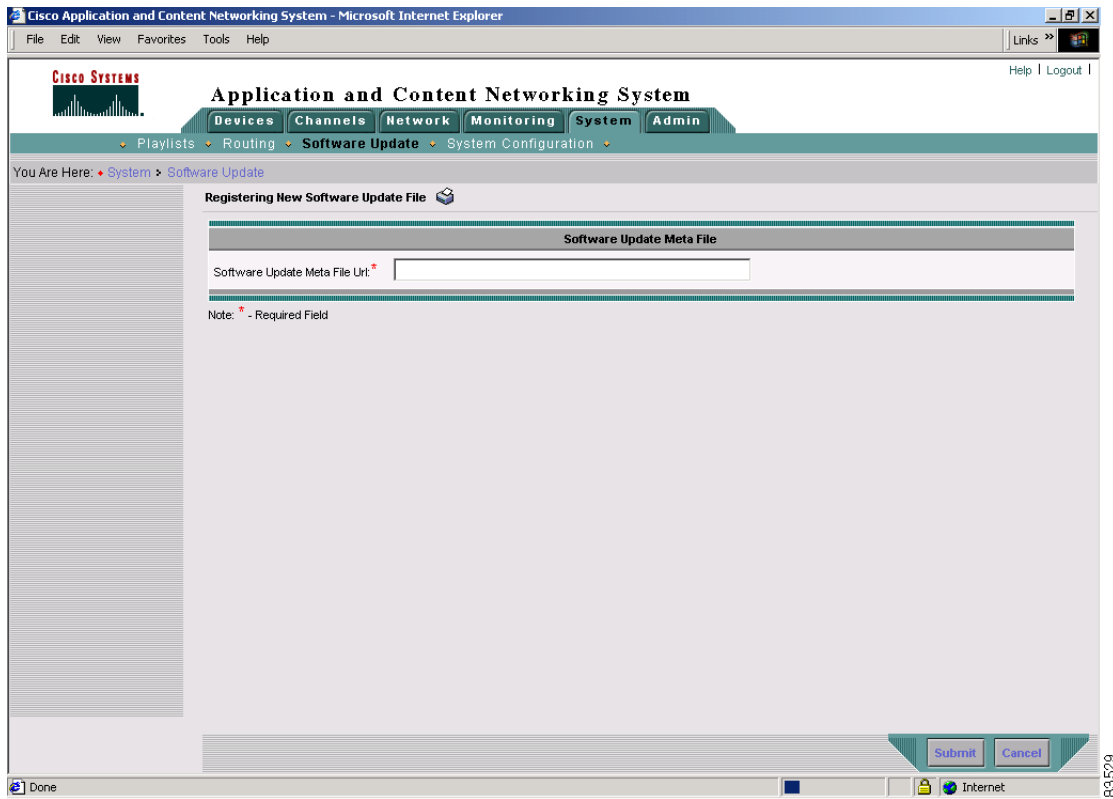
Registering a Meta File URL in the ACNS 5.0 Content Distribution Manager GUI

To upgrade software using the Content Distribution Manager GUI, you must first register the URL of a meta file in 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 10-1](#) for a description of meta file contents.)

To enter the meta file URL, follow these steps:

- 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 software upgrade file, click the **Add Software Update File** icon. The Registering New Software Update File window appears. (See [Figure 10-1](#).)

Figure 10-1 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 sample meta file in the “Editing the Meta File” section on page 10-4. See Table 10-1 for meta file 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 software file that you want to use is now registered in 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 10-2.)



Note The meta file URL remains the same even if the software file that it points to has been changed on your webserver, 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 occurs because the meta file URL is the same, even though other contents of the meta file might have changed. Therefore, to update 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 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.
-

Upgrading the Software Using the ACNS 5.0 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**

ACNS 5.0 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 [“Upgrading or Downgrading the ACNS 5.0 Content Distribution Manager”](#) section on page 10-10.

The Content Distribution Manager reboots at the conclusion of the upgrade procedure, causing you to temporarily lose contact with the device and the GUI. Once 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 5.0.x software release to another ACNS 5.x software release on multiple Content Engines, follow these steps:

-
- Step 1** From the ACNS 5.0 Content Distribution Manager GUI, choose **Devices > Device Groups**. The Device Groups window appears, listing all the device groups in your ACNS network.
 - 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.



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

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

Step 5 Click **Submit**.

Single Device Upgrades Between ACNS 5.0 Releases

To upgrade from one ACNS 5.0 software release to another ACNS 5.x software release on your Content Engines and Content Routers, follow these steps:

Step 1 From the ACNS 5.x 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.

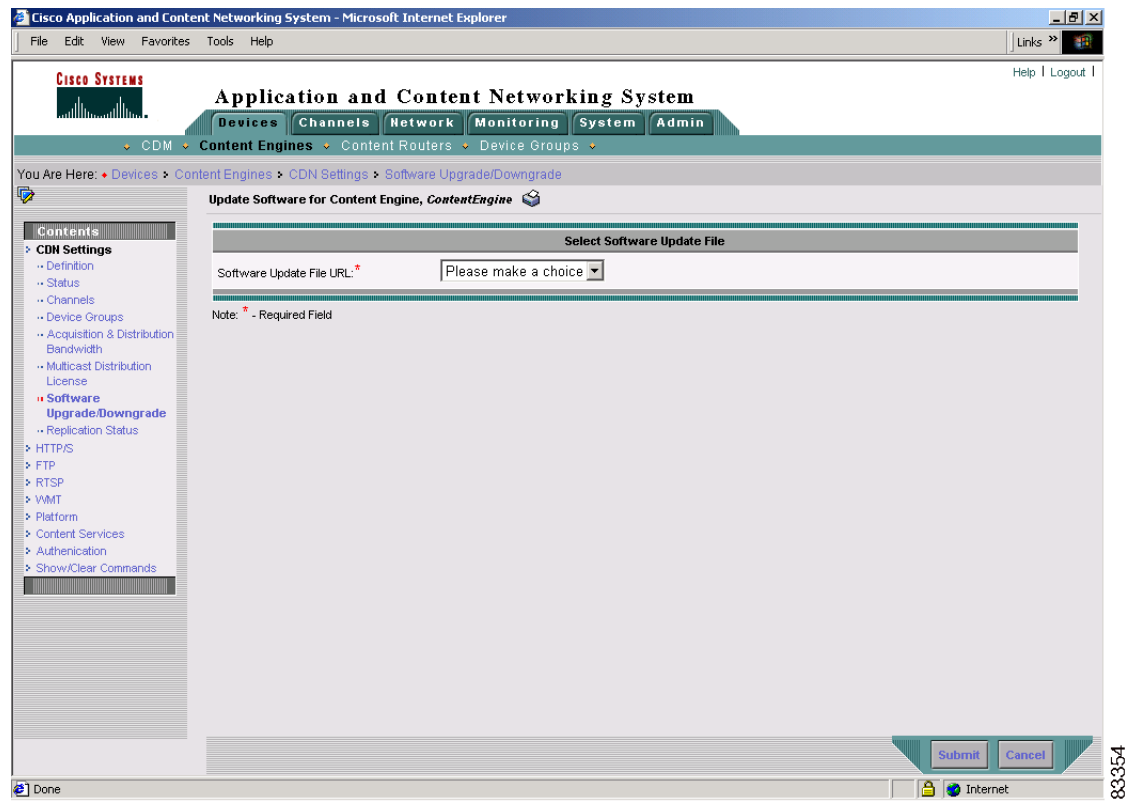
Step 2 Click the **Edit** icon next to the name of the device and click **Status** in the Contents pane to check the software version. Verify that the devices you are choosing are not already running the version that you plan to upgrade to, and that the current version has an upgrade path to the version 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 10-2](#).)



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

Figure 10-2 Update Software 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.](#)) In the Status column, the device shows as Pending while the upgrade is in progress and Online once the upgrade is completed.

Your ACNS Network is now operational, and you are ready to begin serving user requests using the upgraded ACNS 5.x software.

Deleting an Upgrade File from the ACNS 5.0 Content Distribution Manager GUI

To delete an upgrade file from the ACNS 5.0 Content Distribution Manager GUI, follow these steps:

- Step 1** In the Update Software window (see [Figure 10-2](#)), if there are multiple upgrade 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 software upgrade file.
- Step 3** Click **OK**. You are returned to the Software Update window with the selected file removed from the Content Distribution Manager GUI.

Downgrading from ACNS 5.0 Software to ACNS 4.2.x Software Using the Content Distribution Manager GUI

To downgrade to ACNS 4.2 software using the ACNS 5.0 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 10-2 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 10-3 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-5.0.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 10-4 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 5.0 Content Distribution Manager GUI”](#) section on page 10-5.
 - In the Software Update Meta File URL field (see [Figure 10-1](#)), 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 5.0 Content Distribution Manager GUI”](#) section on page 10-7.
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Upgrading or Downgrading the ACNS 5.0 Content Distribution Manager

ACNS 5.0 software does not support upgrading or downgrading the Content Distribution Manager using the Content Distribution Manager GUI. When you upgrade or downgrade the Content Distribution Manager, you must use the CLI method.

Upgrading the Content Distribution Manager

When you upgrade your network, always upgrade the Content Distribution Manager software last. To upgrade the Content Distribution Manager software, follow these steps:

-
- Step 1** Obtain the desired software file from Cisco.com.
See the [“Obtaining a Software File from Cisco.com”](#) section on page 10-2 for information.

Step 2 Install the software file by using the **copy ftp install** or **copy http install** EXEC command:

```
ContentEngine# copy ftp install ftp-server remote_file_dir ACNS-X.x.x-K9.bin
```

```
ContentEngine# copy http install http-server remote_file_dir ACNS-X.x.x-K9.bin
[portnumber]
```

Step 3 Alternatively, if you want to keep a local copy of the software file on your Content Engine, you can use the **copy ftp disk** EXEC command, and then use the **install** EXEC command.

```
ContentEngine# copy ftp disk ACNS-X.x.x-K9.bin
ContentEngine# install ACNS-X.x.x-K9.bin
```

When the **install** command is executed, the software file is expanded. The expanded files overwrite the existing files in the Content Engine. The newly installed version takes effect after the system software is reloaded.



Note The **install** command does not accept .pax files. Files should be of the type .bin (for example, ACNS-5.x.x-K9.bin).

Step 4 After the software file is copied to your system, use the **reload** EXEC command to reboot.

```
ContentEngine# reload
```

The installation process continues automatically after the reboot. No further action is required.

Downgrading a Content Distribution Manager

When you downgrade 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 If you want to retain the current configuration data, back up the existing primary Content Distribution Manager database 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 all tables 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 command 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 CMS database so that the database definition matches the version of the software.
- Remove the old software version database by entering the **cms database delete** command.
 - Create the matching database definition by entering the **cms database create** command.
- Step 11** Restart the CMS on the standby Content Distribution Manager using the **cms enable** command.
- The standby Content Distribution Manager will request a full data update from the primary Content Distribution Manager.
-