



# Migrating from ACNS 4.x Software to ACNS 5.x Software

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Cisco ACNS 5.x software introduces significant changes from the functionality of ACNS 4.x software. This chapter explains the concepts needed to understand the migration from ACNS 4.x software to ACNS 5.x software, and the changes involved. This chapter also provides the procedures for migrating from ACNS 4.x software to ACNS 5.x software.

This chapter contains the following sections:

- [Understanding the Migration Concept and the Differences Between ACNS 4.x Software and ACNS 5.x Software, page 9-1](#)
- [Understanding Your Migration Options, page 9-3](#)
- [Upgrading from ACNS 4.x Software to ACNS 4.2 Software, page 9-10](#)
- [Migrating the Configuration Information and Content, page 9-12](#)
- [Configuring URL Request Translation, page 9-13](#)
- [Upgrading from ACNS 4.2 Software to ACNS 5.x Software, page 9-16](#)



**Note**

The existing ACNS network must run ACNS 4.2 software in order to be migrated to ACNS 5.x software. If ACNS network devices are running a software version earlier than ACNS 4.2, they must first upgrade to ACNS 4.2 software before the migration process. This ensures that the pre-positioned content is preserved in the migration process.



**Note**

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

## Understanding the Migration Concept and the Differences Between ACNS 4.x Software and ACNS 5.x Software

The following changes have been implemented in ACNS 5.x software compared to ACNS 4.x software:

- The Content Distribution Manager no longer stores any content.
- Content acquisition and distribution have changed.

- The form of the URL used to request content is significantly different.
- Routing and redirection are handled differently.

## Functional Changes in the Content Distribution Manager

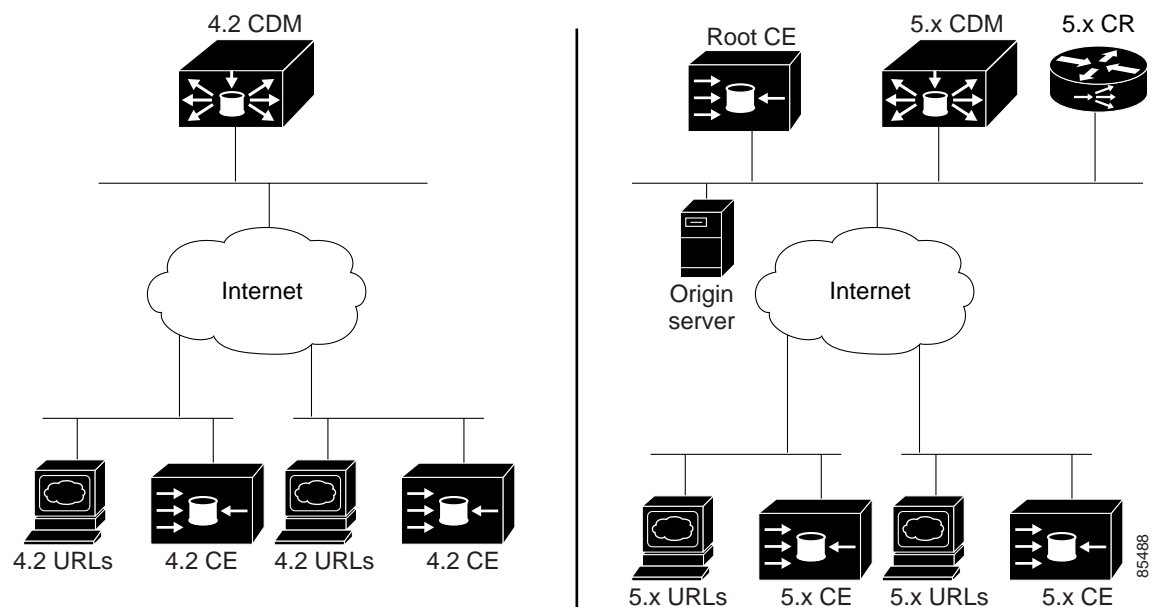
In ACNS 4.x software, a Content Distribution Manager is responsible for content routing, content import, storage and replication, as well as device management and monitoring.

In ACNS 5.x software, Content Distribution Manager functionality is restricted to device management and monitoring. Content is moved out of the Content Distribution Manager to an *origin server*. An origin server is a server that serves the content to be distributed to the Content Engines in your managed ACNS network environment.

In an ACNS 4.x network, the network administrator is responsible for importing content to the Content Distribution Manager. The Content Engines learn of this content through a hierarchical process, and distribute the content using this hierarchy. In the ACNS 5.x release, content is stored on an origin server that is now a required part of the ACNS network.

Figure 9-1 shows the additional network components used in an ACNS 5.x network.

Figure 9-1 ACNS 4.x Network Versus ACNS 5.x Network



## Changes in Content Acquisition and Distribution

In an ACNS 5.x network, a content administrator creates a *manifest file* and places it on the origin server. The manifest file is a manually created XML file used to specify the location from which the content objects should be fetched and how often the content should be checked for updates. This manifest file is then associated with a channel configured by the network administrator. The network administrator uses the Content Distribution Manager GUI to configure a channel to which Content Engines are subscribed.

A root Content Engine acquires the content from the origin server using the combined channel and manifest file information. This root Content Engine can be any ACNS 5.x Content Engine belonging to the network. Content Engines then acquire the content from the root Content Engine through their location in the ACNS 5.x hierarchy.

## Changes in the URL Format

ACNS 5.x software uses a URL format that is different from the ACNS 4.2 URL format. In an ACNS 4.2 environment, a typical client request URL is changed to contain the word “Cisco,” a provider (which is usually the Content Distribution Manager MAC address), a channel name, and the name of the content item within the channel. Sometimes the filename is also changed. In an ACNS 5.x environment, a typical client request URL is unchanged as it makes its way to the origin server in the case of a cache miss from a Content Engine in any location.

Depending on the migration package chosen for the upgrade, you might need to change some or all of the ACNS 4.x URLs to ACNS 5.x URLs to be able to run your ACNS 5.x network. See the [“Configuring URL Request Translation” section on page 9-13](#) for more information on converting URLs.

## Changes to Routing and Redirection Methods

In an ACNS 5.x network, unless you enable request redirection through a WCCP-enabled router or through the Content Engine acting as proxy, you need to add a Content Router or routing Content Engine to the network.



Note

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For more information, see the *Cisco ACNS Software Deployment and Configuration Guide, Release 5.x* or the *Cisco ACNS Software Configuration Guide for Centrally Managed Deployments, Release 5.x* publication.

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## Understanding Your Migration Options

Cisco Systems currently supports two migration options for your network:

- [Migration Package 1](#)
- [Migration Package 2](#)

The first option requires you to shut down your ACNS network and convert the entire network to ACNS 5.x software. The second option allows you to continue operating your ACNS network while you perform a gradual migration to ACNS 5.x software.

In deciding which option to use, you should consider the performance requirements of your network and what additional equipment might be required to complete the network migration method you choose.

### Migration Package 1

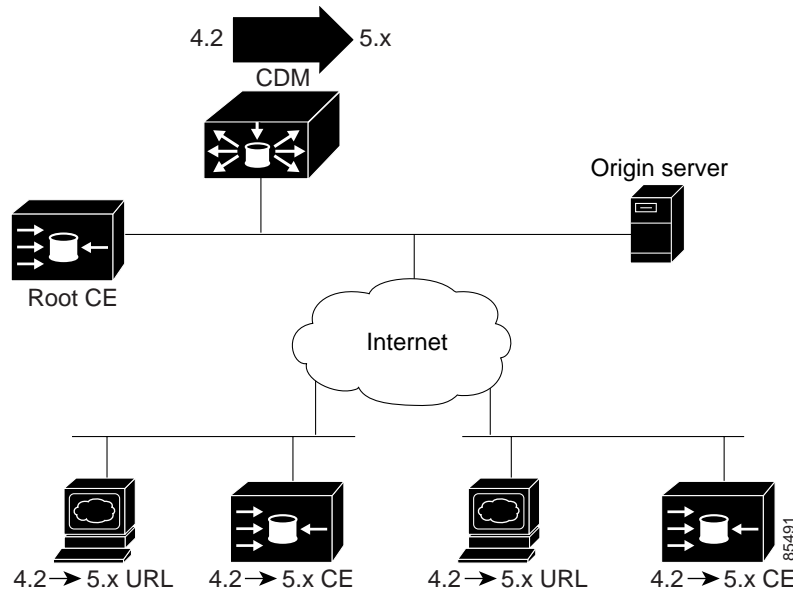
Migration package 1 is intended for companies that can afford downtime in their network. These companies are usually running noncritical applications. Small-size deployments can use this package also.

In migration package 1, content cannot be served during the migration process, which involves upgrading all the ACNS 4.x Content Engines, changing all the ACNS 4.x URLs to ACNS 5.x URLs, and upgrading the Content Distribution Manager.

If this package is used, all ACNS 4.x URLs need to be updated to ACNS 5.x URLs at the end of the upgrade to ACNS 5.x.

Figure 9-2 illustrates this migration package.

Figure 9-2 Migration Package 1



## Minimum Requirements for Migration Package 1

The minimum requirements for migration package 1 are as follows:

- Origin server
 

After migration, this origin server contains the imported contents from the ACNS 4.2 Content Distribution Manager, the migrated channel information, and the migrated coverage zone files.
- Manifest file
 

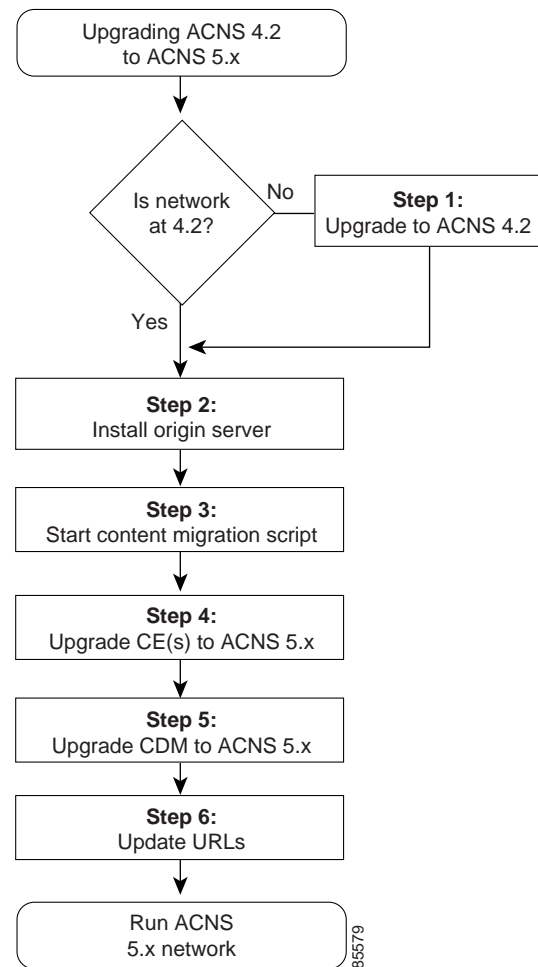
This file is created manually and placed on the origin server.
- New ACNS 5.x Content Router
- ACNS 4.2 Content Engine that can be upgraded to ACNS 5.x
- ACNS 4.2 Content Distribution Manager that can be upgraded to ACNS 5.x

To give you an overall idea of the migration process, use the flowchart in Figure 9-3. To help you understand in more detail the procedure necessary to carry out the migration, use the steps described in this section.

**Note**

Refer to the *Cisco ACNS Deployment and Configuration Guide, Release 5.x* or the *Cisco ACNS Software Configuration Guide for Centrally Managed Deployments, Release 5.x* publication for detailed ACNS network configuration information. The Content Distribution Manager GUI is subject to enhancements and modifications between releases. Be sure to refer to the publication that pertains to your software version.

**Figure 9-3 Migration Package 1**



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## Configuring Migration Package 1

To migrate your network using migration package 1, follow these steps:

**Step 1** Upgrade to ACNS 4.2 software.

You need to ensure that your current ACNS network has been upgraded to ACNS 4.2 software. This is the only version from which you can upgrade to ACNS 5.x software. All ACNS network devices must be running ACNS 4.2 software. (See the [“Upgrading from ACNS 4.x Software to ACNS 4.2 Software”](#) section on page 9-10.)

**Step 2** Install an origin server.

An origin server needs to be installed on the network. Content from the ACNS 4.2 Content Distribution Manager will be copied to this server. Content is copied using FTP, so an FTP server must be activated within the origin server. It is recommended that this server be installed at a location so that data transfer from the Content Distribution Manager is reliable and quick.

**Step 3** Start the content migration script.

This script is initiated through the ACNS 4.2 Content Distribution Manager GUI under a restricted web page link. Enter the following URL in your preferred browser:

`http://cdmIPAddress/cgi-bin/restricted/content-migration`

This script gathers the coverage zone configuration, content, and channel information and moves it to the origin server. (See [“Migrating the Configuration Information and Content”](#) section on page 9-12.)

A content administrator manually transfers this information to a manifest file.

**Step 4** Upgrade Content Engines from ACNS 4.2 software to ACNS 5.x software. (See the [“Upgrading from ACNS 4.2 Software to ACNS 5.x Software”](#) section on page 9-16.)**Step 5** Upgrade the Content Distribution Manager from ACNS 4.2 software to ACNS 5.x software. (See the [“Upgrading the Content Distribution Manager Using the CLI”](#) section on page 9-19.)**Step 6** Update the URLs.

After the process of migrating from ACNS 4.2 to ACNS 5.x software is complete, you need to change all the ACNS 4.2 URLs within your website to conform to the ACNS 5.x URL specification. Many tools are available on the Internet that can search and replace strings within files. The following are two options:

- Search and Replace 98
- Search + Replace




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**Note** These are two different products. They are not certified by Cisco Systems. They are only examples of products that search and replace strings within a text file.

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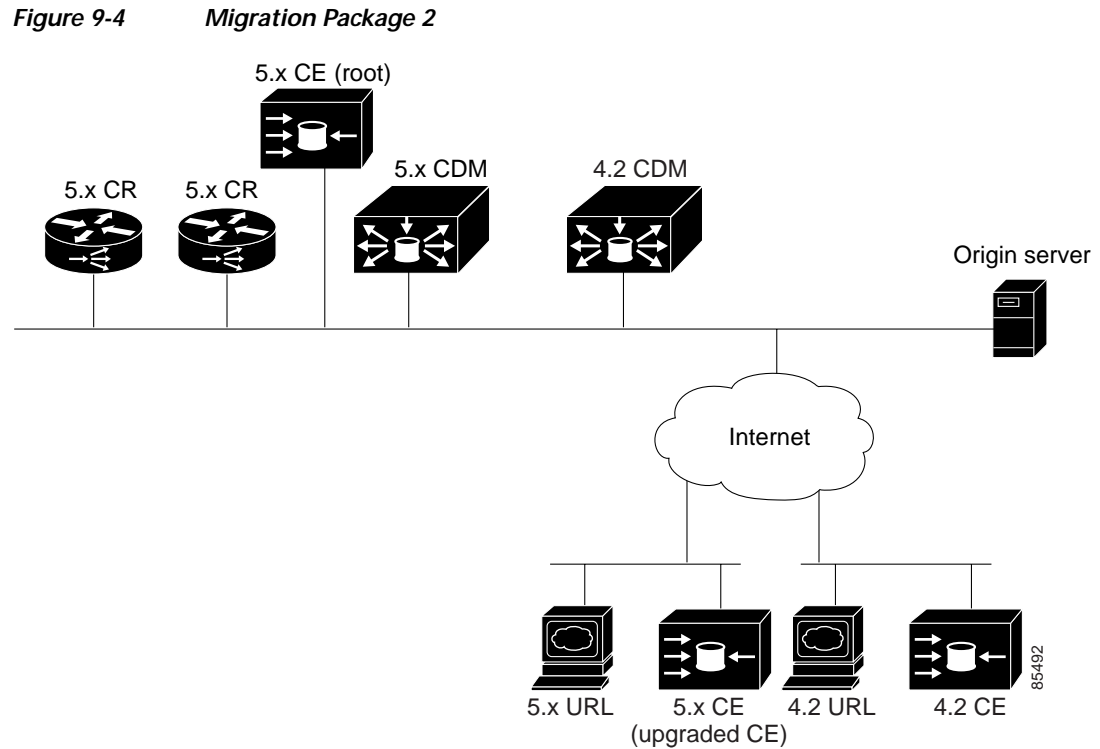
**Step 7** Proceed to the *Cisco ACNS Deployment and Configuration Guide, Release 5.x* or the *Cisco ACNS Software Configuration Guide for Centrally Managed Deployments, Release 5.x* publication to configure your ACNS 5.x network.

## Migration Package 2

Migration package 2 is intended for companies with large deployments where continuous delivery of content to end users during the migration process is critical. These companies are usually running time-sensitive applications with many Content Engines deployed in their network. Choose this option when you cannot afford to have downtime in your network.

When this package is used, content is delivered even during the migration process. URL conversion from ACNS 4.2 to ACNS 5.x can be done over time. You do not need to convert all the ACNS 4.2 URLs to ACNS 5.x URLs immediately.

[Figure 9-4](#) illustrates migration package 2.



## Minimum Requirements for Migration Package 2

The minimum requirements for migration package 2 are as follows:

- Origin server  
After migration, this origin server contains the imported contents from the ACNS 4.2 Content Distribution Manager, the migrated channel information, and the migrated coverage zone files.
- New ACNS 5.x Content Distribution Manager
- ACNS 4.2 Content Engine that can be upgraded to ACNS 5.x
- Two ACNS 5.x Content Routers or routing Content Engines (if needed)



**Note** Content Routers are needed only if WCCP-enabled router redirection is not used or if a Content Engine is not used as a proxy for redirection.

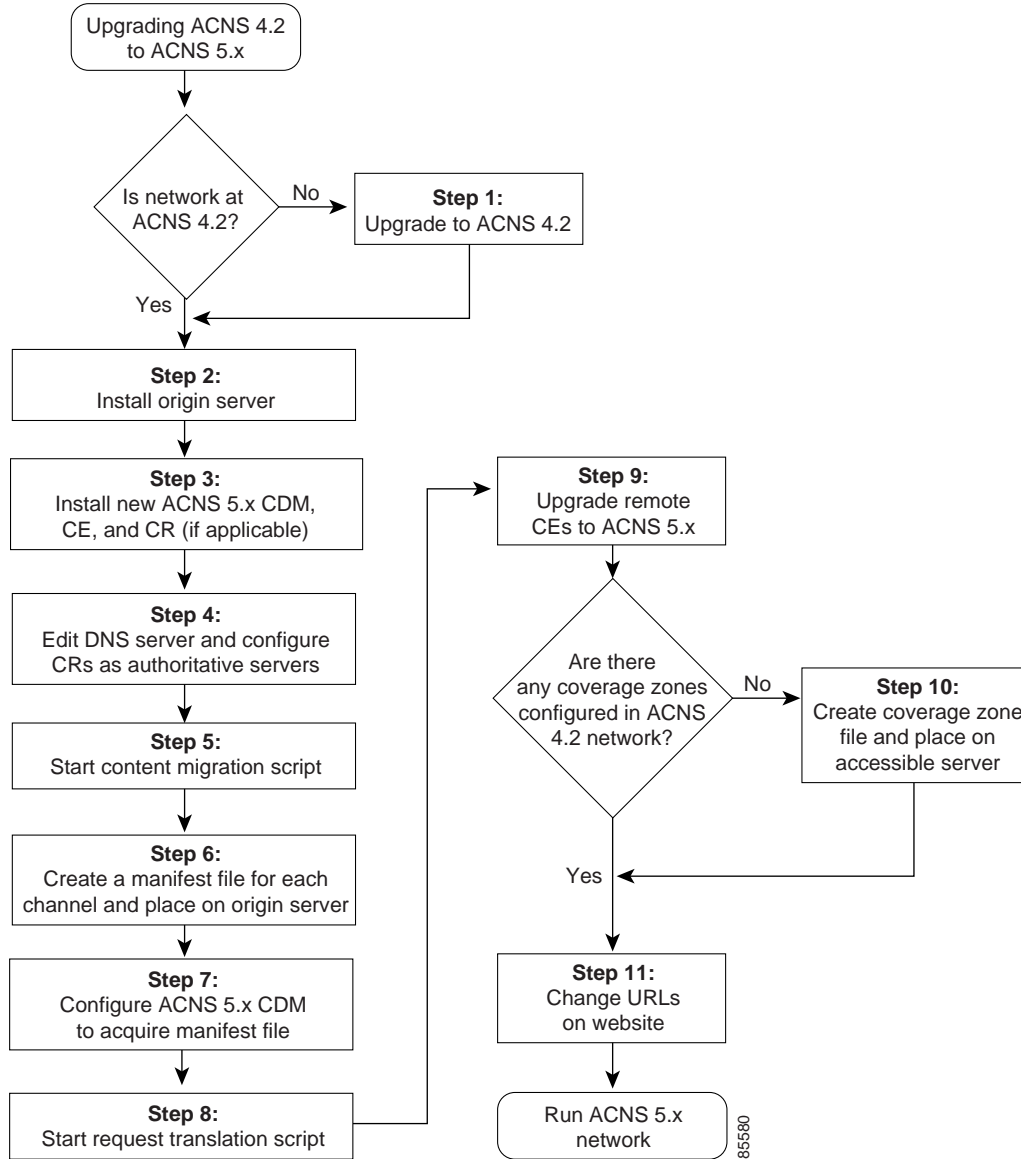
To give you an overall idea of the migration process, use the flowchart in [Figure 9-5](#). To help you understand in more detail the procedure necessary to carry out the migration, use the steps described in this section.



**Note**

See the *Cisco ACNS Deployment and Configuration Guide, Release 5.x* or the *Cisco ACNS Software Configuration Guide for Centrally Managed Deployments, Release 5.x* publications for detailed ACNS network configuration information. The Content Distribution Manager GUI is subject to enhancements and modifications between releases. Be sure to refer to the publication that pertains to your software version.

Figure 9-5 Migration Package 2



## Configuring Migration Package 2

To migrate your network using migration package 2, follow these steps:

### Step 1 Upgrade to ACNS 4.2 software.

You need to ensure that your current ACNS network has been upgraded to ACNS 4.2 software. This is the only version from which you can upgrade to ACNS 5.x software. All ACNS network devices must be running ACNS 4.2 software. (See the [“Upgrading from ACNS 4.x Software to ACNS 4.2 Software”](#) section on page 9-10.)

- Step 2** Install an origin server.
- An origin server needs to be installed on the network. Content from the ACNS 4.2 Content Distribution Manager will be copied to this server. Content is copied using FTP, so an FTP server must be activated within the origin server. It is recommended that the origin server be installed at a location so that the data transfer from the Content Distribution Manager to this server is reliable and quick.
- Step 3** Install a new ACNS 5.x Content Distribution Manager, Content Engine, and Content Router or routing Content Engine.
- You must install a new Content Distribution Manager, Content Engine, and Content Router or routing Content Engine (if applicable) running ACNS 5.x software on the network. The ACNS 5.x Content Distribution Manager runs simultaneously with the old ACNS 4.2 Content Distribution Manager.
- A Content Router or routing Content Engine is needed if this is the only redirection solution for this migration package. Because this type of deployment requires that the ACNS network continue to support end user requests, redundancy is required to avoid a single point of failure.
- A root Content Engine also needs to be installed on the network. This Content Engine must have ACNS 5.x software installed. All other Content Engines that are upgraded to ACNS 5.x software retrieve the contents from this root Content Engine.
- Step 4** Edit the DNS server and configure Content Routers or routing Content Engines as authoritative servers.
- Step 5** Start the content migration script.
- This script is initiated through the ACNS 4.2 Content Distribution Manager GUI under a restricted web page link. Enter the following URL in your preferred browser:
- `http://cdmIPaddress/cgi-bin/restricted/content-migration`
- This script gathers the coverage zone configuration, content, and channel information and moves it to the origin server. (See the [“Migrating the Configuration Information and Content”](#) section on page 9-12.)
- A content administrator manually transfers this information to a manifest file.
- Step 6** Create a manifest file for each channel and place the files on the origin server.
- Step 7** Configure the ACNS 5.x Content Distribution Manager to acquire the manifest files.
- The manifest file is positioned on an origin server and identified by its unique URL identifier. This allows the requested content to be distributed to the root Content Engine.
- Step 8** Start the request URL translation script.
- This script is initiated through the ACNS 4.2 Content Distribution Manager GUI under a restricted web page link. Enter the following URL in your preferred browser:
- `http://cdmIPaddress/cgi-bin/restricted/request-translation`
- This script translates ACNS 4.2-style URL requests to ACNS 5.x-style URL requests. See the [“Configuring URL Request Translation”](#) section on page 9-13 for more information on URL request translation.
- Step 9** Upgrade remote Content Engines to ACNS 5.x software.
- These Content Engines are then ready to receive content distributed by the root Content Engine.
- Step 10** Create a coverage zone file and place it on an accessible server.
- Step 11** Change the URLs on the website.
- After the process of migrating from ACNS 4.2 software to ACNS 5.x software is complete, you need to change the ACNS 4.2 URLs within your website. Many tools are available on the Internet that can search and replace strings within files. The following are two options:
- Search and Replace 98
  - Search + Replace

**Note**

These are two different products. They are not certified by Cisco Systems. They are only examples of products that search and replace strings within text files.

- Step 12** Proceed to the *Cisco ACNS Deployment and Configuration Guide, Release 5.x* or the *Cisco ACNS Software Configuration Guide for Centrally Managed Deployments, Release 5.x* publication to configure your ACNS 5.x network.

## Upgrading from ACNS 4.x Software to ACNS 4.2 Software

The existing ACNS network must run ACNS 4.2 software in order to be migrated to ACNS 5.x software. If ACNS network devices are running a software version earlier than ACNS 4.2, they must first upgrade to ACNS 4.2 software before the migration process. This ensures that the pre-positioned content is preserved in the migration process.

This section describes how to upgrade from ACNS 4.x software to the ACNS 4.2 software release. You can choose between using the Content Distribution Manager GUI or the CLI.

### Upgrading from ACNS 4.x Software to ACNS 4.2 Software Using the Content Distribution Manager GUI

If you choose to use the Content Distribution Manager GUI to perform the upgrade, you must use the following file set:

- ACNS-4.x.x-K9.upg
- ACNS-4.x.x-K9.meta

To install the upgrade package file using the Content Distribution Manager GUI, follow these steps:

- Step 1** From the ACNS 4.x Content Distribution Manager GUI, choose **Channels > Channel Console**, and follow these steps:
- a. Click the **Add Channel** button at the top of the window.
  - b. Click the **Edit** button next to the channel that you added.
  - c. Create a channel named “MANUAL\_UPGRADE” by entering **MANUAL\_UPGRADE** in the Name field.
  - d. Check the **Auto-Replicate** check box.
  - e. Click the **Save Changes** button at the top of the window.
- Step 2** Choose **Devices > Bandwidth** to make sure that the replication bandwidth has been set correctly for each device that you are going to upgrade or downgrade. Make the settings as high as your available bandwidth allows.
- Step 3** Choose **Channels > Subscriber** to subscribe your devices to the MANUAL\_UPGRADE channel.

- Step 4** Choose **Channels > Channel Editor > Media Importer** to import the upgrade or downgrade package files.
- Import the upgrade or downgrade package files to the MANUAL\_UPGRADE channel.
  - Choose **Channels > Channel Editor > Import Progress** to make sure that the Import Progress status field shows 100 percent completion.
  - Wait an additional 20 minutes or so for the channel replication to finish.
  - Choose **Channels > Channel Console**, and verify that the Replication Status field shows 100 percent completion for the MANUAL\_UPGRADE channel.
- Step 5** Choose **Devices > Software Update** to execute the upgrade or downgrade for Content Engines and Content Routers. (The Content Distribution Manager is upgraded or downgraded in another step later on.)
- Choose the upgrade or downgrade package version, and then choose all the device names of the devices that you want upgraded or downgraded. Click the **Start Update** button.
  - Wait approximately 30 minutes for the upgrade or downgrade to be completed.
- Step 6** Verify that the upgrade or downgrade was successful by checking the Version field in the Software Update window. If the upgrade or downgrade was successful, the Version field for the chosen device is updated with the new software version.
- Step 7** After the upgrade or downgrade is complete for all your Content Engines and Content Routers, you need to upgrade or downgrade your Content Distribution Manager.
- Choose **Devices > Software Update**. Choose the upgrade or downgrade package version, and then choose your Content Distribution Manager. Click the **Start Update** button at the top of the window.
  - Wait for the upgrade or downgrade to be completed.

## Upgrading from ACNS 4.x Software to ACNS 4.2 Software Using the CLI

If you choose to use the CLI to perform an upgrade for a device that is running ACNS 4.x software, you need the following:

- FTP server with the upgrade package files
- Network connectivity between the device to be upgraded and the server hosting the appropriate files
- Appropriate .bin upgrade file: ACNS-4.x.x-K9.bin

To install the upgrade file using the CLI, follow these steps:

- Step 1** Install the upgrade file by using the **copy ftp install** or **copy http install EXEC** command:

```
ContentEngine# copy ftp install ftp-server package-file-path package-file-name
```

- Step 2** After the package files are 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.

# Migrating the Configuration Information and Content

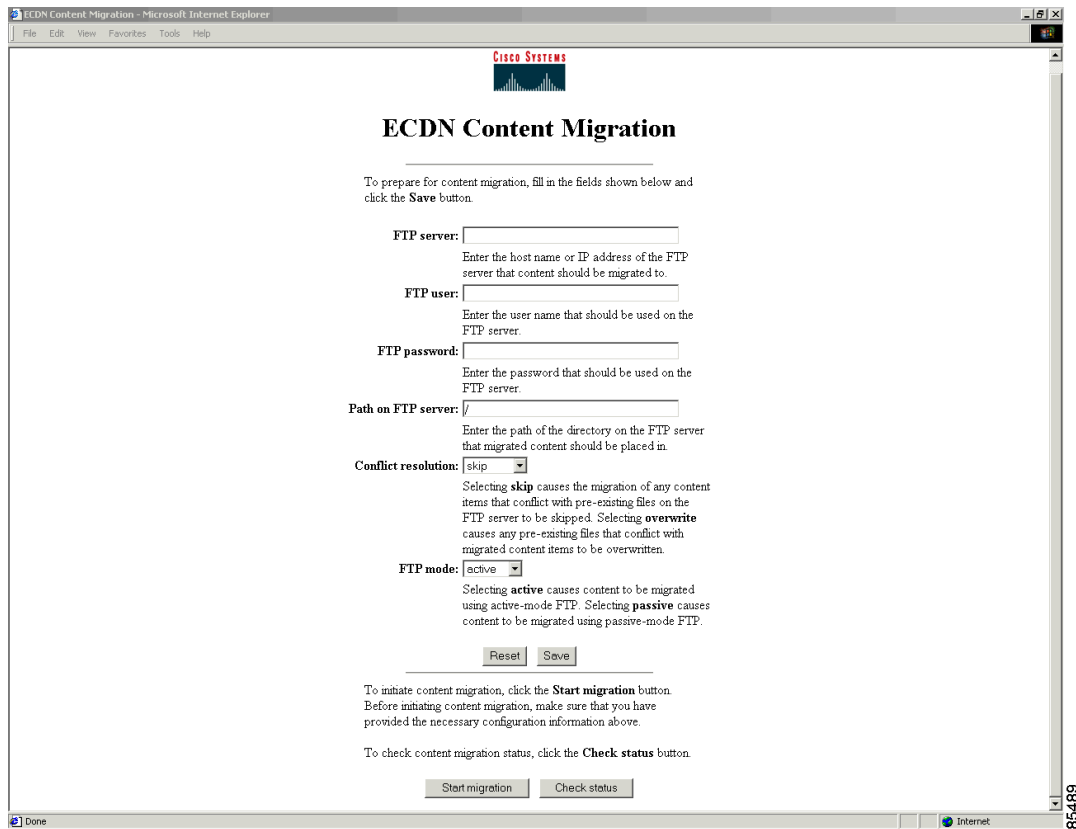
Before you initiate the Content Distribution Manager upgrade, you must retrieve configuration information (channel and coverage zone) and content files and move them from the ACNS 4.2 Content Distribution Manager to an origin server. If you do not, you will lose all the content being stored on your Content Distribution Manager during the upgrade. It is also important to provide a process to translate ACNS 4.2-style requests to ACNS 5.x-style requests. These processes are initiated from the ACNS 4.2 Content Distribution Manager.

The ACNS 4.2 Content Distribution Manager GUI provides a script for content migration that can be initiated by entering the following URL in your preferred browser:

`http://cdmIPAddress/cgi-bin/restricted/content-migration`

This script gathers the coverage zone configuration, content, and channel information and moves it to the origin server. (See [Figure 9-6](#).)

**Figure 9-6** ACNS 4.2 Content Migration Window



**Note**

Before initiating the migration, make sure you enter all the necessary information. After the migration has started, it cannot be stopped unless the Content Distribution Manager is restarted or the FTP connection fails.

To start the content migration process, follow these steps:

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- Step 1** In the FTP server field, enter the host name or IP address of the FTP server to which content should be migrated.
  - Step 2** In the FTP user field, enter the username of the account to be used to access the FTP server.
  - Step 3** In the FTP password field, enter the password that is required to access the FTP server.
  - Step 4** In the Path on FTP server field, enter the directory path where the migrated content is to be located on the FTP server.
  - Step 5** From the Conflict resolution drop-down list, choose a method for resolving conflicts between preexisting files and migrated content items.
    - Choose **Skip** if you do not want content that conflicts with preexisting files to be migrated.
    - Choose **Overwrite** if you want any preexisting files that conflict with migrated content files to be overwritten.
  - Step 6** From the FTP mode drop-down list, choose an FTP mode.
    - Choose **Active** if you want to migrate content using active-mode FTP.
    - Choose **Passive** if you want to migrate content using passive-mode FTP.
  - Step 7** Click **Save** to save the settings, or click **Reset** to clear the fields and make any changes.
  - Step 8** Click **Start migration** to initiate migration of content from the Content Distribution Manager running ACNS 4.2 software to the origin server.
  - Step 9** Click **Check status** to monitor the ongoing status of the content migration. Manually refresh the window to view updated information.
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**Note**

It may take some time before the actual file migration begins. Before the Content Distribution Manager copies files, it gathers information about all the files. The more files there are to migrate, the longer it will take for the file copying to start. During this time, there will be no change in the Check Status window.

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## Configuring URL Request Translation

Request translation is the method used to translate ACNS 4.2-style URL requests to ACNS 5.x-style URL requests automatically. When request translation is enabled, if an ACNS 4.2 Content Distribution Manager or Content Router receives a request for a particular content item and there is no ACNS 4.2 Content Engine to serve the request, the Content Distribution Manager or Content Router uses the configuration information supplied by the request translation page to translate the ACNS 4.2-style URL request into an ACNS 5.x-style URL request naming the same content item. The Content Distribution Manager or Content Router then sends an HTTP 302 redirect message back to the client containing the ACNS 5.x-style URL.

**Note**

You *must* use HTTP-style request translation for previewing WMT content when request routing is performed by a Content Router. Translation to MMS-style URLs can only be used when request routing is performed by WCCP interception.

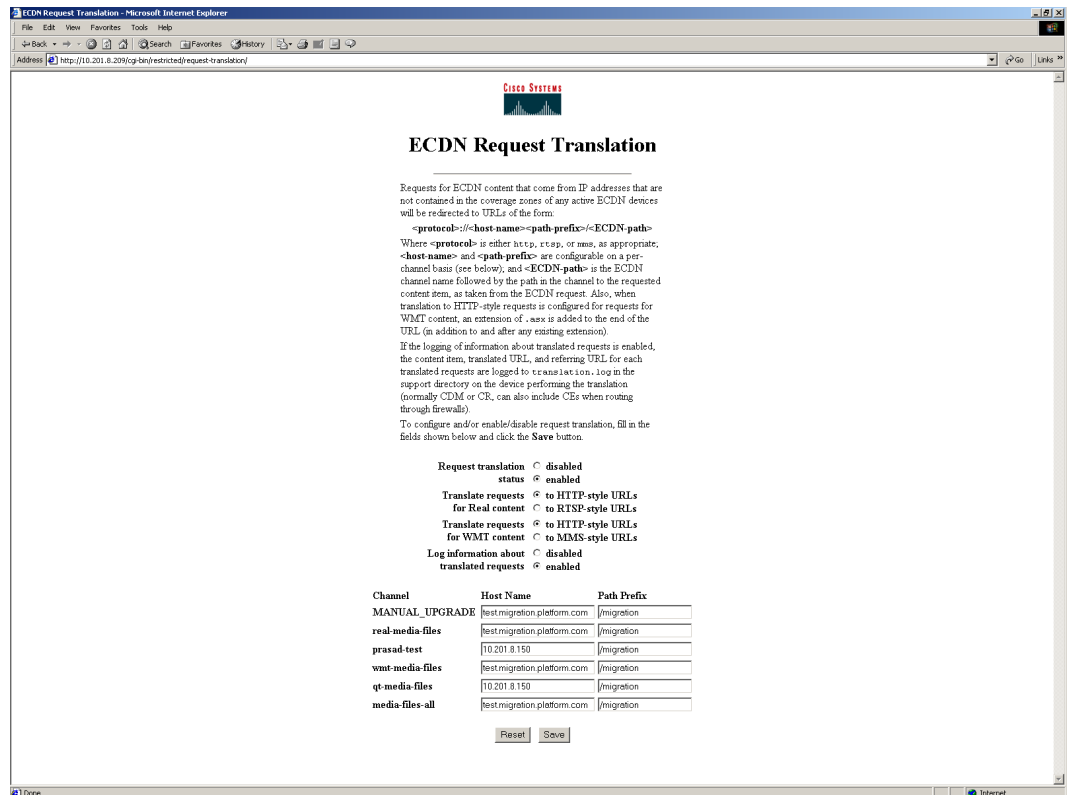
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**Note**

Some browsers do not work correctly for previewing RealMedia content when translation to RTSP-style URLs is used. If you encounter a problem in this area, use translation to HTTP-style URLs.

The window for request translation is located at <http://cdmIPaddress/cgi-bin/restricted/request-translation>. (See the browser Address field shown in Figure 9-7.)

**Figure 9-7 ACNS 4.2 URL Request Translation Window**



To configure URL request translation (see Figure 9-7), follow these steps:

- Step 1** Click the **enabled** radio button to enable URL request translation; click the **disabled** radio button to disable it.
- Step 2** Specify how requests for RealMedia content are to be translated.
  - Click the **to HTTP-style URLs** radio button to redirect requests to retrieve RealMedia content using HTTP.
  - Click the **to RTSP-style URLs** radio button to redirect requests to retrieve RealMedia content using RTSP.
- Step 3** Specify how requests for Windows Media Technologies (WMT) content are to be translated.
  - Click the **to HTTP-style URLs** radio button to redirect requests to retrieve WMT content using HTTP.

- Click the **to MMS-style URLs** radio button to redirect requests to retrieve WMT content using Microsoft Media Server (MMS).
- Step 4** Click the **enabled** radio button to enable logging of URL request translation, including the referring URL. This can be used to identify web pages that are still using ACNS 4.2-style URLs. Click the **disable** radio button to disable URL request translation logging.
- Step 5** Provide the following information for each channel:
- In the Host Name field, enter the name of the host containing the content. This is the host name that should be used when translated URLs are being constructed for content items in this channel.
  - In the Path Prefix field, enter the path to the content, up to but not including the channel name.
- Step 6** Click **Save** to save the settings, or **Reset** to make changes.

## Comparison of ACNS 4.2 URLs Versus ACNS 5.x URLs

In general, an ACNS 5.x URL visible to the user looks like this:

<protocol>://<host-name>/<path-prefix>/<content-name>

where:

- *protocol* indicates the protocol used while issuing the URL request. The protocols that can be used are HTTP, RTSP, and MMS.
- *host-name* indicates the host name, IP address, or DNS host name of the host where the request should be sent. If WCCP-enabled router or proxy-based routing is used for redirection, then this field will have the host name or IP address of the origin server. If a Content Router or Content Services Switch-based routing is used for redirection, then this field contains the delegated host name for the fully qualified domain name (FQDN) website.
- *path-prefix* indicates the path where the content is located on the host.
- *content-name* indicates the exact content file name that is requested from the host.

The URL Request Translation window (Figure 9-7) allows you to configure the *host-name* and *path-prefix* parameters that will be used by a particular channel to translate an ACNS 4.2 URL to an ACNS 5.x URL if there is no ACNS 4.2 Content Engine that can satisfy the initial request.

Table 9-1, Table 9-2, and Table 9-3 are examples of ACNS 4.2 URLs and equivalent ACNS 5.x URLs for HTTP, RTSP, and MMS protocols that can be used in your ACNS 5.x network.

**Table 9-1** HTTP URLs

ACNS 4.2 URL Request	ACNS 5.x URL Request Translation
<p>http://cdm-vip/Cisco/studio-id/channel-id/petshow.ppt</p> <p><b>Note</b> An equivalent ACNS 5.x HTTP URL request will depend on the routing redirection method.</p>	<p>For WCCP-enabled router redirection:</p> <p>http://origin-server-address/&lt;path-prefix&gt;/petshow.ppt</p> <p>For Content Router-based redirection:</p> <p>http://&lt;delegated-host-name&gt;/&lt;path-prefix&gt;/petshow.ppt</p>

Table 9-2 RTSP URLs

ACNS 4.2 URL Request	ACNS 5.x URL Request Translation
http://cdm-ip/Cisco/opt.real/studio-id/channel-id/petshow.rm	For WCCP-enabled router redirection: rtsp://origin-server-address/<path-prefix>/petshow.rm
<b>Note</b> An equivalent ACNS 5.x RTSP URL request will depend on the redirection method used.	For Content Router-based redirection: rtsp://<delegated-host-name>/<path-prefix>/petshow.rm

Table 9-3 MMS URLs

ACNS 4.2 URL Request	ACNS 5.x URL Request Translation
http://cdm-ip/Cisco/opt.wmt/studio-id/channel-id/petshow.asfx	For WCCP-enabled router redirection: mms://origin-server-address/<path-prefix>/petshow.asf
<b>Note</b> An equivalent ACNS 5.x WMT URL request will depend on the redirection method used.	For Content Router-based redirection: http://<delegated-host-name>/<path-prefix>/petshow.asf.asx

## Upgrading from ACNS 4.2 Software to ACNS 5.x Software



### Note

To upgrade from a previous release of ACNS software to ACNS 5.x software, you must be running ACNS 4.2 software. If you are running ACNS 4.1.3 software or an earlier version of ACNS software, you must first upgrade your software to ACNS 4.2 before you can upgrade to ACNS 5.x software. This ensures that any pre-positioned content is preserved.

To upgrade from the ACNS 4.2 software release to 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.

For information on how to obtain the files necessary for the migration from ACNS 4.2.x software to ACNS 5.x software, see [Chapter 2, “Obtaining Software Files and Meta Files.”](#)



### Caution

Do not attempt to upgrade your ACNS 4.2 devices until you have read the sections in this chapter that explain the two migration packages offered when you upgrade from ACNS 4.2 software to ACNS 5.x software. See the [“Understanding Your Migration Options”](#) section on page 9-3 for more information on these migration packages.



### Note

For complete syntax and usage information for the CLI commands used in this chapter, refer to the *Cisco ACNS Software Command Reference, Release 5.x* publication.

## Upgrading Your Content Delivery Network Using the ACNS 4.2 Content Distribution Manager GUI

If you choose to use the ACNS 4.2 Content Distribution Manager GUI to perform the upgrade, you must use the following file set:

- ACNS-4.2.x-TO-5.x.x-K9.upg
- ACNS-4.2.x-TO-5.x.x-K9.meta
- ACNS-4.2.x-TO-5.x.x-K9.bin

To upgrade your software, follow these steps:

- 
- Step 1** From the ACNS 4.2 Content Distribution Manager GUI, choose **Channels > Channel Console**, and follow these steps:
    - a. Click the **Add Channel** button at the top of the window.
    - b. Click the **Edit** button next to the channel that you added.
    - c. Create a channel named “MANUAL\_UPGRADE” by entering **MANUAL\_UPGRADE** in the Name field.
    - d. Check the **Auto-Replicate** check box.
    - e. Click the **Save Changes** button at the top of the window.
  - Step 2** Choose **Devices > Bandwidth** to make sure that the replication bandwidth has been set correctly for each device that you are going to upgrade. Make the settings as high as your available bandwidth allows.
  - Step 3** Choose **Channels > Subscriber** to subscribe your devices to the MANUAL\_UPGRADE channel.
  - Step 4** Choose **Channels > Channel Editor > Media Importer** to import the upgrade package files.
    - a. Import the upgrade package files to the MANUAL\_UPGRADE channel.
    - b. Choose **Channels > Channel Editor > Import Progress** to make sure that the Import Progress status field shows 100 percent completion.
    - c. Wait an additional 20 minutes or so for the channel replication status to be reported. Wait until replication is done.
    - d. Choose **Channels > Channel Console**, and verify that the Replication Status field shows 100 percent completion for the MANUAL\_UPGRADE channel.
  - Step 5** Choose **Devices > Software Update** to execute the upgrade for Content Engines and Content Routers. (The Content Distribution Manager is upgraded in another step later on.)
    - a. Choose the upgrade package version, and then choose all the device names of the devices that you want upgraded. Click the **Start Update** button.
    - b. Wait approximately 30 minutes for the upgrade to be completed.
  - Step 6** Verify that the selected Content Engines and Content Routers which are now upgraded to ACNS 5.x no longer show as active on the ACNS 4.2 Content Distribution Manager GUI.
  - Step 7** After the upgrade is complete for all your Content Engines and Content Routers, you need to upgrade your Content Distribution Manager.
    - a. Choose **Devices > Software Update**. Choose the upgrade package version, and then choose your Content Distribution Manager. Click the **Start Update** button at the top of the window.
    - b. Wait for the upgrade to be completed.
-

## Upgrading an ACNS 4.2 Content Engine and Content Router Using the CLI

If you choose to use the CLI to perform an upgrade for a Content Engine or Content Router running ACNS 4.2 software, you need the following:

- FTP or HTTP server with the upgrade package files
- Network connectivity between the device to be upgraded and the server hosting the upgrade files
- Appropriate .bin upgrade package file: ACNS-4.2.x-TO-5.x.x-K9.bin

There are two upgrade scenarios:

- Scenario 1—E-CDN has been enabled on the device and the customer has loaded the specified meta file (`acns5_cdm_ip.meta`) before the upgrade begins. After the ACNS 4.2 to 5.x upgrade is completed, the ACNS network device automatically joins the ACNS 5.x network.
- Scenario 2—E-CDN has *not* been enabled on the device. In this scenario, the ACNS network devices do not automatically join the ACNS 5.x network once the upgrade is finished, regardless of whether the meta file has been specified before the upgrade or not. If you want the device to join the ACNS 5.x network after the upgrade, you must configure the primary interface and the Content Distribution Manager IP address, and enable the Centralized Management System.



### Note

The meta file contains the IP address of the ACNS 5.x Content Distribution Manager that either the Content Engine or the Content Router will register with once the upgrade is finished. Place the meta file (`acns5_cdm_ip.meta`) in the Content Engine's `/local/local1` directory.

### Scenario 1

To install the upgrade package file on ACNS 4.2 Content Engines or Content Routers that already have meta files loaded, follow these steps:

- Step 1** Install the upgrade package file by using the **copy ftp install** command or **copy http install** command:

```
ContentEngine# copy ftp install ftp-server package-file-path package-file-name
```

```
ContentEngine# copy http install http-server package-file-path package-file-name
portnumber
```

- Step 2** After the package files are copied to your system, reboot and finish the upgrade by using the **reload** command.

```
ContentEngine# reload
```

### Scenario 2

To install the upgrade package file on Content Engines or Content Routers that do not have meta files loaded, follow these steps:

- Step 1** Install the upgrade package file by using the **copy ftp install** command or **copy http install** command:

```
ContentEngine# copy ftp install ftp-server package-file-path package-file-name
```

```
ContentEngine# copy http install http-server package-file-path package-file-name
portnumber
```

**Step 2** After the package files are copied to your system, reboot by using the **reload** command.

```
ContentEngine# reload
```

**Step 3** After the reload process is finished, connect to the Content Engine and configure the primary interface if necessary.

```
ContentEngine(config)# primary-interface FastEthernet 0/0
```



**Note** You can also use the **primary-interface GigabitEthernet** or **primary-interface PortChannel** command for the appropriate connection.

**Step 4** Enter the IP address of the Content Distribution Manager that is managing the ACNS 5.x network.

```
ContentEngine(config) cdm ip cdmIPaddress
```

**Step 5** Enable the Centralized Management System (CMS).

```
ContentEngine(config)# cms enable
```

This command registers the Content Engine with the Content Distribution Manager.

**Step 6** Write the current configuration to memory.

```
ContentEngine# copy running-config startup-config
```

## Upgrading the Content Distribution Manager Using the CLI

If you choose to use the CLI to perform an upgrade for a Content Distribution Manager that is running ACNS 4.2 software, you need the following:

- FTP or HTTP server with the upgrade package files
- Network connectivity between the device to be upgraded and the server hosting the upgrade files
- Appropriate .bin upgrade package file: ACNS-4.2.x-TO-5.x.x-K9.bin

To install the upgrade package file using the CLI, follow these steps:

**Step 1** Connect to the Content Distribution Manager. Configure your company domain name if it does not exist in your ACNS 4.2 configuration before the upgrade begins.

```
CDM(config)# ip domain-name domain_name
```

**Step 2** Install the upgrade package file on the Content Distribution Manager by using the **copy ftp install** command or the **copy http install** command:

```
CDM# copy ftp install ftp-server package-file-path package-file-name
```

```
CDM# copy http install http-server package-file-path package-file-name portnumber
```

**Step 3** After the package files are copied to your system, reboot by using the **reload** command.

```
CDM# reload
```

**Step 4** Connect to the Content Distribution Manager again. Write the current configuration to memory.

```
CDM# copy running-config startup-config
```

---

After the upgrade is finished, the Centralized Management System (CMS) is enabled by default. The default setting for the role of the upgraded Content Distribution Manager is *primary*. If you want to change the status of the Content Distribution manager to *standby*, you need to disable the CMS with the **no cms enable** command, use the **cdm role standby** command on the upgraded Content Distribution Manager, and enable the CMS with the **cms enable** command again.

## Upgrading a Standalone ACNS 4.2 Content Engine or Content Router

This section describes how to upgrade from ACNS 4.2 software to ACNS 5.x software on a device that is *not* operating as part of an ACNS network. After performing this upgrade procedure, you must manually configure the device and register it with the Content Distribution Manager before it can join the ACNS 5.x network, or else it can operate as a standalone caching or streaming device.

To perform an upgrade from ACNS 4.2 software to ACNS 5.x software on a Content Engine or Content Router that is not operating as part of an ACNS 4.2 network, you need the following items:

- FTP or HTTP server with the upgrade package files
- Network connectivity between the device to be upgraded and the server hosting the upgrade files
- Appropriate .bin upgrade package file:
  - ACNS-4.2.x-TO-5.x.x-K9.bin

To install the upgrade package file, follow these steps:

**Step 1** Install the upgrade package file by using the **copy ftp install** or **copy http install EXEC** command:

```
Device# copy ftp install ftp-server package-file-path package-file-name
```

```
Device# copy http install http-server package-file-path package-file-name [portnumber]
```

**Step 2** After the package files are copied to your system, reboot by using the **reload** command.

```
Device# reload
```

The standalone Content Engine or Content Router is now running ACNS 5.x software.

---

The standalone Content Engine is now running ACNS 5.x software. If you want to connect the standalone Content Engine to an ACNS 5.x network, follow these steps:

**Step 1** After the reload process is finished, connect to the Content Engine and configure the primary interface.

```
ContentEngine(config)# primary-interface FastEthernet 0/0
```



**Note** You can also use the **primary-interface GigabitEthernet** or **primary-interface PortChannel** command for the appropriate connection.

---

**Step 2** Enter the IP address of the Content Distribution Manager that is managing the ACNS 5.x network.

```
ContentEngine(config)# cdm ip cdmIPAddress
```

**Step 3** Enable the Centralized Management System (CMS).

```
ContentEngine(config)# cms enable
```

This command registers the Content Engine with the Content Distribution Manager.

**Step 4** Write the current configuration to memory.

```
ContentEngine# copy running-config startup-config
```

---

After you upgrade from ACNS 4.2.x software to ACNS 5.x software, we strongly recommend that you reconfigure the Content Engine for Network Time Protocol (NTP) to ensure that the system clock on the Content Engine is synchronized with the NTP time server clock. This can be done on the Content Engine by using the **ntp server** *{ip-address | hostname}* global configuration command or by using the Content Distribution Manager GUI.

