Release Notes for the Cisco CDN Software Enterprise Solution Version 2.1

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These release notes support the Cisco Content Distribution Network (CDN) Software Enterprise Solution Version 2.1.

Contents

These release notes describe the following topics:

CISCO SYSTEMS

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Introduction

Cisco CDN Software Enterprise Solution Version 2.1 adds important new features to the product. Among the software enhancements in Version 2.1 are:

- Removal of the CDN device registry
- Redesign of the CDN Installation Wizard to simplify device activation and configuration
- Introduction of start and stop time control for media playlists
- Coverage zone configuration through the Content Distribution Manager (CDM) user interface
- Device time control through the CDM user interface

System Requirements

Users and CDN administrators interact with the product using a Web-based graphical interface to the CDM that provides easy access to most CDN functions. The following minimum hardware and software requirements apply to each machine that will be used as a workstation to access the CDM.

For more information on configuring your CDN devices, refer to the *Cisco CDN Software Enterprise Solution Configuration Guide*.

Network Requirements

- Ethernet connection
- Connection to the Internet

Platform and Operating System Requirements

- Windows 95/98 or Windows 2000 Pentium-class system, 133 MHz, 32 MB of RAM
- Windows NT Pentium-class system, 200 MHz, 64 MB of RAM
- Apple Macintosh G3-class, 32 MB of RAM

Browser Requirements

- Microsoft Internet Explorer 5.0 or Netscape Communicator Version 4.7

Media Player Requirements

- Microsoft Windows Media Player 6.x or later
- RealNetworks RealPlayer
- Apple QuickTime Version 4.0

Installation Notes

The following sections are intended to help you upgrade from an earlier version of the CDN software to Version 2.1. If you are setting up the Content Delivery Network (CDN) for the first time, refer to Chapter 2, "Configuring and Activating Content Delivery Network Devices," in the *Cisco CDN Software Enterprise Solution Configuration Guide*. If you are migrating from SightPath CDN hardware to the Cisco CDN hardware platform, refer to the *SightPath to Cisco Hardware Migration Procedure* document.

Determining the Software Version

To determine which version of the CDN software your devices are running, use the System feature of the Content Distribution Manager (CDM) as follows:

Step 1   Launch your Web browser and enter the IP address or DNS name of your CDM into the address field, for example:

`http://127.0.0.1/start.html`

Step 2   When prompted, log in to the CDM using an administrative username and password.

Step 3   From the Devices menu, click **System**.

The System dialog box appears, displaying information on the selected device.

Step 4   Choose the name of the device you are inquiring about from the Device Selector list.

Information on the selected device appears in the System dialog box.

Step 5   Refer to the row labeled Software Version for information on what version of the CDN software the selected device is using. For example,

`V1-7-rc6`

Upgrading to a New Software Version

Updates to your CDN software are distributed through Cisco.com. Use the following procedure or refer to Chapter 4, "Maintaining the System Software," in the *Cisco CDN Software Enterprise Solution User Guide* for instructions on downloading updated software from Cisco.com, and then performing a manual upgrade to install the downloaded software.

Updating Software from Cisco.com

Updates of the CDN software are available from Cisco.com, the Cisco customer support portal. Once you have downloaded the appropriate software from Cisco.com, use the manual upgrade procedure described in the "Performing a Manual CDN Software Upgrade" section on page 5 to distribute the update files to all your CDN devices.

> **Note** In order to access Cisco.com and download your CDN software update, you need a registered username and password for the site. If you are a Cisco customer and service contract owner, a Cisco reseller, Premier Certified Partner, the customer of a Cisco certified Partner Initiated Customer Access (PICA) partner, or a Cisco consultant, you can acquire a login from the Cisco web site.

CDN software can be downloaded from Cisco.com using either a browser pointed to Cisco.com, or an FTP application connected to the Cisco FTP site. Use the appropriate directions that follow to connect to Cisco.com.

Downloading Software from Cisco.com

To connect to Cisco.com:

Step 1 Launch your Web browser and point it to the following URL:

`http://www.cisco.com/cgi-bin/tablebuild.pl/cdn-ent`

Step 2 You are prompted to log on. Enter your Cisco.com username and password.

> **Note** You need to have a Cisco.com username and password before attempting to download a software update from Cisco.com. In order to acquire a Cisco.com login, you need a service contract number, Cisco.com registration number and verification key, PICA registration number and verification key, or packaged service registration number.

Step 3 In the download area, locate the upgrade file or files for the version of the CDN software that you need. Version numbers are listed in the column labeled Release.

Step 4 For each upgrade file you need to download, click the filename to initiate the download.

Step 5 If you are prompted to open the file or save it to a disk, choose **Save** to save the file to a disk. Locate a directory on your hard drive or LAN to temporarily hold the upgrade file and click **OK**.

> **Note** You will later import upgrade files to the CDN, so be sure to place the files in a location that is easy to remember and which you will be able to access later.

Step 6 Proceed to the "Performing a Manual CDN Software Upgrade" section on page 5 for instructions on using the upgrade file to upgrade the software on your CDN devices.

Downloading Software from the Cisco FTP Server

In addition to downloading software upgrades for the CDN product from Cisco.com, you can also use your Web browser to download CDN software from Cisco's designated FTP site: ftp://ftp.cisco.com.

Step 1 Launch your Web browser.

Step 2 Log on to the Cisco FTP server as a registered user or as a guest.

- To enter as a registered user, enter your Cisco.com user ID and password in the Location field in the following format:

    `ftp://userid:password@ftp.cisco.com`

- To enter as a guest user, the URL is:

    `ftp://ftp.cisco.com`

    You are prompted to log on. If you were given a special access code by e-mail or through a customer support representative, enter the special access code as a user ID and enter your e-mail address as a password in the format user@host.domain. It should appear similar to:

    `ftp://`*`access_code:userid@host.domain`*`/coded`

Step 3   Navigate to the following download directory:

`cisco/content-delivery/cdn/enterprise/`

✎
Note   Guest users are only able to see images that are located under the /pub directory.

Step 4   Click the filename for each upgrade file to download the file to your local machine, or right-click the filename and choose the **Save Link As** or **Save Target As** options to save the target file to your local machine.

If you are prompted to open the file or save it to a disk, choose to save the file to a disk. Locate a directory on your hard drive or LAN to temporarily hold the upgrade file and click **OK**.

✎
Note   You will later import these files to the CDN, so be sure to place them in a location from which they are easy to retrieve for import later.

Step 5   Proceed to the "Performing a Manual CDN Software Upgrade" section on page 5 for instructions on using the upgrade file to upgrade the software on your CDN devices.

Performing a Manual CDN Software Upgrade

In order to upgrade your CDN software manually, you must:

1. Create a manual upgrade channel that will distribute the updated license.

2. Subscribe any CDN devices requiring a software update to the manual upgrade channel.

3. Import software update files to the manual upgrade channel.

4. Distribute software update files to all devices marked for upgrade.

Once these steps are complete, you can use the Software Update feature to install the software upgrade files to subscribed devices. See the following sections below for more details on completing each step.

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Note   It is imperative that you upgrade the software on your Content Engines (CEs) before upgrading the software on your CDM. Once your CDM software has been upgraded, any remaining CEs that have not also been upgraded will be unable to communicate with the CDM. Contact Cisco Technical Support if you have any questions regarding the proper procedure for upgrading your CDN devices.

Creating a Manual Upgrade Channel

To create a manual upgrade channel:

Step 1   Launch your Web browser and point it to the CDM.

Step 2   Log on using your administrator logon.

Step 3   From the Channels menu, click **Channel Console**.

Step 4   Click **Add Channel**.

Step 5   Check the check box next to the channel name *Channel #* and click **Edit**.

> ✎
>
> **Note**   *"Channel #"* is the default channel name. If you have added other channels and have not renamed them, the channel that you added will be named *"Channel #"* (*#* being the next incremental number).

Step 6   In the Name field, change the name of the channel to **MANUAL_UPGRADE**.

The channel must use this name (and letter case, as well) in order for it to function as an upgrade channel.

Step 7   In the Size Limit field, enter a value that accommodates your upgrade files.

For example, entering **100** in the field provided and then clicking the **MB** button sets the size limit of the MANUAL_UPGRADE channel to 100 MB.

Step 8   Check both the **Auto Subscribe** and **Auto Replicate** check boxes.

Step 9   Click **Save Changes**.

Subscribing Devices to the Manual Upgrade Channel

Once you have created your upgrade channel, subscribe all the devices requiring a software update to that channel.

Step 1   From the Channels menu, click **Subscriber**.

Step 2   From the Channel Selector, choose the **MANUAL_UPGRADE** channel.

Step 3   In the Unsubscribed CEs column, click **All** to select all of the unsubscribed devices for subscription to the upgrade channel.

Step 4   Click **Subscribe**.

The selected CEs are subscribed to the MANUAL_UPGRADE channel and receive upgrade files once they are imported to the channel.

To unsubscribe CEs from the MANUAL_UPGRADE channel, refer to Chapter 3, "Working with the Content Delivery Network," in the *Cisco CDN Software Enterprise Solution User Guide* for instructions on unsubscribing devices from a channel.

Importing the Software Update Files

To import the software update files to the manual upgrade channel:

Step 1 From the Channels menu, click **Media Importer** and follow the directions for importing the files you downloaded from Cisco.com using the Web server, PC folders or FTP option.

Step 2 From the Channels menu, click **Import Progress** to monitor the progress of your import.

When the import is finished, the import status is "complete."

Step 3 Once you have imported your software upgrade to the manual upgrade channel, refer to the information on updating your CDN software to complete the upgrade process in Chapter 4, "Maintaining the System Software," of the *Cisco CDN Enterprise Solution User Guide*.

New and Changed Information

The following sections detail the new features and feature enhancements included in the Cisco CDN Software Enterprise Solution Version 2.1.

Assigning Coverage Zones for CDN Devices

About Coverage Zones

Decisions about which devices on your CDN serve a particular request for content are made by the CDN software using an intelligent model designed to maximize the success of each content request.

In the simplest scenario, requests from workstations on the CDN are routed to the nearest Content Engine (CE) on their network. However, CDN administrators can also override the default settings and influence content routing through the deployment of "preferred coverage zones" and "regular coverage zones" for CEs and the Content Distribution Manager (CDM).

Preferred coverage zones are ranges of IP addresses assigned to CEs or the CDM. When a request for content originates from an address within the preferred coverage zone of a CE or the CDM, that device is directed to serve the request.

All requests originating from outside the preferred coverage zone for a device, in what is referred to as a "regular" coverage zone, are processed by the nearest device. "Nearness" is determined by the local network segment of each device, defined by its IP address and network mask.

When content requests originate from addresses that are covered by more than one preferred coverage zone or regular coverage zone, the CDM chooses a CE from among the qualified CEs to serve the request.

Creating Coverage Zones

Coverage zones are ranges of IP addresses on the CDN that are associated with specific devices. There are two types of coverage zones that you can specify:

- Preferred coverage zones

  Preferred coverage zones are groupings of IP addresses served by a single CE or group of CEs. Requests originating from within the range of preferred addresses are served by one of a small group of designated CEs, ideally devices that are in close physical proximity, ensuring optimal performance. By default, all CEs serve a preferred coverage zone that is defined by their local network segment (determined by the IP address and the netmask configured for the device).

- Regular coverage zones

  Regular coverage zones are broader groupings of IP addresses served generally by a CDM and pool of CEs on the CDN. By default, all CDN devices (both CEs and the CDM) serve a regular coverage zone that is defined by their CDN network.

Coverage zones that override the network defaults can be defined separately for each CE and for the CDM. When devices are not assigned a particular coverage zone, they use default "preferred" and "regular" coverage zones.

To assign a preferred coverage zone or regular coverage zone for a CE:

Step 1 From the Devices menu, choose **System**.

Step 2 Make sure that the correct CE is displayed in the Device Selector field. If it is not, click the correct device in the list.

General information about the selected device is displayed.

Step 3 In the section labeled CE Coverage Zones, select the **Specify coverage zone settings** option.

Fields for configuring your coverage zones appear.

Step 4 If you are configuring a preferred coverage zone for the CE, place the cursor in the Preferred field and enter the address range in the proper format.

The format for the coverage zone address is *IP_address/netmask*, for example:

```
192.168.0.0/24
```

You can also specify a series of specific addresses in this field separated by semicolons. For example:

```
192.168.200.222; 192.168.200.223; 192.168.200.224
```

Step 5 Repeat Step 4 for the regular coverage zone by moving your cursor to the Regular field and entering the address range in the proper format.

As with the preferred coverage zone address field, you can also enter a range of addresses in the Regular field.

Step 6 Click **Save Changes** to assign the preferred and regular coverage zones you specified to the selected device.

Setting the Start and Stop Times for Media Playlists

To access the playlist time controls and set a schedule of dates on which to play back your media playlist:

Step 1 Follow the instructions in Chapter 3, "Working with the Content Delivery Network," in the *Cisco CDN Enterprise Solution User Guide* to access the TV controller dialog box and create a media playlist.

Step 2 Once you have created your playlist, click the **Time** button on the TV controller console. The playlist time list appears and, below it, controls for scheduling playback times.

Step 3 On the time controls, place the cursor in the Month field in the row labeled Start time and enter the number of the month on which the scheduled media playback begins.

Step 4 Press the **Tab** key to move the cursor forward, and enter the remaining playback information.

All information must be in numeric format, though it is not necessary to use leading zeros. Click the **AM** or **PM** button to indicate what time of day you wish the playlist to start. For example, a Start time of 6:20 p.m. on October 5, 2000 would appear as:

```
Month     Day     Year     Hour     Minute AM     PM
10        5       2000     6        20     __      X
```

Step 5 Repeat Step 3 and Step 4 for the row labeled Stop time to set the time at which the playlist will discontinue playback.

Step 6 Click **Save Changes** to add the Start time and Stop time you specified to the playlist time list. The times will appear on the list at the top of the TV controller dialog box.

Clicking **Cancel Changes** resets the Start time and Stop time without adding any new playback times to the playlist time list.

Modifying Playlist Playback Times

Playlist playback times cannot be edited once they are created. To modify a playlist playback time, delete the time setting you wish to change and add a new setting with the correct times specified.

To modify the playlist time list:

Step 1 With the playlist time list displayed, check the check box next to the playback time setting you wish to change. Click **ALL** to select all playback time settings on the playlist time list, or **NONE** to deselect any time settings that have already been selected.

Step 2 With your time settings selected, click **Remove** to remove the time settings from the playlist time list. Click **Remove All** to delete all time settings from the playlist time list regardless of whether they are selected or not.

Step 3 You are prompted to confirm your decision to remove playback time settings. Click **OK** to confirm your choice or **Cancel** to return to the TV controller dialog box without removing any time settings.

Step 4 Refer to Chapter 3, "Working with the Content Delivery Network" of the *Cisco CDN Enterprise Solution User Guide* to create a time setting on your playlist with the correct Start time and Stop time.

Removing Media from a Playlist Using the TV Controller

To access the TV controller from the CDM and remove media from a playist:

Step 1 From the Devices menu, choose **TV Controls**.

The TV Controls dialog box appears.

Step 2 Choose a CE name. If multiple TV out-enabled CEs are available, make sure to choose the correct CE.

The CDM TV controller appears.

Step 3 Make sure the correct channel is displayed in the Channel Selector field. If it is not, choose the correct channel in the list.

Step 4 Under the heading Playlist, check the check box next to each playlist file that you want to remove from the playlist. Click **All** to select all of the files or **None** to clear your selections.

Step 5 Click **Remove**.

Playing Media on TV-Out Enabled Devices

Once you have created a media playlist using the TV controller, you can play that list of media at any time or schedule playback to occur on specific days and predetermined times. Refer to Chapter 3, "Working with the Content Delivery Network," of the *Cisco CDN Enterprise Solution User Guide* for information on scheduling playback.

To display media from your playlist on a TV-out enabled device:

Step 1 Follow the instructions in Chapter 3, "Working with the Content Delivery Network," of the *Cisco CDN Enterprise Solution User Guide* to access the TV controller dialog box and create a media playlist.

Step 2 Using the TV controller console, click the **Play** button. If you wish the TV controller to loop through the playlist without stopping, click the **LOOP** button on the console.

The TV controllers display changes to indicate that the looping feature is enabled. While the loop feature is enabled, the TV controller plays all media files on the playlist in succession. Click the LOOP button a second time to toggle the looping feature off.

Step 3 To prevent a media file from being played, check the box next to the filename on the Playlist and click **Remove**. The file is removed from the playlist.

Viewing Information About a Media File That Is Playing

To view information about a video that is playing:

Step 1 Follow the instructions in Chapter 3, "Working with the Content Delivery Network," of the *Cisco CDN Enterprise Solution User Guide* to launch the TV controller from the CDM user interface and play media subscribed to a channel.

Step 2 With a media file from the playlist playing, click **Info** on the TV controller. Information on the file that is currently playing appears in the Cisco TV controller window.

Setting the Time Used by CDN Devices

All devices on your CDN use time settings based on two factors:

- System time—This setting defines the date in MM/DD/YYYY format and time in HH:MM:SS format using a 24-hour clock for the CDM and all associated CEs.

- Time zone—This setting is configured for each device separately, allowing devices that are geographically dispersed to coordinate with one another and to apply the appropriate local time settings, based on the system time, when you change bandwidth settings or activate playlists. Refer to Chapter 2, "Configuring Cisco Content Delivery Network Devices," in the *Cisco CDN Enterprise Solution User Guide* for more information on setting the time zone for each of your CDN devices.

To set the system time for your CDN:

Step 1 From the Devices menu, choose **Identification**.

The Identification dialog box appears.

Step 2 From the Device Selector list, choose the CDM.

Some general information about the CDM is displayed, including its name and a short text description.

Step 3 Next to the System Time heading, place your cursor in the first Date field and enter the date in MM/DD/YYYY format. Press the **Tab** key to move between fields when entering the date.

Step 4 Move your cursor to the first Time field and enter the time in HH:MM:SS format. Press the **Tab** key to move between fields when entering the time.

Step 5 Click **Set**. You are prompted to confirm your decision to reset your system time.

> **Note** Setting or changing the system time causes the CDM to reboot immediately. CEs begin using the new system time settings following their next reboot.

Step 6 Click **OK** to confirm your decision. Your CDM reboots immediately. Clicking **Cancel** returns the system time values to their previous settings.

Reconfiguring CDN Devices Following a CDM IP Address Change

Use any of the following procedures to reconfigure your CDM and your Content Engines (CEs) when the CDM IP address has changed. It is critical that you have some plan for redirecting your CEs to your CDM before changing the CDM IP address, and that you monitor the status of your CEs throughout the transition period to confirm that all CEs are ultimately able to connect to the CDM at its new address.

The three approved methods for reconfiguring your CDN devices following a CDM change of address are:

- DNS-based reconfiguration
- CDM-based reconfiguration
- Installation Wizard-based reconfiguration

DNS-based Reconfiguration

This reconfiguration option is available to customers using DNS to connect to their CDN devices.

Note   If you are using DNS, reconfiguring your CEs and CDM using the DNS-based solution is preferable to the other methods discussed here, because it is simpler to implement and requires little or no administrative intervention.

To reconfigure your CEs if you are using DNS:

Step 1   Change the IP address of the CDM to the new IP address. You can change the CDM IP address using either the CDM Device Editor or the CDN Installation Wizard. Refer to Chapter 2, "Configuring Cisco Content Delivery Network Devices," in the *Cisco CDN Enterprise Solution User Guide*.

Step 2   Access the administrative interface of your DNS server software and change the IP address of the CDMs DNS name to match the new IP address of the CDM.

Step 3   Return to the CDM and click **System**.

The System dialog box appears.

Step 4   Make sure that the CDM is listed in the Device Selector dropdown list. If it is not, expand the list and choose the CDM from the devices listed.

Step 5   Click **System Reboot** to reboot your CDM and reconnect it to your network using the new IP address.

Step 6   Wait until your CE devices are pointed to the CDMs new address.

Approximately 45 minutes after your CDM comes back online at its new address, your CEs will begin going offline, once the CDM is no longer available at its prior address. The CEs automatically use the DNS name of the CDM to resolve the address of the CDM to its new IP address.

Step 7   Click **Device Console**. Monitor your CEs and verify that each CE is able to locate the CDM and come back online.

Step 8   If one or more CEs are not able to resolve the new address, use the Installation Wizard to manually point them to the location of the CDM. See the "Installation Wizard-Based Reconfiguration" section on page 14 or the *Cisco CDN Software Enterprise Solution Configuration Guide* for more information.

CDM-based Reconfiguration

If you are not using Domain Name System (DNS) on your network, you can provide your CEs with the new address of the CDM using the Alternate IP Address field on the TCP/IP dialog box. This field stores the new address of the CDM before the CDM has actually changed addresses. CEs that are unable to connect to the CDM at its original address look for the alternate IP address, and then try to reach the CDM at that location.

To configure the alternate IP address for your CDM:

Step 1   From the Device Editor, click **TCP/IP**.

The TCP/IP dialog box appears.

Step 2   Verify that the CDM appears in the Device Selector dropdown list. If the CDM does not appear, expand the list and choose the CDM.

Step 3   Click the **Specify an IP address, port, subnet mask, and gateway** option.

The current IP address of the CDM appears in the IP Address field.

Step 4   Without changing any of the information presented, place the cursor in the Alternate IP Address field and enter the new IP address for the CDM in valid "dotted quad" format. For example:

```
192.168.200.0
```

Step 5   Click **Save Changes** to save the address.

Step 6   Wait approximately one hour before moving the CDM to the address you entered in the Alternate IP Address field.

Once an hour has passed, you can change the actual CDM IP address using either the CDM Device Editor, or the CDN Installation Wizard, or by reconfiguring your DHCP server. Enter the new IP address of the CDM into the IP Address field in the TCP/IP dialog box. This address should match the address in the Alternate IP Address field.

Refer to Chapter 2, "Configuring Cisco Content Delivery Network Devices," in the *Cisco CDN Enterprise Solution User Guide* for more instructions on changing the IP address of CDN devices.

Step 7   Click **Save Changes**.

Step 8   Click **System**.

The System dialog box appears.

Step 9   Make sure that the CDM is listed in the Device Selector dropdown list. If it is not, expand the list and choose the CDM from the devices listed.

Step 10   Click **System Reboot** to reboot the CDM and reconnect it to your network using the new IP address.

Step 11   Wait for the CE devices to point to the CDM's new address.

Approximately 45 minutes after your CDM comes back online at its new address, your CEs will begin going offline, once the CDM is no longer available at its prior address. The CEs automatically use the DNS name of the CDM to resolve the address of the CDM to its new IP address.

Step 12   Click **Device Console**. Monitor your CEs and verify that each CE is able to locate the CDM and come back online.

Step 13   If one or more CEs are not able to resolve the CDM's new address, use the Installation Wizard to manually point them to the location of the CDM. See the "Installation Wizard-Based Reconfiguration" section on page 14 or the *Cisco CDN Software Enterprise Solution Configuration Guide* for more information.

Installation Wizard-Based Reconfiguration

The CDN Installation Wizard can be used to reconfigure your CDM or CEs. Use the Installation Wizard if you were unable to successfully move your CDM to a new IP address using the CDM interface, or if one or more CEs failed to locate the CDM at its new address after you followed the instructions in the "DNS-based Reconfiguration" section on page 12 or the "CDM-based Reconfiguration" section on page 13.

To manually reconfigure a CDM or CE using the Installation Wizard:

Step 1   Launch the CDN Installation Wizard. Refer to Chapter 1, "Overview," in the *Cisco CDN Software Enterprise Solution Configuration Guide* for instructions on activating the Installation Wizard.

The Cisco Content Delivery Network Installation Wizard screen appears.

Step 2   Click **Next** to advance to the next step in the Installation Wizard.

The Select a Device dialog box lists all CDN devices on the subnet by their device ID or by a user-friendly name previously assigned using the Installation Wizard.

Step 3   Choose the first CE or CDM device you want to configure and click **Next** to advance to the next step in the Installation Wizard.

The Name dialog box appears.

Step 4   If you have not already done so, enter a user-friendly name in the field provided.

This name supplements the alphanumeric device ID or MAC address and makes it easier to identify the device when you use the Installation Wizard or CDM user interface.

Step 5   Click **Next** to advance to the next step in the Installation Wizard.

- If the device you selected is a CE, proceed to Step 6.

    The Content Distribution Manager dialog box appears.

- If the device you selected is a CDM, go to Step 8.

Step 6   Use the fields provided to point your CE to the CDM's new IP address on your network. You must complete this step in order for your CE to be able to communicate with the rest of the CDN and begin receiving media.

- Choose **Name** to identify the CDM by its DNS name, and enter the DNS name in the field provided.

- Choose **IP address** to identify the CDM by its IP address, and enter the IP address in the field provided in valid "dotted quad" format. For example:

    `192.168.200.223`

Step 7   Click **Next** to advance to the next step in the Installation Wizard: indicating whether or not you are using a DHCP server.

The Obtain Network Settings Automatically (DHCP) dialog box appears.

Step 8   Perform one of the following actions:

- If you are using DHCP, choose **Yes** and then click **Next** to proceed to the next step in the Installation Wizard: configuring a Domain Name Server.

- If you are not using DHCP and are configuring CDN devices manually, choose **No** and then click **Next**.

  The Network Settings dialog box appears.

  - Place your cursor in the IP address field and enter the network IP address, using the arrow key to move from block to block.

  - Press the **Tab** key to advance to the next fields and enter the subnet mask, if one is being used, as well as the gateway address used by the selected CE or CDM.

  The DNS-Domain Name Server dialog box appears.

Step 9   Perform one of the following actions:

- If you are using a DNS server, choose **Yes**, and then click **Next** to advance to the DNS Servers dialog box and provide the IP addresses of DNS servers referenced by your CDN devices.

  Click **Next** to advance to the next step in the Installation Wizard: identifying your proxy server (if one exists).

- If you are not using DNS, choose **No** and then click **Next** to advance to the next step in the Installation Wizard: identifying your proxy server (if one exists).

  The Proxy Server dialog box appears.

Step 10   Perform one of the following actions:

- If you are using a proxy server, choose **Yes**, and then click **Next** to advance to the next step in the Installation Wizard: identifying Proxy Settings. The Proxy Settings dialog box appears.

  - In the fields provided, enter the IP address of the proxy server and the number of the designated port through which traffic will pass (usually 80).

  - Click **Next** to advance to the next step in the Installation Wizard: identifying a secure proxy server (if one exists).

- If you are not using a proxy server, choose **No** and then click **Next** to advance to the next step in the Installation Wizard: identifying a secure proxy server (if one exists).

  The Secure Proxy Server dialog box appears.

Step 11   Perform one of the following actions:

- If you are using a secure proxy server, choose **Yes**, and then click **Next**. The Secure Proxy Settings dialog box appears.

  - Using the fields provided, enter the IP address, port number, proxy server username and password.

  - Click **Next** to advance to the next step in the Installation Wizard: specifying addresses that will be treated as proxy exceptions.

- If you are not using a secure proxy server, choose **No** and click **Next** to advance to the next step in the Installation Wizard: specifying any addresses that will be treated as proxy exceptions.

  The Proxy Exceptions List dialog box appears.

Step 12   Perform one of the following actions:

- If you do not have addresses you wish to treat as proxy exceptions, choose **No**, and then click **Next** to advance to the next step in the Installation Wizard: reviewing the configuration settings for your selected device.

- If you have addresses that you do not want to connect through your proxy or secure proxy server, choose **Yes** and then click **Next**.

  The Proxy Exceptions dialog box appears.

  – Enter the IP address of your first exception in the field provided, and then click **Add** to add it to the list of exceptions immediately below.

  – Repeat this step for each exception. If you make a mistake, click the exception address in the list of exceptions, and then click **Remove** to remove the address from the list.

  – When you have finished adding exceptions, click **Next** to advance to the next step in the Installation Wizard: reviewing the configuration settings for your CDN device.

  The Settings dialog box appears.

Step 13 Review the configuration settings for your CDN device.

- If the information is not accurate, click **Back** to step back in the Installation Wizard and change the configuration information.

- Otherwise, click **Finish** to configure the CE or CDM using the settings displayed and advance to the next step in the Installation Wizard: confirming configuration of the CDN device.

Tips If you want to copy the information for use in another application, document, or e-mail, click **Copy info** to copy the configuration settings to your Windows clipboard. You can then paste the information into another Windows application.

The Configuring dialog box appears.

Step 14 Perform one of the following actions:

- If this is a CDM or is not a new CE, proceed to Step 15 and wait for the device status to change to "online" before exiting the Installation Wizard.

- If this is a new CE, the device is reconfigured using the settings provided with the Installation Wizard, and then awaits approval. You must manually approve the new CE:

  – Log on to the CDM and click **Device Console**. The CDM lists all associated CDN devices. The new CE appears with a caution status indicator in the online column.

  – Click **Edit** to edit the CE settings. From the Identification dialog box, check the **Approve** check box.

  – Click **Save Changes**. Return to the Installation Wizard and wait for the CDM approval to register.

Note It may take a few moments for the CE to integrate the new configuration settings and come back online. Monitor the status messages provided in the Configuring dialog box and verify that your CE device is able to come online properly.

The machine status indicator located beneath the Copy info button will turn green and read "online."

Step 15 Once the device status is "online," click **More** to return to the Select a Device dialog box and configure another of your CDN devices, or click **Exit** to close the Installation Wizard.

If the device fails to come online, click **Back** to step backward in the Installation Wizard and review your configuration settings.

After initial device configuration, the CDM user interface can be used to modify the configuration settings on any of your devices. Refer to Chapter 2, "Configuring Cisco Content Delivery Network Devices," in the *Cisco CDN Software Enterprise Solution User Guide* for detailed instructions on configuring your CDM or CEs using the CDM user interface.

Resetting the Default Administrator Password

Ordinarily, CDN administrators change the default administrator's (admin) account password in the same manner as any other account password. See Chapter 2, "Configuring Cisco Content Delivery Network Devices," in the *Cisco CDN Enterprise Solution User Guide* for details on changing passwords for accounts.

However, if you lose track of the password for the admin account and accidentally lock yourself out of the CDM administrative interface, you must manually reset the password for the admin account before regaining access to the CDM and the Users feature.

Resetting the admin account password restores the factory-configured password to the account. After resetting this password and rebooting the CDM, administrators can again log on using the admin account and configure the password for the account, as well as for other user and administrative accounts.

> **Note** In order to reset the password for the default administrator account, admin, you must have physical access to the CDM device and have sufficient permissions to be able to log on to that device.

Use the following procedure to reset your default administrator password:

Step 1 Ask any users currently using the CDM to exit the system. In order to reset the default administrator password, you will be required to reboot the CDM twice.

Step 2 Terminate any active Linux sessions by entering **exit** at the prompt.

Step 3 Reboot the CDM machine by powering the machine off, and then on again.

Step 4 Wait for the following prompt:

```
LILO Boot:
```

Step 5 If your CDN devices are using Cisco hardware, enter the following command to log on to the CDM as a single user, and then press **Enter**:

```
LILO Boot# linux single
```

If your CDN devices are installed on hardware that was not manufactured by Cisco Systems, enter the following command to log on to the CDM as a single user, instead of the command listed above. Press **Enter** to initiate the logon.

```
LILO Boot# linux single console=tty0
```

Step 6 Enter the following path for the reset password script, resetpass, as follows at the bash# prompt:

```
bash# source /sonoma/sys/bin/resetpass
```

The script executes, resetting the password for the admin account and rebooting the CDM machine. Once the CDM has completed its reboot, you can log on using the default administrator account by entering the username, **admin**, and the factory-configured password.

Updates to the CDN Installation Wizard

The Cisco CDN Installation Wizard for the Cisco CDN Version 2.1 has changed substantially from previous versions. Changes include:

- Updated user interface
- New procedures for activating and troubleshooting CDMs and CEs

Refer to the *Cisco CDN Enterprise Solution Configuration Guide Version* for information on using the updated Installation Wizard to activate your CDN devices.

Important Notes

The following section contains important notes about the Cisco CDN Software Enterprise Solution Version 2.1 that are not covered in the standard product documentation.

Slow Performance and Choppy Playback from Content Engines

When CDN devices connect to routers or switches which have not been configured to automatically negotiate data transfer modes have been configured to force the use of one data transfer mode (usually 100 Mbps full duplex), some customers have experienced slow performance and "choppy" playback of media from their CEs.

Decreased playback performance results because the CDN device Ethernet card switches from 100 Mbps full-duplex mode to 100 Mbps half-duplex mode, in which data transmission and reception cannot take place simultaneously.

Most Ethernet cards that negotiate duplex settings and port speeds are programmed to avoid conflicts when transmitting data by switching to half-duplex mode automatically when they detect that they are connected to a device (for example, a hub) that does not negotiate duplex mode and port speed. Ports that are configured to force the use of one duplex setting and port speed prompt this response.

We recommend making one of the two following changes to alleviate the problem of choppy media playback and slow performance resulting from this conflict:

- Reconfigure the router or switch to negotiate the duplex setting and speed.
- Reconfigure the CDN device Ethernet card, forcing the use of a duplex setting and speed that match your router settings in the event that autonegotiation fails.

The decision about which device to reconfigure should be made in consultation with your network administrators and in keeping with your own corporate IT policies and procedures.

Reconfigure the Router or Switch to Negotiate Duplex Setting and Speed

To change the configuration of the router or switch that your CDN devices connect to so that it negotiates duplex settings and speeds, refer to the installation, configuration, or command interface documentation that came with the hardware.

If you are unsure of the correct procedure for reconfiguring your hardware, contact the manufacturer's technical support center before proceeding. For questions regarding your CDN software or Cisco hardware, contact Cisco's Technical Assistance Center (TAC). Refer to the "Obtaining Technical Assistance" section on page 25 for more information on contacting the TAC.

Reconfigure the Ethernet Card to Use Full Duplex

To change the configuration of the CDN device Ethernet card so that it uses full duplex mode as a default instead of half duplex mode when autonegotiation fails, use the administrative Set Ethernet Fallback feature. This feature forces your CDM or CEs Ethernet card to use full duplex mode by default, as opposed to half duplex mode.

To change the Ethernet card to Full Duplex mode:

Step 1 Launch your Web browser.

Step 2 In the field provided for the Web page URL, enter the following information, substituting the IP address of the CDM or CE where appropriate:

`http://<CDN_DEVICE_IP_ADDRESS>/cgi-bin/restricted/set-mii-fdv=dibeng.dllco`

You are prompted to log on to the device.

Step 3 Enter the administrative username and password and click **OK**. For example:

`User Name:` **admin**

`Password:` **default**

The Set Ethernet Fallback dialog box appears.

Step 4 Click the drop-down list and choose **Full Duplex** from the list.

Step 5 Click **Submit Change**.

A message appears confirming the default mode that will be used by the Ethernet card when autonegotiation fails.

Step 6 Reboot the device. Refer to Chapter 4, "Maintaining the System Software," in the *Cisco CDN Enterprise Solution User Guide* for instructions on rebooting CDN devices.

If autonegotiation with the router fails, the device will use the duplex mode you specified.

For questions regarding your CDN software or Cisco hardware, contact the TAC. Refer to the "Obtaining Technical Assistance" section on page 25 for more information on contacting the TAC.

Caveats

The following sections list resolved and open caveats for the CDN Software Enterprise Solution Version 2.1.

Open Caveats—CDN Software Enterprise Solution Version 2.1

The following caveats are open (unresolved) at the time of shipment.

- CSCds66386

  The CDM must be rebooted to recognize changes made in the DNS dialog box.

- CSCds74833

  A memory leak in Internet Explorer Version 5.5 causes large imports to fail when the CDM Import Progress feature is used to monitor the import.

- CSCds75476

  The Media Importer GetListofFiles feature fails when you use Netscape Communicator Version 4.7 with Windows 2000.

- CSCds75503

  Some elements of the Media Editor interface are truncated when viewed on Netscape Communicator Version 4.7 on Windows 2000.

  CSCds75534

  The TV Controls interface does not display the status message "There are not TV-enabled CEs on your network" when viewed using Netscape Communicator Version 4.7 on Windows 2000.

- CSCsp01176

  Pressing the **Enter** key in the Device Name field of the CDM Device Editor brings up the HTML text usage page.

- CSCsp01340

  The CDM does not return an error when inconsistent coverage zones are specified.

- CSCsp01362

  White space characters occurring after the channel name in the CDM Channel Settings dialog box make the channel unselectable in the Channel Selector list box.

Resolved Caveats—CDN Software Enterprise Solution Version 2.1

The following caveats, reported in earlier CDN Software Enterprise Solution releases, have been resolved for the Version 2.1 release.

- CSCds67949

  The Installation Wizard accepts invalid subnet addresses when configuring CEs.

- CSCds71640

  The Playback rate field on the CDM accepts rates in the range of 99 Mbps to 249 Mbps when the playback limit is set to 25 Mbps.

- CSCds74623

  Instructions for resetting the default administrator password in Chapter 2, "Configuring Cisco Content Delivery Network Devices," of the *Cisco CDN Enterprise Solution User Guide* should cover logging on to both Cisco and non-Cisco hardware.

- CSCds74865

  Use of the RestoreDown button on a Netscape Communicator 4.7 browser with Windows 2000 causes the CDM user interface to disappear.

- CSCsp00637

  The CDM user interface allows incorrect setting of a subnet mask for coverage zones.

- CSCsp00685

  The CDM Backup/Restore dialog box contains a typo (DILIVERY rather than DELIVERY).

- CSCsp00721

  The Channel Size Limit field on the CDM does not always appear correctly in the Netscape browser.

- CSCsp00758

  The Cancel Import feature on the CDM Media Importer displays the wrong Import Progress user interface when any menu item in the Channels section is selected.

- CSCsp00815

  The Repeat and the Last buttons in the CDM TV Controls dialog box perform the same function.

- CSCsp00858

  The System Reconfiguration feature appears twice in the CDM user interface.

- CSCsp00978

  There is an incorrect error message.

- CSCsp01010

  Users are unable to delete bandwidth when using the Microsoft Internet Explorer browser.

- CSCsp01125

  The CDM Help file index includes confusing links for the keywords "auto-replicate" and "auto-subscribe."

- CSCsp01156

  The CDM Import Progress dialog box indicates that a file import is complete when it is not.

- CSCsp01201

  The system log on the CDM does not display any indication of the device time zone.

- CSCsp01204

  Copying media files from one channel to another using the Media Editor on the CDM increases the size in the channel.

- CSCsp01205

  The CDM Help file index keywords link to unrelated help topics.

- CSCsp01210

  Large-scale FTP imports to a directory with a space in the directory name hang with 0% pending.

- CSCsp01236

  Step 5 in the "Performing a Manual Upgrade of CDN Software" topic of the CDM help is incomplete.

- CSCsp01262

  Changes to bandwidth settings entered on the CDM Bandwidth dialog box are not being saved.

- CSCsp01265

  The CDM deletes the MAPS record on startup.

- CSCsp01270

  A CE cannot be brought back online after moving from one CDM to another.

- CSCsp01280

  CEs still show up in the Subscriber Page even after an upgrade to Version 2.1.

- CSCsp01289

  CEs cannot be brought back online once they have been removed from the CDM.

- CSCsp01297

The FTP and PC Folders on the CDM Media Importer fail with 0% pending if an HTTP proxy is configured.

- CSCsp01343

  The Copy feature on the CDM Media Editor dialog box is able to copy only 44 files.

- CSCsp01350

  Configuring a CDM a second time using the Installation Wizard causes the CDM to hang.

- CSCsp01359

  The playback bandwidth limit as set in the CDM Bandwidth dialog box is not honored during playback.

- CSCsp01365

  The CDM intermittently loses contact with CEs because too many event records are being logged.

- CSCsp01375

  When importing a file with special characters in the filename using the CDM Media Importer, the system hangs indefinitely with a state of Pending.

- CSCsp01389

  The default start and stop times on the CDM TV Controls dialog box reflect the local time for the user's workstation rather than the local time of the selected TV-Out device.

Documentation Updates

The following sections detail changes or additions to the Cisco CDN Software Enterprise Solution documentation as well as omissions to the published CDN Software Enterprise Solution Version 2.1 documents.

Changes

Changes to the Cisco CDN Enterprise Solution documentation are listed below. Changes common to all documents are listed first. Following that, changes are grouped by document.

The references to Cisco Content Distribution Network have been changed to Cisco Content Delivery Network or CDN.

Cisco CDN Software Enterprise Solution Configuration Guide

- Passages referencing the CDN Installation Wizard have been revised to reflect the updated Installation Wizard user interface and procedures.

- Illustrations depicting the Installation Wizard Select a Device, Network Settings, Proxy Settings and Settings, dialog boxes have been added.

- Installation Wizard status icons have been documented.

- Instructions on installing the Installation Wizard have been moved from Chapter 3 to Chapter 1.

- Instructions on installing the Installation Wizard and running it locally have been updated to reflect the Version 2.1 wizard.

- Chapter 2, "Configuring and Activating Content Delivery Network Devices," has been reorganized to reflect the new Installation Wizard.

- Procedures for activating the CDM without a DHCP server and activating CEs in Chapter 2, "Configuring and Activating Content Delivery Network Devices," have been updated to reflect use of the new Installation Wizard.

Cisco CDN Software Enterprise Solution User Guide

The features and product changes described in this section are documented in the *Cisco CDN Software Enterprise Solution User Guide Version 2.1*, which is available online at Cisco.com or on the most recent Documentation CD-ROM from Cisco Systems. Refer to the "Obtaining Documentation" section on page 24 for instructions on obtaining the latest documentation from Cisco.

- References to the device console have been changed to reflect new status icons for CDN devices.

- Illustrations of the System and Identification dialog boxes have changed to reflect changes in the CDM user interface.

- Chapter 2, "Configuring Cisco Content Delivery Network Devices," has been updated to include the sections "Creating Coverage Zones" and "Editing the System Time."

- Chapter 2, "Configuring Cisco Content Delivery Network Devices"—instructions in the "Changing the CDM IP Address" section have been updated to reflect removal of the System Reconfiguration option.

- Chapter 3, "Working with the Content Delivery Network," has been updated to include the sections "Editing Playlist Playback Times," "Removing Media from a Playlist Using the TV controller," "Playing Media on TV-Out Enabled Devices," and "Viewing Information About a Media File That Is Playing."

- Chapter 3, "Working with the Content Delivery Network" —Table 3-1 has been changed to remove reference to the Hypercast option, which has been discontinued in Version 2.1.

- Chapter 3, "Working with the Content Delivery Network"—Figure 3-1 Channel Settings Dialog Box has been updated. The Hypercast feature has been discontinued and the Hypercast option has been removed from the Channel Settings dialog box.

- Chapter 4, "Maintaining the System Software—Instructions in "Reconfiguring CDN Devices" have been updated to reflect the Version 2.1 software, which does not rely on a registry. The Reset feature is no longer used to reconfigure CEs and the CDM when the CDM has moved or changed its IP address.

- Chapter 4, "Maintaining the System Software"—Figure 4-1 System Dialog Box has been updated. The System Reconfiguration feature has been discontinued and the Reset button removed from the System dialog box on the CDM.

- Chapter 4, "Maintaining the System Software"—instructions in "Updating Software from Cisco.com" have been changed to point to the current location of the CDN Software update files on Cisco.com.

Omissions

Cisco CDN Software Enterprise Solution Configuration Guide Version 2.1

The following are omissions or inaccuracies in the *Cisco CDN Software Enterprise Solution Configuration Guide Version 2.1*:

Preface—"Obtaining Technical Assistance" section contains references to Cisco Connection Online (CCO). These references should read "Cisco.com."

Preface—The "Related Documentation" section contains a reference to the *Regulatory Compliance and Safety for the Cisco Content Engine Series* document. This document has been discontinued. Refer to the *Regulatory Compliance and Safety for the Cisco Content Networking Product Series* document.

Cisco CDN Software Enterprise Solution User Guide Version 2.1

The *Cisco CDN Software Enterprise Solution User Guide Version 2.1* has been released in electronic format only.

There are no known inaccuracies in the user guide at the time of release. Please see the "Obtaining Documentation" section on page 24 for information on obtaining a copy of the Version 2.1 user guide from Cisco's website, Cisco.com, or from the Documentation CD-ROM.

Related Documentation

The Cisco Content Delivery Network software comes with both printed documentation and online help to assist you in learning to use the features of the CDN. Refer to the following documents when you have questions regarding the CDN software.

- *Cisco CDN Software Enterprise Solution Configuration Guide*
- *Cisco CDN Software Enterprise Solution User Guide*
- *SightPath to Cisco Hardware Migration Procedure*
- Cisco CDN online help system

In addition, you can find information related to the installation, configuration, and maintenance of your CDN hardware in the following Cisco Systems documents:

- *Cisco Content Engine 500 Series Hardware Installation Guide*
- *Cisco Content Networking Hardware Installation Guide for the Seven-Rack Unit Chassis*
- *Regulatory Compliance and Safety Information for the Cisco Content Networking Product Series*
- *Cisco Content Distribution Manager 4630 Hardware Installation Guide*
- *Cisco Content Distribution Manager 4650* (Product Description Note)

Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- http://www.cisco.com
- http://www-china.cisco.com
- http://www-europe.cisco.com

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:

  http://www.cisco.com/cgi-bin/order/order_root.pl

- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:

  http://www.cisco.com/go/subscription

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit technical comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco.

You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, for your convenience many documents contain a response card behind the front cover. Otherwise, you can mail your comments to the following address:

Cisco Systems, Inc.
Document Resource Connection
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

Cisco.com provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through Cisco.com, you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

http://www.cisco.com

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

http://www.cisco.com/register/

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

http://www.cisco.com/tac/caseopen

Contacting TAC by Telephone

If you have a priority level 1(P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.

- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.