



CHAPTER 7

Software Upgrades

You can use the Software Upgrades options to perform the following types of installations and upgrades:

- **Install/Upgrade**—Use this option to upgrade the application software, install Cisco Unified Communications Manager Locale Installers and dial plans, and upload and install device packs, phone firmware loads, and other COP files.
- **TFTP File Management**—Use this option to upload various device files for use by the phones to the TFTP server. The TFTP server files that you can upload include custom phone rings, callback tones, and phone backgrounds.

Software Upgrade and Installation

With this version of Cisco Unified Communications Manager, you can install upgrade software on your server while the system continues to operate. Two partitions exist on your system: an active, bootable partition and an inactive, bootable partition. The system boots up and operates entirely on the partition that is marked as the active partition.

When you install upgrade software, you install the software on the inactive partition. The system continues to function normally while you are installing the software. When you are ready, you activate the inactive partition and reboot the system with the new upgrade software. The current active partition will then get identified as the inactive partition when the system restarts. The current software remains in the inactive partition until the next upgrade. Your configuration information migrates automatically to the upgraded version in the active partition.

If for any reason you decide to back out of the upgrade, you can restart the system to the inactive partition that contains the older version of the software. However, any configuration changes that you made since upgrading the software will be lost.



Note

You can only make changes to the database on the active partition. The database on the inactive partition does not get updated. If you make changes to the database after an upgrade, you must repeat those changes after switching the partition.

You can install a patch or upgrade version from a DVD (local source) or from a network location (remote source) that the Cisco Unified Communications Manager server can access.

You must install the upgrade patch on the first node before installing it on subscriber nodes. You can install the upgrade patch on multiple subscriber servers at the same time. When you are ready to activate the new version, you must activate the new software on the first node before activating it on all other nodes.

**Note**

Be sure to back up your system data before starting the software upgrade process. For more information, see the *Disaster Recovery System Administration Guide*.

Upgrading to Cisco Unified Communications Manager Release 6.1(1)

Starting with Cisco Unified Communications Manager version 6.1(1), CAPF uses the Certificate Manager Infrastructure to manage its certificates and keys. Because of this, when you upgrade to version 6.1(1) or higher, CAPF keys and certificates automatically get regenerated. You must then rerun the CTL Client application to upgrade the CTL file. For information on using CAPF with Cisco Unified Communications Manager, refer to the *Cisco Unified Communications Manager Security Guide*.

Obtain licenses for Cisco Unified Communications Manager 6.1(1) before upgrading to this release. You must import your new licenses after upgrading to enable the system. Refer to *Cisco Unified Communications Manager Administration Guide* for information about licensing and obtaining licenses.

Obtaining the Upgrade File

Before you begin the upgrade process, you must obtain the appropriate upgrade file from Cisco.com.

If you are upgrading from Cisco Unified Communications Manager release 5.x, the upgrade file name has the following format:

```
cisco-ipt-k9-patchX.X.X.X-X.tar.gz.sgn
```

Where X.X.X.X-X represents the release and build number.

**Note**

Do not rename the patch file before you install it because the system will not recognize it as a valid file.

**Note**

Do not unzip or untar the file. If you do, the system may not be able to read the upgrade files.

If you are upgrading from Cisco Unified Communications Manager release 6.x, the upgrade file has the extension `sgn.iso`.

You can access the upgrade file during the installation process from either a local disk (CD or DVD) or from a remote FTP or TFTP server.

Upgrading from Local Source

You can install software from a CD or DVD that is located in the local disc drive and then start the upgrade process.

To install or upgrade software from a CD or DVD, follow this procedure:

Procedure

Step 1 Create an upgrade disk by using the upgrade file that you downloaded from Cisco.com.

- If you are using an upgrade file with the tar.gz.sgn extension, copy the upgrade file to a writeable DVD.
- If you are using an upgrade file with the sgn.iso extension, you must create an ISO image on a writable DVD from the upgrade file. Just copying the .iso file to the DVD will not work.

- Step 2** Insert the new DVD into the disc drive on the local server that is to be upgraded.
- Step 3** Log into Cisco Unified Communications Operating System Administration.
- Step 4** Navigate to **Software Upgrades > Install/Upgrade**.
The Software Installation/Upgrade window displays.
- Step 5** Choose **DVD/CD** from the **Source** list.
- Step 6** Enter the path to the patch file on the CD or DVD in the Directory field.
If the file is in the root directory, or if you created an ISO image DVD, enter a slash (/) in the Directory field.
- Step 7** To continue the upgrade process, click **Next**.
- Step 8** Choose the upgrade version that you want to install and click **Next**.
- Step 9** In the next window, monitor the progress of the download.
When the download completes, the next window displays a checksum value if you are using an upgrade file with the tar.gz.sg extension. No checksum is displayed if you burned an ISO image DVD.
- Step 10** Verify the checksum value against the checksum for the file that you downloaded that is shown on Cisco.com.

**Caution**

The two checksum values must match to ensure the authenticity and integrity of the upgrade file. If the checksum values do not match, download a fresh version of the file from Cisco.com and try the upgrade again.


- Step 11** Click **Next**.
- Step 12** If you want to install the upgrade and automatically reboot to the upgraded partition, choose **Reboot to upgraded partition**. The system restarts running the upgraded software.
- Step 13** If you want to install the upgrade and then manually reboot to the upgraded partition at a later time, do the following steps:
- a. Choose **Do not reboot after upgrade**.
 - b. Click **Next**.
The Upgrade Status window displays the Upgrade log.
 - c. When the installation completes, click **Finish**.
 - d. To restart the system and activate the upgrade, choose **Settings > Version**; then, click **Switch Version**.

The system restarts running the upgraded software.

Upgrading from Remote Source

To upgrade the software from a network location or remote server, use the following procedure.

Procedure

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- Step 1** Put the upgrade file on an FTP or SFTP server that the server you are upgrading can access.
- Step 2** Log into Cisco Unified Communications Operating System Administration.
- Step 3** Navigate to **Software Upgrades > Install/Upgrade**.
The Software Installation/Upgrade window displays.
- Step 4** Choose **Remote Filesystem** from the **Source** list.
- Step 5** Enter the path to the directory that contains the patch file on the remote system in the **Directory** field.
If the upgrade file is located on a Linux or Unix server, you must enter a forward slash at the beginning of the directory path. For example, if the upgrade file is in the patches directory, you must enter **/patches**. If the upgrade file is located on a Windows server, check with your system administrator for the correct directory path.
- If you are upgrading from Cisco Unified Communications Manager release 5.x, the upgrade file has the extension **tar.gz.sgn**.
 - If you are upgrading from Cisco Unified Communications Manager release 6.x, the upgrade file has the extension **sgn.iso**.
- Step 6** In the **Server** field, enter the server name or IP address.
- Step 7** In the **User Name** field, enter your user name on the remote server.
- Step 8** In the **User Password** field, enter your password on the remote server.
- Step 9** Select the transfer protocol from the **Transfer Protocol** field.
- Step 10** To continue the upgrade process, click **Next**.
- Step 11** Choose the upgrade version that you want to install and click **Next**.
- Step 12** In the next window, monitor the progress of the download.
When the download completes, the next window displays a checksum value if you are using an upgrade file with the **tar.gz.sg** extension. No checksum is displayed if you burned an ISO image DVD.
- Step 13** When the download completes, verify the checksum value against the checksum (if available) for the file you that downloaded that is shown on Cisco.com.
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Caution The two checksum values must match to ensure the authenticity and integrity of the upgrade file. If the checksum values do not match, download a fresh version of the file from Cisco.com and try the upgrade again.
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- Step 14** Click **Next**.
- Step 15** If you want to install the upgrade and automatically reboot to the upgraded partition, choose **Reboot to upgraded partition**. The system restarts running the upgraded software.
- Step 16** If you want to install the upgrade and then manually reboot to the upgraded partition at a later time, do the following steps:
- a. Choose **Do not reboot after upgrade**.
 - b. Click **Next**.
The Upgrade Status window displays the Upgrade log.
 - c. When the installation completes, click **Finish**.

- d. To restart the system and activate the upgrade, choose **Settings > Version**; then, click **Switch Version**.

The system restarts running the upgraded software.

Stalled Upgrades

During the installation of upgrade software, the upgrade may appear to stall. The upgrade log stops displaying new log messages. When the upgrade stalls, you must cancel the upgrade, disable I/O throttling, and restart the upgrade procedure. When you successfully complete the upgrade, you do not need to reenable I/O throttling.

To disable I/O throttling, enter the CLI command **utils iothrottle disable**.

To display the status of I/O throttling, enter the CLI command **utils iothrottle status**.

To enable I/O throttling, enter the CLI command **utils iothrottle enable**. By default, iothrottle is enabled.

If the system does not respond to the cancellation, you must reboot the server, disable I/O throttling, and restart the upgrade process procedure.

Reverting to a Previous Version

After upgrading, you can revert to the software version that was running before the upgrade, by restarting your system and switching to the software version on the inactive partition.

Procedure

- Step 1** Open Cisco Unified Communications Operating System Administration directly by entering the following URL:
`https://server-name/cmplatform`
where *server-name* is the host name or IP address of the Cisco Unified Communications Manager server.
 - Step 2** Enter your Administrator username and password.
 - Step 3** Choose **Settings>Version**.
The Version Settings window displays.
 - Step 4** Click the **Switch Versions** button.
When you verify that you want to restart the system, the system restarts running the upgraded software. This restart might take several minutes.
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Dial Plan Installation

You can install dial plan files from either a local or a remote source by using the same process that is described earlier in this chapter for installing software upgrades. See [Software Upgrade and Installation](#) for more information about this process.

After the dial plan files are installed on the system, log in to Cisco Unified Communications Manager Administration and then navigate to **Call Routing>Dial Plan Installer** to complete installing the dial plans.

Locale Installation

Cisco provides locale-specific versions of the Cisco Unified Communications Manager Locale Installer on www.cisco.com. Installed by the system administrator, the locale installer allows the user to view/receive the chosen translated text or tones, if applicable, when a user works with supported interfaces.

User Locales

User locale files provide translated text and voice prompts, if available, for phone displays, user applications, and user web pages in the locale that the user chooses. User-only locale installers exist on the web.

Network Locales

Network locale files provide country-specific phone tones and gateway tones, if available. Network-only locale installers exist on the web.

Cisco may combine multiple network locales in a single locale installer.



Note

The Cisco Media Convergence Server (MCS) or Cisco-approved, customer-provided server can support multiple locales. Installing multiple locale installers ensures that the user can choose from a multitude of locales.

Changes do not take effect until you reboot every server in the cluster. Cisco strongly recommends that you do not reboot the servers until you have installed all locales on all servers in the cluster. Minimize call-processing interruptions by rebooting the servers after regular business hours.

Installing Locales

You can install locale files from either a local or a remote source by using the same process that is described earlier in this chapter for installing software upgrades. See [Software Upgrade and Installation](#) for more information about this process.



Note

To activate the newly installed locales, you must restart the server.

See [Locale Files](#) for information on the locale files that you must install. You can install more than one locale before you restart the server.

Locale Files

When installing locales, you must install the following files:

- User Locale files—Contain language information for a specific language and country and use the following convention:

cm-locale-language-country-version.cop

- Combined Network Locale file—Contains country-specific files for all countries for various network items, including phone tones, annunciators, and gateway tones. The combined network locale file uses the following naming convention:

Error Messages

See [Table 7-1](#) for a description of the messages that can occur during Locale Installer activation. If an error occurs, you can view the messages in the installation log.

Table 7-1 *Locale Installer Error Messages and Descriptions*

Message	Description
[LOCALE] File not found: <language>_<country>_user_locale.csv, the user locale has not been added to the database.	This error occurs when the system cannot locate the CSV file, which contains user locale information to add to the database. This indicates an error with the build process.
[LOCALE] File not found: <country>_network_locale.csv, the network locale has not been added to the database.	This error occurs when the system cannot locate the CSV file, which contains network locale information to add to the database. This indicates an error with the build process.
[LOCALE] Communications Manager CSV file installer installdb is not present or not executable	A Cisco Unified Communications Manager application called installdb must be present; it reads information that is contained in a CSV file and applies it correctly to the Cisco Unified Communications Manager database. If this application is not found, it either was not installed with Cisco Unified Communications Manager (very unlikely), has been deleted (more likely), or the server does not have Cisco Unified Communications Manager installed (most likely). Installation of the locale will terminate because locales will not work without the correct records that are held in the database.

Table 7-1 *Locale Installer Error Messages and Descriptions (continued)*

Message	Description
[LOCALE] Could not create /usr/local/cm/application_locale/cmservices/ipma/com/cisco/ipma/client/locales/maDialogs_<ll>_<CC>.properties.Checksum.	These errors could occur when the system fails to create a checksum file, caused by an absent Java executable, /usr/local/thirdparty/java/j2sdk/jre/bin/java, an absent or damaged Java archive file, /usr/local/cm/jar/cmutil.jar, or absent or damaged Java class, com.cisco.cm.util.Zipper. Even if these errors occur, the locale will continue to work correctly, with the exception of Cisco Unified Communications Manager Assistant, which cannot detect a change in localized Cisco Unified Communications Manager Assistant files.
[LOCALE] Could not create /usr/local/cm/application_locale/cmservices/ipma/com/cisco/ipma/client/locales/maMessages_<ll>_<CC>.properties.Checksum.	
[LOCALE] Could not create /usr/local/cm/application_locale/cmservices/ipma/com/cisco/ipma/client/locales/maGlobalUI_<ll>_<CC>.properties.Checksum.	
[LOCALE] Could not create /usr/local/cm/application_locale/cmservices/ipma/LocaleMasterVersion.txt.Checksum.	
[LOCALE] Could not find /usr/local/cm/application_locale/cmservices/ipma/LocaleMasterVersion.txt in order to update Unified CM Assistant locale information.	This error occurs when the file has not been found in the correct location, which is most likely due to an error in the build process.
[LOCALE] Addition of <RPM-file-name> to the Cisco Unified Communications Manager database has failed!	This error occurs because of the collective result of any failure that occurs when a locale is being installed; it indicates a terminal condition.

Supported Cisco Unified Communications Products

For a list of products that Cisco Unified Communications Manager Locale Installers support, see the *Cisco IP Telephony Locale Installer for Cisco Unified Communications Manager*, which is available at this URL:

<http://www.cisco.com/cgi-bin/tablebuild.pl/callmgr-locale-51>

Managing TFTP Server Files

You can upload files for use by the phones to the TFTP server on the server. Files that you can upload include custom phone rings, callback tones, and backgrounds. This option uploads files only to the specific server to which you connected, and other nodes in the cluster do not get upgraded.

Files upload into the `tftp` directory by default. You can also upload files to a subdirectory of the `tftp` directory.

If you have two Cisco TFTP servers configured in the cluster, you must perform the following procedure on both servers. This process does not distribute files to all servers, nor to both of the Cisco TFTP servers in a cluster.

To upload and delete TFTP server files, follow this procedure:

Procedure

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- Step 1** From the Cisco Unified Communications Operating System Administration window, navigate to **Software Upgrades > TFTP File Management**.

The TFTP File Management window displays and shows a listing of the current uploaded files. You can filter the file list by using the Find controls.

- Step 2** To upload a file, follow this procedure:

- a. Click **Upload File**.

The Upload File dialog box opens.

- b. To upload a file, click **Browse** and then choose the file that you want to upload.

- c. To upload the file to a subdirectory of the `tftp` directory, enter the subdirectory in the **Directory** field.

- d. To start the upload, click **Upload File**.

The Status area indicates when the file uploads successfully.

- e. After the file uploads, restart the Cisco TFTP service.



Note If you plan to upload several files, restart the Cisco TFTP service only once, after you have uploaded all the files.

For information about restarting services, refer to *Cisco Unified Communications Manager Serviceability Administration Guide*.

- Step 3** To delete files, follow this procedure:

- a. Check the check boxes next to the files that you want to delete.

You can also click **Select All** to select all of the files, or **Clear All** to clear all selection.

- b. Click **Delete Selected**.
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Note If you want to modify a file that is already in the `tftp` directory, you can use the CLI command **file list tftp** to see the files in the TFTP directory and **file get tftp** to get a copy of a file in the TFTP directory. For more information, see [Appendix A, “Command Line Interface.”](#)
