



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, install Cisco Unity Connection locales, 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.

This chapter contains the following sections:

- [Pre-Upgrade Tasks, page 7-1](#)
- [Software Upgrade and Installation, page 7-2](#)
- [Post-Upgrade Tasks, page 7-7](#)
- [Stalled Upgrades, page 7-7](#)
- [Reverting to a Previous Version, page 7-8](#)
- [Dial Plan Installation, page 7-8](#)
- [Locale Installation, page 7-9](#)
- [Managing TFTP Server Files, page 7-10](#)

Pre-Upgrade Tasks

Before you begin the upgrade, perform the following tasks:

- Read the release notes for the new release and be sure you understand the new features and how the upgrade interacts with the other products associated with your system, such as JTAPI, IPMA, RTMT, IPCC, firewalls, and so on.

For Cisco Unified Communications Manager Business Edition, the release notes are located at

http://cisco.com/en/US/products/ps7273/prod_release_notes_list.html

For Cisco Unity Connection, the release notes are located at

http://cisco.com/en/US/products/ps6509/prod_release_notes_list.html

- Ensure that you have the necessary license files for the new release. For more information, see the *Cisco Unified Communications Manager Administration Guide*.

- Before you begin the upgrade, back up your system. For more information, see the *Disaster Recovery System Administration Guide*.
- Disable the Cisco Extension Mobility service by navigating to **Cisco Unified Serviceability > Tools > Service Activation**. For more information, see the *Cisco Unified Serviceability Administration Guide*.

**Note**

Be aware that when you deactivate the Cisco Extension Mobility service, Cisco Extension Mobility users will not be able to log in and log out of phones that support Cisco Extension Mobility.

**Caution**

Failure to deactivate the Cisco Extension Mobility service could cause the upgrade to fail.

After you complete the pre-upgrade tasks, continue with the “[Software Upgrade and Installation](#)” section on page 7-2.

Software Upgrade and Installation

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.

**Note**

If you have users logging in and logging out of Cisco Extension Mobility, this could cause the upgrade to fail. Before starting the upgrade, you must disable the Cisco Extension Mobility service. For more information, see the “[Pre-Upgrade Tasks](#)” section on page 7-1.

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 get 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 Business Edition server can access.

**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*.

This section contains the following topics:

- [Obtaining the Upgrade File, page 7-3](#)
- [Upgrading Software or Installing Locales from a Local Source, page 7-3](#)
- [Upgrading Software or Installing Locales from a Remote Source, page 7-4](#)

Obtaining the Upgrade File

Before you begin the upgrade process, you must obtain the appropriate upgrade file from Cisco.com. For more information, see the “Installation and Upgrade Information” section of the applicable Cisco Unified Communications Manager Business Edition release notes at http://www.cisco.com/en/US/products/ps7273/prod_release_notes_list.html.



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.

You can access the upgrade file during the installation process from either a local DVD or from a remote FTP or SFTP server. Be aware that directory names and filenames that you enter to access the upgrade file are case-sensitive.

Upgrading Software or Installing Locales from a Local Source

To upgrade the software from local DVD, follow this procedure:

Procedure

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- Step 1** If you are upgrading Cisco Unified Communications Manager Business Edition, skip to [Step 2](#).
If you are adding a Cisco Unity Connection locale, stop the Connection Conversation Manager and Connection Mixer services:
- Start Cisco Unity Connection Serviceability.
 - Navigate to **Tools > Control Center - Feature Services**.
 - Under Critical Services, in the Connection Conversation Manager row, click **Stop**.
 - Wait for the service to stop.
 - Also under Critical Services, in the Connection Mixer row, click **Stop**.
 - Wait for the service to stop.
- 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 by entering its URL in a browser:
`http://server-name/cmplatform`
where *server-name* is the name or IP address of the server.
- 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.
- Step 10** If you are upgrading Cisco Unified Communications Manager Business Edition, skip to [Step 11](#).
If you are installing Cisco Unity Connection locales and want to install another locale, click **Install Another**, and return to [Step 4](#).
If you do not want to install another locale, restart the Connection Conversation Manager and Connection Mixer services:
- Start Cisco Unity Connection Serviceability.
 - Navigate to **Tools > Control Center - Feature Services**.
 - Under Critical Services, in the Connection Conversation Manager row, click **Start**.
 - Wait for the service to start.
 - Also under Critical Services, in the Connection Mixer row, click **Start**.
 - Wait for the service to start.
 - Skip the rest of the procedure.
- Step 11** 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 12** If you want to install the upgrade and then manually reboot to the upgraded partition at a later time, do the following steps:
- Choose **Do not reboot after upgrade**.
 - Click **Next**.
The Upgrade Status window displays the Upgrade log.
 - When the installation completes, click **Finish**.
 - To restart the system and activate the upgrade, choose **Settings > Version**; then, click **Switch Version**.

The system restarts running the upgraded software.

Upgrading Software or Installing Locales from a Remote Source

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



Note

Do not use the browser controls, such as Refresh/Reload, while accessing Cisco Unified Operating System Administration. Instead, use the navigation controls provided by the interface.

Procedure

- Step 1** Put the upgrade file on an FTP or SFTP server that the server you are upgrading can access.
- Step 2** If you are upgrading Cisco Unified Communications Manager Business Edition, skip to [Step 3](#).
If you are adding a Cisco Unity Connection locale, stop the Connection Conversation Manager and Connection Mixer services:
- Start Cisco Unity Connection Serviceability.
 - Navigate to **Tools > Control Center - Feature Services**.
 - Under Critical Services, in the Connection Conversation Manager row, click **Stop**.
 - Wait for the service to stop.
 - Also under Critical Services, in the Connection Mixer row, click **Stop**.
 - Wait for the service to stop.
- Step 3** Log into Cisco Unified Communications Operating System Administration by entering its URL in a browser:
http://server-name/cmplatform
where *server-name* is the name or IP address of the server.
- Step 4** Navigate to **Software Upgrades > Install/Upgrade**.
The Software Installation/Upgrade window displays.
- Step 5** Choose **Remote Filesystem** from the **Source** list.
- Step 6** 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, remember that you are connecting to an FTP or SFTP server, so use the appropriate syntax, including:
- Begin the path with a forward slash (/) and use forward slashes throughout the path.
 - The path must start from the FTP or SFTP root directory on the server, so you cannot enter a Windows absolute path, which starts with a drive letter (for example, C:).
- Step 7** In the **Server** field, enter the server name or IP address.
- Step 8** In the **User Name** field, enter your user name on the remote server.
- Step 9** In the **User Password** field, enter your password on the remote server.
- Step 10** Select the transfer protocol from the **Transfer Protocol** field.
- Step 11** To continue the upgrade process, click **Next**.
- Step 12** Choose the upgrade version that you want to install and click **Next**.
- Step 13** In the next window, monitor the progress of the download.



Note If you lose your connection with the server or close your browser during the upgrade process, you may see the following message when you try to access the Software Upgrades menu again:

Warning: Another session is installing software, click Assume Control to take over the installation.

If you are sure you want to take over the session, click **Assume Control**.

If Assume Control does not display, you can also monitor the upgrade with the Real Time Monitoring Tool.

Step 14 If you are installing upgrade software, skip to [Step 15](#).

If you are installing Cisco Unity Connection locales and want to install another locale, click **Install Another**, and return to [Step 4](#).

If you do not want to install another locale, restart the Connection Conversation Manager and Connection Mixer services:

- a. Start Cisco Unity Connection Serviceability.
- b. Navigate to **Tools > Control Center - Feature Services**.
- c. Under Critical Services, in the Connection Conversation Manager row, click **Start**.
- d. Wait for the service to start.
- e. Also under Critical Services, in the Connection Mixer row, click **Start**.
- f. Wait for the service to start.
- g. Skip the rest of the procedure.

Step 15 If you want to install the upgrade and automatically reboot to the upgraded partition, choose **Reboot to upgraded partition**. The system restarts and runs 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.

Post-Upgrade Tasks

After the upgrade, perform the following tasks:

- Enable the Cisco Extension Mobility service by navigating to **Cisco Unified Serviceability > Tools > Service Activation**. For more information, see the *Cisco Unified Serviceability Administration Guide*.



Note If you do not enable the Cisco Extension Mobility service, Cisco Extension Mobility users will not be able to log in and log out of phones that support Cisco Extension Mobility.

- Verify phone functions by making the following types of calls:
 - Voice mail
 - Interoffice
 - Mobile phone
 - Local
 - National
 - International
 - Shared line
- Test the following phone features:
 - Conference
 - Barge
 - Transfer
 - C-Barge
 - Ring on shared lines
 - Do Not Disturb
 - Privacy
 - Presence
 - CTI call control
 - Busy Lamp Field
- If necessary, reinstall the Real Time Monitoring Tool.

Stalled Upgrades

During the installation of upgrade software, the upgrade may seem 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 remains 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 Business Edition 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.
After you verify that you want to restart the system, the system restarts, which might take up to 15 minutes.
- Step 5** To verify that the version switch was successful, you can follow these steps:
- Log into Open Cisco Unified Communications Operating System Administration again.
 - Choose **Settings>Version**.
The Version Settings window displays.
 - Verify that the correct product version is now running on the active partition.
 - Verify that all activated services are running.
 - Log into Cisco Unified Communications Manager Administration by entering the following URL and entering your user name and password:
`https://server-name/ccmadmin`
 - Verify that you can log in and that your configuration data exists.
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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 the [“Software Upgrade and Installation” section on page 7-2](#) for more information about this process.

After you install the dial plan files 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.

Cisco Unity Connection Locales

Cisco Unity Connection locales (languages) provide country-specific system prompts, graphical user interface, and text-to-speech functionality. For information on downloading Cisco Unity Connection locales, see the “Installation and Upgrade Information” section of the applicable Cisco Unified Communications Manager Business Edition release notes at http://www.cisco.com/en/US/products/ps7273/prod_release_notes_list.html.



Caution

Do not install more than five Cisco Unity Connection locales.

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 the “[Software Upgrade and Installation](#)” section on page 7-2 for more information about this process.



Note

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

See the “[Cisco Unified Communications Manager Locale Files](#)” section on page 7-9 for information on the Cisco Unified Communications Manager locale files that you must install. You can install more than one locale before you restart the server.

Cisco Unified Communications Manager Locale Files

When installing Cisco Unified Communications Manager 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:
cm-locale-combinednetworklocale-*version*.cop

Managing TFTP Server Files

You can upload files for use by the phones to the TFTP 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 that are 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 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 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 the *Command Line Interface Reference Guide for Cisco Unified Solutions*.
