Unified Communications Manager Upgrade to Release 9.1(2)

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Software Version Number

These release notes are based on the following software version of Unified Communications Manager: 9.1.2.10000-28

Pre-Upgrade Tasks

For customers who are upgrading from pre-9.0 releases (Releases 5.0 to 8.6) to any 9.x release, you must register all unused Product Authorization Keys (PAKs) and install all pre-9.0 licenses before you upgrade to
9.x. After you upgrade to the latest 9.x release, you will not be able to install pre-9.0 licenses onto a 9.x Enterprise License Manager.

For customers who are upgrading from pre-9.0 releases to 9.x, a license migration is required.

Before you upgrade to Cisco Unified Communications Manager Release 9.1(2), download and run the License Count Utility to gather data and submit a request to Cisco for a preupgrade license review report. This report is used for license migration to 9.x licenses.

To support high availability, Unified Communications Manager Release 9.x clusters operate in a full-featured demo mode for 60 days without a license. After 60 days, the clusters continue to operate and route calls, but the functionality to add or remove devices and users is disabled until valid licenses are available on the associated Enterprise License Manager (ELM).

Before you begin the upgrade, see the following:

- "License Migration" topic in the New and Changed Information chapter.
- Upgrade Guide for Cisco Unified Communications Manager.

⚠️ **Caution**

When you perform a Refresh Upgrade to the latest release of Cisco Unified Communications Manager, the system reboots several times as part of the upgrade process, and the service outage period is longer than with traditional upgrades. Therefore, you may want to perform the upgrade during a scheduled down time for your organization to avoid service interruptions. (The upgrade is a Refresh Upgrade when the major OS version changes between the "from" version and "to" version. For Unified Communications Manager upgrades to 9.1(2), the upgrade executes a Refresh Upgrade when the "from" version is earlier than Release 8.6(x)).

⚠️ **Caution**

If you upgrade to the U.S. export unrestricted version of Cisco Unified Communications Manager, you will not be able to later upgrade to or be able to perform a fresh install of the U.S. export restricted version of this software. Note that IP phone security configurations will be modified to disable signaling and media encryption (including encryption provided by the VPN phone feature).

⚠️ **Caution**

Be sure to back up your system data before starting the software upgrade process.
Pre-Upgrade Tasks

We recommend that you install and assign the Cisco Unified CM "vcs-interop" SIP Normalization script to make secure calls between CTS endpoints and endpoints and devices registered to VCS. For more information about the conditions required for secure calls, see this document:


For more information about the Cisco Unified CM script, see this document:


For more information about configuring Cisco Unified CM and Cisco VCS to interoperate via a SIP trunk, see this document:


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Note

If you are upgrading your software on HP 7825H3 or HP7828H3 hardware, there is no option to revert to the previous version of Cisco Unified Communications Manager. To perform an upgrade on one of these machines you must use an externally powered 16GB USB device to facilitate data migration from the old system to the new installation. For Unity Connection and Business Edition 5000, a 128GB external USB device is required. It is recommended to use an externally powered USB drive as other drives may not be recognized during the Refresh Upgrade sequence.

Consider the following notes:

- A non-bootable image is available for download from Cisco.com. This image may be downloaded to a network server (remote source) or burned to DVD (local source) and used for upgrades. DVDs that are ordered from Cisco are bootable and may be used for fresh installs.

- If you are performing a Refresh Upgrade from a version prior to Release 8.6(x) on HP7825H3 or HP7828H3 hardware, there is no option to revert to the previous version of Cisco Unified Communications Manager.

- If you do not back up your system data before starting the software upgrade process, your data will be lost if your upgrade fails.

- If you chose to revert to the prior version, you will need to install the prior version and restore your data from your DRS backup.

Cisco recommends that you locate your installation disks and license information for the previous version to facilitate the recovery, if necessary. For more information, see the Disaster Recovery System Administration Guide for Cisco Unified Communications Manager.

Interoperability Between Cisco TelePresence System Endpoints And Other Devices

Prior to Cisco Unified Communications Manager Release 9.0(1), to make secure calls between Cisco TelePresence System endpoints and endpoints and devices that are registered to Cisco TelePresence Video Communication Server, Cisco recommended that you install the Unified Communications Manager vcs-interop SIP normalization script.

If you are upgrading to Cisco Unified Communications Manager Release 9.x from Release 8.5(x), and you had previously created/imported a SIP Normalization Script for VCS interoperability, the upgrade to 9.x will...
fail if the name of the SIP Normalization Script used in your previous release is vcs-interop. In this case, you must rename the old script prior to completing the upgrade.

Overview of Software Upgrade Process

In addition to providing detailed upgrade considerations and prerequisite information, the Upgrade Guide for Cisco Unified Communications Manager also provides an overview of the upgrade process. Cisco recommends that you use that document as a reference before and during the upgrade process.

Also, see the new upgrade process available under the “Jump Upgrade” procedure.

You must follow a specific order when upgrading Unified Communications Manager and IM and Presence Service. The order depends on the release from which you are upgrading. The preupgrade release determines the type of upgrade you must perform. There are two types of upgrades:

• Standard Upgrade
• Refresh Upgrade

Important

• Install the software during off-peak hours or during a maintenance window to avoid impact from interruptions.
• For a short period of time after you install Cisco Unified Communications Manager or switch over after upgrading to a different product version, settings changes made by phone users may be lost. Examples of phone user settings include call forwarding and message waiting indication light settings. This can occur because Cisco Unified Communications Manager synchronizes the database after an installation or upgrade, which can overwrite phone user settings changes.

Caution

After you install a new node in an existing cluster, all phones that are registered to the cluster are reset.

Upgrade on Virtual Server

If you run Cisco Unified Communications Manager on a virtual server and are upgrading to the latest release, you must make sure that the virtual server Guest Operating System and RAM meet the requirements for the latest release.
In Unified Communications Manager Release 9.1, the following changes were made to the OVAs:

- The number and the size of the vDisk for the 7500 user and 10,000 user OVAs changed from 2 x 80 GB to 1 x 110 GB. If your current virtual machine uses the original disk sizes, do not change the size or number of disks (keep the originals in place).
- The number of vCPU for the 2500 Limited User OVA changed from 1 vCPU to 2 vCPU.

For more information about virtual machine configurations for Unified Communications Manager Release 9.1(1), see the documentation at the following URL: http://docwiki.cisco.com/wiki/Virtualization_for_Cisco_Unified_Communications_Manager_(CUCM).

Follow this procedure to upgrade Unified Communications Manager on a virtual server.

Procedure

Step 1 Upgrade Unified Communications Manager on the virtual machine to the latest release. For information about installing or upgrading Unified Communications Manager on virtual servers, see Cisco Unified Communications Manager on Virtualized Servers here: http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_installation_guides_list.html.

Step 2 After you finish the upgrade, shut down the virtual machine.

Step 3 Change the Guest Operating System to Red Hat Enterprise Linux 5 (32-bit).

Step 4 Check the RAM on the virtual machine and make sure that it meets the minimum RAM requirements for this release. See the readme file that accompanied the OVA file for this release for minimum RAM requirements at: Products/Voice and Unified Communications/IP Telephony/Call Control/Cisco Unified Communications Manager (CallManager)/Cisco Unified Communications Manager Version [Release]/Unified Communications Manager Virtual Machine Templates.

Step 5 Save changes.

Step 6 Restart the virtual machine.

Configuration Changes During Upgrade

The Upgrade Guide for Cisco Unified Communications Manager describes restrictions that apply to the configuration changes that you can make during an upgrade. For more information, see the following URL: http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_installation_guides_list.html
Supported Upgrades

For information about supported upgrades, see the Cisco Unified Communications Manager Compatibility Matrix at the following URL:


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**Note**

All nodes within a single cluster must be in the same mode. For example, Cisco Unified Communications Manager and IM and Presence Service nodes in the same cluster must either all be in unrestricted mode or all be in restricted mode.

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Upgrade File

Before you begin the upgrade process, you must obtain the appropriate upgrade file. For base releases such as 9.0(1), you must order the upgrade file that is required using the Product Upgrade Tool (PUT) at the following URL: www.cisco.com/upgrade.

For all subsequent 9.x releases, the required upgrade file will be posted to the Downloads section of Cisco.com. You can access the upgrade file during the installation process from either a local DVD or from a remote FTP or SFTP server.

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**Note**

Be aware that directory names and filenames that you enter to access the upgrade file are case sensitive.

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Upgrade Media

To upgrade to the latest release of Unified Communications Manager from a release prior to 8.0(1), use the Product Upgrade Tool (PUT) to obtain a media kit and license or purchase the upgrade from Cisco Sales.

To use the PUT, you must enter your Cisco contract number (Smartnet, SASU or ESW) and request the DVD or DVD set. If you do not have a contract for Unified Communications Manager, you must purchase the upgrade from Cisco Sales.

For more information about supported Unified Communications Manager upgrades, see the Cisco Unified Communications Manager Software Compatibility Matrix at the following URL:


Also, see the “Software Upgrades” chapter of the Upgrade Guide for Cisco Unified Communications Manager.
Software Upgrade Procedures

Install the COP File

For both restricted and unrestricted upgrades from an 8.5(x) or earlier release to a 9.1 release, this patch (COP file) must be applied prior to initiating the upgrade.

<table>
<thead>
<tr>
<th>Step</th>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Before you upgrade from compatible versions of Unified Communications Manager, install the COP file named ciscocm.refresh_upgrade_v1.2.cop.sgn that you can find under Cisco Unified Communications Manager Version 9.1 &gt; Unified Communications Manager / CallManager / Cisco Unity Connection Utilities &gt; COP-Files.</td>
<td></td>
</tr>
</tbody>
</table>

Upgrade to Restricted or Unrestricted Unified Communications Manager

If upgrading from 8.5(1) or earlier, complete the procedure Install the COP File, on page 7.

Note: The unrestricted version of Unified Communications Manager is available in limited markets only.

Be aware that after you install or upgrade to an unrestricted release, you can never upgrade to a restricted version. You are not even allowed to perform a fresh installation of a restricted version on a system that contains an unrestricted version.

Upgrade From a Local Source

Follow this procedure to upgrade the software from a local DVD.

Procedure

Step 1 For an upgrade from 8.5(1) or earlier, complete the procedure Install the COP File, on page 7.

Step 2 For a Refresh Upgrade on HP7825H3 or HP7828H3 hardware from a version prior to Release 8.6(x), use an externally powered USB disk drive with a minimum size of 16 GB to migrate the data from the old system to the new installation. For Unity Connection and Business Edition 5000, an externally powered USB disk drive with a minimum size of 128 GB is required. Cisco recommends that you use an externally powered USB drive, because other drives may not be recognized during the Refresh Upgrade sequence.
If you are upgrading your software on HP7825H3 or HP7828H3 hardware from a version prior to Release 8.6(x), there is no option to revert to the previous version of Cisco Unified Communications Manager. If you do not back up your system data before starting the software upgrade process, your data will be lost if your upgrade fails. If you chose to revert to the prior version, you must install the prior version and restore your data from your DRS backup.

Step 3 If you do not have a Cisco-provided upgrade disk, create an upgrade disk by burning the upgrade file that you downloaded onto a DVD as an ISO image.

Note Copying the .iso file to the DVD will not work. Most commercial disk-burning applications can create ISO image disks.

Step 4 Insert the new DVD into the disc drive on the local server that you want to upgrade.

Step 5 Sign in to Cisco Unified Communications Operating System Administration.

Step 6 Navigate to Software Upgrades > Install/Upgrade. The Software Installation/Upgrade window appears.

Step 7 From the Source list, choose DVD.

Step 8 Enter a slash (/) in the Directory field.

Step 9 To use the Email Notification feature, enter your Email Destination and SMTP Server in the provided fields.

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.

Step 13 To run the upgraded software at the completion of the upgrade process and automatically reboot to the upgraded partition, choose Switch to new version after upgrade. The system restarts and is running the upgraded software. For a Refresh Upgrade on HP7825H3 or HP7828H3 hardware from a version prior to Release 8.6(x), there is no option to revert to the previous version of Cisco Unified Communications Manager, and you will not be able to choose Switch to new version after upgrade.

Step 14 To install the upgrade and then manually switch to the upgraded partition at a later time, perform the following steps, choose Do not switch to new version after upgrade.

Step 15 Click Next. For a Refresh Upgrade, the following text appears:

- For non-HP7825H3/HP7828H3 hardware:
  A Refresh Upgrade requires that you reboot the server during the upgrade. Services will be affected during the upgrade operation. Click OK to proceed with the upgrade.

- For HP7825H3/HP7828H3 hardware:
  If you are upgrading from a version prior to Release 8.6(x), this server model requires a USB storage device in order to proceed with the upgrade. Use a USB storage device with at least 16 GB of capacity. Note that any existing data on the USB device will be deleted.
  For Cisco Unity Connection and Cisco Business Edition 5000, the USB storage device must be at least 128 GB.

The Upgrade Status window displays the Upgrade log.

Step 16 After the installation completes, click Finish (not applicable for Refresh Upgrades).

Step 17 To restart the system and activate the upgrade, choose Settings > Version; then, click Switch Version. The system restarts and runs the upgraded software (not applicable for Refresh Upgrades).
Upgrade From a Remote Source

Caution
If you are performing a Refresh Upgrade on HP7825H3 or HP7828H3 hardware from a version earlier than Release 8.6(x), there is no option to revert to the previous version of Cisco Unified Communications Manager. If you do not back up your system data before starting the software upgrade process, your data will be lost if your upgrade fails. If you chose to revert to the prior version, you must install the prior version and restore your data from your DRS backup.

Supported SFTP Servers
Cisco allows you to use any SFTP server product but recommends SFTP products that are certified with Cisco through the Cisco Technology Developer Partner program (CTDP). CTDP partners, such as GlobalSCAPE, certify their products with specified versions of Cisco Unified Communications Manager. For information about which vendors certified their products with your version of Cisco Unified Communications Manager, see the following URL:
Cisco uses the following servers for internal testing. You may use one of these servers, but you must contact the vendor for support:

- Open SSH (http://sshwindows.sourceforge.net/)
- Cygwin (http://www.cygwin.com/)
- Titan (http://www.titanftp.com/)

Cisco does not support using the SFTP server product freeFTPd because of the 1 GB file size limit on this SFTP product.

For issues with third-party products that have not been certified through the CTDP process, contact the third-party vendor for support.

Follow this procedure to upgrade the software from a network location or remote server.

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

1 If upgrading from 8.5(1) or earlier, complete the procedure Install the COP File, on page 7.

2 If you are performing a Refresh Upgrade on HP7825H3 or HP7828H3 hardware from a version prior to Release 8.6(x), use an externally powered USB disk drive with a minimum size of 16 GB to migrate the data from the old system to the new installation. For Cisco Unity Connection and Cisco Business Edition 5000, an externally powered USB disk drive with a minimum size of 128 GB is required. Cisco recommends that you use an externally powered USB drive because other drives may not be recognized during the Refresh Upgrade sequence.
3 Put the upgrade file on an FTP or SFTP server that the server that you are upgrading can access.
4 Log in to Cisco Unified Communications Operating System Administration.
5 Navigate to **Software Upgrades > Install/Upgrade**. The Software Installation/Upgrade window displays.
6 From the Source list, choose **Remote File system**.
7 In the **Directory** field, enter the path to the directory that contains the patch file on the remote system. 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. 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:).
8 In the **Server** field, enter the server name or IP address.
9 In the **User Name** field, enter the user name on the remote server.
10 In the **User Password** field, enter the password on the remote server.
11 Select the transfer protocol from the **Transfer Protocol** field.
12 To use the Email Notification feature, enter your Email Destination and SMTP Server in the fields provided.
13 To continue the upgrade process, click **Next**.
14 Choose the upgrade version that you want to install and click **Next**.
15 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 is not displayed, you can also monitor the upgrade with the Cisco Unified Real-Time Monitoring Tool.

16 If you want to install the upgrade and automatically reboot to the upgraded software, choose **Switch to new version after upgrade**. The system restarts and runs the upgraded software.
17 If you want to install the upgrade and then manually switch to the upgraded software at a later time, choose **Do not switch to new version after upgrade**.
18 Click **Next**. For a Refresh Upgrade, the following text appears:

- For non- HP7825H3/HP7828H3 hardware:

  A Refresh Upgrade requires that the server be rebooted during the upgrade. Services will be affected during the upgrade operation. Press OK to proceed with the upgrade.

- For HP7825H3/HP7828H3 hardware:
This server model requires a USB storage device in order to proceed with the upgrade. Use a USB storage device with at least 16 GB of capacity. Note that any existing data on the USB device will be deleted. For Cisco Unity Connection and Cisco Business Edition the USB storage device must be at least 128 GB.

The Upgrade Status window displays the Upgrade log.

19 When the installation completes, click Finish (not applicable for Refresh Upgrades).

20 To restart the system and activate the upgrade, choose Settings > Version then click Switch Version.

The system restarts running the upgraded software (not applicable for Refresh Upgrades).

Bridge Upgrade

The bridge upgrade provides a migration path for customers who want to migrate from a discontinued Cisco Unified Communications Manager server to a server that supports the newest release of Cisco Unified Communications Manager. For more information, see the Upgrade Guide for Cisco Unified Communications Manager here: http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_installation_guides_list.html.

Post-Upgrade Tasks

After the upgrade, perform the postupgrade tasks that are outlined in the Upgrade Guide for Cisco Unified Communications Manager, available at http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_installation_guides_list.html. Refer also to the Important Notes section of this document for additional information. Note that you must perform the following post-upgrade tasks only after you complete the upgrade for the entire cluster and set up the database:

- Install additional locales
- Install COP files

Note After you perform a switch version when you upgrade Unified Communications Manager, IP phones request a new configuration file. This request results in an automatic upgrade to the device firmware.

Latest Software and Firmware Upgrades

After you install or upgrade to this release of Unified Communications Manager, check to see whether Cisco has released software upgrades, firmware upgrades, critical patches, or Service Updates.

Firmware

Apply the latest comprehensive Firmware Upgrade CD (FWUCD) as soon as possible to help prevent catastrophic failures.
To check for the latest FWUCD from www.cisco.com, perform the following steps:

1. Select Support > Download Software.

2. Navigate to Products > Voice and Unified Communications > Communications Infrastructure > Voice Servers > Cisco 7800 Series Media Convergence Servers (or Cisco UCS B-Series Blade Servers) > (your server model).

Software

Service Updates (SUs) contain fixes that were unavailable at the time of the original release. They often include security fixes, firmware updates, or software fixes that could improve operation.

To check for software upgrades, SUs, and critical patches from www.cisco.com, perform the following steps:

1. Select Support > Download Software.

2. Navigate to the "Voice and Unified Communications" section and select IP Telephony > Call Control > Cisco Unified Communications Manager (CallManager) > the applicable version of Cisco Unified Communications Manager for your deployment.

Related Documentation

You can view documentation that is associated with supported applications.

<table>
<thead>
<tr>
<th>Application</th>
<th>Documentation Link</th>
</tr>
</thead>
</table>

Limitations and Restrictions

For a list of software and firmware versions of IP telephony components and contact center components that were tested for interoperability with this release of Unified Communications Manager as part of Cisco Unified Communications System testing, see the following web page:

http://www.cisco.com/go/unified-techinfo
Note  Be aware that releases of Cisco IP telephony products do not always coincide with Unified Communications Manager releases. If a product does not meet the compatibility testing requirements with Unified Communications Manager, you must wait until a compatible version of the product becomes available before you can upgrade to the latest release of Unified Communications Manager. For the most current compatibility combinations and defects that are associated with other Unified Communications Manager products, see the documentation that is associated with those products.