



Frequently Asked Questions About Cisco CallManager 4.0 Upgrades

The following frequently asked questions apply for all Cisco CallManager 4.0 upgrades. For information that is specific to the version upgrade, see the following sections:

- [Upgrading from Cisco CallManager 3.2 \(If You Are Not Replacing Hardware\)](#), page 2-1
- [Upgrading from Cisco CallManager 3.3 \(If You Are Not Replacing Hardware\)](#), page 3-1



Tip

If you are replacing hardware during the upgrade, skip to the [“Replacing Servers During the Upgrade”](#) section on page 7-1

From which versions of Cisco CallManager can I upgrade to Cisco CallManager Release 4.0(1)?

To verify which versions of Cisco CallManager are compatible for upgrade, refer to the *Cisco CallManager Compatibility Matrix*. To obtain the most recent version of this document, go to http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm.

If your server runs Cisco CallManager Release 2.4 or 3.0, you must upgrade every server in the cluster to the latest version of Cisco CallManager Release 3.2 before you can upgrade to a version of Cisco CallManager Release 4.0. For information on upgrading to Cisco CallManager Release 3.2, refer to the latest version of *Upgrading Cisco CallManager Release 3.2*.

Before you perform any upgrade procedures, Cisco strongly recommends that you install the latest operating system upgrade/service release, SQL service releases/hotfixes, and Cisco CallManager service release for the versions that currently run in the cluster. Cisco provides the service release and corresponding readme documentation on cisco.com. To obtain these documents, go to <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.



Caution

Cisco recommends that you only upgrade to Cisco CallManager 4.0(1) from a version that is compatible for upgrade to 4.0(1). Versions that are not compatible for upgrade to 4.0(1) contain features that are not supported in 4.0(1). If you upgrade from an unsupported version, you will not be able to access those features that are not supported in 4.0(1) and you will lose the data that is associated with those features.

Which servers and operating system versions does Cisco support for this upgrade?

For Cisco CallManager Release 4.0(1), Cisco supports the servers listed in the *Cisco CallManager Compatibility Matrix*. To obtain the most recent version of this document, go to http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm.

Cisco requires that you install Cisco-provided operating system version 2000.2.5 with service release 2 (2000.2.5sr2) (or later) before you upgrade to Cisco CallManager Release 4.0(1).

For Cisco CallManager 3.2 Upgrades to 4.0(1)

You must perform a Same Server Recovery by using the operating system disks that ship with this version of Cisco CallManager to install operating system version 2000.2.4 before you upgrade to 2000.2.5sr2. You cannot upgrade to Cisco-provided operating system version 2000.2.5sr2 (or later) from a previous version of the operating system. For detailed instructions, refer to “[Upgrading from Cisco CallManager 3.2 \(If You Are Not Replacing Hardware\)](#)” section on page 2-1.

For Cisco CallManager 3.3 Upgrades to 4.0(1)

If your server runs Cisco CallManager 3.3 and operating system version 2000.2.3 (or later), you can use the operating system upgrade CD-ROM or the operating system upgrade web download to upgrade the operating system to 2000.2.5sr2 or later. For detailed instructions, refer to “[Upgrading from Cisco CallManager 3.3 \(If You Are Not Replacing Hardware\)](#)” section on page 3-1.

What disks do I need to gather before I upgrade?

If you are upgrading from Cisco CallManager 3.2, you must upgrade via the disks that come in the software kit.

Before you upgrade from Cisco CallManager 3.2, locate the following disks.

- Cisco IP Telephony Server Operating System Hardware Detection Disk
- Cisco IP Telephony Server Operating System Installation and Recovery Disk

If you are upgrading to Cisco CallManager 4.0 from 3.2, you must use the server-specific operating system disk that comes in the software kit. During the operating system installation, you receive a prompt to insert the appropriate disk into the drive.

- Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk

This disk upgrades the operating system on existing (not new) servers in the cluster.

- Cisco CallManager 4.0 Backup Utility Disk (For Cisco CallManager Publisher Servers)

You use this disk to start the publisher database server upgrade. This disk installs the backup utility that you must use prior to the upgrade.

- Cisco CallManager 4.0 Subscriber Preparation Disk

You use this disk to start all subscriber server upgrades. This disk installs the ServPrep utility.

- Cisco CallManager 4.0 Installation, Upgrade, and Recovery Disk 1 and 2

You use these disks to complete the Cisco CallManager upgrade. This disk installs Cisco CallManager, Microsoft SQL Server 2000, and DC Directory. If you are upgrading from Cisco CallManager 3.2, the disk also installs Microsoft SQL Server 2000 Service Pack 3a (or later).

Which server in the cluster do I upgrade first?

**Caution**

When you perform the Cisco CallManager portion of the upgrade, you must upgrade one server at a time, so the subscriber servers can pull the replicas of the database from the publisher database server. For the subscriber servers to pull the replicas, the publisher database server must be running, and you must not make any changes on the publisher database server while you are upgrading the subscriber servers. After you complete the upgrade on one server and reboot the server, you can start the upgrade on the next server.

**Caution**

This document assumes that all servers are functional and running. If the servers are not functional and running, failover will not occur.

You must upgrade all the servers in the cluster. The order varies depending on the cluster configuration.

Cisco CallManager Runs on the Publisher

If the Cisco CallManager service runs on the publisher database server (two-server cluster), upgrade the servers in the following order:

1. Upgrade the publisher database server.

When you perform an upgrade, the Cisco CallManager service automatically stops, and the devices that are homed to the publisher database server failover to the subscriber server.

2. Upgrade the subscriber.

Cisco CallManager Does Not Run on the Publisher

If the Cisco CallManager service does not run on the publisher database server, upgrade the servers in the following order:

1. Upgrade the publisher database server.
2. Upgrade the Cisco TFTP server, if it exists separately from the publisher database server.
3. Upgrade servers, one server at a time, that have only Cisco CallManager-related services (Music on Hold, Cisco IP Media Streaming Application, and so on) running on them.

Make sure that you upgrade only one server at a time.

Make sure that the Cisco CallManager service does not run on these servers.

4. Upgrade each secondary server, one server at a time.

If you choose to oversubscribe the secondary server(s) during the upgrade, Cisco strongly recommends that you have no more than 5,000 devices that are registered to the secondary server during the upgrade and that you oversubscribe the secondary server(s) for no more than a few hours. Cisco strongly recommends that you perform the upgrade during off-peak hours when low call volume occurs (less than 1,000 busy hour call attempts).

If you configured your Cisco CallManager cluster by using approved Cisco configuration standards, which include configuring four primary servers and two secondary servers in the cluster, you can minimize call-processing interruptions if you register all devices to servers that are running the same version of Cisco CallManager during the entire upgrade process; for example, you register all devices to the secondary Cisco CallManager servers or the primary Cisco CallManager servers, but not to both types of servers.

5. Upgrade each primary server that has the Cisco CallManager service running on it. Remember to upgrade one server at a time.

**Caution**

When you upgrade the primary server(s), call-processing interruptions may occur for up to 30 minutes while the devices attempt to obtain the device loads and register to the upgraded version of Cisco CallManager.

6. Upgrade servers that have Cisco IP telephony applications running on them; for example, Cisco Conference Connection or Cisco Emergency Responder. Remember to upgrade one server at a time. Refer to the application documentation for more information.

How does a coresident upgrade work if I have CRS installed with Cisco CallManager?

For information on how to perform the upgrade on a coresident server, refer to the CRS documentation that is compatible with this version of Cisco CallManager.

How long does it take to upgrade the cluster?

To minimize call-processing downtime, Cisco strongly recommends that you perform all upgrade procedures for the Cisco CallManager and all upgrades/reinstallations for Cisco IP telephony applications within a consecutive time period (within one maintenance window).

Before you perform an upgrade, consider the time that it takes to perform pre-/post-upgrade tasks, Cisco IP telephony application upgrades/reinstallations, and Cisco-verified application upgrades/reinstallations.

For the time that it takes to perform specific tasks on the publisher database server, see the following sections:

- From Cisco CallManager 3.2—[Upgrading from Cisco CallManager 3.2 \(If You Are Not Replacing Hardware\)](#), page 2-1
- From Cisco CallManager 3.3—[Upgrading from Cisco CallManager 3.3 \(If You Are Not Replacing Hardware\)](#), page 3-1

Will I experience call-processing interruptions and a loss of services during the upgrade?

Review the following information before you upgrade.

About Minimizing Call-Processing Interruptions

When you upgrade a cluster, two separate versions of Cisco CallManager run in the cluster at the same time. Be aware that the different Cisco CallManager versions that are running in the cluster will not interact and may cause call-processing interruptions to occur.

If you configured your Cisco CallManager cluster by using approved Cisco configuration standards, which include configuring four primary servers and two backup servers in the cluster, you can minimize call-processing interruptions if you register all devices to servers that are running the same version of Cisco CallManager during the entire upgrade process; that is, you register all devices to the backup Cisco CallManager servers or the primary Cisco CallManager servers, but not to both types of servers.

About a Loss of Services

During the upgrade, Cisco CallManager places Cisco CallManager-related services that display in Cisco CallManager Serviceability in an inactive state. After the upgrade completes, migrated services activate and start after the server reboots. To use additional services, you must activate the service on each server on which you want the service to run. For information on activating services, refer to the *Cisco CallManager Serviceability Administration Guide* or to online help in the Cisco CallManager application.

**Caution**

Cisco strongly recommends that you perform the upgrade during a single maintenance window to minimize call-processing interruptions.

May I use Terminal Services, Virtual Network Computing, and Integrated Lights Out to remotely upgrade the server?

Do not use Terminal Services to upgrade to Cisco CallManager Release 4.0(1). Cisco installs Terminal Services, so Cisco Technical Assistance Center (TAC) can perform remote administration and troubleshooting tasks. Cisco does not support upgrades through Terminal Services.

**Caution**

Before the upgrade, Cisco strongly recommends that you disable Terminal Services and immediately reboot the server to prevent remote access to the server. Accessing the server via Terminal Services may cause the upgrade to fail.

After you upgrade the server, you must enable Terminal Services.

If you want to use Virtual Network Computing (VNC) to remotely upgrade the publisher database server, go to http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel_os/index.htm to obtain the latest version of the VNC document.

**Caution**

If you have installed VNC but do not plan to use it to perform the upgrade, disable it to prevent remote access to the server. If you do not disable VNC and a user/administrator accesses the server during the upgrade, the upgrade will fail.

Do not use Integrated Lights Out (ILO) to perform upgrade or installation tasks. Cisco supports ILO for remote management and configuration tasks only.

May I configure a server in the cluster as a Domain Controller?

Do not configure any server in the cluster as a Domain Controller. If you configure any server in the cluster as a Domain Controller, you cannot upgrade or reinstall Cisco CallManager on the server.

May I perform configuration tasks during the upgrade?



Caution

Do not attempt to perform any configuration tasks during the upgrade. Before the upgrade begins, disable all services that allow any administrator to perform remote configuration tasks. For example, disable Terminal Services or VNC before the upgrade to prevent an administrator from browsing into the server during the upgrade.

Notify all users that the upgrade is occurring, so users do not browse into the server during the upgrade.

Performing configuration tasks during the upgrade causes an upgrade failure.

May I remove a drive before I upgrade?



Caution

You cannot remove a drive if you have the MCS-7815, MCS-7820, MCS-7822, MCS-7825, or customer-provided IBM xSeries 330 server. Cisco does not support drive removal on customer-provided Aquarius servers that meet approved Cisco configuration standards.

Removing a Drive If the Server Runs Cisco CallManager 3.2—Replacement Drive Required

After you verify that you have a good backup of the data, you can remove a drive to save configured data; however, you must insert a replacement drive into the server before you begin the operating system procedures. The [“Removing a Drive, Inserting a Replacement Drive, and Drive Mirroring \(Strongly Recommended\)”](#) section on page 2-18 describes how to properly perform this task.

This task may require that you purchase a new drive.

Before you begin the operating system installation, make sure that you have all drives in the server and verify that the drives are functional. For example, insert two drives for the MCS-7835 and four drives for the MCS-7845. Neglecting to perform these tasks causes the failure of the Cisco CallManager installation and the loss of data/configuration settings from drive mirroring.

Removing a Drive If the Server Runs Cisco CallManager 3.3—Inserting a Replacement Drive and Drive Mirroring Prior to the Upgrade

The [“Removing a Drive, Inserting a Replacement Drive, and Drive Mirroring \(Strongly Recommended\)”](#) section on page 3-10 describes how to properly perform this task.

Removing a Drive If the Server Runs Cisco CallManager 3.3—Upgrading With One Drive In the Server

Perform the following procedure if you plan to remove a drive and upgrade with only one hard drive in the server.

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- Step 1** Power off the publisher database server.
 - Step 2** For all servers except the MCS-7845, remove the hard drive from Slot 0 and label the drive with the machine name, slot number, and current version of Cisco CallManager.

For the MCS-7845, remove the drives from Slot 0 and Slot 2 and label them with the appropriate information.
 - Step 3** Power on the system.

Cisco MCS

- Step 4** Perform the following procedure for the Cisco MCS (The MCS-7845 requires two spare hard drives):
- a. To enable interim recovery mode on the MCS-7830, MCS-7835, or MCS-7845, press **F2**.



Note The MCS-7835H-2.4 (or later) and MCS-7845H-2.4 (or later) default to F2, and the process automatically continues after a 10-second delay.

- b. This step applies only for the MCS-7830, MCS-7835, or MCS-7845. When prompted, press **F1** to continue.

- Step 5** Log in to the server by using the Administrator password.

IBM xSeries Server

- Step 6** To enable interim recovery mode on the customer-provided IBM xSeries 342 server, press **F5**.

- Step 7** Log in to the server by using the Administrator password.

Which third-party, Cisco-verified applications may I install on the Cisco CallManager server?

**Caution**

Cisco supports a limited list of applications on the servers where Cisco CallManager is installed. If you are uncertain whether a third-party application is supported, do not install it on the server.

To review a list of third-party, Cisco-verified applications that you may install on the server, perform the following procedure:

Procedure

- Step 1** Click <http://www.cisco.com/cgi-bin/ecoa/Search>.
- Step 2** In the Solution pane, click **IP Telephony**.
- Step 3** From the Solution Category drop-down list box, choose **Operations, Administration, and Maintenance (OAM)**.
- Step 4** Click **Search**.

**Caution**

Installing or using Netscape Navigator on the Cisco MCS or the Cisco-approved, customer-provided server causes severe performance problems.

Which Cisco IP telephony applications may I install on the Cisco CallManager server?

Consider the following information before you install other software besides Cisco CallManager on the Cisco MCS or the customer-provided server:

- You can install a compatible version of Cisco Customer Response Solutions (CRS), which you must purchase separately from Cisco CallManager.
- Do not install Cisco Unity, Cisco Conference Connection, Cisco Personal Assistant, or Cisco Emergency Responder on the server where Cisco CallManager is installed.
- Cisco strongly recommends that you install a security agent to protect your servers against unauthorized intrusion. Cisco offers two security agent options: Cisco Security Agent (CSA) for Cisco CallManager and Management Center for Cisco Security Agent (CSA MC).

CSA for Cisco CallManager designates a standalone agent and security policy that is designed to be used on all servers in the voice cluster. The policy that is included with this agent gets configured specifically for Cisco CallManager and Customer Response Applications (CRA), and you cannot update or view it. You can download the agent from CCO at <http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des>.

If you want to add, change, delete, or view rules and policies that CSA for Cisco CallManager includes, or if you want to add support for non-Cisco approved, third-party applications, you must purchase and install the fully managed console, CSA MC. CSA MC requires a separate dedicated server to be used as the management center. This management center allows you to create agent kits that are then distributed to agents that are installed on other network systems and servers.

To access information on Cisco Security Agent, see http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/sec_vir/index.htm and http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/rtrmgmt/cw2000/cw2000_b/vpnman/vms_2_2/csa_4_0/index.htm



Caution

If you are uncertain whether a Cisco IP telephony application is supported on the Cisco CallManager server, do not install it.

What additional information should I know before I upgrade?

This document assumes that all servers in your cluster are currently in an operational state.

About Security and Account Policies



Caution

If you change any security or account policies from the default, the upgrade may fail. For more information on security and account policies, refer to Microsoft documentation.

About Service and Enterprise Parameters in Cisco CallManager Administration

Cisco CallManager always updates service parameters with non-numeric values to the suggested value.

If your service parameters are set to the suggested value, Cisco CallManager automatically updates the value during the upgrade to match the new suggested value.

If your customized value exists between the range of minimum and maximum values, Cisco CallManager does not change the customized value.

If you configured customized values that are not between the minimum and maximum range of values, the customized value changes during the upgrade to the maximum or minimum value. For example, if the maximum value equals 10 and the value that you configured is 12, Cisco CallManager automatically sets the value to 10.

During the upgrade, some non-servicewide parameters may change to clusterwide parameters (formerly known as servicewide parameters).

About H.323 Intercluster Trunks

A registration problem occurs when multiple Cisco CallManager clusters have the same device name assigned to more than one H.323 intercluster trunk in Cisco CallManager Administration. You must assign a unique device name to each H.323 intercluster trunk. Refer to the *Cisco CallManager Administration Guide* for information on the trunk configuration procedure.

About H.323 Gateways

Cisco no longer provides the Run H.225D On Every Node option in Cisco CallManager Administration for H.323 gateways. Before you upgrade, verify that all H.323 dial-peer(s) point to a Cisco CallManager server in the device profile for which they are assigned. If the session target statements in the dial-peer(s) do not point to the appropriate Cisco CallManager server, calls fail.

About the Database

After you upgrade Cisco CallManager, the database name automatically increments; for example, from CCM0300 to CCM0301. Third-party CDR software may have SQL triggers that are hard coded to the original database name. The triggers may point to the previous database name and cause all CDR flat files to write to the BAD directory on the publisher database server. If you need technical assistance with this issue, directly contact the third-party software vendor.

About Cisco CallManager Extension Mobility

If you run Cisco CallManager Extension Mobility and Cisco CallManager 3.2 before the upgrade, you must perform additional configuration tasks after the upgrade, so Cisco CallManager Extension Mobility runs as expected. For more information on configuration tasks, refer to the Cisco CallManager Extension Mobility upgrade section of the *Cisco CallManager Features and Services Guide for 4.0(1)*. To obtain the most recent version of this document, go to http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm.

When should I perform post-upgrade tasks?

Do not perform any post-upgrade tasks until you complete the upgrade on all servers in the cluster.

What if I encounter problems during the upgrade?

Cisco recommends that if you encounter problems during the upgrade, take the following actions:

1. During the upgrade if you receive an error message that displays in a dialog box, see the [“Error Messages” section on page 6-1](#) and perform the recommended corrective action.
2. Obtain and review all log files from C:\Program Files\Common Files\Cisco\Logs; for example, C:\Dcdsrvr\log, C:*.log, C:*txt.

Be aware that not all error messages that display in the log file are catastrophic. MSI generates error messages in the log file for many reasons; for example, attempts to access a service that Cisco CallManager does not use.