



Upgrading from Cisco CallManager 3.3 (If You Are Not Replacing Hardware)

You must upgrade Cisco CallManager on the publisher database server and all subscriber servers in the cluster. For the order of the upgrade, see the “Which server in the cluster do I upgrade first?” section on page 1-3.

Before You Begin

Before you start the upgrade, make sure that you perform the following tasks:

Table 3-1 Pre-Upgrade Tasks

	Pre-Upgrade Task	Related Topics
Step 1	Make sure that you run a recommended version of Cisco CallManager on all servers in the cluster.	From which versions of Cisco CallManager can I upgrade to Cisco CallManager Release 4.0(1)?, page 1-1
Step 2	Make sure that you understand the order in which you must upgrade the cluster.	Which server in the cluster do I upgrade first?, page 1-3 How does a coresident upgrade work if I have CRS installed with Cisco CallManager?, page 1-4
Step 3	Make sure that your server configuration supports this upgrade.	Which servers and operating system versions does Cisco support for this upgrade?, page 1-2
Step 4	Make sure you have 2.0 gigabytes of available disk space on each of your servers for the Cisco CallManager upgrade.	
Step 5	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, refer to the Cisco CallManager Extension Mobility upgrade section of the <i>Cisco CallManager Features and Services Guide for 4.0(1)</i> . 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 .
Step 6	If you are using Cisco Unity as your voice-messaging system, configure the voice mail ports in Cisco CallManager to ensure proper migration.	For more information, refer to the <i>Release Notes for Cisco CallManager</i> . 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 .

Table 3-1 Pre-Upgrade Tasks (continued)


Pre-Upgrade Task	Related Topics
Step 7 You must assign a unique device name to each H.323 intercluster trunk. A registration problem occurs when multiple Cisco CallManager clusters have the same device name assigned to H.323 intercluster trunks in Cisco CallManager Administration.	Refer to the <i>Cisco CallManager Administration Guide</i> for information on the trunk configuration procedure.
Step 8 Verify that all H.323 dial-peer(s) point to a Cisco CallManager server in the device profile for which they are assigned. Cisco no longer provides the Run H.225D On Every Node option in Cisco CallManager Administration for H.323 gateways. If the session target statements in the dial-peer(s) do not point to the appropriate Cisco CallManager server, calls fail.	Refer to the <i>Cisco CallManager Administration Guide</i> for information on the gateway configuration procedure.
Step 9 Perform the recommended backup procedures for all coresident software applications that are installed on the server.  Caution Failing to complete a backup causes a loss of data and configuration settings. For information on performing the backup, refer to the documentation that supports the applications. The Cisco IP Telephony Backup and Restore System (BARS) does not back up any operating system files except Host/LMhost, if these files exist on the server. For a list of files that the utility backs up, refer to <i>Cisco IP Telephony Backup and Restore System (BARS) Administration Guide</i> . To obtain the most recent version of this document, go to http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm .	How does a coresident upgrade work if I have CRS installed with Cisco CallManager?, page 1-4
Step 10 Be aware that 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.

Table 3-1 Pre-Upgrade Tasks (continued)

Pre-Upgrade Task	Related Topics
<p>Step 11 Understand how Cisco CallManager updates service parameters.</p> <p>For Service Parameters with Nonnumeric Values Cisco CallManager always updates service parameters with non-numeric values to the suggested value.</p> <p>For Service Parameters with Numeric Values 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).</p>	<p>For more information on service parameters, refer to the <i>Cisco CallManager Administration Guide</i> and the <i>Cisco CallManager System Guide</i>.</p>
<p>Step 12 Before the upgrade, obtain the local Administrator account password, the SQL server SA password, the Private Password Phrase, and the computer name of the publisher database server.</p>	<p>Information That You May Need During the Upgrade, page 3-4</p>
<p>Step 13 If you have installed CDR Analysis and Reporting on a server with Cisco CallManager Release 3.3(4) or later, you must uninstall the CAR plugin. Be sure to save the CAR database by clicking No when you are asked if you want to remove the ART database.</p>	<p>See Uninstalling CAR, page 3-3</p>

Uninstalling CAR

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- Step 1** Choose **Start > Settings > Control Panel > Add/Remove Programs**.
 - Step 2** From the Add/Remove Programs window, choose CDR Analysis and Reporting.
 - Step 3** Click the Change/Remove button
 - Step 4** When prompted to remove the selected application and all of its components, click **OK**.
 - Step 5** When prompted to remove the ART database, click **No**. Clicking No will save your CAR database.
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Information That You May Need During the Upgrade

Use the information in the following table when you perform the upgrade procedures.



Caution When entering passwords for the local Administrator and SA (SQL Server system administrator) accounts, enter alphanumeric characters only. The account password must match on every server in the cluster. For each of the accounts, you must enter the same password on every server in the cluster.

The upgrade prompts you for a Private Password Phrase. The upgrade uses the string that you enter to create a unique, encrypted password. You must enter the same phrase on all servers in the cluster.

Table 3-2 Information That You May Need During the Upgrade

Data	Your Entry
Destination where the backup file is stored during the backup	
WorkGroup Name	
Name of your organization	
Computer name of the publisher database server	
Local Administrator account password (same password for all servers in cluster)	
LDAP (DC) Directory Manager password (same password for all servers in cluster)	
SQL Server SA password (same password for all servers in cluster)	
Private Password Phrase for the cluster (same phrase for all servers in cluster)	

Upgrading the Cisco CallManager 3.3 Publisher Database Server

Review [Table 3-3](#), which includes the upgrade tasks, designated time to perform the task, and the location where you obtain the procedure:

Table 3-3 Recommended Upgrade Tasks for the Cisco CallManager 3.3 Publisher Database Server

	Task	Procedure	Designated Time
Step 1	Verify that you have performed all pre-upgrade tasks.	See the “Before You Begin” section on page 3-1 and the “Information That You May Need During the Upgrade” section on page 3-4.	Depends on the size of the cluster
Step 2	Remove all servers in the cluster from the NT Domain or the Microsoft Active Directory Domain.	See the “Remove the System from the NT Domain or Microsoft Active Directory Domain and Reboot the Server (Required, If Configured)” section on page 3-7. Tip You can perform this task on all servers in the cluster at the same time.	Depends on the size of the cluster
Step 3	Manually disable and stop all platform agents, Cisco-verified applications (Cisco AVVID Partner Applications), and Cisco-provided coresident applications that run on the servers in the cluster. Reboot the server.	Disabling platform agents and services, such as performance monitoring (for example, NetIQ), antivirus (Cisco-approved McAfee services), intrusion detection (for example, Cisco Security Agent), and remote management services, ensures that the upgrade does not encounter issues that are associated with these services. See the “Disable and Stop Third-Party, Cisco-Verified, and Cisco-Provided Coresident Applications and Reboot the Server (Required)” section on page 3-8. Tip You can perform this task on all servers in the cluster at the same time.	20 minutes
Step 4	Manually install and configure the CIPT Backup and Restore System (BARS), version 4.0(1) (or later).	If you have not already done so, Cisco recommends that you install and configure the backup utility on the publisher database server. The CIPT Backup and Restore System (BARS) does not back up any operating system files except Host/LMhost, if these files exist on the server. For a list of files that the utility backs up, refer to <i>Cisco IP Telephony Backup and Restore System (BARS) Administration Guide</i> . To obtain the most recent version of this document, go to http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm .	15 minutes
Step 5	Using the Backup and Restore System (BARS), version 4.0(1) (or later), manually back up the Cisco CallManager data to either a network directory or tape drive.	For information on backing up your system, refer to <i>Cisco IP Telephony Backup and Restore System (BARS) Administration Guide</i> . To obtain the most recent version of this document, go to http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm . Tip To significantly improve the speed of the Cisco CallManager upgrade, archive or remove CDRs before backing up your system.	30 to 60 minutes, depending on the size of the Cisco CallManager and Call Detail Record (CDR) database

Table 3-3 Recommended Upgrade Tasks for the Cisco CallManager 3.3 Publisher Database Server (continued)

	Task	Procedure	Designated Time
Step 6	<p>Run the Cisco CallManager Upgrade Assistant Utility on all servers in the cluster.</p> <p>You must perform this task on one server in the cluster at a time, beginning with the publisher database server.</p>	<p>The Cisco CallManager Upgrade Assistant Utility verifies that your server is in a healthy state before the upgrade. Perform this task on one server in the cluster at a time, beginning with the publisher database server.</p> <p>See the “Run the Cisco CallManager Upgrade Assistant Utility on All Servers in the Cluster (Strongly Recommended)” section on page 3-10.</p>	1 to 20 minutes for the publisher database server; 1 to 5 minutes for the subscriber server
Step 7	If the server supports drive removal, remove a drive from the server to save your data and configuration.	See the “ Removing a Drive, Inserting a Replacement Drive, and Drive Mirroring (Strongly Recommended) ” section on page 3-10.	15 to 60 minutes, depending on the server type
Step 8	Use the operating system upgrade CD-ROM or the operating system upgrade web download to upgrade the operating system to Cisco-provided version 2000.2.5 (or later).	<p>Before you perform the upgrade, be sure to read the operating system readme information that is posted on the operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page at http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml.</p> <p>Perform on the publisher database server first; complete the Cisco CallManager upgrade on the publisher database server before you upgrade the operating system on the subscriber servers.</p>	45 to 75 minutes per server, depending on the server type
Step 9	Download and install the latest Cisco IP Telephony Server Operating System service release (2000-2-5sr2 or later). (Required)	<p>The operating system service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page.</p> <p>For installation instructions, refer to the file-specific readme document, <i>Cisco IP Telephony Operating System, SQL Server, Security Updates, and Installing the Operating System on the Cisco IP Telephony Applications Server</i>. To obtain the most recent version of these documents, go to http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml.</p>	15 minutes
Step 10	Download and install the latest OS-related security hotfixes, if any. (Recommended)	<p>The operating system related security hotfixes post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page.</p> <p>For installation instructions, refer to the file-specific readme document, <i>Cisco IP Telephony Operating System, SQL Server, Security Updates, and Installing the Operating System on the Cisco IP Telephony Applications Server</i>. To obtain the most recent version of these documents, go to http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml.</p>	5 minutes
Step 11	Verify that you installed Microsoft SQL Server 2000, Service Pack 3a (or later).	<p>For information on how to verify and install the service pack, refer to the readme documentation that accompanies the service pack.</p> <p>Tip Install this service pack on the publisher database server; complete the Cisco CallManager upgrade on the publisher database server before you install this service pack on the subscriber servers.</p>	20 minutes

Table 3-3 Recommended Upgrade Tasks for the Cisco CallManager 3.3 Publisher Database Server (continued)

	Task	Procedure	Designated Time
Step 12	Upgrade Cisco CallManager.	See the “Performing the Upgrade on the Cisco CallManager 3.3 Publisher Server (Required)” section on page 3-12.	45 to 90 minutes per server, depending on the server type
Step 13	Upgrade all of the subscriber servers in the cluster.	See the “Upgrading the Cisco CallManager 3.3 Subscriber Server(s)” procedure on page 3-14.	Depends on the size of the cluster.

Remove the System from the NT Domain or Microsoft Active Directory Domain and Reboot the Server (Required, If Configured)



Tip

You can perform this task on all servers in the cluster at the same time.

The reboot causes call-processing interruptions if done at the same time.



Caution

When a server exists in a domain during an upgrade, authentication between servers may fail, or the non-default domain security policies may restrict Cisco CallManager from building critical NT accounts. Failing to remove the system from the domain and add it to a work group may cause upgrade errors, upgrade failures, or a total system failure, which includes a loss of data and a complete reinstallation of Cisco CallManager. Do not place the servers back into the domain until you have completed the upgrade procedures for every server in the cluster.

Convert any servers that exist in the NT Domain or Microsoft Active Directory Domain by performing the following procedure:

Procedure

- Step 1** Choose **Start > Settings > Control Panel > System**.
- Step 2** Click the **Network Identification** tab.
- Step 3** Click the **Properties** button.
- Step 4** Click the **Workgroup** radio button and enter a name, for example, WRKGRP, in the corresponding field.
- Step 5** Click **OK**.
- Step 6** When prompted to do so, reboot the server.
- Step 7** Log in to the server by using the Administrator password.

- Step 8** Perform this procedure on every server in the cluster that exists in the NT Domain.
- Step 9** Go to the Domain Controller and remove the computer accounts for the Cisco CallManager servers in the cluster.
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Disable and Stop Third-Party, Cisco-Verified, and Cisco-Provided Coresident Applications and Reboot the Server (Required)



Tip

You must perform this task on all servers in the cluster at the same time.

The reboot may cause call-processing interruptions.

To review a list of Cisco-verified applications that Cisco supports and that you should disable before the installation, click <http://www.cisco.com/cgi-bin/ecoa/Search>. In the Solution pane, click **IP Telephony**. From the Solution Category drop-down list box, choose **Operations, Administration, and Maintenance (OAM)**. Click **Search**.

The following platform agents may interfere with the Cisco CallManager installation: antivirus services, intrusion detection services (for example, Cisco Security Agent), OEM server agents, server management agents, VOIP monitoring/performance monitoring, or remote access/remote management agents. Disabling platform agents and services, such as performance monitoring (for example, NetIQ), antivirus (Cisco-verified McAfee services), intrusion detection, and remote management services, ensures that you do not encounter issues that are associated with these services.

This document provides procedures for disabling Cisco-verified McAfee antivirus services only. If you need assistance with disabling other services or applications, refer to the corresponding documentation that accompanies the product.

To disable the McAfee antivirus services, perform the following tasks:

Procedure

- Step 1** Choose **Start > Settings > Control Panel > Administrative Tools > Services**.
- Step 2** From the Services window, right-click one of the antivirus services; that is, Network Associates Alert Manager, Network Associates McShield, or Network Associates Task Manager, and choose **Properties**.
- Step 3** In the Properties window, verify that the General tab displays.
- Step 4** In the Service Status area, click **Stop**.
- Step 5** From the Startup type drop-down list box, choose **Disabled**.
- Step 6** Click **OK**.

- Step 7** Perform [Step 1](#) through [Step 6](#) for all Cisco-approved McAfee antivirus services; for example, Network Associates Alert Manager, Network Associates McShield, and Network Associates Task Manager.
- Step 8** Reboot the server and verify that the services are not running.

**Caution**

Make sure that the services do not start after the reboot.

**Caution**

If Cisco-verified antivirus or intrusion detection software is not currently installed on the server, Cisco strongly recommends that you do not install the software until you complete the entire upgrade/installation of all servers in the cluster.

Install and Configure CIPT Backup and Restore (BARS) Version 4.0(1) (or Later) (Strongly Recommended)

If you have not already done so, Cisco recommends that you install and configure the backup utility on the publisher database server. The CIPT Backup and Restore System (BARS) does not back up any operating system files except for Host/LMhost, if these files exist on the server.

For a list of files that the utility backs up, refer to *Cisco IP Telephony Backup and Restore System (BARS) Administration Guide*. To obtain the most recent version of this document, go to <http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm>.

Back Up Existing Data (Strongly Recommended)

For information on backing up your system, refer to *Cisco IP Telephony Backup and Restore System (BARS) Administration Guide*. To obtain the most recent version of this document, go to <http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm>.

Run the Cisco CallManager Upgrade Assistant Utility on All Servers in the Cluster (Strongly Recommended)



Tip

You must perform this task on one server in the cluster at a time, beginning with the publisher database server.

The reboot may cause call-processing interruptions.

Item Needed: Web Download of Utility

Run the Cisco CallManager Upgrade Assistant Utility to verify that your server is in a healthy state before the upgrade. The document that posts next to the utility on the web provides detailed information about the utility. To obtain the utility and the document, perform the following procedure:

Procedure

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- Step 1** Click <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.
 - Step 2** Click **Cisco CallManager Version 4.0**.
The Cisco CallManager 4.0 software page displays.
 - Step 3** Locate and download the document.
 - Step 4** Using the document as a reference, download and run the utility on every server in the cluster where Cisco CallManager is installed.
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Removing a Drive, Inserting a Replacement Drive, and Drive Mirroring (Strongly Recommended)

Item Needed: Newly Purchased Hard Drive

You cannot remove a drive if you have the MCS-7815, MCS-7820, MCS-7822, MCS-7825, or the customer-provided IBM xSeries 330 server.

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. This task may require that you purchase a new drive.

This process may take between 30 minutes to 60 minutes, depending on the size of the drive.

Perform the following steps to remove a drive, to insert a replacement drive, and to mirror the drives:

Procedure

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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.
 - 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.
- c. After Windows 2000 finishes booting, insert the replacement hard drive in Slot 0.

**Note**

On the MCS-7845, do not insert the replacement drive into Slot 2 until the mirror process completes for the drive in Slot 0.

- d. On the MCS-7830, MCS-7835, or MCS-7845, choose **Start > Compaq Systems Tools > Compaq Array Configuration Utility**. When the Array Configuration Utility Warning window opens, click **OK**.
- e. Watch the status bar in the lower, right corner to determine when the mirroring process completes.
- f. This step applies for the MCS-7845 only.
After the mirroring process completes in Slot 0, insert the next drive into Slot 2. The mirroring process launches automatically after you insert the drive into Slot 2.

IBM xSeries Server

- Step 5** Perform the following procedure for the IBM xSeries server:

- a. Insert a replacement drive into Slot 0.
- b. Press **F5**.
- c. Choose **Start > Programs > ServeRaid Manager > ServeRaid Manager**. You can view the progression of the drive mirroring.

Upgrade the Operating System to Cisco-Provided Version 2000.2.5 (or Later) (Required)

Before you perform the upgrade, be sure to read the operating system readme information that is posted on the operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page at <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.

Perform the upgrade on the publisher database server first; complete the Cisco CallManager upgrade on the publisher database server before you upgrade the operating system on the subscriber servers.

Download and Install the Latest Cisco IP Telephony Server Operating System Service Release (Required)

Download and install the latest Cisco IP Telephony Server Operating System service release (2000-2-5sr2 or later). The operating system service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page.

For installation instructions, refer to the file-specific readme document, *Cisco IP Telephony Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco IP Telephony Applications Server*. To obtain the most recent version of these documents, go to <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.

Download and Install the Latest OS-Related Security Hotfixes (If Any) (Recommended)

The operating system related security hotfixes post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page.

For installation instructions, refer to the file-specific readme document, *Cisco IP Telephony Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco IP Telephony Applications Server*. To obtain the most recent version of these documents, go to <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.

Install Microsoft SQL Server 2000, Service Pack 3a (Required)

For information on how to verify and install the service pack, refer to the readme documentation that accompanies the service pack.



Tip

Install this service pack on the publisher database server; complete the Cisco CallManager upgrade on the publisher database server before you install this service pack on the subscriber servers.

Performing the Upgrade on the Cisco CallManager 3.3 Publisher Server (Required)

Items Needed: Cisco CallManager 4.0(1) Installation, Upgrade, and Recovery Disk 1 and 2

Perform the following procedure.



Note

If you did not log in to the server after the operating system upgrade, log in to the server by using the Administrator account.

Procedure

Step 1 Locate the Cisco CallManager 4.0(1) Installation, Upgrade, and Recovery Disks 1 of 2 and insert it into the drive.



Tip Do not remove the disk until you are directed to do so by procedure. Removing the disk before the procedure directs you to do so may cause an installation failure.

Step 2 To confirm which version of Cisco CallManager you are upgrading from and which version you are upgrading to, click **Yes**.

Step 3 To confirm that you have disabled antivirus and intrusion detection software, click **Yes**.

If you have not installed Microsoft SQL 2000 Service Pack 3a (or a later version), an error message displays. To obtain the service pack and corresponding readme documentation, go to <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.



Tip If you just installed the service pack, you must insert the Cisco CallManager Installation, Upgrade, and Recovery Disk 1 of 2 again after the service pack installs and the server reboots; continue to wait while the Cisco IP telephony application prepares to install.

Step 4 The Preparing to Install window displays while the installation program copies files to your server. This process takes approximately 10 minutes. Do not click **Cancel**.

Step 5 The Resuming the InstallShield Wizard window displays. Click **Next**.

Step 6 Enter the administrator password. Click **Next**.

Step 7 Enter the private password phrase for the cluster; confirm the private password phrase, and click **Next**.

Step 8 To begin the installation, click **Install**.

The status window displays. Do not click **Cancel**.

Step 9 A message displays that indicates that you need to insert the next upgrade disk. Insert the Cisco CallManager 4.0(1) Installation, Upgrade, and Recovery Disk 2 and click **OK**.

A message displays that indicates that you need to install the first upgrade disk again.

Step 10 Insert the Cisco CallManager 4.0 Installation, Upgrade, and Recovery Disk 1 of 2 and click **OK**.

Step 11 Click **Finish**.

Step 12 Click **Yes**.

Upgrading the Cisco CallManager 3.3 Subscriber Server(s)

Table 3-4 describes how to upgrade the subscriber servers.

Table 3-4 Recommended Upgrade Tasks for the Cisco CallManager 3.3 Subscriber Servers




Task	Important Information and Resources
Step 1 Perform pre-upgrade tasks.	See the “ Before You Begin ” section on page 3-1 and the “ Information That You May Need During the Upgrade ” section on page 3-4.
Step 2 Verify that you removed all servers from the NT or Microsoft Active Directory Domain.	See the “ Remove the System from the NT Domain or Microsoft Active Directory Domain and Reboot the Server (Required, If Configured) ” section on page 3-15.
Step 3 Verify that you have disabled and stopped all third-party, Cisco-verified, and Cisco-provided coresident applications that run on the server. Make sure that you have rebooted the server.	See the “ Disable and Stop Third-Party, Cisco-Verified, and Cisco-Provided Coresident Applications and Reboot the Server (Required) ” section on page 3-16.
Step 4 Optional Task Run the ServPrep utility.	You can only run the utility via the Cisco CallManager Subscriber Preparation Disk. Cisco does not provide this utility on the web. See the “ Run the ServPrep Utility (Optional) ” section on page 3-17.
Step 5 Use the operating system upgrade CD-ROM or the operating system upgrade web download to upgrade the operating system to Cisco-provided version 2000.2.5 (or later).	Before you perform the upgrade, be sure to read the operating system readme information that is posted on the operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page at http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml .  Caution If you choose to do so, you can upgrade the operating system on all subscriber servers in the cluster at the same time. This task causes call-processing interruptions.
Step 6 Download and install the latest Cisco IP Telephony Server Operating System service release (2000-2-5sr2 or later). (Required)	The operating system service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page. For installation instructions, refer to the file-specific readme document, <i>Cisco IP Telephony Operating System, SQL Server, Security Updates</i> , and <i>Installing the Operating System on the Cisco IP Telephony Applications Server</i> . To obtain the most recent version of these documents, go to http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml .

Table 3-4 Recommended Upgrade Tasks for the Cisco CallManager 3.3 Subscriber Servers (continued)

Task	Important Information and Resources
Step 7 Download and install the latest OS-related security hotfixes, if any. (Recommended)	<p>The operating system related security hotfixes post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page.</p> <p>For installation instructions, refer to the file-specific readme document, <i>Cisco IP Telephony Operating System, SQL Server, Security Updates</i>, and <i>Installing the Operating System on the Cisco IP Telephony Applications Server</i>. To obtain the most recent version of these documents, go to http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml.</p>
Step 8 Verify that you installed Microsoft SQL Server 2000, Service Pack 3a (or later).	<p>For information on how to verify install the service pack, refer to the readme documentation that accompanies the service pack.</p> <p> Caution This task causes call-processing interruptions.</p>
Step 9 Task That You Should Perform Serially Perform the Cisco CallManager upgrade on one server at a time.	<p> Caution You must perform the Cisco CallManager installation serially; that is, on one server at a time. After you reboot the server and after you verify that the server pulled the subscription from the publisher database server, you can begin the upgrade on the next server.</p> <p>You use the same Cisco CallManager Installation, Upgrade, and Recovery Disks for the publisher database server and subscriber servers.</p> <p>See the “Upgrading Related Cisco CallManager Services and Detecting the Server” section on page 3-19.</p>
Step 10 After you complete the installation on all servers in the cluster, perform post-upgrade tasks.	<p>See the “Performing Post-Upgrade Tasks” section on page 4-1.</p>

Remove the System from the NT Domain or Microsoft Active Directory Domain and Reboot the Server (Required, If Configured)



Tip

You can perform this task on all servers in the cluster at the same time.

The reboot causes call-processing interruptions if done at the same time.



Caution

When a server exists in a domain during an upgrade, authentication between servers may fail, or the non-default domain security policies may restrict Cisco CallManager from building critical NT accounts. Failing to remove the system from the domain and add it to a work group may cause

upgrade errors, upgrade failures, or a total system failure, which includes a loss of data and a complete reinstallation of Cisco CallManager. Do not place the servers back into the domain until you have completed the upgrade procedures for every server in the cluster.

Convert any servers that exist in the NT Domain or Microsoft Active Directory Domain by performing the following procedure:

Procedure

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- Step 1** Choose **Start > Settings > Control Panel > System**.
 - Step 2** Click the **Network Identification** tab.
 - Step 3** Click the **Properties** button.
 - Step 4** Click the **Workgroup** radio button and enter a name, for example, WRKGRP, in the corresponding field.
 - Step 5** Click **OK**.
 - Step 6** When prompted to do so, reboot the server.
 - Step 7** Log in to the server by using the Administrator password.
 - Step 8** Perform this procedure on every server in the cluster that exists in the NT Domain.
 - Step 9** Go to the Domain Controller and remove the computer accounts for the Cisco CallManager servers in the cluster.
-

Disable and Stop Third-Party, Cisco-Verified, and Cisco-Provided Coresident Applications and Reboot the Server (Required)



Tip

You must perform this task on all servers in the cluster at the same time.

The reboot may cause call-processing interruptions.

To review a list of Cisco-verified applications that Cisco supports and that you should disable before the installation, click <http://www.cisco.com/pcgi-bin/ecoa/Search>. In the Solution pane, click **IP Telephony**. From the Solution Category drop-down list box, choose **Operations, Administration, and Maintenance (OAM)**. Click **Search**.

The following platform agents may interfere with the Cisco CallManager installation: antivirus services, intrusion detection services (for example, Cisco Security Agent), OEM server agents, server management agents, VOIP monitoring/performance monitoring, or remote access/remote management agents. Disabling platform agents and services, such as performance monitoring (for example, NetIQ), antivirus (Cisco-verified McAfee services), intrusion detection, and remote management services, ensures that you do not encounter issues that are associated with these services.

This document provides procedures for disabling Cisco-verified McAfee antivirus services only. If you need assistance with disabling other services or applications, refer to the corresponding documentation that accompanies the product.

To disable the McAfee antivirus services, perform the following tasks:

Procedure

-
- Step 1** Choose **Start > Settings > Control Panel > Administrative Tools > Services**.
 - Step 2** From the Services window, right-click one of the antivirus services; that is, Network Associates Alert Manager, Network Associates McShield, or Network Associates Task Manager, and choose **Properties**.
 - Step 3** In the Properties window, verify that the General tab displays.
 - Step 4** In the Service Status area, click **Stop**.
 - Step 5** From the Startup type drop-down list box, choose **Disabled**.
 - Step 6** Click **OK**.
 - Step 7** Perform [Step 1](#) through [Step 6](#) for all Cisco-approved McAfee antivirus services; for example, Network Associates Alert Manager, Network Associates McShield, and Network Associates Task Manager.
 - Step 8** Reboot the server and verify that the services are not running.



Caution

Make sure that the services do not start after the reboot.



Caution

If Cisco-verified antivirus or intrusion detection software is not currently installed on the server, Cisco strongly recommends that you do not install the software until you complete the entire upgrade/installation of all servers in the cluster.

Run the ServPrep Utility (Optional)

Item Needed: Cisco CallManager Subscriber Upgrade Disk 1

Before you install Cisco CallManager, you must run the ServPrep utility and install Cisco-provided operating system version 2000.2.5sr2 or later by using the Cisco-provided operating system disks.

The ServPrep utility, which you run on subscriber servers, updates the network configuration by creating the file, STISys.inf, which contains network information. The utility saves TCP/IP settings, but you lose manually configured NIC settings; for example, hard-coded Speed/Duplex settings. After you complete the installation on all servers in the cluster, you must manually configure previous NIC settings.



Caution

This utility supports all Cisco Media Convergence Servers, customer-provided HP DL320 and DL380 servers, and customer-provided IBM xSeries 330, 340, 342, and 345 servers that meet Cisco-approved configuration standards. Do not run this utility on any other servers, including customer-provided servers.

Procedure

-
- Step 1** Insert the Cisco CallManager Subscriber Upgrade Disk 1 into the drive as soon as you can do so.
- Step 2** When the Upgrade Warning window displays, carefully read the information and click the **ServPrep Utility** link at the bottom of the window.
- Step 3** Run the program from the current location; follow the prompts that display.
-

Upgrade the Operating System to Cisco-Provided Version 2000.2.5 (or Later) (Required)

Before you perform the upgrade, be sure to read the operating system readme information that is posted on the operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page at <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.

Perform the upgrade on the publisher database server first; complete the Cisco CallManager upgrade on the publisher database server before you upgrade the operating system on the subscriber servers.

Download and Install the Latest Cisco IP Telephony Server Operating System Service Release (Required)

Download and install the latest Cisco IP Telephony Server Operating System service release (2000-2-5sr2 or later). The operating system service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page.

For installation instructions, refer to the file-specific readme document, *Cisco IP Telephony Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco IP Telephony Applications Server*. To obtain the most recent version of these documents, go to <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.

Download and Install the Latest OS-Related Security Hotfixes (If Any) (Recommended)

The operating system related security hotfixes post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco CallManager software page.

For installation instructions, refer to the file-specific readme document, *Cisco IP Telephony Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco IP Telephony Applications Server*. To obtain the most recent version of these documents, go to <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.

Install Microsoft SQL Server 2000, Service Pack 3a (Required)

For information on how to verify and install the service pack, refer to the readme documentation that accompanies the service pack.

**Tip**

Install this service pack on the publisher database server; complete the Cisco CallManager upgrade on the publisher database server before you install this service pack on the subscriber servers.

Upgrading Related Cisco CallManager Services and Detecting the Server

Items Needed: Cisco CallManager 4.0(1) Installation, Upgrade, and Recovery Disk 1 and 2

Perform the following procedure.

**Note**

If you did not log in to the server after the operating system upgrade, log in to the server by using the Administrator account.

Procedure

Step 1 Locate the Cisco CallManager 4.0(1) Installation, Upgrade, and Recovery Disks 1 of 2 and insert it into the drive.

**Tip**

Do not remove the disk until you are directed to do so by procedure. Removing the disk before the procedure directs you to do so may cause an installation failure.

Step 2 To confirm which version of Cisco CallManager you are upgrading from and which version you are upgrading to, click **Yes**.

Step 3 To confirm that you have disabled antivirus and intrusion detection software, click **Yes**.

If you have not installed Microsoft SQL 2000 Service Pack 3a (or a later version), an error message displays. To obtain the service pack and corresponding readme documentation, go to <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.

**Tip**

If you just installed the service pack, you must insert the Cisco CallManager Installation, Upgrade, and Recovery Disk 1 of 2 again after the service pack installs and the server reboots; continue to wait while the Cisco IP telephony application prepares to install.

Step 4 The Preparing to Install window displays while the installation program copies files to your server. This process takes approximately 10 minutes. Do not click **Cancel**.

Step 5 The Resuming the InstallShield Wizard window displays. Click **Next**.

Step 6 Enter the administrator password. Click **Next**.

Step 7 Enter the private password phrase for the cluster; confirm the private password phrase, and click **Next**.

Step 8 To begin the installation, click **Install**.

The status window displays. Do not click **Cancel**.

- Step 9** A message displays that indicates that you need to insert the next upgrade disk. Insert the Cisco CallManager 4.0(1) Installation, Upgrade, and Recovery Disk 2 and click **OK**.
A message displays that indicates that you need to install the first upgrade disk again.
- Step 10** Insert the Cisco CallManager 4.0 Installation, Upgrade, and Recovery Disk 1 of 2 and click **OK**.
- Step 11** Click **Finish**.
- Step 12** Click **Yes**.
-

**Tip**

Repeat the procedures in the [“Upgrading the Cisco CallManager 3.3 Subscriber Server\(s\)”](#) section on [page 3-14](#) on each subscriber server until you have upgraded all the servers in your cluster. After you update all of the servers, perform the appropriate procedures in the [“Performing Post-Upgrade Tasks”](#) section on [page 4-1](#).
