



## Replacing Servers During the Upgrade

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This document assumes that Cisco CallManager is the only application that runs on the server. This document does not provide procedures for replacing coresident servers where Cisco CallManager, Cisco Customer Response Solutions (CRS), and Cisco-verified, third-party applications are installed on the same server.

By using these procedures, you can replace the publisher database server only, a subscriber server only, multiple subscriber servers, or both the publisher database server and the subscriber server(s) during the upgrade. Unless otherwise indicated in the document, remember to perform all procedures serially; that is, on one server at a time.



### Caution

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These procedures cause call-processing interruptions. Cisco strongly recommends that you perform this procedure during a maintenance window. After you perform a backup, do not make any changes to the existing publisher database server that runs Cisco CallManager 3.2. Any changes that you make after a backup will not exist in the new database.

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## Replacing the Cisco CallManager 3.2 Publisher Database Server During the Cisco CallManager 4.0 Upgrade



### Caution

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If you are replacing the publisher database server, you must perform the procedures for the new publisher database server on a physically isolated network (a dead net). See [Step 14](#).

If you are performing installation procedures on a dead net, you must have network or media access to the backup file, MCS.sti file, or a tape drive and the tape if you originally backed up to a tape device. You must have network or media access to the Recovery folder and contents from the STI\_DATA drive of the publisher database server. Before you start the Cisco CallManager installation, verify file access and DNS name resolution to the MCS.sti file in the dead net through the computer browser.

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### Procedure

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- Step 1** Perform [Step 2](#) through [Step 13](#) for the existing Cisco CallManager 3.2 publisher database server.

**Performing Tasks on the Existing Cisco CallManager 3.2 Publisher Database Server (Required)**

- Step 2** Record all network configuration settings, including the computer name, network card speed and duplex settings, IP address, subnet mask, gateway, DNS, and WINS for the current system. Record the configuration of the servers in the existing cluster; record all software versions, Cisco CallManager services, coresident applications, and plugins, so you can reinstall them after the upgrade. Use [Table 7-1](#) to record the information.

**Table 7-1 Server Configuration Settings**

Server Configuration Settings	Your Entry
Computer Name	
NIC Speed/Duplex settings	
IP Address	
Subnet Mask	
Default Gateway	
DNS Settings	
WINS Settings	
Cisco CallManager services (See Cisco CallManager Serviceability.)	
Coresident applications (Note the application type and version.)	
Cisco verified, third-party applications (Note the application type and version.)	
Plugins from Cisco CallManager Administration	
Other Pertinent Information	

- Step 3** Refer to the document, *Using the Cisco IP Telephony Applications Backup Utility Version 3.5.52* (or later), to perform the following tasks. To obtain the most recent version of this document, go to <http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm>.
- a. Uninstall any prior versions of the backup utility; reboot the server when you are instructed to do so.



**Note** You cannot uninstall Cisco IP Telephony Applications Backup Utility version 3.5.6 if you installed the utility during the Cisco CallManager 3.2(3) installation.

- b. Install and configure Cisco IP Telephony Applications Backup Utility Version 3.5.52 (or later) on the publisher database server.
- c. Right-click the backup icon in the Windows 2000 system tray and back up the existing Cisco CallManager data.

**Caution**

Make sure that you back up the data to a network directory or a local tape device. After you perform a backup, do not make any changes to the existing publisher database server that runs Cisco CallManager 3.2. Any changes that you make after a backup will not exist in the new database.

**Caution**

If additional data besides Cisco CallManager data exists on the publisher database server, make sure that you back up the data before you continue with this procedure. Use the backup utility and documentation that applies to the application. This procedure does not outline migration of any data besides Cisco CallManager data. After you perform the Cisco CallManager upgrade, you must reinstall additional applications and restore the data by using the specified restoration procedures for the application.

**Step 4**

Copy the Recovery folder (with dbname.ini and backup.ini files) from the STI\_DATA drive (usually the D:\Recover folder) to the network directory where the MCS.sti file (the backed up data) is stored. You can perform this task on a floppy drive.

**Caution**

If these files do not exist on the server before the Cisco CallManager installation starts, the restoration of data fails.

**Step 5**

Copy the HOST and/or LMHOST files from C:\WINNT\SYSTEM32\DRIVERS\ETC to the network directory where the MCS.sti file (the backed up data) is stored. You can perform this task on a floppy drive.

**Preparing the New Publisher Database Server****Step 6**

Locate the disks for the Cisco-provided 2000.2.4 (or later) operating system.

**Step 7**

Power on the new publisher database server that has no data on it.

**Step 8**

Install the operating system by using the Cisco-provided disks and the document, *Installing the Operating System on the Cisco IP Telephony Applications Server*. To obtain the most recent version of this document, go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel\\_os/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel_os/index.htm).

**Caution**

During the operating system installation, make sure that you choose the **New Installation or Server Replacement** option.

You must enter the exact computer name and network configuration information as the publisher database server that runs Cisco CallManager 3.2.

Do not join the new publisher database server to a Windows domain. Joining the domain causes the Cisco CallManager installation to fail.

During the operating system installation, check the **I am recovering a system from backup check box** (to ensure that the Recover flag is created in the STI\_DATA drive).

**Step 9**

Use Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk that ships with Cisco CallManager to upgrade the Cisco-provided operating system to version 2000.2.5. 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>.

**Step 10**

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>.

- Step 11** Download and install the latest OS-related security hotfixes, if any.
- 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>.
- Step 12** Copy the stored Recovery folder, including the dbname.ini and backup.ini files that exist on the network directory or floppy diskette, to the D: drive on the new publisher database server.
- Step 13** Copy the Host and/or LMHOST files to C:\WINNT\SYSTEM32\DRIVERS\ETC on the publisher database server; reboot the server.
- Step 14** Obtain the Cisco CallManager Installation, Upgrade, and Recovery Disks and the document, *Installing Cisco CallManager Release 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](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm).
- Step 15** Perform a Cisco CallManager 4.0 installation.

**Caution**

Do not remove the disk unless the installation process or this document prompts you to do so. When a prompt asks, “The Same System Recovery flag was detected. Is this server being configured as a Cisco CallManager Publisher,” click **Yes**.

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**Moving the New Publisher Database Server to the Live Network**

- Step 16** After the Cisco CallManager installation completes, power off the new publisher database server.
- Step 17** Connect the new publisher database server to the production network.
- Step 18** Power off the publisher database server that runs Cisco CallManager 3.2 and disconnect it from the network.
- Step 19** Power up the new publisher database server on the production network.

**Tip**

After you install Cisco CallManager on the server, verify that the new server behaves as expected. Review post-installation and post-upgrade tasks and perform the necessary tasks as you verify. To obtain the Cisco CallManager 4.0(1) installation document for post-installation tasks, go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm). To review post-upgrade tasks, see the “Performing Post-Upgrade Tasks” section on page 4-1.

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## Replacing Cisco CallManager 3.2 Subscriber Server(s) During a Cisco CallManager 4.0 Upgrade

You must install Cisco CallManager on subscriber servers serially, that is, on one server at a time.

**Caution**

If you are replacing the publisher database server and subscriber server(s), make sure that you have replaced the publisher database server first and that the data migrated and that services started as expected.

Perform these procedures on a live network with a live publisher database server.

**Timesaver**

If you choose to do so, you may perform the operating system installation simultaneously on all new servers if the new hardware is not connected to the same network as the current system. Make sure that you install the operating system on a physically isolated network by using the procedures in this document. Installing the operating system in this manner saves you about 1 hour per server when you perform the actual hardware migration to the production network.

**Tip**

After you install the first subscriber server, verify that the server and application behave as expected. If the server does not behave as expected, power off the live (new) publisher database server and the subscriber server, power on the publisher database server that runs Cisco CallManager 3.2, and rebuild the subscriber server to its original state. If this was a hardware replacement for the subscriber server, restore power to the old subscriber server.

After you install the second subscriber server and verify that it behaves as expected, you may experience call-processing interruptions if you choose to revert the cluster to the original state.

**Procedure**

- Step 1** Record all network configuration settings, including the computer name, network card speed and duplex settings, IP address, subnet mask, gateway, DNS, and WINS for the current system. Record the configuration of the servers in the existing cluster; record all software versions, Cisco CallManager services, coresident applications, and plugins, so you can reinstall them after the upgrade. Use [Table 7-1](#) to record the information.
- Step 2** Power off the subscriber server that runs Cisco CallManager 3.2 and disconnect it from the network.
- Step 3** Connect the new server to the network and power on the server.
- Step 4** Using the Cisco-provided Operating System disks, install operating system 2000.2.4 (or later) on the new server that has no data on it.

**Caution**

During the operating system installation, make sure that you choose the **New Installation or Server Replacement** option.

Do not check the I am recovering a system from backup check box.

Do not join the server to a Windows Domain during the operating system installation. Joining the domain causes the Cisco CallManager installation to fail.

- Step 5** Use Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk that ships with Cisco CallManager to upgrade the Cisco-provided operating system to version 2000.2.5. 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>.
- Step 6** 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>.
- Step 7** Download and install the latest OS-related security hotfixes, if any. 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>.
- Step 8** Using the Cisco CallManager Installation disks, perform a complete subscriber installation on the new server where you installed the operating system. Refer to the Cisco CallManager installation document for more information. Go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm).

**Tip**

After you install Cisco CallManager on the server, verify that the new server behaves as expected. Review post-installation and post-upgrade tasks and perform the necessary tasks as you verify. To obtain the Cisco CallManager 4.0(1) installation document for post-installation tasks, go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm). To review post-upgrade tasks, see the “Performing Post-Upgrade Tasks” section on page 4-1.

# Replacing the Cisco CallManager 3.3 Publisher Database Server During the Cisco CallManager 4.0(1) Upgrade

Perform the following procedure:

## Procedure

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- Step 1** Perform [Step 2](#) through [Step 6](#) for the existing Cisco CallManager 3.3 publisher database server.
- Performing Tasks on the Existing Cisco CallManager 3.3(2) Publisher Database Server (Required)**
- Step 2** Record all network configuration settings, including the computer name, network card speed and duplex, IP address, subnet mask, gateway, DNS, and WINS for the current system. Record the configuration of the servers in the existing cluster; record all software versions, Cisco CallManager services, coresident applications, and plugins, so you can reinstall them after the upgrade. Record the information in [Table 7-1](#)
- Step 3** 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. Refer to [Uninstalling CAR, page 3-3](#) for information on the procedure.
- Step 4** Refer to the document, *Cisco IP Telephony Backup and Restore System (BARS) Administration Guide*, to perform the following tasks. To obtain the most recent version of this document, go to <http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm>.
- Install and configure the Cisco IP Telephony Backup and Restore System (BARS) Version 4.0(1) (or later) on the publisher database server; reboot the server.
  - Back up the existing Cisco CallManager data.



### Caution

Make sure that you back up the data to a network directory or a local tape device.

After you perform a backup, do not make any changes to the existing publisher database server that runs Cisco CallManager 3.3. Any changes that you make after a backup will not exist in the new database.

- Step 5** Copy the HOST and/or LMHOST files from C:\WINNT\SYSTEM32\DRIVERS\ETC to the network directory where the backed-up data is stored. You can perform this task on a floppy drive.
- Step 6** Power off the Cisco CallManager 3.3 publisher database server and disconnect it from the network.

## Preparing the New Publisher Database Server

- Step 7** Connect the new server to the network and power on the server. By using the Cisco-provided operating system disks, install operating system version 2000.2.4 on the new publisher database server that has no data on it. To obtain the operating system documentation, go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel\\_os/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel_os/index.htm).



### Caution

During the operating system installation, make sure that you choose the New Installation or Server Replacement option. You must enter the exact computer name and network configuration information as the publisher database server that runs Cisco CallManager 3.3. Do not check the I am recovering a system from backup check box. Do not join the new publisher database server to a Windows domain. Joining the domain causes the Cisco CallManager installation to fail.

- Step 8** Use Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk that ships with Cisco CallManager to upgrade the Cisco-provided operating system to version 2000.2.5. 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>.
- Step 9** 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>.
- Step 10** Download and install the latest OS-related security hotfixes, if any. 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>.
- Step 11** Copy the HOST and/or LMHOST files to C:\WINNT\SYSTEM32\DRIVERS\ETC on the new publisher database server; reboot the server.
- Step 12** Obtain the document, *Installing Cisco CallManager Release 3.3*. Go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm) to obtain the most recent version.
- Step 13** While you refer to the document, perform a Cisco CallManager 3.3 installation.
- Step 14** Restore the backed-up data to the new publisher database server. To obtain the backup and restore utility documentation, go to <http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm>.




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**Tip** Verify that the new server behaves as expected. Review post-installation and post-upgrade tasks and perform the necessary tasks as you verify. To obtain the Cisco CallManager 3.3 installation document for post-installation tasks, go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm).

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- Step 15** Use this document, perform a Cisco CallManager 4.0(1) upgrade.




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**Tip** Verify that the new server behaves as expected. Review and post-upgrade tasks and perform the necessary tasks as you verify. To review post-upgrade tasks, see the “[Performing Post-Upgrade Tasks](#)” section on page 4-1.

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# Replacing the Cisco CallManager 3.3 Subscriber Server(s) During the Cisco CallManager 4.0(1) Upgrade

You must install Cisco CallManager on subscriber servers serially, that is, on one server at a time.



## Caution

If you are replacing the publisher database server and subscriber server(s), make sure that you have replaced the publisher database server first and that the data migrated and services started as expected.

Perform these procedures on a live network with a live publisher database server.



## Timesaver

If you choose to do so, you may perform the operating system installation simultaneously on all new servers if the new hardware is not connected to the same network as the current system. Make sure that you install the operating system on a physically isolated network by using the procedures in this document. Installing the operating system in this manner saves you about 1 hour per server when you perform the actual hardware migration to the production network.



## Tip

After you install the first subscriber server, verify that the server and application behave as expected. If the server does not behave as expected, power off the live (new) publisher database server and the subscriber server, power on the publisher database server that runs Cisco CallManager 3.2, and rebuild the subscriber server to its original state. If this was a hardware replacement for the subscriber server, restore power to the old subscriber server.

After you install the second subscriber server and verify that it behaves as expected, you may experience call-processing interruptions if you choose to revert the cluster to the original state.

## Procedure

- Step 1** Record all network configuration settings, including the computer name, network card speed and duplex settings, IP address, subnet mask, gateway, DNS, and WINS for the current system. Record the configuration of the servers in the existing cluster; record all software versions, Cisco CallManager services, coresident applications, and plugins, so you can reinstall them after the upgrade. Use [Table 7-1](#) to record the information.
- Step 2** Power off the Cisco CallManager 3.3 subscriber server and disconnect it from the network.
- Step 3** Connect the new server to the network and power on the server.
- Step 4** Using the Cisco-provided Operating System disks, install operating system 2000.2.4 (or later) on the new server that has no data on it.



## Caution

During the operating system installation, make sure that you choose the **New Installation or Server Replacement** option.

Do not check the I am recovering a system from backup check box.

Do not join the server to a Windows Domain during the operating system installation. Joining the domain causes the Cisco CallManager installation to fail.

- Step 5** Use Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk that ships with Cisco CallManager to upgrade the Cisco-provided operating system to version 2000.2.5. 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>.
- Step 6** 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>.
- Step 7** Download and install the latest OS-related security hotfixes, if any. 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>.
- Step 8** Using the Cisco CallManager Installation disks, perform a complete subscriber installation on the new server where you installed the operating system. Refer to the Cisco CallManager installation document for more information. Go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm).

**Tip**

After you install Cisco CallManager on the server, verify that the new server behaves as expected. Review post-installation and post-upgrade tasks and perform the necessary tasks as you verify. To obtain the Cisco CallManager 4.0(1) installation document for post-installation tasks, go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm). To review post-upgrade tasks, see the “Performing Post-Upgrade Tasks” section on page 4-1.

## Troubleshooting Hardware Replacements During Upgrades

If the server does not behave as expected, power off the live (new) publisher database server and the subscriber server, if applicable, power on the publisher database server that runs Cisco CallManager 3.2 or 3.3, and rebuild the subscriber server to its original state. If you replaced the subscriber server, restore power to the subscriber server that runs Cisco CallManager 3.2 or 3.3.