




## Performing Post-Upgrade Tasks

After you complete the upgrade, perform the appropriate tasks as described below:

| Post-Upgrade Task  | Related Information and Procedures   |
|--|--|
| <b>Step 1</b> Cisco CallManager installation sets the default recovery setting for Cisco CallManager services to automatically restart the service when a failure is detected. Verify the default failure response of any services that you have previously changed. | See the <a href="#">“Default Recovery Setting”</a> section on page 3-4.  |
| <b>Step 2</b> Verify that the subscriber servers pulled the copy of the database.  | See the <a href="#">“Verifying and Reinitializing Subscriber Connections”</a> section on page 3-6.   |
| <b>Step 3</b> Verify that all of the appropriate services started.<br>Verify that you can make internal calls.<br>Verify that you can place and receive a call across gateways.  | See the <a href="#">“Verifying Services, Patches, and Hotfixes”</a> section on page 3-6.<br>See the <a href="#">“Reassigning Route Lists”</a> section on page 3-7.<br><br><b>Caution</b> If you have third-party software, such as CDR software, integrated with Cisco CallManager and the third-party software does not run as expected after the upgrade, verify that you entered the same SA password on all servers in the cluster. |
| <b>Step 4</b> If you have CRS and Cisco CallManager installed on the same server, complete the upgrade by referring to the appropriate documentation.  | See the <a href="#">“How does a coresident upgrade work if I have CRS installed with Cisco CallManager?”</a> section on page 1-6.  |

| Post-Upgrade Task  | Related Information and Procedures   |
|--|--|
| <p><b>Step 5</b> After you complete the Cisco CallManager upgrade on every server in the cluster, reinstall all Cisco-verified applications and all plug-ins that were previously installed on the server except the Cisco CDR Analysis and Reporting plug-in.</p> <p>For example, if you have integrated your enterprise directory with Cisco CallManager, you must reinstall the Cisco Customer Directory Configuration Plugin on all servers in the cluster after the upgrade, starting with the publisher database server. Reinstalling the plug-in populates your enterprise directory with any additional schema extensions and data entries that Cisco CallManager needs.</p> | <p>Refer to the appropriate documentation that accompanies the applications.</p>   |
| <p><b>Step 6</b> Upgrade Cisco TAPI, Cisco JTAPI, Cisco TSP (for the voice-messaging system), and the Cisco TSP for Cisco SoftPhone.</p>   | <p>See the following sections for more information:</p> <ul style="list-style-type: none"> <li>• <a href="#">Upgrading TAPI, JTAPI, and Cisco Telephony Service Provider (TSP)</a>, page 3-10</li> <li>• <a href="#">Upgrading the Cisco TAPI/TSP for Cisco SoftPhone</a>, page 3-10</li> </ul>  |
| <p><b>Step 7</b> If you have CRS or Cisco CallManager Extended Services installed, you must execute the JTAPI update utility to ensure that the JTAPI plug-in is installed properly.</p>   | <p>See “<a href="#">Using the JTAPI Update Utility with CRS</a>” section on page 3-11.</p>   |
| <p><b>Step 8</b> If you are using Cisco Unity as your voice-messaging system, configure the appropriate settings to ensure proper failover.</p>  | <p>For more information, refer to the <i>Release Notes for Cisco CallManager</i>. To obtain the most recent version of this document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_c_allmg/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_c_allmg/index.htm</a>.</p>   |
| <p><b>Step 9</b> Verify that all Cisco IP telephony applications that are integrated with Cisco CallManager run properly. If you need to do so, upgrade the Cisco IP telephony applications that are integrated with your Cisco CallManager system.</p>  | <p>Refer to the <i>Cisco CallManager Software Compatibility Matrix</i> that is found at the following location: <a href="http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_device_support_tables_list.html">http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_device_support_tables_list.html</a></p> <p>If the application is compatible with this version of Cisco CallManager, refer to the appropriate Cisco IP telephony application documentation.</p> |
| <p><b>Step 10</b> For your migrated version of Cisco CallManager Attendant Console to work, you must check the Call Park Retrieval Allowed check box for the ac user that you configured in the Global Directory. The attendant console does not initialize if you do not check this check box.</p>  | <p>For more information on how to perform this task, refer to the <i>Cisco CallManager Administration Guide</i>.</p>   |

| Post-Upgrade Task   | Related Information and Procedures  |
|---|---|
| <p><b>Step 11</b> 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.</p>  | <p>If you need technical assistance with this issue, directly contact the third-party software vendor.</p>  |
| <p><b>Step 12</b> If you want to use Norton AntiVirus, install the application and perform post-installation tasks.</p>   | <p>Refer to <i>Using Symantec/Norton AntiVirus with Cisco CallManager</i>.</p> <p>Click the following URLs to obtain more information.</p> <p><a href="http://www.cisco.com/en/US/partner/products/sw/voicesw/p5556/prod_bulletin0900aecd800f6180.html">http://www.cisco.com/en/US/partner/products/sw/voicesw/p5556/prod_bulletin0900aecd800f6180.html</a></p> <p><a href="http://www.cisco.com/en/US/partner/products/sw/voicesw/p5556/prod_bulletin0900aecd800f8572.html">http://www.cisco.com/en/US/partner/products/sw/voicesw/p5556/prod_bulletin0900aecd800f8572.html</a></p>  |
| <p><b>Step 13</b> The locale, English_United_States, installs automatically on the server. To upgrade existing locales or to add additional locales to the server, install the Cisco IP Telephony Locale Installer.</p>   | <p>You can obtain locale specific versions of the Cisco IP Telephony Network Locale installer for Cisco CallManager 4.2 when they become available at</p> <p><a href="http://www.cisco.com/kobayashi/sw-center/telephony/callmgr/locale-installer.shtml">http://www.cisco.com/kobayashi/sw-center/telephony/callmgr/locale-installer.shtml</a>.</p> <p>Refer to the readme file that is posted next to the Cisco IP Telephony Locale Installer software for the complete list of supported languages and localized features. For more information on installing the locale installer, refer to <i>Using the Cisco IP Telephony Locale Installer</i>.</p> <p><b>Note</b> The locale installer has version-specific support for Cisco CallManager releases.</p> |
| <p><b>Step 14</b> You must configure the Network Interface Card (NIC) Speed and Duplex settings of the Cisco CallManager server to match the configuration of the LAN switch port to which the server is connected. Failure to match these settings between the server and switch may cause degraded network performance and unexpected errors to occur. Contact your network administrator or see the Cisco IOS configuration documentation to determine your current settings of the LAN switch port to which the Cisco CallManager NIC is connected.</p> | <p>Some administrators have found that the 100/Full setting works well.</p>   |

| Post-Upgrade Task  | Related Information and Procedures   |
|--|--|
| <p><b>Step 15</b> Verify the version of hotfixes and service packs that are installed on the server.</p> <p>Download the latest hotfixes, service packs, and Cisco CallManager service release that are available on the web.</p> <p>This task requires a reboot of the server after you install the files.</p> <p><b>Tip</b> Perform this task on an ongoing basis to maintain your system.</p>   | <p><a href="#">Verifying Services, Patches, and Hotfixes, page 3-6</a></p> <p><a href="#">Reassigning Route Lists, page 3-7</a></p> <p><b>Tip</b> The service releases may post to the web after the Cisco CallManager upgrade is available.</p> |
| <p><b>Step 16</b> If you are upgrading from Cisco CallManager Release 3.3(x), 4.0(x), or 4.1(x) and had more than one primary Cisco CallManager server, you must reassign the route lists to Cisco CallManager groups that you configured if you wish to maintain an optimal load balance.</p>   | <p>See the <a href="#">“Reassigning Route Lists” section on page 7</a>.</p>  |
| <p><b>Step 17</b> If you are administering Cisco CallManager servers from a PC that does not have Microsoft Java Machine, you will need to install and configure Sun Microsystems Java Virtual Machine (JVM) on the PC to ensure that Cisco CallManager Administration displays correctly.</p> <p>MSJVM installed by default in all client workstation versions of the current Windows operating systems, except for the following versions:</p> <ul style="list-style-type: none"> <li>• Windows XP Professional with SP1 slipstreamed into the installation</li> <li>• Windows 2000 Server/Professional with SP4 slipstreamed into the installation</li> </ul> | <p>See the <a href="#">“Requirement for Installation of Java Virtual Machine” section on page 3-8</a>.</p>   |
| <p><b>Step 18</b> Perform basic connectivity and functional testing of any current Cisco Partner/Affiliate products/applications in your current (post-upgrade) environment. If you find any issues, compare your post-upgrade test results with your documented pre-upgrade test results.</p>   | <p>See the <a href="#">“Before You Begin” section on page 2-1</a></p>  |

## Default Recovery Setting

Cisco CallManager installation sets the default recovery setting on the following services to automatically restart the service when a failure is detected:

- Cisco Serviceability Reporter
- Cisco CallManager
- Cisco CTIManager
- Cisco TFTP
- Cisco Telephone Call Dispatcher

- Cisco Tomcat
- Cisco RIS Data Collector
- Cisco Messaging Interface

Cisco does not recommend changing the recovery setting on a live production system. If you want to change the default failure response of a service, you can set the recovery setting by choosing **Start > Settings > Control Panel > Service**.

## Enabling Third-party Applications, Antivirus Services, or Security Agents

After you log in to the server, enable all third-party applications, antivirus services, or security agents through the Control Panel by completing the following procedure:

### Procedure

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- Step 1** Choose **Start > Programs > Administrative Tools > Services**.
  - Step 2** Locate the third-party application, antivirus service, or security agent that you want to start, right-click the service, and choose Properties.
  - Step 3** In the Properties window, click the General tab.
  - Step 4** From the Startup type drop-down list box, choose **Automatic**.
  - Step 5** Click **OK**.
  - Step 6** In the Services window, right-click the application or service and click **Start**.
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# Verifying and Reinitializing Subscriber Connections

If the connections between the publisher database server and the subscribers within a cluster are broken for any reason, you cannot copy the database to the subscribers.

## Verifying the Status of the Subscription

To determine whether the connections between the publisher database server and the subscribers within a cluster are broken, wait 35 minutes after you have installed the last subscriber in the cluster. Then, open SQL Server Enterprise Manager. If a red X icon appears next to the subscription, the subscription is broken.

## Reinitializing the Subscription/Starting the Replication Snapshot Agent

If you determine that one or more subscription connections are broken, as indicated by the red X icon next to the subscriptions, reinitialize the subscriptions and start the replication snapshot agent on the publisher database server.

### Procedure

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- Step 1** Open SQL Server Enterprise Manager by choosing **Start > Programs > Microsoft SQL Server > Enterprise Manager**.
  - Step 2** In the following path, choose the name of the publisher database that you are configuring: **Microsoft SQL Servers/SQL Server Group/<this server's hostname>/Databases/<the publisher database name>Publications**.
  - Step 3** In the main window, right-click the subscription name and choose **Reinitialize all Subscriptions**. Click **Yes** to confirm.
  - Step 4** In the following path, choose the **Snapshot Agents** folder: **Microsoft SQL Servers/SQL Server Group/<this server's hostname>/Replication Monitor/Agents**.
  - Step 5** Right-click the publication name that matches the database name that you are configuring; then, click **Start**.
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In rare cases, the reinitialization of the subscriptions may not work. If you determine that the previous procedure did not work as expected, contact the team that provides technical assistance for this product; for example, your Cisco Partner or the Cisco Technical Assistance Center (TAC).

# Verifying Services, Patches, and Hotfixes

Perform the following tasks:

- Verify that the appropriate services run on each server in the cluster ([About Services, page 3-7](#))
- Verify that you have installed the latest Microsoft patches and hotfixes ([About Microsoft Patches and Hotfixes, page 3-7](#))
- Verify that you have installed the latest Cisco CallManager service release ([About Cisco CallManager Service Releases, page 3-7](#))

### About Services

Open Cisco CallManager Serviceability and verify that all migrated services are running. To review service activation procedures and service recommendations, refer to the *Cisco CallManager Serviceability Administration Guide* and the *Cisco CallManager Serviceability System Guide*.

**Caution**

Do not start and stop services through the Microsoft Computer Management window. Starting and stopping services through the window causes problems with the Cisco CallManager database.

### About Microsoft Patches and Hotfixes

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>.

### About Cisco CallManager Service Releases

After you install this version of Cisco CallManager on all servers in the cluster, Cisco strongly recommends that you install the latest Cisco CallManager service release on all servers in the cluster. These service releases provide bug fixes for your system.

Be aware that Cisco CallManager service releases are cumulative. Cisco rolls these bug fixes into the next Cisco CallManager release.

**Tip**

Make sure that you install the same version of the service release on every server in the cluster.

To obtain the latest Cisco CallManager service release, perform the following procedure:

- Step 1** Click <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.
- Step 2** Click **Cisco CallManager Version 4.2**.  
The Cisco CallManager 4.2 software page displays.
- Step 3** Locate and download the readme file for the service release.  
The readme file provides procedures, caveats, and descriptive information for installing the files.
- Step 4** Using the readme file as a reference, install the Cisco CallManager service release on every server in the cluster where Cisco CallManager is installed.

## Reassigning Route Lists

If you had more than one primary Cisco CallManager server in a cluster and you are upgrading from Cisco CallManager Release 3.3(x), 4.0(x), or 4.1(x) to Cisco CallManager 4.2(1), you will need to reassign the route list to the Cisco CallManager group that you configured in Cisco CallManager Administration to maintain optimal load balance. To ensure call processing redundancy, the upgrade program created a Cisco CallManager group containing a primary server and a backup server for every primary Cisco CallManager server in the cluster and then assigned route lists to each Cisco CallManager group using a round robin algorithm. The name format for the created Cisco CallManager group is RLCMG\_<primary Cisco CallManager name>.

**Procedure**

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- Step 1** Evaluate the Cisco CallManager group and route list configuration for load balancing and redundancy, as described in the *Cisco CallManager System Guide* and the *Cisco CallManager Network Solutions Design Guide*.
- Step 2** Assign the route list(s) to the Cisco Call Manager group(s) that you have configured in Cisco CallManager Administration.
- Step 3** Delete the migrated CCM group, RLCMG\_<primary CM-server-name>.
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## Requirement for Installation of Java Virtual Machine

The Microsoft Java Virtual Machine (MSJVM) technology allows Java applications to run on Microsoft Windows-based computers. Some versions of Microsoft Internet Explorer (a component of the Windows operating systems) included MSJVM, but Microsoft has discontinued distribution of MSJVM in its software and announced end-of-life support for the product.

MSJVM installed by default in all client workstation versions of the current Windows operating systems, except for the following ones:

- Windows XP Professional with SP1 slipstreamed into the installation
- Windows 2000 Server/Professional with SP4 slipstreamed into the installation

**Note**

Because the Cisco CallManager Administration windows depend on remote scripts, which depend on the JVM for web interaction, Cisco CallManager requires the use of JVM on the client machine to ensure that the Cisco CallManager Administration display correctly.

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If your client machine runs MSJVM, you can continue to use the existing configuration to browse into the Cisco CallManager Administration windows and perform administration tasks.

If you do not have MSJVM installed on your client machine (or if you receive an error message stating that Cisco CallManager cannot detect JVM on the client machine), and you need to perform Cisco CallManager Administration tasks, you must install and configure the Sun Microsystems' Java Virtual Machine (JVM) on the client machine. (The Sun JVM is part of the Java 2 Runtime Environment—JRE.) In addition, you must configure the browser security to be Java-enabled. See the [“JRE Installation” section on page 3-9](#) for information about installing JRE on the client machine.

If you are not sure if MSJVM is installed on the client machine, you can install the Sun J2RE anyway. You would then have two Java Runtime Environments installed and running on your machine.

**Tip**

If you run two separate JVM products (MSJVM and Sun J2RE) on your client machine, be sure to download and install patches and security updates for each JVM from the appropriate software vendor (Microsoft and Sun).

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## JRE Installation

As part of the Cisco CallManager installation, the system provides the Sun JRE client software in a zip file that is installed on the Cisco CallManager server.

**Note**

Windows XP/XP Professional includes a built-in tool that handles zip files. If you use Windows 2000 as your operating system, you must obtain a separate compression utility (such as WinZip) to store and access zip files.

To install the JRE software for the client PC, follow these steps:

**Procedure**

**Step 1** From the Cisco CallManager server, navigate to the **C:\utils\JRE** directory and search for the **J2RE\_Client\_<jre version>.zip** file.

The following example shows the zip file name:

```
J2RE_Client_1.4.2_05.zip
```

**Note**

Only the Cisco CallManager Administrator can access the JRE software on the Cisco CallManager server; to enable access to other users, copy the **J2RE\_Client\_<jre version>.zip** file to a server that all users can share.

**Step 2** Right-click the **J2RE\_Client\_<jre version>.zip** file and click **Copy** to copy the file to your client PC.

**Step 3** Double-click the **J2RE\_Client\_<jre version>.zip** file to unzip the Sun J2RE installation executable.

**Step 4** Double-click the installation executable file on the client PC.

The following example shows the installation executable file name:

```
j2re-1_4_2_04-windows-i586-p.exe
```

**Note**

The exact file name of the installation executable file changes with each version as the new version number is incorporated into the name.

The JRE software installs in the **C:\Program Files\Cisco\Java\JRE** directory.

## Viewing the Component Versions That Are Installed on the Server

The **mcsver.exe** program reports the current version of all installation components, including the operating system. Be aware that Cisco does not report the actual Cisco CallManager version through this program. Recognize that most of these components, which run from the installation disks during the initial installation, no longer exist on the system.

The version for OS Image equals your operating system disk version number. The version of OS Image will change only if you do a new installation with the Cisco IP Telephony Server Operating System Hardware Detection disk.

The version for stiOSUpd.exe equals the version of the operating system upgrade that you last ran either via disk or via the web. When Cisco updates and releases the Cisco IP Telephony Server Operating System OS Upgrade disk (Disk 2), the version of stiOSUpd changes.

Perform the following procedure to view the component versions that are installed on the server:

#### Procedure

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- Step 1** Use Windows Explorer to browse to the following folder:  
**C:\utils\mcsver**
- Step 2** View the versions of the components that are running on your server.
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## Upgrading TAPI, JTAPI, and Cisco Telephony Service Provider (TSP)

You must upgrade the Telephony Application Programming Interface and Java Telephony Application Programming Interface (TAPI/JTAPI) client software on any application server or client workstation on which TAPI/JTAPI applications are installed. If you do not upgrade the TAPI/JTAPI client, your application will fail to initialize.

The following information applies if you have integrated a Cisco Unity system with Cisco CallManager. TSP makes the voice-mail ports available to Cisco Unity. To ensure that Cisco Unity integrates properly with Cisco CallManager, you may need to upgrade the TSP that is integrated with the voice-messaging system. To ensure that you upgrade to the appropriate TSP release, refer to the *Cisco CallManager Compatibility Matrix*.

## Upgrading the Cisco TAPI/TSP for Cisco SoftPhone

Perform the following procedure to upgrade the Cisco SoftPhone TAPI/TSP to the version that is stated in the *Cisco CallManager Compatibility Matrix*.

#### Procedure

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- Step 1** From each Cisco Softphone client, browse into server that is running Cisco CallManager Administration and log in with administrative privileges.



**Tip** To browse into the server, enter `https://<CM-server-name>/CCMAdmin/main.asp`, where <CM-server-name> equals the name of the server, in the Address bar in the web browser.

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- Step 2** From the Application menu, choose **Install Plugins**.
- Step 3** Click the **Cisco Telephony Service Provider** icon that is associated with the plug-in.

- Step 4** To complete the upgrade, follow the prompts in the window.
- Step 5** Verify that a basic call works as expected for Cisco SoftPhone.
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## Using the JTAPI Update Utility with CRS

Cisco Customer Response Solutions (CRS) servers include a JTAPI Update Utility that performs synchronization of the Cisco CallManager Plugin with the CRS server and the Cisco Agent Desktop (CAD). You must run this update tool to ensure successful operation of your CRS server.

If you have CRS or Cisco CallManager Extended Services installed (either coresident with the Cisco CallManager server or on a separate server) and you upgrade and/or install Cisco CallManager, you must take additional action to ensure plug-in synchronization.

Because an upgrade to a Cisco Call Manager server may include an updated JTAPI Plugin component, make sure that you run the JTAPI Update Utility on the CRS server to upgrade the JTAPI client. Running the JTAPI Update Utility on your CRS server, after you upgrade Cisco CallManager, ensures that the JTAPI Plugin gets properly installed.

**Note**

Simply executing the plug-in installer to install the JTAPI Plugin on the CRS server (in lieu of running the JTAPI Update Utility) does not copy the jtapi.jar file to the CRS share folder, which leaves the update in an unfinished state.

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For detailed information about the JTAPI Update Utility, refer to the Cisco Customer Response Applications Administrator Guide at

[http://www.cisco.com/univercd/cc/td/doc/product/voice/sw\\_ap\\_to/apps\\_3\\_5/english/admn\\_app/apadm35.pdf](http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/apps_3_5/english/admn_app/apadm35.pdf).

## Using the Cisco CallManager Music On Hold Disk or Download

**Note**

This section applies if you have never downloaded the Cisco CallManager Music On Hold files from the web or used the Cisco CallManager Music On Hold disk.

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When you initially install Cisco CallManager on your server, a default music on hold audio file sample automatically installs for customer use. To increase your music on hold (MOH) selection, you may download one of the following two files via the web:

- cisco-cm-MusicOnHold, which is a set of wav files that provides the entire music selection from the disk
- cisco-cm-MusicOnHoldSampler, which is a small set of files that offers a sample of music that is available on the disk

For information on the MOH feature, refer to the latest version of the *Cisco CallManager Administration Guide* and the latest version of the *Cisco CallManager System Guide*.

As a Cisco CallManager user, you can use any disk/file with music on hold. Because of licensing restrictions, you must not distribute the Cisco CallManager Music on Hold disk/files to anyone else, and you must not use the files for any other purpose.

