



## **Upgrading Cisco Unified CallManager**

Release 4.3(1)

### **Corporate Headquarters**

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
<http://www.cisco.com>  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 526-4100

Text Part Number: OL-11425-01



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## Preface

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This preface describes the purpose, audience, organization, and conventions of this guide and provides information on how to obtain related documentation.

The preface covers these topics:

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- [Audience, page viii](#)
- [Conventions, page viii](#)
- [Locating Related Documentation, page ix](#)
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## Purpose of Document

This document provides Cisco Unified CallManager upgrade procedures and requirements for the Cisco Media Convergence Server and the customer-provided server that meets approved Cisco configuration standards.

This document contains information on the following topics:

- [Preinstallation Information, page 1-1](#)
- [Upgrading Your Cisco Unified CallManager Server \(When You Are Not Replacing Hardware\), page 2-1](#)
- [Performing Post-Upgrade Tasks, page 3-1](#)
- [Reverting to the Previous Configuration After an Upgrade Attempt, page 4-1](#)
- [Upgrade Messages, page 5-1](#)
- [Replacing Servers During the Upgrade, page 6-1](#)

**Tip**

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Use this document in conjunction with the documents that are listed in the “[Locating Related Documentation](#)” section on page ix.

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## Audience

The *Upgrading Cisco Unified CallManager* document provides information for network administrators who are responsible for maintaining the Cisco Unified CallManager system. This guide requires knowledge of telephony and IP networking technology.

## Conventions

Consider the following documentation conventions as you review this upgrade document:

Unless otherwise specified, base server model numbers will be used in this document. For example references to the MCS-7835 apply to servers including the MCS-7835, the MCS-7835-1000, the MCS-7835-1266, the MCS 7835H-2.4, the MCS-7835I-2.4, MCS-7835H-3.0, MCS-7835I-3.0, the customer-provided DL380, and the customer-provided IBM xSeries 342 and 345.

**Blue Text**—To quickly navigate to a section or URL from your computer, click text that appears in blue.

**Note**

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Reader, take note. Notes contain helpful suggestions or references to material not covered in the publication.

---

**Caution**

---

Reader, be careful. You may do something that could result in equipment damage or loss of data.

---

**Timesaver**

---

Reader, this tip saves you time as you perform the procedure.

---

**(Required)**

This convention indicates that you must perform the procedure. Failing to perform the procedure could cause a total system failure or a loss of data and configuration settings.

**(Recommended)**

This convention indicates that the procedure is strongly recommended, but not required.

# Locating Related Documentation

Cisco strongly recommends that you review the following documents before you upgrade:

- *Release Notes for Cisco Unified CallManager Release 4.3*

Cisco provides a version of this document that matches the version of the upgrade document. Use this document as a companion guide to the upgrade document.

- *Cisco Unified CallManager Compatibility Matrix*

To ensure continued functionality with interfacing Cisco IP telephony applications after the Cisco Unified CallManager upgrade, refer to the *Cisco Unified CallManager Compatibility Matrix*, which provides information and workarounds for applications that are integrated with Cisco Unified CallManager.

Affected applications may include Cisco Conference Connection, Cisco SoftPhone, Cisco uOne, Cisco 186 Analog Telephony Adaptor, Cisco Personal Assistant, Cisco Customer Response Solutions (CRS), Telephony Application Programming Interface and Java Telephony Application Programming Interface (TAPI/JTAPI) applications, including Cisco-provided and third-party applications, and Cisco Unified CallManager Telephony Service Provider (TSP).

If you use Cisco Unified CallManager and related Cisco IP telephony applications in a call-center environment, review this document before you begin any upgrade procedures.

- Third-party application compatibility information

Before you upgrade Cisco Unified CallManager, verify that all the Cisco-provided and Cisco-approved applications that run in your network are compatible with this version of Cisco Unified CallManager.

- *Cisco Unified Communications Operating System, SQL Server, Security Updates*

This document provides information on the latest operating system, SQL Server, and security support updates. Information in this document applies to servers that are running the following Cisco IP telephony applications: Cisco Unified CallManager, Conference Connection, Personal Assistant, and Cisco Customer Response Applications/Solutions, and so on.

- *Cisco IP Telephony Backup and Restore System (BARS) Administration Guide*

This document describes how to install the BARS utility, configure the backup settings, back up Cisco Unified CallManager data, and restore the data/server.

This document also provides a list of files that the utility backs up. This utility does not back up operating system files, except for Hosts/LMHosts files, if those files exist on the server.

- *Cisco Unified CallManager Security Guide*

This document provides step-by-step instructions on how to configure and troubleshoot authentication and encryption for Cisco Unified CallManager, Cisco Unified IP Phones, SRST references, and Cisco MGCP gateways.

- The appropriate Cisco IP telephony application documentation

Locate the release notes, installation/upgrade, and configuration guides for the applications that you have integrated with Cisco Unified CallManager.

Click the URLs in [Table 1](#) to locate the appropriate documentation and related software.

**Table 1** Quick Reference for URLs

Related Information and Software	URL and Additional Information
Operating system documentation and Virtual Network Computing (VNC) documentation (not readme documentation)	<a href="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</a>
Cisco MCS data sheets	<a href="http://www.cisco.com/en/US/products/hw/voiceapp/ps378/index.html">http://www.cisco.com/en/US/products/hw/voiceapp/ps378/index.html</a>
Software-only servers (IBM, HP, Compaq, Aquarius)	<a href="http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure_list.html">http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure_list.html</a>
<i>Cisco Unified CallManager Compatibility Matrix</i>	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm</a>
Cisco Partner Program Compatibility Information	<a href="http://www.cisco.com/pcgi-bin/ecoa/Search">http://www.cisco.com/pcgi-bin/ecoa/Search</a>
Cisco Technology Affiliate Program Compatibility Information	<a href="http://www.cisco.com/pcgi-bin/ecoa/Search?isAffil=Y">http://www.cisco.com/pcgi-bin/ecoa/Search?isAffil=Y</a>
Cisco Unified CallManager documentation	<a href="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</a>
Cisco Unified CallManager backup and restore documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm</a>
Cisco Unified CallManager, SQL Server, and operating system service releases, upgrades, and readme documentation	<a href="http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml">http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml</a> <b>Note</b> The operating system and SQL Server 2000 service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco Unified CallManager software page.
<i>Cisco Unified CallManager Security Guide</i>	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/sec_vir/ae/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/sec_vir/ae/index.htm</a>
Related Cisco IP telephony application documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/index.htm</a>

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. This section explains the product documentation resources that Cisco offers.

### Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/techsupport>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Product Documentation DVD

The Product Documentation DVD is a library of technical product documentation on a portable medium. The DVD enables you to access installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the HTML documentation and some of the PDF files found on the Cisco website at this URL:

<http://www.cisco.com/univercd/home/home.htm>

The Product Documentation DVD is created and released regularly. DVDs are available singly or by subscription. Registered Cisco.com users can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

## Ordering Documentation

You must be a registered Cisco.com user to access Cisco Marketplace. Registered users may order Cisco documentation at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

If you do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

## Documentation Feedback

You can provide feedback about Cisco technical documentation on the Cisco Support site area by entering your comments in the feedback form available in every online document.

## Cisco Product Security Overview

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:

<http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>. If you require further assistance please contact us by sending email to [export@cisco.com](mailto:export@cisco.com)

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you will find information about how to do the following:

- Report security vulnerabilities in Cisco products
- Obtain assistance with security incidents that involve Cisco products
- Register to receive security information from Cisco

A current list of security advisories, security notices, and security responses for Cisco products is available at this URL:

<http://www.cisco.com/go/psirt>

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you have identified a vulnerability in a Cisco product, contact PSIRT:

- For emergencies only—[security-alert@cisco.com](mailto:security-alert@cisco.com)

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- For nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532



### Tip

We encourage you to use Pretty Good Privacy (PGP) or a compatible product (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.x through 9.x.

Never use a revoked encryption key or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

The link on this page has the current PGP key ID in use.

If you do not have or use PGP, contact PSIRT to find other means of encrypting the data before sending any sensitive material.

# Product Alerts and Field Notices

Modifications to or updates about Cisco products are announced in Cisco Product Alerts and Cisco Field Notices. You can receive these announcements by using the Product Alert Tool on Cisco.com. This tool enables you to create a profile and choose those products for which you want to receive information.

To access the Product Alert Tool, you must be a registered Cisco.com user. Registered users can access the tool at this URL:

<http://tools.cisco.com/Support/PAT/do/ViewMyProfiles.do?local=en>

To register as a Cisco.com user, go to this URL:

<http://tools.cisco.com/RPF/register/register.do>

## Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Support website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

## Cisco Support Website

The Cisco Support website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day at this URL:

<http://www.cisco.com/en/US/support/index.html>

Access to all tools on the Cisco Support website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>



### Note

Before you submit a request for service online or by phone, use the **Cisco Product Identification Tool** to locate your product serial number. You can access this tool from the Cisco Support website by clicking the **Get Tools & Resources** link, clicking the **All Tools (A-Z)** tab, and then choosing **Cisco Product Identification Tool** from the alphabetical list. This tool offers three search options: by product ID or model name; by tree view; or, for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.



### Tip

#### Displaying and Searching on Cisco.com

If you suspect that the browser is not refreshing a web page, force the browser to update the web page by holding down the Ctrl key while pressing **F5**.

To find technical information, narrow your search to look in technical documentation, not the entire Cisco.com website. After using the Search box on the Cisco.com home page, click the

**Advanced Search** link next to the Search box on the resulting page and then click the **Technical Support & Documentation** radio button.

To provide feedback about the Cisco.com website or a particular technical document, click **Contacts & Feedback** at the top of any Cisco.com web page.

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## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests, or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411

Australia: 1 800 805 227

EMEA: +32 2 704 55 55

USA: 1 800 553 2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

**Severity 1 (S1)**—An existing network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

**Severity 2 (S2)**—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

**Severity 3 (S3)**—Operational performance of the network is impaired while most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

**Severity 4 (S4)**—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

# Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The Cisco Online Subscription Center is the website where you can sign up for a variety of Cisco e-mail newsletters and other communications. Create a profile and then select the subscriptions that you would like to receive. To visit the Cisco Online Subscription Center, go to this URL:

<http://www.cisco.com/offer/subscribe>

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco channel product offerings. To order and find out more about the *Cisco Product Quick Reference Guide*, go to this URL:

<http://www.cisco.com/go/guide>

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<http://www.cisco.com/go/marketplace/>

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<http://www.ciscopress.com>

- *Internet Protocol Journal* is a quarterly journal published by Cisco for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the *Internet Protocol Journal* at this URL:

<http://www.cisco.com/ipj>

- Networking products offered by Cisco, as well as customer support services, can be obtained at this URL:

<http://www.cisco.com/en/US/products/index.html>

- Networking Professionals Connection is an interactive website where networking professionals share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

<http://www.cisco.com/discuss/networking>

- “What’s New in Cisco Documentation” is an online publication that provides information about the latest documentation releases for Cisco products. Updated monthly, this online publication is organized by product category to direct you quickly to the documentation for your products. You can view the latest release of “What’s New in Cisco Documentation” at this URL:

<http://www.cisco.com/univercd/cc/td/doc/abtnicd/136957.htm>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>





## Preinstallation Information

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This section provides information that you should consider before upgrading a Cisco Unified CallManager server and frequently asked questions (FAQs) regarding the Cisco Unified CallManager 4.3 upgrade.

### Important Considerations

Before you proceed with the Cisco Unified CallManager installation or upgrade, consider the following requirements and recommendations:

- Cisco Unified CallManager requires a minimum of 2 GB of memory on the Cisco Unified CallManager servers. To avoid system problems, such as dropped calls, verify that your servers have a minimum of 2 GB of memory installed. If the installation process detects less than 2 GB memory on the publisher server, the installation aborts. The installation process performs a similar check on the Cisco Unified CallManager subscriber server; it allows the installation to continue if it detects less than the minimum requirement.
- Install the Cisco Unified CallManager software on the publisher server first and then on the subscriber server(s).
- You cannot add a subscriber server to a cluster by installing a previous version of Cisco Unified CallManager and then upgrading the subscriber server to the same version that is running on the publisher server. If you are adding a new subscriber server or replacing a subscriber server on the cluster, you must use the installation DVDs with the same Cisco Unified CallManager version that is running on the publisher server.
- Make sure that you are logged in as the administrator on the server before starting the Cisco Unified CallManager installation.
- Install the Cisco Unified CallManager software on one server at a time to ensure that subscriber servers can receive replicate copies of the database from the publisher database server.
- Make sure that the subscriber server that you are installing can connect to the publishing database server during the installation.
- Do not choose cancel after you start the installation. If you choose cancel, you will need to reimage your machine by reinstalling the operating system.
- Because security settings for the Cisco Unified CallManager server are set up by the installation and upgrade script, do not make any adjustments to these predefined settings, or you may experience a significant impact to the functionality of your server.
- When entering passwords for the local Administrator and SA (SQL Server system administrator) accounts, use alphanumeric characters only.

- Enter the same administrator password on all servers in the cluster.
- Install the Cisco Unified CallManager software during off-peak hours or during a maintenance window to avoid impact from call-processing interruptions.
- Do not implement multiple servers in a Cisco Unified CallManager cluster by using a drive that was mirrored or cloned from a single Cisco Unified CallManager server. This results in servers having duplicate Security ID (SID) and impairs Cisco Unified CallManager operations. You must install the Cisco IP telephony operating system and Cisco Unified CallManager software separately on each server by using the Cisco-provided installation disks.
- Do not configure any server in the cluster as a Domain Controller.
- Place the server in a Workgroup before you install the software.
- Configure the server by using static IP addressing to ensure that the server obtains a fixed IP address and that the Cisco Unified IP Phones can register with the application when you plug the phones into the network.
- Do not attempt to perform any configuration tasks during the installation.
- Do not use terminal services to install the Cisco Unified CallManager software
- Do not install any Cisco-verified applications until you complete installing Cisco Unified CallManager on every server in the cluster.
- Cisco provides support for a limited set of applications on the servers where Cisco Unified CallManager is installed. If you are uncertain whether a third-party application is supported, do not install it on the server.
- You must disable third-party, Cisco-verified applications on your servers before starting the Cisco Unified CallManager installation.
- Install a security agent to protect your servers against unauthorized intrusion.
- Do not install Cisco Unity on a server where Cisco Unified CallManager is installed.
- Installing or using Netscape Navigator on the Unified CallManager Appliance MCS or the Cisco-approved, customer-provided server causes severe performance problems.
- Carefully read the instructions that follow before you proceed with the installation. See “[Upgrading Your Cisco Unified CallManager Server \(When You Are Not Replacing Hardware\)](#)” section on page 2-1 and “[Performing Post-Upgrade Tasks](#)” section on page 3-1.

## Frequently Asked Questions About Cisco Unified CallManager 4.3 Upgrades

The following frequently asked questions apply for all Cisco Unified CallManager 4.3 upgrades.

### From which versions of Cisco Unified CallManager can I upgrade to Cisco Unified CallManager Release 4.3(1)?

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

If your server runs a version of Cisco CallManager Release 3.2 or earlier, you must first upgrade every server in the cluster to the latest version of Cisco CallManager Release 3.3 before you can upgrade to a version of Cisco Unified CallManager Release 4.3. For information on upgrading to Cisco CallManager Release 3.3, 4.0, or 4.1, refer to the appropriate version of the *Upgrading Cisco Unified CallManager* document. You cannot upgrade directly from Cisco CallManager Release 3.2 or earlier to Cisco Unified CallManager Release 4.3.

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

**Caution**

Cisco recommends that you only upgrade to Cisco Unified CallManager 4.3(1) from a version that is compatible for upgrade to 4.3(1). Versions that are not compatible for upgrade to 4.3(1) may contain features that are not supported in 4.3(1). If you upgrade from an unsupported version, you will not be able to access those features that are not supported in 4.3(1), and you will lose the data that is associated with those features.

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

For Cisco Unified CallManager Release 4.3(1), Cisco supports the servers that are listed in the *Cisco Unified CallManager Compatibility Matrix*. To obtain the most recent version of this document, go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/ccmcomp.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm).

Cisco requires that you use the operating system installation DVD to install the operating system version 2003.1.1 or later and that you backup your system by using Cisco IP Telephony Backup and Restore System (BARS) version 4.0(12) or later before you upgrade to Cisco Unified CallManager Release 4.3(1). After you backup your system, you can upgrade from the latest versions of Cisco Unified CallManager 3.3, 4.0, 4.1, and 4.2. For detailed instructions, refer to “[Upgrading Your Cisco Unified CallManager Server \(When You Are Not Replacing Hardware\)](#)” section on page 2-1.

## Which third-party applications does Cisco support for this upgrade?

The Cisco Partner Program and Technology Affiliate Program require Interoperability Verification Testing (IVT) for all named Partner and Affiliate applications and products for major releases of Cisco Unified CallManager. If you upgrade to this version of Cisco Unified CallManager before IVT is completed, you may experience performance and compatibility issues with some Cisco-approved, third-party applications that run in your network. Before you upgrade Cisco Unified CallManager, verify that all the Cisco-provided and Cisco-approved applications that run in your network are compatible with this version of Cisco Unified CallManager. Cisco-provided and Cisco-approved third-party applications include, but are not limited to, Cisco IP Contact Center, Cisco Emergency Responder, IVR, and so on.

Cisco strongly recommends that you do not upgrade to this version of Cisco Unified CallManager until compatibility exists. After the compatible application becomes available, upgrade Cisco Unified CallManager and then the application(s).

To determine if compatibility testing has been completed for a Cisco-approved third-party applications and products, refer to the following URLs.

**Cisco Partner Program**

<http://www.cisco.com/cgi-bin/ecoa/Search>

Enter the name of the company for which you want to search and then click **Search**.

To see a list of third-party, Cisco-verified applications that may be installed on the server with Cisco Unified CallManager, choose **IP Telephony** in the Solution pane and then choose **Operations, Administration, and Maintenance (OAM)** in the Solution Category drop-down list box.

**Cisco Technology Affiliate Program**

<http://www.cisco.com/cgi-bin/ecoa/Search?isAffil=Y>

Enter the name of the company for which you want to search and then click **Search**.

**Caution**

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

**Tip**

To obtain the latest list of compatible Cisco applications, refer to the Cisco Unified CallManager Compatibility Matrix at the following URL:

[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/ccmcomp.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm)

**Caution**

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

## Which server in the cluster do I upgrade first?

**Caution**

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

**Caution**

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

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

**Cisco Unified CallManager Runs on the Publisher**

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

1. Upgrade the publisher database server.

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

2. Upgrade the subscriber.

#### **Cisco Unified CallManager Does Not Run on the Publisher**

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

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

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

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

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

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

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

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



#### **Caution**

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

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

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

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

## **How long does it take to upgrade the cluster?**

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

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

For the time that it takes to perform specific tasks on the publisher database server, see [Upgrading Your Cisco Unified CallManager Server \(When You Are Not Replacing Hardware\)](#), page 2-1

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

Review the following information before you upgrade.

### About Minimizing Call-Processing Interruptions

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

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

### About a Loss of Services

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



#### Caution

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

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

Do not use Terminal Services or Integrated Lights Out (ILO) to upgrade to Cisco Unified CallManager Release 4.3(1). Cisco installs Terminal Services, so Cisco Technical Assistance Center (TAC) can perform remote administration and troubleshooting tasks. Cisco does not support upgrades through Terminal Services.

**Caution**

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

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

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

**Caution**

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

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

## May I add Cisco Unified CallManager servers as members of a Windows domain?

Cisco does not recommend adding Cisco Unified CallManager servers as members of a Microsoft Windows domain. However if your system architecture is dependent on servers joining a Windows domain, then you must disable the Network Time Protocol (NTP) software that is installed by Cisco Unified CallManager when you add the server as a member of a domain and use Microsoft time service. You must disable the NTP service on every server in your cluster.

**Note**

You must install the server as a member of a workgroup during installation of Cisco Unified CallManager.

**Note**

Do not make any modifications to the installed NTP configuration file (NTP.CONF). Modifications to the NTP.CONF file may result in synchronization problems with CDRs, Traces, Event Logging, and so on. Cisco does not support these modifications.

To disable the Cisco-installed NTP software on a server:

**Step 1** Choose **Start > Programs > Administrative Tools > Services**.

- Step 2** Double-click the **Network Time Protocol** service.
- Step 3** In the Startup type field, choose **Disabled**.
- Step 4** Click **Stop**.
- Step 5** Click **OK**.

**Caution**

Every time that you upgrade your server, you must remove the server from the Windows Domain prior to installing the upgrade software.

When you complete your upgrade and you are adding the server to the Windows domain, you must disable the Cisco-installed NTP services again.

If you are joining the server to a Microsoft Windows 4.0 domain, you must also perform an additional procedure for synchronizing time. Refer to *How to Synchronize the Time on a Windows 2000-Based Computer in a Windows NT 4.0 Domain* at <http://www.microsoft.com>.

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

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

## May I perform configuration tasks during the upgrade?

**Caution**

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

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

Performing configuration tasks during the upgrade causes an upgrade failure.

## May I remove a drive before I upgrade?

**Caution**

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

### Removing a Drive and Inserting a Replacement Drive and Drive Mirroring Prior to the Upgrade


The “[Removing a Drive, Inserting a Replacement Drive, and Drive Mirroring \(Strongly Recommended\)](#)” section on page 2-14 describes how to properly perform this task.

### Removing a Drive and Upgrading With One Drive In the Server

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

- 
- Step 1** Run the "CHKDSK /F" command on all logical drives:
- The "Trace" drive - either E: or F: (for MCS-7845)
  - The D: drive
  - The C: drive - requires a reboot
- a. If you are prompted to dismount the volume, enter **N** for no.
- b. If you are prompted to schedule the volume to be checked the next time that the system restarts, enter **Y** for yes.
- Step 2** Power off the publisher database server.
- Step 3** 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 Unified CallManager.
- For the MCS-7845, remove the drives from Slot 0 and Slot 2 and label them with the appropriate information.
- Step 4** Power on the system.

### Cisco MCS Unified CallManager Appliance

- Step 5** Perform the following procedure for the Unified CallManager Appliance 78xxH MCS or HP ProLiant Series Server (The MCS-7845 requires two spare hard drives):
- a. To enable interim recovery mode on the MCS-7830, MCS-7835, or MCS-7845, press **F2**.
-  **Note** The MCS-7835H-2.4 (or later) and MCS-7845H-2.4 (or later) default to F2, and the process automatically continues after a 10-second delay.
- b. This step applies only for the MCS-7830, MCS-7835, or MCS-7845. When prompted, press **F1** to continue.
- Step 6** Log in to the server by using the Administrator password.

### Cisco Unified CallManager for the IBM xSeries Server

- Step 7** To enable interim recovery mode on the Unified CallManager Appliance 78xx MCS or Cisco Unified CallManager for the IBM xSeries Server, press **F5**.
- Step 8** Log in to the server by using the Administrator password.
- 

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

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

- You can install a compatible version of Cisco Customer Response Solutions (CRS), which you must purchase separately from Cisco Unified CallManager.

- Do not install Cisco Unity, Cisco Conference Connection, Cisco Personal Assistant, or Cisco Emergency Responder on the server where Cisco Unified CallManager is installed.
- Cisco strongly recommends that you install a security agent to protect your servers against unauthorized intrusion. Cisco offers two security agent options: Cisco Security Agent (CSA) for Unified CallManager and Management Center for Cisco Security Agent (CSA MC).

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

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

To access information on Cisco Security Agent, see [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/sec\\_vir/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/sec_vir/index.htm) and [http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000\\_b/vpnman/vms\\_2\\_2/csa\\_4\\_0/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_b/vpnman/vms_2_2/csa_4_0/index.htm)

**Caution**


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

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## What additional information should I know before I upgrade?

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

### About Security and Account Policies

**Caution**


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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.

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### About Service and Enterprise Parameters in Cisco Unified CallManager Administration

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

If your service parameters are set to the suggested value, Cisco Unified 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 Unified 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 Unified CallManager automatically sets the value to 10.

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

**About H.323 Intercluster Trunks**

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

**About H.323 Gateways**

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

**About the Database**

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

## When should I perform post-upgrade tasks?

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

## What if I encounter problems during the upgrade?

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

1. During the upgrade if you receive an error message that displays in a dialog box, see the [“Upgrade Messages” section on page 5-1](#) and perform the recommended corrective action.
2. Obtain and review all log files (\*.log and \*.txt) from the following directories:
  - C:\Program Files\Common Files\Cisco\Log
  - C:\Program Files\Common Files\Cisco\Directory
  - C:\Install\DBInstall
  - C:\Dcdsrrv\log

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





# Upgrading Your Cisco Unified CallManager Server (When You Are Not Replacing Hardware)

You cannot upgrade directly from Cisco CallManager Release 3.2 or earlier to Cisco Unified CallManager Release 4.3. If your server runs a version of Cisco CallManager Release 3.2 or earlier, you must first upgrade every server in the cluster to the latest version of Cisco CallManager Release 3.3, 4.0, 4.1, or 4.2 before you can upgrade to a version of Cisco Unified CallManager Release 4.3. For information on upgrading to Cisco CallManager Release 3.3, refer to the latest version of *Upgrading Cisco CallManager Release 3.3*.



## Note

To verify which versions of Cisco Unified CallManager are compatible for upgrade, refer to the *Cisco Unified CallManager Compatibility Matrix*.

You must upgrade Cisco Unified 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 1-4.


## Before You Begin

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

	Pre-Upgrade Task	Important Notes
Step 1	Make sure that you run a recommended version of Cisco Unified CallManager on all servers in the cluster.	<a href="#">From which versions of Cisco Unified CallManager can I upgrade to Cisco Unified CallManager Release 4.3(1)?</a> , page 1-2
Step 2	Make sure that you understand the order in which you must upgrade the cluster.	<a href="#">Which server in the cluster do I upgrade first?</a> , page 1-4 <a href="#">How does a coresident upgrade work if I have CRS installed with Cisco Unified CallManager?</a> , page 1-5

## Before You Begin

Pre-Upgrade Task	Important Notes
<b>Step 3</b> In Cisco Unified CallManager Administration, make sure that you add each server only once on the Server Configuration window ( <b>System &gt; Server</b> ). If you add a server by using the host name and add the same server by using the IP address, Cisco Unified CallManager cannot accurately determine component versions for the server after a Cisco Unified CallManager upgrade. If you have two entries in Cisco Unified CallManager Administration for the same server, delete one of the entries before you upgrade.	Refer to the <i>Cisco Unified CallManager Administration Guide</i> .
<b>Step 4</b> Make sure that your server configuration supports this upgrade.	<a href="#">Which servers and operating system versions does Cisco support for this upgrade?, page 1-3</a>
<b>Step 5</b> Make sure that you have enough free disk space on each of your servers for the Cisco Unified CallManager upgrade.  You need at least 3.0 gigabytes of disk space.	
<b>Step 6</b> If you are using Cisco Unity as your voice-messaging system, configure the voice mail ports in Cisco Unified CallManager to ensure proper migration.	For more information, refer to the <i>Release Notes for Cisco Unified 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_callmg/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm</a> .
<b>Step 7</b> You must assign a unique device name to each H.323 intercluster trunk. A registration problem occurs when multiple Cisco Unified CallManager clusters have the same device name assigned to H.323 intercluster trunks in Cisco Unified CallManager Administration.	Refer to the <i>Cisco Unified CallManager Administration Guide</i> for information on the trunk configuration procedure.
<b>Step 8</b> Verify that all H.323 dial-peer(s) point to a Cisco Unified 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 Unified CallManager Administration for H.323 gateways. If the session target statements in the dial-peer(s) do not point to the appropriate Cisco Unified CallManager server, calls fail.	Refer to the <i>Cisco Unified CallManager Administration Guide</i> for information on the gateway configuration procedure.
<b>Step 9</b> If your system uses Cisco-provided operating system version 2004.4 or later and uses DNS for name resolution, make sure that you have set the <b>Primary DNS suffix of this computer</b> field if you set the <b>DNS suffix for this connection</b> field on the computer.	Refer to the <i>Installing the Operating System on the Cisco Unified Communications Server, Version 2000.4.4</i> (or later) for information on this procedure.

Pre-Upgrade Task	Important Notes
<p><b>Step 10</b> Perform the recommended backup procedures for all coresident software applications that are installed on the server.</p> <p> <b>Caution</b> 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.</p> <hr/> <p>BARS does not back up any operating system files except Host/LMhost, if these files exist on the server.</p> <p>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 <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm</a>.</p>	<p><a href="#">How does a coresident upgrade work if I have CRS installed with Cisco Unified CallManager?, page 1-5</a></p>
<p><b>Step 11</b> Be aware that if you change any security or account policies from the default, the upgrade may fail.</p>	<p>For more information on security and account policies, refer to Microsoft documentation.</p>
<p><b>Step 12</b> Understand how Cisco Unified CallManager updates service parameters.</p> <p><b>For Service Parameters with Nonnumeric Values</b></p> <p>Cisco Unified CallManager always updates service parameters with non-numeric values to the suggested value.</p> <p><b>For Service Parameters with Numeric Values</b></p> <p>If your service parameters are set to the suggested value, Cisco Unified CallManager automatically updates the value during the upgrade to match the new suggested value.</p> <p>If your customized value exists between the range of minimum and maximum values, Cisco Unified CallManager does not change the customized value.</p> <p>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 Unified CallManager automatically sets the value to 10.</p> <p>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 Unified CallManager Administration Guide</i> and the <i>Cisco Unified CallManager System Guide</i>.</p>

Pre-Upgrade Task	Important Notes
<b>Step 13</b> If you are upgrading a Cisco Unified CallManager 4.0 server and you installed certificates on the phones that are using the Certificate Authority Proxy Function (CAPF) server, you must migrate existing the CAPF data.	<a href="#">Migrating Existing CAPF Data, page 2-4</a>
<b>Step 14</b> If your cluster uses security, make sure that you have at least one of the two Etokens that you used to secure the cluster and that the Etoken remains valid.	
<b>Step 15</b> Close all web browser windows.	If you have an open browser window, Cisco Unified CallManager will reboot the server after the Sun Microsystem JRE package has been installed.
<b>Step 16</b> Verify that all Cisco Unified CallManager Extension Mobility users have logged out of the system prior to the upgrade.	If there are still extension mobility users who are still logged in during the upgrade, they may not be able to use all the features on their phone until they log off and log back in.
<b>Step 17</b> 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.	<a href="#">Information That You May Need During the Upgrade, page 2-6</a>
<b>Step 18</b> Before the upgrade, perform basic connectivity and functional testing of any current Cisco Partner/Affiliate applications and products in your current (pre-upgrade) environment. Document the tests you perform and the results for use in the post-upgrade procedures.	
<b>Step 19</b> Obtain and review any required Cisco Partner/Affiliate versions of software and documentation necessary to support this version of Cisco Unified CallManager.	<a href="#">Which third-party applications does Cisco support for this upgrade?, page 1-3</a>

## Migrating Existing CAPF Data



### Caution

Failing to perform the tasks that are described in this section may cause a loss of CAPF data.

Review the following details before you upgrade Cisco Unified CallManager:

- Upgrades from Cisco Unified CallManager 4.0 where CAPF was installed on the Cisco Unified CallManager 4.0 publisher database server—If you performed certificate operations before the upgrade to Cisco Unified CallManager 4.3 and CAPF ran on the publisher database server, the latest operation status migrates to the Cisco Unified CallManager 4.3 database.
- Upgrades from Cisco Unified CallManager where CAPF was installed on a Cisco Unified CallManager 4.0 subscriber server—If you performed certificate operations before the upgrade to Cisco Unified CallManager 4.3 and CAPF ran on a subscriber server, you must copy the CAPF data to the 4.0 publisher database server before you upgrade the cluster to Cisco Unified CallManager 4.3.

## Copying CAPF 1.0(1) Data from a 4.0 Subscriber Server to the 4.0 Publisher Database Server



### Caution

If you installed CAPF utility 1.0(1) on a Cisco Unified CallManager 4.0 subscriber server, you must copy the CAPF data to the 4.0 publisher database server before you upgrade to Cisco Unified CallManager 4.3. Failing to perform this task causes a loss of CAPF data; for example, you may lose the phone record files in C:\Program Files\Cisco\CAPF\CAPF.phone. If a loss of data occurs, the locally significant certificates that you issued with CAPF utility 1.0(1) remain in the phones; CAPF 4.3(1) must reissue the certificates, which are not valid.

To copy the files, perform the following procedure:

### Procedure

- Step 1** Copy the files in [Table 2-1](#) from the machine where CAPF 1.0 is installed to the publisher database server where Cisco Unified CallManager 4.0 is installed:

**Table 2-1 Copy From Server to Server**

Files to Copy	From Machine Where CAPF 1.0 Is Installed	To Publisher Database Server Where Cisco Unified CallManager 4.0 Is Installed
*.0	in C:\Program Files\Cisco\CAPF	to C:\Program Files\Cisco\Certificates
CAPF.phone	in C:\Program Files\Cisco\CAPF	to C:\Program Files\Cisco\CAPF
CAPF.cfg files	in C:\Program Files\Cisco\CAPF	to C:\Program Files\Cisco\CAPF

- Step 2** Upgrade every server in the cluster to Cisco Unified CallManager 4.3.
- Step 3** After you upgrade the cluster to Cisco Unified CallManager 4.3, upgrade the Cisco CTL client and run it before you use the phones. The Cisco CTL client will copy the CAPF certificate to all the servers in the cluster.
- Step 4** Delete the CAPF utility that you used with Cisco Unified CallManager 4.0. See [Table 2-1](#).

## 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 2-2** 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 Unified CallManager Publisher Database Server

Review the following upgrade tasks, designated time to perform the task, and the location where you obtain the procedure:

	<b>Task</b>	<b>Procedure</b>	<b>Designated Time</b>
<b>Step 1</b>	Verify that you have performed all pre-upgrade tasks.	See the “ <a href="#">Before You Begin</a> ” section on page 2-1 and the “ <a href="#">Information That You May Need During the Upgrade</a> ” section on page 2-6.	Depends on the size of the cluster
<b>Step 2</b>	Remove all servers in the cluster from the NT Domain or the Microsoft Active Directory Domain.	See the “ <a href="#">Remove the System from the NT Domain or Microsoft Active Directory Domain and Reboot the Server (Required, If Configured)</a> ” section on page 2-10.  <b>Tip</b> You can perform this task on all servers in the cluster at the same time.	Depends on the size of the cluster
<b>Step 3</b>	Manually disable and stop all platform agents, Cisco-verified applications (Cisco 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 “ <a href="#">Disable and Stop Third-Party, Cisco-Verified, and Cisco-Provided Coresident Applications and Reboot the Server (Required)</a> ” section on page 2-10.  <b>Tip</b> You can perform this task on all servers in the cluster at the same time.	20 minutes
<b>Step 4</b>	Manually install and configure Cisco IP Telephony Backup and Restore System (BARS) version 4.0(12) (or later). (Required)	If you have not already done so, Cisco requires that you install and configure the backup utility on the publisher database server.  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 <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm</a> .	15 minutes
<b>Step 5</b>	Using BARS, version 4.0(12) (or later), manually back up the Cisco Unified CallManager data to either a network directory. (Required)	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 <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm</a> .  <b>Tip</b> To significantly improve the speed of the Cisco Unified CallManager upgrade, archive or remove CDRs before backing up your system.  <b>Note</b> If your system uses Cisco-provided operating system version 2004.4 or later and uses DNS for name resolution, make sure that you have set the <b>Primary DNS suffix of this computer</b> field if you set the <b>DNS suffix for this connection</b> field on the computer before you perform the backup. Refer to the <i>Installing the Operating System on the Cisco Unified Communications Server, Version 2000.4.4</i> (or later) for information on this procedure.	30 to 60 minutes, depending on the size of the Cisco Unified CallManager and Call Detail Record (CDR) database

	Task	Procedure	Designated Time
Step 6	<p>Run the Cisco Unified 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 Unified 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 “<a href="#">Run the Cisco Unified CallManager Upgrade Assistant Utility on All Servers in the Cluster (Strongly Recommended)</a>” section on page 2-12.</p>	1 to 20 minutes for the publisher database server; 1 to 5 minutes for the subscriber server
Step 7	Use the operating system install DVD to install the Cisco-provided operating system version 2003.1.1 (or later).	<p>Before you perform the installation, be sure to read <i>Installing the Operating System on the Cisco Unified Communications Applications Server</i>. To obtain the most recent version of this document, go to <a href="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</a></p> <p>Perform on the publisher database server first; complete the Cisco Unified CallManager upgrade on the publisher database server before you upgrade the operating system on the subscriber servers.</p> <p><b>Note</b> If your system uses DNS for name resolution and you set the <b>DNS suffix for this connection</b> field on the computer, make sure that you have also set the <i>Primary DNS suffix of this computer</i> field. Refer to the <i>Installing the Operating System on the Cisco Unified Communications Server, Version 2003.1.1</i> for information on this procedure.</p>	45 to 75 minutes per server, depending on the server type
Step 8	Download and install the latest Cisco Unified Communications Server Operating System service release. (Recommended)	<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 Unified CallManager software page.</p> <p>For installation instructions, refer to the file-specific readme document, <i>Cisco Unified Communications Operating System, SQL Server, Security Updates</i>, and <i>Installing the Operating System on the Cisco Unified Communications Applications Server</i>. To obtain the most recent version of these documents, go to <a href="http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml">http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml</a>.</p>	15 minutes
Step 9	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 Unified CallManager software page.</p> <p>For installation instructions, refer to the file-specific readme document, <i>Cisco Unified Communications Operating System, SQL Server, Security Updates</i>, and <i>Installing the Operating System on the Cisco Unified Communications Applications Server</i>. To obtain the most recent version of these documents, go to <a href="http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml">http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml</a>.</p>	5 minutes

Task	Procedure	Designated Time
<b>Step 10</b> Manually install and configure Cisco IP Telephony Backup and Restore System (BARS) version 4.0(12) (or later). (Required)	<p>If you have not already done so, Cisco requires that you install and configure the backup utility on the publisher database server.</p> <p><b>Note</b> The operating system installation removes the version of BARS that you previously installed.</p> <p>For more detailed instructions, 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 <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm</a>.</p>	15 minutes
<b>Step 11</b> Copy the backup tar file from the remote location where you stored the file to the local hard disk of the Cisco Unified CallManager server so that you can easily access the backup file during the restore process. (Recommended)	Copy the tar file to a location that you can remember.	2 minutes
<b>Step 12</b> If the server supports drive removal, remove a drive from the server to save your data and configuration.	See the “ <a href="#">Removing a Drive, Inserting a Replacement Drive, and Drive Mirroring (Strongly Recommended)</a> ” section on page 2-14.	15 to 60 minutes, depending on the server type
<b>Step 13</b> Upgrade Cisco Unified CallManager.	<p> <b>Caution</b> You must perform the Cisco Unified 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>See the “<a href="#">Upgrading Related Cisco CallManager Services and Detecting the Server (Required)</a>” section on page 2-15</p>	45 to 120 minutes per server, depending on the server type
<b>Step 14</b> Upgrade all of the subscriber servers in the cluster.	<p>See the “<a href="#">Upgrading the Cisco Unified CallManager Subscriber Server(s)</a>” procedure on page 2-17.</p> <p><b>Note</b> You cannot add a subscriber server to a cluster by installing a previous version of Cisco Unified CallManager and then upgrading the subscriber server to the same version that is running on the publisher server. If you are adding a new subscriber server or replacing a subscriber server on the cluster, you must use the installation DVD with the same Cisco Unified CallManager version that is running on the publisher server.</p>	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 Unified 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 Unified 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 Unified 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/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 Unified 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

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**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, Network Associates Task Manager, or McAfee Framework Service and choose **Properties**.



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**Note** The name of the antivirus service depends on the version of your antivirus software.

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**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.



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

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**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.

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## Install and Configure Cisco IP Telephony Backup and Restore System (BARS) Version 4.0(12) (or Later) (Required)

If you have not already done so, Cisco requires that you install and configure the backup utility on the publisher database server. The Cisco IP Telephony 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 (Required)

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>.



### Note

If your system uses Cisco-provided operating system version 2004.4 or later and uses DNS for name resolution, make sure that you have set the **Primary DNS suffix of this computer** field if you set the **DNS suffix for this connection** field on the computer before performing the backup. Refer to the *Installing the Operating System on the Cisco Unified Communications Server, Version 2000.4.4* (or later) or information on this procedure.

## Run the Cisco Unified 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 latest Cisco Unified 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 latest version of the utility and the document, perform the following procedure:

### Procedure

- Step 1** Click <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.
- Step 2** Click **Cisco Unified CallManager Version 4.3**.  
The Cisco Unified CallManager 4.3 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 Unified CallManager is installed.
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## Install the Operating System to Cisco-Provided Version 2003.1.1 (or Later) (Required)

Cisco requires that you install the Cisco Unified Communications operating system version 2003.1.1 (or later) with the latest service release before you upgrade to Cisco Unified CallManager Release 4.3(1).

Before you perform the installation, be sure to read *Installing the Operating System on the Cisco Unified Communications 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).

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

## 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 Unified CallManager software page.

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

## Install and Configure Cisco IP Telephony Backup and Restore System (BARS) Version 4.0(12) (or Later) (Required)

If you have not already done so, Cisco requires that you install and configure the backup utility on the publisher database server.

**Note** The operating system installation removes the version of BARS that you previously installed.

For more detailed instructions, 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>.

## Copy the Backup File to the Cisco Unified CallManager Server (Recommended)

Copy the backup tar file from the remote location where you stored the file to the local hard disk of the Cisco Unified CallManager server so that you can easily access the backup file during the restore process. (Recommended)

## 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 Cisco MCS-7815, MCS-7820, MCS-7822, or MCS-7825 Cisco Unified CallManager appliances, 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

- 
- Step 1** Run the "CHKDSK /F" command on all logical drives:
- The "Trace" drive - either E: or F: (for MCS-7845)
  - The D: drive
  - The C: drive - requires a reboot
- a. If you are prompted to dismount the volume, enter **N** for no.
  - b. If you are prompted to schedule the volume to be checked the next time that the system restarts, enter **Y** for yes.

This step ensures data integrity and secures a higher chance of success when you are mirroring drives afterwards.

- Step 2** Power off the publisher database server.
- Step 3** 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 Unified CallManager.
- For the MCS-7845, remove the drives from Slot 0 and Slot 2.
- Step 4** Power on the system.

### Cisco MCS Unified CallManager Appliance

- Step 5** Perform the following procedure for the Unified CallManager Appliance 78xxH MCS or HP ProLiant Series Server (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 2003 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** or **Start > HP Systems Tools > HP 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.

**Cisco Unified CallManager for the IBM xSeries Server**

**Step 6** Perform the following procedure for the Unified CallManager Appliance 78xx MCS or Cisco Unified CallManager 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 process.

## Upgrading Related Cisco CallManager Services and Detecting the Server (Required)

Continue the upgrade by performing the following procedure.

**Note**

Critical third-party components that are required and installed by Cisco Unified CallManager might require multiple reboots during installation, and you may need to manually restart the installation program and reenter the configuration data.

**Procedure**

**Step 1** If you did not log in to the server after the operating system upgrade, log in to the server by using the Administrator password.

**Step 2** Locate the Cisco Unified CallManager 4.3 Installation, Upgrade, and Recovery Disk and insert it into the drive.

The installation process automatically starts.

**Tip**

Do not remove the disk until you are directed to do so by procedure.

**Step 3** To confirm the version of Cisco Unified CallManager from which you are upgrading and the version to which you are upgrading, click **Yes**.

**Step 4** To confirm that you have disabled antivirus and intrusion detection software, click **Yes**.

- Step 5** To confirm that you might be prompted to reboot the server and reenter configuration data multiple times for Cisco Unified CallManager to install critical third-party components, click **OK**.
- Step 6** In the Welcome window, click **Next**.
- Step 7** Accept the Cisco Unified CallManager license agreement by clicking the **I accept the terms in the license agreement** radio button; then, click **Next**.
- Step 8** If you want to receive alerts when the pool non-paged memory usage reaches 75%, 90%, and 95% of the allocated memory size, enter the email server and email addresses to which you want the system to send alerts in the Non-Paged Pool Monitor Epage Service window.

The allocated space varies, depending on whether or not the \3GB switch exists for the NonpagePool-Bytes parameter in the boot.ini file. If \3GB switch exists, the maximum value of non-paged pool memory equals 128 MB. If the \3GB switch does not exist, the maximum value of non-paged pool memory equals 256 MB.




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**Note** Note: You can change the values that you enter after installation by editing the C:\Utils\epageDetails.txt file.

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- Step 9** In the Customer Information window, the User Name and Organization that you entered during the operating system installation automatically display.
- Cisco automatically populates the product key fields with the product key that you entered during the operating system installation. Click **Next**.
- Step 10** In the Server type window, choose the **Publisher** radio button and click **Next**.
- Step 11** In the Install type window, choose the **Upgrade from 3.3, 4.0, 4.1, and 4.2 release** radio button, enter the path to the Cisco Unified CallManager backup file in the **Backup Archive File** field, and click **Next**.
- The system validates the archive file.
- Step 12** In the Administrator Password / Private Password window, do the following tasks:
- Enter the administrator password.
  - Enter the private password phrase for the cluster; then, reenter the password for confirmation.
  - Click **Next**.
- Step 13** In the Database passwords window, do the following tasks:
- Enter the SQL System Administrator (SA) password; then, reenter it for confirmation.
  - Enter a Directory Manager password; then, reenter it for confirmation.
  - Click **Next**.
- Step 14** To begin the installation, click **Install**.
- Step 15** To reboot the server and continue with the installation, click **OK**.
- Step 16** After the server reboots, log in to the Windows Administrator account.
- The installation begins. The status window opens and displays the progress of the installation. Do not click Cancel.




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**Note** The progress of the status bar may reset as each software package is being installed and as the installation program configures your machine. You may see the installation program reset the status bar multiple times. Do not reboot the server unless the installation prompts you to do so.

---

**Step 17** After the DC Directory installation completes, a message indicates that you must reboot to continue the installation. Click **OK**.

The system reboots and the InstallShield Wizard window displays.

**Step 18** Click **Finish**.

A message indicates that you must reboot to continue the installation.

**Step 19** To reboot the server, click **OK**.

**Step 20** After the server reboots, log in to the Windows Administrator account.

The Cisco IP Telephony Backup and Restore System (BARS) restores the database from the backup file archive. After the restore completes, the Cisco Unified CallManager installation begins again.

**Step 21** When the installation completes, click **Finish**.

**Step 22** To reboot the server, click **Yes**.



**Note**

If you have secure phones in your cluster, you must perform [Step 4](#) and [Step 5](#) in the “[Upgrading Your Cisco Unified CallManager Server \(When You Are Not Replacing Hardware\)](#)” section on page 2-1 in order for your phones to register.

## Upgrading the Cisco Unified CallManager Subscriber Server(s)





**Note**

You cannot add a subscriber server to a cluster by installing a previous version of Cisco Unified CallManager and then upgrading the subscriber server to the same version that is running on the publisher server. If you are adding a new subscriber server or replacing a subscriber server on the cluster, you must use the installation DVD with the same Cisco Unified CallManager version that is running on the publisher server.

Perform the following tasks to upgrade the subscriber servers.

	Task	Important Information and Resources
<b>Step 1</b>	Perform pre-upgrade tasks.	See the “ <a href="#">Before You Begin</a> ” section on page 2-1 and the “ <a href="#">Information That You May Need During the Upgrade</a> ” section on page 2-6.
<b>Step 2</b>	Verify that you removed all servers from the NT or Microsoft Active Directory Domain.	See the “ <a href="#">Remove the System from the NT Domain or Microsoft Active Directory Domain and Reboot the Server (Required, If Configured)</a> ” section on page 2-19.
<b>Step 3</b>	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 “ <a href="#">Disable and Stop Third-Party, Cisco-Verified, and Cisco-Provided Coresident Applications and Reboot the Server (Required)</a> ” section on page 2-20.

Task	Important Information and Resources
<b>Step 4</b> <b>Optional Task</b> Run the ServPrep utility.	You can only run the utility via the Cisco Unified CallManager Subscriber Preparation Disk. Cisco does not provide this utility on the web.  See the “ <a href="#">Run the ServPrep Utility (Optional)</a> ” section on page 2-21.
<b>Step 5</b> Use the operating system DVD to install the Cisco-provided operating version 2003.1.1 (or later). (Required)	Before you perform the installation, be sure to read <i>Installing the Operating System on the Cisco Unified Communications Applications Server</i> . To obtain the most recent version of this document, go to <a href="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</a> .  <b>Note</b> If your system uses DNS for name resolution and you set the <b>DNS suffix for this connection</b> field on the computer, make sure that you have also set the <i>Primary DNS suffix of this computer</i> field. Refer to the <i>Installing the Operating System on the Cisco Unified Communications Server, Version 2003.1.1</i> for information on this procedure.
<b>Step 6</b> Download and install the latest Cisco Unified Communications Server Operating System service release. (Recommended)	The operating system service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco Unified CallManager software page.  For installation instructions, refer to the file-specific readme document, <i>Cisco Unified Communications Operating System, SQL Server, Security Updates</i> , and <i>Installing the Operating System on the Cisco Unified Communications Applications Server</i> . To obtain the most recent version of these documents, go to <a href="http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml">http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml</a> .
<b>Step 7</b> 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 Unified CallManager software page.  For installation instructions, refer to the file-specific readme document, <i>Cisco Unified Communications Operating System, SQL Server, Security Updates</i> , and <i>Installing the Operating System on the Cisco Unified Communications Applications Server</i> . To obtain the most recent version of these documents, go to <a href="http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml">http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml</a> .

Task	Important Information and Resources
<p><b>Step 8</b> <b>Task That You Should Perform Serially</b></p> <p>Perform the Cisco Unified CallManager upgrade on one server at a time.</p>	<p> <b>Caution</b> While you are upgrading a subscriber server, do not reboot the publisher server.</p> <hr/> <p> <b>Caution</b> You must perform the Cisco Unified 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> <hr/> <p>You use the same Cisco Unified CallManager Installation, Upgrade, and Recovery Disks for the publisher database server and subscriber servers.</p> <p>See the <a href="#">“Upgrading Related Cisco CallManager Services and Detecting the Server (Required)”</a> section on page 2-23</p>
<p><b>Step 9</b> After you complete the installation on all servers in the cluster, perform post-upgrade tasks.</p>	<p>See the <a href="#">“Performing Post-Upgrade Tasks”</a> section on page 3-1.</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 Unified 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 Unified 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 Unified CallManager servers in the cluster.
- 

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



**Tip**

The reboot may cause call-processing interruptions.

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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 Unified CallManager installation: antivirus services, intrusion detection services (for example, Cisco Security Agent for Unified CallManager), 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

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- 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, Network Associates Task Manager, or McAfee Framework Service and choose **Properties**.



**Note**

The name of the antivirus service depends on the version of your antivirus software.

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- 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 Unified CallManager Subscriber Upgrade Disk

Before you install Cisco Unified CallManager, you must run the ServPrep utility and install Cisco Unified Communications Operating System by using the Cisco-provided operating system disks and upgrade to the latest operating system 2003.1.1 (or later).

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, Unified CallManager appliances, customer-provided Cisco Unified CallManager for the HP DL320 and DL380 servers, and customer-provided Cisco Unified CallManager for the 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 Unified CallManager Subscriber Upgrade Disk 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 2003.1.1 (or Later) (Required)

Cisco requires that you install the Cisco Unified Communications operating system version 2003.1.1 (or later) with the latest service release before you upgrade to Cisco Unified CallManager Release 4.3(1).

Before you perform the installation, be sure to read *Installing the Operating System on the Cisco Unified Communications 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).

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

**Note** If your system uses DNS for name resolution and you set the **DNS suffix for this connection** field, make sure that you have set the **Primary DNS suffix of this computer** field. Refer to the *Installing the Operating System on the Cisco Unified Communications Server, Version 2003.1.1* for information on this procedure.

## Download and Install the Latest Cisco Unified Communications Server Operating System Service Release (Recommended)

Download and install the latest Cisco Unified Communications Server Operating System service release. The operating system service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco Unified CallManager software page.

For installation instructions, refer to the file-specific readme document, *Cisco Unified Communications Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco Unified Communications 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 Unified CallManager software page.

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

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## Upgrading Related Cisco CallManager Services and Detecting the Server (Required)



### Note

Critical third-party components that Cisco Unified CallManager requires and installs might require multiple reboots during installation, and you may need to manually restart the installation program and reenter the configuration data.

### Items Needed: Cisco Unified CallManager 4.3(1) Installation and Recovery Disk

Perform the following procedure:

### Procedure

- Step 1** If you did not log in to the server after the operating system installation, log in to the server by using the Administrator password.
- Step 2** Locate the Cisco Unified CallManager 4.3 Installation, Upgrade, and Recovery Disk and insert it into the drive.
- The installation process automatically starts.



### Tip

Do not remove the disk until the procedure directs you to do so.

- Step 3** To confirm that you have disabled antivirus and intrusion detection software, click **Yes**.
- Step 4** To confirm that you might be prompted to reboot the server and reenter configuration data multiple times for Cisco Unified CallManager to install critical third-party components, click **OK**.
- Step 5** In the Welcome window, click **Next**.
- Step 6** Accept the Cisco Unified CallManager license agreement by clicking the **I accept the terms in the license agreement** radio button; then, click **Next**.
- Step 7** If you want to receive alerts when the pool non-paged memory usage reaches 75%, 90%, and 95% of the allocated memory size, enter the email server and email addresses to which you want the system to send alerts in the Non-Paged Pool Monitor Epage Service window.

The allocated space varies, depending on whether or not the \3GB switch exists for the NonpagePool-Bytes parameter in the boot.ini file. If \3GB switch exists, the maximum value of non-paged pool memory equals 128 MB. If the \3GB switch does not exist, the maximum value of non-paged pool memory equals 256 MB.



### Note

Note: You can change the values that you enter after installation by editing the C:\Utils\ePageDetails.txt file.

- Step 8** In the Customer Information window, click **Next**.
- Step 9** In the Server Type window, choose **Subscriber** radio button, enter the publisher hostname in the **Publisher Server Name** field, and click **Next**.
- Step 10** In the Administrator Password / Private password window, do the following tasks:
- Enter the administrator password; then, reenter it for confirmation.

- b. Enter the private password phrase for the cluster; then, reenter it for confirmation.
- c. Click **Next**.

**Step 11** In the Database passwords window, do the following tasks:

- a. Enter the SQL System Administrator (SA) password; then, reenter it for confirmation.
- b. Click **Next**.

**Step 12** To begin the installation, click **Install**.

**Step 13** To reboot the server and continue with the installation, click **OK**.

**Step 14** After the server reboots, log in to the Windows Administrator account.

The installation begins. The status window opens and displays the progress of the installation. Do not click Cancel.



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**Note** The progress of the status bar may reset as each software package is being installed and as the installation program configures your machine. You may see the installation program reset the status bar multiple times. Do not reboot the server unless the installation prompts you to do so.

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**Step 15** Click **Finish**.

**Step 16** To reboot the server, click **Yes**.

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**Tip**

Repeat the procedures in the [“Upgrading the Cisco Unified CallManager Subscriber Server\(s\)”](#) section on page 2-17 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 3-1.

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**Note**


If you have secure phones in your cluster, you must perform [Step 4](#) and [Step 5](#) in the [“Upgrading Your Cisco Unified CallManager Server \(When You Are Not Replacing Hardware\)”](#) section on page 2-1 in order for your phones to register.

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## Performing Post-Upgrade Tasks

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

	<b>Post-Upgrade Task</b>	<b>Related Information and Procedures</b>
<b>Step 1</b>	Cisco Unified 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. Verify that you can make internal calls. 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. See the <a href="#">“Reassigning Route Lists”</a> section on page 3-7.   <b>Caution</b> If you have third-party software, such as CDR software, integrated with Cisco Unified 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 your Cisco Unified CallManager cluster uses security and the eTokens that are used to secure the cluster remain valid, update the CTL file, restart the Cisco TFTP and Cisco CallManager services on all the nodes in the cluster, and reset all secure phones.	Refer to the <i>Cisco IP Telephony Backup and Restore System (BARS) Administration Guide</i> , Version 4.0(12) or later for information on restoring a cluster that uses security.
<b>Step 5</b>	If your Cisco Unified CallManager cluster uses security and you have lost the original Etokens or both Etokens got locked, you must perform the procedure with the new Etokens.	See the <a href="#">“Handling Secure Phones”</a> section on page 3-8.

Post-Upgrade Task	Related Information and Procedures
<b>Step 6</b> The system automatically restores the hosts and lmhosts files on the publisher server but not on the subscriber servers. If you use hosts and lmhosts files for name resolution, you need to create new hosts and lmhosts files on each subscriber server or copy them from the publisher server. The system stores the files in the c:\winnt\system32\drivers\etc directory.	
<b>Step 7</b> If you have CRS and Cisco Unified 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 Unified CallManager?</a> ” section on <a href="#">page 1-5</a> .
<b>Step 8</b> After you complete the Cisco Unified 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.  For example, if you have integrated your enterprise directory with Cisco Unified 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 Unified CallManager needs.	Refer to the appropriate documentation that accompanies the applications.
<b>Step 9</b> Upgrade Cisco TAPI, Cisco Unified CallManager JTAPI, Cisco Unified CallManager TSP (for the voice-messaging system), and the Cisco Unified CallManager TSP for Cisco SoftPhone.	See the following sections for more information: <ul style="list-style-type: none"> <li>• <a href="#">Upgrading TAPI, JTAPI, and Cisco Unified CallManager Telephony Service Provider (TSP)</a>, page 3-11</li> <li>• <a href="#">Upgrading the Cisco Unified CallManager TAPI/TSP for Cisco IP SoftPhone</a>, page 3-11</li> </ul>
<b>Step 10</b> If you have CRS or Cisco Unified CallManager Auto-Attendant installed, you must execute the JTAPI update utility to ensure that the JTAPI plug-in is installed properly.	See “ <a href="#">Using the JTAPI Update Utility with CRS</a> ” section on <a href="#">page 3-11</a> .
<b>Step 11</b> If you are using Cisco Unity as your voice-messaging system, configure the appropriate settings to ensure proper failover.	For more information, refer to the <i>Release Notes for Cisco Unified 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> .
<b>Step 12</b> Verify that all Cisco IP telephony applications that are integrated with Cisco Unified CallManager run properly. If you need to do so, upgrade the Cisco IP telephony applications that are integrated with your Cisco Unified CallManager system.	Refer to the <i>Cisco Unified CallManager Software Compatibility Matrix</i> that is found at the following location: <a href="http://www.cisco.com/en/US/products/sw/voicew/ps556/products_device_support_tables_list.html">http://www.cisco.com/en/US/products/sw/voicew/ps556/products_device_support_tables_list.html</a>  If the application is compatible with this version of Cisco Unified CallManager, refer to the appropriate Cisco IP telephony application documentation.

Post-Upgrade Task	Related Information and Procedures
<p><b>Step 13</b> For your migrated version of Cisco Unified 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 Unified CallManager Administration Guide</i>.</p>
<p><b>Step 14</b> After you upgrade Cisco Unified 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 15</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 Unified 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/ps556/prod_bulletin0900aecd800f6180.html">http://www.cisco.com/en/US/partner/products/sw/voicesw/ps556/prod_bulletin0900aecd800f6180.html</a></p> <p><a href="http://www.cisco.com/en/US/partner/products/sw/voicesw/ps556/prod_bulletin0900aecd800f8572.html">http://www.cisco.com/en/US/partner/products/sw/voicesw/ps556/prod_bulletin0900aecd800f8572.html</a></p>
<p><b>Step 16</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 Unified CallManager Locale Installer.</p>	<p>You can obtain locale specific versions of the Cisco Unified Communications Network Locale installer for Cisco Unified 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 Unified CallManager 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 Unified CallManager Locale Installer</i>.</p> <p><b>Note</b> The locale installer has version-specific support for Cisco Unified CallManager releases.</p>
<p><b>Step 17</b> You must configure the Network Interface Card (NIC) Speed and Duplex settings of the Cisco Unified 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 Unified 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 18</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 Unified 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 Unified CallManager upgrade is available.</p>
<p><b>Step 19</b> If you are upgrading from Cisco CallManager Release 3.3(x) and had more than one primary Cisco Unified CallManager server, you must reassign the route lists to Cisco Unified 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 20</b> If you are administering Cisco Unified 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 Unified 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> <li>• Windows 2003 Server</li> </ul>	<p>See the <a href="#">“Requirement for Installation of Java Virtual Machine” section on page 3-8</a>.</p>
<p><b>Step 21</b> If you have created trace directories in addition to the default directories before the upgrade, you need to create them again.</p>	<p>Refer to the <i>Cisco Unified CallManager Serviceability Administration Guide</i>.</p>
<p><b>Step 22</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 Unified 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 Unified 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

- 
- 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**.
-

# 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

- 
- 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**.
- 

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 Unified CallManager service release ([About Cisco Unified CallManager Service Releases, page 3-7](#))

### About Services

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

### About Microsoft Patches and Hotfixes

Refer to the file-specific readme document, *Cisco Unified Communications Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco Unified Communications 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 Unified CallManager Service Releases

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

Be aware that Cisco Unified CallManager service releases are cumulative. Cisco rolls these bug fixes into the next Cisco Unified 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 Unified CallManager service release, perform the following procedure:

- Step 1** Click <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.
- Step 2** Click **Cisco Unified CallManager Version 4.3**.  
The Cisco Unified CallManager 4.3 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 Unified CallManager service release on every server in the cluster where Cisco Unified CallManager is installed.

## Reassigning Route Lists

If you had more than one primary Cisco Unified CallManager server in a cluster and you are upgrading from Cisco CallManager Release 3.3(x), to Cisco Unified CallManager 4.3(1), you will need to reassign the route list to the Cisco Unified CallManager group that you configured in Cisco Unified CallManager Administration to maintain optimal load balance. To ensure call processing redundancy, the upgrade program created a Cisco Unified CallManager group containing a primary server and a backup server

for every primary Cisco Unified CallManager server in the cluster and then assigned route lists to each Cisco Unified CallManager group using a round robin algorithm. The name format for the created Cisco Unified CallManager group is RLCMG\_<primary Cisco Unified CallManager name>.

#### Procedure

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

## Handling Secure Phones

Perform the following procedure if your Cisco Unified CallManager cluster uses security and you have lost the original Etokens or both Etokens got locked.

#### Procedure

- 
- Step 1** Browse to C:\Program Files\Cisco\TFTPPath and rename the CTLFile.tlv to a filename that you can remember.
  - Step 2** Run the CTL Client.  
The system displays a message that indicates that no CTL file exists.
  - Step 3** Click **OK**.
  - Step 4** If the cluster exists in mixed mode, choose the **Set Cisco Unified CallManager Cluster to Mixed Mode** option if the option is not grayed out. Otherwise, choose the **Update CTL File** option.
  - Step 5** Click **Next**, and follow the wizard to complete the update.
  - Step 6** After you exit the wizard, restart the Cisco TFTP and Cisco CallManager services on all the nodes in the cluster.
  - Step 7** On each secure phone, choose the **Settings** menu and the **Security Setting** submenu, choose the **CTL File** option, press **\*\*#**, and press the **Unlock** softkey.
  - Step 8** To erase the CTL file on the phone, press the **Erase** soft key.
  - Step 9** Reset the phones.
- 

## 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
- Windows 2003 Server

**Note**

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

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

If you do not have MSJVM installed on your client machine (or if you receive a message stating that Cisco Unified CallManager cannot detect JVM on the client machine), and you need to perform Cisco Unified CallManager Administration tasks, you must install and configure the Sun Microsystems' Java Virtual Machine (JVM) on the client machine. (The Sun JVM represents 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 whether 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).

## JRE Installation

As part of the Cisco Unified CallManager installation, the system provides the Sun JRE client software in a zip file that is installed on the Cisco Unified 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 Unified 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\_11.zip**




---

**Note** Only the Cisco Unified CallManager Administrator can access the JRE software on the Cisco Unified 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_11-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 Unified 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 Unified Communications 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 Unified Communications 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

---

- 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.
-

# Upgrading TAPI, JTAPI, and Cisco Unified CallManager 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 Unified CallManager. TSP makes the voice-mail ports available to Cisco Unity. To ensure that Cisco Unity integrates properly with Cisco Unified 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 Unified CallManager Compatibility Matrix*.

## Upgrading the Cisco Unified CallManager TAPI/TSP for Cisco IP SoftPhone

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

### Procedure

- 
- Step 1** From each Cisco IP Softphone client, browse into server that is running Cisco Unified 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.

---

- Step 2** From the Application menu, choose **Install Plugins**.
- Step 3** Click the **Cisco Unified CallManager 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 IP SoftPhone.
- 

## Using the JTAPI Update Utility with CRS

Cisco Customer Response Solutions (CRS) servers include a JTAPI Update Utility that performs synchronization of the Cisco Unified 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 Unified CallManager Auto-Attendant installed (either coresident with the Cisco Unified CallManager server or on a separate server) and you upgrade and/or install Cisco Unified CallManager, you must take additional action to ensure plug-in synchronization.

Because an upgrade to a Cisco Unified CallManager 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 Unified 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.

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 Unified CallManager Music On Hold Disk or Download

**Note**

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

When you initially install Cisco Unified 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:

- ciscocm-MusicOnHold, which is a set of wav files that provides the entire music selection from the disk
- ciscocm-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 Unified CallManager Administration Guide* and the latest version of the *Cisco Unified CallManager System Guide*.

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



## Reverting to the Previous Configuration After an Upgrade Attempt

---

In the unlikely event of an upgrade failure, or if you prefer an earlier version of Cisco Unified CallManager, perform the following steps to return the Cisco Unified Communications Applications Server to the configuration that was in effect prior to the upgrade.

### Reconfiguring If You Did Not Remove a Drive Before the Upgrade

This procedure assumes that you have a good backup file on a tape device or network directory. Refer to *Cisco IP Telephony Backup and Restore System (BARS) Administration Guide* at <http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm>.

Perform the following procedure:

#### Procedure

---

- Step 1** Perform the following procedure, depending on whether you are reverting the publisher database server or the subscriber server(s):
- Publisher Database Server**
- Step 2** Reinstall the operating system by using Cisco-provided operating system version 2000.2.4 or later. You must perform this task by using the Cisco-provided disks that shipped with Cisco Unified CallManager server.
- Step 3** Using the disks that originally shipped with Cisco Unified CallManager, reinstall Cisco Unified CallManager on your server. Do not install or configure the backup utility that automatically displays during the installation.
- Step 4** If you want to do so, install and configure the Cisco IP Telephony Backup and Restore System (BARS) .
- Step 5** Perform the necessary upgrade(s) to match the most recent successful backup.



**Note** To revert to the pre-upgrade configuration, you must restore the version of Cisco Unified CallManager that was in effect when the last successful backup occurred.

---

**Step 6** Restore the data.

**Subscriber Server(s)**

**Step 7** Reinstall the operating system by using Cisco-provided operating system version 2000.2.4 or later.

You must perform this task by using the Cisco-provided disks that shipped with Cisco Unified CallManager server.

**Step 8** Using the disks that originally shipped with Cisco Unified CallManager, reinstall a version of Cisco Unified CallManager on your server.

Do not install or configure the backup utility that automatically displays during the installation.

**Step 9** If you want to do so, install and configure the Cisco IP Telephony Backup and Restore System (BARS).

You install and configure the backup utility on the subscriber when a Cisco IP telephony application, for example, CRS, exists on the subscriber server.

## Reconfiguring If You Removed a Drive Before the Upgrade

This process may take from 15 minutes to 60 minutes, depending on the size of the drive.

Perform the following procedure:

### Procedure

**Step 1** Run the "CHKDSK /F" command on all logical drives:

- The "Trace" drive - either E: or F: (for MCS-7845)
  - The D: drive
  - The C: drive - requires a reboot
- a. If you are prompted to dismount the volume, enter **N** for no.
  - b. If you are prompted to schedule the volume to be checked the next time that the system restarts, enter **Y** for yes.

**Step 2** Shut down the server.

**Step 3** Remove the existing hard drive from Slot 0. Insert the hard drive that was removed prior to the upgrade into Slot 0.



**Note** On the Cisco MCS-7845 Unified CallManager appliance, perform this additional step. Remove the existing hard drive from Slot 2 and insert the hard drive that you removed prior to the upgrade into Slot 2.

**Step 4** Slightly pull the drive in Slot 1; for the MCS-7845, also slightly pull the drive in Slot 3. Do not completely remove the drives from the server.

**Step 5** Power on the system.



**Note** Step 5 does not apply for Cisco MCS-7835I-2.4 and MCS-7835I-3.0 Unified CallManager appliances.

**Cisco MCS Unified CallManager Appliances**

**Step 6** Perform the following procedure for all Cisco 78xxH MCS or HP ProLiant Series Unified CallManager appliances where you removed a drive:

- 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. Push the drive that was slightly pulled in [Step 4](#) into Slot 1.
- d. For the MCS-7830, MCS-7835, or MCS-7845, choose **Start > Compaq Systems Tools > Compaq Array Configuration Utility** or **Start > HP Systems Tools > HP Array Configuration Utility**.
- e. Watch the status bar in the lower, right corner to determine when drive mirroring completes.
- f. This step applies only for the MCS-7845. After the mirroring process completes in Slot 1, push the drive into Slot 3 that was pulled in [Step 4](#).
- g. Verify that the process completed successfully.

**Cisco MCS-7835I-2.4 or MCS7835I-3.0 Unified CallManager appliances or Cisco Unified CallManager for the IBM xSeries Server**

**Step 7** Press **F5**.

**Step 8** Press **Ctrl + I**.

**Step 9** Using the arrow keys, choose **Advanced functions**.

**Step 10** Using the arrow keys, choose **Copy the configuration from drives to the controller**.

**Step 11** Press **Y** for Yes.

Processing begins.

**Step 12** Press any key to continue.

**Step 13** Using the arrow keys, press **Exit**.

**Step 14** Press **Ctrl + Alt + Del**.

**Step 15** Log in to the server by using the Administrator password.

**Step 16** Push the drive that was slightly pulled in [Step 4](#) into Slot 1.



---

**Note** Messages display about the drive state. Proceed with the process. Do not remove the drive.

---

This process takes about 35 to 40 minutes, depending on the server.

**Step 17** Choose **Start > Programs > ServeRaid Manager > ServeRaid Manager**. You can view the progression of the drive mirroring.

**Step 18** Verify that the process completed successfully.

---

## Reverting the Hard Drive After Drive Mirroring Completes

If you want to revert a hard drive after drive mirroring occurs and you have made changes that affect the domain trust relationship, you must remove the server from the domain and then add it back to the domain. You must have rights to join the server to the domain before you perform this 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 **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 [Step 1](#) through [Step 3](#).
  - Step 9** Click the **Domain** radio button and enter the domain name for the server.
  - Step 10** Click **OK**.
  - Step 11** When prompted to do so, reboot the server.
- 

## Reverting Upgraded Cisco Unified Communications Applications After You Revert Cisco Unified CallManager

After you revert the entire cluster to a previous version of Cisco Unified CallManager, you must revert integrated Cisco IP telephony applications. You must revert these integrated applications to the version that is compatible with the reverted Cisco Unified CallManager. To revert the application, perform the following procedure:

### Procedure

- 
- Step 1** In the *Cisco Unified CallManager Compatibility Matrix*, identify the telephony product and compatible version that matches the cluster reversion. Go to [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/ccmcomp.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm) to locate this document.
  - Step 2** From the application server or the client workstation, if applicable, browse into the reverted server that is running Cisco Unified 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.
  - Step 3** From the Application menu, choose **Install Plugins**.

- Step 4** Click the appropriate plug-in, as seen in the following list:
- Cisco Unified CallManager Telephony Service Provider for Cisco IP SoftPhone
  - Cisco Unified CallManager JTAPI for any application that interfaces with Cisco Unified CallManager by using JTAPI.
- Step 5** To complete the installation, follow the prompts in the window.
- Step 6** Perform this procedure on all servers where the application is installed.
-





## Upgrade Messages

The following messages may display in dialog boxes (not the log file) during the upgrade. You can obtain and review the log file, `ccminst <data/time stamp>.log`, from `C:\Program Files\Common Files\Cisco\Logs`.

**Table 5-1**      **Installation Messages**

Message	Reason	Corrective Action
<p>During the installation process, you may be prompted possibly multiple times to reboot the server to install a critical component.</p> <p>Follow the instructions in the dialog box, and</p> <ol style="list-style-type: none"> <li>(1) Reboot the server.</li> <li>(2) Log in as the administrator.</li> <li>(3) Rerun the installation program.</li> </ol> <p><b>Note</b> You may need to re-enter your data in order to resume the installation.</p>	<p>Consider this to be an informational message only.</p>	<p>To continue the installation, click <b>OK</b>.</p>
<p>You must provide the Computer Name of the publisher server. IP addresses or fully qualified DNS names are not allowed.</p>	<p>You must not enter periods (.) when you enter the publisher database server name.</p>	<p>Reenter the information correctly.</p>
<p>You must provide the publisher server name when installing a subscriber.</p>	<p>This message displays when you install Cisco Unified CallManager on the subscriber server and do not provide the publisher database server name.</p>	<p>Reenter the information correctly.</p>
<p>You have entered an invalid product key. Please re-enter the key.</p>	<p>You entered an invalid product key.</p>	<p>See the Cisco CRS installation documentation to obtain the Cisco CRS product keys. See this document for the Cisco Unified CallManager product key.</p>
<p>You must enter a password.</p>	<p>This message displays when you do not enter a password, but the application requires a password for the installation to occur.</p>	<p>Enter the correct password.</p>

Table 5-1 Installation Messages (continued)

Message	Reason	Corrective Action
The passwords that you entered do not match.	This message displays when you enter a password more than one time, but the password that you enter does not match the password on the server.	Enter the same password on all servers in the cluster.
The password that you entered is not valid.	You entered an invalid password.	Enter the correct password.
You must enter a phrase from 1 to 15 characters in length. This phrase may contain English lower-case letters, English upper-case letters, Westernized Arabic Numerals, and the following Non-alphanumeric “special characters” { . < > : ? /   \ ` ~ ! @ \$ ^ & * ( ) _ - + }	You entered invalid characters for the private password phrase.	Enter valid characters.
The installation has detected pending file operations. You must reboot the server before continuing. The installation will now abort.	Pending file operations are occurring.	Reboot the server and then install Cisco Unified CallManager.
You are not logged on as ‘Administrator’. You must log in by using local Administrator user name and password to install Cisco Unified CallManager.	You did not log in to the server with the local Administrator user name and password.	Log in to the server with the local Administrator user name and password.
You do not have administrator privileges. You must have administrator privileges to install Cisco Unified CallManager.	You do not have administrative privileges.	Log in to the server with an account that has administrative privileges.
Windows 2003 Server is not installed. You must install operating system supplied by Cisco before you can install Cisco Unified CallManager. For more information, refer to the <i>Installing the Operating System on the Cisco IP Telephony Applications Server</i> and <i>Upgrading Cisco Unified CallManager</i> documents. The installation will now abort.	You did not install the appropriate version of the operating system.	Make sure that you installed the operating system version 2003.1.1 (or later) on all dedicated and coresident servers. Upgrade to 2003.1.1 (or later) and install the latest service release before installing Cisco Unified CallManager.
You must install Cisco Unified CallManager by double clicking CCMSetup.exe.	You tried to install Cisco Unified CallManager by double clicking the msi file that is part of the Cisco Unified CallManager package.	Double-click the CCMSetup.exe file.
Cisco Unified CallManager could not install the SUN Microsystems JRE component. Review the Cisco Unified CallManager installation logs to determine cause of failure, take appropriate action. For more information refer, to the Cisco Unified CallManager installation documents.	JRE installation failed.	Obtain and examine the log file.

**Table 5-1** *Installation Messages (continued)*

<b>Message</b>	<b>Reason</b>	<b>Corrective Action</b>
Cisco Unified CallManager installation has detected JRE version <JREVERSION> installed at <JRELOCATION>. Uninstall this version of JRE from the server and rerun the installation. To continue the installation, you must disable or stop any anti-virus protection, intrusion detection software, and other third-party applications, and then rerun the installation program.	Installation detected a version of JRE that is not compatible or a version that may not have all necessary components installed.	Uninstall the current JRE version and rerun the installation program.
Cisco Unified CallManager successfully installed Sun JRE and requires the server to be rebooted. To continue the installation, you must disable or stop any anti-virus protection, intrusion detection software, and other third-party applications, and then rerun the installation program.	Cisco Unified CallManager requires the server to be rebooted to continue the installation.	Reboot the server and log in with administrator privileges. The installation program continues automatically.
You must apply SQL 2000 Service Pack 4 (or later) before proceeding with this installation.	You did not install Microsoft SQL 2000 Service Pack 4.	Install Microsoft SQL 2000 Service Pack 4 and perform the Cisco Unified CallManager upgrade.
The installation program could not detect a valid version of Microsoft SQL 2000. Ensure that the server has a valid Cisco Unified CallManager version before continuing with the upgrade procedure. The installation will now abort.	The installation program did not detect a valid version of Microsoft SQL 2000.	Before attempting another upgrade, you must rebuild the server with a good copy of Cisco Unified CallManager data
If you have installed intrusion detection or antivirus protection software, you must stop and disable these applications from the Services Control console before you continue with the Cisco Unified CallManager installation. All other installed third-party applications must be uninstalled before proceeding with the Cisco Unified CallManager installation. Failure to follow these directives could result in un-recoverable errors. Would you like to proceed?	This message always displays to alert the administrator of the requirements.	If you have Cisco-verified applications (Cisco Partner Applications) or platform agents that are installed on the server, you must disable/uninstall them and stop the services.
Because the <BUILDVERSION> of this Cisco Unified CallManager MSI package is not compatible with the Cisco Unified CallManager setup file (ccmsetup.exe), make sure that you are using the ccmsetup.exe that was distributed with this version of Cisco Unified CallManager. The installation will now abort.	This message indicates that the MSI package is not compatible with the Cisco Unified CallManager setup file.	Use the ccmsetup.exe file that was distributed with this version of Cisco Unified CallManager.

Table 5-1 Installation Messages (continued)

Message	Reason	Corrective Action
You are attempting to upgrade Cisco Unified CallManager <InstalledBUILDVERSION> to version <UpgradeBUILDVERSION>. Direct upgrades from this version of Cisco Unified CallManager are not supported. You must first upgrade to a compatible Cisco Unified CallManager version before upgrading to this version. The installation will now abort.	You tried to upgrade from a version other than Cisco CallManager 3.3, Cisco Unified CallManager 4.0, or Cisco Unified CallManager 4.1.	Upgrade to Cisco CallManager 3.3, Cisco Unified CallManager 4.0, Cisco Unified CallManager 4.1, or Cisco Unified CallManager 4.2 before attempting to upgrade to Cisco Unified CallManager 4.3.
You are attempting to upgrade Cisco Unified CallManager <InstalledBUILDVERSION> to version <UpgradeBUILDVERSION> by using the web download file. You cannot use the web download file to upgrade from this version of Cisco Unified CallManager directly. You must obtain the upgrade CD-ROM disks from your Cisco account representative to complete this upgrade. The installation will now abort.	You cannot upgrade Cisco CallManager 3.3(x) to Cisco Unified CallManager 4.2(3) by using the package for web (PFW) download file.	You must use the upgrade CD-ROM disks from the Cisco Unified CallManager 4.2(3) software kit. Contact your Cisco account representative.
Configuration changes to the Cisco Unified CallManager server do not take effect until you restart your system. Click Yes to restart the computer now or No if you plan to restart the computer later.	This message displays when you make configurational changes to Cisco Unified CallManager during installation.	You do not need to take any corrective action.
Cisco Unified CallManager installation detected a service control file from a previous failed installation. This may have resulted in incorrect service Startup Type settings. Click: "Yes" to continue installing with the current settings, "No" to reset service startup types to the original settings and exit the installation program, or "Cancel" to exit the installation program with no further action.	This message displays when the installation program detects a previous failed installation.	Cisco recommends that you choose Yes and continue installing Cisco Unified CallManager with the current settings.

Table 5-1 Installation Messages (continued)

Message	Reason	Corrective Action
The installation has detected that the server exists in a domain. When a server exists in a domain, authentication between servers may fail or the non-default domain security policies may be too restrictive for the Cisco Unified CallManager installation to build critical NT Accounts during an upgrade. Failure to remove the server from the domain and add to a workgroup may cause upgrade errors, upgrade failures, or a total system failure, which includes a loss of data and a complete reinstallation of Cisco Unified CallManager. Would you like to proceed?	The server exists in a domain.	Before you continue the installation, Cisco strongly recommends that you remove all servers in the cluster from the domain.
To proceed, the installation program must update the configuration and restart the server. To continue the installation with these changes and restart the server now, click <b>OK</b> . To abort the installation, click <b>Cancel</b> .	Consider this to be an informational message only.	Cisco recommends that you click <b>OK</b> to continue the installation.
This release of Cisco Unified CallManager is not supported on this server model. The installation will now abort.	You cannot install this version of Cisco Unified CallManager on this server.	Refer to the <i>Cisco Unified CallManager Compatibility Matrix</i> for a list of servers on which you can install this version of Cisco Unified CallManager. To obtain the most recent version of this document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm</a> .
The installation program does not have enough disk space on the C drive to complete the installation. The installation program requires that you have 3.0 gigabytes of disk space available on your server. Make at least 3.0 gigabytes of disk space available and restart the installation. For information, refer to the Upgrading Cisco Unified CallManager guide.	You attempted an upgrade by using the web file from Cisco.com and do not have enough free disk space.	Create 3.0 gigabytes of available disk space and restart the installation program.
The installation program does not have enough disk space on the C drive to complete the installation. The installation program requires that you have 3.0 gigabytes of disk space available on your server. Make at least 3.0 gigabytes of disk space available and restart the installation. For information, refer to the Upgrading Cisco Unified CallManager guide.	You attempted an upgrade by using the CD ROM disks, but you do not have enough free disk space.	Create 3.0 gigabytes of available disk space and restart the installation program.

**Table 5-1** *Installation Messages (continued)*

<b>Message</b>	<b>Reason</b>	<b>Corrective Action</b>
This version of Cisco Unified CallManager is currently installed.	This message displays when you attempt to install the same version of Cisco Unified CallManager that is currently on the server.	Remove the disk from the drive.
A newer version of this package has already been installed.	This message displays when you attempt to install a previous version of Cisco Unified CallManager after a successful installation of a later version.	Remove the disk from the drive.
Cisco Unified CallManager install did not complete successfully. Review the log file for more information.	The Cisco Unified CallManager installation failed.	Obtain and examine the log file.
Unable to locate MSI package associated with this bootstrapper.	You did not copy all the files that came with the Cisco Unified CallManager installation package to the server.	Copy the complete installation package to the server and rerun the Cisco Unified CallManager installation.
Error opening MSI package	Cisco Unified CallManager Setup cannot find the MSI package.	This message displays if you encounter a media problem; insert the disk again.
This package has already been installed.	This message displays when you attempt to install the same version of Cisco Unified CallManager again after a successful installation.	Remove the disk from the drive.
An unexpected error occurred.	An error occurred during the Cisco Unified CallManager setup.	Obtain and examine the log file.
An unexpected error occurred while creating the log directory.	The installation could not create the log file directory.	Verify that security policies on the server are not restrictive.
An unexpected error occurred while constructing package name.	An error occurred during the Cisco Unified CallManager setup.	Obtain and examine the log file.
The local security policy “Restrict CD-ROM access to locally logged-on user only” is enabled. This setting interferes with the Cisco Unified CallManager installation. Please disable this setting using the Local Security Policy utility, reboot, and rerun the Cisco Unified CallManager installation.	This message tells you that the “Restrict CD-ROM access to locally logged-on user only” local security policy is enabled on your server.	Disable this setting by using the Local Security Policy utility, reboot, and rerun the Cisco Unified CallManager installation.  For more information, see the <a href="#">“Resolving Name Resolution Failures”</a> section on page 5-16.
Failure occurred trying to get DBNAME value from registry. Aborting Cisco Unified CallManager installation.	The installation could not read DBNAME value from registry on the local machine.	Reboot the server and rerun the Cisco Unified CallManager installation.
Failure occurred trying to validate the format of DBNAME value. Aborting Cisco Unified CallManager installation.	The registry contains an invalid format of the DBNAME value. This error only occurs if you have manually modified this value.	Make sure that the DBNAME value is in the format CCM0xxx, where x stands for any digits.

Table 5-1 Installation Messages (continued)

Message	Reason	Corrective Action
<p>Current OS version does not meet minimum requirements. This version of CallManager requires the minimum OS version to be &lt;MinOSVersion&gt;. The minimum baseline OS image version is &lt;MinOSBaseVersion&gt;.</p> <p>For more information, refer to the “Installing the Operating System on the Cisco IP Telephony Applications Server and Upgrading Cisco Unified CallManager” documents. The installation will now abort.”</p>	<p>Cisco Unified CallManager Release 4.3(1) requires Cisco-provided operating system version 2003.1.1 or later.</p>	<p>Refer to <i>Cisco Compatibility Matrix</i> to review which versions are compatible for installation. To access the document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm</a>.</p> <p>For installation information, refer to the <i>Installing the Operating System on the Cisco Unified Communications Applications Server</i> and <i>Upgrading Cisco Unified CallManager</i> documents.</p>
<p>Installing Cisco Unified CallManager using Terminal Services is not allowed. Install will now abort.</p>	<p>Cisco does not support Terminal Services for Cisco Unified CallManager installations, upgrades, or configuration tasks.</p> <p>Cisco Technical Assistance Center (TAC) uses Terminal Services for remote management and troubleshooting tasks.</p>	<p>If you want to use Virtual Network Computing (VNC), obtain the most recent version of the documentation at <a href="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</a>.</p>
<p>Failed to launch &lt;name of executable&gt;, aborting install</p>	<p>The installation attempted to launch the executable, and the launch failed.</p>	<p>Obtain and examine the log file. You may have a media problem.</p>
<p>Failure occurred during the Cisco Directory installation. Refer to the log file C:\Program Files\Common Files\Cisco\Directory\IntegratedSetup.trc for details. Aborting Cisco Unified CallManager install.</p>	<p>The DC Directory installation failed.</p>	<p>Obtain and examine the log file.</p>
<p>The Cisco Unified CallManager installation detected an error while copying files. Stop all platform agents and Cisco-verified applications, and restart the installation. For more information, refer to the Upgrading Cisco Unified CallManager document.</p>	<p>The Cisco Unified CallManager installation failed to copy files to your server.</p>	<p>Stop all platform agents and Cisco-verified applications and restart the installation.</p>
<p>Failure occurred during the Cisco Unified CallManager installation. Please look at the Cisco Unified CallManager installation log file for details. Aborting Cisco Unified CallManager installation.</p>	<p>The Cisco Unified CallManager installation detected an error while copying files.</p>	<p>Stop all platform agents and Cisco-verified applications and restart the installation.</p> <p>Obtain and examine the log file.</p>

**Table 5-1** *Installation Messages (continued)*

<b>Message</b>	<b>Reason</b>	<b>Corrective Action</b>
The password of [X] does not match the password on the publisher [Y]. For details, review the log file [Z].	The username and/or password of the user who is installing Cisco Unified CallManager on the subscriber server does not match the username and/or password on the publisher database server.	Make sure that you entered the correct publisher server name and that the username and password on the publisher and subscriber match.
Because no network connectivity exists or you entered the incorrect publisher server name, the installation could not verify the password of [X] against the publisher [Y]. For details, review the log file [Z].	During the subscriber server installation, this error occurs if no network connection exists between the subscriber and publisher database servers or you did not enter the correct name of the publisher database server.	Verify the connection between the publisher database server and subscriber server and make sure that you entered the correct publisher database server name.
Either the password of [X] does not match the password on the publisher [Y], or a network connectivity error occurred. For details, review the log file [Z].	One of the following problems occurred: <ul style="list-style-type: none"> <li>No network connectivity exists between the publisher database server and the subscriber server.</li> <li>The username and/or password of the user who is installing Cisco Unified CallManager on the subscriber server does not match the username and/or password on the publisher database server.</li> <li>You entered the incorrect publisher database server name.</li> </ul>	Do each of the following tasks: <ul style="list-style-type: none"> <li>Verify the connection between the publisher database server and subscriber server.</li> <li>Make sure that you installed Cisco Unified CallManager on the publisher database server and subscriber server by using the Administrator username and password.</li> <li>Make sure that you entered the correct publisher database server name.</li> </ul>
The private password phrase does not match the private password phrase on the publisher [X]. For details, review the log file [Y].	During the subscriber server installation, one of the following problems occurred: <ul style="list-style-type: none"> <li>The passwords of the NT service accounts did not match.</li> <li>You entered the incorrect publisher database server name</li> <li>You entered a different private password phase on the publisher database server than you did on the subscriber server.</li> </ul>	Do each of the following tasks: <ul style="list-style-type: none"> <li>Make sure that a trusted connection exists between the subscriber server and the publisher database server.</li> <li>Make sure that you entered the correct publisher database server.</li> <li>Make sure that you entered the same private password phrase that you entered on the publisher database server.</li> </ul>

**Table 5-1** *Installation Messages (continued)*

<b>Message</b>	<b>Reason</b>	<b>Corrective Action</b>
The installation could not verify the private password phrase on the publisher <server name>, because the user does not have permission to access the publisher server over the network. For details, review the log file <log file name>.	The installation could not verify the private password phrase on the publisher <server name> because the user does not have permission to access the publisher server over the network. For details, review the log file <log file name>.	<p>During the installation of a subscriber server, the installation program could not verify the private password phrase against the publisher server because of the security settings on either the publisher or the subscriber servers.</p> <p>The following list gives the probable causes:</p> <ul style="list-style-type: none"> <li>• The publisher or the subscriber server was in a domain during the installation.</li> <li>• Some local security policy settings on the machine prevented the installation program from performing this operation.</li> </ul>
Either the passwords do not match on the publisher [servername], or a network connectivity error occurred.	<p>During the subscriber server installation, one of the following errors occurred:</p> <ul style="list-style-type: none"> <li>• Network connectivity failed.</li> <li>• You entered a NT service account password that does not match the password on the publisher database server.</li> <li>• You did not enter the correct name of the publisher database server.</li> </ul>	<p>Do all of the following tasks:</p> <ul style="list-style-type: none"> <li>• Verify the connection between the subscriber and publisher database servers.</li> <li>• Make sure that you enter the same NT service account password that you entered on the publisher database server.</li> <li>• Make sure that you enter the correct publisher database server name.</li> </ul>
The installation failed to verify the Cisco Unified CallManager version that runs on the publisher database server. Cancel the installation, and review the log file at C:\Program Files\Common Files\Cisco\Logs\CCMUIInst.log.	During subscriber installation, this error occurs if no network connection exists between the subscriber and publisher database servers, or you did not enter the correct name of the publisher database server.	Verify the connection between the publisher database server and subscriber database server and make sure that you entered the correct publisher database server name.
The Cisco Unified CallManager version you are installing on this subscriber does not match the version running on the publisher database server. Cancel the installation and ensure the publisher is upgraded to this Cisco Unified CallManager version before you continue.	You attempted to install a different version of Cisco Unified CallManager on the subscriber database server than you installed on the publisher database server.	Install the same version of Cisco Unified CallManager on the subscriber database server that you installed on the publisher database server.

Table 5-1 Installation Messages (continued)

Message	Reason	Corrective Action
UMX.dll failed to register. After you complete the installation, review the log file.	UMX.dll failed to register because the process creation failed, the process terminated abnormally, or an error occurred when the system was executing regsvr32.	Verify that you rebooted the server after the installation. Execute a command prompt, enter regsvr32 C:\dcdsrrv\lib\UMX.dll, and press Enter.  To verify that you corrected the problem, try to add a new user in Cisco Unified CallManager Administration on this server.
Indexing directory data did not finish. After you complete the installation, review the log file. The log file C:\dcdsrrv\log\DirInstallValidation.log.	The installation could not determine whether the DC Directory completed the indexing of its data.	Continue with installation. At the end of the installation, reboot the server when prompted to do so. After you reboot the server, bring up the services control and wait for DC Directory Server to have a status of <i>started</i> .  If this is a publisher database server, you can install Cisco Unified CallManager on the subscriber database servers.  If this is a subscriber database server, go to a command window and enter <b>dcdrepl trigger all</b> . Depending on the number of users that are configured in your system, the service may be in the starting state for a long time before changing to a started state.
The Cisco Unified CallManager installation failed to stop <list of services> service(s). Please reboot the server, manually stop the service(s), and rerun the Cisco Unified CallManager installation program.	The installation program failed to stop the services during installation.	Reboot the server, manually stop the service(s), and rerun the Cisco Unified CallManager installation program.
The installation encountered an unknown error while trying to resolve the Publisher server name [X]. For more information, review the log file CCMInstUI.log.	The name resolution of the publisher server failed.	Verify that you correctly entered the publisher server name. To verify the hosts file, see the “ <a href="#">Resolving Name Resolution Failures</a> ” section on page 5-16.
The installation could not resolve the Publisher server name [X] to a valid IP address. Verify that you entered the correct publisher server name, and review the log file CCMInstUI.log for more information.	You entered the wrong publisher server name, or the hosts file has the wrong information.	Verify that you correctly entered the publisher server name. To verify the hosts file, see the “ <a href="#">Resolving Name Resolution Failures</a> ” section on page 5-16.

**Table 5-1**      **Installation Messages (continued)**

Message	Reason	Corrective Action
The installation successfully resolved the Publisher server name [X] to IP address [Y] but could not resolve the IP address back to a host name.	The reverse name resolution of the Cisco Unified CallManager publisher server failed.	Verify that you correctly entered the publisher server name. To verify the hosts file, see the <a href="#">“Resolving Name Resolution Failures”</a> section on page 5-16.
The installation successfully resolved the Publisher server name [X] to IP address [Y] and resolved the IP address back to the host name [Z]. The resolved host name does not match the server name that you entered.	The publisher server name that you entered does not match the server name that the installation program retrieved after completing forward and reverse name resolution.	Verify that you correctly entered the publisher server name. To verify the hosts file, see the <a href="#">“Resolving Name Resolution Failures”</a> section on page 5-16.
The installation encountered an unknown error while trying to determine the server type during the upgrade. For more information, review the log file [x].	The registry contains invalid server information.	Obtain and examine the log file.
Because mapped network drives exist on the server, the installation could not verify the password of [x] against the publisher [y]. Disconnect all the mapped drives, reboot the system, and rerun the installation. For details, review the log file [z].	The installation could not verify that the password on the subscriber server matches the password on the publisher database server.	Disconnect all the mapped drives, reboot the system, and rerun the installation.
Because mapped network drives exist on the server, the installation could not verify the private password phrase against the publisher [y]. Disconnect all the mapped drives, reboot the system, and rerun the installation. For details, review the log file [z].	The installation could not verify that the private password phrase on the subscriber server matches the private password phrase on the publisher database server.	Disconnect all the mapped drives, reboot the system, and rerun the installation.
The Cisco Unified CallManager installation detected an unrecoverable error during database migration. You must revert to the original version of Cisco Unified CallManager. For more information, refer to the <i>Installing the Operating System on the Cisco Unified Communications Applications Server</i> and <i>Upgrading Cisco Unified CallManager</i> documents.	The installation program failed to migrate the Cisco Unified CallManager data.	<p>Revert to the original version of Cisco Unified CallManager by performing the following procedures:</p> <ul style="list-style-type: none"> <li>• Install the operating system by using the same server recovery method.</li> <li>• Install the version of Cisco Unified CallManager that was running on your server before you attempted to upgrade.</li> <li>• Restore the Cisco Unified CallManager data from the backup file.</li> </ul> <p>For more information, see the <a href="#">“Reverting to the Previous Configuration After an Upgrade Attempt”</a> section on page 4-1.</p>

Table 5-1 Installation Messages (continued)

Message	Reason	Corrective Action
<p>You are upgrading Cisco Unified CallManager &lt;InstalledBUILDVERSION&gt; to version &lt;UpgradeBUILDVERSION&gt; which does NOT support the following features:</p> <ul style="list-style-type: none"> <li>• Force Authorization Code and Client Matter Codes</li> <li>• Call Block for Extension to Extension Transfer</li> </ul> <p>If you continue to upgrade, these features will no longer be available, and any associated data will be lost. Do you want to continue the upgrade process?</p>	<p>If you upgrade from release 3.3(4) and above to 4.0(2), you will forfeit the listed features.</p>	<p>None. Consider this to be an informational message.</p>
<p>The upgrade that you are attempting is not supported. To verify which versions of Cisco Unified CallManager are compatible for upgrade, please refer to the Cisco Unified CallManager Compatibility Matrix on CCO. The installation will now abort.</p>	<p>This message indicates that the version of Cisco Unified CallManager from which you are attempting to upgrade is not supported.</p>	<p>Refer to <i>Cisco Unified CallManager Compatibility Matrix</i> to review which versions are compatible for installation. To access the document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm</a>.</p>
<p>Cisco Unified CallManager installation failed while installing Microsoft SQL 2000. Review the Cisco Unified CallManager installation logs to determine the cause of failure. Take appropriate action and reinstall both the Cisco Unified Communications Operating System and Cisco Unified CallManager program. For more information refer, to the Cisco Unified CallManager installation documents.</p>	<p>The following items comprise the probable causes:</p> <ul style="list-style-type: none"> <li>• The target machine probably has a virus.</li> <li>• Cisco Security Agent, antivirus software, or other third-party application was installed and running.</li> </ul>	<p>Review Cisco Unified CallManager installation to determine the cause of failure. Take appropriate action to either remove the virus or disable the specified software and then reinstall both the Cisco Unified Communications Operating System and Cisco Unified CallManager program.</p>
<p>Cisco Unified CallManager successfully installed Microsoft SQL 2000 and requires the server to be rebooted. To continue the installation, you must disable or stop any antivirus protection, intrusion detection software, and other third-party software, and then rerun the installation program. When the server reboots, you must rerun the installation program to continue your installation.</p>	<p>This message indicates that the antivirus, intrusion detection, or other third-party application was installed and running</p>	<p>To continue the installation, you must do the following tasks:</p> <ol style="list-style-type: none"> <li>Disable or stop any antivirus or intrusion detection software, as well as any other third-party application.</li> <li>Rerun the installation program.</li> <li>After the server reboots, rerun the installation program if it does not automatically continue.</li> </ol>

**Table 5-1**      *Installation Messages (continued)*

<b>Message</b>	<b>Reason</b>	<b>Corrective Action</b>
Cisco Unified CallManager installation failed while installing Microsoft SQL 2000 SP4. Review the Cisco Unified CallManager installation logs to determine cause of failure, take appropriate action. Download Microsoft SQL 2000 service pack 4 (or later) from Cisco.com, install it on the server, and rerun the Cisco Unified CallManager installation program. For more information refer, to the Cisco Unified CallManager installation documents.	The following items comprise the probable causes: <ul style="list-style-type: none"> <li>• The target machine probably has a virus.</li> <li>• Cisco Security Agent, antivirus software, or other third-party application was installed and running.</li> </ul>	Download Microsoft SQL 2000 service pack 4 (or later) from Cisco.com, install the service pack on the server, and then rerun the Cisco Unified CallManager installation program.
Cisco Unified CallManager successfully installed Microsoft SQL 2000 SP4 and requires the server to be rebooted. To continue the installation, you must disable or stop any antivirus protection, intrusion detection software, and other third-party applications, and then rerun the installation program. When the server reboots, you must rerun the installation program to continue your installation. The installation program automatically reboots the server and the installation will continue.	This message indicates that the antivirus, intrusion detection, or other third-party application was installed and running	To continue the installation, you must do the following tasks: <ol style="list-style-type: none"> <li>a. Disable or stop any antivirus or intrusion detection software, as well as any other third-party application.</li> <li>b. Rerun the installation program.</li> <li>c. After the server reboots, rerun the installation program if it does not automatically continue.</li> </ol>
Cisco Unified CallManager could not install the Microsoft MDAC Hotfix MS04-003 at this time.  When the installation has finished, please reapply the latest Cisco OS Upgrade Service Release.  For more information refer to the Cisco Unified CallManager installation documents.	This message indicates that the hotfix timeout of 1800 seconds expired, or Microsoft SQL Server 2000 Service Pack 4 already has been installed on the system.	This condition does not affect the Cisco Unified CallManager installation, but when the installation finishes, reapply the latest Cisco OS Upgrade Service Release.  If Microsoft SQL Server 2000 SP 4 is already installed, you can ignore this message.

**Table 5-1** Installation Messages (continued)

Message	Reason	Corrective Action
<p>Cisco Unified CallManager could not install the Microsoft SQL 2000 Hotfix MS03-031.</p> <p>When the installation has finished, download the SQL 2000 Hotfix MS03-031 from <a href="http://cisco.com">cisco.com</a>, and manually install it.</p> <p>For more information refer to the Cisco Unified CallManager installation documents.</p>	<p>The Microsoft SQL Hotfix MS03-031 installation failed, possibly because Cisco CSA or an antivirus software was installed and running or because Microsoft SQL Server 2000 Service Pack 4 already has been installed on the system.</p>	<p>This situation does not affect the Cisco Unified CallManager installation. When the installation finishes, disable Cisco CSA or the antivirus software, download the SQL 2000 Hotfix MS03-031 from <a href="http://cisco.com">cisco.com</a>, and manually install it. You can reenable Cisco CSA and the antivirus software after installing the hotfix.</p> <p>If Microsoft SQL Server 2000 SP 4 is already installed, you can ignore this message.</p> <p>You can download the file SQL2K-MS03-031.exe at <a href="http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des-archive">http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des-archive</a></p>
<p>The installation program detected an insufficient amount of memory for this version of Cisco Unified CallManager to function properly on this server. You may continue installing this version on a subscriber server, but you must increase the amount of memory on this server to a minimum of 2 GB after the installation to avoid any system problems.</p>	<p>The server does not meet the minimum memory requirement.</p>	<p>You may continue the installation, but Cisco recommends that you increase the memory on this server to a minimum of 2 GB after the installation to avoid system problems.</p>
<p>The installation program detected an insufficient amount of memory for this version of Cisco Unified CallManager to function properly on this server. Please increase the amount of memory you have on this server to a minimum of 2 GB before you install this version of the program.</p>	<p>The server does not meet the minimum memory requirement.</p>	<p>Increase the memory on this server to a minimum of 2 GB before you install Cisco Unified CallManager.</p>
<p>DBAccess Failure Attempt to access the database has failed. Collect <code>c:\install\dbinstall\dbinstallxxx.txt</code> for diagnosis.</p>	<p>During subscriber installation, this message occurs if issues exist in the replication of databases between the subscriber and publisher database servers or if you did not enter the correct name of the publisher database server.</p>	<p>Verify the replication between the publisher database server and subscriber server and make sure that you entered the correct publisher database server name. To verify the hosts and lmhosts files, see the <a href="#">“Resolving Name Resolution Failures”</a> section on page 5-16.</p>

**Table 5-1**      **Installation Messages (continued)**

Message	Reason	Corrective Action
BARS is not installed. Install BARS first before continuing	Because BARS software is not installed on the system, the user needs to install a supported version of BARS before Cisco Unified CallManager install.	Install a supported version of BARS. Refer to the <i>Cisco Unified CallManager Compatibility Matrix</i> for a list of versions which you can install. To obtain the most recent version of this document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/cmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/cmcomp.htm</a> .
BARS installed version did not meet the minimum supported version requirement. Install the correct BARS version before continuing.	The installed BARS version did not meet the minimum support requirement. User will need to install the minimum support BARS version.	Install a supported version of BARS. Refer to the <i>Cisco Unified CallManager Compatibility Matrix</i> for a list of versions which you can install. To obtain the most recent version of this document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/cmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/cmcomp.htm</a> .
The Backup Archive file did not created by using the minimum supported BARS version. Use the correct BARS version to create the backup archive file before continuing.	The Backup archive does not get created by using the minimum supported BARS version.	Install a supported version of BARS. Refer to the <i>Cisco Unified CallManager Compatibility Matrix</i> for a list of versions which you can install. To obtain the most recent version of this document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/cmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/cmcomp.htm</a> .
BARS installed version is older version than the BARS version that was used to create the Backup Archive file. Install the correct BARS version before continuing.	The BARS software version on the system is older than the BARS version that was used to create the Backup Archive file.	Install the same version of BARS that you used to create the backup archive file.
A function call error occurred.	An exception occurred when Cisco Unified CallManager install tried to execute the BARS API function.	Contact Cisco Technical Support.
An error occurred.	This should never happen. This represents an unknown situation.	Contact Cisco Technical Support.
The BARS Backup file was not taken from this computer, or the computer name is wrong. Correct the problem before continuing.	The Computer name does not match to the backup archive data.	Locate the backup file taken from this computer, or make sure that the computer name matches the backup archive data.

Table 5-1 Installation Messages (continued)

Message	Reason	Corrective Action
The Backup Archive Cisco Unified CallManager version is not a supported upgrade version. Correct the problem before continuing.	The Backup CallManager version does not represent a support upgrade version; for example, 3.2(3).	Create a backup with a supported version of BARS. Refer to the <i>Cisco Unified CallManager Compatibility Matrix</i> for a list of versions which you can install. To obtain the most recent version of this document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm</a> .
The Database name does not appear in BARS Backup file.	The system cannot retrieve the database name from the backup archive file; for example, CCM0300.	Contact Cisco Technical Support.
The backup file does not exist on the local machine.	The backup file does not exist on the local hard drive. Currently, the archive file needs to reside on the local drive before doing the Cisco Unified CallManager install.	Put the archive file on the local drive before continuing the installation.
Input the full path backup file name.	This situation happens when user enters the archive file name on the edit box without supplying the full path name.	Enter the full path to the archive file, not just the archive file name.
The Backup Archive Cisco Unified CallManager Version is not a supported upgrade version.  Verify the supported upgrade version matrix from CCO.  Continue to do the upgrade at your own risk. Do you want to continue? <Yes/No>	This popup message will display if the Backup archive Cisco Unified CallManager is not a supported version but falls in the range of 3.3(0.0) and 4.2(65535, 65535).  The current support Cisco Unified CallManager upgrade version comprises 3.3(5), 4.0(2)a, 4.1(3), 4.2(1), 4.2(2), and 4.2(3).	Create a backup file with a supported version of BARS. Refer to the <i>Cisco Unified CallManager Compatibility Matrix</i> for a list of supported versions. To obtain the most recent version of this document, go to <a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm</a> .

## Resolving Name Resolution Failures

Cisco Unified CallManager requires NetBIOS and IP name resolution. An incorrect WINS (NetBIOS) or DNS (IP) configuration could result in a service outage.

To resolve name resolution failures, consult with your network administrator to confirm NetBIOS and IP name resolution within the entire network, which includes local device IP configurations, local device name resolution (LMHOSTS and HOSTS), network-based name resolution systems (WINS and DNS) and DHCP systems.



### Note

Cisco recommends that you use either local or network-based name resolution and not both at the same time.

**Note**

If you use local name resolution and you change the IP address of any server, you must update the LMHOSTS and HOSTS files of every affected server within the network accordingly. For the changes to take effect, either reboot each affected server or complete the tasks in [Step 4](#).

**Note**

If you use a network-based name resolution and you change the IP address of any server, you must update the WINS and DNS (including RARP) systems. For the changes to take effect, either reboot each affected server or complete the tasks in [Step 4](#).

**Procedure**

**Step 1** Obtain the IP address, hostname, and DNS suffix of each server in the cluster by using the `ipconfig /all` and `hostname` commands on each server.

**Step 2** Populate the hosts files on each server in the cluster with the names and IP addresses of all servers in the cluster. Find the hosts files in `c:\winnt\system32\drivers\etc`.

The following example illustrates a hosts file where `cm1` represents the hostname and `mydomain.com` represents the default DNS suffix or connection-specific DNS suffix from the `ipconfig /all` command output.

```
127.0.0.1 localhost
1.3.5.9 cm1 cm1.mydomain.com
1.2.4.8 cm2 cm2.mydomain.com
```

**Step 3** Populate the lmhosts files on each server in the cluster with the names and IP addresses of all servers in the cluster. Find the lmhosts files in `c:\winnt\system32\drivers\etc`.

The following example illustrates a lmhosts file where `cm1` represents the hostname.

```
1.3.5.9 cm1 #PRE
1.2.4.8 cm2 #PRE
```

**Step 4** For the changes to take effect, issue the following commands on each server:

```
ipconfig /flushdns
nbtstat -R
```

**Note**

Be aware that the letter “R” is case sensitive in the command.

**Step 5** Confirm the changes were successfully loaded by performing the following procedures:

- a. Examine the output of `nbtstat -c`

The names of all other servers in the cluster should appear with a life of -1. The names appear multiple times.

The following example represents the output of the `nbtstat -c` command:

**Example 5-1 NetBIOS Remote Cache Name Table**

Name		Type	Host Address	Life [sec]
CM2	<03>	UNIQUE	1.3.5.9	-1
CM2	<00>	UNIQUE	1.3.5.9	-1

**Example 5-1 NetBIOS Remote Cache Name Table (continued)**

Name		Type	Host Address	Life [sec]
CM2	<20>	UNIQUE	1.3.5.9	-1
CM1	<03>	UNIQUE	1.2.4.8	-1
CM1	<00>	UNIQUE	1.2.4.8	-1
CM1	<20>	UNIQUE	1.2.4.8	-1

- b. Examine the output of *ipconfig /displaydns*. You should have at least one forward and one reverse entry for every server in the cluster. The following example contains two forward entries and two reverse entries per server.

**Forward Entries**

```
cml.mydomain.com.
```

```
-----
Record Name . . . . . : cml.mydomain.com
Record Type . . . . . : 1
Time To Live . . . . . : 30682708
Data Length . . . . . : 4
Section . . . . . : Answer
A (Host) Record . . . :
>                               1.2.4.8
cml.
```

```
-----
Record Name . . . . . : cml
Record Type . . . . . : 1
Time To Live . . . . . : 30682708
Data Length . . . . . : 4
Section . . . . . : Answer
A (Host) Record . . . :
>                               1.2.4.8
```

**Reverse Entries**

```
8.4.2.1.in-addr.arpa.
```

```
-----
Record Name . . . . . : 8.4.2.1.in-addr.arpa
Record Type . . . . . : 12
Time To Live . . . . . : 30682708
Data Length . . . . . : 4
Section . . . . . : Answer
PTR Record . . . . . :
>                               cml
```

```
-----
Record Name . . . . . : 8.4.2.1.in-addr.arpa
Record Type . . . . . : 12
Time To Live . . . . . : 30682708
Data Length . . . . . : 4
Section . . . . . : Answer
PTR Record . . . . . :
cml.mydomain.com
```

# Disabling the Restrict CD-ROM Access to Locally Logged-On User Only Security Policy

If you receive the message that the local security policy “Restrict CD-ROM access to locally logged-on user only” is enabled, you must disable the setting, reboot the server, and rerun the Cisco Unified CallManager installation. Use the following procedure to disable the security policy.

## Procedure

---

- Step 1** To open the Local Security Policy utility, choose **Start > Programs > Administrative Tools > Local Security Policy**.
  - Step 2** Expand the Local Policies folder in the left pane and choose the Security Options folder.
  - Step 3** In the right pane, choose the **Restrict CD-ROM access to locally logged-on user only** policy and press **Enter**.  
The Local Security Policy dialog box displays.
  - Step 4** Choose the **Disabled** radio button and click OK.
  - Step 5** Exit the Local Security Policy utility.
  - Step 6** Reboot the server.
  - Step 7** Restart the Cisco Unified CallManager installation.
-





## Replacing Servers During the Upgrade

This document assumes that Cisco Unified CallManager is the only application that runs on the server. This document does not provide procedures for replacing coresident servers where Cisco Unified 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

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. Any changes that you make after a backup will not exist in the new database.

## Replacing the Cisco Unified CallManager Publisher Database Server During the Cisco Unified CallManager 4.3(1) Upgrade

Perform the following procedure:

### Procedure

**Step 1** Perform [Step 2](#) through [Step 6](#) for the existing Cisco Unified CallManager publisher database server.

### Performing Tasks on the Existing Cisco Unified CallManager 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 6-1](#)

**Table 6-1 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 Unified CallManager Serviceability.)	
Installed locales	
Coresident applications (Note the application type and version.)	
Cisco verified, third-party applications (Note the application type and version.)	
Plugins from Cisco Unified CallManager Administration	
Other Pertinent Information	

**Step 3** If you are replacing a server with four drives, Cisco recommends that you set the trace directory path on the server to the default C: drive. Refer to *Cisco Unified CallManager Serviceability Administration Guide*.

**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>.

- a. Install and configure BARS 4.0(12) (or later) on the publisher database server; reboot the server.
- b. Back up the existing Cisco Unified 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. 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 Unified CallManager 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 2003.1.1 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 Unified CallManager. 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 Unified CallManager installation to fail.

- Step 8** Use Cisco Unified Communications Server Operating System OS Upgrade Disk that ships with Cisco Unified CallManager to upgrade the Cisco-provided operating system to version 2003.1.1. 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 Unified CallManager software page at <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.
- Step 9** Download and install the latest Cisco Unified Communications Server Operating System service release. The operating system service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco Unified CallManager software page.
- For installation instructions, refer to the file-specific readme document, *Cisco Unified Communications Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco Unified Communications 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 Unified CallManager software page.
- For installation instructions, refer to the file-specific readme document, *Cisco Unified Communications Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco Unified Communications 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** Manually install and configure Cisco IP Telephony Backup and Restore System (BARS) version 4.0(12) (or later).

**Note**

The operating system installation removes the version of BARS that you previously installed.

For more detailed instructions, 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>.

- Step 13** Copy the backup tar file from the remote location where you stored the file to the local hard disk of the Cisco Unified CallManager server so that you can easily access the backup file during the restore process.

- Step 14** Using the Cisco Unified CallManager Installation, Upgrade, and Recovery disks, install Cisco Unified CallManager 4.3(1) on the new server, and configure the new server with the same settings as the old server. For detailed instructions on installing Cisco Unified CallManager, see the [“Upgrading Related Cisco CallManager Services and Detecting the Server \(Required\)”](#) section on page 2-15
- Step 15** Install all locales on the new server that were installed on the old server.



**Tip** Verify that the new server behaves as expected. Review 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 3-1.

## Replacing the Cisco Unified CallManager Subscriber Server(s) During the Cisco Unified CallManager 4.3(1) Upgrade

You must install Cisco Unified 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, 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 6-1](#) to record the information.
- Step 2** Power off the Cisco Unified CallManager 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 2003.1.1 (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 Unified CallManager installation to fail.

- Step 5** Use Cisco Unified Communications Server Operating System OS Upgrade Disk that ships with Cisco Unified CallManager to upgrade the Cisco-provided operating system to version 2003.1.1. 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 Unified CallManager software page at <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.
- Step 6** Download and install the latest Cisco Unified Communications Server Operating System service release. The operating system service releases post on the voice products operating system cryptographic software page. You can navigate to the site from the Cisco Unified CallManager software page.
- For installation instructions, refer to the file-specific readme document, *Cisco Unified Communications Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco Unified Communications 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 Unified CallManager software page.
- For installation instructions, refer to the file-specific readme document, *Cisco Unified Communications Operating System, SQL Server, Security Updates*, and *Installing the Operating System on the Cisco Unified Communications 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 Unified CallManager Installation, Upgrade, and Recovery disks, install Cisco Unified CallManager on the new server where you installed the operating system. For detailed procedures, see the “[Upgrading Related Cisco CallManager Services and Detecting the Server \(Required\)](#)” section on [page 2-23](#).

**Tip**

---

After you install Cisco Unified CallManager on the server, verify that the new server behaves as expected. Review post-upgrade tasks and perform the necessary tasks as you verify. To obtain the Cisco Unified CallManager 4.3(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 3-1.

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## 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, and rebuild the subscriber server to its original state. If you replaced the subscriber server, restore power to the subscriber server.