



# Installing the Operating System on the Cisco IP Telephony Applications Server

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## Operating System Version: 2000.2.4

Use this document as a guide for installing the Cisco-provided Windows 2000 operating system on the Cisco IP Telephony Applications Server. Cisco IP telephony applications that use this operating system include Cisco CallManager, Cisco Customer Response Solutions, Cisco Personal Assistant, Cisco Conference Connection, and Cisco Emergency Responder.



### Note

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This document does not support Cisco-approved Aquarius servers, Cisco ICS 7750, or servers where Cisco Unity is installed. See [Table 1](#) to obtain documentation for these servers.

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## Purpose of Document

This document includes information and procedures on the following topics:

- Installing the operating system for the first time
- Installing the operating system when you want to overwrite existing settings
- Installing the operating system when you want to retain existing settings
- Upgrading the operating system via the web or via disk
- Applying hotfixes, BIOS updates, and service packs

Use this document in conjunction with the documents that are listed in [“Locating Related Information and Software”](#) section on page 2.



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# Conventions

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

**Blue Text**—To quickly navigate to a section or URL, click text that appears in this color.




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**Note**

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

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**Tip**

Reader, use the information to perform a task. Tips provide helpful information for performing tasks.

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**Caution**

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

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Cisco Customer Response Applications (CRA) and Cisco Customer Response Solutions (CRS) refer to the same product.

## Locating Related Information and Software

Cisco strongly recommends that you review the following documents before you perform the operating system installation:

- The readme document that posts on the web next to the operating system upgrade  
This document provides a list of changes from the last release and additional information on the operating system.
- *Cisco IP Telephony Operating System, SQL Server, Security Updates*  
This document provides information for tracking Cisco-supported operating system, SQL Server, and security files that are available for web download.
- The appropriate Cisco IP telephony application documentation  
Locate the release notes, installation/upgrade/backup and restore, and configuration guides for the applications that you want to install or upgrade.




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**Note**

If you need installation information for the Cisco Integrated Communications System (ICS) 7750, refer to the compatible version of the Cisco ICS documentation. See [Table 1](#).

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As you review this operating system document and perform operating system installation and upgrade procedures, use [Table 1](#), which provides URLs for software and documentation.

**Table 1 Quick Reference for URLs**

Related Information and Software	URL
Server hardware specifications.	<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> (for Cisco MCS) <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> (for Cisco-approved, customer-provided servers)
Related operating system and server documentation, including release notes and <i>Cisco IP Telephony Operating System</i> , <i>SQL Server</i> , <i>Security Updates</i>	<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>
Virtual Network Computing (VNC) 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>
Operating system upgrade executable/support patches and corresponding 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 support patches post on the voice products operating system cryptographic software page. You can navigate to the site from the voice application (Cisco CallManager, CRS, etc.) software page.
Cisco Security Agent (CSA) and McAfee documentation	<a href="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</a> <a href="http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/rtrmgmt/cw2000/cw2000_b/vpnman/vms_2_2/csa_4_0/index.htm">http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/rtrmgmt/cw2000/cw2000_b/vpnman/vms_2_2/csa_4_0/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>
Cisco ICS 7750 documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/ics/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/ics/index.htm</a>
Cisco Unity documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/index.htm</a>
<i>Cisco CallManager Compatibility Matrix</i>	<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>

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## Installing the Operating System

This section includes information and procedures on the following topics:

- Installing the operating system for the first time
- Installing the operating system when you want to overwrite existing settings
- Installing the operating system when you want to retain existing settings

## Frequently Asked Questions About the Operating System Installation

Review the following questions and responses before you complete the operating system installation.

### What hardware and disks do I receive when I purchase a Cisco MCS or a Cisco IP telephony application?

You do not receive a monitor, keyboard, or mouse with any Cisco Media Convergence Server (MCS). During initial startup and configuration of the server, you supply a monitor, a keyboard, and mouse.

If you plan on using Cisco Music On Hold, your server must support a sound card if you plan on using audio from an external source; for example, if you plan to play your own music or advertisements on the phone.

Before you begin the installation, carefully review the hardware documentation that accompanies your server. Make sure that you have the appropriate hardware before installing the operating system. To obtain information on hardware specifications, see [Table 1](#).

**Note**

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.

All Cisco MCS and customer-provided servers that meet approved Cisco configuration standards ship with a blank hard drive. When you purchase a Cisco IP telephony application, you use the appropriate disks to install/upgrade the operating system and application:

- Cisco IP Telephony Server Operating System Hardware Detection Disk
- Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk  
This disk upgrades the operating system on existing (not new) servers in the cluster. You do not need to use this disk if you are performing a new operating system installation.
- Cisco IP Telephony Server Operating System Installation and Recovery Disk  
You use only one of the server-specific Cisco IP Telephony Server Operating System Installation and Recovery disks that come in your software kit. During the operating system installation, you receive a prompt to insert the appropriate disk into the drive.
- The disk for the Cisco IP telephony application that you plan to install on the server
- Cisco CallManager Music On Hold Disk
- Cisco Extended Services Disk

### How long does it take to perform the operating system installation?

The entire operating system installation process, excluding preinstallation tasks, takes approximately 30 to 60 minutes per server, depending on your server type.

### Which Cisco IP telephony applications use this Cisco-provided operating system?

After you install the Cisco-provided operating system, you install supported Cisco IP telephony applications on a server that is dedicated solely to the single application or a server that supports coresident applications. See [Table 2](#) for more information.

The Cisco IP telephony applications that are listed in [Table 2](#) use the Cisco-provided operating system, which is intended specifically for use with the applications:

**Table 2** *Approved Server Installations for Cisco IP Telephony Applications*

Cisco IP Telephony Application	Approved Server Installation
Cisco CallManager	See the following approved installations: <ul style="list-style-type: none"> <li>• Install on a server that is dedicated to the application.</li> <li>• Install on a server that supports Cisco CallManager and Customer Response Solutions.</li> </ul>
Cisco Customer Response Solutions (CRS)	See the following approved installations: <ul style="list-style-type: none"> <li>• Install on a server that is dedicated to the application.</li> <li>• Install on a server that supports Cisco CallManager and Customer Response Solutions.</li> </ul>
Cisco Personal Assistant	Install on a server that is dedicated to the application.

**Table 2** *Approved Server Installations for Cisco IP Telephony Applications*

<b>Cisco IP Telephony Application</b>	<b>Approved Server Installation</b>
Cisco Conference Connection	Install on a server that is dedicated to the application.
Cisco Emergency Responder	Install on a server that is dedicated to the application.

**Note**

Cisco Unity does not use the operating system that is represented in this document. Refer to the Cisco Unity documentation for information on the Cisco Unity operating system. See [Table 1](#).

## How does the operating system installation work?

When you begin the installation, you boot the server from the Cisco IP Telephony Server Operating System Hardware Detection Disk. After the system boots, the Cisco IP Telephony Applications Server QuickBuilder installation utility loads automatically and guides you through the installation process. Cisco IP Telephony Applications Server QuickBuilder performs several preinstallation tasks that include preparing your server hard drive and loading server configuration information. (See [“What data must I provide to configure the server?”](#) section on page 7 for more information.)

If necessary, Cisco IP Telephony Applications Server QuickBuilder upgrades your system BIOS to a recommended version. Cisco IP Telephony Applications Server QuickBuilder then automatically installs Microsoft Windows 2000 Server, which is intended for use with the Cisco IP telephony applications. This operating system does not fully function for general use.

For information on how the operating system upgrade works, see the [“Upgrading the Operating System/BIOS and Applying Additional Operating System/BIOS Updates”](#) section on page 26.

## Which product key should I enter when I install the operating system?

Cisco supplies you with a Cisco product key when you purchase a Cisco IP telephony product. The product key, which is based on a file encryption system, allows you to install only the operating system and the components that you have purchased, and it prevents other supplied software from being installed for general use on the server. The product key comprises alphabetical letters only.

To identify the product key that you enter during the operating system installation, refer to the Cisco IP telephony application installation documentation. See [Table 1](#).

## What data must I provide to configure the server?

During the installation process, you receive prompts that tell you to enter important configuration information about the server, such as the server name and IP address. You can complete the initial power up more efficiently if you gather all the necessary configuration information before beginning the installation process. The following information applies:

### **New Installation or Server Replacement**

Choose this option if you are installing the Cisco IP telephony application for the first time, overwriting an existing installation, or replacing a server. To replace the server, you must store the data to a network directory or tape device before the operating system installation. Choosing this setting erases all existing drives.

**Same Server Recovery**

Choose this option if you plan to rebuild the server by using the original system configuration settings. You restore the settings from the latest successful backup. Backup data must exist on a network directory or tape device before the operating system installation occurs.

Choosing this setting replaces the C: drive.

**Cisco product key**

See the [“Which product key should I enter when I install the operating system?”](#) section on page 7.

**User and organization name**

Registering the software product that you are installing requires user and organization name. Do not leave the field blank. You can enter underscores, hyphens, numbers, and letters.

**Computer name**

Ensure that the computer name comprises a unique network name of 15 characters or less. It may contain alphanumeric characters and hyphens (-) and must begin with an alphabetical character. Make sure that the computer name and workgroup labels follow the rules for ARPANET host names. Labels must start with a letter, end with a letter or digit, and have as interior characters only letters, digits, and hyphen.

If you change the computer name after the application installation, you must reinstall the operating system and the application.

**Workgroup**

This entry records the name of the workgroup of which this computer is a member. A workgroup comprises a collection of computers that have the same workgroup name. Ensure that this entry of 15 characters or less follows the same naming conventions as the computer name. An error message displays if you attempt to use the same name for the computer name and workgroup name.

Cisco strongly recommends that the server belong to a Workgroup before you install the application. You can change the selection after the installation, but you must place the server in a workgroup again before you upgrade any applications.

**Domain suffix**

Always enter the Domain Name System (DNS) domain suffix in the format “mydomain.com” or “mycompany.mydomain.com.” If you are not using DNS, use a fictitious domain suffix, such as acme.com.

**TCP/IP properties**

Assign an IP address, subnet mask, and default gateway. Because the IP addresses that you assign are permanent properties, you should not change them after installation.

Cisco recommends that you choose static IP information, which ensures that the server obtains a fixed IP address. With this selection, Cisco IP Phones can register with the application when you plug the phones into the network.

**Caution**

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If you choose to use Dynamic Host Configuration Protocol (DHCP), Cisco Technical Assistance Center (TAC) requires that you reserve an IP address for each server in the DHCP server scope. This action prevents the release or reassignment of IP addresses. If you do not reserve IP addresses through the DHCP server scope, the DHCP server may assign a different address to the server if the server is disconnected from, and then reconnected to, the network. To return the server to its original IP address, you must reprogram the IP addresses of the other devices on the network.

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### Domain Name System (DNS)

Cisco requires that you configure DNS, WINS, or lmhosts file to successfully complete installation and upgrade procedures.



#### Caution

You must have a name resolution method in place, such as Domain Name System (DNS), Windows Internet Name Server (WINS), or local naming that uses a configured lmhosts file. If you use DNS, make sure that the DNS server contains a mapping of the IP address and hostname of the server that you are installing before you begin the installation. If you use local name resolution, ensure that the lmhosts file is updated on the existing servers in the cluster before you begin the installation on the new subscriber server; then, you must add the same information to the lmhosts file on the new server during installation, as instructed in the procedure.

### Windows 2000 Simple Network Management Protocol (SNMP) agent

The Windows 2000 SNMP agent provides security through the use of community names and authentication traps. All SNMP implementations universally accept the default name “public.” Cisco sets the community rights to none for security reasons. If you want to use SNMP with this server, you must configure it.

### Terminal Services

Cisco installs Terminal Services, so Cisco Technical Assistance Center (TAC) can perform remote administration and troubleshooting tasks. Cisco does not support installations or configuration tasks through Terminal Services.

New operating system installations automatically disable Terminal Services. If you want to enable Terminal Services during the operating system installation, you must click the appropriate radio button to enable it.

If you perform a Same Server Recovery, the installation maintains the setting that you have configured (disabled or enabled). You can change the setting if you want to do so.

If you perform an operating system upgrade, the upgrade maintains the setting that you have configured.

### NT Administrator password

At the end of the operating system installation, you must enter and confirm an administrator password. Cisco requires a password for security purposes. If you leave the password blank, you cannot install a Cisco IP telephony application on the server.

Make sure that you enter the same password on all servers in the cluster.

[Table 3](#) shows the configuration information that is required for installing the operating system on your server. Complete all fields unless otherwise noted. Gather this information for each Cisco IP Telephony Applications Server that you are installing in the cluster. Make copies of this table and record your entries for each server in a separate table. Have the completed lists with you when you begin the installation.

**Table 3** Configuration Data for Cisco IP Telephony Application Servers

Configuration Data	Your Entry
Cisco product key(s)	
User name	
Name of your organization	

**Table 3 Configuration Data for Cisco IP Telephony Application Servers**

Configuration Data	Your Entry
Computer name	
Workgroup	
NT domain (optional)	
DNS domain suffix	
Current time zone, date, and time	
SNMP community name	
DHCP parameters	Cisco recommends that you program a fixed IP address in TCP/IP properties for the server instead of using DHCP.
TCP/IP properties (required if DHCP is not used) <ul style="list-style-type: none"> <li>• IP address</li> <li>• Subnet mask</li> <li>• Default gateway</li> </ul>	
DNS servers (optional) <ul style="list-style-type: none"> <li>• Primary</li> <li>• Secondary</li> </ul> WINS servers (optional) <ul style="list-style-type: none"> <li>• Primary</li> <li>• Secondary</li> </ul> LmHosts file (optional)	You must configure at least one of the name resolution types.

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



**Caution**

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

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

**Procedure**

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

**Step 4** If you want to do so, choose a company.

**Step 5** Click **Search**.



**Caution**

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

#### **Disabling Third-Party, Cisco-Verified Applications (Required)**



**Caution**

To successfully complete installation, upgrade, or restoration procedures, you must disable and stop all Cisco-verified applications/services on every server in the cluster.

Disabling and stopping platform agents and services, such as performance monitoring (for example, NetIQ), antivirus (Cisco-verified McAfee services), intrusion detection, and remote management services, ensures that the installation does not encounter issues that are associated with these services.

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

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

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

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

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

To access information on Cisco Security Agent, see

[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/sec\\_vir/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/sec_vir/index.htm) and [http://lbj.cisco.com/push\\_targets1/ucdit/cc/td/doc/product/rtrmgmt/cw2000/cw2000\\_b/vpnman/vms\\_2\\_2/csa\\_4\\_0/index.htm](http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/rtrmgmt/cw2000/cw2000_b/vpnman/vms_2_2/csa_4_0/index.htm)

**Caution**

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If you are uncertain whether a Cisco IP telephony application is supported on the server, do not install it. Before you install the application, always review the application documentation for recommended configurations and installations.

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## May I run a web browser on the server?

Cisco strongly recommends that you do not run a web browser on the Cisco MCS or any customer-provided server that meets approved Cisco configuration standards. Running a web browser on the server causes CPU usage to surge.

## May I use Terminal Services, VNC, or ILO to install the operating system on this server?

### About Terminal Services

Cisco installs Terminal Services, so Cisco Technical Assistance Center (TAC) can perform remote administration and troubleshooting tasks. Cisco does not support installations or configuration tasks through Terminal Services.

**Caution**

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Before the operating system 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.

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

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For additional information on Terminal Services, see the [“Terminal Services” section on page 9](#).

### About Virtual Network Computing

If you want to use Virtual Network Computing (VNC) to remotely install supported applications, see [Table 1](#) to obtain the latest version of the VNC document.

**Caution**

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

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### About ILO

If you have a MCS-7835H-2.4 (or later) or MCS-7845H-2.4 (or later), you can use ILO for remote configuration and monitoring tasks. On Cisco MCS and Cisco-approved, customer-provided servers, Cisco does not support ILO for any other purposes, including installation and upgrade tasks.

To use ILO, you must obtain the ILO Default Network Settings tag that shipped with your server and perform all necessary startup tasks. Refer to the documentation that accompanies your hardware.

The ILO administrator who accesses the remote server controls all tasks that occur on the server. If an administrator is performing an installation/upgrade directly on the server and ILO administrator tries to access the server, the ILO administrator controls all tasks on the server. These tasks may interrupt the installation or upgrade; to prevent interruptions, notify all users that can access the server when the upgrade will occur. When an ILO administrator accesses a remote server, the application locks the keyboard and mouse on the remote server where the tasks are occurring.

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

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

## What preinstallation tasks should I perform?

For preinstallation tasks that you must complete before the installation, see [Table 4](#).

**Table 4** Preinstallation Tasks

	Preinstallation Tasks	Important Notes
<b>Step 1</b>	Carefully review the hardware documentation that accompanies your server. Make sure that you have the appropriate hardware before installing the application.	To review the server hardware specifications, see <a href="#">Table 1</a> .
<b>Step 2</b>	Connect a monitor, keyboard, and mouse to the server.	See the “ <a href="#">How do I connect the keyboard and mouse to the server?</a> ” section on page 13.
<b>Step 3</b>	Locate <a href="#">Table 3</a> , which provides specific server configuration information.	See the “ <a href="#">What data must I provide to configure the server?</a> ” section on page 7.

## How do I connect the keyboard and mouse to the server?

You must supply a monitor and, if necessary, a keyboard and mouse to use during initial startup and configuration of the server.

Plug the mouse and keyboard into the standard mouse and keyboard connectors that are marked on the back of the server. Plug the monitor cable into the monitor connector on the back of the server.



### Caution

When installing the operating system on the Cisco MCS, you must use a legacy PS/2 mouse and keyboard. If you use a USB keyboard or mouse, a post-configuration error occurs.

If the MCS-7835-2.4 or MCS-7845-2.4 (or later) is connected to Raritan Keyboard/Video/Mouse (KVM) switch, the keyboard and mouse may not work properly. A hardware fix for the KVM switch is required, so contact Raritan directly.

## What if I encounter problems during the installation?

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

1. During the installation if you receive an error message that displays in a dialog box, see the “[Error Messages](#)” section on page 32 and perform the recommended corrective action.
2. For New Installations—On the server where the problem occurred, obtain and review the log file, MCSSetup.log, from C:\Program Files\Common\Cisco\Log.



### Note

Be aware that not all error messages that display in the log file are catastrophic. Error messages display in the log file for many reasons; for example, attempts to access a service that is not used by Cisco CallManager.

## Where do I obtain the release notes?

To obtain the release notes, see [Table 1](#).

## Performing the Operating System Installation

**Note**

Before the installation, be aware that the process erases the server hard drive and all data and configuration information, if present. If you want to retain configuration settings during the operating system, see the “[Installing the Operating System When You Want to Retain Existing Configuration Settings](#)” section on page 20.

During the installation, the server reboots several times. Do not power off the server at any time during this process, unless instructed. Any unexpected power interruption during the installation process could prevent proper completion of the configuration and might prevent the operating system from restarting.

Do not connect your server to the network until you install the latest operating system upgrade and apply the appropriate Microsoft hotfixes.

To protect the server from virus attacks during the operating system installation, Cisco recommends that complete the operating system installation and apply the latest operating system upgrades and service releases before you connect the server to the network.

See the following sections, depending on the state of your server:

- [Installing the Operating System for the First Time](#), page 14
- [Installing the Operating System to Overwrite Existing Settings/Replace a Server](#), page 16
- [Installing the Operating System When You Want to Retain Existing Configuration Settings](#), page 20
- [Entering the Product Key and Reviewing the License Agreement](#), page 21
- [Entering Server Configuration Data and Completing the Operating System Installation](#), page 22

## Installing the Operating System for the First Time

You will perform the following tasks:

- Insert the hardware detection disk into the drive.
- Click to acknowledge that the installation process erases existing data.

**Procedure**

- 
- Step 1** Locate the Cisco IP Telephony Server Operating System Hardware Detection Disk.
- Step 2** You need to boot the server from the disk, which means that you must power up the server and then insert the disk early in the startup process.

**Note**

The first time that you start up a new server, you will not see any indication that the startup process is operating normally. The startup on a new server takes longer than on preinstalled servers. You may wait as long as 3 minutes before a video connection displays.

Do not remove the disk unless the procedure or process prompts you to do so.

**Step 3**

If you see the post-startup error message about memory upgrades on IBM xSeries servers, you must perform the following procedure:

- a. The Post Startup Error(s) window displays a message about memory upgrades. Using the arrow keys, choose **Continue** and then press **Enter**.
- b. If the Configuration Error window appears, use the arrows keys to choose **Continue**; then, press **Enter**.
- c. The Configuration/Setup Utility window displays a variety of configuration options. Using the arrows keys, choose **Save Settings**. Press **Enter**.
- d. The Save Settings window displays a message about saving the current settings. Press **Enter** to continue.
- e. You automatically return to the Configuration/Setup Utility window. Using the arrows keys, choose **Exit Setup** and then press **Enter**.
- f. When the Exit Setup window displays, use the arrow keys to choose **Yes, exit the Setup Utility**. Press **Enter**. The system reboots automatically.
- g. With a new server, the IBM BIOS upgrade utility runs; then, the server reboots automatically.

**Step 4**

If the ROM Based Setup Configuration Utility window opens on the MCS-7825, perform the following procedure:

**Caution**

Cisco strongly recommends that you choose the following selections from the ROM Based Setup Utility windows. Other selections may impact the stability of Cisco CallManager. If you inaccurately make a choice from one of the ROM Based Setup Utility windows, press F9 during the bootup process to return to the ROM Based Setup Utility and correct the choice.

- a. The first ROM Based Setup Utility window offers a language selection menu. English remains the only supported language at this time. Press **Enter** to choose English. Choosing a language other than English does not change the language that is seen during the installation process.
- b. The second ROM Based Setup Utility window lists several operating system choices. Windows 2000 remains the only supported operating system. Using the arrow keys, choose **Windows 2000** from the operating system selection menu. Press **Enter**.
- c. Because the third ROM Based Setup Utility window is preset at the factory, you cannot alter it. Press **ESC** to close the menu and continue.
- d. In the fourth ROM Based Setup Utility window, enter the correct date and time and then press **Enter**.
- e. In the final ROM Based Setup Utility window, a message states that the system configuration is complete. Press **F10** to exit the utility and automatically reboot the system.

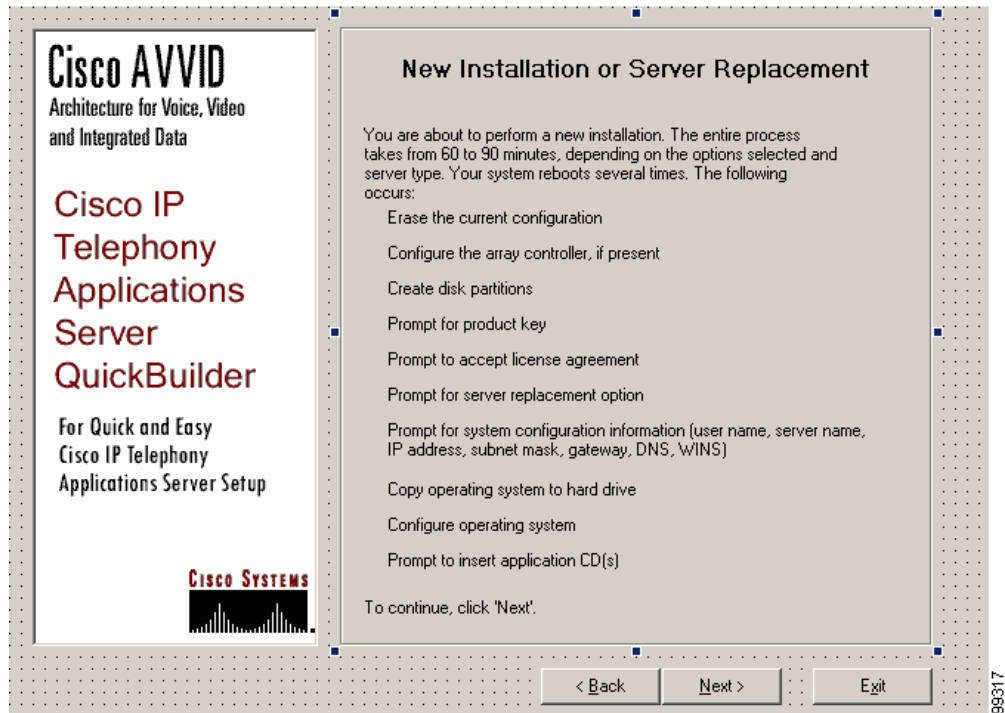
**Caution**

You may not see all the windows or prompts that are represented in [Step 6](#) through [Step 7](#). Read the information in the windows carefully and proceed with the installation.

- Step 5** On some servers, the New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.

Figure 1 shows the tasks that are performed during the installation.

**Figure 1** *New Installation or Server Replacement Window*



- Step 6** On some servers, the Configuration Process window opens with a message that states that hardware detection is in process; click **Next**. The system reboots automatically.
- Step 7** On some servers, a Configuration Process window with a message about conducting an initial hardware configuration opens; click **Next**. The system reboots automatically.
- Step 8** Continue the installation by performing the steps in “[Entering the Product Key and Reviewing the License Agreement](#)” section on page 21.

## Installing the Operating System to Overwrite Existing Settings/Replace a Server

This section applies if you want to perform one of the following tasks:

- Overwrite existing configuration settings
- Replace a server (which erases all drives)

For a definition of New Installation or Server Replacement, see the “[New Installation or Server Replacement](#)” section on page 7.

## Procedure

- 
- Step 1** If necessary, connect a monitor, keyboard, and mouse to the server as described in [“How do I connect the keyboard and mouse to the server?”](#) section on page 13.
  - Step 2** Locate the Cisco IP Telephony Server Operating System Hardware Detection Disk.
  - Step 3** Insert the disk into the drive and then restart the system immediately. Do not press any keys during the reboot.
  - Step 4** Perform the following tasks, depending on the server type.

### MCS 7815-1000

- Step 5** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 6** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 7** The New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.
- Step 8** If a Configuration Process window opens with a message about conducting an initial hardware configuration, click **Next**. The system reboots automatically.
- Step 9** Skip to [“Entering the Product Key and Reviewing the License Agreement”](#) section on page 21.

### MCS-7815I-2.0

- Step 10** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 11** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 12** The New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.
- Step 13** If a Configuration Process window opens with a message about conducting an initial hardware configuration, click **Next**. The system reboots automatically.
- Step 14** Skip to [“Entering the Product Key and Reviewing the License Agreement”](#) section on page 21.

### MCS-7820 and MCS-7822

- Step 15** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 16** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 17** A warning displays that configuration and data will be overwritten; click **Next**. The system automatically reboots.
- Step 18** When the F1 prompt display at the bottom of the window, press **F1** to save changes.
- Step 19** The New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.
- Step 20** If a Configuration Process window opens with a message about conducting an initial hardware configuration, click **Next**. The system reboots automatically.
- Step 21** Skip to [“Entering the Product Key and Reviewing the License Agreement”](#) section on page 21.

### MCS-7825H-2.2 and MCS-7825H-3.0

- Step 22** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.

- Step 23** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 24** The New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.
- Step 25** If a Configuration Process window opens with a message about conducting an initial hardware configuration, click **Next**. The system reboots automatically.
- Step 26** Skip to [“Entering the Product Key and Reviewing the License Agreement” section on page 21](#).

#### **MCS 7825-800 and MCS-7825-1133**

- Step 27** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 28** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 29** The New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.
- Step 30** A warning displays that configuration and data will be overwritten; click **Next**. The system automatically reboots.
- Step 31** Skip to [“Entering the Product Key and Reviewing the License Agreement” section on page 21](#).

#### **MCS-7830, MCS 7835-733, and MCS 7835-1000**

- Step 32** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 33** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 34** A warning displays that configuration and data will be overwritten; click **Next**. The system automatically reboots.
- Step 35** The New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.
- Step 36** When the Configuration Process window opens with a message about hardware detection, click **Next**. The system reboots automatically.
- Step 37** When the Configuration Process window opens with a message about conducting an initial hardware configuration, click **Next**. The system reboots automatically.
- Step 38** Skip to [“Entering the Product Key and Reviewing the License Agreement” section on page 21](#).

#### **MCS 7835-1266 and MCS 7845-1400**

- Step 39** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 40** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 41** A warning displays that configuration and data will be overwritten; click **Next**. The system automatically reboots.
- Step 42** When the Configuration Process window opens with a message about conducting an initial hardware configuration, click **Next**. The system reboots automatically.
- Step 43** Skip to [“Entering the Product Key and Reviewing the License Agreement” section on page 21](#).

**MCS-7835H-2.4 and MCSH-7835-3.0**

- Step 44** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 45** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 46** A warning displays that configuration and data will be overwritten; click **Next**. The system automatically reboots.
- Step 47** When the Configuration Process window opens with a message about conducting an initial hardware configuration, click **Next**. The system reboots automatically.
- Step 48** Skip to [“Entering the Product Key and Reviewing the License Agreement” section on page 21](#).

**MCS-7845H-2.4 and MCS-7845H-3.0**

- Step 49** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 50** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 51** A warning displays that configuration and data will be overwritten; click **Next**. The system automatically reboots.
- Step 52** When the Configuration Process window opens with a message about conducting an initial hardware configuration, click **Next**. The system reboots automatically.
- Step 53** Skip to [“Entering the Product Key and Reviewing the License Agreement” section on page 21](#).

**IBM xSeries 330 Server**

- Step 54** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 55** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 56** The New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.
- Step 57** A warning displays that configuration and data will be overwritten; click **Next**. The system automatically reboots.
- Step 58** Skip to [“Entering the Product Key and Reviewing the License Agreement” section on page 21](#).

**IBM xSeries 340, 342, 345 Servers or the MCS-7835I-2.4 and MCS-7835I-2.4**

- Step 59** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 60** When the Type of Installation window opens, choose **New Installation or Server Replacement**; then, click **Next**.
- Step 61** The New Installation or Server Replacement window displays a list of tasks that are performed during the installation. Click **Next**.
- Step 62** When the Configuration Process window opens with a message about hardware detection, click **Next**. The system reboots automatically.
- Step 63** Skip to [“Entering the Product Key and Reviewing the License Agreement” section on page 21](#).
-

## Installing the Operating System When You Want to Retain Existing Configuration Settings

This section applies if you want to install the operating system and retain the existing configuration settings that apply to the cluster.

Perform this procedure to migrate data to Cisco CallManager 3.3 or if the C: drive is corrupt beyond repair. For a definition of Same Server Recovery, see the [“Same Server Recovery” section on page 8](#).

**Caution**

Before you perform this procedure, verify that you have a good backup on a network directory or tape device.

**Procedure**

- Step 1** Locate the Cisco IP Telephony Server Operating System Hardware Detection Disk.
- Step 2** Insert the disk into the drive and then restart the system immediately. Do not press any keys during the reboot.
- Step 3** When the Cisco IP Telephony Applications Server QuickBuilder welcome window opens, click **Next**.
- Step 4** When the Type of Installation window opens, choose **Same Server Recovery**; then, click **Next**.
- Step 5** A warning message states that the installation erases all data. Click **Next**.
- Step 6** In the Ready to Install window, click **Next**.
- Step 7** Skip to the [“Entering Server Configuration Data and Completing the Operating System Installation” section on page 22](#).

## Entering the Product Key and Reviewing the License Agreement

In this portion of the installation, you will perform the following tasks:

- Enter the Cisco product key for the Cisco IP telephony application that you want to install.
- Read and agree to the terms in the End User License Agreement.
- Ensure that the I am recovering a system from backup check box is unchecked.

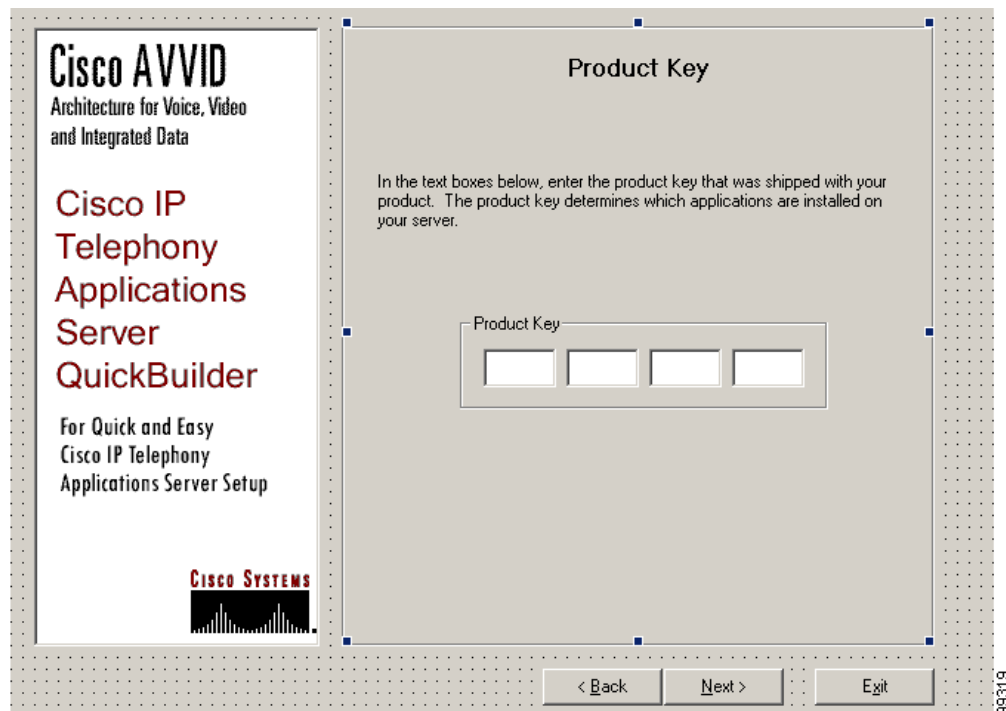
### Procedure

**Step 1** Obtain the product key for the Cisco IP telephony application that you want to install.

To obtain the product key, review the application installation documentation.

Figure 2 shows the product key window.

**Figure 2** Product Key Window



**Step 2** Enter the product key; then, click **Next**.

**Step 3** The End User License Agreement window opens. Read through the contents of the agreement. If you consent to the terms of the agreement, click **I Agree**. If you do not consent, you must terminate the installation by clicking **Exit**.

- Step 4** Depending on the state of your server, the Server Replacement Option window may or may not display. If this window does not display, go to [Step 6](#).
- If the window displays, perform one of the following procedures:
- If you are installing the application for the first time, make sure that the **I am recovering a system from backup** check box is unchecked.
  - If you are performing a server replacement on the publisher database server and you are restoring the data, check the **I am recovering a system from backup** check box.
- Step 5** Then, click **Next**.
- Step 6** In the Ready to Complete Installation window, click **Next**.
- Step 7** Continue the operating system installation by completing the steps in “[Entering Server Configuration Data and Completing the Operating System Installation](#)” section on page 22.
- 

## Entering Server Configuration Data and Completing the Operating System Installation

In this portion of the installation, you will perform the following tasks:

- Enter your user name, name of organization, computer name, and DNS suffix.
- Join a workgroup, which serves as a requirement for the application installation.
- Choose the appropriate time zone, date, and time.
- Enter the server IP address, subnet mask, and default gateway.
- Enter the primary and secondary IP addresses for DNS and WINS (or configure LMHosts). These entries serve as requirements for the Cisco CallManager installation.
- Change the default community public name to ensure security within the Windows 2000 Simple Network Management Protocol (SNMP) agent.
- Enable or disable Terminal Services.
- Insert the server-specific Cisco IP Telephony Server Operating System Installation and Recovery Disk to complete the operating system installation.

Using the data that you collected in [Table 3](#), complete the following steps to configure each server:

### Procedure

---

- Step 1** The Cisco IP Telephony Applications Server Configuration Wizard begins. Click **Next** to continue. The Cisco Registration window opens, as seen in [Figure 3](#).

### About Same Server Recovery

If you chose the Same Server Recovery option at the beginning of the installation, Cisco CallManager automatically populates the data entry fields with configuration data that was recovered from the backup. Do not change IP addresses or the computer name during the recovery.

If you did not join a Workgroup during the previous operating system installation, be aware that Cisco requires this configuration for the installation of the application.

If you did not configure DNS, WINS, or lmhosts file during the previous operating system installation, be aware that Cisco requires this configuration for the Cisco CallManager 3.3 installation.

### About New Installation or Server Replacement

If you chose the New Installation or Server Replacement option at the beginning of the installation, you must enter the appropriate information in the following windows.

**Figure 3** Cisco Registration Window

### Configuring the Computer Name and DNS Domain Suffix (Required)

Ensure that the computer name comprises a unique network name of 15 characters or less. It may contain alphanumeric characters and hyphens (-) and must begin with an alphabetical character. Make sure that the computer name and workgroup labels follow the rules for ARPANET host names. Labels must start with a letter, end with a letter or digit, and have as interior characters only letters, digits, and hyphen.

Ensure that the DNS domain suffix is entered in the format “mydomain.com” or “company.mydomain.com.” If you are not using DNS, use a fictitious domain suffix, such as acme.com.

- Step 2** After the Cisco Registration window opens, enter your user name, the name of your organization, a computer name, and DNS suffix; then, click **Next**.

### Configuring a Workgroup (Required for Cisco CallManager Installations and Upgrades)

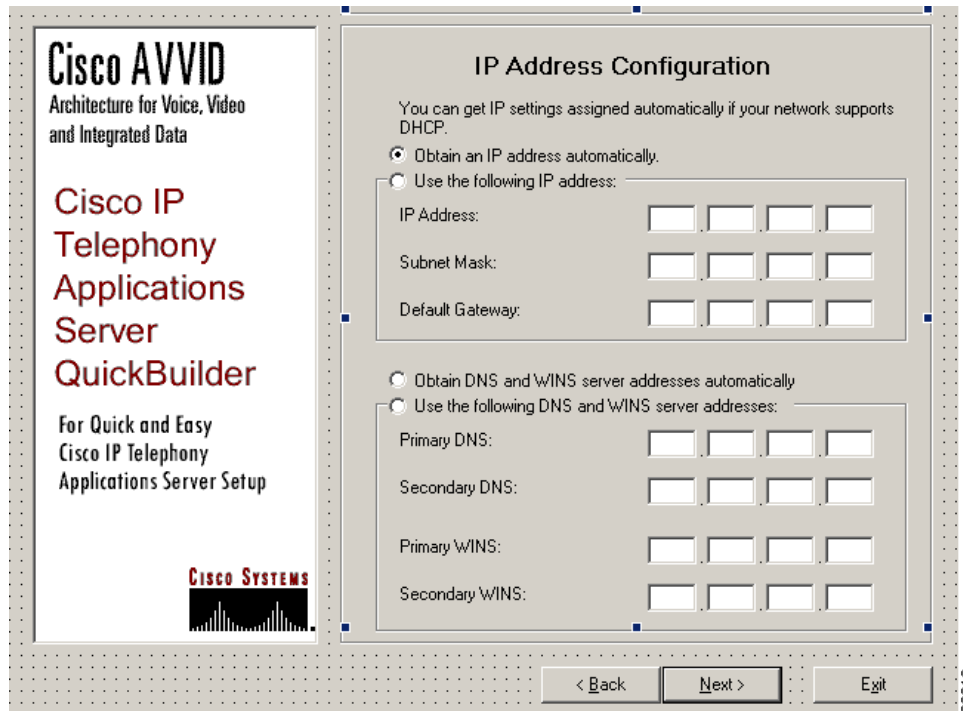
- Step 3** The Join Domain window displays whether the server is in a Workgroup or Domain. If the server exists in a Domain, Cisco requires that you place the server in a Workgroup. To join a Workgroup, perform the following procedure:

- a. Enter a name of the Workgroup, for example, WRKGRP. Make sure that you enter a Workgroup name that differs from the Computer Name.
- b. Click **Next**.

**Step 4** Choose the appropriate time zone for the server. Set the current date and time; then, click **Next**.

The IP Address Configuration window opens, as seen in [Figure 4](#). This window serves two purposes. You assign the IP address, subnet mask, and default gateway in the pane at the top of the window. In the pane at the bottom of the window, you enter the information to configure DNS and WINS. If you prefer to do so, you can choose to configure lmhosts file instead of DNS and WINS.

**Figure 4** IP Address Configuration Window



### Configuring a Static IP Address (Strongly Recommended)



#### Caution

Cisco recommends choosing static IP information, which ensures that the Cisco CallManager server obtains a fixed IP address. With this choice, Cisco IP Phones can register with Cisco CallManager when you plug the phones into the network.

If you choose to use Dynamic Host Configuration Protocol (DHCP), Cisco Technical Assistance Center (TAC) requires that you reserve an IP address for each server in the DHCP server scope. This action prevents the release or reassignment of IP addresses. If you do not reserve IP addresses through the DHCP server scope, the DHCP server may assign a different address to the server if the server is disconnected from, and then reconnected to, the network. To return the server to its original IP address, you would have to reprogram the IP addresses of the other devices on the network.

**Step 5** Cisco recommends that you choose **Use the following IP address** when prompted about the method that is used to configure the IP information.

**Step 6** Enter the server IP address, subnet mask, and default gateway in the appropriate fields.

### Configuring DNS, WINS, or lmhosts file (Required for Cisco CallManager Installations and Upgrades)



#### Caution

You must have a name resolution method in place. If you are not using DNS or WINS, you must configure local name resolution by updating the lmhosts file with IP address and hostname information for every server in your cluster, as instructed in [Step 8](#).

#### Step 7

If you are using DNS or WINS, click the **Use the following DNS and WINS server addresses** radio button; then, enter the IP addresses of the primary and secondary DNS servers and primary and secondary WINS servers. Click **Next** and continue to [Step 9](#).

If you are not using DNS, leave the DNS and WINS fields empty. Make sure that the **Use the following DNS and WINS server addresses** radio button is not chosen, so you can configure local name resolution; then, click **Next**.

#### Step 8

If you did not enter DNS or WINS server information in the previous window, and if you are installing multiple servers in a cluster, you must configure local name resolution by updating the lmhosts file, so it contains a mapping of the IP address and hostname of each server in the cluster. Perform the following steps to configure the lmhosts file:

- a. In the LMHost window, check the **Check if you want to edit LMHosts file** check box.
- b. Enter the IP Address and Server Name.

For example:

```
172.16.0.10 dallascml
```

- c. Click **Add Server**.
- d. Click **Next** to continue.



#### Note

The Windows 2000 SNMP agent provides security through the use of community names and authentication traps. All SNMP implementations universally accept the default name “public.” Cisco sets the community rights to none for security reasons. If you want to use SNMP with this server, you must configure it.

#### Step 9

When the SNMP agent window opens, be aware that Cisco sets the default community value to “public.” If you want to change the value, enter a new name and then click **Next**.

#### Step 10

The installation process disables Terminal services automatically. If you want, you can enable these services; then, click **Next**.

#### Step 11

The drive automatically opens. Remove the hardware detection disk from the drive and insert the server-specific Cisco IP Telephony Server Operating System Installation and Recovery Disk into the drive. The configuration process continues automatically after detection of the appropriate disk.

The server begins an installation and reboot process that takes about 10 minutes to complete.

#### Step 12

The drive automatically opens, and the server automatically reboots.



#### Note

If the server pulls the disk back into the server after the reboot, wait until the installation completes before you remove the disk.

Windows 2000 setup begins and takes about 10 minutes to complete. Do not power down the server or press any keys during setup.

- Step 13** On the MCS-7830 during a Same Server Recovery, the following message may display:  
 “Windows 2000 could not start because the following file is missing or corrupt: <Windows 2000 root>\system32\ntoskrnl.exe...”  
 To complete the Same Server Recovery, obtain the **7830-Bootfix** web download and readme document.

**Entering an NT Administrator Password (Required for Application Installation)**

- Step 14** When the dialog box displays, enter an administrative password in the Password field; enter the same password in the Confirm Password field and click **OK**.  
 If you leave the password fields blank, you cannot install any Cisco IP telephony applications on the server.



**Note** Verify the NumLk status before you enter the password. This task ensures that you enter the appropriate password.

Make sure that you enter the same password on all servers in the cluster.  
 The server automatically logs out.

- Step 15** Log in to the server by using the administrative user name and password.  
**Step 16** Install the operating system on every server in the cluster that uses it.  
**Step 17** Refer to the Cisco IP telephony application documentation for additional installation and configuration tasks. See [Table 1](#).

## Upgrading the Operating System/BIOS and Applying Additional Operating System/BIOS Updates

The operating system upgrade disk and executable that is available on the web provide service packs, hotfixes, components, and security settings that are available for your server; to obtain the latest operating system hotfixes, service packs, components, and security settings, download the executable instead of using the disk.

The operating system upgrade updates your system to the latest Cisco-provided operating system version.

### Frequently Asked Questions About Operating System Software Updates

Review the following information before you upgrade the operating system.

#### Why can I not find the web executable that is specified in the Cisco IP telephony application documentation?

If you cannot locate a file on the web, Cisco has removed the file from the web and replaced it with a newer version. Always install the version that is available on the web, unless the readme document states otherwise.

## How do I know which version of the operating system runs on my server?

The MCSver.exe program reports the current version of the operating system components. Be aware that Cisco does not report the actual application version through this program. Most of these components, which are 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 changes only if you do a new installation with the Cisco IP Telephony Server Operating System Hardware Detection Disk.

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

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

### Procedure

---

**Step 1** Use Windows Explorer to browse to the following folder:

**C:\utils\MCSver.exe**



**Tip**

If this program is not present on the server, install win-OS-Upgrade.2000-2-4.exe or a later version of this file on the server.

---

**Step 2** Locate the operating system image version and the OS Upgrade version.

---

## In what order should I apply the software updates?

Refer to *Cisco IP Telephony Operating System, SQL Server, Security Updates* for more information. See [Table 1](#) to obtain the document.

## How long does it take to upgrade the operating system?

It takes approximately 20-60 minutes, depending on the server type, the speed of the hardware, and the age of the components (BIOS, etc.).

## Where do I find more information (release notes/readme) about the software update?

You can obtain the latest upgrade executable and version-specific readme document from the voice software cryptographic site on the web.

The readme document may be a later version than the executable if information regarding the upgrade is updated. If the readme is a newer version than the executable, Cisco recommends that you review the updated document for new information regarding the upgrade.

## When should I install the software update?



**Caution**

Cisco strongly recommends that you install the software update during off-peak hours or a maintenance window. Installing the software update may cause call-processing interruptions.

## May I perform configuration tasks during the update?



**Caution**

Do not attempt to perform any configuration tasks during the installation. Before you update the server, disable all services that allow any administrator to perform remote configuration tasks. For example, disable Terminal Services or VNC, if you do not plan to use it, before the upgrade to prevent an administrator from browsing into the server during the installation.

Notify all users that you are performing an installation, so users do not browse into the server.

Performing configuration tasks during the installation causes an installation failure.

## May I use Terminal Services, VNC, or ILO on this server during the installation?

### About Terminal Services

Cisco installs Terminal Services, so Cisco Technical Assistance Center (TAC) can perform remote administration and troubleshooting tasks.

Cisco does not support operating system installations or configuration tasks through Terminal Services.



**Caution**

Before the installation, 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 installation to fail.

After you perform the installation, you must enable Terminal Services.

### About Virtual Network Computing

If you want to use Virtual Network Computing (VNC) to remotely install supported applications, see [Table 1](#) 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 installation, disable it to prevent remote access to the server. If you do not disable VNC and a user/administrator accesses the server during the installation, the installation will fail.

### About ILO

If you have a MCS-7835H-2.4 (or later) or MCS-7845H-2.4 (or later), you can use ILO for remote configuration and monitoring tasks. On Cisco MCS and Cisco-approved, customer-provided servers, Cisco does not support ILO for any other purposes, including installation and upgrade tasks.

To use ILO, you must obtain the ILO Default Network Settings tag that shipped with your server and perform all necessary startup tasks. To use this product, refer to the documentation that accompanies your hardware.

The ILO administrator who accesses the remote server controls all tasks that occur on the server. If an administrator is performing an installation/upgrade directly on the server and ILO administrator tries to access the server, the ILO administrator controls all tasks on the server. These tasks may interrupt the installation or upgrade; to prevent interruptions, notify all users that can access the server when the upgrade will occur.

When an ILO administrator accesses a remote server, the application locks the keyboard and mouse on the remote server where the tasks are occurring.

## What pre-upgrade tasks should I perform?

Perform the following tasks before you upgrade the operating system.

1. Verify the operating system version that is running on your system.
2. Review the readme documentation for installation procedures, caveats, and compatibility information.
3. Disable all Cisco-verified, third-party applications and reboot the server.
4. Disable Cisco IDS Host Sensor Agents and reboot the server.
5. Verify that you have installed the latest backup utility that is available on the web. Verify that you have a good backup of your data on a network directory or tape device.
6. Verify that you have enough free disk space on the server.

Make sure you have 1 GB of free disk space before you copy the executable to the server. Delete any unnecessary files. Remove old log files, CDP records, old installation files, etc.

7. Close all programs before performing the upgrade.

## What if I encounter problems during the operating system upgrade?

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

1. During the operating system upgrade if you receive an error message that displays in a dialog box, see the [“Error Messages” section on page 32](#) and perform the recommended corrective action.
2. On the server where the upgrade problem occurred, obtain and review the log file, MCSOSupg.log, from C:\Program Files\Common Files\Cisco\Logs.



### Note

Be aware that not all error messages that display in the log file are catastrophic. Error messages display in the log file for many reasons; for example, attempts to access a service that is not used by Cisco CallManager.

## What if I encounter problems during the SQL Server service pack or hotfix update, and how do I verify the version that is installed?

Refer to the readme document for the specific software update. See [Table 1](#) to obtain the document.

## Downloading the Operating System Upgrade, Hotfixes, Service Packs, and Additional Software Updates

To install the software update, perform the following procedure:

- 
- Step 1** Perform pre-installation tasks. See the “What pre-upgrade tasks should I perform?” section on page 29.
  - Step 2** Click <http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>.



**Note** You must have a Cisco Connection Online (CCO) username and password to obtain the update from the web.

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- Step 3** Choose **The Application** (for example, Cisco CallManager) > **Download...Cryptographic Software... > Download Cisco 3DES Cryptographic Software under export licensing controls.**
  - Step 4** On the page that displays, locate the readme document for the software update.
  - Step 5** Review the readme document for specific instructions and caveats.
  - Step 6** Download the software update to your hard drive.
  - Step 7** Note the location where you save the downloaded file.
  - Step 8** Double-click the downloaded file to begin the installation.
  - Step 9** Perform the installation on every server where the update is supported.
- 

## Using the Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk to Upgrade the Operating System

Perform the following procedure to upgrade the operating system:

### Procedure

- 
- Step 1** Obtain the Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk and insert it into the drive.
  - Step 2** The upgrade occurs automatically. Do not remove the disk until the upgrade completes or you are prompted to do so.
-

## Post-Upgrade Tasks

Table 5 provides a list of tasks that you should perform after the software upgrade.

**Table 5** *Post-Upgrade Tasks*

Task	Notes
Run the operating system version utility to verify that the version installed on the server.	See the “How do I know which version of the operating system runs on my server?” section on page 27.
Verify that you have all hotfixes and support patches installed on the server.	Refer to the readme document for the operating system upgrade.
Enable all Cisco-verified, third-party applications and services that you disabled before the upgrade.	For a list of supported applications and services, see the “Which Cisco-verified, third-party applications may I install on the server?” section on page 10.
Verify that the following services are running: <ul style="list-style-type: none"> <li>MS-SQL Agent, MS-SQL Server, and other SQL dependencies</li> <li>DC Directory</li> <li>SNMP and its dependencies</li> <li>IIS Admin and its dependencies on the publisher database server</li> <li>Network Time Protocol</li> </ul>	If the services are not running, start the services by performing the following procedure: <ol style="list-style-type: none"> <li>Choose <b>Start &gt; Settings &gt; Control Panel &gt; Administrative Tools &gt; Services</b>.</li> <li>From the Services window, right-click the service and choose <b>Start</b>.</li> </ol>
Verify that you can place and receive calls and that all features work as expected.	For more information on supported features, refer to the <i>Cisco CallManager Features and Services Guide</i> .
Verify that all necessary services in Cisco CallManager Serviceability are running on the server.	Refer to the <i>Cisco CallManager Serviceability Administration Guide</i> .

## Ongoing Server Management

The HP Insight Management Agent or the IBM Director (UMS), both SNMP agent extensions, allow you to monitor and manage the specific components of your server, such as CPU, virtual memory, and disk usage. They also monitor server temperature, fan status, power supplies, and NIC information.

On Cisco Media Convergence Servers and approved, customer-provided HP servers, the drivers upgrade when you insert the latest version of the Cisco IP Telephony Server Operating System OS/BIOS Upgrade Disk into the drive or when you upgrade the operating system via the web. For information on how to use this disk, refer to the readme documentation. For driver, BIOS, or firmware upgrades on the IBM xSeries servers, contact the hardware manufacturer directly or navigate to the IBM website through the following URL:

<http://www.cisco.com/warp/public/779/largeent/avvid/products/infrastructure.html>

If you are using IBM Director (UMS), you must perform the following procedure:

**Procedure for Changing Computer Name if Using IBM Director (UMS)**

- Step 1** Using Windows Explorer, browse to **C:\Program Files\UMS\Director\bin\Twgipccf.exe**.
- Step 2** Double-click the executable.
- Step 3** In the System Name field, enter the computer name.
- Step 4** Choose each adapter and check the **Driver Enabled** check box. Perform this step for all drivers.
- Step 5** Uncheck **Enable Wake-On...**
- Step 6** Click **OK**.
- Step 7** Perform this procedure on all IBM servers (for example, MCS-7815, IBM xSeries 330, 340, 342, 345, or the MCS-7835I-2.4).

## Error Messages

Table 6 describes error messages that display in dialog boxes and the appropriate corrective actions. If you need to obtain the log files, see the [“What if I encounter problems during the installation?”](#) section on page 13 or the [“What if I encounter problems during the operating system upgrade?”](#) section on page 29.

**Table 6 Error Messages**

<b>Error Message</b>	<b>Corrective Action</b>
THIS CD DOES NOT SUPPORT THIS MACHINE EJECT THE CD AND PRESS ANY KEY TO REBOOT.	The error message provides the corrective action.
Hardware Not Supported. OS version 2000.2.4 only supports the IBM X345. Eject the CD and press any key to reboot.	The error message provides the corrective action.
No recovery information is found. You must select New Installation.	You chose the Same Server Recovery option during the operating system installation, or the system cannot detect your recovery information. Choose the <b>New Installation and Server Replacement</b> option.
Quickbuilder could not find <file>. Please restart the Process and make sure you have the CD for the server inserted. If you get this again, your machine may not be supported by this CD.	The error message provides the corrective action.
The product key you entered will build an NT 4.0 operating system which is no longer a supported platform. Please enter another product key.	To obtain the correct product key, refer to the installation documentation for the application that you want to install on this server.

**Table 6 Error Messages (Continued)**

<b>Error Message</b>	<b>Corrective Action</b>
Cisco eServices is not supported as a stand alone server on this platform. Please enter a product key for a CallManager server, a CallManager server with Cisco eServices or abort the installation.	The error message provides the corrective action.  To obtain the correct product key, refer to the installation documentation for the application that you want to install on this server.
The product key you entered does not enable you to run the installation on this CD. Please enter another key or exit from the program.	The error messages provides the corrective action.  To obtain the correct product key, refer to the installation documentation for the application that you want to install on this server.
QuickBuilder cannot support hardware. The hardware detected is not supported by this CD. QuickBuilder cannot be run.	Locate the correct server and install the operating system on the server.
Quickbuilder could not read your hard drive correctly. Please restart the Process. If you get this again, your machine may not be supported by this CD. Do you want to continue anyway?	The error message provides the corrective action.
model.txt file not found. The hardware model type could not be detected. QuickBuilder cannot be run.	Locate the correct server and install the operating system on the server.
The IP address that you have entered for the IP address in lmhosts file is not valid. Please enter a valid IP address.	The error message provides the corrective action.
User Name, Organization, Computer Name, Workgroup and DNS Suffix are required entries.	Enter the requested information.
Computer Name must be 2 or more characters.	Enter the appropriate information.
The new Computer Name is a number. The name may not be a number.	See the <a href="#">“Computer name” section on page 8</a> for guidelines.
The Workgroup and Computer Name cannot be the same.	Enter a different Workgroup name.
NT Domain or Workgroup are required entries.	Enter the appropriate information.
Workgroup must be 2 or more characters.	Enter the appropriate information.
The NT Domain Name and Computer Name cannot be the same.	Enter unique names.
Domain Name must be 2 or more characters.	Enter the appropriate information.
This is not a valid user name.	See the <a href="#">“User and organization name” section on page 8</a> .
The password was not correctly confirmed. Please ensure that the password and confirmation match exactly.	The error message provides the corrective action.
The Primary DNS that you have entered for the IP address is not valid. Please enter a valid Primary DNS.	The error message provides the corrective action.
The Secondary DNS that you have entered for the IP address is not valid. Please enter a valid Secondary DNS.	The error message provides the corrective action.

**Table 6** Error Messages (Continued)

Error Message	Corrective Action
The Secondary DNS server entry can not exist without Primary DNS server entry.	Enter the appropriate information for the Primary DNS server.
The Primary WINS that you have entered for the IP address is not valid. Please enter a valid Primary WINS.	The error message provides the corrective action.
The Secondary WINS that you have entered for the IP address is not valid. Please enter a valid Secondary WINS.	The error message provides the corrective action.
The Secondary WINS server entry can not exist without Primary WINS server entry.	Enter the appropriate information for the Primary WINS server.
The adapter requires at least one valid IP address. Please enter one.	The error message provides the corrective action.
The current drive configuration is not supported. This application will now exit.	Check the hardware specifications for the server. See <a href="#">Table 1</a> .
Config file isn't found. Please supply config information again.	The error message provides the corrective action.
Failed to determine correct time zone settings. Please check your selections. Time zone code is invalid.	Choose the correct time zone.
This entry must begin with a character value between 'A' and 'Z'	Enter a valid entry.
Spaces are not valid for this entry.	Enter a valid entry.
<The information that you entered> is not a valid entry. Please specify value between 1 and 223.	Enter a valid entry.
IP addresses starting with 127 are not valid because they are reserved for loopback addresses. Please specify some other valid value between 1 and 223.	The error message provides the corrective action.
<The information that you entered> is not a valid entry. Please specify value between 0 and 255.	The error message provides the corrective action.
OS upgrade new hardware found.	Click <b>Finish</b> .
Windows 2000 could not start because the following file is missing or corrupt: <Windows 2000 root>\system32\ntoskrnl.exe...	To complete a Same Server Recovery on a MCS-7830, obtain the <b>7830-Bootfix</b> web download and readme document.
Two versions of MCSOSupg.exe are running at the same time. Click OK to close one of the files.	You are running two operating system upgrades at the same time. The error message provides the corrective action.
Phase 1 did not successfully complete. Reboot the server and start the upgrade again.	The error message provides the corrective action.

**Table 6 Error Messages (Continued)**

Error Message	Corrective Action
The OS Version on this server does not support this upgrade. Please go to <a href="http://www.cisco.com">www.cisco.com</a> and download the latest OS Upgrade for this Server.	Download and install win-OS-Upgrade.2000-2-3.exe (or later); then, install the remaining compatible software updates.
The following file is already on your computer: C:\Program Files\Cisco\Updates\ <upgrade file&gt;<br="" name&gt;\&lt;upgrade=""></upgrade> Do you wish to overwrite this file?	This message displays under the following circumstances: <ul style="list-style-type: none"> <li>You attempt to run the support patch more than once.</li> <li>The first time that you run the support patch, a warning states that you need to install the operating system upgrade before the patch.</li> </ul> Choose <b>Yes to All</b> when this message displays.

## Using the Bug Toolkit

If you have an account with Cisco.com (Cisco Connection Online), you can use the Bug Toolkit to find caveats for this product.

To use the Bug Toolkit, click the following URL:

[http://www.cisco.com/cgi-bin/Support/Bugtool/launch\\_bugtool.pl](http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl)

## Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

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

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

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

## Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

[http://www.cisco.com/en/US/partner/ordering/ordering\\_place\\_order\\_ordering\\_tool\\_launch.html](http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html)

All users can order annual or quarterly subscriptions through the online Subscription Store:

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

Click Subscriptions & Promotional Materials in the left navigation bar.

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products Marketplace:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

## Documentation Feedback

You can submit e-mail comments about technical documentation to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour-a-day, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance. If you do not hold a valid Cisco service contract, please contact your reseller.

## Cisco TAC Website

The Cisco TAC website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year. The Cisco TAC website is located at this URL:

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

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

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

## Opening a TAC Case

Using the online TAC Case Open Tool is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer. The online TAC Case Open Tool is located at this URL:

<http://www.cisco.com/tac/caseopen>

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case 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 listing of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

## TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your 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.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation 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.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—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 Product Catalog describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:  
[http://www.cisco.com/en/US/products/products\\_catalog\\_links\\_launch.html](http://www.cisco.com/en/US/products/products_catalog_links_launch.html)
- Cisco Press publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:  
<http://www.ciscopress.com>
- Packet magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:  
<http://www.cisco.com/packet>
- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:  
<http://www.cisco.com/go/iqmagazine>
- Internet Protocol Journal is a quarterly journal published by Cisco Systems 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/en/US/about/ac123/ac147/about\\_cisco\\_the\\_internet\\_protocol\\_journal.html](http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html)
- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:  
<http://www.cisco.com/en/US/learning/index.html>

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