



Installing a Cisco Unity System

Your installation tasks depend on whether you are installing Cisco Unity on a component system or on a baseline system. Use the task list for your system type to install the Cisco Unity system correctly.

This chapter contains the following sections:

- [Task List for a Component System, page 2-2](#)
- [Task List for a Baseline System, page 2-5](#)
- [Installation Checklist, page 2-6](#)
- [Registering Cisco Unity, page 2-12](#)
- [Installing Voice Cards, page 2-13](#)
- [Setting Up the Cisco Unity Server, page 2-16](#)
- [Starting the Cisco Unity Server and Logging On to Windows \(Baseline System Only\), page 2-17](#)
- [Installing Windows 2000 Server \(Component System Only\), page 2-19](#)
- [Installing Additional Windows 2000 Languages, page 2-21](#)
- [Assigning a Static IP Address, page 2-22](#)
- [Verifying the IP Address, page 2-23](#)
- [Installing the USB Key Driver and Attaching the USB System Key \(Component System Only\), page 2-24](#)
- [Installing Active Directory or Adding the Cisco Unity Server to an Existing Domain, page 2-25](#)
- [Installing SQL Server 2000 or MSDE 2000, page 2-27](#)

- [Installing Internet Explorer, page 2-31](#)
- [Installing Message Queuing 2.0, page 2-31](#)
- [Installing NNTP Service \(Exchange 2000 Only\), page 2-32](#)
- [Installing Exchange, Including Administration Software \(Selected Configurations Only\), page 2-33](#)
- [Installing Exchange Administration Software Only, page 2-38](#)
- [Updating the Active Directory Schema \(Exchange 2000 only\), page 2-40](#)
- [Installing Other Software, page 2-42](#)
- [Creating Organizational Units and a Mailbox Store \(Exchange 2000 Only\), page 2-44](#)
- [Choosing the Windows Account Used for Installing Cisco Unity, page 2-45](#)
- [Installing Cisco Unity, page 2-48](#)
- [Reinstalling Windows 2000 Service Pack 2, page 2-53](#)
- [Creating an Outlook User Profile, page 2-53](#)
- [Customizing the Cisco Unity System, page 2-54](#)

Task List for a Component System

Some tasks apply only to particular configuration types, and are noted as such. If a task does not apply to your situation, skip it.

1. Review the installation checklist. See the [“Installation Checklist” section on page 2-6](#).
2. Register Cisco Unity, if the Information Services manager has not already done so. See the [“Registering Cisco Unity” section on page 2-12](#).
3. Install voice cards (traditional phone systems only). See the [“Installing Voice Cards” section on page 2-13](#).
4. Set up the Cisco Unity server. See the [“Setting Up the Cisco Unity Server” section on page 2-16](#).
5. Install Windows 2000 Server. See the [“Installing Windows 2000 Server \(Component System Only\)” section on page 2-19](#).

6. Install Windows 2000 Multilanguage User Interface, if applicable. See the [“Installing Additional Windows 2000 Languages”](#) section on page 2-21.
7. *All configurations except Voice Messaging Only:* Assign a static IP address, if applicable and if you did not do so while installing Windows 2000 Server. See the [“Assigning a Static IP Address”](#) section on page 2-22.
8. *All configurations except Voice Messaging Only:* Confirm that the server is getting an IP address. See the [“Verifying the IP Address”](#) section on page 2-23.
9. If the system key is a USB key, install the driver for the key and attach the USB key to the server. See the [“Installing the USB Key Driver and Attaching the USB System Key \(Component System Only\)”](#) section on page 2-24.
10. Add the Cisco Unity server to an existing domain, or install Active Directory. See the [“Installing Active Directory or Adding the Cisco Unity Server to an Existing Domain”](#) section on page 2-25.
11. Install Microsoft SQL Server 2000 or MSDE 2000. See the [“Installing SQL Server 2000 or MSDE 2000”](#) section on page 2-27.
12. Install Internet Explorer 5.5. See the [“Installing Internet Explorer”](#) section on page 2-31.
13. Install Message Queuing 2.0. See the [“Installing Message Queuing 2.0”](#) section on page 2-31.
14. Install NNTP Service, if the system is using Exchange 2000. See the [“Installing NNTP Service \(Exchange 2000 Only\)”](#) section on page 2-32.
15. Install Exchange 2000 Server or Exchange Server 5.5, or install the corresponding administration software. See the applicable section:
 - [“Installing Exchange, Including Administration Software \(Selected Configurations Only\)”](#) section on page 2-33.
 - [“Installing Exchange Administration Software Only”](#) section on page 2-38.
16. Update the Active Directory schema, if the system is using Exchange 2000. See the [“Updating the Active Directory Schema \(Exchange 2000 only\)”](#) section on page 2-40.
17. Install other software. See the [“Installing Other Software”](#) section on page 2-42.

18. If applicable, create Active Directory organizational units for users and distribution lists, and a mailbox store, if the system is using Exchange 2000. See the “[Creating Organizational Units and a Mailbox Store \(Exchange 2000 Only\)](#)” section on page 2-44.
19. Choose the Windows account that you will use to install Cisco Unity. See the “[Choosing the Windows Account Used for Installing Cisco Unity](#)” section on page 2-45.
20. Install Cisco Unity. See the “[Installing Cisco Unity](#)” section on page 2-48.
21. Reinstall Windows 2000 Server Service Pack 2. See the “[Reinstalling Windows 2000 Service Pack 2](#)” section on page 2-53.
22. Create an Outlook user profile. See the “[Creating an Outlook User Profile](#)” section on page 2-53.
23. Create an emergency repair disk. Refer to Windows 2000 Help.
24. Integrate Cisco Unity and the phone system. Refer to the Cisco Unity integration guide for your phone system. Cisco Unity integration guides are available on the Cisco Unity Documentation compact disc and on Cisco.com at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/index.htm.
25. Customize the Cisco Unity system. See the “[Customizing the Cisco Unity System](#)” section on page 2-54.

Task List for a Baseline System

Some tasks apply only to particular configuration types, and are noted as such. If a task does not apply to your situation, skip it.

1. Review the installation checklist. See the [“Installation Checklist”](#) section on page 2-6.
2. Register Cisco Unity, if the Information Services manager has not already done so. See the [“Registering Cisco Unity”](#) section on page 2-12.
3. Install voice cards (traditional phone systems only). See the [“Installing Voice Cards”](#) section on page 2-13.
4. Set up the Cisco Unity server. See the [“Setting Up the Cisco Unity Server”](#) section on page 2-16.
5. Start the server, and log on to Windows 2000. See the [“Starting the Cisco Unity Server and Logging On to Windows \(Baseline System Only\)”](#) section on page 2-17.
6. Install Windows 2000 Multilanguage User Interface, if applicable. See the [“Installing Additional Windows 2000 Languages”](#) section on page 2-21.
7. *All configurations except Voice Messaging Only:* Assign a static IP address, if applicable. See the [“Assigning a Static IP Address”](#) section on page 2-22.
8. *All configurations except Voice Messaging Only:* Confirm that the server is getting an IP address. See the [“Verifying the IP Address”](#) section on page 2-23.
9. Add the Cisco Unity server to an existing domain, or install Active Directory. See the [“Installing Active Directory or Adding the Cisco Unity Server to an Existing Domain”](#) section on page 2-25.
10. Install Microsoft SQL Server 2000 or MSDE 2000. See the [“Installing SQL Server 2000 or MSDE 2000”](#) section on page 2-27.
11. Install Exchange 2000 Server or Exchange Server 5.5, or install the corresponding administration software. See the applicable section:
 - [“Installing Exchange, Including Administration Software \(Selected Configurations Only\)”](#) section on page 2-33.
 - [“Installing Exchange Administration Software Only”](#) section on page 2-38.

12. Update the Active Directory schema, if the system is using Exchange 2000. See the “[Updating the Active Directory Schema \(Exchange 2000 only\)](#)” section on page 2-40.
13. Install other software. See the “[Installing Other Software](#)” section on page 2-42.
14. If applicable, create Active Directory organizational units for users and distribution lists, and a mailbox store, if the system is using Exchange 2000. See the “[Creating Organizational Units and a Mailbox Store \(Exchange 2000 Only\)](#)” section on page 2-44.
15. Choose the Windows account that you will use to install Cisco Unity. See the “[Choosing the Windows Account Used for Installing Cisco Unity](#)” section on page 2-45.
16. Install Cisco Unity. See the “[Installing Cisco Unity](#)” section on page 2-48.
17. Reinstall Windows 2000 Server Service Pack 2. See the “[Reinstalling Windows 2000 Service Pack 2](#)” section on page 2-53.
18. Create an Outlook user profile. See the “[Creating an Outlook User Profile](#)” section on page 2-53.
19. Create an emergency repair disk. Refer to Windows 2000 Help.
20. Integrate Cisco Unity and the phone system. Refer to the Cisco Unity integration guide for your phone system. Cisco Unity integration guides are available on the Cisco Unity Documentation compact disc and on Cisco.com at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/index.htm.
21. Customize the Cisco Unity system. See the “[Customizing the Cisco Unity System](#)” section on page 2-54.

Installation Checklist

The following sections list requirements and other necessary information for installing a Cisco Unity system.

Cisco Unity Activation Code

You must have an activation code for the system key to complete the Cisco Unity installation or upgrade. Cisco sends an e-mail with the code—which activates license settings—once the Cisco Unity software has been registered on Cisco.com.

A registration notice shipped with Cisco Unity contains instructions for registering the software. The resulting e-mail from Cisco instructs the recipient to save the code to a blank disk labeled “Cisco Unity Activation Code” and to store the disk with the Cisco Unity software and documentation.

If the Cisco Unity software has not been registered, do so immediately because it can take up to one business day to receive the activation code for the system key. See the “[Registering Cisco Unity](#)” section on page 2-12 for instructions on registering the software or on getting another copy of the activation code, if it has been misplaced.

The Cisco Unity installation instructions later in this chapter explain when to use the activation code.

Documentation and Tools Requirements

- A printout of the integration guide for your phone system. Cisco Unity integration guides are available on the Cisco Unity Documentation compact disc and on Cisco.com at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/index.htm.
- A blank 3.5" 1.44 MB disk for creating an emergency repair disk.
- A test phone.
- A list of settings for the previous voice messaging system configuration, including extensions, transfer settings, and caller input settings. (Subscriber information can be imported from Exchange, and from phone systems and voice messaging systems that can generate comma-delimited files.)

If the site had no previous voice messaging system, then you need a list of extensions.

Software Requirements

A Cisco Unity baseline system includes the required software in the package.

- Windows 2000 Server. (Cisco Unity is not qualified on Windows 2000 Professional, Advanced Server, or Datacenter Server.)
- Windows 2000 Service Pack 2.
- Windows 2000 Multilanguage Pack, if you plan to use Windows 2000 in a language other than English.
- Exchange, if you are installing Exchange on the Cisco Unity server (required for all configurations except Unified Messaging in an Existing Exchange Site). You also need the necessary Client Access Licenses unless you are installing the Voice Mail Run-Time Edition of Exchange Server version 5.5. The following versions are supported:
 - Exchange 2000 Server. (Exchange 2000 Enterprise Server and Conferencing Server are not supported when installed on the Cisco Unity server, but they are supported when installed on the network.)
 - Voice Mail Run-Time Edition of Exchange Server version 5.5.
 - Exchange Server (Standard Edition) version 5.5.
- Exchange 5.5 Service Pack 4, whether you are installing Exchange 5.5 on the Cisco Unity server or connecting to an Exchange 5.5 server in an existing site.
- On systems with more than 16 voice ports, SQL Server 2000 Standard Edition. On systems with 16 or fewer voice ports, MSDE 2000.
- Internet Explorer version 5.01, or version 5.5 or later.
- Internet Explorer 5.5 Service Pack 1 (the service pack is automatically installed if you are using the Internet Explorer 5.01 and 5.5 disc from the Cisco Unity compact disc set).
- pcAnywhere version 10 or later, host-only edition.
- Emergency system restoration discs (baseline systems only).
- Cisco Unity.
- On client systems, Outlook 98, Outlook 2000, or Outlook XP. Outlook 97 is not supported.

- On client systems, Windows 98 or later if you are installing the Cisco Unity server in a Unified Messaging configuration and if users are accessing voice messages by using ViewMail for Outlook.
- On client systems, Windows 98 or later if users are accessing the Cisco Unity Administrator or the ActiveAssistant.

See also the “Qualified Optional Third-Party Software” section on page 2-11.

Hardware Requirements

- A Cisco Unity system key that enables the applicable integration, number of voice ports, and other options.
- A server that meets Cisco Unity specifications. Refer to the Cisco TAC website at http://www.cisco.com/cgi-bin/Support/PSP/psp_view.pl?p=Software:Unity



Caution

Cisco TAC will not provide any assistance for installing, customizing, or troubleshooting Cisco Unity on a platform that is not on the list of hardware supported by Cisco Unity.

- Voice cards that are approved for use with Cisco Unity. (If you are integrating Cisco Unity with Cisco CallManager, the integration does not require voice cards.)

Some voice cards that were supported with earlier versions of Cisco Unity are no longer supported. If you are upgrading from Cisco Unity version 2.x to version 3.0 and the existing server contains unsupported voice cards, you have to replace those cards to upgrade to version 3.0. Refer to the Cisco TAC website at

http://www.cisco.com/cgi-bin/Support/PSP/psp_view.pl?p=Software:Unity

If you are installing a Cisco Unity system outside the United States and you are connecting it directly to the central office by using an analog loop, you may need to install inline telco filters on the Dialogic voice cards to filter tax impulse signals. For more information, refer to the Dialogic documentation and regulatory notices that ship with the voice cards.

- The necessary cables, line splitters, and adapters to connect the voice cards to the phone system. If you are installing cards that have H.100 connectors, you need an H.100 cable that has at least as many connectors as you have cards (you must connect all cards by using a single cable) but no more than five extra connectors.

Security Recommendations

Because Cisco Unity uses Microsoft Internet Information Services (IIS) and other Windows components, it is susceptible to the same security attacks as any Microsoft Web server or application server. Refer to Microsoft recommendations and guidelines to secure the Cisco Unity server behind a firewall.

Requirements for the Unified Messaging in an Existing Exchange Site Configuration

- Access to the administrator account on each domain or to the Enterprise Domain account.
- Access to an account that has full Exchange administrator rights.
- A backup of any Exchange or Windows 2000 servers (in the unlikely event you need to restore data).

Requirements for Using Exchange 2000 and Exchange 5.5 Together

If you are installing Cisco Unity in the Unified Messaging in an Existing Exchange Site configuration, if there are Exchange 2000 and Exchange 5.5 servers in the site, and if you want Exchange 2000 and Exchange 5.5 users to be Cisco Unity subscribers:

- The Exchange 2000 servers must be installed into the Exchange 5.5 site.
- The Active Directory Connector must be set up between Active Directory and the Exchange 5.5 servers.

Requirements for Upgrading from Cisco Unity 2.x to 3.0



Caution

- All of the requirements for a Cisco Unity 3.0 system.

Requirements for Cisco Unity 3.0 are different from requirements for earlier versions. The system must meet Cisco Unity 3.0 standards as described in the [“Installation Checklist”](#) section to receive support from Cisco TAC.

- A Cisco Unity system at version 2.3(4.104) or later. Upgrades from earlier versions are not supported. (If your system is at an earlier version, you must reinstall all software. In addition, if your system is at version 2.2 or earlier, you need a new system key.)
- Remove ActiveFax. ActiveFax is no longer supported, either on the Cisco Unity server or on a separate server.
- A network connection or a high-capacity removable storage device, so you can save subscriber and other information exported from the existing Cisco Unity 2.x system and import that information into the 3.0 system.

Qualified Optional Third-Party Software

- VERITAS Backup Exec for Windows NT and Windows 2000 Small Business Server Edition version 8.6.
- Trend Micro ScanMail.
 - Version 5 for Exchange 2000
 - Version 3.x for Exchange 5.5
- RSA SecurID system (which provides enhanced phone security).
 - RSA ACE/Server version 4.1 or version 4.4.
 - RSA ACE/Agent for Microsoft Windows 2000 version 1.1.

The ACE/Server software and Cisco Unity software cannot be installed on the same server. For information on configuring Cisco Unity to work with the RSA SecurID system, refer to the [“Enhanced Phone Security”](#) chapter of the *Cisco Unity System Administration Guide*.

- Adobe Acrobat Reader version 4.0 or later.

Unsupported Third-Party Software

- Windows Terminal Services is not supported.
- Earlier versions of Cisco Unity supported installing fax software on the Cisco Unity server. This is no longer supported.

Registering Cisco Unity

The Cisco Unity system key is shipped with a minimal number of settings. To activate the system key so that it includes the settings purchased by the customer, the Cisco Unity software must be registered on Cisco.com.

Within one business day of registration, you will receive an e-mail with a Cisco Unity activation code. The Cisco Unity installation instructions later in this chapter explain when to use the activation code.

Registrations are processed only during regular business hours.



Caution

You cannot complete the installation without a Cisco Unity activation code.

To register Cisco Unity on Cisco.com

Step 1 Browse to the applicable software registration site (URLs are case sensitive):

Not a registered user on Cisco.com <http://www.cisco.com/cgi-bin/Software/FormManager/formgenerator.pl>

Registered user on Cisco.com <http://www.cisco.com/cgi-bin/Software/FormManager/formgenerator.pl>

Step 2 Enter the requested information and submit the form. Within one business day of registration, you will receive an e-mail with the Cisco Unity activation code.

Step 3 Store this notice with the Cisco Unity software and documentation.

If the Cisco Unity activation code is misplaced or lost, it can take up to one business day to get another copy.

To get another copy of the activation code

Step 1 Call Cisco TAC:

In the U.S. 800 553-2447

Outside the U.S. For your local TAC phone number, refer to the website
<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Step 2 You will need to provide information to verify Cisco Unity ownership—for example, the purchase order number, the serial number on the system key, or the product authorization key in the Cisco Unity compact disc wallet.

Installing Voice Cards

Do this section if you are:

- Installing a new Cisco Unity system.
- Upgrading an existing system from version 2.x to version 3.0 and adding, changing, or removing voice cards.

For information on adding, changing, or removing voice cards in an existing Cisco Unity 3.0 system, see [Chapter 4, “Upgrading a Cisco Unity 3.0 System.”](#)



Warning

Before working on a system that has an on/off switch, turn OFF the power and unplug the power cord.

**Warning**

Before opening the chassis, disconnect the telephone-network cables to avoid contact with telephone-network voltages.

**Warning**

Do not work on the system or connect or disconnect cables during periods of lightning activity.

**Warning**

To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

**Warning**

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

**Warning**

This equipment is to be installed and maintained by service personnel only as defined by AS/NZS 3260 Clause 1.2.14.3 Service Personnel.

**Warning**

The safety cover is an integral part of the product. Do not operate the unit without the safety cover installed. Operating the unit without the cover in place will invalidate the safety approvals and pose a risk of fire and electrical hazards.

**Warning**

Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.

To install voice cards

Step 1 If the server is already on, exit the Cisco Unity software and then shut down the server. For more information, see [Appendix B, “Exiting and Starting the Cisco Unity Software and Server.”](#)

Step 2 Attach an antistatic wrist strap, and ground yourself to the Cisco Unity server.



Warning

During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself.

Step 3 Set the switches and jumpers on each card. See [Appendix A, “Voice Cards,”](#) for information on hardware settings for your cards.

Some cards include hardware settings that indicate which card is first, which is second, and so on. If you are installing more than one card of the same model, keep the cards in order so you can install them in the correct order in [Step 4](#).

If you are installing Dialogic D/120JCT-EURO or D/240PCI-T1 cards, do not do the procedure under “Software Settings” in [Appendix A, “Voice Cards,”](#) at this time. The *Cisco Unity Installation Guide* alerts you when to do the procedure later in the installation.

Step 4 Insert each card firmly into its slot, and fasten each card to the computer backplate with a screw.

If you are installing more than one card of the same model, and if the cards include a hardware setting that indicates which card is first, second, and so on, install the cards in the order specified by the hardware settings.

If you are installing cards of different models in the same server, install cards of the same model adjacent to one another.

PCI cards can be put into either 32-bit or 64-bit PCI slots.

All cards with H.100 bus (also known as CT bus) connectors must be installed in the same server. If all the cards do not fit in the Cisco Unity server, then you must install all of them in an expansion chassis.

Step 5 If you are installing multiple voice cards that have H.100 bus connectors, cable the cards together. On each card, connect the cable so the red stripe on the cable corresponds with pin 1 on the card connector. Confirm that the connectors are firmly seated.

**Caution**

If you do not cable cards together as required, the voice card software will not start, and Cisco Unity will not answer calls.

If the cable has more connectors than the server has voice cards, use the first and last connectors, and leave unused connectors in the middle of the cable. If the end of a cable is allowed to dangle loose, it can act as a radio antenna and pick up noise from the bus.

If you are cabling three or more cards together, connect the first connector on the cable to the first card, the second connector to the second card, and so on.

Setting Up the Cisco Unity Server

We recommend that you connect the server to a dedicated uninterruptible power supply.

A baseline Cisco Unity server is configured for a specific hardware setup. Do not add or change any hardware on the Cisco Unity server, except to add voice cards or memory.

To set up the server

- Step 1** Place the server near the phone system and a network connection, in a dry, cool area that is free of dust.
- Step 2** Attach peripheral devices and the network cable, if applicable, to the server.
- If you are setting up a Cisco MCS-7825 server (Compaq DL-320) and connecting it to the network, use only the bottom RJ-45 Ethernet receptacle.
- Step 3** If the system key is a parallel key, attach the system key to the server. If you are connecting a printer to the server, plug the printer into the parallel port on the key.
- If the system key is a USB key and you are setting up a baseline system, plug the key into any USB port now.
- If the system key is a USB key and you are setting up a component system, wait to attach the key until after you have installed the USB key driver, later in this chapter.

- Step 4** Connect the phone system to the server as described in the Cisco Unity integration guide for your phone system.
- For pinout information, see the section for your voice card in [Appendix A, “Voice Cards.”](#)
- Step 5** If you are installing the Cisco Unity system outside the United States, if the server contains voice cards, and if the cards came with a ferrite clamp, attach the clamp around the analog phone lines as close to the server as possible.
-

Starting the Cisco Unity Server and Logging On to Windows (Baseline System Only)

To start the Cisco Unity server and log on to Windows

- Step 1** Turn on the Cisco Unity server.
- Step 2** If a Factory Condition screen appears, press **C** to continue, and press **A** to accept the license agreements. The Cisco Unity server restarts.
- Step 3** In the Windows 2000 Setup wizard, click **Next**.
- Step 4** Follow the on-screen prompts until the Licensing Modes dialog box appears.
- Step 5** Click **Per Seat**.
- Step 6** Click **Next**.
- Step 7** Follow the on-screen prompts until the Computer Name and Administrator Password dialog box appears.
- Step 8** Change the computer name, if applicable, and enter and confirm a password for the default Administrator account. The default password for a baseline system is a blank password.
- Step 9** Follow the on-screen prompts until the Network Settings dialog box appears.
- Step 10** Click **Typical Settings**.
- Step 11** Click **Next**.
- Step 12** In the Workgroup or Computer Domain dialog box, click **No, This Computer Is Not on a Network, or Is on a Network Without a Domain**.

In addition, if the Workgroup or Computer Domain box is empty, enter a workgroup name. The name you enter now is not important. You will join a domain or make the Cisco Unity server a domain controller in a later procedure, so the Cisco Unity server will no longer be in a workgroup.

- Step 13** Click **Next**.
 - Step 14** Click **Restart Now**, and the server automatically restarts several times.
 - Step 15** When the Welcome to Windows dialog box appears, press **Ctrl-Alt-Delete**.
 - Step 16** In the Log On to Windows dialog box, enter the password for the Administrator account in the Password box. This is the password that you specified in [Step 8](#).
 - Step 17** Click **OK**.
 - Step 18** If the server does not contain voice cards, skip to [Step 25](#).
If the server contains voice cards, the Welcome to the Found New Hardware wizard appears. Click **Next**.
 - Step 19** Click **Search for a Suitable Driver for My Device (Recommended)**.
 - Step 20** Click **Next**.
 - Step 21** Check the **Floppy Disk Drives** and **CD-ROM Drives** check boxes, and click **Next**.
 - Step 22** Click **Disable the Device**.
 - Step 23** Click **Finish**.
 - Step 24** If the server contains more than one voice card, repeat Steps [18](#) through [23](#) for each voice card.
 - Step 25** In the Windows 2000 Configure Your Server dialog box, click **I Will Configure This Server Later**.
 - Step 26** Click **Next**.
 - Step 27** Uncheck the **Show This Screen at Startup** check box.
 - Step 28** Close the window.
-

Installing Windows 2000 Server (Component System Only)

The following two procedures describe how to install Windows 2000 by using the compact discs that are currently shipping with Cisco Unity. Do the procedures in the order listed.

If you are using different discs, the installation process may differ.

For more detailed information on individual steps in the installation process, refer to the Windows 2000 documentation included with the software.

If you want to install the Cisco Unity server into a Windows NT 4.0 domain, the Cisco Unity server must be a member server, and you must use Exchange 5.5 instead of Exchange 2000.

To install Windows 2000 Server

Step 1 If the system key is a USB key and if it is attached to the server, remove it.



Caution

If you run the installation program with a USB system key attached to the server, then installing the correct driver for the USB key will not work properly.

Step 2 Insert Cisco Unity Operating System 2000 Disc 1 in the CD-ROM drive.

If no operating system is installed on the server, change the BIOS so the system attempts to start from the CD-ROM drive before it attempts to start from the hard disk.

Step 3 If you are not installing on a Dell server, restart the server and skip to [Step 9](#).

If you are installing on a Dell server and are not installing a RAID, restart the server and skip to [Step 9](#).

If you are installing on a Dell server and are installing a RAID, continue with [Step 4](#).

Step 4 Restart the server, and press **F6** as soon as the following message appears at the bottom of the screen: “Press F6 if you need to install a third-party SCSI or RAID controller.”

**Caution**

If you are not certain that you pressed F6 before the message cleared, restart the server and try again. This is the only opportunity you will have to indicate to the installation program that you are installing a RAID driver.

- Step 5** When the text “Setup could not determine...” appears, press **S** to specify an additional device.
- Step 6** When prompted, insert Dell PERC 2 RAID Driver Diskette B3070 for Windows 2000 in drive A, and press **Enter**.
- Step 7** In the list, select **DELL PERC 2 2, 2/Si, 3/Si, 3/Di Raid Controllers**, and press **Enter**.
- Step 8** When the text “Setup will load support...” appears, press **Enter**.
- Step 9** Follow the on-screen prompts until you are prompted to specify the partition on which to install Windows 2000.
- Step 10** If no operating system is installed on the server, skip to [Step 11](#).
If you are installing Windows 2000 on the same partition where an operating system is already installed, select and delete that partition.
- Step 11** Select the partition (or unpartitioned space) on which to install Windows 2000, and press **Enter**.
- Step 12** If the partition you selected in [Step 11](#) is unformatted, select **Format the Partition Using the NTFS File System**, and press **Enter**.
Otherwise, skip to [Step 13](#).
- Step 13** Follow the on-screen prompts until you are prompted to enter a product/CD key.
- Step 14** Enter the key for Cisco Unity Operating System 2000 from the CD jewel case liner.
- Step 15** Click **Next**.
- Step 16** Follow the on-screen prompts until you are prompted to select a licensing mode.
- Step 17** Click **Per Seat** for the licensing mode, then click **Next** to continue.
- Step 18** Follow the on-screen prompts to complete the installation.
- Step 19** At the end of the installation, click **Finish**, and the server automatically restarts.
- Step 20** Log on to Windows 2000. The Windows 2000 Configure Your Server dialog box appears.

- Step 21** Click **I Will Configure This Server Later**, and click **Next**.
 - Step 22** Uncheck the **Show This Screen at Startup** check box.
 - Step 23** Close the window.
-

To install Windows 2000 Service Pack 2

- Step 1** Log on to Windows.
 - Step 2** Insert Cisco Unity Operating System 2000 Disc 2, Service Pack 2 in the CD-ROM drive.
 - Step 3** Browse to the root directory, and double-click **W2ksp2.exe**.
 - Step 4** Follow the on-screen prompts to complete the installation.
 - Step 5** Remove the compact disc.
 - Step 6** Restart the server.
-

Installing Additional Windows 2000 Languages

If you want to view the Windows user interface in languages other than English, install the Windows 2000 Multilanguage User Interface and the applicable languages.

To install Windows 2000 Multilanguage User Interface

- Step 1** Log on to Windows.
- Step 2** Depending on which language(s) you want to install, insert the applicable Cisco Unity Operating System 2000 disc in the CD-ROM drive:

**Cisco Unity
Operating System 2000 Disc 3**

For Chinese (simplified), Chinese (traditional), Dutch, French, German, Italian, Japanese, Korean, Spanish, or Swedish.

**Cisco Unity
Operating System 2000 Disc 4**

For Arabic, Czech, Danish, Finnish, Greek, Hebrew, Hungarian, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Russian, or Turkish.

If the disc does not run automatically, browse to the root directory, and double-click **Muisetup.exe**.

- Step 3** Check the check boxes for the languages you want to install, and click **OK**.
- Step 4** Click **OK**.
-

Assigning a Static IP Address

The Cisco Unity server must have an IP address for network administration of Cisco Unity and for subscriber access to the Cisco Unity ActiveAssistant.

When a baseline system is connected to a network that has a Dynamic Host Configuration Protocol (DHCP) server, the Cisco Unity server is configured to automatically obtain an IP address from the DHCP server. A component system with Windows 2000 installed by using the “[Installing Windows 2000 Server \(Component System Only\)](#)” section on page 2-19 is also configured to obtain an IP address from the DHCP server.

If the network does not have a DHCP server or if you prefer to manually assign a static IP address, do the following procedure.

To assign a static IP address

- Step 1** On the Windows Start menu, click **Settings > Control Panel > Network and Dial-Up Connections > Local Area Connection**.
- Step 2** Click **Properties**.

- Step 3** In the Components Checked Are Used by This Connection list, check the **Internet Protocol (TCP/IP)** check box.
 - Step 4** Click **Internet Protocol (TCP/IP)** (do not uncheck the check box), and click **Properties**.
 - Step 5** Enter applicable values. For more information, refer to Windows 2000 Help.
 - Step 6** Click **OK**.
 - Step 7** Restart the server.
-

Verifying the IP Address

To verify the IP address

- Step 1** On the Windows Start menu, click **Programs > Accessories > Command Prompt**.
 - Step 2** Find the IP address of a router or some other well-known name server on the same network segment as the Cisco Unity server. In the Command Prompt window, enter **ipconfig /all**, and press **Enter**.
 - Step 3** Ping the router or other server whose IP address you found in [Step 2](#). In the Command Prompt window, enter **ping <IP address>**, and press **Enter**.
 - Step 4** If the router sends a reply, the Cisco Unity server has a valid IP address.

If the router does not reply, either the Cisco Unity server has a problem obtaining an address from the DHCP server, or the assigned static IP address conflicts with the IP address of another computer on the network. Verify the network settings. If needed, troubleshoot any problem as you would a network connectivity problem.
-

Installing the USB Key Driver and Attaching the USB System Key (Component System Only)

If the system key is a USB key and if you are installing Cisco Unity on a component system, install the driver for the key. (The driver is already installed on a baseline system.)

To install the USB key driver and attach the USB system key

- Step 1** If you installed Windows 2000 while the USB key was attached, a default USB driver was installed automatically. Do the next procedure, [“To remove the default USB driver”](#) first.
 - Step 2** Insert Cisco Unity Disc 1 in the CD-ROM drive.
 - Step 3** Browse to the directory SecurityKeySetup, and double-click **Setup.exe**.
 - Step 4** Follow the on-screen prompts to complete the installation. Accept all default values.
 - Step 5** When the installation program finishes, plug the USB system key into any USB port on the Cisco Unity server.
-

Do the following procedure only if you installed Windows 2000 with the USB key already attached.

To remove the default USB driver

- Step 1** On the Windows Start menu, click **Settings > Control Panel > System**.
- Step 2** In the System Properties dialog box, click the **Hardware** tab.
- Step 3** Click **Device Manager**.
- Step 4** In the Device Manager dialog box, expand **Other Devices**.
- Step 5** Right-click **USB Token**, and click **Uninstall**.
- Step 6** In the Confirm Device Removal dialog box, click **OK**.
- Step 7** Close the Device Manager dialog box, the System Properties dialog box, and Control Panel.

- Step 8** Install the USB key driver. Do the previous procedure, “[To install the USB key driver and attach the USB system key](#)”.

Installing Active Directory or Adding the Cisco Unity Server to an Existing Domain



Caution

If the Cisco Unity server will be the only server in the domain, you must install Active Directory. However, because Active Directory is a very processor- and memory-intensive application, if you are adding the Cisco Unity server to an existing domain, we strongly recommend that you do not also install Active Directory on the Cisco Unity server. Instead, do the procedure in the “[Existing Domain](#)” section on page 2-26.

Active Directory

To install Active Directory

- Step 1** On the Windows Start menu, click **Run**, then run **Dcpromo**.
- Step 2** Click **Next**.
- Step 3** Follow the on-screen prompts until the Permissions dialog box appears. If you are setting up the Cisco Unity system in the Voice Messaging Only configuration, use the following values. Otherwise, consult the system administrator to determine how to set up the server.

Table 2-1 *Installing Active Directory on a Voice Messaging Only System*

Dialog Box Name	Value
Domain Controller Type	Domain Controller for a New Domain
Create Tree or Child Domain	Create a New Domain Tree
Create or Join Forest	Create a New Forest of Domain Trees

Table 2-1 *Installing Active Directory on a Voice Messaging Only System*

Dialog Box Name	Value
New Domain Name	Consult the system administrator.
NetBIOS Domain Name	Consult the system administrator.
Database and Log Locations	If possible, choose separate hard disks for the database and the logs.
Shared System Volume	Consult the system administrator.

Step 4 In the Permissions dialog box, click **Permissions Compatible with Pre-Windows 2000 Servers**.

**Caution**

If you choose the other option, Permissions Compatible Only with Windows 2000 Servers, Cisco Unity will not work.

If you are not installing the Cisco Unity system into an Exchange 2000 cluster, consult the system administrator.

Step 5 Click **Next**.

Step 6 Enter and confirm a password.

Step 7 Click **Next**.

Step 8 Review the settings, and click **Next** to install Active Directory.

Step 9 Click **Finish**.

Step 10 Click **Restart Now**.

Existing Domain

Do the following procedure to add the Cisco Unity server to an existing domain without making it an additional domain controller in that domain.

If you are installing Cisco Unity in the Voice Messaging Only configuration, do the procedure in the [“Active Directory”](#) section on page 2-25 instead.

To add the Cisco Unity server to an existing domain

- Step 1** On the Windows Start menu, click **Settings > Control Panel > System**.
 - Step 2** Click the **Network Identification** tab.
 - Step 3** Click **Properties**.
 - Step 4** In the Identification Changes dialog box, click **Domain**, and enter the name of the domain that you want to join.
 - Step 5** Click **OK**.
 - Step 6** In the Domain Username and Password dialog box, enter the name and password of an account that has permission to add computers to the domain.
 - Step 7** Click **OK** three times.
 - Step 8** Click **Yes** to restart the server.
-

Installing SQL Server 2000 or MSDE 2000

Install SQL Server 2000 or MSDE 2000, depending on the number of ports you are connecting with the Cisco Unity server:

SQL Server 2000 For systems with more than 16 ports.

MSDE 2000 For systems with 16 voice ports or fewer.

**Caution**

Cisco Unity systems with 16 voice ports or fewer are licensed only for MSDE 2000, not for SQL Server 2000. If you install SQL Server 2000 on a system with 16 ports or fewer, Cisco TAC will not provide support for the system.

SQL Server 2000

To install SQL Server 2000

- Step 1** Log on to Windows.
- Step 2** Insert the Cisco Unity Data Store 2000 compact disc in the CD-ROM drive.
- Step 3** When the Microsoft SQL Server 2000 Standard Edition window appears, click **SQL Server 2000 Components**.
- Step 4** In the Install Components window, click **Install Database Server**.
- Step 5** In the Welcome dialog box, click **Next**.
- Step 6** In the Computer Name dialog box, click **Next** to accept the default setting **Local Computer**.
- Step 7** In the Installation Selection dialog box, click **Next** to accept the default setting **Create a New Instance of SQL Server, or Install Client Tools**.
- Step 8** Follow the on-screen prompts until the CD Key dialog box appears.
- Step 9** Enter the key for Cisco Unity Data Store 2000 from the “Software CD Keys” insert at the front of the CD wallet.
- Step 10** Click **Next**.
- Step 11** In the Installation Definition dialog box, click **Next** to accept the default setting **Server and Client Tools**.
- Step 12** In the Instance Name dialog box, check the **Default** check box.
- Step 13** Click **Next**.
- Step 14** In the Setup Type dialog box, click **Next** to accept the default setting **Typical**.
- Step 15** In the Services Accounts dialog box, click **Use the Same Account for Each Service**.
- Step 16** Click **Use a Domain User Account**.
- Step 17** Under Service Settings, in the **Username**, **Password**, and **Domain** boxes, specify a member of the Domain Admins group.
- Step 18** Click **Next**.
- Step 19** In the Authentication Mode dialog box, click **Mixed Mode**.

**Caution**

Do not choose the option Windows Authentication Mode, or Cisco Unity will not run.

- Step 20** Under Add Password for the SA Login, enter and confirm a password for the SQL Server system administrator logon, and click **Next**.
- Step 21** In the Start Copying Files dialog box, click **Next**.
- Step 22** In the Choose Licensing Mode dialog box, click **Processor License For**, and specify the number of processors in the Cisco Unity server.
- Step 23** Click **Continue**.
- Step 24** If you are prompted about shutdown tasks before continuing with the installation, click **Next**.
- Step 25** Click **Finish**.
- Step 26** When Setup is complete, click **Finish** to restart the computer.
-

MSDE 2000

Do the following two procedures in the order listed to install MSDE 2000.

**Caution**

MSDE 2000 is not the same as SQL Server 2000 Personal Edition. Do not install Personal Edition.

To install MSDE 2000

- Step 1** Insert the Cisco Unity Data Store 2000 compact disc in the CD-ROM drive.
- Step 2** Browse to the directory MSDE, and double-click **Setup.exe**.
- Step 3** When the installation is complete, click **Yes** to restart the server. Leave the Cisco Unity Data Store 2000 compact disc in the CD-ROM drive.
-

To install Enterprise Manager

- Step 1** When the server restarts, log on to Windows.
 - Step 2** If the Cisco Unity Data Store 2000 compact disc does not run automatically, browse to the root directory, and double-click **Autorun.exe**.
 - Step 3** Click **SQL Server 2000 Components**.
 - Step 4** Click **Install Database Server**.
 - Step 5** In the Welcome dialog box, click **Next**.
 - Step 6** In the Computer Name dialog box, click **Next** to accept the default setting **Local Computer**.
 - Step 7** In the Installation Selection dialog box, click **Next** to accept the default setting **Create a New Instance of SQL Server, or Install Client Tools**.
 - Step 8** Follow the on-screen prompts until the CD Key dialog box appears.
 - Step 9** Enter the key for Cisco Unity Data Store 2000 from the “Software CD Keys” insert at the front of the CD wallet.
 - Step 10** Click **Next**.
 - Step 11** In the Installation Definition dialog box, click **Client Tools Only**.
 - Step 12** Click **Next**.
 - Step 13** In the Select Components dialog box, uncheck all check boxes in the Components list except **Management Tools**.
 - Step 14** Select **Management Tools** (but do not uncheck the check box).
 - Step 15** In the Sub-Components list, uncheck all check boxes except **Enterprise Manager**, and click **Next**.
 - Step 16** In the Start Copying Files dialog box, click **Next**.
 - Step 17** Click **Finish**.
-

Installing Internet Explorer

**Caution**

When you install Internet Explorer, the file WScript.exe is installed automatically. Do not remove WScript.exe, or Cisco Unity Setup will fail.

To install Internet Explorer

-
- Step 1** Insert the Internet Explorer 5.01 and 5.5 compact disc in the CD-ROM drive.
 - Step 2** When the Internet Explorer 5 Family and Internet Tools window appears, click **Install Internet Explorer 5.01 and Internet Tools** or **Install Internet Explorer 5.5 and Internet Tools**.
 - Step 3** Follow the on-screen prompts to complete the installation.
-

Installing Message Queuing 2.0

To install Message Queuing 2.0

-
- Step 1** On the Windows Start menu, click **Settings > Control Panel > Add/Remove Programs**.
 - Step 2** Click **Add/Remove Windows Components**.
 - Step 3** In the Windows Components dialog box, check the **Message Queuing Services** check box. Do not change any other items.
 - Step 4** Click **Next**.
 - Step 5** In the Message Queuing Type dialog box, click **Next**. Do not change any items.
 - Step 6** If the Message Queuing Server dialog box appears, click **Message Queuing Will Not Access a Directory Service**, and click **Next**.
 - Step 7** If the Windows NT 4.0 Message Queuing Clients dialog box appears, click **No, Do Not Change the Permissions**, and click **Next**.

- Step 8** When you are prompted, insert Cisco Unity Operating System 2000 Disc 1 in the CD-ROM drive, and click **OK**.
- Step 9** In the Completing the Windows Components Wizard dialog box, click **Finish**.
- Step 10** Close the Add Remove Programs dialog box and Control Panel.
-

Installing NNTP Service (Exchange 2000 Only)

Install Microsoft NNTP Service if you are installing Exchange 2000 on the Cisco Unity server or if you are connecting Cisco Unity to an Exchange 2000 server.

To install NNTP Service

- Step 1** On the Windows Start menu, click **Settings > Control Panel > Add/Remove Programs**.
- Step 2** Click **Add/Remove Windows Components**.
- Step 3** Click **Internet Information Services (IIS)** (but do not uncheck the check box), and click **Details**.
- Step 4** In the Internet Information Services (IIS) dialog box, check the **NNTP Service** check box.
If the **SMTP Service** check box is not already checked, check it, too.
- Step 5** Click **OK**.
- Step 6** Click **Next**.
- Step 7** When the installation is complete, click **Finish**.
- Step 8** Close the Add Remove Programs dialog box and Control Panel.
-

Installing Exchange, Including Administration Software (Selected Configurations Only)

This section contains procedures for installing Exchange 2000 Server and Exchange Server 5.5 on the Cisco Unity server. Do the procedures in the order listed for your version of Exchange, which includes administration software.

The procedures apply only to the compact discs that are currently shipping with Cisco Unity. If you are using different discs (for example, Microsoft BackOffice[®] Server), the procedures may differ.

If you are installing Cisco Unity in the Unified Messaging in an Existing Exchange Site configuration, installing Exchange on the Cisco Unity server is:

Optional When the site is not using Exchange 2000 clustering.

Required When the site is using Exchange 2000 clustering.

Exchange 5.5 clusters are not supported with Cisco Unity version 3.0.



Caution

Cisco Unity supports only active/passive clustering in a two-node cluster.

If you do not install Exchange on the Cisco Unity server, later in the installation you specify an Exchange server on the network for the Cisco Unity server to connect with.



Caution

If you are installing Cisco Unity in the Unified Messaging in an Existing Exchange Site configuration, if there are both Exchange 5.5 and Exchange 2000 servers on the site, and if you choose to install Exchange on the Cisco Unity server, you must install Exchange 2000. In this configuration, installing Exchange 5.5 on the Cisco Unity server is not supported.

Exchange 2000

To run Forestprep (required only if the Cisco Unity server is the first Exchange 2000 server in the forest)

- Step 1** Log on to Windows by using the schema administrator account.
 - Step 2** Insert the Cisco Unity Message Store 2000 disc in the CD-ROM drive.
 - Step 3** On the Windows Start menu, click **Run**, and run
`<CD-ROM drive letter>:\setup\i386\setup.exe /forestprep`
 - Step 4** Follow the on-screen prompts.
 - Step 5** When you are prompted to enter a product identification number/CD key, enter the key for Cisco Unity Message Store 2000 from the “Software CD Keys” insert at the front of the CD wallet.
 - Step 6** Click **Finish**.
-

To run Domainprep (required only if the Cisco Unity server is the first Exchange 2000 server in the domain)

- Step 1** Insert the Cisco Unity Message Store 2000 disc in the CD-ROM drive.
 - Step 2** On the Windows Start menu, click **Run**, and run
`<CD-ROM drive letter>:\setup\i386\setup.exe /domainprep`
 - Step 3** Follow the on-screen prompts.
 - Step 4** When you are prompted to enter a product identification number/CD key, enter the key for Cisco Unity Message Store 2000 from the “Software CD Keys” insert at the front of the CD wallet.
 - Step 5** If a warning appears about this being an insecure domain, click **OK**.
 - Step 6** Follow the on-screen prompts.
 - Step 7** Click **Finish**.
-

Changes to the Active Directory schema may take 15 minutes or more to replicate throughout the forest. These changes must finish replicating before you can install Exchange. To determine whether changes have replicated and to force replication if necessary, use Replication Monitor, which is available if you install Support Tools from the Cisco Unity Operating System 2000 compact disc.

To install Exchange 2000 Server

- Step 1** Insert the Cisco Unity Message Store 2000 disc in the CD-ROM drive.
If the disc does not run automatically, browse to the root directory, and double-click **Launch.exe**.
 - Step 2** Click **Exchange Server Setup**.
 - Step 3** Follow the on-screen prompts until you are prompted to enter a product identification number/CD key.
 - Step 4** Enter the key for Cisco Unity Message Store 2000 from the “Software CD Keys” insert at the front of the CD wallet, and click **Next**.
 - Step 5** In the Component Selection dialog box, change the drive and path where components will be installed, if applicable. Do not change which components to install.
 - Step 6** Click **Next**.
 - Step 7** Follow the on-screen prompts until the installation is complete.
 - Step 8** Click **Finish**.
-

Exchange Server 5.5

To install Exchange Server 5.5

- Step 1** If you are installing Cisco Unity into an existing Exchange site, log on to Windows by using the account that was used to install Exchange on other servers. Otherwise, use an account that has Services Account Administration permissions for the destination site and configuration containers.
- Step 2** Insert Cisco Unity Message Store 5.5 Disc 1 in the CD-ROM drive.

- Step 3** When the Microsoft Exchange Server Version 5.5 Window appears, click **Setup Server and Components**.
- If the disc does not run automatically, browse to the root directory, and double-click **Launch.exe**.
- Step 4** Click **Microsoft Exchange Server 5.5**.
- Step 5** Accept the license agreement.
- Step 6** Click **Complete/Custom**.
- Step 7** Uncheck the **Outlook Web Access** check box.
- Optionally, you can save disk space by choosing not to install the MS Mail and/or cc:Mail connectors if the site does not require them. In the list, click **Microsoft Exchange Server**, then click **Change Option**. Uncheck the **MS Mail Connector** or **cc:Mail Connector** check box. Then click **OK**.
- Step 8** Click **Continue**.
- Step 9** When you are prompted to enter a CD key, enter the key for Cisco Unity Message Store 5.5 from the “Software CD Keys” insert at the front of the CD wallet.
- Step 10** Click **OK**.
- Step 11** Follow the on-screen prompts until you are prompted to choose between joining an existing site and creating a new site:
- | | |
|------------------------------|---|
| Join an existing site | When there is an existing Exchange site and you want to add the Cisco Unity server to that site. |
| Create a new site | When the Cisco Unity server is the only Exchange server.
or
When there are other Exchange servers, but you are installing the Cisco Unity system in the Voice Messaging Only configuration. |
- Step 12** Follow the on-screen prompts until you are prompted to run the optimizer.
- Step 13** Click **Run Optimizer**. Note that the Exchange Optimizer may automatically move files to different hard disks unless you specify otherwise.
- Step 14** Follow the on-screen prompts to complete the installation.
- Step 15** At the Microsoft Exchange Server screen, click **Exit**.

Step 16 Restart the server.

To change the LDAP port number

Step 1 On the Windows Start menu, click **Programs > Microsoft Exchange > Microsoft Exchange Administrator**.



Caution Change the LDAP port number only if you installed Exchange 5.5 and Active Directory on the same server.

Step 2 In the site container, open the **Configuration** container.

Step 3 Under Configuration, click **Protocols**.

Step 4 In the right pane, double-click **LDAP (Directory) Site Defaults**.

Step 5 On the General tab, change Port Number to **379** (or another available port number).

Step 6 Click **OK**, and close the Exchange Administrator.

Microsoft recommends that all Exchange 5.5 servers on the network have the same service pack installed. Therefore, install Exchange 5.5 Service Pack 4 on the Cisco Unity server and on the other Exchange 5.5 servers in the site.

To install Exchange Service Pack 4

Step 1 Insert Cisco Unity Message Store 5.5 Disc 2, Service Pack 4 in the CD-ROM drive.

Step 2 Browse to the directory Eng\Server\Setup\I386, and double-click **Update.exe**.

Step 3 Follow the on-screen prompts to complete the installation.

Step 4 Restart the server.

To configure Exchange

- Step 1** On the Windows Start menu, click **Programs > Microsoft Exchange > Microsoft Exchange Administrator**.
- Step 2** In the dialog box that appears, click **Browse**.
- Step 3** In the Server Browser dialog box, click the name of the Cisco Unity server, and click **OK**.
- Step 4** In the Connect to Server dialog box, click **Set as Default**, and click **OK**.
- Step 5** If you changed the LDAP port number, restart the server.
-

Installing Exchange Administration Software Only

Do this section if you did not install Exchange 2000 or Exchange 5.5 on the Cisco Unity server.

This section contains procedures for installing Exchange 2000 and Exchange 5.5 administration software. Install the applicable administration software on the Cisco Unity server:

**Exchange 2000
administration software**

When the Exchange organization contains only Exchange 2000 servers or contains both Exchange 2000 and Exchange 5.5 servers.

**Exchange 5.5
administration software**

When the Exchange organization contains only Exchange 5.5 servers.

Exchange 2000

To install Exchange 2000 administration software

- Step 1** Insert the Cisco Unity Message Store 2000 disc in the CD-ROM drive.

If the disc does not run automatically, browse to the root directory, and double-click **Launch.exe**.

- Step 2** Click **Exchange Server Setup**.
 - Step 3** Follow the on-screen prompts until the Product Identification dialog box appears.
 - Step 4** Enter the key for Cisco Unity Message Store 2000 from the “Software CD Keys” insert at the front of the CD wallet, and click **Next**.
 - Step 5** In the Component Selection dialog box, in the Action column, change the action for Microsoft Exchange 2000 to **Custom**.
 - Step 6** Change the action for Microsoft Exchange Messaging and Collaboration Services to **None**.
 - Step 7** Leave the action for Microsoft Exchange System Management Tools as **Install**.
 - Step 8** Click **Next**.
 - Step 9** Follow the on-screen prompts to complete the installation.
 - Step 10** Restart the server.
-

Exchange 5.5

To install Exchange 5.5 administration software

- Step 1** Insert Cisco Unity Message Store 5.5 Disc 1 in the CD-ROM drive.
- Step 2** When the Microsoft Exchange Server Version 5.5 window appears, click **Setup Server and Components**.

If the disc does not run automatically, browse to the root directory, and double-click **Launch.exe**.
- Step 3** Click **Microsoft Exchange Server 5.5**.
- Step 4** Accept the license agreement.
- Step 5** Click **Complete/Custom**.
- Step 6** Uncheck all check boxes except the **Microsoft Exchange Administrator** check box.
- Step 7** Click **Continue**.

Updating the Active Directory Schema (Exchange 2000 only)

- Step 8** When you are prompted to enter a CD key, enter the key for Cisco Unity Message Store 5.5 from the “Software CD Keys” insert at the front of the CD wallet.
 - Step 9** Click **OK**.
 - Step 10** Follow the on-screen prompts to complete the installation.
-

Microsoft recommends that all Exchange 5.5 servers on the network have the same service pack installed. Therefore, install Exchange 5.5 Service Pack 4 on the Cisco Unity server and on the other Exchange 5.5 servers in the site.

To install Exchange Service Pack 4

- Step 1** Insert Cisco Unity Message Store 5.5 Disc 2, Service Pack 4 in the CD-ROM drive.
 - Step 2** Browse to the directory Eng\Server\Setup\I386, and double-click **Update.exe**.
 - Step 3** Follow the on-screen prompts to complete the installation.
 - Step 4** Restart the server.
-

Updating the Active Directory Schema (Exchange 2000 only)

With Exchange 2000, several changes need to be made to the Active Directory schema for Cisco Unity to work properly. To see the changes that the schema update program makes, browse to the directory Schema\LdifScripts on Cisco Unity Disc 1, and view the file Avdirmonex2k.ldf.

In addition, if you plan to use either the Voice Gateway or the AMIS Gateway with Exchange 2000, update the schema with changes for the Internet Voice Connector. The gateways provided by the Internet Voice Connector are distinct:

- Voice Gateway** Allows two Cisco Unity systems to send and receive SMTP mail while preserving the Cisco Unity-specific attributes in the messages. These attributes allow Cisco Unity to identify messages as voice messages.
- AMIS Gateway** Allows Cisco Unity to send and receive voice messages from other voice messaging systems that support the AMIS analog protocol.

To see the changes that the schema update program makes for the Internet Voice Connector, browse to the directory Schema\LdifScripts on Cisco Unity Disc 1, and view the file Voicegateway.ldf. For installation information on the Internet Voice Connector, refer to the “[Digital Networking](#)” chapter of the *Cisco Unity System Administration Guide*.

Changes to the Active Directory schema may take 15 minutes or more to replicate throughout the forest. These changes must finish replicating before you can install Cisco Unity. To determine whether changes have replicated and to force replication if necessary, use Replication Monitor, which is available if you install Support Tools from the Cisco Unity Operating System 2000 compact disc.

To update the schema, use either the following procedure or any tool that applies LDIF scripts (for example, the Microsoft Ldifde utility).

To update the Active Directory schema

-
- Step 1** On the computer that has the schema master role (the Cisco Unity server, unless you joined an existing domain), log on to Windows as a user who is a member of the Schema Admins group.
- Step 2** Insert Cisco Unity Disc 1 in the CD-ROM drive.
- Step 3** Browse to the directory ADSchemaSetup, and double-click **ADSchemaSetup.exe**.
- Step 4** In the Active Directory Schema Setup dialog box, check the **Exchange 2000 Directory Monitor** check box.
- Step 5** If you plan to install the Internet Voice Connector, check the **Exchange 2000 Internet Voice Connector** check box.
- Step 6** Click **OK**.

- Step 7** When the schema update has finished, Ldif.log and Ldif.err files are saved to the desktop. View the contents of these files to confirm that the update completed successfully.
-

Installing Other Software

Microsoft Outlook

You install Microsoft Outlook[®] because anyone calling Cisco TAC may be asked to use Outlook to perform troubleshooting.

To install Outlook

- Step 1** Insert the Cisco Unity Message Store, Mail Client disc in the CD-ROM drive.
- Step 2** When the Welcome to Microsoft Outlook 2000 dialog box appears, enter the software CD key for Outlook 2000 from the “Software CD Keys” insert at the front of the CD wallet.
- Step 3** Click **Next**.
- Step 4** Click the **Install Now** button.
- Step 5** Click **OK**.
-

Symantec pcAnywhere (Required)

If you are installing a baseline system, Symantec pcAnywhere has already been installed.

You install pcAnywhere because Cisco TAC may use it to perform troubleshooting.

We recommend that you configure the pcAnywhere host software not to start automatically when you restart the server.

To install pcAnywhere and configure it so that it does not start automatically

- Step 1** Follow the manufacturer instructions to install pcAnywhere.
- Step 2** On the Windows Start menu, click **Programs > Symantec pcAnywhere**.
- Step 3** In the pcAnywhere toolbar, click **Hosts**.
- Step 4** Right-click the **Modem** icon or the host that is configured for a modem, and click **Properties**.
- Step 5** In the pcAnywhere Host Properties dialog box, click the **Settings** tab.
- Step 6** In the Host Startup section, uncheck the **Launch with Windows** check box.
- Step 7** Click **OK** to close the pcAnywhere Host Properties dialog box.
- Step 8** Exit pcAnywhere.

Trend Micro ScanMail

Follow the manufacturer instructions to install Trend Micro ScanMail for Microsoft Exchange.

Note that scanning individual Exchange mailboxes can affect the performance of Cisco Unity.



Caution

Do not configure ScanMail to block WAV attachments, or voice messages will be stripped of their recordings.

VERITAS Backup Exec

Follow the manufacturer instructions to install VERITAS Backup Exec.

RSA SecurID

Refer to the “[Enhanced Phone Security](#)” chapter of the *Cisco Unity System Administration Guide*.

Adobe Acrobat Reader

The Cisco Unity documentation is available on the Cisco Unity Documentation compact disc in Adobe Acrobat (PDF) format (as well as in HTML format). To view the PDF files, you need Adobe Acrobat Reader, which you can install from the Cisco Unity Documentation compact disc.

Fax Software

Installing fax software of any kind on the Cisco Unity server is not supported.

Creating Organizational Units and a Mailbox Store (Exchange 2000 Only)

With Exchange 2000, users and distribution lists are created in a location that you specify. If you want users and distribution lists to be created in custom organizational units (OUs), create the OUs now. Both OUs need to be in the same domain, but they do not need to be in the same domain as the Cisco Unity server. For information on creating OUs, refer to Active Directory Users and Computers Help.

You also have the option to create a custom mailbox store as the default for subscribers that are added through the Cisco Unity Administrator or that are imported from a CSV file. For information on creating a custom mailbox store, refer to Active Directory Users and Computers Help. (You configure Cisco Unity to use the mailbox store during Cisco Unity Setup.)

Choosing the Windows Account Used for Installing Cisco Unity

The Windows account with which you log on to install Cisco Unity is the owner of the Windows services for Cisco Unity. Changing the owner or the password for each of these services is time consuming, so choose an account that you do not intend to change regularly. You may even want to create an account whose sole purpose is to be the owner of the Cisco Unity services. These services include:

- AvCsMgr
- AvCsGateway
- AvDirChangeWriter
- AvDSAD or AVDSEx55
- AvDSGlobalCatalog
- AvGaenSvr
- AvRepDirSvrSvc
- AvUMRSyncSvr

**Caution**

If you change the password on the account that owns these services, you must also change the password on the services, or Cisco Unity will not run.

Cisco Unity Setup creates a number of Windows accounts and other objects, so the account with which you log on must have proper security access to perform the necessary operations. In addition, Cisco Unity Setup creates a number of Exchange objects, so the account also must have the necessary Exchange 2000 or Exchange 5.5 permissions. After Cisco Unity is installed, this same account is used to access mailboxes and the directory.

In general, we recommend that you use the same account to install Cisco Unity as you use to install Exchange on the Cisco Unity server.

If you are installing more than one Cisco Unity server in a site, you can use the same account to install Cisco Unity software on all of them.

Rights Required for Cisco Unity Setup and Connecting to the Directory

The account with which you log on to Windows must:

- Have the right to act as part of the operating system.
- Have the right to log on as a service.
- Be a member of the Local Administrators group.

Permissions Required for Connecting to the Directory

The Exchange permissions required to install Cisco Unity depend on which version of Exchange is installed on the network and on whether Exchange is installed on the Cisco Unity server.

Exchange 2000 is not installed on the Cisco Unity server

- Add the Cisco Unity server to the Exchange Domain Servers group.

Exchange 2000 is installed on the Cisco Unity server, and the organization contains only Exchange 2000 servers

- If you installed Exchange on the Cisco Unity server by using a different account than you used to install Exchange on other servers, confirm that the Cisco Unity server is a member of the Exchange Domain Servers group in the domain in which the Cisco Unity server is installed. This gives the Cisco Unity server permission to act as an Exchange server.
- Because the AvDSAD service requires read/write access to Active Directory, the account must be a member of the Enterprise Administrators group. (Accounts used to administer Cisco Unity do not require this permission.)

Exchange 5.5 is installed on the Cisco Unity server, and the organization contains only Exchange 5.5 servers

- If you installed Exchange on the Cisco Unity server by using a different account than you used to install Exchange on other servers, confirm that the account has Exchange Services Account Administration permissions for the

site and the configuration container that Cisco Unity is being installed into. Add the permissions from an Exchange server in the site that the Cisco Unity server will be joining.

- Optionally, be a member of the Domain Admins group. Domain Admin rights ensure that Cisco Unity Setup can create default users during installation.

To accommodate customers' security concerns, this permission is no longer strictly required. Without the permission, you cannot use the Cisco Unity Administrator to add Cisco Unity subscribers and, therefore, Exchange mailboxes and Windows accounts. However, you can add Internet subscribers from Cisco Unity (which do not require Exchange mailboxes or Windows accounts), and you can still import subscribers from Exchange.

**Caution**

If the account used to install Cisco Unity is not a member of the Domain Admins group, you cannot create subscriber accounts by using the Cisco Unity Administrator. Instead, you must import subscribers from Exchange or from a comma-delimited text file.

The organization contains both Exchange 2000 and Exchange 5.5 servers

If you want both Exchange 2000 and Exchange 5.5 users to be Cisco Unity subscribers:

- Grant Services Account Administration permissions to the Exchange Domain Servers group for the Exchange 5.5 site and configuration containers.
- If the Cisco Unity server is not already in the Exchange Domain Servers group in the domain in which the Cisco Unity server is installed, add it to that group. This gives the Cisco Unity server permission to act as an Exchange server.

Installing Cisco Unity

Cisco Unity Setup

To run Cisco Unity Setup

- Step 1** Log on to Windows by using an account that has the necessary rights. See the [“Choosing the Windows Account Used for Installing Cisco Unity”](#) section on page 2-45.
- Step 2** Insert Cisco Unity Disc 1 in the CD-ROM drive.
- Step 3** Browse to the root directory, and double-click **Setup.exe**.
- Step 4** Follow the on-screen prompts until the System Key dialog box appears.
- If the Confirm Demonstration License Settings dialog box appears first, one of the following problems has occurred:
- The system key is not fully attached or is not attached at all. Confirm that the key is fully seated.
 - If the key is a USB key, the driver for the key is not installed correctly. See the [“Installing the USB Key Driver and Attaching the USB System Key \(Component System Only\)”](#) section on page 2-24.
- Click **Cancel**, click **Yes**, and click **Finish** to exit Setup. Then resolve the problem, and rerun **Setup.exe**. (If you continue the installation without resolving the problem, Cisco Unity will be installed as a demonstration system.)
- Step 5** If you are upgrading from Cisco Unity 2.x to 3.0 without changing licensed features (such as number of ports and text-to-speech engine), in the System Key dialog box, click **Use the Current License Settings**, then skip to [Step 8](#).
- If you are installing a new Cisco Unity system or are upgrading from Cisco Unity 2.x to 3.0 and changing licensed features, in the System Key dialog box, click **Update or Initialize License Settings from Update File**, and continue with [Step 6](#).
- Step 6** Insert the Cisco Unity Activation Code disk in drive A.

(When Cisco Unity was registered on Cisco.com, Cisco replied with an e-mail containing an attached file with an activation code for the system key. The instructions in the e-mail directed that the attached file be saved to a disk. For more information, see the [“Registering Cisco Unity” section on page 2-12.](#))

- Step 7** Browse to drive A, click the file on the disk, then click **Open**.
- Step 8** Click **Next**.
- Step 9** Follow the on-screen prompts until the Select Features dialog box appears.
- Step 10** If the Cisco Unity server contains Dialogic voice cards, check the **Install Voice Card Software** check box.
Otherwise, uncheck the **Install Voice Card Software** check box.
- Step 11** Click **Next**.
- Step 12** Follow the on-screen prompts until the Cisco Unity Languages dialog box appears.
- Step 13** Choose the language(s) to install.

**Caution**

If you are upgrading a Cisco Unity 2.x system to version 3.0, install and load the same phone languages on the Cisco Unity 3.0 system that were installed and loaded on the 2.x system. Otherwise, subscribers who are configured to use the missing languages will not be able to hear the system conversation in their language.

Australian English, New Zealand English, and Colombian Spanish are not available as text-to-speech (TTS) languages. To use one of these languages for your phone language, you must also install another language for your TTS language:

- | | |
|------------------------------|---|
| English (Australian) | Also install English (United States) for TTS. |
| English (New Zealand) | Also install English (United States) for TTS. |
| Spanish (Colombia) | Also install Spanish (Spain) for TTS. |

TTS is not available in Norwegian.

- Step 14** Follow the on-screen prompts until you are prompted to restart the Cisco Unity server.

**Caution**

If you are upgrading from Cisco Unity version 2.x to 3.0, and if you plan to transfer subscriber information from the old system to the new, do not add any objects (such as subscribers and distribution lists) or remove any default objects until after you import data from the existing Cisco Unity system. The Cisco Unity Database Import utility requires that data be imported into a clean Cisco Unity system.

- Step 15** If the server does not contain Dialogic D/120JCT-EURO or D/240PCI-T1 voice cards, check the **Yes, I Want to Restart My Computer Now** check box, and click **Finish**.

If the server contains Dialogic D/120JCT-EURO or D/240PCI-T1 voice cards, uncheck the **Yes, I Want to Restart My Computer Now** check box, and click **Finish**.

- Step 16** If the server contains Dialogic D/120JCT-EURO or D/240PCI-T1 voice cards, do the procedure under “Software Settings” for your voice card in [Appendix A, “Voice Cards.”](#) When you are finished, restart the Cisco Unity server.

Directory Connection

This section contains procedures for completing the Cisco Unity installation on an Exchange 2000 system and on an Exchange 5.5 system. Do the procedure(s) for your version of Exchange.

If you are installing Cisco Unity in the Unified Messaging in an Existing Exchange Site configuration and the site contains both Exchange 5.5 and Exchange 2000 servers, use the procedure(s) for Exchange 2000.

Exchange 2000

To connect Cisco Unity with the directory

- Step 1** Start the Cisco Unity server.

- Step 2** Log on to Windows by using an account that has the necessary rights and permissions. See the [“Choosing the Windows Account Used for Installing Cisco Unity”](#) section on page 2-45.
- Step 3** On the Windows desktop, double-click **Configuration Setup**.
- Step 4** On the Welcome screen, click **Next**.
- Step 5** Click **Microsoft Exchange 2000**.
- Step 6** Click **Next**.
- Step 7** Choose the Exchange server and mail store in which to create new mailboxes. For the Unified Messaging in an Existing Exchange Site configuration:
- We recommend that you choose one of the less busy Exchange servers in the site. All voice messages pass through the server you choose here on their way to user mailboxes.
 - If Exchange is installed on the Cisco Unity server to support Exchange clusters, choose the Cisco Unity server.
- Step 8** Click **Next**.
- Step 9** Enter the domain in which you want Cisco Unity to create users and distribution lists.
- Step 10** If you created custom organizational units for users or distribution lists, click the corresponding **Modify** button to specify them here.
- Step 11** Click **Next**.
- Step 12** Enter the password for the current account.
- Step 13** Click **Next**.
- Step 14** When configuration is complete, click **Finish**.
-

If Cisco Unity is servicing mailboxes that reside on Exchange 2000 clusters, you need to change an account password and several Cisco Unity services.

To change the account used by Cisco Unity services (Exchange 2000 clusters only)

- Step 1** In Active Directory Users and Computers, change the password on the Unity_<servername> account.

- Step 2** In Active Directory Users and Computers, add the Unity_<servername> account to the Exchange Domain Servers group.
- Step 3** In Active Directory Users and Computers, add the Unity_<servername> account to the Local Administrators group.
- Step 4** In Services, change the following services to log on by using the Unity_<servername> account:
- AvCsGateway
 - AvCsMgr
 - AvGaenSvr
 - AvRepDirSvrSvc
 - AvUMRSyncSvr
- Step 5** Restart the Cisco Unity server.
-

Exchange 5.5

To connect Cisco Unity with the directory

- Step 1** Start the Cisco Unity server.
- Step 2** Log on to Windows by using an account that has the necessary rights and permissions. See the [“Choosing the Windows Account Used for Installing Cisco Unity”](#) section on page 2-45.
- Step 3** On the Windows desktop, double-click **Configuration Setup**.
- Step 4** On the Welcome screen, click **Next**.
- Step 5** Click **Microsoft Exchange 5.5**.
- Step 6** Click **Next**.
- Step 7** Enter the name of the server on which Exchange 5.5 is installed.

For the Unified Messaging in an Existing Exchange Site configuration, we recommend that you choose one of the less busy Exchange servers in the site. All voice messages pass through the server you choose here on their way to user mailboxes.

- Step 8** If Active Directory and Exchange 5.5 are installed on the same server, change LDAP Port Number to the value that you entered in the [“To change the LDAP port number” section on page 2-37](#).
- Step 9** Click **Next**.
- Step 10** Enter the password for the current account. This account is added to Cisco Unity as an administrator account.
- Step 11** Click **Next**.
- Step 12** Click **OK** to stop Cisco-Unity services.
- Step 13** When configuration is complete, click **Finish**.
-

Reinstalling Windows 2000 Service Pack 2

To reinstall Windows 2000 Service Pack 2

- Step 1** Log on to Windows.
- Step 2** Insert Cisco Unity Operating System 2000 Disc 2, Service Pack 2 in the CD-ROM drive.
- Step 3** Browse to the root directory, and run **W2ksp2.exe**.
- Step 4** Follow the on-screen prompts to complete the installation.
- Step 5** Remove the compact disc.
- Step 6** Restart the server.
-

Creating an Outlook User Profile

To use Outlook for troubleshooting, you must create an Outlook user profile on the Cisco Unity server for the Windows account that you used to install Cisco Unity.

To create an Outlook user profile

-
- Step 1** On the Windows Start menu, click **Settings > Control Panel > Mail**.
- Step 2** In the Mail and Fax dialog box, click **Add**. The Microsoft Outlook Setup Wizard appears.
- Step 3** Follow the on-screen prompts until you are prompted to specify an account.
- Step 4** Specify the account that you used to install Cisco Unity.
- Step 5** Follow the on-screen prompts to finish creating the profile.
-

Customizing the Cisco Unity System

You do most of these tasks by using the Cisco Unity Administrator. The tasks reference chapters in the *Cisco Unity System Administration Guide* that contain detailed information.

The *Cisco Unity System Administration Guide* is available by clicking the Online Documentation icon in the Cisco Unity Administrator. It is also available on the Cisco Unity Documentation compact disc and on Cisco.com at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/index.htm.

1. Back up Cisco Unity. Refer to the “[Maintaining Cisco Unity](#)” chapter.
2. Define system schedules:
 - Identify standard business hours.
 - Identify closed and weekend hours.
 - Create custom schedules, if necessary.
 - Identify holidays.Refer to the “[Schedule Settings](#)” and “[Holiday Settings](#)” sections in the “[System Settings](#)” chapter.
3. Set up phone and GUI languages. Refer to the “[Multiple Languages](#)” chapter.
4. Set up third-party fax, if applicable. Refer to the “[Integrating a Fax Server with Cisco Unity](#)” chapter.

5. Set up connections between sites and between voice messaging systems, if applicable:
 - Set up the Digital Networking feature. Refer to the “[Digital Networking](#)” chapter.
 - Set up AMIS. Refer to the “[AMIS](#)” chapter.
6. Review or create the organization’s call management plan. Refer to the “[Call Management Tools](#)” chapter.
7. Prepare to add subscribers:
 - Create public distribution lists.
 - Determine account policy.
 - Review, change, and create classes of service.
 - Review, create, and modify subscriber templates.

Refer to the “[About Subscriber Accounts](#)” chapter.

8. Set up enhanced phone security, if applicable. Create a new class of service or modify an existing one for the subscribers who will be using enhanced phone security. Refer to the “[Enhanced Phone Security](#)” chapter.
9. Create restriction tables, and assign them to the applicable class(es) of service. Refer to the “[Restriction Tables](#)” chapter.
10. Test the system configuration:
 - Add a single subscriber (refer to the “[Creating Subscriber Accounts](#)” chapter). Log on to Cisco Unity as the test subscriber, record a name, and set a password.
 - Confirm that the greeting, conversation, call transfer, and message options for the subscriber are working properly. Test the password.
 - Verify that the subscriber inherited the correct class of service. Confirm access to the applicable licensed features.
 - Make corrections to system configuration as necessary.
11. Add subscribers. Refer to the “[Creating Subscriber Accounts](#)” chapter.
12. Assign subscribers to screen those messages left in Cisco Unity that are not associated with a specific recipient, such as those left to the Unaddressed Messages distribution list. Refer to the “[Message Handling](#)” section in the “[Subscriber and Operator Orientation](#)” chapter.

13. Modify individual subscriber accounts as needed. Refer to the “[Subscriber Settings](#)” chapter.
14. Implement and then test the call management plan:
 - Create call handlers. Refer to the “[Call Handler Settings](#)” chapter.
 - Specify directory handler settings. Refer to the “[Directory Handler Settings](#)” chapter.
 - Create interview handlers. Refer to the “[Interview Handler Settings](#)” chapter.
 - Set up call routing. Refer to the “[Call Routing](#)” chapter.
15. Back up Cisco Unity. Refer to the “[Maintaining Cisco Unity](#)” chapter.
16. Train subscribers and operators to use Cisco Unity, if applicable. Refer to the “[Subscriber and Operator Orientation](#)” chapter.