



CHAPTER 4

Installing the Operating System

In this chapter, you do the following tasks in the order listed:

1. Review considerations for installing Windows. See the [“Considerations for Installing Windows” section on page 4-2](#).
2. *If you are installing Windows by using a retail Windows disc:* Configure the RAID arrays. See the [“Configuring the RAID Arrays \(Selected Installations\)” section on page 4-3](#).
3. Install Windows Server 2003 or Windows 2000 Server by using the applicable procedure based on the considerations you reviewed in Task 1.:
 - [Installing Windows Server 2003 by Using the Cisco Unity Platform Configuration Discs, page 4-4](#)
 - [Installing Windows 2000 Server by Using the Cisco Unity Platform Configuration Discs, page 4-6](#)
 - [Installing Windows Server 2003 by Using a Retail Windows Server 2003 Disc, page 4-8](#)
 - [Installing Windows 2000 Server by Using a Retail Windows Server 2000 Disc, page 4-9](#)
4. *If you installed Windows by using a retail Windows disc:* Create the partitions according to the storage configuration requirements for the platform. See the [“Creating the Partitions” section on page 4-11](#).

If you installed Windows by using the Platform Configuration discs, partitions of the correct sizes were created automatically.
5. *If the Cisco Unity server will have more than 96 ports:* Add the 3GB and userva switches to the boot.ini file. See the [“Adding 3GB and userva Switches to the Boot.ini File” section on page 4-12](#).

When you are finished with this chapter, return to [Chapter 1, “Overview of Mandatory Tasks for Installing Cisco Unity,”](#) to continue installing the Cisco Unity system correctly.



Note

The tasks in the list reference detailed instructions in the Cisco Unity installation guide and in other Cisco Unity documentation. Follow the documentation for a successful installation.

Considerations for Installing Windows

In general, we recommend that you install Windows Server 2003 on the Cisco Unity server. Microsoft will produce service packs and security updates for Windows Server 2003 for several years longer than it does for Windows 2000 Server.

Note the considerations in the following sections:

- [Windows Server 2003 Considerations, page 4-2](#)
- [Windows 2000 Server Considerations, page 4-2](#)
- [Additional Considerations for Both Windows Versions, page 4-2](#)

Windows Server 2003 Considerations

- If Windows Server 2003 is installed on the Cisco Unity server, voice cards and Dialogic software will not function correctly. Consequently, circuit-switched phone system integrations that use voice cards are not supported for use with a Cisco Unity server on which Windows Server 2003 is installed. (IP integrations—Cisco Unified CM and SIP—and PIMG integrations are supported for use with a Cisco Unity server on which Windows Server 2003 is installed.)
- The Cisco Unity Platform Configuration discs for all servers install the Windows Server 2003 Multilingual User Interface (MUI) as well as Windows in English. The MUI allows you to change the language of the Windows user interface to the other operating-system languages supported for use with Cisco Unity: French, German, and Japanese.

Windows 2000 Server Considerations

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The Cisco Unity Platform Configuration discs install Windows 2000 Server in English and do not install the Multilingual User Interface (MUI).

If you want to display the Windows 2000 Server user interface in French, German, or Japanese, you must install Windows by using one of the following discs:

- A localized installation disc. You must purchase a retail Windows 2000 Server disc localized in the desired language.
- A Windows 2000 Server disc that includes the MUI, which is available only through Microsoft volume-licensing programs. The MUI allows you to change the language of the Windows user interface to the other operating-system languages supported for use with Cisco Unity: French, German, and Japanese.

Additional Considerations for Both Windows Versions

- If you install Windows by using the Cisco Unity Platform Configuration discs or an English-language retail disc, you must install the English-language version of all third-party software on the Cisco Unity server.

- The Cisco Unity Server Updates wizard, which automatically installs the latest Microsoft updates recommended for use with Cisco Unity, installs only English-language updates. You can use the Server Updates wizard to install updates only in the following cases:
 - You installed Windows by using the Platform Configuration discs.
 - You installed Windows by using an English-language retail disc, with or without the MUI.

If you install a non-English version of Windows, you cannot use the Server Updates wizard to install updates. We recommend that you download the updates from the Microsoft website and manually install them, or download and install them by using Windows Automatic Update. (For more information on Windows Automatic Update, refer to the “Support Policy for Windows Automatic Update” section in *Supported Hardware and Software, and Support Policies for Cisco Unity Release 5.x*. For a list of the updates currently recommended for use with Cisco Unity, refer to *Software Installed by the Cisco Unity Server Updates Wizard*. Both documents are available at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_installation_guides_list.html.)

Configuring the RAID Arrays (Selected Installations)

If you are installing Windows using the Cisco Unity Platform Configuration discs, or if the system is not using RAID, skip this section.

Do this section only if the system is using hardware-based RAID. (Software-based RAID is not supported.)

To configure the arrays, you group the physical disks into logical disks and assign a RAID type to each logical disk. The server manufacturer provides a disc that contains utilities for several setup tasks, including configuring RAID arrays. Use the disc to configure the arrays when the Cisco Unity server was not purchased from Cisco.

The following discs are provided by server manufacturers:

Hewlett-Packard	Hewlett-Packard SmartStart
IBM	IBM ServerGuide (Windows Server 2003 only)

The following procedure contains only general steps. For detailed instructions on using a specific array-configuration utility, refer to the manufacturer documentation.

To Configure the RAID Arrays by Using the Manufacturer-Provided Utility

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- Step 1** Start the Cisco Unity server, and insert the manufacturer disc in the DVD drive.
 - Step 2** On the main menu, select the array-configuration utility.
 - Step 3** For each logical disk needed, group physical disks of the same make and model, and assign a RAID type. For information on the recommended RAID configuration for the server, refer to the *Cisco Unity Supported Platforms List* at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html.
 - Step 4** Follow the manufacturer instructions to complete the configuration.
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Installing Windows Server 2003 by Using the Cisco Unity Platform Configuration Discs

A Cisco Unity server purchased from Cisco ships with Platform Configuration discs that contain a utility to install Windows Server 2003 by restoring an image that is customized for the platform. The image includes the Windows Server 2003 components, subcomponents, and service packs that were required by the version of Cisco Unity that was shipping at the time that the Platform Configuration discs were created.

Installing Windows Server 2003 by using the Cisco Unity Platform Configuration discs reduces the Cisco Unity system installation time and ensures that the required operating system and components, drivers, and service packs are installed and configured correctly. In addition, the partitions are automatically set up.



Caution

Do not attach the network cable to the server until you have installed the Microsoft service packs and updates recommended for use with Cisco Unity. The Cisco Unity installation guide alerts you when to install the service packs and updates, and when to connect to the network later in the installation process.

To Install Windows Server 2003 by Using the Cisco Platform Configuration Disc (Selected Servers Only)

Step 1 Remove any devices that are connected to a USB port on the server.



Caution

If you leave USB devices plugged into the server during Windows configuration, the devices may be interpreted as storage devices. As a result, Windows will not create hard-disk partitions that are required by Cisco Unity Setup, and Setup will fail.

Step 2 Start the server, and insert the Cisco Unity Platform Configuration disc in the DVD drive.

Step 3 Restart the server.

Step 4 If you are using a server manufactured by Hewlett-Packard, skip to [Step 5](#).

If you are using a server manufactured by IBM and the following message appears:

“The ServeRAID firmware and BIOS installed on your system must be upgraded or downgraded to be compatible with the RAID drivers on the Cisco Platform Configuration disc. For information on upgrading or downgrading, refer to the Cisco Technical Note [Upgrading or Downgrading ServeRAID Firmware and BIOS on IBM Servers on Cisco.com](#).”

do the procedures in the tech note *RAID-Controller Firmware and RAID BIOS on IBM Servers Upgrade or Downgrade Procedure* at

http://www.cisco.com/en/US/products/ps6509/tsd_products_support_install_and_upgrade_technotes_list.html (the document title changed). Then return to [Step 2](#) of this procedure.

If you are using an MCS-7815I-3.0-ECS1 or MCS-7815-I1-ECS1 server and the server will not boot from the Cisco Unity Platform Configuration disc, do the procedures in the tech note *MCS-7815I-3.0-xxx1 and MCS-7815-I1-xxx1 (Shipped Before March 2005) DVD-ROM Drive Does Not Consistently Boot* at

http://www.cisco.com/en/US/products/ps6509/tsd_products_support_install_and_upgrade_technotes_list.html. Then return to [Step 2](#) of this procedure.

Step 5 If you are using a server manufactured by IBM, skip to [Step 6](#).

If you are using a server manufactured by Hewlett-Packard, choose a language for the operating system and the locale.

The remaining Windows Server 2003 installation screens will be in English, but when the Windows installation is complete, the Windows user interface will display in the language you selected.

Step 6 Follow the on-screen prompts until you are prompted to choose a licensing mode.

Step 7 Click **Per Server**, and click **Next**.

Step 8 Enter a name for the server (netBIOS name). Use only alphabetical characters A to Z and a to z, numerical characters 0 to 9, and hyphens (-). We recommend that you assign a name with 15 or fewer characters.



Caution Using other characters in the server name is not supported by DNS.

If there is more than one Cisco Unity server in an Active Directory forest, give each Cisco Unity server a name that is unique in the first 14 characters, or Cisco Unity will have problems communicating with the Active Directory accounts that it creates. For example, the following names would cause communication problems: CiscoUnitySrvr1 and CiscoUnitySrvr2.

Step 9 Click **Next**.

Step 10 Enter and confirm a password for the Administrator account.



Caution If you are using a server manufactured by Hewlett-Packard and you chose a language other than English in [Step 5](#), note that until Windows installation has finished, the keyboard layout is the English-language QWERTY keyboard layout, not the standard keyboard layout for the language you chose.

Step 11 Click **Next**.

Step 12 Follow the on-screen prompts until the Workgroup or Computer Domain page appears.

Step 13 Click **No, This Computer Is Not on a Network, or Is on a Network without a Domain**.

Step 14 Optionally, specify a different name for the workgroup.

Step 15 Click **Next**.

Step 16 If you are using a server manufactured by Hewlett-Packard, skip to [Step 17](#).

If you are using a server manufactured by IBM, choose a language for the operating system and the locale.

Step 17 Restart the server.

Step 18 Wait until the Platform Configuration disc has finished running configuration scripts and automatically restarting the server. (There may be multiple automatic restarts.)

Installing Windows 2000 Server by Using the Cisco Unity Platform Configuration Discs

A Cisco Unity server purchased from Cisco ships with Platform Configuration discs that contain a utility to install Windows 2000 Server by restoring an image that is customized for the platform. The image includes the Windows 2000 Server components, subcomponents, and service packs that were required by the version of Cisco Unity that was shipping at the time that the Platform Configuration discs were created.

Installing Windows 2000 Server by using the Cisco Unity Platform Configuration discs reduces the Cisco Unity system installation time and ensures that the required operating system and components, drivers, and service packs are installed and configured correctly. In addition, the logical drives are automatically set up.



Caution

Do not attach the network cable to the server until you have installed the Microsoft service packs and updates recommended for use with Cisco Unity. The Cisco Unity installation guide alerts you when to install the service packs and updates, and when to connect to the network later in the installation process.

Do one of the following two procedures, depending on the platform: Hewlett-Packard or IBM.

Hewlett-Packard: To Install Windows 2000 Server by Using the Cisco Unity Platform Configuration Discs

- Step 1** Start the Cisco Unity server, and insert Cisco Unity Platform and RAID Configuration Disc (HP) CD 1 in the DVD drive.
- Step 2** When the main menu appears, press <F2>.
- Step 3** Follow the on-screen prompts until you are prompted to select a licensing mode.
- Step 4** Click **Per Seat**, and click **Next**.
- Step 5** Enter a name for the server (netBIOS name). Use only alphabetical characters A to Z and a to z, numerical characters 0 to 9, and hyphens (-).



Caution

Using other characters in the server name is not supported by DNS.

If there is more than one Cisco Unity server in an Active Directory forest, give each Cisco Unity server a name that is unique in the first 14 characters, or Cisco Unity will have problems communicating with the Active Directory accounts that it creates. For example, the following names would cause communication problems: CiscoUnitySrvr1 and CiscoUnitySrvr2.

- Step 6** Specify and confirm a password, then click **Next**.
- Step 7** Follow the on-screen prompts until the Network Settings dialog box appears.
- Step 8** Click **Typical Settings**, and click **Next**.
- Step 9** 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**.

If the Workgroup or Computer Domain dialog 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 10** Click **Next**.

- Step 11** Follow the on-screen prompts to complete the installation.
- Step 12** When the Windows 2000 Configure Your Server dialog box appears, click **I Will Configure This Server Later**, and click **Next**.
- Step 13** Uncheck the **Show This Screen at Startup** check box, and close the window.
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IBM: To Install Windows 2000 Server by Using the Cisco Unity Platform Configuration Discs

- Step 1** Start the Cisco Unity server, and insert Cisco Unity Platform Configuration Disc (IBM) CD 1 in the DVD drive.
- Step 2** When the main menu appears, press **Enter** to start the installation program.
- Step 3** Follow the on-screen prompts until you are prompted to select a licensing mode.
- Step 4** Click **Per Seat**, and click **Next**.
- Step 5** Enter a name for the server (netBIOS name). Use only alphabetical characters A to Z and a to z, numerical characters 0 to 9, and hyphens (-).



Caution Using other characters in the server name is not supported by DNS.

If there is more than one Cisco Unity server in an Active Directory forest, give each Cisco Unity server a name that is unique in the first 14 characters, or Cisco Unity will have problems communicating with the Active Directory accounts that it creates. For example, the following names would cause communication problems: CiscoUnitySrvr1 and CiscoUnitySrvr2.

- Step 6** Specify and confirm a password, then click **Next**.
- Step 7** Follow the on-screen prompts until the Network Settings dialog box appears.
- Step 8** Click **Typical Settings**, and click **Next**.
- Step 9** 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**.

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 10** Click **Next**.
- Step 11** Follow the on-screen prompts to complete the installation.
- Step 12** When the Windows 2000 Configure Your Server dialog box appears, click **I Will Configure This Server Later**, and click **Next**.
- Step 13** Uncheck the **Show This Screen at Startup** check box, and close the window.
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Installing Windows Server 2003 by Using a Retail Windows Server 2003 Disc

The server manufacturer provides a disc that contains utilities for several setup tasks, including guiding the installation of Windows 2003 Server from a retail disc. Always use the manufacturer's guided system-setup utility to install Windows Server 2003. This ensures that the operating system and the drivers are installed and configured correctly.



Caution

When installing Windows Server 2003, do not install Universal Description, Discovery, and Integration (UDDI) Services, or the Cisco Unity System Preparation Assistant will fail later in the installation process.

The following discs are provided by server manufacturers:

Hewlett-Packard	Hewlett-Packard SmartStart
IBM	IBM ServerGuide



Caution

Do not attach the network cable to the server until you have installed the Microsoft service packs and updates recommended for use with Cisco Unity. The Cisco Unity installation guide alerts you when to install the service packs and updates, and when to connect to the network later in the installation process.

To Install Windows Server 2003 by Using the Manufacturer's Guided System-Setup Utility and a Retail Windows 2003 Disc

- Step 1** Start the Cisco Unity server, and insert the manufacturer disc in the DVD drive.
- Step 2** Follow the on-screen prompts to install Windows Server 2003 from a retail disc.
- You may be prompted to configure the RAID arrays. Note the following considerations:
- If the arrays have already been configured, do not change the configuration.
 - If the arrays have not been configured, follow the prompts to configure them. Refer to the manufacturer documentation.
- Step 3** When applicable, make the following choices:
- Specify a partition size of **12 GB** for the operating system.
 - If you are installing Windows Server 2003 on the same partition where an operating system is already installed, select and delete that partition.

- Format the operating system partition by using the **NTFS** file system.
- For regional settings, select a locale in the Your Locale (Location) list. The locale you select must match one of the system-prompts languages that you will install for Cisco Unity. Note that Cisco Unity Setup always installs the English (United States) system prompts.

For a list of supported system-prompts languages, refer to the “Available Languages for Cisco Unity Components” section in the applicable version of *Release Notes for Cisco Unity* at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_release_notes_list.html.

**Caution**

If the locale you specify when you install Windows Server 2003 does not match any of the installed Cisco Unity system-prompts languages, Cisco Unity will log errors in the event log and may stop taking calls. The locale you select here must match the Cisco Unity system-prompt language exactly. For example, if you choose English (United Kingdom) for locale, you must also choose English (United Kingdom) as one of the Cisco Unity system-prompts languages. Installing the system prompts for English (Australia) will not work.

- Specify **Per Seat** for the licensing mode.
- When you enter a name (netBIOS name) for the Cisco Unity server:
 - If there is more than one Cisco Unity server in an Active Directory forest, give each Cisco Unity server a name that is unique in the first 14 characters, or Cisco Unity will have problems communicating with the Active Directory accounts that it creates. For example, the following names would cause communication problems: CiscoUnitySrvr1 and CiscoUnitySrvr2.
 - Use only alphabetical characters A to Z and a to z, numerical characters 0 to 9, and hyphens (-).

**Caution**

Using other characters in the server name is not supported by DNS.

- Do not join a domain. Instead, specify a workgroup. The Cisco Unity installation guide alerts you when to connect to the network and when to join a domain later in the installation process.

Installing Windows 2000 Server by Using a Retail Windows Server 2000 Disc

The server manufacturer provides a disc that contains utilities for several setup tasks, including guiding the installation of Windows 2000 Server from a retail disc. Use the manufacturer disc when the Cisco Unity server was not purchased from Cisco.

The following discs are provided by server manufacturers:

Hewlett-Packard	Hewlett-Packard SmartStart
IBM	IBM ServerGuide (selected servers only)

Installing Windows 2000 Server by using the manufacturer’s guided system-setup utility ensures that the operating system and the drivers are installed and configured correctly.

**Caution**

Do not attach the network cable to the server until you have installed the Microsoft service packs and updates recommended for use with Cisco Unity. The Cisco Unity installation guide alerts you when to install the service packs and updates, and when to connect to the network later in the installation process.

To Install Windows 2000 Server by Using the Manufacturer's Guided System-Setup Utility and a Retail Windows 2000 Disc

Step 1 Start the Cisco Unity server, and insert the manufacturer disc in the DVD drive.

Step 2 Follow the on-screen prompts to install Windows 2000 Server from a retail disc.

You may be prompted to configure the RAID arrays. Note the following considerations:

- If the arrays have already been configured, do not change the configuration.
- If the arrays have not been configured, follow the prompts to configure them. Refer to the manufacturer documentation.

Step 3 When applicable, make the following choices:

- Specify a partition size of **12 GB** for the operating system.
- If you are installing Windows 2000 Server on the same partition where an operating system is already installed, select and delete that partition.
- Format the operating system partition by using the **NTFS** file system.
- For regional settings, select a locale in the Your Locale (Location) list. The locale you select must match one of the system-prompts languages that you will install for Cisco Unity. Note that Cisco Unity Setup always installs the English (United States) system prompts.

For a list of supported system-prompts languages, refer to the “Available Languages for Cisco Unity Components” section in the applicable version of *Release Notes for Cisco Unity* at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_release_notes_list.html.

**Caution**

If the locale you specify when you install Windows 2000 Server does not match any of the installed Cisco Unity system-prompts languages, Cisco Unity will log errors in the event log and may stop taking calls. The locale you select here must match the Cisco Unity system-prompt language exactly. For example, if you choose English (United Kingdom) for locale, you must also choose English (United Kingdom) as one of the Cisco Unity system-prompts languages. Installing the system prompts for English (Australia) will not work.

- Specify **Per Seat** for the licensing mode.
- When you enter a name for the Cisco Unity server (netBIOS name), use only alphabetical characters A to Z and a to z, numerical characters 0 to 9, and hyphens (-).

**Caution**

Using other characters in the server name is not supported by DNS.

If there is more than one Cisco Unity server in an Active Directory forest, give each Cisco Unity server a name that is unique in the first 14 characters, or Cisco Unity will have problems communicating with the Active Directory accounts that it creates. For example, the following names would cause communication problems: CiscoUnitySrvr1 and CiscoUnitySrvr2.

- Do not join a domain. Instead, specify a workgroup. The Cisco Unity installation guide alerts you when to connect to the network and when to join a domain later in the installation process.
- If you are prompted to specify Windows 2000 Server components to install, select the following required components:
 - Internet Information Services
 - Message Queuing Services



Note If you do not install all the required Windows 2000 Server components, subcomponents, and service packs while installing the operating system, the Cisco Unity installation guide alerts you when and how to install them later.

- Step 4** When the Windows 2000 Configure Your Server dialog box appears, click **I Will Configure This Server Later**.
- Step 5** Uncheck the **Show This Screen at Startup** check box, and close the window.

Creating the Partitions



Note If the Cisco Unity server was purchased from Cisco, skip this section. When you installed Windows using the Cisco Unity Platform Configuration discs shipped with the server, the partitions were created automatically.

Do the following procedure to create the partitions that you identified in the [“Determining the Locations for Files on the Cisco Unity Server”](#) section on page 2-4.

To Create the Partitions

- Step 1** Log on to Windows as a member of the Administrators group.
- Step 2** On the Windows Start menu, click **Programs > Administrative Tools > Computer Management**.
- Step 3** In the console tree under Storage, click **Disk Management**.
- Step 4** Right-click the first available unallocated region of the first available logical disk, and click **New Partition** (if Windows Server 2003 is installed) or **Create Partition** (if Windows 2000 Server is installed).
- Typically, you will need to create one more partition than the number of logical disks available. After you install the operating system, the first 12 GB of the first logical disk is used for the system partition, and is given the drive letter C. You create the first extended partition by using the remaining space on the first logical disk. When you create subsequent partitions, you use the entire logical disk.
- Step 5** On the New Partition Wizard (Windows Server 2003) or Create Partition Wizard (Windows 2000 Server) welcome screen, click **Next**.
- Step 6** Click **Extended Partition**, and click **Next**. (Do not click Primary Partition.)
- Step 7** Specify to use the remaining disk space, and click **Next**.
- Step 8** Verify the settings, and click **Finish**.

- Step 9** In the Disk Management utility, right-click the new partition, and click **New Logical Drive** (Windows Server 2003) or **Create Logical Drive** (Windows 2000 Server).
 - Step 10** On the Create Partition Wizard welcome screen, click **Next**.
 - Step 11** Click **Logical Drive**, and click **Next**.
 - Step 12** Specify to use the maximum disk space, and click **Next**.
 - Step 13** Assign a drive letter, and click **Next**.
 - Step 14** Specify the NTFS file system format, and click **Next**.
 - Step 15** Verify the settings, and click **Finish**.
 - Step 16** Repeat [Step 4](#) through [Step 15](#) for each partition that you have to create.
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Adding 3GB and userva Switches to the Boot.ini File

If the Cisco Unity server will be configured for more than 96 voice messaging ports, do the following procedure.

To Add 3GB and userva Switches to the Boot.ini File

- Step 1** Open the `c:\boot.ini` file in a text editor.
 - Step 2** Add `/3GB /userva=2800` to the line that includes `WINDOWS="Microsoft Windows 2003 Server"`. For example:

```
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Windows Server 2003, Standard" /fastdetect /NoExecute=OptOut /3GB /userva=2800
```
 - Step 3** Restart the server.
-