



Installing the Operating System

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

1. *If the system is using RAID:* Configure the RAID arrays. See the [“Configuring the RAID Arrays” section on page 4-1](#).
2. Install Windows 2000 Server. See the [“Installing Windows 2000 Server” section on page 4-4](#).
3. *If the Cisco Unity server was not purchased from Cisco:* Set up the logical drives according to the storage configuration requirements for the platform. See the [“Setting Up the Logical Drives \(If the Cisco Unity Server Was Not Purchased from Cisco\)” section on page 4-9](#). (Note that a Cisco Unity server purchased from Cisco was shipped with Platform Configuration discs that automatically set up the logical drives when you used the discs to install Windows 2000 Server.)

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.

Configuring the RAID Arrays

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 procedure you use to configure the arrays depends on whether the Cisco Unity server was purchased from Cisco:

Server purchased from Cisco	<p>Use the Cisco-provided array-configuration utility. See the “Using the Cisco-Provided Array-Configuration Utility” section on page 4-2.</p> <p>Note We recommend that you use the Cisco-provided array-configuration utility that appears on the Cisco Unity Platform and RAID Configuration Disc even if you install the operating system by using the manufacturer’s guided system-setup utility and a retail Windows 2000 Server disc. The array-configuration utility automatically configures the arrays as recommended for each server and can save a substantial amount of time over manually configuring the arrays by using the array-configuration utility available on the manufacturer disc.</p>
Server not purchased from Cisco	<p>Use the array-configuration utility available on the manufacturer disc that is shipped with the Cisco Unity server. See the “Using the Manufacturer-Provided Array-Configuration Utility” section on page 4-3.</p>

Using the Cisco-Provided Array-Configuration Utility

A Cisco Unity server purchased from Cisco ships with Platform Configuration discs that contain a utility for automatically configuring the arrays. Do one of the following two procedures, depending on the platform: Hewlett-Packard or IBM.

Hewlett-Packard: To Configure the RAID Arrays by Using the Cisco-Provided Utility

- Step 1** Start the Cisco Unity server, and insert the applicable disc in the CD-ROM drive, depending on the Windows 2000 edition:

Windows 2000 Server Cisco Unity Platform and RAID Configuration Disc (HP) CD 1

Windows 2000 Advanced Server Cisco Unity Platform and RAID Configuration Disc—AS (HP) CD 1

- Step 2** When the main menu appears, press **<F1>**.
- Step 3** Follow the on-screen prompts. When the utility has completed, the main menu reappears.



Caution Do not press any keys while the BIOS screen is displayed. If you interrupt the utility, you will have to start over.

IBM: To Configure the RAID Arrays by Using the Cisco-Provided Utility

- Step 1** Start the Cisco Unity server, and insert the Cisco Unity RAID Configuration Disc (IBM) in the CD-ROM drive.

- Step 2** Select the server type. The options may combine the following information:
- Server model.
 - Number of physical disks installed in the server.
 - Size, in gigabytes, of the largest physical disks.
- Step 3** Press **Enter**.
- Step 4** Follow the on-screen prompts.
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Using the Manufacturer-Provided Array-Configuration Utility

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:

Dell	Dell Server Assistant
Hewlett-Packard	Hewlett-Packard SmartStart
IBM	IBM ServerGuide

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

- Step 1** Start the Cisco Unity server, and insert the manufacturer disc in the CD-ROM 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:

Medium-scale system	We recommend configuring all disk arrays as RAID 1.
Large-scale system	if Exchange is not installed on the Cisco Unity server, we recommend configuring all disks as RAID 1. If Exchange is installed on the Cisco Unity server, we recommend configuring the first two disk arrays as RAID 1 and the third disk array as RAID 10.

For a RAID 1 volume, group two physical disks.

For a RAID 10 volume, create two sublogical RAID 1 arrays, then create a spanned RAID 0 across the two RAID 1 volumes.

- Step 4** Follow the manufacturer instructions to complete the configuration.
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Installing Windows 2000 Server



Do not install Windows Server 2003 on the Cisco Unity server. It is not supported.

The compact discs you use to install Windows 2000 Server depend on whether the Cisco Unity server was purchased from Cisco and which language version of Windows 2000 Server you want to install:

<p>Server purchased from Cisco, and installing the English-language version of Windows 2000 Server</p>	<p>Use the Platform Configuration discs that are shipped with the Cisco Unity server. See the “Using the Cisco Unity Platform Configuration Discs” section on page 4-4.</p>
<p>Server not purchased from Cisco, or installing a localized version of Windows 2000 Server</p>	<p>Use the manufacturer’s guided system-setup utility and a retail Windows 2000 Server disc in the desired language. See the “Using the Manufacturer’s Guided System-Setup Utility and a Retail Windows 2000 Server Disc” section on page 4-7.</p>

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 either Windows 2000 Server or Windows 2000 Advanced Server by restoring an image that is customized for the platform. The image includes the required Windows 2000 Server or Advanced server components, subcomponents, and service packs (for example, Internet Information Server, Terminal Services, and the currently required Windows 2000 Server service pack).

Whether you install Windows 2000 Server or Windows 2000 Advanced Server on the Cisco Unity server depends on which server you have. For a list of supported servers and the operating system that we recommend you install on each, refer to *Cisco Unity Supported Platforms List* at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheet09186a008009267e.html.



All references to Windows 2000 Server in the remainder of the *Cisco Unity Installation Guide* apply both to Windows 2000 Server and to Windows 2000 Advanced Server.

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.



Do not attach the network cable to the server until Windows 2000 Server Service Pack 3 is installed or the server will be vulnerable to the viruses that Service Pack 3 helps to prevent. The *Cisco Unity Installation Guide* alerts you when to install the service pack 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 the applicable disc in the CD-ROM drive, depending on the Windows 2000 Server edition:

Windows 2000 Server Cisco Unity Platform and RAID Configuration Disc (HP) CD 1

Windows 2000 Advanced Server Cisco Unity Platform and RAID Configuration Disc—AS (HP) CD 1

Step 2 When the main menu appears, press <F2>.

Step 3 Follow the on-screen prompts until you are prompted to remove the disc from the drive.

Step 4 Remove CD 1, and insert the applicable disc in the CD-ROM drive, depending on the Windows 2000 Server edition:

Windows 2000 Server Cisco Unity Platform and RAID Configuration Disc (HP) CD 2

Windows 2000 Advanced Server Cisco Unity Platform and RAID Configuration Disc—AS (HP) CD 2

Step 5 Follow the on-screen prompts until you are prompted to select a licensing mode.

Step 6 Click **Per Seat**, and click **Next**.

Step 7 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.

We recommend that you assign a name with 15 or fewer characters.

Step 8 Specify and confirm a password, then click **Next**.

Step 9 Follow the on-screen prompts until the Network Settings dialog box appears.

Step 10 Click **Typical Settings**, and click **Next**.

Step 11 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 12 Click **Next**.

Step 13 Follow the on-screen prompts to complete the installation.

- Step 14** When the Windows 2000 Configure Your Server dialog box appears, click **I Will Configure This Server Later**, and click **Next**.
- Step 15** Uncheck the **Show This Screen at Startup** check box, and close the window.

IBM: To Install Windows 2000 Server by Using the Cisco Unity Platform Configuration Discs

- Step 1** Start the Cisco Unity server, and insert the applicable disc in the CD-ROM drive, depending on the Windows 2000 Server edition:

Windows 2000 Server Cisco Unity Platform Configuration Disc (IBM) CD 1

Windows 2000 Advanced Server Cisco Unity Platform Configuration Disc—AS (IBM) CD 1

- 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 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.

We recommend that you assign a name with 15 or fewer characters.

- 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.

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

The server manufacturer provides a disc that contains utilities for several setup tasks, including guiding the installation of Windows 2000 Server or Windows 2000 Advanced 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:

Dell	Dell Server Assistant
Hewlett-Packard	Hewlett-Packard SmartStart
IBM	IBM ServerGuide

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.

Whether you install Windows 2000 Server or Windows 2000 Advanced Server on the Cisco Unity server depends on which server you have. For a list of supported servers and the operating system that we recommend you install on each, refer to *Cisco Unity Supported Platforms List* at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheet09186a008009267e.html.

**Note**

All references to Windows 2000 Server in the remainder of the *Cisco Unity Installation Guide* apply both to Windows 2000 Server and to Windows 2000 Advanced Server.

**Caution**

Do not attach the network cable to the server until Windows 2000 Server Service Pack 3 is installed. The *Cisco Unity Installation Guide* alerts you when to install the service pack 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 CD-ROM 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:

- 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 **8 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 languages that you will install for Cisco Unity. Note that the Cisco Unity installation always installs English (United States).

For a list of supported languages, refer to *Cisco Unity 4.0 System Requirements, and Supported Hardware and Software* at

http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/sysreq/40_sysrq.htm.

**Caution**

If the locale you specify when you install Windows 2000 Server does not match any of the installed Cisco Unity 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 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 languages. Installing the Cisco Unity language 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.

We recommend that you assign a name with 15 or fewer characters.

- 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.
- If you are prompted to specify Windows 2000 Server components to install, select the following required components:
 - Internet Information Server
 - Message Queuing Services
 - Terminal Services

**Note**

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

- If you are prompted to specify a Windows 2000 Server service pack to install, specify Windows 2000 Server Service Pack 3.

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.

Setting Up the Logical Drives (If the Cisco Unity Server Was Not Purchased from Cisco)

**Note**

If the Cisco Unity server was purchased from Cisco, skip this section. When you installed Windows 2000 Server with the Cisco Unity Platform Configuration discs shipped with the server, the logical drives were automatically set up.

To set up a logical drive, you create an extended partition on a logical disk, then create the logical drive in the partition. Do the following procedure to set up all the drives that you identified in the [“Determining the Drive Locations for Files on the Cisco Unity System”](#) section on page 2-3.

To Set Up the Logical Drives

- 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 **Create Partition**.

Typically, you will need to create one more logical drive than the number of logical disks available. After you install the operating system, the first 8 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. If you need the same number of logical drives as the number of logical disks available, use an entire logical disk for each partition you create.

- Step 5** On the Create Partition Wizard 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 **Create Logical Drive**.
- 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 to use 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 for each logical drive you have to create.

