

E60 Installation Road Map

HP NetServer



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Installation Overview (Parts 1-12)



1. Overview of NetServer Features
2. Verify contents and obtain HP NetServer Navigator CD release history
3. Remove the cover (if installing optional accessories)
4. Install additional memory
5. Install all accessory boards
6. Install additional mass storage
7. Install a second processor
8. Replace the cover
9. Connect Monitor, Keyboard, and Mouse
10. Verify installed accessories (optional)
11. Configure the HP NetServer
12. Install Additional HP Utility and Management Software



Audience Assumptions

This road map is intended for the person who installs, administers, and troubleshoots network servers. Hewlett-Packard Company assumes that you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

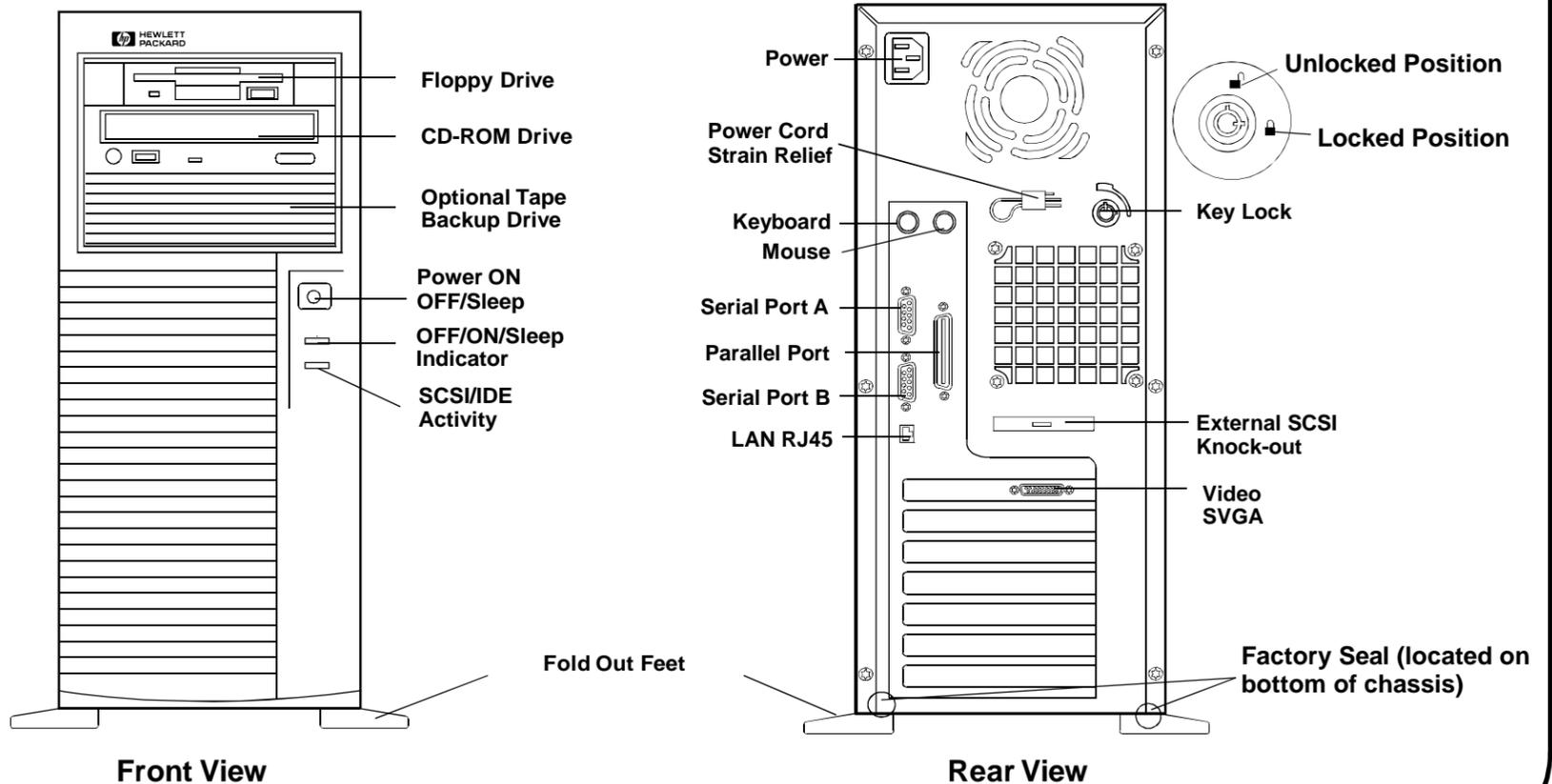
ESD Warning

This NetServer contains sensitive electronic devices that can be damaged by electrostatic discharge (ESD). ESD hazards are a result of installation or service personnel failing to ground themselves properly. To be properly grounded, you must use a proper ESD wrist strap and work surface grounded to the NetServer chassis.

Tools Required

- Screwdriver: TORX® T15 (if installing options)
- Screwdriver: flat blade, 1/4-inch (if installing external SCSI port)
- *HP NetServer Navigator CD-ROM* (included)

1 Overview of NetServer Features



2 Verify Contents

Unpack and verify the contents of the shipping box against the Contents Checklist included with your NetServer. If anything is missing or damaged, contact your reseller. For information on tested accessories, download the Order Assistant from the HP Web page.

Obtain HP NetServer Navigator CD-ROM Release History

To ensure that you have the latest versions of the software, obtain the current release history. This report describes the latest software updates to each release of the *HP NetServer Navigator CD-ROM* and instructions for obtaining a current release.

Obtain the release history from one of these sources:

- **Fax**—Call HP's fax system at 1-800-333-1917 (or 1-208-344-4809 from your fax machine) and request document ID number (found on CD)
- **Internet WWW**—<http://www.hp.com/netserver/servsup/cdinfo>
- **Internet FTP**—<ftp://ftp.hp.com/pub/servers/>
Click on /software and view the .txt file that matches the document ID found on the CD
- **CompuServe**—GO HPPC; download the .txt file that matches the document ID found on the CD



To obtain drivers and utilities for non-HP components of your system, follow the directions provided by the component or network operating system manufacturer to access the necessary Internet, BBS, or CompuServe site containing the drivers and software.

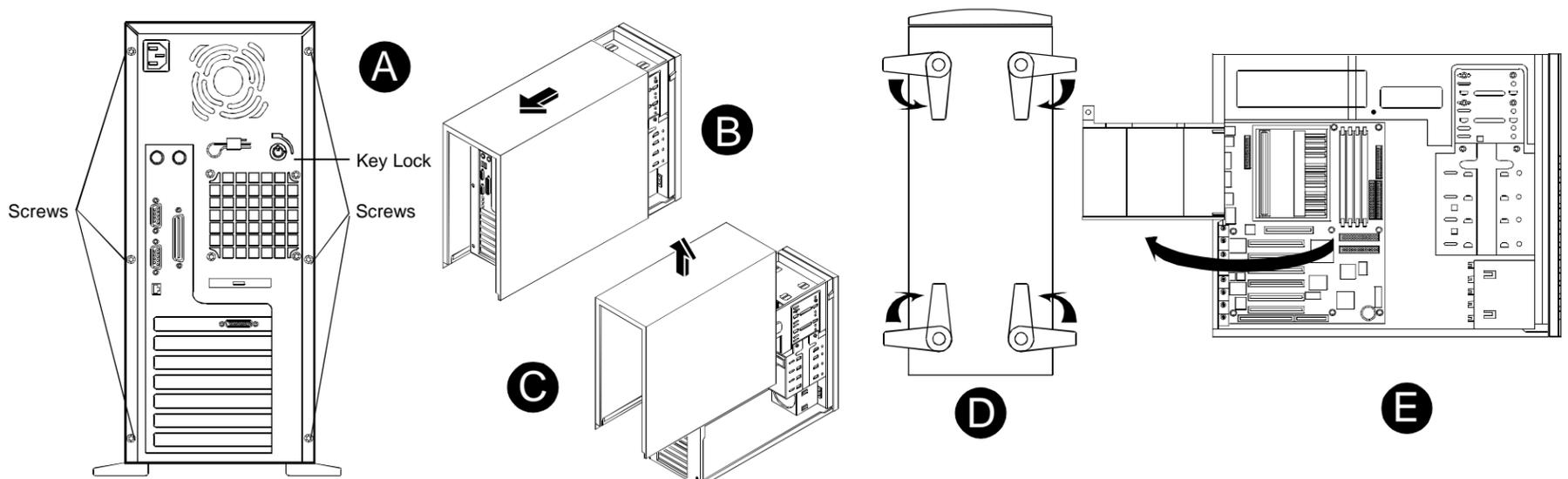
3 Remove the Cover (If Installing Optional Accessories)

If you are installing options, you will need to remove the cover using a TORX T15 driver or a flat blade screw driver. To install options, you will need a TORX T15 driver and a flat blade screwdriver if you are installing the external SCSI port.

WARNING Before removing the cover, always disconnect the power cord and unplug telephone and network cables. Disconnect the power cord to avoid exposure to high energy levels that may cause burns when parts are short-circuited by metal objects such as tools or jewelry. Disconnect telephone cables to avoid exposure to shock hazard from telephone ringing voltages.

CAUTION Wear a wrist strap and use a static-dissipating work surface connected to the chassis when handling components.

1. **Turn off the NetServer** and disconnect the power cord.
2. **Unlock the cover:** To unlock the cover, use the key in the key bag. See Figure A.
3. **Unscrew the cover:** Unscrew the six TORX 15/ slotted screws securing the cover. See Figure A.
4. **Remove the cover:** Place your hands on either side of the cover. While *applying downward pressure*, pull the cover back to release it (see Figure B) and then lift it off the chassis. See Figure C.
5. **Lay the Net Server on its side:** Most internal work is best done with the NetServer on its side. Turn the feet in, and lay it on its side. See Figure D.
6. **Reposition the cooling duct/cover:** The duct unsnaps and swings out of the way. See Figure E.

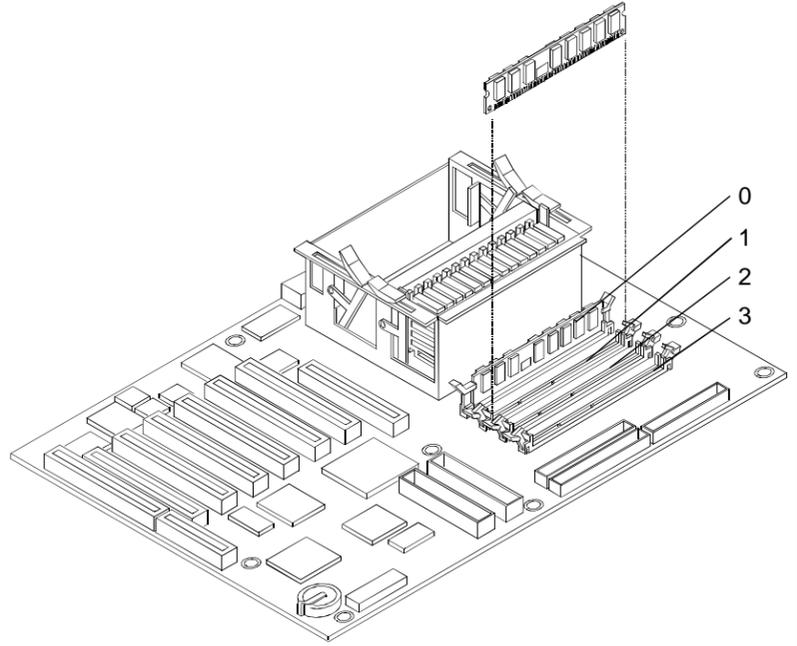


4 Install Additional Memory

DIMM Installation Rules

- Use only HP DIMMs listed on the Technical Reference Card located on the side of the NetServer chassis.
- DIMMs can be installed in any socket in any combination, but the order of 0,1,2,3 is recommended.

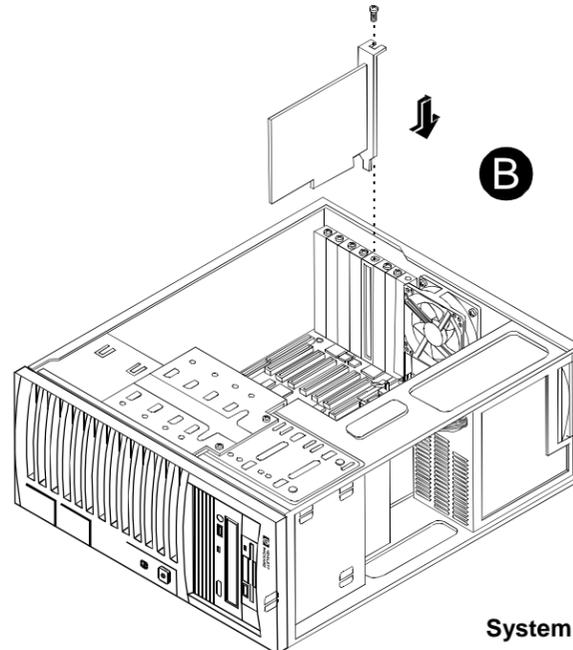
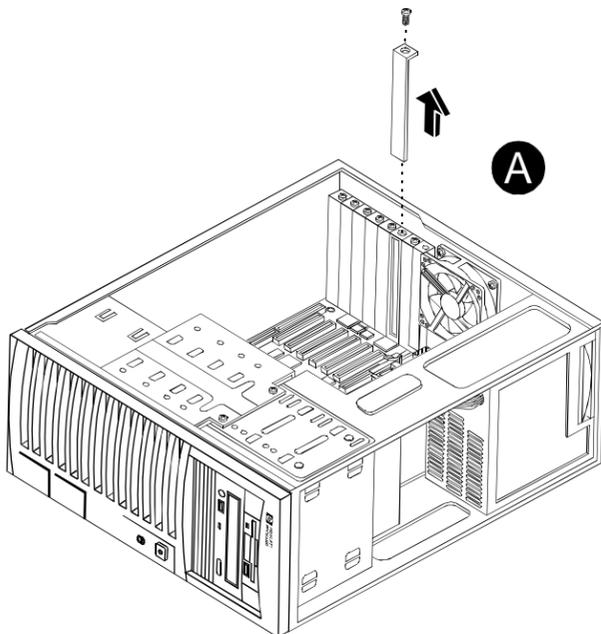
- 1. Remove the cover:** Remove the cover and prepare the NetServer as described in Part 3.
- 2. Install the DIMM:** Locate the DIMM sockets. Align the notches on the DIMM with the keys in the socket. Spread the socket retaining clips. Hold the DIMM at a 90 degree angle to the system board and press it into the socket until the retaining clips on both ends of the socket snap into place.
- 3. Replace the cover:** If you are not installing accessory boards, mass storage devices, or the external SCSI connector, replace the NetServer cover as described in Part 8: "Replace the Cover."



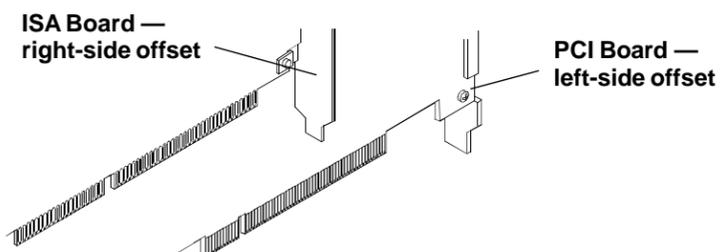
5 Install All Accessory Boards

NOTE For a list of boards HP has tested, and to view the README file containing the latest configuration information, see the *HP NetServer Navigator CD-ROM*. If you have installed any ISA non-Plug-and-Play accessory boards, you *must* reserve system resources (memory, I/O addresses, IRQ, and DMA) for each of the boards. You will perform this step in Part 11: "Configure the HP NetServer."

- 1. Remove the cover:** Remove the cover and prepare the NetServer as described in Part 3.
- 2. Read the documentation** included with each accessory board. Follow any special instructions, and follow all installation recommendations.
- 3. Remove the slot cover screw** and slot cover bracket. See Figure A.
- 4. Install the boards:** Some boards have preferred slot locations, in which case special installation instructions will be provided in the user guide of that board. Insert the screw to secure the board. See Figure B.



An accessory board can be identified by the offset of the bracket and the shape of the edge connector



IRQs are shared as shown below. If you are installing a PCI board that does not support interrupt sharing (refer to the accessory board documentation), make sure that the shared slot is empty or has no embedded device assigned to it.

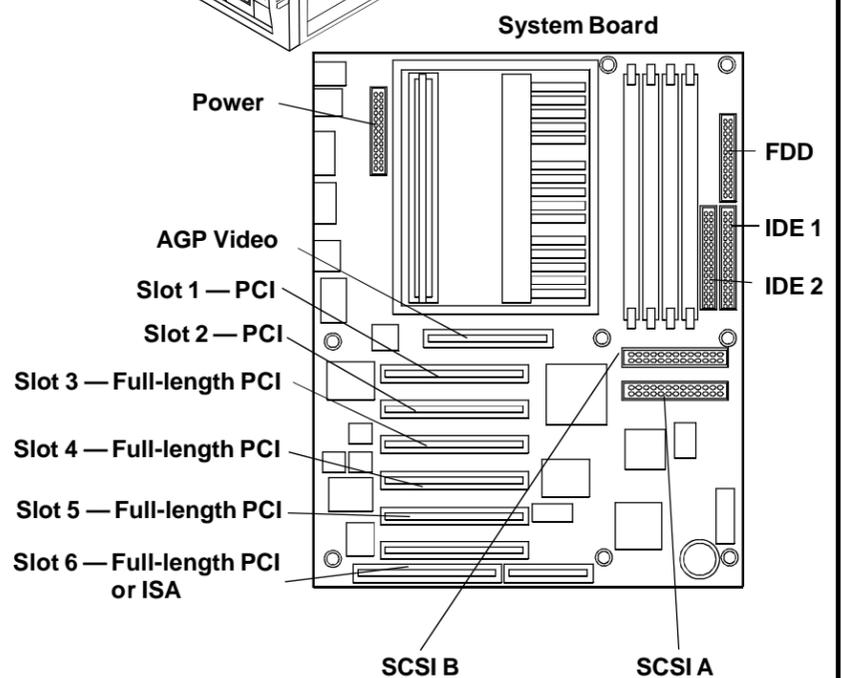
- PCI slot 1 and slot 5*
- PCI slot 2 and slot 6
- Embedded SCSI and slot 3
- Embedded LAN and slot 4

PCI slots boot in the following order: 2,1,6,3,4,5

*Slots 1 and 5 may also share with the video board, if video board jumper is set.

- 5. Replace the cover:** If you are not installing mass storage devices or a second processor, replace the cooling duct/cover and the cover as described in Part 8: "Replace the Cover."

If you are installing hard disk mass storage devices, continue with Part 6: "Install Additional Mass Storage Devices."



6 Install Additional Mass Storage Devices

NOTE With certain mass storage configurations, you may need additional cables or adapters. (See the HP NetServer E 60 *Installation Guide* for information on installing the optional external SCSI port, and for duplexing information.) For configuration information and part numbers for HP cables, adapters, and trays, see HP Information Assistant or Order

Installing Internal SCSI Mass Storage Devices

1. Configure the device: Set the jumpers on the disk drive to an unused SCSI address. Make sure the device is not terminated (the NetServer E 60 uses cable termination). Refer to the drive's user guide for details.

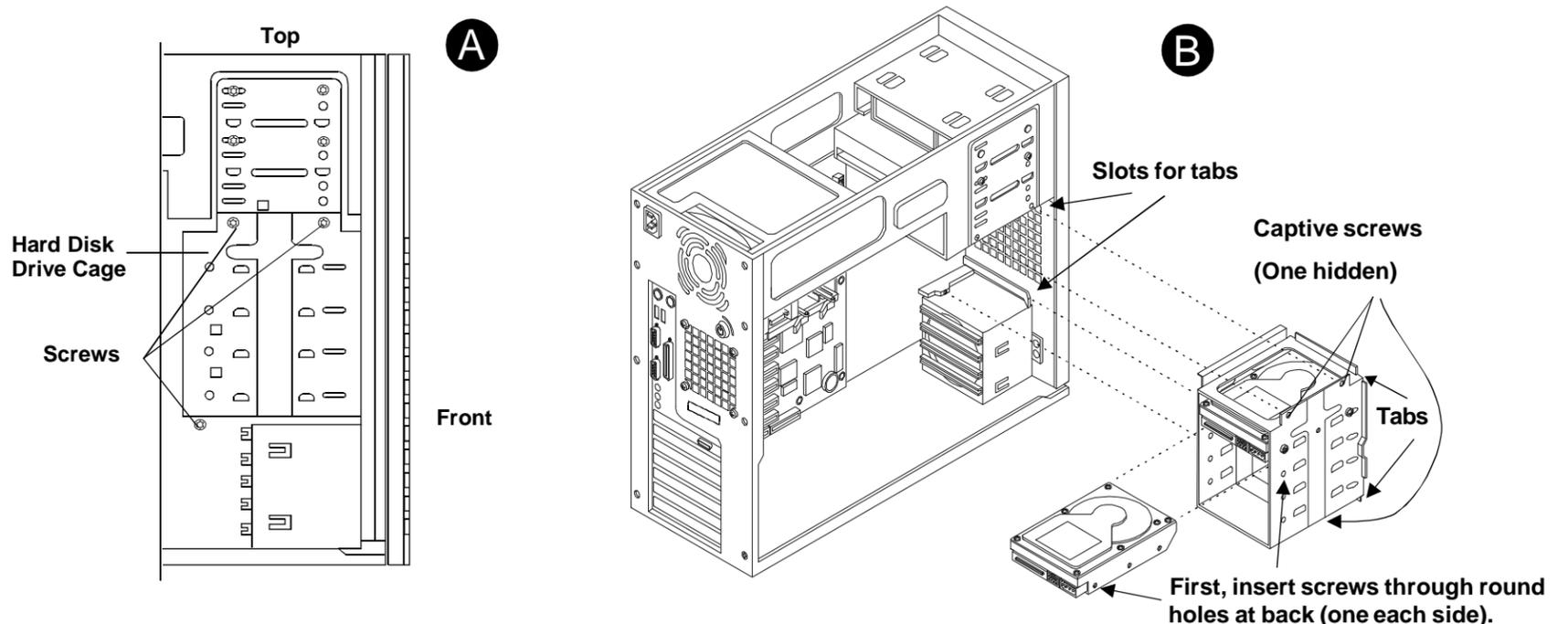
Boot Device Priority

The system searches for a bootable device in this order: 1) IDE CD-ROM drive with a bootable CD-ROM. 2) Flexible disk drive with a bootable flexible disk. 3) Embedded SCSI A. 4) Embedded SCSI B. SCSI devices on any one SCSI channel (SCSI A or B) will boot in the following order: 0,1,2,3,4,5,6.

2. Remove the cover: and prepare the NetServer as described in Part 3: "Remove the Cover." To add or remove from the hard disk drive cage, lay the NetServer on its side and open the air duct. To add or remove a tape drive, leave the NetServer standing on its feet.

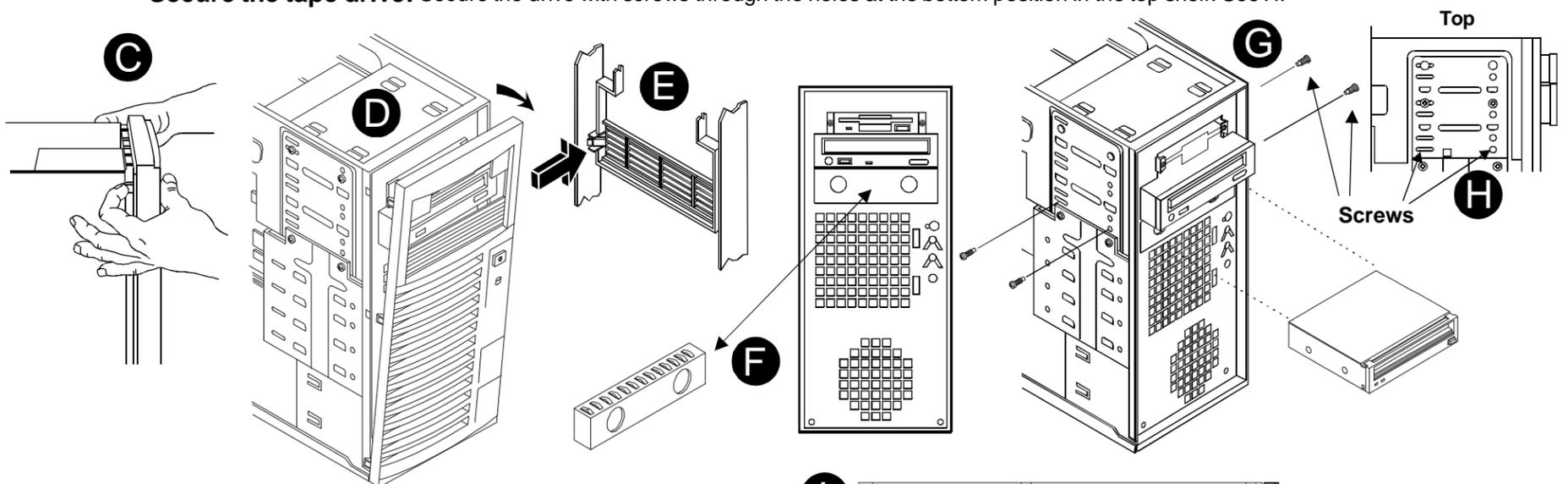
3. Adding Hard Disk Drives

- **Remove the hard disk drive cage:** Loosen the three captive screws securing the hard disk drive cage. Unplug the power and SCSI connectors for any hard disks already in the cage. Remove the cage. See Figure A.
- **Insert new hard disk drive:** Insert the hard disk drive into the cage with the connectors inside and toward the feet. See Figure B.
- **Secure hard disk drive:** Align the disk drive's screw holes with the round and elongated holes in the cage. Insert screws in one round hole in the back, and then in the elongated hole on the same side. Repeat on the other side. Screws are TORX 15, #6-32, not to exceed 1/4-inch in length. See Figure B.
- **Reinstall cage:** Reinsert the disk drive cage into the chassis. Tabs at front of the cage fit into slots in the chassis. Tighten the three captive screws.



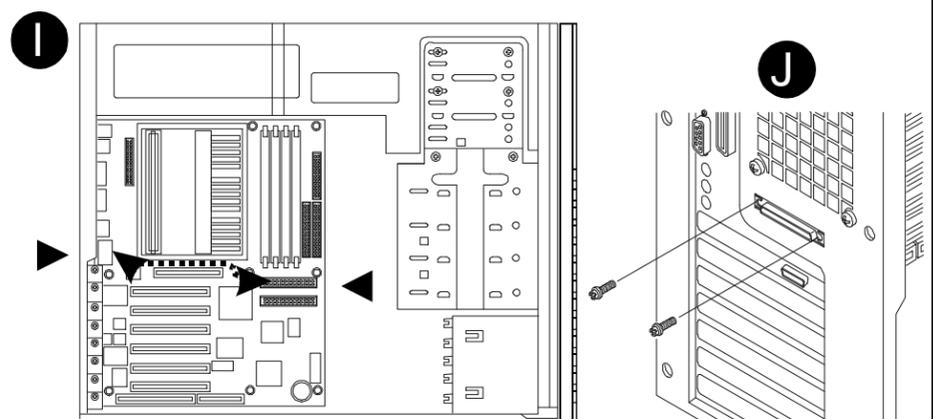
4. Adding a Tape Drive

- **Remove the bezel:** Starting at the top, on both sides, begin by deflecting bezel catches outward while gently pulling the bezel. See C. Loosen all six catches and remove. See D.
- **Unsnap and remove cover plate:** From the back, unsnap and remove the filler panel. See E.
- **Remove filler piece:** Remove the sheet metal filler piece. See F.
- **Insert tape drive:** Insert the tape drive from the front. See G.
- **Secure the tape drive:** Secure the drive with screws through the holes at the bottom position in the top shelf. See H.



5. Installing the External SCSI Mass Storage Device Connector

- **Obtain External SCSI Cable Kit (HP P/N D8214A):** Order from your dealer.
- **Remove cover:** Remove the cover and position the NetServer as described in Part 3.
- **Remove external SCSI connector knock-out:** Use a flat blade screwdriver to remove the knock-out at the rear of the system. See illustration in Part 9.
- **Install SCSI cable:** Attach the cable to the free SCSI connector on the system board and to the knock-out at the rear. See I and J.
- **Replace cover** as described in Part 8.



6. Connect the cables: Connect SCSI and power cables to the drives. If doing internal hard disk drive duplexing, see Chapter 4 in the *HP NetServer E60 Installation Guide*.

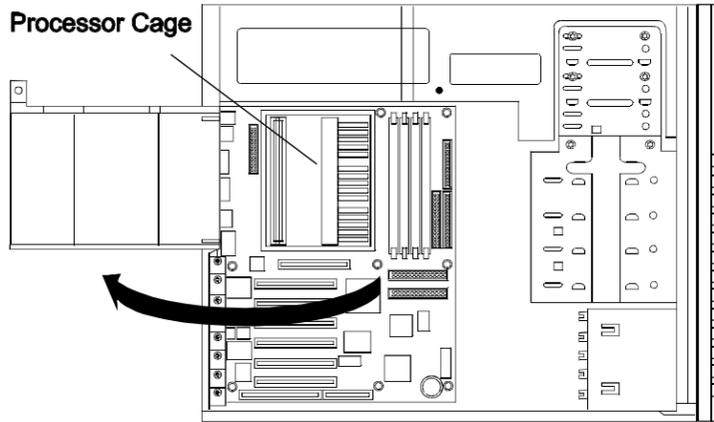
7. Replace the bezel and cover: Replace the bezel by pushing the bezel back into place. Replace the cover as described in Part 8.

7 Install a Second Processor

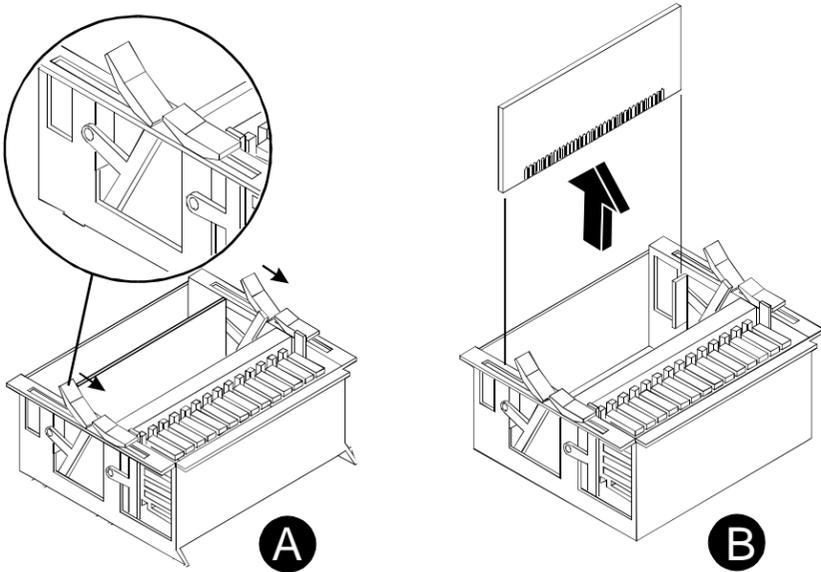
Processor Installation Rules

The HP NetServer E 60 supports either Intel Pentium II or Pentium III processors. Do not mix Pentium II and Pentium III processors in the system. Do not mix processors with different clock speeds (for example, 400 and 450 MHz) in the system. Note that compatible processors may not be identical in appearance.

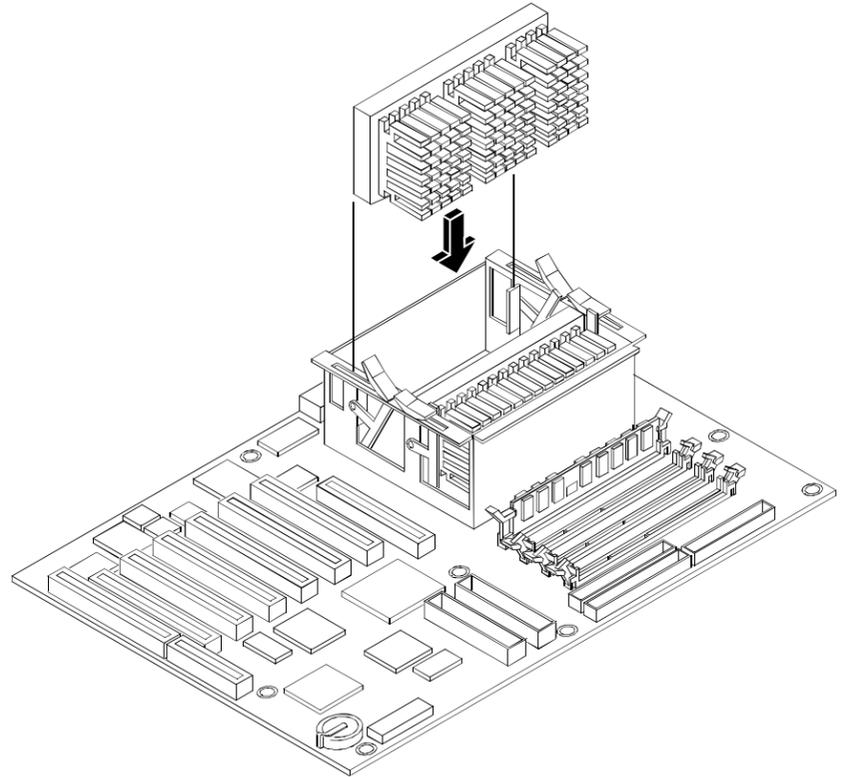
1. Remove the cover: Remove the cover and prepare the NetServer as described in Part 3, and locate the processor cage.



2. Remove the terminator: Rotate the clips open. See Figure A. Hold the terminator resistor module by its edges, and pull it out.



3. Insert the processor: Align the second processor over the empty slot with the heat sink oriented the same as the first processor, and press the processor into the socket. The securing clips will only lay down flat against the top of the processor when the processor is fully seated.



4. Replace the cover: If you are not installing accessory boards, memory, or mass storage devices, replace the NetServer cover as described in Part 8: "Replace the Cover."

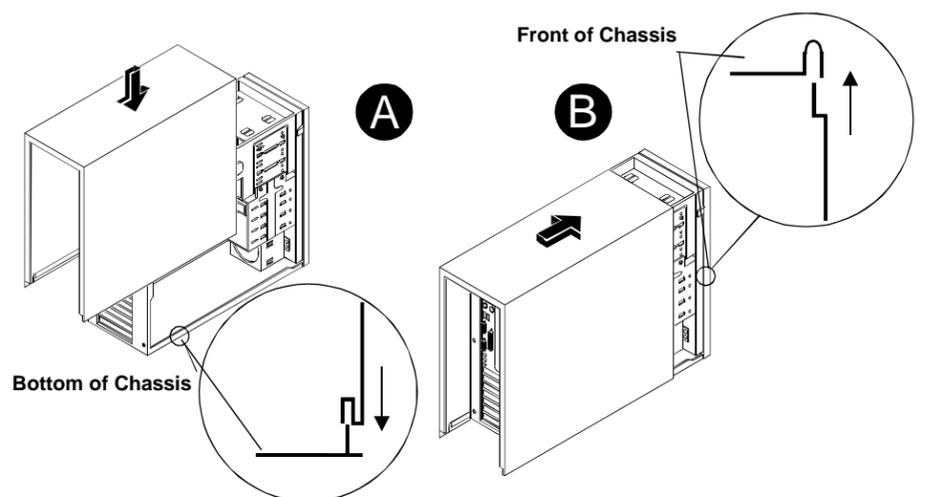
8 Replace the Cover

1. Position the cooling duct/cover: Return the duct/cover to the shut position, and snap into place.

2. Replace the NetServer cover:

- Place one hand on either side of the cover and press inward lightly to assist in aligning the inside flange of the cover with the bottom edge of the chassis. See Figure A.
- Slide forward. See Figure B.

3. Replace the screws: Replace the six screws in the cover.

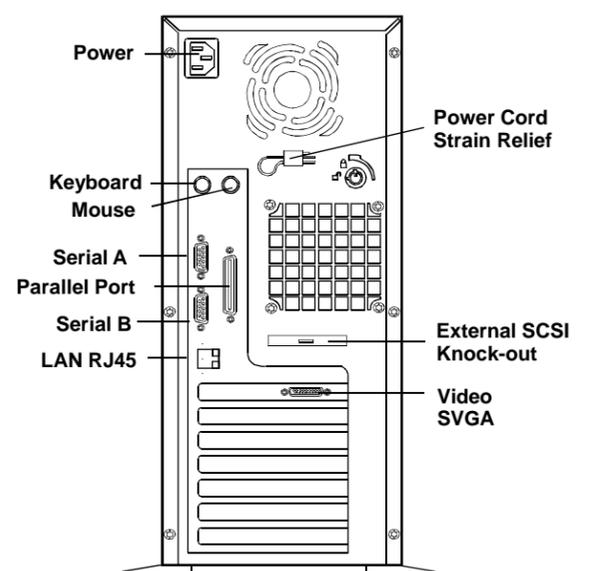


9 Connect Monitor, Keyboard, and Mouse

1. Connect cables: Connect the monitor, keyboard, and mouse to the HP NetServer and plug in the power cords to the NetServer and to the monitor.

2. Secure cord: Secure server power cord with the power cord strain relief.

3. Connect UPS: If you have an Uninterruptible Power Supply (UPS), install it and turn it on. Refer to the user guide included with the UPS for instructions.



10 Verify Installed Accessories (Optional)

You may now verify accessories you have installed. These include memory, mass storage devices, and plug-and-play accessory boards.

To verify installed hardware:

- 1. View the boot screen:** Turn on the HP NetServer and monitor. View the text that displays on the boot screen as the system boots. This includes:
 - System memory total
 - Processor speed and number
 - IDE mass storage devices found
 - SCSI mass storage devices found

NOTE Non-plug-and-play adapter boards installed in the NetServer cannot be detected at boot time. Only plug-and-play boards will be displayed on the boot screen.

- 2. View the System Configuration screen:** After the system BIOS is initialized, the System Configuration screen is displayed for a few seconds. Press the Pause key to continue viewing the screen. The System Configuration screen shows the NetServer's hardware configuration. This includes:

- Processor information
- System memory information
- System I/O port information
- Plug-and-play PCI adapter boards

NOTE Non-plug-and-play adapter boards installed in the NetServer cannot be detected at boot time. Only plug-and-play boards will be displayed on the System Configuration screen.

NOTE SCSI devices connected to a SCSI adapter board cannot be displayed at boot time. Only IDE mass storage devices will be displayed on the System Configuration screen.

Any hardware you have installed that does not show up on either of these screens (excluding the exceptions noted above) indicates a defective component or improper installation.

11 Configure the HP NetServer

- 1. Turn on the NetServer and monitor,** and insert the *HP NetServer Navigator CD-ROM* into the CD-ROM drive. Turn the power off, wait 10 seconds and turn the power on again.

If the system fails to boot, follow the instructions on the screen:

- Press F2 to enter Setup (to security, configure system I/O, or allocate system resources).
- Press F4 to accept automatic configuration update. You may get a message about updating the BIOS - this is a firmware update only and does not configure hardware resources.

- 2. Allocate system resources to ISA boards:** If you have installed an ISA non-plug-and-play accessory board, you must run the BIOS Setup utility to allocate system resources to the board. For instructions on allocating system resources, refer to "Configuring ISA Non-Plug-and-Play Boards" in Chapter 11, "Using the BIOS Setup and SCSI Select Utilities" in the *HP NetServer E 60 Installation Guide*.

- 3. View the Readme file:** When the Navigator CD-ROM boots, select "Readme File" from the HP NetServer Navigator Main Menu. The README file contains the latest information to help you install your NetServer. Read it carefully before beginning your installation. If the native language needs to be changed, select "User Preferences" and select the appropriate language.

- 4. Run Configuration Assistant:** Go to the HP NetServer Navigator Main Menu and choose "Configuration Assistant." Choose one of the three options, "Express," "Custom," or "Replicate," described in the next column.

NOTE If you plan to use the Remote Console feature (see Part 12) you must create the Utility Partition. If you choose "Express" configuration, the partition will be created automatically. If you perform a "Custom" configuration, you will need to choose "Install/Update Utility Partition" from within Configuration Assistant to create the partition.

Express: Recommended. This option walks you through the installation and configuration of your HP NetServer, including automatic installation of the NOS (Windows NT™ or NetWare® only) using HP-recommended defaults.

Custom: This option is for users familiar with setting up servers and doing NOS installations.

Replicate: To duplicate the configuration of an already configured HP NetServer to an identical HP NetServer. This option requires the prior creation of a replicate diskette.

- 5. Select the NOS** you plan to install.

- 6. Select the installation mode:** If you choose certain versions of Novell® NetWare® or Microsoft® Windows NT™ Server, you will be prompted to choose between automated or manual NOS install.

Choose automated mode for first-time installation of Novell NetWare or Microsoft Windows NT Server on a factory-configured HP E-Series NetServer.

Perform a manual install if you are installing a NOS other than Novell NetWare or Microsoft Windows NT Server, or if you replaced HP components (for example, replacing an HP NIC with a NIC not on HP's Tested Products List (TPL) or added a SCSI controller board from a third party).

- 7. Install the NOS:** If you selected the HP automated installation process, you will be guided through the process by a series of HP display screens.

If you selected the NOS vendor's installation process (manual install), view and print the HP NOS installation instructions, and create the driver disk(s) for the NOS. Install the NOS using the installation utility supplied with the NOS.

12 Install Additional HP Utility and Management Software

- 1. Install and Configure Tape Backup Software:** If your NetServer includes a preinstalled tape backup device, install and configure the tape backup software now. See the *Tape Backup Getting Started Guide* online documentation found on the *HP NetServer Documentation CD-ROM* for instructions on installing and configuring the tape backup software.
- 2. Install Online Documentation (optional):** The Microsoft Windows-based HP Information Assistant viewer may be installed from the *HP NetServer Documentation CD-ROM* (refer to your User Guide for details). Installing HP Information Assistant gives you access to all the system and reference documentation for your HP NetServer-- it is your complete reference.
- 3. Configure the Remote Console feature (optional):** The Remote Console feature allows you to access server Utility Partition diagnostics and utilities by redirecting the server's console to a remote PC. Refer to your *HP NetServer Server Management Reference Guide* for details.
- 4. Install Server Management Software (optional):** Additional free HP TopTools software included with your system enables you to manage and monitor your HP NetServer at the server, over the network, or from a remote location. Refer to your *HP NetServer Server Management Reference Guide* for details.