

HP NetServer Ultra Hot Swap Hard Disk Drive and Tray



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Hewlett-Packard Company
Network Server Division
Technical Communications/MS 45SLE
10955 Tantau Avenue
Cupertino, CA 95014-8059 USA

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Audience Assumptions

The guide is for the person who installs, administers, and troubleshoots LAN servers. Hewlett-Packard Company assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

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1 Installation Procedure

This guide describes how to attach an Ultra hot swap hard disk drive to a hot swap tray and install the hard disk drive in your computer. Additionally, this guide provides the cautions and instructions for removing and storing the hard disk drive.

Installing the Hot Swap Hard Disk Drive in a Tray (optional)

If you purchase a hot swap tray accessory (D3349B) separately from the hot swap hard disk drive, follow these steps to attach the tray accessory:

1. Make sure that the hot swap hard disk drive meets the specifications written on the hot swap tray label. If the hot swap drive is capable of running Ultra2 at LVD (low voltage differential) signal levels, a jumper must be installed on the drive to force the drive into SE (single-ended) mode. Refer to the drive manual for the location of a “Force SE” jumper.

NOTE Not all Ultra2/LVD drives have this jumper. If the drive does not have the Force SE jumper, that drive model will probably not work with HP NetServer Ultra Hot Swap backplanes.

2. Attach the drive to the hot swap tray with the screws provided in the order shown in Figure 1-1.

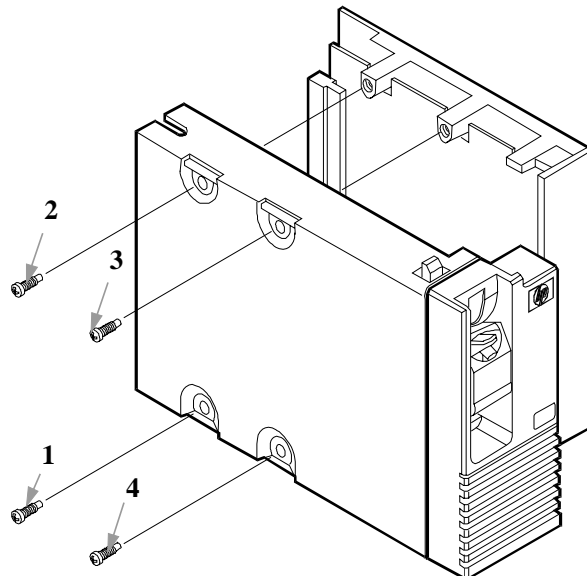


Figure 1-1. Hot Swap Hard Disk Drive and Tray Installation

Unpacking and Shipping

Your system has a shipping plug to ensure that the hot swap hard disk drive is not damaged while it is being transported. Save this plug. If you plan to transport your system, reinstall your shipping plug as shown in Figure 1-2.

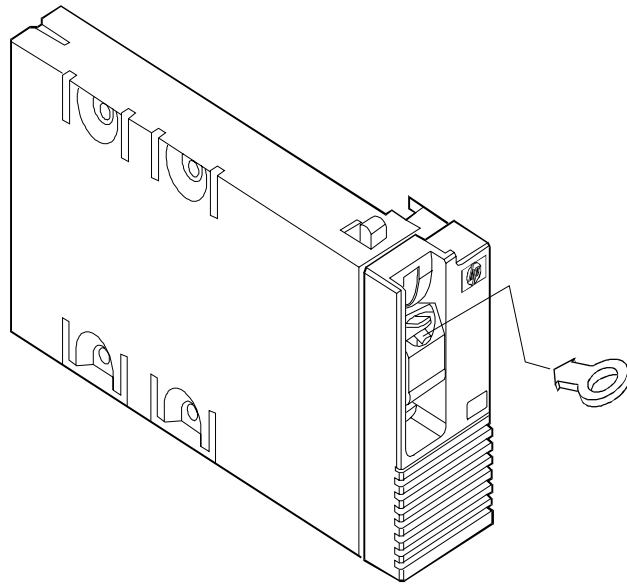


Figure 1-2. Shipping Plug

Installing the Hot Swap Hard Disk Drive

CAUTION

Use one of the six (6) vertical shelves in the system. *Do not* attempt to install the hot swap hard disk drive in the horizontal shelves.

Protect the hot swap hard disk drive from static electricity by leaving it in its antistatic bag until you are ready to install it. Before handling the hard disk drive, touch any unpainted metal surface to discharge static electricity. When you remove the hard disk drive from the antistatic bag, handle it only by the frame.

Do not touch the electrical components. Place the hard disk drive on the antistatic bag whenever you set it down.

1. If there is a filler panel in the disk shelf, remove that panel.
2. On the hot swap hard disk drive, press the locking tab down, and lift the lever up as far as it can go. (See Figure 1-3.) Lifting the lever retracts the locking pin at the top of the hard disk drive.

3. Holding the hard disk drive as shown in Figure 1-3, slide the hot swap hard disk drive slowly into the shelf until it stops.
4. Press the lever down as far as it will go.

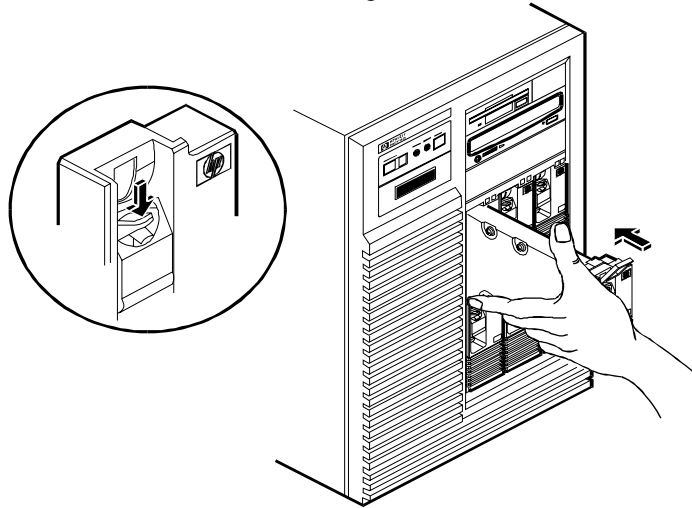


Figure 1-3. Installing the Hot Swap Hard Disk Drive

Removing the Hot Swap Hard Disk Drive

1. To unlock the hot swap hard disk drive, push the tab down and then lift the front lever.
2. Pull the hard disk drive out about an inch (2.5 cm) to break the power connection.
3. Wait about 30 seconds for the hard disk drive to stop spinning and the drive heads to park.
4. Use your hand to support the bottom of the hard disk drive, as shown in Figure 1-4. Slowly pull the hard disk drive straight out. *Do not allow the hard disk drive to fall.*
5. Turn the hard disk drive slowly to its horizontal storage orientation.
6. Place the hard disk drive in an electrostatic protected container. *Do not stack hot swap hard disk drives.*

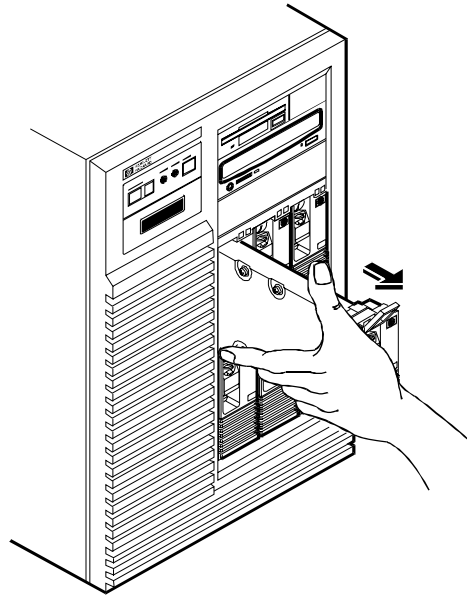


Figure 1-4. Removing the Hot Swap Hard Disk Drive

2 Disk Drive Characteristics

The proper settings for the following items will depend on the operating system (NetWare, MS-DOS, OS/2, Windows NT, UNIX, or Banyan Vines) and corresponding version number:

- Extended Translation setting for the controller
- Partitions, logical drives or divisions for the hot swap hard disk drive

For non-UNIX systems, partition and logical hot swap hard disk drive sizes also depend on:

- Partition type (Bootable or Non-bootable)
- File system (FAT, HPFS, NTFS)

To determine the appropriate controller and disk drive configuration, consult the section below for your operating system.

NetWare and DOS

NOTE If you want to write core dumps onto the hard disk drive, ensure that the drive has enough space for a complete image of your total memory.

Table 2-1. Partitioning Information for NetWare and DOS

| System Software on Disk | Disk Use | Extended Translation for > 1 GB Drive | Primary (Boot) Partition | Extended Partition | Logical Disk |
|--------------------------------|---------------------------|---|--|---------------------------|---------------------|
| NetWare with DOS | Operating system and data | Disabled | 30-50 MB recommended, 1 GB maximum for DOS | None | N/A |
| NetWare only | Data only | Disabled | None | None | N/A |
| DOS only | Operating system | Enabled | 2 GB maximum | Rest of disk | 2 GB maximum |
| DOS only | Data only | Enabled | None | Disk capacity | 2 GB maximum |

OS/2 and Windows NT

NOTE Configure the controller with “Extended Translation for Drives > 1 GB” *enabled*.

Table 2-2. Partitioning Information for OS/2 and Windows NT

| Operating System | Maximum Bootable Partition | | Maximum Non-bootable Drive | | |
|-------------------------|----------------------------|------|----------------------------|---------------|---------------|
| | FAT or HPFS | NTFS | FAT | HPFS | NTFS |
| OS/2 2.X | 2 GB | N/A | 2 GB | 64 GB | N/A |
| OS/2 Warp Family | 2 GB | N/A | 2 GB | 64 GB | N/A |
| Windows NT 3.1 | 2 GB | 2 GB | 2 GB | Disk capacity | Disk capacity |
| Windows NT 3.5 | 2 GB | 2 GB | 2 GB | Disk capacity | Disk capacity |
| Windows NT 3.51 | 4 GB | 4 GB | 4 GB | Disk capacity | Disk capacity |
| Windows NT 4.0 | 4 GB | 4 GB | 4 GB | N/A | Disk capacity |

UNIX and Banyan Vines

Table 2-3. Partitioning Information for UNIX

| Operating System | Extended Translation for > 1 GB Drive | Maximum Size | | Maximum Number | |
|--|---------------------------------------|---------------|----------------------------|--------------------|------------------------|
| | | Partition | File system (division) | Partitions on Disk | Divisions in Partition |
| SCO UNIX 3.2.4.2 and ODT/OS 3.0 | Disabled | Disk capacity | 1 GB (root) 2 GB (data) | 4 | 7 |
| SCO UNIX 3.2v5.0 and OS 5.0.X | Disabled | Disk capacity | 1 TB | 4 | 7 |
| UnixWare 1.1 | Disabled | Disk capacity | 2 GB | 4 | 16 slices |
| UnixWare 2.0.X | Disabled | Disk capacity | 2 GB - 1 TB | 4 | 16 slices |
| UnixWare 2.1.X | Disabled | Disk capacity | 2 GB - 1 TB | 4 | 184 slices |
| Banyan VINES 5.54 and 6.X, 7.X | Disabled | Disk capacity | 2 GB | 1 | N/A |

3 Application Alerts

D4903A Cooling Requirements

The D4903A mass storage device is the first of a family of high performance 10K RPM drives. Adequate cooling is very important. The D4903A drive is currently supported in the LH Plus, LH Pro, LD Pro, LX Pro, LXe Pro, and Storage System/6. The drive is not supported in the LH and LS.

D3604A/B Storage System/6 using Ultra SCSI Drives

Ultra SCSI is an industry standard for transferring data. HP NetServer drives that come installed as part of Ultra Hot Swap drive accessories are Ultra SCSI capable. However, Ultra SCSI requires that all components of the system be Ultra SCSI capable, including the controller, the drives, and the connections. Since the D3604A/B Storage System/6 is Fast SCSI (20 MB/sec) capable but not Ultra SCSI capable, this drive cannot be used in Ultra SCSI mode when installed into a D3604A/B Storage System/6.

Fast SCSI (not Ultra SCSI) must be enabled in the host system, if it is connected to the Storage System/6 with Ultra SCSI drives installed. Complete information on using Ultra SCSI in your NetServer can be found on the HP NetServer "News Updates and Information" web page at:

http://www.hp.com:80/netserver/support/news_main.html
under "Using Ultra SCSI in your HP NetServer"

Hot Swap Drives Must be Parked Prior to Removal

To prevent handling damage (for example, head slaps or head actuator unlocking) to a good drive during removal, perform the following steps:

1. Unlatch the drive.
2. Pull the drive out about an inch (2.5 cm) to break the power connection.
3. Wait about 30 seconds for the drive to stop spinning and the drive heads to park.
4. Carefully remove the drive.

A Warranty and Support

The hardware warranty below applies to components purchased as accessories. If your component was factory installed as part of a HP NetServer model, refer to the *Warranty Statement* provided with your system documentation.

Hardware Warranty

This HP NetServer accessory is covered by a limited hardware warranty for a period of one year from receipt by the original end-user purchaser.

Once installed in an HP NetServer, this accessory may carry the longer of either a one-year warranty or the remainder of the warranty period for the HP NetServer in which it is installed.

This accessory may be serviced through expedited part shipment. In this event, HP will prepay shipping charges, duty, and taxes; provide telephone assistance on replacement of the component; and pay shipping charges, duty, and taxes for any part that HP asks to be returned.

The customer may be required to run HP-supplied configuration and diagnostic programs before a replacement will be dispatched or an on-site visit is authorized.

Refer to the *Warranty Statement* provided with your original HP NetServer system documentation for the warranty limitations, customer responsibilities, and other terms and conditions.

HP Repair and Telephone Support

Refer to the *HP Warranty and Service/Support Booklet* section of your HP NetServer system documentation for instructions on how to obtain HP repair and telephone support.

HP World Wide Web Site

Refer to the following World Wide Web (WWW) site for technical specifications on Hewlett-Packard hard disk drives:

http://www.hp.com:80/netserver/support/news_main.html

B Regulatory Information

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name: Hewlett-Packard Company
Address: 10955 Tantau Avenue
Cupertino, CA 95052

declares, that the product

Product Name: Hot Swap Hard Disk Drives
Model Number(s): D3581A, D3582A, D3582C, D3583A, D3583C, D4289A
D5039A, D6019A, D7050A
Product Options: N/A

conforms to the following Product Specifications:

Safety: IEC 950:1991 + A1, A2 / EN 60950 (1992) + A1, A2
EMC: CISPR 22:1993 / EN 55022 (1994) - Class B ¹⁾
EN 50082-1:1992 - Generic Immunity
IEC 801-2:1991, 4 kV CD, 8 kV AD
IEC 801-3:1984, 3V/m
IEC 801-4:1988, 0.5 kV Signal Lines, 1 kV Power Lines

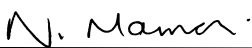
Supplementary Information:

The product herewith complies with the requirements of the following directives, and carries the CE-mark accordingly:

- o Low Voltage Directive 72/23/EEC
- o EMC Directive 89/336/EEC

1) This product was tested in a typical configuration with a Hewlett-Packard NetServer computer and peripherals.

Cupertino, February 8, 2000



Nigel Marrion/Quality Engineering Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department ZQ / Standards Europe, Herrenberger Straße 130, D-7030 Böblingen (FAX: + 49-7031-143143)