

Veritas Appliance

Hardware Service Procedure

Storage Disk Drive Replacement: NetBackup 5230/5240 Appliance

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Purpose

This document describes the process for replacing the storage disk drives in a NetBackup 5230 Appliance and a NetBackup 5240 Appliance.

Affected Models

NetBackup 5230 Appliance

The NetBackup 5230 Appliance is a 2U system with 4 TB or 14 TB of internal storage. It consists of either a stand-alone base server or a base server with one to four attached 3U Veritas Storage Shelves. From the front panel of the NetBackup 5230, you can view 12 disk slots, arranged horizontally. Two 1-TB SAS disks are installed in slots 0 and 1. Slots 2 and 3 hold blank carriers. The remaining slots hold eight storage disks with a capacity of 1 TB or 3 TB each. All eight storage disks must have the same capacity. Using 3-TB disks in slots 0 or 1 is not permitted. A small control panel is on the right side of the front panel. It contains system LEDs and operations buttons, including the power button.

Figure 1 Front view of the NetBackup 5230 Appliances

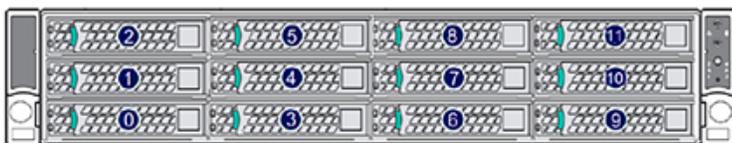
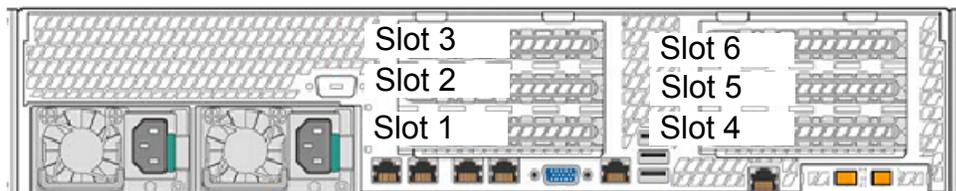


Figure 2 Rear view of the NetBackup 5230 Appliances



The power sockets are on the left side of the rear panel. The rear panel contains six PCIe slots. Slot 1 is used for the external storage RAID controller if the appliance is connected to a storage shelf. The remaining slots may hold 10 Gb Ethernet NICs or Fibre Channel HBAs, depending on the configuration. An internal storage RAID controller is installed on the mainboard of the appliance.

NetBackup 5240 Appliance

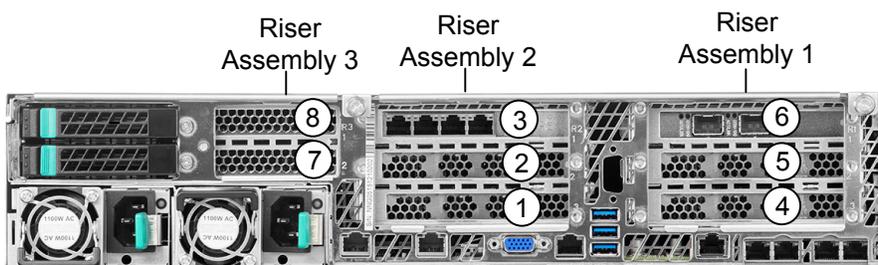
The NetBackup 5240 Appliance is a hardware and software storage system that can scale to 220 TB of available backup capacity. It consists of a NetBackup 5240 Appliance and up to four optional NetBackup 5240 Appliance Storage Shelves. By itself, the 2U NetBackup 5240 Appliance offers internal data storage from 4TB to 27TBs, depending on the storage configuration you purchase. When additional storage is required, you can attach up to four 2U storage shelves to the NetBackup 5240 Appliance. Each NetBackup 5240 Appliance Storage Shelf offers 49TBs of backup storage capacity. Attaching four storage shelves offers 196TBs of storage, in addition to the internal storage that is available with the NetBackup 5240 Appliance.

SAS-3 cables are used to connect the NetBackup 5240 Appliance to the storage shelves. SAS-3 cables are also used to connect the storage shelves to each other.

Figure 3 Front view of the NetBackup 5240 Appliance



Figure 4 Rear view of the NetBackup 5240 Appliance



Warning: You must also unplug the unit from all AC power sources before you remove the cover. If the power cords are still connected, internal standby voltages could harm personnel and equipment.

Onsite Policies and Procedures

Electrical safety

The static discharged by human bodies can damage static-sensitive components on the boards. When installing and maintaining the equipment, observe appropriate electrostatic safety precautions to prevent personnel injuries or device damage.

When operating a device in an electrostatic sensitive area, you must take electrostatic-discharge (ESD)-preventive measures. These include wearing ESD-preventive gloves, an ESD-preventive wrist strap, and ESD-preventive clothes to avoid personnel injury or device damage.

To prevent damage to the device, pay attention to the following during operations:

- Do not touch devices with bare hands because ESD from the human body may damage the electrostatically sensitive elements on a board.
- When dealing with the server or any of the internal components, wear an ESD-preventive wrist strap, ESD-preventive gloves, and ESD-preventive suit.

Hardware part replacement procedure

Removing and replacing a faulty storage disk drive

This section describes how to remove and replace a faulty storage disk drive from the chassis in a NetBackup 5230 Appliance and a NetBackup 5240 Appliance.

In both a NetBackup 5230 Appliance and a NetBackup 5240 Appliance, the storage disk drives are located in slots 4 through 11. In both appliances, slot 11 contains the hot spare disk.

Slots 4 through 11 are noted in the following figures.

Figure 5 NetBackup 5230 Appliance storage disk drive locations



Figure 6 NetBackup 5240 Appliance storage disk drive locations

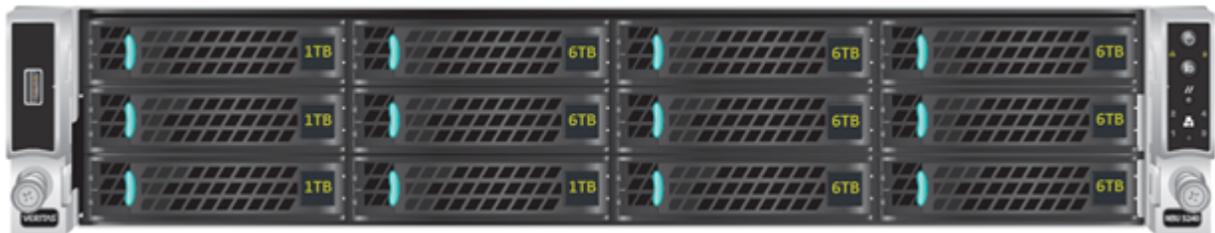


Note: Do not mix disk drive sizes. Replacement drives need to match the size of the drives they are replacing.

For NetBackup 5230 Appliance, only replace 1TB drives with 1TB drives and 3TB drives with 3TB drives. If a drive does not have a label, it is 1TB in size. The picture below shows how the drives are labeled.



For NetBackup 5240 Appliance, only replace 1TB drives with 1TB drives, 3TB drives with 3TB drives, and 6TB drives with 6TB drives. If a drive does not have a label, it is 1TB in size. The picture below shows how the drives are labeled.



Note: The operating system drives in slots 0 and 1 can only be 1TB size.

This repair can be accomplished with the appliance installed in the rack.

Note: If the appliance has attached storage shelves, these do not need to be turned off while the appliance is being serviced.

Requirements

- NetBackup 5230 Appliance replacement 1-TB or 3-TB hard disk drive
or
- NetBackup 5240 Appliance replacement 1-TB, 3-TB, or 6-TB hard disk drive

- ESD wrist strap

To locate and identify the appliance that has the faulty disk drive

- Go to the unit with the failed component.

To locate and then remove the faulty storage disk drive

- 1 Put on a grounded ESD-compliant wrist strap or take other ESD-preventive measures.

Note: The static discharged by human bodies can damage static-sensitive components on the boards. When installing and maintaining the equipment, you must observe appropriate electrostatic safety precautions to prevent personnel injuries or device damage.

- 2 If applicable, remove the front bezel. Grip the bezel on its sides and pull it from the appliance.
- 3 In the front panel, locate the drive to be replaced. The drive must be in slots 4-11 and the drive status LED must be a solid amber color before you disconnect the drive. The drive status LED is the top LED of the two LEDs that are located on the disk drive face plate.



If the LED is blinking amber, the disk drive is in the process of rebuilding and must not be disturbed. If the drive status LED is off, the drive is working properly.

- 4 Press the green button on the left side of the drive carrier to release the disk drive lever.



- 5 Pull the lever open completely but do not slide the drive out of the slot. Let the drive motor stop spinning. This takes about 30 seconds.
- 6 Slide the disk drive and its carrier out of the slot.



Caution: You must complete the hard disk drive swap within three minutes. Leaving the disk drive slot open for longer than three minutes can result in the appliance overheating and cause other components to fail.

- 7 Place the faulty disk drive in an ESD-compliant bag.

To install the storage disk drive

- 1 Put on a grounded ESD-compliant wrist strap or take other ESD-preventive measures.

Note: The static discharged by human bodies can damage static-sensitive components on the boards. When installing and maintaining the equipment, you must observe appropriate electrostatic safety precautions to prevent personnel injuries or device damage.

- 2 Remove the replacement disk drive from the ESD-protective wrapper.
- 3 Press the green button on the drive carrier to release the lever.
- 4 Pull the lever open completely.
- 5 Slide the disk drive and its carrier completely into the slot.



- 6 Close the lever and make sure that the disk drive cover is flush with the front panel.



- 7 Check the status of the LEDs on the drive that you replaced. The drive activity LED turns green when the connection is good.

After a short period, the drive status LED will start blinking amber to indicate that the rebuild is in progress.

