**DS4243 and DS4246 Disk Shelf Overview**

**Front view**
- Up to 24 disk drives
- (See the Hardware Universe for supported disk drives)
- Left mounting flange
- Right mounting flange
- Shelf LEDs:
  - power
  - shelf fault
  - activity
- Two-digit shelf ID digital display
- Tab for changing the shelf ID
- Left ear cover
- Disk drive bay numbering 0-23
- Right ear cover

**Rear view**
- Left ear cover
- Slot A
- Slot B
- IOM3
- IOM fault LED
- Power supply LEDs:
  - power
  - DC fault
  - fan fault
  - AC fault
- ACP ports
- SAS ports
- Two or four power supplies (each with two integrated fans)
- 2 I/O modules (IOMs)
- 2 I/O blanks

**Note:** DS4243 shelves ship with two or four power supplies, depending on the type of disk drives.

**Note:** The ACP and SAS ports on the IOMs are designated as circle and square ports.

**Alternate Control Path (ACP) capability**

For maximum storage availability and stability, storage systems with disk shelves have the option to use the ACP capability. ACP is a protocol that enables Data ONTAP® to manage and control the disk shelf storage subsystem. It uses a separate network from the data path so that it can independently perform recovery whenever certain interruptions are detected in the data path.

To use the ACP capability, you must cable the ACP ports on the disk shelves and connect the disk shelves to the dedicated network interface on each storage system controller. At system setup, you enable ACP functionality by configuring ACP parameters. If your storage system does not have a dedicated onboard network interface for ACP, you assign one at system setup.

Standard ACP cabling rules apply to all storage systems and can be found in the Universal SAS and ACP Cabling Guides. ACP functionality, configuration, and enabling information can be found in the Data ONTAP Storage Management Guide.

**Note:** If all initial storage system setup you choose not to use the ACP capability, you can use it later by cabling the ACP connections and enabling ACP by running setup again.

**Component replacement map**

**Front**
- Up to 24 disk drives
- Two or four power supplies

**Back**
- Two IOMs

**Note:** New DS4243 and DS4246 disk shelves are visually distinguished by the following labeling:
- The disk shelf model, DS4243 or DS4246, appears on the front right ear cover of the disk shelf.
- IOM3 appears on the IOM face for DS4243 disk shelves. IOM6 appears on the face of the IOM for DS4246 disk shelves.

**Hot-adding disk shelves**

If you are hot-adding disk shelves to an existing storage system, see the applicable document for the system requirements and procedure.

- For MetroCluster systems using SAS optical cables, see Configuring a stretch MetroCluster system with SAS disk shelves and SAS optical cables.
- For MetroCluster systems using FibreBridge 6500N bridges, see Configuring a MetroCluster system with SAS disk shelves and FibreBridge 6500N bridges.

These documents can be found on the NetApp Support Site at support.netapp.com.

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DS4243 and DS4246 Disk Shelf Installation and Setup

System requirements
For the most current information about supported Data ONTAP releases, platforms, SAS disk shelves, disk drives, and SAS cables, see the Hardware Universe on the NetApp Support Site at support.netapp.com.

Documentation
For more disk shelf and safety information, see the DS4243, DS2246, DS4466, and DS4246 Disk Shelf Installation and Service Guide.

1 Ground yourself
Ground yourself to the storage system chassis using the grounding leash that came with your storage system.

Note: You do not need to ground disk shelves; grounding is done through the power cords.

2 Installing the disk shelf in a rack
If the disk shelf did not come in a cabinet, you must install it in an equipment rack using the four-post rail kit or the two-post telco tray kit that came with your disk shelf. See the rack installation flyer that came with the rack kit for detailed instructions.

Note: If you are installing the disk shelf in a two-post mid-mount installation, you must use the mid-mount telco kit, which includes brackets, in addition to the two-post telco tray kit.

Note: One power outlet is required for each power supply in a disk shelf.

3 Set disk shelf IDs
1. Connect power cords to the disk shelf and turn on the power to the disk shelf.
2. Visually verify that the ID for each disk shelf is unique. If not, set the disk shelf ID:
   a. Remove the left ear cover.
   b. Press and hold the U-shaped tab or button until the first digit blinks.
   c. Press the tab or button until the correct number is displayed.
   d. Repeat steps b and c for the second digit.
   e. Press and hold the tab or button until the second number stops blinking.
   f. Both numbers blink and the operator display panel fault LED illuminates in about five seconds.
   g. Power-cycle the disk shelf to make the new disk shelf ID take effect.

Note: Depending on the disk drive type, your disk shelf might have two or four power supplies. Connect power supplies in slots 1 and 3 to one power source and power supplies in slots 2 and 4 to a different power source.

CAUTION
LIFTING HAZARD
110 lbs (49.9 kg)
To reduce the weight of the disk shelf, remove the power supplies and IOMs before lifting.

4 Cable the system
If you are using HBAs, they must already be installed in the storage system.
1. Cable controllers.
2. Cable disk shelves.

Following are steps to cable two common configurations. For SAS and ACP rules, and more cabling configurations, see the Universal SAS and ACP Cabling Guide.

Single controller with two quad-port SAS HBAs supporting two stacks of disk shelves
Dual-path connectivity

High availability (HA) pair with two quad-port SAS HBAs supporting two stacks of disk shelves
Multipath HA connectivity

Boot the system and proceed with setup
See the Installation and Setup Instructions that came with your storage system for booting your storage system and for system setup.

- To take advantage of the ACP capability, you can enable it at setup or later. See the Data ONTAP Software Setup Guide for the setup worksheet and other setup information.