

StorNext M-Series Metadata Array/Expansion Unit: Disk Drive Replacement

Follow the steps in the document to replace a disk drive in your StorNext M-Series metadata array:

To replace the disk drive, refer to the following sections:

- [Replacing the Metadata Array/Expansion Unit Drives](#) on page 2
- [Replacing Metadata Array/Expansion Unit Hot Spare Drives](#) on page 5

Replacing the Metadata Array/Expansion Unit Drives

StorNext M-Series Metadata Array disk drive replacement instructions apply to all M-Series Metadata Appliance (M660, M440, and M330) products.

The term “Expansion Unit” applies only to M660 Metadata Appliances.

Refer to the hardware guide of your StorNext Metadata Appliance for a description of the disk and RAID layout of the StorNext metadata storage devices.

Replacing Metadata Array/Expansion Unit drives consists of the following steps:

- 1 [Preparing to Replace the Drives](#)
- 2 [Replacing the Metadata Array/Expansion Unit Drives](#) on page 3

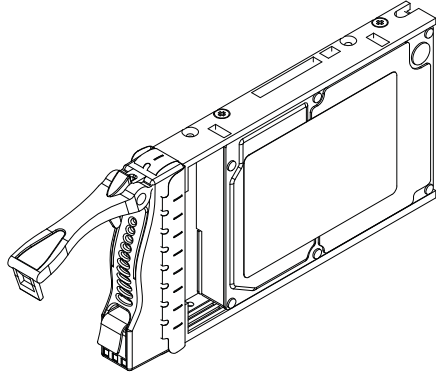
Preparing to Replace the Drives

Before beginning the replacement procedure, make sure that you have the required replacement kit.

Required Replacement Kit

Refer to the following tables for the replacement kit contents (see [Table 1](#)):

Table 1 Drive Replacement Kit

Qty	Illustration	Description
1		Replacement drive

Required Tools

The following tools are required:

- None

Replacing the Metadata Array/Expansion Unit Drives

Replacing the Metadata Array/Expansion Unit drives consists of the following steps:

- 1 [Identifying the Failed Drive](#)

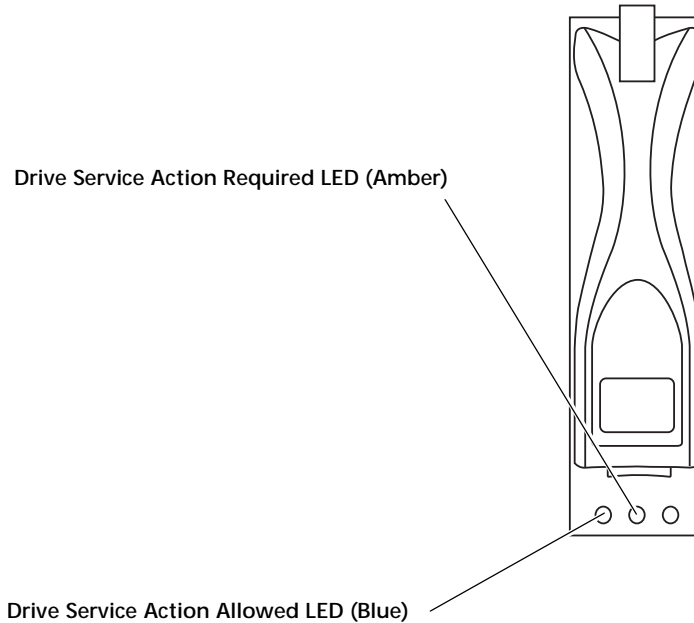
2 [Replacing the Failed Drive](#) on page 3

Identifying the Failed Drive

Before you can replace the failed drive, you must identify which drive has failed.

- 1 If a fault is detected, the amber **Drive Service Action Required** LED is on. If you can safely remove the drive, the blue **Service Action Allowed** LED is on (see [Figure 1](#)).

Figure 1 Drive LEDs

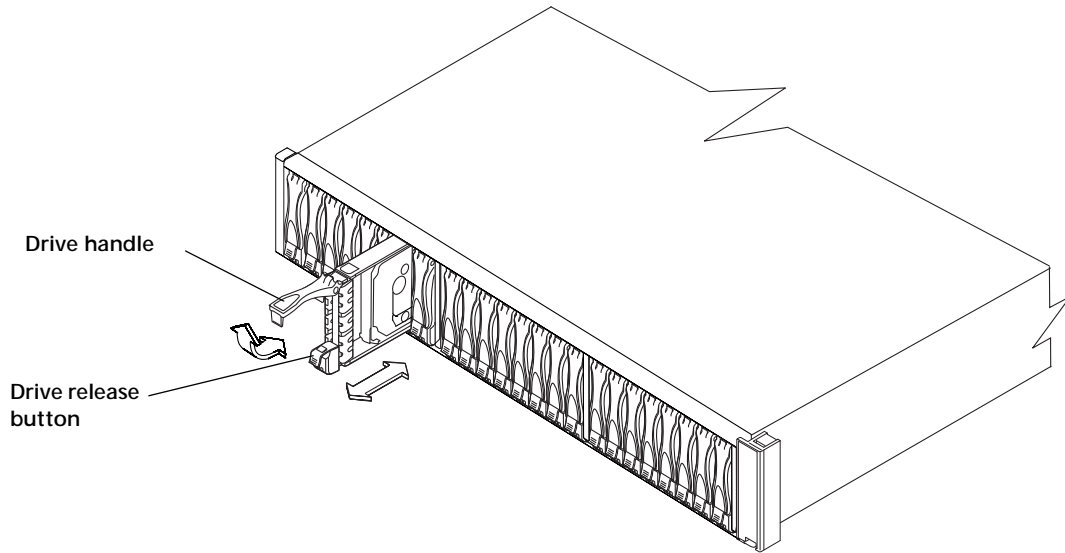


Replacing the Failed Drive

Once you have identified the failed drive:

- 1 Push the drive release button and open the drive carrier handle to release the drive.
- 2 Slide the drive out until it is free of the drive bay. (see [Figure 2](#) on page 4).

Figure 2 Replacing Metadata Array/Expansion Unit Drives



- 3 Insert the replacement drive into drive bay where the failed drive previously was installed.

Note: The replacement drive must be a new replacement drive and not a drive removed from another StorNext M-Series system.

Note: Replacement drives must be the identical type of drive removed. HDDs can only use HDD spares, and SSDs can only use SSD spares. Replacement drives must also be the same size or larger than the failed drive. The array controller will generate errors if an incompatible drive is used as a replacement.

The replacement drive will rebuild.

Note: Be aware that the drive once replaced will become the hot spare drive. The original hot spare drive took over for the failed drive.

The Metadata Array/Expansion Unit drive replacement is complete.

Replacing Metadata Array/Expansion Unit Hot Spare Drives

Note: The following procedure is intended only for hot spare drives, not data drives.

StorNext M-Series Metadata Array disk drive replacement instructions apply to all M-Series Metadata Appliance (M660, M440, and M330) products.

The term “Expansion Unit” applies only to M660 Metadata Appliances.

Refer to the hardware guide of your StorNext Metadata Appliance for a description of the disk and RAID layout of the StorNext metadata storage devices.

Replacing Metadata Array or Expansion Unit hot spare drives involve the following steps:

- 1 [Preparing to Replace Hot Spare Drives](#)
- 2 [Identifying the Failed Hot Spare Drive](#) on page 6
- 3 [Complete the Service Menu Procedure](#) on page 6
- 4 [Replacing the Failed Hot Spare Drive](#) on page 7

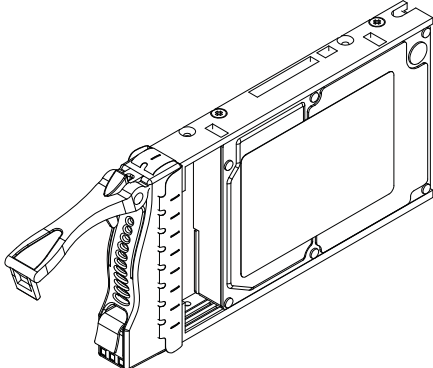
Preparing to Replace Hot Spare Drives

Before beginning the replacement procedure, make sure that you have the required replacement kit.

Required Replacement Kit

Refer to the following tables for the replacement kit contents (see [Figure 2](#)):

Table 2 Hot Spare Drive Replacement Kit

Qty	Illustration	Description
1	 A detailed line drawing of a hot spare drive. It is a long, rectangular metal chassis with a handle on the left side. The handle has a latch mechanism. The front of the drive features a series of vertical slots, likely for ventilation or drive components. The right side has several mounting points and a small circular indicator.	Replacement Metadata Array or Expansion Unit hot spare drive

Required Tools

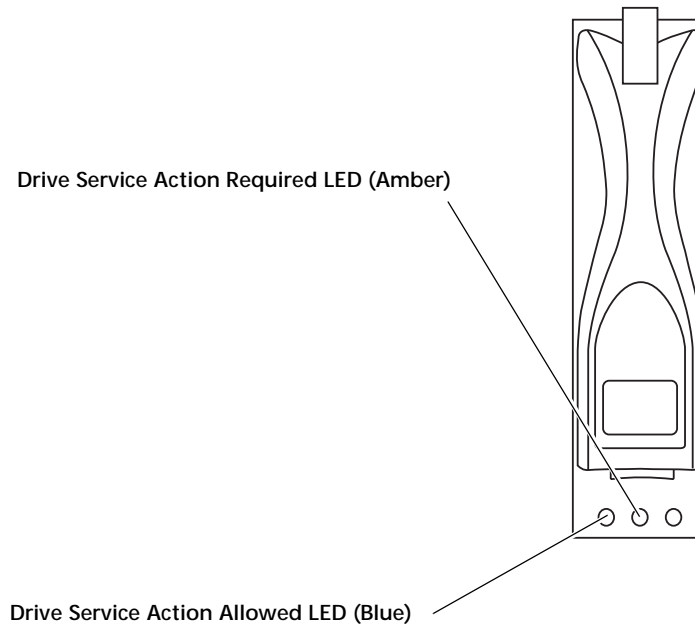
No tools are required.

Identifying the Failed Hot Spare Drive

Before you can replace the failed hot spare drive, you must identify which drive has failed.

- If a fault is detected, the amber **Drive Service Action Required** LED is on.
- If you can safely remove the drive, the blue **Drive Service Action Allowed** LED is on (see [Figure 3](#) on page 6).

Figure 3 Hot Spare Drive LEDs



Complete the Service Menu Procedure

Note: Complete the following procedure in the Service Menu to remove the drive from the hot spare pool for the system before physically removing the hot spare drive from the Metadata Array or Expansion Unit.

To complete the Hot Spare **Service Menu** procedure:

- 1 Open an `ssh` connection to the MDC, and log in as the `stornext` user.
- 2 To login to the command line enter:
 - User: `stornext`
 - Password: The default password is `password`
- 3 Enter:

```
sudo rootsh
```

- 4 Enter the password for the stornext user account a second time.
- 5 Enter the following:

```
sh /opt/DXi/scripts/service.sh
```

- 6 Navigate to **Hardware Configuration > Setup external Array > Replace Hot Spare Drive**. After the system scans for hot spare drives, a list of hot spare drives and the status of each will display in the Service menu.
- 7 Select the failed hot spare drive to replace.
- 8 Select **y** to confirm the selection.
- 9 If you have a replacement drive ready, select **y**.
- 10 After the failed drive is unassigned from the hot spare pool, you will be prompted to replace the failed drive.

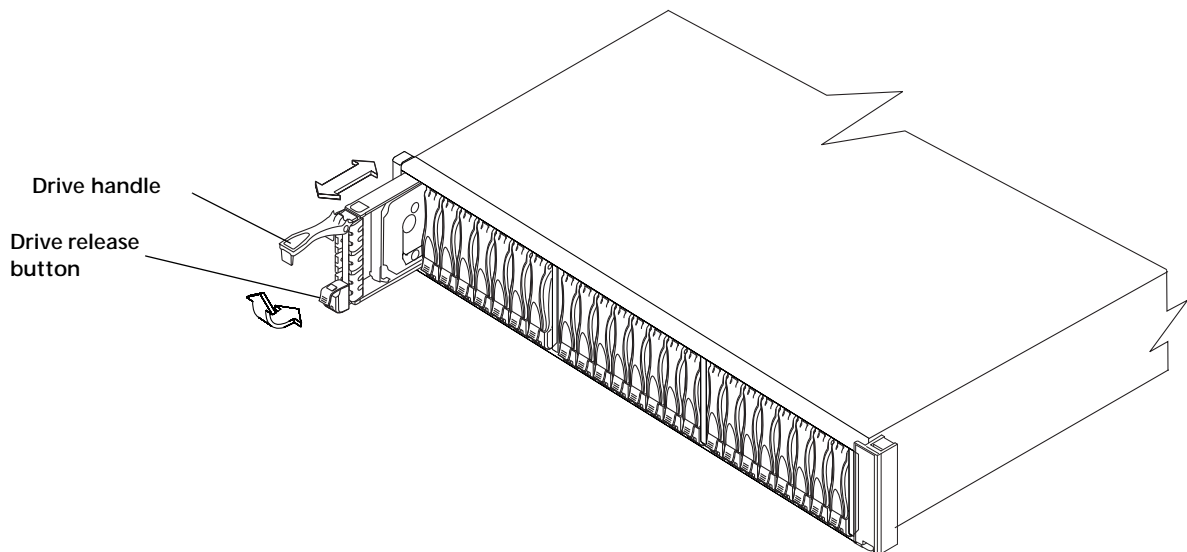
Replacing the Failed Hot Spare Drive

After you have completed the steps in the previous section to [Complete the Service Menu Procedure](#) on page 6, you can replace the hot spare drive.

To replace the failed hot spare drive:

- 1 Push the drive release button and open the drive carrier handle to release the drive.
- 2 Slide the drive out until it is free of the drive bay. (see [Figure 4](#)).

Figure 4 Replacing the Hot Spare Drive



- 3 Insert the replacement hot spare drive into the drive bay where the failed drive previously was installed.

Note: The replacement hot spare drive must be a new replacement drive and not a drive removed from another StorNext M-Series system.

Note: Replacement drives must be the identical type of drive removed. HDDs can only use HDD spares, and SSDs can only use SSD spares. Replacement drives must also be the same size or larger than the failed drive. The array controller will generate errors if an incompatible drive is used as a replacement.

- 4 After the replacement drive has been inserted into the drive bay, press **Enter** in the **Service Menu**. The replacement drive will be reassigned to the hot spare pool.
- 5 Press **Enter** to return to the main **Service Menu**.
- 6 Enter **q** repeatedly until you exit the **Service Menu**.
- 7 Close your SSH session.

The hot spare drive replacement is complete.