Quantum®

Replacing a Fan

StorNext QD6000/QD7000 Base System

StorNext QD6000/QD7000 Base System, Replacing a Fan, 6-68483-01 Rev A, July 2016, Product of USA.

About this guide

This section provides the following information:

- Intended audience
- Prerequisites
- NetApp to Quantum Naming Decoder

Intended audience

This guide is intended for storage customers and technicians.

Prerequisites

Prerequisites for installing and using this product include knowledge of:

- Servers and computer networks
- Network administration
- Storage system installation and configuration
- Storage area network (SAN) management and direct attach storage (DAS)
- Fibre Channel (FC) and Ethernet protocols

NetApp to Quantum Naming Decoder

Use Table 1 to correlate the NetApp product nomenclature to the equivalent Quantum-storage naming conventions.

Table 1 Product Nomenclature

E-Series NetApp Product	Quantum-Storage	Description
Controller-Drive Tray	Base System	Quantum uses Base System when referring to a drive tray with the RAID controllers.
Drive Tray	Expansion Unit	Quantum uses Expansion Unit when referring to a drive tray with the environmental services modules (ESMs).
E5600 (Code Name: Titan)	RAID controller	Four 16Gb/s FC SFP+ host ports
E5500 (Code Name: Soyuz)	RAID controller	Four 16Gb/s FC SFP+ host ports
E5400 (Code Name: Pikes Peak)	RAID controller	Four 8Gb/s FC SFP+ host ports
DE6600 (Code Name: Wembley)	4U 60-drive enclosure	60 3.5 inch disk drives
E5560 or E5660 (DE6600 4U drive enclosure with E5500 or E5600 RAID controllers)	Quantum StorNext QD7000	
E5460 (DE6600 4U drive enclosure with E5400 RAID controllers)	Quantum StorNext QD6000	
E5424 (DE5600 24-drive 2U drive enclosure (Code Name: Camden) with E5400 RAID controllers)	Quantum StorNext QS2400	
E5412 (DE1600 12-drive 2U drive enclosure (Code Name: Ebbets) with E5400 RAID controllers)	Quantum StorNext QS1200	

Replacing a Failed Fan Canister in the E5660 Controller-Drive Tray

To access this product, go to the NetApp® Support Site at support.netapp.com.

Before you replace the fan canister in the E5660 controller-drive tray, gather antistatic protection and a replacement fan canister.

ATTENTION Possible equipment damage due to overheating – If you perform this procedure with the power turned on, you must complete it within 15 minutes to prevent the possibility of overheating the equipment.

You can determine whether you have a failed fan canister in two ways:

- The Recovery Guru directs you to replace a failed fan canister.
- You locate the failed fan canister by checking the Fan Service Action Required LED.

ATTENTION Possible hardware damage – To prevent electrostatic discharge damage to the tray, use proper antistatic protection when handling tray components.

Figure 1. LEDs on a Fan Canister

92006-01
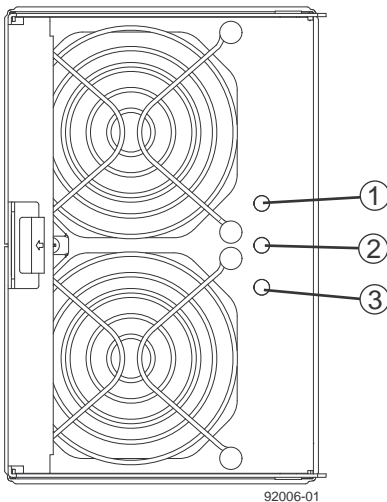
1. Fan Power LED (Green)
2. Fan Service Action Required LED (Amber)
3. Fan Service Action Allowed LED (Blue)

1. Gather support data about your storage array by using one of these methods:.

   - Use the storage management software to collect and save a support bundle of your storage array. From the Array Management Window toolbar, select **Monitor** > **Health** > **Collect Support Data Manually**. Then name and specify a location on your system where you want to save the support bundle.

- Use the command line interface (CLI) to run the `Save StorageArray SupportData` command to gather comprehensive support data about the storage array. For more information about this command, refer to the *Command Line Interface and Script Commands Programming Guide*.

NOTE Gathering support data can temporarily impact performance on your storage array.

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2. Did the Recovery Guru direct you to replace a failed canister?
   - **Yes** – Go to step 3.
   - **No** – Run the Recovery Guru to identify the failed component.

ATTENTION Possible equipment damage – To avoid taking the wrong fan canister offline, contact your Technical Support Representative before performing step 3.

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3. If the Recovery Guru has directed you to replace the fan canister, and the blue Fan Service Action Allowed LED id not on, prepare the canister for removal using the command line or the GUI.
   - On the GUI, click on the image of the tray that contains the fan canister you want to replace. From the Array Management Window toolbar, select **Hardware** > **Prepare for Removal**.
   - On the command line, type this command, and press **Enter**:

SMcli <*ctrl_IP1*> <*ctlr_IP2*> -c "Set tray [*trayID*] [fanCanister [left|right] service Allowed Indicator=on;"

In this command:
   - <*ctlr_IP1*> <*ctlr_IP2*> are the identifiers of the controllers in the controller-drive tray.
   - [*trayID*]is the identifier of the controller-drive tray that contains the fan canister you want to replace. Controller-drive tray ID values are 0 to 99. Be sure to type the square brackets around the value.
   - [left|right] is the identifier of the fan canister you want to replace. Valid values are left or right. Be sure to type the square brackets around the value

4. Put on antistatic protection.

5. Unpack the new fan canister.
   a. Set the new fan canister on a flat, static-free surface near the controller-drive tray.
   b. Save all the packing materials in case you need to return the fan canister.

6. Check the Fan Service Action Required LED to locate the failed fan canister.

   If a fault is detected, the amber Fan Service Action Required LED is on. Before you can safely remove the fan canister, the blue Fan Service Action Allowed LED must be on.

7. Remove the fan canister from the drive tray by pressing on the tab holding the fan canister in place, and then pulling the fan canister toward you.

Figure 2. Removing a Fan Canister

92006-02
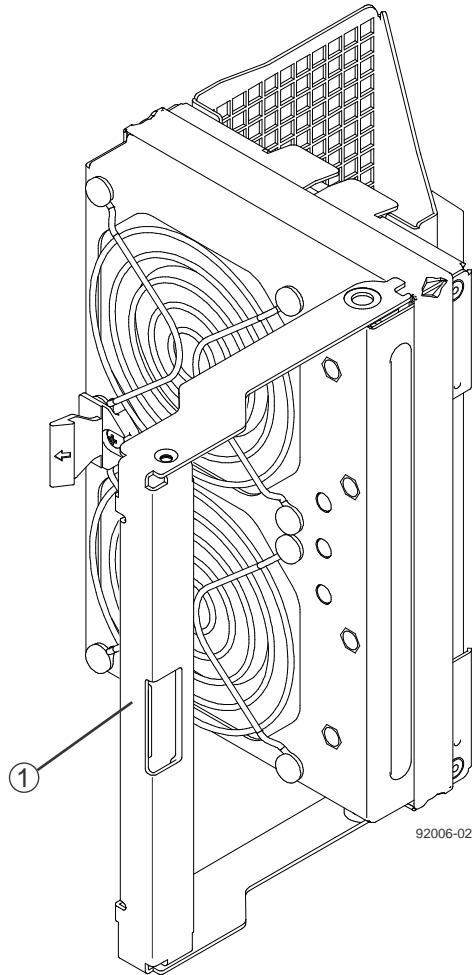
1. Fan Canister Handle

8. Use the fan canister handle to pull the fan canister out of the controller-drive tray.

9. Slide the replacement fan canister all the way into the controller-drive tray, and then move the fan canister so that the tab on the fan canister latches.

10. Check the Fan Power LED and Fan Service Action Required LED on the new fan canister, (Figure 1).

11. Based on the LED status, perform one of these actions:

    -   **The Fan Power LED is on,** *and* **the Fan Service Action Required LED is off** – Go to step 13.

    -   **The Fan Power LED is off,** *or* **the Fan Service Action Required LED is on** – Check that the fan canister is installed correctly. Reinstall the fan canister. Go to step 12.

12. Did this action correct the problem?

    -   **Yes**– Go to step 13.

    -   **No** – If the problem has not been resolved, contact your Technical Support Representative.

13. Check the status of all of the trays in the storage array.

14. Does any component have a Needs Attention status?

   ▪ **Yes** – Click the **Recovery Guru** toolbar button in the Array Management Window, and complete the recovery procedure. If the problem has not been resolved, contact your Technical Support Representative.

   ▪ **No** – Go to step .

15. Remove the antistatic protection.

16. Gather support data about your storage array by using one of these methods:.

   ▪ Use the storage management software to collect and save a support bundle of your storage array. From the Array Management Window toolbar, select **Monitor** > **Health** > **Collect Support Data Manually**. Then name and specify a location on your system where you want to save the support bundle.

   ▪ Use the command line interface (CLI) to run the `Save StorageArray SupportData` command to gather comprehensive support data about the storage array. For more information about this command, refer to the *Command Line Interface and Script Commands Programming Guide*.

NOTE Gathering support data can temporarily impact performance on your storage array.

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