Quantum.

Replacing a Power Supply in an Expansion Unit

StorNext QD7000

Firmware 8.30.xx.xx

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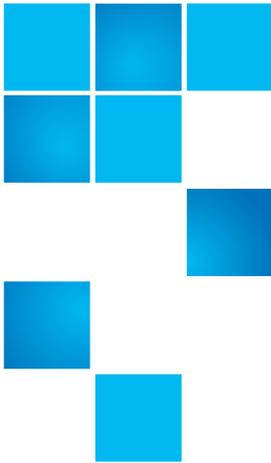
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Preface

This section provides the following information:

- Audience
- Prerequisites
- NetApp to Quantum Naming Decoder
- Product Safety Statements
- Contacts
- Comments
- Quantum Global Services

Audience

This manual 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	Sixty 3.5 inch disk drives

E-Series NetApp Product	Quantum-Storage	Description
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	

Product Safety Statements

Quantum will not be held liable for damage arising from unauthorized use of the product. The user assumes all risk in this aspect.

This unit is engineered and manufactured to meet all safety and regulatory requirements. Be aware that improper use may result in bodily injury, damage to the equipment, or interference with other equipment.

WARNING: Before operating this product, read all instructions and warnings in this document and in the system, safety, and regulatory guide.

警告　在使用本产品之前，请先阅读本文档及系统、安全和法规信息指南中所有的说明和警告信息。

警告　操作本產品前，請先閱讀本文件及系統、安全與法規資訊指南中的指示與警告說明。

ADVERSAL Læs alle instruktioner og advarsler i dette dokument og i *Vejledning om system-sikkerheds- og lovgivningsoplysninger*, før produktet betjenes.

AVERTISSEMENT Avant d'utiliser ce produit, lisez la totalité des instructions et avertissements de ce document et du *Guide d'informations sur le système, la sécurité et la réglementation*.

HINWEIS Lesen Sie vor der Verwendung dieses Produkts alle Anweisungen und Warnhinweise in diesem Dokument und im System, Safety, and Regulatory Information Guide (Info-Handbuch: System, Sicherheit und Richtlinien).

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ADVERTENCIA	Antes de utilizar este producto, lea todas las instrucciones y advertencias en este documento y en la Guia informativa sobre sistema, seguridad y normas.

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NetApp® E-Series Storage Systems: Replacing a Power Canister in the DE6600 Drive Tray

To download SANtricity ES Storage Manager and related product documentation, go to the NetApp Support Site at support.netapp.com.

Before you replace the power canister in the DE6600 drive tray, gather antistatic protection and a replacement power canister.

Figure 1 DE6600 Drive Tray – Rear View

92033-02

1.   DE6600 Drive Tray Power Canister

ATTENTION Possible equipment damage – 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.

ATTENTION Possible equipment failure – Before starting this procedure, make sure that you have the correct power canister for your particular hardware configuration. If you are performing a hardware reconfiguration, make sure you have the correct replacement power canister to support the particular controller tray or controller-drive tray to which your DE6600 drive tray is to be attached. Using a power canister with the wrong power supply can cause your storage array to power down and stop working because of the power supply mismatch.

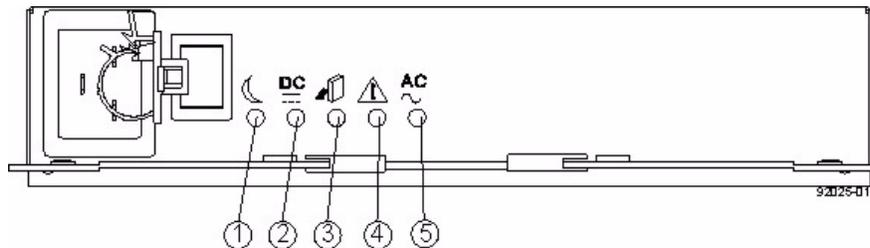You can determine whether you have a failed power canister in two ways:

- The Recovery Guru directs you to replace a failed power canister.

- You locate the failed power canister by checking the Power Service Action Required LED.

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

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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, select **Advanced >> Troubleshooting >> Support Data >> Collect**. Then name and specify a location on your system where you want to store 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 *Command Line Interface and Script Commands*. Running this command can temporarily impact performance on your storage array.

2. Did the Recovery Guru direct you to replace a failed power canister?

   — **Yes** – Go to step 3.

   — **No** – Run the Recovery Guru to identify the failed component, and then go to step 3.

3. Put on antistatic protection.

4. Unpack the new power canister.

   a. Set the new power canister on a flat, static-free surface near the drive tray.

   b. Save all packing materials in case you need to return the power canister.

5. Make sure that the Power switch on the new power canister is turned off.

6. Check the Power Service Action Required LED to locate the failed power canister (Figure 2).

Figure 2 LEDs on a Power Canister

1. Standby Power LED (Green)
2. Power Output DC Power LED (Green)
3. Power Service Action Allowed LED (Blue)
4. Power Service Action Required LED (Amber)
5. Power Input AC Power LED (Green)

If a fault is detected, the amber Power Service Action Required LED is on. If you can safely remove the power canister, the blue Power Service Action Allowed LED is on.

7. Do you have power applied?

— No – Go to step 9.

— Yes – Go to step 8.

    SMcli <ctrl_IP1> -c "Set tray [trayID] powerCanister[top|bottom] service
    Allowed Indicator=on;"

— [trayID] is the identifier of the drive tray that contains the power canister that you want to replace. Drive tray ID values are 0 to 99. Be sure to type the square brackets around the identifier.

— [top|bottom] is the identifier of the power canister that you want to replace. Power canister values are either top or bottom. Be sure to type the square brackets around the value.

This command turns on the blue Power Service Action Allowed LED and prevents the controller from accessing the drive tray (Figure 2).
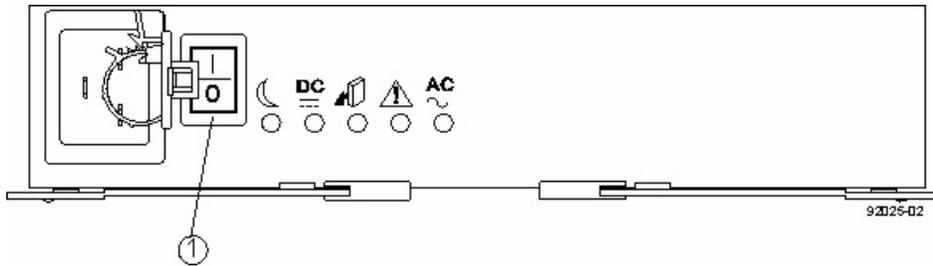

ATTENTION Possible loss of power – To avoid taking the wrong power canister offline and causing the drive tray to lose all power, contact your Technical Support representative before performing step 8.

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8. Turn off the Power switch on the power canister that has failed (Figure 3).

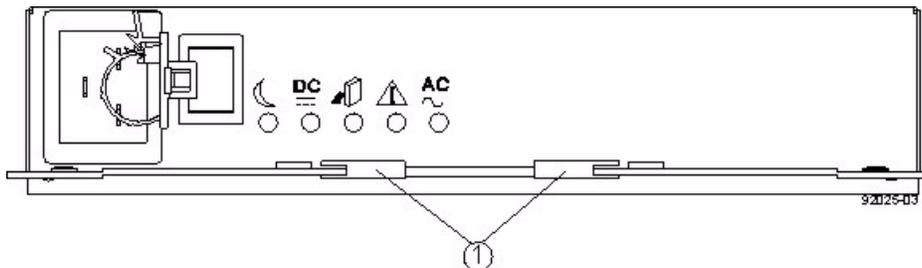**Figure 3 Power Switch on the DE6600 Drive Tray**

    1.   Power Switch

9. Unplug the power cord from the failed power canister.

10. Remove the power canister from the drive tray (Figure 4) by pressing the orange tab toward the black tab, moving the power canister latches to the outside, and then pulling the power canister toward you.

While removing the power canister, you might notice an increase in fan speed. The fan speed returns to normal after you have replaced the power canister.

Figure 4 Removing and Replacing a Power Canister

    1.   Power Canister Latches

11. Slide the replacement power canister all the way into the drive tray. Rotate the power canister latches towards the center to lock the power canister into place.

12. Make sure that the Power switch on the replacement power canister is turned off, and then plug in the power cord.

13. Turn on the Power switch on the replacement power canister.

14. Check the green Power Input AC Power LED and the amber Power Service Action Required LED on the new power canister.

15. Based on the LED status, perform one of the following actions:

    — **The Power Input AC Power LED is on and the Power Service Action Required LED is off** – Go to step 17.

    — **The Power Input AC Power LED is off or the Power Service Action Required LED is on** – Check that the power canister is installed correctly. Reinstall the power canister. Go to step 16.

16. Did this action correct the problem?

    — **Yes** – Go to step 17.

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

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

18. 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 19.

19. Remove the antistatic protection.

20. Gather support data about your updated 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, select **Advanced >> Troubleshooting >> Support Data >> Collect**. Then name and specify a location on your system where you want to store the support bundle.

    — Use the 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 *Command Line Interface and Script Commands*. Running this command can temporarily impact performance on your storage array.