Quantum.

Installing Adjustable Support Rails

StorNext QD7000

Firmware 8.30.xx.xx

Installing Adjustable Support Rails, 6-68557-01 Rev A, April 2017 Product of USA.

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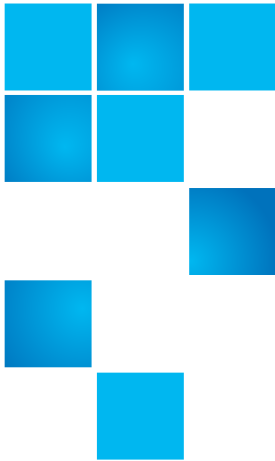
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Preface

Note: The 8.30.xx.xx firmware (Lehigh) is used in the QD7000 (E5600, Titan RAID controller, only). Refer to the NetApp to Quantum Naming Decoder section for additional information.

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

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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	

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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.

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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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Installing Adjustable Support Rails

![NetApp logo]

Installing Adjustable Support Rails

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

This kit instruction is applicable to these 2U (9 cm or 3.5 inch) trays:

- DE1600

- DE5600

- E2612

- E2624

- E5412

- E5424

- E5512

- E5524

When you install a controller-drive tray or a drive tray that was shipped separately (not already installed in the cabinet), you might need to install support rails in the cabinet.

The adjustable support rail kit includes these parts:

- Two support rails (left and right)

- Three M5 screws and one M4 screw for racks with round holes

- Six large washers for racks with square holes

- Six spacers for racks with square holes

NOTE If you use a torque driver to tighten the rail fasteners, use a value of 1.6 newton meters (14 inch lbs). If you use too high a value, you can strip out either the rail or the screw.

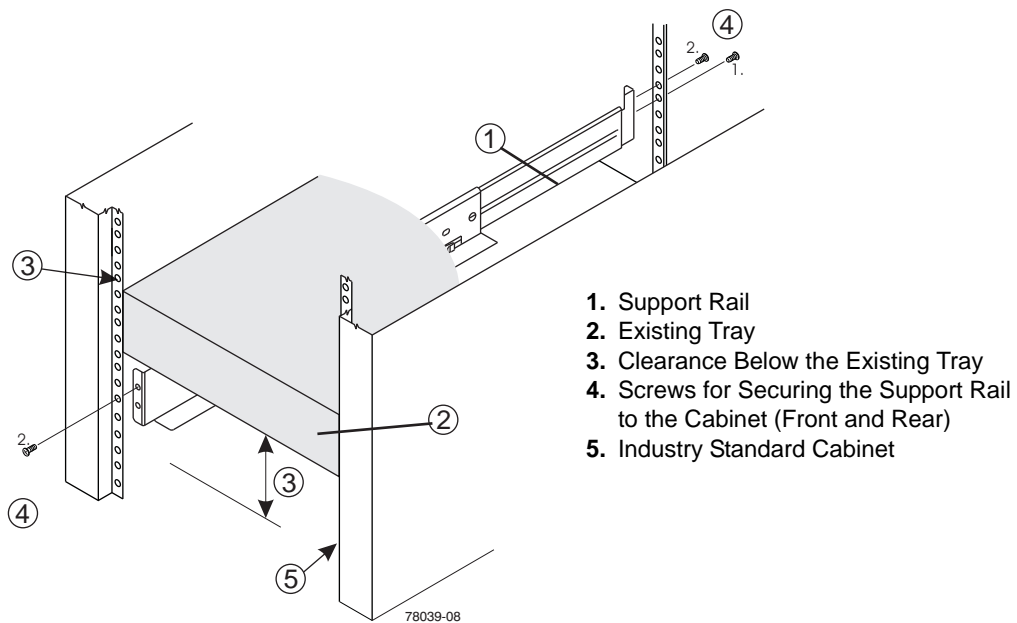Complete the following sections to install the adjustable support rails:

1 "Positioning the Support Rails in the Cabinet" on page 2.

2 "Attaching the Support Rails to the Cabinet" on page 3.

3 "Installing Trays in the Cabinet" on page 5.

Positioning the Support Rails in the Cabinet

shows how the support rails are affixed to the inside of the cabinet. Position the support rails in the cabinet.

- If you are installing the support rails above an existing tray, position the rails directly above the tray.

- If you are installing the support rails below an existing tray, allow 2U (9 cm or 3.5 in) clearance for a controller-drive tray or a drive tray.

Figure 1 Positioning the Support Rails in the Cabinet

1. Support Rail
2. Existing Tray
3. Clearance Below the Existing Tray
4. Screws for Securing the Support Rail to the Cabinet (Front and Rear)
5. Industry Standard Cabinet
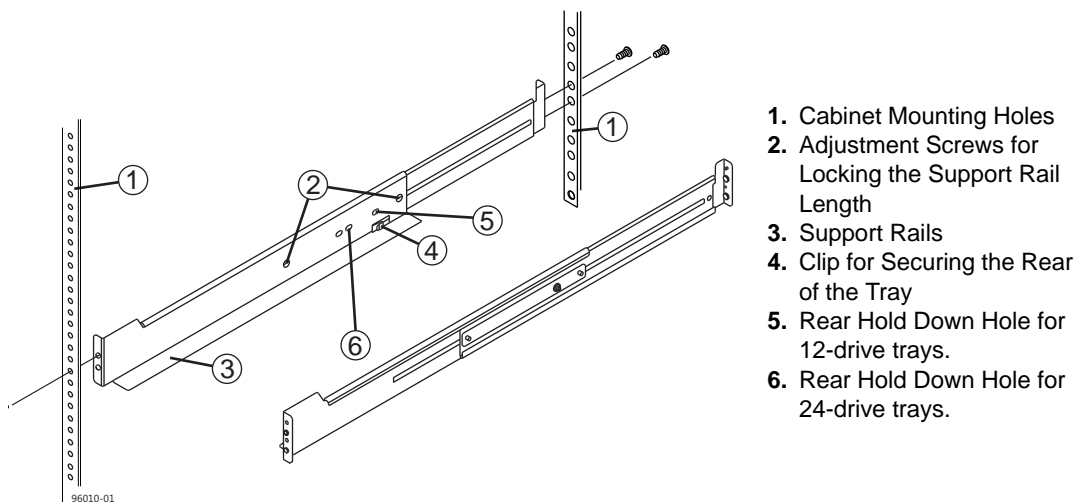
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Attaching the Support Rails to the Cabinet

Use one of the following procedures:
- "Attaching the Support Rails to a Square-Hole Cabinet"

- "Attaching the Support Rails to a Round-Hole Cabinet" on page 4
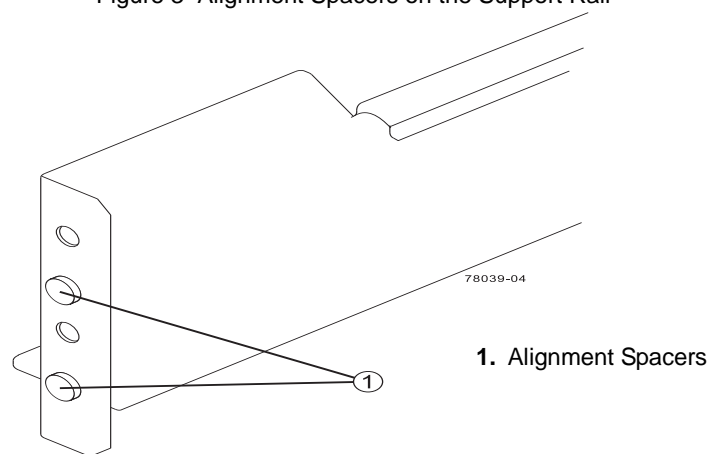
Attaching the Support Rails to a Square-Hole Cabinet

If you are installing adjustable support rails into a square-hole cabinet, complete the following steps (see Figure 2):

Figure 2 Attaching the Support Rails to the Cabinet

1. Cabinet Mounting Holes
2. Adjustment Screws for Locking the Support Rail Length
3. Support Rails
4. Clip for Securing the Rear of the Tray
5. Rear Hold Down Hole for 12-drive trays.
6. Rear Hold Down Hole for 24-drive trays.

1 Make sure that the alignment spacers on the front flange of the support rail fit into the mounting holes in the cabinet by replacing the two small spacers in the front bracket and the two small spacers in the rear bracket with the large spacers that come with the rail kit (see Figure 3).
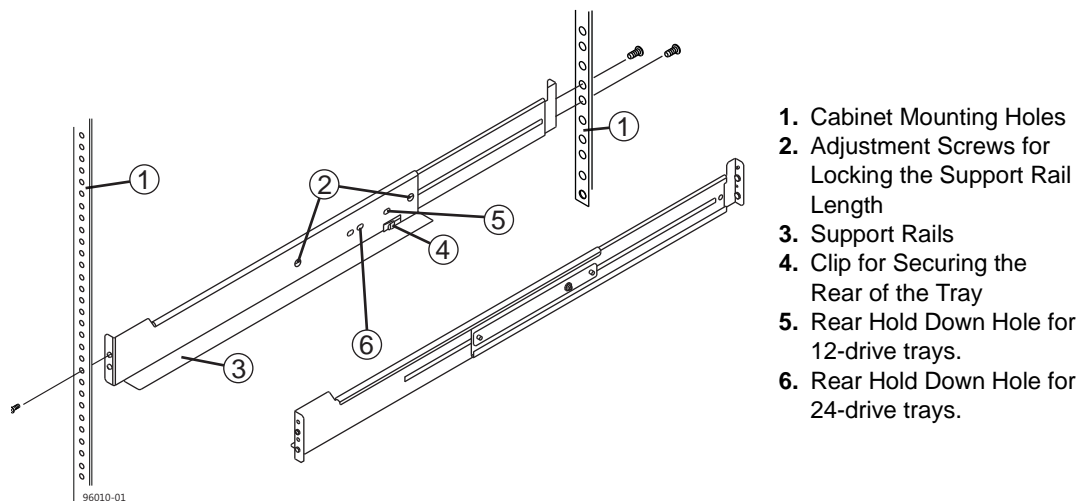
Figure 3 Alignment Spacers on the Support Rail

1. Alignment Spacers

2 Make sure that the adjustment screws on the support rail are loose so that you can extend or contract the support rail as needed.

3 Place the support rail inside the cabinet and extend the support rail until the flanges on the support rail touch the inside of the cabinet.

4 Insert one M5 screw through the front of the cabinet and screw into the top captured nut in the support rail, adding a large washer between each M5 screw and the support rail bracket.

5 Insert two M5 screws through the rear of the cabinet and screw into the captured nuts in the rear flange in the support rail, adding a large washer between each M5 screw and the support rail bracket.

6 Tighten the adjustment screws on the support rail.

7 Insert one M4 screw in the appropriate rear hold down hole (for either the 12-drive tray or the 24-drive tray) on the rear of the support rail to attach it to the cabinet, adding a large washer between the M4 screw and the support rail bracket.

8 Repeat step 1 on page 3 through step 7 for the second support rail.

Attaching the Support Rails to a Round-Hole Cabinet

If you are installing adjustable support rails into a round-hole cabinet, complete the following steps (see Figure 4):

Figure 4 Attaching the Support Rails to a Round-Hole Cabinet

1. Cabinet Mounting Holes
2. Adjustment Screws for Locking the Support Rail Length
3. Support Rails
4. Clip for Securing the Rear of the Tray
5. Rear Hold Down Hole for 12-drive trays.
6. Rear Hold Down Hole for 24-drive trays.

1 Make sure that the alignment spacers on the front flange of the support rail fit into the round mounting holes in the cabinet.

2 Make sure that the adjustment screws on the support rail are loose so that you can extend or contract the support rail as needed.

3 Place the support rail inside the cabinet and extend the support rail until the flanges on the support rail touch the inside of the cabinet.

4 Insert one M5 screw through the front of the cabinet and screw into the top captured nut in the support rail.

5 Insert two M5 screws through the rear of the cabinet and screw into the captured nuts in the rear flange in the support rail.

6 Tighten the adjustment screws on the support rail.

7 Insert one M4 screw in the appropriate rear hold down hole (for either the 12-drive tray or the 24-drive tray) on the rear of the support rail to attach it to the cabinet.

8 Repeat step 1 on page 4 through step 7 for the second support rail.

Installing Trays in the Cabinet

1 To install each tray, see the applicable tray installation instructions.

2 Is the cabinet completely filled with trays?

Yes – Refer to the initial setup guides for the trays that are contained in the cabinet, and complete the power-on procedures described in them.

No – Use front panel kits to cover the empty spaces above or below the installed trays.