

DX3000 and DX5000 Quick Start Guide

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Introduction

This quick start guides provides basic installation and configuration instructions for both the DX3000 and DX5000 systems (see [figure 1](#)). For more information, see the *Quantum DX3000 and DX5000 User's Guide* on the documentation CD provided with your DX3000 or DX5000 system.

Notational Conventions

This instruction uses the following conventions:

NOTE: Notes emphasize important information related to the main topic.

CAUTION: Cautions indicate potential hazards to equipment and are included to prevent damage to equipment.

WARNING: Warnings indicate potential hazards to personal safety and are included to prevent injury.

Figure 1 PX3000 and DX5000



Choosing a Location

The DX3000/DX5000 must be installed in a restricted access location per specification **EN69050-1**. This system must only be installed by qualified IT service personnel. This is required to prevent untrained personnel from allowing body parts or electrically conductive items to penetrate into the interior of the system when replacing or installing drives, fans, and power supplies.

When choosing an installation site for the DX3000/DX5000 system, consider the following requirements:

- [Rack Space Requirements](#)
- [Environmental Conditions](#)

Rack Space Requirements

[Table 1](#) contains the rack requirements for both the DX3000 and DX5000.

Table 1 Rack Requirements

	DX3000	DX5000
Depth	27 in (68.6 cm)	25.4 in (64.5 cm)
Width	19 in (48.3 cm)	19 in (48.3 cm)
Height	3.5 in (8.9 cm), 2U	8.75 (22.2 cm), 5U
Weight	50 lbs (22.68 kg)	122 (55.34 kg)
Air Clearance	Open 4 in (10.2 cm) behind unit for proper air flow	

Environmental Conditions

The installation site must have the following environmental conditions:

- Humidity: 20%-80% non-condensing
- Temperature: 10°C-35°C (50°F-95°F)
- Altitude: 0 to 10,000 feet (0 to 3048 meters)

These environmental conditions apply when the DX-Series system is in operation.

NOTE: For additional specifications, refer to the *Quantum DX3000 and DX5000 User's Guide* (PN 81-81493)

Preparing for the Installation

Before you begin the installation procedure in this section, make the following preparations as described in this section:

- [Providing Necessary Tools](#)
- [Taking ESD Precautions](#)

Providing Necessary Tools

Provide the following tools for unpacking and installing the DX3000 and DX5000 systems:

- #1 PHILLIPS® screwdriver
- #2 PHILLIPS screwdriver
- #1 Flat head screwdriver
- Antistatic wrist strap included in accessory kit

Taking ESD Precautions

Some components within the DX3000 and DX5000 systems contain static-sensitive parts. To avoid damaging these parts while performing installation procedures, always observe the following precautions:

- Keep the DX3000/DX5000 system turned off during all installation procedures.
- Use an antistatic wrist strap (included in the accessory kit).
- Keep static-sensitive parts in their original shipping containers until ready for installation.
- Do not place static-sensitive parts on a metal surface. Place them inside their protective shipping bag or on an antistatic mat.
- Avoid touching connectors and other components.

NOTE: Dry climates and cold-weather heating environments have lower relative humidity and are more likely to produce static electricity.

Unpacking the DX3000/DX5000

This section explains how to unpack both the DX3000 and DX5000 system components and move them to their final installation location.

By following these instructions, you help ensure that the system will continue to be safeguarded after it arrives at the installation site.

Unpack and remove the following components from the packing materials (see [figure 2](#) and [figure 3](#)):

- DX3000 or DX5000 chassis
- Hard drive sleds
- Accessory kit

WARNING: The DX3000 weighs 38 lbs (17.24 kg) and the DX5000 weighs 85 lbs (38.56 kg) without hard drives. Two people are required to lift either unit.

Figure 2 Unpacking the DX3000

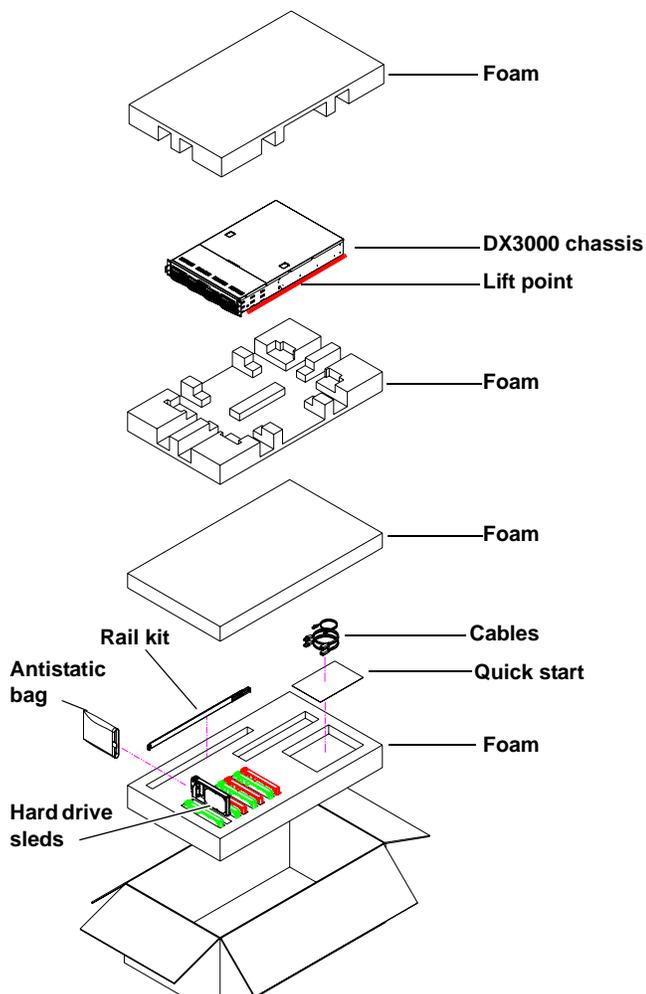
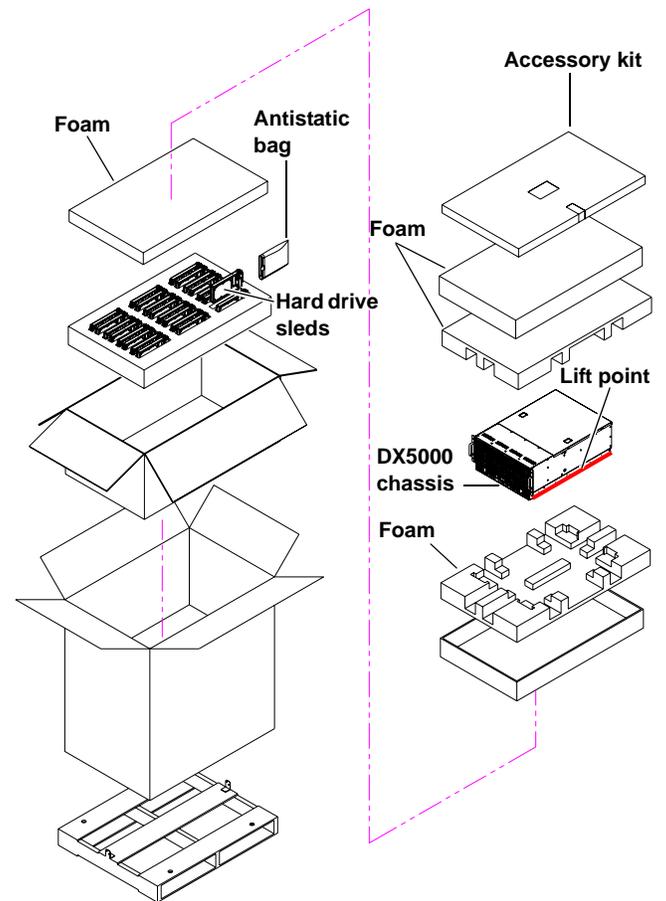


Figure 3 Unpacking the DX5000



Installing the DX3000/DX5000 System

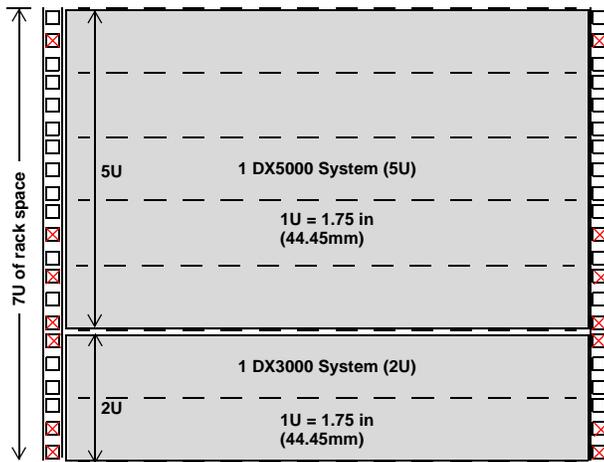
Installing the DX3000/5000 in a rack consists of the following steps:

- [Locating the Mounting Position](#)
- [Installing the DX3000/DX5000 Chassis](#)

Locating the Mounting Position

Both the DX3000 and DX5000 systems are designed to fit in a standard 19 inch wide rack. It is important to the chassis installation to locate the hole pattern in the rack rails (see [figure 4](#)).

Figure 4 Rail Hole Pattern

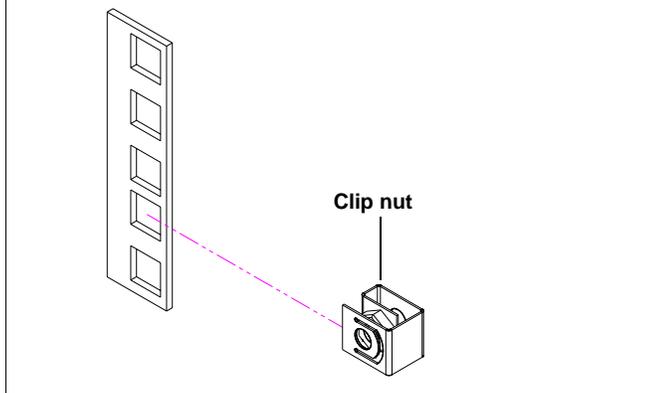


The marks above (X) indicate the location of mounting hardware on the rack rails. Ensure that any necessary mounting hardware is installed on the rack rails prior to installing the chassis.

Hole pattern	
Top of rack	
	.312 in (7.92 mm)
	.625 in (15.9 mm)
	.625 in (15.9 mm)
	.5 in (12.7 mm)
	.625 in (15.9 mm)
	.625 in (15.9 mm)
	.5 in (12.7 mm)

WARNING: If the rack is empty at the time of installation, do NOT install the DX3000 or DX5000 chassis too high in the rack. The weight of the chassis may cause the rack to become "top heavy" and unstable if installed in the top of an empty rack.

NOTE: Quantum ships sufficient clip nuts to support mounting the DX3000/DX5000 rack rails and also to secure the front of the chassis to the rails.



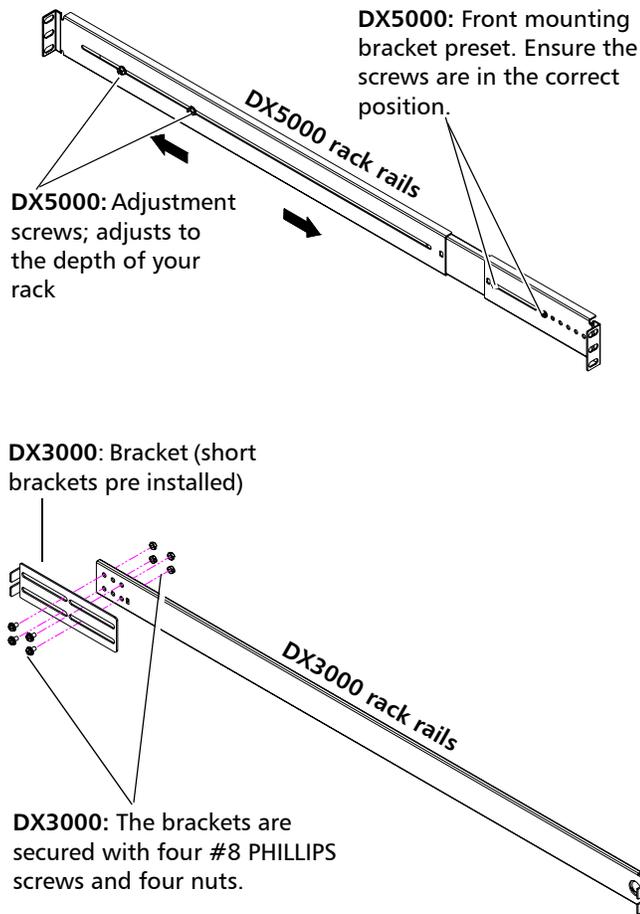
Installing the DX3000/DX5000 Chassis

1 Assemble the DX3000/DX5000 support brackets [figure 5](#):

- **For the DX5000** - The DX5000 rails are preset for easy installation. Loosen the two nuts securing the back portion of the rail so the rail can adjust to the depth of the rack.
- **For the DX3000** - The DX3000 rails are preset for 28 in (71.1cm). Loosen the nuts to adjust the rails to the depth of the rack.

NOTE: Two sizes of support brackets are included with the DX3000 rails to support various rack depths. Measure the depth of the rack to determine the depth. The **short brackets** (5 in., 12.7cm) are used for rack depths of 28 to 31 in (71.1 to 78.7 cm). The **long brackets** (10 in., 25.4 cm) are used for rack depths of 32 to 36 in (81.3 to 91.4 cm). Use the appropriate support bracket for your rack.

Figure 5 Assembling the Rack Rails



2 Install the left and right chassis support brackets at the beginning of a hole pattern (see [Locating the Mounting Position](#)) and secure as follows (see [figure 6](#)):

NOTE: The support brackets extend to accommodate rack depths or 30 to 36 in. (76.2 to 91.4 cm).

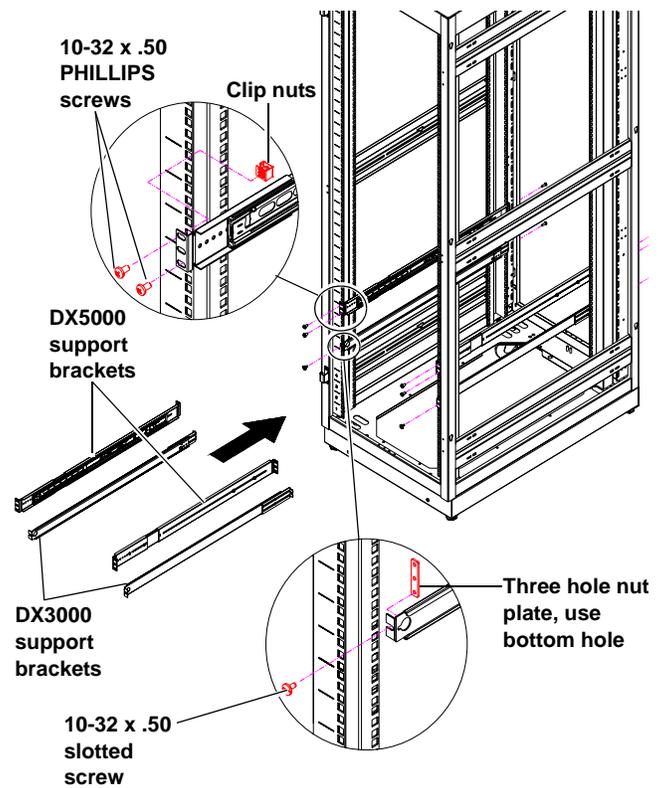
- **DX3000** - One 10-32 x .50 in. Slotted screw with and a three hole nut plate on each rail at the front and back of the rack. 10-32 x .50 in. PHILLIPS screws and nuts are also provided for racks with threaded holes.

NOTE: The DX3000 support brackets must be installed on the inside rack rails.

- **DX5000** - Two 10-32 x .50 in. PHILLIPS screws on each rail at the front and back of the rack for the DX5000.

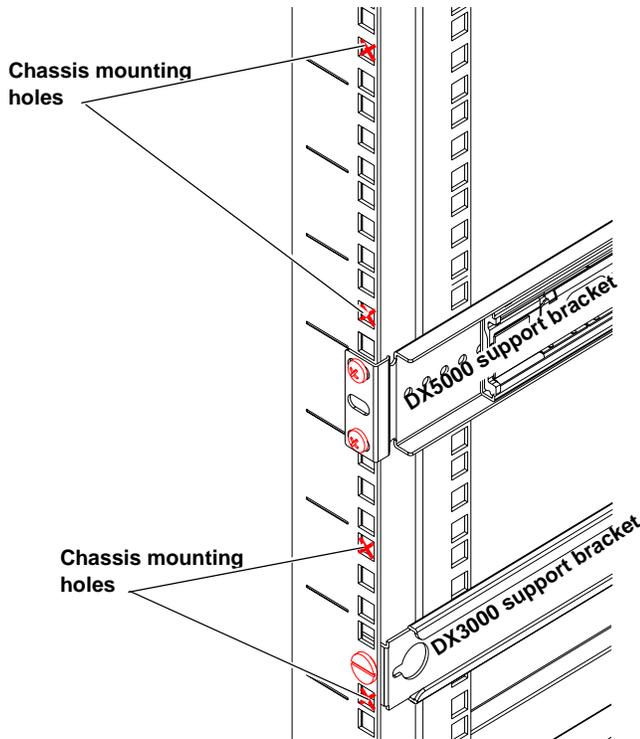
NOTE: Ensure that clip nuts are installed on the rails (see [figure 4](#)) prior to installing the DX5000 rails.

Figure 6 Installing the Chassis Support Brackets (DX3000 and DX5000)



- 3 Once the rails are secured to the rack, tighten the rail adjustment nuts on each rail.
- 4 With the support brackets installed, prepare the chassis mounting holes if necessary (see [figure 7](#) for hole location). These are the holes used to secure the chassis to the rack.

Figure 7 DX3000/DX5000 Chassis Mounting Holes



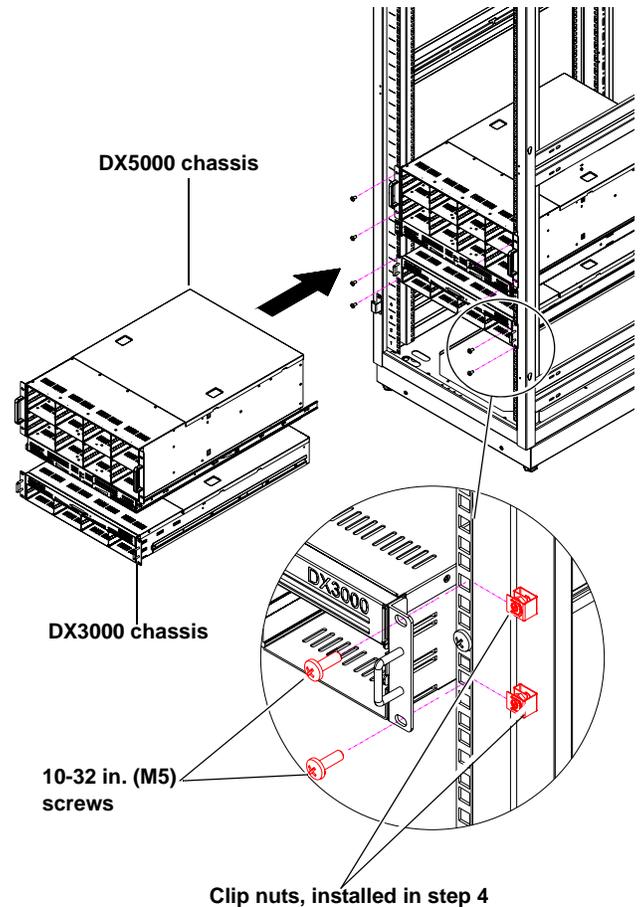
5 Carefully slide the chassis into the rack.

WARNING: The DX3000 weighs 38 lbs (17.24 kg) and the DX5000 weighs 85 lbs (38.56 kg) without hard drives. Two people are required to lift either unit.

6 Secure the DX3000/DX5000 chassis to the rack with the following hardware (see [figure 8](#)):

- **DX3000** - two 10-32 x 1.25 in. (M5 x 32 metric also provided) black PHILLIPS screws on each side of the front of the chassis. Tighten to 5 in/lbs.
- **DX5000** - two 10-32 x 1.25 in. (M5 x 32 metric also provided) black PHILLIPS screws on each side of the front of the chassis.

Figure 8 Securing the DX3000/DX5000 Chassis to the Rack



7 Install each of the hard drive sleds into the DX-Series storage array chassis. Ensure each drive is completely installed in the chassis with the drive handle in the closed position (see [figure 9](#) for DX3000 and [figure 10](#) for DX5000).

CAUTION: Use ESD procedures when handling the hard drives sleds (see "Taking ESD Precautions" on page 2). Place the ESD wrist strap on your wrist and connect the other end of the strap to the DX3000/DX5000 chassis.

NOTE: The hard drives must be installed in the proper sequence since RAID sets have already been established at the factory. Refer to the label on the bottom of the drive sled for the drive number. The hard drive numbering starts in the lower left-hand drive bay and then moves to the right.

DX3000	Drive 4	Drive 5	Drive 6	Drive 7
	Drive 0	Drive 1	Drive 2	Drive 3
Array controller 2	Drive 8	Drive 9	Drive 10	Drive 11
	Drive 4	Drive 5	Drive 6	Drive 7
	Drive 0	Drive 1	Drive 2	Drive 3
Array controller 1	Drive 8	Drive 9	Drive 10	Drive 11
	Drive 4	Drive 5	Drive 6	Drive 7
	Drive 0	Drive 1	Drive 2	Drive 3
DX5000	Drive 0	Drive 1	Drive 2	Drive 3

Figure 9 Installing the Disk Drives in the DX3000 Chassis

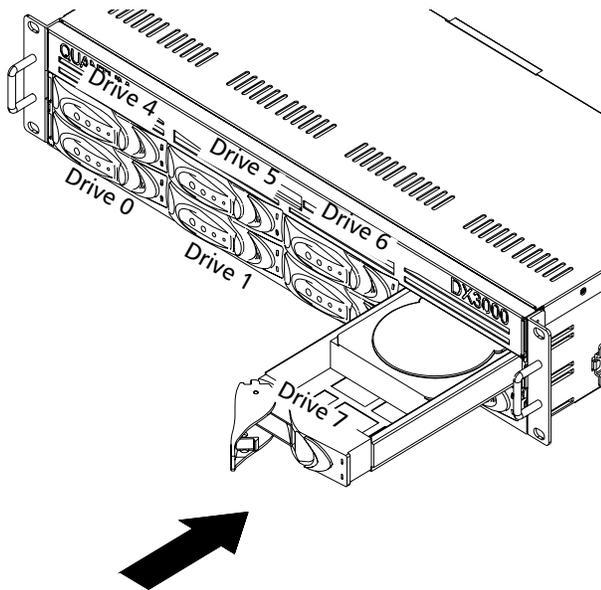
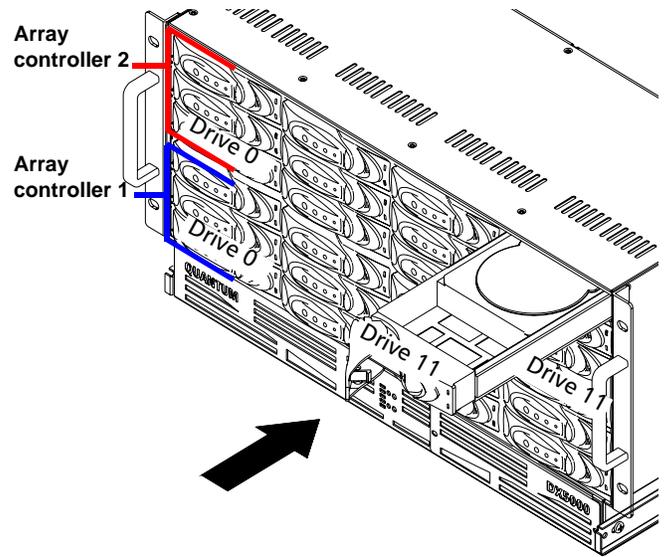


Figure 10 Installing the Disk Drives in the DX5000 Chassis



The DX3000/DX5000 chassis is now installed in the rack.

Cabling the DX3000/DX5000

The cabling instructions differ depending on the system installed. Refer to the following sections for either the DX3000 or DX5000 system:

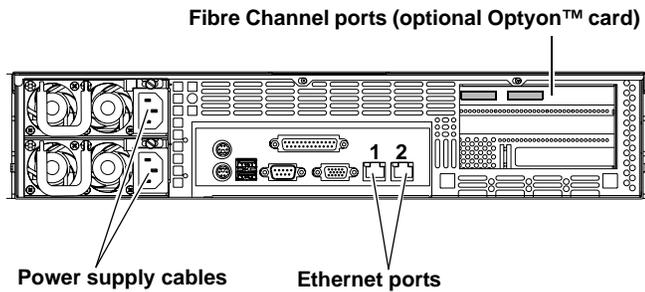
- [Cabling a DX3000 System](#)
- [Cabling a DX5000 System](#)

Cabling a DX3000 System

Connect the following cables to the back of the DX3000 system (see [figure 11](#)):

- Connect a power cable to each power supply
- Connect an Ethernet cable to port ETH1
- Fibre Channel cable (optional)

Figure 11 DX3000 System Cabling

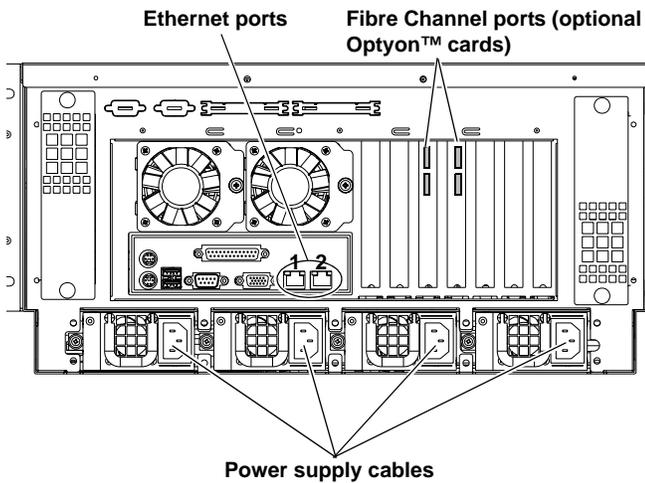


Cabling a DX5000 System

Connect the following cables to the back of the DX5000 system (see [figure 12](#)):

- Connect a power cable to each power supply
- Connect an Ethernet cable to port ETH1 (left-hand port)
- Fibre Channel cable (optional)

Figure 12 DX5000 System Cabling



Initial Configuration

Before the DX3000/DX5000 is operational, you must configure the system by completing the remote management setup screens.

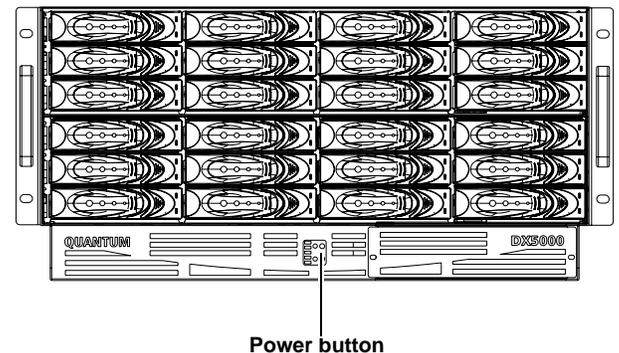
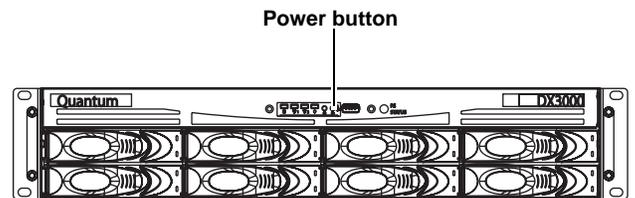
Configuring the DX3000/DX5000 consists of the following major steps:

- Accept the License Agreement
- Complete the User Registration
- Complete the Network Configuration
- Select a RAID Configuration
- Create Cartridges on the DX3000/DX5000

To configure the DX3000/DX5000:

- 1 Turn on the D3000/DX5000 system by pressing the power button located on the front of the chassis (see [figure 13](#)).

Figure 13 Power Buttons

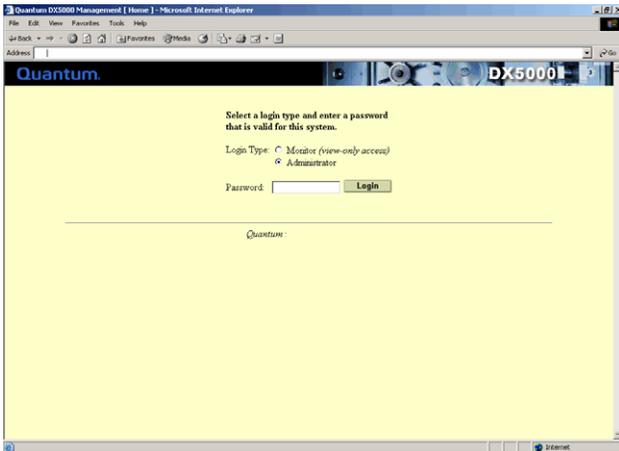


- 2 On a computer on the same subnet as the DX3000/ DX5000, enter the IP address of the system in the Address field of a web browser.

NOTE: The default IP address is: 10.1.1.1 for port 1 and 10.0.1.0 for port 2.

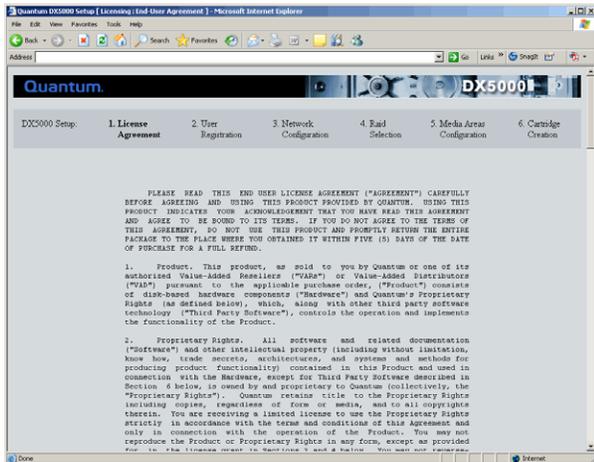
The Log In screen displays (see [figure 14](#)).

Figure 14 Log In Screen



- 3 Select **Administrator** and enter **password** for the password.
The **License Agreement** screen displays (see [figure 15](#)).

Figure 15 License Agreement

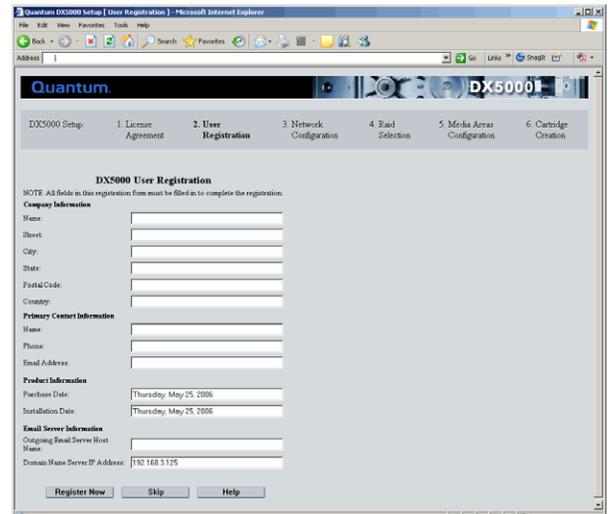


- 4 Read the license agreement and press **I Accept** to continue.

NOTE: If you do not accept the license agreement, the DX3000/DX5000 will not function.

The **User Registration** screen displays (see [figure 16](#)).

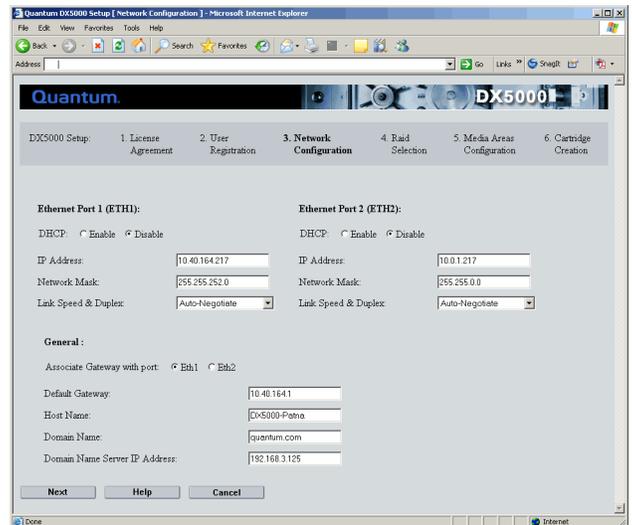
Figure 16 User Registration



- 5 The registration information is sent to Quantum to allow the system to be easily serviced and maintained. If you do not want to register on-line, press **Skip**, then fill out and mail the warranty card included in the DX3000/DX5000 accessory kit. When finished, click **Continue** to continue.

The **Network Configuration** screen displays (see [figure 17](#)).

Figure 17 Network Configuration



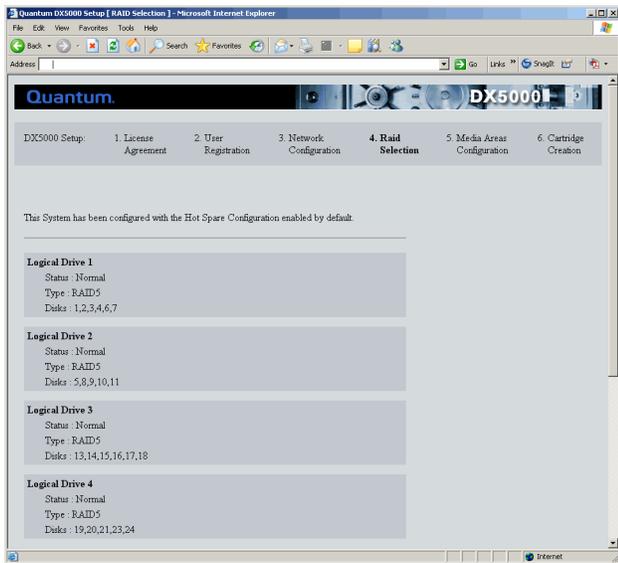
- Enter the network configuration information for both **Ethernet** ports (if used) and the host and domain information in the **General** Section. When finished click **Next** to continue.

NOTE: When DHCP is disabled, the default IP address for port 1 is 10.1.1.1 with a netmask of 255.255.255.0. The default IP address for port 2 is 10.0.1.0 with a netmask of 255.255.0.0.

NOTE: Refer to the *Quantum DX3000 and DX5000 User's Guide* (PN 81-81493) for additional network configuration information.

The **RAID Selection** screen displays (see [figure 18](#)).

Figure 18 RAID Selection
(DX5000 with Twelve Drives)



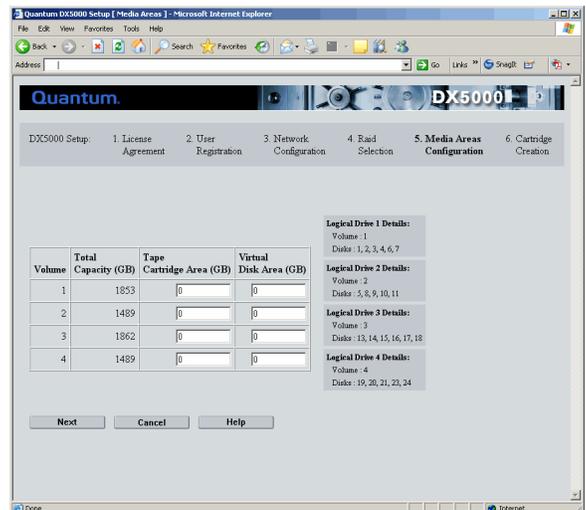
- The DX3000/DX5000 systems ship from Quantum in the following default RAID5 configurations:

- DX3000** - One logical drive with either four or eight hard drives.
- DX5000 (twelve hard drives)** - Two logical drives: The first logical drive contains six hard drives. The second logical drive contains five hard drives. The last hard drive is reserved as a hot spare.
- DX5000 (twenty-four drives)** - Four logical drives: First the third logical drives contain six hard drives. Second and fourth logical drives contain 5 hard drives. Two hard drives are reserved as hot spares. have two hard drives reserved as hot spares.

DX5000 users can disable the hot spare option(s) to maximize storage capacity. This process takes approximately 4 hours to complete. Click **Next** to continue. During this initialization period, the system is available, but only in a degraded (slower) mode.

The **Media Areas Configuration** screen displays (see [figure 19](#)).

Figure 19 Media Areas Configuration

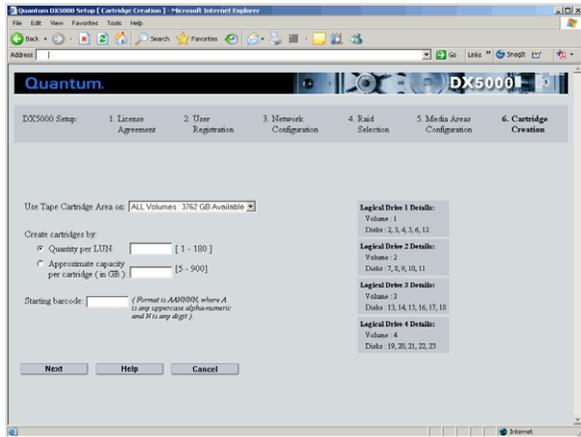


The **Media Areas Configuration** screen allows you to specify how much storage space is dedicated to either virtual tape cartridges or virtual disks.

- If you would like tape cartridges to be available on one or more volumes, change the number in the **Tape Cartridge Area (GB)** from a minimum of 5 GB to the total capacity of the volume. 5 GB is the smallest size available to tape cartridges.
- If you would like virtual disks to be available on one or more volumes, change the number in **Virtual Disk Area (GB)** from a minimum of 1 GB to the total capacity of the volume.
- Click **Next**. to continue

The **Cartridge Creation** screen displays (see [figure 20](#)).

Figure 20 Cartridge Creation
(DX5000 with Twelve Drives)



- 11 Select the volume(s), either **All Volumes** or **Volume Name**, where the tape cartridges will be created.
- 12 Create cartridges by either quantity or capacity:
 - If you select **By quantity**, you can create between 1 and 400 cartridges per LUN. The capacity decreases the more tape cartridges you create.

NOTE: The maximum number of cartridges depends on the size of the volumes created in the **Media Areas Configuration** section.

- If you select **By capacity**, you choose between 5 GB and the maximum capacity of the logical drive per cartridge. The number of cartridges decreases with higher capacity per cartridge.
- 13 Enter the starting cartridge barcode.

NOTE: The barcode format must be AANNNN, where A is any uppercase alpha-numeric character and N is any single digit (0-9). Barcodes automatically increment.

- 14 Click **Next**.
The **Finish System Setup** screen displays.
- 15 Click **OK** to apply your settings.

The DX3000/DX5000 is configured and ready for operation. Refer to the *Quantum DX3000 and DX5000 User's Guide* (PN 81-81493) for additional information.

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