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DXi4500 Installation and Configuration Guide

This guide provides basic installation and configuration instructions for the DXi4500 system (see [Figure 1](#)). Make sure to read the DXi4500 Site Planning Guide before starting your installation. The Site Planning Guide is included on the documentation CD provided with your DXi4500 system.

Note: Make sure to take the online training for the DXi4500 in order to make the best use of your product. The online training is available at www.quantum.com/ServiceandSupport/StorageCareLearning/Index.aspx

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 DXi4500 System



DXi4500 Configurations

The DXi4500 is available in the following configurations (see [Table 1](#)):

Table 1 DXi4500 Configurations

Configuration	Number of Hard Drives	Hard Drive Capacity
DXi4510 (2.2 TB Usable Capacity)	8	500 GB
DXi4520 (4.4 TB Usable Capacity)	8	1 TB

Choosing a Location

Quantum recommends installing the DXi4500 system in a controlled or restricted area to prevent access by untrained personnel. In addition, Quantum recommends that system installation be performed only by qualified IT personnel.

When choosing an installation site for the DXi4500 system, consider the following requirements:

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

Installation Requirements

Review the *DXi4500 Site Planning Guide* (PN 6-66909) to ensure that your site meets the installation requirements for the DXi4500.

Rack Space Requirements

[Table 2](#) contains the rack requirements for the DXi4500 components.

Table 2 Rack Requirements

	DXi4500
Height	2U, 3.40 in (8.6 cm)
Width (side to side)	17.19 in (43.6 cm)
Depth (front to back)	24.09 in (61 cm)
Weight (stand alone)	49.5 lbs (22.5 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% to 80% (non-condensing)
- Temperature: 10 to 35 °C (50 to 95 °F) 35 °C Max, Altitude = 900 m or 2952.75 ft (28 °C Max, Altitude = 3048 m or 10,000 ft)

These environmental conditions apply when the DXi4500 system is in operation.

Note: For additional specifications, refer to the *Quantum DXi4500 User's Guide* (PN 6-66904) located on the documentation CD.

Preparing for the Installation

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

- [Taking ESD Precautions](#) on page 3

Taking ESD Precautions

Some components within the DXi4500 system contain static-sensitive parts. To avoid damaging these parts while performing installation procedures, always observe the following precautions:

- Keep the DXi4500 system turned off during all installation procedures.
- 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 DXi4500

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

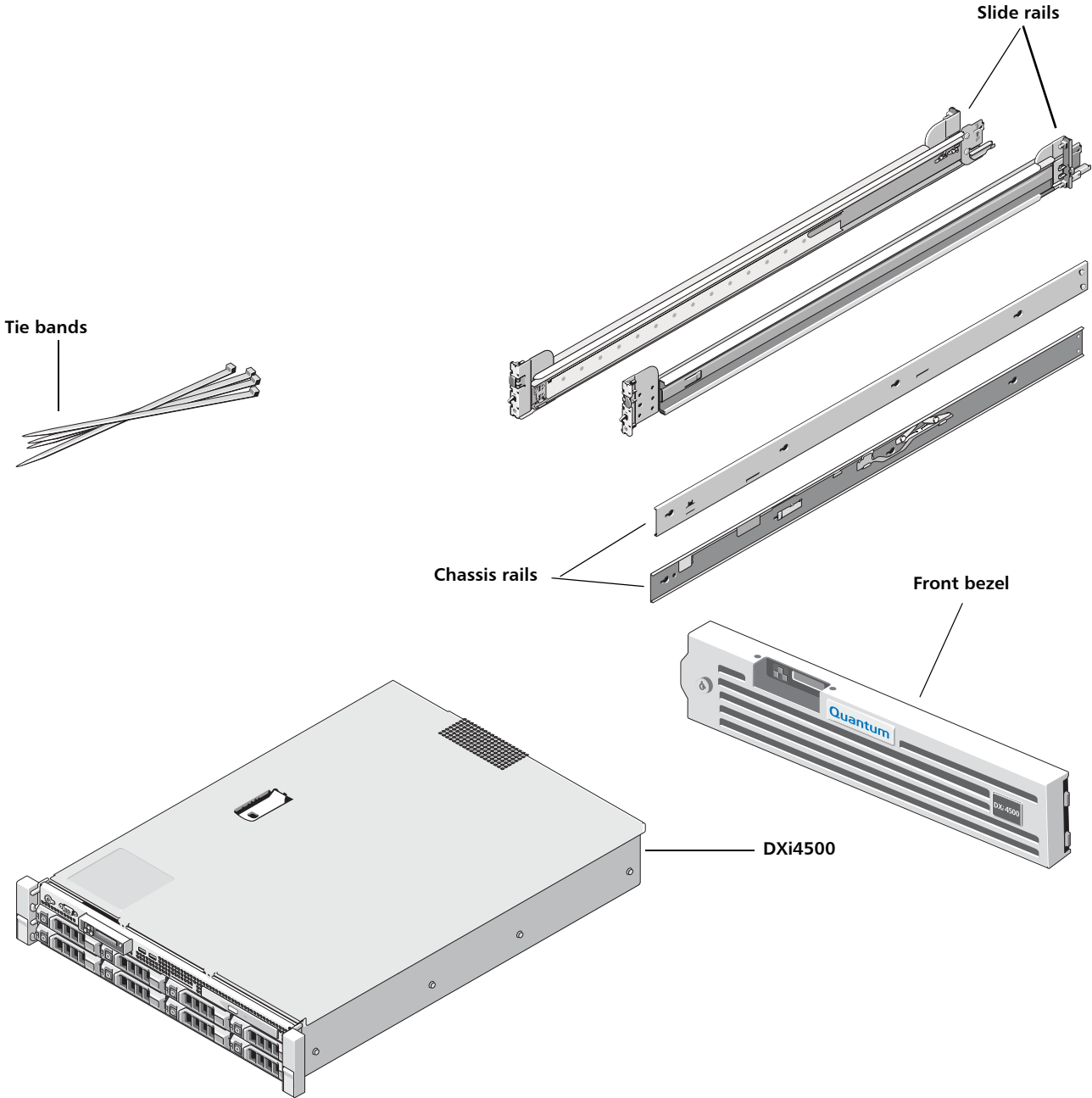
Unpack and remove the following components from the packing materials (see [Figure 2](#)):

- DXi4500 chassis
- Front bezel with key
- (4) power cords, 2 U.S. and 2 international cables
- Ethernet cables
- Left and right slide assemblies
- Cable-management arm
- Left and right cable-management arm ramp assemblies
- DXi4500 Quick Reference and Documentation CD
- DXi4500 Installation and Configuration Instructions
- Accessory kit

Caution: Do NOT discard the packing materials after the system is unpacked. The packaging materials must be used if the system is relocated.

WARNING: The DXi4500 weighs 49.5 lbs (22.5 Kg). Two people are required to lift the chassis.

Figure 2 Unpacking the DXi4500



Installing the DXi4500 System

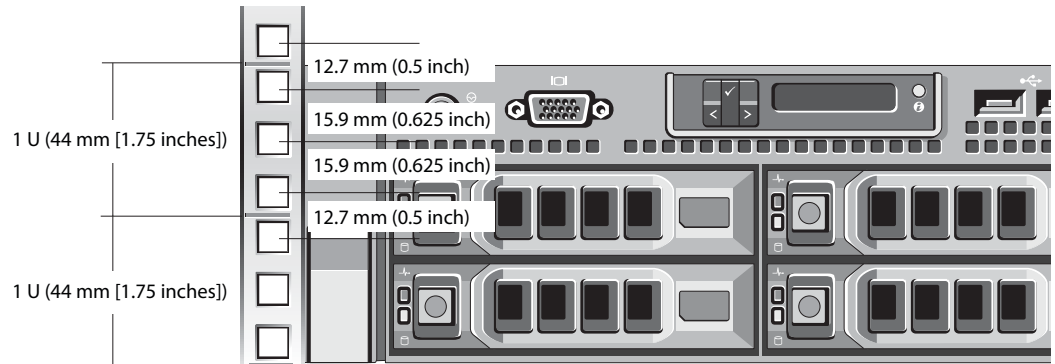
Installing the DXi4500 in a rack consists of the following steps:

- 1 [Locating the Mounting Position](#) on page 6
- 2 [Installing the DXi4500](#) on page 7
- 3 [Cabling the DXi4500](#) on page 11

Locating the Mounting Position

The DXi4500 systems is designed to fit in a standard 19 inch wide rack. It is important for the chassis installation to locate the hole pattern in the rack rails. You must allow 2U (3.5 in (8.9 cm)) of vertical space for the DXi4500 system. Rack cabinets that meet EIA-310 standards have an alternating pattern of three holes per rack unit with center-to-center hole spacing (beginning at the top hole of a 1-U space) of 15.9 mm, 15.9 mm, and 12.7 mm (0.625 inch, 0.625 inch, and 0.5 inch) for the front and back vertical rails (see [Figure 3](#)). Rack cabinets may have round or square holes.

Figure 3 Rail Hole Pattern



WARNING: If the rack is empty at the time of installation, do NOT install the DXi4500 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.

To mark the rack, perform the following step:

- 1 Place a mark (or tape) on the rack's front vertical rails where you want to locate the bottom of the system you are installing in the rack. The bottom of each 1-U space is at the middle of the narrowest metal area between holes (marked with a horizontal line on some rack cabinets).

Installing the DXi4500

Installing the DXi4500 consists of the following steps:

- [Installing the DXi4500 Rack Mounting Rails](#)
- [Installing the DXi4500 Chassis](#)

Installing the DXi4500 Rack Mounting Rails

- 1 Install the rack mounting rails (see [Figure 4](#) for square holes and [Figure 5](#) for Round holes):
 - a Position the left and right rail end pieces of the rail module labeled **FRONT** facing inward and orient each end piece to seat in the square holes on the front side of the vertical rack flanges. Align each end piece to seat the pegs in the bottom hole of the first U space and the top hole of the second U space.
 - b Engage the back end of the rail until it fully seats on the vertical rack flange and the second tooth on the latch locks in place.

Note: To remove the rack mounting rails, pull the **Release** latch located on the front of the rail.

Figure 4 Installing the Rack Mounting Rails (Square Holes)

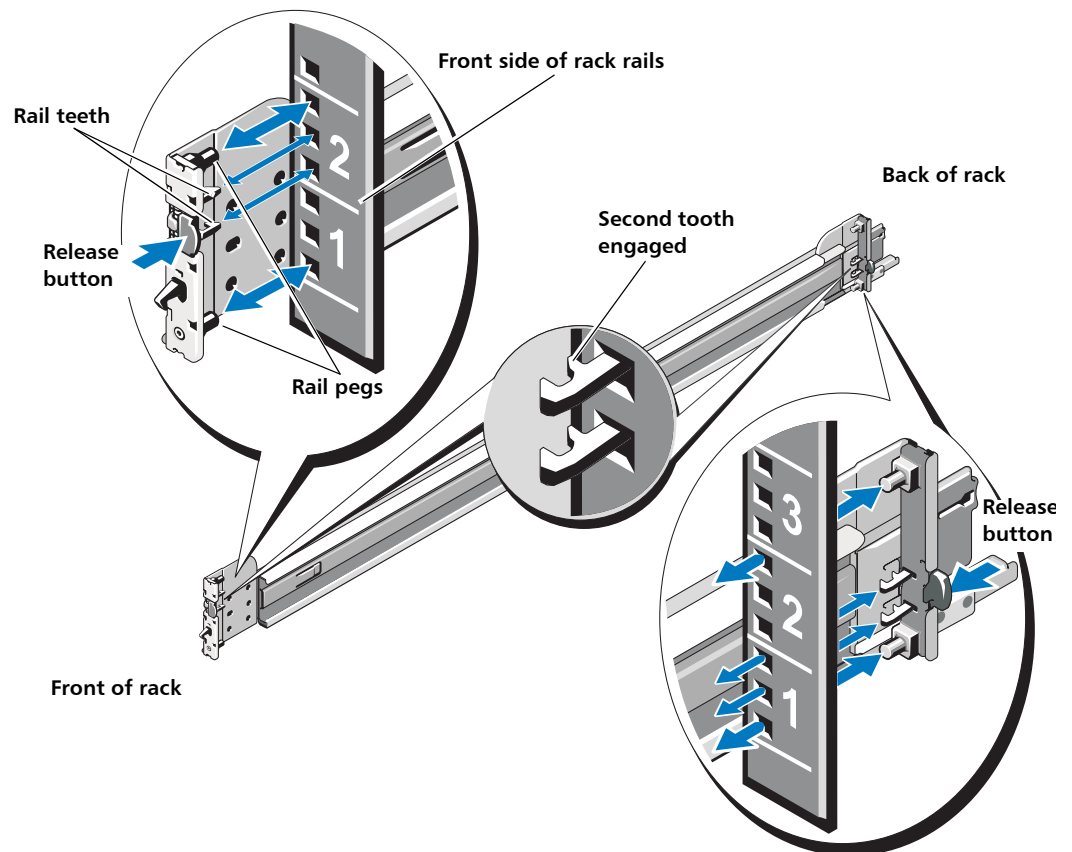
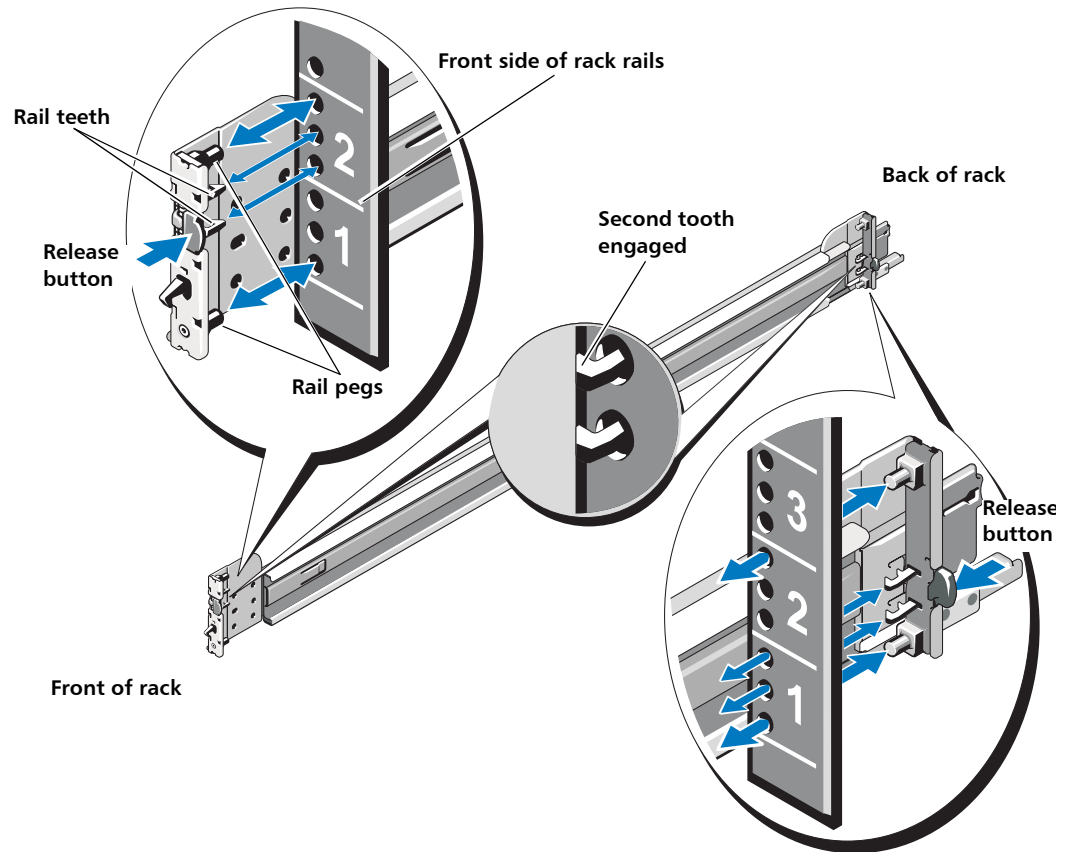


Figure 5 Installing the Rack Mounting Rails (Round Holes)

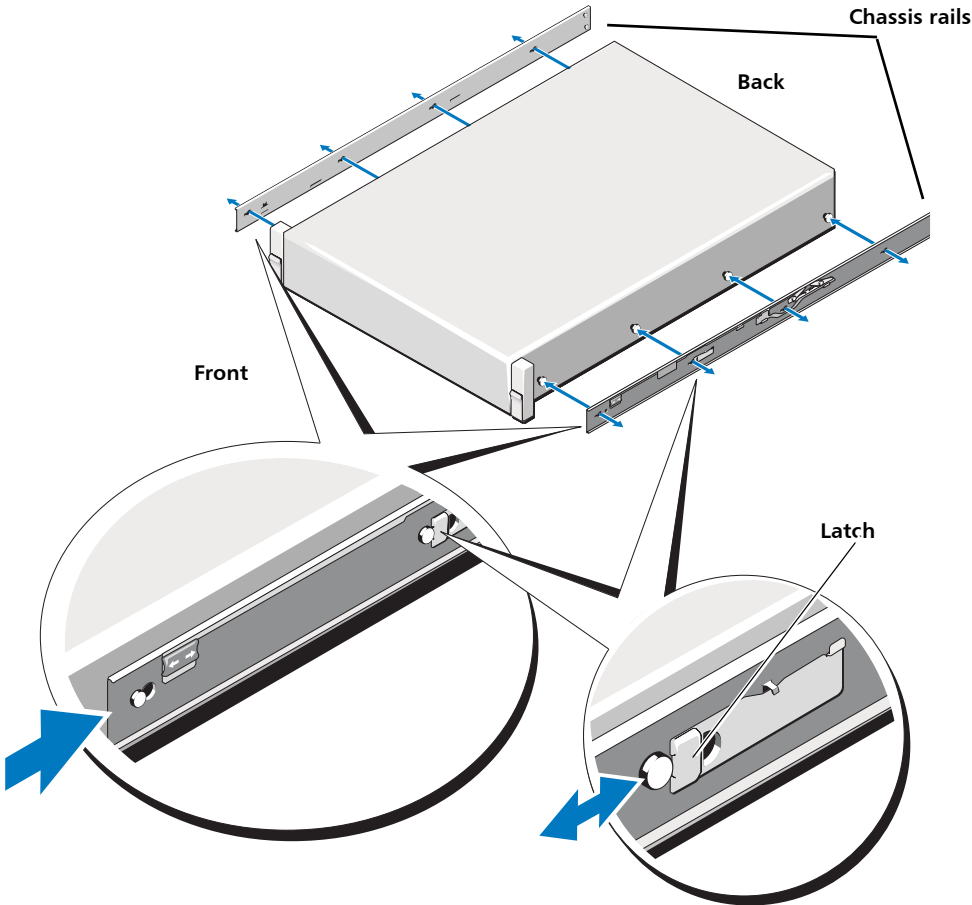


- 2 Place the DXi4500 on a level surface and align the four keyhole slots on the chassis rails with the corresponding pins on the system. Slide the chassis rails towards the back of the system until each one locks into place (see [Figure 6](#)).

WARNING: The DXi4500 weighs 49.5 lbs (22.5 Kg). Two people are required to lift the chassis.

Note: To disengage the chassis rails, pull the latch and push the rails toward the front of the chassis.

Figure 6 Installing the Chassis Rails



Installing the DXi4500 Chassis

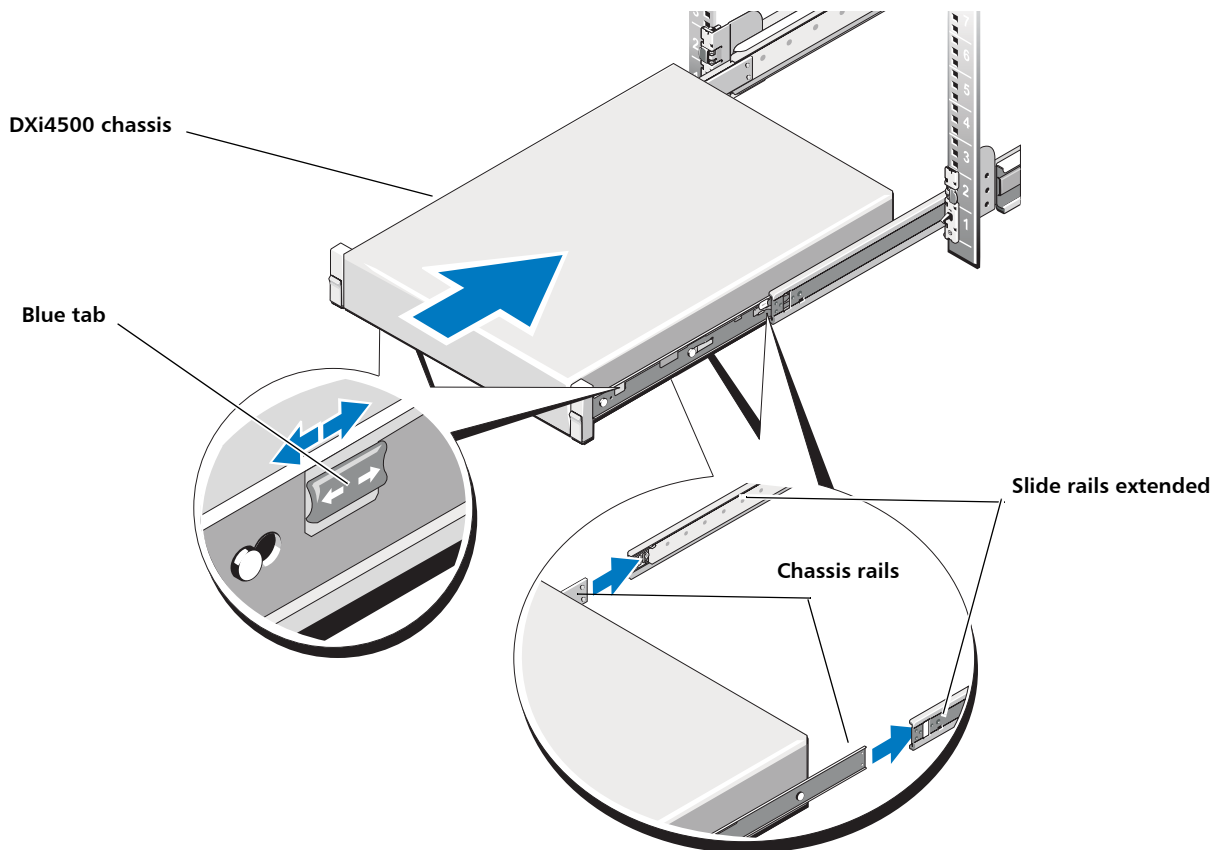
WARNING: Ensure that the system is properly supported until the chassis rails are locked into the slide rails on both sides.

1 To install the DXi4500 chassis (see [Figure 7](#)):

WARNING: The DXi4500 weighs 49.5 lbs (22.5 Kg). Two people are required to lift the chassis.

- a Pull the slide rails out of the rack until they lock into place.
- b Align and insert the ends of the chassis rails into the ends of the slide rails. Push the system inward until the chassis rails lock into place.
- c Push or pull the blue tab located near the front of the system and slide the system into the rack.

Figure 7 Installing the DXi4500 Chassis



Cabling the DXi4500

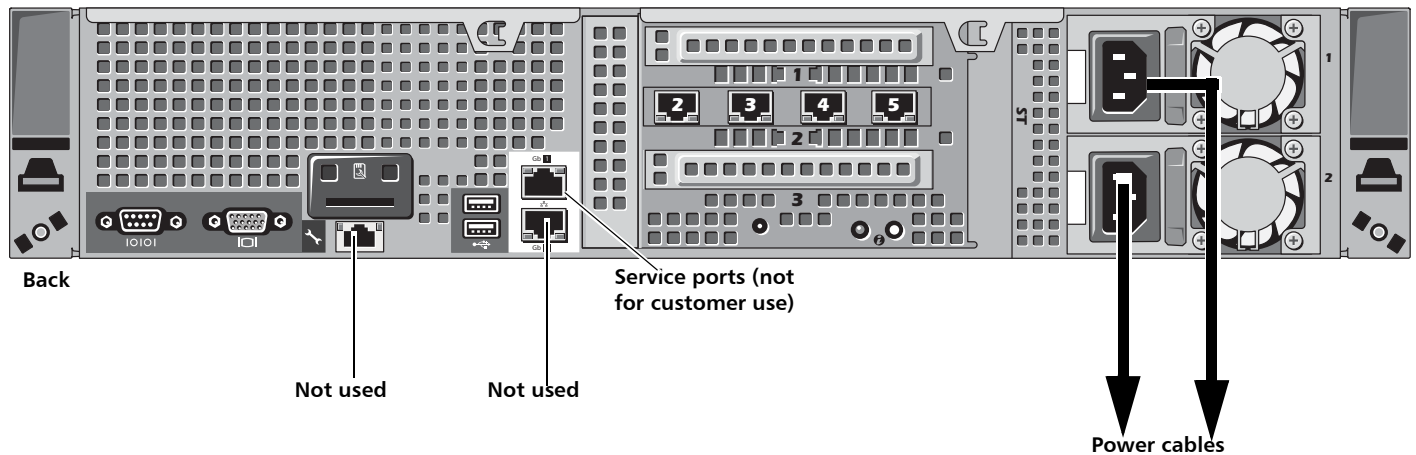
To cable the DXi4500 (see [Figure 8](#)):

- 1 Connect a power cable to each power supply (two).

Note: It is recommended that you connect each power cord to a separate AC circuit to ensure system availability in case of a power failure.

- 2 Do NOT connect Ethernet cables at this time.

Figure 8 Cabling the DXi4500



Initial Configuration

Before the DXi4500 is operational, you must configure the system through the remote management setup pages. You must also configure your backup software.

Configuring the DXi4500 consists of four major steps. See the following subsections for detailed instructions for completing each step:

- 1 [Accessing the DXi4500, Remote Management Interface](#) on page 12
- 2 [Completing the Setup Wizard](#) on page 15
- 3 [Connecting the Ethernet Cables](#) on page 19
- 4 [Creating a Typical Backup Configuration](#) on page 20

Note: You will need a computer and an Ethernet cable to complete the initial setup.

Note: If you attempt to install multiple DXi4500 systems at the same time, an IP address conflict can occur because each system is configured with the same default IP address (10.1.1.1). To avoid this problem, install one system and configure it to use a different IP address before you connect another system to the network.

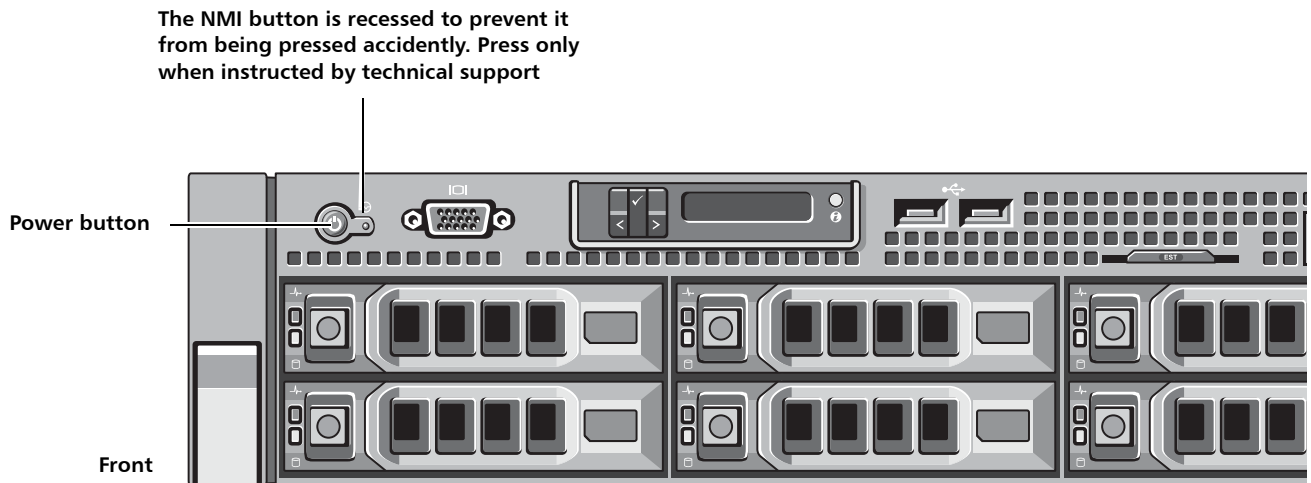
Accessing the DXi4500, Remote Management Interface

To access the DXi4500 remote management interface:

- 1 Turn on the DXi4500 system by pressing the power button located on the front of each chassis (see [Figure 9](#)).

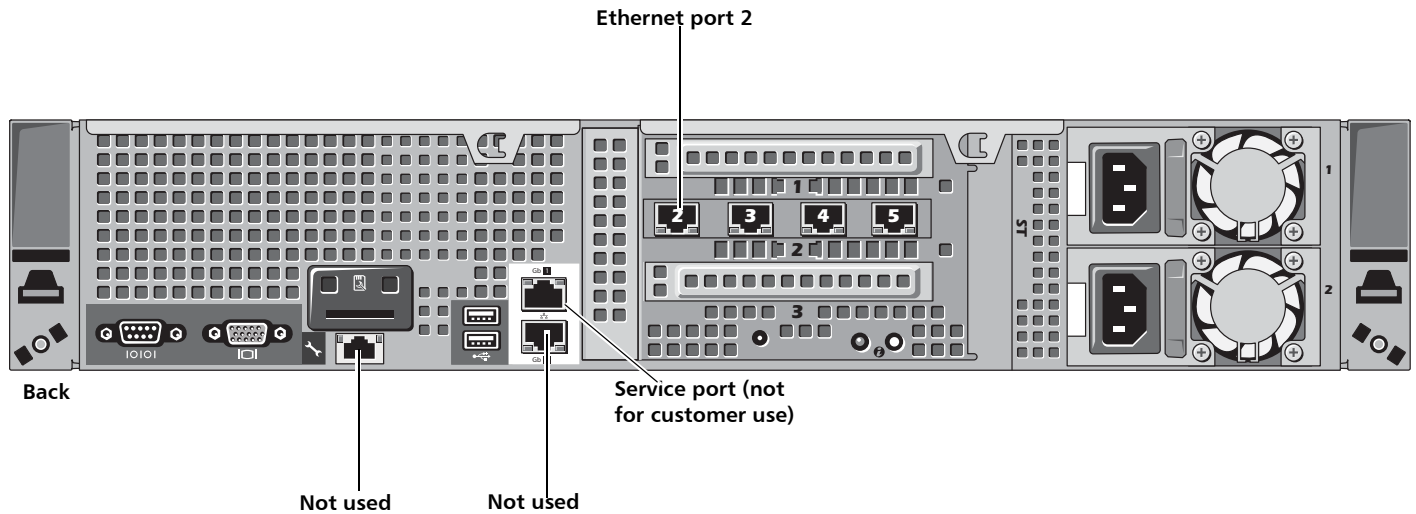
Note: Wait 10 minutes for the system to boot before continuing with the procedure.

Figure 9 Power Buttons



- 2 Using an Ethernet cable, connect the Ethernet port on the computer to Ethernet port 2 on the back of the DXi4500. Ethernet port 2 is in the far left-hand Ethernet port in the middle PCI slot (slot 2) as you face the back of the system (see [Figure 10](#)).

Figure 10 Ethernet Ports



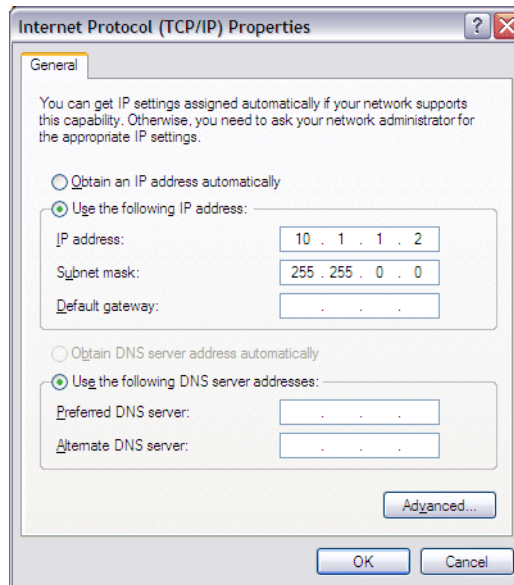
3 Configure the network settings on the computer:

Note: This procedure assumes you are running Windows XP on the computer. The steps might be different if you are using another operating system.

- a On the Windows **Start** menu, click **Connect To > Show all connections**.
- b Right-click the network connection that corresponds to the Ethernet port on the computer (for example, **Local Area Connection**), and click **Properties**.
- c Select **Internet Protocol (TCP/IP)** in the list of connections, and then click **Properties**.

The **Internet Protocol (TCP/IP) Properties** window displays (see [Figure 11](#)).

Figure 11 Internet Protocol (TCP/IP) Properties Window



d Select **Use the following IP Address** and then enter the following information:

Caution: Before changing the IP address information, write down the original settings. This will be used later to reset the network configuration.

- **IP address** - 10.1.1.2
- **Subnet mask** - 255.255.0.0

e Click **OK**.

f Wait at least two minutes for the computer to set the IP addresses on the local computer.

4 On the computer, open a supported Web browser, type **10.1.1.1** in the **Address** box, and press **<Enter>**.

The **Log In** page displays (see [Figure 12](#)).

Note: For Web browsers, the DXi4500 supports either Internet Explorer 6 or higher, or Firefox 1.5 or higher.

Note: If the **Log In** page does not display, verify that you entered the correct IP address (**10.1.1.1**) and that the network settings on the computer are correct. Wait five minutes, then try again. If the **Log In** page still does not display, contact Quantum Customer Support. (Contact information is located on the last page of this document.)

Continue with the next section to log on to the system and complete the Setup Wizard.

Figure 12 Log In Screen



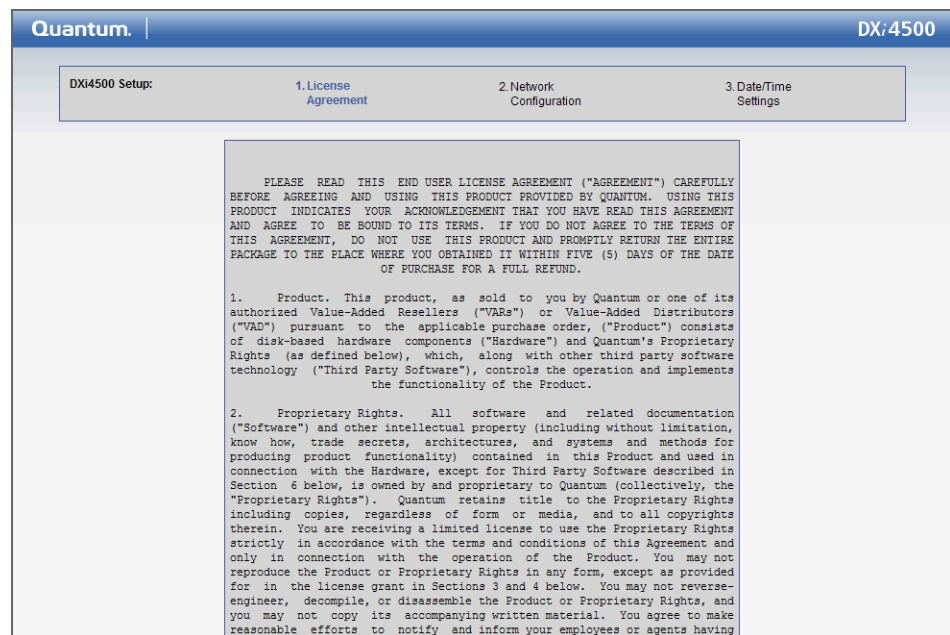
Completing the Setup Wizard

To complete the DXi4500 setup wizard:

- 1 On the **Log In** page, select **Administrator**, type password for the password, and click **Login**.

The **License Agreement** page displays (see [Figure 13](#)).

Figure 13 License Agreement



- 2 Read the license agreement and click **I Accept** at the bottom to continue.

Note: If you do not accept the license agreement, the DXi4500 will not function.

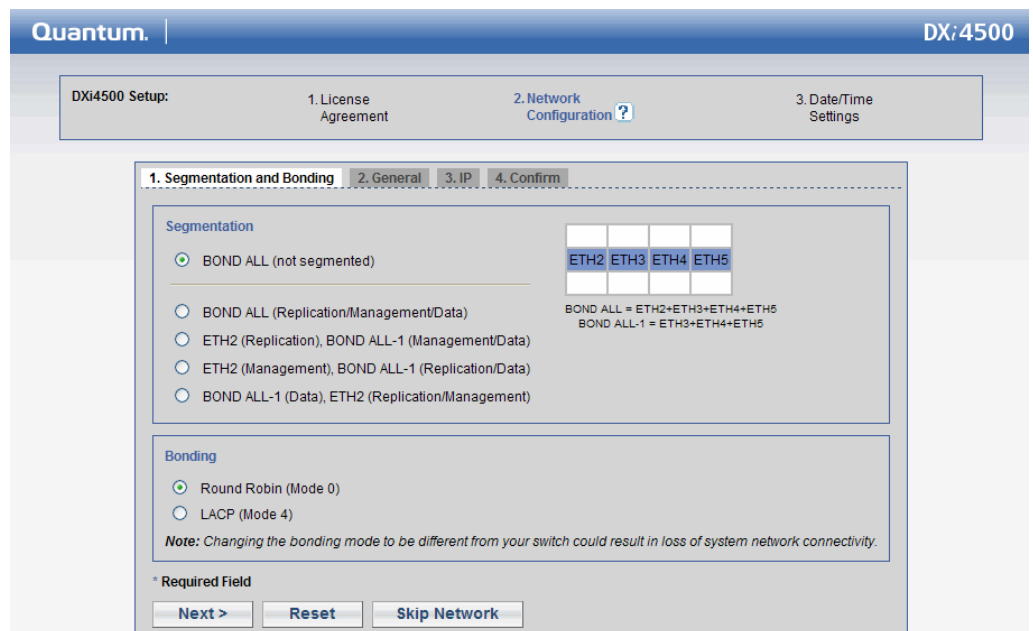
The **Segmentation and Bonding** page displays (see [Figure 14](#)).

Caution: Configuring network segmentation requires advanced networking knowledge. When selecting network segmentation options other than the options recommended in the following procedures, contact your network administrator for assistance.

If you choose to use network segmentation or CIFS, refer to the DXi4500 User's Guide for details.

Caution: The DXi4500 bonding settings must match the switch settings. If the switch settings and the DXi4500 settings do not match, your system may become inaccessible.

Figure 14 Network Configuration (Segmentation and Bonding)



3 Under **Segmentation**, select **BOND ALL (Not segmented)**. **BOND ALL (Not segmented)** is the default setting.

Note: Refer to the *Quantum DXi4500 User's Guide* (PN 6-66904) located on the documentation CD for information about additional segmentation options.

4 Under **Bonding**, select **Round Robin (Mode 0)**. **Round Robin (Mode 0)** is the default setting.

Note: Refer to the *Quantum DXi4500 User's Guide* (PN 6-66904) located on the documentation CD for information about additional bonding options.

5 Click **Next**.

The **General** page displays (see [Figure 15](#)).

Figure 15 Network Configuration (General)

Quantum. | DXi4500

DXi4500 Setup: 1. License Agreement 2. Network Configuration ? 3. Date/Time Settings

1. Segmentation and Bonding 2. General 3. IP 4. Confirm

System

* Hostname:

DNS

Domain Search Path: ?

* Required Field

< Previous Next > Reset Skip Network

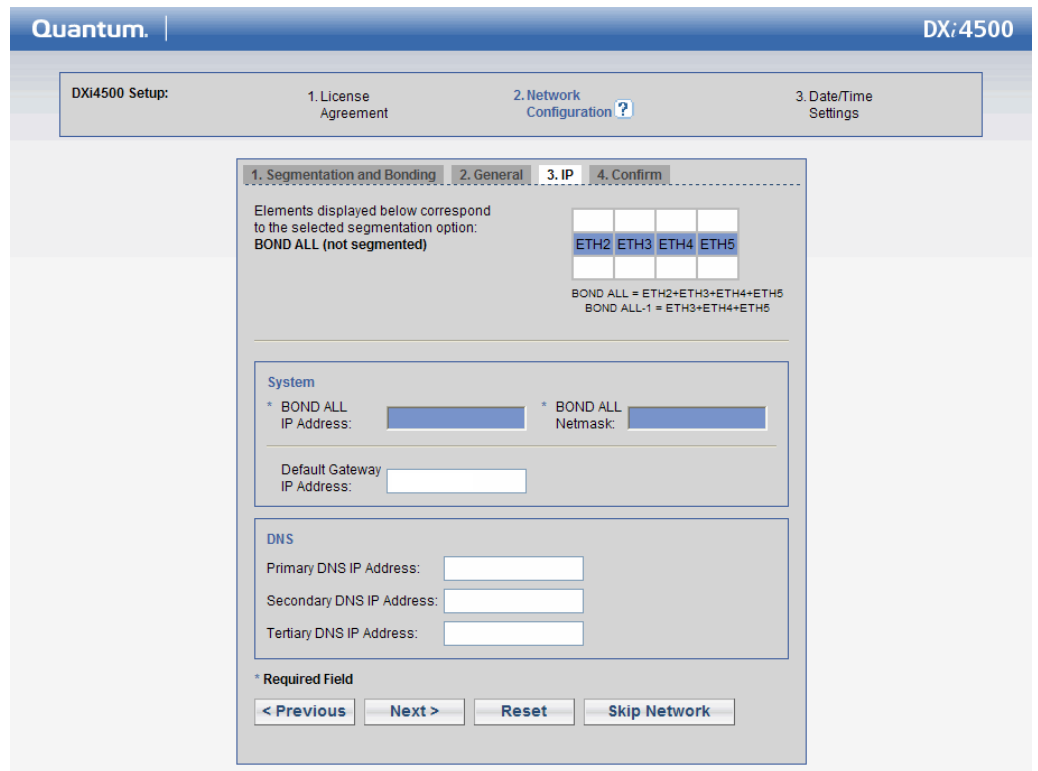
6 On the **General** page:

- a Enter the **Hostname** used to identify the DXi4500 system.
- b If your site uses Domain Search Path (**DNS**), enter the DNS. DNS may be either a single domain name or a comma-separated list (no spaces) of up to 6 domain names. The first domain name listed is used as the local domain. Domain names must only contain letters [A-Z a-z], numbers[0-9], dots [.] and hyphens [-].

7 Click **Next**.

The **Network Configuration (IP)** page displays (see [Figure 16](#)).

Figure 16 Network Configuration (IP)



8 On the **IP** page:

Your network administrator will provide you with the IP address information.

Caution: Make sure you enter the correct IP address information and that you write this information down. If you enter the incorrect IP address information and reboot, you will not be able to access the system.

- a Under **System**, enter the **IP Address**, the **Netmask**, and the **Default Gateway** you want to use to join the DXi4500 to your network.
 - b If your site uses DNS, under **DNS**, enter the **Primary**, **Secondary**, and **Tertiary DNS IP Address**.
- 9** Click **Apply** to confirm the changes, then click **Yes** to continue. A message displays stating that the **Network configuration has been saved**.
- 10** Click **OK** to continue.
- The **Date/Time Settings** page displays (see [Figure 17](#)).

Figure 17 Date/Time Settings

- 11 If necessary, select **Manual** to manually set the system date and time.

Click **Edit** to specify the system date. Use the drop down boxes to specify the system time.

Note: You can also choose to synchronize the system time with an NTP time server. For more information, refer to the *Quantum DXi4500 User's Guide* (PN 6-66904) located on the documentation CD.

- 12 Select the **Timezone**.

- 13 Select the desired time format (**24 hours** or **12 hours**).

- 14 Click **Apply**.

A message appears stating that completing the setup will restart the system.

- 15 Click **Yes** to restart the system.

- 16 Disconnect the computer from the DXi4500 from Ethernet port 2 on the DXi4500. Reset the computer network settings back to its default values.

- 17 Wait 15 minutes for the system to fully restart.

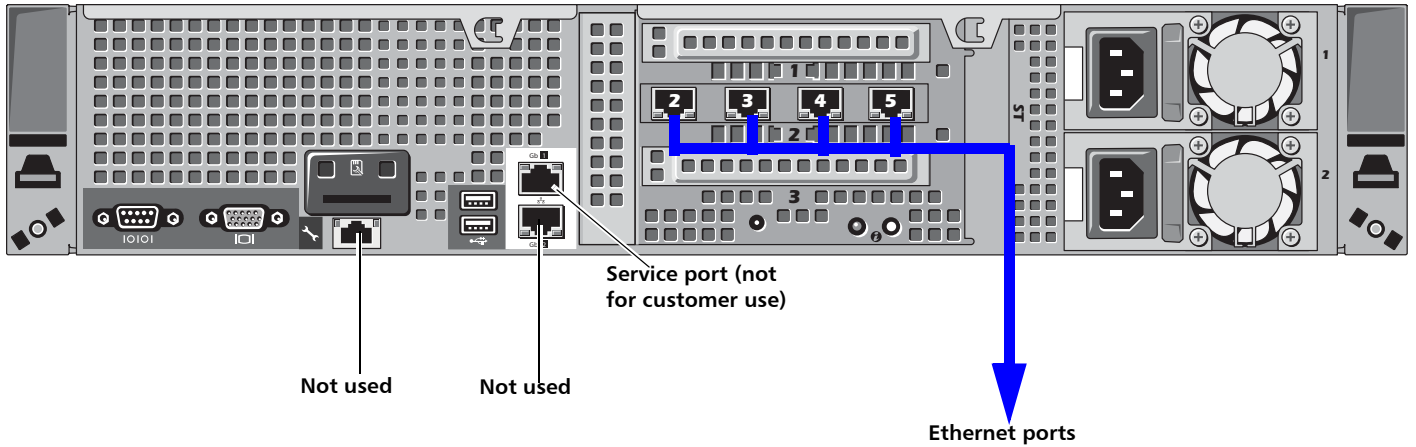
Connecting the Ethernet Cables

Connect the Ethernet cables to the DXi4500 as follows (see [figure 18](#)).

Note: The Ethernet cables are used for remote management and NAS connectivity. Review the *DXi4500 Site Planning Guide* (PN 6-66638) located on the documentation CD to determine the number of Ethernet cables to attach.

- 1 Connect up to four Ethernet cables to the Quad port NIC (ports 2, 3, 4, and 5).

Figure 18 Connecting the Ethernet Cables



Creating a Typical Backup Configuration

Before you can begin using the DXi4500 for backups, you must configure the system for NAS or Symantec™ NetBackup OST. See the following sections for detailed instructions for completing each type of configuration:

- [Installed System Licenses](#) on page 21
Refer to this section for information on installed system licenses.
- [OST Configuration](#) on page 21
See this section to configure the DXi4500 to use OST (OpenStorage) and Symantec Veritas NetBackup to perform backups and Optimized Duplication.
- [NAS Configuration](#) on page 22
See this section to configure the DXi4500 to use NAS (network attached storage) for backups.

Installed System Licenses

The following licenses are installed by default on the system:

- Deduplication License
- NAS connectivity License
- OST (Open Storage) License
- Replication License
- DXi Advanced Reporting License

OST Configuration

The following components are required for OST (Open Storage) operation with the DXi4500:

- Symantec Veritas NetBackup v.6.5.4 (or later) or Symantec Backup Exec 2010 (or later).

Caution: NetBackup v 6.5.4 and Backup Exec 2010 are the minimum versions required for OST functionality.

- Quantum OST storage server (included with the Quantum DXi4500 software)
- Quantum OST plug-in (downloaded separately through the remote management pages or from the Quantum Service and Support Web site)

To enable OST on the DXi4500:

- 1 Download and install the Quantum OST Plug-in according to the instructions in the *Quantum DXi-Series: Symantec™ Veritas NetBackup OST Configuration Guide* (6-66755) or *Quantum DXi-Series: Symantec™ Backup Exec OST Configuration Guide* (6-66910).

Note: You can find a copy of the *OST Configuration Guides* on the quick reference CD that came with your DXi4500 system.

- 2 Follow the steps in the *OST Configuration Guide* to configure the DXi4500 and NetBackup or Backup Exec to perform backups and OST Optimized Duplication.
- 3 To optimize your backup environment:
 - Follow the procedures in the *Veritas NetBackup 6.5 from Symantec with DXi-Series Best Practice Guide* (20020428). To obtain a copy of the *Veritas NetBackup 6.5 from Symantec with DXi-Series Best Practice Guide*, visit the DXi-Series product pages on www.quantum.com.
 - Follow the procedures in the *Backup Exec from Symantec with DXi-Series Best Practice Guide* (20020434). To obtain a copy of the *Backup Exec from Symantec with DXi-Series Best Practice Guide*, visit the DXi-Series product pages on www.quantum.com.
- 4 To learn more about operating the DXi4500, refer to the *Quantum DXi4500 User's Guide* (PN 6-66904) located on the documentation CD.



NAS Configuration

The DXi4500 presents its disk storage as NAS (network attached storage) shares. Before you can use the DXi4500 for backups, you must create at least one NAS share on the system. After you create a NAS share, you can configure your backup application to back up data to the share.

Use the following procedure to set up a basic NAS share.

Note: Do not use this procedure if you are using OST to perform backups. Instead, see [OST Configuration](#) on page 21.

Note: This procedure assumes you are creating a NAS share in a Windows environment. Refer to the *Quantum DXi4500 User's Guide* (PN 6-66904) located on the documentation CD for additional NAS configuration information.

- 1 Log on to the DXi4500 remote management pages:
 - a On a computer on the same subnet as the DXi4500, enter the IP address of the system in the **Address** box of a supported Web browser.
Use the IP address you specified when setting up the system.
The **Log In** page displays (see [figure 12](#)).
 - b Select **Administrator**, type **password** for the password, and click **Login**.
The **Home** page displays.
- 2 Join the DXi4500 to the Windows domain used by your backup application:

Note: This procedure assumes you are joining the DXi4500 to a Windows workgroup. If your site uses Active Directory instead of workgroups, refer to the *Quantum DXi4500 User's Guide* (PN 6-66904) located on the documentation CD for information on joining a Windows domain using Active Directory.

- a From the contents frame, click the **Configuration** menu.
The **NAS & OST** page displays.
- b From the **NAS & OST** page, click the **Windows Domain** tab.
The **Windows Domain** page displays (see [figure 19](#)).

Figure 19 Windows Domain Page

The screenshot shows the Quantum DXi4500 configuration interface. The top navigation bar includes 'Admin' and 'Ticket' buttons, and the user is logged in as 'Administrator Login'. The main content area is titled 'Windows Domain' and contains the following fields and options:

- Domain Type:** A dropdown menu with 'Select a Type' selected.
- Domain/Workgroup Name:** A text input field.
- Primary Domain Controller:** Two radio button options: 'Use DNS Discovery' (selected) and 'Specify Address' (with an adjacent text input field).
- Organization Unit (optional):** A text input field.
- Administrator Name:** A text input field.
- Administrator Password:** A text input field.

A confirmation message at the top of the main area reads: 'This system has not joined a Windows Domain'. An 'Apply' button is located at the bottom of the configuration area.

a In the **Domain Type** box, select **Workgroup**.

b In the **Domain/Workgroup Name** box, type the name of the Windows workgroup to join.

c Click **Apply**

A confirmation message appears. Click **Yes** to confirm, then click **OK** to continue.

3 To add a Workgroup User, select the **Access Control** tab and enter a **Username** and **Password**. Do NOT grant admin rights and click **Apply**.

4 Create a de-duplicated NAS share:

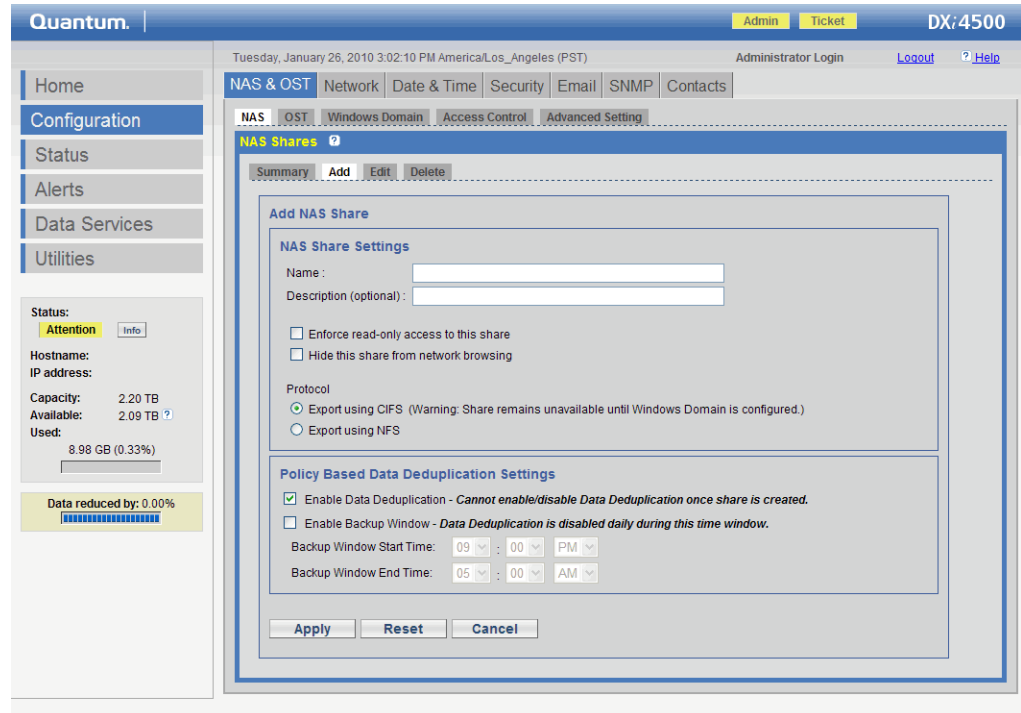
a From the **NAS & OST** page, click the **NAS** tab.

The **NAS Shares** page displays.

b From the **NAS Shares** page, click the **Add** tab.

The **Add NAS Share** page displays (see [figure 20](#)).

Figure 20 Add NAS Share Page

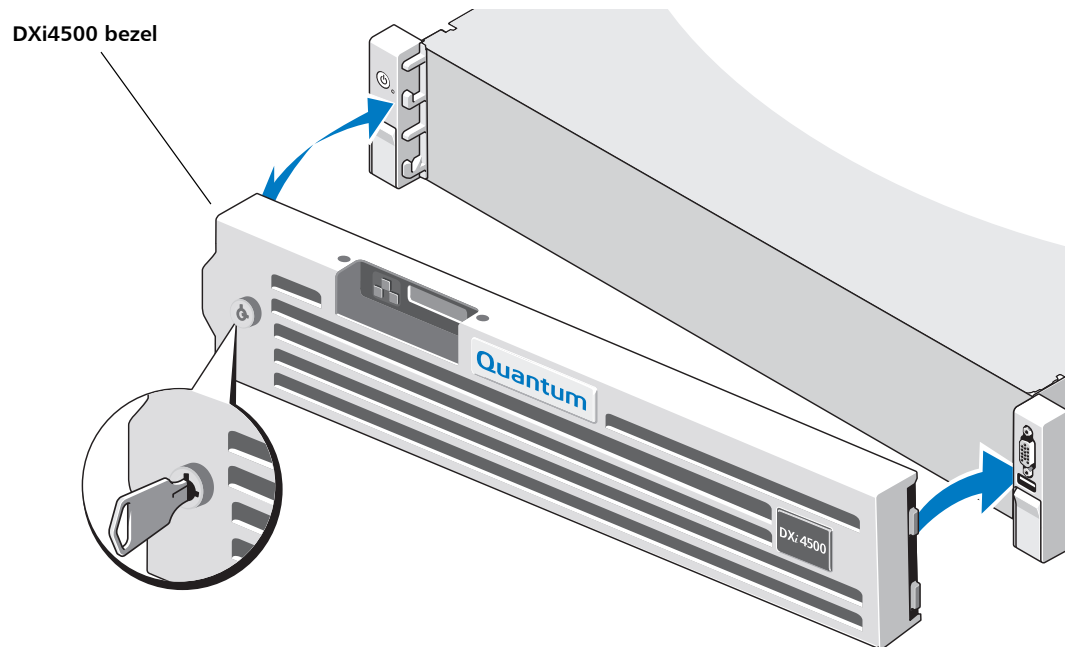


- a In the **Name** box, type a name for the **NAS** share.
The share will appear as this name on the Windows network.
 - b Under **Protocol**, select **Export using CIFS**.
 - c Ensure that the **Enable Deduplication** check box is selected (deduplication is enabled by default).
 - d Click **Apply**.
A confirmation message appears. Click **Yes** to confirm, then click **OK** to continue.
The NAS share is created and becomes available on the Windows network.
- 5 To verify the NAS share:
- a On a computer on the same network as the DXi4500, click **Start** and then **Run**.
 - b Type: \\<IP address of the DXi4500>\<name of the NAS share>
 - c Press **Enter**.
The NAS share will display the NAS share in **Windows Explorer** if successful.

- 6 Install a bezel on the front of the DXi4500 and expansion module(s). The bezel snaps into place on the front of the DXi4500 to prevent the removal of the system from the rack (see [Figure 21](#)).

Note: The keys that lock and unlock the front bezel are located in the accessory kit.

Figure 21 Installing the Front Bezels



- 7 The DXi4500 is now ready to use for backup operation. The installation is successful when you are able to backup data to the system. Here are the next steps you can take:
- To configure your backup application to begin performing backups to the new NAS share, refer to your backup application documentation.
 - To enable remote replication of the NAS share to another DXi™-Series system, refer to Chapter 11, "Implementing a Data Replication Plan" in the *Quantum DXi4500 User's Guide* located on the documentation CD.
 - To learn more about operating the DXi4500, refer to the *Quantum DXi4500 User's Guide* (PN 6-66904) located on the documentation CD.



For assistance, contact the Quantum Customer Support Center:
USA: **800-284-5101 (toll free) or 949-725-2100**
EMEA: **00800-4-782-6886 (toll free) or +49 6131 3241 1164**
APAC: **+800 7826 8887 (toll free) or +603 7953 3010**
Worldwide: <http://www.quantum.com/ServiceandSupport>

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About Quantum

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