

Quantum® User Essentials

DXi4000 Series (DXi4510 and DXi4601)



Review this document after your DXi4000 system has been installed. It will help you become familiar with your system. This document is not, however, a substitute for the *DXi4000 User's Guide* or for Quantum training.

Customer Training and Documentation

For information on configuring, operating, and maintaining your DXi4000, open a Web browser and go to www.quantum.com/DXi4000Docs. There you will find product documentation, how-to videos, and other product resources.

Licensed Features

On the DXi GUI, go to **Utilities > License Keys** and review the licensed features.

Pre-installed features:

NAS: Network Attached Storage (NAS) is one of the options for presenting the DXi4000 to the host. The Common Internet File System (CIFS) protocol and Network File System (NFS) protocol are supported.

OST: OpenStorage (OST) is one of two options for presenting the DXi4000 to the host. Specific versions of NetBackup and Backup Exec are required. For more details, refer to the *DXi-Series OST Configuration Guide*.

Deduplication: Enables data deduplication capability.

Replication: Enables the replication feature, which is the process of creating and managing duplicate versions of your data.

Storage Capacity: (DXi4601 only) Enables the purchased storage capacity for the system. A storage capacity license key is pre-installed for all initially purchased capacity (4, 8, or 12 TB).

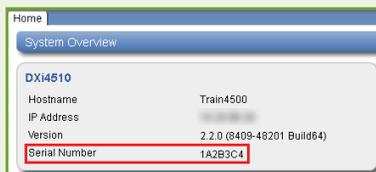
Storage Capacity upgrade feature (DXi4601 only)

You can increase the available storage capacity of the system up to a total of 12 TB, by adding additional license keys. To increase your storage capacity, contact your Quantum sales representative to purchase a storage capacity upgrade license. After you purchase the license, you will receive a License Certificate containing an authorization code. Follow the detailed steps in the "Adding a License Key" section of the *DXi4000 User's Guide* to complete the storage capacity upgrade. After adding a Storage Capacity license, the DXi4601 needs to be rebooted to activate the additional capacity.

You need your system serial number when contacting a Quantum sales representative. You can locate the serial number two ways:

From the GUI: Look at the Home page of the remote management pages. The serial number is located in the System Details section.

On Physical Components: You can also locate the system serial number by looking at the front and rear of the server node. The top of the EST tab on the front of the unit includes the serial number (labeled as Service Tag), and so does a sticker on the rear of the unit. An example system serial number is 1A2B3C4.



Basic Operation

1. Log on to GUI and change the default password (password) for the Administrator user (**Configuration > System > Security > Web & CLI Passwords**).
Monitor user: view the DXi4000 management pages, but not change them.
Administrator user: view and edit the management pages
2. Power on and shut down the DXi4000 in the order described in the *DXi4000 User's Guide*. (Refer to the "Turning On and Shutting Down the System" section.)

Basic Configuration (Network, NAS, OST, Replication)

1. Edit Network Configuration. Go to **Configuration > System > Network**. Consult your network administrator prior to changing any of the information. (*DXi4000 User's Guide*, Network section)
2. Configure NAS. Go to **Configuration > NAS**. (*DXi4000 User's Guide*, NAS section)
3. Configure OST. Go to **Configuration > OST**. (*DXi4000 User's Guide*, OST section)
4. Set up replication. Go to **Configuration > Replication**. (*DXi4000 User's Guide*, Data Replication section) **Note:** OST replication (optimized duplication) does not require the same set up as replication for NAS shares. (*Symantec Netbackup or Backup Exec OST Configuration Guide*).

During data replication, data is sent from one system (the source) to another system (the target), usually in another location. Sources send replicated data, consisting of unique blocks not already present at the target, to the target, as well as the metadata for the entire backup set.

Replication can occur at the NAS share and the directory/file level.

Share-level replication treats the entire NAS share as a single entity. The replicated data (entire share) is secured at the target and requires that a recovery process be run to make the data accessible.

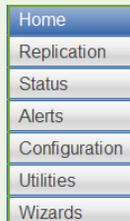
Directory/file-level replication sends the data in a specific NAS directory/file to the target. Proper system configuration allows replicated data to be immediately accessible at the target.

Quantum recommends to schedule replication to run after backups are complete. Recovered data is only as current as the last replication. (DXi4000 User's Guide, Adding or Editing a Scheduled Event section). Also, Quantum recommends that you always replicate a new share or partition immediately after creating it. This establishes the initial data structure on the target system and greatly increases the speed of the first replication.

5. Configure space reclamation. Go to **Utilities > Space Reclamation** (*DXi4000 User's Guide*, Space Reclamation section). It is a best practice to run space reclamation on a daily basis.

Space reclamation is the process used to delete blocks that are no longer referenced by metadata, returning capacity to the free space pool for future reuse. The operation can use a significant amount of CPU processing and disk I/O.

While it is possible to reclaim space concurrent with other activities, you should schedule space reclamation during periods when other operations (ingest, replication, tape creation, etc.) are not being performed. When other operations are scheduled concurrent with space reclamation, system performance will be impacted.

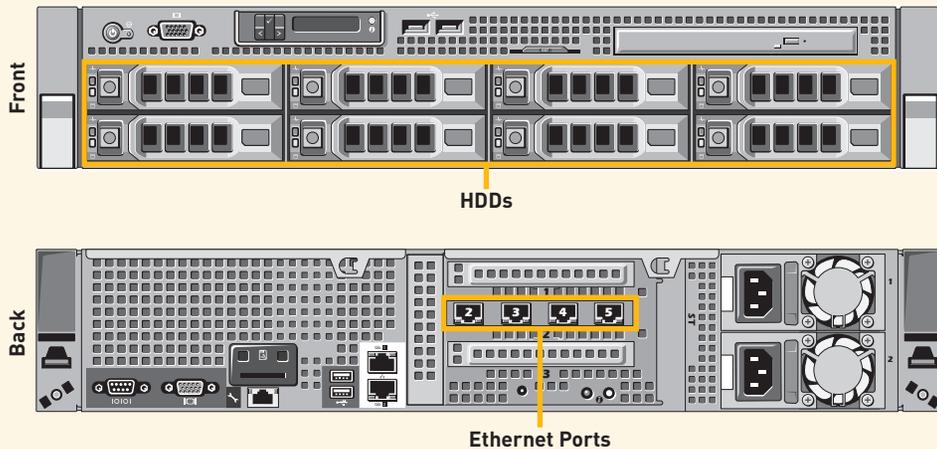


The Wizards launch during the initial configuration and can be used at any time. The Wizards provide you with step-by-step instructions for setting up NAS, OST, replication, email alerts, and technical support features such as registering your product.

Hardware

1. Identify the Ethernet ports on the server node.
2. Identify the LEDs on the server node.
3. Identify the disk drives. The DXi4000 uses hard disk drives (HDDs).

Server Node



Status and Notifications / Alert Options

1. Set up Email notifications. Go to **Configuration > Notifications > Email > Recipients**. (*DXi4000 User's Guide*, Notifications section)
2. Set up SNMP. Go to **Configuration > Notifications > SNMP**. (*DXi4000 User's Guide*, Notifications section)
3. Install and configure StorageCare Guardian. Installation instructions and whitepapers are located at www.quantum.com/ServiceandSupport/Services/GuardianInformation/Index.aspx
4. Check the system status on the Home page. (*DXi4000 User's Guide*, DXi4000 Home Page chapter)
5. Check **Status** from the main menu. Go to **Status > Hardware**. Storage array failures are critical and must be addressed immediately to minimize the chances of data loss. (*DXi4000 User's Guide*, DXi4000 Status section)
6. Review the Service Ticket buttons. Follow the suggested actions. (*DXi4000 User's Guide*, DXi4000 Alerts Chapter)

Troubleshooting and Help

1. Before calling Quantum Support, review these FAQs:

Question: How can I free up disk space on my DXi?

Answer: There are multiple ways you can remove data from your DXi:

- You can delete data from your NAS share.
- If the DXi is a target system, you can delete the replicated snapshots.
- After one or more of the previous actions have been taken you must run space reclamation to free up the space.

Question: When should I schedule replication and space reclamation for best performance?

Answer: If possible, try to schedule your backups, replication and space reclamation to run at different times throughout the day. By keeping those processes separate your blockpool performance will improve.

Question: How can I increase my deduplication rate?

Answer: Three things that will hurt your deduplication ratio are software compression, encryption, and multiplexing. Most backup applications have options that can be enabled or disabled for these functions and are often enabled by default. They should be disabled or the DXi will not be able to achieve an optimal deduplication ratio.

Question: What should I do when my backups fail?

Answer: Backup jobs may have failed for some of the following reasons:

- The DXi ran out of space during the backup window.
- Your backup host lost network connectivity to the DXi.
- Your backup application may have crashed. Try re-running the backup before contacting Quantum support.

2. Review the Troubleshooting section in the *DXi4000 User's Guide*.
3. Download log files for Technical Support. They will need these to troubleshoot problems.
 - **Utilities > Diagnostics > System Diag File > Generate New/Download Current**
 - **Utilities > Diagnostics > Storage Array Diag File > Generate New/Download Current**
4. Visit www.quantum.com/ServiceAndSupport to access the KnowledgeBase.
5. Access eSupport by opening an Online Service Request at https://onlineservice.quantum.com/OA_HTML/xxibu/jtflogin.jsp
6. Contact Quantum Support. In US, call 800-284-5101. In Europe, call toll free 00800 9999 3822 or direct +49 6131 3241 1164. You will need your system serial number. For additional contact information, go to www.quantum.com/ServiceandSupport/Contacts/Index.aspx