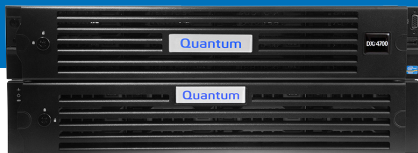


# Quantum® User Essentials

## DXi4700



Review this document after your DXi4700 system has been installed. It will help you become familiar with your system. This document is not, however, a substitute for the *DXi4700 User's Guide* or for Quantum DXi training.

### Documentation and Training

For information on configuring, operating, and maintaining your DXi4700, open a Web browser and go to [www.quantum.com/dxi4000docs](http://www.quantum.com/dxi4000docs). You will find product documentation, how-to videos, and other product resources there.

For information about training courses available for the DXi4700, go to [www.quantum.com/ServiceandSupport/StorageCareLearning/index.aspx](http://www.quantum.com/ServiceandSupport/StorageCareLearning/index.aspx).

### Licensed Features

On the DXi GUI, go to **Utilities > License Keys** and review the following pre-installed licensed features:

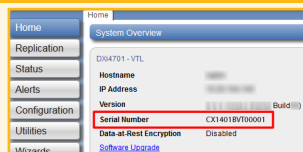
- **Network Attached Storage (NAS):** An option for presenting the DXi4700 to the host.
- **Virtual Tape Library (VTL):** An option for presenting the DXi4700 to the host.
- **Backup Application Specific Path to Tape (PTT):** Provides the ability to move data to physical tape cartridges in an attached tape library using a Fibre Channel connection. (DXi4700 Multi-Protocol only.)  
**Note:** The DXi4700 can be ordered as NAS only, as VTL only, or as a NAS, VTL, and PTT multi-protocol system.
- **Deduplication:** Enables data deduplication.
- **Replication:** Enables replication, the process of creating and managing duplicate versions of your data.
- **OpenStorage Technology (OST):** An option for presenting the DXi4700 to the host. Requires specific versions of NetBackup and Backup Exec. For more details, refer to the *DXi-Series OST Configuration Guide*.
- **Data-in-Flight Encryption:** Enables the use of 128-bit or 256-bit AES encryption when sending data to another DXi system. (Not available in all regions.)
- **Storage Capacity:** Enables the purchased storage capacity for the system. A 5-TB storage capacity license is pre-installed, and a license for purchased storage above 5 TB ships with the DXi4700 for installation at startup and initial configuration. Contact your Quantum sales representative for storage capacity upgrades.

### System Serial Number

You will need your system serial number when contacting Quantum for Technical Support. You can locate the serial number two ways:

**From the GUI:** The serial number is shown on the **Home** page. An example system serial number is **CX1401BVT00001**.

**On Physical Components:** You can also locate the system serial number on the EST tab at the lower front of the node. Pull out the tab to see the serial number (labeled as **Service Call System Serial Number**).



### Basic Operation

1. Log on to the GUI and change the default password (**password**) for the Administrator user (**Configuration > System > Security**).
2. Power on and shut down the DXi4700 in the order described in the *DXi4700 User's Guide* (Refer to the "Turning On and Shutting Down the System" section).

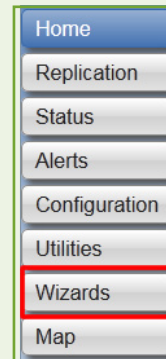
### Basic Configuration (Network, NAS, OST, Replication)

The **Configuration Wizards** launch during the initial configuration, but you can use them at any time by clicking the **Wizards** button from the DXi menu. The **Configuration Wizards** provide step-by-step instructions for setting up NAS, OST, replication, e-mail alerts, and technical support features such as registering your product and enabling licensed features.

In addition to using the **Wizards** menu, you can configure network, NAS, OST, VTL, replication, and space management settings from the DXi main menus by doing any of the following:

- Edit the Network Configuration. Go to **Configuration > System > Network**. Consult your network administrator prior to changing any of the information. (*DXi4700 User's Guide*, "System: Network" section in the "Configuration" chapter).
- Configure NAS. Go to **Configuration > NAS** (*DXi4700 User's Guide*, "DXi4700 Configuration" chapter).
- Configure OST. Go to **Configuration > OST** (*DXi4700 User's Guide*, "DXi4700 Configuration" chapter).
- Configure VTL. Go to **Configuration > VTL**. Media creation varies, depending on the backup application and settings used. As a general rule, configure sufficient media to hold the amount of backup data for the required retention period, and use smaller-sized media (*DXi4700 User's Guide*, "Configuration" chapter).
- Set up replication. Go to **Configuration > Replication** (*DXi4700 User's Guide*, "DXi4700 Configuration" chapter). **Note:** OST replication (Optimized Duplication) does not require the same setup as replication for NAS shares (*DXi-Series 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 to the target, consisting of unique blocks not already present at the target, as well as the metadata for the entire backup set. Quantum recommends scheduling replication to run after backups are complete. Recovered data is only as current as the last replication (*DXi4700 User's Guide*, "Adding or Editing a Scheduled Event" section). In addition, always replicate a new share immediately after creating it. This establishes the initial data structure on the target system and greatly increases the speed of the first replication.
- Configure space reclamation. Go to **Utilities > Space Reclamation** to start, stop, or monitor space reclamation activities (*DXi4700 User's Guide*, "Space Reclamation" section). Go to **Configuration > Scheduler** to configure a space reclamation schedule (*DXi4700 User's Guide*, "Scheduler" section).

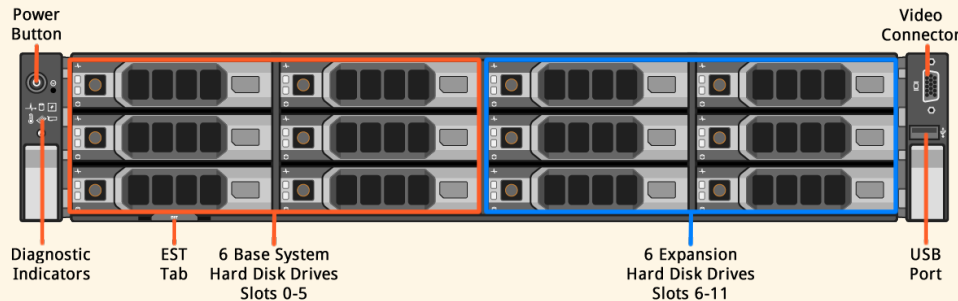
During space reclamation, the DXi4700 searches the blockpool for tags that are no longer referenced and deletes the unneeded tags to free up space. It's a best practice to run/schedule space reclamation on a daily basis. However, reclamation can use a significant amount of CPU processing and disk I/O. Avoid running or scheduling space reclamation during known backup periods.



## Hardware

### Node Front View (Bezel Removed)

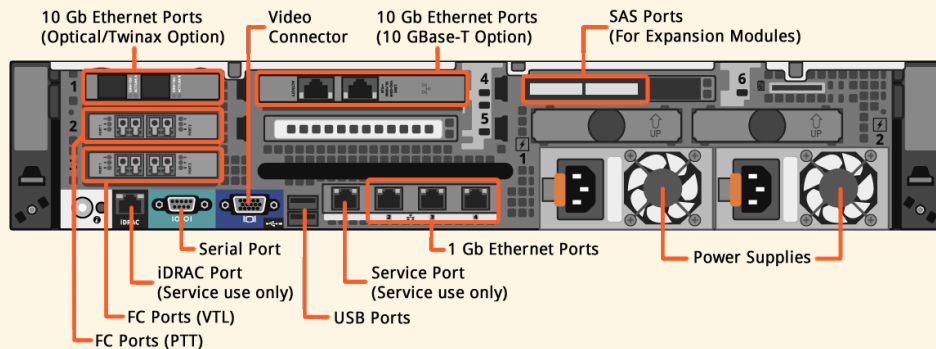
- Identify the main components on the front of the DXi4700 node. The Power button, diagnostic indicators, video connector, USB connector, and EST tab are all available on the front of the server.
- Identify the disk drives. The DXi4700 includes a single server node with either six or twelve 4-TB hard disk drives (HDDs) in a RAID 6 set with a single hot spare.



Refer to the *DXi4700 User's Guide*, "DXi4700 Basic Operations" chapter, for additional details about the front panel components, including the diagnostic indicators.

### Node Rear View

- Identify the Ethernet ports and various connectors, power supplies, and ports at the back of the system. The DXi4700 includes three 1 GbE ports to connect the system to a network, and one 1GbE port reserved for Quantum Service. The iDRAC port is also reserved for Quantum Service.



Refer to the *DXi4700 User's Guide*, "DXi4700 Basic Operations" chapter, for additional details about the rear panel components and the optional Ethernet ports.

### Expansion Module Front View (Bezel Removed)

- DXi4700 configurations with 45 TB or more useable capacity have one, two, or three Expansion Modules.



## Status and Notifications / Alert Options

- Set up email notifications for administrative alerts and service tickets. Go to **Configuration > Notifications > Email > Recipients** (*DXi4700 User's Guide*, "Notifications" section).
- Set up SNMP to send status messages. Go to **Configuration > Notifications > SNMP** (*DXi4700 User's Guide*, "Notifications" section).
- Install and configure StorageCare Guardian. Product documentation and white papers are located at [www.quantum.com/ServiceandSupport/Services/GuardianInformation/Index.aspx](http://www.quantum.com/ServiceandSupport/Services/GuardianInformation/Index.aspx). StorageCare Guardian securely links Quantum hardware and diagnostic data from the surrounding storage ecosystem to Quantum's Global Services Team to enable faster, more precise root cause diagnosis of problems.
- Check the system status on the **Home** page (*DXi4700 User's Guide*, "DXi4700 Home Page" chapter).
- Check **Status** from the DXi Main menu. Go to **Status > Hardware**. Storage array failures are critical and must be addressed immediately to minimize the chances of data loss (*DXi4700 User's Guide*, "DXi4700 Status" chapter).
- Review the **Service Ticket** buttons. Go to **Alerts > Service Tickets**. Follow the suggested actions (*DXi4700 User's Guide*, "DXi4700 Alerts" chapter).

## Troubleshooting and Help

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 you have taken one or more of the previous actions, 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 overall performance will be better.

**Question:** How can I increase my deduplication ratio?

**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 that 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.

Here are some tips you may find helpful for troubleshooting:

- Review the "Troubleshooting" chapter in the *DXi4700 User's Guide*.
- Search for solutions in the Knowledge Base at <http://qsupport.quantum.com/kb/>
- 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**
- Access eSupport by opening an Online Service Request at [https://onlineservice.quantum.com/OA\\_HTML/xxibu/jtflogin.jsp](https://onlineservice.quantum.com/OA_HTML/xxibu/jtflogin.jsp)
- Contact Quantum Support. In the U.S., call 800-284-5101 toll free. In Europe, call toll free +800-9999-3822 or direct +33 (0)1-41-43-49-10. You will need your system serial number. For contact information for other regions, go to [www.quantum.com/ServiceandSupport/Contacts/Index.aspx](http://www.quantum.com/ServiceandSupport/Contacts/Index.aspx).