



Release Notes

Product	DXi-Series (Release 1.4.4)
Operating Systems (Remote Web Client)	Microsoft® Internet Explorer 6.x and later versions and Mozilla Firefox™ 2.x and later versions
Date	June 2011

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Purpose of This Release

This software release provides the following new capabilities:

- Maintenance Release for DXi2500-D, DXi4500, DXi6500, DXi6700, and DXi7500 (software version 1.4.4).

Note: Software version 1.4.4 is a mandatory upgrade for DXi7500 and for other DXi systems that are not immediately planned for upgrade to DXi 2.x.

- Bug fixes (see [Resolved Issues](#) on page 6).

Compatibility Matrix

The following table provides information about hardware compatibility with DXi-Series software (Release 1.4.4). This information is current as of the publication date of these release notes.

Component	Description
DXi2500-D	<ul style="list-style-type: none">• 1 system with 16GB RAM
DXi4500 - 4510	<ul style="list-style-type: none">• 1 system with 24GB RAM• 1 RAID controller card• 4 x 1GbE ports• 2 TB usable capacity
DXi4500 - 4520	<ul style="list-style-type: none">• 1 system with 24GB RAM• 1 RAID controller card• 4 x 1GbE ports• 4 TB usable capacity
DXi6500 - 6510	<ul style="list-style-type: none">• 1 base node with 24GB RAM• 1 RAID controller card• 2 x 1GbE ports• 8 TB usable capacity
DXi6500 - 6520	<ul style="list-style-type: none">• 1 base node with 48GB RAM• 2 RAID controller cards• 0 to 3 expansion modules (JBODs)• 6 x 1GbE ports• 8 TB to 32 TB usable capacity

Component	Description
DXi6500 - 6530	<ul style="list-style-type: none"> • 1 base node with 48GB RAM • 4 RAID controller cards • 2 to 6 expansion modules (JBODs) • 6 x 1GbE ports • 24 TB to 56 TB usable capacity
DXi6500 - 6540	<ul style="list-style-type: none"> • 1 base node with 48GB RAM • 4 RAID controller cards • 2 to 6 expansion modules (JBODs) • 6 x 1GbE ports • 2 x 8Gb Fibre Channel ports (for OST path to tape only, not ingest) • 24 TB to 56 TB usable capacity
DXi6500 - 6550	<ul style="list-style-type: none"> • 1 base node with 48GB RAM • 4 RAID controller cards • 2 to 6 expansion modules (JBODs) • 2 x 10GbE ports plus 2 x 1GbE ports • 2 x 8Gb Fibre Channel ports (for OST path to tape only, not ingest) • 24 TB to 56 TB usable capacity
DXi6700	<ul style="list-style-type: none"> • 1 base node with 48GB RAM • 4 RAID controller cards • 2 to 6 expansion modules (JBODs) • 2 x 1GbE ports • 4 x 8Gb Fibre Channel ports (for VTL and backup application path to tape) • 24 TB to 56 TB usable capacity
DXi7500 Enterprise including the DXi7500-N	<p>Hardware configurations based on:</p> <ul style="list-style-type: none"> • 1 node with 32GB RAM • 1 to four array modules • 1 to sixteen expansion modules • 4 power strips • 1 Fibre Channel switch • 1 GbE switch • 1 redundant power unit
DXi7500 Express	<p>Hardware configurations based on:</p> <ul style="list-style-type: none"> • 1 node with 32GB RAM • 1 array module

OST Plug-In Support

The Quantum OST plug-in is based on Symantec OpenStorage API specification Version 9.4.2.

Note: The Quantum OST plug-in must be installed on a host configured with NetBackup 6.5.2A (or later) or Backup Exec 2010 (or later).

The following tables list the supported platforms and current release versions for the DXi2500-D, DXi4500, DXi6500, DXi6700, and DXi7500.

Table 1 NetBackup 6.5.2 (or later) and Backup Exec 2010 (or later) Compatibility List

Platform	Plug-in Version	DXi Software Version
RedHat Linux x86 32-bit (NetBackup only)	2.3.1	1.4 or higher
Solaris x86 64-bit (NetBackup only)	2.3.1	1.4 or higher
Solaris SPARC 32-bit (NetBackup only)	2.3.1	1.4 or higher
Solaris SPARC 64-bit (NetBackup only)	2.3.1	1.4 or higher
Windows 2003/2008 32-bit	2.3.1	1.4 or higher
Windows 2003/2008 64-bit	2.3.1	1.4 or higher

Note: The Quantum RedHat Linux x86 and Solaris10 SPARC OST 32-bit plug-ins should be used with NetBackup 6.5.

The Quantum OST plug-in availability for NetBackup 7.0 is limited to (see [Table 2](#)):

Note: The Quantum RedHat Linux x86 and Solaris10 x86 and SPARC OST 64-bit plug-ins should be used with NetBackup 7.0 (or later).

Table 2 NetBackup 7.0 (or later) Plug-in Compatibility List

Platform	Plug-in Version	DXi Software Version
RedHat Linux x86 64-bit	2.3.1	1.4 or higher
Solaris_10 64-bit	2.3.1	1.4 or higher
Solaris SPARC 64-bit	2.3.1	1.4 or higher
Windows 2003/2008 32-bit	2.3.1	1.4 or higher

Platform	Plug-in Version	DXi Software Version
Windows 2003/2008 64-bit	2.3.1	1.4 or higher

Replication Compatibility

The following DXi-Series systems are capable of replicating to one another:

- DXi8500 (VTL and NAS Replication)
 - 1.4.2.1_85, 1.4.3_85, and 1.4.4_85
- DXi7500 Express and DXi7500 Enterprise (VTL and NAS Replication)
 - Software Versions: 1.2, 1.2.1, 1.4, 1.4.0.1, 1.4.1, 1.4.1.1, 1.4.2, 1.4.3, 1.4.3.1, and 1.4.4
- DXi6500 (NAS Replication Only)
 - Software Versions: 1.3_65, 1.3.1_65, 1.3.3_65, 1.4, 1.4.0.1, 1.4.1, 1.4.1.1, 1.4.2, 1.4.3, and 1.4.4
- DXi6700 (VTL Replication Only)
 - Software Version: 1.4.1, 1.4.1.1, 1.4.2, 1.4.3, and 1.4.4
- DXi5500 (VTL and NAS Replication)
 - Software Versions: 1.7.2, 1.7.3, and 1.7.3.1
- DXi4500 (NAS Replication Only)
 - Software Version: 1.3.1_45, 1.4.1, 1.4.1.1, 1.4.2, 1.4.3, and 1.4.4
- DXi3500 (VTL and NAS Replication)
 - Software Versions: 1.7.2, 1.7.3, and 1.7.3.1
- DXi2500-D (NAS Replication Only)
 - Software Version: 1.1.1.4_25, 1.4.1, 1.4.1.1, 1.4.2, 1.4.3, 1.4.3.1, and 1.4.4

Note: The DXi6500, DXi4500, and DXi2500-D are NAS-only systems, and cannot be used as targets for VTL replication.

Note: The DXi6700 is a VTL-only system, and cannot be used as a target for NAS replication.

Resolved Issues

The following issues are resolved in this release of DXi-Series 1.4.4 software (see the table below for change request numbers):

Caution: The upgrade to 1.4.4 must be completed prior to January 1, 2012 to ensure that the following issues do not occur on DXi systems.

- **RAS Tickets** - RAS (Service) Tickets will not be generated on all Galaxy-based DXi systems as of January 1, 2012.

Note: Please note that even though the RAS Tickets will not be generated, the DXi remote management console will still display warning and error status of the monitored components.

- **DXi7500 Shadow Tape Copy Feature** - The Shadow Tape Copy feature will have issues with the tape database as of January 1, 2012. Please note that the Shadow Tape Copy feature was offered as an extra option on the DXi7500 model only.
- **Application Specific Path-To-Tape (PTT) Feature** - As of January 1, 2012, if any PTT configuration changes are made, the PTT tape database may not function appropriately.

Change Request Number	SR Number	Platform	Description
23633	1276092 1275296 1275666 1287464	DXi7500	Hot spare drive auto copy back did not start after failed drive replacement.
23817	N/A	All	2012 bug: svclog invoked with negative request ID causes failure to issues RAS events.
23835	N/A	All	2012 bug: A RAS event reported with negative request ID will display in GUI as a very large number.
23836	N/A	All	2012 bug: Negative request IDs cause Shadow Copy failure.

Known Issues

This release of DXi-Series 1.4.4 software has the following known issues:

[Replication Known Issues](#) on page 7

[Space Reclamation Known Issues](#) on page 8

[VTL Known Issues](#) on page 9

[Network Known Issues](#) on page 9

[CLI Known Issues](#) on page 10

[GUI Known Issues](#) on page 10

[OST Known Issues](#) on page 12

[Upgrade Known Issues](#) on page 13

[Misc. Known Issues](#) on page 13

Replication Known Issues

Change Request Number	Platform	Description	Workaround
7269	All	Replicating a filename which begins with & in a directory caused all of the files in the entire directory to replicate to the target.	Do NOT use the & character in a filename.
7336	DXi7500 and DXi6700	Replicating a cartridge that is in an exported state should not be allowed and users should be warned.	Do NOT replicate cartridges that are in an exported state.
7915	All	Aborting a synchronization job when a namespace and synchronize are queued up aborts only the synchronization and leaves the namespace replication in a queued state.	Manually abort the namespace replication.
11683	All except DXi6700	If the same user exists on both source and target systems, the user should be prompted to overwrite permissions on the target system before synchronization or Directory/ File Based replication occurs.	Set the same permissions on both source and target for the same user.

Change Request Number	Platform	Description	Workaround
12089	All except DXi6700	Scheduled replication creates errors when all shares are disabled using the Replication > Source Role > Actions > Disable GUI option.	To prevent the logging errors, remove the schedules of the share in question using Data Services > Replication > NAS . Select the share you want to disable scheduling for and then click Edit > Uncheck Enable Schedule Replication > Uncheck Enable Replication and then Click Apply . Do this for each NAS share that you want to remove the scheduled replication for instead of disabling all shares from replication using Replication > Source Role > Actions > Disable .
13617	All	If replication is changed while a namespace replication on a NAS share or VTL is in progress, the replication may become stuck or stay queued up.	Cancel the queued job and restart the replication or wait until the next scheduled replication to take effect.
13692	All	No Service alert is logged for failback jobs when the failure is due to a power outage.	Re-initiate the failback after system resumes operation.
14974	All	A Target system will fail a failback operation if the replication target IP (source role) is not configured.	Use an IP address on the Target system to specify the network address of the Source system.
21802	All	GUI reports replication status as Queued during active replications	Pause and restart replication.

Space Reclamation Known Issues

Change Request Number	Platform	Description	Workaround
8154	DXi7500 and DXi6700	Unable to delete tape cartridges while Space Reclamation is running on the system.	Wait until Space Reclamation is complete before deleting cartridges.

VTL Known Issues

Change Request Number	Platform	Description	Workaround
5668	DXi7500 and DXi6700	PX500 emulation is unable to find the element number when defining the path.	Use Quantum DXi7500/DXi6700 as the VTL library emulation.
10938	DXi7500 and DXi6700	Virtual tape drives with a stuck tape may not unload after a manual unload command.	Retry the manual unload command.
12886	DXi7500 and DXi6700	A Windows host is not able to see a mapped VTL after the system is rebooted.	Reset the VTL port mapping from the GUI (see the DXi7500/DXi6700 User's Guide) and re-scan the devices from the Windows host. If you are still experiencing problems, ensure that your host HBA is running the latest software revision.
17262	DXi7500 and DXi6700	The VTL and Virtual Tape Drives are unable to be discovered after the Fibre Channel cables have been disconnected and then reconnected.	Remove and reinstall the Fibre Channel cables that were disconnected.

Network Known Issues

Change Request Number	Platform	Description	Workaround
8628	All except DXi6700	A replication IP address should not be required to configure the network if the user does not use replication.	Enter a "dummy" IP address. This will be fixed in a future revision.

CLI Known Issues

Change Request Number	Platform	Description	Workaround
13604	All except DXi6700	Enabling jumbo frames disrupts active network configurations.	Don't change the setting if I/O is running.
14032	All except DXi6700	By default the "syscli --getstatus jumbo" command displays only bonded network devices' jumbo frame status. If some network devices are not bonded (segmented) the "syscli --getstatus jumbo" will not display jumbo frame status for those devices when using the command without any option specified.	To display all the network devices' jumbo frame status, use the "--all" option in the command (i.e. syscli --getstatus jumbo --all"). To display a single network device jumbo frame status, specify the network device using the "--dev" option in the command. For example, "syscli --getstatus jumbo --dev eth0" command displays ETH0 device jumbo status.
15259	DXi7500 and DXi6700	When trying to create an alias for a WWPN by using following command: <pre>syscli --add host --wwpn 210200e08b4f6d9c --alias TestHost</pre> The command fails with the following error: ERROR: AddHost failed! (E2006841)	This action can also be accomplished from the GUI > Configuration > VTL > Host Access > Hosts Tab

GUI Known Issues

Change Request Number	Platform	Description	Workaround
7617	DXi6700	The Select All button at the bottom of the Media Actions->Virtual Actions page does not work correctly when combined with the Select All button in the table.	The Select All button at the bottom of the Media Actions->Virtual Actions page is used to select all on the current page. The Select All button in table is used to select all in the partition.
7874	All	Alert->Service Tickets -> View Recommended Actions - Quantum Support link hyperlink missing.	Manually copy and paste the hyperlink into your browser to access the Quantum Support web page.

Change Request Number	Platform	Description	Workaround
7935	All	When selecting all share administrators including default domain administrator for deleting, the GUI should display an error indicating that it can not delete the default domain administrator.	The default domain administrator can NOT be deleted.
11776	All except DXi6700	On the target system, when "Allowed Replicated source" is added as an IP Address, the replicated share can be deleted even when the share is enabled on source.	Use the hostname instead of an IP address for allowed replicated source on the target to prevent replicated shares from being deleted on the target.
11792 11790 11954	All except DXi6700	Usernames beginning with "#" or "\$" characters, or OST LSU names beginning with the "_" character are not displayed correctly.	Do not use these characters to begin usernames or OST LSU names
15310	DXi7500 and DXi6700	When the system is running a backup and a partition is created with > than 5000 cartridges, the GUI displays: PLEASE WAIT... The system is either busy with a previous request or in the process of restarting the web-based interface.	This is normal operation. Wait until the GUI becomes responsive. Do NOT reboot the system.
17436	All	Bold text is not visible in FireFox.	this will be fixed in a future release.

OST Known Issues

Change Request Number	Platform	Description	Workaround
10041	All except DXi6700	Subsequent Optimized Duplication jobs may fail or become stuck when running jobs are canceled or stopped.	Restart the NetBackup services.
13795	All except DXi6700	Unable to delete undiscovered OST devices from Backup Exec 2010.	Reestablish connection from the Backup Exec OST device and the DXi system. The connection can be reestablished by re-starting Backup Exec services or rebooting the DXi system. Once the connection is established, the device will be discovered, and the you will be able to delete it.
15286	All except DXi6700	New OpenStorage Devices added to Backup Exec 2010 initially show as "Undiscovered".	Press Refresh in the Backup Exec View pull-down menu until the device show as discovered.
15322	All except DXi6700	Optimized Duplication Succeeds, but the following error is shown: V-79-8192-4881 - The count of Files and Directories processed is not available for this operation. The File and Directory count might be displayed as zero.	This is expected behavior. You are able to restore using the duplicated image with no issues.
22183	All except DXi6700	Intermittent optimized duplication failures may occur with NetBackup or Backup Exec if the deduplication process has not completed.	Schedule sufficient time for deduplication to complete before beginning an optimized duplication process.

Upgrade Known Issues

Change Request Number	Platform	Description	Workaround
13711	All	If a power cycle occurs while uploading the software image, the system displays only an "Activation Error Occurred!" message.	Do not power cycle in middle of an upgrade. Begin the upgrade again.
13366	DXi6500 and DXi6700	The system goes into diagnostic mode if a SAS cable is pulled during storage expansion upgrade.	Don't pull cables during storage capacity upgrade.

Misc. Known Issues

Change Request Number	Platform	Description	Workaround
10931 24095	All	When using path to tape, if an attached library fails or becomes inaccessible, rapid growth of the MSM tac log can cause the root directory on the DXi to run out of space.	On the DXi, delete, compress, or remove old or unneeded log files in the following directory: /opt/adic/MSM/logs/tac/
12454	All except DXi6700	If a single file is replicated using the Command Line Interface (CLI), the ACL for that file will be lost.	Use Synchronize option from the GUI. See the <i>DXi-Series User's Guide</i> for further information.
12523	All	Occasionally, the NTP server cannot be contacted during the wizard setup.	Change the NTP setting using the GUI Config-Time & Date option. See the <i>DXi-Series User's Guide</i> for further information.
13621	All	NTP server error and Admin Alert are produced after changing from NTP 24-hr to 12-hr NTP format.	Verify time format has changed. If the time format has changed, ignore the alert.
15848	DXi6550	Backups jobs running to a DXi6550 with the optical option via a Dell 8024f switch may not complete or will complete with very slow performance.	Change the Dell 8024f settings from RSTP to Classic STP . Refer to the Dell switch documentation for more information.

Cosmetic Issues

Change Request Number	Platform	Description	Workaround
11800	All except DXi6700	Although all NAS shares are deleted, if there is at least 1 OST share, the target will still have value and display grayed out.	This issue can be ignored and does not impact functionality.
11803	All except DXi6700	On the Ethernet performance page, the "average" drop-down menu reflects "all" ports and not just the "active" ports.	When viewing the Ethernet performance "average," be aware that the calculation is affected by potentially inactive ports, including one of the service ports.
12092	All except DXi6700	Service Ticket: Recommended Actions: Contains information on barcode/cartridge when a NAS share fails.	This issue can be ignored and does not impact functionality. This will be fixed in a future release.

Software Upgrade Guidance

Prerequisite to Upgrading to Software Version 1.4.4

You MUST upgrade to the latest version of DXi Advanced Reporting prior to upgrading to software version 1.4.4. The latest version of DXi Advance Reporting can be downloaded from the disk based product pages located at: <http://www.quantum.com/ServiceandSupport/Index.aspx>

Generally, software upgrades should ONLY be done from the GUI. For compatibility information, see [Compatibility Matrix](#) on page 2.

- [DXi2500-D Upgrade Path](#)
- [DXi4500 Upgrade Path](#)
- [DXi6500 Upgrade Path](#)
- [DXi6700 Upgrade Path](#)
- [DXi7500 Upgrade Path](#)

DXi2500-D Upgrade Path

[Table 3](#) describes the upgrade path for the DXi2500-D.

Table 3 DXi2500-D Software Upgrade Path

Original Software Version	Upgrade To:						
	1.1.1.4_25	1.4.1	1.4.1.1	1.4.2	1.4.3	1.4.3.1	1.4.4
1.1.1.4_25	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	Not supported	Not supported	Not supported
1.4.1	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.1.1	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.2	Not supported	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.3	Not supported	Not supported	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade
1.4.3.1	Not supported	Not supported	Not supported	Not supported	Not supported	N/A*	GUI Upgrade
1.4.4	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	N/A*

* Software restores with the same software version to preserve configuration and data is supported.

DXi4500 Upgrade Path

[Table 4](#) describes the upgrade path for the DXi4500.

Table 4 DXi4500 Software Upgrade Path

Original Software Version	Upgrade To:					
	1.3.1_45	1.4.1	1.4.1.1	1.4.2	1.4.3	1.4.4
1.3.1_45	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	Not recommended **	Not recommended **
1.4.1	Not supported	N/A*	GUI Upgrade	GUI Upgrade	Not recommended **	Not recommended **
1.4.1.1	Not supported	Not supported	N/A*	GUI Upgrade	Not recommended **	Not recommended **
1.4.2	Not supported	Not supported	Not supported	N/A*	Not recommended **	Not recommended **
1.4.3	Not supported	Not supported	Not supported	Not supported	N/A*	Not recommended **
1.4.4	Not supported	Not supported	Not supported	Not supported	Not supported	N/A*

* Software restores with the same software version to preserve configuration and data is supported.

** It is recommended that you upgrade to software version 2.0.

DXi6500 Upgrade Path

[Table 5](#) describes the upgrade path for the DXi6500.

Table 5 DXi6500 Software Upgrade Path

Original Software Version	Upgrade To:		
	1.4.2	1.4.3	1.4.4
1.4.2	Not Supported *	Not recommended **	Not recommended **
1.4.3	Not Supported	Not Supported *	Not recommended **
1.4.4	Not Supported	Not Supported	Not Supported *

* Software restores with the same software version to preserve configuration and data is supported.

** It is recommended that you upgrade to software version 2.0.

DXi6700 Upgrade Path

[Table 4](#) describes the upgrade path for the DXi6700.

Table 6 DXi6700 Software Upgrade Path

Original Software Version	Upgrade To:				
	1.4.1	1.4.1.1	1.4.2	1.4.3	1.4.4
1.4.1	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.1.1	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.2	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade
1.4.3	Not supported	Not supported	Not supported	N/A*	GUI Upgrade
1.4.4	Not supported	Not supported	Not supported	Not supported	N/A*

* Software restores with the same software version to preserve configuration and data is supported.

DXi7500 Upgrade Path

The following sections describe the upgrade paths for the DXi7500.

- [DXi7500 Software Upgrade Path \(1.0.1 through 1.2\)](#)
- [DXi7500 Software Upgrade Path \(1.2 through 1.4.4\)](#)

DXi7500 Software Upgrade Path (1.0.1 through 1.2)

The following table describes the upgrade path for software versions 1.0.1 through 1.2 (see [Table 7](#)).

Table 7 DXi7500 Software Upgrade Path (1.0.1 through 1.2)

Original Software Version	Upgrade To:				
	1.1	1.1.1	1.1.1R6	1.1.3	1.2
1.0.1	GUI Upgrade	GUI Upgrade	Not supported	GUI Upgrade	Not supported**
1.1.1	Not supported	N/A*	Not supported	GUI Upgrade	GUI Upgrade
1.1.1R6	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade
1.1.3	Not supported	Not supported	Not supported	N/A*	GUI Upgrade

Original Software Version	Upgrade To:				
	1.1	1.1.1	1.1.1R6	1.1.3	1.2
1.2	Not supported	Not supported	Not supported	Not supported	N/A*

* Software restores with the same software version to preserve configuration and data is supported.

** Upgrading 1.0.1 to 1.2 requires upgrading to 1.1.3 prior to the upgrade to 1.2.

DXi7500 Software Upgrade Path (1.2 through 1.4.4)

The following table describes the upgrade path for software versions 1.2 through 1.4.4 (see [Table 8](#)).

Note: If you are upgrading software from a version prior to 1.2, you must first upgrade your system to 1.2 (see [Table 7](#)) before upgrading your system to subsequent software versions. If you are upgrading software from a version at or after 1.2, you can upgrade directly to version of software as shown in [Table 8](#).

Table 8 DXi7500 Software Upgrade Path (1.2 through 1.4.4)

Original Software Version	Upgrade To:									
	1.2	1.2.1	1.4	1.4.0.1	1.4.1	1.4.1.1	1.4.2	1.4.3	1.4.3.1	1.4.4
1.2	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	Not supported	Not supported	Not supported
1.2.1	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	Not supported	Not supported	Not supported
1.4	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.0.1	Not supported	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.1	Not supported	Not supported	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.1.1	Not supported	Not supported	Not supported	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.2	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade	GUI Upgrade
1.4.3	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	N/A*	GUI Upgrade	GUI Upgrade
1.4.3.1	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	N/A*	GUI Upgrade
1.4.4	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	N/A*

* Software restores with the same software version to preserve configuration and data is supported.

Software Upgrade Requirements

Refer to the following system requirements before upgrading the system software:

- If there are more than 10 replication sources configured on your system, the upgrade will abort. Temporarily remove the additional sources before upgrading the software.
- Do not attempt a software upgrade if there are any hardware failures in the system.
- The following DXi-Series systems must have enough available space on the system before upgrading the software:
 - DXi2500-D - 50 GB available space
 - DXi4500 - 200 GB available space
 - DXi6500 - 200 GB available space
 - DXi6700 - 200 GB available space
 - DXi7500 - Quantum customer support upgrade only.

Software Upgrade Steps

Note: Quantum recommends that all replication to the system be stopped prior to the software upgrade. It is possible to upgrade the DXi system software with replication running (GUI upgrade only); however, when the system reboots after the software upgrade, the replication status will indicate **Failed**. After the next scheduled replication, the indicators will return to normal.

Caution: Do NOT interrupt the system during a software upgrade. If the upgrade is interrupted, you must remove the partially uploaded file from the system using the **Remove** button on the **Software Upload** page. Once the file is removed, you can retry the software upgrade process.

- 1 Download the **System Diagnostic** file from the GUI **Utilities>Diagnostics** tab. Transfer the diagnostic file to a safe repository off of the system being upgraded.

Note: Since downloading the necessary files can take a long period of time, download the files one day prior to the software upgrade.

Note: All backup jobs and I/O to the system must be stopped.

- 2 Using the source system GUI, make sure all space reclamation has been stopped on BOTH the source and ALL Target DXi systems being replicated.

Although it is possible to upgrade the software via the GUI while replication is running it is highly recommended that replication be paused and allowed to fail before the software upgrade begins.
- 3 Restart the DXi-Series system from the GUI as a confirmation that all backups and I/O have been stopped prior to the software upgrade.

Note: The preferred method of restarting the 2wDXi-Series system is via the GUI or via the CLI command `syscli --nodemanage --reboot`.

4 **Customer Support Only:** Login to the system after the reboot and monitor the `/var/log/messages` file for any signs of problems using the following command.

```
#> tail -f /var/log/messages
```

5 Make sure that all hard drives are in a **Normal** state. Check the **Status>Hardware** page of the GUI.

6 Perform the software upgrade via the GUI.

Note: While upgrading the software through the GUI, do not refresh or navigate away from the software upload page. This will cause the software upload to abort and fail.

7 Once the software upgrade has finished, if you stopped replication, restart.

8 After the software upgrade is complete, download a **System Diagnostic** file from the GUI **Utilities>Diagnostics** tab. Transfer the diagnostic file to the same safe repository that was used to store the original diagnostic files during Step 1.

Software Upgrade Times

The DXi-Series software upgrade generally takes less than 60 minutes to complete except for the DXi7500 system when going from software version 1.2.x to 1.4.x. This can take up to 1 hour and 40 minutes.

Note: For a DXi7500 being upgraded to 1.4.4, an additional 20–40 minutes should be allowed for the array modules to upgrade. After the system reboots it will not be accessible via GUI or CLI for 20–40 minutes while array modules are upgraded. **DO NOT HALT THE INSTALL OR REBOOT THE SYSTEM.** Once the array modules are upgraded, the system will continue the boot process and return to normal operation.

Documentation

The following documents are currently available for the DXi-Series.

Document Number	Document Title
6-66591	DXi2500-D User's Guide
6-66592	DXi2500-D Installation and Configuration Guides
6-66593	DXi2500-D Site Planning Guide

Document Number	Document Title
6-66586	DXi7500 User's Guide
6753500	DXi7500 Site Planning Guide
6-66530	DXi7500 EMC® NetWorker Backup Application Specific Configuration Guide
6-66537	DXi7500 Symantec™ NetBackup Backup Application Specific Configuration Guide
6-66544	DXi7500 Oracle® Secure Backup Application Specific Configuration Guide
6-66718	DXi7500 Symantec NetBackup Backup Application Specific Configuration Guide
6-66544	DXi-Series Symantec NetBackup OST Configuration Guide
6-66910	DXi-Series Symantec Backup Exec OST Configuration Guide
6-66538	DXi-Series CLI Interface Guide

Supported Backup Application Filters

Backup Application	Revision
Symantec NetBackup	6.x and later
Symantec BackupExec	12.5 and later
CommVault Galaxy / Simpana	7 and later
EMC NetWorker	7.4 and later
CA ARCserve	11.5 and later
IBM Tivoli Storage Manager	5.5.x and later
HP Data Protector	6.x and later
BakBone NetVault	7.4 and later
Oracle Secure Backup	10.2 and later
Oracle RMAN	10.x and later (Supported with Oracle OSB, CommVault SIS, and Symantec NetBackup)
EMC Retrospect	8 and later

Backup Application	Revision
All filters support the backup application version above and also one previous version. Contact the backup application vendor for the latest software revision information.	

Additional Notes

Date And Time Configuration

The date and time settings are configured using either the **Guided Setup Wizard** at installation or the **Configuration -> Date and Time** page in the GUI.

Although you may specify the date and time manually for your system, we highly recommend that you configure your system to use NTP (Network Time Protocol) to maintain accurate date and time settings.

If you have configured at least one DNS (Domain Name Server) IP address during network configuration, then you should select one of the Timeserver Pools. The Timeserver Pool most appropriate for your system will depend upon your geographical location. For example, if you are located in the United States we recommend you select **us.pool.ntp.org**.

If you have not configured your system to utilize at least one DNS IP address, then you cannot use a timeserver pool and must specify an NTP timeserver IP address, directly. The GUI will provide a recommended default timeserver address of **208.66.174.71**; however, it is possible that the default timeserver may occasionally fail to respond to an NTP query. In this case you may receive an error message attempting to apply NTP settings using the default timeserver address. If you experience an issue with the default timeserver, we recommend that you try an alternate timeserver address (such as **192.43.244.18**) or select another timeserver address from the NTP support website at <http://support.ntp.org>.

Network Hostname Restrictions

The network hostnames must not exceed 64 characters.

Internet Explorer Security Level

The GUI has been designed to function with Internet Explorer's default security level. If you happen to experience problems logging into the GUI, then you can view/set your browser's security level by clicking on Internet Explorer's Tools menu, selecting the Internet Options menu item, and clicking on the Security tab in the new window that opens.

Changing the Number of Allowed Sources

The default number of allowed DXi replication sources is 10. The default number of allowed OST replication sources is 2. If you need to change these default settings, contact Quantum Customer Support.

Space Reclamation

The **Space Reclaimed** value displayed on the **Space Management > General** tab displays the amount of physical disk space that will be reclaimed as a result of deleting deduplicated data. However, the actual amount of physical disk space may be less than the value indicated because of fixed overhead of the deduplication module. Since the disk space usage in the system is also dynamic, other activities in the system may impact the accuracy of the **Space Reclaimed** value.

StorageCare Vision

You must update to the latest version of StorageCare Vision (4.x) to operate with software version 1.3 or later.

OST NetBackup Version

You must use NetBackup version 6.5.3 or higher to resolve the following known issue in older versions of NetBackup

- Subsequent Optimized Duplication jobs may fail/stuck when running jobs are canceled or stopped.

Shadow Tape Copy Path to Tape

Even though Shadow Tape Creation is available on the GUI, the features and functionality will not be supported in subsequent releases of DXi7500 software (post 1.4.1).

Running Healthchecks

Quantum recommends running the **Healthcheck** utility (**Utilities>Diagnostics>Healthchecks**) daily to ensure data integrity.

Contacting Quantum

More information about this product is available on the Service and Support website at www.quantum.com/support. The Service and Support Website contains a collection of information, including answers to frequently asked questions (FAQs).

For further assistance, or if training is desired, contact Quantum:

United States	800-284-5101 (toll free) 949-725-2100
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EMEA	00800-4-782-6886 (toll free) +49 6131 3241 1164
APAC	+800 7826 8887 (toll free) +603 7953 3010
For additional contact information:	www.quantum.com/support
To open a Service Request:	www.quantum.com/osr

For the most updated information on Quantum Global Services, please visit:
www.quantum.com/support