



Release Notes

Product	DXi8500 (Release 1.4.5_85)
Operating Systems (Remote Web Client)	Microsoft® Internet Explorer 6.x and later versions and Mozilla Firefox™ 2.x and later versions
Date	August 2011

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Purpose of This Release

This software release provides the following new capabilities:

- Supports DXi8500 systems using 2TB modules (Array and Expansion).
- Maintenance release of the DXi8500 system (software version 1.4.5_85).

Note: Software version 1.4.5_85 is a mandatory upgrade for DXi8500 systems.

Hardware Component List

The following table provides information about hardware compatibility with DXi8500 software (Release 1.4.5_85). This information is current as of the publication date of these release notes.

Component	Description
DXi8500	Hardware configurations based on: <ul style="list-style-type: none">• 1 System Node with 64 GB RAM• 1 to 2 Metadata modules• 2 to 10 Array modules (1TB or 2TB)• 0 to 10 Expansion modules (1TB or 2TB)• 1 Fibre Channel switch• 1 Ethernet switch<ul style="list-style-type: none">• 1 redundant power system (RPS) (for the Ethernet switch)

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 DXi8500.

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)	2.4.0	1.4 or higher
Solaris x86 64-bit (NetBackup only)	2.4.0	1.4 or higher
Solaris SPARC 32-bit (NetBackup only)	2.4.0	1.4 or higher
Solaris SPARC 64-bit (NetBackup only)	2.4.0	1.4 or higher
Windows 2003/2008 32-bit	2.4.0	1.4 or higher
Windows 2003/2008 64-bit	2.4.0	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	2.4.0	1.4 or higher
Solaris_10 64-bit	2.4.0	1.4 or higher
Solaris SPARC 64-bit	2.4.0	1.4 or higher
Windows 2003/2008 32-bit	2.4.0	1.4 or higher

Platform	Plug-in Version	DXi Software Version
Windows 2003/2008 64-bit	2.4.0	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, 1.4.4_85, 1.4.4.1_85, and 1.4.5_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, 1.4.4, 2.0, 2.0.0.x, and 2.0.1.
- DXi6700
 - Software Version: 1.4.1, 1.4.1.1, 1.4.2, 1.4.3, 1.4.4, 2.0, 2.0.0.x, and 2.0.1.
- 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, 1.4.4, 2.0, 2.0.0.x, and 2.0.1.
- 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: To use the DXi6700 as a target for NAS replication, it must be running DXi 2.0 software or higher.

Known Issues

This release of DXi-Series 1.4.3_85 firmware has the following known issues:

- [Replication Known Issues](#) on page 5
- [Space Reclamation Known Issues](#) on page 6
- [VTL Known Issues](#) on page 7
- [Network Known Issues](#) on page 7
- [CLI Known Issues](#) on page 8
- [GUI Known Issues](#) on page 8
- [OST Known Issues](#) on page 9
- [Misc. Known Issues](#) on page 10
- [Cosmetic Issues](#) on page 10

Replication Known Issues

Change Request Number	Description	Workaround
7269	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.
7915	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	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	Description	Workaround
12089	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	If the replication target is changed while a namespace replication on a NAS share or VTL is in progress (such as due to a power outage), 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	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	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	GUI reports replication status as Queued during active replications.	Pause and restart replication.

Space Reclamation Known Issues

Change Request Number	Description	Workaround
8154	Unable to delete tape cartridges while Space Reclamation is running on the system.	Wait until Space Reclamation is complete before deleting cartridges.
18989	The GUI shows low space, but the system has more than 1 TB of capacity available.	The more tape cartridges that are created, the more space the metadata data files consume. In this case 1TB. So from the GUI, it will show that the system is in a critically low condition, but actually shows 1TB of available space.

VTL Known Issues

Change Request Number	Description	Workaround
5668	PX500 emulation is unable to find the element number when defining the path.	Select any other emulation type for the VTL emulation.
10938	Virtual tape drives with a stuck tape may not unload after a manual unload command.	Retry the manual unload command.
12886 17262 18842	The VTL and VTD devices are unable to be discovered after the Fibre Channel cables have been disconnected and then reconnected or the system is rebooted.	Remove and reinstall the Fibre Channel cables that were disconnected. Reboot the Fibre Channel hosts. Reset the VTL port mapping from the GUI (see the DXi8500 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.
19104	In some cases for replicated virtual cartridges, the Used value displays as larger than the cartridge capacity.	This is due to differences in compression technology, and only occurs in some cases for cartridges received by replication from a DXi7500 source. All existing data will be maintained. However, if the cartridge is subsequently overwritten, the Used size will not be allowed to exceed Capacity.

Network Known Issues

Change Request Number	Description	Workaround
8628	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	Description	Workaround
13604	Enabling jumbo frames disrupts active network configurations.	Don't change the setting if I/O is running.
14032	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	When trying to create an alias for a WWPN by using following command: syscli --add host --wwpn 210200e08b4f6d9c --alias TestHost 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	Description	Workaround
7935	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	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	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

Change Request Number	Description	Workaround
15310	<p>When the system is running a backup and a partition is created with > than 5000 cartridges, the GUI displays:</p> <p>PLEASE WAIT...</p> <p>The system is either busy with a previous request or in the process of restarting the web-based interface.</p>	This is normal operation. Wait until the GUI becomes responsive. Do NOT reboot the system.
17436	Bold text is not visible in FireFox.	This will be fixed in a future release.

OST Known Issues

Change Request Number	Description	Workaround
10041	Subsequent Optimized Duplication jobs may fail or become stuck when running jobs are canceled or stopped.	Restart the NetBackup services.
13795	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	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	<p>Optimized Duplication Succeeds, but the following error is shown:</p> <p>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.</p>	This is expected behavior. You are able to restore using the duplicated image with no issues.
22183	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.
24948	NBU 7.1 with OST causes a large quantity of harmless "File Open Error" messages.	This is fixed in NBU 7.5. OST still works; ignore the flooding of messages.

Misc. Known Issues

Change Request Number	Description	Workaround
10931 24095	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/
13621	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.
18370 19091	Errors are received after a DSET log is generated. After retrieving a DSET log, the system status can also briefly show the system board as "failed".	Ignore these error messages.
20336	When FC port 9 is pulled or down, a correct RAS ticket is generated, but Admin Alerts incorrectly reports that the wrong HBA FC port numbers (FC0, FC1, FC2, FC3, FC4, and FC5) are down.	Although the FC port numbering is incorrect, the Admin Alert is a valid alert indicating that a customer-facing FC link is down. This alert will be fixed in a future release.
24926	The DXi8500 system sometimes goes into diagnostic mode after the JBOD expansion process.	Reset the diagnostic state via the GUI.

Cosmetic Issues

Change Request Number	Description	Workaround
11800	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	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	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 1.4.5_85

You **MUST** upgrade to the latest version of DXi Advanced Reporting prior to upgrading to software version 1.4.5_85. 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 [Hardware Component List](#) on page 2.

Table 3 DXi8500 Software Upgrade Path

Original Software Version	Upgrade To:			
	1.4.2_85	1.4.3_85	1.4.4_85	1.4.5_85
1.4.2_85	N/A*	GUI Upgrade	GUI Upgrade	Not supported.
1.4.3_85	Not supported	N/A*	GUI Upgrade	GUI Upgrade
1.4.4_85	Not supported	Not supported	N/A*	GUI Upgrade
1.4.5_85	Not supported	Not supported	N/A*	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.

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 DXi-Series system is via the GUI or via the CLI command **syscli --nodemanage --reboot**.

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

- 5 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.

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

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 DXi8500:

Document Number	Document Title
6-67030	DXi8500 User's Guide
6-67035	DXi8500 Site Planning Guide
6-66530	DXi-Series EMC® NetWorker Backup Application Specific Configuration Guide
6-66537	DXi-Series Symantec™ NetBackup Application Specific Configuration Guide
6-66718	DXi-Series Oracle® Secure Backup Application Specific Configuration Guide
6-66755	DXi-Series Symantec NetBackup OST Configuration Guide
6-66910	DXi-Series Symantec Backup Exec OST Configuration Guide
6-66538	DXi-Series Command Line Interface (CLI) 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

Backup Application	Revision
Oracle RMAN	10.x and later (Supported with Oracle OSB, CommVault SIS, and Symantec NetBackup)
EMC Retrospect	8 and later

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 & 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 Web site 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 the DXi8500.

StorageCare Guardian

You must update to the latest version of StorageCare Guardian (2.0.4 or later) to operate with the DXi8500.

DXi Advanced Reporting

For DXi Advanced Reporting to operate correctly with DXi8500, you must have the following software versions for DXi Advanced Reporting:

- **User Interface version:** 1.0.0-20101102-1053
- **Data Collector version:** 01.02.09-119012p1

For more information on DXi Advanced Reporting, refer to the DXi Advanced Reporting Software and Documentation CD included with your system.

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 or become stuck when running jobs are canceled or stopped.

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
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