



Release Notes

Release	DXi 3.2.4 Software
Supported Product	DXi6900-S
Date	August 2016

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Purpose of This Release

DXi 3.2.4 Software supports the DXi6900-S disk backup system and contains important bug fixes (see [Resolved Issues](#)).

What's New in DXi 3.2.4 Software

DXi6900-S

DXi 3.2.4 Software supports the new DXi6900-S system.

Product Compatibility List

The following table provides information about hardware compatibility with DXi 3.2.4 Software.

Component	Description
DXi6900-S	<ul style="list-style-type: none">• 1 Node• 1 or 2 Array modules (RBODs)• 0 to 6 Expansion modules (EBODs)• 3 x 1 GbE Ethernet ports• Additional network adapter providing combinations of up to 6 x 10 GbE Ethernet ports, 6 x 10 GBase-T Ethernet ports, or 6 x 16 Gb Fibre Channel ports (for VTL or PTT)• 34 TB-544 TB usable capacity

Supported Web Browsers

Web browser software is not included with the DXi . You must obtain and install it separately. The DXi remote management console supports the following Web browsers:

- Mozilla Firefox 36 or later
- Google Chrome 40 or later
- Microsoft Internet Explorer 10 with SSL 3.0 disabled (enabled by default) and higher.

Additional Information

- For correct operation of the remote management console, disable any pop-up blockers and enable JavaScript in your Web browser.
- DXi Advanced Reporting requires installation of Adobe Flash Player plug-in 10.x or higher.
- DXi Advanced Reporting does not support the 64-bit version of the Flash Player plug-in on Linux. Instead, use the 32-bit Flash Player plug-in and a 32-bit browser.
- If you experience Web browser issues, update to the latest version of your web browser.

OST Plug-In Support

The Quantum OST 2.9 and 3.x plug-ins are based on Veritas OpenStorage API specification Version 9.4.2 and 11.1.

Required Components

The following components are required for OST (OpenStorage) operation with the DXi-Series :

- Veritas NetBackup 7.1.x or later or Backup Exec 2010 R3 or later.
- If using the Veritas NetBackup 52xx Appliance platform, version 2.6.0.2 or later.
- Quantum OST Plug-in (downloaded separately through the remote management console or from the Quantum Service and Support Web site).
- Quantum OST storage server (included with the DXi software).

Supported Platforms and Software Versions

OST Plug-in support is available for the DXi4700-NAS, DXi4700 Multi-Protocol , and DXi6900 systems.

OST Plug-ins are available for the following operating systems:

- Windows 32-bit
- Windows 64-bit
- Linux
- Solaris
- AIX
- HPUX

OST Plug-in support is also available for the Veritas NetBackup 52xx Appliance.

The latest versions of all OST Plug-ins are available for download at:

<http://www.quantum.com/serviceandsupport/softwareanddocumentationdownloads/ostclientplugin/index.aspx>

For more information on OST Plug-in installation, see the *OST Plug-in Installation Instructions (6-67074)*

Replication Compatibility

The following DXi software releases can replicate data to the DXi appliance. DXi software releases not shown in the list are not recommended.

		Replication Source						
		DXi 1.4.4 DXi 1.5	DXi 2.1.3	DXi 2.2.x	DXi 2.3.x	DXi 3.0.x	DXi 3.1.x	DXi 3.2.x
Replication Target	DXi 1.4.4 DXi 1.5	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 2.1.3	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 2.2.x	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 2.3.x	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 3.0.x	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 3.1.x	No	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 3.2.x	No	Yes	Yes	Yes	Yes	Yes	Yes

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

Resolved Issues

The following issues were resolved in DXi 3.2.4 Software.

Bug Number	SR Number	Description
36289	1616776	ENOENT errors from StorNext File System (SNFS).
	1618298	
	1267280	
	1296192	
	1346162	
	1346518	
	1296192	
	1317742	
	1346162	
	1345618	
	1421786	
	3379600	
	3380362	
	3385386	
	3402946	
	3415792	
	3425578	
	3608612	
	3637452	
44191	3598452	BLOB settings have no effect on replication target systems.
44844	3650184	Capacity expansion issue.
44865	3650184	Reduction of system reboots during capacity expansion.
45192	3675718	Storage Collect log file issue.

Bug Number	SR Number	Description
45253	3656016	Storage Collect performance issues.
45271	3673766	Blockpool performance issues.
45425	3692006	Blockpool performance issues.
45481	3697184	Blockpool BLOB enhancements.
45515	3700756	Virtual Tape Drives (VTDs) cause DXi system to go into diagnostic mode.
45563	3697930	Network Time Protocol (NTP) server synchronization issue.
45585	3706488	GUI displays controller failure after failed drive replacement.
45714	3685788	DXi software upgrade issues.
45744	3713930	Node backplane firmware issue.

Known Issues

DXi 3.2.4 Software has the following known issues:

- [Replication Known Issues](#)
- [Space Reclamation Known Issues](#)
- [Network Known Issues](#)
- [CLI Known Issues](#)
- [GUI Known Issues](#)
- [VTL Known Issues](#)
- [NAS Known Issues](#)
- [OST Known Issues](#)
- [Installation and Upgrade Known Issues](#)
- [Miscellaneous Known Issues](#)
- [DXi Advanced Reporting Known Issues](#)

i Note: The Scheduler command line interface (CLI) commands are deprecated in DXi 3.2.4 Software. These commands continue to function in DXi 3.2.4 Software but will be removed in a future software release. To schedule events, use the **Configuration > Scheduler** page in the remote management console instead.

Replication Known Issues

Bug Number	SR Number	Description	Workaround
31605		On the Home page and the Status > Disk Usage page, the value for Data Size After Reduction is larger than the value for Data Size Before Reduction .	<p>This issue can occur when replication is enabled for a share or partition, but replication is rarely or never run. In this case, continuously replicated data accumulates on the target system, but this data is not included in the value for Data Size Before Reduction until a replication job is performed and a snapshot is saved.</p> <p>To correct the issue, manually initiate replication of the share or partition on the Replication > Send page, and allow the replication to complete.</p> <p>To avoid this issue in the future, schedule replication for the share or partition on the Configuration > Scheduler page. Alternately, you can enable Directory/File or Cartridge Based replication for the share or partition.</p>
36811		Some chargeback reporting statistics are not maintained for failback operations.	<p>The Input Bytes for the failback operation can be viewed on the source for the failback operation. On the Replication > Send page, hold the cursor over the job status and note the value displayed for Original Data Size.</p> <p>i Note: After the failback operation is complete, chargeback reporting on the target for the failback operation will accurately report the User Data Size of the data replicated.</p>
36999		Replication performance is slower than expected when replicating to a DXi running software version 1.x and encryption is set to None . (This can also cause system log files to become large.)	Select a different encryption setting for the target (128-bit) when replicating from a DXi running 2.3.0.x Software to a DXi running 1.x Software.

Bug Number	SR Number	Description	Workaround
37000		If replication is disabled and the re-enabled for a share or partition on the Replication > Send page, previously configured Directory/File or Cartridge Based Replication settings are lost.	<p>This is expected behavior. When replication is disabled, all replication settings for the share or partition are cleared. To re-configure the share or partition for Directory/File or Cartridge Based replication, select it and click Configure.</p> <p>i Note: You can disable or enable replication for all shares or partitions on the Replication > Actions page. This method preserves replication settings for all shares or partitions.</p>

Space Reclamation Known Issues

Bug Number	SR Number	Description	Workaround
34571	1568062 1560808 1602614	After an unexpected stop and restart of the blockpool, space reclamation does not occur as expected.	Reboot the DXi.

Network Known Issues

Bug Number	SR Number	Description	Workaround
34125		On the Configuration > System > Network page, editing the IP Address , Netmask , and Gateway for a network interface results in the following error: Destination Gateway: <ip_address> is not reachable by any of the current configured IP addresses.	Delete the existing network interface and add a new interface with the desired IP Address , Netmask , and Gateway .

CLI Known Issues

Bug Number	SR Number	Description	Workaround
35104		When using the --edit emailrecipient CLI command, the same e-mail address can be assigned to multiple recipients.	Use the Configuration > Notifications > Email > Recipients page in the remote management console to edit e-mail recipients.

GUI Known Issues

Bug Number	SR Number	Description	Workaround
30999		When creating or editing an event on the Configuration > Scheduler page, all times are relative to the workstation from which the GUI is accessed, rather than the DXi.	If the DXi is in a different time zone than the workstation used to access the GUI, make sure to account for the time zone differences when scheduling events.
35426		On the Configuration > OST > Storage Servers page, if there are multiple pages of storage servers, the Delete button is unavailable (gray) if all storage servers on a page are selected even if all the storage servers meet the deletion criteria (no backup images or active connections).	This occurs if a storage server on another page does not meet the deletion criteria. De-select at least one storage server on the displayed page, and the Delete button will be available.
32609		On the Configuration > Scheduler > Calendar page, after you add or edit an event and specify recurrence until a date, if you hover the cursor over the event, the UNTIL date does not display in human readable format.	Open the event by double-clicking it to view the UNTIL date.
32659		If you reboot or shut down the DXi using the Utilities > Reboot & Shutdown page and leave the web browser window open, after the DXi comes up again, refreshing the open web page causes the reboot or shut down command to be sent to the DXi again.	After you reboot or shut down the DXi using the Utilities > Reboot & Shutdown page, make sure to close the browser window. In general, you should not refresh the web browser (unless instructed to do so) or copy and paste URLs between tabs.

Bug Number	SR Number	Description	Workaround
36888		On the Configuration > OST > Accent page, after uploading certificate and key files and clicking Apply , a dialog box appears, but the message is truncated.	The complete dialog message is: TLS credential files were successfully installed. The system is rebooting to complete the installation. Please wait before logging in again.
36926		When adding a scheduled event on the Scheduler page, the message Saving, please wait displays, but the save action does not complete, and the schedule is not set.	Refresh the browser window, and add the scheduled event again.
39135		If a very long security notice is specified on the Configuration > System > Security > Security Notice page, the end of the message may be truncated in the Security Notice dialog box that displays after logging on.	Specify a shorter message on the Configuration > System > Security > Security Notice page.
39824		On the Status > Hardware > Details > Storage Arrays page, an Attention link displays next to Controllers and Volumes , but clicking the link displays an empty list of non-normal controllers or volumes.	Even though the Attention link displays, drives that are rebuilding are considered normal by the system. Click the Controllers or Volumes link to see a list of all drives.
41378		In a Google Chrome browser, DXi Remote Management help files may not appear when Help is selected.	In Chrome, select Settings > Show Advanced Setting > Privacy > Content Settings > Pop-ups > Manage Exceptions . Add the DXi IP address to the exceptions box, select Allow , and click Done .
42575		Error message occurs on the Configuration > System > Security > Data-at-Rest page when attempting to enable Data-at-Rest encryption after a drive replacement.	After a drive replacement, wait until RAID rebuilding is complete before enabling Data-at-Rest encryption.
42779		The PTT page allows any number concurrent PTT backup jobs to be configured. When more concurrent backup jobs are started than the PTT license allows (3), the additional jobs fail.	Do not configure more than 3 concurrent PTT backup jobs.

VTL Known Issues

Bug Number	SR Number	Description	Workaround
39734		NDMP path to tape (PTT) backup jobs are slow or fail with status 23 or 86.	NDMP backup jobs can take longer or fail altogether if media and tape drives are not in optimal condition. Replace old media and clean
41109		Intermittent backup failures occur with the IBM LTO-5 tape drive emulation selected.	<p>Force disable append only mode in NetBackup:</p> <p>Unix</p> <p>Use the following touch file to disable append mode: /usr/openv/netbackup/db/config/DISABLE_APPEND_MODE</p> <p>Windows</p> <p>Use the following touch file to disable append mode: %install_path%\Veritas\Netbackup\db\config\DISABLE_APPEND_MODE</p>

NAS Known Issues

Bug Number	SR Number	Description	Workaround
29705		Backup failures occur due to timeouts under heavy, concurrent VTL and NAS ingest.	Use the following CLI command to configure NFS shares for asynchronous mode: syscli --nfscommit async [--share <sharename>]
27908	1387940 1408612 1465392 1493203	Files copied to exported NFS and CIFS shares do not retain their original creation time.	To determine the creation time, examine the original file rather than the copy on the share.
37651		If a workgroup user is deleted using the syscli --del user command while a CIFS share is mounted, a user with the same username cannot be later added.	Use a different username when adding a workgroup user. To avoid this issue, make sure to unmount any CIFS shares before deleting the associated workgroup users.

OST Known Issues

Bug Number	SR Number	Description	Workaround
36868		When attempting to enable concurrent optimized duplication with the following CLI command: syscli --edit storageserver -name <storage_server_name> -concurrenttopdup enabled the command appears to complete successfully, but concurrent optimized duplication is not actually enabled.	Use the Configuration > OST > Storage Servers page in the remote management console to enable concurrent optimized duplication.

Installation and Upgrade Known Issues

Bug Number	SR Number	Description	Workaround
36686		If the Software Upgrade Utility dialog box is open, and the session logs out due to inactivity, the Login window does not automatically display, and the Software Upgrade Utility remains open. Clicking the Check Now button results displays the following error: PollUpgradeJob not authenticated .	Close the Software Upgrade Utility , log back on to the system, and then access the Software Upgrade Utility . Clicking the Check Now will now work as expected.

Miscellaneous Known Issues

Bug Number	SR Number	Description	Workaround
26610	1349564	Spectra Logic T120 and greater libraries cannot be discovered on the Configuration > PTT > Physical Device Discovery page.	Before attempting to discover the Spectra Logic, place the library into STK L700 emulation mode. Data partitions must be individually configured to use the Sun/StorageTek L700 emulation mode. Only data partitions configured to use the STK L700 emulation mode are recognized by the DXi.
37163		The LCD front panel and the system banner display Attention, and a service ticket is generated referring to a problem with omcliproxy.	This issue can be ignored and does not impact functionality. Delete the unneeded RAS ticket.
44146		The hard drives located in the DXi6900 G2 node are nominally 1.2 TB in size. If one of these hard drives fail the resulting service ticket will display the correct hard drive model but will display the size as 900 GB.	This issue does not impact functionality.

DXi Advanced Reporting Known Issues

Bug Number	SR Number	Description	Workaround
30001		Exporting a graph to a JPEG or PNG graphic image in Internet Explorer 9 version 9.0.0.8112.16241 causes the browser to stop responding.	Using a newer version of Internet Explorer 9 or another supported browser.
35537		Used Disk Space may appear as unknown or NaN (not a number) if the selected time range begins before the installation date of the DXi.	Select a time range that begins after the installation of the DXi.
36969		After the time zone is changed on the DXi, DXi Advanced Reporting does not log Ethernet or Fibre Channel I/O activity. This issue only occurs if the new time zone is west of the previous time zone. i Note: This also affects ingest statistics displayed on the Home page in the remote management console	Ethernet and Fibre Channel I/O logging will resume after a number of hours equal to the difference in time zones. For example, if the new time zone is 8 hours west of the old time zone, logging will resume in 8 hours.
37013		The Replication Ingest > Total per Replication report displays a blank screen.	When no replication ingest has occurred on the DXi, the database will be empty; therefore, the Replication Ingest > Total per Replication report will display a blank screen. This is normal behavior.
39487		On the Replication Ingest report, data for small replication jobs is not graphed accurately, especially when longer time ranges are selected.	See the exported CSV file (Reports > Replication Ingest > Export Replication Chargeback) for the correct data.

Documentation

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

Document Number	Document Title
6-68161	DXi6900 Site Planning Guide
6-68165	DXi6900 User Essentials
6-68446	DXi6900 User's Guide
6-68446	DXi6900 Optional NIC Instructions
6-68446	DXi6900 Software Installation and Upgrade Guide
6-67079	DXi-Series NetBackup and Backup Exec OST Configuration Guide
6-67081	DXi-Series Command Line Interface (CLI) Guide
6-67211	DXi-Series Backup Application Specific Path to Tape (PTT) Configuration Guide
6-67082	DXi-Series SNMP Reference Guide
6-67353	DXi Advanced Reporting User's Guide

For the most up-to-date documentation for the DXi-Series, go to:
<http://www.quantum.com/ServiceandSupport/Index.aspx>

Supported Backup Applications

The following backup applications are supported for use with DXi 3.2.4 Software:

Backup Application	Revision
Veritas NetBackup	7.1.x and later
Veritas Backup Exec	2010 R3 and later
CommVault Simpana	9 and later
Quantum vmPRO	3.2 and later
Veeam Backup & Replication	6.5 and later
EMC NetWorker	7.6.5 and later
IBM Tivoli Storage Manager	6.3.3 and later
HP Data Protector	7.1 and later
CA ARCserve	16.5 and later
Dell NetVault	9.0.x and later
Microsoft Data Protection Manager	2010 and later
Oracle Secure Backup	10.2 and later
ASG-Time Navigator	4.2 and later
Syncsort Backup Express	3.1.x and later

i Note: Contact the backup application vendor for the latest software revision information.

DXi Additional Notes

For additional information about DXi 3.2.4 Software, refer to the following sections.

- [Email Reports](#)
- [System Metadata](#)
- [Date & Time Configuration](#)
- [Network Hostname Restrictions](#)
- [Internet Explorer Security Level](#)
- [Changing the Number of Allowed Sources](#)
- [Quantum Vision](#)
- [StorageCare Guardian](#)
- [Running Healthchecks](#)

Email Reports

Quantum recommends enabling **Email Reports** after upgrading to DXi 3.2.4 Software (if not already enabled). When enabled, **Email Reports** periodically sends system configuration and status information to Quantum, including any software upgrades you have installed using the new **Software Upgrade Utility**. Quantum Support can use this information to provide a better support experience in the future.

To configure **Email Reports**:

1. Make sure a valid outgoing e-mail server is specified on the **Configuration > Notifications > Email > Server** page.
2. (Optional) Specify any additional recipients to receive the reports on the **Configuration > Notifications > Email > Email Reports > Recipients** page.
3. Make sure a weekly **Email Reports** schedule is configured on the **Configuration > Scheduler** page. Configure two weekly recurring events: one for **Status** reports and one for **Configuration** reports.

System Metadata

The **System Metadata** statistic appears in two locations in the DXi remote management console:

- On the **Home** page, under **Disk Usage > Show More**.
- On the **Status > Disk Usage** page, under **Used**.

The **System Metadata** statistic represents all internal usage of disk space on the DXi . This statistic is calculated using the following formula:

$$\text{System Metadata} = [\text{File System Used Space}] - [\text{Reclaimable Space}] - [\text{Blockpool Reduced Data Size}] - [\text{Non-Deduplicated Data Size}]$$

The following values are used in this formula:

- **File System Used Space** - All space used by all parts of the system. This includes temporary files (such as those used by replication, space reclamation, and healthchecks), as well as cached files that have not yet been truncated.
- **Reclaimable Space** - The disk space that can be used for new deduplicated data. The DXi will automatically compact reclaimable space to create more free space as needed.
- **Blockpool Reduced Data Size** - The amount of deduplicated data in the blockpool that has non-zero reference counts (that is, data that is not a candidate for space reclamation). During space reclamation, this value will decrease as reference counts are decremented.
- **Non-Deduplicated Data Size** - The size of data stored on shares that do not have data deduplication enabled. This value increases or decreases as data is added to or removed from these shares.

Because **System Metadata** is affected by many values and represents the internal operations of the DXi , you might not always be able to easily correlate changes in this statistic to your typical usage patterns.

Date & Time Configuration

The date and time settings are configured using either the **Getting Started Wizard** at installation or the **Configuration > System > Date & Time** page in the remote management console.

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 **Date & Time** page 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 hostname must not exceed 64 characters.

Internet Explorer Security Level

The remote management console has been designed to function with Internet Explorer's default security level. If you happen to experience problems logging into the remote management console, 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. If you need to change these default settings, contact Quantum Customer Support.

Quantum Vision

You must update to the latest version of Quantum Vision (4.3.3 or later) to operate with DXi 3.2.4 Software.

StorageCare Guardian

StorageCare Guardian - DXi6900

- To configure your DXi6900 into Guardian, contact Quantum Customer Support to install TSB 00002845.
- The Diagnostic Collect and Storage Collect capture log features will not work for DXi 3.x software without first applying the appropriate patch. Contact Quantum Customer Support and reference TSB 00002845.
- Starting with the DXi 3.2 firmware, you will need to enable the CLI Administrator user and set the password to cliadmin. This will allow Guardian to capture the Diagnostic Collect and Storage Collect log logs.

Running Healthchecks

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

DXi Advanced Reporting Additional Notes

For additional information about DXi Advanced Reporting, refer to the following sections.

- [Logging On to Advanced Reporting](#)
- [Decrease in Before Reduction Data](#)

Logging On to DXi Advanced Reporting

If you cannot access the DXi Advanced Reporting Login window, launch a supported Web browser on a workstation that has network access to the DXi system for which you want to view reports, and in the browser address box, type **http://<IP_address>/reports/index.html** where <IP_address> is the IP address of the DXi, and then press **Enter**.

Decrease in Before Reduction Data

Backup expiration by your backup application causes the Before Reduction data to decrease immediately in graphs like Data Volume Overview. In earlier versions of the software, backup expiration was not reflected in Before Reduction data until space reclamation was run. The effect of this change is an immediate drop in Before Reduction data any time you expire backups.

Contacting Quantum

More information about this product is available on the Service and Support website at <http://www.quantum.com/ServiceandSupport/Index.aspx>. The Service and Support Website contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, or if training is desired, contact the Quantum Customer Support Center:

Region	Support Contact
North America	1-800-284-5101 (toll free) +1-720-249-5700
EMEA	+800-7826-8888 (toll free) +49 6131 324 185
Asia Pacific	+800-7826-8887 (toll free) +603-7953-3010

For worldwide support:

<http://www.quantum.com/serviceandsupport/index.aspx>
