Release Notes

Product	DXi 2.2.1.1 Software for DXi8500
Supported Browsers (Remote Management Console)	Microsoft Internet Explorer 8.x or higher, Mozilla Firefox 7.x or higher
Date	March 2013

Contents

Purpose of This Release

With DXi 2.2.1.1 Software, all of the features introduced in DXi 2.2 Software for DXi6000 disk backup systems are now also available for DXi8500 systems:

- **OST Automatic Image Replication (AIR)** - If you are using Symantec NetBackup 7.1 or higher, you can configure an LSU for Automatic Image Replication. If enabled, data on an LSU is automatically replicated to a remote LSU that resides on a DXi in a different NetBackup domain.

- **Concurrent Optimized Duplication** - With Concurrent Optimized Duplication, as data is written to the storage server, it is simultaneously replicated to the target DXi. When optimized duplication or Automatic Image Replication subsequently occurs, the operation is more efficient because a portion of the required data has already been replicated to the target storage server.

- **DXi Accent Improvements** - DXi Accent supports Windows based media servers running Symantec Backup Exec or NetBackup. In addition, data sent from the media server to the DXi can be encrypted using AES (Advanced Encryption Standard) encryption methods.

- **Secure File Shred** - With Secure Shred, you can securely and permanently erase sensitive data stored on the DXi. To securely erase data, first delete files on NAS shares or storage servers, or erase tape cartridges on VTL partitions, then start secure shred. During secure shred, all residual data associated with the deleted files or cartridges is securely erased from the disk drives and is overwritten with random patterns.

- **VLAN Tagging** - You can enable VLAN tagging and Jumbo Frames for any configured network interface on the DXi.

- **Administrative Activity Log** - Use the **Activity Log** to view a record of all activities performed by administrative and service users in the past 90 days. You can view the user who performed the activity, the time the activity was performed, and other information. You can also download the activity log to an XML file.

- **Consolidated Job Scheduler** - All scheduled functions of the DXi are now managed on the **Scheduler** page, including the scheduling of replication, replication throttling, e-mail reports, healthchecks, and space reclamation.

- **Fibre Channel Port Management** - Detailed port layout diagrams make it easy to identify Fibre Channel Ports on the back of the system. Also, you can change the mode of a Fibre Channel port to initiator or target.

- **Site Map** - The **User Interface Site Map** displays a visual map of all management pages in the DXi remote management console. Use the map to quickly locate and jump to any page.

- **Space Reclamation Improvements** - Scheduled and on demand space reclamation has been tuned for increased performance, while automatic space reclamation during low space conditions provides maximum free space recovery. Also, the blockpool automatically reuses free bytes when ingesting data.

- **DXi Advanced Reporting** - The latest version of DXi Advanced Reporting (version 2.1.2) is included with DXi 2.2.1.1 Software. There is no need to

install or update DXi Advanced Reporting after upgrading to DXi 2.2.1.1 Software.

- **Bug Fixes** - For more information, see

Hardware Compatibility List

The following table provides information about hardware compatibility with DXi 2.2.1.1 Software. This information is current as of the publication date of these release notes.

Component	Description
DXi8500 (1 TB Drives)	• 1 System Node • 1 to 2 Metadata modules • 2 to 10 Array modules • 0 to 10 Expansion modules • 1 Fibre Channel switch • 1 Ethernet switch • 1 redundant power system (RPS) for the Ethernet switch • 20 TB to 200 TB usable capacity
DXi8500 (2 TB Drives)	• 1 System Node • 1 to 2 Metadata modules • 2 to 10 Array modules • 0 to 6 Expansion modules • 1 Fibre Channel switch • 1 Ethernet switch • 1 redundant power system (RPS) for the Ethernet switch • 40 TB to 320 TB usable capacity
DXi8500 (3 TB Drives)	• 1 System Node • 1 to 2 Metadata modules • 1 to 2 Array modules • 1 to 10 Expansion modules • 1 Ethernet switch • 1 redundant power system (RPS) for the Ethernet switch • 45 TB to 330TB usable capacity

OST Plug-In Support

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

- Symantec NetBackup 7.x or higher or Backup Exec 2010 or higher.

- Quantum OST storage server (included with the Quantum DXi-Series software).

- Quantum OST Plug-in (downloaded separately through the remote management console or from the Quantum Service and Support Web site).

You must use the correct versions of all of these OST components. Refer to Table 1 and Table 2 for version compatibility information regarding the DXi-Series OST components. The tables include compatibility information for Windows, Linux, and Solaris operating systems. This information is current as of the publication date of these release notes.

For further information concerning the OST plug-in, see the *Quantum DXi-Series NetBackup and Backup Exec OST Configuration Guide* located on the documentation CD.

Table 1 Backup Exec 2010 (or later) Plug-in Compatibility List

Platform	Plug-in Version	DXi Software Version
Windows 2003/2008 32-bit	2.6.0	2.2.1.1
Windows 2003/2008 64-bit	2.6.0	2.2.1.1

Table 2 NetBackup 7.x (or later) Plug-in Compatibility List

Platform	Plug-in Version	DXi Software Version
RedHat Linux x86 64-bit	2.6.0	2.2.1.1
SUSE Linux x86 64-bit	2.6.0	2.2.1.1
Solaris 10 and Solaris 11 x86 64-bit	2.6.0	2.2.1.1
Solaris 10 and Solaris 11 SPARC 64-bit	2.6.0	2.2.1.1
HP-UX 11i v3 IA-64	2.6.0	2.2.1.1
IBM AIX 6.1 and 7.1 Power 64-bit	2.6.0	2.2.1.1
Windows 2003/2008 32-bit	2.6.0	2.2.1.1
Windows 2003/2008 64-bit	2.6.0	2.2.1.1

* NetBackup 7.1.0.3 or later requires Quantum OST Plug-in 2.5.2 or later.

Replication Compatibility

The following table indicates the DXi software levels that can replicate data to one another. Combinations not shown in the table are not supported.

		Replication Source			
		DXi 1.4.4 **DXi 1.5**	**DXi 2.0.0.2** **DXi 2.0.x**	**DXi 2.1.x**	**DXi 2.2.x**
Replication Target	**DXi 1.4.4** **DXi 1.5**	Yes	Yes	Yes	Yes
	DXi 2.0.0.2 **DXi 2.0.1**	Yes	Yes	Yes	Yes
	DXi 2.1.x	Yes	Yes	Yes	Yes
	DXi 2.2.x	Yes	Yes	Yes	Yes

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

Note: If data is replicated from a DXi running DXi 2.x Software to another DXi running 2.x, that data cannot be failed back to a DXi running system software 1.x. Perform a failback to a DXi running DXi 2.x Software.

Resolved Issues

The following issues are resolved in DXi 2.2.1.1 Software.

Bug Number	SR Number	Description
32739	1509626 1508364 1509036	A service ticket is generated after the array monitor script stops and then automatically restarts.
32766	1511250 1510298 1511884	The array monitor script stops, but there are no issues with the arrays.

Bug Number	SR Number	Description
32865	1514020	Service ticket e-mails with large attachments sent by the DXi may be blocked by IT policies.
32927	1481908 1519422	On systems that were previously upgraded from 1.x software, Linter database upgrade failure results in a partially upgraded system when upgrading to 2.2.1 software.

In addition to the resolved issues above, DXi 2.2.1.1 Software includes all issues that were resolved in DXi 2.2.1 Software, DXi 2.2.0.1 Software, and DXi 2.2 Software:

DXi 2.2.1 Resolved Issues

Bug Number	SR Number	Description
24068	1281802	A DM session error is recorded in the OST Plug-in log, but the reason for the error is not logged.
28189		After clicking **Update** on the **Status > Hardware > Firmware Version** page, the system appears busy and does not appear to complete the operation.
30304	1408754 1410992	When using HP Data Protector, a backup job fails and tape drives go offline.
30342	1427138	The Samba process stops operating and restarts, causing temporary loss of CIFS services.
30431	1442292	An error occurs during optimized duplication when the target attempts to open a file that was not transferred by the source.

Bug Number	SR Number	Description
30483	1442292	An OST optimized duplication fails because a file is busy.
30758	1450932 1432250 1450122 1455246 1454500	The GUI does not display OST LSU recovery and reformat progress when the system is starting.
30801	1450932	If an error occurs during LSU reformat, the system should stop the reformat process and generate a service ticket.
31059	1458438	A warning about the number of open CIFS files is incorrectly logged as an error instead.
31166		If you are using DXi Accent for backups and the **TLS with AES 256** encryption option for Accent is enabled, the following conditions may occur: • In NetBackup, backup jobs start but remain in active state and do not complete. • In Backup Exec, the discovery process does not complete.
31190		When attempting to change the administrator or other password using the **syscli**, the system prompts for the old password. If the correct old password is entered, the system rejects it, and the password cannot be changed.
31263	1470868 1458398	The GUI unexpectedly stops and restarts while viewing the **Status > Performance > RAID** page.
31277	1458526 1458472	When running McAfee Vulnerability Manager, a RAS ticket occurs indicating an error in the NDMP service.
31316	1457336, 1465438	Netperf reports very low bandwidth when throttle is enabled and when running netperf from different client.
31320	1465526	Following a software upgrade, the background blockpool verify process pauses indefinitely.
31383	1448128, 1474100	OST optimized duplication fails with Error 84 due to blockpook network timeouts.
31396	1479064, 1480084	On the **Utilities > Space Reclamation** page, the **bytes reclaimed** message for space reclamation stage 3 (deletions) displays an incorrect number of bytes.
31425	1457336	Replication performance is reduced due to too much blockpool index activity.
31657	1472116, 1474048, 1453048, 1483176, 1483176	The Samba service stops and does not restart, causing NAS backup jobs to fail.
31766 31838	1475222	The blockpool is unable to start after a blockpool repair fails.

Bug Number	SR Number	Description
32003	1480084	On the **Space Reclamation** page, should display **Reclaimable Space** (instead of **Space Reclaimed**) when running new (normal) mode.
32093	1480884	Increase the blockpool stop timeout from 10 minutes to 60 minutes to allow more time for shutdown.

DXi 2.2.0.1 Resolved Issues

Bug Number	SR Number	Description
29719		High memory usage by the blockpool wrapper.
31195		LSU verify/reformat and list image operations are not performed using the fastest available method.
31250		Disk usage statistics do not include blockpool logical free space.
31320	1465526	Space reclamation pauses indefinitely during stage 2.
31350		Enhancement request: Cache free disk statistics rather than querying the blockpool each time a call for statistics is made.

DXi 2.2 Replication Resolved Issues

Bug Number	SR Number	Description
21593	1346114 1330470 1381850 1419284 1419294 1450144	Synchronization incorrectly affects deduplication and disk usage statistics.
26036	1342954 1340566 1371764 1415054 1415388 1403260 1421470 1437966	The event queue becomes filled when there is a very large number of trigger replication events during a low space status, leading to a system restart.

Bug Number	SR Number	Description
26708	1312708 1351542 1372418 1378898 1355584 1393346 1403260 1408434 1375872 1415924 1414574	Replication performance is reduced comparing 2.0.x to 1.4.x.
26767		Using the **Scheduler** page or the CLI, if a replication throttle event is deleted after it has started but before it has ended, then replication throttling mode will continue and will not stop.
27160	1366320 1391098	Replication from a 1.x system to a 2.x system fails, but the 2.x target shows success.
28313	1393346	Enhancement request: Eliminate the need to perform a manual sync after pausing replication.
28514	1400994	Trigger replication events occur during ingest on the same file rather than after the store has finished.
28515	1400994 1412234 1433080	Manual synchronization is creating and keeping a replication bundle on the target unit.
28885		A service ticket occurs stating that the DXi cannot connect to the blockpool on the replication target.

DXi 2.2 Space Reclamation Resolved Issues

Bug Number	SR Number	Description
27205 29423		Space reclamation remains at Stage 2 and does not complete even after a long period of time elapses.
30096	1409700 1447216 1410138	Enhancement request: Optimize memory usage during space reclamation.

DXi 2.2 Network Resolved Issues

Bug Number	SR Number	Description
13726	1101242 1292776	Enhancement request: Network configuration should support VLAN tagging options.
29872	1412708 1408162	Enhancement request: Support adding host routes when configuring network settings.

DXi 2.2 CLI Resolved Issues

Bug Number	SR Number	Description
28058		The **syscli** does not appear to include commands to get SAS host bus adapter (HBA) status on DXi8500 3TB systems.

DXi 2.2 GUI Resolved Issues

Bug Number	SR Number	Description
23583 27483	1276646 1293848 1315198 1315176 1315198 1315284 1315220 1315234 1315242 1315160 1315252 1315260 1373350 1412386	The GUI becomes unresponsive if there are a large number of historical admin alerts or service tickets.
25543	1350900 1387132 1430992 1452592	The GUI does not show space reclamation progress when space reclamation is running.

Bug Number	SR Number	Description
25718	1330470 1396522	Ingest value shows number that is too high.
26259	1427832	Under heavy load, the Thrift server stops responding, causing the GUI to becoming unresponsive.
27346		On the **Configuration > Scheduler** page, attempting to modify a future instance of a recurring event that uses the **until** option to define its end may fail with the error `Invalid entry, please check all values and try again`.
27491	1410236	Enhancement request: Serialize start and end actions of a specific event type.
27534	1410236	When adding or deleting a replication throttle schedule using the CLI, various INFO and ERROR messages may display before the command completes successfully.
27906 27954	1330470 1405630	Enhancement request: Show additional statistics for **Data Size Before Reduction**.
28696	1396034	GUI allows the web admin password to contain an ampersand [&] but subsequent login fails.
29010	1412234	Enhancement request: GUI should have a Quick Tip for replication pause behavior.
29520	1358132	Enhancement request: GUI **Replication Status** and **Home** pages should include a **Warning** status for partial failure
29741		On the **Configuration > System > Security > Data-at-Rest** page, attempting to upload a premium feature key (PFK) file results in the error: `Event you were trying to undefined does not exits`. Also, the system does not respond when attempting to download a recovery file.
30127	1432074 1443224 1447896 1450144	GUI is reporting that **Data Size Before Reduction** is less than the **Data Size After Reduction**.
31084		An **Operation failure** service ticket is generated stating that a new core file has been created for **/scratch/core/axis2_http_serv**.
30717		Unable to download a Data-at-Rest Recovery File on the **Configuration > System > Security > Data-at-Rest** page if the supplied password begins with a hyphen [**-**].

DXi 2.2 VTL Resolved Issues

Bug Number	SR Number	Description
26545	1390728 1392558	A timeout occurs during data ingest on VTL and NAS.
27921	1372114 1381506	Enhancement request: Have multiple filers see virtual tape drives (VTDs) through different FC paths.
28337	1385634 1430578 1434156	Unclean shutdown during host access configuration leads to a blockpool verify.
28656	1406688 1409282 1452714	Unclean shutdown during path to tape configuration leads to a blockpool verify.
29726	1404930 1409348 1409696	NetApp filer does not see VTDs after a DXi reboot until the Fibre Channel link is unplugged and plugged.

DXi 2.2 NAS Resolved Issues

Bug Number	SR Number	Description
23966	1287022 1315680 1326376 1363666 1371668 1408236 1414058 1418330 1430090 1437614 1439836	Connectivity to NAS shares temporarily lost following multiple error messages in the **winbindd** logs.
24896		An NFS share can perform Directory/File Based (trigger based) synchronization to a CIFS share with the same Sync ID. This should not be allowed due to the protocol mismatch.
26044		If a mounted NFS share containing a large number of files is deleted, and then a new share with the exact same name is immediately created and mounted by clients, then files written to the new share may be lost.
30082	1434158	An assertion failure may occur when the system is shut down while NAS shares being deleted.

DXi 2.2 OST Resolved Issues

Bug Number	SR Number	Description
21267	1407336	A storage server cannot be deleted even when it contains no LSUs and there are no active connections.
28901	1442292	OST images with zero length metadata files are not correctly deleted during cleanup.
29179	1432074 1433526 1447896	Errors occur during the OST image metadata file close operation.
29687		An OST optimized duplication job fails when running concurrent OST optimized duplication jobs and no replication target is specified. This occurs only when performing optimized duplication from 2.x to 2.x systems.
30338	1439394	Enhancement request: Reduce the number of metadata file opens and closes during OST backups.

DXi 2.2 Installation and Upgrade Resolved Issues

Bug Number	SR Number	Description
23973	1350908 1406660 1406664 1406438 1420936 1445732	After a successful DXi software installation, a service ticket is generated noting a problem with the **dsm_sa_datamgrd** component.
28245	1387100 1394598	After upgrading a source DXi to 2.1.x Software, replication to the configured target DXi no longer works.
29988 30251	1432250	Unexpected reboot occurs during software upgrade due to a failure of the OST server (upgrade completed successfully after reboot).
30570	1445516 1447016 1449840	After a software upgrade, the system comes up in diagnostic mode due to a mySQL failure.

DXi 2.2 Miscellaneous Resolved Issues

Bug Number	SR Number	Description
21636	1228336	Enhancement request: Improve the performance of automatic healthchecks to match the performance of manual healthchecks.
22649	1245052 1381662	Missing data does not cause a service ticket prior to an attempt to retrieve the data.
24033	1284190 1434250	Healthcheck cannot recover missing data if the DXi replication IPs are not configured in an OST environment.
24367	1290220, 1396164, 1401472, 1414740	A service ticket is generated indicating a problem with SNMP if the syscli is used to get status for systemboard, networkport and storagearray.
24651	1303636 1323354 1367552 1384202 1383524 1401126 1454100	A service ticket is generated due to healthcheck service restarting during a healthcheck.
25784	1329858	Apache web server automatically restarts.
27222	1357642 1362160 1383004 1400152 1437614	Backups fail with error 1326 (Logon failure unknown user name or bad password.
27751		The DXi8500 online help and *User's Guides* incorrectly state that an underscore (_) must not be used in the name of a VTL partition.
28006	1382294	Interruption in management network due to STP enabled on Ethernet switch.
28231	1394828	Enhancement request: Add information to documentation about additional disk space required on target DXi as compared to the source DXi.
28342	1400274	Enhancement request: Add information about VLAN tagging to the *DXi User's Guide*.
28908	1405844	Enhancement request: Generate a service ticket when a store fails due to a blockpool allocation failure.
29005	1410334	Negative blockpool statistics lead to incorrect compression ratio.
29204	1412434	During DSET log generation, the IPMI card is reset, causing a service ticket.
29190	1412914	NetBackup configurations where space characters are used in the policy/client setup are not supported.

Bug Number	SR Number	Description
29387	1407632	Change RAID controller settings so that hot spare drives spin up less frequently.
29504	1407410	A blockpool pause timer may fire multiple times for the same event.
29710	1412938	In Backup Exec, permanently busy images get orphaned because the metadata has a stuck busy flag.
30118	1319126 1367478 1374686 1449136	Enhancement request: Do not rebuild a drive reported as bad by the controller until the drive has actually been replaced.
30479	1441794	SCSI transfers with unusual byte counts fail.

Known Issues

DXi 2.2.1.1 Software has the following known issues:

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Replication Known Issues

Bug Number	SR 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.
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	1132956	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.
18326		If Directory/File Based Replication is enabled for a share and then disabled at a later time, a replication report will not show any of the replication activity that occurred during the time that Directory/File Based Replication was enabled.	Re-enable Directory/File Based Replication for the share, then run the replication report again to see the historical replication activity.
18787		A manual or scheduled replication initiated immediately after changing the replication target may fail.	Perform the replication again.
18845		An error occurs if the same DXi is configured to be a source as well as the target for replication.	Do not include the configured target DXi in the list of source DXis.

Bug Number	SR Number	Description	Workaround
20351		If data is replicated from a DXi running DXi 2.x Software to another DXi running 2.x, that data cannot be failed back to a DXi running system software 1.x.	Perform a failback to a DXi running DXi 2.x Software.
20674		An error is returned when attempting to delete a replication source if the source was added with an invalid (cannot be resolved) host name.	Pause replication before deleting a source with an invalid host name.
21612		When recovering or failing back an NFS share, the value of the **Commit** attribute (**sync** or **async**) is not preserved.	Manually reset the **Commit** attribute for the share after it is recovered on the target, or fail back the share to the source.
24005		A missing file error occurs during replication or space reclamation. This can occur if files were deleted while replication or space reclamation was in progress.	Retry the replication or space reclamation. To avoid this issue, do not delete files while performing replication or space reclamation.
24277		If several synchronization jobs are queued, and then while the first job is in progress the other jobs are canceled, the DXi will begin synchronizing the canceled jobs after finishing the first job in the queue.	Cancel the synchronization jobs again.
23228		When attempting to recover or synchronize a VTL partition, a capacity mismatch error occurs if the target DXi does not support the library emulation and drive type used by the original partition.	When creating the source partition, make sure to use a library emulation and drive type supported by the target.
24731		If the configured replication target does not support VTL, enabling replication at the time of partition creation results in an error, and the partition is not created. If you then attempt to create the same partition again, with the same name and replication enabled, the DXi will become unresponsive and must be rebooted.	If the configured replication target does not support VTL, do not enable replication at the time of partition creation.
26167		When performing a failback from a DXi running 2.1 or 2.1.x software to a DXi running software version 2.0.x or earlier, the failback fails if a valid source IP address has not been specified on the DXi running 2.1 or 2.1.x software.	On the DXi running 2.1 or 2.1.x software, specify a valid **Source IP Address** on the **Configuration > Replication > Send** page.

Bug Number	SR Number	Description	Workaround
29341		It is possible to configure two identical replication schedules for the same share or partition.	If this is done, one of the scheduled replication jobs will succeed and the other will fail. Ignore the failed job and delete the redundant schedule.
31514		An error occurs when attempting to configure replication from a source system running DXi 2.2.1 Software to a target system running 2.1.x if the systems are configured for network segmentation.	Upgrade the target system to DXi 2.2.1 Software.
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**.	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. To correct the issue, manually initiate replication of the share or partition on the **Replication > Send** page, and allow the replication to complete. 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.
31828		(DXi8500 only) When replication throttling is configured for a 10 GbE network interface, actual network performance is higher than the specified throttle value.	If replication throttling is required, configure network segmentation so that replication traffic uses a 1 GbE interface instead.
32006		An error occurs when attempting to enable replication on a VTL partition if there is an OST storage server on the system that uses the same name but with a different case. For example, if the VTL partition is named "Chrome" and the OST storage server is named "chrome", the error occurs. If the OST storage server is named "Chrome", the error does *not* occur. **Note:** NAS shares are not affected.	Use unique names for VTL partitions and OST storage servers.

Bug Number	SR Number	Description	Workaround
32098		When replicating a share to a system running DXi 1.x Software while data is being written to the share, the replication service stops and a service ticket is generated	The replication service is automatically restarted. You can safely close the service ticket. To avoid this issue, upgrade the target system to DXi 2.x Software.
32166		The following administration alert occurs: `Directory/File Based Trigger Delete FAILED. Wild cards are not allowed in path specification for replication.`	Replication does not support asterisks [*] or ampersands [&]. Remove or rename any affected files, then perform a synchronization to propagate the deletions to the target.

Space Reclamation Known Issues

Bug Number	SR Number	Description	Workaround
20826		After upgrading the system software, the **Space Reclaimed** statistics are incorrect on the **Space Reclamation > General** page.	The statistics will be correct after space reclamation is run.

Network Known Issues

Bug Number	SR 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.
20448		If a **Domain Suffix Search List** has not been specified on the **Network** page, and the DXi is added to an Active Directory server, the DXi is added to the domain with the suffix **localdomain**. After this, the DXi cannot be managed using Active Directory.	Specify the correct domain suffix in the **Domain Suffix Search List** before adding the DXi to an Active Directory server. (If adding multiple entries to the list, make sure the correct path is first in the list.)
20572		When using Active Directory, the DXi is not automatically added to the DNS server in the parent domain after the DXi is added to a child domain.	Cross domain joining is not supported by Samba. Instead, manually add a DNS entry to the DNS server.

Bug Number	SR Number	Description	Workaround
20574		Unable to manage DXi Local Users and Groups from the Active Directory controller after the DXi is added to a child domain.	Log off of the Active Directory controller, then log back on. Users and groups will be listed correctly.
21603		If the DXi is assigned an IP address in the 10.17.21.0 to 10.17.21.24 range, a network connection to the DXi cannot be established.	The IP addresses in this range are reserved. Configure the DXi using a different IP address.
23808		A CIFS share cannot be mapped when using Windows 2008 R2 SP1 with the **RequireSecuritySignature** registry key set to **1**.	Edit the Windows 2008 registry and set the following key to **0**: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\LanmanWorkstation\Parameters\RequireSecuritySignature
30169 30805	1419732	Running the Network Analyzer on the **Utilities > Analyzer > Performance** page fails if NetServer is enabled on both the source (driver) DXi and the target DXi.	Only enable NetServer on the target DXi, and leave it disabled on the source (driver) DXi. To enable or disable NetServer, use the **Utilities > Analyzer > Settings** page.
31942		On the **Configuration > System > Network** page, enabling jumbo frames (MTU 9000) for a bonded 10 GbE network device causes breaks in network transmission.	Make sure to select **MTU 1500** for bonded 10 GbE network devices.
32077		If replication throttling is enabled and the DXi is upgraded to software version 2.2.1, an error occurs when attempting to configure a network interface on the **Configuration > System > Network** page.	Delete the replication throttle using the following **syscli** command: syscli --del throttle --service REP After deleting the throttle, you can configure network interfaces. **Note:** If you re-enable throttling, it must be disabled prior to configuring network interfaces again.

CLI Known Issues

Bug Number	SR 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. **Note:** The **--getstatus jumbo command** has been deprecated.	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.

GUI Known Issues

Bug Number	SR Number	Description	Workaround
7874		**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.
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.
11790 11792 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
15310		When the system is running a backup and a partition is created with more 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.

Bug Number	SR Number	Description	Workaround
20673		On the **Email Home > On Demand** page, after viewing and saving a configuration data report, the **OK** button is disabled.	Refresh the Web browser to return enable the **OK** button.
21019		Immediately after a fresh software install, the disk capacity statistics displayed in the remote management console are incorrect.	Wait a few minutes for the disk capacity statistics to be updated.
22417		When adding an SNMP community, the following error displays: The IP Address/Network Mask pair does not imply a valid network address. This error occurs even though the pair is in fact valid.	Leave the **Network Mask** field blank when creating the community.
23165		When deleting host access groups on the **Host Mapping** page, the job status indicator does not complete.	The host access groups were successfully deleted. To clear the job status indicator, navigate to another page in the remote management console, then navigate back.
24567		In the **OST Wizard**, on **Step 3: Add LSUs**, if you sort the list of LSUs by name, and then select one or more LSUs, the **Delete** button remains disabled.	Click **Previous** to return to the previous step, then click **Next** to return to Step 3. Select the LSUs to delete, and click **Delete**.
24644		On the **Utilities > Diagnostics > System Diag File** page, after clicking **Generate New** to create a new system diagnostics file, the message No file has been generated appears, and the **Download Current** button remains disabled.	Check the **Admin Alerts** page to see if an admin alert was generated. If the /**scratch** file system is out of space, the system cannot create a new diagnostics file, and an admin alert is generated.
26174		On the **Configuration > VTL > Media > Actions**, when **Show All Media** is selected in the **Action** drop-down box, an **Unresponsive Script** error dialog box may display if there is a very large number of media.	Keep clicking **Continue** on the error dialog box until the media displays. To avoid this error, view media for a particular partition, or apply a barcode filter.
26245		On the **Configuration > Scheduler** page, the horizontal scroll bar does not allow you to scroll to the right to see the entire view.	Navigate to a different page in the remote management console, and then navigate back to the **Scheduler** page.
26021		Web browser save password features (and similar third party browser add-ons) are not able to store and recall the DXi password when logging on.	To maintain proper security, enter the password manually each time you log on to the DXi.

Bug Number	SR Number	Description	Workaround
27206		When generating a storage array diagnostics file, the operation does not appear to complete even after a long period of time elapses.	Press **F5** to refresh the page. Or navigate to another page, and then navigate back to the **Utilities > Diagnostics > Storage Array Diag File** page.
28361		Generating a Storage Array Diagnostics File takes a long time to complete, but there is no warning about this on the **Utilities > Storage Array Diag File** page.	This is expected behavior. Generating a Storage Array Diagnostics File can require 60 minutes or more depending on the system configuration. Wait for the operation to complete.
29153		After editing an event on the **Scheduler** page, a new event cannot be added by clicking and dragging.	Refresh the browser window, and then click and drag to add a new event.
29729		On the **Configuration > System > Security > Data-at-Rest** page, if an incorrect premium feature key (PFK) file is uploaded using Internet Explorer, an error message is not returned. Instead, a message displays stating the PFK file was successfully uploaded.	Use Firefox to upload a PFK file on the **Data-at-Rest** page.
29730		On the **Configuration > System > Security > Data-at-Rest** page, when uploading a premium feature key (PFK) file is uploaded using Internet Explorer, the border around the file name turns red.	The red border does not indicate an error. However, you should use Firefox to upload a PFK file on the **Data-at-Rest** page (see bug 29729 above).
29832		When a scheduled space reclamation event is deleted on the **Scheduler** page, the **Administrative Activity Log** records the deletion but does not record the type of event that was deleted.	When looking at the **Administrative Activity Log**, if you have questions about the type of event that was deleted, note the user and time of deletion, and then consult the appropriate person.
30735		On the **Scheduler** page, if a monthly or weekly event is edited and changed to a daily event, any subsequent attempts to edit a single instance of the event will fail.	Delete the recurring event and then create a new daily recurring event. You can then edit single instances of the new recurring event as needed.
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.
31164		The **Status > Logs > Activity Log** page is difficult to read and use if the Internet Explorer window is resized to a small size.	Use Firefox to view the page.

Bug Number	SR Number	Description	Workaround
31969		If the **syscli --change password** command is used to change a Web password (admin or monitor) so that it is longer than 15 characters, the password cannot be used to log on to the remote management console. The GUI does not accept passwords longer than 15 characters.	Use the **syscli --change password** command to change the password so that it is 15 characters or less, and then log on to the remote management console again.
32101		On the **Network** page, it is possible to inadvertently add an empty entry to the **Routing Details** table for an interface. Once added, the empty route table entry cannot be deleted.	The empty route table entry will not affect system operation. To remove the entry, do one of the following: • In the **IP Address** table, first delete the interface associated with the empty route entry. Then add the interface again to the **IP Address** table, using the same settings, and click **Update** to store the changes. (Do *not* click **Apply** at the bottom of the page, as this will force a reboot of the system.) • Click **Reset** at the bottom of the page. This will undo all recent changes and reset the **Network** page to the last saved settings.
32279		If you are viewing the **Utilities > Space Reclamation** page while space reclamation is in progress, and then attempt to navigate to the **Configuration** page, the remote management console does not respond, and the **Configuration** page does not display.	Navigate to another page (for example, **Home** or **Map**) and then navigate to the **Configuration** page.
32410		An error occurs when attempting to log on to the DXi remote management console using Internet Explorer 10.	Enable **Compatibility View** in Internet Explorer 10, and then log on to the remote management console.

VTL Known Issues

Bug Number	SR Number	Description	Workaround
21688		The following error occurs when editing a partition to reduce the number of storage slots: `Error: setting number of slots: 150. Error:-1`	To remove slots, the slots at the end of the range of slots must be empty. Export cartridges from the highest numbered slots, and then edit the partition again.
22019		Media can be recycled (erased) on the Media Actions page even if it is write protected (WP).	The WP status is respected by the host but not the DXi. Do not recycle media that has data.
30808		When using the **VTL Configuration Wizard**, if you add a host group in step 5 but do not specify a host in the **Host** drop-down box, an error will occur when trying to confirm the settings in step 6.	Make sure to specify a valid host when adding a host access group.

NAS Known Issues

Bug Number	SR Number	Description	Workaround
19332		NFS recovery jobs performed with a supported backup application fail to complete.	Make sure the backup client system has a minimum of 8 GB of RAM.
19935		Attempting to delete a share while performing I/O on the share (for example, copying files to the share) results in an error. After this error occurs, the share cannot be deleted, and replication cannot be performed to the share.	Wait for I/O on a share to complete prior to deleting a share.
19936		A file/directory path with more than 244 characters cannot be accessed on a mapped NAS share.	Limit file/directory paths on a mapped NAS share to 244 characters or less.
21407		Empty files and directories can still be created on NFS shares when the DXi is in a low space condition.	Do not attempt to write files and directories to NFS shares on the DXi when it is in a low space condition. Run space reclamation to free up disk space before writing additional files.
23218		When mounting NFS shares on Solaris clients using the noac option, performance is degraded.	Do not use the noac option when mounting shares, or use a non-Solaris client.

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	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.
31755		Running a large number of concurrent backup and replication jobs may cause timeouts in the backup application, leading to random failure of NFS and CIFS backup jobs.	Reduce the number of concurrent backup jobs. Alternately, increase the timeout value in the backup application. For example, in NetBackup, increase the **Client connect timeout** and **Client read timeout** to the maximum (32767). See the online support article: http://www.symantec.com/business/support/index?page=content&id=HOWTO13869 In addition, on a Windows media server, change the **SESSTIMEOUT** value to 600 seconds (10 minutes). See the online support article: http://support.microsoft.com/kb/102067

OST Known Issues

Bug Number	SR Number	Description	Workaround
10041	1423609 1066048 1236048	Subsequent Optimized Duplication jobs may fail or become stuck when running jobs are canceled or stopped.	Restart the NetBackup services.
13795	1913763	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. Alternately, upgrade to Backup Exec 2010 R2, which contains a fix for this bug.

Bug Number	SR Number	Description	Workaround
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		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.
20587		On a NetBackup media server, temporary files created during backups are not removed.	This issue is resolved. To remove any temporary files that were created by previous versions, delete all files in the /**tmp/dm/shadow** directory on the NetBackup media server.
23109		There is a small chance of observing a discrepancy in the aggregate statistics for DXi Accent and the statistics for individual media servers.	Navigate to another page in the remote management console, then navigate back.

23253		If a storage server is configured to use multiple LSUs, and if LSU spanning is configured, when one LSU gets full and NetBackup is handling a disk full condition, the following errors are logged in OST Plug-in log:
		`ERROR    - 20110526 14:53:50 11818 /pgnimage.cpp:2500 Write to image failed.  dm_error: -812, STS Error: 2060031`
		`ERROR    - 20110526 14:53:50 11818 /pgnimage.cpp:2584 EXIT pgn_write_image: (out of space:2060031) ih=0x13c1ed00, bytesWritten=0`
		OR
		`ERROR    - 20110414 23:27:36 20648 /pgnbfst.cpp:1153 Received error(2060031) from server, OST_RESERVE_LSUSPACE for 262144 bytes failed`
			If the NetBackup spanning worked as expected, and if the job completed successfully, these errors may be ignored.

Bug Number	SR Number	Description	Workaround

24628 26580		When DXi Accent is enabled, a maximum number of jobs (backups, restores, and/or optimized duplications) can be run against the DXi. The maximum is 100 total jobs.
		
		When the limit is reached, the following error is logged to the OST Plug-in log:
		
		`VServer "hybrid-dedupe-no-encrypt" limit reached (limit 100).`
		
		Also, the following error is logged in the NetBackup progress log:
		
		`Critical bpdm (pid=12515) image open failed: error 2060020: storage server connection limit exceeded`
			If the connection limit is reached on the DXi, the OST Plug-in retries for 300 seconds by default. If the connection cannot be established within 300 seconds, the connection times out and an error is returned.
			
			The default connection timeout is 300 seconds. The timeout value can be increased using the following setting in **/usr/Quantum/QuantumPlugin.conf**.
			
			DATA_CONNECTION_BUSY_TIMEOUT

26627		When attempting to perform an optimized synthetic full backup using NetBackup running on a Windows-based media server, a normal synthetic full backup occurs instead. During a normal synthetic full backup, all data is read back to the media server, resulting in a longer backup window.
		
		Note: This issue usually occurs with existing storage servers and disk pools.
			Make sure the storage server and disk pools are correctly configured for optimized synthetic full backups. To do this, run the following commands on the media server:
			
			`nbdevconfig -changests -stype Quantum -storage_server <ss_name> -setattribute`
			
			`nbdevconfig -changedp -stype Quantum -dp <dp_name> -setattribute OptimizedImage`
			
			To verify the configuration, run the following commands and make sure they return the flag **OptimizedImage**:
			
			`nbdevquery -liststs -U`
			
			`nbdevquery -listdp -U`
			
			For more information, see the following Symantec online support article: http://www.symantec.com/business/support/index?page=content&id=TECH77767

26147		When using OST with a media server configured with RedHat Linux and a Chelsio 10GbE card, restore operations take significantly longer to complete than backup operations.	Use the **perftune.sh** and **ifup-local** scripts (provided by Chelsio) to correctly set kernel parameters on the media server. To do this, you must copy the **perftune.sh** and **ifup-local** scripts to **/sbin** on the media server. For more information, refer to the Chelsio driver installation instructions (in the **ReadMe** file included with the driver).

Bug Number	SR Number	Description	Workaround
29854		In NetBackup 7.5, when you click **Refresh** on the **Change Disk Pool** dialog box, the following error displays: `The snapshot property of one or more volumes in the disk pool has changed. This property cannot be changed after initial configuration.`	To resolve this issue, refer to the following Symantec support article: http://www.symantec.com/docs/ HOWTO67378
30134		In NetBackup 7.5, when attempting to change a **Replication** operation to a **Duplication** operation on the **Storage Lifecycle Policy Editing Window**, the storage unit is not updated and remains blank.	Make the change a second time. On the second attempt, the storage unit is correctly updated.
30180		OST path to tape traffic is not routed directly from the DXi to the physical tape library, and instead is routed through the NetBackup media server, when the operation is initiated by a Storage Lifecycle Policy.	To resolve this issue, refer to the following Symantec support articles: http://www.symantec.com/business/ support/ index?page=content&id=TECH193964 http://www.symantec.com/business/ support/ index?page=content&id=TECH184142
30429		If an LSU that is enabled for Automatic Image Replication (AIR) belongs to a disk pool for which spanning is enabled, when an opportunity for spanning occurs, the LSU is not spanned, and NetBackup fails the backup with the following or similar error: `Critical bptm (pid=24097) backups created for eventual duplication to remote master servers cannot span multiple volumes.`	LSUs that are enabled for Automatic Image Replication cannot be spanned. If an LSU is configured for AIR, make sure spanning is disabled for the disk pool it belongs to. **Note:** When an LSU is configured for AIR, it can take up to five minutes for the change to be visible in NetBackup.

Bug Number	SR Number	Description	Workaround
30515		Automatic Image Replication (AIR) jobs run between a UNIX media server and a Windows media server fail.	NetBackup does not support image replication between different operating systems. Always perform Automatic Image Replication between media servers that use the same operating system.
31095		NetBackup 7.5 and 7.6 may have problems recognizing or accepting the DXi replication topology configured for Automatic Image Replication (AIR). This occurs because Quantum's implementation of Automatic Image Replication does not correctly publish storage server names to NetBackup such that NetBackup can correctly distinguish between storage server names. **Note:** Quantum OST is unique among OST implementations in that it separates the DXi appliance from the OST storage server. In other implementations, the appliance is the storage server. On the DXi, the storage server is a logical construct which allows the DXi to have multiple storage servers.	When configuring AIR, use storage server names that are unique among the DXi systems involved in an AIR configuration.

Installation and Upgrade Known Issues

Bug Number	SR Number	Description	Workaround
13711		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		The system goes into diagnostic mode if a SAS cable is pulled during storage expansion upgrade.	Don't pull cables during storage capacity upgrade.
15362		During installation, warnings appear that the **Inode Expand Min**, **Inode Expand Max**, and **Inode Expand Inc** configuration variables are deprecated.	These warnings do not affect installation and can be ignored.

Bug Number	SR Number	Description	Workaround
21270		When upgrading to DXi 2.0 Software, the 1.4.x diagnostic files are deleted.	Before upgrading to 2.0, save copies of the 1.4.x collect logs to a location that is not on the DXi.

24372		After upgrading from 1.4.x to 2.0.x, the following error appears in the **upgrade1to2.out** log.
		
		`*** Speedy VMC_MEDIA_TYPE_GENERIC table upload`
		`*** Error of appending row 9`
		`Loarel: (903) duplicate value for primary or unique key`
		`Loarel: system error: 0`
		`Loarel: (903) duplicate value for primary or unique key in adding row number 1`
			You may safely disregard this error. The upgrade completed successfully.

26455	1329228	A custom setting for MI thread count in the **/etc/init.d/ost** file is lost when upgrading and is reset to the default value (20 threads).	Prior to upgrading, note the value for MI threads in the **/etc/init.d/ost** file, and then reset the value following the upgrade. **Note:** In general, in DXi 2.1.x Software or later, it is no longer necessary to alter the MI thread setting to optimize performance.
28397	1395064	If a DXi that is configured with DNS entries is disconnected from the network prior to a software upgrade, the upgrade will not succeed.	If the DXi must be disconnected from the network during an upgrade, remove any DNS entries on the **Configuration > System > Network** page prior to the upgrade.
29410		During a software upgrade, if the DXi is booted from the software DVD before the firmware (.fw) file is uploaded and activated, the following error occurs upon a subsequent attempt to activate the firmware image: `The firmware file is not present.`	Despite the error, the upgrade will succeed after the firmware image is activated. In the future, to avoid this issue, do not boot from the software DVD before activating the firmware image. Note that the software DVD is *not* required for 2.x to 2.x upgrades.
30829		After upgrading to 2.1 Software or later, the Integrity healthcheck is disabled.	The Integrity healthcheck is currently not supported in 2.1 or later software. Run the De-Duplication healthcheck instead.

Bug Number	SR Number	Description	Workaround
31603		If an attached physical tape library is configured for Path to Tape (PTT), the configured devices may not be accessible after upgrading to DXi 2.2.1 Software or later from an earlier version.	DXi 2.2.1 Software or later requires a WWPN change for all Fibre Channel ports configured for PTT use. For details, see Path to Tape WWPN Change on page 38.
32309		After upgrading to DXi 2.2.1 Software, the value for **OST Storage Servers** on the **Home** page (under **Data Reduction Statistics**) and on the **Disk Usage Page** (under **Data Before Reduction**) displays as **0.00 MB** even though storage servers with data exist on the DXi.	On the **Configuration > OST > Storage Servers** page, edit each existing storage server. On the **Edit Storage Server** page, select the **Enable Concurrent Optimized Duplication** check box and click **Apply**. If you do not want to keep concurrent optimized duplication enabled, clear the check box and click **Apply** again. Repeat this process for each storage server.

Miscellaneous Known Issues

Bug Number	SR Number	Description	Workaround
12454		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 *DXi-Series User's Guide* for further information.
12523		Occasionally, the NTP server cannot be contacted, resulting in the following admin alert: WARNING: Unable to access NTP server/pool.	Check the NTP settings on the **Configuration > System > Date & Time** page and change if necessary. Before a valid NTP Server can be configured by hostname or selected from an **NTP Server Pool** on the **Configuration > System > Date & Time** page, a Primary DNS server must be configured on the **Configuration > System > Network** page. When updating the NTP settings through the **Getting Started Wizard**, configure the Primary DNS Server in the **Network** step prior to configuring the NTP server in the **Date & Time** step.
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.

Bug Number	SR Number	Description	Workaround
17553		Long backups on a NetBackup client running on Windows 2003 can fail due to insufficient system resources.	Edit the registry settings on the client as described in the following Microsoft knowledge base article: http://support.microsoft.com/kb/304101/en-us
18370 19091 27478		Errors are received after a DSET log is generated on the **Utilities > DSET** page. After retrieving a DSET log, the system status can also briefly show the system board as "failed".	You may ignore these error messages, and download the DSET log as usual.
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.
20707		If one of the processes in the DataPath cores, this can cause other processes in the DataPath to core as well. Process cores will results in RAS alerts. DataPath consists of the following processes: bpwd, bpwapid, qfsd, ost, ndmp, nas_control, nfslock, smb, nfs	If a core occurs, only the first core requires investigation, as it is the root cause. The subsequent cores are expected and can be disregarded.
23372		After a reboot, the DXi comes up in diagnostic mode, and attempting to retrieve a collect log does not proceed past the step **Collecting -FC scst-**.	Reboot the DXi again using the remote management console or the CLI.
24495		The online help content for the **Utilities > Diagnostics > Healthchecks > General** page does not include **Contact Support** in the list of possible healthcheck statuses.	If running a healthcheck results in the **Contact Support** status, contact Quantum Customer Support.
26066		When using Quantum Vision to view status and reporting data for a DXi, data is not collected from the DXi at the frequency specified in Vision.	Upgrade to Quantum Vision 4.1 or later.
26248		When a good drive is removed from a storage array, the resulting service ticket incorrectly states that the drive has failed.	Drive status is correctly report on the **Status > Hardware > Details > Storage Arrays** page.

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.
27883		Unable to use Firefox browser to access the iDRAC console on a DXi8500.	In Firefox, navigate to **Options > Advanced > Encryption** and click **View Certificates**. In the list, delete all Dell certificates.
28540		Backups are slow or fail when attempting to write a large number of small files (for example, 8KB files) to a NAS share.	The DXi is optimized for backup use (a small number of large files) rather than for use as primary NAS storage (a large number of small files). Do not use the DXi as primary NAS storage; instead, use the DXi with a backup application to store backup images on NAS shares.
28699		When running a Retina Security scan, the following security event is reported: `OpenSSH X11 Port Forwarding Session Hijack Vulnerability`.	This is a false positive result and can be safely ignored. The version of **OpenSSH** included with DXi 2.1.x Software or later already includes the required security fixes.
28747		When running a Retina Security scan, the following security event is reported: `IBM WebSphere Application Server JavaHashTable Denial of Service`.	This is a false positive result and can be safely ignored. IBM WebSphere Application Server is not included with DXi Software.
28805		When running a Nessus Security scan, the following security event is reported: `Signing is disabled on the remote SMB server`.	SMB server signing is disabled by default to allow interoperability with a wide range of Windows clients. To enable SMB server signing, use the **Configuration > NAS > Advanced Setting** page in the remote management console.
29384		Plugging and unplugging a Fibre Channel cable on an Array module multiple times in rapid succession may cause the system to reboot.	After plugging or unplugging a Fibre Channel cable from an Array module, wait 10 minutes before plugging or unplugging it again.
29959		DXi Advanced Reporting cannot be accessed on a DXi with critically low or no free space.	Delete data and run space reclamation to free up space on the DXi.

Bug Number	SR Number	Description	Workaround
31338		After removing a good hard drive and then reinserting it, the system does not generate a service ticket.	Do *not* remove a hard drive that has not failed. If you accidently remove a good drive, wait 30 seconds before reinserting the drive.
31887		If Data-at-Rest Encryption is enabled when an Array module (RBOD) or Expansion module (EBOD) is not in an optimal state (for example, a rebuild is in progress), the GUI reports the following error: `EnableHarddrivesecurity failed`. In addition, the **Data-at-Rest** page shows Data-at-Rest Encryption as disabled. Attempting to enable Data-at-Rest again with the same passphrase or a new passphrase results in additional error messages stating enabling hard drive security failed or is not supported. **Note:** If you plan to use Data-at-Rest Encryption, Quantum recommends enabling it immediately after installation of the new system.	Wait for the RBOD or EBOD to become optimal again (check the **Status > Hardware** page). Then re-enable Data-at-Rest Encryption. You *must* enter the same passphrase that was used when initially attempting to enable Data-at-Rest Encryption. The GUI will report the following error: `EnableHarddrivesecurity failed! because encryption had been enabled. User need to refresh the GUI and encryption status will change from disable to enable.` This error message can be safely ignored. Refresh the Web browser, and the **Data-at-Rest** page will now correctly show Data-at-Rest Encryption as enabled. **Note:** If you use a different passphrase to re-enable encryption, the GUI will report the following error: `EnableHarddrivesecurity: Hard drive security is not supported on this platform.` Also, Data-at-Rest Encryption will *not* be enabled. You *must* use the same passphrase that was used the first time you tried to enable Data-at-Rest Encryption.

Cosmetic Issues

Bug Number	SR 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.
20505		If you have used the Configuration Wizards to configure the system, after the DXi reboots, the green check marks on the **Wizards** menu that indicate a wizard was completed no longer display.	This is cosmetic only. All settings made using the Configuration Wizards are retained after a reboot.
21497		The first time an NFS share is modified after a CIFS share is modified, a message appears incorrectly stating that the CIFS service was started successful.	Click **OK** to dismiss the message.
29034		The DXi remote management console does not display the SAS port layout for the DXi8500 3TB Node.	To see the SAS port layout on the rear of the System Node, refer to the *Quantum DXi8500 User's Guide* (6-67205-03).

Documentation

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

Document Number	Document Title
6-67206	*DXi8500 Site Planning Guide*
6-67107	*DXi8500 User Essentials*
6-67205	*DXi8500 User's Guide*
6-67203 6-67204	*DXi8500 Unpacking and Installation Guides* • *Pre-Racked Configurations* • *Un-Racked Configurations*

Document Number	Document Title
6-67036	*DXi8500 Array and Expansion Module Upgrade Instructions*
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*

Supported Backup Applications

The following backup applications are supported for use with DXi 2.2.1.1 Software:

Backup Application	Revision
Symantec NetBackup	7.x and later
Symantec Backup Exec	2010 R2 and later
EMC NetWorker	7.4 and later
CommVault Simpana	7.0 and later
CA ARCserve	12.5 and later
Oracle Secure Backup	10.2 and later
IBM Tivoli Storage Manager	5.5.4 and later
HP Data Protector	6.0 and later
Dell NetVault	8.x and later
ASG-Time Navigator	4.2 and later
Syncsort Backup Express	3.1.x and later

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

Additional Notes

For additional information about DXi 2.2.1.1 Software, refer to the following sections.

- LTO-6 Support
- Path to Tape WWPN Change
- Data Before Reduction Statistics
- Configuring a Constant Replication Bandwidth Throttle
- Making Multiple Changes to a Recurring Scheduled Event
- Free Space
- System Metadata
- Date & Time Configuration
- Network Hostname Restrictions
- Internet Explorer Security Level
- Changing the Number of Allowed Sources
- Quantum Vision
- StorageCare Guardian
- OST NetBackup Version
- Running Healthchecks

LTO-6 Support

HP LTO-6 drives in Quantum Scalar libraries are supported for use with path to tape data movement in DXi 2.2.1.1 Software. On the **Configuration > PTT > Physical Device Discovery** page, an LTO-6 drive in an attached physical tape library will appear as an undefined device. However, the LTO-6 drive will function normally when used for path to tape.

Path to Tape WWPN Change

DXi 2.2.1 Software or later requires a World Wide Port Name (WWPN) change for all Fibre Channel ports configured for path to tape (PTT) use when upgrading from an earlier software version. If the existing configured Fibre Channel path depends on switch alias zoning or host mapping on the physical library, then the Fibre Channel configuration between the DXi and the physical library needs to be reestablished using the new DXi initiator WWPN.

After upgrading, take one of the following actions depending on your PTT configuration:

PTT Configuration	WWPN Change Procedure
Physical library is directly connected to an initiator Fibre Channel port on the DXi.	Delete the old physical mapping and scan to re-discover the physical library on the **Configuration > PTT > Physical Device Discovery** page.
Physical library is connected to a Fibre Channel switch and uses Fibre Channel port zoning.	Delete the old physical mapping and scan to re-discover the physical library on the **Configuration > PTT > Physical Device Discovery** page.
Physical library is connected to a Fibre Channel switch and uses WWPN zoning.	Rezone the library using the new initiator WWPN. Then delete the old physical mapping and scan to re-discover the physical library on the **Configuration > PTT > Physical Device Discovery** page.

Note: You can view current WWPN information on the **Configuration > PTT > FC Initiators & Targets** page.

Note: If the host server does recognize the virtual tape library (VTL) after the upgrade, then reboot the host server.

Data Before Reduction Statistics

The categories that make up the **Data Before Reduction** value on the **Status > Disk Usage** page changed after the *User's Guide* and online help were finalized. Refer to the information below regarding **Data Before Reduction**. In addition, the amount of data in all OST storage servers appears on the **Home** page, under **Data Reduction Statistics**.

Data Before Reduction

The **Data Before Reduction** value represents the original, native size of all data that has been processed by the data deduplication and compression engines.

Data before reduction is divided into the following categories:

- **Incoming Replication** - The amount of data stored on the DXi via replication from another DXi. This does *not* include incoming data from Directory/File or Cartridge Based Replication, or incoming data from Failback replication.

- **NFS Deduplicated Shares** - The amount of data stored in deduplicated shares configured in Network File System (NFS) format for Linux systems. This includes incoming data from Directory/File Based Replication, and incoming data from Failback replication.

- **CIFS Deduplicated Shares** - The amount of data stored in deduplicated shares configured in Common Internet File System (CIFS), also known as Server Message Block (SMB), format for Windows systems. This includes

incoming data from Directory/File Based Replication, and incoming data from Failback replication.

- **Deduplicated Partitions** - The amount of data stored in deduplicated partitions. This includes incoming data from Cartridge Based Replication, and incoming data from Failback replication.

- **OST Storage Servers** - The amount of data stored in deduplicated OpenStorage (OST) storage servers. This includes incoming data for OST and DXi Accent.

Configuring a Constant Replication Bandwidth Throttle

The **Configuration > Scheduler** page can be used to create a recurring series of replication throttle events. However, if you want a replication throttle bandwidth to always be in effect at all times, you need to configure a constant replication throttle bandwidth. To configure a constant replication throttle bandwidth, do not use the **Scheduler** page to schedule the throttle event. Instead, use the following CLI command:

```
syscli --add throttle --service REP --bw <bandwidth><K|M>
```

For example, to enforce a constant replication throttle of 32KB/s at all times:

```
syscli --add throttle --service REP --bw 32K
```

Note: For more information about using CLI commands, see the *DXi-Series Command Line Interface (CLI) Guide* (6-67081).

Making Multiple Changes to a Recurring Scheduled Event

This section describes the expected result when making multiple changes to a recurring scheduled event in DXi 2.1 Software and later. This information applies only when a DXi administrator has performed *all* of the following steps in the order listed:

1 Create a recurring event having two or more instances in the series.

2 Edit one or more instances within the series, creating exception instances, using one or both of the following methods:

    a Deleting (one or more instances within the series).

    b Changing the start time (of one or more instances within the series).

3 Finally, change the base start time of the entire recurring event series.

The change in step 3 will cause the system to fill in the holes in the series that were left by the instances that were deleted or moved in step 2. This is the expected behavior.

If the instances that were moved in step 2b are no longer needed after step 3, they should be manually deleted. Similarly, if the new instances filled in by step 3 are not needed, then they should be manually deleted.

Free Space

The free space available on the DXi is the sum of free space in the file system and the free space available for ingest data in the deduplication engine. The presentation layers (OST/NFS/CIFS) looking for available free space on the DXi

can only present the free space in the file system. This may make it look like the DXi is low on space. The free space in the deduplication engine is available for ingest and will be used for ingest automatically by the system.

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:

System Metadata = [File System Used Space] - [Reclaimable Space] - [Blockpool Reduced Data Size] - [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 (4.0.4 or later) to operate with DXi 2.2.x Software.

StorageCare Guardian

You must update to the latest version of StorageCare Guardian (2.0.7 or later) to operate with DXi 2.2.x Software.

OST NetBackup Version

You must use NetBackup version 7.x 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 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:

United States	1-800-284-5101 (toll free)
	+1-720-249-5700
EMEA	+800-7826-8888 (toll free)
	+49-6131-3241-1164
APAC	+800-7826-8887 (toll free)
	+603-7953-3010

For worldwide support:

http://www.quantum.com/ServiceandSupport/Index.aspx