



# Release Notes

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<b>Product</b>	DXi 1.5_85 Software for DXi8500
<b>Operating Systems (Remote Web Client)</b>	Microsoft® Internet Explorer 6.x and later versions and Mozilla Firefox™ 2.x and later versions
<b>Date</b>	February 2012

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## Purpose of This Release

This software release provides the following new capabilities:

- Maintenance release for DXi8500.
- Bug fixes (see [Resolved Issues](#) on page 5).

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## Compatibility Matrix

The following table provides information about hardware compatibility with DXi 1.5\_85 Software. This information is current as of the publication date of these release notes.

Component	Description
DXi8500	Hardware configurations based on: <ul style="list-style-type: none"><li>• 1 System Node with 64GB or 128GB RAM</li><li>• 1 to 2 Metadata modules</li><li>• 2 to 10 Array modules (1TB or 2TB)</li><li>• 0 to 10 Expansion modules (1TB or 2TB)</li><li>• 1 Fibre Channel switch</li><li>• 1 Ethernet switch<ul style="list-style-type: none"><li>• 1 redundant power system (RPS) (for the Ethernet switch)</li></ul></li></ul>

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## OST Plug-In Support

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

- Symantec Veritas NetBackup and Backup Exec 2010 (both available from Symantec).
- 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](#), [Table 2](#), and [Table 3](#) for version compatibility information regarding the DXi-Series OST components. The tables include compatibility information for Windows, Linux, Solaris, and HP-UX 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 OST Configuration Guide* or the *Quantum DXi-Series Backup Exec OST Configuration Guide*, located on the documentation CD.

Table 1 Backup Exec 2010 (or later) Compatibility List

Platform	Plug-in Version	DXi Software Version
Windows 2003/2008 32-bit	2.5.1	1.4 or higher
Windows 2003/2008 64-bit	2.5.1	1.4 or higher

Table 2 NetBackup 6.5.2 (or later) Compatibility List

Platform	Plug-in Version	DXi Software Version
RedHat Linux x86 32-bit	2.5.1	1.4 or higher
RedHat Linux x86 64-bit*	2.5.1	1.4 or higher
SUSE Linux x86 32-bit	2.5.1	1.4 or higher
Solaris 10 and Solaris 11 x86 64-bit	2.5.1	1.4 or higher
Solaris 10 and Solaris 11 SPARC 32-bit	2.5.1	1.4 or higher
Solaris 10 and Solaris 11 SPARC 64-bit*	2.5.1	1.4 or higher
HP-UX 11i v3 IA-64	2.5.1	1.4 or higher
Windows 2003/2008 32-bit	2.5.1	1.4 or higher
Windows 2003/2008 64-bit	2.5.1	1.4 or higher

\* RedHat Linux x86 64-bit and Solaris SPARC 64-bit are supported, but you must use the 32-bit OST Plug-in on these platforms.

Table 3 NetBackup 7.x (or later) Plug-in Compatibility List

Platform	Plug-in Version	DXi Software Version
RedHat Linux x86 64-bit	2.5.1	1.4 or higher
SUSE Linux x86 64-bit	2.5.1	1.4 or higher
Solaris 10 and Solaris 11 x86 64-bit	2.5.1	1.4 or higher
Solaris 10 and Solaris 11 SPARC 64-bit	2.5.1	1.4 or higher
HP-UX 11i v3 IA-64	2.5.1	1.4 or higher
Windows 2003/2008 32-bit	2.5.1	1.4 or higher

Platform	Plug-in Version	DXi Software Version
Windows 2003/2008 64-bit	2.5.1	1.4 or higher

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## Replication Compatibility

The following DXi-Series systems are capable of sending replicated data to or receiving replicated data from a DXi running DXi 1.5\_85 Software:

- DXi8500
  - Software Version: **1.4.x\_85, 2.1, 2.1.1**
- DXi7500 Express and DXi7500 Enterprise
  - Software Versions: **1.2, 1.2.x, 1.4, 1.4.x, 1.5**
- DXi6701 and DXi6702
  - Software Version: **2.0.1.x, 2.1.1**
- DXi6700 (VTL Replication only for 1.4.x)
  - Software Version: **1.4.x, 2.0.1.x, 2.1.1**
- DXi6500 Family (DXi6510, DXi6520, DXi6530, DXi6540, DXi6550) (NAS Replication Only)
  - Software Versions: **1.3\_65, 1.3.x\_65, 1.4, 1.4.x, 2.0, 2.0.0.x, 2.0.1.x, 2.1.1**
- DXi5500
  - Software Versions: **1.7.2, 1.7.3, and 1.7.3.1**
- DXi4000 Family (DXi4510, DXi4520, DXi4601) (NAS Replication Only)
  - Software Version: **1.3.1\_45, 1.4.x, 2.0, 2.0.0.x, 2.0.1.x, 2.0.2\_46, 2.0.2.1\_46, 2.1.1**
- DXi3500
  - Software Versions: **1.7.2, 1.7.3, and 1.7.3.1**
- DXi2500-D (NAS Replication Only)
  - Software Version: **1.4.x, 1.5**

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

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**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.

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## Resolved Issues

The following issues are resolved in DXi 1.5\_85 software:

Change Request Number	SR Number	Description
6020	838844 839776 893930 950812 964054 950880 901694 992488 1185264 1185264 1334686	System ran out of memory (detected by BFST).
10457	1007646 1169878	Re-enabling replication should automatically re-enable any cartridge based replication settings that were set before replication was disabled.
10931 24095	1190564 1290766	When using path to tape, if an attached library fails or becomes inaccessible, rapid growth of the MSM tac log can cause the root directory on the DXi to run out of space.
12711	1310276	The System goes into diagnostic mode with the following message: ERROR: cm_util_get_health: Failed to get health of COMMON_HARDWARE.
13996	1104742	Appending to source replication continuous file may not report errors.
14081	1108096 1119074 1122820 1138512 1159416 1177626 1153586 1352758	The blockpool crashes if a NetWorker fragment is stored.
14620	1122582	Enhancement request for deduplication backlog statistics through <b>syscli</b> .
14646	1168812	A sync operation gets queued indefinitely when the replication service is paused.
15116	1130450 1190556 1263910	After an unclean shutdown, the BPV repairs the BLOB tree heap and the BLOB tree index more than once.

Change Request Number	SR Number	Description
16438	1152796 1213858 1233326 1267272 1271050 1303670 1321440 1322940 1312610 1324302 1353570	Segmentation faults and core dumps caused by log4cplus-server.
17130	1241796	With Symantec NetBackup, path to tape (PPT) restore or verify operations fail via NDMP.
17262		The VTL and Virtual Tape Drives are unable to be discovered after the Fibre Channel cables have been disconnected and then reconnected.
17915	1206678 1353638	The DXi had a VTD core due to running out trackers.
17928	1213864, 1213814, 1215860, 1240326, 1269462	Following a software upgrade, unable to use PTT devices.
19131	1185502 1257392 1273148 1283660 1274332 1328076 1357624	Space reclamation fails, and deletes do not occur again until another trigger is received to start deletes.
20106	1206678 1268670 1311366 1335336 1346942 1347502 1352168	VTD crashes following Could not find host by sid and BUG: soft lockup errors ("tracker == NULL" issue).
20213	1207082 1233584 1251518 1259136	A kernel panic occurs with error: Kernel BUG at fs/locks.c:172.
20297	1300206 1303550 1317890	Excessive LIPs/resets on FC causes KDUMP during reboot.

Change Request Number	SR Number	Description
21421	1236016 1239860 1246604 1247716 1248260 1322902	The DXi enters diagnostic mode due to the following error: Failed to get health of IOS_HARDWARE.
21522	1206168 1206602 1291566	NDMP cores while retrieving from spanned cartridges.
22478	1256226 1254798 1308100 1313672 1302390 1315294	System degraded because <b>winbindd</b> cores with handling child domains.
22622	1241796	Data retrieved from virtual media is corrupt and does not match the original.
22715	1257716	Software installation failed and some directories do not exist on the DXi.
22992	1272758 1280484	Kernel panic during PTT rescan.
23306 26468	1346942 1347502 1352168 1370886	Improve abort handling in VTD command queue, to remove aborted commands in queue prior to thread assignment ("out of trackers" fix).
23378	1271816 1281732 1286398 1319772 1323084 1337558 1339022 1345198	Healthcheck core abort in <b>_int_free</b> .
23424	1268354	If a DXi7500 has more than 26 disk LUNs, <b>bootdisk-add.sh</b> fails to re-add a new <b>/dev/sda</b> disk.

Change Request Number	SR Number	Description
23513	1272144 1252132 1284810 1282474 1296718 1298660 1298490 1303750 1308050 1312840 1311374 1318462 1317022 1321078 1320326 1322424 1321696 1322236 1327104 1328396 1332736 1331092 1334574 1335448 1338520 1340042	False RAS ticket generated for LSI expansion trays.
23592	1276620	A long sync operation can overwrite the effort of a subsequent trigger based replication that completes first.
23765	1275822 1282810 1308600 1312952 1319524 1331002	The smbtorure maxfid test forced an SMDB panic/core.



Change Request Number	SR Number	Description
23798 26134	1279904 1291402 1288074 1295626 1297146 1299450 1298888 1308800 1312272 1315510 1316672 1312682 1318582 1319266 1323146 1315996 1336630	NAS connectivity is lost due to a crash in <b>smdb</b> .
23890	1231752	Maintenance tasks need to be handled by a separate process.
24036	1296014	Blockpool receives weak termination signal with no indication in the logs of the sender.
24083	1353124	A create image operation succeeds on existing image.
24246	1370886	A kernel panic occurs due to the following error: Cmd(248980), On Reset, aborting active cmd.
24271	1289382	Kernel bug in CentOS 4.4 can result in corruption for reported errors with sense key of <b>no sense</b> .
24336	1285598 1297304 1301782 1301890 1319548 1305744 1307908	RAS tickets generated for temporary low swap space.
24401	1284106	Space reclamation can delete all share/partition blockpool tags if retrying a CVFS tag dump.
24476	1285598 1301782	Unnecessary instances of servers are running (for example, <b>dm_srvr</b> ) and are consuming virtual memory.

Change Request Number	SR Number	Description
24478 24705	1279508 1208220 1297612 1297610 1309818 1247758 1302154 1298774 1312234 1309644 1318072 1314312 1318618 1328558 1330894 1333456 1329826 1318488 1322674 1318488 1332222 1340844 1334688 1333530 1326468 1342258 1354836 1354218	High swap memory usage causes the system to slow down (Dark Memory).
24603	1297520 1340452 1351764 1351772 1357496 1358992 1358994 1372802 1380420	A file parsing error after a Fibre Channel switch power supply outage send the DXi into diagnostic mode.
24700	1303456	For heavily used systems, the size of the collect log is very large and takes hours to transfer.
24726	1298444 1328886 1331082 1345678 1349010 1344018 1359606	Samba SMDB core due to a null security descriptor involving <b>set_ea_dos_attribute</b> .

Change Request Number	SR Number	Description
24967 24997	1317424 1300052	Symantec Backup Exec OST verify significantly impacts concurrent Symantec NetBackup OST ingest IO rate.
25000	1313976 1309838 1314286 1313976 1316430 1320372 1349668	Multiple <b>telnet</b> sessions to <b>Qfcs witch</b> appear to be stuck in a loop, causing 100% CPU utilization.
25317	1304056 1337298 1359358 1362206	DXi experiences <b>tlem_submit</b> core during boot sequence.
25355	1317424	Crash occurs in <b>dm_svr</b> when a client connection is terminated.
25424	1323544 1316200 1357580	SVN external mapping for OST is obsolete for some 1.4.x builds.
25561	1327348	Memory usage continually increases during NDMP restore operation.
25865	1332766	A backup fails when using Oracle Data Pump export ( <b>expdp</b> ).
26113	1344884 1345854	If the <b>GFF_ID</b> switch directory server query fails, the host is not presented as mappable or present to the user in the GUI.
26158	1334662 1340358 1344266 1336866	A RAS ticket occurs stating The battery is not holding a charge and needs to be replaced even when the battery is operating correctly.
26182	1344030	The <b>Configuration &gt; VTL &gt; Host Access</b> GUI pages fail to build because the GIO layer has a communication issue with the FC switch.
26185	1338866 1357476 1355836 1347548	The <b>Configuration &gt; VTL &gt; Host Access</b> GUI pages respond slowly when Fibre Channel is connected through a Fibre Channel switch
26334	1344444	Link to wrong version of MegaCLI SAS RAID Management Tool causes a kernel panic.
26367	1338606 1334662 1362208 1363292	PERC batteries do not charge correctly due to a firmware bug causing <b>Write Cache</b> to be disabled.
26495	1345744 1345840	A kernel panic occurs following Fibre Channel delays and the error: application has not been responding over 5 minutes.

Change Request Number	SR Number	Description
26588	1349928	The maximum number of open files needs to be raised to 65535 to avoid file handling errors.
26800	1357704	A service ticket occurs indicating a crash occurred with the <b>hwmond</b> process.
26854	1358756	Blockpool corruption is not always properly corrected.

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## Known Issues

DXi 1.5\_85 Software has the following known issues:

- [Replication Known Issues](#) on page 12
- [Space Reclamation Known Issues](#) on page 14
- [VTL Known Issues](#) on page 14
- [Network Known Issues](#) on page 15
- [CLI Known Issues](#) on page 15
- [GUI Known Issues](#) on page 16
- [OST Known Issues](#) on page 16
- [Misc. Known Issues](#) on page 17
- [Cosmetic Issues](#) on page 18

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### Replication Known Issues

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Change Request Number	Description	Workaround
7269	Replicating a filename which begins with & in a directory caused all of the files in the entire directory to replicate to the target.	Do NOT use the & character in a filename.
7915	Aborting a synchronization job when a namespace and synchronize are queued up aborts only the synchronization and leaves the namespace replication in a queued state.	Manually abort the namespace replication.

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

## Space Reclamation Known Issues

Change Request Number	Description	Workaround
8154	Unable to delete tape cartridges while Space Reclamation is running on the system.	Wait until Space Reclamation is complete before deleting cartridges.
18989	The GUI shows low space, but the system has more than 1 TB of capacity available.	The more tape cartridges that are created, the more space the metadata data files consume. In this case 1TB. So from the GUI, it will show that the system is in a critically low condition, but actually shows 1TB of available space.
27030	A service ticket occurs with the following summary and details: Summary: DXi: General DXi Software BPGC: Operation failure Details: Corrupted tag <tag_number> found in referenced tags file.	No data loss or corruption has occurred. To correct the issue, restart Space Reclamation, or wait for the next scheduled Space Reclamation to occur. (Do not restart the <b>bpgc</b> process.)

## VTL Known Issues

Change Request Number	Description	Workaround
5668	PX500 emulation is unable to find the element number when defining the path.	Select any other emulation type for the VTL emulation.
10938	Virtual tape drives with a stuck tape may not unload after a manual unload command.	Retry the manual unload command.
19104	In some cases for replicated virtual cartridges, the <b>Used</b> value displays as larger than the cartridge capacity.	This is due to differences in compression technology, and only occurs in some cases for cartridges received by replication from a DXi7500 source. All existing data will be maintained. However, if the cartridge is subsequently overwritten, the <b>Used</b> size will not be allowed to exceed Capacity.
26956 26992	On HP-UX, restore jobs from PTT (path-to-tape) using NDMP run at very slow speeds, and restores that span two media time out and with code 2826.	To work around these issues, use one of the following methods: <ul style="list-style-type: none"> <li>• Restore from a VTL copy (if available).</li> <li>• Attach the tape library directly to the NetBackup server and run the restore (Direct Attached).</li> </ul>

## Network Known Issues

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

## CLI Known Issues

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

## GUI Known Issues

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

## OST Known Issues

Change Request Number	Description	Workaround
10041	Subsequent Optimized Duplication jobs may fail or become stuck when running jobs are canceled or stopped.	Restart the NetBackup services.
13795	Unable to delete undiscovered OST devices from Backup Exec 2010.	Reestablish connection from the Backup Exec OST device and the DXi system. The connection can be reestablished by re-starting Backup Exec services or rebooting the DXi system. Once the connection is established, the device will be discovered, and the you will be able to delete it.



Change Request 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.
22183	Intermittent optimized duplication failures may occur with NetBackup or Backup Exec if the deduplication process has not completed.	Schedule sufficient time for deduplication to complete before beginning an optimized duplication process.
24948	NBU 7.1 with OST causes a large quantity of harmless "File Open Error" messages.	This is fixed in NBU 7.5. OST still works; ignore the flooding of messages.

## Misc. Known Issues

Change Request Number	Description	Workaround
13621	NTP server error and Admin Alert are produced after changing from NTP 24-hr to 12-hr NTP format.	Verify time format has changed. If the time format has changed, ignore the alert.
18370 19091	Errors are received after a DSET log is generated. After retrieving a DSET log, the system status can also briefly show the system board as "failed".	Ignore these error messages.
20336	When FC port 9 is pulled or down, a correct RAS ticket is generated, but Admin Alerts incorrectly reports that the wrong HBA FC port numbers (FC0, FC1, FC2, FC3, FC4, and FC5) are down.	Although the FC port numbering is incorrect, the Admin Alert is a valid alert indicating that a customer-facing FC link is down. This alert will be fixed in a future release.
24926	The DXi8500 system sometimes goes into diagnostic mode after the JBOD expansion process.	Reset the diagnostic state via the GUI.

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## Cosmetic Issues

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

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## Software Upgrade Guidance

### Prerequisite to Upgrading to DXi 1.5\_85 Software

You MUST upgrade to the latest version of DXi Advanced Reporting prior to upgrading to software version 1.5\_85. The latest version of DXi Advance Reporting can be downloaded from the disk based product pages located at: <http://www.quantum.com/ServiceandSupport/Index.aspx>

### Upgrade Compatibility

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

DXi 1.5\_85 Software is supported on DXi8500. To upgrade to DXi 1.5\_85 Software, the DXi must be running software version 1.4.5\_85. For information about upgrading an earlier software version to version 1.4.5\_85, refer to the *DXi-Series 1.4.5\_85 Release Notes (6-67063-07)*.

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### Software Upgrade Requirements

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

- If there are more than 10 replication sources configured on your system, the upgrade will abort. Temporarily remove the additional sources before upgrading the software.
- Do not attempt a software upgrade if there are any hardware failures in the system.

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## Software Upgrade Steps

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

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

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

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

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

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

Although it is possible to upgrade the software via the GUI while replication is running it is highly recommended that replication be paused and allowed to fail before the software upgrade begins.

- 3 Restart the DXi-Series system from the GUI as a confirmation that all backups and I/O have been stopped prior to the software upgrade.

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

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

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

- 5 Make sure that all hard drives are in a **Normal** state. Check the **Status>Hardware** page of the GUI.
  - 6 Perform the software upgrade via the GUI.
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**Note:** While upgrading the software through the GUI, do not refresh or navigate away from the software upload page. This will cause the software upload to abort and fail.

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- 7 Once the software upgrade has finished, if you stopped replication, restart.
- 8 After the software upgrade is complete, download a **System Diagnostic** file from the GUI **Utilities > Diagnostics** tab. Transfer the diagnostic file to the

same safe repository that was used to store the original diagnostic files during Step 1.

### Software Upgrade Times

The DXi-Series software upgrade generally takes less than 60 minutes.

After the system reboots it will not be accessible via GUI or CLI for 20–40 minutes while array modules are upgraded. **DO NOT HALT THE INSTALL OR REBOOT THE SYSTEM.** Once the array modules are upgraded, the system will continue the boot process and return to normal operation.

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## Documentation

The following documents are currently available for the DXi8500:

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

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## Supported Backup Applications

The following backup applications are supported for use with DXi 1.5 Software:

Backup Application	Revision
Symantec NetBackup	6.0 and later

Backup Application	Revision
Symantec Backup Exec	12.5 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
Quest NetVault	8.x and later
Atempo 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

### DXi8500 Port Usage

For correct operation of the DXi8500, certain firewall ports must be open for different types of traffic. For a complete list of all firewall ports that must be open on the DXi, see the latest version of the *Quantum DXi8500 Site Planning Guide* (6-67206), which is available on the **Documentation** tab on the Quantum DXi8500 Support page:

<http://www.quantum.com/ServiceandSupport/SoftwareandDocumentationDownloads/DXi8500/Index.aspx>

### Date & Time Configuration

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

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

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

If you have not configured your system to utilize at least one DNS IP address, then you cannot use a timeserver pool and must specify an NTP timeserver IP

address, directly. The GUI will provide a recommended default timeserver address of **208.66.174.71**; however, it is possible that the default timeserver may occasionally fail to respond to an NTP query. In this case you may receive an error message attempting to apply NTP settings using the default timeserver address. If you experience an issue with the default timeserver, we recommend that you try an alternate timeserver address (such as **192.43.244.18**) or select another timeserver address from the NTP support Web site at: <http://support.ntp.org>.

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## Network Hostname Restrictions

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The network hostnames must not exceed 64 characters.

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## Internet Explorer Security Level

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

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## Changing the Number of Allowed Sources

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

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## Space Reclamation

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

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## Quantum Vision

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You must update to the latest version of Quantum Vision (4.0.4 or later) to operate with the DXi8500

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## StorageCare Guardian

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

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## OST NetBackup Version

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

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

## Running Healthchecks

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

## Contacting Quantum

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

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

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

For the most updated information on Quantum Global Services, please visit: [www.quantum.com/support](http://www.quantum.com/support)

