



StorNext 4.7.0 Release Notes

Product	StorNext® 4.7.0
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Contents

What's New in StorNext 4.7.0	3
StorNext Compatibility	10
Supported StorNext Upgrade Paths.	10
Compatibility Between StorNext and Other Products	11
Supported System Components	12
Known Issues	12
Contacting Quantum	19

What's New in StorNext 4.7.0

Purpose of this Release

StorNext 4.7.0 is an important release of StorNext that adds several features: StorNext 4.7.0 gives heavy users of StorNext Storage Manager better performance as their list of files to retrieve grows. Windows customers get better support for concurrent access control of files. Customers interested in connecting to Apple Xsan MDCs can take advantage of StorNext FX. Finally, customers with ACSLS libraries with multiple robots get support for more parallel tape operations.

StorNext 4.7.0 broadens the list of supported platforms.

StorNext 4.7.0 includes approximately 250 bug fixes and enhancements, more than 60 of which were directly requested by customers.

New Features and Enhancements in StorNext 4.7.0

Global Optimization of Pending File Retrieve Tape Mounts

StorNext 4.7.0 globally optimizes how tapes are mounted to satisfy pending file retrieve requests. When multiple files are requested from the same tape, StorNext will generally mount the tape just once to retrieve all of them, in tape-position order, optimizing tape movement. In StorNext 4.7.0, this optimization happens across all requests. In prior releases, optimization only occurred within an individual request, for example, **fsretrieve**. Customers with large numbers of file retrieves that access the same tapes can expect to see performance improvement. For urgent jobs, customers can invoke the **fsretrieve** command with a new **-p** ("priority") flag to place the new job at the top of the list.

Better Support for Concurrent Access Control on Windows

StorNext now better supports Windows programs that limit concurrent access to files so that multiple users do not alter the same file at the same time. StorNext has long supported file locking, but Windows program like Office often rely on the Windows-specific **Share Mode** instead. In StorNext 4.7.0, **Share Mode** can be propagated to all Windows clients, blocking attempts to open an already-open file on a different machine. In earlier StorNext releases, **Share Mode** was only available on the local client. Because **Share Mode** can prevent concurrent file access that worked in earlier releases, **Share Mode** is disabled by default. See the **snfs_config** command in the *MAN Pages Reference Guide* for more details.

StorNext FX

As an outgrowth of this release, Quantum has revitalized StorNext FX, so that customers who need to access Apple Xsan file systems from current Windows and Linux operating systems can do so. StorNext FX now shares the same client architecture as the StorNext 4.7.0 client. Customers interested in StorNext FX should see the *StorNext FX 4.7.0 Release Notes* for details. StorNext FX is sold

separately, and licensed by client connected to an Apple Xsan Metadata Controller.

More Concurrency for ACSLS Libraries with Multiple Robots

StorNext 4.7.0 supports concurrent mount and dismount requests for Oracle ACSLS libraries with multiple robots.

New Operating System and Tape Drive Support

StorNext 4.7.0 adds the following new Operating Systems:

- Windows Server 2012
- Red Hat Enterprise Linux 6 Update 4
- Debian 6.0.5 and later 6.0.x as a StorNext Client
- Solaris 11 and 11.1 as a StorNext Client
- SUSE Enterprise Linux Server 11 SP 2 as a Metadata Controller, Distributed Data Mover, and Distributed LAN Client Gateway

StorNext 4.7.0 Adds Support for Oracle T10000D Tape Drives

StorNext 4.7.0 supports LTO WORM functionality where offered by the drive vendor, unlike earlier releases with more limited WORM support.

For full details of StorNext compatibility, see the *StorNext and StorNext FX Compatibility Guide* at <http://www.quantum.com/sndocs>.

Customer Reported Fixed Issues and Enhancements

The following table lists the customer reported fixed issues and enhancements for StorNext 4.7.0.

Operating System	Service Request Number	Change Request Number	Description
All	1364964, 1365444, 1473898, 896226	3546	Support Windows share modes cluster-wide
All	1217762	25007	Incorrect error reported by fspolicy -r when no relocation files detected.
All	1005184	27935	fs_fcopyman causes TSM startup to timeout
All	1128678, 1569782	29187	Client holding file lock hangs on reconnect with global file locking enabled

Operating System	Service Request Number	Change Request Number	Description
All	1293738, 1291852, 1345278, 1391860, 1514154, 1318502	31456	NFS server panicked with: CVFS ASSERTION FAILED: cvp->cv_magic == CV_MAGIC line 3132 file md_vnops.c module 0x34
All	1250142	33238	Missing .SHARED_FSNAME file error was not displayed by the GUI during HA system upgrade
All	1481860, 1510404, 1531872	34175	HAMgr connection failed: too many connections
All	1515122, 1295102, 1333452, 1391508, 1453638, 1467954, 1296558, 1284070, 1529652, 1540070	34657	DiskInfo tac log messages "StripeGroup configuration contains 0 Disks" should tell us which file system it is reporting on."
All	1387460, 1340710, 1401642	35218	Class limits not completely enforced.
All	1336560, 1390454	35871	Multiple library robots are not used concurrently
All	1341370	36053	ArcDisp cores with signal 11 in HandleMoveEject
All	1350600 1573190 1574866	36127	When expanding the metadata stripe group, the allocation strategy needs modifying
All	1337734, 1386160	36361	Activating fsm not responsive to voting clients
All	1360670, 1361986, 1373274, 1449138, 1548032	36412	Conversion of HA secondary fails with "Error invoking action"
All	1394692, 1449358	37366	Can't delete excessive amount of Admin Alerts
All	1390454	37409	Extra "emergency policy" log entries when running a normal class-based store policy

Operating System	Service Request Number	Change Request Number	Description
All	1387838, 1404164, 1465390, 1494462, 1533670	37430	Improve logging for revoke timeout
All	1392164, 1406552	37621	fs_cpyresp performance is adversely affected by TRUNCATE IMMEDIATE operations
All	1403902	37756	GUI affinities page fails to load if affinity name is used > 1 time
All	1464074 1482682	38103	Metadata read error on wrong stripe group not detected and no core file
All	1429488, 1528528, 1537900	38512	fsm fails after upgrade from 4.2.1 with ASSERT failed (ip->i_idinode.idi_flags & InodeFlagPendFree) == 0
All	1434230	38701	cvfsck failure related to bad_name_list
All	1419636	38808	md_get_dirattrs() call does not display failing inode number in debug output
All	1438176	38948	Look at addressing the flood of not accessible and soft mount RAS from fsmcom.c
All	1438240	39036	Provide logging capability during sending metadata phase of replication
All	1554500	39510	fsretrieve of large number of files fails on retry when copy unavailable
All	1475478, 1526280, 1534060, 1486380	39728	Misleading licensing error message generated by fsmpm when server components are installed but system is not a server
All	1479612, 1511180	40033	GUI get Java heap space errors in the file recovery webpage
All	1477208	40303	Duplicate entries response is masked when inserting into MSM tables
All	1481180	40327	Error in MSM STK_DMOUNT_FAILED_LOG log message
All	n/a	40370	fsstats to show counts for Policy Classes
All	n/a	40393	Correct a confusing log entry
All	n/a	40414	GUI Support handling multiple image files for M-series upgrades
All	n/a	40421	Log in MSM appears to have incorrect information

Operating System	Service Request Number	Change Request Number	Description
All	n/a	40432	Add crontab entries to snapshot to help with Debugging
All	1575178, 1588104	40433	Same Request Ids being used for multiple commands
All	n/a	40464	Forced Dismounts should be higher priority
All	n/a	40480	Reallocation not working properly when using multiple drive pools.
All	n/a	40483	Need to improve logs in TSM/MSM
All	n/a	40484	Error in logs - cannot modify only mscnot field
All	1495072	40573	Bad xattrs not fixed by cvfsck
All	1441576	40638	TSM is incorrectly handling a WRITE dmapi event
All	1496086, 1531520	40812	Install fails on mysql component if /adic has incorrect permissions
All	1496086	40813	Install continually fails on mysql component once a failure has occurred on this component
All	1510696	41108	When modifying policy class parameters, policy default copies is unexpectedly changed when File Age Before Truncation is modified
All	1503532	41376	snbackup takes too long to run because of database archive time
All	1504258	41383	fsmedscan does not handle consecutive tape marks
All	1522514	41394	GUI File and Directory Actions browsing fails on directory name containing single quote
All	1440472, 1520800, 1526530	41443	Running cvfsck on corrupt file system can result in thousands of messages.
All	1524676, 1529000, 1548710, 1517124, 1558576	41498	Library Capacity shown incorrectly in GUI home page (pie chart)
All	1530470, 1550442, 1545088, 1556624, 1568238	41721	Database crash during policy store
All	1537746	41866	GUI Tools > Storage Manager > LOI fails to process Audit Failure events
All	1543380	41956	A typo in .cfgx generates an ASSERT with no error logging

Operating System	Service Request Number	Change Request Number	Description
All	1359420, 1514098, 1537746, 1349918, 1497368, 1556490	41995	consolelist database table not cleaned up
All	1543310, 1571462	42079	GUI fails to display quota if the soft limit timer has expired
All	1480480, 1349838, 1354566	42146	Rename can update client size incorrectly from the fsm attributes
All	n/a	42210	Typo in masarchive/config/mas_agent.ini.proto
All	1531542	42217	cvfsck randomly chooses inodes when double allocations, should clear both inodes
All	1552660	42323	Using wildcard with cvcp cause file overwrite.
All	n/a	42398	MAS Agent can be disrupted by temporary absence of its config file
All	n/a	42466	File names in fsmedinfo -l are pointing to .rep_private directory for deleted files
All	1547504, 1470988	42527	Stripe Group Migration with GUI fails w/ Java out of memory
All	1526692	42530	Name space realization fails due to bad file descriptor errors in realize_namespace() on target side
All	1544884, 1558304, 1560878, 1554200, 1567750	42532	When BindSame() recreate a ipv4 socket it assume TCP and does not set SO_REUSEADDR
All	1559338, 1564374	42726	After cvfsck clobbered free list, many double allocations and took 67 hours to run.
All	1558610, 1557572, 1121384, 1535590, 1568914	42737	Backing up StorNext file system using EMC Networker produces errors getting extended attributes
All	n/a	42784	StorageTek T10000D Tape Drive Support
All	1564670	42893	cvcp exit with status zero even on error. Cause script to assume copy succeeded.

Operating System	Service Request Number	Change Request Number	Description
All	1564496	42990	Pending free list problem can cause panic which we could fix without panic
All	1574832	43226	GUI RFE Add Policy Class filter to media report
All	1578258	43359	FSM OphangLimit Panic due to stuck journal pusher thread
All	1561322	43587	fs_store daemon uses <code>select count(*)...</code> query
All	n/a	43947	GUI Lattus-M manual namespace mode not available with empty scan result set
Linux	1326764, 1558768, 1555748	36334	HA conversion of primary MDC fails because vsping executing when rpc service is stopped
Linux	n/a	40535	nPulse, Custom Kernel Support
Linux	n/a	40779	Add IBM TS1130 drive support for IBM TS3500 Library
Linux	1502162, 1487154, 1546212	40861	Race condition in M660 from udev causes Eth0 to disappear which results in license problems
Linux	1531432, 1538246, 1474334, 1558768, 1555748	41908	Check for portmap rpm depependancy at install time required by MSM
Linux	1527928	41984	fsmedcopy heartbeat timer firing on long copies causing internal processing failure
Linux	n/a	42011	Add licensing for MAS Agent
Linux	1540046	42216	DLC client filesystem hang when expanding with new unlabel drive.
Linux	n/a	42267	Add licensing for MAS Agent
Linux	1564556	42889	High mysqld cpu utilization with large DLC configuration and gateway metrics enabled
Linux	1584402	43449	Creating a new mountpoint, The GUI limits the number of available characters in a filesystem mount name to 25.
Windows	1355798, 1455446, 1564876	36685	Windows Size on disk from explore properties is wrong
Windows	1463072	39379	Windows GUI adds an obsolete Stripe Group Type Regular parameter to the .cfg file
Windows	1468688	39981	cvgather -e does not work on 4.3.1 with data from 4.2.1

Operating System	Service Request Number	Change Request Number	Description
Windows	1459308	40489	Windows: HA reset function may cause a BSOD
Windows	1466368	41151	Windows MDL leak causes memory usage to go up
Windows	1520442	41526	Windows active directory search can time out and lose synchronization with refresh credentials thread
Windows	n/a	42756	SNFS 4.x not caching case insensitive file name matches in name cache

Visit www.quantum.com/ServiceandSupport for additional information and updates for StorNext.

StorNext Compatibility

For information on StorNext 4.7.0 compatibility with operating systems, kernel versions, hardware platforms, drives, libraries, StorNext Appliances, StorNext client interoperability, and other compatibility items, see the *StorNext Compatibility Guide*. SNAPI, Partial File Retrieval, and Apple Xsan compatibility information is provided in separate documents.

Quantum OS Upgrade Support Policy

StorNext supports any security or functional bug update that applies to the current StorNext-supported Red Hat update level or SuSE Linux Service Patch. StorNext does **not** support updating the update level or service patch beyond the currently supported levels shown in the *StorNext Compatibility Guide* available here:

<http://www.quantum.com/sndocs>

Supported StorNext Upgrade Paths

Sites running the following StorNext versions may upgrade directly to this release assuming the platform, service pack, architecture (32-bit or 64-bit), and StorNext component(s) are supported in this release:

- StorNext 4.3.2
- StorNext 4.3.3
- StorNext 4.6.0
- StorNext 4.6.1

All other versions of StorNext require additional steps to upgrade to this release.

Note: Updates are intended to be done to all of the Lattus and metadata systems present in a given deployment (for example, if M662, A10, C10, S10 are present, they all must be updated, one appliance cannot be "left behind").

Distributed Data Mover (DDM) Guidelines

Distributed Data Movers (DDMs) must be upgraded to StorNext 4.7.0 when the Metadata Controller (MDC) is operating on StorNext 4.7.0.

WARNING: Upgrades to StorNext 4.7.0 are intended to be completed to all of the Lattus Object Storage and Metadata appliances present in a given deployment. For example, if M662, A10, C10, S10 are present, they must **ALL** be updated; one appliance in a configuration cannot be "left behind".

Compatibility Between StorNext and Other Products

This section describes various interactions between this release and StorNext components and features.

Lattus

Refer to the *Lattus Release Notes* for information about compatibility between Lattus and StorNext 4.7.0.

Lattus Object Storage documentation is available here:

<http://www.quantum.com/lattusdocs>

Lattus A10

Refer to the *Lattus A10 Release Notes* for information about compatibility between Lattus A10 and StorNext 4.7.0.

Lattus Object Storage documentation is available here:

<http://www.quantum.com/lattusdocs>

Partial File Retrieval

StorNext Partial File Retrieval (PFR) is a separately available product which enables you to quickly retrieve and utilize segments of large media files— rather than the entire file—based on timecode parameters.

Note: StorNext Partial File Retrieval (PFR) is not compatible with Lattus.

Refer to the *StorNext Partial File Retrieval Compatibility Guide* at this location for information about compatibility between PFR and StorNext 4.7.0:

<http://www.quantum.com/sndocs>

StorNext API (SNAPI)

StorNext API (SNAPI) enables you to run third-party APIs with StorNext.

Refer to the *SNAPI Compatibility Guide* at this location for information about compatibility between SNAPI and StorNext 4.7.0:

<http://www.quantum.com/sndocs>

Apple Xsan

Xsan is software that enables multiple Mac computers to concurrently access hundreds of TBs of content on Xserve RAID or Promise RAID storage over high-speed Fibre Channel so creative artists can share data faster and consolidate projects. Quantum supplements this solution with StorNext data management software, enabling Apple Xsan customers to use applications running on Windows, Linux, and UNIX with their Xsan and share content across more systems.

Refer to the *Xsan Compatibility Guide* at this location for information about compatibility between Apple Xsan and StorNext 4.7.0:

<http://www.quantum.com/sndocs>

Supported System Components

Supported Browsers

For information on browsers supported with the StorNext GUI for this release, refer to the *StorNext Compatibility Guide* available here:

<http://www.quantum.com/sndocs>

Known Issues

The following sections list known issues in this release of StorNext, as well as associated workarounds, where applicable:

- [StorNext File System Known Issues](#) on page 13
- [StorNext Storage Manager Known Issues](#) on page 15
- [StorNext GUI Known Issues](#) on page 17
- [StorNext Installation, Replication, HA and Other Known Issues](#) on page 18

Note: If you encounter one or more of the issues listed in this section, please contact Quantum Customer Support and report the issue(s) you encountered. Also inform the support representative whether you were able to successfully work around the issue(s) by using the provided workaround. Doing these things will help Quantum prioritize the order in which known issues are addressed in future StorNext releases.

StorNext File System Known Issues

[Table 1](#) lists known issues specific to StorNext File System.

Note: Due to the formatting of the table, see [Table 1](#) on page 14.

Table 1 StorNext File System
Known Issues

Operating System	Change Request Number	Service Request Number	Description
Windows	41151	1466368	<p>The StorNext Windows client may experience a memory leak under rare circumstances.</p> <p>The memory leak occurs under the following conditions:</p> <ul style="list-style-type: none"> • A Windows SMB 1 client had mapped the StorNext file system. • The SMB 1 client issues a server-side copy request. • The Windows SMB server issues a "ChunkCopy" write request to the StorNext file system. • The I/O is not eligible for Fast I/O processing. <p>In StorNext release 4.7.0, the code to prevent this leak is turned ON by default. If you are told by a Quantum representative this feature is causing a problem, you can turn OFF this code by changing a Windows registry setting.</p> <p>To turn this code ON or OFF, follow the procedure in the Workaround below.</p> <hr/> <p>Workaround</p> <hr/> <p>To enable or disable this feature, add a new Windows Registry value under:</p> <p>Computer\HKEY_LOCAL_MACHINE\SOFTWARE\ADIC\CentraVision File System\1</p> <p>Name: CvMdlFree Type: DWORD Value: 1 to enable, 0 to disable</p> <p>Use the following detailed instructions to add the new value to the StorNext registry settings. StorNext must be installed before you can make this modification.</p> <hr/> <p>WARNING: Incorrectly modifying the system registry can cause serious problems with your operating system.</p> <hr/> <p>Note: Depending on the security on your system, you may need to have Administrator rights to change the registry.</p> <p>Start Regedit:</p> <ol style="list-style-type: none"> 1 Open the Run box with the keyboard combination Windows key + R. 2 In the Run line, enter regedit. 3 Click OK. 4 Click Yes to User Account Control if asked (Windows Vista/7/8). 5 Navigate to: Computer\HKEY_LOCAL_MACHINE\SOFTWARE\ADIC\CentraVision File System\1 <p><i>(Continued on next row)</i></p>

Operating System	Change Request Number	Service Request Number	Description
			<p>Note: Save the current values in the part of the registry you are changing. In the File tab, select Export and select a location to save the current values.</p> <p>6 Add a new value named CvMdlFree with a DWORD value of 0.</p> <ul style="list-style-type: none"> a In a blank area of the right-hand panel, right-click and select New > DWORD(32-bit) value. b New Value #1 appears, and will be highlighted. Click this name, change the name to CvMdlFree, and then press Enter. The value will default to 0 (feature disabled.) c To enable this feature, right-click on the name CvMdlFree and select Modify... d In the pop-up labeled Edit DWORD (32-bit) value, enter the value 1 to enable the feature. e Click OK. <p>7 Restart StorNext by:</p> <ul style="list-style-type: none"> a Rebooting your system, or <p>Note: Click Start > StorNext File System > Service Stop, then > Service Start.</p>

StorNext Storage Manager Known Issues

[Table 2](#) lists known issues specific to StorNext Storage Manager.

Note: Due to the formatting of the table, see [Table 2](#) on page 16.

Table 2 StorNext Storage Manager Known Issues

Operating System	Change Request Number	Service Request Number	Description
Linux	43246	1568166	If connectivity faults occur when transferring data from StorNext Storage Manager to and from Lattus, consider using less sensitive offline of iopaths and media.
			<p>Workaround</p> <p>The workaround for this issue is to add the following lines to /usr/adic/TSM/config/fs_sysparm_override and then restart StorNext Storage Manager: FS_THRESHOLD_INC_NUM=0; MEDIA_SUSPECT_THRESHOLD=32767; Note: If you store data to tape, changing these settings will affect the normal behavior for dealing with unreliable media and tape drives.</p>
Linux	43156	n/a	<p>Description</p> <p>SUSE Linux 11.1 can suffer excess CPU overhead for some data patterns because it uses compression during https transfers to Lattus. Note: This only applies to SUSE Linux 11.1. The issue is fixed in SUSE Linux 11.2. SUSE Linux 11.0 is only supported on a client for StorNext and the issue does not occur. SUSE Linux 10, Red Hat Enterprise Linux 5, and Red Hat Enterprise Linux 6 avoid compression.</p>
			<p>Workaround</p> <p>To turn the compression Off, apply the Operating System patch described on the following Web page: https://www.suse.com/support/update/announcement/2013/suse-su-20130549-3.html</p>
Linux	44144	n/a	<p>Description</p> <p>Wide Area Storage I/O path is taken Offline due to exceeding its failure threshold.</p>
			<p>Workaround</p> <p>If the WAS configuration is changed for DDM clients or access protocol, then Storage Manager needs to be stopped and restarted to avoid this failure condition.</p>

StorNext GUI Known Issues

[Table 3](#) lists known issues specific to the StorNext GUI process.

Table 3 StorNext GUI Known Issues

Operating System	Change Request Number	Service Request Number	Description
All	44249	n/a	On the StorNext GUI, clicking the context-sensitive help icon on the Tools > User Accounts Web page displays content of an older and obsolete User Access help page.
			<p>Workaround</p> <p>To display the User Accounts help page, perform the following steps on the StorNext GUI:</p> <ol style="list-style-type: none"> 1 Click the non-context-sensitive help icon in the upper-right corner, located to the left of Log Off. The StorNext Online Help appears and the List of Topics help page is displayed. 2 On the List of Topics help page, scroll down to the Tools Menu Options section, and then click the User Accounts hyperlink.
All	44454	n/a	<p>Description</p> <p>The <i>StorNext Man Pages Reference Guide</i>, first introduced in StorNext 4.3.0, has replaced the obsolete <i>StorNext CLI Reference Guide</i>. A dead link to the <i>StorNext CLI Reference Guide</i> incorrectly remains accessible from the StorNext GUI, when you click Documentation on the Help menu.</p>
			<p>Workaround</p> <p>The <i>StorNext Man Pages Reference Guide</i> is also available at http://www.quantum.com/sndocs.</p>

StorNext Installation, Replication, HA and Other Known Issues

[Table 4](#) lists known issues specific to StorNext installations, data replication, HA systems and other areas.

Table 4 StorNext Installation, Replication, HA and Other Known Issues

Operating System	Change Request Number	Service Request Number	Description
All	44076	n/a	Cache Clustering is not supported in the Lattus 3.1.4 release.
			Workaround
			Support for this feature will be enabled in a future Lattus release.
Linux	38197	n/a	Quantum has updated the priority Queuing in StorNext 4.7.0. If you changed StorNext Storage Manager priority Queuing by modifying the <code>/usr/adic/TSM/config/pri.config</code> configuration file, your changes ARE NOT overwritten. Quantum recommends you look at the new queuing priority below and take this into consideration of your file. The changes below increase the default reprioritization age times for both retrieves and stores so that requests stay in their current priority longer, in order to take advantage of internal changes made to the request queue management, in an effort to minimize tape mounts and tape positioning.
			Workaround
			Quantum recommends that you incorporate the changes under the NEW values heading below, if necessary. The default age time has been increased for priorities 4 through 7 as follows: OLD values 4 : 6 : 4 : 5 5 : 8 : 6 : 10 6 : 10 : 6 : 20 7 : 12 : 6 : 20 NEW values 4 : 6 : 4 : 20 5 : 8 : 6 : 20 6 : 10 : 6 : 25 7 : 12 : 6 : 25

Operating System	Change Request Number	Service Request Number	Description
Linux	41548	n/a	Due to the way the binary logging is configured, warnings in the <code>mysqld.log</code> appear when <code>mas_agent</code> is running.
			<p>Workaround</p> <p>When running the StorNext MAS Agent for Harmonic component, Quantum recommends that you ignore warning messages of the following form seen in the <code>/usr/adic/mysql/logs/mysqld.log</code> file:</p> <pre>130220 16:27:54 [Warning] Unsafe statement written to the binary log using statement format since BINLOG_FORMAT = STATEMENT. Statements writing to a table with an auto-increment column after selecting from another table are unsafe because the order in which rows are retrieved determines what (if any) rows will be written. This order cannot be predicted and may differ on master and the slave....</pre>
Linux	44208	1597918	Description
			<p>An appliance upgrade does not enable <code>multipathd</code> if a custom <code>multipath.conf</code> file exists in the <code>/etc/</code> directory.</p> <p>If you upgrade to StorNext 4.3.2 or StorNext 4.3.3 and the system is not already running multi-path, do not place a custom <code>multipath.conf</code> file in <code>/etc/</code> until after the upgrade is completed. The upgrade for 4.3.2 and 4.3.3 does a conversion from RDAC to DM-MP but this conversion will not take place if a <code>/etc/multipath.conf</code> file already exists on the system.</p>
			<p>Workaround</p> <p>If you require a custom <code>multipath.conf</code> file:</p> <ol style="list-style-type: none"> 1 Perform the upgrade to StorNext 4.3.2 or StorNext 4.3.3. 2 Allow the upgrade scripts to perform the full conversion and enabling of <code>multipathd</code>. 3 Upload the custom <code>multipath.conf</code> file on the system. 4 Restart the system.

Contacting Quantum

More information about this product is available on the Quantum Service and Support website at www.quantum.com/ServiceandSupport. The Quantum 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.

To request a software upgrade, visit www.quantum.com/ServiceandSupport/Upgrade/Index.aspx.

For further assistance, or if training is desired, contact the Quantum Technical Assistance Center:

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EMEA	+00-800-7826-8888 (toll free) +49-6131-3241-1164
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Online Service and Support	www.quantum.com/OSR
Worldwide Web	www.quantum.com/ServiceandSupport

(Local numbers for specific countries are listed on the Quantum Service and Support Website.)