



StorNext 4.7.3 Release Notes

Product	StorNext® 4.7.3
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What's New in StorNext 4.7.3

Purpose of this Release

StorNext 4.7.3 is a combination of software improvements plus updated metadata controller and client support, and also addresses customer reported issues, and other items listed in the section [Customer Reported Issues and Enhancements Addressed in StorNext 4.7.3](#) on page 3 in this document.

Note: StorNext 4.7.3 is supported for "software only" configurations.

New Features and Enhancements in StorNext 4.7.3

StorNext 4.7.3 includes the following new features and enhancements:

- Adds support for Red Hat Enterprise Linux version 6 update 7 as a metadata controller.
- Adds new support for StorNext SAN, Distributed LAN and FX clients running Red Hat Enterprise Linux version 6 update 7.
- Updated SAN, Distributed LAN and FX client support for SuSE Linux Enterprise Server version 11 service pack 3.
- Validated upgrade paths from StorNext 4.3.2 through StorNext 4.7.2, to StorNext 4.7.3.
- New support for the latest Grass Valley storage arrays for use with Windows-based metadata controllers.

Customer Reported Issues and Enhancements Addressed in StorNext 4.7.3

The following table lists the customer reported issues and enhancements addressed in StorNext 4.7.3.

Operating System	Change Request Number	Service Request Number	Description
All	14630	588194, 1202400, 1400624, 1369968, 1283890, 1485518, 1518636, 1546344, 3444348, 3514780	Enhancement request to implement a method to delete old or closed tickets, since the <code>sl_event_details</code> table can increase significantly in size.

Operating System	Change Request Number	Service Request Number	Description
All	32550	1283836, 1315702, 1321040, 1380282, 1515914, 1525624, 1587004, 3400886, 1333496, 1348916	A media ID that exists in TSM does not exist in MSM.
All	32866	1204448	Enhancement request to improve the syslog documentation in the log_params file.
All	33105	1245606	Request to implement an update to the GUI to not allow the cancellation of a media that is in the REMOVE state.
All	33106	1246828	The command fsddmconfig -q does not display the current value of max_movers in the Server column.
All	33193	1246052, 1649910, 3423160, 3520738, 3582034	The command vsmove fails from one SCSI library to another SCSI library due to the absence of a Vaulting license.
All	33404	1231270, 1309642, 1305202	Enhancement request to implement a method to detect and associate orphaned media with an archive.
All	34555	1292936, 1203510, 1244184, 1252666, 1256238, 1264130, 1283186, 1284344, 1284436, 1329830, 1478788, 3436562, 3436750, 3424342	Save disk labels for possible recovery if the need to restore the labels occurs.
All	35521	1322836	The command fsstate displays no status if CFGDIR is empty.
All	35663	1531430	The method to delete a managed file system does not remove an entry from the /usr/adic/TSM/config/filesystems file.

Operating System	Change Request Number	Service Request Number	Description
All	37183	1364412	usurp from active peer in one pass saying it was idle.
All	38744	1435330	TSM uses maximum logging if the <code>log_params</code> file is missing and does not issue a warning.
All	39820	1475960, 3361556	The GUI media action Purge Media fails with Failed to Purge Media: Empty CLI Command error.
All	40125	3452800	Do not invoke <code>sngateway_cleanup.pl</code> on a standby system.
All	45693	3357910, 3432000	UNKNOWN VPINST: UNKNOWN EVENT: 85 TEXT: Failed to roll event file <code>/usr/adic/TSM/internal/event_dir/0x0004ea0ad4bd3bd9.create_d</code> , <code>errno: 2 fs: /stornext/cvfs1</code>
All	45831	1591174	The program <code>fs_mapper -m</code> fails when it encounters a file system where the root inode contains a Xattr pointer (<code>idi_xattr_blk !=0</code>).
All	47389	3371316, 3380000, 3415176 3428360 3436244, 3488030	The command <code>fsmpm</code> should be less verbose when setting deviceparams .
All	49489	1515914, 1525624, 1557926, 1629758, 1635034, 1644314, 1271440, 1312338, 1327440, 1330014, 1329864, 1338932, 1371132, 1372660, 1418712, 1426826, 3519520	Canceling a media move from the GUI LOI after the media has been ejected from the source archive can leave the media in an orphaned state.
All	49659	1176108	Cannot use the utility <code>chgmedstate</code> to put a intransit/unknown media into an archive if no other media of that type already exists in the archive.
All	49678	1215318, 1526752	The utility <code>chgmedstate</code> should not allow a media to be associated with an archive (library or vault) if there is a pending enter/eject for the media.

Operating System	Change Request Number	Service Request Number	Description
All	51575	3458612, 3392684, 3467430	FixStaleAttrs() return VOP_EINTR causing inode to be mark stale.
All	52921	3472004	The command fsmedcopy hangs when a proxy child death signal is received before all the mover statuses.
All	53776	3518924, 3526170	The GUI method to retrieve of a file to a new filename retrieves only 1-byte unless user knows filesize.
All	54629	3508876	The GUI allows for use of preceding spaces when creating an SDisk, but will not list new SDisk afterwards.
All	55769	3526302	The command fs_feature may pass the wrong date to the feature it is running.
All	55965	3508654	The sncompare qt check_not_all_copies_made test does not report errors on files with multiple active versions.
All	56228	3462410	The command fsrmdiskcopy does not handle a kernel NULL pointer reference.
All	56877	3546218	The utility sncompare is killed or hangs if there are too many entries in DIRPATH table.
All	57227	3560454	The command snbackup wrongly compares bkplist cpyid with filecomp cpyid since the entry in filecomp is a bitmask.
All	57654	n/a	The command cvfsid does not properly interpret the license.dat file.

Operating System	Change Request Number	Service Request Number	Description
All	58987	1622028, 1623008, 1619618, 1621444, 1606208, 1613512, 1611260, 1610606, 1615548, 1615552, 1616032, 1619446, 1620970, 1620976, 1622416, 1622270, 1626322, 1649238, 3445930, 3442938, 3527490, 3557628	Request to move/downgrade certain FRU/EVENT combinations from Sev1 to Sev2 .
All	59085	3546218	Request to fix issues discovered during sncompare testing.
All	59860	3546218	The sncompare f test does not complete when run on a file system that contains 120-million directories.
All	60242	3596060	The sncompare fs test hangs on <code>msa2dmi_stat()</code> call on a pipe (fifo) file.
All	60646	3589032, 3568592	Thread processing <code>fallocate()</code> deadlocks with <code>cvfbiod</code> on <code>cv_resextentlock</code> rwlock.
All	60664	3608098	Data corruption when DLC client timeout on Proxy server.
All	61184	3546218	The utility sncompare is killed or hangs if there are too many entries in DIRPATH table.
Linux	33623	1319898, 3469594	The command fsretrieve -B option does not work with copy2-copy4 media.
Linux	46081	1635978	Enhancement request to be more verbose when force_sync_io is set.
Linux	49268	3409512, 3515864, 3535130	ipython activation may cause kernel stack overrun on Linux.
Linux	49442	3420306	The utility sncompare generates a script which may delete filecomp db records that should be kept.

Operating System	Change Request Number	Service Request Number	Description
Linux	49910	3605980	Storage Manager hung: fs_fcopyman has been at 100% CPU utilization for 17 hours.
Linux	49940	3319200, 3429870, 3437466, 3438678, 3616374	The command ls -l displays ? instead of file attributes in case of FSM services being cycled.
Linux	51028	3457804 3449424 3456412 3451726 3459054 3466908 3468194 3472650 3480604 3481948 3488030 3502510 3543548 3584656 3598924	Losing a single path to a LUN can send the fsmpm in a rescan loop.
Mac OS	44982	3437384	CVFS ASSERTION FAILED: f_rwlck->rw_state & RW_WRITE line 1861 file lock.c""@nomad/md_debuglog.c:358
Windows	49968	1577606, 3400798	There is a race between InitSockHandlers/SockInput() starting and KillSockHandlers()
Windows	51092	3439086, 3380044, 3441922, 3459502, 3475416	Windows Server 2012 crashes when CIFS shares a StorNext volume.
Windows	58448	3576618	Windows preallocations over-allocate causing a file to use more space than needed.

StorNext Compatibility

For information on StorNext 4.7.3 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 4.7.3 and StorNext FX 4.7.3 Compatibility Guide* available here:

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

Supported StorNext Upgrade Paths and Upgrade Considerations

StorNext Software Upgrade Matrix

For information on which StorNext versions allow you to upgrade directly to this release, refer to the **StorNext Software Upgrade Matrix** section in the *StorNext Compatibility Guide* available here:

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

Note: StorNext 4.7.3 is supported for "software only" configurations.

Compatibility Between StorNext and Other Products

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

Note: StorNext 4.7.3 is supported for "software only" configurations.

Lattus

Refer to the *Lattus Release Notes* for information about compatibility between Lattus and StorNext 4.7.3.

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 4.7.3:

<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 4.7.3:

<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 4.7.3:

<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 11
- [StorNext Storage Manager Known Issues](#) on page 13
- [StorNext GUI Known Issues](#) on page 16
- [StorNext Installation, Replication, HA and Other Known Issues](#) on page 17

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 12.

Table 1 StorNext File System
 Known Issues

Operating System	Change Request Number	Service Request Number	Description
All	54834	3505208, 3516356	<p>If a file is being copied to the StorNext file system using Windows Explorer and Windows Explorer crashes before it finishes copying all the data, the file may contain data blocks from old, deleted files. This problem occurs because Windows Explorer sets EOF to the size of the file before it writes the data to the file. This leaves a gap of uninitialized data in the file.</p> <p>Note: This problem can also occur with other programs that set EOF beyond the end of data.</p> <p>This problem does not occur if Windows Explorer encounters an error while writing the file; Windows Explorer will delete the partially written file.</p> <hr/> <p>Workaround</p> <hr/> <p>To prevent this problem from occurring on StorNext, you can use the StorNext "client configuration" application's advanced mount option "Restrict Pre-allocation API" on Window systems and the "protect_alloc=yes" mount option on Linux systems. This option will set the unwritten parts of the file to zero. When this option is set, non-root users are unable to use the preallocation ioctl. This option also implies sparse=yes.</p> <p>For more information on this option, see the man page mount_cvfs(8). The sparse option will introduce some overhead when using Windows Explorer. Before setting the protect_alloc option, see the sparse option in mount_cvfs(8) for a description of how it changes StorNext behavior.</p>

Operating System	Change Request Number	Service Request Number	Description
Linux	49470	3364458	<p>When the namedStreams option is enabled on a file system, there is a possibility that an inode created with a previous release of StorNext may contain invalid information which could cause the FSM to PANIC with a "Segmentation Fault Signal." The cvlog for that file system displays a back trace similar to the following:</p> <pre>[] 0x7f234d967700 (Debug) BACKTRACE: Obtained 10 stack frames [] 0x7f234d967700 (Debug) BACKTRACE: /usr/cvfs/bin/fsm(LogStackTrace+0x35) [0x43bf8f] [] 0x7f234d967700 (Debug) BACKTRACE: /usr/cvfs/bin/fsm(onintr+0x2c2) [0x43c312] [] 0x7f234d967700 (Debug) BACKTRACE: /lib64/libpthread.so.0() [0x3ca320f500] [] 0x7f234d967700 (Debug) BACKTRACE: /usr/cvfs/bin/fsm(Inodeattrv4+0xb9) [0x46582f] [] 0x7f234d967700 (Debug) BACKTRACE: /usr/cvfs/bin/fsm(VopInodeTokenChange+0x2b4) [0x477554] [] 0x7f234d967700 (Debug) BACKTRACE: /usr/cvfs/bin/fsm(TokenRequest+0x149) [0x495dee] [] 0x7f234d967700 (Debug) BACKTRACE: /usr/cvfs/bin/fsm() [0x47bcb1] [] 0x7f234d967700 (Debug) BACKTRACE: /usr/cvfs/bin/fsm(queue_thread+0x199) [0x47e5e9] [] 0x7f234d967700 (Debug) BACKTRACE: /usr/cvfs/bin/fsm() [0x47ec98] [] 0x7f234d967700 (Debug) BACKTRACE: /lib64/libpthread.so.0() [0x3ca3207851] [] 0x7f234d967700 (**FATAL**) PANIC: /usr/cvfs/bin/fsm "Segmentation Fault Signal." file /scm/nightly/VM-0-RedHat60AS-26x86-64-SP0/sn/snfs/fsm/fsm.c, line 615</pre> <p>Workaround</p> <p>If this problem occurs, contact Quantum Customer Support (see Contacting Quantum on page 19) and reference CR 47109 to isolate and fix the defective inode.</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 14.

Table 2 StorNext Storage Manager Known Issues

Operating System	Change Request Number	Service Request Number	Description
All	25506, 41413	976344, 1504258, 1635952, 3471000, 3526376	<p>In certain conditions when Storage Manager receives an end of tape indication early, SCSI sense messages may be logged by the fs_fmover process. These the messages will have a format similar to the following:</p> <pre>Dec 28 20:38:00 MDC-Hostname sntsm fs_fmover[29837]: E1201(8)<1034815852>:fsScsi1311: {2}: Check condition: op=0Ah key=00h asc=00h ascq=02h END OF PARTITION/MEDIUM DETECTED</pre> <p>Workaround</p> <p>Early EOT reporting can cause tape I/O performance problems due to reporting of and handling of the check conditions. This is more prevalent on HP tape drives but may also occur on IBM tape drives. The workaround is to reduce the usable capacity by up to 1% for IBM drives or 5% for HP drives. To do so, adjust the PERCENT_FULL_TO_MIGRATE system parameter in <code>/usr/adic/TSM/config/fs_sysparm_override</code>.</p> <p>Note: The Early EOT reporting can also cause extreme clutter in some TSM log files.</p>
All	52548	n/a	<p>Description</p> <p>When executing the command fsretrieve -B batchfile, the socket will hang when sending too large of an IPC message.</p> <p>Workaround</p> <p>For the command fsretrieve -B batchfile, limit the number of file names in the batchfile to 3000 or less. This limitation is to prevent the socket from hanging in the event a retry of all files in the batchfile is necessary.</p>

Operating System	Change Request Number	Service Request Number	Description
Linux	43246	1568166	Description
			If connectivity faults occur when transferring data from StorNext Storage Manager to and from Lattus, the iopath can be set offline and the mediaID can be marked as suspect. After this happens, you need to use the fschstate and fschmedstate commands to clear these conditions after connectivity is re-established.
			Workaround
			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.
Linux	43156	n/a	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.
			Workaround
			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
Linux	44360	n/a	Description
			Wide Area Storage I/O path is taken Offline due to exceeding its failure threshold.
			Workaround
			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.

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	<p>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> <hr/> <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.

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
Linux	38197	n/a	<p>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.</p> <hr/> <p>Workaround</p> <hr/> <p>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:</p> <p>OLD values 4 : 6 : 4 : 5 5 : 8 : 6 : 10 6 : 10 : 6 : 20 7 : 12 : 6 : 20</p> <p>NEW values 4 : 6 : 4 : 20 5 : 8 : 6 : 20 6 : 10 : 6 : 25 7 : 12 : 6 : 25</p>

Operating System	Change Request Number	Service Request Number	Description
Linux	41548	n/a	<p data-bbox="610 327 1390 390">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> <p data-bbox="610 411 773 443">Workaround</p> <p data-bbox="610 464 1461 831">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: 130220 16:27:54 [Warning] Unsafe statement written to the binary log using statement format since <code>BINLOG_FORMAT = STATEMENT</code>. 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....</p>

Contacting Quantum

More information about StorNext is available on the Quantum Service and Support website at <http://www.quantum.com/ServiceandSupport>. The Quantum Service and Support website contains a collection of information, including answers to frequently asked questions (FAQs).

Contacts

Quantum company contacts are listed below.

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