Quantum

Compatibility Guide

StorNext 4.3.0

6-67688-01 Rev A

StorNext 4.3.0 Compatibility

StorNext Components
Discontinued Operating Systems and Service Packs

Operating System	Kernel or Release	Platform	MDC Server	File System SAN Client	Distributed LAN Server	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
RHEL 5	2.6.18-53.EL (Update 1)	x86 64-bit	DROP	DROP	DROP	DROP	DROP	DROP	DROP
	2.6.18-92.EL (Update 2)	x86 64-bit	DROP	DROP	DROP	DROP	DROP	DROP	DROP
	2.6.18-128.EL (Update 3)	x86 64-bit	DROP	DROP	DROP	DROP	DROP	DROP	DROP
SLES10	2.6.16-46-0.12 (SP1)	x86 32-bit		DROP		DROP			
	2.6.16-46-0.12 (SP1)	x86 64-bit	DROP	DROP	DROP	DROP	DROP	DROP	DROP
	2.6.16.60-0.27 (SP2)	x86 32-bit		DROP		DROP			
	2.6.16.60-0.27 (SP2)	x86 64-bit	DROP	DROP	DROP	DROP	DROP	DROP	DROP

StorNext Components
Supported Operating Systems and Service Packs

Operating System	Kernel or Release	Platform	MDC Server[1]	File System SAN Client	Distributed LAN Server Gateway[2]	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
Windows Server 2003[5]	R2 SP2	x86 32-bit		✓		✓			
		x86 64-bit	✓	✓	✓[3, 4]	✓			
Windows XP[5]	SP2	x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
	SP3	x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
Windows	SP1	x86 32-bit		✓		✓			

[1] High Availability is available on all supported Linux MDC platforms.
[2] A StorNext G300 running this release supports any of the DLCs on the operating systems as indicated in this column
[3] Distributed LAN Server on Windows supports up to 128 Distributed LAN Clients.
[4] Gateway instrumentation is not available for Windows.

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StorNext Components
Supported Operating Systems and Service Packs

Operating System	Kernel or Release	Platform	MDC Server[1]	File System SAN Client	Distributed LAN Server Gateway[2]	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
Vista[5]		x86 64-bit		✓		✓			
	SP2	x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
Windows Server 2008[5]	SP1	x86 32-bit		✓		✓			
		x86 64-bit	✓	✓	✓[3, 4]	✓			
	SP2	x86 32-bit		✓		✓			
		x86 64-bit	✓	✓	✓[3, 4]	✓			
	R2	x86 32-bit		✓		✓			
		x86 64-bit	✓	✓	✓[3, 4]	✓			
	R2 SP1	x86 64-bit	✓	✓	✓[3, 4]	✓			
Windows 7[5]		x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
	SP1	x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
RHEL 5[5 6 7]	2.6.18-164.EL (Update 4)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.18-194.EL (Update 5)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.18-238.EL (Update 6)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.18-274.EL (Update 7)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.18-308.EL (Update 8)	**x86 64-bit**	**ADD**	**ADD**	**ADD**	**ADD**	**ADD**	**ADD**	**ADD**
RHEL 6[5 6]	2.6.32.71.EL	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.32.131.EL (Update 1)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.32.220.EL (Update 2)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
SLES 10[5 6 7 8]	2.6.16.60-0.54.5 (SP3)	x86 32-bit		✓		✓			
	2.6.16.60-0.54.5 (SP3)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.16.60-0.85.1 (SP4)	x86 32-bit		✓		✓			
	2.6.16.60-0.85.1 (SP4)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
SLES 11[5 6 7 8]	2.6.27.19-5	x86 64-bit		✓		✓			
	2.6.32.12-0 (SP1)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
Solaris 10	Any	sparc 64-bit		✓					
	Any	Opteron x86 64-bit		✓		✓			

[5] RHEL and SLES kernel and Windows service pack levels listed indicate the supported versions. Updates within the same service pack (e.g. security updates) are, in general, supported unless otherwise noted.
[6] The "Xen" virtualization software is not supported.
[7] HBA multipath customers: please verify with your HBA vendor that your current multipath driver is supported for any planned Linux OS version/update/service pack level. If your driver is not supported for your planned Linux OS version/update/service pack, the StorNext client or server may not be functional after your Linux upgrade.
[8] A "roll" of a particular digit is not indicative that a new SLES service pack has been declared by Novell. The kernel revisions listed in this document are typically (but not always), the first kernel revision of the service pack.

StorNext Components
Supported Operating Systems and Service Packs

Operating System	Kernel or Release	Platform	MDC Server[1]	File System SAN Client	Distributed LAN Server Gateway[2]	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
		Intel x86 64-bit		✓		✓			
IBM AIX	6.1	64-bit Power Architecture		✓					
	7.1	64-bit Power Architecture		✓					
HP-UX	11i v3[9]	Itanium 64-bit		✓					
CentOS[10]	Equivalent supported RHEL5 and RHEL6	x86 64-bit		✓		✓			
Scientific Linux[10]	Equivalent supported RHEL5 and RHEL6	x86 64-bit		✓		✓			
Oracle Linux[10]	Equivalent supported RHEL5 and RHEL6	x86 64-bit		✓		✓			

StorNext Virtual Machine Support

Operating System	Kernel or Release	Platform	File System SAN Client (See Note A)	File System LAN Client (See Note B)
Windows Server 2003 Server 2008 XP Vista 7	All SN supported service packs	x86 32-bit	✓	✓
		x86 64-bit	✓	✓
RHEL5	All SN supported service packs	x86 64-bit	✓	✓
RHEL6	All SN supported service packs	x86 64-bit	✓	✓
SLES 10	All SN supported service packs	x86 32-bit	✓	✓
		x86 64-bit	✓	✓
SLES 11	All SN supported service packs	x86 64-bit	✓	✓

NOTE A: Setting up a SAN client within a virtual machine can be complicated and should be done with great care to avoid data loss.

[9] HPUX 11iv3 requires the "0909 Patch set".
[10] Platform is supported only if the issue can be reproduced on the equivalent Red Hat release. Only the "standard" versions of this platform are supported. "Special" or "optimized" versions are not supported.

Guests running StorNext SAN clients have limited cluster functionality due to the use of RDMs to access storage. In particular, snapshots, vMotion, DRS, and fault tolerance are disabled. If these features are required, use DLC clients instead.

To configure StorNext SAN clients in VMware guests, be aware of the following considerations:

- StorNext Data LUNs must be assigned to each StorNext SAN client VM using Raw Device Maps (RDMs) in /Physical Mode/ on a Shared virtual SCSI adapter.
- Never use /Virtual Mode/ RDMs for StorNext LUNs.
- Consult your storage vendor for details on properly configuring the storage for use as VMware vSphere to use raw LUNs as RDMs.
- On each SAN client, generate a raid-strings file by running the command:
  - cvlabel -R > /usr/cvfs/config/raid-strings
  - Then open /usr/cvfs/config/raid-strings in a text editor and change the third column to JBOD for all storage types. This disables StorNext multi-path handling, which is not needed in a guest. The host will handle multi-pathing.

NOTE B: To configure StorNext Distributed LAN Clients in VMware guests, follow the same procedures you would for a physical system. There are no VMware-specific requirements or issues.

StorNext Upgrade Matrix

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

- StorNext 4.1.0
- StorNext 4.1.1
- StorNext 4.1.2
- StorNext 4.1.3
- StorNext 4.2
- StorNext 4.2.1
- StorNext 4.2.1.0.1
- StorNext 4.2.2
- StorNext 4.2.2.0.1

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

StorNext Client Interoperability

StorNext SAN Client Version	Platform
StorNext 3.0.x and older	Back-revision clients running these StorNext versions are not supported, even during the upgrade process. Clients must be upgraded with MDCs to achieve a compatible back-rev client version.
StorNext 3.1.x	Back-revision clients are not supported, even during the upgrade process. Clients must be upgraded with MDCs to SN 4.3.x.
StorNext 3.5.x	Certain back-revision clients, as follows, are supported: • AIX 5.3 • HPUX 11iv2 • SGI IRIX 6.5.30 • SLES10 Itanium • SLES11 Itanium • SLES10 32-bit • RHEL4 Quantum recommends that other clients be upgraded along with the MDC.
StorNext 4.0.x StorNext 4.1.x	Certain back-revision clients, as follows, are supported: RHEL4 Quantum recommends that clients be upgraded along with the MDC.
StorNext 4.2.x	Quantum recommends that clients be upgraded along with the MDC.

Compatibility with other Products

Product	Reference
Xsan to StorNext Compatibility	Please see the Xsan compatibility matrix document for Xsan compatibility with StorNext
SNAPI to StorNext Compatibility	Please see the SNAPI compatibility matrix document for compatibility between SNAPI and StorNext.
StorNext Partial File Retrieval (PFR) to StorNext Compatibility	Please see the PFR compatibility matrix document for compatibility between PFR and StorNext.
Advanced Reporting	This release is compatible with the following Advanced Reporting versions: • RHEL5: StorNext Advanced Reporting 2.0.4 (1371) • RHEL6: StorNext Advanced Reporting 2.0.4 (1369)

StorNext Browser Support

The following browsers are supported with the GUI for this release:

- Firefox (versions 4 through 11, Quantum recommends FF11)
- Internet Explorer (versions 7 through 9, Quantum recommends IE9)
- Chrome (version 18)

Quantum Supported Libraries and Tape Drives

Vendor Library Family	Libraries	Minimum / Recently Tested Library Firmware Level	Drive Types	Minimum / Recently Tested Drive Firmware Level	Notes
Quantum	Scalar i500	Please see applicable i500 documentation for library and drive firmware recommendations	IBM LTO-2 IBM LTO-3 IBM LTO-3 WORM IBM LTO-4 IBM LTO-4 WORM IBM LTO-5		
			HP LTO-4 FC		
			HP LTO-4 SAS		
			HP LTO-5 FC		
			HP LTO-5 SAS		
			IBM LTO-5 FC		
	Scalar i6000 / i2000	Please see i6000 / i2000 documentation for library and drive firmware recommendations	IBM LTO-1 FC and SCSI IBM LTO-2 FC and SCSI IBM LTO-3 (2G and 4G IBM LTO-3 WORM IBM LTO-4 4G IBM LTO-4 WORM IBM LTO-5 HP LTO-3 2G HP LTO-3 4G HP LTO-3 WORM HP LTO-4 4G HP LTO-4 WORM HP LTO-5 FC Quantum DLT-S4		
			Quantum SDLT 320 SCSI		
			Quantum SDLT 600 FC		

Quantum Supported Libraries and Tape Drives

Vendor Library Family	Libraries	Minimum / Recently Tested Library Firmware Level	Drive Types	Minimum / Recently Tested Drive Firmware Level	Notes
	Scalar i80 / i40	Please see i80 / i40 documentation for library and drive firmware recommendations	HP LTO-4 FH SAS		
			HP LTO-4 FH 4GB FC		
			HP LTO-4 HH SAS		
			HP LTO-4 HH FC		
			HP LTO-5 HH SAS		
			HP LTO-5 HH FC		
	Scalar 24	Please see Scalar 24 documentation for library and drive firmware recommendations	IBM LTO-1 IBM LTO-2 IBM LTO-3 IBM LTO-4		Not including WORM
	Scalar 50	Please see Scalar 50 documentation for library and drive firmware recommendations	HP LTO-4		
	Scalar 100	Please see Scalar 100 documentation for library and drive firmware recommendations	IBM LTO-1 IBM LTO-2 IBM LTO-3 AIT-2		Not including WORM NOTE: 2.10.0013 firmware not to be used.
	Scalar 1000	Please see Scalar 1000 documentation for library and drive firmware recommendations	IBM LTO-2 IBM 3590B1A AIT-1		Must use SDLC/DAS, SDLC/SCSI Target Mode or Native SCSI
	Scalar 10000	Please see Scalar 10000 documentation for library and drive firmware recommendations	IBM LTO-1 IBM LTO-2 IBM LTO-3 IBM LTO-4 IBM LTO-3 WORM AIT-2 AIT-2 WORM		Must use SDLC/DAS, SDLC/SCSI Target Mode or Native SCSI
			IBM 3592		
	PX500	Please see PX500 documentation for library and drive firmware recommendations	HP LTO-3		Not including WORM 30.0
	PX720	Please see PX700 documentation for library and drive firmware recommendations	HP LTO-2 HP LTO-3 DLT-S4		Not including WORM

Quantum Supported Libraries and Tape Drives

Vendor Library Family	Libraries	Minimum / Recently Tested Library Firmware Level	Drive Types	Minimum / Recently Tested Drive Firmware Level	Notes
	DXI 7500	Please see DXI 7500 documentation for firmware recommendations	Supported i2k emulation modes include: DLT7000, SDLT320, SDLT600, DLT-S4, Quantum/Certance LTO-2, 3, HP LTO-1, 2, 3, 4, IBM LTO-1, 2, 3, 4		
	DXI 8500	Please see DXI 7500 documentation for firmware recommendations	Supported i2k emulation modes include: DLT7000, SDLT320, SDLT600, DLT-S4, Quantum/Certance LTO-2, 3, HP LTO-1, 2, 3, 4, IBM LTO-1, 2, 3, 4		

Non-Quantum Supported Libraries and Tape Drives

Vendor Library Family	Libraries	Minimum / Recently Tested Library Firmware Level	Drive Types	Minimum / Recently Tested Drive Firmware Level	Notes
Dell	PV136T	Minimum: 3.11 Recently Tested: Unavailable	IBM LTO-2 IBM LTO-3 IBM LTO-4		
	PowerVault ML6000 (6010, 6020, 6030)	Minimum: 585G.GS003 Recently Tested: N / A	IBM LTO3FH SCSI IBM LTO3FH FC	Minimum: 93G6	LTO-3, LTO-4, LTO-5 WORM capability supported
			IBM LTO4FH SAS IBM LTO4FH FC	Minimum: A232	
			IBM LTO5FH SAS IBM LTO5FH FC	Minimum: A420	
HP	ESL E Series	Minimum: 4.10 Recently Tested: 7.50	HP LTO-3 HP LTO-3 WORM	Recently tested: L68W	
			HP LTO-4		
			HP LTO-4 WORM		
			HP LTO-5	Recently tested: I25W	
			HP LTO-5 WORM		
	MSL 6000	Minimum: 5.07 Recently Tested: Unavailable	HP LTO-2 HP LTO-3 HP LTO-3 WORM	Recently tested: L67W	MSL 6000 does not support HP LTO-5

Non-Quantum Supported Libraries and Tape Drives

Vendor Library Family	Libraries	Minimum / Recently Tested Library Firmware Level	Drive Types	Minimum / Recently Tested Drive Firmware Level	Notes
			HP LTO-4		
	MSL G3 Series (2024/4048/8096)	Minimum 2024: 0370 (3.70) Minimum 4048: 0600 (6.00), Recently tested: 7.20 Minimum 8096: 0850 (8.50)	HP LTO-2 HP LTO-3 HP LTO-3 WORM		HP LTO-5 WORM validation was not successful in SN 4.x testing and is not supported
			HP LTO-4		
			HP LTO-4 WORM		
			HP LTO-5		
	EML E-Series	Minimum: 1070 Recently Tested: 1395	HP LTO-3 HP LTO-4 LTO-4 WORM		HP LTO-5 WORM validation was not successful in SN 4.x testing and is not supported
			HP LTO-5	Recently tested: I25S	
	ESL G3	Minimum: Recently Tested: 620H			LTO-3 drives are not supported on the ESL G3 library
			HP LTO-4 4G	Recently tested: H63W	
			HP LTO-4 WORM		
			HP LTO-5 FC	Recently tested: I3FW	
IBM	TS3500	Minimum: 7422 Recently Tested: A420	IBM LTO-2 IBM LTO-3 IBM LTO-4 IBM LTO-5	 Minimum: 93GE Minimum: A239 Minimum: A6S0	
			IBM 3592 (J1A and E05)		
			IBM TS1120 (E05)		Same as IBM3592 E05
			IBM TS1140	Minimum: D3I3_642 for TS1140 with TS3500	
	TS3310	Minimum: 587G.GS003 Recently Tested: N / A	IBM LTO-3	Minimum: 93GE	
			IBM LTO-4	Minimum: A239	
			IBM LTO-5	Minimum: A6S0	
Oracle SCSI/FC Libraries	L180/L700/L1400	Minimum: 3.18.02 Recently Tested: Unavailable	T9840C		
			T9840D		
			T10000A[11]	Minimum: 1.40	
			T10000B[11]	Minimum: 1.40	
			T10000C[11, 12]		
			HP LTO-3		

[11] When using T10000 drives, the STK library parameter "Fastload" must be set to "OFF".

[12] When using a T10000 Rev C drive with ACSLS 8.0.x, please assure that your cleaning cartridges are suppord in that ACSLS release. Quantum has found a case where a cleaning cartridge isn't recognized by ACSLS 8.0.x and reports incorrect media type in the StorNext GUI. This report of incorrect media type does not prevent the cleaning cartridge from being successfully used, but can cause operator confusion. ACSLS 8.1.x corrects the issue.

Non-Quantum Supported Libraries and Tape Drives

Vendor Library Family	Libraries	Minimum / Recently Tested Library Firmware Level	Drive Types	Minimum / Recently Tested Drive Firmware Level	Notes
			HP LTO-4		
			IBM LTO-3		
			IBM LTO-4		
	SL3000	Minimum: 2.35 LTO-5 requires minimum 2.35 Recently Tested: Unavailable	T9840C		
			T9840D		
			T10000A[11]	Minimum: 1.40	
			T10000B[11]	Minimum: 1.40	
			T10000C[11, 12]		
			HP LTO-3		
			HP LTO-4		
			HP LTO-5	Recently tested: I2DS	
			IBM LTO-3		
			IBM LTO-4		
			IBM LTO-5		
	SL500	Minimum: 1373 LTO-5 requires minimum 1395 Recently Tested: Unavailable	HP LTO-3		
			HP LTO-4		
			HP LTO-5	Recently tested: I2DS	
			IBM LTO-3		
			IBM LTO-4		
			IBM LTO-5		
	9740	Minimum: 2000 Recently Tested: Unavailable	Sun/STK 9840		Obsolete
Oracle ACSLS 7.3 ACSLS 7.3.1 ACSLS 8.0.x[13] ACSLS 8.1.x	L180/L700/L1400	Minimum: 3.18.02 Recently tested (L700): 3.18	T9840C		
			T9840D		
			T10000A[11]	Minimum: 1.40	
			T10000B[11]	Minimum: 1.40	
			T10000C[11, 12]		
			HP LTO-3	Recently tested: L6CS	
			HP LTO-4		
			IBM LTO-3		
			IBM LTO-4		
	SL3000	Minimum: 2.35 LTO-5 requires minimum 2.35 Recently Tested: 3.60	T9840C		
			T9840D		
			T10000A[11]	Minimum: 1.40	
			T10000B[11]	Minimum: 1.40 Recently tested: 1.44.210	

[13] The Oracle FC and ACSLS sections have been modified to include drive and library permutations that are "paper certified" based on testing that has been performed and validated by Sun/STK.

Non-Quantum Supported Libraries and Tape Drives

Vendor Library Family	Libraries	Minimum / Recently Tested Library Firmware Level	Drive Types	Minimum / Recently Tested Drive Firmware Level	Notes
			T10000C[11, 12]	Recently tested: 1.53.311	
			HP LTO-3		
			HP LTO-4		
			HP LTO-5	Recently tested: I2DS	Requires minimum ACSLS 7.3.1
			IBM LTO-3		
			IBM LTO-4		
			IBM LTO-5		Requires minimum ACSLS 7.3.1
	SL500	Minimum: 1373 LTO-5 requires minimum 1395 Recently Tested: Unavailable	HP LTO-3		
			HP LTO-4		
			HP LTO-5	Recently tested: I2DS	Requires minimum ACSLS 7.3.1
			IBM LTO-3		
			IBM LTO-4		
			IBM LTO-5		Requires minimum ACSLS 7.3.1
	SL8500	Minimum: 4.14 LTO-5 requires minimum 6.02 Recently Tested: 7.05	T9840C		
			T9840D		
			T10000A[11]	Minimum: 1.40	
			T10000B[11]	Minimum: 1.40 Recently tested: 1.44	
			T10000C[11, 12]	Recently tested: 1.53.311	
			HP LTO-3		
			HP LTO-4		
			HP LTO-5	Recently tested: I2DS	Requires minimum ACSLS 7.3.1
			IBM LTO-3		
			IBM LTO-4		
			IBM LTO-5		Requires minimum ACSLS 7.3.1
Qualstar	XLS	Minimum: 0880 Recently Tested: Unavailable	IBM LTO-3 IBM LTO-4		
			IBM LTO-5		
Sony	Petasite CSM-200	Minimum: 6.30 Recently Tested: Unavailable	IBM LTO-4 drive (T1600)		
Spectra Logic	T-Series (T50e,	Minimum: Unavailable	LTO-3	Vendor supported: 93G0	See Bulletin 46

Non-Quantum Supported Libraries and Tape Drives

Vendor Library Family	Libraries	Minimum / Recently Tested Library Firmware Level	Drive Types	Minimum / Recently Tested Drive Firmware Level	Notes
	T120, T200, T380, T680, T950, and T-Finity)	Recently Tested: 2000	LTO-4	Recently tested: 97F9	Library firmware is known as BlueScale 11. Both L700 emulation and Native mode are supported In L700 emulation mode, LTO-5 drives report as LTO-4, limiting the capacity of the media.
			LTO-5	Recently tested: B170	
			IBM TS1140	Recently tested: 3524	