StorNext 4.2.1 Supported Operating Systems and Platforms

Operating System	Kernel or Release	Platform	MDC Server[1]	File System SAN Client	Distributed LAN Server	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
Windows Server 2003	R2 SP2[2]	x86 32-bit		✓		✓			
		x86 64-bit	✓	✓	✓[3]	✓			
Windows XP	SP2	x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
	SP3	x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
Windows Vista	SP1	x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
	SP2	x86 32-bit		✓		✓			
		x86 64-bit		✓		✓			
Windows Server 2008	SP1	x86 32-bit		✓		✓			
		x86 64-bit	✓	✓	✓[3]	✓			
	R2	x86 32-bit		✓		✓			
		x86 64-bit	✓	✓	✓[3]	✓			
	SP2	x86 32-bit		✓		✓			
		x86 64-bit	✓	✓	✓[3]	✓			
	R2 SP1	x86 64-bit	✓	✓	✓	✓			
Windows 7		x86 64-bit		✓		✓			
		x86 32-bit		✓		✓			
	SP1	x86 64-bit		✓		✓			
		x86 32-bit		✓		✓			

Notes: When adding StorNext Storage Manager to a StorNext File System environment, the metadata controller (MDC) must be moved to a supported platform. If you attempt to install and run a StorNext 4.2.1 server that is not supported, you do so at your own risk. Quantum strongly recommends against installing non-supported servers.

[1] High Availability is available on all supported Linux MDC platforms.

[2] StorNext support and has been tested using R2 SP2 since StorNext release 3.1.2.

[3] Windows Distributed LAN Server supports up to 128 distributed LAN clients.

Note: StorNext support for Partial File Retrieval (PFR) and Apple Xsan is not coupled with StorNext releases, so this information is not included in the table. For compatibility information on PFR and Apple Xsan, see
http://www.quantum.com/ServiceandSupport/SoftwareandDocumentationDownloads/SNMS/Index.aspx?whattab=Fifth#compatibility.
(Click the Documentation tab and navigate to the "Compatibility Guide" heading.)

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StorNext 4.2.1 Supported Operating Systems and Platforms (Continued)

Operating System	Kernel or Release	Platform	MDC Server [1]	File System SAN Client	Distributed LAN Server	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
RHEL 5 [5] [6]	2.6.18-53.EL (Update 1) [4]	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.18-92.EL (Update 2) [4]	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.18-128.EL (Update 3) [4]	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	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	✓	✓	✓	✓	✓	✓	✓
RHEL 6	2.6.32.71.EL	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.32.131.EL (Update 1)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓

Notes:

The RHEL kernel levels listed indicate which kernel levels were used for the majority of testing. In general, other kernel levels within the same service pack are supported unless otherwise noted.

[1] High Availability is available on all supported Linux MDC platforms.

[4] All supported releases of RHEL5 prior to RHEL5U4 have a possible silent data corruption issue as documented in Product Alert #20. Quantum recommends that users migrate to RHEL5U4 or later as soon as possible.

[5] The "Xen" virtualization software is not supported for RHEL 4 and RHEL5.

[6] 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.

For systems running Red Hat Enterprise Linux version 5 or 6, before installing StorNext you must first install the following kernel files:

- Base kernel
- Kernel-header
- kernel-devel
- gcc-c development tools

Linux places both an IPV4 and an IPV6 address in the /etc/hosts file, but for StorNext the /etc/hosts file must contain only the IPV4 loopback.

Caution: Red Hat 5 and 6 ship with Security-Enhanced Linux (selinux) <u>enabled</u> by default. To ensure proper StorNext operation, you must not install Red Hat 5 or 6 with selinux enabled. That is, selinux must be off, or the file system could fail to start.

If Red Hat 5 or 6 have already been installed with SELINUX enabled, edit the file `/etc/selinux/config` and change the line with `SELINUX=enforcing` or `SELINUX=permissive` to `SELINUX=disabled`. Refer to Red Hat 5 or 6 documentation for more information.

StorNext 4.2.1 Supported Operating Systems and Platforms (Continued)

Operating System	Kernel or Release	Platform	MDC Server [1]	File System SAN Client	Distributed LAN Server	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
SLES 10 [6 8]	2.6.16-46-0.12 (SP1) [7]	x86 32-bit		✓		✓			
	2.6.16.60-0.27 (SP2) [7]	x86 32-bit		✓		✓			
	2.6.16.60-0.54.5 (SP3)	x86 32-bit		✓		✓			
	2.6.16.60-0.85.1 (SP4)	x86 32-bit		✓		✓			
	2.6.16-46-0.12 (SP1) [7]	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.16.60-0.27 (SP2) [7]	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.16.60-0.54.5 (SP3)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
	2.6.16.60-0.85.1 (SP4)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
SLES 11 [6 7 8]	2.6.27.19-5	x86 64-bit		✓		✓			
	2.6.32.12-0 (SP1)	x86 64-bit	✓	✓	✓	✓	✓	✓	✓
Sun Solaris 10	Generic 141444-09	sparc 64-bit		✓					
	Generic 127128-11	Opteron x86 64-bit		✓		✓			
		Intel x86 64-bit		✓		✓			

Notes:

The SLES kernel levels listed indicate which kernel levels were used for the majority of testing. In general, other kernel levels within the same service pack are supported unless otherwise noted.

[1] High Availability is available on all supported Linux MDC platforms.

[6] 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.

[7] SLES10 SP1 and certain SLES10 SP2 releases are sensitive to the silent data corruption issue documented in Product Alert #20. The problem has been fixed in SLES 10 SP2 that includes level 2.6.16.60-0.37_f594963d, in SLES 10 SP3, and in the SLES 11 releases. There is no recommended work-around at this time.

[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.

For systems running SUSE Linux Enterprise Server, you must first install the kernel source code (typically shipped as the kernel-source RPM).

GNU tar is required on Solaris systems. In addition, for systems running Solaris 10, install the Recommended Patch Cluster (dated March 10, 2006 or later) before installing StorNext.

To enable support for LUNs greater than 2TB on Solaris 10, the following patches are required:

- 118822-23 (or greater) Kernel Patch
- 118996-03 (or greater) Format Patch
- 119374-07 (or greater) SD and SDD Patch
- 120998-01 (or greater) SD Headers Patch

StorNext 4.2.1 Supported Operating Systems and Platforms (Continued)

Operating System	Kernel or Release	Platform	MDC Server [1]	File System SAN Client	Distributed LAN Server	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
IBM AIX	6.1	64-bit Power Architecture		✓					
	7.1	64-bit Power Architecture		✓					
HP-UX	11i v3 [9]	Itanium 64-bit		✓					

Notes:

[1] High Availability is available on all supported Linux MDC platforms.

[9] HPUX 11iv3 requires the "0909 Patch set"

The following platforms have equivalent RedHat releases, and are supported only if the issue can be reproduced on the equivalent RedHat release. Only the "standard" versions of the following platforms are supported. "Special" or "optimized" versions are not supported.

StorNext 4.2.1 Supported Operating Systems and Platforms (Continued)

Operating System	Kernel or Release	Platform	MDC Server [1]	File System SAN Client	Distributed LAN Server	File System LAN Client	Storage Manager / SNAPI	Distributed Data Mover	Replication / Dedup Server
CentOS	Equivalent supported RHEL5 and RHEL6 (when available) releases	x86 64-bit		✓		✓			
Scientific Linux [10]	Equivalent supported RHEL5 and RHEL6 releases	x86 64-bit		✓		✓			
Oracle Linux [10]	Equivalent supported RHEL5 and RHEL6 releases	x86 64-bit		✓		✓			

Notes:

[1] High Availability is available on all supported Linux MDC platforms.

[10] These platforms are not specifically tested for StorNext releases. Support for these releases will be at the equivalent RHEL or SLES kernel service pack release, and issues reported against these platforms must be demonstrated to be on the equivalent base RHEL or SLES release for additional support to apply.

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StorNext 4.2.1-Supported Quantum Libraries and Tape Drives

Vendor Library Family	Libraries	Enforced Minimum / Recently Tested Library Firmware Level	Drive Types	Enforced Minimum / Recently Tested Drive Firmware Level	Notes
Quantum / ADIC	Scalar i500 i5.1 (Quantum, Dell, IBM) i6 (Quantum) i6.1 (Quantum, Dell) i6.2 (IBM)	i5.1: 572G.GS002 i6: Minimum 586G.GS001	IBM LTO-2	i5.1: 8571 i6: A4N0	
			IBM LTO-3	i5.1: 93G0 Ii: 93GE	
			IBM LTO-3 WORM		
			IBM LTO-4	i5.1: 94D4 i6: A239	
			IBM LTO-4 WORM		
			IBM LTO-5	i6: A5M0	
			IBM LTO-5 FC	I6: A5M0	
			HP LTO-4 FC	i5.1: H46Z i6: H58Z	
			HP LTO-4 SAS	I5.1: A45Z i6: A55Z	
			HP LTO-5 FC	i6: I39Z Support starts in Quantum i6.x	
			HP LTO-5 SAS	i6: X38Z Support starts in Quantum i6.x	
	Scalar i2000 / i6000 (i6000 branding started at i2k i8)[‡]	Minimum: 120A IBM LTO-3, IBM LTO-3 WORM Minimum: 300A.xxx IBM LTO-4, IBM LTO-4 WORM Minimum 540A.xxx i6.5; 590A i6.6: 595A.01601 i6.7: 596A.GS00301 i8.0(.1): 600A.GS23201 i8.1: 605A.GS07401	IBM LTO-1 FC and SCSI	5AU1	i6000 branding started at i2000 i8.
			IBM LTO-2 FC and SCSI	I6.x: 93T0 I8.x: A4N0	
			IBM LTO-3 (2G and 4G)	i6.x: 93G0 i8.x 93GM	
			IBM LTO-3 WORM		
			IBM LTO-4 4G	i6.x: 94D4 i8: A239	
			IBM LTO-4 WORM		
			IBM LTO-5	i8.1: A5M0 requires i8.1 or later	
			HP LTO-3 2G	L67Z	
			HP LTO-3 4G	M69Z	
			HP LTO-3 WORM		
			HP LTO-4 4G	H58Z	
			HP LTO-4 WORM		
			HP LTO-5 FC	I6.x: I24Z i8.0: I39Z I8.1: I3AZ Requires i6.7 or later	
			Quantum DLT-S4	V42	
			Quantum SDLT 320 SCSI	V94	
			Quantum SDLT 600 FC	V53	

[‡] Before using DLT cleaning with DLT-S4 or SDLT 600 drives, configure the library (Scalar i2000 or PX720) to disable reporting of the media ID. If media ID reporting is not disabled, StorNext will not recognize the cleaning media (SDLT type 1).

Quantum StorNext.

StorNext 4.2.1- Supported Quantum Libraries and Tape Drives (Continued)

Vendor Library Family	Libraries	Enforced Minimum / Recently Tested Library Firmware Level	Drive Types	Enforced Minimum / Recently Tested Drive Firmware Level	Notes
Quantum / ADIC	Scalar i40 / i80	Base (SP5): 105G.GS001 I1 (SP6): 111G.GS003 I2: 120G.GS003	HP LTO-4 FH SAS	A55Z	
			HP LTO-4 FH 4GB FC	H58Z	
			HP LTO-4 HH SAS	U52Z	
			HP LTO-4 HH FC	V52Z	
			HP LTO-5 HH SAS	Z38Z, requires i1	
			HP LTO-5 HH FC	Y23Z, requires i2	
	Scalar 24	Minimum: 107A.GY0002	IBM LTO-1		Not including WORM
			IBM LTO-2		
			IBM LTO-3		
			IBM LTO-4		
	Scalar 50	Minimum: 002A	HP LTO-4		
	Scalar 100	Minimum: 2.05.0003	IBM LTO-1		Not including WORM **NOTE**: 2.10.0013 firmware not to be used.
			IBM LTO-2		
			IBM LTO-3		
			AIT-2		
	Scalar 1000	Minimum: 3.00.0017	IBM LTO-2		Must use SDLC/DAS, SDLC/SCSI Target Mode or Native SCSI
			IBM 3590B1A		
			AIT-1		
	Scalar 10000	Minimum: 110A.00001	IBM LTO-1		Must use SDLC/DAS, SDLC/SCSI Target Mode or Native SCSI
			IBM LTO-2		
			IBM LTO-3	See library firmware requirement	
			IBM LTO-4	See library firmware requirement	
			IBM LTO-3 WORM	See library firmware requirement	
			AIT-2		
			AIT-2 WORM		
			IBM 3592		
	PX500	Minimum: 001A	HP LTO-3		Not including WORM
	PX720 ‡	Minimum 4.00	HP LTO-2		Not including WORM
			HP LTO-3		
			DLT-S4		

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StorNext 4.2.1- Supported Quantum Libraries and Tape Drives (Continued)					
Vendor Library Family	Libraries	Enforced Minimum / Recently Tested Library Firmware Level	Drive Types	Enforced Minimum / Recently Tested Drive Firmware Level	Notes
Quantum / ADIC	DXI 7500	Minimum: N / A Recently Tested: 05.02.084	Supported i2k emulations 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	Minimum: N / A Recently Tested: N / A	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		

‡ Before using DLT cleaning with DLT-S4 or SDLT 600 drives, configure the library (Scalar i2000 or PX720) to disable reporting of the media ID. If media ID reporting is not disabled, StorNext will not recognize the cleaning media (SDLT type 1).

Quantum. StorNext.

StorNext 4.2.1-Supported Non-Quantum Libraries and Tape Drives

Vendor Library Family	Libraries	Enforced Minimum / Recently Tested Library Firmware Level	Drive Types	Enforced Minimum / Recently Tested Drive Firmware Level	Notes
Dell	PV136T	Minimum: 3.11	IBM LTO-2		
			IBM LTO-3		
			IBM LTO-4		
	PowerVault ML6000 (6010, 6020, 6030)	Minimum: 585G.GS003	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	Recently tested: L68W	
			HP LTO-3 WORM		
			HP LTO-4		
			HP LTO-4 WORM		
			HP LTO-5	Recently tested: I25W	
			HP LTO-5 WORM		
	EML E-Series	Minimum: 1070 Recently tested: 1395	HP LTO-3		HP LTO-5 WORM validation was not successful in SN 4.x testing and is not supported
			HP LTO-4		
			LTO-4 WORM		
			HP LTO-5	Recently tested: I25S	
	ESL G3	Recently tested: 620H	HP LTO-4 4G	Recently tested: H63W	LTO-3 drives are not supported on the ESL G3 library
			HP LTO-4 WORM		
			HP LTO-5 FC	Recently tested: I3FW	
	MSL 6000	Minimum: 5.07	HP LTO-2		MSL 6000 does not support HP LTO-5
			HP LTO-3	Recently tested: L67W	
			HP LTO-3 WORM		
			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-5 WORM validation was not successful in SN 4.x testing and is not supported
			HP LTO-3		
			HP LTO-3 WORM		
			HP LTO-4		
			HP LTO-4 WORM		
			HP LTO-5		
IBM	TS3500	Minimum: 7422 Recently Tested: A420	IBM LTO-2		
			IBM LTO-3	Minimum 93GE	
			IBM LTO-4	Minimum A239	
			IBM LTO-5	Minimum A6S0	
			IBM 3592 (J1A and E05)		
			IBM TS1120 (E05)		Same as IBM3592 E05
	TS3310	Minimum: 587G.GS003	IBM LTO-3	Minimum: 93GE	
			IBM LTO-4	Minimum: A239	
			IBM LTO-5	Minimum: A6S0	

Quantum StorNext

StorNext 4.2.1-Supported Non-Quantum Libraries and Tape Drives (Continued)					
Vendor Library Family	Libraries	Enforced Minimum / Recently Tested Library Firmware Level	Drive Types	Enforced Minimum / Recently Tested Drive Firmware Level	Notes
Qualstar	XLS	Minimum: 0880	IBM LTO-3		
			IBM LTO-4		
Sony	Petasite CSM-200	Minimum: 6.30	IBM LTO-4 drive (T1600)		
Spectra Logic	T-Series (T50e, T120, T200, T380, T680, T950, and T-Finity)	Minimum: unknown Recently Tested: 11.4.3	LTO-3	Vendor supported: 93G0	See Bulletin 46 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-4		
			LTO-5	Recently tested: B170	
Oracle SCSI/FC Libraries	L180/L700/L1400	Minimum: 3.18.02	T9840C		
			T9840D		
			T10000A	Minimum 1.40	See Note 2
			T10000B	Minimum 1.40	See Note 2
			T10000C		
			HP LTO-3		
			HP LTO-4		
			IBM LTO-3		
			IBM LTO-4		
	SL3000	Minimum: 0235 LTO-5 requires minimum 2.35	T9840C		
			T9840D		
			T10000A	Minimum: 1.40	See Note 2
			T10000B	Minimum: 1.40	See Note 2
			T10000C		
			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	HP LTO-3		
			HP LTO-4		
			HP LTO-5	Recently tested: I2DS	
			IBM LTO-3		
			IBM LTO-4		
			IBM LTO-5		
	9740	Minimum: 2000	Sun/STK 9840		Obsolete

Note 2: When using T10000 drives, the STK library parameter "Fastload" must be set to "OFF".

Quantum StorNext.

StorNext 4.2.1-Supported Non-Quantum Libraries and Tape Drives (Continued)					
Vendor Library Family	Libraries	Enforced Minimum / Recently Tested Library Firmware Level	Drive Types	Enforced Minimum / Recently Tested Drive Firmware Level	Notes
Oracle ACSLS 7.3 ACSLS 7.3.1 ACSLS 8.0.x Libraries See Note 1	L180/L700/L1400	Minimum: 3.18.02 Recently tested (L700): 3.18	T9840C		
			T9840D		
			T10000A	Minimum: 1.40	See Note 2
			T10000B	Minimum: 1.40	See Note 2
			T10000C		
			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: 2.35	T9840C		
			T9840D		
			T10000A	Minimum: 1.40	See Note 2
			T10000B	Minimum: 1.40 Recently tested: 1.44.210	See Note 2
			T10000C		
			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	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 4.73 Recently Tested: 6.02	T9840C		
			T9840D		
			T10000A	Minimum: 1.40	See Note 2
			T10000B	Minimum: 1.40 Recently tested: 1.44	See Note 2
			T10000C		
			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

Note 1: 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 Oracle.

Note 2: When using T10000 drives, the STK library parameter "Fastload" must be set to "OFF".

Quantum. StorNext.

StorNext 4.2.1 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 4.2.x.
StorNext 3.5.x	The following back-revision clients 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	The following back-revision clients are supported: • RHEL4 Quantum recommends that other clients be upgraded along with the MDC.
StorNext 4.2	Quantum recommends that other clients be upgraded along with the MDC.

StorNext 4.2.1 Virtual Machine Support
StorNext supports SAN client and DLC clients running within VMware virtual machines on the Windows and Linux operating systems listed in the "Supported Operating Systems and Platforms" section. Refer to StorNext Product Bulletin 69 for additional details about VMware support.

For information about StorNext and Apple Xsan compatibility, refer to the document "StorNext and Apple Xsan Compatibility" at this location:

http://www.quantum.com/ServiceandSupport/SoftwareandDocumentationDownloads/SNMS/Index.aspx?whattab=Fifth#compatibility