



Release Notes

Product	StorNext FX 2.2
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Purpose of This Release

StorNext FX is client-only software that is licensed to run in Apple Xsan managed environments and used with an Apple metadata controller.

StorNext FX 2.2 is a maintenance release which resolves a number of issues and updates the list of supported operating systems and platforms.

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

Operating System Requirements

The following table shows the supported operating systems, kernel versions, CPU type and StorNext FX client versions for StorNext FX 2.2.

Supported Operating Systems and Platforms for StorNext FX Clients			
Operating System	Kernel or Release/Service Pack	CPU Platform	SNFX 2.2 Clients
Windows 2003 Server	R2 SP2	x86 32-bit	✓
		x86 64-bit	✓
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 2008	SP1	x86 32-bit	✓
		x86 64-bit	✓
	SP2	x86 32-bit	✓
		x86 64-bit	✓
	R2	x86 32-bit	✓
		x86 64-bit	✓
Windows 7	N / A	x86 32-bit	✓
		x86 64-bit	✓

Supported Operating Systems and Platforms for StorNext FX Clients			
Operating System	Kernel or Release/Service Pack	CPU Platform	SNFX 2.2 Clients
RHEL 4	2.6.9-67.EL (Update 6) †	x86 64-bit	✓
	2.6.9-78.EL (Update 7) †	x86 64-bit	✓
	2.6.9-67.EL (Update 8)	x86 64-bit	✓
RHEL 5	2.6.18-53.EL (Update 1) †	x86 64-bit	✓
	2.6.18-92.EL (Update 2) †	x86 64-bit	✓
	2.6.18-128.EL (Update 3) †	x86 64-bit	✓
	2.6.18-164.EL (Update 4)	x86 64-bit	✓
SLES 10 †† ***	2.6.16-46-0.12 (SP1)	x86 32-bit	✓
	2.6.16.60-0.27 (SP2)	x86 32-bit	✓
	2.6.16.60-0.54.5 (SP3)	x86 32-bit	✓
	2.6.16-46-0.12 (SP1)	x86 64-bit	✓
	2.6.16.60-0.27 (SP2)	x86 64-bit	✓
	2.6.16.60-0.54.5 (SP3)	x86 64-bit	✓
SLES 11 ***	2.6.27.19-5	x86 64-bit	✓

† All releases of RHEL4 and RHEL5 except RHEL4 Update 8 and RHEL5 Update 4 have a possible silent data corruption issue as documented in Product Alert #20. Quantum recommends that users migrate to RHEL4 Update 8 or RHEL5 Update 4 as soon as possible. Also, note that the "Xen" virtualization software is not supported for RHEL 4 and RHEL 5.

†† SLES 10 SP1 (and earlier) and SP2 kernels earlier than 37 are sensitive to the same silent data corruption issue documented in Product Alert #20. The problem has been fixed in 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 workaround at this time.

*** 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. Later revisions within the service pack are typically, but not always, supported.

Note: For systems running Red Hat Enterprise Linux version 4 or 5, before installing StorNext you must first install the kernel header files (shipped as the kernel-devel-smp or kernel-devel RPM).

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

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

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

System Requirements

This section describes the system requirements necessary to successfully install StorNext FX 2.2.

StorNext FX 2.2 File System Connectivity Requirements

The following connectivity requirements must be met for each StorNext FX mounted file system:

System/Component	Requirement
Network LAN using TCP/IP (all clients and servers must be interconnected)	For SNFX metadata traffic, Quantum requires that a separate, dedicated, switched Ethernet LAN be used.
SAN	SNFX clients: An FC-HBA or equivalent SAN communication device where the storage is visible and accessible to multiple SAN clients. SNFX does not support multiple hosts connected through an FC hub device because the resulting propagation of Loop Initialization Protocol resets can cause data corruption.

StorNext Client Software Requirements

To install and run the StorNext client software, the client system must meet the following minimum hardware requirements.

For SAN (FC-attached) clients:

- 1 GB RAM
- 500 MB available hard disk space

Xsan Metadata Controller/SNFX Client Compatibility

The following table shows the Xsan metadata controller versions compatible with StorNext FX 2.2 clients.

Xsan Metadata Controller / StorNext FX Client Compatibility	
Xsan Metadata Controller Version	StorNext FX Client 2.2
Xsan 2.1	✓
Xsan 2.1.1	✓
Xsan 2.2	✓
Xsan 2.2.1	✓

Resolved Issues

The following table lists resolved issues that are specific to StorNext File System and might therefore affect StorNext FX.

Note: There is no change to cryptographic functionality in StorNext FX 2.2.

Operating System	CR Number	SR Number	Description
Linux	25231	871620	Resolved a condition that occurred after the automounter mounted or unmounted file systems on a client. The mount failed with a "no such file or directory" message.
	26274	901844	Corrected a condition in which asyn msync failed on mmapped files when the application is terminated by a signal
	29348	n/a	Resolved a situation where Red Hat kernels always reported I/O size as 4K, resulting in poor performance.
Windows	23161	723675	Corrected a condition in which Windows continuously requested a reboot if a file system was mapped but had no access to the LUNs.
	24012	769476	Resolved a condition that caused a panic when a client was rebooted during real-time I/O.
	24165	770396	Corrected a condition during Windows client shutdown that caused FSM to consume a lot of memory and potentially panic.
	26414	722239	Corrected a condition in which the CvReadDir command entered an infinite loop.
	26852	n/a	Resolved a condition in which CvRtlGetVersion was called at the wrong IRQ level, resulting in a blue screen.
	27472	970490, 973766, 999134, 956410, 971086, 1014024, 1033014, 1065500	Resolved a blue screen condition related to OplockOpenChange on newer versions of Windows.

Operating System	CR Number	SR Number	Description
Windows	29384	n/a	Corrected a condition in which a Windows client will returned <code>STATUS_ACCESS_DENIED</code> (<code>0xC0000022L</code>) after a StorNext user sent a read request to the StorNext client and the desired access bit did not have the <code>FILE_READ_DATA</code> bit set.
	29526, 29527	n/a	Corrected a timing problem with reading file attributes on Windows.
	29709	1057754, 1064402	Corrected a condition in which StorNext File system allowed files to be deleted over CIFS.
All	23610	597058	Resolved a condition in which rebooting clients when <code>ServerLicensedClients = MaxLicensedConnects</code> didn't decrement <code>ServerLicensedClients</code> .
	28235	1005056, 1018552	Resolved a condition in which a client low on memory caused data corruption on a Macintosh when the extent was not deleted.
	29581	1081418	Corrected a condition in which <code>cctl</code> retrieval failed due to authentication causing mount failure.

Known Issues

The following table lists known issues in this release of StorNext FX, as well as associated workarounds where applicable.

Operating System	CR Number	SR Number	Description	Workaround
Windows	31391	n/a	After you activate the license on your StorNext FX client, you may need to change the permissions on the .auth_secret file to enable Read access. If Read access is not enabled, fsmppm will not start.	<p>After you copy the .auth_secret file from the Xsan MDC to a Windows client, following these steps to enable Read access for the .auth_secret file:</p> <ol style="list-style-type: none"> 1 Navigate to C:/Program Files/Stornext/config. 2 Right-click on the .auth_secret file and select Properties. 3 Click the Security tab 4 Select the Everyone Group or user name. 5 Enable Read permission by checking the Allow box. (Note: Fsmppm is able to start if the permission is Read only. It doesn't need the Write permission to start.) 6 Click Apply to apply your changes. 7 Restart StorNext services from Start > All Programs > StorNext File System by selecting Services Stop and Services Start. 8 Verify fsmppm activity on the Xsan file system by opening Start > All Programs > StorNext File System > Client Configuration and mapping the file system.

Documentation

The following StorNext FX 2.2 and related StorNext 3.5.2 documents are currently available:

Document Number	Document Title
6-01396-06	<i>StorNext FX 2.2 Installation Guide</i>
6-01743-03	<i>StorNext FX 2.2 File System Quick Reference Guide</i>
6-01658-10	<i>StorNext 3.5.2 User's Guide</i>
6-00360-19	<i>StorNext 3.5.2 Installation Guide</i>
6-01376-14	<i>StorNext 3.5.2 File System Tuning Guide</i>

Contacting Quantum

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

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

Quantum Technical Assistance Center in the USA:	+1 800-284-5101
For additional contact information:	www.quantum.com/support
To open a Service Request:	www.quantum.com/osr

For the most updated information on Quantum Global Services, please visit: www.quantum.com/support