

Quantum®



# Compatibility Guide

6-68043-02, Rev. P

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## 1.0 StorNext Requirements

The following requirements must be met before installing StorNext.

- Security-Enhanced Linux (SELinux) is disabled.
- Quantum requires that system clocks be synchronized for proper functionality, and recommends that NTP be used to ensure clocks remain synchronized across all nodes.
- The following packages must be installed:
  - gcc
  - make
- kernel-source (for systems running SUSE Linux)
- kernel-devel (for systems running Red Hat Linux)

**Note:** The version of the kernel-source or kernel-devel package must correspond to the version of the booted kernel. In addition, the system must have basic utilities installed such as perl, bash, grep, etc. as well as basic libraries. In general, StorNext will not install on a stripped-down installation of Linux.

## 1.1 Terminology

Acronyms used within the document:

Acronym	Description
APFO	Advanced Path Failover
DDM	Distributed Data Mover
DLC <sup>1</sup>	Distributed LAN Client
DLS <sup>2 3</sup>	Distributed LAN Server / Gateway
FX	StorNext FX Client
HA <sup>4</sup>	High Availability
LTFS	Linear Tape File System
LTS	Long Term Support (Ubuntu)
MDC <sup>5</sup>	Meta-data Controller
RHEL	Red Hat Enterprise Linux
SLES	SuSE Linux Enterprise Server
SC	File System SAN Client
SN	StorNext
SNFS	StorNext File System
SNSM	StorNext Storage Manager
XWD	Xcellis Workflow Director
XWE	Xcellis Workflow Extender

<sup>1</sup> StorNext Distributed LAN clients can be connected to either Distributed LAN Servers or StorNext G300 appliances.

<sup>2</sup> Distributed LAN Server on Windows supports up to 128 Distributed LAN Clients.

<sup>3</sup> Gateway instrumentation is not available for Windows.

<sup>4</sup> HA and GUI are supported on StorNext M Series Appliances and supported MDCs.

<sup>5</sup> Initial availability of StorNext 5 is on StorNext Metadata Appliances.

## 2.0 System Requirements for Quantum StorNext Metadata Controllers

- StorNext 6 shared file system requires 3GB of memory.
- StorNext 6 managed file systems require 7GB of memory for each file system.
- StorNext MDC nodes require a minimum of 16 GB each.
- Running larger Storage Manager deployments requires additional memory for the Storage Manager database, growing up to 48 GB for systems as the number of managed files approaches 1 Billion.
- Additionally, Quantum recommends another 8 GB of RAM on the MDC node(s) for each file system to be used for buffer cache, to take advantage of the performance improvements in StorNext 5.
- For planning purposes, 10B unmanaged and 1.4B managed file counts are a guideline, but are not an absolute or enforced limit. These values reflect our current guidelines for configuring a StorNext solution the number of files and the performance of your solution may vary.
- LTFS StorNext Support and Memory Requirements
  - StorNext Storage Manager support for LTO-8 tape devices with Linear Tape File System (LTFS) requires StorNext 6.0.6 or later.
  - Using LTO-7 tape devices and LTO M8 media with Linear Tape File System is not supported.
  - Reading and writing LTFS tape is slower than ANTF.
    - Trade-off performance for vendor independence.
    - StorNext performance is on par with any other implementation of LTFS.
  - For any MDC or any DDM client running movers and using LTFS there is extra memory needed.
  - LTFS will utilize more memory than ANTF. Each time a tape is opened, the full directory structure is pulled into memory. Thus a potential significant amount of memory is required on top of the normal StorNext requirements.
  - For StorNext, for each file on a tape, there is an associated Object file that contains specific path information. Thus the #'s listed need to be doubled. Running with StorNext, the formula from the site would actually be drives x million files x 2 +1.
  - Example:
    - Customer has 2 million files written to an LTFS tape. Each time that tape is open the minimum amount of memory required is  $2 * 2 + 1 = 5$  GB of memory.
    - If on top of this one has 5 tape drives and the potential of 2 million files on each tape the minimum amount of memory required would be  $5 * 2 * 2 + 1 = 21$ GB.

## 3.0 StorNext and StorNext FX Client RAM, Disk and CPU Requirements

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

For SAN (FC-attached) clients or LAN clients:

- 1 GB RAM
- 500 MB available hard disk space

For SAN clients acting as a Gateway server:

- 2 GB RAM
- 500 MB available hard disk space

**Note:** Gateway servers may require additional RAM depending on the number of file systems, LAN clients, and NICs used. See “Gateway Server Memory Tuning” in the StorNext User’s Guide for Gateway server memory tuning guidelines.

## 4.0 StorNext and StorNext FX Client File System Buffer Cache

Multiple mounted file systems typically share a single buffer cache. A StorNext and StorNext FX client buffer cache is created for each different cachebufsize. By default, all file systems have the same cachebufsize of 64K, so they all share the same buffer cache.

These settings do not apply to Apple Xsan Clients, which do not use the StorNext buffer cache.

The amount of memory consumed by default for each cachebufsize depends on the platform type and the amount of memory in the system. The table below shows the default amount of memory consumed by cachebufsize.

A platform with more than 2 GB of memory will use a cachebufsize of 256MB, otherwise 64MB will be used.

To see information about the buffer cache after mounting file systems, use the **cvdb(1)** command with the **-b** option. To change the amount of memory used by the buffer cache at mount time, use the **buffercachecap** parameter.

On Windows, the non-paged pool is used for buffer cache memory until it consumes up to 64 megabytes (32-bit systems) or 64 gigabytes (64-bit systems). Any additional buffer cache memory comes from the paged pool.

## 5.0 StorNext Software Upgrade Matrix

Sites running the following StorNext versions may upgrade directly to this release assuming the platform, service pack, architecture (x86 and compatible and Intel 64 and compatible), and StorNext component(s) are supported in this release.

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

Customers who remain current can generally upgrade to the latest release in a single update or upgrade. Customers who fall behind on updates or upgrades require more complex procedures and should contact Quantum Professional Services.

### Important Notes

- If your system is running StorNext 5.4.0.3 with Storage Manager, then you must read and execute the instructions in [Product Alert Number 48](#) when upgrading to later versions of StorNext.
- Your system must be at StorNext 5.3.0 (or later) to upgrade directly to StorNext 6.0.6.1 (or later).
- StorNext 6.x does not support M330 appliances.

StorNext Software Supported Upgrades / Updates																	
MDCs at StorNext Release...	StorNext 5.3.0	StorNext 5.3.1	StorNext 5.3.1.1	StorNext 5.3.2.1	StorNext 5.4.0.1	StorNext 5.4.0.2	StorNext 5.4.0.3	StorNext 5.4.0.4	StorNext 5.4.1	StorNext 5.4.1.1	StorNext 6.0	StorNext 6.0.1	StorNext 6.0.1.1	StorNext 6.0.5	StorNext 6.0.5.1	StorNext 6.0.6	StorNext 6.0.6.1
Can go to StorNext Release																	
StorNext 6.0.6.1	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
StorNext 6.1.x					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## 6.0 StorNext Appliance Upgrade Matrix

Quantum Appliance Supported Upgrades / Updates																	
Xcellis, Artico and M4xx/M6xx and G-series MDCs at StorNext Release...	StorNext 5.3.0	StorNext 5.3.1	StorNext 5.3.1.1	StorNext 5.3.2.1	StorNext 5.4.0.1	StorNext 5.4.0.2	StorNext 5.4.0.3	StorNext 5.4.0.4	StorNext 5.4.1	StorNext 6.0	StorNext 6.0.1	StorNext 6.0.1.1	StorNext 6.0.5	StorNext 6.0.5.1	StorNext 6.0.6	StorNext 6.0.6.1	
...Can upgrade / update to StorNext Release																	
StorNext 6.0.6.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
StorNext 6.1.x					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## 7.0 Supported Operating Systems and Platforms

**Note:** HA and GUI are only supported on StorNext M Series Appliances and supported MDCs. Only 64-bit platforms are supported.

**Note:** StorNext does not install or start on a system today that has Red Hat Security-Linux (SELinux) enabled. There are checks in several configuration files and daemons that prevent the installation and use of StorNext with Red Hat Secure Linux (SELinux). There are no plans to add support for Red Hat Secure Linux (SELinux) at this time.

Windows Server 2008	R2 and R2 SP1						
See Footnotes:	6						
Kernel:	n/a						
	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 5.3.0	✓			✓	✓	✓	✓
5.3.1.x	✓			✓	✓	✓	✓
5.3.2.x	✓			✓	✓	✓	✓
5.4.0.1	✓			✓	✓	✓	✓
5.4.0.2	✓			✓	✓	✓	✓
5.4.0.3	✓			✓	✓	✓	✓
5.4.0.4	✓			✓	✓	✓	✓
6.0.x	✓			✓	✓	✓	✓
6.1.x	✓			✓	✓	✓	✓

<sup>6</sup> The Windows Service Pack levels that are listed, indicate the supported versions. "Dot" releases, for example Windows 8.1, are distinct and not supported unless called out. RedHat Enterprise Linux is specified at the update level. Unless otherwise noted, kernel releases up to and including the release listed in this document is supported. Those beyond the kernel version listed are not supported. SuSE Enterprise Linux is specified at the Service Pack level. Unless otherwise noted, kernel releases up to and including the release listed in this document is supported. Those beyond the kernel version listed are not supported. Debian support is specified at the level of X.Y release levels. Ubuntu support is specified at the level of X.Y.Z release levels.



Windows 7 | Base and SP1  
 See Footnotes: 6  
 Kernel: n/a

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5.3.0</b>					✓	✓	✓
5.3.1.x					✓	✓	✓
5.3.2.x					✓	✓	✓
5.4.0.1					✓	✓	✓
5.4.0.2					✓	✓	✓
5.4.0.3					✓	✓	✓
5.4.0.4					✓	✓	✓
6.0.x					✓	✓	✓
6.1.x					✓	✓	✓

Windows 8 | Base  
 See Footnotes: 6  
 Kernel: n/a

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5.3.0</b>					✓	✓	✓
5.3.1.x					✓	✓	✓
5.3.2.x					✓	✓	✓
5.4.0.1					✓	✓	✓
5.4.0.2					✓	✓	✓
5.4.0.3					✓	✓	✓
5.4.0.4					✓	✓	✓
6.0.x					✓	✓	✓
6.1.x					✓	✓	✓

Windows 8.1 | Base  
 See Footnotes: 6  
 Kernel: n/a

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 5.3.0					✓	✓	✓
5.3.1.x					✓	✓	✓
5.3.2.x					✓	✓	✓
5.4.0.1					✓	✓	✓
5.4.0.2					✓	✓	✓
5.4.0.3					✓	✓	✓
5.4.0.4					✓	✓	✓
6.0.x					✓	✓	✓
6.1.x					✓	✓	✓

Windows 10 | Base  
 See Footnotes: 6  
 Note: Windows 10 Creator's Update supported with StorNext 6.x (or later).  
 Kernel: n/a

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 5.3.0					✓	✓	✓
5.3.1.x					✓	✓	✓
5.3.2.x					✓	✓	✓
5.4.0.1					✓	✓	✓
5.4.0.2					✓	✓	✓
5.4.0.3					✓	✓	✓
5.4.0.4					✓	✓	✓
6.0.x					✓	✓	✓
6.1.x					✓	✓	✓

Windows Server 2012 | Base

See Footnotes:

Kernel: n/a

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 5.3.0	✓			✓	✓	✓	✓
5.3.1.x	✓			✓	✓	✓	✓
5.3.2.x	✓			✓	✓	✓	✓
5.4.0.1	✓			✓	✓	✓	✓
5.4.0.2	✓			✓	✓	✓	✓
5.4.0.3	✓			✓	✓	✓	✓
5.4.0.4	✓			✓	✓	✓	✓
6.0.x	✓			✓	✓	✓	✓
6.1.x	✓			✓	✓	✓	✓

Windows Server 2012 | R2

See Footnotes:

Kernel: n/a

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 5.3.0	✓			✓	✓	✓	✓
5.3.1.x	✓			✓	✓	✓	✓
5.3.2.x	✓			✓	✓	✓	✓
5.4.0.1	✓			✓	✓	✓	✓
5.4.0.2	✓			✓	✓	✓	✓
5.4.0.3	✓			✓	✓	✓	✓
5.4.0.4	✓			✓	✓	✓	✓
6.0.x	✓			✓	✓	✓	✓
6.1.x	✓			✓	✓	✓	✓

Windows Server  
2016

See Footnotes:

Kernel: n/a

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 6.0.x					✓	✓	✓
6.1.x					✓	✓	✓

Red Hat 6

Update 6

See Footnotes:

6

Kernel: 2.6.32-504.EL

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 5.3.0	✓	✓	✓	✓	✓	✓	✓
5.3.1.x	✓	✓	✓	✓	✓	✓	✓
5.3.2.x	✓	✓	✓	✓	✓	✓	✓
5.4.0.1	✓	✓	✓	✓	✓	✓	✓
5.4.0.2	✓	✓	✓	✓	✓	✓	✓
5.4.0.3	✓	✓	✓	✓	✓	✓	✓
5.4.0.4	✓	✓	✓	✓	✓	✓	✓
6.0.x	✓	✓	✓	✓	✓	✓	✓
6.1.x	✓	✓	✓	✓	✓	✓	✓

# Quantum StorNext.

Red Hat 6 | Update 7  
 See Footnotes: 6  
 Kernel: 2.6.32-573.EL

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5.3.0</b>							
5.3.1.x	✓	✓	✓	✓	✓	✓	✓
5.3.2.x	✓	✓	✓	✓	✓	✓	✓
5.4.0.1	✓	✓	✓	✓	✓	✓	✓
5.4.0.2	✓	✓	✓	✓	✓	✓	✓
5.4.0.3	✓	✓	✓	✓	✓	✓	✓
5.4.0.4	✓	✓	✓	✓	✓	✓	✓
6.0.x	✓	✓	✓	✓	✓	✓	✓
6.1.x	✓	✓	✓	✓	✓	✓	✓

Red Hat 6 | Update 8  
 See Footnotes: 6  
 Kernel: 2.6.32-642.EL

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 6.0.x</b>	✓	✓	✓	✓	✓	✓	✓
6.1.x	✓	✓	✓	✓	✓	✓	✓

**Red Hat and CentOS 6 Update 9**

**6**

**See Footnotes:**

StorNext 6.0.6.1 has been successfully tested with Red Hat EL and CentOS 6 update 9. Support for this distribution requires using an updated kernel which includes the fixes necessary to correct *Spectre* and *Meltdown* security vulnerabilities 1, 2 and 3.

StorNext 6.0.6.1 does not work with Red Hat EL and CentOS 7 update 5.

If you are an administrator of a non-StorNext Appliance system, then you must be careful when upgrading a Red Hat EL and CentOS operating system. You must only upgrade to levels supported in this document.

**Kernel:**

**Kernel version for software-only environments:  
2.6.32-696.30.1**

**Kernel version for StorNext appliance releases:  
2.6.32-696.20.1**

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 6.0.6.1</b>	✓	✓	✓		✓	✓	✓
<b>6.1.x</b>	✓	✓	✓		✓	✓	✓

**Red Hat 7**

**Base**

**See Footnotes:**

**6**

**Kernel:**

**3.10.0-123.EL**

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5.3.0</b>	✓	✓	✓		✓	✓	✓
<b>5.3.1.x</b>	✓	✓	✓		✓	✓	✓
<b>5.3.2.x</b>	✓	✓	✓		✓	✓	✓
<b>5.4.0.1</b>	✓	✓	✓		✓	✓	✓
<b>5.4.0.2</b>	✓	✓	✓		✓	✓	✓
<b>5.4.0.3</b>	✓	✓	✓		✓	✓	✓
<b>5.4.0.4</b>	✓	✓	✓		✓	✓	✓
<b>6.0.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>6.1.x</b>	✓	✓	✓	✓	✓	✓	✓

Red Hat 7 | Update 1  
 See Footnotes: 6  
 Kernel: 3.10.0-229.EL

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 5.3.0	✓	✓	✓		✓	✓	✓
5.3.1.x	✓	✓	✓		✓	✓	✓
5.3.2.x	✓	✓	✓		✓	✓	✓
5.4.0.1	✓	✓	✓		✓	✓	✓
5.4.0.2	✓	✓	✓		✓	✓	✓
5.4.0.3	✓	✓	✓		✓	✓	✓
5.4.0.4	✓	✓	✓		✓	✓	✓
6.0.x	✓	✓	✓	✓	✓	✓	✓
6.1.x	✓	✓	✓	✓	✓	✓	✓

Red Hat 7 | Update 2  
 See Footnotes: 6  
 Kernel: 3.10.0-327.EL

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 5.3.0							
5.3.1.x					✓	✓	✓
5.3.2.x					✓	✓	✓
5.4.0.1	✓	✓	✓		✓	✓	✓
5.4.0.2	✓	✓	✓		✓	✓	✓
5.4.0.3	✓	✓	✓		✓	✓	✓
5.4.0.4	✓	✓	✓		✓	✓	✓
6.0.x	✓	✓	✓	✓	✓	✓	✓
6.1.x	✓	✓	✓	✓	✓	✓	✓

Red Hat 7 | Update 3  
 See Footnotes: 6  
 Kernel: 3.10.0-514.EL

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
StorNext 6.0.x	✓	✓	✓	✓	✓	✓	✓
6.1.x	✓	✓	✓	✓	✓	✓	✓

**Red Hat and CentOS 7 Update 4**

**See Footnotes:**

**Kernel:**

**6**

StorNext 6.0.6.1 has been successfully tested with Red Hat EL and CentOS 7 update 4. Support for this distribution requires using the updated kernel, which includes the fixes necessary to correct *Spectre* and *Meltdown* security vulnerabilities 1, 2 and 3.

StorNext 6.0.6.1 does not work with Red Hat EL and CentOS 7 update 5.

If you are an administrator of a non-StorNext Appliance system, then you must be careful when upgrading a Red Hat EL and CentOS operating system. You must only upgrade to levels supported in this document.

**Kernel version for StorNext 6.0.6.1 environments:**

**3.10.0-693.2.2**

**Kernel version for StorNext 6.1 environments:**

**3.10.0-693.21.1**

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 6.0.6.1</b>	✓	✓	✓		✓	✓	✓
<b>6.1</b>	✓	✓	✓	✓	✓	✓	✓

**Red Hat and CentOS 7**

**See Footnotes:**

**Kernel:**

**Update 5**

**6**

StorNext 6.1 has been successfully tested with Red Hat EL and CentOS 7 update 5. Support for this distribution requires using the updated kernel, which includes the fixes necessary to correct *Spectre* and *Meltdown* security vulnerabilities 1, 2 and 3.

If you are an administrator of a non-StorNext Appliance system, then you must be careful when upgrading a Red Hat EL and CentOS operating system. You must only upgrade to levels supported in this document.

**Kernel version for software-only environments:**

**3.10.0-862.11.6**

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 6.1.x</b>	✓	✓	✓		✓	✓	✓



**SUSE SLES 11** | **SP2**  
**See Footnotes:** 6  
**Kernel:** 3.0.13-0.27

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5.3.0</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.3.1.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.3.2.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.1</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.2</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.3</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.4</b>	✓	✓	✓	✓	✓	✓	✓
<b>6.0.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>6.1.x</b>	✓	✓	✓	✓	✓	✓	✓

**SUSE SLES 11** | **SP3**  
**See Footnotes:** 6  
**Kernel:** 3.0.76-0.11

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5.3.0</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.3.1.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.3.2.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.1</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.2</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.3</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.4</b>	✓	✓	✓	✓	✓	✓	✓
<b>6.0.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>6.1.x</b>	✓	✓	✓	✓	✓	✓	✓

## Important Notice Regarding the SUSE Linux Enterprise Server (SLES) Operating System

The following versions of the SUSE Linux Enterprise Server (SLES) operating system will no longer be supported, for both the Metadata Controller (MDC) and Distributed Data Mover (DDM) platforms, effective with StorNext 6.0.0.

- SUSE Linux Enterprise Server (SLES) version 11
- SUSE Linux Enterprise Server (SLES) version 12

<b>SUSE SLES 11</b>	<b>SP4</b>
<b>See Footnotes:</b>	<b>6</b>
<b>Kernel:</b>	<b>3.0.101-63</b>

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5</b>							
<b>5.3.0</b>							
<b>5.3.1.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.3.2.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.1</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.2</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.3</b>	✓	✓	✓	✓	✓	✓	✓
<b>5.4.0.4</b>	✓	✓	✓	✓	✓	✓	✓
<b>6.0.x</b>	✓	✓	✓	✓	✓	✓	✓
<b>6.1.x</b>	✓	✓	✓	✓	✓	✓	✓

## Important Notice Regarding the SUSE Linux Enterprise Server (SLES) Operating System

The following versions of the SUSE Linux Enterprise Server (SLES) operating system will no longer be supported, for both the Metadata Controller (MDC) and Distributed Data Mover (DDM) platforms, effective with StorNext 6.0.0.

- SUSE Linux Enterprise Server (SLES) version 11
- SUSE Linux Enterprise Server (SLES) version 12

<b>SUSE SLES 12</b>	<b>Base</b>
See Footnotes:	6
Kernel:	3.12.28-4

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5</b>							
5.3.0					✓	✓	
5.3.1.x					✓	✓	
5.3.2.x					✓	✓	
5.4.0.1	✓	✓	✓		✓	✓	
5.4.0.2	✓	✓	✓		✓	✓	
5.4.0.3	✓	✓	✓		✓	✓	
5.4.0.4	✓	✓	✓		✓	✓	
6.0.x	✓	✓	✓		✓	✓	
6.1.x	✓	✓	✓		✓	✓	

## Important Notice Regarding the SUSE Linux Enterprise Server (SLES) Operating System

The following versions of the SUSE Linux Enterprise Server (SLES) operating system will no longer be supported, for both the Metadata Controller (MDC) and Distributed Data Mover (DDM) platforms, effective with StorNext 6.0.0.

- SUSE Linux Enterprise Server (SLES) version 11
- SUSE Linux Enterprise Server (SLES) version 12

<b>SUSE SLES 12</b>	<b>SP1</b>
<b>See Footnotes:</b>	<b>6</b>
<b>Kernel:</b>	<b>3.12.49.11</b>

	MDC	SNSM	DDM	DLS	SAN	DLC	FX
<b>StorNext 5</b>							
<b>5.3.0</b>							
<b>5.3.1.x</b>							
<b>5.3.2.x</b>							
<b>5.4.0.1</b>	✓	✓	✓		✓	✓	✓
<b>5.4.0.2</b>	✓	✓	✓		✓	✓	✓
<b>5.4.0.3</b>	✓	✓	✓		✓	✓	✓
<b>5.4.0.4</b>	✓	✓	✓		✓	✓	✓
<b>6.0.x</b>	✓	✓	✓		✓	✓	✓
<b>6.1.x</b>	✓	✓	✓		✓	✓	✓

Supported as Clients Only

Debian	7.0, 7.1 and 7.2 only		
See Footnotes:	6		
Kernel:	n/a		
	SAN	DLC	FX
StorNext 5			
5.3.0	✓	✓	
5.3.1.x	✓	✓	
5.3.2.x	✓	✓	
5.4.0.1	✓	✓	
5.4.0.2	✓	✓	
5.4.0.3	✓	✓	
5.4.0.4	✓	✓	
6.0.x	✓	✓	
6.1.x	✓	✓	

Debian	7.8		
See Footnotes:	6		
Kernel:	n/a		
	SAN	DLC	FX
StorNext 5			
5.3.0	✓	✓	
5.3.1.x	✓	✓	
5.3.2.x	✓	✓	
5.4.0.1	✓	✓	
5.4.0.2	✓	✓	
5.4.0.3	✓	✓	
5.4.0.4	✓	✓	
6.0.x	✓	✓	
6.1.x	✓	✓	

Debian	8.x		
See Footnotes:	6		
Kernel:	The 13.6.04 kernel (or earlier) is required for use with StorNext 6.0 (or later).		
	SAN	DLC	FX
StorNext 6.0.x	✓	✓	
6.1.x	✓	✓	

Oracle Solaris	10, 11, 11.1, 11.2 and 11.3		
See Footnotes:			
Kernel:	n/a		
	SAN	DLC	FX
StorNext 6.0.x	5.4.0.1	5.4.0.1	

IBM AIX	7.1		
See Footnotes:			
Kernel:	n/a		
	SAN	DLC	FX
StorNext 6.0.x	5.4.0.1		

HPE HP-UX	11i version 3		
See Footnotes:	7		
Kernel:	n/a		
	SAN	DLC	FX
StorNext 6.0.x	5.4.0.1		

<sup>7</sup> HPE UX 11iv3 requires the "0909 Patch set".

<b>Scientific Linux</b>	<b>Red Hat 7 based versions</b>		
<b>See Footnotes:</b>	<b>8</b>		
<b>Kernel:</b>	<b>n/a</b>		
	<b>SAN</b>	<b>DLC</b>	<b>FX</b>
<b>StorNext 5</b>			
<b>5.3.0</b>	✓	✓	
<b>5.3.1.x</b>	✓	✓	
<b>5.3.2.x</b>	✓	✓	
<b>5.4.0.1</b>	✓	✓	
<b>5.4.0.2</b>	✓	✓	
<b>5.4.0.3</b>	✓	✓	
<b>5.4.0.4</b>	✓	✓	
<b>6.0.x</b>	✓	✓	
<b>6.1.x</b>	✓	✓	

<b>Oracle OEL</b>	<b>Red Hat 7 equivalent</b>		
<b>See Footnotes:</b>	<b>8</b>		
<b>Kernel:</b>	<b>n/a</b>		
	<b>SAN</b>	<b>DLC</b>	<b>FX</b>
<b>StorNext 5</b>			
<b>5.3.0</b>	✓	✓	
<b>5.3.1.x</b>	✓	✓	
<b>5.3.2.x</b>	✓	✓	
<b>5.4.0.1</b>	✓	✓	
<b>5.4.0.2</b>	✓	✓	
<b>5.4.0.3</b>	✓	✓	
<b>5.4.0.4</b>	✓	✓	
<b>6.0.x</b>	✓	✓	
<b>6.1.x</b>	✓	✓	

<b>Oracle OEL</b>	<b>Red Hat 6 equivalent</b>		
<b>See Footnotes:</b>	<b>8</b>		
<b>Kernel:</b>	<b>n/a</b>		
	<b>SAN</b>	<b>DLC</b>	<b>FX</b>
<b>StorNext 5</b>	✓	✓	
<b>5.3.0</b>	✓	✓	
<b>5.3.1.x</b>	✓	✓	
<b>5.3.2.x</b>	✓	✓	
<b>5.4.0.1</b>	✓	✓	
<b>5.4.0.2</b>	✓	✓	
<b>5.4.0.3</b>	✓	✓	
<b>5.4.0.4</b>	✓	✓	
<b>6.0.x</b>	✓	✓	
<b>6.1.x</b>	✓	✓	

<b>Ubuntu Linux</b>	<b>14.04.0 and 14.04.1 LTS versions</b>		
<b>See Footnotes:</b>	<b>6</b>		
<b>Kernel:</b>	<b>n/a</b>		
	<b>SAN</b>	<b>DLC</b>	<b>FX</b>
<b>StorNext 5</b>			
<b>5.3.0</b>	✓	✓	
<b>5.3.1.x</b>	✓	✓	
<b>5.3.2.x</b>	✓	✓	
<b>5.4.0.1</b>	✓	✓	
<b>5.4.0.2</b>	✓	✓	
<b>5.4.0.3</b>	✓	✓	
<b>5.4.0.4</b>	✓	✓	
<b>6.0.x</b>	✓	✓	
<b>6.1.x</b>	✓	✓	

<b>Ubuntu Linux</b>	<b>14.04.2 LTS</b>		
<b>See Footnotes:</b>	<b>6</b>		
<b>Kernel:</b>	<b>n/a</b>		
	<b>SAN</b>	<b>DLC</b>	<b>FX</b>
<b>StorNext 5</b>			
<b>5.3.0</b>	✓	✓	
<b>5.3.1.x</b>	✓	✓	
<b>5.3.2.x</b>	✓	✓	
<b>5.4.0.1</b>	✓	✓	
<b>5.4.0.2</b>	✓	✓	
<b>5.4.0.3</b>	✓	✓	
<b>5.4.0.4</b>	✓	✓	
<b>6.0.x</b>	✓	✓	
<b>6.1.x</b>	✓	✓	

<b>Ubuntu Linux</b>	<b>16.04. LTS versions</b>		
<b>See Footnotes:</b>	<b>6</b> ( <i>Contact Quantum support for Ubuntu client software</i> )		
<b>Kernel:</b>	<b>n/a</b>		
	<b>SAN</b>	<b>DLC</b>	<b>FX</b>
<b>StorNext 6.0.x</b>	✓	✓	
<b>6.1.x</b>	✓	✓	

## 8.0 StorNext Client Interoperability

In general back-revision clients (e.g., StorNext 4.3.x clients with StorNext 5.0.x MDC) are supported for the interval of time that is required to upgrade a configuration; with the assumption that once the configuration process is complete, all clients would be at the same level.

The following table describes back-revision clients that are supported with the StorNext 6.0.x releases.

StorNext Client Interoperability	
StorNext SAN Client Version	Platform
StorNext 5 Release 5.x	Quantum recommends that clients be upgraded along with the MDC. <sup>8</sup>
StorNext 6 Release 6.x	Quantum recommends that clients be upgraded along with the MDC. <sup>8</sup>

### Important Notes

- If a StorNext version is not listed, it is not supported as a back-revision client, even during the upgrade process.
- The StorNext SAN or Distributed LAN clients software installed into a client may be a supported earlier version, or the same version as the MDC/appliance. For example, StorNext 5.4 SAN or DLC client can be used with a StorNext 6.1 MDC/appliance.
- The use of StorNext SAN or Distributed LAN client software that is newer than the version installed onto an MDC/appliance is not supported. For example, StorNext 6.1 SAN or DLC client cannot be used with a StorNext 6.0 MDC/appliance.
- Some StorNext 6x features, such as file system auditing, can be used with StorNext 5 Linux or Windows clients. Refer to the [StorNext 6 User's Guide](#) for additional details.
- All core software components (file system and Storage Manager) installed on the same MDC/appliance must be the same version of StorNext.
- Xcellis Workflow Extenders, G3xx gateways, Distributed Data Movers and Distributed LAN client gateways must use the same version of StorNext that is installed on the MDC/appliance.

<sup>8</sup> Except as noted to be incompatible in the table in section 6.0



## 9.0 StorNext Virtual Machine Support

StorNext supports SAN client and DLC clients running within VMware virtual machines where the operating system the client is running on is Linux or Windows. Only 64-bit platforms are supported. The following table shows general compatibility.

Operating System	Kernel or Release	File System SAN Client (See Note A)	File System LAN Client (See Note B)
Windows Server 2008 Windows Server 2012 Windows 7 Windows 8, 8.1 Windows 10	All SN supported service packs in the supported operating systems and platforms table.	✓	✓
RHEL 6.x	All SN supported service packs in the supported operating systems and platforms table.	✓	✓
RHEL 7.x	All SN supported service packs in the supported operating systems and platforms table.	✓	✓
SLES 11.x	All SN supported service packs in the supported operating systems and platforms table.	✓	✓
SLES 12.x	All SN supported service packs in the supported operating systems and platforms table.	✓	✓

**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.

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.

## 10.0 General Compatibility with other Products

Product	Reference
StorNext API (SNAPI)	<p>StorNext 6.0.0 and StorNext 6.0.5 includes StorNext Application Programming (SNAPI) version 2.0.3 to ensure StorNext Storage Manager interoperability with Quantum AEL and Scalar libraries, as well as ongoing support for ISV and end-user applications.</p> <p>Beginning with StorNext 6.1.0, SNAPI is not supported or distributed. SNAPI 2.0.3 is the latest and final release of SNAPI.</p> <p>Beginning with StorNext 4.x, StorNext web services replaced SNAPI. Web services provides all the functionality of SNAPI, plus additional capabilities, and is included with StorNext at no additional charge.</p> <p>For compatibility between SNAPI and StorNext, see the <a href="#">StorNext SNAPI 2.0.x Compatibility</a> document.</p> <p>StorNext Web Services enables you to run third-party application program interfaces (APIs) with StorNext. To view the latest commands supported by the StorNext Web Services, refer to the <a href="#">StorNext 6 Web Services Guide</a>.</p>
StorNext Partial File Retrieval (PFR)	<p>For compatibility between PFR and StorNext, see the <a href="#">StorNext Partial File Retrieval 1.x Compatibility</a> document.</p>
StorNext Connect	<p>For compatibility between StorNext Connect and StorNext, see <a href="#">Planning and Compatibility</a>.</p>
StorNext Appliance Controller	<p>For compatibility between StorNext Appliance Controller and StorNext, see the <a href="#">Appliance Controller Compatibility Guide</a>.</p>
Lattus	<p>For compatibility between Lattus and StorNext, see the appropriate <i>Lattus Release Notes</i> document available online at <a href="#">Lattus PDF Downloads</a>.</p>
DXi	<p>For compatibility between DXi and StorNext, see the appropriate DXi product page online at <a href="http://www.quantum.com/documentation">http://www.quantum.com/documentation</a>.</p>

## 11.0 Quantum Appliance Compatibility

- This table uses StorNext M440 as a generic term that applies to the StorNext M441D, M441Q, M445D SSD and M445Q SSD models.
- This table uses StorNext M660 as a generic term that applies to the StorNext M661, M661XL, M662 M662XL and M665 SSD models.
- This table uses G300 as a generic term that applies to the StorNext G301 and G302 models.
- Appliances must be at StorNext 5.3.1 in order to update to StorNext 5.3.2.
- If your system is running StorNext 5.4.0.3 with Storage Manager, then you must read and execute the instructions in [Product Alert Number 48](#) when upgrading to later versions of StorNext.

Quantum Appliance Compatibility with StorNext Releases											
Appliance	M330	M440	M660	Pro Foundation	Artico	Xcellis Artico	Xcellis Foundation	Xcellis Workflow Director	Xcellis Workflow Extender	G300	Xcellis 14G Director and Extender
StorNext Release											
StorNext 6.0		✓	✓	✓	✓	✓	✓	✓	✓	✓	
6.0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
6.0.1.1					✓	✓	✓	✓	✓		
6.0.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	
6.0.5.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
6.0.6		✓	✓	✓	✓	✓	✓	✓	✓	✓	
6.0.6.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
6.1.x		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## 12.0 StorNext Browser Support

**Important note regarding the Software Online Help:** The tool that we used to generate the StorNext Software Online Help in the past, RoboHelp, is not supported with newer versions of supported web browsers. This issue only affects StorNext versions 5.2.0 and earlier. For combinations that are not supported, the StorNext Software Online Help does not display correctly in StorNext GUI.

The following browser versions are supported with StorNext versions 5.2.0 and earlier:

- Firefox version 36 and later
- Google Chrome version 40 and later
- Microsoft Internet Explorer version 10 and later, only if Secure Socket Layer 3.0 is disabled

Quantum recommends using the latest released version of the following browsers for the StorNext GUI:

- Firefox version 51 (or later)
- Microsoft Internet Explorer version 11 (or later)
- Chrome version 56 (or later)
- Safari version 10.12 (or later)
- Microsoft Edge version 38.14393.0.0 (or later)

## 13.0 Supported Quantum Library and Drive List

### Note

- StorNext Storage Manager supports many Quantum and non-Quantum tape devices and libraries. Many currently supported tape devices, including Quantum and 3rd party, have been retired as no longer supported by the respective vendor. For your planning purposes, please be aware that Storage Manager will no longer support the following tape devices will end effective with the first major StorNext feature release. Effective with the next StorNext feature release after StorNext 6.0.6, Storage Manager will no longer support the following tape devices:
  - LTO generations 1, 2 and 3
  - IBM 3490, 3490E, 3592, 3480
  - Oracle 8590, 9840 and 9940
  - AIT, AITW
  - DLT2, DLTS4, DLT2000 and DLT4000
  - CTIII and CTIV

### Note

- StorNext Storage Manager support for Linear Tape File System (LTFS) based on Open LTFS and is compatible with other vendor's implementations. LTFS tape format provides many of the same features as Quantum ANTF format, with the additional benefit of multi-vendor portability. LTFS is an ideal format for long-term archiving use, but it is slower than ANTF.
- The StorNext 6 implementation of LTFS is based on Open LTFS version 2.1.1. Basic support for LTO-8, including LTO-M8 media, requires StorNext 6.0.5 (or later).
- Support for LTO-8 with LTFS requires StorNext 6.0.6 (or later).
- Advanced Path Failover does not support LTFS.

Supported Quantum Library and Drive List								
Vendor	Libraries	Drive Types <sup>9</sup>	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.0.x, 6.1.x	Notes
Quantum	Scalar i500	IBM LTO-2	✓					<ul style="list-style-type: none"> <li>• LTFS is only available for LTO-5/6/7/8 drives which support partitioning.</li> <li>• Support for LTFS with LTO-7 drives requires StorNext 5.4.0 or later.</li> <li>• Support for LTFS with LTO-8 drives requires StorNext 6.0.6 or later.</li> <li>• LTO-8 support includes support for LTO-M8 formatted media.</li> <li>• LTO-7 tape devices using LTO M8 formatted media does not work with Linear Tape File System.</li> </ul>
		IBM LTO-3	✓	✓	✓	✓	✓	
		IBM LTO-4	✓	✓	✓	✓	✓	
		IBM LTO-5	✓	✓	✓	✓	✓	
		IBM LTO-6	✓	✓	✓ <sup>10</sup>	✓ <sup>10</sup>	✓ <sup>10</sup>	
		IBM LTO-7	✓ <sup>11</sup>	✓ <sup>11</sup>	✓ <sup>10 11</sup>	✓ <sup>10 11</sup>	✓ <sup>10-11</sup>	
		IBM LTO-8						
		HPE LTO-4	✓	✓	✓	✓	✓	
		HPE LTO-5	✓	✓	✓	✓	✓	
		HPE LTO-6	✓	✓	✓	✓	✓	
	Scalar i6000 / i2000	IBM LTO-1	✓					<ul style="list-style-type: none"> <li>• LTFS is only available for LTO-5/6/7/8 drives which support partitioning.</li> <li>• Support for LTFS with LTO-7 drives requires StorNext 5.4.0 or later.</li> <li>• Support for LTFS with LTO-8 drives requires StorNext 6.0.6 or later.</li> <li>• LTO-8 support includes support for LTO-M8 formatted media.</li> <li>• LTO-7 tape devices using LTO M8 formatted media does not work with Linear Tape File System.</li> </ul>
		IBM LTO-2	✓					
		IBM LTO-3	✓	✓	✓	✓	✓	
		IBM LTO-4	✓	✓	✓	✓	✓	
		IBM LTO-5	✓	✓	✓	✓	✓	
		IBM LTO-6	✓	✓	✓ <sup>12</sup>	✓ <sup>12</sup>	✓ <sup>12</sup>	
		IBM LTO-7	✓ <sup>13</sup>	✓ <sup>13</sup>	✓ <sup>12 13</sup>	✓ <sup>12 13</sup>	✓ <sup>12 13</sup>	
		IBM LTO-8					✓	
		HPE LTO-3	✓	✓	✓	✓	✓	
		HPE LTO-4	✓	✓	✓	✓	✓	
		HPE LTO-5	✓	✓	✓	✓	✓	
		HPE LTO-6	✓	✓	✓	✓	✓	
Quantum DLT-S4	✓							

<sup>9</sup> StorNext supports LTO WORM functionality where offered by the drive vendor. Please see the vendor website for more details.

<sup>10</sup> APFO supported

<sup>11</sup> The i500 requires firmware version 8.4 or later to support LTO-7

<sup>12</sup> APFO supported i6k only with LTO-6 or LTO-7

<sup>13</sup> LTO-7 is not available in the Scalar i2000 library.

Supported Quantum Library and Drive List								
Vendor	Libraries	Drive Types <sup>9</sup>	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.0.x, 6.1.x	Notes
		Quantum SDLT 320 SCSI	✓					
		Quantum SDLT 600 FC	✓					
	Scalar i40 / i80	HPE LTO-4	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> <li>• LTFS is only available for LTO-5/6/7/8 drives which support partitioning.</li> <li>• Support for LTFS with LTO-7 drives requires StorNext 5.4.0 or later.</li> <li>• Support for LTFS with LTO-8 drives requires StorNext 6.0.6 or later.</li> <li>• LTO-8 support includes support for LTO-M8 formatted media.</li> <li>• LTO-7 tape devices using LTO M8 formatted media does not work with Linear Tape File System.</li> </ul>
		HPE LTO-5	✓	✓	✓	✓	✓	
		HPE LTO-6	✓	✓	✓	✓	✓	
		IBM LTO-5	✓	✓	✓	✓	✓	
		IBM LTO-6	✓	✓	✓	✓	✓	
	IBM LTO-7		✓	✓	✓	✓		
	Scalar i3	IBM LTO-6				✓	✓	<ul style="list-style-type: none"> <li>• LTFS is only available for LTO-5/6/7/8 drives which support partitioning.</li> <li>• Support for LTFS with LTO-7 drives requires StorNext 5.4.0 or later.</li> <li>• Support for LTFS with LTO-8 drives requires StorNext 6.0.6 or later.</li> <li>• LTO-8 support includes support for LTO-M8 formatted media.</li> <li>• LTO-7 tape devices using LTO M8 formatted media does not work with Linear Tape File System.</li> </ul>
		IBM LTO-7				✓	✓	
		IBM LTO-8						
	Scalar i6	IBM LTO-6				✓	✓	<ul style="list-style-type: none"> <li>• LTFS is only available for LTO-5/6/7/8 drives which support partitioning.</li> <li>• Support for LTFS with LTO-7 drives requires StorNext 5.4.0 or later.</li> <li>• Support for LTFS with LTO-8 drives requires StorNext 6.0.6 or later.</li> <li>• LTO-8 support includes support for LTO-M8 formatted media.</li> </ul>
		IBM LTO-7				✓	✓	
		IBM LTO-8					✓	

Supported Quantum Library and Drive List								
Vendor	Libraries	Drive Types <sup>9</sup>	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.0.x, 6.1.x	Notes
								<ul style="list-style-type: none"> <li>LTO-7 tape devices using LTO M8 formatted media does not work with Linear Tape File System.</li> </ul>
	Scalar 24	IBM LTO-1	✓					
		IBM LTO-2	✓					
		IBM LTO-3	✓	✓	✓	✓	✓	
		IBM LTO-4	✓	✓	✓	✓	✓	
	Scalar 50	HP LTO-4	✓	✓	✓	✓	✓	
	Scalar 100	IBM LTO-1	✓					<ul style="list-style-type: none"> <li>Do not use firmware version 2.10.0013.</li> <li><b>Note:</b> Effective with the next StorNext feature release after StorNext 6.0.6, support for all versions of the AIT and T9840 drives will be dropped.</li> </ul>
		IBM LTO-2	✓					
		IBM LTO-3	✓	✓	✓	✓	✓	
		AIT-2	✓	✓	✓	✓	✓	
	Scalar 1000	IBM LTO-2	✓					<ul style="list-style-type: none"> <li>You must use SDLC <sup>14</sup> - SCSI Target Mode or Native SCSI.</li> <li>DAS/ACI is not supported.</li> <li><b>Note:</b> Effective with the next StorNext feature release after StorNext 6.0.6, support for all versions of the AIT and T9840 drives will be dropped.</li> </ul>
		IBM 3590B1A	✓	✓	✓	✓	✓	
			✓	✓	✓	✓	✓	
		AIT-1	✓	✓	✓	✓	✓	
	Scalar 10000	IBM LTO-1	✓					<ul style="list-style-type: none"> <li>Must use SDLC <sup>14</sup> SCSI Target Mode or Native SCSI.</li> <li>DAS/ACI is not supported.</li> <li><b>Note:</b> Effective with the next StorNext feature release after StorNext 6.0.6, support for all versions of the AIT and T9840 drives will be dropped.</li> </ul>
		IBM LTO-2	✓					
		IBM LTO-3	✓	✓	✓	✓	✓	
		IBM LTO-4	✓	✓	✓	✓	✓	
		IBM LTO-5	✓	✓	✓	✓	✓	
		AIT-2	✓	✓	✓	✓	✓	
		AIT-2 WORM	✓	✓	✓	✓	✓	
		IBM 3592	✓	✓	✓	✓	✓	
	PX500	HPE LTO-3	✓	✓	✓	✓	✓	
	PX720	HPE LTO-2	✓					
		HPE LTO-3	✓	✓	✓	✓	✓	
			✓					
		DLT S4	✓					

<sup>14</sup> Scalar Distributed Library Controller has been tested up to version 2.8



## 14.0 Supported Non-Quantum Library and Drive List

Large, complex StorNext Storage Manager solutions support the use of non-Quantum software such as Oracle StorageTek Automated Cartridge System Library Software (ACSL) for centralized, multi-platform tape library management. Additionally, Storage Manager supports physical library partitioning to improve the utilization and logical sharing of enterprise-level tape libraries.

**Note:** Effective with the next StorNext feature release after StorNext 6.0.6, support for all versions of the AIT and T9840 drives will be dropped.

Non-Quantum Supported Libraries and Tape Drives																	
Vendor	Libraries	Drive Types <sup>9</sup>	StorNext 5	StorNext 5.0.1	StorNext 5.1.0	StorNext 5.1.1	StorNext 5.2.0.x	StorNext 5.2.1	StorNext 5.2.2	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.x (all versions)	StorNext 6.1.x (all versions)	Notes	
Dell	PV136T	IBM LTO-2	✓	✓	✓	✓	✓	✓	✓	✓							
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	PowerVault ML6000 6010 / 6020 / 6030	IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
HPE	ESL E Series	HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	MSL 6000	HPE LTO-2	✓	✓	✓	✓	✓	✓	✓	✓							
		HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	MSL G3 Series 2024 / 4048 / 8096	HPE LTO-2	✓	✓	✓	✓	✓	✓	✓	✓							
		HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	EML E Series	HPE LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	ESL G3	HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
HPE LTO-7												✓	✓	✓	✓		
MSL 6480	HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Non-Quantum Supported Libraries and Tape Drives																		
Vendor	Libraries	Drive Types <sup>9</sup>	StorNext 5	StorNext 5.0.1	StorNext 5.1.0	StorNext 5.1.1	StorNext 5.2.0.x	StorNext 5.2.1	StorNext 5.2.2	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.x (all versions)	StorNext 6.1.x (all versions)	Notes		
IBM	TS3100	HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
		HPE LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	TS3500	IBM LTO-7										✓	✓	✓	✓	✓		
		IBM LTO-2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-7										✓	✓	✓	✓	✓		
		IBM 3592 (J1A and E05)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM TS1120	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM TS1130	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM TS1140	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	IBM TS1150										✓	✓	✓	✓	✓	✓		
	TS3310	IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-7										✓	✓	✓	✓	✓		
	TS4500	TS1140										15	15	15	15	15		
TS1150											✓	✓	✓	✓	✓			
IBM LTO-7											✓	✓	✓	✓	✓			
Oracle SCSI / FC	L180 / L700 / L1400	T9840C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
		T9840D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		T10000A <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		T10000B <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

<sup>15</sup> The tape device and library have been tested individually, but this specific combination has not been tested. Although not formally tested, this drive and library pair is expected to work without any issues.

Non-Quantum Supported Libraries and Tape Drives																		
Vendor	Libraries	Drive Types <sup>9</sup>	StorNext 5	StorNext 5.0.1	StorNext 5.1.0	StorNext 5.1.1	StorNext 5.2.0.x	StorNext 5.2.1	StorNext 5.2.2	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.x (all versions)	StorNext 6.1.x (all versions)	Notes		
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	SL3000	T9840C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Note:</b> Effective with the next StorNext feature release after StorNext 6.0.6 support for all versions of the AIT and T9840 drives will be dropped.	
		T9840D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		T10000A <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		T10000B <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		T10000C <sup>16 18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		T10000D <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
		HPE LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
		IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
	IBM LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SL500	HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SL150	IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		HPE LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	9740			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Obsolete</b> <b>Note:</b> Effective with the next StorNext feature release after StorNext 6.0.6 support for all versions of the AIT and T9840 drives will be dropped.	
			Sun/STK 9840															

<sup>16</sup> When using a T10000 Rev C drive with ACSLS 8.0.x, please assure that your cleaning cartridges are supported 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	Libraries	Drive Types <sup>9</sup>	StorNext 5	StorNext 5.0.1	StorNext 5.1.0	StorNext 5.1.1	StorNext 5.2.0.x	StorNext 5.2.1	StorNext 5.2.2	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.x (all versions)	StorNext 6.1.x (all versions)	Notes
Oracle ACSLS 7.3 / 7.3.1 / 8.0.x / 8.1.x / 8.2.x / 8.3 / 8.4 <sup>17</sup>	L180 / L700 / L1400	T9840C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Note:</b> Effective with the next StorNext feature release after StorNext 6.0.6 support for all versions of the AIT and T9840 drives will be dropped.
		T9840D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000A <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000B <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	SL3000	T9840C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Note:</b> Effective with the next StorNext feature release after StorNext 6.0.6 support for all versions of the AIT and T9840 drives will be dropped.
		T9840D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000A <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000B <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000C <sup>16 18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000D <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 7.3.1
		HPE LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 8.2
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 7.3.1
		IBM LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 8.2
	IBM LTO-7												✓	✓	Requires minimum of ACSLS 8.4	
	SL500	HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
HPE LTO-4		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

<sup>17</sup> ACSLS versions are supported on Solaris installs only, ACSLS 8.3 is the first version that supports Oracle Linux.

<sup>18</sup> When using T10000 drives, the STK library parameter "Fastload" must be set to "OFF".

Non-Quantum Supported Libraries and Tape Drives																	
Vendor	Libraries	Drive Types <sup>9</sup>	StorNext 5	StorNext 5.0.1	StorNext 5.1.0	StorNext 5.1.1	StorNext 5.2.0.x	StorNext 5.2.1	StorNext 5.2.2	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.x (all versions)	StorNext 6.1.x (all versions)	Notes	
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 7.3.1	
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 7.3.1	
	SL8500	T9840C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Note:</b> Effective with the next StorNext feature release after StorNext 6.0.6 support for all versions of the AIT and T9840 drives will be dropped.
		T9840D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000A <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000B <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000C <sup>16 18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		T10000D <sup>18</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 7.3.1
		HPE LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 8.2
		IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 7.3.1
		IBM LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 8.2
		IBM LTO-7											✓	✓	✓	✓	Requires minimum of ACSLS 8.4
		SL150	HPE LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HPE LTO-6	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Requires minimum of ACSLS 8.2	
Qualstar	XLS	IBM LTO-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		IBM LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Sony	Petasite CSM-200	IBM LTO-4 (T1600)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			

Non-Quantum Supported Libraries and Tape Drives																	
Vendor	Libraries	Drive Types <sup>9</sup>	StorNext 5	StorNext 5.0.1	StorNext 5.1.0	StorNext 5.1.1	StorNext 5.2.0.x	StorNext 5.2.1	StorNext 5.2.2	StorNext 5.3.0	StorNext 5.3.1.x	StorNext 5.3.2.x	StorNext 5.4.x	StorNext 6.x (all versions)	StorNext 6.1.x (all versions)	Notes	
Spectra Logic	T-Series T50e / T120 / T200 / T380 / T680 / T950 / T-Finity	IBM TS1140	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	StorNext 6.0.5 and later support the use of LTO-8 tape devices in all Spectra libraries	
		LTO-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		LTO-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		LTO-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		LTO-7												✓	✓		✓
		LTO-8													✓		✓

## 15.0 Advanced Path Failover Compatibility

Using the StorNext Distributed Data Mover (DDM) feature can boost overall data movement performance by distributing data movement across multiple systems. To ensure data integrity, StorNext software requires the use of SCSI Persistent Reservations on StorNext metadata controllers and DDM clients. As SCSI persistent reservations control access to shared devices, such as tape, Storage Manager retains control of the tape device paths, even if a failover were to occur.

StorNext Storage Manager supports IBM Advanced Path Failover (APFO) for redundant paths to IBM LTO-6, LTO-7 and LTO-8 tape devices. Using IBM APFO requires SCSI Persistent Reservations to be turned off, as device reservations are handled by IBM's software, not StorNext.

- StorNext 6.0.5 (or later) supports LTO-8 tape devices paired with Quantum Scalar i3, i6, i500 and i6000 libraries.
- StorNext 5 supports IBM Advanced Path Failover (APFO) with IBM LTO-6 and LTO-7 tape devices installed in Scalar i500 and i6k libraries.

**Notes:**

- IBM strongly recommends that tape and disk I/O use separate HBAs when used with the IBM Advanced Path Failover (**lin\_tape**) driver.
- Advanced Path Failover does not support Quantum Linear Tape File System.
- IBM **lin\_tape** driver versions 3.0.10 and 3.0.18 cannot be used with StorNext.
- Please refer to the IBM **lin\_tape.ReadMe** the latest details about supported operating system versions and for a listing of supported/non supported versions of the Join Driver.
- SCSI-3 persistent reservations must be enabled in the **lin\_tape.conf** file for IBM APFO if data path failover is not enabled. For additional information on how to configure **SCSI Persistent Reservations**, see the [Tape Devices and Persistent SCSI Reserve](#).

Minimum Tested Version of Firmware / Driver Version	
	StorNext 6.0 (or later)
IBM lin_tape driver version	3.0.23
Quantum Scalar i3 and i6	150G.GS080 – i2.1
Quantum Scalar i6k	760Q.GS25000 – i13
Quantum Scalar i500	700G.GS013 - i9
IBM LTO-6 Drive FH	H990
IBM LTO-7 Drive HH	HB81
IBM LTO-7 Drive FH	HB80
IBM LTO-8 Drive HH	HB83
IBM LTO-8 Drive FH	HB82

## 16.0 Xsan Compatibility

Apple Xsan Server with StorNext FX Clients							
Xsan Controller Version	StorNext 6.0.x (all versions)	StorNext 5.4.x (all versions)	StorNext 5.3.2.x	StorNext 5.3.1	StorNext 5.3.0	StorNext 5.2.2	StorNext 5.2.0 or 5.2.1
All versions of Xsan 5.X				✓	✓		
Xsan 4.1					✓	✓	
Xsan 4					✓	✓	✓

StorNext MDC with Apple Xsan Clients				
StorNext Controller Version	Xsan 5.0.1 macOS 10.13	Xsan 5 macOS 10.12	Xsan 4.1 macOS 10.11	Xsan 4 macOS 10.10
StorNext 6.0.5 (or later)	✓	✓		
StorNext 6.0, 6.0.1, 6.0.1.1		✓		
StorNext 5.4.x		✓	✓	✓
StorNext 5.3.2.x		✓	✓	✓
StorNext 5.3.1			✓	✓
StorNext 5.3.0			✓	✓
StorNext 5.2.2			✓	✓
StorNext 5.2.0, 5.2.1				✓



## 17.0 StorNext Security

StorNext supports two security models:

- UNIX permission bits
- Access Control Lists (ACL)

Although StorNext supports both security models, the version used depends on the client platform and system configuration settings within StorNext.

Display and manipulation of ACLs for NFSv4 is only supported when the NFS server is a StorNext Appliance running StorNext 5.4.0.1 or later.

See the [StorNext 6 Documentation Center](#) for complete details on StorNext security.

## 18.0 Network File System Support

With some limitations outlined below, StorNext supports Network File System versions 3 and 4.

### Limitations

- NFSv3 is not supported in an NFS-HA configuration.
- NFS-HA is only supported on the Xcellis Workflow Director.
- Due to issues with lock recovery that may occur after rebooting, file locking is not supported when concurrently sharing the same StorNext file system from multiple NFS servers.
- Concurrently sharing the same StorNext file system from multiple NFS servers is not supported when used with the StorNext NAS option.
- NFSv4 is only supported when using Linux NFS servers.
- The display and manipulation of ACLs is not supported for NFSv3. However, ACLs are still enforced.
- The display and manipulation of ACLs for NFSv4 is only supported when the NFS server is a StorNext Appliance running StorNext version 5.4.0.1 or later releases.
- NFSv4 delegations are not supported.

## 19.0 Data snpolicy Replication Compatibility

The following table provides compatibility between StorNext releases when using the replication feature. To ensure maximum snpolicy replication performance, Quantum strongly recommends that all systems utilizing snpolicy replication upgrade to StorNext 4.7.1 (or later).

**Note:** If a source replication policy uses deduplication, the target policy must also use deduplication.

Source Release	Target Release						
	StorNext 4.7.x	StorNext 5.0.x	StorNext 5.1.x	StorNext 5.2.x	StorNext 5.3.x	StorNext 5.4.x	StorNext 6.0.x
StorNext 5.0.x	✓	✓	✓	✓	✓	✓	✓
StorNext 5.1.x	✓	✓	✓	✓	✓	✓	✓
StorNext 5.2.x	✓	✓	✓	✓	✓	✓	✓
StorNext 5.3.x	✓	✓	✓	✓	✓	✓	✓
StorNext 5.4.x	✓	✓	✓	✓	✓	✓	✓
StorNext 6.0.x		✓	✓	✓	✓	✓	✓

## 20.0 FlexTier™ License Compatibility

FlexTier for Public Cloud			
Provider	Platform	StorNext 5.4.x	StorNext 6.0.x, 6.1.x
		License	
Amazon S3	Simple Storage Service	FlexTier for Public Cloud	
	Infrequent Access		
	Glacier		
	Government Cloud		
	Commercial Cloud Services		
Microsoft	Azure (AppendBlob only)		
Google	Cloud Platforms using S3		
SwiftStack	Using S3	n/a	FlexTier for Public Cloud

FlexTier for Private Cloud			
Provider	Platform	StorNext 5.4.x	StorNext 6.0.x, 6.1.x
		License	
Quantum	Lattus	Object Store	
	P-100	n/a	FlexTier for Private Cloud
NetApp	Webscale StorageGRID	FlexTier for Private Cloud	
IBM	Cloud Object Storage (Cleversafe)		
SCALITY	RING		
HGST	ActiveScale		
Hitachi Vantara	Hitachi Content Platform	n/a	FlexTier for Private Cloud

## 22.0 FlexSync™ Compatibility

- FlexSync is a license enabled option for use with StorNext 6.0 and later.
- Supported FlexSync data mover platforms include Xcellis Workflow Directors, Xcellis Workflow Extenders and M4xx and M6xx series appliances.
- FlexSync can only be used with unmanaged file systems (source or destination); managed file systems cannot be used with FlexSync.
- Data protection solutions based on FlexSync must have at least one (1) data mover; multiple data movers can be used to maximize performance.
- A single data mover configuration can be used to protect local or cross-mounted file systems.
- FlexSync configurations that transmit data across a WAN or LAN connection to a remote destination use delta block compression to transfer only new or changed blocks to maximize network bandwidth. FlexSync software must be installed on all WAN or LAN connected destinations. At least two (2) FlexSync data movers must be licenses for WAN and LAN connected configurations.
- The FlexSync license is installed on the Xcellis or M-Series system that is also used when configuring FlexSync. This license key will state the total number of licensed data movers.

See the [FlexSync Documentation Center](#) for additional details regarding prerequisites, system guidelines, and compatibility.

## 23.0 QXS Interoperability and Certification

- All Quantum-branded QXS-3/4/6 fibre channel (RC models with fibre channel connectivity kit) and iSCSI QXS-6 models can be used as primary storage in a StorNext environment.
- Usage of virtual volumes is not recommended for StorNext file systems used for bandwidth intensive streaming workloads.
- Thin-provisioned and tiered storage devices should not be used if performance or consistency of performance is expected or desired.

See the [QXS Interoperability Matrix](#) for complete details on StorNext interoperability with StorNext Software.