Release Notes

StorNext Management Suite 2.4.1

SNMS Server Operating Systems:
    SGI IRIX 6.5.19f, 22f and 6.5.19m, 22m and 23m
    Solaris 8 and 9 SPARC (64-bit)
    Red Hat Enterprise Linux Advanced Server 3.0 (32-bit) Update 2

SNMS Client and StorNext FS Server Client Operating Systems:
    SGI IRIX 6.5.19f, 22f and 6.5.19m, 22m and 23m
    Solaris 8 and 9 SPARC (64-bit)
    Red Hat Enterprise Linux Advanced Server (32- and 64-bit) Update 2
    SuSE Linux 8.1 (Enterprise Edition)
    IBM AIX 5.2 (64-bit)
    Windows (2000, NT, Server 2003, and XP)
    Interoperability with Apple Xsan 7N125 or greater

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Contents

📝 Note
- StorNext Management Suite (SNMS) is composed of the StorNext Storage Manager (StorNext SM) and the StorNext File System (StorNext FS). The StorNext FS component can also operate as a stand-alone product. To obtain details on supported application platforms, contact your ADIC representative.
- For Release 2.4.1, the SNMS Server Operating System and the StorNext FS Server Operating System must always be run in US_English.

Purpose of this Release

This release contains information that should be used by client sites to utilize the latest releases of SNMS 2.4.1 and StorNext FS.

New features and functionality for SNMS 2.4.1 include:

- Support for the following platforms:
  - Red Hat Enterprise Linux Advanced Server 3.0
  - SGI IRIX 6.5.22f, 6.5.22m, and 6.5.23m
  - Windows Server 2003
- 100% interoperability with Apple Xsan 7N125 or greater
- Supports up to 30M managed files per managed file system
- Restore audits work with affinities
- Store policies can now run while rebuilds are in progress
- Notification e-mail names can be longer than 17 characters
- LUN assignment scripting
- Dual-aisle configuration with Scalar® 10K
- SNMS failover for STK ACSLS libraries, including ACSLS 7.0 support
- Performance enhancements for the `fsmedcopy` and `fsclean` commands

- Support for HP MSL tape library

- Support for HP EVA 3000 Disk Array with HP SecurePath failover

- Support for HP MSA 1000 Disk Array with HP SecurePath failover

- Support for EMC Clariion CX Series failover for dual-controller configuration

- Support for STK 9840C tape drive

Special Configuration Requirements

The following libraries require special configurations to run SNMS or StorNext FS.

> ✍ Note   StorNext 2.4.1 does not support the following configurations:
>
> - File system metadata on the same network as iSCSI data.
>
> - File system metadata on the same network as NFS or CIFS data.

DAS and Scalar DLC Network-Attached Libraries

Prior to launching the StorNext Initial Configuration Wizard (ICW), DAS and Scalar DLC network-attached libraries must have the DAS client already installed on the appropriate host control computer.

DAS Attached Libraries

For AML/2 and AML/J DAS attached libraries, refer to the *DAS Installation and Administration Guide*, "Installation and Configuration", "DAS Configuration File Description". The client name is either the default SNMS server host name or the name selected by the administrator.

Scalar DLC Attached Libraries

For Scalar 10K and Scalar 1000 DLC attached libraries, refer to the *Scalar Distributed Library Controller Reference Manual* (part number 6-00658-02), "Installation and Configuration", "Client Component Installation". The DAS client should be installed during the installation of the Scalar DLC attached libraries. Use this procedure to install the DAS client.

1   Select **Clients > Create DAS Client**.

The client name is either the default SNMS server host name or the name selected by the administrator.

2   When the DAS client is configured in Scalar DLC, select **Aliasing**.

3   Select sony_ait as the Media aliasing.

The default value is 8mm.

4   Verify that Element Type has AIT drive selected.

5   Click **Change** to execute the changes.

ACSLS Attached Libraries

Due to limitations in the STK ACSLS interface, SNMS only supports single ACSLS configurations. SNMS support requires that the ACSLS client be installed on the appropriate host machine.

Using StorNext with Xsan

StorNext is interoperable with the Apple Xsan application. If you are testing a heterogeneous mix of Apple Xsan and ADIC StorNext clients, the Xsan build must be 7N125 or greater. For information on supported hardware environments when running Xsan, refer to the Apple Xsan documentation. To attach an Xsan client to a StorNext FS server, perform these special configuration steps on the Xsan client.

1   Install the Xsan application.

The machine reboots.

2   Open a terminal window. To become `root`, type:

```
sudo -s
```

3   Create the `role.plist` file in the `/Library/Filesystems/Xsan/config/` directory. The `role.plist` file must include these contents:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://
www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
        <key>license</key>
        <string><Xsan_License_String></string>

        For Example:

        xsan-010-000-n-ncs-rpe-fcu-axd-jnp-ilo-p

        <key>role</key>
        <string>CLIENT</string>
</dict>
</plist>
```

4   Stop the Xsan application. Type:

```
HOST=`hostname -s`
/sbin/SystemStarter stop acfs
```

5   Create the `fsnameservers` file in the `/Library/Filesystems/Xsan/config/` directory. The `fsnameservers` file must include the IP address of the StorNext FS server.

6   Verify the system has started. Type:

```
/Library/Filesystem/Xsan/bin/cvadmin
```

If the system has not started, repeat Step 3.

7   Start the Xsan application. Type:

```
touch /tmp/start_acfs
/sbin/SystemStarter start acfs
```

8   Make the `/Volumes/<fsname>` directory, where `<fsname>` is the name of the file system. Type:

```
mkdir -p /Volumes/<fsname>
```

9   Mount the StorNext FS file system to the mount point defined in Step 8, where `<fsname>` is the name of the file system. Type:

```
mount -t acfs <fsname> /Volumes/<fsname>
```

Certified System Components

This table lists certified system components that support SNMS 2.4.1.

Component	Description
Browsers	Netscape 4.7x, 4.8x, 7.0 Microsoft Internet Explorer 5.5 and later
HBA	Emulex LP8000, LP850, LP9000, LP90002 QLogic: QLA2200, QLA2310, QLA2340, QLA2342
FC Router	ADIC FCR 250, SNC 3000, SNC 5100
FC Switch	Brocade 2x00 and Brocade 3x00 McData Cisco MDS 9000
Libraries	ADIC Scalar 100, 1000, 10K, i2000, S24 AMU v3.10E2 AML/2, E, J ACSLS version 6.0.1, version 6.1 with patch PUT0203, or version 7.0. To obtain the patch for version 6.1, contact your STK sales representative. Dell PV-136T with v.3.11 or higher firmware. Only IBM LTO-2 drives are supported. HP MSL6000 (only supported with the HP LTO-2 tape drives) IBM ULT3583-TL with v.5.14 firmware or higher. STK ACSLS: 9310, L5500, L700, L180, 9740 STK SCSI: L700, L180, 9740
Tape Drives	HP LTO-2; tested with firmware revision F38W IBM LTO-1; tested with firmware revision 16E0 IBM LTO-2; tested with firmware revision 31mj IBM 3590B1A; tested with firmware revision A5UF IBM 3590E1A; tested with firmware revision E32E Sony AIT-2 and Sony AIT-2 Worm; tested with firmware revision 0401 Sony AIT-3; tested with firmware revision 0102 Sony AIT-3; Worm; tested with firmware revision 0201 STK 9840; tested with firmware revision 130.0 STK 9840B; tested with firmware revision 1.33.309 STK 9840C; tested with firmware revision 1.34.553 STK 9940A; tested with firmware revision 1.30 STK 9940B; tested with firmware revision R1.32.427f
NFS	Version 3
Addressable Power Switch	WTI RPS-10m NOTE:　The RPS-10m (master) is supported. 　　　　The RPS-10s (slave) is not supported.

System Requirements

To successfully install SNMS 2.4.1, the requirements listed in the following tables must be met.

StorNext FS Requirements

For each StorNext FS mount, these requirements must be met.

System/Component	Requirement
AIX	**StorNext FS clients:** A minimum of 128 MB of RAM is required.
IRIX	**StorNext FS clients:** A minimum of 128 MB of RAM is required.
Solaris	**StorNext FS clients:** A minimum of 128 MB of RAM is required.
Linux	**StorNext FS clients:** A minimum of 128 MB of RAM is required.
	Intel Pentium 2, 3, or 4 processor
Windows 2000 Windows NT Windows Server 2003 Windows XP	**StorNext FS clients: A minimum of** 256 MB of RAM is required. This requirement can be reduced by using custom cache settings.
	Intel Pentium 2, 3, or 4 processor
Network LAN using TCP/IP (all clients and servers must be interconnected)	For the StorNext FS metadata traffic, ADIC requires that a separate, dedicated, switched Ethernet LAN be used.
SAN	**StorNext FS clients:** An FC-HBA or equivalent SAN communication device where the storage is visible and accessible to multiple SAN clients.
	StorNext FS does not support multiple hosts connected through an FC hub device because the resulting propagation of Loop Initialization Protocol resets can cause data corruption.
Server Memory	For the first 2 file systems, a minimum of 512 MB of RAM. For each subsequent file system (up to 8 total), either passive or active, a minimum of 256 MB of RAM.
Server Hard Disk	StorNext FS requires 350 MB of hard disk space for binaries, documentation, configuration, and log files. If internal meta-data is used, approximately 2.5 GB of additional hard disk space is required per 1M files.
Client Hard Disk	StorNext FS requires 200 MB of hard disk space for binaries, documentation, configuration, and log files.
Disk Drives	StorNext FS only supports the file system when it is running on FC-3 SCSI drives.
Failover	To make sure that data corruption does not occur, an addressable power switch must be used to forcibly shut down the failed meta-data controller. ADIC has qualified the WTI RPS-10m as an addressable power switch.

StorNext Storage Manager Requirements

Note   StorNext SM only runs on SGI IRIX, Red Hat Linux, and Sun Solaris operating systems.

System/Component	Requirement
Browser settings	Reload the StorNext GUI pages. Perform these steps to enable the page reload. • In Netscape, click: **Edit** > **Preferences** > **Advanced** > **Cache**. Select **Every Time** and click **OK**. • In Internet Explorer, click: **Tools** > **Internet Options** > **General** > **Settings** > **General**. Under **Settings**, select **Every visit to the page** and click **OK**.
Server Memory	A minimum of 512 MB of RAM is required.
Server Hard Disk	Depending on file system activity, SNMS binaries, documentation, configuration, and log files require up to 30 GB of local hard disk space. An additional 500 MB of hard disk space is required per 1M managed files.
Client Hard Disk	StorNext FS requires 200 MB of hard disk space for binaries, documentation, configuration, and log files.

Operating System Level Requirements

These tables list the required operating system levels required to successfully operate SNMS and StorNext FS 2.4.1.

StorNext Management Suite Requirements

Server Platform	Operating System Levels
Solaris	Solaris 8, level 108528-09 or later Solaris 9
IRIX	6.5.19f, 22f and 6.5.19m, 22m and 23m
Red Hat Linux	Uniprocessor or Multiprocessor, Red Hat Enterprise Linux Advanced Server 3.0, Update 2, kernel levels 2.4.21-15.0.x.EL and 2.4.21-15.0.x.ELsmp. To build a loadable kernel module, both the kernel and kernel source RPM packages must be installed. To build and install the StorNext FS modules, install all tools necessary to build a kernel module (including compilers) on all Linux clients and server systems. To install these tools, obtain and install a patch (available from Red Hat).

StorNext FS Requirements

Server Platform	Operating System Levels
AIX	5.2 (64-bit)
IRIX	6.5.19, 22f and 6.5.19, 22 and 23m
Solaris	Solaris 8 and 9
Red Hat Linux	Uniprocessor or Multiprocessor, Red Hat Enterprise Linux Advanced Server 3.0, Update 2, kernel levels 2.4.21-15.0.x.EL and 2.4.21-15.0.x.ELsmp. To build a loadable kernel module, both the kernel and kernel source RPM packages must be installed. To build and install the StorNext FS modules, install all tools necessary to build a kernel module (including compilers) on all Linux clients and server systems. To install these tools, obtain and install a patch (available from Red Hat).
SuSE Linux	For uniprocessor systems, the required kernel (SuSE Linux 8.1 Enterprise Edition) is `K_delft-2.4.19-304.` For multiprocessor systems, the required kernel is `K_smp-2.4.19-304.` To build a loadable kernel module, both the kernel and kernel source RPM packages must be installed. To build and install the StorNext FS modules, install all tools necessary to build a kernel module (including compilers) on all Linux clients and server systems. To install these tools, install SuSE Service Pack 2a from CD. If the CD version is not available, use this link to download it from the SuSE website; a SuSE account is required: http://psdb.suse.de/extra/i386/update/SuSE-SLES/8/UnitedLinux-1.0-SP-2a-i386-RC1-CD1.iso
Windows 2000	Service Pack 4
Windows NT	Service Pack 6a
Windows Server 2003	
Windows XP	Service Pack 2

Upgrade Instructions

This section describes the following upgrades:

- Upgrading to SNMS 2.4.1
- Upgrading to StorNext FS 2.4.1
-
-

Upgrading to SNMS 2.4.1

Use the following instructions to upgrade to SNMS 2.4.1.

1 Mount the SNMS 2.4.1 installation CD for the machine's platform.

2 Upgrade the SNMS software. Type:

```
inst.Stornext -upgrade
```

If you have any questions or encounter problems upgrading SNMS, contact the ADIC Technical Assistance Center (ATAC).

- In the USA: 800.827.3822
- Outside the USA (toll free): 00.800.9999.3822
- ATAC website: www.adic.com/techsup

Upgrading to StorNext FS 2.4.1

Use the following instructions to upgrade to StorNext FS 2.4.1.

> ✍ **Note**
> - Before upgrading the StorNext software, ADIC recommends that you back up all StorNext configuration files.
> - After StorNext is upgraded, your StorNext license remains valid; there is no need to request a new one as long as your system ID does not change.

1 Shut down StorNext FS.

- For **UNIX**, type: `/etc/init.d/cvfs fullstop`
- For **Windows**, click: **Start > Programs > StorNext File System** and select **Stop and Remove File System Services.**

2 Back up the `/usr/cvfs/config` directory.

3 Remove the old version of StorNext FS.

- For **AIX**, type:

  ```
  installp -u <file_set>
  ```

  where the `<file_set>` is the StorNext product to be removed.

  For example:

  ```
  snfs_2.3.1b22.rtc
  ```

- For **IRIX**, type:

  ```
  versions remove cv_base cv_clnt cv_serv
  ```

- For **Solaris**, type:

```
pkgrm ADICcvfs
```

- For **Linux**, type:

```
rpm -qa|grep cvfs-client
cvfs-client_<version information>

rpm -ea cvfs-client_<version information>

rpm -qa|grep cvfs-server
cvfs-server_<version information>

rpm -ea cvfs-server_<version information>
```

- For **Windows** click: **Start > Settings > Control Panel > Add/Remove Programs** and select **StorNext File System**.

4   Install the upgrade version of StorNext FS. Depending on your operating system, follow the installation instructions in either the *StorNext File System Installation Guide for UNIX Users,* or the "Installing StorNext FS on Windows" chapter of the *StorNext Management Suite Installation Guide*.

5   Restore the backup (from Step 2 on page 9) files in the `/usr/cvfs/config` directory.

6   Reboot the system.

Upgrading SNMS from Red Hat Linux 8.0 to Red Hat Enterprise Linux Advanced Server 3.0

SNMS 2.4.1 does not support Red Hat Linux 8.0. Customers who use SNMS on the Red Hat Linux 8.0 must upgrade to Red Hat Enterprise Linux Advanced Server 3.0 (RHEL). The following procedures list upgrade prerequisites, how to upgrade to RHEL, and specify post-upgrade tasks.

Upgrade Prerequisites

Before upgrading from Red Hat Linux 8.0 to RHEL, perform these steps.

1   Verify that the StorNext entries in `/etc/fstab` are saved in a file that will be backed up. After Red Hat Linux 8.0 is upgraded to RHEL, this file is used to restore the entries in `/etc/fstab`. Type:

```
cat /usr/adic/www/conf/cvfs_mount_points

grep cvfs /etc/fstab
```

If the output of these commands is not the same, type:

```
grep cvfs /etc/fstab > /usr/adic/www/conf/cvfs_mount_points
```

2   Stop all SNMS software components except those required to perform the backup. This action prevents any changes to the SNMS system while the backup is running. Type:

```
/usr/adic/bin/adic_control stop
/usr/adic/bin/adic_control stop SNFS
/usr/adic/bin/adic_control start database
/usr/adic/bin/adic_control start MSM
```

3   Perform an SNMS backup. Type:

```
/usr/adic/TSM/exec/tdlmBackup
```

If the backup was not successful, do not continue to the next step. `tdlmBackup` displays the media that is used. Record the media ID.

4 Mount the backup media.

    a. From the StorNext Storage Manager (SNSM) Home Page, click **Media > Library > Mount**.

       This action enables media to mount without requiring an operator to manually open the library and place backup media in the drive.

    b. Record the drive alias where the media is mounted.

5 Record the serial number of the drive where the backup media is mounted. This information is used during the restore process (after RHEL is installed). Type:

```
/usr/adic/TSM/exec/fsconfig -i <drive_alias>
```

6 Stop the remaining software components. Type:

```
/usr/adic/bin/adic_control stop
```

7 Capture and print the following command output so it is accessible after RHEL is installed. Type:

```
df
grep Node /usr/adic/DSM/config/*.cfg
/usr/cvfs/bin/cvlabel -l
grep cvfs /etc/fstab
/usr/adic/TSM/util/fs_scsi -p
cat /etc/sysconfig/rawdevices
```

8 Remove the SNMS software. Insert the SNMS installation CD (the previous version that is being removed) and type:
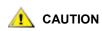
```
inst.StorNext -remove
```

9 Insert the RHEL installation CD in the CD drive.

10 Power off the machine.

11 Disconnect the RAID used for the StorNext FS file systems from the machine.

12 If an internal disk is used for the StorNext FS file system, ADIC recommends that you disconnect it before installing RHEL so it is not reformatted during the installation process.

Upgrading to RHEL

Use this procedure to upgrade to RHEL.

1 Power on the machine and install RHEL.

During the installation, you are directed through a series of screens and CD changes.

> ⚠️ **CAUTION** **If the StorNext FS disk is reformatted, then additional steps are required to recover any migrated data.**

2 Before clicking **Finish** on the last installation screen, reconnect the RAID.

3 Perform all post-upgrade configuration tasks necessary to complete the RHEL setup.

Post-upgrade tasks can include, but are not limited to, setting up the yellow pages, auto mounts, raw devices, etc.

Post-Upgrade Tasks

After upgrading to RHEL, use this procedure to complete post-upgrade tasks.

1   Reconnect all disconnected internal disks.

2   Mount the SNMS 2.4.1 installation CD and install the SNMS software. Type:

```
inst.StorNext
```

3   Add SNMS environment settings to the shell. Type:

```
. /usr/adic/.profile
```

- or -

```
source /usr/adic/.cshrc
```

4   Verify that all tape drives, archives, and disks are visible. Type:

```
/usr/adic/TSM/util/fs_scsi -p
```

5   Compare the command output to the command output before RHEL was installed (Step 7 above).

The device paths may be different, but the same disks, tape drives, and archives should be listed. If the command output is not the same, correct it before going to the next step.

6   Determine the mounted backup media device path. Use the serial number recorded in Step 5 on page 11. Type:

```
/usr/adic/TSM/util/fs_scsi -f <serial_number>
```

7   Restore the information from the backup. Type:

```
/usr/adic/TSM/exec/tdlmRestore -f <device_path> -t <device_type>
```

8   Restore the SNFS configuration files. Type:

```
cd /usr/adic/DSM/config
```

9   Rename all configuration files with a prefix of `.backup_` back to their original name.

For example:

```
mv .backup_snfs1.cfg snfs1.cfg
```

10   Add all StorNext FS entries back to `/etc/fstab`. Type:

```
cat /usr/adic/www/conf/cvfs_mount_points >> /etc/fstab
```

11   Upgrade the SNMS software. Type:

```
inst.StorNext -force -upgrade
```

This step converts the restored database to the format of the installed release.

12   Restart the SNMS software. Type:

```
/user/adic/bin/adic_control start SNFS
```

13   Verify that data exists in the StorNext FS file systems.

14   Verify that data can be stored and retrieved.

Upgrading SNMS on IRIX

For instructions on upgrading an IRIX machine to SNMS 2.4.1, contact ATAC. After upgrading to SNMS 2.4.1, you must perform the following post-upgrade task to turn off `mediaid`.

If you upgraded StorNext on a machine running IRIX (all supported versions), use this procedure to turn off `mediad` for any StorNext-managed storage device.

1   Log on as `root`. Type:

```
su root
```

2   Edit the `mediad.config` file. Type:

```
vi /etc/config/mediad.config
```

3   Add the following statement for each SNMS-managed storage device.

```
ignore device <device_name>

...

ignore device <device_name>
```

where `<device_name>` is the description path to the storage device.

For example:

```
/dev/rmt/tps0d6nrv
```

4   Save the changes and quit the edit session.

5   Stop the `mediad` process. Type:

```
mediad -k
```

6   Re-start the mediad process. Type:

```
mediad
```

Known Issues

This table lists known issues in this release of StorNext.

Operating System	CR Number	Service Request Number	Description	Workaround

AIX	33986	N/A	During a StorNext upgrade, if you encounter a DSM failure that resembles the following output:
			
			`SNFS UPGRADE 2.4.1(48) Status`
			`1) Upgrade 2.4.1(48) perl Complete`
			`2) Upgrade 2.4.1(48) GUI Complete`
			`3) Upgrade 2.4.1(48) apache Complete`
			`4) Upgrade 2.4.1(48) DSM Failed`
			
			`Check /tmp/SNFS.install.log log file for errors.`
			
			`Do you wish to continue (Yes or <No>)? No`
				Reboot the machine and repeat the upgrade process.
				
				NOTE: This may be caused by an inability to unmount the file system. Check the log for details.

	34431	N/A	The `cvfsck` command may fail on AIX.	**1** Run the following command. Type: `ulimit -d unlimited -f unlimited -m unlimited` **2** Re-run the `cvfsck` command.
IRIX	34453	308348	The `cvdb -K` command does not work with IRIX.	The `-K` parameter is not supported at this time.
Linux	21602	N/A	MSM does not install properly on Red Hat Linux machines.	Manually install `pdksh` (available on the Red Hat website or the StorNext installation disks).
	31277	N/A	The `snfsdefrag` command can cause file fragmentation to worsen if the free space on your file system is highly fragmented.	Before using the `snfsdefrag` command, make sure your file system has at least 10% free space available.
	31374	N/A	Available tape drives are not visible when running HP SecurePath on a Red Hat Enterprise Linux Advanced Server 3.0 machine.	Run the `dev_rescan` utility to view available tape drives.

Operating System	CR Number	Service Request Number	Description	Workaround
Linux	34383	N/A	FSM may panic and deleting files is difficult, after system reaches 100% capacity.	**1** Add the following line (temporarily) to the configuration file: `MaxMBPerClientReserve 0` **2** Restart FSM and verify that files can be removed to free enough space to continue operations. **3** Remove files. **4** Remove the line added in <u>Step 1</u> from the configuration file. **5** Restart the FSM. **NOTE:** If temporary line is not removed from the configuration file, StorNext performance will be severely impacted.
Solaris	17263	N/A	Recursive `chmod` command fails at a certain depth on Solaris 9 machines.	Solaris `chmod`, `chown`, and `chgrp` depend on "." and ".." being the first two entries returned by the `readdir` command. Compile the GNU not UNIX (GNU) versions of the `fileutils` package; GNU `chmod`, `chown`, and `chgrp` do not depend on directory entry ordering.
Windows	14254	N/A	In a Windows/UNIX environment, using path names longer than 220 characters may cause procedures to fail under all versions of Microsoft Windows.	Verify that path names are not longer than 220 characters.
	31959	N/A	Windows non-paged pool exhausted due to Oplock deadlock.	Disable Oplock.
	34067	N/A	When copying from a CIFS mounted machine to SNFS client, the client fails and the following application prompt appears: (Action Required) The file system 'b44' on host '127.0.0.1' has been re-initialized.	Reboot the system.

Operating System	CR Number	Service Request Number	Description	Workaround
Windows	34699	N/A	File system does not automatically mount after a reboot due to `GetByHostName` failure.	Do one of the following: • Add the server name to the `etc\hosts` file on the Windows client. - or - • Type the IP address of the machine in the `fsnameservers` tab instead of the machine name.
All	34784	N/A	When performing a `cvcp` command from a Windows client against a file with international characters, a "cannot find file" error is returned.	N/A
	34737	N/A	StorNext (CVFS) does not support DriveImage7.	N/A
	4534	N/A	Files do not migrate by default policy rules if time is set in the future.	Verify that time settings on all server and client machines are synchronized.
	7576	N/A	Install / Uninstall failures during installation (permissions and NIS).	Contact ATAC: • In the USA: 800.827.3822 • Outside the USA (toll free): 00.800.9999.3822 • ATAC Website: www.adic.com/techsup
	15372	N/A	JNI FC-HBA drivers for Linux do not support tape libraries.	N/A
	16853	N/A	Stopping DSM component causes unwanted HA failover.	Refer to the StorNext Product Bulletin #4: http://www.adic.com/us/collateral/SNMS_ProdBull_4.pdf
	22159	N/A	HA Failover: Linter does not automatically start on the standby server when the active server reaches 100% capacity on the local file system.	Manually start SNSM components using the StorNext GUI.
	34211	N/A	On STK libraries, StorNext and Extensible Drive Interface (XDI) do not handle multiple Cartridge Access Points (CAP).	Use only first CAP on multi-CAP STK libraries.

Operating System	CR Number	Service Request Number	Description	Workaround
All	34571	N/A	Displayed quotas are different than requested quotas.	N/A
	34720	N/A	Breaking an Ethernet connection causes a disconnect that invalidates locks (file locking).	N/A
	34875	N/A	All SNMS components must be stopped and restarted after a disaster recovery audit is run.	N/A
	35235	N/A	Dual Aisle: The Media Storage Manager logs a `memory allocation` error when mounts are cancelled.	System performance is not impacted, however, incorrect messages are logged for mount commands.

Resolved Issues

This table lists resolved issues in this release of SNMS.

Operating System	CR Number	Service Request Number	Description
AIX	15599	N/A	GUI does not start the StorNext FS on AIX.
	34129	N/A	AIX clients crash simultaneously when the customer's Java-based application is run on a CVFS mounted file system.
IRIX	32667	N/A	IRIX server and all clients hung on moves (mv); retrieves not issued for truncated files.
	33654	N/A	Unable to create new file system via ICW on IRIX due to license problem.
Linux	15186	N/A	The upgrade of the database on Linux fails due to the `/usr/adic/database` directory being removed.
	15637	N/A	Following a fresh installation, the ICW "Add Library" step fails because it could not find the changer device.
	34044	N/A	`cvfsck` hangs after completing dead inodes check on RHEL systems.
Solaris	21775	N/A	On Solaris, if the software is removed and reinstalled with `inst.StorNext`, no changes made to the `/kernel/drv/ sgen.conf` file are present.
	32086	N/A	When performing a rebuild audit of FSM the function fails due to an environment variable not being sourced in by the GUI. This causes the audit to fail and not load the database.

Operating System	CR Number	Service Request Number	Description
Windows	15635	N/A	StorNext FS errors when mapping a drive on Windows.
	31013	N/A	A daemon exception error was experienced on a Windows 2000 client.
	31952	N/A	The call to `PnVerifyWindowsCompatable()` is failing with an `VOP_EINVAL` error. I18N support on Windows is non-functional.
	33646	N/A	Getting a exception on W2K client going to a Linux server when running `iozone`.
	33954	N/A	2.4 FSM Rolling SEGV Panic - big endian server, win security and quotas.
	34263	N/A	Windows files erroneously created with UNIX execute bits.
All	13011	N/A	Internationalization languages are not displayed correctly in the SNMS GUI.
	15492	N/A	Due to the limited Media Class length, media type names must be limited to 4 characters.
	17594	N/A	Explicitly state command line environment requirements for TSM tasks.
	21548	N/A	HA Failover: `startlinter` script requires `/tcorrect` option in order for database to start successfully on standby server.
	25052	N/A	The periodic sync daemon (`CvSyncAttr`) does a flush on all of the buffers for a file. While it is waiting for the writes to complete, it holds the `cvnode` lock.
	25053	N/A	Apache upgrade fails 2.3 b17 to 2.3 b23.
	29010	236738	`MSM_control` start can corrupt archived configuration files.
	30215	N/A	A file created with sticky bit permissions (i.e., 2444) loses its sticky bits in the FILEATTR database after the file is retrieved.
	30528	263094	Four (4) of the `/usr/adic/bin/adic_control` options do not work. • `adic_control restart` • `adic_control stop snms` • `adic_control start snms` • `adic_control fullstop`
	31827	N/A	There are several erroneous ASSERTs in the FSM buffer transaction code that result in the following error: `ASSERT(((trans_buf_item_t*)tip)->bi_rollback_tid)`
	31918	N/A	When the database component is shut down, `cvfs fullstop` will fail during the MSM shutdown because MSM cannot connect to the database.
	31929	N/A	Mounted disks show up in the ICW.

Operating System	CR Number	Service Request Number	Description
All	31977	N/A	After a file has been deleted, the SNSM File Recover page returns an "undefined" status rather than the filename.
	32150	N/A	The drive mount state is not updated for media that is missing from physical libraries during audits.
	32239	N/A	When using the GUI, network-attached libraries display incorrect information in the Library Configuration window.
	32240	N/A	When trying to add or modify a mailbox for a network library, a debug message is displayed. Clicking **OK** causes the message box to close, but no action is taken.
	32618	N/A	File system manager freezes when using cvmkfile to create files larger than 600GB.
	33669	N/A	Authentication mapping regression - random "other" mode.
	33787	N/A	2.4 roll up: 232: exception in md_cvdir.
	33833	N/A	2.4 roll up: cvntclnt fails to map drives
	33993	N/A	Change the GUI license text.
	34034	N/A	2.4: system panic: ASSERT(file_locked).
	34122	N/A	StorNext GUI: ICW - ADD TAPE DRIVES library selection page is broken.
	34123	N/A	StorNext GUI: ADD LIBRARY - Needs to accommodate DAS dual-aisle with HA failover.
	34209	N/A	Dual Aisle Eject does not work.
	34256	N/A	Immutable files - protect against non-zeroed dirty bits.
	34275	N/A	uids and gids >= 32K lead to problems in fsrecover.

Limitations

This table lists the limitations that have been discovered in this release of SNMS.

Operating System/ Component Affected	Description
IRIX	StorNext FS uses 64-bit inode numbers. Programs compiled without 64-bit support may experience problems working with files with inode numbers greater than 2 GB. This issue is not unique to StorNext, but may be encountered by some legacy applications when working with StorNext FS.
	SNMS only supports SGI 64-bit versions of IRIX on operating systems that use the SGI version of the QLogic QLA2200 or QLA2310 FC-HBAs.
	SNMS and StorNext FS are shipped as separate, installable streams for the maintenance (m) and feature (f) releases of IRIX. You need to select the correct maintenance or feature streams of SNMS and StorNext FS. Otherwise, you will encounter problems during installation and while running the product. Use the `uname -aR` command to determine the running version of IRIX. • If you are using the maintenance stream of SNMS or StorNext FS, the stream is listed as `6.5.19m, 22m, or 23m`. For this stream, you must install the maintenance release of SNMS or Stornext FS. • If you are using the feature stream of SNMS or StorNext FS, the stream is listed as `6.5.19f, or 22f`. For this stream, you must install the feature release of SNMS or StorNext FS. • If you are using IRIX level `6.5.23,` you must install the maintenance stream of SNMS or StorNext FS.

	On many versions of IRIX, the root crontab contains the following entry which is used to remove old application crash dumps and temporary mail files:
	
	 `find / -local -type f '(' -name core -o -name dead.letter ')' -atime +7 -mtime +7 -exec rm -f '{}' ';'`
	
	 If StorNext file systems are mounted, they will be traversed by this `find` command which can have a dramatic impact on the performance of other applications currently using these file systems. To prevent the traversal of StorNext file systems, modify the `find` command so it reads:
	
	 `find / -local '(' -type d -fstype cvfs -prune ')' -o -type f '(' -name core -o -name dead.letter ')' -atime +7 -mtime +7 -exec rm -f '{}' ';'`

Operating System/ Component Affected	Description

Linux	StorNext FS is shipped as separate, installable versions for the Uniprocessor (up) and Multiprocessor (smp) Linux kernel versions. You need to select the correct kernel version of StorNext FS. Otherwise you will encounter problems during installation and while running the product.
	
	Use the `uname -v` command to determine the running version of Linux. The version includes the string smp for multi-processor kernels.
	
	• For **up** kernels, the StorNext FS RPM files for the server and client code must have **up** in the RPM file name.
	• For **smp** kernels, the StorNext FS RPM files for the server and client code must have **smp** in the RPM file name.
	
	The following are examples of Linux RPM file names for **up** and **smp** kernels.
	
	• **up**:
	`cvfs-client_7.1_2417up-2.1.1-63.i386.rpm`
	`cvfs-server_7.1_2417up-2.1.1-63.i386.rpm`
	
	• **smp**:
	`cvfs-client_7.1_2418smp-2.1.1-63.i386.rpm`
	`cvfs-server_7.1_2418smp-2.1.1-63.i386.rpm`

	On many versions of Linux, the cron system runs a nightly script called `slocate.cron` that is used to build a database used by the slocate command. If StorNext file systems are mounted, they will be traversed by this cron job which can have a dramatic impact on the performance of other applications currently using these file systems. To prevent cron from traversing StorNext file systems, two files need to be updated. Perform these steps:
	
	1 Modify the `updatedb` command in the /etc/cron.daily/slocate.cron file to read:
	`/usr/bin/updatedb -f`
	`"cvfs,nfs,smbfs,ncpfs,proc,devpts" -e`
	`"/tmp,/var/tmp,/usr/tmp,/afs,/net"`
	NOTE: "cvfs" has been added to the exclude list.
	
	2 Add `cvfs` to the PRUNEFS definition in the `/etc/updatedb.conf` file. For example:
	`PRUNEFS="cvfs devpts NFS nfs afs proc smbfs autofs auto iso9660"`

Operating System/ Component Affected	Description
Solaris	StorNext FS only supports 64-bit inodes for installations of the software on Solaris 8. (CR 8208).
	For LUNs there is a maximum limit of 850 GB. Recommendation: To maximize support across all platforms, set LUNs to be no greater than 850 GB when you are using Solaris 8 or 9.

	On Solaris, by default, the `/usr/lib/fs/nfs/nfsfind` script is run nightly by the cron daemon. This script contains a `find` command that traverses any local file system that is exported (shared) via NFS. If the running of this script is interfering with the performance of processes accessing StorNext file systems, it can be modified to skip them. To do so, add the following line to the `find` command in the script:
	
	`'(' -type d -fstype cvfs -prune ')' -o`
	
	The final `find` command should look like this:
	
	`find $dir '(' -type d -fstype cvfs -prune ')' -o -type f -name .nfs\* -mtime +7 -mount -exec rm -f {} \;`

Windows	Windows-based StorNext FS clients do not support symbolic links that point to a file system outside of StorNext FS. Symbolic links are created either by a UNIX/Linux client or by a Windows client (and are referred to as junctions).
	If you are using the SNMS client software with Windows 2000, Windows NT, Windows Server 2003, or Windows XP, turn off the Recycle Bin in the StorNext file systems mapped on the Windows machine, so the file systems will work properly. 1 On the Windows client machine, right-click the **Recycle Bin** icon on your desktop and click **Properties**. 2 Click **Global**. 3 Click **Configure drives independently**. 4 Click **Local Disk** onto which you have mapped SNMS. 5 Select the **Do not move files to the Recycle Bin. Remove files immediately when deleted** check box. 6 Click **Apply** and **OK**.
	Virus-checking software, such as McAfee Virus Scan, can severely degrade StorNext FS performance. If you have anti-virus software running on your Windows 2000/Windows NT/Windows Server 2003/Windows XP machines, ADIC recommends you configure the software so that it does NOT check StorNext FS.

Operating System/ Component Affected	Description
All	Hot re-zoning of SAN fabrics is not supported.
	StorNext is incompatible with CXFS.
	StorNext File System is incompatible with third-party portmappers.
	The SNMS GUI does not support an isolated metadata network topology with a system configured for HA failover. If the browser does not have connectivity to the isolated metadata network, then it will fail to connect after a failover event. If you have an isolated metadata network topology, make sure your browser has connectivity to the isolated metadata network or correct your network topology so the browser has connectivity to the isolated metadata network. For more information, contact ATAC: • In the USA: 800.827.3822 • Outside the USA (toll free): 00.800.9999.3822 • ATAC Website: www.adic.com/techsup

Documentation

These documents are currently available for StorNext products:

Document Number	Document Title
6-00360-05 Rev B	*StorNext Management Suite Installation Guide*
6-00905-03 Rev B	*StorNext File System Installation Guide for UNIX Users*
6-00362-03 Rev B	*StorNext Management System Administrator Guide*
6-00361-07 Rev B	*StorNext Storage Manager Quick Reference Booklet*
6-00361-08 Rev B	*StorNext File System Quick Reference Booklet*

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