



Product Alert 48

Product	StorNext versions 5.4.0.3 and the 5.3.2.1_RC65259 Limited Customer Release (LCR)
Summary	Problem: Data within a managed file system may not be protected when using StorNext 5.4.0.3
Date	June 2017

Problem

Data within a StorNext Managed file system may not be protected or backed up with StorNext 5.4.0.3 or 5.3.2.1_RC65259 (LCR).

Note: For more information, contact the Quantum Technical Assistance Center and reference CR 68503.

Symptom

Customers may see files without any DMAPI attributes under a Storage Manager relation point, or notice that files are not being stored to archive media. Additionally, customers may see permission denied errors when trying to move a directory within a relation point.

Cause

This issue was caused by a regression in the StorNext File System Manager (FSM) process that was introduced in the StorNext 5.4.0.3 release. Specifically, a value is not being reset correctly when the FSM recycles an inode in its cache.

6-00960-148 Rev C, June 2017, Product of USA.

© 2017 Quantum Corporation. All rights reserved. Your right to copy this manual is limited by copyright law. Making copies or adaptations without prior written authorization of Quantum Corporation is prohibited by law and constitutes a punishable violation of the law. Artico, Be Certain (and the Q brackets design), DLT, DXi, DXi Accent, DXi V1000, DXi V2000, DXi V4000, DXiV-Series, FlexTier, Lattus, the Q logo, the Q Quantum logo, Q-Cloud, Quantum (and the Q brackets design), the Quantum logo, Quantum Be Certain (and the Q brackets design), Quantum Vision, Scalar, StorageCare, StorNext, SuperLoader, Symform, the Symform logo (and design), vmPRO, and Xcellis are either registered trademarks or trademarks of Quantum Corporation and its affiliates in the United States and/or other countries. All other trademarks are the property of their respective owners. Products mentioned herein are for identification purposes only and may be registered trademarks or trademarks

As a result, when objects are created underneath a relation point directory, they may not inherit the DMAPI attributes which will cause an issue with files store and rename operations.

Solution

Customers who have configurations that include managed file systems and are running either of the affected versions of StorNext software should upgrade to StorNext 5.4.0.4 immediately.

Note: This issue is resolved in StorNext release 5.4.0.4.

Caution: Refer to [Required Post-Upgrade Tasks](#) to run the `snsnms_scan` tool to detect and fix any files that might be affected.

Required Post-Upgrade Tasks

After upgrading to StorNext 5.4.0.4 customers must run the `snsnms_scan` tool to detect and fix any files that might be affected.

The `snsnms_scan` command has the following usage:

```
/usr/cvfs/lib/snsnms_scan: [-fy] [-t num] relation-point-paths
```

Caution: You must specify the relation-point-paths (not the file system mount points) when using the `snsnms_scan` tool.

Entry	Usage
<code>-f</code>	fix damaged files when found
<code>-y</code>	bypass prompt before processing
<code>-t</code>	thread count for parallel processing (default 8)

The `snsnms_scan` tool finds and repairs the file system issues that result from using an affected version of StorNext. The tool was designed to be understood and used by end-user administrators.

snsnms_scan Tool

The `snsnms_scan` tool must be run as root. The post process step must be run on the MDC where Storage manager is located. The tool has been written to run as fast as possible and will impose some CPU load on the MDC.

Caution: Customers with larger installations may want to execute this tool at non-peak usage hours to reduce system impact.

The tool can be run in a scan only mode, or a scan and repair mode. The tool takes a list of paths to Storage Manager relation points as input arguments. It scans the contents of each relation point looking for files and directories which do not have the correct metadata information for Storage Manager.

For each relation point two files are output in the current directory the tool is run from, one for directories with identified issues and one for files. A summary of relation points with issues found will be the output at the end.

Repairing Files

In order to repair files, the tool must be run using the **-f** option. When used with the **-f** option, the same reported files will be the output, but the related metadata will be repaired. The same summary of relation points with issues will be the output along with instructions on how to run the **fschfiat** command. Once the **fschfiat** command has completed setting of effected files to be stored by storage policy, the repair processing is done.

Using `snsnms_scan` in Scan Mode

Caution: Always make a backup of the files generated by the `snsnms_scan` tool since the files are overwritten each time you run the tool.

- `file_<rel-point>.txt`
- `dir_<rel-point>.txt`

Using `snsnms_scan` in scan mode on the `/snfs/wotan/S3` relation point:

```
root> /usr/cvfs/lib/snsnms_scan /snfs/wotan/S3
```

```
Prepared to process:
```

```
/snfs/wotan/S3
```

```
Enter OK to continue> OK
```

```
Proceeding with scan for damage...
```

```
Scanning /snfs/wotan/S3 for content not in class 3
```

```
Scanning file tree...
```

```
Scan complete.
```

```
224 inodes (0 dir/1 files bad) in 1 seconds at 224 inodes/sec
```

```
Bad content was found in 1 relation point.
```

```
The following are impacted:
```

```
/snfs/wotan/S3
```

```
Errors found the scan, review the files for the relation points and run with the  
-f option to repair files.
```

Using snsms_scan in Repair Mode

Caution: You must specify the relation-point-paths (not the file system mount points) when using the `snsms_scan` tool.

Do not stop the fix process as you will lose track of files already repaired.

Using `snsms_scan` in repair mode on the `/snfs/wotan/S3` relation point:

```
root> /usr/cvfs/lib/snsms_scan -f /snfs/wotan/S3
```

Prepared to process:

```
/snfs/wotan/S3
```

```
Enter OK to continue> OK
```

```
Proceeding with scan and repair...
```

```
Scanning /snfs/wotan/S3 for content not in class 3
```

```
Scanning file tree...
```

```
updating snea state for /snfs/wotan/S3/slord/testdir/passwd
```

```
Scan complete. 224 inodes (0 dir/1 files bad) in 1 seconds at 224 inodes/sec
```

```
File system content has been repaired.
```

You now need to run the following command as root on the StorNext MDC.

```
fschfiat -s p -B files_S3.txt
```

Caution: Quantum recommends you run a final scan when everything has been repaired to make sure no files were missed. It is possible to have a race between listing the files and repairing them.

Workaround

There is currently no workaround for this issue. Upgrade to StorNext 5.4.0.4 immediately to resolve this problem.

Bulletin and Alert Automatic Notification

To automatically receive future bulletins and/or alerts for Quantum StorNext via email, go to the location below and enter basic information about yourself, your company, and your StorNext product. You need to provide your StorNext serial number when you sign up.

Go to this location to sign up for automatic notification:

www.quantum.com/stornextbulletins

Contacting Quantum

More information about StorNext is available on the Quantum Service and Support website at www.quantum.com/ServiceandSupport. The Quantum Service and Support website contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, contact the Quantum Technical Assistance Center:

United States	800-284-5101 Option 5 (toll free)
EMEA	00800 7826 8888 (toll free) 49 6131 3241 1164
Online Service and Support	www.quantum.com/OSR
World Wide Web	www.quantum.com/ServiceandSupport

(Local numbers for specific countries are listed on the Quantum Service and Support Website.)