Product Bulletin 60

Product	All versions of StorNext® Storage Manager running StorNext 3.1.3 or earlier, 3.5.0 or 3.5.1
Summary	The Storage Manager database does not return the correct number of rows for queries during fsclean processing.
Date	July 2010

Overview

During processing of the `fsclean` command, the database can return the wrong number of rows in one of two different ways.

Scenario 1): In databases with certain characteristics, size and/or internal layout, running the "`fsclean -r`" command will not completely clean all database entries for a specific piece of media that has been marked as logically blank by the fsrminfo command. This issue can result in data loss.

Scenario 2): In databases with certain characteristics, size and/or internal layout, running the `fsclean` command (most variations) can remove information from some database tables so that a file's path and name cannot be created by commands such as `fsmedinfo` that rely on those entries. This issue is considered an annoyance because the file's path and name can still be found through other utilities.

If you encounter this situation, please contact Quantum Support for assistance and reference CR 27727.

Symptoms

In Scenario #1, a file can still look like it is stored (fully or partially) on a piece of media, when in fact the database entries are stale, because entries that should have been removed were not. Because these stale entries still exist in the database, a file could be truncated even though it is not fully stored on valid media. If it is truncated and no other copies exist on valid media, data loss could occur. This would show up as a failed retrieve of the file in the TSM tac logs. There is no exact signature for this item that identifies it; however, if an fsretrieve of a file fails because the media is invalid, it could indicate this issue.

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Example output from TSM tac logs for a fsretrieve failure:

```
Nov 30 08:52:45 jdp-rhel5-1.mdh-dev.quantum.com sntsm
fs_cpyreq[20148]: E1201(8)<1933452426>:mda4rtv2562:  Media not
found ndx: 2 gen: 1
```

```
Nov 30 08:52:45 jdp-rhel5-1.mdh-dev.quantum.com sntsm
fs_cpyreq[20148]: E1004(4)<1933452426>:mda4cmn1416:  Retrieval
failure: cannot retrieve (key: 8 ino: 12 gen: 0), media gone. copy
num - 1
```

In Scenario #2, commands such as `fsfileinfo` and "`fsmedinfo -l`" will not be able to generate the path and or name for a file that is stored on the media because of the missing entries.

Example from a "fsmedinfo -l" will show a "PATH UNKNOWN"

```
350    001    Tue Nov 24 13:08:31 2009  8:PATH UNKNOWN, (name rec
not found)
```

Solution

This issue is fixed in the StorNext 3.5.2, 3.1.4 and later, and all 4.0 releases.

> **Note:** The fix will prevent the problems documented above from occurring. If the problem has already happened the fix will not change the situation. If you suspect you have encountered either problem, contact your service provider.

There is currently no workaround for this problem. The specific triggers (database characteristics) have not been isolated.

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:

North America	+1 800-284-5101 Option 5
EMEA	00800 9999 3822
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.)