Product Alert 49

Product	All available versions of Quantum StorNext® 6 software
Summary	The scheduled removal of inactive instances of files from a managed file system may remove more instances than configured to be removed.
Date	April 2018

Problem

This Product Alert describes an issue that may impact all StorNext 6 based environments configured with managed file systems. New systems running StorNext 6 and systems upgraded from StorNext version 5x to 6x are potentially vulnerable. This issue is limited to StorNext 6 based configurations only.

StorNext 6.0 introduced a new parameter that provides users with a more flexible way to schedule the automated removal of inactive file instances within a managed file system.

StorNext GUI

Specifically, configurations that have policy classes that were created or modified using the StorNext graphical user interface (GUI) after any version of StorNext 6 was installed are most likely to be affected.

The StorNext GUI `Age of inactive versions to clean` parameter controls the per-class cleanup of inactive file versions from the Storage Manager database. StorNext Storage Manager may misinterpret the parameter. Setting this parameter to "0y", which is the default when applying policy settings using the StorNext GUI, incorrectly removes more inactive versions than intended.

Command Line Utilities

Policy classes created or modified using command line utilities do not set a value for this parameter unless explicitly stated. When the value has never been set, it represents an empty string, and the issue does not occur.

Symptom

To determine if your StorNext 6 environment has been affected by this issue, search the `/usr/adic/TSM/logs/tac/*` log files for occurrences of the `fsclean -c` keyword. Run the following command from the administrator's console and look for the following:

```
zgrep "fsclean -c" /usr/adic/TSM/logs/tac/*
```

When these logs are observed and the time string provided to the **fsclean** command matches, or is close to, the time of the log, the issue is likely present on your system. The difference between the timestamps should roughly match the clean version times for the class or the system default of 7 years.

The following examples include bolded text to highlight the timestamps:

Example 1 - Environment has been affected:

Apr 06 10:52:00.809157 mdc1 sntsm fs_feature[23097]: E1202(9)<01510>:<0>:CleanVersionsFeature::run210:° clnver: fsclean -c exampleclass -t **2018:04:06:10:52:00**

Example 2 - Environment has not been affected:

Mar 31 20:00:01.018047 snxxx-stornxt2 sntsm fs_feature[1127]:E1202(9)<7156037>:<0>:CleanVersionsFeature::run159: clnver: fsclean -c oneyearbackup -t **2017:03:31:20:00:01**

Solution

This issue is resolved with StorNext 6.0.6.1.

Quantum recommends all StorNext 6 environments with managed file systems upgrade to the 6.0.6.1 release as quickly as possible.

Note: Upgrading to StorNext 6.0.6.1 will not recover lost instances that have been cleaned prior to the upgrade.

Workaround

There are two options to work around this issue. They are as follows:

Note: Quantum recommends using Option 1.

Option 1

Turning off the scheduled clean-versions feature will prevent this issue from impacting a StorNext 6 environment. Quantum recommends that all StorNext 6 configurations with managed file systems should disable all file cleaning tasks by issuing this command:

fsschedlock -a -t clnver -f all

This **fsschedlock** command will stop all automated file cleaning tasks from running. Executing the **fsschedlock** command shown above will allow manual cleaning tasks to be executed.

> **Note:** This setting can be applied before upgrading to StorNext 6.0.

File cleaning should be re-enabled after upgrading to StorNext 6.0.6.1.

Option 2

Setting the internal **clnvertime** parameter per class to a non-zero value will avoid inactive files from being removed prematurely. However, when this parameter is set to zero, file cleaning may occur using the current system time causing all inactive copies to be removed.

It is also possible to use scheduled cleaning correctly by setting non-zero values for all policy classes. The following command-line example demonstrates how to set the time to seven years (the default) for one policy class:

fsmodclass -W 7y <classname>

> **Note:** This setting cannot be applied before upgrading to StorNext 6.0.

If you suspect that you've been affected, please contact Quantum technical support. See Contacting Quantum.

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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:

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