Product Alert 21

Product	StorNext® Storage Manager version 3.1.2 and earlier
Summary	If StorNext receives a retryable tape drive error while fsmedcopy or fsfilecopy is executing, there is a chance during the retry process that tapes other than those being used for the fsmedcopy or fsfilecopy processes could be overwritten.
Date	December 2008

Overview

Customers using the fsmedcopy or fsfilecopy commands can overwrite tapes if a tape drive error is encountered while these commands are executing. The problem occurs when transferring data from one tape to another tape during the fsmedcopy process. When an error occurs with one of the drives being used during the copy process and there are other requests outstanding for the same tape drives, data may be written to the incorrect tape, causing existing data to be overwritten.

For more information, see CR 26258.

Symptoms

Tapes not involved in the fsmedcopy operation have their volume header and/or data overwritten. Unfortunately, this error is not detected until a later time when the overwritten tape is mounted for a new operation.

Cause

During the handling of a tape drive error, a check is made to see if the error is classified as retryable. If it is a retryable error, the two tapes being used for the fsmedcopy tape-to-tape processing are released to permit remounting into different drives to avoid the drive errors. The release processing allows other outstanding commands waiting on tape drives to use these same drives and mount different tapes.

The problem occurs when the error processing that clears the retry flag is missed by the parent process in handling the death of the fs_fmover child process. When command processing resumes, it still believes it has the original tapes and drives allocated. The resumed process incorrectly begin writing to drives that may have been allocated to another request. The result can be overwritten data on the tapes allocated to the other request.

Recommendations

Until a solution is available, the recommended workaround for this issue is to specify a specific destination tape from the scratch pool by using the "-d mediaid" option for fsmedcopy or fsfilecopy. If a tape drive error is encountered where a specific destination tape is specified, the retry is skipped and therefore the command will just fail. Although the command does not complete, avoiding the retry prevents tapes from being overwritten. The command can then be tried again to see if it will complete.