

T10/06-397r1 SMC-3 Error codes overview

To: T10 Technical Committee
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Subject: T10/06-397 SMC-3 Error codes overview

Revision History

Revision 0 (31 August 2006): initial revision

Revision 1 (4 January 2007): added comments from November SMC-3 WG meeting and removed error codes that do not require description in SMC-3.

Related Documents

SMC-3 r2 - SCSI Media Changer Commands – 3, revision 2

Overview

The SMC-3 WG requested a list of the media changer specific error codes as defined by SPC-4. The next tables show error codes supported by media changer devices as specified by SPC-4. This proposal does not intend to create a description of these error codes. It wants to create a list of error codes that require a description in SMC-3.

Next table shows media changer error codes that require a description in SMC-3. The key VS indicates that the description of the error code is likely vendor specific and therefore does not require a description in SMC-3 (i.e., it would appear in the vendors SCSI reference manual for their product).

Error Code	Comment
CLEANING REQUESTED	Remove SMC support?
CLEANING FAILURE	Remove SMC support?
CLEANING REQUEST REJECTED	Remove SMC support?
LOGICAL UNIT NOT READY, INITIALIZING COMMAND REQUIRED	Investigate usage of this error code
LOGICAL UNIT NOT READY, MANUAL INTERVENTION REQUIRED	VS
LOGICAL UNIT NOT READY, OFFLINE	
NO REFERENCE POSITION FOUND	VS
RANDOM POSITIONING ERROR	VS
MECHANICAL POSITIONING ERROR	VS
INVALID ELEMENT ADDRESS	Already described in SMC-3
NOT READY TO READY CHANGE, MEDIUM MAY HAVE CHANGED	
IMPORT OR EXPORT ELEMENT ACCESSED	Already described in SMC-3
INCOMPATIBLE MEDIUM INSTALLED	
MEDIUM NOT PRESENT – TRAY CLOSED	VS
MEDIUM NOT PRESENT – TRAY OPEN	VS
MEDIUM NOT PRESENT – LOADABLE	VS
MEDIUM NOT PRESENT – MEDIUM AUXILIARY MEMORY ACCESSIBLE	
MEDIUM DESTINATION ELEMENT FULL	Already described in SMC-3
MEDIUM SOURCE ELEMENT EMPTY	Already described in SMC-3
MEDIUM MAGAZINE NOT ACCESSIBLE	
MEDIUM MAGAZINE REMOVED	
MEDIUM MAGAZINE INSERTED	
MEDIUM MAGAZINE LOCKED	
MEDIUM MAGAZINE UNLOCKED	
MEDIA LOAD OR EJECT FAILED	No SMC error code?
MEDIUM REMOVAL PREVENTED	Already described in SMC-3
MEDIUM REMOVAL PREVENTED BY DATA TRANSFER ELEMENT	Already described in SMC-3
OPERATOR REQUEST OR STATE CHANGE INPUT	Remove SMC support?
OPERATOR MEDIUM REMOVAL REQUEST	
NO SEEK COMPLETE	HP requested a description of this error code in SMC-3. WG requested information of usage

WARNING – SPECIFIED TEMPERATURE EXCEEDED	HP requested a description of this error code in SMC-3. WG requested information of usage
WARNING – BACKGROUND MEDIUM SCAN DETECTED MEDIUM ERROR	HP requested a description of this error code in SMC-3. WG requested information of usage

Next table lists error codes that are according SPC-4 supported by media changers, but this proposal suggest removing media changer support by deleting the 'M' for these error codes in table x in SPC-4.

Error Code
LOGICAL UNIT NOT READY, REBUILD IN PROGRESS
LOGICAL UNIT NOT READY, RECALCULATION IN PROGRESS
LOGICAL UNIT NOT READY, NOTIFY (ENABLE SPINUP) REQUIRED
LOGICAL UNIT COMMUNICATION CRC ERROR (ULTRA-DMA/32)
WARNING - BACKGROUND PRE-SCAN DETECTED MEDIUM ERROR
WRITE ERROR – UNEXPECTED UNSOLICITED DATA
WRITE ERROR - NOT ENOUGH UNSOLICITED DATA
READ ERROR – FAILED RETRANSMISSION REQUEST
LOGICAL BLOCK ADDRESS OUT OF RANGE
CDB DECRYPTION ERROR
DATA DECRYPTION ERROR

Suggested changes to SMC-3

Currently there is no definition of magazine, although the term is used 12 times in SMC3r02.

3.1.x Magazine: A structure consisting of one or more import/export elements or storage elements that is used to contain a set of volumes within the media changer. Some media changer devices allow an operator to remove the magazine from the media changer.

Currently there is no definition of the term offline, although the term is used 6 times in SMC3r02

3.1.x Offline: WG: TBD, two methods are in use by media changers to report offline. One does not report on the SCSI interface at all and the other reports Check Condition status.