memorandum

T10/07-100r0

To	From	Subject	Date
INCITS T10 Committee	Michael Banther, HP	SPC-4 Microcode Digital Signing ASCQ	1 March 2007

Revision History

Revision 0 – Initial document.

Reference documents

SCSI Primary Commands – 4 (SPC-4), Project 1731-D, Rev 09, 17 February 2007.

Background

Some HP products use digitally signed microcode to ensure that microcode downloads to the product do not allow for a breach of security. If the download operation of microcode detects an incorrect signature, the device server performing the operation needs a way to report the security breach to the application (which will hopefully inform the operator).

This proposal requests the new ASCQ and proposes text for when it is used. New text appears in blue.

Changes to the SPC-4 draft standard

4.5.6 Sense key and sense code definitions

Add an entry to table 28 for DIGITAL SIGNATURE VALIDATION FAILURE with ASC set to 74h and ASCQ set to 06h. This new definition applies to all device types.

5.15 Downloading and activating microcode

If the device server is unable to process a WRITE BUFFER command with a download microcode mode because of a vendor specific condition, it shall terminate the command with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST, and the additional sense code set to COMMAND SEQUENCE ERROR.

If the device server detects a digital signature validation failure while processing a WRITE BUFFER command with a download microcode mode, it shall terminate the command with CHECK CONDITION status, with the sense key set to ABORTED COMMAND, and the additional sense code set to DIGITAL SIGNATURE VALIDATION FAILURE.

C.2 Additional sense codes

Add an entry to table C.1 for DIGITAL SIGNATURE VALIDATION FAILURE with ASC set to 74h and ASCQ set to 06h. This new definition applies to all device types.