ENDL
T E X A S

Date: 19 March 2008
To: T10 Technical Committee
From: Ralph O. Weber
Subject: Set Attributes error handling in OSD-2

Introduction

The error handling for bogus attempts to set attributes values contain repeated text that obscures the error being processed with details of the additional sense code to be reported. The reporting complexity is due to the fact that the bogus field can appear in the CDB or in the parameter data.

This proposal suggests text changes that move the additional sense code reporting rules to a separate subclause and reference it wherever error detection occurs. This has two benefits:

 • The error being tested is not buried amongst the reporting rules.
 • Future changes in the reporting rules need be made in only one place (the new subclause).

Because of the number of instances where text needs to be changed, only a few example cases are shown. Changing all the applicable text is left as an exercise for the editor.

Revision History

r0   Initial revision

Unless otherwise indicated additions are shown in blue, deletions in red strikethrough, and comments in green.

Proposed Changes in OSD-2 r03

7.1.1 Attributes parameter formats

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7.1.n Reporting illegal attempts to set attribute values

Attempts to set an attribute to an illegal value may be detected in the set attributes list or in certain CDB fields. Attempts to set an attribute to an illegal value shall be handled as follows:

    a) If the CDB ATTRIBUTE PAGE field, ATTRIBUTE NUMBER field, ATTRIBUTE LENGTH field, and ATTRIBUTE VALUE field (see 5.2.4.2) specify an illegal combination of attribute page, attribute number, attribute length, and attribute value, then the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB;

    b) If the CDB SET ATTRIBUTE PAGE field, SET ATTRIBUTE NUMBER field, and SET ATTRIBUTE LENGTH field (see 5.2.4.3) specify an illegal combination of attribute page, attribute number, and attribute length, then the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB;

    c) If the CDB SET ATTRIBUTE PAGE field, SET ATTRIBUTE NUMBER field, and SET ATTRIBUTE LENGTH field (see 5.2.4.3) specify an valid combination of attribute page, attribute number, and attribute length but the attribute value specified by the SET ATTRIBUTES OFFSET field is illegal, then the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN PARAMETER LIST; or

    d) If a set attributes list (see 5.2.4.4) contains an entry that specifies an illegal combination of attribute page, attribute number, attribute length, and attribute value, then the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN PARAMETER LIST.

7.1.2 OSD attributes pages

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{{All OSD-2 clauses should be searched for 'set attributes list', and each error reporting instance thus found should be modified based on the pattern shown in the following three examples.}}

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4.11.3.2 Policy access tags

~~If a set attributes list (see 5.2.4.4) contains a request to set the FENCE bit to one, the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN PARAMETER LIST. If the CDB SET ATTRIBUTE NUMBER field contains 4000 0001h (i.e., the policy access tag attribute) and the set attributes data specified by the SET ATTRIBUTES OFFSET field (see 5.2.4.3) specifies that the FENCE bit be set to one, the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB.~~

If a command contains a request to set the FENCE bit to one, then the command shall be terminated as described in 7.1.n.

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7.1.2.8 Root Information attributes page

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~~If a set attributes list (see 5.2.4.4) attempts to set the default isolation method attribute to a value that the supported isolation methods attribute indicates is not supported, the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN PARAMETER LIST. If the CDB SET ATTRIBUTE NUMBER field (see 5.2.4.3) attempts to set the default isolation method attribute to a value that the supported isolation methods attribute indicates is not supported, the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB.~~

If a command attempts to set the default isolation method attribute to a value that the supported isolation methods attribute indicates is not supported, then the command shall be terminated as described in 7.1.n.

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~~If a set attributes list (see 5.2.4.4) contains an entry specifying the number of an attribute that table 127 states is not application client settable, the command shall be terminated with a CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN PARAMETER LIST. If the CDB SET ATTRIBUTE NUMBER field (see 5.2.4.3) specifies the number of an attribute that table 127 states is not application client settable, the command shall be terminated with a CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB.~~

If a command attempts to set an attribute that table 127 states is not application client settable, then the command shall be terminated as described in 7.1.n.