To: T10 Technical Committee
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Subject: T10/06-250r0 SAT-2: Application Client Specific Log Page Translation

Revision History
Revision 0 - Initial draft of document

Related Documents
SAT-2 (No draft available yet)

1 Overview

This proposal defines a translation for the application client-specific log pages into ATA host-specific log pages to provide equivalent functionality.

2 Document Changes

2.1 Changes to SAT-2 (T10/1827-D no rev)

Add the following new clause to SAT-2.

2.1.1 Application Client log page

2.1.1.1 Translation Overview

The Application Client log page provides a location for application clients to store information. A SATL translates a LOG SELECT or LOG SENSE command to the application client log page to accesses to the ATA host vendor-specific log pages. Table 1 describes the translation of the general usage application client parameter data for the application client log page.

The SATL determines if the attached ATA device supports host vendor specific log pages by reading log page address 00h using READ LOG EXT, READ LOG DMA EXT, or SMART READ LOG.

If the attached ATA device does not support the general purpose logging feature set, or does not support host vendor specific log pages, the SATL shall complete any LOG SELECT or LOG SENSE command for the application client log page with a CHECK CONDITION status, a sense key of ILLEGAL REQUEST, and an additional sense code of INVALID FIELD IN CDB.

Table 1 — General usage application client parameter data fields

Field	Description or Reference
PARAMETER CODE	See 2.1.1.2
DU	Shall be 1b (see SPC-4)
TSD	Shall be 0b (see SPC-4)
ETC	Shall be 0b (see SPC-4)
TMC	This field is ignored (see SPC-4)
FORMAT AND LINKING	Shall be 11b (see SPC-4)
PARAMETER LENGTH	Shall be FCh (see SPC-4)
GENERAL USAGE PARAMETER BYTES	See 2.1.1.2

2.1.1.2 LOG SELECT translation

The SATL stores the application client parameter for a LOG SELECT command in the ATA device host vendor-specific log page. The SATL stores the application client parameter data at the ATA log address as specified in table 2. Within an ATA log address, the SATL shall store each parameter code in ascending order within the 16 512-byte data blocks for each ATA log address. For example, parameter code 00 is stored at offset 0 of the first 512-byte block of data at log address 80h and parameter code 01 is stored at offset 256 in the first 512-byte block of data at log address 80h. The SATL stores this information by issuing a SMART WRITE LOG, WRITE LOG EXT, or WRITE LOG DMA EXT command to the SATL. The SATL shall ensure that any previously stored data at the log address is preserved when writing to the log address for the requested parameter data.

Table 2 — Parameter Storage Location

Parameter Code	ATA Log Address
00h - 1Fh	80h
20h - 3Fh	81h
40h - 5Fh	82h
60h - 7Fh	83h
80h - 9Fh	84h
A0h - BFh	85h

Table 2 — Parameter Storage Location

Parameter Code	ATA Log Address
C0h - DFh	86h
E0h - FFh	87h
100h - 11Fh	88h
120h - 13Fh	89h
140h - 15Fh	8Ah
160h - 17Fh	8Bh
180h - 19Fh	8Ch
1A0h - 1BFh	8Dh
1C0h - 1DFh	8Eh
1E0h - 1FFh	8Fh

2.1.1.3 LOG SENSE translation

The SATL retrieves the requested parameter data by reading the ATA log address that stores the parameter code using a SMART READ LOG, READ LOG EXT, or READ LOG DMA EXT command. The log address to read is determined by Table 2.