

To: T10 Technical Committee
From: Jeff Wolford, HP (jeff.wolford@hp.com)
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Subject: 07-302r1 SBC-3 WRITE LONG Additional Sense code option to support SAT-2

Revision History

Revision 0 (02 July 2007) first revision
Revision 1 (17 July 2007) – Incorporated review 07 July 2007 feed back to remove redundant “shall” (indicated by red strike out)

Related Documents

SBC3r10 - SCSI Block Commands – 3 (SBC-3) revision 10
SAT2r0 - SCSI / ATA Translation – 2 (SAT-2) revision 0
07-200r1 – SAT-2 WRITE LONG to WRITE UNCORRECTABLE EXT revision 1

Overview

Current the WRITE LONG command describes 4 requirements (a through d) for a device server when the COR_DIS bit is set to one. Requirement d specifies “the additional sense code set to READ ERROR – LBA MARKED BAD BY APPLICATION CLIENT”. ATA devices do NOT have access to information to allow them to provide this additional sense code. Additional, currently most SCSI/SAS drives do not support this additional sense code.

Suggested Changes

WRITE LONG (10) command, requirement d:

A correction disabled (COR_DIS) bit set to zero specifies that, when the specified logical block is read, the device server shall perform normal error recovery on that logical block. A COR_DIS bit set to one specifies that, when the specified logical block is read, the device server shall:

- a) perform no error recovery on that logical block including any read error recovery enabled by the Read-Write Error Recovery mode page (see 6.3.5);
- b) perform no automatic reallocation of that logical block including any automatic reallocation enabled by the Read-Write Error Recovery mode page;
- c) not consider errors on logical blocks to be informational exception conditions as defined in the Information Exceptions Control mode page (see SPC-4): and
- d) return CHECK CONDITION status with the sense key set to MEDIUM ERROR and the additional sense code ~~set to READ ERROR – LBA MARKED BAD BY APPLICATION CLIENT~~ shall be set to either:

- A) READ ERROR – LBA MARKED BAD BY APPLICATION CLIENT; or
- B) UNRECOVERABLE READ ERROR.

The additional sense code should be set to READ ERROR – LBA MARKED BAD BY APPLICATION CLIENT.

The condition established by the COR_DIS bit being set to one shall remain in effect until the logical block is written by any means (e.g., any WRITE command, WRITE SAME command, FORMAT command, or another WRITE LONG command specifying the same logical block with the COR_DIS bit set to zero).

The write uncorrectable error (WR_UNCOR) bit and physical block (PBLOCK) bit are defined in table 84. If there are more than one logical block per physical block (i.e., the LOGICAL BLOCKS PER PHYSICAL BLOCK EXPONENT field in the READ CAPACITY (16) data (see 5.13.1) is set to a non-zero value), the device server shall support the WR_UNCOR bit and the PBLOCK bit.