

To: T10 Technical Committee
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Title: SBC-6: Additional statuses in GET LBA STATUS

Revision history

Revision 0 (21 April 2025): Initial version

Revision 1 (29 April 2025): Add reference to SBC-6

Overview

As online depopulation (REMOVE ELEMENT AND MODIFY ZONES) gains more industry attention, applications clients need a method to determine in advance which LBA ranges would be affected by a REMZ. While 22-108r1 (Houlder, 17 November 22) directly addresses this with modifications to the LBA Status log, there is a gap where an LBA range is still fully accessible, but is at risk of becoming inaccessible (e.g., the head health reported by GET PHYSICAL ELEMENT STATUS is non-normal). In this case, a proactive host may want to issue REMZ but is currently unable to determine in advance which LBAs will be affected.

The proposal seeks to define two additional LBA ACCESSIBILITY values within an LBA Status Descriptor in the LBA Status log, to report LBA ranges that are accessible, but at risk of becoming inaccessible.

Because value 0000h is defined as “LBA accessibility is not reported”, support for these new values (and any other non-zero value) is therefore optional.

Changes below are to SBC-6.

This is a sister proposal to T13 g25119r1, Additional Statuses in LBA Status log.

Additions are shown in blue, deletions in red, comments in green.

5.6.2.2 LBA status descriptor

The LBA status descriptor (see table 52) contains LBA status information for one or more LBAs.

Table 52 — LBA status descriptor format

Byte	Bit	7	6	5	4	3	2	1	0
0	(MSB)	LBA STATUS LOGICAL BLOCK ADDRESS							
...									
7									
8	(MSB)	NUMBER OF LOGICAL BLOCKS							
...									
11									
12	Reserved	LBA ACCESSIBILITY				PROVISIONING STATUS			
13		ADDITIONAL STATUS							
14		Reserved							
15									

The LBA STATUS LOGICAL BLOCK ADDRESS field contains the first LBA of the LBA extent for which this descriptor reports LBA status.

The NUMBER OF LOGICAL BLOCKS field contains the number of logical blocks in that LBA extent. The device server should return the largest possible value in the NUMBER OF LOGICAL BLOCKS field.

The LBA ACCESSIBILITY field is shown in table 53.

Table 53 — LBA ACCESSIBILITY field

Code	Description
0000b	LBA accessibility is not reported
0001b	LBA extent is not able to be written and not able to be read
0010b	LBA extent is read only
0011b	LBA extent is able to be read and written and is at risk of becoming inaccessible
0100b	LBA extent is read-only and at risk of becoming inaccessible
All others	Reserved