



Date: 4 March 2025
 To: T10 Technical Committee
 From: Ralph O. Weber
 Subject: SBC-6 Clarify background medium scan handling after a power on

Introduction

The following sentence in the *enabling background medium scan operations* subclause is jangling nerves in certain testing labs.

After power on, if background pre-scan operations are not enabled (see 4.23.2.1), then the device server shall set the Background Medium Scan Interval timer to zero (i.e., expired).

The net effect of this (as written) seems to be that every power cycle is required to disable background medium scan operations (i.e., disable the timer that starts background medium scan operations) if background pre-scan operations are disabled.

At least one wag believes that the troublesome sentence contains an unstated assumption that background medium scan is enable, which is not always certain. The change proposed in r0 intends to eliminate the assumption.

See the revision history for behaviors that were added after r0 and r1.

Revision History

- r0 Initial revision
- r1 Attempted to address email concerns that the r0 changes are insufficient to address background medium scans on disks with very large numbers of logical blocks.
- r2 The January CAP discussion highlighted previously unnoticed text regarding background medium scans suspending and later restarting. Because some seemingly exaggerated claims were made about the existing text, this revision suggests a new clarification.
- r3 As requested by the March CAP Ad Hoc, several tweaks were made to ensure that the collars and cuffs match (including one semi-colon that was omitted from the copied SBC-5 text). This is the recommended revision of this proposal.

Unless otherwise indicated additions are shown in underlined blue, deletions in ~~red-strikethrough~~, and comments in green. Differences between this revision and the previous revision, if any, are highlighted with change bars.

Proposed Changes in SBC-6 (based on SBC-5 r08)

4.23.3.2 Suspending and resuming background medium scan operations

The logical unit shall suspend a background medium scan operation if any of the following occurs:

- a) a command or task management function is processed that requires the background medium scan operation to be suspended;
- b) a SCSI event (e.g., a hard reset) (see SAM-6) is processed that requires the background medium scan operation to be suspended;
- c) a power condition timer expires (see the Power Condition mode page in SPC-6), and the PM_BG_PRECEDENCE field in the Power Condition mode page is set to 10b;
- d) the S_L_FULL bit (see 6.5.4) is set to one, and the Background Scan log parameters (see 6.4.2) are all used; or
- e) an application client sets the EN_BMS bit to zero (see 6.5.4).

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The logical unit shall resume a suspended background medium scan operation from where the operation was suspended [\(e.g., as described in this subclause \(i.e., 4.23.3.2\)\)](#) when:

- a) there are no commands in any task set to be processed;
- b) there are no task management functions to be processed;
- c) there are no SCSI events to be processed;
- d) the PM_BG_PRECEDENCE field in the Power Condition mode page is set to 10b (see SPC-6), but no power condition timer defined in the Power Condition mode page has expired;
- e) the S_L_FULL bit (see 6.5.4) ~~is set to zero~~, <<<insert a space>>> or the Background Medium Scan log parameters in the Background Scan Results log page are not all used;
- f) the EN_BMS (see 6.5.4) ~~is set to one~~, <<<insert a space>>> and
- g) the logical unit has been idle for the time specified in the MINIMUM IDLE TIME BEFORE BACKGROUND SCAN field (see 6.5.4).

4.23.3.3 Halting background medium scan operations

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