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NVM Express Technical Proposal for New Feature

Technical Proposal ID	6024 Clarify Get Log Page command effects on AERs
Change Date	2020-09-27
Builds on Specification	NVMe Management Interface Specification version 1.1a
References Specification	

Technical Proposal Author(s)

Name	Company
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This proposal clarifies that out-of-band Get Log Page command does not have any effect on AERs to NVMe controllers.

Revision History

Revision Date	Change Description
2020-07-13	Initial version
2020-07-13	Revised new requirement to use wording from section 6.2 on the NVMe Admin command status.
2020-07-03	Updated filename and date for Phase 3. No text changes.
2020-08-03	Re-word Note 2 to reflect the requirement and then allow previous versions to be different. Approved for member review.
2020-08-06	Updating filename to reflect member review.
2020-09-14	Updated RAE so that A stands for asynchronous. Removed redundant text pointing to Status field for the NVMe command completion. Approved for integration.
2020-09-27	Integrated into the NVMe Management Interface Specification, Revision 1.1.

Description for NVMe-MI 1.1 NVMe 1.4 Changes Document

This technical proposal adds:

- New log page to return Boot Partition contents only accessible on SMBus interface.

Description of Specification Changes

Markup Conventions:

Black:	Unchanged (however, hot links are removed)
Red Strikethrough:	Deleted
Blue:	New
Blue Highlighted:	TBD values, anchors, and links to be inserted in new text.
<Green Bracketed>:	Notes to editor

Modify portions of NVM Express Management Interface Specification version 1.1a as shown below:

Modify portion section 6 as shown below:

6 NVM Express Admin Command Set

The NVM Express Admin Command Set allows NVMe Admin Commands to be issued to any Controller in the NVM Subsystem using the out-of-band mechanism. Figure 1 shows NVM Express Admin Commands that are mandatory, optional, and prohibited for an NVMe Storage Device and an NVMe Enclosure using the out-of-band mechanism. All NVM Express Admin Commands are prohibited using the in-band tunneling mechanism. The commands are defined in the NVM Express specification. If an NVMe Admin Command is issued in a Request Message that is a prohibited command in Figure 1, the Management Endpoint shall return an Invalid Parameter Error Response with Parameter Error Location pointing to the NVMe opcode. Future revisions of this specification may add additional commands to Figure 1. The NVM Express Admin Command Set is only applicable in the out-of-band mechanism and is prohibited in the in-band tunneling mechanism.

Figure 1: List of NVMe Admin Commands Supported using the Out-of-Band Mechanism

Command	NVMe Storage Device O/M/P ¹	NVMe Enclosure O/M/P ¹
Abort	P	P
Asynchronous Event Request	P	P
Create I/O Completion Queue	P	P
Create I/O Submission Queue	P	P
Delete I/O Completion Queue	P	P
Delete I/O Submission Queue	P	P
Device Self-test	O	O
Directive Receive	P	P
Directive Send	P	P
Doorbell Buffer Config	P	P
Firmware Activate/Commit	O	O
Firmware Image Download	O	O
Format NVM	O	P
Get Features	M	O
Get Log Page ²	M	O
Identify	M	O
Keep Alive	P	P
Namespace Management	O	P
Namespace Attachment	O	P
NVMe-MI Receive	P	P

Figure 1: List of NVMe Admin Commands Supported using the Out-of-Band Mechanism

Command	NVMe Storage Device O/M/P ¹	NVMe Enclosure O/M/P ¹
NVMe-MI Send	P	P
Sanitize	O	O
Security Send	O	P
Security Receive	O	P
Set Features	O	O
Vendor Specific	O	O
Virtualization Management	O	O
<p>NOTES:</p> <ol style="list-style-type: none"> 1. O/M/P definition: O = Optional, M = Mandatory, P = Prohibited from being supported. An NVMe Enclosure that is also an NVMe Storage Device (i.e., implements namespaces) shall implement mandatory commands required by either an NVMe Storage Device or an NVMe Enclosure and may implement optional commands allowed by either an NVMe Storage Device or an NVMe Enclosure. Mandatory commands shall be supported if the NVMe Controller specified by the Controller ID field supports the command. 2. If the Retain Asynchronous Event bit is cleared to '0', then the status associated with the NVMe Admin Command shall be Invalid Field in Command (i.e., the NVMe Admin command is aborted). For implementations compliant to version 1.1 or earlier of this specification, the Retain Asynchronous Event bit in the Get Log Page command (refer to the NVM Express Base Specification) may or may not be ignored by the controller. Refer to section 6.2. 		