

T10/06-418r1 SAS-2 Enable disable zone management function revision

To: T10 Technical Committee
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Subject: T10/06-418r1 SAS-2 Enable disable zone management function revision

Revision Information

- Revision 0: Initial proposal
- Revision 1: Revised function result descriptions and clarified that the zoning expander device shall be locked.

Referenced Documents

sas2r05b Serial Attached SCSI – 2 (SAS-2) revision 5b
06-358r4 SAS-2 Zone configuration model (Tim Symons, PMC-Sierra)

Overview

To enable and disable zoning in a zoning expander device there is a requirement for the device to be managed and configured to meet the requirements of a ZPSDS. This proposal is to allow the SMP ENABLE DISABLE ZONING function to be only processed when the zoning expander device is locked, and only originated by an active zone manager. The requirements of the function are unchanged, and the function becomes an SMP zone configuration function as defined in 06-358r4 SAS-2 Zone configuration model (Tim Symons, PMC-Sierra).

Table 202 – FUNCTION RESULT field

Code	Name	SMP function(s)	Description
04h	INVALID EXPANDER CHANGE COUNT	ENABLE DISABLE ZONING	The management device server supports the SMP function, but the EXPECTED EXPANDER CHANGE COUNT field does not match the current expander change count. The ADDITIONAL RESPONSE BYTES may be present but shall be ignored.
21h	PHYSICAL PRESENCE NOT ASSERTED NO MANAGEMENT ACCESS RIGHTS	ENABLE DISABLE ZONING, ZONE LOCK,	Physical presence was required but was not detected by the expander device when the SMP function was requested. The ADDITIONAL RESPONSE BYTES field may be present but shall be ignored. If either the: a) ZONE ENABLE bit is set to zero and a zoning expander device processes an ENABLE DISABLE ZONING request when the PHYSICAL PRESENCE bit is zero; or b) ZONE ENABLE bit is set to one and a zoning expander device processes a ZONE LOCK request when the ZONE LOCK bit is set to zero, PHYSICAL PRESENCE bit is set to zero and the zone manager does not have access to zone group 2.
23h	ZONE LOCK VIOLATION	ZONE LOCK, ZONE ACTIVATE, ZONE UNLOCK, CONFIGURE ZONE PHY INFORMATION ENABLE DISABLE ZONING	A zoning expander device that is zone locked, receives an SMP request function from a source that is not the active zone manager. If the ZONE ENABLE bit is set to one and: a) An unlocked zoning expander device receives an SMP zone configuration function from an SMP initiator port that is not the active zone manager; or b) a locked zoning expander device receives an SMP ZONE LOCK request or an SMP zone configuration function from an SMP initiator port that is not the active zone manager.

Table 203 - Function result priority

SMP Function	SMP Function Result Priority
ENABLE DISABLE ZONING	1) INVALID REQUEST FRAME LENGTH; 2) SMP_ZONE_VIOLATION; 3) ZONE_LOCK_VIOLATION; 4) UNKNOWN ENABLE DISABLE ZONING VALUE; 5) PHYSICAL_PRESENCE_NOT_ASSERTED; 6) NO_MANAGEMENT_ACCESS_RIGHTS 7) INVALID_EXPANDER_CHANGE_COUNT 8) SMP_FUNCTION_FAILED 9) SMP_FUNCTION_ACCEPTED

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10.4.3.16 ENABLE DISABLE ZONING function

The ENABLE DISABLE ZONING function enables or disables zoning. [This function is used to set the ZONING ENABLED bit in the REPORT GENERAL response.](#) This SMP function shall be supported by SMP target ports in zoning expander devices (see 4.9). Other SMP target ports shall not support this SMP function. This SMP function shall only be processed if **the zoning expander device is locked and:**

- a) the request is received from an SMP initiator port that has access to zone group 2 (see 4.9.3.2); or
- b) the request is received from any SMP initiator port while physical presence is asserted.

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