

T10/06-288r4 SAS-2 SMP ZONE CONFIGURATION ACTIVATE function.

To: T10 Technical Committee  
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Subject: 06-288r4 SAS-2 SMP ZONE CONFIGURATION ACTIVATE function

**Revision Information**

- Revision 0: First draft.
- Revision 1: Revisions to align with zone management client lock, load, activate and unlock procedure discussed and Denver face to face.
- Revision 2: Added usage for CONFIGURING bit and function result information.
- Revision 3: Removed time-out references as these belong in the time-out proposal (06-326). Moved Broadcast operation to the Zone Lock Release function. (06-289)
- Revision 4: Revised function name and moved description to the model definition (06-358)

**Referenced Document**

Sas2r05a Serial Attached SCSI – 2 (SAS-2) r5a  
 06-286r3 SAS-2 SMP ZONE CONFIGURATION LOCK  
 06-289r4 SAS-2 SMP ZONE CONFIGURATION UNLOCK (Tim Symons, PMC-Sierra)  
 06-326r0 SAS-2 SMP Zone Lock Timer (Tim Symons, PMC-Sierra)  
 06-358r0 SAS-2 Zone Configuration model (Tim Symons, PMC-Sierra)

**Overview**

When the active zone management client has completed all zone updates and received SMP FUNCTION ACCEPTED from all zoning expander devices in the ZPSDS it shall activate the changes by originating the **ZONE CONFIGURATION ACTIVATE** request to all locked zoning expander devices. The activate function causes each zoning expander device to make the shadow zone permission table active.

This proposal defines the ACTIVATE ZONE UPDATE functions.

**10.4.3.1 SMP function request frame format**

**Table 196 – SMP functions (FUNCTION field)**

Code	SMP function	Description	Reference
85h	ACTIVATE ZONE LOCKED UPDATE	The zoning expander device shall make the shadow register data operational.	10.4.3.xx

10.4.3.2 SMP function response frame format

Table 198 – FUNCTION RESULT field

Code	Name	SMP function(s)	Description
21h	ZONE LOCK VIOLATION	CONFIGURE PHY ZONE, CONFIGURE ZONE PERMISSION, ZONE LOCK, ZONE CONFIGURATION ACTIVATE, ZONE LOCK RELEASE	A zoning expander device that is zone locked, receives an SMP zone locked request function from a source that is not the active zone management client, or when the zoning expander device is not locked.

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Table xx - Function result priority per SMP Function

SMP Function (per table 197)	SMP Function Result Priority
ZONE CONFIGURATION ACTIVATE	1) INVALID REQUEST FRAME LENGTH 2) SMP ZONE VIOLATION 3) ZONE LOCK VIOLATION 4) SMP FUNCTION FAILED 5) SMP FUNCTION ACCEPTED

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10.4.3.xx ACTIVATE ZONE UPDATE function

When a zone locked configuration request is originated (i.e. SMP CONFIGURE ZONE PERMISSION TABLE function, SMP CONFIGURE PHY ZONE function), and the zoning expander devices are locked then the zoning expander device shall store the requested changes in shadow registers. The shadow register information shall not be operational until an ACTIVATE ZONE UPDATE request is received from the active zone management client.

The ACTIVATE ZONE UPDATE request format is defined in Table 1.

Table 1 – ACTIVATE ZONE UPDATE request

Byte\Bit	7	6	5	4	3	2	1	0	
0	SMP FRAME TYPE (40h)								
1	FUNCTION (84h)								
2	Reserved								
3	REQUEST LENGTH (00)								
4	(MSB)	CRC							
7							(LSB)		

The SMP FRAME TYPE field shall be set to 40h.

The FUNCTION field shall be set to 84h.

The REQUEST LENGTH field shall be set to (00).

The CRC field is defined in 10.4.3.1.

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The ACTIVATE ZONE UPDATE response format is defined in Table 2.

**Table 2 – ACTIVATE ZONE UPDATE response**

Byte\Bit	7	6	5	4	3	2	1	0	
0	SMP FRAME TYPE (41h)								
1	FUNCTION (84h)								
2	FUNCTION RESULT								
3	RESPONSE LENGTH (00h)								
4	(MSB)	CRC							
7								(LSB)	

The SMP FRAME TYPE field shall be set to 41h.

The FUNCTION field shall be set to 84h.

The FUNCTION RESULT field is defined in 10.4.3.2

The RESPONSE LENGTH field shall be set to 00h.

The CRC field is defined in 10.4.3.1.