



## EX Commands

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This chapter provides EX (exercise) commands for the Cisco ONS 15454 SDH.

### 13.1 EX-SW-<STM\_MSSPR>

Exercise Protection Switch (STM4, STM16, STM64)

#### Usage Guidelines

This command exercises the algorithm for switching from a working facility to a protection facility without actually performing a switch. It is assumed that the facility being exercised is the working unit. The exercise switching success or failure result will be indicated by an automatic alarm.

See [Table 27-1 on page 27-1](#) for supported modifiers by platform.

Exercise switch for the SDH protection line is not supported in this release. If sending this command to the protection unit, an error message will be returned. In addition to all normal INPUT, EQUIPAGE, PRIVILEGE error codes, the following error codes are also included in this command:

- SNVS (Status, Not in Valid State)
- SROF (Status, Requested Operation Failed)
- SSRD (Status, Switch Request Denied)



#### Note

- If you send the EX-SW-<STM\_MSSPR> command to both east and west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30–45 seconds) the system will only execute one (WEST) side EXER-RING query, and preempt the other (EAST) side query. There will be no event messages reported for the preempted side, and it will be in APS-CLEAR switching state.
- Examples of sending the EX-SW-<STM\_MSSPR> command to both east and west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30–45 seconds) are: (a) A single command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring or (b) Separate queries (via TL1 or CTC, or TL1 and CTC) on both sides/spans of the same two-fiber or four-fiber ring.
- DIRN is an optional parameter. A NULL value of this parameter defaults to BTH for a two-fiber or four-fiber MS-SPRing protection group.

DIRN follows these rules:

- TRMT will always fail for any kind of protection groups.

- For two-fiber and four-fiber MS-SPRing protection groups both the RCV and TRMT direction will fail.
- Only BTH is a valid parameter. EX-SW-<STM\_TYPE> can be operated only on MS-SPRing protection groups.

**Category**

MS-SPRing

**Security**

Maintenance

**Input Format**

EX-SW-&lt;STM\_MSSPR&gt;:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;::,[&lt;SWITCHTYPE&gt;],[&lt;DIRECTION&gt;];

**Input Example**

EX-SW-STM16:CISCO:FAC-12-1:123::,SPAN,BTH;

**Input Parameters****Table 13-1** EX-SW-<STM\_MSSPR> Input Parameters

Parameter and Values	Description
<b>AID</b>	Access identifier from the <a href="#">“25.1.12 FACILITY”</a> section on page 25-17. Identifies the facility in the NE to which the switch request is directed
<b>SWITCHTYPE</b>	Switch type. Must not be null Parameter type is SWITCH_TYPE—MS-SPRing switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-STM commands. They are not applicable for the OPR-PROTNSW-STM commands. RING and SPAN are the only allowed values for MS-SPRing protection
• FRCDWKSWBK	Working unit is forced to switch back to working
• FRCDWKSWPR	Working unit is forced to switch to the protection unit
• LOCKOUTOFPR	Lockout of protection
• LOCKOUTOFWK	Lockout of working
• MANWKSWBK	Manual switch of working unit back to working
• MANWKSWPR	Manual switch of working unit back to the protection unit
• RING	MS-SPRing ring switch type
• SPAN	MS-SPRing span switch type
<b>DIRECTION</b>	Direction. A null value defaults to RCV Parameter type is DIRECTION—transmit and receive direction
• BTH	Both transmit and receive directions

**Table 13-1** EX-SW-<STM\_MSSPR> Input Parameters (continued)

Parameter and Values	Description
• RCV	Receive direction only
• TRMT	Transmit direction only

