EX Commands

This chapter provides exercise (EX) commands for the Cisco NCS 2002 and Cisco NCS 2006.

15.1 EX-SW-<STM_MSSPR>

The Exercise Protection Switch for STM4, STM16, STM64, and STM256 (EX-SW-<STM_MSSPR>) 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 card. The exercise switching success or failure result will be indicated by an automatic alarm. See Table 29-1 on page 29-1 for supported modifiers by platform.

Usage Guidelines

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

    – Status, Not in Valid State (SNVS)

    – Status, Requested Operation Failed (SROF)

    – Status, Switch Request Denied (SSRD)

- 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 to 45 seconds) the system will only execute one (WEST) side EXER-RING query, and preempt the other (EAST) side query. No event messages is reported for the preempted side, and it will be in APS-CLEAR switching state. This is applicable in the following situations:

    – A single command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring

    – Separate queries (through Transaction Language One [TL1], Cisco Transport Controller [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 group.

    – 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-<STM_MSSPR>:[<TID>]:<AID>:<CTAG>::,[<SWITCHTYPE>],[<DIRECTION>];

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

Table 15-1   Parameter Support

Parameter	Description
<AID>	Access identifier from the "27.15 FACILITY" section on page 27-23. Identifies the facility in the NE to which the switch request is directed.
<SWITCHTYPE>	(Optional) Switch type. Must not be null. The parameter type is SWITCH_TYPE, which is the 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 card is forced to switch back to working.
• FRCDWKSWPR	Working card is forced to switch to the protection card.
• LOCKOUTOFPR	Lockout of protection.
• LOCKOUTOFWK	Lockout of working.
• MANWKSWBK	Manual switch of working card back to working.
• MANWKSWPR	Manual switch of working card back to the protection card.
• RING	MS-SPRing ring switch type.
• SPAN	MS-SPRing span switch type.
<DIRECTION>	(Optional) Direction. A null value defaults to RCV. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

15.2 EX-SW-<OCN_BLSR>

The Exercise Protection Switch for OC12, OC48, OC192, or OC768 (EX-SW-<OCN_BLSR>) 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 success or failure of the exercise switching will be indicated by an automatic alarm.

Usage Guidelines   See Table 29-1 on page 29-1 for supported modifiers by platform.

Exercise switch for the SONET 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, and 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-<OCN_BLSR> command to both the east and the west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30 to 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 this are:

  - A single command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring

  - Separate queries (through TL1 or Cisco Transport Controller [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 BLSR protection group. DIRN follows these rules:

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

  - For two-fiber and four-fiber BLSR protection groups, both the RCV and TRMT direction will fail.

  - Only BTH is a valid parameter. EX-SW-<OCN_TYPE> can be operated only on bidirectional line switched ring (BLSR) protection groups.

Category   BLSR

Security   Maintenance

Input Format   EX-SW-<OCN_BLSR>:[<TID>]:<AID>:<CTAG>::,[<SWITCHTYPE>],[<DIRECTION>];

Input Example   EX-SW-OC48:CISCO:FAC-12-1:123::,SPAN,BTH;

Input Parameters

<AID>		Access identifier from the "27.15 FACILITY" section on page 27-23. Identifies the facility in the NE to which the switch request is directed.
<SWITCHTYPE>		Switch type. Must not be null. The parameter type is SWITCH_TYPE, which is the BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. RING and SPAN are the only allowed values for BLSR protection.
	• FRCDWKSWBK	Working unit is forced to switch back to working
	• FRCDWKSWPR	Working unit is forced to switch to the protection unit
	• LOCKOUTOFPR	Lock out of protection
	• LOCKOUTOFWK	Lock out of working
	• MANWKSWBK	Manual switch of working unit back to working
	• MANWKSWPR	Manual switch of working unit back to the protection unit
	• RING	BLSR ring switch type
	• SPAN	BLSR span switch type
<DIRECTION>		Direction. A null value defaults to RCV. The parameter type is DIRECTION (transmit and receive direction)
	• BTH	Both transmit and receive directions
	• RCV	Receive direction only
	• TRMT	Transmit direction only