Configuration Sequences

This chapter provides a quick reference to command sets typically used when setting up card functions.

- SRM Configurations

    Setting up SRM Line(s) and Link(s)

    Setting 1:N Redundancy

- CESM Configurations

    Setting up CESM Connectivity

    Debugging CESM

    Running CESM Tests

- FRSM Configurations

    Setting Up FRSM Connectivity

    Running FRSM Tests

- AUSM Configurations

    Setting Up AUSM Connectivity

    Debugging AUSM

    Running AUSM Tests

SRM Configurations

This section contains typical command sequences associated with the MGX 8800 Service Resource Module.

Setting up SRM Line(s) and Link(s)

Do this configuration at the PXM.

Step 1 *Enable the SRM T3 line.* **addln -ds3** *<slot.line>*

Step 2 *Verify.* **dsplns** *<lineTable>* *<SlotNum>*

Step 3 *Add the link.* **addlink** *<T3Slot.Line>* <T1Slot> *<TargetSlotNum> <TargetSlotLineNum>*

Step 4 *Verify.* **dsplink** *<T3Slot.Line>*

Setting 1:N Redundancy

Do this configuration at the PXM.

Step 1 *Set redundancy.* **addred** *<redPrimarySlotNum> <redSecondarySlotNum> <redType>*

Step 2 *Verify.* **dspred**

Note Use the **softswitch** command to switch between the primary and secondary slots.

CESM Configurations

This section contains typical command sequences associated with the MGX 8800 Circuit Emulation Service Module.

Setting up CESM Connectivity

Bring up the CESM command prompt to do this configuration.

Step 1 *Set card resource* **cnfcdrscprtn** *<PAR_max_conns> <PNNI_max_conns> <Tag_max_conns>*
partitions.

Step 2 *Verify.* **dspcdrscprtn**

Step 3 *Add Line.* **addln** *<line number>*

Step 4 *Configure line.*
  • *T1* • **cnfln** *<line_num> <line_code> <line_len> <clk_src>* [*E1-signalling*]
  • *T3* • **cnfln** *<line_num> <line_code> <line_len> <clk_src>*

Step 5 *Verify.*
  • *Check all lines* • **dsplns**
  • *View specific line* • **dspln** *<line_num>*

Step 6 *Add Port.*
  • *T1* • **addport** *<port_num> <line_num> <begin_slot> <num_slot> <port_type>*
  • *T3* • **addport** *<port_num> <line_num>*

Step 7 *Verify.*
  • *Check all ports* • **dspports**
  • *View specific port* • **dspport** *<port_num>*

Step 8 *Set port resource* **cnfportrscprtn** *<port_num> <controller_name>*
partitions.

Step 9 *Verify.* **dspportrscprtn**

Step 10 *Add Connection.*
  • *T1* • **addcon** *<port_number> <signalling type> <partial_fill> <cond_data> <cond_signalling> <controller_type> <mastership> <RemoteEndConID>*
  • *T3* • **addcon** *<port_num>* [*mastership*] [*remoteConnID*]

Step 11 *Verify.* **dspcon**

Step 12 *Configure Channel.*
  • *T1* • **cnfcon** *<port_num> <CDVT> <CLIP> <bufsize> <clockmode> <IdleSuppEnable> <ForceIdleSuppression>*
  • *T3* • **cnfcon** *<port> <CDVT> <CellLossIntegPeriod> <bufsize>*

Step 13 *Verify.*
  • *Check all connections* • **dspcons**
  • *View specific connection* • **dspcon**

Debugging CESM

Checking CESM Connectivity

Bring up the CESM command prompt to perform the following debugging functions.

- *Display alarms*   **dspalms** *<lineType>*
- *Display alarm count*   **dspalmcnt -ds3** *<LineNum>* | **-e3** *<LineNum>* | **-ds1** *<LineNum>*
- *Display channel counters*   **dspchancnt** *<channel number>*
- *Display SAR counters*   **dspsarcnt** *<ChanNum>*
- *Test the connection*   **tstcon** *<port_num>*
- *Test the delay*   **tstdelay** *<chan_num>*

Running CESM Tests

- Setting Up BERT Session on a CESM
- Setting Up Local Loopback Testing on a Low-Speed FRSM

Setting Up Local Loopback Testing on a CESM

Bring up the CESM command prompt to set up the following loopback functions on T1 or T3 lines:

Step 1 *Add Line Loop.* **addlnloop** *<line number>*

Step 2 *Remove Line Loop.* **dellnloop** *<line number>*

Setting Up BERT Session on a CESM

Bring up the CESM command prompt.

Step 1 *Acquire BERT.* **acqdsx3bert**

Step 2 *Reset BERT counters.* **clrbertcntrs**

Step 3 *Start BERT.* **startdsx3bert**

Step 4 *Display BERT detail.* **dspdsx3bert**

Step 5 *Stop BERT.* **deldsx3bert**

FRSM Configurations

This section contains typical command sequences associated with the MGX 8800 Frame Relay Service Module.

Setting Up FRSM Connectivity

Bring up the FRSM command prompt to do this configuration.

Step 1	*Set card resource partitions.*	**cnfcdrscprtn** *<PAR_max_conns> <PNNI_max_conns> <Tag_max_conns>*
Step 2	*Verify.*	**dspcdrscprtn**
Step 3	*Add Line.*	
	• *8T1/E1, 2CT3, 2T3/E3*	• **addln** *<line number>*
	• *HS1/B, HS2*	• **addln** *<line number> <line type> <line rate>*
Step 4	*Configure Line.*	
	• *8T1/E1, 2CT3, 2T3/E3*	• **cnfln** *<line number> <line code> <line length> <clock source>* **[***E1 signalling***]**
	• *HS1/B, HS2*	• **cnfds3ln** <DS3 *line number> <line type> <line rate> <clock source>*
Step 5	*Verify.*	
	• *Check all lines*	• **dsplns**
	• *View specific line*	• **dspln** *<line number>*
Step 6	*Add Port.*	
	• *2T3E3*	• **addport** *<port number> <line number> <port type>*
	• *2CT3*	• **addport** *<port number> <line number> <ds0 speed> <begin slot> <number of slots> <port type>*
	• *8T1/E1*	• **addport** *<port number> <line number> <DS0 speed> <begin slot> <number of slots> <port type>*
Step 7	*Verify.*	
	• *Check all ports*	• **dspports**
	• *View specific port*	• **dspport**
Step 8	*Set port resource partitions.*	**cnfportrscprtn** *<port number> <controller>* <percent BW> *<low DCLI> <high DLCI> <max LCN>*
Step 9	*Verify.*	**dspportrscprtn**
Step 10	*Add Connection.*	**addcon** *<port> <DLCI> <CIR> <chan_type> <egress_service_type>*
	• *T1*	*<CAC> <controller_type> <mastership> <connID> <controller* ID>
Step 11	*Verify.*	**dspcon** *<port.DLCI>*
Step 12	*Configure Channel.*	
	• *T1*	• **cnfcon** *<port_num> <CDVT> <CLIP> <bufsize> <clockmode> <IdleSuppEnable> <ForceIdleSuppression>*
	• *T3*	• **cnfcon** *<port> <CDVT> <CellLossIntegPeriod> <bufsize>*
Step 13	*Verify.*	
	• *Check all connections*	• **dspcons**
	• *View specific connection*	• **dspcon**

Running FRSM Tests

- Setting Up Local Loopback Testing on a High-Speed FRSM
- Setting Up Local Loopback Testing on a High-Speed FRSM
- Setting Up T3 BERT Testing on an FRSM 2T3E3

Setting Up Local Loopback Testing on a Low-Speed FRSM

You can initiate a local line loopback on FRSM T1/E1 cards. Other loopbacks (such as remote loopbacks and far-end loopback) can be initiated through the SRM BERT functions.

Bring up the FRSM command prompt to set up the following loopback functions.

Step 1	*Set up the local line loopback.*	**addlnloop** *<line_num>*
Step 2	*Configure loopback code detection.*	**cnflnloop** *<line_num> <lpbkCodeDetection>*
Step 3	*Set up loopbacks on connections.*	**addchanloop** *<chan_num>*
Step 4	*Verify.*	**dspln** *<line_num>*
Step 5	*Remove the loopback configuration.*	**dellnloop** *<line_num>*

Setting Up Local Loopback Testing on a High-Speed FRSM

You can initiate a local line loopback on FRSM T3/E3 cards. Other loopbacks (such as remote loopbacks, far-end loopback) can be initiated through the SRM BERT functions.

Bring up the FRSM command prompt to set up the following loopback functions.

Step 1	*Set up the local line loopback.*	**addds3loop** *<line_num>*
Step 2	*Configure loopback code detection.*	**cnflnloop** *<line_num> <lpbkCodeDetection>*
Step 3	*Set up loopbacks on connections.*	**addchanloop** *<chan_num>*
Step 4	*Verify.* • *All lines* • *Specified lines*	• **dspds3ln** *<line_num>* • **dspds3lns**
Step 5	*Remove the loopback configuration.*	**delds3loop** *<line_num>* **dspds3ln** *<line_num> <lpbkCodedetection>*

Setting Up T3 BERT Testing on an FRSM 2T3E3

Bring up the FRSM command prompt to set up the following loopback functions.

Step 1 *Configure BERT.* **cnfdsx3bert** <*line_num*> <*test*-**pattern**>

Step 2 *Configure a line.* **xcnfln** <*LineNum*> **-e** <*dsx3LineEnable*> **-ds3ben** <*dsx3LineBERTEnable*>

Step 3 *Insert errors on the line.* **moddsx3bert** <*error_ir*>

Step 4 *Verify.* **dspdsx3bert**

Step 5 *Stop the BERT testing session.* **deldsx3bert**

AUSM Configurations

This section contains typical command sequences associated with the MGX 8800 ATM User Service Module.

Setting Up AUSM Connectivity

Bring up the AUSM command prompt to do this configuration.

Step 1	*Set card resource partitions.*	**cnfcdrscprtn** *<PAR_max_conns> <PNNI_max_conns> <Tag_max_conns>*
Step 2	*Verify.*	**dspcdrscprtn**
Step 3	*Add Line.*	**addln** *<line number>*
Step 4	*Verify.*	**dspln** *<line number>*
Step 5	*Configure Line.*	**cnfln** *<line num> <line_code> <line_len> <clk_src>* [E1-*signalling*]
Step 6	*Verify.*	
	• *Check all lines.*	**dspln** *<line number>*
	• *View specific line.*	**dspln** *<line number>*
Step 7	*Decision:* Narrowband *or* IMA*?*	

Narrowband

• *Add Port.* (max 1 per line)	• **addport** *<port_num> <port type> <line_num>*
• *Verify.*	
• *Check all ports.*	• **dspports**
• *View specific port.*	• **dspport** *<port_num>*

IMA

• *Add group.* (max 8 logical ports per AUSM)	• **addimagrp** *<group_num> <port_type> <list_of_links>* min_num_links>
• *Verify.*	
• *Check all groups.*	• **dspimagrps**
• *View specific group.*	• **dspimagrp**
• *Configure the group.*	**cnfimagrp** *<group_num> <max_diff_delay> <min_num_links>*
• *Add lines to the group.*	**addlns2imagrp** *<group_num> <list_of_lines>*
• *Verify.*	**dspimagrp**
• *Set IMA alarm parameters.*	**cnfimaalmparm** *<group_num> <uptime> <downtime>*

Step 8	*Add Connection.*	**addcon** *<port_num> <vpi> <vci> <conn_type> <service_type>* [*Controller_Type*] [*mastership*] [*remoteConnID*]
Step 9	*Verify.*	**dspcon** *<port.VPI.VCI>*

Debugging AUSM

- Checking AUSM Line Connections
- Checking AUSM IMA Group

Checking AUSM Line Connections

Bring up the AUSM command prompt to perform the following debugging functions.

- *Display port queue*   **dspportq** *<port number> <egress queue number>*
- *Display port counters*   **dspportcnt** *<port number>*
- *Display alarms*   **dspalms** *<lineType>*
- *Display alarm count*   **dspalmcnt -ds1** *<LineNum>*
- *Display channel counters*   **dspchancnt** *<Port.VPI.VCI>*
- *Display Load*   **dspsarcnt** *<ChanNum>*
- *Display SAR counters*   **dspsarcnt** *<ChanNum>*

Checking AUSM IMA Group

You probably won't do these things unless the IMA Group is not functioning properly.

Bring up the AUSM command prompt to perform the following debugging functions.

- *Display lines: Check to ensure* **dspimaln** *<imagroup> <linenum>*
  that lines are clear of alarms at
  both ends.

- *Check Tx and Rx LSM states on* **dspimaln** *<imagroup> <linenum>*
  constituent links.

- *Display the group configuration* **dspimagrp** *<lineType>*
  for both ends; check for
  constituent links.

- *Check observed differential* **dspimagrp** *<lineType>*
  delay.

Running AUSM Tests

- AUSM Connections
- IMA
- Loopbacks

AUSM Connections

- *Test the connection.*   **tstcon** *<Port.vpi.vci>*
- *Test connection segment.*   **tstconseg** *<Port.vpi.vci>*
- *Test the delay.*   **tstdelay** *<Port.vpi.vci>*

IMA

Bring up the AUSM command prompt to perform the following debugging functions.

- *Configure IMA Test.*   **cnfimatst** *<group_num> <Test_link_num><test_pattern> <test_proc_status>*
- *Verify.*   **dspimatst** *<group_num>*

Loopbacks

The following loopbacks can be executed on an AUSM.

- Remote loopback—Puts the card in remote line loopback mode, as enabled or disabled by FDL messages.
- Local line loopback—Works on the network side, as initiated by the **addlnloop** command.
- Local LCN/Channel loopback—Set up by LCN, as initiated by the **addchanloop** command.

Setting up a Local Line Loopback on an AUSM

Bring up the AUSM command prompt.

- *Set loopback on a specified*   **addlnloop** *<linenum>*
  AUSM line.
- *Stop the loopback.*   **dellnloop** *<linenum>*

Setting up an LCN/Channel Loopback on an AUSM

Bring up the AUSM command prompt.

- *Set loopback on a specified*   **addchanloop** *<Port.vpi.vci>*
  AUSM port.
- *Stop the loopback.*   **delchanloop** *<Port.vpi.vci>*