



Release Notes for Cisco MGX 8850 Software Version 2.1.70

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About Release 2.1.70

These release notes describe the new features, system requirements, and limitations that apply to Release 2.1.70 for the MGX 8850 IP + ATM backbone switch. These notes also contain Cisco support information.

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

Type of Release

Release 2.1.70 is a software release for MGX 8850 switches that use the PXM45 processor card.

Locating Software Updates

Software updates are located at Cisco Connection Online (CCO) at <http://www.cisco.com/kobayashi/sw-center/wan-planner.shtml>.

Acronyms

[Table 1](#) lists acronyms used in these release notes.

System Requirements

Table 1 *Acronyms Used in These Release Notes*

Acronym	Description
ABRFS	ABRFS: Available Bit Rate - Foresight
ABRSTD	ABRFS: Available Bit Rate - Standard
AINI	ATM Inter-Network Interface
APS	automatic protection switching
AR	Auto Route
ATM	asynchronous transfer mode
AXSM	ATM Switch Service Module
B-ISUP	Broadband ISDN User Part
BPX	broadband packet exchange
BXM	broadband switch module
BXM-E	broadband switch module - enhanced
CC	continuity check
CLI	command line interface
CM	connection manager
CPE	customer premises equipment
CRC	cyclic redundancy check
CWM	Cisco Wide Area Network Manager
DSLAM	digital subscriber line access module
ENNI	enhanced network-to-network Interface
FCES	Flow Control External Segment
FRSM	frame relay service module
IETF	Internet Engineering Task Force
ILMI	Interim Local Management Interface
IOS	internet operating system
ITU-T	International Telecommunication Union-Telecommunication
LDP	label distribution protocol
LMI	local management interface
LOS	loss of signal
LSC	label switch controller
LSP	label switched paths
LSR	label switch router
MGX	Multiservice Gigabit Switch
MIB	management information base
MPG	multiple peer group

Table 1 *Acronyms Used in These Release Notes (continued)*

Acronym	Description
MPLS	multiple protocol label switching
NCDP	network clock distribution protocol
NNI	network-to-network interface
OAM	Operations, Administration, and Maintenance
PNNI	private network-to-network interface
PVC	permanent virtual circuit
PXM	processor switch module
RDI	remote defect indicator
RPM	route processor module
RPM-PR	route processor module - Premium
SCT	service class template
SLA	service level agreement
SM	service module (a card)
SMFIR	single mode fiber - intermediate range
SNMP	simple network management protocol
SPVC	soft permanent virtual connection
SVC	switched virtual circuit
UNI	User-Network Interface
VCi	virtual channel identifier
VNNI	virtual network-to-network interface
VPI	virtual path identifier
VsVd	Virtual Source, Virtual Destination
WFQ	Weighted Fair Queuing (algorithm)
XLMI	extended local management interface
XPVC	extended permanent virtual circuit

This section describes software compatible with this release, and lists the hardware supported in this release.

Software/Firmware Compatibility Matrix

[Table 2](#) lists Cisco WAN or IOS products that are interoperable with MGX Release 2.1.70.

Table 2 *MGX and RPM Software Version Compatibility Matrix*

Cisco WAN or IOS Products	Current Release	One release before current release	Two releases before current release
CWM	10.5.10	n/a	n/a
MGX 1	1.2.00	1.1.40	1.1.34

Table 2 *MGX and RPM Software Version Compatibility Matrix (continued)*

Cisco WAN or IOS Products	Current Release	One release before current release	Two releases before current release
MGX 2	2.1.70	2.1.60	2.0.15
BPG/IGX	9.3.35	9.3.24	9.2.40
MGX 8220	5.0.17	4.1.11	n/a
SES	1.1.70	n/a	1.0.15
Firmware	latest for all	n/a	n/a
IOS	12.2(4)T1	12.2(4)T	12.2(2)T3
VISM	2.2	2.1.1 (1 pair)	1.5.6 (1 pair)

Table 3 lists the software that is compatible for use in a switch running Release 2.1.70 software. Note that the AXSM/B cards use the same software as AXSM cards.

Table 3 *MGX and RPM Software Version Compatibility Matrix*

Board Pair	Boot Software	Minimum Boot Code Version	Runtime Software	Latest Firmware Version	Minimum Firmware Version
PXM45	pxm45_002.001.070.202_bt.fw	2.1.70	pxm45_002.001.070.202_mgx.fw	2.1.70	2.1.70
PXM45/B	pxm45_002.001.070.202_bt.fw	2.1.70	pxm45_002.001.070.202_mgx.fw	2.1.70	2.1.70
AXSM-1-2488	axsm_002.001.070.202_bt.fw	2.1.70	axsm_002.001.070.202.fw	2.1.70	2.1.70
AXSM-16-155					
AXSM-4-622					
AXSM-16-T3/E3					
AXSM-1-2488/B	axsm_002.001.070.202_bt.fw	2.1.70	axsm_002.001.070.202.fw	2.1.70	2.1.70
AXSM-16-155/B					
AXSM-4-622/B					
AXSM-16-T3/E3/B					
AXSM-2-622-E	axsme_002.001.070.202_bt.fw	2.1.70	axsme_002.001.070.202.fw	2.1.70	2.1.70
AXSM-8-155-E					
AXSM-16-T3E3-E					
RPM-PR	rpm-boot-mz.122-4.T1	12.2(4)T1	rpm-js-mz.122-4.T1	12.2(4)T1	12.2(4)T1

Additional Compatibility Information

The following notes provide additional compatibility information for this release:

- You can gracefully upgrade to Release 2.1.70 from Releases 2.0.15, 2.1.10, and 2.1.60.
- MGX 2.1.70 interoperates with SES PNNI 1.1.70 plus BPX Switch Software (SWSW) 9.3.35 plus BXM MFR.

- This release supports feeder connections from Cisco MGX 8850 Release 1.1.40. Please see the “Release Notes for MGX 8850, 8230, and 8250 Software Version 1.1.40” for feeder feature issues. Release notes can be downloaded from <http://www.cisco.com/univercd/cc/td/doc/product/wanbu/index.htm>.
- You must use CWM Release 10.5.10 to manage networks that contain MGX 8850 switches running Release 2.1.70.
- The RPM-PR software in this release is based on IOS Release 12.2(4)T1.

Hardware Supported

Table 4 lists the hardware supported in Release 2.1.70.

Table 4 Hardware Supported in Release 2.1.70 for MGX 8850

Product ID	800 Part Number	Minimum Revision
AXSM-1-2488	800-05795-05	-A0
AXSM-1-2488/B	800-07983-02	-A0
AXSM-16-155	800-05776-06	-A0
AXSM-16-155/B	800-07909-05	-A0
AXSM-16-T3/E3	800-05778-08	-A0
AXSM-16-T3/E3/B	800-07911-05	-A0
AXSM-16-T3E3-E	800-18519-02	-A0
AXSM-2-622-E	800-18521-02	-A0
AXSM-4-622	800-05774-09	-B0
AXSM-4-622/B	800-07910-05	-A0
AXSM-8-155-E	800-18520-02	-A0
MGX-APS-CON-8850	800-05307-01	-A0
MGX-MMF-FE	800-03202-02	-A0
MGX-RJ45-4E/B	800-12134-01	-A0
MGX-RJ45-FE	800-02735-02	-A0
MMF-4-155/C	800-07408-02	-A0
MMF-8-155-MT	800-04819-01	-A1
MMF-8-155-MT/B	800-07120-02	-A0
PXM45	800-06147-07	-B0
PXM45/B	800-09266-04	-A0
PXM-HD	800-05052-03	-A0
PXM-UI-S3	800-05787-02	-A0
RPM-PR-256	800-07178-02	-A0
RPM-PR-512	800-07656-02	-A0
SMB-4-155	800-07425-02	-A0
SMB-8-E3	800-04093-02	-A0
SMB-8-T3	800-05029-02	-A0

Table 4 Hardware Supported in Release 2.1.70 for MGX 8850 (continued)

Product ID	800 Part Number	Minimum Revision
SMFIR-1-622/C	800-07410-02	-A0
SMFIR-2-622	800-05383-01	-A1
SMFIR-2-622/B	800-07412-02	-B0
SMFIR-4-155/C	800-07108-02	-A0
SMFIR-8-155-LC	800-05342-01	-B0
SMFIR-8-155-LC/B	800-07864-02	-B0
SMFLR-1-2488	800-06635-04	-A0
SMFLR-1-2488/B	800-08847-01	-A0
SMFLR-1-622/C	800-07411-02	-A0
SMFLR-2-622	800-05385-01	-A1
SMFLR-2-622/B	800-07413-02	-B0
SMFLR-4-155/C	800-07409-02	-A0
SMFSR-1-2488	800-05490-05	-A0
SMFSR-1-2488/B	800-07255-01	-A0
SMFXLR-1-2488	800-05793-05	-A0
SMFXLR-1-2488/B	800-08849-01	-A0

Hardware Compatibility Matrix

Table 5 shows which back cards can be used with each front card in Release 2.1.70.

Table 5 Back Cards and Connectors Supported by Front Cards

Front Card Type	Back Card Types	Supports APS Connector (MGX-APS-CON)
AXSM-1-2488	SMFSR-1-2488 SMFLR-1-2488 SMFXLR-1-2488	Yes
AXSM-1-2488/B	SMFSR-1-2488/B SMFLR-1-2488/B SMFXLR-1-2488/B	Yes Yes yes
AXSM-2-622-E	SMFIR-1-622/C SMFLR-1-622/C	Yes Yes
AXSM-4-622	SMFIR-2-622 SMFLR-2-622	Yes
AXSM-4-622/B	SMFIR-2-622/B SMFLR-2-622/B	Yes

Table 5 Back Cards and Connectors Supported by Front Cards (continued)

Front Card Type	Back Card Types	Supports APS Connector (MGX-APS-CON)
AXSM-8-155-E	MMF-4-155/C SMFIR-4-155/C SMFLR-4-155/C SMB-4-155	Yes Yes Yes
AXSM-16-155	MMF-8-155-MT SMFIR-8-155-LC SMFLR-8-155-LC	Yes
AXSM-16-155/B	SMB-4-155 MMF-8-155-MT/B SMFIR-8-155-LC/B SMFLR-8-155-LC/B	Yes
AXSM-16-T3E3	SMB-8-T3 SMB-8-E3	
AXSM-16-T3E3/B	SMB-8-T3 SMB-8-E3	
AXSM-16-T3E3-E	SMB-8-T3 SMB-8-E3	
PXM45	PXM-HD PXM-UI-S3	N/A
PXM45/B	PXM-HD PXM-UI-S3	N/A
RPM-PR-256 RPM-PR-512	MGX-MMF-FE MGX-RJ45-4E/B MGX-RJ45-FE	N/A

New and Changed Information

This section describes new features, hardware, and commands in Release 2.1.70.

New Features

The following features are new in release 2.1.70:

- OAM Loopback
- ITU-T APS Annex B
- XPVC/XPVP Termination on AXSM-E
- Config Verify

OAM Loopback

This feature allows a PVC or SPVC ATM connection terminating on an AXSM-E card to be put into a loopback mode for testing purposes. Standard or non-standard OAM cell patterns are transmitted toward the AXSM-E with or without a CRC error. These cells are then looped back by the AXSM-E in the opposite direction. At the sourcing device, returning cells are compared to known transmitted cells in order to verify the integrity of the link. Up to 8 loopback connections are supported per AXSM-E card.

This loopback feature is available only on AXSM-E OC-3 cards with SMFIR line modules, and does not apply to VNNI links or SVC connections.

Benefits

This feature is targeted at ATM network applications requiring layer 2 loopback testing.

Limitations

- Currently, this feature is supported through CLI only.
- Only ingress channel loopback is supported.
- Statistics gathering is suspended for a connection in loopback.

ITU-T APS Annex B

Automatic Protection Switching, as described in ITU-T G.783, is supported on the AXSM-E OC-3 card with an SMFIR line module. Interoperability of this feature between the BPX and the MGX is not supported.

Benefit

This feature brings high levels of resiliency to ITU-T compliant network applications.

Limitations

- Currently, this feature is supported through CLI only.
- Interoperability of this feature between the BPX and the MGX is not supported.

XPVC/XPVP Termination on AXSM-E

This feature is intended to support the use of AXSM-E ports as end points for XPVC/XPVP connections in networks evolving from AR to PNNI, using MGX Release 2.1.70, BPX 9.3.30 and CWM 10.5.10.

Benefit

This feature further extends the Network Migration 1B capabilities to cover a new card type on the MGX Release 2.

Platforms and Considerations

The minimum release bundle required consists of MGX 8850 R2.1.70 with AXSM-E, BPX 9.3.30, and CWM 10.5.10.

Design Guide and Application Notes

Similar to AXSM, AXSM-E does not support ABRFS service type. CWM allows the user to select ABRSTD or ABRFS at the BXM/AUSM-8/FRSM-8 for setting up XPVC/XPVP connections to AXSM-E. In the case of an ABRSTD connection, CWM automatically enables the necessary parameters at the termination points and at the NNI termination points to create a single congestion control loop between AXSM-E termination point and the remote XPVC/XPVP termination point.

For all service modules that do not support ABRSTD, for example, the ones on MGX 8220, FRSM-VHS and FRSM-2CT3 on MGX 82xx, XPVC/XPVB connection with AXSM-E will involve ABRFS segment in the AR domain and an ABRSTD segment in the PNNI domain. Each segment will have its own congestion control loop.

In this case, CWM checks if BXM-E is used for the XLMI link at the BPX gateway node. It automatically enables the corresponding AR termination point in that BXM-E with FCES, and also enables the internal VsVd at the AXSM-E termination point.

For BXM to AXSM-E connections with ABRFS service type, CWM automatically enables FCES at the BXM termination points in the AR segment, and enables internal VsVd at the AXSM-E termination point.

CWM aggregates alarms from the AR and PNNI segments to display the overall condition for the XPVC and for the individual XPVC segments. This is no change of functionality from using AXSM as XPVC/XPVP end points in terms of connections monitoring in the CM GUI.

CWM Service Agent supports the connection management of AR-PNNI type XPVC/XPVP with termination point on AXSM-E. This is no change of functionality from AXSM support.

The WFQ, Policing, VsVd and ABRSTD VsVd parameters in the SCT associated with AXSM-E must be configured prior to provisioning of any XPVC/XPVP. CWM provides the ability to download SCT files to the switch and associate them with AXSM-E.

Limitations

- No support for LMI and hence no feeder shelf can be connected to AXSM-E. The AR-PNNI-Hybrid connection is not supported for the same reason.
- No support for XLMI and ENNI and hence AXSM-E should not be connected physically to BPX, BXM, or BXM-E for the purpose of migration.
- Only AR-PNNI connectivity type is supported since AXSM-E does not support ENNI.
- All CWM 10.5 limitations regarding AXSM support of XPVC/XPVP also apply to the AXSM-E.

References

See the CWM 10.5.10 Release Note, the CWM 10.5 Installation Guide, and the Cisco MGX 8850 Switch Software Configuration Guide, Release 2.1 for the basic feature set of XPVC/XPVP Provisioning.

Config Verify

This is an off-line utility that runs on a Solaris workstation to verify the integrity of configuration files transferred from the hard disk of the MGX 8850 to the Solaris workstation. This tool helps validate uploaded configuration files.

Enhancements in Release 2.1.70

The product enhancement requests (PERs) in [Table 6](#) are included in MGX Release 2.x. The enhancements that are new to release 2.1.70 are marked with an asterisk (*). Refer to the “MGX 8850 Command Reference for Release 2.1” at

<http://www.cisco.com/univercd/cc/td/doc/product/wanbu/8850r21/index.htm> for further details about the commands mentioned in these enhancements.

Table 6 *List of Product Enhancement Requests in MGX Release 2.x*

Enhancement Number	Purpose
2832	This enhancement displays Bit Error Counts on AXSM lines. The command is dspbecnt . The AXSM-E card does not support this command in 2.1.70, but will in 2.1.71. The display follows the same style as the PXM1 uplinks.
2835	The dclk command is available on the active PXM45 Card in an MGX 8850 node. It provides a display of the Digital to Analog Converter (DAC) value and the Deviation in Parts per Million of the output frequency for the current clock source from the nominal frequency value for the local oscillator on the PXM45 UIS3 card.
2837	After a user enters tstdelay/tstconseg , the results should be shown after the command is run.
2836	The node name was not shown in all command displays, and is now added to the following PNNI command displays: conntrace , dspcon , dsppnni-link , dsppnni-neighbor .
2838 *	(CSCdv27524): Need master/slave filter on dspconcnt and dspcons . The dspconinfo command displays the connection counts by class of service (CSCdt11863), and the new enhancement (CSCdv27524) allows users to get master/slave counts in. The new feature provides a filter “-owner” with (slave/master) as options.
2839	The AXSM card now displays the total number of active lines, ports, and channels. A new CLI command “ dsptotals ” was added to accomodate this request.
2840	(CSCdt54869): This enhancement was made because dsppnports showed confusing DAX counts. The dsppnports command now shows three sections. The first section is called Summary of Active connections, the second section is called the Summary of Total Config ured SPVC Endpoints, and the third section is called the Summary of Total Active SVC/SPVC Intermediate Endpoints.
2841	Since the SCT default Traffic Parameters (PCR, MCR, SCT etc) are not used in programming the connection, then it should be removed from the SCT File.
2842 *	(CSCdu84598): Add threshold and current reset count info in the reset log. This PER has been implemented as requested. The log message associated with MAX_CD_RESET feature should show the threshold for resets that has been configured. The cnfndparms command is used to configure the max card reset PER window.

Table 6 List of Product Enhancement Requests in MGX Release 2.x (continued)

Enhancement Number	Purpose
2843	This enhancement raises the priority of the CLI session. Enter ESC-CTRL-2 either while in a CLI session or at the login prompt. The session will remain at a higher priority until the session is terminated by logging out or timeout. This is available for debugging performance problems if a CLI command cannot be executed because the system is too busy. This should NOT be used for normal operations.
2844	The clrsarcnt command will clear the SAR Counters which are displayed in dpsarcnt .
2845	When a connection is being routed and there is no response to signaling for that connection, a crankback-type message will be generated so that the connection can try alternate routes instead of waiting forever.
2849 *	The dspstbyclksrcs command, available from the standby PXM45 card, displays the state of configured clock sources.
2889	A new command, checkflash , checks for data corruption by verifying flash content against its checksum.
2920 *	This PER is a configuration utility on a Workstation to verify the switch configuration database.
2892	The commands addlnloop and addchanloop should use the same name convention for Local & Remote loopback.
3092	All commands dealing with alarms should display a logical hierarchy, for example, eg dspcdalms <slot #>
3417 *	The Trap managers will be automatically deleted if there is no 'keep alive' request from CWM for the configured intervals.

Additional Software Information

MIB

The SNMP MIB release for 2.1.70 is mgxmibs2160.tar.

Service Class Template File Information

The default Service Class Templates (SCTs) provided with release 2.1.70 are as follows:

AXSM and AXSM/B

- SCT 2 - policing enabled, PNNI
- SCT 3 - policing disabled, PNNI
- SCT 4 - policing enabled, MPLS and PNNI
- SCT 5 - policing disabled, MPLS and PNNI

AXSM-E

- SCT 4 - policing enabled, ABR-tag parameter included
- SCT 5 - policing enabled, ABR-tag parameter not included (use this SCT for upload to CWM workstation)



Note

AXSM-E SCT 5 has some changes to the default values (other than TAG-ABR not being present). It is the latest version of the SCT file that is being released with 2.1.70

New Hardware Supported in Release 2.1.70

There is no new hardware supported by this release. However, the previous 2.1.60 release introduced the following new hardware:

- AXSM-E module (T3/E3, OC3c/STM1, OC12c/STM4)
- AXSM/B OC-48 (No APS support)

Hardware Overview

The following sections describe the hardware introduced in release 2.1.60.

AXSM-E module (T3/E3, OC3c/STM1, OC12c/STM4)

The AXSM-E module (AXSM-E module (T3/E3, OC3c/STM1, OC12c/STM4) is a double-height Service Module used on the PXM45-based MGX 8850 platform. The AXSM-E supports ATM cell transfer over the following physical interfaces: T3/E3, OC-3c/STM-1, and OC-12c/STM-4. The AXSM-E hardware is implemented with a base card (mother board) and various auxiliary cards (daughter boards) that each define the physical interface (T3/E3, and so on) being used.

AXSM-E card types include:

- AXSM-16-T3E3-E, which supports SMB-8-T3 and SMB-8-E3 back cards
- AXSM-8-155-E, which supports SMB-4-155, MMF-4-155/C, SMFIR-4-155/C, and SMFLR-4-155/C back cards
- AXSM-2-622-E, which supports SMFIR-1-622/C and SMFLR-1-622/C back cards



Note

The front card hardware (mother board/daughter board) for each card type can support up to two back cards. But in Release 2.1.60 or higher, only one back card (i.e., half the port capacity available in hardware) is supported by software. The full port capacity will be supported with a future software release. No hardware changes will be required.

AXSM-1-2488/B (No APS support)

The AXSM-1-2488/B/(OC-48/STM-16) is a double-height ATM service module that uses serial line traces to access the crossbar switching fabric. It supports 1:1 module redundancy and provides ATM switching and line functions. A future software release will activate the APS capability on the AXSM-1-2488/B.

One port is supported per single-height back card (SMFSR or SMFLR)

New and Changed Commands

Release 2.1.70 contains the new and changed commands listed in the following sections. Crossbar commands in particular have significantly changed to enhance the feature.

Please refer to the "MGX 8850 Command Reference, Release 2.1" (part DOC7812563=) for details about CLI commands (see the "Related Documentation" section later in these notes for additional documentation that supports this release).

New and Changed Commands

Release 2.1.70 contains new commands, listed below.

Please refer to the "MGX 8850 Command Reference, Release 2.1" (part DOC7812563=) for details about CLI commands (see the "Related Documentation" section later in these notes for additional documentation that supports this release).

New Commands

These commands are new to Release 2.1.70.

- cnfxbaradmin
- dspadjlnalms
- dspdevalms (was clrxbaralm(s))
- dspdeverr
- dspdeverrhist (was dspxbarerrcnt)
- dspxbarplanealms
- dspxbarslotbwalms

Changed Commands

These commands have changed:

- dspadjlnalm
- dspalm
- dspapsbkplane
- dspapsln
- dspapslns
- dspxbar
- dspxbarswalms
- switchapsln

Removed Commands

- dspxbaralm(s) is now dspdevalms
- dspxbarerrcnt is now dspdeverrhist

- dspxbalararm

Limitations and Restrictions

This section describes the following issues for Release 2.1.70:

- General limitations, restrictions, and notes
- AXSM limitations
- RPM-PR and MPLS limitations, restrictions, and notes
- APS management information and open issues
- Clearing the configuration on redundant PXM45/B cards

General Limitations, Restrictions, and Notes

The following limitations and restrictions apply to this release:

- For a graceful upgrade, you must upgrade from version 2.0.15, 2.1.10, or 2.1.60.
- Presently, the PXM CLI allows for provisioning of a PNNI controller (controller id 2) on any slot in the chassis, but for this release, such provisioning should be restricted to slot 7 only.
- APS is not supported on AXSM-1-2488/B.
- The maximum number of logical interfaces with PXM45 cards is 99 and PXM45/B cards is 192. Of 192 PNNI interfaces, up to 100 interfaces can be signaling ports.
- AXSM-1-2488 and AXSM-1-2488/B cards do not have a policing function enabled.
- Trace information captured in the error logs of non PXM slots (seen with **dsperr -sl <slotnum>**) will not translate addresses in the trace to correct symbolic names. Such files with trace data need to be moved off the system using FTP and forwarded to TAC.
- Support for a total of 19 controllers (one for PNNI and 18 for LSC). Controller ID 2 is reserved for a PNNI controller; IDs 3–20 are available for LSC controllers.
- Partition ID 1 is reserved for PNNI.
- If an active AXSM card is stuck in the active INIT state, the standby PXM will not go to the standby Ready state until the active AXSM goes to a steady state. Steady states are: Active Ready, Failed, Mismatch, Empty, Empty Reserved, Standby Ready. With redundancy configured, if a standby AXSM card is stuck in a standby init state, with an active AXSM already in a Active Ready state, the standby PXM will go to the standby Ready state without any delay. If both AXSMs in the redundancy pair are not in a steady state, then the standby PXM will not go to the standby Ready state until one or both of the 2 AXSM cards are in the active Ready state.
- If the destination address is reachable for both an IISP and a PNNI link from the same node, ABR connections will not route. The current routing algorithm will always choose IISP links over PNNI links because it is local. Since IISP does not support ABR connections, the connection setup will fail.
- In this release, a Service Class Template (SCT) can be changed with connections present. However, if the change affects services in use, the connections will be rerouted.
- When CWM is used to manage the network, the IP address 10.0.x.x cannot be used as the LAN address (InPci) for the switch.

Important Notes

This section provides general notes that apply to this release, and covers some procedures that are not yet in the manuals.

- You must use the SCT files released with 2.1.60 or later (number 2 and 3, which were included in version 2.0.13 are similar to number 2 and 3 for 2.1.60 and later) for the Control VC feature. If you are using the MPLS feature, then you will need to change to SCT 4 or 5, which were released with version 2.1.00.
- By default, 900 cps and 543 cps will be reserved for SSCOP and PNNI Signalling VC respectively, even when you disable SSCOP and PNNI. These values are configurable using the **cnfpnctlvc** command.
- Do not execute the **delcontroller** command when connections/ports still exists. The impact of executing **delcontroller** with connections is that the connections cannot be recovered until the controller is re-added using **addcontroller** and the AXSM cards or the entire node has to be reset (otherwise ports remain in the provisioning state). There is now a warning to the user of the impact of the command when there are existing connections/ports.
- Analysis of the code has identified a situation which has a low probability of occurring and in fact has not been encountered in any test scenarios to date. This caution and associated workaround is provided as a precautionary measure. When the link bandwidth for SPVC connections is reaching full capacity, making minimal bandwidth available for new SPVC connections, a condition can be encountered where the initial software check believes there is sufficient bandwidth for the new SPVC connection; however, the final software confirmation for available bandwidth may be rejected because there is no bandwidth available. If this problem occurs, the system will recover when the PNNI updates are refreshed. (This will happen at the default time of 30 minutes.) The user can recover from this problem by making the Administrative weight of that link very high to minimize use of that link.
- To replace one type of AXSM front card with another type, you must delete all connections, partitions, ports and down lines. If an AXSM card fails, the same type of AXSM card must be installed in its slot. (Refer to section “Decommissioning an AXSM Slot” in the *Cisco MGX 8850 Switch Software Configuration Guide, Release 2.1*.)
- When the switch cannot automatically resolve nativity check conflicts, you can force a configuration rebuild from a specific hard disk by establishing a console port session through the corresponding PXM-UI-S3 card and issuing the **shmRecoverIgRbldDisk** command. This command ignores the nativity check and configures the entire switch according to the configuration on the hard disk.
- PNNI default min VCI is 35 unless changed explicitly. The reason for the default is to reserve VCI=32–34 for other control purposes (e.g., MPLS and NCDP). For users who would like to add MPLS controller in future releases of MGX 8850, it is highly recommend to set the min-vcv value to be 35 or more for all partitions on the port where the MPLS partition will be added. By doing so, the TDP signalling VC for MPLS will be established automatically on 0/32. MinVPI is not negotiated by ILMI, so the user should set this parameter to the same value on both nodes.

AXSM-E Limitations

- No support for policing when used as NNI port.
- Only Level 2 and 3 statistics are supported. Once the stats level is selected, it cannot be changed if a port has any connection set up.
- With Level 2 statistics, OAM cells are not distinguished from user cells, and up to 62,000 connections are supported per service module.

- With Level 3 statistics, OAM cells and user cells are counted separately, and up to 32K connections are supported per service module.
- External loopback (addchanloop) from AXSM-E to CPE is supported via CLI only and not via SNMP.
- When external loopback is in effect, **tstdelay** and **tstconseg** are not supported.
- Continuity Check (CC) of the PNNI segment between AXSM-E and AXSM can be executed only with the CLI. The user must make sure that the SPVC end point is configured as segment end point before executing the continuity check, and reconfigure back to non-segment after the continuity check completes..
- Anomaly CSCdt17212 is caused by a limitation of our software/firmware. Here is the explanation:
According to the Atlas document, the policing rate is defined as $50000000 / \text{PCR}$.
If we have a big PCR like OC12 line rate (1412830), the policing rate, parameter is a relatively small number ($50000000/1412830 = \sim 35.38996$). Since we are doing an integer division in this operation, values would be truncated. As a result, the policing parameter cannot be calculated accurately.
Moreover, the policing rate parameter is stored in a exponent (5-bits) and mantissa (9-bits) format, so this format cannot represent a small number very accurately.
Combining the above two factors, we cannot configure an accurate policing parameter when the rate is very large.
Since we want to make sure the user would get the rate they specified, our firmware would configure policing to the next larger rate that the hardware can represent.
If we select a large rate like 1400000, the firmware would program the actual policing rate to be 1428571.
- Anomaly CSCdv42527 requires further explanation: For VC queued (WFQ) connections, the maximum rate of traffic that the connection can handle is 0.2% less than the PCR of the connection. This is a hardware limitation (same as the limitation for BPX).

RPM-PR and MPLS Limitations, Restrictions, and Notes

For Release 2.1.70, no new RPM features are introduced. Some bugs were fixed. The same RPM-PR and MPLS limitations and restrictions that applied to release 2.1.60 also apply to 2.1.70:

- InterAS, MPLS TE and POS are not supported features on RPM-PR.
- **Saveallcnf** (issued on the PXM45/B card) captures configuration data saved by the RPM-PR card (as well as AXSM and PXM45 cards), and saves it on the active PXM45/B card's hard disk. Users must have configured RPM to store its configuration on the PXM45/B hard disk (E:/RPM). That is, on RPM, a user should have this line in its running configuration ("**boot configure:auto_config_slot#**"). To ensure that the saved file contains the latest RPM configuration, the user needs to execute the **copy run start** command on each RPM card prior to the **saveallcnf** command. This way, the RPM files on the active PXM45 hard disk will contain the latest configuration to be saved.
- A single RPM-PR can only function as either an Edge LSR or as an LSC, but not as both.
- Total of (OC12 minus T3) Mbps intrashelf traffic for Cell bus based modules are supported.
- To configure redundancy, the primary and secondary RPM-PR cards need to be in the Active state and the secondary card should not have any configuration.

- Removing a back card does not cause RPM-PR switchover. But sometimes the RPM-PR card gets reset when a back card is removed. As rev A0 of these release notes goes to press, we are working this issue (CSCdu39287).
- After establishing redundancy between two RPM-PR cards with the `addred` command, you must enter the `copy run start` command on the primary RPM-PR card to save the configuration change.
- If a secondary RPM-PR card is redundant to primary cards x and y, you cannot delete redundancy for only card x.
- If you need to enter the **softswitch** and **switchcc** commands, Cisco Systems recommends that you wait at least 5 seconds after issuing the **softswitch** command, and then enter the **switchcc** command.
- IOS software images on primary and secondary RPM-PR cards do not have to be compatible, but the IOS software on a secondary card should be at the same level as the primary card or higher.
- For ELSR to LSC connectivity, the default control VC used is 32. If a PNNI partition exists with VCI 32 as part of its partition range, then when MPLS partition is added, there are two options to handle the situation:
 - Add MPLS controller and define its partition with available range. On ELSR, define control VC from any VCI value within the range defined in the partition. The same VC should be defined on the LSC on xTag interface.
 - Reconfigure PNNI partition to spare the control VC usage on RPM-PR, AXSM, AXSM/B, or AXSM-E.
- Whenever the RPM-PR configuration is changed and a user wants to store that configuration, the user must enter the **"copy run start"** command on the RPM-PR. If this is not done, the changed configuration will be lost on RPM-PR card reboot or RPM-PR switchover in case of redundancy.
- Even though RPM-PR can have 1999 sub interfaces, the usage of sub interfaces should be planned in such a way that it does not cross a safe limit of 1985. This is because each sub interface takes one IDB (interface descriptor block) and the number of IDBs available in the card is 2000. Further, a user might need some IDBs for the RPM-PR back card and its ports.

RPM-PR and MPLS Notes

This section contains additional notes on using RPM-PR cards and MPLS in this release:

- RPM-PR back card status may be incorrect (anomaly CSCdt55154).
- For RPM-PR SPVC dax connections, the slave end must be deleted before the master endpoint.

Table 7 lists RPM commands that are different in MGX Releases 1.x and 2.x.

Table 7 RPM Commands that are Different in Releases 1 and 2

Release 1.x (PXM1)	Release 2.x (PXM45)
<code>addcon</code>	<code>switch connection</code>
<code>rpmrscprtn</code>	<code>switch partition</code>
<code>atm pvc</code>	<code>pvc</code>

New Bypass Feature for RPM in 12.2(4)T IOS Release



Note

Information about the bypass feature and the IOS commands used to support it was not available at the time of the printing of the RPM documents; therefore, it is included in these release notes.

RPM cards have a maximum storage of 128 KB for the NVRAM. This size limitation creates a problem for customers with large configurations, who find it impossible to store the configurations in the NVRAM, even with compression enabled.

In order to support storage of large configuration files, a new bypass feature is now available in the 12.2(4)T IOS Release. With the bypass feature enabled, the enhanced “write memory” is used to bypass the NVRAM and save the configuration on:

- For MGX Release 2, the file `auto_config_slot##` located in `E:/RPM`.
- For MGX Release 1, the file `auto_config_slot##` located in `C:/RPM`.

Where “##” represents the zero-padded slot number in which the RPM card is seated in the MGX chassis.

To enable the bypass feature, issue the command **`rpmnvbypass`** from the IOS run time image—not in the IOS boot image.

To disable the bypass feature, issue the command **`no rpmnvbypass`**.

To verify that the bypass feature is either enabled or disabled, issue the **`show running-configuration`** command. If the bypass feature is enabled, **`rpmnvbypass`** is seen on the display. If it is not seen, the feature is not enabled.

Example 1 through Example 5 illustrate how the feature is enabled and disabled, and how to validate each of these actions from the configuration display.

**Note**

Since the bypass feature bypasses NVRAM, it is not necessary to compress the configuration file using the command **`service compress-config`**.

**Caution**

1) When using the bypass feature, you can only load the run time IOS image from the PXM hard-drive or from the boot flash. 2) Do not execute the command **`no boot config`** because doing so may prevent the bypass feature from working properly. 3) If the command **`write memory`** is issued with the bypass feature enabled, and is consequently followed by an RPM reset, previous versions of the boot image will trigger the RPM card to go into boot mode (unable to load run-time IOS).

Example 1 Running configuration without the bypass feature enabled

```
rpm_slot02#show running-config
Building configuration...

Current configuration : 470 bytes
!
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname rpm_slot02
!
boot system c:rpm-js-mz.122-3.6.T1
enable password cisco
!
ip subnet-zero
!
!
!
```

```

interface Switch1
  no ip address
  no atm ilmi-keepalive
  switch autoSynch off
!
ip classless
no ip http server
ip pim bidir-enable
!
!
snmp-server community public RO
snmp-server community private RW
!
!
line con 0
line aux 0
line vty 0 4
  no login
!
end

```

Example 2 **Enable the bypass feature (rpmnvbypass)**

```

rpm_slot02#
rpm_slot02#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
rpm_slot02(config)#rpmnvbypass
The "boot config" statement has been (re)added to your
running configuration. Do not remove it else risk not
using the nvbypass feature

rpm_slot02(config)#end
rpm_slot02#

```

Example 3 **Running configuration with bypass feature enabled (note rpmnvbypass at end of output)**

```

rpm_slot02#show running-config
Building configuration...

Current configuration : 515 bytes
!
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname rpm_slot02
!
boot system c:rpm-js-mz.122-3.6.T1
boot config c:auto_config_slot02     <==== Line added as per output above
enable password cisco
!
ip subnet-zero
!
!
!
!
interface Switch1
  no ip address

```

```

no atm ilmi-keepalive
switch autoSynch off
!
ip classless
no ip http server
ip pim bidir-enable
!
!
snmp-server community public RO
snmp-server community private RW
!
!
line con 0
line aux 0
line vty 0 4
  no login
!
rpmnvbypass
end

```

Example 4 *Disable the bypass feature (no rpmnvbypass)*

```

rpm_slot02#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
rpm_slot02(config)#no rpmnvbypass
rpm_slot02(config)#end
rpm_slot02#

```

Example 5 *Running configuration after the bypass feature is disabled*

```

rpm_slot02#show running-config
Building configuration...

Current configuration : 503 bytes
!
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname rpm_slot02
!
boot system c:rpm-js-mz.122-3.6.T1
boot config c:auto_config_slot02
enable password cisco
!
ip subnet-zero
!
!
!
!
interface Switch1
  no ip address
  no atm ilmi-keepalive
  switch autoSynch off
!
ip classless
no ip http server
ip pim bidir-enable
!
!
snmp-server community public RO

```

```

snmp-server community private RW
!
!
line con 0
line aux 0
line vty 0 4
  no login
!
end

rpm_slot02#

```

Booting the RPM-PR

Refer to chapter 5 of the “Cisco MGX Route Processor Module Installation and Configuration Guide, Release 2.1” (part DOC-7812510=) for complete details on configuring the RPM-PR cards. (See the “Documentation” section for information on how to order a printed copy of this manual or locate the manual online.) A summary of the booting and upgrading procedures is presented here for your convenience.

When the RPM-PR is booted, the boot image must be the first file in the bootflash. If the bootflash does not have a valid boot image as a first file, the card may not be able to boot and can result in bootflash corruption. If the bootflash is corrupted, you will have to send the card back for an external burn with a valid boot image.

You can reboot the RPM-PR from the PXM by entering the command **resetcd** *<card_number>* from the switch CLI, where *card_number* is the slot number of the RPM-PR that is being rebooted.



Note

Omitting the card number resets the entire system.

Also, you can reboot the RPM-PR from the RPM-PR using the RPM-PR console port and entering the **reload** command.

Each time you turn on power to the RPM-PR, by inserting the RPM-PR into the MGX 8850, it goes through the following boot sequence:

1. The RPM-PR runs diagnostics on the CPU, memory, and interfaces.
2. The system boot software, which is the boot image, executes and searches for a valid Cisco IOS image, which is the RPM-PR runtime software.

The source of the Cisco IOS image is determined by the configuration register setting. To verify this setting, you can enter either the **show version** or **show bootvar** command. (See the “Viewing the Hardware Configuration” section of the “Cisco MGX Route Processor Module Installation and Configuration Guide, Release 2.1” (part DOC-7812510=).

- If the configuration register is set to the factory-default setting of **0x01**, RPM-PR will come up and stay in boot mode.
 - If the configuration register is **0x2**, the RPM-PR will look for the runtime image either in bootflash or on the PXM45/B E:RPM drive.
3. The search for runtime image is determined by which boot system command is entered.
 - Entering the **boot system e:<runtime_image_name>** command will result in a search for a runtime image in the E:RPM directory on the PXM45 hard disk.
 - Entering the **boot system bootflash:<runtime_image_name>** will result in a search for a run time image in the bootflash.

4. If the runtime software is not found after three attempts, the RPM-PR reverts to the boot mode.
5. If a valid Cisco IOS image is found, then the RPM-PR searches for a valid configuration, which can reside in NVRAM or as a configuration file either on the PXM hard disk E: drive or in bootflash.

If you want to load from a specific configuration file, you should enter either the **boot config bootflash:<config_file>** command or the **boot config e:<config_file>** command.

6. For normal RPM-PR operation, there must be a valid Cisco IOS image on the PXM-45 E: drive or in bootflash, and a configuration in NVRAM or configuration file in bootflash or on the PXM disk.

The first time you boot the RPM-PR, configure the RPM-PR interfaces and save the configuration to a file in NVRAM. Then follow the procedure described in “Initializing the RPM-PR Card.” For information on the Cisco IOS instructions, see Appendix C, “IOS and Configuration Basics.” (The section and appendix referred to are in the “Cisco MGX Route Processor Module Installation and Configuration Guide, Release 2.1” (part DOC-7812510=).

RPM-PR Bootflash Precautions

The RPM-PR bootflash is used to store boot image, configuration and “run time” files. The Flash stores and accesses data sequentially, and the RPM-PR boot image must be the first file stored to successfully boot the card. Erasing the boot image or moving it from the first position on the Flash will cause the card to not boot.

The RPM boot image, which comes loaded on the Flash, will work for all RPM IOS images. Therefore, there is no reason to ever delete or move the factory installed boot image.



Caution

Erasing or moving the boot image can cause RPM-PR boot failure. When this happens, the RPM must be returned to Cisco and reflashed.

In order to avoid this unnecessary failure, requiring card servicing, you should

- Never erase the boot file from the RPM Flash
- Never change the position of the boot file on the RPM Flash
- Use care when “squeezing” the Flash to clean it up.

As long as the boot file remains intact in the first position on the flash, the RPM will successfully boot.

APS Management Information

The following tips apply to the use of the **dspapsbkplane** command and the APS connector, which is sometimes called a backplane. The APS connector must be installed to enable intercard APS.

The APS commands **dspapsln**, **dspapslns**, **switchapsln**, and **dspapsbkplane** have been modified in release 2.1.70.

The APS command **dspadjlnalm** is new to release 2.1.70. Refer to the “MGX 8850 Command Reference for Release 2.1” at

<http://www.cisco.com/univercd/cc/td/doc/product/wanbu/8850r21/index.htm> for further details about the commands mentioned in these release notes.



Note

The issues in this section are seen only in Operational mode 1+1, bi-directional, Rev/non-Rev. If at least one side is configured as 1+1 unidirectional, these problems do not occur.

The following are some open issues in this release:

- Reset of active AXSM, removal of active AXSM, or AXSM switchover may cause the lines behind that card to be in a LOS status for 20 to 30 ms. If these lines were active at the time, some additional APS switch will occur; and the corresponding lines at the far-end will be in SF alarms before the standby AXSM is coming up. The momentary loss of signal is due to the hardware limitation; no other workaround is available. (Refer to CSCdu41763 -- P-comment and CSCdv01058 -- Eng-Note for more details.)
- If multiple active lines are removed at the same time, one line may not switchover.
 - To recover, either perform lockout of Protection line and Clear from the far end or perform delete APS for the line, then add the APS line back.

Preparing for Inter-card APS

The following components are required for inter-card APS:

- two front cards.
- two back cards for every bay hosting APS lines. All lines on cards used for inter-card APS must operate in APS pairs or use Y cables.
- an APS connector installed between the two back cards for every bay hosting APS lines.

Use the **dspapsbkplane** command on both the standby and active card to verify that the APS connector is plugged in properly. The following example shows the results displayed by the **dspapsbkplane** command when the APS connector is in place:

```
M8850_NY.1.AXSM.a > dspapsbkplane
```

Line-ID	Primary Card Signal Status	Secondary Card Signal Status
	Slot #1	Slot #2
1.1	PRESENT	PRESENT
1.2	PRESENT	ABSENT
2.1	PRESENT	ABSENT
2.2	PRESENT	ABSENT

Remote Front Card : PRESENT
 Top Back Card : ENGAGED
 Bottom Back Card : ENGAGED

The following example shows the results displayed by the **dspapsbkplane** command when the APS connector is not in place:

```
M8850_LA.1.AXSM.a > dspapsbkplane
```

Line-ID	Primary Card Signal Status	Secondary Card Signal Status
	Slot #1	Slot #2
1.1	PRESENT	ABSENT
1.2	ABSENT	ABSENT
2.1	PRESENT	ABSENT
2.2	ABSENT	ABSENT

Remote Front Card : ABSENT
 Top Back Card : ENGAGED
 Bottom Back Card : NOT-ENGAGED

**Note**

The **dspapsbkplane** command should be used only when the standby card is in the Ready state. When the standby card is booting or fails, intercard APS cannot work properly and this command displays “NOT ENGAGED.”

If the **dspapsbkplane** command displays the message “APS Line Pair does not exist,” suspect that the APS is not configured on a line.

If the **dspapsbkplane** command shows different values for each of the two cards, suspect that the APS connector is seated properly on one card but not on the other.

The APS connector status is the same for all lines in a single bay because the APS connector interconnects two back cards within the same bay. You need to enter the **dspapsbkplane** command only once to display the APS connector status for both upper and lower bays.

Enter the **dspapslms** command to verify APS configuration. If the working and protection lines show OK, both lines are receiving signals from the remote node.

Managing Intercard APS Lines

In AXSM and AXSM/B intercard APS, either front card can be active, and can be connected to either APS line through the APS connector joining the two back cards. The following process describes how intercard APS communication works:

1. The signal leaves the front card at the remote end of the line. (See Figure 1 and Figure 2.)
2. The signal passes through the APS connector and both back card transmit ports at the remote end of the line. (See Figure 1 and Figure 2.)
3. The signal travels through both communication lines to the receive ports on both back cards at the local end. (See Figure 1 and Figure 2.)
4. The active front card processes the signal that is received on the active line. (See Figure 1 and Figure 2.)
5. The standby card monitors only the status of the standby line. (See Figure 1 and Figure 2.)
6. If necessary, the signal passes through the APS connector to the front card. (See Figure 2.)

**Note**

The front card monitors only one of the receive lines.

[Figure 1](#) shows an example of how this process operates in a standard APS configuration, where the primary card monitors the working line and the secondary card monitors the protection line.

[Figure 2](#) shows an example of how the APS communication process operates in a crossed APS configuration, where the secondary card monitors the working line that is attached to the primary card, and the primary card monitors the protection line that is connected to the secondary card.

Figure 1 Standard APS Configuration

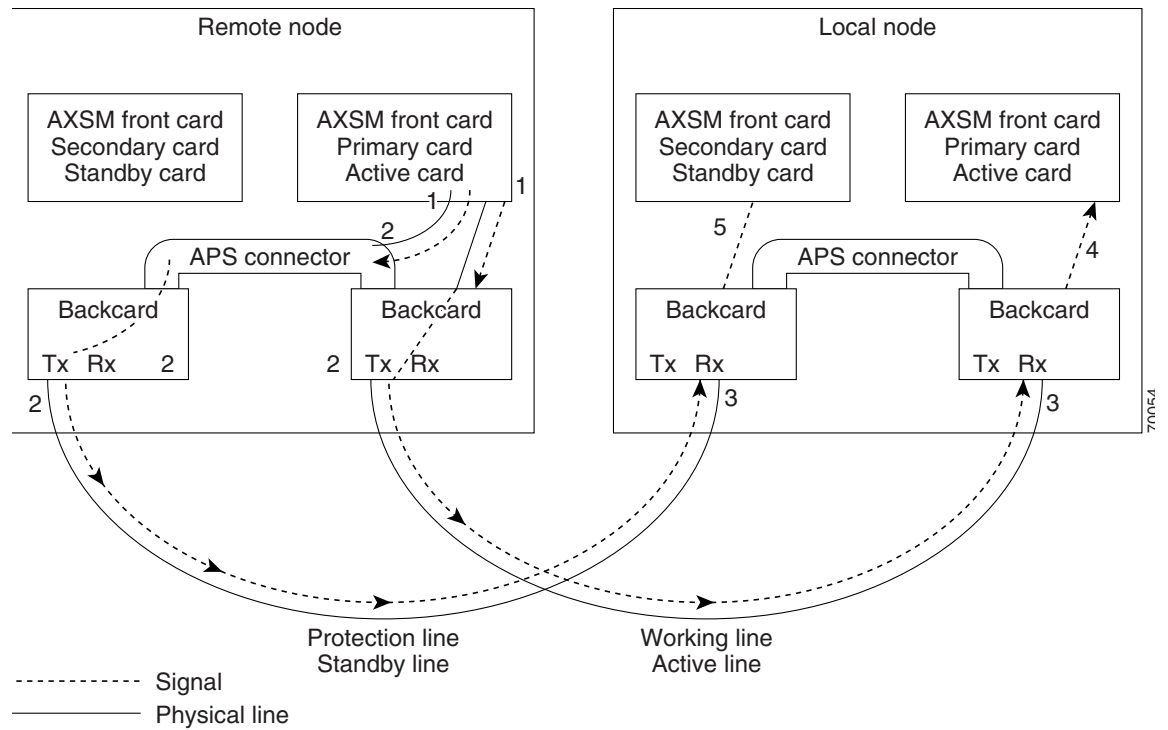
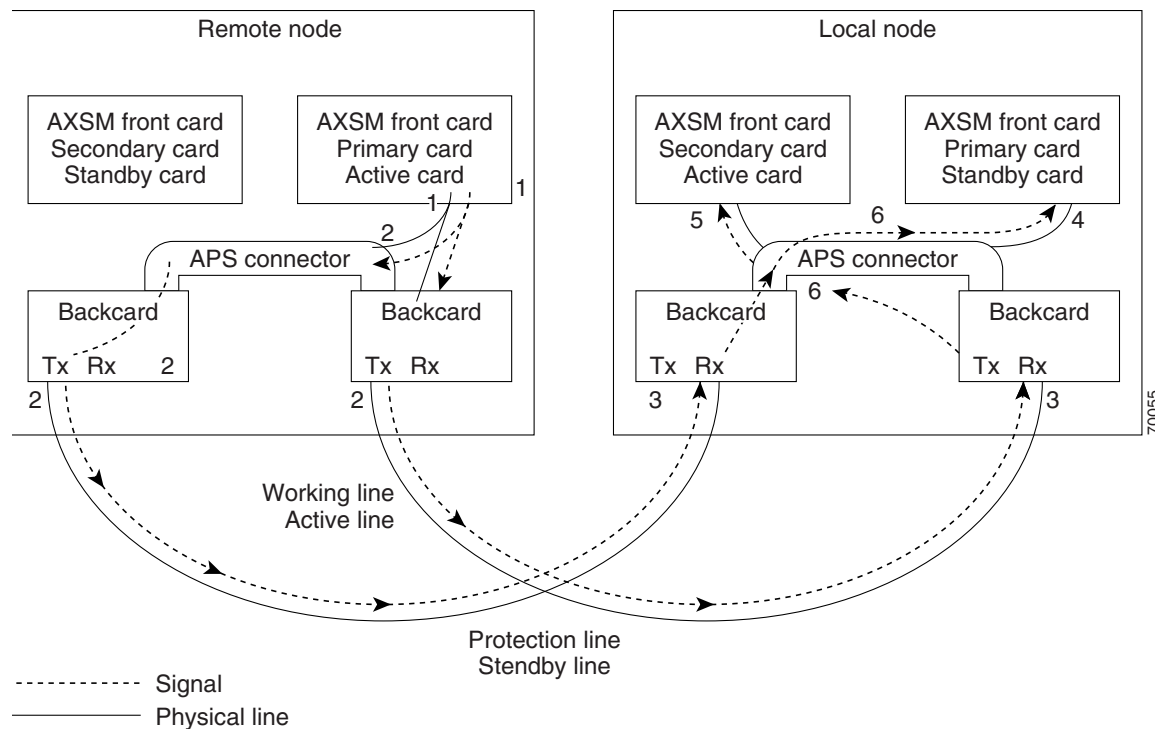


Figure 2 Crossed APS Configuration



Line failures are always detected at the receive end of the line. This is where a switchover occurs when a failure is detected. Two different types of switchovers can occur, depending on whether the APS was configured as unidirectional or bidirectional in the **cnfapsln** command:

- When a failure occurs on a line configured for unidirectional switching, the switch changes lines at the receive end only. A switchover is not necessary at the transmit end because the transmitting back cards send signals on both lines in the 1 +1 APS configuration.
- When a failure occurs on a line configured for bidirectional switching, a switchover occurs at both ends of the line.

If the status of the standby line is good, a switchover from the failed active line to the standby is automatic.

Enter the **cnfapsln** command to enable an automatic switchover back to the working line after it recovers from a failure, as shown in the following example:

```
M8850_LA.1.AXSM.a > cnfapsln -w 1.1.1 -rv 2
```

[Table 1](#) describes the configurable parameters for the **cnfapsln** command.

Table 8 *cnfapsln Command Parameters*

-w <working line>	Slot number, bay number, and line number of the active line to configure, in the format: slot.bay.line Example: -w 1.1.1
-sf <signal fault ber>	A number between 3 and 5 indicating the Signal Fault Bit Error Rate (BER), in powers of ten: <ul style="list-style-type: none"> • 3 = 10⁻³ • 4 = 10⁻⁴ • 5 = 10⁻⁵ Example: -sf 3
-sd <SignalDegradeBER>	A power of 10 in the range 5-9 that indicates the Signal Degrade Bit Error Rate (BER): <ul style="list-style-type: none"> • 5 = 10⁻⁵ • 6 = 10⁻⁶ • 7 = 10⁻⁷ • 8 = 10⁻⁸ • 9 = 10⁻⁹ Example: -sd 5
-wtr <Wait To Restore>	The number of minutes to wait after the failed working line has recovered, before switching back to the working line. The range is 5-12. Example: -wtr 5

Table 8 *cnfapsln Command Parameters*

-w <working line>	Slot number, bay number, and line number of the active line to configure, in the format: slot.bay.line Example: -w 1.1.1
-dr <direction>	Determines whether the line is unidirectional or bidirectional. <ul style="list-style-type: none"> • 1 = Unidirectional. The line switch occurs at the receive end of the line. • 2 = Bidirectional. The line switch occurs at both ends of the line. <p>Note This optional parameter is not shown in the above example because you do not need to set it for a revertive line.</p> <p>Example: -dr 2</p>
-rv <revertive>	Determines whether the line is revertive or non-revertive. <ul style="list-style-type: none"> • 1 = Non-revertive. You must manually switch back to a recovered working line. • 2 = Revertive. APS automatically switches back to a recovered working line after the number of minutes set in the -wtr parameter. <p>Example: -rv 1</p>

If you want to manually switch from one line to another, enter the **switchapsln** <bay> <line> <switchOption> command, as shown in the following example:

```
M8850_LA.1.AXSM.a > switchapsln 1 1 6
Manual line switch from protection to working succeeded on line 1.1.1
```

Table 2 describes the configurable parameters for the **cnfapsln** command.

Table 9 *switchapsln Command Parameters*

Parameter	Description
bay	The working bay number to switch.
line	The working line number to switch.

Table 9 *switchapsln Command Parameters*

Parameter	Description
switchOption	<p>The method of performing the switchover.</p> <ul style="list-style-type: none"> • 1 = Clear previous user switchover requests. Return to working line only if the mode is revertive. • 2 = Lockout of protection. Prevents specified APS pair from being switched over to the protection line. If the protection line is already active, the switchover is made back to the working line. • 3 = Forced working to protection line switchover. If the working line is active, the switchover is made to the protection line unless the protection line is locked out or in the SF condition, or if a forced switchover is already in effect. • 4 = Forced protection to working line switchover. If the protection line is active, the switch is made to the working line unless a request of equal or higher priority is in effect. This option has the same priority as option 3 (forced working to protection line switchover). Therefore, if a forced working to protection line switchover is in effect, it must be cleared before this option (forced protection to working line switchover) can succeed. • 5 = Manual switchover from working to protection line unless a request of equal or higher priority is in effect. • 6 = Manual switchover from protection to working line. This option is only available in the 1+1 APS architecture.
service switch	<p>This is an optional parameter. When set to 1, this field causes all APS lines to switch to their protected lines.</p>

Enter the **dspapslns** command to verify that the active line switched over from the protection line to the working line, as shown in the following example:

```
M8850_LA.1.AXSM.a > dspapslns
Working Prot.  Conf  Oper   Active  WLine PLine WTR   Revt  Conf  Oper  LastUser
Index   Index  Arch  Arch   Line   State State (min)  Dir  Dir  SwitchReq
-----
  1.1.1  2.1.1  1+1   1+1   working  OK    OK      5   Yes   bi    bi  ManualP->W
```

Troubleshooting APS Lines

Port lights on AXSM and AXSM/B front cards indicate the receive status of APS lines. The active front card always displays the status of the active line. The standby card always displays the status of the inactive line. If only one APS line fails, the line failure LED is always displayed on the standby front card.



Caution

When the active front card and the active line are in different slots and the inactive line has failed, it is easy to incorrectly identify the failed line as the line in the standby slot. To avoid disrupting traffic through the active line, verify which physical line is at fault before disconnecting the suspect line.

If the active line fails and the standby line is not available, the switch reports a critical alarm.

If the active line fails and the standby line takes over, the former standby line becomes the new active line, and the switch reports a major alarm.

If an AXSM front card fails, APS communication between the redundant front cards fails. This can result in one of the following situations:

- If both APS lines were working before the failure, an APS line failure causes a switchover to the protection line
- If either APS line failed prior to a front card failure, a failure on the active line does not cause a switchover to the other line. Because the standby front card failed, it cannot monitor the standby line and report when the line has recovered. This means that the active card cannot use the standby line until the standby front card is replaced and the line problem corrected.

Use the following procedure to troubleshoot APS lines.

- Step 1** Enter the **dsplns** command to determine if the line in alarm is an APS line. The **dsplns** command shows which lines are enabled for APS:

```
M8850_LA.1.AXSM.a > dsplns
```

Sonet Line	Line State	Line Type	Line Lpbk	Frame Scramble	Medium Line Coding	Medium Line Type	Alarm State	APS Enabled
1.1	Up	sonetSts12c	NoLoop	Enable	Other	ShortSMF	Clear	Enable
1.2	Up	sonetSts12c	NoLoop	Enable	Other	ShortSMF	Clear	Disable
2.1	Up	sonetSts12c	NoLoop	Enable	Other	ShortSMF	Clear	Disable
2.2	Up	sonetSts12c	NoLoop	Enable	Other	ShortSMF	Clear	Disable

If the line in alarm is an APS line, and has always functioned properly as an APS line, proceed to Step 2.

If the line in alarm has never functioned properly as an APS line, verify that the following are true:

- redundant front and back cards are in the appropriate bays and are installed at both ends of the line.
- cable is properly connected to both ends of the line.
- enter the **dspapsbkplane** command to verify that the APS connector is installed properly at both ends of the line.

- Step 2** Enter the **dspapslns** command at both ends of the communication line to determine whether one or both lines in an APS pair are bad. Use [Table 3](#) to help you determine which APS line is not functioning properly.

Table 10 Troubleshooting APS Line Problems Using the *dspaps* Command

Active Line	Working Line	Protection Line	Working Line LED	Protection Line LED	Description
Working	OK	OK	Green	Green	Active card is receiving signal on working and protection lines. This does not guarantee that transmit lines are functioning properly. You must view the status on remote switch.
Protection	SF	OK	Green	Red	Active card is receiving signal on the protection line. No signal received on the working line.
Working	OK	SF	Green	Red	Active card is receiving signal on the working line. No signal received on the protection line.
Working	SF	SF	Red	Red	Active card is not receiving signal from either line. The working line was the last line to work.
Protection	SF	SF	Red	Red	Active card is not receiving signal from either line. The protection line was the last line to work.
Working	UNAVAIL	UNAVAIL			The card set is not complete. One or more cards have failed or been removed. See Table 4 to troubleshoot card errors.

If one or both lines appear to be bad, determine whether the working or protection line is in alarm. Troubleshoot and correct the standby line first. Replace the components along the signal path until the problem is resolved.

- If the **dspapslns** command at either end of the line indicates a front or back card problem, resolve that problem first. (See [Table 11](#) to card problems).
- If the **dspapslns** command shows a signal failure on the standby line, replace that line.
- If the standby line is still down, replace the cards along the signal path.

Table 11 Troubleshooting Card Problems

APS Line Failure	Possible Cause
All lines in upper and lower bays	Suspect a bad or removed front card. If both front cards are good, both back cards may be bad.
All lines in upper bay only. Lower bay APS lines ok.	Suspect bad upper bay back card.
All lines in lower bay only. Upper bay APS lines OK.	Suspect bad lower bay back card.

Clearing the Configuration on Redundant PXM45 Cards

Due to checks to prevent an inserted card from affecting the system, an additional step may be required when inserting two "non-native" PXM45 cards in a shelf. Insert the first PXM45, do a **clrallcnf**, and allow this to become active before inserting the second PXM45.

Recommendations

Cisco Systems provides the following information and recommendations for switch configuration:

- The RPM-PR subinterface ID range is 1 – 32767.
- Apply the default values for PCR, SCR, and so on to the Control VC. If the values are decreased to a low value, there is a chance that the protocol on the interface (SSCOP or PNNI) will not come up.

Installing and Upgrading to Release 2.1.70

You can gracefully upgrade an MGX 8850 to Release 2.1.70 from Release 2.0.15, 2.1.10, or 2.1.60.

The procedures in this section were extracted from “Appendix A, Downloading and Installing Software Upgrades” in the “MGX 8850 Switch Software Configuration Guide, Release 2.1” (part DOC-7812551=). **In this section, references to “chapters” refer to chapters in that manual.**

You can download that manual from

<http://www.cisco.com/univercd/cc/td/doc/product/wanbu/8850r21/index.htm>.



Caution

Although graceful upgrades can be aborted with the `abortrev` command, the `abortrev` command does reset both active and standby cards, so reverting back to an earlier software release is not graceful. Please see the “`abortrev`” command description in the “Cisco MGX 8850 Switch Command Reference, Release 2.1” (part DOC-7812563=). A table under that command shows the behavior of cards in a single and redundant configuration.

This section describes how to locate, download, and install software updates for the switch. Because software updates are stored in the switch file system, this section includes a subsection on browsing the file system. This section includes the following subsections:

- Upgrade Process Overview
- Quickstart Procedures for Software Upgrades
- Browsing the File System
- Copying Software Files to the Switch
- Upgrade Procedures for PXM45 and AXSM Cards
- Upgrade Procedures for RPM-PR Cards
- Troubleshooting Upgrade Problems

Upgrade Process Overview

This section provides a series of quickstart procedures that describe how to perform graceful and non-graceful upgrades to the switch. To perform a graceful upgrade on a switch card, the card must be operating in redundant mode with another switch card of the same type. When performed properly, graceful upgrades have minimal impact on connections in progress and do not interrupt any established connections.



Note

Graceful upgrades to Release 2.1.70 are supported from Releases 2.0.15, 2.1.10, and 2.1.60.

When a card to be upgraded is not operating in redundant mode, you must do a non-graceful upgrade, which disrupts all traffic that passes through the card. For PXM45 cards, an ungraceful upgrade interrupts all traffic passing through the switch. For all other types of cards, an ungraceful upgrade affects only the traffic that passes through that card.

Each type of switch card runs boot and runtime software. The recommended sequence for upgrading the software (i.e., firmware) on switch cards is as follows:

1. PXM45 boot software
2. PXM45 runtime software
3. AXSM boot software
4. AXSM runtime software
5. RPM-PR boot software
6. RPM-PR runtime software


Note

If you plan to upgrade PXM45 cards and AXSM cards, upgrade the PXM45 cards first. Wait until the PXM45 cards are operating in active and standby modes with the correct software before upgrading AXSM cards. The software version used by the PXM45/B cards should be equal to or later than the version used on the AXSM, AXSM/B, and AXSM-E cards.

Typically, the boot software requires less frequent upgrades. However, in this release, both the boot and runtime software need to be upgraded.

When you upgrade the software on a switch card, proceed as follows:

- Decide whether you are performing a graceful or non-graceful upgrade
- Follow the appropriate quickstart procedure for that type of upgrade
- For additional information on a task within a quickstart procedure, see the subsection to which the procedure refers

The next subsection presents the quickstart procedures for switch card software upgrades.

Quickstart Procedures for Software Upgrades

The following subsections provide quickstart procedures for the following upgrades:

- Graceful PXM45 Boot Upgrades
- Non-Graceful PXM45 Boot Upgrades
- Graceful PXM45 and AXSM Runtime Software Upgrades
- Non-Graceful PXM45 and AXSM Runtime Software Upgrades
- Graceful AXSM Boot Upgrades
- Non-Graceful AXSM Boot Upgrades
- RPM-PR Boot and Runtime Software Upgrades


Caution

A CP port session is required because you will be resetting the node and entering commands in "Backup Boot mode," which is not accessible through other connection methods.

Graceful PXM45 Boot Upgrades

When performed properly, graceful upgrades have minimal impact on connections in progress and do not interrupt any established connections.

When a boot software upgrade is required, the procedure for upgrading redundant PXM45 cards updates the standby card and then makes that card active. This method ensures a smooth transition to the new software and preserves all established calls. Any calls that are not established are lost.

A graceful upgrade of the boot software does the following:

1. Loads the new software on the standby PXM45 card
2. Makes the standby PXM45 card active
3. Loads the new software on the formerly active (now standby) PXM45 card



Note

Avoid making configuration changes while upgrading PXM45 software. Configuration changes can be lost when the PXM45 is reset during the upgrade.

To upgrade the runtime software, use the following procedure.

	Command	Purpose
Step 1	ftp	Copy the boot and runtime files you want to use to the switch. See “Copying Software Files to the Switch,” which appears later in this section.
Step 2	username password	Establish a CLI session with the <i>standby</i> PXM45 card using the CP port on the UI-S3 back card and a user name with CISCO_GP privileges.
Step 3	saveallcnf	This optional step saves the current configuration to the hard disk of the active PXM45/B card. (The command can only be issued on the active PXM card.) Refer to “Saving a Configuration” in Chapter 7, “Switch Operating Procedures.”
Step 4	sh sysBackupBoot <Return> (2.0.11 and earlier)	Using the CP port connection, change to the PXM45 Backup Boot mode. Note that the software versions 2.0.11 and earlier require you to press Return during the reboot sequence to enter backup boot mode. See “Changing to PXM45 Backup Boot Mode” in Appendix B, “PXM45 Backup Boot Procedures.”
Step 5	sysPxmRemove	At the backup boot prompt, enter the sysPxmRemove command: This step prevents the active card from resetting the standby card while you are working with it.

	Command	Purpose
Step 6	sysFlashBootBurn " <i>Filename</i> " reboot <i>username</i> <i>password</i> dspcds; dsprevs	Burn the boot software. Remember to enter quotation marks before and after the boot software filename. For example: sysFlashBootBurn "C:FW/pxm45_002.001.070.202_bt_fw" See "Upgrading PXM45 Boot Software," which appears later in this section.
Step 7	<i>username</i> <i>password</i>	Establish a CLI session with the <i>active</i> PXM45 card (which is the non-upgraded card) using the CP port on the UI-S3 back card and a user name with CISCO_GP privileges.
Step 8	switchcc y	Switch the roles of the active and standby cards so you can upgrade the non-upgraded card in standby mode.
Step 9	sh sysBackupBoot <Return> (2.0.11 and earlier)	Using the CP port connection, change to the PXM45 Backup Boot mode. Note that the software versions 2.0.11 and earlier require you to press Return during the reboot sequence to enter backup boot mode. See "Changing to PXM45 Backup Boot Mode" in Appendix B, "PXM45 Backup Boot Procedures."
Step 10	sysPxmRemove	At the backup boot prompt, enter the sysPxmRemove command: This step prevents the active card from resetting the standby card while you are working with it.
Step 11	sysFlashBootBurn " <i>Filename</i> " reboot <i>username</i> <i>password</i> dspcds; dsprevs	Burn the boot software. Remember to enter quotation marks before and after the boot software filename. For example: sysFlashBootBurn "C:FW/pxm45_002.001.070.202_bt_fw" See "Upgrading PXM45 Boot Software," which appears later in this section. The boot software is now upgraded on both the active and standby cards. The card that was active before the upgrade is now operating in standby mode.

Non-Graceful PXM45 Boot Upgrades

Ungraceful upgrades disrupt all switch traffic and are usually used in lab installations where the use of standalone cards provides no opportunity for a graceful upgrade. The quickstart procedure is provided as an overview and as a quick reference.



Note

Avoid making configuration changes while upgrading PXM45 software. Configuration changes can be lost when the PXM45 is reset during the upgrade.

	Command	Purpose
Step 1	ftp	Copy the boot and runtime files you want to use to the switch. See “Copying Software Files to the Switch,” which appears later in this section.
Step 2	username password	Establish a CLI session with the active PXM45 card using the CP port on the UI-S3 back card and a user name with CISCO_GP privileges.
Step 3	saveallcnf	This optional step saves the current configuration to the hard disk of the active PXM45/B card. Refer to “Saving a Configuration” in Chapter 7, “Switch Operating Procedures.”
Step 4	sh sysBackupBoot <Return> (2.0.11 and earlier)	Using the CP port connection, change to the PXM45 Backup Boot mode. Note that the software versions 2.0.11 and earlier require you to press Return during the reboot sequence to enter backup boot mode. See “Changing to PXM45 Backup Boot Mode” in Appendix B, “PXM45 Backup Boot Procedures.”
Step 5	sysFlashBootBurn “Filename” reboot username password dspcd; dsprevs	Burn the boot software. Remember to enter quotation marks before and after the boot software filename. For example: sysFlashBootBurn "C:FW/pxm45_002.001.070.202_bt.fw" See “Upgrading PXM45 Boot Software,” which appears later in this section.

Graceful PXM45 and AXSM Runtime Software Upgrades

When performed properly, graceful upgrades have minimal impact on connections in progress and do not interrupt any established connections.

This quickstart procedure applies to both PXM45 and AXSM cards and does the following:

1. Loads the new software on the standby PXM45 or AXSM card
2. Makes the standby card active
3. Loads the new software on the formerly active (now standby) card



Note

If you plan to upgrade PXM45 cards and AXSM cards, upgrade the PXM45 cards first. Wait until the PXM45 cards are operating in active and standby modes with the correct software before upgrading AXSM cards. The software version used by the PXM45/B cards should be equal to or later than the version used on the AXSM, AXSM/B, and AXSM-E cards. When AXSM boot software is to be upgraded, it should be upgraded before upgrading the runtime software.



Note

Avoid making configuration changes while upgrading PXM45 software. Configuration changes can be lost when the PXM45 is reset during the upgrade.

**Note**

Upgrade software on the node to Release 2.1.70 before inserting the AXSM-E card.

To upgrade the runtime software, use the following procedure.

	Command	Purpose
Step 1	ftp	Copy the boot and runtime files you want to use to the switch. See “Copying Software Files to the Switch,” which appears later in this section.
Step 2		Upgrade the boot software for the card you are upgrading. PXM45 cards should be upgraded first. See “Graceful PXM45 Boot Upgrades,” which appears earlier in this section. For instructions on upgrading AXSM boot software, see “Graceful AXSM Boot Upgrades,” which appears later in this section.
Step 3	<i>username</i> <i>password</i>	Establish a CLI session with the active PXM45 card using a user name with SERVICE_GP privileges.
Step 4	saveallcnf	This optional step saves the current configuration to the hard disk of the active PXM45/B card. Refer to “Saving a Configuration” in Chapter 7, “Switch Operating Procedures.”
Step 5	dspcds; dsprevs; dsprev -sl commitrev <slot> <revision>	Verify that all previous upgrades have been committed. If a previous upgrade has not been committed, commit to the new upgrade. See “Committing to a Runtime Software Upgrade,” which appears later in this section.
Step 6	loadrev <slot> <revision> dspcds; dsprev -sl	Load the new runtime software on the standby card.
Step 7	runrev <slot> <revision> dspcds; dsprev -sl dspcd <slot>	Switch over to the standby card and load the new runtime software on the new standby (non-upgraded) card.
Step 8	commitrev <slot> <revision> dspcds dsprevs dsprev -sl	This command prevents an accidental switch back to a previous software revision if someone enters the abortrev command. Enter the commitrev command after the former active card comes up in the standby-U state. Cisco Systems recommends that you avoid configuration changes until after you have run the commitrev or abortrev commands. See “Aborting a Runtime Software Upgrade” and “Committing to a Runtime Software Upgrade,” both of which appear later in this section.

Non-Graceful PXM45 and AXSM Runtime Software Upgrades

Ungraceful upgrades disrupt all switch traffic and are usually used in lab installations where the use of standalone cards provides no opportunity for a graceful upgrade. The quickstart procedure is provided as an overview and as a quick reference.


Note

If you plan to upgrade PXM45 cards and AXSM cards, upgrade the PXM45 cards first. Wait until the PXM45 cards are operating in active and standby modes with the correct software before upgrading AXSM cards. The software version used by the PXM45/B cards should be equal to or later than the version used on the AXSM, AXSM/B, and AXSM-E cards. When AXSM boot software is to be upgraded, it should be upgraded before upgrading the runtime software.


Note

Avoid making configuration changes while upgrading PXM45 software. Configuration changes can be lost when the PXM45 is reset during the upgrade.


Note

Upgrade software on the node to Release 2.1.70 before inserting the AXSM-E card.

	Command	Purpose
Step 1	ftp	Copy the boot and runtime files you want to use to the switch. See “Copying Software Files to the Switch,” which appears later in this section.
Step 2		Upgrade the boot software as described in “Non-Graceful PXM45 Boot Upgrades,” which appears earlier in this section or “Non-Graceful AXSM Boot Upgrades,” which appears later in this section.
Step 3	<i>username</i> <i>password</i>	Establish a CLI session with the active PXM45 card using a user name with SERVICE_GP privileges.
Step 4	saveallcnf	This optional step saves the current configuration to the hard disk of the active PXM45/B card. Refer to “Saving a Configuration” in Chapter 7, “Switch Operating Procedures.”
Step 5	dspcds; dsprev -sl commitrev <slot> <revision>	Verify that all previous upgrades have been committed. If a previous upgrade has not been committed, commit to the new upgrade. See “Committing to a Runtime Software Upgrade,” which appears later in this section.
Step 6	loadrev <slot> <revision> dspcds; dsprev -sl	Define the new software version to be used.

	Command	Purpose
Step 7	runrev <slot> <revision> dspcds; dsprev -sl	Reset the card and run the new runtime software version.
Step 8	commitrev <slot> <revision> dspcds dsprev -sl dsprevs	This command prevents an accidental switch back to a previous software revision if someone enters the abortrev command. Cisco Systems recommends that you avoid configuration changes until after you have run the commitrev or abortrev commands. See “Aborting a Runtime Software Upgrade” and “Committing to a Runtime Software Upgrade,” both of which appear later in this section.

Graceful AXSM Boot Upgrades

When performed properly, graceful upgrades have minimal impact on connections in progress and do not interrupt any established connections. The quickstart procedure is provided as an overview and as a quick reference.



Note

If you plan to upgrade PXM45 cards and AXSM cards, upgrade the PXM45 cards first. Wait until the PXM45/B cards are operating in active and standby modes with the correct software before upgrading AXSM cards. The software version used by the PXM45/B cards should be equal to or later than the version used on the AXSM, AXSM/B, and AXSM-E cards.



Note

Upgrade software on the node to Release 2.1.70 before inserting the AXSM-E card.

	Command	Purpose
Step 1	ftp	Copy the boot and runtime files you want to use to the switch. See “Copying Software Files to the Switch,” which appears later in this section.
Step 2	<i>username</i> <i>password</i>	Establish a CLI session with the <i>active</i> PXM45 card using a user name with SERVICE_GP privileges or higher.
Step 3	saveallcnf	This optional step saves the current configuration to the hard disk of the active PXM45/B card. Refer to “Saving a Configuration” in Chapter 7, “Switch Operating Procedures.”
Step 4	burnboot <slot> <revision> dspcd <slot> dsprevs	Burn the boot software on the standby AXSM card by specifying the slot number of the standby card. See “Upgrading Boot Software on an AXSM Card,” which appears later in this section.

	Command	Purpose
Step 5	switchredcd <fromSlot> <toSlot>	Activate the upgraded card and place the non-upgraded card in standby mode.
Step 6	burnboot <slot> <revision> dspcd <slot> dsprevs	Burn the boot software on the non-upgraded, standby AXSM card by specifying the slot number of the standby card. See “Upgrading Boot Software on an AXSM Card,” which appears later in this section.

Non-Graceful AXSM Boot Upgrades

Ungraceful upgrades disrupt all switch traffic and are usually used in lab installations where the use of standalone cards provides no opportunity for a graceful upgrade. The quickstart procedure is provided as an overview and as a quick reference.



Note

If you plan to upgrade PXM45 cards and AXSM cards, upgrade the PXM45 cards first. Wait until the PXM45 cards are operating in active and standby modes with the correct software before upgrading AXSM cards. The software version used by the PXM45/B cards should be equal to or later than the version used on the AXSM, AXSM/B, and AXSM-E cards.



Note

Upgrade software on the node to Release 2.1.70 before inserting the AXSM-E card.

	Command	Purpose
Step 1	ftp	Copy the boot and runtime files you want to use to the switch. See “Copying Software Files to the Switch,” which appears later in this section.
Step 2	username password	Establish a CLI session with the <i>active</i> PXM45 card using a user name with SERVICE_GP privileges or higher.
Step 3	saveallcnf	This optional step saves the current configuration to the hard disk of the active PXM45 card. Refer to “Saving a Configuration” in Chapter 7, “Switch Operating Procedures.”
Step 4	burnboot <slot> <revision> dspcd <slot> dsprevs	Burn the boot software on the standby AXSM card by specifying the slot number of the standby card. See “Upgrading Boot Software on an AXSM Card,” which appears later in this section.

RPM-PR Software Upgrades for Cards with 1:N Redundancy

On the MGX 8850, the RPM cards can go into slots 1 through 6, or 9 through 14.

The RPM-PR card supports software upgrades when 1:N redundancy is established in the switch between RPM-PR cards. Boot software is generally upgraded less often than runtime software, so be sure to compare the recommended boot software version with the boot software running on your RPMs before starting an upgrade. The correct boot software might already be installed.


The following quickstart procedure describes how to upgrade redundant RPM-PR cards. For detailed instructions, see “Upgrade Procedures for RPM-PR Cards,” which appears later in this section.

These procedures describe how to upgrade boot as well as runtime software together or runtime software only.

**Note**

Redundancy must be established before you use this procedure. If redundancy has not been configured between two RPM-PR cards, upgrade each RPM-PR card using the procedure in “RPM-PR Software Upgrades for Non-Redundant Cards,” which appears later in this chapter. To add redundancy to an RPM-PR card, refer to “Establishing Redundancy Between Two RPM-PR Cards” in Chapter 4, “Preparing RPM-PR Cards for Operation.”

Table 12 RPM-PR Boot Software and Runtime Software Upgrades Together

	Command	Purpose
Step 1	ftp	Copy the boot and runtime files you want to use to the switch (E:RPM). See “Copying Software Files to the Switch,” which appears later in this section.
Step 2	username password	Establish a CLI session with the <i>active</i> PXM45 card using a user name at any access level.
Step 3	cc <primarySlot>	Select the slot in which the primary RPM-PR card is installed.
Step 4	enable password	Enter Enable mode for the router.
Step 5	dir e:	Verify router access to the PXM45 hard disk and the boot upgrade software.
Step 6	show flash:	Display current contents of bootflash.
Step 7S	copy filename bootflash: dir bootflash:	Copy the upgrade boot software to flash. For example: copy e:rpm-boot-mz_002.001.060.000 bootflash:
Step 8	del bootflash:	Delete older boot files from the bootflash. The switch always attempts to load the first bootable file in bootflash. If the upgraded file has a higher file number than another bootable file, it will not be used when the card is reset. Note This step marks files to be deleted, but it does not delete them.
Step 9	show flash:	 Caution Verify that at least one valid boot or runtime image will not be deleted. If all boot and runtime images are deleted from bootflash, the RPM card must be returned to the factory for repair.
Step 10	squeeze flash:	This step deletes all files that have been marked for deletion.

	Command	Purpose
Step 11	copy	Optional: Copy and rename the runtime file to a generic name for easy updates. See “Non-Graceful RPM-PR Runtime Software Upgrades,” which appears later in this chapter. Note If you have already configured the RPM to use a generic name, you can skip to Step 12 .
Step 12	show bootvar	Display the current runtime software filename.
Step 13	config terminal	Enter the router global configuration mode.
Step 14	no boot system	Remove the entire boot list. To remove a single file from the boot list, include a filename. For example: Router(config)# no boot system c:rpm-js-mz_122-4.T
Step 15	boot system c:filename	Add the new router runtime image to the boot list. For example: Router(config)# boot system c:rpm-js-mz_122-4.T
Step 16	boot config e:auto_config_RPM-PR_slot#	Configure the RPM-PR card to store its configuration on the PXM45 hard disk . Note This step only needs to be performed once. If this command is already in the startup configuration file, you do not need to enter it again.
Step 17	^Z	Exit global configuration mode.
Step 18	copy run start	Save the new configuration. Note If you omit this step, the RPM-PR card will continue to use the previous version of software.
Step 19	show bootvar	Verify the change in the runtime software filename.
Step 20	softswitch <primarySlot> <secondarySlot>	This step makes the secondary card active and resets the primary RPM-PR card. When the primary card resets, it loads the upgraded boot software from bootflash.
Step 21	cc <secondarySlot>	Select the slot in which the secondary RPM-PR card is installed.
Step 22	enable password dir e: show flash: copy filename bootflash: dir bootflash: show flash: squeeze flash:	Repeat Step 4 through Step 10 to move the upgraded boot software into bootflash.
Step 23	show bootvar config terminal no boot system boot system c:filename ^Z copy run start show bootvar	Repeat Step 12 through Step 15 and Step 17 through Step 19 to upgrade runtime software.

	Command	Purpose
Step 24	<code>softswitch <secondarySlot> <primarySlot></code>	This step makes the upgraded primary card active and resets the secondary RPM-PR card. When the secondary card resets, it loads the upgraded boot software from bootflash. Both primary and secondary cards should now be using upgraded boot software.
Step 25		If there are other primary RPM-PR cards that need upgrading, repeat the part of this procedure that upgrades the primary card, then execute the softswitch command once to reload the primary card. Finally, execute the softswitch command a second time to make the upgraded primary card active.

RPM-PR Runtime Software Upgrade (no boot software upgrade)

The RPM-PR card supports upgrades when 1:N redundancy is established in the switch between RPM-PR cards.

The following quickstart procedure describes how to gracefully upgrade redundant RPM-PR cards.



Note

Redundancy must be established before you use this procedure. If redundancy has not been configured between two RPM-PR cards, upgrade each RPM-PR card as described in “RPM-PR Runtime Software Upgrades for Non-Redundant Cards,” which appears later in this chapter. To add redundancy to an RPM-PR card, refer to “Establishing Redundancy Between Two RPM-PR Cards” in Chapter 4, “Preparing RPM-PR Cards for Operation.”

Table 13 RPM-PR Runtime Software Upgrade (no boot upgrade)

	Command	Purpose
Step 1	<code>ftp</code>	Copy the boot and runtime files you want to use to the switch (E:RPM). See “Copying Software Files to the Switch,” which appears later in this section.
Step 2	<code>copy</code>	Optional: Copy and rename the runtime file to a generic name for easy updates. See “Non-Graceful RPM-PR Runtime Software Upgrades,” which appears later in this chapter. Note If you have already configured the RPM to use a generic name, you can skip to Step 12 .
Step 3	<code>username password</code>	Establish a CLI session with the <i>active</i> PXM45 card using a user name at any access level.
Step 4	<code>cc <primarySlot></code>	Select the slot in which the primary RPM-PR card is installed.
Step 5.	<code>enable password</code>	Enter Enable mode for the router.
Step 6	<code>show bootvar</code>	Display the current runtime software filename.
Step 7	<code>config terminal</code>	Enter the router global configuration mode.

	Command	Purpose
Step 8	no boot system	Remove the entire boot list. To remove a single file from the boot list, include a filename. For example: Router(config)# no boot system c:rpm-js-mz_122-4.T
Step 9	boot system c:filename	Add the new router runtime image to the boot list. For example: Router(config)# boot system c:rpm-js-mz_122-4.T
Step 10	boot config e:auto_config_RPM-PR_slot#	Configure the RPM-PR card to store its configuration on the active PXM45 hard disk . Note This step only needs to be performed once. If this command is already in the startup configuration file, you do not need to enter it again.
Step 11	^Z	Exit global configuration mode.
Step 12	copy run start	Save the new configuration. Note If you omit this step, the RPM-PR card will continue to use the previous version of software.
Step 13	show bootvar	Verify the change in the runtime software filename.
Step 14	softswitch <primarySlot> <secondarySlot>	This step makes the secondary card active and resets the primary RPM-PR card. When the primary card resets, it loads the upgraded boot software from bootflash.
Step 15	cc <secondarySlot>	Select the slot in which the secondary RPM-PR card is installed.
Step 16	enable <i>password</i> show bootvar config terminal no boot system boot system c:filename ^Z copy run start show bootvar	Repeat Step 5 through Step 9 and Step 11 through Step 13 .
Step 17	softswitch <secondarySlot> <primarySlot>	This step makes the upgraded primary card active and resets the secondary RPM-PR card. When the secondary card resets, it loads the upgraded boot software from bootflash. Both primary and secondary cards should now be using upgraded runtime software.
Step 18		If there are other primary RPM-PR cards that need upgrading, repeat the part of this procedure that upgrades the primary card, then execute the softswitch command once to reload the primary card. Finally, execute the softswitch command a second time to make the upgraded primary card active.

RPM-PR Software Upgrades for Non-Redundant Cards


Use the software upgrade procedure in this subsection when you need to upgrade RPM-PR boot software and the RPM-PR is operating in standalone mode.

**Note**

If the RPM-PR is operating in 1:N redundancy mode with another RPM-PR, upgrade the cards as described in “RPM-PR Software Upgrades for Cards with 1:N Redundancy,” which appears earlier in this chapter.

The following quickstart procedure is provided as an overview and as a quick reference for those who have already performed RPM-PR upgrades on the switch. For detailed instructions, see “Upgrade Procedures for RPM-PR Cards,” which appears later in this section.

Table 14 RPM-PR Boot and Runtime Software Upgrade (Together)

	Command	Purpose
Step 1	ftp	Copy the boot and runtime files you want to use to the switch (E:RPM). See “Copying Software Files to the Switch,” which appears later in this section.
Step 2	username password	Establish a CLI session with the <i>active</i> PXM45 card using a user name at any access level.
Step 3	cc <RPM-PR_Slot>	Select the slot in which the RPM-PR card is installed.
Step 4	enable password	Enter Enable mode for the router.
Step 5	dir e:	Verify router access to the active PXM45 hard disk and the boot upgrade software.
Step 6	show flash:	Display current contents of bootflash.
Step 7S	copy filename bootflash: dir bootflash:	Copy the upgrade boot software to flash. For example: copy e:rpm-boot-mz_002.001.070.202 bootflash:
Step 8	del bootflash:	Optional. Delete older boot files from the bootflash. This step marks files to be deleted, but it does not delete them.
Step 9	show flash:	 Caution Verify that at least one valid boot or runtime image will not be deleted. If all boot and runtime images are deleted from bootflash, the RPM card must be returned to the factory for repair.
Step 10	squeeze flash:	This step deletes all files that have been marked for deletion.
Step 11	show bootvar	Display the current runtime software filename.
Step 12	config terminal	Enter the router global configuration mode.
Step 13	no boot system	Remove the entire boot list. To remove a single file from the boot list, include a filename. For example: Router(config)# no boot system c:rpm-js-mz_122-4.T
Step 14	boot system e:filename	Add the new router runtime image to the boot list. For example: Router(config)# boot system e:rpm-js-mz.122-4.T

	Command	Purpose
Step 15	<code>boot config</code> <code>e:auto_config_RPM-PR_slot#</code>	Configure the RPM-PR card to store its configuration on the PXM45 hard disk . Note This step only needs to be performed once. If this command is already in the startup configuration file, you do not need to enter it again.
Step 16	<code>^Z</code> <code>copy run start</code>	Exit global configuration mode and save the new configuration.
Step 17	<code>show bootvar</code>	Verify the change in the runtime software filename.
Step 18	<code>cc <active_PXM45_slot></code> <code>resetcd <RPM-PR_Slot></code>	This command sequence restarts the RPM-PR card with the new boot image.

RPM-PR Runtime Software Upgrades (no boot software upgrade)

Use the software upgrade procedure in this section when you need to upgrade RPM-PR runtime software and the RPM-PR is operating in standalone mode.



Note

If the RPM-PR is operating in 1:N redundancy mode with another RPM-PR, upgrade the cards as described in “RPM-PR Software Upgrades for Cards with 1:N Redundancy,” which appears earlier in this chapter.

The following quickstart procedure is provided as an overview and as a quick reference for those who have already performed RPM-PR upgrades on the switch. For detailed instructions, see “Upgrade Procedures for RPM-PR Cards,” which appears later in this section.

Table 15 RPM-PR Runtime Software Upgrades (no boot software upgrade)

	Command	Purpose
Step 1	<code>ftp</code>	Copy the boot and runtime files you want to use to the switch (E:RPM). See “Copying Software Files to the Switch,” which appears later in this section.
Step 2	<code>copy</code>	Copy and rename the runtime file to a generic name for easy updates. See “Non-Graceful RPM-PR Runtime Software Upgrades,” which appears later in this chapter. Note If you have already configured the RPM to use a generic name, you can skip to Step 12 .
Step 3	<code>username</code> <code>password</code>	Establish a CLI session with the <i>active</i> PXM45 card using a user name at any access level.
Step 4	<code>cc <RPM-PR_Slot></code>	Select the slot in which the RPM-PR card is installed.
Step 5	<code>enable</code> <code>password</code>	Enter Enable mode for the router.
Step 6	<code>show bootvar</code>	Display the current runtime software filename.

	Command	Purpose
Step 7	config terminal	Enter the router global configuration mode.
Step 8	no boot system	Remove the entire boot list. To remove a single file from the boot list, include a filename. For example: Router(config)# no boot system c:rpm-js-mz_122-4.T
Step 9	boot system e:filename	Add the new router runtime image to the boot list. For example: Router(config)# boot system e:rpm-js-mz.122-4.T
Step 10	boot config e:auto_config_RPM-PR_slot#	Configure the RPM-PR card to store its configuration on the PXM45 hard disk . Note This step only needs to be performed once. If this command is already in the startup configuration file, you do not need to enter it again.
Step 11	^Z copy run start	Exit global configuration mode and save the new configuration.
Step 12	show bootvar	Verify the change in the runtime software filename.
Step 13	cc <active_PXM45_slot> resetcd <RPM-PR_Slot>	This command sequence selects the active PXM card and restarts the RPM card with the new runtime image.
Step 14	dspcds dspcd <RPM-PR_Slot> cc <RPM-PR_Slot>	Verify router reboot is complete.

Browsing the File System

The active PXM45 hard disk stores log files, configuration files, and boot and runtime software. The switch operating system supports a set of UNIX-like commands that you can use to locate log files or manage software updates. [Table 16](#) lists commands that you can use to browse the file system.



Note

File and directory names in the switch file system are case sensitive. Also, some of the commands listed in [Table 16](#) are not available at all administrator access levels.

Table 16 File System Commands at Switch Prompt

Command	Description
cd	Change directories. Access level required: ANYUSER or above.
copy	Copies a file from one location to another. Syntax: copy <source file name> <destination file name> Access level required: GROUP1 or above.
del	Deletes a file. Syntax: del <file name> Access level required: GROUP1 or above.

Table 16 File System Commands at Switch Prompt (continued)

Command	Description
ll	List directory contents using long format, which includes the name, size, modification date, and modification time for each file. This command also displays the total disk space and free disk space. Syntax: ll Access level required: ANYUSER or above.
ls	List directory contents using the short format, which displays filenames, total disk space, and free disk space. Syntax: ls Access level required: ANYUSER or above.
pwd	Display the present working directory. Syntax: pwd Access level required: ANYUSER or above.
rename	Renames a file. Syntax: rename <old file name> <new file name> Access level required: GROUP1 or above.
whoami	Lists the login name for the current session. Syntax: whoami Access level required: ANYUSER or above.

Copying Software Files to the Switch

This section describes how to copy software files to the MGX 8850 switch. The switch cards use boot software and runtime software. Each PXM45 and AXSM card uses the boot software to define communications between the card components and to enable cards to start up. The runtime software defines how the card operates after startup. RPM-PR cards function on the runtime software and use the boot software only when they cannot load the runtime software.



Note

The boot and runtime software are installed on the switch at the factory. Before you copy new files to the switch, verify that you need to update the files by comparing the file versions on the disk to the file versions in [Table 2](#).

The MGX 8850 switches provide a File Transfer Protocol (FTP) service to support file transfers to the switch. If you have FTP client software and network connectivity to both the switch and the server where the software files are stored, you can use FTP to transfer files directly from the server to the switch.



Note

The following procedure describes how to copy files to the switch when the runtime software is up and running (showing the node name switch prompt). When the runtime software cannot load, copy the software files to the switch as described in “Transferring Software Files to and from the Switch” in Appendix B, “PXM45 Backup Boot Procedures.”

- Step 1** Locate the files you want to download from <http://www.cisco.com/kobayashi/sw-center/sw-wan.shtml>.
- Step 2** Using a workstation with FTP client software, transfer PXM45 and AXSM files from the server to the switch directory C:/FW.

The procedure you use for transferring the files depends on the FTP client software you are using. When initiating the FTP connection, remember the following:

- Select the switch by entering its IP address.
- When prompted for a username and password, enter the username and password you use when managing the switch.
- When configuring file transfer options, select binary mode for the file transfer.

- Step 3** To verify that the new PXM45 and AXSM files have been transferred to the switch, log into the switch and display the contents of the C:/FW directory.

- Step 4** Using a workstation with FTP client software, transfer RPM-PR files from the server to the switch directory E:/RPM.

**Note**

You must use a capital E when referencing the E drive in switch commands.

- Step 5** To verify that the new RPM-PR files have been transferred to the switch, log into the switch and display the contents of the e:/RPM directory.

For more information on browsing the switch file system, see “Browsing the File System,” which appears earlier in this section.

Upgrade Procedures for PXM45 and AXSM Cards

The following sections describe procedures that support upgrades to PXM45 and AXSM cards. For complete upgrade procedures, see “Quickstart Procedures for Software Upgrades,” which appears earlier in this section. The procedures in this section detail some of the tasks listed in the quickstart procedures.

Upgrading PXM45 Boot Software

This section describes how to upgrade the PXM45 boot software on a single PXM45 card. If you are performing a graceful upgrade, use the quickstart procedure described in “Graceful PXM45 Boot Upgrades,” which appears earlier in this section. The following procedure provides detailed information on the upgrade task within the quickstart procedure.

- Step 1** If you have not done so already, establish a CLI session with the active PXM45 card using the CP port on the UI-S3 back card and a user name with CISCO_GP privileges.
- Step 2** If you have not done so already, change to PXM45 Backup Boot mode as described in “Changing to PXM45 Backup Boot Mode” in Appendix B, “PXM45 Backup Boot Procedures.”
- Step 3** To burn the boot software on the PXM45, enter the **sysFlashBootBurn** command as follows:

```
pxm45bkup> sysFlashBootBurn "filename"
```

Replace *filename* with the complete path to the boot file on the PXM45 hard drive. For example:

```
pxm45bkup> sysFlashBootBurn "C:FW/pxm45_002.001.070.202_bt_fw"
```

Step 4 When the switch prompts you to confirm this action, type **y** and press **Return**.

When the boot software burning process is complete, the switch displays a message similar to the following:

```
Flash download completed ...
value = 0 = 0x0
```

Step 5 When the boot software has been burned, reset the card with the **reboot** command. For example:

```
pxm45bkup> reboot
```

Be patient and wait for Login prompt to appear.

Step 6 When the Login prompt appears, log in to the switch as you do at the beginning of a CLI session. The switch prompt should appear.

Step 7 To confirm that the PXM45 card is now using the correct boot software, enter the **dsprevs** command.

Step 8 Use **dspcd** to see the condition of the PXM45 card. You should see active/active and no card alarm. The Boot FW Rev row in the display should show the new revision as shown in the following example:

```
8850_NY.7.PXM.a > dspcd
8850_NY                               System Rev: 02.01   Mar. 04, 2001 22:47:23 PST
MGX8850                               Node Alarm: NONE
Slot Number      7      Redundant Slot:  8

                                Front Card      Upper Card      Lower Card
                                -----
Inserted Card:      PXM45                UI Stratum3      PXM HardDiskDrive
Reserved Card:      PXM45                UI Stratum3      PXM HardDiskDrive
State:              Active              Active          Active
Serial Number:      SBK050302AF          SBK045203PJ      SBK044602HJ
Prim SW Rev:        2.0(13)              ---            ---
Sec SW Rev:         2.0(13)              ---            ---
Cur SW Rev:        2.0(13)              ---            ---
Boot FW Rev:        2.1(0)              ---            ---
800-level Rev:      A0                  A0              A0
800-level Part#:    800-06147-08          800-05787-02     800-05052-04
CLEI Code:          BAA670YCAA           BA7IBCLAAA       BA7IADNAAA
Reset Reason:       On Power up
Card Alarm:         NONE
Failed Reason:      None
Miscellaneous Information:
```

Type <CR> to continue, Q<CR> to stop:

After you confirm the upgrade to the first PXM45 card, the boot software upgrade for that card is complete.

Loading the Runtime Upgrade Software

This section describes how to load the runtime upgrade software in preparation for running it. Production switches should have redundant cards installed, so that upgrades can occur without interrupting traffic. For graceful upgrades, the upgrade software is loaded on the standby card first, and then the control is switched to upgraded card so that the other card can be upgraded. The best way to assess the upgrade status of a card is to enter the **dspcd <slot>** (or **dsprev -sl**) command. For example:

```

8850_NY.7.PXM.a > dspcd
8850_NY                      System Rev: 02.01   Mar. 04, 2001 22:47:23 PST
MGX8850                      Node Alarm: NONE
Slot Number    7    Redundant Slot:  8

```

	Front Card -----	Upper Card -----	Lower Card -----
Inserted Card:	PXM45	UI Stratum3	PXM HardDiskDrive
Reserved Card:	PXM45	UI Stratum3	PXM HardDiskDrive
State:	Active	Active	Active
Serial Number:	SBK050302AF	SBK045203PJ	SBK044602HJ
Prim SW Rev:	2.0(13)	---	---
Sec SW Rev:	2.0(13)	---	---
Cur SW Rev:	2.0(13)	---	---
Boot FW Rev:	2.1(0)	---	---
800-level Rev:	A0	A0	A0
800-level Part#:	800-06147-08	800-05787-02	800-05052-04
CLEI Code:	BAA670YCAA	BA7IBCLAAA	BA7IADNAAA
Reset Reason:	On Power up		
Card Alarm:	NONE		
Failed Reason:	None		
Miscellaneous Information:			

Type <CR> to continue, Q<CR> to stop:

The primary (Prim SW Rev), secondary (Sec SW Rev), and current (Cur SW Rev) software revision labels indicate the status of an upgrade. In this example, these numbers match because the runtime software upgrade has not started. (Note that the boot software has been upgraded as indicated by the Boot FW Rev label.)

The primary software revision indicates which revision a card will run if it becomes active, and the secondary revision indicates an alternate revision that the card will use if the abortrev command is entered. (For more information on aborting an upgrade, see “Aborting a Runtime Software Upgrade,” which appears later in this section.) The current software revision represents the software the active card is using.

The normal sequence of commands for a runtime software upgrade is **loadrev**, **runrev**, and **commitrev**. Table 17 shows how the software revision levels change during a graceful runtime software upgrade. Software Versions Reported During Graceful Upgrades

Table 17 Software Versions Reported During Graceful Upgrades

Software Revision	Before Upgrade		After loadrev		After runrev		After commitrev	
	Slot 7	Slot 8	Slot 7	Slot 8	Slot 7	Slot 8	Slot 7	Slot 8
	Active	Standby	Active	Standby	Standby	Active	Active	Standby
Primary	2.0(13)	2.0(13)	2.0(13)	2.0(13)	2.1(0)	2.1(0)	2.1(0)	2.1(0)
Secondary	2.0(13)	2.0(13)	2.1(0)	2.1(0)	2.0(13)	2.0(13)	2.1(0)	2.1(0)
Current	2.0(13)	2.0(13)	2.0(13)	2.1(0)	2.1(0)	2.1(0)	2.1(0)	2.1(0)

For non-graceful upgrades, the load process defines the software version to which the switch is about to be upgraded. Table 18 shows how the revision levels change during a non-graceful upgrade.

Table 18 Software Versions Reported During Non-Graceful Upgrades

Software Revision	Before Upgrade	After loadrev	After runrev	After commitrev
Primary	2.0(13)	2.0(13)	2.1(0)	2.1(0)
Secondary	2.0(13)	2.1(0)	2.0(13)	2.1(0)
Current	2.0(13)	2.0(13)	2.1(0)	2.1(0)

If you are performing a graceful upgrade, use the quickstart procedure described in “Graceful PXM45 and AXSM Runtime Software Upgrades,” which appears earlier in this section. The following procedure provides detailed information on the load task within the quickstart procedure.

- Step 1** To load the upgrade runtime software version on a PXM45 or AXSM card, enter the following command:

```
mgx8850a.7.PXM.a > loadrev <slot> <revision>
```

Replace *<slot>* with the card slot number for the card to be upgraded, and replace *<revision>* with the software version number for the update. For graceful upgrades, you can specify either the active or the standby card. The switch software will automatically load the upgrade runtime software on the standby card when it is installed. The following example shows how to enter this command:

```
mgx8850a.7.PXM.a > loadrev 7 2.1(0)
```

After you enter the loadrev command, the standby card comes up in the standby-U state.

You can find the software version number in [Table 2](#). You can also determine the version number from the runtime software filename as described in “*Determining the Software Version Number from Filenames*,” which appears in Chapter 7, “Switch Operating Procedures.”

- Step 2** When prompted to confirm the command, type **y** and press **Return** to continue.
- Step 3** To verify that the load command was processed correctly, enter the **dspcd <slot>** command and check the status of the software revision levels. You can also view the revision levels with the **dsprevs** or **dsprev -sl** command. (**dsprev -sl** shows that **loadrev** is done.)

**Note**

In a standalone configuration, the switch does not start the upgraded runtime software until the **runrev** command is entered. In a redundant configuration, the switch starts the upgraded runtime software on the standby card. The standby card does not become active until the **runrev** command is entered.

Activating the Upgraded Runtime Software

After you load the upgraded runtime software for a PXM45 or AXSM card, enter the **runrev** command to start using the software. The version levels for graceful and non-graceful upgrades change as shown earlier in [Table 17](#) and [Table 18](#). The following procedure describes how to activate the upgraded runtime software.

- Step 1** To start using the new runtime software version on a PXM45 or AXSM card, enter the following command:

```
mgx8850a.7.PXM.a > runrev <slot> <revision>
```

Replace *<slot>* with the card slot number, and replace *<revision>* with the software version number specified with the **loadrev** command. For graceful upgrades, you can specify either the active or the standby card. The switch software will automatically run the upgrade runtime software on the standby card when it is installed. The following example shows how to enter this command:

```
mgx8850a.7.PXM.a > runrev 7 2.1(0)
```

The active card is reset, and the former standby card comes up in the active-U state.

- Step 2** When prompted to confirm the command, type **y** and press **Return** to continue.
- Step 3** To verify that the load command was processed correctly, enter the **dspcd <slot>** command and check the status of the software revision levels. You can also view the revision levels with the **dsprev -sl** command.
- Step 4** When the former active PXM45 comes up in the standby-U state, enter the **commitrev** command to commit to that software version. This step is optional. The **dsprev -sl** command shows that **runrev** is done.

After the **runrev** command is entered, the switch starts running the new runtime software revision. The secondary software revision shows that a previous revision is still available. Whenever the secondary runtime software revision is different from the primary and current runtime software revisions, you can revert back to the secondary software revision as described in “Aborting a Runtime Software Upgrade,” which appears later in this section.

Upgrading Boot Software on an AXSM Card



Note

The AXSM upgrade procedures are the same for AXSM, AXSM/B, and the new AXSM-E cards.

The upgrade procedure for the boot software on a single AXSM card is the same for graceful and non-graceful upgrades. The difference between the graceful and non-graceful boot software upgrades is the sequence of commands before and after the upgrade on a single card. For information on the proper sequence see “Graceful AXSM Boot Upgrades” or “Non-Graceful AXSM Boot Upgrades,” both of which appear earlier in this section.

To upgrade the boot software, use the following procedure.

- Step 1** Copy the new boot software files for the AXSM card to the switch as described in “Copying Software Files to the Switch,” which appears earlier in this section.
- Step 2** Establish a CLI session with the switch using a user name with SERVICE_GP privileges or higher.

- Step 3** To burn the new AXSM boot software, enter the burnboot command from the active PXM45 card. For example:

```
mgx8850a.7.PXM.a > burnboot <slot> <revision>
```

Replace *<slot>* with the slot number of a standalone AXSM card or an AXSM card operating in standby mode. Replace *<revision>* with the software revision number to which you are upgrading. For example:

```
mgx8850a.7.PXM.a > burnboot 1 2.1(0)
```

- Step 4** When prompted to confirm the upgrade, type **y** and press **Return**.

After you confirm the upgrade, the new boot software is burned into the AXSM card and the card is reset. Be patient, the card reset takes some time. You can use the **dspcds** (or **dsprevs**) command to display the status of the AXSM card. At first, the status may show that the card slot is empty or the card is rebooting. Reenter the command periodically to see the current status of the card. When the card status returns to active or standby, you are ready to continue.

- Step 5** To confirm that the AXSM card is now using the correct boot software, enter the **dspcd <slot>** command. The Boot FW Rev row in the display should show the new revision as shown in the following example:

```
8850_NY.7.PXM.a > dspcd 1
8850_NY                      System Rev: 02.01   Mar. 04, 2001 22:58:22 PST
mgx8850                      Node Alarm: NONE
Slot Number: 1      Redundant Slot: NONE

                        Front Card      Upper Card      Lower Card
                        -----
Inserted Card:         AXSM_40C12      SMFIR_2_OC12      SMFIR_2_OC12
Reserved Card:         AXSM_40C12      SMFIR_2_OC12      UnReserved
State:                 Active          Active            Active
Serial Number:         SAK0344001V     SBK0406002K      SAK032800Q6
Prim SW Rev:           2.0(13)         ---              ---
Sec SW Rev:            2.0(13)         ---              ---
Cur SW Rev:           2.0(13)         ---              ---
Boot FW Rev:           2.1(0)          ---              ---
800-level Rev:
800-level Part#:       800-05774-05     800-05383-01     800-05383-01
CLEI Code:             1234567890      BAI9ADTAAA       0
Reset Reason:          On Power up
Card Alarm:            NONE
Failed Reason:         None
Miscellaneous Information:
```

Type <CR> to continue, Q<CR> to stop:

After you confirm the boot software upgrade to the AXSM card, the boot software upgrade for that card is complete.

Aborting a Runtime Software Upgrade

After upgrading PXM45 or AXSM runtime software, you can revert to the previously used version of software at any time, as long as you have not committed to the new software version with the **commitrev** command (which is described in the next section).



Note

Reverting to the previously used version of runtime software terminates all calls in progress.

To revert to the previously used runtime software version, use the following procedure.

- Step 1** Establish a configuration session using a user name with SERVICE_GP privileges or higher.
- Step 2** To display the software revisions known to the switch, enter the **dspcd <slot>** command. (You can also view the revision levels with the **dsprevs** and **dspversion** command.)
- Replace *slot* with the slot number of the active PXM45 or AXSM card. To complete the next step, you need to know the secondary software revision shown in the display.



Note If the primary and secondary software revisions are the same, there is no other revision level to revert back to.

- Step 3** To abort use of the primary software revision and revert back to the secondary software revision, enter the following command:

```
mgx8850a.7.PXM.a > abortrev <slot> <revision>
```

Replace *<slot>* with the card slot number for the active PXM45 or AXSM card, and replace *<revision>* with the software version number for the secondary software revision.

- Step 4** To verify that the standby card is running the previously used software version, enter the **dspcd <slot>** command to view the software version in use. You can also view the revision levels with the **dsprev -sl** command.

Committing to a Runtime Software Upgrade

Committing to an upgrade does the following:

- Disables use of the **abortrev** command to revert back to the previously used version of software
- Enables upgrading of the current version of software

Once you are sure that an upgrade is stable, you can use the **commitrev** command to commit that software version. This prevents other administrators from inadvertently reverting to the previous version. You must also commit the current software version before you can upgrade to another software version.

To commit the currently running runtime software version, use the following procedure:

- Step 1** Establish a configuration session using a user name with SERVICE_GP privileges or higher.
- Step 2** Determine if there is an unfinished upgrade by doing the following:
- a. If necessary, use the **cc** command to select the active PXM45 card.
 - b. Enter the **dspcd <slot>** command.
 - c. Check the **dspcd** command report to see if the same software revision is listed for the Primary Software Revision (Prim SW Rev), Secondary Software Revision (Sec SW Rev), and Current Software Revision (Curr SW Rev).

If all version numbers are identical, the runtime software can be upgraded. There is no need to commit to the current software revision.

- Step 3** To commit to the software version, enter the following command:

```
mgx8850a.7.PXM.a > commitrev <slot> <revision>
```


Replace `<slot>` with the card slot number for the active PXM45 or AXSM card, and replace `<revision>` with the software version number for the currently used software version. To display the software version number, use the **dspcd** `<slot>` command to view the software version in use. You can also view the revision levels with the **dsprev -sl** command.

**Note**

Cisco Systems recommends that you avoid configuration changes until after you have run the **commitrev** or **abortrev** commands.

Upgrade Procedures for RPM-PR Cards

The following sections describe how to upgrade boot and runtime software on RPM-PR cards in detail.

Please read [“RPM-PR and MPLS Limitations, Restrictions, and Notes”](#) section on page 18.

Upgrading RPM Boot Software

At the factory, a boot file is installed in the bootflash on the RPM-PR card and is used to boot the card. The runtime software is updated more frequently than the boot software. However, the boot software is updated occasionally. When you are updating runtime software, check [Table 2](#) to see if a boot software upgrade is required.

The boot software is stored in bootflash memory on the RPM card. To manage the software in bootflash, you access it as if it were a hard disk. For example, in copy and delete file commands, files are identified as `bootflash:filename` (which is similar to `e:filename`).

The following example shows a directory of bootflash contents:

```
Router(boot)#show flash:
-#- ED --type-- --crc--- -seek-- nlen -length- ----date/time----- name
1  .D config  D4F7352A  40330  18      686 Jan 30 2001 18:18:41 auto_config_slot09
2  .D config  CBF007C1  40660   9      688 Feb 22 2001 15:33:11 slot9.cnf
3  .. image   F596869A  2973E8  27  2452744 Feb 28 2001 03:16:05
rpm-boot-mz_002.001.070.202
```

**Note**

Although you can display directory contents with the **dir bootflash:** command, the **show flash:** command provides more detail. Also, although bootflash and flash are separate entities on other Cisco Systems Routers, both terms refer to the same entity on the RPM.

In the example above, the numbers in the left column indicate the order in which the RPM-PR card will try to load software. The second column shows that the first two files are marked for deletion (D). The last column lists the names of the files stored in bootflash.

When managing the bootflash, you need to keep in mind the following:

- When the RPM card is reset, it tries to load the first bootable image in bootflash.
- The RPM card will not attempt to boot from automatic configuration files, which are named using the format `auto_config_slotnn`, where nn represents a slot in which an RPM card is installed.
- If the image that RPM tries to load does not load, you can reset the RPM from the active PXM45 card using the **resetcd** `<slot>` command.
- Files are not removed from bootflash until the **squeeze flash:** command is entered. If you delete a file and do not enter **squeeze flash:**, the RPM card will still attempt to boot from the first image it finds, whether it is marked for deletion or not.

**Caution**

If all bootable images are deleted from bootflash, the card must be returned to the factory to be reprogrammed.

Upgrading RPM Runtime Software

The runtime software on the RPM can be loaded from the following sources:

- The E:RPM directory on the PXM45 hard disk
- Bootflash
- A TFTP server on a LAN to which an RPM back card is connected.

Cisco Systems recommends that you configure the RPM card to load from the E:RPM directory on the PXM45 hard disk. Note that images will load much faster from bootflash, but if you are using multiple RPM cards, it takes longer to complete an upgrade because the runtime software must be copied to each RPM card's bootflash instead of to a single location.

At startup, the RPM card attempts to load the software in the order listed in the startup-config file. The following example shows an excerpt from a startup-config file:

```
!
boot system e:rpm-js-mz_122-4.T
boot system bootflash:rpm-js-mz_122-4.T
boot config c:auto_config_slot09
logging rate-limit console 10 except errors
enable password cisco
!
```

In the startup-config file example, the RPM card attempts to load the runtime software from the PXM45 card (E:rpm-js-mz_122-4.T) first, and if that fails, it attempts to load the image copy stored in bootflash. This configuration takes longer to upgrade, but it assures the card can reboot if someone accidentally removes the file on the PXM45 hard disk.

**Note**

The convention is lowercase *e* for RPM-PR commands and uppercase *E* for switch commands.

To configure the RPM to load upgraded runtime software from the PXM45 hard disk, you need to do the following:

- Copy the upgraded file to the PXM45 hard disk
- Update the boot system variable in the router startup-config file to load the new file.
- Reset the RPM card so that it loads the new file.

RPM-PR cards can be configured for 1:N redundancy as well as for non-redundant configurations. The procedures for both types of configuration are in the sections that follow.

**Tips**

To simplify runtime software updates, copy the runtime file in the E:RPM directory and rename it to a generic name such as rpm-js-mz. The production runtime filenames have version numbers appended to them, but you can change this. This approach allows you to perform future upgrades by copying the file to the hard disk, renaming a copy of the file to your generic name, and resetting each card. The approach eliminates the need to reconfigure IOS on each card to recognize the new filename.

Upgrade Procedure for Boot Software and Runtime Software for Non-Redundant Cards

The following procedure describes how to upgrade boot software and runtime software.



Note

The first part of this procedure describes boot software upgrade and the second part describes runtime software upgrade. RPM boot software can be upgraded either in boot mode or in runtime mode. The procedure described here shows an example for runtime mode. The same commands are applicable for upgrading boot software in boot mode.

- Step 1** Copy the new boot software file for the RPM-PR card to the switch (E:RPM) as described in “Copying Software Files to the Switch,” which appears earlier in this section.
- Step 2** Establish a configuration session using any valid user name.
- Step 3** Use the **cc** command to select the RPM-PR card to update.

```
pop20two.7.PXM.a > cc 9
```

```
(session redirected)
```

```
Router>
```

The switch displays the IOS prompt for the router on the RPM-PR card. From this point on, all commands are Cisco IOS commands.



Note

This procedure assumes that you are familiar with Cisco IOS, which is a topic that is beyond the scope of this book. This procedure details only those commands that are unique to setting up RPM-PR on the switch. For general Cisco IOS commands, examples are given to show how to complete the task.

- Step 4** Enter Enable mode for the router.
- ```
Router>enable
Password:
Router#
```
- Step 5** To verify router access to the PXM45 hard disk and display the boot file name, enter **dir e:** command.

```
Router#dir e:
Directory of c:/
```

```
65539 -rw- 815 Sep 13 2001 23:51:10 auto_config_slot09
65540 -rw- 2588780 May 22 2001 19:06:54 rpm-boot-mz_002.001.070.201
84611 -rw- 2452768 Apr 05 2001 05:34:44 rpm-boot-mz.122-4.T
66805 -rw- 8529104 May 22 2001 19:09:00 rpm-js-mz_002.001.070.201
85809 -rw- 7936012 Apr 05 2001 06:28:54 rpm-js-mz.122-4.T
```

```
104857600 bytes total (83068928 bytes free)
```

- Step 6** To display the files in the bootflash, enter the **show flash:** command.

```
Router#show flash:
```

```
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time----- name
1 .. image F596869A 296D88 27 2452744 Feb 28 2001 03:16:05 rpm-boot-mz_122-4.T
```

```
30315128 bytes available (2452872 bytes used)
```

**Step 7** To copy new boot software to the bootflash, use the **copy** command.

```
Router#copy c:rpm-bootmz_002.001.070.201 bootflash:
Destination filename [rpm-boot-mz_002.001.070.201]?
CC
CC
2334044 bytes copied in 35.768 secs (66686 bytes/sec)
```



## Tips

When prompted for the destination filename, press enter to use the source filename shown in the prompt. To change the destination filename, type a new filename after the prompt.

**Step 8** To verify that the file was copied, enter the **show flash:** command.

**Step 9** To mark an older boot file for deletion from the bootflash, use the **del bootflash:** command as shown in the following example:

```
Router#del bootflash:
Delete filename []? rpm-js-mz
Delete bootflash:rpm-js-mz? [confirm]
Router#
```



## Tips

To unmark a bootflash file so that it won't be deleted when the **squeeze flash:** command is run, enter the undelete *<number>* command, where *number* is the file number displayed in the left-most column of the *show flash:* command display.

**Step 10** To delete all files that are marked for deletion from bootflash, enter the **squeeze flash:** command as shown in the following example:

```
Router boot)#squeeze flash:
All deleted files will be removed. Continue? [confirm]y
Squeeze operation may take a while. Continue? [confirm]

Squeeze of bootflash complete
```

**Step 11** Enter the **show flash:** command to verify that the bootflash files are as you want them.



### Caution

If all bootable images are deleted from bootflash and the RPM card is restarted, the card must be returned to the factory to be reprogrammed. When you are done managing the bootflash, the **show flash:** command should display at least one bootable image, and **the image you want the card to boot from must be the first bootable image in the list.**



## Tips

If the **show flash:** command does not display a bootable image, copy a bootable image to bootflash as described earlier in this procedure. You can continue to manage the bootflash, even when there are no files in bootflash, until the router is restarted.



## Tips

If the bootflash contains bootable images and the sequence is such that the card will not start, you can enter rommon mode and load the bootable image. To get into rommon mode, establish a console connection to the RPM card, reset the RPM card using the **resetcd** *<slot>* command from the active PXM45 card, then quickly enter the **CTRL-[, Break** sequence at the RPM console. The command to send a **Break** depends on the computer platform and software you are using. It may take a couple

of attempts to successfully get into rommon mode. When you are in rommon mode, the RPM card displays the *rommon 1 >* prompt.

Once in rommon mode, you can enter the **dir bootflash:** command to display the images in bootflash. To boot one of the images, enter a **boot** command the following format: **boot bootflash:filename**.

**This ends the boot software upgrade procedure. The following steps are for upgrading the runtime software. If you do not want to upgrade the runtime software, you need to restart the RPM card by entering the reload command.**

- Step 12** Copy the new runtime software file for the RPM-PR card to the switch (E:RPM) as described in “Copying Software Files to the Switch,” which appears earlier in this section.
- Step 13** If you are using a generic filename for your runtime images, copy the file on the PXM45 hard disk and rename the copy. For example:

```
8850_LA.8.PXM.a > copy rpm-js-mz_122-4.T rpm-js-mz
```

- Step 14** Establish a configuration session using any valid user name.
- Step 15** If your RPM is already configured to use a file with a generic name, skip to Step 24.
- Step 16** Use the **cc** command to select the RPM-PR card to update.

```
pop20two.7.PXM.a > cc 9
```

```
(session redirected)
```

```
Router>
```

The switch displays the IOS prompt for the router on the RPM-PR card. From this point on, all commands are Cisco IOS commands.



**Note** This procedure assumes that you are familiar with Cisco IOS, which is a topic that is beyond the scope of this book. This procedure details only those commands that are unique to setting up RPM-PR on the switch. For general Cisco IOS commands, examples are given to show how to complete the task.

- Step 17** Configure the RPM card to store its configuration on the PXM45 hard disk by entering the following command:

```
Router> boot config e:auto_config_slot#
```

- Step 18** Enter Enable mode for the router.

```
Router>enable
Password:
Router#
```

- Step 19** Display the startup runtime software filename by entering the **show bootvar** command.

```
Router#show bootvar
BOOT variable = e:rpm-js-mz_122-4.T,12;
CONFIG_FILE variable = c:auto_config_slot09
BOOTLDR variable does not exist
Configuration register is 0x2
```

In the example above, the startup runtime software file is E:rpm-js-mz\_122-4.T, and it has a version number attached to it. Another way to view the boot list is to enter the **show startup-config** command and look for the **boot system** commands.

**Step 20** Enter the router global configuration mode.

```
Router#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
```

**Step 21** If you need to change the boot system filenames, remove the existing boot list using the **boot system** command as follows:

```
Router(config)# no boot system
```

**Step 22** Create a new boot list by entering one or more **boot system** commands as follows:

```
Router(config)# boot system e:filename
```

Replace the filename variable with the name of the new runtime file that was previously transferred to the E:RPM directory on the switch. For example:

```
Router(config)# boot system e:rpm-js-mz
```

If you want to enter additional boot system commands, enter them in the order in which you want the RPM card to use them. The following example adds a statement to load from bootflash if the runtime file is not found on the PXM45 hard disk:

```
Router(config)# boot system bootflash:rpm-js-mz_122-4.T
```



#### Note

Before the RPM card can load runtime software from bootflash, you must copy the runtime software to the bootflash. The procedure for copying files from the PXM45 hard disk to bootflash is described in the previous section.

**Step 23** Exit global configuration mode and save the new configuration.

```
Router(config)#^Z
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

**Step 24** To verify the change, enter the **show bootvar** or **show run** commands.

**Step 25** Switch to the active PXM45 card and reset the RPM card. For example:

```
Router#cc 8

(session redirected)

8850_LA.8.PXM.a > resetcd 9
The card in slot number 9, will be reset. Please confirm action
resetcd: Do you want to proceed (Yes/No)? y
```

## Upgrading RPM-PR Boot Software and Runtime Software for 1:N Redundancy

Redundancy must be established before you use the procedure in this section. If redundancy has not been established, upgrade each RPM-PR card using the procedure in the next section, “Upgrading Without Redundancy”.

To upgrade the RPM-PR runtime software for 1:N redundancy, use the following procedure. (Note that the directory on the PXM45 card uses (E:) and the directory within the router card uses (e:).)

The following procedure describes how to upgrade boot software and runtime software.

**Note**

The first part of this procedure describes boot software upgrade and the second part describes runtime software upgrade. RPM boot software can be upgraded either in boot mode or in runtime mode. The procedure described here shows an example for runtime mode. The same commands are applicable for upgrading boot software in boot mode.

- Step 1** Copy the new boot software file for the RPM-PR card to the switch (E:RPM) as described in “Copying Software Files to the Switch,” which appears earlier in this section.
- Step 2** Establish a configuration session using any valid user name.
- Step 3** Use the **cc** command to select the RPM-PR card to update.

```
pop20two.7.PXM.a > cc 9
```

```
(session redirected)
```

```
Router>
```

The switch displays the IOS prompt for the router on the RPM-PR card. From this point on, all commands are Cisco IOS commands.

**Note**

This procedure assumes that you are familiar with Cisco IOS, which is a topic that is beyond the scope of this book. This procedure details only those commands that are unique to setting up RPM-PR on the switch. For general Cisco IOS commands, examples are given to show how to complete the task.

- Step 4** Enter Enable mode for the router.
- ```
Router>enable
Password:
Router#
```
- Step 5** To verify router access to the PXM45 hard disk and display the boot file name, enter **dir e:** command.

```
Router#dir e:
Directory of c:/
```

```
65539  -rw-          815   Sep 13 2001 23:51:10  auto_config_slot09
65540  -rw-       2588780   May 22 2001 19:06:54  rpm-boot-mz_002.001.070.201
84611  -rw-       2452768   Apr 05 2001 05:34:44  rpm-boot-mz.122-4.T
66805  -rw-       8529104   May 22 2001 19:09:00  rpm-js-mz_002.001.070.201
85809  -rw-       7936012   Apr 05 2001 06:28:54  rpm-js-mz.122-4.T
```

```
104857600 bytes total (83068928 bytes free)
```

- Step 6** To display the files in the bootflash, enter the **show flash:** command.

```
Router#show flash:
```

```
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time----- name
1  .. image      F596869A 296D88  27  2452744 Feb 28 2001 03:16:05 rpm-boot-mz_122-4.T
```

```
30315128 bytes available (2452872 bytes used)
```

Step 7 To copy new boot software to the bootflash, use the **copy** command.

```
Router#copy c:rpm-bootmz_002.001.070.201 bootflash:  
Destination filename [rpm-boot-mz_002.001.070.201]?  
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC  
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC  
2334044 bytes copied in 35.768 secs (66686 bytes/sec)
```



Tips

When prompted for the destination filename, press enter to use the source filename shown in the prompt. To change the destination filename, type a new filename after the prompt.

Step 8 To verify that the file was copied, enter the **show flash:** command.

Step 9 To mark an older boot file for deletion from the bootflash, use the **del bootflash:** command as shown in the following example:

```
Router#del bootflash:
Delete filename []? rpm-js-mz
Delete bootflash:rpm-js-mz? [confirm]
Router#
```



Tips

To unmark a bootflash file so that it won't be deleted when the **squeeze flash:** command is run, enter the undelete *<number>* command, where *number* is the file number displayed in the left-most column of the *show flash:* command display.

Step 10 To delete all files that are marked for deletion from bootflash, enter the **squeeze flash:** command as shown in the following example:

```
Router boot)#squeeze flash:
All deleted files will be removed. Continue? [confirm]y
Squeeze operation may take a while. Continue? [confirm]

Squeeze of bootflash complete
```

Step 11 Enter the **show flash:** command to verify that the bootflash files are as you want them.



Caution

If all bootable images are deleted from bootflash and the RPM card is restarted, the card must be returned to the factory to be reprogrammed. When you are done managing the bootflash, the **show flash:** command should display at least one bootable image, and **the image you want the card to boot from must be the first bootable image in the list.**



Tips

If the **show flash:** command does not display a bootable image, copy a bootable image to bootflash as described earlier in this procedure. You can continue to manage the bootflash, even when there are no files in bootflash, until the router is restarted.



Tips

If the bootflash contains bootable images and the sequence is such that the card will not start, you can enter rommon mode and load the bootable image. To get into rommon mode, establish a console connection to the RPM card, reset the RPM card using the **resetcd** *<slot>* command from the active PXM45 card, then quickly enter the **CTRL-[, Break** sequence at the RPM console. The command to send a **Break** depends on the computer platform and software you are using. It may take a couple

of attempts to successfully get into rommon mode. When you are in rommon mode, the RPM card displays the *rommon 1 >* prompt.

Once in rommon mode, you can enter the **dir bootflash:** command to display the images in bootflash. To boot one of the images, enter a **boot** command the following format: **boot bootflash:filename**.

This ends the boot software upgrade procedure for the primary card. The following steps are for upgrading the runtime software. If you do not want to upgrade the runtime software for the primary card, skip steps 12 through 24 and go to step 25 to upgrade the boot software on the secondary card.

- Step 12** Copy the new runtime software file for the RPM-PR card to the switch (E:RPM) as described in “Copying Software Files to the Switch,” which appears earlier in this section.
- Step 13** If you are using a generic filename for your runtime images, copy the file on the PXM45 hard disk and rename the copy. For example:

```
8850_LA.8.PXM.a > copy rpm-js-mz_122-4.T rpm-js-mz
```

- Step 14** Establish a configuration session using any valid user name.
- Step 15** If your RPM is already configured to use a file with a generic name, skip to Step 25.
- Step 16** Use the **cc** command to select the RPM-PR card to update.

```
pop20two.7.PXM.a > cc 9
```

```
(session redirected)
```

```
Router>
```

The switch displays the IOS prompt for the router on the RPM-PR card. From this point on, all commands are Cisco IOS commands.



Note

This procedure assumes that you are familiar with Cisco IOS, which is a topic that is beyond the scope of this book. This procedure details only those commands that are unique to setting up RPM-PR on the switch. For general Cisco IOS commands, examples are given to show how to complete the task.

- Step 17** Configure the RPM card to store its configuration on the PXM45 hard disk by entering the following command:

```
Router> boot config e:auto_config_slot#
```

- Step 18** Enter Enable mode for the router.

```
Router>enable
```

```
Password:
```

```
Router#
```

- Step 19** Display the startup runtime software filename by entering the **show bootvar** command.

```
Router#show bootvar
BOOT variable = e:rpm-js-mz_122-4.T,12;
CONFIG_FILE variable = c:auto_config_slot09
BOOTLDR variable does not exist
Configuration register is 0x2
```

In the example above, the startup runtime software file is `e:rpm-js-mz_122-4.T`, and it has a version number attached to it. Another way to view the boot list is to enter the **show startup-config** command and look for the **boot system** commands.

Step 20 Enter the router global configuration mode.

```
Router#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
```

Step 21 If you need to change the boot system filenames, remove the existing boot list using the **boot system** command as follows:

```
Router(config)# no boot system
```

Step 22 Create a new boot list by entering one or more **boot system** commands as follows:

```
Router(config)# boot system e:filename
```

Replace the filename variable with the name of the new runtime file that was previously transferred to the E:RPM directory on the switch. For example:

```
Router(config)# boot system e:rpm-js-mz
```

If you want to enter additional boot system commands, enter them in the order in which you want the RPM card to use them. The following example adds a statement to load from bootflash if the runtime file is not found on the PXM45 hard disk:

```
Router(config)# boot system bootflash:rpm-js-mz_122-4.T
```



Note

Before the RPM card can load runtime software from bootflash, you must copy the runtime software to the bootflash. The procedure for copying files from the PXM45 hard disk to bootflash is described in the previous section.

Step 23 Exit global configuration mode and save the new configuration.

```
Router(config)#^Z
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

Step 24 To verify the change, enter the **show bootvar** or **show run** commands.

Step 25 Switch to the active PXM45 card. For example:

```
Router#cc 8

(session redirected)
```

Step 26 Switch to the secondary card using the **softswitch** command as follows:

```
8850_LA.8.PXM.a > softswitch <fromSlot> <toSlot>
```

Replace `<fromSlot>` with the slot number of the primary card. Replace `<toSlot>` with the slot number of the secondary card.

This step makes the secondary card active and resets the primary RPM-PR card. When the Primary card resets, it loads the upgraded software.

Step 27 **cc** to the secondary slot.

Step 28 Repeat steps 1 through 11.

This ends the boot software upgrade on the secondary card. If you do not want to upgrade the runtime software, go to step 30.

The following steps are for upgrading runtime software on the secondary card.

Step 29 Repeat steps 12 through 24.

Step 30 Switch back to the primary card using the **softswitch** command as follows:

```
8850_LA.8.PXM.a > softswitch <fromSlot> <toSlot>
```

Replace <fromSlot> with the slot number of the secondary card. Replace <toSlot> with the slot number of the primary card.

This step makes the primary card active and resets the secondary RPM-PR card. When the reset is complete, the secondary card is ready to run the upgraded software.

Step 31 To verify that the router reboot is complete, enter the **dspcds** or **dspcd <slot>** commands. The reboot is complete when the card state displays as *Active*. Another way to verify router operation is to use the **cc slot** command. If you can access the router from the switch prompt, the router reboot is complete.

Step 32 If there are other primary cards with redundant (secondary) cards, repeat this procedure for each primary card.

Troubleshooting Upgrade Problems

Table 19 lists symptoms of upgrade problems and suggestions on how to correct them.



Tips

When troubleshooting problems on standby PXM45 cards or cards that do not start up to the active state, establish communications through the boot IP address or through the console port.

Table 19 Troubleshooting Upgrade Problems

Primary Symptom	Secondary Symptom	Suggested Action
loadrev or runrev command fails		<p>The loadrev command is blocked when a previous upgrade has not been completed with the commitrev command. Use the dsprev -s command to locate the cards that are still being upgraded.</p> <p>For more information on a particular card, enter the dspcd <slot> command and verify that the Current, Primary, and Secondary software revision numbers are identical. If the numbers are not identical, issue the commitrev <slot> command.</p> <p>Enter the dspcds command (or dsprevs or dsprev -s) and verify that the standby card is in standby state. Also look for a -U or -D in the dspcds command display, which indicates that the card is in the process of being upgraded (-U) or downgraded (-D). The loadrev and runrev commands are blocked whenever the standby card is not in standby state or an upgrade or downgrade is in progress.</p>
After restart, the switch stops displaying messages and does not display a prompt.		Press Return to display the prompt.
After restart, switch stops at backup boot prompt: pxm45bkup> .	The switch displays the message: <i>Can not open file C:/version.</i>	The version file is probably missing. Create the version file as described in “Initializing the Switch” in Chapter 2, “Configuring General Switch Features.”
(Use a console port connection to see this. If you missed the startup messages, enter the reboot command.)	The switch displays the message: <i>Unable to determine size of C:/FW/filename.</i>	<p>The version recorded in the version file doesn’t match software installed in the C:FW directory.</p> <p>Enter the sysVersionShow command to see which file the PXM45 is trying to load.</p> <p>Verify that the correct software is installed on the switch using the commands described in “Browsing the File System in Backup Boot Mode” in Appendix B, “PXM45 Backup Boot Procedures.”</p> <p>If the runtime software is not on the hard disk, copy it to the hard disk as described in “Transferring Software Files to and from the Switch” in Appendix B, “PXM45 Backup Boot Procedures.”</p> <p>If a typo is entered when initializing the switch, re-enter the sysVersionSet command, enter the sysVersionShow command to verify the correct setting, and then reboot the switch with the reboot command.</p>
	The switch displays the message: <i>Please run sysDiskCfgCreate.</i>	The hard disk is formatted, but not ready for operation. Enter the sysDiskCfgCreate command. For more information, refer to “Initializing the PXM45 Hard Disk” in Appendix B, “PXM45 Backup Boot Procedures.”

Table 19 Troubleshooting Upgrade Problems (continued)

Primary Symptom	Secondary Symptom	Suggested Action
Standby PXM45 continually reboots. You can view the rebooting process through the console port.		<p>The active PXM45 card cannot bring up the standby card. The following procedure assumes that this card has just been installed in the switch and that you have given the standby card sufficient time to synchronize with the Active card.</p> <p>Interrupt the boot cycle by pressing Return. Timing is important, so you might have to press Return multiple times. When the pxm45bkup prompt appears, immediately enter the sysPxmRemove command to prevent the Active card from rebooting the standby card while you are working on it.</p> <p>Enter the sysChangeEnet command and verify that the <i>inet on ethernet (e)</i> and <i>gateway inet (g)</i> values are set to the boot and gateway IP address set with the bootChange command on the active card. Also, verify that the <i>boot device</i> is set to <i>InPci</i>. The sysChangeEnet command works like the bootChange command, which is described in “Setting the Boot IP Address” in Chapter 2, “Configuring General Switch Features.”</p> <p>Enter the sysClrallcnf command to clear any configuration data on the standby card set. This command does not clear the boot IP address set with the sysChangeEnet command.</p>
After restart, the switch stops at shell prompt: pxm45>.		<p>If the Return key is pressed at one of the auto-boot prompts during start up, the switch stops in shell mode. Enter the reboot command to restart the switch and avoid pressing the Return key.</p>
The non-active PXM45 will not transition out of the active init state.	One or more non-standby AXSM cards are in a transitional state.	<p>A non-standby AXSM card is a standalone AXSM card or the card within a redundant AXSM pair that is trying to go active. When a non-standby AXSM card is in a transitional state, such as the init state, the PXM45 cannot transition to the standby state. When all non-standby cards have reached a steady (non-transitional) state, the PXM45 will transition to a steady state. Steady states include the following: active ready, failed, mismatch, empty, empty reserved, and standby ready.</p> <p>Note When either card in a redundant AXSM pair is active, that AXSM pair is not preventing the standby PXM45 from transitioning to a steady state. The standby PXM45 is only affected when both cards in a redundant pair are in a transitional state.</p>

Documentation

Release notes ship with the switch. You can also download the release notes and other documentation from <http://www.cisco.com/univercd/cc/td/doc/product/wanbu/index.htm>, or you can order printed manuals (see “Ordering Documentation”).

Related Documentation

The following Cisco publications contain additional information related to the operation of this product and associated equipment in a Cisco WAN switching network.

Cisco WAN Manager Release 10.5 Documentation

The product documentation for the Cisco WAN Manager (CWM) network management system for Release 10.5 is listed in [Table 20](#).

Table 20 Cisco WAN Manager Release 10.5 Documentation

Title	Description
<i>Cisco WAN Manager Installation Guide for Solaris, Release 10.5</i> DOC-7812948=	Provides procedures for installing Release 10 of the CWM network management system and Release 5.3 of CiscoView.
<i>Cisco WAN Manager User's Guide, Release 10.5</i> DOC-7812945=	Describes how to use the CWM Release 10 software which consists of user applications and tools for network management, connection management, network configuration, statistics collection, and security management.
<i>Cisco WAN Manager SNMP Service Agent, Release 10.5</i> DOC-7812947=	Provides information about the CWM Simple Network Management Protocol Service Agent, an optional adjunct to CWM used for managing Cisco WAN switches using SNMP.
<i>Cisco WAN Manager Database Interface Guide, Release 10.5</i> DOC-7812944=	Provides information about accessing the CWM Informix OnLine database that is used to store information about the network elements.

Table 21 WAN CiscoView Release 10 Documentation

Title	Description
<i>WAN CiscoView Release 3 for the MGX 8850 Edge Switch, Release 1</i> DOC-7811242=	Provides instructions for using this network management software application that allows you to perform minor configuration and troubleshooting tasks.

Table 21 WAN CiscoView Release 10 Documentation

Title	Description
WAN CiscoView Release 3 for the MGX 8250 Edge Concentrator, Release 1 DOC-7811241=	Provides instructions for using this network management software application that allows you to perform minor configuration and troubleshooting tasks.
WAN CiscoView Release 3 for the MGX 8230 Multiservice Gateway, Release 1 DOC-7810926=	Provides instructions for using this network management software application that allows you to perform minor configuration and troubleshooting tasks.

Cisco MGX 8850 Release 2.1 Documentation

The product documentation for the installation and operation of the MGX 8850 Release 2.1 switch is listed in [Table 22](#).

Table 22 Cisco MGX 8850 Switch Release 2.1 Documentation

Title	Description
<i>Cisco MGX 8850 Routing Switch Hardware Installation Guide, Release 2.1</i> DOC-7812561=	Describes how to install the MGX 8850 switch. It explains what the switch does, and covers site preparation, grounding, safety, card installation, and cabling.
<i>Cisco MGX 8850 Switch Command Reference, Release 2.1</i> DOC-7812563=	Describes how to use the commands that are available in the CLI ¹ of the MGX 8850 switches.
<i>Cisco MGX 8850 Switch Software Configuration Guide, Release 2.1</i> DOC-7812551=	Describes how to configure the MGX 8850 switch to operate as ATM edge and core switches. This guide also provides some operation and maintenance procedures.
<i>Cisco MGX 8850 SNMP Reference, Release 2.1</i> DOC-7812562=	Provides information on all supported MIB ² objects, support restrictions, traps, and alarms for the AXSM, PXM45, and RPM. PNNI is also supported.
<i>Cisco MGX and SES PNNI Network Planning Guide</i> DOC-7813543=	Provides guidelines for planning a PNNI network that uses the MGX 8850 switch and the BPX 8600 switch. When connected to a PNNI network, each BPX 8600 series switch requires a Service Expansion Shelf (SES) for PNNI route processing.
<i>Cisco MGX Route Processor Module Installation and Configuration Guide, Release 2.1</i> DOC-7812510=	Describes how to install and configure the MGX Route Processor Module (RPM-PR) in the MGX 8850 Release 2.1 switch. Also provides site preparation, troubleshooting, maintenance, cable and connector specifications, and basic IOS configuration information.

1. CLI = command line interface

2. MIB = Management Information Base

SES PNNI Release 1.1 Documentation

The product documentation that contains information for the understanding, the installation, and the operation of the Service Expansion Shelf (SES) PNNI Controller is listed in [Table 23](#).

Table 23 *SES PNNI Controller Release 1.1 Documentation*

Title	Description
<i>Cisco SES PNNI Controller Software Configuration Guide, Release 1.1</i> DOC-7813539=	Describes how to configure, operate, and maintain the SES PNNI Controller.
<i>Cisco SES PNNI Controller Software Command Reference, Release 1.1</i> DOC-7813541=	Provides a description of the commands used to configure and operate the SES PNNI Controller.
<i>Cisco MGX and SES PNNI Network Planning Guide</i> DOC-7813543=	Provides guidelines for planning a PNNI network that uses the MGX 8850 and the BPX 8600 switches. When connected to a PNNI network, each BPX 8600 series switch requires a SES for PNNI route processing.

Cisco WAN Switching Software, Release 9.3 Documentation

The product documentation for the installation and operation of the Cisco WAN Switching Software Release 9.3 is listed in [Table 24](#).

Table 24 *Cisco WAN Switching Release 9.3 Documentation*

Title	Description
<i>Cisco BPX 8600 Series Installation and Configuration, Release 9.3.30</i> DOC-7812907=	Provides a general description and technical details of the BPX broadband switch.
<i>Cisco WAN Switching Command Reference, Release 9.3.30</i> DOC-7812906=	Provides detailed information on the general command line interface commands.
<i>Cisco IGX 8400 Series Installation Guide, Release 9.3.30</i> OL-1165-01 (online only)	Provides hardware installation and basic configuration information for IGX 8400 Series switches running Switch Software Release 9.3.30 or earlier.
<i>Cisco IGX 8400 Series Provisioning Guide, Release 9.3.30</i> OL-1166-01 (online only)	Provides information for configuration and provisioning of selected services for the IGX 8400 Series switches running Switch Software Release 9.3.30 or earlier.
<i>Cisco IGX 8400 Series Regulatory Compliance and Safety Information</i> DOC-7813227=	Provides regulatory compliance, product warnings, and safety recommendations for the IGX 8400 Series switch.

MGX 8850 Multiservice Switch, Release 1.1.40 Documentation

The product documentation that contains information for the installation and operation of the MGX 8850 Multiservice Switch is listed in [Table 25](#).

Table 25 MGX 8850 Multiservice Gateway Documentation

Title	Description
<i>Cisco MGX 8850 Multiservice Switch Installation and Configuration, Release 1.1.3</i> DOC-7811223=	Provides installation instructions for the MGX 8850 multiservice switch.
<i>Cisco MGX 8800 Series Switch Command Reference, Release 1.1.3.</i> DOC-7811210=	Provides detailed information on the general command line for the MGX 8850 switch.
<i>Cisco MGX 8800 Series Switch System Error Messages, Release 1.1.3</i> DOC-7811240=	Provides error message descriptions and recovery procedures.
Cisco MGX 8850 Multiservice Switch Overview, Release 1.1.3 OL-1154-01 (online only)	Provides a technical description of the system components and functionary of the MGX 8850 multiservice switch from a technical perspective.
<i>Cisco MGX Route Processor Module Installation and Configuration Guide, Release 1.1</i> DOC-7812278=	Describes how to install and configure the MGX Route Processor Module (RPM/B and RPM-PR) in the MGX 8850, MGX 8250, and MGX 8230 Release 1 switch. Also provides site preparation, troubleshooting, maintenance, cable and connector specifications, and basic IOS configuration information.
<i>1.1.40 Version Software Release Notes Cisco WAN MGX 8850, MGX 8230, and MGX 8250 Switches</i> DOC-7813594=	Provides new feature, upgrade, and compatibility information, as well as known and resolved anomalies.

MGX 8250 Edge Concentrator, Release 1.1.40 Documentation

The documentation that contains information for the installation and operation of the MGX 8250 Edge Concentrator is listed in [Table 26](#).

Table 26 MGX 8250 Multiservice Gateway Documentation

Title	Description
<i>Cisco MGX 8250 Edge Concentrator Installation and Configuration, Release 1.1.3</i> DOC-7811217=	Provides installation instructions for the MGX 8250 Edge Concentrator.
<i>Cisco MGX 8250 Multiservice Gateway Command Reference, Release 1.1.3</i> DOC-7811212=	Provides detailed information on the general command line interface commands.
<i>Cisco MGX 8250 Multiservice Gateway Error Messages, Release 1.1.3</i> DOC-7811216=	Provides error message descriptions and recovery procedures.

Table 26 MGX 8250 Multiservice Gateway Documentation (continued)

Title	Description
<i>Cisco MGX 8250 Edge Concentrator Overview, Release 1.1.3</i> DOC-7811576=	Describes the system components and functionality of the MGX 8250 edge concentrator from a technical perspective.
<i>Cisco MGX Route Processor Module Installation and Configuration Guide, Release 1.1</i> DOC-7812278=	Describes how to install and configure the MGX Route Processor Module (RPM/B and RPM-PR) in the MGX 8850, MGX 8250, and MGX 8230 Release 1 switch. Also provides site preparation, troubleshooting, maintenance, cable and connector specifications, and basic IOS configuration information.
<i>1.1.40 Version Software Release Notes Cisco WAN MGX 8850, MGX 8230, and MGX 8250 Switches</i> DOC-7813594=	Provides new feature, upgrade, and compatibility information, as well as known and resolved anomalies.

MGX 8230 Multiservice Gateway, Release 1.1.40 Documentation

The documentation that contains information for the installation and operation of the MGX 8230 Edge Concentrator is listed in [Table 27](#).

Table 27 MGX 8230 Multiservice Gateway Documentation

Title	Description
<i>Cisco MGX 8230 Edge Concentrator Installation and Configuration, Release 1.1.3</i> DOC-7811215=	Provides installation instructions for the MGX 8230 Edge Concentrator.
<i>Cisco MGX 8230 Multiservice Gateway Command Reference, Release 1.1.3</i> DOC-7811211=	Provides detailed information on the general command line interface commands.
<i>Cisco MGX 8230 Multiservice Gateway Error Messages, Release 1.1.3</i> DOC-78112113=	Provides error message descriptions and recovery procedures.
<i>Cisco MGX 8230 Edge Concentrator Overview, Release 1.1.3</i> DOC-7812899=	Provides a technical description of the system components and functionary of the MGX 8250 edge concentrator from a technical perspective.
<i>Cisco MGX Route Processor Module Installation and Configuration Guide, Release 1.1</i> DOC-7812278=	Describes how to install and configure the MGX Route Processor Module (RPM/B and RPM-PR) in the MGX 8850, MGX 8250, and MGX 8230 Release 1 switch. Also provides site preparation, troubleshooting, maintenance, cable and connector specifications, and basic IOS configuration information.
<i>1.1.40 Version Software Release Notes for Cisco WAN MGX 8850, MGX 8230, and MGX 8250 Switches</i> DOC-7813594=	Provides new feature, upgrade, and compatibility information, as well as known and resolved anomalies.

Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order printed Cisco product documentation from the Networking Products MarketPlace:

http://www.cisco.com/cgi-bin/order/order_root.pl

Starting with MGX Release 2.1.60 and its associated releases, printed documentation is offered through the “Printed Information Ordering” site, which can be accessed through:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:

<http://www.cisco.com/go/subscription>

- Non-registered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

Documentation on the World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- <http://www.cisco.com> (for example,
<http://www.cisco.com/univercd/cc/td/doc/product/wanbu/index.htm>)
- <http://www-china.cisco.com>
- <http://www-europe.cisco.com>

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription as mentioned above.

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Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

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Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

<http://www.cisco.com/tac>

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.



Note

To register for Cisco.com, go to <http://www.cisco.com/register/>

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at <http://www.cisco.com/tac/caseopen>

Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

Caveats

This section provides the following information:

- Known Anomalies in Release 2.1.70
- Anomalies Resolved in Release 2.1.70
- Anomaly Status Changes in Release 2.1.70
- Known Anomalies in Release 2.1.60
- Anomalies Resolved in Release 2.1.60
- Anomaly Status Changes in Release 2.1.60
- Anomalies Resolved in Release 2.1.10
- Known RPM-PR/MPLS Anomalies



Caution

Do not remove the active PXM45 card while the offline diagnostic is running on the redundant PXM45 card. If you do, the redundant PXM45 will reboot, but it will not be able to become active unless its hard disk drive was previously synchronized to the previously active PXM45 hard disk. Please refer to defects CSCdu32813 and CSCdv84390 for more information.

Known Anomalies for Release 2.1.70

Table 28 lists the anomalies and known workarounds for release 2.1.70.

Table 28 Known Anomalies for Release 2.1.70

Bug ID	Description
S1Bugs	
CSCdu88142	Symptom: All SMs on node were reset by newly active PXM. Condition: A CLI switchover was executed in rapid succession on all active cards on the node, including the active PXM. Workaround: None

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCdv46583	Symptom: sframetick lock config is lost. Condition: When a switchcc is executed on the shelf. Workaround: None
CSCdv79606	Symptom: PNNI port/conn and CLI command failures Condition: PXM45B SAR was unable to transmit Workaround: None
CSCdw00887	Symptom: Sometimes when RPM_PR card is reloaded, it goes into FAIL state. Condition: Sometimes RPM_PR some time goes into fail state when switchcc command is executed to switch between slot 7 and slot 8. Workaround: Do a switchcc back, this will force the RPM_PR to reload and eventually to come up.
CSCdw20354	Symptom: PXM toggling between boot, and empty/reserved. Condition: Appears to have begun after a switchcc was executed Workaround: None
S2 Bugs	
CSCdt05385	Symptom: No alarms reported when HD failure on active PXM Condition: HD failure was simulated on active PXM Workaround: None
CSCdu53234	Symptom: RPM-PR backcards can not be detected from PXM Condition: Performed dspcds Workaround: cc into the RPM-PR card, Check the backcard presence by doing a "show interface brief"
CSCdv22588	Symptom: AXSM card went into empty/reserved state Condition: Brown-out testing was being conducted Workaround: UNKNOWN
CSCdv29599	Symptom: Node went into IDT mode. Condition: Setrev from 2.0 version to 2.1 version Workaround: None.
CSCdv41385	Symptom: One RPM failed on reload / resetcd randomly Condition: When the RPM cards comes up. It is unable to register the polling port to pxm randomly. So RPM cannot create the ipc session for polling port. The RPM card goes into fail state. Workaround: Reload or resetcd again
CSCdv63508	Symptom: AXSM/B OC12 went into empty/reserved state Condition: None Workaround: None

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCdv90202	<p>Symptom: AXSM-E card is in "ACTIVE_F" state due to one HW part failure.</p> <p>Condition: Software did detect error in the log.</p> <p>Workaround: None</p>
CSCdv91277	<p>Symptom: MIB Walk on dsx3CircuitIdentifier Returns internal Project Code Name</p> <p>Condition: All conditions</p> <p>Workaround: None.</p>
CSCdv91455	<p>Symptom: Card stuck in empty/empty reserve, or init state.</p> <p>Condition: Simulated hard failures on active PXM, then hard fail on all active axsm in redundant set. Multiple simulated failure on recovering axsm and pxm card after hard failure, and double failures on axsm with redundant peer.</p> <p>A simulated hard failure = physically removing active sm's.</p> <p>Workaround: reseted for stdby axsms in redundant pair set. reseted for all non redundant axsm card.</p>
CSCdw05056	<p>Symptom: The standby pxm does not become active when a switchcc was issued after the active and standby cards in loadrev Done-U state.</p> <p>Condition: Do a loadrev on the pxm45 (A/A, A/B, or B/B combo) then issue a switchcc at the CLI.</p> <p>Workaround: None</p>
CSCdw07374	<p>Symptom: Connections are missing in RPM after a reload.</p> <p>Condition: While adding 2k connections via a scripts, it was noted that some of the slave end points did not get created or were missing.</p> <p>Workaround: None</p>
CSCdw08107	<p>Symptom: AXSM went into empty reserved / empty state</p> <p>Condition: AXSM had been reset at the conclusion of offline diag</p> <p>Workaround: None</p>
CSCdw08931	<p>Symptom: LAN IP retained after a clralenf.</p> <p>Condition: None</p> <p>Workaround: None</p>
CSCdw11749	<p>Symptom: AXSMET3E3 went in to Fail state.</p> <p>Condition: None.</p> <p>Workaround: None</p>
CSCdw19298	<p>Symptom: VNNI stuck in down-in-progress</p> <p>Conditions: PXM and AXSM fw upgrade.</p> <p>Workaround: switchcc on PXM</p>
CSCdw20235	<p>Symptom: AXSMs reported failed status</p> <p>Condition: On-line diag detected errors</p> <p>Workaround: None</p>

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCdw21769	<p>Symptom: dspcon shows inaccurate slave address.</p> <p>Condition: After doing some reroute, looked at output of dspcon command and found that master endpoints are pointing to wrong slave.</p> <p>Workaround: None</p>
CSCdw22066	<p>Symptom: pxm45 went in to Active-F state.</p> <p>Condition: A couple of reboots.</p> <p>Work Around: None.</p>
CSCdw23117	<p>Symptom: Standby PXM45 takes too long to come up.</p> <p>Condition: None</p> <p>Workaround: None</p>
CSCdv30603	<p>Symptom: IP address did not show on the ENNI connected BPX shelf.</p> <p>Condition: After a clrcnf was done on the MGX II</p> <p>Workaround: Perform a switchredcd on the MGX II.</p>
CSCdv54606	<p>Symptom: There is a checksum mismatch between what is computed by the CWM and what is written in the alarm file generated by AXSM.</p> <p>Condition: AXSM generates alarm file every minute. It calculates the checksum and puts it in the file. CWM does a FTP of these files and computes the checksum. Compare this checksum with the checksum in the file. They do not match. This is an intermittent problem.</p> <p>Workaround: Since AXSM generates a new file every minute, CWM can retry the FTP. Next time, it is highly probable that the file is a good one.</p>
CSCdw06221	<p>Symptom: Alarming of PVCs under different failure conditions is not consistent across AXIS, MGX1, MGX45, BPX</p> <p>Condition: None</p> <p>Workaround: None</p>
S3 Bugs	
CSCdr50497	<p>Symptoms: dspset command does not display proper information.</p> <p>Conditions: dspset to display content of an SCT file in PXM Disk.</p> <p>Workaround: If the SCT is already applied to an active port/card, use dspcdset or dspportset command to display the contents of the sct. For the SCT files not applied to any port or card, there is no workaround available on MGX platform. Use CWM to display contents of such SCT</p>
CSCds43557	<p>Symptom: Event log file got corrupted</p> <p>Condition: Injecting a hardware failure on BRAM component of Active PXM45 card manually.</p> <p>Workaround: None</p>

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCds73435	<p>Symptom: Residual database information causes AXSM card state to be interpreted incorrectly. An AXSM card inserted into this slot with the residual database may not successfully come up.</p> <p>Condition: Residual database on the disk can be introduced if the active Pxm card or disk is replaced with an older card or disk that has old data on it.</p> <p>Workaround: Before replacing an active PXM front card or disk, make sure that there is a saved configuration for that node. After replacing the active PXM front card or disk, restored the saved configuration. Or to verify if there are residual data on the disk, after the node comes up, perform a list file command (e.g. ll) on the D:/DB2 directory. For every slot that is reserved, there should be a corresponding subdirectory for that reserved slot (e.g. SL7), if there are extra subdirectories for non-reserved slot, these are residual old databases.</p>
CSCdt06410	<p>Symptom: During LOS condition, LOF, AIS-L and RDI-P are seen with dspalm command.</p> <p>Condition: When line encounters LOS.</p> <p>Workaround: Ignore all other alarms if LOS is present.</p>
CSCdt41608	<p>Symptom: Console port baud rate is not shown correctly using the dspserialif command.</p> <p>Condition: User sees a "0" baud rate when executing dspserialif command. Terminal server connects to console port fine with a baud rate of 9600. A cnfserialif is then executed to set the port to 9600. A subsequent execution of dspserialif then shows the value correctly as 9600.</p> <p>Workaround: None</p>
CSCdt42130	<p>Symptom: Switch driver error messages appeared in the event log</p> <p>Condition: AXSM cards were reseated</p> <p>Workaround: None</p>
CSCdt54410	<p>Symptom: sr_proto_unblock_app:Failed allocating resource IpcMessage Err=0x26037 message appears in event log</p> <p>Condition: Messages were logged against an AXSM after software upgrade</p> <p>Workaround: None</p>
CSCdt61599	<p>Symptom: Different level of alarm reported by dspxbaralm and dspswalms.</p> <p>Condition: When there is crossbar errors.</p> <p>Workaround: None.</p>
CSCdt70323	<p>Symptom: Need non-shellconn method of burning PXM boot code which also does not require console access to each PXM.</p> <p>Condition: None</p> <p>Workaround: None.</p>
CSCdu26141	<p>Symptom: SHM-4_DB_REQ_FAIL messages are logged at Sev-4 in the event log</p> <p>Condition: Consecutive resetcds were executed on the PXMs in this system.</p> <p>Workaround: None</p>

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCdu27030	<p>Symptom: OAM CC Activation Cell correlation tag is incorrectly modified.</p> <p>Condition: User notes that an F4-Seg Active-CC OAM cell with a correlation tag of 0x6A is returned to the sending device with a correlation tag of 0x00.</p> <p>Workaround: None</p>
CSCdu27373	<p>Symptom: Customer reports unnecessary traps being sent as result of clralment.</p> <p>Condition: Unnecessary traps are generated when clralment is executed on an AXSM line with statistical alarms.</p> <p>Workaround: None</p>
CSCdu29780	<p>Symptom: The line admin state is down because either: - there is NO DISK RECORD on the line, the line is defaulted to admin state down; or - the disk record is there but it shows admin state down.</p> <p>Condition: Upgrading from older version to newer version and doing setrev's on multiple cards at the same time.</p> <p>Workaround: Do setrev on each card and wait until that is complete before doing the next card.</p>
CSCdu32813	<p>Symptom: Online diag did not fail</p> <p>Condition: When faults are injected on all XBAR switches</p> <p>Workaround: None</p>
CSCdu39958	<p>Symptom: dspconload, dsplnload & dspportload commands should give an option for time interval for which the load stats are requested for.</p> <p>Condition: AXSM CLI commands: dspconload, dsplnload & dspportload</p> <p>Workaround: None.</p>
CSCdu60534	<p>Symptom: dsp*load commands do not have accurate cps where "*" is ln/port/con. It can also be compared to dspportent.</p> <p>Condition: AXSM CLI commands: dsplnload, dspportload, dspconload & dspportent.</p> <p>Workaround: The values are nearly correct for low cell-rates.</p>
CSCdu60643	<p>Symptom: SDRAM failures were not recorded in event log</p> <p>Condition: Fault Insertion tests were being performed on modified hardware</p> <p>Workaround: None</p>
CSCdu70465	<p>Symptom: CLI vs CMGUI displays are inconsistent</p> <p>Condition: When displaying the CDVT via the CLI vs the CMGUI.</p> <p>Workaround: None</p>
CSCdu71423	<p>Symptom: Popup message about LMI discovery on node.</p> <p>Condition: User executed 3 cli commands, and then the popup message appeared.</p> <p>Workaround: None</p>
CSCdu71558	<p>Symptom: Alarms on slot #11 and #12, during fault insertion testing.</p> <p>Condition: By inserting high speed link error on slot #7, active PXM</p> <p>Workaround: None</p>

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCdu84104	<p>Symptom: dspllog shows that a power supply failure occurred.</p> <p>Condition: After a switchcc was done on 2 separate shelves.</p> <p>Workaround: none.</p>
CSCdu86488	<p>Symptom: Slow reroute times reported.</p> <p>Condition: Reroute initiated by rrtcon CLI command</p> <p>Workaround: UNKNOWN</p>
CSCdv07942	<p>Symptom: NVRAMCHKSUMERR and NOVRAMFAIL Sev-4 messages appear in the event log</p> <p>Condition: PXM-UI-S3 backcard was removed on standby, active PXM reset and then standby PXM UI-S3 backcard was reinstalled.</p> <p>Workaround: None</p>
CSCdv14497	<p>Symptom: No log entry recorded in event log when CWM SCT manager is used to associate a card SCT to an AXSM.</p> <p>Condition: When upgrading new software version</p> <p>Workaround: Unknown.</p>
CSCdv19288	<p>Symptom: Backcard reserved type set to unknown</p> <p>Condition: When addred is done for AXSM cards</p> <p>Workaround: None</p>
CSCdv22540	<p>Symptom: AXSM core dump</p> <p>Condition: Burn boot was executed</p> <p>Workaround: UNKNOWN</p>
CSCdv29805	<p>Symptom: switchapsln results in an error message indicating failure to switch due to unknown reason</p> <p>Condition: Rx cable on Protection line had been removed, to create an LOS condition - but line toggled between SD and SF condition</p> <p>Workaround: UNKNOWN</p>
CSCdv36479	<p>Symptom: Corrupted output of CLI commands.</p> <p>Conditions: When the dspecd and dsplns command are executed on the AXSM.</p> <p>Workaround: None</p>
CSCdv40366	<p>Symptom: When adding ATM-ATM connection (SPVC), switch send mib object with Remote NSAP with a blank value.</p> <p>Conditions: This will cause CWM to have -1 value on r_network_id</p> <p>Workaround: None</p>
CSCdv43250	<p>Symptom: No limit to the number of attempt to login.</p> <p>Condition: When logging into the MGX from the login prompt.</p> <p>Workaround: none</p>

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCdv43695	<p>Symptom: dspbecnt command hangs</p> <p>Condition: Both W and P lines for the pair on which dspbecnt command was executed, were in alarm</p> <p>Workaround: UNKNOWN</p>
CSCdv45123	<p>Symptom: Doing an snmpwalk of MGX 8850 returns incorrect values of ifInOctets,ifOutOctets for atm0,sl0 and lnPci0</p> <p>Conditions: None</p> <p>Workaround: None</p>
CSCdv47501	<p>Symptom: WLine doesn't clear within time.</p> <p>Condition: Introduce Bert on both WLine and Pline.</p> <p>Workaround: None</p>
CSCdv47986	<p>Symptom: dspln/dsplns/dspalm/dspalms no longer reflect aps line failures (SF)</p> <p>Condition: An error injector was setup to inject an error rate sufficient to force the W line into SF</p> <p>Workaround: UNKNOWN</p>
CSCdv48058	<p>Symptom: Event log and trapd.log file incorrectly show aps switchovers due to SD when the failure condition was SF</p> <p>Condition: SF condition was created on the active working line to induce a switchover</p> <p>Workaround: UNKNOWN</p>
CSCdv49510	<p>Symptom: No indication on dspapslns of a condition causing port to go operationally down - at the node level, only an indication of a minor alarm from the line interface</p> <p>Condition: Tx cables were pulled from both the W and P lines of a 1+1 aps pair.</p> <p>Workaround: UNKNOWN</p>
CSCdv49780	<p>Symptom: SF/SD clearing times for 10-3 thresholds close to 19 sec instead of 10msec</p> <p>Condition: Rx cable of an aps pair was removed and re-connected</p> <p>Workaround: UNKNOWN</p>
CSCdv49830	<p>Symptom: Event log does not distinguish between SD/SF failures on W lines or P lines</p> <p>Condition: SD/SF failures were created on the W and P lines</p> <p>Workaround: UNKNOWN</p>
CSCdv50574	<p>Symptom: Incorrect usage statement generated.</p> <p>Condition: When the delapsln cli command is executed.</p> <p>Workaround: none</p>
CSCdv62811	<p>Symptom: aps line toggles between SF and SD</p> <p>Condition: SF threshold set to 10-3, error injected at 10-2</p> <p>Workaround: None</p>

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCdv64841	<p>Symptom: Event log message indicating RDI alarm received on line of an aps pair</p> <p>Condition: RX cable on both lines of the aps pair had been pulled out to create LOS condition</p> <p>Workaround: UNKNOWN</p>
CSCdv69323	<p>Symptom: Shelf sends too many messages to cwm.</p> <p>Condition: After the execution of switchredcd on the shelf.</p> <p>Workaround: None</p>
CSCdv72718	<p>Symptom: Inconsistent alarm reporting on shelf.</p> <p>Condition: When a serial bus failure is executed via fault insertion.</p> <p>Workaround: none</p>
CSCdv74376	<p>Symptom: Few AXIS connections are in a-bit alarms</p> <p>Condition: switch y-red on BXM</p> <p>Work Around: switch y-red again OR dncon and upcon on connections that have a-bit alarms (this is service affecting)</p>
CSCdv80431	<p>Symptom: Extra line of information on the output of dspbecnt command</p> <p>Condition: Secondary card is active</p> <p>Workaround: UNKNOWN</p>
CSCdv84390	<p>Symptom: The redundant PXM stays in FAILED state after aborting offline diagnostic.</p> <p>Condition: Active PXM was physically removed while offline diagnostic is running on the redundant PXM.</p> <p>Workaround: Try one of the following workarounds:</p> <ol style="list-style-type: none"> 1.- insert a good PXM into the previously-active PXM slot and reset the redundant PXM card. This allows the PXM to rebuild the node using configuration from the synchronized disk drive. 2.- restore all configuration on the node onto the redundant PXM disk.
CSCdw06122	<p>Symptom: dspportload reports incorrect load on AXSME UNI port</p> <p>Conditions: "dspportload" reports incorrect values on both ingress and egress ports with active ABR SPVCs.</p> <p>Workaround: None</p>
CSCdw06190	<p>Symptom: Frame discard can be enabled on a VPC</p> <p>Condition: AXSM-E allows frame discard feature to be enabled on a VPC. The feature should always be disabled on a VPC.</p> <p>Workaround: None</p>

Table 28 Known Anomalies for Release 2.1.70 (continued)

CSCdw06206	<p>Symptom: Reiterative tstdelay does not work</p> <p>Condition: tstdelay allows us to specify multiple iterations to measure average e-2-e delays at one shot. Each iteration should invoke exactly one OAM loopback cell. But when specifying more than one iterations, dspchancnt shows it actually sends only one OAM loopback cell.</p> <p>Workaround: None</p>
CSCdw06746	<p>Symptom: Customer would like to know why a module showing 'Failed/Empty' for the pxm45 card state only reports the alarm as 'MINOR'. It should show the alarm status as 'MAJOR'.</p> <p>Condition: Incorrect boot image present in bootflash: causes module to fail.</p> <p>Workaround: Unknown for MINOR/MAJOR alarm reporting.</p>
CSCdw10207	<p>Symptom: APS switching between W and P lines when both are in alarm</p> <p>Condition: W line is in LOS and P line may be in SD or SF or LOS condition.</p> <p>Workaround: None</p>
CSCdw10379	<p>Symptom: No event log message.</p> <p>Condition: When the cli command dnport is executed.</p> <p>Workaround: None</p>
CSCdw10397	<p>Symptom: popup message appeared</p> <p>Condition: While trying to delete some file from the C:FW directory.</p> <p>Workaround: None</p>

Anomalies Resolved in Release 2.1.70

Table 29 lists the anomalies resolved in release 2.1.70.

Table 29 Anomalies Resolved in Release 2.1.70

S1 Bugs	
CSCdt97218	SLT: Power cycling caused JUP PXM45B flash memory to corrupt
CSCdu41564	OC48B:Primary and secondary clock sources go bad after 5 mins.
CSCdu76279	DLS:switchredcd caused 3000+ conns to report Major/Minor alarms
CSCdu85706	DLS:Sync-up of dsppnni-routing policy when stby HD replaced
CSCdv00688	VSI: no route update, because 8k con commit fail on AXSM
CSCdv00909	CPI error message scrolls on screen after PXM45B inserted & switchcc
CSCdv02985	delpart command broken
CSCdv04081	PNNI node goes to DOWN leads pnni link to be hello down
CSCdv11860	Cannot find stat files on the AXSME card
CSCdv14011	cards go out of sync after red pair is failed
CSCdv14217	SNMP requests are getting rejected.
CSCdv20649	SLT: cc to the cards fail and SSI-IPC allocation failures

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv22119	REG21: No matching ancestry level, building dtl failed.
CSCdv23056	REG21: abortrev causing all PXMs and AXSMs in failed state
CSCdv23701	REG21:svcc-rcc does not come up at 2nd level.
CSCdv24000	A burst of cell can overflow QESAR and SAR stays in waiting state.
CSCdv25828	pnni-links going down and about 10k connections out of 50k going dow
CSCdv25840	AXSME-RED: unable to ftp, and sessions are fluctuating
CSCdv26901	CWM fails to discover AINI trunks as the switch returns incorrect va
CSCdv26910	AXSME runtime image crashes in initialization
CSCdv27197	write mem with service compressed enable append the configs
CSCdv27977	REG21:message handler for HMM epid not initialized, causing PXM fail
CSCdv28306	ABR VSVD connection getting added incorrectly on the switch
CSCdv29117	SLT:Stdby PXM will not boot due to IPC buf leak by SHM/HMM on Active
CSCdv29233	DLS:asymmetric bandwidth usage on both ends of a link
CSCdv29485	DLS:Recovery time during PXM hardware replacements
CSCdv30930	After switchcc sysDiag didn't reset axsme after offIndiag done.
CSCdv33052	REG21: dspspvcaddr causing active PXM reset
CSCdv35114	DLS: APS working line will not clear.
CSCdv35156	DLS: APS SF on protection line got cleared automatically
CSCdv41218	AXSME-RED: redund switchover happen itself, connections failed
CSCdv41321	switchcc after delred cause the new standby PXM to reset repeatedly
CSCdv41444	AXSME-RED: After switchcc pnports went to building vc mode
CSCdv42594	REG21:AXSME nni port in auto-config state
CSCdv43500	AXSME-RED: log messages were messed up, log file sizes not same
CSCdv46583	DLS: sframetic lock lost while performing switchcc.
CSCdv54297	SLT: secondary AXSM stays in Init for long time after switchredcd
CSCdv54577	redundant AXSME with 60+ K maxcon failed when upgrade to 2.1(70)
CSCdv57330	Connection addition fails (disk update failing)
CSCdv57745	pnCcb crashed during interface failure handling
CSCdv58121	Bad AXSM HumVee configuration
CSCdv59137	redman did not read pep table properly, causing lost conns in pxm
CSCdv59536	OD: after switchcc pnni-link went to attempt state
CSCdv59710	PNNI link corrupted after upgrade from 1.0.15 to 1.1(60.101)
CSCdv72837	OD: active pxm didn't send the update to the standby pxm
CSCdv74983	SLT:pnccb task crashed after upgrade to new image
CSCdv76197	REG21: active PXM45 reset, tlb store exception, task snmpMA
CSCdv76600	Memory corruption while sending sig pdu to SAR
CSCdv77165	2.1.70 has pnport resource allocation inconsistencies
CSCdv78427	Routed SPVCs stay in multiple alarms without any reasons
CSCdv79566	REG21:Cant delete the pnport after deleting part/port/dnln
CSCdv79588	REG21:Cant delete the pnport after deleting part/port/dnln.
CSCdv79606	PXM45B SAR unable to send/IPC lost all conn. to all SMs

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv79783	Full coverage offline diag failed on all AXSMs/all nodes
CSCdv84753	call stuck in setup state
CSCdv87248	REG21:pnCcb crash cause PXMs rolling reboot
CSCdv88187	AXSM resets following several prov. and resync failures from CWM.
CSCdv88838	Cannot modify the pcr/scr values for the cbr/vcr connections
CSCdv88844	APS: stdby card unable to send messages to Active
CSCdw00192	2.1(70) delchanloop results in a hidden loop and drop all cells
CSCdw00887	SLT: Some rpm-pr goes to FAIL state when switchcc!
CSCdw02239	SSCOP on existing trunks went down (RESET state)
CSCdw02500	EPD does not work properly on ingress VC-Q
CSCdw02521	REG21: ports stuck in down-in-progress for UNI with DAX cons
CSCdw04225	submit the fix CSCdv20918 into version 2.1
CSCdw05462	AXSME does not upload caclConfigTable in config-upload.
CSCdw13587	PXM hangs or resets when entering diag debugger
CSCdw15710	SLT:in the rpm file status for the ok connections is failed
CSCdw17486	Boot can hang on cold reset due to cache flush
S2 Bugs	
CSCds87335	tstconseg gets timeout on local loopback (OAM)
CSCdt05371	DLS:Flt Ins: HD failure on act/stdby PXM - traps not generated
CSCdt07691	DLS:Clk msgs in event log requiring operator action must be sev 1-3
CSCdt20459	DLS:Flt Ins:Mastership tests resulted in crossbar fabric & cd crossb
CSCdt53844	DLS:Flt.Ins:QE0 failure: PXM did not switchover/all cds in cont rese
CSCdt61572	DLS:LAN port spurious interrupt:Message not recorded in event log
CSCdt86036	%TCATM-4-XCONNECT_FAILED when toggling vc-merge
CSCdu56412	wr me failed, getting startup-config file open failed()
CSCdu62742	AXMB:OC3 1+1APS
CSCdu68442	cnfcon: -frame option doesn't work in cnfcon CLI
CSCdu77654	AutoShut: switchcc enables disabled plane that has xbar errors
CSCdu84598	PER: Add threshold and current reset count info. in the reset log
CSCdu86046	REG21:SPVC fails on AXSME AINI/IISP i/f with mismatch alarm
CSCdu86213	Ethernet chip hung,transit buffer corrupted 0x8300fdca
CSCdu88138	AXSME-RED:Mismatch/Empty added redundancy to empty but no redund con
CSCdv00358	Call Release and switchover causes the CM to allocate wrong VPI/VCI
CSCdv01538	DLS: <switchcc>stbycd ready but stby PXM xbar degraded.
CSCdv02243	PXM switchover on Jup causes re-enabling of shut planes.
CSCdv02677	During offline diag and after switchcc, need to send ready ind again
CSCdv02933	Xbar enhancements for troubleshooting crossbar errors
CSCdv03151	AutoShut: AXSM_APS: P_Line of 1:1 stuck in SF after delaps/addaps
CSCdv03742	Policing on NNI should be configurable from SCT.
CSCdv03745	Ingress AIS not detected on SPVC if not an OAM seg endpt.
CSCdv04224	Need to implement a field by field update for upgrades in Rep RAM.

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv04639	AXSME-RED: standby pxm stuck in init state, after active pxm reset
CSCdv04697	AutoShut: Switchcc outage > 0.5s if autoshut/loadsharing disabled
CSCdv04782	Lockout getting erased during Pri Sec Mismatch
CSCdv05897	REG_21: cell loss on ABR VSVD when pumping @ MCR (port SCT = 6)
CSCdv08256	APSAxB:Clearing improperly after force switchapsln on both sides
CSCdv08462	AXSME-RED: lost everything on PXM hard drive
CSCdv11638	REG_21: port stuck in auto config state b/c qe ingr dropping cells
CSCdv12352	Active AXSM gets reset with lmi-task crash
CSCdv14066	RPM-PR CLI show subinterface existed, but not existed in the agent
CSCdv14490	Error accessing Skystone register after reset
CSCdv14817	UPG:multiple loadrev on AXSM and PXM45 caused standby PXM keep reboot
CSCdv15196	DLS: resetcd on PXM generated xbar alarm but switchcc did not.
CSCdv15287	APSAxB: dspapslns output un-reflects AnnexB feature
CSCdv15379	APSAxB:dspapsln show WS2 in SF when WS1 disconnected
CSCdv15874	AutoShut: The standby PXM lost sw alarm info after switchcc
CSCdv16376	mfg:Display incorrect on AXSM/E card.
CSCdv16414	IT/AUTO:Spvc conns failed to reroute during link failure
CSCdv16449	mfg:clrerr command no longer works unless slot# is specified.
CSCdv17391	JUP: error message after successful softswitch.
CSCdv17398	Switchcc caused offdiag reporting failure
CSCdv17888	JUP:redundant rpm(standby/primary)failed if switchcc/burnboot/runrev
CSCdv18182	APSAxB: Force switching happened after working section 2 in SD stat
CSCdv18671	MGX generates an error while enable/disable scrambling
CSCdv21008	PXM resets when doing a FTP put to a logical directory
CSCdv21810	DLS: DOSF files found in directory with erroneous date
CSCdv22424	Can not have more than 8 telnet sessions
CSCdv22605	DLS:aps alms not displayed/aps switchover allowed w/ empty/res AXSM
CSCdv23029	CV does not modify Status Trap Enable for AXSME-T3E3 cards.
CSCdv23264	No error status for sonetMediumLineType set-requests
CSCdv23628	APSAxB: SD alarm when SF threshold=5, sent bert 1E-5 or 1E-4
CSCdv24248	Jup:All RPMs go to boot state for few seconds after PXM switch over
CSCdv24848	SLT:PNNI svcc-rcc keeps flapping between 2 PGLs.
CSCdv24901	SHM: SM not reset on non-fatal-major error while coming up
CSCdv24903	SHM: Brings up unstable Standby PXM as Active and loses coredump
CSCdv24904	sh contro vsi descri:available cell rate is 1 on axsm-e port
CSCdv25115	SLT: SPVCs do not get committed (come active0 after the switchred
CSCdv25962	Unable to cc to RPM-PR Card (IPC port failure)
CSCdv25699	DLS: <dspecdalms> shows feeder alm for BPX LMI oper down alm.
CSCdv26763	AXSME-RED: frame discard should be disable by default
CSCdv28193	AXSME-RED: log was flooded with !!MAX par=4, Cur. par =5
CSCdv29345	SLT: cc to the cards fail and SSI-IPC allocation failures

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv29691	VSI Proxy rejects multipoint-to-point connections
CSCdv29802	DLS:Interface in LOS toggles between SF and SD conditions
CSCdv29887	DLS:addlnloop/dellnloop does not show syntax
CSCdv30222	DLS: clkalm redundancy alm did not appear after loadrev.
CSCdv31000	JTOAM:no VPI/VCI info when dspchanloop
CSCdv31081	REG21: fabric alarm not declared, causing xbar plane shut down
CSCdv31700	BLOCK: improperly error handling when addchanloop and delchanloop
CSCdv31839	SLT/JUP:AXSM Humvee prematurely declare major alarm and link shutdn
CSCdv31893	VSICORE: Resync was not handled properly for VC Merge connection
CSCdv32157	RPM 1:N Redundancy lost on setrev
CSCdv32370	DLS: xbarfabric alm did not appear after runrev
CSCdv33077	OAMLB:resetcd causes some chanloop initializations failed
CSCdv33196	Connection resynch request NOT received by Legacy SM
CSCdv33320	DLS:AXSM showed failed conn to be operationally up
CSCdv34404	Pri Sec Mismatch when Secondary Section in SF & remote APS added bac
CSCdv34426	UPG: syncRAMdb detected when one of the redundancy AXSM reset
CSCdv35386	OAMLB:same and un-meaningful error message for wrong actions on addc
CSCdv35548	upgrade from 2.0.13 to 2.015 on red.AXSM pair causes alarm inconsist
CSCdv35559	OAMLB:Valid OAM cnt increments when sending undefine OAM cells
CSCdv35661	BLOCK: addchanloop failed on conns with both edpts/rtppts on same cd
CSCdv35677	AXSM CLI should allow for provisioning VCC with VCI < 32
CSCdv38031	AXSM stats : CON files need to be zipped and sent to CWM
CSCdv38053	Floating Exception caused card reset w/ device driver as rsttype
CSCdv39732	SHM:dsprrfhis time unmatched with system time
CSCdv40211	Node gets busy does not allow user to execute command when upilmi
CSCdv40230	QE configuration is not restore correctly after delchanloop
CSCdv40509	rpm_port status on rpm card differs from PXM database
CSCdv40835	Jup: a active rpm (secondary) failed on softswitch to standby
CSCdv42482	Standby stays in Empty Resvd after Restoreallcnf.
CSCdv42608	DLS:AXSM show conn to be failed, while PXM shows conn is up
CSCdv42771	Reschedule offline diag on PXM does not cancel previous timer
CSCdv43232	DLS: Online diag error on switchcc/resetcds
CSCdv43371	Error in code related to diagnostics on standby card
CSCdv44062	Operational Status UNKNOWN trap generated after deleting RPM subif
CSCdv44690	dspreInfoPtr is uninitilaized in function shmProcCliDspRedMsg
CSCdv45070	DLS:AXSM shows routed SPVC to be in CONDN when UNI port is down
CSCdv45241	AXMB:OC3 1+1APS; Pline in SF state after resear front card.
CSCdv45755	REG21:Standby PXM not getting updated when PGL priority changed to 0
CSCdv45835	REG21:No PGL elected when PGL priority changed & switchcc done
CSCdv46609	none ports getting reported to ccm
CSCdv46616	clrspvcnonpers on none ports- problems due to ccm

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv46842	SLT: For one line both active & prot. line go SF after BC reinserted
CSCdv47078	AXSME detects Path Trace Mismatch and generates RDI-P
CSCdv47100	SCR in VSI Commit message filled wrongly for CBR3 connections
CSCdv47136	Upgrades: abortrev/setrev from 3.0 has errors when rebuild from disk
CSCdv47168	UPGRADES: reset standby card after loadrev complete get clralcnf
CSCdv47189	delred does not work on RPM slot if prim & sec slots are EMPTY
CSCdv47372	AXSM-E: roots conns dangling after toggling VC merge
CSCdv47410	APSAnxB:Pnport down after delapsln on both ends with prim card activ
CSCdv47448	AXMB:OC12 1+1APS; R&R BC, both WL&PL in SF; remote PL stuck in SF
CSCdv47962	DLS:Working line goes into SD after forced switch to it.
CSCdv48339	REG:saveallcnf did not save the configuration on a node
CSCdv49668	Missing varbind #10 from trap 60156 and 60157
CSCdv49932	tstdelay on XPVP connection (pop1/ausm-8t1 to pop2/axsme-oc3) failed
CSCdv51689	Cannot route and terminate calls with TNS
CSCdv52151	Fix for CSCdu75634 not correctly implemented post-2.1(60)
CSCdv52164	SLT: cons fail due to VP is not set(should be set) in MPG
CSCdv52479	Re-insertion of b/c caused SD on lines on other b/c
CSCdv54606	Checksum error found in alarm file on Jup node
CSCdv54801	RPM-PR cannot boot up after 1:N Redundancy
CSCdv54875	SVC calls cannot go through
CSCdv55210	popup message update_slow_filter:empty slow match list appearing.
CSCdv55257	display of the default values in dspnpnctvc is incorrect.
CSCdv55598	When provisioning 10k connection, 6k failed, no indicating the cause
CSCdv56021	AXSM-E: Getting VSI error when LSC resync with AXSM-E upon switchred
CSCdv57867	Auto-Deletion of Trap Manager(s) must be supported: PER-3417
CSCdv58178	Port failure when one Tx and Rx of an aps pair is failed
CSCdv58746	60302 not send out when conn created failed,chanID reused in new con
CSCdv59242	NCCI ATM addr not getting de-regd on stby - mem not freed
CSCdv59346	PSBF getting declared erroneously when SF on Prot Line at Far End
CSCdv59696	CIT30:sscop sends errors due to corruption of frame trailer.
CSCdv61068	Customer needs events related to port up/down in system lo
CSCdv62195	SLT:Checksum not in the configuration file
CSCdv63740	After changing SES nodename to small one, conn shows part of old name
CSCdv64431	SysDiag: online diag error is not updated in SysDiag DBs
CSCdv64521	Virtual path alarms are not working.
CSCdv64906	channel lpbk does not work with ABR conn with VSVD.
CSCdv65489	OD: PXM45 online diag error is ignored. Its statistics are incorrect
CSCdv65508	diskDb: dbIntFailSlotsTrapSend() memory leakage
CSCdv65541	APS Lockout fails when Remote has SF on Protection Line
CSCdv67271	OD: not able to add more than 49998 connections on node
CSCdv67375	SLT: PXM got rst in SES shelf and IPC buffer leaks after configuration

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv67998	xpvc provision fail, mesg conn doesn't exist in cPro db
CSCdv68030	Insufficient array size in snmp-ma can lead to system crash
CSCdv68138	snmpProxy Exception on switchcc of PXM1E
CSCdv68523	SNTP: svcifconfig with nodal atm address caused pxm45 crashed.
CSCdv68632	REG21: avail cell rate not decremented for AXSME ports routing spvcs
CSCdv70276	Restoreallcnf fails saying it cannot deltree
CSCdv70404	upg: Data Bus Error encounter during node sync after DB Extraction
CSCdv70619	RM discard counter is not correct in dspchanent.
CSCdv71072	LAN flooding causes snmpMgmt run away, PXM reset
CSCdv71518	REG21: xbar status inconsistent b/w standby PXM45 and AXSMs
CSCdv71784	SLT:CDV/CTD can be modified to 0/-1 for AXSME connection
CSCdv71971	CIT30: svc call can get through even when -svcblock ON on via node.
CSCdv72191	SSI: Provide shellconn functions to detect and recover chunk leaks
CSCdv72612	Cannot add redundancy on RPM cards
CSCdv73084	REG21: AXSME online diag failure b/c CC_CELL_CONNECTION_FAIL @ bay 0
CSCdv73141	duplicate entries in dspchanloop and they cannot be deleted.
CSCdv73601	dspchanent -r has very poor granularity in the cell stats
CSCdv73701	CIT30: dangling SVC on IISP interface.
CSCdv74771	dspnni-path command does not update SPT when bw becomes available
CSCdv75571	Set/Clear of ReservedSlotPtr not being done properly
CSCdv75575	FAS: Remote File access timeout due to incorrect file locking
CSCdv76788	clrdiagerr did not restart AXSM-E online diag test
CSCdv77401	Via and end node had pnCcb exception after pathtrace enabled.
CSCdv77868	dspnncons -type ctrl output loops
CSCdv77874	FAS is using freed ipc message (causing standby to stay in stage 1)
CSCdv78258	Multi-point connections not bulk synced
CSCdv78321	XBAR:Xbar err not reported on PXM45 the second time unless print don
CSCdv78414	Incorrect handling for active Slave Pep in ConCommit Q when rx Setup
CSCdv79353	SysDiag ignore online diag error after switchcc (see CSCdt46582)
CSCdv79733	DEV: ADDR-5-ADDR_ERROR in dsperrs after reroutes
CSCdv80455	Popup on nodes running AXSM image
CSCdv80960	put network debug tools into CLI commands
CSCdv81531	REG21: nni port stuck in down in progress
CSCdv81644	AXSM-E: Connection Reassert Error upon toggling vc-merge
CSCdv81833	Port stuck in down in progress
CSCdv82064	PXM45 doesn't send complete Revision number in Config upload file
CSCdv82164	File locks are not given up in the FileAccessServer
CSCdv82348	SLT:Unable to make nrtvbr SVC calls from MGX8850R2 consistently
CSCdv83144	APS Annex-B, Receiving 4 extra cells after Forced Switch
CSCdv84169	Make LAN default secondary mgmt interface
CSCdv84265	config_verify: using multiple tools requires user interaction

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv84308	config_verify does not produce detailed AXSME connection data
CSCdv84361	JAN:ssiMemChunkAssign() chunk corrupted in CMTask
CSCdv84895	After replacing the chassis can't restore previous cnf with stdby pxm
CSCdv85820	trap order not correct for 60082, 60052, 60055 in switchback rpm-pr
CSCdv85993	AXSME HW revision incorrect
CSCdv87157	CIT30:Pep mismatch between act/stdby PXMs after resetting AXSM.
CSCdv88161	IPFR xpvc connection fails first attempt with invalid error messages
CSCdv88924	SLT: SAR sends error not receiving trap after switchcc
CSCdv89142	SLT:Constant node resync caused by -2 trap
CSCdv90344	SLT:Constant node resync caused by -2 trap
CSCdv90453	xconnect setup failed timeout on LSC
CSCdv90737	DEV: SVC ABR call w/o ABC MCR fails
CSCdv91293	REG21: SVC fails if passAlongCap on remote pnni port disabled
CSCdv91322	mpeg1: Router crashed running 2 xPOS fast switched
CSCdv91332	Standby PXM45 Failed to come to standby
CSCdv91334	tons of 60401 traps generated when switchcc of pxm45 cards
CSCdw01349	Port in down-in-progress for a long time
CSCdw03474	bookfactor is not applied when cbr pcr > configured bw.
CSCdw05198	PXM rejects modification on master end of connection say networkbusy
CSCdw05363	PXM software error reset core dumps after offline diag started
CSCdw05534	upg: Coredump on OC48 redundant pair upgrade. Online diag failed
CSCdw06681	REG2.1: NNI pnport is in down in progress state
CSCdw07416	mismatch stat value for Egress CLP1 cells discarded (stat ID 9)
CSCdw07942	REG21:cnfcon -frame option does not work on SES shelf
CSCdw09128	ACR does not rate down effectively under congestion
CSCdw09499	Invalid ResetReason received with ShelfRestart trap 60004
CSCdw09693	Enhance RMI to recover from window maxing out conditions
CSCdw10046	No traps/event logs when feeder LMI fails
CSCdw10074	No traps for SF/SD conditions (when no switchover)
CSCdw10629	CIT30:AXSM card became Empty Resvd/Empty after abortrev
CSCdw10812	Few SPVC are in temporary failure.
CSCdw11917	dbgfailsvc does not get failure node information
CSCdw13155	should not have more than 192 interfaces in pnni
CSCdw13285	Jup&MGX:dspecds show RPM backcards active regardless they are empty
CSCdw13381	REG21:Offline diag did not run on PXM and card in empty rsvd state
CSCdw15489	diag: offline fail when node reset/switchcc/cnftime occurred.
CSCdw16283	Unable to ftp complete SES stats file for the 100k network
CSCdw17365	Duplicate key instances in the Connection stats files from AXSM-E
CSCdw17431	REG21: standby PXM1 failed after clralcnf/restoreallcnf in SES PNNI
CSCdw21654	Reboot command failed to reboot the card
CSCdw21901	Offline diag failed on stdby pxm45: HDD file sys related failure

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdw23117	Standby PXM45 takes too long to come up.
S3 Bugs	
CSCds18548	Zenith Card Type for VSI slaves CTC registration
CSCds25915	Add a new command dspstbyclksrscs
CSCds64512	Need support for Jup DC PEMs, new PSUs
CSCds81130	Plug and play option for port is not working.
CSCdt52074	DLS:Line alarm severity should be higher in event log
CSCdt53946	DLS:Event log messages for VC lookup failed
CSCdt53954	DLS:Event log messages - halfLeg removal failed
CSCdt60594	DLS:Event Log:QE48 SAR error and mem block assignment messages
CSCdt79438	Fix Compiler Warning.
CSCdt95907	Need one command to show amt of bw available and overbooking info
CSCdu28121	DLS:Card removal/insertion messages should be logged as Sev 1-4
CSCdu47283	Coredump feature enhancement tracking bug
CSCdu62578	Jup: RPM-PR backcards can not be detected with dspcds
CSCdu69697	AXSM CLI addport syntax help display left out VUNI type 4
CSCdu71393	DLS: popup--relMsgCount: 0 endpoints 100 time since swo 70
CSCdu73090	AutoShut: HMM log gives incorrect slot number for Xbar errs
CSCdu75603	Check-in ID for stats changes per CWM request.
CSCdu77909	Diag:dspdiagerr record cleared after switchcc, SW need improved
CSCdu82183	Node Name change via SNMP is not reflected in Feeder
CSCdu82562	REG_21:improper error message when enabling ilmi on VNNI w/wrong vpi
CSCdu86488	DLS:Reroute perf. affected by conn teardown/setup race condition
CSCdu87737	SRM -- snmpwalk on ifTable cause buffer leak
CSCdu88108	pnCliTask stack usage exceeds the 70% margin and floods the log
CSCdu88446	snmpget returns NOSUCHNAME for a registered trap manager
CSCdu89296	MGX8850-snmpgetnext operation on AXSM cards not working
CSCdu89595	With RDI Fix a switchaps causes momentary port down.
CSCdv00091	Incorrect handling of VSI NAK reason codes 11 and 12
CSCdv00733	DLS:Evt.Log:switchcc caused SPVC-RAM-DISK AUDIT error msgs.
CSCdv03305	dsplg -mod CRDMP only show 5 open/close pairs for 8 AXSM coredump
CSCdv03937	AXSM-E T3/E3 card shows similar configs for upper and lower bays
CSCdv04762	check-in Id for CWM request line stats change
CSCdv05265	FC descrip for AXSME card are not in the ext-poll from boot
CSCdv05710	PREFIX: Using unitalize tmpFileName[] in minicr_clean_zipfile()
CSCdv05978	Netbase modules event log cleanup
CSCdv09384	int_vsud & ext_vsud in atm_connection DB not sync up for axsme
CSCdv09393	checkin ID for diag and stats
CSCdv11263	SPVCs are derouted during sync failure in IFFM Conn Cmt
CSCdv11854	clrallcnf works inconsistently on RPM slots
CSCdv14381	dsplg cleanup for resetcd, switchred and switchcc

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv14409	AXSME rejects SCT Cosb CLR value 15
CSCdv17268	cnfalm command for AXSME does not have support for e3 line.
CSCdv17318	VPI for a VNNI port can be set to 0
CSCdv19048	Evtlog: Severity-4- resync error occurred
CSCdv19681	Bad values in ifTable
CSCdv19871	strcpy err
CSCdv21177	QE Sar Dispatcher attempts an unnecessary message free operation
CSCdv21653	No notification to user about ethernet link failure
CSCdv22430	Offline diag should generate traps when it fails (SW Enhancement)
CSCdv22864	Status Enquiry retries do not happen second time
CSCdv23177	PNNI route agent should exclude interfaces which are not up in IFM
CSCdv25125	AXSME-RED: spvcn_logged error during node rebuild
CSCdv26359	DLS: popup on AXSM after runrev executed.
CSCdv27524	Need master/slave filter on dspconent and dspcons
CSCdv28449	Alarm update interval should be faster
CSCdv29799	DLS:spvcHelp command output appears on all telnet sessions
CSCdv29805	DLS:switchapsln results in switch failed due to some unknown reason
CSCdv29813	DLS:Evt.Log:SSI-MEMBLKERROR/SSI-PARMINVALID msgs during configuration
CSCdv30045	Use FreeOctetString when MakeOctetString is used
CSCdv30929	Memory leak for connttrace
CSCdv33190	Enhance miniCsr to a) take slot# b) not delete DB dir from restore
CSCdv34005	Changes to clean up the MSG files in the pxm cm code
CSCdv34338	DIAG: cannot schedule offline diag more than 1-day in advance
CSCdv34471	DLS:dspcon error message generated on all open telnet sessions
CSCdv35333	Need to zip the stat files for storing it on the RAM DISK
CSCdv35399	Remove double reference to HMM_DEVTYPE_HUMVEE in hmm_pxm.c
CSCdv35569	pncac not proper on particular cards after upgrade 2.0.13-2.0.15
CSCdv36199	Need R/W test coverage for BRAM, HDD in PXM45 offline diags
CSCdv36558	Change Axsm Alarm Reporting for Customer change of dspcdalm
CSCdv36812	Interworking b/n 2.1 and 3.0 nodes with Gat PerUtilIE results in dro
CSCdv36928	800 dash number not consistent
CSCdv36941	do not append additional params in EQOS IE in outgoing Setup msg
CSCdv39156	Adding VNNI port with certain VPI wrongly rejected
CSCdv39167	shm Set function is copying the wrong information in the fields
CSCdv39207	Introduce dspadjlnalm cmd to display adjacent line alms for aps line
CSCdv39735	MSG Sev1 - Sev4 Documentation - SPVC/CONPRO Module
CSCdv39751	Add ASIC Core Dump support for QE1210, CBC, and SABRE1210
CSCdv39925	MDC enhancement and warnings clean up
CSCdv40099	Add Rx directional oversubscribed information to dspnportsrc
CSCdv40142	Bad SNMP Trap sent when default SPVC Prefix is configured
CSCdv40294	Add ASIC core dump support for switching fabric ASIC

Table 29 Anomalies Resolved in Release 2.1.70 (continued)

CSCdv40350	Need event logs when SNMP set/get operation fails on conns
CSCdv40715	DB2: UPdate msg files
CSCdv41892	DLS: dspdisk command shows more free space then allocated size.
CSCdv42305	DLS: Incorrect error message for cnfsig command.
CSCdv42828	Compare only priority of current in Delete CLock processing
CSCdv43406	SF doesn't clear after BERT tester is stopped with WLine removed
CSCdv43701	Upgrades: the STBY_SLOT_UPD_INFO contains no versioned info
CSCdv46101	Changes to clean up the MSG files in the pxm shm code
CSCdv46108	Add more description, troubleshooting information in event msg files.
CSCdv46656	MGX/BPX: Incompatible info_length interpretation in sys_cap IG
CSCdv47106	APSAnxB: section mismatch in active line only when lockout cleared
CSCdv49344	VcMerge & Multicast connection: delete failure handling and logs.
CSCdv49699	Prot. Line goes into SD after autoswitch
CSCdv49738	REG21:Scope in n/w addr. table different than one configured
CSCdv49987	accessing pointer after freeing memory
CSCdv50522	DB2: Remove obsolete CLI commands
CSCdv50787	All 8 HUMVEE xcvr are enabled
CSCdv51387	Reference to non-existent SCT file during upgrade.
CSCdv51523	ENVMON: need support for fourth PSU in Jup chassis
CSCdv52005	Cleanup: change all the memcmp on the revision to use shmRevCmp fcn
CSCdv53433	Add a high watermark variable to track writing RAM Disk
CSCdv55514	Event log definitions/TAC details/Recommended Actions Enhancements
CSCdv56487	Event logging changes for atmsig/CC modules
CSCdv58411	memory not freed if addition of a new interface fails
CSCdv60729	cleanup of ipc releated enhancements
CSCdv68551	dspon does not clear port RX RDI on a dex connection.
CSCdv68569	cwTrapLineModuleNumber value is not correct in some Back Card traps
CSCdv70651	remove redundant code to avoid erroneous error log.
CSCdv76794	Rename the file to the same file will cause file system corruption
CSCdv79379	AXSM Diag: resend RESULT_IND message to SysDiag
CSCdv79389	AXSME Diag: resend RESULT_IND message if not receive SysDiag confirm
CSCdv80445	AXSM: dspchancnt does not work for vc-merge connections
CSCdw03321	sync-up for connection update is too long
CSCdw03642	VSICORE: ConnCmt w/ local processing is not forwarded to stdby
CSCdw05442	upg: Single went into failed during runrev
CSCdw06349	Popup error messages from cnfpnni-intf
CSCdw06725	The event log on active card for major error on standby not good

Anomaly Status Changes in Release 2.1.70

Table 30 lists anomalies that have changed status in Release 2.1.70.

Table 30 *Anomalies that have changed status in Release 2.1.70*

Anomaly ID	Description
S1 Anomalies	
CSCdt80393	pxm in slot 7 shown as empty reserved after doing a switchcc (7 to 8); Unreproducible
CSCdv14596	AXSME-RED: all the cards were getting crossbar error on node; Closed
CSCdv30024	DLS:PXM in continuous reboot mode after replacement of HD on node; Duplicated
CSCdv40153	AXSME-RED: standby pxm continuously reboot; Closed
CSCdv48326	stdby PXM card Went into Failed state on sysBackupBoot; Duplicated
S2 Anomalies	
CSCdu32920	AXSME_APS: Plug in stby PXM45B caused device driver err; node reset; Duplicated
CSCdu35571	AXSME_APS: AXSMB does not clear card alarm state MAJOR; Unreproducible
CSCdv02677	During offline diag and after switchcc, need to send ready ind again; Unreproducible
CSCdv12161	dsponinfo on pxm45 shows different count than RPM; Unreproducible
CSCdv16846	DLS:PXM45 stuck in empty/reserved state; Closed
CSCdv22579	DLS:Brown-out testing:AXSM/B OC12 card went into mismatch; Closed
CSCdv25110	AXSME-RED: watchdog timed out, stanby pxm got reset; Unreproducible
CSCdv38370	DLS:after loadrev, stdby PXM hangs at init, resets and core dumps; Duplicated
CSCdv40211	Node gets busy does not allow user to execute command when upilmi; Unreproducible
CSCdv40313	SPVC connections cannot get routed(failed). BW and channels available; Closed
CSCdv41618	AXMB:OC3 1+1APS; WL in SF, reject Forced P->W; Lockout P->W,PL in SF; Closed
CSCdv43536	DLS: Inconsistent alarm reporting.; Duplicated
CSCdv45704	Connection count between PXM mib database and RPM doesn't match; Unreproducible
CSCdv46114	SLT:SM_ALARM file has 0 bytes; Unreproducible
CSCdv46195	SLT:SM_CON_UPDATE file is empty for pop-2 and jup; Unreproducible
CSCdv47316	RPM Redundancy switchover generates sub-if deletion,conn alarm trap; Duplicated
CSCdv48323	DLS:AXSM core dump/diag failed after switchreded; Duplicated
CSCdv48884	T1:Upper BCard R&R causes 3 Wlines to go into SF; Duplicated
CSCdv49080	LMI alms appear on feeder when connections are in alarm.; Duplicated
CSCdv49623	DLS:Deleting slave end caused master to go into mismatch; Closed
S3 Anomalies	
CSCdt53948	DLS:Event log messages for CTC app event handler failed; Closed
CSCdt61868	Tag-vc goes into bindwait state on UNI port; Closed

Table 30 *Anomalies that have changed status in Release 2.1.70*

CSCdu70336	DLS: stbyPXM did not update fan tray information after switchcc; Closed
CSCdu80634	AutoShut: NVRAM chksum failure (UIBC) occurs after resetsys; Duplicated
CSCdv08270	DLS:SD took 1 min to clear after LOS cleared (delapsln/addapsln); Closed
CSCdv17142	DLS: explanation for blocking of switchcc after switchredcd/resetcd; Closed
CSCdv18980	EvtLog: DOSFAIL messages -opening/reading/closing the files; Duplicated
CSCdv19080	Evtlog: Severity-4-FIPC invalid FIPC passed as an argument.; Duplicated
CSCdv32683	Evt.Log: NOVRAM infoGet failed message appeared after switchcc; Duplicated
CSCdv33539	Evt.Log: New COS max BW out of bounds message in dsplog.; Unreproducible
CSCdv33552	Evt.Log: Source string long then Dest Buffer Size.; Duplicated
CSCdv33710	Evt.Log: PnNet/ILMI/attempt to add duplicate address; Duplicated
CSCdv40632	DLS: Trap 60007:cwIpAddressChange not generated when IP address rest; Closed
CSCdv40668	DLS: Node IP address changes lost after sysFlashBootBurn; Closed
CSCdv41974	DLS: No error syntax message for the cnfrtparm command; Closed
CSCdv47185	DLS:AXSM core dump; Closed

Known Anomalies in Release 2.1.60

[Table 31](#) lists known severity level 1 (S1) anomalies in Release 2.1.60.

Table 31 *Known Severity 1 Anomalies in Release 2.1.60*

Anomaly ID	Description
CSCdt80393	Symptom: PXM goes to empty reserved after switchcc Condition: Performing switchcc Workaround: Unknown
CSCdu76279	Symptom: switchredcd caused a number of connections to deroute Condition: The AXSM pair that the switchredcd was executed on had aps configured Workaround: UNKNOWN
CSCdu88446	Symptom: few MGX 8850 nodes are not syncing up due to -2 trap Condition: Modes of few MGX 8850 nodes are remaining in mode 2 for a long time. Even if they at any time go to mode 3, they will come back to mode 2 once -2 trap is sent by RTM. Workaround: None
CSCdv14596	Symptom: All the AXSM and AXSM-E cards on the node receiving the crossbar error Condition: All the AXSM and AXSM-E cards on the node receiving the crossbar error Work-around: Pull and re-insert the pxm cards

Table 31 Known Severity 1 Anomalies in Release 2.1.60 (continued)

CSCdv29233	Symptom: avCR allocation asymmetric on both ends of a symmetrically loaded PNNI link Condition: Switchredcd had been executed Workaround: UNKNOWN
CSCdv29599	Symptom: Node went into IDT mode. Condition: Setrev from 2.0 version to 2.1 version Workaround: None.
CSCdv30024	Symptom: PXM goes into continuous reboot Condition: switchcc executed to make the PXM standby - CB communication cannot be maintained from other PXM Workaround: UNKNOWN
CSCdv35114	Symptoms: SF on W-line will not clear Condition: Remove W-Line -> P-Line becomes active and W-Line is in SF, remove P-Line -> P-Line is in SF, reconnect W-Line Workaround: reconnect P-Line. Both lines will get cleared from SF.
CSCdv35156	Symptom: P-Line toggles between SF <-> OK; W-Line toggles between SF <-> SD Condition: remove W-Line; remove P-Line Workaround: Reconnect both W-Line & P-Line. Both lines will get cleared from SF. If not, delays and readd aps.
CSCdv40153	Symptom: standby pxm continuously rebooted, or standby RPM failed to takeover and RPM cannot boot up Condition: standby pxm continuously rebooted, or after multiple switchcc and softswitch Workaround: Perform resetsys
CSCdv43500	Symptom: Log files were truncated. Condition: Log files were truncated. Workaround: None
CSCdv46583	Symptom: sframetic lock config is lost. Condition: When a switchcc is executed on the shelf. Workaround: none
CSCdv48326	Symptom: Pxm Stdbby card went to Failed state on sysBackupBoot Condition: Pxm Stdbby card went to Failed state on sysBackupBoot Workaround: None
CSCdv49699	Symptom: aps switchover takes a long time, and port goes down when the Working line Rx cable of an aps pair was removed Condition: One of the AXSMs in the AXSM redundant pair had been removed Workaround: UNKNOWN

Table 31 Known Severity 1 Anomalies in Release 2.1.60 (continued)

CSCdv49780	Symptom: SF/SD clearing times for 10-3 thresholds close to 19 sec instead of 10msec Condition: Rx cable of an aps pair was removed and re-connected Workaround: UNKNOWN
CSCdv43406	Symptoms: SF on the P-Line does not get cleared. Condition: Remove W-Line -> P-Line becomes active and W-Line is in SF, inject BER from a tester to P-Line until it also becomes SF, stop injecting BER Workaround: reconnect W-Line. Both lines will clear from SF.

Table 32 lists known severity level 2 (S2) anomalies in Release 2.1.60.

Table 32 Known Severity 2 Anomalies in Release 2.1.60

Anomaly ID	Description
CSCdu32920	Symptom: When plugged in stdby PXM45B it caused a device driver error and the node got reset. Condition: This is an intermittent problem. There is no particular condition under which it be reproduced. Workaround: None
CSCdu35571	Symptom: When an AXSM A FC/BC is replaced by AXSMB FC/BC, there is a b/c mismatch alarm which shouldn't be there. Conditions: Replace the AXSMA FC/BC with AXSMB FC/BC without resetting the shelf. Workaround: None
CSCdu80634	Symptom: NVRAM checksum failure during resetsys at three different place. 1) UIBC, 2) PS A1, 3) PS A2 Ran debugger afterwards and it showed that there is really no problem. These problems occurs intermittently only. Condition: Resetsys Workaround: None
CSCdv02677	Symptom: " dspdiagstatus " shows that AXSM is in idle state while it is still doing offline diag. AXSM card does not get reset and stuck in this state. Condition: " switchcc " is executed while AXSM is running offline diag Workaround: Reset AXSM card.
CSCdv12161	Symptom: dspconinfo shows different count for connections on RPM than exist count Condition: After upgrade and without Auto SYnc ON Workaround: None
CSCdv12352	Symptom: AXSM-Active card reset due to lmi-task problem Conditions: when AXSM redundancy switchover is initiated through resetcd of active AXSM. Workaround: Since this is an intermittent problem, try the switchover after sometime.

Table 32 Known Severity 2 Anomalies in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdv14066	<p>Symptoms: CM GUI does not show any port for active RPM-PR card on MGX 8850node.</p> <p>Condition: The RPM-PR card on MGX 8850 nodes is active state. There two resource partitions (vpc and vcc) defined. The virtual_port table in CWM database table has entries for the RPM-PR card.</p> <p>Workaround: None.</p>
CSCdv14490	<p>Symptom: AXSME card goes to init, gets reset after 12-15 min and comes up as active.</p> <p>Condition: While burning boot on standby pxm45, Fatal err caused on AXSME card.</p> <p>Workaround: None</p>
CSCdv15196	<p>Symptom: xbar fabric alarms generated but switchcc does not.</p> <p>Condition: When a resetcd is executed on the standby PXM</p> <p>Workaround: None</p>
CSCdv16846	<p>Symptom: PXM was stuck in empty/reserved state</p> <p>Condition: UNKNOWN</p> <p>Workaround: UNKNOWN</p>
CSCdv21810	<p>Symptom: DOSF files are showing in the directory on the PXM with dates showing the year 2098</p> <p>Condition: Customer not sure how these file were created, but has indicated that these were not seen before.</p> <p>Workarounds: None</p>
CSCdv22579	<p>Symptom: AXSM/B card reported mismatch condition</p> <p>Condition: Brown-out testing was being conducted during which time the NOVRAM of the backcard appears to have been wiped out</p> <p>Workaround: UNKNOWN</p>
CSCdv22588	<p>Symptom: AXSM card went into empty/reserved state</p> <p>Condition: Brown-out testing was being conducted</p> <p>Workaround: UNKNOWN</p>
CSCdv24901	<p>Symptom: card takes long time to come up. dspecds shows card in xxx-F(degraded) state</p> <p>Condition: A task/app has encountered error.</p> <p>Workaround: Reset the degraded card.</p>
CSCdv24904	<p>Symptom: Available cell rates are only 1s when "sh controller vsi descriptor"</p> <p>Condition: The maximum cell rate is 141283</p> <p>Workaround: Unknown</p>
CSCdv25110	<p>Symptom: Watchdog timed-out and standby PXM resets</p> <p>Condition: Watchdog timed-out and standby PXM resets</p> <p>Workaround: None</p>

Table 32 Known Severity 2 Anomalies in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdv25962	Symptom: Cannot cc to RPM-PR Condition: During normal Configurations Workaround: UNKNOWN
CSCdv27878	Symptom: Ingress data not being shown. Condition: When the dspportdbgent command is executed via the CLI. Workaround: None
CSCdv30603	Symptom: IP address did not show on the ENNI connected BPX shelf. Condition: After a clrcnf was done on the MGX II Workaround: Perform a switchredcd on the MGX II.
CSCdv32370	Symptom: No xbarfabric alarm generated on MGXII shelf running 2.1.60. Condition: When a runrev command is executed and the card resets. Workarounds: None
CSCdv34426	Symptom: System was upgrade from 2.1.10 to 2.1.60 for both image and bootcode. Perform a setrev to 2.1(10.6) image while leaving the bootcode to 2.1(60). After 2 days the node was last downgrade, the slot 9 went into major alarm. Issue reseted on slot 9 Condition: 1. slot 9 stuck in INIT state; 2. Can't cc to slot 10; 3. SyncRAMdb continue to give out the error Work Around: None
CSCdv36479	Symptom: Corrupted output of CLI commands. Conditions: When the dspscd and dsplns command are executed on the AXSM. Workaround: None
CSCdv38370	Symptom: Standby PXM went through a software error reset core dump Condition: loadrev was being executed Workaround: UNKNOWN
CSCdv40211	Symptom: Node gets busy for a long time. Condition: After upilmi on the port with traffic that has 50K conns. Workaround: Unknown.
CSCdv40313	Symptom: The SPVC's connections don't get routed although BW and channels available on the nni trunks between the nodes. Condition: Some SPVC's connections between the two nodes are in failed state and repeatedly fail to reroute. Workaround: None
CSCdv41618	Symptom: 1. OC3 1+1APS, WLine in SF alarm, PLine is Active. Could not do Switchaps with Forced option.; 2. Would accept Lockout to switch PL->WLine. But PLine then stuck in SF alarm. Condition: 1. OC3 1+1APS, from AXSM/B to AXSM/E; with both WLine & PLine connected.; 2. WLine in SF alarm due to unknown reason; BEcnt is increasing steadily. Workaround: None

Table 32 Known Severity 2 Anomalies in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdv42608	Symptom: AXSM temporarily showed a successful connection to be operationally down Condition: An LOS condition on the UNI port, which was cleared Workaround: Reroute connection (rrtcon)
CSCdv43232	Symptom: Customer seeing AXSM error messages in the dsplog. Condition: After a resetcd and then a switchcc . Workaround: None
CSCdv43536	Symptom: Inconsistent alarm report on the shelf. Condition: When the dpswalm cli command is executed on the switch. Workaround: None
CSCdv44062	Symptoms: Delete Sub-Interface on RPM-PR Condition: Delete SUB-If Workaround: None
CSCdv45070	Symptom: AXSM shows connection to be in conditioning state, while PXM shows connection to be routed Condition: UNI port was operationally down Workaround: None
CSCdv45241	Symptom: 1. Pline stayed in SF state.; 2. Pline switched to Wline (cause Pline in SF momentarily). Condition: 1. Remove and reseal secondary (active) card.; 2. All aps lines in protection mode. Workaround: Unknown
CSCdv45704	Symptom: Existing connection on RPM, not showing into pxm mib database Condition: None Workaround: None
CSCdv46114	Symptom: Node is not synced up and SM_ALARM file is empty. Conditions: None Workaround: None
CSCdv46195	Symptom: MGX2 and 8950 are partially synced. They remain in mode 4. SM_CONN_UPDATE is empty for one slot on each node. Conditions: It is still not sure if the file was corrupted on the switch or during the ftp. Workaround: None

Table 32 Known Severity 2 Anomalies in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdv46842	<p>Symptom: The working and protection line go the SF mode on one side when BC is removed while the same line have both the protection and active line in OKAY APS state. The backplane is properly seated and no other line alarms.</p> <p>Condition: On one side APS there are no alarms, but the other side show that there are SF on both active and protection lines. There are no alarms or bit errors for the particular node.</p> <p>Workaround: None</p>
CSCdv47185	<p>Symptom: AXSM OC12 core dumped</p> <p>Condition: UNKNOWN</p> <p>Workaround: UNKNOWN</p>
CSCdv47316	<p>Symptoms: Switchover Redundancy causes lot many Sub-If deletion Traps</p> <p>Condition: Execute Switchover on RPM-PR on PXM45</p> <p>Workaround: None</p>
CSCdv47448	<p>Symptom: 1. OC12 1+1 APS; PLine stuck in SF after remove & reinstall the Back card from the remote node; 2. Significant data loss detected at 47% of the VCCs.</p> <p>Condition: 1. OC12 1+1 APS on AXSM/B with NonRev & BiDir configuration. The Primary FC is active, all PLines are active; 2. Remove and reinstall both upper and lower Back cards.</p> <p>Workaround: None.</p>
CSCdv47501	<p>Symptom: WLine doesn't clear within time.</p> <p>Condition: Introduce Bert on both WLine and Pline.</p> <p>Workaround: None</p>
CSCdv47962	<p>Symptom: Working Line goes into SD and displays incrementing Bit Error Count</p> <p>Condition: A forced switchover from the P line to the W line was executed</p> <p>Workaround: UNKNOWN</p>
CSCdv47986	<p>Symptom: dspln/dsplns/dspalm/dspalms no longer reflect aps line failures (SF)</p> <p>Condition: An error injector was setup to inject an error rate sufficient to force the W line into SF</p> <p>Workaround: UNKNOWN</p>
CSCdv48323	<p>Symptom: switchredcd after burnboot caused AXSM to core dump and also post diag error messages to event log</p> <p>Condition: switchredcd was executed after burnboot</p> <p>Workaround: UNKNOWN</p>
CSCdv48884	<p>Symptom: Upper BCard R&R causes 3Wlines to go to SF</p> <p>Condition: Upper BCard R&R causes 3Wlines to go to SF</p> <p>Workaround: None</p>

Table 32 Known Severity 2 Anomalies in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdv49080	Symptom: Feeder alarm should appear instead of LMI failure. Condition: When a connection failure occurs on a shelf. Workaround: None
CSCdv49395	Symptom: Link is in auto config state/ ilmi taking long time to come up. Condition: Set the conPollInactiveInterval to (say) 40. Down ilmi and up it after (say) 10 minutes Work Around: None
CSCdv49397	Symptom: Can not remove the IP network route. Condition: When using the routeDelete CLI command. Workaround: none
CSCdv49510	Symptom: No indication on dspapslns of a condition causing port to go operationally down - at the node level, only an indication of a minor alarm from the line interface Condition: Tx cables were pulled from both the W and P lines of a 1+1 aps pair. Workaround: UNKNOWN
CSCdv49623	Symptom: Master end of a routed conn showed itself to be in mismatch Condition: Slave end of the conn had been deleted Workaround: UNKNOWN
CSCdv49668	Symptom: Customer not seeing correct trap description. The following is displayed for trap 60156, and 60157: (UNAVAILABLE EVENT PARAMETER \$10) Condition: Switch or AXM card appears not to be sending correct varbinds with trap. Workaround: None

[Table 33](#) lists known severity level 3 (S3) anomalies in Release 2.1.60.

Table 33 Known Severity 3 Anomalies in Release 2.1.60

Anomaly ID	Description
CSCdt41608	Symptom: Console port baud rate is not shown correctly using the dspserialif command. Condition: User sees a "0" baud rate when executing dspserialif command. Terminal server connects to console port fine with a baud rate of 9600. A cnfserialif is then executed to set the port to 9600. A subsequent execution of dspserialif then shows the value correctly as 9600. Workaround: None
CSCdt42130	Symptom: Switch driver error messages appeared in the event log Condition: AXSM cards were reseated Workaround: None

Table 33 Known Severity 3 Anomalies in Release 2.1.60 (continued)

CSCdt53948	Symptom: CTC app event handler failed messages observed in event log Condition: None Workaround: None
CSCdt54410	Symptom: sr_proto_unblock_app:Failed allocating resource IpcMessage Err=0x26037 message appears in event log Condition: Messages were logged against an AXSM after software upgrade Workaround: None
CSCdt61599	Symptom: Different level of alarm reported by dspxbaralm and dspswalms. Condition: When there is crossbar errors. Workaround: None.
CSCdt61868	Symptom: RPM in PXM1 is connected as LER to AXSM UNI port. on UNI port whole vpi range 0-255 is assigned for the MPLS partition and a Xtagint is created on LSC which is internal to PXM45. TDP and ospf comes up fine LER can see LSC but ping to each other fails as on LSC headend vc shows in bindwait state. Condition: None Workaround: Configure the port as VNNI instead of UNI in AXSM. This is actually the recommended port type when connecting multiple RPMs in PXM1 to AXSM.
CSCdt70323	Symptom: Need non-shellconn method of burning PXM boot code which also does not require console access to each PXM. Condition: None Workaround: None.
CSCdu26141	Symptom: SHM-4_DB_REQ_FAIL messages are logged at Sev-4 in the event log Condition: Consecutive resetcds were executed on the PXMs in this system. Workaround: None
CSCdu28121	Symptom: Event log messages for card removal / insertion are logged at Sev-7 Condition: Cards are removed from the system and reinserted. Workaround: UNKNOWN
CSCdu29780	Symptom: The line admin state is down because either: - there is NO DISK RECORD on the line, the line is defaulted to admin state down; or - the disk record is there but it shows admin state down. Condition: Upgrading from older version to newer version and doing setrev's on multiple cards at the same time. Workaround: Do setrev on each card and wait until that is complete before doing the next card.
CSCdu60534	Symptom: dsp*load commands do not have accurate cps where "*" is ln/port/con. It can also be compared to dspportent. Condition: AXSM CLI commands: dsplnload , dspportload , dspconload & dspportent . Workaround: The values are nearly correct for low cell-rates.

Table 33 Known Severity 3 Anomalies in Release 2.1.60 (continued)

CSCdu60643	Symptom: SDRAM failures were not recorded in event log Condition: Fault Insertion tests were being performed on modified hardware Workaround: None
CSCdu70336	Symptom: The fan tray information is not getting updated on the stby PXM Condition: After executing a switchcc . Workaround: None
CSCdu70465	Symptom: CLI vs CMGUI displays are inconsistent Condition: When displaying the CDVT via the CLI vs the CMGUI. Workaround: None
CSCdu71423	Symptom: Popup message about LMI discovery on node. Condition: User executed 3 cli commands, and then the popup message appeared. Workaround: None
CSCdu71558	Symptom: Alarms on slot #11 and #12, during fault insertion testing. Condition: By inserting high speed link error on slot #7, active PXM Workaround: None
CSCdu82183	Symptom: After setting the node name using SNMP (system.sysName.0), any of the following symptoms occur: - existing CLI sessions do not immediately reflect the changed node name - the standby PXM does not reflect the changed node name -attached feeders do not reflect the change node name Condition: Whenever node name is changed using SNMP. Workaround: Change the node name using the CLI command " cnfname ".
CSCdu84104	Symptom: dspllog shows that a power supply failure occurred. Condition: After a switchcc was done on 2 separate shelves. Workaround: None.
CSCdv07942	Symptom: NVRAMCHKSUMERR and NOVRAMFAIL Sev-4 messages appear in the event log Condition: PXM-UI-S3 backcard was removed on standby, active PXM reset and then standby PXM UI-S3 backcard was reinstalled. Workaround: None
CSCdv08270	Symptom: SD condition took 1 min to clear after LOS condition cleared Condition: APS was setup between MGX and BPX. LOS condition on protection line on MGX was created by deleting aps configuration on the BPX side. The APS configuration was then added back on, and LOS cleared. Workaround: UNKNOWN
CSCdv17142	Symptom: switchcc blocked even though PXM is in standby state - explanation needed Condition: This usually happens after switchredcd or resetcd on AXSM Workaround: UNKNOWN

Table 33 Known Severity 3 Anomalies in Release 2.1.60 (continued)

CSCdv18980	Symptom: DOSFAIL messages appearing in the dsplog. Conditions: While provisioning XPVC's on the shelf. Workarounds: None
CSCdv19048	Symptom: Sev-4 FIPC error occurred on the shelf. Conditions: While provisioning XPVC's on the shelf. Workarounds: None
CSCdv19080	Symptom: Invalid FIPC passed as an argument. Condition: While provisioning XPVC's in the network. Workaround: None
CSCdv19288	Symptom: Backcard reserved type set to unknown Condition: When addred is done for AXSM cards Workaround: None
CSCdv32683	Symptom: sysNvInfoGetFailed message appears in the log. Condition: Appears after a switchcc is executed on the shelf. Workaround: None
CSCdv33486	Symptom: CC-4-CC Scaling error appeared in the dsplog. Condition: After a switchcc was executed on the shelf. Workaround: None
CSCdv33539	Symptom: New COS max BW out of bounds message appears in the dsplog. Condition: After a switchcc is executed on the shelf. Workaround: None
CSCdv33552	Symptom: SSI-4-STRTOOLONG message appeared in the dsplog. Condition: After a switchcc was executed on the shelf. Workaround: none
CSCdv33628	Symptom: Card does not have hardware mastership error in the dsplog. Condition: Appears after a switchcc is executed on the shelf. Workaround: none
CSCdv33710	Symptom: Pn/ILMI/attempt to add duplicate address appears in the dsplog Condition: Occurs when a switchcc is executed on the shelf. Workaround: None
CSCdv38381	Symptom: FTP back into shelf logs you into previous directory, not root directory. Condition: After you have logged out of a telnet session, after cd'ing to another directory. Workaround: None
CSCdv40632	Symptom: Trap 60007 not generated. Condition: Upon doing an IP restore. Workaround: None

Table 33 Known Severity 3 Anomalies in Release 2.1.60 (continued)

CSCdv40668	Symptom: The shelf IP and Node name got changed. Condition: During a clrcnf , after the SysFlashBootBurn Workaround: None
CSCdv40708	Symptom: % utilization is showing an odd number. Condition: When the dspprfhist cli command is executed. Workaround: None
CSCdv41974	Symptom: no error syntax message for the cnfrtparm command. Condition: When executing the cnfrtparm command via the cli Workaround: None
CSCdv42305	Symptom: Error message present. Condition: When executing the cnfsig command via the CLI Workaround: None
CSCdv43250	Symptom: No limit to the number of attempt to login. Condition: When logging into the MGX from the login prompt. Workaround: None

Anomalies Resolved in Release 2.1.60

Table 34 lists the severity 1 anomalies that have been resolved in Release 2.1.60. Table 35 lists the severity 2 anomalies that have been resolved in Release 2.1.60. Table 36 lists the severity 3 anomalies that have been resolved in Release 2.1.60.

Table 34 Severity 1 Anomalies Resolved in Release 2.1.60

Anomaly ID	Description
CSCdt45561	card with APS gets reset when working line is unplugged
CSCdt65453	The ports stuck in buildingvc/downinprogress after resetsysofpeernod
CSCdt77590	DLS:AXSM switchredcd caused conns to go into mismatch
CSCdt90992	AXSME-RED: All pnni-link went down and connections lost
CSCdu16786	AXSME-RED: core didn't get dumped
CSCdu17812	DLS: auto-config intf doesn't inform pnni of failed intf
CSCdu18494	DLS: switchredcd resulted in node rebuild/PXM device driver core dump
CSCdu21560	AXSME-RED: Switchcc caused cell drops at redundant AXSM-Es.
CSCdu26664	DLS:Connections failed to route after node rebuild
CSCdu27530	MGX 8850 node is not synching up since file transfer by FTP has err
CSCdu28147	OAM Flooding Causes AXSM Lockup
CSCdu28296	Multiple reroutes caused reroute to fail caused connection to fail
CSCdu30563	DB2: Configuration done during Standby coming up is missing

Table 34 Severity 1 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu32784	AXSM-AXSM-E interop: switchred on oc12 creates SF-L; generates Hecc err
CSCdu34681	SSCOP stuck in reset state. Link is down.
CSCdu36143	APS line on OC12 at bottom bay broken.
CSCdu36505	The SCT values when taken by qe, cause the AXSME to reset. (BLOCK)
CSCdu36965	AXSME_APS: Offline Diag corrupt standby PXM45B FC NVRAM
CSCdu36985	LOG: tLOGD suspends itself after disk reformat
CSCdu37067	unable to delete partitions on AXSM card
CSCdu39060	dbSvrIO Tlb load exception on active PXM, both PXMs reset
CSCdu39130	New MIB variable cwspConnTraceLastNode always returns zero
CSCdu40944	AXSME-RED: Switchccc causing some spvcs to go into failed state.
CSCdu42067	DLS:pnport stuck in building VC due to LCN CAC problem
CSCdu42597	The cnfpnportcac is not accepted by switch. (BLOCK)
CSCdu44081	ASXM T3E3-B type card has incorrect vendor OID
CSCdu46759	DLS: AXSM core dump did not complete
CSCdu49923	PXM45 keeps resetting due to Watchdog timeout reason
CSCdu52341	dspcons broken in merged baseline
CSCdu54039	DLS: Full coverage off-line diag failed all cards, all nodes
CSCdu54317	DLS: Connection Reserve failures due to LCN CAC issues
CSCdu54528	AXSME-RED: After upgrading the node, ran into memory leakage problem
CSCdu56919	DLS: Route calculation not performed correctly
CSCdu58238	alarm reported for SRM slots
CSCdu58285	AXSME-RED: AXSM-E transmitting more packet caused pxm discard hello
CSCdu60392	after add conn, no channel trap send out even OperStatus changed OK
CSCdu61522	DLS: detect and cleanup non-native standby disk
CSCdu61528	tRed: redTable corrupts pnRedmans memory, cause pnRedman to runaway
CSCdu61664	failed to AXSM redundancy, standby AXSM stuck init
CSCdu61696	AXMB:OC3 1+1APS; Remove 1 Pline, active FC went into reset.
CSCdu61712	Unable to add connection from CM Gui.
CSCdu63317	AXSME-RED: after graceful upgrade, all standby went to fail state
CSCdu64276	REG21: active/standby PXM reset multiple times after graceful upgrade
CSCdu65579	DLS: ATMizer crashed in stdby PXM causing SMs to fail
CSCdu67812	Fail to respond SCM polling while running offln diag
CSCdu68730	vsi_slave not freeing IPC memory for AXSM/AXSME, cant cc to slot
CSCdu68940	Active AXSM took Tlb exception when resetting both active and stdby
CSCdu69952	per VC MCR not guaranteed during congestion.

Table 34 Severity 1 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu71150	tVsiSlave ssiException cause AXSM crash
CSCdu72151	PXM-CM database for RPM virtual ports in provisioning after upgrade.
CSCdu76279	DLS: switchredcd caused 3000+ conns to report Major/Minor alarms
CSCdu76785	DIAG: AXSME card stuck in init
CSCdu77948	MPG: Physical Node connected to logical node causes Routing failure
CSCdu83013	Pnni node gets deleted (memory corruption) and all SPVCs fail
CSCdu83479	DLS: Spurious LOS and pnport alarm reporting
CSCdu85706	DLS: Sync-up of dspnni-routing policy when stby HD replaced
CSCdu86488	DLS: Reroute perf. affected by conn teardown/setup race condition
CSCdu88446	snmpget returns NOSUCHNAME for a registered trap manager
CSCdu88491	offline test fails on AXSM cards.
CSCdu89105	AXSME-RED: swapped AXSM with RPM, still showed AXSM
CSCdu89555	Turning on Offline diagnostics on standby PXM stops the node operation
CSCdv00327	IP connectivity task crashes if an invalid version 4 LMI req is recv
CSCdv00343	LMI protocol version negotiation between MGX2 and MGX1
CSCdv00688	VSI: no route update, because 8k con commit fail on AXSM
CSCdv00909	CPI error message scrolls on screen after PXM45B inserted and switchcc
CSCdv01101	SLT: SPVC conns failed to route due to unallocated number
CSCdv02985	delpart command broken
CSCdv04081	PNNI node goes to DOWN leads pnni link to be hello down
CSCdv04632	All cards reset with switchcc
CSCdv10290	Cards go to Failed state when placed in Reserved slots
CSCdv11860	Cannot find stat files on the AXSME card
CSCdv12312	SLT: Connection exist on AXSM but not exist in controller
CSCdv14217	SNMP requests are getting rejected.
CSCdv17909	AXSME-RED: swapped the RPM card with AXSM-E, came as mismatch
CSCdv22119	REG21: No matching ancestry level, building dtl failed.
CSCdv22405	Cant CC to some AXSM cards
CSCdv23056	REG21: abortrev causing all PXMs and AXSMs in failed state
CSCdv23701	REG21:svcc-rcc does not come up at 2nd level.
CSCdv24000	A burst of cell can overflow QESAR and SAR stays in waiting state.
CSCdv25828	pnni-links going down and about 10k connections out of 50k going down
CSCdv26901	CWM fails to discover AINI trunks as the switch returns incorrect va
CSCdv27197	write mem with service compressed enable append the configs
CSCdv27977	REG21:message handler for HMM epid not initialized, causing PXM fail

Table 34 Severity 1 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdv29117	AXSME-RED: frame discard should be disabled by default
CSCdv33052	REG21: dspspvcaddr causing active PXM reset
CSCdv34262	DLS: Connection failures due to resource allocation problem in partition
CSCdv41218	AXSME-RED: redund switchover happened itself, connections failed

Table 35 Severity 2 Anomalies Resolved in Release 2.1.60

Anomaly ID	Description
CSCdr47931	Though vpi restricted to 1 value in pnport, multiple vpi gets thorough
CSCds23024	FTP put failed (due to long file name)
CSCds52907	pnCcb filling up the log file on PXM45 with ILMI messages
CSCds78313	100K: Slave endpoints of daxis are not committed after resetsys.
CSCds79859	AUTO: control vc bw not subtracted from ports available rsrc
CSCds84423	tstdelay doesn't start the test and OamTimerCreate Error
CSCdt08059	DLS: Telnet daemon allows access without authentication
CSCdt09931	DLS: Node goes onto internal oscillator after switchcc
CSCdt27596	Switch modifies Notify Msg protocol discriminator to an invalid value
CSCdt28362	There is no CLI command to clear channel counters in AXMS-E
CSCdt33442	AXSM OC12 card does not report LOCD alarm
CSCdt38634	after upgd fw on bxm, one link between mgx and ses disappeared
CSCdt46917	SYNCRAM: Corrupts memory by incorrectly accessing db/conn table
CSCdt51104	DLS: Flt. Ins:Flash - No indication of flash failure
CSCdt53354	vsiSync task crashed after an upgrade was aborted
CSCdt53383	CIT: tmon task hugging 54% CPU usage
CSCdt53959	AXMB: OC3 1+1APS; switchaps clear failed after remove and install BC.
CSCdt56272	BKT1-SLT: Node rebuilt on its own after a double failure
CSCdt63208	AXSME_APS: Active AXSME went into EmptyResvd/Active after switchcc
CSCdt65489	MPG: svcc-rcv establishes after a long time.
CSCdt68302	AXSME_APS: inconsistent VSVD setup between PXM and AXSME
CSCdt79626	SLT: OC12 1+1APS not W nor P-line displayed repeatedly.
CSCdt81984	RPM do not go active
CSCdt82991	SLT:PXM45 shows Active-F after upgrading boot and runtime images
CSCdt84148	APS switch fails due to timeouts
CSCdt86848	AXSME_APS: Need to check configured connections before cnf maxcon

Table 35 Severity 2 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdt97193	Core mask data corrupted
CSCdu02498	AXSME-RED: clrportent didn't clear the port count
CSCdu09435	UNI40DT:ILMI registered addresses not advertised across peer groups
CSCdu10670	Doing multiple rrtcon for SPVC causes peps fsm timer stop on PXM
CSCdu10676	Not following Bellcore R5-89, R5-90 regarding generation of Inv K1
CSCdu10763	rejecting ers and vsvd to be set as 0 in SNMP set
CSCdu10851	AXSM: IFC State transitions to FAILED_INT after switchcc (BLOCK)
CSCdu13182	AXSM ds3 interface fails after 6130 reloading
CSCdu13416	MPG: Internal Reachable Addr. ptse not aging out.
CSCdu14884	DLS: tLOGD task hanging on semaphore/dsplog causes CLI to hang
CSCdu15477	AXSME-RED: Standby PXM45A went into failed state after resetcd
CSCdu16855	AXSME_APS: Switchcc causes VSI error (QE failure) on AXSM2
CSCdu18196	The connections don't get their minimum rate.
CSCdu19252	AXSME-RED:AXSME dropping cells generated out of longer frames.
CSCdu19577	MPG: Route optimization of SPVC is not done correctly.
CSCdu19732	APS: Removal of WLine followed by Switchred, C0/data loss.
CSCdu20071	LOCD alarm not generated on OC12 when COSET is disabled
CSCdu20428	CBR.3: VSIM setting scr equal to PCR0 instead of PCR0+1.
CSCdu20596	DLS: Evt.Log:switchcc results in Error in rebuilding in spvcStandbyUp
CSCdu20858	DLS: CLI commands to be included in the Evt.log Severe Cmd. category
CSCdu20935	AXSME-RED: both card stayed in Mismatch state after adding redund
CSCdu21330	The ipAdEntIfindex in the ipAddrTable is not implemented properly
CSCdu21495	MPG:LGN node index shown in idb even when LGN is down.
CSCdu21621	QE VC Threshold should be less than 61440
CSCdu21738	AXMB:OC3 1+1APS; Removed WLine BC, 1 line toggled between WandPLines.
CSCdu21778	AXMB:OC12 1+1APS; Switchred caused all PLines in ALM, switchaps fail
CSCdu22855	AXMB:OC3 1+1APS; Removed BC caused both WLines and PLines in ALM.
CSCdu23302	Topo Info and Link status not reported when autocnf is disabled
CSCdu23840	DLS: Command abbreviation cannot be disallowed on AXSM
CSCdu25902	DLS: Evt.Log:NOde rebuild causes shmDiskHdl Mem Blk Error log message
CSCdu26208	AXSME-RED: After enabling the ilmi pnports went to autoconfig mode
CSCdu26729	MPG: dsppnni-path shows truncated path if more than 20 hops.

Table 35 Severity 2 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu26804	qePurgeVc fails to send purge request for qe,1 glcn 0xxxx keep popup
CSCdu27378	loadrev,runrev on AXSMOC48 causes card to go to ACTIVE-F status
CSCdu28575	uni port with SPVCs can be changed to pnni port which is wrong
CSCdu29047	AXSME-RED: AXSM oc12 card got rebooted after execution of addport
CSCdu29320	OC48 rate traffic discarded because of ingress VC queues full.
CSCdu29495	AXMB:OC3 1:1APS; PLine in ALM, with increasing BEcnt after addapsln
CSCdu29643	Clean up traces in pxm cm area
CSCdu29768	AXMB:OC3 1:1APS; WLine and PLine in ALM without any causes.
CSCdu30342	AXSM card resets if there is not runtime code in the flash.
CSCdu30388	AXSME_APS: AXSME-OC3 MMF BC NVRAM problem after power cycle or reseal
CSCdu30471	Trunk would not route VPCs even though resources were available.
CSCdu30628	PXM card is stuck in init state when booting up simulation image
CSCdu30831	CV-L count not incremented as per GR-253 for SONET Line Layer
CSCdu31592	write failed error after BurnBoot AXSM nightly image
CSCdu32655	Modifying bounds of if condition in VrmCnvtSctIndexToEntry in SCT.
CSCdu32749	cwspOperIlmiEnable show same value when port is up then down
CSCdu32855	AUTO: data traffic loss on oc48 link when APS hw is plugged in backmi
CSCdu32892	AXSME-RED: dspportent didn't show the correct count
CSCdu33891	192intfs:can not config UNI version to SELF through CV.
CSCdu34034	AXSME_APS: APS toggles between SD/SF although BERT > SF thrhold
CSCdu34832	XBAR: Crossbar alarm on standby PXM45 not integrated
CSCdu34897	enable online diag on standby pxm cause AXSM go to active-F state
CSCdu35223	AXSME_APS: Unable to delred after addaps on non-adj red pair fails
CSCdu35924	OC48A SMSFR back cards in Mismatch after upgrade to new nightly image
CSCdu36494	60K:end point lost in queue after down conn and up conn
CSCdu36765	APS protection line in SF (BER) state after adding APS
CSCdu36771	dspxbarstatus does not recognize AXSMEs for highest bandwidth
CSCdu36962	EFCI Tagging Not Working On All Traffic Classes
CSCdu37234	Complementary SABRE programming getting cleared for VSVD.
CSCdu38087	Partitions intf policy is synched up after connections on standby
CSCdu38123	Junk ABR parameters are sent in the commit during call release
CSCdu38585	COREDUMP GDB: Cannot compile
CSCdu38741	CCM does not handle MGX 8950 slots 15 and 16
CSCdu39349	VSI: vsisSyncConnAccess should not fail because of missing ep

Table 35 Severity 2 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu39354	VSISync: VSICfgSetIov shall never free IOV regardless of the error
CSCdu39448	AXMB:OC3 1:1APS; dspapslns showed unclear MIS in WandPLine states.
CSCdu39579	Conn endpoint reports Egr AIS even though conn. is normal
CSCdu40145	SVC calls lost after switchcc
CSCdu40419	AXSME_APS: Links go buildVC if del/re-add port/part w/ ILMI enabled
CSCdu42939	Remove cwrSubIfOperationStatus from RPMs Config Upload file
CSCdu43684	Event logs flood the PXM45 disk due to CAC errors
CSCdu43874	TaskMonitor: Deletes suspended tasks after reporting non-fatal major
CSCdu44571	The AXSME takes the non existent SCT.
CSCdu44603	AXSME-PLFM:AXME cards remain in failed state after PXM reset.
CSCdu45127	DLS: pnport went into bldg vc after dnpnport/AXSM reset
CSCdu46065	DLS:AXSM Offline diagnostics failed - software error reset
CSCdu46109	DLS: Offline diag on PXM indicated Real-time clock test failure
CSCdu47198	AXSM should not generate invalid K1/K2 even if invalid K1 is received.
CSCdu49269	AXSME_APS: emin/imin of 0% causes standby AXSM reset continuously
CSCdu49473	adding the new bit to differentiate old and new vers for pathtrace
CSCdu49852	dspxbarstatus shows wrong value for highest bandwidth needed
CSCdu50112	Varied traffic loss on OC-48 link when APS hw is plugged in
CSCdu50537	fix broken AXSM core dump
CSCdu50573	DLS: Offline diag-HDD full test failed
CSCdu50651	AXSME_APS: AXSM sends ILMI NAKs after reseted active/stand AXSMs
CSCdu50846	NILE4 attempt to write the write protected memory area
CSCdu52333	AXSME_APS: Ctrl+C to abort saveallcnf causes subsequent save problem
CSCdu52519	cnfcon reads the parameters incorrectly
CSCdu53247	no alarms received @spvc master end after removing AXSM @ slave end
CSCdu54229	sys_diag failed to send config to itself.
CSCdu55927	INTEROP: APS Stdb by AXSM/B removal caused high number of cell lost
CSCdu55982	AXMB:1+1APS; LowerBay all Plines in SF alarm after FC removed
CSCdu57717	DLS:PXM reports mismatch alarm for AXSM/B cards
CSCdu58197	cnfcon allows per value to be set greater than port bandwidth
CSCdu58315	Reg_21: commitrev rejected after runrev-done, have to wait 90 mins
CSCdu58621	Core dump occurred with Software Error Reset when diags enabled
CSCdu59980	addchanloop functionality to be re-examined in 2.1
CSCdu60210	configured address is different after resetsys

Table 35 Severity 2 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu60449	RPM-reg: Connectivity problem after adding 1800 RPM/RPM pvc conns.
CSCdu60588	PCPRO: semaphore timeout on active incremental update
CSCdu60659	DLS:CPU utilization/Reroute rates for MGX45/PXM45B/2.1.60
CSCdu60971	Misleading error string from CLI parser
CSCdu61498	AXMB: AXSM oc12 cell los rate extremely high; cable removal
CSCdu62742	AXMB:OC3 1+1APS;Serv Switch W->P failed, caused WLine in SF alarm.
CSCdu64552	a few connections fail commit on standby PXM during bulk sync
CSCdu64635	SHM change RPM card type after loadrev/runrev
CSCdu64670	Diag: offline passed stats increased before diag test done on PXM45/
CSCdu64692	AXSME-RED: partition 1 was not found even though there was partition
CSCdu64893	Upd: Faulty alarms generated after PXM upg from 2.1(10)->2.1(60)
CSCdu64926	AXMB:1+1APS;Prim-FC removed over 1Hr, both WLandPL=SF, all VCCs failed
CSCdu65557	Intra Card APS is NOT blocked for Model B, causing SF.
CSCdu65565	DLS:PXM/AXSM show conn state to be OK for failed conn
CSCdu65577	Channel Mismatch and PSBF should not be detected for 1+1 uni op mode
CSCdu65624	Upd: RamSync err after loadrev from 2.0(14)->2.1(60); Stdby PXM fail
CSCdu66258	AXSME-PLFM: Active PXM got reset on inserting b/c for AXSMB.
CSCdu66757	StatsTask ssiStatInterval Begin event log flooding
CSCdu67702	abort offln diag from pxm45 will not reset AXSM-E
CSCdu68442	cnfcon: -frame option doesn't work in cnfcon CLI
CSCdu68756	Off-Line Diagnostics fails on an AXSM-2
CSCdu68820	Though pnport restricted to 1 pair vpi/vci call through with other vci
CSCdu68858	OC3 port max BWidth is checked for 353207 instead of 353208
CSCdu69419	Ccb crash in DAX install cross con.
CSCdu71600	memPartAllocate fail while standby pxm insertion
CSCdu72922	AXSME-RED: After delpart and addpart there was problem in incremental
CSCdu73991	Autoshut: HMM does not report HUMVEE errors detected to SHM
CSCdu74517	DIAG: When resetting active card during offln tst, standby doesn't boot
CSCdu74543	The cross commit programmed with wrong traffic parameter
CSCdu74600	AutoShut: Switch fails to re-enable AXSM planes after xbar err clear
CSCdu74622	AXMB:1+1APS; Wline BC RandR, some Wlines stuck in SF, all PLines in SF
CSCdu74973	REG21:Entry borde node w/parallel links having routing problem
CSCdu75634	RPM goes to standby after upgrade and status remained even by reseted
CSCdu76333	Off-line diags could corrupt NOVRAM, HDD

Table 35 Severity 2 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu76350	AXSM-2 Off-Line DIAGs fails on AXSM-2 Rev A cards
CSCdu76375	After double fault (switchcc and reseted) pxm45 rebooted 3 times
CSCdu77158	Upgr: create space failed msg polls continuously after 2.0-2.1.60 upgr
CSCdu77544	shmRecoverClrallcnf does not clean up the standby disk
CSCdu77654	AutoShut: switchcc enables disabled plane that has xbar errors
CSCdu77666	Diag: core dump after full offline diag test passed on AXSM card
CSCdu77819	Upgr: RamSync err after loadrev from 2.0(14)->2.1(60); Stdbby PXM fail
CSCdu78558	Diag:switchcc causes AXSM card reset during AXSM full offline diag
CSCdu79620	Cannot dump AXSM core on MGX 8950 if AXSM slot # greater than 10
CSCdu79713	AutoShut: RandR XM60 causes planes to shut down; transient errs only
CSCdu79972	Default password is used for FTP after node reboot
CSCdu80115	DLS:Evt.Log:LMI SYNCRAM_RESET msgs on AXSM after switchcredcd
CSCdu80239	Diag: full offline diag did not got launched but failed on OC48-B
CSCdu80791	Conn-mod has problem if the remote lcn changes in scheme 1.
CSCdu81208	DLS: Evt.Log:switchcredcd caused APS-4-APS_MAIN_ERR in event log
CSCdu81334	DIAG: HMM doesn't detect an error in SABRE
CSCdu81480	AutoShut: OC12 in Act-F; on-line diag fails test 0x20200 xbar burst
CSCdu82351	Port/Conn Status Not Displayed Correctly W/APS Events
CSCdu83346	AutoShut: Sys doesn't detect xbar err if inserting from stdby PXM
CSCdu84558	AXSM rebooted due to scmReader unable to read sct file
CSCdu84598	PER: Add threshold and current reset count info. in the reset log
CSCdu84756	DLS: Node rebuild caused No network clk redundancy alm
CSCdu85621	AXSME-RED: PXM stuck into init state and reset again
CSCdu85780	DLS: switchcc on one node causes SSCOP status traps on neighboring no
CSCdu86022	AutoShut: RandR XM60 enables planes that has xbar errors
CSCdu86046	REG21:SPVC fails on AXSME AINI/IISP i/f with mismatch alarm
CSCdu86061	dspcons is blocked for user with ANYUSER privilege on AXSM
CSCdu86796	Failure Management should not deroute calls when UNI card is reset
CSCdu87251	abr1 con becomes conditioned when asymmetric PCR/MCR
CSCdu87715	AutoShut: Sys reports xbar err after AXSM is removed; plane shut
CSCdu87850	Connection did not go to Fail state
CSCdu87912	Not able to add master connections on FRSM-HS2B-HSSI/12IN1/2T3B/2E3B
CSCdu88138	AXSME-RED:Mismatch/Empty added redundancy to empty but no redund con
CSCdu88371	DIAG: Offline statistics incorrect

Table 35 Severity 2 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu88488	VC queued connections were being set as VSVD in SABRE
CSCdu89126	AutoShut: Transient errs on PXM causes plane to shut after RandR XM60
CSCdu89150	Upg 2.0.14->2.1.60 fail: in 2.0 control port maxCR is zero
CSCdv01075	No bw/lcn cac should be done on standby PXM
CSCdv01740	REG21:SVC calls drop after 4 minutes with cause code 37.
CSCdv01830	The PXM45 gets to the Active-F state in MGXII
CSCdv02236	delchanloop does not restore traffic back in a connection
CSCdv02677	During offline diag and after switchcc, need to send ready ind again
CSCdv03127	REG21:spvc not getting routed due to inconsistent routing data.
CSCdv03239	DLS:Evt.Log:SPVC-ERROR:Failed to allocate Leg messages
CSCdv03357	AXSME-RED: RPM/PR card came up as mismatch, in unreserved slot
CSCdv03843	Syserrd stack usage exceeds 70% margin and floods log
CSCdv04011	SHM does not know AXSM in offline diag mode after switchcc
CSCdv04224	Need to implement a field by field update for upgrades in Rep RAM.
CSCdv05553	sysClrallcnf does not clear the RPM-PRs configuration
CSCdv05897	REG_21: cell loss on ABR VSVD when pumping @ MCR (port SCT = 6)
CSCdv06914	File locking mechanism requires exact match in abs. path name
CSCdv06995	Switchred makes both active and standby reset.
CSCdv07890	SLT:ip connectivity using vpi/vci which is free in VCM table
CSCdv08122	After node upgrade, PNNI links go into fail state
CSCdv08344	Data loss caused by removing the P line on ONI
CSCdv08890	SLT:pnports are stuck in down in progress state
CSCdv10191	AXSME-RED: FtpdServ1 task got suspended while downloading
CSCdv11638	REG_21: port stuck in auto config state b/c qe ingr dropping cells
CSCdv11980	RPM-PR card is shown as RPM oid in the config upload file
CSCdv14020	Enhancement to dspapsbkplane CLI
CSCdv14503	Conn is not backed out properly if A-C fails for prev A,NULL conn
CSCdv14514	Use api to directly look up shm db instead of using messages
CSCdv15591	String copy err(ssiStringCopy: Source String longer than DestBuffer)
CSCdv15883	AXSMB/OC48 backcard not identified as AXSM_OC48_A backcard in JUP
CSCdv18254	SUM to SFM communication problem
CSCdv19189	simulation image need to be fixed for TGM.
CSCdv22434	ipconn does not update vcm entry on standby
CSCdv24848	SLT:PNNI svcc-rcv keeps flapping between 2 PGLs.

Table 35 Severity 2 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdv26763	AXSME-RED: frame discard should be disable by default
CSCdv29117	SLT: Stdbby PXM will not boot due to IPC buf leak by SHM/HMM on Active
CSCdv33320	DLS:AXSM showed failed conn to be operationally up
CSCdv40509	rpm_port status on RPM card differs from PXM database
CSCdv47100	SCR in VSI Commit message filled wrongly for CBR3 connections

Table 36 Severity 3 Anomalies Resolved in Release 2.1.60

Anomaly ID	Description
CSCdr20267	I n PXM-CM, max threshold values in SCT to be changed from % to time
CSCdr93148	Port parameters (univer/nniver type) do not match up in CiscoView
CSCds73574	DLS: Commit Fail/other msgs in event log need to be interpreted
CSCds89138	SSCOP Conformance Test Suites (Adtech) Failing
CSCdt07370	DLS: Popup when shellcon display_queue_stats was executed
CSCdt07753	DLS: No trap sent when primary clk src restored if sec. is OK
CSCdt13184	AXSMB: Unclear Switchaps error when the remote has BiDir PLine-Lockout
CSCdt15584	The error messages due to illegal operations displays on diff termin
CSCdt24846	PXM Boot: Enhance error display to be more readable for troubleshoot
CSCdt24861	SHM: Image download error detection and logging problem
CSCdt32198	dsper command should be blocked when used on non-pxm slots
CSCdt32277	core command crash on Null core file name *C*
CSCdt33579	CIT21:no crankback during temp failure at connect (svc vpi out of ran
CSCdt33839	UPG-dt: Checksum mismatch between cntrlr and slave
CSCdt38459	Temporarily disable report of diag conn failure to pxm45
CSCdt42037	Control Characters Cause CLI Monitor Change Without Warning
CSCdt52074	DLS: Line alarm severity should be higher in event log
CSCdt52092	DLS: Call failure due to max crankbacks msg in event log
CSCdt53574	DLS: addport usage statement is incorrect
CSCdt55252	AXSME_APS: Prot->Work switched should be blocked on AXSM 1:1 APS
CSCdt55552	Error message appeared in event log while doing switchcc
CSCdt55955	RPM VSI I/F Name Inconsistent with PNNI
CSCdt60282	FTP activity is not reported in the log
CSCdt66492	State information with elidbxlevel 1 is confusing.
CSCdt67109	SBC: resulting summary addr prefix incorrect
CSCdt73490	Missing params in Sw Get Cnfg Rsp VSI message from Slave

Table 36 Severity 3 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdt75424	dspconload/lnload/portload commands need to be included in AXSME CLI
CSCdt75546	60K: lack of resource causing failed spvc conn m-endpoint at AXSM
CSCdt75737	There are a lot error logs after multiple switchcc overnight
CSCdt78030	Invalid LIN/port id reachable-addr local
CSCdt78174	Need LIN <=> physical descriptor mappings
CSCdt79472	after saveallcnf task tTnCmdTsk05 is running away.
CSCdt80506	shm retxq err handler frees mbPtr twice
CSCdt81274	AXSME_APS: Several SSI errors generated with saveallcnf
CSCdt84464	ABR call released with cause 47 instead of 37, when no enough AVCR
CSCdt86885	snmp set of bookfactor does not cause log entry; causes screen msg
CSCdt88951	MPG: PGid lvl indicator byte is 2/3 digit long thou 2 digit lvl added
CSCdt89017	MPG: Remove -lowest option from cnfpnni-node
CSCdt89059	MPG: Explanation in the help of addpnni-node is incorrect/confusing
CSCdt89105	MPG: No error displayed when default summary address is deleted.
CSCdt90288	AXSME_APS: Addcon(master) overrides INTVSVD/EXTVSVD on slave side
CSCdt90814	SBC: dsppnni-ptse address display incorrect
CSCdt95790	miniCSR: Mechanism for faster synch up of new standby card
CSCdt97693	CLI parser is not rejecting -ve values for UI_UINT type param.
CSCdt98161	AXSME_APS: Need more meaningful err msg for addapps intra-even# APS
CSCdt98355	Verify functionality of cavi Stats
CSCdu00601	Change mod id for path trace log and no limit
CSCdu02027	VSI Slave uses wrong ret code for not enough LCN error.
CSCdu03048	Fix MDC to take new AXSM-2 model B as one new module
CSCdu07958	No dynamic optrt when scheduled w/ cnfrteopt
CSCdu08187	switchapsln 1(clear) gives unnecessary error message
CSCdu09713	NAM: Tries to send freed IPC buffer
CSCdu10448	Console port of standby PXM hangs after CLI timeout.
CSCdu14157	cnfelksrc display doesn't show portid option
CSCdu14812	POP2.0 logs both PXM card errors
CSCdu18362	entPhysicalDescr value for XM-60 card is empty
CSCdu18938	CLI Help Facility: TLB exception, installation failed, etc.
CSCdu21566	Switchcc does not block PXM switchover to a degraded stby PXM
CSCdu21583	SHM: Image download doesn't log enough information if failed
CSCdu21599	Connections are not committed by the controller
CSCdu21601	AXSME_APS: Delpart causes EM SW log and incorrect err msg

Table 36 Severity 3 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu22025	Introduce new CLI command dspconalarms
CSCdu22193	IntfmarkedRelease Counter increment has problems
CSCdu22270	AXSM diag should cancel path tests during a PXM switchover
CSCdu22924	Xbar Card alarm and Fabric alarm minimal severity should be Major
CSCdu22981	APS alarm display should give more details for MIS state
CSCdu23546	Add RPM, Atm physical, and module config traps
CSCdu24637	AXSME_APS: Request to change SD/SF default for consistency
CSCdu25741	Allow AFI of 0x00 to 0xFE for Aesa Address
CSCdu25788	Feature checkin: support cesm card on POP2 shelf
CSCdu26101	DLS:Evt.log:Node rebuild resulted in SHM-4-STBY_UPDATE_ERR (RMI err)
CSCdu27512	Modify dspapsbkplane api to be like AxsmE
CSCdu28014	XM-60 insertion/removal not notified
CSCdu29332	Need to support CISCO-WAN-ATM-CONN-STAT-MIB through K-V funcs
CSCdu29663	AXSME allows cnfilmi to vpi/vci values which r already used by a con
CSCdu30102	addcon: -frame flag not supported in the CLI.
CSCdu30326	Support cacIStatEntry table for AXSM compatibility
CSCdu30439	Take out reference to IMA Group in error strings
CSCdu31207	SNMP interface does not match CLI for cwspSvccMaxVpi
CSCdu31385	Drivers flood the event log
CSCdu31626	OC3 port LED remains green while CLI indicates los, lof
CSCdu32974	AXSM card error STAT-4-ERROR logged
CSCdu33459	Atlas has an issue for LCN 0 OAM.
CSCdu34039	AXSME_APS: Request to change APS state from UP to OK
CSCdu34560	DLS: Ntwk clk redundancy alm not reported after stdby PXM reset
CSCdu34803	AXSME-PLFM:dspdiagstatus doesn't show online diag enabled
CSCdu35021	AXSME_APS: Interop- AXSM1 APS req gives err msg although op complete
CSCdu35221	AXSME_APS: Addaps of non-adj redundant AXSME pair should be blocked
CSCdu35690	AXSME-RED: It was not showing last unknown vpi/vci
CSCdu37050	dbgpnni -hello on does not give useful info
CSCdu37176	AXSME_APS: Interop- AXSM1 fails to generate Do Not Revert
CSCdu37560	The ifName for interfaces on AXSME is wrong
CSCdu38021	Offline diagnostics do not work for AXSMEs
CSCdu38281	AXSME: dspcd from PXM and AXSME show total port number mismatch
CSCdu38776	AXSME_APS: S/W Err reset on AXSMB triggered by offline diag

Table 36 Severity 3 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu39076	AXSME_APS: dsplns showing line info twice w/ diff format on T3/E3
CSCdu39967	Do not always allocate max size for GAT
CSCdu42238	dsplnct text show be the same for AXSME as AXSM for the same data
CSCdu42593	Dspred: the type of reserved PXM card showed regardless inserted card
CSCdu42634	Interface name contains trailing NULL for Traps 60381, 60382, 60383
CSCdu42733	Merge baseline changes for customer build
CSCdu43506	cmake <file.o> not working 100% time
CSCdu44037	AXSM-B OC48 back card is not getting updated in the Database-MGX 8950
CSCdu44707	Misleading error message while configuring card SCT
CSCdu45037	follow error handling precedence in processing msg
CSCdu45344	VsiErr:Connection Reassert Error 0x5011 and 0xC001
CSCdu46121	atIfIndex, ipRouteIfIndex, and ipNetToMediaIfIndex not proper
CSCdu47043	dpscds from PXM45 for slot with MMF bk card incorrect
CSCdu47270	CCM Anomaly: Congestion action query for itf doesn't consider slave
CSCdu47676	AXMB:1+1APS; Missing line number when SwitchapsIn failed.
CSCdu48709	AXSME_APS: ATLA_HMM_ERR logs generated when upilmi/dnilmi on T3E3
CSCdu49122	Misleading snmp-set behavior
CSCdu49743	Syntax missing on Softswitch
CSCdu50642	Inconsistent line and port counters
CSCdu51147	OAM traffic is not discarded with user data for down conns
CSCdu51490	caviIndex value and caviViIfIndex value must not be same
CSCdu51821	Limit max conns to 50K for PXM45
CSCdu52169	ssiMemCheckAddr function needs to be converted to Public API
CSCdu52293	dspload output in AXSME needs to be in consistent with AXSM
CSCdu52329	Though invalid port number dspportload displays output
CSCdu52364	For invalid line number, dsplnload gives Err: Bad Port number
CSCdu52423	Xbar: XBar card errors and auto-shutdown events should be sev2.
CSCdu52450	Xbar: Crossbar fabric alarm not generated against PXM card.
CSCdu53179	VSI Proxy in PXM45 not able to provide the correct statistics
CSCdu53335	ACO Switch Does Not Cut Out Audio Alarm
CSCdu53414	LOG: Event Log semaphores option should include INVERSION_SAFE
CSCdu53566	SHM: Invalid return code in API: shmRemoteFrontCardReservedReport
CSCdu53711	dspintfcongflags CLI command gives port does not exist error
CSCdu54063	dsplnload cmd shows % util as zero
CSCdu54617	Card config trap needs to be defined for AXSME

Table 36 Severity 3 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu54931	A message SM feature bitmap is = 0 keeps popping up on the CLI
CSCdu55452	Need a shell command to enable/disable lower bay configuration
CSCdu55598	could not get vpci for LCNs while clrchancnts on AXSM, vsiErr C049
CSCdu55862	Need to remove chanloop related commands from CLI
CSCdu56465	dspingbcketcnt command should not report discards
CSCdu57012	Provide support for 3 new AXSME card types
CSCdu57600	Ambiguous Conntrace Response On CLI
CSCdu57868	Though no optional keywords/parameters given cnfabr gets accepted
CSCdu59074	Create HTML files from .msg files, for online documentation.
CSCdu61930	dspxbar CLI command does not accept valid parameters for XM60
CSCdu62473	Add backplane state to dspapsln
CSCdu62537	Addcontroller on MPGSIM node causes CMTask Exception
CSCdu62999	REG21: Node name missing in dspnni-node
CSCdu63948	aesa_ping command doesn't support -data disable
CSCdu64459	Need to print task ID for debugging purposes
CSCdu64501	CM: Attempts to free memory that it doesn't own
CSCdu64884	AXMB:1+1APS;Switchaps failed with PL=SF; but no Error msgs.
CSCdu65551	dbIntfcGetMinCellRate should return a UINT32 instead of UINT8
CSCdu65571	Sometimes for Bi/NRev one side is in protection and the other Working
CSCdu65635	RPM card went into boot after resetsys
CSCdu66478	Need to modify makefile for newly added trap files.
CSCdu66490	192 ports -- modify MIB to ensure user configuration
CSCdu66519	AXSME_APS: Incorrect Error msg for CLI Addpart
CSCdu66656	need new traps for AXSME
CSCdu66689	snmptraps.h needs to be modified for new traps in AXSME
CSCdu67734	spvcm logs error during node rebuild
CSCdu68467	vsiRedChk give misleading information
CSCdu68796	SYSTEM: Replace NILE4 write protection with Code Checksum
CSCdu68976	Incorrect description of csApsLineSwitchReason in 2 Aps traps.
CSCdu69537	The sanity is Not ok message pop up after runrev on pxm
CSCdu69675	dumpversions and dumpconfigs CLI Macros broken w/ vty login in RPM
CSCdu69697	AXSM CLI addport syntax help display left out VUNI type 4
CSCdu70399	AXSM-E DIAG Build fails if snmp-subagent dir is not pre-compiled
CSCdu71031	operational parameters PG is absent error need be removed
CSCdu71072	allow dsplog/dsperr commands to be executed before cd is ready
CSCdu71112	VSI-4-RMCONNError ERROR 0xC04B 6503 QE dummy LCN

Table 36 Severity 3 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdu71141	SHM: Active PXM in failed state cant bring up stby pxm
CSCdu71467	DLS: output of semShow (shell) command pop-up on wrong user session
CSCdu73277	AXSME-RED: conns IOV failed, deleting partitions on active card
CSCdu74562	AXMB:1+1APS; Clrbecnt with only Wln or Pln, but cleared the opposite
CSCdu74573	AutoShut: Need better error msg for CLI dspxbarerrcnt
CSCdu74581	vsiErr 0xD05E interface policy has no guaranteed rate for any service
CSCdu75005	AXSM1: Off-line diag is running away on CPU
CSCdu75354	ifTable reports extra ATM Phys for SONET AXSME cards
CSCdu75449	AXSME-RED: AXSM standby was not showing vsiRedChk properly
CSCdu75603	Check-in ID for stats changes per CWM request.
CSCdu76191	modify MIB due to requirement change
CSCdu76815	VSICORE: conn commit with local processing error on standby
CSCdu77305	IPC data pointer access after message is freed
CSCdu77314	PXMCM: IPC data pointer access after message is freed
CSCdu77723	When cnfilmi to vpi/vci of a known con, wrong ERR msg:command fails
CSCdu77756	FIPC-4-LCNUNBIND_FAIL when RPM-RPM spvcs rebuild
CSCdu77909	Diag:dspdiagerr record cleared after switchcc, SW need improved
CSCdu78588	VC max thresh should be limited to 61440 cells.
CSCdu79975	REG21: no error given when adding multiple VTs that exceeds line BW
CSCdu81006	DLS:Evt.Log:x-cmt request fail messages are generated on AXSM reset
CSCdu81259	DLS:Evt.Log:AXSM pair reset caused CRDM-2-FATAL_ERROR
CSCdu81325	Need to remove object 20-37 from table cwspOperationTable
CSCdu82562	REG_21:improper error message when enabling ilmi on VNNI w/wrong vpi
CSCdu82585	diag task run-away when executing offln diag test.
CSCdu83055	AutoShut: Switchcc causes SPVC err log in task pnRedman(invalid evt)
CSCdu83477	Diag: Offline diag count increases for Active SMs
CSCdu85500	dalGetLenforConn() needs to be corrected
CSCdu85575	800 dash number not consistent
CSCdu86572	Event Log Cleanup: VCM-4-INTERNAL ERROR message on lofs
CSCdu87737	SRM -- snmpwalk on ifTable cause buffer leak
CSCdu88108	pnCliTask stack usage exceeds the 70% margin and floods the log
CSCdu88209	stats for Alerting msg are not cleared with clrsigstats
CSCdu88217	taskDelay of 2 ticks in pcproStandbyWrite routine
CSCdu88543	Active and Standby mismatch of the connections
CSCdu89236	Switchcc cause the connection to deroute
CSCdu89565	SHM: dsprevs leaks memory

Table 36 Severity 3 Anomalies Resolved in Release 2.1.60 (continued)

Anomaly ID	Description
CSCdv00035	Incorrect value for pnniLinkVersion (should be version1point0)
CSCdv00091	Incorrect handling of VSI NAK reason codes 11 and 12
CSCdv00481	Autoshut: Humvee alarms not cleared even after the AXSM is reset
CSCdv02241	Deletion of persistent endpoint should clean up chan lpbks
CSCdv02461	IP connectivity lost to feeder, after line fail and switchcc on PXM45
CSCdv02588	DLS:Evt.Log:SPVM-4-ERROR:atmSoft_derouteSlaveConnection()fail to rel
CSCdv03156	DLS:Evt.Log:switchcc -- bitmap fails for leaf/root for interface
CSCdv03206	REG21: Transit Network id in dsppnni-reachable-addr shows junk value
CSCdv03447	SLT:PnNet/PNNI/pnni-svc-down - retry start timer started
CSCdv04393	New mib variables needed for Single-ended SPVC and Priority Routing
CSCdv04762	check-in Id for CWM request line stats change
CSCdv05714	delete DAX conn while slave port down causes dangling leg
CSCdv05841	DIAG: Reseted on active pxm caused diag stats to corrupt
CSCdv07632	resetsys on dax and both intf are down will create leg congestion
CSCdv08217	standby pcema should not call api to unreserve a slot
CSCdv09393	checkin ID for diag and stats
CSCdv21653	No notification to user about ethernet link failure
CSCdv30929	Memory leak for conntrace
CSCdv36928	800 dash number not consistent

Anomaly Status Changes in Release 2.1.60

[Table 37](#) lists anomalies that have changed status in Release 2.1.60.

Table 37 Anomalies that Have Changed Status in Release 2.1.60

Anomaly ID	Description
S2 Anomalies	
CSCds60439	PXM45B active becomes Active-F and stdby becomes failed when resetcd. Junked
CSCdu57547	DLS:AXSM reports spurious alarms on successful connections. Closed
CSCdu60622	DLS:Offline diag. did not terminate on stdby PXM when active reset. Closed
S3 Anomalies	
CSCdt63012	Reg: Forced Switchback on feeder does not Reject. Duplicate
CSCdu15428	When using SCT3 (no policing), policing appears to still be on. Closed

Known Anomalies in Release 2.1.10

Table 38 lists known anomalies in Release 2.1.10. Each anomaly includes a brief discussion of the problem. For additional information, use Bug Navigator to view the release note enclosure associated with the Anomaly ID listed in the table.

Table 38 Known Anomalies for Release 2.1.10

Anomaly ID	Description
S1 Anomalies	
CSCdu42756	Symptom: Both AXSM cards in an AXSM pair reset when switchredcd executed Condition: None Workaround: None
S2 Anomalies	
CSCdt05371	Symptom: Tr2 were not generated for hard disk failure during fault insertion testing. Condition: Hard disk failure was simulated on modified PXM45 cards. Workaround: None.
CSCdt05378	Symptom: Switchover to faulty standby PXM45 allowed during fault insertion testing. Condition: Hard disk failure was simulated on the standby PXM. Workaround: None
CSCdt05383	Symptom: PXM45 switchover did not occur when hard disk failure simulated on active PXM45 during fault insertion testing. Condition: Hard disk failure was simulated on active PXM45. Workaround: None
CSCdt05385	Symptom: No alarms reported when hard disk failure on active PXM45. Condition: Hard disk failure was simulated on active PXM45. Workaround: None
CSCdt05387	Symptom: Hexadecimal characters appeared on telnet session and access to system via telnet and console port access was then lost. Condition: Hard disk failure was simulated on active PXM45. Workaround: None
CSCdt25070	Symptom: Node alarms and traps are not generated on high speed serial link errors. Condition: High speed serial link error injected during fault insertion testing. Workaround: None
CSCdt64502	Symptom: Signal failure and signal degrade conditions might persist longer than the time mentioned/specified by the spec. Condition: When a line goes into SF or SD condition or the line actually clears from this condition, the SF or SD might just take a couple of seconds longer. This can be verified when a bit error rate tester is used and verified for the same. Workaround: None.

Table 38 Known Anomalies for Release 2.1.10 (continued)

CSCdu60627	<p>Symptom: PXM in continuous reset cycle after HD backcard replaced</p> <p>Condition: "Can not Enable External Cache_Tag_Match: External cache not Enabled" reported via console port</p> <p>Workaround: None</p>
CSCdu62742	<p>Symptom: When performing a service switch on a given bay, some of the lines did not switch. Returning a message indicating that the line has an error due to a higher priority in existence.</p> <p>Condition: This probably could be overlooked and user misunderstanding. If the far end has a pre-existing condition of higher priority switching would not perform on any given line.</p> <p>Workaround: None.</p>
S3 Anomalies	
CSCds14722	<p>Symptom: There is no way to display Hmm Error counters from the CLI.</p> <p>Condition: No command available.</p> <p>Workaround: None</p>
CSCds42201	<p>Symptom: Standby PXM45 card is in continuous reset loop, all AXSM cards in the shelf are either in failed state or in reset loop.</p> <p>Condition: Injecting a hardware failure on SRAM component of active PXM45 card manually.</p> <p>Workaround: None</p>
CSCds42505	<p>Symptom: No major alarm is displayed against AXSM card in card alarms when the card is in failed state.</p> <p>Condition: Injecting a hardware failure on SRAM component of active PXM45 card manually.</p> <p>Workaround: None</p>
CSCds43093	<p>Symptom: switchcc allowed to be executed when the standby PXM45 card has a hardware failure.</p> <p>Condition: Injecting a hardware failure on SRAM component of standby PXM45 card manually.</p> <p>Workaround: Do not execute switchcc.</p>
CSCds43124	<p>Symptom: Standby PXM45 card hardware failure is not reported correctly.</p> <p>Condition: Injecting a hardware failure on SRAM component of standby PXM45 card manually.</p> <p>Workaround: None</p>
CSCds43165	<p>Symptom: Active and standby PXM45 card hardware failure is not reported in the event log.</p> <p>Condition: Injecting a hardware failure on SRAM component of either active or standby PXM45 card manually.</p> <p>Workaround: None</p>

Table 38 Known Anomalies for Release 2.1.10 (continued)

CSCds43560	<p>Symptom: PXM45 card status LED is green when the card is continuous reset loop.</p> <p>Condition: Injecting a hardware failure on BRAM component of active PXM45 card manually.</p> <p>Workaround: None</p>
CSCds66375	<p>Symptom: Dspcd, dspcds, dspbkpl, readid bkpl, recordid bkpl show inaccurate headings.</p> <p>Condition: Always.</p> <p>Workaround: None.</p>
CSCds66602	<p>Symptom: Dax Vcc connection fails</p> <p>Condition: An unrelated VPC partition is deleted</p> <p>Workaround: None</p>
CSCds70494	<p>Symptom: No mechanism to filter flood of HMM error log.</p> <p>Condition: Too many errors reported to HMM. The only way to stop this is to disable HMM reporting.</p> <p>Workaround: None</p>
CSCds73435	<p>Symptom: Residual database information causes AXSM card state to be interpreted incorrectly. An AXSM card inserted into this slot with the residual database may not successfully come up.</p> <p>Condition: Residual database on the disk can be introduced if the active PXM45 card or disk is replaced with an older card or disk that has old data on it.</p> <p>Workaround: Before replacing an active PXM45 front card or disk, make sure that there is a saved configuration for that node. After replacing the active PXM45 front card or disk, restored the saved configuration. Or to verify if there are residual data on the disk, after the node comes up, perform a list file command (e.g. ll) on the D:/DB2 directory. For every slot that is reserved, there should be a corresponding subdirectory for that reserved slot (e.g. SL7), if there are extra subdirectories for non-reserved slots, these are residual old databases.</p>
CSCds88784	<p>Symptom: The dspcdalms and dspcds commands show minor and major alarms for AXSM cards. These alarms are for HUMVEE errors that were reported to the CAM, but can not be cleared.</p> <p>Condition: In versions 2.0(X) and 2.1(X), there is no way to clear individual card alarms. These alarms are maintained as a summary of all minor and major alarms in the system.</p> <p>Workaround Use the resetcd -f command, in order to clear the alarm summary counters. Note: This command will NOT physically reset the card; only the alarm summary counters will be cleared.</p>
CSCdt05372	<p>Symptom: Pop-up messages appeared on CLI.</p> <p>Condition: Hard disk failure was simulated during fault insertion testing.</p> <p>Workaround: None</p>
CSCdt14348	<p>Symptom: Should not have a hard-coded enable password on the standby RPM.</p> <p>Condition: Only on standby RPM.</p> <p>Workaround: None.</p>

Table 38 Known Anomalies for Release 2.1.10 (continued)

CSCdt23235	Symptom: Pushing the 2 buttons on the front of the PXM45/B board does not generate a CORE dump when the card resets. Condition: None. Workaround: None.
CSCdt31059	Symptom: Sub-interface addition without specifying link-type results in anomalies. Condition: Sub-interface should be added without specifying link-type. Workaround: While adding sub-interface always specify sub-interface link-type.
CSCdt70323	Symptom: Need non-shellconn method of burning PXM45 boot code which also does not require console access to each PXM45. Condition: None Workaround: None.
CSCdt84148	Symptoms: Switch fails sometimes when the operating mode is bi-directional. Conditions: APS switchover fails. Workaround: To provision 1+1 uni direction on at least one side.
CSCdt86445	Symptom: addcontroller does not check for all error conditions Conditions: Adding LSC controller on AXSM card, adding controller on empty card, and adding 2 controllers on the same slot. Workaround: None
CSCdt86631	Symptom: Trap Vendor OID is wrong. Conditions: addcontroller on empty card. Work Around: Do not addcontroller on empty card.
CSCdt91951	Symptom: AXSM card resets after 1 minute of lost data after error injection. Condition: Injected error on the Utopia 3 bus between Humvee and QE48 detected by Online diagnostics causes card switchover. Workaround: None
CSCdt93005	Symptom: None Condition: CTC error in dsplog Workaround: None

Table 38 Known Anomalies for Release 2.1.10 (continued)

CSCdu01259	<p>Symptoms: Command sh switch partition shows wrong information regarding PXM45 Slot and ifType.</p> <p>Conditions:</p> <pre>Router# sh switch partition vcc 1 ----- Shelf : 1 Pxm Slot : 7 Slot : 4 IfType : 3 Router# sh switch partition vpc 1 ----- Shelf : 0 Pxm Slot : 0 <--- should this be slot 7 Slot : 4 IfType : 0 <--- Does ifType = 0 correct ?</pre> <p>Workaround: None</p>
CSCdu22932	<p>Symptom: When loadsharing and autosutdown is enabled and the planes shut down due to switch plane errors, standby card needs to show degraded mode.</p> <p>Condition: Loadsharing and autosutdown enabled and crossfabric seeing alarms.</p> <p>Workaround: None.</p>
CSCdu26141	<p>Symptom: SHM-4_DB_REQ_FAIL messages are logged at Sev-4 in the event log</p> <p>Condition: Consecutive reseted commands were executed on the PXM cards in this system.</p> <p>Workaround: None</p>
CSCdu27030	<p>Symptom: OAM CC Activation Cell correlation tag is incorrectly modified.</p> <p>Condition: User notes that an F4-Seg Active-CC OAM cell with a correlation tag of 0x6A is returned to the sending device with a correlation tag of 0x00.</p> <p>Workaround: None</p>
CSCdu33656	<p>Symptom: "dspportload" command does not have the option for a time period based utilization.</p> <p>Condition: Use AXSM CLI command - "dspportload".</p> <p>Workaround: None.</p>
CSCdu43253	<p>Symptom: VC AIS is reported back to CPE sending LOS into UNI port.</p> <p>Condition: Customer notes incorrect reception of VC AIS at a test analyzer connected to an AXSM UNI port after introduction of LOS. This behavior is not expected.</p> <p>Workaround: None</p>
CSCdu54884	<p>Symptom: Core dump and SHM_CDF_RESET_FAILED event and error messages were generated for an AXSM slot</p> <p>Condition: Card had been reset</p> <p>Workaround: None</p>

Table 38 Known Anomalies for Release 2.1.10 (continued)

CSCdu58108	<p>Symptom: RPM-PR card description is invisible from MGX8850's SNMP interface.</p> <p>Conditions: The entPhysicalDescr object produces a null string for RPM-PR. This condition is present in Release 2.1 of MGX8850.</p> <p>Workaround: Use the "dspcds" CLI command, or decode the value returned for entPhysicalVendorOid.</p>
CSCdu59116	<p>Symptom: tstconseg fails when the line is put in physical loopback.</p> <p>Condition: AXSM CLI - use tstconseg command with a physical loopback on the line.</p> <p>Workaround: Use logical loop-back (addlnloop/dellnloop).</p>
CSCdu60534	<p>Symptom: dsp*load commands do not have accurate cps where "*" is ln/port/con. It can also be compared to dspportent.</p> <p>Condition: AXSM CLI commands : dsplnload, dspportload, dspconload and dspportent.</p> <p>Workaround: The values are nearly correct for low cell-rates. See the "Lab-results" attachment for details.</p>
CSCdu61522	<p>Symptom: Trap IP address on a node observed to change.</p> <p>Condition: Hard drive backcards have been swapped with other nodes, and switchccs were executed on days when IP address was observed to change</p> <p>Workaround: None</p>

Anomalies Resolved in Release 2.1.10

[Table 39](#) lists anomalies that were in Release 2.1.10 that are resolved in Release 2.1.60. Included with each anomaly is a brief discussion of the problem. For additional information, use Bug Navigator to view the release note enclosure associated with the Bug ID listed in the table.

Table 39 Resolved Anomalies that Were in Release 2.1.10

Anomaly ID	Description
S1Anomalies	
CSCdr04767	PNNI link state stay in OneWayInside/Attempt after AXSM reboot.
CSCds48791	RPM-PR doesn't always come up.
CSCds52336	Standby-PXM switch-plane links get shut on AXSM-Reset.
CSCds79775	PXMB: Tlb load exception on single AXSM while reinserting PXM45/B card
CSCds83769	REG: SCM retries; Stby PXM45 and all AXSMs went down; qe overflow.
CSCdt01701	resetcd of the RPM, caused the active PXM45 reboot.
CSCdt05292	When did the switchcc, ipc err flooded the screen and PNNI went down.
CSCdt29711	LCN port group used count goes -ve while upgrading the node.
CSCdt38643	AXSMB:OC3andOC12 1+1APS; switchaps didn't switch remote line w/Bi-Dir.
CSCdt40561	DLS: SPVCs failed after upgrade due to cross-commit fail
CSCdt47965	switchcc Causes RPM-B/RPM-PR to lose cells.

Table 39 Resolved Anomalies that Were in Release 2.1.10 (continued)

CSCdt48247	AUTOCARD: DBs should be created on Standby also.
CSCdt53443	Always get bulkfile create aborted trap 60903 when upload RPM file.
CSCdt55555	PXM45 card gets stuck in idtmon. Undo the checkin CSCdt33765.
CSCdt57525	APS OC3 back card remove/insert caused protection chan stuck signal fail.
CSCdt62832	switchcc with resetsys causes links to go to 1Wayinside.
CSCdt62917	The SPVC connections not routing because of node upgrade.
CSCdt65453	The ports stuck in buildingvc/downinprogress after resetsys of peernod.
CSCdt70757	The SPVC connections not routing because of node upgrade.
CSCdt72750	Standby card went to Init state after AXSM upgrade
CSCdt72786	Pnports went to building VC state after upgrading bootcode for AXSM
CSCdt74499	CLI commands were rejected because of time outs
CSCdt75070	Standby card went to Init state after AXSM upgrade.
CSCdt79058	Application should never send an already freed iov buffer.
CSCdt80570	R5K L2 Cache is incorrectly enable.
CSCdt80677	The current baseline code always skips Nativity checking.
CSCdt83293	restoreallcnf did not restore cfg on the node.
CSCdt86743	SNMP fails on the whole shelf leaving it unmanageable.
CSCdt87745	100K:stat counter not decremented causing cong. and all 100K fail
CSCdt87835	AXSM/B:1+1APS; 3 PNNI links down, SSCOP in reset, after SW upgrade.
CSCdt95005	AXSM/B:OC3 1+1APS; working line auto switch failed after working line back card removed.
CSCdu01185	SLT: OC48 redundancy works only in one way properly.
CSCdu16786	AXSME-RED: core didn't get dumped.
CSCdu17620	DLS:PNNI tries to route call using VPI/VCI assigned to active call.
CSCdu24141	RPM ABR PCR is not enforced during traffic flow.
CSCdu26664	DLS:Connections failed to route after node rebuild
CSCdu30563	DB2: Configuration done during Standby coming up is missing
CSCdu36048	Backout changes for CSCdu05489 and CSCdu19989.
CSCdu54317	DLS: Connection Reserve failures due to LCN CAC issues
S2 Anomalies	
CSCdr15911	PhyTask suspended after inserting OC48 back card.
CSCdr89521	DLS: Routing cost deteriorates to 0 for a routed connection.
CSCdr91301	AXSM-RED: ILMI disabled in PXM45 automatically *REDT*.
CSCds22332	AXSM slot remaps are messed up on standby PXM45.
CSCds46509	REG: inconsistency in displaying s/w versions.
CSCds52863	100K: SPVC dax connections disappear after PXM45 software upgrade from 2.0 to 2.1.
CSCds64705	Load-Sharing enabled, Hv err on act-Pxm45 during standby PXM45 bring up.

Table 39 Resolved Anomalies that Were in Release 2.1.10 (continued)

CSCds78391	Online diag was ran on standby AXSM card, it went to fail state.
CSCds78530	MPLS VSI Interface Policy not programmed in PXM45.
CSCds84581	REG: problem with APS lines that has ILMI enabled
CSCdt07644	DLS: Minor clock alarm for primary clock is never cleared
CSCdt07730	DLS: dspelkalms shows minor alarm for secondary instead of primary
CSCdt09616	Connections do not clear IF FAIL if added when port is down.
CSCdt09931	DLS: Node goes onto internal oscillator after switchcc.
CSCdt09949	DLS: Channel loops are lost randomly without doing anything.
CSCdt11342	REG: SHM show RPM in BOOT although RPMs are active after switchcc.
CSCdt11521	vsiProcessVxlCommitRsp:no legs, but has Pep error message keep pop up
CSCdt16262	AXSM/B: 1+1 APS failed switchaps W->P, after protection line Lockout and Clear.
CSCdt16458	AXSM/B:1+1 APS disapsln showed differ results after switchapsln failed.
CSCdt19936	Ports stuck in building vc after node reset
CSCdt25937	cnfpnportsig value for aini is accepted but not working.
CSCdt37525	syncRam allows application to send to standby while standby failed
CSCdt38272	AIS are not detected on the routing node when dnpnport is issued.
CSCdt38628	DLS: dspbecnt shows wrong info for an aps line
CSCdt38632	Command routeNedAdd failed
CSCdt41415	AXSM ports stuck in autoconfig after power cycling MGX 8850
CSCdt42037	Control Characters Cause CLI Monitor Change Without Warning.
CSCdt42953	cc enable should be allowed if oam is set for enni.
CSCdt43001	AXSM/B:OC3 1+1APS; over 75% VCCs in alarm after switchredcd.
CSCdt43448	3 spvc connections of 100k failed after reset sys
CSCdt43629	DLS: Nodal data in disk mismatch with RAM data msg appears in event l
CSCdt44343	Event log files are not ordered chronologically.
CSCdt45544	DSL: <scmproccardinsertremovemsg> unknown slot 23 on switchcc
CSCdt45643	DLS: Route Op Start/STop messages are dropped incorrectly
CSCdt47978	dbgcon command should be removed from cli
CSCdt48282	Core dump functionality for AXSM
CSCdt48479	ABR CDVT policing does not work on AXSM
CSCdt51273	softswitch causes failure to open virtual port on new active card.
CSCdt52132	SHM: event filter should free event before return
CSCdt52608	REG: setrev on active PXM45 made the pnports to go autoconfig.
CSCdt53257	tstdelay on a SPVC connection is not consistent
CSCdt53354	vsiSync task crashed after an upgrade was aborted.
CSCdt54457	NNI links went into vc failure.
CSCdt55245	Dynamic scaling: MPLS COSs need to have different scaling classes.

Table 39 Resolved Anomalies that Were in Release 2.1.10 (continued)

CSCdt55938	CWM cannot resync on AXSM card.
CSCdt56272	BKT1-SLT: Node rebuilt on its own after a double failure.
CSCdt56312	APS intermittently fails to switching on OC48/OC3 (BlandNREV).
CSCdt57738	IPCONN SVC not up (VcTbl Full)
CSCdt57775	DLS: warning regarding cnfnportcac applying to existing calls
CSCdt59596	Trap 60078 slot/index varbinds are switched in trap output
CSCdt60239	REG: Active line shows ALM when switchredcd on the other side of 1+1APS.
CSCdt60315	Dspalment does not work for RevRAI alarm on AXSM T3 card
CSCdt62251	Active Trap Received When down then up on AXSM->RPM connection.
CSCdt62497	No Up Trap is Received when down then up on RPM->RPM connection.
CSCdt63170	DLS:resource allocation after AXSM pair reset.
CSCdt64155	Update cwm with line state after switchover.
CSCdt65181	Redundancy switchover trap has incorrect data.
CSCdt66184	Access level for addcon... should be GROUP
CSCdt67969	REG: Standby PXM45A reset from init state.
CSCdt68712	Virtual trunks were not coming up even spvp conns were out of alarm
CSCdt70494	dspreed shows slot as empty even though standby.
CSCdt70708	Connection cannot cnfcon on connection at feeder endpoint.
CSCdt70864	SRM slots should not alarm when empty in 2.1(0).
CSCdt74986	DAX conns generating E-AisRdi alarm
CSCdt75047	IPCONN: PXM switchover can leave ATM SVC in wrong state
CSCdt75586	SBC: dspnni-link displayed attempt-onewayinside
CSCdt76291	MPG: Timer was overwritten when more than 5 outgoing resource inform.
CSCdt76575	Software exception caused by task PhyTask missing for OC12 card.
CSCdt79166	UPG-dt: Runrev blocked due diskupdate without any provisioning.
CSCdt80226	REG: Uni port went into vc failure after adding 5k SPVC slave ends.
CSCdt80433	Connections and port on SM non active in the chassis are OK and UP.
CSCdt81775	AXSM does not report mismatch even if the other end point got delete.
CSCdt82559	REG: Some master end points had AIS/RDI after resetsys at both ends.
CSCdt82767	VSICORE: connections are not deleted properly in VcoBulkDel (dnport).
CSCdt83005	COREDUMP: Enable AXSM coredump feature by default
CSCdt84185	Dangling / Disappearing leg in CM.
CSCdt84299	Node rebuilt itself after restoreallcnf and cmLmi exception found.
CSCdt85241	Standby RPM doesn't take over primary slot after resetsys.
CSCdt86437	RPM uses hard-coded SNMP community string of MGX 2.0/2.1 SW
CSCdt86522	RPM ports in down state after a resetsys on node.
CSCdt86827	Inconsistencies with sub interface.

Table 39 Resolved Anomalies that Were in Release 2.1.10 (continued)

CSCdt86961	Sub interface down does not get reflected in connection status.
CSCdt89684	The PXM45 active card failed after inserting the RPM/PR.
CSCdt91205	MIB version shows up as 0 in gFwMibSlotInfo Table.
CSCdt91237	AXSB:1+1APS; dsplns had Critical/Major alm, but dspalm was Clear.
CSCdt94279	IPC event declaration and usage mismatch.
CSCdt96477	CSMI task needs to free up the pipe buffer on getting pipe send err.
CSCdt97193	Core mask data corrupted.
CSCdt97225	During pcpro audit out of sync connections should be flagged not deleted.
CSCdu00244	VSICORE/RM: Delete Ingress connection ID failed on standby.
CSCdu04807	CRC mismatch between RVT and PXM45 dbs.
CSCdu04832	Need to check partitions lcn range while adding a new partition.
CSCdu05612	RM/DAL: del egr connection ID failed due to the implicit egr connection ID delete.
CSCdu06158	VSICORE: add egress connection ID failure.
CSCdu07155	VC merge does not work on AXSM 1and2 cards.
CSCdu09353	Service switch causes all APS lines on both bays to switch.
CSCdu10842	Connection Trace MIB tree contains incorrect value.
CSCdu10851	AXSM: IFC State transitions to FAILED_INT after switchcc
CSCdu11128	SyncRam/DataXfer did not detects register from wrong slot.
CSCdu12506	All interrupt are disabled while adding intra-card APS lines.
CSCdu13182	AXSM DS3 interface fails after 6130 reloading.
CSCdu17872	Ports can be provisioned to a corrupt SCT file, no warning generated.
CSCdu20368	DLS: Evt. log: switchcc results in watchdog already created msg.
CSCdu20402	Wrong value returned for cwspOperIlmiEnable MIB object.
CSCdu20428	CBR.3: VSIM setting scr equal to PCR0 instead of PCR0+1.
CSCdu20588	DLS: Evt.Log: switchcc results in SSIF bad timer message in log.
CSCdu20591	DLS: Evt. log: switchcc results in ILMI error messages in log.
CSCdu20596	DLS: Evt.Log: switchcc results in Error in rebuilding in spvcStandbyUp.
CSCdu20858	DLS:CLI commands to be included in the Evt. log Severe Cmd. category.
CSCdu21004	DLS: Evt. log: switchcc resulted in PXMC-4-RAMSYNC error messages.
CSCdu21576	Connections not in MISMATCH state.
CSCdu23901	Connection Trace MIB requires new variable.
CSCdu30471	Trunk would not route VPCs even though resources were available.
CSCdu38087	Partitions intf policy is synched up after connections on standby
CSCdu38123	Junk ABR parameters are sent in the commit during call release
CSCdu43684	Event logs flood the PXM45 disk due to CAC errors
CSCdu50537	fix broken AXSM coredump
CSCdu50846	NILE4 attempt to write the write protected memory area

Table 39 Resolved Anomalies that Were in Release 2.1.10 (continued)

S3 Anomalies	
CSCds02957	dspvsiparts should display the number of conns in each partition
CSCds44434	Found a diagnostic error in dsplog when online diags run on PXM45.
CSCds50108	dspcon show the incorrect RIF/RDF values in ABR connection.
CSCds50591	Trace back error when OSPF running on 255 SPVP connection.
CSCds52306	dspxbaralms doesn't show any alarms even though xbar err and alms exist.
CSCds52595	trapCITask keeps logging Invalid Ptr Messages
CSCds68651	AXSM2 card takes 10 minutes to reset when QE-48 chip is reset.
CSCds69414	PNNI event is misleading about service module card role
CSCds73580	upport should be blocked by the cema if the Port is in the UP state.
CSCds77014	dspapsln and dspapslns display different alarm states.
CSCds79149	REG: incorrect err generated when addpart with no port.
CSCds80214	dspcd display is inconsistent for full and half-height card.
CSCds87038	DLS: dspdiagcnf, dspdiagerr, dspdiagstatus commands do not break
CSCds89750	Trap 60301 cwChanAdd received w/ invalid varbind cwaChanVpcFlag.
CSCdt04929	Only allow copychan to copy up to 20 conns
CSCdt05929	tstdelay for feeder end should be rejected
CSCdt08776	REG: calling of API ctcAppActiveRdyconfirm fails when switchred
CSCdt10751	Alarm information needs to be broadcast to AXSMs.
CSCdt14240	ssiIpcEpWait(0) handling need enhancement
CSCdt16719	Upd: need remove pop up message on newly active PXM45 card.
CSCdt23408	DLS: Popup messages on all telnet sessions when dspsscops executed
CSCdt23729	Xbar fencing command needed.
CSCdt24006	Event Log Cleanup: ShelfMgr event logged Sev 2
CSCdt25266	SSI-EXCEPTION in tDbgTrc for OC48 card.
CSCdt32558	switchcc causes lots of cmStdbySetVpiVciBitmap events (7000+)
CSCdt33765	BackupBoot: PXM45A/B, AXSM cache not flushed correctly
CSCdt36274	addapsln should not allow for annex B option in command line.
CSCdt39878	Error messages on APS CLI commands gives unnecessary messages.
CSCdt41012	SHM: addred/delred commands are not logged by CLI.
CSCdt42037	Control Characters Cause CLI Monitor Change Without Warning.
CSCdt42209	DLS: CUT: (cuts) failed to schedule timer in cutsProcessAckRecv even
CSCdt43383	UPG-dt: Setrev on a redundant pair with Primary card missing fails.
CSCdt43625	REG: Allowed to configure redundancy between upper bay and lower bay.
CSCdt44241	Display Alarms Commands Not Corresponding
CSCdt46363	SHM: clrallcnf doesn't delete SHM DBs.
CSCdt48901	DLS:ILMI disabled messages printed in event log after switchcc

Table 39 Resolved Anomalies that Were in Release 2.1.10 (continued)

CSCdt51884	SHM: Doesn't prevent multiple upgrades simultaneously.
CSCdt52092	DLS: Call failure due to max crankbacks msg in event log
CSCdt52357	All printf's need to be changed to ssiDbgPrintf's.
CSCdt53956	DLS: dsprevs command randomly displays garbage for non-existent card
CSCdt55215	REG: Vsi_avl_tree_add failed, node exist- message got generated.
CSCdt59746	SSI: Mark the corrupted chunk to avoid repeated logging
CSCdt58380	CoreDump: request for setting default value for 2.0
CSCdt60607	switchredcd command should prompt user with warning to continue
CSCdt60635	dsppnport output does not show univer self signalling correctly.
CSCdt61754	clrportent doesn't check for the port.
CSCdt74560	Replace eventlog for invalid number of varbinds/bad linked list.
CSCdt76387	pcpro connection audit is not started sometimes.
CSCdt76635	Rev up of files done inaccurately.
CSCdt77534	DLS:CLKMGR STBY EPID INVALID/IPC CHAN. FLR. evt. msg on switchcc/reb.
CSCdt78111	Green LED remains on after cnfln to plcp and dnln on AXSM-16T3E3.
CSCdt78905	Congestion Manager logs errors when VSIM sends interfaces
CSCdt80847	Redundancy: a user command to check the active/standby consistency.
CSCdt81674	SLT: Software should not correct HecErr, should discard HecErr Cells.
CSCdt83286	AXSMB: Garbage Req. displayed on OC12 APS AXSM/B console.
CSCdt85723	DAL: dalConnIdShowByVpci doesn't return proper slot/port info.
CSCdt85953	Provide a solution to card nativity issues.
CSCdt86853	Invalid values in RPM_connection.
CSCdt89348	Need to display more granular level for the Alarm in dspapslns.
CSCdt89848	Popup after adding APS line.
CSCdt91656	Add ipcHelp routine on MGXII.
CSCdt97747	ivty_destroy_existing_session() in LOGIN error msg in log.
CSCdt98355	Verify functionality of cavi Stats.
CSCdu01995	No module option for dbgcon.
CSCdu03068	The command prompt doesn't show the correct VCI range.
CSCdu03444	RamSync code clean-up.
CSCdu03454	Line shows alarm even though it is DOWN.
CSCdu07942	clrallcnf doesn't clear RPM NVRAM Sometime...
CSCdu09570	ssi trace core dumps when more than 4 args are passed to it.
CSCdu16101	TCA threshold not defaulted after dnln.
CSCdu18994	DLS: saveallcnf popup after running clrcnf after upgrade to 2.1.
CSCdu23970	dspsapbkplane displays err msg when executed from standby card.

Anomaly Status Changes in Release 2.1.10

Table 40 lists anomalies that have changed status in Release 2.1.10.

Table 40 *Anomalies that Have Changed Status in Release 2.1.10*

Anomaly ID	Description
S1 Anomalies	
CSCdt29648	DLS: BPX interop- BPX port counter fails to update after aps switchover. Bug Duped, Change to Sev 2
CSCdt87174	Sync up fails on MGXII node. Unreproducible
CSCdu08846	DLS:BPX interop-data transfer affected after switchredcd. Bug Duped
CSCdu12856	DLS:1000+ SPVCs fail after burn boot on stdby and switchcc. Bug Duped
CSCdu15569	AXSM-B:1+1APS; Remove FC caused remote both WLines and PLines in ALM. Bug Duped
CSCdu43302	20k conns get derouted after burn new boot code on active PXM, Bug Duped
CSCdu46759	DLS: AXSM core dump did not complete, Verified
CSCdu50573	DLS:Offline diag-HDD full test failed, Verified
CSCdu62708	pnSscop Tlb load exception while save PXM core dump. Bug Duped
CSCdu62712	all links go down due to sscop reset. Unreproducible
CSCdu62739	:AXSM-B:OC3 1+1APS;Remove WLine BC, all Pnports Down, all VCCs failed. Closed
S2 Anomalies	
CSCds74270	DLS:SPVCs that were operationally down did not report alarms. Junked
CSCdt19949	DLS:switchapsln 4 and 6 should have higher priority than 3 and 5. Bug Duped
CSCdt29629	DLS:BPX interop-APS switch not allowed for 1+ min after alm cleared. Unreproducible
CSCdt63973	AXSM-B: OC12 1+1APS; depbecnt showed huge Count in 24 hr COUNTER. Closed
CSCdt69485	AXSM-B:OC3 1+1APS; both WLine and Pline in ALM after BER test switchaps. Closed
CSCdt75251	AXSM2 went to Empty Res State, max reset and hello problem. Closed
CSCdt80060	Conns remains in temporary failure after pnni-link down and up. Closed
CSCdt84036	the Redundancy got deleted and reappeared on RPM cards. Bug Duped
CSCdt88532	APS line went to protect after clearing it under a scenario. Bug Duped
CSCdt89899	RPM do not go active; RFS takes 3 hours to download image. Bug Duped
CSCdt96142	SLT: After Upgrade, OC48 log showed memory error. Bug Duped.
CSCdu14207	AUTO:Node Alarm Does Not Get Updated on dsp Screens. Unreproducible
CSCdu15972	backcard removal and reinsertion creates LOS,LOF on the other end. Bug Duped
CSCdu16674	OC48b:After BC removed and inserted port stuck in down state. Closed
CSCdu18017	IPC_buf mem problem during sw download to AXSM. Bug Duped
CSCdu19301	AXSME_APS: ABR conns fail to reroute; reject by tVsiSlave on CAC. Duplicated

Table 40 *Anomalies that Have Changed Status in Release 2.1.10 (continued)*

CSCdu20851	DLS:Evt.Log:switchcc results in SSI-4-NEXTCHUNKCORR chunk corrupted. Duplicated
CSCdu22880	BPX Interop. switchredcd Pri->Sec, P-Channel stuck with SF. Duplicated
CSCdu36152	ilmi lost connectivity after node reset(conn in E-AIS). Duplicated
CSCdu46109	DLS:Offline diag on PXM indicated Real-time clock test failure. Postponed
CSCdu51485	DLS:Invalid K1 (0x71) bytes reported/spurious alms/failure to switch. Unreproducible
CSCdu51488	DLS:Board Memory Full Discards on SPVCs during routing failures. Duplicated
CSCdu51470	DLS:pnport shows different remote end. Unreproducible
CSCdu55306	DLS: SPVCs went into mismatch after dnport/upport. Duplicated
CSCdu58827	DLS:Software error reset coredump during upgrade. Duplicated
S3 Anomalies	
CSCds42187	SIM: Multiple link warnings in several APS files. Closed
CSCds86986	Upg:AXSM switchover cause all links go to attempt state. Closed
CSCds67426	Upg:lost primary and secondary clock after system reset. Postponed
CSCdt04197	AXSM-B: APS Service switch did not try to switch every lines on AXSM-B. Duplicated
CSCdt28752	REG:One SPVC went into failed state. Unreproducible
CSCdt42337	AXSM-B:1+1APS; error msgs displayed on Active card after switchredcd. Closed
CSCdt48287	Xbar Alarm does not disable switch port. Duplicated
CSCdt69463	Card alarm display is inconsistent for AXSM OC12. Junked
CSCdt72072	OC12 dspcd shows junk info since from PXM45 dspcds show it Active-F. Junked
CSCdt73278	dspalms shows line 2.1 in alarms (LOS,etc) even line down,no backed. Duplicated
CSCdt74681	REG:520 SPVC master end points got deleted. Unreproducible
CSCdt76508	missing dspportalm, dspfeederalm and dspchanalm cmds on AXSM cds. Closed
CSCdt82111	Basic CLI prompt not displayed on active PXM failure. Closed
CSCdt82189	AXSM-B: OC12 1+1APS; dispapsbkplane gave inconsistent results. Closed
CSCdt93508	RPM Issues port 161 socket error every 60 seconds to console. Closed.
CSCdu13862	Lines missing in dsplns output, db shows sonet when lines are T3. Duplicated
CSCdu15566	AXSM-B: Protection line show ALM when it is OK. Duplicated
CSCdu15997	AXSM T3/E3 card gave wrong information after multiple switchredcd. Unreproducible
CSCdu21554	BPX-Interop. BPX should not allow F(P->W) while F(W->P) pending. Duplicated
CSCdu30398	addcon and delcon not logging correctly in dsplog. Closed
CSCdu46186	DLS:Popup message from AXSM card's CLI prompt. Closed
CSCdu48892	AXSM-B:1+1 APS; both WLn and PLn in SFL after LOS on both and WLn reinst. Duplicated
CSCdu52330	Need unequipped path detection for Australia homologation. Duplicated

Anomalies Resolved in Release 2.1.00

Table 41 lists anomalies previously in Release 2.1.00 that have been fixed in Release 2.1.60. Included with each anomaly is a brief discussion of the problem. For additional information, use Bug Navigator to view the release note enclosure associated with the Bug ID listed in the table.

Table 41 Resolved Anomalies that Were in Release 2.1.00

Anomaly ID	Description
S1 Anomalies	
CSCdt57525	APS OC3 BC remove/insert caused protection chan stuck signal fail
CSCdt62832	Switchcc with resetsys causes links to go to 1Wayinside
CSCdt65453	The ports stuck in buildingvc/downinprogress after resetsysofpeernod
S2 Anomalies	
CSCdr91301	AXSM-RED: ILMI disabled in PXM automatically *REDT*
CSCds64781	after delred the secondary RPM has config of previous primary
CSCds78530	MPLS VSI Interface Policy not programmed in PXM45
CSCdt11342	REG: SHM show RPM in BOOT although RPMs are active after switchcc
CSCdt11521	vsiProcessVxlCommitRsp:no legs,but has Pep error message keep pop up
CSCdt38260	DLS:pnport went into VC failure state after setrev
CSCdt38628	DLS: dspbecnt shows wrong info for an aps line
CSCdt43629	DLS:Nodal data in disk mismatch with RAM data msg appears in event l
CSCdt44668	UPG-dt:After a runrev on PXMA pair inserting PXMB causes ATMIZER err
CSCdt45643	DLS: Route Op Start/STop messages are dropped incorrectly
CSCdt51884	SHM: Doesn't prevent multiple upgrades simultaneously
CSCdt53257	tstdelay on a SPVC connection is not consistent
CSCdt56312	APS intermittently fails to switching on OC48/OC3 (BlandNREV)
CSCdt60239	REG: Active line shows ALM when switchred on the other side of 1+1APS
CSCdt67969	REG: Standby PXM45A reset from init state.
CSCdt70494	dspred shows slot as empty even though standby
S3 Anomalies	
CSCdr28284	User shouldn't have to specify SVC/SPVC w/dspchancnt *BLOCK*
CSCds44434	Found a diagnostic error in dsplog when online diags run on PXM451
CSCds50108	dspcon show the incorrect RIF/RDF values in ABR connection
CSCds68568	scm-seq-mismatches,bootburn takes more than 30 min on Axsm-oc12
CSCds68651	AXSM2 card takes 10 minutes to reset when QE-48 chip is reset.
CSCds70494	Need mechanism to filter error reporting to HMM
CSCds87038	DLS:dspdiagcnf, dspdiagerr, dspdiagstatus commands do not break
CSCdt26078	Non-existing CommEp..invalid tag logged when cc to AXSM card. (AUTO)
CSCdt42209	DLS:CUT:(cuts) failed to schedule timer in cutsProcessAckRecv even

Table 41 Resolved Anomalies that Were in Release 2.1.00 (continued)

Anomaly ID	Description
CSCdt43383	UPG-dt:Setrev on a redundant pair with Primary card missing fails
CSCdt43625	REG:Allowed to configure redundancy between upper bay and lower bay.
CSCdt46552	ilmi and port status of aini link shows up rather down
CSCdt55215	REG:Vsi_avl_tree_add failed, node exist- message got generated.
CSCdt58554	Modify APS Event Log to make it more user-friendly.
CSCdt60635	dsppnport output does not show univer self signalling correctly

Known RPM-PR/MPLS Anomalies

The following sections present known and resolved anomalies for RPM-PR.

Known Anomalies for RPM

Table 42 Known Anomalies for RPM

Bug ID	Description
CSCdw07374	<p>Symptom: Connections are missing in RPM after executing a reload.</p> <p>Conditions: While adding 2K connections via a scripts, it was noted that some of the slave end points did not get created or were missing.</p> <p>Workaround: None</p>
CSCdr43330	<p>Symptom: MIB objects range for PCR/SCR/MBS is specified between 7 and 23000000.</p> <p>It should be between 0 and 0xffffffff.</p> <p>Conditions: The current MIB advertises the PCR/SCR/MBS range as valid from 7 through 23000000.</p> <p>This was put in specifically for AXSM. However, because the MIB is used by other SMs as well, the range for these connections parameters should be changed to the generic range of 0 through 0xffffffff.</p> <p>Workaround: None</p>
CSCdt52963	<p>Symptom: RPM adjusts its clock by GMT offset in all cases.</p> <p>Conditions: After a reset of the RPM, the time on the RPM is off by -8 hours. For example, if the PXM shows 09:00:00 PST, the RPM shows 01:00:00 PST</p> <p>It appears that the RPM assumes the time received from PXM on a reset is a UTC time and will adjust it accordingly to its configured time zone. Therefore, if the PXM is on PST -8 and RPM is PST -8, the RPM ends up with time that is offset by -16 hours from UTC. (PXM configured time zone is PST with a GMT offset of -8.)</p> <p>Workaround: Configure the RPM to be on UTC time.</p>

Table 42 Known Anomalies for RPM (continued)

Bug ID	Description
CSCdu01259	<p>Symptom: sh switch partition command shows the wrong information for <i>PXM Slot</i> and <i>ifType</i>.</p> <p>Conditions: Executing the show switch partition command on an RPM shows the existing partitions. However, executing a sh switch partition vcc vpc <partition_id> command displays detailed information on the specified partition.</p> <p>The data from these 2 commands should match, but does not.</p> <p>Workaround: None</p>
CSCdu57693	<p>Symptom: Resetcd on an RPM-PR leads to deletion of all NON-DAX RPM-RPM segments on that card</p> <p>Conditions: Add few non-dax connections on an RPM-PR card. Reset that card. After the card comes up as active, those non-dax connections on that card are deleted.</p> <p>Workaround: Execute a write memory on the RPM before resetting the card.</p>
CSCdv41385	<p>Symptom: One RPM failed randomly on reload /resetcd.</p> <p>Conditions: When the RPM card comes up, it is unable to register the polling port to pxm randomly. Therefore, RPM cannot create the ipc session for polling port and the RPM card goes into fail state.</p> <p>Workaround: Reload or resetcd again</p>
CSCdv91589	<p>Symptom: RPM tries to recreate database for standby/secondary rpm-pr .</p> <p>Conditions: When the switchcc or resetcd of active PXM card is executed, the secondary RPM cards tried to create the database, which resulted in displaying the errors in the log.</p> <p>Workaround: None</p>
CSCdw00887	<p>Symptom: Occasionally, when an RPM_PR card is reloaded, it goes into FAIL state.</p> <p>Conditions: RPM_PR occasionally goes into fail state when switchcc command is executed to switch between slot 7 and slot 8.</p> <p>Workaround: Do a switchcc again (from slot 8 to slot 7), which will force the RPM_PR to reload and eventually come up.</p>
CSCdw16306	<p>Symptom: Standby PXM receives corrupted RMM seat table from the Active PXM.</p> <p>Conditions: Standby PXM sometimes receives corrupted RMM seat table from Active PXM. Executing a switchcc following this corruption might cause an unsuccessful bootup of the RPM.</p> <p>Workaround: None</p>
CSCdw17607	<p>Symptom: Control-Break sent through hyperterminal caused the exceptional error on rpm-pr.</p> <p>Conditions: After connection between the PC serial port to RPM_PR console port, opened up the hyperterminal with speed 9600. Sending a cntr-break caused an exception error and failed to go to rommon state as expected.</p> <p>Workaround reset rpm-pr</p>

Anomalies Resolved for RPM /MPLS

Table 43 *Anomalies Resolved for RPM*

Bug ID	Description
CSCdu56412	<p>Symptom: Received "startup-config file open failed()" message on RPM-PR while executing a "write mem" command.</p> <p>Conditions: Received a "startup-config file open failed()" error message while performing a save configuration (write memory) command.</p> <p>Workaround: None</p>
CSCdu88446	<p>Few MGX 8850 and MGX 8950 nodes are not syncing up due to -2 trap. CWM times out during upload file for RPMs card</p> <p>Conditions: Some of MGX8850 and MGX8950 nodes are remaining in mode 2 for a long time. Even if they go to mode 3, they will come back to mode 2 once a -2 trap is sent by RTM. RPM proxy (on PXM) upon receiving config upload file requests from CWM, executes mib walk on all RPM including standby RPM card. Standby cards should not be part of mib walk.</p> <p>Workaround: None</p>
CSCdv14066	<p>Symptom: IOS CLI shows that RPM card configuration exists, but this information does not get reflected in CWM CM GUI or when the mib walk is executed on the concerned RPM tables.</p> <p>Conditions: This is an intermittent bug where while the RPM-PR card on MGX 8850 nodes is in active state with some provisioning done. IOS CLI shows all the configuration correctly but CWM CM GUI and/or mib walk on the RPM tables does not reflect any data on the card. In fact, the card does not even register in the mib walk -like if it is not present in the node.</p> <p>Workaround: None.</p>
CSCdv25962	<p>Symptom: Cannot cc to RPM-PR</p> <p>Conditions: Unable to perform a cc at one of the RPM-PR cards while mpls is working on that particular RPM-PR, but you can enter into this RPM-PR through telnet from the LSC or other eLSR.</p> <p>Workaround: None</p>
CSCdv27197	<p>Symptom: auto_config_slot## file used for storing RPM config on PXM disk (E:/RPM) keeps growing with each "wr mem" or "copy run start" executed. A reload of config from this file may fail.</p> <p>Conditions: auto_config_slot## file is chosen as storing the config for RPM and "wr mem" or "copy run start" is executed.</p> <p>Workaround: Rename old auto_config_slot## file to some invalid name and then execute "wr mem" or "copy run start" This needs to be done for each operation of saving config. The old file with invalid name can be deleted once "wr mem" or "copy run start" has executed successfully and a new auto_config_slot## is created.</p>
CSCdv72612	<p>Symptom: Cannot add 1:N redundancy on RPM cards.</p> <p>Conditions: When trying to add RPM 1:N redundancy, received the following error message: addred : Primary Slot upgrade in progress #### tRedCliRqstAddRed: priSlot 2 secSlot 3 redType 1 FAILED</p> <p>Workaround: None</p>

Table 43 Anomalies Resolved for RPM (continued)

Bug ID	Description
CSCdv91334	<p>Symptom: On executing a switchcc command, tRvt task sends numerous (60401) traps to CWM station.</p> <p>Conditions: Every time the switchcc was performed on pxm45 cards, numerous sub interface traps - 60401 - were generated from the switch. This large amount of traps ties up CWM.</p> <p>When CWM receives a large number of traps in a short period, the RTM in CWM generates -2 traps. which triggers the EM to start a new node resync of the node. This impacts the syncup time of CWM when switchcc is performed.</p> <p>Workaround: None</p>
CSCdw00887	<p>Symptom: Occasionally when an RPM_PR card is reloaded, it goes into FAIL state.</p> <p>Conditions: Sometimes RPM_PR goes into fail state when a switchcc command is executed to switch between slot 7 and slot 8.</p> <p>Workaround: Do a switchcc back, which will force the RPM_PR to reload and eventually to come up.</p>
CSCdw15710	<p>Symptom: 120 xpvc connections were added from the CWM utility, ConnProxy. Good connections on the switch were shown as failed in the GUI.</p> <p>Conditions: 120 xpvc, RPM-PR connections were added through conn proxy between c1-p2(slot 9, vpi=0, vci=2005-2120) and bpx1.fdr1 (slot1, port1 , dlci=5-120). All of these connections were displayed as failed in the GUI.</p> <p>In the CWM database oper_status (operational status of the rpm end point) for these connections was failed. The RPM file received from the switch contained the same information that connections were failed. However, on the switch itself, connections were not failed. On PXM they were ok, and on RPM they were in the mismatch alm.</p> <p>Workaround: None</p>

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