



# Release Notes for Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830, Software Version 4.0.17

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## About Release 4.0.17

The PXM45 and AXSM-XG software for Release 4.0.17 on Cisco.com was updated from version .200 to version .201 to include the following resolved anomalies: CSCeg29724 and CSCeg88649. See [Table 24](#) in the “Resolved Anomalies in Release 4.0.17” section on page 104.

In addition, the PXM45 software has been updated from .201 to .202 to include the following resolved anomalies: CSCec48191 and CSCeg52860. See [Table 23](#) in the “Resolved Anomalies in Release 4.0.17” section on page 104.

For the list of files in this release, see [Table 8](#) in the “MGX and RPM Software Version Compatibility Matrix” section on page 33.



**Note**

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PXM45 versions .200 and .201 are still supported. AXSM-XG version .200 is still supported.

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These release notes describe the system requirements and limitations that apply to Release 4.0.17 of the MGX 8850, MGX 8950, and MGX 8830 multiservice switches. These notes also contain Cisco support information.

For a list of the open and resolved anomalies in this release, see the “Anomalies in Release 4.0.17” section on page 88.



**Note**

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FRSM12 cards are not supported in this release.

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## Type of Release

Release 4.0.17 is a software release for the following MGX switches:

- MGX 8830 PNNI routing switch
- MGX 8850 (PXM1E)
- MGX 8850 (PXM45)

## Locating Software Updates

The following URL is the location for the MGX 8850 (PXM45/PXM1E), MGX 8830, and MGX 8950 Release 4.0.17 software:

<http://www.cisco.com/kobayashi/sw-center/wan/wan-planner.shtml>

## New Features and Enhancements in Release 4.0.17

None.

## New Features and Enhancements in Release 4.0.15

This section describes new developments in Release 4.0.15.

### Frame Discard Feature

New developments have occurred in the CLI for the Frame Discard feature in connection provisioning. Starting with Releases 3.0.23 and 4.0.10, two types of frame discard became available. For a detailed explanation, refer to the **addcon** or **cnfcon** description in either the *Cisco MGX 8830, MGX 8850 (PXM45 and PXM1E), and Cisco MGX 8950 Command Reference* (Release 3 or 4) or the *Cisco ATM Services (AXSM) Software Configuration Guide and Command Reference for MGX Switches* (Release 3 or 4).

Also see the Note in the Installation and Upgrade section of these release notes.

## New Features and Enhancements in Release 4.0.12

This section describes new features and enhancements in Release 4.0.12.

### Point-to-Multipoint Support

The SVC/SPVC point-to-multipoint (P2MP) feature offers the ability for an endpoint (termed the root endpoint) to establish a simple tree topology to multiple endpoints (termed leaf endpoints). The data traffic is uni-directional in the direction from the root to all the leaves. When P2MP calls are established using signaling, leaves can be added to a root endpoint using SETUP/ADD\_PARTY signaling messages.

P2MP is a mandatory feature described in UNI 3.0, UNI3.1 and UNI4.0<sup>1</sup> specifications. The implementation is compliant within Q2971.

P2MP calls can also be setup by provisioning a root endpoint using the **addcon** CLI command. The leaf endpoints can then be added by using the **addparty** CLI command.

The numbers of P2MP connections that can be supported on different MGX platforms are listed in [Table 1](#).

**Table 1** Point to Multipoint Support

	MGX 8950 <sup>1</sup>	MGX 8850 <sup>2</sup>	BPX/SES	MGX 8830
Total number of connections (point-to-point and P2MP)	250000	250000	100000	27000
Total number of P2MP connections <sup>2</sup>	5000	5000	500	500
Number of parties per P2MP connection <sup>3</sup>	1000 <sup>4</sup>	1000	100	100

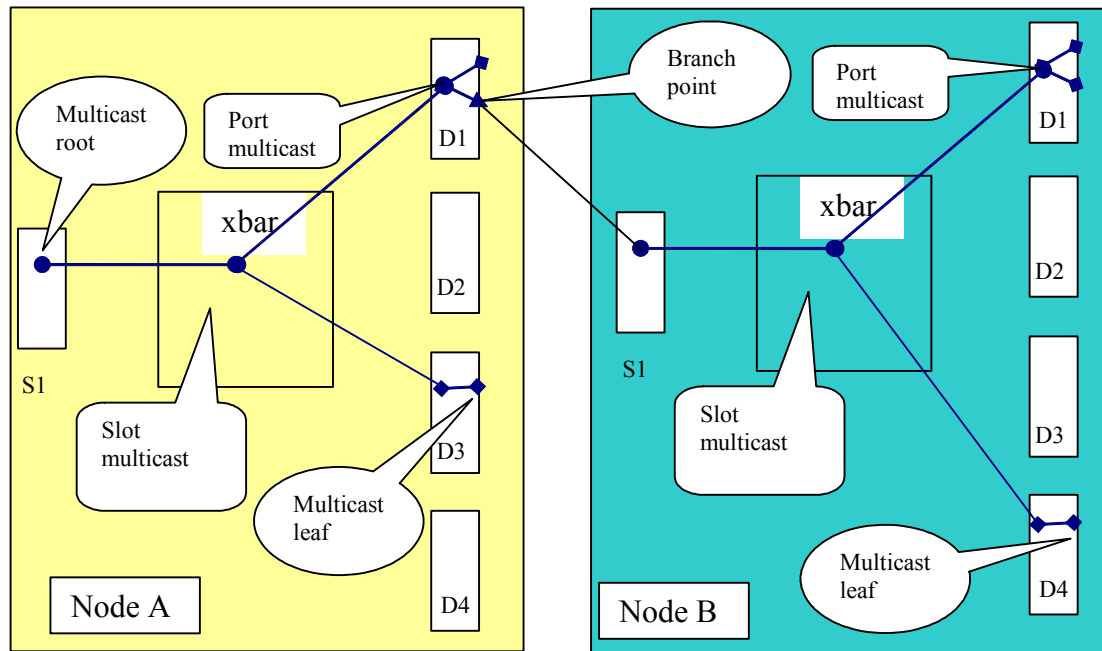
**Table 1 Point to Multipoint Support (Continued)**

	MGX 8950 <sup>1</sup>	MGX 8850 <sup>2</sup>	BPX/SES	MGX 8830
Number of branches	128	128	1	32
Number of parties per node	10000	10000	1000	1000

1. The P2MP feature is supported only on PXM45/B or PXM45/C.
2. This value is the number of P2MP roots that can be setup on a node.
3. The number of parties for a given P2MP connection can be more than the number of leaves on that connection. There can be multiple endpoint references on a given leaf endpoint.
4. This is the number of P2MP roots that can be setup on a node.

The capability to replicate ATM traffic on an MGX varies with the type of hardware used. Figure 1 shows the replication mechanism in MGX and the limitations associated with specific hardware.

**Figure 1 Replicating Traffic**



In Figure 1, D1–D4 are destination cards in an MGX Node A. S1 is a source card on Node A, where the root endpoint of the P2MP connection is provisioned.

In this example, a P2MP connection has leaves on D1 and D3 of Node A and on D1 and D4 of Node B. The first stage of multicast is called the slot multicast, which is performed by the crossbar module on the MGX. Although the replication takes place on the crossbar, the slots toward which replication should take effect is instructed by the source card S1 on Node A.

Slot multicast cells arrive on the replication engines on slots D1 and D3 of Node A. The second stage of multicast, called port multicast, is performed by the destination cards. Port multicast on slot D1 (Node A) delivers data to a leaf on one of its ports and to a branch on another of its ports. On the slot D3 (Node A) only one leaf endpoint exists.

Data from the branching point is delivered to S1 of Node B. A slot multicast operation occurs followed by port multicast at each of the destination card slots (D1 and D4).



Some of the destination cards might not be able to perform the port multicast operation. For example, in [Figure 1](#) if D4 on Node B is incapable of doing port multicast and if there were multiple leaves on it, the replication needs to be performed at D1 on Node A. In this case, two connections would carry the same data from Node A to Node B.

## Capabilities

[Table 2](#) lists multicast capabilities by card.

**Table 2** *Multicast Capabilities by Card*

	AXSM/A	AXSM/B	AXSM-E	AXSM-XG	PXM1E
Slot Multicast	YES	YES	YES	YES	NO
Port Multicast	YES	YES	NO <sup>1</sup>	YES	NO

1. Only one leaf is supported on AXSM-E. See the section on AXSM-E limitations.

## Crossbar Limitations

The MGX 8850 is equipped with a maximum of 8 switching planes on the crossbar module. MGX 8950 can have as many as 16 switching planes on the crossbar module.

Most of the broadband SMs (AXSM-A, AXSM-B, AXSM-E, FRSM12, RPM-XF) have access to just 8 switching planes. The AXSM-XG is the only broadband SM that can access all 16 switching planes however, AXSM-XG can use all 16 of them only on an MGX 8950.

When unicast traffic is sent from source card S1 to destination D1, S1 sends a request on any of the available 8/16 switch planes. The crossbar negotiates access to the destination slot D1 on the requested switch plane. If the destination grants the request, the cell is transferred from S1 to D1 on the requested switch plane. If the request is not granted (for example, a serial link from the crossbar to D1 is busy or down), then S1 attempts the transfer on one of the other switch planes.

For multicast traffic, the crossbar accepts multicast root cells from S1 without negotiating access to all possible destination slots and makes best effort to forward cells to all relevant destination slots.

The crossbar limitations are as follows:

- If the serial link between the crossbar and the destination slot is brought down (either administratively or by online diagnostics), the multicast cells destined on that serial link never depart the crossbar. A loss of multicast traffic occurs. Unicast traffic is not impacted because the source card is denied access on that switching plane, which forces the source card to attempt sending cells on other serial links.
- For an MGX 8950, the AXSM-XG hardware enables the use of all 16 serial links. However, if the AXSM-XG is sending traffic toward an AXSM-A (or any card which supports only 8 serials), only 8 serial links can be functional.

For unicast traffic, the 8-link limit gets enforced because of the end-to-end negotiation between source and destination cards. However, for multicast traffic, the crossbar absorbs traffic from the source card on all 16 links and will drop traffic on 8 of them (as the destination cannot take it). This implies that on a MGX 8950, the P2MP feature works reliably only if a chassis is populated only with AXSM-XG cards. This limitation does not impact unicast traffic.

## AXSM/A Limitations

The crossbar is configured for ‘Unicast preferred’ implying that honors requests from the service modules in the following order (for a specific destination slot):

1. Unicast Primary with speedup
2. Multicast Primary with speedup
3. Unicast Primary
4. Multicast Primary
5. Unicast Secondary

The broadband service modules can generate two types of requests (primary and secondary) for unicast traffic based on the number of switch planes and number of cells in the input queue. The service modules can generate one “Unicast Primary” and multiple “Unicast secondary” requests at any point of time (every S-Tick). AXSM/A does not support the speedup option in its request toward the crossbar.

For example, a source card has 8 cells in the queue for the same destination, and switch is made of 4 switch planes. The source card generates one “Unicast Primary” and 3 “Unicast secondary” requests. For multicast traffic there is no secondary request, all multicast requests are primary. Multiple source cards could attempt to send both “Unicast” and “multicast” traffic to the same (congested) destination. Therefore, one source card “Multicast primary” request can win over the other source cards “Unicast secondary requests”. Traffic from only one source card to the same destination is an issue as the card gives priority to unicast traffic.

In the following example:

- Card A is sending OC48 CBR unicast traffic to Card B.
- Card C is sending OC24 UBR multicast traffic to Card B.
- Card B can sink in only OC48 worth of traffic from A and C.

Result: Card A sees some ingress discards. The same behavior is seen for unicast traffic. Card A cannot assert speedup requests toward the crossbar to ensure guaranteed traffic.

In the next example:

- Card A is sending OC24 CBR multicast traffic to Card B.
- Card C is sending OC48 UBR unicast traffic to Card B.
- Card D is sending OC48 UBR unicast traffic to Card B.
- Card B can sink in only OC48 work of traffic from A, C, and D.

Result: Card A sees some ingress discards.

## AXSM/B Limitations

AXSM-B hardware resolved the issue of ‘speedup’ signal assertion. Thus, the above mentioned problem was resolved.

However, both AXSM-A and AXSM-B have a common limitation. During the ‘port multicast’ performed at the destination cards, the multicast root cells are replicated and queued on to several leaf connections. The root cells are queued up in cache while awaiting replication. This cache is approximately 32 cells deep. When there is a burst of traffic from several different P2MP connections and if the replication is not done fast enough, the cache could overflow. Data loss could occur on multicast connections.

## AXSM-E Limitations

AXSM-E hardware does not support the ‘port multicast’ operation. However, when used as a trunk, AXSM-E is required to carry P2MP calls, without using the branching (or replication) functionality. PNNI recognizes this limitation of AXSM-E and ensures that branching is not done on an AXSM-E.

Because of the same limitation, AXSM-E can host only a single leaf of a multicast connection. When several P2MP parties (leaves) are added to a P2MP connection, only one leaf can be terminated on an AXSM-E for a given P2MP connection.

If multiple leaves terminate on a node and if one of the leaves terminates on an AXSM-E (AXSM-E can only have one leaf), then the call setup to the AXSM-E leaf might not setup reliably. For example, if there is a de-route/re-route of the connection, there is no guarantee on the leaf call setup.

However, if only one leaf exists in the node and this leaf is on an AXSM-E, the call setup to the AXSM-E is setup reliably.

## PXM1E Limitations

PXM1E does not support branching (for P2MP connections) in this release. PXM1E can, however, be a via node for P2MP connections in 4.0.15.

# New Features and Enhancements in Release 4.0.11

None.

# Features and Enhancements in Previous Release 4.0.10

The new features in Release 4.0.10 are listed in [Table 3](#).

**Table 3** New Features in Release 4.0.10

New Release 4.0.10 Feature	MGX 8850 PXM45(A)	MGX 8850 PXM45/B	MGX 8850 PXM45/C	MGX 8950	MGX 8850 (PXM1E)	MGX 8830
LMI AutoSense	YES	YES	YES	NA	YES	YES
Resource Monitoring	YES	YES	YES	YES	YES	YES
Add Channel Loopback on AXSM-E	YES	YES	YES	NA	NA	NA
Service Module Hot Core Dump	YES <sup>1</sup>	YES <sup>1</sup>	YES <sup>1</sup>	YES	NO	NO
Active PXM Freeze Detection and Recovery	YES	YES	YES	YES	NO	NO
Improved SCM Polling Diagnostics on Active and Standby PXM	YES	YES	YES	YES	YES	YES
MGX-FRSM-HS2/B	NA	YES	YES	NO	YES	YES

**Table 3** New Features in Release 4.0.10 (Continued)

New Release 4.0.10 Feature	MGX 8850 PXM45(A)	MGX 8850 PXM45/B	MGX 8850 PXM45/C	MGX 8950	MGX 8850 (PXM1E)	MGX 8830
MGX-FRSM-2T3E3	NO	YES	YES	NO	YES	YES
AXSM/B Feeder Support	YES	YES	YES	YES <sup>2</sup>	NA	NA

1. Except for cell bus service module.
2. Already supported on MGX 8850 (PXM45) and new on MGX 8950.

## LMI AutoSense

The LMI AutoSense feature on the Frame Relay cards enables a Frame Relay port to detect the LMI type supported by the Frame Relay customer premise equipment (CPE). With this autosensing feature, you do not need to configure the LMI type on each Frame Relay port on the FRSM-8T1/E1 and FRSM-VHS (2CT3, 2T3, 2E3, 2HS2B) cards on PXM1, PXM45A/B/C, and PXM1E platforms.

The LMI AutoSense feature is supported for Frame Relay and FUNI port types. It is not applicable for Frame Forwarding port types. The detected LMI types are the following UNI types:

- AnnexD-UNI
- AnnexA-UNI
- StrataLMI

The LMI AutoSense feature is not supported on NNI interfaces.

The LMI AutoSense feature is configurable at a per port level.

A new MIB variable portLmiSigConfMethod has been added to the existing frPortCnfSigLMIGrpTable MIB table.

The **addport**, **cnfport**, **xcnfport** and **dspport** CLI commands have been modified to configure/display the new portLmiSigConfMethod MIB variable.

### addport

The lmi\_autosense parameter is added to the **addport** CLI, which can be optionally specified while adding the port. By default the value is set to Manual (1).

If you want to configure the port for LMI AutoSense, set the lmi\_autosense parameter value to AutoSense (2) while adding the port using **addport**.

The **addport** command syntax for the cards is modified as shown below

#### FRSM-8P and FRSM-2CT3.

Syntax:

**addport** port\_num line\_num ds0\_speed begin\_slot num\_slot port\_type [*lmi\_autosense*]

where *lmi\_autosense* can be configured for either mode Manual (1) or AutoSense (2).

#### FRSM-2T3, FRSM-2E3, FRSM-HS2B

Syntax:

**addport** port\_num line\_num port\_type [*lmi\_autosense*]

## xcnfport

The `-lmias` parameter has been added to the **xcnfport** CLI, which can be specified while either adding the port or modifying the port using **xcnfport**. By default the value is set to Manual (1).

To configure the port for LMI autosense set the `-lmias` parameter value to AutoSense (2) while adding/modifying the port using **xcnfport**. At the same time, set the port signaling protocol type to noSignalling using the `-sig` option.

The **xcnfport** command syntax for the cards has been modified as shown below.

Syntax:

```
xcnfport -pt <PortNum> -ln <PortLineNum> -en <PortEnable> -rat <PortEqueueServiceRatio> -flag
<PortFlagsBetweenFrames> -asy <AsynchMsg> -t391 <T391Timer> -t392 <T392Timer> -n391
<N391Counter> -n392 <N392Counter> -n393 <N393Counter> -enhancedLmi <enhancedLmi> -pta
<portAdmin> -svcen <portSvcStatus> -svcuse <portSvcInUse> -pbe <portBertEnable> -m32eqth
<EgressQueueThreshold> -lmias <lmi autosense>
```

where `-lmias <lmi_autosense>` can be set to either 1 for Manual or 2 for Autosense.

## cnfport

The `lmi_autosense` parameter has been added to the **cnfport** CLI, which can be specified while modifying the port. By default the value is set to Manual (1).

To configure the port for LMI Autosense, set the `lmi_autosense` parameter value to AutoSense (2) and `lmiSig` to noSignalling while using **cnfport**.

The **cnfport** command syntax for the cards has been modified to as shown below:

Syntax:

```
cnfport portNum lmiSig asyn ELMi T391 T392 N391 N392 N393 [lmi_autosense]
```

where [*lmi\_autosense*] can be set to either 1 for Manual or 2 for AutoSense.

## dspport

The existing CLI **dspport** is modified to display the value of the new MIB variable as shown in the following example:

```
node.1.4.VHSHS2.a > dspport 1
  SlotNum:                4
  PortLineNum:            1
  PortNum:                1
  PortRowStatus:         Add
  PortDs0Speed:          notUsed
  PortDs0ConfigBitMap(1stDS0): 0xffffffff(1)
  PortEqueueServiceRatio: n/a
  PortFlagsBetweenFrames: 0
  PortSpeed:             51840 kbps
  portLmiSigConfMethod: Manual
  SignallingProtocolType: NoSignalling
  AsynchronousMsgs:     UPD_UFS disabled
  T391LineIntegrityTimer: 10 sec
  T392PollingVerificationTimer: 15 sec
  N391FullStatusPollingCounter: 6
  N392ErrorThreshold:   3
  N393MonitoredEventCount: 4
  EnhancedLmi:         Off
  PortState:           FailedDuetoLineFailure
```

```

PortSignallingState:      No Signalling Failure
CLLMEnableStatus:        Disable
CLLMxmtStatusTimer:      40 ms
portType:                 frameRelay
portEnhancedSIW:          Disable
PortIngrPercentUtil:      0
PortEgrPercentUtil:       0
PortOversubscribed:       False
PortSvcStatus:            Disable
PortSvcInUse:             Not In-Use
PortSvcShareLcn:          Card-based
PortSvcLcnLow:            0
PortSvcLcnHigh:           0
PortSvcDlciLow:           0
PortSvcDlciHigh:          0
PortNumNextAvailable:     2
    
```

## Resource Monitoring

The Resource Monitoring feature periodically checks the switch resources and takes appropriate actions to resolve a resource shortage or ensure recovery happens. The resources monitored are

- Memory (all SSI partitions and VxWorks (TM) partition)
- Hard Disk space
- IPC buffers
- CPU
- SSI Sync Timers
- SSI File Descriptors
- VxWorks file descriptors
- System up time

The actions include:

- Alarm
- Trap
- Log

The following commands are new to support this feature:

- **cnfrmrsrc**: Configure resource monitoring behavior
- **dsprmrsrc**: Display particular resource information in detail
- **dsprmrsrscs**: Display all the resources in summary
- **dsprmalms**: Display resource related alarms

The following command is modified on the existing CLI:

- **dspcdalm**: Add resource monitoring category

## Platforms

The feature is supported on the following platforms:

- MGX 8850 (PXM1E, PXM45, AXSM, AXSM-E, FRSM12)
- MGX 8950 (PXM45, AXSM/B, AXSM-XG)
- MGX 8830 (PXM1E)

## Add Channel Loopback on AXSM-E (PER 3854)

Currently, the **addchanloop** CLI command on the AXSM-E card offers the local and remote loop option. This command is the same as the **addchanloop** command on the AXSM/B Card.

The local (egress) loop option of the **addchanloop** command has been added on the AXSM-E. Special handling is involved in which the SABRE chip handles the egress loopback instead of the ATLAS chip.

The **dspchancnt** command is supported on the loopback connection.

### Limitations:

- OAM and RM cells cannot be looped back; only data cells can be looped.
- All OAM functions do not work on the loopback connections.
- The QE is disabled in the egress direction when the SABRE is looped back, so discards occur at the egress QE. The data cells are looped back through SABRE.
- During the loopback, special loopback LCNs are used. The normal connection LCN is disabled.
- Each card has 8 loopback LCNs. Only 8 connections can be looped back at a time. Loopbacks can be in the ingress and egress direction.
- You cannot enable remote and local channel loopback at the same time on the same channel.

## Platforms

The feature is supported on the MGX 8850 (AXSM-E).

## Service Module Core Hot Dump

To ease debugging of either memory leak or memory corruption on SM cards, use the core hot dump feature. This feature initiates core hot dump through CLI command **core hot-dump** <file.zip> on the SM. The feature is available on the following service modules:

- AXSM
- AXSM-E
- AXSM-XG
- FRSM12

This feature is not supported on cell bus service modules (CBSMs). Only one SM slot can execute core hot dump at one time. The core hot dump does not cause SM card to reset.

The feature can be executed on active and standby SM cards. Each SM slot performing core hot dump has a core hot dump zip file saved on the active PXM hard disk, C:/ directory. You can use FTP to upload the zipped core file to a workstation and use a GDB debugger to analyze the core file problems.

At the PXM CLI prompt, you can check the SM core hot dump status by using the CLI command, **core dump-status**. The CLI shows slots that are in the process of core hot dump.

## Platforms

The feature is supported on the following platforms:

- MGX 8850 (AXSM/B, AXSM-E, FRSM12)
- MGX 8950 (AXSM/B, AXSM-XG)

## Active PXM Freeze Detection and Recovery (PER 7869)

The standby PXM monitors the SCM polls coming from the active PXM. If the standby PXM detects a missing Poll, the PXM waits for a maximum configurable consecutive missing polls. The default is 13 polls in 19.5 seconds. Then, the PXM takes over the mastership and resets the active PXM.

To ensure the standby PXM does not reset the active PXM for local SCM path failure, the active PXM detects the missing poll responses. The active PXM resets the standby PXM (or any service module) in configurable consecutive missing poll responses. The recommendation is 10 polls in 15 seconds recommended.

This feature is not enabled by default on PXM cards. The feature must be enabled on the active PXM. The values for maximum poll counts from active and standby must be configured. The default value for the standby PXM maximum missing poll before it declares active frozen is 13 counts (19.5 sec). The default value for the active PXM maximum poll retries is 9 polls (+1 failure before retries).

## Platforms

The feature is supported on the following platforms:

- MGX 8850(PXM45)
- MGX 8950

## Improved SCM Polling Diagnostics on Active and Standby PXM

The feature is an enhancement in SCM for improving the debugging ability for SCM poll and RPM heartbeat failures. SCM has a mechanism of monitoring the health of the card by sending poll messages (heartbeat failures in RPM).

SCM declares a card dead when a certain number of responses are not received. SCM reports the error to the Shelf Manager, which then resets the service module. No debugging information is logged or stored once the card resets.

This feature has the capability of storing more information when a card fails for easier debugging. The possible cause of an SCM poll or heartbeat failures could be the following failures: Failure in the communication path, Failure of the channel on which the Poll/Heartbeat is sent, and Failure on the Service Module. SCM collects the relevant data for improving failure analysis. A minimum number of failure of poll or heartbeat threshold (50% of Maximum Poll Retry limit) is used to trigger the collection of data from SAR, QE, and CBC on the PXM side.



## Platforms

The feature is supported on the following platforms:

- MGX 8850(PXM45, PXM1E)
- MGX 8950
- MGX 8830

## Cell Bus Service Module on PXM-45 (Expanded from MGX 4.0.00 Release)

MGX-FRSM-2T3E3 and MGX-FRSM-HS2/B have been added to the list of cell bus service modules supported on the PXM45/B and PXM45/C.

### Platform

The feature is supported on the MGX 8850 (PXM45/B, PXM45/C).

## AXSM/B as Feeder Uplink on MGX 8950

Previously supported only on the MGX 8850 (PXM45), the feeder upstream capability is supported on the MGX 8950. This feature enables PXM1 feeder nodes to be directly connected to the AXSM/B cards on MGX 8950 nodes.

### Platforms

The feature is supported on the MGX 8950.

## Features and Enhancements in Previous Release 4.0.00



### Note

Cell bus service modules (CBSMs) were formerly called narrow band service modules (NBSMs). As the MGX product line has grown, the narrow band distinction is no longer appropriate. CBSMs use the MGX cell bus for customer traffic instead of the serial bus used by cards such as AXSM and FRSM-12-T3E3.

See the [“Acronyms” section on page 132](#) for definitions of acronyms used in these release notes.

Release 4.0.00 contains the following new features list in [Table 4](#).

**Table 4** MGX Release 4.0.00 Feature Support by Switch

New Release 4.0.00 Feature	MGX 8850 PXM45(A)	MGX 8850 PXM45/B	MGX 8850 PXM45/C	MGX 8950	MGX 8850 (PXM1E)	MGX 8830
Closed User Groups (CUG)	YES*	YES	YES	YES	YES	YES
Preferred routes for PNNI Multipeer Group Networks	YES	YES	YES	YES	YES	YES

**Table 4 MGX Release 4.0.00 Feature Support by Switch (Continued)**

New Release 4.0.00 Feature	MGX 8850 PXM45(A)	MGX 8850 PXM45/B	MGX 8850 PXM45/C	MGX 8950	MGX 8850 (PXM1E)	MGX 8830
Point to Multipoint SVC/SPVC support (P2MP)	NO	YES	YES	YES	YES	YES
Increased number of Signaling Interfaces	NO	YES	YES	YES	N/A	N/A
Virtual trunks support in PXM1E	NO	NO	NO	NO	YES	YES
Virtual UNI support in PXM1E	N/A	N/A	N/A	NO	YES	YES
PXM1E as Upstream to Feeder Nodes	N/A	N/A	N/A	NO	YES	YES
AXSM-E Upstream to Feeder Nodes	NO	YES	YES	NO	NO	NO
Cell Bus on PXM45 <sup>1</sup>	NO	YES	YES	NO	NO	NO
Additional Narrow Band on PXM1E	N/A	N/A	N/A	NO	YES	YES
AXSM-32-T1E1-E UNI with IMA	NO	YES	YES	NO	N/A	N/A
PXM1E-16-T1E1 UNI with IMA	N/A	N/A	N/A	NO	YES	YES
PXM1E-8-155	N/A	N/A	N/A	N/A	YES	YES
PXM45/C	NO	NO	YES	YES	NO	NO
AXSM-1-9953-XG	NO	NO	NO	YES	NO	NO
AXSM-4-2488-XG	NO	NO	NO	YES	NO	NO

1. See the CBSM matrix (Table 5) for details.

\* Closed User Groups are supported on PXM45/A in Release 4.0.10.

## Closed User Groups

The Closed User Groups (CUG) supplementary service enables network users to form groups, to and from which access is restricted. A network user may be associated with one CUG, multiple CUGs, or no CUG. Members of a specific CUG can communicate typically among themselves but typically not with network users outside of the CUG.

Specific network users can have additional restrictions, preventing them from originating calls to, or receiving calls from, network users of the same CUG (Outgoing Calls Blocked or Incoming Calls Blocked). In addition, a network user can be further restricted in originating calls to, or receiving calls from, network users outside of any CUG membership defined for the network user (Outgoing Access or Incoming Access.).

The feature is based on the ITU-T Q.2955.1 recommendation.

## Platforms

The feature is supported on the following platforms:

- MGX 8850 (PXM45)
- MGX 8850 (PXM1E)
- MGX 8830
- MGX 8950

## References

ITU-T Q.2955.1

## Preferred Routes for PNNI Multipeer Group Networks

Preferred routing of connections provides the network operator a means of bypassing the PNNI route selection. Users can configure a specific path through the network which a connection follows. Preferred routes can be configured as either preferred or directed routes.

A preferred route follows the configured path if that path is available. The route reverts to a PNNI-selected route if the preferred route is not available.

A directed route follows only the configured path; if the configured path is not available, the connection will remain unrouted.

Preferred routes can be specified for SPVCs from source switch to the destination switch end-to-end using CLI or SNMP. The end-to-end preferred route for connections can span across multiple peer groups. The implementation is based on PNNI 1.1 specification.

## Platforms

This feature is supported on the following platforms:

- MGX 8850 (PXM45)
- MGX 8850 (PXM1E)
- MGX 8830
- MGX 8950

## References

PNNI 1.1

## Point-to-Multipoint SVC/SPVC Support

The SVC/SPVC point-to-multipoint (P2MP) feature offers the ability for one root SVC/SPVC connection to establish a simple tree topology to one or more leaf connections.

The data traffic is uni-directional from root multicast to all leaves. The data that is sent by the root channel is received by all leaves. From the root, leaves can be added to the connection using SETUP/ADD\_PARTY signaling messages. Point-to-multipoint is a mandatory feature described in UNI 3.0, UNI3.1, and UNI4.0 specs. The implementation is compliant with in Q2971.

## Platforms

This feature is supported on the following platforms:

- MGX 8850 (PXM45)
- AXSM/B on MGX 8950
- AXSM/B on MGX 8850 (PXM45)




---

**Note** AXSM/B support is limited due to the capability of the hardware. P2MP connections and throughput are limited.

---

## References

UNI 3.0, UNI3.1, UNI4.0, Q2971

## Increased Number of Signaling Interfaces

A maximum of 192 PNNI routing/signaling interfaces are supported on MGX 8850 (PXM45/B and PXM45/C). Prior to this release, the platform supported only 99 signaling interfaces. This feature enables increased signaling interfaces for interconnecting with other switches or DSLAMs.

## Platforms

This feature is supported on the following platforms:

- MGX 8850 (PXM45)
- MGX 8950

## PXM1E-Related Hardware (the PXM1E-8-155 card)

The PXM1E hardware has the following attributes:

- PXM1E-8-155 has new 8-port OC3/STM1 back card with the SFP and MCC-8-155 support.
- PXM1E 8-port OC3/STM1 requires the UI-S3/B back card.
- Supports existing PXM1 features.

## Redundancy Support

The PXM1E PNNI Controller offers redundancy, hitless operation, and Y-Redundancy (1:1), which is supported in PXM1E for the 155 interface.

Service modules have 1:N redundancy and 1:1 redundancy as supported by the individual service modules

## Automatic Protection Switching Support

Automatic Protection Switching (APS) 1:1 and 1+1 for both the Bellcore GR-253 and ITU-T G.783 Annex-A and Annex-B standards are supported for the OC3 and STM1 interfaces. The MGX-8850-APS-CON plane is required for APS functionality.

## Modular Transceiver Support in the New 8-port OC3/STM1 Back Card

The PXM1E supports a single universal back card capable of supporting single-mode and multi-mode fiber connectors for the different reaches in OC3 and STM1.

External field-replaceable transceivers for SMF-IR, SMF-LR and MMF, purchased by the user, are supported.

## UNI connection support in PXM1E-16-T1E1

In the previous software release (3.0.10), the PXM1E-16-T1E1 card provided support for IMA trunking. In the MGX 4.0.00 release, the same card supports both native ATM UNI and IMA UNI endpoints. Sixteen T1/E1 ports can be mixed and matched for either native UNI or NNI ports and IMA UNI or NNI ports.

## ATM Routing in PXM1E

The PXM1E-based switches support the ATM Forum standard PNNI routing/signaling based on the same baseline used for MGX 8850 (PXM45) and BPX/SES systems. The PXM1E-based switches can be a peer to the PXM45-based switches in the single peer group and participate in multipeer groups.

## Connection Management

The PXM1E supports the following types of connections: SVC, SVP, SPVC, and SPVP. UNI 3.X/4.0 signaling and ILMI are used to setup SVCs and SVPs.

PXM1E supports 13,500 local switching connections and 27,000 routed connections.

## Cell Bus Service Module Support

A cell bus service module (CBSM) is an MGX service module that uses the MGX cell bus to transport customer traffic between that service module and other services modules or PXM uplinks. Traditionally, the CBSMs were called narrow band service modules (NBSMs).

For a summary of service modules supported in MGX 8830 and MGX 8850 (PXM1E), see to [Table 5](#).

## Virtual Trunks Support in PXM1E

Virtual trunks are supported in the PXM1E ports. A maximum of 31 (physical and virtual) trunks can be supported in a PXM1E card. The feature is supported in 4-port OC3/STM1, 8-port T3/E3, 8-port OC3/STM1, 16- port T1/E1, and the combo PXM1E cards. SVC, SPVC and SPVP connections can be routed over the virtual trunks. Virtual trunks can originate and terminate between PXM1E, AXSM/A, AXSM/B, AXSM-XG, and AXSM-E cards.

## Virtual UNI Support in PXM1E

Virtual UNI (VUNI) and Enhanced Virtual UNI (EVUNI) is defined in addition to the already defined port types: UNI, NNI, and VNNI (Virtual Trunk). This feature benefits both the MPLS and PNNI control plane.

## Feeder Trunk support in PXM1E

PXM1E ports can accept feeder trunks in any port. IGX 8400, MGX 8230, MGX 8250, and MGX 8850 (PXM1) can be added as feeders to MGX 8830 and MGX 8850 (PXM1E).

## PXM1E Diagnostics

Both HMM and online diagnostics report alarms in the Hardware Alarm category under the card alarms.

- HMM reports alarms for all devices when error thresholds are crossed. Further information can be obtained via the CLI command: **dspdeverr** <device>. This CLI must be issued for each device to ensure that all relevant errors have been observed. The alarm raised by the specific instance of the device (for example, QE1210 – 0 or 1) is also available with the **dspdeverr** command.
- The CLI **dsdiagerr online** command indicates is an error is reported by online diagnostics. Further information regarding the error can be obtained from the event logs via a filter using the following command: **dsplug -mod PXM1E**.

POST test results printed to the console immediately after execution could display failures. These failures could be due to tests being attempted for devices not present on the particular PXM1E-board (for example, the second ATM policing device on the PXM1E-4-155). The tests are based on device offsets and can display spurious results. To confirm or rule-out real and relevant tests, use the following examples:

In [Example 1](#), ATM policing device 2 and framers 2 and 4 do not exist on a PXM1E-4-155. The output shows all relevant test cases passed. Although framers 2 and 4 show passed, these two cases must be ignored.

### Example 1 PXM1E-4-155 Test Results

```

Power On Self Test Results

```

Test Name	Result	Description
BRAM Checksum	PASS	
QE Ram	PASS	
CBC Ram	PASS	
Ethernet Reg	PASS	
PCI-IDE Reg	PASS	
Clock Mux	PASS	
Framer 1 Access	PASS	
Framer 2 Access	PASS	
Framer 3 Access	PASS	
Framer 4 Access	PASS	
ATLAS 1 Ram	PASS	
ATLAS 2 Ram	FAIL	Ingress SRAM: Pattern Not Matched
Hard Disk Access	PASS	

In [Example 2](#), ATM policing device 2 and framers 2 and 4 do not exist on a PXM1E-8-T3E3. The output shows all relevant test cases passed.

**Example 2 PXM1E-8-T3E3 Test Results**

```

Power On Self Test Results

Test Name          Result    Description
BRAM Checksum      PASS
QE Ram             PASS
CBC Ram           PASS
Ethernet Reg       PASS
PCI-IDE Reg        PASS
Clock Mux          PASS
Framer 1 Access    PASS
Framer 2 Access    PASS
Framer 3 Access    FAIL      Framer 3 Access 1 Fail
Framer 4 Access    FAIL      Framer 4 Access 1 Fail
ATLAS 1 Ram        PASS
ATLAS 2 Ram        FAIL      Ingress SRAM: Pattern Not Matched
Hard Disk Access   PASS

```

[Example 3](#) shows all relevant test cases passed.

**Example 3 PXM1E-T3E3-155 Test Results**

```

Power On Self Test Results

Test Name          Result    Description
BRAM Checksum      PASS
QE Ram             PASS
CBC Ram           PASS
Ethernet Reg       PASS
PCI-IDE Reg        PASS
Clock Mux          PASS
Framer 1 Access    PASS
Framer 2 Access    PASS
Framer 3 Access    PASS
Framer 4 Access    PASS
ATLAS 1 Ram        PASS
ATLAS 2 Ram        PASS
Hard Disk Access   PASS

```

In [Example 4](#), shows all relevant test cases passed. For the 8OC3, the Ethernet Controller test is not done since the controller is part of the system controller that is not tested in this release.

**Example 4 PXM1E-8-155 Test Results**

```

Power On Self Test Results

Test Name          Result    Description
BRAM Checksum      PASS
QE Ram             PASS
CBC Ram           PASS
Ethernet Reg       NOT_DONE  Ethernet Controller Test Not Required.

```

PCI-IDE Reg	PASS
Clock Mux	PASS
Framer 1 Access	PASS
Framer 2 Access	PASS
Framer 3 Access	PASS
Framer 4 Access	PASS
ATLAS 1 Ram	PASS
ATLAS 2 Ram	PASS
Hard Disk Access	PASS

In [Example 5](#), ATM policing device 2 and framers 1, 2, 3, and 4 do not exist on a PXM1E-16-T1E1. The output shows all relevant test cases passed.

**Example 5 PXM1E-16-T1E1 Test Results**

```

Power On Self Test Results

Test Name          Result  Description

BRAM Checksum      PASS
QE Ram             PASS
CBC Ram            PASS
Ethernet Reg       PASS
PCI-IDE Reg        PASS
Clock Mux          PASS
Framer 1 Access    FAIL    Framer 1 Access 1 Fail
Framer 2 Access    FAIL    Framer 2 Access 1 Fail
Framer 3 Access    FAIL    Framer 3 Access 1 Fail
Framer 4 Access    FAIL    Framer 4 Access 1 Fail
ATLAS 1 Ram        PASS
ATLAS 2 Ram        FAIL    Ingress SRAM: Pattern Not Matched
Hard Disk Access   PASS
    
```

## AXSM-E as Upstream to Feeder Nodes

Previously supported only with AXSM and AXSM/B cards, the feeder upstream capability supported using the AXSM-E card. This feature enables PXM1 and IGX 8400 feeder nodes to be directly connected to the AXSM-E cards on the PXM45 nodes.

### Platform

This feature is supported on the MGX 8850 (PXM45) platform.

## Cell Bus Service Modules on PXM45

This feature allows key Cell Bus Service Modules to be supported on the MGX 8850 (PXM45). Where necessary, these cards can be used in conjunction with the SRM-E or SRM-3T3/C Service Resource Module for distribution and redundancy. See [Table 5](#) for details.

### Platform

This feature is supported on the MGX 8850 (PXM45) platform.



**Note**

Support for these service modules is already available on all PXM1 and PXM1E platforms.

**Table 5** Cell Bus Service Modules (CBSMs) Supported in Release 4.0.00, 4.0.10, 4.0.11, and 4.0.12

Cell Bus Service Modules	MGX 8850				MGX 8830	MGX 8950
	PXM45(A)	PXM45/B	PXM45/C	PXM1E	PXM1E	PXM45B/C
MGX-AUSM-8T1/B	NO	NO	NO	YES	YES	NO
MGX-AUSM-8E1/B	NO	NO	NO	YES	YES	NO
AX-CESM-8T1	NO	YES <sup>1</sup>	YES <sup>1</sup>	NO	NO	NO
MGX-CESM-8T1/B	NO	YES	YES	YES	YES	NO
AX-CESM-8E1	NO	YES	YES	YES	YES	NO
AX-FRSM-8T1 and AX-FRSM-8E1	NO	YES	YES	YES	YES	NO
AX-FRSM-8T1-C and AX-FRSM-8E1-C	NO	YES	YES	YES	YES	NO
MGX-FRSM-2CT3	NO	YES	YES	YES	YES	NO
MGX-FRSM-2T3E3	NO	YES	YES <sup>2</sup>	YES	YES	NO
AX-FRSM-HS1	NO	NO	NO	NO	NO	NO
AX-FRSM-HS2	NO	NO	NO	NO	NO	NO
MGX-FRSM-HS2/B	NA	YES	YES <sup>2</sup>	YES	YES	NO
MGX-SRME	YES <sup>3</sup>	YES	YES	YES	YES	NO
MGX-SRM-3T3/C	NO	YES	YES	YES	YES	NO
MGX-VISM-8T1 and MGX-VISM-8E1 *	NO	NO	NO	NO	NO	NO
MGX-VISM-PR-8T1 and MGX-VISM-PR-8E1 *	YES	YES	YES	YES	YES	NO

1. For better performance, use MGX-CESM-8T1/B on nodes with PXM45/B and PXM45/C processor/controller cards.

2. New and supported in Release 4.0.10.

3. APS is not supported for SRME on PXM45/A.

## AXSM-32-T1E1-E UNI with IMA

This feature allows the AXSM-32-T1E1-E to support the IMA capability on a UNI, VUNI, and EVUNI interfaces. This feature is in addition to the IMA trunking feature already supported in a previous release.

### Platforms

This feature is supported on the MGX 8850 (PXM45) platform.

## PXM45/C

The PXM45/C is a combination ATM switching fabric/processor card. The switching fabric provides 45 Gbps of non-blocking switching capacity. The processor provides the control plane that delivers ATM networking software, diagnostics, and performance monitoring.

### Platforms

This feature is supported on the following platforms:

- MGX 8850 (PXM45)
- MGX 8950

## AXSM-1-9953-XG

The AXSM-1-9953-XG ATM Switch Service Module is a high-density, double-height service module for use in the Cisco MGX 8950 switch. Use this card in combination with the high-capacity PXM45 processor and the XM-60 switching module to deliver OC-192c/STM-64 trunk connectivity.

Up to 12 AXSM-XG service modules can be accommodated in the Cisco MGX 8950.

### Platforms

This feature is supported on the MGX 8950.

## AXSM-4-2488-XG

The AXSM-4-2488-XG ATM Switch Service Module is a Quad OC-48/STM-16, double-height service module for use in the Cisco MGX 8950 switch. Used in combination with the high-capacity PXM45 processor and the XM-60 switching module, the AXSM-4-2488-XG card delivers high density connectivity on 4 interfaces of OC-48/STM-16, either in a clear-channel format or as channelized to OC-12/STM-4, OC-3/STM-1, and DS-3.

Up to 12 AXSM-4-2488-XG service modules can reside in the Cisco MGX 8950 to provide up to 48 OC-48/STM-16 interfaces. This card supports both high bandwidth and the highest network availability. When used in the channelized mode, each service module can carry alternatively up to 64 DS-3 channels, 64 OC-3/STM-1 channels, 16 OC-12/STM-4 channels, or any combination of these three types adding up to 64 channels.

### Platforms

This feature is supported on the MGX 8950 platform.

## Enhancements

The product enhancement requests (PERs) in [Table 6](#) were introduced in Release 4.0.00.

**Table 6** *Product Enhancement Requests in Release 4.0.00*

<b>Enhancement Number or Description</b>	<b>Purpose</b>
AUSM CAC based on SCR 1822	This enhancement is for the PXM and the AUSM 8T1E1 cards. As part of this feature an option is provided to the customer per card to select the CAC feature. The option available is SCR based CAC or PCR based.
Scaling to 1 to 2 million connections 1820	The purpose of this enhancement is to introduce several concepts: <ol style="list-style-type: none"> <li>1. Global Transaction ID that will be maintained per SM (AXSM/AXSM-E/AXSM-XG/PXM1E/SES). This will be used by the CWM to check if its database is in sync with the database of the switch.</li> <li>2. Static Connection File will be pre-created by the switch that are rules dependent. This will eliminate the need for CWM to wait for file creation and can be directly transferred via FTP from the switch.</li> <li>3. Incremental File that will only contain data necessary for CWM to sync up. CWM will specify the Transaction ID with which it is in sync, and the switch will only provide connection data from the same Transaction ID. This will eliminate returning back data that is not needed by CWM.</li> </ol>
Persistent Topology 2291	The purpose of this feature is to enable the CWM to maintain a persistent topology information of the entire network. One or more nodes will be designated as gateway nodes. Whenever CWM needs info about the network, it will query gateway nodes to collect the necessary information.
Preferred Route including MPG 2489, 3383	Preferred routing of connections provide the network operator a means of bypassing the PNNI route selection, and configuring a specific path through the network which a connection will follow.  Preferred routes can be configured as either preferred or directed routes. A preferred route follows the configured path if available, but will revert to a PNNI-selected route if the preferred route is not available.  A directed route follows only the configured path; if the configured path is not available, the connection remains unrouted.  Preferred routes can be specified for SPVCs from source switch to the destination switch end-to-end using CLI or SNMP. The end-to-end preferred route for connections can span across multiple peer groups. The implementation is based on PNNI 1.1 specification.
Display Hot Standby for AXSME and AXSM-XG 2834	When the CLI command is given on a standby AXSM or AXSME, for the verification of the persistent information, it reads the information from the active PXM disk and compares with the configuration in its RAM.  First, the number of records for each type of configuration will be compared. Then, the record data itself will be compared for each existing record. It displays any discrepancies on the terminal. For non-persistent information, the standby AXSM or AXSME obtains the non-persistent information from its active peer and compares it with what it has in its RAM. It displays any discrepancies on the terminal.
Additional CBSM Stats 2965	Additional CBSM stats for FRSM Port/PVC and AUSM are added.

**Table 6 Product Enhancement Requests in Release 4.0.00 (Continued)**

Enhancement Number or Description	Purpose
Reroute speed increase using PXM45/C 3726	This enhancement doubles the connection reroutes-per-second rate on MGX.
Larger Stat Counters via AXSM-XG 3727	AXSM-XG supports 64 bit statistics.
Narrow Band Service Modules on PXM45 3733	Narrowband service modules are supported on MGX 8850 PXM45.
MPG Logical Topology configuration and display 4103	Currently, to construct a PNNI topology map, you depend on the PNNI CLI commands. This is especially difficult to do for a MPG topology. This enhancement allows CWM to display such topology on its GUI by means of SNMP as well as the traps received from the switch.
Dsplog entry sync 4928	<p>Currently, the events which occur on the service modules (SMs) are logged only on the disk of the active PXM and are not replicated on the standby PXM. On the other hand, events which occur on either PXM are replicated on the peer PXM. This design leads to the following problems:</p> <ul style="list-style-type: none"> <li>• The user gets an inconsistent view of the events. Some events are replicated while others are not. This inconsistency leads to hindrance during the debugging. The user generally expects same event-logs on both the PXMs.</li> <li>• The SM events have one point of failure. If an SM event was logged to a PXM and its hard disk crashes, it is not possible to recover the event from the standby PXM.</li> </ul> <p>To remove these deficiencies in the event-log application, this project will implement the changes required to replicate the SM events to the standby controller card. These changes will help to provide a consistent view of the SM events to the user and improve the reliability.</p>
Additional PNNI Stats for Collection 6052, 6053, 6054, 6055	The purpose of this feature is to provide complete network management support (via CWM). This feature is to help customers, deploying SPVC/P circuits, collect and analyze relevant statistics for the purposes of, but not limited to, trouble shooting the network issues, engineering the network resources, and load balancing the traffic.
Remote end of the connection is not informed on endpoint failure -Part of feeder projects 6558	<p>This document describes the functionality of the LMI support on AXSM-E/PXM1E in MGX 8850 routing nodes. Starting from MGX Release 2, AXSM has feeder trunk support.</p> <p>LMI-based feeder trunks on AXSME/PXM1E give the customer the flexibility of attaching MGX PXM1 (which is a concentrator for CPE equipment) and/or IGX 8400 (in feeder mode) to the MGX as the routing node.</p> <p>Feeders can be connected to an MGX 8850 (PXM45) routing node via feeder trunks on AXSM/AXSME. On MGX 8850 (PXM1E) routing nodes, feeders can be directly connected via feeder trunks to the PXM1E.</p>
AIS Delay Timer 6600	Current connection re-routing sends AIS/Abit from both ends of a connection when the connection is de-routed. Sending AIS/Abit during grooming can cause customers to revert to backup facilities. The AIS Delay feature would provide a mechanism to delay AIS/Abit up to a configurable time.

**Table 6** Product Enhancement Requests in Release 4.0.00 (Continued)

Enhancement Number or Description	Purpose
Trunk Deroute Delay Timer 5048	This feature will add the de-route delay feature, currently supported in AutoRoute on the BPX/IGX, to the PNNI networking software. This feature will allow some time for a failed NNI interface to recover at the physical layer before the switch declares it as failed (due to LOS, LOF, AIS-P, and so forth).  This feature does not support failure scenarios caused by dnpport, dnpnport, and card failures.
Absolute Grooming Threshold 2600	In the current implementation of connection grooming on MGX switches, the connections are chosen for grooming if the cost of the new path available is better (smaller) than the current cost of the connection by a configurable threshold.  The threshold is calculated as a percentage of the existing cost of the connection. The percentage of threshold change can be configured through the CLI. This feature will allow grooming to use an absolute cost threshold in addition to percentage of threshold change.

## Service Class Template (SCT) File Information

This section contains SCT file information for Release 4.0.10.

### PXM1E

The Service Class Template (SCT) bundle in Release 4.0.10 includes the following updates:

- PXM1E\_SCT.PORT.5
- PXM1E\_SCT.PORT.6

The PXM1E SCT files apply to MGX 8850 (PXM1E) and MGX 8830.

The default SCTs provided with Release 4.0.10 are as follows:

- SCT 5—Policing enabled. In general, this is for use on UNI ports.
- SCT 6—Policing disabled. In general, this is for use on NNI ports.

The checksum values for the SCT files are as follows:

- PXM1E\_SCT.PORT.5.V1:Check sum is = 0x18a4fdad= 413466029
- PXM1E\_SCT.PORT.6.V1:Check sum is = 0x2cb30eb7= 749932215

PXM1E does not support CARD SCT. See CSCdx55759 for details.

ABR VSVD parameters are not supported due to hardware limitation.

### AXSM and AXSM/B

The default SCT files are as follows:

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

The check sums for the SCT files are as follows:

- AXSM\_SCT.PORT.2.V1:Check sum is = 0x78ccfb22= 2026699554
- AXSM\_SCT.PORT.3.V1:Check sum is = 0x987919a7= 2558073255
- AXSM\_SCT.PORT.4.V1:Check sum is = 0x775bfaa2= 2002516642
- AXSM\_SCT.PORT.5.V1:Check sum is = 0xe84c696a= 3897321834
- AXSM\_SCT.CARD.2.V1:Check sum is = 0x78ccfb22= 2026699554
- AXSM\_SCT.CARD.3.V1:Check sum is = 0x987919a7= 2558073255
- AXSM\_SCT.CARD.4.V1:Check sum is = 0x775bfaa2= 2002516642
- AXSM\_SCT.CARD.5.V1:Check sum is = 0xe84c696a= 3897321834

You can use the **dspsctchksum** <filename> command to confirm that the checksum of the Cisco-released SCT file and the file on the node match.

## AXSM-E

The new AXSM-E SCT files are as follows:

- CARD and PORT SCT 4—Policing enabled for PNNI, disabled for MPLS
- CARD and PORT SCT 5—Policing enabled for PNNI, disabled for MPLS
- PORT SCT 6—Policing disabled, used for trunks
- CARD and PORT SCT 52—Policing enabled on PNNI, disabled on MPLS
- PORT SCT 53—Policing disabled on PNNI and MPLS
- PORT SCT 54—Policing enabled on PNNI, disabled on MPLS
- PORT SCT 55—Policing disabled on PNNI and MPLS

The checksums for the new AXSM-E SCT files are as follows:

- AXSME\_SCT.PORT.4.V1: Check sum is = 0x778eb096
- AXSME\_SCT.CARD.4.V1: Check sum is = 0x778eb096
- AXSME\_SCT.PORT.5.V1:Check sum is = 0x53c67945= 1405516101
- AXSME\_SCT.PORT.6.V1:Check sum is = 0xb69ce935= 3063736629
- AXSME\_SCT.PORT.52.V1:Check sum is = 0x199550ec= 429215980
- AXSME\_SCT.PORT.53.V1:Check sum is = 0xf6d53485= 4141167749
- AXSME\_SCT.PORT.54.V1:Check sum is = 0x2a96b5b9= 714519993
- AXSME\_SCT.PORT.55.V1:Check sum is = 0x5403c5ac= 1409533356
- AXSME\_SCT.CARD.5.V1:Check sum is = 0x53c67945= 1405516101
- AXSME\_SCT.CARD.52.V1:Check sum is = 0xde496f2= 233084658

## AXSM-4-2488-XG

The new AXSM-4-2488-XG SCT files are as follows:

- CARD SCT 1, 2—Policing disabled on PNNI and MPLS in ingress direction based on backplane bandwidth
- PORT SCT 100 (OC192), 200 (OC48), 300 (OC12), 400 (OC3), 500 (DS3)—Policing disabled on PNNI and MPLS
- PORT SCT 101, 201, 301, 401, 501—Policing disabled on PNNI and enabled on MPLS
- PORT SCT 110, 210, 310, 410, 510—Policing enabled on PNNI and disabled on MPLS
- PORT SCT 111, 211, 311, 411, 511—Policing enabled on PNNI and enabled on MPLS

The checksums are as follows:

- AXSMXG\_SCT.CARD.1.V1: Check sum is = 0xea8c7cc4= 3935075524
- AXSMXG\_SCT.CARD.2.V1: Check sum is = 0x2bb41874= 733223028
- AXSMXG\_SCT.PORT.100.V1: Check sum is = 0x7bd15b34= 2077317940
- AXSMXG\_SCT.PORT.200.V1: Check sum is = 0x81574ebb= 2169982651
- AXSMXG\_SCT.PORT.300.V1: Check sum is = 0x5f611c38= 1600199736
- AXSMXG\_SCT.PORT.400.V1: Check sum is = 0xce44971c= 3460601628
- AXSMXG\_SCT.PORT.500.V1: Check sum is = 0x62f8e58f= 1660478863
- AXSMXG\_SCT.PORT.101.V1: Check sum is = 0xe6c5b937= 3871717687
- AXSMXG\_SCT.PORT.201.V1: Check sum is = 0x54963d54= 1419132244
- AXSMXG\_SCT.PORT.301.V1: Check sum is = 0x73945353= 1939100499
- AXSMXG\_SCT.PORT.401.V1: Check sum is = 0xc8a295e9= 3366098409
- AXSMXG\_SCT.PORT.501.V1: Check sum is = 0x31cbc16d= 835436909
- AXSMXG\_SCT.PORT.110.V1: Check sum is = 0x4c3108e9= 1278281961
- AXSMXG\_SCT.PORT.210.V1: Check sum is = 0x98470301= 2554790657
- AXSMXG\_SCT.PORT.310.V1: Check sum is = 0x65d5be76= 1708506742
- AXSMXG\_SCT.PORT.410.V1: Check sum is = 0xa89a40f5= 2828681461
- AXSMXG\_SCT.PORT.510.V1: Check sum is = 0x5740c45= 91491397
- AXSMXG\_SCT.PORT.111.V1: Check sum is = 0xbf1c77e9= 3206313961
- AXSMXG\_SCT.PORT.211.V1: Check sum is = 0x3e304ff3= 1043353587
- AXSMXG\_SCT.PORT.311.V1: Check sum is = 0xa0f7eeb7= 2700603063
- AXSMXG\_SCT.PORT.411.V1: Check sum is = 0x92193268= 2451124840
- AXSMXG\_SCT.PORT.511.V1: Check sum is = 0x852dc30= 139648048

## FRSM-12-T3E3

The SCT file for FRSM-12-T3E3 has the following changes:

- ATM CAC is not supported.
- UPC cannot be configured using SCT.

- WFQ and ABR are not supported in the port SCT.
- Cosb min rate and excess priority cannot be configured in the port SCT.
- Frame\_Discard mode is always set, and you should not change it.
- SCT 4-PNNI is supported.

The checksums are as follows:

- FRSM12\_SCT.PORT.4 checksum = 0x28539d36
- FRSM12\_SCT.CARD.4 checksum = 0x28539d36

## System Requirements

This section describes the software and hardware supported in this release.

### Software/Firmware Compatibility Matrix

Table 7 lists Cisco WAN or IOS products that are compatible with Release 4.0.17.

**Table 7** *MGX 4.0.17 Release Compatibility Matrix*

Switch or Component	Certified Software Version
MGX 8230 (PXM1)	MGX 1.2.21, 1.2.22, 1.2.23 <sup>1</sup>
MGX 8250 (PXM1)	MGX 1.2.13
MGX 8850 (PXM1)	MGX 1.2.0.2 MGX 1.1.34
MGX 8850 (PXM45)	MGX 4.0.17 <sup>1</sup>
MGX 8850 (PXM1E)	MGX 4.0.15
MGX 8950 (PXM45)	MGX 4.0.12
MGX 8830 (PXM1E)	MGX 4.0.10 MGX 3.0.25 <sup>1</sup> MGX 3.0.23 MGX 3.0.20 MGX 2.1.81
BPX Switch Software	9.4 Release: 9.4.10 <sup>1</sup> 9.3 Release: 9.3.36, 9.3.47, 9.3.51 <sup>1</sup> 9.2 Release: 9.2.43



**Table 7** MGX 4.0.17 Release Compatibility Matrix (Continued)

Switch or Component	Certified Software Version
BPX SES Shelf	SES 4.0.15 <sup>1</sup>
	SES 4.0.10
	SES 3.0.25
	SES 3.0.23
	SES 3.0.20
	SES 1.1.75
Cisco WAN Manager	CWM 12.0.00 Patch 3 <sup>1</sup>
	CWM 12.0.00 Patch 2
	CWM 12.0.00 Patch 1.1
MGX 8220 Shelf	MGX 8220 5.0.20 <sup>1</sup>
	MGX 8220 5.0.19
	MGX 8220 4.1.12
VISM-PR	VISM 3.1.2 <sup>1</sup>
	VISM 2.2.1
IOS RPM-PR	12.3(2)T5 <sup>1</sup>
IOS RPM-XF	12.3(2)T5 <sup>1</sup>

1. This release is certified with Release 4.0.17.

## MGX and RPM Software Version Compatibility Matrix

Table 8 lists the software that is compatible for use in a switch running Release 4.0.17 software.



**Note**

AXSM/B cards use the same software as AXSM cards.

**Table 8** MGX and RPM Software Version Compatibility Matrix

Board Pair	Boot Software	Minimum Boot Code Version	Runtime Software	Firmware Version
PXM45	pxm45_004.000.017.202_bt.fw <sup>1</sup>	4.0.17	pxm45_004.000.017.202_mgx.fw <sup>1</sup>	4.0.17
PXM45/B				
PXM45/C				

Table 8 MGX and RPM Software Version Compatibility Matrix (Continued)

Board Pair	Boot Software	Minimum Boot Code Version	Runtime Software	Firmware Version
PXM1E-4-155 MGX 8850 (PXM1E) chassis	pxm1e_004.000.017.200_bt.fw	4.0.17	pxm1e_004.000.017.200_mgx.fw	4.0.17
PXM1E-8-T3E3 MGX 8850 (PXM1E) chassis				
PXM1E-T3E3-155 MGX 8850 (PXM1E) chassis				
PXM1E-8-155				
PXM1E-4-155 MGX 8830 chassis	pxm1e_004.000.017.200_bt.fw	4.0.17	pxm1e_004.000.017.200_m30.fw	4.0.17
PXM1E-8-T3E3 MGX 8830 chassis				
PXM1E-T3E3-155 MGX 8830 chassis				
AXSM-1-2488	axsm_004.000.017.200_bt.fw	4.0.17	axsm_004.000.017.200.fw	4.0.17
AXSM-16-155				
AXSM-4-622				
AXSM-16-T3/E3				
AXSM-1-2488/B	axsm_004.000.017.200_bt.fw	4.0.17	axsm_004.000.017.200.fw	4.0.17
AXSM-16-155/B				
AXSM-4-622/B				
AXSM-16-T3/E3/B				
AXSM-2-622-E	axsme_004.000.017.200_bt.fw	4.0.17	axsme_004.000.017.200.fw	4.0.17
AXSM-8-155-E				
AXSM-16-T3E3-E				
AXSM-32-T1E1-E				
AXSM-4-2488-XG	axsmxg_004.000.017.201_bt.fw <sup>1</sup>	4.0.17	axsmxg_004.000.017.201.fw <sup>1</sup>	4.0.17
AXSM-1-9953-XG				
FRSM-12-T3E3	frsm12_004.000.017.200_bt.fw	4.0.17	frsm12_004.000.017.200.fw	4.0.17
MGX-SRME	N/A (Obtains from PXM)	N/A	N/A (Obtains from PXM)	N/A
SRM-3T3/C	N/A (Obtains from PXM)	N/A	N/A (Obtains from PXM)	N/A
AX-CESM-8E1	cesm_8t1e1_CE8_BT_1.0.02.fw	1.0.02	cesm_8t1e1_021.000.012.200.fw	21.0.12
AX-CESM-8T1	cesm_8t1e1_CE8_BT_1.0.02.fw	1.0.02	cesm_8t1e1_021.000.012.200.fw	21.0.12
MGX-CESM-8T1/B	cesm_8t1e1_CE8_BT_1.0.02.fw	1.0.02	cesm_8t1e1_021.000.012.200.fw	21.0.12
MGX-AUSM-8T1/B	ausm_8t1e1_AU8_BT_1.0.02.fw	1.0.02	ausm_8t1e1_021.000.012.200.fw	21.0.12

**Table 8** MGX and RPM Software Version Compatibility Matrix (Continued)

Board Pair	Boot Software	Minimum Boot Code Version	Runtime Software	Firmware Version
MGX-AUSM-8E1/B	ausm_8t1e1_AU8_BT_1.0.02.fw	1.0.02	ausm_8t1e1_021.000.012.200.fw	21.0.12
AX-FRSM-8T1	frsm_8t1e1_FR8_BT_1.0.02.fw	1.0.02	frsm_8t1e1_021.000.012.200.fw	21.0.12
AX-FRSM-8E1	frsm_8t1e1_FR8_BT_1.0.02.fw	1.0.02	frsm_8t1e1_021.000.012.200.fw	21.0.12
AX-FRSM-8T1-C	frsm_8t1e1_FR8_BT_1.0.02.fw	1.0.02	frsm_8t1e1_021.000.012.200.fw	21.0.12
AX-FRSM-8E1-C	frsm_8t1e1_FR8_BT_1.0.02.fw	1.0.02	frsm_8t1e1_021.000.012.200.fw	21.0.12
MGX-FRSM-HS2/B	frsm_vhs_VHS_BT_1.0.06.fw	1.0.06	frsm_vhs_021.000.012.200.fw	21.0.12
MGX-FRSM-2CT3	frsm_vhs_VHS_BT_1.0.06.fw	1.0.06	frsm_vhs_021.000.012.200.fw	21.0.12
MGX-FRSM-2T3E3	frsm_vhs_VHS_BT_1.0.06.fw	1.0.06	frsm_vhs_021.000.012.200.fw	21.0.12
MGX-RPM-PR-256	rpm-boot-mz.123-2.T5	12.3(2)T5	rpm-js-mz.123-2.T5	12.3(2)T5
MGX-RPM-PR-512	rpm-boot-mz.123-2.T5	12.3(2)T5	rpm-js-mz.123-2.T5	12.3(2)T5
MGX-RPM-XF-512	rpmxf-boot-mz.123-2.T5	12.3(2)T5	rpmxf-p12-mz.123-2.T5	12.3(2)T5
MGX-VISM-PR-8T1	vism_8t1e1_VI8_BT_3.1.01.fw	3.1.01	vism_8t1e1_003.051.002.100.fw (CALEA image)	3.51.2
			vism_8t1e1_003.001.002.100.fw (non-CALEA image)	3.1.2
MGX-VISM-PR-8E1	vism_8t1e1_VI8_BT_3.1.01.fw	3.1.01	vism_8t1e1_003.051.002.100.fw (CALEA image)	3.51.2
			vism_8t1e1_003.001.002.100.fw (non-CALEA image)	3.1.2

1. Release 4.0.17 also supports PXM45 versions .200 and .201 and AXSM-XG version .200 boot and runtime software.

## SNMP MIB

The SNMP MIB release for 4.0.17 is mgx8850rel4010mib.tar.

## Hardware Supported



### Note

FRSM12 is not supported in Release 4.0.17.

This section lists:

- MGX 8850 (PXM45) Product IDs, 800 part numbers, and revision levels
- MGX 8850 (PXM1E) Product IDs, 800 part numbers, and revision levels

- MGX 8830 Product IDs, 800 part numbers, and revision levels
- MGX 8950 Product IDs, 800 part numbers, and revision levels

Front and back card types, and whether APS connectors are supported for

- MGX 8850 (PXM45)
- MGX 8850 (PXM1E)
- MGX 8830
- MGX 8950

**Note**

For hardware installation instructions, refer to the Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide MGX Release 2 through 5 at <http://www.cisco.com/univercd/cc/td/doc/product/wanbu/8850px45/hwdoc/index.htm>

## New Hardware

This section lists hardware introduced in MGX 4.x releases.

### New Hardware in Release 4.0.17

No new hardware is introduced.

### New Hardware in Release 4.0.15

The following new hardware is introduced.

- MGX-2GE
- MGX-2OC12POS

### New Hardware in Releases 4.0.10–4.0.12

No new hardware is introduced in Releases 4.0.10 through 4.0.12.

### New Hardware in Release 4.0.00

The following new hardware is supported by the Release 4.0.00 software. Features enabled by the hardware are described in [Features and Enhancements in Previous Release 4.0.10, page 11](#).

- PXM45/C
- PXM1E-8-155
- MCC-8-155
- SFP-8-155
- AXSM-4-2488-XG
- SMF-4-2488-SFP
- SMFLR-1-2488-SFP
- SMFSR-1-2488-SFP

- AXSM-1-9953-XG
- SMFSR-1-9953
- SMFIR-1-9953
- SMFLR-1-9953

## APS Connectors

Table 9 lists MGX 8850 (PXM45/PXM1E) and MGX 8830 APS connectors.

**Table 9** MGX 8850 (PXM45/PXM1E) and MGX 8830 APS Connectors

<b>MGX 8850 (PXM45) APS Connectors</b>		
<b>Hardware</b>	<b>MGX-8850-APS-CON (800-20640-01)</b>	<b>MGX-APS-CON (800-05307-01)</b>
AXSM-16-155	Yes	Yes
AXSM-16-155/B	Yes	Yes
AXSM-4-622	Yes	Yes
AXSM-4-622/B	Yes	Yes
AXSM-1-2488	Yes	Yes
AXSM-1-2488/B	Yes	Yes
AXSM-8-155-E	Yes	Yes
AXSM-2-622-E	Yes	Yes
SFP-8-155	Yes	Yes
MCC-8-155	Yes	Yes
MGX-SRME	Yes	No
<b>MGX 8850 (PXM1E) APS Connectors</b>		
<b>Hardware</b>	<b>MGX-8850-APS-CON (800-20640-01)</b>	<b>MGX-APS-CON (800-05307-01)</b>
PXM1E-4-155	Yes	Yes
PXM1E-8-155	Yes	Yes
PXM1E-COMBO (also known as PXM1E-T3E3-155)	No	No
MGX-SRME	Yes	No
<b>MGX 8830 APS Connectors</b>		
<b>Hardware</b>	<b>MGX-8830-APS-CON (800-05308-02)</b>	
PXM1E-4-155	Yes	
PXM1E-8-155	Yes	

**Table 9** MGX 8850 (PXM45/PXM1E) and MGX 8830 APS Connectors (Continued)

MGX 8850 (PXM45) APS Connectors		
Hardware	MGX-8850-APS-CON (800-20640-01)	MGX-APS-CON (800-05307-01)
PXM1E-COMBO	No	
MGX-SRME	No	

## MGX 8850 (PXM45) Product IDs and Card Types


**Note**

FRSM12 is not supported in Release 4.0.17.

Table 10 lists Product IDs, 800 part numbers, and the minimum revision levels for the MGX 8850 (PXM45).

In Table 10, for the following cards, *R* means that this is a redundant card:

- AX-R-RJ48-8E1
- AX-R-RJ48-8T1
- AX-R-SMB-8E1

Also, either of the following connectors work for the AXSM cards in the MGX 8850 (PXM45) switch:

- MGX-8850-APS-CON
- MGX-APS-CON

**Table 10** Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8850 (PXM45)

Product ID	800 Part Number	Minimum Revision
AX-CESM-8E1	800-02751-02	-A0
AX-CESM-8T1	800-02750-03	-B0
AX-FRSM-8E1	800-02438-04	-A0
AX-FRSM-8E1-C	800-02462-04	-A0
AX-FRSM-8T1	800-02461-04	-A0
AX-FRSM-8T1-C	800-02461-04	-A0
AX-RJ48-8E1	800-02408-01	-A0
AX-RJ48-8T1	800-02286-01	-A0
AX-R-RJ48-8E1	800-02409-01	-A0
AX-R-RJ48-8T1	800-02288-01	-A0
AX-R-SMB-8E1	800-02410-01	-A0
AXSM-1-2488	800-05795-05	-A0
AXSM-1-2488/B	800-07983-02	-A0
AXSM-16-155	800-05776-06	-A0

**Table 10 Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8850 (PXM45)**  
(Continued)

Product ID	800 Part Number	Minimum Revision
AXSM-16-155/B	800-07909-05	-A0
AXSM-16-T3E3	800-05778-08	-A0
AXSM-16-T3E3/B	800-07911-05	-A0
AXSM-16-T3E3-E	800-18519-02	-A0
AXSM-2-622-E	800-18521-02	-A0
AXSM-32-T1E1-E	800-22229-01	-A0
AXSM-4-622	800-05774-09	-B0
AXSM-4-622/B	800-07910-05	-A0
AXSM-8-155-E	800-18520-02	-A0
AX-SMB-8E1	800-02287-01	-A0
FRSM-12-T3E3 <sup>1</sup>	800-18731-02	-A0
MCC-16-E1	800-19853-02	-A0
MCC-8-155	800-22117-02	-A0
MGX-1GE	800-18420-03	-A0
MGX-2GE	800-20831-04	-B0
MGX-1OC12POS-IR	800-08359-05	-A0
MGX-2OC12POS-IR	800-21300-04	-B0
MGX-8850-APS-CON	800-20640-01	-A0
MGX-APS-CON	800-05307-01	-A0
MGX-BNC-2E3	800-04056-02	-A0
MGX-BNC-2T3	800-04057-02	-A0
MGX-BNC-3T3-M	800-03148-02	-A0
MGX-CESM-8T1/B	800-08613-02	-A0
MGX-FRSM-2CT3	800-06335-01	-D0
MGX-FRSM-2T3E3	800-02911-07	-D0
MGX-GE-LHLX	30-1299-01	-A0
MGX-GE-SX	30-1301-01	-A0
MGX-GE-ZX	10-1439-01	-A0
MGX-MMF-FE	800-03202-02	-A0
MGX-RJ45-4E/B	800-12134-01	-A0
MGX-RJ45-FE	800-02735-02	-A0
MGX-RJ48-8E1	800-19310-01	-B0
MGX-RPM-PR-256	800-07178-02	-A0
MGX-RPM-PR-512	800-07656-02	-A0
MGX-RPM-XF-512	800-09307-06	-A0

**Table 10 Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8850 (PXM45)**  
(Continued)

Product ID	800 Part Number	Minimum Revision
MGX-SMFIR-1-155	800-14460-02	-A0
MGX-SRM-3T3/C	800-05648-01	-A0
MGX-SRME	800-14224-02	-A0
MGX-STM1-EL-1	800-14479-02	-A0
MGX-VISM-PR-8E1	800-07991-02	-A0
MGX-VISM-PR-8T1	800-07990-02	-A0
MGX-XF-UI	800-09492-01	-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
PXM45/C	800-20217-04	-A0
PXM-HD	800-05052-03	-A0
PXM-UI-S3	800-05787-02	-A0
PXM-UI-S3/B	800-21557-01	-A0
RBBN-16-T1E1	800-21805-03	-A0
SFP-8-155	800-21518-03	-A0
SMB-4-155	800-07425-02	-A0
SMB-6-T3E3	800-08799-01	-A0
SMB-8-E3	800-04093-02	-A0
SMB-8-T3	800-05029-02	-A0
SMF-4-2488-SFP	800-19913-04	-A0
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



**Table 10 Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8850 (PXM45)  
(Continued)**

Product ID	800 Part Number	Minimum Revision
SMFLR-8-155-LC	800-05343-01	-C0
SMFLR-8-155-LC/B	800-07865-02	-B0
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

1. This card is not supported in Release 4.0.17.

Table 11 lists MGX 8850 (PXM45) front and back card types and whether APS connectors are supported in 4.0.17.

**Table 11 MGX 8850 (PXM45) Front and Back Card Types and Supported APS Connectors**

Front Card Type	Back Card Types	Supports APS Connector (MGX APS-CON or MGX-8850-APS-CON)
PXM45/C	PXM-HD	—
	PXM-UI-S3/B	—
PXM45	PXM-HD	—
	PXM-UI-S3	—
PXM45/B	PXM-HD	—
	PXM-UI-S3	—
AXSM-1-2488	SMFSR-1-2488	Yes
	SMFLR-1-2488	Yes
	SMFXLR-1-2488	Yes
AXSM-1-2488/B	SMFSR-1-2488/B	Yes
	SMFLR-1-2488/B	Yes
	SMFXLR-1-2488/B	Yes
AXSM-2-622-E	SMFIR-1-622/C	Yes
	SMFLR-1-622/C	Yes
AXSM-4-622	SMFIR-2-622	Yes
	SMFLR-2-622	Yes
AXSM-4-622/B	SMFIR-2-622/B	Yes
	SMFLR-2-622/B	Yes

**Table 11 MGX 8850 (PXM45) Front and Back Card Types and Supported APS Connectors (Continued)**

Front Card Type	Back Card Types	Supports APS Connector (MGX APS-CON or MGX-8850-APS-CON)
AXSM-8-155-E	SMB-4-155	Yes
	MMF-4-155/C	Yes
	SMFIR-4-155/C	Yes
	SMFLR-4-155/C	Yes
AXSM-16-155	MMF-8-155-MT	Yes
	SMFIR-8-155-LC	Yes
	SMFLR-8-155-LC	Yes
AXSM-16-155/B	SMB-4-155	Yes
	MMF-8-155-MT/B	Yes
	SMFIR-8-155-LC/B	Yes
	SMFLR-8-155-LC/B	Yes
AXSM-16-T3E3, AXSM-16-T3E3/B AXSM-16-T3E3-E	SMB-8-T3	—
	SMB-8-E3	—
AXSM-32-T1E1-E	MCC-16-E1	—
	RBBN-16-T1E1	—
FRSM-12-T3E3 <sup>1</sup>	SMB-6-T3E3	—
MGX-VISM-PR-8T1	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
MGX-VISM-PR-8E1	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
MGX-SRME	MGX-SMFIR-1-155	Yes
	MGX-STM1-EL-1	Yes
MGX-SRM-3T3/C	MGX-BNC-3T3-M	—
MGX-RPM-PR-256 MGX-RPM-PR-512	MGX-MMF-FE	—
	MGX-RJ45-4E/B	—
	MGX-RJ45-FE	—

**Table 11 MGX 8850 (PXM45) Front and Back Card Types and Supported APS Connectors (Continued)**

Front Card Type	Back Card Types	Supports APS Connector (MGX APS-CON or MGX-8850-APS-CON)
MGX-RPM-XF-512	MGX-XF-UI	—
	MGX-1GE	—
	MGX-2GE	—
	MGX-1OC12POS-IR	—
	MGX-2OC12POS-IR	—
	MGX-GE-LHLX <sup>2</sup>	—
	MGX-GE-SX <sup>2</sup>	—
	MGX-GE-ZX <sup>2</sup>	—
AX-CESM-8T1	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
MGX-CESM-8T1/B	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
AX-FRSM-8E1	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
AX-FRSM-8T1-C	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
AX-FRSM-8E1-C	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
AX-FRSM-8T1	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
MGX-FRSM-2CT3	MGX-BNC-2T3	—
MGX-FRSM-2T3E3	MGX-BNC-2E3	—
	MGX-BNC-2T3	—

1. This card is not supported in Release 4.0.17.
2. Small form factor pluggable optical transceivers for MGX-1GE and MGX -2GE back cards.

## MGX 8850 (PXM1E) Product IDs and Card Types

Table 12 contains Product IDs, 800 part numbers, and revision levels for the MGX 8850 (PXM1E) switch.

Table 13 lists MGX 8850 (PXM1E) front and back card types and whether APS connectors are supported.

**Table 12 Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8850 (PXM1E)**

Product ID	800 P/N	Min. Revision
SRM-3T3/C	800-05648-01	-A0
BNC-3T3-M	800-03148-02	-A0
MCC-8-155	800-22117-02	-A0
SFP-8-155	800-21518-03	-A0
PXM1E-8-155	800-21686-05	-A0
PXM1E-4-155	800-18588-03	-A0
PXM1E-8-T3E3	800-18590-03	-A0
PXM1E-16-T1E1	800-18658-04	-A0
PXM1E-COMBO (also known as PXM1E-T3E3-155)	800-18604-03	-A0
MMF-4-155/C	800-07408-02	-A0
SMFIR-4-155/C	800-07108-02	-A0
SMFLR-4-155/C	800-07409-02	-A0
PXM-UI-S3/B	800-21557-01	-A0
SMB-8-T3	800-05029-02	-A0
SMB-8-E3	800-04093-02	-A0
MGX-T3E3-155	800-18698-02	-A0
MMF-1-155-SFP <sup>1</sup>	10-1308-01	-A0
SMFLR-1-155-SFP <sup>1</sup>	10-1280-01	-A0
SMFIR-1-155-SFP	10-1283-01	-A0
MCC-16-E1	800-19853-02	-A0
RBBN-16-T1E1	800-21805-03	-A0
MGX-VISM-PR-8T1	800-07990-02	-A0
MGX-VISM-PR-8E1	800-07991-02	-A0
MGX-SRME	800-14224-02	-A0
MGX-SRM-3T3/C	800-05648-01	-A0
MGX-BNC-3T3-M	800-03148-02	-A0
MGX-SMFIR-1-155	800-14460-02	-A0
MGX-STM1-EL-1	800-14479-02	-A0
MGX-RPM-PR-256	800-07178-02	-A0

**Table 12 Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8850 (PXM1E)  
(Continued)**

Product ID	800 P/N	Min. Revision
MGX-RPM-PR-512	800-07656-02	-A0
MGX-MMF-FE	800-03202-02	-A0
MGX-RJ45-4E/B	800-12134-01	-A0
MGX-RJ45-FE	800-02735-02	-A0
MGX-RJ48-8E1	800-19310-01	-B0
MGX-AUSM-8T1/B	800-04809-01	-A0
MGX-AUSM-8E1/B	800-04810-01	-A0
AX-CESM-8E1	800-02751-02	-A0
MGX-CESM-8T1/B	800-08613-02	-A0
AX-FRSM-8T1	800-02437-04	-A0
AX-FRSM-8E1	800-02438-04	-A0
AX-FRSM-8T1-C	800-02461-04	-A0
AX-FRSM-8E1-C	800-02462-04	-A0
MGX-FRSM-HS2/B	800-17066-01	-A0
MGX-FRSM-2CT3	800-06335-01	-D0
MGX-FRSM-2T3E3	800-02911-07	-D0
MGX-BNC-2T3	800-04057-02	-A0
MGX-BNC-2E3	800-04056-02	-A0
AX-SMB-8E1	800-02287-01	-A0
AX-R-SMB-8E1 <sup>2</sup>	800-02410-01	-A0
AX-RJ48-8E1	800-02408-01	-A0
AX-R-RJ48-8E1 <sup>2</sup>	800-02409-01	-A0
AX-RJ48-8T1	800-02286-01	-A0
AX-R-RJ48-8T1 <sup>2</sup>	800-02288-01	-A0
MGX-12IN1-8S	800-18302-01	-A0
SCSI2-2HSSI/B <sup>3</sup>	800-05463-02	-A0
	800-05501-01	-A0
MGX-8850-APS-CON	800-20640-01	-A0
MGX-APS-CON	800-05307-01	-A0

1. These cards are required only if you need modular optics with the PXM1E-COMBO back card.
2. R means that this is a redundant card.
3. The SCSI2-2HSSI/B card has two different 800 part numbers, and both part numbers are valid.

**Table 13** MGX 8850 (PXM1E) Front and Back Card Types and Supported APS Connectors

Front Card Type	Back Card Types	Needs APS-CON?
PXM1E-8-155	SFP-8-155	Yes
	MCC-8-155	Yes
	MMF-1-155-SFP <sup>1</sup>	Yes
	SMFLR-1-155-SFP <sup>1</sup>	Yes
	SMFIR-1-155-SFP <sup>1</sup>	Yes
	PXM-UI-S3/B	—
PXM1E-4-155	MMF-4-155/C	Yes
	SMFIR-4-155/C	Yes
	SMFLR-4-155/C	Yes
	PXM-UI-S3/B	—
PXM1E-8-T3E3	SMB-8-T3	—
	SMB-8-E3	—
	PXM-UI-S3/B	—
PXM1E-16-T1E1	PXM-UI-S3/B	—
	MCC-16-E1	—
	RBBN-16-T1E1	—
PXM1E-COMBO (also known as PXM1E-T3E3-155)	MGX-T3E3-155	—
	MMF-1-155-SFP2	—
	SMFLR-1-155-SFP <sup>1</sup>	—
	SMFIR-1-155-SFP <sup>1</sup>	—
	PXM-UI-S3/B	—
MGX-VISM-PR-8T1	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
MGX-VISM-PR-8E1	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
MGX-SRME	MGX-SMFIR-1-155	Yes
	MGX-STM1-EL-1	Yes
MGX-SRM-3T3/C	MGX-BNC-3T3-M	—
MGX-RPM-PR-256 MGX-RPM-PR-512	MGX-MMF-FE	—
	MGX-RJ45-4E/B	—
	MGX-RJ45-FE	—

**Table 13 MGX 8850 (PXM1E) Front and Back Card Types and Supported APS Connectors (Continued)**

Front Card Type	Back Card Types	Needs APS-CON?
MGX-AUSM-8T1/B	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
MGX-AUSM-8E1/B	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	MGX-RJ48-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
AX-CESM-8E1	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
MGX-CESM-8T1/B	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
AX-FRSM-8T1	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
AX-FRSM-8E1	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
AX-FRSM-8T1-C	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
AX-FRSM-8E1-C	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
MGX-FRSM-HS2/B	SCSI2-2HSSI/B	—
	MGX-12IN1-8S	—
MGX-FRSM-2CT3	MGX-BNC-2T3	—
MGX-FRSM-2T3E3	MGX-BNC-2E3	—
	MGX-BNC-2T3	—

1. Small form factor pluggable optical transceivers for PXM1E-COMBO back card.

## MGX 8830 Product IDs and Card Types

Table 14 lists Product IDs, 800 part numbers, and revision levels for the MGX 8830.

Table 15 lists MGX 8830 front and back card types and whether APS connectors are supported.

**Table 14 Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8830**

Product ID	800 Part Number	Min. Revision
PXM1E-8-155	800-21686-04	-A0
SFP-8-155	800-21518-03	-A0
MCC-8-155	800-22117-02	-A0
PXM-UI-S3/B	800-21557-01	-A0
PXM1E-4-155	800-18588-03	-A0
PXM1E-8-T3E3	800-18590-03	-A0
PXM1E-16-T1E1	800-18658-04	-A0
PXM1E-COMBO (also known as PXM1E-T3E3-155)	800-18604-03	-A0
MMF-4-155/C	800-07408-02	-A0
SMFIR-4-155/C	800-07108-02	-A0
SMFLR-4-155/C	800-07409-02	-A0
SMB-8-T3	800-05029-02	-A0
SMB-8-E3	800-04093-02	-A0
MGX-T3E3-155	800-18698-02	-A0
MMF-1-155-SFP <sup>1</sup>	10-1308-01	-A0
SMFLR-1-155-SFP <sup>1</sup>	10-1280-01	-A0
SMFIR-1-155-SFP	10-1283-01	-A0
MCC-16-E1	800-19853-02	-A0
RBBN-16-T1E1	800-21805-03	-A0
MGX-SRME	800-14224-02	-A0
MGX-SRM-3T3/C	800-05648-01	-A0
MGX-BNC-3T3-M	800-03148-02	-A0
MGX-SMFIR-1-155	800-14460-02	-A0
MGX-STM1-EL-1	800-14479-02	-A0
MGX-RPM-PR-256	800-07178-02	-A0
MGX-RPM-PR-512	800-07656-02	-A0
MGX-MMF-FE	800-03202-02	-A0
MGX-RJ45-4E/B	800-12134-01	-A0
MGX-RJ45-FE	800-02735-02	-A0
MGX-RJ48-8E1	800-19310-01	-B0
MGX-AUSM-8T1/B	800-04809-01	-A0



**Table 14** Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8830 (Continued)

Product ID	800 Part Number	Min. Revision
MGX-AUSM-8E1/B	800-04810-01	-A0
AX-CESM-8E1	800-02751-02	-A0
MGX-CESM-8T1/B	800-08613-02	-A0
AX-FRSM-8T1	800-02437-04	-A0
AX-FRSM-8E1	800-02438-04	-A0
AX-FRSM-8T1-C	800-02461-04	-A0
AX-FRSM-8E1-C	800-02462-04	-A0
AX-SMB-8E1	800-02287-01	-A0
AX-R-SMB-8E1 <sup>2</sup>	800-02410-01	-A0
AX-RJ48-8E1	800-02408-01	-A0
AX-R-RJ48-8E1	800-02409-01	-A0
AX-RJ48-8T1	800-02286-01	-A0
AX-R-RJ48-8T1	800-02288-01	-A0
MGX-12IN1-8S	800-18302-01	-A0
MGX-FRSM-HS2/B	800-17066-01	-A0
MGX-FRSM-2CT3	800-06335-01	-D0
MGX-FRSM-2T3E3	800-02911-07	-D0
MGX-BNC-2T3	800-04057-02	-A0
MGX-BNC-2E3	800-04056-02	-A0
SCSI2-2HSSI/B <sup>3</sup>	800-05463-02	-A0
	800-05501-01	-A0
MGX-VISM-PR-8E1	800-07991-02	-A0
MGX-VISM-PR-8T1	800-07990-02	-A0

1. These cards are required only if you need modular optics with the PXM1E-COMBO back card.
2. R means this is a redundant card.
3. The SCSI2-2HSSI/B card has two different 800 part numbers, and both part numbers are valid.

**Table 15** MGX 8830 Front and Back Card Types and Supported APS Connectors

Front Card Type	Back Card Types	Needs APS-CON?
PXM1E-8-155	SFP-8-155	Yes
	MCC-8-155	Yes
	PXM-UI-S3/B	—

Table 15 MGX 8830 Front and Back Card Types and Supported APS Connectors (Continued)

Front Card Type	Back Card Types	Needs APS-CON?
PXM1E-4-155	MMF-4-155/C	Yes
	SMFIR-4-155/C	Yes
	SMFLR-4-155/C	Yes
	PXM-UI-S3/B	—
PXM1E-8-T3E3	SMB-8-T3	—
	SMB-8-E3	—
	PXM-UI-S3/B	—
PXM1E-COMBO (also known as PXM1E-T3E3-155)	MGX-T3E3-155	No
	MMF-1-155-SFP <sup>1</sup>	—
	SMFLR-1-155-SFP <sup>1</sup>	—
	SMFIR-1-155-SFP <sup>1</sup>	—
	PXM-UI-S3/B	—
PXM1E-16-T1E1	MCC-16-E1	—
	RBBN-16-T1E1	—
	PXM-UI-S3/B	—
MGX-SRME	MGX-SMFIR-1-155	No
	MGX-STM1-EL-1	No
MGX-SRM-3T3/C	MGX-BNC-3T3-M	—
MGX-RPM-PR-256 MGX-RPM-PR-512	MGX-MMF-FE	—
	MGX-RJ45-4E/B	—
	MGX-RJ45-FE	—
MGX-AUSM-8T1/B	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
MGX-AUSM-8E1/B	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	MGX-RJ48-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
AX-CESM-8E1	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
AX-CESM-8T1	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—

**Table 15** MGX 8830 Front and Back Card Types and Supported APS Connectors (Continued)

Front Card Type	Back Card Types	Needs APS-CON?
MGX-CESM-8T1/B	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
AX-FRSM-8E1	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
AX-FRSM-8T1-C	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
AX-FRSM-8E1-C	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—
MGX-FRSM-HS2/B	SCSI2-2HSSI/B	—
	MGX-12IN1-8S	—
MGX-FRSM-2CT3	MGX-BNC-2T3	—
MGX-FRSM-2T3E3	MGX-BNC-2E3	—
	MGX-BNC-2T3	—
MGX-VISM-PR-8T1	AX-RJ48-8T1	—
	AX-R-RJ48-8T1	—
MGX-VISM-PR-8E1	AX-SMB-8E1	—
	AX-R-SMB-8E1	—
	AX-RJ48-8E1	—
	AX-R-RJ48-8E1	—
	MGX-RJ48-8E1	—

1. Small form factor pluggable optical transceivers for the PXM1E-COMBO back card.

## MGX 8950 Product IDs and Card Types

[Table 16](#) lists Product IDs, 800 part numbers, and revision levels for the MGX 8950.

[Table 17](#) lists MGX 8950 front and back card types and whether APS connectors are supported.



### Note

MGX 8950 does not support the AXSM/A or the AXSM-E cards. If these cards are present, they will show up as “Failed” when the **dspcds** command is issued.

**Table 16** Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8950

<b>Product ID</b>	<b>800 Part Number</b>	<b>Minimum Revision</b>
PXM45/B	800-09266-04	-A0
PXM45/C	800-20217-03	-B0
PXM-UI-S3	800-05787-02	-A0
PXM-UI-S3/B	800-21557-01	-A0
PXM-HD	800-05052-03	-A0
AXSM-1-2488/B	800-07983-02	-A0
SMFSR-1-2488/B	800-07255-01	-A0
SMFLR-1-2488/B	800-08847-01	-A0
SMFXLR-1-2488/B	800-08849-01	-A0
AXSM-16-155/B	800-07909-05	-A0
AXSM-4-622/B	800-07910-05	-A0
AXSM-16-T3E3/B	800-07911-05	-A0
MMF-8-155-MT/B	800-07120-02	-A0
SMFIR-8-155-LC/B	800-07864-02	-B0
SMFLR-8-155-LC/B	800-07865-02	-B0
SMFIR-2-622/B	800-07412-02	-B0
SMFLR-2-622/B	800-07413-02	-B0
SMB-8-T3	800-05029-02	-A0
SMB-8-E3	800-04093-02	-A0
SMB-4-155	800-07425-02	-A0
XM-60	800-04706-06	-A0
AXSM-4-2488-XG	800-16987-04	-A0
AXSM-1-9953-XG	800-07365-06	-A0
SMF-4-2488-SFP	800-19913-04	-A0
SMFSR-1-2488-SFP	10-1421-03	-A0
SMFLR-1-2488-SFP	10-1742-01	-A0
SMFSR-1-9953	800-08237-06	-A0
SMFIR-1-9953	800-08246-06	-A0
SMFLR-1-9953	800-08247-06	-A0
SFP-8-155	800-21518-03	-A0
MCC-8-155	80022117-02	-A0
MGX-APS-CON-8950	800-15308-01	-A0
MGX-MMF-FE	800-03202-02	-A0
MGX-RJ45-4E/B	800-12134-01	-A0
MGX-RJ45-FE	800-02735-02	-A0

**Table 16** Card Numbers and Revisions Supported in Release 4.0.17 for MGX 8950 (Continued)

Product ID	800 Part Number	Minimum Revision
MGX-RPM-PR-256	800-07178-02	-A0
MGX-RPM-PR-512	800-07656-02	-A0
MGX-RPM-XF-512	800-09307-06	-A0
MGX-2GE	800-20831-04	-B0
MGX-2OC12POS-IR	800-21300-04	-B0
MGX-1OC12POS-IR	800-08359-05	-A0
MGX-1GE	800-18420-03	-A0

**Table 17** MGX 8950 Front and Back Card Types and Supported APS Connectors

Front Card Type	Back Card Types	Supports APS Connector (MGX-APS-CON-8950)
AXSM-4-2488-XG	SMF-4-2488-SFP (SMFSR-1-2488-SFP SMFLR-1-2488-SFP)	—
AXSM-1-9953-XG	SMFSR-1-9953	—
	SMFIR-1-9953	—
	SMFLR-1-9953	—
PXM45/C	PXM-HD	—
	PXM-UI-S3/B	—
PXM45/B	PXM-HD	—
	PXM-UI-S3	—
AXSM-1-2488/B	SMFSR-1-2488/B	Yes
	SMFLR-1-2488/B	Yes
	SMFXLR-1-2488/B	Yes
AXSM-4-622/B	SMFIR-2-622/B	Yes
	SMFLR-2-622/B	Yes
AXSM-16-155/B	SMB-4-155	Yes
	MMF-8-155-MT/B	Yes
	SMFIR-8-155-LC/B	Yes
	SMFLR-8-155-LC/B	Yes
AXSM-16-T3E3/B	SMB-8-T3	—
	SMB-8-E3	—

**Table 17** MGX 8950 Front and Back Card Types and Supported APS Connectors (Continued)

Front Card Type	Back Card Types	Supports APS Connector (MGX-APS-CON-8950)
MGX-RPM-PR-256	MGX-MMF-FE	—
MGX-RPM-PR-512	MGX-RJ45-4E/B	—
	MGX-RJ45-FE	—
MGX-RPM-XF-512	MGX-XF-UI	—
	MGX-1GE	—
	MGX-2GE	—
	MGX-1OC12POS-IR	—
	MGX-2OC12POS-IR	—
	MGX-GE-LHLX <sup>1</sup>	—
	MGX-GE-SX <sup>1</sup>	—
	MGX-GE-ZX <sup>1</sup>	—

1. Small form factor pluggable optical transceivers for MGX-1GE back card.

## New and Changed Commands

There are no new or changed commands in Release 4.0.17.

There were no new or changed commands in Release 4.0.15.

The following commands were new or changed in Release 4.0.12:

- **addlink, dellink**
- **cnfscmpollparms, dspscmpollparms**
- **dspchanct**
- **dspclksrc**
- **dsppnportcac, dsppnportsrc**
- **dsplog**
- **dsplns, dspapslns, dspapsln**
- **dumpconfigs**
- **dumptrace, upallports, dnullports, dspdeverr, dspdevhist**

There were no new or changed commands in Release 4.0.11. Some command information in these release notes is repeated from the Release 4.0.10 release notes.

Refer to the following documentation for details about commands:

- The *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Command Reference, Release 4*, part OL-3846-01, available online at <http://www.cisco.com/univercd/cc/td/doc/product/wanbu/8850px45/re14/cmdref/index.htm>
- The *Cisco ATM Services (AXSM) Software Configuration Guide and Command Reference for MGX Switches, Release 4*, part OL-3852-01, available online at <http://www.cisco.com/univercd/cc/td/doc/product/wanbu/8850px45/re14/axsm/index.htm>

# Limitations, Restrictions, and Notes for 4.0.17

This section includes information about limitations, restrictions, and notes pertaining to MGX Release 4.0.17.

## Limitations

Release 4.0.17 limitations are as follows:

- Upgrading AXSM-XG cards

To upgrade AXSM-XG cards from an older Release 4 to a current Release 4, all other AXSM cards in the chassis should be running a Release 4. This is necessary because the AXSM-XG card requires all other service module cards in the shelf to support receiving IPC Version 2 (64 bit aligned) messages.

The following error is displayed on the CLI during the upgrade if this restriction is not met:

```
ERR: Requested revision has IPC incompatibility with other card(s) in shelf. Make sure all
cards are running the same major revision.
```

- The following problems occur when a **delpart** command is executed:
  - Two ports with different physical IDs but the same logical port ID can exist on the PXM in a rare error case related to a **delpart** command. (CSCeb77548)
  - If a **delpart** command has been used on a port with phyId X and ifId Y, before re-using the same ifId Y to do an **addpart** on a port with a different phyId Z, do the following:
    - A **delpnport** command should be done for port X on the PXM to ensure that the earlier port (X) is completely deleted from the PXM.
  - If any form of pre-provisioning has been done on a port on the PXM, (for example, **dnnpport** followed by **upnpport**), if a **delpart** is now done for this port, trap 70006 is not sent to the CWM. In this case, the trunk is not deleted from CWM (CSCeb81958).
  - "**delpnport**" from CWM does not delete a port on the PXM if a "**delpart**" command had been used on the port earlier from the service module (CSCeb78837).
  - A PNNI link is deleted using **delpart** but shown in major alarm in the Network Monitor of CWM because the trap 70006 is not sent to CWM. In this case, the trunk is not deleted from CWM (CSCin55488). This is similar to CSCeb81958.
- The **addcon** command should not be run on an AXSM running a 3.0 version when the PXM is a 4.0 version. Using this command in this mixed version configuration can have the side effect of a PXM task exception especially with SPVC DAX connections.
- When you execute the commands **delpart** and **delpport**, the controller sends release on the connections routed over NNI links before doing unbind with the **pnport**. When a new port comes up, the **addcon** is rejected by CMTask as the old connection is still not released (unbind pending). When unbind finally happens, the old connection gets removed and new control vc can get added. See CSCeb35266 for more information.

- The SVCC-RCCs between LGNs are not established after the level is changed on one of the LGNs. The Upnode id of the uplinks to the level changed LGN displayed by the command **dspnni-inducing-uplink** still shows the old level instead of the new level. The Upnode is enabled quickly after the node level is changed. For example, the following sequence of commands are cut and pasted to change the Upnode level. See CSCeb36703 for more information.

- **cnfpnni-node** <node-index> -enable false
- **cnfpnni-node** -level <level> -nodeId <node-id> -pgId <pg-id>
- **cnfpnni-node** <node-index> -enable true'

The workaround of this is to disable and then re-enabled the Upnode with the level changed using the command **cnfpnni-node**.

- When a **delpnni-node** is issued for a higher level node, a dynamic memory buffer is leaked. This should not cause a problem unless the dynamic memory partition is low on memory. The workaround for this is to do a **switchcc**.
- When configuring virtual interfaces (for example, VUNI, VNNI, EVUNI, EVNNI), the physical interface must be of all one ATM header type, either UNI or NNI. The signaling that is applied to a virtual port is independent of the actual virtual port ATM header. The only limit is that the VPI value must be within the UNI ATM header limitations



**Caution**

Due to significant differences in the Preferred Route feature between Release 3 and Release 4, all Preferred Route information is lost during migration to Release 4. To facilitate the recreation of the preferred routes, document the routes before starting the upgrade.

## PXM1-E Parity Errors

The PXM1E parity errors are as follows:

- If CBC CBH RAM has a parity error on the active PXM1E card, and if no traffic passes on any connections, the PXM1E does not detect this parity error and does not switch over to the standby card.

All service module cards reset.

In future release MGX Release 5, the Online Diagnostics module will have a Cell Bus Parity test that will detect this condition and cause a switchover.

- The PXM1E standby card still comes up when QE TS RAM parity error occurs. In future release of MGX Rel 5, Online diagnostics module will detect this condition on the standby and cause the card to reset.

## Upgrading to 4.0.10

Use the following notes when upgrading to 4.0.10:

- Any invocation of 'reboot 0' from shellconn to reset a PXM card results in an unconditional core dump on the card with reason "Reset From Shell". As a side effect, customers using the CLI command **burnboot** to upgrade the PXM boot revision to MGX 4.0(10) release from any older release gets a "Reset From Shell" core dump while upgrading. This core dump should be ignored. No future upgrades will be affected by this.
- The statistics associated with the online and offline diag tests (viewed via **dspdiagstat**) get corrupted after an upgrade to 4.0. A **clrdiagstat** CLI command should be issued against all slots after an upgrade has been completed. See CSCea42260 for more formation.



- The persistent link database is not supported on PXM45(A) cards. Therefore, if the persistent topology gateway node of a peer group has PXM45(A) cards, then before this node is upgraded to the 4.0 release, another node with PXM45/B/C cards have to be configured to be the persistent topology gateway node for this peer group. The node with the PXM45(A) card should then be disabled as the gateway node. Then, proceed with the upgrade for this node.
- To upgrade to 4.0.10, you do not need to upgrade to 3.0.20 if you are running 3.0.10.
- If you upgrade from 3.0, 3.0(21.100) or any pre-3.0 release to 4.0, the node reports a few instances of the following error message during **burnboot** and **switchcc**:

```
Error Log for Slot 07: Error Num 5
Event Logged:
07I00229 04/02/2003-17:49:14 SMGR-4-INVD_RET
E:00005 tStDnld19 smgrApiSHMFileDownload
smgrApiSHMFileDownload: Card not in correct state
```

Setup and operation of the Preferred Route feature is changed between MGX Release 3 and MGX Release 4. Refer to the *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Software Configuration Guide, Release 4* for information on how to migrate Release 3-based preferred routes into a Release 4-based network after the 4.0 upgrade is complete.

The Preferred Routes information from the MGX 3.0.20 release notes is repeated in these notes.

## Higher Level Logical Link Limits

The numbers of logical links in the higher levels of the PNNI hierarchy is limited to 30 per level when the complex node configuration is turned on. The limit is essential to reduce the processing time involved in finding the bypasses between the logical links.

Whenever a significant change in bandwidth occurs in one of the links within the peer group, the bypass calculation is triggered, and the bypasses are usually found from one logical link to another.

If you have  $n$  logical links, the calculation involves the finding  $n*n$  bypasses. If the number of logical links  $n$  is large, a lot of processing time is used for calculating the bypasses. The number of logical links per level must be limited to 30.

The number can be controlled by configuring the appropriate number of aggregation tokens for the outside links for that peer group.

## CLI Upgrade

During an upgrade when the standby card has a 4.0 release or later runtime firmware and the active card has a pre-4.0 runtime firmware version, there is no display output from standby when **cc** command is issued. The error message, "Err: cliSipcPsrRead(): received oversized message" appears from the active card. The workaround for this is as follows:

1. On the PXM card, connect to the console port of the standby card if you need to access it.
2. Complete the upgrade so that both service modules are running the same version.

The number of input characters for the CLI has increased from 256 to 512 bytes to accommodate more than 32 input parameters in 4.0 release firmware. When the standby card has 4.0 release firmware and the active card has pre 4.0 release firmware, the active card is receiving 512 bytes. This active card thus receives the error message above.

## Preferred Routes

Preferred routes are not supported for connections with endpoints on VISM and RPM card types in Releases 4.0 and above. Upgrading a preferred routing configured connection from any Release 3.0.x is non-graceful. In a future release, the configuration of the preferred route identifier information for each connection will be supported on the service module cards instead of the PXM controller.

During the upgrade, the preferred route identifier information for each connection is lost, and the preferred route identifier needs to be reprovisioned on the service module cards. Also, the preferred route table at the PXM controller is lost.

Connections already routed with preferred routing remain, and these connections do not have alarms. If a node in the PNNI network is removed via physical decommissioning, and if any nodes in the network have some preferred routes that contain the removed node as one of the hops, the preferred route(s) must be deleted/modified manually.

When a connection is routed on a route other than its preferred route and if the preferred route becomes available, the connection is not automatically derouted to route back to its preferred route. You have to deroute/reroute by using configuration commands (**opt rte**, **rrt con**, **dncon/upcon**, and so forth).

QoS precedence over Preferred Route does not apply to MPG network (CSCdz40310). A preferred route configured with higher node ID cannot be blocked (CSCdz41145, CSCdz49001). Use the **delpref** command when a preferred route in use is allowed in Release 4 and not in Release 3. All the nodes in the network should be running Release 4.0.00 software to use preferred route feature. Due to differences in physical port numbering, non-MGX nodes can only be the terminating nodes in a preferred route.

## PXM45/C

The PXM45/C card is supported only on MGX 8850 (PXM45) and MGX 8950, starting with release 4.0.00.

## 192 Signaling Interfaces

This feature has been tested on PXM45/B and PXM45/C cards on MGX 8850 and MGX 8950 platforms only. The limit for signaling interface of PXM45/A remains unchanged, and for PXM45/B and PXM45/C, the number of signaling interfaces supported is increased to 192. The number of physical ports supported is 4000 (same as the limit for MGX 8850/8830 PXM1E when supporting cell bus service modules).

## Closed User Group (CUG)

The following notes pertain to the CUG feature:

- If a Closed User Group(CUG) membership configuration is modified, the CUG interlock code information maintained by the SVC connections, which have already been routed, is not altered.
- The CUG feature is not supported on nodes which are configured with right-justified E.164 addresses using cnfe164 justify.
- This feature allows a maximum of 100 CUGs per AESA address at a UNI interface.
- This feature allows CUG membership to be provisioned at a maximum of 200 AESA addresses per node, assuming that none of the AESA addresses are assigned to multiple interfaces. However this limit is not enforced in the software.

- If some of these AESA addresses are assigned to more than one interface, the number of AESA addresses supported by this feature is correspondingly reduced. For example, if all the addresses on the node are assigned to two interfaces, CUG membership should not be provisioned for more than 100 addresses per node.
- When configuring CUGs on a node, up to 20000 different 20-byte AESA administrative addresses can be specified (200 address with 100 CUGs each) in the leading portion of the CUG interlock codes within the node.
- The space taken by these CUG IC AESAs is shared with that used to store the calling/called party numbers of the in-progress or active connections.
- This feature is now supported on PXM45(A) on MGX 8850 switches.

## AXSM-32-T1E1-E/PXM1E-16-T1E1

The following notes apply to the AXSM-32-T1E1-E and PXM1E-16-T1E1:

- IMA version fall back is part of IMA group operation. If a group is configured with version 1.1 and it is connected to a far end group which is configured with version 1.0, this group will fall back to version 1.0.
- The IMA link LIF(Loss of IMA Frame) and LODS(Link Out of Delay Synchronization) defect integration times are configurable.
- ATM layer configuration for line and IMA ports takes an additional parameter, AIS enable. It is enabled by default.
- In T1 mode, payload scrambling is disabled by default and in E1 mode it is enabled by default on all lines and IMA groups.
- Only 10 SVC calls/sec is guaranteed
- FDL support for Loopback code detection is not supported
- Far End Line Performance counters are supported only for E1. They are not supported for the T1 interface.
- HMM support is not available for the IMA and the Framers devices.
- When there is switchover, it can take up to 3.5 seconds for the
- IMA groups to recover. Data is lost until the groups recover.
- Auto-restart(persistent Rx IMA ID) feature is not supported.
- IMA group cannot have links from upper and lower bays together.
- ITC clocking mode on IMA is not supported.
- One way transmission delay of more than 500 msec on the T1/E1 IMA links is not supported
- There is 5ms fluctuation on IMA delay tolerance.
- While the IMA group accumulated delay is being removed with "clrimadelay", the following applies:
  - Any changes to this IMA group configuration are temporarily blocked.
  - Any changes in the FE IMA links in this group can cause the NE IMA group to restart.
- The VC and COSB thresholds are updated as and when the links are added/deleted from the IMA groups.
- The thresholds for the connections added when there are N links in the group can differ from connections added when there are (N+1) links in the IMA group.

- BERT is only supported on the T1 interfaces. It is not supported on E1 interfaces.
- The port number in the `pnport(shelf.slot:subslot.port:subport)` could be a random number.
- The user should not interpret this number as line or IMA group number. Refer to DDTSCSCdy08500

## Cell Bus Service Modules (formerly Narrow Band Service Modules) and RPM-PR

When `switchredcd` is done and a PXM switchover (either through `switchcc/resetcd` on the PXM or due to a failure) happens at the same time (CSCea36485):

- Conditions: `switchredcd` is run from PXM Command Line to perform CBSM Switchover. PXM switches over (manual or automatic) before the SM switchover is completed.
- Symptom: SM did not switchover after `switchredcd`
- If the PXM switches over before the CBSM switchover completes, the following issues can be seen:
  - the SM Switchover may not be complete and the standby card will be in an indeterminate state. The `dspscd` command from PXM will still show it as 'standby' and later switchover (due to Active SM removal or reset) will fail, causing Loss of Traffic. The `switchredcd` command will also fail.
  - The `switchredcd` from PXM again will cause the failure since the standby SM will not be able to allocate memory.
  - Work round: Reset the standby Service Module card.
- CBSM feature is not available for PXM45/A
- CBSM (max dax con) 7200
- CBSM (max non-dax) 27K.

## AXSM-E as Upstream to Feeder Nodes

These notes apply to the AXSM-E:

- The AXSME cards only work on the MGX 8850 (PXM45).
- Above T3/E3, the AXSM-E port density is only half the density of AXSM and AXSM/B.
- The highest port bandwidth supported on AXSM-E is OC-12/STM-4.

## IGX Feeder

When an IGX is added as a feeder to a SES/BPX or MGX node, it will have a default node number, this node number may not be unique within the network. If it is not unique then it needs to be modified to a unique node number by issuing cli command "`rnmd <x>`" where x should be unique with respect to all other auto-route nodes. To find the other node numbers, use cli command "`dsps +n`". Failing to do so, CWM Databroker may have incorrectly formed hybrid connection database, the CWM GUI may show the connection as incomplete.

## Policing Accuracy for PXM1E

There is a limitation regarding the policing accuracy for the PXM1E. The policing rate is defined as  $50000000/PCR$ . If the PCR is comparable to the OC12 line rate (1412830), the policing rate parameter is a relative small number ( $50000000/1412830 = \sim 35.38996$ ). Since integer division is performed, the decimal values are truncated. As a result, the policing parameter cannot be calculated accurately. Moreover, the policing rate parameter is stored in an exponent (5-bits) and mantissa (9-bits) format, so this format cannot represent a small number very accurately. Combining the above two factors, a 100% accurate policing parameter cannot be configured.

To ensure that the user gets the rate that they have specified, the software configures policing at the next larger rate which the hardware can support. For example, if a connection has a PCR = 1400000, the software programs the actual policing rate to be 1428571. For a worst case scenario, if the user configures a VBR2 connection with a PCR of 1400010 and the ingress user traffic is 1428570, there won't be any policing because the ATM policing device would police at rate 1428571 only.

## Maximum Threshold Accuracy for PXM45 and PXM1E

There is a limitation regarding the maximum threshold accuracy for the PXM45 and PXM1E. The Qbin threshold and VI rate are stored in the form of exponent and mantissa, and some accuracy is lost in expressing the real rate. In testing the thresholds, the lack of accuracy is compounded with both of the Qbin and VI rate (draining rate). Therefore, an exact 100% correct discard rate cannot be calculated.

To ensure that the user gets the rate that they have specified, the software configures Qbin depth at the next larger rate which the hardware can support. As a result, Int. Cell Gap(ICG) and Relative Service Delay (RSD) are truncated.

## PXM1E-Based Switches

The following notes apply to PXM1E based switches (that is, MGX 8850 (PXM1E) and MGX 8830):

- There is no CLI retrieve POST (Power On Self Test) display.
- POST can only be displayed on the console during boot up.
- Y-red is not supported on the MCC Electrical back card
- For inter-card APS to work on the PXM1E-8-155, and one front card is missing or not available, both backcards have to be present. A front card cannot drive the alternate trunk-backcard when its own local trunk-backcard is absent.
- MPLS controller is not supported on PXM1E.
- PXM1E Clock source is supported by CESM, and AUSM cell bus service module cards. CESM and AUSM can provide one clock source, either primary or secondary.
- Only SPVCs and SPVPs are supported on cell bus service modules. SVCs are not supported on CBSM (Cell Bus Service Module).
- There is no bandwidth CACing support on the cell bus service modules, except for the RPM card, which is checked against the OC3 card rate. For example, for a given RPM, the bandwidth allocated to all connections may not exceed OC3 rate. Bandwidth CACing is supported on the PXM1E uplink port.

- The maximum bandwidth to be distributed among cell bus service modules is ~ OC10 while traffic on the network interfaces on PXM1E can achieve true OC12 line rate.
- Traffic should be balanced between the Cell Bus Controllers to achieve the OC-10 rate. The traffic should be distributed equally at a rate of about OC-5 on the two Cell Bus Controllers. The Cell Bus Controllers can't load share to achieve OC-10 with one Cell Bus set at an OC-6 rate, and another Cell Bus set at an OC-4 rate. Anything above OC-6 will be dropped. However, if only one Cell Bus Controller is used and the other Cell Bus controller is not used, then it can achieve OC-10. On an 8850, the CBCs are split between the left and right side of the chassis: CBC0 supports slots 1-6 and 17-22 and CBC1 supports slots 9-14 and 25-30. On an 8830, CBC0 supports slots 3,5,10, and 12 and CBC1 supports slots 4,6,11, and 13. Balance is achieved by planning the distribution of your cell base card by evenly distribute from left side of chassis and right side of chassis.

## PXM1E Hardware Limitations

These are the PXM1E hardware limitations:

- For inter-card APS to work on the PXM1E-8-155 with one front card missing or unavailable, both backcards have to be present. A front card cannot drive the alternate trunk-backcard when its own local trunk-backcard is absent.
- During hardware upgrade from PXM1E-4-155 to PXM1E-8-155, at the time when the inserted card types are different (one PXM1E-4-155 card set and one PXM1E-8-155 card set), the standby trunk-backcard functionality will not be available. Therefore, LED functionality will not be available, and APS lines will not work on that backcard. No modular optical transceiver(SFP-8-155)-mismatches will be reported for that backcard. No SFP-8-155 mismatches will be reported during hardware upgrades.
- Since the PXM1E-4-155 and PXM1E-8-155 backcards support LC and SC interfaces respectively, the following limitation/restriction applies. For hardware upgrade from PXM1E-4-155, to PXM1E-8-155, it is required that, after the first PXM1E-4-155 card set is replaced by the PXM1E-8-155 card set, any cabling for the PXM1E-8-155 interfaces is updated with a LC-SC converter. Similarly, after the second card-set is replaced, the same needs to be done for the interfaces on the new card-set. If this is not done, the upgrade will not be graceful and will be service affecting, until appropriate cables are setup.
- When MGX-8850-APS-CON is used, and one trunk-backcard is removed, care must be taken to screw the remaining backcard in completely, to ensure that the contacts are complete.
- MGX-8850-APS-CON
  - The Combo card does NOT require a mini-backplane. The PXM1E-8-155 REQUIRES a mini-backplane. The PXM1E-4-155 card does not require a mini-backplane but it is RECOMMENDED that one be inserted. This is to support graceful upgrade to PXM1E-8-155 cards in the future. Since the PXM1E-8-155 card requires a mini-backplane, if one is not already present when upgrading from PXM1E-4-155 to PXM1E-8-155, the upgrade cannot be graceful.
- Standby alarms not raised for HMM and Online Diagnostics. Alarms will NOT be raised for HMM and Online Diagnostics on the Standby card.

## Reserved VCIs

Here are the reserved VCIs that the customer cannot provision:

- vpi=0, vci=5 is used for SSCOP for UNI signaling ports.(If the port is configured for non signaling (univer = none) then no VPI/VCI is reserved.)
- VUNI uses configured vpi and VCI=5 for SSCOP.

- EVUNI uses minimum vpi and VCI=5 for SSCOP.
- NNI uses vpi=0, vci=18 for PNNI RCC.
- VNNI uses configured VPI for the port and the VCI=18 for PNNI RCC
- EVNNI uses minimum VPI and the VCI=18 for PNNI RCC
- vpi=0, vci=16 is used for ILMI if ILMI is enabled. VUNI, VNNI uses configured VPI for the port and VCI=16 for ILMI. Similarly, ILMI for EVNNI or EVUNI uses minimum vpi and vci=16.
- If MPLS is configured, vci=33 in the similar fashion as above.
- If NCDP is configured, minimum VPI and vci=34 for NCDP clocking.
- VPI=0 and VCI=31 are used for online diagnostics.

## AXSM-E OAM

- Any connection can receive E2E/OAM loopback cells up to the line rate (as long as the policing policy permits).
- If the connection is not in the loopback mode and is operating in the normal mode, then the AXSM-E card can receive up to 1,500 segment OAM loopback cells per second. Any excessive segment OAM loopback cell will be dropped. This limitation applies for all the connections on a card.
- For example, if there is only one connection, then that connection can receive 1,500 segment OAM loopback cells per second. If there are 2,000 connections on an AXSM-E card and one segment OAM loopback cell per second is being pumped through on each connection, then there can only be up to 1,500 connections to receive loopback cells at any given second, and the additional 500 connections would not receive for that second.
- The limitation is 1,500 segment OAM loopback cells per card and not per connection, the 1,500 cps assumes an even flow rate.

## CLI Configurable Access

The following notes pertain to how command access levels can be configured:

- Not all CLI commands are allowed to be changed and a command cannot be changed to CISCO\_GP group access level.
- Only the switch software is allowed to generate the binary file. This file has an authentication signature which has to be validated before the file can be used. Any manual changes to the file would make the file void.
- If the binary file becomes corrupted, then the command access levels revert back to the default values during the card bring-up. To recover, repeat the installation process or retain a copy of the binary file and do **cnfcli accesslevel install** on that service module.
- Currently, command names are verified, but an invalid command name may be parsed and be added to the binary file. However, this invalid name would be ignored later.
- If replication to standby failed, the installation process failed.
- **cnfcli accesslevel default** restores all command access levels to default for the service module that this command is executed on. It does not remove the binary file and this change is not persistent. If it is executed on the active card of a redundancy pair, the standby card is not affected. When the card is reset and the binary file exists, it will configure from the binary file when it is brought up.

## Controller Card Mastership Sanity Verification

Because the solution provided in this release can only detect and log invalid mastership state transitions, an outage may still occur.

## Serial Bus Path Fault Isolation

The Serial Bus Fault Isolation feature only addresses isolating errors on the local cards. However, when a common error occurs on the switching fabric card, this solution does not address this. As a result, if there is a problem on the PXM card or the XM60, the fault is going to be reported against all cards that detected the symptoms of this problem.

## Cell Bus Path Fault Isolation and Recovery

The following notes pertain to cell bus path faults:

- The isolation procedures can isolate the Cell Bus path involving the QE SAR that is used for polling the Serial Bus based Service Modules (e.g., AXSM, AXSM/B, AXSM-E,) and all the communication with the standby controller card and the Cell Bus Based Service Modules (e.g., FRSM, CESM). These procedures can't isolate the Cell Bus path failures involving ATMizer SAR that is used for the inter-card communication except polling, between the active controller card and the Serial Bus based Service Modules (e.g., AXSM, AXSM/B, AXSM-E).
- The isolation procedures isolate the Cell Bus path failures to the active controller card only. This means, it is determined whether the active controller card has the fault for the inter-card communication over the Cell Bus from the active controller card to the Service Modules and the standby controller card or not. It does not isolate the fault if the active controller card fails to communicate with some cards and successfully communicates with the rest on the Cell Bus.
- There should be at least 2 cards (2 Service Modules or 1 Service Module and 1 standby PXM) for the isolation procedures to be able to isolate the Cell Bus path failures to the active controller card.
- Only the failures detected by periodic polling triggers the isolation procedures. Failures reported from other sources in the system against a Service Module or the standby controller card due to the Cell Bus path failures don't initiate the isolation procedures, and which results in resetting that card against which the failure is reported, even while the active controller card is in the process of isolating the Cell Bus path failures triggered by the polling failures.
- There is no separate trap/alarm generated against the active controller card Cell Bus path when the fault is isolated to the active controller card. Only the event logs will be available that can be used during the manual investigation triggered by the card reset and/or switchover traps.
- If there is no controller card redundancy available, isolating the Cell Bus path failure to active controller card results in outage as the active controller card will be reset.



## FRSM-12-T3E3



**Note** FRSM12 cards are not supported in Release 4.0.17.

The following limitations summarize the FRSM-12-T3E3 adherence to the current Functional Specification:



**Note** The FRSM-12-T3E3 card does not support E3.

- CLLM will not be supported: The FRSM-12-T3E3 card can support connection level congestion through ATM EFCI. It also supports FR-ATM interworking of ECN and EFCI. Frame level congestion only happens in full line rate of sub-15 byte frames, therefore the hardware will only support Port Level Congestion Management in the Frame Relay domain.
- BERT is not supported.
- Sub-rate DS3 is not supported.
- Online and Offline Diagnostics is not supported.
- Complete core dump is not supported.

### Port and Connection Limitations

The following are port and connection limitations pertaining to the new FRSM-12-T3E3 card:

Port limitations:

- 4 bytes header length with Stratacom LMI is not supported
- LMI on Frame Forwarding port is not supported
- If LMI is configured, Port header length cannot be changed

Connection Limitations:

- Single ended connections can only originate from FRSM12. Single-ended connections terminating on FRSM12 are not supported.
- The command *chanType* cannot be modified
- If Port header length is 2 bytes, Max DLCI number is 1023
- If Port header length is 2 bytes, the restricted DLCIs are 0, 1007 and 1023
- If Port header length is 4 bytes, the restricted DLCIs are 0 and 8257535
- To add a Frame Forward connection, the port should be configured to Frame Forward type.
- For Frame Forwarding ports, the maximum configurable connection(s) is 1.
- For Frame Relay ports, the maximum configurable connection(s) is 4000.
- If the connection is in loopback, it cannot be modified
- CIR can only be 0 for UBR connections
- If CIR equals to 0, Bc should also be zero, Be and zeroCirConEir should be nonzero.
- If CIR not equals to 0, Bc should be nonzero
- If chanType is Frame Forward, chanFECNconfig should be setEFCIzero, chanCLPtoDEmap should be ignoreCLP, chanDEtoCLPmap should not be mapCLP

- If chanType is NIW or NIWReplacem chanFECNconfig should be setEFCIzero, chanCLPtoDEmap should not be setDEzero or setDEone
- If chanType is frSIW\_transparent or frSIW\_translate, chanCLPtoDEmap should not be ignoreCLP

Maximum connections depending on LMI type:

- Annex A/D LMI, 2 byte header, FRF 1.2 not enabled: 898 conns
- Annex A/D LMI, 2 byte header, FRF 1.2 enabled: 1000 conns (port max)
- Annex A/D LMI, 4 byte header, FRF 1.2 not enabled: 640 conns
- Annex A/D LMI, 4 byte header, FRF 1.2 enabled: 4000 conns (port max)
- Strata LMI, 2 byte header, FRF 1.2 not enabled: 560 conns
- Strata LMI, 2 byte header, FRF 1.2 enabled: 1000 conns (port max)

## Disk Space Maintenance

Because the firmware does not audit the disk space usage and remove unused files, the disk space in C: and E: drives should be manually monitored. Manually delete any unused saved configuration files, core files and firmware files and the configuration files of the MGX-RPM-PR-256/512 and MGX-RPM-XF-512 cards to avoid a shortage of disk space required to store event logs, configuration upload files in the C: drive and the configuration of MGX-RPM-PR-256/512 and MGX-RPM-XF-512 cards in the E: drive.

## Non-native Controller Front Card and PXM-HD Card

Use the following guidelines:

- Cisco recommends that the hard disk on the PXM1E front card and PXM-HD back card should contains at least 30% of free disk space at all times.
- When the front controller cards or the PXM-HD back cards are swapped within the same system, the system will perform a non-native card check, as a result, the controller card that attempts to come up as Active/Active may get resets twice.
- When a non-native PXM1E front card or a PXM-HD card is inserted into the standby controller slot, after the standby controller front card becomes Active/Standby, the active controller front card will copy its hard disk content over to the standby controller card. The active controller front card will not perform any automatic hard disk contents removal from neither the active nor standby controller card.
- Cisco recommended that customer regularly groom their system hard disk, that is, to remove all old files or outdated runtime and boot images residing under the following directories: C:/FW, C:/RPM, and E:/RPM. Also, any old and core files under C:/ and C:/CNF/ directories. All file removal will be perform by customer from the active pxm.
- Cisco highly recommends that the customer regular backup their saved system configuration to their local server.

- The system will keep only the two most recent copy of the saved system configuration under C:/CNF directory. Customer may use ftp protocol to ftp all the saved configuration under C:/CNF to their local server for future references. All files under C:/CNF will not replicated over to the standby controller card under any circumstances.
- The following steps are recommended to remove files on the system from the active controller card:

- 
- Step 1** Change to the directory that needs grooming.
- ```
cc <directory_name>
```
- Step 2** List the directory to identify old files that can be removed and available disk space.
- ```
ll
```
- Step 3** To remove any old files (you may also use wildcards in the file name):
- ```
rm <complete_filename>
```
- Step 4** List the directory to see if the file has been removed and disk space is available:
- ```
ll
```
- 

## clrsmcnf Command

These notes pertain to the **clrsmcnf** command:

- For the clear service module configuration feature, if there is a controller card switchover before the clear service module configuration operation is complete, the **clrsmcnf** command needs to be re-issued to ensure that the configuration is completely cleared to avoid any incomplete cleanup.
- For the clear service module configuration feature, using the **clrsmcnf** command may result in discrepancy in the PNNI configuration. For example, some connections may be in the mis-match state.
- If the **clrsmcnf** command is given with the <all> option to clear the software version for the slot as well, then the card will go into the boot/empty state after the operation is complete.
- While using the **clrsmcnf** command, the card in the specified slot is not usable until the operation has successfully completed.

## APS

These notes pertain to the APS feature:

- For AXSM APS, the backcard of the active card **MUST** be present for APS to function.
- AXSMs need the backcard of the active front card for the APS to work. This implies that AXSMs do not support the cross backcard removal, upper backcard of one AXSM and lower backcard of another AXSM.
- If you remove the upper backcard of the active front AXSM, it will trigger switching active card. At this point the APS is OK. However, if the lower backcard of the current active AXSM is removed at this time, it will not trigger switching active card since the standby card is missing one of the backcard. At this point the lower backcard APS does not work since the backcard of the active front card is missing.

- New commands **dspadjlnalm** and **dspadjlnalment** are now supported on AXSM.
- Port LED lights on AXSM-E front cards indicate the receive status of physical line connected to it only when the card is in active state. For a standby AXSM-E card, the LEDs always remain green whether the lines are in LOS irrespective of which lines are Active (CSCdv68576).

## Path and Connection Trace

These notes pertain to the path and connection trace features:

- Path trace is not supported on the control port.
- Path trace will not have the accurate information when there is a crankback on the connect path.
- Path and Connection trace feature in Release 3.0.00 is not compatible with the path and connection trace available with previous releases.
- Path and Connection trace supports point to point connections.
- Path and Connection trace supports MPG (multi-peer group) and SPG (single-peer group).

## Simple Network Timing Protocol (SNTTP)

The CWM MIB is not supported in Release 4.0.00.

## Priority Routing

These notes pertain to the priority routing feature:

Prioritized reroute of SPVCs is not guaranteed, if the SPVCs originate on a signaling port. SPVCs may get routed out of order. In-order routing of SPVCs is guaranteed on non-signaling ports.

- RPM does not support configuration of routing priority. All RPM mastered SPVCs will be assigned a routing priority of 8 by the PXM.
- **addcon** command on SES does not have support for specifying the routing priority. All the added SPVCs are assigned a routing priority of 8. **cnfcon** can be used to change the routing priority of the SPVCs.
- Changing the routing priority for dax connections, will not change the priority of the associated SVCs, this is because the SPVCs will not be derouted and rerouted if just the end-point parameters are changed, and routing priority is an end-point parameter. Also since dax connections are never derouted even when the UNI port goes down and **rrtcon** command is not supported for dax connections, the routing priority change will never get reflected. The only way for this to get reflected is to do a **dncon** and **upcon**. The very fact that dax connections are never derouted, the effect of this limitation is voided.

- Priority routing operates in a best effort manner for the following reasons:
  - Two in-order RELEASEs can still arrive out of order at the Master node, if they take two different paths.
  - Under congestion scenarios the RELEASEs are expected to be transmitted out-of-order. This is because the release of other calls should not be held up if the RELEASEs are not able to be sent on one of the interfaces, as it is congested. The calls that are unable to be released could be higher priority calls.
  - Lower priority SPVCs can be routed ahead of higher priority SPVCs. This can happen if several attempts have been made to route higher priority SPVCs, but failed. To prevent starvation of lower priority SPVCs, software will start to route lower priority SPVCs and software will get to the higher priority SPVCs at a later point in time.

## SPVC Interop

These notes pertain to SPVC interoperability:

- NNI SPVC Addendum Version 1.0 is not supported.
- PNNI 1.0 Addendum (Soft PVC MIB) is not supported.
- Terminating single-ended SPVCs on MSSBU switch Legacy Service Modules is not supported.
- Origination of Single ended spvcs (with -slavepersflag) from Legacy Service Modules (FRSM, CESM and RPM) is not supported.
- CC (Continuity Check) shall not be available at the slave end of a single-ended SPVC.
- Reporting AIS detection to CWM shall not be available at the slave end of a single-ended SPVC.
- tstdelay shall not be available at the slave end of a single-ended SPVC for MGX 8850. In case of SES-PNNI, the command is available from the PXM even for the slave endpoint.
- The slave end of a single-ended SPVC shall not be visible to CWM.
- If Single-ended SPVCs are originated from MSSBU switches, they can only be configured via CLI and not from CWM in the current release.
- Single-end Provisioning will not be supported for DAX connections as no value addition is seen for Interoperability.
- SPVC Statistics shall not be available for the slave endpoint of a single-ended SPVC because this endpoint is non-persistent.
- When the persistent slave endpoint of an existing SPVC connection is deleted and the master endpoint is allowed to remain, the connection may get established as a single-ended spvc connection. In this case, CWM will show the connection as "Incomplete"
- Override of SVC connections on a VPI due to an incoming SPVP request for that VPI is not supported The following override options alone are supported:
  - spvcoverridesvc
  - spvcoverridesvp
  - spvpoverridesvp.

## Persistent Topology

These notes pertain to the persistent topology feature:

- In a mixed network of pre-Release 4.0.00 and 4.0.00 or later nodes, only the node name and the node id will be shown for a pre-Release 4.0.00 node in the topo DB. This is because the feature is not present in pre-Release 4.0.00 nodes.
- If a peer group is made up of physical nodes with pre-Release 4.0.00 release logical nodes, then the info for the logical node will be stored in the Topo DB, because there is no way to distinguish between physical nodes and pre-Release 4.0.00 release logical nodes. Logical nodes with Release 4.0.00 or later SW release will not be stored in the Topo DB.
- To delete a node info entry from the Topo DB, first remove the node itself from the network, either by disconnecting the cables, or downing all the links between that node and the network. Wait for an hour. Then, delete that node from the topo DB. This is done because, even if a node is removed from the topo DB of all nodes in the peer group, its PTSEs will still be stored in the other nodes, until they are flushed from those nodes. This would happen within an hour's time, but it is configurable as a PNNI timer value. If the node is deleted from the Topo DB within that hour's time, and the node does `switchcc/reboot`, then it's possible that the node info for that deleted node will be added back into the topo db.
- When the node id of a node is changed, the old node id is added back into the Topo DB as a new node entry. In addition, the old node id will still be stored in the topo DB of all the other nodes in the PG. In order to delete this entry, wait for an hour so that the PTSEs with the old node id is flushed from the DB of all the nodes in the PG, and then delete the info of the old node id from the topo DB.
- It is possible that the gateway nodes are not in sync in a peer group, and this could happen in many situations. For example, a gateway node is added in a peer group, then a node is deleted from the PG, and another gateway node is configured, then the info for the deleted node would not be in the second gateway node. Another example is that a node is deleted from one gateway node, but not in another gateway node.
- When deleting a node from the PG, the node info must be deleted from all the nodes in that PG, even the non-gateway-node nodes. Otherwise, the node info for that deleted node will still be in the non-gateway-node nodes. This could cause inconsistencies later if this node is configured to be a gateway node.

## Manual Clocking

These notes pertain to manual clocking:

- AUSM can support only one clock. If a second clock is configured on the same AUSM card AUSM will nack us. When the second clock is naked no warning or message is given by the CLI. The NAK can only be found out by looking through the logs. The second clock configured on the AUSM will not be reflected in the clocking database
- If the line carrying the primary or the secondary clock source goes in alarm and a `switchcc` is done on the switch the clock configuration for the line in alarm will be wiped out. The clock configuration will also be wiped out if any card is rebooted when the clocking line is in alarm. This only applies to AXSM.

- No clock sources are supported on FRSM. If a clock source is configured on FRSM, it will not be reflected in the database.
- When *resetcd* is invoked on a service module, the primary and secondary (if configured) clock sources will be recommitted even though the primary or secondary clock source is not a port on the service module that was reset. Recommitted means that the primary and secondary will get requalified and the node will temporarily latch onto the internal oscillator, After the clock is requalified, the node will lock onto the primary clock source once again.

## AXSM Cards

If ER stamping is used, the rate interval does not provide sufficient accuracy to be completely effective. As a result, when an AXSM card is supporting a PNNI link which is congested with mixed CBR/ABR traffic, cells will be dropped. This Conditions only occurs when ER stamping is enabled and CI is disabled on an AXSM PNNI link, along with CBR/ABR traffic running so as cause congestion on the link.

Cisco recommends that the CI/EFCI mechanism be used for rate feedback rather than the ER stamping mechanism, especially if CBR/ABR traffic is expected. (CSCdw63829)

## AXSM-XG Hardware Limitation

The IR/LR/XLR SFP modules will need a 10 db attenuator when connected with short cables. Otherwise the specification for receiver sensitivity on the Rx is exceeded.

## ATM Multicast

The recommended configuration for MGX 8950 with ATM multicast application is as follows:

- MGX 8950 system loaded with AXSM/Bs without any AXSM-XG cards in the system
- MGX 8950 system loaded with all AXSM-XG based cards without AXSM/Bs in the system.
- The MGX 8950 system having a mix of AXSM-XG based card and AXSM/Bs is not a recommended configuration for ATM Multicast application. The limitation is due to the behavior of backplane serial buses in the system. The suggested workaround:
  - In order for the MGX 8950 system with AXSM-XG based card and AXSM/B to be present in the network supporting ATM Multicast the PNNI Node configuration can be made as branching restricted. `cnfpnni-node 1 -branchingRestricted on`

## RPM-PR and RPM-XF Limitations

For Release 4.0.15, Route Processor Module (RPM) cards have their own release notes. For details on RPM cards, refer to the “Release Notes for Cisco MGX Route Processor Module (RPM/B and RPM-PR) IOS Release 12.3(2)T5 for MGX Releases 1.2.21 and 4.0.15” and “Release Notes for Cisco MGX Route Processor Module (RPM-XF) IOS Release 12.3(2)T5 for MGX 8850 and MGX 8950 Release 4.0.15 (PXM45)”. These release notes are available online at <http://www.cisco.com/univercd/cc/td/doc/product/wanbu/index.htm>.

## Restrictions

This sections contains restrictions in Release 4.0.17.

### AXSM-32-T1E1-E and PXM1E-16-T1E1

PNNI requires SCR = 453 cells/sec and PCR = 969 cells/sec for the control connection.

SSCOP requires of SCR = 126 cells/sec and PCR = 2000 cells/sec.

### AXSM Model B Restrictions

These restrictions apply to AXSM model B cards:

- The **enableaxsmbaps** command is a PXM CLI command required to turn on additional APS features on AXSM/B cards in Releases 3.0.x and up. By issuing this command, the card operating mode becomes AXSM Op B. This command is required only while upgrading configured cards with Release 3.0.x images. If the AXSM/B cards do not have any configuration and are upgraded with Release 3.0.x, then the card operating mode would be made as AXSM Op B and it is not required to issued the **enableaxsmbaps** command.

The command has the following syntax:

- **enableaxsmbaps** <primary | secondary slot>
- The **enableaxsmbaps** command should be given after the completion of upgrading to Release 3.0.x. The following requirements are needed to change the card operating mode to AXSM Op B:
- For redundant cards, both the cards should be AXSM/B cards and the image on both cards should be Release 3.0.x and up.
- For non-redundant cards, the card should be an AXSM/B and the image should be Release 3.0.x and up.

## Formatting Disks

The hard disks should not be formatted with the Release 4.0.00 backup boot or runtime firmware. The Release 4.0.00 firmware initializes the disks with DOS File System Version 2.0 where as the earlier 2.x releases use DOS File System Version 1.0. As a result, if the hard disks are formatted with Release 3.0.00 firmware, those disks will become unusable in nodes running Release 2.x firmware. Since, Release 4.0.00 firmware is backward compatible, it can use hard disks with DOS File System Version 1.0.

## Saving Configurations

The C disk drive should not be used for saving multiple older configurations, images, and core dumps. The disk space on this drive is needed to save event logs and configurations, and the logs and configurations will not be correctly saved if there is inadequate disk space.

Save on all active PXM45 and PXM1E cards.



## Other Limitations and Restrictions

Here are additional notes that pertain to Release 4.0.00:

- When configuring virtual interfaces (i.e. VUNI, VNNI, EVUNI, EVNNI), the physical interface must be of all one ATM header type, either UNI or NNI. Keep in mind that the signaling that is applied to a virtual port is independent of the actual virtual port ATM header. The only limit will be that the VPI value must be within the UNI ATM header limitations.
- Bulk Status Enquiry is a proprietary signaling message used to check whether connections across peer nodes are intact. It is triggered automatically upon PXM switchover as well as in other scenarios like SSCOP link establishment. Though Bulk Status Enquiry will not work with Release 2.1 when the peer node is running release 3.0/4.0, there is an automatic fall back mechanism to standards specific "Normal Status Enquiry" procedure in case the bulk procedure fails. Hence, there should be no loss of functionality as a result of this limitation.
- If command **clrchancnt** is executed while a **dspchancnt** command is currently active then the data displayed will be incorrect. Restarting the **dspchancnt** after the previous one has completed will display correct data.
- Configuration required for preventing CLI lockout on PXM45(A) based via nodes: When a PXM45(A) based node is a via node for PXM45/C based end nodes, a normal deroute followed by a reroute will result in a CLI lockout on the PXM45(A) node. If there are permanently failed connections originating on the PXM45/C end nodes, then the CLI lockout will be extensive. To circumvent this situation, configure the following on the PXM45/C nodes which are adjacent to the PXM45(A) node: **cnfnodalconglth** -connpendhi 950 -connpendlo 750 Note that this is same as the recommended threshold for PXM45/B. This will ensure that the PXM45/C based nodes do not pump SETUPS towards the PXM45(A) node at a high rate. (CSCdz90598)
- **clrsmcnf** will not work for redundant service modules.
- **clrsmcnf** will not work if an upgrade is in progress.
- If RPM-PR or RPM-XF is configured as a LSC (Label Switch Controller), execution of **clrsmcnf** command on those LSC slots will be rejected - as designed.
- PXM disk sync verification will not work if an upgrade is in progress.
- The maximum number of 250,000 connections supported in Release 3.0.00 or later with PXM45/B.
- NCDP is not supported on BPX.
- CSCdz33652—When you clear the chancnt while you are monitoring the chancnt, you get garbage for the counters on the **dspchancnt** display. (AXSM-XG)

## Clearing the Configuration on Redundant PXM45 and PXM1E Cards

Use the following guidelines:

- Due to checks to prevent an inserted card from affecting the system, an additional step may be required when inserting two nonnative PXM45 (or PXM1E) cards in a shelf. Insert the first PXM45, use the **clrallcnf** command, and allow this to become active before inserting the second PXM45 (or PXM1E).
- After a **clrallcnf**, the user needs to explicitly clean up stale SCT files (refer to anomaly CSCdw80282).

## Limitations and Restrictions for 2.1.x

This section is extracted from the MGX 2.1.80 Release Notes. It describes the following issues for Releases 2.1.60 through 2.1.80:

- General 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 Release 2.1.x and other releases:

- After **switchcc**, there was some competition for 8,000 buffer resources. Since dbSync could not allocate the buffer to handle its file sync between Active and Standby, the “going to be” Standby card was reset again then came up later.

In 2.1 and earlier, dbSync allocates its resources from the same LOW priority pool as many other applications; therefore, dbSync might fail should the resource in this pool be used up.

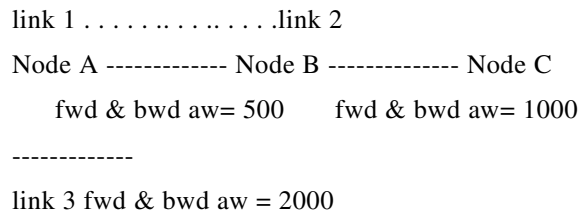
In 3.0 and later, there was an enhancement to let critical tasks (dbSync, syncRam) allocate its resources with a HIGH priority option. This means these tasks can get its resources from both LOW and HIGH priority pool and prevent this problem from happening (CSCdz84282).

- For a graceful upgrade, you must upgrade from version 2.1.80, or 2.0.16 or below to 2.1.80 to 3.0.00.
- 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.
- Of 192 PNNI interfaces, up to 100 interfaces can be signaling ports. The other 92 interfaces should be non-signaling ports, such as non self-supporting ports.
- AXSM-1-2488 and AXSM-1-2488/B cards do not have a policing function enabled.
- The front card hardware (mother board/daughter board) for each card type can support up to two back cards. But in Release 2.1.80, only one AXSM-E 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.
- In Multiple Peer Group (MPG) mode, when one switches over to the standby on a PGL node with 3 levels, it can take several minutes on the standby card for this PGL to come up and the SVC based RCC to setup. This is normal behavior, because PNNI doesn't support hot redundancy. So on switch over, the entire PNNI database has to be rebuilt. (It is like a reboot for PNNI, even though the active calls are not affected.)
- 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 and engineering.
- Support for 3 controllers only (1 for PNNI and 2 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.
- The maximum number of logical interfaces (physical trunks, virtual trunks, logical ports) supported in this release with PXM45 cards is 99 and PXM45/B cards is 192.

- 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 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.
- If there are MGX-RPM-PR-256/512 card(s) in the node, after **crallcnf**, the standby controller card takes longer to come up. The more MGX-RPM-PR-256/512 cards in the node, the longer the standby controller takes to come up. This also happens when the standby controller card is coming up, and MGX-RPM-PR-256/512 cards are inserted into slots that were not previously used for MGX-RPM-PR-256/512 cards.

### Limitations for rteopt via parallel links

The following are limitations for rteopt via parallel link.



Configuration:

- link 1 has forward and backward admin weight set to 500 (via cnfpnni-intf)
- link 2 has forward and backward admin weight set to 1000
- link 3 has forward and backward admin weight set to 2000
- SPVC connection is routed from Node A to Node C (Master endpoint is at Node A) via link 1 and link 2

## Scenario 1

Link 2 is down (e.g., via **dnnpport**), connections are re-routed right away but Node A hasn't had that info updated in the routing tables.

So SPVC on Node A will have routing cost =  $2*500 + 2*1000 = 3000$ , but since link 2 is down, Node B will choose link 3. But the routing cost on Node A SPVC is still 3000 as it did the calculation during the route search.

Now if link 2 is up, if you do **rteopt** on Node A, it gets the new route, the new path selected has a cost of 3000.

Since **spvc** has 3000, it doesn't re-route through link 2.

## Scenario 2

Instead of link 2 down, if there is a crankback on link 2, the same result stated above will happen.

## Scenario 3 (for CBR and VBR)

Link selection is set as **maxavcr** or **maxcr** or **random** on node B (via **cnfpnni-selection**) If link 2 has less bandwidth than link 3, and the link selection criteria at Node B is set to **maxavcr**, Node A will still put the cost as 3000 with least **aw** calculation, but Node B will choose link 3 (even though it is costlier) because it has more bandwidth.

## Scenario 4 (for ABR and UBR)

Link selection doesn't apply to ABR and UBR. (via **cnfpnni-selection**. This is exactly the same as Scenario 3 as ABR and UBR follow load balancing on parallel links instead of choosing the **minaw** link.

## Scenario 5 (for all types of service categories)

After call setup, if the admin weight is increased on the link on which the call is routed, the routing cost calculated during the call setup will not get changed. So if a **rteopt** is done after increasing admin weights on the existing links on the connection path, the connections will not get optimized to take the newer path.

## Workaround

If you **dnnpport** on link 2 (connections will be routed via link 3), after **upnpport** on link 2, then use **cnfpnni-intf** to change the existing admin weight on link 2 to lesser value, e.g., 800 (from 1000).

So when **optrite** is executed at Node A, routing cost will be =  $2*500 + 800(\text{fwd}) + 1000(\text{bwd}) = 2800$  for the new route of link 2.

Since all SPVC connections have 3000 as the routing cost, connections will be rerouted on link 2.

## 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 2.1.80 (number 2 and 3, which were included in version 2.0.13 are similar to number 2 and 3 for 2.1.80) 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, 2000 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 by the **cnfpnctive** 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 Conditions 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 avoid that link from being used.
- 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-vc value to be 35 or more for all partitions on the port where the MPLS partition will be added. By doing so, the TDP signaling vc for MPLS will be established automatically on 0/32. MinVPI is not negotiated by ILMI, so the user should set this parameter same on both nodes.
- In Multiple Peer Group (MPG) mode, when one switches over to the standby on a PGL node with 3 levels, it can take several minutes on the standby card for this PGL to come up and the SVC based RCC to setup. This is normal behavior, because PNNI doesn't support hot redundancy. So on switch over, the entire PNNI database has to be rebuilt. (It is like a reboot for PNNI even though the active calls are not affected.)

## APS Management Information

The following tips apply to the use of the **dspapbskplane** 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 **dspapbskplane** were modified in release 2.1.70.



**Note**

Commands **dspadjlnalm** and **dspadjlnalment** are available since Release 3.0.00. The command **dspadjlnalment** is supported on AXSM-E and AXSM/B.

The APS command **dspadjlnalm** was new to release 2.1.70.

Refer to the following command references for details about commands mentioned in these release notes:

- The *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Command Reference, Release 4*, part OL-3846-01, available online at <http://www.cisco.com/univercd/cc/td/doc/product/wanbu/8850px45/rel4/cmdref/index.htm>
- The *Cisco ATM Services (AXSM) Software Configuration Guide and Command Reference for MGX Switches, Release 4*, part OL-3852-01, available online at <http://www.cisco.com/univercd/cc/td/doc/product/wanbu/8850px45/rel4/axsm/index.htm>



**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.
- For AXSM/A hardware only: 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 pair of slots 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 pair of slots hosting APS lines, except for AXSM-XG cards in an MGX 8950 chassis.

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:

```
M8xx0_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 place:

```
M8xx0_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.

## 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:

- Step 1** The signal leaves the front card at the remote end of the line. (See Figure 1 and Figure 2.)
- Step 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.)
- Step 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.)
- Step 4** The active front card processes the signal that is received on the active line. (See Figure 1 and Figure 2.)
- Step 5** The standby card monitors only the status of the standby line. (See Figure 1 and Figure 2.)
- Step 6** If necessary, the signal passes through the APS connector to the front card. (See Figure 2.)



**Note**

For AXSM, the front card monitors only one of the receive lines. For AXSM/B, the front card monitors both the receive lines.

Figure 2 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 3 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 2 Standard APS Configuration**

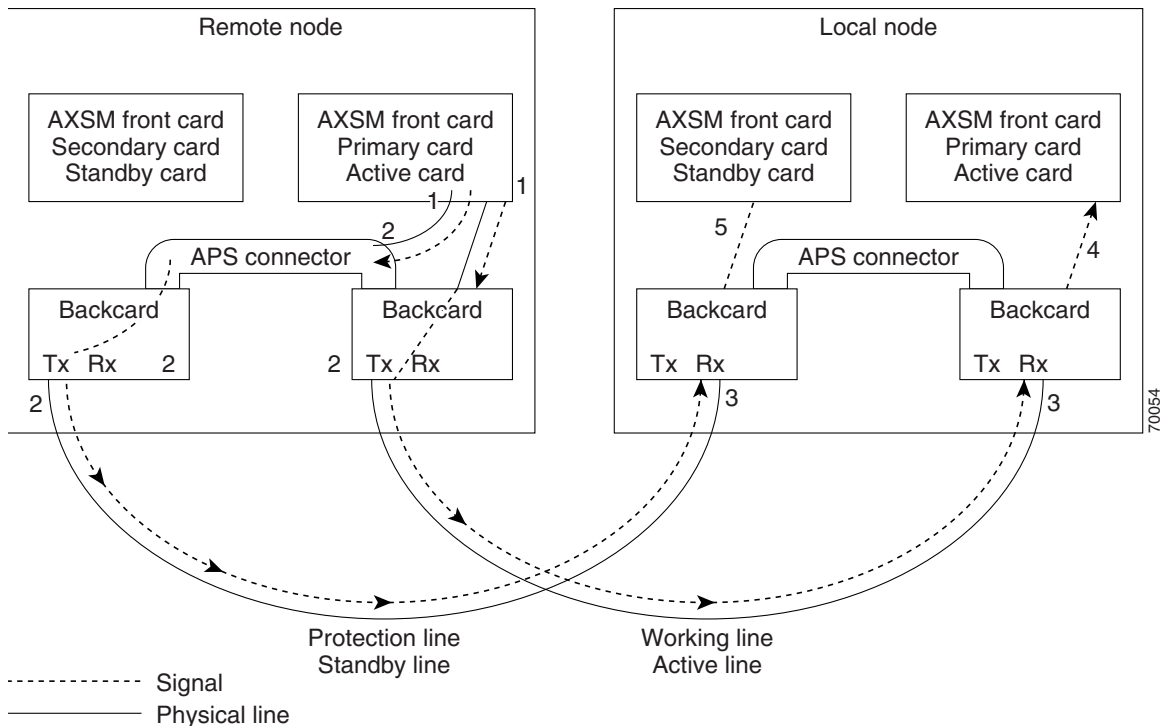
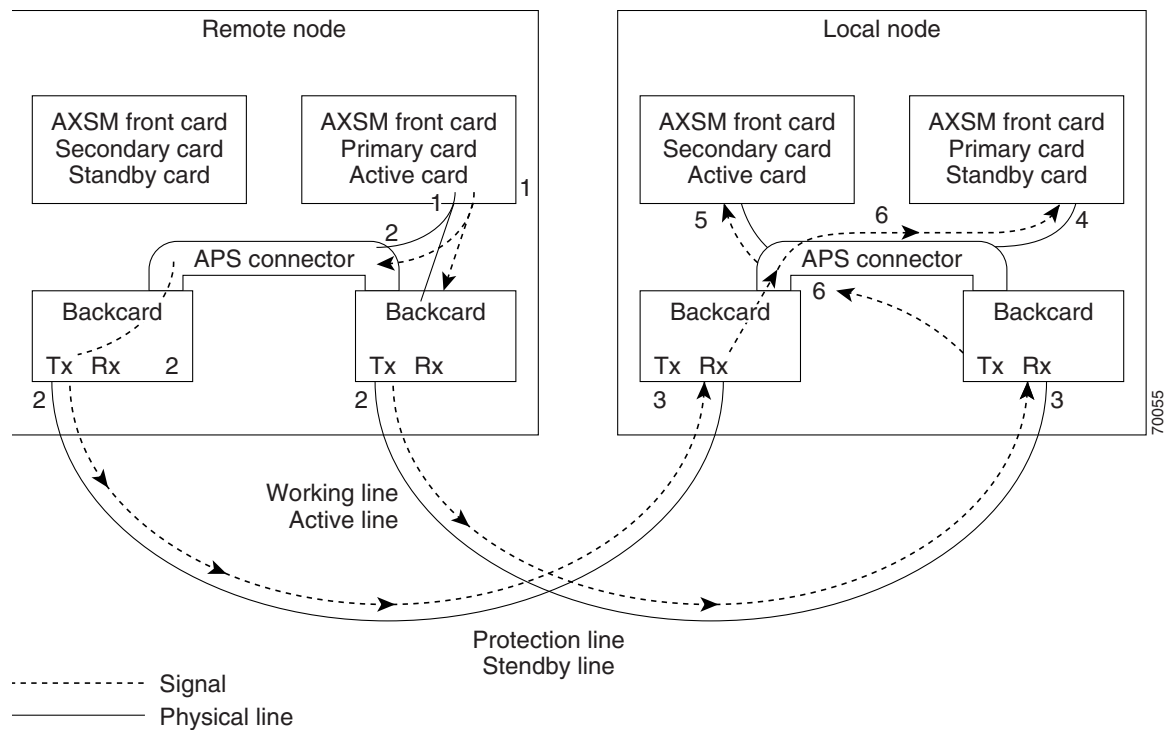




Figure 3 Crossed APS Configuration



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:

```
M8xx0_LA.1.AXSM.a > cnfapsln -w 1.1.1 -rv 2
```

Table 18 describes the configurable parameters for the **cnfapsln** command.

**Table 18** *cnfapsln Command Parameters*

<p>-w &lt;working line&gt;</p>	<p>Slot number, bay number, and line number of the active line to configure, in the format:</p> <p>slot.bay.line                      Example: -w 1.1.1</p>
<p>-sf &lt;signal fault ber&gt;</p>	<p>A number between 3 and 5 indicating the Signal Fault Bit Error Rate (BER), in powers of ten:</p> <ul style="list-style-type: none"> <li>• 3 = 10<sup>-3</sup></li> <li>• 4 = 10<sup>-4</sup></li> <li>• 5 = 10<sup>-5</sup></li> </ul> <p>Example: -sf 3</p>
<p>-sd &lt;SignalDegradeBER&gt;</p>	<p>A power of 10 in the range 5-9 that indicates the Signal Degrade Bit Error Rate (BER):</p> <ul style="list-style-type: none"> <li>• 5 = 10<sup>-5</sup></li> <li>• 6 = 10<sup>-6</sup></li> <li>• 7 = 10<sup>-7</sup></li> <li>• 8 = 10<sup>-8</sup></li> <li>• 9 = 10<sup>-9</sup></li> </ul> <p>Example: -sd 5</p>
<p>-wtr &lt;Wait To Restore&gt;</p>	<p>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.</p> <p>Example: -wtr 5</p>

**Table 18** *cnfapsln Command Parameters (Continued)*

<code>-w &lt;working line&gt;</code>	Slot number, bay number, and line number of the active line to configure, in the format:  slot.bay.line Example: <code>-w 1.1.1</code>
<code>-dr &lt;direction&gt;</code>	Determines whether the line is unidirectional or bidirectional.  <ul style="list-style-type: none"> <li>• 1 = Unidirectional. The line switch occurs at the receive end of the line.</li> <li>• 2 = Bidirectional. The line switch occurs at both ends of the line.</li> </ul> <p><b>Note</b> 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: <code>-dr 2</code></p>
<code>-rv &lt;revertive&gt;</code>	Determines whether the line is revertive or non-revertive.  <ul style="list-style-type: none"> <li>• 1 = Non-revertive. You must manually switch back to a recovered working line.</li> <li>• 2 = Revertive. APS automatically switches back to a recovered working line after the number of minutes set in the <code>-wtr</code> parameter.</li> </ul> <p>Example: <code>-rv 1</code></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:

```
M8xx0_node.1.AXSM.a > switchapsln 1 1 6
Manual line switch from protection to working succeeded on line 1.1.1
```

[Table 19](#) describes the configurable parameters for the **cnfapsln** command.

**Table 19** *switchapsln Command Parameters*

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

**Table 19** *switchapsln Command Parameters (Continued)*

Parameter	Description
switchOption	<p>The method of performing the switchover.</p> <ul style="list-style-type: none"> <li>• 1 = Clear previous user switchover requests. Return to working line only if the mode is revertive.</li> <li>• 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.</li> <li>• 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 Conditions, or if a forced switchover is already in effect.</li> <li>• 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.</li> <li>• 5 = Manual switchover from working to protection line unless a request of equal or higher priority is in effect.</li> <li>• 6 = Manual switchover from protection to working line. This option is only available in the 1+1 APS architecture.</li> </ul>
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:

```
M8xx0_node.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 light behavior changed in Release 3.0.00 as follows:

Port lights on 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.

Port lights on AXSMB front cards indicate the receive status of the Physical Line connected to it. For example, when APS is configured for working line as 5.1.3 and protection line as 6.1.3, regardless of which card is active, port LED on card 5 will show the receive status of 5.1.3 and card 6 will show the receive status of 6.1.3.



### Note

The remainder of this section is the same as for Release 2.1.80 unless otherwise noted as updated for Release 3.0.00.



### 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/A 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:

```
M8xx0_.1.node.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 20](#) to help you determine which APS line is not functioning properly.



**Note** [Table 20](#) is updated for Release 3.0.00.

**Table 20** 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 for AXSM/A, Red for AXSM/A, Green for AXSM/B	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 <a href="#">Table 21</a> 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 21](#) to troubleshoot 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 21 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.

## Installation and Upgrade Procedures

For information on the following installation and upgrade procedures, please refer to the *Cisco MGX 8850 (PXM1E/PXM45)*, *Cisco MGX 8950*, and *Cisco MGX 8830 Software Configuration Guide, Release 4*, part OL-3845-01.

## Upgrade Information

The upgrade appendix in the *Cisco MGX 8850 (PXM1E/PXM45)*, *Cisco MGX 8950*, and *Cisco MGX 8830 Software Configuration Guide, Release 4* contains the following procedures:

- Graceful PXM1E Boot Upgrades from Release 3.0
- Graceful PXM1E Boot Upgrades from Release 3.0.20
- Non-Graceful PXM1E Boot Upgrades
- Graceful PXM1E Runtime Software Upgrades
- Non-Graceful PXM1E Runtime Software Upgrades
- Graceful PXM45, AXSM, and FRSM-12-T3E3 Runtime Software Upgrades
- Non-Graceful PXM45, AXSM, and FRSM-12-T3E3 Runtime Software Upgrades
- Graceful AXSM or FRSM-12-T3E3 Boot Upgrades
- Non-Graceful AXSM or FRSM-12-T3E3 Boot Upgrades
- Graceful Service Module Boot Upgrades
- Non-Graceful Service Module Boot Upgrades
- Graceful Service Module Runtime Software Upgrades
- Non-Graceful Service Module Runtime Software Upgrades
- Graceful RPM-PR Boot Software Upgrades
- Graceful RPM-PR Runtime Software Upgrades
- Non-Graceful RPM-PR Boot Software Upgrades
- Non-Graceful RPM-PR Runtime Software Upgrades
- Installing SCT Files

## Maintenance Information

The upgrade appendix in the *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Software Configuration Guide, Release 4* contains the following procedures:

- Replacing PXM1E-4-155 cards and with PXM1E-8-155 Cards
- Replacing PXM45/A or PXM45/B Cards with PXM45/C Cards

## Upgrade Limitations

When connections are built on an AXSM\_B card with software version 2.1(80) and the card is replaced with a regular AXSM, the connections remain OK. When this node is upgraded to Release 3.0.10, the card will go into a mismatch state indicating that the reserved card is an AXSM\_B. See anomaly CSCdz72564 for details.

## Frame Discard



### Note

An important caveat exists for virtual path connections (VPCs) that were added with frame discard enabled before version 3.0.23 or 4.0.10. The switch lets you enable frame discard on a VPC, even though hardware does not support it. If a VPC with frame discard enabled already existed on the node when you upgrade to release 3.0.23, 4.0.10, or later, you cannot subsequently modify the VPC unless you delete it, then re-add it with frame discard disabled. To avoid the need to delete a VPC, disable frame discard on any such VPCs before you upgrade to MGX releases 3.0.23, 4.0.10, or later.

The order of software releases was as follows:

- MGX 4.0.00 April 2003
- MGX 3.0.23 May 2003
- MGX 4.0.10 August 2003
- MGX 4.0.11 October 2003
- MGX 4.0.12 October 2003
- MGX 3.0.25 December 2003
- MGX 4.0.15 January 2004

## Anomalies in Release 4.0.17

This section provides information about known anomalies in the MGX 8850, MGX 8830, and MGX 8950 Release 4.0.17.

Anomalies are organized as follows:

- [Known Anomalies in Release 4.0.17, page 89](#)
- [Resolved Anomalies in Release 4.0.17, page 104](#)
- [Anomaly Status Changes Since Release 4.0.15, page 108](#)



## Known Anomalies in Release 4.0.17

Table 22 lists the known anomalies in Release 4.0.17.

**Table 22** Known Anomalies in Release 4.0.17

Bug ID	Description
CSCdv32986	<p>Headline: 100% data is getting dropped on some connections</p> <p>Symptom: SAR does not service some connection after starting and stopping data several times.</p> <p>Conditions: Initiate the data traffic. Stop and start it again for several time. Sar will stop servicing for some connections.</p> <p>Workaround: None.</p> <p>Hardware: FRSM-VHS</p>
CSCdy23797	<p>Headline: Command needs to be updated in documentation</p> <p>Symptom: <b>pntrace</b> commands not completely documented.</p> <p>Conditions: None.</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>
CSCdy49757	<p>Headline: AUSM channel, port, sar counters do not correctly count rm cells</p> <p>Symptom: AUSM channel, port and SAR counters do not correctly count RM cells received from CPE.</p> <p>Conditions: The AUSM channel, port and SAR counters do not correctly handle RM cells when they are generated by the CPE (test-set). When RM cells are received by the AUSM card the baseline behavior is that they should be discarded by the UNI port. Indeed that is what is noted to happen for AUSM on pxm1e. The command "dspconload" shows that no traffic is received from the AUSM when a stream of RM cells at 480 cps is generated by the test-set.</p> <p>Workaround: None.</p> <p>Hardware: AUSM-8T1E1</p>

Table 22 Known Anomalies in Release 4.0.17 (Continued)

Bug ID	Description
CSCdy59294	<p>Headline: AUSM/PXM1E transmits invalid PTI = 7 cell, but FE cant see traffic</p> <p>Symptom: AUSM/PXM1E transmits invalid PTI = 7 cells into network but cannot pass traffic out of far-end AUSM port.</p> <p>Conditions: An abr1 PVC was provisioned between two AUSM-IMA ports: [Test Set A] &lt;---&gt; node1 to node2 &lt;---&gt; [Test Set B] Test set A generated 480 CPS of ATM cells with the PTI field set to 7 (invalid). The payload consisted of 48 byte 6 A pattern. The channel, port and SAR counters on node1 indicate that traffic is being sent into the network. On the PXM1E card on node1 the "<b>dspconload</b>" command indicates that all the PTI = 7 traffic is sent out the trunk interface. In fact there seems to be RM cell overhead in both directions.</p> <p>The "<b>dspconload</b>" command on node1 indicates that all PTI = 7 traffic is being received on the trunk interface. However on the AUSM port on node 2 the chan, port and SAR counters all remain at zero. It is very strange that the AUSM card handles PTI = 7 cells differently on the Ingress and Egress directions. At one time the PVC was able to transmit PTI = 7 cells end to end but it has only been observed to happen once.</p> <p>Workaround: None.</p> <p>Hardware: AUSM-8T1E1</p>
CSCdz04750	<p>Headline: FRSM8 does not correctly process incoming frames with correct crc-16</p> <p>Symptom: The FRSM8 card does not correctly process incoming Frames with incorrect CRC-16.</p> <p>Conditions: The FRSM8 card does not correctly process incoming Frames with incorrect Frame Check Sum sequence. The port should discard these "corrupt" frames under the port counter "RcvFramesDiscCRCError:". Instead the frames get sent into the network.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM1E</p>
CSCea08833	<p>Headline: Switch name changes to MGX 8220 when doing switchredcd or resetcd.</p> <p>Symptom: 8220 appears as the shelf name causing a display error on MGX PXM1E.</p> <p>Conditions: When the customer performs a switchredcd or a resetcd on the FRSM2T3.</p> <p>Workaround: None.</p> <p>Hardware: PXM1E</p>
CSCea46779	<p>Headline: PXM45B with broken Humvee-SAR interface</p> <p>Symptom: Hardware alarm reported on PXM45B.</p> <p>Conditions: Unknown.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM45</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

Bug ID	Description
CSCea55232	<p>Headline: REG4: axsmxg-ch gets cema errors during upport/dnport</p> <p>Symptom: Active card gets reboot then stuck Failed/Empty Resv.</p> <p>Conditions: There are some activities such as addcon, dnport/upport.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-XG</p>
CSCea64363	<p>Headline: dspDevErr need to be modified to show the device No.</p> <p>Symptom: dspDevErr need to modify to show the device No.</p> <p>Conditions: dspDevErr and dspDevErrhist for CBC, Q1210 and doesn't shows which group of error related to which device No. i.e. in the display the first group of error is for device 1 or 2.</p> <p>Workaround: None.</p> <p>Hardware: PXM1E</p>
CSCea65034	<p>Headline: dspDevErr/dspDevhist doesn't work on stdby PXM</p> <p>Symptom: dspDevErr/dspDevhist doesn't work on stdby PXM.</p> <p>Conditions: According to function specification of HMM on PXM1E the Device-triggered test are run on both Active and standby PXMs, but the dspDevErr and dspDevErrhist doesn't work on stdby PXM.</p> <p>Workaround: None.</p> <p>Hardware: PXM45</p>
CSCea71178	<p>Headline: REG4: after few switchredcd the AXSM-XG port 1.3 stuck path alm</p> <p>Symptom: axmxg-ch stays with path alarm on port 1.3 after few switchredcd.</p> <p>Conditions: Switchredcd was executed.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-XG</p>
CSCea72681	<p>Headline: Need protection to ensure that SM don't generate files to fill disk</p> <p>Symptom: AXSM in Yred configuration 1:1 have a strange behavior: StandBy fails in Init/Boot/Empty status, traffic on the active is affected, a reset on the failed card affect the active card too. The active card is not accessible via CC command, reply: "Err: redirection timed out".</p> <p>Conditions: System running code 3.0.20; Yred configuration on AXSM 1:1.</p> <p>Workaround: So far the work around experimented it's a reset via CLI on the "ACTIVE" card, it will restore both the cards but some ghost connections may appears in "mismatch" status. Need to delete the connection manually, a display of those connection will give back: "ERR: Connection does not exist on controller".</p> <p>Hardware: AXSM1</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCea85655	<p>Headline: PXM stuck booting after restoreallcnf.clrdsk</p> <p>Symptom: Standby PXM continuously reboots.</p> <p>Conditions: Do restoreallcnf on the node.</p> <p>Workaround: Remove the "C:/clrdsk" file, if it is present.</p> <p>Hardware: PXM45/B</p>
CSCea89455	<p>Headline: AXSM/E T3/E3 Offline diag failure</p> <p>Symptom: AXSM/E T3/E3 card reports offline failure.</p> <p>Conditions: Full coverage off line diag was executed.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-E</p>
CSCeb05061	<p>Headline: AXSM-E T3/E3 fails full cov. off line diag - Atlas test</p> <p>Symptom: Offline diag reports Atlas test failures on AXSM-E T3/E3.</p> <p>Conditions: Full coverage offline diag test was executed.</p> <p>Workaround: Unknown.</p> <p>Hardware: AXSM-E</p>
CSCeb05910	<p>Headline: PM parameters on NBSMs are not accurate</p> <p>Symptom: PM parameters on NBSMs are not accurate.</p> <p>Conditions: PM parameters on NBSMs are not accurate Line layer error counters remain at zero. On the other hand, the Path layer counters such as CRC and CRC ES do not correctly reflect the count.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM1E</p>
CSCeb19481	<p>Headline: XBAR port and slot alarms reported against slot of a chassis</p> <p>Symptom: Switch alarms reported against a slot on a chassis.</p> <p>Conditions: Unknown.</p> <p>Workaround: Unknown.</p> <p>Hardware: None</p>
CSCeb20570	<p>Headline: EvtLog:switchcc-multiple entries related to CBC/FW ready/not ready</p> <p>Symptom: multiple instances of firmware ready/not ready and CBC ready/not ready in event log.</p> <p>Conditions: <b>switchcc</b> was executed.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM45/B</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

Bug ID	Description
CSCeb33176	<p>Headline: AXSM-XG card reset because of hw_timer_TassiException</p> <p>Symptom: Active card resets by itself and switchover occurred.</p> <p>Conditions: None.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-XG</p>
CSCeb35363	<p>Headline: increasing delay on IMA causes pnpport to go into enablenotup state</p> <p>Symptom: <b>pnpport</b> becomes 'enablenotup' when delay of 249ms induced on one link of the IMA group, causing all user traffic to re-route despite VPC / IMA trunk in active state on the AUSM card for that trunk. The delay later reduced to 50 ms but pnpport does not recover.</p> <p>Conditions: <b>pnpport</b> becomes 'enablenotup' when delay of 249 ms induced on one link of the IMA group.</p> <p>Workaround: None.</p> <p>Hardware: AUSM-8T1E1</p>
CSCeb38659	<p>Headline: <b>resetsys</b> on PXM45 causes AINI port to vc failure</p> <p>Symptom: On PXM45 node, the AINI port goes into vc failure.</p> <p>Conditions: Executed the command <b>resetsys</b>.</p> <p>Workaround: Perform the commands <b>dnpnpport</b> and <b>upnpport</b>.</p> <p>Hardware: PXM45/B</p>
CSCeb38846	<p>Headline: remote loopback option not available on frsm-8t1e1.</p> <p>Symptom: Remote Line/Port loopback option not available in FRSM8T1/E1 for MGX-2 which is available in MGX-1.</p> <p>Reports following error: switch.a.PXM. &gt; <b>cnfbert -cbif 17.1.0 -pat 1 -lpbk 15 -sbe 1 -en 4 Error!! Bert Pattern could not sync. Test failed Error!! BERT pattern could not sync.</b></p> <p>Conditions: Feature not available in <b>cnfbert</b> command.</p> <p>Workaround: None.</p> <p>Hardware: PXM1E</p>
CSCeb38926	<p>Headline: REG4+:MGX8850 node crashed after doing restoreallcnf, not healthy</p> <p>Symptoms: Active PXM getting stuck in backup boot after restoreallcnf is done.</p> <p>Conditions: <b>restoreallcnf</b></p> <p>Workaround: Esc+Ctrl+X on the console will reset the card and will come up fine.</p> <p>Hardware: PXM45/B</p>

Table 22 Known Anomalies in Release 4.0.17 (Continued)

Bug ID	Description
CSCeb40265	<p>Headline: <b>xcnfln</b> shows the clkfrequencythreshold 1-5. does not show what is measured</p> <p>Symptom: clkfrequencythreshold has the option of 1-5 on xcnfln/cnfln on the HS2/B card does not specify the individual value.</p> <p>Conditions: <b>xcnfln</b> shows the clkfrequencythreshold 1-5. It does not explain what are the values meant. It did not say what the value of selecting 1 and etc.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM1E</p>
CSCeb47830	<p>Headline: AXSME - ssi exception error: snmpSA crash</p> <p>Symptom: SSI exception error.</p> <p>Conditions: snmpSA malfunctioned.</p> <p>Workaround: None.</p> <p>Hardware: PXM45</p>
CSCeb49214	<p>Headline: DE-LSNT:VSI session messaged up after reset redundant RPMXF cards</p> <p>Symptom: VSI session messed up after reset redundant RPMXF.</p> <p>Condition: There were 1:N redundant ELSR RPM-XFs in the MGX shelf. Reset active RPMXF, immediately reset standby twice, the VSI session messed up.</p> <p>Workaround: Reset Active PXM again.</p> <p>Hardware: PXM45/B</p>
CSCeb50108	<p>Headline: PXM45 sends ipc polling request on LCN 7</p> <p>Symptom: IOS IPC communication was sent to RPM-XF card on LCN 7. IOS IPC communication should use LCN 2.</p> <p>Conditions: None.</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>
CSCeb50419	<p>Headline: axsm-xg trunk in minor alarm</p> <p>Symptom: Trunk in minor alarm.</p> <p>Conditions: The same trunk is clear on the switch and another CWM.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-XG</p>
CSCeb61872	<p>Headline: sw rev varbind not available when trap 60056 sent for RPM</p> <p>Symptom: entPhysicalSoftwareRev varbind empty in traps 60055 and 60056.</p> <p>Conditions: Intermittently occurs on PXM45, PXM1E nodes for RPM-PR slots.</p> <p>Workaround: None.</p> <p>Hardware: PXM1E</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

Bug ID	Description
CSCeb67843	<p>Headline: Failed to add entry in QE48 Conn id table</p> <p>Symptom: PnCcb hogs the cpu time on the node and idle time goes down to zero Connection fail with Cross Commit failure.</p> <p>Conditions: Could happen when the number of cons on AXSM go above 80K (depending on the VPI/VCI ranges used for the connections).</p> <p>Workaround: None.</p> <p>Hardware: AXSM1</p>
CSCeb69414	<p>Headline: Pnport of AXSM-XG oc192 card stay in down in prog for long time</p> <p>Symptom: pnport of oc192 stays in down in progress for long time (1 min - 7 min).</p> <p>Conditions: Performed commands dnlimi and delpart on the AXSM-XG card.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-XG</p>
CSCeb72485	<p>Headline: CESM cannot clear RcvAIS when connected to physical loop</p> <p>Symptom: The CESM port will get stuck in RcvAIS due to an alarm loop.</p> <p>Conditions: This should be specific to a hard loopback or to equipment that transmits back exactly the same T1 state as received (without interpretation).</p> <p>With a test set or any equipment on one end of a CESM connection and a loopback on the remote end when there is an ATM PVC failure, there is an alarm loop which prevents the circuit from coming up even after the ATM PVC is restored.</p> <p>Workaround: Once in this state, to recover the line alarm must be cleared. This can be accomplished by plugging in a good T1 or by resetting the CESM.</p> <p>Further Problem Description:</p> <p>The CESM should send AIS out of the T1 ports when there is an ATM failure. This is happening correctly.</p> <p>When the failure clears, the CESM is still receiving AIS from the hard loop. This then causes the CESM to fail the PVC due to the line alarm.</p> <p>Due to this there is an alarm loop.</p> <p>Hardware: CESM-8T1E1</p>
CSCeb82771	<p>Headline: HDD fails full coverage off line diag</p> <p>Symptom: Hard Drive backcard of PXM45B reported failure.</p> <p>Condition: Offline diag was executed.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM45/B</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCeb84390	<p>Headline: rx idle cell counter does not increment in dsplncnt</p> <p>Symptom: Rx Idle cell does not increment in dsplncnt or dspatmlayercnt.</p> <p>Conditions: clear channel card only (AXSMXG_1_OC192 and AXSMXG_16_OC3).</p> <p>Workaround: None.</p> <p>Hardware: AXSM-XG</p>
CSCec09847	<p>Headline: Autocard fails to start in a MGX 8850 node</p> <p>Symptom: Software reset occurred after a <b>resetsys</b> was issued.</p> <p>Conditions: <b>resetsys</b> was issued from the CLI.</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>
CSCec12370	<p>Headline: Crankback updates the pnni-idb with wrong values</p> <p>Symptom: Call not getting routed over a link even if it has sufficient resources.</p> <p>Conditions: VSI errors when the link is sufficiently congested.</p> <p>Workaround: pnni disable followed by enable on the source node.</p> <p>Hardware: PXM45</p>
CSCec12463	<p>Headline: EVENT-CLEANUP:multiple ncdp fill in dsperrs log.</p> <p>Symptom: Multiple ncdp invalid case and atmc-5-p2mp error filling <b>dsperrs</b> log.</p> <p>Conditions: Release MGX 4.0(12) in network.</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>
CSCec14761	<p>Headline: Software Error Reset PXM45</p> <p>Symptom: Software Error Reset caused PXM45/B to loose mastership.</p> <p>Conditions: MGX45, Version 3.0.20(100).</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>
CSCec16762	<p>Headline: Cant <b>cc</b> on AXSM due to max sessions in hang</p> <p>Symptom: Sessions on AXSM remain in hang.</p> <p>Condition: PXM45 and AXSM running 3.0.20.</p> <p>Workaround: Switchcc will clear the ghost sessions.</p> <p>Hardware: AXSM1</p>
CSCec18779	<p>Headline: FRSM-HS2B DAX connections not initialized properly after card reset</p> <p>Symptom: Remote connection end shows to be OK while local end of connection has Port-Alarm.</p> <p>Conditions: Some of DAX connections after card reset.</p> <p>Workaround: Execute CLI, <b>dncon/upcon</b> to restore connections to the correct state.</p> <p>Hardware: FRSM-VHS</p>



**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

Bug ID	Description
CSCec30621	<p>Headline: Several OIDs in cwRsrcPartConfEntry return incorrect values</p> <p>Symptom: When querying specific OIDs via SNMP, unexpected values returned.</p> <p>Problem is with these OIDs:</p> <p>cwRsrcPartEgrPctBwUsed .1.3.6.1.4.1.9.9.125.1.1.1.1.7</p> <p>cwRsrcPartIngPctBwUsed .1.3.6.1.4.1.9.9.125.1.1.1.1.8</p> <p>cwRsrcPartEgrPctBwAvail .1.3.6.1.4.1.9.9.125.1.1.1.1.9</p> <p>cwRsrcPartEgrPctBwAvail .1.3.6.1.4.1.9.9.125.1.1.1.1.10</p> <p>Conditions: This problem is not configuration dependent.</p> <p>Workaround: None.</p> <p>Hardware: AXSM1</p>
CSCec31183	<p>Headline: Port Alarm is asserted on standby CESM-T3E3 card after <b>addred</b></p> <p>Symptom: Major Alarm on standby card.</p> <p>Conditions: After adding 1:1 redundancy.</p> <p>Workaround: None.</p> <p>Hardware: CESM-T3E3</p>
CSCec33505	<p>Headline: Receive FIFO not held in reset during dnl.</p> <p>Symptom: 2 lcns corresponding to signalling channel 0/5 cause sscop sequence error.</p> <p>Conditions: clrsmcnf on the axsm-xg card.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-XG</p>
CSCec35834	<p>Headline: Card failed to come back active after reboot (RPM)</p> <p>Symptom: RPM service module did not respond to reboot and remained down.</p> <p>Condition: The problem occurred after the user had executed "dsperr" on a trace dump error event.</p> <p>Workaround: Resetting the mgx45 processor card.</p> <p>Hardware: All</p>
CSCec41394	<p>Headline: ILMI-4-GEN-ERR emIlmiStartCfgReg evt generated when card in Init</p> <p>Symptom: ILMI related error messages are generated in the event log.</p> <p>Condition: SM is in the Init state.</p> <p>Workaround: Unknown.</p> <p>Hardware: AXSM-E</p>

Table 22 Known Anomalies in Release 4.0.17 (Continued)

Bug ID	Description
CSCec42174	<p>Headline: getting xbar alarm with offline diags enabled</p> <p>Symptoms: PXM gets xbar alarms in slot 7 when they have offline diags enabled and the card resets and took away redundancy.</p> <p>Conditions: Traffic conditions were normal. Offline diags were enabled on PXM45/B on slot 7.</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>
CSCec43059	<p>Headline: Path stay in critical alarm while line is clear</p> <p>Symptom: paths stay in alarm while line is clear.</p> <p>Conditions: <b>delapsln</b>, <b>delred</b> on the redundant pair of axsmxg cards, then add new configuration on the card.</p> <p>Workaround: Unknown.</p> <p>Hardware: AXSM-XG</p>
CSCec45631	<p>Headline: UI-S3 Clock Controller fails to enter Free Run mode</p> <p>Symptom: UI-S3 fails to enter Free Run mode.</p> <p>Conditions: After execution of the CLI command: <b>cnfncdpksrc 255.255 255 -priority XX</b></p> <p>Workaround: To force UI-S3 directly into Free Run mode execute. CLI command, <b>cnfncdpkcrs</b>, for port 7.35 or 7.36 with no external reference line present at the port.</p> <p>Hardware: PXM45/C</p>
CSCec49709	<p>Headline: Wrong module type message in CWM log for PXM45C/UI-S3B</p> <p>Symptom: Wrong module type message in CWM log when PXM45C goes through a reset.</p> <p>Conditions: PXM45C goes through a reset.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM45/C</p>
CSCec51074	<p>Headline: backcard aps mux not set accordingly after switchred</p> <p>Symptom: paths stay in alarm while line is clear.</p> <p>Conditions: <b>delapsln</b>, <b>delred</b> on the redundant pair of axsmxg cards, then add new configuration on the card.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-XG</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCec51153	<p>Headline: DT: Resetting RPM caused, PXM reset</p> <p>Symptom: Resetting the RPM-PR caused the, PXM to reset.</p> <p>Conditions: Resetting the RPM-PR caused the, PXM to reset.</p> <p>Workaround: Changed the boot image of the RPM-PR.</p> <p>Hardware: PXM45</p>
CSCec51349	<p>Headline: PXM1e reset after pumping high rate OAM loopback</p> <p>Symptom: PXM1E resets when pumping E2E (or segment) OAM loopback cells into SPVC endpoints.</p> <p>Conditions: a) SPVC endpoint(s) on PXM1E port b) e2e (or segment) loopback cells pumped into the connection(s) at a rate of between 8K cps to under 15k cps c) OAM task takes up all CPU and starves out other critical tasks and the card would go to Active-F state and in the worst case, reset. d) At rates of 15K and higher, a throttling mechanism would kick in and OAM loopback processing will be controlled.</p> <p>Workaround: None.</p> <p>Hardware: PXM1E</p>
CSCec56452	<p>Headline: DE-LSNT: switchredcd on RPMXF followed by switchcc cause two XF reset</p> <p>Symptom: Both Active and Standby RPM-XFs reset when a 'switchredcd' is followed by 'switchcc'.</p> <p>Conditions: Do switchredcd for 1:N redundant RPM-XFs, when standby RPMXF is downloading configuration file from PXM, it may be less or more than 5 seconds depending on the size of the configuration file. Do a switchcc and both active and standby RPM-XFs will reset.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM45</p>
CSCec62158	<p>Headline: UPG5: No integrated alarm when SRME APS PLine in LOS</p> <p>Symptom: No integrated card, node alarm.</p> <p>Conditions: SRME APS PLine in LOS.</p> <p>Workaround: None.</p> <p>Hardware: PXM1E</p>
CSCec66028	<p>Headline: 11010P4C:Trunk is shown into major alarm while there is no alarm on switch</p> <p>Symptom: Routing trunks have major alarm, switch is not having alarm.</p> <p>Conditions: Unknown.</p> <p>Workaround: None.</p> <p>Hardware: PXM45</p>

Table 22 Known Anomalies in Release 4.0.17 (Continued)

Bug ID	Description
CSCec69678	<p>Headline: Popup: Cannot open input file ALARM:/SM_ALARM_1_13.CF errno=0x388002</p> <p>Symptom: Popup message on RPM card.</p> <p>Conditions: Customer may have performed resetcd on this slot prior to writemem completing successfully.</p> <p>Workaround: None.</p> <p>Hardware: RPM-XF</p>
CSCec71316	<p>Headline: DT: Connections do not get deprogrammed after dnport on AXSM-E card.</p> <p>Symptom: The connections do not get deprogrammed on AXSM-E card.</p> <p>Conditions: A dnport/upport is done on the AXSM-E port.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-E</p>
CSCec78432	<p>Headline: FRSM-2T3 in a PXM1E chassis transmitting bogus a-bit alarm</p> <p>Symptom: FRSM-2T3 transmits out a wrong A-bit status.</p> <p>Conditions: FRSM running firmware 21.0.3. It is in a PXM1E environment running 4.0.10.</p> <p>Workaround: Execute the command <b>dncon/upcon</b> on the connection fixes this issue and FRSM starts transmitting the correct A-bit status.</p> <p>Further Problem Description: Wrong status can be displayed using the dspchancnt command on the FRSM by sending A=0.</p> <p>Transmitting A=0 is a way the FRSM alerts the other frame relay port about a problem internal to the network on the MGX. If there is a genuine problem on the pvc within the MGX network then transmitting A=0 is valid. This defect addresses a condition where no problem is found within the MGX connection but the FRSM still transmits out a A=0 on all pvcs.</p> <p>Hardware: FRSM-VHS</p>
CSCec83347	<p>Headline: AXSM-E had a core dump for watchdog time-out, need investigation</p> <p>Symptoms: MGX45 node populated with AXSM-E running ver MGX 3.0.(20.100) reset due to watchdog timeout, and dumped a core.</p> <p>Conditions: None.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-E</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

Bug ID	Description
CSCed01505	<p>Headline: threshold for SCM task hanging should be less</p> <p>Symptom: Customer was replacing a defective RPM-PR card, the secondary RPM-PR was covering. While replacing the RPM-PR primary card, the node rebuilt. When the cards came up, the slot 4 came up to standby and slot 11 was showing empty.</p> <p>Conditions: The failure occurred during a maintenance event. They were replacing the defective card and the node reset. After the system came up, the redundant RPM-PR card that was covering for the defective slot, did not come to active. Before the system reset the covering RPM-PR card was active.</p> <p>Workaround: None.</p> <p>Hardware: All</p>
CSCed01523	<p>Headline: need to fix node rebuild due to stdby in init but SCM thinks ready</p> <p>Symptom: Customer was replacing a defective RPM-PR card, the secondary RPM-PR was covering. While replacing the RPM-PR primary card, the node rebuilt. When the cards came up, the slot 4 came up to standby and slot 11 was showing empty.</p> <p>Conditions: The failure occurred during a maintenance event. They were replacing the defective card and the node reset. After the system came up, the redundant RPM-PR card that was covering for the defective slot, did not come to active. Before the system reset the covering RPM-PR card was active.</p> <p>Workaround: None.</p> <p>Hardware: All</p>
CSCed01526	<p>Headline: Do not block SCM task if RPM open port timed out</p> <p>Symptom: Customer was replacing a defective RPM-PR card, the secondary RPM-PR was covering. While replacing the RPM-PR primary card, the node rebuilt. When the cards came up, the slot 4 came up to standby and slot 11 was showing empty.</p> <p>Conditions: The failure occurred during a maintenance event. They were replacing the defective card and the node reset. After the system came up, the redundant RPM-PR card that was covering for the defective slot, did not come to active. Before the system reset the covering RPM-PR card was active.</p> <p>Workaround: None.</p> <p>Hardware: All</p>
CSCed01970	<p>Headline: tDispatch task should give up CPU for other low priority tasks.</p> <p>Symptom: On heavily loaded shelf with RPM-PRs, observed CPU starvation ssi events logged by low priority tasks (priority &gt; 65).</p> <p>Conditions: This could happen only if continuous stream of IPC messages (coming from RPMs) that needs to be dispatched to upper applications.</p> <p>Workaround: None.</p> <p>Hardware: All</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCed02565	<p>Headline: ATLAS Non-Fatal and QE1210 Not-Fatal errors on yred AXSM pair</p> <p>Symptom: Warnings were logged against ATLAS FIFO full even with no traffic loss.</p> <p>Condition: Pump traffic at peak line rate.</p> <p>Workaround: None.</p> <p>Hardware: AXSM-E</p>
CSCed40495	<p>Headline: MAINT: xcnfcon to disable preftrte block if previously was directrte</p> <p>Symptom: Disable the preftrte-Id by xcnfcon or xcnfchan on NBSM cards is not allowed if the preftrte previously set to directrte.</p> <p>Conditions: associate a directed preftrte then disable the preftrte by simply set preftrte-Id to 0 (xcnfcon -chn 16 -preftrte 0).</p> <p>Workaround: Must shut down the directed preftrte first. xcnfcon -chn 16 -preftrte &lt;ID&gt; -directrte 0.</p> <p>Hardware: AUSM-8T1E1</p>
CSCed09164	<p>Headline: Conn mastered at AUSM/FRSM with frm-based policing not prop to slave</p> <p>Symptom: When frame based policing is enabled and the connection is mastered on CBSM (AUSM/FRSM) it is not propagated to slave endpoint.</p> <p>Conditions: Connection mastered on CBSM.</p> <p>Workaround: Add conn with master on AXSM.</p> <p>Hardware: PXM1E</p>
CSCed09942	<p>Headline: Minor issue on displaying card alarm state</p> <p>Symptom: The card alarm state shown by controller card is different than the card alarm state displayed by card.</p> <p>Conditions: Add a line, port and connection on a FRSM card. Make line out of alarm. Configure port for a signalling such that port should go into signaling failure alarm. Use dspcd on the FRSM card and dspcds on the controller card to verify the card alarm state.</p> <p>Workaround: None.</p> <p>Hardware: PXM1E</p>
CSCed27617	<p>Headline: After switchCC AXSM/B port failed to come up</p> <p>Symptom: After RDI-P is received port is shut down.</p> <p>Conditions: AXSM-16-155-B port will not come up after switchCC.</p> <p>Workaround: None.</p> <p>Further Problem Description: Customer doing functionality testing on PXM-45/B, AXSM-16-155 and AXSM-16-T3E3. Once a switchcc is performed, slot 4 (AXSM-16-155) port 1.8 failed to come up. The port is in operation down state. Line alarm indicates RDI-P which brings down the port.</p> <p>Hardware: AXSM1B_OC3</p>

**Table 22 Known Anomalies in Release 4.0.17 (Continued)**

Bug ID	Description
CSCed31663	<p>Headline: RPM_PR cards did not respond to SCM polling after switchcc</p> <p>Symptom: RPM_PR cards did not respond to SCM polling.</p> <p>Conditions: The command switchcc was executed.</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>
CSCed33156	<p>Headline: Popup msg: Cant write to C:/, errno 0x38800f</p> <p>Symptom: Popup messages appears on all telnet sessions.</p> <p>Conditions: File is ftp'd to root directory on node.</p> <p>Workaround: Unknown.</p> <p>Hardware: PXM45/B</p>
CSCed35770	<p>Headline: Standby PXM45 resets by itself</p> <p>Symptom: The Standby PXM45/B resets by itself.</p> <p>Conditions: None</p> <p>Workaround: None</p> <p>Hardware: PXM45/B</p>
CSCed41921	<p>Headline: PXM45/B fails to go standby after sysVersionSet</p> <p>Symptom: The second PXM45/B does not come to standby mode.</p> <p>Conditions: Performing "sysVersionSet" after a "clrallcnf".</p> <p>Workaround: Reset the failed PXM45/B from the Active PXM45/B.</p> <p>Hardware: PXM45</p>
CSCef01952	<p>Headline: Secondary rpm-pr card wont go to standby after reset, cycles boot-empty</p> <p>Symptom: RPM-PR card would not come to standby state after reset. RPM-PR cycled through boot empty-reserved states Operator could not cc to card from PXM CLI. Console port in one case could not be accessed.</p> <p>Conditions: Nodes were stable, no operational issues known at the time of the event. No provisioning took place on the RPM-PR cards due to an upgrade requirement for a provisioning freeze.</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>
CSCef21961	<p>Headline: tTnCmdTsk01 hogs CPU on PXM45/B in sysBramEvtLogPrint()</p> <p>Symptom: none telnet responses on pxm45 due to a CPU usage by tTnCmdTsk01.</p> <p>Conditions: None.</p> <p>Workaround: None.</p> <p>Hardware: PXM45/B</p>

**Table 22** Known Anomalies in Release 4.0.17 (Continued)

Bug ID	Description
CSCef47494	Headline: RPMPR-512 freezes on powerup Conditions: After a node is powered up. Workaround: Resetting the card slot from PXM. Hardware: PXM45/B
CSCef75440	Headline: AXSM/B NVRAM gets corrupted. Symptom: AXSMB cards show up as having a corrupted NVRAM. Conditions: When the PXM45s in an MGX 8950 chassis with some configuration are replaced with new PXM45s with unknown configuration and the node powered up. Workaround: None. Hardware: AXSM1B_OC3
CSCef80396	Headline: CRC RM error counter is not counted correctly on scheduler hw chip Symptom: There is CRC-errored RM but the error is not reported. Conditions: The card is receiving CRC-errored RM. Workaround: None. Hardware: AXSM-E

## Resolved Anomalies in Release 4.0.17

Table 23 lists the anomalies that are resolved in PXM45 version .202 of Release 4.0.17 as of April 5, 2005.


**Note**

Version .202 also includes the anomalies that are resolved in versions .201 and .200.

**Table 23** Resolved Anomalies in PXM45 Version .202

Bug ID	Description
CSCec48191	WatchDog timeout core dump caused by SAR queue full
CSCeg52860	Workaround for ATMizer SAR lockup

Table 24 lists the anomalies that are resolved in PXM45 and AXSM-XG version .201 of Release 4.0.17.


**Note**

Version .201 also includes the anomalies that are resolved in version .200.

**Table 24** Resolved Anomalies in PXM45 and AXSM-XG Version .201

Bug ID	Description
CSCeg29724	XM60 insertion causing active PXM45C to reset
CSCeg88649	ABR configuration lost after stby reset



Table 25 lists the anomalies that are resolved in software version .200 of Release 4.0.17.

**Table 25 Resolved Anomalies in Release 4.0.17**

Bug ID	Description
CSCdz87948	AXSM-9952 config clock source not working properly
CSCeb28420	EvtLog:emSyncHumveePort fail messages in log
CSCeb35754	PNNI-DT: Virtual trunks on XG-CH card wont come up
CSCeb48798	PNNI-DT:ctd conns wont route thru X
CSCeb59534	CIT50:6 cliCmdTask stuck in standby side
CSCeb82698	SES: addcon command cannot add -int_vsvd (3.0) or -frame (4.0)
CSCeb88227	SHM API shmCdFeatureMismatchUpdate not functioning as designed
CSCec16762	Cant cc on AXSM due to max sessions in hang
CSCec28083	PSBF logic does not work
CSCec33126	CurrentESs and the CurrentSESs seems to be interchanged
CSCec47332	pnCcb crash at atmCore_spcvGetVxlChksum
CSCec50576	core from core hot-dump CLI has CRC error on unzip
CSCec51074	backcard aps mux not set accordingly after switchred
CSCec60307	XGOC3-DEV: Several SHMA-3-NFAT_MIN_EPRT2 messages logged
CSCec68829	XGOC3-DEV:Conns failed,saying no len tho rsrc is available.
CSCec69421	core from core hot-dump CLI has invalid AXSMXG name (AXM?)
CSCec74562	Exception in snmpSA (FindLenUInt64)
CSCec76832	Additional verification on XG port device RAM write
CSCec77906	PNNI-DT: port not accessible on XG
CSCec81892	XGOC3-DEV: BAD SCT is causing axsmxg-oc3 conns to not get rerouted
CSCec82413	PBUMP:xg pnports in buildingvc
CSCec87046	XGOC3-DEV: SPI Errors due to continuous upilm/dnilmi on axsmxg-oc3
CSCec89865	entPhysicalHardwareRev for AXSM-XG is missing in config upload file
CSCed04835	XGOC3-DEV: cons allocated exceeding maximum cons on NNI and VNNI prt
CSCed07569	ncdp clocking on ima port switched to other port after txRf changed
CSCed08621	PBUMP: delete Rsrc prtn error on XG
CSCed14131	switchcc fail because standby PXM xbar is degraded
CSCed23150	AXSM VSIS changes wrong IpConn LCN on new cmd with same VP in VPC
CSCed29047	MAINT: When IMA link fails from FE, port bw does not get updated
CSCed31518	Missing MPLS serv categ except values in load info in AXSME and XG
CSCed33540	MPLS is not working for an int on AXSM-XG OC3
CSCed34991	Incorrect serv-cat in Interface load VSI message from AXSM-XG
CSCed35995	Traffic stopped running on 500 ABR cons on AXSM-XGOC3
CSCed37263	Line configuration changes not getting updated on standby APS lines
CSCed40835	DAX cons went to failed state after resetting card

**Table 25 Resolved Anomalies in Release 4.0.17 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCed41580	AXSM-XG OC48 stuck in empty reserved after switched
CSCed41771	UPG5: XG-OC3 generate AIS upon enabling CC OAM on connection
CSCed42998	REG5: AXSM-XG ports in building vc after dn/upallport script
CSCed43063	cnfcdsct with non-default SCT does not read SCT file correctly
CSCed43288	Paths and Ports down on XGOX48 due to lower layer down line is clear
CSCed44352	REG5: No XG OC3 Xover after rem ACT/STBY FRU delaps ins stby FRU
CSCed45061	PXM1E: Telnet sessions cannot be deleted
CSCed46156	coredump: software error reset
CSCed46245	REG5:A lot of SHM-4-EE-EVT-ALOC_ERR found, maybe memory corrupted
CSCed47179	Modify sysCheckDiskForResidualDb to cleanup clrenf signature file
CSCed49638	Diag Error: continuity check failed on axsmxg
CSCed50096	UPG5: Line stuck in RDI-P after add/del AnnexB APS on AXSM
CSCed53671	axsmxg pnports in auto config
CSCed54706	trap varbind out of order for 60106, 60107, 60355
CSCed55502	Memory block error in cutw
CSCed57273	REG5: VSI_4-RMCONNAPIERROR and failed to add entry to qe48 con table
CSCed60108	Failed to reroute SPVC after route optimization (optrt)
CSCed60564	AXSMXG: Path config reverts to old config after switchedcd
CSCed64351	standby axsmxg rebooted after dn/upilmi
CSCed68047	PXM console stuck
CSCed69534	axsmxg path in alarm after node rebuild
CSCed74635	AXSM_E 16T3 went into failed state when reset while in boot
CSCed77102	AXSM-E card went into Active-F state
CSCed79589	AXSMXG Reduce writes to NVRAM
CSCed82422	Redman log can crash for fail in ssiTableGetInfo
CSCed84624	VPI0: connection fails; stops attempting after multiple switchcc
CSCed87160	vnni alarm did not clear on axsmxg
CSCed89620	AXSMXG offline diag fail on timeout 3 hours later
CSCed94385	Xbar errors on slots with AXSM-E cards
CSCed94976	pnRedman got suspended: pxms in active-F and init
CSCee00796	ILMI enabled UNI port goes down and up when connection are added
CSCee02533	AXSMXG: Policing template for VBR3 has discard action for bkt 1.
CSCee05255	PNNI crashed after running resetcd script
CSCee07111	OAM on ILMI vpi/vci causes AXSM active/F with QE48 H/w error
CSCee09064	UPG5: AXSM update stdby card with incorrect value for Frame discard
CSCee09072	AXSME: GFR setting is lost on standby card after standby reset

**Table 25 Resolved Anomalies in Release 4.0.17 (Continued)**

Bug ID	Description
CSCee09158	bootchange cmd on AXSM-E OC12 w/o changes caused card reset
CSCee14367	PXM reset and coredumped due to descriptor table full
CSCee16959	PXM45 not downloading enable.stats file to SMs after switchredcd
CSCee19358	HV Add ELT Fails when add/del/add frequently with same rmt info
CSCee22385	FTP server task write to stale socket - cause file corruption
CSCee24142	Software truncation errors on PCR/SCR for CBR and VBR conns
CSCee24831	AXSMXG-FDR: pnRedman fails to update stdby; connections lost
CSCee30125	The Clearcase Region Change caused build errors
CSCee31972	UPG5+: XG EVNNI port stuck in down after runrev
CSCee32671	LMI sends incorrect message during timer retry
CSCee34615	TCP RST vulnerability unexpectedly close ftp/ssh/telnet session
CSCee35169	AXSM Resets SNMP Subagent Software Exception
CSCee42153	UPG5+: Mem leak from AXSM-XG ImiRootTask
CSCee43147	LMI data corruption if multiple LMI ports configured
CSCee44466	LMI Control VC should use VSI service type signalling
CSCee45538	Switch ASIC semaphore causes CLI freeze-AXSMXG
CSCee47465	CBSM-AXSMXG conn - after switchredcd - traffic stops
CSCee53657	REG+: AXSME OC12 has SSI-4-CHNK_XNOT_USED error
CSCee56586	REG+: AXSM has SSI-4-CHNK_XNOT_USED error
CSCee61427	PVC can not be deleted from AXSM - Not in Cpro Db
CSCee63139	UPG5+: Mem leak on AXSM after line config failure
CSCee70573	PXM swaps between nodes resulted in software downgrade
CSCee73008	AXSME randomly sets E1 CRC multiframe SA bits, which should be all 1
CSCee78995	connections on SM went into mismatch when update counter > 2^15-1
CSCee80886	xg-oc48 in failed/empty after resetcd
CSCee80889	ssi snmp exception error on axsmxg
CSCee81874	standby pxm reset due to syncram timeout
CSCee82746	Connections not routing when link selection set to load-balance
CSCee87371	Trap Client and DB Client leak IPC buffers, insuff. floing mblks
CSCee89950	IPC error: IlmiPassup reaches the max queue and drop packets
CSCef04069	if DB Client sent to DB server timeout, need to increment commit id
CSCef09312	AXSM APS does not switch over when 10k working router gets reloaded.
CSCef12968	Memory Leak on AXSM when issuing multiple tstdelay/tstconseg command
CSCef13388	HV_ELT_TBL_ENTRY_EXIST is handled incorrectly in VSI
CSCef24752	per PVC %util parmater is applied to MCR for abr-std connection
CSCef26833	xg rebooted after upilmi on vn timer

**Table 25 Resolved Anomalies in Release 4.0.17 (Continued)**

Bug ID	Description
CSCef37040	Minor version change may fail SCT version check in AXSMXG cards
CSCef41542	VISM-PR goes into fail state after power cycle and switchcc
CSCef42054	Active PXM45 switched causing a core file
CSCef52092	Need MGX Model /B support earlier than 5.1 for customer ease-of-use
CSCef52302	SNMPSA exception due to NULL pointer access
CSCef68719	clrmscnf causes pnCCb crash and pxm45b reset
CSCin59675	AUTO: UPC policing parameters are not properly displayed for AXSMXG
CSCin72192	oof_criteria,aisc_check gets populated in line table for E3 interface

## Anomaly Status Changes Since Release 4.0.15

Table 26 lists the anomalies that have changed status since previous Release 4.0.15.

**Table 26 Anomaly Status Changes**

Bug ID	Description
CSCea31637	Headline: AXSME_8OC3 causing OAM managed pvcs to fail Status Change: Closed
CSCea42088	Headline: Need ability to modify the remote ICR for the abr service Status Change: Closed
CSCeb35883	Headline: FRSM-HS2/B port in alarm when line is in logical loop Status Change: Closed
CSCeb49614	Headline: HARD: AXSME card reboot after inserting HSSI back card Status Change: Closed
CSCeb55991	Headline: Clock Source switching without any logged information Status Change: Closed
CSCec14733	Headline: POS interface on RPM-XF can only handle 617500 pkts/sec as sup 65k Status Change: Junked
CSCec18077	Headline: rpmxf card crashing repeatedly after upgrade of code Status Change: Duplicated
CSCec45442	Headline: Second outage seen after PXM switchover Status Change: Junked
CSCec60515	Headline: <b>dsprmrsrcs</b> command output needs to be improved Status Change: Duplicated

**Table 26** *Anomaly Status Changes (Continued)*

Bug ID	Description
CSCed35770	Headline: Standby PXM45 resets by itself Status Change: Closed
CSCed41921	Headline: PXM45/B fails to go standby after sysVersionSet Status Change: Unreproducible

## Anomaly Status Change from Previous Releases

Table 27 lists the anomalies from previous releases that have changed status.

**Table 27** *Anomaly Status Change from Previous Release*

Anomaly	Description
CSCdy78398	HFIT:SCM polling takes 3 min to detect SAR errors; Closed
CSCdy82219	HFIT: Utopic 2 Bus CBC to ATMIZER tx/rx bit errors test cases; Closed
CSCdz67977	HMM: Humvee should log more details and take actions on Humvee GenEr; Duplicate of CSCea41517
CSCea55232	REG4: axsmxg-ch gets cema errors during upport/dnport; Unreproducible
CSCea71178	REG4: after few switchredcd the axsmxg port 1.3 stuck path alm; Unreproducible
CSCea80192	pxm which is native could not takeover the mastership; Closed
CSCea89455	AXSM/E T3/E3 Offline diag failure; Unreproducible
CSCeb01897	AXSM/B-OC3 went into empty/res due to SHM_CDF_DISCOVER_TMR_POP; Closed
CSCeb05061	AXSM-E T3/E3 fails full cov. off line diag; Unreproducible
CSCeb19481	XBAR port and slot alarms reported against slot of a chassis; Unreproducible
CSCeb27898	Active standby PXM45 HD failed; Closed
CSCeb33176	AXSM-XG card reset because of hw_timer_TassiException; Unreproducible
CSCeb38926	REG4+:MGX8850 node crashed after doing restoreallcnf, not healthy; Unreproducible
CSCeb48332	LPID should be displayed in dec. not hex to be consistent with cli; Closed and Severity Change
CSCeb50108	PXM45 sends ipc polling request on LCN 7; Unreproducible
CSCeb50419	axsm-xg trunk in minor alarm; Unreproducible
CSCeb51965	LSNT: tQeTask & tDispatch Task hogging the CPU, Duplicate of CSCed01970
CSCeb69414	Pnport of axsm-xg oc192 card stay in down in prog for long time; Unreproducible
CSCeb82476	Minor cards alarms seen when upgrade to MGX PXM45/B 3.0(23); Duplicate of CSCea69946
CSCeb82771	HDD fails full coverage off line diag; Unreproducible
CSCec32286	BU EFA of PXM45C HD backcard; Closed
CSCec38355	Active PXM45B card locked up & node got isolated; Closed
CSCec45095	LSNT:Switchcc invokes SAR Auto Recovery; Duplicate of CSCec42437
CSCec48361	On IMA slots multiple errors - featuremismatch; Junked
CSCec54212	Need troubleshooting commands like addchanloop, cnfchandbg on PXM1E; Closed
CSCec56829	UPGRD: SSI-4-STKCHK exceeds threshold due to task tRMM; Duplicate of CSCdz50777

**Table 27** Anomaly Status Change from Previous Release (Continued)

CSCec57564	shmPslotInfoGet() uses more than 3K of stack space; Closed
CSCec58287	MGX45 Reset twice and dumped cores, needs investigation; Duplicate of cat open-4015.txt   filt
CSCec64982	UPG5: XG-192 APS adj line LOS but LED not in red; Closed

## Anomalies Resolved in Previous Releases

This section contains the resolved anomalies in previous releases.

### Resolved Anomalies in Release 4.0.15

Table 28 lists the anomalies that are resolved in Release 4.0.15.

**Table 28** Resolved Anomalies in Release 4.0.15

Bug ID	Description
CSCeb28420	EvtLog:emSyncHumveePort fail messages in log
CSCec41322	resetsys caused SM to be reset again due to MCast rcvr loosing msgs
CSCec44812	Sw Fab If ASIC ILT SRAM par err must be detected/recovered from
CSCec55319	Mem leakage in procResponse: RespCalcC exhausting SSI SNMP partition
CSCec55976	vsiSlave Task suspended recovery action should be Fatal
CSCec57716	SSI stack usage exceeds threshold messages in evt. log
CSCec59926	dump commands pause indefinitely with RPMs and may leak resources
CSCec63239	VxWork timer wrapped around
CSCec63535	AXSME:P2MP party in failed state after dnport/upport on leaf port
CSCec63556	AXSM P2MP root does not pass AIS to leaves on LOS/AIS
CSCec63713	AXSM reset with core dump
CSCec65160	dspload shows asymmetric bandwidth on AXSMs
CSCec66037	UBR.2 policing needs to tag all cells
CSCec66881	LSNT:AXSM Xtags does not come up
CSCec67719	HMM and QE48 falsely detects parity error when enabled
CSCec68661	XGOC3-DEV: RM Alarms on AXSMB-OC3 after upgrade
CSCec69262	PXM does not switch RPM-XF upon bkcd failures
CSCec79143	Watchdog resets on AXSM observed
CSCec79734	UPG5: APS adj line stuck in LOS after node rebuild
CSCec82151	MPEIT:pnCcb crash after clrsmcnf
CSCec83032	Internal Osc priority going back to default value after rebuild
CSCec86279	ABR tagging problem on PXM-1E Combo STM-1
CSCed01918	AUTO:Upgrade to 4.0.15 AXSME image fails

**Table 28** Resolved Anomalies in Release 4.0.15 (Continued)

Bug ID	Description
CSCed17323	Duplicate entries for conns in the STATS files
CSCed22720	Active PXM1E switched over after Standby Combo back card inserted
CSCed22794	MAINT: P2MP SPVP and SPVC with same VPI can be committed on same port
CSCed26797	oam-pvc manage, encapsulation and protocol ip not set via SNMP
CSCed30255	PBUMP connections not torn down in via node after dnpnport
CSCed30486	Line configuration changes do not get applied to standby APS lines
CSCed42682	AXSM-1/B diag enhancement

## Resolved Anomalies in Release 4.0.12

Table 29 lists the resolved anomalies in Release 4.0.12.

**Table 29** Resolved Anomalies in Release 4.0.12

Bug ID	Description
CSCdw91580	Removing SRME FC or BC causes switchover time > 250ms.
CSCdz04524	P2MP_DT: SPVC p2mp parties terminated on AXSME stays in FAIL
CSCdz66395	CIT40: OAM CC config is allowed from CLI on PXM1E.
CSCdz83876	dsplksrc displays internal clock source after switchcc
CSCea20818	mem.leak: CMtask holds ipc_get_floating_mblk
CSCea23761	Implement PCI error interrupt on pxm45c/pxm1e-8oc3
CSCea59570	Adding APS line when the stby card is not stby give wrong error mess
CSCea65791	dumpconfigs command aborted with error message
CSCea72681	Need protection to ensure that SM don't generate files to fill disk
CSCea82940	Src node found bypass for ingress & egress ports on same border node
CSCea84491	UPGRD: resetsys, err_log logged FIPC-5-EPHNDLRFAIL from pnConPro
CSCea92407	Path Alm on Protection line does not get intg. when Pri line Red/Yel
CSCea93644	CLI_CONSITENCY: AXSM-XG does not support some of AXSME commands
CSCeb03881	Backcard removal causes cc to card fail.
CSCeb06582	MPSM: abit alarm not propagated correctly for some CESM/MPSM-CES con
CSCeb13176	Incorrect reporting sequence could cause loss of diag error results
CSCeb13369	After Offline diags executes, FSM should go to IDLE, not READY state
CSCeb15291	pxm reports card in active-F and cc to card fails
CSCeb17823	Unreliable tstdelay results for axsm/B/E <--> frsm
CSCeb18768	TnCmdTsk03 exception found
CSCeb22068	Unable to cc to card
CSCeb23240	multiple APS-SF-DECL msg posted to evtlog w/o SF (BER) clearing

**Table 29 Resolved Anomalies in Release 4.0.12 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCeb23400	Need HMM error counters for QE, XIF, PIF
CSCeb25477	AXSME: dspchancnt, CLPO discarded should only show user data
CSCeb29954	Ima link failure does not reflect to the pnpport resource
CSCeb31125	dsphotstandby command shows wrong info when runrev executed: frsm-vhs
CSCeb32478	taskIndex and size of (gSysTaskTable) expect larger range.
CSCeb34166	dspdiagcnf shows online diagnostics enabled by mistake on SM/PXM1E.
CSCeb34878	Warning needed when APS disabled on non-redundant PXM1E
CSCeb36107	FIPC-5-LINKOUTERROR Repeated Log error
CSCeb38023	switchcc caused Reset from Shell core dumps on PXM45C
CSCeb40512	delred fail for LSM in 8830
CSCeb42487	possible memory corruption issues dsperr.
CSCeb46725	tCrdmp task logged Proxy file protocol error after node rebuild
CSCeb47830	ssi exception error: snmpSA crash
CSCeb48697	dspcds shows cd type UNKNOWN when in Mismatch state
CSCeb48739	HARD: dspcd shows MISMATCH but no reserved type
CSCeb49580	HARD: no alarm cause in lower bay nbsm when rsvd for bbsm
CSCeb50179	HARD: Improper error message for addred with incomp FRSMHS2B BC
CSCeb50268	After forced switch W->P, SFBER on W does not cause W->P switch
CSCeb50631	HARD: Incorrect error message for addred 1:n bulk mode
CSCeb51038	HARD: Secondary NBSM used as Bulk and Non-Bulk
CSCeb51056	HARD: Incorrect Error Message when error in addred
CSCeb51078	dumpconfigs command aborted when there is a RPM card in the node
CSCeb51081	AXSM5 loss traffic without any alarm
CSCeb51137	Hard: CBSM in empty state when burnboot followed by addred
CSCeb51176	HARD: CBSM addred not blocked when primary SM in burnboot
CSCeb51323	SRMEB: Stats manager caused Active PXM1E reset
CSCeb51696	HARD: switchreded and reseted not blocked during burnboot on CBSM
CSCeb52781	SRMEB: No ERR msg while enabling SRM/SRMEB-3T3 Online Diag
CSCeb54282	HARD: dspreed doesn't show Active-U during nbsm upgrades
CSCeb54310	HARD: FRSM8E1 went to failed state when runrev followed by abortrev
CSCeb54369	HARD: dspreed doesn't show blkd for pri/sec with lower/higher version
CSCeb54823	Manual setting of CB4,CB8 allowable clock rate throws error message
CSCeb55258	Misleading error message when provisioning and not enough bandwidth
CSCeb55874	PnCcb crash cause PXM45 switchover
CSCeb55910	CCMA-4-IPCSENDFAIL message logged for AXSM-E in init state
CSCeb56175	ShmPing should exclude pinging pxm peer



**Table 29 Resolved Anomalies in Release 4.0.12 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCeb57712	ata semaphore timeout and watchdog timeout should be 30 seconds
CSCeb57805	loadrev exception happens in cli cmd task
CSCeb58207	none of the bert commands executed is seen in the dsplog
CSCeb58417	clrmscnf fails on multiple slots
CSCeb58599	MPSM8-DT: PXM45 logs Diag Error when online diag is running on STBY
CSCeb58943	Invalid SSI trace log in event log
CSCeb59779	Trap 60051 not generated for RPM_PR
CSCeb60025	switchredcd on node resets the PXM1e
CSCeb60130	HARD: secondary nbsm fail due to reset sec without prim in loadrev
CSCeb60706	PXM45/B reset due to non fatal major error core dump available
CSCeb61475	Standby PXM45A resets while getting the image from active card
CSCeb61894	LSNT: connections remain in alarm
CSCeb62400	Cannot do core hot-dump on any SM after core abort-dump
CSCeb62428	bringup tools needed for hardware debug
CSCeb62594	Disk spin down to be done only on 20G hard Disk/ add sh cmd for tmou
CSCeb62699	Axsm-xg stdbby card reset and failed if keep doing delpart/addpart
CSCeb63198	MPSM8-DT: Connection routed on Prefrte but Pref-rte flag does not set
CSCeb63658	Increase HW error threshold.
CSCeb64000	switchover loss around 630ms, >250ms
CSCeb64022	Active PXM stopped responding and standby got stuck in Init state
CSCeb64756	Del/add partition causes the pnpport stay in vc-failure.
CSCeb64863	Policing of 80 char limit for certain cli commands
CSCeb65427	Printf Mutex semaphore getting locked
CSCeb66181	connections on last port of AXSME/PXM1E/AXSM-XG not sent to CWM
CSCeb66476	Not able to ftp the configVerify distribution zip file to any node
CSCeb67611	SRMEB: No event logs found for srme LINK commands
CSCeb67820	CIT50: node db contains two entries with same node id
CSCeb67870	snmp Master Agent went to idle state for approx 45 min
CSCeb68355	AXSM/B does not tx RDI-P when W in LOS and P in RDI
CSCeb68706	observed message file already closed after runrev executed on frsm
CSCeb69085	need the event log. for QE1210 and CBC
CSCeb69124	Incremental files are deleted slowly when Standby is available
CSCeb69793	FI: test-13: Hard disk failure: No trap upon fault
CSCeb69978	workQPanic: HDD ISR cannot clear HDD interrupt due to PCI read failed
CSCeb70169	Stack usage exceeds threshold (70 percent): Task=tRVT
CSCeb70258	Incorrect ifName string in the atm phy trap 60373

**Table 29 Resolved Anomalies in Release 4.0.12 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCeb70361	PXM1E: pushing ACO/HIST does not generate core-dump on pxm1e
CSCeb71464	CLI for Active PXM Freeze Detection and Recovery
CSCeb71578	HARD: No switchover of 1:n red after removing primNBSM then act PXM
CSCeb72999	Reinserting AXSM-XG causes PNNI link to stay in failed state for lon
CSCeb73912	DISK Spin down to be disabled by default
CSCeb74414	avoid calling task delays in reboot (sysToMonitor)
CSCeb74423	Block switchcc/yred while stby axsm is not responding to polling
CSCeb74822	ATMizer send fails because of xmtBuff full
CSCeb75099	All traffic loss when route the conns on axsm-xg card
CSCeb76581	CIT50:pnRedman suspended at provred_persis_link_addDel
CSCeb77003	PNNI gdb enhancements
CSCeb77459	Observed Bad CRC PDUs during the signaling packets exchange
CSCeb77524	soft reset the card when tRootTask does not get CPU
CSCeb77925	Online diagnostics on AXSM-XG causes large no of OAM cells on that
CSCeb78993	AXSM-XG: OAM Config RAM write verification should ignore misc bits
CSCeb79161	Request the correct conn DB for ramSync
CSCeb79598	STATS UPLOAD: T3 LINE - Number of Keys = 0 byte order incorrect
CSCeb80366	Implement diag changes for pxm1e-combo respin (JA removal)
CSCeb80600	corrupted stats on pxm1e -- cesm-t1e1 cards under corner configs
CSCeb80634	Implement pxm45/pxm1e diagnostics enhancements
CSCeb81314	snmpget/walk of standby SM can cause denial of service
CSCeb81848	AUTO:AXSM/AXSME fails to come up after upgrade
CSCeb83142	connection fails routing due to wrong util used at slave
CSCeb83347	printf() in cliSmEptWrite() caused flood of messages
CSCeb83949	Policing of 80 char limit for dspnpportcac and dspnpportsrc command
CSCeb83965	Policing of 80 char limit for certain cli commands
CSCeb85464	AXSM switchredcd caused PXM to reset and coredump
CSCeb85657	P2MP parties fail to route over faked uplinks
CSCeb86666	After burnboot and clrallcnf card keeps resetting during post.
CSCeb87513	pnni link on a PXM1E with IMA backcard goes down without recovery
CSCeb88172	PXM45C keeps resetting after a switchcc
CSCec01073	FRSM HS2/B to support low speed rates like 2.4K
CSCec02957	CIT50: port stuck in provisioning after commitrev and resetsys
CSCec04064	ATmizer SAR ingress/egress path diagnostics reqd for PXM1E
CSCec04212	failed stdby PXM caused AXSM cds to go into failed state.
CSCec04754	status byte in stats file always set to 1 ERR

**Table 29 Resolved Anomalies in Release 4.0.12 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCec04902	CIT50: redman do not read > 100 records for Disk_spv_c_itf_db
CSCec05278	OAM cc is not working consistently as expected
CSCec07087	PXM1E: ATLAS HMM should report errors to SHM
CSCec08533	CESM T3E3 1:1 Redundancy is not functional
CSCec10875	the first two intervals of a new connection has wrong stats data
CSCec10933	Software Err Reset core dump caused by 2 tasks hanging on a semaphore
CSCec11151	UI-S3 not locked to proper reference after inband references switch
CSCec11356	LSNT: GLCNs downed for Service module cards
CSCec11994	CTC app stage spawn state machine is susceptible to error
CSCec12108	Pnports of AXSM-XG card stay in building vc
CSCec12454	Getting the details of error log failed with wrong error message
CSCec12475	EVENT-CLEANUP: multiple IFM-5_critical errors fill in dsperrs log
CSCec12609	CIT50: several VSI sev4 error logged from act and stdby AXSMB
CSCec13851	QMC errors on AXSM1P Etch5 cards
CSCec14029	cnfpasswd command not recorded into the LOG for PXM45/PXM1E
CSCec14485	User should not be forced to enter ICR if VSVD if off
CSCec15230	Software Error Reset core dump on PXM45 node
CSCec15803	Svc number show as -1 in the partition of AXSM-XG card
CSCec16448	Cannot add con with line rate on HS2/B low rate
CSCec16527	Changing maxbw using cnfpnportcac causes rsrc alloc. inconsistency
CSCec17149	Dspcons does not report AIS alarm on SPVP connections
CSCec17721	OAM cc is not working properly on axsm-xg card
CSCec20081	Add performance profiling code to CCB
CSCec20568	DCMP msg has uninitialized fields
CSCec20587	Invalid pref route value in DCMP can cause pnCcb exception
CSCec22514	PXM card reset caused by killing the telnet session
CSCec23958	Offline diags causes near end and far end pm errors on active card
CSCec24908	tsmTermdTas suspended due to invalid guard magic word
CSCec25188	MPSM8-DT: Online diag detects DataPath Test Timeout
CSCec25929	COSB stats is not cleared correctly
CSCec27723	Pnni signalling lcn reuse - pnni link cannot establish
CSCec28435	AXSME IMA port goes into vc failure after dnpnport and uppnport
CSCec28667	addimalnk for E1 path of invalid line type (E1CRC) addressloadexcept
CSCec29583	Interop of MGX 5.0 & 4.0 with PB & MPG enabled causes routing issues
CSCec33139	Not able to add redundancy between 2 RPM-PR cards
CSCec33311	blanket bugid for sprintf violations

**Table 29 Resolved Anomalies in Release 4.0.12 (Continued)**

Bug ID	Description
CSCec33758	Spoke cost of destination PG should not be added to routing cost
CSCec33808	Crankback on failure of call forwarding should not be SEBI
CSCec35459	SRM redundancy not updated properly after upgrade
CSCec36965	FRSM resets due to config upload
CSCec37734	saveallcnf save config file with wrong date
CSCec38330	Send TOD update to RPM -XF cards too
CSCec39239	PBUMP: No Direct Path after Downing Trunk and Upping It Back
CSCec39798	CMTask causes an SSI exception in PXM1E running 3.0.20
CSCec40496	Dnp*ort on the Uni port on axsmxg card does not work
CSCec49118	Standby AXSM Failed due to IPC buffer leak on Active AXSM
CSCec49356	tVsiSlave on AXSM crashes on multiple nodes around the same time

## Resolved Anomalies in Release 4.0.11

Table 30 lists the resolved anomalies in Release 4.0.11.

**Table 30 Resolved Anomalies in Release 4.0.11**

Bug ID	Description
CSCeb47830	ssi exception error: snmpSA crash
CSCeb63198	MPSM8-DT: Connection routed on Prefrte but Pref-rte flag does not set
CSCeb69978	workQPanic: HDD ISR cannot clear HDD interrupt due to PCI read failed
CSCeb88172	PXM45C keeps resetting after a switchcc
CSCeb83142	connection fails routing due to wrong util used at slave
CSCec07087	PXM1E: ATLAS HMM should report errors to SHM

## Resolved Anomalies in Release 4.0.10

Table 31 lists the resolved anomalies in Release 4.0.10.

**Table 31 Resolved Anomalies in Release 4.0.10**

Bug ID	Description
CSCdv50574	delapsln produced incorrect usage statement
CSCdv69400	Enable local loop on addchanloop on AXSM-E
CSCdv87022	oam error while adding connections
CSCdw84887	AXSMXG asic registers needs to be dumped in the core.
CSCdx29779	IPC buffer corruption due to cache coherency - task suspension
CSCdx61758	ResetAtmizerOnPxm1e()/ResetAtmizerOnPxm45() use hard-coded adrs

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

Bug ID	Description
CSCdx75573	SRME shown as SRM-T3 when it is in INIT state
CSCdx78943	AXM-XG: Dspcd displays NOVRAM Dump with Mismatched BC - axsm5
CSCdx85715	Need equivalent command of dspnctlv for higher level SVC based RCC
CSCdy21305	IPC memLeak in ilmiMain task
CSCdy27632	[cnfxbardmin on] does not enable PXM45A/B humvee/xbar links correctl
CSCdy37182	Incorrect dspcd Info Provided For Quad OC48 Back Card On AXSM-XG
CSCdy40482	CTC messages flooding the logs during standby reset
CSCdy61591	Enhance periodic port resynch on PXM to trigger more often
CSCdy61622	Broken HE ready pin can cause XBAR problem
CSCdy81038	dspcds shows failed backcard as ACTIVE
CSCdy82520	CIT40: several nni ports ilmi status stuck in NotApplicable
CSCdz06444	AXG4CH: XG in Failed state after resetcd with 126 EVNNI ports.
CSCdz09843	CIT40: trapSrvTask suspended due to IPC buffer corruption
CSCdz21942	AXGCH: APS1:1; Dspapsln & Dspbecnt reject with incorrect error msg.
CSCdz22884	AXGCHTM:EFCI not updated in cli dspchanct
CSCdz23198	dspportent avg. counts plummets when discard occur
CSCdz23621	Z-RED:Standby RPM-XF vsi master endpoint id is not cleared on PXM
CSCdz26250	AXGCH:dsppaths -ds3 shows path N/A when -ds3 table empty
CSCdz43418	P2MP_DT: addparty create svc UBR instead of CBR with BCOBA
CSCdz45007	AXSME-16T3E3 failed when redundancy is added.
CSCdz47627	PXM45/B/C does not come up after inserting HDD backcard
CSCdz61310	1e: DT Error messages appears on all Xterm sessions
CSCdz63826	P2MP_DT: Nodal conn limit can be exceeded when p2p and p2mp combine
CSCdz65649	1e: DT addapsln should not be allowed if aps mini bkplane is not pre
CSCdz65654	Double free memory problem in function pnni_svc_send_msg_to_sigapi()
CSCdz72159	SYSTEM: Standby PXM should check Active PXM heartbeat
CSCdz79515	burnboot should not be allowed on a downed card
CSCdz80353	memShow on the pxm1e displays a negative number.
CSCdz81163	CLI needs to support formatting for 64 bit objects.
CSCdz81341	Failed to sync up with one PXM45 node-CUT dir not found on this node
CSCdz81780	Memory Usage: Manage through memory pool instead of global
CSCdz82259	In NCDP mode t1 and e1 reference present at the same port 7.35
CSCdz82315	Junk output sent to all CLI by addred
CSCdz83401	dspnni-election should show active peer group leader node name
CSCdz87239	addred on MGX gives an error message
CSCdz87255	File open doesn't return error for non existent file.

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCdz90184	VsiErr and VSI_VRM_TRACE does not work on standby PXM45
CSCdz90394	Enhance display of dspnwnodes to include in use field
CSCdz90584	UPGRD: PXM45/B active/stdby in minor alarm after upg from pxm45A
CSCea01025	DIP: tca option prints garbage for SONET line
CSCea02816	UPGRD: at runrev on pxm45, error log shows pnCcb task is not owner
CSCea03515	1e: DT dnport/upport causes high CPU utilization on the node
CSCea04132	1e: DT unwanted messages after clrsmcnf for SRM-3T3
CSCea04389	ipc name server errors logged on a node
CSCea06889	Even though the slot was empty, it gave error while cc
CSCea07573	Axsmxg connection stat values are incorrect
CSCea07599	Static and Statistics Memory partitions are low in AXSME 4.0 Image
CSCea09461	PXM1e: Reducing port rate by cnfport got rejected with VSI error
CSCea10567	Need to warn/block reset single PXM with disk hw failed
CSCea11030	snmpSA task is stuck- CWM doesn't get traps
CSCea11335	SNMP request caused an exception
CSCea11689	MGX sends card removal trap with alarm severity of 8 - s/b 2
CSCea12511	dspvsiparts show partId as 0 when partId is 1
CSCea13194	REG4: dspchanct X -r 1 cannot be quit 1e: DT
CSCea13539	CTD & CDV incorrectly copied in atmSoft_getAltenateAdminWt()
CSCea13996	UPGRD: at loadrev, stdby pxm reports SFP mismatch
CSCea14630	IMA bandwidth change not reflected in PNNI
CSCea15325	1e: DT REG4: one-way switchcc loss > 520ms on 8-oc3
CSCea15665	UPGRD: tDbgInTask/tDbgOutTask get TID 11 when telnet from w/in node
CSCea16704	resetcd shows Standby card not ready/available card not redundant
CSCea17820	Null saved ttl i.e. ptr log cluttering CC module
CSCea17835	SHM<->XG SFP: SHM doesn't make secondary cd actv on addred actv mis
CSCea18042	PXM crashes after start traffic between 2 RPMs in the shelf
CSCea19434	UPGRD: during upgrd, pnCcb reports AUDIT release error
CSCea20454	PXM1e: 2cells/s AIS on Swth side Tx after get LMI-Abit frm Feeder
CSCea20600	pnPnni is not the owner of the block
CSCea20706	Require user confirmation for cnfpath -width change
CSCea21717	AXSM with policing enabled, expectation is that gcr1 is enabled
CSCea21837	Can't disable Frame discard parm on VPCs
CSCea21991	1e: HARD unable to upln2.5-2.8 if 8oc3 goes UNRES during h/w upg
CSCea23516	Congestion value help doesn't reflect the new acceptable values
CSCea23534	GDB Syncup with firmware files.

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

Bug ID	Description
CSCea23761	Implement PCI error interrupt on PXM45/C/pxm1e-8oc3
CSCea24010	OAM error: OamLpbkHandler seen during upgrade
CSCea24098	1e HARD: SHMA-4_API_SEND_ERR on active PXM1E after switchcc/upgrade
CSCea24732	FRSM12: lmiXmtUpdateStatus inside shellcon flag control
CSCea24948	Hotstdby: dsphotstandby check IMA DB record on non-T1E1 cards
CSCea25138	SCM Debug Enhancements for collecting info on Poll/Htbt failures
CSCea25406	UPGRD: addapps on Jcombo, SHMA-INTERCD-APS-RPT logged to error_log
CSCea26305	Add explanation to usage of adding part id to a controller
CSCea26569	Connection show wrong preferred route status after prefroute changed
CSCea26816	1e HARD: SSI-5_DOSFAIL error due to task cutVTask
CSCea26821	1e HARD: tRed error, possible corruption for redTable after abortrev
CSCea27324	1e HARD: NCDT-4-ADDVC_FAIL on standby PXM1E on configuring ncdp
CSCea27538	Diag image hangs on DPDC CPUB
CSCea27656	Dax con: need to update fail cause code if slave is LOS
CSCea27781	cnfconsegep on leaf svc endpoints displays root endpoint vpi/vci
CSCea27803	tstpndelay fails to work on svc leaf endpoint
CSCea27807	BRAM corruption on PXM45B after power cycle and during runtime
CSCea28523	1e HARD: FILM-5-FWRITE_FAILED should not be logged as an error event
CSCea28822	1e HARD: RED-5-SEND_MISMATCH upon removing active sec FRSM-2T3 BC
CSCea28840	1e HARD: downLoadBram failed after remove act pri FRSM-2T3 BC
CSCea28863	Enhance SyncRam to support Max Outstanding IOV Buffer from 8 to 16
CSCea28998	Need to initialize response message in cli2shmCmdIf()
CSCea29118	Place Holder to remove ability to enable/disable sfp security check
CSCea29984	Resource Reservation phase II checkin
CSCea30418	Need to add cefcLastClearConfigTime in the shelf generic files
CSCea30694	dsconsegep on SPVC endpoint show incorrect segment endpoint status
CSCea31745	CIT40:4 NwClockMgr log should be reduced to lower severity
CSCea32116	1e HARD: Autocard and dbCnt event log after delred 1:1 FRSM VHS
CSCea32276	1e HARD: VSIS-5-VSIERR event log due to CMTASK
CSCea32283	1e HARD: SHMA event log due to task tmon on PXM1e-8oc3 and 8E3
CSCea32296	1e HARD: pcemaGETLInFormPort error due to task FTM on PXM1E-4oc3
CSCea32660	Handling of entries in Provisional tree on deletion of part. on SM
CSCea32763	1e HARD: NCDT DISABLE PORT event log when all ncdpports are dn PXM1e
CSCea33031	1e HARD: SHM API Err due to task pcemaSyncTash on PXME-8oc3
CSCea35486	CIT40: some filters for dspnpsysaddr do not work

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCea37542	REG4: AXSMXG-CH dspportent syntax is incorrect
CSCea38021	dspsd does not report alarm of standby PXM
CSCea38347	cnfdiagall is done enabling diag for all slots, enables srm3t3 not s
CSCea38739	REG4: clrimadelay failed when IMA group in version fallback
CSCea38855	AUTOMATION: svcblock is broken
CSCea39016	dsppni-svcc-rcc shows wrong information
CSCea41058	Size of Replicate Directories array must be dynamically calculated.
CSCea41104	set on ChanRowStatus to notInService on down conn does not throw err
CSCea41573	Avoid memory leakage in trapserver for large traps
CSCea41723	Add ICR range check to SES CLI interface (cnfcon and addcon)
CSCea41802	dspeverr shows redundant info on every screen of a multi-screen o/p
CSCea41991	switchapsln display need to be enhanced
CSCea42097	Resource Reservation phase III checkin
CSCea42240	[SysDiag]: sysdiag clears self diag errors while going STBY->ACTRDY
CSCea42581	Copy OK:65552 bytes copied popup on AXSM telnet session
CSCea43402	pxm1e inserted caused clkalms but dspckalms result in error message
CSCea44266	REG4: Unknown reserved st. of Combo back card causes APS failure
CSCea44644	PXM45: ping command does not default to 5 and no No. of packets opt.
CSCea45267	REG4: Routing cost not update after conn reroute due to vpi mismatch
CSCea45702	dsptopolinklist displays rmt PnPort ID as a huge -ve no
CSCea46427	PXM45C/PXM1E-8OC3: HW WD Timeout is not the same as on PXM45A/B
CSCea46677	Non persistent pep code cleanup
CSCea47481	after switchover data stopped on a pvc between two nodes
CSCea48409	dspscons -rteid has incorrect syntax help
CSCea49519	Do not update ptse flush to standby for topo nodes
CSCea49615	UPGRD: on card bringup in 8830 node, srmOnlineBotBay task logs Error
CSCea49652	UPGRD: upon switchcc on pxm1e, ACAR-2-DBINIT from autocard task
CSCea50382	ATMC-5-INTERNAL WARNING need to be cleaned up
CSCea50527	EvtLog: DB2S-4-DBSVR_DOS_FAIL logged on switchcc
CSCea50686	EvtLog: PXMC-4-GENERR message logged after switchcc
CSCea50748	Resource Monitor Files Checkin
CSCea51139	REG4: FRSM12: tstcon/tstdelay result shows 5 channels
CSCea51508	Telnet server enters infinite loop waiting on input
CSCea51517	Supported SM cards need Core Hot Dump feature
CSCea51520	SSI IPC tracing on LCNs, Epids and Card-to-Card data is broken
CSCea51928	cnfdiagall enables diag for empty slots 31 and 32



**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

Bug ID	Description
CSCea52204	pxm45 exception due to a boundary case on conn upload file cleanup
CSCea52282	UPGRD: event_log get conns in CPRO-4-GET_LCN_FAILED for axsmxg
CSCea53625	UPGRD: upon loadrev, the pxm logged RESY-5-BLKZEROPEP (dsplog)
CSCea54679	Secondary clock status showing OK, clock reason is unknown reason
CSCea54763	UPGRD: ssiChunkPoolsShow gets neg. value for nb_alloc_ok, nb_free_ok
CSCea54830	cnfconsegep response dump outputs corrupt screen
CSCea55999	dspload shows service category corruption for partitions
CSCea56491	Link Invalid trap for uplink not include correct local port#
CSCea56548	Clear IP interface stats counters
CSCea56906	PXM45 reset due to pnCcb task crashing
CSCea57084	cnfclkparams does not behave as intended
CSCea57096	if path is up, conn configured but not bound the drop all msgs
CSCea57626	Placeholder for P2MP on PXM1E Feature Checkin
CSCea58703	Debug congestion msg statement is spewed to screen during SVC test
CSCea58817	dspldiagstat failed counter not reset properly
CSCea58913	UPGRD: upon burnboot, axsmxg comes up active/active exp. active/mism
CSCea59011	UPGRD: node gets error_log of RESY-5-PEPNOTEXIST, no entry event_log
CSCea59054	SNMP subagent is not registered leading to GET failures
CSCea59170	UPGRD: upon switchcc on pxm1e, ACAR-2-DBINIT from autocard task
CSCea59289	addchanloop VP greater than 255 doesn't work on NNI link
CSCea59612	dnpport/upppport caused all links to go to ILMI failure
CSCea59652	Offline diagnostics fails on AXSM/E card
CSCea61569	CUT: memory leakage
CSCea63353	Dynamic memory corruption - AXSM/B
CSCea63712	Send proper Severity Value in PXM45/PXM1E/AXSM and all traps
CSCea63966	Post passed even PXM boot from wrong boot rev
CSCea64148	Resource Reservation phase III implemented for critical tasks
CSCea64332	Handle sysClkTick wraparound in SSI
CSCea64399	REG4: Pref route: Num of network node poorly display
CSCea64478	Node unreachable: memory is held by pnni tasks
CSCea64753	Event log entry for RDI-L needed
CSCea64778	dspadjlnalment -intvl option should be removed
CSCea64785	AXSM Conn. database corrupted after disk corruption
CSCea64808	ssi exception generated by HwMonitor on AXSM
CSCea65228	REG4: AXSMXG-CH comes up as a Active-F/Active after resetsys.
CSCea65471	Backend functions used by k_entity_get should set errno

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCea65604	REG4: PNNI task is suspended due to software exception
CSCea65605	limit max cref count in RM to 27000 for PXM45
CSCea65768	dumconfigs executes some macro commands which are not supported on P
CSCea65819	PXM failed due to event log disk write problems
CSCea66038	Provide mechanism to track buffer leak for all SRs applications.
CSCea66438	Bert is enabled on the FRSM8T1 line even though no bert running on P
CSCea66540	REG4: Rrtcon causes traffic outage for extended period of time
CSCea66920	IT/AT: incorrect range/functionality for dspslotlink & dsperr
CSCea6697	1 Log floods with VSI_4-RMBWCAC Error
CSCea67065	Connection mismatch due to bulk sync not working correctly
CSCea67241	Port rx RDI alarm on virtual channel
CSCea67896	after switchover standby came up in mismatch state with trunk bc
CSCea68727	Incremental files are not getting deleted from couple of nodes
CSCea68798	Telnet to a node fails with the error indicating No Resource
CSCea68950	CIT40:pnCcb suspended at atmSoft_openSvcParty
CSCea68959	CLI: telnet need to setsockopt SO_KEEPALIVE
CSCea68972	CIT40:port stuck in down in progress with dangling svc
CSCeb69150	PXM reports port alarm on AUSM-IMA card after clearing of line alarm
CSCea69245	pxm1e clock is stuck in interface does not support clock in state
CSCea69606	SRMs in reserved state after clrsrcmf
CSCea69620	telnet to lan interface fails time to time
CSCea69772	number of pnports is -7
CSCea69946	tracking bug for hw alms issues at customer site
CSCea70636	It is possible to download ver 3 bootcode to Broadcom PDC flash
CSCea71135	Reroute on AXSM-XG caused tVsiSlave toget suspended
CSCea71197	SSI Sync Timer not initialized
CSCea71360	AXSM-XG Cell Bus SAR Reassembly status shows discards occasionally
CSCea71811	pxm1e reporting wrong state of srm-#T3 of slot 16
CSCea71884	Evt Log indicates error, unable to open/create diag log file
CSCea72069	Ports went to building vc after reinsertion of AXSM cards
CSCea72190	deletion of SCT files causing errors, and not updating properly
CSCea72419	SSI exception in SAR ISR caused card reset
CSCea73159	AXSM-XG memory map setup incorrectly
CSCea73315	AXSMXG: Ifname scheme needs to be changed as per CWM req
CSCea73429	SysDiag causes memleak on Active PXM45 card
CSCea74070	PXM45B switchover happened automatically on MGX 8950

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCea74091	REG4: Reseating both pxms on MGX 8950 freezes the nodes
CSCea74178	REG4: reset SM (Empty) and switchover on PXM1E, showing Failed/Empty
CSCea74359	SHM Fatal/Non-fatal report APIs - pcema(PXM Connmgm)
CSCea74366	SHM Fatal/Non-fatal report APIs - PXM Connmgm-VSIS
CSCea74371	SHM Fatal/Non-fatal report APIs - IP Name Server
CSCea74373	SHM Fatal/Non-fatal report APIs - pcpro
CSCea74378	SHM Fatal/Non-fatal report APIs - SCT File Manager
CSCea74459	Invalid entries in atm_connection for SES endpoints
CSCea74882	Connections fail to route due to svcc-rcc is not up
CSCea75170	parent change trap not sent
CSCea75353	DEV: SPVC fail to establish w/ lctd set to sum of trunks ctd
CSCea75375	CIT40:IPC 8k buffer low and congestion
CSCea75576	pep stuck in vsi-in-progress
CSCea75640	dead code causing confusion - need to be removed
CSCea75675	IPCONN Suspended and PXM45B stuck in reboot for long time
CSCea76411	sysBlinkLedOff leaks 48B of memory every time called
CSCea76798	SCT file for AXSM-XG
CSCea76869	REG4: nbsm dax conns triggers nni routine pep_p
CSCea76994	Entity MIB Changes to support OSMINE certification for ENV devices
CSCea77282	CIT40: pnCcb suspended at resyncGetLegFromSvc
CSCea77528	SRME standby does not initialize properly
CSCea77597	SSI: invariant checks flood event log
CSCea77946	flood of trap 70103, received 1197 in 5 minute period
CSCea78045	AXSM2/B offline full coverage diag always fail
CSCea78166	Connection trap (for some) implementation does not match definition
CSCea78204	CIT40: SES node stays in mem and leg congestion
CSCea78695	REG4:DBSYNC warnings in dsperrs when resetsys
CSCea78828	Both PXM45B failed when upgrading
CSCea79827	UPGRD: Double free of IPC buffer after IPC reply failure
CSCea80248	CLI task suspended and PXM45 switched over
CSCea80544	UPGRD: remove active pxm45C triggers Exception at interrupt level
CSCea80608	LSNT: stats files go to badfilelist
CSCea80655	Node doesn't recover from congestion during conn reroute
CSCea81631	dspalms cli on PXM45 is not showing anything
CSCea81721	UPGRD: online diag reports, but HMM does not reports card problem
CSCea81791	Need high priority queue for mgmt traffic in Europa SAR

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCea81820	Primary RPM not reset after IPC seat deletion & secondary take over
CSCea81899	LSNT:error writing file.error 0x38801c for RPM-PR
CSCea82079	optрте produces messages in the log
CSCea82467	rtopt is done even for NNI port
CSCea82643	PnSscop holding sarMgmIpcRxBuffer
CSCea82849	function returning values other than function type
CSCea82887	starvetask error: SCM Leaking Memory (FixDone: Debug Code Added)
CSCea82940	Src node found bypass for ingress & egress ports on same border node
CSCea83015	Active AXSM failed to operate and standby card went to failed to sta
CSCea83031	UPGRD: At runrev on AXSM-OC3B,Sync Timeout Handler fail
CSCea83188	wrong error message when cellbus clk is configured with autosetting
CSCea83257	The ENUM_errCode_genConnErr (117) is not unique/specific
CSCea83345	Active PXM gets reset while core hot dump is aborted on SM
CSCea83402	introduce event logs in atmizer host code
CSCea84077	dsppnni-node-list shows 2 (instead of 1) for the local node
CSCea84180	XBAR: AXSM-32T1E1-E cards not added in the list of serial bus cards
CSCea84287	PXM1E went to idtmon
CSCea84304	REG4: both cards reset after runrev; core dump found
CSCea84616	releasing svc but svc or call id is NULL
CSCea84711	error log - vsi state FULL but peer leg is NULL
CSCea85031	node rebuilt again after a resetsys was executed
CSCea85150	AXSMXG: dspver should show AXSM-XG under card type.
CSCea85217	popup message on telnet session atmSig_build_snmpTrace:port_id.
CSCea85222	Raise the task priority of legacy apps running on the PXM
CSCea85433	Need to enable HMM interrupt for Scheduling, QE, XIF and PIF
CSCea85629	LMI protocol should exchange logical slot/port info
CSCea85850	Leak: Memory leaked by scm message send by shm2ScmCnfPollParms
CSCea86041	MPG preferred route failure. Connection in fail state
CSCea86144	PXM switchover every minute due to pnCcb crashes
CSCea86474	rmmSendCTCMsg task not applicable for PXM1e targets
CSCea87103	Europa CTT corruption during up/dn pnpports
CSCea87281	tstcon fails if more PVCs are added between PXM1E and VISM
CSCea88075	add diag. codes to collect overflow stats.
CSCea88905	SM needs to check for PCR >= ICR >= MCR when configuring conns
CSCea89254	AXSM-E Local Channel Loopback not functional
CSCea89407	Investigate Atmizer PCI freeze

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

Bug ID	Description
CSCea89735	dsplns repeatedly dsp all lns when APS 1+1 lns configured only
CSCea89755	Should not consider spoke cost when BN path does not exist
CSCea89860	near-end CurrentPCVs and CurrentPES are not incrementing
CSCea90166	addred fails with back card mismatch error
CSCea90213	Trap server need to map Severity values from apps/SMs
CSCea90476	dspealms is not reporting correct alarms after upgrade
CSCea90885	VSI Slave Add control port failed error event msg after addcontrolle
CSCea91209	dsphanent does not work for p2mp connections
CSCea91227	FRSM-2CT3 card stuck in Standby state
CSCea91250	Online diag flr (cc con flr) of AXSM-E OC3 - no ind in dspdiagerr
CSCea91362	VPI overlap causing dnport failures
CSCea91382	dsphanent on pxm1e does not work for control VCs
CSCea91807	PNNI task pnSptAw is running away
CSCea92020	Active PXM gets reset after issuing core hot-dump on service module
CSCea92539	pnCcb Crash
CSCea92707	possible of NNI resource leak !
CSCea92832	ports in down in progress, node snmp unreachable
CSCea92851	axsm and pxm cards reseted by shm
CSCea93216	Incorrect node entry in persistent topo db
CSCea93238	Messages pops up on MGX login window
CSCea93470	pnni connections not shown in dspcons after image upgrade
CSCea93772	Event Log does not show correct info on clk switchover
CSCeb00556	Reject backcard reservation from non-active SMs
CSCeb00576	Backcard unreserve should clear the reserved BC NVID
CSCeb00707	No alarms on VNNI ports
CSCeb01093	PXM45C resets with Work Queue Panic with no coredump
CSCeb01727	Static files should be deleted from standby PXM on clralcnf/clrsmcn
CSCeb01883	need warning message about conns derouting when dnlimi via cli
CSCeb01891	resetcd fails, log shows task starvation with tNetTask running away
CSCeb01960	CIT40: Cache Exception Handler corruption in Backup Boot in PXM45C
CSCeb02143	Evt Log: SYS-4-ERR SysDiagTimerStop error messages logged during dia
CSCeb02341	Enhance DataXfer connection to allow register up to 16 windows.
CSCeb02467	cc: 1. Zero bytes to be written 2. static mem free event.
CSCeb03383	IDE perftest leaks file descriptors & memory
CSCeb03759	AXSM-XG needs to set reassembly timeout to a reasonable value
CSCeb03930	cpro code review for double commit

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCeb03966	wr mem fails w/ startup-conf file open failed (Unknown error 1785358
CSCeb04690	link went down after delays on secondary card
CSCeb05265	AXSME/XG should also use cutwAlarmFileWriteLatest for incr files
CSCeb05876	sscop stuck in reset state
CSCeb06087	RPM-PR should not switchover to redundant if reset flag is disabled
CSCeb06188	SNMP GetNext on Feeder table returns multiple dup responses
CSCeb06258	HARDENING: QE SAR INVMAGIC changes
CSCeb06552	New API to query for Max Elements can be sent at an instant
CSCeb07265	Semaphore not returned in config upload
CSCeb07649	File created by Sysdiag can grow without limit
CSCeb07718	node rebuilt again after a resetsys was executed
CSCeb07879	received message the alternate tbc is not of combo back
CSCeb07963	HARDENING: Coredump should identify incomplete core and log the same
CSCeb07986	AXSM pair reset w/ DAX conns caused loss of telnet/console port acce
CSCeb08124	CCB task is stuck on ssiTaskDelay after large c
CSCeb08242	clrmscnf takes 150+ sec and always failed/aborted for the 1st time
CSCeb08282	AXSM-E response to CLI dspchanloop not showing loopback type
CSCeb08420	empty slot check for cc command broke AXSM and AXSME builds
CSCeb08432	ciscoWANSscopLinkChange trap being sent out on standby PXM (dropped)
CSCeb08814	AXSM-XG went to Active-F due to scheduling U4 control parity error
CSCeb09028	HARDENING: SM Core configuration needs semaphore protection
CSCeb09216	In error case, spvc leg may be freed without pep indication
CSCeb09273	Need shellcon command to see total count of ais
CSCeb09620	CUTS timers are not working properly after switchovers/switchredcds
CSCeb10288	cc command modification doesn't use SHM API function to get card stat
CSCeb10455	Temporary disable HMM for port device
CSCeb10713	Line never out of SF
CSCeb11493	Inconsistent routing cost
CSCeb11785	P2MPJ loaded addparty failed with SPI PATH and OUT OF LEAF error
CSCeb12259	DISK: Disk goes to busy state
CSCeb12866	Online diag failed with Utopia test receive timeout
CSCeb13117	pxm45 online diag potentially leak ipc on standby
CSCeb13164	pxm45 online diag starts offline timer when swithcc to active
CSCeb13227	pxm45 online diag enhance:add diagHelp, appropriate err checking.
CSCeb13255	connections are derouted before the expiration of sscop timers
CSCeb13272	P2MPJ pnRedman exception triggered during delparties

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

Bug ID	Description
CSCeb13320	CBM1/CBM0 Ingress Parity errors on PXM
CSCeb13364	CLI clrdiagstat does not work on the standby card
CSCeb13569	replace ssiRamIovCurMaxElementsGet with new SSI API (in all axsm app
CSCeb13967	PXM45 reset due to Tlb Load Exception
CSCeb15236	traps 60103, 60129 received with trap number=-1 at NMS
CSCeb15251	Checkin real issues found during code-review and code-coverage
CSCeb15425	linkinvalid trap missing
CSCeb15476	tstconseg not working properly with option num
CSCeb15543	config files creation fails on pxm
CSCeb15642	addaps line is allowed on AXSM-OC48/B while in AXSM-A OP mode
CSCeb16085	clear static variables and avoid static memory fragmentation
CSCeb17103	null ptr/malloc and free mismatch
CSCeb17121	P2MPJ: node reset when switchcc as subAgent fails to resolve EpId
CSCeb17400	config upload file missing cwaChanIntAbrVSVD and cwaChanExtAbrVSVD
CSCeb17732	Possible fragmentation caused by small mem allocations from heap
CSCeb17785	AXSM-XG switchover during re-routing with dn/uppnport script
CSCeb17786	Popup from CUTV Event Handler
CSCeb18012	cema should revert back reservation/unresv if SHM reporting fails
CSCeb18167	P2MPJ PXM1E-IMA P2MP addparty failed with SPI error
CSCeb18178 a	dd debug counter for AIS send rcv from controller
CSCeb18197	Standby card resets thrice and goes into Fail state after resetsys
CSCeb18630	ncdp_db gets updated during loadrev state and blocks runrev
CSCeb18702	cnfpri-routing command should be blocked if p2mp queue is not empty
CSCeb18768	TnCmdTsk03 exception found
CSCeb19078	dspcon for prefer route should show route cost as N/A be it SPG or M
CSCeb19177	Online diags: Hard disk access too frequent. Change to once in 15min
CSCeb19444	pnports in down in progress
CSCeb19644	AXSM/E does not detect and discard OAM cells w/CRC error
CSCeb19917	default val incorrectly specified in cnfintfcongth help syntax
CSCeb20060	SNMP: change binary to mutex semaphore
CSCeb20066	Temporary buffer congestion can cause Diags to stop running
CSCeb20096	cnfsscop command doesn't have parameter range
CSCeb20387	CHNK_XNOT_USED error on standby PXM after switchcc
CSCeb20411	multiple PARMINVALID errors on PXM1E node
CSCeb20426	Memory Congestion on MGX (PXM45)
CSCeb20445	Removal of OC3 uplink port on pxm45 boards

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCeb20461	pnport remain in vc failure
CSCeb20464	multiple VSIS errors on PXM1e nodes
CSCeb20522	EvtLog:switchcc-CTC-4-EVTSENDTOSTMCHN error message
CSCeb20534	EvtLog:switchcc-MCAST-4-CNFSNMP_ERRORPA
CSCeb20553	EvtLog:switchcc-PROO-4-soPRerrEv
CSCeb20707	Upgrade of SM is locked while the SM remains in active-U state
CSCeb20746	Limit telnet node-to-node to one hop
CSCeb20884	Resetting Service modules caused a switch PXM core
CSCeb21825	NamTask occupy the memory and cause the pnport stay in down in prog
CSCeb22799	All AXSME cards show Resource Alarm Major
CSCeb22910	PXM1E standby card failed with Troot task exception after upgrade
CSCeb23245	AXSM failed after upgrade frm 3.0.20.100 to 4.0.10.2P3
CSCeb23443	Possible truncated/misformed IPC message cause errmsgs on RPMXF
CSCeb23611	IFM_LOG string error in atmcoreifcAct20
CSCeb24166	CLI-IN to wait till the cmd task is done and not accept any cmds bet
CSCeb24722	AXSM-XG: memory leak in AXSM-XG OAM
CSCeb25248	runrev failed after CESM is deleted from 1:n redundancy
CSCeb25592	AXSM-XG: cema error logging enhancement
CSCeb25839	pxm45 online diag: potential LCN leak
CSCeb26030	Chg reqd to prevent unintentional delpart trigger.
CSCeb26052	after runrev both PXM1E reset
CSCeb26138	Remove some commands which are not required
CSCeb26579	VISM <-> SAPI communication lost during VISM reset
CSCeb27325	Unwanted ssi_ipc message on AXSM-XG console
CSCeb27605	Need matching handling of IPC_CRIT_PRI ipc msg on Sar side
CSCeb27631	local variable returned in cwspConfigTable
CSCeb28248	Memory leak due to frequent PTSE refreshes
CSCeb28420	EvtLog:emSyncHumveePort fail messages in log
CSCeb28664	Inserting PXM1E/PXM45 slowly cause incorrect HW initialization
CSCeb28869	Trap Freq test reports failures (or success) twice for each run
CSCeb29029	Enhancement changes for config upload hardening
CSCeb29267	Memory allocation failures at AXSME card
CSCeb29794	RMON related event log messages should be at a higher severity
CSCeb30173	AUTO:tmOn command causes pxm1e to pause indefinitely
CSCeb30373	AXSM does not correctly report sonetPathIntervaleSs object
CSCeb30550	NNI links on PXM1E went of resources with only few cons routed



**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

Bug ID	Description
CSCeb30643	Standby PXM got stuck in INIT state: link topo failed to access data
CSCeb30953	CLI session does not timeout after saveallcnf
CSCeb31839	Inconsistency in line alarm reporting with dspcds and dsplns.
CSCeb32256	SARSNDERROR filling up the dsperrs log
CSCeb32410	FM_OPEN errors are filling up the error log
CSCeb32489	VxWorks timer fails after 466/496 days
CSCeb32512	C:CUT directory is synced with standby
CSCeb32523	VISM clk ports was not correctly handle on PXM
CSCeb32526	need to enhance CBC ingress parity error logging
CSCeb32527	Non Fatal IE handling in RELEASE msg. needs to be fixed.
CSCeb32578	Node CPU usage >90% w/mpsm155 sanity - console/ethernet unresponsive
CSCeb33456	Change code handling for RPrime search for p2mp
CSCeb33695	Fix the ssiClkTickGet timer wraparound leading to file create failur
CSCeb35085	Getting error on cell bus caused card to go to failed state
CSCeb35244	REG4+: Software err reset core dump generated twice within 15 min.
CSCeb35373	Need more defensive code for prevent invalid address access
CSCeb35412	VNNI link stuck in onewayoutside status
CSCeb35848	Tracing/Debug code for SHM Hardening effort
CSCeb35966	AXSM/E card core-dumps, fails and DB corruption observed
CSCeb36159	HW and card State Alarm on Stdby pxm1e combo after loadrev
CSCeb36393	send trap to indicate the enabling and enabled states of the switch
CSCeb36526	LSNT:RVT process stuck in init state after switchcc
CSCeb37438	PTSE flag changes do not get updated at the receiving nodes
CSCeb37714	svc_cac if_indexs missing in PNNI CC CF file
CSCeb37862	topo gw stuck in enabling state
CSCeb37912	AIS status is not getting updated on the VUNI port
CSCeb38038	dspon shows con in pref when its not in pref route
CSCeb38189	could not cc to any slot after the switchcc hang problem
CSCeb38985	MOC error caused ILMI failure on AXSM-XG card
CSCeb39148	Offline diag fails with Data path test receive timeout
CSCeb39202	CWM request to reduce traps sent from the switch
CSCeb39220	subagents failed to register
CSCeb39242	Possible memory leaks in SCM.
CSCeb39866	IPC: IPC data buffers should be cache aligned
CSCeb40302	after node rebuild frsm-2t3 card came up in failed state
CSCeb40512	delred fail for LSM in 8830

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

<b>Bug ID</b>	<b>Description</b>
CSCeb40612	reset of active AXSM in red pair - RM not freeing resources
CSCeb41273	cnfdiagall command does not work after cnfdiag <slot> used
CSCeb42454	CMSC fails to get stats file on 8830 PXM1E with long node name
CSCeb43141	PnCcb is hogging the node after downing the nni port and uni port
CSCeb43213	subagent did not come up on axsm after upgrade
CSCeb44169	SRCV task is at 60% with a very high stack usage
CSCeb44780	FI: ATM device egress memory fault is not detected by online diag
CSCeb44925	TrapCl errors logged on stdby
CSCeb45101	switchcc shouldn't be executed when stdby pxm has a hardware alarm
CSCeb45254	SRMEB: Add/Del line loop cause APS failure
CSCeb46615	node not shown in dsptopondlist
CSCeb47263	dangling sessions on AXSM cards
CSCeb47692	TrapSrvtask holding memory
CSCeb47749	PCI2PCI Bridge in reset caused sw to lock up
CSCeb47823	unable to cc to Active/Secondary FRSM when Primary slot is empty
CSCeb48179	Pxm1e stuck in dead lock after running addlink/dellink script
CSCeb48679	AXSM/E UNI port passes F5 Segment Loopback ID=0 cells to n/w
CSCeb48715	AXSM/B UNI port passes F5 Segment Loopback ID=0 cell to n/w
CSCeb48721	AXSM with policing enabled, expectation is that gcr1 is enabled
CSCeb49058	DS3 int on AXSM-B/AXSM-E/PXM1E alm. clear int time is incorrect
CSCeb50248	Shm reset standby PXM1e while it was in offline diag
CSCeb50728	AXSM with policing enabled, expectation is that gcr1 is enabled
CSCeb51610	PXM1E UNI port passes F5 segment loopback ID=0 to n/w
CSCeb51648	The detail QE1210 Log. is needed when SCM poll fails
CSCeb51676	EVENT-CLEANUP:multiple ATMC and ATMS errors fill in dsperrs log
CSCeb51978	Unable to login to Active PXM
CSCeb52114	Wrong trap for sonet path in alarm for AXSMXG card
CSCeb52766	LSNT: PXM45 in Active-F state, mainproc1 suspended
CSCeb53193	HARD: Prim SRM in fail state since tRed instructed to go to fail
CSCeb53201	HARD: RevChgLock corrupted and locks upgrade commands
CSCeb53689	SSI-3_Exception after resetsys
CSCeb54108	Standby PXM core dumps due to pnRedMan software error
CSCeb54229	SHMA-7-NFATAL_MAJ_ERPT filing up the dsperrs log
CSCeb54825	Persistent RM alarms generated due to SSI static med threshold cross
CSCeb55365	HARD: pseudo reserve code from AXSM to RPM does not change
CSCeb55874	PnCcb crash cause PXM45 switchover

**Table 31 Resolved Anomalies in Release 4.0.10 (Continued)**

Bug ID	Description
CSCeb56475	tRoot Enhancement
CSCeb57712	ata semaphore timeout and watchdog timeout should be 30 seconds
CSCeb58943	Invalid SSI trace log in event log
CSCeb59779	Trap 60051 not generated for RPM_PR
CSCeb60025	switchredcd on node resets the PXM1e
CSCeb60706	PXM45/B reset due to non fatal major error core dump available
CSCeb61475	Standby PXM45A resets while getting the image from active card
CSCeb61894	LSNT:connections remain in alarm
CSCeb62400	Cannot do core hot-dump on any SM after core abort-dump
CSCeb62594	Disk spin down to be done only on 20G hard Disk/ add sh cmd for tmou
CSCeb62699	Axsm-xg stdby card reset and failed if keep doing delpart/addpart
CSCeb64022	Active PXM stopped responding and standby got stuck in Init state
CSCeb66181	connections on last port of AXSME/PXM1E/AXSM-XG not sent to CWM
CSCeb68355	AXSM/B does not tx RDI-P when W in LOS and P in RDI
CSCeb72999	Reinserting AXSM-XG causes PNNI link to stay in failed state for long
CSCeb73912	DISK Spin down to be disabled by default
CSCeb74414	avoid calling task delays in reboot (sysToMonitor)
CSCeb75099	All traffic loss when route the conns on AXSM-XG card
CSCeb77459	Observed Bad CRC PDUs during the signaling packets exchange
CSCeb77925	Online diagnostics on AXSM-XG causes large no of OAM cells on that
CSCeb78993	AXSM-XG: OAM Config RAM write verification should ignore misc bits
CSCeb86666	After burnboot and clallcnf card keeps resetting during post.
CSCin33117	Deletion of P2mp Party resulted in Party FSM failed error
CSCin43381	Allowing VUNI port with VPI number 0
CSCin45167	delred is not successful on pxm card throwing switch error.
CSCin49093	Can't add CUG on e164 addr for uni30-uni40 port from gui if no CUG present

## Known Route Processor Module or MPLS Anomalies

For information about anomalies with the RPM-PR or RPM/B card, refer to the *Release Notes for Cisco MGX Route Processor Module (RPM/B and RPM-PR) for MGX Release 1.2.21 and MGX Release 4.0.10*.

For information about anomalies with the RPM-XF card, refer to *Release Notes for Cisco MGX Route Processor Module (RPM-XF) for MGX 8850 Release 4.0.10 (PXM45)*.

# MGX-RPM-XF-512 Anomalies

The new MGX-RPM-XF-512 card supports MGX 8850 (PXM45), Release 4.0.10.

For information about anomalies with the MGX-RPM-XF-512 card, refer to “Release Notes for Cisco MGX Route Processor Module (RPM-XF) for Release 4.0.10 of MGX 8850 (PXM45)”.

## Acronyms

Table 32 lists acronyms that have been referenced in these release notes.

**Table 32 Acronyms Used in these Release Notes**

Acronym	Description
AXSM	ATM Switch Service Module. In these release notes, <i>AXSM-A</i> refers to the original AXSM card ( <i>A</i> did not appear on the card), and <i>AXSM/B</i> refers to the newer AXSM/B card ( <i>B</i> does appear on the card).
ABR	Available bit rate
APS	Automatic Protection Switching
CALEA/LI	Communications Assistance for Law Enforcement Act/ Lawful Intercept
CBSM	Cell bus service module. CBSMs were formerly called narrow band service modules (NBSMs).
CLI	Command Line Interface
CoS	Class of service
CUG	Closed User Group
CWM	Cisco Wide Area Network Manager
GE	Gigabit Ethernet
IAP	Intercept Access Point
IMA	Inverse Multiplexing over ATM
LANE	Local Area Network Emulation
LFI	Link Fragmentation Interleaving
MLPPP/LFI	Multi-Link PPP
MTI	Multicast Tunnel Interface
NBSM	Narrow band service module (traditional name for the cell bus service modules in Release 4 and higher)
P2MP	Point-to-Multipoint
PE	Provider Edge
PER	Product Enhancement Request
PNNI	Private Network-to-Network Interface
POS	Packet over SONET
POST	Power On Self-Test
PPP	Point-to-Point Protocol

**Table 32** *Acronyms Used in these Release Notes (Continued)*

<b>Acronym</b>	<b>Description</b>
PXM	Processor Switch Module
RPM	Route Processor Module
SFP	Small Form Factor Pluggable Unit
SONET	Synchronous Optical NETWORK
SPVC	Soft permanent virtual connection
SRM	Service Resource Module
SVC	Switched virtual circuit
VPN	Virtual Private Network
VRF	VPN Routing / Forwarding
XF	Express Forwarding

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### Documentation DVD

Cisco documentation and additional literature are available in a Documentation DVD package, which may have shipped with your product. The Documentation DVD is updated regularly and may be more current than printed documentation. The Documentation DVD package is available as a single unit.

Registered Cisco.com users (Cisco direct customers) can order a Cisco Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

Cisco Marketplace:

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

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

## Documentation Feedback

You can send comments about technical documentation to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

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

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—[security-alert@cisco.com](mailto:security-alert@cisco.com)
- Nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)

**Tip**

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one that has the most recent creation date in this public key server list:

<http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on>

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

## Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

### Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year, at this URL:

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

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.



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Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

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

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

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- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

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- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

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

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