



Text Part Number: 78-7098-02

1.1.10 Version Software Release Notes Cisco WAN MGX 8850 Software

About These Release Notes

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About the 1.1.10 Release

Release 1.1.10 of the MGX 8850 supports the same network scenarios as Release 1.0.00, Release 1.1.00, and Release 1.1.01. It also supports the following additional configuration highlighted below:

- 1 Feeder concentration to the BPX 8600 and all other endpoints (no BPX 8600 BNI trunk connections). IGX endpoints are supported in this release using Switch Software 9.2.

The MGX 8850 provides multiservice, high density ATM, Circuit Emulation and Frame Relay feeder concentration to the BPX 8600. The MGX 8850 connects to the BPX 8600 using the feeder trunk protocol over a PXM port. On the BPX 8600 side the feeder connection trunk to the MGX 8850 is supported on the BXM card only. Interoperability support is limited to (a) MGX 8850 to MGX 8850, (b) MGX 8850 to MGX 8220, and (c) MGX 8850 to BPX 8600 (FR to ATM service interworking).

- 2 MGX 8850 in a Stand-alone Concentrator configuration and Full PXM UNI support on all ports.

Stand-alone capability allows the MGX 8850 to act as edge concentrator to any vendor ATM network which implies service interoperability with other vendor's equipment. All connections for stand-alone are local switching connections.

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FEATURES

MGX 8850 Release 1.1.10 provides the following additional features (in addition to the ones provided in Release 1.1.01 and earlier):

- APS redundancy on PXM-OC3 and OC12 interfaces. Only 1+1 redundancy configuration is supported. No 1:1 APS redundancy.
- Full PXM UNI support in Stand-alone configuration using all ports with policing. The UNI channels on PXM will support CBR, rt-VBR, nrt-VBR, UBR and ABR classes of service.
- BERT support on FRSM-8T1/E1, CESM-8T1/E1 and AUSM-8T1/E1 and FRSM-2CT3 cards. The BERT support is at whole T1/E1 or port level (n*DS0).

Release 1.1.10 MGX 8850 Hardware

MGX 8850 is a 45 Gbps backplane with 1.2 Gbps switching fabric for release 1.1.10. The same backplane is used with different switching fabric cards (1.2, 45 Gbps) to achieve scalability. MGX 8850 release 1.1.10 hardware components and their revisions that are supported are as follows:

Front card model #	Rev #	Back card model #	Rev #
MGX 8850 Chassis	A		
MGX-DC power supply	A		
MGX-AC1 power supply	A		
MGX-AC2-2 power supply	A		
PS-1200-AC power supply	A		
MGX-SRM-3T3-B	A	MGX-BNC-3T3	A
PXM1	A	PXM-UI	A
PXM-1-2-T3E3	A	PXM-UI	A
		MGX-BNC-2E3	A
		MGX-BNC-2E3A	A
		MGX-BNC-2T3	A
PXM-1-4-155	A	PXM-UI	A
		MGX-MMF-4-155	A
		MGX-SMFIR-4-155	A
		MGX-SMFLR-4-155	A
PXM-1-1-622	A	PXM-UI	A
		MGX-SMFIR-1-622	A
		MGX-SMFLR-1-622	A

Front card model #	Rev #	Back card model #	Rev #
MGX-RPM-64M	A	MGX-RJ45-FE	A
		MGX-MMF-FE	A
		MGX-RJ45-4E	A
		MGX-MMF-FDDI	A
		MGX-SMF-FDDI	A
		MGX-MMF-FDDI/FD	A
		MGX-SMF-FDDI/FD	A
MGX-RPM-128M	A	MGX-RJ45-FE	A
		MGX-MMF-FE	A
		MGX-RJ45-4E	A
		MGX-MMF-FDDI	A
		MGX-SMF-FDDI	A
		MGX-MMF-FDDI/FD	A
		MGX-SMF-FDDI/FD	A
AX-CESM-8E1	A	AX-SMB-8E1	
		AX-RJ48-8E1	
		AX-R-SMB-8E1	
		AX-R-RJ48-8E1	
AX-CESM-8T1	A	AX-RJ48-8T1	
		AX-R-RJ48-8T1	
MGX-AUSM-8E1/B	A	AX-SMB-8E1	
		AX-RJ48-8E1	
		AX-R-SMB-8E1	
		AX-R-RJ48-8E1	
MGX-AUSM-8T1/B	A	AX-RJ48-8T1	
		AX-R-RJ48-8T1	
AX-FRSM-8E1	AC	AX-SMB-8E1	
		AX-RJ48-8E1	
		AX-R-SMB-8E1	
		AX-R-RJ48-8E1	
AX-FRSM-8E1-C	AC	AX-SMB-8E1	
		AX-RJ48-8E1	
		AX-R-SMB-8E1	
		AX-R-RJ48-8E1	
AX-FRSM-8T1	AC	AX-RJ48-8T1	
		AX-R-RJ48-8T1	

Front card model #	Rev #	Back card model #	Rev #
AX-FRSM-8T1-C	AC	AX-RJ48-8T1 AX-R-RJ48-8T1	
MGX-FRSM-HS2	A	MGX-SCSCI2-2HSSI/B	A
MGX-FRSM-2CT3	A	MGX-BNC-2T3	A
MGX-FRSM-2T3E3	A	MGX-BNC-2E3 MGX-BNC-2E3A	A A

Support for embedded Cisco IOS router (Router Processor Module - RPM)

- The RPM is an embedded Cisco IOS router with integrated ATM Deluxe Port Adapter and Cell Bus Controller ASIC for internal connections to the backplane cell bus. A number of port adaptors (back cards) can be configured with the RPM front card (FDDI, Ethernet, Fast Ethernet).
 - 4E Adapter
 - FE Adapter (UTP, MMF)
 - FDDI Adapter (full duplex, half duplex, SMF, MMF)

MGX 8220 Hardware not supported on Release 1.1.10 of the MGX 8850

The following cards are not supported in Release 1.1.10:

- AX-FRSM-HS1
- AX-SRM-T1E1

MGX 8220 Hardware that has been superseded on the MGX 8850 by MGX 8850-specific Hardware

- AX-SRM-3T3-A and AX-BNC-3T3 card set

The MGX-SRM-3T3-B front card replaces the original AX-SRM-3T3-A front card and the MGX-BNC-3T3 back card replaces the original AX-BNC-3T3 back card. This change allows the use of slots 9, 10, 25, and 26 for 1:n redundancy and BERT in the MGX 8850 chassis. Both the AX-SRM-3T3-A/AX-BNC-3T3 card set and the MGX-SRM-3T3-B/MGX-BNC-3T3 card set are supported on the MGX 8220.

- AX-SCSI2-2HSSI

Superseded by the MGX-SCSCI2-2HSSI/B, which works with the MGX-FRSM-HS2 front card. A V.35 interface will be supported on the AX-FRSM-HS1 in future releases.

- AX-IMATM
Superseded by MGX-AUSM-8T1/B and MGX-AUSM-8E1/B
- AX-IMATM-B
Superseded by MGX-AUSM-8T1/B and MGX-AUSM-8E1/B

MGX 8220 Hardware that will not be supported on the MGX 8850

- AX-FRASM-8T1
- All MGX 8820 four port cards
- AX-AUSM-8T1/A
- AX-AUSM-8E1/A

Software Platform Features

- 1 MGX 8850 provides high speed native ATM interfaces which can be configured as ATM UNI ports or trunks
- 2 Support for 1:N and 1:1 Service Module Redundancy, as indicated in the table below:

Front card model #	Redundancy supported
MGX-RPM-64M	No redundancy
MGX-RPM-128M	No redundancy
MGX-AUSM-8E1/B	1:N redundancy
MGX-AUSM-8T1/B	1:N redundancy
AX-CESM-8E1	1:N redundancy
AX-CESM-8T1	1:N redundancy
AX-FRSM-8E1	1:N redundancy
AX-FRSM-8E1-C	1:N redundancy
AX-FRSM-8T1	1:N redundancy
AX-FRSM-8T1-C	1:N redundancy
MGX-FRSM-HS2	1:1 redundancy
MGX-FRSM-2CT3	1:1 redundancy
MGX-FRSM-2T3E3	1:1 redundancy

- 3 Support for Bulk Distribution using SRM-3T3B card.
- 4 Service module and PXM upgrades

Features not Supported in this Release:

- CESM-T3/E3
- RPM 1:1 redundancy
- RPM statistics
- FRSM-HS1-B
- Coexistence as feeder and stand-alone
- MPLS support (Tag edge router and tag edge controller)
- Layer 2 support as an autoroute routing node
- SRM T1E1
- IPX endpoints with the MGX 8850
- MGX 8220 Release 4.1.00 circuit emulation endpoints

Major Network Management Features

- CWM Connection Management
- CiscoView support for equipment management
- CLI support
- Service MIB support
- Connection Management for connections to RPM with associated CM GUI support.
- Topology subsystem enhancements to support the MGX 8850 as a stand-alone switch.
- Statistics

For more details refer to the CWM Release 9.2.04 release notes part number 78-6659-04

Connection Limits

- 4000 connections per card.
- 12000 connections per shelf

SNMP MIB:

The SNMP MGX 8850 MIB is being provided with the delivery of Release 1.1.10 of the MGX 8850 software on CCO. The MIB is in standard ASN.1 format and is located in the ASCII text files `MGX8800Mib.mib` file which is included in the same directory within CCO. These files may be compiled with most standards-based MIB compilers. For changes in this MIB from release 1.1.01 please refer to the MIB release notes on CCO.

Notes & Cautions

NODE RELATED

At most one BERT test can be performed per shelf at any point in time. BERT can only be activated through the CLI.

Do not execute the `restoreallcnf` command in the middle of the installation process. If you follow the following steps:

- Step 1** `saveallcnf`
- Step 2** `restoreallcnf`
- Step 3** `install`
- Step 4** `newrev`

The `dsplns` command will display a line as disabled, but you cannot run an `addln` command. Do not execute the `restoreallcnf` command until the `install` and `newrev` commands have completed.

The correct order for the restore procedure is:

- Step 1** `saveallcnf`
- Step 2** `install`
- Step 3** `newrev`
- Step 4** `restoreallcnf`

(for more information, refer to CSCdm57683)

`Addln` should be issued before issuing `addapsln`.

The following line and alarm related commands have been modified to allow slots 8, 16 and 32 as valid arguments if PXM at slot 8 is active:

- `addln`
- `delln`
- `cnfln`
- `dspln`
- `dsplns`
- `addlnloop`
- `dellnloop`
- `cnfsrcmclksrc`
- `dspsrmclksrc`
- `dspalm`
- `dspalms`
- `dspalmcnt`
- `clralmcnt`
- `clralm`
- `dspalmcnf`

For Redundancy to work customer must have 2 PXMs and 2 SRMs, with 1 SRM during switchcc PXMs will go to mismatch state.

Full redundancy requires redundant SRMs. There must be SRMs in both slot 15 and 16 to ensure service module redundancy for the upper shelf AND SRMs in both slot 31 and 32 to ensure service module redundancy for the lower shelf. Lack of the second SRM may result in mismatch conditions.

For service module redundancy support, if the active service module is physically removed from the slot then a switchcc would cause the now active service module to be inaccessible. The workaround is to make sure that both the active and standby cards are physically present in their slots. If the active card indeed needs to be removed then at shellconn type: `pmmStartScmPolling(slotnumber)` after the switchcc. This would make things go ok. The cause and fix are known and fix will show up in 1.2 maintenance release.

MGX 8220 service modules (AX-FRSM-8T1/E1, and AX-CESM-8T1/E1) need to have the boot flash upgraded to MGX 8220 release 5.0.00 common boot code(1.0.01 version) before they can be plugged in the MGX 8850 chassis. All MGX-8220 service module versions that do not use this common boot code (release 2.0.xx, 3.0.xx, 4.0.xx of boot code) are not supported in the MGX 8850.

If loading of the correct common boot code image is required then it will have to be performed on an MGX 8220 chassis, and cannot be performed on an MGX 8850 chassis. Please refer to the procedure below, which is also outlined in the *Cisco MGX 8850 Installation and Configuration* publication on the documentation CD.

Step 1 Use ftp to port the Axis 5 common boot image for the service module to a workstation

Step 2 Plug in the card into the MGX 8220 shelf

Step 3 Download the proper MGX 8220 shelf release 5.0 boot image using the following commands from the workstation:

```
tftp <ip address of the MGX 8220 shelf >  
bin  
put <boot filename> AXIS_SM_1_<slot#>.BOOT
```

Now you must insure that tftp downloaded the appropriate boot code by verifying the flash checksums.

Step 1 Login to the shelf.

```
cc <slot #>'  
chkflash'
```

Step 2 Verify that the two checksums are the same.

If NOT, repeat the process until they are the same. If they are the same, then you can safely remove the card. At this point the service module can be used in the MGX 8850 shelf.

Caution If the checksums are not the same when you remove the service module then the service module will not boot when it is plugged in and the service module will have to be RMA'ed.

MGX 8850 MGX-FRSM-HS2, MGX-FRSM-2CT3, MGX-FRSM-2T3E3 need to have release 10.0.03 firmware for the runtime image and release 1.0.02 firmware for the backup boot image.

Whenever an MGX 8850 is added as a feeder to a BPX 8600, SWSW automatically programs a channel with a VPI.VCI of 3.8 for use as the IP Relay channel. IP Relay is used to send IP data between nodes via the network handler; allowing every node in the domain to be directly addressable via IP addressing and CWM workstations to communicate with every node (especially feeders) using TELNET, SNMP and CWM protocols. If the user tries to add a channel with a VPI.VCI of 3.8, the BPX 8600 does not prevent the user channel from being added, but the MGX 8850 rejects it. To delete the added channel on the BPX 8600, and to get IP relay working you need to reset the BXM card. (CSCdk84083).

In addition to clearing all the configuration, `clralcnf` clears the network IP addresses. IP addresses and netmasks stay the same (`dspifip`). However, it's recommended by engineering to reconfigure them using the `cnfifip` command. Network IP is gone (`dspnwip`), and must be reconfigured using the `cnfifip` command. Refer to the entry on `cnfifip` in the Cisco MGX 8850 Command Reference publication on the documentation CD for syntax.

- All connections, ports and lines must be deleted before issuing the `clrmscnf` command.
- The `copychan` command does not work on the MGX 8850

A minimum of two and up to four IP addresses are needed to be configured for MGX 8850 (one or more of the following: ethernet, ATM, SLIP) and the boot IP address. The user should use "bootChange" to set up IP gateway when the PXM card is just installed. The IP default gateway should be on the same subnet as the PXM board. Use the `bootChange` command to set correct IP address, netmask, and default gateway.

Do not install a Y cable on the UIA CP port for PXMs. If you do both serial ports will be enabled and you will not be able to communicate at all with the shelf through the console ports. If after `switchcc` standby PXM loses the downlevel port then it is due to a downlevel Beta version of UIA backcard that were shipped during field-trial only. Upgrading the UIA back card to the latest version should fix this problem.

You can only configure an AUSM service module as the clock source. If you try to configure an FRSM-8E1/T1 as the clock source, the error message displays that the service module does not provide clock driving support, but the `dspclksrc` command shows FRSM-8T1/E1 even though it is the previous configured AUSM clock source (CSCdm38800)

To configure the external clock source use the interface label 7.35. Do not use 0.33 or 7.33

There are also `routeShow/routeAdd/routeDelete` commands for modifying routing tables.

New LMI commands:

You must reboot your PXM after each modification with “*bootChange*” for it to take effect. Also make sure the subnet mask is 255.255.0.0

```
. bootChange
- Only enter the ethernet IP address, netmask and default gateway.
- Type "." to erase incorrect entries.

tigers.1.7.PXM.a > bootChange

'.' = clear field; '-' = go to previous field; ^D = quit

boot device          :lnPci
processor number     :0
host name            :C          <-- Please put "C".
file name           :
inet on ethernet (e) :172.29.37.40:ffffff00 <-- Ethernet IP Addr/Netmask
inet on backplane (b):
host inet (h)       :
gateway inet (g)    :172.29.37.1 <-- Default Gateway
user (u)            :
ftp password (pw) (blank = use rsh):
flags (f)           :0x0
target name (tn)    :
startup script (s)  :
other (o)           :
```

- Type in reboot, after this the command "ping" will work:

```
tigers.1.7.PXM.a > ping 171.71.54.53 1
171.71.54.53 is alive
```

Configuration save and restore is only supported through the CLI (CWM does not support configuration save and restore).- Service module upgrades error handling is not provided. If the user skips any of the steps during upgrade or if a power failure happens in the middle of the upgrade, results will be unpredictable. See the Special Installation and Upgrade requirements section for service module upgrades. To recover from procedural errors contact your TAC support personnel.

The MGX 8850 supports 15 simultaneous telnet sessions and 10 tftp sessions.

You must use the following Y cables for FRSM-HS2 and FRSM-CT3 redundancy as specified in the Product Orderability Matrix (Straight Cable: 72-0710-01, Crossover Cable: 72-1265-01, Straight Y-cable: FRSM-HS2: CAB-SCSI2-Y, FRSM-CT3: CAB-T3E3-Y). Other cables are not supported.

Y cable redundancy for FRSM-HS2, FRSM-2CT3, FRSM-2T3, FRSM-2E3 is only supported for adjacent slots.

Statistics are not supported for the RPM.

There is no need to issue the **syncdisk** and **shutdisk** commands before removing the PXMs. The **system** quiesces the disk by detecting the removal of the PXM board and flushes the write buffers to the disk and **puts the PXM in sleep mode**. This disables any further hard disk access since it locks the actuator. **When the card is reinserted the PXM automatically comes out of sleep mode.**

Syntax of “addlink” command has changed as follows:

New Syntax:

Syntax: addlink <T3LineNum> <T1Slot> <NumberOfT1s> <TargetSlotNum>

<TargetSlotLineNum>

<T3LineNum> where = Slot.Line

Slot = 15,31

Line = 1 - 3

<T1Slot> where T1Slot = 1 - 28

<NumberOfT1s> where NumberOfT1s = 1-8

<TargetSlotNum> where TargetSlotNum = 1-6|11-14|17-22|27-30

<TargetSlotLineNum> where TargetSlotLineNum = 1-8

PAR command “cnfnwip” has been disabled in this release, please use “cnfifip” instead.

If you lose power, or remove the on-line PXM you lose the broadcast address. Use the “cnfifip” command to configure the broadcast address. To re-define your ATM address and IP Address that are in the same subnet, you have to change the ATM address to a temporary address not in the same subnet, then add back your IP Address with the original Broadcast address, then go back and correct your ATM address.

Cooling and Power limitations: Customer should be aware of the need for extra power supplies and fans beyond certain limitations. A single fan tray will support all configurations that draw between 1200 and 1400 watts. For power requirements, the MGX 8850 requires a minimum of one power supply per line cord to support the power requirement for 5 cards.

	0-5 cards	6-10 cards	11 and above
Single Line Cord (N+1):	2	3	4
Dual Line Cord (2N):	2	4	6

This is based on an estimated worst case power requirement of 190W plus margin per card slot.

CONNECTION MANAGEMENT RELATED

The name of the node cannot be changed if there are PVCs. The node name must be changed from the default value before adding connections, since it cannot be changed later. Use the **cnfname** command to change the node name.

Only one feeder trunk can be configured. No BNI trunk to MGX 8850 as a feeder is supported.

The slave end of a connection must be added first.

The slave end cannot be deleted and re-added back by itself. If you delete the slave end, the entire connection must be completely torn down and re-added back. If the slave end of the connection is deleted and re-added back by itself, then unpredictable results will happen.

For user connections, VCI 3 and VCI 4 on every VPI are reserved for VPC OAMs.

The actual number of feeder connections you can provision on the PXM is always two less than you have configured. (the dsprscprtns command shows max connections as 32767, but you can only use 32767 - 2 = 32765). One connection is used for LMI and another one for IP relay.

There is no error handling detection while provisioning through the CLI. Invalid endpoints and unsupported connection types (such as connections between FRSM-CESM ports or connections between structured and unstructured connections) are permitted using the CLI. The user should not configure these connections.

The sum of CIR of all channels of a port can be greater than port speed as long as CAC is disabled. However, it is not acceptable for one channel's CIR to be greater than port speed even if CAC is disabled. Two channels added up can exceed port speed. This means you cannot oversubscribe a port if only one channel is configured.

When trying to add a port on DS0 slot 32 of a CESM-8E1 line using an SNMP set or the CiscoView Equipment Manager, The SNMP agent in CESM will time out, without adding the port. The SNMP libraries treat the 32 bit DS0 slotmap (cesPortDs0ConfigBitMap) as an integer. The value for the last DS0 is treated as the sign value. This causes a corruption in the packet coming to the agent. As the agent does not receive a complete SNMP packet, it does not respond and times out. Use the command line interface to add a port on DS0 slot 32 of a CESM-8E1 line.

The **cnfport** command does not allow VPI ranges to be reduced. The **cnfport** command only allows the VPI range to expand. The correct sequence is to delete all connections on the partitions, delete the partitions, delete the port and add the port with new VPI range.

RPM RELATED

Recommendations for Booting:

The current implementation provides the following options:

From PXM Disk

NetBoot (TFTP server)

Bootting from PXM Disk is faster than NetBoot.

Recommendations for saving RPM configuration

The current implementation provides the following options:

- a. Save on flash / boot-flash.
- b. Save on PXM Disk.
- c. Save on network (TFTP server)
- d. Save on RPM NVRAM (comes up faster; only for limited configuration size)

It is recommended to save the configuration on flash and on the PXM Disk, as well as on the network server. This ensures that the configuration can be restored; even in the case of multiple failures.

For example if an RPM card has problems, one can copy the configuration from either the PXM disk or from the network to new RPM card. In case of multiple hardware failures (both RPM and PXM cards have problems) one can copy the configuration from the network server.

Replacing the existing RPM with a new card or a card with old configuration in flash:

The existing configuration (of the old card) can be restored on the newly inserted card by following the instructions given below:

1. Insert the new card into an unreserved empty slot. A previously used slot can be unreserved by giving the "clrsmcnf" command.

2. By default the ATM interface comes in “shut” mode. Enable the ATM interface of the new card by following commands in order:

```
config term
interface switch <slot #>/1
no shut
```

3. Copy the old RPM’s configuration (from the PXM disk or the network server) to the new card’s bootflash (For example copying from PXM disk: “copy c:<image name> bootflash:”).

4. Configure the new card to use the configuration in its bootflash using the “boot config bootflash:<config-file-name>” command.

5. Save the changes using “write mem” command.

6. Insert the new card into the old slot.

Please note that in RPM context the “config save/restore” feature of the PXM only restores the PXM part of the RPM configuration/connections. The RPM part of the configuration should also be saved from RPM CLI through copy command (For example: “copy run c:<config-filename>” for saving to PXM Disk) for future restoration.

RPM Connection Resynchronization:

The RPM Connection Re-sync process is supported in the 12.04T release. This feature checks for consistency between the RPM and PXM connection databases.

Limitations

The MGX 8850 does not support CISM endpoints with MGX 8220 release 4.1 through CWM, but is supported through the CLI (CSCdm11835).

Do not execute the `restoreallcnf` command in the middle of the installation process. If you follow the following steps:

- Step 1** `saveallcnf`
- Step 2** `restoreallcnf`
- Step 3** `install`
- Step 4** `newrev`

The `dsplns` command will display a line as disabled, but you cannot run an `addln` command. Do not execute the `restoreallcnf` command until the `install` and `newrev` commands have completed.

The correct order for the restore procedure is:

- Step 1** `saveallcnf`
- Step 2** `install`
- Step 3** `newrev`
- Step 4** `restoreallcnf`

(for more information, refer to CSCdm57683)

The Service MIB does not support resource partitions.

LIP is supported on the maintenance port, but there is no PPP support on the maintenance port.

BIS messages are constantly being sent from BPX to various nodes. This affects the frequency of TFTP updates, which may affect CWM performance and/or CWM database consistency. (CSCdm29396 - ssw 9.1.10)

Unable to provision virtual trunks in SWSW 9.1.10. (CSCdm12851)

Problems Fixed in Release 1.1.10

Symptom:

The `ComMat.dat` file does not show a direct upgrade path from 1.1.00 to 1.1.10. Graceful upgrades are not possible from 1.1.00 to 1.1.10.

Conditions:

Results in loss of configuration when upgrading to aforementioned versions.

Solution:

The `ComMat.dat` file was not configured to support upgrading or downgrading from the 1.1.00 release to the 1.1.10 release. Engineering added a new set of rules to rectify the situation. (CSCdm69961).

Trap managers are not aged. If a trap manager is added, it has to be explicitly deleted. (CSCdk36727)

Unexpected RAI alarms while configuring DSX1 line in SF mode (CSCdk56888)

The customer would like to have the ability to measure the processor consumption by process on the MGX 8850, the same way they can on the BPX. (CSCdm09225)

When the ATM uplink is under congested condition (ATM cloud), it is observed that the receiving FRSM is not receiving frames with FECN bit set and the sending FRSM is not receiving frames with BECN bit set as expected, if the FR-ATM interworking mode is set to service interworking transparent mode on the FRSMs. (CSCdm21269)

The Connection GUI misreports connection modification in the following scenario: 1. Add a 3-segment connection with PXM UNI endpoints. 2. Modify the SCR on the PXM UNI side to a big number, big enough to exceed the available bandwidth on the feeder trunk side. Also turn on CAC override. 3. Execute the modification. CWM will display a successful result, even though the modification is actually rejected because oversubscription is not allowed on the feeder trunk side.(CSCdm33419)

Sometimes the channels start sending AIS cells on to the port. As a result some channels on service modules are consistently in alarm state. Also as a result feeder connections disappear on the MGX 8850 after executing the resetsys command. (CSCdm36595)

Some AUSM cards get stuck in cardInit state after executing the resetsys command. (CSCdm29249)

CardIntegratedAlarm is not displayed when CLI command “dspcd” is executed on MGX8850 service modules.(CSCdm42493)

Currently, for all line driver commands, like addln, delln, dspln, dsplns, dspalm, dspalms, dspalmt, dspalmcnf, clralm, clralmt; we use the logical slot combination (7,15,31); rather than the physical slots, as to which of the two combinations, (7,15,31) or (8,16,32), is active. However, in this release, this is now changed to physical slot numbering, rather than logical slots. (CSCdm35462)

FRSM-2CT3 gives temporarily out of buffers message after addds3loop (CSCdm50194)

Pulling out an active PXM causes multiple problems (CSCdm57808)

APS line switch not indicated in switchlog & incorrect in CWM trap (CSCdm55429)

FRSM-2CT3 can go into mismatch due to configuration mismatch between PXM cards (CSCdm29177)

Error log shows: A process that is not the owner is attempting to free resources (CSCdm33972)

Unable to add SRM lines from PXM in slot 8 (CSCdm35462)

Boot code from an invalid card type could be loaded to a different SM (CSCdm46905)

PXM log flooded with resync messages (CSdm47917)

MemShow, dspelksrc and dsprkload bad responses (CSCdm07070)

Unable to configure RS232 port speeds (CSCdm23786)

Dsplmi & dsparent available on AXIS or on PXM (CSCdk84622)

FRSM-2CT3 cards go into mismatch due to config mismatch (CSCdm29177)

Par-VSI task gets suspended (unable to add/delete connections (CSCdm32736)

Error log for slot 7 shows a process that is not the owner (CSCdm33972)

Error log for slot 8 shows Db plfm:PmmRamDb update when card is not active (CSCdm34001)

Error log for slot 8 shows no updated to Db plfm:sm14-v20 found to commit (CSCdm34011)

Dspcons display breaks a connection into two lines (CSCdm37450)

Restoreallcnf fails, with PXMs locking up and connections not restored (CSCdm39478)

PSW firmware needs to reset PXM when a task fails to spawn successfully (CSCdm39767)

On switchcc can lose RPM files that exist on the active PXM (CSCdm42463)

When lmitrace on, keep doing dlmi hangs the system (CSCdm42849)
Error log for slot 8 shows an invalid ssi-mqid of 0xffffffff (CSCdm33996)
Addcon for a dax connection with ABR gives SNMP set error 6 (CSCdm38372)
FRSM-2CT3 does not pause its display totals (CSCdm33570)
PXM logs error for manually invoked switchcc (CSCdm47909)
RPM config file not mirrored from active to standby PXM card (CSCdm53583)
Copy of file to RPM can result in overwriting RPM directory entry (CSCdm50771)

Problems Fixed in Release 1.1.01

One of the slots on the node had a CESM-8E1 card with some connections. The connections, ports and lines on the CESM were deleted and it was replaced with an AUSM-8T1 card. The AUSM card went to mismatch state. On trying to execute the clrmscnf command the following error message was seen: flyers4.1.7.PXM.a > clrmscnf 20, Do you want to proceed (Yes/No)? Yes Command Failed: Resources exist on card (CSCdm29289).

Happens on an MGX 8850 switch with two PXMs (Core Redundancy). If the Active PXM while synchronizing the databases to Standby, resets, then the Standby PXM goes to Fail State. The reset PXM comes up as Active and will show the other PXM slot as Empty (CSCdm30193)

ShelfIntegrated alarm becoming Major or Minor either after switchcc or resetsys. (CSCdm33756)

One connection, CESM-PXM UNI ended up deleted in CESM, but SPM still has some incomplete data structure. Since there is only one connection per port for the CESM, and the connection is in such state that can not be removed or re-added, the port and its bandwidth become unusable (CSCdm33289)

Configuring the DS3 framing format on an FRSM-2CT3 to M13 does not permit the card to operate correctly with other devices using that framing format. (CSCdm35575)

When modifying a particular protected memory address on CESM8p which causes CESM HW watchdog reset, PXM got reset or lost SAR functionality. (CSCdm15367)

Adding or modifying a connection to an RPM fails if the RPM enable password differs from the password that Conn MGR has cached. Example: A connection to an RPM is configured, then the enable password is changed on the RPM -- any subsequent connection adds or changes fail because of a bad enable password. (CSCdm34114)

When modifying the bandwidth allocation (usually from a smaller percentage to a much bigger one) of a port with 'cnfport' command, it is not always possible to create more connections under that port. (CSCdm32894)

The standby PXM console is not enabled for use. Downlevel PXM board (CSCdm34030)

Adding connections through a conn proxy script. Card went to failed state after adding around 700 connections. (CSCdm32773)

SMs are shown in failed state though physically they are active. This was observed for FRSM8p and FRSM-VHS in slot 5 and 6 and 1. (CSCdm21684)

While using a script to do stress switchcc test, there is a one time occurrence where it was found that the original active card did not come back as standby, but went to fail state. (CSCdm35298)

The problem is related to the PVC's traffic parameters. We are still investigating what the PCR, average, and burst values should be set to for VBR connection. This values are related to nature of the traffic which is sent to the RPM. (CSCdm35352)

When the connection is deleted, the trap does not go to SV+. (CSCdm27489)

Major differences when add vbr.2 connections on PXM by CLI and CWM (CSCdm28075)

If “cnfcon” command is given with the CIR value of less than 8 and greater than zero then the command is never completed and later on one cannot do any modifications, display, etc. (CSCdm34047)

Restoreallcnf does not restore the saved config. Occurs when restoring a configuration taken from another physical shelf. The card the restoreallcnf was done on will not become active but the other card will which contains the previous configuration. (CSCdm37114)

AUSM Connection addition fails for VP connection from CWM. (CSCdm36674)

At low frequencies, the jitter characteristics does not fully comply with the standards.(CSCdm38833)

Problems Fixed in Release 1.1.00

Stand-alone Statistics collection does not work if the PXM is in slot 8 (CSCdm20017).

There is no need to issue the **syncdisk** and **shutdisk** commands before removing the PXM. The **system** quiesces the disk by detecting the removal of the PXM board and flushes the write buffers to the disk and **puts the PXM in sleep mode**. This disables any further hard disk access since it locks the actuator. **When the card is reinserted the PXM automatically comes out of sleep mode**.

In Release 1.0.00 Configuration Save and Restore works only for the same firmware image even if there are no database changes from one version to the other version. In release 1.1.00 Configuration Save and Restore can be done on different firmware images if the firmware images have compatible databases.

VPI range was limited to 0 to 255 on PXM UNI and NNI on the feeder ports in Release 1.0.00. There is no VPI range limit in Release 1.1.00. (CSCdk63920)

A flood of SNMP requests can cause SNMP and CLI to be unavailable for some time (CSCdm13663).

After a user adds PXM UNI channel, VCC with VCI=0, user cannot add any more VCCs with same (CSCdm14123)

Was unable to delete a VP connection for PXM UNI channels using CWM (CSCdm15120)

While executing "cc" command to a Service Module (SM) on a telnet session, the telnet session hangs, and the console of the active PXM card has Tlb load exception message. (CSCdm15150)

Telnet session gets cut off without any error messages or obvious network problem (CSCdm15166)

When adding connections using scripts utilizing Conn-Proxy, without delay between two connection additions, and when there are line alarms at either endpoint, there is a probability that the CESM card may reboot. (CSCdk12363)

FRSM-2CT3 is dropping frames due to frame aborts detected by HDLC controller. (CSCdm13123)

Traffic on connection on FRSM-8T1E1 stopped after removal and insertion (CSCdm18521)

Cannot have more than one session on FRSM-VHS (CSCdk77924)

A channel is shown in alarm even though there is no line alarm and port alarm locally on the FRSM8p service module, and there is no remote alarm on the far end of the connection. (CSCdm14383)

Port statuses at service module site might be different with those at PXM and VSI controller site.(CSCdm15183)

A port was seen that had no alarm on FRSM8p, but "dspparifs" on PXM CLI shows the interface of this port in fail state. (CSCdm15620)

Attempt to configure the external clock source using the label 0.33 does not work. (CSCdm15669)

Some FRSM-8T1E1s don't come up when the MGX8850 is power cycled. (CSCdm16401)

Using script to add ports on FRSM8P Service Module card, in case a port addition fails, FRSM8 is not backing off properly and leave the port still added locally on the card even though the port is not added on PXM side and PAR (the interface corresponding to this port will not show up in "dspparifs" CLI on PXM, but "dsports" on SM shows the port added). (CSCdm03268)

Connections in alarm while lines are OK. (CSCdm10735)

Service module & the PXM reserve different bandwidth for the same connection.(CSCdk92115)

The card, after power recycle does not come up. It gets stuck in standby. (CSCdm10416)

When removing a service module or removing a line, VSI controller prints out "swerr 20208" sometimes. (CSCdm16902)

When an MGX 8850 shelf with CESM-8T1E1s is left running for over a day with Configuration Uploads going continuously, there is a possibility of allocated large buffers not getting released. (CSCdm17868)

The interface state (port state) is inconsistent between the VSI controller and the platform as well as that at service module. (CSCdm16033)

A tftp download of backboot displays an S-objlib_OBJ_UNAVAILABLE error (CSCdm16295)

While RPM is reloading after a card reset or as a result of card removal, PXM gets reset intermittently. (CSCdm15040)

CLI commands on a PXM hang after aborting a command using Ctrl-C. (CSCdm16726)

PXM reset when OC12 trunk back card was inserted. (CSCdm20010)

Broad band connection statistics fail when the PXM is in slot 8 and statistics are enabled (CSCdm20017)

Problems Fixed for RPM in 12.0.4T

These anomalies are fixed in IOS 12.0.4T. For generic IOS issues, refer to the 12.0.4T release notes.

- RPM in adjacent slots share single OC3 cell-bus bandwidth, which cause a 30% drop in throughput at line speed. It is recommended not to use RPM in adjacent slots at high input rate configurations (CSCdk93626).
- Only VCI zero is supported for VPI greater than zero, therefore VP connections are limited to one VC.
- Under certain unknown condition RPM may not get the MAC addresses from the PXM. The occurrence of this conditions is quite low. It is recommended to set up the MAC address manually when such condition is detected. (CSCdk53731).
- IPC buffers exhaust after executing CC command around 70 times. This requires a reload of RPM to re-establish IPC connectivity to PXM. This condition does not cause any interruption of traffic (CSCdk89950).
- Running an extended ping from an IPC console connection may overload the IPC channel (CSCdk76558)
- Virtual template is not supported through SNMP MIB.
- The “tstcon” command to RPM is not supported in this version (CSCdm00845)
- SNMP over IPC channel is not supported in this version, therefore CV application is not supported (CSCdk47301).
- Reported CRC error counts may not be correct in this version (CSCdk70267)
- Tstcon option on CMGUI for PXM-FR connection is not displayed (CSCdk71714)

Documentation

Refer to the MGX 8850 user documentation on the documentation CD.

The *Cisco MGX 8850 Installation and Configuration* includes installation and configuration instructions for the following service modules:

- AX-FRSM-HS1
- AX-CESM-T3E3

This module is not supported in this release, therefore, do not execute the configuration examples provided in the documentation.

The *Cisco MGX 8850 Command Reference* also includes documentation of the commands that can be executed on the following modules:

- AX-FRSM-HS1

This module is not supported in this release, therefore, do not execute the features on the following commands which is FRSM-HS1-specific. The affected command descriptions include:

- addln (for FRSM-HS1)
- There are 40 commands that are supported on the CESM-T3E3. Refer to Table 1-3 in the *Cisco MGX 8850 Command Reference* for a list of these commands

Compatibility Notes

1. MGX 8850 Software Interoperability with other Products

MGX 8850 Platform Software:	PXM 1.1.10
MGX 8220 Firmware:	Rev: 4.1.00 (Refer to the MGX 8220 Release Notes)
Compatible Switch Software:	SwSw 9.2.00 for BPX and BXM firmware - MDA (Refer to the SwSw 9.2.00 Release Notes)
Network Management Software:	CWM 9.2.04 (Refer to the CWM 9.2.04 Release Notes)
Cisco View:	CV 4.2 WAN CV 2.03 (Refer to the CWM 9.2.04 Release Notes)

2. Software Boot and Runtime Firmware Requirements

Board Pair	Boot Code	Version	Firmware	Version	Minimum Version
PXM1	pxm_bkup_1.1.11.fw	1.1.11	pxm_1.1.10fw	1.1.10	1.1.10
PXM-1-2-T3E3	pxm_bkup_1.1.11.fw	1.1.11	pxm_1.1.10.fw	1.1.10	1.1.10
PXM-1-4-155	pxm_bkup_1.1.11.fw	1.1.11	pxm_1.1.10.fw	1.1.10	1.1.10
PXM-1-1-622	pxm_bkup_1.1.11.fw	1.1.11	pxm_1.1.10.fw	1.1.10	1.1.10
AX-CESM-8E1	cesm_8tle1_CE8_BT_1.0.01.fw	1.0.01	cesm_8tle1_10.0.03fw	10.0.03	10.0.01
AX-CESM-8T1	cesm_8tle1_CE8_BT_1.0.01.fw	1.0.01	cesm_8tle1_10.0.03.fw	10.0.03	10.0.02
MGX-AUSM-8E1/B	ausm_8tle1_AU8_BT_1.0.01.fw	1.0.01	ausm_8tle1_10.0.03.fw	10.0.03	10.0.02
MGX-AUSM-8T1/B	ausm_8tle1_AU8_BT_1.0.01.fw	1.0.01	ausm_8tle1_10.0.03fw	10.0.03	10.0.01
AX-FRSM-8E1	frsm_8tle1_FR8_BT_1.0.01.fw	1.0.01	frsm_8tle1_10.0.03.fw	10.0.03	10.0.01
AX-FRSM-8E1-C	frsm_8tle1_FR8_BT_1.0.01.fw	1.0.01	frsm_8tle1_10.0.03fw	10.0.03	10.0.01
AX-FRSM-8T1	frsm_8tle1_FR8_BT_1.0.01.fw	1.0.01	frsm_8tle1_10.0.03.fw	10.0.03	10.0.01
AX-FRSM-8T1-C	frsm_8tle1_FR8_BT_1.0.01.fw	1.0.01	frsm_8tle1_10.0.03.fw	10.0.03	10.0.01
MGX-FRSM-HS2	frsm_vhs_VHS_BT_1.0.01.fw	1.0.01	frsm_vhs_10.0.03fw	10.0.03	10.0.01
MGX-FRSM-2CT3	frsm_vhs_VHS_BT_1.0.01.fw	1.0.01	frsm_vhs_10.0.03.fw	10.0.03	10.0.01
MGX-FRSM-2T3E3	frsm_vhs_VHS_BT_1.0.01.fw	1.0.01	frsm_vhs_10.0.03fw	10.0.03	10.0.01

3. RPM Boot and IOS Image

RPM BOARD	BOOT CODE	IOS IMAGE
MGX-RPM-64M	rpm-boot-mz.120-4.T1	rpm-js-mz.120-4.T1
MGX-RPM-128M	rpm-boot-mz.120-4.T1	rpm-js-mz.120-4.T1

Location of RPM Images on CCO:

On CCO (<http://www.cisco.com>) click on “Software Center” under “Service & Support”. This brings you to the Service & Support page. Click on “Cisco IOS Software”.

From the left bar select the “Special File Access” button. Supply your special access code (as given by your account manager) and click on the “execute” button. This brings you to the page where the RPM 120-4.T1 images are posted.

Special Installation and Upgrade Requirements

Existing customers should use the upgrade procedure on page 25 to upgrade from 1.0.00 to 1.1.00/1.1.01/1.1.10. For new customers the image will be pre-installed as 1.1.10 and they need to use PXM installation procedure to upgrade to future maintenance releases.

Single PXM Installation Procedure

Step 1 Download the 1.1.10 PXM runtime image to the PXM.

```
tftp <node_name or IP address>
bin
put pxm_1.1.10.fw POPEYE@PXM_ACTIVE.FW
quit
```

Step 2 Download the ComMat.dat file to the C:/ directory of the Active PXM. Use the tftp put command:

```
tftp <node_name or IP address>
bin
put ComMat.dat
quit
```

Step 3 Execute the **install 1.1.10** command.

Step 4 Answer **Yes** to the question the install command will ask.

Installation Procedure For Redundant PXMs:

Step 1 Verify that one PXM is Active and the other Standby.

Step 2 Download the 1.1.10 PXM runtime image to the Active PXM.

Step 3 Download the ComMat.dat file to the C:/ directory of the Active PXM.

Step 4 On the Active PXM, do “install 1.1.10”.

[The cards will reset at this point, and it is not determinate which card will become the Active and which will become the Standby.]

Step 5 After the Standby card is reset and successfully enters the hold state, on the Active PXM, do “newrev 1.1.10”.

Step 6 After the Active PXM is reset and successfully enters the hold state, on the Active PXM, do “commit 1.1.10”.

PXM Flash Download Procedure

- Step 1** Download the PXM backup image to the PXM.

```
tftp <node_name or IP address>
bin
put pxm_bkup_<revision>.fw POPEYE@PXM.BT
quit
```

- Step 2** While in the same directory that you downloaded the backup boot file to, execute the **downloadflash** command.

Service Module Firmware Download Procedure

- Step 1** Download the selected revision of service module firmware into the service module in the selected slot.

```
tftp <node_name or IP address>
bin
put <revision>.fw POPEYE@PXM_SM_1_<slot #>.FW
quit
```

- Step 2** While in the same directory that you downloaded the backup boot file to, execute the **downloadflash** command.

Note Please consult your Support Representative before performing any software upgrade.

Service Module Installation/Upgrade and Flashdownload Requirements.

MGX 8220 service modules (AX-FRSM-8T1/E1, AX-AUSM-8T1/E1 and AX-CESM-8T1/E1) need to have the boot flash upgraded to MGX 8220 release 5.0.00 common boot code(1.0.01 version) before they can be plugged in the MGX 8850 chassis. All MGX-8220 service module versions 2.0.xx, 3.0.xx, 4.0.xx of boot code are not supported in the MGX 8850.

SPARE DEPOT - Customers receiving a replacement service module via the TAC (through the RMA process) will have the common boot code image that works for MGX 8220 release 4.x, 5.x and MGX 8850 installed on legacy service modules. (Spare service modules received directly from manufacturing through the normal ordering process will have the correct boot code image already loaded.)

If loading of the correct common boot code image is required then it will have to be performed on an MGX 8220 chassis, and cannot be performed on an MGX 8850 chassis. Please refer to the procedure below, which is also outlined in the *Cisco MGX 8850 Installation and Configuration Guide* on the documentation CD.

Use ftp to port the Axis 5 common boot image for the service module to a workstation

Plug in the card into the MGX 8220 shelf

Download the proper MGX 8220 shelf release 5.0 boot image using the following commands from the workstation:

```
tftp <ip address of the MGX 8220 shelf >
bin
put <boot filename> AXIS_SM_1_<slot#>.BOOT
```

Now you must insure that tftp downloaded the appropriate boot code by verifying the flash checksums.

Login to the shelf.

```
cc <slot #>'
chkflash'
```

Verify that the two checksums are the same.

If NOT, repeat the process until they are the same. If they are the same, then you can safely remove the card. At this point the service module can be used in the MGX 8850 shelf.

Note If the checksums are not the same when you remove the service module then the service module will not boot when it is plugged in and the service module will have to be RMA'ed.

- MGX 8850 MGX-FRSM-HS2, MGX-FRSM-2CT3, MGX-FRSM-2T3E3 need to have release 10.0.01 firmware for the runtime image and release 10.0.01 firmware for the backup boot image.

-If you need to upgrade both flash and runtime image of MGX 8220 Release 4.0.xx service modules to release 10.0.01 to operate within the MGX 8850 chassis please follow the procedure below, which is also outlined in the *Cisco MGX 8850 Installation and Configuration* publication on the documentation CD.

PXM Software 1.0.00 to 1.1.00 or 1.1.01 or 1.1.10 Upgrade Procedure

If you have previously loaded 1.0.00Ei (or any later release) onto your shelf, you don't have to reformat your disk as explained below. **Please use 1.1.01 instead of 1.1.00 in the procedure, the procedure is the same.**

We have completed the disk changes required to attain enhancement in performance. Basically, the changes are twofold.

- Introducing DMA. DMA delivers 2.5-3 times the throughput.
- Reduction in file system size. This delivers 4 times the throughput we previously had. The file system size is now set to 800 Meg.

Following is the procedure to bring up the shelf with the current release:

FOR SINGLE PXM SYSTEMS:

Note First you must ensure that the shelf IP address and the PXM IP address are set. The PXM must have its own unique IP address and there must be a another unique IP address for the shelf.

To set the PXM address, use the bootChange command:

```
node-prompt> bootChange
.' = clear field; '-' = go to previous field; ^D = quit
boot device      : lnPci
processor number  : 0
host name        :
file name        :
inet on ethernet (e) : 172.29.37.220:ffffff00
inet on backplane (b):
host inet (h)    :
gateway inet (g) : 172.29.37.1
user (u)         :
ftp password (pw) (blank = use rsh):
flags (f)        : 0x0
target name (tn) :
startup script (s) :
other (o)        :
```

Set the “inet on ethernet (e) :” field with the first part of the entry (before the :) as the IP address, and the second part as the subnet mask.

Set the “gateway inet (g) :” with the gateway address.

This must be done on both PXMs. This can also be done in backup boot from the VxWorks prompt “->”.

To set the shelf IP address:

```
node-prompt> cnfifip 26 shelf.ip.address subnet.mask broadcast.address
The second argument is the shelf IP address.
```

The third argument is the subnet mask.

The fourth argument is the broadcast address.

Step 1 On the PXM, save the current configuration:

```
node-prompt> saveallcnf
```

Step 2 Get the filename by listing the CNF directory:

```
node-prompt> ll "C:/CNF"
size      date      time      name
-----
512      APR-08-1999 08:16:18 .          <DIR>
512      APR-08-1999 08:16:18 ..         <DIR>
512      APR-09-1999 05:26:42 TMP        <DIR>
45433    APR-09-1999 05:28:42 NODENAME_0409990528.zip
45433    APR-09-1999 05:28:42 NODENAME.zip
In the file system :
total space : 819200 K bytes
free space  : 787787 K bytes
```

For this case, the filename is NODENAME_0409990528.zip. The last set of numbers is the date and time (04/09/99 05:28). If you have executed the saveallcnf command a number of times, there will be a number of files, pick the one with the correct timestamp.

Do not execute the restoreallcnf command in the middle of the installation process. If you follow the following steps:

- Step 1** saveallcnf
- Step 2** restoreallcnf
- Step 3** install

Step 4 newrev

The dsplns command will display a line as disabled, but you cannot run an addln command. Do not execute the restoreallcnf command until the install and newrev commands have completed.

The correct order for the restore procedure is:

Step 1 saveallcnf

Step 2 install

Step 3 newrev

Step 4 restoreallcnf

(for more information, refer to CSCdm57683)

Step 5 On the workstation, upload the saved configuration to the workstation:

```
unix-prompt> tftp shelf.ip.address
tftp> bin
tftp> get CNF/NODENAME_0409990528.zip
Received 45433 bytes in 0.4 seconds
```

Step 6 Download the new bootcode:

```
unix-prompt> tftp shelf.ip.address
tftp> bin
tftp> put pxm_bkup_1.1.00FW_POPEYE@PXM.BT
Sent 642232 bytes in 6.3 seconds
```

The byte count above is just an example. It will be different for different images. Make sure that the boot is successfully downloaded. You should see a message like the following on the console:

```
Program length = 642230
Calculated checksum = 0x2a5a41f2 stored checksum = 0x2a5a41f2
Fw checksum passed
```

Step 7 Burn the backup boot into flash by using the “downloadflash” command (you can only have the one backup boot file in the /FW directory):

```
node-prompt> downloadflash
writing pxm_bkup_1.1.00.fw to flash...
Board recognized as a PXM1A board ...
Checksum size is 642230 ...
Erasing the flash ....
FLASH erase complete
Downloading C:/FW/pxm_bkup_1.1.00.fw into the flash ...
verifying flash contents ....
Flash ok ....
```

Step 8 Reboot the shelf:

```
node-prompt> resetsys
Do you want to proceed (Yes/No)? yes
```

The shelf should boot into backup boot and display the VxWorks prompt “-”.

Step 9 Format the disk:

```
-> ataFormat
IDE: format in progress. This takes a while .....
.....
Disk format complete. Reboot the system ....
value = 0 = 0x0
```

This will take a long time (~25 minutes), so be patient.

Step 10 Reboot the PXM:

```
-> reboot
```

Step 11 On the workstation, download the PXM FW:

```
unix-prompt> tftp pxm.ip.address
tftp> bin
tftp> put pxm_1.1.00.fw POPEYE@PXM.FW
Sent 1982672 bytes in 18.3 seconds
```

Make sure that the transfer is successful, by looking at the message displayed on the PXM console after the transfer:

```
Program length = 1982672
Calculated checksum = 0xd9779bc6 stored checksum = 0xd9779bc6
Fw checksum passed
```

Step 12 Set the FW version to be booted:

```
-> setPXMPrimary "1.1.00"
```

Step 13 Reset the PXM:

```
-> reboot
```

Step 14 Download the saved configuration to the shelf:

```
unix-prompt> tftp shelf.ip.address
tftp> bin
tftp> put NODENAME_0409990528.zip CNF/NODENAME_0409990528.zip
Sent 45433 bytes in 0.4 seconds
```

Step 15 Download the service module firmware to the shelf:

```
unix-prompt> tftp shelf.ip.address
tftp> bin
tftp>put frsm_8t1e1_10.0.01.fw POPEYE@SM_1_0.FW
Sent 1982672 bytes in 18.3 seconds
```

Make sure that the transfer is successful, by looking at the message displayed on the PXM console after the transfer:

```
Program length = 1982672
Calculated checksum = 0xd9779bc6 stored checksum = 0xd9779bc6
Fw checksum passed
```

Repeat for each service module type and for each slot specific firmware.

Step 16 Restore the configuration:

```
node-prompt> restoreallcnf -fNODENAME_0409990528.zip
The saved FW version (1.0.00) is not same as the current FW version
(1.1.00)
Do you want to proceed with the saved FW version (1.0.00)? no
Do you want to keep the current FW version (1.1.00)
(WARNING, the databases in these FW versions must be compatible or upgradeable
for this to work)? yes
All current config will be replaced with the specified restored config and the
shelf will be reset.
Do you want to proceed (Yes/No)? yes
Syncing .....
Flash download completed.
```

FOR REDUNDANT PXM SYSTEMS TO BE UPDATED ALL AT ONCE (ONE LONG OUTAGE - THIS IS NOT GRACEFUL)

If you have previously loaded 1.0.00Ei (or any later releases) onto your shelf, you don't have to reformat your disk as explained below and you can skip steps 1-10 and start from step 11. **Please use 1.1.01 instead of 1.1.00 in the procedure, the procedure is the same.**

First you must ensure that the shelf IP address and the two PXM IP addresses are set. Each PXM must have its own unique IP address and there must be a another unique IP address for the shelf.

Step 1 To set the PXM addresses, use the bootChange command:

```
node-prompt> bootChange
.' = clear field; '-' = go to previous field; ^D = quit
boot device      : lnPci
processor number  : 0
host name        :
file name        :
inet on ethernet (e) : 172.29.37.220:ffffff00
inet on backplane (b):
host inet (h)    :
gateway inet (g)  : 172.29.37.1
user (u)         :
ftp password (pw) (blank = use rsh):
flags (f)        : 0x0
target name (tn) :
startup script (s) :
other (o)        :
```

Set the “inet on ethernet (e) :” field with the first part of the entry (before the :) as the IP address, and the second part as the subnet mask.

Set the “gateway inet (g) :” with the gateway address.

This must be done on both PXMs. This can also be done in backup boot from the VxWorks prompt “->”.

To set the shelf IP address:

```
node-prompt> cnfifip 26 shelf.ip.address subnet.mask broadcast.address
```

The second argument is the shelf IP address.

The third argument is the subnet mask.

The fourth argument is the broadcast address.

Step 2 On the active PXM, save the current configuration:

```
node-prompt> saveallcnf
```

Step 3 Get the filename by listing the CNF directory:

```
node-prompt> ll "C:/CNF"
size      date      time      name
-----
512      APR-08-1999 08:16:18 .          <DIR>
512      APR-08-1999 08:16:18 ..         <DIR>
512      APR-09-1999 05:26:42 TMP        <DIR>
45433    APR-09-1999 05:28:42 NODENAME_0409990528.zip
45433    APR-09-1999 05:28:42 NODENAME.zip

In the file system :
total space : 819200 K bytes
free space  : 787787 K bytes
```

For this case, the filename is NODENAME_0409990528.zip. The last set of number is the date and time (04/09/99 05:28). If you have executed the saveallcnf a number of times, there will be a number of files, pick the one with the correct timestamp.

Do not execute the restoreallcnf command in the middle of the installation process. If you follow the following steps:

- saveallcnf
- restoreallcnf
- install

- newrev

The `dsplns` command will display a line as disabled, but you cannot run an `addln` command. Do not execute the `restoreallcnf` command until the `install` and `newrev` commands have completed.

The correct order for the restore procedure is:

- saveallcnf
- install
- newrev
- restoreallcnf

(for more information, refer to CSCdm57683)

Step 4 On the workstation, upload the saved configuration to the workstation:

```
unix-prompt> tftp shelf.ip.address
tftp> bin
tftp> get CNF/NODENAME_0409990528.zip
Received 45433 bytes in 0.4 seconds
```

Step 5 Download the new bootcode from the workstation:

```
unix-prompt> tftp shelf.ip.address
tftp> bin
tftp> put pxm_bkup_1.1.00.fw POPEYE@PXM.BT
Sent 642232 bytes in 6.3 seconds
```

Make sure that the boot is successfully downloaded. You should see a message like the following on the console:

```
Program length = 642230
Calculated checksum = 0x2a5a41f2 stored checksum = 0x2a5a41f2
Fw checksum passed
```

On the redundant PXMs, make sure that the boot is completely copied to the standby PXM. If you have a console connected to the standby PXM, you should see a message similar to the one on the active console.

If you do not have a console connected to the standby PXM, from the active PXM console `cc` to the standby PXM list the FW directory:

```
node-prompt> cc standby-pxm-number
(session redirected)
node-prompt> ll "C:/FW"
  size      date       time       name
-----
    512     APR-08-1999 08:16:18  .           <DIR>
    512     APR-08-1999 08:16:18  ..          <DIR>
 1982672   APR-08-1999 08:17:10  pxm_1.1.00.fw
   818676  APR-08-1999 08:59:30  sm35.fw
   642232  APR-09-1999 05:44:30  pxm_bkup_1.1.00.fw
In the file system :
  total space : 819200 K bytes
  free space  : 787150 K bytes
```

Step 6 Burn the backup boot into flash by using the “downloadflash” command:

```
node-prompt> downloadflash
writing pxm_bkup_1.1.00.fw to flash...
Board recognised as a PXM1A board ...
Checksum size is 642230 ...
Erasing the flash ....
FLASH erase complete
Downloading C:/FW/pxm_bkup_1.1.00.fw into the flash ...
verifying flash contents ....
Flash ok ....
```

Repeat this on the standby PXM. Note that you can only have the one backup boot file in the /FW directory. Remove any old backup boot files by issuing the cd /FW command to move to the FW directory and issuing the rm command to remove the old files.

command

Step 7 Reboot the shelf:

```
node-prompt> resetsys
Do you want to proceed (Yes/No)? yes
You will need a console connection to both of the PXMs.
```

The shelf should boot into backup boot and display the VxWorks prompt “->”.

Step 8 Format the disk:

```
-> ataFormat
IDE: format in progress. This takes a while .....
.....
Disk format complete. Reboot the system .....
value = 0 = 0x0
```

This will take a long time (~25 minutes), so be patient.

Step 9 Repeat Step 8 on the other PXM. The system may report unable to register standby. You can ignore this message and proceed to Step 10.

Step 10 Reboot the PXM:

```
-> reboot
```

Step 11 On the workstation, download the PXM firmware:

```
unix-prompt> tftp pxm.ip.address
tftp> bin
tftp> put pxm_1.1.00.fw POPEYE@PXM.FW
Sent 1982672 bytes in 18.3 seconds
```

Make sure that the transfer is successful, by looking at the message displayed on the PXM console after the transfer:

```
Program length = 1982672
Calculated checksum = 0xd9779bc6 stored checksum = 0xd9779bc6
Fw checksum passed
```

Step 12 Set the firmware version to be booted:

```
-> setPXMPrimary "1.1.00"
```

Step 13 Repeat steps 11 and 12 on the other PXM.

Step 14 Reset the PXM:

```
-> reboot
```

Step 15 Repeat Step 14 on the other PXM.

Step 16 Download the saved configuration to the shelf:

```
unix-prompt> tftp shelf.ip.address
tftp> bin
tftp> put NODENAME_0409990528.zip CNF/NODENAME_0409990528.zip
Sent 45433 bytes in 0.4 seconds
```

Step 17 Download the service module firmware to the shelf:

```
unix-prompt> tftp shelf.ip.address
tftp> bin
tftp> put frms8et1_10.0.00.fw POPEYE@SM_1_0.FW
Sent 1982672 bytes in 18.3 seconds
Make sure that the transfer is successful, by looking at the message displayed
on the PXM console after the transfer:
Program length = 1982672
Calculated checksum = 0xd9779bc6 stored checksum = 0xd9779bc6
Fw checksum passed
Repeat for each service module type and for each slot specific firmware.
```

Step 18 Restore the configuration:

```
node-prompt> restoreallcnf -fNODENAME_0409990528.zip
The saved FW version (1.0.00) is not same as the current FW version (1.1.00)
Do you want to proceed with the saved FW version (1.0.00)? no
Do you want to keep the current FW version (1.1.00)
(WARNING, the databases in these FW versions must be
compatible or upgradeable for this to work)? yes
All current config will be replaced with the specified restored config and the
shelf will be reset.
Do you want to proceed (Yes/No)? yes
Syncing .....
Flash download completed.
```

Service Module Upgrades

The following steps need to be followed for service module upgrade. Service module firmware images cannot be downloaded as specific versions in MGX 8850 Release 1.0.00 because only one image can be present on the disk at one instance. Hence the user cannot revert back during the installation process.

Step 1 Download the firmware image.

```
tftp <ip address of the MGX 8850 shelf >
bin
put frsm_<version>.fw POPEYE@SM_1_<slot#>.FW
```

for a slot-specific image (in this example the service module is tied to slot 1),

or

```
tftp <ip address of the MGX 8850 shelf >
bin
put frsm_<version>.fw POPEYE@SM_1_0.BOOT
```

for a slot-independent image,

Step 2 For non-graceful upgrades, just reset the card and the service module will come up with the new image.

Step 3 For graceful upgrades, a secondary card should be backing up the service module that needs to be upgraded. Configure the redundancy.

```
install sm <slot> <version>
```

where <slot> is the service module that is being upgraded

and <version> is the service module image on the disk.

Note The concept of version is redundant here, since there is only one service module image on the disk. However we do check that the version given by the user matches the image on the disk to make it consistent with PXM upgrade/downgrade.

```
newrev sm <slot> <version>
```

where <slot> is the service module that is being upgraded

and <version> is the service module image on the disk.

```
commit sm <slot> <version>
```

where <slot> is the service module that is being upgraded

and <version> is the service module image on the disk.

Note There is no abort command for service module upgrade.

Known Anomalies for Platform Software and Service Module Firmware

The following is the list of known anomalies in the MGX 8850, release 1.1.10 delivery. Included with each is a brief discussion of the problem. A more in depth discussion is available in the release note enclosure of the problem record in Bug Navigator.

Bug ID	Description
CSCdk71643	<p>Symptom/Condition:</p> <p>This is suppose to be an added feature that gives robust end to end connectivity with full recovery in cases of error. But unfortunately, with the current design it will take some extra effort and time to provide this. It will be part of future enhancement and may be available in the next release. Just a little note about why, any Traps sent to PAR are directed by LCN number which is not available without a complete end to end connection, which currently limits the generation of Traps for incomplete connections (after a stipulated timeout period).</p> <p>For now, due to absence of these traps a little more responsibility goes to the end user who is creating end to end connections. It is important that if and when a connection is added or removed both Master and Slave end of the connection should be added or removed respectively. Only one side of a connection should not be removed to create a new connection with the other side. Hence creating and deleting connections under any circumstance is complete only with the creation and deletion of both end of the connections. Failure to do this can result in unneeded dangling connections.</p>
CSCdk72991	<p>Symptom:</p> <p>FRSM-VHS takes several minutes to go active when inserted the first time or after clrallcnf.</p> <p>Condition:</p> <p>The delay is due to the creation time of the FRSM-VHS database on the disk. This delay is only introduced the first time the card is inserted or after clrallcnf.</p> <p>Work around:</p> <p>Wait for card to go active</p>
CSCdk86638	<p>Symptom:</p> <p>When using CWM to add connections, if the connection addition request times out, subsequent addition of the same connection may fail as well, complaining that the connection already exists (even though it timed out).</p> <p>Description:</p> <p>This is caused by two factors:</p> <ol style="list-style-type: none"> 1. CWM assumes that when time out, connections are not added on the switch on which the timeout occurs, and thereby only removes other segments of the timed out connection on other involved nodes. 2. On MGX switch, when CWM reports connection timeout, it does not necessarily mean a timeout on the switch. The CWM timeout may be caused, for example, by the network delay etc. from switch and CWM. The connection may actually be provisioned on the switch. <p>Workaround:</p> <p>Don't use the same vpi/vci/dlci used by the timed out connections. This can be fixed by CWM to perform a retrieval to check if the connection is actually provisioned or not on the switch, after connection addition times out.</p>

Bug ID	Description
CSCdm05358	<p>Symptom:</p> <p>When modifying a particular protected memory address on CESM8p which causes CESM HW watchdog reset, PXM got reset or lost SAR functionality.</p> <p>Description:</p> <p>When this happens, CESM sent a huge amount of traffic onto the management connection which is supposed to be used for intercard communication activities such as polling.</p> <p>This traffic causes the SAR to spend all its resources on doing the cleaning/flushing in ISR (interrupt service).</p> <p>This address should never be modified using the shellConn 'modify' command. It was used unknowingly in debug/test process.</p> <p>Workaround:</p> <p>Don't try to modify this protected address in shellConn (m 0xb300060) (0xb300060 is ATMizer CPU address for SAR on CESM8P).</p> <p>As a general guideline, shellConn commands like 'modify memory' should not be used by the customer.</p>
CSCdm10722	<p>Symptom/Condition:</p> <p>The install, newrev and commit commands for service module upgrade (there is no concept of downgrade here, as there exists only one valid, service module image on the disk at a time), do not follow, the same state machine as PXM commands in the current release.</p> <p>Hence, it is mandatory, that for service modules, these commands are given in the documented order, which is:</p> <ol style="list-style-type: none"> (1) install (2) newrev (3) commit <p>WARNING: If these, commands are not given in the above specified order, we can be in a situation where we can have two different images running on the primary/secondary combination. However, on the disk, there is only one valid image for the service modules.</p> <p>Workaround:</p> <p>Assuming, that these commands were given out of order, and now we have two different images, running, on primary / secondary combination.</p> <ol style="list-style-type: none"> f1 - Old image version f2 - Newly downloaded image <ol style="list-style-type: none"> (1) Reset the secondary card, so that it comes up, with f2. (2) Do a softswitch between the two cards, so that secondary takes over and becomes active. At the same time, primary is reset, and comes up with f2. (3) If you may, you can now, do a softswitch, to revert back to the original primary, to restore normal state.
CSCdm11712	<p>Symptom:</p> <p>ingress frame delays impacts RTD.</p> <p>Conditions:</p> <p>The behavior of the devices (HDLC controller etc.) and the way SAR schedules cells in FRSM-2CT3 is quite different from FRSM-8T1/E1. We will try to improve RTD in future release.</p> <p>Workaround:</p> <p>Currently there is no work-around for this.</p>

Bug ID	Description
CSCdm12929	<p>Symptom: FRSM-2CT3 card throughput drops as frame size drops below 144 octets.</p> <p>Conditions: Currently FRSM-2CT3 has some system limitations when the frame size is less than 144 bytes. We will improve this to some extent in the next release.</p> <p>Workaround: There is no work-around for this.</p>
CSCdm17478	<p>Symptom: This bug is a cell spacing/rate issue of the traffic being pumped. It's under analysis still.</p> <p>Workaround: The work around is to increase the IBS to 100 so that no drops are seen.</p>
CSCdm19747	<p>Conditions: cnfrscrptn and change vpi range to: vpi min =0, vpi max =0 This will lead to deleting connections that vpi is not 0.</p> <p>Symptoms: swerr 20909, swerr 20182, swerr 21501, swerr 20320</p> <p>Work Around: If there are many connections on the feeder trunk. Don't change the vpi range to smaller value than the connections' vpi The cnfrscrptn should be blocked at the source if there are conns on the interface.</p>
CSCdm22510	<p>Symptom: Connection traps are not sent out when receiving A bit update from CPE.</p> <p>Conditions: The end result of this is that CWM will not be notified about the channel status change (failure or normal), neither will PXM/PAR. The remote end is notified via in band OAM. This applies to all service modules.</p> <p>Workaround: No Workaround</p>
CSCdm23426	<p>Symptom: Config change trap carries the port resource partition row status as ADD while deleting the resource partition.</p> <p>Conditions: Wrong status will be sent with all resource partition DEL traps.</p> <p>Workaround: Currently there is no work around to avoid database inconsistency between CWM and the service module.</p>

Bug ID	Description
CSCdm28951	<p>Symptom: PXM having wrong A-bit status</p> <p>Conditions: Unknown.</p> <p>Workaround: There is no work-around for this.</p>
CSCdm29907	<p>Symptom/Condition: The cardMajorAlarmBitmap MIB variable is not found in the AXIPOP.my file. Currently, this information is available only on CLI. Some backward compatibility issues need to be resolved before this is available through SNMP.</p>
CSCdm30544	<p>Problem: The major card integrated alarm due to inconsistent databases on the PXM and the SM does not get cleared.</p> <p>Symptom: Under rare situations, a configuration change on an SM will fail to make the necessary changes on the PXM. The SM will try to back-off the changes and this might fail also. This failure to undo the changes will result in the inconsistent databases card integrated alarm (which can be seen using the “dspcd” command).</p> <p>Workaround: There is no workaround to prevent this alarm condition from happening. However it is extremely rare that it will occur. This alarm indication does not disappear at all. There is no CLI command to clear the alarm indication either. The only way to get rid of the alarm indication is to reset the card.</p>
CSCdm30541	<p>Symptom: cnfrscrprtn fails to configure given VCI range.</p> <p>Description: Only one dimensional resource partitioning, either VPI or VCI resource partitioning is available. If resource partitioning is attempted for both VPI & VCI, only VPI partitioning will take affect (if possible). The VCIs will be given full range for every controller. The command will not return error. VCI partitioning is only possible if the port is configured with only ONE VPI value instead of a range.</p> <p>Workaround: To use VCI partitioning, configure only ONE VPI value instead of a range.</p>
CSCdm31437	<p>Conditions: SV+ needs a trap when a line is added or deleted.</p> <p>Symptoms: In a Feeder case, SV+ is informed of a line addition through Inband communication. However, in case of stand-alone configuration SV+ needs a trap to determine addition or deletion of lines.</p> <p>Work Around: There is currently no work around for this.</p>

Bug ID Description

CSCdm33635

Conditions:
 During switchback, dspcds shows neither card as active.
 Symptoms:
 During switchback processing for a 1:1 redundant FRSM-2CT3, neither card is shown active; there is also no redundancy indication:
 Initially, the redundancy information is displayed as follows:

```
taggmt42.1.7.PXM.a > dspcds

      Slot  CardState   CardType   CardAlarm  Redundancy
      ----  -
      1.1   Standby      FRSM-2CT3  Clear      Covered by slot 2
      1.2   Active       FRSM-2CT3  Major      Covering slot 1
```

```
taggmt42.1.7.PXM.a > switchback 2 1
Do you want to proceed (Yes/No)? Yes
```

```
taggmt42.1.7.PXM.a > dsplog
04/25/1999-08:01:52 07 tTnCmdTsk02 RED-7-AC_INFO_ERR
Error Event switchBack() successful
04/25/1999-08:01:52 07 tTnCmdTsk02 PMM-7-RST_REQ
Reset request: SM Reset, 2
04/25/1999-08:01:52 07 tTnCmdTsk02 RED-7-SMM_INFO
```

```
System Information : switchback:
slot 2 (cardInx 3) is present, insertion msg from 7
taggmt42.1.7.PXM.a > dspcds
```

```
      Slot  CardState   CardType   CardAlarm  Redundancy
      ----  -
      1.1   Standby      FRSM-2CT3  Clear
      1.2   Boot        FRSM-2CT3  Clear
```

```
taggmt42.1.7.PXM.a > dspcds
```

```
      Slot  CardState   CardType   CardAlarm  Redundancy
      ----  -
      1.1   Standby      FRSM-2CT3  Clear
      1.2   Reserved     FRSM-2CT3  Clear
```

```
slot 2 (cardInx 3) is present, insertion msg from 7
```

```
taggmt42.1.7.PXM.a > dspcds
```

```
      Slot  CardState   CardType   CardAlarm  Redundancy
      ----  -
      1.1   Standby      FRSM-2CT3  Clear
      1.2   CardInit     FRSM-2CT3  Clear
```

```
      Slot  CardState   CardType   CardAlarm  Redundancy
      ----  -
      1.1   Active       FRSM-2CT3  Major
      1.2   Standby     FRSM-2CT3  Clear
```

Work Around:
 There is currently no work around for this.

Bug ID	Description
CSCdm33677	<p>Symptom:</p> <p>Not able to add ABR1 connection from PXMUNI to PXMUNI (3-segment) whenever the feeder trunk has some of its bandwidth used up due to other connections.</p> <p>Condition:</p> <p>Using SV+ to add ABR1 connection. The SCR field is default to the max port bandwidth and not editable (greyed out). If there is at least one other connection already added, the available bandwidth will be less than that of the port speed. The new connection addition will fail.</p> <p>Workaround:</p> <p>Use CLI to add connection (addcon) then modify the SCR to the desired value (within what is available) via cnfupcabr (another CLI command).</p>
CSCdm34035	<p>Symptom:</p> <p>Invalid msgType from SCM</p> <p>Description:</p> <p>The console is repeatedly logging the following message:</p> <pre data-bbox="558 835 1078 888">04/26/1999-09:23:42 14 cmm FRSM-6-4172 Invalid value : Invalid msgType from SCM</pre> <p>Workaround:</p> <p>No Workaround</p>
CSCdm37454	<p>Symptom/Condition:</p> <p>Another observation, that was noted while debugging this bug, was that, when a different card type is inserted in the original primary slot, it goes into Mismatch state, which is the correct behavior. Now, this state is shown both by dspcds as well as dspred, command that is output of PMM and RED modules. However, RED module, keeps knowledge of old card type (the original card type in primary slot), which is also, correct, because redundancy has been configured for this slot. However, the problem, is that when you reset, the secondary, this Mismatch card also, gets reset, which is not expected. It should not be affected.</p> <p>Workaround:</p> <p>Pull out this card, which is of different type, and insert back the original primary card. It goes back into standby state, since the secondary is covering it. Now, redundancy is in stable state.</p>
CSCdm38440	<p>Symptom:</p> <p>Whenever the DST changes the MGX8850 doesn't alter the time accordingly. This happens during April or October and the MGX8850 has an offset of one hour compared to actual time.</p> <p>Condition:</p> <p>Happens when DST changes (April and October).</p> <p>Workaround:</p> <p>As long as MGX8850 is a feeder to BPX, there won't be any problem with the time, since BPX supports DST and updates the MGX8850 feeder whenever there is a change in time. When MGX8850 is used as a stand-alone, there will be an offset of 1 hour, since DST is not supported. Set the appropriate time using the cnftime CLI command.</p>

Bug ID	Description
CSCdm40113	<p>Symptom:</p> <p>It takes over 20 minutes for the FRSM-2CT3 cards to go active after a clralcnf command has been issued.</p> <p>Conditions:</p> <p>Occurs when there are several FRSM-2CT3s in the shelf along with other service modules.</p> <p>Workaround:</p> <p>None. Wait for cards to go active.</p> <p>Further Problem Description:</p> <p>Creation of default service module config takes a long time and is processed one service module at a time. Subsequently, all the other SM wait to go active until the default config upload for all the service modules are done.</p>
CSCdm42475	<p>Symptom:</p> <p>When sneak cables are used to loop traffic around multiple line interfaces on a shelf, some channels may stay in alarm state on Service Modules even though there is no line alarm, no port alarm, and no connections alarms on PXM (dspcons shows all normal).</p> <p>Description:</p> <p>Under typical configuration, where lines are properly connected to CPE or test equipment (instead of connecting it another line yet connected to another line etc.), alarms are set and cleared as expected.</p> <p>Workaround:</p> <p>This particular configuration using sneak cable typically is used to loop traffic within a shelf multiple times with limited traffic source. This is OK from the perspective of carrying the traffic through. However, this may cause problems with propagating alarms.</p>
CSCdm44173	<p>Symptom:</p> <p>Negative test failure. Changing the DC type results in connection being lost.</p> <p>Conditions:</p> <p>Changing the daughter card type (e.g oc3 to t3 or vice-versa) results in the PXM connections to be lost. This is due to the restore failure on a different physical interface type. Once the type of the daughter card is changed, the line driver will not add the line due to a different card type. However, the higher modules (PAR, VSI) etc. must have a mechanism in case of a restore failure and the should not result in connection deletion.</p> <p>Workaround:</p> <p>There is currently no workaround for this.</p>

Bug ID Description

CSCdm44523 Symptom:
bootChange inputs must include host name, or inet on ethernet field will go into the host name and file name fields as shown below

```
-> bootChange
'.' = clear field; '-' = go to previous field; ^D = quit
boot device      : lnPci
processor number : 0
host name        : e=172.16.156.29
file name        : fffffff0
inet on ethernet (e) :
inet on backplane (b):
host inet (h)    :
gateway inet (g) : 172.16.156.1
user (u)         :
ftp password (pw) (blank = use rsh):
flags (f)        : 0x0
target name (tn) :
startup script (s) :
other (o)        :
                :
```

Conditions:

Occurs when executing the bootChange command, and nothing is entered in the host name field

Workaround:

Be sure to put something into the host name field, and this problem will not be seen

CSCdm45045 Symptom:

APS: no differentiation between Model A and B backcards

Conditions:

If there is a Model A back card, APS does not work. APS is only supported with the Model B back card. After deleting APS (line not trunk configuration), APS could not be re-added to the line, even with a Model B backcard.

```
pop2.1.7.PXM.a > dspapsln
SlotLine Type Active WStatus PStatus CDType Direc Revert
LastUserSwReq
-----
7.2&8.2 1+1_2 7.2 OK OK OC-3 BI RVE MANUAL_SWITCH
7.3&8.3 1+1_2 7.3 OK OK OC-3 BI RVE NO_REQUEST

pop2.1.7.PXM.a > delapsln 2
pop2.1.7.PXM.a > dspapsln
SlotLine Type Active WStatus PStatus CDType Direc Revert
LastUserSwReq
-----
7.3&8.3 1+1_2 7.3 OK OK OC-3 BI RVE NO_REQUEST

pop2.1.7.PXM.a > delapsln 3

pop2.1.7.PXM.a > addapsln 3 7 3 8 2
Set APS failure : back cards are not Model B
```

Workaround:

No Workaround

Bug ID	Description
CSCdm45141	<p>Symptom: Switchcc displays ssiFrameXmt failed and VSI master: invalid sw clock info pg</p> <p>Condition: The ssiXmtFrame failure was caused by SCM transmitting on GLCN=0, which is reserved. This is due to scmSwitch including slot 31 and slot 32 which are not mapped in SCM master.</p> <p>switchcc on PXM displays the following message in the PXM log:</p> <pre> 1. ssiFrameXmt failed, error status -1 - 31 dropped 2. Vsi master: invalid sw clock info pg ; 2, 3, -2104681808 - 1 dropped 05/27/1999-06:16:13 07 PAR:Vsi PAR-7-VSIM_DEBUG Vsi master: invalid sw clock info pg ; 2, 3, -2104681808 - 1 dropped 05/27/1999-06:16:10 07 PAR:Vsi PAR-7-VSIM_DEBUG Vsi master: invalid sw clock info pg ; 2, 3, -2104681808 </pre> <p>Workaround: No Workaround</p>
CSCdm46245	<p>Symptom: LED alarm light displays but dspalms shows no alarms.</p> <p>Condition: This intermittent condition occurs where Major Alarm red LED light displays while there is no actual alarm(s). CLI command “dspcds” shows Major shelfIntegratedAlarm, but dspcd (on service module) or dspalms shows all clear. This problem/condition is under investigation.</p> <p>Workaround: None.</p>
CSCdm46394	<p>Symptom: SYSTEM ERROR 20208 occurred during SM images upgrading to 10.0.02_01Jun99_1</p> <p>Condition: This is a one time occurrence. The following is observed:</p> <pre> ##### ##### SYSTEM ERROR 20208 1 1179649 1 1179649 ##### </pre> <p>Description: The above error indicates that PAR is receiving bulk interface trap before the interfaces known to PAR, so PAR is logging the bad interface system error. This is a rare race condition. Subsequently when the individual port trap comes, the interface will be created in PAR properly.</p> <p>Workaround: No workaround. This error is not causing any problem as the port state will be updated correctly subsequently by the individual port trap.</p>

Bug ID	Description
CSCdm47203	<p>Symptoms:</p> <p>In rare cases, adding huge amount of connections may cause FRSM-VHS SMs to slow down on “cc” responses.</p> <p>Conditions:</p> <p>The FRSM-VHS SMs may show warning messages on the console reporting “no more SCM buffers” or “no more session available”. In some cases, the FRSM-VHS just simply not responding, or very slow on the console.</p> <p>Workaround:</p> <p>Increase timeout value for the “cc” command:</p> <pre data-bbox="597 632 854 680"> > shellConn -> cliCcTimeout = 60 </pre> <p>(Or any other value greater than 16 (default, in seconds).</p> <p>Reset the service module.</p> <p>There will be a fix to increase number of SCM buffers for FRSM-VHS service modules.</p>
CSCdm49847	<p>Symptom:</p> <p>CLI command “dsplns” fails to display anything, but returns undefined symbol:</p> <pre data-bbox="545 926 878 974"> mgx1.1.3.VHS2E3.a > dsplns undefined symbol: dsplns </pre> <p>Workaround:</p> <p>No Workaround</p>
CSCdm48519	<p>Symptom:</p> <p>140 second data hit when a FRSM-2CT3 gets reset.</p> <p>Condition:</p> <p>When non redundant card having more number of channels is reset, it takes more than two minutes for traffic continuity to work.</p> <p>Work Around:</p> <p>There is no work around.</p>
CSCdm49090	<p>Symptoms:</p> <p>FRSM-VHS card fails to go to Active state during the upgrade process. It also fails to log any message.</p> <p>Conditions:</p> <p>This occurs when FRSM-VHS card has 16 MB DRAM and the firmware upgrade process (to firmware supporting 2000/4000 connections) is done.</p> <p>Work Around:</p> <p>User has to upgrade the hardware from 16MB to 32MB DRAM.</p>

Bug ID	Description
CSCdm49862	<p>Symptom:</p> <p>dspln fails, returning "undefined symbol"</p> <pre> mgx1.1.3.VHS2E3.a > dspln 1 undefined symbol: dspln mgx1.1.3.VHS2E3.a > dsp Unknown Command : dsp The possibilities are : dspalm dspalmcnf dspalmcnt dspalms dspbufoverflow dspcd dspcderrs dspcdprtntype dspcdrschrtn dspchan dspchancnt dspchanmap dspchans dspchstats dspcon dspcons dspds3ln dspds3lns dspdsx3bert dspegrq dspegrqs dspfeature dspfst dsplcn dspln dsplns dspmptbl dspmsgcnt dspport dspportcnt dspportrschrtn dspports dspportstats dpsarcnt dpsarcnts dpservrate dpslftst dpslftsttbl dspstatparms dpsvcrange dsptaskinfo dsptotals dspusedlnmap mgx1.1.3.VHS2E3.a > version ***** Cisco System. AXIS FRSM-VHS Card ***** Firmware Version = 10.0.01 Backup Boot version = 5.0.00_15Dec98 VxWorks (for CISCO) version 5.3.1. Kernel: WIND version 2.5. Made on Sat May 8 00:43:44 PDT 1999.</pre> <p>Workaround:</p> <p>No workaround</p>
CSCdm51382	<p>Symptom:</p> <p>FRSM-card takes about 1 minute to report A=0 to CPE, when line goes into alarm.</p> <p>Conditions:</p> <p>The conditions when this will occur is unknown. Still investigating the problem.</p> <p>Workaround:</p> <p>There is no workaround.</p>
CSCdm51406	<p>Symptom:</p> <p>The remote end card does not receive any OAM cells.</p> <p>Conditions:</p> <p>This happens when the local end card continuously sends OAM cells over a long period of time.</p> <p>Work Around:</p> <p>The local end card has to be reset so that it will start transmitting OAM cells.</p>

Bug ID	Description
CSCdm52380	<p>Symptom: After an ungraceful upgrade, the PXMs end up in boot state.</p> <p>Conditions: An ungraceful upgrade using setPXMPrimary is done.</p> <p>Workaround: Reset the PXMs after the problem occurs.</p>
CSCdm52590	<p>Symptom: This occurs when a PXM is reset during an upgrade/downgrade operation (other than the reset performed as part of the operation).</p> <p>Work Around: Nothing, the PXM eventually gets to the correct state. It just takes awhile.</p>
CSCdm54605	<p>Symptom: After delifip 37, the shelf will automatically reboot itself.</p> <p>Condition: The shelf reboot is intentionally done in the “delifip” command. The reason for this action is still under investigation. If there is no impact on MGX 8850 shelves without the reboot action, it will be corrected in the next release.</p>
CSCdm54916	<p>Symptom: cesm-t1 with UNI connections start showing AIS-OAM cell incrementing. This can be seen using dspchanct. However, no traffic loss has been observed because of these AIS cell increment.</p> <p>Condition: This problem is intermittent.</p> <p>Work Around: There is currently no work around for this.</p>
CSCdm55225	<p>Symptom: When any provisioning is performed (connections, ports or lines added) and a saveallcnf is given the command may fail.</p> <p>Conditions: Same as above.</p> <p>Workaround: None.</p> <p>Further Problem Description: Provisioning results in changes to the database which leads to disk writes on the C:\DB directory. If a saveallcnf is run at the same time, which ultimately tries to compress the very same C:\DB directory, the state of the disk directory at the beginning of the compression may not be the same during the compression process, depending upon whether a disk write to the directory has happened due to provisioning. A mechanism is needed whereby writes to the disk are locked during the compression process if compression is being done on the same directory.</p>

Bug ID	Description
CSCdm56094	<p data-bbox="521 304 617 325">Symptom</p> <p data-bbox="521 346 1468 451">The far end device can not be put into a loopback using the “Far End Inband Loopback” or the “Far End ESF Loopback” options under the “DEVICE TO LOOP” menu in the “cnfbert” command. If these options are chosen as part of a BERT pattern test, then the test will not be configured as it will fail to sync the pattern.</p> <p data-bbox="521 472 617 493">Condition</p> <p data-bbox="521 514 1468 619">The inband and ESF loopbacks are activated/de-activated by transmitting the loopback codes for the minimum number of seconds specified by the ANSI T1.403 specification. However, due to variations in the way time is measured by the AUSM and the far-end devices, some devices do not detect the code for the</p> <p data-bbox="521 640 1307 661">desired number of seconds and hence they do not activate/deactivate the loopback.</p> <p data-bbox="521 682 641 703">Workaround</p> <p data-bbox="521 724 1437 766">This problem may not be seen on all (far-end) devices. If it is seen, then there is no workaround other than trying to repeat the test configuration till it is successful.</p>
CSCdm56202	<p data-bbox="521 808 617 829">Symptom:</p> <p data-bbox="521 850 1404 903">The dsploads command has limitations. Load display in AUSM-B ATM ports and IMA port configuration does not show any information related to the port activity and utilization.</p> <p data-bbox="521 924 641 945">Workaround:</p> <p data-bbox="521 966 649 987">Investigating.</p>
CSCdm56223	<p data-bbox="521 1018 617 1039">Symptom:</p> <p data-bbox="521 1060 1047 1081">SRM responds to FEAC for T3 resulting in local loop.</p> <p data-bbox="521 1102 633 1123">Conditions:</p> <p data-bbox="521 1144 1015 1165">Happens when FEAC codes are sent to T3 of SRM.</p> <p data-bbox="521 1186 641 1207">Workaround:</p> <p data-bbox="521 1228 649 1249">Investigating.</p>
CSCdm56229	<p data-bbox="521 1270 617 1291">Symptom:</p> <p data-bbox="521 1312 917 1333">SRM responds to FEAC to loop the T1s.</p> <p data-bbox="521 1354 633 1375">Conditions:</p> <p data-bbox="521 1396 1193 1417">Happens when FEAC codes to loop the T1s are sent to the SRM card.</p> <p data-bbox="521 1438 641 1459">Workaround:</p> <p data-bbox="521 1480 649 1501">Investigating.</p>
CSCdm57515	<p data-bbox="521 1522 617 1543">Symptom:</p> <p data-bbox="521 1564 1242 1585">Removal of FRSM-2CT3 backcard does not cause redundancy switchover.</p> <p data-bbox="521 1606 633 1627">Conditions:</p> <p data-bbox="521 1648 1307 1669">When the line module of the primary is removed, the secondary doesn't take over.</p> <p data-bbox="521 1690 641 1711">Workaround:</p> <p data-bbox="521 1732 1453 1768">Re-insert the line module of the primary. When primary becomes active, reset the primary for the secondary to take over.</p>

Bug ID	Description
CSCdm57683	<p>Symptom: The <code>dsplns</code> command will display a line as disabled, but you cannot do an <code>addln</code>.</p> <p>Conditions: User runs the following sequence of commands: <code>saveallcnf</code> <code>restoreallcnf</code> <code>install</code> <code>newrev</code></p> <p>Workaround: Do not execute the <code>restoreallcnf</code> command before executing the <code>install</code> command.</p>
CSCdm57795	<p>Symptom: Illegal LCN error message</p> <p>Conditions: When performing a <code>switchcc</code>, the following error displays repeatedly: <code>rmLcnBlkGet:illegal lcn number:lcn = 0 if = 0x 0 max_lcn = 4112 firstDataLcn = 16</code> <code>rmLcnBlkGet:illegal lcn number:lcn = 0 if = 0x 0 max_lcn = 4112 firstDataLcn = 16</code> <code>rmLcnBlkGet:illegal lcn number:lcn = 0 if = 0x 0 max_lcn = 4112 firstDataLcn = 16</code> <code>rmLcnBlkGet:illegal lcn number:lcn = 0 if = 0x 0 max_lcn = 4112 firstDataLcn = 16</code></p> <p>Description: This error message indicates that a connection with an illegal LCN (in this case it is LCN=0) is being resynced. It is found that this is not causing any problem on the <code>switchcc</code>, but may delay the standby PXM going active for up to 1 minute.</p> <p>Workaround: No workaround.</p>
CSCdm62176	<p>Symptom: Executing a <code>cc</code> to redundant-active SMs(<code>cesm</code>,<code>frsm</code>,<code>ausm</code>) always fails after a <code>switchcc</code>.</p> <p>Workaround: No workaround.</p>
CSCdm62224	<p>Symptom: Rpm-registration fails after a <code>switchcc</code>.Ipc-port open fails</p> <p>Workaround: No workaround.</p>
CSCdm62238	<p>Symptom: The active RPM in slot10 comes up & remains in reserved state after execution of the <code>resetsys</code> command.</p> <p>Workaround: No workaround.</p>

Known Anomalies for RPM

These RPM anomalies are tied to its function with the MGX8850. For generic IOS issues, refer to the 12.0.4T release notes.

- Under heavy load conditions from multiple sources, RPM performance may degrade (CSCdk91818)
- Some RPMs may not boot when more than 8 RPMs are booting simultaneously from the PXM hard disk (CSCdm14987)
- UBR connection for RPM is not supported from CWM, even though the CLI can support it

Note For more details refer to the CWM Release 9.2.03 release notes part number 78-6659-03

Obtaining Service and Support

For service and support for a product purchased from a reseller, contact the reseller. Resellers offer a wide variety of Cisco service and support programs, which are described in the section “Service and Support” in the information packet that shipped with your chassis.

Note If you purchased your product from a reseller, you can access Cisco Connection On-line (CCO) as a guest. CCO is Cisco Systems’ primary, real-time support channel. Your reseller offers programs that include direct access to CCO’s services.

For service and support for a product purchased directly from Cisco, use CCO.

Cisco Connection On-line

Cisco Connection On-line (CCO) is Cisco Systems’ primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco’s customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

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This document is to be used in conjunction with the 1.1.10 Cisco WAN Switching MGX 8850 publications.

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