



Release Notes for IP Transfer Point (ITP) 7600 for Cisco IOS Release 12.2(18)IX

Software Release Date 10/26/2007
Cisco IOS Release 12.2(18)IXE

These release notes for the ITP 7600 platform describe the enhancements provided in Cisco IOS Release 12.2(18)IXD and later. These release notes are updated as needed.

For a list of the software caveats that apply to Cisco IOS Release 12.2(18)IX, see the “Caveats for Cisco IOS Release 12.2(18)IX” section on page 11.

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These release notes include the following topics:

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System Requirements

This section describes the system requirements for Cisco IOS Release 12.2(18)IX and includes the following sections:

Memory Requirements, page 2



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Memory Requirements

Table 1 *Images and Memory Recommendations for the ITP 7600 Cisco IOS Release 12.2(18)IXE*

Platform	Feature Sets	Image Name	Software Image	Flash Memory Recommended	DRAM Memory Recommended	Runs From
Cisco 7600	IP Transfer Point	IP Transfer Point	s72033-itpk9v-mz	512	512	Flash

Table 2 *Images and Memory Recommendations for the ITP 7600 Cisco IOS Release 12.2(18)IXD*

Platform	Feature Sets	Image Name	Software Image	Flash Memory Recommended	DRAM Memory Recommended	Runs From
Cisco 7600	IP Transfer Point	IP Transfer Point	s72033-itpk9v-mz	512	512	Flash

Table 3 *Images and Memory Recommendations for the ITP 7600 Cisco IOS Release 12.2(18)IXC*

Platform	Feature Sets	Image Name	Software Image	Flash Memory Recommended	DRAM Memory Recommended	Runs From
Cisco 7600	IP Transfer Point	IP Transfer Point	s72033-itpk9v-mz	512	512	Flash

Table 4 *Images and Memory Recommendations for the ITP 7600 Cisco IOS Release 12.2(18)IXB1*

Platform	Feature Sets	Image Name	Software Image	Flash Memory Recommended	DRAM Memory Recommended	Runs From
Cisco 7600	IP Transfer Point	IP Transfer Point	s72033-itpk9v-mz	512	512	Flash

Table 5 *Images and Memory Recommendations for the ITP 7600 Cisco IOS Release 12.2(18)IXA*

Platform	Feature Sets	Image Name	Software Image	Flash Memory Recommended	DRAM Memory Recommended	Runs From
Cisco 7600	IP Transfer Point	IP Transfer Point	s72033-itpk9v-mz	512	512	Flash

Hardware Supported

Table 6 shows the supported interfaces for the ITP 7600 platform.

Table 6 **Supported Interfaces for the Cisco ITP 7600**

Interface or Linecard	Introduced In ¹
Cisco7606-S Chassis	12.2(18)IXE
Cisco7609-S Chassis	12.2(18)IXE
Cisco 7600 Supervisor Engine 720-3B	12.2(18)IXB1
ATM Port Adapter (PA-A6-0C3)	12.2(18)IXB1
ITP SS7 Q.703 High-speed Port Adapter (PA-MCX-4TE1-Q)	12.2(18)IXB1
Cisco 7600 Supervisor Engine 720-3BXL	12.2(18)IXA
Enhanced FlexWAN module for the Cisco 7600 Series Router (WS-X6582-2PA)	12.2(18)IXA
2 Port FE (PA-2FE-TX)	12.2(18)IXA
ITP SS7 Port Adapter for SS7 low-speed links (PA-MCX-8TE1-M)	12.2(18)IXA
ATM Port Adapter for SS7 high speed links (PA-A3-8E1IMA)	12.2(18)IXA
ATM Port Adapter for SS7 high speed links (PA-A3-8T1IMA)	12.2(18)IXA

1. The number in the “Introduced In” column indicates the Cisco IOS Release in which the interface was introduced on the ITP 7600.

Determining the Software Version

To determine the version of Cisco IOS software running on your Cisco ITP 7600, use the **show version EXEC** command.

New and Changed Information

New Hardware Features in Release 12.2(18)IXE

No new hardware features are supported by the ITP 7600 for Cisco IOS Release 12.2(18)IXE.

New Software Features in Release 12.2(18)IXE

The following new software features are supported by ITP 7600 on Cisco IOS Release 12.2(18)IXE:

- Saving, Loading, and Non-Disruptive Replacement of a GWS Configuration or GWS Table to a Remote or Local File
- Saving, Loading, and Non-Disruptive Replacement of an MLR Configuration to a Remote or Local File
- Translation Type (TT) Modification within an Application Group
- TTMAP support for xUA AS
- Extending the Application Group to 64 Entries per Group
- Enhancing GTT Address Conversion Flexibility
- MLR Routing to M3UA AS without modifying the DPC
- Enhanced MLR Modification CdPA (and CgPA)

Saving, Loading, and Non-Disruptive Replacement of a GWS Configuration or GWS Table to a Remote or Local File

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

In Cisco IOS 12.2(18)IXE and later releases, you can save a GWS table or a general GWS configuration to a local or remote file system, load the general configuration from a local or remote file system, and non-disruptively replace the running GWS configuration or GWS table on an operational system.

The GWS table file is made up of a number of table entries. The general GWS configuration file is made up of action sets, table sub mode commands, linkset table, AS table and global table.

This feature is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Saving, Loading, and Non-Disruptive Replacement of an MLR Configuration to a Remote or Local File

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

In Cisco IOS 12.2(18)IXE and later releases, you can save the general MLR configuration to a local or remote file system, load the general configuration from a local or remote file system, and non-disruptively replace the running MLR configuration on an operational system.

The general MLR configuration file includes MLR global result groups, loading MLR address table command, MLR rulesets, MLR modify profiles, routing tables. Individual MLR address tables may still be saved to separate files, but the load statements are included in the general MLR configuration file.

This feature is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Translation Type (TT) Modification within an Application Group

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

GTT currently allows post-translation modification of the TT on a per-GTA basis, unless the result type is an application group. This feature allows post-translation modification of the TT on a per application group member basis.

This feature is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

TTMAP support for xUA AS

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Mapping the CdPA TT to a configured value is supported for all MSUs being sent or received over a particular linkset. This feature extends configured CdPA TT modification to all MSUs being sent or received over a particular M3UA or SUA AS.

This feature is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Extending the Application Group to 64 Entries per Group

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

This feature extends the limit of eight GTT application group members per application group to 64 application group members. The composition of the application group supports the range of 64 members with the same cost value and 64 members with unique cost values.

This feature is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Enhancing GTT Address Conversion Flexibility

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

GTT address conversion allows the operator to specify the number of digits removed from the original address prefix when the in-address prefix is matched. GTT address-conversion supports 0 digits for the update in-address parameter. The supported range today is between 1 and 15 digits. The range of digits removed may be between 0 and 15 digits, and has no relation to the number of digits specified in the in-address parameter.

This feature is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

MLR Routing to M3UA AS without modifying the DPC

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

This feature gives the MLR ability to route a received packet to an M3UA AS without modifying the DPC. This is not an MSU copy feature, but a modification to the routing of the received MSU.

This feature is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Enhanced MLR Modification CdPA (and CgPA)

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

This feature allows MLR to modify the SCCP CdPA GT selector and digits prior to routing to the specified result. MLR modifies the SCCP CdPA PC and SSN using a modification profile. MLR modifies the SCCP CdPA via modify-profile for all MAP-based operations. MLR expands its SCCP CgPA modification to be applied to all MAP-based operations

This feature is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

New Hardware Features in Release 12.2(18)IXD

No new hardware features are supported by the ITP 7600 for Cisco IOS Release 12.2(18)IXD.

New Software Features in Release 12.2(18)IXD

The following new software features are supported by ITP 7600 on Cisco IOS Release 12.2(18)IXD:

- Integrated GWS and MLR Triggers
- SS7 Port Adapter for SS7 Low-Speed Links Supports 126 Links
- SMS MO Proxy
- Enhanced Loadsharing

Integrated GWS and MLR Triggers

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

In Cisco IOS 12.2(18)IXD and later releases, MLR triggers and GWS are integrated. GWS determines which packets are intercepted by MLR. You can configure MLR triggers using the GWS infrastructure, GWS tables, and MLR variables.

Integrated GWS and MLR Triggers are documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

SS7 Port Adapter for SS7 Low-Speed Links Supports 126 Links

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

In Cisco IOS 12.2(18)IXD and later releases, the SS7 Port Adapter for SS7 Low-Speed Links (PA-MCX-8TE1-M) supports 126 links. This specific port adapter is supported in earlier releases, but Cisco IOS 12.2(18)IXD and later release offer full support of an increased the number of links.

The SS7 Port Adapter for SS7 Low-Speed Links is documented in the SS7 guide, *SS7 Port Adapter Installation and Configuration* on Cisco.com:

<http://www.cisco.com/univercd/cc/td/doc/product/core/cis7507/portadp/multicha/mcx8te1/index.htm>

It is also documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

SMS MO Proxy

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

The ITP SMS MO proxy capability is extended to the Cisco 7600 Platform in this release. This feature allows MO-proxy, a stateful application, to work with the Cisco 7600 supervisor module (SUP). Previously, this feature was not supported on the 7600 platform.

SMS MO proxy is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Enhanced Loadsharing

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

The Enhanced Loadsharing feature creates a 3-bit hash from a subset of bits (6 each) taken from the OPC and DPC. Concatenating this hash with the SLS yields a 7-bit value that is then used to select a link (SLC) from a 128 entry SLS->SLC mapping table. This results in a much more even load distribution among available links.

The feature also allows flexibility in choosing the subset of bits from the OPC and DPC using the `opc-shift` and `dpc-shift` parameters and simultaneous configuration of `sls-shift`, at the global and/or linkset level.

Enhanced Loadsharing is documented in the *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

New Hardware Features in Release 12.2(18)IXC

No new hardware features are supported by the ITP 7600 for Cisco IOS Release 12.2(18)IXC.

New Software Features in Release 12.2(18)IXC

The following new software features are supported by ITP 7600 on Cisco IOS Release 12.2(18)IXC:

- GWS SCCP Error Return
- MLR SCCP Error Return
- Multiple HSL PVCs per Physical ATM interface
- SCCP/MAP Address Modification for SRI-SM Messages.
- C-Link Backup Routing of M3UA/SUA Traffic

MLR SCCP Error Return

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXC allows you to configure MLR to return a UDTS to the source of the SCCP packet when the SCCP packet is blocked. You configure this by specifying an optional `sccp-error` parameter on block results in MLR rules and MLR address tables.

GWS SCCP error return is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

GWS SCCP Error Return

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXC allows you to configure GWS to return a UDTS to the source of the SCCP packet when the SCCP packet is dropped. You configure a return UDTS when you define the gateway screening action set in enhanced GWS.

GWS SCCP error return is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Multiple HSL PVCs per Physical ATM interface

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXC allows multiple HSL PVCs per physical ATM interface. This is done through the support of subinterface configuration on the ATM link. Prior to Cisco IOS Release 12.2(18)IXC, you could only configure the ATM interface not any subinterfaces. The ability to create additional subinterfaces allows for more qssals, since only one qssal is allowed per interface or subinterface.

The multiple HSL PVCs feature is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

SCCP/MAP Address Modification for SRI-SM Messages

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXC permits SCCP and MAP address modification using a MLR **modify-profile**. MLR currently supports modifying only the service center address (orig-smsc) and the calling party address (CgPA) for SRI-SM messages.

With Cisco IOS Release 12.2(18)IXC, the user can also now optionally configure the desired action for failed modifications using the **modify-failure** command within the MLR options submode. A user can also configure the **preserve-opc** function within the global MLR options submode. The **preserve-opc** function retains the original Originating Point Code (OPC). The user may configure MLR to return a UDTS to the source of the SCCP packet when the SCCP packet is blocked by specifying an optional **sccp-error** parameter on block results.

SCCP and MAP address modification is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

C-Link Backup Routing of M3UA/SUA Traffic

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXC supports a C-link Backup Routing feature that provides backup routing to M3UA and SUA ASs. It uses an MTP3/M2PA linkset to a remote SG serving the same ASs over SCTP/IP. This configurable software feature is available to any ITP running a sigtran protocol (M3UA and/or SUA) and offloaded MTP3. The remote SG that is reachable through the C-link may be another ITP, or any SG serving the same ASs.

C-link Backup Routing is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

New Hardware Features in Release 12.2(18)IXB1

The following new hardware features are supported by ITP 7600 on Cisco IOS Release 12.2(18)IXB1:

Support for the ATM Port Adapter (PA-A6-OC3)

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

The ATM Port Adapter (PA-A6-OC3) provides 8K VCs per port adapter and represents a performance improvement over the PA-A3-OC3 Port Adapter. The feature and function of the PA-A6-OC3 is unchanged.

The PA-A6-OC3 Port Adapter is supported in three variants:

- Multimode (PA-A6-OC3MM)
- Single-mode intermediate reach (PA-A6-OC3SMI)
- Single-mode long reach (PA-A6-OC3SML)

Each variant of the PA-A3-OC3 Port Adapter supports 2 physical optical connections for ATM signaling, one transmit and one receive for OC3 or STM-1 direct connectivity.

Support for the Cisco 7600 Supervisor Engine720 with Policy Feature Card 3B (SUP720-3B)

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

The Cisco 7600 Supervisor Engine 720-3B (SUP720-3B) is a member of the SUP720 family with a modular PFC3B forwarding engine daughter card.

Support for Q.703 Annex A High-speed Links (PA-MCX-4TE1-Q)

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXB1 provides support for Q.703 Annex A high-speed links on the ITP. The SS7 Q.703 High-speed Port Adapter (PA-MCX-4TE1-Q) supports enhanced Message Transfer Part Level 2 (MTP2) functions and procedures that are suitable for the operation and control of signalling links at data rates of 1.5 and 2.0 Mb. The ITP software for Cisco IOS Release 12.2(18)IXB1 enables configuration of the card type and controller and enables configuration of the interface for SS7 high speed MTP2 encapsulation.

Support for Q.703 Annex A high speed links is documented in *SS7 Q.70 High Speed Port Adapter Installation and Configuration Guide* and in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

New Software Features in Release 12.2(18)IXB1

The following new software features are supported by ITP 7600 on Cisco IOS Release 12.2(18)IXB1:

Preventive Cyclic Redundancy (PCR) Error Correction

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXB1 supports Preventive Cyclic Redundancy (PCR) Error Correction as described in Q.703 and GR-246. PCR is an alternative form of error correction for MTP2 links and is typically used on links that have a long delay (such as satellite links).

The PCR error correction feature is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Multi-Layer Routing (MLR) Generic Opcode Support

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXB1 extends Mobile Access Part (MAP) operation support to include all GSM-MAP (3GPP TS 29.002 version 5.9.0 Release 5) operations in MLR rules.

MLR Generic Opcode support is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

Insert Destination Point Code (DPC) in Called Party (CDPA) PC

Platforms: Cisco 7604, Cisco 7606, Cisco 7609, Cisco 7613

Cisco IOS Release 12.2(18)IXB1 provides a global option to insert DPC into the CDPA PC for packets that are MLR-routed.

The Insert DPC in CDPA feature is documented in *IP Transfer Point (ITP) on the Cisco 7600 Platform*.

New Hardware Features in Release 12.2(18)IXA

The initial release of ITP 7600 in Release 12.2(18) IXA includes the following hardware feature set:

- Cisco 7600 Supervisor Engine 720-3BXL
- Enhanced FlexWAN module for the Cisco 7600 Series Router (WS-X6582-2PA)
- 2 Port FE (PA-2FE-TX)
- ITP SS7 Port Adapter for SS7 low-speed links (PA-MCX-8TE1-M)
- ATM Port Adapter for SS7 high speed links (PA-A3-8E1IMA)
- ATM Port Adapter for SS7 high speed links (PA-A3-8T1IMA)

New Software Features in Release 12.2(18)IXA

The ITP 7600 platform provides the following key features:

- Non-Disruptive Upgrade
- Standard STP routing (MTP, GTT) and variant support
- Standard M3UA/SUA Signaling Gateway (Offloaded)
- QoS
- Gateway Screening
- Multiple Instances and Instance Translation
- Multiple Point Codes (primary, secondary, capability) per instance.
- Offloaded Multi-Layer Routing
- Offloaded Enhanced Gateway Screening

Caveats for Cisco IOS Release 12.2(18)IX

Caveats describe unexpected behavior in Cisco IOS software releases. Severity 1 caveats are the most serious caveats; severity 2 caveats are less serious. Severity 3 caveats are moderate caveats, and only select severity 3 caveats are included in the caveats document.



Note

If you have an account with Cisco.com, you can also use the Bug Toolkit to find select caveats of any severity. To reach the Bug Toolkit, **log in** to Cisco.com and click **Service and Support: Technical Assistance Center: Select & Download Software: Jump to a software resource: Software Bug Toolkit/Bug Watcher**. Another option is to go to http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

Open Caveats—Cisco IOS Release 12.2(18)IXE

This section documents possible unexpected behavior by Cisco IOS Release 12.(18)IXE and describes only severity 1 and 2 caveats and select severity 3 caveats.

- CSCsh35975

Bad VCD msg observed traffic on the other links and subinterfaces does not seem to be affected.

The below steps cause the condition

- a. shut the main interface and its sub-interfaces that are used in links
- b. no shut the main interface but keep the sub-interfaces shut

There are no known workarounds

- CSCsd34549

An unexpected config_state value is seen during reload or switchover.

This is seen after an IMA card reloads or switches over.

There are no known workarounds

- CSCsd73254

On the ITP 7600 platform, if a specific software error on the active RP causes the active RP to fail, the standby SUP may not detect the failure. Instead, the active SUP may reload the ITP to restore ITP manageability.

This has only been observed in specific lab tests that force a specific software failure on the active RP.

There are no known workarounds

Resolved Caveats—Cisco IOS Release 12.2(18)IXE

All the caveats listed in this section are resolved in Cisco IOS Release 12.2(18)IXE. This section describes only severity 1 and 2 caveats and select severity 3 caveats.

- CSCek63758

MSU Rates spike after clearing counters

This problem occurs on all ITP platforms

- There are no known workarounds
- CSCsg27676

The SGMP link between ITP mates may flap when an ASP becomes active

This problem occurs on all ITP platforms

There are no known workarounds
 - CSCsg58153

The PA has crashed and is unresponsive

Bad circuits on uplink links cause all the SS7 links to go down and flap continuously

Workaround: The fix is to bring the PA up once it has crashed
 - CSCsh69956

Syslog messages and SNMP traps are not generated for clock transitions on the PA-A3-8T1IMA

This problem occurs on all ITP platforms

There are no known workarounds.
 - CSCsi40918

The RSP crashed causing a switchover to standby RSP.

This crash occurred during normal router operations.

There are no known workarounds.
 - CSCsi60319

The MMSC gateway feature of the ITP is not returning the responding HLR E.164 address to the SMPP client when the HLR responds with an ERROR or REJECT component.

This problem only affects the MMSC gateway feature when clients submit a GetIMSI request and an HLR responds with an error.

There are no known workarounds.
 - CSCsi64297

A VIP crashes while processing GTT traffic.

This problem occurs with MTP3 offload enabled with a VIP performing GTT on both UDT and XUDT SCCP messages.

There are no known workarounds.
 - CSCsi68966

SCCP fails to route messages to XUA PCs even though they are available.

This problem is timing related and only occurs on a reboot of the entire system or card.

Workaround: GTAs entered in config should point to AS name directly instead of PC.
 - CSCsi79035

The M3UA ASP multi-homing test fails when one interface is disconnected even though there are multiple local-ip addresses configured on multiple interfaces. The output of the **show ip sctp instance** shows only one local-ip address when it should have shown two.

When M3UA ASPs have local-ip addresses from different FlexWANs, then sometimes only one IP address is used by the Sctp instance.

Workaround: Doing **shutdown** and **no shutdown** of the affected M3UA instance clears the problem. The output of the command **show ip sctp instance** will now show two local-ip addresses.

- CSCsi98081
A buffer leak caused by a large quantity of SNMP traps.
This problem occurs on all ITP platforms
There are no known workarounds.
- CSCsj36934
7507MX crashes due to a bus error: System returned to ROM by bus error at PC 0x4107D360 TLB (load or instruction fetch) exception, CPU signal 10, PC = 0x4107D360
This occurs during normal operations.
There are no known workarounds.
- CSCsj60899
Flexwan crash while processing outbound m3ua sccp msu xudt.
ITP may experience a LC crash while processing an XUDT SCCP Message that is routed to an M3UA destination. The XUDT must contain the optional importance parameter.
There are no known workarounds.
- CSCsj99422
New ASP binding during NSO bulk sync causes SYNCERR.
This occurs on an NSO switchover on ITP running m3ua/sua traffic.
There are no known workarounds.
- CSCsk15118
ITP may crash while performing SCCP instance address conversion
This occurs when the following three conditions are met:
 - sccp instance conversion where address conversion is used between instances
 - MSU with more than 16 digits in the received called party address
 - The called party address does not match an entry in the selected prefix conversion table.
 Workaround: Ensure that all prefix conversion tables have default entries that will match all possible addresses.
For example,


```
cs7 instance 0 gtt address-conversion E164toE164 ...
update in-address 0 out-address 0 update
in-address 1 out-address 1 update
in-address 2 out-address 2 update
in-address 3 out-address 3 update
in-address 4 out-address 4 update
in-address 5 out-address 5 update
in-address 6 out-address 6 update
in-address 7 out-address 7 update
in-address 8 out-address 8 update
in-address 9 out-address 9
```
- CSCsk25247
An ITP M2PA link will stop processing received messages and will eventually fail after receiving an SCTP DATA chunk that is 300 bytes or more. The DATA chunk is an invalid message because it is larger than the maximum MSU size allowed on the link, and is discarded before the Forward

Sequence Number (FSN) in the M2PA header is updated for the link. This causes all subsequent messages received over the link to be dropped due to an invalid FSN. The link will eventually fail if an SLTM/SLTA is dropped, or when the remote peer can no longer buffer forwarded messages.

The output of 'show cs7 m2pa statistics' and 'show cs7 m2pa' may be used to identify that this problem is occurring. 'show cs7 m2pa statistics' will show an elevated number of UnexpectedFSN_rcvd errors. 'show cs7 m2pa state' will show that the 'bsnr' field is not incrementing despite data chunks being received over the association.

This occurs when ITP receives an SCTP DATA chunk that is 300 bytes or more over an active M2PA link.

Workaround:

- Identify the source of the invalid MSU and prevent it from forwarding the MSU to the ITP
- shut / no shut the linkset to recover the affected links. This, however, will not prevent the problem from re-occurring.

- CSCsk50308

When configuring an mtp3 route to an m3ua/sua point code, the initial route status is "available" even though the m3ua/sua point code is locally inactive.

This occurs only upon initial route configuration.

Workaround: Do one of the following:

- Bring the m3ua/sua point code active to match the route availability.
- Execute an mtp3 restart.

- CSCsf15218

An SCTP Association is missing from SCTP tables

This occurs when all SS7 sctp based links are not offload to line cards. When VIP in slot 0 is OIR associations are deleted from MIB tables.

There are no known workarounds.

- CSCsj60907

SCCP management messages like SST, SSA, SSC, and SSP do not get processed properly particularly when XUA SGMP association for the SG Mate show some congestion and some of the ASs require re-routing.

This condition happens on 7600 routers when SGMP association for the SG Mate shows congestion and some of the ASs are in re-routing state.

Workaround: Disable SGMP and perform a graceful switchover to the standby SUP.

- CSCsk18339

The Standby Supervisor Module on a 7600 running with an ITP image is constantly reloading due to a Redundancy Facility notification timeout. The following messages are displayed on the Active Supervisor console log about five and a half minutes after the Standby Supervisor is brought online:

```
%OIR-SP-3-PWRCYCLE: Card in module <slot>, is being power-cycled (RF request)
%OIR-SP-3-PWRCYCLE: Card in module <slot>, is being power-cycled (OIR slot disable)
%PFREDUN-SP-6-ACTIVE: Standby processor removed or reloaded, changing to Simplex
mode
```

The **show redundancy history** command output shows that the 'CS7 NSO' client failed to complete the RF_PROG_STANDBY_BULK stage of the Redundancy Facility client progression:

```
RF_PROG_STANDBY_BULK(104) CS7 NSO(5081) op=0 rc=0
RF_EVENT_CLIENT_PROGRESSION(503) CS7 NSO(5081) op=7 rc=0
*my state = ACTIVE(13) *peer state = UNKNOWN(0)
```

Reloading peer (notification timeout)

There are three conditions that lead to the problem:

- The 7600 boots up with an ITP configuration (i.e. the **cs7 varian** command is included in the startup-config) and the startup-config does not contain the **cs7 gtt load** command.
- The **cs7 gtt load** command is issued after the 7600 is loaded.
- The Standby Supervisor is reloaded.

- CSCsk19670

SCTP packet retransmission can occur for SIGTRAN protocols. The ITP arp process that handles arp request for SIGTRAN links can inadvertently delete an arp entry and cause packets to not be sent for a period of time. The SCTP protocol detects that the packets have not been acknowledged and will retransmit the packets. There is no packet loss.

The ITP arp process populates arp entries in the IP arp table for destination IP addresses used by SIGTRAN protocols. If a routing protocol is used that generates multiple routes for a destination used by SIGTRAN protocols, the ITP arp process inadvertently deletes each one of the multiple routes and then triggers new arp requests for each route. When arp sends an arp request, the arp entry is marked as incomplete until an arp reply is received. The adjacency entry in the L3 forwarding table is marked as "punt" during the period the arp entry is incomplete and will drop any packets that are presented for forwarding during this window. The SCTP protocols detects that packets were dropped and will retransmit the packets. There is no packet loss.

This occurs when using IP routing protocols that generate multiple routes to a specific destination. The ITP arp process can inadvertently delete an arp entry for SIGTRAN IP destinations.

Workaround: Use static IP routes to the SIGTRAN destinations.

- CSCsk44543

An alignment traceback similar to the following may occur:

```
Sep 12 14:07:56.705: %ALIGN-3-CORRECT: Alignment correction made at 0x42442A70 reading 0x80495C3
```

```
Sep 12 14:07:56.705: %ALIGN-3-TRACE: -Traceback= 42442A70 4173CA38 41802774 41802A8C 4173D3EC 4177DBBC 41A4B648 41CD66FC
```

This occurs during normal operation.

There are no known workarounds.

- CSCsi34398

When unconfiguring and reconfiguring OC3 ATM interfaces and associated linksets, with multi-pvc feature, including sub-interface and IP protocol, system may reload unexpectedly.

The exact sequence of operation to recreate that problem has not been identified. Some conditions under an OC3 ATM interface, configuring and unconfiguring sub-interfaces, as well as ip protocol and atm nni.

Avoid configuring and unconfigure multiple times. Once the system is configured, it remains stable.

- CSCsh33248

A traceback similar to the following is observed:

```
%FIB-4-FIBNULLIDB: Missing idb for fibidb ATM4/1/0.1 (if_number 76).
-Traceback= 40603CD0 413473C8 4134867C 40C9CFB0 40CA08FC 40CA177C
%FIB-4-FIBNULLIDB: Missing idb for fibidb ATM4/1/0.1 (if_number 76).
-Traceback= 40603CD0 4133485C 41334990 4132A58C 4132AB68 4132E490 4132C5FC
%FIB-SP-STDBY-4-FIBXDRINV: Invalid format. invalid if_number
%CEF: fibidb ATM4/1/0.1(76) has no idb
```

In a multi-pvc configuration and after a switchover, configuration of a non-existent sub-interface may cause the trace back above.

- Don't unconfigure non-existent sub-interfaces

 - CSCse11887
IPCALLOCFAIL occurs during OIR of FlexWAN.
The problem occurs intermittently during FlexWAN OIR.
There are no known workarounds.
 - CSCsf10777
An ATMPA-3-CMDFAIL may occur when you extract the Flexwan from the chassis.
Occurs only when the Flexwan contains an E1 IMA PA, and the Flexwan is extracted from the chassis. Once the Flexwan is reinserted no additional symptoms occur.
There are no known workarounds if the Flexwan is extracted.

Open Caveats - Release 12.2(18)IXD

- CSCsg81906

Symptom An M3UA/SUA ASP may momentarily enter and exit congestion upon receiving a DAUD.

Conditions The problem only occurs when the ITP receives a DAUD with greater than 250 affected PCs.

Workaround The default ASP tx-queue-depth is 1000; adjust this to a higher value to avoid entering congestion.

- CSCsi34398

Symptom When unconfiguring and reconfiguring OC3 ATM interfaces and associated linksets, with multi-pvc feature, including sub-interface and IP protocol, system may reload unexpectedly.

Conditions The exact sequence of operation to recreate that problem has not been identified. Some conditions under an OC3 ATM interface, configuring and unconfiguring sub-interfaces, as well as ip protocol and atm nni.

Workaround Avoid configuring and unconfigure multiple times. Once the system is configured, it remains stable.

- CSCsh33248

Symptom A traceback similar to the following is observed:

```
%FIB-4-FIBNULLIDB: Missing idb for fibidb ATM4/1/0.1 (if_number 76).
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-Traceback= 40603CD0 4133485C 41334990 4132A58C 4132AB68 4132E490 4132C5FC
%FIB-SP-STDBY-4-FIBXDRINV: Invalid format. invalid if_number
%CEF: fibidb ATM4/1/0.1(76) has no idb
```


Conditions In a multi-pvc config and after a switchover, configuration of a non-existent sub-interface may cause the trace back above.

Workaround Don't unconfigure non-existent sub-interfaces

- CSCsh35975

Symptom On 7600, bad VCD msg when no shut main int while keep sub-int shut

Conditions In IXC, following the below steps causes the condition

- shut the main interface and its sub-interfaces that are used in links
- no shut the main interface but keep the sub-interfaces shut
- Bad VCD msg observed Maybe a link test msg or alignment msg. Traffic on the other links and subinterfaces does not seem to be affected.

Workaround None

- CSCsd34549

Symptom Unexpected config_state value is seen during reload or switchover.

Conditions This is seen after an IMA card reloads or switches over.

Workaround

- CSCsd73254

Symptom On the ITP 7600 platform, if a specific software error on the active RP causes the active RP to fail, the standby SUP may not detect the failure. Instead, the active SUP may reload the ITP to restore ITP manageability.

Conditions This has only been observed in specific lab tests that force a specific software failure on the active RP.

Workaround None

- CSCse11887

Symptom IPCALLOCFAIL occurs during OIR of FlexWAN.

Conditions The problem occurs intermittently during FlexWAN OIR.

Workaround None

- CSCsf10777

Symptom An ATMPA-3-CMDFAIL may occur when you extract the Flexwan from the chassis.

Conditions Occurs only when the Flexwan contains an E1 IMA PA, and the Flexwan is extracted from the chassis. Once the Flexwan is reinserted no additional symptoms occur.

Workaround No workarounds are known if the Flexwan is extracted.

Resolved Caveats - Release 12.2(18)IXD

CSCsg11686

Symptom ITP running tests as defined in Q.781: linkset with 2 links, one of the links is brought out of service, linkset status remains available. When the failed link is re-activated, the ITP is using SIE instead of SIN.. When the second link is brought into service the ITP sends a SIE, the OMLSSU_XMIT_SIE count increases by 1 in the concerned link, and this msg can also be seen on the INET side.

Conditions NA

Workaround None

CSCsg34131

Symptom A 7500 ITP running SCTP offload will experience high CPU when another SCTP node attempts to establish an SCTP association to an offloaded port but on the wrong VIP card. That is:

- ITP with SCTP offload
- Port XXXX offloaded to VIP A
- Port YYYY offloaded to VIP B
- An attempt to establish an SCTP association to port YYYY on VIP A, or to port XXXX on VIP B, will cause high CPU utilization in the RSP.

Conditions When this situation occurs, the high CPU is due to the IP Input process.

Workaround None

CSCsh26503

Symptom ITP changes over with more than 16 combined linksets and corrupts SLT table.

Conditions None

Workaround None

CSCsh28961

Symptom ITP SUA signalling gateway reloads due to process watchdog timeout in the CS7 SCCP Input Process after the ITP memory has been exhausted. This DDTS addresses the watchdog timeout, not the memory depletion.

Conditions None

Workaround None

CSCsh37628

Symptom Running an snmp walk is causing a Bus Error and crash.

Conditions None

Workaround None

CSCsh49591

Symptom Bring an xua point code active on a pair of ITPs with C-link configured. Make sure the point code is configured in an ANSI instance (or ITU with "cs7 national-options TFR" not enabled). Bring the point code inactive on one ITP such that xua traffic is routed via the C-link. Preventive TFP is not sent to the C-link peer when the point code goes inactive.

Conditions None

Workaround None

CSCsh66422

Symptom Possible difficulties moving an instance from one instance to another.

Conditions A linkset is configured in an instance. An alternate route is created to that PC over a different linkset and the route table is saved to a file. Remove the automatically created route over the direct linkset and configure pc-conversion with an alias in instance X in instance Y, the router is reloaded. Remove the pc-conversion but with real alias instances in reverse order. At this point the route still exists in instance X but will not appear in show pc-conversion output.

Workaround The ITP can be reloaded.

CSCsh69956

Symptom Syslog messages & SNMP traps are not generated for clock transitions on the IMA PA.

Conditions None

Workaround None

CSCsh79649

Symptom SUA ASP may cause router crash after shut/no shut.

Conditions None

Workaround None

CSCsh85983

Conditions FW crash & traceback from R&D center. ASP was periodically flapping. See attachments for complete logs of current and prior crashes.

Conditions None

Workaround None

CSCsh91740

- CSCsg93892

Symptom An emergency changeover occurs, instead of the expected normal changeover, when the ATM interface is shutdown. This emergency changeover may cause packet loss.

Conditions The cs7 link associated with this ATM interface is available.

Workaround None

- CSCsf04659

Symptom MSU Rates are reported for non-existent interfaces.

Conditions If a FlexWAN is removed from the system, MSU rates continue to be reported for all interfaces on the affect FlexWAN.

Workaround None

- CSCsf01453

Symptom Disabling triggers during MLR configuration may drop MLR traffic.

Conditions The system sets a timer when you enter MLR configuration mode. When the timer expires all existing configuration is sent to the FlexWANs to update all MLR tables and configurations. This event occurs whether you complete configuration or not. When the configuration is sent to each FlexWAN, MLR is disabled for a short period of time for that FlexWAN. During this time period, MLR processing is not available for that FlexWAN. Also, statistics may incorrectly report for MLR.

Workaround Configure GTT for backup delivery when disabled MLR occurs. It is recommended to configure MLR during maintenance periods of little or no existing traffic.

- CSCsg01213

Symptom Egress FE interface incorrectly reports total output_drops

Conditions This bug is present in 76xx platforms running 12.2(18)IXA and 12.2(18)IXB and 12.2(18)IXB1.

Workaround None

- CSCsg09620

Symptom The beat message is processed by SG between ASPUP and ASPAC.

Conditions This occurs in a timing window where the beat messages are sent by the ASP, immediately after receiving ASP Up Ack from the ITP.

Workaround None

- CSCsg27544

Symptom While processing retrieved paks for M3UA, the SUP encounters a CPUHOG and reloads.

Conditions The CPUHOG and reload happen when the SUP is trying to process a retrieved pak.

Workaround None

- CSCsg40048

Symptom While processing an unexpected message, the SUP reloads in XUA Offload Inbound

Conditions All 7600-based ITPs running m3ua and/or sua.

Workaround None

- CSCsg42706

Symptom SUP shows CS7 XUA ERROR: binding already exists

Conditions None

Workaround None

- CSCsg72008

Symptom A reload occurs after deleting ASP from the AS submode when bindings are available.

Conditions This occurs when routing m3ua/sua traffic for a loadshare bindings AS.

Workaround None. The problem is only cosmetic.

- CSCsg87626

Symptom Updating the AS from dwn-re --> down state on FlexWAN fails.

Conditions This occurs when you are routing m3ua/sua traffic with SGMP enabled, the SGMP association goes down, or the ASP goes inactive on mate.

Workaround None

Open Caveats - Release 12.2(18)IXC

- CSCsg93892

Symptom An emergency changeover occurs, instead of the expected normal changeover, when the ATM interface is shutdown. This emergency changeover may cause packet loss.

Conditions The cs7 link associated with this ATM interface is available.

Workaround None

- CSCsd34549

Symptom Unexpected config_state value is seen during reload or switchover.

Conditions This is seen after an IMA card reloads or switches over.

Workaround There is no known workaround. However, there are no known harmful effects.

- CSCsd73254

Symptom On the ITP 7600 platform, if a specific software error on the active RP causes the active RP to fail, the standby SUP may not detect the failure. Instead, the active SUP may reload the ITP to restore ITP manageability.

Conditions This has only been observed in specific lab tests that force a specific software failure on the active RP.

Workaround None

- CSCse11887

Symptom IPCALLOCFAIL occurs during OIR of FlexWAN.

Conditions The problem occurs intermittently during FlexWAN OIR.

Workaround None

- CSCsf04659

Symptom MSU Rates are reported for non-existent interfaces.

Conditions If a FlexWAN is removed from the system, MSU rates continue to be reported for all interfaces on the affect FlexWAN.

Workaround None

- CSCsf10777

Symptom An ATMPA-3-CMDFAIL may occur when you extract the Flexwan from the chassis.

Conditions Occurs only when the Flexwan contains an E1 IMA PA, and the Flexwan is extracted from the chassis. Once the Flexwan is reinserted no additional symptoms occur.

Workaround No workarounds are known if the Flexwan is extracted.

Resolved Caveats - Release 12.2(18)IXC

- CSCsd96345

Symptom An ITP with HSL links running at high utilization (near 100% capacity) of the physical underlying T1/E1, after entering congestion, may begin to flap and continue to flap until traffic is suppressed through TFC messages by the originator.

Conditions HSL link is driven into congestion when priority 0 traffic nears a 100% of the physical T1/E1 capacity.

Workaround None

- CSCsf22759

Symptom XUA packets drop under high traffic with several ASPs.

Conditions Multiple ASPs are sending & receiving M3UA/SUA traffic.

Workaround None

- CSCsf22768

Symptom Active ASPs with zero weight do not use the round robin, as is expected.

Conditions M3UA/SUA traffic routed to a loadshare round robin AS.

Workaround None

- CSCsf29679

Symptom The Instance SLS Shift does not download to FlexWan

Conditions ITU variant, M3UA, or SUA configuration, and cs7 sls-shift, configured to 1, 2, or 3.

Workaround None

- CSCsg01213

Symptom Egress FE interface incorrectly reports total output_drops

Conditions This bug is present in 76xx platforms running 12.2(18)IXA and 12.2(18)IXB and 12.2(18)IXB1.

Workaround None

- CSCsg09620

Symptom The beat message is processed by SG between ASPUP and ASPAC.

Conditions This occurs in a timing window where the beat messages are sent by the ASP, immediately after receiving ASP Up Ack from the ITP.

Workaround None

- CSCsg27544

Symptom While processing retrieved paks for M3UA, the SUP encounters a CPUHOG and reloads.

Conditions The CPUHOG and reload happen when the SUP is trying to process a retrieved pak.

Workaround None

- CSCsg40048

Symptom While processing an unexpected message, the SUP reloads in XUA Offload Inbound

Conditions All 7600-based ITPs running m3ua and/or sua.

Workaround None

- CSCsg42706

Symptom SUP shows CS7 XUA ERROR: binding already exists

Conditions None

Workaround None

- CSCsg72008

Symptom A reload occurs after deleting ASP from the AS submode when bindings are available.

Conditions This occurs when routing m3ua/sua traffic for a loadshare bindings AS.

Workaround None. The problem is only cosmetic.

- CSCsg87626

Symptom Updating the AS from dwn-re --> down state on FlexWAN fails.

Conditions This occurs when you are routing m3ua/sua traffic with SGMP enabled, the SGMP association goes down, or the ASP goes inactive on mate.

Workaround None

Open Caveats - Release 12.2(18)IXB1

- CSCsd34549

Symptom Unexpected config_state value is seen during reload or switchover.

Conditions Error seen with IMA card after a reload or switchover.

Workaround There is no known workaround. However, there are no known harmful effects.

- CSCsd73254

Symptom On the ITP 7600 platform, if a specific software error on the active RP causes the active RP to fail, the standby SUP may not detect the failure, but instead the active SUP may reload the ITP to restore ITP manageability.

Conditions This has only been observed in specific lab tests that force a specific software failure on the active RP.

Workaround None

- CSCsd96345

Symptom An ITP with HSL links running at high utilization near 100% capacity of the physical underlying T1/E1, after entering congestion may begin to flap and continue to flap until traffic is suppressed via TFC messages by the originator.

Conditions HSL link is driven into congestion with priority 0 traffic at near 100% of the physical T1/E1.

Workaround None

- CSCse11887

Symptom IPCALLOCFAIL occurs during OIR of FlexWAN.

Conditions Problem intermittently occurs during FlexWAN OIR.

Workaround None

- CSCsf01453

Symptom MLR traffic may be dropped when triggers are disabled during MLR configuration.

Conditions The system sets a timer when you enter MLR configuration mode. When the timer expires all existing configuration is sent to the FlexWANs to update all MLR tables and configurations. This event occurs whether you complete configuration or not. When the configuration is sent to each FlexWAN, MLR is disabled for a short period of time for that FlexWAN. During this time period, MLR processing is not available for that FlexWAN. Also, statistics may incorrectly report for MLR.

Workaround Configure GTT for backup delivery during occurrences where MLR is disabled. Configure MLR during maintenance periods where traffic may be low or non-existent.

- CSCsf03311

Symptom SUP and FlexWAN ASP configuration becomes mismatched.

Conditions If user modifies the configuration of an existing ASP, the configuration is saved on SUP but never relayed to the FlexWAN. Thus, the FlexWAN continues to use the original configuration parameters, use (for example, src and destination ports).

Workaround ASPs must be deleted completely then reconfigured with new parameter data.

- CSCsf04659

Symptom MSU Rates are reported for non-existent interfaces.

Conditions If a FlexWAN is removed from the system, MSU rates continue to be reported for all interfaces on the affect FlexWAN.

Workaround None

Resolved Caveats - Release 12.2(18)IXB

- CSCek38607

Symptom ITP running on the Cisco 7600 platform may experience error messages and global title translation table errors if a switchover from the active RP to the standby RP happens after the system reaches ITP NSO mode, but before GTT table download to the line cards is complete.

Conditions The switchover must happen between the system reaching NSO state (indicated by console message) and GTT table download complete (also indicated via console log message).

Workaround Avoid issuing a redundancy force-switchover until after the system has reached NSO mode and the GTT download complete message has been displayed on the console or in system logs.

- CSCek38702

Symptom An ITP running on Cisco 7600 platform when switching from active RP to standby RP due to a failure on the active RP due to certain software errors may encounter a switchover delay. Normally this delay is expected to be 2 to 4 seconds, but in this failure mode, the delay may be longer. Depending on

the traffic load and the length of switchovers, some links may be taken out of service temporarily due to local or remote protocol errors. If the duration of the switchover is long enough, some FlexWANs may be reloaded by the new active to clear the condition.

Conditions This has only been observed in specific lab tests using internal debug commands that force software failures on the active RP. This issue only happens a small percentage of the times this specific test is executed.

Workaround None

- CSCsd83706

Symptom Unexpected FlexWAN reload upon update and save of MLR configuration.

Conditions This is a timing related bug and it does not happen every time. When an update of MLR trigger or route table configuration is done, followed by a save configuration, some FlexWANs might unexpectedly reload.

Workaround None

- CSCsd91506

Symptom Under rare circumstances, packets may be lost during rerouting of packets destined for a failed ASP to an active ASP in an AS.

Conditions The problem may occur when there are two or more active ASPs in an AS, and one of the active ASP's SCTP association fails.

Workaround None

- CSCsd92741

Symptom Under rare circumstances, a spurious memory access may occur at bootup on a FlexWAN with M2PA links.

Workaround None

- CSCsd94495

Symptom All FlexWANs reload.

Conditions Occurs when user deletes an MLR secondary trigger directly.

Workaround If it is necessary to remove a secondary trigger, delete the primary trigger and then add the primary back. The secondary trigger will be deleted and no reload on FlexWANs will occur.

- CSCsd94659

Symptom MLR continues to route data based on an address which was deleted from an existing MLR address-table. The deleted address does not appear in the MLR address-table configuration, and it is not displayed via the **show cs7 mlr address-table** on the RP.

Conditions This problem only occurs when the user configures multiple address-table names that are unique only in the use of upper/lower case (for example, TABLENAME and TableName).

Workaround Define unique MLR address-table names, regardless of the use of upper/lower case. Do not configure an address-table name which consists of the same characters in a different case.

Open Caveats - Release 12.2(18)IXA

- CSCek38607

Symptom ITP running on the Cisco 7600 platform may experience error messages and global title translation table errors if a switchover from the active RP to the standby RP happens after the system reaches ITP NSO mode, but before GTT table download to the line cards is complete.

Conditions The switchover must happen between the system reaching NSO state (indicated by console message) and GTT table download complete (also indicated via console log message).

Workaround Avoid issuing a redundancy force-switchover until after the system has reached NSO mode and the GTT download complete message has been displayed on the console or in system logs.

- CSCek38702

Symptom An ITP running on Cisco 7600 platform when switching from active RP to standby RP due to a failure on the active RP due to certain software errors may encounter a switchover delay. Normally this delay is expected to be 2 to 4 seconds, but in this failure mode, the delay may be longer. Depending on

the traffic load and the length of switchovers, some links may be taken out of service temporarily due to local or remote protocol errors. If the duration of the switchover is long enough, some FlexWANs may be reloaded by the new active to clear the condition.

Conditions This has only been observed in specific lab tests using internal debug commands that force software failures on the active RP. This issue only happens a small percentage of the times this specific test is executed.

Workaround None

- CSCsd34549

Symptom Unexpected config_state value is seen during reload or switchover.

Conditions Error seen with IMA card after a reload or switchover.

Workaround There is no known workaround. However, there are no known harmful effects.

- CSCsd73254

Symptom On the ITP 7600 platform, if a specific software error on the active RP causes the active RP to fail, the standby SUP may not detect the failure, but instead the active SUP may reload the ITP to restore ITP manageability.

Conditions This has only been observed in specific lab tests that force a specific software failure on the active RP.

Workaround None

- CSCsd83706

Symptom Unexpected FlexWAN reload upon update and save of MLR configuration.

Conditions This is a timing related bug and it does not happen every time. When an update of MLR trigger or route table configuration is done, followed by a save configuration, some FlexWANs might unexpectedly reload.

Workaround None

- CSCsd91506

Symptom Under rare circumstances, packets may be lost during rerouting of packets destined for a failed ASP to an active ASP in an AS.

Conditions The problem may occur when there are two or more active ASPs in an AS, and one of the active ASP's SCTP association fails.

Workaround None

- CSCsd92741

Symptom Under rare circumstances, a spurious memory access may occur at bootup on a FlexWAN with M2PA links.

Workaround None

- CSCsd94495

Symptom All FlexWANs reload.

Conditions Occurs when user deletes an MLR secondary trigger directly.

Workaround If it is necessary to remove a secondary trigger, delete the primary trigger and then add the primary back. The secondary trigger will be deleted and no reload on FlexWANs will occur.

- CSCsd94659

Symptom MLR continues to route data based on an address which was deleted from an existing MLR address-table. The deleted address does not appear in the MLR address-table configuration, and it is not displayed via the **show cs7 mlr address-table** on the RP.

Conditions This problem only occurs when the user configures multiple address-table names that are unique only in the use of upper/lower case (for example, TABLENAME and TableName).

Workaround Define unique MLR address-table names, regardless of the use of upper/lower case. Do not configure an address-table name which consists of the same characters in a different case.

- CSCsd96345

Symptom An ITP with HSL links running at high utilization near 100% capacity of the physical underlying T1/E1, after entering congestion may begin to flap and continue to flap until traffic is suppressed via TFC messages by the originator.

Conditions HSL link is driven into congestion with priority 0 traffic at near 100% of the physical T1/E1.

Workaround None

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