Doc. No. 78-2809-04A

Cisco IOS Release 11.1 Release Notes for LightStream 1010 ATM Switch Software

October 28, 1996

Release 11.1(6)

These release notes describe the features and caveats for Cisco Internetwork Operating System (Cisco IOS™) Release 11.1(6) for the LightStream 1010 Asynchronous Transfer Mode (ATM) switch software. The LightStream 1010 ATM switch software is based on Cisco IOS Release 11.1(410). This release includes enhancements in support of the LightStream 1010 ATM switch.

Introduction

These release notes discuss the following topics:

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New Release 11.1(6) Features

The following features have been added to the LightStream 1010 ATM switch software:

- F4 operations, administration, and maintenance (OAM) traffic flows and the **atm ping** command are supported. For detailed information refer to the **atm oam** and the **atm ping** commands in the *LightStream 1010 ATM Switch Command Reference* publication.
- A new management information base (MIB) variable, named *ciscoAtmIfSvcUpcIntent*, has been added to the CISCO-ATM-IF-MIB.my. This variable allows configuration using SNMP as the usage parameter control (UPC) mode for switched virtual circuits (SVCs) on an interface.

New Release 11.1(4) Features

The following features have been added to the LightStream 1010 ATM switch software:

- Private Network-to-Network Interface (PNNI) Protocol support for single level hierarchy configuration. For detailed information see the chapter "Configuring PNNI" in the *LightStream 1010 ATM Switch Software Configuration Guide*.
- User Network Interface (UNI) Protocol Version 3.1 support. For detailed information see the **atm uni** and **atm iisp** commands in the *LightStream 1010 ATM Switch Command Reference Guide*.
- ATM Address Resolution Protocol (ARP) Server support on the ATM switch processor (ASP) module. For detailed information see the chapter "Configuring the LANE and IP over ATM Clients" in the *LightStream 1010 ATM Switch Software Configuration Guide*.
- Network clock selection priority support. For detailed information see the **network-clock-select** command in the *LightStream 1010 ATM Switch Command Reference Guide*.
- Per-port configuration of the LECS address is supported. For detailed information refer to the **atm-ilmi**, **atm lecs-address**, and the **atm lecs-address default** commands in the *LightStream 1010 ATM Switch Command Reference*.
- F5 OAM flows and atm ping commands are supported. For detailed information refer to the **atm oam** and the **atm ping** commands in the *LightStream 1010 ATM Switch Command Reference*.
- Management information base (MIB) changes include:
  - AAL5 table for RFC1695 (AToM MIB)
  - VC/VP cross-connect table support for RFC1695 (AToM MIB)
  - support for management of logical interfaces (VP tunnels)

Documentation

For documentation of Cisco IOS Release 11.1 LightStream 1010 ATM switch software features, refer to the following publications, available as printed manuals or electronic documents:

- *LightStream 1010 ATM Switch User Guide*
- *LightStream 1010 ATM Switch Software Configuration Guide*
- *LightStream 1010 ATM Switch Command Reference*

For electronic documentation of Release 11.1 ATM switch software features, available on the Cisco Connection Documentation, Enterprise Series CD-ROM, refer to the *LightStream 1010 ATM Switch Software Configuration Guide* and *LightStream 1010 ATM Switch Command Reference* publications, which are located in the LightStream 1010 database under ATM Adapters and Switches database.

You can also access Cisco technical documentation on the World Wide Web: `http://www.cisco.com`.

Platform Support

This release supports the LightStream 1010 ATM switch.

Cisco IOS Packaging

The LightStream1010 supports the routing of ATM signaling requests across a network of switches using the ATM routing protocols. Two standard routing protocols have been developed by the ATM Forum—Internet InterSwitch Signaling Protocol (IISP) and the Public Network-to-Network Interface (PNNI) Protocol, version 1.0. Both protocols are supported by the LightStream 1010. The default IISP software image supports the IISP only; the optional PNNI image also supports the PNNI version 1.0 Protocol. Table 1 lists the feature set for the Cisco IOS Release 11.1(6), Release 11.1(410), and Release 11.1(4) of the LightStream 1010 ATM switch software.

Table 1 Cisco IOS Releases 11.1(6), 11.1(410), and 11.1(4) for LightStream 1010 ATM Software Features

Type	Feature	IISP Image	PNNI Image
Cisco IOS Base Features	SNMP	Yes	Yes
	Asynchronous support (SLIP)	Yes	Yes
	PPP	Yes	Yes
	IP	Yes	Yes
	NTP	Yes	Yes
	TACACS+	Yes	Yes
	Telnet	Yes	Yes

Type	Feature	IISP Image	PNNI Image
ATM Features	Point-to-point and point-to-multipoint Permanent VCCs and VPCs	Yes	Yes
	Point-to-point and point-to-multipoint Switched VCCs and VPCs (UNI 3.0)	Yes	Yes
	Point-to-point and point-to-multipoint Switched VCCs and VPCs (UNI 3.1)	Yes	Yes
	Soft VCCs and VPCs	Yes	Yes
	VP Tunneling	Yes	Yes
	PNNI	No	Yes
	ILMI	Yes	Yes
	IISP	Yes	Yes
	LANE client (LEC) on ASP	Yes	Yes
	ATM ARP server on ASP	Yes	Yes
	ATM ARP client on ASP	Yes	Yes
	Port snooping	Yes	Yes
	ATM Access lists	Yes	Yes

Table 2 lists the feature set for the Cisco IOS Release 11.1(1) of the LightStream 1010 ATM switch software.

Table 2 Cisco IOS Release 11.1(1) for LightStream 1010 ATM Software Features

Type	Feature	IISP
Cisco IOS Base Features	SNMP	Yes
	Asynchronous support (SLIP)	Yes
	PPP	Yes
	IP	Yes
	NTP	Yes
	TACACS+	Yes
	Telnet	Yes
ATM Features	Point-to-point and point-to-multipoint Permanent VCCs and VPCs	Yes
	Point-to-point and point-to-multipoint Switched VCCs and VPCs (UNI 3.0)	Yes
	Soft VCCs and VPCs	Yes
	VP tunneling	Yes
	ILMI	Yes
	IISP	Yes
	LANE client (LEC) on ASP	Yes
	ATM ARP client on ASP	Yes
	Port snooping	Yes
	ATM access lists	Yes

Memory Requirements

The system Dynamic Random Access Memory (DRAM) resides on a SIMM module on the ATM Switch Processor (ASP). The default DRAM configuration is 16 MB. The amount of DRAM required on the ASP module is determined by the number of active physical and logical ports (virtual path tunnels) and the expected number of active switched virtual channels (SVCs) through the switch. Table 3 is an approximate guide that should be used when determining the amount of DRAM required for a switch with 32 physical ports:

Table 3 DRAM Required Determined by SVCs

SVCs Required	DRAM Required
Less than 4000 active SVCs	16 MB DRAM
Between 4000 and 16000 active SVCs	32 MB DRAM
Between 16000 and 32000 active SVCs	64 MB DRAM

Release 11.1(6) Caveats Corrected

This section describes caveats that have been corrected by Release 11.1(6) for the LightStream 1010 ATM switch.

The following caveats have been corrected for this release of the LightStream 1010 ATM switch software.

- If PNNI receives a hello packet with a length exceeding pnni_hello_type—for example, a hello packet with multiple type_length_value (TLV) fields—it will enter into an infinite loop. [CSCdi65795]
- If the switch did not detect the physical link going down, SSCOP may not tear down the active switched virtual circuits (SVCs) properly. This occurs when SSCOP receives a begin PDU and treats the PDU as a retransmission, and it is ignored. [CSCdi66728]
- Systems with less than three ports—for example 2 OC-12 PAMs—cause a failure in the power-on diagnostic tests even though the system and the ports are functional. The test failure causes the LightStream 1010 status LED to be red after power-on and a failure is indicated at the console display. [CSCdi66729]
- Removing the receive end of DS3/E3 PAM does not cause the transmit end of the connection to go down. [CSCdi68141]
- AToM MIB does not report correct the neighbor name for the virtual path (VP) tunnel. [CSCdi69035]
- When a VP switch is placed along the path of a VP tunnel between two LS1010 switches, calls through this VP tunnel *will not* be completed if the VPI numbers on incoming interfaces and outgoing interfaces have *different* VPI numbers assigned. [CSCdi69105]
- The allocation of a soft permanent virtual circuit (PVC) destination half-leg VPI/VCI is not correct. This allowed a switched virtual circuit (SVC) to be established through an interface to also allocate this same VPI/VCI, and then release it. Then the Soft PVC destination half-leg would disappear. [CSCdi69254]
- The Service Specific Connection Oriented Protocol (SSCOP) incorrectly parses the protocol data unit (PDU) state if list elements equal 4. This causes a sequence error. To verify this problem, enable debug SSCOP error and an MAA_ERROR_S error will appear on the console. [CSCdi70022]

- PNNI routing software might crash when a link (that is followed by one or more links with NULL metrics) is removed from the internal topology database. [CSCdi71540]
- The flag bit in the global call reference is not set correctly in the restart and restart-ack message. It is always set to 0. [CSCdi71545]
- A Feature card FPGA download driver could fail causing occasional disabling of the multi-cast and available bit rate (ABR) functions on the Feature card. This would cause some of the multi-cast and traffic-management power-on tests to fail and the Status LED on the ASP card to show red. [CSCdi72070]
- Strict restrictions on UPC based on interface type are enforced. For example, tagging or dropping is not allowed on non-UNI-Network-side interfaces. Destination half-leg UPC is always set to **passing**. Resolution of this DDTS modifies the operation of **atm pvc**, **atm pvp**, **atm soft-vc,** and **atm soft-vp** commands, to remove the restriction of UPC to UNI-Network-side. [CSCdi72411]
- UNI 3.0 to UNI 3.1 conversion is incorrect on PNNI interfaces. This occurs if the ingress port is a UNI 3.0 and the egress port is a PNNI. [CSCdi72611]
- The per-interface CLI configuration **atm svc-upc-intent command** is not allowed using a corresponding SNMP MIB object. This configuration determines the inbound UPC action to perform for SVCs and terminating legs of Soft PVCs at an interface. [CSCdi72604]
- The DS-3 driver ignores loss of cell delineation (LCD) far end receive failure (FERF) when using Cbit physical layer convergence protocol (PLCP) framing. [CSCdi72667]
- Currently OAM Manager handles fault management functions. If it receives a non-fault management type OAM cell—performance management, system management, or activation/deactivation cells—the software process drops the cell. [CSCdi73621]

Release 11.1(6) Caveats

This section describes potential unexpected behavior by Release 11.1(6) for the LightStream 1010 ATM switch.

The following caveats have been identified for this release of the LightStream 1010 ATM switch software.

- When using the **snmp-server host** configuration command an error may be displayed indicating a problem exists in permitting Chassis Failure and Chassis Change traps to be sent to an SNMP trap-host. [CSCdi72353]
- For constant bit rate (CBR) and variable bit rate real-time (VBR-RT) service categories, the maximum cell loss ratio (CLR) default value is set as *don't care*. [CSCdi73017]
- Configuration memory full error message appears.

  Adding too many configuration commands will cause earlier commands to be lost and the following error massage to appear:

  ```
  % Configuration buffer full, can't add command: user command
  ```

  This error indicates that the configuration memory limit has been reached and earlier working commands may be lost if you proceed.

  Do not use the **write memory** or **copy running-config** commands if this error message appears. This bug was introduced in release 11.1(1). [CSCdi54713]
- The ARP cache entries might not appear complete in the following two situations:

When you forward a packet to an IP-address (for example using **ping**) that is mapped to a PVC map-list, the packet is sent across an atm network using map-list. During the operation, an IP ARP cache is not updated with the index value (VCD) of the map-list PVC. This means the IP ARP cache appears incomplete even though the ping was successful.

When you forward a packet to an IP-address (for example using **ping**) with a destination that is mapped to a SVC map-list, the packet is sent across an ATM network using map-list, and the SVC to IP destination is established, and IP ARP cache is updated. After the SVC is established, when the **clear arp** command is used, all entries are cleared and the ARP cache is not updated. This means the IP ARP cache appears incomplete even though the ping was successful. This behavior was present in release 11.1(1). [CSCdi55010]

- The RDI cells sent by an end point in response to the AIS (Alarm Indication Signal) cells, which are generated during a fault condition at an intermediate switch, are not propagated beyond that intermediate switch. This is because the switch removes the connection leg entries for both interfaces participating in the connection once the fault on one interface is detected, even though the other interface may be running. As a result, the RDI cells are dropped at the switch. [CSCdi55937]
- Static maps are used to associate IP addresses with NSAP addresses, so that an ATM SVC can be established to contact the associated host.

  The static-map specifies a map-class to indicate traffic parameters to use when initiating an ATM SVC. Many static-maps should be able to use the same map-class. Currently, confusion occurs if several static-maps share the same map-class, so that only one of the maps sharing the map-class is used at one time. The correct behavior is to keep all static-map status information in the static-map only, rather than the map-class data structure. A workaround is to not share map-classes among static-maps.

  If changes are made to a map-list, a static-map, or a map-group while the map is associated with an active SVC, connectivity to the IP address(es) associated with the static-map is interrupted. The IP address is not reachable until the associated Address Resolution Protocol (ARP) table entry is timed-out. The correct behavior is to allow map-list, a static-map, or a map-group to be modified at any time. This behavior was present in release 11.1(1). [CSCdi56066]
- The SNMP ifPhysAddr of interface ATM 2/0/0 displays an empty string rather than (one of) the ATM address of the switch. [CSCdi59248]
- The ATM ARP server does not check the IP subnet mask during registration. The ARP server registers an IP address that resides outside of its own subnet boundary. [CSCdi62225]
- You can not disable signaling and SSCOP on an interface, except through the use of the **atm nni** command using the IISP image. This behavior was present in release 11.1(1). [CSCdi64829]

Note The primary function of the **atm nni** command is to configure an interface as an NNI interface (as opposed to a UNI or IISP interface). Signaling and SSCOP are disabled because the IISP image does not include any NNI signaling protocol. Any ambiguity in the meaning of the **atm nni** command is going to be removed when the new command to disable signaling and SSCOP is introduced.

- Configuration of internal static routes is allowed even when the static route is a duplicate of an ILMI-registered address on another port of the same switch. This behavior was present in release 11.1(1). [CSCdi65799]

- Under certain conditions, when one of the LightStream 1010 interfaces is shut/noshut repeatedly, some the SVCs may not be released properly. This can result in a LEC not being able to connect to the LECS if its SVC connection to LECS is not released properly from the LECS side.

  A workaround is to use the **clear atm-vc** command to clear the SVC. [CSCdi65885]

- Under heavy traffic conditions, the LightStream 1010 LAN emulation client (LEC) could degrade performance of an external BUS entity that has the root for the point-to-multipoint virtual circuit (VC) connection in the same switch.

  Work-around:

  If an LEC needs to be configured for Network Management, configure the LEC on a light-traffic emulated LAN (ELAN). [CSCdi69829]

Release 11.1(410) Caveats

This section describes potential unexpected behavior by Release 11.1(410) for the LightStream 1010 ATM switch.

The following caveats have been identified for this release of the LightStream 1010 ATM switch software.

- Systems with less than 3 ports, for example 2 OC-12 PAM's, causes a failure in the power-on diagnostic tests even though the system and the ports are functional. The test failure causes the LightStream 1010 status LED to be red after power-on and the following failure is indicated at the console display. A subsequent use of the **show diag power-on** command will not show any failures.

```
Booting on Sep 04 1996 13:46:56 with 2-PAM Configuration

 LS1010 Diagnostics V2.29, Dated Aug 16 1996 19:06:23
 Model CPU-Card, Serial# 3099381, H/W V3.2, SWC Rev-3
 Model FC1-Card, Serial# 3098875, H/W V3.2
 Copyright (c) Cisco Systems Inc.  1995-1996

.....................................F.........
Power-on Diagnostics Failed

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```

  [CSCdi66729]

- Configuration memory full error message appears.

  Adding too many configuration commands will cause earlier commands to be lost and the following error massage to appear:

```
% Configuration buffer full, can't add command: user command
```

This error indicates that the configuration memory limit has been reached and earlier working commands may be lost if you proceed.

Do not use the **write memory** or **copy running-config** commands if this error message appears. This bug was introduced in release 11.1(1). [CSCdi54713]

- The ARP cache entries might not appear complete in the following two situations:

  When you forward a packet to an IP-address (for example using **ping**) that is mapped to a PVC map-list, the packet is sent across an atm network using map-list. During the operation, an IP ARP cache is not updated with the index value (VCD) of the map-list PVC. This means the IP ARP cache appears incomplete even though the ping was successful.

  When you forward a packet to an IP-address (for example using **ping**) with a destination that is mapped to a SVC map-list, the packet is sent across an ATM network using map-list, and the SVC to IP destination is established, and IP ARP cache is updated. After the SVC is established, when the **clear arp** command is used, all entries are cleared and the ARP cache is not updated. This means the IP ARP cache appears incomplete even though the ping was successful. This behavior was present in release 11.1(1). [CSCdi55010]

- The RDI cells sent by an end point in response to the AIS (Alarm Indication Signal) cells, which are generated during a fault condition at an intermediate switch, are not propagated beyond that intermediate switch. This is because the switch removes the connection leg entries for both interfaces participating in the connection once the fault on one interface is detected, even though the other interface may be running. As a result, the RDI cells are dropped at the switch. [CSCdi55937]

- Static maps are used to associate IP addresses with NSAP addresses, so that an ATM SVC can be established to contact the associated host.

  The static-map specifies a map-class to indicate traffic parameters to use when initiating an ATM SVC. Many static-maps should be able to use the same map-class. Currently, confusion occurs if several static-maps share the same map-class, so that only one of the maps sharing the map-class is used at one time. The correct behavior is to keep all static-map status information in the static-map only, rather than the map-class data structure. A workaround is to not share map-classes among static-maps.

  If changes are made to a map-list, a static-map, or a map-group while the map is associated with an active SVC, connectivity to the IP address(es) associated with the static-map is interrupted. The IP address is not reachable until the associated Address Resolution Protocol (ARP) table entry is timed-out. The correct behavior is to allow map-list, a static-map, or a map-group to be modified at any time. This behavior was present in release 11.1(1). [CSCdi56066]

- The SNMP ifPhysAddr of interface ATM 2/0/0 displays an empty string rather than (one of) the ATM address of the switch. [CSCdi59248]

- The ATM ARP server does not check the IP subnet mask during registration. The ARP server registers an IP address that resides outside of its own subnet boundary. [CSCdi62225]

- You can not disable signaling and SSCOP on an interface, except through the use of the **atm nni** command using the IISP image. This behavior was present in release 11.1(1). [CSCdi64829]

Note The primary function of the **atm nni** command is to configure an interface as an NNI interface (as opposed to a UNI or IISP interface). Signaling and SSCOP are disabled because the IISP image does not include any NNI signaling protocol. Any ambiguity in the meaning of the **atm nni** command is going to be removed when the new command to disable signaling and SSCOP is introduced.

- Configuration of internal static routes is allowed even when the static route is a duplicate of an ILMI-registered address on another port of the same switch. This behavior was present in release 11.1(1). [CSCdi65799]
- Under certain conditions, when one of the LightStream 1010 interfaces is shut/noshut repeatedly, some the SVCs may not be released properly. This can result in a LEC not being able to connect to the LECS if its SVC connection to LECS is not released properly from the LECS side.

  A workaround is to use the **clear atm-vc** command to clear the SVC. [CSCdi65885]
- If PNNI receives a hello packet with a length exceeding pnni_hello_type—for example, a hello packet with multiple type_length_value (TLV) fields—it will enter into an infinite loop. [CSCdi65795]
- If the switch did not detect the physical link going down, SSCOP may not tear down the active switched virtual circuits (SVCs) properly. This occurs when SSCOP receives a begin PDU and treats the PDU as a retransmission, and it is ignored. [CSCdi66728]
- Systems with less than three ports—for example 2 OC-12 PAMs—cause a failure in the power-on diagnostic tests even though the system and the ports are functional. The test failure causes the LightStream 1010 status LED to be red after power-on and a failure is indicated at the console display. [CSCdi66729]
- Removing the receive end of DS3/E3 PAM does not cause the transmit end of the connection to go down. [CSCdi68141]
- AToM MIB does not report correct the neighbor name for the virtual path (VP) tunnel. [CSCdi69035]
- When a VP switch is placed along the path of a VP tunnel between two LS1010 switches, calls through this VP tunnel *will not* be completed if the VPI numbers on incoming interfaces and outgoing interfaces have *different* VPI numbers assigned. [CSCdi69105]
- The allocation of a soft permanent virtual circuit (PVC) destination half-leg VPI/VCI is not correct. This allowed a switched virtual circuit (SVC) to be established through an interface to also allocate this same VPI/VCI, and then release it. Then the Soft PVC destination half-leg would disappear. [CSCdi69254]
- The Service Specific Connection Oriented Protocol (SSCOP) incorrectly parses the protocol data unit (PDU) state if list elements equal 4. This causes a sequence error. To verify this problem, enable debug SSCOP error and an MAA_ERROR_S error will appear on the console. [CSCdi70022]
- PNNI routing software might crash when a link (that is followed by one or more links with NULL metrics) is removed from the internal topology database. [CSCdi71540]
- The flag bit in the global call reference is not set correctly in the restart and restart-ack message. It is always set to 0. [CSCdi71545]
- A Feature card FPGA download driver could fail causing occasional disabling of the multi-cast and available bit rate (ABR) functions on the Feature card. This would cause some of the multi-cast and traffic-management power-on tests to fail and the Status LED on the ASP card to show red. [CSCdi72070]
- Strict restrictions on UPC based on interface type are enforced. For example, tagging or dropping is not allowed on non-UNI-Network-side interfaces. Destination half-leg UPC is always set to **passing**. Resolution of this DDTS modifies the operation of **atm pvc**, **atm pvp**, **atm soft-vc,** and **atm soft-vp** commands, to remove the restriction of UPC to UNI-Network-side. [CSCdi72411]
- UNI 3.0 to UNI 3.1 conversion is incorrect on PNNI interfaces. This occurs if the ingress port is a UNI 3.0 and the egress port is a PNNI. [CSCdi72611]

- The per-interface CLI configuration **atm svc-upc-intent command** is not allowed using a corresponding SNMP MIB object. This configuration determines the inbound UPC action to perform for SVCs and terminating legs of Soft PVCs at an interface. [CSCdi72604]
- The DS-3 driver ignores loss of cell delineation (LCD) far end receive failure (FERF) when using Cbit physical layer convergence protocol (PLCP) framing. [CSCdi72667]
- Currently OAM Manager handles fault management functions. If it receives a non-fault management type OAM cell—performance management, system management, or activation/deactivation cells—the software process drops the cell. [CSCdi73621]

Release 11.1(4) Caveats

This section describes potential unexpected behavior by Release 11.1(4) for the LightStream 1010 ATM switch.

The following caveats have been identified for this release of the LightStream 1010 ATM switch software.

- Attempting to clear call statistics using the **clear atm pnni statistics call** command if call statistics collection is *not* enabled causes the switch to crash.

  Confirm that call statistics collection is enabled using the **show atm pnni statistics call** command before clearing call statistics.

```
Switch#show atm pnni statistics call

pnni call statistics since 00:01:19

                   total     cbr       rtvbr     nrtvbr    abr       ubr
source route reqs  0         0         0         0         0         0
successful         0         0         0         0         0         0
unsuccessful       0         0         0         0         0         0
crankback reqs     0         0         0         0         0         0
successful         0         0         0         0         0         0
unsuccessful       0         0         0         0         0         0
on-demand attempts 0         0         0         0         0         0
successful         0         0         0         0         0         0
unsuccessful       0         0         0         0         0         0
background lookups 0         0         0         0         0         0
successful         0         0         0         0         0         0
unsuccessful       0         0         0         0         0         0
next port requests 0         0         0         0         0         0
successful         0         0         0         0         0         0
unsuccessful       0         0         0         0         0         0

                   total     average
usecs in queue     0         0
usecs in dijkstra  0         0
usecs in routing   0         0
Switch#
```

  If you enter the **show atm pnni statistics call** command and call statistics collection is *not* enabled you will see “Statistics Not Enabled” as in the following example:

```
Switch#show atm pnni statistics call
Statistics Not Enabled
Switch#
```

  Enable call statistics collection using the **statistics call** command in ATM router PNNI configuration mode as in the following example:

```
Switch(config)#atm router pnni
```

```
Switch(config-atm-router)#statistics call
Switch(config-atm-router)#
```

[CSCdi66510]

- The minimum queue threshold setting does not function correctly and could cause potential performance degradation. [CSCdi67197]
- Systems with less than 3 ports, for example 2 OC-12 PAM's, causes a failure in the power-on diagnostic tests even though the system and the ports are functional. The test failure causes the LightStream 1010 status LED to be red after power-on and the following failure is indicated at the console display. A subsequent use of the **show diag power-on** command will not show any failures.

```
Booting on Sep 04 1996 13:46:56 with 2-PAM Configuration

 LS1010 Diagnostics V2.29, Dated Aug 16 1996 19:06:23
 Model CPU-Card, Serial# 3099381, H/W V3.2, SWC Rev-3
 Model FC1-Card, Serial# 3098875, H/W V3.2
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```

[CSCdi66729]

- Configuration memory full error message appears.

  Adding too many configuration commands will cause earlier commands to be lost and the following error massage to appear:

  ```
  % Configuration buffer full, can't add command: user command
  ```

  This error indicates that the configuration memory limit has been reached and earlier working commands may be lost if you proceed.

  Do not use the **write memory** or **copy running-config** commands if this error message appears. This bug was introduced in release 11.1(1). [CSCdi54713]

- The ARP cache entries might not appear complete in the following two situations:

  When you forward a packet to an IP-address (for example using **ping**) that is mapped to a PVC map-list, the packet is sent across an atm network using map-list. During the operation, an IP ARP cache is not updated with the index value (VCD) of the map-list PVC. This means the IP ARP cache appears incomplete even though the ping was successful.

  When you forward a packet to an IP-address (for example using **ping**) with a destination that is mapped to a SVC map-list, the packet is sent across an ATM network using map-list, and the SVC to IP destination is established, and IP ARP cache is updated. After the SVC is established,

when the **clear arp** command is used, all entries are cleared and the ARP cache is not updated. This means the IP ARP cache appears incomplete even though the ping was successful. This behavior was present in release 11.1(1). [CSCdi55010]

- The RDI cells sent by an end point in response to the AIS (Alarm Indication Signal) cells, which are generated during a fault condition at an intermediate switch, are not propagated beyond that intermediate switch. This is because the switch removes the connection leg entries for both interfaces participating in the connection once the fault on one interface is detected, even though the other interface may be running. As a result, the RDI cells are dropped at the switch. [CSCdi55937]
- Static maps are used to associate IP addresses with NSAP addresses, so that an ATM SVC can be established to contact the associated host.

  The static-map specifies a map-class to indicate traffic parameters to use when initiating an ATM SVC. Many static-maps should be able to use the same map-class. Currently, confusion occurs if several static-maps share the same map-class, so that only one of the maps sharing the map-class is used at one time. The correct behavior is to keep all static-map status information in the static-map only, rather than the map-class data structure. A workaround is to not share map-classes among static-maps.

  If changes are made to a map-list, a static-map, or a map-group while the map is associated with an active SVC, connectivity to the IP address(es) associated with the static-map is interrupted. The IP address is not reachable until the associated Address Resolution Protocol (ARP) table entry is timed-out. The correct behavior is to allow map-list, a static-map, or a map-group to be modified at any time. This behavior was present in release 11.1(1). [CSCdi56066]
- The SNMP ifPhysAddr of interface ATM 2/0/0 displays an empty string rather than (one of) the ATM address of the switch. [CSCdi59248]
- The ATM ARP server does not check the IP subnet mask during registration. The ARP server registers an IP address that resides outside of its own subnet boundary. [CSCdi62225]
- You can not disable signaling and SSCOP on an interface, except through the use of the **atm nni** command using the IISP image. This behavior was present in release 11.1(1). [CSCdi64829]

Note The primary function of the **atm nni** command is to configure an interface as an NNI interface (as opposed to a UNI or IISP interface). Signaling and SSCOP are disabled because the IISP image does not include any NNI signaling protocol. Any ambiguity in the meaning of the **atm nni** command is going to be removed when the new command to disable signaling and SSCOP is introduced.

- Configuration of internal static routes is allowed even when the static route is a duplicate of an ILMI-registered address on another port of the same switch. This behavior was present in release 11.1(1). [CSCdi65799]
- Under certain conditions, when one of the LightStream 1010 interfaces is shut/noshut repeatedly, some the SVCs may not be released properly. This can result in a LEC not being able to connect to the LECS if its SVC connection to LECS is not released properly from the LECS side.

  A workaround is to use the **clear atm-vc** command to clear the SVC. [CSCdi65885]
- If PNNI receives a hello packet with a length exceeding pnni_hello_type—for example, a hello packet with multiple type_length_value (TLV) fields—it will enter into an infinite loop. [CSCdi65795]

- If the switch did not detect the physical link going down, SSCOP may not tear down the active switched virtual circuits (SVCs) properly. This occurs when SSCOP receives a begin PDU and treats the PDU as a retransmission, and it is ignored. [CSCdi66728]
- Systems with less than three ports—for example 2 OC-12 PAMs—cause a failure in the power-on diagnostic tests even though the system and the ports are functional. The test failure causes the LightStream 1010 status LED to be red after power-on and a failure is indicated at the console display. [CSCdi66729]
- Removing the receive end of DS3/E3 PAM does not cause the transmit end of the connection to go down. [CSCdi68141]
- AToM MIB does not report correct the neighbor name for the virtual path (VP) tunnel. [CSCdi69035]
- When a VP switch is placed along the path of a VP tunnel between two LS1010 switches, calls through this VP tunnel *will not* be completed if the VPI numbers on incoming interfaces and outgoing interfaces have *different* VPI numbers assigned. [CSCdi69105]
- The allocation of a soft permanent virtual circuit (PVC) destination half-leg VPI/VCI is not correct. This allowed a switched virtual circuit (SVC) to be established through an interface to also allocate this same VPI/VCI, and then release it. Then the Soft PVC destination half-leg would disappear. [CSCdi69254]
- The Service Specific Connection Oriented Protocol (SSCOP) incorrectly parses the protocol data unit (PDU) state if list elements equal 4. This causes a sequence error. To verify this problem, enable debug SSCOP error and an MAA_ERROR_S error will appear on the console. [CSCdi70022]
- PNNI routing software might crash when a link (that is followed by one or more links with NULL metrics) is removed from the internal topology database. [CSCdi71540]
- The flag bit in the global call reference is not set correctly in the restart and restart-ack message. It is always set to 0. [CSCdi71545]
- A Feature card FPGA download driver could fail causing occasional disabling of the multi-cast and available bit rate (ABR) functions on the Feature card. This would cause some of the multi-cast and traffic-management power-on tests to fail and the Status LED on the ASP card to show red. [CSCdi72070]
- Strict restrictions on UPC based on interface type are enforced. For example, tagging or dropping is not allowed on non-UNI-Network-side interfaces. Destination half-leg UPC is always set to **passing**. Resolution of this DDTS modifies the operation of **atm pvc**, **atm pvp**, **atm soft-vc,** and **atm soft-vp** commands, to remove the restriction of UPC to UNI-Network-side. [CSCdi72411]
- UNI 3.0 to UNI 3.1 conversion is incorrect on PNNI interfaces. This occurs if the ingress port is a UNI 3.0 and the egress port is a PNNI. [CSCdi72611]
- The per-interface CLI configuration **atm svc-upc-intent command** is not allowed using a corresponding SNMP MIB object. This configuration determines the inbound UPC action to perform for SVCs and terminating legs of Soft PVCs at an interface. [CSCdi72604]
- The DS-3 driver ignores loss of cell delineation (LCD) far end receive failure (FERF) when using Cbit physical layer convergence protocol (PLCP) framing. [CSCdi72667]
- Currently OAM Manager handles fault management functions. If it receives a non-fault management type OAM cell—performance management, system management, or activation/deactivation cells—the software process drops the cell. [CSCdi73621]

New Error Codes Added for Release 11.1(4)

This section lists and describes system error messages for the LightStream 1010 ATM switch. A complete list and explanation of the error codes appears in appendix A of the *LightStream 1010 ATM Switch Software Configuration Guide*.

ATM PNNI signaling error messages.

Error Message %ATMSIG-3-INVPNNIMSG :
Invalid msg from routing/pnni : error return code

No memory atmsys_get_buf for next_port_req

No memory atmsys_get_buf for source_route_req

No buffer for sending Setup message

No buffer for sending Call Proceeding message

No buffer for sending Connect message

No buffer for sending Connect Ack message

No buffer for sending Release message

No buffer for sending Release Comp message

No buffer for sending Status message

No buffer for sending Status Enquiry message

No buffer for sending Restart message

No buffer for sending Restart Ack message

No buffer for xfer Setup message

No buffer for sending Connect message

No buffer for sending Add Party message

No buffer for sending Status message

No buffer for sending AddPartyAck message

No buffer for sending AddPartyRej message

No buffer for sending DropParty message

No buffer for sending DropPartyAck message

No buffer for sending Begin Pdu

No buffer for sending Begin Ack Pdu

No buffer for sending Begin Rej Pdu

No buffer for sending End Pdu

No buffer for sending End Ack Pdu

No buffer for sending Resync Pdu

No buffer for sending Resync Ack Pdu

No buffer for sending Ustat Pdu

No buffer for sending Stat Pdu

No buffer for sending Poll Pdu

Explanation <explanation>.

Recommended Action If this message recurs, contact your technical support representative for assistance.

PNNI and IISP routing error messages.

Error Message `%PNNI-4-INTERNAL_ERROR: IISP failed to get the argument to iisp_router process`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-BADPACKET: Invalid pkt: length shorter than header size [dec], phdr->length`

Explanation Unrecognized type of PNNI packet has been received.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-BADPACKET: Invalid pkt: unrecognized packet type [dec], TLV_TYPE( phdr )`

Explanation Unrecognized type of PNNI packet has been received.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: PNNI failed to get the argument to pnni_router process`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: PNNI failed to set the argument to pnni_router process`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: PNNI failed to set the argument to pnni_update process`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-ADDRESS_EXIST: Address derived from the switch's prefix by soft PVC manager [chars] clashes with existing address in prefix table`

Explanation Automatic soft PVC port address assignment fails. Address derived from the switch's prefix for soft PVC port clashes with an existing address in the prefix table.

Recommended Action If possible, assign a new MAC address to the end system that causes the clash.

Error Message `%PNNI-4-ATM_SYS_ERROR: Error: Incorrect API version. Mismatched API message version received by PNNI.`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: Cannot add NNI interface. An attempt to add an NNI interface failed.`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: Received API message to create an interface for an existing port`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR:Received API message to delete an interface that PNNI does not know of`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-ATM_SYS_ERROR: Error: Received Unrecognized API message`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: Unrecognized req msg from signaling [hex]`

Explanation Unrecognized request message from signaling error process.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-BADPACKET: Invalid REQ pkt: [chars] [dec] [dec]`

Explanation Invalid PNNI request packet has been received.

Recommended Action Check the sender of the packet for any possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid DS pkt: Type in header is not Nodal PTSE summaries (512), type [dec]`

Explanation Invalid PNNI database summary packet has been received.

Recommended Action Check the sender of the packet for any possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid DS pkt: Length in hdr shorter than smallest possible, len [dec], ds_data->length`

Explanation Invalid PNNI database summary packet has been received.

Recommended Action Check the sender of the packet for any possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid DS pkt: Bad length in node [chars], eDS PTSE sum len [dec], left [dec], count [dec], left [dec]`

Explanation Invalid PNNI database summary packet has been received.

Recommended Action Check the sender of the packet for any possible problem.

Error Message `%PNNI-4-INTERNAL_ERROR: NULL node in ptsedb ID [hex]`

Explanation Invalid PNNI database summary packet has been received.

Recommended Action Check the sender of the packet for any possible problem.

Error Message `%PNNI-4-INTERNAL_ERROR: Rev DS in an invalid nbr state`

Explanation Invalid neighbor state found.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: Remove neighbor with interface list not empty`

Explanation A neighbor is being removed but interface list still shows some interface.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: Cannot locate neighbor to be deleted`

Explanation Cannot locate a neighbor to be deleted.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: Internal Nbr Number Stack Overflow`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-CONFIG_ERROR: Configuration Error: Port looped-back, cannot form adjacency\n`

Explanation PNNI detects a port looped back to itself.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid ACK pkt: [chars]`

Explanation Invalid ACK packet has been received.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-INTERNAL_ERROR: rxmt timer with no element`

Explanation Invalid ACK packet has been received.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid PTSP pkt: Bad Type in PTSE header: [dec]`

Explanation Invalid ACK packet has been received.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid PTSP pkt:  Unknown type in PTSE header: [dec],)`

Explanation Invalid PTSP packet has been received.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid PTSP pkt: Inconsistent type between PTSE header and:    PTSE content [dec] [dec]`

Explanation Invalid PTSP packet has been received.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid PTSP pkt: PTSE len does not add up to total PTSE len in header [dec] [dec]`

Explanation Invalid PTSP packet has been received.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid PTSP pkt: IG with type matching the PTSE type is missing:    from PTSE [dec] [dec]`

Explanation There is no information group inside this PTSE that has the same type as the type in the PTSE header.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid PTSP pkt: Bad checksum in PTSE ID: [dec]`

Explanation Invalid PTSP packet has been received.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-BADPACKET: Invalid PTSP pkt: [chars]`

Explanation Invalid PTSP packet has been received.

Recommended Action Check the sender of the packet for a possible problem.

Error Message `%PNNI-4-INTERNAL_ERROR: Can't find node included in ACK header: [chars] , pnni_nodeid_string(node_id)`

Explanation Cannot locate node in an ACK packet.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: Hello state machine error in state [chars] , error_msg`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-CONFIG_ERROR: Configuration Error:  Neighbor in different PeerGroup\n`

Explanation Neighbor indicates that it is a different peergroup. This software version does not support multiple peer groups.

Recommended Action Correct switch address to be part of the same peer group.

Error Message `%PNNI-4-INTERNAL_ERROR: Cannot add NNI interface, uninitialized pointers`

Explanation Neighbor indicates that it is a different peergroup. This software version does not support multiple peer groups.

Recommended Action Correct switch address to be part of the same peer group.

Error Message `%PNNI-4-INTERNAL_ERROR: Getting Node Id For An Invalid Node [hex], node`

Explanation Neighbor indicates that it is a different peergroup. This software version does not support multiple peer groups.

Recommended Action Correct switch address to be part of the same peer group.

Error Message `%PNNI-4-INTERNAL_ERROR: Null element to deq_ptse`

Explanation Neighbor indicates that it is a different peergroup. This software version does not support multiple peer groups.

Recommended Action Correct switch address to be part of the same peer group.

Error Message `%PNNI-4-INTERNAL_ERROR: Null element to deq_ptse`

Explanation Neighbor indicates that it is a different peergroup. This software version does not support multiple peer groups.

Recommended Action Correct switch address to be part of the same peer group.

Error Message `%PNNI-4-INTERNAL_ERROR: Can't find our own node in PTSE database`

Explanation Neighbor indicates that it is a different peergroup. This software version does not support multiple peer groups.

Recommended Action Correct switch address to be part of the same peer group.

Error Message `%PNNI-2-SPF_ERROR: Tent List Overflow in min_aw_route_od()`

Explanation Number of nodes in the network exceeds the node limit of the internal SPF data structure.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-2-SPF_ERROR: Tent List Overflow in min_cdv_route_od()`

Explanation Number of nodes in the network exceeds the node limit of the internal SPF data structure.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-2-SPF_ERROR: Tent List Overflow in min_ctd_route_od()`

Explanation Number of nodes in the network exceeds the node limit of the internal SPF data structure.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-2-SPF_ERROR: Tent List Overflow in min_aw_dijkstra_bg()`

Explanation Number of nodes in the network exceeds the node limit of the internal SPF data structure.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-2-SPF_ERROR: Tent List Overflow in min_cdv_dijkstra_bg()`

Explanation Number of nodes in the network exceeds the node limit of the internal SPF data structure.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-2-SPF_ERROR: Tent List Overflow in min_ctd_dijkstra_bg()`

Explanation Number of nodes in the network exceeds the node limit of the internal SPF data structure.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-2-SPF_ERROR: Tent List Overflow in min_hop_route_all()`

Explanation Number of nodes in the network exceeds the node limit of the internal SPF data structure.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: PDB is NULL on a Route Request!!! [hex], msg->op_code`

Explanation Bad request from signaling process error.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: Unknown timer type [hex]`

Explanation Bad request from signaling process error.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message `%PNNI-4-INTERNAL_ERROR: IF table full, cannot add new interface [hex]`

Explanation No more entries in the interface table are allowed. The maximum number of entries is 256.

Recommended Action Do not add anymore entries in the interface table.

Release 11.1(1) Caveats

This section describes possibly unexpected behavior by Release 11.1(1) for the LightStream 1010 ATM switch.

The following caveats have been identified for this release of the LightStream 1010 ATM switch software.

- If an existing End System Identifier (ESI) is removed from the ATM Switch Processor (ASP) interface or any of its sub-interfaces due to the following:
  - The command **no esi-address**
  - A new ESI is defined using the **esi-address** command. The 20 byte ATM address corresponding to the old ESI address which is registered with the Interim Link Management Interface (ILMI) is not removed. They exist together with the newly registered address corresponding to the new ESI. Similarly, when the prefix is changed the existing ILMI registered address (with the old prefix and the current ESI address) are not removed. [CSCdi47217]
- The AAL5 table for the AToM MIB (RFC 1695) is not supported. [CSCdi48153]
- The switch will reload if a large number of debug messages are configured to be processed.

  If either the **debug all** or **debug atm sig-all** commands are enabled for all interfaces with a large number of calls, for example, thousands of calls, then the number of messages would be overwhelming for the system to handle.

  To work around use specific debug flags for the appropriate modules. If possible, enable debug flags for the specific interfaces that are needed to be tracked.

  Most debug flags allow interface specification as a variable. [CSCdi50862]
- The **atm idle-timeout** command at the ASP interface 2/0/0 is not supported.

  Idle timeout defines how long an SVC connection can remain idle before the connection is torn down. This command does exist in the configuration but will have no impact on idle SVCs. Even if the idle timeout interval is configured, the interface will not be torn down. [CSCdi51446]
- The Virtual Channel (VC) and Virtual Path (VP) cross-connects tables in the AtoM MIB are not supported. Permanent Virtual Circuit (PVCs) can be currently configured using the proprietary Cisco ATM connection MIB. [CSCdi51809]

- The interpretation of the tolerance traffic parameter for Usage Parameter Control (UPC, or policing) on ATM Variable Bit Rate (VBR) PVCs is incorrect. UPC monitors the cell-traffic received on a connection for correctness based on the Generic Cell Rate Algorithm (GCRA). Optionally, UPC can be configured, per connection, to pass, and tag (set) the Cell Loss Priority (CLP) bit, or drop cells, that GCRA considers to be in violation of the traffic contract.

  When a VBR PVC on an interface is created with UPC set to allow tagging or dropping, the connection-traffic-table row specified for receive dictates the UPC parameters. If the *tolerance* parameter is specified in the connection-traffic-table row, this should be interpreted as maximum burst size, and a computation done to determine a burst tolerance to use in the GCRA UPC algorithm. This computation is not done, instead the tolerance parameter is interpreted directly as burst tolerance. This causes the tolerance parameter to be interpreted as a number of cell times at 2.72 microseconds. [CSCdi52517]

- The per interface debugging for ILMI, if turned on using the command **debug atm** *card/sub_card/port* will be disabled if the interface is shutdown. If debugging is required on an interface it has to be explicitly turned on after the interface is brought up again. [CSCdi52596]

- The **show atm vc traffic** command may display a false 0 value for a terminating connection. [CSCdi54094]

- Configuration memory full error message appears.

  Adding too many configuration commands will cause earlier commands to be lost and the following error massage to appear:

  ```
  % Configuration buffer full, can't add command: user command
  ```

  This error indicates that the configuration memory limit has been reached and earlier, working commands, may be lost if you proceed.

  Do not use the **write memory** or **copy running-config** commands if this error message appears. [CSCdi54713]

- Map class configuration for SVCs initiated on the switch CPU interface interprets cell rates in units of cells-per-second instead of the correct units of kilobits-per-second.

  This includes the following configuration command variables: [CSCdi54716]

  ```
  forward-peak-cell-rate-clp1
  forward-peak-cell-rate-clp0
  forward-sustained-cell-rate-clp1
  forward-sustained-cell-rate-clp0
  backward-peak-cell-rate-clp1
  backward-peak-cell-rate-clp0
  backward-sustained-cell-rate-clp1
  backward-sustained-cell-rate-clp0
  ```

- The LAN Emulation Configuration Server (LECS) address can be configured on a switch-wide basis. This is applicable to both the command line interface (CLI) as well as Simple Network Management Protocol (SNMP). A future release of the software will allow the LECS address to be configured on a per-interface basis. [CSCdi55506]

- Multiple ESI addresses differing only in their selector byte can not be registered on the ASP interface ATM 2/0/0 and its sub-interfaces. [CSCdi55662]

- ILMI keepalive changes to default after interface shutdown and restart.

  If the interface configuration parameter, ILMI keep-alive, is enabled and configured using the **keepalive** command, and the interface is shutdown and restarted, the configuration is reset to the default value of 5 seconds. [CSCdi55676]

- OAM cells are not handled correctly by the switch.

  All OAM cells in the transit connections are being forwarded without processing. OAM related commands, for example, the **atm ping** command, are currently disabled. [CSCdi55921]

- Currently all soft VP calls that specify service category as Constant Bit Rate (CBR) will be connected as Unspecified Bit Rate (UBR) calls. This problem does not affect the Soft VC calls. [CSCdi55962]

- Static maps are used to associate IP addresses with NSAP addresses, so that an ATM SVC can be established to contact the associated host.

  The static-map can specify a map-class to indicate traffic parameters to use when initiating an ATM SVC. Many static-maps should be able to use the same map-class. Currently, confusion can occur if several static-maps share the same map-class, such that only one of the maps sharing the map-class can be used at one time. The correct behavior would be to keep all static-map status information only in the static-map, rather than the map-class data structure. A workaround is to not share map-classes among static-maps.

  If changes are made to a map-list, a static-map, or a map-group, while the map is associated with an active SVC, then connectivity to the IP address(es) associated with the static-map is interrupted. The IP address is not reachable until the associated Address Resolution Protocol (ARP) table entry is timed-out. The correct behavior would be to allow map-list, a static-map, or a map-group to be modified at any time. [CSCdi56066]

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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, Internet e-mail, and fax download options, and 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`.
- 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 baud rates up to 14.4 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact `cco-help@cisco.com`. For additional information, contact `cco-team@cisco.com`.

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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 baud rates up to 14.4 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

Note If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com.

This document is to be used in conjunction with the *LightStream 1010 ATM Switch Software Configuration Guide and the LightStream 1010 ATM Switch Command Reference* publication.

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