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Release Notes for Catalyst 5000 Family ATM Module Software Release 3.2

November 24, 1999

This release note describes the Catalyst 5000 family ATM module software release 3.2(16). The ATM dual PHY OC-3 modules (WS-X5153, WS-X5154, WS-X5155, WS-X5156, WS-X5157, and WS-X5158) are supported in this release. This is a maintenance release only; no new features are introduced in this release.

For a list of IOS software caveats that apply to this release, refer to *Cisco IOS Software Release 11.3 and 11.3T Caveats*. For IOS release notes that apply to this release, refer to *Release Notes for Cisco IOS Release 11.3*. These documents are located on the Documentation CD-ROM and CCO. For information, see the Cisco Connection Online, page 28.

Note The Catalyst 5000 family includes the Catalyst 5002, the Catalyst 5000, the Catalyst 5505, the Catalyst 5509, and the Catalyst 5500 switches. Throughout this publication and all Catalyst 5000 family documents, the phrase *Catalyst 5000 family switches* refers to all Catalyst 5000 family switches, unless otherwise noted.

Cisco IOS Release 11.3 End of Engineering

End of Engineering (EOE) means there are no more regularly scheduled maintenance releases. The following maintenance releases scheduled on the EOE date are only available through CCO and Field Service Operations, and not through manufacturing:

- Cisco IOS Release 11.3 is scheduled to reach End of Engineering (EOE) status for the ATM dual PHY OC-12 modules (WS-X5161 and WS-X5162), the ATM dual PHY OC-3 modules (WS-X5167 and WS-X5168), and the ATM Fabric Integration module (WS-X5165) with maintenance Release 3.2(16).

EOE releases are subject to change. For the most up-to-date information on the status of EOE, see *End of Engineering for Cisco IOS Software Releases* product bulletins on CCO.

Ongoing support for functionality in Release 3.2 is available in Cisco IOS Release 12.0(4a)W5(15a) and later maintenance releases of Cisco IOS Release 12.0W5 on CCO at:

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Service & Support: Product Bulletins: Software

Under **Cisco IOS 11.3**, click on **End of Sales and End of Engineering for Cisco IOS Software Releases 11.3 and 11.3 T (#847: 12/98)** or **Cisco IOS Software 11.3 NA EOS and EOE (#849:12/98)**.

Software Release Images

Table 1 lists the current software release image name on CCO for the Catalyst 5000 family ATM modules.

Table 1 Current Software Release Image Name for ATM Modules

Module	Product Number	LANE SW Release	PVC Traffic-Shaping SW Release	Token Ring	MPOA SW Release	Latest Supervisor Engine SW Release
ATM LANE Single PHY OC-3	WS-X5153	3.2(16)	51.1(5)	70.2(1)	Not applicable	5.1(1)
	WS-X5154	c5atm-wblane.113-11	c5atm-wbpvc.113-6.	c5atm-trlane.70		
	WS-X5155	.WA4.14b.bin	WA4.9d.bin	-2-1.bin		
ATM LANE Dual PHY OC-3	WS-X5156	3.2(16)	51.1(5)	70.2(1)	Not applicable	5.1(1)
	WS-X5157	c5atm-wblane.113-11	c5atm-wbpvc.113-6.	c5atm-trlane.70		
	WS-X5158	.WA4.14b.bin	WA4.9d.bin	-2-1.bin		
ATM Dual PHY DS3	WS-X5166	Not applicable	51.1(5) c5atm-wbpvc.113-6. WA4.9d.bin	Not applicable	Not applicable	5.1(1)
ATM Dual PHY OC-12	WS-X5161	4.14b	4.14b	11.3(9)WA4(12)	4.14b	5.1(1)
	WS-X5162	c5atm-wtall.113-11. WA4.14b.bin	c5atm-wtall.113-11. WA4.14b.bin	c5atm-wtoken. 113-9.WA4.12. bin	c5atm-wtall.113- 10. WA4.14b.bin	
ATM Dual PHY OC-3	WS-X5167	4.14b	4.14b	11.3(9)WA4(12)	4.14b	5.1(1)
	WS-X5168	c5atm-wtall.113-11. WA4.14b.bin	c5atm-wtall.113-11. WA4.14b.bin	c5atm-wtoken. 113-9.WA4.12. bin	c5atm-wtall.113- 10. WA4.14b.bin	
ATM Fabric Integration	WS-X5165	4.14b c5atm-wtall.113-11. WA4.14b.bin	4.14b c5atm-wtall.113-11. WA4.14b.bin	Not applicable	4.14b c5atm-wtall.113- 10. WA4.14b.bin	5.1(1)

Table 2 lists the software versions and applicable ordering information for the Catalyst 5000 family ATM module software.

Table 2 Software Version/Orderable Product Number Matrix

Software Version	Filename	Orderable Product Number Flash on System	Orderable Product Number Spare Upgrade (Floppy Media)
3.2(4)	c5000-atm.3-2-4.bin	SFC5K-ATM-3.2.4	SWC5K-ATM-3.2.4=
3.2(5)	cat5000-atm.3-2-5.bin	SFC5K-ATM-3.2.5	SWC5K-ATM-3.2.5=
3.2(6)	cat5000-atm.3-2-6.bin	SFC5K-ATM-3.2.6	SWC5K-ATM-3.2.6=
3.2(7)	cat5000-atm.3-2-7.bin	SFC5K-ATM-3.2.7	SWC5K-ATM-3.2.7=
3.2(8)	c5atm-wblane.113-2.5.WA4.4m.bin	SFC5K-ATM-3.2.8	SWC5K-ATM-3.2.8=

Table 2 Software Version/Orderable Product Number Matrix (continued)

Software Version	Filename	Orderable Product Number Flash on System	Orderable Product Number Spare Upgrade (Floppy Media)
3.2(9)	c5atm-wblane.113-4.WA4.7a.bin	SFC5K-ATM-3.2.9	SWC5K-ATM-3.2.9=
3.2(10)	c5atm-wblane.113-6.WA4.9b.bin	SFC5K-ATM-3.2.10	SWC5K-ATM-3.2.10=
3.2(11)	c5atm-wblane.113-6.WA4.9c.bin	SFC5K-ATM-3.2.11	SWC5K-ATM-3.2.11=
3.2(12)	c5atm-wblane.113-8.WA4.11.bin	SFC5K-ATM-3.2.12	SWC5K-ATM-3.2.12=
3.2(13)	c5atm-wblane.113-8.WA4.11a.bin	SFC5K-ATM-3.2.13	SWC5K-ATM-3.2.13=
3.2(14)	c5atm-wblane.113-9.WA4.12a.bin	SFC5K-ATM-3.2.14	SWC5K-ATM-3.2.14=
3.2(15)	c5atm-wblane.113-10.WA4.13a.bin	SFC5K-ATM-3.2.15	SWC5K-ATM-3.2.15=
3.2(16)	c5atm-wblane.113-11.WA4.14b.bin	SFC5K-ATM-3.2.16	SWC5K-ATM-3.2.16=
4.3	cat5atm-wtall.113-2.WA4.3.bin	SFC5K-ATM-4.3.0	SWC5K-ATM-4.3.0=
4.4(b)	c5atm-wtall.113-2a.WA4.4b.bin	SFC5K-ATM-4.4B	SWC5K-ATM-4.4B=
4.5	c5atm-wtall.113-3a.WA4.5.bin	SFC5K-ATM-4.5	SWC5K-ATM-4.5=
4.7a	c5atm-wtall.113-4.WA4.7a.bin	SFC5K-ATM-4.7	SWC5K-ATM-4.7=
4.8a	c5atm-wtall.113-5.WA4.8a.bin	SFC5K-ATM-4.8	SWC5K-ATM-4.8=
4.9a	c5atm-wtall.113-6.WA4.9a.bin	SFC5K-ATM-4.9	SWC5K-ATM-4.9=
4.9b	c5atm-wtall.113-6.WA4.9b.bin	SFC5K-ATM-4.9B	SWC5K-ATM-4.9B=
4.9c	c5atm-wtall.113-6.WA4.9c.bin	SFC5K-ATM-4.9C	SWC5K-ATM-4.9C=
4.11	c5atm-wtall.113-8.WA4.11.bin	SFC5K-ATM-4.11	SWC5K-ATM-4.11=
4.11a	c5atm-wtall.113-8.WA4.11a.bin	SFC5K-ATM-4.11A	SWC5K-ATM-4.11A=
4.12a	c5atm-wtall.113-9.WA4.12a.bin	SFC5K-ATM-4.12A	SWC5K-ATM-4.12A=
4.13a	c5atm-wtall.113-10.WA4.13a.bin	SFC5K-ATM-4.13A	SWC5K-ATM-4.13A=
4.14b	c5atm-wtall.113-11.WA4.14b.bin	SFC5K-ATM-4.14B	SWC5K-ATM-4.14B=
51.1(1)	cat5000-atm-pvcshape.51-1-1.bin	SFC5K-ATMPV-51.1	SWC5K-ATMPV-51.1=
51.1(2)	c5atm-wbpvc.113-2.5.WA4.4m.bin	SFC5K-ATMPV-51.1.2	SWC5K-ATMPV51.1.2=
51.1(3)	c5atm-wbpvc.113-4.WA4.7.bin	SFC5K-ATMPV-51.1.3	SWC5K-ATMPV51.1.3=
51.1(4)	c5atm-wbpvc.113-6.WA4.9a.bin	SFC5K-ATMPV-51.1.4	SWC5K-ATMPV51.1.4=
51.1(5)	c5atm-wbpvc.113-6.WA4.9d.bin	SFC5K-ATMPV-51.1.5	SWC5K-ATMPV51.1.5=

Software Release 3.2(16)

This section contains usage guidelines and restrictions for the ATM module software release 3.2(16). This is a maintenance release only; no new features were introduced in this release.

Note ATM module software release 11.3(11)WA4(14b) is the release following ATM module software release 11.3(10)WA4(13a). Software release 3.2(16) is the release following 3.2(15). There were no interim releases.

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 11.3(11)WA4(14b). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The supervisor switchover feature is supported in supervisor engine software release 4.2(1) and later.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: “ATM_INSTANCE message does not contain timestamp info.” If you receive this message, use the **set clock** command to set the system clock. (CSCdk22518)
- Octet counters are supported on a per-physical-interface basis only. Octet counters per virtual LAN (VLAN) or per LAN Emulation client (LEC) are not supported.
- The Cisco LAN Emulation Server/LAN Emulation Client (LES/LEC) components will not use the well-known LAN Emulation Configuration Server (LECS) address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the Integrated Local Management Interface (ILMI). (CSCdj70490)
- If you have an LECS, LES, or broadcast and unknown server (BUS) configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses network service access points (NSAPs). Be sure to update the LECS database configuration with new NSAP values.
- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.
- The **clear counters** command does not clear some counters due to code space limitations in the SAR processor. (CSCdm94861)

Differences Between Software Releases 3.2(15) and 3.2(16)

This section describes software release 3.2(15) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(16).

- The following unsolicited message occasionally displays:

```
%SYS-3-INVMEMINT: Invalid memory action (free) at interrupt level
```

These messages are harmless as no memory is being freed. (CSCdm82457)
- Creation of PVCs using the capvcTable from CISCO-ATM-PVC-MIB generates the response “no such name.” (CSCdp26510)
- If a LEC gets a CONNECT_ACK for the Multicast Forward before it receives a CONNECT for the Multicast Send, the BUS VCs are never bound and the LEC cannot transmit and receive on those VCs. (CSCdp31101)
- The **Debug lane client topology** command generates undesirable topology change debug messages :

```
LEC ATM0.100: received LANE_TOPO_CHANGE on VCD 233
```

Although these messages do not affect functionality, they make troubleshooting LANE issues difficult. (CSCdm92473)

- LECs may get stuck in the initialState after an SSCOP failure. (CSCdp01039)

Software Release 3.2(15)

This section contains usage guidelines and restrictions for the ATM module software release 3.2(15). This is a maintenance release only; no new features were introduced in this release.

Note ATM module software release 11.3(10)WA4(13a) is the release following ATM module software release 11.3(9)WA4(12a). Software release 3.2 (15) is the release following 3.2(14). There were no interim releases.

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 11.3(10)WA4(13a). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The supervisor switchover feature is supported in supervisor engine software release 4.2(1) and later.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: “ATM_INSTANCE message does not contain timestamp info.” If you receive this message, use the **set clock** command to set the system clock. (CSCdk22518)
- Octet counters are supported on a per-physical-interface basis only. Octet counters per virtual LAN (VLAN) or per LAN Emulation client (LEC) are not supported.
- The Cisco LAN Emulation Server/LAN Emulation Client (LES/LEC) components will not use the well-known LAN Emulation Configuration Server (LECS) address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the Integrated Local Management Interface (ILMI). (CSCdj70490)
- If you have an LECS, LES, or broadcast and unknown server (BUS) configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses network service access points (NSAPs). Be sure to update the LECS database configuration with new NSAP values.
- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.

Differences Between Software Releases 3.2(14) and 3.2(15)

This section describes software release 3.2(14) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(15).

- The Catalyst 5000 ATM RxHost service experiences memory allocation problems. This problem is resolved in software release 11.3(10)WA4(13a). (CSCdm68112)

- No command exists for enabling and disabling local LE-ARP reverification. This problem is resolved in software release 11.3(10)WA4(13a). To enable local reverification, enter the **lane le-arp reverify local** command from privileged mode. To disable local reverification, use the **no lane le-arp reverify local** command. By default, local reverification is disabled. (CSCdm73824)
- The ATM module cannot generate ciscoAtmDualPhyChange trap. This problem is resolved in software release 11.3(10)WA4(13a). (CSCdk84679)
- SNMP reads the major interface name of an ATM port from a Catalyst 5000 family switch as "/A" rather than "ATMmodule/slot/A" or "ATMmodule/slot/B." This problem is resolved in software release 11.3(10)WA4(13a). (CSCdm15256)

Software Release 3.2(14)

This section contains usage guidelines and restrictions for the ATM module software release 3.2(14). This is a maintenance release only; no new features were introduced in this release.

Note ATM module software release 11.3(9)WA4(12a) is the release following ATM module software release 11.3(8)WA4(11a). Software release 3.2(14) is the release following 3.2(13). There were no interim releases.

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 11.3(9)WA4(12a). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The **show version** command displays different software release numbers depending on which CLI you use. For example:
 - From the Catalyst 5000 family supervisor engine CLI (prior to supervisor engine software release 4.1), this ATM software release is displayed as 3.2(14).
 - From the Catalyst 5000 family supervisor engine CLI (supervisor engine software release 4.1 and later), the IOS software version displayed is 11.3(9)WA4(12a).
 - From the Catalyst 5000 family ATM module CLI, the IOS software version displayed is 11.3(9)WA4(12a).

All three versions are identical.

Note ATM module software release 11.3(9)WA4(12a) is the release following ATM module software release 11.3(8)WA4(11a). Software release 3.2(14) is the release following 3.2(13). There were no interim releases.

- The supervisor switchover feature is supported in supervisor engine software release 4.2(1) and later.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: "ATM_INSTANCE message does not contain timestamp info." If you receive this message, use the **set clock** command to set the system clock. (CSCdk22518)

- Octet counters are supported on a per-physical-interface basis only. Octet counters per virtual LAN (VLAN) or per LAN Emulation client (LEC) are not supported.
- The Cisco LAN Emulation Server/LAN Emulation Client (LES/LEC) components will not use the well-known LAN Emulation Configuration Server (LECS) address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the Integrated Local Management Interface (ILMI). (CSCdj70490)
- If you have an LECS, LES, or broadcast and unknown server (BUS) configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses network service access points (NSAPs). Be sure to update the LECS database configuration with new NSAP values.
- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.

Differences Between Software Releases 3.2(13) and 3.2(14)

This section describes software release 3.2(13) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(14).

- LANE Client CPUHOGs are reported under very heavy LE-ARP activity. This problem is resolved in ATM module software release 11.3(9)WA4(12a). (CSCdm30840)

Software Release 3.2(13)

This section contains usage guidelines and restrictions for the ATM module software release 3.2(13). This is a maintenance release only; no new features were introduced in this release.



Caution Release 3.2(13) replaces software release 3.2(12), which was deferred due to caveat CSCdm05638. If you are currently using software version 3.2(12) (image name c5atm-wtall.113-8.WA4.11.bin), you should replace that version with release 3.2(13) (image name c5atm-wtall.113-8.WA4.11a.bin).

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 3.2(13). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The **show version** command displays different software release numbers depending on which CLI you use. For example:
 - From the Catalyst 5000 family supervisor engine CLI (prior to supervisor engine software release 4.1), this ATM software release is displayed as 3.2(13).
 - From the Catalyst 5000 family supervisor engine CLI (supervisor engine software release 4.1 and later), the IOS software version displayed is 11.3(8)WA4(11a).
 - From the Catalyst 5000 family ATM module CLI, the IOS software version displayed is 11.3(8)WA4(11a).

All three versions are identical.

Note ATM module software release 11.3(8)WA4(11a) is the release following ATM module software release 11.3(6)WA4(11). Software release 3.2 (14) is the release following 3.2(12). There were no interim releases.

- The supervisor switchover feature is supported in supervisor engine software release 4.2(1) and later.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: “ATM_INSTANCE message does not contain timestamp info.” If you receive this message, use the **set clock** command to set the system clock. (CSCdk22518)
- Octet counters are supported on a per-physical-interface basis only. Octet counters per VLAN or per LEC are not supported.
- The Cisco LES/LEC components will not use the well-known LECS address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the ILMI. (CSCdj70490)
- If you have an LECS, LES, or BUS configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses NSAPs. Be sure to update the LECS database configuration with new NSAP values.
- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.

Differences Between Software Releases 3.2(12) and 3.2(13)

This section describes software release 3.2(12) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(13).

- After binding LECS database to the major ATM interface, the module sometimes crashes. The only way to recover is to reset the module from the Catalyst 5000 family switch console using the **reset** command. This problem is resolved in ATM module software release 11.3(8)WA4(11a). (CSCdm35836)
- LE_ARP reverification exhibits unexpected behaviour after a Spanning Tree link is re-enabled. This problem is resolved in ATM module software release 11.3(8)WA4(11a). (CSCdm05638)
- After resetting LANE services on the module, the ATM signalling input process overloads the CPU. This problem only occurs if you have greater than 1000 LE_ARP table entries. This problem is resolved in ATM module software release 11.3(8)WA4(11a). (CSCdj85034)

Software Release 3.2(12)

This section contains usage guidelines and restrictions, and provides the software caveats for the ATM module software release 3.2(12). This is a maintenance release only; no new features were introduced in this release.



Caution Release 3.2(13) replaces software release 3.2(12), which was deferred due to caveat CSCdm05638. If you are currently using software version 3.2(12) (image name c5atm-wtall.113-8.WA4.11.bin), you should replace that version with release 3.2(13) (image name c5atm-wtall.113-8.WA4.11a.bin).

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 3.2(12). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The **show version** command displays different software release numbers depending on which CLI you use. For example:
 - From the Catalyst 5000 family supervisor engine CLI (prior to supervisor engine software release 4.1), this ATM software release is displayed as 3.2(12).
 - From the Catalyst 5000 family supervisor engine CLI (supervisor engine software release 4.1 and later), the IOS software version displayed is 11.3(8)WA4(11).
 - From the Catalyst 5000 family ATM module CLI, the IOS software version displayed is 11.3(8)WA4(11).

All three versions are identical.

Note ATM module software release 11.3(8)WA4(11) is the release following ATM module software release 11.3(6)WA4(9c); there were no interim releases.

- The supervisor switchover feature is supported in supervisor engine software release 4.2(1) and later.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: “ATM_INSTANCE message does not contain timestamp info.” If you receive this message, use the **set clock** command to set the system clock. (CSCdk22518)
- Octet counters are supported on a per-physical-interface basis only. Octet counters per virtual LAN (VLAN) or per LAN Emulation client (LEC) are not supported.
- The Cisco LAN Emulation Server/LAN Emulation Client (LES/LEC) components will not use the well-known LAN Emulation Configuration Server (LECS) address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the Integrated Local Management Interface (ILMI). (CSCdj70490)
- If you have an LECS, LES, or broadcast and unknown server (BUS) configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses network service access points (NSAPs). Be sure to update the LECS database configuration with new NSAP values.

- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.

Differences Between Software Releases 3.2(11) and 3.2(12)

This section describes software release 3.2(11) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(12).

- Under certain conditions, when there are large control frames sent out to the ATM network, the ATM module might reset. This problem is resolved in ATM module software release 3.2(12). (CSCdm25344)

Software Release 3.2(11)

This section contains usage guidelines and restrictions, and provides the software caveats for the ATM module software release 3.2(11). This is a maintenance release only; no new features were introduced in this release.

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 3.2(11). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The LE_ARP cache entry reverification process requires supervisor engine software release 3.2(2) or greater, but is not available in supervisor engine software release 4.1(x). If the supervisor engine software does not meet these requirements, reverification is performed by sending actual LE_ARPs.
- The **show version** command displays different software release numbers depending on which CLI you use. For example:
 - From the Catalyst 5000 family supervisor engine CLI (prior to supervisor engine software release 4.1), this ATM software release is displayed as 3.2(11).
 - From the Catalyst 5000 family supervisor engine CLI (supervisor engine software release 4.1 and later), the IOS software version displayed is 11.3(6)WA4(9c).
 - From the Catalyst 5000 family ATM module CLI, the IOS software version displayed is 11.3(6)WA4(9c).All three versions are identical.
- The supervisor switchover feature is supported in supervisor engine software release 4.2(1) and later.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: “ATM_INSTANCE message does not contain timestamp info.” If you receive this message, use the **set clock** command to set the system clock. (CSCdk22518)
- Octet counters are supported on a per-physical-interface basis only. Octet counters per VLAN or per LEC are not supported.

- The Cisco LES/LEC components will not use the well-known LECS address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the ILMI. (CSCdj70490)
- If you have an LECS, LES, or BUS configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses NSAPs. Be sure to update the LECS database configuration with new NSAP values.
- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.

Differences Between Software Releases 3.2(10) and 3.2(11)

This section describes software release 3.2(10) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(11).

- The LANE code drops packets before receiving READY_IND message. This problem is resolved in ATM module software release 3.2(11). (CSCdk52652)
- In systems configured with supervisor engine software release 4.4(1) and ATM dual PHY OC-12 modules (WS-X5161 or WS-X5162) running software release 3.2(11), incorrect LE-ARP reverification behaviour occurs after a spanning-tree link fails and then reenables. This problem is resolved in ATM module software release 3.2(11). (CSCdm05638)

Software Release 3.2(10)

This section contains usage guidelines and restrictions, and provides the software caveats for the ATM module software release 3.2(10).

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 3.2(10). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The LE_ARP cache entry reverification process requires supervisor engine software release 3.2(2) or greater, but is not available in supervisor engine software release 4.1(x). If the supervisor engine software does not meet these requirements, reverification is performed by sending actual LE_ARPs.
- The **show version** command displays different software release numbers depending on which CLI you use. For example:
 - From the Catalyst 5000 family supervisor engine CLI (prior to supervisor engine software release 4.1), this ATM software release is displayed as 3.2(10).
 - From the Catalyst 5000 family supervisor engine CLI (supervisor engine software release 4.1 and later), the IOS software version displayed is 11.3(6)WA4(9b).
 - From the Catalyst 5000 family ATM module CLI, the IOS software version displayed is 11.3(6)WA4(9b).

All three versions are identical.

Note ATM module software release 11.3(6)WA4(9b) is the release following ATM module software release 11.3(4)WA4(7a); there were no interim releases.

- The supervisor switchover feature is supported in supervisor engine software release 4.2(1) and later.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: “ATM_INSTANCE message does not contain timestamp info.” If you receive this message, use the **set clock** command to set the system clock. (CSCdk22518)
- Octet counters are supported on a per-physical-interface basis only. Octet counters per VLAN or per LEC are not supported.
- The Cisco LES/LEC components will not use the well-known LECS address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the ILMI. (CSCdj70490)
- If you have an LECS, LES, or BUS configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses NSAPs. Be sure to update the LECS database configuration with new NSAP values.
- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.

Differences Between Software Releases 3.2(9) and 3.2(10)

This section describes software release 3.2(9) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(10).

- LE-ARP reverification should be more efficient on Catalyst 5000 family platforms. In previous releases, LE-ARP reverification was performed by actually ARPing the MAC addresses. This resulted in networks with large numbers of MAC addresses being flooded with excessive LE_ARP traffic as a result of periodic MAC address verification.

Catalyst 5000 family ATM module software release 3.2(10), LE-ARP reverifications are performed by checking the EARL table for the entry. If the EARL entry exists, this indicates that traffic has come from that address within the last five minutes. If the EARL entry still points to the data direct VC that is believed to be correct, it is good for another five minutes. This problem is resolved in ATM module software release 3.2(10). (CSCdk44824)

Note The LE_ARP cache entry reverification process requires supervisor engine software release 3.2(2) or greater, but is not available in supervisor engine software release 4.1(x). If the supervisor engine software does not meet these requirements, reverification is performed by sending actual LE_ARPs.

- The ATM dual OC-12 module (WS-X5161) repeatedly crashes (approximately 30 minutes plus or minus 30 minutes) when connected to a Fore ASX1000 running version S-ForeThought_5.3.0 FCS (1.28069) or Bay (NEC) Centillion 1600 switch running version 7.0(1) RICE 425. This problem is resolved in ATM module software release 11.3(6)WA4(9b). (CSCdk42660)
- The ATM software forces reload. This problem is resolved in ATM module software release 11.3(6)WA4(9b). (CSCdk37882)

Software Release 3.2(9)

This section contains usage guidelines and restrictions, and provides the software caveats for the ATM module software release 3.2(9).

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 3.2(9). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The **show version** command displays different software release numbers depending on which CLI you use. For example:
 - From the Catalyst 5000 family supervisor engine CLI (prior to supervisor engine software release 4.1), this ATM software release is displayed as 3.2(9).
 - From the Catalyst 5000 family supervisor engine CLI (supervisor engine software release 4.1 and later), the IOS software version displayed is 11.3(4)WA4(7a).
 - From the Catalyst 5000 family ATM module CLI, the IOS software version displayed is 11.3(4)WA4(7a).

All three versions are identical.
- The supervisor switchover feature is supported in supervisor engine software release 4.2(1) and later.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: “ATM_INSTANCE message does not contain timestamp info.” If you receive this message, use the **set clock** command to set the system clock. (CSCdk22518)
- Octet counters are supported on a per-physical-interface basis only. Octet counters per VLAN or per LEC are not supported.
- The Cisco LES/LEC components will not use the well-known LECS address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the Integrated Local Management Interface (ILMI). (CSCdj70490)
- If you have an LECS, LES, or BUS configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses NSAPs. Be sure to update the LECS database configuration with new NSAP values.
- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.

- Catalyst 5000 family supervisor engine software release 2.1(5) corrects these two software problems:
 - When you remove or hot swap an ATM module during system operation, you invalidate the slot and virtual circuit number in the content-addressable memory (CAM) table. (CSCdi42681)
 - You cannot enter the **session** command for an ATM module if the supervisor engine module IP address is not set (if the IP address is set to 0.0.0.0). (CSCdi44641)
- Catalyst 5000 family supervisor engine software release 1.5 corrects the following software problem:

Do not hot swap faulty ATM modules using Catalyst 5000 family supervisor engine software releases 1.1, 1.2, 1.3, and 1.4. In these releases, modules remain offline if you hot swap faulty ATM modules from their slots. To bring the modules online, you must reset the Catalyst 5000 family switch. (CSCdi45212)

Differences Between Software Releases 3.2(8) and 3.2(9)

This section describes software release 3.2(8) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(9).

- The supervisor switchover feature requires an upcoming supervisor engine software release with specific support for the Catalyst 5000 family ATM modules. Until the supervisor engine software supports this feature, the ATM module resets when the supervisor switchover occurs. This problem is resolved in ATM module software release 3.2(9) with the release of supervisor engine software 4.2(1) or above.
- When you have a high number of LECs on an ATM module, after a reset or a fastswitchover, sometimes VLANs are not added to the Spanning-Tree Protocol on the supervisor engine. Workaround: do a shutdown/no shutdown on the LANE subinterfaces of the ATM module that are showing the problem. This problem is resolved in ATM module software release 3.2(9). (CSCdk24331)
- You are unable to change or overwrite the burned-in Media Access Control (MAC) address of the ATM LANE module. This problem is resolved in ATM module software release 3.2(9). (CSCdk22377)
- The **show atm ilmi-status** command on the ATM switch (LightStream1010) does not show the Peer Interface name correctly for the interface that is connected to the Catalyst 5000 family ATM module. This problem is resolved in ATM module software release 3.2(9). (CSCdk31263)
- The linkDown and linkUp (1.3.6.1.6.3.1.1.5.3 and 1.3.6.1.6.3.1.1.5.4) Simple Network Management Protocol (SNMP) traps are not generated. This problem is resolved in ATM module software release 3.2(9). (CSCdk31263)
- The **set clock** command has been reenabled so that if you do not have supervisor engine image 4.2(1) or later (which supports the timestamp synchronization feature), you can use this command to set the system clock. (CSCdk22518)
- In Catalyst 5000 family switches configured with two redundant ATM modules, when the forwarding trunk was forced into blocking and the blocking trunk was forced into forwarding, the CAM entries on the ELAN(s) would ping-pong between the two modules. This problem is resolved in ATM module software release 3.2(9). (CSCdk30418)
- When a topology change occurred, the LEC would not use the short aging timer if it was on the designated bridge of the ELAN. This problem is resolved in ATM module software release 3.2(9). (CSCdk30340)

- In the Catalyst 5000 family dual PHY ATM modules, if the ILMI keepalives are enabled, the ATM interface oscillates between the UP and DOWN states. This problem is resolved in ATM module software release 3.2(9). (CSCdk33409)
- ATM module software release 3.2(9) supports the **copy tftp** command. (CSCdk33409)
- When you have a high number of LECs on an ATM module, after a reset or a fastswitchover, sometimes VLANs are not added to the Spanning-Tree Protocol on the supervisor engine. Workaround: do a shutdown/no shutdown on the LANE subinterfaces of the ATM module that are showing the problem. This problem is resolved in ATM module software release 3.2(9). (CSCdk24331)
- When the PHY is connected to a LightStream 1010 and if the LightStream 1010 interface goes down, the Catalyst 5000 family ATM module cannot detect an OC-3 link-down condition. This problem is resolved in ATM module software release 3.2(9). (CSCdk24048)
- When LECs are created through VLAN Trunk Protocol (VTP) updates, the subinterfaces do not appear in the running configuration. This problem is resolved in ATM module software release 3.2(9). (CSCdk45680)

Software Release 3.2(8)

This section contains usage guidelines and restrictions, software caveats, new and modified commands, functional descriptions, software configuration procedures, and a configuration example for the ATM module software release 3.2(8).

Usage Guidelines and Restrictions

This section describes the usage guidelines, warnings, and cautions for the Catalyst 5000 family ATM module software release 3.2(8). It also describes ATM module software problems that are fixed by specific Catalyst 5000 supervisor engine software releases.

- The **show module** command displays different software release numbers depending on which CLI you use. For example:
 - From the switch CLI (prior to supervisor engine software release 4.1), the software version displayed is 3.2(8).
 - From the switch CLI, if you are using supervisor engine software release 4.1 and above, the software version displayed is 11.3(2)WA4(4m) 3.2(8).
 - From the Catalyst 5000 family ATM module CLI, the IOS release displayed is 11.3(2)WA4(4m).3.2(8).

All three versions are identical.
- The supervisor switchover feature requires an upcoming supervisor engine software release with specific support for the Catalyst 5000 family ATM modules. Until the supervisor engine software supports this feature, the ATM module resets when the supervisor switchover occurs.
- The supervisor switchover feature is not supported on ATM hardware version 1.3 or lower. For hardware versions 1.3 or lower, the ATM module resets when the supervisor switchover occurs.
- The HSRP fast convergence feature requires IOS release 11.2(13)P or later on the router.
- If system time synchronization is not supported, this message displays during the ATM module startup time: “ATM_INSTANCE message does not contain timestamp info.” If you receive this message, note that the **set clock** command is still disabled.

- The **set clock** command is disabled in the ATM software release version 3.2(8) and above. The system time is synchronized automatically with the supervisor engine time. However, the system time synchronization feature requires an upcoming supervisor engine software release.
- The Cisco LEC/LES components will not use the well-known LECS address when all other options for connecting to the LECS are exhausted. The LEC/LES contacts the LECS only through the ILMI. (CSCdj70490)
- If you have an LECS, LES, or BUS configured on an ATM module, and you replace the supervisor engine module or move the ATM module from one slot to another, you will modify the default ATM addresses NSAPs. Be sure to update the LECS database configuration with new NSAP values.
- When you insert or replace ATM modules, enter the **clear config mod_num** command to clear the ATM module configuration information in the supervisor engine module, and to obtain the correct spanning-tree parameters for the modules. Enter this command from the supervisor engine module command prompt.
- Catalyst 5000 family supervisor engine software release 2.1(5) corrects these two software problems:
 - When you remove or hot swap an ATM module during system operation, you invalidate the slot and virtual circuit number in the content-addressable memory (CAM) table. (CSCdi42681)
 - You cannot enter the **session** command for an ATM module if the supervisor engine module IP address is not set (if the IP address is set to 0.0.0.0). (CSCdi44641)
- Catalyst 5000 family supervisor engine software release 1.5 corrects the following software problem:

Do not hot swap faulty ATM modules using Catalyst 5000 family supervisor engine software releases 1.1, 1.2, 1.3, and 1.4. In these releases, modules remain offline if you hot swap faulty ATM modules from their slots. To bring the modules online, you must reset the Catalyst 5000 family switch. (CSCdi45212)

Differences Between Software Releases 3.2(7) and 3.2(8)

This section describes software release 3.2(7) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(8).

- In some cases, when you enter the **no atm bind pvc vlan vcd vlan_num** command, the ATM module continues forwarding packets on that PVC from that VLAN. This problem is resolved in ATM module software release 3.2(8). (CSCdk09587)
- During a supervisor engine switchover, the LE-ARP entry to the old NSAP address should be deleted. If the old NSAP address is not deleted, the LE-ARP entry points to the old ATM address, forcing the supervisor engine to use the old ATM address until reverification occurs. This problem is resolved in ATM module software release 3.2(8). (CSCdk03405)
- The Catalyst 5000 family ATM module does not respond to lsystem MIB. This problem is resolved in ATM module software release 3.2(8). (CSCdj89282)
- In ATM module software release 3.2(7), when the primary LES fails, a switchover to a secondary LES occurs. But when a LES that is ranked higher in the priority list comes back up, the active LES is switched to the new LES (with the higher priority). In ATM module software release 3.2(8), the second switchover to the new LES does not occur, regardless of the priority.

You can configure switching to the higher priority LES by entering the **name elan_id preempt** command in the LECS database. (CSCdj70825)

In ATM module software release 3.2(8) and later, the **name** command has been modified as follows:

Description

Use the **name** command to assign a unique ELAN name to a LES and to configure an ELAN. The **no** form of this command deletes the specified ELAN name.

```
name elan_id {local-seg-id | new-name | preempt | restricted | server-atm-address |
un-restricted} atm-addr
no name elan_id atm-addr
```

Syntax Description

<i>elan_id</i>	ELAN ID of the ELAN.
local-seg-id	(Optional) Keyword that specifies the local segment number for this emulated TR LAN.
new-name	(Optional) Keyword that introduces a new name for this ELAN.
preempt	(Optional) Keyword that turns on higher-priority LES preemption.
restricted	(Optional) Keyword that closes this ELAN to access by name only.
server-atm-address	(Optional) Keyword that specifies the LES-NSAP address for this ELAN.
un-restricted	(Optional) Keyword that opens this ELAN to access by name only.
<i>atm-addr</i>	ATM address of the LANE client.

Default

By default, higher-priority LES preemption is off.

Command Type

IOS ATM command.

Command Mode

Database configuration.

Usage Guidelines

Use this command when setting up the LECS database on Catalyst 5000 family switches or when configuring the address of a LES/BUS.

If you enter the **name** *elan_id* **preempt** command to turn on higher-priority LES preemption, in the event the primary LES fails, a switchover to a secondary LES occurs. But when a LES that is ranked higher in the priority list comes back up, the active LES is switched to the new LES (with the higher priority).

If you use the default configuration, the second switchover to the new LES does not occur, regardless of the priority. Use the **no** form of the command to turn off higher-priority LES preemption.

Example

This example shows how to configure the LES ATM NSAP address for the default ELAN:

```
ATM#config terminal
Enter configuration commands, one per line. End with Ctrl-Z.
ATM (lane-config-database)#name default server-atm-address
47.009181000000061705b7701.00400BFF0011.00
ATM (lane-config-database)#end
```

Differences Between Software Releases 3.2(6) and 3.2(7)

This section describes software release 3.2(6) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(7).

- Service Specific Connection Orientation Protocol (SSCOP) quick poll causes transmit queues to hang. This problem is resolved in ATM module software release 3.2(7). (CSCdj68934)
- IEEE spanning tree does not function correctly over RFC 1483/IRB and the Catalyst 5000 family ATM module. This problem is resolved in ATM module software release 3.2(7). (CSCdj36070)
- Uplink groups do not function with an ATM port. This problem is resolved in ATM module software release 3.2(7). (CSCdj40387)
- The **atm clock** command is not available. This problem is resolved in ATM module software release 3.2(7). (CSCdj73078)
- If a large number of nodes exist in a single ELAN, the ATM module configured with LES/BUS may run out of memory. This is largely due to the amount of LAN Emulation Resolution Protocol (LE-ARP) requests from LANE clients. This problem is resolved in ATM module software release 3.2(7). (CSCdj69029)

Differences Between Software Releases 3.2(5) and 3.2(6)

This section describes software release 3.2(5) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(6).

- Tearing down one LEC tears down *all* LECs in the ELAN. This problem is resolved in ATM module software release 3.2(6). (CSCdj54587)
- The ATM driver fails to accept a virtual connection (VC), causing a VC creation failure. This problem is resolved in ATM module software release 3.2(6). (CSCdj58475)
- When the cable to the ATM module is disconnected during a Management Information Base (MIB) walk, an address exception occurs. This problem is resolved in ATM module software release 3.2(6). (CSCdj55768)
- The ATM module transmits packets on a wrong VC (ATM code). This problem is resolved in ATM module software release 3.2(6) and requires supervisor engine software release 2.4(3) or later. (CSCdj60614)

Differences Between Software Releases 3.2(4) and 3.2(5)

This section describes software release 3.2(4) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(5).

- You cannot perform any SNMP **set** commands to a Catalyst 5000 family ATM module—this capability has temporarily been disabled. This problem, which is resolved in ATM module software release 3.2(5), requires Catalyst 5000 family supervisor engine software release 2.4(3) and above. (CSCdi70688) (CSCdj31463)
- The ATM module might fail to come online when the ATM switch to which it is connected is reloaded. This problem is resolved in ATM module software release 3.2(5). (CSCdj34492)
- When an ATM LANE port changes from forwarding to blocking, LE-ARP table entries are not modified. This problem is resolved in ATM module software release 3.2(5). (CSCdj25152)
- The ATM OC-3 module does not have the capability to set a MAC address for ATM interfaces. This problem is resolved in ATM module software release 3.2(5). (CSCdj33482)
- Incorrect CAM/LE-ARP table entries cause intermittent connectivity failures. This problem is resolved in ATM module software release 3.2(5). (CSCdj32249)
- Heavy LE-ARP activity causes the LEC buffer memory to leak. This in turn causes the ATM module to lock up due to no memory. This problem is resolved in ATM module software release 3.2(5). (CSCdj10256)
- LES/BUS servers deleted via CLI commands are still reported by the SNMP agent. This problem is resolved in ATM module software release 3.2(5). (CSCdj30783)
- If you issue the **write network** command in an ATM module that contains the **supervisor-engine-ip** command in its configuration set, the ATM LANE module resets. This problem is resolved in ATM module software release 3.2(5). (CSCdj38660)
- The **lecsLesConfigTable** MIB skips LES instances. This problem is resolved in ATM module software release 3.2(5). (CSCdj24857)
- The SNMP **get next** command requests a timeout when the **ifIndex** values are sparse. This problem is resolved in ATM module software release 3.2(5). (CSCdj45339)

New Features for Software Release 3.2(2)

The following features have been added to the Catalyst 5000 family ATM module software:

- Performance enhancements—The transmit and receive segmentation and reassembly (SAR) sublayers have been tuned for better data throughput.
- DUALPHY-MIB support—Added support for DUALPHY-MIB. The Cisco Systems MIB name for the DUALPHY-MIB is CISCO-ATM-DUAL-PHY-MIB.
- The CISCO-ATM-DUAL-PHY-MIB allows SNMP visibility into the low level physical (PHY) counters and status variables.

Differences Between Software Releases 3.2(3) and 3.2(4)

This section describes software release 3.2(3) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(4).

- When modifying the LANE database, if you lose the Telnet session to the router, this could cause the database to lock up. This is not a bug in the LANE code. A dead Telnet session can be detected within five to eight minutes from the live side. Once detected, the live side cleans up and releases the lock. This is a Telnet feature and has nothing to do with the LANE database. The workaround is to reload the router. (CSCdj06660)
- In some instances when there is traffic on the ATM side of a LANE configuration, the ATM module might fail to come online after a reset. This problem is resolved in ATM module software release 3.2(4). (CSCdj07474)
- Under some conditions when a dual PHY ATM LANE module switches from PHY A to PHY B, the CAM might not clear. This problem is resolved in ATM module software release 3.2(4). (CSCdj08341)

Differences Between Software Releases 3.2(2) and 3.2(3)

This section describes software release 3.2(2) problems that were resolved in Catalyst 5000 family ATM module software release 3.2(3).

- In certain cases, the FLUSH response generated by the Catalyst 5000 family ATM module was incorrectly truncated into 18 bytes. This problem is resolved in ATM module software release 3.2(3). (CSCdi82052)
- When an LECS becomes the master, it always registers the well-known LECS address, whether this was required or not. This problem is resolved in ATM module software release 3.2(3). (CSCdi90235)
- When a LANE data-direct VC setup fails, or when an LEC fails to come up, a small amount of memory is lost. Over time, this causes the ATM module to run out of memory. At this point, you cannot session to the ATM module from the supervisor engine console; you must reset the ATM module. This problem is resolved in ATM module software release 3.2(3). (CSCdi90659)
- A problem exists with the Simple Server Replication Protocol (SSRP) when a dual PHY ATM module in a Catalyst 5000 family switch is attached to two LightStream 1010 switches. When disconnecting the active PHY, the LES goes down. After trying to come up again, the LES fails and remains down. This problem is resolved in ATM module software release 3.2(3). (CSCdi89040)
- When Service Timestamps are enabled, and SSRP is used, the stack for the ATMSIG process might overflow. This causes memory corruption, and the ATM module to reset. This problem is resolved in ATM module software release 3.2(3). (CSCdi84672)
- The **copy**, **configure network**, and **write network** commands now function correctly only if you use Catalyst 5000 family supervisor engine software release 2.2. (CSCdi44899)

Differences Between Software Releases 3.2 and 3.2(2)

This section describes software release 3.2 problems that were resolved in Catalyst 5000 family ATM module software release 3.2(2).

Note Catalyst 5000 family ATM module software release 3.2 caveats are listed in the section “Software Release 3.2 Caveats.”

- When you use the HSRP between two routers, one router is attached to a Catalyst 5000 family switch via ATM LANE, and the other is attached via real Ethernet. When the active HSRP router switches from the Ethernet-attached router to the LANE-attached router, the CAM on the supervisor engine module might continue to use the old Ethernet connection of the active HSRP router, thus causing the packets addressed to the HSRP MAC address to be lost. (CSCdi70264)
- When a Catalyst 5000 becomes a LECS master, it starts listening on the well-known LECS address. When the Catalyst 5000 becomes a slave, it stops listening.

This situation leads to problems in ATM networks where other unrelated LECSs on the system also listen to the well-known LECS address. When this happens, the configured circuits sometimes end up on unwanted LECSs. (CSCdi74881)

- Changes have been made to the semantics of the following commands:

- **lane auto-config-atm-address**
- **lane fixed-config-atm-address**
- **lane config-atm-address**

In pre-3.2 software releases, on the major interface, these commands assigned the config-atm-address to the LECS and told any other LANE entity running on the same major interface to use a specified LECS address on the major interface. On the subinterface, these commands told LANE entities other than the LECS to use the specified LECS address.

- The following new commands are implemented for software releases 3.2 and above:

- **lane [config] auto-config-atm-address**
- **lane [config] config-atm-address**

When the **config** keyword is present, these commands are directed only at the LECS itself; otherwise, they are directed to any other LANE entity telling it which LECS address to use. If you want to send a message to the LECS itself, include the **config** keyword. Otherwise, do not include the **config** keyword.

- **lane config fixed-config-atm-address**

In ATM module software releases 3.2 and above, this command tells the LECS to listen on the well-known LECS address only if it becomes a master. Otherwise, the LECS does not listen on the well-known LECS address. As soon as a master LECS that was listening on the well-known LECS address becomes a slave, it stops listening on that address.

Note Software release 3.2 correctly handles the upward compatibility. If you already have a pre-3.2 configuration file, the 3.2 software correctly handles the commands. However, if you start with a new switch and 3.2 software, you must enter the 3.2 commands.

- You can configure VCs per virtual path (VP) by entering the **atm vc-per-vp** command as any of the following numbers (32, 64, 128, 256, 512, 1024, 2048, 4096). If you create a permanent virtual path (PVP) with a virtual path identifier (VPI) value larger than the default (0 to 3) and you reboot the ATM module, the **PVC setup** command fails during startup. (CSCdi74999)
- In ATM module software release 3.2, the BUS ignores nonzero VPI values for the multicast distribution VC, sending data to the wrong VC. (CSDdi79753)

Differences Between Software Releases 2.2 and 3.2

This section describes software release 2.2 problems that were resolved in software release 3.2.

Note Software release 3.2 caveats are listed in the section “Software Release 3.2 Caveats.”

- When you enter the **write memory** command from the ATM module, an ARP entry appears in the configuration file. This problem is resolved in ATM module software release 3.2. (CSCdi37977)
- You cannot set the port level on an ATM port; the Catalyst 5000 family switch reports an error message indicating the feature is not supported. This problem is resolved in ATM module software release 3.2. (CSCdi44488 and CSCdi62448)
- When an ATM module link goes down, the Catalyst 5000 family switch does not generate a link-down trap to indicate that the ATM link is down. This problem is resolved in ATM module software release 3.2. (CSCdi45044)
- Removing a media cable from an ATM module that contains LECs can bring down LECs on other ATM modules. This problem is resolved in ATM module software release 3.2. (CSCdi62648)

Differences Between Software Releases 2.1 and 2.2

This section describes software release 2.2 modifications that correct problems in Catalyst 5000 family ATM module software release 2.1.

Note Problems existing in ATM module software release 1.1 and not resolved in releases 1.2, 1.3, or 2.1 are also present in ATM module software release 2.2.

The LEC has been modified; the control distribute VC is now optional. Additionally, the LEC does not accept the VC after processing a “join” response. When the control or multicast VC does not come up due to an incorrect Broadband Low Layer Information (B-LLI) or wrong-calling party, the LEC removes all associated VCs and returns to the Idle state. (CSCdi43013)

Software Release 2.1 Modifications

This section describes software release 2.1 modifications that correct problems in previous software releases.

Note Problems existing in software release 1.1 and not resolved in releases 1.2 or 1.3 are also present in software release 2.1.

- The LEC LE-ARP cache reverification timer does not update changed entries. This problem is resolved in ATM module software release 2.1. (CSCdi50465)
- The Catalyst 5000 uses an incorrect Object Identifier (OID) to get the LECS address from an ATM switch. This problem is resolved in software release 2.1. (CSCdi50537)
- The LEC cannot receive messages from the BUS on the point-to-point multicast send VCC. Although the ATM Forum specification allows the BUS to send packets to the LEC on this VCC, Cisco's BUS is not implemented this way. This problem is fixed in software release 2.1. (CSCdi50945)
- You must modify the LEC software to allow it to operate with a Cisco LightStream 2020 ATM switch. This problem is resolved in software release 2.1. (CSCdi51791)
- The ATM module might stop forwarding packets if it receives a normal-sized packet that has an incorrect, very large value in the AAL5 length field. This problem is resolved in ATM module software release 2.1. (CSCdi51872)
- If you remove the media cable from an active module, stale entries in the transmitter's content-addressable memory (TSAR CAM) can force traffic to a specific MAC address through the BUS instead of through a data direct virtual connection (VC). This problem is resolved in ATM module software release 2.1.

New Features for Software Release 1.3

Software release 1.3 contains improved startup system diagnostics for manufacturability.

Differences Between Software Releases 1.1 and 1.2

This section describes software release 1.2 modifications that correct problems in Catalyst 5000 family ATM module software release 1.1.

Note Software release 1.1 caveats also apply to software release 1.2, unless they are described in this section as resolved caveats.

- Some cyclic redundancy check (CRC) errors might occur when the ATM module transmits certain sizes of frame combinations. This problem is resolved in ATM module software release 1.2. (CSCdi47110)
- If a data VC on an ATM module receives a CRC error in a LANE control frame, the ATM module might reset. This problem is resolved in ATM module software release 1.2. (CSCdi47110)

Software Release 3.2(9) Caveats

The **copy tftp startup** command is supported in in ATM module software release 3.2(9). However, for large configuration files (over 1997 lines), this command is not recommended. Use the **config network** command instead.

Software Release 3.2(8) Caveats

This section describes possible unexpected behavior and other miscellaneous caveats for software release 3.2(8). The caveats listed here describe only serious problems.

- SNMP does not report correct packet counts for the LANE BUS. (CSCdk09010)
- Octet counters are not supported. (CSCdj81931)

Software Release 3.2(7) Caveats

There are no new caveats for software release 3.2(7).

Software Release 3.2(6) Caveats

There are no new caveats for software release 3.2(6).

Software Release 3.2(5) Caveats

There are no new caveats for software release 3.2(5).

Software Release 3.2(4) Caveats

This section describes possible unexpected behavior and other miscellaneous caveats for software release 3.2(4). The caveat listed here describes only a serious problem.

When static LE ARP entries are configured on an ATM subinterface, the router crashes if there is no LANE client on the subinterface. (CSCdj10839)

Software Release 3.2(2) Caveats

This section describes possible unexpected behavior and other miscellaneous caveats for software release 3.2(2). The caveats listed here describe only serious problems.

- When a PVC exists, the **lecsConfigDirectConnSrc** SNMP object appears for an instant; that is, the **lecsConfigDirectConnSrc** fails to be omitted. (CSCdi68849)
- After entering the **session** command to access the ATM module, enter the **terminal monitor** command to display additional informational messages. (CSCdi41337)
- Do not enter the **show cam mod_num/port_num** command to display all CAM entries on an ATM port because the *port_num* on an ATM module corresponds to a VC number instead of to a port number. You will receive an error if you enter this command on an ATM port. For example:

```
Console> (enable) show cam dynamic 4/301
Module 4 Port number must be in the range 1..1
```

(CSCdi44444)

- Do not enter the **copy**, **configure network**, and **write network** on the ATM module. These commands do not function in this software release. (CSCdi44899)
- Do not hot swap faulty ATM modules using Catalyst 5000 family supervisor engine software release 1.4. In this release, modules remain offline if you hot swap faulty ATM modules from their slots. To bring the modules online, you must reset the Catalyst 5000 family switch. This problem has been fixed in Catalyst 5000 family supervisor engine software release 1.5. (CSCdi45212)
- You cannot perform an **SNMP set** to a Catalyst 5000 family ATM module—this capability has temporarily been disabled. (CSCdi70688)

Software Release 3.2 Caveats

This section describes possible unexpected behavior and other miscellaneous caveats for software release 3.2. The caveats listed here describe only serious problems.

- When a PVC exists, the **lecsConfigDirectConnSrc** SNMP object appears for an instant; that is, the **lecsConfigDirectConnSrc** fails to be omitted. (CSCdi68849)
- After entering the **session** command to access the ATM module, enter the **terminal monitor** command to display additional informational messages. (CSCdi41337)
- Do not enter the **show cam mod_num/port_num** command to display all CAM entries on an ATM port because the *port_num* on an ATM module corresponds to a VC number instead of to a port number. You will receive an error if you enter this command on an ATM port. For example:

```
Console> (enable) show cam dynamic 4/301
Module 4 Port number must be in the range 1..1
```

(CSCdi44444)

- Do not enter the **copy**, **configure network**, and **write network** on the ATM module. These commands do not function in this software release. (CSCdi44899)
- Do not hot swap faulty ATM modules using Catalyst 5000 family supervisor engine software release 1.4. In this release, modules remain offline if you hot swap faulty ATM modules from their slots. To bring the modules online, you must reset the Catalyst 5000 family switch. This problem has been fixed in Catalyst 5000 family supervisor engine software release 1.5. (CSCdi45212)
- You cannot perform an **SNMP set** to a Catalyst 5000 family ATM module—this capability has temporarily been disabled. (CSCdi70688)

Software Release 1.1 Caveats

This section describes possible unexpected behavior and other miscellaneous caveats for software release 1.1. The caveats listed here describe only serious problems.

- When you enter the **write memory** command from the ATM module, an ARP entry appears in the configuration file. Do not delete this ARP entry. (CSCdi37977)
- After entering the **session** command to access the ATM module, enter the **terminal monitor** command to display additional informational messages. (CSCdi41337)
- When you remove or hot swap an ATM module during system operation, you invalidate the port number and VC addresses in the CAM table. Enter the **clear cam** command to delete the invalidated port number and VC addresses. (CSCdi42681)

- Do not enter the **show cam** *mod_num/port_num* command to display all CAM entries on an ATM port because the *port_num* on an ATM module corresponds to a VC number instead of to a port number. You will receive an error if you enter this command on an ATM port. For example:

```
Console> (enable) show cam dynamic 4/301  
Module 4 Port number must be in the range 1..1
```

(CSCdi44444)

- Do not enter the **session** command for an ATM module if the supervisor engine module IP address is not set (if the IP address is set to 0.0.0.0). To determine if the IP address is set, enter the **show interface** command. (CSCdi44641)
- Do not enter the **copy**, **configure network**, and **write network** on the ATM module. These commands do not function for this software release. (CSCdi44899)
- When an ATM module link goes down, the Catalyst 5000 family switch does not generate a link-down trap to indicate that the ATM link is down. (CSCdi45044)
- Do not hot swap faulty ATM modules using Catalyst 5000 family supervisor engine software releases 1.1, 1.2, 1.3, or 1.4. In these releases, modules remain offline if you hot swap faulty ATM modules from their slots. To bring the modules online, you must reset the Catalyst 5000 family switch. (CSCdi45212)
- The Catalyst 5000 family switch does not support PVCs for LANE in ATM module software release 1.1.
- Some CRC errors result when the ATM module transmits certain sizes of frame combinations. (CSCdi47110)
- If a data VC on an ATM module receives a CRC error in a LANE control frame, the ATM module might reset. (CSCdi47110)
- The LEC LE ARP cache reverification timer does not update changed entries. (CSCdi50465)
- The Catalyst 5000 family switch uses an incorrect OID to get the LECS address from an ATM switch. (CSCdi50537)
- The LEC cannot receive messages from the BUS on the point-to-point multicast send VCC. Although the ATM Forum specification allows the BUS to send packets to the LEC on this VCC, Cisco's BUS is not implemented in this way. (CSCdi50945)
- You must modify the LEC software to allow it to operate with a Cisco LightStream 2020 ATM switch. (CSCdi51791)
- The ATM module might stop forwarding packets if it receives a normal-sized packet that has an incorrect, very large value in the AAL5 length field. (CSCdi51872)
- If you remove the media cable from an active module, stale entries in the TSAR CAM can force traffic to a specific MAC address through the BUS instead of through a data direct virtual connection.
- When you insert or replace ATM modules, clear the module configuration information by entering the command **clear config all** or **clear config** *mod_num*. This command obtains the correct spanning-tree parameters for the modules.

Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit comments electronically:

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We appreciate your comments.

Documentation

The following documents are available for the Catalyst 5000 family switches:

- *Catalyst 5000 Family Installation Guide*
- *Catalyst 5000 Family Module Installation Guide*
- *Catalyst 5000 Family Supervisor Engine Installation Guide*
- *Quick Software Configuration—Catalyst 5000 Family, Catalyst 4000 Family, Catalyst 2948G, and Catalyst 2926G Series Switches*
- *Software Configuration Guide—Catalyst 5000 Family, Catalyst 4000 Family, Catalyst 2948G, and Catalyst 2926G Series Switches*
- *Command Reference—Catalyst 5000 Family, Catalyst 4000 Family, Catalyst 2948G, and Catalyst 2926G Series Switches*
- *System Message Guide—Catalyst 5000 Family, Catalyst 4000 Family, Catalyst 2948G, and Catalyst 2926G Series Switches*
- *Enterprise MIB User Quick Reference* (online only)

For information on how to install and configure the Catalyst 5000 family ATM modules, refer to the *Catalyst 5000 Family Module Installation Guide*.

For information on how to access the ATM module command-line interface (CLI) and customize the configuration from the terminal and from nonvolatile RAM (NVRAM), refer to these publications:

- *Software Configuration Guide—Catalyst 5000 Family, Catalyst 4000 Family, Catalyst 2948G, and Catalyst 2926G Series Switches*
- *Command Reference—Catalyst 5000 Family, Catalyst 4000 Family, Catalyst 2948G, and Catalyst 2926G Series Switches*

For quick software configuration procedures for the Catalyst 5000 family switches, refer to the *Quick Software Configuration* publication for your switch. For detailed software configuration information and procedures, refer to the *Software Configuration Guide* for your switch.

- Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more up to date than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.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 connection rates up to 28.8 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 *Software Configuration Guide* and the *Command Reference* publications appropriate to your switch.

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