CHAPTER 7

Command Reference

This chapter contains an alphabetical reference for all ATM commands available on the Catalyst 5000 and 6000 family switches.

atm-address

Use the **atm-address** command to override the control ATM address. To revert to the default value, use the **no** form of this command.

[**no**] **atm-address** *atm-address* [**ubr+ pcr** *value* **mcr** *value*]

Syntax Description

atm-address	Control ATM address.
ubr+	Keyword to specify an unavailable bit rate+ VCC.
pcr	Peak cell rate; value is specified in kpbs.
mcr	Minimum cell rate; value is specified in kpbs.

Defaults

The default is an autogenerated ATM address.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

This command specifies the control ATM address used when it is associated with a hardware interface. The **ubr+ pcr** *value* **mcr** *value* optional command arguments are used to set a CoS to QoS mapping on a specific interface.

Examples

The following example specifies the ATM address:

```
ATM(config-if)#atm-address 47.009181000000061705C2B01.00E034553024.00
ATM(config-if)#
```

The following example shows how to enter CoS to QoS mappings using PCR and MCR values on a specific ATM address. This command is entered from the lane qos database configuration mode.

```
ATM(lane-qos)# atm-address 47.009181000000061705B0C01.00E0B0951A40.0A cos 7 pcr 500000 mcr 100000
ATM(config-qos)#
```

Related Commands

show atm interface atm0
lane client qos
lane qos database

atm bind pvc vlan

Use the **atm bind pvc vlan** command to bind a PVC to a specified VLAN.

[**no**] **atm bind pvc vlan** *vcd vlan_num*

Syntax Description

vcd	Virtual circuit descriptor; a unique number for each switch that identifies which VPI/VCI to use for a particular packet.
vlan_num	Number of the VLAN.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

You can bind any number of PVCs to the same VLAN. To prevent loops, each PVC must uniquely connect a VLAN group between two Catalyst 5000 family and 2926G series switches.

Examples

This example shows how to bind PVC 10 to VLAN 5 and PVC 11 to VLAN 5:

```
ATM(config-if)#atm bind pvc vlan 10 5
ATM(config-if)#atm bind pvc vlan 11 5
```

Related Commands

show atm vc

atm clock internal

Use the **atm clock internal** command to cause the ATM module on the Catalyst 5000 family and 2926G series switches to generate the transmit clock from its internal source. Enter the **no** form of this command to set the clock generation mode to receive timing from an external source.

[**no**] **atm clock internal**

Syntax Description

This command has no arguments or keywords.

Defaults

The ATM module generates the transmit clock signal from its internal source. The default is loop-timed clock mode for the ATM dual PHY OC-3 modules (WS-X5167 and WS-X5168).

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

The **atm clock internal** and the **no atm clock internal** commands are not supported by the ATM dual PHY OC-12 module.

Examples

This example shows how to set the ATM module to generate the transmit clock from its internal source:

```
ATM(config-if)#atm clock internal
ATM(config-if)#
```

This example shows how to set the ATM module to generate the transmit clock from an external source:

```
ATM(config-if)#no atm clock internal
ATM(config-if)#
```

atm ds3-scramble

Use the **atm ds3-scramble** command to enable scrambling on the current port. Enter the **no** form of this command to disable scrambling.

Note All devices speaking to each other must have the same scramble setting (on or off) to be able to communicate.

[**no**] **atm ds3-scramble**

Syntax Description

This command has no arguments or keywords.

Defaults

The default is scrambling not enabled.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

Because ATM network equipment can exhibit sensitivity to certain bit patterns, scrambling is used to randomize such patterns to guarantee cell synchronization. This command applies to DS3 interfaces only.

Examples

This example shows how to enable scrambling:

```
ATM(config)#interface atm0
ATM(config-if)#atm ds3-scramble
ATM(config-if)#
```

atm framing

Use the **atm framing** command to change the default DS3 line framing from C-bit with ATM direct mapping (ADM) to one of the following:

- M23 ADM
- M23 PLCP
- C-bit PLCP

Enter the **no** form of this command to use the default value.

[**no**] **atm framing** [**m23adm** | **cbitplcp** | **m23plcp**]

Syntax Description

m23adm	(Optional) Keyword to specify M23 ADM.
cbitplcp	(Optional) Keyword to specify C-bit with PLCP framing.
m23plcp	(Optional) Keyword to specify M23 with PLCP framing.

Defaults

The default value is C-bit with ADM.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

This command is not available to the OC-3 ATM module.

The **atm framing** command applies to DS3 interfaces only.

This command allows you to set the DS3 framing mode to either M23 ADM, M23 PLCP, C-bit PLCP, or C-bit ADM (default value).

Examples

This example shows how to select m23adm frame as the frame type:

```
ATM(config-if)#atm framing m23adm
ATM(config-if)#
```

atm ilmi-enable

Use the **atm ilmi-enable** command to enable the ILMI on a port. To disable the ILMI, use the **no** form of this command.

[**no**] **atm ilmi-enable**

Syntax Description This command has no arguments or keywords.

Defaults The default is ILMI is enabled.

Command Types Cisco IOS ATM command.

Command Modes Interface configuration.

Usage Guidelines The ILMI is enabled by default; however, if the peer does not support ILMI, you should turn off the ILMI using this command. When you use the **no** form of this command, the switch is disabled only after restart.

Examples This example shows how to enable the ILMI:

```
ATM(config-if)#atm ilmi-enable
ATM(config-if)#
```

This example shows how to disable the ILMI:

```
ATM(config-if)#no atm ilmi-enable
ATM(config-if)#
```

Related Commands **show atm vc**

atm ilmi-keepalive

Use the **atm ilmi-keepalive** command to enable ILMI keepalives. To disable ILMI keepalives, use the **no** form of this command.

[**no**] **atm ilmi-keepalive** *seconds*

Syntax Description

seconds	Number of seconds between keepalives.

Defaults

The default is 3 seconds. Values less than 3 seconds are rounded to 3 seconds. There is no upper boundary to the range of values.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to set the number of seconds between ILMI keepalives:

```
ATM(config-if)#atm ilmi-keepalive 5
ATM(config-if)#
```

Related Commands

show atm vc

atm lbo

Use the **atm lbo** command to set the line buildout corresponding to the cable length. This command is specific to DS3 and is not available in the OC-3 ATM module.

atm lbo {**short** | **long**}

Syntax Description

short	Keyword to set the line buildout (cable length) up to 255 feet (77.4 meters).
long	Keyword to set the line buildout (cable length) over 255 feet (77.4 meters).

Defaults

The default is **short**.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

The **atm lbo** command applies to DS3 interfaces only.

Examples

This example sets the line buildout (cable length) to over 255 feet (77.4 meters):

```
ATM(config-if)#atm lbo long
ATM(config-if)#
```

Related Commands

show atm vc

atm preferred phy

Use the **atm preferred phy** command to change the preferred PHY to the one not currently in use.

atm preferred phy {**A** | **B**}

Syntax Description

A	Keyword to indicate PHY A.
B	Keyword to indicate PHY B.

Defaults

The default is PHY A.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

Use this command only with the OC-12 dual PHY ATM module connected to the same or different switches.

Examples

This example shows how to specify PHY A as the preferred PHY:

```
ATM#configure terminal
Enter configuration commands, one per line.  End with Ctrl-Z.
ATM(config)#interface atm0
ATM(config-if)#atm preferred phy A
ATM(config-if)#
```

Related Commands

show lane default-atm-addresses

atm pvc

Use the **atm pvc** command to create a PVC on the Catalyst 5000 family and 2926G series switch interface. The **no** form of this command deletes the specified PVC.

[**no**] **atm pvc** *vcd vpi vci* [**aal5snap** | **ilmi** | **qsaal**]

Note The following version of the **atm pvc** command is available only in ATM software release 50.1(1) and later and 51.1(1) and later.

[**no**] **atm pvc** *vcd vpi vci* [**aal5snap** | **ilmi** | **qsaal**] [*peak_rate average_rate* [*burst_size*]] [**oam** *seconds*]

Note The following version of the **atm pvc** command is available only in ATM software release 11.3(6)WA4(9b) and later.

[**no**] **atm pvc aal5snap** *vcd vpi vci pcr scr mbs*

Syntax Description

vcd	Number of the VCD that identifies which VPI/VCI to use for a particular packet.
vpi	VPI for the PVC. The range of *vpi* is from 0 to 255.
vci	VCI for the PVC. The range is from 0 to 4096.
aal5snap	(Optional) Keyword to specify the use of AAL5 with LLC/SNAP encapsulation.
ilmi	(Optional) Keyword to specify the use of ILMI.
qsaal	(Optional) Keyword to specify signaling AAL.
peak_rate	(Optional) Maximum rate (in kbps) at which this virtual circuit can transmit. The range is from 0 to 155000. Available in ATM PVC traffic-shaping software release 50.1(1) and later. The maximum rate for *peak_rate* in ATM PVC traffic-shaping software release 51.1(1) and later is 45000 kbps. The maximum rate for *peak_rate* in ATM PVC traffic-shaping Release 11.3(6)WA4(9b) and later is 155000 kbps.
average_rate	(Optional) Average rate (in kbps) at which this virtual circuit can transmit. The range is from 0 to 1000. Available in ATM PVC traffic-shaping software release 50.1(1) and later and 51.1(1) and later.
burst_size	(Optional) Burst cell size in number of cells. Acceptable values are 0 to 1. Available in ATM PVC traffic-shaping software release 50.1(1) and later and 51.1(1) and later.
oam *seconds*	(Optional) Keyword that specifies how often to generate an OAM 5 loopback cell from this virtual circuit. Available in ATM PVC traffic-shaping software release 50.1(1) and later and 51.1(1) and later.
pcr[1]	(Peak cell rate) Maximum rate (in kbps) at which this virtual circuit can transmit. Valid values are 0 to 622000 for the ATM dual PHY OC-12 modules (WS-X5161 and WS-X5162) and the ATM fabric integration module (WS-X5165); 0 to 155,000 for the ATM dual PHY OC-3 modules (WS-X5167 and WS-X5168).

scr[2]	(Sustainable cell rate) Average rate (in kbps) at which this virtual circuit transmits. Valid values are 0 to 622000 for the ATM dual PHY OC-12 modules (WS-X5161 and WS-X5162) and the ATM fabric integration module (WS-X5165); 0 to 155,000 for the ATM dual PHY OC-3 modules (WS-X5167 and WS-X5168).
mbs	(Maximum burst size) Value that relates to the maximum number of ATM cells the virtual circuit (VC) can transmit to the network at the peak rate of the PVC. Valid values are 0 and 2 to 255.

1. The minimum *pcr* rate is 64 kbps. If you specify a *pcr* greater than 0 and less than 64 kbps, the rate specified to the SAR is 64 kbps.
2. The minimum *scr* rate is 64 kbps. If you specify an *scr* greater than 0 and less than 64 kbps, the rate specified to the SAR is 64 kbps.

Defaults

If you omit the *pcr* argument, the PVC defaults to the highest bandwidth rate queue available (622,000 kbps). By default, the VC is configured to run as fast as possible. If you omit the **oam** keyword, OAM cells are not generated. If you use the **oam** keyword without specifying *seconds*, the default value of 10 seconds is used.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

The **atm pvc** command creates a PVC and attaches it to the VPI and VCI specified. You cannot specify both *vpi* and *vci* as 0.

The VPI is an 8-bit field in the header of the ATM cell. The VPI value is unique only on a single interface, not throughout the ATM network.

The VCI is a 16-bit field in the header of the ATM cell. The VCI value is unique only on a single interface, not throughout the ATM network.

The allowed VPI and VCI ranges vary depending on the value specified by the **atm vc-per-vp** command. The **atm vc-per-vp** command sets the VCI bits, and the number of VCI bits set determines the allowable VPI range.

If you are configuring an SVC, you must use this command to configure the PVC that handles the SVC call setup and termination. In this case, specify the **qsaal** keyword.

The *peak_rate* argument determines the size of the rate queue used. ATM PVC traffic-shaping software release 50.1(1) and later and 51.1(1) and later create rate queues dynamically to satisfy the specifications of **atm pvc** commands. When an **atm pvc** command specifies a **peak** rate that does not match any use-configured rate queue, a rate queue is created dynamically.

The **oam** keyword causes the Catalyst 5000 family and 2926G series switch to generate and echo OAM F5 loopback cells to verify connectivity. After OAM cell generation is enabled, OAM cells are transmitted periodically. The remote end must respond by echoing back the cells.

The **atm pvc** command on 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) supports RFC 1483 Ethernet-bridged AAL5/SNAP encapsulation only.

For the ATM dual PHY OC-12 modules (WS-X5161 and WS-X5162) and the ATM dual PHY OC-3 modules (WS-X5167 and WS-X5168), and the ATM fabric integration module (WS-X5165) with ATM module Release 11.3(6)WA4(9b) and later, traffic shaping supports multiple traffic classes:

- Unspecified bit rate (UBR)

  When configuring a PVC, if you enter a zero value for PCR and SCR (or do not specify any value), the channel is opened with a service type of UBR (with a maximum line rate).

- Constant bit rate (CBR) or 1/PCR

  While configuring a PVC, if you enter a zero value for SCR and non-zero PCR, the channel is opened with a service type of CBR at 1/PCR.

  Note The maximum burst size (MBS) specified is not relevant for this case.

- Variable bit rate (VBR)

  While configuring a PVC, if you enter non-zero values for PCR and SCR, the channel is opened with a service type of VBR.

  Note The MBS should be a value between 2 and 255. If you specify an MBS of 1, the channel is opened as 1/PCR rate-shaped.

The **atm pvc** command creates a PVC and attaches it to the specified VPI and VCI. The *vpi* and *vci* values cannot both be specified as 0. For example, if *vpi* is 0, then *vci* cannot be 0, and conversely, if *vci* is 0, then *vpi* cannot be 0.

The *pcr*, *scr*, and *mbs* arguments are only supported on 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).

Maximum *pcr* values are 0 to 622,000 for the ATM dual PHY OC-12 modules (WS-X5161 and WS-X5162) and the ATM fabric integration module (WS-X5165); 0 to 155,000 for the ATM dual PHY OC-3 modules (WS-X5167 and WS-X5168).

The minimum *pcr* or *scr* is 64 kbps. If you specify a *pcr* or *scr* greater than 0 and less than 64 kbps, the rate specified to the SAR is 64 kbps.

Examples

This example shows how to create a PVC to be used for ATM signaling for an SVC, using VPI 0 and VCI 5:

```
ATM(config-if)#atm pvc 1 0 5 qsaal
ATM(config-if)#
```

This example shows how to create a PVC in ATM PVC traffic-shaping software release 50.1, specifying the peak and average rates and OAM cell generation:

```
ATM(config-if)#atm pvc 1 0 5 aal5snap 155000 1000 oam
ATM(config-if)#
```

This example shows how to create a PVC in ATM PVC traffic-shaping Release 11.3(6)WA4(9b), specifying the PCR, SCR, and MBS:

```
ATM(config-if)#atm pvc 0 34 interface atm0/0/0 0 34
ATM(config-if)#
```

Related Commands **atm vc-per-vp**
show atm vc

atmsig close

Use the **atmsig close** command to disconnect a particular SVC.

atmsig close atm0 *vcd*

Syntax Description

atm0	Keyword to specify the **atm0** interface number to close the SVC, because VCs are numbered per interface.
vcd	Virtual circuit descriptor of the SVC to close.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to close SVC 2 on the ATM module:

```
ATM#atmsig close atm0 2
ATM#
```

atm sonet

Use the **atm sonet** command to set the mode of operation and control type for cell-rate decoupling on the SONET PLIM. To revert to the default value, use the **no** form of this command.

[**no**] **atm sonet** {**stm-1** | **sts-3c**} {**stm-4** | **sts-12c**}

Syntax Description

stm-1	Keyword to specify synchronous transport module level 1 (STM-1) operation. Supported by the ATM dual PHY OC-3 modules.
sts-3c	Keyword to specify synchronous transport signal level 3, concatenated (STS-3c) operation. Supported by the ATM dual PHY OC-3 modules.
stm-4	Keyword to specify synchronous transport module level 4 (STM-4) operation. Supported by the ATM dual PHY OC-12 modules.
sts-12c	Keyword to specify synchronous transport signal level 12, concatenated (STS-12c) operation. Supported by the ATM dual PHY OC-12 modules.

Defaults

The default is STS-3c operation for the ATM dual PHY OC-3 modules and STS-12c operation for the ATM dual PHY OC-12 modules.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

This command applies only to the ATM dual PHY OC-3 and OC-12 modules.

The **no atm sonet** command is the same as the **atm sonet sts-3c** command for the ATM dual PHY OC-3 modules and the **atm sonet sts-12c** command for the ATM dual PHY OC-12 modules.

Examples

This example shows how to set the mode for cell-rate decoupling on the SONET PLIM to stm-1:

```
ATM (config-if)#atm sonet stm-1
ATM (config-if)#
```

atm traffic-shape rate

Use the **atm traffic-shape rate** command to configure output throttling on your Catalyst 5000 family and 2926G series switch ATM module. The **no** form of this command returns the output rate to the default.

[**no**] **atm traffic-shape rate** *1-155*

Syntax Description

1-155	Number between 1 and 155 indicating Mbps.

Defaults

The default is 155 Mbps.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

This command is not supported by the ATM dual PHY OC-12 module.

Examples

This example shows how to set the output throttle to 50:

```
ATM(config-if)#atm traffic-shape rate 50
ATM(config-if)#
```

atm uni-version

Use the **atm uni-version** command to specify the UNI version (3.0 or 3.1) the switch should use when ILMI link autodetermination is unsuccessful or ILMI is disabled. The **no** form of this command restores the version to the default.

[**no**] **atm uni-version** *version_num*

Syntax Description

version_num	UNI version for the interface. Valid values are 3.0 or 3.1.

Defaults

The default UNI version is 3.0.

Command Types

Cisco IOS ATM command.

Command Modes

Global configuration.

Examples

This example shows how to set the UNI version to 3.1:

```
ATM(config)#atm uni-version 3.1
ATM(config)#
```

atm vc-per-vp

Use the **atm vc-per-vp** command to set the maximum number of VCIs to support per VPI. The **no** form of this command restores the default value.

[**no**] **atm vc-per-vp** *num*

Syntax Description

num	Maximum number of VCIs to support per VPI. Valid values are 32, 64, 128, 256, 512, and 1024.

Defaults

The default is that the maximum number of VCIs to support per VPI is 1024.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

This command controls the memory allocation in the Catalyst 5000 family and 2926G series switches for the VCI table. It defines the maximum number of VCIs to support per VPI; it does not designate the VCI numbers. Use the **atm pvc** command to designate the VCI number.

An invalid VCI causes a warning message to display.

Examples

This example shows how to set the maximum number of VCIs to support per VPI to 512:

```
ATM(config-if)#atm vc-per-vp 512
ATM(config-if)#
```

clear mpoa client cache

Use the **clear mpoa client cache** command to clear the ingress and egress cache entries of one or all MPCs.

clear mpoa client [**name** *mpc-name*] **cache** [**ingress** | **egress**] [**ip-address** *ip-address*]

Syntax Description

name *mpc-name*	(Optional) Keyword to specify the name of the MPC with the specified name.
ingress	(Optional) Keyword to clear ingress cache entries associated with the MPC.
egress	(Optional) Keyword to clear egress cache entries associated with the MPC.
ip-address *ip-address*	(Optional) Keyword to clear matching cache entries with the specified IP address.

Defaults

The system defaults are:

- All MPC cache entries are cleared.
- Both caches are cleared.
- Entries matching only the specified destination IP address are cleared.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to clear the ingress and egress cache entries for the MPC named ip_mpc:

```
ATM#clear mpoa client name ip_mpc cache
ATM#
```

Related Commands

show mpoa client cache

client-atm-address name

Use the **client-atm-address name** command to add a LANE address entry to the configuration server's database. The **no** form of this command removes a client address entry from the table.

[**no**] **client-atm-address** *atm-address-template* **name** *elan-name*

Syntax Description

atm-address-template	Template that specifies an ATM address explicitly or a specific part of an ATM address and uses wildcard characters for other parts of the ATM address. Wildcard characters can replace any nibble or group of nibbles in the prefix, the ESI, or the selector fields of the ATM address.
name	Keyword to specify the name of the ELAN.
elan-name	Name of the ELAN; the maximum length of *elan-name* is 32 characters.

Defaults

The default is that no address and no ELAN name are configured.

Command Types

Cisco IOS ATM command.

Command Modes

Database configuration.

Usage Guidelines

This command binds to the specified ELAN any client whose address matches the specified template. When a client comes up, it consults the LANE configuration server, which responds with the ATM address of the LANE server for the ELAN. The client then initiates join procedures with the LANE server.

You must create the ELAN specified by the *elan-name* argument using the **name server-atm-address** command before you use the **client-atm-address** command.

If an existing entry in the configuration server's database binds the LANE client ATM address to a different ELAN, the new command is rejected.

This command affects only the bindings in the named configuration server database. It has no effect on the LANE components themselves.

A LANE ATM address has the same syntax as an NSAP but is not a network-level address:

- A 13-byte prefix that includes the following fields defined by the ATM Forum: AFI field (1 byte), DCC or ICD field (2 bytes), DFI field (1 byte), Administrative Authority field (3 bytes), Reserved field (2 bytes), Routing Domain field (2 bytes), and Area field (2 bytes).
- A 6-byte system identifier (ESI).
- A 1-byte selector field.

LANE ATM address templates can use two types of wildcards: an asterisk (*) to match any single character and an ellipsis (...) to match any number of leading or trailing characters.

In LANE, a prefix template matches the prefix explicitly but uses wildcards for the ESI and selector fields. An ESI template matches the ESI field explicitly but uses wildcards for the prefix and selector.

In our implementation of LANE, the prefix corresponds to the specific subinterface of the interface.

Examples

This example uses an ESI template to specify the part of the ATM address corresponding to an interface. This template allows any client on any subinterface of the interface that corresponds to the displayed ESI value, no matter which switch the router is connected to, to join the engineering ELAN:

```
ATM(lane-config-database)#client-atm-address ...0800.200c.1001.** name engineering
```

This example uses a prefix template to specify the part of the ATM address corresponding to the switch. This template allows any client on the subinterface of any interface connected to the switch that corresponds to the displayed prefix to join the marketing ELAN:

```
ATM(lane-config-database)#client-atm-address 47.000014155551212f.00.00... name marketing
```

Related Commands

default-name
lane database
name

debug mpoa client

Use the **debug mpoa client** command to display MPC debug information.

[**no**] **debug mpoa client** {**all** | **data** | **egress** | **general** | **ingress** | **keep-alives** | **platform-specific**} [**name** *mpc-name*]

Syntax Description

all	Keyword to show debugging information for all MPC activity.
data	Keyword to show debugging information for data plane activity only. This keyword applies only to routers.
egress	Keyword to show debugging information for egress functionality only.
general	Keyword to show general debugging information only.
ingress	Keyword to show debugging information for ingress functionality only.
keep-alives	Keyword to show debugging information for keepalive activity only.
platform-specific	Keyword to show debugging information for specific platforms only. This keyword applies only to the Catalyst 5000 family and 2926G series ATM module.
name *mpc-name*	(Optional) Keyword to specify the name of the MPC with the specified name.

Defaults

The default is debugging is turned on for all MPCs.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to turn on debugging for the MPC ip_mpc:

```
ATM#debug mpoa client all name ip_mpc
```

Related Commands

show mpoa client cache

default-name

Use the **default-name** command to provide an ELAN name in the configuration server's database for those client MAC addresses and client ATM addresses that do not have explicit ELAN name bindings. Use the **no** form of this command to remove the default name.

[**no**] **default-name** *elan_name*

Syntax Description

elan_name	ELAN name for any LANE client MAC address or LANE client ATM address not explicitly bound to any ELAN name. The maximum length of *elan-name* is 32 characters.

Defaults

The default is that no name is configured.

Command Types

Cisco IOS ATM command.

Command Modes

Database configuration.

Usage Guidelines

This command affects only the bindings in the configuration server's database. It has no effect on the LANE components themselves.

The named ELAN must already exist in the configuration server's database before this command is used. If the default name-to-ELAN name binding already exists, the new binding replaces it.

Related Commands

client-atm-address name
lane database
name

disable—ATM

Use the **disable** command to exit privileged EXEC mode and return to user EXEC mode. After executing this command, the angle-bracket (>) prompt appears.

disable [*level*]

Syntax Description

level	(Optional) Option to reduce the privilege level.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Usage Guidelines

Use this command with the *level* option to reduce the privilege level. If you do not specify a level, it defaults to the user EXEC mode, which is level 1.

Examples

This example shows how to cause the system to exit privileged EXEC mode and return to user EXEC mode, as indicated by the angle bracket (>) prompt:

```
ATM#disable
ATM>
```

Related Commands

enable—ATM

display-databases

Use the **display-databases** command to display all the LECS database tables.

display-databases

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Database configuration.

Examples

This example shows how to display all the LECS database tables:

```
ATM(lane-config-database)#display-databases
  eng_dbase
  display-databases   <----- config table in context
```

editing

Use the **editing** command to enable enhanced editing mode. Use the **no** form of this command to disable enhanced editing mode.

[**no**] **editing**

Syntax Description

This command has no arguments or keywords.

Command Types

Cisco IOS ATM command.

Defaults

The default is enabled.

Command Modes

Line configuration.

Usage Guidelines

Table 7-1 describes the keys used to enter and edit commands. Ctrl indicates the Control key. You must press **Ctrl** simultaneously with the associated letter key. Esc indicates the Escape key. You must press **Esc** first, followed by the associated letter key. Keys are not case sensitive.

Table 7-1 Editing Command Keys

Keys	Function
Tab	Completes a partial command name entry. When you enter a unique set of characters and press the Tab key, the system completes the command name. If you enter a set of characters that could indicate more than one command, the system beeps to indicate an error. Enter a question mark (**?**) immediately following the partial command (no space). The system lists the commands that begin with that string.
Delete or Backspace	Erases the character to the left of the cursor.
Return	Processes a command when you are at the command line. At the ---More--- prompt on a terminal screen, pressing the **Return** key scrolls down a line.
Spacebar	Allows you to see more output on the terminal screen. Press the **Spacebar** when you see ---More--- on the screen to display the next screen.
Left Arrow[1]	Moves the cursor one character to the left. When you enter a command that extends beyond a single line, you can press the left arrow key repeatedly to scroll back to the system prompt and verify the beginning of the command entry.
Right Arrow[1]	Moves the cursor one character to the right.
Up Arrow[1] or Ctrl-P	Recalls commands in the history buffer, beginning with the most recent command. Repeat the key sequence to recall older commands.

Table 7-1 Editing Command Keys (continued)

Keys	Function
Down Arrow[1] or Ctrl-N	Returns to more recent commands in the history buffer after recalling commands with the up arrow or Ctrl-P. Repeat the key sequence to recall more recent commands.
Ctrl-A	Moves the cursor to the beginning of the line.
Ctrl-B	Moves the cursor back one character.
Ctrl-D	Deletes the character at the cursor.
Ctrl-E	Moves the cursor to the end of the command line.
Ctrl-F	Moves the cursor forward one character.
Ctrl-K	Deletes all characters from the cursor to the end of the command line.
Ctrl-L or Ctrl-R	Redisplays the system prompt and command line.
Ctrl-T	Transposes the character to the left of the cursor with the character located at the cursor.
Ctrl-U or Ctrl-X	Deletes all characters from the cursor back to the beginning of the command line.
Ctrl-V or Esc Q	Inserts a code to indicate to the system that the keystroke immediately following should be treated as a command entry, *not* as an editing key.
Ctrl-W	Deletes the word to the left of the cursor.
Ctrl-Y	Recalls the most recent entry in the delete buffer. The delete buffer contains the last ten items you deleted or cut. **Ctrl-Y** can be used with **Esc Y**.
Ctrl-Z	Ends configuration mode and returns to the EXEC prompt.
Esc B	Moves the cursor back one word.
Esc C	Capitalizes from the cursor to the end of the word.
Esc D	Deletes from the cursor to the end of the word.
Esc F	Moves the cursor forward one word.
Esc L	Changes to lowercase from the cursor to the end of the word.
Esc U	Capitalizes from the cursor to the end of the word.
Esc Y	Recalls the next buffer entry. The buffer contains the last ten items you deleted. Press **Ctrl-Y** first to recall the most recent entry. Then press **Esc Y** up to nine times to recall the remaining entries in the buffer. If you bypass an entry, press **Esc Y** to cycle back to it.

1. The arrow keys function only with ANSI-compatible terminals such as VT100.

Examples

This example shows how to disable enhanced editing mode on virtual terminal line 3:

```
ATM#config terminal
Enter configuration commands, one per line.  End with Ctrl-Z.
ATM(config)#line vty 3
ATM(config-line)#no editing
ATM(config-line)#
```

Related Commands session

enable—ATM

Use the **enable** command to enter privileged EXEC mode.

enable

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Usage Guidelines

If the system administrator has set a password with the **enable password** command, you are prompted to enter the password before gaining access to privileged EXEC mode. The password is case sensitive. The default password on the ATM module is **atm**.

Examples

This example shows how to cause the system to enter privileged command mode, as indicated by the pound sign (#):

```
ATM>enable
Password: <password>
ATM#
```

Related Commands

disable—ATM

end

Use the **end** command to exit configuration mode.

end

Syntax Description This command has no arguments or keywords.

Defaults This command has no default setting.

Command Types Cisco IOS ATM command.

Command Modes Global configuration.

Usage Guidelines You can also press **Ctrl-Z** to exit configuration mode.

Examples This example shows how to exit configuration mode and return to EXEC mode:

```
ATM(config)#end
ATM#
```

Related Commands **exit**

exit

Use the **exit** command at the system prompt to exit any command mode or close an active terminal session and terminate the EXEC.

exit

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Available in all command modes.

Usage Guidelines

When you enter the **exit** command at the EXEC level, the EXEC session is ended. Use the **exit** command at the configuration level to return to privileged EXEC mode. Use the **exit** command in interface and line command modes to return to global configuration mode. Use the **exit** command in subinterface configuration mode to return to interface configuration mode. You can also press **Ctrl-Z** in any configuration mode to return to privileged EXEC mode.

Examples

This example shows how to exit an active session:

```
ATM>exit
```

Related Commands

enable—ATM
end

help

Use the **help** command to display a brief description of the help system.

help

Syntax Description

This command has no arguments or keywords.

Command Types

Cisco IOS ATM command.

Command Modes

Available in all ATM command modes.

Usage Guidelines

To list all commands available for a particular command mode, enter a question mark (**?**) at the system prompt.

To obtain commands that begin with a particular character string, enter the abbreviated command entry and then a question mark (**?**). This form of help is called word help, because it lists only the keywords or arguments that begin with the abbreviation you entered.

To list associated keywords or arguments for a command, enter a question mark (**?**) in place of a keyword or argument on the command line. This form of help is called command syntax help, because it lists the keywords or arguments that apply based on the command, keywords, and arguments you have already entered.

Examples

This example shows how to display a brief description of the help system:

```
ATM#help
Help may be requested at any point in a command by entering
a question mark '?'.  If nothing matches, the help list will
be empty and you must backup until entering a '?' shows the
available options.
Two styles of help are provided:
1. Full help is available when you are ready to enter a
   command argument (e.g. 'show ?') and describes each possible
   argument.
2. Partial help is provided when an abbreviated argument is entered
   and you want to know what arguments match the input
   (e.g. 'show pr?'.)
```

This example shows how to use word help to display the privileged EXEC commands that begin with the letters *co*:

```
ATM#co?
configure copy
```

history—ATM

Use the **history** command to enable the command history function or to change the command history buffer size for a particular line. Use the **no** form of this command to disable the command history feature.

[**no**] **history** [**size** *number-of-lines*]

Syntax Description

size *number-of-lines*	(Optional) Keyword to specify the number of command entries that the system will record in its history buffer. The range of *number-of-lines* is 0 to 256.

Defaults

The default is *number-of-lines* is set to 10.

Command Types

Cisco IOS ATM command.

Command Modes

Line configuration.

Usage Guidelines

The **history** command provides a record of EXEC commands you have entered. This feature is useful for recalling long or complex commands or entries, such as access lists.

The **history** command enables the history function with the last buffer size specified or with the default of ten lines if there was no prior setting. The **history size** *number-of-lines* command sets the number of command entries stored in the command history buffer.

The **no history** command disables the history feature but remembers the buffer size if it was set to a value other than the default. The **no history size** command resets the buffer size to the default.

Table 7-2 lists the keys and functions you can use to recall commands from the command history buffer.

Table 7-2 History Keys

Key	Function
Up Arrow or Ctrl-P[1]	Recalls commands in the history buffer in a backward sequence, beginning with the most recent command. Repeat the key sequence to recall older commands.
Down Arrow or Ctrl-N[1]	Returns to more recent commands in the history buffer after recalling commands with the up arrow or Ctrl-P. Repeat the key sequence to recall more recent commands.

1. The arrow keys function only with ANSI-compatible terminals such as VT100s.

Examples

This example shows how to configure virtual terminal line 4 with a history buffer size of 35 lines:

```
ATM#config terminal
Enter configuration commands, one per line. End with Ctrl-Z.
ATM(config)#line vty 4
ATM(config-line)#history size 35
ATM(config-line)#
```

Related Commands

show history

interface

Use the **interface** command within privileged EXEC mode to enter the interface configuration mode.

interface *atm_num*[*.sub_interface_num* **mul**] | *loopback_num*

Syntax Description

atm_num	Number of the ATM interface; valid values are from 0 to 4294967295.
.sub_interface_num	(Optional) Number of the subinterface.
mul	(Optional) Keyword to specify multipoint.
loopback_num	Loopback interface number; valid values are from 0 to 2147483647.

Defaults

This command has no default settings.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration and subinterface configuration.

Usage Guidelines

If you do not specify the **mul** keyword when entering a subinterface number, the CLI does not accept the command.

Examples

This example shows how to enter interface configuration mode for interface atm0:

```
ATM(config)#interface atm0
ATM(config-if)#
```

This example shows how to enter subinterface configuration mode for subinterface atm0.1:

```
ATM(config-if)#interface atm0.1
ATM(config-subif)#
```

lane auto-config-atm-address

Use the **lane auto-config-atm-address** command to specify that the ATM address is computed automatically for the LECS or the LES and LEC, depending on whether the **config** keyword is used. Use the **no** form of this command to remove the previously assigned ATM address.

[**no**] **lane** [**config**] **auto-config-atm-address**

Syntax Description

config (Optional) Keyword to specify the LECS ATM address.

Defaults

The default is that no specific ATM address or method is set.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

When the **config** keyword is not present, this command causes the LES and LEC on the subinterface to use the automatically assigned ATM address for the LECS.

When the **config** keyword is present, this command assigns the automatically generated ATM address to the LECS configured on the interface. Multiple commands that assign ATM addresses to the LECS can be issued on the same interface to assign different ATM addresses to the LECS. Commands that assign ATM addresses to the LECS include **lane auto-config-atm-address**, **lane config-atm-address**, and **lane fixed-config-atm-address**.

Examples

This example shows how to associate the LECS with the database named network1 and how to specify that the LECS ATM address is automatically assigned:

```
ATM(config-if)#lane config auto-config-atm-address
lane database network1
name eng server-atm-address 39.0000014155551211.0800.AA00.1001.02
name mkt server-atm-address 39.0000014155551211.0800.AA00.4001.01
lane config network1
lane auto-config-atm-address
ATM(config-if)#
```

Related Commands

lane config database
lane config-atm-address

lane bus-atm-address

Use the **lane bus-atm-address** command to define the ATM address for the LANE BUS. Use the **no** form of this command to remove the ATM address for the BUS.

[**no**] **lane bus-atm-address** *bus_name atm-addr*

Syntax Description

bus_name	Name of the BUS.
atm-addr	ATM address of the BUS.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to define the ATM address for the LANE BUS:

```
ATM(config-if)#lane bus-atm-address
ATM(config-if)#
```

lane client

Use the **lane client** command to activate a LANE client on the specified subinterface. Use the **no** form of this command to remove a previously activated LANE client on the subinterface.

[**no**] **lane client** [**ethernet** *vlan_num* [*elan-name*]]

Syntax Description

ethernet	Keyword to indicate the type of ELAN attached to the interface.
vlan_num	Number of the VLAN that corresponds to the specified ELAN.
elan-name	(Optional) Name of the ELAN. This argument is optional because the client obtains its ELAN name from the configuration server. Maximum length for *elan-name* is 32 characters.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

If you already entered a **lane client** command on the subinterface for a different ELAN, the client initiates termination procedures for that ELAN and joins the new ELAN.

If you do not provide an *elan-name* value, the client contacts the server to find which ELAN to join. If you provide an *elan-name* value, the client consults the configuration server to ensure that no conflicting bindings exist.

Examples

This example shows how to activate the LANE client for a VLAN 3 called eng:

```
ATM(config-subif)#lane client ethernet vlan 3 eng
```

Related Commands

lane client-atm-address

lane client-atm-address

Use the **lane client-atm-address** command to specify an ATM address and to override automatic ATM address assignment for the LANE client on the specified subinterface. Use the **no** form of this command to remove the ATM address previously specified for the LANE client on the specified subinterface and revert to automatic address assignment.

[**no**] **lane client-atm-address** *atm-address-template*

Syntax Description

atm-address-template	ATM address or a template in which wildcard characters are replaced by any nibble or group of nibbles of the prefix bytes, the ESI bytes, or the selector byte of the automatically assigned ATM address.

Defaults

The default is automatic ATM address assignment.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

If you use this command on a selected subinterface, but with a different ATM address than was used previously, it replaces the LANE client's ATM address.

A LANE ATM address has the same syntax as an NSAP (but it is not a network-level address):

- A 13-byte prefix that includes the following fields defined by the ATM Forum: AFI field (1 byte), DCC or ICD field (2 bytes), DFI field (1 byte), Administrative Authority field (3 bytes), Reserved field (2 bytes), Routing Domain field (2 bytes), and Area field (2 bytes).
- A 6-byte ESI.
- A 1-byte selector field.

LANE ATM address templates can use two types of wildcards: an asterisk (*) to match any single character and an ellipsis (...) to match any number of leading or trailing characters. The values of the characters replaced by wildcards come from the automatically assigned ATM address.

In LANE, a prefix template matches the ATM address prefix explicitly but uses wildcards for the ESI and selector fields. An ESI template matches the ESI field explicitly but uses wildcards for the prefix and selector.

In our implementation of LANE, the prefix corresponds to the switch, the ESI corresponds to the ATM interface, and the Selector field corresponds to the specific subinterface of the interface.

Examples

This example shows how to use an ESI template to specify the part of the ATM address corresponding to the interface; the remaining parts of the ATM address come from automatic assignment, designated by the double asterisks:

```
ATM(config-if)#lane client-atm-address...0800.200C.1001.**
```

This example shows how to use a prefix template to specify the part of the ATM address corresponding to the switch; the remaining parts of the ATM address come from automatic assignment, designated by the ellipses:

```
ATM(config-if)#lane client-atm-address 47.000014155551212f.00.00...
```

Related Commands

lane client

lane client mpoa client name

Use the **lane client mpoa client name** command to bind a LEC to the named MPC. Use the **no** form of this command to unbind the named MPC from a LEC.

[**no**] **lane client mpoa client name** *mpc-name*

Syntax Description

mpc-name Name of the specific MPC.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

When you enter this command, the named MPC binds to a LEC. The named MPC must exist before this command is accepted. If you enter this command before a LEC is configured (not necessarily running), a warning message is issued.

Examples

This example shows how to bind a LEC on a subinterface to the MPC:

```
ATM (config-subif)#lane client mpoa client name ip_mpc
ATM (config-subif)#
```

Related Commands

show mpoa client

lane client qos

Use the **lane client qos** *database_name* command to apply the database to an interface. Use the **no** form of this command to remove the database from the interface.

[**no**] **lane client qos** *database_name*

Syntax Description

database_name Name of the QoS database.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to apply a LANE QoS database to a subinterface:

```
ATM (config-subif)#lane client qos fred
ATM (config-subif)#
```

Related Commands

atm-address
lane qos database
show lane qos database

lane config-atm-address

Use the **lane config-atm-address** command to specify the ATM address of a given configuration server. Use the **no** form of this command to remove an assigned ATM address.

[**no**] **lane config-atm-address** *atm-address-template*

Syntax Description

atm-address-template	ATM address or template in which wildcard characters are replaced by any nibble or group of nibbles of the prefix bytes, the ESI bytes, or the selector byte of the automatically assigned ATM address.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

This command causes the LANE client on the subinterface to use the specified ATM address (rather than the ATM address provided by the ILMI) to locate the configuration server.

A LANE ATM address has the same syntax as an NSAP (but it is not a network-level address):

- A 13-byte prefix that includes the following fields defined by the ATM Forum: AFI field (1 byte), DCC or ICD field (2 bytes), DFI field (1 byte), Administrative Authority field (3 bytes), Reserved field (2 bytes), Routing Domain field (2 bytes), and Area field (2 bytes).
- A 6-byte ESI.
- A 1-byte selector field.

LANE ATM address templates can use two types of wildcards: an asterisk (*) to match any single character and an ellipsis (...) to match any number of leading or trailing characters. The values of the characters replaced by wildcards come from the automatically assigned ATM address.

In LANE, a prefix template explicitly matches the ATM address prefix but uses wildcards for the ESI and selector fields. An ESI template explicitly matches the ESI field but uses wildcards for the prefix and selector.

In our implementation of LANE, the prefix corresponds to the switch, the ESI corresponds to the ATM interface, and the Selector field corresponds to the specific subinterface of the interface.

Examples

This example shows how to specify the ATM address of the LANE configuration server:

```
ATM(config-subif)#lane config-atm-address 39.000000000000014155551211.0800200c1001.00
```

Related Commands **show lane**

lane config database

Use the **lane config database** command to associate a named configuration table (database) with the configuration server on the selected ATM interface. Use the **no** form of this command to remove the association between a named database and the configuration server.

[**no**] **lane config database** *database-name*

Syntax Description

database-name Name of the LANE database.

Defaults

The default is that no configuration server is defined, and no database name is provided.

Command Types

Cisco IOS ATM command.

Command Modes

Global configuration.

Usage Guidelines

This command is valid only on a major interface, not a subinterface, because only one LANE configuration server can exist for a switch cloud.

The named database must exist before you enter the **lane config database** command. See the **lane database** command for more information.

You cannot enter multiple **lane config database** commands on the same interface. You must delete an existing association using the **no** form of this command before you can enter a new association.

Activating a LANE client requires the **lane config database** command and one of these commands: **lane fixed-config-atm-address**, **lane auto-config-atm-address**, or **lane config-atm address**.

Examples

This example shows how to associate a named configuration database with the configuration server:

```
ATM(config)#interface atm0
ATM(config-if)#lane config database test
```

Related Commands

lane auto-config-atm-address
lane config-atm-address
lane database

lane database

Use the **lane database** command to create a named configuration database that can be associated with a configuration server when one is configured. Use the **no** form of this command to delete all entries in the specified database.

[**no**] **lane database** *database-name*

Syntax Description

database-name Database name (32 characters maximum).

Defaults

The default is that no name is provided.

Command Types

Cisco IOS ATM command.

Command Modes

Global configuration.

Usage Guidelines

A LANE database contains entries that bind an ELAN name to the ATM address of the LANE server, bind LANE client MAC addresses to an ELAN name, and bind LANE client ATM address templates to an ELAN name.

Entering the **lane database** command places you in database configuration mode, in which you can enter the **client-atm-address name**, **default name**, **mac-address name**, and **name server-atm-address** commands to create entries in the specified database. When you are done creating entries, type **Ctrl-Z** or **exit** to return to global configuration mode.

Examples

This example shows how to create a configuration database named test:

```
ATM# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
ATM(config)#lane qos database test
ATM(lane-config-database)#end
```

Related Commands

client-atm-address name
default-name
name

lane le-arp

Use the **lane le-arp** command to add a static entry to the LE ARP table of the LANE client configured on the subinterface. Use the **no** form of this command to remove a static entry.

[**no**] **lane le-arp** *mac-addr atm-addr*

Syntax Description

mac-addr MAC address to bind to the specified ATM address.

atm-addr ATM address to bind to the specified MAC address.

Defaults

The default is that no static address bindings are provided.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

This command only adds or removes a static entry binding a MAC address to an ATM address. It does not add or remove dynamic entries. Removing the static entry for a specified ATM address from an LE ARP table does not release Data Direct VCCs established to that ATM address. However, clearing a static entry clears any fast-cache entries that were created from the MAC address-to-ATM address binding.

Static LE ARP entries are not aged and are not removed automatically.

To remove dynamic entries from the LE ARP table of the LANE client on the specified subinterface, enter the **clear lane le-arp** command.

Examples

This command adds a static entry to the LE ARP table:

```
ATM(config-if)#lane le-arp 0800.aa00.0101 47.000014155551212f.00.00.0800.200C.1001.01
```

Related Commands

show lane le-arp

lane qos database

Use the **lane qos database** command to create the LANE QoS database. Use the **no** form of this command to delete the specified database.

[**no**] **lane qos database** *name*

Syntax Description

name	Database name (32 characters maximum).

Defaults

The default is that no name is provided.

Command Types

Cisco IOS ATM command.

Command Modes

Global configuration.

Examples

This example shows how to create a configuration database named test:

```
ATM# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
ATM(config)#lane qos database test
ATM(lane-config-database)#end
```

Related Commands

atm-address
lane client qos
show lane qos database

lane qos iptos trust

Use the **lane qos iptos trust** global configuration command to change the LANE QoS mode to trusted. Use the **no** form of the command to change the LANE QoS mode to untrusted.

[**no**] **lane qos iptos trust**

Syntax Description

iptos	Keyword to specify the IP Type of Service header.
trust	Keyword to specify the trusted command mode.

Defaults

The default LANE QoS command mode is untrusted.

Command Modes

Global configuration.

Examples

This example shows how to set the mode to trusted:

```
ATM(config)# lane qos iptos trust
ATM(config)
```

Related Commands

atm-address
lane client qos
show lane qos database

lane register

Use the **lane register** command to register a LANE client connected by a PVC to the LANE server on the subinterface. Use the **no** form of this command to remove a prior entry.

[**no**] **lane register** *vcd mac-addr atm-addr*

Syntax Description

vcd	Virtual channel descriptor of the Server Direct PVC through which the LANE client is connected to the LANE server.
mac-addr	MAC address of the LANE client.
atm-addr	ATM address of the LANE client.

Defaults

The default is that no PVC is defined, and no MAC address and ATM address are provided.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

Ordinarily, SVCs are used instead of PVCs for communications within ELANs, and registration occurs dynamically via the LANE protocol. Use the **lane register** command only when you use PVCs.

If you use PVCs instead of SVCs for Server Direct circuits between the LANE server and LANE clients, use this command on the LANE server to identify the MAC address and the ATM address of the LANE client at the other end of a virtual circuit. If the client at the other end has a different ATM address, it is not allowed to join the ELAN.

Use the **lane pvc** command on a LANE client and the **lane register** command on a LANE server to enable PVCs, instead of SVCs alone, for LANE. The *vcd* value in the **lane register** command must match the *vcd* value in a **lane pvc** command and in an **atm pvc** command.

If you use PVCs for the Control Direct VCCs, you must also use PVCs for the Control Distribute VCCs. If you use PVCs for the Multicast Send VCCs, you must also use PVCs for the Multicast Forward VCCs.

Examples

This example shows how to register a LANE client connected by a PVC to the LANE server on the subinterface:

```
ATM(config)#interface atm0.1
ATM(config-subif)#lane register 98 0800.aa00.0101 47.000014155551212f.00.00.0800.200C.1001.01
ATM(config-subif)#end
```

Related Commands **show lane**

lane server-atm-address

Use the **lane server-atm-address** command to configure the LES ATM address. Use the **no** form of this command to delete the specified LES.

[**no**] **lane server-atm-address** *les_name atm-address-template*

Syntax Description

les_name	Name of the LES.
atm-address-template	ATM address or template in which wildcard characters are replaced by any nibble or group of nibbles of the prefix bytes, the ESI bytes, or the selector byte of the automatically assigned ATM address.

Defaults

The default is Ethernet.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

For complete information on using ATM address templates, refer to the "Configuring ATM LANE Emulation" chapter in the *Software Configuration Guide* for your switch.

Examples

This example shows how to configure the LES ATM address:

```
ATM(config-if)#lane server-atm-address 39.000000000000014155551211.0800200c1001.00.
ATM(config-if)#
```

lane server-bus

Use the **lane server-bus** command to configure the LES and BUS for the specified ELAN on the subinterface. Use the **no** form of this command to delete the specified LES/BUS.

[**no**] **lane server-bus** {**ethernet** | **tokenring**} *elan_name* [**elan-id** *id*]

Syntax Description

ethernet	Keyword to specify an Ethernet network.
tokenring	Keyword to specify a Token Ring network.
elan_name	Name of the ELAN.
elan-id	(Optional) Keyword to specify the ELAN ID.
id	ELAN ID of the ELAN.

Defaults

The default is Ethernet.

Note Only emulated Ethernet LANs are supported.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

The LES/BUS of an ELAN must be co-located.

The maximum length of the *elan_name* is 32 characters.

If you have already entered the **lane server-bus** command on the subinterface for a different ELAN, the LES terminates procedures with all LECs and appears as the LES for the new ELAN.

To participate in MPOA, a LEC must have an ELAN ID. The **lane server-bus** command enables the LEC to obtain the ELAN ID from the LES when the LEC bypasses the LECS phase.

Caution If an ELAN ID is supplied, ensure that it corresponds to the same ELAN ID value specified in the LECS for the same ELAN.

You can also enter the **name elan-id** command to obtain the ELAN ID from the LECS. The **no** form of this command removes a previously configured LES/BUS on the subinterface.

Examples

This example shows how to enable the LES/BUS for an Ethernet ELAN:

```
ATM(config-subif)#lane server-bus ethernet default
ATM(config-subif)#end
```

Related Commands

lane server-atm-address
name

mac-address

Use the **mac-address** command to set the MAC layer address.

mac-address *ieee-address*

Syntax Description

ieee-address	48-bit IEEE MAC address written as a dotted triplet of 4-digit hexadecimal numbers.

Defaults

The default is no MAC layer address is set.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

If you have a LECS, LES, or BUS configured on an ATM module, and you replace the supervisor engine or move the ATM module from one slot to another, you can enter the **mac-address** command to modify the default ATM address network service access points (NSAPs). This way, if you replace the supervisor engine or move the ATM module from one slot to another, the NSAP is taken from the MAC address instead of the supervisor engine.

Examples

This example shows how to set the MAC layer address, where xx.xxxx is an appropriate second half of the MAC address to use:

```
ATM(config-if)#mac-address 5000.5axx.xxxx
```

mpoa client config name

Use the **mpoa client config name** command to define an MPC with a specified name. Use the **no** form of this command to delete the MPC.

[**no**] **mpoa client config name** *mpc-name*

Syntax Description

mpc-name Name of the specific MPC.

Defaults

The system defaults are as follows:

- shortcut-frame-count default is 10 frames.
- shortcut-frame-time default is 1 second.
- ATM address is autogenerated.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

When you enter this command, you are placed in the MPC configuration/definition mode. From here, you can enter subcommands to define or change MPC variables specific only to this MPC. Note that the MPC is not functional until it is attached to a hardware interface.

Examples

This example shows how to create or modify the MPC named ip_mpc:

```
ATM> enable
ATM#configure
ATM (config)#mpoa client config name ip_mpc
mpoa-client-config#
```

Related Commands

atm-address
shortcut-frame-count
shortcut-frame-time

mpoa client name

Use the **mpoa client name** command to attach an MPC to a major ATM interface. Use the **no** form of this command to break the attachment.

[**no**] **mpoa client name** *mpc-name*

Syntax Description

mpc-name Name of the specific MPC.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

The **mpoa client name** command provides an interface to the MPC through which the MPC can set up and receive calls.

When you enter this command on a major interface that is up and operational, the named MPC becomes operational. After the MPC is fully operational, it can register its ATM address.

Examples

This example shows how to attach the MPC ip_mpc to an interface:

```
ATM (config)#mpoa client config name ip_mpc
mpoa-client-config#interface atm 1/0
config-if#mpoa client name ip_mpc
config-if#
```

Related Commands

show mpoa client
mpoa client config name
show mpoa default-atm-addresses

mpoa server config name

Use the **mpoa server config name** command to define an MPS with the specified name. Use the **no** form of this command to delete an MPS.

[**no**] **mpoa server config name** *mps-name*

Syntax Description

mps-name Name of the specific MPS.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Global configuration.

Usage Guidelines

The **mpoa server config name** command defines an MPS with the specified name. The MPS does not start functioning until it is attached to a specific hardware interface. Once that attachment is complete, the MPS starts functioning. When you configure or create an MPS, you automatically enter the MPS configuration mode.

You can define the MPS variables specific to an MPS, only after that MPS is defined with a specified name. After you enter this command, you may enter further commands to change MPS variables that are specific only to this MPS.

Examples

This example shows how to attach the MPC ip_mpc to an interface:

```
ATM (config)#mpoa client config name ip_mpc
mpoa-client-config#interface atm 1/0
config-if#mpoa client name ip_mpc
config-if#
```

Related Commands

show mpoa client
mpoa client config name
show mpoa default-atm-addresses

mtu

Use the **mtu** command to set the interface MTU.

mtu *size*

Syntax Description

size	MTU size in bytes. Valid values are from 64 to 17944. Valid ATM values are 1500, 4528, and 9218 for Ethernet; and 4490 and 9180 for Token Ring.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

This command is not supported by these modules:

- ATM LANE single PHY OC-3 (WS-X5153, WS-X5154, and WS-X5155)
- ATM LANE dual PHY OC-3 (WS-X5156, WS-X5157, and WS-X5158)
- ATM dual PHY DS3 (WS-X5166)
- ATM dual PHY OC-12 (WS-X5161 and WS-X5162)
- ATM dual PHY OC-3 (WS-X5167 and WS-X5168)

Examples

This example shows how to set the MTU to 1500 for an Ethernet module:

```
ATM (config-if)#mtu 1500
ATM (config-if)#
```

Related Commands

show vlan

name

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

[**no**] **name** *elan-name* **elan-id** *id* {**local-seg-id** | **new-name** | **preempt** | **restricted** | **server-atm-address** | **un-restricted**} *atm-addr*

Syntax Description

elan_name	Name of the ELAN.
elan_id	Keyword to specify the ELAN ID of the ELAN.
id	ELAN ID of the ELAN.
local-seg-id	Keyword to specify the local segment number for this emulated TR LAN.
new-name	Keyword to introduce a new name for this ELAN.
preempt	Keyword to turn on higher priority LES preemption.
restricted	Keyword to close this ELAN to access by name only.
server-atm-address	Keyword to specify the LES-NSAP address for this ELAN.
un-restricted	Keyword to open this ELAN to access by name only.
atm-addr	ATM address of the LANE client.

Defaults

The default has higher priority LES preemption off.

Command Types

Cisco IOS ATM command.

Command Modes

Database configuration.

Usage Guidelines

Use this command when setting up the LECS database on Catalyst 5000 family and 2926G series switches or when configuring the address of a LES/BUS.

When you enter the **name** *elan-name* **elan-id** *id* **preempt** command to turn on higher priority LES preemption, if the primary LANE server (LES) fails, a switchover to a secondary LES occurs. But when a LES that is ranked higher in the priority list becomes active, 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.

The **new-name** and **preempt** keywords are supported in Catalyst 5000 and 2926G series ATM software release 3.2(8) and later.

Examples

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

```
ATM(lane-config-database)#name default server-atm-address
47.009181000000061705b7701.00400BFF0011.00
ATM(lane-config-database)#
```

Related Commands

lane database
default-name

reload—ATM

Use the **reload** command to halt and perform a cold restart on the module.

reload

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Usage Guidelines

The **reload** command halts the ATM module. If you set the ATM module to restart on error, it reboots itself. Use the **reload** command after you enter configuration information into a file and save to the startup configuration.

Once you have confirmed the reload, you are logged out of the session and returned to the Console> prompt.

You cannot reload from a virtual terminal if the system is not set up for automatic booting. This restriction prevents the system from dropping to the ROM monitor and taking the system out of the remote user's control.

If you modify your configuration file, the system prompts you to save the configuration. During a save operation, the system asks you if you want to proceed with the save if the CONFIG_FILE environment variable points to a startup configuration file that no longer exists. If you say "yes" in this situation, the system goes to **setup** mode upon reload.

Examples

This example shows how to reload the system from the privileged EXEC prompt:

```
ATM#reload

System configuration has been modified. Save? [yes/no]: y
Building configuration...
[OK]
Proceed with reload? [confirm]
Console>
```

shortcut-frame-count

Use the **shortcut-frame-count** command to specify the maximum number of times a packet can be routed to the default router within the shortcut-frame time before an MPOA resolution request is sent. Use the **no** form of this command to restore the default shortcut-setup frame count value.

[**no**] **shortcut-frame-count** *count*

Syntax Description

count Shortcut-setup frame count.

Defaults

The default is 10 frames.

Command Types

Cisco IOS ATM command.

Command Modes

MPC configuration.

Examples

This example shows how to set the shortcut-setup frame count to 5 for the MPC:

```
mpoa-client-config#shortcut-frame-count 5
mpoa-client-config#
```

Related Commands

atm-address
mpoa client config name
shortcut-frame-time

shortcut-frame-time

Use the **shortcut-frame-time** command to set the shortcut-setup frame time (in seconds) for the MPC. Use the **no** form of this command to restore the default shortcut-setup frame-time value.

[**no**] **shortcut-frame-time** *time*

Syntax Description

time (Optional) Shortcut-setup frame time in seconds.

Defaults

The default is 1 second.

Command Types

Cisco IOS ATM command.

Command Modes

MPC configuration.

Examples

This example shows how to set the shortcut-setup frame time to 7 for the MPC:

```
mpoa-client-config#shortcut-frame-time 7
mpoa-client-config#
```

Related Commands

atm-address
mpoa client config name
shortcut-frame-count

show atm ilmi-status atm

Use the **show atm ilmi-status atm** command to display ILMI-related information.

show atm ilmi-status atm *mod_num/subcard_num/port_num*

Syntax Description

mod_num/	Number of the module.
subcard_num	Number of the submodule.
port_num	Number of the port for the ATM interface.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display ILMI-related information.

```
ATM#show atm ilmi-status atm 0/0/3
Interface : ATM0/0/3 Interface Type : Private UNI (Network-side)
ILMI VCC : (0, 16) ILMI Keepalive : Enabled (5 Seconds)
Addr Reg State:   UpAndNormal
Peer IP Addr:     0.0.0.0
Peer MaxVPIbits:  8               Peer MaxVCIbits:  14
Configured Prefix(s) :
47.0091.8100.0000.0041.0b0a.1081
47.0091.8100.0000.0060.3e5a.db01
47.0091.8100.5670.0000.0000.1122
```

Table 7-3 describes the fields shown in the **show atm ilmi-status atm** output.

Table 7-3 show atm ilmi-status Command Output Fields

Field	Description
Interface	Number of the module, submodule, and port of the specified ATM interface.
Interface Type	Type of interface for the specified ATM interface.
ILMI VCC	Number of the current ILMI VCC for the specified ATM.
ILMI Keepalive	Status and the set time for the ILMI for the specified ATM.
Configured Prefix	Prefix for the ATM.

show atm interface atm0

Use the **show atm interface atm0** command to display information about the ATM interface.

show atm interface atm0

Note The interface number **atm0** must always be used for the Catalyst 5000 family and 2926G series ATM module.

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display statistics on the ATM module:

```
ATM#show atm interface atm0
ATM interface ATM0:
AAL enabled:  AAL5 , Maximum VCs: 4096, Current VCCs: 2
Tx buffers 32, Rx buffers 32, Exception Queue: 32, Raw Queue: 32
VP Filter: 0x0, VCIs per VPI: 1024, Max. Datagram Size:1580
PLIM Type:SONET - 155Mbps, TX clocking: LINE
0 input, 0 output, 0 IN fast, 0 OUT fast
Config. is ACTIVE
ATM#
```

Table 7-4 describes the fields in the **show atm interface atm0** output.

Table 7-4 show atm interface atm0 Command Output Fields

Field	Description
ATM interface	ATM interface number.
AAL enabled	AAL type currently enabled.
Maximum VCs	Maximum number of virtual connections this interface can support.
Current VCCs	Number of virtual connections currently active on the interface.
Tx buffers	Number of transmit buffers on the interface.
Rx buffers	Number of receive buffers on the interface.

Table 7-4 show atm interface atm0 Command Output Fields (continued)

Field	Description
VCIs per VPI	Maximum number of VCIs to support per VPI (as configured using the **atm vc-per-vp** command).
Max. Datagram Size	Maximum datagram size supported by the interface.
PLIM Type	PLIM type and speed.
TX clocking	Transmit clocking method used on the interface.
input	Number of packets received from process switch.
output	Number of packets sent to process switch.
IN fast	Number of packets received from fast process switch.
OUT fast	Number of packets sent to fast process switch.
Config. is	Status of the configuration: ACTIVE or VALID in *n* SECONDS. ACTIVE indicates that the current Catalyst 5000 family and 2926G series switch configuration has been loaded into the switch and is being used. VALID in *n* SECONDS indicates that the configuration will be active in *n* seconds. There is a 5-second inactive period whenever a new configuration is sent to the Catalyst 5000 family and 2926G series switch.

show atm traffic

Use the **show atm traffic** command to display current global ATM traffic information to and from all ATM networks connected to the ATM module.

show atm traffic

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows sample output from the **show atm traffic** command:

```
ATM#show atm traffic
949 Input packets
948 Output packets
0 Broadcast packets
0 Packets received on non-existent VC
0 Packets attempted to send on non-existent VC
0 OAM cells received
0 OAM cells sent
ATM#
```

Table 7-5 describes the fields in the **show atm traffic** output.

Table 7-5 show atm traffic Command Output Fields

Field	Description
Input packets	Total number of input ATM packets.
Output packets	Total number of nonbroadcast output ATM packets.
Broadcast packets	Total number of broadcast output ATM packets.
Packets received on nonexistent VC	Number of packets received addressed to a virtual connection that is not configured.
Packets attempted to send on nonexistent VC	Number of packets attempted to send to a virtual connection that is not configured.
OAM cells received	Number of OAM cells received.
OAM cells sent	Number of OAM cells sent.

Related Commands

atm pvc

show atm vc

Use the **show atm vc** command to display the active ATM virtual connections (PVCs and SVCs) and traffic information.

show atm vc [*vcd*]

Syntax Description

vcd	(Optional) Number of the virtual connection for which information is displayed.

Defaults

If you do not specify a *vcd*, the command displays information for all SVCs. The output is in summary form (one line per VC).

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display statistics for all VCs:

```
ATM#show atm vc
                                        AAL /         Peak   Avg.  Burst
Interface     VCD   VPI   VCI Type  Encapsulation  Kbps   Kbps  Cells Status
ATM0            1     0     5  PVC  AAL5-SAAL          0      0     0 INACTIVE
ATM0            2     0    16  PVC  AAL5-ILMI          0      0     0 INACTIVE
ATM#
```

Table 7-6 describes the fields in the **show atm vc** output.

Table 7-6 show atm vc Command Output Fields

Field	Description
Interface	Interface on which the VC is configured.
VCD	VCD of the VC.
VPI	VPI of the VC.
VCI	VCI of the VC.
Type	Type of virtual connection (PVC or SVC).
AAL/Encapsulation	AAL type and encapsulation type configured for the virtual connection.
Status	Status of the virtual connection (ACTIVE or INACTIVE).

show atm vlan

Use the **show atm vlan** command to display the active VLAN-to-PVC bindings.

show atm vlan [*vlan_num*]

Syntax Description

vlan_num	(Optional) Number of the VC about which information is displayed. The range of *vlan_num* is 1 to 1023.

Defaults

If you do not specify a *vlan_num*, all active VLAN-to-PVC bindings are displayed.

Command Types

Cisco IOS ATM command.

Command Modes

Privileged EXEC.

Examples

After entering the **show atm vlan** command, you see this display:

```
ATM#show atm vlan
VCD     VLAN-ID
10      5
11      5
ATM#
```

The display shows the VCD of the VC and the VLAN-ID of the VLAN to which the VC belongs.

show history

Use the **show history** command to list the commands you have entered in the current EXEC session.

show history

Syntax Description

This command has no arguments or keywords.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Usage Guidelines

The command history feature provides a record of EXEC commands you have entered. The number of commands the history buffer records is determined by the **history size** line configuration command or the **terminal history size** EXEC command.

Table 7-7 lists the keys and functions you can use to recall commands from the command history buffer.

Table 7-7 History Keys

Key	Function
Up arrow or Ctrl-P [1]	Recalls commands in the history buffer in a backward sequence, beginning with the most recent command. Repeat the key sequence to recall older commands.
Down arrow or Ctrl-N [1]	Returns to more recent commands in the history buffer after recalling commands with Ctrl-P or the up arrow. Repeat the key sequence to recall more recent commands.

1. The arrow keys function only with ANSI-compatible terminals such as VT100s.

Examples

This example shows how to list the command history:

```
ATM#show history
  enable
  show atm traffic
  show atm vlan
  show lane
  show history
ATM#
```

show lane

Use the **show lane** command to display global and per-VCC LANE information for all the LANE clients configured on an interface, a subinterface, or an ELAN.

show lane [**interface atm0**[**.***subinterface*] | **name** *elan-name*] [**brief**]

Note This command displays exactly the same information as the **show lane client** command.

Syntax Description

interface atm0	(Optional) Keyword to specify ATM interface 0.
.*subinterface*	(Optional) Number of the subinterface; the period (.) is required.
name *elan-name*	(Optional) Keyword to specify the name of an ELAN; the maximum length of *elan-name* is 32 characters.
brief	(Optional) Keyword to display only global information, not per-VCC information.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows sample output of the **show lane** command:

```
ATM#show lane
LE Client ATM0.2  ELAN name: blue  Admin: up  State: operational
Client ID: 1
HW Address: 0040.0bf0.0020   Type: ethernet            Max Frame Size: 1516
ATM Address: 39.000000550055005500550055.00400BF00020.02

 VCD  rxFrames  txFrames  Type       ATM Address
 0         0         0  configure 39.000000550055005500550055.00000C0425C2.00
 14        3         4  direct    39.000000550055005500550055.00000C0425C0.01
 15        1         0  distribute39.000000550055005500550055.00000C0425C0.01
 16        0         8  send      39.000000550055005500550055.00000C0425C1.01
 17        14        0  forward   39.000000550055005500550055.00000C0425C1.01
 18        25        28 data      39.000000550055005500550055.00400BF00420.00

ATM#
```

Table 7-8 describes the fields in the **show lane** output.

Table 7-8 show lane Command Output Fields

Field	Description
LE Client	Interface or subinterface this LANE client is on.
ELAN name	Name of the ELAN this client is linked to.
State	Status of this LANE client. Possible states include initialState, lecsConnect, configure, join, busConnect, and operational.
HW Address	MAC address, in dotted hexadecimal notation, assigned to this LANE client.
Type	ELAN type.
Max Frame Size	Maximum frame size on this ELAN.
ATM Address	ATM address of the LANE client.
VCD	VCD for the VCCs established for this LANE client.
rxFrames	Number of frames received on the VCC.
txFrames	Number of frames transmitted on the VCC.
Type	Type of VCC. Possible VCC types are configure, direct, distribute, send, forward, and data.
ATM Address	ATM address of the LANE component at the other end of the VCC.

Related Commands

show lane bus
show lane client
show lane config
show lane default-atm-addresses
show lane le-arp
show lane server

show lane bus

Use the **show lane bus** command to display LANE information for the BUSs configured on all servers, on a specified interface, or on an ELAN.

show lane bus [**interface atm0**[**.***subinterface*] | **name** *elan-name*] [**brief**]

Syntax Description

interface atm0	(Optional) Keyword to specify ATM interface 0.
.*subinterface*	(Optional) Number of the subinterface; the period (.) is required.
name *elan-name*	(Optional) Keyword to specify an ELAN; the maximum length of *elan-name* is 32 characters.
brief	(Optional) Keyword to display only global information, not per-VCC information.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display information about all LANE BUSs:

```
ATM#show lane bus
LE BUS ATM0.1  ELAN name: default  Admin: up  State: operational
type: ethernet         Max Frame Size: 1516
ATM address: 47.009181000000000061705B8301.00400B020012.01
data forward: vcd 16, 4 members, 31324 packets, 0 unicasts

lecid  vcd     pkts   ATM Address
    1   13        0 47.009181000000000061705B8301.00400B020010.01
    2   19        0 47.009181000000000061705B8301.00400B010040.01
    3   22    31321 47.009181000000000061705B8301.00400BC5D430.01
    4  171        3 47.009181000000000061705B8301.0060705B8302.00
```

Table 7-9 describes the fields in the **show lane bus** output.

Table 7-9 show lane bus Output Fields

Field	Description
LE BUS	Interface or subinterface on which the BUS is configured.
ELAN name	Name of the ELAN with which the BUS is associated.
State	State of the BUS.
type	Type of ELAN.
Max Frame Size	Maximum frame size allowed on the ELAN.

Table 7-9 show lane bus Output Fields (continued)

Field	Description
ATM address	ATM address of the BUS.
data forward	Information about data forwarding performed by the BUS.

Related Commands

show lane
show lane client
show lane config
show lane default-atm-addresses
show lane le-arp
show lane server

show lane client

Use the **show lane client** command to display global and per-VCC LANE information for all the LANE clients configured on an interface, a subinterface, or an ELAN.

show lane client [**interface atm0**[**.***subinterface*] | **name** *elan-name*] [**brief**]

Note This command displays the same output as the **show lane** command.

Syntax Description

interface atm0	(Optional) Keyword to specify ATM interface 0.
.*subinterface*	(Optional) Number of the subinterface. The period (.) is required.
name *elan-name*	(Optional) Keyword to specify the name of an ELAN. The maximum length of *elan-name* is 32 characters.
brief	(Optional) Keyword to display only global information, not per-VCC information.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display LANE client information:

```
ATM#show lane client
LE Client ATM0.2  ELAN name: blue  Admin: up  State: operational
Client ID: 1
HW Address: 0040.0bf0.0020   Type: ethernet            Max Frame Size: 1516
ATM Address: 39.000000550055005500550055.00400BF00020.02

 VCD  rxFrames  txFrames  Type       ATM Address
 0         0         0  configure 39.000000550055005500550055.00000C0425C2.00
 14        3         4  direct    39.000000550055005500550055.00000C0425C0.01
 15        1         0  distribute39.000000550055005500550055.00000C0425C0.01
 16        0         8  send      39.000000550055005500550055.00000C0425C1.01
 17        14        0  forward   39.000000550055005500550055.00000C0425C1.01
 18        25        28 data      39.000000550055005500550055.00400BF00420.00

ATM#
```

For a description of the fields in the **show lane client** command output, see Table 7-13.

Related Commands

show lane
show lane bus
show lane config
show lane default-atm-addresses
show lane le-arp

show lane config

Use the **show lane config** command to display LANE information about the LECS.

show lane config [**interface atm0**] [**brief**]

Syntax Description

interface atm0	(Optional) Keyword to specify the ATM interface.
brief	(Optional) Keyword to display only global information, not per-VCC information.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display information about the LECS:

```
ATM#show lane config
LE Config Server ATM0 config table: test
Admin: up  State: operational
LECS Mastership State: active master
list of global LECS addresses (0 seconds to update):
47.009181000000000061705B8301.00400B020013.00  <-------- me
47.009181000000000061705B8301.00400B010043.00 connected outgoing call (vcd 24)
ATM Address of this LECS: 47.009181000000000061705B8301.00400B020013.00 (auto)
 vcd  rxCnt  txCnt  callingParty
   7      4      4  47.009181000000000061705B8301.00400B020011.01 LES default 0 active
  26      0      0  47.009181000000000061705B8301.00400B010041.01 LES default 1 backup
cumulative total number of unrecognized packets received so far: 0
cumulative total number of config requests received so far: 151
cumulative total number of config failures so far: 143
    cause of last failure: no configuration
    culprit for the last failure: 47.009181000000000061705B8301.0060705B8302.00
ATM#
```

Table 7-10 describes the fields in the **show lane config** output.

Table 7-10 show lane config Output Fields

Field	Description
LE Config Server ATM0 config table	LECS table.
State	Operational state of the LECS.
LECS Mastership State	Master state of the LECS.

Table 7-10 show lane config Output Fields (continued)

Field	Description
list of global LECS addresses (0 seconds to update)	ATM addresses of the LECS on the network (and the number of seconds until the list is next updated).
ATM Address of this LECS	ATM address of the LECS configured on this interface.
cumulative total number of unrecognized packets received so far	Number of unrecognized packets received by the LECS.
cumulative total number of config requests received so far	Number of configuration requests received by the LECS.
cause of last failure	Cause of the last configuration failure.
culprit for the last failure	ATM address of the device that caused the last configuration failure.

Related Commands

show lane
show lane bus
show lane client
show lane default-atm-addresses
show lane le-arp
show lane server

show lane default-atm-addresses

Use the **show lane default-atm-addresses** command to display default ATM addresses for the LEC, LES/BUS, and LECS.

show lane default-atm-addresses

Syntax Description

This command has no arguments or keywords.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Usage Guidelines

If the two PHYs of the ATM dual PHY card connect to different switches, and if you configure the ATM card to have a LES/BUS or LECS, you must determine the addresses to be used if the first PHY goes down. See the **atm preferred phy** command for more information.

Examples

After entering the **show lane default-atm-addresses** command, you see this display:

```
ATM#show lane default-atm-addresses
interface ATM0:
LANE Client:        ...00E0B06F1840.**
LANE Server:        ...00E0B06F1841.**
LANE Bus:           ...00E0B06F1842.**
LANE Config Server: ...00E0B06F1843.00
note: ** is the subinterface number byte in hex
ATM#
```

The display shows the last 12 digits of the default LEC, LES, BUS, and LECS ATM addresses (followed by the subinterface number).

Related Commands

atm preferred phy
show lane default-atm-addresses

show lane le-arp

Use the **show lane le-arp** command to display the LE ARP table of the LANE client configured on an interface or any of its subinterfaces, on a specified subinterface, or on an ELAN.

show lane le-arp [**interface atm0**[**.***subinterface*] | **name** *elan-name*]

Syntax Description

interface atm0	(Optional) Keyword to specify ATM interface 0.
.*subinterface*	(Optional) Number of the subinterface; the period (.) is required.
name *elan-name*	(Optional) Keyword to specify the name of an ELAN; the maximum length of *elan-name* is 32 characters.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display the LANE ARP table of the LEC:

```
ATM#show lane le-arp
Hardware Addr   ATM Address                                  VCD  Interface
0000.0c15.a2b5  39.000000000000000000000000.00000C15A2B5.01  39  ATM 0.1
0000.0c15.f3e5  39.000000000000000000000000.00000C15F3E5.01  25* ATM 0.1
ATM#
```

Table 7-11 describes the fields in the **show lane le-arp** output.

Table 7-11 show lane le-arp Command Output Fields

Field	Description
Hardware Addr	MAC address, in dotted hexadecimal notation, assigned to the LANE component at the other end of the specified VCD.
ATM Address	ATM address of the LANE component at the other end of the specified VCD.
VCD	Virtual channel descriptor.
Interface	Interface or subinterface used to reach the specified component.

Related Commands

show lane
show lane le-arp

show lane qos database

Use the **show lane qos database** command to display the contents of a specific LANE QoS database.

show lane qos database *name*

Syntax Description

name	LANE QoS database to display.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display the contents of a LANE QoS database:

```
ATM# show lane qos database fred
QOS: fred
    configured cos values: 4-7, usage: 1
    dst nsap: 47.009181000000000061705B0C01.00E0B0951A40.0A
    cos: 7, pcr: 500000, mcr: 100000
```

Related Commands

lane qos database
lane client qos

show lane server

Use the **show lane server** command to display LANE information for the LESs configured on all servers, on a specified interface, or on an ELAN.

show lane server [**interface atm0**[**.***subinterface*] | **name** *elan-name*] [**brief**]

Syntax Description

interface atm0	(Optional) Keyword to specify ATM interface 0.
.*subinterface*	(Optional) Number of the subinterface; the period (.) is required.
name *elan-name*	(Optional) Keyword to specify an ELAN; the maximum length of *elan-name* is 32 characters.
brief	(Optional) Keyword to display only global information, not per-VCC information.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display LANE information for the LES:

```
ATM#show lane server
LE Server ATM0.1  ELAN name: default  Admin: up  State: operational
type: ethernet         Max Frame Size: 1516
ATM address: 47.009181000000061705B8301.00400B020011.01
LECS used: 47.009181000000061705B8301.00400B020013.00 connected, vcd 8
control distribute: vcd 12, 4 members, 9086 packets

proxy/ (ST: Init, Conn, Waiting, Adding, Joined, Operational, Reject, Term)
lecid ST vcd    pkts Hardware Addr  ATM Address
   1P O    9       2 0040.0b02.0010 47.009181000000061705B8301.00400B020010.01
   2P O   18       2 0040.0b01.0040 47.009181000000061705B8301.00400B010040.01
   3P O   21    9084 0040.0bc5.d430 47.009181000000061705B8301.00400BC5D430.01
   4  O  170       2 0060.705b.8302 47.009181000000061705B8301.0060705B8302.00
ATM#
```

Table 7-12 describes the fields in the **show lane server** output.

Table 7-12 show lane server Command Output Fields

Field	Description
LE Server	LES for this interface.
ELAN name	Name of the ELAN associated with this LES.
State	Operational state of the LES.

Table 7-12 show lane server Command Output Fields (continued)

Field	Description
type	ELAN type.
Max Frame Size	Maximum frame size allowed on the ELAN.
ATM address	ATM address of the LES.
LECS used	ATM address of the LECS used by the LES, the connection state, and the VCD used.

Related Commands

show lane
show lane server

show mpoa client

Use the **show mpoa client** command to display a summary of information regarding one or all MPCs.

show mpoa client [**name** *mpc-name*] [**brief**]

Syntax Description

name *mpc-name*	(Optional) Keyword to specify the name of the MPC.
brief	(Optional) Keyword to specify the output limit of the command.

Defaults

The default is that all MPC information is displayed.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Usage Guidelines

If you omit the **name** keyword, the command displays information for all MPCs.

Examples

This example shows output from the **show mpoa client** command:

```
ATM#show mpoa client name ip_mpc brief
MPC Name: ip_mpc, Interface: ATM1/0, State: Up
MPC actual operating address: 47.00918100000000613E5A2F01.0010A6943825.00
Shortcut-Setup Count: 1, Shortcut-Setup Time: 1
Lane clients bound to MPC ip_mpc: ATM1/0.1
Discovered MPS neighbours                  kp-alv   vcd     rxPkts     txPkts
47.00918100000000613E5A2F01.006070174824.00     59    30         28          2
Remote Devices known                                vcd     rxPkts     txPkts
47.00918100000000613E5A2F01.00000C5A0C5D.00          35          0         10
ATM#
```

Table 7-13 describes the fields in the **show mpoa client** output.

Table 7-13 show mpoa client Command Output Fields

Field	Description
MPC Name	Name specified for the MPC.
Interface	Interface to which the MPC is attached.
State	Current state of the MPC.
MPC actual operating address	ATM address of the MPC.

Table 7-13 show mpoa client Command Output Fields

Field	Description
Shortcut-Setup Count	Current number specified by the **shortcut-frame-count** command.
Shortcut-Setup Time	Current value specified by the **shortcut-frame-time** command.
Lane clients bound to MPC ip_mpc	List of LANE clients currently bound to the MPC ip_mpc.
Discovered MPS neighbours	List of learned MPS addresses.
kp-alv	Number of seconds until the next keepalive message should be received.
vcd	Number that identifies the virtual connection.
rxPkts	Number of packets received from the learned MPS.
txPkts	Number of packets transmitted to the learned MPS.
Remote Devices known	List of other devices (typically other MPCs) not in this ELAN.
vcd	Number that identifies the virtual connection to that MPC.
rxPkts	Number of packets received from the learned remote device.
txPkts	Number of packets transmitted to the learned remote device.

Related Commands **mpoa client name**

show mpoa client cache

Use the **show mpoa client cache** command to display the ingress or egress cache entries matching the IP addresses for the MPCs.

show mpoa client [**name** *mpc-name*] **cache** [**ingress** | **egress**] [**ip-address** *ip-address*]

Syntax Description

name *mpc-name*	(Optional) Keyword to specify the name of the MPC.
ingress	(Optional) Keyword to display ingress cache entries associated with an MPC.
egress	(Optional) Keyword to display egress cache entries associated with an MPC.
ip-address *ip-address*	(Optional) Keyword to display cache entries that match the specified IP address.

Defaultss

The system defaults are:

- All MPC information is displayed.
- Both caches are shown.
- All IP address entries are shown.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Usage Guidelines

The more optional parameters specified, the more filtering is applied to the **show** command.

Examples

This example shows output from the **show mpoa client cache** command for a specific MPC:

```
ATM#show mpoa client ip_mpc cache
MPC Name: ip-mpc, Interface: ATM1/0, State: Up
MPC actual operating address: 47.00918100000000613E5A2F01.0010A6943825.00
Shortcut-Setup Count: 1, Shortcut-Setup Time: 1
Number of Ingress cache entries: 1
MPC Ingress Cache Information:
Dst IP addr     State   vcd Expires Egress MPC Atm address
20.20.20.1      RSVLD    35   11:38 47.00918100000000613E5A2F01.00000C5A0C5D.00
Number of Egress cache entries: 1
MPC Egress Cache Information:
Dst IP addr         Dst MAC       Src MAC     MPSid  Elan Expires  CacheId  Tag
10.10.10.1      0000.0c5a.0c58 0060.7017.4820     9     2   11:55        1    1
ATM#
```

Table 7-14 describes the fields in the **show mpoa client cache** output.

Table 7-14 show mpoa client cache Command Output Fields

Field	Description
MPC Name	Name specified for the MPC.
Interface	Interface to which the MPC is attached.
State	Current state of the MPC (up or down).
MPC actual operating address	ATM address of the MPC.
Shortcut-Setup Count	Current number specified by the **shortcut-frame-count** command.
Number of Ingress cache entries	Number of entries in the ingress cache.
MPC Ingress Cache Information:	
Dst IP addr	IP address of the destination.
State	State of the ingress cache entry[1].
vcd	Number that identifies the virtual connection.
Expires	Time in minutes/seconds until the ingress cache entry expires.
Egress MPC Atm address	ATM address of the egress MPC.
Number of Egress cache entries	Number of entries in the egress cache.
MPC Egress Cache Information:	
Dst IP addr	IP address of the destination.
Dst MAC	MAC address of the destination.
Src MAC	MAC address of the source.
MPSid	Unique number representing the egress MPS.
Elan	ELAN identifier of the ELAN serving this destination IP address.
Expires	Time in minutes/seconds until the egress cache entry expires.

Table 7-14 show mpoa client cache Command Output Fields (continued)

Field	Description
CacheID	Cache identifier.
Tag	Tag identifier.

1. Valid states are initialized, trigger, refresh, hold_down, resolved, and suspended.

Related Commands **clear mpoa client cache**

show mpoa client statistics

Use the **show mpoa client statistics** command to display all the statistics collected by an MPC.

show mpoa client [**name** *mpc-name*] **statistics**

Syntax Description

name *mpc-name* (Optional) Keyword to specify the name of the MPC.

Defaults

The defaults are that all the statistics collected by an MPC are displayed.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Usage Guidelines

This command displays all the statistics collected by an MPC.

Examples

This example shows output from the **show mpoa client statistics** command for the MPC ip_mpc:

```
ATM#show mpoa client name ip_mpc statistics
MPC Name: ip_mpc, Interface: ATM1/0, State: Up
MPC actual operating address: 47.00918100000000613E5A2F01.0010A6943825.00
Shortcut-Setup Count: 1, Shortcut-Setup Time: 1

                            Transmitted       Received
MPOA Resolution Requests              2              0
MPOA Resolution Replies               0              2
MPOA Cache Imposition Requests        0              0
MPOA Cache Imposition Replies         0              0
MPOA Cache Purge Requests             0              0
MPOA Cache Purge Replies              0              0
MPOA Trigger Request                  0              0
NHRP Purge Requests                   0              0


Invalid MPOA Data Packets Received: 0
ATM#
```

Related Commands

show mpoa client

show mpoa default-atm-addresses

Use the **show mpoa default-atm-addresses** command to display the default ATM addresses for the MPC.

show mpoa default-atm-addresses

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows output from the **show mpoa default-atm-addresses** command when the switch prefix is NOT available:

```
ATM#show mpoa default-atm-addresses
interface ATM1/0:
MPOA Server: ...006070174824.**
MPOA Client: ...006070174825.**
note: ** is the MPS/MPC instance number in hex

interface ATM2/0:
MPOA Server: ...006070174844.**
MPOA Client: ...006070174845.**
note: ** is the MPS/MPC instance number in hex
ATM#
```

This example shows output from the **show mpoa default-atm-addresses** command when the switch prefix is available:

```
ATM#show mpoa default-atm-addresses
interface ATM1/0:
MPOA Server: 47.0091810000000613E5A2F01.006070174824.**
MPOA Client: 47.0091810000000613E5A2F01.006070174825.**
note: ** is the MPS/MPC instance number in hex

interface ATM2/0:
MPOA Server: 47.10000000000000000000000.006070174844.**
MPOA Client: 47.10000000000000000000000.006070174845.**
note: ** is the MPS/MPC instance number in hex
ATM#
```

Related Commands

atm-address

show sscop

Use the **show sscop** command to show SSCOP details for all ATM interfaces.

show sscop

Syntax Description This command has no arguments or keywords.

Defaults This command has no default setting.

Command Types Cisco IOS ATM command.

Command Modes EXEC.

Examples This example shows sample output from the **show sscop** command:

```
ATM#show sscop
SSCOP details for interface ATM0
   Current State = Idle,   Uni version = 3.0
   Send Sequence Number: Current = 0,  Maximum = 10
   Send Sequence Number Acked = 0
   Rcv Sequence Number: Lower Edge = 0, Upper Edge = 0, Max = 10
   Poll Sequence Number = 0, Poll Ack Sequence Number = 0
   Vt(Pd) = 0
   Connection Control:  timer = 1000
   Timer currently Inactive
   Timer_Keepalive = 30000
   Current Retry Count = 0, Maximum Retry Count = 10
   AckQ count = 0, RcvQ count = 0, TxQ count = 0
   Local connections currently pending = 0
   Max local connections allowed pending = 50
   Statistics -
      Pdu's Sent = 0, Pdu's Received = 0, Pdu's Ignored = 0
      Begin = 0/0, Begin Ack = 0/0, Begin Reject = 0/0
      End = 0/0, End Ack = 0/0
      Resync = 0/0, Resync Ack = 0/0
      Sequenced Data = 0/0, Sequenced Poll Data = 0/0
      Poll = 0/0, Stat = 0/0, Unsolicited Stat = 0/0
      Unassured Data = 0/0, Mgmt Data = 0/0, Unknown Pdu's = 0
ATM#
```

Table 7-15 describes the possible fields (depending on the port type queried) in the **show sscop** output.

Note Interpreting the output of the **show sscop** command requires a thorough understanding of SSCOP. This information is used by Cisco technicians to help diagnose network problems.

Table 7-15 show sscop Command Output Fields

Field	Description
SSCOP details for interface	Interface for which details are returned.
Current State	Current SSCOP state for the interface.
Uni version	Version of UNI configured on the interface.
Send Sequence Number	Current and maximum send sequence number.
Send Sequence Number Acked	Sequence number of packets already acknowledged.
Rcv Sequence Number	Sequence number of packets received.
Poll Sequence Number	Current poll sequence number.
Poll Ack Sequence Number	Poll sequence number already acknowledged.
Vt(Pd)	Number of Pd frames sent that triggers the sending of a Poll frame.
Connection Control	Timer value for establishing and terminating SSCOP, and indicates whether the timer is active or inactive.
Timer_Keepalive	Timer value used to send keepalives on an idle link.
Current Retry Count	Current count of the retry counter.
Maximum Retry Count	Maximum number of retries allowed.
AckQ count	Current value of the acknowledgment queue count.
RcvQ count	Current value of the receive queue count.
TxQ count	Current value of the transmit queue count.
Local connections currently pending	Current number of local connections pending.
Max local connections allowed pending	Maximum number of pending local connections.
Pdu's Sent	Total number of SSCOP frames sent.
Pdu's Received	Total number of SSCOP frames received.
Pdu's Ignored	Number of invalid SSCOP frames ignored.
Begin	Number of Begin frames sent/received.
Begin Ack	Number of Begin Ack frames sent/received.
Begin Reject	Number of Begin Reject frames sent/received.
End	Number of End frames sent/received.
End Ack	Number of End Ack frames sent/received.
Resync	Number of Resync frames sent/received.
Resync Ack	Number of Resync Ack frames sent/received.
Sequenced Data	Number of Sequenced Data frames sent/received.

Table 7-15 show sscop Command Output Fields (continued)

Field	Description
Sequenced Poll Data	Number of Sequenced Poll Data frames sent/received.
Poll	Number of Poll frames sent/received.
Stat	Number of Stat frames sent/received.
Unsolicited Stat	Number of Unsolicited Stat frames sent/received.
Unassured Data	Number of Unassured Data frames sent/received.
Mgmt Data	Number of Mgmt Data frames sent/received.
Unknown Pdu's	Number of Unknown SSCOP frames sent/received.

Related Commands

sscop cc-timer
sscop keepalive-timer
sscop max-cc
sscop poll-timer
sscop receive-window
sscop send-window

show version—ATM

Use the **show version** ATM command to display version information for the ATM module.

show version

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to display version information for the ATM module:

```
ATM#show version
Cisco Internetwork Operating System Software
IOS (tm) C5kATM Software (ALC-A-M), Version 11.2(11P), RELEASE SOFTWARE (fc1)
Copyright (c) 1986-1998 by cisco Systems, Inc.
Compiled Mon 02-Mar-98 13:46 by integ
Image text-base: 0x40010000, data-base: 0x401CB9E0

ROM: System Bootstrap, Version 3.2(11P), SOFTWARE

ATM uptime is 4 weeks, 1 day, 17 hours, 17 minutes
System restarted by power-on
Running default software

cisco C5kALC (68ec030) processor (revision 0x00) with 11264K bytes of memory.
Processor board ID 1610612736, with hardware revision

Last reset from
Authorized for ATM software set. (0x0)
1 Ethernet/IEEE 802.3 interface(s)
1 ATM network interface(s)
127K bytes of non-volatile configuration memory.

Configuration register is 0x1901
ATM#
```

Table 7-16 describes the fields in the **show version** output.

Table 7-16 show version Command Output Fields

Field	Description
Version	Version information for the Catalyst 5000 family and 2926G series ATM module software.
Compiled	Date and time the software was compiled.

Table 7-16 show version Command Output Fields (continued)

Field	Description
ROM: System Bootstrap, Version	Bootstrap version.
ATM Module uptime is	Amount of uninterrupted time that the system has been up and running.
System restarted by	Status on how the system was last booted, either as a result of normal system startup or of system error. For example, an attempt to access a nonexistent address results in this bus error: `System restarted by bus error at PC 0xC4CA, address 0x210C0C0`
Running default software	If the software was booted over the network, the Internet address of the boot host is shown. If the software was loaded from onboard ROM, this line reads "Running default software." In addition, the names and sources of the host and network configuration files are shown.
cisco....	The remaining output shows the hardware configuration and any nonstandard software options.
Configuration register is	Configuration register contents, displayed in hexadecimal notation.

shutdown

Use the **shutdown** command to shut down a physical interface. Use the **no** form of this command to restart the interface.

[**no**] **shutdown**

Syntax Description

This command has no arguments or keywords.

Defaults

The interface is enabled.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to access and shut down the atm0 interface:

```
ATM(config)#interface atm0
ATM(config-if)#shutdown
ATM(config-if)#
```

This example shows how to access and then restart the atm0 interface:

```
ATM(config)#interface atm0
ATM(config-if)#no shutdown
ATM(config-if)#
```

sscop cc-timer

Use the **sscop cc-timer** command to change the SSCOP connection control timer value. Use the **no** form of this command to restore the default value.

[**no**] **sscop cc-timer** *msecs*

Syntax Description

msecs	Number of microseconds between Begin messages; the range of *msecs* is from 1 to 60000.

Defaults

The default SSCOP connection control timer value is 10 seconds.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

The SSCOP connection control timer determines the time between transmission of SSCOP BGN, END, or RS PDUs as long as an acknowledgment has not been received.

Examples

This example shows how to set the SSCOP connection control timer value to 15 microseconds:

```
ATM(config-if)#sscop cc-timer 15
```

Related Commands

show sscop

sscop keepalive-timer

Use the **sscop keepalive-timer** command to change the SSCOP keepalive timer value. Use the **no** form of this command to restore the default value.

[**no**] **sscop keepalive-timer** *msecs*

Syntax Description

msecs	Number of microseconds the ATM module waits between transmission of poll PDUs when no SD or SDP PDUs are queued for transmission or are outstanding pending acknowledgments. The range of *msecs* is from 1 to 60000.

Defaults

The default SSCOP keepalive timer value is 30 seconds.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to set the SSCOP keepalive timer to 15 microseconds:

```
ATM(config-if)#sscop keepalive-timer 15
```

Related Commands

show sscop

sscop max-cc

Use the **sscop max-cc** command to change the SSCOP connection control retry count. Use the **no** form of this command to restore the default value.

[**no**] **sscop max-cc** *retries*

Syntax Description

retries	Number of times that SSCOP attempts to transmit BGN (establishment), END (release), or RS (resynchronization) PDUs as long as an acknowledgment has not been received; the range of *retries* is from 1 to 127.

Defaults

The default SSCOP connection control retry count is 10 retries.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to set the SSCOP connection control retry count to 20:

```
ATM(config-if)#sscop max-cc 20
```

Related Commands

show sscop

sscop max-stat

Use the **sscop max-stat** command to change the SSCOP number of entries in a Stat frame. Use the **no** form of this command to restore the default value.

[**no**] **sscop max-stat** *entries*

Syntax Description

entries Number of entries in a Stat frame; the range of *entries* is from 1 to 255.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to set the SSCOP entries in a Stat frame to 50:

```
ATM(config-if)#sscop max-stat 50
```

Related Commands

show sscop

sscop poll-timer

Use the **sscop poll-timer** command to change the SSCOP poll timer value. Use the **no** form of this command to restore the default value.

[**no**] **sscop poll-timer** *msecs*

Syntax Description

msecs	Number of microseconds the ATM module waits between transmission of POLL PDUs; the range of *msecs* is from 1 to 60000.

Defaults

The default SSCOP poll timer value is 10 seconds.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Usage Guidelines

The SSCOP poll timer controls the maximum time between transmission of POLL PDUs when SD or SDP PDUs are queued for transmission or are outstanding pending acknowledgments.

Examples

This example shows how to set the SSCOP poll timer to 15 microseconds:

```
ATM(config-if)#sscop poll-timer 15
```

Related Commands

show sscop

sscop receive-window

Use the **sscop receive-window** command to change the size of the SSCOP receiver window. Use the **no** form of this command to restore the default value.

[**no**] **sscop receive-window** *packets*

Syntax Description

packets	Number of packets the interface receives before it sends an acknowledgment to the ATM switch; the range of *packets* is from 1 to 127.

Defaults

The default size of the SSCOP receiver window is 7 packets.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to set the size of the SSCOP receiver window to 10 packets:

```
ATM(config-if)#sscop receive-window 10
```

Related Commands

show sscop

sscop send-window

Use the **sscop send-window** command to change the size of the SSCOP transmitter window. Use the **no** form of this command to restore the default value.

[**no**] **sscop send-window** *packets*

Syntax Description

packets	Number of packets the interface can send before it must receive an acknowledgment from the ATM switch; the range of *packets* is from 1 to 127.

Defaults

The default size of the SSCOP transmitter window is 7 packets.

Command Types

Cisco IOS ATM command.

Command Modes

Interface configuration.

Examples

This example shows how to set the size of the SSCOP transmitter window to 10 packets:

```
ATM(config-if)#sscop send-window 10
```

Related Commands

show sscop

terminal

Use the **terminal** command to set the number of lines displayed on-screen. Use the **no** form of this command to return the screen length to the default.

[**no**] **terminal length** [*screen-length*]

Syntax Description

screen-length	(Optional) Number of lines to display on-screen. The range of *screen-length* is from 0 to 512. A value of 0 disables pausing between screens of output.

Defaults

The default screen length is 24 lines.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to set the terminal length to 0 so that output scrolls on the screen without pausing:

```
ATM> terminal length 0
```

ubr+cos

Use the **ubr+cos** command to map the CoS value or range of values to a UBR+ VCC. Use the **no** form of this command to remove the configuration.

[**no**] **ubr+ cos** {*value* | *range*}

Syntax Description

value	Single CoS value
range	Range of CoS values.

Defaults

The default CoS range for a UBR+ VCC is from 4 to 7.

Command Types

Cisco IOS ATM command.

Command Modes

EXEC.

Examples

This example shows how to map traffic with CoS values between 5 and 7 to a UBR+ VCC:

```
ATM(lane-qos)# ubr+ cos 5-7
ATM(lane-qos)#
```

write terminal

Use the **write terminal** command to display the configuration information currently in running memory.

write terminal

Syntax Description

This command has no arguments or keywords.

Command Types

Switch command.

Command Modes

Privileged EXEC.

Usage Guidelines

You can also use this command in ATM EXEC mode to display the current ATM configuration information.

Examples

This example shows how to display the current ATM configuration information:

```
ATM#write terminal
Building configuration...

Current configuration:
!
version 11.2
!
hostname ATM
!
!
!
interface ATM0
 atm preferred phy A
 atm pvc 1 0 5 qsaal
 atm pvc 2 0 16 ilmi
 lane client ethernet 100
!
!
line con 0
line vty 0 4
 no login
!
end

ATM#
```