

show ip mroute

To display the contents of the IP multicast routing table, use the **show ip mroute** command in EXEC mode.

```
show ip mroute [group-name | group-address] [source] [summary] [count] [active kbps]
```

Syntax Description	
<i>group-name</i> <i>group-address</i>	(Optional) IP address, name, or interface of the multicast group as defined in the DNS hosts table.
<i>source</i>	(Optional) IP address or name of a multicast source.
summary	(Optional) Displays a one-line, abbreviated summary of each entry in the IP multicast routing table.
count	(Optional) Displays statistics about the group and source, including number of packets, packets per second, average packet size, and bits per second.
active kbps	(Optional) Displays the rate that active sources are sending to multicast groups. Active sources are those sending at a rate of <i>kbps</i> or higher. The <i>kbps</i> argument defaults to 4 kilobits per second (kbps).

Defaults
The **show ip mroute** command displays all groups and sources.
The **show ip mroute active** command displays all sources sending at a rate greater than or equal to 4 kbps.

Command Modes
EXEC

Command History	Release	Modification
	10.0	This command was introduced.
	12.0(5)T	The flag “H” was added in the output display to indicate that an outgoing interface is hardware-switched in the case of IP multicast Multilayer Switching (MLS).

Usage Guidelines
If you omit all optional arguments and keywords, the **show ip mroute** command displays all entries in the IP multicast routing table.

The Cisco IOS software populates the multicast routing table by creating source, group (S,G) entries from star, group (*,G) entries. The star (*) refers to all source addresses, the “S” refers to a single source address, and the “G” is the destination multicast group address. In creating (S,G) entries, the software uses the best path to that destination group found in the unicast routing table (that is, through Reverse Path Forwarding [RPF]).

Examples

The following is sample output from the **show ip mroute** command for a router operating in dense mode. This command displays the contents of the IP multicast routing table for the multicast group named *cbone-audio*.

```
show ip mroute cbone-audio

IP Multicast Routing Table
Flags: D - Dense, S - Sparse, C - Connected, L - Local, P - Pruned
       R - RP-bit set, F - Register flag, T - SPT-bit set
Timers: Uptime/Expires
Interface state: Interface, Next-Hop, State/Mode

(*, 224.0.255.1), uptime 0:57:31, expires 0:02:59, RP is 0.0.0.0, flags: DC
  Incoming interface: Null, RPF neighbor 0.0.0.0, Dvmrp
  Outgoing interface list:
    Ethernet0, Forward/Dense, 0:57:31/0:02:52
    Tunnel0, Forward/Dense, 0:56:55/0:01:28

(198.92.37.100/32, 224.0.255.1), uptime 20:20:00, expires 0:02:55, flags: C
  Incoming interface: Tunnel0, RPF neighbor 10.20.37.33, Dvmrp
  Outgoing interface list:
    Ethernet0, Forward/Dense, 20:20:00/0:02:52
```

The following is sample output from the **show ip mroute** command for a router operating in sparse mode:

```
show ip mroute

IP Multicast Routing Table
Flags: D - Dense, S - Sparse, C - Connected, L - Local, P - Pruned
       R - RP-bit set, F - Register flag, T - SPT-bit set
Timers: Uptime/Expires
Interface state: Interface, Next-Hop, State/Mode

(*, 224.0.255.3), uptime 5:29:15, RP is 198.92.37.2, flags: SC
  Incoming interface: Tunnel0, RPF neighbor 10.3.35.1, Dvmrp
  Outgoing interface list:
    Ethernet0, Forward/Sparse, 5:29:15/0:02:57

(198.92.46.0/24, 224.0.255.3), uptime 5:29:15, expires 0:02:59, flags: C
  Incoming interface: Tunnel0, RPF neighbor 10.3.35.1
  Outgoing interface list:
    Ethernet0, Forward/Sparse, 5:29:15/0:02:57
```

The following is sample output from the **show ip mroute** command that shows the VCD value, because an ATM interface with PIM multipoint signalling is enabled:

```
show ip mroute 224.1.1.1

IP Multicast Routing Table
Flags: D - Dense, S - Sparse, C - Connected, L - Local, P - Pruned
       R - RP-bit set, F - Register flag, T - SPT-bit set, J - Join SPT
Timers: Uptime/Expires
Interface state: Interface, Next-Hop or VCD, State/Mode

(*, 224.1.1.1), 00:03:57/00:02:54, RP 130.4.101.1, flags: SJ
  Incoming interface: Null, RPF nbr 0.0.0.0
  Outgoing interface list:
    ATM0/0, VCD 14, Forward/Sparse, 00:03:57/00:02:53
```

The following is sample output from the **show ip mroute** command with the **summary** keyword:

```
show ip mroute summary

IP Multicast Routing Table
Flags: D - Dense, S - Sparse, C - Connected, L - Local, P - Pruned
       R - RP-bit set, F - Register flag, T - SPT-bit set, J - Join SPT
Timers: Uptime/Expires
Interface state: Interface, Next-Hop, State/Mode

(*, 224.255.255.255), 2d16h/00:02:30, RP 171.69.10.13, flags: SJPC
(*, 224.2.127.253), 00:58:18/00:02:00, RP 171.69.10.13, flags: SJC
(*, 224.1.127.255), 00:58:21/00:02:03, RP 171.69.10.13, flags: SJC

(*, 224.2.127.254), 2d16h/00:00:00, RP 171.69.10.13, flags: SJCL
  (128.9.160.67/32, 224.2.127.254), 00:02:46/00:00:12, flags: CLJT
  (129.48.244.217/32, 224.2.127.254), 00:02:15/00:00:40, flags: CLJT
  (130.207.8.33/32, 224.2.127.254), 00:00:25/00:02:32, flags: CLJT
  (131.243.2.62/32, 224.2.127.254), 00:00:51/00:02:03, flags: CLJT
  (140.173.8.3/32, 224.2.127.254), 00:00:26/00:02:33, flags: CLJT
  (171.69.60.189/32, 224.2.127.254), 00:03:47/00:00:46, flags: CLJT
```

The following is sample output from the **show ip mroute** command with the **active** keyword:

```
show ip mroute active

Active IP Multicast Sources - sending >= 4 kbps

Group: 224.2.127.254, (sdr.cisco.com)
  Source: 146.137.28.69 (mbone.ipd.anl.gov)
  Rate: 1 pps/4 kbps(1sec), 4 kbps(last 1 secs), 4 kbps(life avg)

Group: 224.2.201.241, ACM 97
  Source: 130.129.52.160 (webcast3-e1.acm97.interop.net)
  Rate: 9 pps/93 kbps(1sec), 145 kbps(last 20 secs), 85 kbps(life avg)

Group: 224.2.207.215, ACM 97
  Source: 130.129.52.160 (webcast3-e1.acm97.interop.net)
  Rate: 3 pps/31 kbps(1sec), 63 kbps(last 19 secs), 65 kbps(life avg)
```

The following example of **show ip mroute** is displayed when IP multicast MLS is configured. Note that the “H” indicates hardware switched.

```
show ip mroute

IP Multicast Routing Table
Flags: D - Dense, S - Sparse, C - Connected, L - Local, P - Pruned
       R - RP-bit set, F - Register flag, T - SPT-bit set, J - Join SPT, H - Hardware
switched
Timers: Uptime/Expires

(*, 229.10.0.1), 00:04:35/00:02:59, RP 0.0.0.0, flags: DJC
Incoming interface: Null, RPF nbr 0.0.0.0
Outgoing interface list:
  Vlan6, Forward/Dense, 00:00:30/00:02:30
    Vlan5, Forward/Dense, 00:04:35/00:02:30
    Vlan2, Forward/Dense, 00:01:28/00:00:00

(192.0.2.20, 229.10.0.1), 00:04:35/00:02:27, flags: CT
Incoming interface: Vlan2, RPF nbr 0.0.0.0
Outgoing interface list:
  Vlan5, Forward/Dense, 00:03:25/00:00:00, H
  Vlan6, Forward/Dense, 00:00:10/00:00:00, H
```

Table 36 describes the fields shown in the displays.

Table 36 show ip mroute Field Descriptions

Field	Description
Flags:	Provides information about the entry.
D - Dense	Entry is operating in dense mode.
S - Sparse	Entry is operating in sparse mode.
C - Connected	A member of the multicast group is present on the directly connected interface.
L - Local	The router itself is a member of the multicast group.
P - Pruned	Route has been pruned. The Cisco IOS software keeps this information in case a downstream member wants to join the source.
R - Rp-bit set	Indicates that the (S,G) entry is pointing toward the rendezvous point (RP). The RP is typically a prune state along the shared tree for a particular source.
F - Register flag	Indicates that the software is registering for a multicast source.
T - SPT-bit set	Indicates that packets have been received on the shortest path source tree.
J - Join SPT	
H - Hardware switched	Indicates the outgoing interface is hardware switched because IP multicast MLS is enabled.
Timers:	Uptime/Expires.
Interface state:	Interface, Next-Hop or VCD, State/Mode.

Table 36 show ip mroute Field Descriptions (continued)

Field	Description
(* , 224.0.255.1) (198.92.37.100/32, 224.0.255.1)	Entry in the IP multicast routing table. The entry consists of the IP address of the source router followed by the IP address of the multicast group. An asterisk (*) in place of the source router indicates all sources. Entries in the first format are referred to as (*,G) or “star comma G” entries. Entries in the second format are referred to as (S,G) or “S comma G” entries. (*,G) entries are used to build (S,G) entries.
uptime	How long in hours, minutes, and seconds the entry has been in the IP multicast routing table.
expires	How long in hours, minutes, and seconds until the entry will be removed from the IP multicast routing table on the outgoing interface.
RP	Address of the rendezvous point (RP) router. For routers and access servers operating in sparse mode, this address is always 0.0.0.0.
flags:	Information about the entry.
Incoming interface:	Expected interface for a multicast packet from the source. If the packet is not received on this interface, it is discarded.
RPF neighbor	IP address of the upstream router to the source. “Tunneling” indicates that this router is sending data to the RP encapsulated in Register packets. The hexadecimal number in parentheses indicates to which RP it is registering. Each bit indicates a different RP if multiple RPs per group are used.
Dvmrp or Mroute	Indicates whether the RPF information is obtained from the DVMRP routing table or the static mroutes configuration.
Outgoing interface list:	Interfaces through which packets will be forwarded. When the ip pim nbma-mode command is enabled on the interface, the IP address of the PIM neighbor is also displayed.
Ethernet0	Name and number of the outgoing interface.
Next hop or VCD	Next hop specifies downstream neighbor’s IP address. VCD is the virtual circuit descriptor number. VCD0 means the group is using the static-map virtual circuit.
Forward/Dense	Indicates that packets will be forwarded on the interface if there are no restrictions due to access lists or TTL threshold. Following the slash (/) is the mode in which the interface is operating (dense or sparse).
Forward/Sparse	Sparse mode interface is in forward mode.
time/time (uptime/expiration time)	Per interface, how long in hours, minutes, and seconds the entry has been in the IP multicast routing table. Following the slash (/) is how long in hours, minutes, and seconds until the entry will be removed from the IP multicast routing table.

The following is sample output from the **show ip mroute** command with the **count** keyword:

```
Router# show ip mroute count

IP Multicast Statistics
4045 routes using 2280688 bytes of memory
41 groups, 97.65 average sources per group
Forwarding Counts:Pkt Count/Pkts per second/Avg Pkt Size/Kilobits per second
Other counts:Total/RPF failed/Other drops(OIF-null, rate-limit etc)

Group:239.0.18.1, Source count:200, Packets forwarded:348232, Packets received:348551
  RP-tree:Forwarding:12/0/218/0, Other:12/0/0
    Source:10.1.1.1/32, Forwarding:1763/1/776/9, Other:1764/0/1
    Source:10.1.1.2/32, Forwarding:1763/1/777/9, Other:1764/0/1
    Source:10.1.1.3/32, Forwarding:1763/1/783/10, Other:1764/0/1
    Source:10.1.1.4/32, Forwarding:1762/1/789/10, Other:1763/0/1
    Source:10.1.1.5/32, Forwarding:1762/1/768/10, Other:1763/0/1
    Source:10.1.1.6/32, Forwarding:1793/1/778/10, Other:1794/0/1
    Source:10.1.1.7/32, Forwarding:1793/1/763/10, Other:1794/0/1
    Source:10.1.1.8/32, Forwarding:1793/1/785/10, Other:1794/0/1
    Source:10.1.1.9/32, Forwarding:1793/1/764/9, Other:1794/0/1
    Source:10.1.1.10/32, Forwarding:1791/1/774/10, Other:1792/0/1
    Source:10.1.2.1/32, Forwarding:1689/1/780/10, Other:1691/0/2
    Source:10.1.2.2/32, Forwarding:1689/1/782/10, Other:1691/0/2
    Source:10.1.2.3/32, Forwarding:1689/1/776/9, Other:1691/0/2
  .
  .
  .

Group:239.0.18.132, Source count:0, Packets forwarded:8810, Packets received:8810
  RP-tree:Forwarding:8810/7/780/49, Other:8810/0/0

Group:239.0.17.132, Source count:0, Packets forwarded:704491, Packets received:704491
  RP-tree:Forwarding:704491/639/782/4009, Other:704491/0/0

Group:239.0.17.133, Source count:0, Packets forwarded:704441, Packets received:704441
  RP-tree:Forwarding:704441/639/782/3988, Other:704441/0/0

Group:239.0.18.133, Source count:0, Packets forwarded:8810, Packets received:8810
  RP-tree:Forwarding:8810/8/786/49, Other:8810/0/0

Group:239.0.18.193, Source count:0, Packets forwarded:0, Packets received:0

Group:239.0.17.193, Source count:0, Packets forwarded:0, Packets received:0

Group:239.0.18.134, Source count:0, Packets forwarded:8803, Packets received:8803
  RP-tree:Forwarding:8803/8/774/49, Other:8803/0/0
```



Note

The RP-tree: field is displayed only for non-Source Specific Multicast (SSM) groups that have a (*, G) entry and a positive packet received count.

Table 37 describes the significant fields shown in the display.

Table 37 show ip mroute count Field Descriptions



Field	Description
Group:	Summary statistics for traffic on an IP multicast group G. This row is displayed only for non-SSM groups.
Forwarding Counts:	<p>Statistics on the packets that are received and forwarded to at least one interface.</p> <p> Note There is no specific command to clear only the forwarding counters; you can clear only the actual multicast forwarding state with the clear ip mroute command. Issuing this command will cause interruption of traffic forwarding.</p>
Pkt Count/	Total number of packets received and forwarded since the multicast forwarding state to which this counter applies was created.
Pkts per second/	Number of packets received and forwarded per second. On an IP multicast fast-switching platform, this number is the number of packets during the last second. Other platforms may use a different approach to calculate this number. Please refer to the platform documentation for more information.
Avg Pkt Size/	Total number of bytes divided by the total number of packets for this multicast forwarding state. There is no direct display for the total number of bytes. You can calculate the total number of bytes by multiplying the average packet size by the packet count.
Kilobits per second	Bytes per second divided by packets per second divided by 1000. On an IP multicast fast switching platform, the number of packets per second is the number of packets during the last second. Other platforms may use a different approach to calculate this number. Please refer to the platform documentation for more information.
Other counts:	Statistics on the received packets. These counters include statistics about the packets received and forwarded and packets received but not forwarded.
Total/	Total number of packets received.
RPF failed/	Number of packets not forwarded due to a failed RPF or acceptance check (when bidir-PIM is configured).
Other drops(OIF-null, rate-limit etc)	Number of packets not forwarded for reasons other than an RPF or acceptance check (such as the OIF list was empty or because the packets were discarded because of a configuration, such as ip multicast rate-limit , was enabled).
Group:	<p>Summary information about counters for (*, G) and the range of (S, G) states for one particular group G. The following RP-tree: and Source: output fields contain information about the individual states belonging to this group.</p> <p> Note For SSM range groups, the Group: displays are statistical. All SSM range (S, G) states are individual, unrelated SSM channels.</p>

Table 37 show ip mroute count Field Descriptions (continued)

Field	Description
Source count:	Number of (S, G) states for this group G. Individual (S, G) counters are detailed in the Source: output field rows.
Packets forwarded:	The sum of the packets detailed in the Forwarding Counts: fields for this IP multicast group G. This field is the sum of the RP-tree and all Source: fields for this group G.
Packets received:	The sum of packets detailed in the Other counts fields for this IP multicast group G. This field is the sum of the Other count: Pkt Count fields of the RP-tree: and Source: rows for this group G.
RP-tree:	Counters for the (*, G) state of this group G. These counters are displayed only for groups that have a forwarding mode that do not forward packets on the shared tree. These (*,G) groups are bidir-PIM and PIM-SM groups. There are no RP-tree displays for PIM-DM and SSM range groups.
Source:	Counters for an individual (S, G) state of this group G. There are no (S, G) states for bidir-PIM groups.

Related Commands

Command	Description
ip multicast-routing	Enables IP multicast routing or multicast distributed switching.
ip pim	Enables PIM on an interface.

show ip pim interface

To display information about interfaces configured for Protocol Independent Multicast (PIM), use the **show ip pim interface** command in EXEC mode.

show ip pim interface [*type number*] [*count*]

Syntax Description	
<i>type</i>	(Optional) Interface type.
<i>number</i>	(Optional) Interface number.
count	(Optional) Number of packets received and sent out the interface.

Command Modes EXEC

Command History	Release	Modification
	11.2(11)GS	This command was introduced.
	12.0(5)T	The flag “H” was added in the output display to indicate that an outgoing interface is hardware-switched in the case of IP multicast Multilayer Switching (MLS).

Usage Guidelines This command works only on interfaces that are configured for PIM.

Examples The following is sample output from the **show ip pim interface** command:

```
show ip pim interface
```

Address	Interface	Mode	Neighbor Count	Query Interval	DR
198.92.37.6	Ethernet0	Dense	2	30	198.92.37.33
198.92.36.129	Ethernet1	Dense	2	30	198.92.36.131
10.1.37.2	Tunnel0	Dense	1	30	0.0.0.0

The following is sample output from the **show ip pim interface** command with a **count**:

```
show ip pim interface count
```

Address	Interface	FS	Mpackets In/Out
171.69.121.35	Ethernet0	*	548305239/13744856
171.69.121.35	Serial0.33	*	8256/67052912
198.92.12.73	Serial0.1719	*	219444/862191

The following is sample output from the **show ip pim interface** command with a **count** when IP multicast MLS is enabled. The examples lists the PIM interfaces that are fast switched and process switched, and the packet counts for these. The “H” is added to interfaces where IP multicast MLS is enabled.

```
show ip pim interface count

States: FS - Fast Switched, H - Hardware Switched
Address      Interface      FS  Mpackets In/Out
192.1.10.2   Vlan10         * H 40886/0
192.1.11.2   Vlan11         * H 0/40554
192.1.12.2   Vlan12         * H 0/40554
192.1.23.2   Vlan23         *   0/0
192.1.24.2   Vlan24         *   0/0
```

Table 38 describes the fields shown in the displays.

Table 38 *show ip pim interface count Field Descriptions*

Field	Description
Address	IP address of the next-hop router.
Interface	Interface type and number that is configured to run PIM.
Mode	Multicast mode in which the Cisco IOS software is operating. This can be dense mode or sparse mode. DVMRP indicates a DVMRP tunnel is configured.
Neighbor Count	Number of PIM neighbors that have been discovered through this interface. If the neighbor count is 1 for a DVMRP tunnel, the neighbor is active (receiving probes and reports).
Query Interval	Frequency, in seconds, of PIM router-query messages, as set by the ip pim query-interval interface configuration command. The default is 30 seconds.
DR	IP address of the designated router on the LAN. Note that serial lines do not have designated routers, so the IP address is shown as 0.0.0.0.
FS	An asterisk (*) in this column indicates that fast switching is enabled.
Mpackets In/Out	Number of packets into and out of the interface since the box has been up.

Related Commands

Command	Description
ip pim	Enables PIM on an interface.
show ip pim neighbor	Lists the PIM neighbors discovered by the Cisco IOS software.

show ip protocols vrf

To display the routing protocol information associated with a VRF, use the **show ip protocols vrf** command in EXEC mode.

show ip protocols vrf *vrf-name*

Syntax Description	<i>vrf-name</i>	Name assigned to a VRF.
---------------------------	-----------------	-------------------------

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)T	This command was introduced.

Usage Guidelines Use this command to display routing information associated with a VRF.

Examples The following example shows information about a VRF called vpn1:

```
show ip protocols vrf vpn2

Routing Protocol is "bgp 100"
  Sending updates every 60 seconds, next due in 0 sec
  Outgoing update filter list for all interfaces is
  Incoming update filter list for all interfaces is
  IGP synchronization is disabled
  Automatic route summarization is disabled
  Redistributing:connected, static
  Routing for Networks:
  Routing Information Sources:
    Gateway         Distance      Last Update
    13.13.13.13      200          02:20:54
    18.18.18.18      200          03:26:15
  Distance:external 20 internal 200 local 200
```

Table 39 describes the fields shown in this example.

Table 39 *show ip protocols vrf Field Descriptions*

Field	Description
Gateway	Displays the IP address of the router identifier for all routers in the network.
Distance	Displays the metric used to access the destination route.
Last update	Displays the last time the routing table was updated from the source.

Related Commands

Command	Description
show ip vrf	Displays the set of defined VRFs and associated interfaces.

show ip route vrf

To display the IP routing table associated with a VRF (VPN routing/forwarding instance), use the **show ip route vrf** command in EXEC mode.

```
show ip route vrf vrf-name [connected] [protocol [as-number] [tag] [output-modifiers]] [list
number [output-modifiers]] [profile] [static [output-modifiers]] [summary
[output-modifiers]] [supernets-only [output-modifiers]]
```

Syntax Description	
<i>vrf-name</i>	Name assigned to the VRF.
connected	(Optional) Displays all connected routes in a VRF.
<i>protocol</i>	(Optional) To specify a routing protocol, use one of the following keywords: bgp , egp , eigrp , hello , igrp , isis , ospf , or rip .
<i>as-number</i>	(Optional) Autonomous system number.
<i>tag</i>	(Optional) IOS routing area label.
<i>output-modifiers</i>	(Optional) For a list of associated keywords and arguments, use context-sensitive help.
list number	(Optional) Specifies the IP access list to display.
profile	(Optional) Displays the IP routing table profile.
static	(Optional) Displays static routes.
summary	(Optional) Displays a summary of routes.
supernets-only	(Optional) Displays supernet entries only.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)T	This command was introduced.

Usage Guidelines This command displays specified information from the IP routing table of a VRF.

Examples

This example shows the IP routing table associated with the VRF called vrf1:

```
show ip route vrf vrf1
```

```
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate default
       U - per-user static route, o - ODR
       T - traffic engineered route
```

Gateway of last resort is not set

```
B   51.0.0.0/8 [200/0] via 13.13.13.13, 00:24:19
C   50.0.0.0/8 is directly connected, Ethernet1/3
B   11.0.0.0/8 [20/0] via 50.0.0.1, 02:10:22
B   12.0.0.0/8 [200/0] via 13.13.13.13, 00:24:20
```

This example shows BGP entries in the IP routing table associated with the VRF called vrf1:

```
Router# show ip route vrf vrf1 bgp
```

```
B 51.0.0.0/8 [200/0] via 13.13.13.13, 03:44:14
B 11.0.0.0/8 [20/0] via 51.0.0.1, 03:44:12
B 12.0.0.0/8 [200/0] via 13.13.13.13, 03:43:14
```

Related Commands

Command	Description
show ip cache	Displays the CEF forwarding table associated with a VRF.
show ip vrf	Displays the set of defined VRFs and associated interfaces.

show ip rsvp host

To display RSVP terminal point information for receivers or senders, use the **show ip rsvp host** EXEC command.

```
show ip rsvp host {host {receivers | senders} | installed | interface | neighbor | request |
reservation | sender}
```

Syntax Description	host	Displays RSVP endpoint senders and receivers information.
	installed	Displays RSVP installed reservations.
	interface	Displays RSVP interface information.
	neighbor	Displays RSVP neighbor information.
	request	Displays RSVP reservations upstream information.
	reservation	Displays RSVP reservation requests from downstream.
	sender	Displays RSVP PATH state information.
	temp-psb	Displays RSVP PATH requests awaiting policy decision.
	temp-rsb	Displays RSVP reservation requests awaiting policy decisions.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	11.2	This command was introduced.
	12.0(5)S	The keyword host was added.

Examples The following examples show output from **show ip rsvp host receivers** command:

```
show ip rsvp host receivers
```

```
To          From          Pro DPort Sport Next Hop      I/F  Fi Serv BPS Bytes
10.0.0.11   10.1.0.4         0  10011 1                SE  LOAD 100K 1K
```

Table 40 lists the fields displayed in this example.

Table 40 *show ip rsvp host Field Descriptions*

Field	Description
To	IP address of the receiver.
From	IP address of the sender.
Pro	Protocol code.
DPort	Destination port number.

Table 40 show ip rsvp host Field Descriptions (continued)

Sport	Source port number.
Next Hop	IP address of the next hop.
I/F	Interface of the next hop.
Fi	Filter (Wild Card Filter, Shared Explicit Filter, or Fixed Filter).
Serv	Service (value can be RATE or LOAD).
BPS	Reservation rate in bits per second.
Bytes	Bytes of burst size requested.

show ip vrf

To display the set of defined VRFs (VPN routing/forwarding instances) and associated interfaces, use the **show ip vrf** command in EXEC mode.

```
show ip vrf [{brief | detail | interfaces}] [vrf-name] [output-modifiers]
```

Syntax Description		
brief	(Optional)	Displays concise information on the VRF(s) and associated interfaces.
detail	(Optional)	Displays detailed information on the VRF(s) and associated interfaces.
interfaces	(Optional)	Displays detailed information about all interfaces bound to a particular VRF, or any VRF.
<i>vrf-name</i>	(Optional)	Name assigned to a VRF.
<i>output-modifiers</i>	(Optional)	For a list of associated keywords and arguments, use context-sensitive help.

Defaults When no optional parameters are specified the command shows concise information about all configured VRFs.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)T	This command was introduced.

Usage Guidelines Use this command to display information about VRFs. Two levels of detail are available: use the **brief** keyword or no keyword to display concise information, or use the **detail** keyword to display all information. To display information about all interfaces bound to a particular VRF, or to any VRF, use the **interfaces** keyword.

Examples This example shows brief information for the VRFs currently configured:

```
show ip vrf
```

```

Name           Default RD      Interfaces
vrf1           100:1          Ethernet1/3
vrf2           100:2          Ethernet0/3
```

Table 41 describes the fields shown in this example.

Table 41 *show vrf Field Descriptions*

Field	Description
Name	Specifies the VRF name.
Default RD	Specifies the default route distinguisher.
Interfaces	Specifies the network interfaces.

This example shows detailed information for the VRF called vrf1:

```
show ip vrf detail vrf1

VRF vrf1; default RD 100:1
  Interfaces:
    Ethernet1/3
  Connected addresses are in global routing table
  Export VPN route-target communities
    RT:100:1
  Import VPN route-target communities
    RT:100:1
  No import route-map
```

Table 42 describes the fields shown in this example.

Table 42 *show ip vrf detail Field Descriptions*

Field	Description
Interfaces	Specifies the network interfaces.
Export	Specifies VPN route-target export communities.
Import	Specifies VPN route-target import communities.

This example shows the interfaces bound to a particular VRF:

```
show ip vrf interfaces

Interface      IP-Address      VRF              Protocol
Ethernet2     130.22.0.33    blue_vrf         up
Ethernet4     130.77.0.33    hub              up
router#
```

Table 43 describes the fields shown in this example.

Table 43 *show ip vrf interfaces Field Descriptions*

Field	Description
Interface	Specifies the network interfaces for a VRF.
IP-Address	Specifies the IP address of a VRF interface.
VRF	Specifies the VRF name.
Protocol	Displays the state of the protocol (up/down) for each VRF interface.

Related Commands	Command	Description
	ip vrf	Configures a VRF routing table.
	rd	Creates routing and forwarding tables for a VRF.
	route-target	Creates a route-target extended community for a VRF.
	import map	Configures an import route map for a VRF.
	ip vrf forwarding	Associates a VRF with an interface or subinterface.

show isis database verbose

To display more information about the database, use the **show isis database verbose** command in EXEC mode.

show isis database verbose

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)S	This command was introduced.

Examples The following example shows output from the **show isis database verbose** command:

```
show isis database verbose

IS-IS Level-1 Link State Database
LSPID                LSP Seq Num  LSP Checksum  LSP Holdtime  ATT/P/OL
dtp-5.00-00          * 0x000000E6  0xC9BB        1042           0/0/0
  Area Address:49.0001
  NLPID:             0xCC
  Hostname:dtp-5
  Router ID:         5.5.5.5
  IP Address:        172.21.39.5
  Metric:10          IP 172.21.39.0/24
dtp-5.00-01          * 0x000000E7  0xAB36        1065           0/0/0
  Metric:10          IS-Extended dtp-5.01
  Affinity:0x00000000
  Interface IP Address:172.21.39.5
  Physical BW:10000000 bits/sec
  Reservable BW:1166000 bits/sec
  BW Unreserved[0]: 1166000 bits/sec, BW Unreserved[1]: 1166000 bits/sec
  BW Unreserved[2]: 1166000 bits/sec, BW Unreserved[3]: 1166000 bits/sec
  BW Unreserved[4]: 1166000 bits/sec, BW Unreserved[5]: 1166000 bits/sec
  BW Unreserved[6]: 1166000 bits/sec, BW Unreserved[7]: 1153000 bits/sec
  Metric:0           ES dtp-5
```

Table 44 lists the fields displayed in this example.

Table 44 show isis database verbose Field Descriptions

Field	Description
LSPID	<p>The LSP identifier. The first six octets form the System ID of the router that originated the LSP.</p> <p>The next octet is the pseudonode ID. When this byte is zero, the LSP describes links from the system. When it is nonzero, the LSP is a so called non-pseudonode LSP. This is similar to a router LSA in OSPF. The LSP will describe the state of the originating router.</p> <p>For each LAN, the designated router for that LAN will create and flood a pseudonode LSP, describing all systems attached to that LAN.</p> <p>The last octet is the LSP number. If there is more data than can fit in a single LSP, the LSP will be divided into multiple LSP fragments. Each fragment will have a different LSP number. An asterisk (*) indicates that the LSP was originated by the system on which this command is issued.</p>
LSP Seq Num	Sequence number for the LSP that allows other systems to determine if they have received the latest information from the source.
LSP Checksum	Checksum of the entire LSP packet.
LSP Holdtime	Amount of time the LSP remains valid, in seconds. An LSP holdtime of zero indicates that this LSP was purged and is being removed from all routers' LSDB. The value between brackets indicates how long the purged LSP will stay in the LSDB before being completely removed.
ATT	The Attach bit. This bit indicates that the router is also a Level 2 router, and it can reach other areas. L1-only routers and L1L2 routers that have lost connection to other L2 routers will use the attached bit to find the closest L2 router. They will point a default route to the closest L2 router.
P	The P bit. Detects if the IS is area partition repair capable. Cisco and other vendors do not support area partition repair.
OL	The Overload bit. Determines if the IS is congested. If the Overload bit is set, other routers will not use this system as a transit router when calculating routers. Only packets for destinations directly connected to the overloaded router will be sent to this router.
Area Address	Reachable area addresses from the router. For L1 LSPs, these are the area addresses configured manually on the originating router. For L2 LSPs, these are all the area addresses for the area to which this route belongs.
IP Address	IPv4 address for the interface.
Metric	IS-IS metric for the cost of the adjacency between the originating router and the advertised neighbor, or the metric of the cost to get from the advertising router to the advertised destination (which can be an IP address, an ES or a CLNS prefix).
Affinity	Attribute flags of the link being flooded.
Physical BW	Bandwidth capacity (in bits per second) of the link.
Reservable BW	Amount of reservable bandwidth on this link.
BW Unreserved	Amount of bandwidth that is available for reservation.

show isis mpls traffic-eng adjacency-log

To display a log of 20 entries of MPLS traffic engineering IS-IS adjacency changes, use the **show isis mpls traffic-eng adjacency-log** command in EXEC mode.

show isis mpls traffic-eng adjacency-log

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)S	This command was introduced.

Examples The following is sample output from the **show isis mpls traffic-eng adjacency-log** command:

```
show isis mpls traffic-eng adjacency-log

IS-IS RRR log
When      Neighbor ID      IP Address      Interface Status Level
04:52:52  0000.0024.0004.02  0.0.0.0        Et0/2      Up      level-1
04:52:50  0000.0026.0001.00  170.1.1.2      PO1/0/0    Up      level-1
04:52:37  0000.0024.0004.02  0.0.0.0        Et0/2      Up      level-1
```

Table 45 lists the fields displayed in this example.

Table 45 *show isis mpls traffic-eng adjacency-log* Field Descriptions

Field	Description
When	The amount of time since the entry of the log was recorded.
Neighbor ID	Identification value of the neighbor.
IP Address	IPv4 address of the neighbor.
Interface	Interface from which a neighbor is learned.
Status	Up (active) or Down (disconnected)
Level	Indication of routing level.

show isis mpls traffic-eng advertisements

To display the last flooded record from MPLS traffic engineering, use the **show isis mpls traffic-eng advertisements** command in EXEC mode.

show isis mpls traffic-eng advertisements

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)S	This command was introduced.

Examples The following is output from the **show isis mpls traffic-eng advertisements** command:

```
show isis mpls traffic-eng advertisements

System ID:dtp-5.00
Router ID:5.5.5.5
Link Count:1
Link[1]
Neighbor System ID:dtp-5.01 (broadcast link)
Interface IP address:172.21.39.5
Neighbor IP Address:0.0.0.0
Admin. Weight:10
Physical BW:10000000 bits/sec
Reservable BW:1166000 bits/sec
BW unreserved[0]:1166000 bits/sec, BW unreserved[1]:1166000 bits/sec
BW unreserved[2]:1166000 bits/sec, BW unreserved[3]:1166000 bits/sec
BW unreserved[4]:1166000 bits/sec, BW unreserved[5]:1166000 bits/sec
BW unreserved[6]:1166000 bits/sec, BW unreserved[7]:1153000 bits/sec
Affinity Bits:0x00000000
```

Table 46 lists the fields displayed in this example.

Table 46 show isis mpls traffic-eng advertisements Field Descriptions

Field	Description
System ID	Identification value for the local system in the area.
Router ID	MPLS traffic engineering router ID.
Link Count	Number of links advertised by MPLS traffic engineering.
Neighbor System ID	Identification value for the remote system in an area.
Interface IP address	IPv4 address of the interface.

Table 46 *show isis mpls traffic-eng advertisements Field Descriptions (continued)*

Neighbor IP Address	IPv4 address of the neighbor.
Admin. Weight	Administrative weight associated with this link.
Physical BW	Bandwidth capacity of the link (in bits per second).
Reservable BW	Amount of reservable bandwidth on this link.
BW unreserved	Amount of bandwidth that is available for reservation.
Affinity Bits	Attribute flags of the link being flooded.

show isis mpls traffic-eng tunnel

To display information about tunnels considered in IS-IS next hop calculation, use the **show isis mpls traffic-eng tunnel** command in EXEC mode.

show isis mpls traffic-eng tunnel

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)S	This command was introduced.

Examples The following example shows output from this command:

```
show isis mpls traffic-eng tunnel
```

Station Id	Tunnel Name	Bandwidth	Nexthop	Metric	Mode
kangpa-router1.00	Tunnel1022	3333	2.2.2.2	-3	Relative
	Tunnel1021	10000	2.2.2.2	11	Absolute
tomklong-route.00	Tunnel1031	10000	3.3.3.3	-1	Relative
	Tunnel1032	10000	3.3.3.3		

Table 47 lists the fields displayed in this example.

Table 47 *show isis mpls traffic-eng tunnel Field Descriptions*

Field	Description
Station Id	The name or system ID of the MPLS traffic engineering tail end router.
Tunnel Name	The name of the MPLS traffic engineering tunnel interface.
Bandwidth	The MPLS traffic engineering tunnel bandwidth specified.
Nexthop	The MPLS traffic engineering tunnel destination IP address.
Metric	The MPLS traffic engineering tunnel metric.
Mode	The MPLS traffic engineering tunnel metric mode. Mode can be relative or absolute.

show lane

To display detailed information for all the LANE components configured on an interface or any of its subinterfaces, on a specified subinterface, or on an emulated LAN, use the **show lane** command in EXEC mode.

AIP on the Cisco 7500 Series Routers; for the ATM Port Adapter on the Cisco 7200 Series

```
show lane [interface atm slot/port[.subinterface-number] | name elan-name] [brief]
```

ATM Port Adapter on the Cisco 7500 Series Routers

```
show lane [interface atm slot/port-adapter/port[.subinterface-number] | name elan-name][brief]
```

Cisco 4500 and 4700 Routers

```
show lane [interface atm number[.subinterface-number] | name elan-name] [brief]
```

Syntax Description		
interface atm <i>slot/port</i>	(Optional) ATM interface slot and port for the following:	<ul style="list-style-type: none"> AIP on the Cisco 7500 series routers. ATM port adapter on the Cisco 7200 series routers.
interface atm <i>slot/port-adapter/port</i>	(Optional) ATM interface slot, port adapter, and port number for the ATM port adapter on the Cisco 7500 series routers.	
interface atm <i>number</i>	(Optional) ATM interface number for the NPM on the Cisco 4500 or 4700 routers.	
<i>.subinterface-number</i>	(Optional) Subinterface number.	
name <i>elan-name</i>	(Optional) Name of emulated LAN. The maximum length of the name is 32 characters.	
brief	(Optional) Keyword used to display the brief subset of available information.	

Command Modes EXEC

Command History	Release	Modification
	11.0	This command was introduced.

Using the **show lane** command is equivalent to using the **show lane config**, **show lane server**, **show lane bus**, and **show lane client** commands. The **show lane** command shows all LANE-related information except the **show lane database** command information.

Examples

The following is sample output from the **show lane** command for an Ethernet-emulated LAN:

```
show lane

LE Config Server ATM2/0 config table: cisco_eng
Admin: up State: operational
LECS Mastership State: active master
list of global LECS addresses (30 seconds to update):
39.020304050607080910111213.00000CA05B43.00 <----- me
ATM Address of this LECS: 39.020304050607080910111213.00000CA05B43.00 (auto)
  vcd  rxCnt txCnt  callingParty
    50    2    2  39.020304050607080910111213.00000CA05B41.02 LES elan2 0 active
cumulative total number of unrecognized packets received so far: 0
cumulative total number of config requests received so far: 30
cumulative total number of config failures so far: 12
  cause of last failure: no configuration
  culprit for the last failure: 39.020304050607080910111213.00602F557940.01

LE Server ATM2/0.2 ELAN name: elan2 Admin: up State: operational
type: ethernet Max Frame Size: 1516
ATM address: 39.020304050607080910111213.00000CA05B41.02
LECS used: 39.020304050607080910111213.00000CA05B43.00 connected, vcd 51
control distribute: vcd 57, 2 members, 2 packets

proxy/ (ST: Init, Conn, Waiting, Adding, Joined, Operational, Reject, Term)
lecid ST vcd  pkts Hardware Addr ATM Address
  1  O  54    2  0000.0ca0.5b40 39.020304050607080910111213.00000CA05B40.02
  2  O  81    2  0060.2f55.7940 39.020304050607080910111213.00602F557940.02

LE BUS ATM2/0.2 ELAN name: elan2 Admin: up State: operational
type: ethernet Max Frame Size: 1516
ATM address: 39.020304050607080910111213.00000CA05B42.02
data forward: vcd 61, 2 members, 0 packets, 0 unicasts

lecid vcd  pkts ATM Address
  1  58    0 39.020304050607080910111213.00000CA05B40.02
  2  82    0 39.020304050607080910111213.00602F557940.02

LE Client ATM2/0.2 ELAN name: elan2 Admin: up State: operational
Client ID: 1 LEC up for 11 minutes 49 seconds
Join Attempt: 1
HW Address: 0000.0ca0.5b40 Type: ethernet Max Frame Size: 1516

ATM Address: 39.020304050607080910111213.00000CA05B40.02

VCD  rxFrames txFrames Type ATM Address
  0    0        0  configure 39.020304050607080910111213.00000CA05B43.00
 55    1        4  direct 39.020304050607080910111213.00000CA05B41.02
 56    6        0  distribute 39.020304050607080910111213.00000CA05B41.02
 59    0        1  send 39.020304050607080910111213.00000CA05B42.02
 60    3        0  forward 39.020304050607080910111213.00000CA05B42.02
 84    3        5  data 39.020304050607080910111213.00602F557940.02
```

The following is sample output from the **show lane** command for a Token Ring LANE network:

```
show lane

LE Config Server ATM4/0 config table: eng
Admin: up State: operational
LECS Mastership State: active master
list of global LECS addresses (35 seconds to update):
39.020304050607080910111213.006047704183.00 <----- me
ATM Address of this LECS: 39.020304050607080910111213.006047704183.00 (auto)
  vcd rxCnt txCnt callingParty
    7      1      1 39.020304050607080910111213.006047704181.01 LES elan1 0 active
cumulative total number of unrecognized packets received so far: 0
cumulative total number of config requests received so far: 2
cumulative total number of config failures so far: 0

LE Server ATM4/0.1 ELAN name: elan1 Admin: up State: operational
type: token ring      Max Frame Size: 4544      Segment ID: 2048
ATM address: 39.020304050607080910111213.006047704181.01
LECS used: 39.020304050607080910111213.006047704183.00 connected, vcd 9
control distribute: vcd 12, 1 members, 2 packets

proxy/ (ST: Init, Conn, Waiting, Adding, Joined, Operational, Reject, Term)
lecid ST vcd  pkts Hardware Addr  ATM Address
    1  0   8      3 100.2          39.020304050607080910111213.006047704180.01
                                0060.4770.4180 39.020304050607080910111213.006047704180.01

LE BUS ATM4/0.1 ELAN name: elan1 Admin: up State: operational
type: token ring      Max Frame Size: 4544      Segment ID: 2048
ATM address: 39.020304050607080910111213.006047704182.01
data forward: vcd 16, 1 members, 0 packets, 0 unicasts

lecid vcd  pkts  ATM Address
    1   13      0 39.020304050607080910111213.006047704180.01

LE Client ATM4/0.1 ELAN name: elan1 Admin: up State: operational
Client ID: 1          LEC up for 2 hours 25 minutes 39 seconds
Join Attempt: 3
HW Address: 0060.4770.4180 Type: token ring      Max Frame Size: 4544
Ring:100 Bridge:2      ELAN Segment ID: 2048
ATM Address: 39.020304050607080910111213.006047704180.01

VCD  rxFrames  txFrames  Type      ATM Address
    0         0         0  configure 39.020304050607080910111213.006047704183.00
   10         1         3  direct   39.020304050607080910111213.006047704181.01
   11         2         0  distribute 39.020304050607080910111213.006047704181.01
   14         0         0  send     39.020304050607080910111213.006047704182.01
   15         0         0  forward  39.020304050607080910111213.006047704182.01
```

Table 48 describes significant fields in the sample displays.

Table 48 *show lane Field Descriptions*

Field	Description
LE Config Server	Identifies the following lines as applying to the LANE configuration server. These lines are also displayed in output from the show lane config command. See the show lane config command for explanations of the output.
LE Server	Identifies the following lines as applying to the LANE server. These lines are also displayed in output from the show lane server command. See the show lane server command for explanations of the output.
LE BUS	Identifies the following lines as applying to the LANE broadcast-and-unknown server. These lines are also displayed in output from the show lane bus command. See the show lane bus command for explanations of the output.
LE Client	Identifies the following lines as applying to a LANE client. These lines are also displayed in output from the show lane client command. See the show lane bus command for explanations of the output.

show lane bus

To display detailed LANE information for the broadcast and unknown server configured on an interface or any of its subinterfaces, on a specified subinterface, or on an emulated LAN, use the **show lane bus** command in EXEC mode:

AIP on the Cisco 7500 Series Routers; for the ATM Port Adapter on the Cisco 7200 Series

```
show lane bus [interface atm slot/port[.subinterface-number] | name elan-name] [brief]
```

ATM port adapter on the Cisco 7500 Series Routers

```
show lane bus [interface atm slot/port-adapter/port[.subinterface-number] | name elan-name][brief]
```

Cisco 4500 and 4700 Routers

```
show lane bus [interface atm number[.subinterface-number] | name elan-name] [brief]
```

Syntax Description		
interface atm <i>slot/port</i>	(Optional) ATM interface slot and port for the following:	<ul style="list-style-type: none"> • AIP on the Cisco 7500 series routers. • ATM port adapter on the Cisco 7200 series routers.
interface atm <i>slot/port-adapter/port</i>	(Optional) ATM interface slot, port adapter, and port number for the ATM port adapter on the Cisco 7500 series routers.	
interface atm <i>number</i>	(Optional) ATM interface number for the NPM on the Cisco 4500 or 4700 routers.	
<i>.subinterface-number</i>	(Optional) Subinterface number.	
name <i>elan-name</i>	(Optional) Name of emulated LAN. The maximum length of the name is 32 characters.	
brief	(Optional) Keyword used to display the brief subset of available information.	

Command Modes EXEC

Command History	Release	Modification
	11.0	This command was introduced.

Examples

The following is sample output from the **show lane bus** command for an Ethernet-emulated LAN:

```
show lane bus

LE BUS ATM2/0.2 ELAN name: elan2 Admin: up State: operational
type: ethernet Max Frame Size: 1516
ATM address: 39.020304050607080910111213.00000CA05B42.02
data forward: vcd 61, 2 members, 0 packets, 0 unicasts

lecid vcd pkts ATM Address
  1 58 0 39.020304050607080910111213.00000CA05B40.02
  2 82 0 39.020304050607080910111213.00602F557940.02
```

The following is sample output from the **show lane bus** command for a Token Ring LANE:

```
show lane bus

LE BUS ATM3/0.1 ELAN name: anubis Admin: up State: operational
type: token ring Max Frame Size: 4544 Segment ID: 2500
ATM address: 47.00918100000000000000000000.00000CA01662.01
data forward: vcd 14, 2 members, 0 packets, 0 unicasts

lecid vcd pkts ATM Address
  1 11 0 47.00918100000000000000000000.00000CA01660.01
  2 17 0 47.00918100000000000000000000.00000CA04960.01
```

Table 49 describes significant fields in the sample displays.

Table 49 *show lane bus Field Descriptions*

Field	Description
LE BUS ATM2/0.2	Interface and subinterface for which information is displayed.
ELAN name	Name of the emulated LAN for this broadcast and unknown server.
Admin	Administrative state, either up or down.
State	Status of this LANE broadcast and unknown server. Possible states include down and operational.
type	Type of emulated LAN.
Max Frame Size	Maximum frame size (in bytes) on the emulated LAN.
Segment ID	The ring number of the emulated LAN. This field appears only for Token Ring LANE.
ATM address	ATM address of this LANE broadcast and unknown server.
data forward	Virtual channel descriptor of the Data Forward VCC, the number of LANE clients attached to the VCC, and the number of packets transmitted on the VCC.
lecid	Identifier assigned to each LANE client on the Data Forward VCC.
vcd	Virtual channel descriptor used to reach the LANE client.
pkts	Number of packets sent by the broadcast and unknown server to the LANE client.
ATM Address	ATM address of the LANE client.

show lane client

To display detailed LANE information for all the LANE clients configured on an interface or any of its subinterfaces, on a specified subinterface, or on an emulated LAN, use the **show lane client** command in EXEC mode.

AIP on the Cisco 7500 Series Routers; ATM Port Adapter on the Cisco 7200 Series

```
show lane client detail [interface atm slot/port[.subinterface-number] | name elan-name] [brief]
```

ATM Port Adapter on the Cisco 7500 Series Routers

```
show lane client detail [interface atm slot/port-adapter/port[.subinterface-number] | name elan-name] [brief]
```

Cisco 4500 and 4700 Routers

```
show lane client detail [interface atm number[.subinterface-number] | name elan-name] [brief]
```

Syntax Description

detail	Displays additional FSSRP information.
interface atm <i>slot/port</i>	(Optional) ATM interface slot and port for the following: <ul style="list-style-type: none"> AIP on the Cisco 7500 series routers. ATM port adapter on the Cisco 7200 series routers.
interface atm <i>slot/port-adapter/port</i>	(Optional) ATM interface slot, port adapter, and port number for the ATM port adapter on the Cisco 7500 series routers.
interface atm <i>number</i>	(Optional) ATM interface number for the NPM on the Cisco 4500 or 4700 routers.
<i>.subinterface-number</i>	(Optional) Subinterface number.
name <i>elan-name</i>	(Optional) Name of emulated LAN. The maximum length of the name is 32 characters.
brief	(Optional) Displays the brief subset of available information.

Command Modes

EXEC

Command History

Release	Modification
11.0	This command was introduced.
12.0(5)T	Added detail option and command output line “This client is running in FSSRP mode.”

Examples

The following is sample output from the **show lane client** command for an Ethernet-emulated LAN:

```
show lane client

LE Client ATM2/0.2 ELAN name: elan2 Admin: up State: operational
Client ID: 1 LEC up for 11 minutes 49 seconds
Join Attempt: 1
HW Address: 0000.0ca0.5b40 Type: ethernet Max Frame Size: 1516

ATM Address: 39.020304050607080910111213.00000CA05B40.02

VCD  rxFrames  txFrames  Type      ATM Address
  0           0           0  configure 39.020304050607080910111213.00000CA05B43.00
 55           1           4  direct   39.020304050607080910111213.00000CA05B41.02
 56           6           0  distribute 39.020304050607080910111213.00000CA05B41.02
 59           0           1  send     39.020304050607080910111213.00000CA05B42.02
 60           3           0  forward  39.020304050607080910111213.00000CA05B42.02
 84           3           5  data     39.020304050607080910111213.00602F557940.02
```

The following is sample output from the **show lane client** command for a Token Ring LANE:

```
show lane client

LE Client ATM4/0.1 ELAN name: elan1 Admin: up State: operational
Client ID: 1 LEC up for 2 hours 26 minutes 3 seconds
Join Attempt: 3
HW Address: 0060.4770.4180 Type: token ring Max Frame Size: 4544
Ring:100 Bridge:2 ELAN Segment ID: 2048
ATM Address: 39.020304050607080910111213.006047704180.01

VCD  rxFrames  txFrames  Type      ATM Address
  0           0           0  configure 39.020304050607080910111213.006047704183.00
 10           1           3  direct   39.020304050607080910111213.006047704181.01
 11           2           0  distribute 39.020304050607080910111213.006047704181.01
 14           0           0  send     39.020304050607080910111213.006047704182.01
 15           0           0  forward  39.020304050607080910111213.006047704182.01
```

The following is sample output from the **show lane client detail** command.

```
show lane client detail

LE Client ATM1/0.1 ELAN name:xxx Admin:up State:operational
Client ID:2 LEC up for 5 days 40 minutes 45 seconds
ELAN ID:0
This client is running in FSSRP mode.
Join Attempt:14
Known LE Servers:1
Configured Idle Time:5 seconds
Last Fail Reason:Config VC being released
HW Address:00e0.8fcf.d820   Type:ethernet           Max Frame Size:1516

ATM Address:47.0091810000000061705B0C01.00E08FCFD820.01
VCDrxFramestxFramesTypeATM Address
0 0 0 configure 47.00918100000000613E5A2F01.006070174823.00

LEC ID:2, State:LESBUS_ACTIVE

52 17783556direct47.00918100000000613E5A2F01.00000C5A0C59.01
5317780distribute47.00918100000000613E5A2F01.00000C5A0C59.01
54 00send47.00918100000000613E5A2F01.00000C5A0C5A.01
55 00forward47.00918100000000613E5A2F01.00000C5A0C5A.01

LEC ID:3, State:LESBUS_ACTIVE

93122234direct47.00918100000000613E5A2F01.00000ABCD001.09
941220distribute47.00918100000000613E5A2F01.00000ABCD001.09
9700send47.00918100000000613E5A2F01.00000ABCD002.09
0800forward47.00918100000000613E5A2F01.00000ABCD002.09
```

Table 50 describes significant fields in the sample displays.

Table 50 *show lane client Field Descriptions*

Field	Description
LE Client ATM2/0.2	Interface and subinterface of this client.
ELAN name	Name of the emulated LAN.
Admin	Administrative state; either up or down.
State	Status of this LANE client. Possible states include initialState, lecsConnect, configure, join, busConnect, and operational.
Client ID	The LAN emulation 2-byte Client ID assigned by the LAN emulation server.
Join Attempt	The number of attempts made before successfully joining the emulated LAN.
HW Address	MAC address of this LANE client.
Type	Type of emulated LAN.
Max Frame Size	Maximum frame size (in bytes) on the emulated LAN.
Ring	The ring number for the client. This field appears only for Token Ring LANE.
Bridge	The bridge number for the client. This field appears only for Token Ring LANE.

Table 50 show lane client Field Descriptions (continued)

Field	Description
ELAN Segment ID	The ring number for the emulated LAN. This field appears only for Token Ring LANE.
ATM Address	ATM address of this LANE client.
VCD	Virtual channel descriptor for each of the VCCs established for this LANE client.
rxFrames	Number of frames received.
txFrames	Number of frames transmitted.
Type	Type of VCC. The Configure Direct VCC is shown in this display as <i>configure</i> . The Control Direct VCC is shown as <i>direct</i> ; the Control Distribute VCC is shown as <i>distribute</i> . The Multicast Send VCC and Multicast Forward VC are shown as <i>send</i> and <i>forward</i> , respectively. The Data Direct VCC is shown as <i>data</i> .
ATM Address	ATM address of the LANE component at the other end of this VCC.

Related Commands

Command	Description
lane fssrp	Enables the special LANE features so that LANE components (such as the LANE configuration server, the LANE client, the LANE server, and the BUS) become aware of FSSRP.
lane client	Activates a LANE client on the specified subinterface.
lane server	Activates a LANE server on the specified subinterface.
show lane config	Displays global LANE information for the configuration server configured on an interface.

