

# Chapter 13

## RIP Monitoring and Troubleshooting

Table 44 summarizes the command-line interface (CLI) commands you can use to monitor the RIP. In the table, the commands are grouped by functionality. In the remainder of this chapter, they are explained alphabetically.

**Table 44: Commands for Monitoring RIP**

Task or Information to Monitor	Command
Neighbors with which this router exchanges information.	show rip neighbor on page 438
RIP packet and error counters.	show rip statistics on page 439
	clear rip statistics on page 437

### clear rip statistics

**Syntax** clear rip statistics <neighbor>

**Description** Reset RIP neighbor counters to zero.

**Required Privilege Level** clear

**See Also** show rip statistics on page 439

**Options** none—Reset RIP counters for all neighbors.

neighbor <neighbor>—(Optional) Reset RIP counters for specified RIP neighbor.

## show rip neighbor

**Syntax** show rip neighbor <name>

**Description** Display information about all RIP neighbors.

**Options** none—Display brief information about all RIP neighbors.

*name*—(Optional) Display detailed information about a specific RIP neighbor.

**Required Privilege Level** view

**Output Fields** Neighbor—Name of RIP neighbor.

State—State of the connection. It can be either Up or Dn (Down).

Source Address—Source address.

Destination Address—Destination address.

Send Mode—Send options. It could be broadcast, multicast, none, or version 1.

Receive Mode—Type of packets to accept. It could be both, none, version 1, or version 2.

In Metric—Metric added to incoming routes when advertising into RIP routes that were learned from other protocols.

**Sample Output**

```

user@host> show rip neighbor

```

Neighbor	State	Source Address	Destination Address	Send Mode	Receive Mode	In Met
ge-2/3/0.0	Up	192.168.9.105	192.168.9.107	bcast	both	1
at-5/1/1.42	Dn	(null)	(null)	mcast	v2 only	3
at-5/1/0.42	Dn	(null)	(null)	mcast	both	3
at-5/1/0.0	Up	20.0.0.1	224.0.0.9	mcast	both	3
so-0/0/0.0	Up	192.168.9.97	224.0.0.9	mcast	both	3

## show rip statistics

<b>Syntax</b>	show rip statistics < name >
<b>Description</b>	Display RIP protocol statistics.
<b>Options</b>	none—Display brief information about all RIP neighbors. name—(Optional) Display detailed information about a specific RIP neighbor.
<b>Required Privilege Level</b>	view
<b>Output Fields</b>	RIP info—Information about RIP on the specified interface. port—UDP port number used for RIP. update interval—Number of seconds since last update. holddown—Holddown interval, in seconds. timeout—Timeout interval, in seconds. bad msgs—Number of bad messages received. rts learned—Number of routes learned through RIP. rts held down—Number of routes held down by RIP. curr memory— Amount of memory currently used. max memory—Highwater mark of memory used by RIP. Logical interface—Name of the logical interface. routes learned—Number of routes learned on the logical interface. routes advertised—Number of RIP routes advertised. counter—List of counter types. Updates sent—Number of update messages sent. Triggered updates sent—Number of triggered update messages sent. Responses sent—Number of response messages sent. Bad messages—Number of bad messages received. RIPv1 Updates Received—Number of RIPv1 Update messages received. RIPv1 Bad Route Entries—Number of RIPv1 Bad Route Entry messages received. RIPv1 Updates Ignored—Number of RIPv1 Update messages ignored. RIPv2 Updates Received—Number of RIPv2 Update messages received. RIPv2 Bad Route Entries—Number of RIPv2 Bad Route Entry messages received.

RIPv2 Updates Ignored—Number of RIPv2 updates ignored.

Authentication Failures—Number of received update messages that failed authentication.

RIP Requests Received—Number of RIP Request messages received.

RIP Requests Ignored—Number of RIP Request messages ignored.

**Sample Output**

```

user@host> show rip statistics so-0/0/0.0
RIP info: port 520; update interval 30s; holddown 180s; timeout 120s.
      bad msgs  rts learned  rts held down  curr memory  max memory
              0           0           0           3840       3840

so-0/0/0.0: 0 routes learned; 5 routes advertised
Counter                Total    Last 5 min  Last minute
-----                -
Updates Sent           0         0         0
Triggered Updates Sent 1         0         0
Responses Sent         0         0         0
Bad Messages           0         0         0
RIPv1 Updates Received 0         0         0
RIPv1 Bad Route Entries 0         0         0
RIPv1 Updates Ignored  0         0         0
RIPv2 Updates Received 0         0         0
RIPv2 Bad Route Entries 0         0         0
RIPv2 Updates Ignored  0         0         0
Authentication Failures 0         0         0
RIP Requests Received  0         0         0
RIP Requests Ignored   0         0         0
    
```