

Chapter 15

RIP Operational Mode Commands

Table 35 summarizes the command-line interface (CLI) commands you can use to monitor Routing Information Protocol (RIP). In the table, the commands are grouped by functionality. In the remainder of this chapter, they are explained alphabetically.

Table 35: Commands for Monitoring RIP

Task or Information to Monitor	Command
Neighbors with which this router exchanges information.	show rip neighbor on page 425
RIP packet and error counters.	show rip general-statistics on page 424
	clear rip general-statistics on page 423
	show rip statistics on page 426
	clear rip statistics on page 424

clear rip general-statistics

Syntax	clear rip general-statistics <name instance> <logical-router logical-router-name>
Description	Reset RIP neighbor counters to zero.
Options	logical-router <i>logical-router-name</i> —(Optional) Name of a particular logical router on which the command operates.
Required Privilege Level	clear
See Also	show rip general-statistics on page 424

clear rip statistics

- Syntax** clear rip statistics <name | instance> <logical-router *logical-router-name*>
- Description** Reset RIP neighbor counters to zero.
- Required Privilege Level** clear
- See Also** show rip statistics on page 426
- Options** none—Reset RIP counters for all neighbors.
- name*—(Optional) Reset RIP counters for specified RIP neighbor.
- instance*—(Optional) Reset RIP counters for specified instance.
- logical-router *logical-router-name*—(Optional) Name of a particular logical router on which the command operates.

show rip general-statistics

- Syntax** show rip general-statistics <name> <logical-router *logical-router-name*>
- Description** Display brief RIP protocol statistics.
- Options** none—Display brief statistics about all RIP neighbors.
- name*—(Optional) Display brief statistics about a specific RIP neighbor.
- logical-router *logical-router-name*—(Optional) Name of a particular logical router on which the command operates.
- Required Privilege Level** view
- See Also** clear rip general-statistics on page 423
- Output Fields** bad msgs—Number of bad messages received from a neighbor, such as wrong family or unknown neighbor.
- no recv intf—Number of packets received with no matching interface.
- curr memory—Amount of memory currently used by RIP.
- max memory—Highwater mark of memory used by RIP.
- ```
user@host> show rip general-statistics
RIPv2 I/O info:
 bad msgs : 0
 no recv intf : 0
 curr memory : 0
 max memory : 0
```

## show rip neighbor

- Syntax** show rip neighbor <name> <logical-router *logical-router-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.
- logical-router *logical-router-name*—(Optional) Name of a particular logical router on which the command operates.
- Required Privilege Level** view
- Output Fields** Neighbor—Name of RIP neighbor.
- State—State of the connection. The interface can be either Up or Dn (Down).
- Source Address—Source address.
- Destination Address—Destination address.
- Send Mode—Send options. It can be broadcast, multicast, none, or version 1.
- Receive Mode—Type of packets to accept. It can be both, none, version 1, or version 2.
- In Met—Metric added to incoming routes when advertising into RIP routes that were learned from other protocols.

**Sample Output: show rip neighbor**

```

user@host> show rip neighbor
Neighbor State Address Source Destination Send Receive In

ge-2/3/0.0 Up 192.168.9.105 192.168.9.107 bcst 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

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|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Syntax</b>                   | show rip statistics <name> <logical-router <i>logical-router-name</i> >                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>              | Display RIP statistics about messages sent and received on an interface, as well as information received from advertisements from other routers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Options</b>                  | <p><i>name</i>—(Optional) Display detailed information about a specific RIP neighbor.</p> <p>logical-router <i>logical-router-name</i>—(Optional) Name of a particular logical router on which the command operates.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Required Privilege Level</b> | view                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>See Also</b>                 | clear rip statistics on page 424                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Output Fields</b>            | <p>RIP info—Information about RIP on the specified interface.</p> <p>port—UDP port number used for RIP.</p> <p>update interval—Number of seconds since last update.</p> <p>holddown—Hold-down interval, in seconds.</p> <p>timeout—Timeout interval, in seconds.</p> <p>restart in progress, restart time <i>xxs</i>, restart will complete in <i>xxs</i>—Displayed when RIP is in the process of graceful restart.</p> <p>restart time <i>xxs</i>—Total time in seconds (<i>xxs</i>) that it takes to complete RIP graceful restart. The range is 1 through 600 seconds, and the default is 60 seconds.</p> <p>restart will complete in <i>xxs</i>—Amount of time in seconds (<i>xxs</i>) remaining until graceful restart is declared complete. This is the restart time minus the time elapsed.</p> <p>restart is complete; restart time <i>xxs</i>—Displayed when RIP has completed the process of graceful restart.</p> <p>restart time <i>xxs</i>—Total time in seconds (<i>xxs</i>) that it took to complete RIP graceful restart. The range is 1 through 600 seconds, and the default is 60 seconds.</p> <p>bad msgs—Number of bad messages received.</p> <p>rts learned—Number of routes learned through RIP.</p> <p>rts held down—Number of routes held down by RIP.</p> <p>rqsts dropped—Number of received request packets that were dropped.</p> <p>resps dropped—Number of received response packets that were dropped.</p> |

curr memory—Amount of memory currently used by RIP.

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.

Total—Total number of packets for the selected counter.

Last 5 min—Number of packets for the selected counter in the most recent five minute period.

Last minute—Number of packets for the selected counter in the most recent one minute period.

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: show rip statistics**

```

user@host> show rip statistics so-0/0/0.0
RIP info: port 520; update interval 30s; holddown 180s; timeout 120s.
restart in progress; restart time 60s; restart will complete in 55s.
 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

```