

RIP Commands

This chapter describes the function and displays the syntax for Routing Information Protocol (RIP) commands. For more information about defaults and usage guidelines, see the corresponding chapter of the *Network Protocols Command Reference, Part 1*.

auto-summary

To restore the default behavior of automatic summarization of subnet routes into network-level routes, use the **auto-summary** router configuration command. To disable this feature and transmit subprefix routing information across classful network boundaries, use the **no** form of this command.

```
auto-summary  
no auto-summary
```

default-information originate

To generate a default route into RIP, use the **default-information originate** router configuration command. To disable this feature, use the **no** form of this command.

```
default-information originate [route-map mapname]  
no default-information originate
```

route-map *mapname* (Optional) Routing process will generate the default route if the route map is satisfied.

default-metric

To set default metric values for RIP, use this form of the **default-metric** router configuration command. To return to the default state, use the **no** form of this command.

```
default-metric number  
no default-metric [number]
```

number Default metric value.

ip rip authentication key-chain

To enable authentication for RIP Version 2 packets and to specify the set of keys that can be used on an interface, use the **ip rip authentication key-chain** interface configuration command. Use the **no** form of this command to prevent authentication.

```
ip rip authentication key-chain name-of-chain  
no ip rip authentication key-chain [name-of-chain]
```

name-of-chain Enables authentication and specifies the group of keys that are valid.

ip rip authentication mode

To specify the type of authentication used in RIP Version 2 packets, use the **ip rip authentication mode** interface configuration command. Use the **no** form of this command to restore clear text authentication.

```
ip rip authentication mode {text | md5}  
no ip rip authentication mode
```

text Clear text authentication.

md5 Keyed MD5 authentication.

ip rip receive version

To specify a RIP version to receive on an interface basis, use the **ip rip receive version** interface configuration command. Use the **no** form of this command to follow the global **version** rules.

```
ip rip receive version [1] [2]  
no ip rip receive version
```

1 (Optional) Accepts only RIP Version 1 packets on the interface.

2 (Optional) Accepts only RIP Version 2 packets on the interface.

ip rip send version

To specify a RIP version to send on an interface basis, use the **ip rip send version** interface configuration command. Use the **no** form of this command to follow the global **version** rules.

```
ip rip send version [1] [2]  
no ip rip send version
```

1 (Optional) Sends only RIP Version 1 packets out the interface.

2 (Optional) Sends only RIP Version 2 packets out the interface.

ip split-horizon

To enable the split horizon mechanism, use the **ip split-horizon** interface configuration command. To disable the split horizon mechanism, use the **no** form of this command.

```
ip split-horizon
no ip split-horizon
```

neighbor (IGRP and RIP)

To define a neighboring router with which to exchange routing information, use this form of the **neighbor** router configuration command. To remove an entry, use the **no** form of this command.

```
neighbor ip-address
no neighbor ip-address
```

ip-address IP address of a peer router with which routing information will be exchanged.

network (RIP)

To specify a list of networks for the Routing Information Protocol (RIP) routing process, use this form of the **network** router configuration command. To remove an entry, use the **no** form of this command.

```
network network-number
no network network-number
```

network-number IP address of the network of directly connected networks.

offset-list

To add an offset to incoming and outgoing metrics to routes learned via RIP, use the **offset-list** router configuration command. To remove an offset list, use the **no** form of this command.

```
offset-list {access-list-number | name} {in | out} offset [type number]
no offset-list {access-list-number | name} {in | out} offset [type number]
```

access-list-number | *name* Standard access list number or name to be applied. Access list number 0 indicates all access lists. If *offset* is 0, no action is taken. For IGRP, the offset is added to the delay component only.

in Applies the access list to incoming metrics.

out Applies the access list to outgoing metrics.

offset Positive offset to be applied to metrics for networks matching the access list. If the offset is 0, no action is taken.

- type* (Optional) Interface type to which the offset-list is applied.
- number* (Optional) Interface number to which the offset-list is applied.

output-delay

To change the interpacket delay for RIP updates sent, use the **output-delay** router configuration command. To remove the delay, use the **no** form of this command.

output-delay *delay*
no output-delay [*delay*]

- delay* Delay, in milliseconds, between packets in a multiple-packet RIP update. The range is 8 to 50 milliseconds. The default is no delay.

router rip

To configure the Routing Information Protocol (RIP) routing process, use the **router rip** global configuration command. To turn off the RIP routing process, use the **no** form of this command.

router rip
no router rip

timers basic

To adjust RIP network timers, use the **timers basic** router configuration command. To restore the default timers, use the **no** form of this command.

timers basic *update invalid holddown flush*
no timers basic

- update* Rate in seconds at which updates are sent. This is the fundamental timing parameter of the routing protocol. The default is 30 seconds.
- invalid* Interval of time in seconds after which a route is declared invalid; it should be at least three times the value of *update*. A route becomes invalid when there is an absence of updates that refresh the route. The route then enters holddown. The route is marked inaccessible and advertised as unreachable. However, the route is still used for forwarding packets. The default is 180 seconds.
- holddown* Interval in seconds during which routing information regarding better paths is suppressed. It should be at least three times the value of *update*. A route enters into a holddown state when an update packet is received that indicates the route is unreachable. The route is marked inaccessible and advertised as unreachable. However, the route is still used for forwarding packets. When holddown expires, routes advertised by other sources are accepted and the route is no longer inaccessible. The default is 180 seconds.

flush Amount of time in seconds that must pass before the route is removed from the routing table; the interval specified should be greater than the *invalid* value. If it is less than this sum, the proper holddown interval cannot elapse, which results in a new route being accepted before the holddown interval expires. The default is 240 seconds.

validate-update-source

To have the Cisco IOS software validate the source IP address of incoming routing updates for RIP and IGRP routing protocols, use the **validate-update-source** router configuration command. To disable this function, use the **no** form of this command.

validate-update-source
no validate-update-source

version

To specify a RIP version used globally by the router, use the **version** router configuration command. Use the **no** form of this command to restore the default value.

version {1 | 2}
no version

- | | |
|----------|--------------------------|
| 1 | Specifies RIP Version 1. |
| 2 | Specifies RIP Version 2. |

