5 Configuring IP/RIP

Routing Information Protocol (RIP) is an Interior Gateway Protocol (IGP) that uses hop count as its routing metric. Routers that are enabled with RIP update neighboring routers by transmitting a copy of; their own routing table. By default, the OmniCore routing switch performs these updates every 30 seconds.

The RIP routing table always uses the most efficient route to a destination route, that is, the route with the fewest hops and longest matching prefix. When the OmniCore switch becomes aware of a better destination route, that new route will replace the previous route as the preferred route. In turn, the OmniCore switch will also update other RIP routers of the new route.

Every RIP routing table entry contains a metric, the destination address, and the address of the next hop. The metric represents the total number of hops needed to reach a destination.

The OmniCore switch supports RIP version 1 (RIPv1), RIP version 2 (RIPv2), and RIPv2 that is compatible with RIPv1. It also supports text key authentication, on an interface basis, for RIPv2.

IP/RIP Commands

The major IP/RIP commands in the OmniCore CLI are listed in the following tables. Other commands are available for fine-tuning your IP/RIP configuration. To see a complete list of these commands or for more information regarding the commands used in this chapter, see the *OmniCore CLI Reference Manual*.

IP/RIP Global Commands

Command	Default	Description
ip rip force-holddowntimer	0 seconds	Specifies the interval whereby a RIP route remains in a forced hold-down state.
ip rip host-route	enable	Enables support for host routes.
ip rip redistribution	no default	Creates an instance for redistributing OSPF and static routes into RIP routes.
ip rip redistribution metric	1	Specifies the metric value that will be assumed upon the reception of external routes.
ip rip redist-status	enable	Enables OSPF or static route redistribution into RIP routes.
ip rip route-tag	0	Specifies a tag value for RIP autonomous system external (ASE) routes.
ip rip status	disable	Enables IP/RIP.

IP/RIP Interface Commands

Command	Default	Description
vlan ip rip auth-key	no default	Define a text string as the RIP authentication key (V2 packets).
vlan ip rip auth-type	none	Define RIP authentication type (V2 packets).
vlan ip rip metric	1	Sets the RIP metric or cost for specified route.
vlan ip rip recv-version	Version 1 and Version 2 packets	Define the version of RIP packets accepted by an IP interface.
vlan ip rip send-version	Version 1 packets	Define the version of RIP packets to be sent on an IP interface.
vlan ip rip status	disable	Enables RIP forwarding for an IP interface.

Configuring IP/RIP

By default, IP/RIP is disabled on the OmniCore routing switch.

Follow these steps to configure IP/RIP:

1. Enable RIP. Please note that RIP must be globally enabled before it will work on a VLAN.

```
OmniCore> ip rip

OmniCore/ip/rip> status enable

OmniCore/ip/rip> show
RIP Status                              :enable
Host Route Support                      :enable
Redistribution Status                   :disable
Route Tag                               :0
Force Holddown Timer                    :0
```

2. Enable RIP on an existing VLAN. To enable RIP and modify RIP options for an IP interface, you must specify the IP address and VLAN ID. An IP address of 10.0.45.45 (which is a member of VLAN 300) is used for this example.

```
OmniCore/ip/rip> home

OmniCore> vlan 300 ip 10.0.45.45 rip

OmniCore/vlan=300/ip=10.0.45.45/rip> status enable
```

3. (Optional) Modify the default send version, receive version, metric value, and define an authentication type and key.

```
OmniCore/vlan=300/ip=10.0.45.45/rip> send-version v2

OmniCore/vlan=300/ip=10.0.45.45/rip> recv-version both

OmniCore/vlan=300/ip=10.0.45.45/rip> metric 3

OmniCore/vlan=300/ip=10.0.45.45/rip> auth-type none

OmniCore/vlan=300/ip=10.0.45.45/rip> auth-key Abacus
```

```
OmniCore/vlan=300/ip=10.0.45.45/rip> show
RIP Send Version                          :v2
RIP Recv Version                          :both
RIP Authentication Type                   :none
RIP Authentication Key                    :Abacus
RIP Default Metric                        :3
RIP Status                                :enable
```