RIP Next Generation (RIPng)

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Chapter Information

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From the Book

This chapter provides information and commands concerning the following topics:

- Implementing RIP Next Generation
- Verifying and troubleshooting RIPng
- Configuration example: RIPng

NOTE

For an excellent overview of IPv6, I strongly recommend you read Rick Graziani's book from Cisco Press: *IPv6 Fundamentals: A Straightforward Approach to Understanding IPv6*.

Implementing RIP Next Generation

This section shows how to implement RIP Next Generation (RIPng) on a router.

`Router(config)#ipv6 unicast-routing`	Enables the forwarding of IPv6 unicast datagrams globally on the router.
`Router(config) #interface serial0/0/0`	Moves to interface configuration mode.
`Router(config-if) #ipv6 rip TOWER enable`	Creates the RIPng process named TOWER and enables RIPng on the interface.

NOTE

Unlike RIPv1 and RIPv2, where you needed to create the RIP routing process with the **router rip** command and then use the **network** command to specify the interfaces on which to run RIP, the RIPng process is created automatically when RIPng is enabled on an interface with the **ipv6 rip** *name* **enable** command.

TIP

Be sure that you do not misspell your process name. If you do misspell the name, you will inadvertently create a second process with the misspelled name.

NOTE

Cisco IOS Software automatically creates an entry in the configuration for the RIPng routing process when it is enabled on an interface.

NOTE

The **ipv6 router rip** *process-name* command is still needed when configuring optional features of RIPng.

NOTE

The routing process name does not need to match between neighbor routers.

`Router(config)#ipv6 router rip TOWER`	Creates the RIPng process named TOWER if it has not already been created and moves to router configuration mode.
`Router(config-rtr) #maximum-paths 2`	Defines the maximum number of equal-cost routes that RIPng can support.

NOTE

The number of paths that can be used is a number from 1 to 64. The default is 4.

`Router(config-if)#ipv6 rip tower default-information originate`	Announces the default route along with all other RIPng routes.
`Router(config-if) #ipv6 rip tower default-information only`	Announces only the default route. Suppresses all other RIPng routes.

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