BFD for RIPv2 Support

The BFD for RIPv2 Support feature is used to facilitate an alternate path selection when a neighboring router is inactive.

Routing Information Protocol (RIP) uses the timeout of prefixes of a particular neighbor to identify if a neighbor is inactive. By default, the timeout is 180 seconds; that is, although the next-hop router is inactive, the RIP router will still broadcast prefixes for up to 180 seconds.

Bidirectional Forward Detection (BFD) is a protocol that provides subsecond failure detection using a single, common standardized mechanism that is independent of media and routing protocols.

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table at the end of this module.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Prerequisites for BFD for RIPv2 Support

BFD is independent of RIPv2 and must be enabled and functional on the router.

How to Configure BFD for RIPv2 Support Feature

Configuring BFD on RIPv2 Neighbors

Perform this task toconfigure BFD on RIPv2 neighbors:

SUMMARY STEPS

1. **enable**
2. **configure   terminal**
3. **router rip**
4. **bfd all-interfaces**
5. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.
Step 3	**router rip** **Example:** `Router(config)# router rip`	Configures the RIP routing process and enters router configuration mode.
Step 4	**bfd all-interfaces** **Example:** `Router(config-router)# bfd all-interfaces`	Enables BFD on all interfaces associated with the routing process. • RIPv2 registers with BFD and creates sessions for the neighbor when RIP updates are received. New neighbors are automatically enabled for BFD when the update packets are received. **Note** Alternatively, you can use the **neighbor** *ip-address* **bfd**command to enable BFD for a specific RIP neighbor.

	Command or Action	Purpose
Step 5	**end** **Example:** `Router(config-router)# end`	Exits router configuration mode and returns to global configuration mode.

Configuration Example for BFD for RIPv2 Support Feature

Example Configuring BFD for a RIPv2 Neighbor

The following example shows how to configure BFD for all interfaces associated with a RIPv2 neighbor:

```
!
interface GigabitEthernet 0/0/0
 ip address 10.10.10.1 255.255.255.0
 bfd interval 50 min_rx 50 multiplier 5
end
!
interface GigabitEthernet 0/0/1
 ip address 10.10.20.1 255.255.255.0
 bfd interval 50 min_rx 50 multiplier 5
end
!
router rip
 version 2
 redistribute connected
 network 10.0.0.0
 neighbor 10.10.20.2 bfd
 bfd all-interfaces
 no auto-summary
!
```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
Cisco IOS IP Routing: Protocol-Independent Commands	*Cisco IOS IP Routing: Protocol-Independent Command Reference*

Standards

Standard	Title
None	--

MIBs

MIB	MIBs Link
None	--

RFCs

RFC	Title
None	--

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for BFD for RIPv2 Support

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1: Feature Information for BFD for RIPv2 Support

Feature Name	Releases	Feature Information
BFD for RIPv2 Support	Cisco IOS Release 15.1(2)S Cisco IOS Release 15.3(2)T	The BFD for RIPv2 Support feature is used to facilitate alternate path selection when a neighboring router is inactive. The following commands were introduced or modified: **bfd all-interfaces, debug ip rip bfd events, neighbor (RIP),**and **show ip rip neighbor**.