

Xconnect as a Client of BFD

The Xconnect as a Client of Bidirectional Forwarding Detection (BFD) feature provides a trigger for redundant pseudowire switchover based on BFD's fast failure detection capabilities.

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Information About Xconnect as a Client of BFD

Xconnect as a Client of BFD

Redundant pseudowires are deployed to provide fault tolerance and resiliency to L2VPN-backhauled connections. The speed at which a system recovers from failures, especially when scaled to large numbers of pseudowires, is critical to many service providers and service level agreements (SLAs). The configuration of a trigger for redundant pseudowire switchover reduces the time that it takes a large number of pseudowires to failover. A fundamental component of bidirectional forwarding detection (BFD) capability is enabled by fast-failure detection (FFD).

The configuration of this feature refers to a BFD configuration, such as the following (the second URL in the **bfd map** command is the loopback URL in the **monitor peer bfd** command):

```
bfd-template multi-hop mh
 interval min-tx 200 min-rx 200 multiplier 3 !
bfd map ipv4  10.1.1.0/24  10.1.1.1/32 mh
```

How to Configure Xconnect as a Client of BFD

Configuring Xconnect as a Client of BFD

Perform this task to configure a trigger for redundant pseudowire switchover.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **pseudowire-class mpls-ffd**
   - Enters pseudowire class configuration mode.
4. **encapsulation mpls**
5. **monitor peer bfd** [**local interface** *interface-type interface-number*]

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 3	**pseudowire-class mpls-ffd** • Enters pseudowire class configuration mode. **Example:** `Device(config)# pseudowire-class mpls-ffd`	Establishes a pseudowire class for MPLS fast-failure detection.
Step 4	**encapsulation mpls** **Example:** `Device(config-pw-class)# encapsulation mpls`	Specifies the tunneling encapsulation to be MPLS.
Step 5	**monitor peer bfd** [**local interface** *interface-type interface-number*] **Example:** `Device(config-pw-class)# monitor peer bfd local interface loopback 0`	Enables the pseudowire fast-failure detection capability.

Configuration Examples for Xconnect as a Client of BFD

Example: Xconnect as a Client of BFD

Pseudowire Class Configuration

The following example shows pseudowire fast-failure detection enabled for a pseudowire class:

```
pseudowire-class mpls-ffd
 encapsulation mpls
 monitor peer bfd local interface Loopback0
```

Template Configuration

The following example shows pseudowire fast-failure detection enabled in a template:

```
template type pseudowire 1
 encapsulation mpls
 monitor peer bfd local interface Ethernet0/1
```

Interface Configuration

The following example shows pseudowire fast-failure detection enabled for an interface:

```
interface pseudowire100
 encapsulation mpls
 neighbor 10.10.1.1 21190
 monitor peer bfd local interface Ethernet0/1
```

Additional References

Related Documents

Related Topic	Document Title
Any Transport over MPLS	Any Transport over MPLS
High Availability for AToM	AToM Graceful Restart
L2VPN Interworking	L2VPN Interworking
Layer 2 local switching	Layer 2 Local Switching
PWE3 MIB	Pseudowire Emulation Edge-to-Edge MIBs for Ethernet and Frame Relay Services
Packet sequencing	Any Transport over MPLS (AToM) Sequencing Support

Related Topic	Document Title
BFD configuration	IP Routing BFD Configuration Guide

Standards

Standards	Title
None	--

MIBs

MIBs	MIBs Link
None	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFCs	Title
None	--

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/techsupport

Feature Information for Xconnect as a Client of BFD

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 Xconnect as a Client of BFD

Feature Name	Releases	Feature Information
Xconnect as a Client of BFD	Cisco IOS XE Release 3.8S	This feature provides fast-failure detection for L2VPN pseudowire redundancy. The following command was introduced: **monitor peer bfd**.