

Monitoring and Maintaining Multilink Frame Relay

The Cisco Frame Relay implementation currently supports routing on IP, DECnet, AppleTalk, XNS, Novell IPX, CLNS, Banyan VINES, and transparent bridging. This guide describes how to monitor and maintain the Multilink Frame Relay feature for the Cisco ASR 1000 Series Routers.

- Feature Overview , page 1
- Configuring Multilink Frame Relay, page 1
- Monitoring and Maintaining Frame Relay and Multilink Frame Relay, page 2
- Additional References, page 2
- Feature Information for Monitoring and Maintaining Multilink Frame Relay, page 3

Feature Overview

The Multilink Frame Relay feature is based on the Frame Relay Forum's Multilink Frame Relay UNI Implementation Agreement (FRF.16). This feature provides a cost-effective way to increase bandwidth for certain applications by enabling multiple serial links to be aggregated into a single bundle of bandwidth. Multilink Frame Relay is supported on User-to-Network Interface (UNI) networks.

Configuring Multilink Frame Relay

The mulitlink frame relay configuration processes are described in the Frame Relay - Multilink (MLFR-FRF.16) feature guide. For more information, see the Frame Relay - Multilink (MLFR-FRF.16) feature guide at: {start hypertext}http://www.cisco.com/en/US/docs/ios/ios_xe/wan/configuration/guide/wan_ml_fr_frf161_xe.html{end hypertext}

Monitoring and Maintaining Frame Relay and Multilink Frame Relay

You can use different **show** and **debug** commands to monitor and maintain frame relay and multilink frame relay configurations.

You can use the following **show** commands to display the multilink frame relay configurations:

- **show platform software frame-relay—**Displays the statistics about frame relay permanent virtual circuits (PVCs).
- **show platform software mfr—**Displays statistics about multilink frame relay information.

You can use the following **debug** commands to debug the multilink frame relay configurations:

- **debug platform hardware qfp active interface frame-relay multilink—**Debugs the multilink frame relay interfaces in the Cisco QuantumFlow Processor (QFP).
- **platform trace runtime process forwarding-manager module—**Enables Forwarding Manager Route Processor and Embedded Service Processor trace messages for the forwarding manager process.

For additional information on the commands and the options available for each command, see the Cisco IOS Configuration Fundamentals Command Reference document, located at: {start hypertext}http://www.cisco.com/en/US/docs/ios/fundamentals/command/reference/cf_book.html{end hypertext}

Additional References

Related Documents

Related Topic	Document Title
Multilink - Frame Relay (MLFR-FRF.16)	{start hypertext}http://www.cisco.com/en/US/docs/ios-xml/ios/wan/configuration/guide/wan_mlfr16_xe.html{end hypertext}
Frame Relay	*Wide-Area Networking Configuration Guide: Frame Relay, Cisco IOS XE Release 3S*
Cisco IOS commands	*Cisco IOS Master Commands List, All Releases*

Standards

Standard	Title
None	—

MIBs

MIB	MIBs Link
None	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at this URL: {start hypertext}http://www.cisco.com/go/mibs{end hypertext}

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.	{start hypertext}http://www.cisco.com/cisco/web/support/index.html{end hypertext}

Feature Information for Monitoring and Maintaining Multilink Frame Relay

{start cross reference}Table 16-1{end cross reference} lists the features in this module and provides links to specific configuration information.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to{start hypertext} http://www.cisco.com/go/cfn{end hypertext}. An account on Cisco.com is not required.

Note {start cross reference}Table 16-1{end cross reference} 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.

Table 1: Feature Information for Monitoring and Maintaining Multilink Frame Relay

Feature Name	Releases	Feature Information
Monitoring and Maintaining Frame Relay	Cisco IOS XE 3.4.0S	In Cisco IOS XE Release 3.4S, this feature was introduced on the Cisco ASR 1000 Series Router.