



Troubleshooting Enhancements for Multilink PPP over ATM Link Fragmentation and Interleaving

The Troubleshooting Enhancements for Multilink PPP over ATM Link Fragmentation and Interleaving enhance the output of the **show atm pvc**, **show multilink ppp**, and **show interfaces virtual-access** commands to display multilink PPP (MLP) over ATM link fragmentation and interleaving (LFI) information. This feature also introduces the **debug atm lfi** command, which can be used to display MLP over ATM LFI debugging information.

Feature History for Troubleshooting Enhancements for Multilink PPP over ATM LFI

Release	Modification
12.3(7)T	This feature was introduced.

Finding Support Information for Platforms and Cisco IOS Software Images

Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at <http://www.cisco.com/go/fn>. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.

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How to Troubleshoot Multilink PPP over ATM LFI

This section contains the following procedure:

- [Troubleshooting Multilink PPP over ATM LFI, page 2](#)

Troubleshooting Multilink PPP over ATM LFI

Perform this task to display information about multilink PPP over ATM LFI connections.

Prerequisites

This task assumes that you have configured multilink PPP over ATM LFI in your network. For information about how to configure multilink PPP over ATM LFI, see the [“Additional References” section on page 3](#).

SUMMARY STEPS

1. **enable**
2. **show atm pvc** *vpi/vci*
3. **show ppp multilink** [**active** | **inactive** | **interface** *bundle-interface* | [**username** *name*] [**endpoint** *endpoint*]]
4. **show interfaces virtual-access** [*type number*]
5. **debug atm lfi**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	show atm pvc <i>vpi/vci</i> Example: Router# show atm pvc 15/200	Displays traffic, management, and MLP over ATM LFI information for the specified PVC.
Step 3	show ppp multilink [active inactive interface <i>bundle-interface</i> [username <i>name</i>] [endpoint <i>endpoint</i>]] Example: Router# show ppp multilink username blue	Displays bundle information for MLP bundles.

	Command or Action	Purpose
Step 4	<p><code>show interfaces virtual-access number</code></p> <p>Example: Router# show interfaces virtual-access 3</p>	<p>Displays status, traffic data, and configuration information about a specified virtual access interface.</p> <ul style="list-style-type: none"> • Display will indicate if the interface is a member of a multilink PPP bundle.
Step 5	<p><code>debug atm lfi</code></p> <p>Example: Router# debug atm lfi</p>	<p>Displays MLP over ATM LFI debug information.</p>

Examples

See the `show atm pvc`, `show ppp multilink`, `show interfaces virtual-access`, and `debug atm lfi` command pages for examples of output and descriptions of the fields in the output. For information about where to find the command pages for these commands, see [Command Reference, page 5](#).

Additional References

The following sections provide references related to multilink PPP over ATM LFI.

Related Documents

Related Topic	Document Title
LFI for multilink PPP configuration tasks	<i>“Configuring Link Fragmentation and Interleaving for Multilink PPP” chapter in the Cisco IOS Quality of Service Solutions Configuration Guide, Release 12.2</i>
LFI for ATM virtual circuits configuration tasks	<i>“Configuring Link Fragmentation and Interleaving for Frame Relay and ATM Virtual Circuits” chapter in the Cisco IOS Quality of Service Solutions Configuration Guide, Release 12.2</i>
Multilink PPP over ATM LFI commands	<i>Cisco IOS Quality of Service Solutions Command Reference, Release 12.3 T</i>
Multilink PPP configuration tasks	“PPP Configuration” section in the <i>Cisco IOS Dial Technologies Configuration Guide, Release 12.3</i>
Multilink PPP commands	<i>Cisco IOS Dial Technologies Command Reference, Release 12.3 T</i>
ATM configuration tasks	<i>“WAN Protocols” section in the Cisco IOS Wide-Area Networking Configuration Guide, Release 12.3</i>
ATM commands	<i>Cisco IOS Wide-Area Networking Command Reference, Release 12.3 T</i>

MIBs

MIBs	MIBs Link
No new or modified MIBs are supported by this feature.	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

Technical Assistance

Description	Link
Technical Assistance Center (TAC) home page, containing 30,000 pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/public/support/tac/home.shtml

Command Reference

The following commands are introduced or modified in the feature or features documented in this module. For information about these commands, see the *Cisco IOS Dial Technologies Command Reference* at http://www.cisco.com/en/US/docs/ios/dial/command/reference/dia_book.html. For information about all Cisco IOS commands, go to the Command Lookup Tool at <http://tools.cisco.com/Support/CLILookup> or to the *Cisco IOS Master Commands List*.

- **debug atm lfi**
- **show atm pvc**
- **show interfaces virtual-access**
- **show ppp multilink**

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