Cisco Catalyst 8500/LightStream 1010 IOS Release 12.1(13)EB

Introduction

This Product Bulletin describes the content and delivery information concerning Cisco IOS™ software release 12.1(13)EB. It should be used in conjunction with Product Bulletin titles, Cisco IOS Software Release 12.1E. 12.1(13)EB is an Early Deployment (ED) release supporting Cisco Catalyst 8510/8540 and Lightstream 1010 platforms.

New Features in 12.1(13)EB

New features are supported on the Cisco Catalyst 8510MSR, 8540MSR, and Lightstream 1010.

New Feature	8510MSR	8540MSR	LS1010	
ATM Per Class Overbooking	Yes	Yes	Yes	(LS1010 requires ASP-FCPFQ)
Frame Relay Enhancements	Yes	Yes	Yes	(All Require Firmware version 4.4)
Point to Multipoint Soft PVC (P2MP SPVC)	Yes	Yes	Yes	
CPU Port Soft PVC	Yes	Yes	Yes	
Soft PVC Traffic Parameter Modifications	Yes	Yes	Yes	
PNNI Connection Trace MIB, RFC 2515	Yes	Yes	Yes	

Table 1. Cisco IOS Release 12.1(13) EB Features

Detailed Information

ATM Per Class Overbooking

ATM Overbooking allows Virtual Circuits (VC) to utilize more bandwidth, up to the physical interface limits, than originally specified in the service contract. If the actual traffic exceeds the limits of the interface, all traffic classes are reduced proportionally. The new feature, ATM Per Class Overbooking, allows overbooking on specific classes only. This allows specific classes, such as UBR or VBR to utilize overbooking, while others, such as CBR do not. If actual traffic exceeds the limits of the interface, only those traffic classes configured for overbooking will be reduced. In the example above, this will leave the CBR traffic at a fixed rate, while decreasing UBR and VBR proportionally. On the LS1010 platform, this feature requires the Per Flow Queuing Feature Card, ASP-FCPFQ.

Frame Relay Enhancements

Frame Relay Enhancements include Configurable Frame Size and Overflow Queuing. The current implementation of Frame Relay to ATM interworking (FR-ATM IWF) uses a fixed frame size. This results in non optimum usage of bandwidth. Configurable Frame Size allows the user to configure frame sizes appropriately to the network traffic pattern for increased throughput. Overflow Queuing increases the queue sizes in the Frame Relay to ATM direction to accommodate sustained traffic at the Peak Information Rate (PIR). When traffic shaping is implemented for VBR circuits in the Frame Relay to ATM direction, some cells may be dropped when there is sustained traffic at the Peak Information Rate (PIR). Overflow Queuing adds more queuing capability to eliminate dropped cells.

The Frame Relay Enhancements are only available on the 4 Port E1 Frame Relay Port Adapters, C85MS-4E1-FRRJ48. In order to utilize these features, the Port Adapter firmware must be upgraded to Version 4.4.

Point to Multipoint Soft PVC (P2MP SPVC)

Point to Multipoint Soft PVC's add point to multipoint signaling capabilities to the existing Soft PVC feature. Soft PVC's have a PVC at each of the source and destination nodes, while utilizing ATM signaling to connect the intermediate nodes of a circuit. This allows connectivity to end devices which do not support ATM signaling, while using ATM signaling to easily establish connections within a network. Point to multipoint SPVC's extend the feature so that a single source node can establish connections to multiple destination nodes. P2MP SPVC's are particularly suited for broadcast applications, such as video and audio, which require the high quality traffic guarantees that are provided by ATM.

CPU Port Soft PVC

CPU Port SPVC feature allows SPVC's to be configured on the virtual interface of the CPU port. This allows a management station, connected to the CPU Port, to utilize the signaling properties of SPVC's to establish connections through the network. It allows an existing management station connection on a line card to migrate to the CPU Port, thus freeing up another interface for data traffic.

Soft PVC Traffic Parameter Modifications

In order to change the Traffic Parameters of existing SPVC's, the SPVC must be removed, then reestablished with a new command. This could result in excessive SPVC downtime due to multiple configurations. The Soft PVC Traffic Parameter Modification feature allows an existing SPVC to be torn down, and then reestablished, with a single command, when the traffic parameter portion of the SPVC is changed. This results in minimal downtime as the SPVC is quickly deleted, then reinstalled.

PNNI Connection Trace MIB, RFC 2515

The existing PNNI Connection Trace feature allows connections, which have been established via PNNI, to be traced through the network to determine which nodes are used in the path. The MIB, RFC 2515, is implemented for use with SNMP and network management systems.

New MIBs

The following new MIB is supported:

ATM-TRACE-MIB

Documents

For more detailed information about the platforms and features being delivered in 12.1(13) EB, please reference the following documents:

http://www.cisco.com/univercd/cc/td/doc/product/atm/c8540/12_1/index.htm

Support

Cisco IOS software release 12.1(13) EB follows the standard Cisco support policy as indicated in the following link:

http://www.cisco.com/warp/public/437/27.html

Download Information

Customers can download Cisco IOS Release 12.1(13) EB software from Cisco Connection Online (CCO) in the Software Image Library.

http://www.cisco.com/public/sw-center

Product Numbers

Cisco IOS Release 12.1(13) EB Feature Sets, Images, and Memory Recommendations

Platform	Software Feature Set	Product Codes	Image	Flash	DRAM
LS1010	Cisco LS1010 Series IOS Lightstream IISP/PNNI	SL10R2-12113EB SL10R2-12113EB=	ls1010-wp-mz	16MB	64MB
LS1010	Cisco LS1010 Series IOS Lightstream IISP/PNNI SSH 3DES	SL10R2K2-12113EB SL10R2K2-12113EB=	ls1010-wpk2-mz	16MB	64MB
8510MSR	Cisco CAT8510 Series IOS ATM/Layer3	S851R2-12113EB S851R2-12113EB=	cat8510m-wp-mz	16MB	64MB
8510MSR	Cisco CAT8510 Series IOS ATM/Layer3 SSH 3DES	S851R2K2-12113EB S851R2K2-12113EB=	cat8510m-wpk2-mz	16MB	64MB
8540MSR	Cisco CAT8540 Series IOS ATM/Layer3	S854R2-12113EB S854R2-12113EB=	cat8540m-wp-mz	16MB	256MB
8540MSR	Cisco CAT8540 Series IOS ATM/Layer3 SSH 3DES	S854R2K2-12113EB S854R2K2-12113EB=	cat8540m-wpk2-mz	16MB	256MB

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: +65 317 7777
Fax: +65 317 7799

Cisco Systems has more than 200 offices in the following countries and regions. Addresses, phone numbers, and fax numbers are listed on the Cisco Web site at www.cisco.com/go/offices

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica • Croatia Czech Republic • Denmark • Dubai, UAE • Finland • France • Germany • Greece • Hong Kong SAR • Hungary • India • Indonesia • Ireland Israel • Italy • Japan • Korea • Luxembourg • Malaysia • Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland Portugal • Puerto Rico • Romania • Russia • Saudi Arabia • Scotland • Singapore • Slovakia • Slovenia • South Africa • Spain • Sweden Switzerland • Taiwan • Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela • Vietnam • Zimbabwe