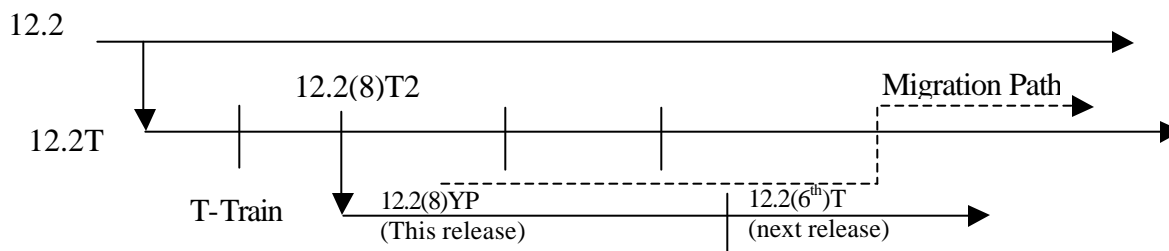**CISCO SYSTEMS**

Cisco IOS Early Deployment Release 12.2(8)YP

Introduction

This Product Bulletin describes the content and delivery information concerning Cisco IOS™ software release 12.2(8)YP. It should be used in conjunction with Product Bulletin titles, Cisco IOS Software Release 12.2(8)T. 12.2(8)YP is a short-lived Early Deployment (ED) release parented to 12.2(8)T2 and supporting Cisco MGX RPM-XF platform.

Migration Guide

Diagram 1 below displays Cisco 12.2(8)YP release functionality relative to the 12.2T release. This diagram also identifies the recommended migration path.

Cisco MGX RPM-XF in 12.2(8)YP

The Cisco Route Processor Module XF (Cisco RPM-XF) is a seamless integrated IP/MPLS services gateway for Cisco Advanced ATM Multiservice Portfolio (AAMP) leveraging industry leading Cisco IOS® software and powered by Cisco PXF's innovative adaptive processing for highest service performance.

The Cisco RPM-XF has an adaptive network processing technology based on Cisco's patented Parallel Express Forwarding (PXF) architecture. The PXF network processor provides hardware-based forwarding and ease of programmability for flexible service delivery. The Cisco RPM-XF is built to provide high-performance edge services, high scalability, and reliability. The Cisco RPM-XF creates new and differentiated current services for ATM-based networks, such as voice over

IP (VoIP) and IP-enabled Layer 2 service. The Cisco RPM-XF also provides a Multiprotocol Label Switching (MPLS) control plane for emerging services and network architectures

Key Applications

- Adds IP with industry-leading quality of service (QoS) for VoIP, VPN, and MPLS

- Allows IP enabling of any Layer 2 services such as Frame Relay for Cisco networks and other vendor networks

- Serves as gateway for ATM services into IP/MPLS core networks

Software Overview

The Cisco RPM-XF is based on the Cisco IOS® Operating System. Cisco IOS® Software is feature-rich network system software that provides network intelligence for the business-critical solutions. Key software services are outlined in Table 1:

Table 1: Features of Cisco IOS Operating System

Services	Features
Routing	BGPv4[1], OSPF[2], IS-IS[3], RIPv2[4], EIGRP[5], IP multicast routing (PIM[6])
MPLS	Label edge router LSR[7] and LSC[8] MPLS-VPN[9] (RFC 2547) MPLS traffic engineering (RSVP-TE[10])
Quality of service	IP Diff-Serv[11] (TOS[12], DSCP[13]) MPLS Diff-Serv (E-LSP[14], L-LSP[15]) Diff-Serv-aware traffic engineering LLQ[16] Weighted RED[17] CB-WFQ[18] Modular QoS CLI[19]
Ethernet	802.1Q VLAN 802.1Q to MPLS VPN interworking
High availability	1:N redundancy
ATM	VBR-rt[20], VBR-nrt[21], UBR[22] Virtual-circuit shaping Per-virtual circuit queues PNNI-SPVC[23] Ships in the night mode (PNNI and MPLS control plane) MSF[24]-compliant architecture (Cisco Virtual Switch Architecture)
Network management	SNMPv1/2/3[25] support

	Cisco WAN Manager (element management, Layer 2 connection management GUI[26], SNMP) VPN Solution Center (MPLS VPN service management) CiscoWorks, Cisco Information Center
IETF[27] standards compliance (not comprehensive)	RFCs 3063, 3037, 3036, 3035, 3032, 3031, 2858, 2796, 2702, 2684, 2598, 2597, 2547, 2475, 2453, 2364, 2328, 2205, 1966, and 1583

[1] Border Gateway Protocol Version 4

[2] Open Shortest Path First

[3] Intermediate System-to-Intermediate System

[4] Routing Information Protocol Version 2

[5] Enhanced Interior Gateway Routing Protocol

[6] Protocol Independent Multicast

[7] Label switch router

[8] Label switch controller

[9] Multiprotocol Label Switching virtual private network

[10] Resource Reservation Protocol [Resource Reservation Protocol]

[11] Differentiated services

[12] Type of service

[13] Differentiated services code point

[14] [EXP-Inferred Label Switched Path]

[15] [Label-Only Inferred-Label Switched Path]

[16] Low-latency queuing

[17] Weighted Random Early Detection

[18] Class-Based Weighted Fair Queuing

[19] Quality of service command-line interface

[20] Real-time variable bit rate

[21] Non-real time variable bit rate

[22] Unspecified bit rate

[23] Soft permanent virtual circuit

[24]Multiservice Switching Forum

[25]Simple Network Management Protocol Versions 1/2/3

[26]Graphical user interface

[27]Internet Engineering Task Force

For more detailed information about the platforms and features being delivered in 12.2(8)YP, please reference the following documents:

http://www.cisco.com/univercd/cc/td/doc/product/software/ios/122/122relnt/7000/rn7000yd.htm

http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122newft/122limit/122y/122yd/122yd8/index.htm

Support

Cisco IOS software release 12.2(8)YP follows the standard Cisco support policy as indicated in the following link:

http://www.cisco.com/warp/public/437/37.html

Product Numbers

Cisco IOS Release 12.2(8)YP Feature Sets, Images, and Memory Recommendations

Platform	Software Feature Set	Product Code	Image	Flash	DRAM
Cisco MGX RPM-XF	MGX RPM-XF IP IOS	MGX-RPM-XF-IP	rpmxf-p12-mz	64M	512MB