New and Changed Feature Information

This chapter lists all the features that have been added or modified in this guide. The table also contains references to these feature documentation sections.

Interface and Hardware Component Features Added or Modified in IOS XR Release 7.1.x

Feature	Description	Introduced/Changed in Release	Where Documented
CFM Adaptive Bandwidth Notifications	Connectivity Fault Management (CFM) extension is used to send Bandwidth Notifications Messages (BNM) to Maintenance Endpoints (MEPs) on the corresponding interface on the head-end router.	Release 7.1.1	For more information about the feature, see the Configuring Ethernet OAM chapter in the *Interface and Hardware Component Command Reference for Cisco ASR 9000 Series Routers*.
CFM Hardware Offload	The CFM Hardware Offload feature is now supported on ASR 9000 5th Genereation High Density line cards	Release 7.1.15	For more information about the feature, see the Configuring Ethernet OAM chapter in the *Interface and Hardware Component Command Reference for Cisco ASR 9000 Series Routers*.

SPAN to File	The SPAN to File feature is an extension of the pre-existing SPAN feature in traffic mirroring. SPAN over File allows packets of network data to be mirrored to a file instead of an interface, so that they can be analysed at a later stage. The file format is PCAP, so that it can be easily used with tools such as tcpdump or wireshark.	Release 7.1.2	For more information about the feature, see the *Configuring Traffic Mirroring* chapter in the *nterface and Hardware Component Command Reference for Cisco ASR 9000 Series Routers*.
File Mirroring	File mirroring feature enables the router to copy files or directories automatically from `/harddisk:/mirror` location in active RP to `/harddisk:/mirror` location in standby RP or RSP without user intervention or EEM scripts.	Release 7.1.2	For more information about the feature, see the section *Introduction to File Mirroring* in chapter *Configure Traffic Mirroring*.
Convert Speed of a Dual-mode Optic	This feature enables converting the speed of a dual-mode optic from one to another using the **hw-module location <node-id> port <port number> breakout <interface>** command.	Release 7.1.3	Convert Speed of a Dual-mode Optic