What's New in Cisco cBR-8 Series Routers

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Cisco is continuously enhancing the product with every release and this section covers a brief description of key features and enhancements that were added. It also includes links to detailed documentation, where available.

New and Changed Information

The following section lists the new software and hardware features supported on the Cisco cBR Series Converged Broadband Routers in this release:

New Software Features in Cisco IOS XE Amsterdam 17.3.1z

The following features are supported in the Cisco cBR-8 series routers:

Support for OFDMA 2048-QAM Modulation

Cisco cBR-8 router supports 2048-Quadrature Amplitude Modulation (QAM) for subcarriers of upstream OFDMA channels.

DEPI Statistics Synchronization Interval Configuration

In Cisco cBR-8 router, the DEPI statistics is synchronized from cdman (us-schedular) to IOSd. The previous synchronization interval is 15 seconds, which consumes extra CPU resources and may impact the overall

cBR-8 system performance. Starting from Cisco IOS XE Amsterdam 17.3.1z, the default DEPI statistics synchronization interval is set to 60 seconds to reduce the CPU usage of the synchronization process. You can also configure the interval by using **cable rphy statistics session update-freq** command in global configuration mode to accommodate your specific needs. But Cisco recommends the default setting unless a change is requested by a Cisco service representative for a particular topology or use case. You must keep in mind that never use short interval in large scale deployment to avoid high CPU usage. For more information, see

https://www.cisco.com/c/en/us/td/docs/cable/cmts/cmd_ref/b_cmts_cable_cmd_ref/cable_p_through_cable_r.html#wp3469000627.

Increased Support for US and DS classifier count

From Cisco IOS XE Amsterdam 17.3.1z release, support for static classifiers increased from 16 downstream and 16 upstream per modem to 32 downstream and 32 upstream per modem. You can view information about the classifiers for a particular Cable Modem, using the **show cable modem classifiers** command in privileged EXEC mode.

New Hardware Features in Cisco IOS XE Amsterdam 17.3.1z

There are no new hardware features in the Cisco IOS XE Amsterdam 17.3.1z release for Cisco cBR-8 series routers.

New Software Features in Cisco IOS XE Amsterdam 17.3.1x

The following features are supported in the Cisco cBR-8 series routers:

IPDR support for DOCSIS 3.1

Supports DOCSIS 3.1 IPDR schemas to address the need for a reliable, fast, efficient, and flexible export process of high volume data records such as billing, performance, and diagnostic data.

VRF RI Address for Unicast and Multicast

Both multicast and unicast on Cisco cBR-8 can use the VRF RI address advertised by source PE.

Common 55-1 US Profile for 2x2/1x2 RPD

The Cisco cBR-8 supports configuring the same profile to both upstream physical RF ports in an RPD. Service providers can now expand the 55-1 service group on to the second US port without the need for extra hardware.

PCMM High Priority Calls

From Cisco IOS XE Amsterdam 17.3.1x, the Cisco cBR-8 supports specifying the SessionClassID of high priority calls. The Cisco cBR-8 considers PCMM calls with the default SessionClassID of 15 and calls with the priority you specify as high priority calls. A new command, `packetcable multimedia high-priority` has been introduced to specify the SessionClassID of high priority calls.

L2VPN MTU Size Auto-negotiation

Cisco cBR-8 router allows you to configure arbitrary MTUs for each DOCSIS 3.1 modem differently and auto-negotiates the set up of L2VPN pseudowire. You can use the **cable l2-vpn-service xconnect mtu-auto-negotiation** command to achieve L2VPN MTU size auto-negotiation.

IPv6 Support for Inserting Hostname

Cisco cBR-8 router provides IPv6 support for inserting hostname into DHCPv6 packets. Use the **cable ipv6 dhcp-insert hostname** command to configure the Cisco cBR-8 routers.

New Hardware Features in Cisco IOS XE Amsterdam 17.3.1x

There are no new hardware features in the Cisco IOS XE Amsterdam 17.3.1x release for Cisco cBR-8 series routers.

New Software Features in Cisco IOS XE Amsterdam 17.3.1w

The following features are supported in the Cisco cBR-8 series routers:

Cisco cBR-8 Router as Auxiliary Video Core

You can configure a Cisco cBR-8 router as a Remote PHY auxiliary video core. Use the Cisco cBR-8 router as an auxiliary video core to support video and OOB with Cisco cnBR or to support video on a separate Cisco cBR-8 router other than the DOCSIS core.

DOCSIS Predictive Scheduler

DOCSIS Predictive Scheduler (DPS) is a scheduling technique to reduce the DOCSIS upstream latency by predicting and allocating unsolicited grants to service flows.

Differentiated Services Code Point Downstream Marking

Cisco cBR-8 Converged Broadband Router conforms to DOCSIS service's priority to drive traffic by high queue or low queue with various Differentiated Services Code Point downstream (DSCP) marking.

Multicast Downstream Interface Selection

DOCSIS 3.1 modems can use the secondary wideband interface without the RCC template for downstream multicast traffic if the secondary wideband interface conforms to the following:

- The interface has the `cable igmp static-group group`.

- Belongs to the same MAC domain as the modem.

- Its active `rf-chan` list is the subset of modem's downstream Receive Channel Set (RCS).

The DOCSIS 3.0 modems are capable of using secondary wideband interface for downstream multicast traffic by using the RCC template.

New Hardware Features in Cisco IOS XE Amsterdam 17.3.1w

There are no new hardware features in the Cisco IOS XE Amsterdam 17.3.1w release.

Behaviour Changes Introduced Features

Modified Software Features in Cisco IOS XE Amsterdam 17.3.1z

There are no modified software features in the Cisco IOS XE Amsterdam 17.3.1z release for Cisco cBR-8 series routers.

Modified Hardware Features in Cisco IOS XE Amsterdam 17.3.1z

There are no modified hardware features in the Cisco IOS XE Amsterdam 17.3.1z release for Cisco cBR-8 series routers.

Modified Software Features in Cisco IOS XE Amsterdam 17.3.1x

There are no modified software features in the Cisco IOS XE Amsterdam 17.3.1x release for Cisco cBR-8 series routers.

Modified Hardware Features in Cisco IOS XE Amsterdam 17.3.1x

There are no modified hardware features in the Cisco IOS XE Amsterdam 17.3.1x release for Cisco cBR-8 series routers.

Modified Software Features in Cisco IOS XE Amsterdam 17.3.1w

The following features are modified in the Cisco cBR-8 series routers:

PTP Reroute

Improves PTP rerouting performance when a Cisco cBR-8 router switches path to the PTP primary clock.

show platform integrity Command

New **OS Hashes** section is available with the `show platform integrity` command output.

MD5 and DES/3DES deprecated in SNMPv3

Starting from Cisco IOS XE Amsterdam 17.3.1w, MD5 authentication and DES/3DES privacy options are deprecated.

Modified Hardware Features in Cisco IOS XE Amsterdam 17.3.1w

The following hardware feature is supported in the Cisco cBR-8 series routers:

New Revision of CBR-CCAP-LC-40G

Supports version ID V09 of the Cisco cBR-8 line card CBR-CCAP-LC-40G. It is compatible with Cisco IOS XE Amsterdam 17.3.1w and later releases.