Release Notes for Cisco cBR Series Converged Broadband Routers, IOS XE Release 17.18

Contents

Cisco cBR Series Converged Broadband Routers, IOS XE Release 17.18.1w

This Release Notes identifies changes and issues related to the release of Cisco cBR-8 Converged Broadband Router (Cisco cBR-8).

For more information on Cisco cBR-8, see the Related resources section.

New software features

Cisco IOS XE software is packaged in feature sets that consist of software images that support specific platforms. The feature sets available for a specific platform depend on which Cisco IOS XE software images are included in a release. Each feature set contains a specific set of Cisco IOS XE features.

Caution: Cisco IOS XE images with strong encryption (including, but not limited to 168-bit [3DES] data encryption feature sets) are subject to U.S. government export controls and have limited distribution. Strong encryption images to be installed outside the United States are likely to require an export license. Customer orders may be denied or subject to delay because of U.S. government regulations. When applicable, the purchaser or user must obtain local import and use authorizations for all encryption strengths. Please contact your sales representative or distributor for more information, or send an e-mail to export@cisco.com.

This section provides a brief description of the new software features introduced in this release.

New software features in IOS XE 17.18.1w

Table 1. New software features for Cisco cBR-8 Routers, IOS XE Release 17.18.1w

Product impact	Feature	Description
API Experience	Monitor cBR-8 Logs in CSPC Update	This feature is an update to the existing feature - converting the syslog format to be compatible with AFM, which is introduced in the IOS XE 17.18.1w release. The CX Automated Fault Management (AFM) tool reads syslog messages from a syslog server. The CX Common Services Platform Collector (CSPC) tool is responsible for collecting syslog messages from the cBR8 and sending them to the syslog server. Forwarding rules can be configured for CSPC to define which messages are forwarded from the syslogs to a syslog server.
Ease of Use	CM Specific OFDMA US PMA Fine Tuning	With the current US PMA design a single data IUC is selected for all minislots of an OFDMA channel. All the minislot average RxMER needs to satisfy the modulation SNR requirement for the selected data IUC. This feature allows for an OFDMA customized IUC configuration per CM. Known as “Fine Tuning” this allows for adjustment of IUC.
Ease of Use	OFDMA Codeword Downgrade Per Channel List Support for PMA	OFDMA codeword downgrade per channel list add/extend to PMA The OFDMA profile management codeword error downgrade IUC configuration allows customers to define the OFDMA profile management downgrade path. A modem's OFDMA channel can skip downgrade steps, making the downgrade process shorter from the highest IUC to the lowest IUC. The Downgrade IUCs are configured in the OFDMA mod-profile. With this feature we are allowing an external PMA to change the downgrade path for a specific upstream channel. As the PMA changes the IUC’s modulation, it can also decide the best path for the downgrade.
Ease of Use	OFDMA CWERR Downgrade Kafka Message	A new Kafka Telemetry message is being provided that will periodically report the count of IUC downgrades that occur due to codeword errors. The new Kafka message is referred to as “OFDMA-CWERR-Downgrade” and will carry statistics related to the IUC downgrade counts, partial-service counts, current IUC and RxMER

		send/receive counts.
Ease of Use	Pilot Tone Frequency Overlap Support	This feature allows the operator to configure 4 pilot tone frequencies in RPDs that overlap existing SC-QAM channels, and without any limitation of the minimum frequency interval between adjacent pilot tones Command Introduced: **cable downstream-pilot-tone freq-overlap disable**.

New hardware features

This section provides a brief description of the new hardware features introduced in this release.

New hardware features in IOS XE 17.18.1w

There are no new hardware features in the IOS XE 17.18.1w release for Cisco cBR-8 routers.

Changes in behavior

This section provides a brief description of the behavior changes introduced in this release.

Modified software features in IOS XE 17.18.1w

There are no modified software features in the IOS XE 17.18.1w release for Cisco cBR-8 routers.

Modified hardware features in IOS XE 17.18.1w

There are no modified hardware features in the IOS XE 17.18.1w release for Cisco cBR-8 routers.

Resolved issues

This table lists the resolved issues in this specific software release.

Note: This software release may contain bug fixes first introduced in other releases. To see additional information, click the bug ID to access the Cisco Bug Search Tool.

Resolved issues for cBR-8, Release IOS XE 17.18.1w

Table 2. Resolved issues for Cisco cBR-8 Routers, Release IOS XE 17.18.1w

Bug ID	Description
CSCwp96634	Line card restart as the device is stuck in gcd_num
CSCwq73762	cBR-8 supervisor graceful failover because ptpd reload
CSCwr56087	DOCSIS 3.1 layer 3 loss to modem after OFDM downstream profile failure and static load-balance move
CSCwo78968	After adding new data-prof, CMs goes OFFLINE, when OFDM ch configured as primary
CSCwq02191	One report on Kafka-consumer is missing post LC Process (i.e IOSD) Restart.
CSCwq44663	US Dynamic Power Ceiling - After DBC to 10 upstream channel bonding, assigned ubg

Bug ID	Description
	mismatch with SF ubg in 'scm serv ver' after mdm down/upgrade
CSCwr63505	cBR-8 - TenG ports remain down post upgrade to 17.12.1z2

Open issues

This table lists the open issues in this specific software release.

Note: This software release may contain open bugs first identified in other releases. To see additional information, click the bug ID to access the Cisco Bug Search Tool.

Open issues for cBR-8, Release IOS XE 17.18.1w

Table 3. Open issues for Cisco cBR-8 Routers, Release IOS XE 17.18.1w

Bug ID	Description
CSCwr60465	Video QAM incorrectly on RFID in Wideband-Cable Interface
CSCwq97496	cBR-8 - TenG ports remain down post upgrade to 17.12.1z2
CSCwq97740	D3.1 modems report uncorrectable codeword errors on OFDM control profile with ZBL configuration

Known issues

Map CBR-DPIC-8X10G 10-gigabit ethernet interface to downstream controllers

Starting from Cisco IOS XE Bengaluru 17.6.1a, when you configure the RPD with CBR-CCAP-LC-G2-R, note that the CBR-DPIC-8X10G 10-Gigabit Ethernet Interface to downstream controllers mapping has changed.

Following are the new mapping values.

10-Gigabit Ethernet Interface	Downstream Controller
<slot>/1/0 ~ 1	0..7
<slot>/1/2 ~ 3	8..15
<slot>/1/4 ~ 5	16..23
<slot>/1/6 ~ 7	24..31

The mapping changes are also for valid downstream-video controllers

Note: The mapping changes does not apply to the CBR-DPIC-2x100G.

The previous mapping values are:

10-Gigabit Ethernet Interface	Downstream Controller
<slot>/1/0 ~ 3	0..15
<slot>/1/4 ~ 7	16..31

Ensure that you have correctly configured the mapping to avoid error logs and error messages. Following is an example of a wrong manual configuration:

```
Router(config)#cab rpd test1
Router(config-rpd)#core-interface tenGigabitEthernet 8/1/0 Router(config-rpd-core)#rpd-ds 0 downstream-cable 8/0/9 profile 0
For RPD aaaa.bbbb.aaaa, DPIC TE interface Te8/1/0 and DS controller 9 mismatch, TE interface Te*/1/0 can only be associated with DS controller */*/0~7, configuration failed.
Router(config-rpd-core)#rpd-ds 0 downstream-video 8/0/9 profile 1
For RPD aaaa.bbbb.aaaa, DPIC TE interface Te8/1/0 and Video controller 9 mismatch, TE interface Te*/1/0 can only be associated with Video controller */*/0~7, configuration failed. Router(config-rpd-core)#
```

Following is an example of a bootup error message:

```
*Jun 10 15:53:29.108 CST: %CBR-3-TE_CONTROLLER_MISMATCH: For RPD aaaa.bbbb.aaaa, DPIC TE interface Te8/1/0 and DS controller 9 mismatch, TE interface Te*/1/0 can only be associated with DS controller */*/0~7, configuration failed.

*Jun 10 15:53:29.110 CST: %CBR-3-TE_CONTROLLER_MISMATCH: For RPD aaaa.bbbb.aaaa, DPIC TE interface Te8/1/0 and Video controller 9 mismatch, TE interface Te*/1/0 can only be associated with Video controller */*/0~7, configuration failed.
```

Compatibility

The Cisco cBR-8 software must be compatible with Cisco RPD and SmartPHY software. Otherwise the RPD remains in the **init(gcp)** state. The following table provides details of the compatible software versions:

Cisco cBR-8 Software Version	Compatible Cisco RPD Software Version	Compatible SmartPHY Software Version
IOS XE 17.18.1w	Cisco 1x2 / Compact Shelf RPD Software 10.9.2	SmartPHY v25.2

Supported hardware

For detailed information about the hardware supported in Cisco IOS XE 17.18.1 and its maintenance releases, see: How and What to Order.

Cisco announced September 18, 2020, as the end-of-sale date for the Cisco cBR-8 Leoben1 based DOCSIS line cards (CBR-LC-*-16U30) and SUP60 (CBR-CCAP-SUP-60G).

For further information regarding end-of-sale and end-of-life announcements, see https://www.cisco.com/c/ en/us/products/video/cbr-series-converged-broadband-routers/eos-eol-notice-listing.html.

Note: Starting with IOS XE 17.18.1w, 8 RPD US sharing mode is no longer supported. The maximum number of RPD in US sharing mode is 4.

Memory requirements

The following table displays the memory recommendations for the Cisco cBR-8 routers with IOS XE 17.18.1w feature sets.

Table 4. Memory recommendations for the Cisco cBR-8 Routers, Release IOS XE 17.18.1w

Feature Set	Cisco cBR-8 Route Processor	Software Image	Recommended Flash Memory	Recommended DRAM Memory	Runs From
CISCO IOS-XE universalk9	Cisco cBR-8 (CBR) Processor	cbrsup-universalk9.17.18.1w.SPA.bin	8G	48G	Harddisk
CISCO IOS-XE CLC K9	Cisco cBR-8 (CYLONS) Processor	cbrsup-universalk9.17.18.1w.SPA.bin	8G	16G	Supervisor
CISCO IOS-XE Kobol-R	Cisco cBR-8 (Kobol-R) Processor	cbrsup-universalk9.17.18.1w.SPA.bin	8G	64G	Supervisor

Supported transceiver modules

For more information on the supported transceiver modules, see Transceiver Module Group (TMG) Compatibility Matrix.

Supported software packages

View installed software version for IOS XE 17.18.1w

To determine the version of the Cisco IOS XE software running on your Cisco cBR Series Converged Broadband Router, log in to the router and enter the **show version** EXEC command.

```
Router# show version
Load for five secs: 10%/1%; one minute: 8%; five minutes: 8%
Time source is NTP, 23:25:17.494 EDT Wed Oct 22 2025
Cisco IOS XE Software, Version 17.18.01w
```

```
Cisco IOS Software [IOSXE], cBR Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version
17.18.1w, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2025 by Cisco Systems, Inc.
Compiled Thu 23-Oct-25 00:26 by mcpre

Cisco IOS-XE software, Copyright (c) 2005-2025 by cisco Systems, Inc.
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licensed under the GNU General Public License ("GPL") Version 2.0.  The
software code licensed under GPL Version 2.0 is free software that comes
with ABSOLUTELY NO WARRANTY.  You can redistribute and/or modify such
GPL code under the terms of GPL Version 2.0.  For more details, see the
documentation or "License Notice" file accompanying the IOS-XE software,
or the applicable URL provided on the flyer accompanying the IOS-XE
software.

ROM: 17.15(1r)S

CBR-CREG2-L02 uptime is 26 minutes
Uptime for this control processor is 35 minutes
System returned to ROM by reload at 21:29:53 EDT Wed Oct 22 2025
System restarted at 22:58:30 EDT Wed Oct 22 2025
System image file is "bootflash:cbrsup-universalk9.17.18.01w.SPA.bin"
Last reload reason: LocalSoft

This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

Smart Licensing Status: UNREGISTERED/EVAL MODE
```

```
Cisco cBR-8 (CBR) processor (revision CBRVE) with 6611621K/6147K bytes of memory.
Processor board ID FXS2025Q458
36 Gigabit Ethernet interfaces
16 Ten Gigabit Ethernet interfaces
4 Hundred Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
50331648K bytes of physical memory.
7649279K bytes of eUSB flash at bootflash:.
117155287K bytes of SATA hard disk at harddisk:.
```

Determine firmware support

This section describes firmware that is supported for the Cisco cBR-8 Converged Broadband Routers. For more information, see Install and Upgrade Guides.

Note: If you want to upgrade to one of the Supervisor CPLD versions mentioned in the table, the chassis must have Cisco IOS XE Bengaluru 17.6.1a or later.

Table 5. Firmware Packages and Versions Supported in IOS XE 17.18.1w

Internal Name	Component Name	Required Minimum Version	Command
Linecard Uboot	CBR-CCAP-LC-40G Rommon	2011.03.19	**show platform**
Supervisor CPLD	CBR-CCAP-SUP-160G CPLD	16052011 19071712 (optional)	**show platform**
	CBR-CCAP-SUP-250G CPLD	170724E0 190717E1 (optional)	**show platform**
Supervisor ROMMON	CBR-CCAP-SUP-160G ROMMON and CBR-CCAP-SUP-250G ROMMON	16.7(9r)s	**show platform**
Line Card CPLD	CBR-CCAP-LC-40G CPLD	00000026	**show platform diag**
DOCSIS 3.1 downstream module Micro	CBR-CCAP-LC-40G Gemini2 Micro	3.1A	**show platform diag**
DOCSIS 3.1 downstream module FPGA	CBR-CCAP-LC-40G Gemini2 Apollo	4.484F	**show platform diag**
DPIC Uboot and FPGA	CBR-DPIC-8X10G Firmware	00010001	**show platform diag**
DPIC 100G Uboot and FPGA	CBR-DPIC-2X100G Firmware	00020006	**show platform diag**

RF-PROT-PIC Firmware	CBR-RF-PROT-PIC Firmware	00000721	**show platform diag**

Related resources

We recommend that you view the field notices for this release to see if your software or hardware platforms are affected. If you have an account at Cisco.com, you can find the field notices at: http://www.cisco.com/en/US/customer/support/tsd_products_field_notice_summary.html

If you do not have an account at Cisco.com, you can find the field notices at http://www.cisco.com/en/US/support/tsd_products_field_notice_summary.html

Note: Cisco IOS XE Cupertino 17.18.1 is generally available for field deployment. However, we recommend that you validate and qualify Cisco IOS XE Cupertino 17.18.1 in a limited field trial with your specific network configuration requirements. This process ensures a smoother, faster, and successful field deployment

For information on Cisco cBR-8, go through the following links:

Cisco cBR-8 Documentation for Cisco IOS XE

Cisco cBR-8 DOCSIS Software Configuration Guide

Legal information