



Introduction



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This Release Notes contain information about downloading and installing Cisco IOS XE Amsterdam 17.2.x and its maintenance releases. The document also provides new and changed information, hardware support, limitations and restrictions, and caveats for Cisco IOS XE Amsterdam 17.2.x and its maintenance releases.

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 on Cisco.com, you can find field notices at http://www.cisco.com/en/US/customer/support/tsd_products_field_notice_summary.html .

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



- Note** Cisco IOS XE Amsterdam 17.2.x is generally available for field deployment. However, we recommend that you validate and qualify Cisco IOS XE Amsterdam 17.2.x in a limited field trial with your specific network configuration requirements. This would ensure a smoother, faster, and successful field deployment.

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System Requirements

These sections describe the system requirements for Cisco IOS XE Amsterdam 17.2.x:

Hardware Supported

For detailed information about the hardware supported in Cisco IOS XE Amsterdam 17.2.x and its maintenance releases, see:

http://www.cisco.com/c/en/us/td/docs/cable/cbr/installation/guide/b_cbr_how_and_what_to_order.html.



Note The Cisco cBR chassis must house line cards with either downstream DOCSIS 3.0 PHY modules or downstream DOCSIS 3.1 PHY modules. Mixed configuration is not supported.

Memory Requirements

The following table displays the memory recommendations for the Cisco cBR Series Converged Broadband Routers with Cisco IOS XE Amsterdam 17.2.x feature sets.

Table 1: Memory Recommendations for the Cisco cBR Series Converged Broadband Routers with IOS XE Amsterdam 17.2.1

Feature Set	Cisco cBR Route Processor	Software Image	Recommended Flash Memory	Recommended DRAM Memory	Runs From
CISCO IOS-XE universalk9	Cisco cBR8 (CBR) Processor	cbrsup-universalk9.17.2.01.SPA.bin	8G	48G	Bootflash:
CISCO IOS-XE CLC K9	Cisco cBR8 (CYLONS) Processor	cbrsup-universalk9.17.2.01.SPA.bin	8G	16G	Supervisor
CISCO IOS-XE Kobol-R	Cisco cBR8 (Kobol-R) Processor	cbrsup-universalk9.17.2.01.SPA.bin	8G	64G	Supervisor

Determining the Software Version for Cisco IOS XE Amsterdam 17.2.1

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

```
Router#show version
Load for five secs: 19%/2%; one minute: 16%; five minutes: 16%
Time source is NTP, *12:15:09.965 EDT Tue Mar 31 2020
Cisco IOS XE Software, Version 17.02.01
Cisco IOS Software [Amsterdam], cBR Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version
17.2.1, RELEASE SOFTWARE (fc4)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2020 by Cisco Systems, Inc.
Compiled Thu 26-Mar-20 02:48 by mcpre
```

```
Cisco IOS-XE software, Copyright (c) 2005-2020 by cisco Systems, Inc.
All rights reserved. Certain components of Cisco IOS-XE software are
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: IOS-XE ROMMON
```

```
video-LWR-G-I10 uptime is 21 hours, 47 minutes
Uptime for this control processor is 21 hours, 53 minutes
System returned to ROM by reload at 14:18:32 EDT Mon Mar 30 2020
System image file is "harddisk:cbrsup-universalk9.17.02.01.SPA.bin"
Last reload reason: Reload Command
```

```
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: REGISTERED/OUT OF COMPLIANCE
```

```
Cisco cBR-8 (CBR) processor (revision CBRVE) with 10390158K/6147K bytes of memory.
Processor board ID FXS2038Q3GW
64 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:.
234365527K bytes of SATA hard disk at harddisk:.

```

```

Configuration register is 0x1820

```

Microcode Software

This section describes microcode software that is supported for the Cisco cBR Series Converged Broadband Routers.

For more information, see the Upgrade Guide in the [Install and Upgrade Guides](#) page.

Table 2: Firmware Packages and Versions Supported in Cisco IOS XE Amsterdam 17.2.1

Internal Name	Component Name	Required Minimum Version	Command
Supervisor CPLD	CBR-CCAP-SUP-160G CPLD	16052011/19071712	show platform
	CBR-CCAP-SUP-250G CPLD	170724E0/190717E1	show platform
Supervisor ROMMON	CBR-CCAP-SUP-160G ROMMON and CBR-CCAP-SUP-250G ROMMON	16.7(6r)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	00020005	show platform diag

Feature Support

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.

Cisco cBR Series Converged Broadband Routers and Cisco Remote PHY Devices Version Compatibility

The versions of Cisco cBR-8 router and RPD must be compatible. If the versions are not compatible, the RPD remains in the **init(gcp)** state. The following list provides information on the compatible Cisco cBR-8 and Cisco RPD versions:

- Cisco IOS XE Amsterdam 17.2.1 works with RPD 8.1, 8.2, 8.3, 8.5 and 8.6

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 17.2.1

IPsec Security Support

Provides limited support for up to 16 Gbps encrypted IPsec that is sent or forwarded by the Cisco cBR router. IPsec enables security for information that is sent over unprotected networks.

Modified Software Features in Cisco IOS XE Amsterdam 17.2.1

There are no modified software features in Cisco IOS XE Amsterdam 17.2.1.

New Hardware Features in Cisco IOS XE Amsterdam 17.2.1

Cisco IOS XE Amsterdam 17.2.1 supports the features mentioned in the Hardware Installation Guide. For more information, see [Cisco cBR Hardware Installation Guide](#).

MIBs

To locate and download MIBs for selected platforms, Cisco IOS XE releases, and feature sets, use Cisco MIB Locator found at the following URL:

<https://mibs.cloudapps.cisco.com/ITDIT/MIBS/servlet/index>

New and Changed MIB Information in Cisco IOS-XE Amsterdam 17.2.1

There are no new or modified MIBs in the Cisco IOS XE Amsterdam 17.2.1 release.

Best Practice Manual of Procedure for Cisco IOS XE Amsterdam 17.2.x Upgrade

See the Upgrading the Cisco cBR Converged Broadband Routers for Cisco IOS XE Amsterdam 17.2.x document at the [Install and Upgrade Guides](#) page.

Cisco cBR Router Documentation References

Go to the following links to access the technical documents:

- Cisco cBR Series Converged Broadband Routers Product Details:
<http://www.cisco.com/c/en/us/support/video/cbr-series-converged-broadband-routers/tsd-products-support-series-home.html>
- Cisco cBR-8 Router User Documentation: <https://www.cisco.com/c/dam/en/us/td/docs/cable/cbr/Cisco-cBR/IOS-XE-17-2-x/index.html>

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see [What's New in Cisco Product Documentation](#).

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the [What's New in Cisco Product Documentation RSS feed](#). The RSS feeds are a free service.