Release Notes for Cisco CSR 1000v Series, Cisco IOS XE Amsterdam 17.1.x

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Cisco CSR 1000v Series Cloud Services Routers Overview

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Virtual Router

The Cisco Cloud Services Router 1000V (CSR 1000V) is a cloud-based virtual router that is intended for deployment in cloud and virtual data centers. This router is optimized to serve as a single-tenant or a multitenant WAN gateway.

When you deploy a CSR 1000V instance on a VM, the Cisco IOS XE software functions as if it were deployed on a traditional Cisco hardware platform. You can configure different features depending on the Cisco IOS XE software image.

Secure Connectivity

CSR 1000V provides secure connectivity from an enterprise network such as a branch office or a data center, to a public or a private cloud.

System Requirements

Hardware Requirements

For hardware requirements and installation instructions, see the Cisco CSR 1000v Series Cloud Services Router Software Configuration Guide .

Software Images and Licenses

The following sections describe the licensing and software images for CSR 1000V.

Cisco Smart Licensing

The Cisco CSR 1000V router supports Cisco Smart Licensing. To use Cisco Smart Licensing, you must first configure the Call Home feature and obtain the Cisco Smart Call Home Services. For more information, see Installing CSR 1000V Licenses and Smart Licensing Guide for Access and Edge Routers.

For a more detailed overview on Cisco Licensing, go to https://cisco.com/go/licensingguide.

Cisco CSR 1000v Evaluation Licenses

Evaluation license availability depends on the software version:

- Evaluation licenses valid for 60 days are available at the Cisco Software Licensing (CSL) portal: http:/www.cisco.com/go/license

The following evaluation licenses are available:

- IPBASE technology package license with 10 Gbps maximum throughput

- SEC technology package license with 5 Gbps maximum throughput

- APPX technology package license with 5 Gbps maximum throughput

- AX technology package license with 2.5 Gbps maximum throughput

If you need an evaluation license for the Security technology package, or for an AX technology package with higher throughput, contact your Cisco service representative.

For instructions on obtaining and installing evaluation licenses, see the "Installing CSL Evaluation Licenses for Cisco IOS XE 3.13S and Later" section of the Cisco CSR 1000v Software Configuration Guide .

Cisco CSR 1000v Software Licenses

Cisco CSR 1000v software licenses are divided into feature set licenses. The supported feature licenses depend on the release.

Current License Types

The following are the license types that are supported (Cisco IOS XE Everest 16.4.1 or later):

- IPBase: Basic Networking Routing (Routing, HSRP, NAT, ACL, VRF, GRE, QoS)

- Security: IPBase package + Security features (IP Security VPN, Firewall, MPLS, Multicast)

- AX: IPBase package + Security features + Advanced Networking features (AppNav, AVC, OTV and LISP)

- APPX Package: IPBase package + Advanced Networking features - Security features (IP security features not supported)

Legacy License Types

The three legacy technology packages - Standard, Advanced, and Premium - were replaced in the Cisco IOS XE Release 3.13 with the **IPBase**, **Security**, and **AX** technology packages.

Features Supported by License Packages

For more information about the Cisco IOS XE technologies supported in the feature set packages, see the overview chapter of the Cisco CSR 1000v Series Cloud Services Router Software Configuration Guide.

Throughput

The Cisco CSR 1000v router provides both perpetual licenses and term subscription licenses that support the feature set packages for the following maximum throughput levels:

- 10 Mbps
- 50 Mbps
- 100 Mbps
- 250 Mbps
- 500 Mbps
- 1 Gbps
- 2.5 Gbps
- 5 Gbps
- 10 Gbps

The throughput levels are supported for different feature set packages in each version. For more information about how the maximum throughput levels are regulated on the router, see the Cisco CSR 1000v Cloud Services Router Software Configuration Guide.

Memory Upgrade

A memory upgrade license is available to add memory to the Cisco CSR 1000v router (Cisco IOS XE 3.11S or later). This license is available only for selected technology packages.

Additional Information about Licenses and Activation

For more information about each software license, including part numbers, see the Cisco CSR 1000v Router Datasheet. For more information about the standard Cisco IOS XE software activation procedure, see the Software Activation Configuration Guide, Cisco IOS XE Release 3S.

Software Image Nomenclature for OVA, ISO, and QCOW2 Installation Files

The Cisco CSR 1000v installation file nomenclature indicates properties supported by the router in a given release.

For example, these are filename examples for the Cisco IOS XE Everest 16.4.1 release:

- csr1000v-universalk9.16.04.01.ova
- csr1000v-universalk9.16.04.01.iso
- csr1000v-universalk9.16.04.01.qcow2

The filename attributes are listed below, along with the release properties.

Table 1: OVA Installation Filename Attributes

Filename Attribute	Properties
Example:universalk9	Installed image package.
03.09.00a.S.153-2.S0a	Indicates that the software image is for the Cisco IOS XE 3.9.0aS release image (mapped to the Cisco IOS 15.3(2) release).
std or ext	Standard release or extended maintenance support release.

New and Enhanced Software Features for Cisco IOS XE Amsterdam 17.1.x

New and Enhanced Features for Cisco IOS XE Amsterdam 17.1.1

The following are the new software features that are supported on the Cisco CSR 1000v for Cisco IOS XE Amsterdam 17.1.1 release:

- From the Cisco IOS XE 17.1.1 release, in the Feature Restricted mode, you can execute the copy command, However, you cannot copy to startup/nvram as the startup configuration is protected. For more informartion, see the Cisco CSR 1000v and Cisco ISRv Software Configuration Guide

- From the Cisco IOS XE 17.1.1 release, when your device is in the Feature Restricted mode, the hostname is displayed with a restricted label. For example, *(restricted) Router#*. For more informartion, see the Cisco CSR 1000v and Cisco ISRv Software Configuration Guide.

- Starting from Cisco IOS XE release 17.1, it is no longer necessary to execute the **clear platform software vnic-int interface** command before removing the vNIC configuration from the hypervisor. For more informartion, see the Cisco CSR 1000v and Cisco ISRv Software Configuration Guide.

- Route Sharing between Multiple VRFs: In certain deployment scenarios such as the ACI Anywhere deployment, the CSR 1000v instance acts as the L3 Gateway that provides the IP connectivity between the multi-tenant Data Center sites. You can now configure VRF Route Sharing across VxLAN peers on CSR 1000v instances to support common services in a public cloud.

- Web User Interface - Supports an embedded, GUI-based device-management tool that provides the ability to provision the router, simplifies device deployment and manageability, and enhances user experience. The following features are supported on the Web User Interface from Cisco IOS XE Amsterdam 17.1.1:

  - Configuring the Routing Information Protocol

Note When you upgrade from one Cisco IOS XE release to another, you may see a *%Invalid IPV6 address* error in the console log file. To rectify this error, enter the global configuration mode, re-enter the missing IPv6 alias commands, and save the configuration. The commands are persistent on subsequent reloads.
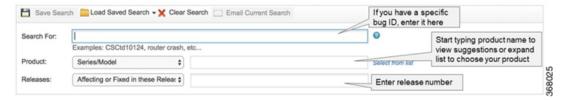
Resolved and Open Bugs for Cisco IOS XE Amsterdam 17.1.1
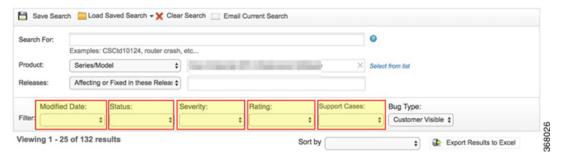
Using the Cisco Bug Search Tool

About the Cisco Bug Search Tool

Use the Cisco Bug Search Tool to access open and resolved bugs for a release.

The tool allows you to search for a specific bug ID, or for all the bugs specific to a product and a release.

You can filter the search results by the last modified date, bug status (open or resolved), severity, rating, and support cases.

Open Bugs for Cisco IOS XE Amsterdam 17.1.1

Caveat ID Number	Description
CSCvk40602	Display throughput level in the show version for a CSR1000v.
CSCvr13149	Multicast VRF Nat not working properly.
CSCvr21113	APN password in clear text when configuring profile under cellular controller.
CSCvs00410	MKA session up but unable to pass data across link using AES-256-XPN cipher.
CSCvs09146	Remove licensing install and config CLI for CSR Pay as you go instances.
CSCvx11972	GuestShell Gets removed during the IOS upgrade

Resolved Bugs for Cisco IOS XE Amsterdam 17.1.1

Caveat ID Number	Description
CSCvp56245	Trunk-group does not monitor actual status of BRI ports configured.

Caveat ID Number	Description
CSCvr78580	CSR1000v Azure HAv3 route table update fails with non-IP address next hop entries.
CSCvr89957	CFT crashed frequently.

Related Documentation

- Release Notes for previous versions of Cisco Cloud Services Router 1000V Series

- Configuration Guides for Cisco Cloud Services Router 1000V Series

- Product Landing page for Cisco Cloud Services Router 1000V Series

- Datasheet for Cisco Cloud Services Router 1000V Series

- Field Notices

- Deferral Notices

- Cisco Bulletins