Release Notes for Cisco Catalyst 8000V Edge Software, Cisco IOS XE 17.13.x

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Cisco Catalyst 8000V Edge Software Overview

About Cisco Catalyst 8000V

Cisco Catalyst 8000V Edge Software or Cisco Catalyst 8000V is a software-based, virtual router that combines the functionalities of Cisco Cloud Services Router (Cisco CSR1000V) and Cisco Integrated Services Virtual Router (Cisco ISRv) into a single image that is intended for deployment in on-prem branches, data centers, colocation data centers, and public clouds.

Cisco Catalyst 8000V supports NIM modules on Cisco ENCS platforms, runs on any x86 platform, and is supported on ESXi, KVM, NFVIS hypervisors. Further, you can deploy this router on public cloud providers such as Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), and Alibaba Cloud.

When you deploy Cisco Catalyst 8000V as a VM, the Cisco IOS XE software behaves similar to a traditional Cisco router (hardware platform). You can configure different features depending on the Cisco IOS XE software version.

Features

- **Hardware independence**: The Cisco Catalyst 8000V router uses the benefits of virtualization in the cloud to provide hardware independence. Since the Cisco Catalyst 8000V runs as a virtual machine, you can use this router on any x86 hardware that the virtualization platform supports.
- **Sharing of host hardware resources**: The host server hardware resources such as CPU cores, memory, and disk are managed by the hypervisor, and these resources are shared among the guest VMs. You can regulate the amount of hardware resources assigned to a specific Cisco Catalyst 8000V VM instance.
- **Flexibility in deployment**: You can easily move a VM from one server to another. Thus, you can move a Cisco Catalyst 8000V instance from a server in one physical location to a server in another physical location without moving any hardware resources.
- **Enhanced software security - Secure Object Store**: In Cisco Catalyst 8000V, storage partitions for NVRAM, licensing, and other data are created as object stores. The individual object stores are encrypted to ensure data security, and this product is Cisco Secure Development life cycle (CSDL) compliant. Further, Cisco Catalyst 8000V supports a 16G disk cycle profile.

Hardware Requirements

For hardware requirements and installation instructions, see the Cisco Catalyst 8000V Edge Software Installation And Configuration Guide.

Software Images and Licenses

The following sections describe the licensing and software images for Cisco Catalyst 8000V.

Cisco Catalyst 8000V Software Licenses

The Cisco Catalyst 8000V is licensed based on throughput, feature-set, and the licensing term. This product supports Cisco Smart Licensing Usage Policy as well as Cisco DNA Licensing. Based on whether you want to go for purchased licenses that go with the Cisco Catalyst 8000V instance, or a subscription-based license, choose one of the following options:

Subscription-Based Licensing via Cisco DNA

You can purchase a subscription license for Cisco Catalyst 8000V through the following three licenses that are available via Cisco DNA:

- Cisco Catalyst 8000V - Network-Premier
- Cisco Catalyst 8000V - Network-Advantage
- Cisco Catalyst 8000V - Network-Essentials

For more information on Cisco Catalyst 8000V DNA licensing, see Cisco DNA Software for SD-Wan and Routing Ordering Guide.

Bring-Your-Own-Licensing

You also have an option to purchase and use licenses with Cisco Catalyst 8000V as a Bring-Your-Own-License (BYOL) instance or as a Pay-As-You-Go (PAYG) instance.

To use a Cisco Catalyst 8000V - BYOL license, see Licenses and Licensing Models to know to how install and configure your license.

If you have upgraded to Cisco Catalyst 8000V from a Cisco CSR 1000V or a Cisco ISRV, you must use Smart Licensing Using Policy (SLP). Traditional licenses do not work after the upgrade.

Pay-As-You-Go Licensing

Cisco Catalyst 8000V supports the PAYG Licensing model with Amazon Web Services (AWS) and Microsoft Azure Marketplace. Cisco Catalyst 8000V hourly-billed AMI or Pay As You Go licensing model allows you to consume an instance for a defined period of time. In this licensing model, you can directly launch the instance from the AWS or Azure Marketplace and start using the instances. The licenses are embedded in the image.

Note For demo or evaluation licenses, contact your Cisco Account Team if you have a direct purchase agreement with Cisco, or your Cisco Partner or Reseller.

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

Software Image Nomenclature for Installation Files

The Cisco Catalyst 8000V installation file nomenclature indicates properties supported by the router in a given release.

For example, these are filename examples for the Cisco IOS XE Dublin 17.13.1a release:

- c8000v-universalk9.17.13.01a.ova
- c8000v-universalk9.17.13.01a.iso
- c8000v-universalk9.17.13.01a.qcow2

The following table lists the filename attributes along with its properties:

Table 1: Installation Filename Attributes

Filename Attribute	Properties
universalk9	Specifies the package that you are installing. Images with the universalk9 designation in the image name refers to a universal image that offers all the Cisco IOS features including strong payload cryptography features such as IPSec VPN, SSL VPN, and Secure Unified Communications. This image also supports security features like Zone-Based Firewall, Intrusion Prevention through the SECNPE-K9 license.
17.13.01a	Indicates that the software image is mapped to the Cisco IOS XE Dublin 17.13.1a release.

Product Field Notice

Cisco publishes Field Notices to notify customers and partners about significant issues in Cisco products that typically require an upgrade, workaround or other user action. For more information, see https://www.cisco.com/c/en/us/support/web/field-notice-overview.html.

We recommend that you review the field notices to determine whether your software or hardware platforms are affected. You can access the field notices from https://www.cisco.com/c/en/us/support/web/tsd-products-field-notice-summary.html#%7Etab-product-categories.

New and Enhanced Features for Cisco IOS XE 17.13.x

New and Enhanced Features for Cisco IOS XE 17.13.1a

Note Cisco IOS XE 17.13.1a is the first release for Cisco Catalyst 8000V in the Cisco IOS XE 17.13.x release series.

Table 2: Software Features

Feature	Description
Support for Intel E810 NIC for on-prem ESXi and KVM hosts	Cisco Catalyst 8000V now supports Intel E810 NIC for on-prem ESXi and KVM h optimizes high-performance server workloads and helps improve network perfor

Feature	Description
Support for c6in Instance types in AWS Deployments	Cisco Catalyst 8000V now supports c6in instance types for AWS deployment third Generation Intel Xeon Scalable processors that provide greater network performance.
Support for Mellanox CX-5 on Ubuntu 16.04 LTS	Cisco Catalyst 8000V now supports Mellanox CX-5 on Ubuntu 16.04 LTS.
Application Performance Monitor	The Application Performance Monitor feature is a simplified framework that intent-based performance monitors. With this feature, you can view real-time performance filtered by client segments, network segments, and server segme
Cisco SD-Routing Cloud OnRamp for Multicloud	Cisco SD-Routing Cloud OnRamp for Multicloud extends enterprise WAN to pu solution helps to integrate public cloud infrastructure into the Cisco Catalyst these capabilities, the devices can access the applications hosted in the cloud.
Enhancements to BGP Maximum Prefix	• Discard Extra Prefixes: This enhancement introduces the **neighbor maxi** command to drop all excess prefixes received from the neighbor when th prefixes exceed the maximum limit.b - Logging enhancement: The loggi support a per neighbor logging time every 60 seconds. • Logging enhancement: The logging system is enhanced to support a per n 60 seconds.
Initiating GARP for NAT Mapping	This feature introduces support for configuring retry time intervals for GARP interface. You can configure this feature using the **global ip arp nat-garp-ret static** commands.
Schedule Software Upgrade on SD-Routing Devices	With this feature, you can upgrade the software image on the supported Cisco an option to schedule the upgrade process at specified time. This allows you t to the software upgrade process.
SD-Routing Configuration Group	The Configuration Group feature provides a simple, reusable, and structured SD-Routing device using Cisco Catalyst SD-WAN Manager.
Segment Routing over IPv6 Dataplane	From Cisco IOS XE 17.13.1a, Segment Routing is supported over the IPv6 da Protocol (BGP) on L3VPN networks using On-Demand Next Hop (ODN).
Speed Test for SD-Routing Devices	Cisco SD-WAN Manager allows you to measure the network speed and avail device and an iPerf3 server. The speed tests measure the upload speed from the or specified iperf3 server, and measure the download speed from the iperf3 se
Strength Enforcement for IKE Security Association (SA)	This feature introduces an algorithm to ensure that the strength of the IKE (IKEv cipher is greater than or equal to the strength of its child IPsec SA encryption To enable this algorithm, use the **crypto ipsec ike sa-strength-enforcement** c see Cisco IOS Security Command Reference.
Support for Flexible NetFlow Application Visibility on SD-Routing Devices	The Flexible NetFlow (FNF) feature provides statistics on packets flowing th to identify the tunnel or service VPNs. Also, it provides visibility for all the tra VPN0 on Cisco SD-Routing devices by using the Application Intelligence En

Feature	Description
Support for Packet Capture for SD-Routing	This feature allows you to capture the bidirectional IPv6 traffic data to troublesh SD-Routing devices.
Support for Persistence of BGP Dynamic Neighbors	From IOS XE 17.13.1a, the device maintains the neighbor information even after t To configure this, use the **bgp listen persistent** command for all dynamic neighb **range peer-group persistent** command for specific neighbors.
Support for Security-Enhanced Linux	SELinux (Security-Enhanced Linux) is a solution designed to incorporate a stron access control (MAC) architecture into Cisco IOS XE platforms. From Cisco IOS XE 17.13.1a, SELinux is enabled by default in Enforcing mode platforms.
Support for Suite B ciphers with GET VPN	This enhancement introduces support for Suite B ciphers with GET VPN on Cisc

Table 3: Cisco Unified Border Element (CUBE) Features

Feature	Description
NAT Traversal using RTP Keepalive	From Cisco IOS XE 17.13.1a onwards, using RTP keepalive packets, CUBE supports media transmission in the NAT environment.

Resolved and Open Bugs - Cisco IOS XE 17.13.x

Resolved Bugs - Cisco IOS XE 17.13.1a

Identifier	Headline
CSCwh10813	Add verbose log to indicate grant ra-auto un configures grant auto in PKI server
CSCwf25735	Device QoS more than four remark with set-cos not work
CSCwf44703	NAT64 prefix is not originated into OMP
CSCwf80400	IOS XE router may experience unexpected reset while executing the **show utd engine standard statistics** command
CSCwf14607	Crash observed when exporting PKCS12 to terminal via SSH CLI
CSCwf71116	Static route keeps advertising via OMP even though there is no route
CSCwf45486	OMP to BGP redistribution leads to incorrect AS_Path installation on the chosen Next-Hop

Open Bugs - Cisco IOS XE 17.13.1a

Identifier	Headline
CSCwh84068	C8000V crashes after changing NAT HSL configuration
CSCwi19182	C8000V throttles throughput to 20Mbps while it must be 250Mbps
CSCwh94906	WLC segmentation fault crashes with Network Mobility Services Protocol (nmsp)
CSCwh77221	SNMP unable to poll tunnel data after a minute
CSCwi06843	Endpoint tracker triggers a CPU hog
CSCwh76453	Tracker for TLOC extension is down even though TLOC is up and there is ICMP reachability
CSCwi14178	Failed to connect to device : x.x.x.x Port: 830 user : vmanage-admin error : Connection failed
CSCwi08171	Router crashes due to crypto IKMP process
CSCwh01678	Device FTM crashes with SIG enabled
CSCwi05395	SNMPbulkget cannot get loss, latency and jitter for ProbeClassTable & ClassIntervalTable OIDs
CSCwi23562	When RADIUS is down and there is an IKE-AUTH request received, the box stops replying to DPD packets
CSCwi11807	SNMPbulkget breaks the OID appRouteStatisticsTable after minute not returning the correct order
CSCwi00369	Device loses security parameter after upgrade
CSCwi06404	Device undergoes PKI related crash after failing a CRL fetch
CSCwi13563	IP SLA probe for endpoint tracker does not work once endpoint tracker is changed until reload
CSCwh65016	Device unexpectedly reboots due to QFP exception
CSCwi15688	Unexpected NAT translation occurs in a specific network
CSCwh91136	IOS XE:Traffic not encrypted and droped over IPSEC SVTI tunnel
CSCwi16452	20.13 SSE:401 Error thrown when switching from SSE to SIG
CSCwi16015	[SIT]: SSE tunnels don't come up with dialer interface relax check in IKE
CSCwi19875	Device unable to process hidden characters in a file while trying to use bootstrap method
CSCwh52440	IP SLA does not have checks for ICMP probes to be sent on source interface.
CSCwi31833	UTD deployment failing if deployed from remote server hostname rather than IP.

Identifier	Headline
CSCwi35177	Device crash caused by continuous interface flap, interface associated to many IPSec interfaces
CSCwi30529	AAA: Template push fails when AAA authorization is set to local.
CSCwi15930	Device fails to upgrade due to CDB issue.

Related Documentation

Cisco Catalyst 8000V Edge Software Product Page

Cisco Catalyst 8000V Edge Software Data Sheet

Cisco Catalyst 8000V Edge Software Installation And Configuration Guide

Cisco Catalyst 8000V Edge Software High Availability Configuration Guide

Troubleshooting Guide for Cisco Catalyst 8000V Edge Software

Smart Licensing Using Policy for Cisco Enterprise Routing Platforms

Communications, Services, and Additional Information

- To receive timely, relevant information from Cisco, sign up at Cisco Profile Manager.
- To get the business impact you're looking for with the technologies that matter, visit Cisco Services.
- To submit a service request, visit Cisco Support.
- To discover and browse secure, validated enterprise-class apps, products, solutions and services, visit Cisco Marketplace.
- To obtain general networking, training, and certification titles, visit Cisco Press.
- To find warranty information for a specific product or product family, access Cisco Warranty Finder.

Cisco Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

Documentation Feedback

To provide feedback about Cisco technical documentation, use the feedback form available in the right pane of every online document.

Troubleshooting

For the most up-to-date, detailed troubleshooting information, see the Cisco TAC website at https://www.cisco.com/en/US/support/index.html.

Go to **Products by Category** and choose your product from the list, or enter the name of your product. Look under **Troubleshoot and Alerts** to find information for the issue that you are experiencing.