

New and Changed Information

The following tables summarize the new and changed features and tell you where they are documented.

Table 1: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.15.1

Feature	Description
Cisco ENCS 5400 End of Life (EOL)	Cisco ENCS 5400 has reached End of Life (EOL). The last supported software versions for Cisco ENCS 5400 are Cisco NFVIS Release 4.15.x and Cisco Catalyst SD-WAN Manager Release 20.15.x.

Table 2: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.13.1

Feature	Description
Cisco NFVIS Support on Cisco UCS C-Series M6 Rack Servers	Starting from Cisco NFVIS Release 4.13.1, Cisco NFVIS software is supported on Cisco UCS M6 Rack Servers as a term-based license. Order Cisco NFVIS software smart license along with the Cisco UCS C M6 Rack Server Product purchase.

Table 3: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.12.1

Feature	Description
DHCP Support for Internal Management Network	Cisco NFVIS uses the IP address assigned by a DHCP server for monitoring the VNF deployment.
VM Image Registration Using FTP and SCP Servers	In addition to already existing support to register a VM image using a http or https servers, you can register the VM images using FTP and SCP servers.

Table 4: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.11.1

Feature	Description
Cisco NFVIS ThousandEyes Support	With this feature, you can deploy Cisco ThousandEyes monitoring agent in container form-factor natively on Cisco NFVIS-enabled platforms.
SNMP Cisco-MIB	Use the CISCO MIB 1.3.6.1.4.1.9.1.2376 to display the Cisco NFVIS hostname in SNMP notifications.

Table 5: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.10.1

Feature	Description
NFVIS resource allocation enhancement	The NFVIS system memory allocations are changed for Cisco NFVIS Release 4.10.1.
Configure Additional WAN Transport Connectivity on ENCS Switch Ports	Starting from Cisco NFVIS Release 4.10.1, Cisco ENCS supports terminating WAN circuits on its built-in eight port switch. This is in addition to the two dedicated WAN ports thereby providing you the ability to terminate upto ten WAN circuits on Cisco ENCS devices.
SNMP encryption passphrase	Starting from Cisco NFVIS Release 4.10.1, there is an option to add an optional passphrase for SNMP that can generate a different priv-key other than the auth-key.
Use **router bgp** command	Starting from Cisco NFVIS Release 4.10.1, the command **route-distribute** is no longer supported. We recommend that you use the **router bgp** command instead.
Use **system settings name-server** command	Starting from Cisco NFVIS Release 4.10.1, the command **dns-server** is no longer supported. We recommend that you use **system settings name-server** command instead.

Table 6: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.9.3

Feature	Description
Change in default system memory for CSP devices	Starting from Cisco NFVIS 4.9.3 release, 8 GB is allocated to Cisco NFVIS in a CSP device with 64 GB memory space.

Feature	Description
A new command to clear cache memory	The **`support flush cache memory`** command is introduced to clear cache memory using the CLI, that clears up some system memory to enable Cisco NFVIS to perform better. Clearing caches using support flush cache command can help resolve issues related to outdated or corrupted cache data. For example, clearing the cache in a web browser can help resolve issues such as slow page load times of Cisco NFVIS portal.

Table 7: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.9.1

Feature	Description
Cisco NFVIS Kubernetes Support	This feature enables you to deploy and operate Kubernetes as a VM using Cisco Enterprise NFVIS. You can download the NFVIS Kubernetes.tar.gz file, upload it to the Cisco Enterprise NFVIS and deploy the Kubernetes VM to leverage Kubernetes related technologies within Cisco Enterprise NFVIS.
VM Image Packaging Tool	The VM image packaging tool provides the UI for you to generate a full VM package, generate a scaffold package, and repackage. The tool works separately from the Cisco NFVIS system.

Table 8: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.8.1

Feature	Description	Where Documented
NFVIS Clustering Capability for Cisco Cloud Services Platform (CSP)	This feature enables you to combine three nodes into a single cluster definition whereby, all the member nodes display configuration information about all the VMs deployed in the cluster. Each member node contributes to a user-specified disk size (same value for all the members) of their total disk size to form a shared and clustered file system. The data is replicated across all the cluster members. This clustering capability is resilient against single node failures. **Note** This capability is a beta feature in this release and should not be used in production because, Cisco may make changes in the subsequent releases without providing any backward compatibility. The beta is provided as-is and without any warranty of any kind.	NFVIS Clustering Capability for Cisco Cloud Services Platform (CSP)
Single IP Monitoring External Gateway	This feature enables you to configure the external gateway monitoring interval, using the **`wan-monitor-interval`** command.	Single IP Monitoring External Gateway
Support for Network VLAN Range Configuration	This feature enables you to configure a VLAN range in trunk mode in the network configuration.	Support for Network VLAN Range Configuration

Table 9: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.7.1

Feature	Description	Where Documented
Granular Role Based Access Control	This feature introduces a new resource group policy that manages the VM and VNF. You can now assign users to a group to control VNF access, during VNF deployment.	Granular Role Based Access Control

Feature	Description	Where Documented
Enforce Setting of BIOS and CIMC Passwords	This feature enforces the user to change the default password for CIMC and BIOS.	Enforce Setting of BIOS and CIMC Passwords
Support for 40G Dual Port and Quad-Split NICs in Cisco Cloud Services Platforms	Starting from this release, the 40G network interface card (NIC) supports dual port modes on Cisco Cloud Services Platform (CSP).	Support for 40G Dual Port and Quad-Split NICs in Cisco Cloud Services Platforms

Table 10: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.6.1

Feature	Description	Where Documented
Local Authentication for a Specific Group of Users	This feature allows you to create a group with specific users, who can perform only the local authentication; and don't have to authenticate externally through TACACS.	Local Authentication for a Specific Group of Users
Support for External Storage for Cisco Cloud Services Platforms	External disks are supported for Cisco Cloud Services Platforms (CSP).	Support for External Storage for Cisco Cloud Services Platforms
Support for Replacing HTTP Basic Authentication	This feature enhances NFVIS local portal capabilities, to replace HTTP basic authentication to prevent accidental leakage of credentials.	–
Support for NFVIS Container Life Cycle Management	This features provides support for container lifecycle management.	Support for NFVIS Container Life Cycle Management

Table 11: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.5.1

Feature	Description	Where Documented
ENCS Switch Monitoring	This feature allows you to calculate the data rate for ENCS switch ports based on the data collected from the ENCS switch.	ENCS Switch Monitoring
Authentication Cache for External Authentication Server	This feature supports TACACS authentication through OTP on NFVIS portal	Authentication Cache for External Authentication Server

Feature	Description	Where Documented
BGP Route Annoucement over MPLS or IPSec	This feature allows you to configure NFVIS to announce routes through BGP over MPLS or in conjunction with secure overlay to announce routes over IPSec tunnel.	BGP Route Annoucement over MPLS or IPSec

Table 12: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.4.1

Feature	Description	Where Documented
Cisco Catalyst 8200 Series Edge Universal CPE Support	The Cisco Catalyst 8200 Series is the next generation of Cisco Enterprise Network Compute System platform that combines routing, switching and application hosting into a compact one rack unit device. These platforms are designed to allow customers to run virtualized network functions and other applications as virtual machines on the same hardware platform powered by Cisco NFVIS hypervisor software.	Supported Hardware Platforms On NFVIS Cisco Catalyst 8200 Series Edge uCPE Hardware Installation Guide
SNMP VM Monitoring MIB	SNMP VM monitoring MIBs support added.	SNMP MIB Support
Live Export Support	Supports VM backup process without shutting down the VM.	VM Action APIs
VM Export with Selective Disk	You can exclude certain disks or volumes from a VM export.	VM Export with Selective Disk
BGP Support on NFVIS	This feature allows NFVIS system to learn routes announced from the remote BGP neighbor and apply the learnt routes to NFVIS system. This feature also allows you to announce or withdraw NFVIS local routes to the remote BGP neighbor.	BGP Support on NFVIS
DNS Name Server Configuration Enhancement	NFVIS allows configuring upto three nameservers which can be used by DNS resolvers in the order specified by the user. New command introduced to configure DNS nameservers: **system settings name-server**.	Configure DNS Name Servers

Feature	Description	Where Documented
CIMC Secure Overlay Support	This is a disaster recovery feature to recover an unresponsive NFVIS. CIMC periodically monitors NFVIS health and when NFVIS health check fails, CIMC establishes a secure tunnel to the remote. At remote site, you can login to CIMC and do the necessary troubleshooting to recover NFVIS.	CIMC Secure Overlay Support

Table 13: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.2.1

Feature	Description	Where Documented
Enhancements to backup and restore of configurations	New commands are introduced to view the overall status of backup and restore process. Enhancements to backup file location and factory default options are introduced. Information on how to troubleshoot failure to restore NFVIS configurations is added.	Backup and Restore NFVIS and VM Configurations
HugePage memory and CPU allocation	The system memory allocations are enhanced and all memory apart from the amount reserved for system is converted to HugePage memory.	Host System Requirements
Command for PnP certificates	A certificate can be used as a PnP root certificate through Command Line Interface (CLI).	Certificate for Static PnP discovery
Secure Operation in FIPS Mode on NFVIS	The Federal Information Processing Standards (FIPS) Publication 140-2 are publicly announced standards developed by the United States federal government for use in computer systems by non-military government agencies and government contractors.	Secure Operation in FIPS Mode on NFVIS
BIOS and CIMC password	New password restrictions and security measures are added for CIMC and BIOS.	BIOS and CIMC Password
CIMC TACACS Support	CIMC TACACS configuration support enabled on NFVIS.	CIMC TACACS Support

Table 14: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 4.1.1

Feature	Description	Where Documented
Storm control support	Storm control is used to monitor incoming traffic levels and limit excessive flow of packets on any user facing switch port that could cause a traffic storm.	Configure Storm Control
hot-add and hot-delete support on DPDK interface	Support interface hot add and hot delete operations on DPDK networks.	Update VM Image
VM backup and restore perserving mac and UID	Specifying the unique MAC ID flag during VM import will ensure that the imported VM is not deployed with the same UID and interface MAC addresses.	Import and Export NFVIS VM
Support placing VM's extra storage volumes to external datastore	This feature supports placing VNF volumes on external datastore storage locations	VNF Volumes
PNIC promiscuous mode support	Enabling promiscuous mode on an interface can be used to monitor all incoming packets on the interface.	Promiscuous mode

Table 15: New and Changed Features for Cisco Enterprise Network Function Virtualization Infrastructure Software, Release 3.12.3

Feature	Description	Where Documented
Secure Tunnel enhacements for PKI and EAP	EAP and PKI authentication supported on secure overlay.	Secure Overlay
APC UPS support	This feature provides support for monitoring battery status for an APC UPS connected to the ENCS box through a USB cable.	APC UPS Support and Monitoring
SNMP support for CPU usage	Supported SNMP MIBs for CPU usage	SNMP MIB Support
AAA auth-order	In this feature the supported aaa authentication order is local authentication followed by TACACS+.	Default Authentication Order