



About Cisco Enterprise NFVIS



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Cisco Enterprise Network Function Virtualization Infrastructure Software (Cisco Enterprise NFVIS) is a Linux-based infrastructure software designed to help service providers and enterprises to design, deploy and manage network services. Cisco Enterprise NFVIS helps dynamically deploy virtualized network functions, such as a virtual router, firewall, and WAN acceleration, on a supported Cisco device. You do not always require a physical device for every network function. Automated provisioning and centralized management also eliminates costly truck rolls.

Cisco Enterprise NFVIS provides a Linux-based virtualization layer to the Cisco Enterprise Network Function Virtualization (ENFV) solution.

Cisco ENFV Solution Overview

The Cisco ENFV solution helps convert your critical network functions into a software which can deploy network services across dispersed locations in minutes. It provides a fully integrated platform that can run on top of a diverse network of both virtual and physical devices with the following primary components:

- Cisco Enterprise NFVIS
- VNFs
- Unified Computing System (UCS) and Enterprise Network Compute System (ENCS) hardware platforms
- Digital Network Architecture Center (DNAC)

For more details on the Cisco ENFV solution, see the [Cisco Enterprise Network Functions Virtualization Solution Overview](#).

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Benefits of Cisco Enterprise NFVIS

- Cost effective solution to consolidate multiple physical network appliances into a single server running multiple virtual network functions.
- Flexibility in deploying services quickly and in a timely manner.
- Cloud based VM life cycle management and provisioning.
- In-box life cycle management software to deploy and chain VMs dynamically on the platform.
- Programmable APIs.

Supported Hardware Platforms

Depending on your requirement, you can install Cisco Enterprise NFVIS on the following Cisco hardware platforms:

- Cisco 5100 Series Enterprise Network Compute System (Cisco ENCS)
- Cisco 5400 Series Enterprise Network Compute System (Cisco ENCS)
- Cisco UCS C220 M4 Rack Server
- Cisco Cloud Services Platform 2100 (CSP 2100)
- Cisco ISR4331 with UCS-E140S-M2/K9
- Cisco ISR4351 with UCS-E160D-M2/K9
- Cisco ISR4451-X with UCS-E180D-M2/K9
- Cisco UCS-E160S-M3/K9 Server
- Cisco UCS-E180D-M3/K9
- Cisco UCS-E1120D-M3/K9

Cisco ENCS

The Cisco 5100 and 5400 Series Enterprise Network Compute System combines routing, switching, storage, processing, and a host of other computing and networking activities into a compact one Rack Unit (RU) box. This high-performance unit achieves this goal by providing the infrastructure to deploy virtualized network functions and acting as a server that addresses processing, workload, and storage challenges.

Cisco UCS C220 M4 Rack Server

The Cisco UCS C220 M4 Rack Server is a high-density, general-purpose enterprise infrastructure and application server that delivers world class performance for a wide range of enterprise workloads, including virtualization, collaboration, and bare-metal applications.

Cisco CSP 2100

Cisco Cloud Services Platform 2100 (Cisco CSP 2100) is a software and hardware platform for data center network functions virtualization. This open kernel virtual machine (KVM) platform, with Red Hat Enterprise Linux (RHEL) 7.3 as the base operating system, is designed to host networking virtual services. Cisco CSP 2100 enables network, security, and load balancer teams to quickly deploy any Cisco or third-party network virtual service.



Note Return Material Authorization (RMA) capability for CSP 2100 is not supported when in use with NFVIS.

Cisco UCS E-Series Server Modules

The Cisco UCS E-Series Servers (E-Series Servers) are the next generation of Cisco UCS Express servers. E-Series Servers are a family of size, weight, and power efficient blade servers that are housed within the Generation 2 Cisco Integrated Services Routers (ISR G2), Cisco 4400, and Cisco 4300 Series Integrated Services Routers. These servers provide a general-purpose compute platform for branch office applications deployed either as bare metal on operating systems, such as Microsoft Windows or Linux; or as virtual machines on hypervisors.

Supported VMs

Currently, the following Cisco supplied VMs and third party VMs are supported:

- Cisco ISRV
- Cisco Adaptive Security Virtual Appliance (ASAv)
- Cisco Virtual Wide Area Application Services (vWAAS)
- Linux Server VM
- Windows Server 2012 VM

Key Tasks You can Perform Using Cisco Enterprise NFVIS

- Perform VM image registration and deployment
- Create new networks and bridges, and assign ports to bridges
- Create custom flavors—a flavor is the customized profile of the VM image
- Perform service chaining of VMs
- Perform VM operations
- Verify system information including CPU, port, memory, and disk statistics

The APIs for performing these tasks are explained in the API Reference for Cisco Enterprise NFVIS.



Note From a Cisco Enterprise NFVIS command-line interface, you can connect to another server and VMs remotely using the SSH client.
