Configure NFVIS-for-UC OVS

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Introduction

This document describes the steps required to configure NFVIS-for-UC Open vSwitch (OVS) for Virtual Machine network connectivity.

Prerequisites

Requirements

- Supported Business Edition or Cisco Expressway hardware that supports NFVIS-for-UC.
  - Business Edition 6000/7000 M5 or later
  - Cisco Expressway C1400V M7 or later
- NFVIS-for-UC software installed with WebUI accessible for management.

Reference Setup

Usage	VLAN	IP	Gateway	pNIC	Bridge	Network	Uplink Switch Name	Uplink Switch Port
Appliance OOB CIMC	100	10.0.100.10/24	10.0.100.1/24	CIMC Management			mgmt-switch	Eth1/1
NFVIS-for-UC Management	101	10.0.101.10/24	10.0.101.1/24	GE0-0	lan-br	lan-net	mgmt-switch	Eth1/10
VM Data1	10	N/A	10.0.10.1/24	GE1-0	vm-br1	vm-net-10	vm-switch	Eth1/11
VM Data2	20	N/A	10.0.20.1/24	GE1-1	vm-br2	vm-net-20	vm-switch	Eth1/12

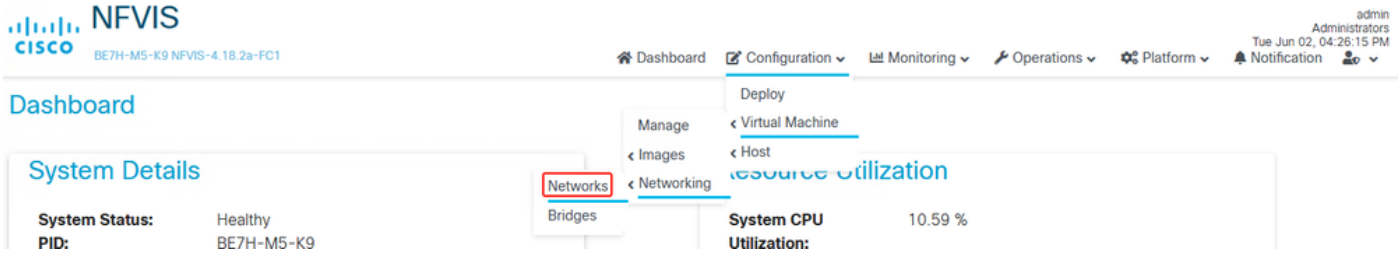
Configure OVS for VM Connectivity

Once you are able to remotely manage NFVIS-for-UC, the next step is setting up networks for Virtual Machine connectivity. In this setup, GE1-0 and GE1-1 are used for VM data traffic.

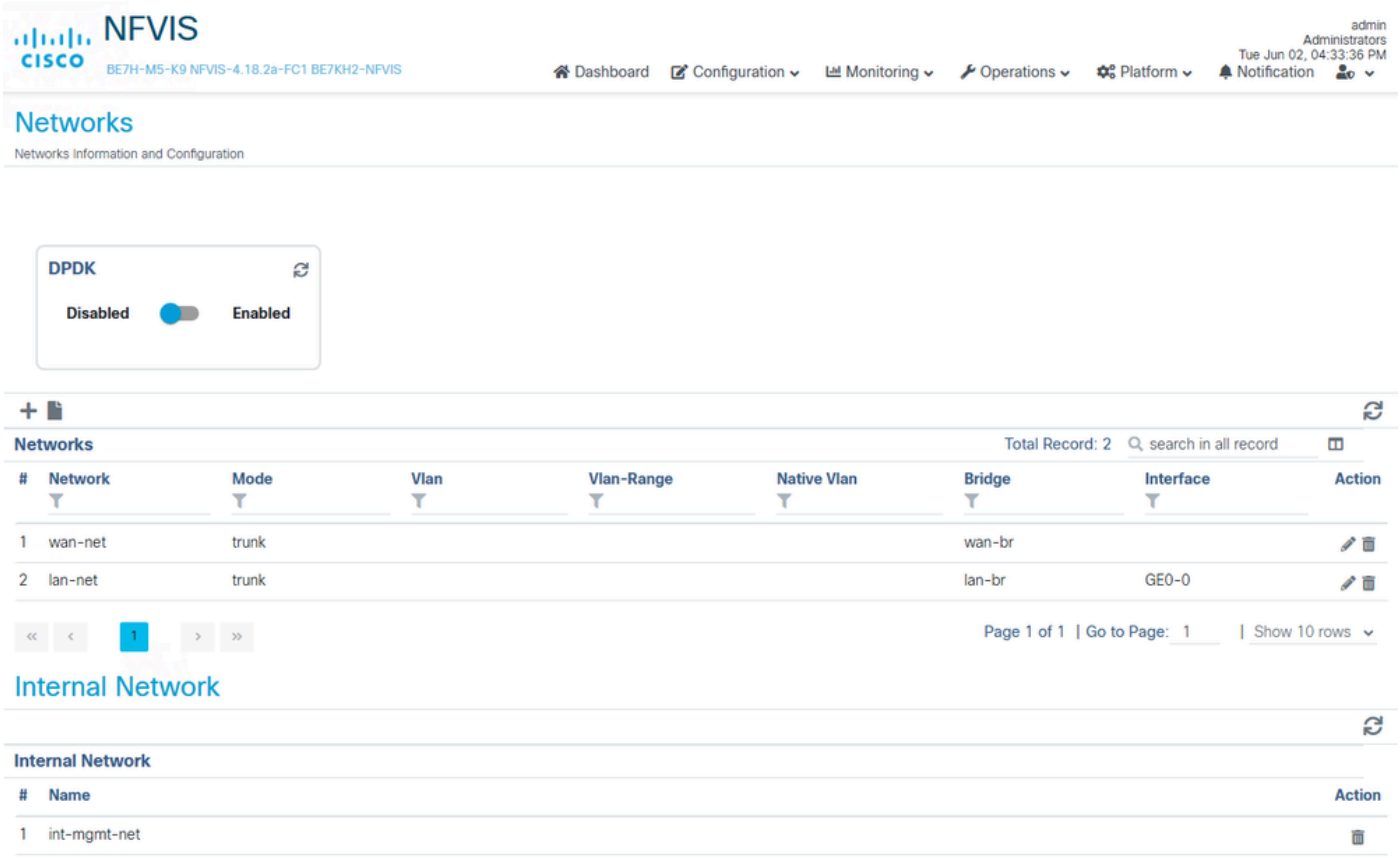
Step 1: Log in to NFVIS-for-UC WebUI at **https://<NFVIS Management IP or FQDN>** using credentials you set earlier.



Step 2: Navigate to **Network configuration** page from drop **Configuration > Virtual Machines > Networking > Networks**.

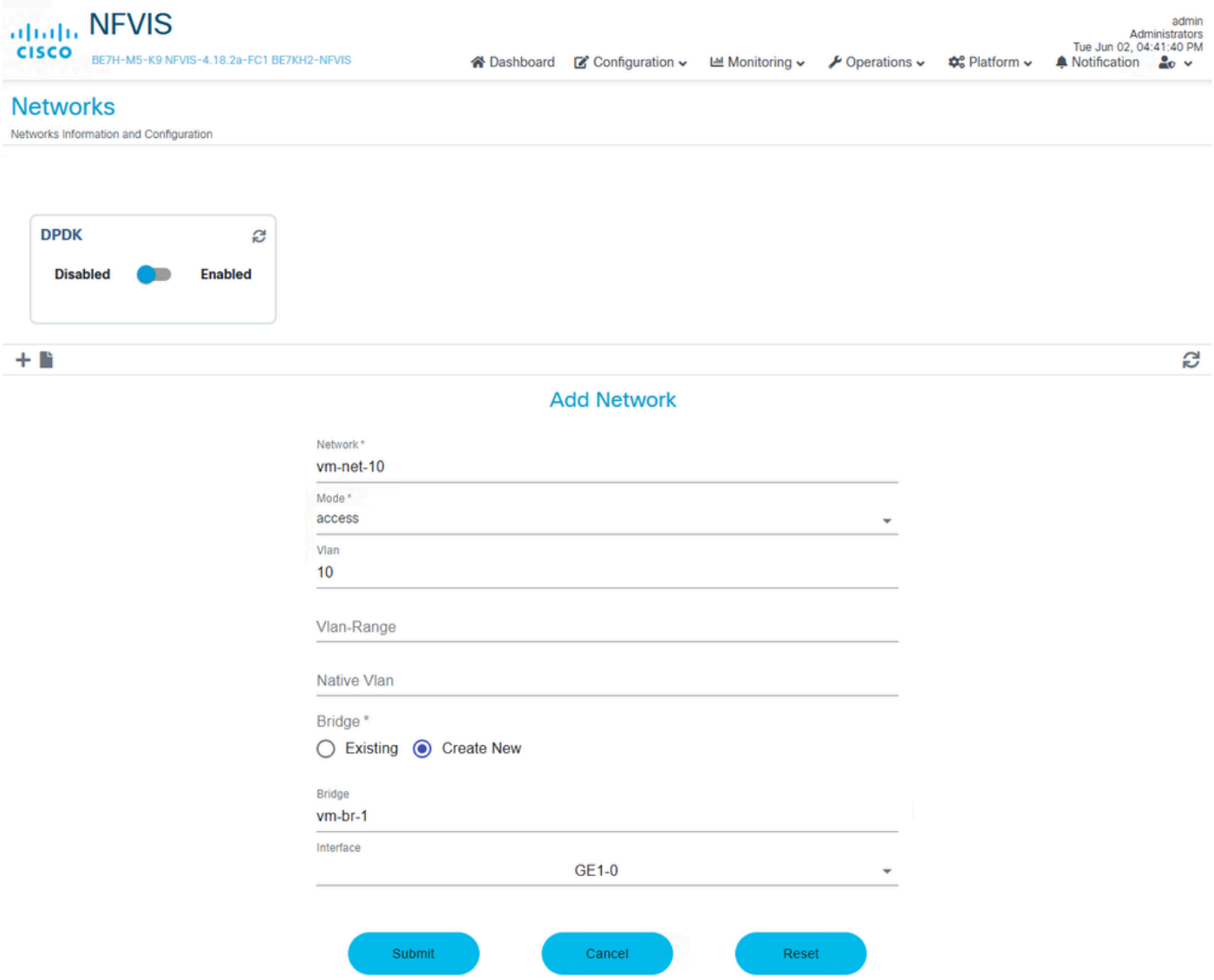


Networks page default configuration (BE7H-M5-K9)

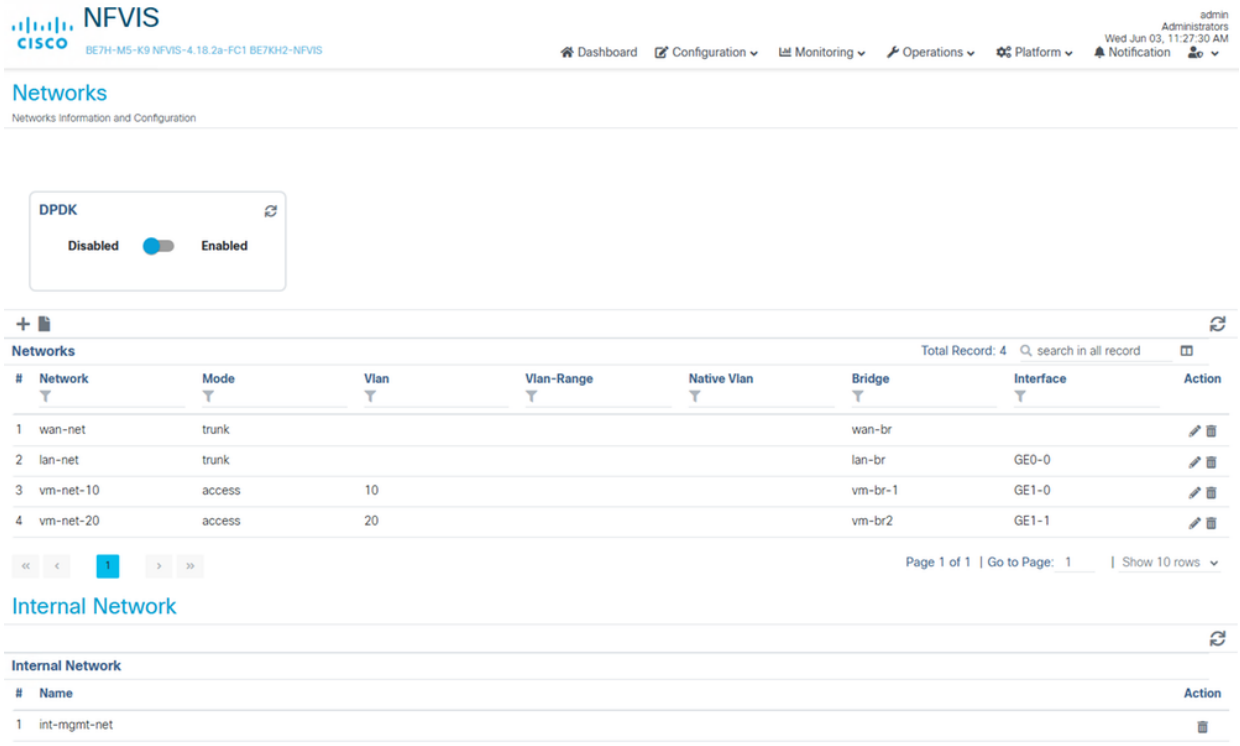


Step 3: Add New network, by clicking the + sign to add network. Enter **network details** and click **Submit** once done. Repeat the same step for other VLANs/network. Re-use the same bridge or create a new one based on your design.

- Name: vm-net-10
- Mode: Access
- VLAN: 10
- Bridge: Create **New**, **GE1-0** as interface to use. Recall that GE0-0 is being used for NFVIS-for-UC management.



Step 4. Verify the networks now appear on the Networks page.



You can also see these networks created from the NFVIS-for-UC CLI.

```
BE7KH2-NFVIS# show system networks
NETWORK BRIDGE PORTS TYPE VLAN
------------------------------------------------------------
wan-net wan-br N/A openvswitch N/A
lan-net lan-br GE0-0,GE0-0_l11 openvswitch N/A
GE1-0-SRIOV-1 N/A N/A SRIOV N/A
...omitted default SRIOV networks...
vm-net-10 vm-br1 GE1-0,vnic0 openvswitch 10
vm-net-20 vm-br2 GE1-1,vnic1 openvswitch 20

BE7KH2-NFVIS#
```

Related Articles and Documentation

- CIsco Virtualization Guide for Cisco On-premises Calling Applications
- Cisco Business Edition 6000/7000 Appliances Installation Guide
- Understanding NFVIS Networking
- NFVIS 4.x Getting Started Guide
- NFVIS 4.x Configuration Guide

Terminology Used

- BE6K/BE7K – Cisco Business Edition 6000/7000 series appliances
- CE1400V – Cisco Expressway appliance
- NFV – Network Function Virtualization, VNF can be considered as an outcome of NFV.
- VNF – Virtualized Network Function (such as virtual router, firewall)
- NFVIS-for-UC – NFV Infrastructure Software for Unified Communications
- pNIC – Physical Network Interface Card, physically installed in the appliance, managed by NFVIS-for-UC.
- vNIC – Virtual Network Interface Card, managed by NFVIS-for-UC, assign vNIC to virtual machines.
- OCP NIC 3.0 – Open Compute Project Network Interface Card 3.0.
- MLoM – Modular LAN on Motherboard
- OVS – Open Virtual Switch
- SR-IOV – Single Root I/O Virtualization, allows the pNIC to present itself to NFVIS-for-UC as multiple physical NICs.
- DPDK – Data Plane Development Kit