

Silver Peak Systems

Installing EdgeConnect on Cisco ENCS

Contents

Overview	1
Assumptions and Prerequisites	2
Hardware Model Support	2
Procedure	2
Upload the EdgeConnect KVM image to ENCS.....	2
Create the EdgeConnect Image Package	4
Create Image Profiles	6
Create Virtual Networks	8
Deploy the EdgeConnect Virtual Machine	8
Configure the EdgeConnect Management IP.....	10

Overview

This guide provides step-by-step instructions for installing EdgeConnect on a Cisco ENCS platform.

Assumptions and Prerequisites

- The EdgeConnect appliance has one LAN connection and two WAN connections.
- The LAN connection is connected to a virtual Cisco router within ENCS.

Hardware Model Support

The ENCS hardware model supported with the EdgeConnect appliance is ENCS 5104 (AMD SoC). Additionally, this must be packaged with dedicated CPU cores.

Procedure

Follow these steps to install an EdgeConnect with Cisco ENCS.

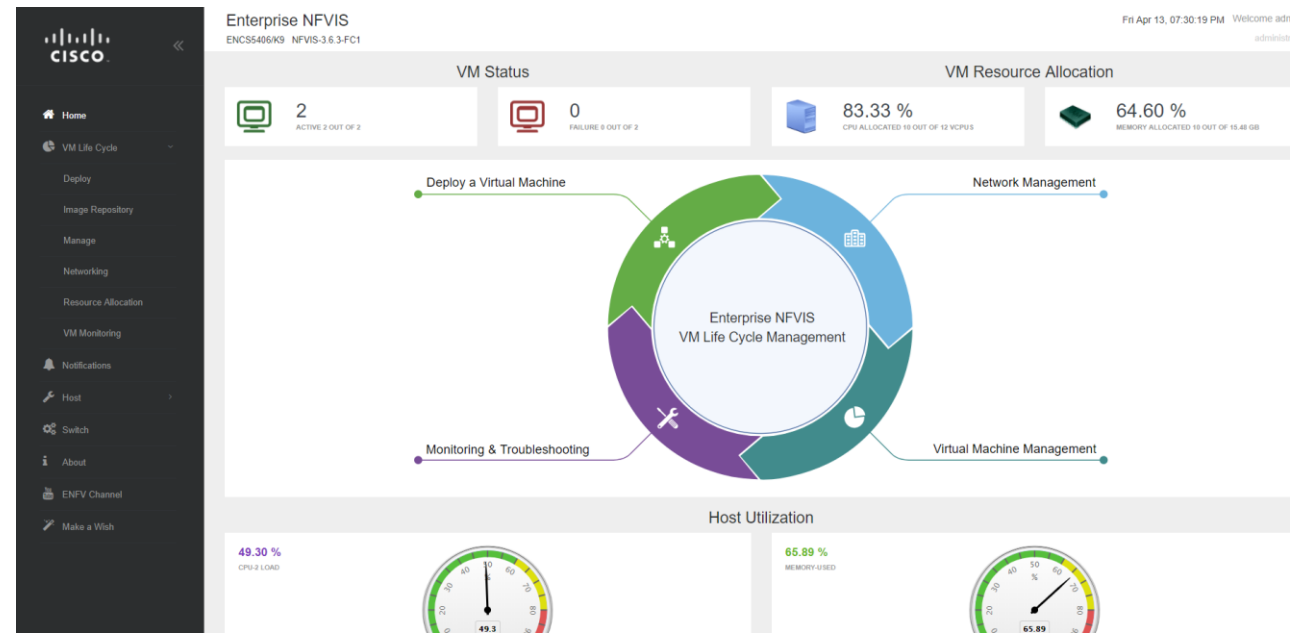
Upload the EdgeConnect KVM image to ENCS

1. Log into the Cisco ENCS appliance web console with your **username** and **password**.

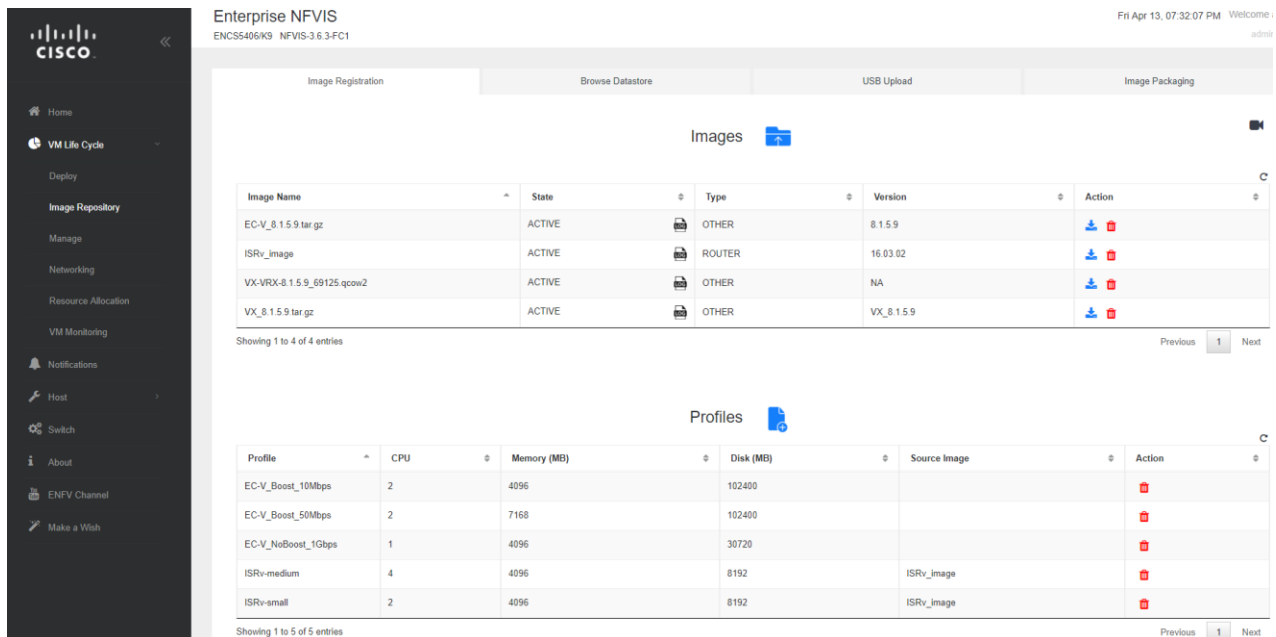


The screenshot shows the Cisco Enterprise NFV login interface. At the top left is the Cisco logo. Below it, the text 'Cisco Enterprise NFV' is displayed in a large font, followed by 'Enterprise NFV Infrastructure Software' in a smaller font. There are two input fields: 'Username' and 'Password'. At the bottom, there is a black button with a lock icon and the text 'Log In'.

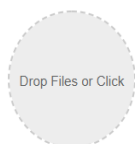
The Enterprise NFVIS screen opens.



- From the menu bar on the left pane, click **VM Life Cycle** and scroll down to select **Image Repository**. The Image Registration page opens.



- Click the Images icon that appears towards the center of the screen. The Drop Files or Click circular icon slides open.



#	Name	Size	VM Type	Dedicated Cores	File Storage	Progress	Status

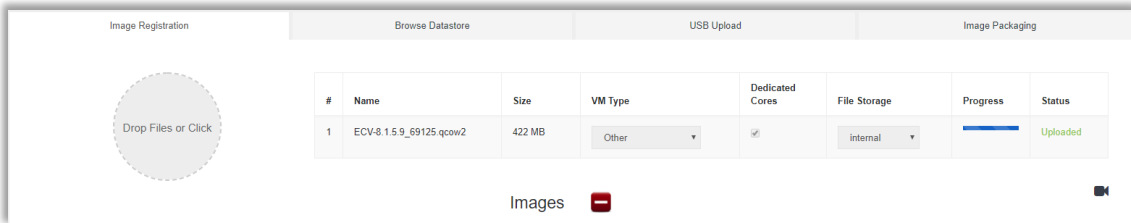
- From the Image Registration page, configure the following settings.

Field	Selection
VM Type	Other
CPU Cores	Check this box to dedicate the CPU cores.
File Storage	Internal

- From the **Drop Files or Click** area, either drag or select the file you downloaded from support site. For example, EC-8.1.9.4_74923.qcow2.

Note: By default, no network memory disk is created. If you want to utilize network memory, you must upload a datastore file, for example: datastore-500G.qcow2. The datastore file can be created on a Unix machine and you can adjust the size based on the requirement. Use the following command on a Unix computer to create a datastore file:

- `qemu-img create -f qcow2 datastore-500G.qcow2 500G`



- Once you have configured your settings, click **Submit**.

Create the EdgeConnect Image Package

- From the Enterprise NFVIS screen, click **VM Life Cycle** and scroll down to select **Image Repository**.
- Select the Imaging Packing tab, and click the file icon labeled **VM Packages**.

The Imaging Packaging page opens.

Enterprise NFVIS
ENC55406/K9 NFVIS-3.6.3-FC1

Fri Apr 13, 07:44:46 PM Welcome
admi

Image Registration	Browse Datastore	USB Upload	Image Packaging
Package Name <input type="text" value="Required Field"/>	VM Version <input type="text" value="Required Field"/>	VM Type <input type="text" value="Router"/>	Dedicate Cores(Optimize) <input type="text" value="No"/>
<input checked="" type="radio"/> Local <input type="radio"/> Upload Raw Images (.qcow2/img) <input type="text" value="Select local files"/>	Serial Console <input type="text" value="Disable"/>	Srvov Driver(s) <input type="text" value="Select available driver(s)"/>	
Raw Disk File Bus <input type="text" value="virtio"/>	Thick Disk Provisioning <input type="text" value="No"/>	<input checked="" type="radio"/> Local <input type="radio"/> Upload Bootstrap Files <input type="text" value="Select local files"/>	
Bootstrap Cloud Init Drive <input type="text" value="cdrom"/>	Bootstrap Cloud Init Bus <input type="text" value="ide"/>		

- Configure the following settings.

Field	Selection
Package Name	There are no restrictions. You can give it any name.
VM Version	There are no restrictions. You can give it any value.
VM Type	Other.
Dedicate Core (Optimize)	Yes.
Serial Console	Enable.
Sriov Driver(s)	Enable all driver (i.e., igb, igbvf, i40evf).
Raw Image File	<ol style="list-style-type: none"> 1. Select the Local radio button. 2. In the text field, select the image file that was previously uploaded, EC- 8.1.9.4_74923. 3. Optionally, select the text field again and select the datastore file: <code>datastore-500G.qcow2</code>. <p>Note: Be sure to do the above steps in the exact order. The completed file list should be similar to the following: <code>x VX-VRX-8.1.9.4_74923.qcow x datastore-500G.qcow2</code></p>
Raw Disk File Bus	Virtio.
Thick Disk Provisioning	Yes.
Upload Bootstrap Files	This is optional. If you are unsure, leave it blank.
Bootstrap Cloud Init Drive	CDROM.

4. Click **Advanced Configuration**.

The Advanced Configuration screen opens.

▼ Advanced Configuration

Virtual Interface Model

none

▼ Custom Properties

Key

UNIQUE UPPERCASE KEY

Value

Comma separated string value(s)

▼ Resource Requirements

CPU Range: 1 8

Memory Range(MB): 256 32768

Disk Range(GB): 1 1000

VNIC: 8

▼ Add Profile(s)

Profile: Profile Name

CPU: 1

Memory (MB): 256

Disk (GB): 1

Default

Submit

5. For Virtual Interface Model, select **None**.

6. Click **Resource Requirements** and configure the following settings.

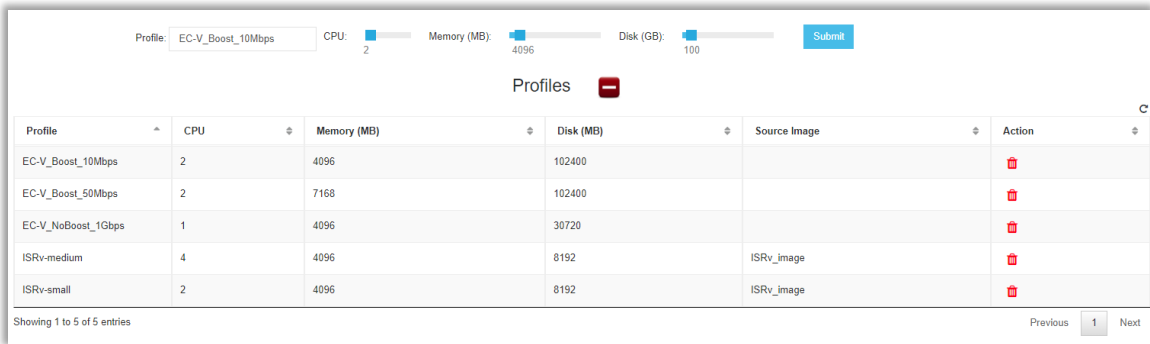
Field	Selection
CPU Range	Min 2 Max highest value.
Memory Range (MB)	Min 4096. Max highest value.
VNIC	Highest value.

7. Click **Submit**.

Create Image Profiles

1. From the Enterprise NFVIS screen, click **VM Life Cycle** and scroll down to select **Image Repository**.
2. Select the Image Registration tab, and click the file icon labeled **Image Registration**.

The Profiles screen opens.



3. On the Profiles screen, click the Profiles icon to add a profile and configure the following settings.

Field	Selection
Profile	There are no restrictions. This can be any value (i.e., EC-V_Boost_10Mbps).
CPU	Match the specification based on the Table 1.1
Memory (MB)	Match the specification based on the Table 1.1.
Disk (GB)	Match the specification based on the Table 1.1.

Table 1-1. Specifications

SD-WAN Bandwidth	Processor Cores (>2 GHz)	Memory	Minimum Storage	Storage IOPs	Storage Bandwidth
Up to 1 Gbps	2	4 GB	30 GB	n/a	n/a
1 to 4 Gbps	4	4 GB	30 GB	n/a	n/a
4 to 5 Gbps	8	4 GB	30 GB	n/a	n/a
Added Boost Bandwidth	Processor Cores (>2 GHz)	Memory	Minimum Storage	Storage IOPs	Storage Bandwidth
Up to 10 Mbps	4	4 GB	100 GB	100	25 MB/s
10 to 50 Mbps	4	7 GB	100 GB	200	50 MB/s
50 to 200 Mbps	8	14 GB	250 GB	1000	250 MB/s
200 to 1000 Mbps	24	30 GB	250 GB	5000	1250 MB/s

4. Click **Submit**.

Create Virtual Networks

- From the Enterprise NFVIS screen, click **VM Life Cycle** and scroll down to select **Networking**.

The Networks & Bridges screen opens.

Enterprise NFVIS
ENC5406/K9 NFVIS-3.6.3-FC1

Fri Apr 13, 07:51:58 PM Welcome admin
administr

Networks & Bridges

Network	Mode	Vlans	Bridge	Interfaces	Actions
lan-net	trunk	500	lan-br	int-LAN	
MGMT-0	access	500	lan-br	int-LAN	
Transit	access		Transit		
wan-net	access	501	wan-br	GE0-0	
wan-net-ge01	access	502	wan-ge01-br	GE0-1	

Showing 1 to 5 of 5 entries

Interface Status

Interface	Speed (Mbps)	Media	MAC
GE0-0	1000	Twisted Pair	38:0e:4d:b4:68:c8
GE0-1	1000	Twisted Pair	38:0e:4d:b4:68:c9
MGMT	1000	Twisted Pair	38:0e:4d:b4:69:3c

Showing 1 to 3 of 3 entries

SRIOV Networks

SRIOV Network	Interface
LAN-SRIOV-1	LAN Switch
LAN-SRIOV-2	LAN Switch
LAN-SRIOV-3	LAN Switch
LAN-SRIOV-4	LAN Switch
LAN-SRIOV-5	LAN Switch

Showing 1 to 5 of 10 entries

- Towards the middle of the screen, click the file icon labeled **Network and Bridges**. Additional fields appear.
- Configure these settings to create the new virtual network.

Field	Selection
Network	There are no restrictions. This can be any value.
Mode	Trunk
VLAN	Leave this blank.
Bridge	Select the Create New radio button and type a name for the new bridge.

- Click **Submit**.

Deploy the EdgeConnect Virtual Machine

- From the Enterprise NFVIS screen, click **VM Life Cycle** and scroll down to select **Deploy**. The Deploy screen opens.

Enterprise NFVIS
ENCSS406/K9 NFVIS-3.6.3-FC1

Fri Apr 13, 07:55:07 PM Welcome
admin

VM Deployment

Warning: Any change in the vNIC of a deployed VM will automatically reboot the VM

ROUTER
FIREWALL
vWAAS
vWLC
OTHER

Image Registration Status

Name	Status
EC-V_8.1.5.9.tar.gz	ACTIVE
ISRV_image	ACTIVE
VX-VRX-8.1.5.9_69125.qcow2	ACTIVE
VX_8.1.5.9.tar.gz	ACTIVE

VM Status Overview

VM Deployment Status

Name	Status
EC1	Active
vRouter2	Active

Deploy

- At the top of the page, click and drag the circle icon labeled **Other** into the VM deployment section. The VM Details screen opens.

VM Details

VM Name *

Image ▼

Profile ▼

Deployment Disk ▼

- Configure these settings.

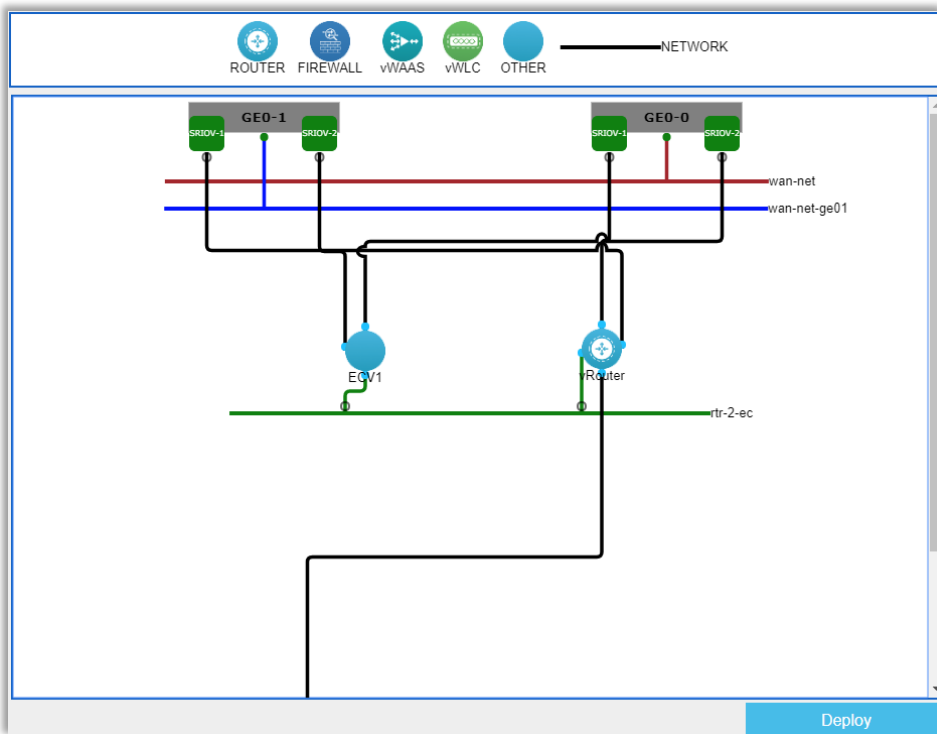
Field	Selection
VN Name	There are no restrictions. Enter a name of the VN.
Image	Select the image package that you created in the previous section (i.e., EC-V_8.1.5.9.tar.gz).
Profile	Select one of the profiles created in the previous screen (i.e., EC-V_Boost_10Mbps).
Deployment Disk	datastore 1.

Note: From the Deployment screen, you can also add vNICs by clicking the VM icon and dragging the mouse/arrow to the external interface or virtual network you want to associate it with.

Recommendations:

We recommend that you deploy EdgeConnect in Inline Router Mode (ILRM) as this will provide a separate and distinct LAN and WAN interfaces. We also recommend connecting WAN side interfaces to the SRIOV interface slots for best results.

4. Click **Deploy**.



Configure the EdgeConnect Management IP

1. From the Enterprise NFVIS screen, click **VM Life Cycle** and scroll down to select **Manage**.

The Manage screen opens. At the top of the page under VM Status, a view of all the virtual machines and their associated status are displayed.

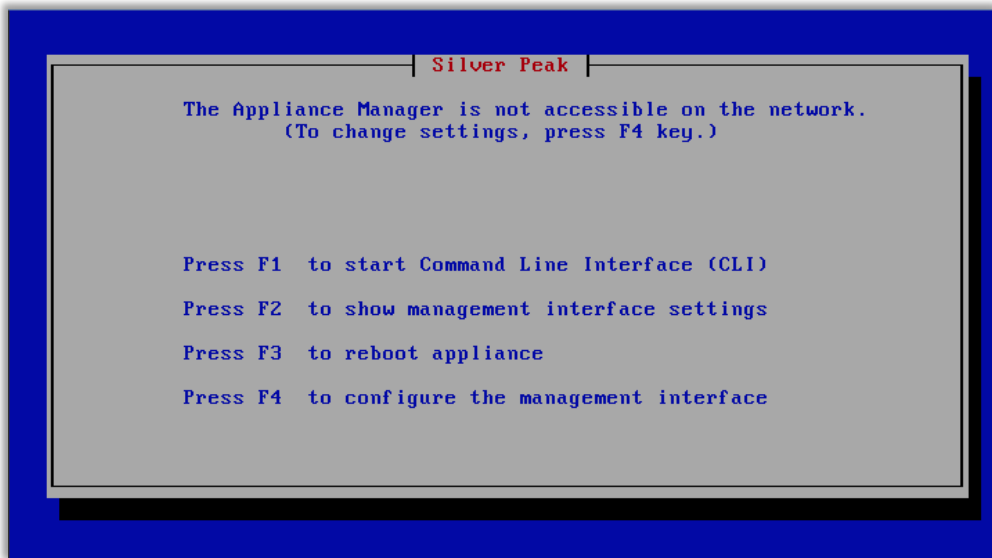
The screenshot shows the 'VM Status' page. At the top, there is a table with columns: Name, Status, Profile, Port Forwarding, and vnic (0-7). Two VMs are listed: EC1 and vRouter2. Below the table, there is a network diagram showing connections between various components like 'wan-net', 'wan-net-ge01', 'transit', and 'MGMT-0'. To the right of the diagram is a 'VM Status Overview' panel showing a table of VM Deployment Status with columns for Name and Status, listing EC1 and vRouter2 as 'Active'.

- Under the **Name** column, click the console icon next to the EdgeConnect virtual machine that you created. A new tab opens providing console access to the appliance.

Note: Ensure that your pop-up blocker is disabled or configured to allow pop-ups from the ENCS web console.

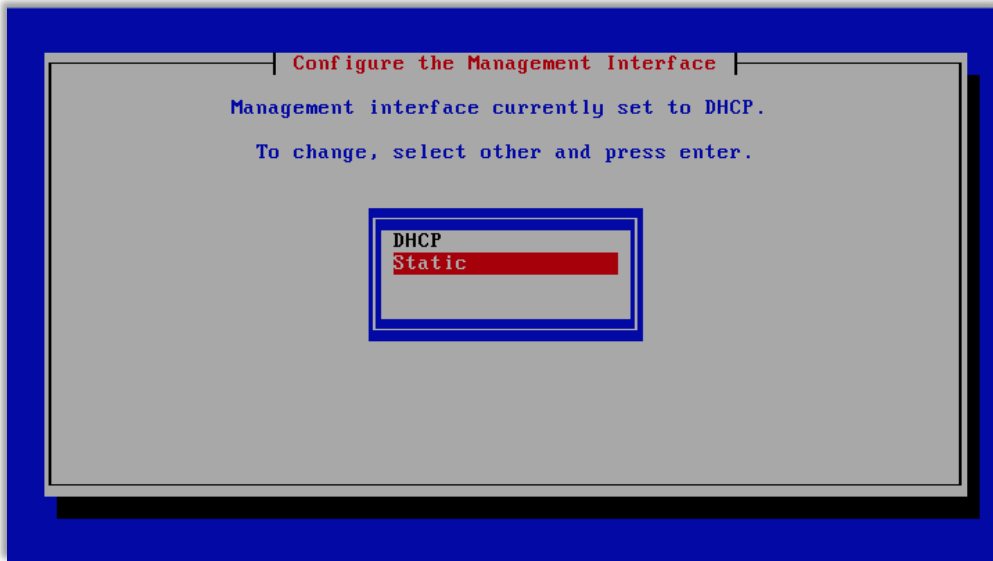
This screenshot is similar to the previous one but highlights the console icon (a monitor with a cursor) in the 'Actions' column for the ECV1 VM. The table shows ECV1 with status 'Active' and profile 'EC-V_Boost_10Mbps'. The vnic table for ECV1 shows connections to 'rtr-2-ec', 'GE0-0-SRIOV-2', and 'GE0-1-SRIOV-2'. The vRouter2 VM is also visible with status 'Active' and profile 'ISRv-small'.

- From the Console View/Tab, press F4 to configure the management interface.

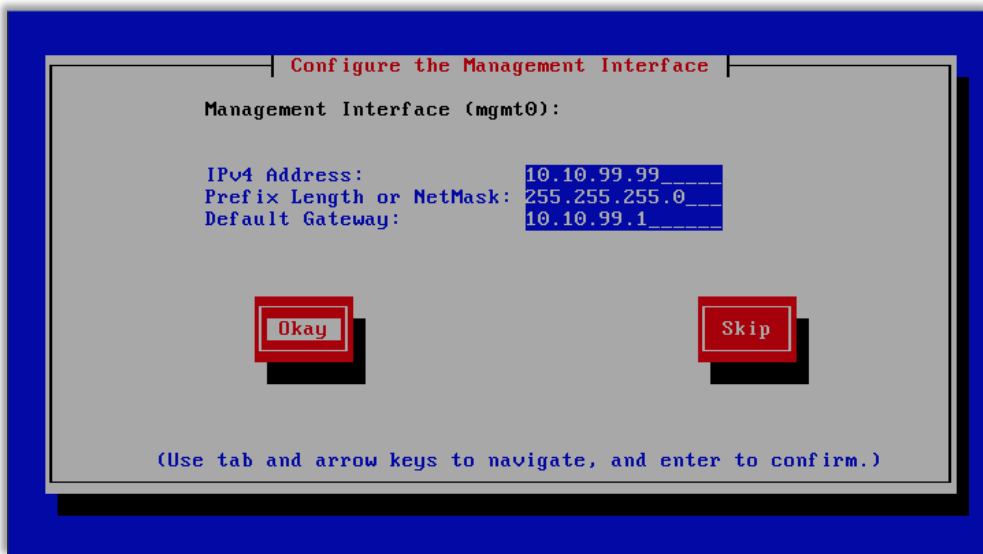


The Configure the Management Interface screen opens.

4. Select **Static**.



5. Proceed to configure the IP address, subnet mask, and default gateway, and click **OK**.



6. After you have verified that all the configuration details are correct, click **Apply**.
The EdgeConnect appliance should now be accessible via HTTP using the IP address you provided.