



Managing Cisco Virtual Machine Fabric Extender For VMware

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About Cisco Virtual Machine Fabric Extender

A virtualized server implementation consists of one or more VMs that run as guests on a single physical server. The guest VMs are hosted and managed by a software layer called the hypervisor or virtual machine manager (VMM). Typically, the hypervisor presents a virtual network interface to each VM and performs Layer 2 switching of traffic from a VM to other local VMs or to another interface to the external network.

Working with a Cisco virtual interface card (VIC) adapter, the Cisco Virtual Machine Fabric Extender (VM-FEX) bypasses software-based switching of VM traffic by the hypervisor for external hardware-based switching in the fabric interconnect. This method reduces the load on the server CPU, provides faster switching, and enables you to apply a rich set of network management features to local and remote traffic.

Integrating Cisco VM-FEX in Cisco UCS Director

To successfully integrate Cisco VM-FEX in Cisco UCS Director, complete the tasks outlined in the table below:

Task	Description	Reference
Edit computing policy	To enable DirectPath I/O, full guest memory reservation is necessary on the VM. This can be achieved by editing the VM's computing policy.	Editing Computing Policy For Cisco VM-FEX Support, on page 2

Task	Description	Reference
Edit networking policy	The adapter type must be VMXNET3 and should be associated with the VM's DirectPath enabled portgroup.	Editing Network Policy For VM-FEX Support, on page 3

Editing Computing Policy For Cisco VM-FEX Support

Procedure

- Step 1** Choose **Policies > Virtual/Hypervisor Policies > Computing**.
- Step 2** On the **Computing** page, click **VMware Computing Policy**.
- Step 3** Click the row with the policy that you want to edit.
- Step 4** Click **Edit**.
- Step 5** On the **Edit Computing Policy** screen, check **Override Template** and **Reserve all guest memory**, and specify the reserved guest memory.
- Note** The reserved guest memory should always be greater than 4096MB.
- Step 6** Click **Submit**.
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Editing Network Policy For VM-FEX Support

Procedure

- Step 1** Choose **Policies > Virtual/Hypervisor Policies > Network**.
 - Step 2** On the **Network** page, click **VMware Network Policy**.
 - Step 3** Click the row with the policy that you want to edit.
 - Step 4** Click **Edit**.
 - Step 5** On the **Network Policy Information** screen, click the + icon next to **VM Networks**.
 - Step 6** Click the + icon to add a new entry to the VM Networks table.
 - Step 7** On the **Add Entry to VM Networks** screen, choose **VMXNET3** in the **Adapter Type** drop-down list.
 - Step 8** Click the row with the portgroup that you want to add.
 - Step 9** Click the **Edit** icon.
 - Step 10** On the **Add Entry to Port Groups** screen, choose the VM DirectPath enabled portgroup.
 - Step 11** Click **Submit**.
 - Step 12** In the **Add VM Networks Entry** screen, click **Submit**.
 - Step 13** In the **Network Policy Information** screen, click **Submit**.
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