



# Configuring a Service Profile with VM-FEX

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## Configuring Dynamic vNIC Connection Policies

### Dynamic vNIC Connection Policy

The dynamic vNIC connection policy determines how the connectivity between VMs and dynamic vNICs is configured. This policy is required for Cisco UCS domains that include servers with VIC adapters on which you have installed VMs and configured dynamic vNICs.

#### Ethernet Adapter Policy

Each dynamic vNIC connection policy includes an Ethernet adapter policy and designates the number of vNICs that can be configured for any server associated with a service profile that includes the policy.

#### Server Migration



**Note**

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If you migrate a server that is configured with dynamic vNICs, the dynamic interface used by the vNICs fails and notifies you of that failure.

When the server comes back up, assigns new dynamic vNICs to the server. If you are monitoring traffic on the dynamic vNIC, you must reconfigure the monitoring source.

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## Creating a Dynamic vNIC Connection Policy

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>create dynamic-vnic-conn-policy</b> <i>policy-name</i>	<p>Creates the specified vNIC connection policy and enters organization vNIC connection policy mode.</p> <p>This name can be between 1 and 32 alphanumeric characters. You cannot use spaces or any special characters other than - (hyphen), _ (underscore), : (colon), and . (period), and you cannot change this name after the object is saved.</p> <p><b>Note</b> Do not specify "default" as the value for the dynamic vNIC connection policy name. Cisco UCS Manager automatically resolves any empty policy references to "default". Any service profiles or service profile templates with only static vNICs defined will automatically reference the policy "default" when it is present. If you specify "default" for the dynamic vNIC connection policy name, then unexpected dynamic vNICs might be created on those service profiles or service profile templates.</p>
<b>Step 3</b>	UCS-A /org/dynamic-vnic-conn-policy # <b>set desc</b> <i>description</i>	<p>(Optional)</p> <p>Provides a description for the policy.</p> <p>Enter up to 256 characters. You can use any characters or spaces except ` (accent mark), \ (backslash), ^ (carat), " (double quote), = (equal sign), &gt; (greater than), &lt; (less than), or ' (single quote).</p> <p>If your description includes spaces or nonalphanumeric characters, you must begin and end your description with double quotation marks. The quotation marks do not appear in the description field of any <b>show</b> command output.</p>
<b>Step 4</b>	UCS-A /org/dynamic-vnic-conn-policy # <b>set adapter-policy</b> <i>policy-name</i>	Specifies the Ethernet adapter policy to use for this policy. The adapter policy must already exist.
<b>Step 5</b>	UCS-A /org/dynamic-vnic-conn-policy # <b>set dynamic-eth</b> { <i>dynamic-eth-num</i>   <b>off</b> }	<p>Specifies the number of dynamic vNICs to use for this policy.</p> <p>Enter an integer between 0 and 256. The default is 54.</p> <p><b>Note</b> Components of your system may limit this number to fewer than 256 vNICs.</p>
<b>Step 6</b>	UCS-A /org/dynamic-vnic-conn-policy # <b>set protection</b> { <b>protected</b>   <b>protected-pref-a</b>   <b>protected-pref-b</b> }	<p>Dynamic vNICs are always protected in Cisco UCS, but this command allows you to select a preferred fabric, if any. You can choose one of the following options:</p> <ul style="list-style-type: none"> <li>• <b>protected</b>—Cisco UCS uses whichever fabric is available.</li> <li>• <b>protected-pref-a</b>—Cisco UCS attempts to use fabric A, but fails over to fabric B if necessary.</li> <li>• <b>protected-pref-b</b>—Cisco UCS attempts to use fabric B, but fails over to fabric A if necessary.</li> </ul>

	Command or Action	Purpose
<b>Step 7</b>	UCS-A /org/dynamic-vnic-conn-policy # <b>commit-buffer</b>	Commits the transaction.

The following example shows how to create a dynamic vNIC connection policy named MyDynVnicConnPolicy that uses the system-provided Ethernet adapter policy for 12 dynamic vNICs and commit the transaction:

```
UCS-A# scope org /
UCS-A /org # create dynamic-vnic-conn-policy MyDynVnicConnPolicy
UCS-A /org/dynamic-vnic-conn-policy* # set adapter-policy
UCS-A /org/dynamic-vnic-conn-policy* # set desc "Dynamic vNIC for Eth policy"
UCS-A /org/dynamic-vnic-conn-policy* # set dynamic-eth 12
UCS-A /org/dynamic-vnic-conn-policy* # commit-buffer
UCS-A /org/dynamic-vnic-conn-policy #
```

## Deleting a Dynamic vNIC Connection Policy

### SUMMARY STEPS

1. UCS-A# **scope org** *org-name*
2. UCS-A /org # **delete dynamic-vnic-conn-policy** *policy-name*
3. UCS-A /org # **commit-buffer**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>delete dynamic-vnic-conn-policy</b> <i>policy-name</i>	Deletes the specified vNIC connection policy.
<b>Step 3</b>	UCS-A /org # <b>commit-buffer</b>	Commits the transaction.

The following example shows how to delete the dynamic vNIC connection policy named MyDynVnicConnPolicy and commit the transaction:

```
UCS-A# scope org /
UCS-A /org # delete dynamic-vnic-conn-policy MyDynVnicConnPolicy
UCS-A /org* # commit-buffer
UCS-A /org #
```

# Viewing Dynamic vNIC Properties in a VM

## Before You Begin

The VM must be operational.

## SUMMARY STEPS

1. UCS-A# **scope system**
2. UCS-A /system # **scope vm-mgmt**
3. (Optional) UCS-A /system/vm-mgmt # **show virtual-machine**
4. UCS-A /system/vm-mgmt # **scope virtual-machine uuid**
5. UCS-A /system/vm-mgmt/virtual-machine # **show vnic [detail]**

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope system</b>	Enters system mode.
<b>Step 2</b>	UCS-A /system # <b>scope vm-mgmt</b>	Enters VM management mode.
<b>Step 3</b>	UCS-A /system/vm-mgmt # <b>show virtual-machine</b>	(Optional) Displays the running virtual machines.
<b>Step 4</b>	UCS-A /system/vm-mgmt # <b>scope virtual-machine uuid</b>	Enters command mode for the virtual machine that contains the dynamic vNIC.
<b>Step 5</b>	UCS-A /system/vm-mgmt/virtual-machine # <b>show vnic [detail]</b>	Displays the vNIC properties.

The following example shows how to display the properties of a dynamic vNIC in a VM:

```
UCS-A# scope system
UCS-A /system # scope vm-mgmt

UCS-A /system/vm-mgmt # show virtual-machine
Virtual Machine:
  UUID: 420a00c8-934b-4ae3-6af5-2ce9b8bd0f44
  Service Profile: org-root/ls-PTS-ch6-7
  Server: sys/chassis-6/blade-7
  Status: Online
.
.
.
UCS-A /system/vm-mgmt # scope virtual-machine 420a08b0-cda7-9e0a-424f-01ec8653eea0
UCS-A /system/vm-mgmt/virtual-machine # show vnic detail

vNIC:
  Name: 4479
  Status: Online
  MAC Address: 00:50:56:8A:07:B5
  Profile Name: VM-mgmt
  Virtual Adapter: sys/chassis-1/blade-1/adapter-1/host-eth-9
```

```
Vnic Dn: org-root/ls-PTS-ch1-1/ether-dynamic-prot-009  
Current Task:
```

```
UCS-A /system/vm-mgmt/virtual-machine #
```

