



## Verifying that the Data Path is Ready

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## Verifying that Dynamic vNICs Are Up and Running

When you upgrade a Cisco UCS that includes dynamic vNICs and an integration with VMware vCenter, you must verify that all dynamic vNICs are up and running on the new primary fabric interconnect before you activate the new software on the former primary fabric interconnect to avoid data path disruption.

Perform this step in the Cisco UCS Manager GUI.

### Procedure

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- Step 1** In the **Navigation** pane, click the **VM** tab.
  - Step 2** On the **VM** tab, expand **All > VMware > Virtual Machines**.
  - Step 3** Expand the virtual machine for which you want to verify the dynamic vNICs and choose a dynamic vNIC.
  - Step 4** In the **Work** pane, click the **VIF** tab.
  - Step 5** On the **VIF** tab, verify that the **Status** column for each VIF is **Online**.
  - Step 6** Repeat Steps 3 through 5 until you have verified that the VIFs for all dynamic vNICs on all virtual machines have a status of **Online**.
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## Verifying the Ethernet Data Path

### Procedure

|               | Command or Action   | Purpose   |
|---------------|---|---|
| <b>Step 1</b> | UCS-A /fabric-interconnect # <b>connect nxos {a   b}</b>              | Enters NX-OS mode for the fabric interconnect.  |
| <b>Step 2</b> | UCS-A(nxos)# <b>show int br   grep -v down   wc -l</b>                | Returns the number of active Ethernet interfaces.<br>Verify that this number matches the number of Ethernet interfaces that were up prior to the upgrade. |
| <b>Step 3</b> | UCS-A(nxos)# <b>show platform fwm info hw-stm   grep '1.'   wc -l</b> | Returns the total number of MAC addresses.<br>Verify that this number matches the number of MAC addresses prior to the upgrade.                           |

The following example returns the number of active Ethernet interfaces and MAC addresses for subordinate fabric interconnect A so that you can verify that the Ethernet data path for that fabric interconnect is up and running:

```
UCS-A /fabric-interconnect # connect nxos a
UCS-A(nxos)# show int br | grep -v down | wc -l
86
UCS-A(nxos)# show platform fwm info hw-stm | grep '1.' | wc -l
80
```

## Verifying the Data Path for Fibre Channel End-Host Mode

For best results when upgrading a Cisco UCS domain, we recommend that you perform this task before you begin the upgrade and after you activate the subordinate fabric interconnect, and then compare the two results.

### Procedure

|               | Command or Action  | Purpose  |
|---------------|--|--|
| <b>Step 1</b> | UCS-A /fabric-interconnect # <b>connect nxos {a   b}</b>   | Enters NX-OS mode for the fabric interconnect.   |
| <b>Step 2</b> | UCS-A(nxos)# <b>show npv flogi-table</b>                   | Displays a table of flogi sessions.  |
| <b>Step 3</b> | UCS-A(nxos)# <b>show npv flogi-table   grep fc   wc -l</b> | Returns the number of servers logged into the fabric interconnect.<br><br>The output should match the output you received when you performed this verification prior to beginning the upgrade. |

The following example displays the flogi-table and number of servers logged into subordinate fabric interconnect A so that you can verify that the Fibre Channel data path for that fabric interconnect in Fibre Channel End-Host mode is up and running:

```
UCS-A /fabric-interconnect # connect nxos a
UCS-A(nxos) # show npv flogi-table
-----
SERVER
INTERFACE VSAN FCID PORT NAME NODE NAME EXTERNAL
INTERFACE
-----
vfc705 700 0x69000a 20:00:00:25:b5:27:03:01 20:00:00:25:b5:27:03:00 fc3/1
vfc713 700 0x690009 20:00:00:25:b5:27:07:01 20:00:00:25:b5:27:07:00 fc3/1
vfc717 700 0x690001 20:00:00:25:b5:27:08:01 20:00:00:25:b5:27:08:00 fc3/1

Total number of flogi = 3.

UCS-A(nxos) # show npv flogi-table | grep fc | wc -l
3
```

## Verifying the Data Path for Fibre Channel Switch Mode

For best results when upgrading a Cisco UCS domain, we recommend that you perform this task before you begin the upgrade and after you activate the subordinate fabric interconnect, and then compare the two results.

### Procedure

|               | Command or Action  | Purpose  |
|---------------|--|--|
| <b>Step 1</b> | UCS-A /fabric-interconnect # <b>connect nxos {a   b}</b>     | Enters NX-OS mode for the fabric interconnect.   |
| <b>Step 2</b> | UCS-A(nxos)# <b>show flogi database</b>                      | Displays a table of flogi sessions.  |
| <b>Step 3</b> | UCS-A(nxos)# <b>show flogi database   grep -I fc   wc -l</b> | Returns the number of servers logged into the fabric interconnect.<br><br>The output should match the output you received when you performed this verification prior to beginning the upgrade. |

The following example displays the flogi-table and number of servers logged into subordinate fabric interconnect A so that you can verify that the Fibre Channel data path for that fabric interconnect in Fibre Channel End-Host mode is up and running:

```
UCS-A /fabric-interconnect # connect nxos a
UCS-A(nxos) # show flogi database
-----
INTERFACE VSAN FCID PORT NAME NODE NAME
-----
vfc726 800 0xef0003 20:00:00:25:b5:26:07:02 20:00:00:25:b5:26:07:00
vfc728 800 0xef0007 20:00:00:25:b5:26:07:04 20:00:00:25:b5:26:07:00
vfc744 800 0xef0004 20:00:00:25:b5:26:03:02 20:00:00:25:b5:26:03:00
vfc748 800 0xef0005 20:00:00:25:b5:26:04:02 20:00:00:25:b5:26:04:00
```

```
vfc764          800  0xef0006  20:00:00:25:b5:26:05:02  20:00:00:25:b5:26:05:00
vfc768          800  0xef0002  20:00:00:25:b5:26:02:02  20:00:00:25:b5:26:02:00
vfc772          800  0xef0000  20:00:00:25:b5:26:06:02  20:00:00:25:b5:26:06:00
vfc778          800  0xef0001  20:00:00:25:b5:26:01:02  20:00:00:25:b5:26:01:00
```

Total number of flogi = 8.

```
UCS-A (nxos) # show flogi database | grep fc | wc -l
8
```