

VIC 14XX in Standalone and UCSM Integrated Mode

Contents

[Introduction](#)

[Scenario 1. VIC 14XX Integration with UCSM](#)

[Direct Connect to UCS Fabric Interconnect](#)

[A Single Wire Connects to UCS Fabric Interconnect](#)

[Scenario 2. VIC 14XX in Standalone Mode](#)

[Configure Port Channel Mode via CIMC Command Line](#)

[Scenario 3. VIC 14XX in Standalone Mode in Port-channel – With LACP](#)

[Details about Forward Error Correction \(FEC\) Mode:](#)

[Related Information](#)

Introduction

This document describes the procedure available only when a Cisco Unified Computing Systems (UCS) C-Series network adapter 14XX is used.

Scenario 1. VIC 14XX Integration with UCSM

Implementation Details:

VIC 14xx's have 4 ports. In case port-channel is enabled, Port 1-2 should go to the same switch/FI and Port 3-4 can go to another switch/ FI.

Port channel mode change is supported only in stand-alone mode (In UCSM mode the port-channel always needs to be enabled(default), hence there is no option to change the mode.

Direct Connect to UCS Fabric Interconnect

Direct Connect Cabling Configuration with Cisco VIC 1455 (4-Port Linking)

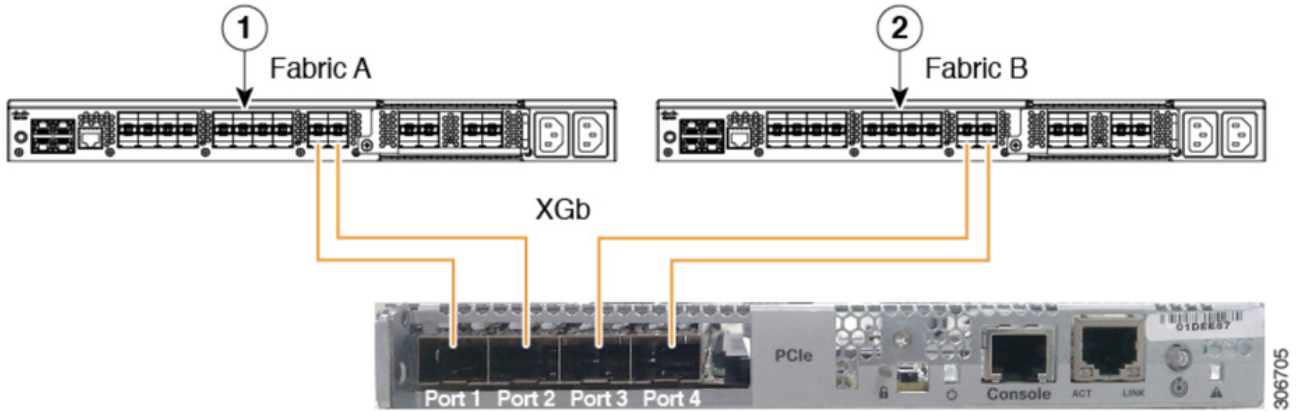
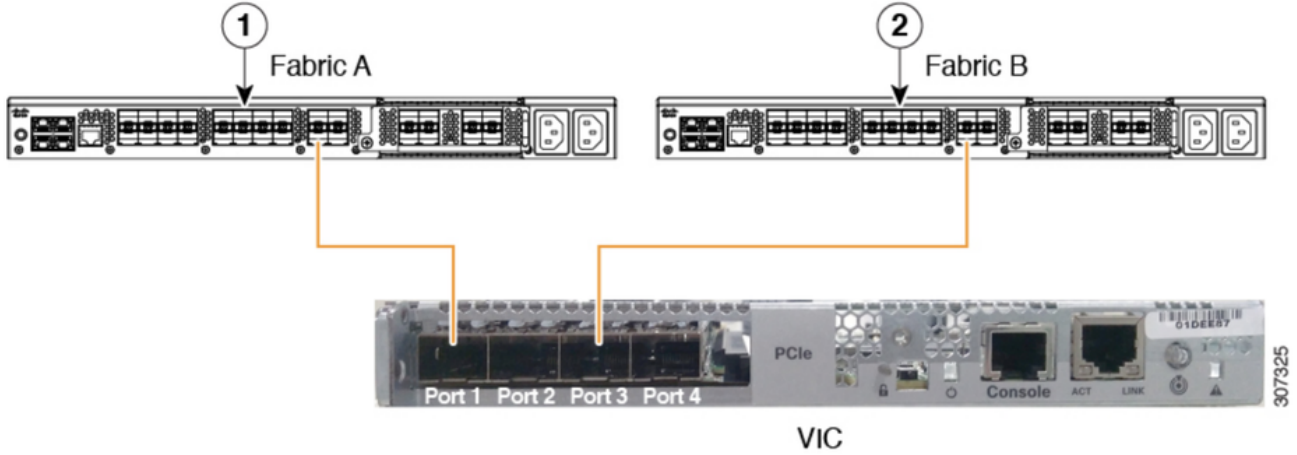


Figure 3. Direct Connect Cabling Configuration with Cisco VIC 1455 (2-Port Linking)



Note

Ports 1 and 3 are used because the connections between ports 1 and 2 (also 3 and 4) form an internal port-channel.

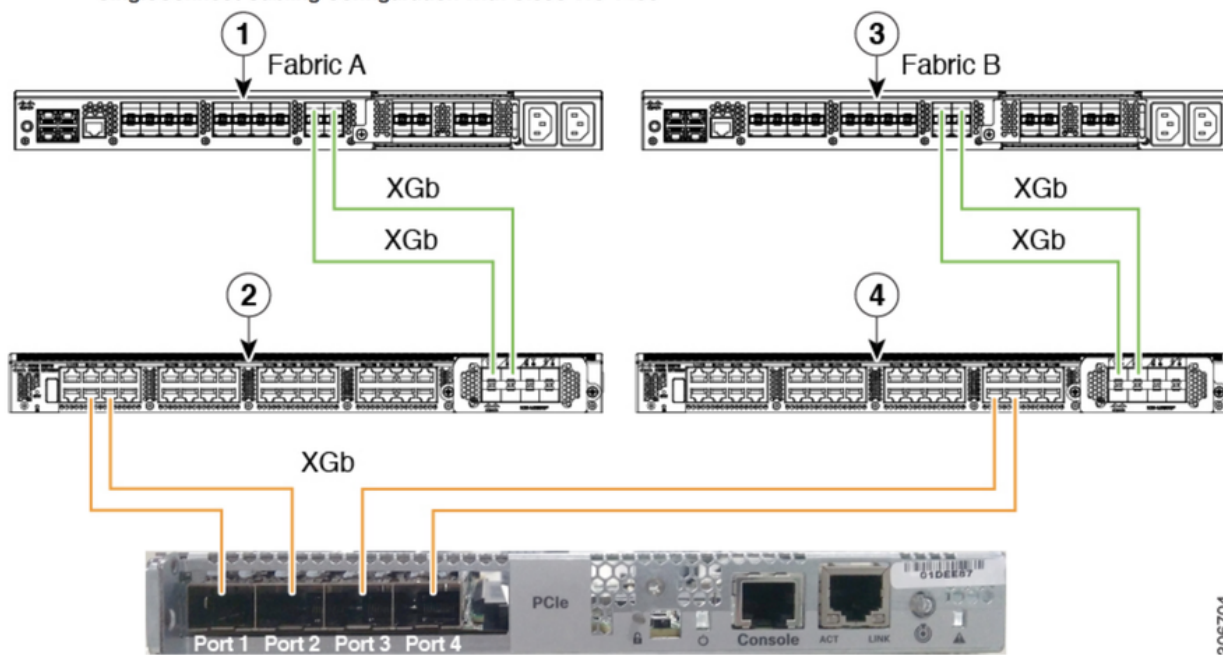


Caution

Do not connect port 1 to Fabric Interconnect A and port 2 to Fabric Interconnect B. Use ports 1 and 3 only. Using ports 1 and 2 results in discovery and configuration failures.

A Single Wire Connects to UCS Fabric Interconnect

SingleConnect Cabling Configuration with Cisco VIC 1455



306704



Note

XGb represents a 40 GB connection or a 10 GB connection or a 25 GB Ethernet connection. For the 10 Gigabit Ethernet, the following cables are used:

- 4x10 Breakout Small Form-Factor Pluggable (SFP) cables
- 4x10 Active Optical (OAC) cables
- 10G Small Form-Factor Pluggable (SFP) cable that uses the Qualified Security Assessor (QSA) module

For the 25 Gigabit Ethernet, the following cables are used:

- 25G SFP 28

1 Cisco UCS 6200 Series or 6300 or Cisco UCS 6454 Fabric Interconnect (Fabric A)

4 Cisco Nexus 2232PP or Cisco Nexus 2232TM-E (Not applicable with Cisco UCS VIC 1455) or Cisco Nexus 2348UPQ FEX (Fabric B)



Scenario 2. VIC 14XX in Standalone Mode

Implementation Details:

Port channel mode change is supported only in stand-alone mode.

Uncheck or Check the highlighted checkbox to DISABLE or ENABLE the port-channel mode in standalone mode.

*When PC is enabled: under the Uplink port field, only 2 interfaces or Uplink will be presented to create vNIC.

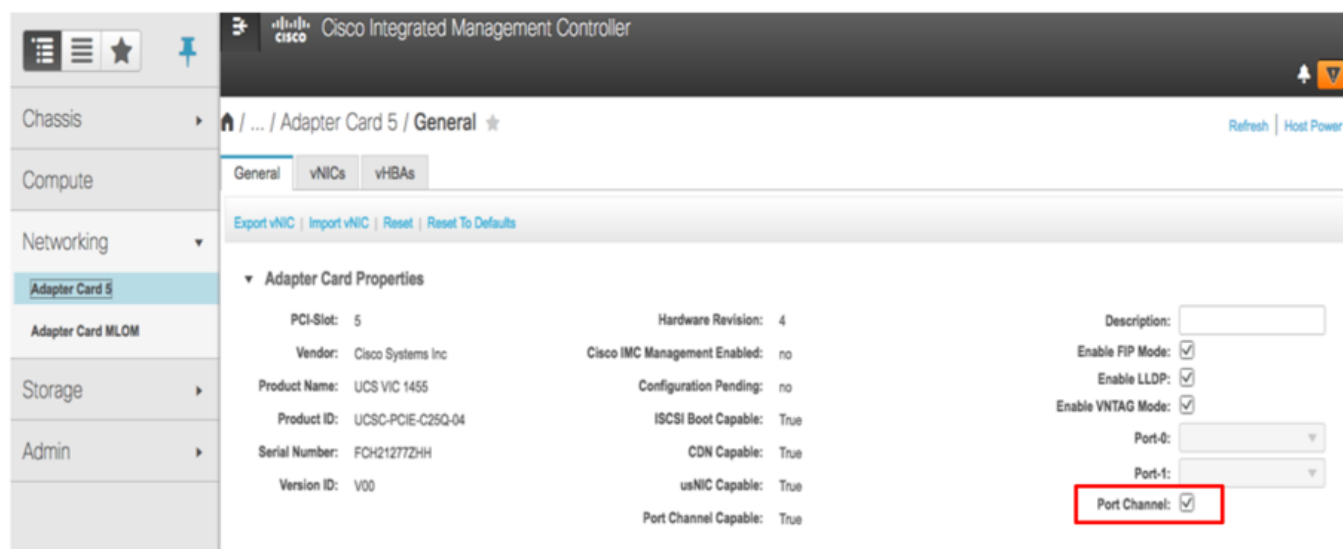
Po1 – with physical port 1 and 2 are bundled

Po2 – with physical port 3 and 4 are bundled

*When PC is disabled: under the Uplink port field, 4 Ethernet interfaces (Eth 0,1,2,3) should be active to create vNICs.

Note: When you change the port channel configuration, all the previously created vNICs and vHBAs is deleted and the configuration will be restored to factory defaults.

Configuring Port Channel Mode(CIMC WebUI)



Port Channel Disabled Mode

- Provides four uplink ports corresponding to each physical port.
- No support for NIV/UCSM mode..
- Four default vNICS are created (One per each uplink)
- Four default fNICs are created (One per each uplink)
- If CIMC is in Cisco-Card/Shared-LOM-ext modes, four NCSI channels are created.
- Supported in Stand-alone mode only

Configure Port Channel Mode via CIMC Command Line

```
C240# scope chassis
C240 /chassis # scope adapter 5
C240 /chassis/adapter # set portchannel disabled
C240 /chassis/adapter *# commit
```

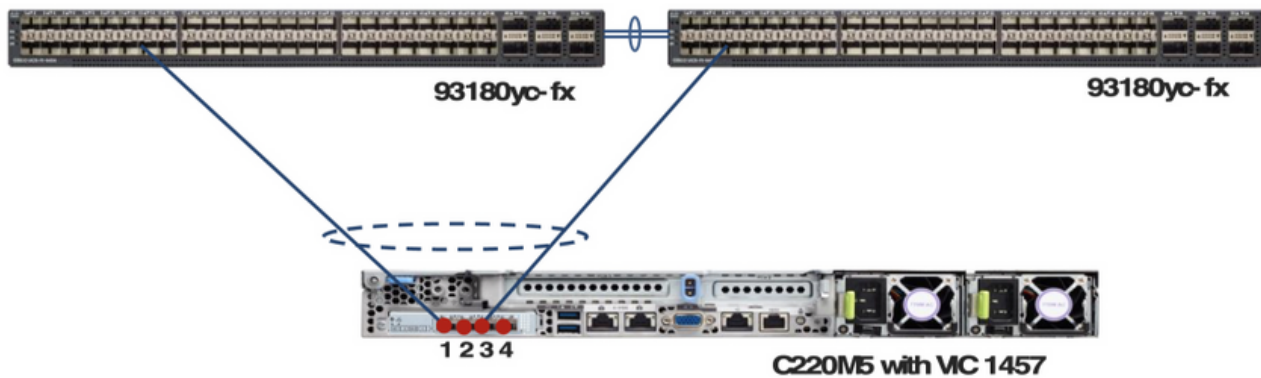
After portchannel mode switch, vNIC configurations are lost and new default vNICs are created.
Do you want to continue?[y|N]y
Warning: Change portchannel mode

- All the vnic configuration are reset to factory defaults.
- New vNIC adapter settings will take effect upon the next server reset.
- Kindly do server reset before doing any further config.

Scenario 3. VIC 14XX in Standalone Mode in Port-channel – With LACP

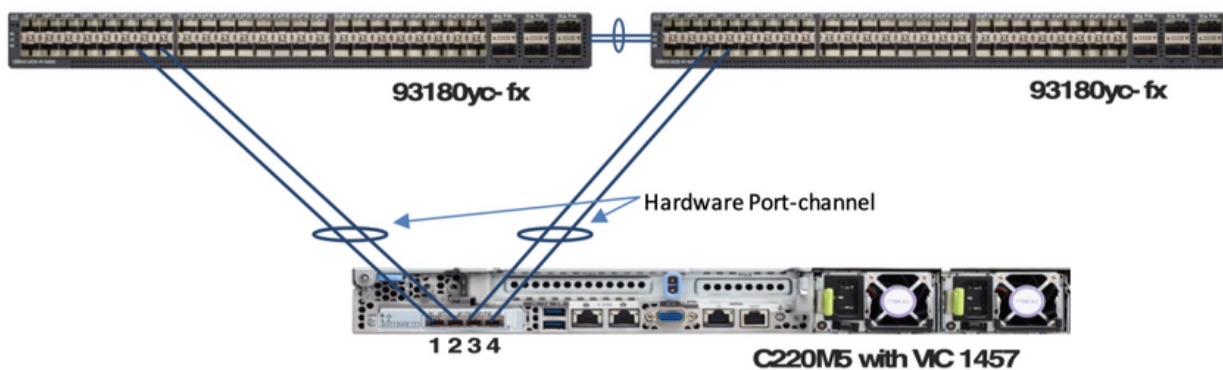
With default port-channel enabled, switch dependent port-channel is possible from the OS on the server with single-Link from VIC 1455/1457 towards each TOR switch in multi-chassis trunking (MCT). Examples of MCT are VPC from Cisco or mLAG supported on third-party switches

Figure 18. Standalone mode server connectivity with default port-channeling enabled.



Caution - With dual-link towards each TOR and with default port-channel on the VIC, switch dependent port-channel is not possible from the OS on the server. In this case on each TOR, non-lacp port-channel would have to be created and a VPC like MCT port-channel spanning multiple TOR switch is not possible.

Figure 19. Standalone mode server connectivity with default port-channeling enabled and two links to each TOR.



Another important key takeaway:

LACP is not supported on the standard switches in ESXi. Customer needs to have a DVS Switch to support LACP

<https://kb.vmware.com/s/article/1001938>

Details about Forward Error Correction (FEC) Mode:

FEC mode is applicable only for 25G link speed. On the 14xx adapters, FEC mode set on the adapter must match the FEC mode of the switch. Otherwise, the link does not come up.

The default value is Auto

```
Server# scope chassis
Server /chassis # scope adapter 1
Server /chassis/adapter # scope ext-eth-if 1
Server /chassis/adapter/ext-eth-if # set admin-fec-mode cl74
Server /chassis/adapter/ext-eth-if* # commit
Changes to the network settings will be applied immediately.
You may lose connectivity to the Cisco IMC and may have to log in again.
Do you wish to continue? [y/N] y
```

Port 1:

MAC Address: 00:5D:73:1C:6C:58

Link State: LinkDown

Encapsulation Mode: CE

Admin Speed: Auto

Operating Speed: -

Link Training: N/A

Admin FEC Mode: cl74

Operating FEC Mode: Off

Connector Present: NO

Connector Supported: N/A

Connector Type: N/A

Connector Vendor: N/A

Connector Part Number: N/A

Connector Part Revision: N/A

```
Server /chassis/adapter/ext-eth-if #
```

Known defect: [CSCvp97248](#) Auto FEC mode on VIC 14xx adapters should change based on the transceiver inserted

Related Information

- https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c-series_integration/ucsm4-0/b_C-Series-Integration_UCSM4-0/b_C-Series-Integration_UCSM4-0_chapter_0110.html
- [Technical Support & Documentation - Cisco Systems](#)