



Configuring SingleConnect

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SingleConnect

Cisco UCS Manager supports an option to integrate the C-Series Rack-Mount Server with Cisco UCS Manager using the NC-SI. This option enables Cisco UCS Manager to manage the C-Series Rack-Mount Servers using a single cable for both management traffic and data traffic. When you use the SingleConnect mode, one host facing port on the FEX is sufficient to manage one rack-mount server, instead of the two ports used in the Shared-LOM mode. This allows you to connect more number of rack-mount servers with Cisco UCS Manager for integrated server management. Make sure you have the correct server firmware for integration with Cisco UCS Manager. If not, upgrade your server firmware before integration. See [Upgrading the C-Series Server Firmware](#).

Important Guidelines for SingleConnect

SingleConnect has the following guidelines and limitations:

- To enable SingleConnect for the Cisco UCS Manager integration, you must have the Cisco UCS VIC 1225, Cisco UCS VIC 1227, Cisco UCS VIC 1385, Cisco UCS VIC 1387, Cisco UCS VIC 1455, Cisco UCS VIC 1457, or Cisco UCS VIC 1467 or Cisco VIC 15428 installed in the specific slot assigned for SingleConnect in the rack server. If the VIC is not in the specific slot, SingleConnect does not work.



Note Cisco VIC 1225T is supported only on C220 M4, C240 M4, and C460 M4 servers. Cisco UCS MLOM 1227T and Cisco UCS MLOM 1387 are supported only on C240 M4 and C220 M4 servers. Cisco VIC 15428 is supported only on M6 servers.

Management Connection Policy and Connection Mode

When establishing physical connections for the C-Series Rack-Mount Server in the Cisco UCS Domain, you must specify the connection mode and management policy in Cisco UCS Manager GUI or Cisco UCS Manager CLI. The management policy is global to all connected C-Series Rack-Mount Servers. The connection mode determines the rack server discovery in Cisco UCS Manager.

You can specify either one of the following connection policies for the rack servers:

- **Auto Acknowledged:** This is the recommended and default connection mode for the C-Series Rack-Mount Server. If the connection mode is auto-acknowledged, immediately after establishing the physical connection, Cisco UCS Manager discovers the rack server and starts managing the server based on the specified management policy.
- **User Acknowledged:** If the connection mode is user-acknowledged, after establishing the physical connection, you must manually acknowledge the connection and specify the connection mode in the Cisco UCS Manager GUI or Cisco UCS Manager CLI to begin the discovery. Cisco UCS Manager does not begin the C-Series Rack-Mount Server discovery until you specify the connection mode. See [Manually Acknowledging Connection Mode - GUI, on page 2](#) or [Manually Acknowledging Connection Mode - CLI, on page 3](#) for detailed procedure.



Note When rack servers are discovered and are managed by Cisco UCS Manager, if you want to change the existing connection mode for one C-Series Rack-Mount Server, you have to decommission the server, re-commission it and specify the new connection mode. Only then Cisco UCS Manager can discover the server in the new connection mode.

Manually Acknowledging Connection Mode - GUI

If the connection mode is user-acknowledged, after establishing the physical connection, you must manually acknowledge the connection and specify the connection mode in the Cisco UCS Manager GUI to begin the

discovery. Cisco UCS Manager does not begin the C-Series Rack-Mount Server discovery until you specify the connection mode.

Step 1 Expand **Equipment > Rack Mounts > Servers**.

Note For Cisco UCS C125 M5 Servers, expand **Equipment > Rack Mounts > Enclosures > Rack Enclosure *rack_enclosure_number* > Servers**.

Step 2 Select the **Inventory > CIMC** tab.

Step 3 Click **Configure Management Connection** and select **Enable**.

Step 4 Select **Enabled** checkbox for **State**.

Step 5 Click **OK**.

Manually Acknowledging Connection Mode - CLI

If the connection mode is user-acknowledged, after establishing the physical connection, you must manually acknowledge the connection and specify the connection mode in the Cisco UCS Manager CLI to begin the discovery. Cisco UCS Manager does not begin the C-Series Rack-Mount Server discovery until you specify the connection mode.

SUMMARY STEPS

1. UCS-A# **scope server_ID**
2. UCS-A/server # **scope cimc**
3. UCS-A/server/cimc # **scope mgmt-conn sideband**
4. UCS-A/server/cimc/mgmt-conn #**set mgmt-conn-state enabled**
5. UCS-A/server/cimc/mgmt-conn* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# scope server_ID	Enters the specified server.
Step 2	UCS-A/server # scope cimc	Enters the CIMC mode.
Step 3	UCS-A/server/cimc # scope mgmt-conn sideband	Enters the management connection mode.
Step 4	UCS-A/server/cimc/mgmt-conn # set mgmt-conn-state enabled	Acknowledges the connection mode.
Step 5	UCS-A/server/cimc/mgmt-conn* # commit-buffer	Saves the changes in the system.

Example

```
UCS-A# scope server 1
UCS-A /server # scope cimc
```

```

UCS-A /server/cimc # scope mgm
UCS-A /server/cimc # scope mgmt-conn
UCS-A /server/cimc # scope mgmt-conn sideband
UCS-A /server/cimc/mgmt-conn # set mgmt-conn-state enabled
UCS-A /server/cimc/mgmt-conn* # commit-buffer
UCS-A /server/cimc/mgmt-conn

```

Requirements for SingleConnect Integration with Cisco UCS Manager

Requirements for Cluster Setup

You must have the following items to create a single-wire integration for C-Series Rack-Mount Server with Cisco UCS Manager in a cluster setup:

- A Cisco UCS system that is running Cisco UCS Manager.
- Any of the C-Series Rack-Mount Servers and corresponding CIMC and UCS Manager release versions listed in the following table:

Table 1: Minimum Required Version of Cisco IMC, BIOS and Cisco UCS Manager for SingleConnect Integration

Server	Cisco IMC	BIOS	UCS Manager	UCS Manager (CIMC)	UCS Manager (BIOS)
Cisco UCS C220 M4 Server (requires 2.2.3 or above)	2.0(3d)	2.0.3	2.2(3a)	2.0(3d)	2.0.3
Cisco UCS C240 M4 Server (requires 2.2.3 or above)	2.0(3d)	2.0.3	2.2(3a)	2.0(3d)	2.0.3
Cisco UCS C460 M4 Server	1.5(7a)	1.5.7	2.2(2a)	1.5(7a)	1.5.7
Cisco UCS C220 M5 Server	3.1.1d	3.1.1i.0	3.2(1d)	3.1.1d	3.1.1i.0
Cisco UCS C240 M5 Server	3.1.1d	3.1.1h.0	3.2(1d)	3.1.1d	3.1.1h.0

Server	Cisco IMC	BIOS	UCS Manager	UCS Manager (CIMC)	UCS Manager (BIOS)
Cisco UCS C480 M5 Server	3.1(2b)	3.1.2a.0	3.2(2b)	3.1(2b)	3.1.2a.0
Cisco UCS C480 M5 Server	3.1(2b)	3.1.2a.0	3.2(2b)	3.1(2b)	3.1.2a.0
Cisco UCS C125 M5 Server	4.0(1a)	4.0(1a)	4.0(1a)	4.0(1a)	4.0(1a)
Cisco UCS C480 M5 ML Server	4.0(2a)	4.0(2a)	4.0(2a)	4.0(2a)	4.0(2a)
Cisco UCS C240 SD M5 Server	4.1(2)	4.1(2)	4.1(2)	4.1(2)	4.1(2)
Cisco UCS C220 M6 Server	4.2(1)	4.2(1)	4.2(1)	4.2(1)	4.2(1)
Cisco UCS C240 M6 Server	4.2(1)	4.2(1)	4.2(1)	4.2(1)	4.2(1)
Cisco UCS C225 M6 Server	4.2(1)	4.2(1)	4.2(1)	4.2(1)	4.2(1)
Cisco UCS C245 M6 Server	4.2(1)	4.2(1)	4.2(1)	4.2(1)	4.2(1)



Note For Cisco UCS C220 M4, C240 M4, C220 M5, and C240 M5 servers you can use either MLOM or VIC to integrate with Cisco UCS Manager in SingleConnect or direct connect mode.

Cisco UCS C125 M5 Servers do not support MLOM. For Cisco UCS C125 M5 Servers, you must place the VIC card in slot 2 only.

The adapter for connectivity is selected as explained below:

- **MLOM only:** When only MLOM is present in the server, the connectivity adapter is by default MLOM.
 - **MLOM and VIC adapters:** MLOM is the default connectivity adapter.
 - **No MLOM:**
 - If the Cisco UCS C220 M4/C220 M5 contains a VIC, it must be installed in Riser1 - Slot 1 for SingleConnect or direct connect integration.
 - If the Cisco UCS C240 M4/C240 M5 contains a VIC, it can be installed on any one of the following slots 1, 2, 4, or 5 for SingleConnect or direct connect integration.
 - **No MLOM and VIC:** No single connect or direct connect support.
-



Important The server must have Cisco UCS VIC 1225, Cisco VIC 1227 , Cisco VIC 1385, Cisco VIC 1387 MLOM, Cisco VIC 1455, or Cisco VIC 1457 MLOM, or Cisco VIC 15428 MLOM installed.

The Firmware and Boot Loader versions for Cisco UCS VIC 1225 or Cisco VIC 1227 are:

For the Cisco UCS 1225 and 1227 cards:

- Recommended — 2.1(0.457a)
- Minimum required — 2.1(0.367e)

For Cisco UCS VIC 1385 and 1387 MLOM:

- Recommended 4.1.1a
- Minimum 4.1.1a

For Cisco UCS VIC 1455 and 1457 MLOM:

- Recommended 5.0(1a) and higher

For Cisco UCS VIC 1467 and 1477 MLOM:

- Recommended 5.2(1a) and higher

For Cisco UCS VIC 15428 MLOM:

- Recommended 5.2(2b) and higher

Cisco UCS 1225, , Cisco UCS 1227, Cisco UCS 1385, Cisco UCS 1387, Cisco UCS 1455, Cisco UCS 1457, and Cisco UCS 1467 VICs support single-connect.

If you are using Cisco UCS VIC for single-connect, make sure the card is inserted in one of the slots as described in the following table:



Note Beginning with Cisco UCS Manager release 4.2, M3 Servers are not supported.

Table 2: Cisco UCS VIC Slot for SingleConnect Integration

Server	PCIe Slot
Cisco UCS C220 M4 Server	MLOM, 1
Cisco UCS C240 M4 Server	MLOM, 1, 2, 4, 5 Note If slots 2 and 5 are occupied with GPUs, then VICs can be placed in slots 1 and 4.
Cisco UCS C460 M4 Server	4, 9, 5, 10

Server	PCIe Slot
Cisco UCS C220 M5 Server	MLOM, 1
Cisco UCS C240 M5 Server	MLOM, 1, 2, 4, 5 Note If slots 2 and 5 are occupied with GPUs, then VICs can be placed in slots 1 and 4. See Cisco UCS Manager Management for Mixed VIC Set-up, on page 10 for slot combination.
Cisco UCS C240 SD M5 Server	MLOM, 1, 2
Cisco UCS C480 M5 Server	1, 2
Cisco UCS C125 M5 Server	2
Cisco UCS C480 M5 Server	1, 2
Cisco UCS C480 M5 ML Server	11, 12
Cisco UCS C220 M6 Server	MLOM, 1, 3
Cisco UCS C240 M6 Server	MLOM, 1, 2, 4, and 5 Note If slots 2 and 5 are occupied with GPUs, then VICs can be placed in slots 1 and 4.
Cisco UCS C225 M6 Server	MLOM, 1, 3
Cisco UCS C245 M6 Server	MLOM, 1, 2, 4, and 5 Note If slots 2 and 5 are occupied with GPUs, then VICs can be placed in slots 1 and 4.



Note Cisco UCS 1225, 1225T, 1385, 1455, and 1495 are PCIe based adapters and Cisco VIC 1227, Cisco VIC 1227T, Cisco VIC 1387, Cisco VIC 1457, Cisco VIC 1467, Cisco VIC 1477, Cisco VIC 15428 MLOM and Cisco VIC 1497 are MLOM based.

- Cisco UCS 6200 Series, Cisco UCS 6300 Series, or Cisco UCS 6400 Series Fabric Interconnect, or Cisco UCS 6536 Fabric Interconnect. The switch ports where Fabric Extenders (FEX) will be connected must be marked as server ports.
- The following FEX types can be used:
 - Cisco Nexus 2232PP
 - Cisco Nexus 2232TM-E

- Cisco Nexus 2348UPQ
- Cisco Nexus 93180YC-FX3 in FEX mode (with Cisco UCS 6400 Series Fabric Interconnect)

**Note**

- You can connect the Cisco Nexus 2232PP or Cisco Nexus 2232TM-E FEXs to the 6200 series FIs, and Cisco Nexus 2232PP, Cisco Nexus 2232 TM-E, or Cisco Nexus 2348UPQ FEXs to the 6300 series FIs.
- You must plug a power cord into each of the two power supplies in the FEX. If the power is connected and there are issues in the hardware, you might see “Major” faults reported during the power-on self test (POST). For example, you might see this error: `Power supply 1 in fex 6 power: error`. You can clear errors by connecting any missing power cord to the FEX power supply.

- Four 10-Gb Small Form-Factor Pluggable (SFP) cables.

**Note**

- At least one cable to connect each FEX with the corresponding FI.
- At least one cable to link the data traffic path between server and FEX.
- At least four cables for uplinks from the FEX to FIs. You can either use 10 Gb twinaxial cable or one of the following SFP type cables:
 - SFP - 10GE-SR
 - FET - 10GE

**Important**

Do not mix SFP types on an uplink. If you mix the SFP types on an uplink, you will see `Discovery Failed` errors.

Requirement for Non-cluster Setup

If you are integrating the server in a non-cluster setup, along with the Cisco UCS Manager and C-series rack mount server, you will need the following components :

- One Cisco UCS 6200 Series, Cisco UCS 6300 Series, or Cisco UCS 6400 Series Fabric Interconnect, or Cisco UCS 6536 Fabric Interconnect. The switch ports where Fabric Extenders (FEX) will be connected must be marked as server ports.
- One of the following FEX types can be used:
 - Cisco Nexus 2232PP
 - Cisco Nexus 2232TM-E
 - Cisco Nexus 2348UPQ

- Three 10-Gb SFP cables.

**Note**

- If you are using 6200 Series FI, the minimum requirement for SFP cable is 2.
- At least one cable for linking the data traffic path between server and FEX.
- At least two cables for uplinks from the FEX to FIs. Each of these two cables used for uplink from the FEX to FIs can either use 10 Gb twinaxial cable or one of the following Small Form-Factor Pluggable (SFP) type cables:
 - SFP - 10GE-SR
 - FET - 10GE

- 40G SFP cable for connected Cisco Nexus 2348UPQ

Cisco UCS Manager Management for Mixed VIC Set-up

Cisco UCS Manager does not provide full support in a setup with Cisco UCS M6 Servers and mixed VIC cards.

Table 3: Cisco UCS Manager Management

Slots	Cisco UCS Manager Management
Only MLOM.	MLOM is the default connectivity adapter.
Both MLOM and VIC adapters.	MLOM is the default connectivity adapter.
Only VIC adapter and no MLOM.	VIC adapter can be installed on slot 1 for single connect or direct connect integration.

Cisco UCS Manager Management for Mixed VIC Set-up

Cisco UCS Manager does not provide full support in a setup with Cisco UCS M5 Servers and mixed VIC cards.

Table 4: Cisco UCS Manager Management

Slots	Cisco UCS Manager Management
Only MLOM.	MLOM is the default connectivity adapter.
Both MLOM and VIC adapters.	MLOM is the default connectivity adapter.
Only VIC adapter and no MLOM.	VIC adapter can be installed on slot 1 for single connect or direct connect integration.

Cisco UCS Manager Management for Mixed VIC Set-up in C240 M5 Server

Cisco UCS Manager does not provide full support in a setup with Cisco UCS C240 M5 Server and mixed VIC cards.

Table 5: Cisco UCS Manager Management

Slots	Cisco UCS Manager Management
Both slot 1 and slot 2 are occupied. Slot 1 - Cisco VIC 1455 Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects only slot 2.
Both slot 1 and slot 2 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 Slot 2 - Cisco VIC 1455	Cisco UCS Manager detects both the slots.
Both slot 1 and slot 2 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects both the slots.
Only one slot is occupied. Slot 1 - Any Cisco VIC card or third-party adapter or Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.
Both slot 4 and slot 5 are occupied. Slot 4 - Cisco VIC 1455 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects only slot 5.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 Slot 5 - Cisco VIC 1455	Cisco UCS Manager detects both the slots.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects both the slots.

Slots	Cisco UCS Manager Management
Only one slot is occupied. Slot 4 - Any Cisco VIC card or third-party adapter or Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.

Cisco UCS Manager Management for Mixed VIC Set-up in C220 M6 Server

Cisco UCS Manager does not provide full support in a setup with Cisco UCS C220 M6 Server and mixed VIC cards.

Table 6: Cisco UCS Manager Management

Slots	Cisco UCS Manager Management
Slot 1, slot 2, and slot 3 are occupied. Slot 1 - Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Any Cisco VIC card or third-party adapter Slot 3 - Any Cisco VIC card or third-Party Adapter	Cisco UCS Manager detects only slot 2.
Slot 1, slot 2, and slot 3 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Cisco VIC 1455 or Cisco VIC 1495 Slot 3 - Any Cisco VIC card or third-Party Adapter except Cisco VIC 1455 or Cisco VIC 1495	Cisco UCS Manager detects all the slots.
Slot 1, slot 2, and slot 3 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Any Cisco VIC card or third-party adapter Slot 3 - Any Cisco VIC card or third-Party Adapter	Cisco UCS Manager detects all the slots.
Only one slot is occupied. Slot 1 - Any Cisco VIC card or third-party adapter or Slot 2 - Any Cisco VIC card or third-party adapter or Slot 3 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.

Slots	Cisco UCS Manager Management
Both slot 4 and slot 5 are occupied. Slot 4 - Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects only slot 5.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Cisco VIC 1455 or Cisco VIC 1495	Cisco UCS Manager detects both the slots.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects both the slots.
Only one slot is occupied. Slot 4 - Any Cisco VIC card or third-party adapter or Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.



Note Cisco VIC 1495 is supported only on Cisco UCS 6300 Series Fabric Interconnects.

Cisco UCS Manager Management for Mixed VIC Set-up in C240 M6 Server

Cisco UCS Manager does not provide full support in a setup with Cisco UCS C240 M6 Server and mixed VIC cards.

Table 7: Cisco UCS Manager Management

Slots	Cisco UCS Manager Management
Both slot 1 and slot 2 are occupied. Slot 1 - Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects only slot 2.
Both slot 1 and slot 2 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Cisco VIC 1455 or Cisco VIC 1495	Cisco UCS Manager detects both the slots.

Slots	Cisco UCS Manager Management
Both slot 1 and slot 2 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects both the slots.
Only one slot is occupied. Slot 1 - Any Cisco VIC card or third-party adapter or Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.
Both slot 4 and slot 5 are occupied. Slot 4 - Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects only slot 5.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Cisco VIC 1455 or Cisco VIC 1495	Cisco UCS Manager detects both the slots.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects both the slots.
Only one slot is occupied. Slot 4 - Any Cisco VIC card or third-party adapter or Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.



Note Cisco VIC 1495 is supported only on Cisco UCS 6300 Series Fabric Interconnects.

Cisco UCS Manager Management for Mixed VIC Set-up in C225 M6 Server

Cisco UCS Manager does not provide full support in a setup with Cisco UCS C225 M6 Server and mixed VIC cards.

Table 8: Cisco UCS Manager Management

Slots	Cisco UCS Manager Management
Slot 1, slot 2, and slot 3 are occupied. Slot 1 - Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Any Cisco VIC card or third-party adapter Slot 3 - Any Cisco VIC card or third-Party Adapter	Cisco UCS Manager detects only slot 2.
Slot 1, slot 2, and slot 3 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Cisco VIC 1455 or Cisco VIC 1495 Slot 3 - Any Cisco VIC card or third-Party Adapter except Cisco VIC 1455 or Cisco VIC 1495	Cisco UCS Manager detects all the slots.
Slot 1, slot 2, and slot 3 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Any Cisco VIC card or third-party adapter Slot 3 - Any Cisco VIC card or third-Party Adapter	Cisco UCS Manager detects all the slots.
Only one slot is occupied. Slot 1 - Any Cisco VIC card or third-party adapter or Slot 2 - Any Cisco VIC card or third-party adapter or Slot 3 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.
Both slot 4 and slot 5 are occupied. Slot 4 - Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects only slot 5.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Cisco VIC 1455 or Cisco VIC 1495	Cisco UCS Manager detects both the slots.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects both the slots.

Slots	Cisco UCS Manager Management
Only one slot is occupied. Slot 4 - Any Cisco VIC card or third-party adapter or Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.

Cisco UCS Manager Management for Mixed VIC Set-up in C245 M6 Server

Cisco UCS Manager does not provide full support in a setup with Cisco UCS C245 M6 Server and mixed VIC cards.

Table 9: Cisco UCS Manager Management

Slots	Cisco UCS Manager Management
Both slot 1 and slot 2 are occupied. Slot 1 - Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects only slot 2.
Both slot 1 and slot 2 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Cisco VIC 1455 or Cisco VIC 1495	Cisco UCS Manager detects both the slots.
Both slot 1 and slot 2 are occupied. Slot 1 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects both the slots.
Only one slot is occupied. Slot 1 - Any Cisco VIC card or third-party adapter or Slot 2 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.
Both slot 4 and slot 5 are occupied. Slot 4 - Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects only slot 5.

Slots	Cisco UCS Manager Management
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Cisco VIC 1455 or Cisco VIC 1495	Cisco UCS Manager detects both the slots.
Both slot 4 and slot 5 are occupied. Slot 4 - Any Cisco VIC card or third-party adapter except Cisco VIC 1455 or Cisco VIC 1495 Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects both the slots.
Only one slot is occupied. Slot 4 - Any Cisco VIC card or third-party adapter or Slot 5 - Any Cisco VIC card or third-party adapter	Cisco UCS Manager detects whichever slot is occupied.



Note Cisco VIC 1495 is supported only on Cisco UCS 6300 Series Fabric Interconnects.

Connecting the C-Series Server with Cisco UCS Domain in Cluster Setup

Before you begin



Important Make sure the server CIMC is set to factory default settings to integrate with Cisco UCS Manager.

Before you connect the server, make sure the Cisco UCS VIC 1225, Cisco VIC 1227, Cisco VIC 1385, Cisco VIC 1387 MLOM, Cisco VIC 1455, Cisco VIC 1457 MLOM, Cisco VIC 1467, or Cisco VIC 1477 is installed in the correct slot for integration with Cisco UCS Manager. If the card is not installed in the correct slot, you cannot enable the single-wire management for the server.

- Step 1** Install the server in the rack. See the *Install and Upgrade Guide* for the server that you are using. The install guides are available at the following url: [Install and Upgrade Guides](#).
- Step 2** Connect the path that carries both data traffic and management traffic to the FEXes:
- Connect a supported cable between the adapter card in the server and a port on the FEX that is connected to Fabric A. You can use any port on the FEX.
 - Connect a supported SFP cable between the adapter card in the server and a port on the FEX that is connected to Fabric B. You can use any port on the FEX.

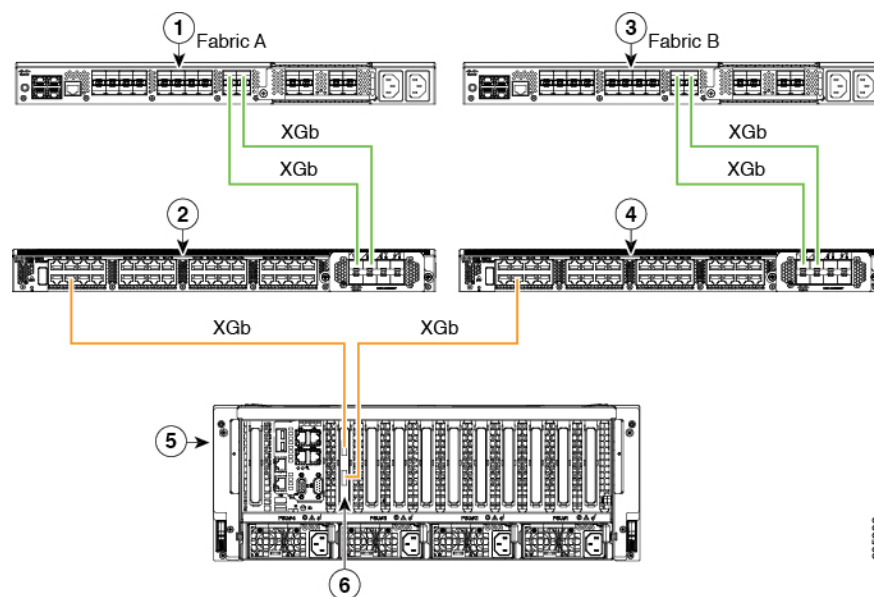
- Step 3** Connect the paths from the FEXes to the FIs.
- Connect at least two supported SFP cables between FEX A and two ports on FI A. You can use any ports on FI A, but the ports must be configured as server ports.
 - Connect at least two supported SFP cables between FEX B and two ports on FI B. You can use any ports on FI B, but the ports must be configured as server ports.
 - For information on the C-Series integration network topology and cable connections, see the [Network Topology and Supported Cables](#) section.
 - On the FEX, you can use only the right block of eight ports for uplinks. The maximum number of uplinks is eight.
 - Do not mix SFP types on an uplink. Doing so might result in a discovery failure.
- Step 4** Attach a power cord to each power supply in your server, and then attach the power cord to a grounded AC power outlet.
- Step 5** Reboot the server.

Physical Connectivity Illustrations for SingleConnect Cluster Setup

The following image shows a sample of SingleConnect physical connectivity for C-Series Rack-Mount Server with Cisco UCS Domain, Cisco UCS Manager. This image shows the cabling configuration for Cisco UCS Manager integration with a C-Series Rack-Mount Server. The paths shown in gold carry both management traffic and data traffic.

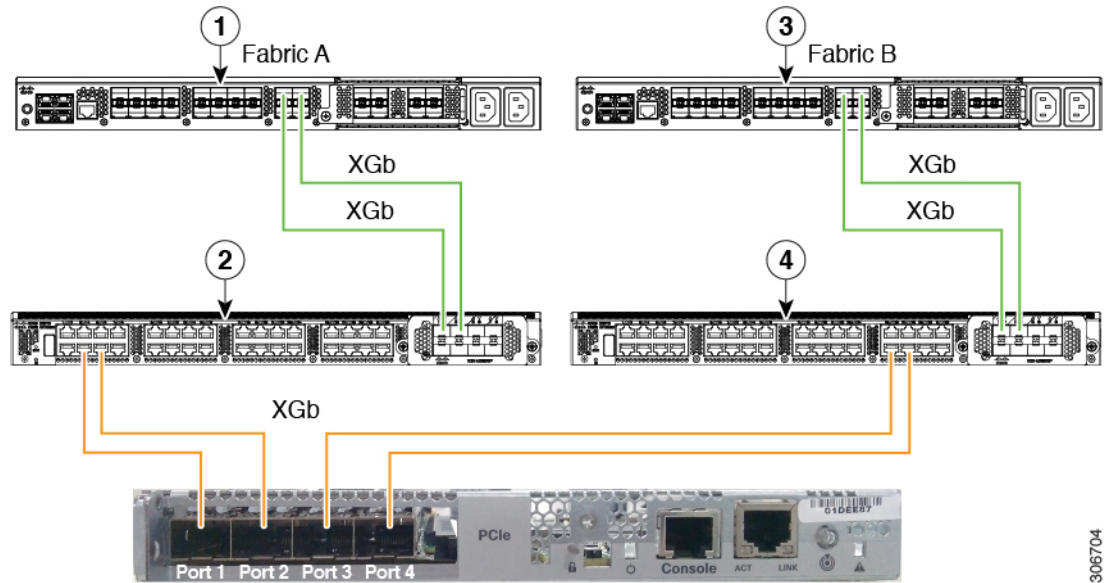
The illustrations given are only for example purpose. The equipment setup may vary depending on the server, FI, and FEX.

Figure 1: SingleConnect Cabling Configuration



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Figure 2: SingleConnect Cabling Configuration with Cisco VIC 1455/VIC 1457/VIC 1467/VIC 15428



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

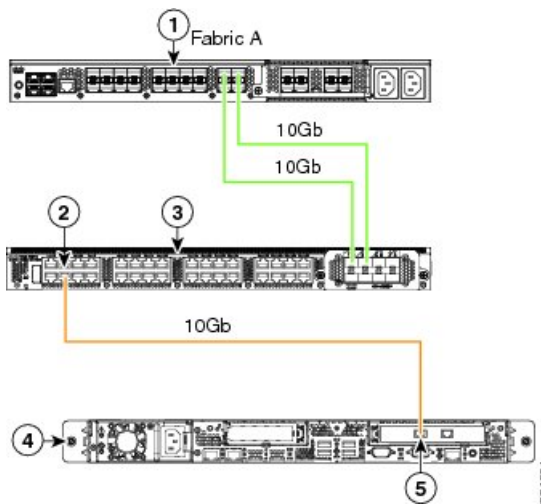
1	Cisco UCS 6200 Series, Cisco UCS 6200 Series, or Cisco UCS 6400 Series Fabric Interconnect, or Cisco UCS 6536 Fabric Interconnect (Fabric A)	4	Cisco Nexus 2232PP, Cisco Nexus 2232TM-E (Not applicable with Cisco UCS VIC 1467), Cisco Nexus 2348UPQ FEX (Fabric B), or Cisco Nexus N9K-C93180YC-FX3 in the FEX mode (with Cisco UCS 6400 Fabric Interconnect) or Cisco VIC 15428
2	Cisco Nexus 2232PP, Cisco Nexus 2232TM-E (Not applicable with Cisco UCS VIC 1467), or Cisco Nexus 2348UPQ FEX (Fabric A) or Cisco VIC 15428	5	C-Series Rack-Mount Server
3	Cisco UCS 6200 Series, Cisco UCS 6300, or Cisco UCS 6400 Series Fabric Interconnect or Cisco UCS 6536 Fabric Interconnect (Fabric B)	6	Cisco UCS VIC in supported PCIe or MLOM slot.

Connecting the C-Series Server with UCS Domain in Non-cluster Setup

To connect the C-Series Server with UCS domain, complete the same steps described in [Connecting the C-Series Server with Cisco UCS Domain in Cluster Setup, on page 17](#). Instead of connecting two FIs and two FEXes, you need to connect only one FI and one FEX.

Figure 3: Single-wire Non-Cluster Setup Example

The following illustration is an example of a non-cluster setup in single-wire management.



- Note** XGb represents a 40 GB Ethernet connection or a 10 GB Ethernet connection or 25 GB Ether 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, Cisco UCS 6300 Series, Cisco UCS 6400 Series Fabric Interconnect (Fabric A)	4	C-Series Rack-Mount Server
2	SingleConnect connection	5	Cisco UCS VIC adapter in supported PCIe slot
3	Cisco Nexus 2232PP, Cisco Nexus 2232TM-E, or Cisco Nexus 2348UPQ FEX (Fabric A)		

Physical Connectivity Illustrations for SingleConnect Non-Cluster Setup

The following image shows a sample of SingleConnect physical connectivity for C-Series Rack-Mount Server with Cisco UCS Domain, Cisco UCS Manager. This image shows the cabling configuration for Cisco UCS Manager integration with a C-Series Rack-Mount Server. The paths shown in gold carry both management traffic and data traffic.

The illustrations given are only for example purpose. The equipment setup may vary depending on the server, FI, and FEX.

Figure 4: SingleConnect Cabling Configuration with Cisco VIC 1455/VIC 1457/VIC 1467/VIC 15428 - Single Cable

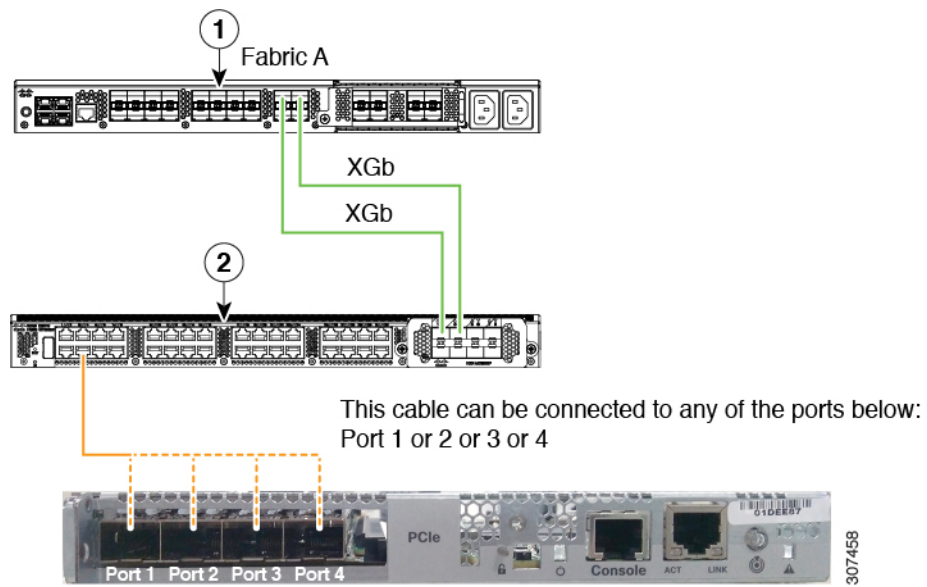
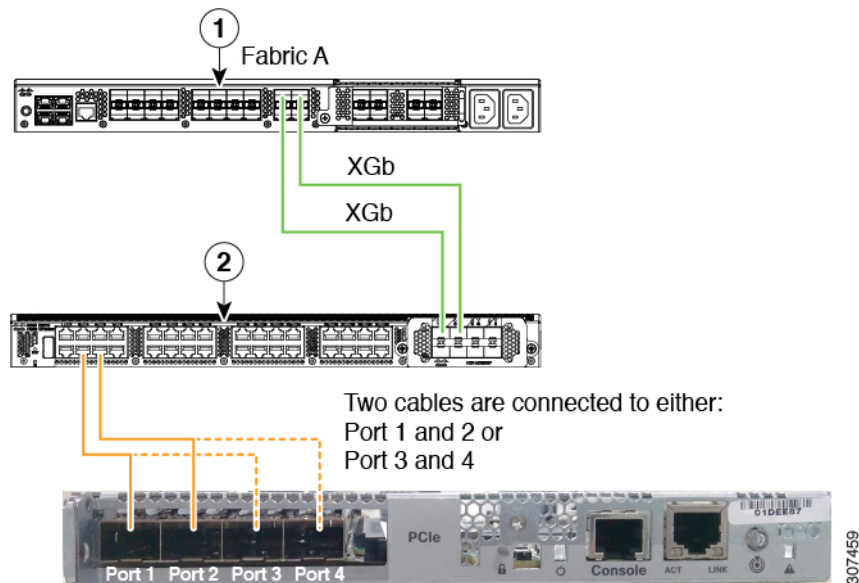


Figure 5: SingleConnect Cabling Configuration with Cisco VIC 1455/VIC 1457/VIC 1467/ VIC 15428 - Dual Cable



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

Managing the Rack-Mount Server in Cisco UCS Manager after Integration

You can manage and monitor all rack-mount servers that have been integrated with a Cisco UCS domain through Cisco UCS Manager. After the integration, you can perform all rack-mount server management tasks only through the service profiles from Cisco UCS Manager GUI or Cisco UCS Manager CLI. The C-Series Rack-Mount Server Cisco IMC is not accessible when you start managing the server with Cisco UCS Manager.

Cisco UCS Manager provides information, errors, and faults for each rack-mount server that was discovered.

For more information on managing C-Series Rack-Mount Servers from Cisco UCS Manager, see the chapter on Managing Rack-Mount Servers in your release specific [Cisco UCS Manager Configuration Guide](#).

Reverting a Server From Cisco UCS Domain Mode to Standalone Mode

When you manage a Cisco UCS C-Series server with Cisco UCS Manager software, a UCS Manager service profile is associated with the server. If you want to revert a C-Series server to standalone mode (so that it can be managed by Cisco IMC software), you must do the following actions in UCS Manager:

-
- Step 1** Disassociate the UCS Manager service profile from the server.
 - Step 2** Remove the connections from the adapter.
 - Step 3** Manually power on the server.
 - Step 4** Connect the front panel KVM connection.
 - Step 5** Press **F8** during the boot up.
 - Step 6** Reset CIMC to factory defaults or stand-alone mode.

Caution If you do not disassociate the service profile from the server, MAC and WWN numbers assigned by UCS Manager might be kept by the server. This can cause numbering duplication and conflicts with other servers that are managed by UCS Manager. Also, if you revert a server to standalone mode without disassociating its service profile, any LSI RAID controller will not show as a bootable device in the standalone server, preventing local booting.

Special Considerations for Integrated Servers

When you connect the C-Series servers in Cisco UCS system, make sure to review the following information:

- [FEX Considerations, on page 23](#)
- [Cisco VIC 1467 and VIC 15428 Connectivity, on page 24](#)

FEX Considerations

Re-acknowledge Attached Servers After a FEX Is Decommissioned/Recommissioned

Whenever you decommission or recommission a Cisco UCS FEX, all the servers that are connected to that FEX must be re-acknowledged in UCS Manager.

Cisco VIC 1455 and 1457 Connectivity

For cluster setup, connect port 1 and 2 to one FEX. Connect port 3 and 4 to another FEX. For non-cluster setup, connect either port 1 and 2 or port 3 and 4 to the FEX.

Cisco VIC 1467 and VIC 15428 Connectivity

For cluster setup, connect port 1 and 2 to one FEX. Connect port 3 and 4 to another FEX. For non-cluster setup, connect either port 1 and 2 or port 3 and 4 to the FEX.