



Configuring SingleConnect

This chapter includes the following sections:

- [SingleConnect, on page 1](#)
- [Management Connection Policy and Connection Mode, on page 1](#)
- [Manually Acknowledging Connection Mode, on page 2](#)
- [Requirements for SingleConnect Integration with Cisco UCS Manager, on page 3](#)
- [Cisco UCS Manager for Mixed Cisco UCS VIC Setup, on page 7](#)
- [Connecting the C-Series Server with Cisco UCS Domain in Cluster Setup, on page 14](#)
- [Connecting the C-Series Server with Cisco UCS Domain in Non-Cluster Setup, on page 16](#)
- [Managing the Rack-Mount Server in Cisco UCS Manager after Integration, on page 19](#)
- [Reverting a Server From Cisco UCS Domain Mode to Standalone Mode, on page 19](#)
- [Special Considerations for Integrated Servers, on page 19](#)

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](#).

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 2](#) 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

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 Cisco IMC and UCS Manager release versions listed in [Table 1: Minimum Required Version of Cisco IMC, BIOS and Cisco UCS Manager, on page 4](#).
- Two Cisco UCS VIC cards and two Cisco UCS FIs. See [Supported Cisco UCS C-Series Servers](#) for adapter and FI compatibility with your server. To enable SingleConnect for the Cisco UCS Manager

integration, you must have a Cisco VIC 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.

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

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

Server	Cisco IMC	Cisco IMC BIOS	Cisco UCS Manager	UCS Manager (BIOS)
Cisco UCS C240 M7 Server	TBD	C240M731a0	4.3(2b)	TBD
Cisco UCS C220 M7 Server	TBD	C220M731a0	4.3(2b)	TBD
Cisco UCS C220 M6 Server	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)
Cisco UCS C225 M6 Server	4.2(1)	4.2(1)	4.2(1)	4.2(1)
Cisco UCS C220 M5 Server	3.1.1d	3.1.1i.0	3.2(1d)	3.1.1i.0
Cisco UCS C245 M6 Server	4.2(1)	4.2(1)	4.2(1)	4.2(1)
Cisco UCS C240 M5 Server	3.1.1d	3.1.1h.0	3.2(1d)	3.1.1h.0
Cisco UCS C480 M5 Server	3.1(2b)	3.1.2a.0	3.2(2b)	3.1.2a.0
Cisco UCS C480 M5 Server	3.1(2b)	3.1.2a.0	3.2(2b)	3.1.2a.0
Cisco UCS C125 M5 Server	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)
Cisco UCS C240 SD M5 Server	4.1(2)	4.1(2)	4.1(2)	4.1(2)

Recommended Cisco VIC Firmware Version

Table 2: Recommended Cisco VIC Firmware Version

Server	VIC Firmware Version
Cisco UCS VIC 15238	5.3(2.32)
Cisco UCS VIC 15235	5.3(2.32)-48
Cisco UCS VIC 15425	5.3(2.32)-48
For Cisco UCS VIC 15428 MLOM	5.3(2.32)-48
Cisco UCS VIC 1495	5.3(2.32)
For Cisco UCS VIC 1467 and 1477 MLOM:	5.3(2.32)
For Cisco UCS VIC 1455 and 1457 MLOM:	5.3(2.32)
Cisco UCS VIC 1385 and 1387 MLOM	4.6(2.230015)

Cisco UCS VIC Slot for SingleConnect Integration

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:

Table 3: Cisco UCS VIC Slot

Server	PCIe Slot
Cisco UCS C220 M7 Server	MLOM, 1, 3
Cisco UCS C240 M7 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 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.

Server	PCIe Slot
Cisco UCS C220 M5 Server	MLOM, 1 For Cisco UCS C220 M5 Server servers you can use either MLOM or VIC to integrate with Cisco UCS Manager in SingleConnect or direct connect mode.
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. For Cisco UCS C240 M5 Server servers you can use either MLOM or VIC to integrate with Cisco UCS Manager in SingleConnect or direct connect mode. See Cisco UCS Manager Management for Mixed VIC Set-up, on page 7 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 C125 M5 Servers do not support MLOM. For Cisco UCS C125 M5 Servers, you must place the VIC card in slot 2 only.
Cisco UCS C480 M5 Server	1, 2
Cisco UCS C480 M5 ML Server	11, 12

Cabling Considerations

Refer xx for the compatible cables. (release notes link)

Requirements 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 need the following components :

- A Cisco UCS system that is running Cisco UCS Manager.
- Any of the C-Series Rack-Mount Servers and corresponding Cisco IMC and UCS Manager release versions listed in [Table 1: Minimum Required Version of Cisco IMC, BIOS and Cisco UCS Manager, on page 4](#).
- One Cisco UCS VIC cards and one Cisco UCS FI. See [Supported Cisco UCS C-Series Servers](#) for adapter and FI compatibility with your server.
- Refer [Recommended Cisco VIC Firmware Version, on page 5](#).

- To enable Cisco UCS Manager integration, you must have a Cisco VIC installed in the specific slot assigned in the rack server. If the VIC is not in the specific slot, integration does not work. Refer [Cisco UCS VIC Slot for SingleConnect Integration, on page 5](#).
- Refer [Cabling Considerations, on page 6](#)

Cisco UCS Manager for Mixed Cisco UCS VIC Setup

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 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

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

Table 5: 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 6: 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.
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 7: 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.

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 - 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 8: 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.

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 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 9: 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.

Slots	Cisco UCS Manager Management
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.
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 10: 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.
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.



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

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

Before you begin



Important Ensure that Cisco IMC is set to factory default settings to integrate with Cisco UCS Manager.

Before you connect the server, ensure that the Cisco UCS VIC 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.
 - 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.

- For cabling information, see [Physical Connectivity Illustrations for SingleConnect Cluster Setup, on page 15](#).

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

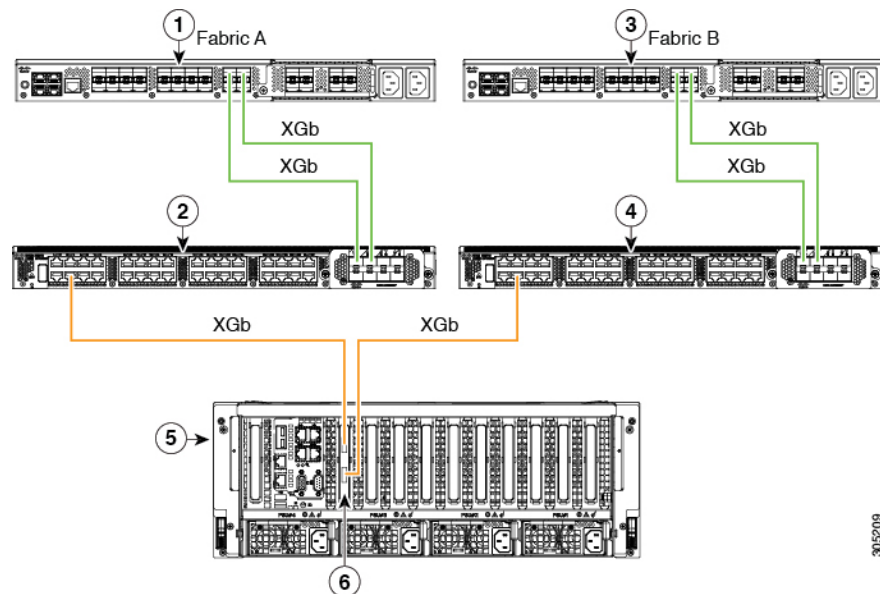
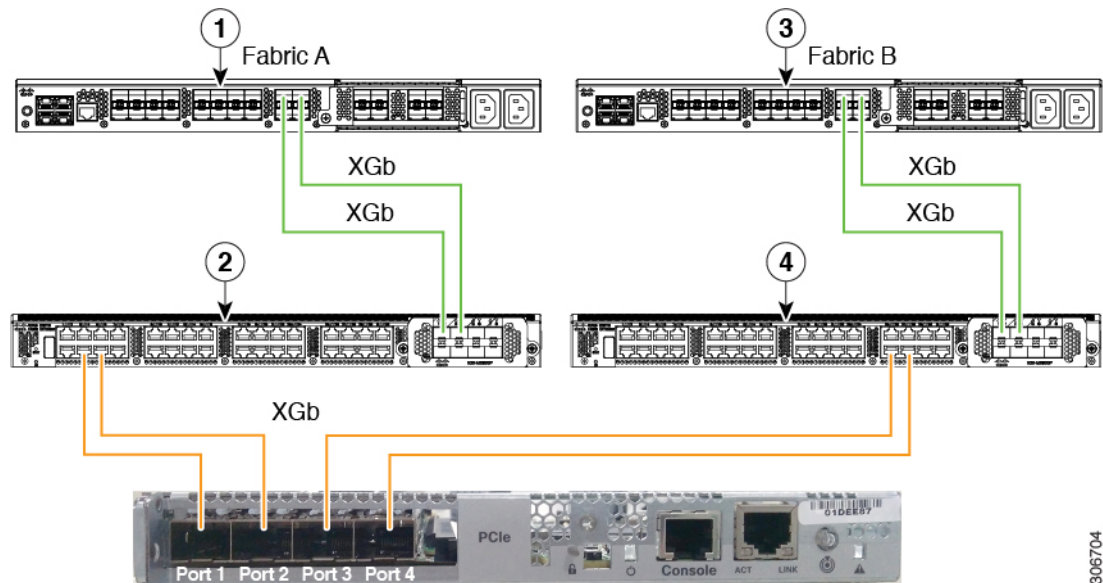


Figure 2: SingleConnect Cabling Configuration with Cisco VIC



1	Cisco UCS UCS FI (Fabric A)	4	FEX for Cisco UCS VIC
2	FEX or Cisco UCS VIC	5	C-Series Rack-Mount Server
3	Cisco UCS UCS FI (Fabric B)	6	Cisco UCS VIC in supported PCIe or MLOM slot.



Note XGb represents a Ethernet connection speed. For speed values, refer [Supported Cisco UCS C-Series Servers](#). For cabling requirements, see xxx (release notes ref)

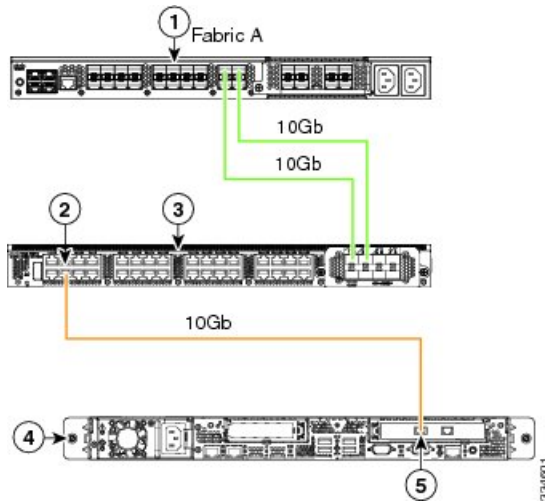
Connecting the C-Series Server with Cisco UCS Domain in Non-Cluster Setup

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 14](#). 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.



1	Cisco UCS FI	4	C-Series Rack-Mount Server
2	SingleConnect connection	5	Cisco UCS VIC adapter in supported PCIe slot
3	Cisco FEX (Fabric A)		

Cabling Considerations

Refer xx for the compatible cables. (release notes link)

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 - Single Cable

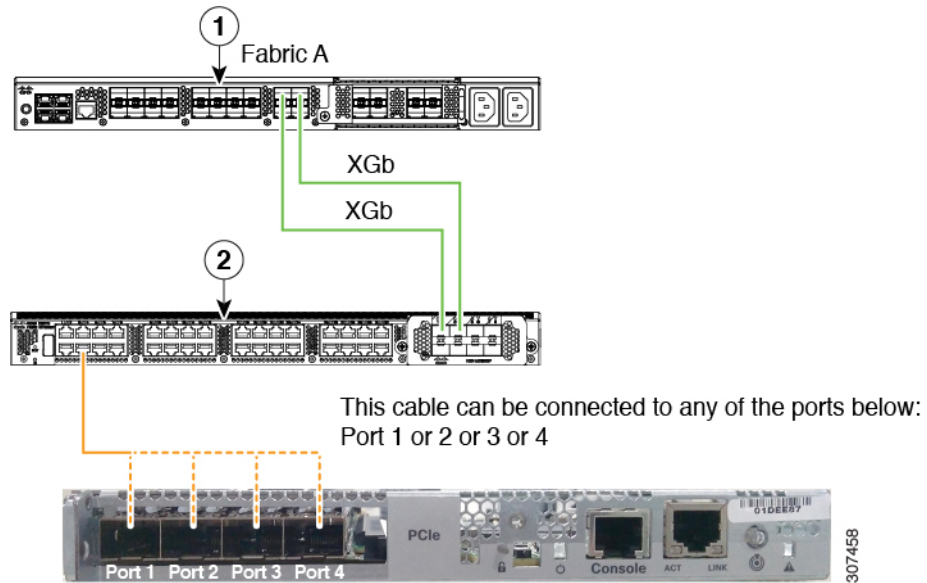
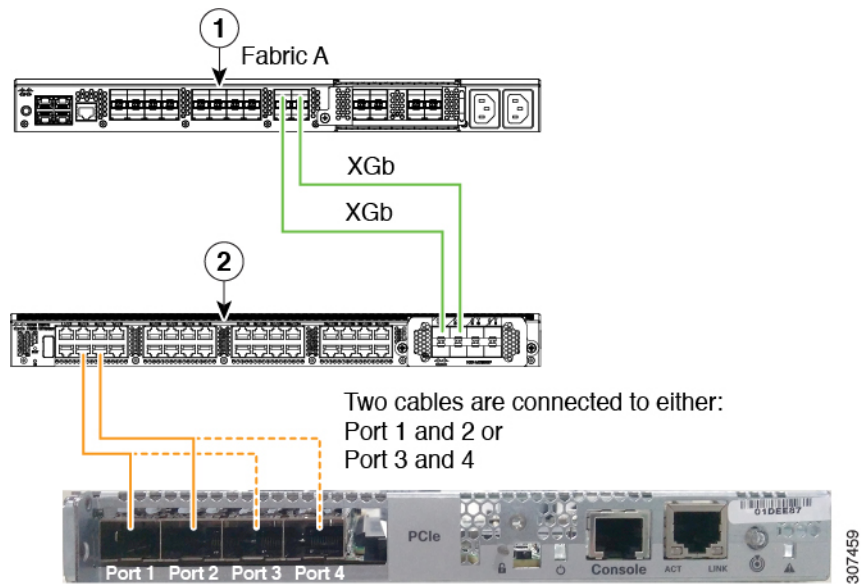


Figure 5: SingleConnect Cabling Configuration with Cisco VIC - Dual Cable



Note XGb represents a Ethernet connection speed. For speed values, refer [Supported Cisco UCS C-Series Servers](#). For cabling requirements, see xxx (release notes ref)

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 Cisco IMC 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 Cisco UCS Manager might be kept by the server. This can cause numbering duplication and conflicts with other servers that are managed by Cisco UCS Manager. Also, if you revert a server to standalone mode without disassociating the service profile, any LSI RAID controller may 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 20](#)
- [Cisco VIC 1467 and VIC 15428 Connectivity, on page 20](#)

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.