



Configuring the Fabric Interconnects

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Initial System Setup

The first time that you access a fabric interconnect in a Cisco UCS domain, a setup wizard prompts you for the following information required to configure the system:

- Installation method (GUI or CLI)
- Setup mode (restore from full system backup or initial setup)
- System configuration type (standalone or cluster configuration)
- System name
- Admin password
- Management port IPv4 address and subnet mask, or IPv6 address and prefix

- Default gateway IPv4 or IPv6 address
- DNS Server IPv4 or IPv6 address
- Default domain name

Setup Mode

You can choose to either restore the system configuration from an existing backup file, or manually set up the system by going through the Setup wizard. If you choose to restore the system, the backup file must be reachable from the management network.

System Configuration Type

You can configure a Cisco UCS domain to use a single fabric interconnect in a standalone configuration or to use a redundant pair of fabric interconnects in a cluster configuration.

A cluster configuration provides high availability. If one fabric interconnect becomes unavailable, the other takes over. Only one management port (Mgmt0) connection is required to support a cluster configuration; however, both Mgmt0 ports should be connected to provide link-level redundancy.

In addition, a cluster configuration actively enhances failover recovery time for redundant virtual interface (VIF) connections. When an adapter has an active VIF connection to one fabric interconnect and a standby VIF connection to the second, the learned MAC addresses of the active VIF are replicated but not installed on the second fabric interconnect. If the active VIF fails, the second fabric interconnect installs the replicated MAC addresses and broadcasts them to the network through gratuitous ARP messages, shortening the switchover time.



Note

The cluster configuration provides redundancy only for the management plane. Data redundancy is dependent on the user configuration and might require a third-party tool to support data redundancy.

To use the cluster configuration, you must directly connect the two fabric interconnects together using Ethernet cables between the L1 (L1-to-L1) and L2 (L2-to-L2) high-availability ports, with no other fabric interconnects in between. Also you can connect the fabric interconnects directly through a patch panel to allow the two fabric interconnects to continuously monitor the status of each other and quickly know when one has failed.

Both fabric interconnects in a cluster configuration must go through the initial setup process. You must enable the first fabric interconnect that you set up for a cluster configuration. When you set up the second fabric interconnect, it detects the first fabric interconnect as a peer fabric interconnect in the cluster.

For more information, see to the *Cisco UCS 6100 Series Fabric Interconnect Hardware Installation Guide*.

Management Port IP Address

In a standalone configuration, you must specify only one IPv4 address, gateway, and subnet mask, or only one IPv6 address, gateway, and network prefix for the single management port on the fabric interconnect. You can configure either an IPv4 or an IPv6 address for the management port IP address.

In a cluster configuration, you must specify the following three IPv4 addresses in the same subnet, or three IPv6 addresses with the same prefix:

- Management port IP address for fabric interconnect A
- Management port IP address for fabric interconnect B
- Cluster IP address

**Note**

In a cluster configuration, the management port for both fabric interconnects must be configured with the same address type, either IPv4 or IPv6. If you configure the first FI with an IPv4 address then attempt to configure the second FI with an IPv6 address, the configuration will fail.

Performing an Initial System Setup for a Standalone Configuration

Before You Begin

- 1 Verify the following physical connections on the fabric interconnect:

- The console port is physically connected to a computer terminal or console server
- The management Ethernet port (mgmt0) is connected to an external hub, switch, or router

For more information, refer to the *Cisco UCS Hardware Installation Guide* for your fabric interconnect.

- 2 Verify that the console port parameters on the computer terminal (or console server) attached to the console port are as follows:

- 9600 baud
- 8 data bits
- No parity
- 1 stop bit

- 3 Collect the following information that you will need to supply during the initial setup:

- System name
- Password for the admin account. Choose a strong password that meets the guidelines for Cisco UCS Manager passwords. This password cannot be blank.
- Management port IPv4 and subnet mask, or IPv6 address and prefix.
- Default gateway IPv4 or IPv6 address.
- DNS server IPv4 or IPv6 address (optional).
- Domain name for the system (optional).

Procedure

- Step 1** Power on the fabric interconnect.
You will see the power on self-test messages as the fabric interconnect boots. The system will run a DHCP client to check for a lease.
- Step 2** If the system obtains a lease go to step 6, otherwise, continue to the next step.
- Step 3** Connect to the console port.
- Step 4** At the installation method prompt, enter `gui`.
- Step 5** If the system cannot access a DHCP server, you are prompted to enter the following information:
- IPv4 or IPv6 address for the management port on the fabric interconnect
 - IPv4 subnet mask or IPv6 prefix for the management port on the fabric interconnect
 - IPv4 or IPv6 address for the default gateway assigned to the fabric interconnect

Note Cisco UCS Manager does not support auto configuration from IPv6 DHCP servers, or IPv6 router advertisements.

- Step 6** Copy the web link from the prompt into a supported web browser and go to the Cisco UCS Manager GUI launch page.
- Step 7** On the Cisco UCS Manager GUI launch page, select **Express Setup**.
- Step 8** On the **Express Setup** page, select **Initial Setup** and click **Submit**.
- Step 9** In the **Cluster and Fabric Setup** Area, select the **Standalone Mode** option.
- Step 10** In the **System Setup** Area, complete the following fields:

Field	Description
System Name field	The name assigned to the Cisco UCS domain. In a standalone configuration, the system adds "-A" to the system name. In a cluster configuration, the system adds "-A" to the fabric interconnect assigned to fabric A, and "-B" to the fabric interconnect assigned to fabric B.
Admin Password field	The password used for the Admin account on the fabric interconnect. Choose a strong password that meets the guidelines for Cisco UCS Manager passwords. This password cannot be blank.
Confirm Admin Password field	The password used for the Admin account on the fabric interconnect.
Mgmt IP Address field	The static IPv4 or IPv6 address for the management port on the fabric interconnect.

Field	Description
Mgmt IP Netmask field or Mgmt IP Prefix field	The IPv4 subnet mask or IPv6 prefix for the management port on the fabric interconnect. Note The system prompts for a Mgmt IP Netmask or a Mgmt IP Prefix based on what address type you entered in the Mgmt IP Address field.
Default Gateway field	The IPv4 or IPv6 address for the default gateway assigned to the management port on the fabric interconnect. Note The system prompts for a Default Gateway address type based on what address type you entered in the Mgmt IP Address field
DNS Server IP field	The IPv4 or IPv6 address for the DNS server assigned to the fabric interconnect.
Domain Name field	The name of the domain in which the fabric interconnect resides.

- Step 11** Click **Submit**.
A page displays the results of your setup operation.

Initial System Setup for a Cluster Configuration

Performing an Initial System Setup on the First Fabric Interconnect

Before You Begin

- 1 Verify the following physical connections on the fabric interconnect:
 - A console port on the first fabric interconnect is physically connected to a computer terminal or console server
 - The management Ethernet port (mgmt0) is connected to an external hub, switch, or router
 - The L1 ports on both fabric interconnects are directly connected to each other
 - The L2 ports on both fabric interconnects are directly connected to each other

For more information, refer to the *Cisco UCS Hardware Installation Guide* for your fabric interconnect.

- 2 Verify that the console port parameters on the computer terminal (or console server) attached to the console port are as follows:
 - 9600 baud

- 8 data bits
- No parity
- 1 stop bit

3 Collect the following information that you will need to supply during the initial setup:

- System name.
- Password for the admin account. Choose a strong password that meets the guidelines for Cisco UCS Manager passwords. This password cannot be blank.
- Three static IPv4 or IPv6 addresses: two for the management port on both fabric interconnects (one per fabric interconnect) and one for the cluster IP address used by Cisco UCS Manager.
- Subnet mask for the three static IPv4 addresses, or network prefix for the three static IPv6 addresses.
- Default gateway IPv4 or IPv6 address.
- DNS server IPv4 or IPv6 address (optional).
- Domain name for the system (optional).

Procedure

-
- Step 1** Power on the fabric interconnect.
You will see the power on self-test messages as the fabric interconnect boots. The system will run a DHCP client to check for a lease.
- Step 2** If the system obtains a lease go to step 6, otherwise, continue to the next step.
- Step 3** Connect to the console port.
- Step 4** At the installation method prompt, enter **gui**.
- Step 5** If the system cannot access a DHCP server, you are prompted to enter the following information:
- IPv4 or IPv6 address for the management port on the fabric interconnect
 - IPv4 subnet mask or IPv6 prefix for the management port on the fabric interconnect
 - IPv4 or IPv6 address for the default gateway assigned to the fabric interconnect
- Note** In a cluster configuration, both fabric interconnects must be assigned the same management interface address type during setup.
- Step 6** Copy the web link from the prompt into a web browser and go to the Cisco UCS Manager GUI launch page.
- Step 7** On the Cisco UCS Manager GUI launch page, select **Express Setup**.
- Step 8** On the **Express Setup** page, select **Initial Setup** and click **Submit**.
- Step 9** In the **Cluster and Fabric Setup** Area:
- a) Click the **Enable Clustering** option.
 - b) For the **Fabric Setup** option, select **Fabric A**.
 - c) In the **Cluster IP Address** field, enter the IPv4 or IPv6 address that Cisco UCS Manager will use.
- Step 10** In the **System Setup** Area, complete the following fields:

Field	Description
System Name field	The name assigned to the Cisco UCS domain. In a standalone configuration, the system adds "-A" to the system name. In a cluster configuration, the system adds "-A" to the fabric interconnect assigned to fabric A, and "-B" to the fabric interconnect assigned to fabric B.
Admin Password field	The password used for the Admin account on the fabric interconnect. Choose a strong password that meets the guidelines for Cisco UCS Manager passwords. This password cannot be blank.
Confirm Admin Password field	The password used for the Admin account on the fabric interconnect.
Mgmt IP Address field	The static IPv4 or IPv6 address for the management port on the fabric interconnect.
Mgmt IP Netmask field or Mgmt IP Prefix field	The IPv4 subnet mask or IPv6 prefix for the management port on the fabric interconnect. Note The system prompts for a Mgmt IP Netmask or a Mgmt IP Prefix based on what address type you entered in the Mgmt IP Address field.
Default Gateway field	The IPv4 or IPv6 address for the default gateway assigned to the management port on the fabric interconnect. Note The system prompts for a Default Gateway address type based on what address type you entered in the Mgmt IP Address field.
DNS Server IP field	The IPv4 or IPv6 address for the DNS server assigned to the fabric interconnect.
Domain Name field	The name of the domain in which the fabric interconnect resides.

- Step 11** Click **Submit**.
A page displays the results of your setup operation.

Performing an Initial System Setup on the Second Fabric Interconnect

Before You Begin

You must ensure the following:

- A console port on the second fabric interconnect is physically connected to a computer terminal or console server
- You know the password for the admin account on the first fabric interconnect that you configured.

Procedure

- Step 1** Power on the fabric interconnect.
You will see the power on self-test messages as the fabric interconnect boots. The system will run a DHCP client to check for a lease.
- Step 2** If the system obtains a lease go to step 6, otherwise, continue to the next step.
- Step 3** Connect to the console port.
- Step 4** At the installation method prompt, enter **gui**.
- Step 5** If the system cannot access a DHCP server, you are prompted to enter the following information:
- IPv4 or IPv6 address for the management port on the fabric interconnect
 - IPv4 subnet mask or IPv6 prefix for the management port on the fabric interconnect
 - IPv4 or IPv6 address for the default gateway assigned to the fabric interconnect
- Note** In a cluster configuration, both fabric interconnects must be assigned the same management interface address type during setup.
- Step 6** Copy the web link from the prompt into a web browser and go to the Cisco UCS Manager GUI launch page.
- Step 7** On the Cisco UCS Manager GUI launch page, select **Express Setup**.
- Step 8** On the **Express Setup** page, select **Initial Setup** and click **Submit**.
The fabric interconnect should detect the configuration information for the first fabric interconnect.
- Step 9** In the **Cluster and Fabric Setup** Area:
- a) Select the **Enable Clustering** option.
 - b) For the **Fabric Setup** option, make sure **Fabric B** is selected.
- Step 10** In the **System Setup** Area, enter the password for the Admin account into the **Admin Password of Master** field.
The **Manager Initial Setup** Area is displayed.
- Step 11** In the **Manager Initial Setup** Area, the field that is displayed depends on whether you configured the first fabric interconnect with an IPv4 or IPv6 management address. Complete the field that is appropriate for your configuration as follows:

Field	Description
Peer FI is IPv4 Cluster enabled. Please Provide Local Fabric Interconnect Mgmt0 IPv4 Address field	Enter an IPv4 address for the Mgmt0 interface on the local fabric interconnect.
Peer FI is IPv6 Cluster Enabled. Please Provide Local Fabric Interconnect Mgmt0 IPv6 Address field	Enter an IPv6 address for the Mgmt0 interface on the local fabric interconnect.

Step 12 Click **Submit**.
A page displays the results of your setup operation.

Adding Out-of-band IPv4 Addresses to a Fabric Interconnect

All fabric interconnects require an OOB IPv4 address, network mask and gateway. This procedure describes how to configure an OOB IPv4 address for a fabric interconnect that was set up with static IPv6 addresses.

Before You Begin

Collect the out-of-band (OOB) IPv4 address you want to assign to the fabric interconnect.

Procedure

	Command or Action	Purpose
Step 1	UCS-A # scope fabric interconnect a	Enters fabric configuration mode for Fabric A.
Step 2	UCS-A/fabric-interconnect # set out-of-band ip ip-addr netmask ip-addr gw ip-addr	Sets the OOB IPv4 address, network mask and gateway address. The system warns that the console session change may be disconnected when the change is committed.
Step 3	UCS-A/fabric-interconnect # commit-buffer	Commits the transaction to the system configuration.

The following example shows configuring an OOB IPv4 address for fabric interconnect A:

```
UCS-A# scope fabric-interconnect a
UCS-A /fabric-interconnect # set out-of-band ip 10.105.214.107 netmask 255.255.255.0 gw 10.105.214.1
Warning: When committed, this change may disconnect the current CLI session
UCS-A /fabric-interconnect* # commit-buffer
```

Enabling a Standalone Fabric Interconnect for Cluster Configuration

You can add a second fabric interconnect to an existing Cisco UCS domain that uses a single standalone fabric interconnect. To do this, you must enable the standalone fabric interconnect for cluster operation by configuring it with the virtual IP or IPv6 address of the cluster, and then add the second fabric interconnect to the cluster.

Procedure

	Command or Action	Purpose
Step 1	UCS-A# connect local-mgmt	Enters local management mode.
Step 2	UCS-A(local-mgmt) # enable cluster {virtual-ip-addr virtual-ip6-addr}	Enables cluster operation on the standalone fabric interconnect with the specified IPv4 or IPv6 address. When you enter this command, you are prompted to confirm that you want to enable cluster operation. Type yes to confirm. The IP address must be the virtual IPv4 or IPv6 address for the cluster configuration, not the IP address assigned to the fabric interconnect that you are adding to the cluster.

The following example enables a standalone fabric interconnect with a virtual IPv4 address of 192.168.1.101 for cluster operation:

```
UCS-A# connect local-mgmt
UCS-A(local-mgmt) # enable cluster 192.168.1.101
This command will enable cluster mode on this setup. You cannot change it
back to stand-alone. Also, any GUI or KVM sessions may be terminated. Are you sure you want
to continue? (yes/no): yes
UCS-A(local-mgmt) #
```

The following example enables a standalone fabric interconnect with a virtual IPv6 address of 192.168.1.101 for cluster operation:

```
UCS-A# connect local-mgmt
UCS-A(local-mgmt) # enable cluster ipv6 2001::109
This command will enable IPv6 cluster mode on this setup. You cannot change it
back to stand-alone. Also, any GUI or KVM sessions may be terminated. Are you sure you want
to continue? (yes/no): yes
UCS-A(local-mgmt) #
```

What to Do Next

Add the second fabric interconnect to the cluster.

Configuring the Information Policy on the Fabric Interconnect

You must configure the information policy to display the uplink switches that are connected to Cisco UCS.

**Important**

You must enable the information policy on the fabric interconnect to view the SAN, LAN, and LLDP neighbors of the fabric interconnect.

Enabling or Disabling the Information Policy on the Fabric Interconnect

Procedure

- Step 1** In the **Navigation** pane, click **Equipment**.
- Step 2** Click the **Equipment** node.
- Step 3** In the **Work** pane, click the **Policies** tab.
- Step 4** Click the **Global Policies** subtab.
- Step 5** In the **Info Policy** area, select one of the following:

Option	Description
Disabled	Disable the information policy
Enabled	Enable the information policy

- Step 6** Click **Save Changes**.

Viewing the LAN Neighbors of a Fabric Interconnect

Procedure

- Step 1** In the **Navigation** pane, click **Equipment**.
- Step 2** In the **Equipment** tab, expand **Equipment > Fabric Interconnects**.
- Step 3** Click the fabric interconnect for which you want to view the LAN neighbors.
- Step 4** In the **Work** pane, click the **Neighbors** tab.
- Step 5** Click the **LAN** subtab.
This subtab lists all the LAN neighbors of the specified Fabric Interconnect.

Viewing the SAN Neighbors of a Fabric Interconnect

Procedure

- Step 1** In the **Navigation** pane, click **Equipment**.
 - Step 2** In the **Equipment** tab, expand **Equipment > Fabric Interconnects**.
 - Step 3** Click the fabric interconnect for which you want to view the SAN neighbors.
 - Step 4** In the **Work** pane, click the **Neighbors** tab.
 - Step 5** Click the **SAN** subtab.
This subtab lists all the SAN neighbors of the specified Fabric Interconnect.
-

Viewing the LLDP Neighbors of a Fabric Interconnect

Procedure

- Step 1** In the **Navigation** pane, click **Equipment**.
 - Step 2** In the **Equipment** tab, expand **Equipment > Fabric Interconnects**.
 - Step 3** Click the fabric interconnect for which you want to view the LLDP neighbors.
 - Step 4** In the **Work** pane, click the **Neighbors** tab.
 - Step 5** Click the **LLDP** subtab.
This subtab lists all the LLDP neighbors of the specified Fabric Interconnect.
-

Fabric Evacuation

Cisco UCS Manager 2.2(4) introduces fabric evacuation, which is the ability to evacuate all traffic that flows through a Fabric Interconnect from all servers attached to it through an IOM or FEX while upgrading a system.

Upgrading the secondary Fabric Interconnect in a system disrupts the traffic that is active on the Fabric Interconnect. This traffic fails over to the primary Fabric Interconnect. You can use fabric evacuation as follows during the upgrade process:

- 1 Stop all the traffic that is active through a Fabric Interconnect.
- 2 For vNICs configured with failover, verify that the traffic has failed over by using Cisco UCS Manager or tools such as vCenter.
- 3 Upgrade the secondary Fabric Interconnect.
- 4 Restart all the stopped traffic flows.

- 5 Change the cluster lead to the secondary Fabric Interconnect.
- 6 Repeat steps 1 to 4 and upgrade the other Fabric Interconnect.

**Note**

Fabric evacuation is supported only with the following:

- Manual install
- Cluster configuration

Configuring Fabric Evacuation

Procedure

	Command or Action	Purpose
Step 1	In the Navigation pane, click Equipment .	
Step 2	Expand Equipment > Fabric Interconnects > <i>Fabric_Interconnect_Name</i> .	
Step 3	In the Work pane, click the General tab.	
Step 4	In the Actions area of the General tab, click Configure Evacuation .	The Configure Evacuation dialog box appears.
Step 5	To configure fabric evacuation on the specified Fabric Interconnect, click one of the following radio buttons in the Admin Evac Mode field: <ul style="list-style-type: none"> • On—Stops all the traffic that is active through the specified Fabric Interconnect. • Off—Restarts traffic through the specified Fabric Interconnect. 	
Step 6	To evacuate a Fabric Interconnect irrespective of its current evacuation state, check the Force check box.	(Optional)
Step 7	Click Apply .	A warning dialog box appears. Enabling fabric evacuation will stop all traffic through this Fabric Interconnect from servers attached through IOM/FEX. The traffic will fail over to the Primary Fabric Interconnect for fail over vnics. Are you sure you want to continue?
Step 8	Click OK to confirm fabric evacuation and continue.	

Ethernet Switching Mode

The Ethernet switching mode determines how the fabric interconnect behaves as a switching device between the servers and the network. The fabric interconnect operates in either of the following Ethernet switching modes:

End-Host Mode

End-host mode allows the fabric interconnect to act as an end host to the network, representing all servers (hosts) connected to it through vNICs. This behavior is achieved by pinning (either dynamically pinned or hard pinned) vNICs to uplink ports, which provides redundancy to the network, and makes the uplink ports appear as server ports to the rest of the fabric. In end-host mode, the fabric interconnect does not run the Spanning Tree Protocol (STP) but it avoids loops by denying uplink ports from forwarding traffic to each other and by denying egress server traffic on more than one uplink port at a time. End-host mode is the default Ethernet switching mode and should be used if either of the following are used upstream:

- Layer 2 switching for Layer 2 aggregation
- Virtual Switching System (VSS) aggregation layer

**Note**

When you enable end-host mode, if a vNIC is hard pinned to an uplink port and this uplink port goes down, the system cannot repin the vNIC, and the vNIC remains down.

Switch Mode

Switch mode is the traditional Ethernet switching mode. The fabric interconnect runs STP to avoid loops, and broadcast and multicast packets are handled in the traditional way. Switch mode is not the default Ethernet switching mode, and should be used only if the fabric interconnect is directly connected to a router, or if either of the following are used upstream:

- Layer 3 aggregation
- VLAN in a box

**Note**

For both Ethernet switching modes, even when vNICs are hard pinned to uplink ports, all server-to-server unicast traffic in the server array is sent only through the fabric interconnect and is never sent through uplink ports. Server-to-server multicast and broadcast traffic is sent through all uplink ports in the same VLAN.

Configuring Ethernet Switching Mode

**Important**

When you change the Ethernet switching mode, Cisco UCS Manager logs you out and restarts the fabric interconnect. For a cluster configuration, Cisco UCS Manager restarts both fabric interconnects. The subordinate fabric interconnect reboots first as a result of the change in switching mode. The primary fabric interconnect reboots only after you acknowledge it in **Pending Activities**. The primary fabric interconnect can take several minutes to complete the change in Ethernet switching mode and become system ready. The existing configuration is retained.

While the fabric interconnects are rebooting, all blade servers lose LAN and SAN connectivity, causing a complete outage of all services on the blades. This might cause the operating system to fail.

Procedure

-
- Step 1** In the **Navigation** pane, click **Equipment**.
- Step 2** Expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.
- Step 3** In the **Work** pane, click the **General** tab.
- Step 4** In the **Actions** area of the **General** tab, click one of the following links:
- **Set Ethernet Switching Mode**
 - **Set Ethernet End-Host Mode**

The link for the current mode is dimmed.

- Step 5** In the dialog box, click **Yes**.
Cisco UCS Manager restarts the fabric interconnect, logs you out, and disconnects Cisco UCS Manager GUI.
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Fibre Channel Switching Mode

The Fibre Channel switching mode determines how the fabric interconnect behaves as a switching device between the servers and storage devices. The fabric interconnect operates in either of the following Fibre Channel switching modes:

End-Host Mode

End-host mode allows the fabric interconnect to act as an end host to the connected fibre channel networks, representing all servers (hosts) connected to it through virtual host bus adapters (vHBAs). This behavior is achieved by pinning (either dynamically pinned or hard pinned) vHBAs to Fibre Channel uplink ports, which makes the Fibre Channel ports appear as server ports (N-ports) to the rest of the fabric. When in end-host mode, the fabric interconnect avoids loops by denying uplink ports from receiving traffic from one another.

End-host mode is synonymous with N Port Virtualization (NPV) mode. This mode is the default Fibre Channel Switching mode.

**Note**

When you enable end-host mode, if a vHBA is hard pinned to an uplink Fibre Channel port and this uplink port goes down, the system cannot repin the vHBA, and the vHBA remains down.

Switch Mode

Switch mode is the traditional Fibre Channel switching mode. Switch mode allows the fabric interconnect to connect directly to a storage device. Enabling Fibre Channel switch mode is useful in Pod models where there is no SAN (for example, a single Cisco UCS domain that is connected directly to storage), or where a SAN exists (with an upstream MDS).

Switch mode is not the default Fibre Channel switching mode.

**Note**

In Fibre Channel switch mode, SAN pin groups are irrelevant. Any existing SAN pin groups are ignored.

Cisco UCS Fabric Interconnect in Switch Mode with Cisco MDS 9000 Family Fibre Channel Switching Modules

While creating a port channel between a Cisco MDS 9000 family FC switching module and a Cisco UCS Fabric Interconnect in switch mode, use the following order:

- 1 Create the port channel on the MDS side.
- 2 Add the port channel member ports.
- 3 Create the port channel on the Fabric Interconnect side.
- 4 Add the port channel member ports.

If you create the port channel on the Fabric Interconnect side first, the ports will go into a suspended state.

When the Cisco UCS Fabric Interconnect is in switch mode, the port channel mode can only be in **ON** mode and not **Active**. However, to get the peer wwn information for the Fabric Interconnect, the port channel must be in **Active** mode.

Configuring Fibre Channel Switching Mode

**Important**

When you change the Fibre Channel switching mode, Cisco UCS Manager logs you out and restarts the fabric interconnect. For a cluster configuration, Cisco UCS Manager restarts both fabric interconnects simultaneously in Cisco UCS Manager Release 3.1(1) and earlier releases. In Cisco UCS Manager Release 3.1(2), when the Fibre Channel switching mode is changed, the UCS fabric interconnects reload sequentially. In Cisco UCS Manager Release 3.1(3), and later releases, the subordinate fabric interconnect reboots first as a result of the change in switching mode. The primary fabric interconnect reboots only after you acknowledge it in **Pending Activities**. The primary fabric interconnect can take several minutes to complete the change in Fibre Channel switching mode and become system ready.

**Note**

When the Fibre Channel switching mode is changed, both UCS fabric interconnects will reload simultaneously. Reloading of fabric interconnects will cause a system-wide downtime for approximately 10-15 minutes.

Procedure

-
- Step 1** In the **Navigation** pane, click **Equipment**.
- Step 2** Expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.
- Step 3** In the **Work** pane, click the **General** tab.
- Step 4** In the **Actions** area of the **General** tab, click one of the following links:
- **Set Fibre Channel Switching Mode**
 - **Set Fibre Channel End-Host Mode**
- The link for the current mode is dimmed.
- Step 5** In the dialog box, click **Yes**.
Cisco UCS Manager restarts the fabric interconnect, logs you out, and disconnects Cisco UCS Manager GUI.
-

Changing the Properties of the Fabric Interconnects

**Note**

To change the subnet or network prefix for a Cisco UCS domain, you must simultaneously change all subnets or prefixes, the virtual IPv4 or IPv6 address used to access Cisco UCS Manager, and the IPv4 or IPv6 addresses for both fabric interconnects.

Both fabric interconnects must maintain the same management address type, either IPv4 or IPv6. You cannot change the management address type for Fabric A without changing the management address type for Fabric B.

Procedure

-
- Step 1** In the **Navigation** pane, click **Admin**.
- Step 2** On the **Admin** tab, click **All**.
- Step 3** In the **Work** pane, click the **General** tab.
- Step 4** In the **Actions** area, click **Management Interfaces** to open the **Management Interfaces** dialog box.
- Step 5** In the **Management Interfaces** dialog box, modify the values as necessary.
- Step 6** To change only the virtual IP address that you use to access Cisco UCS Manager, enter the desired IP address in either the **IPv4 Address** or the **IPv6 Address** field in the **Virtual IP** area.
- Step 7** To change only the name assigned to the Cisco UCS domain, enter the desired name in the **Name** field in the **Virtual IP** area.
- Step 8** To change the subnet and IPv4 address, or the network prefix and IPv6 address, and default gateway assigned to the fabric interconnects, update the following fields:
- In the **Virtual IP** area, change the IP address used to access Cisco UCS Manager in the **IPv4 Address** or **IPv6 Address** field.
 - In the **Fabric Interconnect** area for each fabric interconnect, click either the IPv4 or IPv6 tab.
 - On the IPv4 tab, update the IP address, subnet mask, and default gateway.
 - On the IPv6 tab, update the IP address, prefix, and default gateway.
- Step 9** Click **OK**.
- Step 10** Log out of Cisco UCS Manager GUI and log back in again to see your changes.
-

Determining the Leadership Role of a Fabric Interconnect



Important

To determine the role of the fabric interconnects in a cluster when the admin password is lost, open the Cisco UCS Manager GUI from the IP addresses of both fabric interconnects. The subordinate fabric interconnect fails with the following message:

```
UCSM GUI is not available on secondary node.
```

Procedure

-
- Step 1** In the **Navigation** pane, click **Equipment**.
- Step 2** In the **Equipment** tab, expand **Equipment > Fabric Interconnects**.
- Step 3** Click the fabric interconnect for which you want to identify the role.
- Step 4** In the **Work** pane, click the **General** tab.
- Step 5** In the **General** tab, click the down arrows on the **High Availability Details** bar to expand that area.
- Step 6** View the **Leadership** field to determine whether the fabric interconnect is the primary or subordinate.
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