



Configuring Ports

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Server and Uplink Ports on the Fabric Interconnect

Each fabric interconnect has a set of ports in a fixed port module that you can configure as either server ports or uplink Ethernet ports. These ports are not reserved. They cannot be used by a Cisco UCS instance until you configure them. You can add expansion modules to increase the number of uplink ports on the fabric interconnect or to add uplink Fibre Channel ports to the fabric interconnect.

You need to create LAN pin groups and SAN pin groups to pin traffic from servers to an uplink port.

Each fabric interconnect can include the following types of ports:

Server Ports

Server ports handle data traffic between the fabric interconnect and the adapter cards on the servers.

You can only configure server ports on the fixed port module. Expansion modules do not include server ports.

Uplink Ethernet Ports

Uplink Ethernet ports handle Ethernet traffic between the fabric interconnect and the next layer of the network. All network-bound Ethernet traffic is pinned to one of these ports.

By default, Ethernet ports are unconfigured. However, you can configure them to function in the following ways:

- Server
- Uplink
- FCoE
- Appliance

You can configure uplink Ethernet ports on either the fixed module or an expansion module.

Uplink Fibre Channel Ports

Uplink Fibre Channel ports handle FCoE traffic between the fabric interconnect and the next layer of the storage area network. All network-bound FCoE traffic is pinned to one of these ports.

By default, Fibre Channel ports are uplink. However, you can configure them to function as Fibre Channel storage ports. This is useful in cases where a Cisco UCS requires a connection to a Direct-Attached Storage (DAS) device.

You can only configure uplink Fibre Channel ports on an expansion module. The fixed module does not include uplink Fibre Channel ports.

Configuring Server Ports

You can only configure server ports on the fixed port module. Expansion modules do not include server ports.

This task describes only one method of configuring ports. You can also configure ports from a right-click menu, from the **General** tab for the port, or in the LAN Uplinks Manager.

Procedure

-
- Step 1** In the **Navigation** pane, click the **Equipment** tab.
 - Step 2** In the **Equipment** tab, expand **Fabric Interconnects** > *Fabric_Interconnect_Name* > **Fixed Module** > **Unconfigured Ports**.
 - Step 3** Click one or more ports under the **Unconfigured Ports** node.
 - Step 4** Drag the selected port or ports and drop them in the **Server Ports** node.

The port or ports are configured as server ports, removed from the list of unconfigured ports, and added to the **Server Ports** node.

Configuring Uplink Ethernet Ports

You can configure uplink Ethernet ports on either the fixed module or an expansion module.

This task describes only one method of configuring uplink Ethernet ports. You can also configure uplink Ethernet ports from a right-click menu or from the **General** tab for the port.

Procedure

- Step 1** In the **Navigation** pane, click the **Equipment** tab.
 - Step 2** On the **Equipment** tab, expand **Equipment > Fabric Interconnects > Fabric_Interconnect_Name**.
 - Step 3** Depending upon the location of the ports you want to configure, expand one of the following:
 - **Fixed Module**
 - **Expansion Module**
 - Step 4** Click one or more of the ports under the **Unconfigured Ethernet Ports** node.
If you want to reconfigure a server port, appliance port, or FCoE storage port, expand the appropriate node.
 - Step 5** Drag the selected port or ports and drop them in the **Uplink Ethernet Ports** node.
The port or ports are configured as uplink Ethernet ports, removed from the list of unconfigured ports, and added to the **Uplink Ethernet Ports** node.
-

What to Do Next

If desired, change the properties for the default flow control policy and admin speed of the uplink Ethernet port.

Changing the Properties of an Uplink Ethernet Port

Procedure

- Step 1** In the **Navigation** pane, click the **Equipment** tab.
- Step 2** On the **Equipment** tab, expand **Equipment > Fabric Interconnects > Fabric_Interconnect_Name**.
- Step 3** Depending upon the location of the ports you want to configure, expand one of the following:
 - **Fixed Module**
 - **Expansion Module**

- Step 4** In the **Uplink Ethernet Ports** node, click the uplink Ethernet port that you want to change.
- Step 5** In the **Work** pane, click the **General** tab.
- Step 6** In the **Actions** area, click **Show Interface**.
- Step 7** In the **Properties** dialog box, complete the following fields:
- a) (Optional) In the **User Label** field, enter a label to identify the port.
 - b) From the **Flow Control Policy** drop-down list, select a flow control policy to determine how the port sends and receives IEEE 802.3x pause frames when the receive buffer fills.
 - c) In the **Admin Speed** field, click one of the following radio buttons:
 - 1Gbps
 - 10Gbps
- Step 8** Click **OK**.
-

Configuring an FCoE Storage Port

You can configure FCoE storage ports on either the fixed module or an expansion module.

This task describes only one method of configuring FCoE storage ports. You can also configure FCoE storage ports from the **General** tab for the port.

Before You Begin

The Fibre Channel switching mode must be set to Switching for these ports to be valid. The storage ports cannot function in end-host mode.

Procedure

-
- Step 1** In the **Navigation** pane, click the **Equipment** tab.
- Step 2** On the **Equipment** tab, expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.
- Step 3** Depending upon the location of the ports you want to configure, expand one of the following:
- **Fixed Module**
 - **Expansion Module**
- Step 4** Click one or more of the ports under the **Unconfigured Ethernet Ports** node.
If you want to reconfigure an uplink Ethernet port, server port, or appliance port, expand the appropriate node.
- Step 5** Right-click the selected port or ports and choose **Configure as FCoE Storage Port**.
- Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
- Step 7** Click **OK**.
The port or ports are configured as FCoE storage ports, removed from the list of unconfigured ports, and added to the **Storage Ethernet Ports** node.
-

Reconfiguring a Port on a Fabric Interconnect

Procedure

- Step 1** In the **Navigation** pane, click the **Equipment** tab.
- Step 2** On the **Equipment** tab, expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.
- Step 3** Depending upon the location of the ports you want to reconfigure, expand one of the following:
- **Fixed Module**
 - **Expansion Module**
- Step 4** Click the port or ports you want to reconfigure.
- Step 5** Drag the selected port or ports and drop them in the appropriate node.
The port or ports are reconfigured as the appropriate type of port, removed from the original node, and added to the new node.
-

Example: Reconfiguring an Uplink Ethernet Port as a Server Port

- 1 Expand the **Uplink Ethernet Ports** node and select the port you want to reconfigure.
- 2 Drag the port and drop it into the **Server Ports** node.

Enabling a Port on a Fabric Interconnect

After you enable or disable a port on a fabric interconnect, wait for at least 1 minute before you reacknowledge the chassis. If you reacknowledge the chassis too soon, the pinning of server traffic from the chassis may not be updated with the changes to the port that you enabled or disabled.

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN** > **LAN Cloud**.
- Step 3** Expand *Fabric_Interconnect_Name* > **Ports**.
- Step 4** Right-click the port that you want to enable and choose **Enable Port**.
- Step 5** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
-

Disabling a Port on a Fabric Interconnect

After you enable or disable a port on a fabric interconnect, wait for at least 1 minute before you reacknowledge the chassis. If you reacknowledge the chassis too soon, the pinning of server traffic from the chassis may not be updated with the changes to the port that you enabled or disabled.

Procedure

-
- Step 1** In the **Navigation** pane, click the **LAN** tab.
 - Step 2** On the **LAN** tab, expand **LAN > LAN Cloud**.
 - Step 3** Expand ***Fabric_Interconnect_Name* > Ports**.
 - Step 4** Right-click the port that you want to disable and choose **Disable Port**.
 - Step 5** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
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Unconfiguring a Port on a Fabric Interconnect

Procedure

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- Step 1** In the **Navigation** pane, click the **Equipment** tab.
 - Step 2** On the **Equipment** tab, expand **Equipment > Fabric Interconnects > *Fabric_Interconnect_Name***.
 - Step 3** Depending upon the location of the ports you want to unconfigure, expand one of the following:
 - **Fixed Module**
 - **Expansion Module**
 - Step 4** Click the port or ports you want to unconfigure.
 - Step 5** Drag the selected port or ports and drop them in the **Unconfigured Ports** node.
The port or ports are unconfigured, removed from the original node, and added to the new node.
-

Appliance Ports

Configuring an Appliance Port

You can configure Appliance ports on either the fixed module or an expansion module.

This task describes only one method of configuring appl ports. You can also configure appliance ports from the **General** tab for the port.

Procedure

- Step 1** In the **Navigation** pane, click the **Equipment** tab.
- Step 2** On the **Equipment** tab, expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.
- Step 3** Depending upon the location of the ports you want to configure, expand one of the following:
- **Fixed Module**
 - **Expansion Module**
- Step 4** Click one or more of the ports under the **Unconfigured Ethernet Ports** node.
If you want to reconfigure a server port, uplink Ethernet port, or FCoE storage port, expand the appropriate node.
- Step 5** Right-click the selected port or ports and choose **Configure as Appliance Port**.
- Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
- Step 7** In the **Configure as Appliance Port** dialog box, complete the following fields:

Name	Description
Priority drop-down list	The QoS priority assigned to this port. This can be: <ul style="list-style-type: none"> • best-effort—This priority is reserved for the Basic Ethernet traffic lane. • bronze—Use this priority for vNIC traffic only. • fc—Use this priority for vHBA traffic only. • gold—Use this priority for vNIC traffic only. • platinum—Use this priority for vNIC traffic only. • silver—Use this priority for vNIC traffic only.
Pin Group drop-down list	The LAN pin group that you want to use as the appliance pin target to the specified fabric and port, or fabric and port channel
Create LAN Pin Group link	Click this link if you want to create a LAN pin group.
Admin Speed field	<p>The data transfer rate for this port. Select the value that matches the destination to which the port is linked. This can be:</p> <ul style="list-style-type: none"> • 1Gbps • 10Gbps <p>Note The admin speed can only be changed for certain ports. For more information, see the <i>Hardware Installation Guide</i> for your fabric interconnect.</p>

Name	Description
Port Mode field	<p>The port mode used for the appliance port. By default, the mode is set to trunk. This can be:</p> <ul style="list-style-type: none"> • trunk—If you click this radio button, check one or more check boxes in the table to assign VLANs to the appliance port. • access—If you click this radio button, choose a VLAN from the Select VLAN drop-down list to assign it to the appliance port. You can also assign an Ethernet target endpoint to the appliance port if you choose this mode. <p>You can also click Create VLAN to create a VLAN to assign to the appliance port.</p>
Ethernet Target Endpoint check box	Check this check box if you want to assign a VLAN or target MAC address to the appliance port. This option is only available if you configure the appliance port to use the access port mode.
Name field	<p>A user-defined name for the endpoint.</p> <p>This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters, and you cannot change this name after the object has been saved.</p>
MAC Address field	The MAC address for the endpoint in nn:nn:nn:nn:nn:nn format.

Step 8 Click **OK**.

The port or ports are configured as Appliance ports, removed from the list of unconfigured ports, and added to the **Storage Ethernet Ports** node.

Modifying the Properties of an Appliance Port

Procedure

Step 1 In the **Navigation** pane, click the **Equipment** tab.

Step 2 On the **Equipment** tab, expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.

Step 3 Depending upon the location of the appliance port you want to modify, expand one of the following:

- **Fixed Module**
- **Expansion Module**

Step 4 Expand **Appliance Ports**.

Step 5 Click the appliance port for which you want to modify the properties.

Step 6 In the **Work** pane, click the **General** tab.

Step 7 In the **Actions** area, click **Show Interface**.

You may need to expand or use the scroll bars in the **Properties** dialog box to see all the fields.

Step 8 In the **Properties** dialog box, modify the values in one or more of the following fields:

Name	Description
User Label field	<p>A user-defined name that can be used for internal tracking or customized identification.</p> <p>Enter up to 32 characters. You can use any characters or spaces except ^ (carat), \ (backslash), > (greater than), < (less than), ' (single quote), " (double quote), ` (accent mark).</p>
Admin Speed field	<p>The data transfer rate for this port. Select the value that matches the destination to which the port is linked. This can be:</p> <ul style="list-style-type: none"> • 1Gbps • 10Gbps <p>Note The admin speed can only be changed for certain ports. For more information, see the <i>Hardware Installation Guide</i> for your fabric interconnect.</p>
Priority drop-down list	<ul style="list-style-type: none"> • best-effort—This priority is reserved for the Basic Ethernet traffic lane. • bronze—Use this priority for vNIC traffic only. • fc—Use this priority for vHBA traffic only. • gold—Use this priority for vNIC traffic only. • platinum—Use this priority for vNIC traffic only. • silver—Use this priority for vNIC traffic only.
Pin Group drop-down list	<p>The LAN pin group that you want to use as the appliance pin target to the specified fabric and port, or fabric and port channel</p>
MAC Address field	<p>The MAC address for the endpoint in nn:nn:nn:nn:nn:nn format.</p> <p>If you do not see this field, the port does not have an Ethernet target endpoint set. Click Add Ethernet Target Endpoint in the Actions area to add an endpoint.</p>

Name	Description
Port Mode field	<p>The port mode used for the appliance port. By default, the mode is set to trunk. This can be:</p> <ul style="list-style-type: none"> • trunk—If you click this radio button, check one or more check boxes in the table to assign VLANs to the appliance port. • access—If you click this radio button, choose a VLAN from the Select VLAN drop-down list to assign it to the appliance port. You can also assign an Ethernet target endpoint to the appliance port if you choose this mode.

Step 9 Click **OK**.

Fibre Channel Storage Ports

Configuring a Fibre Channel Storage Port

This task describes only one method of configuring FC storage ports. You can also configure FC storage ports from the **General** tab for the port.

Before You Begin

The Fibre Channel switching mode must be set to Switching for these ports to be valid. The storage ports cannot function in end-host mode.

Procedure

- Step 1** In the **Navigation** pane, click the **Equipment** tab.
- Step 2** On the **Equipment** tab, expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.
- Step 3** Expand the **Expansion Module** node.
- Step 4** Click one or more of the ports under the **Uplink FC Ports** node.
- Step 5** Right-click the selected port or ports and choose **Configure as FC Storage Port**.
- Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
- Step 7** Click **OK**.
The port or ports are configured as FC storage ports, removed from the list of uplink FC ports, and added to the **Storage FC Ports** node.

Restoring an Uplink Fibre Channel Port

This task describes only one method of restoring an FC storage port to function as an uplink FC port. You can also reconfigure FC storage ports from the **General** tab for the port.

Procedure

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- Step 1** In the **Navigation** pane, click the **Equipment** tab.
 - Step 2** On the **Equipment** tab, expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.
 - Step 3** Expand the **Expansion Module** node.
 - Step 4** Click one or more of the ports under the **Storage FC Ports** node.
 - Step 5** Right-click the selected port or ports and choose **Configure as FC Uplink Port**.
 - Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
 - Step 7** Click **OK**.
- The port or ports are configured as uplink FC ports, removed from the list of FC storage ports, and added to the **Uplink FC Ports** node.
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Default Zoning

Zoning allows you to set up access control between hosts and storage devices. When a zone is configured or the configuration is updated, this information is propagated to all the other switches in the fabric.

In Cisco UCS, the zoning configuration is inherited from an upstream switch. You cannot configure zoning or view information about your zoning configuration through Cisco UCS Manager. The only configurable zoning option in Cisco UCS Manager is whether the default zone in a VSAN (nodes not assigned to any zone) permits or denies access among its members.

When default zoning is **enabled**, all traffic is permitted among members of the default zone.

When default zoning is **disabled**, all traffic is denied among members of the default zone.

Default zoning is applied on a per-VSAN basis. You cannot enable default zoning at the fabric level.



Note

Default zoned configurations are not recommended for production deployments, which must always use direct connect Fibre Channel topologies with upstream MDS or Nexus 5000 switches.

Enabling Default Zoning

Procedure

- Step 1** In the **Navigation** pane, click the **SAN** tab.
- Step 2** In the **SAN** tab, click the **SAN** node.
- Step 3** In the **Work** pane, click the **VSANs** tab.
- Step 4** Click one of the following subtabs, depending upon the type of VSAN for which you want to enable default zoning:
- | Subtab | Description |
|------------------|---|
| All | Displays all VSANs in the Cisco UCS instance. |
| Dual Mode | Displays the VSANs that are accessible to both fabric interconnects. |
| Switch A | Displays the VSANs that are accessible to only fabric interconnect A. |
| Switch B | Displays the VSANs that are accessible to only fabric interconnect B. |
- Step 5** In the table, double-click the VSAN.
Cisco UCS Manager GUI displays the **General** tab for the VSAN.
- Step 6** In the **Actions** area, click **Enable Default Zoning**.
- Step 7** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.

Disabling Default Zoning

Procedure

- Step 1** In the **Navigation** pane, click the **SAN** tab.
- Step 2** In the **SAN** tab, click the **SAN** node.
- Step 3** In the **Work** pane, click the **VSANs** tab.
- Step 4** Click one of the following subtabs, depending upon the type of VSAN for which you want to disable default zoning:
- | Subtab | Description |
|------------------|---|
| All | Displays all VSANs in the Cisco UCS instance. |
| Dual Mode | Displays the VSANs that are accessible to both fabric interconnects. |
| Switch A | Displays the VSANs that are accessible to only fabric interconnect A. |

Subtab	Description
Switch B	Displays the VSANs that are accessible to only fabric interconnect B.

- Step 5** In the table, double-click the VSAN.
Cisco UCS Manager GUI displays the **General** tab for the VSAN.
- Step 6** In the **Actions** area, click **Disable Default Zoning**.
- Step 7** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.

Uplink Ethernet Port Channels

An uplink Ethernet port channel allows you to group several physical uplink Ethernet ports (link aggregation) to create one logical Ethernet link to provide fault-tolerance and high-speed connectivity. In Cisco UCS Manager, you create a port channel first and then add uplink Ethernet ports to the port channel. You can add up to eight uplink Ethernet ports to a port channel.



Note

Cisco UCS uses Link Aggregation Control Protocol (LACP), not Port Aggregation Protocol (PAgP), to group the uplink Ethernet ports into a port channel. If the ports on the upstream switch are not configured for LACP, the fabric interconnects treat all ports in an uplink Ethernet port channel as individual ports and therefore forward packets.

Creating an Uplink Ethernet Port Channel

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > LAN Cloud**.
- Step 3** Expand the node for the fabric interconnect where you want to add the port channel.
- Step 4** Right-click the **Port Channels** node and choose **Create Port Channel**.
- Step 5** In the **Set Port Channel Name** page of the **Create Port Channel** wizard, do the following:
- Complete the following fields:

Name	Description
ID field	The identifier for the port channel. Enter an integer between 1 and 256. This ID cannot be changed after the port channel has been saved.

Name	Description
Name field	A user-defined name for the port channel. This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters, and you cannot change this name after the object has been saved.

b) Click **Next**.

Step 6 In the **Add Ports** page of the **Create Port Channel** wizard, do the following:

- a) In the **Ports** table, choose one or more ports to include in the port channel.
- b) Click the >> button to add the ports to the **Ports in the port channel** table.
You can use the << button to remove ports from the port channel.

Note Cisco UCS Manager warns you if you select a port that has been configured as a server port. You can click **Yes** in the dialog box to reconfigure that port as an uplink Ethernet port and include it in the port channel.

Step 7 Click **Finish**.

Enabling an Uplink Ethernet Port Channel

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
 - Step 2** On the **LAN** tab, expand **LAN > LAN Cloud**.
 - Step 3** Expand the node for the fabric interconnect that includes the port channel you want to enable.
 - Step 4** Expand the **Port Channels** node.
 - Step 5** Right-click the port channel you want to enable and choose **Enable Port Channel**.
 - Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
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Disabling an Uplink Ethernet Port Channel

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > LAN Cloud**.
- Step 3** Expand the node for the fabric interconnect that includes the port channel you want to disable.
- Step 4** Expand the **Port Channels** node.
- Step 5** Right-click the port channel you want to disable and choose **Enable Port Channel**.
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Adding Ports to and Removing Ports from an Uplink Ethernet Port Channel

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > LAN Cloud > Fabric > Port Channels**.
- Step 3** Click the port channel to which you want to add or remove ports.
- Step 4** In the **Work** pane, click the **General** tab.
- Step 5** In the **Actions** area, click **Add Ports**.
- Step 6** In the **Add Ports** dialog box, do one of the following:
- To add ports, choose one or more ports in the **Ports** table, and then click the **>>** button to add the ports to the **Ports in the port channel** table.
 - To remove ports, choose one or more ports in the **Ports in the port channel** table, and then click the **<<** button to remove the ports from the port channel and add them to the **Ports** table.
- Step 7** Click **OK**.
-

Deleting an Uplink Ethernet Port Channel

Procedure

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- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > LAN Cloud**.
- Step 3** Expand the node for the fabric interconnect where you want to delete the port channel.
- Step 4** Click the **Port Channels** node.
- Step 5** In the **General** tab for the **Port Channels** node, choose the port channel you want to delete.
- Step 6** Right-click the port channel and choose **Delete**.
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Appliance Port Channels

An appliance port channel allows you to group several physical appliance ports (link aggregation) to create one logical Ethernet storage link for the purpose of providing fault-tolerance and high-speed connectivity. In Cisco UCS Manager, you create a port channel first and then add appliance ports to the port channel. You can add up to eight appliance ports to a port channel.



Note

Cisco UCS uses static mode, not Link Aggregation Control Protocol (LACP), to group the appliance ports into a port channel.

Creating an Appliance Port Channel

Procedure

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- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > Appliances**.
- Step 3** Expand the node for the fabric interconnect where you want to add the port channel.
- Step 4** Right-click the **Port Channels** node and choose **Create Port Channel**.
- Step 5** In the **Set Port Channel Name** page of the **Create Port Channel** wizard, complete the following fields to specify the identity and other properties of the port channel:

Name	Description
ID field	<p>The unique identifier of the port channel.</p> <p>Enter an integer between 1 and 256. This ID cannot be changed after the port channel has been saved.</p>

Name	Description
Name field	A user-defined name for the port channel. This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters.
Priority drop-down list	The quality of service setting associated with this port channel. This can be: <ul style="list-style-type: none"> • fc—Use this priority for QoS policies that control vHBA traffic only. • platinum—Use this priority for QoS policies that control vNIC traffic only. • gold—Use this priority for QoS policies that control vNIC traffic only. • silver—Use this priority for QoS policies that control vNIC traffic only. • bronze—Use this priority for QoS policies that control vNIC traffic only. • best-effort—Do not use this priority. It is reserved for the Basic Ethernet traffic lane. If you assign this priority to a QoS policy and configure another system class as CoS 0, Cisco UCS Manager does not default to this system class. It defaults to the priority with CoS 0 for that traffic.
Pin Group drop-down list	The pin group associated with this port channel.

Step 6 In the **VLANs** area, do the following:

- a) In the **Port Mode** field, click one of the following radio buttons to select the mode you want to use for the port channel:

- **trunk**
- **access**

With either mode selected, you can click the **Create VLAN** link to create a new VLAN.

- b) If you clicked the **trunk** radio button, complete the following fields:

Name	Description
Select column	Check the check box in this column for each VLAN you want to use.
Native VLAN column	To designate one of the VLANs as the native VLAN, click the radio button in this column.

c) If you clicked the **access** radio button, choose a VLAN from the **Select VLAN** drop-down list.

Step 7 (Optional) If you want to add an endpoint, check the **Ethernet Target Endpoint** check box and complete the following fields:

Name	Description
Name field	The name of the endpoint. This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters, and you cannot change this name after the object has been saved.
MAC Address field	The MAC address for the endpoint.

Step 8 Click **Next**.

Step 9 In the **Add Ports** page of the **Create Port Channel** wizard, do the following:

- In the **Ports** table, choose one or more ports to include in the port channel.
- Click the **>>** button to add the ports to the **Ports in the port channel** table.
You can use the **<<** button to remove ports from the port channel.

Note Cisco UCS Manager warns you if your configuration could cause issues with service profiles or port configurations. You can click **Yes** in the dialog box if you want to create the port channel despite those potential issues.

Step 10 Click **Finish**.

Enabling an Appliance Port Channel

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > Appliances**.
- Step 3** Expand the node for the fabric interconnect that includes the port channel you want to enable.
- Step 4** Expand the **Port Channels** node.
- Step 5** Right-click the port channel you want to enable and choose **Enable Port Channel**.
- Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.

Disabling an Appliance Port Channel

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > Appliances**.
- Step 3** Expand the node for the fabric interconnect that includes the port channel you want to disable.
- Step 4** Expand the **Port Channels** node.
- Step 5** Right-click the port channel you want to disable and choose **Disable Port Channel**.
- Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
-

Adding Ports to and Removing Ports from an Appliance Port Channel

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > Appliances > Fabric > Port Channels**.
- Step 3** Click the port channel to which you want to add or remove ports.
- Step 4** In the **Work** pane, click the **General** tab.
- Step 5** In the **Actions** area, click **Add Ports**.
- Step 6** In the **Add Ports** dialog box, do one of the following:
- To add ports, choose one or more ports in the **Ports** table, and then click the **>>** button to add the ports to the **Ports in the port channel** table.
 - To remove ports, choose one or more ports in the **Ports in the port channel** table, and then click the **<<** button to remove the ports from the port channel and add them to the **Ports** table.
- Step 7** Click **OK**.
-

Deleting an Appliance Port Channel

Procedure

-
- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **LAN** tab, expand **LAN > Appliances**.
- Step 3** Expand the node for the fabric interconnect that includes the port channel you want to enable.
- Step 4** Expand the **Port Channels** node.
- Step 5** Right-click the port channel you want to enable and choose **Disable Port Channel**.
- Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
-

Fibre Channel Port Channels

A Fibre Channel port channel allows you to group several physical Fibre Channel ports (link aggregation) to create one logical Fibre Channel link to provide fault-tolerance and high-speed connectivity. In Cisco UCS Manager, you create a port channel first and then add Fibre Channel ports to the port channel.

You can create up to four Fibre Channel port channels in each Cisco UCS instance. Each Fibre Channel port channel can include a maximum of 16 uplink Fibre Channel ports.

Creating a Fibre Channel Port Channel

Procedure

-
- Step 1** In the **Navigation** pane, click the **SAN** tab.
- Step 2** On the **SAN** tab, expand **SAN > SAN Cloud**.
- Step 3** Expand the node for the fabric where you want to create the port channel.
- Step 4** Right-click the **FC Port Channels** node and choose **Create Port Channel**.
- Step 5** In the **Set Port Channel Name** page of the **Create Port Channel** wizard, do the following:
- Complete the following fields:

Name	Description
ID field	The identifier for the port channel. Enter an integer between 1 and 256. This ID cannot be changed after the port channel has been saved.

Name	Description
Name field	A user-defined name for the port channel. This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters, and you cannot change this name after the object has been saved.

b) Click **Next**.

Step 6 In the **Add Ports** page of the **Create Port Channel** wizard, do the following:

- a) From the **Port Channel Admin Speed** drop-down list, select the admin speed for traffic on the port channel.
- b) In the **Ports** table, choose one or more ports to include in the port channel.
- c) Click the **>>** button to add the ports to the **Ports in the port channel** table.
You can use the **<<** button to remove ports from the port channel.

Step 7 Click **Finish**.

Enabling a Fibre Channel Port Channel

Procedure

Step 1 In the **Navigation** pane, click the **SAN** tab.

Step 2 On the **SAN** tab, expand **SAN > SAN Cloud > Fabric > FC Port Channels**.

Step 3 Click the port channel you want to enable.

Step 4 In the **Work** pane, click the **General** tab.

Step 5 In the **Actions** area, click **Enable Port Channel**.

Step 6 If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.

Disabling a Fibre Channel Port Channel

Procedure

-
- Step 1** In the **Navigation** pane, click the **SAN** tab.
- Step 2** On the **SAN** tab, expand **SAN > SAN Cloud > Fabric > FC Port Channels**.
- Step 3** Click the port channel you want to disable.
- Step 4** In the **Work** pane, click the **General** tab.
- Step 5** In the **Actions** area, click **Disable Port Channel**.
- Step 6** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
-

Adding Ports to and Removing Ports from a Fibre Channel Port Channel

Procedure

-
- Step 1** In the **Navigation** pane, click the **SAN** tab.
- Step 2** On the **SAN** tab, expand **SAN > SAN Cloud > Fabric > FC Port Channels**.
- Step 3** Click the port channel to which you want to add or remove ports.
- Step 4** In the **Work** pane, click the **General** tab.
- Step 5** In the **Actions** area, click **Add Ports**.
- Step 6** In the **Add Ports** dialog box, do one of the following:
- To add ports, choose one or more ports in the **Ports** table, and then click the **>>** button to add the ports to the **Ports in the port channel** table.
 - To remove ports, choose one or more ports in the **Ports in the port channel** table, and then click the **<<** button to remove the ports from the port channel and add them to the **Ports** table.
- Step 7** Click **OK**.
-

Modifying the Properties of a Fibre Channel Port Channel



Note

If you are connecting two Fibre Channel port channels, the admin speed for both port channels must match for the link to operate. If the admin speed for one or both of the Fibre Channel port channels is set to auto, Cisco UCS adjusts the admin speed automatically.

Procedure

- Step 1** In the **Navigation** pane, click the **SAN** tab.
- Step 2** On the **SAN** tab, expand **SAN > SAN Cloud > Fabric > FC Port Channels**.
- Step 3** Click the port channel that you want to modify.
- Step 4** In the **Work** pane, click the **General** tab.
- Step 5** In the **Actions** area, change the values in one or more of the following fields:

Name	Description
Name field	The user-defined name given to the port channel. This name can be between 1 and 16 alphanumeric characters.
VSAN drop-down list	The VSAN associated with the port channel.
Port Channel Admin Speed drop-down list	The admin speed of the port channel. This can be: <ul style="list-style-type: none"> • 1 Gbps • 2 Gbps • 4 Gbps • 8 Gbps • auto

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

Deleting a Fibre Channel Port Channel

Procedure

- Step 1** In the **Navigation** pane, click the **LAN** tab.
- Step 2** On the **SAN** tab, expand **SAN > SAN Cloud > Fabric > FC Port Channels**.
- Step 3** Right-click the port channel you want to delete and choose **Delete**.
- Step 4** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.

Configuring Server Ports with the Internal Fabric Manager

Internal Fabric Manager

The Internal Fabric Manager provides a single interface where you can configure server ports for a fabric interconnect in a Cisco UCS instance. The Internal Fabric Manager is accessible from the **General** tab for that fabric interconnect.

Some of the configuration that you can do in the Internal Fabric Manager can also be done in nodes on the **Equipment** tab, on the **LAN** tab, or in the LAN Uplinks Manager.

Launching the Internal Fabric Manager

Procedure

- Step 1** In the **Navigation** pane, click the **Equipment** tab.
 - Step 2** On the **Equipment** tab, expand **Equipment** > **Fabric Interconnects** > *Fabric_Interconnect_Name*.
 - Step 3** Click **Fixed Module**.
 - Step 4** In the **Work** pane, click **Internal Fabric Manager** in the **Actions** area.
The Internal Fabric Manager opens in a separate window.
-

Configuring a Server Port with the Internal Fabric Manager

Procedure

- Step 1** In the Internal Fabric Manager, click the down arrows to expand the **Unconfigured Ports** area.
 - Step 2** Right-click the port that you want to configure and choose **Configure as Server Port**.
 - Step 3** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
 - Step 4** If you have completed all tasks in the Internal Fabric Manager, click **OK**.
-

Unconfiguring a Server Port with the Internal Fabric Manager

Procedure

- Step 1** In the Internal Fabric Manager, click the server port in the **Server Ports** table.
 - Step 2** Click **Unconfigure Port**.
 - Step 3** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
 - Step 4** If you have completed all tasks in the Internal Fabric Manager, click **OK**.
-

Enabling a Server Port with the Internal Fabric Manager

Procedure

- Step 1** In the Internal Fabric Manager, click the server port in the **Server Ports** table.
 - Step 2** Click **Enable Port**.
 - Step 3** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
 - Step 4** If you have completed all tasks in the Internal Fabric Manager, click **OK**.
-

Disabling a Server Port with the Internal Fabric Manager

Procedure

- Step 1** In the Internal Fabric Manager, click the server port in the **Server Ports** table.
 - Step 2** Click **Disable Port**.
 - Step 3** If Cisco UCS Manager GUI displays a confirmation dialog box, click **Yes**.
 - Step 4** If you have completed all tasks in the Internal Fabric Manager, click **OK**.
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