



Equipment Related Policies

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Chassis Discovery Policy

The chassis discovery policy determines how the system reacts when you add a new Cisco UCS S3260 chassis or an existing standalone Cisco UCS S3260 chassis to a Cisco UCS system. [Cisco UCS S3260 System Architectural Overview](#) describes the connectivity for a Cisco UCS S3260 system managed by Cisco UCS Manager. Cisco UCS Manager uses the settings in the chassis discovery policy to determine whether to group links from the system I/O controllers (SIOCs) to the fabric interconnects in fabric port channels.

To add a previously standalone Cisco UCS S3260 chassis to a Cisco UCS system, you must first configure it to factory default. You can then connect both SIOCs on the chassis to both fabric interconnects. After you connect the SIOCs on the chassis to the fabric interconnects, and mark the ports as server ports, chassis discovery begins.



Note Chassis/IOM acknowledgement after chassis/FEX discovery policy changes is not applicable for S3260 chassis.

Server Discovery

Cisco UCS Manager automatically discovers the Cisco UCS S3260 server nodes after the Cisco UCS S3260 chassis is discovered.



Note Server discovery fails if the SIOC corresponding to the server is not present.

Link Grouping

In release 4.0(1a), **Link Group Preference** is automatically set to **Port Channel** when using new SIOC with PCIe slots.



Note For the Cisco UCS 6454 Fabric Interconnect, the **Link Group Preference** is always set to **Port Channel**.

When you connect a Cisco UCS S3260 chassis through a FEX to a Cisco UCS 6200 Series fabric interconnect or directly to a Cisco UCS 6300 Series fabric interconnect, or Cisco UCS 6454 Fabric Interconnect, Cisco UCS Manager ignores the **Port Channel** preference and the SIOCs operate in the non-port channel mode.

When you connect a Cisco UCS S3260 chassis directly to a Cisco UCS 6200 Series fabric interconnect, you can use link grouping to determine whether all of the links from the SIOC to the fabric interconnect are grouped into a fabric port channel during chassis discovery. If the link grouping preference is set to **Port Channel**, all of the links from the SIOC to the fabric interconnect are grouped in a fabric port channel. If set to **None**, links from the SIOC are pinned to the fabric interconnect.

Set the link grouping preference to **Port Channel** if the Cisco UCS S3260 chassis is connected to a Cisco UCS 6200 Series fabric interconnect through a 4x10G breakout cable. If this is not done, chassis discovery will not complete.

Set the link grouping preference to **None** if the Cisco UCS S3260 chassis is connected to a fabric interconnect through a single 10G cable.

After changing the **Link Group Preference** value in the Cisco UCS Manager GUI, Decommission and then Recommission the Cisco UCS S3260 chassis for the change to take effect.

In the Cisco UCS domain, if there are other chassis operating in **Port Channel** mode, do the following:

1. Discover the chassis in the Cisco UCS system with the **Link Group Preference** set to **Port Channel**
2. Change the link aggregation preference for the Cisco UCS S3260 chassis through Chassis Connectivity Policy
3. Decommission the chassis
4. Recommission the chassis

Configuring the Chassis/FEX Discovery Policy

SUMMARY STEPS

1. UCS-A# **scope org /**
2. UCS-A /org # **scope chassis-disc-policy**
3. (Optional) UCS-A /org/chassis-disc-policy # **set descr** *description*
4. UCS-A /org/chassis-disc-policy # **set link-aggregation-pref** {**none** | **port-channel**}
5. UCS-A /org/chassis-disc-policy # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# scope org /	Enters the root organization mode. Note The chassis/FEX discovery policy can be accessed only from the root organization.

	Command or Action	Purpose
Step 2	UCS-A /org # scope chassis-disc-policy	Enters organization chassis/FEX discovery policy mode.
Step 3	(Optional) UCS-A /org/chassis-disc-policy # set descr <i>description</i>	Provides a description for the chassis/FEX discovery policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 4	UCS-A /org/chassis-disc-policy # set link-aggregation-pref { none port-channel }	Specifies whether the links from the SIOCs or FEXes to the fabric interconnects are grouped into a port channel. Link aggregation can be one of the following: <ul style="list-style-type: none"> • none—links from the SIOC or FEX are pinned to the fabric interconnect. • port-channel—links from the SIOCs to the fabric interconnects are grouped into a port channel
Step 5	UCS-A /org/chassis-disc-policy # commit-buffer	Commits the transaction to the system configuration.

Example

The following example scopes to the default chassis discovery policy, provides a description for the policy, sets the link grouping preference to port channel, specifies the server pool policy qualifications that will be used to qualify the chassis, and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope chassis-disc-policy
UCS-A /org/chassis-disc-policy* # set descr "This is an example chassis discovery policy."
UCS-A /org/chassis-disc-policy* # set link-aggregation-pref port-channel
UCS-A /org/chassis-disc-policy* # commit-buffer
UCS-A /org/chassis-disc-policy #
```

What to do next

To customize fabric port channel connectivity for a specific chassis, configure the chassis connectivity policy.

Chassis Connectivity Policy

The chassis connectivity policy determines whether a specific chassis is included in a fabric port channel after chassis discovery. This policy is helpful for users who want to configure one or more chassis differently from what is specified in the global chassis discovery policy.

By default, the chassis connectivity policy is set to global. This means that connectivity control is configured when the chassis is newly discovered, using the settings configured in the chassis discovery policy. Once the chassis is discovered, the chassis connectivity policy controls whether the connectivity control is set to none or port channel.



Note The chassis connectivity policy is created by Cisco UCS Manager only when the hardware configuration supports fabric port channels.

The following table displays the various connectivity and media type support for FC/FCoE.

Table 1: Connectivity and Media Type Support for FC/FCoE

FI	Connectivity	Supported	Port-Channel	FC/FCoE
Cisco UCS 6454 Fabric Interconnect	Direct Connect– 10 GB – QSA	Yes Not using Breakout	¹ SIOC (Non Port-Channel) ² New gen SIOC - No	Yes
Cisco UCS 6454 Fabric Interconnect	Direct Connect– 25G SFP 28	Yes Not using Breakout	SIOC - No New gen SIOC (Port-Channel)	Yes
Cisco UCS 6454 Fabric Interconnect	2232 FEX - 10 GB - QSA	Yes	SIOC (Non Port-Channel) New gen SIOC (Port-Channel)	Yes
Cisco UCS 6454 Fabric Interconnect	2232xx - 4x10 GB - Breakout Cable	Yes	SIOC (Port-Channel) New gen SIOC -No	No
63xx	Direct Connect 40 GB	Yes	SIOC (Non Port-Channel) New gen SIOC -No	Yes
63xx	Direct Connect– 10 GB – QSA	Yes Not using Breakout	SIOC - No New gen SIOC (Port-Channel)	No
63xx	Direct Connect 4x10 GB – Breakout	No	N/A	N/A
63xx	Direct Connect 2x10 GB – Reverse Breakout	Yes	SIOC - No New gen SIOC (Port-Channel)	No
63xx	2348UPQ FEX - 10 GB – QSA	Yes	SIOC (Non Port-Channel) New gen SIOC (Port-Channel)	Yes

FI	Connectivity	Supported	Port-Channel	FC/FCoE
63xx	2348UPQ FEX - 4x10 GB - Breakout	No	N/A	N/A
62xx	Direct Connect – 4x10 GB - Breakout Cable	Yes	SIOC (Port-Channel) New gen SIOC - No	Yes
62xx	Direct Connect – 10 GB – QSA	Yes	SIOC (Non Port-Channel) New gen SIOC (Port-Channel)	Yes
62xx	2232 FEX - 10 GB - QSA	Yes	SIOC (Non Port-Channel) New gen SIOC (Port-Channel)	Yes
62xx	2232xx - 4x10 GB - Breakout Cable	No	N/A	N/A
6324	Direct Connect - 40 GB	No	N/A	N/A
6324	Direct Connect - 10 GB – QSA	No	N/A	N/A

¹ SIOC without PCIe slots used in release 3.2 and earlier

² New SIOC with PCIe slots used in release 4.0 and higher

Configuring a Chassis Connectivity Policy



Caution

Changing the connectivity mode for a chassis will require decommissioning and recommissioning the chassis for the change to take effect.

SUMMARY STEPS

1. UCS-A# **scope** *org org-name*
2. UCS-A /org # **scope chassis-conn-policy** *chassis-num [a | b]*
3. UCS-A /org/chassis-conn-policy # **set link-aggregation-pref** {*global | none | port-channel*}
4. UCS-A /org/chassis-conn-policy # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters the organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .
Step 2	UCS-A /org # scope chassis-conn-policy <i>chassis-num</i> [a b]	Enters chassis connection policy organization mode for the specified chassis and fabric.
Step 3	UCS-A /org/chassis-conn-policy # set link-aggregation-pref { global none port-channel }	Specifies how the links from the SIOCs to the fabric interconnects are grouped. This can be one of the following: <ul style="list-style-type: none"> • none—No links are grouped in a port channel. • port-channel—All links from an SIOC to a fabric interconnect are grouped in a port channel. • global—The chassis inherits this configuration from the chassis discovery policy. This is the default value.
Step 4	UCS-A /org/chassis-conn-policy # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to change the fabric port channel connectivity for two chassis. Chassis 6, fabric A is changed to port channel and chassis 12, fabric B is changed to discrete links:

```
UCS-A# scope org /
UCS-A /org # scope chassis-conn-policy 6 a
UCS-A /org/chassis-conn-policy # set link-aggregation-pref port-channel
UCS-A /org/chassis-conn-policy* # up
UCS-A /org* # scope chassis-conn-policy 12 b
UCS-A /org/chassis-conn-policy* # set link-aggregation-pref none
UCS-A /org/chassis-conn-policy* # commit-buffer
UCS-A /org/chassis-conn-policy #
```