Chassis and FEX Lifecycle

Chassis and Fabric Extender Discovery and Actions

Chassis and Fabric Extender Discovery

Chassis and Fabric Extenders (FEX) that are connected to a Fabric Interconnect are automatically discovered in Cisco Intersight. To discover chassis and FEX connected to a Fabric Interconnect, ensure that the Fabric Interconnect is claimed in Cisco Intersight.

After the Fabric Interconnect is claimed, do the following:

1. Connect the server ports to both Fabric Interconnects. For example, ports 1 and 2 to FI-A and ports 3 and 4 to FI-B.

2. Configure the server ports on both Fabric Interconnects by using a UCS Domain profile. *Creating a UCS Domain Profile* provides detailed information about creating a UCS Domain profile and assigning it to a UCS Fabric Interconnect Domain.

After the server ports are configured and applied, all the chassis and FEX that are connected to the Fabric Interconnect are automatically discovered. During discovery, the chassis and FEX will auto sync firmware with the Fabric Interconnect if their firmware versions do not match the firmware version of the Fabric Interconnect. Because of this, it may take 25-30 minutes for the chassis and FEX to appear in the GUI. You can check the chassis and FEX status through the nxos CLI by using the show fex command.

Chassis Actions

From the left navigation panel, click **Chassis** for the **Chassis** table view. You can perform the following operations to manage one or more chassis.

Chassis Actions

- **Rediscover**—Initiates the chassis discovery process and then the chassis inventory process.

- **Decommission**—Removes the chassis and IOM inventories. A decommissioned chassis is likely to be eventually recommissioned, a part of the chassis information, including the chassis ID, is retained by Cisco Intersight. Decommissioning is performed when a chassis is physically present and connected, but you want to temporarily remove it from the Cisco Intersight configuration.

- **Remove**—Removes the configuration of a physically removed chassis from Cisco Intersight.

  Before physically removing a chassis from the system, ensure that you unconfigure the server ports to which the chassis is connected.

  If you need to add a chassis, which was earlier removed, back to the Cisco Intersight configuration, the chassis must be reconnected and then rediscovered. During rediscovery Cisco Intersight will assign the chassis a new ID that may be different from ID that it was assigned earlier.

- **Recommission**—Brings the chassis and IOM back online and initiates the chassis discovery process and then the chassis inventory process. After this action is complete, you can access the chassis and any servers in it.

  A list of decommissioned chassis is available in the **Devices** area under **Fabric Interconnects** > *Fabric Interconnect Name* > **Connections** > **Decommissioned**.

  When you recommission the chassis, you have the option to configure the chassis ID.

- **Turn On/Off Locator**—Turns on/off the LED Locator.

  Note This option is available only for Intersight Managed Mode servers.

- **Power Cycle Chassis Slot**—Power cycling a chassis slot is an attempt to recover a non-responding device. This operation can be initiated from Chassis Table View and Chassis Connections View by clicking on the Ellipsis (…) icon.

  Note Power cycling a server slot will bring down the server, potentially impacting the application services. Therefore, this option should be utilized with caution to debug any issues with a server in that chassis slot.

- **Upgrade Firmware**—This action is supported only for Cisco UCS S3260 chassis.

- **Collect Tech Support Bundle**—Collects the tech support bundle. An account administrator can select the device and collect the tech support bundle file for the selected device. The downloaded file can be accessed by navigating to **Admin** > **Tech Support Bundles** section. This file can be shared with the TAC team for troubleshooting any issue.

FEX Actions

From the left navigation panel, click **Fabric Interconnects** > *Fabric Interconnect Name* > **Connections** > **Fabric Extenders** for the **FEX** table view. You can perform the following operations to manage one or more FEX.

FEX Actions

- **Decommission**—Decommissioning is performed when a FEX is physically present and connected, but you want to temporarily remove it from the Cisco Intersight configuration. This action takes the FEX offline and removes the FEX inventory. Because it is expected that a decommissioned FEX will be eventually recommissioned, a portion of the FEX information is retained by Cisco Intersight.

- **Remove**—Removing a FEX involves physically removing a FEX from the system. After the physical removal of the FEX is completed, the configuration for that FEX is removed from Cisco Intersight.

  To add a removed FEX back to the Cisco Intersight configuration, it must be reconnected to server ports that are configured on the Fabric Interconnect. The FEX is automatically discovered. During discovery Cisco Intersight will assign the FEX a new ID that may be different from ID that it was assigned earlier.

- **Recommission**—Recommissioning a FEX brings the FEX back online, initiates the FEX discovery process and then the FEX inventory process. After this action is complete, you can access the FEX.

  A list of decommissioned FEX is available in the **Devices** area under **Fabric Interconnects** > *Fabric Interconnect Name* > **Connections** > **Decommissioned**.

- **Turn On Locator**—Turn on the LED Locator on the selected FEX. Locators are indicators that help direct administrators to specific nodes in large data center environments.

- **Turn Off Locator**—Turn off the LED Locator on the selected FEX. Locators are indicators that help direct administrators to specific nodes in large data center environments.

Chassis Table View

From the **Service Selector** drop-down list, select **Infrastructure Service**. Navigate to **Operate > Chassis**, to launch the Chassis Table view. From this page, you can perform chassis actions, and navigate to the chassis details page. Click the **Settings** icon (the gear icon), and select the columns that you want in the Table view.

You can add specific columns or custom tags to the Chassis Table view to sort and filter the information.

You can view the following details in the Chassis Table view:

- **Name**—Name of the chassis. For UCSM Managed Mode (UMM) and Intersight Managed Mode (IMM) servers, the name is a combination of UCS domain name and chassis ID. The chassis ID is auto-assigned depending on the order in which the chassis are discovered. To configure the chassis ID, decommission the chassis and recommission it. During recommission, you can assign the chassis an ID of your choice.

- **Health**—The chassis health corresponds to the alarms on the chassis. For more details, see Alarms.

- **Contract Status**—Displays the status of the service contract for the chassis based on the current validity of the associated contracts. You can identify the SmartNet Contract ID details of the chassis, and cross launch the Cisco Commerce Software Subscriptions and Service Portal.

- **Chassis ID**—Displays the chassis ID.

- **UCS Domain**—UCS Domain to which the chassis belongs. For standalone servers, this column is not applicable.

- **Model**—Displays the chassis model.

- **User Label**—Displays the assigned user label that helps in identification of the chassis.

- **Serial**—Displays the host ID/serial number of the chassis.

- **Chassis Profile**—Displays the chassis profile that is associated with the chassis.

- **Management Mode**—The management mode of the chassis.

Chassis Table Summary Dashboard

The following widget is available in the Chassis Table view:

- **Contract Status**—The badges display distribution of the service contract status of managed UCS and Hyperflex clusters basis the validity of their associated contracts.

Chassis Details View

When you select a chassis in the chassis table view, a Details page with information specific to the chassis is displayed. In addition to the chassis **Health** status, you can view the following information in the Chassis Details page:

- **Name**

- **Serial**—The serial number of the chassis

- **Model**—The model number of the chassis, for example, UCSB-5108-AC2

- **Revision**—The revision number of the chassis

- **Part Number**—The part number of the chassis

- **Management Mode**—The management mode of the chassis.

- **Contract Status**—The contract status of the managed chassis based on the current validity of their associated contracts.

- **UCS Domain**—The name of the UCS Domain of which the selected chassis is a part

- **Chassis Profiles**—Displays the associated Chassis Profile configuration status.

- **Tags**—The existing tags for the selected object are displayed by default. Click **Manage** to add new tags or modify the existing ones.

The **Properties** area provides a graphical representation of the front and rear view of the chassis, the health overlay for the chassis, and an overview of the hardware properties of the chassis and its components.

Note:

The Chassis Details View is supported on the Cisco UCS S3260 Chassis and Intersight Managed Mode chassis.

The **Alarms** area in Cisco Intersight provides fault monitoring capabilities to track and set up alarms for all managed UCS systems. An alarm alerts you about a failure in the endpoint (a fault) or a threshold that has been raised.

Chassis Inventory View

After a chassis is discovered, an inventory of all its components is made available. When you select a chassis in the **Chassis** table view, you can view the inventory of its components in the **Inventory** tab.

For the selected chassis, you can view details of each of the following components:

- **IO Modules**—You can see the name, vendor, model number, management IP address, operational state, and firmware version of the IO modules in the chassis. When you click a specific IO module, you can view the General properties, details of the Backplane Ports and Fabric ports, a Graphic View, and Health Overlay of the IO module.

    Action: You can reset an IO module or its peer IO module from Chassis Inventory View. Resetting the peer IO module through the corresponding IO module initiates a reboot of peer IO module. This helps to recover a peer IO module that is not directly reachable from Intersight.

    Note In the Cisco UCS X-Series chassis, each Intelligent Fabric Module (IFM) contains fan modules. When you click a fan module, you can view the properties and operational state of the fans.

- **XFM Modules**—You can see a summary of the X-Fabric Modules (XFM) in the chassis. Click a specific XFM to view the details of the fan modules. When you click a fan module, you can view the ID, model, and operational state of the fans.

    Note The XFM (UCSX-F-9416) slots are to be present in the respective two slots of UCSX 9508 Chassis.

- **Thermal**—The **General** tab in the Thermal section displays the thermal configuration and statistics. The **Fan Modules** tab displays the name, number of fans, model number, and operational state of the fan modules. When you click a specific fan module, you can view the general details, fan details, graphic view, and health overlay of the fan module.

- **Power**—The **General** tab in the Power section displays the power configuration and statistics. The **PSUs** tab displays the name, model number, vendor name, serial number, and operational state of the PSUs (Power Supply Units). When you click a specific PSU, you can view the general details, graphic view, and health overlay of the PSU.

- **Servers**—You can see the name, slot ID, model number, and serial number of the servers for the selected chassis.

Chassis Connections View

The Connections view provides a list of all the components that are directly or indirectly connected to your chassis, such as Fabric Interconnects and servers.

Depending on the information available for the selected chassis, the following is displayed:

- **Network**

    - **Switches**—Displays the details of the Fabric Interconnects that are connected to the chassis. These details are Name, Health, Model, Vendor, and Serial.

Chassis Topology View

For more information, see Topology.

Chassis Metrics View

For more information, see Chassis Metrics.

Chassis Actions

From the left navigation panel, click **Chassis** for the **Chassis Table View**. In this page, click the Ellipsis (…) icon to perform the following operations to manage one or more chassis. These actions can also be performed for the selected chassis in the Chassis Details View.

- **Rediscover**—Initiates the chassis discovery process and then the chassis inventory process.

- **Decommission**—Removes the chassis and IOM inventories. A decommissioned chassis is likely to be eventually recommissioned, a part of the chassis information, including the chassis ID, is retained by Cisco Intersight. Decommissioning is performed when a chassis is physically present and connected, but you want to temporarily remove it from the Cisco Intersight configuration.

- **Remove**—Removes the configuration of a physically removed chassis from Cisco Intersight.

  Before physically removing a chassis from the system, ensure that you unconfigure the server ports to which the chassis is connected.

  If you need to add a chassis, which was earlier removed, back to the Cisco Intersight configuration, the chassis must be reconnected and rediscovered. During rediscovery Cisco Intersight will assign the chassis a new ID that may be different from the ID that it was assigned earlier.

- **Turn On/Off Locator**—Turns on/off the LED Locator.

> **Note** This option is available only for Intersight Managed Mode servers.

- **Set User Label**—Allows you to set, update, or delete user labels for each chassis. It must be between 1 and 64 alphanumeric characters, containing only the following special characters: ! # $ % & * + , ( ) [ ] { } | / . ? @ _ : ; ~

- **Power Cycle Chassis Slot**—Power cycling a chassis slot is an attempt to recover a non-responding device. This operation can be initiated from Chassis Table View and Chassis Connections View by clicking on the Ellipsis (…) icon.

Note Power cycling a server slot will bring down the server, potentially impacting the application services. Therefore, this option should be utilized with caution to debug any issues with a server in that chassis slot.

- **Upgrade Firmware**—This action is supported only for Cisco UCS S3260 chassis.

- **Recommission**—Brings the chassis and IOM back online and initiates the chassis discovery process and then the chassis inventory process. After this action is complete, you can access the chassis and any servers in it.

  A list of decommissioned chassis is available in the **Devices** area under **Fabric Interconnects** > *Fabric Interconnect Name* > **Connections** > **Decommissioned**.

  When you recommission the chassis, you have the option to configure the chassis ID.

- **Collect Tech Support Bundle**—Collect the tech support bundle. An Account Administrator or a user with Support Services role can select the device and collect the tech support bundle file for the selected device. The downloaded file can be accessed by navigating to **Admin** > **Tech Support Bundles** section. This file can be shared with the TAC team for troubleshooting any issue.

Fabric Extender Details View

When you select a Fabric Extender (FEX) in the FEX table view, a Details page with information specific to the chassis is displayed. In addition to the FEX **Health** status, you can view the following information in the FEX Details page:

- **Name**

- **Serial**—The serial number of the Fabric Extender

- **Model**—The model number of the Fabric Extender

- **Vendor**—The name of the manufacturer

- **Revision**—The revision number of the Fabric Extender

- **Part Number**—The part number of the Fabric Extender

- **Ports**—The total number of ports on the Fabric Extender, and their operational status. The status can be:

  - **Used**—Number of ports that are currently connected to the Fabric Interconnects and servers

  - **Available**—Number of ports available for use on the Fabric Extender

- **Tags**—The existing tags for the Fabric Extender. You can add new tags, or modify the existing ones from **Manage** tags.

Fabric Extender Inventory View

After a Fabric Extender (FEX) is discovered, an inventory of all its components is made available. When you select a FEX in the **FEX** table view, you can view the inventory of its components on the **Inventory** tab.

For the selected FEX, you can view details of each of the following components:

- **Ports**—The details of all the **Backplane Ports** and **Fabric Ports** on the FEX that is selected.

  The **Backplane Ports** table shows the server ports, which are host ports. This includes information such as the port **Name**, **Status**, **Port Channel ID** to which it belongs, **Speed** of the port and the **Peer** server port.

  The **Fabric Ports** table shows the network ports that are connected to the Fabric Interconnect. This includes information such as the port **Name**, **Status**, **Port Channel ID** to which it belongs, **Switch Slot ID** of the Fabric Interconnect to which it is connected, the **Peer** Fabric Interconnect, and the **Switch Port ID** of the Fabric Interconnect to which it is connected.

  It also includes detailed hardware information and graphic view of each port.

- **Fan Modules**—The details of all the fan modules on the FEX, such as **Name**, **Fans**, **Model**, and **Status**.

  It also includes detailed hardware information and graphic view of each fan module and the fans in it.

- **PSUs**—The details of the Power Supply Units (PSUs) on the FEX, such as **Name**, **ID**, **Model**, **Vendor**, **Serial** and **Status**.

  It also includes detailed hardware information and graphic view of each PSU.

Fabric Extender Connection View

The Connections view provides a list of all the components that are directly or indirectly connected to your Fabric Extender (FEX), such as servers and Fabric Interconnects.

Depending on the information available for the selected FEX, the following is displayed:

- **Compute**

  - **Servers**—The details of all the servers that are connected to the FEX. These details are Name, Health, User Label, Model, and Serial.

- **Network**

  - **Switches**—Displays the details of the Fabric Interconnects that are connected to the FEX. These details are Name, Health, Model, Vendor, and Serial.