

Chassis Profiles and Templates

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About the Cisco UCS C3260 Storage Server

The Cisco UCS C3260 Storage Server is a dense storage rack server with dual server nodes, optimized for large datasets used in environments such as big data, cloud, object storage, and content delivery. It belongs to the Cisco UCS C-Series rack-mount servers product family.

The Cisco UCS C3260 Storage Server is designed to operate in a standalone environment and as part of the Cisco Unified Computing System with Cisco UCS Manager integration. It assumes almost the same characteristics of its predecessors, the Cisco UCS C3160 Rack Server, but with the following additional features:

- System IO Controllers (SIOC).
- Support of up to two server modules.
- Capability to operate in a standalone mode.
- Chassis level functionality in the standalone mode—Shared components such as storage adapters, fans and power supply units are configured at the chassis level.

- Data Center Ethernet connectivity to a server host through a shared dual virtual interface card (VIC).
- Individual hard disk drives (HDD) can be assigned to either server in the dedicated or shared mode.

In addition, one of the server slots in the Cisco UCS C3260 Storage Server can be utilized by a storage expansion module for an additional four 3.5" drives. The server modules can also accommodate two solid state drives (SSD) for internal storage dedicated to that module. The chassis supports Serial Attached SCSI (SAS) expanders that can be configured to assign the 3.5" drives to individual server modules.

For more information, see the Cisco UCS 3260 Quick Reference Guide.

Chassis Profiles

A chassis profile defines the storage, firmware and maintenance characteristics of a chassis. You can create a chassis profile for the Cisco UCS C3260 Storage Server. When a chassis profile is associated to a chassis, Cisco UCS Central automatically configures the chassis to match the configuration specified in the chassis profile.

A chassis profile includes four types of information:

- Chassis definition—Defines the specific chassis to which the profile is assigned.
- Maintenance policy—Includes the maintenance policy to be applied to the profile.
- **Firmware specifications**—Defines the chassis firmware package that can be applied to a chassis through this profile.
- Disk zoning policy—Includes the zoning policy to be applied to the storage disks.

Guidelines and Recommendations for Chassis Profiles

In addition to any guidelines or recommendations that are specific to the policies included in chassis profiles and chassis profile templates, such as the disk zoning policy, adhere to the following guidelines and recommendations that impact the ability to associate a chassis profile with a chassis:

- Each chassis can be associated with only one chassis profile. Similarly, each chassis profile can be associated with only one chassis at a time.
- Chassis profiles are supported only on the Cisco UCS C3260 Storage Server.
- C bundles earlier than Cisco UCS Manager Release 3.1(2) are not supported on the Cisco UCS C3260 Storage Server.

Creating or Editing a Chassis Profile Template

- **Step 1** In the **Actions** bar, type **Create Chassis Profile Template** and press enter.
- **Step 2** In **Basic**, select the **Organization** where you want to create the chassis profile template.

- a) Enter a Name and optional Description and User Label to help identify the chassis profile template.
- b) Choose a **Template Instantiation Mode**:
 - **Initial**—Chassis profiles created from this template inherit all the properties of the template, but will not be updated when this template is updated.
 - **Updating**—Chassis profiles created from this template remain connected and are automatically updated when this template is updated.
- Step 3 Click the Policies tab to assign existing policies to the chassis profile template.

 You can click on a policy and use the drop-down option on the right to assign the policy to the template.
- Step 4 Click Create.

Creating a Chassis Profile from a Template

Procedure

- **Step 1** In the Actions bar, type Create Chassis Profile from Template and press Enter.
- **Step 2** Choose the chassis profile template that you want to use from the **Chassis Profile Template to Instantiate**, and select the **Organization** where you want to create the chassis profile.
- **Step 3** Determine the type of **Chassis Profile Naming Convention** that you want to use. This can be one of the following:
 - Manual Entry—Enter the chassis profile names as comma separated values. A chassis profile will be created for each value entered.
 - Advanced—Enter the prefix, suffix, number of chassis profiles, the first number, and the number of digits.

The chassis profiles are created using the format prefixXXsuffix. For example, three chassis profiles starting at 400 and using 4 digits would be called prefix0400suffix, prefix0401suffix, and prefix0402suffix.

Note You can create up to 99 chassis profiles at one time from a single template.

Step 4 Click Create.

Manually Assigning a Chassis to a Chassis Profile

Procedure

- **Step 1** Click **Browse Tables** and choose **Profiles**.
- **Step 2** On the **Profiles** page, choose the chassis profile that you want to modify.
- Step 3 On the Chassis Profile page, click the Tools icon and choose Assign Chassis Manually.
- **Step 4** Choose the chassis that you want to assign to the chassis profile.
- Step 5 Click Assign.

Chassis Profile Template Details

The Chassis Profile Template details page displays detailed information on the chassis profile template. From here you can:

- · View audit logs.
- Create a chassis profile from this chassis profile template.
- Delete, clone, or rename the chassis profile template.

Templates Table

The **Templates** page allows you to view all templates in Cisco UCS Central. You can filter to view the following types of template:

- Chassis profile template
- Service profile template
- · vHBA template
- vNIC template

From this page, you can:

- Add tags to one or more templates.
- Delete one or more templates.
- Click on a selected template to view the details page for that template.

Chassis Profile Details

The Chassis Profile details page displays detailed information on the chassis profile. From here you can:

- View logs and configuration status.
- Create a chassis profile template from this chassis profile.
- Bind or unbind from the chassis profile template.
- Assign or unassign a chassis.
- Reapply the configuration to the associated chassis.
- Delete, clone, or rename the chassis profile.
- · Acknowledge and decommission a chassis.
- Turn on or turn off the Locator LED for a chassis.
- Launch Cisco UCS Manager for the specific Cisco UCS domain.



• Your browser must have pop-ups enabled.

- For Cisco UCS Manager release 3.1(2) or later, this launches the HTML5 GUI. If the Cisco UCS Manager credentials match the credentials for your Cisco UCS Central login, then the system will automatically log in to the Cisco UCS Manager GUI without prompting for the login information.
- For Cisco UCS Manager release 3.1(1) or previous, this launches the Java-based GUI.

Local Chassis Profiles

The Local Chassis Profile details page displays detailed information on a local chassis profile. Local chassis profiles are managed by Cisco UCS Manager.

From here you can:

- · View logs.
- Acknowledge and decommission a chassis.
- Turn on or turn off the Locator LED for a chassis.
- Launch Cisco UCS Manager for the specific Cisco UCS domain.



Note

- Your browser must have pop-ups enabled.
- For Cisco UCS Manager release 3.1(2) or later, this launches the HTML5 GUI. If the Cisco UCS Manager credentials match the credentials for your Cisco UCS Central login, then the system will automatically log in to the Cisco UCS Manager GUI without prompting for the login information.
- For Cisco UCS Manager release 3.1(1) or previous, this launches the Java-based GUI.

Profiles Table

The **Profiles** page allows you to view all service profiles or all chassis profiles in Cisco UCS Central. Select either **Service Profiles** or **Chassis Profiles** from the top of the page.

From this page, you can:

- Filter which service profiles or chassis profiles are displayed.
- Add tags to one or more service profiles or chassis profiles.
- Delete one or more service profiles or chassis profiles.
- Click on a selected service profile or chassis profile to view the details page for that profile.

Chassis Inventory

The **Chassis** page displays the following information related to the chassis associated with the registered Cisco UCS domain:

This column displays the following information for a chassis: • The associated domain name and chassis ID • Domain group location • Fabric side This column displays the following hardware information for a chassis: • Model number of the chassis • Serial number of the chassis • Number of blades • Number of blades This column displays the following configuration for a Chassis: • Configuration error count • Overall state to count • Power status • This column displays the following configuration for a Chassis: • Configuration error count • Power status • Decommission chassis.
You can recommissi chassis by specifying chassis ID.

Storage Chassis View

The Storage Chassis page allows you to manage and monitor all Cisco UCS C3260 Storage Servers in a Cisco UCS domain.

You can view the following information on the selected chassis and its components:

• **Basic**—Displays the overall status and an overview of all the components within the selected chassis, fault summary, configuration errors and hardware details.

- System IO Controllers—Displays overall status and detailed information about the shared adapter.
- **Servers**—Displays overall status, hardware, and firmware details of the server associated with this chassis. If you select a server, the page redirects to the server detail view page.
- SAS Expanders—Displays the overall status, configuration, and hardware for each SAS expander associated with this chassis.
- **Storage Enclosures**—Displays the overall status and configuration of the storage enclosures associated with this chassis by enclosure or by slot.
- **Storage**—Displays list of the storage in the selected server. Select a disk to view the current overall status, hardware, and controller details.
- Fans—Displays a list of fans in the chassis. Select a fan to view information related to its module, overall status and hardware details.
- **PSUs**—Displays a list of all the PSUs in the chassis. Select a PSU to view information related to its fault summary, overall status, and other property details.

You can also perform the following tasks:

- Acknowledge and decommission a chassis.
- Turn on or turn off the Locator LED for a chassis.
- Modify the discovery policy for the selected chassis.
- Launch Cisco UCS Manager for the specific Cisco UCS domain.



- Your browser must have pop-ups enabled.
- For Cisco UCS Manager release 3.1(2) or later, this launches the HTML5 GUI.
 If the Cisco UCS Manager credentials match the credentials for your Cisco UCS Central login, then the system will automatically log in to the Cisco UCS Manager GUI without prompting for the login information.
- For Cisco UCS Manager release 3.1(1) or previous, this launches the Java-based GUI.

Viewing Chassis Profile Configuration Status

- **Step 1** Click the **Browse Tables** icon and choose **Profiles**.
- Step 2 Click Chassis Profiles.
- **Step 3** Select the chassis profile for which you want to view configuration status.
- Step 4 On the detailed view for your selection, click the Alerts icon and choose Configuration Status. The Configuration Status page displays.

Step 5 Click **Close** to close the window.

Chassis Profile Faults

To view consolidated faults of both the chassis profile and associated chassis, click the **Alerts** icon on the chassis profile page and choose **Faults**. The following information is displayed:

- Filters—Filter the data in the table by severity, fault type, and timestamp.
- Code—Unique identifier associated with the fault.
- Timestamp—Day and time at which the fault occurred.
- Cause—Brief description of what caused the fault.
- Affected Object—The name and location of the component that this issue affects, and the domain name where it is found.
- Fault Details—More information about the log message.
- Severity—Displays an icon denoting the fault severity. The icon key displays below the table.
- Action—Any action required by the fault.

Chassis Profile Inventory Faults

You can view faults from each chassis associated with a chassis profile. To view chassis faults, click the **Faults** icon in the **Chassis Fault Summary** section of a **Chassis Profile** details page. The **Faults Logs** page displays information on the type and severity level of the fault and allows you to monitor and acknowledge the faults.

- Filters—Filter the data in the table by severity, fault type, and timestamp.
- Code—Unique identifier associated with the fault.
- Timestamp—Day and time at which the fault occurred.
- Cause—Brief description of what caused the fault.
- Affected Object—The name and location of the component that this issue affects, and the domain name
 where it is found.
- Fault Details—More information about the log message.
- Severity—Displays an icon denoting the fault severity. The icon key displays below the table.
- Action—Whether user acknowledgment is required.

Chassis Discovery Policy

The chassis discovery policy determines whether a specific chassis is included in a fabric port channel after chassis discovery. This allows for different chassis connectivity modes per fabric interconnect. By default, the chassis discovery policy is set to global. This means that connectivity control is configured when the chassis is newly discovered, using the settings configured for Chassis/FEX Link Grouping Policy on the domain group system policy. Depending on the domain group equipment policy setting, the chassis links are either all set to port channel or single links.

When you set the chassis discovery policy manually for a chassis, you have the following options:

- None—All links functions as single links.
- Port Channel—All links functions as a port channel.
- Global—All links use the settings in the Equipment policy for the entire domain group.
 For more information, see Managing Equipment Policies in the Cisco UCS Central Administration Guide.



The chassis discovery policy is applicable only when the hardware configuration supports fabric port channels, and the chassis is directly connected to a fabric interconnect.

Configuring a Chassis Discovery Policy

Procedure

- **Step 1** Click the **Browse Tables** icon and choose **Chassis**.
- Step 2 Click a chassis.
- **Step 3** On the chassis page, click the **Tasks** icon and choose **Discovery Policy**.
- **Step 4** Choose whether to use the global domain group policy, force all links to function as a port channel, or force all links to function as single links.
- Step 5 Click Save.

Chassis Maintenance Policy

A chassis maintenance policy determines when a chassis is rebooted when changes are made to the chassis profile. By default, the chassis maintenance policy always requires that a user acknowledges the changes before the reboot occurs.

Creating or Editing a Chassis Maintenance Policy

All chassis maintenance policies require user acknowledgment before any maintenance-related configuration can be applied to the chassis.

Procedure

- **Step 1** In the **Actions** bar, type **Create Maintenance Policy** and press Enter.
- **Step 2** In the Maintenance Policy Create dialog box, choose Chassis.
- **Step 3** Choose the **Organization** where you want to create the policy, and enter the **Name** and optional **Description**. The name is case sensitive.
- **Step 4** Click **Evaluate** to view the impact of the policy.
- Step 5 Click Create.

Chassis Firmware Package Policy

The Chassis Firmware Package Policy page displays details about an individual chassis firmware package policy. From this page, you can edit the policy or view the chassis to which the policy is associated.

Creating or Editing a Chassis Firmware Package Policy

- Step 1 In the Actions bar, type Create Chassis Firmware Package Policy and press Enter.
- **Step 2** In the **Chassis Firmware Package Policy** dialog box, click **Basic** and choose the **Organization** in which you want to create the policy.
- **Step 3** Enter a **Name** and optional **Description**. The policy name is case-sensitive.
- Step 4 Select the Chassis Version of the firmware, as required for your environment.Note Only Cisco UCS Manager version 3.1(2) and above C bundles are supported.
- **Step 5** In the **Components** tab, click **Add** to select any components that want to exclude from the firmware update. The included and excluded components display. The following components can be excluded:
 - Chassis adapter
 - · Chassis board controller
 - Chassis management controller
 - · Local disk
 - SAS expander

- Storage controller
- a) To exclude all components, click Excluded Components.
- b) To remove an excluded component, select it and click **Delete**.

Step 6 Click Create.

Note To understand the impact of the policy, click

Evaluate.

Disk Zoning Policies

Disk zoning policies allow you to manage the disks on your chassis servers when associated in a chassis profile. After a disk zoning policy has been created, you can view the disk zoning policy page to review what is included in the policy.

Depending on the storage controller, the disk types that are supported for your disk zoning policy may vary:

Storage Controller	Supported Disk Types
UCSC-C3X60-R1GB	Supports unassigned, dedicated, and chassis spare disks.
UCS-C3K-M4RAID	Supports unassigned, dedicated, and chassis spare disks on the UCSC-C3K-M4SRB server only.
UCSC-C3X60-HBA	Supports shared disks for data storage operations only. LUNs cannot be created on the shared disks.

Creating or Editing a Disk Zoning Policy

Procedure

- **Step 1** In the **Actions** bar, type **Create Disk Zoning Policy** and press Enter.
- **Step 2** In the **Basic** tab, enter the **Name** and optional **Description**.
- **Step 3** Choose whether to enable **Preserve Configuration**.

If enabled, any disk zoning that is configured on the chassis remains as is when the chassis is associated to a chassis profile. If disabled, enter your disk zoning preferences in the **Disk Slots** tab.

- **Step 4** In **Disk Slots**, assign the disks as follows:
 - Unassigned—The disks are not visible to any server, and can be allocated as dedicated, shared, or chassis hot spare.
 - **Dedicated**—Disks are assigned to the specified controller, and are not visible to any other controllers in the chassis.

- **Shared**—Disks are visible to multiple servers and controllers, and can be used for disk failover. Each disk slot must be assigned two controllers.
- Chassis Global Hot Spares—Disks will be made available to a controller if no hot spares on that controller are available.

Step 5 Click Create.

Viewing System IO Configuration Status

- **Step 1** Click the **Browse Tables** icon and choose **Chassis**.
- **Step 2** Click a storage chassis.
- **Step 3** On the storage chassis page, click **System IO Controller**.
- **Step 4** Click a system IO controller to expand it.
- **Step 5** Click the **Tools** icon and choose **Configuration Status**.
- Step 6 On the storage chassis page, click System IO Controller.
 On the System IO Controller dialog box, you can view the SIOC, the CMC, and the chassis discovery configuration status.
- Step 7 Click Close.