



Replacing a C125 M5 Compute Node

This chapter explains how to shut down and replace a Cisco UCS C125 M5 compute node in a Cisco UCS C4200 Server Chassis. Instructions for optionally exporting and importing a Cisco IMC configuration are also included.

- [Shutting Down and Removing Power From a Node, on page 1](#)
- [Replacing a Node in a Chassis, on page 4](#)

Shutting Down and Removing Power From a Node

Compute nodes include a physical power button so that you can shut down the individual node and any installed operating system by using the power button on the node or the software interface.



Caution Always shut down the node before removing it from the chassis, as described in the procedures. Failure to shut down the node before removal results in the corresponding RAID supercap cache being discarded and other data might be lost.



Caution To avoid data loss or damage to your operating system, you should always invoke a graceful shutdown.

The compute node can run in either of two power modes:

- Main power mode—Power is supplied to all server components and any operating system on your drives can run.
- Standby power mode—Power is supplied only to the service processor and certain components. It is safe for the operating system and data to remove the node from the chassis in this mode.

Shutting Down a Node Using the Power Button

Step 1 Check the color of the Power button/LED on the face of the compute node:

- Amber—The node is already in standby mode and you can safely remove it from the chassis.

- Green—The node is in main power mode and must be shut down before you can safely remove it from the chassis.

Step 2 Invoke a graceful shutdown by pressing and releasing the **Power** button.

Caution To avoid data loss or damage to your operating system, you should always invoke a graceful shutdown of the operating system. Do not power off a node if any firmware or BIOS updates are in progress.

With a graceful shutdown, the operating system performs a graceful shutdown and the node goes to standby mode, which is indicated by an amber Power button/LED.

As a best practice, attempt a graceful shutdown first. As an option, you can also invoke an Emergency shutdown, by pressing and holding the **Power** button for 4 seconds to force the main power off and immediately enter standby mode.

Shutting Down a Node Using The Cisco IMC GUI

You must log in with user or admin privileges to perform this task.

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

Step 2 On the Chassis tab, click **Summary**.

Step 3 In the toolbar above the work pane, click the **Host Power** link.

The Server Power Management dialog opens. This dialog lists all servers that are present in the system.

Step 4 In the **Server Power Management** dialog, select Shut Down for the server that you want to shut down. Shut Down performs a graceful shutdown of the operating system.

Note To avoid data loss or damage to your operating system, you should always invoke a graceful shutdown of the operating system. Do not power off a node if any firmware or BIOS updates are in progress.

- It is safe to remove the node from the chassis when the Chassis Status pane shows the Power State as Off for the node that you are removing.
- The physical power button on the node also turns amber when it is safe to remove the node from the chassis.
- The **Server Power Management** dialog also has a Power Off option, but you should use Shut down as a best practice. The Power Off option is a forced shutdown that powers off the chosen node even if tasks are running on that server. Use Power Off only if the Shut Down option does not complete successfully.

Shutting Down Using The Cisco IMC CLI

You must log in with user or admin privileges to perform this task.

Step 1 At the server prompt, enter:

Example:

```
server# scope chassis
```

Step 2 At the chassis prompt, enter:

Example:

```
/chassis# power shutdown
```

The operating system performs a graceful shutdown and the node goes to standby mode, which is indicated by an amber Power button/LED.

Shutting Down a Node Using The Cisco UCS Manager Equipment Tab

You must log in with user or admin privileges to perform this task.

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

Step 2 Expand **Equipment > Chassis > Chassis Number > Servers**.

Step 3 Choose the node that you want to shut down.

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

Step 5 In the Actions area, click **Shutdown Server**.

Step 6 If a confirmation dialog displays, click **Yes**.

The operating system performs a graceful shutdown and the server goes to standby mode, which is indicated by an amber Power button/LED.

Shutting Down a Node Using The Cisco UCS Manager Service Profile

You must log in with user or admin privileges to perform this task.

Step 1 In the Navigation pane, click **Servers**.

Step 2 Expand **Servers > Service Profiles**.

Step 3 Expand the node for the organization that contains the associated service profile.

Step 4 Choose the service profile of the node that you are shutting down.

Step 5 In the **Work** pane, click the **General** tab.

Step 6 In the **Actions** area, click **Shutdown Server**.

Step 7 If a confirmation dialog displays, click **Yes**.

The operating system performs a graceful shutdown and the server goes to standby mode, which is indicated by an amber Power button/LED.

Replacing a Node in a Chassis

Use the procedures in this section to remove and replace a compute node in a chassis.

C125 M5 Compute Node Population Rules

Observe the following rules:

- The C4200 Server Chassis can use 2, 3, or 4 compute nodes.
- Install compute nodes to the lowest-numbered bays first.
- Keep a node blanking panel (UCSC-NBLKD-C4200) in any unused node bays to ensure adequate airflow and cooling.
- Front-loading drives and supercap units in the chassis are not seen by the system unless they correspond to an installed compute node. That is, drives in group 1 and supercap 1 must have node 1 installed, and so on.

Replacing a Node

The compute node is accessed from the rear of the system chassis, so you do not have to pull the system out from the rack.



Note You do not have to remove power from the system chassis in this procedure. Replacement with the chassis powered on is supported if you shut down the server node before removal.



Caution Always shut down the node before removing it from the chassis, as described in the procedures. Failure to shut down the node before removal results in the corresponding RAID supercap cache being discarded and other data might be lost.



Caution Before you replace a server node, export and save the Cisco IMC configuration from the node if you want that same configuration on the new node. You can import the saved configuration to the new replacement node after you install it. This chapter contains procedures for exporting and importing a configuration.

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- Step 1** Optional—Export the Cisco IMC configuration from the server node that you are replacing so that you can import it to the replacement server node. If you choose to do this, use the procedure in [Exporting Cisco IMC Configuration From a Node, on page 5](#), then return to the next step.
- Step 2** Shut down the node by using the software interface or by pressing the node power button, as described in [Shutting Down and Removing Power From a Node, on page 1](#).
- Step 3** Disconnect any cables from ports on the node or installed cards.

- Step 4** Remove the node from the system:
- Loosen the captive thumbscrew on the ejector lever of the node.
 - Rotate the ejector lever to the outside to evenly disengage the node from its midplane connectors.
 - Pull the node straight out from the system.
- Step 5** Install a new node:
- With the ejector lever fully open, align the new node with the empty bay.
 - Push the server node into the bay until it engages with the midplane connectors and is flush with the chassis.
 - Place your fingers on the flat area of the faceplate near the thumbscrew, and push to completely seat the module.
 - Rotate the ejector lever toward the center until it lays flat.
 - Tighten the thumbscrew on the ejector lever to secure the node in the chassis bay.
- Step 6** Connect any cables that you removed to the new node.
- Step 7** Power on the server node.
- Step 8** Perform initial setup on the new server node to assign an IP address and your other preferred network settings. See Initial System Setup in the C4200 Installation Guide.
- Step 9** Optional—Import the Cisco IMC configuration that you saved in step 1. If you choose to do this, use the procedure in [Importing Cisco IMC Configuration to a Node, on page 6](#).

Exporting Cisco IMC Configuration From a Node

This operation can be performed using either the GUI or CLI interface of the Cisco IMC. The example in this procedure uses the CLI commands. For more information, see *Exporting a Cisco IMC Configuration* in the CLI and GUI guides here: [Configuration Guides](#).

Step 1 Log in to the IP address and CLI interface of the node that you are replacing.

Step 2 Enter the following commands as you are prompted:

```
Server# scope cimc
Server /cimc# scope import-export
Server /cimc/import-export# export-config <protocol> <ip-address> <path-and-filename>
```

Step 3 Enter the user name, password, and pass phrase.

This sets the user name, password, and pass phrase for the file that you are exporting. The export operation begins after you enter a pass phrase, which can be anything that you choose.

To determine whether the export operation has completed successfully, use the **show detail** command. To abort the operation, type CTRL+C.

The following is an example of an export operation. In this example, the TFTP protocol is used to export the configuration to IP address 192.0.2.34, in file /ucs/backups/cimc5.xml.

```
Server# scope cimc
Server /cimc # scope import-export
Server /cimc/import-export # export-config tftp 192.0.2.34 /ucs/backups/cimc5.xml
Username:xxxx
Password:****
Passphrase:***
Export config started. Please check the status using "show detail".
Server /cimc/import-export # show detail
Import Export:
```

```

Operation: EXPORT
Status: COMPLETED
Error Code: 100 (No Error)
Diagnostic Message: NONE

```

Importing Cisco IMC Configuration to a Node

This operation can be performed using either the GUI or CLI interface of the Cisco IMC. The example in this procedure uses the CLI commands. For more information, see *Importing a Cisco IMC Configuration* in the CLI and GUI guides for S3260 Storage Servers here: [Configuration Guides](#).

Step 1 SSH into the CLI interface of the new server node.

Step 2 Enter the following commands as you are prompted:

```

Server# scope cimc
Server /cimc# scope import-export
Server /cimc/import-export# import-config <protocol> <ip-address> <path-and-filename>

```

Step 3 Enter the user name, password, and pass phrase.

This should be the user name, password, and pass phrase that you used during the export operation. The import operation begins after you enter the pass phrase.

The following is an example of an import operation. In this example, the TFTP protocol is used to import the configuration to the server node from IP address 192.0.2.34, from file /ucs/backups/cimc5.xml.

```

Server# scope cimc
Server /cimc # scope import-export
Server /cimc/import-export # import-config tftp 192.0.2.34 /ucs/backups/cimc5.xml
Username:xxxx
Password:****
Passphrase:***
Export config started. Please check the status using "show detail".
Server /cimc/import-export # show detail
Import Export:
Operation: IMPORT
Status: COMPLETED
Error Code: 100 (No Error)
Diagnostic Message: NONE

```
