



Cisco UCS Director HP Management Guide, Release 6.5

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Audience

This guide is intended primarily for data center administrators who use Cisco UCS Director and who have responsibilities and expertise in one or more of the following:

- Server administration
- Storage administration
- Network administration
- Network security
- Virtualization and virtual machines

Conventions

Text Type	Indication
GUI elements	GUI elements such as tab titles, area names, and field labels appear in this font . Main titles such as window, dialog box, and wizard titles appear in this font .
Document titles	Document titles appear in this font.
TUI elements	In a Text-based User Interface, text the system displays appears in this font.

Text Type	Indication
System output	Terminal sessions and information that the system displays appear in this font.
CLI commands	CLI command keywords appear in this font .
	Variables in a CLI command appear in this font.
[]	Elements in square brackets are optional.
{x y z}	Required alternative keywords are grouped in braces and separated by vertical bars.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
<>	Nonprinting characters such as passwords are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!,#	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the document.



Caution

Means *reader be careful*. In this situation, you might perform an action that could result in equipment damage or loss of data.



Tip

Means *the following information will help you solve a problem*. The tips information might not be troubleshooting or even an action, but could be useful information, similar to a Timesaver.



Timesaver

Means the described action saves time. You can save time by performing the action described in the paragraph.



IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

Related Documentation

Cisco UCS Director Documentation Roadmap

For a complete list of Cisco UCS Director documentation, see the *Cisco UCS Director Documentation Roadmap* available at the following URL: http://www.cisco.com/en/US/docs/unified_computing/ucs/ucs-director/doc-roadmap/b_UCSDirectorDocRoadmap.html.

Cisco UCS Documentation Roadmaps

For a complete list of all B-Series documentation, see the *Cisco UCS B-Series Servers Documentation Roadmap* available at the following URL: http://www.cisco.com/go/unifiedcomputing/b-series-doc.

For a complete list of all C-Series documentation, see the *Cisco UCS C-Series Servers Documentation Roadmap* available at the following URL: http://www.cisco.com/go/unifiedcomputing/c-series-doc.



The Cisco UCS B-Series Servers Documentation Roadmap includes links to documentation for Cisco UCS Manager and Cisco UCS Central. The Cisco UCS C-Series Servers Documentation Roadmap includes links to documentation for Cisco Integrated Management Controller.

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to ucs-director-docfeedback@cisco.com. We appreciate your feedback.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see What's New in Cisco Product Documentation.

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the What's New in Cisco Product Documentation RSS feed. RSS feeds are a free service.

Obtaining Documentation and Submitting a Service Request



New and Changed Information for this Release

This chapter contains the following section:

• New and Changed Information for this Release, page 1

New and Changed Information for this Release

The following table provides an overview of the significant changes to this guide for this current release. The table does not provide an exhaustive list of all changes made to this guide or of all new features in this release.

Table 1: New Features and Changed Behavior in Cisco UCS Director, Release 6.5

Feature	Description	Where Documented
Cisco UCS Director HP Server Management Guide 6.5	From Cisco UCS Director Release 6.5 onwards, the Cisco UCS Director HP iLO Management Guide and the Cisco UCS Director HP Onboard Administrator Management Guide have been combined into one guide.	Overview, on page 3

New and Changed Information for this Release



Overview

This chapter contains the following section:

- About HP Integrated Lights-Out, page 3
- About HP Onboard Administrator, page 4

About HP Integrated Lights-Out

Integrated Lights-Out (iLO) is a proprietary embedded server management technology from Hewlett-Packard (HP) that provides out-of-band management facilities for HP ProLiant servers. HP integrates iLO into HP ProLiant servers to enable administrators to perform activities on the HP servers from a remote location.

Cisco UCS Director provides the capability to access and manage HP ProLiant servers remotely using HP iLO. Cisco UCS Director provides workflows to automate the server administration tasks and monitor the state of the servers. For more information about pod licenses, see Cisco UCS Director Orchestration Guide.

Using Cisco UCS Director, you can perform the following operations on the HP ProLiant servers that support HP iLO:

- 1 Power on
- 2 Power off
- 3 Set power saver mode
- 4 Auto power on configuration
- 5 View the HP server inventory details
- 6 View the HP server NICs
- 7 View the HP server slots
- **8** View the HP server memory
- **9** View the HP server processors
- 10 Boot PXE

For more information on how to perform these operations on the servers, see Cisco UCS Director Orchestration Guide.

About HP Onboard Administrator

Hewlett-Packard (HP) Onboard Administrator (OA) is the enclosure management processor, subsystem, and firmware base that supports the HP Blade System c-Class enclosure and all the managed devices that are contained within the enclosure. Using OA, you can perform the basic management tasks on server blades or switches within the enclosure.



For supported HP OA versions, see Cisco UCS Director Compatibility Matrix for this release.

Cisco UCS Director communicates with HP OA through secure shell (SSH) to manage HP c7000 servers. At one time, you can manage up to eight servers. To manage servers, you must have two HP OAs in an enclosure: one HP OA in the active state and the other HP OA in the standby state.

With Cisco UCS Director, you can perform the following tasks on an HP server:

- 1 Inventory Management
- 2 Power Management
- 3 Boot Management

The following table provides the mapping between the HP OA buttons and Cisco UCS Director actions.

HP OA Button	Cisco UCS Director Action	Description
Momentary Press	Power on and Power off (the Force check box needs to be unchecked) Note If the server power remains in the "On" status for more than five minutes, the HP OA cancels the operation.	Mimics a physical momentary press of the power button on the server blade. This action powers the server blade on or off gracefully. For more information about managing the blade power, see Managing the Power in a Blade, on page 13.
Press and Hold	Power off (the Force check box needs to be checked)	Mimics a physical press and hold of the power button on the server blade. This action forces the server blade to shut power off without first shutting down the OS. For more information about managing the blade power, see Managing the Power in a Blade, on page 13. Note This option is not available when the server blade is off.

HP OA Button	Cisco UCS Director Action	Description
Cold Boot	Reboot (the Force check box needs to be checked)	Removes power from the system immediately.
		This action is not available when the server blade is off.
		For more information, see Rebooting a Blade Server, on page 15.
Reset	Reboot (the Force check box needs to be unchecked)	Resets the system. This action is not available when the server blade is off.

About HP Onboard Administrator



HP iLO Server Management

This chapter contains the following section:

- Managing iLO Server Accounts, page 7
- Managing HP iLO Reports, page 9

Managing iLO Server Accounts

Adding an HP Account

Cisco UCS Director supports the HP ILO version 2, 3, and 4. Cisco UCS Director performs auto-discovery of the HP ILO version and manages all infrastructure elements in the server that are associated with the HP account.

Before You Begin

Add the pod to which this HP account belongs.

- **Step 1** Choose **Administration** > **Physical Accounts**.
- Step 2 On the Physical Accounts page, click Physical Accounts.
- Step 3 Click Add
- **Step 4** On the **Add Account** screen, complete the following fields:

Name	Description
Pod drop-down list	Choose the pod to which this account belongs.
Category Type drop-down list	Choose Computing as the category type. This is the type of infrastructure for the account.
Account Type drop-down list	Choose HP ILO as the account type.

Step 5 Click Submit.

Step 6 On the second **Add Account** screen, complete the following fields:

Name	Description
Account Name field	A unique name that you assign to this account.
Server Address field	The IP address of the HP server. For a cluster configuration, this is the virtual IP address.
Use Credential Policy check box	Check this box if you want to use a credential policy for this account rather than enter the username and password information manually.
Credential Policy drop-down list	This field appears only when the Use Credential Policy box is checked. Choose a policy from the Credential Policy drop-down list.
User ID field	This field appears only when the Use Credential Policy box is unchecked. The username that this account will use to access the HP server. This username must be a valid account in the HP server.
Password field	This field appears only when the Use Credential Policy box is unchecked. The password associated with the username.
Transport Type drop-down list	This field appears only when the Use Credential Policy box is unchecked. Choose one of the following transport types that you want to use for this account:
	• http
	• https
Port field	This field appears only when the Use Credential Policy box is unchecked. The port used to access the HP account.
Description field	(Optional) A description of this account.
Contact Email field	The email address that you can use to contact the administrator or other person responsible for this account.
Location field	The location of this account.
Service Provider field	(Optional) The name of the service provider associated with this account, if any.

Step 7 Click Add.

Cisco UCS Director tests the connection to the HP server. If that test is successful, it adds the HP account and discovers all infrastructure elements in the server that are associated with that account, including servers

information, slots, processors, memory, and NICs. This discovery process and inventory collection cycle takes approximately five minutes to complete.

The polling interval configured on the **System Tasks** tab on the **Administration** > **System** window specifies the frequency of inventory collection. For more information about configuring the polling interval, see the *Cisco UCS Director Network Devices Management Guide*.

Managing HP iLO Reports

About Managing Reports

All discovered and managed components of HP iLO servers are displayed at the HP account level.

You can view the reports for each of the discovered/added components in the following categories:

- NIC
- Memory
- Processor
- Slots

Viewing the HP Server Report

You can view the status of the HP server and details about the specific component in the HP server.

- **Step 1** Choose **Physical** > **Compute**.
- Step 2 On the Compute page, expand the pod and then click the HP iLO account for which you want to view the report. Cisco UCS Director displays the iLO servers available under the HP account.
- **Step 3** Click the row in the table for the server that you want to monitor.
- Step 4 Click View Details.

Cisco UCS Director displays information about the current status of the selected component. Click the tabs in the window for more details about that component.

Step 5 Click on one of the following tabs to view the status of the server or a specific component in the server:

Name	Description
Summary tab	Overview of the selected HP server details such as the IP address, MAC address, product name, serial number, product ID, and UUID.
Server NICs tab	List of the NICs with their details such as the MAC type, port, and MAC address.
Server Memory tab	List of the memory available in the server by size and speed.

Name	Description
Server Processor tab	List of the processors with their name, speed, execution technology, and memory technology.
Server Slots tab	List of the slots in the server with their name, type, and width.



HP Onboard Administrator Management

This chapter contains the following section:

- Managing OA Accounts, page 11
- Managing HP Servers, page 13
- Managing OA Reports, page 15

Managing OA Accounts

Adding an HP OA Account

Cisco UCS Director performs auto-discovery of the HP OA account and manages all infrastructure elements in the server that are associated with the HP OA account. For managing servers, you must have two HP OAs in an enclosure: one HP OA in the Active state and the other HP OA in the Standby state.



Note

When you add a standby HP OA account, Cisco UCS Director will not discover all infrastructure elements in the server that are associated with that account, including blade server information, slots, processors, and memory.

Before You Begin

Add the pod to which this HP OA account belongs.

- **Step 1** Choose **Administration** > **Physical Accounts**.
- Step 2 Click Physical Accounts.
- Step 3 Click Add.
- **Step 4** On the **Add Account** screen, complete the following fields:

Name	Description
Pod drop-down list	Choose the pod to which this account belongs.
Category Type drop-down list	Choose Computing as the category type . This is the type of infrastructure for the account.
Account Type drop-down list	Choose HP OA as the account type.
Click Submit . The following fields ap	pear once you submit the entries.
Account Name field	A unique name that you assign to this account.
Description field	(Optional) A description of this account.
Server IP field	The IP address of the HP server. For a cluster configuration, this is the virtual IP address.
	Note While adding a standby account, provide the active IP address of the HP OA account that will act as the standby account.
User Credential Policy check box	Check this check box to use the policy to assign credentials to the account.
Credential Policy drop-down list	This field appears only when the User Credential Policy check box is checked. Choose the credential policy.
User ID field	This field is visible only when the User Credential Policy check box is unchecked. The username that this account will use to access the HP server. This username must be a valid account in the HP server.
Password field	This field is visible only when the User Credential Policy check box is unchecked. The password associated with the username.
Protocol drop-down list	This field is visible only when the User Credential Policy check box is unchecked. The protocol is set as SSH .
Port field	This field is visible only when the User Credential Policy check box is unchecked. The port used to access the HP OA account.
Contact Email field	The email address that you can use to contact the administrator or other person responsible for this account.
Location field	The location of this account.

Step 5 Click Add.

Cisco UCS Director tests the connection to the HP server. If that test is successful, it adds the HP OA account and discovers all infrastructure elements in the server that are associated with that account, including blade

server information, slots, processors, and memory. This discovery process and inventory collection takes few minutes to complete.

The polling interval configured on the **System Tasks** tab on the **Administration** > **System** window specifies the frequency of inventory collection. For more information about configuring the polling interval, see the *Cisco UCS Director Network Devices Management Guide*.

Managing HP Servers

Managing the Power in a Blade

- **Step 1** Choose **Physical** > **Compute**.
- **Step 2** Expand the pod and then click the HP Onboard Administrator (OA) account.
- Step 3 Click Blade Servers.
- **Step 4** To turn on a blade, do the following:
 - a) Click the row with the blade that you want to turn on.
 - b) Click **Power On**.
 The **Power On** screen appears.
 - c) From the **Select One Time Boot Order** drop-down list, choose one of the following as the device from which you want to start the booting process when the blade is turned on:
 - USB
 - HDD
 - FLOPPY
 - PXE
 - CD
 - RBSU
 - Normal—To follow the default boot order.
 - d) Click Submit.
- **Step 5** To turn off a blade, do the following:
 - a) Click the row with the blade that you want to turn off.
 - b) Click **Power Off**.
 The **Power Off** screen appears.
 - c) Check Force to forcibly turn off the blade.
 - d) Click Submit.

Managing the Boot Order

- **Step 1** Choose **Physical** > **Compute**.
- **Step 2** Expand the pod and click the HP OA account.
- Step 3 Click Blade Servers.
- **Step 4** Click the row with the server for which you want to change the boot order and click **View Details**.
- Step 5 Click Boot Order.

The boot order set for the blade is displayed.

- **Step 6** To modify the one-time boot order, do the following:
 - a) Click Modify One Time Boot Order.
 The Modify One Time Boot Order screen appears.
 - b) From the **Select One Time Boot Order** drop-down list, choose one of the following as the device that the server needs to refer to for the next reboot:
 - HDD
 - FLOPPY
 - PXE
 - CD
 - RBSU
 - Normal—To follow the default boot order.

Note After reboot, the One Time Boot value is set to

- c) Click Submit.
- **Step 7** To modify the boot order, do the following:
 - a) Click Modify Boot Order.

The Modify Boot Order screen appears.

- b) From the **Select Boot Order** drop-down list, choose one of the following as the device that the server needs to refer to for the next reboot:
 - HDD
 - FLOPPY
 - PXE
 - CD
 - USB
- c) Click Submit.

Rebooting a Blade Server

- **Step 1** Choose **Physical** > **Compute**.
- **Step 2** Expand the pod and click the HP OA account.
- Step 3 Click Blade Servers.
- **Step 4** Click the row with the blade server that you want to reboot.
- Step 5 Click Reboot Blades.
- **Step 6** On the **Reboot Blades** screen, complete the following fields:

Name	Description
Select One Time Boot Order drop-down list	Choose one of the following as the device from which you want to reboot the server:
	• HDD
	• FLOPPY
	• PXE
	• CD
	• RBSU
	• Normal—To follow the default boot order.
Force check box	Check this check box to forcibly reboot the server.

Step 7 Click Submit.

Managing OA Reports

About Managing Reports

All discovered and managed components of HP servers are displayed at the HP OA account level.

You can view the reports for each of the discovered blade servers in the following categories:

- NIC
- CPU/Memory
- Boot Order

Viewing the HP OA Reports

You can view the status of the HP blade server and details about the specific component in the HP server.

Step 1 Choose **Physical** > **Compute**.

On the Compute page, expand the pod and then click the HP OA account for which you want to view the report.

Cisco UCS Director displays the details of the servers that are available under the HP OA account. Click the tabs in the window for more details about that component.

Name	Description
Summary tab	Displays an overview of the server blades that are installed on the chassis of the HP OA account and the number of blades that are powered on.
Blade Servers tab	Displays a list of the blade servers with their details such as the bay on which the server is installed, server name, serial number, status, power condition, UID, and partner. This page has options to power on, reboot, and power off the blades.
	For more details about a server, choose the server and click View Details . Click one of the following tabs in the window for more details about that component:
	 NIC—Displays a list of adapters that are attached to the blade server. The NIC information includes the mezzanine device, mezzanine device slot, mezzanine slot, device port, NIC address, status, and bay.
	 CPU/Memory—Displays the CPU and memory information of the blade server.
	• Boot Order—Displays the following details:
	 One Time Boot—Specifies the device that a server will refer to for the next reboot. After reboot, the One Time Boot value is set to None.
	° Boot Order—Specifies the default boot order of the server.
Power Management tab	Displays the power delay set for rebooting the server blades on each bay, when the server is turned on.
Rack tab	Displays the information of the racks on which the HP blade servers are mounted.

Name	Description
FRU tab	Displays the Field Replaceable Unit (FRU) information for FRUs, such as the HP OA device, fan, blade, and power supply in the HP server. The FRU information includes the name, model, part number, spare part number, serial number, manufacturer, firmware version, and hardware version. Based on FRU, the FRU information displayed in the table varies.
VLAN tab	Displays a list of the VLANs that are configured on the device bays and interconnect bays.
Enclosure Power Supply tab	Displays a list of the power supply units that supply power to the enclosure. The power supply information includes the power supply, status, AC input status, capacity, current power output, serial number, product name, part number, spare part number, and version.
Fan tab	Displays a list of the fans available in the enclosure. The fan information includes the fan, status, speed, maximum speed, minimum speed, power consumed, product name, part number, spare part number, and version.
Enclosure Temperature tab	Displays the current temperature and temperature status of the enclosures, OAs, blade bays, and interconnect modules.
Server Firmware tab	Displays a list of firmware components attached to blades with the bay, discovered status, firmware component, current version, and firmware ISO version.
Devices tab	Displays a list of the HP OA accounts. The HP OA account information includes the onboard administrator, name, role, status, UID, product name, part number, spare part number, serial number, UUID, manufacturer, firmware version, board type, and hardware version.

Viewing the HP OA Reports