



Cisco UCS Director HP Onboard Administrator Management Guide, Release 6.0

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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 <i>this font</i> .
TUI elements	In a Text-based User Interface, text the system displays appears in <i>this font</i> .

Text Type	Indication
System output	Terminal sessions and information that the system displays appear in <i>this font</i> .
CLI commands	CLI command keywords appear in this font . Variables in a CLI command appear in <i>this font</i> .
[]	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.

**Warning****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>.

**Note**

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.



CHAPTER

1

New and Changed Information for this Release

- [New and Changed Information for this Release, page 1](#)

New and Changed Information for this Release

No significant changes were made to this guide for the current release.



Overview

This chapter contains the following sections:

- [Cisco UCS Director, page 3](#)
- [About HP Onboard Administrator, page 4](#)

Cisco UCS Director

Cisco UCS Director is a complete, highly secure, end-to-end management, orchestration, and automation solution for a wide array of Cisco and non-Cisco data infrastructure components, and for the industry's leading converged infrastructure solutions based on the Cisco UCS and Cisco Nexus platforms. For a complete list of supported infrastructure components and solutions, see the [Cisco UCS Director Compatibility Matrix](#).

Cisco UCS Director is a 64-bit appliance that uses the following standard templates:

- Open Virtualization Format (OVF) for VMware vSphere
- Virtual Hard Disk (VHD) for Microsoft Hyper-V

Management through Cisco UCS Director

Cisco UCS Director extends the unification of computing and network layers through Cisco UCS to provide you with comprehensive visibility and management of your data center infrastructure components. You can use Cisco UCS Director to configure, administer, and monitor supported Cisco and non-Cisco components. The tasks you can perform include the following:

- Create, clone, and deploy service profiles and templates for all Cisco UCS servers and compute applications.
- Monitor organizational usage, trends, and capacity across a converged infrastructure on a continuous basis. For example, you can view heat maps that show virtual machine (VM) utilization across all your data centers.
- Deploy and add capacity to converged infrastructures in a consistent, repeatable manner.
- Manage, monitor, and report on data center components, such as Cisco UCS domains or Cisco Nexus network devices.
- Extend virtual service catalogs to include services for your physical infrastructure.

- Manage secure multi-tenant environments to accommodate virtualized workloads that run with non-virtualized workloads.

Automation and Orchestration with Cisco UCS Director

Cisco UCS Director enables you to build workflows that provide automation services, and to publish the workflows and extend their services to your users on demand. You can collaborate with other experts in your company to quickly and easily create policies. You can build Cisco UCS Director workflows to automate simple or complex provisioning and configuration processes.

Once built and validated, these workflows perform the same way every time, no matter who runs the workflows. An experienced data center administrator can run them, or you can implement role-based access control to enable your users and customers to run the workflows on a self-service, as needed, basis.

With Cisco UCS Director, you can automate a wide array of tasks and use cases across a wide variety of supported Cisco and non-Cisco hardware and software data center components. A few examples of the use cases that you can automate include, but are not limited to:

- VM provisioning and lifecycle management
- Network resource configuration and lifecycle management
- Storage resource configuration and lifecycle management
- Tenant onboarding and infrastructure configuration
- Application infrastructure provisioning
- Self-service catalogs and VM provisioning
- Bare metal server provisioning, including installation of an operating system

About HP Onboard Administrator

Hewlett-Packard (HP) Onboard Administrator (OA) is the enclosure management processor, subsystem, and firmware base that supports the HP BladeSystem 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.

**Note**

From Cisco UCS Director Release 5.2 and later releases, Cisco UCS Director offers support for the HP OA version 4.3.

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. For more information about managing the blade power, see Managing the Power in a Blade , on page 11.
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 shutting down the OS before turning the power off. This option is not available when the server blade is off. For more information about managing the blade power, see Managing the Power in a Blade , on page 11.
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 13.
Reset	Reboot (the Force check box needs to be unchecked)	Resets the system. This action is not available when the server blade is off.



Managing HP Onboard Administrator Accounts

This chapter contains the following sections:

- [Adding a Pod, page 7](#)
- [Adding an HP OA Account, page 8](#)
- [Testing the Connection to an HP OA Account, page 10](#)

Adding a Pod

A pod is a logical grouping of physical and virtual components, including one or more physical or virtual accounts, such as an HP OA account for computing. Typically, a pod represents a single converged infrastructure stack, such as a Vblock or VSPEX.

Step 1 On the menu bar, choose **Administration > Physical Accounts**.

Step 2 Click the **Pods** tab.

Step 3 Click **Add**.

Step 4 In the **Add Pod** dialog box, complete the following fields:

Name	Description
Name field	A descriptive name for the pod.
Site drop-down list	Choose the site where you want to add the pod. If your environment does not include sites, you can omit this step.
Type drop-down list	Choose Generic as the type of pod. A generic pod does not require a specific pod license. You can add any type of physical or virtual component to a generic pod.
Description field	(Optional) A description of the pod.

Name	Description
Address field	The physical location of the pod. For example, this field could include the city or other internal identification used for the pod.
Hide Pod check box	Check the check box to hide the pod if you do not want it to show in the Converged Check View. You can continue to add or delete accounts from the pod. For example, you can use this check box to ensure that a pod that does not have any physical or virtual elements is not displayed in the Converged View.

Step 5 Click **Add**.

What to Do Next

Add one or more accounts to the pod.

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 On the menu bar, choose **Administration > Physical Accounts**.

Step 2 Click the **Physical Accounts** tab.

Step 3 Click **Add**.

Step 4 In the **Add Account** dialog box, complete the following fields:

Name	Description
Pod drop-down list	Choose the pod to which this account belongs.

Name	Description
Category Type drop-down list	Choose the category type. You must choose Computing . This is the type of infrastructure for the account.
Account Type drop-down list	Choose the account type. You must choose HP OA .
Click Submit . The following fields appear 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 Address 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*.

Testing the Connection to an HP OA Account

You can test the connection at any time after you add an account to a pod.

-
- Step 1** On the menu bar, choose **Administration > Physical Accounts**.
 - Step 2** Click the **Physical Accounts** tab.
 - Step 3** In the table, click the row of the account for which you want to test the connection.
 - Step 4** Click **Test Connection**.
 - Step 5** When the connection test has completed, click **Close**.
-

What to Do Next

If the connection fails, verify the configuration of the account, including the username and password. If those items are correct, determine if a network connectivity problem exists. Also, you can check the log files to identify the root cause of the connection failure.



Managing HP Servers

This chapter contains the following sections:

- [Managing the Power in a Blade, page 11](#)
- [Managing the Boot Order, page 12](#)
- [Rebooting a Blade Server, page 13](#)

Managing the Power in a Blade

Step 1 On the menu bar, choose **Physical > Compute**.

Step 2 In the left pane, expand the site and then click a pod.

Step 3 Expand the pod and then click the HP Onboard Administrator (OA) account.
Cisco UCS Director displays the details of the servers that are available under the HP OA account.

Step 4 Click the **Blade Servers** tab.

Step 5 To turn on a blade, do the following:

- a) Choose the blade that you want to turn on.
- b) Click **Power On**.
The **Power On** dialog box 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 6

To turn off a blade, do the following:

- Choose the blade that you want to turn off.
 - Click **Power Off**.
The **Power Off** dialog box appears.
 - Check the **Force** check box to forcibly turn off the blade.
 - Click **Submit**.
-

Managing the Boot Order

Step 1 On the menu bar, choose **Physical > Compute**.

Step 2 In the left pane, expand the site and then click a pod.

Step 3 Expand the pod and then click the HP OA account.
Cisco UCS Director displays the details of the servers that are available under the HP OA account.

Step 4 Click the **Blade Servers** tab.

Step 5 Choose the server for which you want to change the boot order and click **View Details**.

Step 6 Click **Boot Order**.
The boot order set for the blade is displayed.

Step 7 To modify the one-time boot order, do the following:

- Click **Modify One Time Boot Order**.
The **Modify One Time Boot Order** dialog box appears.
- 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 **None**.

c) Click **Submit**.

Step 8

To modify the boot order, do the following:

a) Click **Modify Boot Order**.

The **Modify Boot Order** dialog box 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 On the menu bar, choose **Physical > Compute**.

Step 2 In the left pane, expand the site and then click a pod.

Step 3 Expand the pod and then click the HP OA account.
Cisco UCS Director displays the details of the servers that are available under the HP OA account.

Step 4 Click the **Blade Servers** tab.

Step 5 Choose the blade server that you want to reboot.

Step 6 Click **Reboot Blades**.

Step 7 In the **Reboot Blades** dialog box, complete the following fields:

Name	Description
<p>Select One Time Boot Order drop-down list</p>	<p>Choose one of the following as the device from which you want to reboot the server:</p> <ul style="list-style-type: none"> • HDD • FLOPPY • PXE • CD • RBSU • Normal—To follow the default boot order.

Name	Description
Force check box	Check this check box to forcibly reboot the server.

Step 8 Click **Submit**.



Managing Reports

This chapter contains the following sections:

- [About Managing Reports, page 15](#)
- [Viewing the HP OA Reports, page 15](#)

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 On the menu bar, choose **Physical > Compute**.

Step 2 In the left pane, expand the site and then click a pod.
Cisco UCS Director displays the HP Overview in the **Summary** tab.

Step 3 Expand the pod and then click the HP OA account.
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	<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ◦ 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.
Racks tab	Displays the information of the racks on which the HP blade servers are mounted.
FRUs 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 serial number, part number, model, name, version number, firmware version, hardware version, and manufacturer. 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.

Name	Description
Enclosure Power Supply tab	Displays a list of the power supply units that supply power to the enclosure. The power supply information includes the capacity, AC input status, current power output, 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, and power consumed.
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, current version, and firmware ISO version.
Devices tab	Displays a list of the HP OA accounts. The HP OA account information includes the name, role, status, UID, product name, part number, spare part number, serial number, UUID, manufacturer, firmware, board type, and hardware version.
