Cisco UCS Director Shell Guide, Release 6.5

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CONTENTS

Preface

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.

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.

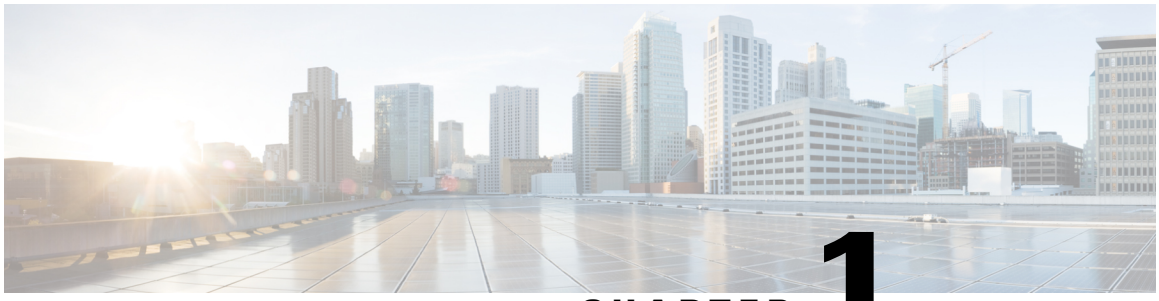
Documentation Feedback

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

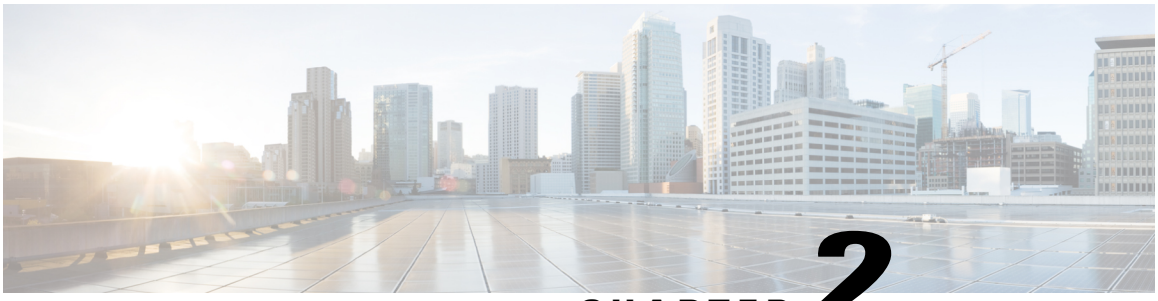
This chapter contains the following sections:

New and Changed Information

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 Shell, Release 6.5

Feature	Description	Where Documented
Shell options output updated to display additional details	The Enable HTTP/HTTPS option allows you to log in to Cisco UCS Director using both HTTP and HTTPS modes.	Enabling HTTP Access
	The Reset MySQL User password option allows to reset the MySQL password.	Troubleshooting
	The Apply Signed Patch option allows you to apply signed patch to Cisco UCS Director.	Applying a Signed Patch to Cisco UCS Director
	The Terminate active GUI session(s) for user allows you to terminate the active GUI sessions when the specified maximum concurrent sessions for a user is reached.	Terminating Active GUI Sessions
	The Backup Database and Restore Database options output is updated.	Managing Databases



CHAPTER 2

Overview

This chapter contains the following sections:

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 networking 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 basis, as needed.

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

Cisco UCS Director Shell

The Cisco UCS Director Shell is a text-based menu that you access through a secure shell (SSH) application and Cisco UCS Director administrator credentials. With the Shell, you can execute commands to perform various system administration tasks, including:

- Patch updates
- Database backup and restore
- Certificate imports
- Services management

About Cisco UCS Director Shell Commands

This guide describes all of the commands available to you when logging in to the Cisco UCS Director shell. You can use these commands to perform the following administrative tasks:

- Stopping/starting all Cisco services
- Display Service Status
- Stopping/starting the MySQL database
- Backing up/restoring the appliance database
- Changing ShellAdmin password
- Synching up time
- Configuring network interface
- Enabling the database for a BMA Appliance
- Adding a BMA hostname/IP address to the appliance
- Displaying network details
- Pinging hostname/IP address
- Version (Cisco UCS Director appliance version)
- Importing CA (JKS) file
- Importing CA Cert (PEM) file for Virtual Network Computing (VNC)
- Shutdown of the Appliance
- Rebooting the Appliance
- Manage Root Access
- Troubleshooting by using Tail Inframgr logs
- Applying a patch to the appliance
- Login as Root
- Configuring Multi-node Setup
- Clean Up Patch Files
- Migrating from Single to Multi-Node
- Enabling HTTP access
- Configuring the defaulty UI
- Resetting MySql user password
- Applying signed patch to the appliance
- Terminating active GUI session(s)
- Quitting the shell

For additional system administration information, refer to the *Cisco UCS Director Administration Guide*.

Prerequisites

To successfully execute the commands described in this guide, you must meet the following prerequisites:

- Cisco UCS Director should be up and running (and reachable).

Note The information in this guide is based on Cisco UCS Director, release 4.0, and later releases.

Logging in to the Shell

The login procedure requires the use of a Secure Shell (SSH) client and the proper login credentials. After gaining access to Cisco UCS Director, you can perform a wide variety of system administration tasks.

Before You Begin

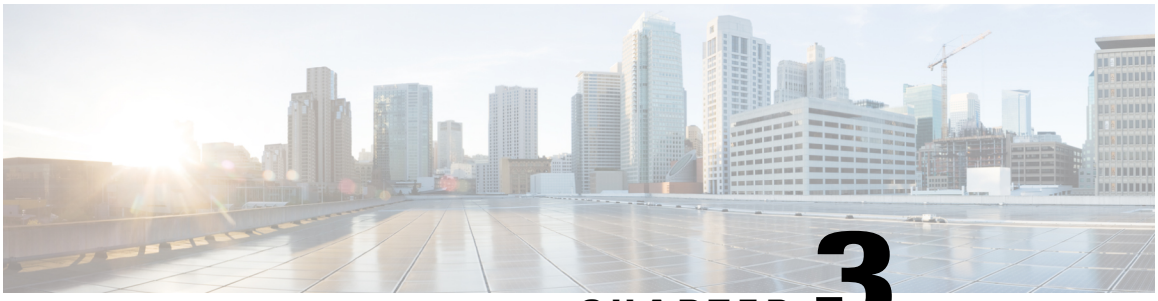
Obtain proper access to Cisco UCS Director and a secure shell (SSH) application.

Step 1 Log in to Cisco UCS Director as shelladmin using your SSH terminal client.

Step 2 Press the Enter key.
The following services are available for selection:

```
          Cisco UCS Director Shell Menu
Node:Standalone | Version:6.5.0.0 Build:65811 | UpTime:  10:45:00 up 10 min,  1 user

1)  Change ShellAdmin Password
2)  Display Services Status
3)  Stop Services
4)  Start Services
5)  Stop Database
6)  Start Database
7)  Backup Database
8)  Restore Database
9)  Time Sync
10) Ping Hostname/IP Address
11) Show Version
12) Generate Self-Signed Certificate and Certificate Signing Request
13) Import CA/Self-Signed Certificate
14) Configure Network Interface
15) Display Network Details
16) Enable Database for Cisco UCS Director Baremetal Agent
17) Add Cisco UCS Director Baremetal Agent Hostname/IP
18) Tail Inframgr Logs
19) Apply Patch
20) Shutdown Appliance
21) Reboot Appliance
22) Manage Root Access
23) Login as Root
24) Configure Multi Node Setup (Advanced Deployment)
25) Clean-up Patch Files
26) Collect logs from a Node
27) Collect Diagnostics
28) Enable HTTP/HTTPS
29) Configure default UI
```

```
30) Reset MySQL User password
31) Apply Signed Patch
32) Terminate active GUI session(s) for user
33) Quit
```



CHAPTER 3

Using Shell Commands

This chapter contains the following sections:

General Administration

This section describes how to execute common administration tasks such as changing your password, stopping and starting services, generating log and report data, as well as other common system administration tasks.

Examining the Version Information

You can verify the Cisco UCS Director version and build number by choosing Show Version. This information is required for debugging purposes.

Step 1 From the Cisco UCS Director Shell menu choose Show Version and press Enter.
Information similar to the following is displayed:

```
Cisco UCS Director Platform
------------------
```

```
Version      : 5.4.0.0
Build Number : 22
Press return to continue ...
```

Step 2 Press Enter to complete the process.

Changing Your Password

You can change your Cisco UCS Director shell password by choosing Change ShellAdmin password.

Step 1 From the **Cisco UCS Director Shell** menu, choose Change ShellAdmin password and press Enter. The following information is displayed:

```
Changing password for user shelladmin.
New UNIX password:
```

Step 2 Enter your new UNIX password and press the **Enter** key.

Step 3 Enter your new UNIX password once again and press the **Enter** key. The following information is displayed:

```
passwd: all authentication tokens updated successfully. Press return to continue...
```

Synchronizing the System Time

You can synchronize the system time to the hardware time and the NTP server by choosing Time Sync.

Step 1 From the Cisco UCS Director Shell menu, choose Time Sync.

Step 2 Press Enter.
The following information is displayed:

```
Time Sync......
System time is Tue Oct 27 11:26:44 UTC 2015
Hardware time is Tue Oct 27 11:26:44 2015 -0.345445 seconds
Do you want to sync systemtime [y/n]? n
Do you want to sync to NTP [y/n]? y
Enter NTP server to sync time with: 10.64.58.50
```

Step 3 Enter the NTP server hostname or IP address, and press Enter to synchronize to the NTP server.
The following information is displayed:

```
ntpd (pid 2893) is running...
Shutting down ntpd: [ OK ]
27 Oct 11:17:25 ntpdate[1476]: step time server 10.64.58.50 offset -605.971324 sec
Synchronized time with NTP server '10.64.58.50'
Added NTP server '10.64.58.50' to /etc/ntp.conf
Starting ntpd: [ OK ]
```

```
synchronised to NTP server (10.64.58.50) at stratum 3
time correct to within 8145 ms
polling server every 64 s
Press return to continue ...
```

Once you have entered an NTP server hostname or IP address, it is added to the list of available NTP servers for future synchronization.

Step 4 Press the Enter key to complete the process.

Applying a Patch to Cisco UCS Director

Choose this option to apply a patch to the appliance.

Note The patch file (zip file) is provided by Cisco UCS Director. Before applying a patch:

- Review the patch release notes and the Readme file.
- Take a snapshot of your VM.
- Take a backup of your database prior to applying the patch. The Apply Patch option allows you to take a backup as part of the Apply Patch procedure; but the best practice is to take a backup immediately before using the Apply Patch option.
- Stop the appliance services.

Before You Begin

- Download the patch file
- Place the file in a web server or FTP, SFTP, or SCP server
- Choose Apply Patch from the Cisco UCS Director Shell menu
- Provide patch URL (http://WebServer/TestPkg.zip)

Step 1 From the Cisco UCS Director Shell menu, choose Apply Patch and press Enter.
The following information is displayed:

```
Applying Patch...
Services will be stopped before upgrade. Do you want to continue? [y/N]:
```

Step 2 Enter y, and press Enter, the services are stopped.

```
y
Stopping services...
Do you want to take database backup before applying patch? [Y/n]:
```

Step 3 If you entered n, enter the mode of transfer and press Enter and provide the required information, as follows:

- SFTP—Enter the SFTP server IP address, server login name and password, and the path to the location where you have stored the upgrade file.
- SCP—Enter the SCP server IP address, server login name and password, and the path to the location where you have stored the upgrade file.
- FTP—Enter the FTP server IP address, server login name and password, and the path to the location where you have stored the upgrade file. For example, **ftp**:*//username:password@hostname\IP_address/software_location_and_name*.
- HTTP—Enter the URL for the location where you stored the upgrade file.
- FILE—Enter the path to the local directory where you have stored the upgrade file.

```
n
User selected option not to take backup, proceeding with applying patch
Specify the Transfer mode [SFTP/SCP/FTP/HTTP/FILE]: SFTP
Server IP Address: XXX.XX.XXX.XXX
Server Username: XXXXX
Server Password:
SFTP Path to Patch Zip file: cucsd_patch_6_5_0_0_61705.zip
Apply the patch 'cucsd_patch_6_5_0_0_61705.zip'? [y/N]:
```

Note Refer to the ReadMe file for information about the patches.

Note Only from Release 6.5, the mode of transfer such as SFTP, SCP, HTTP, and File are supported. This step is applicable only from Release 6.5.

Step 4 If you entered Y and press Enter the backup process starts. Enter the transfer mode and press Enter, and provide the required information.

```
Y
The backup process creates a <filename>.tar.gz file on the system running Cisco UCS Director.
You can copy the file to another server using SFTP/SCP/FTP/HTTP/FILE mode.
Specify the Transfer mode [SFTP/SCP/FTP/HTTP/FILE]: SFTP
Server IP Address: XXX.XX.XXX.XXX
Server Username: XXXXX
Server Password:
SFTP Path to Patch Zip file: cucsd_patch_6_5_0_0_61705.zip
Apply the patch 'cucsd_patch_6_5_0_0_61705.zip'? [y/N]:
```

Note Refer to the ReadMe file for information about the patches.

Note Only from Release 6.5, the mode of transfer such as SFTP, SCP, HTTP, and File are supported. Hence, for earlier versions, only FTP transfer mode details are displayed.

Step 5 If you are prompted to confirm that you want to apply the patch, enter y, then press Enter.
The following information is displayed:

```
y
Checking if the database is running... yes
Downloading the patch...
Sucessfully Connected to XXX.XX.XXX.XXX
Completed downloading the patch.
```

What to Do Next

After the patch is applied, start the services on the appliance using the Start Services option.

Applying a Signed Patch to Cisco UCS Director

Step 1 From the Cisco UCS Director Shell menu, choose Apply Signed Patch and press Enter.
The following information is displayed:

```
Applying Patch...
Services will be stopped before upgrade. Do you want to continue? [y/N]:
```

Step 2 Enter y and press Enter.
The following information is displayed:

```
Stopping services...
Do you want to take database backup before applying patch? [Y/n]:
```

Step 3 If you entered Y and press Enter the backup process starts. Enter the transfer mode and press Enter.

```
The backup process creates a <filename>.tar.gz file on the system running Cisco UCS Director.
You can copy this file to another server using the FTP/SFTP/SCP mode.
Specify the transfer mode and login credentials
Specify the transfer mode [FTP/SFTP/SCP]:
```

Note Refer to the ReadMe file for information about the patches.

Step 4 If you entered n, enter the desired patch file download protocol and press Enter and provide the required information, as follows:

- SFTP—Enter the SFTP server IP address, server login name and password, and the path to the location where you have stored the signed zip file.
- SCP—Enter the SCP server IP address, server login name and password, and the path to the location where you have stored the signed zip file.
- FTP—Enter the FTP server IP address, server login name and password, and the path to the location where you have stored the signed zip file. For example, **ftp**:*//username:password@hostname\IP_address/software_location_and_name*.
- HTTP—Enter the URL for the location where you stored the signed zip file.
- FILE—Enter the path to the local directory where you have stored the signed zip file.

```
n
User selected option not to take backup, proceeding with applying patch.
Enter patch file download protocol [SFTP/SCP/FTP/HTTP/FILE]: SCP
Server IP Address: 172.29.109.134
Server Username: root
```

```
Server Password:
Full Patch to Patch Zip File: /opt/mytest123/cucsd_patch_6_5_0_0_65341_signed.zip
Apply the patch '/opt/mytest123/cucsd_patch_6_5_0_0_65341_signed.zip? [y/N]:
```

Step 5 If you are prompted to confirm that you want to apply the patch, enter y, then press Enter.
The following information is displayed:

```
y
Checking if database is running ...yes
Downloading the patch...
Successfully Connected to 172.29.109.134
Completed downloading the patch.
Verifying patch signature...
Successfully verified the signature of patch file /opt/mytest123/cucsd_patch_6_5_0_0_65341_signed.zip
Proceeding with patch installation
```

Note From this release, you can use the Apply Signed Patch option in the Shell menu to apply signed patch. If you want to upgrade to release 6.5, you should download the signed zip files, extract the files and follow the instructions available in the ReadMe file to manually verify the signature of the patch. Once the image is verified, you can apply the patch zip file using the Apply Patch option.

Shutting Down the Appliance

Choose this option to shut down a Cisco UCS Director appliance.

Step 1 From the Cisco UCS Director Shell menu, choose the Shutdown Appliance option and press the **Enter** key.
The following information displays:

```
 Do you want to Shutdown appliance [y/n] ?:
```

Step 2 Enter y to shut down the appliance. The following information is displayed:

```
Broadcast message from root (pts/0) (Thu Sep 15 13:34:33 2013)

The system is shutting down NOW!
```

Step 3 Press the **Enter** key to return to the main menu.

Rebooting an Appliance

Choose this option to reboot a Cisco UCS Director appliance.

Step 1 From the Cisco UCS Director Shell menu, choose the Reboot Appliance option and press the **Enter** key.

The following information displays:

```
Do you want to Reboot appliance [y/n] ?:
```

Step 2 Enter y to reboot the appliance. The following information is displayed:

```
Rebooting the Cisco UCS Director Appliance...
Broadcast message from root (pts/5) (Wed Sep 18 13:12:06 2013):

The system is going down for reboot NOW!
Rebooting sucessful
Press return to continue...
```

Step 3 Press the **Enter** key to return to the main menu.

Using a Multi-Node Setup

The multi-node setup is supported for Cisco UCS Director on VMware vSphere only. With a multi-node setup, you can scale Cisco UCS Director to support a larger number of VMs than is supported by a single installation of Cisco UCS Director. This setup has the following nodes:

- One primary node
- One or more service nodes
- One monitoring database
- One inventory database

Note For a multi-node setup, you have to install the license on the primary node only.

A multi-node setup improves scalability by offloading the processing of system tasks, such as inventory data collection, form the primary node to one or more service nodes. You can assign certain systems tasks to one or more service nodes. The number of nodes determines how the processing of system tasks is scaled.

Node pools group service nodes and enable you to assign system tasks to more than one service node. If one service node is busy when a system task needs to be run, Cisco UCS Director uses a round-robin assignment to determine which service node should process the system task. If all, service nodes are busy, you can have the primary node run the system task.

For more information about how to configure the primary node and service nodes, and how to assign system tasks, see the Cisco UCS Director Multi-Node Installation and Configuration Guide

Terminating Active GUI Sessions

Step 1 From the Cisco UCS Director Shell menu, choose Terminate active GUI session(s) for user and press Enter.

The following information is displayed:

```
On a subsequent login, all active session(s) for the user will be terminated.
This utility is for terminating the GUI sessions after the specified maximum concurrent sessions for
 a user is reached.
Do you want to proceed [y/n]? :
```

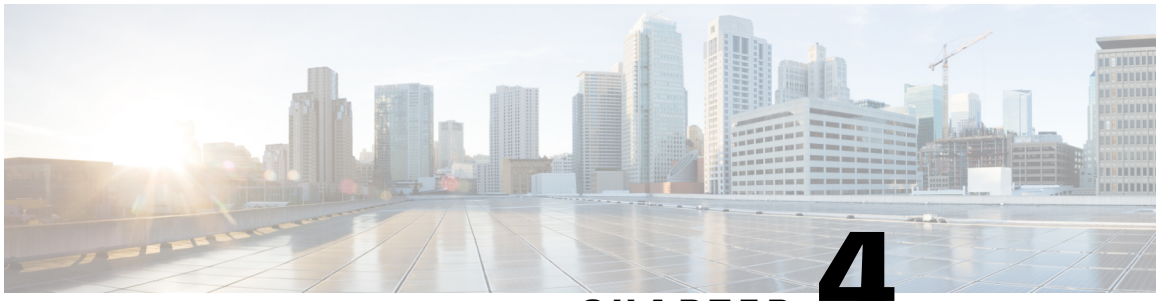
Step 2 Enter y and press Enter.
The following information is displayed:

```
Specify the user name of the user session(s) that needs to be terminated :
```

Step 3 Enter the user name and press Enter.

```
Specify the user session(s) that need to be terminated [a) Oldest, b) All] a/b :
```

Step 4 Enter a or b based on the requirement and press Enter. On Subsequent login, the user GUI session(s) will be terminated, and you are allowed to log in.



CHAPTER 4

Configuring Network Details

This chapter contains the following sections:

Configuring a Network Interface

You can configure a network interface for the Cisco UCS Director appliance by choosing Configure a Network Interface.

Step 1 From the Cisco UCS Director Shell menu, choose Configure a Network Interface and press Enter.
The following information displays:

```
Do you want to Configure DHCP/STATIC IP  [D/S] ? : S
```

Step 2 Choose one of the following configuration selections:

- Choose D to configure a DHCP IP address.
- Choose S to configure a static IP address.

Step 3 Enter s to configure a static IP address and press Enter. The following information is displayed.

```
Configuring STATIC configuration..
Enter the ethernet interface that you want configure E.g. eth0 or eth1:
```

Step 4 Enter the Ethernet interface to configure (for example, eth1) and press Enter. The following information displays:

```
Configuring STATIC IP for eth1...
   IP Address: 209.165.200.224
   Netmask: 255.255.255.0
   Gateway: 209.187.108.1
   DNS Server1: 198.51.100.1
   DNS Server2: 203.0.113.1
Configuring Network with : INTERACE(eth1), IP(209.165.200.224), Netmask(255.255.255.0),
Gateway(209.187.108.1),
```

```
DNS Server1(198.51.100.1), DNS Serverx 2(203.0.113.1)

Do you want to continue  [y/n]? :
```

Step 5 Enter n to discontinue the configuration process. Press Enter to return to complete the process.

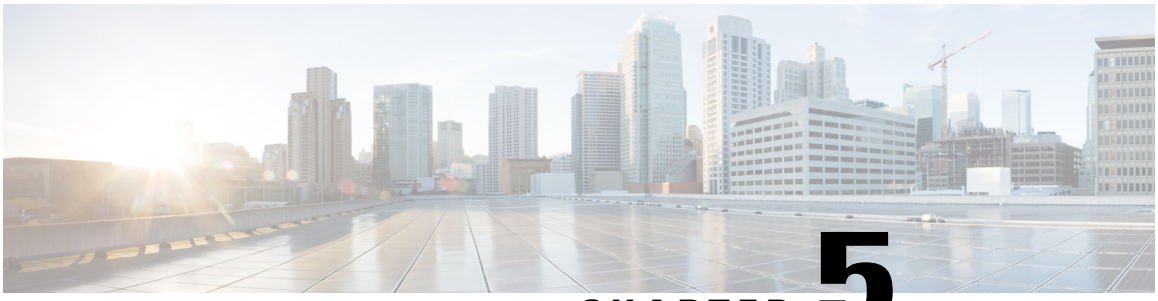
Displaying Appliance Network Details

You can display the Cisco UCS Director appliance network details by choosing the Display Network Details option.

Step 1 From the Cisco UCS Director Shell menu, choose the Display Network Details option and press Enter.
The following information is displayed:

```
Network details....
eth0      Link encap:Ethernet  HWaddr 00:50:56:97:1E:2D
          inet addr:192.0.2.23  Bcast:192.0.2.255  Mask:255.255.255.0
          inet6 addr: fe80::230:56gg:fe97:1e2d/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:189818223 errors:14832 dropped:17343 overruns:0 frame:0
          TX packets:71520969 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:105749301003 (98.4 GiB)  TX bytes:27590555706 (25.6 GiB)
          Interrupt:59 Base address:0x2000

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:1821636581 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1821636581 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:327846827946 (305.3 GiB)  TX bytes:327846827946 (305.3 GiB)

Press return to continue ...
```

Step 2 Press Enter to complete the process.



CHAPTER 5

Managing Cisco Services

This chapter contains the following sections:

Displaying the Status of Your Services

The Display Services option displays all executed services. The Display Services option also displays the status of any associated databases and disks.

- Broker - An ActiveMQ JMS broker used for inter-process communication using JMS messages. All infra services use the broker to communicate between them.
- Controller
- Eventmgr
- Client
- Idaccessmgr - Provides authentication service for Cisco UCS Director users (local, AD imported through LDAP). When you log in through the GUI, tomcat receives the login request and queries idaccessmgr to authenticate the user.
- Inframgr - The back-end server that proves APIs over JMS and REST. Tomcat (GUI) uses these back-end APIs.
- Websock - VNC proxy. Cisco UCS Director provides browser-based VNC access to the VM console. The websock service acts as a VNC proxy to the VM console.
- Tomcat - Hosts Cisco UCS Director GUI web app.
- Flashpolicyd

Note Ensure that all of the above services are up and operating. If a service is not executed on Cisco UCS Director, restart the service through the shell client.

From the Cisco UCS Director Shell menu, choose the Display Service Status option.
The following list of services appears:

```
                        Cisco UCS Director Shell Menu
Node:Standalone | Version:6.5.0.0 Build:65811 | UpTime:  09:23:10 up 2 min,  2 u

sers

1)  Change ShellAdmin Password
2)  Display Services Status
3)  Stop Services
4)  Start Services
5)  Stop Database
6)  Start Database
7)  Backup Database
8)  Restore Database
9)  Time Sync
10) Ping Hostname/IP Address
11) Show Version
12) Generate Self-Signed Certificate and Certificate Signing Request
13) Import CA/Self-Signed Certificate
14) Configure Network Interface
15) Display Network Details
16) Enable Database for Cisco UCS Director Baremetal Agent
17) Add Cisco UCS Director Baremetal Agent Hostname/IP
18) Tail Inframgr Logs
19) Apply Patch
20) Shutdown Appliance
21) Reboot Appliance
22) Manage Root Access
23) Login as Root
24) Configure Multi Node Setup (Advanced Deployment)
25) Clean-up Patch Files
26) Collect logs from a Node
27) Collect Diagnostics
28) Enable HTTP/HTTPS
29) Configure default UI
30) Reset MySQL User password
31) Apply Signed Patch
32) Terminate active GUI session(s) for user
33) Quit                Cisco UCS Director Shell Menu
Node:Standalone | Version:6.5.0.0 Build:65811 | UpTime:  09:23:10 up 2 min,  2 u

sers

1)  Change ShellAdmin Password
2)  Display Services Status
3)  Stop Services
```

```
4)  Start Services
5)  Stop Database
6)  Start Database
7)  Backup Database
8)  Restore Database
9)  Time Sync
10) Ping Hostname/IP Address
11) Show Version
12) Generate Self-Signed Certificate and Certificate Signing Request
13) Import CA/Self-Signed Certificate
14) Configure Network Interface
15) Display Network Details
16) Enable Database for Cisco UCS Director Baremetal Agent
17) Add Cisco UCS Director Baremetal Agent Hostname/IP
18) Tail Inframgr Logs
19) Apply Patch
20) Shutdown Appliance
21) Reboot Appliance
22) Manage Root Access
23) Login as Root
24) Configure Multi Node Setup (Advanced Deployment)
25) Clean-up Patch Files
26) Collect logs from a Node
27) Collect Diagnostics
28) Enable HTTP/HTTPS
29) Configure default UI
30) Reset MySQL User password
31) Apply Signed Patch
32) Terminate active GUI session(s) for user
33) Quit


SELECT> 2

Service      State        PID      %CPU %MEM   tELAPSED #Threads
-----------  -------      -------  ---------------------------------
broker       UP           12358    0.5  0.8       06:11 32
controller   UP           12385    1.7  1.3       06:06 45
eventmgr     UP           12391   29.4  6.0       06:02 41
client       UP           12398   28.8  5.9       05:57 40
idaccessmgr  UP           12404   30.7  6.0       05:52 41
inframgr     UP           12415   69.1 24.4       05:47 121
websock      UP           12588    0.0  0.0       05:42 1
tomcat       UP           12461   12.8 11.6       05:37 34
flashpolicyd UP           12227    0.0  0.0       05:36 1


Database      IP Address            State    Client          Connections
-----------   -----------           -------  ----------      -----------
infra         127.0.0.1             UP       localhost       17

Disk          Size         Used     Available      %Use    Usage
-----------   -------      ------   -----------    -----   ----------
/dev/sda1     477M         111M     341M           25%     NORMAL
```

```
/dev/sdb      50G          28G      20G            59%     NORMAL

Press return to continue ...
```

Note The corresponding status and process ID (PID) of each service is also displayed in the menu. In a multi-node setup, the status is also displayed for any inventory databases or monitoring databases.

Stopping Cisco Services

You can stop all Cisco services that are part of the Cisco UCS Director appliance by choosing Stop Services. You can verify that all services are stopped by choosing Display Service Status.

Step 1 From the Cisco UCS Director Shell menu, choose Stop Services.

Step 2 Press Enter.
The following information displays:

```
Do you want to stop services [y/n]? : y
Stopping service broker...                  [ OK ]
Stopping service controller...              [ OK ]
Stopping service eventmgr...                [ OK ]
Stopping service client...                  [ OK ]
Stopping service idaccessmgr...             [ OK ]
Stopping service inframgr...                [ OK ]
Stopping service websock...                 [ OK ]
Stopping service tomcat...                  [ OK ]
Stopping service flashpolicyd...            [ OK ]
Press return to continue ...
```

Step 3 Press Enter to complete the procedure.

Starting Cisco Services

You can execute all services that are part of Cisco UCS Director by choosing Start Services.

After using this option, you can choose Display Service Status to verify that all services are executed.

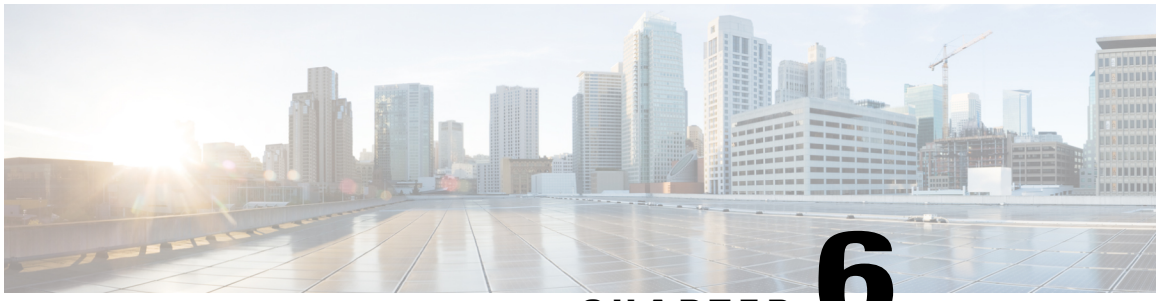
Note Services started in the background are not displayed.

Step 1 From the Cisco UCS Director Shell menu, choose Start Services.
The following information is displayed:

```
Services are being started. Use "Display Services Status" option to check the status
Press return to continue ...
```

Step 2 Press Enter to complete the process.

Step 3 Choose Display Service Status to verify that the services are executed.



CHAPTER 6

Managing Databases

This chapter contains the following sections:

Working with Databases

This section describes how to enable, start and stop, as well as backup and restore a database.

Stopping the Database

You can halt the mysql daemon (mysqld) by choosing the Stop Database option. This option stops all of the following Cisco services:

- Broker
- Controller
- Eventmgr
- Client
- Idaccessmgr
- Inframgr
- Websock (VNC interface)
- Tomcat

- Flashpolicyd

Step 1 From the Cisco UCS Director Shell menu, choose the Stop Database option.
The following information is displayed:

```
Do you want to stop database [y/n]? : y
Stopping database...
Database stopped.
     Stopping broker [PID=13113]/[Child=13115]
     Stopping controller [PID=13139]/[Child=13142]
     Stopping eventmgr [PID=13146]/[Child=13149]
     Stopping client [PID=13153]/[Child=13156
13167
13173]
     Stopping idaccessmgr [PID=13163]/[Child=]
     Stopping inframgr [PID=13170]/[Child=]
     Tomcat is running with [PID=13216]. Stoping it and its child process
     Flashpolicyd is not running
Stopping websock[PID=13342]
Database stopped
Press return to continue ...
```

Step 2 Choose Display Service Status option to verify that the Cisco services have been stopped on the database.
The database status displays as down with no connections.

Starting the Database

You can start the mysql daemon (mysqld) by choosing the Start Database option.

Note This option starts the appliance database only.

Step 1 From the Cisco UCS Director Shell menu, choose the Start Database option.

Step 2 Press **Enter**.
The following information is displayed:

```
Starting database...
Database started.
Press return to continue ...
```

Note The Cisco services are not started automatically when you start the appliance database. Choose the Start Services option to start the Cisco services.

Step 3 Choose Display Service Status option to verify that the Cisco services have been started on the database.
The database status displays as up and list the number of connections.

Backing Up the Database

You can backup the appliance database to an FTP, SFTP, or SCP server.

You need the following information in order to execute the task:

- FTP, SFTP, or SCP server's IP address (from where the database is backed up)
- Server's IP address (where the database is backed up)
- Server's login credentials

Note After the server credentials are provided, the entire database of the Cisco UCS Director appliance is backed up at the specified server location. You then can start the Cisco services by choosing the Start Services option.

Before You Begin

Stop the Cisco services by using the Cisco UCS Director Shell Stop Services option.

Step 1 If you have not already done so, stop the Cisco services by using the Stop Services option. Refer to the Shell documentation about using that option.

Step 2 From the Cisco UCS Director Shell menu, choose the Backup Database option and press **Enter**.
The following information is displayed:

```
Services will be stopped before Database Backup. Do you want to continue [y/n]?
```

Step 3 Enter y and press **Enter**.
The following information is displayed:

```
Taking local Database backup...
The backup process creates a <filename>.tar.gz file on the system running Cisco UCS Director.
This file will be copied to another server using FTP/SFTP/SCP protocol.
Specify the transfer mode and login credentials
```

Step 4 Enter your mode of transfer and login credentials, and press Enter.
The following information is displayed:

```
Server IP Address:
```

Step 5 Enter Server IP address and press Enter.
The following information is displayed:

```
Server IP Address: xxx.xxx.xxx.xxx
Server Login:
```

Step 6 Enter your Server login name and press Enter.

Step 7 Enter your Server password and press Enter.

Note For SFTP server, you can also store the backup files in the sub-directory. By default, the files are stored in the Home directory.

Note For SCP, you need to provide the complete path to store the backup files.

Messages appear to confirm the progress of your backup.

Restoring the Database

Before restoring the database, stop the Cisco services. To stop the services, choose the Stop Services option. Provide the following information in order to execute the task:

- FTP, SFTP, or SCP server's IP address (from where the database is restored)
- Server's login credentials
- Restore filename
- Confirm to restore

Note After server credentials are provided, the entire database of the Cisco UCS Director appliance is restored from the specified server location. You can then start the Cisco services by choosing the Start Services option.

Step 1 From the Cisco UCS Director Shell menu, choose the Restore Services option.

Step 2 Press Enter.
The following information displays:

```
Restore database......
Restore will recover file from an FTP/SFTP server or can copy the backup file through SCP mode to
another server.
Provide the necessary mode of transfer and access credentials
Please provide transfer mode[FTP/SFTP/SCP]:
```

Step 3 Enter your mode of transfer and press Enter.
The following information displays:

```
 Provide the necessary access credentials
Server IP Address:
```

Step 4 Enter your server IP address and press Enter.
The following information displays:

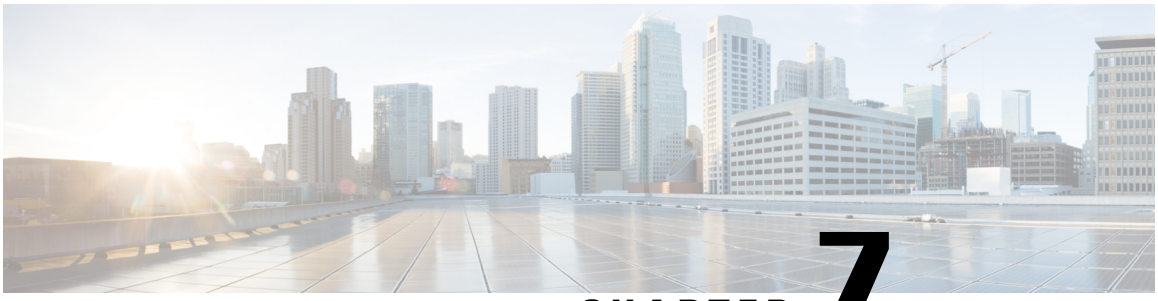
```
Server Login:
```

Step 5 Enter your server login and press Enter.

Step 6 Enter your server password and press the Enter.

Step 7 Follow the onscreen prompts to complete the process.

Step 8 Choose the Start Services option to restart the Cisco services.



CHAPTER 7

Managing Bare Metal Agent Details

This chapter contains the following sections:

Adding the Cisco UCS Director Bare Metal Agent Hostname and IP Address

Choose this option to add the Cisco UCS Director Bare Metal Agent appliance hostname and IP address entries into the Cisco UCS Director appliance's `/etc/hosts` file.

Step 1 From the Cisco UCS Director Shell menu, choose the Add Cisco UCS Director Baremetal Agent option and press Enter. The following information appears:

```
Adding Cisco UCS Director Baremetal Agent Hostname and IP Address entry to /etc/hosts
Enter Cisco UCS Director Baremetal Agent IP Address:192.0.2.1
Enter Cisco UCS Director Baremetal Agent Hostname:192.44.2.1
Adding host entry 192.3.55.1 to /etc/hosts
Entry 192.3.55.1 does not exist
Backed up old file...
Added new entry 192.3.55.1
Added 192.44.2.1 To /etc/hosts
Press return to continue ...
```

Step 2 Press Enter to complete the process.

Enabling the Database for Cisco UCS Director Bare Metal Agent

You can enable remote database access for the Cisco UCS Director Bare Metal Agent appliance by choosing the Enabling the Database for BMA option.

Note This option is required for configuration of the Cisco UCS Director appliance with the BMA appliance.

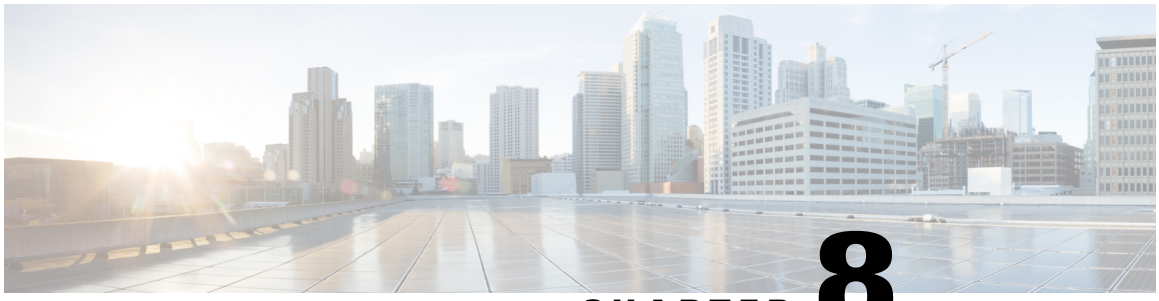
Step 1 From the Cisco UCS Director Shell menu, choose the Enabling the Database for Cisco UCS Directory Baremetal Agent option and press Enter.
The following information is displayed:

```
Do you want to enable 'remote database' access for Cisco UCS Director Baremetal Agent [y/n]? y
   Cisco UCS Director Baremetal Agent Hostname/IP Address: 192.168.0.241
```

Step 2 Choose y and press Enter.
The following information is displayed:

```
Cisco UCS Director Baremetal Agent Hostname/IP Address: 192.0.2.0
Enabling 'remote database' access for 192.0.2.0
Enabling remote database access to 192.0.2.0
About to enable remote access to database - please be catious that this is only supported for Cisco
 UCS Director Baremetal Agent
About to enable remote access to database (192.0.2.0) please be catious that this is only supported
 for Cisco UCS Director
Baremetal Agent
 INFO (DBEnableRemoteAccess.java:195) About to enable remote access to database (192.0.2.0) please
be catious that this is
only supported for Cisco UCS Director Baremetal Agent
Remote DB access enabled
 INFO (DBEnableRemoteAccess.java:213) About to enable remote access to datbase - please be catious
that this is only supported
for Cisco UCS Director Baremetal Agent
flushPrivileges - About to enable remote access to database - please be catious that this is only
supported for Cisco UCS
Director Baremetal Agent
 INFO (DBEnableRemoteAccess.java:119) flushPrivileges - About to enable remote access to database -
 please be catious that
this is only supported for Cisco UCS Director Baremetal Agent
Enabled 'Remote' database access
 INFO (DBEnableRemoteAccess.java:219) Enabled 'Remote' database access
Sucessfully added credential for ipAddress 192.0.2.01
flushPrivileges - About to enable remote access to database - please be catious that this is only
supported for Cisco UCS
Director Baremetal Agent
 INFO (DBEnableRemoteAccess.java:119) flushPrivileges - About to enable remote access to database -
 please be catious that
this is only supported for Cisco UCS Director Baremetal Agent
Enabled 'Remote' database access for: 192.0.2.0
 INFO (DBEnableRemoteAccess.java:679) Enabled 'Remote' database access for: 192.0.2.0
Completed remote database access...
Press return to continue ...
```

Step 3 Press Enter to return to the main menu.



CHAPTER 8

Managing Certificates

This chapter contains the following sections:

Managing SSL Certificates

This section describes how to generate a Self-Signed certificate and Certificate Signing Request (CSR) that can be used to obtain SSL certificates from a Certificate Authority such as VeriSign, Digicert, and so on It also provides instructions to import the generated Self-Signed certificate or CA certificate in Cisco UCS Director.

Generating Self-Signed Certificates and Certificate Signing Requests

When you generate a self-signed certificate, a new self-signed certificate in PEM format and a Certificate Signing Request (CSR) file are created in the `opt/certs/` directory. When generating a self-signed certificate, clicking enter will select the default option. For example, if you do not specify a domain name, the shell admin by default chooses the domain name of the appliance that is configured.

You can generate a self-signed certificate and a CSR using the Generate Self-Signed Certificate and Certificate Signing Request option.

Step 1 From the Cisco UCS Director Shell menu, choose the Generate Self-Signed Certificate and Certificate Signing Request and press Enter.
The following information is displayed:

```
Domain Name [localdom]:
```

Step 2 Enter the domain name and press Enter.

By default the shell menu selects the domain name of the local appliance that is configured.

The following information is displayed:

```
How many days is self-signed certificate valid for? [365]:
```

Step 3 Enter the number of days that you want the self-signed certificate to be valid for and press Enter.
The following information is displayed:

```
Generating a 2048 bit RSA private key
writing new private key to 'opt/certs/localdom.key'
------
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or DN.
There are quite a few fields but you can leave some blank.
For some fields there will be a default value,
If you enter '.', the field will be left blank.
------
Country Name (2 letter code) [GB]:
State or Province Name (full name) [Berkshire]:
Locality Name (eg, city) [Newbury]:
Organization Name (eg, company) [My Company Ltd]:
Organizational Unit Name (eg, section) []:
Common Name (eg, your name or your server's hostname) []:
Email Address []:
```

Step 4 Enter the country name, state or province name, locality name, organization name, organizational unit name, common name, and email address, and press Enter.
The following information is displayed:

```
Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password []:
An optional company name:
```

Step 5 (Optional) Enter a challenge password and an optional company name, and press Enter.
The following information is displayed:

```
Writing new CSR (Certificate Signing Request) to /opt/certs/localdom.csr.
Use the CSR to obtain a certificate in PEM format from a CA (Certificate Authority).

Writing new self-signed certificate in PEM format to opt/certs/localdom.pem.

Press return to continue ...
```

Importing Certification Authority or Self-Signed Certificates

You can either import the generated self-signed certificate or import a certificate generated by another system or third party by copying .pem and .key (private key) files to the `/opt/certs/` directory. The shell admin will automatically discover the .pem and .key files for the given domain in the `/opt/certs/` directory. The .pem file provided is exported into PKCS12 format, and then converted to JKS format. The JKS file can be imported into Tomcat.

You can import a CA signed certificate or self-signed certificate using the Importing CA/Self-Signed Certificate option.

Step 1 From the Cisco UCS Director Shell menu, choose the Importing CA/Self-Signed Certificate option and press Enter.
The following information is displayed:

```
Domain Name [localdom]:
```

Step 2 Enter the domain name and press Enter.
By default the shell menu selects the domain name of the local appliance that is configured.

The following information is displayed:

```
Enter CA/self-signed certificate [/opt/certs/localdom.pem]:
```

Step 3 Enter the path to the CA signed certificate or self-signed certificate, and press Enter.
The following information is displayed:

```
Enter private key [/opt/certs/localdom.key]:
```

Step 4 Enter the path to the private key and press Enter.
The following information is displayed:

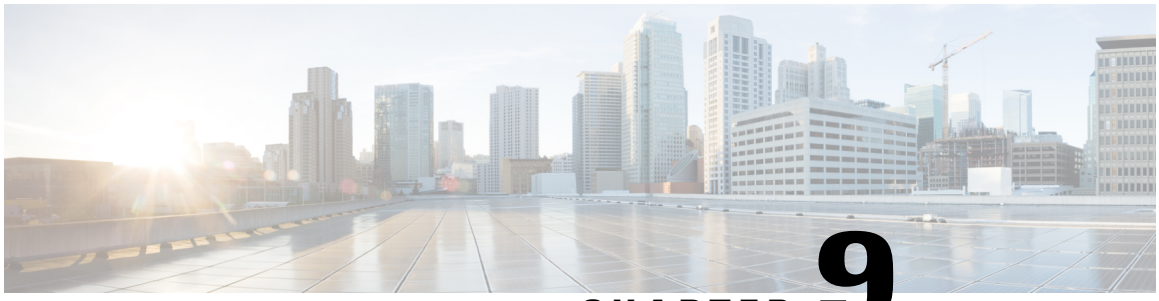
```
Enter keystore password:
```

Step 5 Enter the Java KeyStore (JKS) password and press Enter.
Information similar to the following is displayed

```
Exporting /opt/certs/localdom.pem to PKCS12 format....

Converting PKCS12 to JKS format...

Importing /opt/certs/keystore.jks into tomcat for secured access to UCSD UI using HTTPS.

Certificate /opt/certs/keystore.jks imported to tomcat succesfully.

Do you want to import the certificate file:///opt/certs/localdom.pem into WebProxy for secured access
 to VM console through VNC [y/n]?:
```

Step 6 Enter y and press Enter to import the certificate file into WebProxy for secured access to the VM console through VNC.
The following information is displayed:

```
Certificate file:///opt/certs/localdom.pem imported to WebProxy succesfully.
Press return to continue ...
```



CHAPTER 9

Managing Root Access

This chapter contains the following sections:

Accessing Root Privileges

This section describes how to access root. Tasks that require root privileges include moving directories or files into other directories, providing or revoking user privileges, general system repairs, and occasionally installing applications.

Note Compiling software as root is not recommended for security reasons.

Configuring Root Access

You can enable root privileges by choosing Manage Root Access.

Step 1 From the Cisco UCS Director Shell menu, choose Manage Root Access and press Enter.
The following information is displayed:

```
Enable/Disable/Configure (root privilege) [e/d/c]:
```

Step 2 Enter c and press Enter.
The following information is displayed:

```
Do you want to Configure/Set Root Privilege/Password [y/n]? :
```

Step 3 Enter y and press Enter.

The following information is displayed:

```
Changing root password...
         Changing password for user root.
         New UNIX password:
```

Step 4 Enter a new UNIX password and press Enter.
The following information is displayed:

```
 Retype new UNIX password:
```

Step 5 Enter your new UNIX password and press Enter.
The following information displays:

```
passswd: all authentication tokens updated successfully.
         Root passwd changed successfully
         Press return to continue...
```

Step 6 Press Enter to complete the process.

Enabling Root Access

You can enable root privileges by choosing Manage Root Access.

Step 1 From the Cisco UCS Director Shell menu, choose the Manage Root Access option and press Enter.
The following information displays:

```
 Enable/Disable/Configure (root privalege) [e/d/c]:
```

Step 2 Enter e and press Enter.
The following information is displayed:

```
Do you want to Enable Root Access [y/n]? :
```

Step 3 Enter y and press Enter.
The following information is displayed:

```
Enabling root access...
        Unlocking password for user root.
        passwd: Success.
        Root access enabled successfully
        Press return to continue
```

Step 4 Press Enter to return to compete the process.

Disabling Root Access

Choose this option to disable root privileges.

Step 1 From the Cisco UCS Director Shell menu, choose the Manage Root Access option and press the **Enter** key.

The following information displays:

```
Enable/Disable/Configure (root privalege) [e/d/c]:
```

Step 2 Enter d and press the **Enter** key.
The following information displays:

```
Do you want to Disable Root Access [y/n]? :
```

Step 3 Enter y and press the **Enter** key.
The following information is displayed:

```
disabling root access...
         Locking password for user root.
         Passwd: Success
         Root access disabled sucessfully
         Press return to continue...
```

Step 4 Press the **Enter** key to return to the main menu.

Logging in as Root

You can log in as root by choosing the Login As Root option.

Step 1 From the Cisco UCS Director Shell menu, choose the Login As Root option and press Enter.
The following information is displayed:

```
Do you want to  Login As Root [y/n]? :
```

Step 2 Enter y and press Enter.
The following information is displayed:

```
Logging in as root
         password:
```

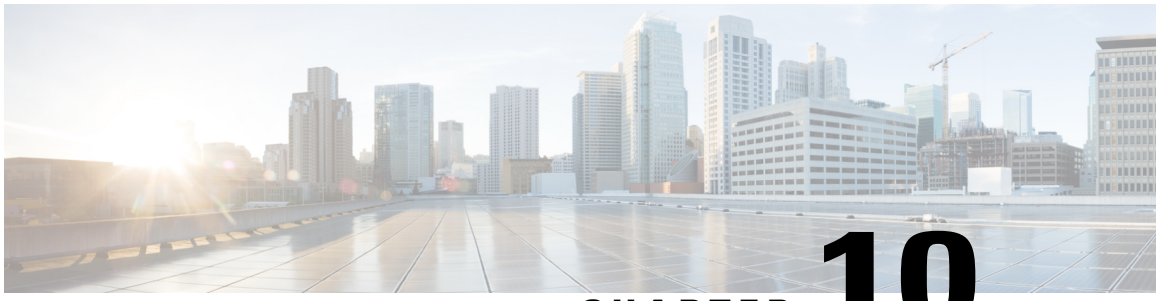
Step 3 Enter your root password and press Enter.
The following information is displayed:

```
Logging as root
Password:
[root@localhost shelladmin]#
```

Step 4 Enter your password and press Enter.

Step 5 Enter exit to return to the shelladmin.
Information similar to the following is displayed:

```
[root@localhost shelladmin]# cd /opt
[root@localhost opt]# exit
exit
Sucessful login
Press return to continue ...
```



CHAPTER 10

Troubleshooting

This chapter contains the following sections:

Backing up the Monitoring Database in a Multi-Node Setup

Problem—You are unable to back up the monitoring database in a multi-node setup.

Recommended Solution—Edit the `dbMonitoringBackupRestore.sh` script.

Step 1 Edit the `/opt/infra/dbMonitoringBackupRestore.sh` script using vi.

Step 2 Remove the `CHARGEBACK_HISTORY_ENTRY` table name from the script.

Pinging the Hostname and IP Address

You can ping a hostname or IP address to test your connectivity by choosing the Ping Hostname/IP address option.

Step 1 From the Cisco UCS Director Shell menu, choose the Ping Hostname/IP address option and press Enter.

Step 2 Enter your IP address and press Enter.
The following information is displayed:

```
 Enter IP Address : 209.165.200.224
PING 209.165.200.224 (209.165.200.224) 56(84) bytes of data.
64 bytes from 209.165.200.224: icmp_seq=1 ttl=64 time=9.90 ms
64 bytes from 209.165.200.224: icmp_seq=2 ttl=64 time=0.316 ms
64 bytes from 209.165.200.224: icmp_seq=3 ttl=64 time=0.254 ms
64 bytes from 209.165.200.224: icmp_seq=4 ttl=64 time=0.198 ms
64 bytes from 209.165.200.224: icmp_seq=5 ttl=64 time=0.267 ms

--- 209.165.200.224 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 3999ms
rtt min/avg/max/mdev = 0.198/2.187/9.901/3.857 ms
Press return to continue ...
```

Step 3 Press Enter to exit out of the operation.

Viewing Tail Inframgr Logs

This Shell lets enables you to see inframgr (Infrastructure Manager) log data, which are generated behind the scenes by use of the Unix tail command. When you are debugging, you can trace problems by using this log data. You use the Tail Inframgr Logs option to immediately tail the most recent inframgr logs. The results are displayed on your screen directly after you select this option.

Step 1 From the Cisco UCS Director Shell menu, choose the Tail Inframgr Logs option and press Enter.
Following are a few sample lines, typical of the results displayed immediately after use of the Tail Inframgr Logs option:

```
2014-07-20 23:17:43,500 [pool-23-thread-17]
INFO  getBestAgent(SystemTaskExecutor.java:308)
- No Agent available for remoting SnapMirrorHistoryStatusSchedulerTask
2014-07-20 23:17:43,502 [pool-23-thread-17]
INFO  updateStatus(SystemTaskStatusProvider.java:181)
- Task: task.SnapMirrorHistoryStatusSchedulerTask changed state to OK
2014-07-20 23:17:43,562 [pool-23-thread-17]
INFO  executeLocally(SystemTaskExecutor.java:133)
- Executing task locally: SnapMirrorHistoryStatusSchedulerTask
2014-07-20 23:17:43,562 [pool-23-thread-17]
INFO  getClusterLeaf(ClusterPersistenceUtil.java:81)
```

```
- Leaf name LocalHost
2014-07-20 23:17:43,571 [pool-23-thread-17]
```

Step 2 To exit from the log file display, type Ctrl+C, then press Enter.

Collecting Logs from a Node

The Collect Logs from a Node option lets you collect logs from the local node or from a remote node.

Step 1 From the Cisco UCS Director Shell menu, choose the Collect Logs from a Node Status option.
The following list of services appears:

```
         Cisco UCS Director Shell Menu
Node:Standalone | Version:6.0.0.0 | UpTime:  19:57:52 up 2 days, 14:23

1) Change ShellAdmin password
2) Display Services Status
3) Stop Services
4) Start Services
5) Stop Database
6) Start Database
7) Backup Database
8) Restore Database
9) Time Sync
10) Ping Hostname/IP Address
11) Show version
12) Generate Self-Signed Certificate and Certificate Signing Request
13) Import CA/Self-Signed Certificate
14) Configure Network Interface
15) Display Network Details
16) Enable Database for Cisco UCS Director Baremetal Agent
17) Add Cisco UCS Director Baremetal Agent Hostname/IP
18) Tail Inframgr logs
19) Apply Patch
20) Shutdown Appliance
21) Reboot Appliance
22) Manage Root Access
23) Login as Root
24) Configure Multi Node Setup (Advanced Deployment)
25) Clean-up Patch Files
26) Collect logs from a Node
27) Collect Diagnostics
28) Quit

SELECT>
```

Step 2 Enter the Logs Collection option.

- If you choose to collect logs from the current node, a response similar to the following appears:

```
Collecting all feature logs....
============================================================
                    Collection of Logs
============================================================
Moving logs from /opt/infra/broker to common/logs
Moving logs from /opt/infra/client to common/logs
Moving logs from /opt/infra/controller to common/logs
Moving logs from /opt/infra/eventmgr to common/logs
Moving logs from /opt/infra/idaccessmgr to common/logs
Moving logs from /opt/infra/inframgr to common/logs
Moving logs from /opt/infra/web_cloudmgr to common/logs

Logs archive path:  /opt/infra/common/logs-07-31-2014-08-36-48.tar
You can also view individual feature logs under /opt/infra/common/logs

Logs collection done for current node
Do you want to collect logs from another node?  [y/n]: Collect Logs from a Node
```

Note To collect logs from another node, the best practice is to return to the Shell menu, select the Collect Logs from a Node option again, and choose the Remote Node option.

- If you choose to collect logs from a remote node, a response similar to the following appears:

```
Please enter the remote server IP/Hostname from where we collect logs:
```

Follow the onscreen instructions to provide the address of the remote log, establish a secure connection, and provide the required login credentials for that remote node.

Collecting Diagnostics

The Collect Diagnostics option helps to collect logs from a Multi-Node setup and a Standalone setup for debugging purposes.

Step 1 From the Cisco UCS Director Shell menu, choose Collect Diagnostics.
The following information is displayed:

```
Diagnostics Menu
==================
Options:
  1) Collect basic diagnostics
  2) Collect inframgr thread dump and heap dump
  3) Collect full diagnostics
  4) Exit
```

Note In a multi-node setup, only Collect basic diagnostics option is supported in inventory and monitoring nodes.

Step 2 If you choose Collect basic diagnostics option, a response similar to the following appears:

```
Type in option# : 1
Collecting basic diagnostics.............. done
Creating diagnostics archive /opt/infra/diags/standalone_diags_basic_12-19-2017-05-25-39.tgz....
```

```
done
Press return to continue ...
```

Step 3 If you choose Collect inframgr thread dump and heap dump option, a response similar to the following appears:

```
Type in option# : 2
Pre-requisites:
1. Download JDK installer jdk-8u131-linux-x64.tar.gz from oracle.com JDK arvhive.
2. Copy the jdk-8u131-linux-x64.tar.gz under /opt/bin.
3. Install the JDK by running the following commands.
        cd /opt/bin
        tar -xzvf jdk-8u131-linux-x64.tar.gz

Enter JDK path if it's already installed (e.g. /opt/bin/jdk1.8.0_131): /root/jdk1.8.0_131/
Collecting infradump diagnostics. This operation may take several minutes to complete.
........ done
Creating diagnostics archive
/opt/infra/diags/standalone_diags_infradump_12-19-2017-04-58-13.tgz.....................................................
 done
Press return to continue ...
```

Step 4 If you choose Collect full diagnostics option, a response similar to the following appears:

```
Type in option# : 3
Pre-requisites:
1. Download JDK installer jdk-8u131-linux-x64.tar.gz from oracle.com JDK arvhive.
2. Copy the jdk-8u131-linux-x64.tar.gz under /opt/bin.
3. Install the JDK by running the following commands.
        cd /opt/bin
        tar -xzvf jdk-8u131-linux-x64.tar.gz

Enter JDK path if it's already installed (e.g. /opt/bin/jdk1.8.0_131): /root/jdk1.8.0_131/
Collecting full diagnostics. This operation may take several minutes to complete.
.......................
Creating diagnostics archive
/opt/infra/diags/standalone_diags_full_12-19-2017-05-00-38.tgz.....................................................
 done
Press return to continue ...
```

Note You can share dignostics information with the Cisco TAC team for troubleshooting purpose by raising a TAC case.

Using Diagnostics Information

User or TAC engineer can collect the basic diagnostics data using Collect basic diagnostics option in the shelladmin while reporting any issue. The diagnostics bundle contains the following diagnostics data that is used for troubleshooting the reported issues.

- Summary file—Contains important and high level summary.
- Diag file—Contains information such as version history with timestamp, average CPU utilization, infra services status, database status, and database size.

- SummaryReport file—Contains summary report.
- DiagOutput file—Contains detailed report.
- UcsdExceptions file—Contains all exceptions found in the inframgr/logfile.txt.* and number of occurrences of each exception.
- infra-env Directory—Contains the infra services configuration (<service>.env) files.
- commands Directory—Contains the output of various system commands.
- var-log-ucsd zip file—Contains the log files such as install.log, bootup.log, and services.log.

Troubleshooting VMware Console Display Issues

Problem—The VMware console does not display after an abrupt shutdown of the Cisco UCS Director VM from VMware vCenter.

Possible Cause—Occasionally after Cisco UCS Director VM is powered on, the VMware console prompt gets stuck after the process restart and does not return to the shelladmin.

Recommended Solution—After the VM is powered on, press Alt-F1 to refresh the VMware console.

In the Cisco UCS Director VM prompt after the VM is powered on, press Alt-F1.
The VMware console screen is refreshed.

Enabling HTTP Access

By default, HTTPS access mode is enabled during initial OVF installation and Cisco UCS Director upgrade. When HTTP is enabled, you can log in to Cisco UCS Director, using both HTTP and HTTPS modes. When HTTPS is enabled, you can log in to the Cisco UCS Director only using HTTPS mode. Even when you try to log in to Cisco UCS Director using HTTP mode, you will be redirected to HTTPS user interface only.

Step 1 From the Cisco UCS Director Shell menu, choose the Enable HTTP/HTTPS option and press Enter.
The following information is displayed:

```
HTTPS is currently enabled. Do you want to enable HTTP [y/n]? :
```

Step 2 Enter y and press Enter.
The following information is displayed:

```
UCS Director Services need to be stopped to proceed with the HTTP configuration. Do you want to
continue [y/n]?
```

Step 3 Enter y and press Enter. The Cisco services are restarted.

Resetting MYSQL User Password in a Multi-Node Setup

Step 1 From the Cisco UCS Director Shell menu, choose the Reset MYSQL User password option and press Enter.
The following information is displayed:

```
This utility will restart the services after changing MYSQL user password, do you want to continue?
 [y/n]:
```

Note In a multi-node setup, ensure that the infra services are stopped in the primary and service nodes before executing the Reset MySQL User password option in DB nodes.

Step 2 Enter y and press Enter.
The following information is displayed:

```
Stopping the infra services...
The infra services are stopped.
Do you want to change the password for MYSQL 'admin' user? [y/n]:
```

Step 3 Enter y and press Enter.
The following information is displayed:

```
Current Password (Type in current password or press enter key to use password from the existing
credentials file):
```

This option is applicable only for the primary and service nodes in a multi-node setup.

Step 4 Enter y and press Enter.
The following information is displayed:

```
Do you want to generate random password for MYSQL 'admin' user? [y/n]:
```

Step 5 Enter n and press Enter.
The following information is displayed:

```
Specify the new password for MYSQL 'admin' user:
```

Step 6 Enter a new MYSQL admin password and press Enter.

Step 7 Enter your new MYSQL admin password and press Enter.
The following information is displayed:

```
MYSQL user password is updated.
Checking if the database is running...yes.
Stopping the database...
The database is stopped.
Starting the database...
The database is started.
Copying credential files to BMA appliance...
Trying to get session to xxx.xxx.xxx.xxx ....
Trying to connect...
Successfully connected
Uloaded file:/opt/certs/mysql/dbkeys.key
Trying to get session to xxx.xxx.xxx.xxx...
Trying to connect...
Successfully connected
Uploaded file:/opt/certs/mysql/dbcreds.properties
```

```
Starting the infra services...
Press return to continue...
```

Note If a BMA appliance is associated with a Cisco UCS Director, the dbkeys and dbcreds files are copied to a specific location in the BMA appliance to establish successful connectivity to the Cisco UCS Director. After resetting the MySQL user password, you should restart the BMA services either from the Cisco UCS Director user interface or from the BMA appliance.

Note In a multi-node set up, if you want to reset the MySQL user password, you should execute the Reset MySQL User password option in all the nodes in the following sequence inventory, monitoring, primary, and service nodes.

Resetting MYSQL User Password in a Standalone Setup

Step 1 From the Cisco UCS Director Shell menu, choose the Reset MYSQL User password option and press Enter.
The following information is displayed:

```
This utility will restart the services after changing MYSQL user password, do you want to continue?
 [y/n]:
```

Step 2 Enter y and press Enter.
The following information is displayed:

```
Stopping the infra services...
The infra services are stopped.
Do you want to change the password for MYSQL 'admin' user? [y/n]:
```

Step 3 Enter y and press Enter.
The following information is displayed:

```
Do you want to generate random password for MySQL 'admin' user? [y/n]:
```

Step 4 Enter y and press Enter.
The following information is displayed:

```
Generating Random Password....... done
Do you want to change the password for MySQL 'root' user? [y/n]:
```

Step 5 If you entered n, enter the new password for MySQL admin user and press Enter.
The following information is displayed:

```
Specify the new password for MySQL 'admin' user:
Confirm the new password for MySQL 'admin' user:
Password update takes few minutes. Please wait..... done
```

Step 6 Enter y and press Enter.
The following information is displayed:

```
Do you want to generate random password for MySQL 'root' user? [y/n]:
```

Step 7 Enter y and press Enter.

The following information is displayed:

```
Generating Random Password....... done
MySQL user password is updated.
Checking if the database is running... yes.
Stopping the database...
.............
The database is stopped.
Starting the database...
Checking if MySQL database is running... .UP
The database is started.

Starting the infra services...
```

Step 8 If you entered n, enter the new password for MySQL root user and press Enter.
The following information is displayed:

```
Specify the new password for MySQL 'root' user:
Confirm the new password for MySQL 'root' user:
Password update takes few minutes. Please wait..................... done


MySQL user password is updated.
Checking if the database is running... yes.
Stopping the database...
..
The database is stopped.
Starting the database...
Checking if MySQL database is running... UP
The database is started.

Starting the infra services...
```

Note After resetting the MySQL user password, you should restart the BMA services either from the Cisco UCS Director user interface or from the BMA appliance.