

# HP Configuration Management

## Enterprise Manager

for the Windows® operating system

Software Version: 5.1x

---

### User Guide

Document Release Date: March 2008

Software Release Date: February 2008



## Legal Notices

### Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

### Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

### Copyright Notices

© Copyright 2008 Hewlett-Packard Development Company, L.P.

### Trademark Notices

Linux is a registered trademark of Linus Torvalds.

Microsoft®, Windows®, and Windows® XP are U.S. registered trademarks of Microsoft Corporation.

OpenLDAP is a registered trademark of the OpenLDAP Foundation.

PREBOOT EXECUTION ENVIRONMENT (PXE) SERVER  
Copyright © 1996-1999 Intel Corporation.

TFTP SERVER

Copyright © 1983, 1993

The Regents of the University of California.

OpenLDAP

Copyright 1999-2001 The OpenLDAP Foundation, Redwood City, California, USA.  
Portions Copyright © 1992-1996 Regents of the University of Michigan.

OpenSSL License

Copyright © 1998-2001 The OpenSSLProject.

Original SSLeay License

Copyright © 1995-1998 Eric Young (eay@cryptsoft.com)

DHTML Calendar  
Copyright Mihai Bazon, 2002, 2003

## Documentation Updates

This guide's title page contains the following identifying information:

- Software Version number, which indicates the software version
- Document release date, which changes each time the document is updated
- Software release date, which indicates the release date of this version of the software

To check for recent updates or to verify that you are using the most recent edition, visit the following URL:

**<http://h20230.www2.hp.com/selfsolve/manuals>**

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Table 1 lists new features added for the Configuration Management v 5.10 release.

**Table 1 New features added for Configuration Management 5.10**

Chapter	Version	Changes
2, 4	5.11	Updated default installation directory to C:\Program Files\HP\HP BTO Software.
3	5.10	Page 18, <a href="#">Import Devices</a> : Added Device Import wizard.
3	5.10	Page 22, <a href="#">Configuring Directory Services</a> : Added new UI setting, Leaf Node Filter: an LDAP-style filter value to filter nodes with large amounts of data types in the tree navigation view.
3	5.10	Page 31, <a href="#">Log Files</a> . Updated section to include information about new log files in 5.10.
4	5.10	Page 37, <a href="#">Notify Devices</a> : Added notify support.
4	5.10	Page 39, <a href="#">Job Management</a> : Added new section which explains the new Jobs control in Enterprise Manager.
4	5.10	Page 43, <a href="#">Managing Virtual Machines</a> : Added information about how to manage virtual machines using the CM Enterprise Manager.

## Support

You can visit the HP Software support web site at:

**[www.hp.com/go/hpsoftwaresupport](http://www.hp.com/go/hpsoftwaresupport)**

This Web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract.

To find more information about access levels, go to:

**[http://h20230.www2.hp.com/new\\_access\\_levels.jsp](http://h20230.www2.hp.com/new_access_levels.jsp)**

To register for an HP Passport ID, go to:

**<http://h20229.www2.hp.com/passport-registration.html>**



# Contents

<b>1</b>	<b>Introduction .....</b>	<b>9</b>
	Audience .....	9
	Chapters Summary .....	9
	Related Documents.....	10
<b>2</b>	<b>Installing the CM Enterprise Manager .....</b>	<b>11</b>
	System Requirements.....	12
	Platform Support .....	12
	Installation Tasks.....	13
<b>3</b>	<b>Configuring the CM Enterprise Manager .....</b>	<b>15</b>
	Navigating the CM Enterprise Manager .....	16
	Signing in to the CM Enterprise Manager .....	16
	CM Enterprise Manager Tabs.....	17
	Configuration Tasks .....	18
	Import Devices .....	18
	Remove Devices .....	19
	Create CM Enterprise Manager Users.....	19
	Configuring Directory Services .....	22
	Integrate the CM Reporting Server .....	30
	Console Settings.....	30
	Log Files .....	31
<b>4</b>	<b>Enterprise Management .....</b>	<b>32</b>
	Managing Directory Policies.....	32
	Service Information .....	36
	Notify Devices .....	37

Setting Global Notify Parameters.....	38
Job Management.....	39
Current Jobs.....	40
Past Jobs.....	40
Job Details.....	41
Job States.....	42
Managing Virtual Machines.....	43
Virtual Machines Tab.....	43
Creating New Virtual Machines.....	44
<b>Index .....</b>	<b>48</b>



# 1 Introduction

The HP Configuration Management Enterprise Manager (CM Enterprise Manager) is a web-based, agent management tool that allows you to quickly and easily manage software, patches, and inventory for devices in your environment.

This guide introduces CM Enterprise Manager, shows you how to install and configure the product components, and provides detailed information and instructions for using the CM Enterprise Manager.

- 

## Audience

This guide is intended for administrators who will be installing, configuring, and using the CM Enterprise Manager.

## Chapters Summary

This book contains the following chapters in addition to this one:

- Chapter 2, [Installing the CM Enterprise Manager](#) includes information on the requirements and installation instructions.
- Chapter 3, [Configuring the CM Enterprise Manager](#) describes how to configure the CM Enterprise Manager for use in your enterprise.
- Chapter 4, [Enterprise Management](#) shows you how to use the CM Enterprise Manager to manage policy on your devices.

## Related Documents

The following guides describe products related to the CM Enterprise Manager.

*HP Configuration Management Configuration Server User Guide*

*HP Configuration Management Portal Installation and Configuration Guide*

*HP Configuration Management Reporting Server Installation and Configuration Guide*

## 2 Installing the CM Enterprise Manager


At the end of this chapter, you will:

- Be familiar with the system requirements for the CM Enterprise Manager.
- Know how to install the CM Enterprise Manager.
- Know how to remove the CM Enterprise Manager.

# System Requirements

Before installing the CM Enterprise Manager, you will need to have the following installed in your enterprise. If the following are already installed, you will need to identify which ones will be used by the CM Enterprise Manager.

- CM Configuration Server
- CM Reporting Server
- CM Portal

 The CM Reporting Server is not required for using the CM Enterprise Manager. However, if you do not have one identified or installed in your enterprise, you will not be able to access any of the CM Reporting Server features in your CM Enterprise Manager. For information about installing and configuring the CM Reporting Server, refer to the *CM Reporting Server Guide*.

The device on which the CM Enterprise Manager will be installed requires one of the following browsers:

- Microsoft Internet Explorer 6.x or above, with patches applied
- Mozilla Firefox 2

Browsers require Adobe Flash Player version 9.0.47.0 (or later) installed.  
[www.adobe.com/go/getflashplayer](http://www.adobe.com/go/getflashplayer)

For Enterprise Manager to properly display data, the following desktop display settings are minimum requirements:

- Screen Resolution: 1024x768
- Color Quality: Medium (16 bit)

Installation and execution of CM Enterprise Manager is not supported on servers that are configured to perform the role of Windows Terminal Server.

## Platform Support

For information about the platforms that are supported in this release, see the accompanying release notes.

# Installation Tasks

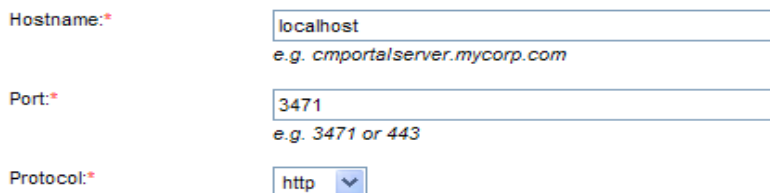
You will need to complete the following tasks to use all the features of the CM Enterprise Manager. Be sure to have the IP address, hostname, and port for your CM Configuration Server, CM Portal, and CM Reporting Server.

- ▶ If the CM Enterprise Manager is installed behind a firewall, and you will be accessing it from outside the firewall, make sure that the firewall allows incoming network connections on port 8080. If not, you will not be able to access the CM Enterprise Manager from outside of the firewall. If you need SSL (secure) access, then the firewall must also be configured to allow incoming network connections on port 8443.

## To install the CM Enterprise Manger and configure CM Portal Settings

- 1 From the installation media, navigate to `Enterprise Manager\win32` directory.
- 2 Double-click the installation executable.
- 3 Select a language and click **OK**.
- 4 Follow the steps in the wizard and provide the appropriate responses.
- 5 After installation, you will be prompted for your CM Portal settings, as seen in the following screen capture.

- ▶ If your web browser does not display this settings window, you will need to access this manually by opening a web browser and navigating to `http://localhost:8080/em/flex/em.jsp`.

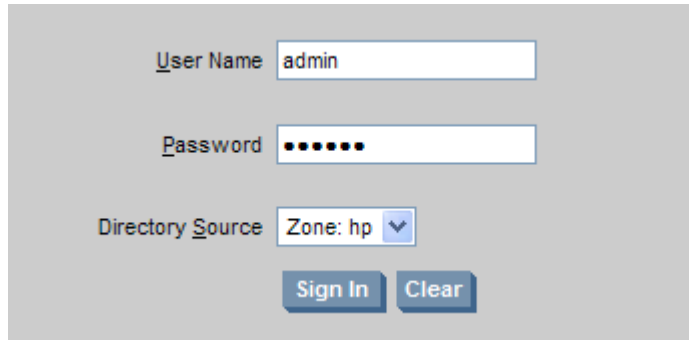


The screenshot shows a settings window with three rows of input fields:

- Hostname:** A text input field containing "localhost". Below it is a small example: "e.g. cmportalserver.mycorp.com".
- Port:** A text input field containing "3471". Below it is a small example: "e.g. 3471 or 443".
- Protocol:** A dropdown menu with "http" selected and a downward arrow.

- 6 Type or select the correct settings, and click **Save**. The settings are then validated. If validation fails, an error is displayed. If validation is

successful, click **Close** to continue. You will be automatically redirected to the start page, shown below.



The screenshot shows a sign-in form with the following elements:

- User Name:** A text input field containing the text "admin".
- Password:** A text input field containing seven black dots, representing a masked password.
- Directory Source:** A dropdown menu with the text "Zone: hp" and a downward-pointing arrow.
- Buttons:** Two buttons labeled "Sign In" and "Clear" are positioned below the input fields.

- 7 Sign in with a user name of admin and a password of secret. These are the defaults. For now, the directory source should be the zone you created when you installed the CM Portal.

▶ You should change the default user name and password before using CM Enterprise Manager in a production environment. See [Create CM Enterprise Manager Users](#) on page 19 for instructions.

- 8 Click **Sign In**.

The main screen of the CM Enterprise Manager is displayed and you are successfully signed in.

To remove the CM Enterprise Manager

- From the **Add or Remove Programs** Control Panel applet, select the HP CM Enterprise Manager. Use the regular removal procedure for your operating system.

---

# 3 Configuring the CM Enterprise Manager

At the end of this section, you will:

- Learn about [Navigating the CM Enterprise Manager](#).
- Be introduced to the many [Configuration Tasks](#).
- Understand the CM Enterprise Manager [Log Files](#).

# Navigating the CM Enterprise Manager

The CM Enterprise Manager allows you to define the desired state for your enterprise by setting configuration policies in your enterprise directory services. In this section, you will learn how to sign in to the CM Enterprise Manager, and the purpose of each tab. The following topics are covered in this section:

- Signing in to the CM Enterprise Manager
- CM Enterprise Manager Tabs

## Signing in to the CM Enterprise Manager

Before you can configure the CM Enterprise Manager, you must sign in.

To sign in to the CM Enterprise Manager

- 1 Double-click the Enterprise Manager icon on your desktop or use the Windows programs group. Additionally, you can open a web browser and go to: **http://enterprisemanager\_hostname:8080/em** where *enterprisemanager\_hostname* is the name of the device where the Enterprise Manager has been installed.



To sign in to the CM Enterprise Manager using secure (SSL) communications, open a browser and go to:

**https://enterprisemanager\_hostname:8443/em**

A default truststore containing a temporary certificate is included in the CM Enterprise Manager. If you wish to use SSL to access the CM Enterprise Manager, you will be prompted to accept or reject this default certificate. Acceptance of this certificate will allow you to use the CM Enterprise Manager; however, you should replace this temporary truststore with one containing a valid certificate for your server. For more information about creating a permanent truststore, see the *HP Configuration Management SSL Implementation Guide*.

- 2 Sign in with the CM Enterprise Manager user name and password (by default, these are *admin* and a *secret*.) If you haven't already, you should change these defaults. See [Create CM Enterprise Manager Users](#) on page 19 for instructions.



- ▶ Do not use non-ASCII characters when entering passwords.
- 3 Select the directory source. Until you have completed other configurations, the directory source should be the zone you created when you installed the CM Portal.
- 4 Click **Sign In**.
  - ▶ If the CM Enterprise Manager is installed behind a firewall, and you will be accessing the CM Enterprise Manager from outside the firewall, make sure that the firewall allows incoming network connections on port 8080. If not, you will not be able to access the CM Enterprise Manager from outside of the firewall. If you need SSL (secure) access, then the firewall must also be configured to allow incoming network connections on port 8443.

Your current session credentials are displayed in the upper right corner of the CM Enterprise Manager.

To sign out of the CM Enterprise Manager

- In the upper right corner of the CM Enterprise Manager page, click **Sign Out**.

## CM Enterprise Manager Tabs

After you are signed in to the CM Enterprise Manager, you will see three tabs.

- **Management:** Use this tab to view and manage devices in your environment. See Chapter 4, [Enterprise Management](#) for more information
- **Reporting:** Use this tab to see reports about your environment. These reports are provided by the CM Reporting Server. To use this tab, you must enable the feature by using the procedure: [To integrate the CM Reporting Server](#) on page 30. See the *HP Configuration Management Reporting Server Installation and Configuration Guide* for more information.
- **Configuration:** Use this tab to configure the CM Enterprise Manager, including directory services and user accounts.

# Configuration Tasks

To finish configuring the CM Enterprise Manager, you will need to complete the following tasks, at a minimum.

- Decide on which directory services you will use.
- Decide which directory services you will use for administrator authentication to the console.
- Decide which directory services will be used for assigning policy.

These tasks are described in the following sections:


- [Configuring Directory Services](#) on page 22.
- [Console Settings](#) on page 30.

You may also want to do the following:


- [Import Devices](#) on page 18.
- [Create CM Enterprise Manager Users](#) on page 19.
- [Integrate the CM Reporting Server](#) on page 30.


## Import Devices

Use the Device Import wizard to import devices into the CM Portal Zone, **Devices** container.

 The Import Device wizard is available only when browsing the CM Portal Zone.


To import devices

- 1 Browse to the CM Portal Zone, Devices container.
- 2 Click the Import Device Wizard button .
- 3 In the **Device IP/Host Name** text box, type or paste a comma-separated list of device hostnames or IP addresses.
- 4 In the Device Classification drop-down, select the appropriate classification for the group of devices.

- **No Preset Classification** – Devices are imported with no classification.
  - **VMware ESX Server** – Enables the Virtual Machines tab on the Device Object window for each device imported with this classification.
- 5 Click **Add**. Devices are added to the import Devices list. To remove a device, select the checkbox to the left of the device and click the Remove button .
  - 6 Review the list and click **Commit**. Devices are imported into the Devices container of the CM Portal Zone.

To remove an imported device, see [Remove Devices](#) on page 19.

## Remove Devices

To remove a device that was previously imported, browse to the device object page and click the **Delete this Directory Object** button .

 Only devices in the CM Portal Zone can be removed..

## Create CM Enterprise Manager Users

Use the Configuration tab to configure the internal users who have access to this CM Enterprise Manager.

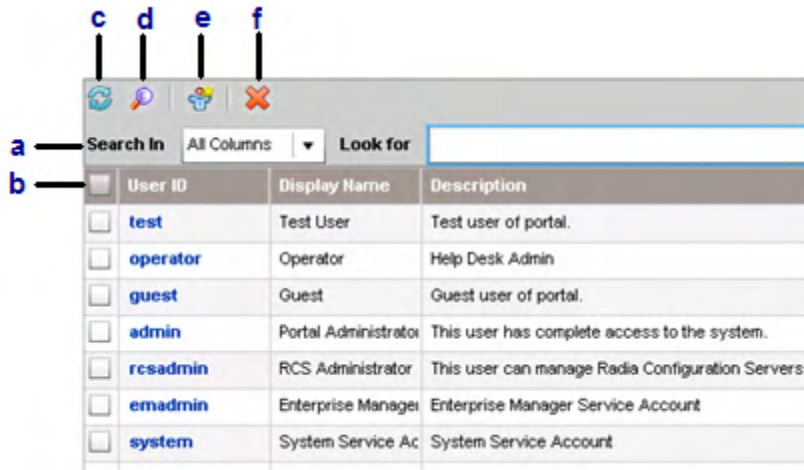
When you create a user from the CM Enterprise Manager, you are creating a user for the CM Portal who has administrative access to the CM internal data store, but may not have access to the directory source depending on the directory source's configuration. If you do not want to use or do not have LDAP servers to use for authentication, then you will need to create a CM Enterprise Manager user.

The following User Ids are included by default:

- test
- operator
- guest
- admin

- rcsadmin
- emadmin
- system

**Figure 1** User list



### Legend

- a** Filter toolbar.
- b** Select all users
- c** Refresh User list
- d** Show/Hide Filter toolbar.
- e** Create User
- f** Delete User

To create a CM Enterprise Manager user

- 1 From the Configuration tab, click the **Users** button in left pane.
- 2 From the Users section, click the **Create User** button. The **User Creation Wizard** starts.
- 3 You have the following configuration options. All parameters marked with an asterisk (\*) are required.
  - Create a **User ID**.

- Create a **Display Name**.
  - Type a meaningful **Description** for the user.
  - Use **Password** to specify the password for the user. Retype the password in **Confirm Password**.
- 4 Click **Next**.
  - 5 Review the Summary screen. If all properties are correct, click **Commit**.
  - 6 Click **Close** to acknowledge the dialog.

If the user is already created, you may want to view its properties or change the password.

#### To view user details

- 1 From the Configuration tab, click **Users** in the left pane.
- 2 Click the name of the user for which you want to view details or change the password. The following screen capture shows a sample User Details window.

**User Details**

Portal Administrator (admin) on Zone: hp

Summary Properties

**Information**

Summary information about this user can be found below. To modify the properties of this user, select the Properties tab.

**Summary**

Directory Source:	Zone: hp
Display Name:	Portal Administrator
Description:	This user has complete access to the system.
Creator:	cn=hp,cn=radia
Created:	2007-02-02T21:11:40Z
Modified:	2007-02-02T21:11:40Z

- 3 Click the **Summary** tab to see basic information about the user. You cannot modify these properties.

- 4 Click the **Properties** tab to see the display name and description of the user. You can modify these properties.
- 5 Click **Save** after making modifications.
- 6 Click **Close** to acknowledge the dialog.

#### To change a password

- 1 From the Configuration tab, **Users**.
- 2 Click the name of the user that you want to change the password for.
- 3 Click the **Properties** tab to see the display name and Description of the user.
- 4 Click **Change Password**.
- 5 Type in the new password.



If you are changing the password for the currently signed in user, this session will be invalidated, and you will need to sign back in.

- 6 Click **Commit**.
- 7 Click **Close** to acknowledge the dialog.

The password has been changed.

## Configuring Directory Services

Before you can assign Services to Directory Service objects, you need to configure connections to your directory services. There are three types of directory services that you can connect to:

- CM Configuration Server (CM-CS)
- Lightweight Directory Authentication Protocol (LDAP)
- LDAP with Secure Sockets Layer (SSL) support (LDAP(Secure))

HP recommends creating one CM Configuration Server connection (CM-CS), and then any required LDAP directory services, either LDAP or LDAP(Secure).

Each directory service may be used for any combination of the following:

- Authorization

- Reporting
- Policy Entitlement

Suppose you have two directories. One specific for policy, but all your user accounts are in a different directory service, which you want to authenticate against. Then, you can create two directory service connections:






- Create one in which **Used for Authentication** is checked, **Used for Policy** is not checked, and **Use Service Account** is not checked.
- Create a second in which **Used for Authentication** is unchecked, **Used for Policy** is checked, and **Use Service Account** is checked.



This configuration will allow you to sign in using the first directory service, and configure policy on the second directory service.

Note that if a directory source is configured to Use for Authorization, but **Use Service Account** is unchecked then the local user will not have access. If **Use Service Account** is checked, then the user will have access.


The following table describes the toolbar buttons available in the Directory Services list. Use this toolbar buttons to manage any existing Directory Services or create new Directory Services.

**Table 1 Directory Services toolbar buttons**

Icon	Toolbar Button Name	Description
	Refresh Data	Refreshes the Directory Services list.
	Show/Hide Filter Input	Use to show or hide the filter toolbar. You can filter Directory Services data using a text string and also narrow the search by selecting individual Directory Services columns to include in the search.
	Create New Directory Service	Launches the Directory Services Creation Wizard.
	Start the Selected Directory Services	Use to start an existing Directory Service that is stopped.
	Stop the Selected Directory Services	Use to stop an existing Directory Service that is started.

Icon	Toolbar Button Name	Description
	Restart the Selected Directory Services	Use to restart an existing Directory Service.
	Delete the Selected Directory Services	Deletes a Directory Service from the list.

### To configure the CM Configuration Server Directory Service


- 1 From the Configuration tab, click **Directory Services** in the left pane.
- 2 From the Directory Services detail section, click the **Create New Directory Service** button . The **Directory Service Connection Wizard** starts.
- 3 Type in a Display Name and Description. From the Type drop-down, select **CM-CS**. Only one CM-CS directory service can be created.
- 4 Click **Next**.
- 5 Under Connection Settings, you have the following options.
  - For **Startup**, select **Automatic** to automatically start this directory service when the CM Portal starts.
  - For **Host**, enter the hostname or IP address of the CM Configuration Server.
  - For **Port**, enter the port of the CM Configuration Server.
  - Use **Service Account ID** to set which account you will use to sign in to the CM Configuration Server. The Service Account is used for both read and write operations. It should have full read and write access to this directory source.
  - Use **Password** to specify the password for the Service Account ID. Retype the password in **Confirm Password** text box.
  - Use **Timeout** to specify in seconds the timeout for your connection to your CM Configuration Server. Keep the default of 120 unless directed to by HP Support.
  - Use **Connection Attempts** to specify how many times to attempt connection to your CM Configuration Server before failing.
  - Use **Connection Delay** to specify the amount of time in seconds to delay between connection attempts.



- 6 Click **Next**.
- 7 Review the Summary screen. If all properties are correct, click **Commit**.
- 8 Click **Close** to acknowledge the dialog.

The directory source is added to the Directory Services list.

#### To configure LDAP Directory Services (without SSL)

- 1 From the Configuration tab, click **Directory Services**.
- 2 From the Directory Services detail section, click the **Create New Directory Service** button . The **Directory Service Connection Wizard** starts.
- 3 Type in a Display Name and Description. From the Type drop-down, select **LDAP**.
- 4 Click **Next**.
- 5 Enter the required connection parameters. You have the following options:
  - For **Startup**, select **Automatic** to automatically start this directory service, when the CM Portal starts.
  - **Host** is the hostname or IP address of the LDAP Server.
  - **Port** is the LDAP Port. The default value is 389.
  - Use **Service Account ID**, to set which account you will use to sign in to the directory services server. The Service Account is used for both read and write operations. It must have full read and write access to this directory source.
  - Use **Password** to specify the password for the Service Account ID. Retype the password in Confirm Password.
  - **Base DN** is used as the root DN when browsing the directory through the CM Enterprise Manager.
- 6 Click **Next**.
- 7 Enter the required user interface parameters. You have the following options:
  - **Used for Reporting**: When enabled, this directory service becomes enabled in the Reporting tab of the CM Enterprise Manager as a filter source. CM Reporting Server must be configured to use the CM Portal as its directory source for this feature to work.

- **Used for Policy:** When enabled, this directory service can be used in the CM Enterprise Manager for policy management.
- **Used for Authentication:** When enabled, this directory service becomes enabled as a sign-in option on the main CM Enterprise Manager screen to allow user authentication based on your existing directory users. The following two parameters will become available.
  - **Authentication Group DN:** This is used as the source for authorized users into the CM Enterprise Manager. Any user that is a member of this group will be enabled to sign in to the CM Enterprise Manager.
  - **Use Service Account:** When enabled, all read and write requests for this directory service will use the **Service Account ID** specified in the **Connection Settings**. When disabled, all read and write requests for this directory service, will use the signed on user’s credentials.
- **Leaf Node Filter:** Enter an LDAP-style filter value to filter nodes with large amounts of data types in the tree navigation view. Objects such as computers and users should be filtered for better usability. Refer to your directory-specific schema to determine the best way to filter each node. The following is an example filter:  
(!(|(objectclass=user)(objectclass=computer)))

8 Click **Next**.


9 Review the Summary information. If all properties are correct, click **Commit**.

10 Click **Close** to acknowledge the dialog.

If you are using SSL on your LDAP server, then you should use the LDAP(Secure) type.

#### To configure LDAP Directory Services with SSL

1 From the Configuration tab, click **Directory Services** in the left pane.

2 From the Directory Services detail section, click the **Create New Directory Service** button . The **Directory Service Connection Wizard** starts.

3 Type in a Display Name and Description. From the Type drop-down, select **LDAP(Secure)**.

4 Click **Next**.

- 5 Enter the required connection parameters. You have the following options:
  - For **Startup**, select auto to automatically start this directory service, when the CMP Portal starts.
  - **Host** is the hostname or IP address of the LDAP Server.
  - **Port** is the LDAP port. The default value is 636.
  - Use **Service Account ID**, to set which account you will use to sign on to the directory services server. The Service Account is used for both read and write operations. It must have full read and write access to this directory source.
  - Use **Password** to specify the password for the Service Account ID. Retype the password in Confirm Password.
  - **Base DN** is used as the root DN when browsing the directory through the CM Enterprise Manager.
  - Use **CA Certificate Directory** to specify the directory of the SSL certificate. The path is relative to the server where the CM Portal is located, for example, C:\Program Files\Hewlett-Packard\CM\ManagementPortal\etc\CACertificates.
  - Use **CA Certificate File** to specify the location of the SSL certificate. The path is relative to the server where the CM Portal is located, for example, C:\Program Files\Hewlett-Packard\CM\ManagementPortal\etc\CACertificates\<LDAP Certificate File Name>.
- 6 Click **Next**.
- 7 Enter the required user interface parameters. You have the following options:
  - **Used for Reporting**: When enabled, this directory service becomes enabled in the Reporting tab of the CM Enterprise Manager as a filter source. CM Reporting Server must be configured to use the CM Portal as its directory source for this feature to work.
  - **Used for Policy**: When enabled, this directory service can be used in the CM Enterprise Manager for policy management.
  - **Used for Authentication**: When enabled, this directory service becomes enabled as a signin option on the main CM Enterprise Manager screen to allow user authentication based on your existing directory users. The following two parameters will become available.

- **Authentication Group DN:** This is used as the source for authorized users into this console. Any user that is a member of this group will be enabled to sign in to the CM Enterprise Manager.
- **Use Service Account:** When enabled, all read and write requests for this directory service will use the Service Account ID specified in the Connection Settings. When disabled, all read and write requests for this directory service, will use the signed on user's credentials.
- **Leaf Node Filter:** Enter an LDAP-style filter value to filter nodes with large amounts of data types in the tree navigation view. Objects such as computers and users should be filtered for better usability. Refer to your directory-specific schema to determine the best way to filter each node. The following is an example filter:  
(!(|(objectclass=user)(objectclass=computer))).

8 Click **Next**.

9 Review the Summary screen. If all properties are correct, click **Commit**.

10 Click **Close** to acknowledge the dialog.

If the directory service connection is already created, you may want to view its properties or change connection options.

To view directory service details

1 From the Configuration tab, click **Directory Services** in the left pane.

2 Click the name of the directory service for which you want to view details or change options. The following shows a sample Directory Services summary window.

**Directory Services** primary

Summary Properties

**Information**

Summary information about this directory service can be found below. To modify the properties of this connection, select the Properties tab.

**Summary**

Display Name:	RCS
Description:	CM Configuration Server
Type:	ds-rcs
Startup:	auto
Status:	started
Creator:	uid=admin,cn=user,cn=hp,cn=radia
Created:	2007-02-02T21:14:58Z
Modified:	2007-02-14T13:39:47Z

- 3 Click the **Summary** tab to see basic information about the directory service. You cannot modify these properties.
- 4 Click the **Properties** tab to see the display name and Description of the user. You can modify these properties. Click **Save** after making modifications.
- 5 Click **Close** to acknowledge the dialog.


#### To change a directory service options

- 1 From the Configuration tab, click **Directory Services** in the left pane.
- 2 Click the name of the directory service that you want to change.
- 3 Click the **Properties** tab to display the directory service options.
- 4 Click **General Settings**, **Connection Settings**, **UI Settings**, or **Advanced Settings** to display the options you want to change.
- 5 Make changes to the presented options. To see a list of options, see [To configure the CM Configuration Server Directory Service](#) on page 24, [To configure LDAP Directory Services \(without SSL\)](#) on page 25, or [To configure LDAP Directory Services with SSL](#) on page 26.
- 6 Click **Save**.
- 7 Click **Close** to acknowledge the dialog.

The options for the directory service have changed.

## Integrate the CM Reporting Server

The CM Reporting Server allows you to view and filter information on devices in your enterprise. For information on installing and configuring the CM Reporting Server, see the *HP Configuration Management Reporting Server Installation and Configuration Guide*. When you enter information in the Reporting Integration section of the Configuration tab, you can access the CM Reporting Server by clicking the Reporting tab.

 To use this feature, you must already have a CM Reporting Server configured for your enterprise.

### To integrate the CM Reporting Server

- 1 From the Configuration tab, click **Reporting Integration**.
- 2 Click **Enable Integration** to allow you to view your CM Reporting Server by clicking on the Reporting tab of the CM Enterprise Manager.
- 3 In **CM Reporting URL**, type the URL for your CM Reporting Server. Enter the fully qualified host name in the configuration box. Do *not* use *localhost* even if the CM Reporting Server is on the same computer as the CM Enterprise Manager.
- 4 Click **Save**.
- 5 Click **Close**.

The Reporting tab will show in your CM Enterprise Manager after you login again.

## Console Settings

Use Console Settings to set advanced options for the CM Enterprise Manager user interface.

### To configure console settings

- 1 From the Configuration tab, click **Console Settings**.
- 2 Set the following options

- Set **Maximum Cache Age (Minutes)** to set the threshold for when the cache should expire for a given set of data. This value is in minutes.
  - Use **Directory Search Attributes** to specify a default set of attributes for the directory search dropdown menu. Consult your directory service's documentation for valid attributes.
- 3 Click **Save** to implement your changes.
  - 4 Click **Close** to acknowledge the dialog.

## Log Files

If you are having issues with connecting or using features of the CM Enterprise Manager, you may need to access the log files. Log files are stored in the following location by default:

```
C:\Program Files\HP\HP BTO Software\CM-EC\tomcat\logs
```

CM Enterprise Manager stores information in multiple log files:

- `catalina.<date>.log`  
Contains the Enterprise Manager server log messages. Multiple server logs may be found in the default log directory with <date> specified, for example, `catalina.2007-10-22.log`
- `OvCMEEmTomcat`  
Contains messages related to installing, stopping and starting Tomcat service.
- `ope.log`  
Contains the Enterprise Manager job process engine messages. Default log settings allow for a maximum of 10 backup log files, each no greater than 5MB. The initial log file is `ope.log` and subsequent backup log files are appended with a number, for example, `ope.log.1`, `ope.log.2`.

You are not expected to understand all of the contents of the logs, but you should be aware of them for the following reasons:

- To be able to look for entries labeled **SEVERE**.
- To access the files under the direction of HP Support.

## 4 Enterprise Management

At the end of this section, you will:

- Learn about [Managing Directory Policies](#).
- Become familiar with [Service Information](#).
- Know how to [Notify Devices](#).
- Understand [Job Management](#).
- Be introduced to [Managing Virtual Machines](#).

### Managing Directory Policies

From the Management tab, Directories tree, you can view the objects in your configured directory services. See [Configuring Directory Services](#) on page 22. You can also see the properties of the object, create its policies, and view its entitlements. When you click a directory object, you see the following tabs:

- Click **Children** to view the object's children. Click on a child object to browse to that object.
- Click **Properties** to view the object's properties.
- Click **Members** to view the object's members.
- Click **Policies** to view the object's local policy configuration, and to create policies for this object.
- Click **Entitlements** to view all resolved policies for this object.
- Click **Virtual Machines** to view a list of the virtual machines that exist on the server. This tab is available only if the selected object is a VMware ESX Server. For additional information, see [Managing Virtual Machines](#) on page 43.




- ▶ Directory Objects that contain a large number of children may time out when retrieving a large number of records. Although the console may time out, the background process will continue to retrieve data until it reaches 10,000 records. If this happens, click the Refresh button to try the request again.

For directory objects with greater than 5000 child nodes, we recommend using the Search interface to navigate to a node within that list. This method will allow you to bypass possible time outs when browsing nodes with a large number of children.

The CM Enterprise Manager provides the ability to search for directory service objects.

#### To search for a directory object

- 1 From the Management tab, **Directories** area, click the **Search Directories** button .
- 2 From the Directory Search box, you can define the following parameters:
  - Select your **Search DN**, by clicking on it in the tree view on the left.
  - Select a **Scope** of either the current level or the current level and all below it.
  - Create a **Filter** expression by selecting an attribute, an operator, and typing in the criteria. To configure the list of available attributes, see [Console Settings](#) on page 30.

- ▶ When using Filter OBJECTCLASS, valid conditions are Equals or Does Not Equal, only. Also, certain directories, such as Active Directory, do not support wildcard characters included in the search strings for some attributes.

- 3 Click **Search** to find the objects that meet your criteria.
- 4 Click **Reset** to begin a new search.

#### To manage policy of directory objects

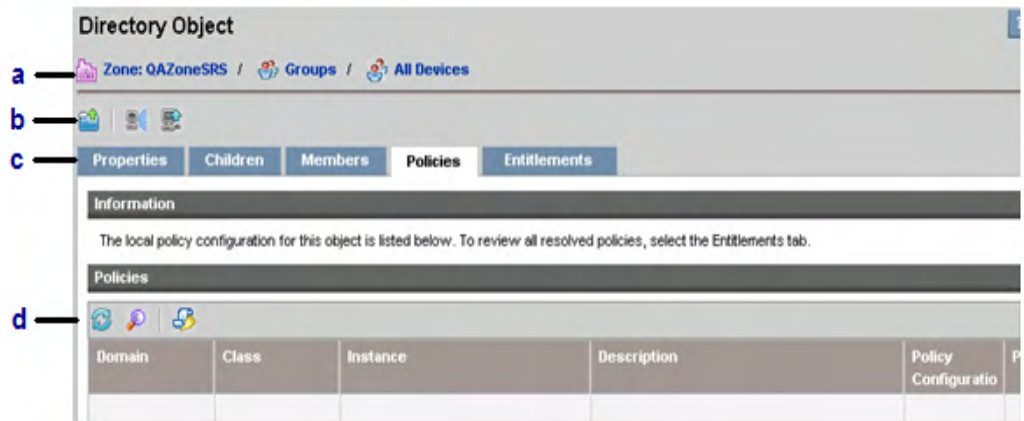
- 1 Sign in to the CM Enterprise Manager.
- 2 Click the **Management** tab.
- 3 Click **Directories**. The list of available directory services expands.

- 4 Click the directory service you want to expand.
- 5 Click a container or child of the directory service to view or manage it. To control a specific policy object, navigate to that object. The following tabs are available:

▶ When you visit the policy tab, the CM Enterprise Manager checks your permissions. If you do not have write permissions, the object's icon will be disabled (gray).

In our example we will create a policy for one device.

The following figure explains the different sections of the Directory Object window.




### Legend

- a** Path to selected directory object
- b** Directory Object toolbar
  - Navigate up one level
  - Job Notification wizard
  - Device Import wizard
- c** Object tabs.

**d** Policy Management toolbar

 Refresh

 Show/Hide filter

 Policy Management Wizard button

6 Click the **Policies** tab.

7 Click the  **Policy Management Wizard** button to start the Policy Management Wizard.

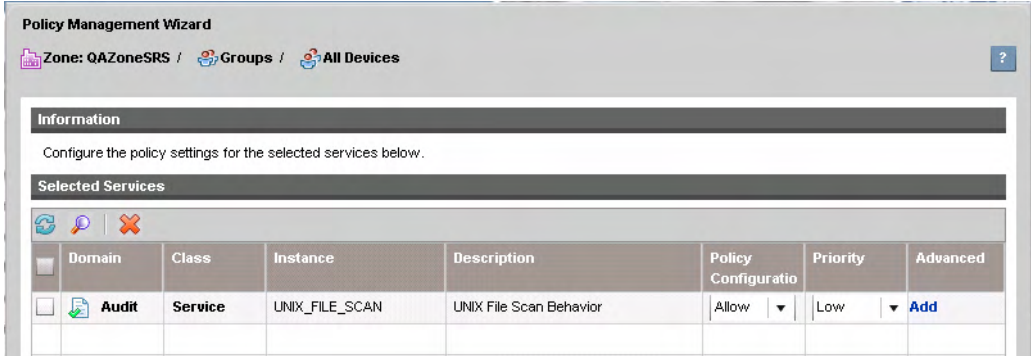
8 In **Step 1 of 3: Service Selection**, you will select the services that you want to add to the object's policy. Select the Configuration Server Database Domain from which you want to select the Service.

9 Check the box next to the services you want to add.


10 Click **Add to Selection** to move the service to the tree view on the right side of the wizard's screen.

11 Click **Next** when you have added all the services you need.

12 In **Step 2 of 3: Policy Configuration**, set the type of Policy and the Priority for each of the services. The example image below displays one Service from the Audit Domain.



The screenshot shows the 'Policy Management Wizard' interface. At the top, there is a breadcrumb trail: 'Zone: QAZoneSRS / Groups / All Devices'. Below this is an 'Information' section with the text: 'Configure the policy settings for the selected services below.' The main area is titled 'Selected Services' and contains a table with the following data:

	Domain	Class	Instance	Description	Policy Configuration	Priority	Advanced
<input type="checkbox"/>	 Audit	Service	UNIX_FILE_SCAN	UNIX File Scan Behavior	Allow   ▾	Low   ▾	<b>Add</b>

- Set **Policy Configuration** to either Allow or Deny.
- Set **Priority** to Low, Medium, or High.
- Click **Add** in the **Advanced** column to add additional Configuration Management attributes and expressions to the criteria for an object.

See the *HP Configuration Management Policy Server Installation and Configuration Guide*.




The **Advanced** feature should only be used by CM Administrators who are extremely familiar with the CM Configuration Server Database and the CM Infrastructure.

- 13 Click **Next** when you have configured the policies.
- 14 In **Step 3 of 3: Summary**, check your configuration. Click **Commit** to complete the Policy Management Wizard.
- 15 Click **Close** to acknowledge the dialog.

## Service Information

After signing in to the CM Enterprise Manager, you can view the services that are available from your CM Configuration Server. A service is a set of data managed as a unit, for example, an application. Services are created using the CM CSDB Editor. See the *HP Configuration Management Administrator User Guide*.

To view available Services

- 1 Sign in to the CM Enterprise Manager.
- 2 Click **Management**.
- 3 In the left pane, click **Services**. The list of available CM Configuration Server Database Domains opens.
- 4 Click the CM Configuration Server Database Domain that contains the Services you want to see.
- 5 If you'd like to narrow the list of available services, click the **Show/Hide Filter Input** button  to display the filter options.
- 6 Click a Service to view its details.
  - The **Properties** tab shows the attributes of the Service from the CM Configuration Server Database.
  - The **Reporting** tab shows summary reports on the Service. You will only see information here if you have enabled CM Reporting Server Integration. To do this, see [To integrate the CM Reporting Server on](#)


## Notify Devices

Notify gives you the ability to force specific devices to connect to a CM Configuration Server and receive policy updates. Use the Notify Wizard to notify devices in your environment.

Devices are notified based on the directory object to which they belong. For example, to notify all devices in the Sales group, browse to the Sales directory object and click the Notify Wizard button  to launch the Notify Wizard.

If you need to define some parameters that should be applied to all Notify jobs by default, see [Setting Global Notify Parameters](#) on page 38.

### To notify devices using the Notify Wizard

- 1 Click the Notify Wizard button  to launch the wizard.
- 2 Enter the Notify parameters.
  - **Job Description:** Enter a description for the Notify job.
  - **Connect Type** - Select Software, Patch, Operating System, or Custom. The Connect Type assigns the CM-CS Database domain in which to look for policy updates.
  - **Notify Port** – Type the port number to use for the notify on each device.
  - **Advanced Parameters** (for Software, Patch, and Operating System Connect Types) – Enter custom parameters you want to include during the Notify. Refer to the *CM Application Manager and Application Self-service Manager Guide* for additional information about parameters available during a Notify.
  - **Custom Command Line** (for Custom Connect Types) – Enter a complete custom parameter command line you want to include during the Notify. Refer to the *CM Application Manager and Application Self-service Manager Guide* for additional information about building custom command lines.

- **Concurrent Process Limit** – Enter the maximum number of processes allowed for the job. Default is 25.
- **New Process Delay** – Enter the time (in seconds) to wait between each job process. The default time is determined by the Connect Type. If you need to modify this, be sure to set a delay that is based on the estimated time it takes to process a single target device when using the selected Connect Type.



By default, notify parameters include any Client Operations Profile (COP) settings stored in the CM-CS Database with the exception of Connect Type **Custom**. COP configuration and settings are included in the *CM Application Manager and Application Self-service Manager Guide*.

- 3 Click **Next**.
- 4 Review the summary information and click **Submit**.

When you finish the steps in the Notify Wizard, a Notify job is created. A Notify job is complete when all devices included in the job have been notified. Use the **Jobs** area (see [Job Management](#) on page 39) to view the status of any Notify jobs.

## Setting Global Notify Parameters

If necessary, you can set global Notify parameters using the console.properties file. The console.properties file is located by default:

```
C:\Program Files\HP\HP BTO Software\CM-EC\tomcat\webapps\em\WEB-INF
```

Global notify parameters apply specific Notify values to all Notify jobs. These parameters will override any Advanced Parameters defined using the Notify wizard. The final command line including all forced global parameters is displayed in the Notify completion window.

To set global Notify parameters

- 1 Use the notify\_global\_commandline\_params option in the console.properties file to set a global Notify parameter.

For example, if you wanted to set the startdir parameter to system and the uid to \$machine for all Notify jobs, you would modify the console.properties file to reflect the following:

```
notify_global_commandline_params=startdir=system,uid=$machine
```

- 2 Restart the CM Enterprise Manager service to begin using the modified console.properties file.

Additionally, you may want to disable the ability to create custom Notify jobs by removing the Custom Command Line option from the Notify Wizard.

#### To disable custom Notify jobs

- 1 Set the notify\_connecttype\_custom\_enabled option equal to false in the console.properties file to disable the Custom Command line option.  

```
notify_connecttype_custom_enabled=false
```
- 2 Restart the CM Enterprise Manager service to begin using the modified console.properties file.

## Job Management

Use the **Jobs** area to view and manage current and past CM Enterprise Management jobs.

The Jobs area contains the following sections:

- [Current Jobs](#)
- [Past Jobs](#)
- [Job Details](#)

#### Device Resolution

Devices included in a Job are resolved according to the order defined in the console.properties file (located in C:\Program Files\HP\HP BTO Software\CM-EC\tomcat\webapps\em\WEB-INF). The default order is:

```
group.target.host.attributes=ipaddress,dnshostname,displayname,cn
```

If necessary, this list can be modified. The CM Enterprise Manager Windows service must be restarted after making changes to this file.






For devices that could not be resolved, a message is displayed in the Job Details window, Details tab. You can open the Job Details window by clicking the Job ID.

## Current Jobs

The Current Jobs area contains information about all Enterprise Management jobs currently running or waiting to run.

Use the buttons located at the top of the Jobs list table to manage existing jobs. See the table below for information about each control button.

**Table 1** Current Jobs controls

Icon	Description
	Refresh Data
	Show/Hide Filter Input.
	Resume a job that was Paused.
	Pause a job that is Currently Active, Waiting to Start, or Waiting to Stop. Job status is set to Paused.
	Stop a Currently Active or Paused job. Job status is set to Cancelled.

Click the Job ID of any job to open the Job Details window. See [Job Details](#) on page 41 for additional information.


Refer to [Job States](#) on page 42 for additional information about the status of each job.

## Past Jobs



The Past Jobs area contains information about jobs that have completed.

The following table describes the buttons available on the Past Jobs tab.

**Table 2** Past Job controls

Icon	Description
	Refresh Data



Icon	Description
	Show/Hide Filter Input.
	Delete a job.

Click the Job ID of any job to open the Job Details window. See Job Details on page 41 for additional information.

## Job Details

The Job Details window contains information about the individual job.

The **Summary** tab displays the current job state, job schedule, and summary information.

The **Properties** tab contains information about the job, including the CM Configuration Server and user ID used to create the job.

The **Details** tab lists all devices affected by the job and the current job status for each individual device. The following table describes individual device status.

**Table 3 Device status**

Status	Description
CANCELLED	Job was cancelled, no processing has completed for the device.
COMPLETED	Job has completed processing for the device.
ERRORS	Errors occurred during device processing.
PENDING	Initial device state prior to job processing.
RETRY	Job will attempt to process the device again.
RUNNING	Job is currently processing the device.
UNKNOWN	Device status is unknown.

Refer to [Job States](#) on page 42 for information about the status of each job.

## Job States

Enterprise Management Jobs can include any number of steps, depending on the job type. For example, Notify jobs include a step for each device to be notified. The execution status of those steps determines the current job state. Job states are described in the following table.

**Table 4 Job state descriptions**

<b>Job State</b>	<b>Description</b>	<b>Example</b>
<b>Running</b>	The job has not yet reached the end state. Running jobs are included in the Current Jobs list.	A running Notify job is in the process of notifying each device.
<b>Paused</b>	A user has paused the job, until a user releases the job, no more steps will be executed. Paused jobs are included in the Current Jobs list.	A paused Notify job will not contact any devices until the job is started again.
<b>Cancelled</b>	A user has cancelled the job, no additional steps will be executed. Cancelled jobs are included in the Past Jobs list.	If you cancel a Notify job, no additional devices are notified.
<b>Completed</b>	The job has reached its end state, all steps have been processed or the job has been cancelled by a user. Completed jobs are included in the Past Jobs list.	A Notify job is complete when all devices included in the job have been notified.

# Managing Virtual Machines

CM Enterprise Manager allows you to manage the virtual machines running on your virtual hosting servers. For example, you can create and manage virtual machines on an existing VMware ESX Server in your environment.

To begin managing your virtual machines:

- 1 In the **Management** tab, click **Directories**.
- 2 Select a virtual hosting server from the Directories tree view to open the **Directory Object** page for that device. The **Virtual Machines** tab on the Directory Object page contains all the information and controls you will use to manage the virtual machines on that device.

See [Virtual Machines Tab](#) on page 43 for more information.

## Virtual Machines Tab

Use the Virtual Machines tab to create and manage virtual machines on existing virtual hosting servers.

IMAGE

The following table describes the columns in the Virtual Machines list.













**Table 5 Virtual Machines list columns**

Column Name	Description
Name	The name of the virtual machine file.
Operating System	The operating system of the virtual machine.
#CPUs	The number of CPUs allocated to the virtual machine.
Memory Size	The amount of memory allocated to the virtual machine.
Status	The current status of the virtual machine.
VM Tools Status	Describes the current status of VM tools on the virtual machine.

Click a virtual machine name to open the properties window.

The following table describes the controls available for managing virtual machines on the virtual hosting server.

**Table 6 Virtual Machine controls**

Icon	Description
	Refresh Data
	Show/Hide Filter input
	Display VM Host System Properties
	Create New Virtual Machine
	Suspend the Selected Virtual Machines
	Reset the Selected Virtual Machines
	Stop the Selected Virtual Machines
	Start the Selected Virtual Machines
	Standby OS on the Selected Virtual Machines
	Reboot OS on the Selected Virtual Machines
	Shutdown OS on the Selected Virtual Machines
	Delete the Selected Virtual Machines


Use the virtual machine controls to manage one or more virtual machines. Select the check box for each virtual machine you want to manage then click the virtual machine control to complete the desired action.

To create a new virtual machine, see [Creating New Virtual Machines](#) on page 44.

## Creating New Virtual Machines

The **Create New Virtual Machine** button allows you to create a new virtual machine on the virtual hosting server with the Virtual Machine Creation Wizard. This wizard prompts for information similar to the information requested by the VMware virtual machine creation wizard. You should be familiar with VMware terminology before using this wizard.

## To create a new virtual machine

- 1 On the Virtual Machines tab, click **Create New Virtual Machine** button .  
The Virtual Machine Creation Wizard opens.
- 2 Provide the following information for the virtual machine you want to create:
  - **Data Center:** Use the drop-down list to select the data center in which to create the new virtual machine.
  - **Host System:** Use the drop-down list to select the host system for the virtual machine.
  - **Name:** Type a name for the virtual machine. Virtual machine names can be up to 80 characters long and can contain alpha-numeric characters, spaces, hyphen, and underscore. Virtual machine names must be unique within each data center and within each folder.
  - **Description:** Type a description of the virtual machine.
- 3 Click **Next**.
- 4 Use the drop-down list to select a **Data Store**. Be sure to select a data store with enough space to store the virtual machine and its virtual disk files.
- 5 Enter the **Disk Size**. Type or use the up and down arrows to enter the Disk Size in megabytes or use the slider tool to enter the size in gigabytes.
- 6 Click **Next**.
- 7 Select the **Guest Operating System** and then select the **Version** and **Operating System Policy** to assign to the new virtual machine. Available policies are defined by the CM OS Manager.
- 8 Click **Next**.
- 9 Type or use the drop-down list to enter the **Number of Virtual Processors** for the virtual machine. Note that a virtual machine cannot be assigned more processors than the actual number of logical processors on the host device.
- 10 Enter the virtual machine **Memory Size**. Type or use the up and down arrows to enter the memory size in megabytes or use the slider tool to enter the size in gigabytes. Minimum memory size is 4MB.
- 11 Click **Next**.

- 12 Use the drop-down lists to select the **Virtual Network** and the **Number of NICs** (Network Interface Cards) to configure for this virtual machine.
- 13 Select **Connect at Power On** if you want each NIC to connect to the network when the virtual machine is powered on.
- 14 Click **Next**.
- 15 Review the summary information and click **Commit**.

The virtual machine is created. View the new virtual machine in the Virtual Machines list. Click the virtual machine name to open the properties window.



# Index

## A

Adobe Flash Player, 12  
Advanced Parameters, 37

## C

catalina, 30  
    log file, 30  
CM Enterprise Manager  
    configuring, 13  
    creating users, 19  
    installing, 13  
    logging on, 16  
    navigating, 16  
    remove, 14  
CM Portal Settings, 13  
CM Reporting Server  
    integrating, 29  
Concurrent Process Limit, 37  
Configuration tab, 17  
configuration tasks, 18  
configuring  
    LDAP, 24  
    LDAP with SSL, 26  
configuring CM Enterprise Manager, 13  
configuring the directory service, 23  
Connect Type, 37  
Connection Settings, 24  
console setting, 30  
Console Settings, 30  
console.properties, 38, 39  
creating users, 19  
Current Jobs, 39

Current Jobs controls, 40  
Custom Command Line, 37

## D

Delete a job, 40  
Device Import wizard, 18  
Device Resolution, 39  
device status, 41  
Device status, 41  
    CANCELLED, 41  
    COMPLETED, 41  
    ERRORS, 41  
    PENDING, 41  
    RETRY, 41  
    RUNNING, 41  
    UNKNOWN, 41  
directory service, 22  
    CM Configuration Server, 23  
    ldap, 24  
    ldaps, 26  
    types, 22  
document changes, 4

## F

firewall, 17  
Flash Player, 12

## G

global Notify parameters, 38

## I

import devices, 18  
installing CM Enterprise Manager, 13  
integrating Reporting Server, 29



## Directory Search Attributes, 30

## J

- Job Details, 41
- Job Management, 39
- Job States, 41
  - Cancelled, 42
  - Completed, 42
  - Paused, 42
  - Running, 42

## L

- Leaf Node Filter, 25, 27
- log files, 30
- logging in, 16
- logon page, 13

## M

- Management tab, 17
- Maximum Cache Age**, 30

## N

- navigating CM Enterprise Manager, 16
- New Process Delay, 37
- Notify, 37
- Notify jobs
  - custom, disabling, 38
- Notify parameters
  - setting globally, 38
- Notify Port, 37
- Notify Wizard, 37
- notify\_connecttype\_custom\_enabled, 39
- notify\_global\_commandline\_params, 38

## O

- ope.log, 30
- OvCMEEmTomcat, 30

## P

- passport registration, 5
- Past Job controls, 40
- Past Jobs, 40
- Pause a job, 40
- platform support, 12
- Policy Management Wizard, 35
  - Policy Configuration, 35
  - Service Selection, 35
  - Summary, 36

## R

- Refresh Data, 40
- related documents, 10
- remove a device, 19
- Reporting tab, 17
- Resume a job, 40

## S

- Services, 36
  - viewing, 36
  - viewing details, 36
- Show/Hide Filter Input, 40
- SSL, 16, 17
- Stop a job, 40
- system requirements, 12
- System Requirements, 12

## U

- users, creating, 19

## V

- virtual hosting servers, 43
- virtual machine
  - create, 44
- Virtual Machine controls, 44
- Virtual Machine Creation Wizard, 45

virtual machines  
managing, 43

Virtual Machines tab, 43  
VMware ESX Server, 43