Third Party System Management Integration Solution

Oracle® Hardware Management Connector for Altiris Deployment Solution 6.9

A complete list of currently supported servers, service processors, and service processor firmware is available at the following web site:

http://www.sun.com/system-management/tools.jsp

Please consult this web site before configuring the Oracle Hardware Management Connector for Altiris Deployment Solution.

Part No. E23905-01

May 2010, Revision A

Contents

CHAPTER 1

Preface

This document explains how to use the Oracle Hardware Management Connector for Altiris Deployment Solution, which consists of the Deployment Job Wizard and the automation environment necessary to deploy your Oracle Sun x86 servers using Altiris Deployment Solution 6.9 (Altiris DS 6.9).

How this Document is Organized

This document contains the following sections:

- Introduction
- Installing and Uninstalling
- Getting Started
- Job Constructor
- Tokens
- Managing BIOS and Firmware Images
- Troubleshooting

This document is intended for experienced IT professionals, field sales representatives and support engineers.

Before You Read This Document

To fully understand the information provided in this document and perform the tasks discussed, you should use it in conjunction with the documentation and on-line help that is supplied with Altiris DS 6.9.

Typographic Conventions

The following typographic conventions are used in this document:

Typeface	Meaning	Examples
AaBbCc1234	Elements written as seen on screen.	Click the **File** menu. Select **Open=>New**.
`AaBbCc1234`	Code that you type.	`cd ..`
AaBbCc1234	Hyperlink to an external web site.	www.oracle.com
AaBbCc1234	Cross reference within this document.	See Installing for more information.

Terms and Definitions

The following terms are used in this manual:

Term	Definition
Altiris DS 6.9	Altiris Deployment Solution 6.9
FTP	File Transfer Protocol
FW	Firmware
HTTP	Hyper-Text Transfer Protocol
ILOM	Integrated Lights Out Manager
Media	CDROM or DVD removable media
OS	Operating System
Token	A variable which is replaced with data during a job
TFTP	Trivial File Transfer Protocol
WinPE	Windows Preinstallation Environment

Related Third-Party Web Site References

Due to the nature of this product, certain Third party web sites are listed as sources of extra information. Please note that:

Oracle is not responsible for the availability of third-party web sites mentioned in this document. Oracle does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Oracle will not be responsible or liable for any actual or alleged damage or loss caused or alleged to be caused by or in connection with use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Oracle Welcomes Your Comments

Oracle is interested in improving its software and welcomes your comments and suggestions. To share your comments, send mail to:

server-sysmgmt-feedback_ww@oracle.com

CHAPTER 2

Introduction

This section provides you with an overview of the Oracle Hardware Management Connector for Altiris Deployment Solution.

Overview

Oracle Hardware Management Connector for Altiris Deployment Solution provides you with a customized automation environment and the Deployment Job Wizard, which is an easy to use graphical wizard which simplifies the process of deploying your Oracle Sun x86 servers using Altiris DS 6.9.

The Deployment Job Wizard helps you to construct deployment jobs that can then be exported to Altiris DS 6.9 and used to deploy your Sun x86 servers. Oracle Hardware Management Connector for Altiris Deployment Solution provides tasks that can be used in the jobs, such as partitioning and formatting disks, deploying Windows Server 2003 or Windows Server 2008, configuring Oracle Integrated Lights Out Manager (ILOM) service processors, system BIOS and so on.

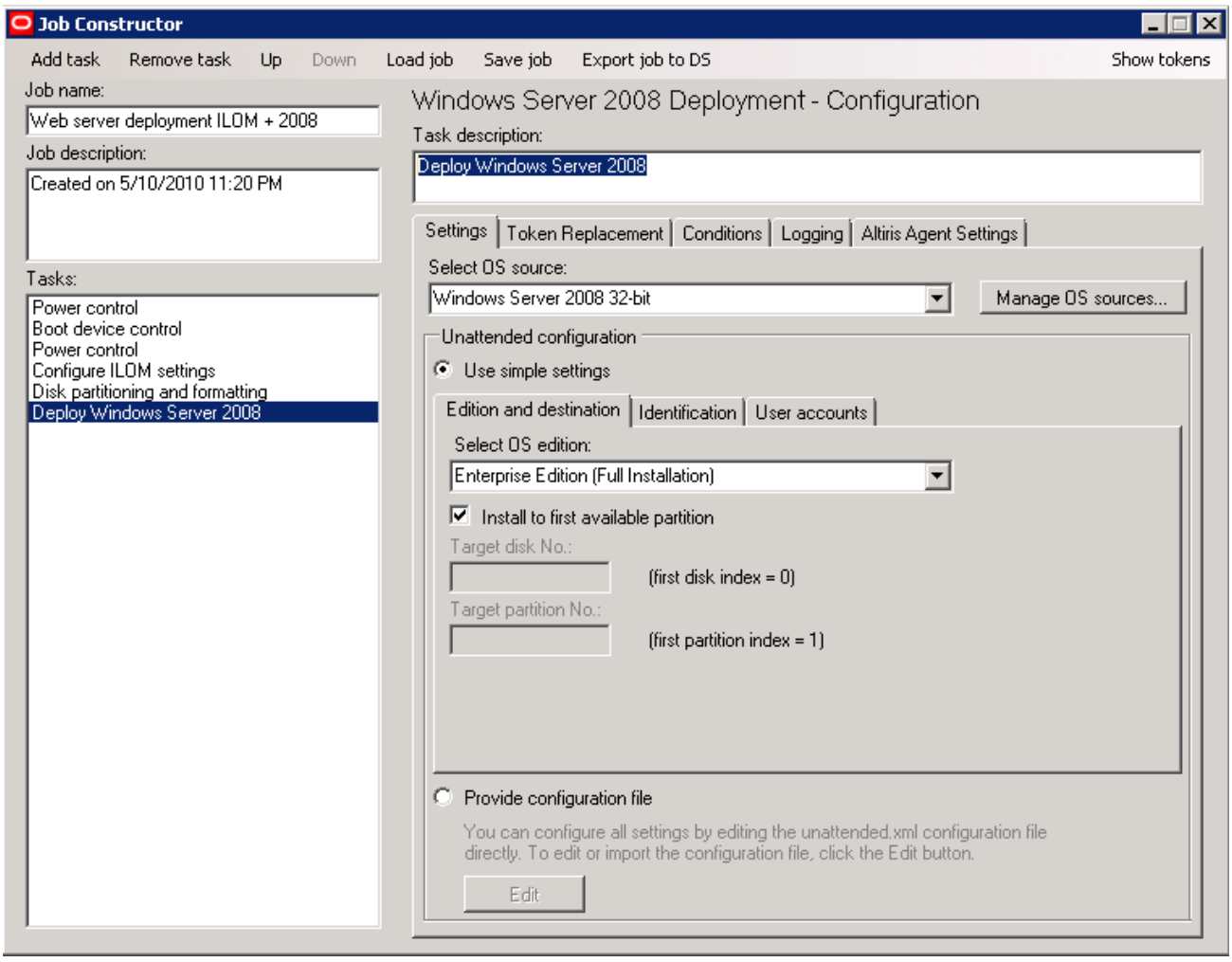

Figure 1: Example Deployment Job

The Deployment Job Wizard also assists you when doing common tasks in deployment such as importing operating system install media sources and managing BIOS and firmware upgrade image packages, both of which can be subsequently used in a deployment job.

Oracle Hardware Management Connector for Altiris Deployment Solution provides tokens that you could find useful in a deployment, such as the ILOM service processor's IP address and so on.

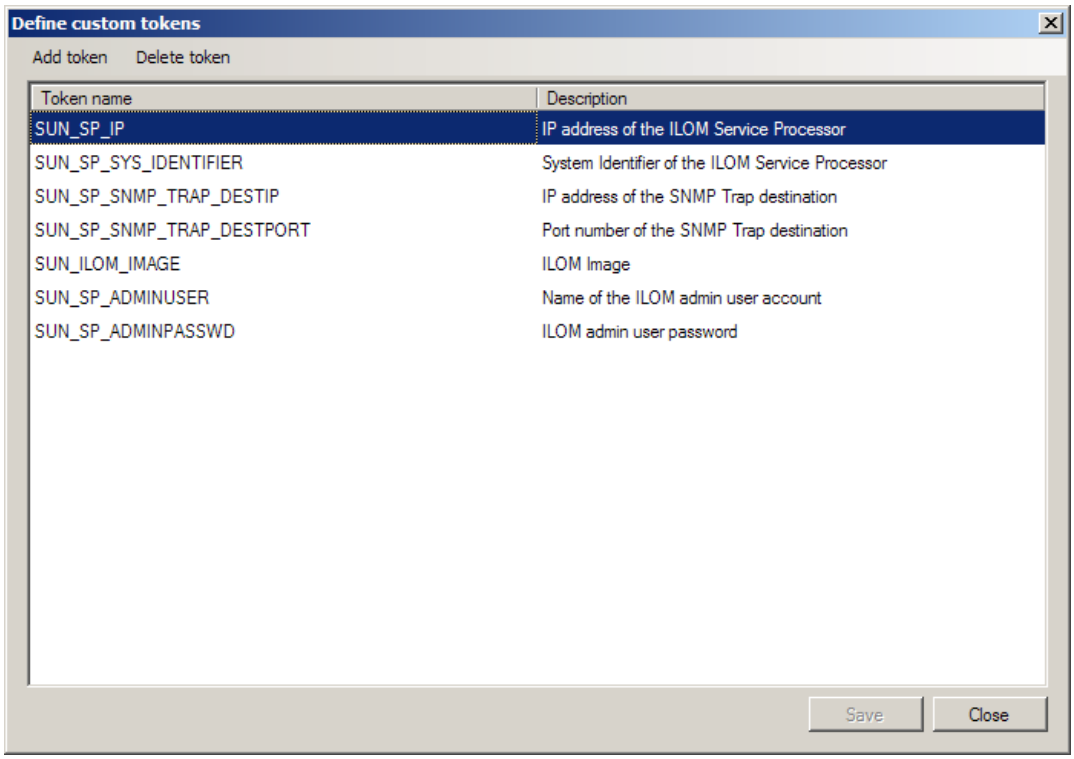

Figure 2: Custom Tokens

These tokens enable you to easily create deployment jobs that can be scaled across a large number of Sun x86 servers. In addition you can define custom tokens that can also be used in your deployment jobs.

CHAPTER 3

Installing and Uninstalling

This section describes how to get, install and uninstall Oracle Hardware Management Connector for Altiris Deployment Solution. In addition the hardware and environment prerequisites for using Oracle Hardware Management Connector for Altiris Deployment Solution are detailed.

Requirements

A complete list of the currently supported Sun x86 servers, service processors, and service processor firmware is available at the following web site:

http://www.sun.com/system-management/tools.jsp

Please consult this website before installing Oracle Hardware Management Connector for Altiris Deployment Solution.

Special Infrastructure Considerations

Sun x86 servers are equipped with the Oracle Integrated Lights Out Manager (ILOM) service processor. Oracle ILOM service processors come complete with network and serial ports to provide rich and secure out-of-band remote management and configuration.

In order to enable the out-of-band management functionality including remote power control and boot device selection in Altiris DS 6.9, the service processor must be connected to the network and assigned an IP address.

In general, service processors can be connected to a separate management network while the host side network ports are connected to a production or provisioning network. In such cases, hosts in the management network must be accessible from the provisioning server either by connecting one network interface of the provisioning server directly to the management network or by means of routing.

For more information about the Oracle ILOM, consult the following page:

http://www.sun.com/system-management/ilom.jsp

or the Oracle Integrated Lights Out Manager User's Guide for your ILOM version, which can be found at the following website:

http://docs.sun.com

Getting the Latest Version

The latest version of the Oracle Hardware Management Connector for Altiris Deployment Solution can be downloaded from the following web page:

http://www.sun.com/system-management/tools.jsp

Once you have downloaded the latest version of Oracle Hardware Management Connector for Altiris Deployment Solution, you should uncompress the downloaded file.

Installing Oracle Hardware Management Connector

Once you have downloaded and uncompressed the installer, you are ready to install Oracle Hardware Management Connector for Altiris Deployment Solution on the deployment server.

Prerequisites

You must have Altiris DS 6.9 installed before trying to install Oracle Hardware Management Connector for Altiris Deployment Solution. In order to be able to install and use Oracle Hardware Management Connector for Altiris Deployment Solution, you must also install the latest Administrator SDK build 1.4.209. Administrator SDK build 1.4.209 is available as part of Altiris knowledge base article 45057, see the following link:

https://kb.altiris.com/

This SDK is known as the ASDK and it needs to be installed prior to launching the installation of the Oracle Hardware Management Connector for Altiris Deployment Solution. The ASDK provides methods to interface with the Altiris Deployment Server and enables the job export from the Deployment Wizard into Deployment Server.

If you are going to use the Update system firmware and BIOS task to deploy updated system firmware and BIOS images, you need to configure a network protocol to make the system firmware and BIOS images available. The system firmware and BIOS images can be deployed using the TFTP, FTP or HTTP network protocols. In order to use FTP and HTTP, you need to have a server configured. You can either use Microsoft IIS or a custom web server. If you choose to use Microsoft IIS, you also need to have a web site or a FTP site configured in IIS. If you choose to use a custom HTTP or FTP server, you need to make the folder containing the images available. There are no specific requirements for the TFTP distribution protocol. For more information, see Configuring Image Distribution Protocols.

Installing

Once you have met the prerequisites, you are ready to install Oracle Hardware Management Connector for Altiris Deployment Solution.

▶ To install Oracle Hardware Management Connector for Altiris Deployment Solution:

1. Navigate to the folder where you uncompressed the Oracle Hardware Management Connector for Altiris Deployment Solution installer and double-click setup.exe.
2. Once the Welcome page is displayed, click **Next**.
3. Read the license agreement, click **I accept the terms in the license agreement**, then click **Next**.

   The Installation path dialog opens. The **Path to Deployment Share** shows the path automatically detected by the installer. This path should be the path to your deployment share. If it is not then click **Browse** to navigate to your deployment share folder. The **Installation Path** shows where Oracle Hardware Management Connector for Altiris Deployment Solution will be installed.

Note - the **Path to Deployment Share** must match your Altiris DS 6.9 deployment share folder. If it is not then the Oracle Hardware Management Connector for Altiris Deployment Solution does not work correctly. See the Altiris DS 6.9 documentation for more information on the deployment share folder.

---

4. Once the **Path to Deployment Share** shown matches your Altiris DS 6.9 deployment share folder, click **Next**.
5. Click **Install**.

   Oracle Hardware Management Connector for Altiris Deployment Solution is installed.
6. When the installation process has finished, click **Finish** to close the Installer.

Starting Deployment Job Wizard

There are two possible methods of starting the Deployment Job Wizard, which is provided as part of Oracle Hardware Management Connector for Altiris Deployment Solution.

You can either:

- within the **Start** menu, navigate to the Oracle Hardware Management Connector for Altiris Deployment Solution entry and click **Deployment Job Wizard**
- within the Altiris DS 6.9 deployment console, navigate to **Tools>Oracle Tools** and click **Deployment Job Wizard**

Both methods open the same Deployment Job Wizard.

Note - when starting the Deployment Job Wizard from the **Start** menu, Altiris DS 6.9 does not need to be running

---

You may optionally have to log in to the Deployment Wizard, if you have enabled security in Altiris Deployment Console. For more information, see the Altiris product documentation.

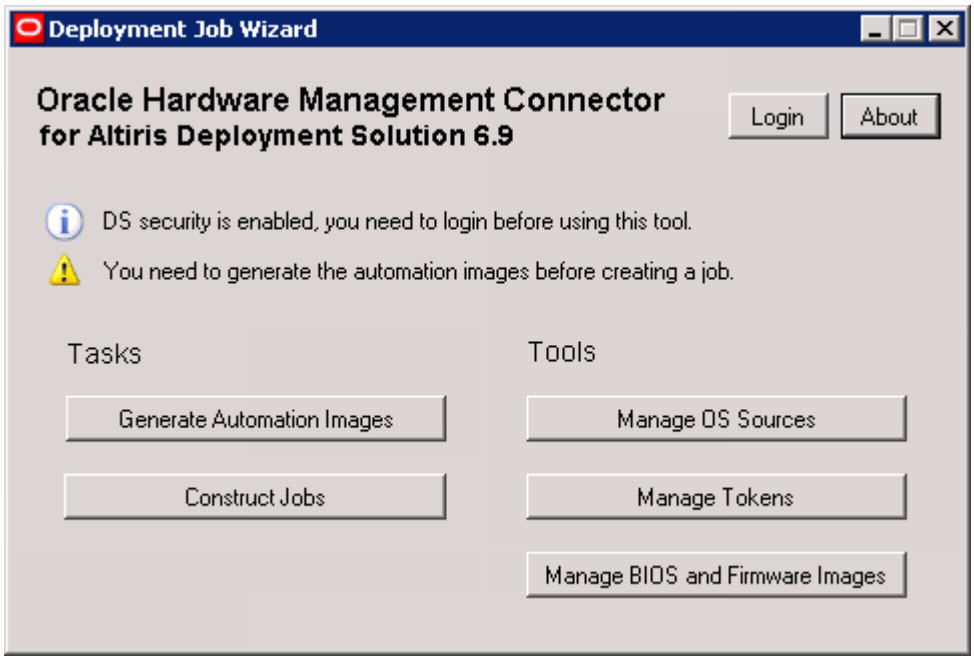

Figure 3: Deployment Job Wizard

The buttons in the Deployment Job Wizard open the various graphical helpers that are provided with the Deployment Job Wizard.

If you have enabled security in the Altiris Deployment Console, but not logged in you may have an optional log in button shown in the Deployment Job Wizard.

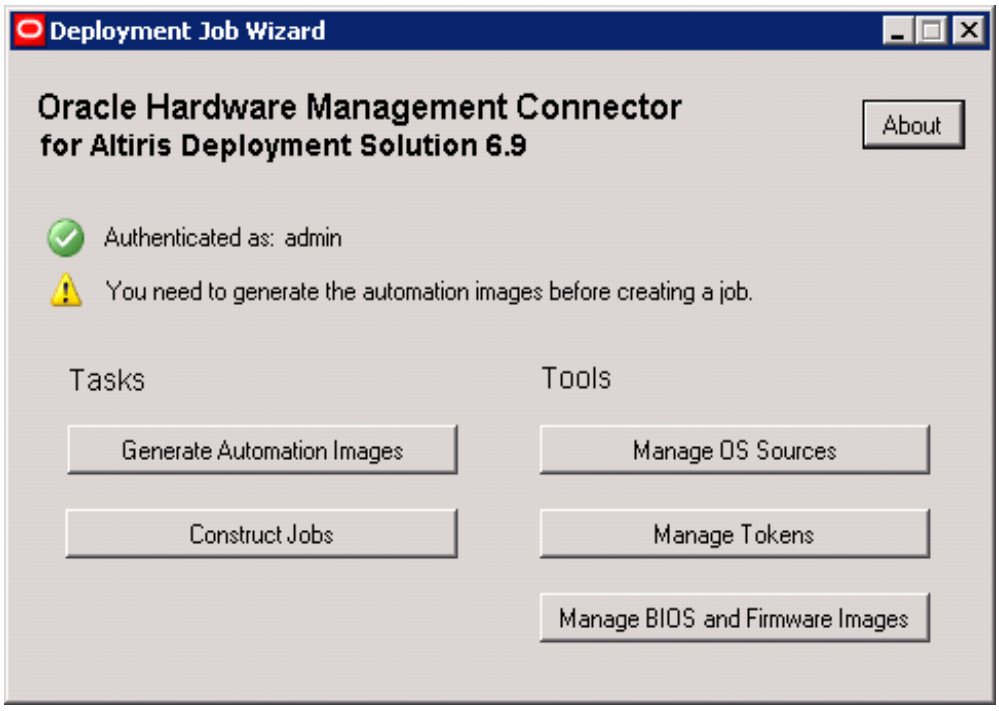

Figure 4: Deployment Job Wizard Authenticated User

If you have logged in to the Altiris Deployment Console, the user currently logged in to the Altiris Deployment Console is shown at the top of the Deployment Job Wizard.

Upgrading Oracle Hardware Management Connector

If you had a previous version of Oracle Hardware Management Connector for Altiris Deployment Solution or Sun Servers Integration for Altiris Deployment Solution 6.9 installed on your system, you can upgrade to the latest version. An upgrade does not delete any of your previous jobs or settings.

▶ To upgrade Oracle Hardware Management Connector for Altiris Deployment Solution:

1. Navigate to the folder where you uncompressed the Oracle Hardware Management Connector for Altiris Deployment Solution installer and double-click setup.exe.
2. The installer detects your previous version of Oracle Hardware Management Connector for Altiris Deployment Solution. If you are sure you want to upgrade, click **Next**.
3. Read the license agreement, click **I accept the terms in the license agreement**, then click **Next**.

4. The installer detects the path of your previous installation. Verify the path and click **Next**.
5. To confirm the installation, click **Install**.

   The installer upgrades your version of Oracle Hardware Management Connector for Altiris Deployment Solution.
6. Once the Installation Wizard has completed the upgrade, click **Finish**.

Uninstalling Oracle Hardware Management Connector

If you want to uninstall Oracle Hardware Management Connector for Altiris Deployment Solution you can use the Add / Remove Programs menu.

▶ To uninstall Oracle Hardware Management Connector for Altiris Deployment Solution:

1. Navigate to **Start > Control Panel**, click open the list of installed software.
2. In the list of **Currently installed software**, click **Oracle Hardware Management Connector for Altiris Deployment Solution**.
3. Click **Remove**.

   A confirmation dialog opens.
4. If you are sure you want to uninstall Oracle Hardware Management Connector for Altiris Deployment Solution, click **Yes.**

   Oracle Hardware Management Connector for Altiris Deployment Solution is uninstalled.

CHAPTER 4

Getting Started

This section provides an overview of the Oracle Hardware Management Connector for Altiris Deployment Solution and explains how to get started with the Deployment Job Wizard, by generating automation images and importing operating system media to deploy to your Sun x86 servers.

Generating Automation Images

After Starting Deployment Job Wizard, a warning is displayed that **You need to generate the automation images before creating a job**. Your first task is to generate automation images.

The automation images are used within a job to boot Sun x86 servers using the Windows Pre-execution (WinPE) automation environment. The automation environment is used to run configuration tools on your Sun x86 servers, which enable you to configure ILOM, partition hard drives and so on.

The Oracle Hardware Management Connector for Altiris Deployment Solution creates automation images by injecting custom content into the automation images provided by Altiris DS 6.9 as standard. During this process, Oracle Hardware Management Connector for Altiris Deployment Solution generates automation images for both 32 bit and 64 bit Sun x86 servers and the process takes approximately 20 minutes.

▶ To generate automation images:

1. Within the Deployment Job Wizard, click **Generate Automation Images**.

   A confirmation dialog opens.

2. Click **Yes**.

   A progress dialog opens.

3. Once the automation images have been created, the progress dialog closes.

   The **You need to generate the automation images before creating a job** warning is no longer displayed.

Note - it is possible to generate fresh automation images at a later date.

Importing Operating System Media

To deploy an operating system (OS) to your Sun x86 servers, you must import operating system install media. Operating system install media can be either physical disk media or disk images. You can import install media for the following operating systems:

- Windows Server 2003 (SP1 and SP2) Standard and Enterprise Edition
- Windows Server 2003 R2 Standard and Enterprise Edition
- Windows Server 2008 (R2) Standard, Enterprise and Datacenter Editions

For up to date information on the operating systems supported by Oracle Hardware Management Connector for Altiris Deployment Solution, see the supported platforms matrix at:

http://www.sun.com/system-management/tools.jsp

For each of these Windows Server versions, Oracle Hardware Management Connector for Altiris Deployment Solution can recognize whether the architecture is 32 or 64bit. Oracle Hardware Management Connector for Altiris Deployment Solution can also recognize the operating system media Service Pack (SP) level and Release (R) level, which for example enables you to identify install media that contains Windows 2003 R2.

Oracle Hardware Management Connector for Altiris Deployment Solution is also capable of slipstreaming Windows Server 2003 R2 install media to an existing operating system media. For more information, see Slipstreaming Windows Server 2003 R2.

▶ To import operating system media:

1. Click **Manage OS Sources**.

   The **Manage OS Sources** dialog opens.

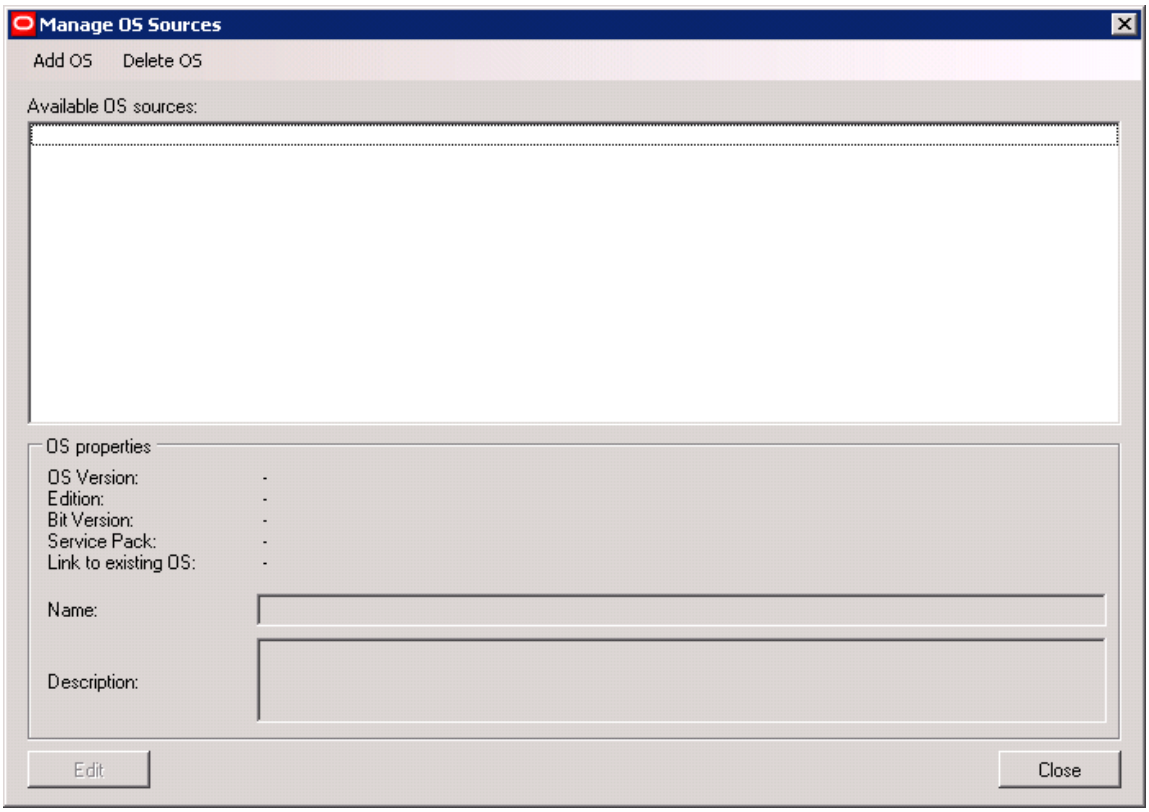

Figure 5: Manage OS Sources dialog

2. The **Manage OS Sources** dialog shows the list of **Available OS sources**, and enables you to **Add OS**, **Edit** or **Delete OS** sources.
3. Click **Add OS.**

   The **Import OS Sources** dialog opens.

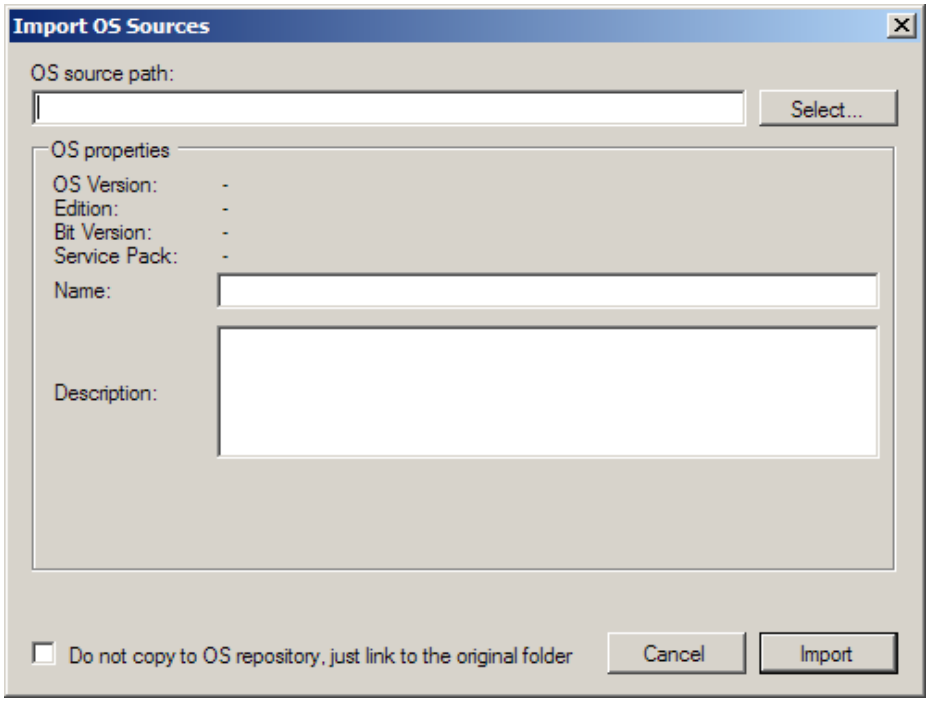

Figure 6: Import OS Sources dialog

4. Click **Select**.

   A file browser opens.

5. Navigate to the location of the OS media you want to import.

   With the OS media selected, click **OK**.

6. Oracle Hardware Management Connector for Altiris Deployment Solution checks the properties of the OS media selected and displays the properties such as the **OS Version, Edition, Bit Version** and **Service Pack**. This enables you to make sure the correct OS Media has been imported.

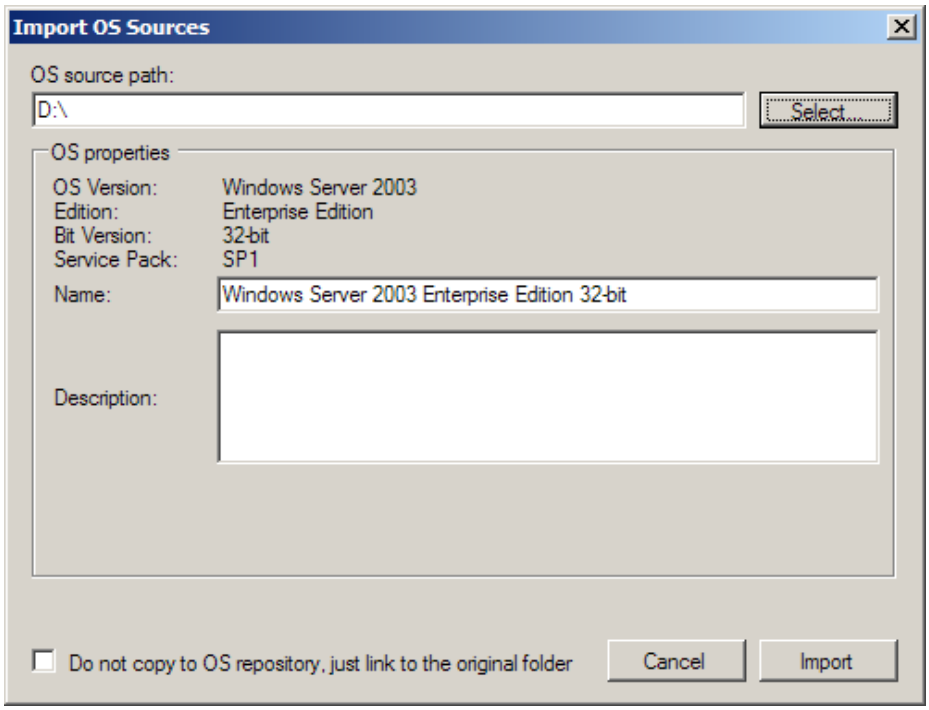

Figure 7: Imported OS Media

7. Optionally edit the **Name** of the imported OS Media and provide a **Description**. These fields are for your information only.

Note - if you are using a source OS media which is already copied somewhere in the Deployment Share, selecting the **Do not copy to OS repository, just link to the original folder** option prevents the image from being copied again to the repository. It is not possible to link to OS media outside of the Deployment Share.

---

8. Click **Import**.

   A progress bar shows the progress of the files being imported.

9. Once the OS media has been imported it is shown in the list of **Available OS sources**.

Repeat this process for each version of Windows Server that you want to deploy to your Sun x86 servers.

Editing Operating System Media Properties

You can edit the properties of an imported OS media, for example to change the description.

▶ To edit imported OS media properties:

1. Within the **Manage OS Sources** dialog, under the list of **Available OS sources**, click the name of the OS media you want to modify.
2. The **Name** and **Description** of the selected OS media are shown in the bottom half of the dialog.
3. Edit the **Name** and **Description** as appropriate.
4. To make your changes permanent, click **Save.** To reject the changes and return to the original **Name** and **Description**, click **Cancel**.

Slipstreaming Windows Server 2003 R2

Windows Server 2003 R2 is available as two installation CDs, the original version of Windows Server 2003 and the additional Windows Server 2003 R2 files. You can use Oracle Hardware Management Connector for Altiris Deployment Solution to slipstream the additional Windows Server 2003 R2 files CD into the first Windows Server 2003 CD.

Note - for this process to work correctly you must have already imported the original version of Windows Server 2003.

▶ To slipstream Windows Server 2003 R2:

1. Within the Manage OS Sources dialog, click **Add OS**.

   The Import OS Sources dialog opens.

2. Click **Select**.

   A file browser opens.

3. Navigate to the location of the additional Windows Server 2003 R2 media you want to slipstream.

   With the OS media selected, click **OK**.

4. Click **Import**.

   A dialog opens asking if you want to slipstream.

5. Click **Yes**.

   The Slipstream OS component dialog opens.

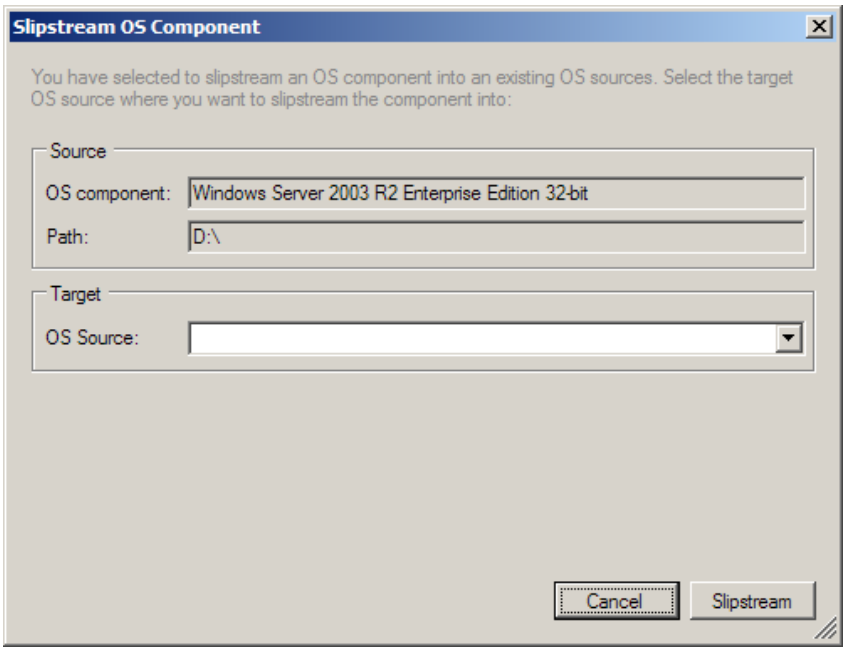

Figure 8: Slipstream OS component Dialog

6. Under **Target**, choose the original Windows Server 2003 install media you want to slipstream Windows Server 2003 R2 into from the **OS Source** drop down menu.
7. Click **Slipstream**.

   The updated Windows Server 2003 R2 media is listed under the **Available OS Sources**.

CHAPTER 5

Job Constructor

This section explains the Job constructor, how to build your own jobs and provides a reference description of each task that can be used in a job.

Creating a Deployment Job

To deploy your Sun x86 servers using Altiris 6.9, you need to create one or more jobs. These jobs consist of tasks, such as changing the server's boot device, configuring ILOM, deploying a Windows Server operating system and so on. The Deployment Job Wizard helps you to create jobs with the appropriate tasks easily without any need for scripting or writing complex configuration files.

This section contains general information about using the job constructor, as well as specific information about each of the tasks included with the Oracle Hardware Management Connector for Altiris Deployment Solution.

Overview of the Job Constructor

This section provides information about the Job constructor and how to use it to create a job.

The Job constructor (Figure 9) consists of the job's parameters on the left hand side of the screen. You must enter a name for the current Job. The Job description contains the date of creation by default, you can optionally edit this field. When starting a new job, the Tasks list is blank.

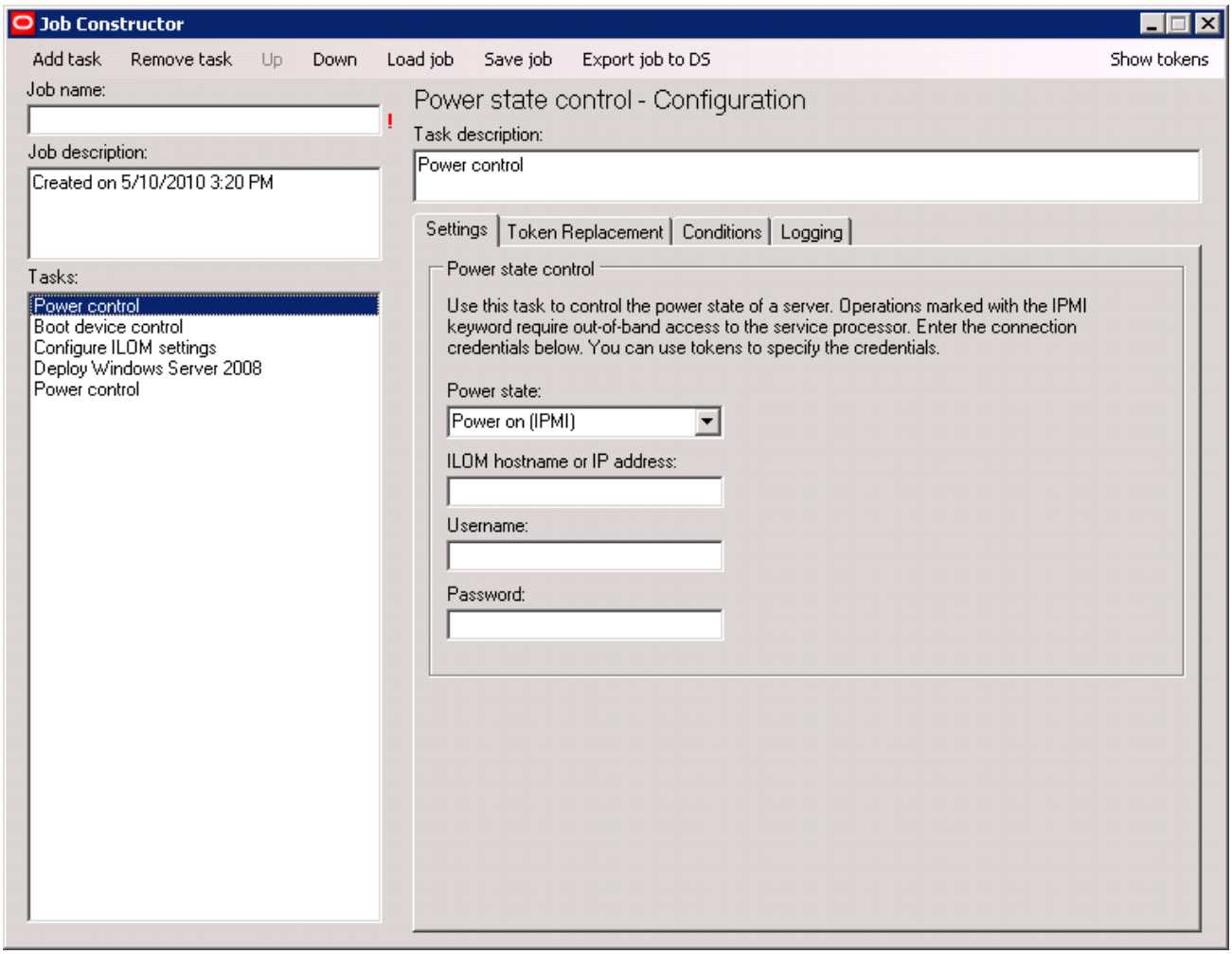

Figure 9: Job Constructor

The right hand side of the screen displays the settings of the currently selected task. When starting a new job this area is blank.

The menu at the top of the Job constructor provides the options used for working with a Job. **Load job** and **Save job** enable you to load and save jobs for future use. At the end of the job creation process you use **Export job to DS** to use the job within Altiris 6.9. **Show tokens** displays a list of the available tokens, see Tokens.

Working with Tasks

Tasks are the actions carried out by a job. This generic procedure explains how to add, remove and change the order of tasks in a job. For more specific information on the different types of task a job can contain, see Task Reference for more information.

▶ To work with tasks:

1. Within the Job constructor, click **Add task**.

A drop-down menu showing the tasks you can use within the job.

2. Click a task name from the drop-down menu.

   The task is added to the **Tasks** list.

   The right side of the Job constructor shows the properties of the new task.

3. To select a different task and view its properties, click the name of the task under the **Tasks** list. The currently selected task is displayed with a blue background.

You can edit the currently selected task's description in the **Task description** field. This enables you to make a note of the task's purpose.

You can edit the task's properties by clicking the tabs under the **Task description** field. Each task has three standard tabs, for more information see Job Constructor Generic Tabs. Some tasks provide tabs with extra properties for the task, for more information on the specific properties of a task, see Task Reference.

The order of the tasks from top to bottom represents the order in which the tasks are executed when running the job. To adjust the position of the currently selected task, use **Up** and **Down**.

You can save a job for later use using **Save job**, which opens a file browser to enable you to choose where to save the job to. Similarly, **Load job** enables you to open previously saved jobs using a file browser. Saving a job is optional, but enables you to reuse and modify the job at a later date.

Note - it is not possible to edit jobs that have already been exported to the Altiris DS 6.9 To make changes to an existing job, you must have the job saved. At a later date, you can modify the saved job and re-export it. This creates a new job in Altiris DS 6.9 that reflects the modifications made. The old job that was exported remains unchanged in Altiris DS 6.9.

Show tokens opens the list of tokens available for use within the job. These tokens are the standard tokens provided by Altiris DS 6.9 and the custom tokens provided by the Deployment Job Wizard. You can add new tokens and edit the Deployment Job Wizard tokens to suit your environment. For more information, see Tokens.

Once you have finished a job and want to use it to deploy your Sun x86 servers, click **Export job to DS**. This generates the job and all of the underlying tasks within Altiris DS 6.9.

Job Constructor Generic Tabs

Each task provided by the Deployment Job Wizard has three tabs, which are the same for all tasks. These tabs are Token Replacement, Conditions and Logging. This section explains these tabs and how to use them in your jobs.

Token Replacement Tab

The **Token Replacement** tab controls how custom tokens are used within the job. If you are using the standard Altiris DS 6.9 tokens there is no need to use this tab. The token replacement tab is used only when the task uses custom tokens, either those provided by Deployment Job Wizard or tokens which you have created. For more information on the different types of token, see Tokens.

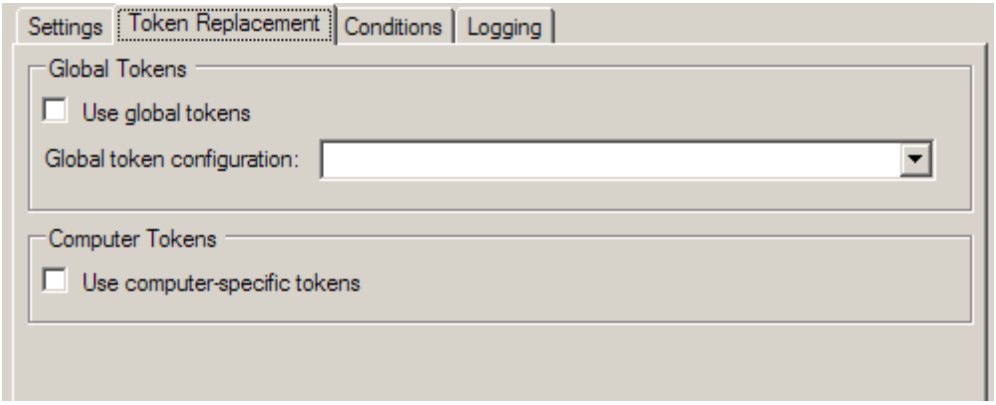

Figure 10: Token Replacement Tab

To enable a task to use either global tokens or computer-specific tokens, click **Use global tokens** or **Use computer-specific** tokens. It is possible for a task to use both types of token. However, if a task is using both types of token you must be careful with tokens that have the same name. When a global token and a computer specific token have the same name and are used within one task, computer specific tokens override global tokens.

Tokens are a powerful way to configure a large number of servers easily. For example, if you are deploying a number of servers, each of which needs to be configured with a slightly different IP addresses, different names and so on. In this case use computer specific tokens for this type of configuration. If certain properties are common across all of the servers being deployed, such as the Windows product key, administrator passwords and so, instead of assigning the values to each of the servers manually, you can assign these values once to a global token configuration and use it in the job. For more information, see Tokens.

Conditions Tab

The **Conditions** tab controls what happens within the job if the task fails.

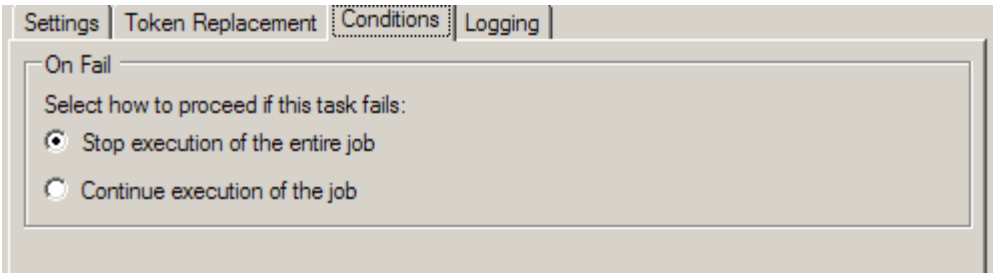

Figure 11: Conditions Tab

By default all tasks use the option **Stop execution of the entire job**, which means that if the task fails the entire job is stopped. The **Continue execution of the job** option enables you to override this default behavior.

Note - use the **Continue execution of the job** option with caution. For example, using this option on a **Disk partitioning and formatting** task could mean your Sun x86 server has an incorrect partition visible for OS deployment.

Logging Tab

The **Logging** tab enables you to control the logging options for a task. By default tasks do not keep logs. You can enable logging by clicking **Log to a file**.

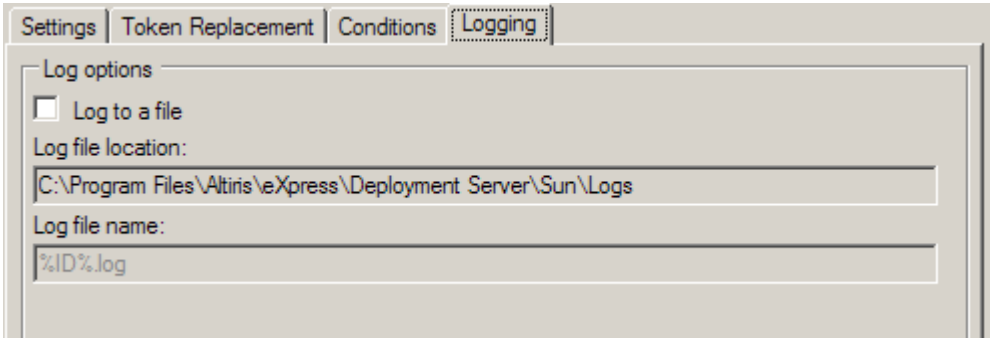

Figure 12: Logging Tab

When logging is enabled, the path which logs are saved to is shown under **Log file location**.You can either type a concrete name for the log file in the **Log file name** field, or you can use a token. By default a token is used, which saves the log file using the server's ID token as the name with the file extension `.log`.

Task Reference

This section describes each task provided by Oracle Hardware Management Connector for Altiris Deployment Solution, the Settings tab of each task and any extra tabs the task has.

Configure BIOS Settings

The Configure BIOS Settings task enables you to configure the BIOS of your Sun x86 servers as part of a deployment job. You configure one server's BIOS as a master template, then capture these BIOS settings and save them to a file. This file can then be used as a template to automatically configure the BIOS of servers as part of deployment job.

Note - you must ensure that the servers you use are the same model, configured with similar hardware and running compatible BIOS versions before using the Configure BIOS Settings task.

There are two stages to using the Configure BIOS Settings task. Your initial job uses the Configure BIOS Settings task with the Capture BIOS settings option to save the template BIOS to the Altiris 6.9 Deployment Share. You then use another Configure BIOS Settings task to apply the template across multiple compatible servers.

▶ To use the Configure BIOS Settings task to capture a template BIOS:

1. Configure the BIOS on the master machine to the exact settings you want to deploy across the remaining servers.
2. Add a Configure BIOS Settings task to your deployment job.
3. In the Configure BIOS Settings task, select Capture BIOS settings.

   The Capture BIOS settings to options become enabled.
4. You can choose to either:

   Use a token to define the location and file name of the captured BIOS settings by selecting the token from the **configuration file specified as a token** drop-down menu.

   Use a fixed path to to define the location and file name of the captured BIOS settings by selecting the **configuration file specified by a path** by clicking Choose....
5. Export the job to Altiris DS 6.9. When you run the job, the BIOS settings are captured to the defined path.

When you have captured the BIOS settings you want to deploy across your servers, you then apply these BIOS settings to other servers as part of another job.

Tip - the BIOS settings file is a human readable XML file that you can edit before applying it to other servers. For more information, see the BIOSconfig documentation, available from http://docs.sun.com.

▶ To apply BIOS settings:

1. Add a Configure BIOS Settings task to your deployment job.
2. You can choose to either:

   Use a **configuration file specified as a token**, which enables you to use a token during deployment to apply BIOS settings across groups of machines. Choose the token from the drop-down menu.

   Use a **configuration file specified by a path**, which enables you to use a defined file during the deployment. Click choose and navigate to the BIOS settings file you want to apply.

When you run the job, the BIOS settings are applied.

Configuring boot order

You can also use the Configure BIOS Settings task to permanently change the boot order of your servers during a deployment job. This enables you to control the ordering of boot devices as part of a deployment job rather than having to capture a template BIOS and deploy it to multiple servers.

▶ To configure the boot order:

1. Add a Configure BIOS Settings task to your deployment job.
2. Select **Set permanent boot order**.

   The Permanent BIOS Boot Order list become active.
3. Choose the **Device class** and **Dev. No.** for each device that you want to set in the boot order. The **Dev. No** sets the priority for boot devices when there is more than one instance of a device.

Note - ensure that the devices you have selected match the devices present on the servers you want to apply this job to. Devices that are part of the boot order configuration specification and are not physically present in the system being configured are ignored. For more information, see your server user's documentation.

When the job is run the server's boot order is permanently changed.

Boot Device Control

The Boot device control task enables you to modify the way which your Sun x86 servers boot at the next power on or restart. If your Sun x86 servers are not set to boot from the network as default, you can use this task to change the one time boot device settings, for example you could change between production and automation environments. The change is made on the Sun x86

server using the ILOM service processor. Therefore, to use this task you must have the Sun x86 server configured to provide out-of-band access to the service processor. For more information, see Special Infrastructure Considerations.

The credentials fields are used to configure the log in to the ILOM service processor. You can either specify concrete credentials or you can use tokens when deploying across multiple machines.

Settings tab

The **Boot device** drop-down menu enables you to choose from the following options:

Option	Description
Do not change boot device	Can be used to create a placeholder task
Network/PXE	Can be used to boot across the network, for example using PXE
Default hard drive	Boots from the first active partition on the default hard drive
CD/DVD	Boots from a CD or DVD in the server's CD/DVD drive
Floppy/primary removable media	Boots from a floppy disk or primary removable media

ILOM Hostname or IP address is the network location of the server's ILOM service processor.

The **Username** and **Password** are the credentials used during the job when connecting to the ILOM service processor in **ILOM Hostname or IP address**. When typing a password, the details are obscured from view for security purposes. However, when using a token in this field the token is displayed.

Note - when entering the password manually do not use a password with % as the first and last character as this causes a conflict with the use of tokens.

You can use this task to set the boot device that is used on the next server reboot.

Configure ILOM

The Configure ILOM task enables you to modify settings on your ILOM service processor. There are many available options that can be configured on your ILOM service processor. For more information on the options available, please see the Integrated Lights Out Manager (ILOM) Concepts Guide document.

Settings Tab

The Configure ILOM task provides configuration options which can be sent to your ILOM service processor during the deployment. To use this task, click **Add option** and choose from the available ILOM configuration options. The configuration option is added to the list of **Configuration options** that are carried out as part of this task. Under the list of **Settings,** choose a **Property** you want to configure and click in the **Value** field. Either type a value you want to use when configuring the **Property** or select from the drop-down menu, which is only available for certain properties.

The available ILOM configuration options that can be configured are as follows:

Option	Description
Alert rule management	Configures the 15 alert rules provided by ILOM
Clients	Configures the various client services such as Radius, LDAP or SMTP.
Clock	Configures the ILOM service processor's internal clock
Identification	Configures the ILOM service processor's identification properties such as ILOM hostname and so on
Network settings	Configures the ILOMservice processor's settings on the network, such as the IP address and so on
Services	Configures the service running on the ILOM service processor, such as SNMP, HTTP and HTTPS
Custom configuration	Configures other options not covered by the default, see below.

In addition, you can add a Custom configuration that configures ILOM properties not covered by the default options. To create a custom configuration, click **Add option** and select **Custom configuration**. Click **Add command**, the Add custom command dialog opens. Configure the custom command, optionally using tokens by clicking **Show tokens**. When you have finished, click **OK**. The custom command is shown under **Settings**.

You can remove options by selecting the option and then clicking **Delete option**, or you can remove command by selecting the command and clicking **Delete command.**

ILOM Access Tab

The Configure ILOM task can connect to the Sun x86 server's ILOM service processor using either out-of-band access or in-band access. The ILOM access

tab enables you to choose between the two possibilities. For more information, see Special Infrastructure Considerations.

Deploy Windows Server 2008

The Deploy Windows Server 2008 task enables you to configure an Edition of Windows Server 2008 to be installed on a Sun x86 server. You choose an installation media and then configure how the unattended install should be configured.

Oracle Hardware Management Connector for Altiris Deployment Solution provides two options:

- Use the simple installation options provided to configure the most common settings provided by the Windows Server 2008 installer
- Use a customized unattended.xml file, either which Oracle Hardware Management Connector for Altiris Deployment Solution generates and you then adjust, or import an existing unattended.xml file.

Documentation on unattended.xml files is available in the Microsoft document Unattended Windows Setup Reference and is part of the Windows Automated Installation Kit (WAIK).

Settings Tab

The Deploy Windows Server 2008 task provides a drop-down menu where you can choose Windows Server 2008 installation media previously imported. Manage OS sources enables you to access the OS source manager. For more information, see Importing Operating System Media. You must select a suitable Windows 2008 installation media for this task to function.

The **Unattended configuration** section of the Settings tab enables you to control exactly how the selected Windows 2008 is installed during the deployment. By default the **Use simple settings method** of configuring the Deploy Windows 2008 task is selected. You can change the method of configuring the installation by clicking **Provide configuration file**, which enables you to edit the unattended.xml file.

The first time you click **Provide configuration file** a confirmation dialog opens, asking if you want to import a sample configuration. Click **Yes**, the Edit file dialog opens. You can manually edit the unattended.xml file. It is possible to use tokens in the unattended.xml file by clicking **Show tokens**. You can also use an existing unattended.xml file by clicking **Import file** and selecting your unattended.xml file. When you have finished editing the unattended.xml file, click **Done** to save the file.

When using the simple settings method of configuring the Deploy Windows 2008 task, you should adjust the settings available on the Edition and Destination, Identification and User accounts tabs as follows:

Edition and Destination tab

Select which edition of Windows Server 2008 to deploy from the **Select OS Edition** drop-down menu. All of the different Windows Server 2008 editions are listed.

Choose which partition the task should install Windows Server 2008 to. By default the **Install to first partition** option is selected, which installs to the first active partition found on any disk, starting with the first and continuing until an active partition is found.

Optionally you can install to a different partition by deselecting the **Install to first partition** option. This enables the **Target disk No**. and **Target partition No.** fields. Type the disk number and partition number you want to install Windows Server 2008 into the fields.

Identification Tab

You must enter a **Product Key** for the installation media so that it can be licensed during the installation procedure and also configure the details to use during deployment such as the **End user full name**, **Group or domain membership** and so on. These options match the options provided by the Microsoft Windows Server 2008 installer.

User Accounts Tab

By default the **Enable built-in Administrator account** option is selected. You must enter an **Administrator password** for the account. You can also **Create a local account with administrator privileges**, optionally providing a **User name to create** and **Password**.

Deploy Windows Server 2003

The Deploy Windows 2003 task enables you to configure an edition of Windows Server 2003 to be installed on your Sun x86 servers. You choose an OS media source to use during the installation and then configure the unattended install.

Oracle Hardware Management Connector for Altiris Deployment Solution provides two options:

- Use the **Basic settings** tab to configure the most common settings provided by the Windows Server 2003 installer
- Use a customized unattended.txt file, either which Oracle Hardware Management Connector for Altiris Deployment Solution generates and you then adjust, or import an existing unattended.txt file

Settings Tab

The Deploy Windows Server 2003 task provides the **Select OS source** drop-down menu where you can choose Windows Server 2003 installation media previously imported. **Manage OS sources** enables you to access the OS source manager without closing the Job constructor. For more information on the OS source manager, see Importing Operating System Media.You must select a suitable Windows Server 2003 installation media for this task to function.

By default the **Auto-detect mass storage drivers** option is selected, which automatically detects the mass storage drivers necessary for the installation media selected under **Select OS source**. Optionally, you can click **Select mass storage drivers** and choose from the list of mass storage drivers.

The **OS Settings** section of the Settings tab enables you to control exactly how the Windows Server 2003 media selected is installed during the deployment. The options on the **Basic Setting**s tab represent the standard information required when installing Windows Server 2003, such as **Computer name**, **Administrator password**, **Product key**, **Group or domain membership** and so on.

The options on the **Advanced** tab enable you to fully customize the deployment by providing a visual representation of a Windows Server 2003 unattended.txt file. The unattended.txt file is used to control the settings provided to the Windows Server 2003 installer during the deployment. For more information on the supported section names and properties, see Microsoft Windows Corporate Deployment Tools User's Guide document.

On the **Advanced** tab, under **Sections** is a list of the sections found in an unattended.txt file. The **Properties** of the currently selected section can be edited by double clicking the **Key** or **Value** field you want to edit. The buttons at the top of the **Advanced** tab enable you to further customize the structure of the unattended.txt file. **Add section** and **Delete section** enable you to modify the sections that should be included in the unattended.txt file. **Add property** and **Delete property** enable you to modify the properties of the currently selected **Section**.

Import settings enables you to open an existing unattended.txt file, importing its settings and their properties into Oracle Hardware Management Connector for Altiris Deployment Solution. You can further edit the **Sections** and their properties. This enables you to work with legacy unattended.txt files within a deployment.

Disk Partitioning and formatting

The Disk partitioning and formatting task enables you to configure how the hard drives on your Sun x86 servers are configured during a deployment.

Note - exercise caution with this task, configuring the partitioning of a disk or formatting of a disk incorrectly can result in data loss.

The Settings tab of the Disk partitioning and formatting task is split into two sub-tabs which control the two possible actions of the task. By default both **Perform disk partitioning** and **Format disk** are deselected. If you want to use these functions within a job, you must select the appropriate checkbox.

Disk Partitioning Tab

The Disk Partitioning tab enables you choose whether to partition a disk. When partitioning a disk you can either **Use simple settings** that enables you to create a single partition, choosing which **Disk number**, what **Size of partition** and what **Drive letter** to assign to the new partition.

To create a more complex partitioning scheme, for example multiple partitions, select the **Edit configuration file** option. The configuration file controls the Microsoft diskpart utility. To edit the configuration file, click **Edit.**

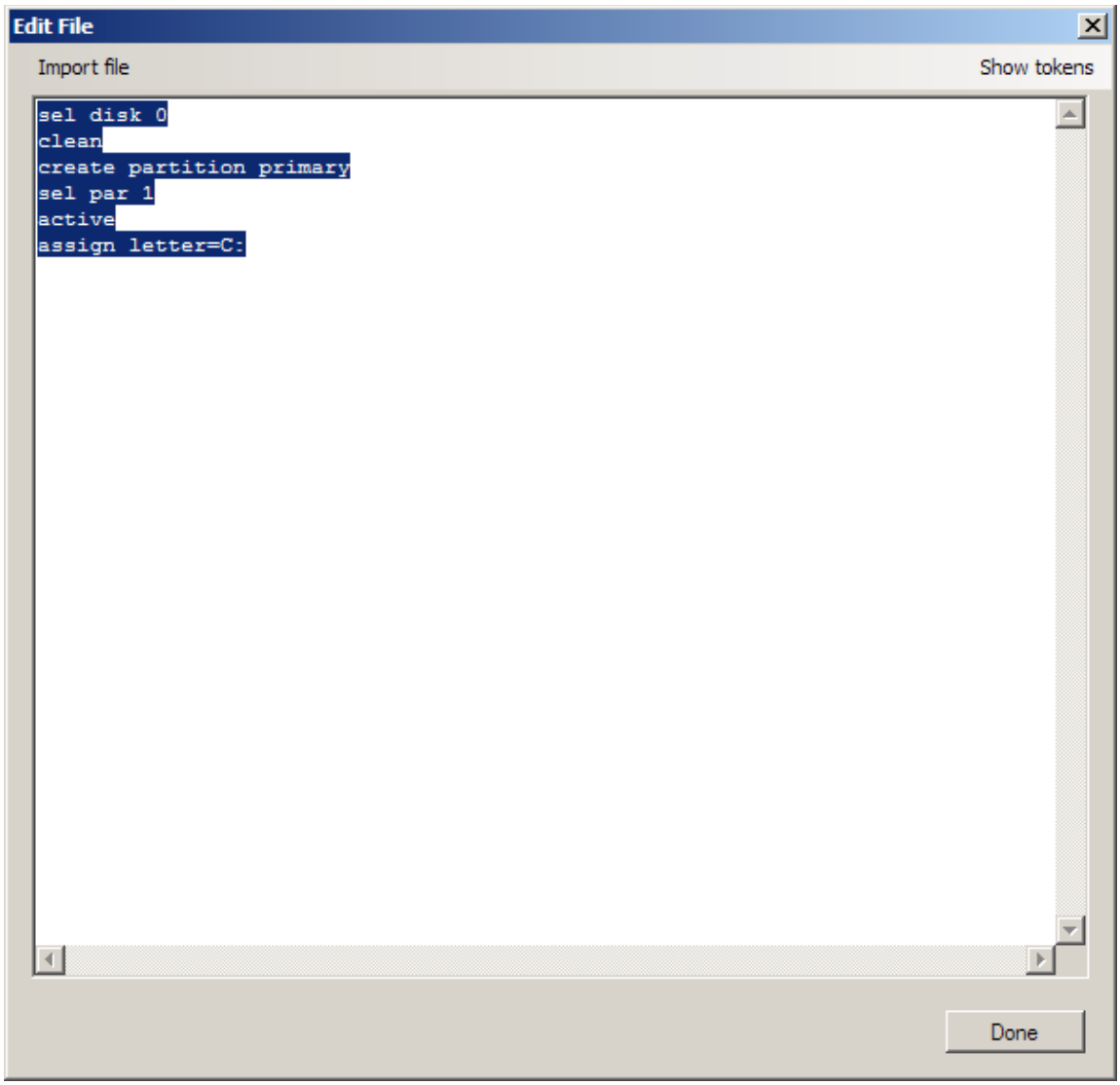

Figure 13: Editing the Diskpart Configuration File

Each line should contain a command line option to provide to the diskpart utility. For more information, see the Microsoft diskpart documentation. You can also use **Import file** to load an existing diskpart configuration file, which provides commands to configure the diskpart utility. When you have finished editing the diskpart configuration file, click Done to save the configuration file.

When you are creating a Windows Server 2003 deployment job, select to **Create the partitions in Windows Server 2003 compatibility mode**. For more information, see Microsoft's diskpart documentation at the following location:

http://technet.microsoft.com/en-us/library/cc766465(WS.10).aspx

Disk formatting Tab

The Disk formatting tab enables you to format a disk partition during the deployment, which for example enables you prepare a disk before deploying an operating system.

A **Drive letter** must be provided, by default the drive letter is set to C:. You can optionally change this by editing the field. Choose a **File system type** to format as, by default the **Create a NTFS filesystem** option is selected. By default a full format of the disk is carried out, optionally you can **Perform a quick format**. You can also optionally provide a **Volume label**.

Power Control

The Power control task enables you to control the power settings of Sun x86 servers during a job, for example powering the server on and off. For all of the power options except the Wake-on-LAN option, the change is made on the Sun x86 server using the ILOM service processor. Therefore, to use this task with these options (marked IPMI in the Power state drop-down menu) you must have the Sun x86 server configured to provide out-of-band access to the service processor. For more information, see Special Infrastructure Considerations.

The credentials fields are used to configure the log in to the ILOM service processor. You can either specify concrete credentials or you can use tokens when deploying across multiple machines. The Wake-on-LAN option uses the Wake-on-LAN functionality provided by Altiris DS 6.9. For more information on this option, see the Altiris 6.9 documentation.

Note - to use the Wake-on-LAN option your server must support the wake-on-LAN function. For more information, see your server user's documentation.

Settings tab

The **Power state** drop-down menu enables you to choose from the following options:

Option	Description
Power on (IPMI)	Turns on the power
Power off (IPMI)	Turns off the power
Power cycle (IPMI)	Turns off and then turns on the power
Hard reset (IPMI)	Resets the power
Soft shutdown (IPMI)	Sends a shutdown message
Wake up (Wake-on-LAN)	Wakes the server up

ILOM Hostname or IP address is the network location of the server's ILOM service processor.

The **Username** and **Password** are the credentials used during the job when connecting to the ILOM service processor in **ILOM Hostname or IP address**. When typing a password, the details are obscured from view for security purposes. However, when using a token in this field the token is displayed.

Note - when entering the password manually do not use a password with % as the first and last character as this causes a conflict with the use of tokens.

Update System Firmware and BIOS

The Update System Firmware and BIOS task enables you to use ILOM service processor firmware and server BIOS update package images during a deployment to upgrade your Sun x86 servers. To be able to use this task the target server must be set up for out-of-band access. For more information, see Special Infrastructure Considerations.

Settings Tab

The Select firmware image drop-down lists the system BIOS and firmware images currently imported. You can import more images by clicking **Manage FW/BIOS images**. Select the protocol you want to use to distribute the upgrade package image from the **Select distribution protocol** drop-down menu.

For more information on working with firmware images, see Managing BIOS and Firmware Images.

ILOM Hostname or IP address is the network location of the server's ILOM service processor.

The **Username** and **Password** are the credentials used during the job when connecting to the ILOM service processor in **ILOM Hostname or IP address**. When typing a password, the details are obscured from view for security purposes. However, when using a token in this field the token is displayed.

Note - when entering the password manually do not use a password with % as the first and last character as this causes a conflict with the use of tokens.

CHAPTER 6

Tokens

Tokens are used within the Oracle Hardware Management Connector for Altiris Deployment Solution to enable you to replace a static piece of data with a token, or variable. This functionality is invaluable when deploying across a large number of Sun x86 servers. You can define your own tokens and then assign them directly to computers. You can also create Global Token Definitions, which are token assignment templates that you can define and then use in your tasks.

Overview of Tokens

Tokens are used within tasks to replace a specific piece of information with a more general variable, which is replaced during the task. How the token is replaced depends on the type of token being used. The two types of token are:

- Computer-specific are local to the computers that have been imported into Altiris DS 6.9. The token is replaced during the job on a per-computer basis. Common uses include specifying an ILOM service processor's IP address, computer name and so on.
- Global tokens are specific to the job being run within Altiris DS 6.9. The token is replaced during the job with the same value on each computer. Common uses include specifying an ILOM upgrade image to be used on all Sun x86 servers of a specific type, assigning a common Administrator password across all Sun x86 servers and so on.

To be able to work with computer-specific tokens, you must have at least one computer defined within Altiris DS 6.9. For more information on defining computers, please see the Altiris DS 6.9 documentation.

Oracle Hardware Management Connector for Altiris Deployment Solution provides tokens commonly used in deploying Sun x86 servers, such as the ILOM service processor's IP address, system identifier and so on. In addition you can define your own tokens, either on a computer-specific basis or as global tokens.

If you have manually manipulated any of the token assignment files, use the Regenerate configuration files option to regenerate the token assignment files according to the Oracle Hardware Management Connector for Altiris Deployment Solution's datastore.

Using Tokens in a Task

The following procedure provides a generic example of how to use a token in a task. The method shown can be applied to using a token for almost any parameter within Oracle Hardware Management Connector for Altiris Deployment Solution.

▶ To use a token in a task:

1. Within the Job constructor, click **Show tokens**.
2. The tokens list opens, showing all of the currently defined tokens. The list of tokens includes:
   - All of the tokens provided by Altiris DS 6.9, indicated by **(DS Token)** in the Description.
   - The default tokens provided by Oracle Hardware Management Connector for Altiris Deployment Solution, the names of which start with **SUN**.
   - Any custom tokens you have created. For more information, see Defining Custom Tokens.
3. Find the token you want to use in the list of tokens and double click the row.

   The token is automatically copied to the clipboard and the list of tokens closes.
4. Paste the token into the required field by either:
   - Right clicking in the field and select **Paste**.
   - Pressing the control-v key combination.
5. Repeat this process for any other tokens you want to use in the task.

Once you have used one or more tokens in a task you need to choose how to use the tokens on the task's Token Replacement tab:

- If you want to use a global token, select **Use global tokens**, then choose which configuration of global tokens you want to use from the **Global token configuration** drop-down.
- If you want to use tokens local to the computer being deployed, select **Use computer-specific tokens**.

Note - if a task is using both types of token, you must be careful with tokens that have the same name. When a global token and a computer specific token have the same name and are used within one task, computer specific tokens override global tokens.

Assigning Tokens to Computers

Tokens can be assigned to computers to control how the token is replaced. You can choose to make a token local to just one computer or assign it to a group of computers. If you want to assign a token to many computers, you can also use global tokens. For more information, see Defining Global Tokens.

▶ To assign a token to a computer:

1. Click **Manage Tokens**.

   The list of token tasks opens.

2. Click **Assign tokens to computers**.

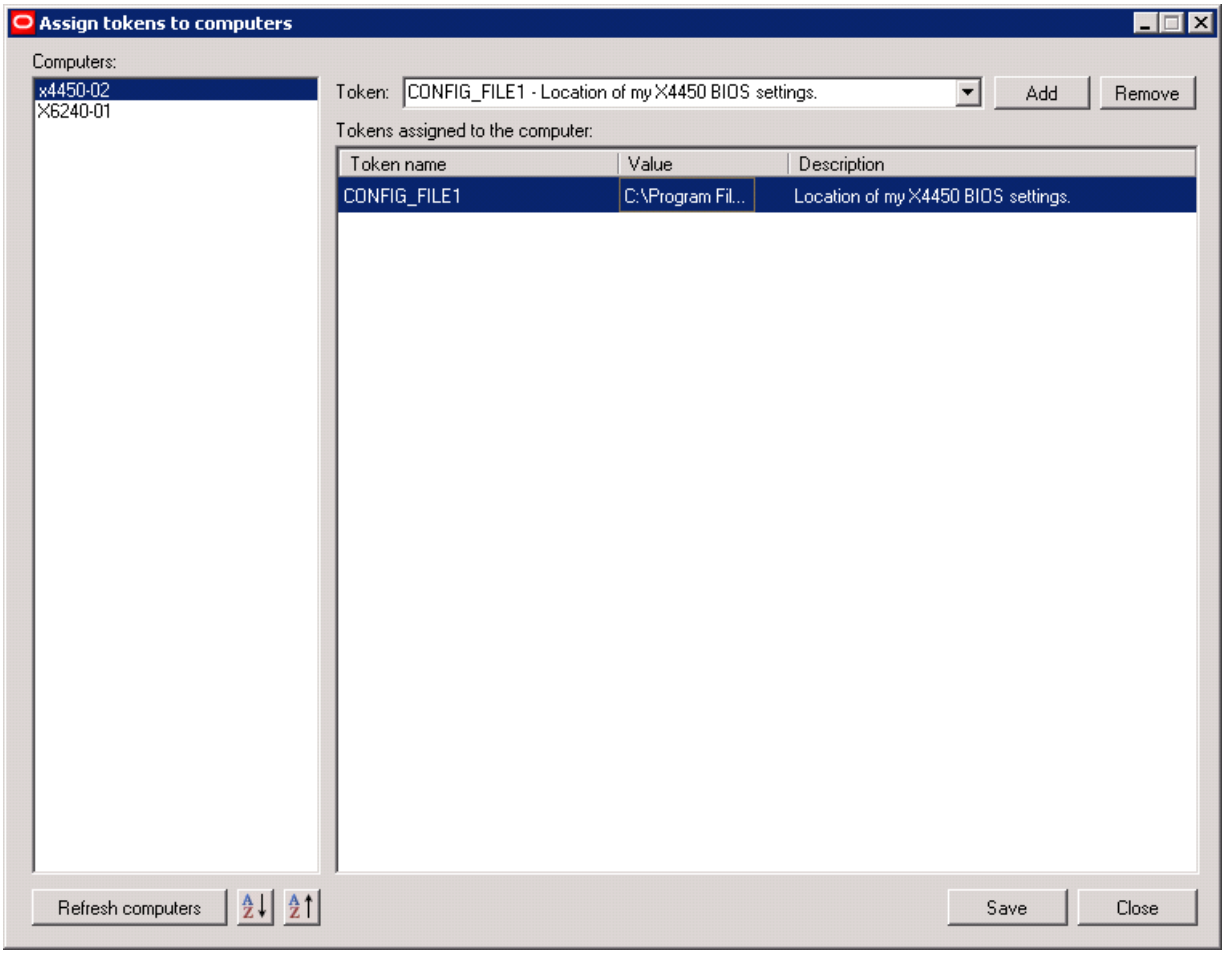

Figure 14: Assign Tokens to Computers Dialog

The computers currently detected in Altiris DS 6.9 are listed on the left. The list can be updated by clicking **Refresh computers**. You can select a computer by clicking its name. It is also possible to select more than one computer by holding down the control key while clicking the computer's names, or holding down the shift key and selecting a range of computers. You can control the ordering of the list of computers

using the two buttons next to **Refresh computers**, which sort the list alphabetically in either ascending or descending order.

On the right is the list of **Tokens assigned to the computer**(s) currently selected.

3. Under **Computers**, select the computer(s) you want to assign tokens to.
4. Choose a token you want to assign from the **Token** drop-down menu.
5. Click **Add**.

   The chosen token is assigned to the currently selected computer(s).
6. Repeat this process as necessary. Optionally you can repeat this process and click **Remove** instead of **Add** to remove an assigned token.
7. To make your changes permanent once you have finished assigning tokens, click **Save**.

   The tokens are assigned to the computers.
8. Click **Close** to return to the Manage tokens dialog.

Defining Global Tokens

Global tokens are used when you want a token to be replaced with the same value across a large number of computers. For example, this can be useful when you want to deploy a group of servers with the same administrator password and so on.

▶ To define a global token configuration:

1. Click **Manage Tokens**.

   The list of token tasks opens.
2. Click **Define global token configurations**.

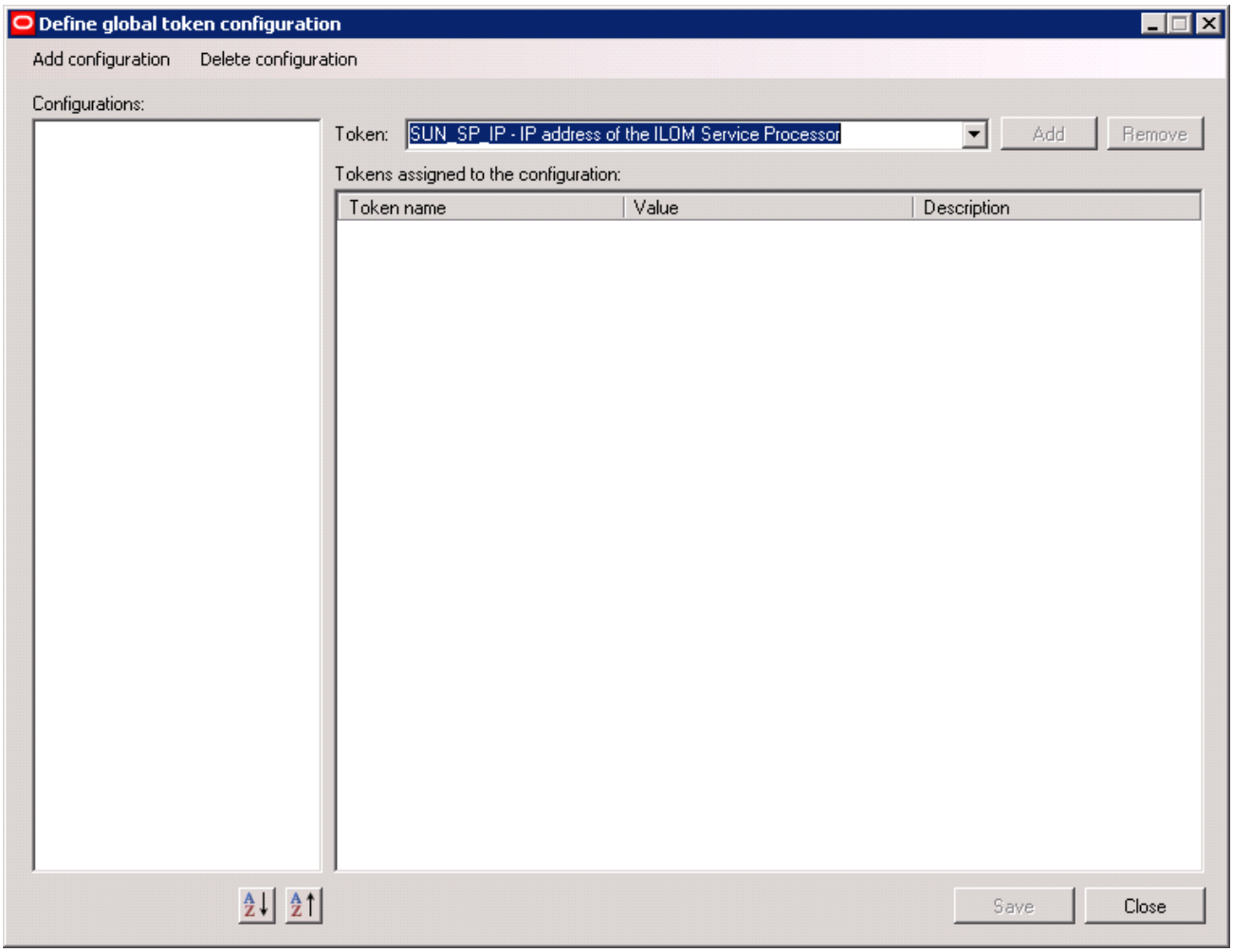

Figure 15: Define Global Tokens Dialog

The list of current global tokens is shown on the left under **Configurations**. A global token definition configuration can be selected by clicking on its name. You can add a new global token configuration by clicking **Add configuration**. The currently selected global token configuration can be deleted by clicking **Delete configuration**. You can control the ordering of the list of **Configurations** using the two buttons under the list of **Configurations**, which sort the list alphabetically in either ascending or descending order.

The list of current tokens assigned to the currently selected configuration is shown on the right under **Tokens assigned to the configuration**.

3. Click the global token configuration you want to add a token to under **Configurations**.
4. Select a token you want to add to the currently selected global token configuration from the **Token** drop-down, then click **Add**.

   The selected token is added to the currently selected global token configuration.

5. Click in the **Value** column for the token.

   The **Value** becomes editable.

6. Choose one of the following options:

   - for a string token type the value that the token should be replaced with during processing a job
   - for a System firmware/BIOS image token, use the drop-down menu to select the appropriate System firmware/BIOS image
   - for a configuration file token, click the **...** button to open a file browser and navigate to the file you want to use as a token.

   Note - configuration files must be stored within the Altiris DS 6.9 deployment share folder.

   ---

7. Repeat this process as necessary.
8. To make your changes permanent once you have finished modifying global token definition configurations, click **Save**.

   The modified global token definition configurations are saved.

9. Click **Close** to return to the Manage tokens dialog.

Defining Custom Tokens

In addition to the Altiris DS 6.9 and Oracle Hardware Management Connector for Altiris Deployment Solution tokens, you can define custom tokens. Custom tokens have a token name and description.

▶ To add a custom token:

1. Click **Manage Tokens**.

   The list of token tasks opens.

2. Click **Define custom tokens**.

   The list of current custom tokens opens, showing the default custom tokens provided with Oracle Hardware Management Connector for Altiris Deployment Solution, as well as any custom tokens you have previously defined.

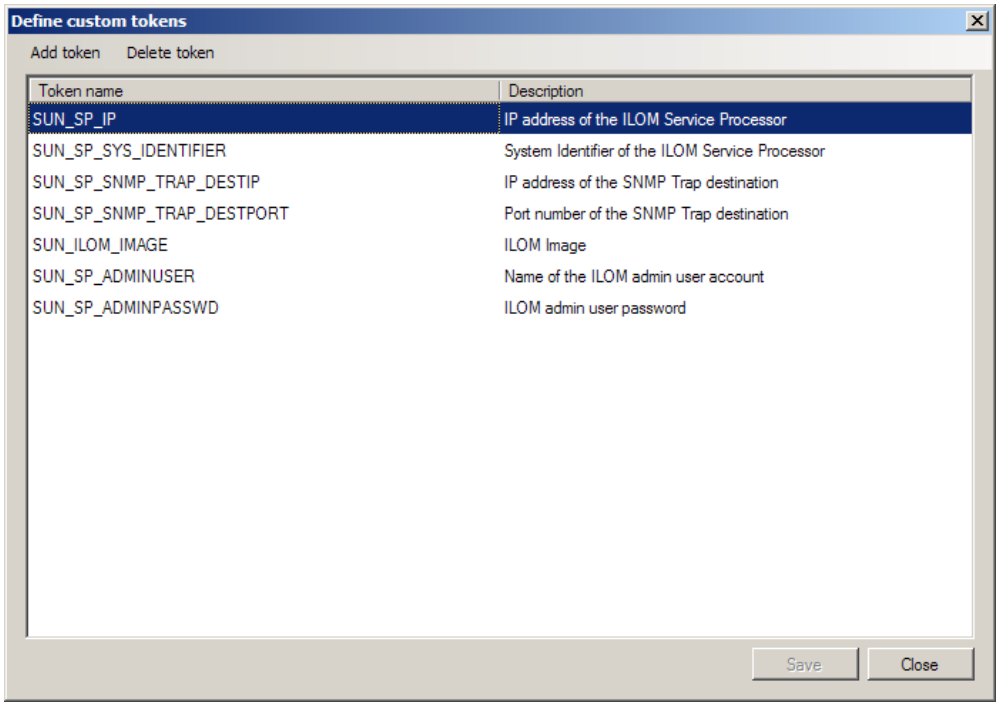

Figure 16: Define Custom Tokens Dialog

3. Click **Add token**.

   The Add token definition dialog opens.

4. Under Token name, type a name for your new token.

   The token name can contain only the following characters:

   a-z, A-Z, 0-9, _

5. From the **Type** drop-down menu, select the type of token to create. The types of token are:

   - String tokens are replaced with a string value defined per computer
   - System firmware/BIOS image tokens are replaced with an imported BIOS and firmware image
   - Configuration file tokens are replaced with a path and file name.

6. Under **Description**, type information about the token.

7. Click **OK** to add the new custom token.

   The token is shown in the list of tokens in the Define custom tokens dialog. You can add as many tokens as you require by repeating this process.

8. To finalize the creation of the new custom token, click **Save**.

   A confirmation dialog opens, if you are sure you want to save your changes to the custom tokens, click **Yes**.

The new custom token is now available for use within your jobs.

Any tokens in the list of tokens which you do not require any longer can optionally be deleted by clicking the token name in the list of custom tokens, then clicking **Delete token**.

CHAPTER 7

Managing BIOS and Firmware Images

Oracle Hardware Management Connector for Altiris Deployment Solution can upgrade a system's BIOS and service processor firmware during a deployment. Images can be distributed using either HTTP, FTP or TFTP protocols.

Importing System BIOS and Firmware Images

Before you can deploy a system BIOS and service processor firmware image package, you must download the appropriate file for your Sun x86 server.

Uncompress this file as necessary, it can be stored anywhere on your hard drive. Once you have the BIOS and service processor firmware image package you have to import it.

▶ To import BIOS and firmware images:

1. Click **Manage BIOS and Firmware Images**.

   The Manage System BIOS and Firmware Packages dialog opens.

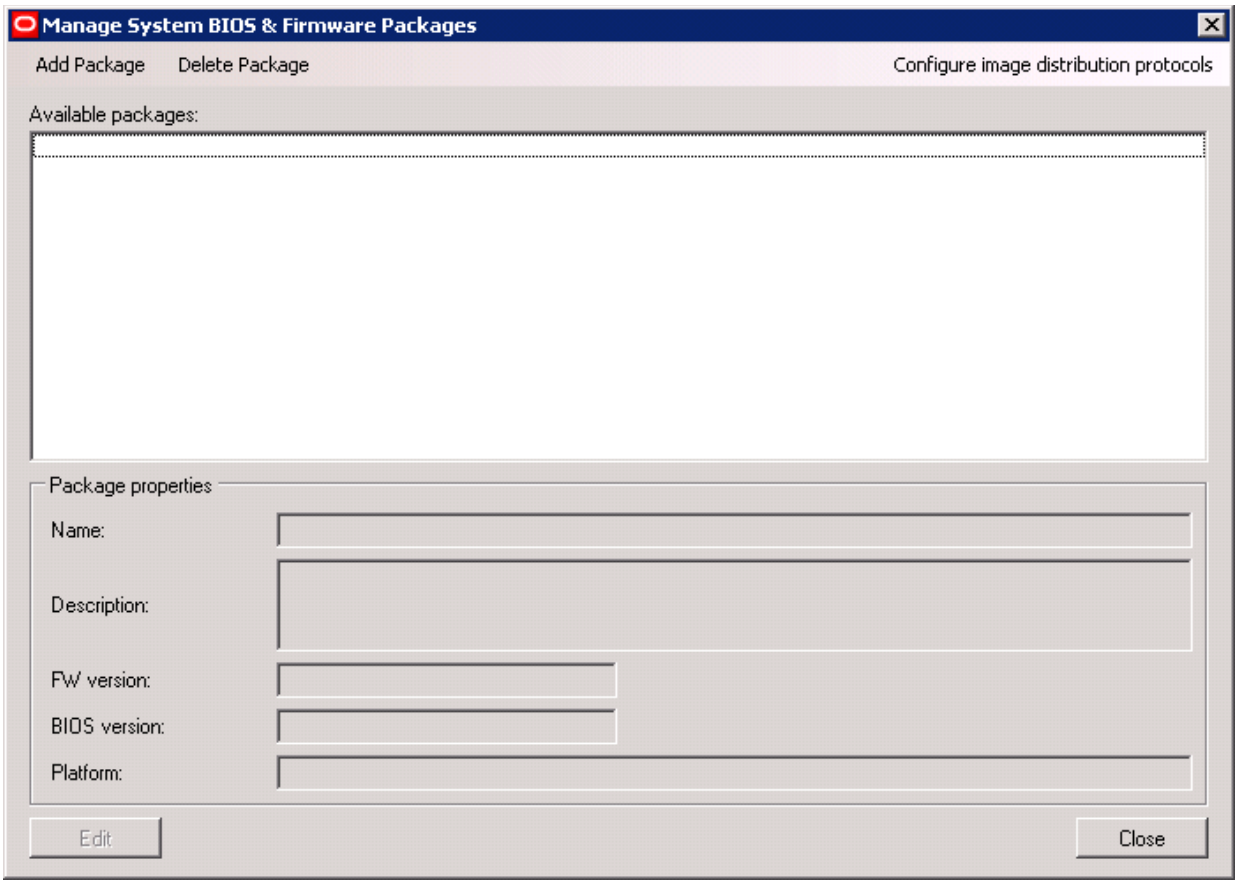

Figure 17: Manage System BIOS and Firmware Packages Dialog

The list of system BIOS and firmware image packages is listed under **Available packages**. The properties of the currently selected package are shown under **Package properties**.

2. Click **Add Package**.

   The Import System BIOS and Firmware Package dialog opens.

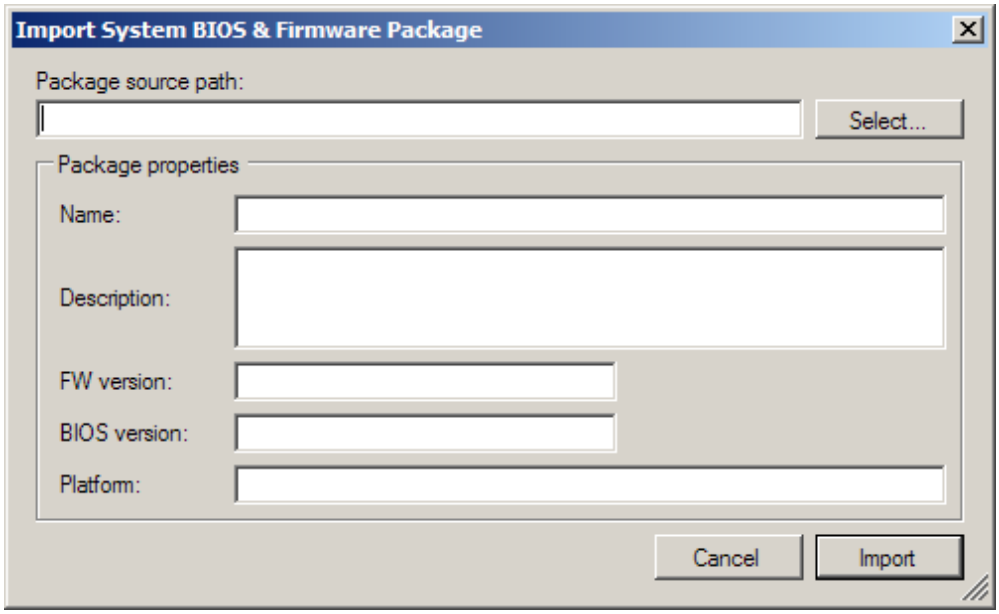

Figure 18: Import System BIOS and Firmware Package Dialog

3. Click **Select**. In the file browser that opens, navigate to the BIOS and service processor firmware image package you want to deploy. Click **Open**.

   The path to the selected BIOS and service processor firmware image package is shown under **Package source path**.

4. You must type at least a **Name** and either a **FW** (Firmware) or **BIOS** version.

5. Click **Import**.

   The BIOS and service processor firmware image package is imported and is ready to be deployed.

Editing a Package's Properties

An imported BIOS and service processor firmware image package's properties can be edited.

▶ To edit an imported BIOS and service processor firmware image package:

1. Within the Manage System BIOS and Firmware Packages dialog, under **Available packages**, click the name of the package you want to edit.

2. Click **Edit**.

   The Package properties of the currently selected package become active.

3. Modify the properties of the package as appropriate.

4. To make the modifications permanent, click **Save**.

You can remove a previously imported system BIOS and firmware image if it is no longer used.

▶ To remove a system BIOS and firmware image:

1. Within the Manage System BIOS and Firmware Packages dialog, under **Available packages**, click the name of the package you want to remove.
2. Click **Delete Package**.

   A confirmation dialog opens.
3. If you are sure you want to remove the selected package, click **Yes**.

   The system BIOS and firmware image is removed.

Configuring Image Distribution Protocols

During a deployment the BIOS and system firmware package images required by your Sun x86 servers have to made available over the network. Oracle Hardware Management Connector for Altiris Deployment Solution enables you to easily configure which network protocol to use for this process. The network protocols available for upgrade image distribution are:

- **HTTP** - you can use either the IIS HTTP web server or a custom HTTP server
- **FTP** - you can use either the IIS FTP web server or a custom FTP server
- **TFTP** - this protocol does not require any configuration

---

Note - some platforms do not support the HTTP or FTP protocols to perform system BIOS and firmware updates. Refer to your server's documentation to identify the supported protocols.

▶ To configure image distribution protocols:

1. Within the Manage System BIOS and Firmware Packages dialog, click **Configure image distribution protocols**.

   The Configure image distribution protocols dialog opens.

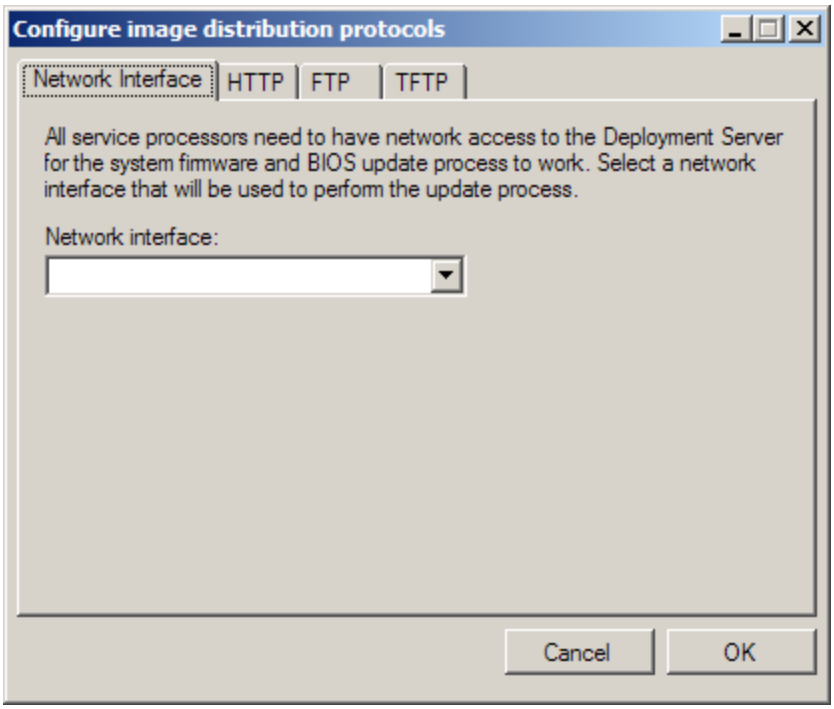

Figure 19: Configure Image Distribution Protocols Dialog

2. On the Network Interface tab, select a **Network interface** that should be used for distributing the BIOS and system firmware package images. The network interfaces are listed by IP address.
3. Click the tab of the protocol you want to use to distribute BIOS and system firmware package images.
4. Click Make images available via <*protocol*> on the tab.

   If you are using HTTP or FTP, choose one of these options:

   - To use the Microsoft IIS server, click **Use IIS**. Then **Select the web site to use** from the drop-down menu.

   Note - if the **Use IIS** option is disabled this means that IIS is not configured. If you want to use IIS, configure IIS and reopen the Configure image distribution protocols dialog.

   If IIS is installed but no web or FTP site is created, the drop-down menus are empty.

   - To use an alternative server, click **Use custom <protocol> server**. Optionally modify the **Location**, which enables you to change the URL where the images will be available.

Tip - the URL of the firmware images repository is shown at the bottom of the dialog box.

Optionally modify the **Port**, which enables you to use a non-standard HTTP or FTP port.

Note - when using a custom server, you need to expose the virtual directory specified under **URL where the images will be available**.

5. Optionally configure the other distribution protocols.
6. Click **OK** to close the Configure image distribution protocols dialog.

CHAPTER 8

Troubleshooting

This section provides tips and solutions for the most common problems you may encounter when installing and using Oracle Hardware Management Connector for Altiris Deployment Solution. In addition you can find the release notes for the current version.

Problems During Install

You must have Altiris DS 6.9 and the Altiris Administrator SDK 1.4.209 installed before you can install Oracle Hardware Management Connector for Altiris Deployment Solution. For more information, see Prerequisites.

ILOM Configuration Issues

During testing, issues were discovered with X4170, X4270 and X4275 servers when using ILOM 2.0. These issues were not present when these platforms were tested with ILOM 3.0. If you encounter issues with the configure ILOM task on these platforms, please upgrade to ILOM 3.0.

Deployment Jobs Do Not Finish On a FAT32 File System

If you choose FAT32 as the file system for the target disk of a Windows Server 2003 installation, the deployment job does not finish although the operating system is successfully installed. The end of deployment is detected when the Altiris client, which is installed on the target machine as part of the deployment job, connects back to the Deployment Server. Due to a known issue in the Altiris client service the client does not start and the end of deployment is not detected. To resolve this issue, use the NTFS file system for the system disk of the target machine. See also Altiris Knowledge Base Article 49740 at http://kb.altiris.com/

Deployment Jobs Do Not Control Boot Device

You may encounter problems when using the Boot device control task to set the first BIOS boot device to Network/PXE. On some machines with multiple network interfaces, setting the first BIOS boot device to Network/PXE will cause the machine to boot only from the first network interface upon next reboot. If your client machines connect to the deployment network using a network interface other than the network interface and you experience issues with setting the BIOS boot order using the Boot device control task, you can resolve the issue by manually setting the permanent BIOS boot device order on the client machines so that all the network interfaces are listed prior to any other boot device.

Checked Builds of Windows Do Not Import

You can not import checked builds of Windows as operating system media. Use retail or volume licensed operating system media only.

Deployment Jobs Fail Unexpectedly

When you are running a job with a Configure ILOM settings task, the job might fail unexpectedly. A work around is to try running the job again.