

Oracle® Enterprise Manager Ops Center

Keep Your Firmware Up-to-Date

12c Release 3 (12.3.0.0.0)

E60014-01

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This guide provides an end-to-end example for how to use Oracle Enterprise Manager Ops Center.

Introduction

This guide describes how to keep your firmware up-to-date in your data center.

Oracle Enterprise Manager Ops Center uses firmware profiles to provision, or update firmware on an asset. In this guide, you will be taken through the steps of how to download firmware images, run a firmware compliance report, and update the firmware in Oracle Enterprise Manager Ops Center.

Oracle Enterprise Manager Ops Center supports a wide variety of hardware resources. It supports the firmware update of components such as RAID Controllers, Expanders, Disks and PDUs. You can now manage the firmware for a variety of hardware resources in Oracle Enterprise Manager Ops Center.

What You Will Need

You need the following to update the firmware in your systems:

- Enterprise Controller installed and configured in connected mode.
- A local software library setup to download the latest firmware updates.
- Discover and manage the server hardware for which you need to update the firmware.
- If you are uploading the firmware image, then the firmware image and the firmware metadata.

You require the following roles to complete the procedures:

- **Profile and plan admin:** Create and manage the firmware profiles and plans.
- **Storage admin:** Setup the initial software library.
- **Update admin:** Update the firmware.

Updating Your Firmware

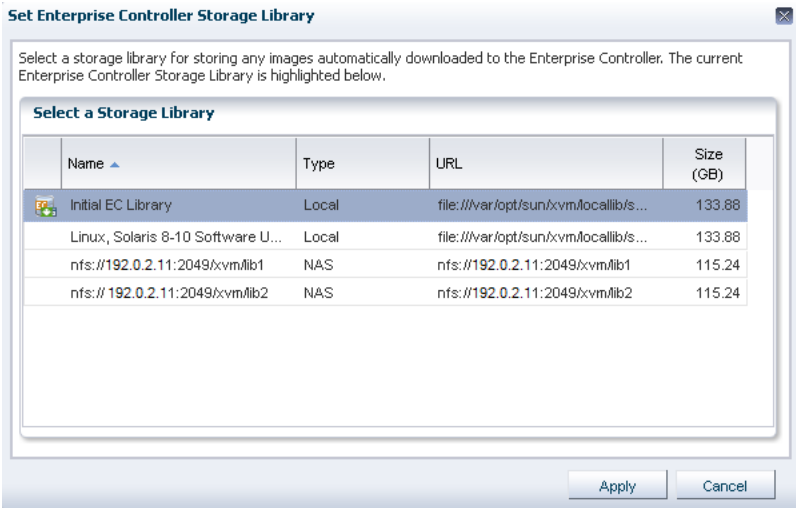
Complete the following tasks in this example to update the firmware using Oracle Enterprise Manager Ops Center:

- [Storage Library Setup and Downloading Firmware Images](#)

- [Uploading Firmware Images](#)
- [Run a Firmware Compliance Report](#)
- [Apply the Firmware Deployment Plan](#)

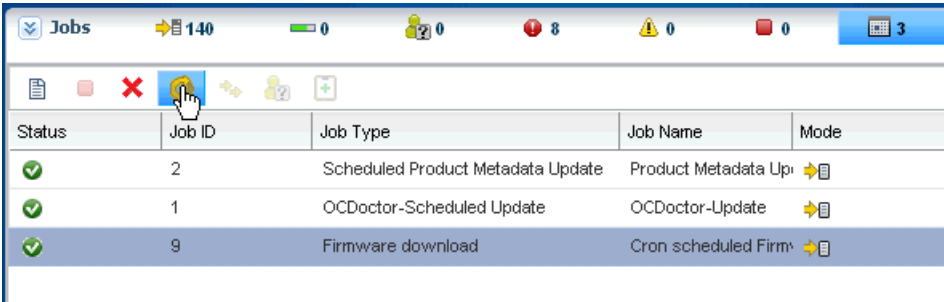
Storage Library Setup and Downloading Firmware Images

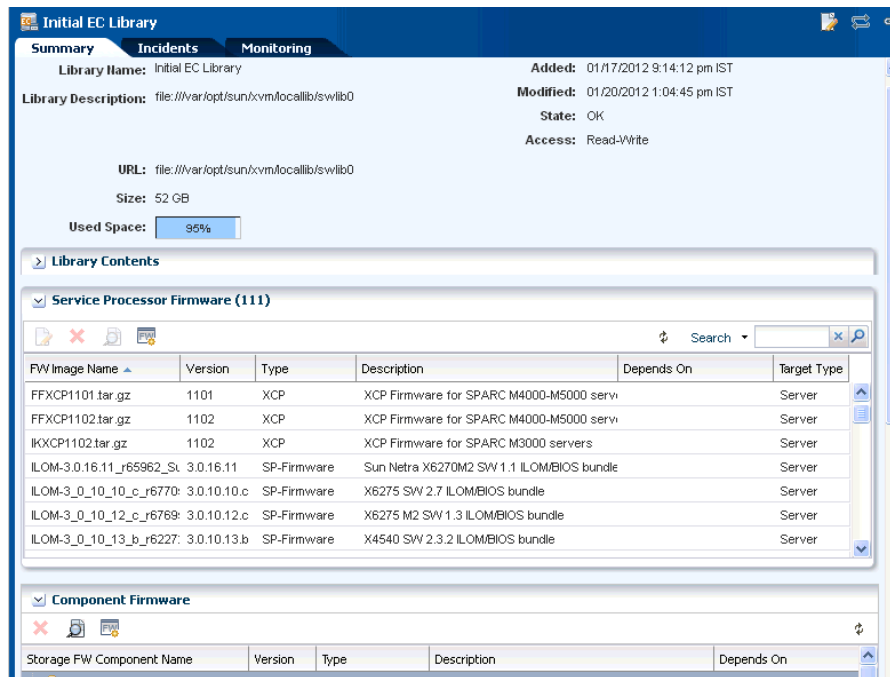
When you install and configure the Enterprise Controller, there is an Initial EC Library which is set as the default storage library to download the images from Knowledge Base.



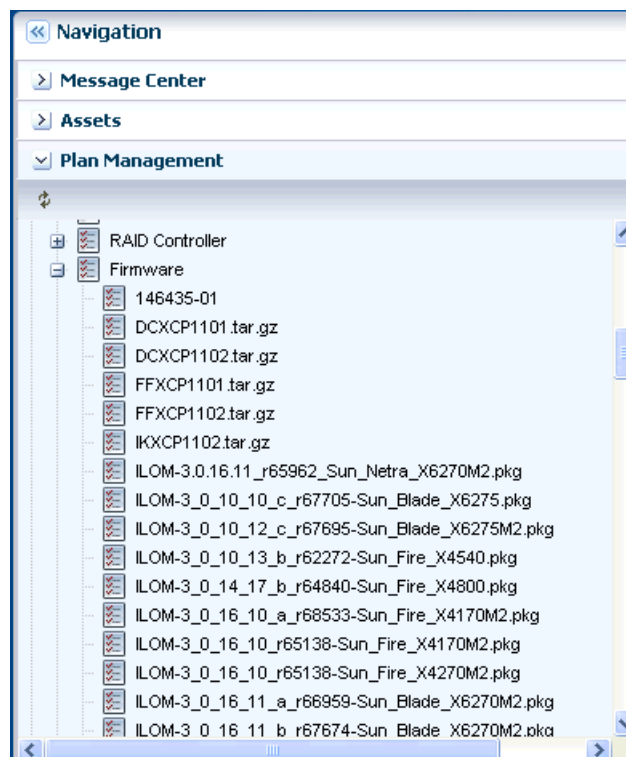
An automatic job is scheduled at run at 3.00 a.m daily to download the latest firmware images. The Enterprise Controller time is followed for the download schedule.

For the first time, the job takes around 1 to 2 hours to complete. Thereafter, only the latest released version of a firmware image are downloaded. You can view all the firmware images in the default library. You can also select the scheduled job and run the firmware image download job any time.





For every firmware image downloaded, a firmware profile and plan are created by default. You can view the default firmware profiles and plans in the Plan Management section.

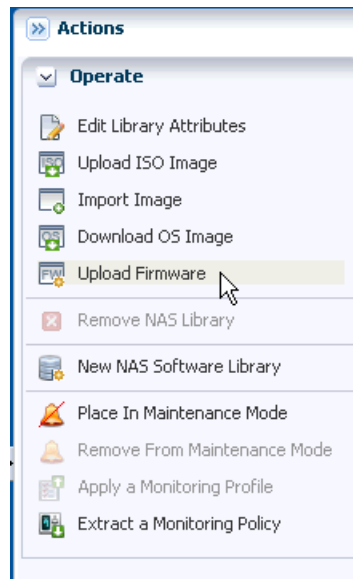


Select a server to find the latest firmware profiles available for it.

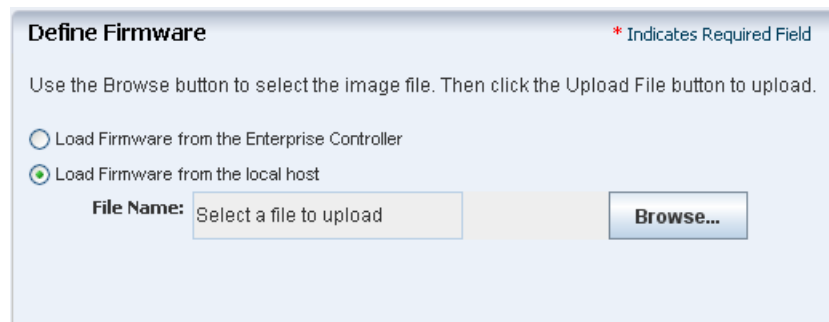
Uploading Firmware Images

You can also upload firmware images to the storage libraries. It is required that the firmware image to be uploaded has the metadata details or you have to provide the firmware image metadata details during upload. See *Oracle Enterprise Manager Ops Center Configure Reference* or more information about uploading firmware images.

1. Select a software library to which you want to upload the firmware image.
2. Click **Upload Firmware** in the Actions pane.



3. You can have the firmware file on the Enterprise Controller, or on the local host where you are running the UI. Select the firmware file from that location.

A screenshot of the 'Define Firmware' dialog box. The dialog has a title bar 'Define Firmware' and a subtitle '* Indicates Required Field'. Below the title bar, there is a text instruction: 'Use the Browse button to select the image file. Then click the Upload File button to upload.' There are two radio buttons: 'Load Firmware from the Enterprise Controller' and 'Load Firmware from the local host'. The 'Load Firmware from the local host' option is selected. Below the radio buttons, there is a 'File Name:' label, a text input field with the placeholder 'Select a file to upload', and a 'Browse...' button.

4. Select the file and click **Upload File**.

Define Firmware * Indicates Required Field

Use the Browse button to select the image file. Then click the Upload File button to upload.

☐ Load Firmware from the Enterprise Controller
☒ Load Firmware from the local host

File Name:

5. The selected image starts uploading. The upload progress status appears.

Define Firmware * Indicates Required Field

Firmware upload is in progress...

19%

6. If the uploaded firmware image has the firmware metadata details, then the details of the firmware image are taken from the metadata. If the image does not have metadata, then you must enter the details of the firmware.

Define Firmware * Indicates Required Field

You have uploaded a firmware with no metadata. Enter the firmware information manually.

* Firmware Name:

Description:

Target Type:
 ☒ Server
 ☐ Chassis
 ☐ Switch
 ☐ PDU

7. Enter the name of the firmware image and description.
8. Select the target hardware type to which the firmware image is applicable.

Click **Next**.

9. Depending on the selected target type, all the available platforms are listed. From the README file of the firmware image, you can view the list of supported platforms. Select the platforms and move to the **Supported Platforms** list.

Click **Next**.

Select Platforms

Select the platforms or models that the firmware image supports.

Available Platforms

- Sun Netra X6270 M2 server module
- Sun Netra X6270 Server Module
- Sun SPARC Enterprise T1000 Server
- Sun SPARC Enterprise T3120 Server
- Sun SPARC Enterprise T5220 Server
- Sun SPARC Enterprise T5440 Server
- T5440 2x6C 1.2GHz 32GB 2X146 SU
- T5440 2x8C 1.4GHz 32GB 2-146
- T5440 4x8C 1.2GHz 64GB 2X146 SU
- T5440 4x8C 1.4GHz 128GB 2-146
- T6300 1.2GHz 8core N1 & 16GB
- T6300 1.4GHz 8core N1 & 32GB
- T6300 1GHz 6core N1 & 4GB

*** Supported Platforms**

- Sun SPARC Enterprise T5140 Server
- Sun SPARC Enterprise T5240 Server

10. Specify the following information for the firmware:

- Specify the type and version of the firmware image. The version number of the firmware image must match the version number of the firmware image file. For example, the uploaded firmware image version is 7.2.11.
- If the firmware image is dependent on any other firmware image, then select those images from the list. In this example, it is not dependent on any other firmware image, therefore select **None**.
- If the firmware README file states that the server must be shutdown before updating the service processor, then select **Power Off**. You must shut down the server before you provision the firmware.
- If the server requires a reboot after updating the service processor, then select the option to reboot the system after the firmware update.

Specify Parameters * Indicates Required Field

Specify the parameters for the firmware image.

* **Firmware Type:** System-Firmware

* **Version:** 7.2.11

Depends On: None

☐ Requires Host Power Off

☐ Requires Host Reboot After Update

Click **Next**.

11. Review the summary of information provided for the firmware and click **Finish** to upload the firmware.

Summary

File URL: file:///var/tmp/139444-16.zip-4

Firmware Name: new_firmware_up_39444-16

Description:

Target Type: Server

Supported Platforms: Sun SPARC Enterprise T5140 Server,Sun SPARC Enterprise T5240 Server

Firmware Type: System-Firmware

Version: 7.2.11

Depends On: None

Requires Host Power Off: Yes

Requires Host Reboot After Update: No

The firmware image is uploaded onto the selected software library.

public_nfs1

Summary Incidents Monitoring

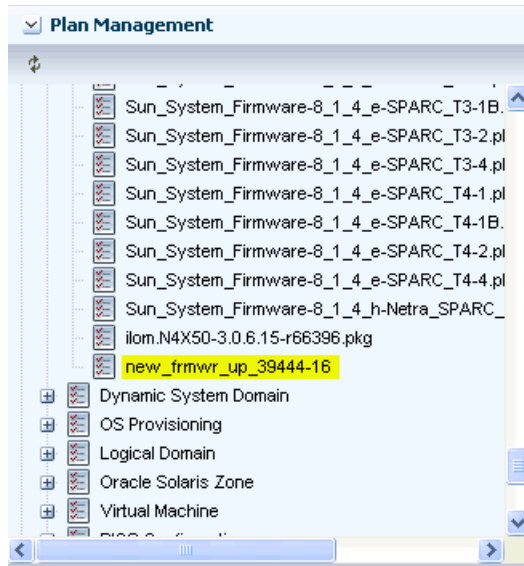
Service Processor Firmware (1)

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🔍 Search

Firmware Image Name	Version	Type	Description	Depends On	Target Type
new_firmware_up_39444	7.2.11	System-Firmware			Server

When you upload a firmware image, a default firmware profile and deployment plan is automatically created.



You can edit, copy or duplicate this firmware profile or the deployment plan, and apply the plan on one or many servers.

Run a Firmware Compliance Report

The advantage of running a firmware compliance report is to identify the condition of the firmware on a specific asset or group of assets.

Select on the targets for which you want to run the compliance report. If your servers are already grouped according to the server type, then select the group to run the report.

1. Select **Reports** from the Navigation pane.
2. Select **Firmware Reports** option in the Reports section.
3. Click **Create Firmware Report** in the Actions pane.
The Create Firmware Report wizard is displayed.
4. Define the following parameters for the report:
 - Name and Description for the report.
 - Select the firmware profile to which you want to compare the targets' firmware.
 - Select the option to view the report in CSV and PDF formats also.
 - Deselect the **Create Schedule** option to run the job immediately.

Click **Next** to select the targets.

- Select Targets

Available Items

Assets	Product Name	Description
All Assets		
Servers		
ocbrm-t5140-1	Sun SPARC Enterprise Server	
192.168.18.10	Virtual Hosts	LDomXVF
192.168.18.10	Solaris 10 Operating System	Operating System
FcGuest1	VirtualMachine	LDomVirtualMachine
192.168.18.33	Solaris 10 Operating System	Global Zone








Target List(2)

Assets
ocbrm-t5140-1
xvmbcm-t5140-2

Add to Target List

Remove from Target List

6. Review the report parameters and click **Run and Close**.

Report Results				
<div>     </div> <div> <div>Search</div> <input type="text"/> <div>   </div> </div>				
Owner	Status	Report Name	Description	Report Type Run Date
root		FirmComp	T5140 Servers	Firmware Compil 01/21/2012 10:00

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Oracle Enterprise Manager Ops Center - Report Details

Report Name: FirmComp
Run Date: 01/21/2012 10:00:19 pm IST
Description: T5140 Servers

Report Type: Firmware
Compliance Report
Status: Successful But Not Compliant

Report Result Report Parameters

Targets of the Report (2)

Host	Status
xvmlbrm-t5140-2	Not Compliant
ocbrm-t5140-1	Not Compliant

Firmware Updates Applicable to Selected Targets (1)

Host	Target	Model	Firmware Type	Current Version	Proposed Version	Required Firmware Packages	Status
xvmlbrm-t5140-2-s	Server	System-Firmware	7.2.7.d	7.4.2	Sun_System_Firm	Not Compliant	

Execute Job Rerun Report Close

Apply the Firmware Deployment Plan

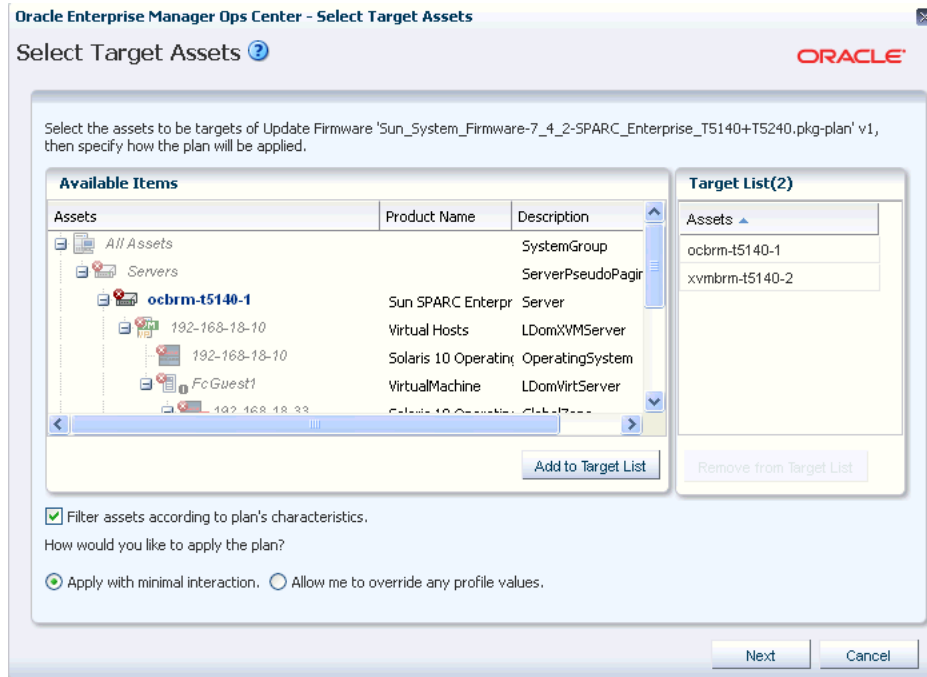
From the report result, you can view the servers that are compliant and not compliant with the selected firmware profile. You can update the firmware using one of the following methods:

- To update all the Not Compliant servers, click **Execute Job** in the report result window.
- To update only selected servers, apply the firmware deployment plan on selected targets.

The following procedure describes how to apply the firmware deployment plan on the selected servers:

1. Shut down the server gracefully. Most of the firmware update requires that the server is not in running state when updating the firmware. The firmware image contains the power off command which results in a hard shut down of the server.
2. To apply the firmware deployment plan on the selected targets, select the plan from the Plan Management section, and click **Apply Deployment Plan**.
3. Select the targets on which you want to apply the plan. Apply the plan with minimal interaction as you do not want to change any parameters of the plan and the profile.

If you are trying to install a firmware version lower than the existing version on the server, then you must edit the profile or apply the plan with the option to override the values. In the firmware profile, select the option **Force Downgrade** for a successful update firmware job.



4. Schedule to run the job now and click **Apply** to run the update firmware job on the selected targets.



Run the update firmware job and view the hardware summary for the updated firmware image details.

You can now obtain firmware images and use them to update your hardware assets in Oracle Enterprise Manager Ops Center. No matter on how many assets you want to provision firmware, a consistent firmware image provisioning is achieved using the firmware profiles and deployment plans.

What's Next?

You can provision operating system of your choice in the hardware. See the *Deploy Operating Systems Workflow* in the Deploy How To library at http://docs.oracle.com/cd/E59957_01/nav/deploy.htm

Related Articles and Resources

See the following for more information:

- [Configure Software Libraries](#) in *Oracle Enterprise Manager Configure Reference* for information about software libraries and images.
- [Hardware](#) in *Oracle Enterprise Manager Operate Reference* for information about managing and monitoring hardware assets.

For end-to-end examples, see the workflows and how to documentation in the library. For deployment tasks, go to http://docs.oracle.com/cd/E59957_01/nav/deploy.htm and for operate tasks go to http://docs.oracle.com/cd/E59957_01/nav/operate.htm.

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