Oracle® Enterprise Manager Ops Center

Managing the Configuration of a Virtual Machine

12*c* Release 1 (12.1.1.0.0)

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

Introduction

Oracle Enterprise Manager Ops Center provides operations for managing virtual machines. A virtual machine is created in a virtualization host, that is placed in a server pool. When you create a virtual machine, you define the required resources for it. After you create the virtual machine, you can manage the resources and add new resources.

This guide shows you how to manage the configuration of a hardware virtualized machine (HVM), created in an Oracle VM Server for x86 system that is placed in a server pool. The virtual machine configuration such as CPU threads and memory units can be modified, and storage and network resources can be added to it.

You can manage the configuration of a virtual machine dynamically, except for attaching networks, which requires the virtual machine to be in shutdown state. You must reboot the virtual machine after the dynamic configuration for the changes to be applied.

See Related Articles and Resources for links to related information and articles.

What You Will Need

In this example, you will need the following to manage a virtual machine configuration:

- A user with the Virtualization Admin role to perform all of the operations described in this example.
- A hardware virtualized machine in an Oracle VM Server for x86, and in shutdown state.
- An Oracle VM Storage Repository library to associate with the virtual machine.
- At least one available network to assign to the virtual machine. The network must be assigned the Virtual Machine role.
- At least two CPU threads, and 2048 MB of memory to assign to the virtual machine.

Managing Virtual Machine Configuration Actions

The following actions are available to manage the virtual machine configuration in Oracle Enterprise Manager Ops Center:

- Adding Storage
- Connecting a Virtual Machine to a Network
- Editing CPU and Memory Utilization
- Editing Boot Order

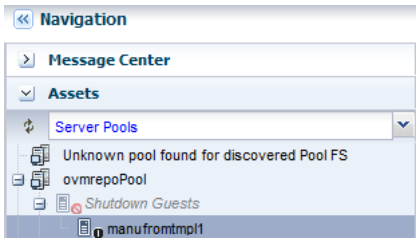
Adding Storage

Storage libraries provide the storage resources required for virtual machines. When you associate a storage library with a virtualization host, the library becomes available for the virtual machines running in that host. You can add storage from the libraries that are available to the virtual machine.

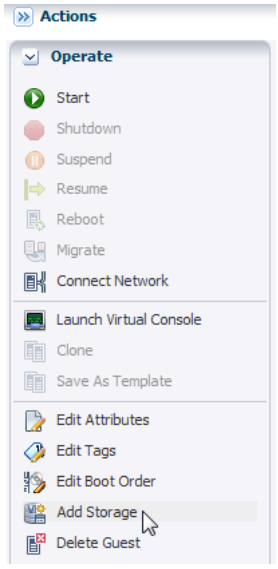
In this example, virtual disks from an Oracle VM Storage Repository are added to a virtual machine which is in shutdown state.

The following procedure details the steps required to add storage to a virtual machine:

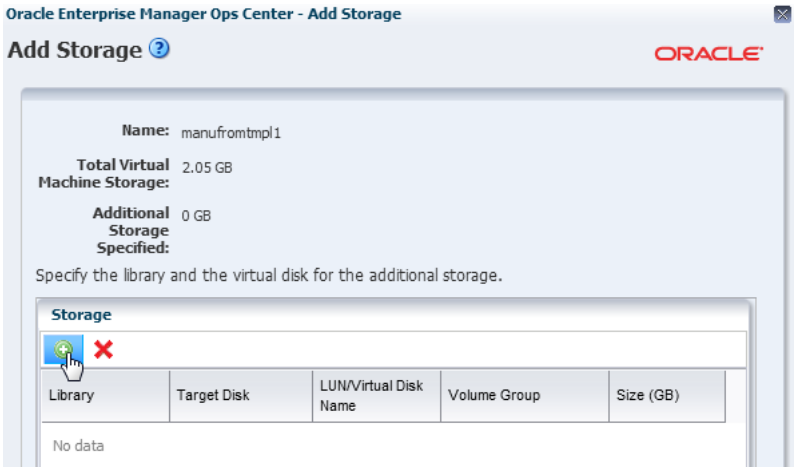
1. Select Server Pools from the Assets section in the Navigation pane.
2. Select the virtual machine that is in shutdown state.



3. Click Add Storage in the Actions pane.

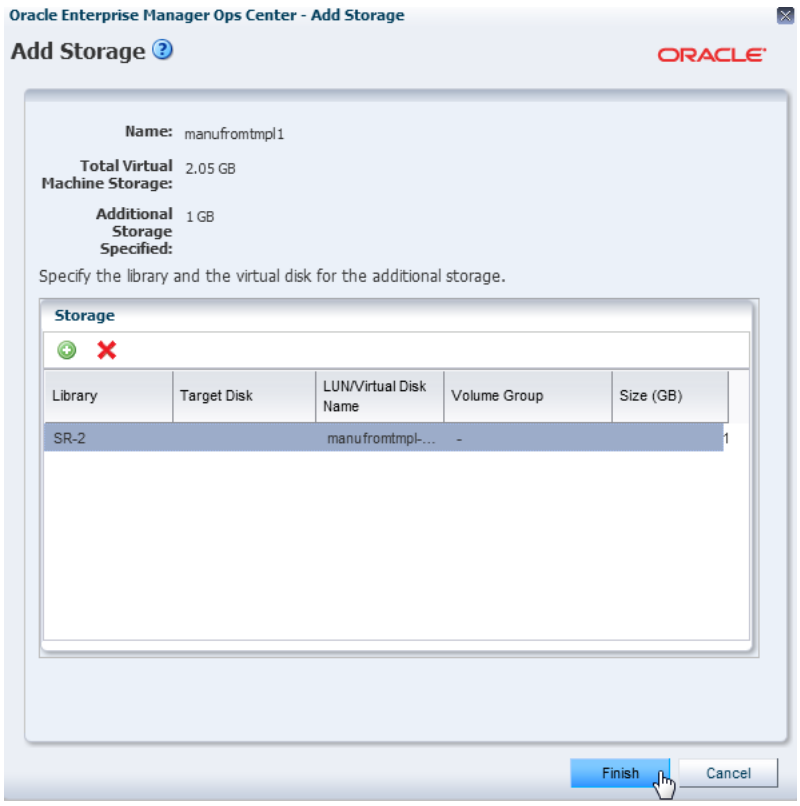


4. Click the Add icon to add storage.

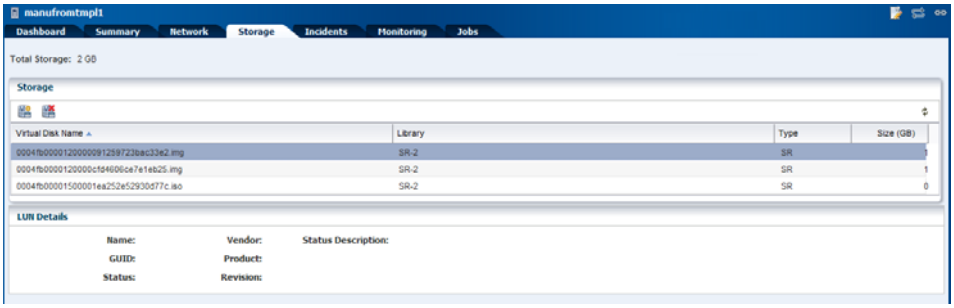


The storage libraries associated with the corresponding virtual machine are displayed in the Library list. The library can be an Oracle VM Storage Repository, Static Block Storage, or Dynamic Block Storage library.

5. Select the Oracle VM Storage Repository library from the list.
6. Enter a virtual disk name in the LUN/Virtual Disk Name field, and specify the size for the disk. The selection of virtual disks varies according to the library selected. Click Finish to add the specified storage to the virtual machine.



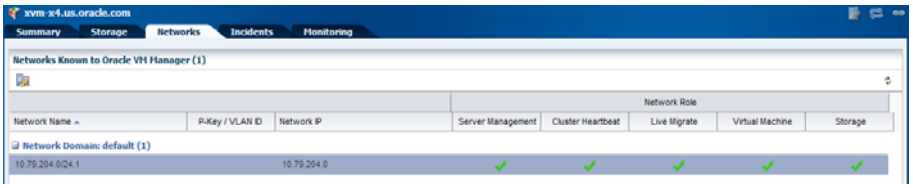
The specified storage is added to the virtual machine.



Connecting a Virtual Machine to a Network

A network enables virtual machines to communicate with each other or with the Internet. When a network is assigned to a server pool, the network is accessible from each virtualization host in the pool. You can connect a virtual machine to an accessible network assigned to a server pool.

The network assigned to the server pool must be assigned the Virtual Machine role, so that it can be used to connect to the virtual machine. To see the roles assigned to the networks attached to a server pool, select an Oracle VM Manager from the Administration section of the Navigation pane, and then select the Networks tab from the center pane:

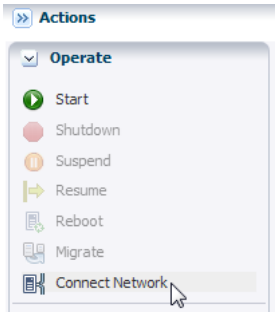


In this example, a virtual machine, in shutdown state, is connected to a network.

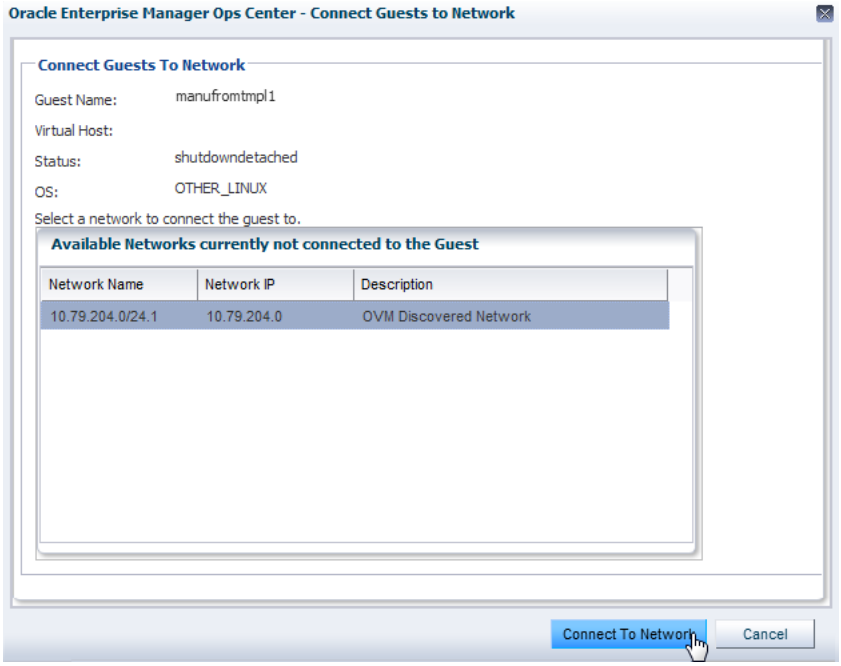
The following procedure describes the steps to connect a virtual machine to a network:

1. Select Server Pools from the Assets section in the Navigation pane.
2. Select the virtual machine that is in shutdown state.

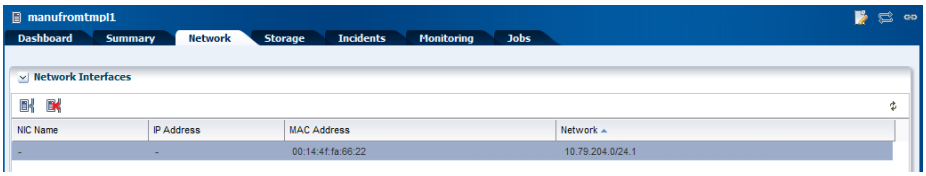
3. Click Connect Network in the Actions pane.



4. Only available networks that are not currently connected to the selected virtual machine appear in a table. Select the networks to which you want to connect the virtual machine, then click Connect To Network to finish.



The specified network is connected to the virtual machine.



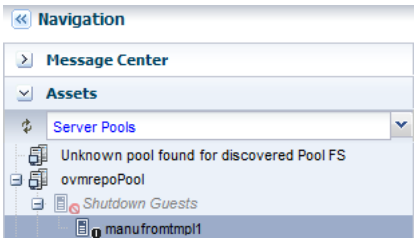
Editing CPU and Memory Utilization

The CPU allocation and memory are defined when you create a virtual machine. You can modify the virtual machine configuration and change the CPU or memory resources.

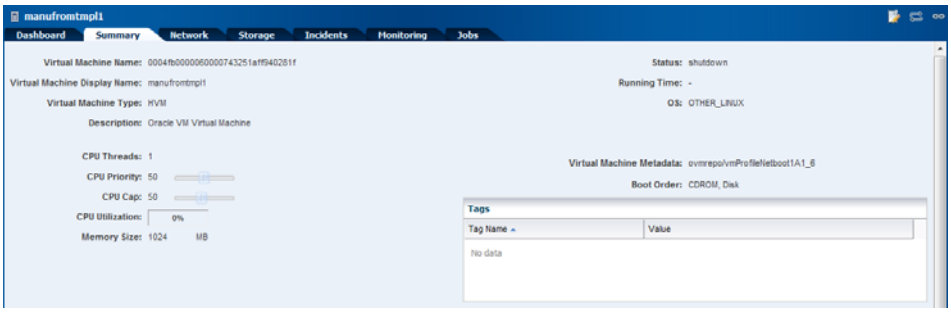
In this example, a virtual machine's CPU threads and memory allocation are modified.

The following procedure takes you through the steps to edit the CPU and memory utilization of a virtual machine:

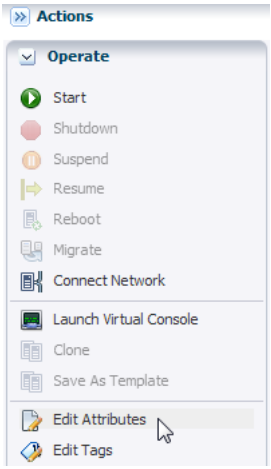
1. Select Server Pools from the Assets section in the Navigation pane.
2. Select the virtual machine that is in shutdown state.



3. Click the Summary tab to see the virtual machine's CPU and memory utilization.

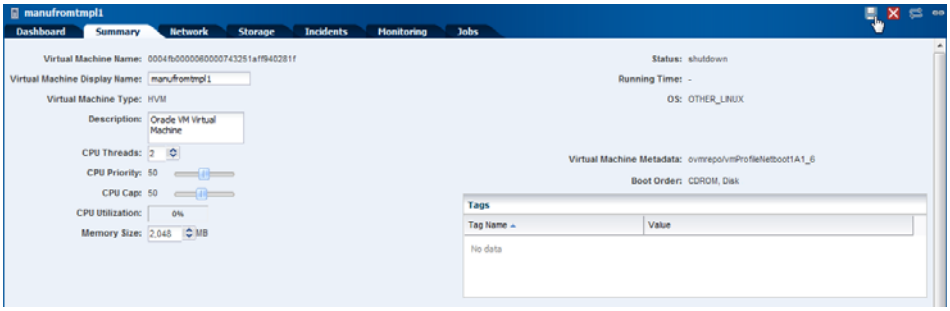


4. Click Edit Attributes in the Actions pane.

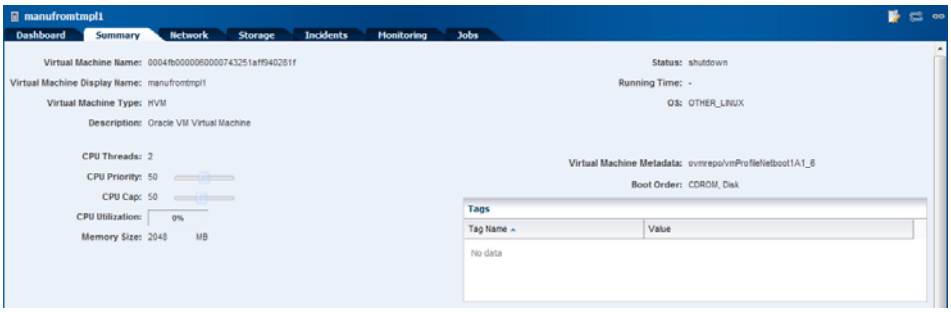


The information displayed in the Summary tab is now editable.

5. In this example, change the number of CPU threads from 1 to 2, and double the amount of memory that you want to assign to the virtual machine. Click Save to save changes.



The specified CPU and memory configuration is applied to the virtual machine.



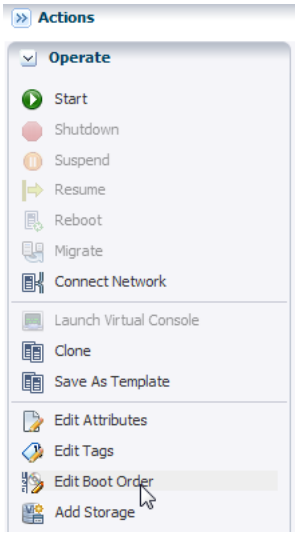
Editing Boot Order

Virtual machines have an option to edit the boot properties. The boot options are set according to the installation source. You can modify the order of the boot options in which you want to start the virtual machine. However, the supported boot order depends on the type of the virtual machine.

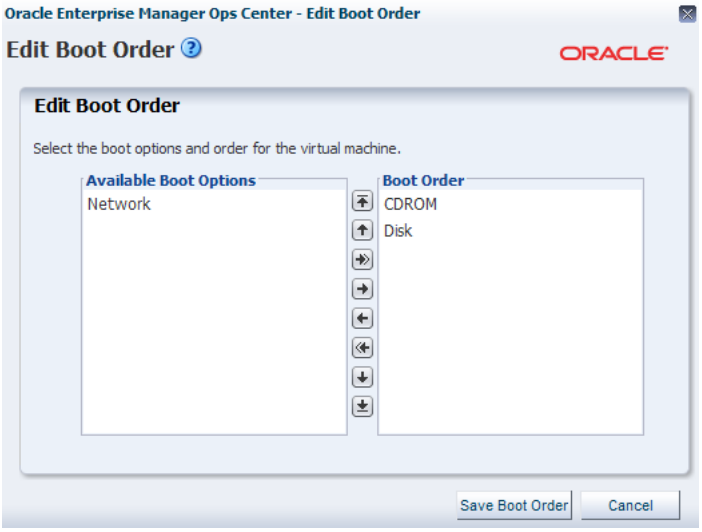
The following procedure describes the steps to edit the boot order in a virtual machine:

1. Select Server Pools from the Assets section in the Navigation pane.
2. Select the virtual machine that is in shutdown state.

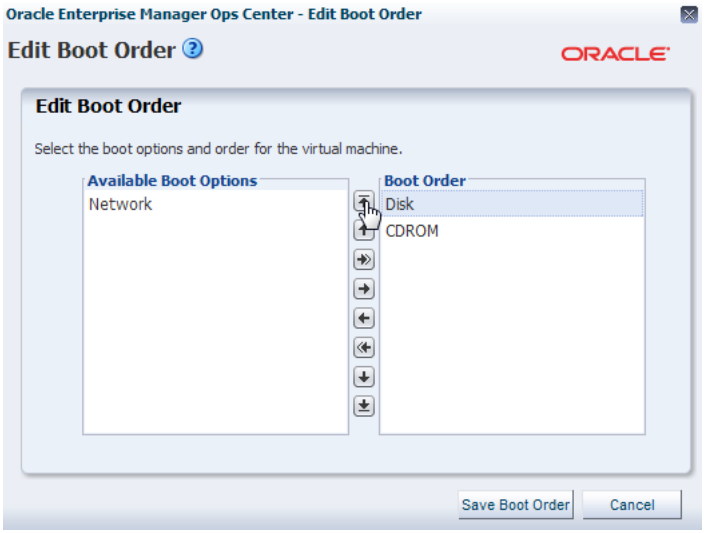
3. Click Edit Boot Order in the Actions pane.



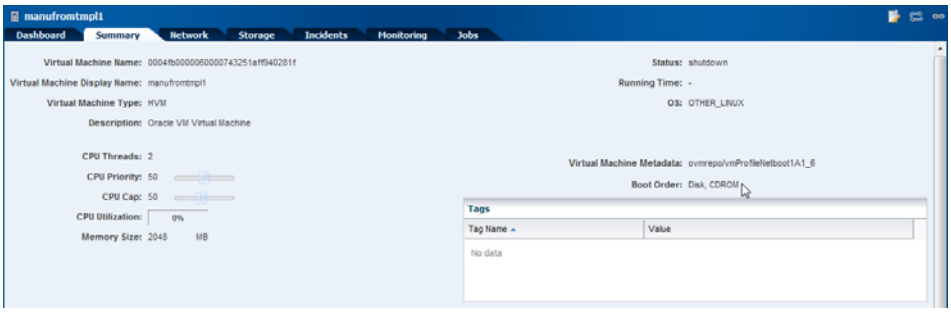
The Edit Boot Order wizard is displayed. The Available Boot Options appear on the left side of the window. The Boot Order for the Boot Options appears on the right side of the window.



4. Use the arrow keys to arrange the boot order, then click Save Boot Order. In this example, select Disk from the Boot Order list and use the top arrow to move it to the top of the Boot Order list.



The order of the boot options for the virtual machine is saved. You can verify that the changes in the boot order have been saved when you open the Summary tab in the center pane, and look for the current boot order:



What's Next?

After managing your virtual machines configuration, you can manage their life cycle with operations such as start, suspend, resume, or reboot. You can also migrate your virtual machines from one virtualization host to another virtualization host.

Related Articles and Resources

The following chapters in the *Oracle Enterprise Manager Ops Center Feature Reference Guide* contain more information about virtual machines and server pools:

- Oracle VM Server for x86
- Server Pools

Other examples are available at http://docs.oracle.com/cd/E27363_01/nav/howto.htm.

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