

Oracle® Enterprise Manager Ops Center

Lifecycle Management of Virtual Machines

12c Release 1 (12.1.2.0.0)

E35863-01

November 2012

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

Introduction

The integration of Oracle VM Server for x86 with Oracle Enterprise Manager Ops Center provides the platform to manage Oracle VM Manager, Oracle VM Servers, server pools, and virtual machines through Oracle Enterprise Manager Ops Center.

A virtual machine includes a configurable set of resources and its own operating system. The resources include virtual CPU, memory, network, and virtual disks. After virtual machines are created, you can start, stop, and restart each virtual machine independently.

This example shows you how you can perform a set of basic operations to manage the lifecycle of a virtual machine created in an Oracle VM Server for x86 server pool. In Oracle Enterprise Manager Ops Center, you can only create virtual machines on Oracle VM Servers that are placed in a server pool.

The operations described in this example will enable you to perform configuration management actions to a virtual machine, such as adding storage, modifying CPU and memory allocation, or connecting networks among other actions.

See [Related Articles and Resources](#) for links to related information and articles.

What You Will Need

You will need the following to manage the lifecycle of your virtual machines:

- A user with the Virtualization Admin role.
- A running virtual machine created in an Oracle VM Server for x86 server pool.

Hardware and Software Configuration

In this example, a virtual machine with the following characteristics is used:

- Virtualization type is hardware virtualized machine (HVM)
- A Linux distribution as the operating system
- A memory size of 1024 MB
- A virtual disk using an Oracle VM Storage repository
- CPU thread is 1, capped to 50

- Network interface is connected to a network

Lifecycle Management of Virtual Machines

In this example, you use the Oracle Enterprise Manager Ops Center user interface (UI) to perform actions to manage the lifecycle of a virtual machine. These actions are described in the following sections:

- [Identifying the Status of a Virtual Machine](#) - This section describes the available status for a virtual machine, and how to verify its current status.
- [Basic Virtual Machine Operations](#) - This section describes how to reboot, shut down, start, suspend, resume, launch the virtual console, and delete a virtual machine.

In this example, you use the virtual machine *dsl1* created in an Oracle VM Server for x86 server pool named *OVMServerPool*.





Identifying the Status of a Virtual Machine

In the Oracle Enterprise Manager Ops Center UI, you can see a virtual machine in one of the following status:

- **Running** – In this status, the virtual machine is powered on, and the OS and applications are running.
- **Shutdown/detached** – In this status, the virtual machine is disconnected from its networks, disassociated from the Oracle VM Server control domain, and all the associated resources are released.
- **Suspended** – In this status, the current state of the operating system, and applications is saved. The operating system and applications are moved to a suspended mode. The Oracle VM Server resources used by the virtual machine are not released.
- **Unreachable** – In this status, the virtual machine cannot be contacted for information. This status indicates a network problem or a problem with the virtual domain or the Oracle VM Server.

You can verify the status of a virtual machine directly in the Navigation pane, or in the Dashboard page of the virtual machine.

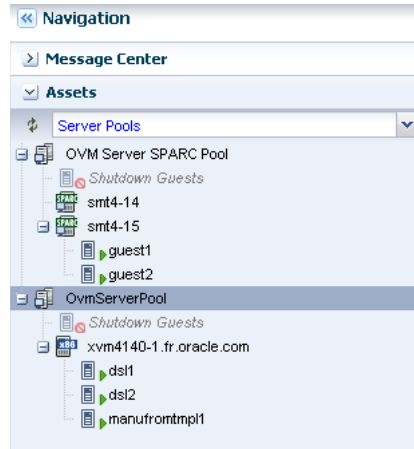
In the Navigation pane, one of the following icons is placed next to the virtual machine to show its current status:

Icon	Status
	Running
	Shutdown/detached
	Suspended
	Unreachable

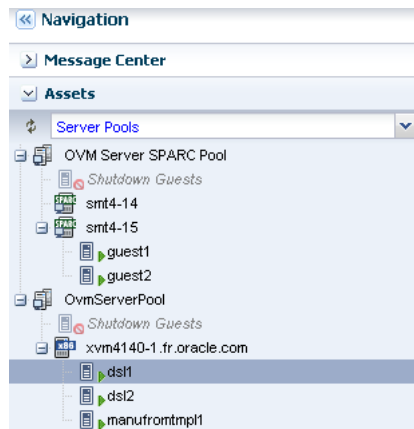
In the Dashboard page of the virtual machine, you can verify its current status along with other information such as operating system, tags, running time, or incidents.

To verify the status of a virtual machine in the Dashboard page:

1. Expand Assets in the Navigation pane, then select Server Pools from the list.

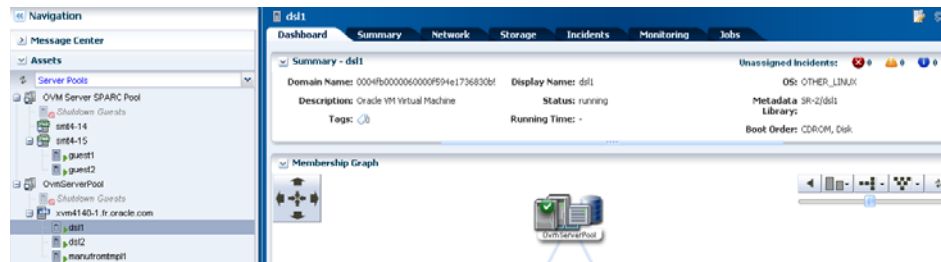


2. Select the virtual machine under the *OVMServerPool* server pool in the Navigation pane.



3. Verify that the status of the virtual machine is running.

The status is part of the information displayed in the Dashboard page of the virtual machine.



Basic Virtual Machine Operations

This section covers the following operations:

- [Rebooting a Virtual Machine](#)
- [Shutting Down a Virtual Machine](#)
- [Starting a Virtual Machine](#)

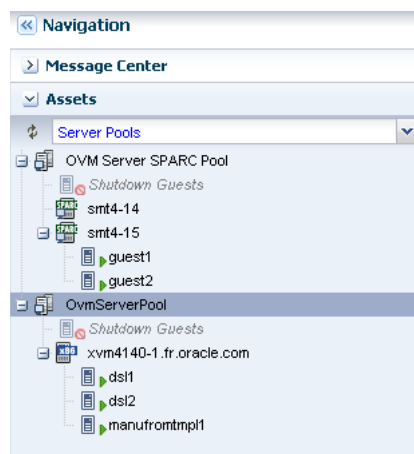
- [Suspending a Virtual Machine](#)
- [Resuming a Suspended Virtual Machine](#)
- [Launching the Virtual Console](#)
- [Deleting a Virtual Machine](#)

Rebooting a Virtual Machine

You can reboot a running or suspended virtual machine according to your needs. You might want to perform a reboot after a system configuration change or on any particular need for your applications.

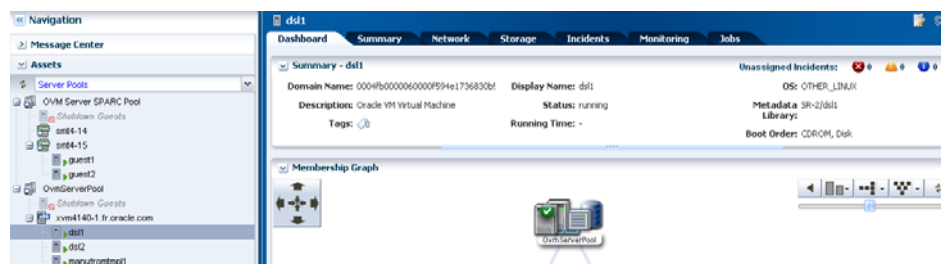
In this example, you reboot a running virtual machine. As part of the reboot process, the virtual machine is shut down and then restarted.

1. Expand Assets in the Navigation pane, then select Server Pools from the list.

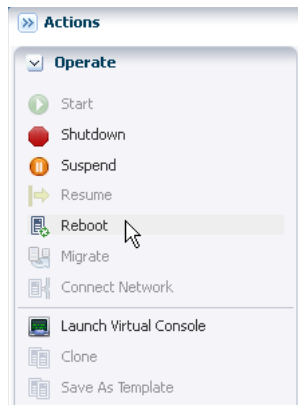


2. Select the virtual machine listed under the *OVMServerPool* server pool in the Navigation pane.

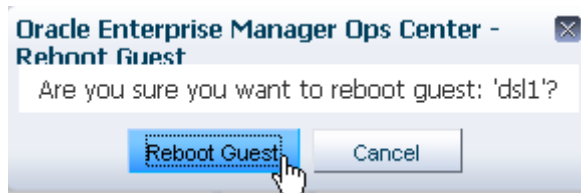
You can verify that the status of the virtual machine is running.



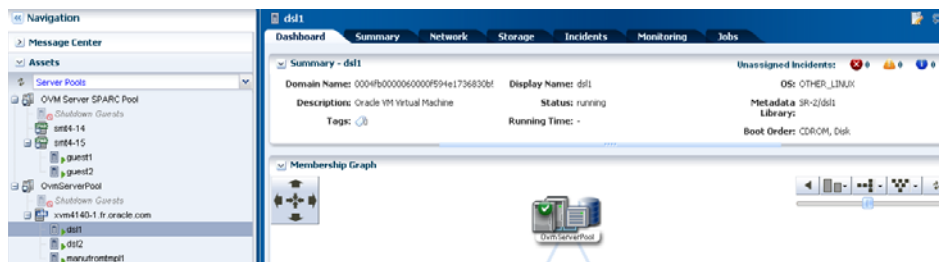
3. Click Reboot in the Actions pane.



4. Click Reboot Guest to confirm. A job is created to reboot the guest.



5. Verify that the status of the virtual machine is changed back to running after the job completes.



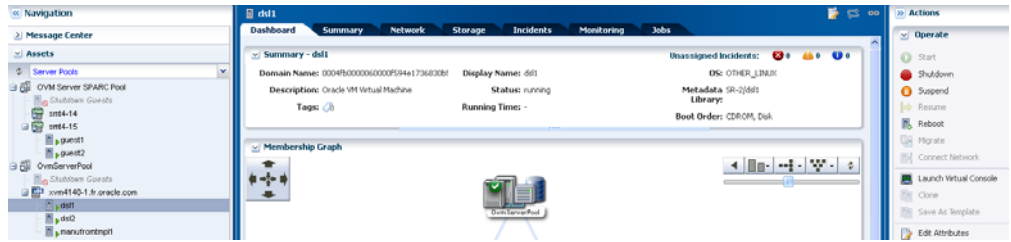
Shutting Down a Virtual Machine

You can shut down a running virtual machine to perform a configuration change such as connecting a network, or to move the virtual machine to a different Oracle VM Server or server pool. When shutting down a virtual machine its status is changed to shutdown/detached and resources are released from the Oracle VM Server.

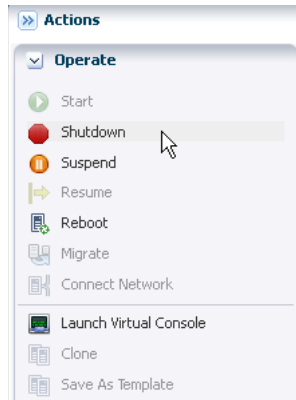
In this example, you shut down a running virtual machine. Some actions, such as Connect Network, are only enabled in the UI for a virtual machine in shutdown/detached status.

1. Select the virtual machine listed under the *OVMServerPool* server pool in the Navigation pane.

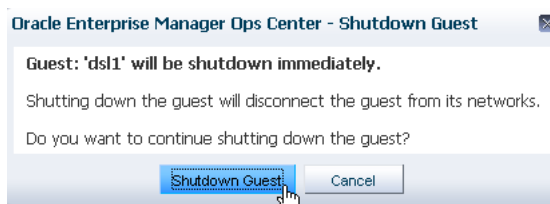
You can verify that the status of the virtual machine is running. Also note that the Connect Network action is disabled in the Actions pane.



2. Click Shutdown in the Actions pane.

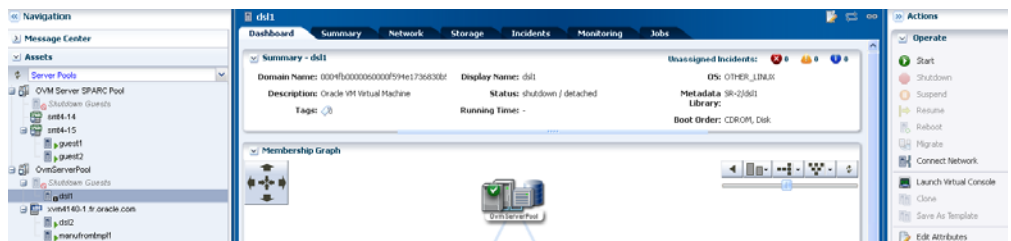


3. Click Shutdown Guest to confirm.



4. Verify that the status of the virtual machine is changed to shutdown/detached after the job completes.

After the job finishes, the virtual machine is listed under Shutdown Guests of the server pool and the Connect Network action is enabled in the Actions pane.

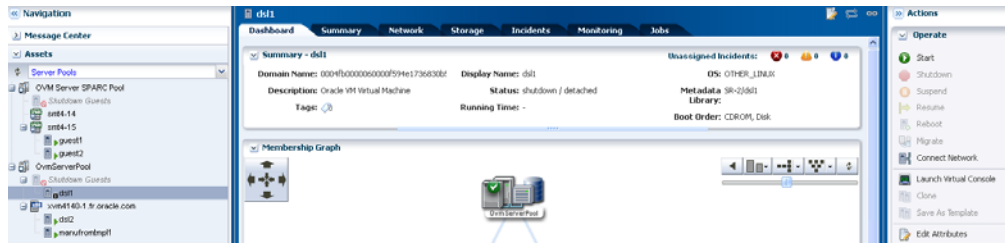


Starting a Virtual Machine

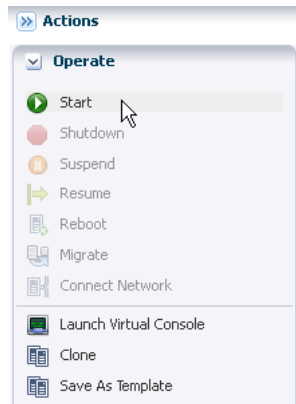
You can start a virtual machine in shutdown/detached status. When starting a virtual machine you can select the server pool and the Oracle VM Server on which to run the virtual machine.

In this example, you start a virtual machine in the same server pool, *OVMServerPool*.

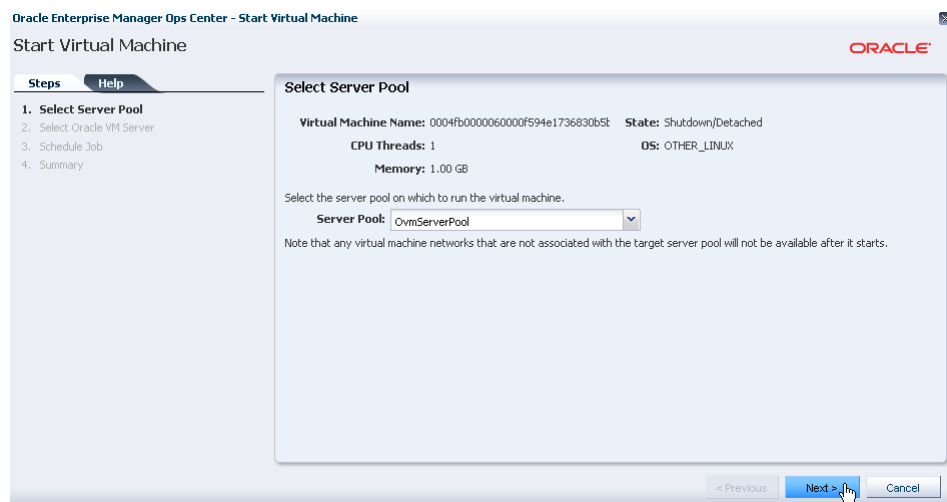
1. Select the virtual machine listed under Shutdown Guests from the server pool in the Navigation pane.



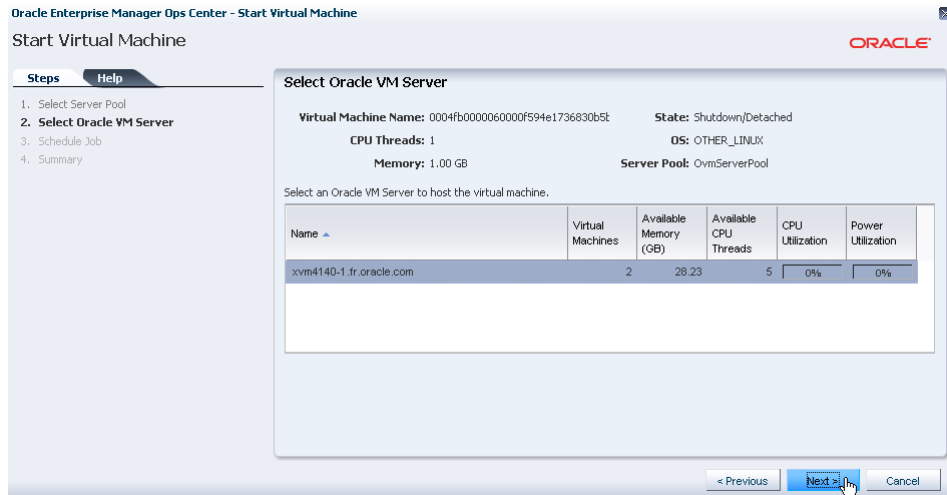
2. Click Start in the Actions pane.



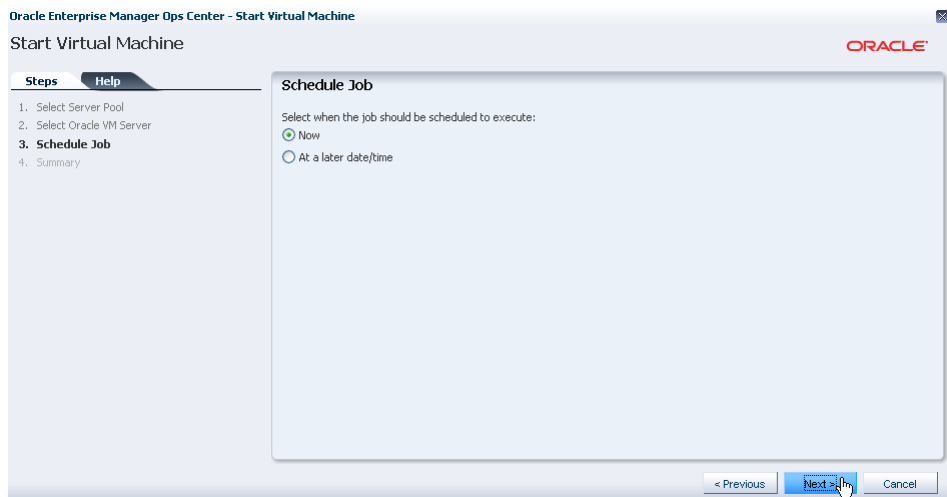
3. Select the server pool on which to run the virtual machine, then click Next.



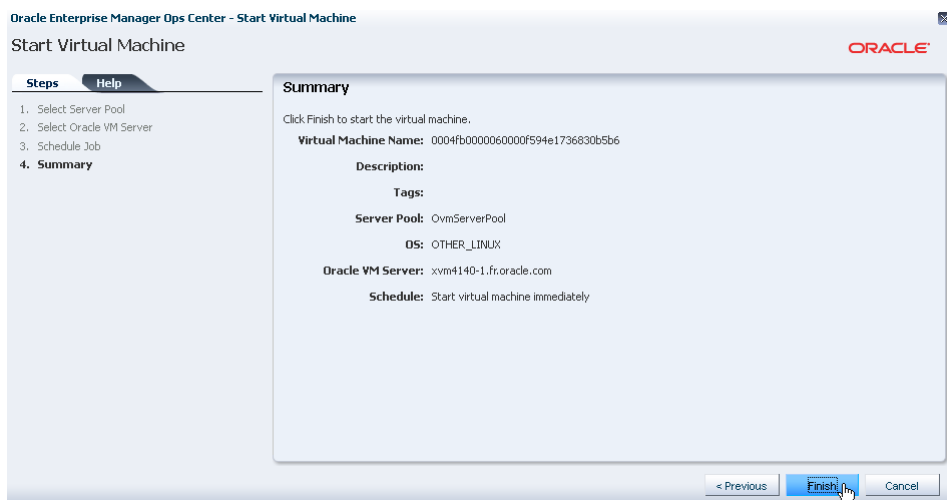
4. Select the Oracle VM Server to host the virtual machine, then click Next.



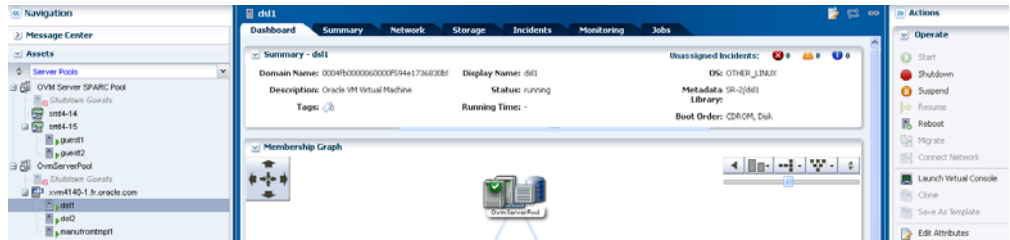
5. Select Now to start the virtual machine immediately, then click Next.



6. Confirm the information in the Summary, then click Finish.



7. Verify that the status of the virtual machine changes to running after the job completes.

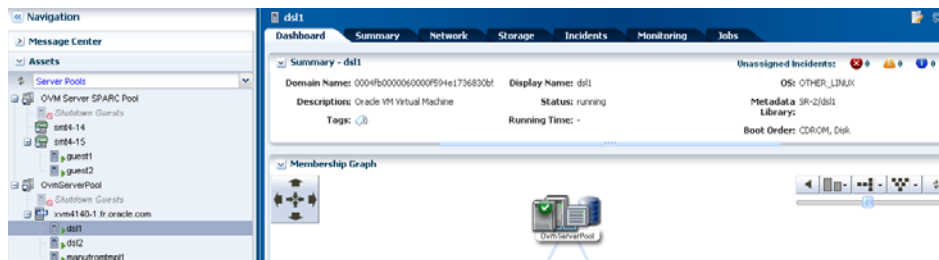


Suspending a Virtual Machine

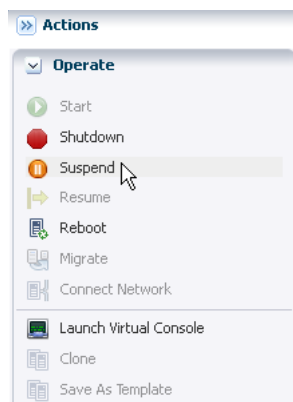
You can suspend a running virtual machine to stop it temporarily. Suspending a virtual machine saves the state of the virtual machine at a certain processing point so you can resume it quickly.

In this example, the Oracle VM Server resources used by the virtual machine are not released when the virtual machine is stopped.

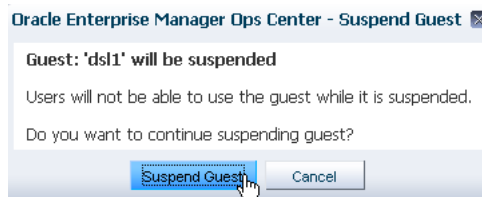
1. Select the virtual machine listed under the *OVMServerPool* server pool in the Navigation pane.



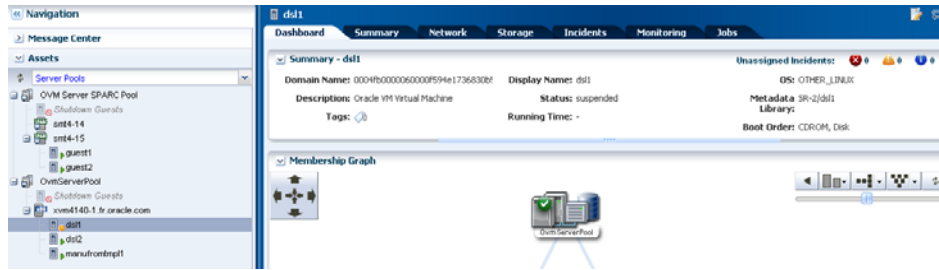
2. Click Suspend in the Actions pane.



3. Click Suspend Guest to confirm.



4. Verify that the status of the virtual machine is changed to suspended after the job completes.

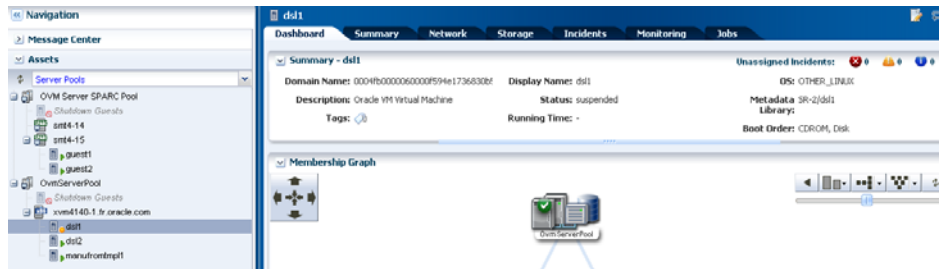


Resuming a Suspended Virtual Machine

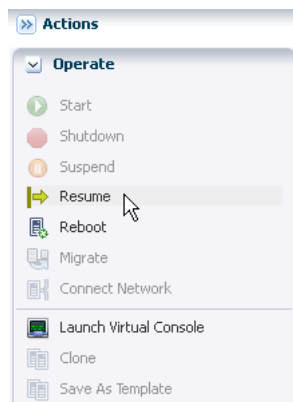
You can resume a virtual machine in suspended status to continue using it. The operating system and applications continue from the same point when you suspended the virtual machine.

1. Select the virtual machine listed under the *OVMServerPool* server pool in the Navigation pane.

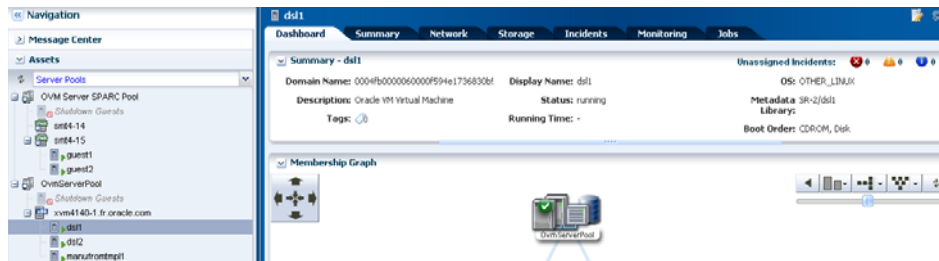
You can verify that the status of the virtual machine is suspended.



2. Click Resume in the Actions pane.



3. Verify that the status of the virtual machine changes to running after the job completes.



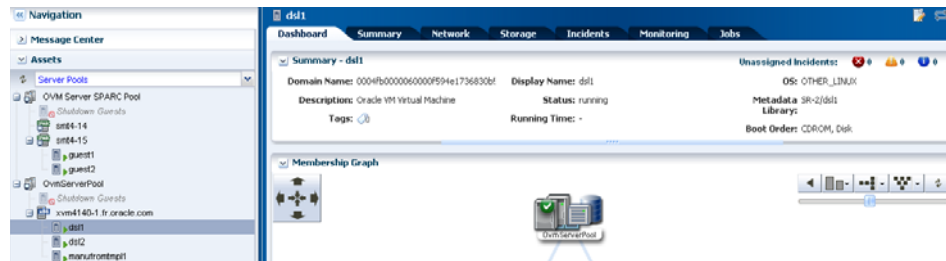
Launching the Virtual Console

You can use the Launch Virtual Console action to connect to a virtual machine in running status.

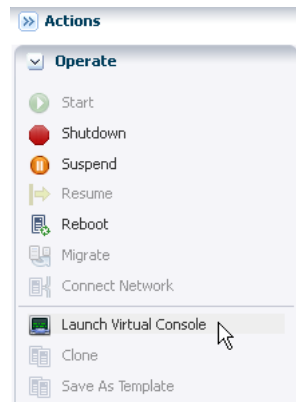
This example opens the console to access a running virtual machine using a Linux distribution.

1. Select the virtual machine listed under the *OVMServerPool* server pool in the Navigation pane.

You can verify that the status of the virtual machine is running.

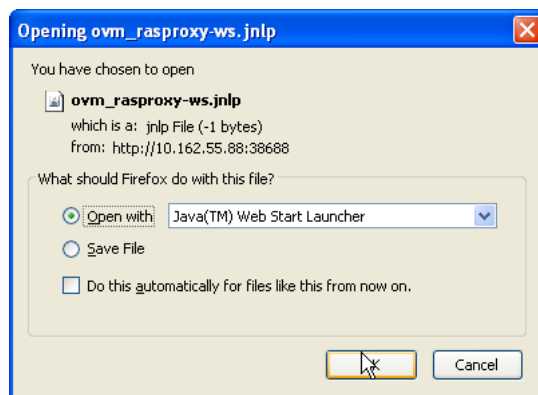


2. Click Launch Virtual Console in the Actions pane.

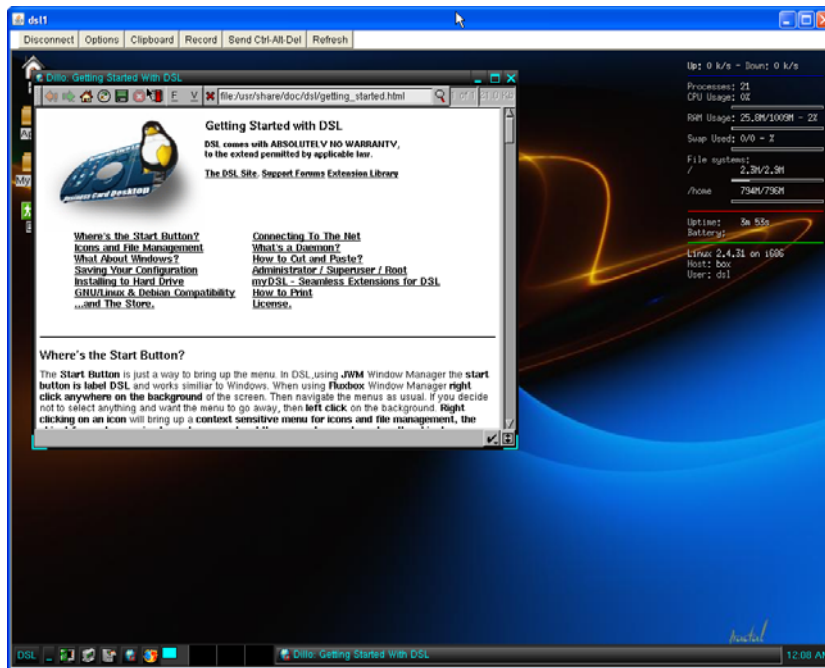


3. Click OK in the window requesting to open a Java proxy file.

Depending on the web browser you are using, you might receive a request to save the file first instead of just opening it.



4. Verify the console opens after the job completes.

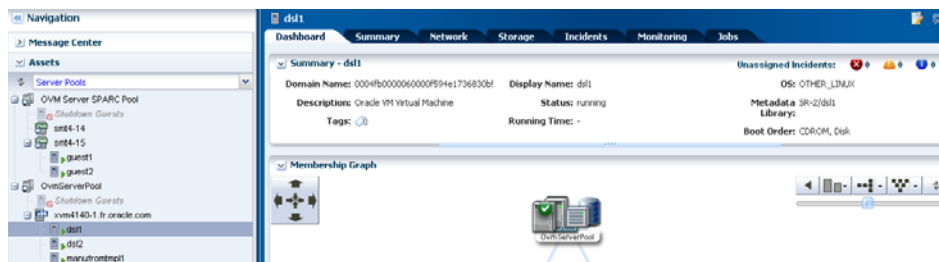


Deleting a Virtual Machine

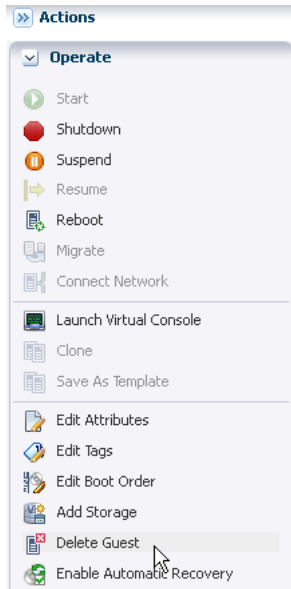
When you delete a virtual machine, all the files and data associated with the virtual machine are removed from Oracle VM Manager.

In this example, you delete a virtual machine in running status that is no longer needed. As part of the deletion process the virtual machine is changed to a shutdown/detached status first, then deleted from the Oracle VM Manager.

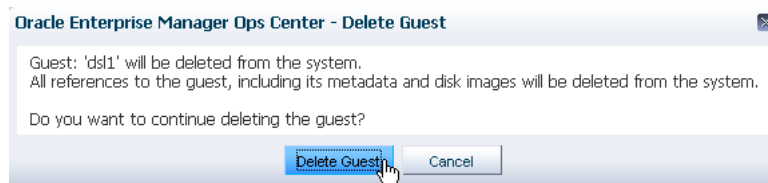
1. Select the virtual machine listed under the *OVMServerPool* server pool in the Navigation pane.



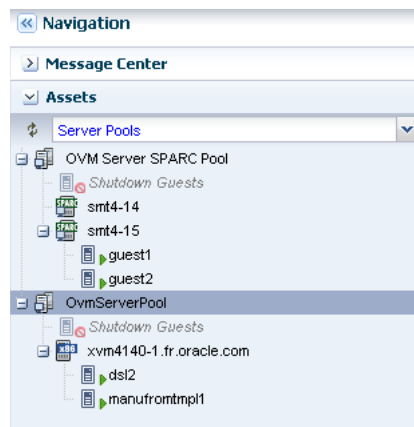
2. Click Delete in the Actions pane.



3. Click Delete Guest to confirm.



4. Verify that the virtual machine is no longer listed under the *OVMServerPool* server pool in the Navigation pane after the job completes.



What's Next?

You can perform virtual machine configuration actions, such as add storage, modify CPU and memory allocation, or connect networks.

Related Articles and Resources

See the following documentation resources for more information about how to manage virtual machines:

- Managing the Configuration of a Virtual Machine
- Migrating Virtual Machines

Other examples are available at

http://docs.oracle.com/cd/E27363_01/nav/howto.htm.

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

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