Oracle® Enterprise Manager Ops Center

Creating Server Pool for Oracle VM Server for x86

12*c* Release 1 (12.1.1.0.0)

E27352-01

June 2012

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

Introduction to Server Pools

Oracle Enterprise Manager Ops Center provides the facility to pool your like resources for maximum efficiency and performance. A server pool is a group of one or more homogenous virtualization servers that have access to the same storage and network resources. A server pool provides load balancing and high availability capabilities for all the members of the pool.

The integration of Oracle VM Server for x86 with Oracle Enterprise Manager Ops Center provides the capability to manage Oracle VM Servers and Oracle VM Manager through Oracle Enterprise Manager Ops Center UI.

You can pool the Oracle VM Servers that are provisioned or discovered through Oracle Enterprise Manager Ops Center. You can interchangeably use the Oracle VM Manager and Oracle Enterprise Manager Ops Center UI to manage the Oracle VM Servers, server pools, and virtual machines.

This example describes how to create a server pool for Oracle VM Server for x86 in Oracle Enterprise Manager Ops Center.

See Related Articles and Resources for more information about Oracle VM Server for x86.

What You Will Need

You will need the following in this example to create a server pool for Oracle VM Server for x86 in Oracle Enterprise Manager Ops Center:

- An Oracle VM Manager discovered and managed in the UI.

- Two Oracle VM Servers that are discovered and managed as part of Oracle VM Manager discovery.

- The Oracle VM Servers are owned by the Oracle VM Manager.

- Oracle VM Storage repositories discovered as part of Oracle VM Manager discovery.

- Networks that are accessible by Oracle VM Servers and to be attached to the server pool.

ORACLE®

- A virtual IP address in the management network of the Oracle VM Manager. This IP address is assigned to the Oracle VM Server that is elected as the Server Pool Master.

- An NFS file server from the Oracle VM Storage Repository to store the cluster heartbeat and other cluster information.
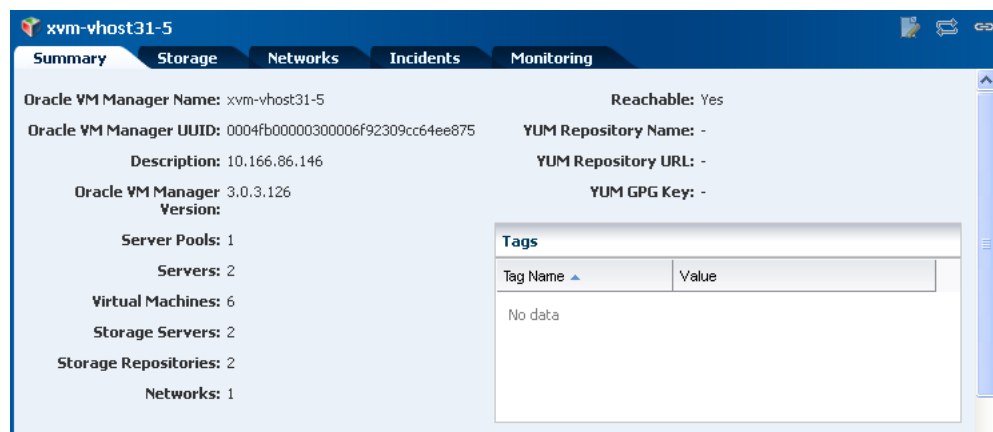
Discovered Oracle VM Manager and Oracle VM Server

The Oracle VM Manager discovered and managed in Oracle Enterprise Manager Ops Center is displayed in the Administration section:
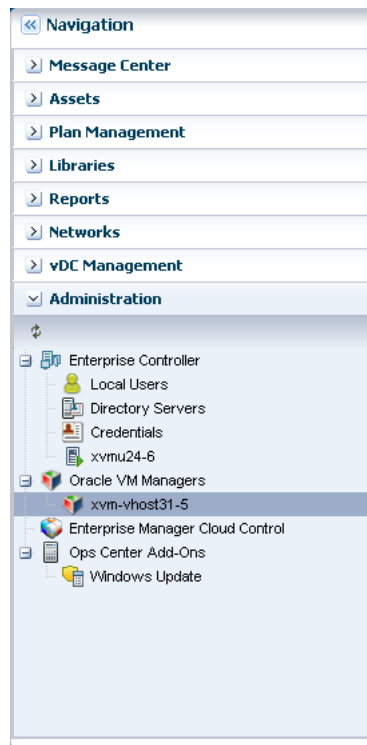

When you discover Oracle VM Manager, the Oracle VM Servers and storage resources that are present are also discovered and displayed in the Oracle Enterprise Manager Ops Center UI.

The other information about the Oracle VM Manager appears the center pane:

The Oracle VM Servers that are discovered and managed as part of the Oracle VM Manager discovery are displayed in the Assets section as shown in the figure:
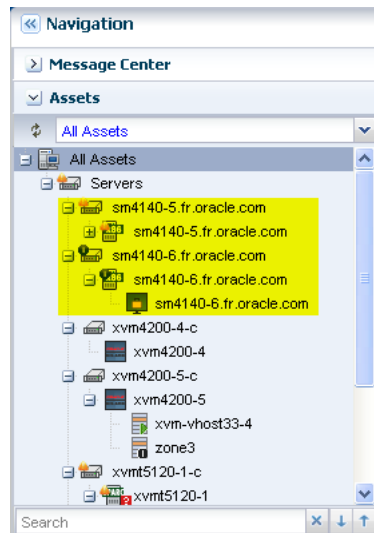
Oracle VM Server Ownership

In a server pool, you can add only the Oracle VM Servers that are owned by the Oracle VM Manager. You must assign ownership of the Oracle VM Servers to the corresponding Oracle VM Manager. Refer to *Oracle Enterprise Manager Ops Center Feature Reference Guide* to assign or take ownership of the Oracle VM Servers.
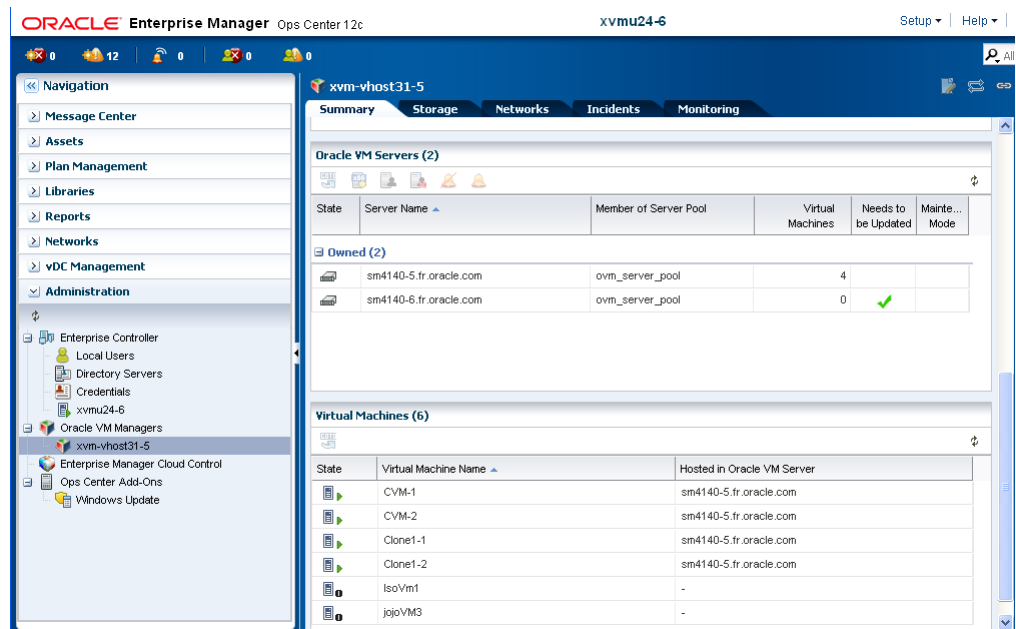
You can see the Oracle VM Servers that are owned by the Oracle VM Manager. Only these Oracle VM Servers will be available to be added to the server pool.

Creating a Server Pool for Oracle VM Server for x86

The following procedure describes the steps to create a server pool for Oracle VM Server for x86:

1. Select Server Pools in the Resource Management View under the Assets section.

2. Click Create Server Pool in the Actions pane.

   The Create Server Pool wizard is displayed.

3. Enter the following details in the server pool identification:

   ■ A name and description for the server pool.

   ■ In this example, do not enter tags.

   ■ Select Oracle VM Server - x86 in the list of Virtualization Technology.

   Click Next to continue.

4. Define the pool configuration:

   ■ Select the Oracle VM Manager.

   ■ Select default network domain from the list.

   ■ Select the management network of the Oracle VM Manager.

   ■ Enter the virtual
     IP address that will be assigned to the internally elected Server Pool Master.

   ■ Select NFS as the Repository type.

   ■ Select the NFS file server and a file system from the list.

     The NFS file system is required to store the cluster heartbeat and other cluster information. Oracle VM formats the server pool file system as OCFS2 file system.

   Click Next to select the members of the server pool.

Define x86 Pool Configuration   * Indicates Required Field

    * Oracle VM Manager: xvm-vhost31-5
    * Management Network: default   —   10.166.88.0/24.1
    * Virtual IP: 10.166.88.142

Cluster File System

    Repository Type: ● NFS   ○ OCFS
    NFS File Server: zs7120-1

Select a File System

    Search ▾

Name	Path	Size (GB)	Free Size (GB)
nfs:/export/oclibs/installFest...	zs7120-1:/export/oclibs/inst...	2596	2593
nfs:/export/oclibs/installFest...	zs7120-1:/export/oclibs/inst...	2593	2593
nfs:/export/oclibs/installFest...	zs7120-1:/export/oclibs/inst...	2595	2593
nfs:/export/oclibs/jmazzill/ar...	zs7120-1:/export/oclibs/jma...	2611	2593

5. The Oracle VM Servers that are owned by the Oracle VM Manager are displayed. Select the two Oracle VM Servers from the list.

Click Next to associate the network domain with the server pool.

Select Members

Select one or more assets to add to the server pool.

Note - Select assets that are compatible with each other to allow migration of guests within the server pool.

    Search ▾

Member Name ▲	CPU Architecture
sm4140-5.fr.oracle.com	
sm4140-6.fr.oracle.com	

6. In this example, there are no user-defined networks. Select the default network domain.

Click Next to continue.

Associate Network Domain

Select the network domain to associate with the server pool. Select the physical interfaces for each asset used to connect to each fabric in the network domain.

Network Domain: | |

default

7. Select the networks to be associated with the server pool.

   The number of connection for each selected network is limited to one for an Oracle VM Server. You cannot make multiple connections to a network.

   Click Next to configure the interfaces.

Associate Networks

Select the networks to associate with all of the servers in the server pool.

Network Domain: default

Network Name	P-Key / VLAN ID	Current Connections	Total Connections
10.166.88.0/24.1	-	0	1

8. In this example, the selected network in the previous step is already connected to the members of the server pool. The interfaces of Oracle VM Server are already configured for the selected network.

   Click Next to associate the storage libraries.

Configure Interfaces

Specify the configuration settings for each network connection. If no rows are displayed in the table below, the selected network connections have already been correctly configured.

Server Pool Name: ovm_server_pool

Specify Configuration Settings for each Network Connection

Hostname ▲	Network	NIC	Address Allocation Method	IP Address
No data				

9. Select the Oracle VM Storage Repository from the list of accessible storage libraries to associate with the server pool.

    You can associate storage libraries such as Oracle VM Storage Repository, Static, and Dynamic Storage library with the server pool. Click Next to set the server pool policies.

Associate Libraries

The storage libraries that are reachable from all the selected virtualization hosts are listed. Select the storage libraries to associate with the server pool.

Search ▾ [   ] ✕ 🔍

Library Type	Library Name ▲	Description
Dynamic Storage	Dynamic Library (zs7120-1-iSCSI)	Dynamic Storage Library of zs7120-1-iSCSI ...
SAN Storage	OVM SAN Static Library (10.166...	SAN Static Library for OVM unmanaged LUNs
SAN Storage	OVM iSCSI Static Library (10.16...	iSCSI Static Library for OVM unmanaged LUNs
Storage Repository	SR-1	
Storage Repository	SR-3	

10. Set the following policies for the server pool:

    ▪ Placement Policy – Select the option to place the virtual machines on Oracle VM Server with lowest relative load. Set the CPU utilization threshold to 75% for 10 minutes.

    ▪ Auto Balancing Policy – Select the option to not to balance the server pool automatically.

Specify Policies

Placement Policy: ⦿ Place virtual machine on Oracle VM Server with lowest relative load

○ Place virtual machine on Oracle VM Server minimizing overall power consumption

A Server is over-utilized when the following values are exceeded:
CPU Utilization exceeds: [75] % for: [10] minutes

Auto-Balancing Policy: ⦿ Do not auto-balance the server pool

○ Balance Virtual Machines load according to selected policy

11. Review the information and click Finish to create the server pool.

Summary

Server Pool Name: ovm_server_pool

Description: This is Oracle VM Server for x86 server pool.

Virtualization Technology: Oracle VM Server - x86

Network Domain: default

Oracle VM Manager

Name	Management Network	Virtual IP	Storage Server	Cluster File System
xvm-vhost31-5	10.166.88.0/24.1	10.166.88.142	zs7120-1	zs7120-1:/export/oclibs /installFest_ldoms

Members

Member Name	Description
sm4140-5.fr.oracle.com	Oracle VM Server for x86
sm4140-6.fr.oracle.com	Oracle VM Server for x86

Fabric Interfaces

Fabric	Hostname	Physical Interface	Bond ID	Bond Member

Networks

Network Name	P-Key / VLAN ID	Current Connections	Total Connections
10.166.88.0/24.1	-1	0	1

Network Interfaces

The new server pool appears in the Server Pools list:
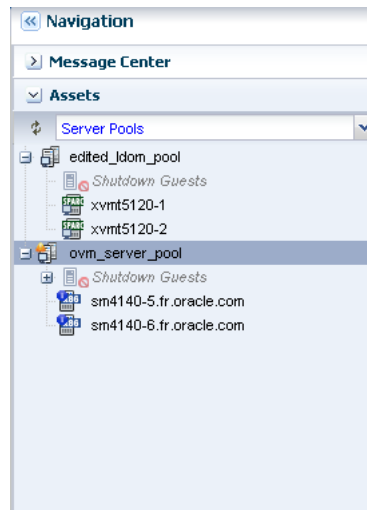
You can see that the two Oracle VM Servers added to the server pool. You can start creating virtual machines using Create Virtual Machines option in the Actions pane. After adding the Oracle VM Server to a server pool, you can create virtual machines.

What's Next

You can manage the server pools and create virtual machines in the server pool. Oracle Enterprise Manager Ops Center provides the following options to manage the server pool configuration and state:

- Associate Network Domain
- Attach Network
- Associate Libraries
- Add Oracle VM Servers
- Apply Monitoring Profile
- Create Virtual Machines

Related Articles and Resources

Refer to the following documentation resources for more information:

- *Oracle Enterprise Manager Ops Center Feature Reference Guide*
- *Oracle Enterprise Manager Ops Center Exploring Your Server Pools*
- *Oracle VM User's Guide*

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.