

This document introduces Oracle VM and gives you a high level overview of how to download and install the software, and how to create a virtual machine. This document contains:

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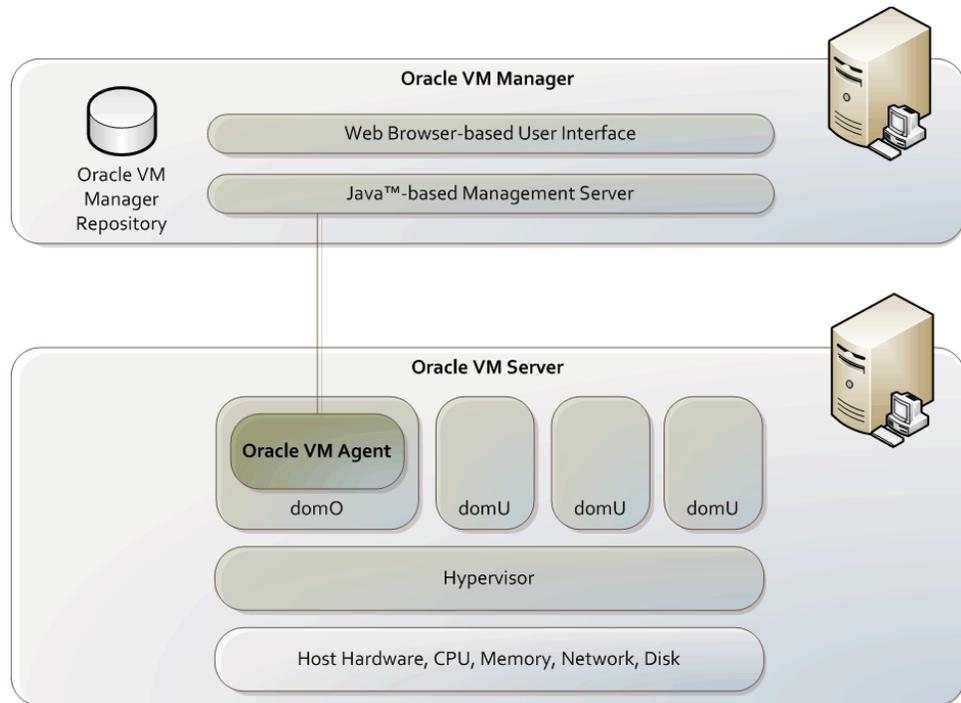
## 1 Introduction to Oracle VM

Oracle VM is a platform that provides a fully equipped environment for better leveraging the benefits of virtualization technology. Oracle VM enables you to deploy operating systems and application software within a supported virtualization environment. The components of Oracle VM are:

- **Oracle VM Manager:** Provides the user interface, which is a standard ADF (Application Development Framework) web application, to manage Oracle VM Servers. Manages virtual machine lifecycle, including creating virtual machines from installation media or from a virtual machine template, deleting, powering off, uploading, deployment and live migration of virtual machines. Manages resources, including ISO files, virtual machine templates and sharable hard disks.
- **Oracle VM Server:** A self-contained virtualization environment designed to provide a lightweight, secure, server-based platform for running virtual machines. Oracle VM Server is based upon an updated version of the underlying Xen hypervisor technology, and includes Oracle VM Agent.
- **Oracle VM Agent:** Installed with Oracle VM Server. It communicates with Oracle VM Manager for management of virtual machines. It also includes a Web Services API to access and manage Oracle VM Server, server pools, and resources.

[Figure 1, "Oracle VM Architecture"](#) shows the components of Oracle VM.

**Figure 1 Oracle VM Architecture**



## 2 Preinstallation Tasks and Requirements

Before you start the Oracle VM installation, make sure your computer meets the minimum hardware and software requirements. This section contains:

- [Downloading Oracle VM](#)
- [Hardware Requirements](#)

### 2.1 Downloading Oracle VM

If you do not already have the Oracle VM software CDs, download them from:

<http://www.oracle.com/virtualization>

The two ISO files you should download are:

- Oracle VM Server
- Oracle VM Manager

Burn the Oracle VM Server ISO file to a bootable CD.

Burn the Oracle VM Manager ISO file to a CD.

### 2.2 Hardware Requirements

You need two computers with static IP addresses to install Oracle VM:

- One clean computer to install Oracle VM Server
- One computer to install Oracle VM Manager with one of the following operating systems installed:

- Oracle Enterprise Linux Release 4 Update 5 or later
- Red Hat Enterprise Linux Release 4 or later

See the *Oracle VM Server Release Notes* and the *Oracle VM Manager Release Notes* for detailed information on hardware requirements.

### 3 Installing Oracle VM Server

Installing Oracle VM Server deletes any previous operating system and data on the computer. To install Oracle VM Server:

1. Boot the computer on which you want to Oracle VM Server with your Oracle VM Server CD.
2. At the boot prompt, press **Enter**.
3. Follow the prompts to install Oracle VM Server.
4. Log into Oracle VM Server as the *root* user, with the password you set during the installation.

See the *Oracle VM Server Installation Guide* for detailed information on installing Oracle VM Server.

If you want to use more than one Oracle VM Server, repeat the installation process. Oracle VM Servers can be added to a server pool and managed by Oracle VM Manager.

### 4 Installing Oracle VM Manager

To install Oracle VM Manager:

1. Start up the operating system on the computer on which you want to install Oracle VM Manager.
2. Insert and mount the Oracle VM Manager CD.
3. As the *root* user, start the Oracle VM Manager installation script:  

```
# sh runInstaller.sh
```
4. Follow the prompts to install Oracle VM Manager.

See the *Oracle VM Manager Installation Guide* for detailed information on installing Oracle VM Manager.

### 5 Creating a Storage Repository and Cluster

Shared storage is a common area to store, access and manage Oracle VM resources such as virtual machines, ISO files, and virtual machine templates. Shared storage is managed in storage repositories. All Oracle VM Servers in a server pool are linked together in a cluster and have access to the storage repository.

If you use the default */OVS* partition during the installation of Oracle VM Server, and you have only one Oracle VM Server in your server pool, you do not need to create shared storage, and therefore do not need to create a storage repository or cluster.

If you want to add more than one Oracle VM Server to a server pool (to create a cluster), you must first create shared storage, and manage that storage in a storage repository for the cluster to access.

You can set up shared storage using:

- OCFS2 (Oracle Cluster File System) using the iSCSI (Internet SCSI) network protocol
- OCFS2 using SAN (Storage Area Network)
- NFS (Network File System)
- Partition (multipath device)

To enable high availability of virtual machines, or to perform live migration of virtual machines to other, identical computers, you must make sure all Oracle VM Servers in the server pool use the same shared storage in a storage repository, and are in the same cluster of Oracle VM Servers.

To create a storage repository and cluster:

1. Create a shared virtual disk to use as shared storage. See your storage technology documentation, and the *Oracle VM Server User's Guide* for information on creating shared storage.
2. Log in to the Oracle VM Server that you will assign the role of the Server Pool Master (the master controller for other Oracle VM Servers in the server pool), and create a storage repository with the script:

```
/opt/ovs-agent-2.3/utills/repos.py -n
```

For example, for an NFS set up, you might use something similar to:

```
# /opt/ovs-agent-2.3/utills/repos.py -n mycomputer:/vol/vol1/data/ovs
```

Or for an OCFS2 set up, you might use something similar to:

```
# /opt/ovs-agent-2.3/utills/repos.py -n /dev/sdb
```

Or for a partition-based set up, you might use something similar to:

```
# /opt/ovs-agent-2.3/utills/repos.py -n /dev/mpath/mpath1
```

3. List the UUID for the storage repository. You need this to set the cluster root in the next step. Retrieve the UUID for the storage repository using the command:

```
# /opt/ovs-agent-2.3/utills/repos.py --list
```

This command lists the storage repositories and the UUID for each. Copy the UUID for the storage repository you want to use as the cluster root.

4. Paste the UUID for the storage repository and use it to set the cluster root with the command:

```
# /opt/ovs-agent-2.3/utills/repos.py --root UUID
```

The shared storage, storage repository and cluster are configured and ready to use. Log in to Oracle VM Manager and create a server pool. The shared storage configuration is then propagated to all Virtual Machine Servers in the server pool.

## 6 Creating a Server Pool

You can use Oracle VM Manager to create and manage virtual machines and resources on Oracle VM Servers. To create a virtual machine using Oracle VM Manager, you must first set up a server pool containing a Server Pool Master, a Utility Server and a Virtual Machine Server. To do this, you must complete the following steps:

1. Open a web browser and log into the Oracle VM Manager web interface. Use the default administrator username *admin* with the password you set during the installation. The URL is:

`http[s]://hostname:port/OVS`

Where, *hostname* refers to the host name or IP address of the Oracle VM Manager host. For example, to connect to Oracle VM Manager using the standard port of 8888 on a host named *example.com*, use:

`http://example.com:8888/OVS`

To connect to Oracle VM Manager using the Secure Sockets Layer (SSL) port of 4443 on a host named *example.com*, use:

`https://example.com:4443/OVS`

2. Create a server pool. If a server pool does not exist, Oracle VM Manager prompts you to create one and guides you through the process.
3. Add at least one Oracle VM Server to the server pool. Select whether the Oracle VM Server is to be used as a Server Pool Master, a Utility Server, and/or a Virtual Machine Server. You need at least one of each type to create a server pool and one Oracle VM Server can perform all the roles simultaneously.
4. Import or load any existing virtual machines as virtual machine templates. You can use FTP/HTTP, or place them directly in the shared storage area and have Oracle VM Manager *discover* them.
5. Upload any operating system ISO files as installation media.

See the *Oracle VM Manager User's Guide* for more detailed information.

## 7 Creating a Virtual Machine

Create a virtual machine, either as a paravirtualized guest or as a hardware virtualized guest using Oracle VM Manager. There are a number of ways to create a virtual machine using Oracle VM Manager:

- Using a virtual machine template
- Using installation media
- Importing a virtual machine

See the *Oracle VM Server User's Guide* and the *Oracle VM Manager User's Guide* for more information.

## 8 Related Documents

For more detailed information, see the following documents in the Oracle VM Release 2.2 documentation set:

- *Oracle VM Server Release Notes*
- *Oracle VM Server Installation Guide*
- *Oracle VM Server User's Guide*
- *Oracle VM Manager Release Notes*
- *Oracle VM Manager Installation Guide*

- *Oracle VM Manager User's Guide*
- *Oracle VM Windows Paravirtual Drivers Installation Guide*
- *Oracle VM Template Builder Installation and User's Guide*
- *Oracle VM Manager Web Services API Reference*

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