

# ORACLE VM MANAGEMENT PACK



## KEY BENEFITS

- End-to-end performance management
- Policy customization
- Live migration
- High availability support
- Minimal virtual sprawl
- Lower cost through automation

*Effective use of virtualization promises to deliver significant cost savings and operational efficiencies. However, it does pose some management challenges that need to be addressed in order to realize its full potential. To overcome these challenges, Oracle Enterprise Manager now offers complete management of virtual server infrastructure and related applications. With the Oracle VM Management Pack, Oracle Enterprise Manager can perform end-to-end monitoring, configuration management, and lifecycle automation of virtual machines to ensure that you capture—and maximize—the benefits of virtualization.*

## Complete Top-Down Management

From the high-level application components to the virtual infrastructure, Oracle Enterprise Manager offers complete top-down management of the entire software stack. It provides proactive monitoring of the health of applications, infrastructure components, and business services to help administrators visualize the impact of virtual infrastructure performance on application performance. This empowers and enables administrators to allocate physical server and storage resources to guest virtual machines in accordance with application requirements and business priorities.

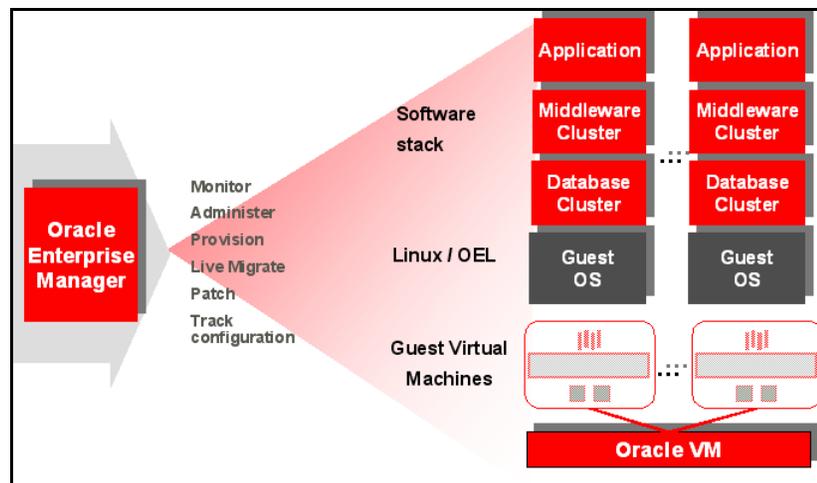


Figure 1. Oracle VM Management Pack enables a comprehensive view of the software stack to optimize the allocation of server resources from the top down.

## Performance and Availability Monitoring

Oracle Enterprise Manager collects performance and availability metrics for Oracle VM Servers and guest virtual machines. Collected metrics include CPU utilization, memory utilization, as well as disk and network throughput. Alerts and notifications can be set based on thresholds for each metric.

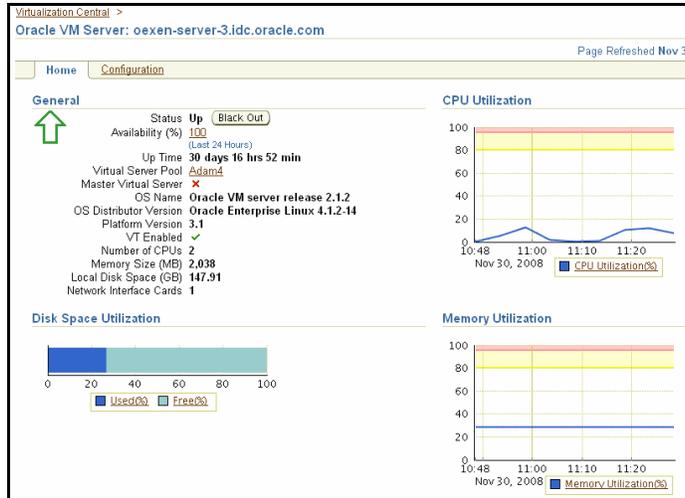


Figure 2. Performance management for Oracle VM Server.

### Configuration Management

Oracle Enterprise Manager collects and maintains an inventory of virtual infrastructure components in a centralized configuration repository. This simplifies the tracking of configuration changes, the comparison of multiple server configurations, and the assessment of configuration compliance based on predetermined policies. User-defined reports can be generated based on the data in the configuration repository.

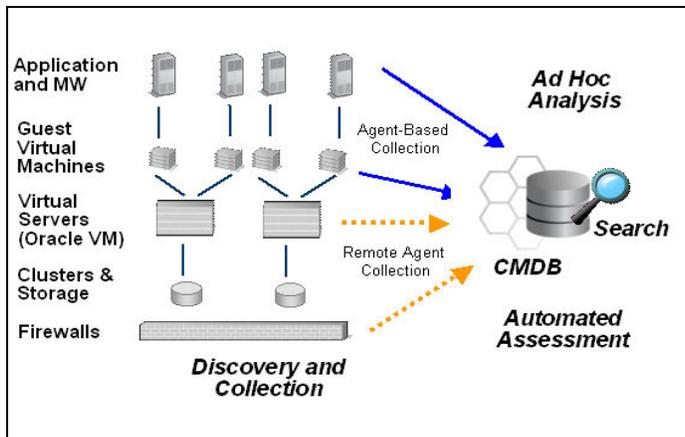


Figure 3. Configuration management for virtual infrastructure.

### Policy Manager

Oracle Enterprise Manager helps reduce the on-going costs for IT compliance. It provides out-of-the-box policies to enforce configuration best practices and regulatory compliance. In addition, users can author their own policies to match

their specific data center and company needs. The application tracks any policy violations and supports automated corrective actions to bring systems back into compliance.

### Lifecycle Automation for Guest Virtual Machines

Oracle VM Management Pack enables Oracle Enterprise Manager to automate the guest virtual machine lifecycle. This reduces the time required to provision new operating system/application environments, helps standardize application deployments by cloning pre-certified configurations, and minimizes planned downtime by allowing guest virtual machines to be live-migrated to other servers during server maintenance windows. Oracle Enterprise Manager also allows automated patching of operating systems and Oracle software running inside the guest virtual machines.

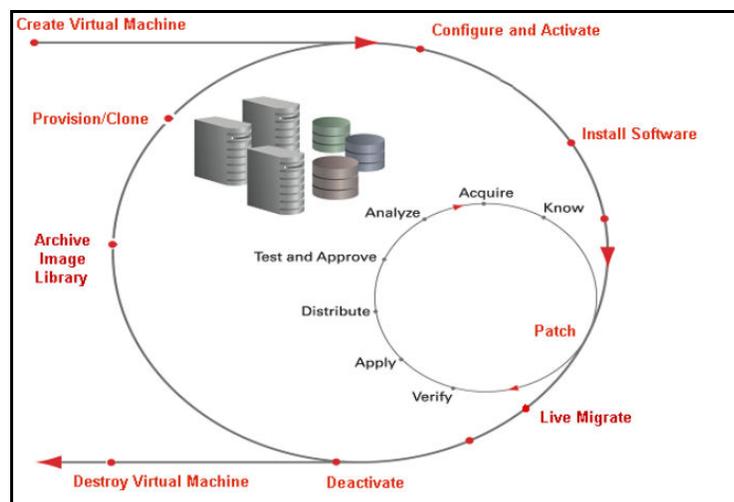


Figure 4. Oracle VM Management Pack facilitates the automation of the guest virtual machine lifecycle

### Provisioning/Cloning Guest Virtual Machines

Oracle Enterprise Manager eliminates the challenge and complexity of provisioning and cloning new guest virtual machines. Oracle Enterprise Manager allows administrators to save an existing guest virtual machine as an Oracle VM template and then use this template to create new guest virtual machines. Alternatively, users can point to an existing guest virtual machine to create a software “gold” image. This standardized image can be cloned to provision software on several other machines. For example, gold images can be created for database and middleware components, as well as Linux environments. Organizations can utilize these cloning features to standardize software deployments throughout a data center.

Server Pool Source Configure Software Reconfiguration Schedule Review

**Create Guest Virtual Machines: Server Pool** Cancel Step 1 of 6 Next

\* Number of Virtual Machines  Total number of virtual machines to be created

\* Server Pool

Virtual Server Allocation  Automatic  Manual

Cancel Step 1 of 6 Next

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Figure 5. Oracle Enterprise Manager provides a simple, flexible approach to provisioning guest virtual machines. New guest virtual machines can be created using ISO images of operating systems, Oracle VM Templates, and PXE bootable guest virtual machines that boot from the network.

### Live Migration

Oracle Enterprise Manager allows a guest virtual machine to be migrated from one Oracle VM Server to another. All guest virtual machines on a server can also be migrated at the same time. By default, live migration traffic is SSL-encrypted to protect sensitive data from exploitation.

### Deploying Preconfigured Software using Oracle VM Templates

Users can download Oracle VM Templates for Linux and Oracle products from oracle.com. These templates contain preinstalled software that is preconfigured according to Oracle's recommended best practices and defaults. Using the Oracle Enterprise Manager console, users can provision new guest virtual machines from these templates and significantly reduce the time to provision new servers with the desired Oracle software.

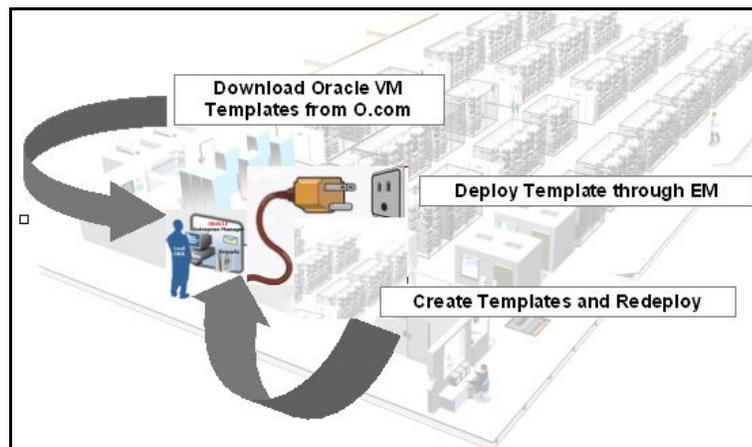


Figure 6. To simplify the process of provisioning Oracle products, preconfigured Oracle VM templates are available on oracle.com for Oracle and Linux environments.

### **Bare Metal Provisioning of Oracle VM Server**

Oracle Enterprise Manager uses industry standard PXE boot technology to automate provisioning of Oracle VM Server software on bare metal machines.

### **Patch Management**

Oracle Enterprise Manager provides “manage as a group” functionality that allows administrators to patch multiple guest virtual machines at a time. In addition, Oracle Enterprise Manager has an extensive deployment procedure framework for patching operating systems, databases, middleware components, and applications running on guest virtual machines.

### **High Availability for Virtual Infrastructure**

Oracle Enterprise Manager allows users to register Oracle VM Servers in a server pool. The shared-storage architecture created by the server pool provides high availability and fault-tolerance features for guest virtual machines.

### **Server Pool Load-Balancing**

- When a guest virtual machine is powered on, Enterprise Manager automatically selects the physical Oracle VM Server for the guest virtual machine from a pool of healthy, available servers—based on a pool-load balancing and availability algorithm.
- Optionally, for each individual guest virtual machine, users can specify a unique list of named Oracle VM Servers, called preferred servers, to be used for hosting the guest virtual machine, to further provide for unique performance and availability needs.

### **Fail-Over Support**

When a server pool is created in Oracle Enterprise Manager with “high availability” mode turned on, Oracle Enterprise Manager automatically restarts guest virtual machines running on a failed Oracle VM Server on other Oracle VM servers.

### **Contact Us**

For more information about Oracle VM Management Pack, please visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.



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