

Oracle VM 3.3: What's New



Oracle VM Server for x86 is a free server virtualization and management solution that makes enterprise applications easier to deploy, manage, and support. Backed worldwide by affordable enterprise-quality support for both Oracle and non-Oracle environments, Oracle VM facilitates the deployment and operation of your enterprise applications on a fully certified platform to reduce operations and support costs while simultaneously increasing IT efficiency and agility.

ORACLE'S SERVER VIRTUALIZATION AND MANAGEMENT

KEY ENHANCEMENTS IN ORACLE VM 3.3

- Infrastructure update to Oracle VM Manager and Oracle VM Server
- HTML5 virtual machine console
- Fully supported Oracle VM Manager Web Services API
- Enhanced support for Oracle VM Server for SPARC
- Improved feature support for Oracle VM Server for x86
- OpenStack interoperability ready with Oracle VM Server for x86
- Better handling of common networking implementations

KEY BENEFITS

- Greater stability, security and better performance for larger deployments
- Enabling more automation and interoperability
- Fast and more reliable console access
- Improved serviceability
- Greater diversity and ease of use

The Virtualization Platform for Enterprise Workloads

You are facing the challenges of a rapidly expanding data center—increased operating costs, inefficient resource utilization, and an eye toward cloud computing. Your virtualization solution has to increase datacenter flexibility, meet your price/performance needs, and make applications easier to deploy, manage, and support.

New Oracle VM 3.3 highlights:

- **Infrastructure changes in Oracle VM Manager:** Much of the technology used to enable Oracle VM Manager has been updated to take advantage of new features, improved performance and security fixes. Major changes to these components include: Oracle WebLogic Server and ADF upgraded to 12c; Java upgraded to version 7; MySQL Database Enterprise Edition upgraded to version 5.6.
- **Infrastructure changes in Oracle VM Server:** Major changes to the underlying technology used for Oracle VM Server on x86 hardware have been implemented, including: Xen hypervisor upgraded to version 4.3; Dom0 user space upgraded to Oracle Linux 6; and Dom0 kernel upgraded to Oracle Unbreakable Enterprise Kernel Release 3 (UEK3).
- **Ready for OpenStack:** Users can also install the [OpenStack technology preview](#) with Oracle VM 3.3 test environments and the latest version of Oracle Linux.
- **Fully supported Web Services API:** Oracle VM Manager now exposes a fully supported Oracle VM Web Services API that offers both SOAP and REST interfaces to program any action supported within Oracle VM, enabling more automation and interoperability. In addition, the Oracle VM Manager Web Interface and the Oracle VM Manager Command Line Interface have been rewritten to use the new WS-API to provide further consolidation and consistency.
- **New statistics and events model:** The statistics and events model has been entirely rewritten to offer significant performance gains. A queued job task is in place to monitor the number of generated statistics and to adjust the threshold automatically during periods where the number of statistics exceeds the threshold.
- **Oracle VM Server notification thresholding:** Oracle VM Server notifications can increase the number of generated events and jobs impacting on performance and filling log files to make them unusable. A facility has been provided to control and limit the number of notifications that an Oracle VM Server can generate by setting notification thresholds.
- **Huge Page support:** Support for Huge Pages (or Super Pages) has been added to allow guests, hosted on an x86-based server pool, to take advantage of this functionality to

improve performance and reduce the I/O that results from page lookups in virtualized environments.

- **Improvements to guest VM messaging:** A change to the Oracle VM Guest Additions messaging facility to support multiple key-value pairs in a single message reduces the number of jobs generated within Oracle VM Manager, resulting in significant performance gains.
- **Tighter security control:** Reduces the number of required open ports to minimize potential access points and security vulnerabilities. To protect and ensure authorized access to Oracle VM Server, a certificate-based authentication model has been implemented for Oracle VM Agent and Oracle VM Manager.
- **New virtual machine console:** The virtual machine console has been redesigned to use JavaScript and HTML5 features. There is no longer any requirement to install or run software locally on the client computer. This change reduces complexity and provides a more reliable console tool.
- **Virtual machine configuration file view:** It is now possible to view the virtual machine configuration file for any virtual machine directly within the Oracle VM Manager Web Interface and Oracle VM Manager Command Line Interface, to provide more transparency for the configuration that is actually applied to a virtual machine when it is started by the hypervisor.
- **Management database consolidation:** Oracle VM Manager comes bundled MySQL Database Enterprise Edition, providing automated database backup and integrated tools for database object consistency checking to improve supportability and management. It removes the need for an external database as the backend management repository.
- **Inbound Migration Lock:** A new feature allows you to protect an Oracle VM Server from attempts to move or migrate other virtual machines to that server. This allows you to run selected virtual machines on a specified Oracle VM Server, and to be certain that no other virtual machines are started on the server, consuming resources that may be mission critical for some applications.
- **Improved VLAN support:** Simplified VLAN support definition enables users to specify VLAN interfaces as needed and to define which ports are used for which VLAN tags, bringing more flexibility to network design.
- **Improved SPARC virtualization management and availability:** Additional storage types such as Fibre Channel, iSCSI, ZFS volume, and local disk, in addition to NFS, can now be directly assigned to virtual machines running in a SPARC server pool managed by Oracle VM Manager, offering customers more choices when choosing storage with Oracle VM Server for SPARC. Furthermore, virtual machine high availability and support for configuration of redundant I/O service domains improve system availability for business-critical operations.
- **Oracle VM Server Installation Partitioning:** The Oracle VM Server Installer now handles all disk partitioning itself, to optimize installation. Part of this process make sure that only the maximum required disk space for the Oracle VM Server software is used. Any remaining disk space is automatically partitioned to be used as a discoverable local disk that can be used to host a storage repository, or attached to a virtual machine hosted on the server. This improvement to disk space usage ensures the best possible use of machine resources. This change is only supported for locally hosted boot disks and does not apply to SAN disks.
- **New Guides and Improved Interface Coverage:** The documentation has been restructured to provide more comprehensive coverage.

Integrated Server Virtualization and Management

Consisting of Oracle VM Server for x86, open source server software, and an integrated web browser-based management console, Oracle VM Manager, Oracle VM provides an easy-to-use, feature-rich graphical interface for creating and managing virtual server pools, running on x86 based systems across the enterprise.

Users can create and manage virtual machines (VMs) that exist on the same physical server but that can behave independently, with each VM having its own virtual CPUs, network interfaces, storage, and operating system.

Oracle VM supports the following guest operating systems:

- Oracle Linux
- Oracle Solaris
- Red Hat Enterprise Linux
- SuSE Linux Enterprise Server
- CentOS
- Microsoft Windows ([learn more about Windows PV Drivers](#))

Please refer to the [product documentation](#) for complete information on supported guest operating system configurations.

Oracle VM Server installs on physical, “bare-metal” servers from a single CD or from a network in about one minute to provide the environment for hosting guest virtual machines. Virtual machines can be created, configured, and managed on hundreds of servers to be managed centrally from a browser using the included Oracle VM Manager software.

Advanced VM Management

Creating and configuring guest VMs is only the beginning. With Oracle VM's included management solution (Oracle VM Manager), administrators can enable advanced functionality to load-balance across resource pools and automatically reduce or eliminate outages associated with server downtime.

Beginning with Oracle VM Manager 3.2, users can create SPARC server pools, virtual machines, as well as manage networking and storage in the same way this is done for x86 environments. From Oracle VM Manager the user can track and manage the two types from the same Oracle VM Manager instance .

Full Stack Management with Oracle Enterprise Manager

[Oracle Enterprise Manager](#) provides an integrated and cost-effective solution for complete physical and virtual server lifecycle management. By delivering comprehensive provisioning, patching, monitoring, administration, and configuration management capabilities via web-based user interface, Oracle Enterprise Manager significantly reduces the complexity and cost associated with managing Oracle VM, Linux, Solaris, and Windows operating system environments. Oracle Enterprise Manager helps customers to accelerate the adoption of virtualization and cloud computing to optimize IT resources, improve hardware utilization, streamline IT processes, reduce costs.

Quickly Configure and Provision Multi-Tier Applications onto Virtualized and Cloud Environments

[Oracle Virtual Assembly Builder](#) makes it possible for administrators to quickly configure and provision entire multi-tier application topologies onto virtualized and cloud environments. It provides a framework for capturing the configuration of existing software components and

packaging them as self-contained building blocks known as appliances. These appliances can then be easily connected to form application blueprints known as assemblies. This innovative approach makes it practical for complex enterprise applications to easily be customized and provisioned in their entirety with minimal to no manual intervention onto virtualized and cloud environments, powered by Oracle VM.

System Requirements

Please refer to the product [documentation](#) for specific software and hardware requirements, and other pertinent information.

Oracle VM Server is supported on Oracle and non-Oracle x86 systems. Please refer to this list of [Oracle Linux and Oracle VM certified hardware](#) to see which systems are certified to run with Oracle VM 3.

The Certified and Supported Virtualization Environment for Oracle

Oracle performs real-world testing on its broad portfolio of products with Oracle VM to ensure bulletproof reliability and streamlined support. All new Oracle product releases are certified by default, but consult Support Note 464754.1 on the [My Oracle Support](#) website for information on exact product versions certified.

Oracle VM Support: The Complete Stack, One Call Worldwide

Oracle's world-class support organization offers Oracle VM Premier Support including:

- Access to patches, fixes, and updates delivered via a subscriber network, the Unbreakable Linux Network
- 24x7 global support

Oracle VM software is available for [free download](#). Support for Oracle VM can be purchased via [Oracle VM Store](#).

Pricing for Oracle VM support is calculated on a per system basis: Consult Oracle's [pricing guide](#) for further details.

For Oracle x86 systems, Oracle VM support is included with [Oracle Premier Support for Systems](#).



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Hardware and Software, Engineered to Work Together

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