ORACLE

Oracle Linux Virtualization Manager

Oracle Linux Virtualization Manager is a server virtualization management platform that can be easily deployed to configure, monitor, and manage an Oracle Linux Kernel-based Virtual Machine (KVM) environment. Oracle Linux KVM and Oracle Linux Virtualization Manager are two components of the Oracle Linux operating environment. This environment also includes management, cloud native computing tools, and the operating system, delivering leading performance and security for hybrid and multi-cloud deployments. The Oracle Linux operating environment helps customers accelerate digital transformation initiatives.

Along with an Oracle Linux Premier Support subscription, customers have access to award-winning Oracle support resources, Linux support specialists, zero-downtime patching with Ksplice, cloud native tools such as Kubernetes and Kata Containers, clustering tools, Oracle Linux Manager (formerly Spacewalk), Oracle Enterprise Manager, and lifetime support. All this and more is included in a single cost-effective support offering. For customers with an Oracle Cloud Infrastructure subscription, Oracle Linux Premier support is included at no additional cost. Unlike many other commercial Linux distributions, Oracle Linux is easy to download and completely free to use, distribute, and update.

Oracle Linux KVM

Starting with Oracle Linux Release 7 with the Unbreakable Enterprise Kernel (UEK) Release 5, Oracle Linux KVM, the Oracle Linux server virtualization solution with KVM, has been enhanced. Users can take a previously deployed Oracle Linux system and turn the operating environment into a KVM host, or a KVM configuration can be set up from a base Oracle Linux installation. Oracle Linux KVM includes support for Intel VT-x and VT-d hardware extensions along with the Secure Encrypted Virtualization (SEV) for AMD-V enabled processors.

Oracle Cloud Infrastructure uses Oracle Linux KVM, which facilitates moving workloads into Oracle Cloud.

Oracle Linux Virtualization Manager

To support multiple hosts running Oracle Linux KVM, data center administrators can use Oracle Linux Virtualization Manager. It is built from the open source oVirt project. The heart of this management solution is the ovirt-engine, which is used to discover KVM hosts and configure storage and networking for the virtualized data center. Oracle Linux Virtualization Manager offers a web-based user interface (UI) and a representational state

Key Features

- Modern, low overhead architecture based on the KVM hypervisor for leading price/performance
- Self-Hosted Engine (SHE) offers a hyper-converged management solution with manager high availability (HA)
- Full REST API allows greater automation and interoperability
- Support for secure live migration and storage live migration
- VM high availability
- Scheduling policies automatically distribute VMs for load balancing or power saving
- Backup and restore support with VM snapshots
- Role-based access for granular user level controls

ORACLE

transfer (REST) application programming interface (API) to manage an Oracle Linux KVM infrastructure. Oracle Linux Virtualization Manager allows customers to continue supporting their on-premises data center deployments with the KVM hypervisor.

High performance modern web user interface

Oracle Linux Virtualization Manager delivers high performance with a modern web UI. For most day-to-day operations, many users will rely on the administration portal or the lighter-weight VM portal. These portals can be accessed from the Oracle Linux Virtualization Manager landing page when first connected with a browser:
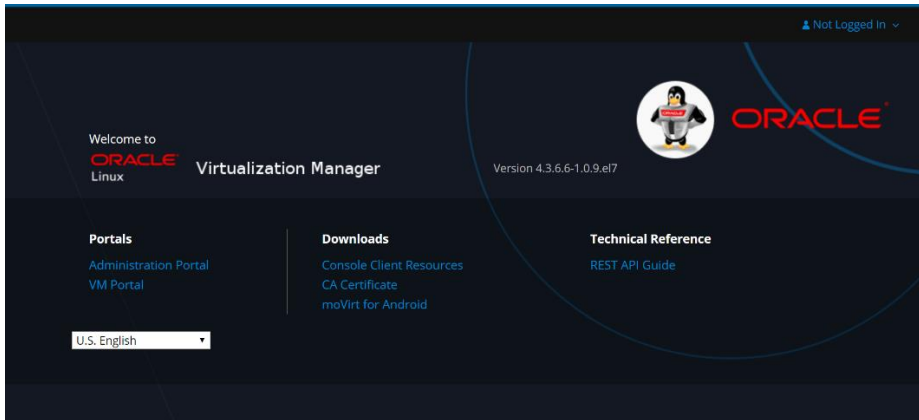
After logging into the administration portal, users will be presented with a dashboard view which displays all of the key information about their deployment (VM counts, host counts, clusters, storage, etc), including the current status of each entity and key performance metrics:
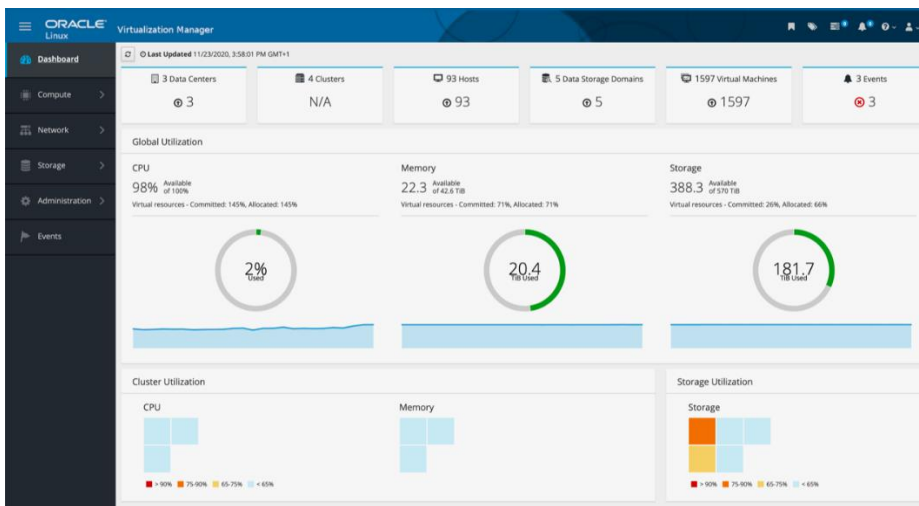
From the Dashboard, users can move to the Compute view for Hosts, Virtual Machines, Templates, Data Centers, Clusters and Pools to configure or edit their virtual environments. Additional menus and sub-menus for Network, Storage, Administration, and Events give full control, with logical workflows in an easy to use web interface.

In addition to the web-based UI, the REST API enables users to integrate with other management systems or automate repetitive tasks with scripts.

Key Benefits

- Complete server virtualization and management solution with zero license cost

- Single software distribution for Oracle Linux OS and Oracle Linux KVM

- Speeds application deployment with Oracle Virtual Appliances

- Rapid VM provisioning with Oracle Linux Templates

- Ksplice integration to patch kernel, QEMU, and user space libraries with no service interruption

- Hard Partitioning support enables efficient Oracle application software licensing

- Full Stack Management with Oracle Enterprise Manager

- Path to Oracle Cloud Infrastructure with a common hypervisor

ORACLE

Engineered for open cloud infrastructure

Data center administrators are facing increased operating costs and inefficient resource utilization. They are looking for solutions that are a good fit with existing environments and ease the transition to a secure, open cloud infrastructure, while reducing costs. Oracle Linux Virtualization Manager increases data center flexibility, meets price/performance targets, and makes applications easier to deploy, manage, and support:

- **High performance and scalability**: Low-overhead architecture with the KVM hypervisor provides scalable performance under increasing workloads. Supports servers with up to 2048 logical CPUs and 64 TB of memory to accommodate the most demanding enterprise and cloud applications.

- **Broad guest operating system support**: Oracle Linux, Red Hat Enterprise Linux, CentOS, SLES, Ubuntu, and Microsoft Windows.

- **Modern Linux kernel**: The Unbreakable Enterprise Kernel (UEK) for Oracle Linux offers high performance and streamlined partner certifications.

- **Self-Hosted Engine (SHE):** A hyper-converged solution that offers high availability to manage a virtualized infrastructure.

- **Oracle Linux KVM with Ksplice**: Ksplice supports Oracle Linux KVM with patching for the kernel, hypervisor, and user-space packages.

Reliability and high availability

In today's online world, applications must retain a high level of availability for end users. Virtualization solutions must deliver a platform for applications to continue to operate even during maintenance activities and hardware failures. Oracle Linux Virtualization Manager supports these requirements with:

- **VM high availability**: Reliably and automatically restart failed VMs on other servers in the server pool after unexpected outages.

- **Secure live VM migration**: Reduce service outages associated with planned maintenance or scale up resources quickly by migrating running VMs to other servers without interruption.

- **Storage live migration**: Perform storage live migrations for virtual disks of running virtual machines.

- **Rapid VM provisioning**: Oracle Linux Templates for Oracle Linux KVM provide an innovative approach to deploying a fully configured software stack by offering pre-installed and pre-configured software images. Oracle Linux Templates reduce installation, configuration, and ongoing maintenance costs, helping organizations achieve faster time to market and lower cost of operations.

- **Backup and restore with snapshots**: Snapshots can be used to create a consistent view of a running VM at a point in time. Multiple snapshots can be stored and used for restoral purposes.

Supported Hardware

- Oracle Linux KVM is supported on 64-bit Intel and AMD (x86-64) hardware architectures

- Visit the Oracle Linux Hardware Certification List (HCL)

ORACLE

Management options and ease of use features

IT operations teams are under increased pressure to deliver more services with fewer resources. Virtualization solutions need to offer multiple management interfaces, automation options, and features that make it easier to deploy applications to end users. All are available with Oracle Linux Virtualization Manager:

- **Advanced management for zero extra cost**: A rich, dynamic HTML-based web user interface provides ease of use, centralized management, and includes comprehensive event tracking and virtualized system health status. In addition to the main administration portal, a light-weight VM portal can be used by cloud consumers to manage VMs:
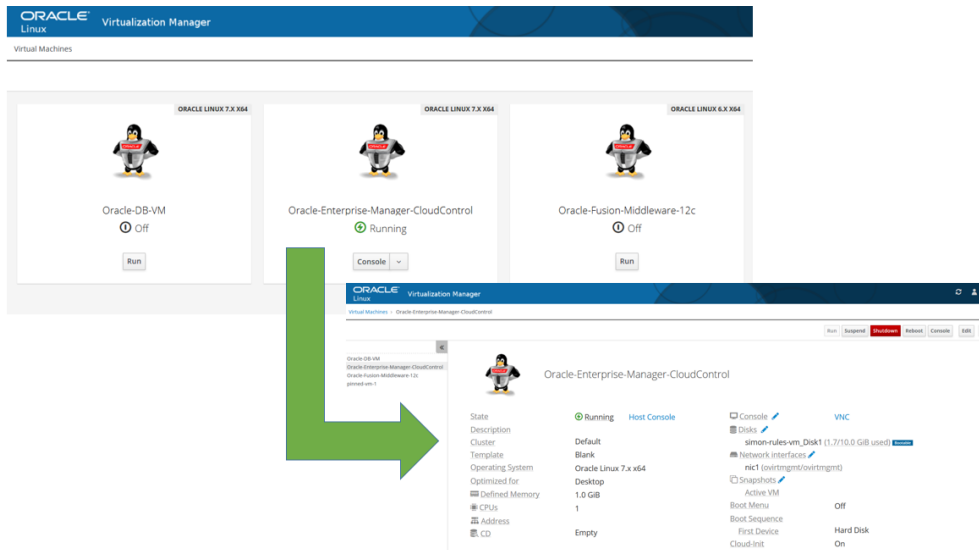
- **Oracle Linux Virtualization Manager REST API**: Oracle Linux Virtualization Manager exposes a REST API, enabling a higher level of automation, interoperability, and integration.

- **Faster software deployment**: Download and import pre-configured virtual machines containing pre-installed Oracle applications or other software to get up and running in hours.

- **Role-based access**: Allow different users with different access permissions to perform the tasks that are relevant to their role with full audit control.

- **Virtual Desktop Infrastructure (VDI):** Oracle Linux Virtualization Manager can be integrated with an external LDAP or Active Directory authentication system, to offer a secure VDI solution for end users.

- **Full stack management**: Integration with Oracle Enterprise Manager offers comprehensive monitoring capabilities.

Easy migration to Oracle Linux Virtualization Manager

Moving your existing virtual machines to Oracle Linux Virtualization Manager can be accomplished individually or in bulk with automated solutions:

ORACLE

- **Virt-v2v integration**: The open source virt-v2v utility is integrated with Oracle Linux Virtualization Manager to easily move VMs from other hypervisors while converting the underlying storage.
- **Standards-based virtual appliance support**: Allows for importing and exporting of Open Virtualization Format (OVF) and Open Virtualization Archive (OVA) based software appliances to accelerate application deployment.

Streamlined support

Oracle is the only vendor in the industry that offers a complete Linux-based solution stack – applications, middleware, database, management tools, operating system, virtualization, hardware, engineered systems, and cloud – along with streamlined support, which offers several benefits.

With Oracle as your Linux support provider, your costs will be significantly lower than with other vendors' Linux support, while having a single point of contact for all your support needs. Users are free to decide which systems should be covered by a support subscription, and at which level each of them should be supported. This makes Oracle Linux an ideal choice for both development and production systems. You decide which support coverage is the best for each of your systems individually, while keeping all of them up-to-date and secure.

Virtualization made easy

With your Oracle Linux Premier Support subscription there is no need to worry about whether the system will run as a physical or virtual instance because it is all included in the price of a single subscription. Users can run Oracle Linux KVM on the host and as many Oracle Linux guest instances as desired, without additional cost. And, when you want to move workloads between different deployment models – Oracle Linux KVM on-premises to Oracle Linux KVM in the cloud – the transition can be virtually seamless.

Established member of the Linux community

Oracle is committed to cultivating, supporting, and promoting popular open source technologies that customers can confidently deploy in business-critical environments. Oracle is a platinum member of the Linux Foundation and a platinum member of the Cloud Native Compute Foundation.

Many of Oracle's Linux engineers participate in the Linux community as maintainers of projects in the upstream Linux source process and work closely with other maintainers. This work helps to develop features and improvements that benefit Linux overall and can later be delivered as part of Oracle Linux.

ORACLE

Oracle Linux partner ecosystem

Oracle works closely with industry leading ISV and IHV partners to enable fully tested, certified, and supported solutions for Oracle Linux and virtualization customers. With an extensive ecosystem, customers can improve time to market and simplify deployment.

The Oracle Linux and Virtualization ISV Catalog provides information about third-party software that ISVs have certified to run on Oracle Linux and Oracle Virtualization. Applications certified on Oracle Linux run wherever Oracle Linux runs, either in Oracle Cloud Infrastructure and other clouds, or in on-premises environments.

The Hardware Compatibility Program helps ensure server hardware solutions are qualified with Oracle Linux and Oracle Linux KVM.

Free and easy to download, install, use, and distribute

Oracle Linux Virtualization Manager and Oracle Linux KVM can be downloaded, used, and distributed free of charge, with easy access to installation ISOs. Oracle provides access to the individual RPM packages, including security updates and bug fixes (errata) via yum repositories, without requiring a support subscription.

Please refer to the Oracle Linux Virtualization Manager Documentation Library for specific software and hardware requirements, and other pertinent information.

Connect with us

Call **+1.800.ORACLE1** or visit **oracle.com/linux**. Outside North America, find your local office at: **oracle.com/contact**.

🅑 blogs.oracle.com/linux   🅕 facebook.com/oraclelinux   🅣 twitter.com/oraclelinux