Frequently Asked Questions
Oracle OpenStack for Oracle Linux Release 2.0

Introduction
Oracle OpenStack for Oracle Linux distribution is a cloud management software product providing customers an enterprise-grade solution to deploy and manage their entire IT environment. The product maintains the flexibility of OpenStack, allowing customers to deploy different configurations, and to integrate with different software and hardware vendors. With Oracle OpenStack for Oracle Linux, customers benefit from an enterprise solution for OpenStack which provides more choice for extended deployment options to best fit customers’ needs. Customers can receive support for all components of their cloud deployment, including OpenStack, the backend database, and the operating system, with one phone call to Oracle. Latest release, Oracle OpenStack for Oracle Linux 2.0 is based on Kilo, delivers a complete solution for creating clouds, providing enterprise developed and tested services, and offering end-to-end support across the infrastructure, allowing customers to choose the services which best serve their business needs.

Docker Containers for Simplified, Fast and Reliable Deployment and Operation
OpenStack is designed so every service is independent. This allows customers to deploy OpenStack in various ways to meet their performance, business, security, and compliance needs. With Docker containers each service is packaged and configured as an independent micro-service then deployed as a container. When there is change in the configuration, a new container is created replacing the old container. New containers are easy to create and do not impact other containers. As a result, you get simplified, reliable and fast deployment that is easy to upgrade, operate and modify. The Oracle OpenStack deployment is based on the upstream OpenStack Kolla project and uses Ansible as an orchestration tool. With Oracle OpenStack for Oracle Linux, customers can take advantage of this capability and deploy one or more controller nodes, compute nodes, network nodes and storage nodes in a simple, efficient way.

Supported OpenStack Services
OpenStack is comprised of several services working together. The product provides support to a subset of those services which are required to build a cloud. The following OpenStack services are supported:

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>Nova</td>
<td>Compute service</td>
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<td>Glance</td>
<td>Image management service</td>
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<td>Keystone</td>
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<td>Cinder</td>
<td>Block storage service</td>
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<td>Neutron</td>
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<td>Horizon</td>
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<td>Swift</td>
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<td>Heat</td>
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<td>Murano</td>
<td>OpenStack application catalog</td>
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Feature Highlights

Best in Class Software Components all Supported by Oracle

A cloud deployment is comprised of multiple moving parts. Aside from the OpenStack software, IT must also choose an operating system, a database, hypervisors, and more. With the Oracle OpenStack distribution for Oracle Linux, IT professionals can receive all the aforementioned pieces, as well as additional components, listed below:

- Oracle Linux
- MySQL Database
- MySQL Cluster Active/Active for High Availability of the OpenStack service (included)
- ZFS Storage Appliance cinder driver (included)
- Flash Storage FS1 cinder driver (included)
- Third Party Products Partner Network
- Broad Range of Hardware Options certified for Oracle Linux
- Oracle VirtualBox Appliance for development and testing

Questions and Answers

General Questions

Q: What is OpenStack?

A: OpenStack is open source software for creating private and public clouds. OpenStack software controls large pools of compute, storage, and networking resources throughout a datacenter, managed through a dashboard or via the OpenStack API. OpenStack works with popular enterprise and open source technologies making it ideal for heterogeneous infrastructure.

Q: What is the licensing cost for Oracle OpenStack for Oracle Linux?

A: Oracle OpenStack for Oracle Linux is available for free download. There is no licensing cost. It can be downloaded for free from the Oracle Webpage.

Q: What value-add is provided in the Oracle OpenStack for Oracle Linux 2.0?

A: Oracle OpenStack for Oracle Linux provides Enterprise-Scale Solution:

- Simplified Rapid Deployment: Each OpenStack service is packaged as an independent micro-service in a Docker container using Ansible playbook for deployment. Containerized micro-services and Ansible orchestration tool enables simplified, reliable and fast deployment with ease of upgrade.

- High Availability, Performance and Scaling with MySQL CE Active/Active Cluster: MySQL CE Active/Active Cluster is pre-built providing industry leading performance and scaling in addition to High Availability (HA).

- Complete end-to-end support for infrastructure components
  - Oracle Linux
  - MySQL Database
  - MySQL Cluster
  - Oracle Flash Storage FS1 Cinder driver
  - Oracle ZFSSA Cinder driver

Technical Questions

Q: After I download Oracle OpenStack for Oracle Linux, what do I need to do to install my application image in the OpenStack VM?

A: The OpenStack Image Service, code-named Glance, provides functionality for discovering, registering, and retrieving virtual machine images. The service includes a RESTful API that allows users to query VM image metadata and retrieve the actual image with HTTP requests. You can also use the Glance command-line tool or the Python API to accomplish the same tasks. VM images made available through OpenStack Image Service can be stored in a variety of locations. How do we change the networking for the guest VMs that we copy to Openstack?

A: OpenStack supports very flexible network configurations. No change is required on the guest. Just make sure the guest networks are created in OpenStack before moving.

Q: Openstack Cinder is the block storage component and it can use a ZFS appliance. Is there any risk to connecting
Openstack to an existing ZFS appliance or is a separate ZFS required?

A: The ZFS SA Cinder driver can easily be used on an existing appliance. Considerations would be around the appliance needing to handle more iSCSI clients and supply more storage. Cinder should be configured to use a separate project for Cinder shares to simplify maintenance and performance analysis. A Cinder admin user should also be created with a role that can only do management on the Cinder project. Refer to the ZFS SA Cinder Driver README for details.

Q: What is the difference between Oracle OpenStack for Oracle Linux and Oracle VM?

A: OpenStack is NOT an alternative to Oracle VM since they solve different problems.

Oracle VM is a virtualization management solution which enables control of pools of compute, storage, and networking through a single pane of glass. With Oracle VM's comprehensive yet intuitive management interface, IT administrators can extensively customize and tailor the virtual environment to support traditional applications with no change required to the application itself. There are many features in Oracle VM that are very appealing to customers and it's geared towards running enterprise products really well. For complex enterprise products customers typically require very close access to the physical placement and resources and that's something Oracle VM does well and a management product like OpenStack is not really a solution to this.

Openstack is an open source infrastructure-as-a-service (IaaS) cloud management platform which aims to provide an open, self-service API for automated provisioning of virtual resources. In general, IaaS end users sacrifice some degree of customization in order to achieve a higher degree of automation. Taking full advantage of the IaaS platform often involves dramatic changes to infrastructure design, operational processes, and applications. In the case of Openstack, the platform is also rapidly evolving and needs a lot of development to be a real enterprise ready product but it has a large development community and strong momentum.

Deployment of IaaS in general and Openstack in particular is therefore a long term investment for most customers, whereas Oracle VM can be more readily deployed to manage virtualized workloads in the context of traditional IT environments.

Q: What does the dashboard in Oracle OpenStack for Oracle Linux provide?

A: The dashboard is an extensible web app that allows cloud administrators and users to control their compute, storage and networking resources.

As a cloud administrator, the dashboard provides an overall view of the size and state of your cloud. You can create users and projects, assign users to projects and set limits on the resources for those projects.

The dashboard provides users a self-service portal to provision their own resources within the limits set by administrators.

Support Questions

Q: What is the support pricing for Oracle OpenStack for Oracle Linux?

A: Support for Oracle OpenStack for Oracle Linux is included as part of Oracle Premier Support for Oracle Linux, Oracle VM, and Systems. There is no additional support cost for Oracle OpenStack for Oracle Linux. More details available here.

Additional Information and Resources

Q: Where can I find more information and technical documentation on Oracle OpenStack for Oracle Linux?

Product web page: data sheet, video, white papers, software download, documentation and blogs

The Oracle Technical Network (OTN) page includes documentation, links and also a virtualbox VM which has Oracle OpenStack for Oracle Linux fully installed, configured and ready to use on your own laptop.