



Red Hat OpenStack Administration III

CL310; 4 Days; Instructor-led

Course Description

Students will set up a Ceph environment and its configuration as a back end for OpenStack, and configure and use the advanced features of OpenStack Neutron.

Course Objectives

- Deploy Red Hat Ceph Storage
- Manage snapshots in Red Hat Ceph Storage
- Access Ceph storage through Ceph block device (RBD) and Ceph object gateway (RADOSGW)
- Configure Red Hat Ceph Storage as a storage back end for OpenStack Services
- Manage networks based on VXLAN, VLAN and GRE
- Deploy and using load-balancer-as-a-service (LBaaS) in OpenStack Neutron
- Troubleshoot Neutron issues

Audience

Experienced Linux® system administrators responsible for managing OpenStack environments who want to learn:

- To configure scalable and distributed storage as a storage back end for OpenStack
- The advanced features offered by OpenStack Neutron

Prerequisites

- Red Hat Certified Engineer (RHCE®) certification or equivalent experience
- Red Hat Certified System Administrator in Red Hat OpenStack certification or equivalent experience
- Have taken Red Hat OpenStack Administration (CL210) course

Course Outline

Introduction to Red Hat Ceph Storage

- Introduce Red Hat Ceph Storage architecture, components, and attributes.

Describe Red Hat Ceph Storage components and features

- Describe the components and features of Red Hat Ceph Storage.

Deploy and access Red Hat Ceph Storage

- Create snapshots and clones for Red Hat Ceph Storage.

Create snapshots and clones

- Manage snapshots and clones of a Ceph Block Device (RBD).

Ceph with the Glance Image service

- Integrate Ceph with the OpenStack Glance Image service to store OpenStack images in Ceph.

Ceph with the Cinder Block Storage service

- Integrate Ceph with the OpenStack Cinder Block Storage service to provide OpenStack volumes in Ceph.

Ceph with the Nova compute service

- Integrate Ceph with the OpenStack Nova compute service to store instance data in Ceph.

Introduce networking fundamentals

- Review networking concepts and deploy OpenStack with a separate Neutron networking node.

Network interfaces

- Manage network interfaces manually (using the ip command) and persistently.

Virtual bridging

- Install and manage virtual network bridges.

Virtual network devices

- Create and deploy virtual network devices.

Network namespaces

- Manage and implement networks inside a network namespace.

Neutron services

- Verify and manage the Neutron services.

Provisioning tenant networks

- Provision tenant networks using VXLAN tunnels, GRE tunnels, and VLANs.

Implementing load-balancer-as-a-service (LBaaS)

- Implement LbaaS.

Neutron networking services

- Diagnose and troubleshoot issues with the Neutron networking service.

Comprehensive Review

- Review tasks from the Red Hat OpenStack III course.