

[CL310]: Red Hat OpenStack III: Networking & Foundations of NFV

Length : 4 Days
Delivery Method : Instructor-led (Classroom)

Course Overview

The Red Hat OpenStack Administration III (CL310) course provides extensive hands-on training for experienced system administrators in how to use the distributed storage features of Red Hat® Ceph Storage and the networking capabilities of OpenStack® Neutron. Participants 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.

This course is based on Red Hat OpenStack Platform 6.

Audience Profile

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

At Course Completion

- 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

Recommended exam or training

- Red Hat Certified Engineer in Red Hat OpenStack exam (EX310)
 - Become a RHCE in OpenStack by passing this exam, where you will demonstrate your abilities to integrate and configure with Red Hat Enterprise Linux OpenStack Platform, Red Hat Ceph Storage, and Neutron services.

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Pre-Requisites

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

Course Outline

Module 1: Introduction to Red Hat Ceph Storage

Lessons

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

Module 2: Describe Red Hat Ceph Storage components and features

Lessons

- Describe the components and features of Red Hat Ceph Storage

Module 3: Deploy and access Red Hat Ceph Storage

Lessons

- Create snapshots and clones for Red Hat Ceph Storage

Module 4: Create snapshots and clones

Lessons

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

Module 5: Ceph with the Glance Image service

Lessons

- Integrate Ceph with the Glance image service, the Cinder block storage service, and the Nova compute service

Module 6: Introduce networking fundamentals

Lessons

- Explain standard networking concepts and OpenStack Neutron networking concepts and services

Module 7: Implement virtual bridging

Lessons

- Install and manage virtual network bridges

Module 8: Implement virtual network devices

Lessons

- Create and deploy virtual network devices

Module 9: Implement network namespaces

Lessons

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

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Module 10: Manage neutron services

Lessons

- Verify and manage the configuration of Neutron networking service

Module 11: Provisioning project networks

Lessons

- Provision project networks using VXLAN tunnels, GRE tunnels, and VLANs

Module 12: Implementing load-balancer-as-a-service (LBaaS)

Lessons

- Implement LbaaS

Module 13: Troubleshoot Neutron networking services

Lessons

- Diagnose and troubleshoot issues with the Neutron networking service

Module 14: Comprehensive Review

Lessons

- Review tasks from the Red Hat OpenStack III course

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