

# Openstack CL310

## Overview

**Duration: 5 Days**

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.

## 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

## Pre-requisite

- 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

### **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 Glance image service, the Cinder block storage service, and the Nova compute service.

## **Introduce networking fundamentals**

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

## **Implement virtual bridging**

Install and manage virtual network bridges.

## **Implement virtual network devices**

Create and deploy virtual network devices.

## **Implement network namespaces**

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

## **Manage neutron services**

Verify and manage the configuration of Neutron networking service.

## **Provisioning project networks**

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

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

Implement LbaaS.

## **Troubleshoot Neutron networking services**

Diagnose and troubleshoot issues with the Neutron networking service.

## **Comprehensive Review**

Review tasks from the Red Hat OpenStack III course.