

## CL210

# Red Hat OpenStack Administration II: Infrastructure Configuration for Cloud Administrators

Introduction to Red Hat OpenStack Platform configuration and administration of private cloud infrastructure using core OpenStack services

Red Hat OpenStack Administration II: Infrastructure Configuration for Cloud Administrators (CL210) teaches you how to implement a full-featured cloud computing environment using OpenStack. You will learn how to configure, administer, and manage Red Hat® OpenStack Platform infrastructure. The lessons and objectives taught in this course will prepare you for the Red Hat Certified System Administrator in Red Hat OpenStack exam (EX210).

This course is based on Red Hat OpenStack Platform 13.0 and Red Hat® Enterprise Linux® 7.5.

### Course overview

The focus of this course is on managing and using the OpenStack client command-line interface and the director and dashboard graphical web user interfaces to securely manage server instances, compute and storage resources, and user identities.

Course content summary:

- Gain familiarity with overcloud service containerization technology.
- Learn about Open Virtual Networking (OVN) enhancement to OVS.
- Use identity service v3 (keystone) with external Red Hat IdM store.
- Manage the core control plane, including Pacemaker.
- Customize images, with techniques for multiple use cases.
- Manage block and object storage.
- Manage compute nodes, including tuning and hyperconvergence.
- Deploy multi-container stacks.
- Troubleshoot OpenStack.

## **Audience for this course**

This course is intended for Linux system administrators, cloud administrators, cloud operators, and infrastructure architects interested in, or responsible for, maintaining a private or hybrid cloud.

## **Prerequisites for this course**

Be a Red Hat Certified System Administrator (RHCSA), or demonstrate equivalent experience by passing the online skills assessment

Attend Red Hat OpenStack Administration I: Core Operations for Cloud Operators (CL110), or demonstrate equivalent experience

## **Course outline**

### **Navigate the Red Hat OpenStack Platform architecture**

Describe the classroom environment, support systems, functions of the undercloud components, and more.

### **Describe the OpenStack control plane**

Identify the shared services running on a controller node and describe service endpoint configuration and security.

### **Integrate identity management**

Describe the installation and architecture of a Red Hat Identity Management back end for the OpenStack identity service.

### **Perform image operations**

Build an image using diskimage-builder and customize launched instances during deployment using cloud-init.

### **Manage storage**

Explain persistent storage options for use in OpenStack, focusing on the expanding capabilities of the default Red Hat® Ceph Storage.

### **Manage OpenStack networking**

Explain the different network types available to the OpenStack networking service and improve network performance with Open Virtual Network.

### **Manage compute resources**

Perform common compute node administration tasks, including live migration, evacuation, and enabling and disabling compute nodes.

### **Automate cloud applications**

Explain the orchestration architecture required to deploy application stacks and write templates using the Heat Orchestration Template (HOT) language.

### **Troubleshoot OpenStack operations**

Discuss recommended diagnostic and troubleshooting tools and techniques.

### **Comprehensive review**

Build a custom image and launch an instance using the custom image.

### **Recommended next exam or course**

- Red Hat Certified System Administrator in Red Hat OpenStack exam (EX210)
- Red Hat OpenStack Administration III: Networking & Foundations of NFV (CL310)
- Red Hat Certified Engineer in Red Hat OpenStack exam (EX310)
- Red Hat Ceph Storage Architecture and Administration (CEPH125) and Red Hat Certified Specialist in Ceph Storage Administration exam (EX125)
- For OpenStack administrators who want to learn more about Red Hat Ceph Storage and become a networking engineer.
- Red Hat CloudForms Hybrid Cloud Management (CL220) and Red Hat Certified Specialist in Hybrid Cloud Management exam (EX220)
- For hybrid cloud engineers who want to learn more about Red Hat® CloudForms and become a cloud architect.