

# Red Hat OpenStack Administration I: Core Operations for Cloud Operators

Duration 5 Days

## COURSE DESCRIPTION

The focus of Red Hat OpenStack Administration I: Core Operations for Cloud Operators (CL110) will be managing OpenStack using both the web-based dashboard and the command-line interface, in addition to managing instances and installing a proof-of-concept environment using Red Hat OpenStack Platform (RHOSP) director. Essential skills covered in the course include configuring Red Hat OpenStack Platform (using the director UI); managing users, projects, flavors, roles, images, networking, and block storage; setting quotas; and configuring images at instantiation.

## COURSE OBJECTIVES

The focus of Red Hat OpenStack Administration I: Core Operations for Cloud Operators (CL110) will be managing OpenStack using both the web-based dashboard and the command-line interface, in addition to managing instances and installing a proof-of-concept environment using Red Hat OpenStack Platform (RHOSP) director. Essential skills covered in the course include configuring Red Hat OpenStack Platform (using the director UI); managing users, projects, flavors, roles, images, networking, and block storage; setting quotas; and configuring images at instantiation.

Students should be able to demonstrate the following skills:

- Design and implement on-demand projects, software-defined networks, and virtual machine instances.
- Deploy a proof-of-concept OpenStack installation for practice, development, demonstration, and testing, back in your own home or business computing environment.
- Manage software-defined networks such as subnets, routers, floating IP addresses, images, flavors, security groups/rules, and block and object storage.
- Create and customize advanced VM instances as applications, customize on deploy, and create scalable stacks of multiple VM applications

## COURSE OUTLINE

- **Introduce launching an instance**  
Launch an instance and describe the OpenStack architecture and use cases.
- **Organize people and resources**  
Manage projects, users, roles, and quotas.
- **Describe cloud computing**  
Describe the changes in technology and processes for cloud computing.
- **Manage Linux networks**  
Administer Linux networks and bridges.
- **Prepare to deploy an instance with public access**  
Manage images, flavors, and private networks in preparation for launching an instance.

- **Deploy an instance**  
Launch and verify an instance.
- **Manage block storage**  
Manage ephemeral and persistent block storage.
- **Manage object storage**  
Administer object storage.
- **Prepare to deploy an external instance**  
Manage external networks and security in preparation for launching an instance with public access.
- **Deploy an instance with public access**  
Launch and verify an instance with public access.
- **Customize instances**  
Customize an instance with cloud-init.
- **Deploy scalable stacks**  
Deploy a stack and configure autoscaling.
- **Install an OpenStack overcloud**  
Install an OpenStack proof of concept using the director UI and provisioning service templates.
- **Lab: Comprehensive review of CL110**  
Review tasks in the Red Hat OpenStack Administration I: Core Operations for Cloud Operators course.

#### PREREQUISITES

Become a Red Hat Certified System Administrator (RHCSA) or demonstrate equivalent experience.

#### WHO SHOULD ATTEND

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