

## Introduction

### Red Hat OpenStack Administration

### Orientation to the Classroom Environment

#### Internationalization:

- Red Hat OpenStack Administration III
- Orientation to the Classroom Environment
- Internationalization

#### 1. Red Hat Ceph Storage Introduction

- The Ceph Storage Project
- Quiz: The Ceph Storage Project
- Object Storage
- Quiz: Object Storage
- Architecture and Design
- Quiz: Architecture and Design
- Quiz: Red Hat Ceph Storage Introduction
- Summary

#### 2. Red Hat Ceph Storage Components and Features

- Ceph Components Overview
- Quiz: Ceph Components Overview
- Ceph data Placement
- Quiz: Ceph data Placement
- Ceph journal
- Quiz: Ceph journal
- Access Methods
- Quiz: Access Methods
- Quiz: Red Hat Ceph Storage Components and Features
- Summary

#### 3. Deploying and accessing Red hat Ceph Storage

- Deploying Red Hat Ceph Storage
- Guided Exercise: Deploying Red Hat Ceph Storage
- Using the ceph Block Device (RBD)
- Guided Exercise: Using Ceph Block Device (RBD)
- Quiz: Deploying and accessing Red hat Ceph Storage
- Summary

#### 4. Creating Snapshots and Clones

- Managing RBD Snapshots
- Guided Exercise: Managing RBD Snapshots
- RBD Layering
- Guided Exercise: RBD Layering
- Quiz: Creating Snapshots and Clones
- Summary

#### 5. Integrating Ceph with the Glance Image Service

- Deploying Red Hat Enterprise Linux Open Stack Platform

- Guided Exercise: Deploying Red Hat Enterprise Linux OpenStack Platform
- Integrating Ceph with OpenStack Glance
- Guided Exercise: Integrating Ceph with OpenStack Glance
- Quiz: Integrating Ceph with OpenStack Glance
- Summary

#### 6. Integrating Ceph with The Cinder Block Storage Service

- Integrating Ceph with OpenStack Cinder
- Guided Exercise: Integrating Ceph with OpenStack Cinder
- Quiz: Integrating Ceph with The Cinder Block Storage Service
- Summary

#### 7. Integrating Ceph with The Nova Compute Service

- Integrating Ceph with OpenStack Nova
- Guided Exercise: Integrating Ceph with OpenStack nova
- Quiz: Integrating Ceph with The Nova Compute Service
- Summary

#### 8. Introducing Networking Fundamentals

- Deploying Red Hat Enterprise Linux Open Stack Platform
- Guided Exercise: Deploying Red Hat Enterprise Linux Open Stack Platform
- Introducing Networking Concepts
- Quiz: Introducing Networking Concepts
- Introducing Neutron Concepts
- Quiz: Introducing Neutron Concepts
- Quiz: Introducing Networking Fundamentals
- Summary

#### 9. Managing Network Interfaces

- Managing Network Interfaces
- Guided Exercise: Managing Network Interfaces
- Lab: Managing Network Interfaces
- Summary

#### 10. Implementing Virtual Bridging

- Implementing Virtual Bridges
- Guided Exercise: Implementing Linux Bridges
- Implementing Open vSwitch Bridges
- Guided Exercise: Implementing Open vSwitch Bridges
- Implementing libvirt Bridges

- Guided Exercise: Implementing libvirt Bridges
- Lab: Implementing Virtual Bridging
- Summary

## 11. Deploying Virtual Network Device

- Viewing Virtual Network Device
- Guided Exercise: Viewing Virtual Network Device
- Creating a Tap Virtual Network Device
- Guided Exercise: Creating a Tap Virtual Network Device
- Creating a MacVTap Virtual Network Device
- Guided Exercise: Creating a MacVTap Virtual Network Device
- Creating Virtual Ethernet (veth) Device
- Guided Exercise: Creating Virtual Ethernet (veth) Device
- Lab: Deploying Virtual Network Device
- Summary

## 12. Implementing Network Namespaces

- Viewing Network Namespaces
- Guided Exercise: Viewing Network Namespaces
- Implementing Network Namespaces
- Guided Exercise: Implementing Network Namespaces
- Lab: Implementing Network Namespaces
- Summary

## 13. Managing the Neutron Services

- Verifying the Neutron server
- Guided Exercise: Verifying the Neutron server
- Verifying the Neutron L2 and L3 Agents
- Guided Exercise: Verifying the Neutron L2 and L3 Agents
- Provisioning a Tenant Network
- Guided Exercise: Provisioning a Tenant Network
- Verifying the Neutron DHCP Agent
- Guided Exercise: Verifying the Neutron DHCP Agent
- Managing Neutron Extensions and Quotas
- Managing Neutron Agents
- Guided Exercise: Managing Neutron Agents
- Lab: Managing the Neutron Services
- Summary

## 14. Provisioning Tenant Network

- Provisioning a VXLAN Network
- Guided Exercise: Provisioning a VXLAN Network
- Provisioning a GRE Network
- Guided Exercise: Provisioning a GRE Network
- Provisioning a VLAN Network
- Guided Exercise: Provisioning a VLAN Network
- Attaching a Tenant Network to an Instance
- Guided Exercise: Attaching a Tenant Network to an Instance
- Managing Floating IP Addresses
- Guided Exercise: Managing Floating IP Addresses
- Lab: Provisioning Tenant Network
- Summary

## 15. Implements LBaaS

- Verifying LBaaS
- Guided Exercise: Verifying LBaaS
- Deploying Instance Using LBaaS
- Guided Exercise: Deploying Instance Using LBaaS
- Lab: Implementing LBaaS
- Summary

## 16. Troubleshooting the Neutron Networking Services

- Diagnosing Issues in Network Namespaces
- Guided Exercise: Diagnosing Issues in Network Namespaces
- Diagnosing L2 Issues
- Guided Exercise: Diagnosing L2 Issues
- Diagnosing L3 Issues
- Guided Exercise: Diagnosing L3 Issues
- Lab: Troubleshooting the Neutron Networking Services
- Summary

## 17. Comprehensive Review

- Red Hat OpenStack Administration III Comprehensive Review
- Lab: Red Hat OpenStack Administration III Comprehensive Review