Course Outline

RHCL310 Red Hat OpenStack Administration III: Networking and Foundations of NFV

Course Summary

Description

Red Hat OpenStack Administration III: Networking & Foundations of NFV (CL310) teaches network engineers, network operators, cloud operators, and cloud administrators how to manage and tune Red Hat OpenStack Platform for network performance. This course can also help you prepare for the Red Hat Certified Engineer (RHCE) in Red Hat OpenStack exam (EX310).

You will learn how to manage the OpenStack networking service (Neutron) with network functions virtualization to enhance network performance. You will configure distributed virtual routers, Open vSwitch with Data Plane Development Kit datapath, and IPv6 networking in OpenStack. You will also deploy software-defined networking with OpenDaylight.

Objectives

At the end of this course, students will be able to:

- Network functions virtualization (NFV)
- Distributed virtual router (DVR)
- Open vSwitch with Data Plane Development Kit (OVS-DPDK) datapath
- IPv6 networking
- Single-root I/O Virtualization (SR-IOV)*
- Software-defined networking (SDN) with OpenDaylight (ODL)
- VLAN, VXLAN, and GRE networks

Topics

- Manage networks in Linux
- Manage OpenStack networking agents
- Deploy IPv6 networks
- Provision OpenStack networks
- Implement distributed virtual routing
- Tune NFV performance
- Implement NFV data paths
- Build software-defined networks with OpenDaylight
- Comprehensive review of Red Hat OpenStack Administration III

Audience

This course is designed for network engineers, network operators, cloud administrators, and cloud operators.

Prerequisites

- Become a Red Hat Certified System Administrator (RHCSA), or demonstrate equivalent experience
- Complete the Red Hat Certified System Administrator in Red Hat OpenStack exam (EX210), or demonstrate equivalent experience

Duration

Five days

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I. Manage networks in Linux
A. Administer network interfaces, bridges, and virtual networking devices.

II. Manage OpenStack networking agents
A. Manage the L2, L3, DHCP, and other OpenStack networking agents.

III. Deploy IPv6 networks
A. Set up IPv6 networks in OpenStack.

IV. Provision OpenStack networks
A. Provision tenant networks and provider networks.

V. Implement distributed virtual routing
A. Enable distributed virtual routing (DVR) to provide scaling and performance.

VI. Tune NFV performance
A. Tune OpenStack networking performance.

VII. Implement NFV data paths
A. Execute network functions virtualization (NFV) data paths.

VIII. Build software-defined networks with OpenDaylight
A. Create software-defined networks with OpenDaylight (ODL).

IX. Comprehensive review of Red Hat OpenStack Administration III
A. Configure advanced networking on Red Hat® OpenStack Platform.