Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316)

Category: Infrastructure & IT Operations | **Vendor:** Red Hat

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format:	Instructor Led - Online
Certification:	Red Hat Certified Specialist in OpenShift Virtualization (EX316) is included
Related Exam:	EX316

Course Overview

The Red Hat Certified Specialist in OpenShift Virtualization (EX316) is included in this offering.

About This Course

Create and manage virtual machines on OpenShift using the Red Hat OpenShift Virtualization operator

Managing Virtual Machines with OpenShift Virtualization teaches the essential skills required to create and manage virtual machines (VM) on OpenShift using the Red Hat OpenShift Virtualization operator. This course does not require previous knowledge of containers and Kubernetes.

This course provides:

- Skills required to create, access, and manage VMs on OpenShift clusters
- Skills required to control usage and access of cpu, memory, storage, and networking resources from VMs using the same Kubernetes features that would also control usage and access to these resources for containers
- Sample architectures to manage High Availability (HA) of VMs using standard Kubernetes features and extensions from OpenShift Virtualization
- Strategies to connect VMs on OpenShift to data center services outside of their OpenShift cluster, such as storage and databases
- Strategies to migrate VMs from compatible hypervisors to OpenShift Virtualization by using the Migration Toolkit for Virtualization operator

Course content summary

- Create VMs from installation media and disk images
- Access text and graphical consoles of a VM
- Connect to VMs using Kubernetes networking (services, ingress, and routes)
- Provision storage to VMs using Kubernetes storage (PVC, PV, and storage classes)
- Start, pause, and stop VMs
- Clone and snapshot VMs
- Create and seal golden VM images
- Connect VMs to external and extra networks (outside of the Kubernetes pod and service networks)
- Provision load balancer services for VMs and then use the services to enable SSH access to VMs
- Connect VMs to host storage and external storage
- Create VMs from predefined and custom VM Templates and InstanceTypes

- Migrate VMs from compatible hypervisors
- Back up and restore VMs by using OADP and command-line tools

Who Should Attend

- Virtual Machine Administrators who want to virtualize workloads from traditional Hypervisors to OpenShift Virtualization
- Platform Engineers, Cloud Administrators, and System Administrators who want to support virtualized workloads, either independently from or in the same OpenShift cluster as containerized workloads

Prerequisites & Entry Requirements

General Prerequisites:

- RH-DO180 is recommended but not required
- Linux skills are not required to manage OpenShift clusters and OpenShift Virtualization but managing individual Linux VMs requires Linux sysadmin skills provided by:

- Red Hat System Administration I (RH124) and Red Hat System Administration II (RH134) for managing the OS inside a Linux VM.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Impact on the organization

OpenShift Virtualization allows organizations to realize operational savings by managing virtualized workloads and containerized workloads together using the same orchestration and clustering infrastructure provided by Red Hat OpenShift.

Deploying Virtual Machines (VMs) on OpenShift also eases integration of traditional server-based applications with more modern cloud-native applications and their supporting practices such as CI/CD, DevOps, and SRE to take advantage of quicker time-to-market and other benefits from these practices, without having to first redesign virtualized workloads as container-native workloads.

Impact on the individual

IT professionals will learn to deploy and manage virtualized workloads on OpenShift.

Detailed Course Outline

Red Hat OpenShift Virtualization

Distinguish Red Hat OpenShift Virtualization from container technologies and from traditional virtual machine technologies. Describe the features and use cases of OpenShift Virtualization. Deploy the OpenShift Virtualization operator in an existing Red Hat OpenShift environment.

Running and Accessing Virtual Machines

Create, manage, inspect, and monitor virtual machines in Red Hat OpenShift Virtualization.

Configuring Kubernetes Networking for Virtual Machines

Configure standard Kubernetes network objects and external access for VMs and virtual machine-backed applications.

Connecting Virtual Machines to External Networks

Configure node networking to connect virtual machines and nodes to networks outside of the cluster by using Multus CNI plug-ins and the NMState operator.

Configuring Storage for Virtual Machines

Manage storage and disks for virtual machines in Red Hat OpenShift by using Kubernetes.

Create and Restore Backups of Virtual Machines

Create virtual machine snapshots and back up virtual machine components individually and by using the OpenShift APIs for Data Protection (OADP) operator.

Replicating Virtual Machines by Using Instance Types, Templates, and Clones

Create and manage clones, templates, and instance types to provision virtual machines.

Advanced Virtual Machine Management

Import, control the placement of, monitor the health of, and live migrate virtual machines.

Configuring Kubernetes High Availability for Virtual Machines

Implement high availability virtual machines that are resilient to failures, planned maintenance, and cluster upgrades by configuring Kubernetes resources.

Certification Path

Red Hat Certified Specialist in OpenShift Virtualization (EX316) is included

Exam: EX316

Skills You Will Learn:

Impact on the organization

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Impact on the individual

 IT professionals will learn to deploy and manage virtualized workloads on OpenShift.

Frequently Asked Questions

Q: What delivery options are available for Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: What certification does this course prepare me for?

The Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316) course helps prepare you for the Red Hat Certified Specialist in OpenShift Virtualization (EX316) is included certification path.

Q: Which exam does this course prepare me for?

This course prepares you for the EX316 official exam. You can take this exam at any exam center across United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online wherever you are located.

Q: How many CPD hours does this course provide?

The 5-day Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316) course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316) training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316)?

Yes, we provide corporate training, dedicated training, and closed classes for Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316), OpenShift Administration, DO317

Q: Why choose Nexus Human for Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Managing Virtual Machines with Red Hat OpenShift Virtualization and exam (EX316) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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