Red Hat Training and Certification

DO256
Red Hat OpenShift Virtualization Administration II: Configuring Production Virtual Machines

Create production-ready virtual machines and their supporting Kubernetes and OpenShift resources in Red Hat OpenShift Virtualization.

Red Hat OpenShift Virtualization Administration II: Configuring Virtual Machines addresses critical challenges in managing virtual machines in Red Hat OpenShift Virtualization. This course teaches IT Operations teams the skills to enable advanced networking features for virtual machines and cluster nodes, to migrate virtual machines from other hypervisors to OpenShift Virtualization, to provide data protection and backups of virtual machines, to create efficient and standardized provisioning of virtual machines, and to provide high availability to virtual machines with Kubernetes resources.

Course content summary

- Understand OpenShift OAuth server concepts and custom resources, including their function in Kubernetes authentication, and define and implement role-based access controls and user permissions.
- Enable comprehensive and flexible networking for nodes and virtual machines within an OpenShift environment.
- Migrate virtual machines from another hypervisor to Red Hat OpenShift Virtualization by using the migration toolkit for virtualization (MTV) operator.
- Back up and restore virtual machines by using the OpenShift APIs for Data Protection (OADP) operator.
- Create and manage custom instance types, templates, and boot sources to provision virtual machines.
- Control the placement of virtual machines on cluster nodes by using Kubernetes resources, and rebalance virtual machine workloads across cluster nodes by enabling descheduler evictions.
- Implement high-availability virtual machines that are resilient to failures, planned maintenance, and cluster upgrades by configuring Kubernetes resources.

Audience for this course

- **Virtual Machine Administrators** who are looking to migrate workloads from traditional hypervisors to OpenShift Virtualization.

Course reference: https://www.redhat.com/en/services/training/do256-red-hat-openshift-virtualization-administration-ii-configuring-production-virtual-machines

- **Platform Engineers, Cloud Administrators,** and **System Administrators** who are interested in supporting virtualized workloads, either independently from or in the same OpenShift cluster as containerized workloads.

Prerequisites for this course

- Red Hat OpenShift Virtualization Administration I: Operating Virtual Machines (DO156)
- Although Linux skills are not required for managing OpenShift clusters and OpenShift Virtualization, operating individual Linux VMs requires Linux system administration skills that the following courses provide:
    - Red Hat System Administration I (RH124) and Red Hat System Administration II (RH134) for managing the OS inside a Linux VM.

Outline for this course

- **Authentication and Authorization for Virtual Machines to Red Hat OpenShift Virtualization**
  Understand OpenShift OAuth server concepts and custom resources, including their function in Kubernetes authentication, and define and implement role-based access controls and user permissions.

- **Advanced Networking for Virtual Machines in Red Hat OpenShift Virtualization**
  Enable comprehensive and flexible networking for nodes and virtual machines within an OpenShift environment.

- **Migrating Virtual Machines to Red Hat OpenShift Virtualization**
  Migrate virtual machines from another hypervisor to Red Hat OpenShift Virtualization by using the migration toolkit for virtualization (MTV) operator.

- **Creating and Restoring Backups of Virtual Machines in Red Hat OpenShift Virtualization**
  Back up and restore virtual machines by using the OpenShift APIs for Data Protection (OADP) operator.

- **Creating Custom Instance Types, Templates, and Boot Sources in Red Hat OpenShift Virtualization**
  Create and manage custom instance types, templates, and boot sources to provision virtual machines.

- **Controlling Scheduling of Virtual Machines in Red Hat OpenShift Virtualization**
  Control the placement of virtual machines on cluster nodes by using Kubernetes resources, and rebalance virtual machine workloads across cluster nodes by enabling descheduler evictions.

- **Configuring High Availability for Virtual Machines in Red Hat OpenShift Virtualization**
  Implement high-availability virtual machines that are resilient to failures, planned maintenance, and cluster upgrades by configuring Kubernetes resources.

Impact on the individual

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

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