Managing Virtual Machines with Red Hat OpenShift Virtualization

Kód kurzu: DO316

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

Pre koho je kurz určený

- Virtual Machine Administrators interested in moving virtualized workloads from traditional Hypervisors to OpenShift Virtualization.
- Kubernetes Administrators (Cluster Administrators, Clusters Engineers) interested in supporting containerized and virtualized workloads in the same OpenShift cluster.
- Site Reliability Engineers interested in using GitOps and Ansible Automation to manage Virtual Machines on OpenShift.

Čo Vás naučíme

- 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.
- Connect VMs to external and extra networks (outside of the Kubernetes pod and service networks).
- Connect VMs to host storage and external storage.
- Ansible management of VMs.
- Create VMs from VM Templates.

Požadované vstupné znalosti

- Take our
- free assessment
- to gauge whether this offering is the best fit for your skills.
- Red Hat OpenShift I: Containers &Kubernetes (DO180) and is recommended but not required.

Študijné materiály

Príručka ku kurzu firmy Red Hat podľa programu kurzu.

Osnova kurzu

Introduction to OpenShift Virtualization

Describe the features and use cases of OpenShift Virtualization.

Run and access Virtual Machines

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

Configure Kubernetes network for Virtual Machines

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

Connect Virtual Machines to external networks

Configure node networking to connect virtual machines and nodes to networks outside the cluster.

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Configure Kubernetes storage for Virtual Machines

Manage storage and disks for VMs in Red Hat OpenShift.

Virtual Machine template management

Create and manage templates to provision virtual machines.

Advanced Virtual Machine management

Snapshot, clone, and live migrate a virtual machine and initiate node maintenance.

Configure Kubernetes high availability for Virtual Machines

Configure Kubernetes resources to implement high availability for virtual machines.

Čo musíte vedieť

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 and manage these workloads using both traditional ways, such as SSH and Ansible, and also modern DevOps practices, such as GitOps and CI/CD

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