DO121
Introduction to Microsoft Azure Red Hat OpenShift

Course description

Learn how to deploy, access, and perform basic customizations to an Microsoft Azure Red Hat OpenShift cluster.

DO121 teaches Platform Operators how to provision managed clusters by using Microsoft Azure Red Hat OpenShift and how to perform basic day-2 customizations on these clusters to onboard application developers and applications.

Recommended training

- All students must be knowledgeable of Microsoft Azure, including operating and managing Azure compute, storage, and network resources.
- For students that are new to Red Hat OpenShift it is recommended that you learn the fundamental skills of managing Red Hat OpenShift clusters, before taking DO121, from the following courses:
  - Red Hat OpenShift I: Containers & Kubernetes (DO180)
  - Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster (DO280)
- Students with previous experience managing Kubernetes clusters are advised to take DO180 and DO280 before taking DO121 or at least acquire foundational skills operating Red Hat OpenShift clusters by using the following free resources from Red Hat:
  - Red Hat Developer Sandbox for OpenShift
  - OpenShift and Kubernetes learning from Red Hat Developer
  - Containers, Kubernetes and Red Hat OpenShift Technical Overview (DO080)

Technology considerations

- Internet access is required to access Azure cloud services using the Azure Portal and the Azure CLI. It is also required to access the Red Hat Hybrid Cloud Console and associated Red Hat cloud services.
- Students must possess an active Azure account with an associated payment method for the Azure resources consumed by Microsoft Azure Red Hat OpenShift clusters.
- Students must possess an active Red Hat customer portal account or a free Red Hat Developer program membership.

Outline for this course

Provision a Managed Azure Red Hat OpenShift Cluster

Create a Microsoft Azure Red Hat OpenShift cluster accessible through the internet.

- **Introduction to Managed OpenShift Clusters**
- Describe the relationship between the customer team and the cloud vendors SRE team regarding system administration of managed OpenShift clusters.
- **Prerequisites to Create an Microsoft Azure Red Hat OpenShift Cluster**

- Learn the different options to deploy Microsoft Azure Red Hat OpenShift clusters in public or private mode and prepare an Azure cloud account and a management workstation to create an Microsoft Azure Red Hat OpenShift cluster.
- **Create an Microsoft Azure Red Hat OpenShift Cluster**
- Create an internet-accessible managed OpenShift cluster using the Azure portal and inspect the cloud resources that compose an Microsoft Azure Red Hat OpenShift cluster.
- **Access an Microsoft Azure Red Hat OpenShift Cluster as an Administrator**
- Retrieve OpenShift cluster administrator credentials to access a managed cluster.

Configure a Managed Azure Red Hat OpenShift Cluster

Configure a Microsoft Azure Red Hat OpenShift cluster to be used for development purposes.

- **Configure Developer Self-service Access to an Microsoft Azure Red Hat OpenShift Cluster**
- Configure an identity provider that allows developers to access a managed cluster and create self-service projects to deploy unprivileged applications.
- **Connect an Microsoft Azure Red Hat OpenShift cluster to Red Hat cloud services**
- Connect a managed cluster to Red Hat cloud services and enumerate the benefits.
- **Configure Additional Storage Classes**
- Connect applications to the Azure disk type that matches their cost and performance requirements.
- **Create Dedicated Node Pools**
- Add a machine set to run applications that use different VM sizes.
- **Configure Node Autoscaling**
- Autoscale a node pool according to application load.
- **Configure Log Forwarding**
- Forward cluster and pod logs to Azure Monitor.