Red Hat OpenShift Administration III: Scaling Deployments in the Enterprise

Duration: 4 Days   Course Code: DO380   Delivery Method: Virtual Classroom

Overview:

Course description
Plan, implement, and manage OpenShift clusters at scale
Red Hat OpenShift Administration III: Scaling Kubernetes Deployments in the Enterprise (DO380) expands upon the skills required to plan, implement, and manage OpenShift® clusters in the enterprise. You will learn how to support a growing number of stakeholders, applications, and users to achieve large-scale deployments.
This course is based on Red Hat® OpenShift Container Platform 4.10.
Note: This course is five days. Durations may vary based on the delivery. For full course details, scheduling, and pricing, select your location then "get started" on the right hand menu.
Course summary
- Manage OpenShift cluster operators and add operators.
- Automate OpenShift management tasks using Ansible® playbooks.
- Create and schedule cluster administration jobs.
- Implement GitOps workflows using Jenkins.
- Integrate OpenShift with enterprise authentication.
- Query and visualize cluster-wide logs, metrics, and alerts.
- Manage both shared, file-based storage and non-shared, block-based storage.
- Manage machine pools and machine configurations.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

- Cluster engineers (systems administrators, cloud administrators, or cloud engineers) focused on planning, designing, and implementing production-grade OpenShift clusters. Cluster engineers require automation skills to scale their manpower to provision and manage an increasing population of clusters, applications, and users, at the same time ensuring these clusters remain in compliance with corporate standards.
- Site reliability engineers (SREs) focused on keeping OpenShift clusters and applications running without disruption. SREs are interested in troubleshooting infrastructure and application issues with OpenShift clusters and require automation skills to reduce the time to identify, diagnose, and remediate issues.

Objectives:

■ This course builds upon the essential skills required to configure and manage an OpenShift 4.x cluster, teaching the enhanced skills needed to operate production environments at scale, including:

■ Automating Day 2 tasks to establish production clusters with higher performance and availability.

■ Integrating OpenShift with enterprise authentication, storage, CI/CD, and GitOps systems to improve productivity of IT operations and compliance with organization's standards.

■ Troubleshooting techniques to identify issues with cluster operators and compute capacity.

Prerequisites:

■ Complete Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster(DO280) and become a Red Hat Certified Specialist in OpenShift Administration.
■ Complete Red Hat System Administration II (RH134) and become a Red Hat Certified System Administrator.
■ Recommended, but not required: become a Red Hat Certified Systems Engineer or a Red Hat Certified Specialist in Ansible

Testing and Certification

Recommended next exam or course

Red Hat Certified Specialist in OpenShift Automation and Integration (EX380)

Red Hat OpenShift Installation Lab (DO322)

Automation. Basic knowledge about writing and running Ansible playbooks is desired.

Multicluster Management with Red Hat OpenShift Platform Plus (DO480)

Red Hat Certified Specialist in MultiCluster Management exam (EX480)

Enterprise Kubernetes Storage with Red Hat OpenShift Data Foundation (DO370)

Red Hat Certified Specialist in OpenShift Data Foundation exam (EX370)

Managing Virtual Machines with Red Hat OpenShift Virtualization (DO316)

Content:

Move from Kubernetes to OpenShift

Demonstrate that OpenShift is Kubernetes by deploying Kubernetes-native applications on OpenShift.

Introduce automation on OpenShift

Automate OpenShift administration tasks using bash scripts and Ansible playbooks.

Manage operators with OpenShift

Deploy Kubernetes Operators and configure OpenShift cluster operators.

Implement GitOps with Jenkins

Implement a GitOps workflow using containerized Jenkins to administer an OpenShift cluster.

Configure enterprise authentication

Integrate OpenShift with enterprise identity providers.

Configure trusted TLS certificates

Configure OpenShift with trusted TLS certificates for external access to cluster services and applications.

Configure dedicated node pools

Configure a subset of the cluster nodes for special workloads.

Configure persistent storage

Configure storage providers and storage classes to ensure cluster user access to persistent storage.

Manage cluster monitoring and metrics

Configure and manage the OpenShift monitoring stack.

Provision and inspect cluster logging

Deploy, query, and troubleshoot cluster-wide logging.

Recover failed worker nodes

Inspect, troubleshoot, and remediate worker nodes in a variety of failure scenarios.

Note: Course outline is subject to change with technology advances and as the nature of the underlying job evolves. For questions or confirmation on a specific objective or topic, contact one of our Red Hatters..

Additional Information:

Technology requirements
This course requires internet access to access the cloud-based classroom environment that provides an OpenShift cluster and a remote administrator's workstation.

Impact on the organization
This course supports IT operations teams that are in the prepare and expand stages of their Container Adoption Journey. The curriculum enables companies to innovate faster, scale based on customer demand, and proactively manage a growing number of OpenShift clusters that host cloud-native and cloud-compatible applications.

Further Information:

For More information, or to book your course, please call us on 00 966 92000 9278

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