

## Red Hat OpenShift Administration III: Scaling Deployments in the Enterprise

**Duration: 4 Days**    **Course Code: DO380**

### 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.

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

### Testing and Certification

#### Recommended next exam or course

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

Red Hat OpenShift Installation Lab (DO322)

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	Configure enterprise authentication	Manage cluster monitoring and metrics
Demonstrate that OpenShift is Kubernetes by deploying Kubernetes-native applications on OpenShift.	Integrate OpenShift with enterprise identity providers.	Configure and manage the OpenShift monitoring stack.
Introduce automation on OpenShift	Configure trusted TLS certificates	Provision and inspect cluster logging
Automate OpenShift administration tasks using bash scripts and Ansible playbooks.	Configure OpenShift with trusted TLS certificates for external access to cluster services and applications.	Deploy, query, and troubleshoot cluster-wide logging.
Manage operators with OpenShift	Configure dedicated node pools	Recover failed worker nodes
Deploy Kubernetes Operators and configure OpenShift cluster operators.	Configure a subset of the cluster nodes for special workloads.	Inspect, troubleshoot, and remediate worker nodes in a variety of failure scenarios.
Implement GitOps with Jenkins	Configure persistent storage	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..
Implement a GitOps workflow using containerized Jenkins to administer an OpenShift cluster.	Configure storage providers and storage classes to ensure cluster user access to persistent storage.	

## 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 20 (0) 2 2269 1982 or 16142

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