Red Hat Training and Certification

# DO380
# Red Hat OpenShift Administration III: Scaling Deployments in the

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 configure and manage OpenShift clusters at scale to address increasing and special demands from applications and ensure reliability, performance, and availability.

This course is based on Red Hat® OpenShift Container Platform 4.14.

**Course content summary**

- Manage OpenShift cluster operators and add operators.
- Implement GitOps workflows using OpenShift GitOps operator.
- Integrate OpenShift with enterprise authentication.
- Query and visualize cluster-wide logs, metrics, and alerts.
- Backup and restore application settings and data with OpenShift APIs for Data Protection (OADP).
- Manage machine pools and machine configurations.

**Target Audience**

- Primary: Platform Engineers, System Administrators, Cloud Administrators, and other infrastructure-related IT roles who are responsible for implementing and managing infrastructure for applications.
- Secondary: Enterprise Architects, Site Reliability Engineers (SRE), DevOps Engineers, and other application-related IT roles who are responsible for designing infrastructure for applications.

**Prerequisites for this course**

- 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.

**Outline for this course**

- **Authentication and Identity Management**
  Configure OpenShift clusters to authenticate by using LDAP and OIDC enterprise identity systems and to recognize groups that those systems define.

- **Backup, Restore, and Migration of Applications with OADP**
  Backup and restore application settings and data with OpenShift APIs for Data Protection (OADP).

- **Cluster Partitioning**
  Configure a subset of cluster nodes to be dedicated to a type of workload.

- **Pod Scheduling**
  Configure workloads to run on a dedicated set of cluster nodes and prevent other workloads from using those cluster nodes.

- **OpenShift GitOps**
  Deploy OpenShift GitOps for managing clusters and applications.

- **OpenShift Monitoring**
  Troubleshoot performance and availability issues with applications and clusters.

- **OpenShift Logging**
  Deploy OpenShift logging and query log entries from workloads and cluster nodes.

**As a result of attending this course,**

- 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:
- Configure pools of cluster nodes with special configurations, and ensure that only the workloads that are intended for those pools are scheduled on those nodes.
- Configure enterprise authentication and group management with legacy LDAP and cloud-native OpenID Connect (OIDC) identity management systems.
- Deploy, manage, and query OpenShift logging and configure log forwarding to external log aggregators and Security Information and Event Management (SIEM) systems.
- Automate cluster configuration and application deployment by using OpenShift GitOps.
- Troubleshoot application and cluster performance and availability issues by using OpenShift Monitoring.
- Configure and automate application-level backups using OpenShift APIs for Data Protection (OADP).

Course reference: https://www.redhat.com/en/services/training/do380-red-hat-openshift-administration-iii-scaling-deployments-in-the-enterprise?section=overview