

# Container Adoption Boot Camp for Administrators (DO700)

## Course Outline

### **Get started with container technology**

Describe how applications can run in containers orchestrated by OpenShift Container Platform.

### **Create containerized services**

Provision a service using container technology.

### **Manage containers**

Manipulate pre-built container images to create and manage containerized services.

### **Manage container images**

Manage the life cycle of a container image from creation to deletion.

### **Create custom container images**

Design and code a Dockerfile to build a custom container image.

### **Deploy containerized applications on OpenShift**

Deploy single container applications on OpenShift Container Platform.

### **Deploying multi-container applications**

Deploy applications that are containerized using multiple container images.

### **Publish enterprise container images**

Interact with an enterprise registry and publish container images to it.

### **Deploying multi-container applications**

Deploy multi-container applications using Helm charts and Kustomize.

### **Managing application deployments**

Monitor application health and implement various deployment methods for cloud-native applications.

### **Describing the Red Hat OpenShift Container Platform**

Describe the architecture of OpenShift Container Platform.

### **Verify the health of a cluster**

Describe OpenShift installation methods and verify the health of a newly installed cluster.

### **Configuring authentication and authorization**

Configure authentication with the HTPasswd identity provider and assign roles to users and groups.

### **Configuring application security**

Restrict permissions of applications using security context constraints and protect access credentials using secrets.

### **Configuring OpenShift networking for applications**

Troubleshoot OpenShift software-defined networking (SDN) and configure network policies.

### **Controlling pod scheduling**

Control the nodes on which a pod runs.

### **Describing cluster updates**

Describe how to perform a cluster update.

### **Managing a cluster with the web console**

Manage a Red Hat OpenShift cluster using the web console.

### **Moving from Kubernetes to OpenShift**

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

### **Introducing automation with OpenShift**

Automate OpenShift using scripts and Ansible playbooks.

### **Managing OpenShift operators**

Manage operators and OpenShift cluster operators.

### **Implementing GitOps with Jenkins**

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

### **Configuring enterprise authentication**

Configure OpenShift integration with enterprise identity providers.

### **Configuring trusted TLS certificates**

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

### **Configuring dedicated node pools**

Add nodes to an OpenShift cluster with custom configurations.

### **Configuring persistent storage**

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

**Managing cluster monitoring and metrics**

Configure and manage the OpenShift monitoring stack.

**Provisioning and inspecting cluster logging**

Deploy and query cluster-wide logging, and diagnose common issues using tools.

**Recovering failed worker nodes**

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