Red Hat Container Adoption Boot Camp for Administrators (DO700)

ID DO700 **Price** 10,200.— €(excl. tax) **Duration** 10 days

Course Overview

Supporting the infrastructure for adoption of container technology and container-native applications, Kubernetes, and DevOps practices

The Container Adoption Boot Camp for Administrators (DO700) immerses you in intensive, hands-on management of container-native applications deployed on Red Hat's implementation of Kubernetes, Red Hat® OpenShift® Container Platform, at enterprise scale. This course is for those seeking to make a quantum leap in their digital transformation journey. Making this shift requires the ability to support a growing number of clusters, stakeholders, applications, and users to achieve large-scale deployments. As part of enrollment, you will receive one year of Red Hat Learning Subscription Standard, which gives you unlimited access to all of our courses online, plus up to five certification exams and two retakes.

This collection of courses is based on Red Hat OpenShift Container Platform 4.10.

Following course completion, you will receive a 45-day extended access to hands-on labs for any course that includes a virtual environment.

Who should attend

System Administrators, Cloud Engineers, and Site Reliability Engineers (SREs) interested in adopting container and Kubernetes technologies.

Prerequisites

Become a Red Hat Certified System Administrator (RHCSA), or demonstrate equivalent experience

Course Objectives

Impact on the organization

This Bootcamp is intended to provide container-novice administrators with the foundational and advanced skills needed to configure, manage, and automate the Red Hat OpenShift Container Platform to deploy containerized applications that are highly available, resilient, and scalable. Red Hat OpenShift Container Platform enables rapid application development and deployment, as well as portability of an application across environments. The platform also offers simplified application scaling, administration, and maintenance of adapted or cloud-native applications.

Impact on the individual

As a result of attending this course, you should be able to configure and manage a Red Hat OpenShift Container Platform 4 clusters at scale, including:

- Configure security controls for users, applications, and networking.
- Integrate OpenShift with enterprise authentication, storage, CI/CD, and GitOps systems to improve productivity of IT operations and compliance with organization’s standards.
- Troubleshoot techniques to identify issues with containerized applications, cluster operators and compute capacity.

Course Content

- Introduction to Containers, Kubernetes, and Red Hat OpenShift
- Manage local containers and building container images
- Deploy and troubleshoot containerized applications for OpenShift
- Control access to projects using role-based access control (RBAC)
- Control resource usage through quotas and limits
- Isolate applications though network policies
- Automate OpenShift administration tasks using Ansible and

Jenkins
- Provision persistent storage tailored for application requirements
- Manage monitoring metrics and alerts
- Deploying and configuring log aggregation

Detailed 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.

About Fast Lane

Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

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Germany
Fast Lane Institute for Knowledge Transfer GmbH
Tel. +49 40 25334610
info@flane.de / www.flane.de

Austria
ITLS GmbH
(Partner of Fast Lane)
Tel. +43 1 6000 8800
info@itls.at / www.itls.at

Switzerland
Fast Lane Institute for Knowledge Transfer (Switzerland) AG
Tel. +41 44 8325080
info@flane.ch / www.flane.ch