

Red Hat OpenShift Installation Lab

Course Duration: 24 Hours

Course Code: DO322

1. Course Overview

The **Red Hat OpenShift Installation Lab** course is a hands-on lab-focused training designed to provide IT professionals with the knowledge and skills required to plan, configure, and install Red Hat OpenShift Container Platform clusters. This course emphasizes practical experience with different installation methods, including installer-provisioned infrastructure (IPI) and user-provisioned infrastructure (UPI), and prepares participants to handle real-world deployment challenges in production environments.

2. What You'll Learn?

By the end of this course, you will be able to:

- Understand **OpenShift cluster architecture** and installation requirements.
- Plan and prepare infrastructure for OpenShift deployments.
- Perform **IPI (Installer-Provisioned Infrastructure)** installations.
- Configure **UPI (User-Provisioned Infrastructure)** installations for custom environments.
- Integrate OpenShift with **Red Hat Enterprise Linux CoreOS (RHCOS)**.
- Configure networking, storage, and authentication during installation.
- Troubleshoot installation failures and verify successful deployments.
- Apply best practices for **enterprise-grade OpenShift installations**.

3. Target Audience

This course is intended for:

- **System administrators** responsible for installing and managing OpenShift clusters.
- **Cloud administrators** deploying OpenShift in hybrid or multi-cloud environments.
- **DevOps and SRE teams** tasked with managing OpenShift infrastructure.
- **IT architects** planning enterprise OpenShift deployments.

4. Pre-Requisites

Participants should have:

- Completed **Red Hat OpenShift Administration I (DO180/DO280 equivalent)** or equivalent knowledge.
- Experience with **Linux system administration**.
- Familiarity with **containers, Kubernetes, and cloud infrastructure**.
- Basic knowledge of **networking and storage concepts**.

5. Course Content

Module 1: Introduction to OpenShift Installation

- OpenShift cluster architecture and installation workflows
- Understanding IPI vs UPI deployment models

Module 2: Preparing the Environment

- Planning installation prerequisites

- Configuring DNS, load balancers, and infrastructure requirements

Module 3: Installer-Provisioned Infrastructure (IPI)

- Automated installation workflow
- Deploying clusters with minimal manual configuration

Module 4: User-Provisioned Infrastructure (UPI)

- Manual infrastructure configuration
- Deploying OpenShift on custom environments (bare metal, cloud, virtualization)

Module 5: Post-Installation Configuration

- Verifying installation success
- Configuring authentication, networking, and storage

Module 6: Troubleshooting and Best Practices

- Handling common installation issues
- Logs and debugging installation failures
- Best practices for production-grade deployments