

Creating and Configuring Production ROSA Clusters

Course Duration: 24 Hours

Course code: CS220

1. Course Overview

The Creating and Configuring Production ROSA Clusters (CS220) course is designed for cloud engineers and IT operations staff who want to deploy and manage production-ready Red Hat OpenShift Service on AWS (ROSA) clusters. Participants learn to configure high-availability clusters, manage networking and security policies, and integrate with external services. The course emphasizes hands-on experience in scaling applications, optimizing resources, and implementing backup and recovery strategies. By the end, learners will be able to confidently deploy, operate, and maintain robust ROSA clusters in enterprise environments.

2. What you'll learn?

By the end of this course, learners will:

This course is designed to provide participants with the practical skills and knowledge needed to successfully create, configure, and manage production-grade Red Hat OpenShift Service on AWS (ROSA) clusters. Learners will explore best practices for deploying highly available, secure, and scalable ROSA environments while integrating AWS-native services. By the end of this course,

participants will be equipped to support enterprise workloads on ROSA confidently and efficiently.

3. Target Audience

- Cloud engineers and architects
- Kubernetes administrators
- DevOps engineers
- Site reliability engineers (SREs)
- Platform engineers managing OpenShift environments
- Professionals planning to deploy OpenShift on AWS (ROSA) in production

4. Pre-Requisites

Participants should have:

- To get the most value from this course, participants should already have a basic understanding of OpenShift architecture and container orchestration, along with familiarity with AWS concepts. Prior hands-on experience in Kubernetes administration will also help learners connect course topics to real-world scenarios.
- Working knowledge of OpenShift fundamentals
- Familiarity with Kubernetes administration
- Basic understanding of AWS infrastructure services
- Experience with Linux command-line operations (recommended)

5. Course content

Module 01 – Overview of ROSA Production Clusters

- Introduction to Production-Ready ROSA Clusters
- Architecture, Components, and High Availability
- Key Considerations for Enterprise Deployments

Module 02 – Planning and Preparing the Environment

- Infrastructure Requirements and Sizing
- Networking and Security Planning
- Preparing AWS and Red Hat Accounts

Module 03 – Deploying Production ROSA Clusters

- Creating and Configuring ROSA Clusters
- Integrating GitHub Authentication and Red Hat Services
- Validating Cluster Deployment

Module 04 – Managing Networking and Security

- Configuring Cluster Networking and Subnets
- Implementing Security Policies and Role-Based Access Control
- Integrating with External Services and APIs

Module 05 – Scaling and Resource Optimization

- Scaling Cluster Nodes and Applications
- Monitoring Performance and Resource Usage
- Optimizing Costs and Cluster Efficiency

Module 06 – Backup, Recovery, and Maintenance

- Implementing Backup and Restore Strategies
- Upgrading ROSA Clusters and Components
- Best Practices for Ongoing Cluster Maintenance

