

# Integrating ROSA Applications with AWS Services (CS221)

ID CS221 Price on request Duration 2 days

## Who should attend

- **Primary:** ROSA Administrators, Platform Engineers, Cloud Administrators, System Administrators and other infrastructure-related IT roles who are responsible for providing and supporting infrastructure for applications deployed on AWS
- **Secondary:** Enterprise Architects, Site Reliability Engineers, DevOps Engineers, and other application-related IT roles who are responsible for designing infrastructure for applications deployed on AWS

## Prerequisites

- [Creating and Configuring Production ROSA Clusters \(CS220\)](#) or equivalent experience: “I know how to create and access a private ROSA cluster”
- AWS administration at the level of either AWS Certified SysOps Administrator - Associate or AWS Certified Solutions Architect - Associate, or equivalent experience: “I know how to manage AWS infrastructure services”
- Basic knowledge of OpenShift from DO080 Technical Overview: “I know basic concepts of OpenShift and containers”
- It is recommended that learners also enroll in the Red Hat Certified OpenShift Administration certification courses in addition to taking CS220 and CS221

## Course Objectives

### Impact on the Organization

- Red Hat OpenShift Service on AWS (ROSA) is a turnkey application platform that provides a managed Red Hat OpenShift service that runs natively on Amazon Web Services (AWS) to enable organizations to increase operational efficiency, refocus on innovation, and quickly build, deploy, and scale applications. Red Hat OpenShift is the hybrid cloud platform that brings operational consistency to on-premise and different cloud environments.
- Organizations adopting ROSA are typically existing AWS customers with skills on using AWS services for a variety of business scenarios and need to integrate managed

OpenShift clusters with their pre-existing AWS environments. These organizations are usually very security-conscious and require strong access controls and network security for all of their AWS services, including their ROSA clusters.

### Impact on the Individual

After completing CS221, students can integrate applications deployed on a private ROSA cluster in a way that cluster administrators and platform engineers retain control of credentials and roles required by applications to access AWS services, instead of exposing those credentials to application developers.

## Course Content

### Integrate applications on ROSA with AWS services while keeping a good security posture.

Integrate applications deployed on ROSA with AWS services in a way that cluster administrators and platform engineers retain control of credentials and roles required by applications to access AWS services instead of exposing those credentials to application developers.

## Course Content Summary

- Integrate with external container registries such as ECR and Quay.io to deploy applications from private image repositories
- Configure storage classes to enable application access to different EBS volume types
- Configure storage classes and security contexts to enable application access to shared EFS storage volumes
- Configure pod identity using STS/IRSA to enable application access to AWS services such as database (Aurora), integration (SQS), and object storage (S3)
- Provision AWS services for applications using the AWS Controllers for Kubernetes (ACK)
- Federate and query application metrics (application workload monitoring) with Amazon Managed Prometheus Service
- Aggregate and query structured application logs with

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Amazon CloudWatch

- Configure custom domains and TLS certificates for secure public access to applications

## Technology considerations

- Internet access is required to access AWS services by using the AWS console and the AWS CLI. It is also required to access the Red Hat Hybrid Cloud Console and associated Red Hat cloud services.
- Students must possess an active Red Hat customer portal account or a free Red Hat Developer program membership.
- This course assumes a PrivateLink STS ROSA cluster and a bastion host to access the cluster, as configured in Chapter 01 of [Creating and Configuring Production ROSA Clusters \(CS220\)](#). Students must either perform these activities from CS220 prior to starting CS221. Ch0 in the CS221 course book covers these activities and provides links to cloud formation templates.

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## Training Centres worldwide



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