

AWS Certified DevOps Engineer – Associate

The AWS Certified DevOps Engineer – Professional exam is intended for individuals who perform a DevOps engineer role with two or more years of experience provisioning, operating, and managing AWS environments.

Course Duration:

- 36 Hr.

Project Duration:

- 8 Hr.

Course Material:

- Lectures (PDF)
- Lab Manual (PDF)
- Recorded Video

Abilities Validated by the Certification

- Implement and manage continuous delivery systems and methodologies on AWS
- Implement and automate security controls, governance processes, and compliance validation
- Define and deploy monitoring, metrics, and logging systems on AWS
- Implement systems that are highly available, scalable, and self-healing on the AWS platform
- Design, manage, and maintain tools to automate operational processes

Detail Syllabus

Introduction

- Introduction to Cloud Computing and AWS services
- Private vs Public Cloud
- History of AWS

Simple Storage Service (S3)

- Introduction to Simple Storage Service(S3)
- How to create Bucket
- How to store objects
- Bucket properties and Object Properties
- How to create Bucket policy
- Static website Hosting in S3
- Versioning and Life cycle creation for objects
- S3 browser

Elastic Compute Cloud (EC2)

- Introduction to Elastic Compute Cloud (EC2)
- Launching EC2 server
- Elastic Block Store (EBS)
- Elastic IP creation
- Amazon Machine Image (AMI)

- Snapshots creation from Volume

Relational Database Service (RDS)

- Introduction to Relational Database Service (RDS)
- Creating RDS instance
- Connect RDS MySQL Workbench

Identity and Access Management (IAM)

- Introduction to Identity and Access Management (IAM)
- Creating users and Groups
- Creating Custom policies
- Giving access to users to services using custom policies
- Cloud Formation

Introduction to the DevOps

- What is Devops
- DevOps: Continuous Delivery and Benefits
- DevOps: Lean thinking, a change of culture
- Version Control (GIT)
- Git Commands Overview
- Demo: GIT commands and github

Introduction to Cloud Formation

- Introduction to Cloud Formation
- Designing a template in Cloud Formation
- Creating Stack using designed Cloud Formation templates
- Create a design with AWS solution Architect Center

Automation and Configuration Management

- Introduction to Automation and Configuration Management
- Ansible: introduction
- Ansible: Installation on Amazon EC2
- Ansible: Installation demo
- Ansible: First Playbook
- Ansible: First Playbook demo
- Ansible: Provisioning EC2 using playbook
- Ansible: Roles

Continuous Integration

- Introduction to Continuous Integration
- Jenkins: Introduction and installation
- Jenkins: Prepare Play App
- Jenkins: Build app
- Jenkins: building applications
- Jenkins: install and build demo
- Jenkins: Pipeline with Batch file
- Jenkins Pipeline with GitHub
- Using AWS CodePipeline

- Using AWS CodeCommit and AWS CodeBuild

AWS CI/CD for Developer

- Developer Theory
- What is CI/CD
- AWS CodeCommit
- Create and use AWS CodeCommit repositories for source control
- AWS CodeDeploy
- CodeDeploy Lifecycle Event Hooks
- AWS CodePipeline
- Automate your CI/CD process with AWS CodePipeline
- Use AWS CodeDeploy to automate your deployments to EC2
- Release and roll back using a blue/green deployment strategy
- Elastic Container Service
- Docker and ECS

Containerization

- Introduction to microservices
- Introduction to docker
- Docker demo
- Docker Architecture
- Docker Images
- Docker Networking
- Docker Volumes.
- AKS and ECS