DevOps Engineering on AWS

In this course, you will learn the most common DevOps patterns to develop, deploy, and maintain applications on the AWS platform. We will explore the core principles of the DevOps methodology and examine a number of use cases applicable to startup, small- to medium-sized business, and enterprise development scenarios.

In this course, you will learn how to:

- Use the principal concepts and practices behind the DevOps methodology
- Design and implement an infrastructure on AWS that supports one or more DevOps development projects
- Use AWS CloudFormation and AWS OpsWorks to deploy the infrastructure necessary to create development, test, and production environments for a software development project
- Use AWS CodeCommit and AWS CodeBuild to understand the array of options for enabling a continuous integration (CI) environment on AWS
- Use AWS CodePipeline to design and implement a continuous integration and continuous delivery (CI/CD) pipeline on AWS
- Use AWS CodeStar to manage all software development activities in one place
- Implement several common continuous deployment (CD) use cases using AWS technologies, including blue/green deployment and A/B testing
- Distinguish between the array of application deployment technologies available on AWS, including AWS CodeDeploy, AWS OpsWorks, AWS Elastic Beanstalk, Amazon Elastic Container Service (Amazon ECS), and Amazon Elastic Container Registry (Amazon ECR), and decide which technology best fits a given scenario
- Use Amazon EC2 Systems Manager for patch management
- Leverage automated testing in different stages of a CI/CD pipeline
- Fine-tune the applications you deliver on AWS for high performance, and use AWS tools and technologies to monitor your application and environment for potential issues

Who Should Attend?

This course is intended for system administrators and software developers.

Prerequisites

We recommend that attendees of this course have the following prerequisites:

- Systems Operations on AWS or Developing on AWS
- Working knowledge of one or more high-level programming languages, such as C#, Java, PHP, Ruby, or Python
- Intermediate knowledge of administering Linux or Windows systems at the command-line level
- Working experience with AWS using both the AWS Management Console and the AWS Command Line Interface (AWS CLI)

Delivery Method

This course is delivered through a mix of:

- Classroom training
- Hands-on labs

Hands-on Activity

This course allows you to test new skills and apply knowledge to your working environment through a variety of practical exercises.

Course Outline

- DevOps and DevSecOps
- The AWS Command Line Interface (AWS CLI)
- Deployment strategies and developer tools
- Infrastructure as Code (IaC)
- AWS developer tools
- Automated testing on AWS
- Configuration management
- Building AMIs and Amazon EC2 Systems Manager
- Containers: Docker and Amazon ECS