

**Module Title : DevOps Engineering on AWS**

**Duration : 3 days**

## Course Description

DevOps Engineering on AWS demonstrates how to use the most common DevOps patterns to develop, deploy and maintain applications on AWS. The course covers the core principles of the DevOps methodology and examines a number of use cases applicable to startup, small-medium business, and enterprise development scenarios.

## Course Objectives

This course is designed to teach you 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
- Set up Git on AWS and understand the array of options for enabling a Continuous Integration environment on AWS
- Use the core principles of Continuous Integration and Continuous Deployment
- Implement several common Continuous Deployment 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, and Amazon EC2 Container Service), and decide which technology best fits a given scenario
- 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

## Intended Audience

This course is intended for:

- System Administrators
- Software Developers

## Prerequisites

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

- Attended System Operations on AWS course
- Attended Developing on AWS course
- Working knowledge of one or more high-level programming languages (C#, Java, PHP, Ruby, Python, etc.)
- 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)

## Bring Your Own Device

Please note that this class requires you to bring your own device. Plan to come to class with the following:

- A notebook computer with Wi-Fi (labs cannot be completed on an iPad or tablet device)
- Administrator access to the computer, if Windows
- Chrome, Firefox, or Safari
- Smart device / tablet to access course literature (optional)

## Course Outline

### Day 1

- What is DevOps?
- Infrastructure as Code, Part 1: Design and Security
- Infrastructure as Code, Part 2: CloudFormation and Configuration Management

### Day 2

- Continuous Integration in the Cloud
- Continuous Delivery on AWS
- Deploying Applications on AWS, Part 1

### Day 3

- Deploying Applications on AWS, Part 2
- Putting It All Together
- Performance-Tuning Your Deployments
- Administering and Automating Your Infrastructure