

**Module Title** : **Systems Operations on AWS**

**Duration** : **3 days**

## Course Description

The Systems Operations on AWS course is designed to help individuals operate highly available and scalable infrastructure on the AWS platform. In this course, we demonstrate how to effectively manage and support AWS resources. We cover concepts such as provisioning infrastructure, deploying applications, tracking costs, monitoring utilisation, and creating backups.

## 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 (IE not supported)

## Course Objectives

This course is designed to teach you how to:

- Use standard AWS infrastructure features such as Amazon Virtual Private Cloud (VPC), Amazon Elastic Compute Cloud (EC2), Elastic Load Balancing, and Auto Scaling from the command line
- Use AWS CloudFormation and other automation technologies to produce stacks of AWS resources that can be deployed in an automated, repeatable fashion
- Build functioning virtual private networks with Amazon VPC from the ground up using the AWS Management Console
- Deploy Amazon EC2 instances using command line calls and troubleshoot the most common problems with instances
- Monitor the health of Amazon EC2 instances and other AWS services
- Manage user identity, AWS permissions, and security in the cloud
- Manage resource consumption in an AWS account using tools such as Amazon CloudWatch, tagging, and Trusted Advisor
- Select and implement the best strategy for creating reusable Amazon EC2 instances
- Configure a set of Amazon EC2 instances that launch behind a load balancer, with the system scaling up and down in response to demand
- Edit and troubleshoot a basic AWS CloudFormation stack definition

## Intended Audience

Systems Administrators, Software Developers, especially those in a Developer Operations (DevOps) role

## Prerequisites

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

- Attended the AWS Essentials course
- Background in either software development or systems administration
- Some experience with maintaining operating systems at the command line (shell scripting in Linux environments, cmd or PowerShell in Windows)
- Basic knowledge of networking protocols (TCP/IP, HTTP)

## 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

Note: course outline may vary slightly based on the regional location and/or language in which the class is delivered.

This course will cover the following concepts on each day:

### Day 1

- System Operations on AWS Overview
- Networking in the Cloud
- Computing in the Cloud

### Day 2

- Storage and Archiving in the Cloud
- Monitoring in the Cloud
- Managing Resource Consumption in the Cloud

### Day 3

- Configuration Management in the Cloud
- Creating Scalable Deployments in the Cloud
- Creating Automated and Repeatable Deployments