

## Systems Operations on AWS

### Summary

Length: 24 hours Level: Experienced

This course teaches systems operators and anyone performing system operations functions how to install, configure, automate, monitor, secure, maintain and troubleshoot the services, networks, and systems on AWS necessary to support business applications. The course also covers specific AWS features, tools, and best practices related to these functions. This course may earn a Credly Badge.

### Learning Objectives

In this course, you will learn to:

Recognize the AWS services that support the different phases of Operational Excellence, a WellArchitected Framework pillar.

Manage access to AWS resources using AWS Accounts and Organizations and AWS Identity and Access Management (IAM).

Maintain an inventory of in-use AWS resources using AWS services such as AWS Systems Manager, AWS CloudTrail, and AWS Config.

Develop a resource deployment strategy utilizing metadata tags, Amazon Machine Images, and Control tower to deploy and maintain an AWS cloud environment.

Automate resource deployment using AWS services such as AWS CloudFormation and AWS Service Catalog.

Use AWS services to manage AWS resources through SysOps lifecycle processes such as deployments and patches.

Configure a highly available cloud environment that leverages AWS services such as Amazon Route 53 and Elastic Load Balancing to route traffic for optimal latency and performance.

Configure AWS Auto Scaling and Amazon Elastic Compute Cloud auto scaling to scale your cloud environment based on demand.

Use Amazon CloudWatch and associated features such as alarms, dashboards, and widgets to monitor your cloud environment.

Manage permissions and track activity in your cloud environment using AWS services such as AWS CloudTrail and AWS Config.

Deploy your resources to an Amazon Virtual Private Cloud (Amazon VPC), establish necessary connectivity to your Amazon VPC, and protect your resources from disruptions of service.

State the purpose, benefits, and appropriate use cases for mountable storage in your AWS cloud environment.

Explain the operational characteristics of object storage in the AWS cloud, including Amazon Simple Storage Service (Amazon S3) and Amazon S3 Glacier.

Build a comprehensive costing model to help gather, optimize, and predict your cloud costs using services such as AWS Cost Explorer and the AWS Cost & Usage Report.

### Course Outline

#### 1. Day 1

System Operations on AWS Overview

Networking in the Cloud

Computing in the Cloud

#### 2. Day 2

Storage and Archiving in the Cloud

Monitoring in the Cloud

Managing Resource Consumption in the Cloud

#### 3. Day 3

Configuration Management in the Cloud

Creating Scalable Deployments in the Cloud

Creating Automated and Repeatable Deployments

### Audience

This course is intended for System administrators and operators who are operating in the AWS Cloud, Informational technology workers who want to increase the system operations knowledge.

### **Prerequisites**

We recommend that attendees of this course have the following prerequisites: Successfully completed the AWS Technical Essentials course  
Background in either software development or systems administration  
Proficiency in maintaining operating systems at the command line, such as shell scripting in Linux environments or cmd/PowerShell in Windows  
Basic knowledge of networking protocols (TCP/IP, HTTP)