Cloud Operations on AWS (Systems Operations on AWS) Training

Duration: **3 Day**

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Overview

The **{*training}** course provides system administrators, cloud operators, and IT professionals with the knowledge and hands-on experience required to manage, automate, monitor, and optimise cloud infrastructure on AWS. Aligned with the **Operational Excellence** pillar of the **AWS Well-Architected Framework**, the course focuses on the tools, processes, and best practices used to operate modern cloud environments efficiently.

Participants will learn how to use services such as **AWS Systems Manager**, **AWS CloudFormation**, **Amazon CloudWatch**, **AWS CloudTrail**, **AWS Config**, **Amazon Route 53**, and **Elastic Load Balancing** to automate infrastructure management, monitor system health, improve security, and optimise operational performance. The course also covers key topics including high availability, scalability, networking, backup and recovery, and cost optimisation.

Through hands-on labs and real-world scenarios, learners will gain practical experience managing secure, resilient, and high-performing AWS environments while applying automation and operational best practices across cloud infrastructure workloads.

Prerequisites

Participants should have:

- A background in systems administration or software development
- Experience with Linux shell scripting, CMD, or PowerShell
- Basic knowledge of TCP/IP and HTTP protocols
- Completion of **AWS Technical Essentials** is recommended

Who Should Attend

This course is designed for:

- **System Administrators**
- **Cloud Operations Engineers**
- **AWS SysOps Administrators**
- **Cloud Engineers**
- **DevOps Professionals**
- **Cloud Support Engineers**
- IT teams responsible for AWS infrastructure management

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What You Will Learn

By the end of this {*training}, you will have gained knowledge and skills in the following areas:

- Apply Operational Excellence principles from the **AWS Well-Architected Framework**.
- Manage access using **AWS IAM**, AWS Accounts, and AWS Organizations.
- Inventory and audit resources using **AWS Systems Manager**, **AWS CloudTrail**, and **AWS Config**.
- Deploy infrastructure using **AWS CloudFormation** and **AWS Service Catalog**.
- Implement Infrastructure as Code practices.
- Configure highly available systems using **Amazon Route 53** and **Elastic Load Balancing**.
- Build scalable architectures using **AWS Auto Scaling**.
- Monitor cloud environments using **Amazon CloudWatch**.
- Improve cloud security and governance.
- Optimise AWS costs and resource utilisation.

Outline

Introduction to Cloud Operations on AWS

- Cloud Operations Fundamentals
- **AWS Well-Architected Framework**
- AWS Well-Architected Tool

Access Management

- **AWS Identity and Access Management (IAM)**
- AWS Organizations
- Account and Resource Governance

System Discovery and Inventory

- AWS Service Interaction
- Automated Discovery
- **AWS Systems Manager**
- **AWS Config**

Resource Deployment and Updates

- Tagging Strategies
- **Amazon Machine Images (AMI)**
- **AWS Control Tower**

Infrastructure Automation

- **AWS CloudFormation**
- **AWS Service Catalog**
- Infrastructure as Code

Resource Management

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- **AWS Systems Manager**
- Operational Automation
- Patch Management

Highly Available Architectures

- **Elastic Load Balancing (ELB)**
- **Amazon Route 53**
- High Availability Design

Automated Scaling

- **AWS Auto Scaling**
- **Amazon EC2 Auto Scaling**
- Spot Instances
- AWS License Manager

Monitoring and Operational Health

- **Amazon CloudWatch**
- Alarms, Dashboards, and Widgets
- Infrastructure Monitoring
- Application Monitoring

Security and Auditing

- **AWS CloudTrail**
- **AWS Config**
- Security Monitoring
- Automated Incident Response

Networking Operations

- **Amazon VPC**
- Secure Network Design
- Hybrid Connectivity
- Network Management

Storage Operations

Mountable Storage

- **Amazon EBS**
- Snapshot Management
- **Amazon Data Lifecycle Manager**
- Backup and Recovery

Object Storage

- **Amazon S3**
- **Amazon S3 Glacier**
- Lifecycle Policies

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Cost Optimisation and Reporting

- **AWS Cost Explorer**
- AWS Cost & Usage Reports
- Spend Management Controls
- Cloud Cost Optimisation Strategies