AWS Cloud Operations

Duration: 3 days
Audience: Professionnel TI

Who is this training for?

System administrators and operators who work in the AWS Cloud. Computer scientists wishing to deepen their knowledge of systems operations

Training objectives

Upon completion of this course, participants will be able to:

- Configure, deploy, and operate AWS resources using the best practices of the Well-Architected Framework.
- Automate infrastructure operations using tools such as CloudFormation and Systems Manager.
- Monitor, maintain, and optimize the performance of systems and applications in AWS.
- Implement security, access management, and compliance mechanisms in a cloud environment.
- Diagnose and resolve incidents to ensure business continuity.

Summary

This course teaches system administrators, operators, and anyone performing day-to-day operations functions in the AWS Cloud how to install, configure, automate, monitor, secure, maintain, and troubleshoot the services, networks, and systems on AWS needed to support enterprise applications. The course also covers AWS-specific features, tools, and best practices related to these functions.

Course outline

In this course, you will learn how to:

Module 1: Introduction to Cloud Operations on AWS

- What is Cloud Operations? • AWS Well-Architected Framework
- AWS Well-Architected Tool

Module 2: Access Management

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- Identity and Access Management (IAM) on AWS
- AWS Resources, Accounts, and Organizations

Module 3: System Discovery

- Ways to Interact with AWS Services
- Tools to Automate Resource Discovery
- Inventory with AWS Systems Manager and AWS Config
- Lab Tutorials: Auditing AWS Resources with AWS Systems Manager and AWS Config

Module 4: Deploy and Update Resources

- Cloud Operations in Deployments
- Tagging Policies
- Deploying Using Amazon Machine Images (AMIs)
- Deploying Using AWS Control Tower

Module 5: Automating Resource Deployment

- Deploying with AWS CloudFormation
- Deploying Using AWS Service Catalog
- Hands-on Lab: Infrastructure as Code

Module 6: Manage Resources

- AWS Systems Manager
- Lab Tutorials: Operations as Code

Module 7: Configure Highly Available Systems

- Distribute Traffic with Elastic Load Balancing
- Amazon Route 53

Module 8: Automate Scaling

- Scale with AWS Auto Scaling

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- Scale with Spot Instances
- Manage Licenses with AWS License Manager

Module 9: Monitor and Maintain System Health

- Monitor and Maintain Healthy Workloads
- AWS Infrastructure Monitoring
- Application Monitoring
- Hands-on Lab: Application and Infrastructure Monitoring

Module 10: Data Security and System Auditing

- Maintaining a Strong Foundation of Identity and Access
- Implementing Detection Mechanisms
- Automating Incident Remediation

Module 11: Operate secure and resilient networks

- Build a secure Amazon Virtual Private Cloud (Amazon VPC)
- Networking beyond the VPC

Module 12: Mountable Storage

- Configure Amazon Elastic Block Store (Amazon EBS)
- Scale Amazon EBS volumes for performance
- Use Amazon EBS snapshots
- Use Amazon Data Lifecycle Manager to manage your AWS resources
- Create backup and data recovery plans
- Configure on-system storage Shared Files
- Lab Hands-on: Automation with AWS Backup for Archiving and Recovery

Module 13: Object Storage

- Deploy Amazon Simple Storage Service (Amazon S3)
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Storage Lifecycle Management on Amazon S3

Module 14: Cost Reporting, Alerting, and Optimization

- AWS Cost Awareness
- Using Cost Management Controls
- Optimizing Your Spend and Usage of AWS
- Hands-on Lab: Core Lab for CloudOps

Approach and methodology

This course emphasizes a hands-on, operations-oriented approach, combining concept papers with many labs in an AWS environment. Learning is centered on real-world operating scenarios, including automation, monitoring, and troubleshooting of infrastructure. The progression allows you to develop robust operational skills to effectively manage cloud environments in an enterprise context.

Prerequisites

Have successfully completed AWS Technical Essentials classroom training.

Recommendations

- Have experience in software development or systems administration.
- Be proficient in operating system maintenance at the command line level, such as writing shell scripts in Linux environments or cmd/PowerShell in Windows.
- Have basic knowledge of network protocols (TCP/IP, HTTP)

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