

Cloud Operations on AWS

Course Benefits & Agenda



Overview

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Course Benefits

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Agenda

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Overview

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.

Course Benefits

This course is designed to teach the student how 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.

- 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.
- Explain the SysOps and DevOps interdependencies necessary to deploy a microservices application in AWS.
- 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.

Agenda

Day 1

Module	Topic
Module 1	Introduction to System Operations on AWS
Module 2a	Access Management
Module 2b	System Discovery

Module	Topic
Lab 1	Auditing AWS Resources with AWS Systems Manager and AWS Config
Module 3	Deploy and Update Resources
Module 4	Automate Resource Deployment
Lab 2	Infrastructure as Code

Day 2

Module	Topic
Module 5	Manage Resources
Module 6a	Configure Highly Available Systems
Module 6b	Automate Scaling
Module 7	Monitor and Maintain System Health
Lab 3	Monitoring Applications and Infrastructure
Module 8	Security and System Auditing
Lab 4	Implementing IAM permissions boundaries

Day 3

Module	Topic
Module 9	Operate Secure and Resilient Networks
Module 10a	Mountable Storage
Module 10b	Object Storage
Lab 5	Automating with AWS Backup for Archiving and Recovery
Module 11	Cost Reporting, Alerts, and Optimization
Lab 6	Capstone lab for SysOps