



Course Content

Course Description:

In this course, you will cover 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 Objectives:

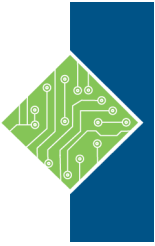
In this course, you will learn to:

- 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.
- And so much more!

Systems Operations on AWS

Course ID #: 1190-201-EC-W

Hours: 21



Prerequisites:

- AWS Technical Essentials
- 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)

Target Audience:

- System administrators and operators who are operating in the AWS Cloud
- Informational technology workers who want to increase their system operations knowledge.

Topics:

Lesson 1: Introduction to System Operations on AWS

- Systems operations
- AWS Well-Architected Framework
- AWS Well-Architected Tool

Lesson 2a: Access Management

- Access management
- Resources, accounts, and AWS Organizations

Lesson 2b: System Discovery

- Methods to interact with AWS services
- Introduction to monitoring services
- Tools for automating resource discovery
- Inventory with AWS Systems Manager and AWS Config
- Troubleshooting scenario

Lab: Auditing AWS Resources with AWS Systems Manager and AWS Config

Lesson 3: Deploy and Update Resources

- Systems operations in deployments
- Tagging strategies
- Deployment using Amazon Machine Images (AMIs)
- Deployment using AWS Control Tower
- Troubleshooting scenario

Lesson 4: Automate Resource Deployment

- Deployment using AWS CloudFormation
- Deployment using AWS Service Catalog
- Troubleshooting scenario

Lab: Infrastructure as Code

Lesson 5: Manage Resources

- AWS Systems Manager
- Troubleshooting scenario

Lab: Operations as Code



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Lesson 6a: Configure Highly Available Systems

- Distributing traffic with Elastic Load Balancing
- Amazon Route 53

Lesson 6b: Automate Scaling

- Scaling with AWS Auto Scaling
- Scaling with Spot Instances
- Managing licenses with AWS License Manager
- Troubleshooting scenario

Lesson 7: Monitor and Maintain System Health

- Monitoring and maintaining healthy workloads
- Monitoring distributed applications
- Monitoring AWS infrastructure
- Monitoring your AWS account
- Troubleshooting scenario

Lab: Monitoring Applications and Infrastructure

Lesson 8: Data Security and System Auditing

- Maintaining a strong identity and access foundation
- Implementing detection mechanisms
- Automating incident remediation
- Troubleshooting scenario

Lab: Implementing IAM permissions boundaries

Lesson 9: Operate Secure and Resilient Networks

- Building a secure Amazon Virtual Private Cloud (Amazon VPC)
- Networking beyond the VPC
- Troubleshooting scenario

Lesson 10a: Mountable Storage

- Configuring Amazon Elastic Block Storage (Amazon EBS)
- Sizing Amazon EBS volumes for performance
- Using Amazon EBS snapshots
- Using Amazon Data Lifecycle Manager to manage your AWS resources
- Creating backup and data recovery plans
- Configuring shared file system storage

Lesson 10b: Object Storage

- Deploying Amazon Simple Storage Service (Amazon S3) with Access Logs, Cross-Region Replication, and S3 Intelligent-Tiering

Lab: Automating with AWS Backup for Archiving and Recovery

Lesson 11: Cost Reporting, Alerts, and Optimization

- Gaining AWS cost awareness
- Using control mechanisms for cost management
- Optimizing your AWS spend and usage

Lab: Capstone lab for SysOps

Register for this class by visiting us at:

www.tcworkshop.com or calling us at 800-639-3535