



## AWS Certified Solution Architect – Associate

### Module 1: Introduction to AWS

- a. What is Cloud?
- b. What is AWS?
- c. Gartner Magic Quadrant
- d. AWS global Infrastructure
- e. Regions & Availability Zones
- f. EDGE Locations
- g. AWS Shared Security Model
- h. Advantages

### Module 2: Compute Services in AWS

- a. EC2
- b. AMI
- c. Instance Types
- d. EBS volumes & Snapshots
- e. EC2 Purchase options & tenancy details
- f. User data & Instance Metadata
- g. Placement Groups
- h. AWS Elastic Beanstalk
- i. Elastic Container Service(ECS)
- j. AWS Lambda
- k. Lab 1,2: EC2 Lab

### Module 3: Networking in AWS

- a. VPC
- b. Subnets
- c. Elastic Network Interface and Elastic IP
- d. Internet Gateway
- e. Route Tables
- f. NAT
- g. VPC Peering
- h. VPC Security
- i. Bastion Host
- j. VPN
- k. Direct Connect
- l. Lab 3: VPC Lab





#### Module 4: Database services in AWS

- a. Database Overview
- b. Responsibilities of Administering a DB
- c. On-premise vs EC2 responsibilities
- d. Hosting a DB on EC2
- e. Relational Database Service(RDS)
- f. Amazon RDS Features
- g. Administration of RDS
- h. On-premise vs EC2 vs RDS
- i. RDS Security & Monitoring
- j. Read Replicas
- k. Amazon Aurora
- l. DynamoDB
- m. Amazon Redshift
- n. Amazon ElastiCache
- o. Cache Engines

#### Module 5: Storage services in AWS

- a. Storage services overview
- b. Storage types
- c. Elastic Block Store(EBS) & EBS types
- d. Instance Store
- e. Elastic File System(EFS)
- f. Simple Storage Service(S3)
- g. S3 Properties
- h. Lifecycle Policies
- i. S3 Events
- j. Storage Classes in S3
- k. S3 Security
- l. Amazon Glacier
- m. Glacier features
- n. AWS Storage Gateway
- o. Storage Gateway Types
- p. AWS Snowball & Snowball Edge
- q. AWS Snowmobile
- r. Lab 4,5,6: EIP, EBS, Snapshots and AMI





## Module 6: AWS Scaling features

- a. Elastic Load Balancer
- b. ELB Benefits
- c. ELB Types
- d. Classic Load Balancer
- e. Application Load Balancer
- f. Network Load Balancer
- g. Comparisons: CLB vs ALB vs NLB
- h. Auto Scaling
- i. Auto Scaling Configuration
- j. Auto Scaling & ELB

## Module 7: Security in AWS

- a. Identity and Access Management (IAM)
- b. IAM Features
- c. IAM terms
- d. IAM Principals
- e. IAM Users
- f. IAM Groups
- g. IAM Role
- h. IAM Access Management: Permissions and Policies
- i. Identity-Based Vs Resource-Based Permissions
- j. Policy types
- k. AWS Key Management Service (KMS)
- l. KMS Encryption
- m. KMS Features
- n. Lab 7: IAM Lab

## Module 8: Monitoring & Alerts

- a. CloudWatch
- b. CloudWatch Alarms
- c. CloudWatch Logs
- d. CloudWatch Events
- e. Cloudtrail
- f. SNS
- g. VPC Flow Logs
- h. S3 Server Access Logging

## Module 9: IaC and Application Services





- a. Cloudformation
- b. CF Template
- c. Simple Queue Service (SQS) MQ
- d. SQS Lifecycle
- e. SQS Types
- f. Message Lifecycle
- g. Amazon Machine Queue (Amazon MQ)
- h. Amazon Simple Workflow Service(SWF)
- i. SWF Concepts

#### **Module 10: Well Architected Framework & DR**

- a. AWS Well-Architected Framework
- b. Five Pillars of the Well-Architected Framework
- c. AWS Well-Architected Tool (AWS WA Tool)
- d. AWS Disaster Recovery
- e. RPO and RTO
- f. DR Key AWS services
- g. DR Scenarios
- h. Backup & Restore
- i. Pilot Light
- j. Warm Standby
- k. Multi-Site
- l. Lab 8: Static Website Hosting with S3

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