

AWS Certified Solutions Architect – Associate

Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud platform. In this course we will start with a broad overview of the AWS platform, and then deep dive into the individual elements of the AWS platform. You will explore Route53, EC2, S3, CloudFront, Auto Scaling, Load Balancing, RDS, RedShift, DynamoDB, EMR, VPC etc. This course is designed to help you pass the AWS Certified Solutions Architect (CSA) – Associate Exam. The AWS Certification is fast becoming the must have certificates for any IT professional working with AWS. Even if you have never logged in to the AWS platform before, by the end of our AWS training you will be able to take the CSA exam.

You Must Know!

Duration:

40 Hours

Who should attend?

AWS Absolute beginners, Programmers Interested in Deploying Applications on AWS

Prerequisites:

No programming knowledge needed and no prior AWS experience required

Main Topics:

- EC2 – Elastic Compute Cloud
- AMI – Amazon Machine Images
- EBS – Elastic Block Store
- Amazon VPC – Virtual Private Cloud
- Route 53
- Amazon S3
- Database Services
- DynamoDB
- SES, SQS, SNS – Email Service, Queue Service, Notification Service

Course Modules

Introduction to Cloud

- What is Cloud
- Why Cloud?
- Types of Cloud Deployment Models
- Types of Cloud Services
- Future of Cloud Technologies
- Advantages and Disadvantages of Cloud

Introduction to Amazon Web Services (AWS)

- What is AWS?
- How to Subscribe for AWS account
- What is the AWS Free Usage Tier?
- AWS Certification
- Introduction to the AWS management Console
- List of services given by AWS

Module 2 – Compute Services

Elastic Compute Cloud (EC2)

- What is Amazon EC2?
- Features of Amazon EC2
- Managing the EC2 infrastructure
- EC2 Dashboard
- Pricing for Amazon EC2

Regions and Availability Zone Concepts

- Describing Regions
- Availability Zones, and Endpoints
- Managing instances in an Availability Zone

Amazon Machine Images (AMI)

- Managing AMIs
- Working with Windows, Linux AMIs
- Shared and Paid AMI
- Making an AMI Public

EC2 Instances

- Instance Type
- Instance life cycle
- Differences between reboot, stop, and terminate
- Building an EC2 windows and linux instances
- To install instance in public and private subnet
- Security via Key Pairs
- EC2 Class and VPC Security Groups
- Managing Elastic IP's
- Pricing model in EC2 instances
- EC2 with Amazon command line interface

Amazon Elastic Block Store (EBS)

- Features of Amazon EBS
- Amazon EBS volumes
- Managing EBS volumes
- Increasing the volume size
- AmazonEBS snapshots

Load Balancing

- Creating a load balancer
- Internal and external load balancer
- Load balancing protocols
- Security groups for the load balancer
- Health check for the load balancer
- Cross-zone load balancing
- Connection Draining

Auto Scaling

- What is auto scaling?
- Auto scaling components
- Benefits of auto scaling
- Creation of launch configuration
- Configuration of auto scaling policies
- Advantages of using auto scaling with ELB

Network & Security

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

Elastic Beanstalk

- Deploy, manage, scale an application
- How management complexity is reduced
- Workflow of Elastic Beanstalk
- Create Application
- Launch Environment
- Manage Environment
- Creating application source bundle
- Modifying the properties of the deployment

Module 3 – Networking Services

Amazon Virtual Private Cloud (VPC)

- What is Amazon VPC?
- VPC Essentials
- Default and Nondefault VPC
- VPC Networking and ACL
- Security Groups
- DNS and DHCP Options Sets
- VPC Peering and Endpoints
- Subnet Routing

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- VPC Internet Gateway
- Elastic IP addresses and network interfaces
- VPC integration with many other AWS services
- Creating a NAT instance in a VPC
- Configuring a Web application in VPC
- Pricing for Amazon VPC

Amazon Route 53

- Route 53 as your DNS service
- Using Traffic Flow
- Route 53 Health Checks
- Configuring DNS Failover
- Latency Based Routing
- Weighted Routing Policies

Module 4 – Security & Identity Services

Identity Access Management (IAM)

- IAM Features
- Getting Started with IAM
- Creation of user, groups, roles
- Managing policies
- Credential Report
- IAM Console and the Sign-in Page

Module 5 – Storage & Content Delivery Services

Amazon S3

- What is object Storage?
- Data as objects
- Lifecycles of S3
- Managing Buckets
- Accessing S3 storage via tools
- Creation of a static website using S3 storage

Amazon Glacier

- Low-cost storage service
- Storage for data backup and archival
- Pricing model for Glacier storage
- Working with vaults and archives

Module 6 – Database Services

Relational Database Service (RDS)

- RDS Essentials
- Launching RDS instance
- Selecting the Engine
- Configuring the Database Engine
- Managing RDS Database
- Setting up automatic backups
- Authorizing access to the DB

DynamoDB (NoSQL Service)

- DynamoDB overview
- What is NoSQL database?
- How It Works
- Using the DynamoDB Console
- Creating Tables and Loading Sample Data
- Query and Scan Operations in DynamoDB

Module 7 – Management Tools

Amazon CloudWatch

- Amazon CloudWatch Architecture
- List of services monitored by CloudWatch
- Collect and track metrics
- Monitoring memory and disk Metrics
- Monitoring logs, Graphs
- Set Alarms

Cloud Formation

- Building AWS infrastructure as a code
- Design a template
- Create a Stack
- Create a Template from your Existing Resources
- Introduction to JSON

Module 8 – Application Services

Amazon Simple Email Service (SES)

- Simple email service overview
- Configuring Amazon email service
- Amazon SES and Deliverability
- Amazon SES Email-Sending Process
- Email format and Limits of SES

Amazon Simple Queue Service (SQS)

- Simple Queue service overview
- SQS for background work task
- Creating a Queue
- Confirming the Queue exists
- Add a permission to the Queue

Amazon Simple Notification Service (SNS)

- Simple Notification Service overview
- SNS architecture
- Publishers and subscribers
- Creation of a topic
- Subscribing to topic via Email
- Setting notification for EC2 instance changes



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