

Syllabus for AMAZON WEB SERVICES (AWS)



Course Duration For Amazon Web Services (AWS) Course:

- 6 Weekends (Weekend Batches only)

Objective For Amazon Web Services (AWS) Course:

- To become an AWS professional who develops Cloud applications with AWS
- To become exam-ready for the AWS Solution Architect Associate certification



Eligibility For Amazon Web Services (AWS) Training Course:

- Science graduates and Post graduates
- Knowledge of any programming language

AWS Solutions Architect

Getting Started with Amazon Cloud

- ✓ Introduction to cloud computing
- ✓ Models of cloud computing
- ✓ Setting up AWS accounts
- ✓ Evaluating Service Level Agreements (SLA)
- ✓ Various AWS Services
- ✓ AWS Management Console
- ✓ The AWS CLI - using credentials
- ✓ The AWS CLI- using roles
- ✓ AWS Global Infrastructure

Identity Access Management (IAM)

- ✓ Introduction to IAM
- ✓ IAM users and their access
- ✓ IAM roles and their permission
- ✓ Active Directory Federation
- ✓ Web Identity Federation
- ✓ IAM Best Practices
- ✓ Assignment: Configuring IAM users, groups and policies, AWS CLI/SDK access to manage services using Credentials and Roles lab

Elastic Load Balancing & Auto Scaling

- ✓ Components and types of load balancing
- ✓ Auto scaling and its benefits
- ✓ Life cycle of auto scaling
- ✓ Components and policies of auto scaling
- ✓ Assignment - Configure Load Balancer, Auto scaling as per utilization in different situations

Amazon EC2

- ✓ EC2 Overview
- ✓ Amazon Machine Images(AMI)
- ✓ AMI creation
- ✓ Security groups
- ✓ Key pairs
- ✓ Assigning elastic IP address
- ✓ Elastic IP v/s Public IP
- ✓ Bootstrap Scripts
- ✓ Overview of Amazon EBS
- ✓ EBS Volume intro
- ✓ EBS vs Instance Store
- ✓ Upgrading EBS volume
- ✓ Management Tools
 - CloudTrail
 - CloudWatch
 - CloudFormation
 - Trusted Advisor
- ✓ Assignment - Creating EC2, Various login ways from different OS, putty and putty keygen use, Assigning EIP, AMI assignment, Creating and restoring snapshot, snapshot to AMI, EC2 Bootstrapping, Cloudformation & CloudWatch assignments.

Elastic Beanstalk & Lambda

- ✓ Managing applications using Beanstalk
- ✓ Copy S3 object through Lambda
- ✓ Assignment - Deploy & scale a stack using Elastic Beanstalk

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Amazon Simple Storage Service(S3)

- ✓ Introduction to S3
- ✓ Creating an S3 bucket
- ✓ S3 Version Control
- ✓ S3 Lifecycle Management & Glacier
- ✓ S3 Uploading & Downloading
- ✓ S3 durability & redundancy
- ✓ Cloud front overview
- ✓ Create a CDN
- ✓ Security & Encryption
- ✓ Storage Gateway
- ✓ Import & Export using Snowball
- ✓ Cross region replication
- ✓ Static website using S3
- ✓ Assignment - Creating S3 bucket, S3 ACL, S3 permissions, hosting static website on S3, Cross region replication assignment, S3 lifecycle assignment

Database Services

- ✓ Database overview
- ✓ Amazon Relational Database Service (RDS)
- ✓ AMI databases
- ✓ Amazon Redshift
- ✓ DynamoDB
- ✓ Amazon ElastiCache
- ✓ AWS Database Migration Service(DMS)
- ✓ Amazon Aurora
- ✓ Assignment - Creating RDS instance, DB backups, RDS Read Replica

Route53

- ✓ Route53 Overview
- ✓ Creating Zones
- ✓ Understanding Routing Policies
 - Simple routing policy
 - Failover routing policy
 - Geolocation routing policy
 - Latency routing policy
 - Multivalued answer routing policy
 - Weighted routing policy
- ✓ Assignment- Components of Hosted Zones, ELB name configuration, Routing Policy

Amazon Application Services Overview

- ✓ Simple Email Service
- ✓ Simple Queue Service
- ✓ Simple Notification Service
- ✓ Amazon SWF

Virtual Private Cloud (VPC) & Direct Connect

- ✓ VPC Overview
- ✓ VPC & its benefits
- ✓ VPC Security
- ✓ Default & non default VPC
- ✓ VPC NAT
- ✓ VPC ACL
- ✓ NAT vs Bastion host
- ✓ Creating Bastion Host
- ✓ Direct Connect Overview
- ✓ Building your custom VPC
- ✓ Assignment - Building your custom VPC, Cleaning VPC, Defining ACL rules, Configuring Bastion Host, Cross Account access

AWS Troubleshooting

- ✓ Troubleshooting EC2 instances
- ✓ Troubleshooting using CloudWatch
- ✓ Troubleshooting using ELB

AWS Project

The students will be completing a project using the various services of AWS under the careful guidance of the faculty.