# AWS Solutions Architect

## ➢ Introduction to Cloud Computing

* + What is Cloud Computing
  + Advantages of Cloud Computing
  + Types of Cloud Computing Based on Service and Deployment Models
  + Overview of AWS
  + Regions and Availability Zones
  + Global Infrastructure

## ➢ Computer Service Overview

* + Introduction to Amazon EC2 Amazon EC2
  + Part Console Demonstration
  + Features of EC2
  + AMI Instance Type
  + Instance Purchasing Options
  + Public IP, Private IP, Elastic IP
  + Instance Lifecycle
  + Placement Groups
  + Security Groups
  + Key Pair
  + EC2 Product Demonstration (LAB)
  + Knowledge Check

## ➢ Elastic Block Stores

* + Introduction to EBS
  + Benefits of Having EBS EBS Volume types
  + Encryption (Data Security)
  + Root and Data Volumes Life Cycle Manager
  + AMI vs. Snapshots
  + EBS Product Demonstration (LAB)
  + Knowledge Check
* Note: Practicalsessions are integrated with each module for hands-on learning

## ➢ Elastic File System

* + Introduction to EFS
  + Comparison between EBS and EFS
  + Mount Targets
  + Supporting Operating Systems
  + Performance and Throughput in EFS
  + Benefits of having EFS
  + EFS Product Demonstration (LAB)
  + Knowledge Check

## ➢ Simple Storage Service

* + Introduction to S3
  + Bucket and Object
  + Object Versioning
  + Server Access Logging
  + Multipart Upload
  + Object Lock
  + Data Encryption
  + Static Website Hosting
  + Understanding S3 Durability and Availability
  + Storage Classes
  + Types of Storage Classes
  + Life Cycle Management
  + Cross Region and Same Region Replication
  + Introduction to Cloud Front
  + S3 Product Demonstration (LAB)
  + Knowledge Check

## ➢ Virtual Private Cloud

* + Introduction to VPC
  + Understanding CIDR
  + Default and Non-default VPC
  + Components of VPC
  + VPC and Subnet Sizing
  + Security in Amazon VPC
  + VPC Flow Logs
  + Security Groups
  + Network Access Control Lists(NACL)
  + Route Tables
* **Note: Practicalsessions are integrated with each module for hands-on learning**
  + Internet Gateway
  + Network Address Translation
  + VPC Peering
  + Introduction to VPN and Direct Connect
  + VPC Product Demonstration (LAB)
  + Knowledge Check

## ➢ Database Services

* + Introduction to RDS
  + Types of Database Enginesin RDS Database Subnet Group
  + Database Read Replicas
  + Manual and Automatic Snapshots
  + Multi-AZ Deployment
  + Alternative to RDS
  + RDS Product Demonstration (LAB) Introduction to DynamoDB
  + Durability and Performance
  + Dynamo DB Basic ComponentsIntroduction to Elastic Cache Introduction to Redshift
  + Data Security & Performance
  + Knowledge Check

## ➢ Route 53

* + Introduction to Route 53 Domain
  + Registration
  + Public and Private Hosted Zone
  + Routing Policies
  + Types of DNS Servers
  + Types of DNS Queries
  + Global Accelerator
  + Knowledge Check

## ➢ Identity and access management

* + Introduction to IAM
  + IAM Features
  + Protect your AWS by different authentication system
  + AWS User Account and Groupsin detail Associating policiesto the user and groups

## Introduction about Roles and its Use

* + Multi Factor Authentication AWS Organization
  + IAM Product Demonstration (LAB)
  + Knowledge Check
* Note: Practicalsessions are integrated with each module for hands-on learning

## ➢ AWS Security Management

* + Well Architected Framework – The 5 pillars of AWS
  + Describing Trusted Advisor Importance of Cloud Trail
  + How Cloud Trail Works
  + Cloud Trail Concepts
  + Insights Events
  + Cloud Trail Event History
  + Validating Cloud Trail log file Integrity
  + Cloud Watch (Monitoring Service)
  + Introduction to Cloud Watch
  + How Cloud Watch Works
  + Cloud Watch Concepts
  + Knowledge Check

## ➢ Application Integration Service

* + Introduction to SNS
  + How SNS works
  + Topic
  + Publishers
  + Subscribers
  + Introduction to SQS
  + Life Cycle of an SQS Message
  + SQS Limits
  + SQS Retention Period
  + Types of Message Queues FIFO Queue
  + Standard Queue
  + Benefits
  + How SQS is different from SNS
  + SNS &SQS Product Demonstration (LAB)
  + Knowledge Check

## ➢ Elastic Load Balancer and Auto Scaling

* + Introduction to ELB
  + Necessity of Load Balancer
  + Features of Load Balancer
  + Availability Zones and Load Balancer nodes
  + Internal and Internet Load Balancer
  + Cross Zonal Load Balancer
  + DNS setup for ELB

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* + Introduction to Auto Scaling
  + Entities of Auto Scaling
  + Auto Scaling Groups
  + Manual and Dynamic Scaling
  + ELB & ASG Product Demonstration (LAB)
  + Knowledge Check

## ➢ Other Services

* + Lambda
  + FSx
  + Cloud Formation
  + Migration Services
  + Data Migration
  + Snowball
  + Snowball Edge
  + Snow Mobile
  + Database Migration
  + Storage Gateway
  + File Gateway
  + Volume Gateway
  + Tape Gateway
  + Certificate Manager