AWS Certified Solutions Architect Associate - (SAA-C02)

Introduction to Cloud Computing

- 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

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
- Difference 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
- Amazon EBS 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
- Key Pairs
- Network interfaces

Elastic Beanstalk

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

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
- 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

Amazon Route 53

- Route 53 as your DNS Services
- Using Traffic Flow

- Route 53 Health Checks
- Configuring DNS Failover
- Latency Based Routing
- Weighted Routing Policies

Cloud Front

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 services
- Storage for data backup and archival
- Pricing model for Glacier storage
- Working with vaults and archives

EPS Elastic File Systems

Security & Identify Services

- Identify 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

Database Services

Relational Database Services (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

Dynamo DB (NoSQL Services)

- DynamoDB Overview
- What is No SQL database?
- How Its Works
- Using the DynamoDB Console
- Creating Tables and Loading Sample Data
- Query and Scan Operations in DynamoDB

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

Cloud Trail

Application Services

Amazon Simple Email Services (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 Services (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

- Publishers and Subscribers
- Subscribing to email or SMS
- Setting notifications while on instance changes

AWS VPN

- Introduction of VPN
- Concept behind a VPN connection
- Setting up of a point to site VPN in AWS
- Establishing the VPN Connection
- Verifying the VPN connection
- Connection from a client machine to VPN established network