AWS Certified Solutions Architect (SAA-CO2)





### **Introduction to Cloud Computing**

- What is Cloud
- Why Cloud?
- Types of Cloud Deployment Models
- Types of Cloud Services
- Future of Cloud Technologies
- Advantages and Disadvantaged 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
- Priding for Amazon EC2

#### **Regions and Availability Zone Concepts**

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

### **Amazon Machine Image (AMI)**

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

#### **EC2 Instances**

- Instance Type
- Instance life cycle
- Differences between reboot, slop, 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 bad 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

# **Scaling and Managing Applications in AWS**

### **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 on application
- How management complexity are reduced
- Workflow of Elastic Beanstalk
- Creole 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 Non default VPC
- VPC Networking and ACL
- Security Groups
- DNS and DHCP Options Sets
- VPC Peering and Endpoints
- Sub net 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 52**

- Route 53 as your DNS service
- 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 service
- Storage for data backup and archival
- Pricing model for Glacier storage
- Working with vaults and archives

# **EFS Elastic File System:**

### **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



# 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

### **Dynamo DB (NoSQL Service)**

- DynomoDB overview
- What is NoSQL database?
- How It 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:**

### **Amazon Simple Email Service (SES)**

- Simple email service overview
- Configuring Amazon email
- service
- Amazon 5E5 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
- Publishers and subscribers



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