

# **APEX COMPUTER EDUCATION**

An ISO 9001:2015 Certified Institute

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## **Course Outline**

### **AWS Certified Solutions Architect – Associate**

- **Module 1: Introduction to Cloud Computing**
  - What is Cloud Computing
  - Advantages of Cloud Computing
  - Service Models (SaaS, PaaS, IaaS)
  - Deployment Models
  - Overview of Private / Public / Hybrid / Community Cloud
- **Module 2: Introduction To AWS**
  - AWS Certification Track
  - AWS Global Infrastructure (Regions, Availability Zones & Edge Locations)
  - Signing Up for AWS
  - AWS Free Tier and Account sing up
- **Module 3: Amazon Elastic Compute Cloud (EC2)**
  - Launching your first AWS Linux instance (Lab)
  - How to Access Both Instance (SSH and RDP)
  - Pricing Backup
- **Module 4: Introduction to AMI**
  - Choosing the AMI
  - Copy and Share AMI across Regions
  - Creating a new AMI from existing Instance
  - Deploying a new Instance from the custom AMI
- **Module 5: Elastic Load Balancer**
  - Introduction to Load Balancing
  - Type of Load Balancer
  - Creating an Elastic Load Balancer (Lab)
  - Create an ELB with Web Servers across Availability Zones
- **Module 6: Auto-Scaling**
- Setting up an Auto-scaled,

- Load-balanced Amazon EC2 application
- **Module 7: Elastic Block Storage (EBS)**
  - Introduction to Elastic Block Storage
  - How to Extend Volume Size Runtime (Lab)
  - EBS Volume types
  - Introduction to Snapshots
  - Detach and Terminating EBS volumes (Lab)
  - Restore Volume Data from Snapshot (Lab)
  - Creating and Deleting Snapshots (Lab)
  - How to Share Volume between different AZ instance (Lab)
  - EBS Snapshot Copy between Region
  - Creating volumes from Snapshot (Lab)
  - EBS Volume Pricing
- **Module 8: EFS (Elastic File System)**
  - Introduction EFS Storage
  - EBS vs EFS
  - Provision EFS Storage (Lab)
  - EFS Pricing
- **Module 9: Simple Notification Service (SNS)**
  - Introduction to SNS
  - SNS Protocols
  - Creating a SNS topic
- **Module 10: Amazon Virtual Private Cloud (VPC)**
  - Introduction to VPC
  - VPC Components
  - Subnet and Route table and Route Gateway (Lab)
  - Private IP vs Public IP vs Elastic IP (Lab)
  - NAT Gateway (Lab)
  - VPC Security (Lab)
  - VPC vs ACL
  - ACL security (Lab)
  - Elastic Network Interface ENI (Lab)
  - VPC Peering (Lab)
  - VPN Introduction
  - VPC Pricing Concept
- **Module 11: Relational Database Service (RDS)**
  - Introduction to RDS
  - RDS Database types

- Creating Databases
- Configuring backups
- **Module 12: Route 53**
  - Introduction to Route 53
  - Domain Registration
  - DNS Records
  - DNS Route Policy
  - Live domain mapping with AWS resource (Lab)
- **Module 13: Cloud Watch**
  - Introduction to Cloud Watch
  - Creating Cloud Watch Alarms
  - Configuring Notifications
  - Integrating Cloud Watch with Auto-scaling
- **Module 14: Identify Access Management (IAM)**
  - Creating Users, Groups and Roles
  - Creating User and Group policies
  - Configure Custom Policy(Lab)
  - Password Policy
  - Activating MFA for a user
  - AWS Cross Account
  - IAM Pricing
- **Module 15: S3 (Simple Storage Service)**
  - Introduction to S3
  - EBS vs EFS vs S3
  - How to Access S3 Bucket and upload data (Lab)
  - S3 Static Website Hosting (Lab)
  - S3 Permissions and Bucket policies (Lab)
  - Enable S3 Versioning (Lab)
  - Enable Server Access logging (Lab)
  - Understand Storage Class
  - Life Cycle of Object (Lab)
  - Glacier Storage (Labs)
  - S3 Pricing
- **Module 16: Cloud Front**
  - Introduction to CDN network and Cloud Front
  - Creating a Cloud Front Distribution
  - Hosting a Website of Cloud Front Distribution
- **Module 17: Dynamo DB**

- Introduction to NoSQL databases
- Creating Dynamo DB tables
- Adding data manually
- Configuring Alarms
- **Module 18: Migration**
  - Migrating on premise VM to AWS cloud

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