COURSE AGENDA:

Course Agenda AWS – Solution Architect Associate Level

Lesson 01 - Course Introduction

- Course Introduction

Lesson 02 - AWS Overview

- Section Introduction

- Introduction to AWS

- Core AWS Services

- Accessing AWS Services

- Assisted Practice: Set up the AWS Command Line Interface

- Key Takeaways

Lesson 03 - Amazon Elastic Compute Cloud

- Section Introduction

- Introduction to Amazon EC2

- Amazon Machine Image

- Assisted Practice: Create a Linux-based EC2 Instance

- Assisted Practice: Create a Windows-based EC2 Instance

- Assisted Practice: Create a Custom AMI

- Assisted Practice: Create an Instance Using a Custom AMI

- Introduction to Amazon EBS

- EBS Snapshot

- Assisted Practice: Create and Attach an EBS Volume to a Linux Instance

- Assisted Practice: Create a Snapshot of an Existing EBS Instance

- Elastic IP Address

- EC2 Instance Metadata

- Elastic File System
- Difference between EFS and EBS

- EC2 Instance Pricing

- AWS EC2 Best Practices

- Amazon FSx

- High Performance Computing (HPC)

- Key Takeaways

- Setting up an Instance with EBS Volume and Snapshot

Lesson 04 - Amazon Storage Services

- Section Introduction

- Introduction to Amazon S3

- Components of Amazon S3

- Assisted Practice: Creating an S3 bucket

- Version Control in Amazon S3

- Assisted Practice: Configuring Bucket Versioning

- Static Web Hosting

- Amazon S3 Policies

- Assisted Practice: Configure an S3 Bucket for Static Website Hosting

- Amazon S3 Storage Classes

- Amazon S3 Pricing

- Amazon S3 Select and S3 Glacier Select

- Sharing an S3 bucket between multiple accounts

- Backup and DataSync

- Amazon CloudFront

- Assisted Practice: Configure a new CloudFront distribution with an S3 bucket
- AWS Snowball

- Amazon Athena and Macie

- Key Takeaways

- Setting Up a CloudFront Distribution with an S3 Bucket

Lesson 05 - Amazon Virtual Private Cloud

- Section Introduction

- Introduction to Amazon VPC

- Assisted Practice: Create a Custom VPC

- Amazon VPC Components

- IP Addresses

- Elastic Network Interface

- VPCs and Subnets

- Internet Gateways

- Network Address Translation (NAT) Gateway

- Assisted Practice: Create a Public and Private Subnet

- Controlling Traffic in Amazon VPC

- Assisted Practice: Create and Configure a Custom Route Table

- VPC Peering

- Assisted Practice: Create and Accept a VPC Peering Connection

- Bastion Host

- Direct Connect

- Virtual Private Network (VPN) Connections

- Auto Scaling

- Amazon Elastic Load Balancer
- Types of Amazon Load Balancers

- Assisted Practice: Set Up an Autoscaled Environment

- Key Takeaways

- Set Up Multiple Virtual Networks on the AWS Cloud

Lesson 06 - Databases on AWS

- Section Introduction

- Introduction to Databases

- Amazon Relational Database Service (RDS)

- Assisted Practice: Create an RDS Database Instance

- Amazon Aurora

- Amazon Redshift

- Assisted Practice: Create an Amazon Redshift Cluster

- Amazon DynamoDB

- Assisted Practice: Create a Table Using the DynamoDB Console

- Amazon ElastiCache

- Key Takeaways

- Create and Query a Database Table with Amazon DynamoDB

Lesson 07 - Amazon Route 53

- Section Introduction

- Domain Name System (DNS)

- Introduction to Amazon Route 53

- Amazon Route 53 Concepts and Terminologies

- Amazon Route 53 Policies

- Assisted Practice: Register a New Domain Name
- Assisted Practice: Create a Public Hosted Zone

- Amazon Route 53 Best Practices

- Amazon Route 53 Costs

- Limitations of Amazon Route 53

- Key Takeaways

- Register a New Domain and Create a Hosted Zone and a Record Set

Lesson 08 - IAM and Security on AWS

- Section Introduction

- Introduction to Identity and Access Management

- Terminologies in AWS IAM

- IAM Users

- Assisted Practice: Creating an IAM user

- IAM Groups

- Assisted Practice: Creating and Addng IAM user to an IAM group

- IAM Roles

- Assisted Practice: Creating an IAM role for an IAM user

- IAM Policies

- Types of IAM Policies

- Assigning IAM roles to Amazon Services

- Assisted Practice: Creating an IAM role for Amazon EC2 Service

- Features of AWS IAM

- AWS Directory Service

- Recource Access Manager

- AWS Organisations
- AWS Single Sing-On

- Assisted Practice: Enabling AWS Single Sign-On for a user

- AWS Multi Factor Authentication

- Assisted Practice: Enable MFA for the root user

- Key Takeaways

Secure the Access to AWS Services

Lesson 09 - Application and Serverless Services in AWS

- Section Introduction

- Introduction to AWS Application Services

- Amazon Simple Queue Service

- Assisted Practice: Configuring Amazon SQS Using the AWS Console

- Amazon Simple Notification Service (SNS)

- Assisted Practice: Setting Up Amazon SNS Notifications

- Amazon SNS vs. Amazon SQS

- Amazon Simple Workflow Service (SWF)

- Amazon API Gateway

- Assisted Practice: Setting Up API Methods to Access an Amazon S3 Bucket

- Amazon Elastic Transcoder

- Amazon Kinesis

- Application Services Best Practices

- Amazon WorkSpaces

- Introduction to AWS Serverless Services

- AWS Lambda

- Assisted practice: API with Lambda proxy integration

- AWS Serverless Application Model

- Amazon Elastic Container Service

- Key Takeaways

Build a Serverless Website in the AWS Cloud

Lesson 10 - Secure and Highly Available Architecture

- Section Introduction

- AWS Well Architectured Framework

- Five Pillars of AWS Well Architectured Framework

- AWS CloudFormation

- Create an Amazon EC2 Instance Using AWS CloudFormation

- AWS Elastic Beanstalk

- AWS WAF and AWS Shield

- AWS Key Management Service

- AWS Best Practices

- Accessing AWS References

- Key Takeaways