**COURSE CONTENTS**

**COURSE DURATION**
**10 Days**

**Lesson 01 - Course Introduction** **DAY 1**
- 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 Storage Services** **DAY 2**
- 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

**D 3 for b er**

**Lesson 04 - Amazon Virtual Private Cloud** **DAY 4**
- 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 05 - Amazon Elastic Compute Cloud** **Day 5**

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

**Day 5 for buffer**

**Lesson 06 - Databases on AWS** **Day 6**

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** **7**

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** **Day 8**

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

**Day 9 as a buffer**
**Day 10**

**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