

# AWS DEVELOPER

## Module 1: Introduction

- a. Course Introduction
- b. About the Training Architect
- c. What are the Sigma Scripts?
- d. Course Features and Tools
- e. AWS Free Tier: Usage Tracking and Billing Widget

## Module 2: AWS Fundamentals

- a. AWS Global Infrastructure
- b. AWS Shared Responsibility Security Model
- c. AWS Compute Overview
- d. AWS Storage Overview

## Module 3: AWS Identity and Access Management

- a. Introduction to AWS Identity and Access Management (IAM)
- b. IAM Essentials
- c. IAM Policies
- d. IAM Users, Groups and Roles
- e. Security Token Service
- f. IAM API Keys
- g. AWS Key Management Service (KMS)
- h. AWS Inspector
- i. Identity Federation and Amazon Cognito

## Module 4: Server Based Compute Services (Elastic Compute Cloud)

- a. EC2 Fundamentals
- b. EC2 Purchasing Options
- c. EC2 Instance Configuration
- d. EC2 Storage Basics
- e. EC2 Key Pairs
- f. Elastic Load Balancers and Session State

- g. EC2 API Actions/Errors and the AWS Shared Responsibilities
- h. Creating Your Own EC2 Workstation in the AWS Console

## Module 5: AWS Virtual Private Cloud (VPC) Fundamentals

- a. VPC Essentials
- b. VPC Networking Basics
- c. VPC Security Basics
- d. VPC Networking for High Availability and Fault Tolerance
- e. VPC Networking with a Bastion Host and NAT Gateway
- f. VPC Section Conclusion & Handoff
- g. Building a Three-Tier Network VPC from Scratch in AWS

## Module 6: AWS Load Balancing

- a. Application Load Balancers
- b. Network Load Balancers
- c. Load Balancer Use Cases
- d. Dynamic Ports

## Module 7: AWS Lambda

- a. Lambda Essentials
- b. Lambda Functions and Events
- c. Lambda Function Configuration
- d. Lambda Function Packages
- e. Lambda Versions and Aliases
- f. Lambda API Actions
- g. Lambda Environment Variables
- h. Lambda Use Cases
- i. AWS Lambda in the Console- Creating a Website

## Module 8: AWS Elastic Container Service

- a. ECS Essentials
- b. Docker Essentials
- c. IAM Roles for ECS Tasks
- d. Deploying a Python Flask Application with AWS ECS

- e. Elastic Beanstalk Overview
- f. Creating an Elastic Beanstalk Application Using the AWS EB CLI

## Module 10: AWS Storage Services

- a. Amazon S3 Essentials
- b. Moving Data to S3
- c. S3 Performance and Permissions
- d. Amazon S3 Encryption
- e. Object Versioning
- f. Storage Classes and Amazon Glacier
- g. S3 Lifecycle Policies
- h. Hosting Static Websites
- i. Enabling CORS Configuration
- j. Common S3 Errors when Developing with AWS S3
- k. AWS CloudFront Essentials

## Module 11: AWS Database Services

- a. DynamoDB Overview
- b. DynamoDB Core Concepts
- c. Provisioned Throughput
- d. DynamoDB read Operations
- e. Local and Global Secondary Indexes
- f. Conditional Writes and Atomic Counters
- g. Common DynamoDB errors and Limits
- h. DynamoDB Auto Scaling and On-Demand
- i. DynamoDB DAX
- j. DynamoDB Throttling Issues
- k. DynamoDB Streams with Lambda
- l. AWS DynamoDB in the Console-Creating Tables, Items and Indexes
- m. DynamoDB Data Loading and Write Operations
- n. RDS Essentials
- o. Encrypting RDS Databases
- p. What is Redshift?
- q. Amazon ElastiCache and Caching Strategies

## Module 12: AWS Application Services

### 12.1 Amazon simple Notification Service (SNS)

- a. Introduction to SNS
- b. Managing Access to SNS Resources
- c. SNS Message Data
- d. Mobile Apps: Mobile Push with SNS
- e. SNS API Actions and Errors
- f. Creating and Subscribing to AWS SNS Topics

### 12.2 Amazon simple Queue Service (SQS)

- a. SQS Essentials
- b. Managing Access to SQS Resources
- c. SQS Polling Types
- d. SQS Message Data
- e. SQS API Actions and Errors
- f. Working with AWS SQS Standard Queues
- g. Working with AWS SQS FIFO Queues

### 12.3 Amazon Simple Workflow Service (SWF)

- a. SWF Essentials

### 12.4 Amazon Step Functions

- a. Step Function Essentials
- b. Step Functions – State Types and Transitions

### 12.5 API Gateway

- a. API Gateway Essentials
- b. API Gateway Deployments and Stages
- c. API Gateway Caching and Monitoring

## Module 13: AWS Management Tools

### 13.1 Cloud Watch

- a. CloudWatch Essentials

### 13.2 Amazon Cloud Formation

- a. CloudFormation Essentials
- b. CloudFormation Resources and Stacks
- c. CloudFormation Functions
- d. CloudFormation Templates
- e. Deploying a website with CloudFormation

### 13.3 Systems Manager Parameter Store

- a. Parameter Store Essentials

## Module 14: AWS Developer Tools

### 14.1 Developer Associate – Core Concepts Review

- a. AWS Security Best Practices Quick Notes
- b. AWS Well Architected Framework Quick Notes
- c. Architecting for the Cloud AWS Best Practice Quick Notes
- d. Practicing Continuous Integration and Continuous Delivery on AWS Quick Notes
- e. Microservices on AWS Quick Notes
- f. AWS Serverless Architectures with AWS Lambda Quick Notes
- g. Optimizing Enterprise Economics with Serverless Architectures Quick Notes
- h. Running Containerized Microservices on AWS Quick Notes
- i. Blue / Green Deployments on AWS Quick Notes

### 14.2 Repos, Deployment, Builds and CI/CD Pipelines

- a. X-Ray
- b. AWS Code Commit
- c. AWS Code Build
- d. AWS Code Deploy
- e. AWS Code pipeline
- f. AWS Code Star