AWS Application Development

Duration: 5 Days

US Price: $2795 *California residents and government employees call for pricing.*

UK Price: £1,995 *Prices are subject to VAT*

CA Price: CDN$3,275 *Prices are subject to GST/HST*

Discounts: We offer multiple discount options. Click here for more info.

Delivery Options: Attend face-to-face in the classroom or remote-live attendance.

Course Description

This hands on course shows how to use the AWS (Amazon Web Services) SDK to develop secure and scalable cloud applications. The course provides in-depth knowledge about how to interact with AWS using code and includes coverage of architectural concepts, best practices, and troubleshooting tips.

The course includes techniques for optimizing the use of the AWS Cloud by understanding AWS services and how these services fit into a cloud solution. Your architectural solution may differ depending on industry and size of business. Because there is no one-size-fits-all design, this course highlights some AWS Cloud design patterns to help you learn some of the common options for overall cloud design.

Course Prerequisites

Students should have a familiarity with AWS services and working knowledge with a language such as of Java, C#/.NET or Python. Students should also have a working knowledge of multi-tier architectures and cloud computing concepts.

Course Overview

Development Basics

- Introduction to Developing on AWS

Introduction to Lambda

- How Lambda Works

- Choosing a Data Store
- Developing Storage Solutions with Amazon S3
- Developing Flexible NoSQL Solutions with Amazon DynamoDB

- Creating Lambda Functions
- Blueprints and Handlers
- Using the Console
- Testing and Logging
- Installing the AWS Command Line Tool
- Creating an S3 Bucket
- Creating a Function and Trigger
- Updating Lambda Functions with the AWS CLI
- Testing and Function Invocation
  - Function Versions and Qualifiers
  - Function Outputs and Timeouts
- Introduction To Kinesis
  - Reacting to Event Streams with Lambda & Kinesis
  - Creating a Stream and Function Trigger
  - End To End Testing with Kinesis Events
- Creating Data-Driven Apps with Lambda & DynamoDB

Connecting Applications and Data with Event-Driven Processing

- Working with Events
- Developing Event-Driven Solutions with Amazon Kinesis Stream
- Developing Event-Driven Solutions with Amazon SWF, Amazon SQS, and Amazon SNS
- Developing Event-Driven Solutions with AWS Lambda

CloudFormation

- Introduction to CloudFormation
- Template Anatomy
- Properties and Functions
- Infrastructure as a Service
- Nested Templates
- AWS Cloud Designer
- AWS CLI - CloudFormation

Developing and Deploying Secure, Scalable Applications

- Developing Secure Applications
- Caching Information for Scalability
- Monitoring Applications and AWS Resources with Amazon CloudWatch
- Deploying Applications with AWS Elastic Beanstalk and AWS CloudFormation

Amazon Route 53

- Amazon Route 53 Concepts
- Getting Started with Amazon Route 53
- Registering Domain Names
- Routing Internet Traffic to your Website or Web Application
- How Amazon Route 53 Checks the Health of Your Resources
- Accessing Amazon Route 53
- AWS Identity and Access Management

Architecture Considerations

Scaling Applications

- Leveraging Global Infrastructure
- Extending On-Premises into the Cloud
- Computing in the Cloud
- Designing Storage Subsystems

- Distributed Environments
- Choosing a Datastore
- Designing Web-Scale Media Hosting
- Event Driven Scaling
- Infrastructure as Code

Efficiency and Optimization

- Orchestrating Batch Processing
- Reviewing Large Scale Design Patterns
- Designing for Cost
- Planning for High Availability and Disaster Recovery