Introduction to Serverless Solutions on AWS

AWS Classroom Training

Course description

This course gives developers an introduction to building serverless applications using AWS Lambda and other services in the AWS serverless platform.

- Course level: Fundamental
- Duration: 4 hours

Activities

This course includes presentations, knowledge checks, and a lab.

Course objectives

In this course, you will learn to:

- Identify the challenges and trade-offs of transitioning to serverless development, and make recommendations that suit your development organization and environment
- Compare and contrast available options for writing infrastructure as code, including AWS CloudFormation, AWS Amplify, AWS Serverless Application Model (AWS SAM), and AWS Cloud Development Kit (AWS CDK)
- Describe the options available for managing authentication and authorization using Amazon API Gateway and Amazon Cognito

Intended audience

This course is intended for:

- Developers who are familiar with serverless, familiar with AWS Lambda fundamentals, and have experience with development in the AWS Cloud.

Prerequisites

We recommend that attendees of this course have:

- Familiarity with the basics of AWS Cloud architecture
- An understanding of developing applications on AWS equivalent to completing the Developing on AWS classroom training
- Knowledge equivalent to completing the following serverless digital trainings: *AWS Lambda Foundations* and *Amazon API Gateway for Serverless Applications*

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Course outline

Welcome and introduction

- Introduction to the application you will build
- Access to course resources

Thinking Serverless

- Best practices for building modern serverless applications
- Event-driven design
- AWS services that support event-driven serverless applications

API-Driven Development and Synchronous Event Sources

- Characteristics of standard request/response API-based web applications
- How Amazon API Gateway fits into serverless applications
- High-level comparison of API types (REST/HTTP, WebSocket, GraphQL)

Introduction to Authentication, Authorization, and Access Control

- Authentication vs. Authorization
- Options for authenticating to APIs using API Gateway
- Amazon Cognito in serverless applications
- Amazon Cognito user pools vs. federated identities

Serverless Deployment Frameworks

- Overview of imperative vs. declarative programming for infrastructure as code
- Comparison of CloudFormation, AWS CDK, Amplify, and AWS SAM frameworks
- Features of AWS SAM and the AWS SAM CLI for local emulation and testing

Hands-On Lab: Deploying a Simple Serverless Application

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