Developing Serverless Solutions on AWS

AWS Classroom Training

Course description

This course gives developers exposure to and practice with best practices for building serverless applications using AWS Lambda and other services in the AWS serverless platform. You will learn about writing functions with AWS Lambda, configuring observability and securing serverless applications.

- Course level: Intermediate
- Duration: 4 hours

Activities

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

Course objectives

In this course, you will learn to:

- Apply best practices to writing Lambda functions inclusive of error handling, logging, environment re-use, using layers, statelessness, idempotency, and configuring concurrency and memory
- Apply best practices for building observability and monitoring into your serverless application
- Apply security best practices to serverless applications

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

- Welcome and introduction
- Access to course resources

Writing Good Lambda Functions

- How the Lambda lifecycle influences your function code
- Best practices for your Lambda functions
- Configuring a function
- Function code, versions and aliases
- Lambda error handling
- Handling partial failures with queues and streams

Observability and Monitoring

- The three pillars of observability
- Amazon CloudWatch Logs and Logs Insights
- Writing effective log files
- Using AWS X-Ray for observability
- CloudWatch metrics and embedded metrics format

Serverless Application Security

- Security best practices for serverless applications
- Applying security at all layers
- API Gateway and application security
- Lambda and application security
- Protecting data in your serverless data stores
- Auditing and traceability

Hands-On Lab: Securing Serverless Applications

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