Curso Developing on AWS

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Dirigido a:

- Desarrolladores de software.
- Arquitectos de soluciones.
- Profesionales de TI que quieran mejorar sus habilidades de desarrollo con los servicios de AWS.

Objetivos:

- Crear una sencilla y completa aplicación en la nube con los kits de desarrollo de software de AWS (AWS SDK), la interfaz de línea de comandos (AWS CLI) y los IDE.
- Configurar los permisos de AWS Identity and Access Management (IAM) para respaldar un entorno de desarrollo.
- Utilizar múltiples patrones de programación en las aplicaciones para acceder a los servicios de AWS.
- Utilizar los AWS SDK para realizar operaciones CRUD (crear, leer, actualizar, eliminar) en los recursos de Amazon Simple Storage Service (Amazon S3) y Amazon DynamoDB.

Requisitos:

- Es recomendable haber obtenido, previamente, la certificación AWS Certified Cloud Practitioner Foundational o haber superado el curso AWS Technical Essentials.
- Tener conocimiento práctico de los servicios principales de AWS.
- Tener experiencia en programación en uno de los siguientes lenguajes: Python, .NET o Java.

Material del curso:

Documentación oficial del **curso Developing on AWS**.

Perfil del docente:

- Formador certificado por AWS.
- Más de 5 años de experiencia profesional.
- Más de 4 años de experiencia docente.
- Profesional activo en empresas del sector IT.

Metodología:

- "Learning by doing" se centra en un contexto real y concreto, buscando un aprendizaje en equipo para la resolución de problemas en el sector empresarial.
- Aulas con grupos reducidos para que el profesional adquiera la mejor atención por parte de nuestros instructores profesionales.
- El programa de estudios como partners oficiales es confeccionado por nuestro equipo de formación y revisado por las marcas de referencia en el sector.
- La impartición de las clases podrá ser realizada tanto en modalidad Presencial como Virtual.

Examen y Certificación:

Preparación para el examen de certificación: **Examen AWS Certified Developer Associate**

Contenidos:

Módulo 1: Course Overview

- Logistics
- Student resources
- Agenda
- Introductions

Módulo 2: Building a Web Application on AWS

- Discuss the architecture of the application you are going to build during this course
- Explore the AWS services needed to build your web application
- Discover how to store, manage, and host your web application

Módulo 3: Getting Started with Development on AWS

- Describe how to access AWS services programmatically
- List some programmatic patterns and how they provide efficiencies within AWS SDKs and AWS CLI
- Explain the value of AWS Cloud9

Módulo 4: Getting Started with Permissions

- Review AWS Identity and Access Management (IAM) features and components permissions to support a development environment
- Demonstrate how to test AWS IAM permissions
- Configure your IDEs and SDKs to support a development environment
- Demonstrate accessing AWS services using SDKs and AWS Cloud9

*Lab 1: Configure the Developer Environment*Módulo 5: Getting Started with Storage

- Describe the basic concepts of Amazon S3
- List the options for securing data using Amazon S3
- Define SDK dependencies for your code
- Explain how to connect to the Amazon S3 service
- Describe request and response objects

Módulo 6: Processing Your Storage Operations

- Perform key bucket and object operations
- Explain how to handle multiple and large objects
- Create and configure an Amazon S3 bucket to host a static website
- Grant temporary access to your objects
- Demonstrate performing Amazon S3 operations using SDKs

*Lab 2: Develop Solutions Using Amazon S3*Módulo 7: Getting Started with Databases

- Describe the key components of DynamoDB
- Explain how to connect to DynamoDB
- Describe how to build a request object
- Explain how to read a response object
- List the most common troubleshooting exceptions

Módulo 8: Processing Your Database Operations

- Develop programs to interact with DynamoDB using AWS SDKs
- Perform CRUD operations to access tables, indexes, and data
- Describe developer best practices when accessing DynamoDB
- Review caching options for DynamoDB to improve performance

- Perform DynamoDB operations using SDK

*Lab 3: Develop Solutions Using Amazon DynamoDB*Módulo 9: Processing Your Application Logic

- Develop a Lambda function using SDKs
- Configure triggers and permissions for Lambda functions
- Test, deploy, and monitor Lambda functions

*Lab 4: Develop Solutions Using AWS Lambda Functions*Módulo 10: Managing the APIs

- Describe the key components of API Gateway
- Develop API Gateway resources to integrate with AWS services
- Configure API request and response calls for your application endpoints
- Test API resources and deploy your application API endpoint
- Demonstrate creating API Gateway resources to interact with your application APIs

*Lab 5: Develop Solutions Using Amazon API Gateway*Módulo 11: Building a Modern Application

- Describe the challenges with traditional architectures
- Describe the microservice architecture and benefits
- Explain various approaches for designing microservice applications
- Explain steps involved in decoupling monolithic applications
- Demonstrate the orchestration of Lambda Functions using AWS Step Functions

Módulo 12: Granting Access to Your Application Users

- Analyze the evolution of security protocols
- Explore the authentication process using Amazon Cognito
- Manage user access and authorize serverless APIs
- Observe best practices for implementing Amazon Cognito
- Demonstrate the integration of Amazon Cognito and review JWT tokens

*Lab 6: Capstone – Complete the Application Build*Módulo 13: Deploying Your Application

- Identify risks associated with traditional software development practices
- Understand DevOps methodology
- Configure an AWS SAM template to deploy a serverless application
- Describe various application deployment strategies
- Demonstrate deploying a serverless application using AWS SAM

Módulo 14: Observing Your Application

- Differentiate between monitoring and observability
- Evaluate why observability is necessary in modern development and key components
- Understand CloudWatch's part in configuring the observability
- Demonstrate using CloudWatch Application Insights to monitor applications
- Demonstrate using X-Ray to debug your applications

*Lab 7: Observe the Application Using AWS X-Ray*Módulo 15: Course Wrap-up

- Course overview
- AWS training courses
- Certifications
- Course feedback

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