GALILEU

Advanced Developing on AWS (AWSAD)

Amazon

- **Nível:**
- **Duração:** 21h

Sobre o curso

The Advanced Developing on AWS course uses the real-world scenario of taking a legacy, on-premises monolithic application and refactoring it into a serverless microservices architecture.

This three-day advanced course covers advanced development topics such as architecting for a cloud-native environment; deconstructing on-premises, legacy applications and repackaging them into cloud-based, cloud-native architectures; and applying the tenets of the Twelve-Factor Application methodology.

Objetivos

In this course, you will learn how to:

- Analyze a monolithic application architecture to determine logical or programmatic break points where the application can be broken up across different AWS services.
- Apply Twelve-Factor Application manifesto concepts and steps while migrating from a monolithic architecture.
- Recommend the appropriate AWS services to develop a microservices based cloud native application.
- Use the AWS API, CLI, and SDKs to monitor and manage AWS services.
- Migrate a monolithic application to a microservices application using the 6 Rs of migration.
- Explain the SysOps and DevOps interdependencies necessary to deploy a microservices application in AWS.

Destinatários

Experienced software developers who are already familiar with AWS services

Pré-requisitos

- In-depth knowledge of at least one high-level programming language
- Working knowledge of core AWS services and public cloud implementation
- Completion of the Developing on AWS course, and then a minimum of 6 months of application of those concepts in a real world environment

Metodologia

This course is delivered through [a mix of]:

- Classroom training
- Labs

Programa

- The cloud journey
- Gaining Agility
- Monolith to MicroServices
- Polyglot Persistence & Distributed Complexity
- Resilience and Scale
- Security and Observability

The cloud journey

- Common off-cloud Architecture
- Introduction to Cloud Air
- Monolithic Architecture
- Migration to the Cloud
- Guardrails
- The six R's of migration
- The Twelve-Factor Application Methodology
- Architectural styles and patterns
- Overview of AWS Services
- Interfacing with AWS Services
- Authentication
- Infrastructure as code & Elastic Beanstalk

- Demonstration: Walk through creating base infrastructure with AWS CloudFormation in the AWS console
- Hands-on lab 1: Deploy your monolith application using AWS Elastic Beanstalk

Gaining Agility

- DevOps
- CI/CD
- Application configuration
- Secrets management
- CI/CD Services in AWS
- Demonstration: Demo AWS Secrets Manager

Monolith to MicroServices

- Microservices
- Serverless
- A look at Cloud Air
- Microservices using Lambda and API Gateway
- SAM
- Strangling the Monolith
- Hands-on lab: Using AWS Lambda to develop microservices

Polyglot Persistence & Distributed Complexity

- Polyglot persistence
- DynamoDB best practices
- Distributed complexity
- Steps functions

Resilience and Scale

- Decentralized data stores
- Amazon SQS
- Amazon SNS
- Amazon Kinesis Streams
- AWS IoT Message Broker
- Serverless event bus
- Event sourcing and CQRS
- Designing for resilience in the cloud
- Hands-on lab: Exploring the AWS messaging options

Security and Observability

- Serverless Compute with AWS Lambda
- Authentication with Amazon Cognito
- Debugging and traceability
- Hands-on lab: Developing microservices on AWS