

Advanced Developing on AWS

Varighed: 3 Days Kursus Kode: GK4505

Beskrivelse:

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.

Målgruppe:

This course is intended for: Experienced software developers who are already familiar with AWS services

Agenda:

- 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.
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Forudsætninger:

We recommend that attendees of this course have the following prerequisites:

- 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 (GK4504), and then a minimum of 6 months of application of those concepts in a real world environment.
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Indhold:

Day 1

Module 1: 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 and 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

Module 2: Gaining Agility

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

Day 2

Module 3: 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

Module 4: Polyglot Persistence ; Distributed Complexity

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

Day 3

Module 5: 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

Module 6: Security and Observability

- Serverless Compute with AWS Lambda
- Authentication with Amazon Cognito
- Debugging and traceability
- Hands-on lab: Developing microservices on AWS
- Hands-on lab 8: Automating deployments with Cloud Formation

Additional Information:

Activities

This course includes presentations, group exercises, and hands-on labs.

Flere Informationer:

For yderligere informationer eller booking af kursus, kontakt os på tlf.nr.: 44 88 18 00

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