

Advanced Developing on AWS – Intensive Training («AWSD02»)

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.

Duration: 3 days

Price: 3'200.–

Course documents: Digital original AWS course books

Content

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.

Day 1

Module 1: The cloud journey

- Common off-cloud architecture
- Introduction to Cloud Air
- Monolithic architecture
- Migration to the cloud
- Guardrails
- The six Rs 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
- Demo: Walk through creating base infrastructure with AWS CloudFormation in the AWS console
- Hands-on lab: Deploy your monolith application using AWS Elastic Beanstalk

Module 2: Gaining Agility

- DevOps
- CI/CD
- Application configuration
- Secrets management
- CI/CD Services in AWS
- 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

- 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: Automating deployments with Cloud Formation

Key Learnings

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

Methodology & didactics

This course is delivered through a mix of classroom training and labs.

Note: A laptop is required in order to complete technical lab exercises; tablets are not appropriate.

Target audience

This course is intended for the following job roles:

- Developer
- DevOps

Why should you attend this specific course? What are my benefits from taking this course? The **Voice of the Instructor answers these questions**. We have asked our instructor team to write a short text about WHY this course is very relevant for the respective job roles and what you can expect from attending the course. You can find this section in the course description under the «*Additional Information*» section.

Requirements

We recommend that attendees of this course have attended the following course (or equivalent knowledge):

- [Developing on AWS – Intensive Training \(«AWSD01»\)](#)

Additional information

Voice of the Instructor

We would like to invite you to the «Advanced Developing on AWS» course, where we will discuss microservices architecture, various software design patterns, and AWS services that you can use to implement the former two. Although this course is specifically designed for developers who would like to build their solutions on the AWS Cloud, we also welcome DevOps engineers and Solutions Architects who aim for a better understanding of modern application design patterns and AWS services that can help you achieve that.

The course has been designed to take you from monolithic architecture all the way to the distributed application world of microservices. We will address many challenges, discuss best practices, and learn about AWS services designed to help you along the way.

Please note that although this is a course for developers, the emphasis is not on coding. While the code is the ultimate product of any building attempt, we will try to look deeper and understand what it takes to create effective code and solutions on AWS through the prism of the AWS SDK. Our goal will be to understand WHY we are using particular AWS services/tools/patterns and HOW you can use them to implement your own solutions.

To get the most out of this course, we suggest that you have attended the «Developing on AWS – Associate» course before or that you already have some hands-on experience with building applications on AWS.

This course is a gem whose shine might not be so obvious at first. Its radiance will captivate you once you understand the intricate complexity of the interaction of AWS services involved, enabling you to simplify otherwise challenging tasks.

We are very much looking forward to meeting you and spending three days discussing all the topics of the course.

Further courses

- [Advanced Developing on AWS – JAM Day \(«AWSDJ2»\)](#)
- [Migrating to AWS – Intensive Training \(«AWSM01»\)](#)
- [Running Containers on Amazon Elastic Kubernetes Service \(Amazon EKS\) – Intensive Training \(«AWSA09»\)](#)
- [MLOps Engineering on AWS – Intensive Training \(«AWSS07»\)](#)

Any questions?

We are happy to advise you on +41 44 447 21 21 or info@digicomp.ch. You can find detailed information about dates on www.digicomp.ch/courses-digital-transformation-technologies/cloud/amazon-web-services-aws/aws-developer/course-advanced-developing-on-aws-intensive-training