

Training: AWS
Advanced Developing on AWS

TRAINING TERMS

2025-08-06 | 3 days | Kraków / Virtual Classroom
2025-09-03 | 3 days | Warszawa / Virtual Classroom

TRAINING GOALS:

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.

Course objectives

In this course, you will:

- 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

Intended audience

This course is intended for experienced software developers who are already familiar with AWS services.

CONSPECT:

- 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
- 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
- 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

REQUIREMENTS:

We recommend that attendees of this course have:

- 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 classroom training, and then a minimum of 6 months of application of those concepts in a real world environment

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by AWS (course completion).

TRAINER:

AWS Authorized Instructor (AAI)