CO1 COMPENDIUM CENTRUM EDUKACYJNE

Training: AWS
Advanced Developing on AWS with AWS Jam

TRANING TERMS

2025-06-10 | 4 days | Virtual Classroom
2025-09-09 | 4 days | Kraków / Virtual Classroom
2025-10-14 | 4 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 four-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.

The final day is an AWS Jam, a gamified event, with teams competing to score points by completing a series of challenges according to established best practices based on concepts covered in the course. You get to experience a wide range of AWS services in a series of real-world scenarios that represent common operational and troubleshooting tasks. The end result is developing, enhancing, and validating your skillsets in the AWS Cloud through real-world problem solving, exploring new services, features, and understanding how they interoperate.
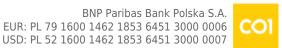
Activities

This course includes presentations, group exercises, hands-on labs, and team-based gamified challenge

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
- Work in a team environment to solve real AWS use-case challenges in an AWS Jam

Intended audience

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

CONSPECT:

- 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

- Day 4
  - AWS Jam
    - Participate in team based challenges in a real AWS environment
    - Compete with your colleagues in a gamified, hands-on learning experience
    - Apply your learning from the course on various AWS services

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)