

Advanced Developing on AWS

Price
\$2,025.00

Duration
3 Days

Delivery Methods
VILT, Private Group



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.

Who Should Attend

Experienced software developers who are already familiar with AWS services

Course Objectives

- 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.

Agenda

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

2 - GAINING AGILITY

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

3 - MONOLITH TO MICROSERVICES

- Microservices
- Serverless
- A look at Cloud Air
- Microservices using Lambda and API Gateway
- SAM
- Strangling the Monolith

4 - POLYGLOT PERSISTENCE & DISTRIBUTED COMPLEXITY

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

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

6 - SECURITY AND OBSERVABILITY

- Serverless Compute with AWS Lambda

- Authentication with Amazon Cognito
- Debugging and traceability