

## Szkolenie: Google Cloud Developing Applications with Google Cloud Platform



### Cel szkolenia:

In this course, application developers learn how to design, develop, and deploy applications that seamlessly integrate components from the Google Cloud ecosystem. Through a combination of presentations, demos, and hands-on labs, participants learn how to use GCP services and pre-trained machine learning APIs to build secure, scalable, and intelligent cloud-native applications.

#### Audience:

Application developers who want to build cloud-native applications or redesign existing applications that will run on Google Cloud Platform

The course includes presentations, demonstrations, and hands-on labs.

### Plan szkolenia:

- Best Practices for Application Development
  - Code and environment management
  - Design and development of secure, scalable, reliable, loosely coupled application components and microservices
  - Continuous integration and delivery
  - Re-architecting applications for the cloud
- Google Cloud Client Libraries, Google Cloud SDK, and Google Firebase SDK
  - How to set up and use Google Cloud Client Libraries, Google Cloud SDK, and Google Firebase SDK
  - Lab: Set up Google Client Libraries, Google Cloud SDK, and Firebase SDK on a Linux instance and set up application credentials
- Overview of Data Storage Options
  - Overview of options to store application data
  - Use cases for Google Cloud Storage, Google Cloud Datastore, Cloud Bigtable, Google Cloud SQL, and Cloud Spanner
- Best Practices for Using Google Cloud Datastore
  - Best practices related to the following: Queries Built-in and composite indexes Inserting and deleting data (batch operations) Transactions Error handling Queries
  - Built-in and composite indexes

- Inserting and deleting data (batch operations)
- Transactions
- Error handling
- Bulk-loading data into Cloud Datastore by using Google Cloud Dataflow
- Lab: Store application data in Cloud Datastore
- Performing Operations on Buckets and Objects
  - Operations that can be performed on buckets and objects
  - Consistency model
  - Error handling
- Best Practices for Using Google Cloud Storage
  - Naming buckets for static websites and other uses
  - Naming objects (from an access distribution perspective)
  - Performance considerations
  - Setting up and debugging a CORS configuration on a bucket
  - Lab: Store files in Cloud Storage
- : Handling Authentication and Authorization
  - Cloud Identity and Access Management (IAM) roles and service accounts
  - User authentication by using Firebase Authentication
  - User authentication and authorization by using Cloud Identity-Aware Proxy
  - Lab: Authenticate users by using Firebase Authentication
- Using Google Cloud Pub/Sub to Integrate Components of Your Application
  - Topics, publishers, and subscribers
  - Pull and push subscriptions
  - Use cases for Cloud Pub/Sub
  - Lab: Develop a backend service to process messages in a message queue
- Adding Intelligence to Your Application
  - Overview of pre-trained machine learning APIs such as Cloud Vision API and Cloud Natural Language Processing API
- Using Google Cloud Functions for Event-Driven Processing
  - Key concepts such as triggers, background functions, HTTP functions
  - Use cases
  - Developing and deploying functions
  - Logging, error reporting, and monitoring
- Managing APIs with Google Cloud Endpoints
  - Open API deployment configuration
  - Lab: Deploy an API for your application

- Deploying an Application by Using Google Cloud Cloud Build, Google Cloud Container Registry, and Google Cloud Deployment Manager
  - Creating and storing container images
  - Repeatable deployments with deployment configuration and templates
  - Lab: Use Deployment Manager to deploy a web application into Google App Engine flexible environment test and production environments
- Execution Environments for Your Application
  - Considerations for choosing an execution environment for your application or service: Google Compute Engine Kubernetes Engine App Engine flexible environment Cloud Functions Cloud Dataflow Google Compute Engine
  - Kubernetes Engine
  - App Engine flexible environment
  - Cloud Functions
  - Cloud Dataflow
  - Lab: Deploying your application on App Engine flexible environment
- Debugging, Monitoring, and Tuning Performance by Using Google Stackdriver
  - Stackdriver Debugger
  - Stackdriver Error Reporting
  - Lab: Debugging an application error by using Stackdriver Debugger and Error Reporting
  - Stackdriver Logging
  - Key concepts related to Stackdriver Trace and Stackdriver Monitoring. Lab: Use Stackdriver Monitoring and Stackdriver Trace to trace a request across services, observe, and optimize performance

## Wymagania:

To get the most benefit from this course, participants should have the following prerequisites:

- Completed Google Cloud Platform Fundamentals or have equivalent experience
- Working knowledge of Node.js
- Basic proficiency with command-line tools and Linux operating system environments

## Poziom trudności



## Certyfikaty:

The participants will obtain certificates signed by Google Cloud Platform.

This course additionally prepares you for **Professional Cloud Developer** certification exam available at Kryterion test centers.

## Prowadzący:

Authorized Google Cloud Platform Trainer.