Szkolenie: Google Cloud
Application Development with Cloud Run

Google Cloud

DOSTĘPNE TERMINY

2026-12-14 | 3 dni | Kraków / Wirtualna sala
2026-12-16 | 3 dni | Warszawa / Wirtualna sala

Cel szkolenia:

This course introduces you to fundamentals, practices, capabilities and tools applicable to modern cloud-native application development using Google Cloud Run. Through a combination of lectures, hands-on labs, and supplemental materials, you will learn how to design, implement, deploy, secure, manage, and scale applications on Google Cloud using Cloud Run

What you'll learn

- Gain detailed understanding of Cloud Run, Google Cloud’s fully managed compute platform for deploying and scaling containerized applications quickly and securely.
- Write and migrate code your way using your favorite languages (Go, Python, Java, Ruby, Node.js, and more).
- Secure service to service communication based on service identities and grant applications only the permissions they need.
- Learn how to build highly available applications with low end-user latency, globally.
- Learn how to connect to, and persist data in the managed database offerings on Google Cloud.
- Understand how abstracting away all infrastructure management creates a simple developer experience.

Who this course is for:

- Cloud developers, API developers, customers and partners

Plan szkolenia:

- Introducing Application Development with Cloud Run
  - Introducing Application Development with Cloud Run
- Understanding Cloud Run
  - You can use any language, any library and any binary. Cloud Run expects your app (in a

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container image) to listen on a port and respond to HTTP requests.
    - Use a docker repository on Artifact Registry to store your images: Cloud Run only deploys from there.
    - Cloud Run uses autoscaling to handle all incoming requests
    - Pay for use pricing model
    - No background tasks: Container lifetime is only guaranteed while handling requests
    - There is no persistent storage: Store data downstream
    - Cloud Run is portable (containers and Knative)
- Building Container Images
    - The contents of a container image (deep dive)
    - There are two ways to build container images - Buildpacks (hands-off) - Docker (you're in control)
    - Cloud Run supports both source-based and a container image based workflow
    - The most important considerations of building a secure container image
- Building Container Images
    - Container lifecycle - Idle vs serving - Shutdown lifecycle hook
    - Cold starts - Min instances
    - Container readiness
    - The service resource and what it describes
    - Configuring memory limits and CPU allocation
    - Deploying a new revision
    - Traffic steering (tagging, gradual rollouts)
- Configuring Service Identity and Authorization
    - Cloud IAM
    - Cloud Run
- Serving Requests
    - Custom Domains
    - Global Load Balancer - URL Map - Frontend - Backend services
    - Benefits and drawbacks of GLB over custom domain
    - Types of GLB Backends
    - Multi-region load balancing
    - Multi-regional applications challenges
    - Cloud CDN
- Using Inbound and Outbound Access Control
    - Ingress settings
    - Cloud Armor
    - Using Cloud IAM to protect services

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- VPC, VPC Access Connector
- Egress settings

- Persisting Data
  - Understanding why you need to store data externally when running a workload on Cloud Run.
  - Connect with Cloud SQL from Cloud Run - Understand how it works (managed Cloud SQL Proxy)
  - Managing concurrency as a way to safeguard performance (understand why and when)
  - Connecting with Memorystore
  - VPC Connector - Challenges with scaling Memorystore (throughput)
  - Briefly introduce Cloud Storage, Firestore and Cloud Spanner, while reinforcing how the client libraries use the built-in service account to connect
  - Multi-region data storage (and what Spanner and Firestore can do for you)
- Implementing Service-to-Service Communication
  - Understanding Cloud Pub/Sub - Understanding topics, push subscriptions
  - -Idempotency (Handling retries and at-least-once invocation)
  - Event ID, design for resume, or use a lease
  - Handling undeliverable messages
  - How to asynchronously schedule a background task on a different service
  - Cloud Tasks, and when to choose it over Cloud Pub/Sub
  - Benefits of using Pub/Sub to pass messages over making sync RPC requests
  - Learn about services in Google Cloud with a built-in integration to push events to Pub/Sub (Cloud Build, Artifact Registry, Cloud Storage, IOT Core, BigQuery)
  - Cloud Scheduler to invoke services on a schedule.
  - CloudEvents
  - EventArc, and how to consume Audit logs
  - What to expect now, and how EventArc will develop over time
- Orchestrating and Automating Serverless Workflows
  - Conceptual overview of Cloud Workflows
  - Invoking and passing parameters
  - Understand steps and jumps
  - Defining, using and passing values with variables
  - Using the switch statement to add logic
  - Workflow visualization
  - Calling HTTPS endpoints
  - Calling an authenticated Cloud Run service
  - Example: polling API for completion

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Wymagania:

- Familiarity with Linux commands and command line interface.
- Basic understanding of Google Cloud.
- Basic understanding of networking.
- Basic understanding of one or more programming languages like Go, Python, Java, Ruby, or Node.js.
- Basic understanding of shell scripts, YAML, JSON, HTTP, and TLS.

Poziom trudności



Certyfikaty:

The participants will obtain certificates signed by Google Cloud Platform.

Prowadzący:

Authorized Google Cloud Platform Trainer

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