

Szkolenie: Google Cloud Architecting Hybrid Cloud Infrastructure with Anthos



DOSTĘPNE TERMINY

2024-10-21 | 4 dni | Virtual Classroom
2024-11-04 | 4 dni | Virtual Classroom
2024-11-04 | 4 dni | Warszawa / Wirtualna sala

Cel szkolenia:

This four day, instructor-led course prepares students to modernize, manage, and observe their containerized applications using Kubernetes, in Google Cloud, AWS, Azure, and on-premises. Through presentations and hands-on labs, participants explore Google Kubernetes Engine (GKE), Connect Agent, Anthos Service Mesh and Anthos Config Management features. Participants learn how to work with containerized applications even when split between multiple clusters, hosted by multiple cloud providers or on-premises. This course is a continuation of Architecting with GKE and assumes direct experience with the technologies covered in that course.

Course objectives

- Explain each layer of the Anthos technology stack and the problems it is designed to address.
- Create, connect and manage Anthos clusters from multiple deployment environments.
- Load-balance clusters running in Google Cloud.
- Describe automating policy and security at scale with Config Management.
- Create multi-cluster networking architectures with Anthos Service Mesh.
- Deploy and run applications on an Anthos on-premises solution
- Monitor and troubleshoot applications running on an Anthos on-premises solution.
- Install workloads on Cloud Run and Cloud Run for Anthos.
- Configure and review logging, metrics, and monitoring for serverless computing solutions on Anthos.
- Install and use Migrate for Anthos to migrate workloads.

Audience

This class is primarily intended for the following participants:

- Technical employees using GCP, including customer companies, partners and system integrators: deployment engineers, cloud architects, cloud administrators, system engineers, and SysOps/DevOps engineers.

- Individuals using GCP to create, integrate, or modernize solutions using secure, scalable microservices architectures in hybrid environments.

Plan szkolenia:

- The course includes presentations and hands-on labs.
- Module 1: Introducing Anthos
 - Overview
 - Anthos technology stack
 - Anthos components
 - Billing
- Module 2: Anthos Environments
 - Containers and GKE review
 - Anthos for centrally managed clusters
 - Creating and managing Anthos clusters
 - Anthos clusters on AWS
 - Anthos clusters on Azure
- Module 3: Multi-cluster Concepts on Anthos
 - Anthos fleets
 - Fleet networking
 - Multi-cluster Service
 - Multi-cluster Gateway
- Module 4: Managing Configuration with Anthos
 - Challenges with configuration management
 - Anthos Config Management
 - Config Sync
 - Hierarchy Controller
 - Policy Controller
 - Config Connector
 - Blueprints
- Module 5: Introducing Anthos Service Mesh
 - Introduction to Anthos Service Mesh
 - Architecture
 - Installation
 - Life of a request in the mesh
 - Mesh telemetry and instrumentation
 - Anthos Service Mesh dashboards

- Anthos Service Mesh pricing and support
- Module 6: Anthos Service Mesh Routing
 - Networking and service discovery
 - Anthos Service Mesh API resources
 - Network resilience and testing
- Module 7: Securing Network Traffic with Anthos Service Mesh
 - Security across services
 - Authentication and encryption
 - Service authentication in the mesh
 - End-user authentication in the mesh
 - Authorization in the mesh
 - Bonus: Employee authentication and authorization in the mesh
- Module 8: Multi-cluster Networking with Anthos Service Mesh
 - Fleet networking
 - Single network east-west routing
 - Multiple network east-west routing
 - North-south routing
- Module 9: Introduction to Anthos Clusters on Bare Metal
 - Overview
 - Use cases for clusters on-premises
 - Anthos on bare metal specifics
 - Components and services
 - Support
 - Billing
- Module 10: Planning and Building the Admin Cluster
 - Architecture
 - Resource requirements
 - Setting up the admin workstation
 - Building the admin cluster
 - Troubleshooting the admin bootstrap process
 - Additional architectural options
- Module 11: Adding and Configuring User Clusters
 - Building the user cluster
 - Enabling authentication
 - Deploying applications
 - Configuring storage

- Module 12: Operating and Managing Clusters
 - Observability
 - Logging
 - Monitoring
 - Operations
 - Security
- Module 13: Application Migration with Anthos
 - Modernization vision
 - Workload discovery and migration assessment
 - Migrating applications to containers
- Module 14: Modern CI/CD for Anthos
 - CI/CD in Google Cloud
 - CI/CD in a private network
 - CI/CD on-premises and multi-cloud environments
 - Securing the software supply chain
 - Deploying 3rd party software
- Module 15: Application Migration with Anthos
 - Overview of serverless computing solutions and their associated Anthos components
 - Install Cloud Run for Anthos
 - Running serverless workloads on Anthos

Wymagania:

The prerequisite for this course is the Architecting with Google Kubernetes Engine course or equivalent experience. Trainers should have taught or upskilled in this course.

Poziom trudności



Certyfikaty:

The participants will obtain certificates signed by Google Cloud.

Prowadzący:

Authorized Google Cloud Platform Trainer.