

Training: Google Cloud Google Cloud Fundamentals: Core Infrastructure



TRAINING TERMS

2025-11-28 | 1 day | Kraków / Virtual Classroom
2025-12-05 | 1 day | Warszawa / Virtual Classroom

TRAINING GOALS:

This course uses lectures and labs to give you an overview of Google Cloud products and services. You learn the value of Google Cloud and how to incorporate cloud-based solutions into your business strategies.

What you'll learn

- Identify the purpose and value of Google Cloud products and services.
- Define how infrastructure is organized and controlled in Google Cloud.
- Explain how to create basic infrastructure in Google Cloud.
- Select and use Google Cloud storage options.
- Describe the purpose and value of Google Kubernetes Engine.
- Identify the use cases for serverless Google Cloud services.
- Explore Google Clouds Generative AI tools and best practices.

Who this course is for

- Individuals planning to deploy applications and create application environments on Google Cloud
- Developers, systems operations professionals, and solution architects getting started with Google Cloud
- Executives and business decision makers evaluating the potential of Google Cloud to address their business needs

Products

- Identity and Access Management (IAM)
- Cloud Marketplace
- Compute Engine
- Cloud Storage
- Cloud Bigtable
- Cloud SQL
- Cloud Spanner
- Firestore
- Google Kubernetes Engine
- Cloud Functions
- Cloud Run

CONSPECT:

- Module 0 Introduction to the Course
 - Topics
 - The course introduction explains the course goals and previews each section.
 - Objectives
 - Introduce course objectives and preview each section of the course.
- Module 1 Introducing Google Cloud
 - Topics
 - Cloud computing overview
 - IaaS and PaaS
 - The Google Cloud network
 - Environmental impact
 - Security
 - Open source ecosystems
 - Pricing and billing
 - Objectives
 - Identify the benefits of Google Cloud.
 - Define the components of the Google network infrastructure, including points of presence, data centers, regions, and zones.
 - Identify the difference between infrastructure as a service (IaaS) and platform as a service (PaaS).
- Module 2 Resources and Access in the Cloud
 - Topics
 - Google Cloud resource hierarchy

- IAM
 - IAM roles
 - Service accounts
 - Cloud Identity
 - Interacting with Google Cloud
- Objectives
 - Identify the purpose of projects on Google Cloud.
 - Define the purpose of and use cases for IAM.
 - List interaction methods with Google Cloud.
 - Use Cloud Marketplace to interact with Google Cloud.
- Module 3 Virtual Machines and Networks in the Cloud
 - Topics
 - Virtual Private Cloud networking
 - Compute Engine
 - Scaling virtual machines
 - Important VPC compatibilities
 - Cloud Load Balancing
 - Cloud DNS and Cloud CDN
 - Connecting networks to Google VPC
 - Objectives
 - Explore the basics of networking in Google Cloud.
 - Identify the purpose of and use cases for Google Compute Engine.
 - Outline how Google Compute Engine can scale
 - Detail important VPC compatibilities including routing tables, firewalls and VPC peering.
 - Explore how Cloud Load Balancing functions in Google Cloud.
 - Deploy a basic infrastructure to Google Cloud
- Module 4 Storage in the Cloud
 - Topics
 - Cloud Storage
 - Cloud SQL
 - Cloud Spanner
 - Firestore
 - Cloud Bigtable
 - Comparing storage options
 - Objectives

- Identify the purpose of and use cases for Cloud Storage.
- Distinguish between Cloud Storage classes.
- Distinguish between Google Cloud's Database storage options.
- Deploy an application that uses Cloud SQL and Cloud Storage.
- Module 5 Containers in the Cloud
 - Topics
 - Introduction to containers
 - Kubernetes
 - Google Kubernetes Engine
 - Objectives
 - Define the concept of a container and identify uses for containers.
 - Identify the purpose of and use cases for Kubernetes and Google Kubernetes Engine.
- Module 6 Applications in the Cloud
 - Topics
 - Cloud Run
 - Cloud Function
 - Objectives
 - Identify the purpose and use cases for Cloud Run
 - Describe how Cloud Functions can support application development on Google Cloud.
 - Deploy a containerized application on Cloud Run
- Module 7 Prompt Engineering
 - Topics
 - Introduction to generative AI
 - Introduction to large language models
 - Prompt engineering and recommended practices
 - Objectives
 - Define what generative AI is.
 - Explain how large language models are trained.
 - Detail the elements and types of a prompt.
 - Explore recommended practices when constructing prompts.
- Module 8 Course Summary
 - Topics
 - The course summary recaps the major concepts learners were introduced to during the course.
 - Objectives

- Summarize the content covered in each section of the course.

REQUIREMENTS:

Familiarity with application development, systems operations, Linux operating systems, and data analytics or machine learning is helpful in understanding the technologies covered.

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by Google Cloud.

TRAINER:

Authorized Google Cloud Platform Trainer.