

## GC-GCF

# GOOGLE CLOUD FUNDAMENTALS: CORE INFRASTRUCTURE



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Beginner	Google Cloud	VILT & ILT	NA

### INTRODUCTION

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

### AUDIENCE PROFILE

This course is intended for the following participants:

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

### PREREQUISITES

This manual assumes the user understands the basics of using Google or search engines.

### COURSE OBJECTIVES

This course teaches participants the following skills:

- Identify the purpose and value of Google Cloud products and services.
- Define how infrastructure is organised 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.

### COURSE CONTENT

#### Lesson 1: Introducing Google Cloud Objectives

- Identify the advantages of Google Cloud.
- Define the components of Google's network infrastructure, including: Points of presence, data centers, regions, and zones.
- Classify the difference between Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS).

#### Activities

- Quiz

#### Lesson 2: Resources and Access in the Cloud Objectives

- Identify the purpose of projects on Google Cloud.
- Define the purpose of and use cases for Identity and Access Management..
- List the methods of interacting with Google Cloud.

#### Activities

- Lab: Getting Started with Cloud Marketplace.
- Quiz.

#### Lesson 3: Virtual Machines and Networks in the Cloud Objectives

- Identify the purpose of and use cases for Google Compute Engine.
- Define the basics of networking in Google Cloud.

#### Activities

- Lab: Getting Started with VPC Networking and Google Compute Engines.
- Quiz.

## Module 4: Storage in the Cloud

### Objectives

- Classify the purpose of and use cases for Cloud Storage, and database option available in Google Cloud
- Distinguish between Google Cloud's storage options

### Activities

- Lab: Getting Started with VPC Networking and Google Compute Engines.
- Quiz.

## Module 5: Containers in the Cloud

### Objectives

- Define the concept of a container and identify uses for containers.
- Identify the purpose of and use cases for Google Kubernetes Engine and Kubernetes.

### Activities

- Lab: Getting Started with GKE.
- Quiz.

## Module 6: Applications in the Cloud

### Objectives

- Identify the purpose of and use cases for Google App Engine.
- Contrast the App Engine Standard environment with the App Engine Flexible environment.
- Identify the purpose of and use cases for Google Cloud Endpoints.
- Identify the purpose and use cases for Cloud Run.

### Activities

- Lab: Hello Cloud Run.
- Quiz.

## Module 7: Course Summary

### Objectives

- Describe how Cloud Source Repositories and Cloud Functions can support application

development on Google Cloud.

- Explain how template-based creation and management of resources leverages a template to produce efficient app deployment and management.

### Activities

- Lab: Automating Deployment of Infrastructure using Terraform.

## Lesson 8: Logging and Monitoring in the Cloud

### Objectives

- Define SLIs, SLOs, and SLAs.
- Identify the purpose of integrated monitoring, alerting, and debugging.

### Activities

- Quiz.
- Course feedback.

## Lesson 9: Course Review and Summary

### Objectives

- Module 1–8 Review.
- •Additional Learning Paths.

## ASSOCIATED CERTIFICATIONS & EXAM

This course in part prepares delegates to write the following exams.

- Google Cloud Certified: Associate Cloud Engineer exam.
- Google Cloud Certified: Professional Cloud Architect exam.
- Google Cloud Certified: Professional Cloud Developer exam.
- Google Cloud Certified: Professional Cloud Network Engineer exam.
- Google Cloud Certified: Professional Cloud Security Engineer exam.