Training: Google Cloud

Getting Started with Google Kubernetes Engine

TRANING TERMS

2026-12-09 | 1 day | Virtual Classroom

TRAINING GOALS:

This course covers an introduction to Kubernetes, a software layer that sits between your applications and your hardware infrastructure. Google Kubernetes Engine (GKE) brings you Kubernetes as a managed service on Google Cloud. This course teaches the basics of GKE and how to get applications containerized and running in Google Cloud. The course covers a basic introduction to Google Cloud, an overview of containers and Kubernetes, Kubernetes architecture, and Kubernetes operations.

Course objectives

- Discuss the differences among Google Cloud compute platforms.
- Discuss the components and architecture of Kubernetes.
- Identify how Google manages Kubernetes orchestration.
- Create and manage Google Kubernetes Engine clusters by using the Google Cloud console and the gcloud/kubectl commands.

Audience

- Application developers, cloud solutions architects, DevOps engineers, IT managers
- Individuals who use Google Cloud to create new solutions or to integrate existing systems, application environments, and infrastructure with Google Cloud.

CONSPECT:

- Module 1 Introduction to the Course
  - Topics
    - The course introduction explains the course goals and previews each section.
  - Objectives
    - Introduce the course goals and preview each section of the course.

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- Module 2 Introduction to Google Cloud
  - Topics
    - Cloud computing and Google Cloud
    - Google Cloud compute offerings
    - The Google network
    - Resource management
    - Billing
    - Interacting with Google Cloud
  - Objectives
    - Identify Google Cloud services and their functions.
    - Choose the right Google Cloud services to create your own cloud solution.
    - Define the purpose of and use cases for Identity and Access Management (IAM).
    - Identify how costs can be managed in the resource hierarchy.
    - Use the Google Cloud console and Cloud Shell to create virtual machines (VMs), service accounts, and buckets.
  - Activities
    - Lab: Accessing the Google Cloud console and Cloud Shell
    - Quiz: Module quiz
- Module 3 Introduction to Containers and Kubernetes
  - Topics
    - Introduction to containers
    - Container images
    - Working with Cloud Build
    - 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.
    - Outline the concept of Google Kubernetes Engine.
    - Create a container using Cloud Build.
  - Activities
    - Lab: Working with Cloud Build
    - Quiz: Module quiz
- Module 4 Kubernetes Architecture
  - Topics
    - Kubernetes concepts
    - The Kubernetes control plane

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        - Google Kubernetes Engine concepts
        - Kubernetes object management
    - Objectives
        - Conceptualize the Kubernetes architecture.
        - Identify how to view and manage Kubernetes objects.
        - Distinguish between Google Kubernetes Engines modes of operation.
        - Deploy a Kubernetes cluster by using GKE.
    - Activities
        - Lab: Deploying GKE Autopilot clusters
        - Quiz: Module quiz
- Module 5 Kubernetes Operations
    - Topics
        - The kubectl command
        - Introspection
    - Objectives
        - Work with the kubectl command.
        - Inspect the cluster and Pods.
        - View a Pod’s console output.
        - Sign in interactively to a Pod.
    - Activities
        - Lab: Deploying GKE Autopilot Clusters from Cloud Shell
        - Quiz: Module quiz
- Module 6 Course Summary
    - Topics
        - The course summary recaps the major concepts learners were introduced to during the course.
    - Objectives
        - Recap the content covered in each section of the course.

REQUIREMENTS:

- Having completed Google Cloud Fundamentals: Core Infrastructure, or having equivalent experience
- Basic proficiency with command-line tools and Linux operating system environments

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Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by Google Cloud.

TRAINER:

Authorized Google Cloud Trainer.

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