

GC-GKE

GETTING STARTED WITH GOOGLE KUBERNETES ENGINE



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

INTRODUCTION

This one-day course provides 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 containerised 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.

AUDIENCE PROFILE

This course is intended for the following participants:

- Application developers, Cloud Solutions Architects, DevOps Engineers, IT managers.
- Individuals using Google Cloud to create new solutions or to integrate existing systems, application environments, and infrastructure with the Google Cloud.

PREREQUISITES

- Application developers, Cloud Solutions Architects, DevOps Engineers, IT managers.
- Individuals using Google Cloud to create new solutions or to integrate existing systems, application environments, and infrastructure with the Google Cloud.

COURSE OBJECTIVES

This course teaches participants the following skills:

- Discuss Google Cloud network architectures, including hybrid architectures.
- Implement reliable, scalable, resilient applications balancing key performance metrics with cost.
- Choose the right Google Cloud deployment services for your applications.
- Secure cloud applications, data and infrastructure.
- Monitor service level objectives and costs using Cloud Monitoring.
- Application developers, Cloud Solutions Architects, DevOps Engineers, IT managers
- Individuals using Google Cloud to create new solutions or to integrate existing systems, application environments, and infrastructure with the Google Cloud.

COURSE CONTENT

Lesson 1: Introduction to Google Cloud

Topics

- Use the Google Cloud Console.
- Use Cloud Shell.
- Define Cloud Computing.

- Identify Google Cloud compute services.
- Understand Regions and Zones.
- Understand the Cloud Resource Hierarchy.

- Administer your Google Cloud Resources. Objectives
- Identify Google Cloud services and their function.
- Choose the right Google Cloud services to create your own Cloud solution.

Activities

- 1 Lab.
- 1 Quiz.

Lesson 2: Containers and Kubernetes in Google Cloud

Topics

- Create a Container Using Cloud Build.
- Store a Container in Container Registry.
- Understand the Relationship Between Kubernetes and Google Kubernetes Engine (GKE).
- Understand how to Choose Among Google Cloud Compute Platforms.

Objectives

- Create a Container using Cloud Build.
- Store a Container in Container Registry.
- Compare and Contrast Kubernetes and GKE features.

Activities

- 1 Lab.
- 1 Quiz.

Lesson 3: Kubernetes Architecture

Topics

- Understand the Architecture of Kubernetes: Pods, Namespaces.
- Understand the Control-plane Components of Kubernetes.
- Create Container Images using Cloud Build.
- Store Container Images in Container Registry.
- Create a Kubernetes Engine Cluster.

Objectives

- Conceptualize the Kubernetes Architecture.
- Deploy a Kubernetes Cluster using GKE.
- Deploy Pods to a GKE Cluster.

- View and Manage Kubernetes Objects.
- Conceptualize the Migrate for Anthos process.

Activities

- 1 Lab.
- 1 Quiz.

Lesson 4: Introduction to Kubernetes Workloads

Topics

- The kubectl Command.
- Introduction to Deployments.
- Pod Networking.
- Volumes Overview.

Objectives

- Understand the Kubectl command.
- Understand how Deployments are used in Kubernetes.
- Understand the networking architecture of Pods.
- Understand Kubernetes storage abstractions.

ASSOCIATED CERTIFICATIONS & EXAM

This course prepares you for the Google Cloud Certified: Associate Cloud Engineer, Google Cloud Certified: Professional Cloud Architect, and the Google Cloud Certified: Professional Cloud Developer certification exams.