Google Cloud

Getting Started with Google Kubernetes Engine

This course will teach you how to containerize workloads in Docker containers, deploy them to Kubernetes clusters provided by Google Kubernetes Engine, and scale those workloads to handle increased traffic. You'll also learn how to continuously deploy new code in a Kubernetes cluster to provide application updates.

DURATION
1 day

LEVEL
Intermediate

FORMAT
Instructor led
On-demand

What you'll learn

- Understand how software containers work.
- Understand the architecture of Kubernetes.
- Understand the architecture of Google Cloud.
- Understand how pod networking works in Google Kubernetes Engine.
- Create and manage Kubernetes Engine clusters using the Google Cloud Console and gcloud/kubectl commands.

Overview	4 Modules · 32 Videos · 3 Labs · 3 Classrom activities
Who this course is for	• 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.
Prerequisite	• Basic proficiency with command-line tools and Linux operating system environments, as well as Web server technologies such as Nginx • Systems Operations experience including deploying and managing applications, either on-premises or in a public cloud environment

Module 01 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 and 1 quiz

Module 02 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 and 1 quiz

Module 03 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 and 1 quiz

Module 04 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.

Activities

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