

Getting Started with Google Kubernetes Engine

Duration: 1 Day

Course Description:

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.

Course Objectives:

At the end of the course, you will be able to:

- 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.

Prerequisites:

To get the most out of this course, participants should have:

- Basic proficiency with command-line tools and Linux operating system environments, as well as Web server
- Systems Operations experience including deploying and managing applications, either onpremises or in a public cloud environment

Audience:

This class is intended for the following participants:

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

Course Outlines:

Module 1: Introduction to Google Cloud

- 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

Module 2: Containers and Kubernetes in Google Cloud

- 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

Module 3: Kubernetes Architecture

- 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

Module 4: Continuous Deployment with Jenkins

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