



Cloud Hero Kubernetes Skills

Course description

Master Docker containers and Kubernetes orchestration by deploying, scaling, managing, and troubleshooting containerized applications on Google Kubernetes Engine (GKE) through hands-on Cloud Hero challenges.

Through guided labs and real-world scenarios, learners will gain hands-on experience provisioning Kubernetes clusters, managing deployments with kubectl, exposing services, and operating containerized applications in cloud-native environments.

- Course level: Intermediate
- Duration: 1 day

Activities

This course includes gamified cloud hero learning experience, hands-on labs, kubernetes deployment exercises, container management workshops, scaling and orchestration challenges, deployment strategy activities, and real-world cloud-native scenarios to reinforce learning.

Course objectives

In this course, you will learn to:

- Build, run, and troubleshoot Docker containers.
- Understand Kubernetes architecture and core concepts.

- Deploy applications on Google Kubernetes Engine (GKE).
- Manage workloads using kubectl commands.
- Configure Deployments and Services.
- Scale Kubernetes applications efficiently.
- Implement Blue-Green and Canary deployment strategies.
- Operate and troubleshoot cloud-native containerized workloads.

Key features

- Docker Fundamentals
- Kubernetes Foundations
- Google Kubernetes Engine (GKE)
- Application Deployment and Orchestration
- Microservices Management
- Scaling and High Availability
- Advanced Deployment Strategies
- Hands-On Challenge-Based Learning

Intended audience

This course is intended for:

- Cloud Engineers
- DevOps Engineers
- Platform Engineers
- Application Developers
- Site Reliability Engineers (SREs)
- Kubernetes Administrators
- Professionals seeking deeper Kubernetes deployment and scaling expertise.

Prerequisites

We recommend that attendees of this course have:

- General familiarity with Kubernetes concepts.

- Linux system administration skills.
- Familiarity with Cloud Shell and command-line interfaces is helpful.
- Little to no prior Docker experience required.

Products covered

- Docker
- Google Kubernetes Engine
- kubectl
- Kubernetes

Course outline

Module 01 - Introduction to Docker

- Container Fundamentals
- Docker Architecture
- Building Containers
- Running Containers
- Container Debugging

Module 02 - Google Kubernetes Engine: Qwik Start

- Kubernetes Fundamentals
- GKE Overview
- Cluster Creation
- kubectl Basics

Module 03 - Orchestrating the Cloud with Kubernetes

- Pods
- Deployments
- Services
- Kubernetes Orchestration
- Scaling Workloads

Module 04 - Managing Deployments Using Kubernetes Engine

- Deployment Management
- Rolling Updates

- Blue-Green Deployments
- Canary Deployments
- Release Strategies

Certification details

Participants receive a Cloud Hero completion badge and recognition upon successful completion of all challenge activities.

FAQs

Who should attend this Cloud Hero?

This Cloud Hero is designed for learners who have basic Kubernetes familiarity and want hands-on experience deploying and scaling applications in Kubernetes environments.

Is prior Docker experience required?

No. Little to no Docker experience is assumed, making this an excellent starting point for containerization skills.

Is this a hands-on learning experience?

Yes. The Cloud Hero consists entirely of guided labs and challenge-based exercises.

What Kubernetes topics are covered?

The course covers clusters, Pods, Deployments, Services, scaling, orchestration, and deployment management strategies.

Will deployment strategies such as Blue-Green and Canary be covered?

Yes. Advanced deployment techniques including Blue-Green and Canary deployments are key components of the learning path.

What products are used?

The challenge focuses on Docker, Kubernetes, kubectl, and Google Kubernetes Engine (GKE).

How long does the Cloud Hero take?

The complete Cloud Hero experience takes approximately 240 minutes.

Will I receive a certificate?

Participants typically earn a Cloud Hero completion badge upon successful completion of all challenge activities.