

## Lab Sheet 5

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# App Dev: Deploying the Application into Kubernetes Engine – Python

Google Kubernetes Engine provides a managed environment for deploying, managing, and scaling your containerized applications using Google infrastructure. The environment Kubernetes Engine provides consists of multiple machines (specifically, Compute Engine instances) grouped together to form a cluster.

Kubernetes provides the mechanisms through which you interact with your cluster. You use Kubernetes commands and resources to deploy and manage your applications, perform administration tasks and set policies, and monitor the health of your deployed workloads.

In this lab, you deploy the Quiz application into Kubernetes Engine, leveraging Google Cloud resources, including Container Builder and Container Registry, and Kubernetes resources, such as Deployments, Pods, and Services.

## What you'll learn

In this lab, you learn how to perform the following tasks:

- Create Docker files to package up the Quiz application frontend and backend code for deployment.
- Harness Container Builder to produce Docker images.
- Provision a Kubernetes Engine cluster to host the Quiz application.
- Employ Kubernetes deployments to provision replicated Pods into Kubernetes Engine.
- Leverage a Kubernetes service to provision a load balancer for the quiz frontend.