# Google Cloud Solutions I: Scaling Your Infrastructure

Expert 7 Steps 8 hours 53 Credits

In this advanced-level quest, you will learn how you to harness serious Gootle Cloud power and infrastructure. The hands-on labs will give you use cases, and you will be tasked with implementing scaling practices utilized by Google's very own Solutions Architecture team. From developing enterprise grade load balancing and autoscaling, to building continuous delivery pipelines, Google Cloud Solutions I: Scaling your Infrastructure will teach you best practices for taking your Google Cloud projects to the next level.

Infrastructure Application Development Business Transformation

## Prerequisites:

This Quest expects solid hands-on proficiency with Google Cloud workflows and processes, especially those involving multiple services working together. It is recommended that the student have at least earned a badge by completing the hands-on labs in the Kubernetes Solutions and Networking in the Google Cloud Quests before beginning. Additional experience with the labs in the Cloud Architecture Quest will also be useful.

## Quest Outline

### Autoscaling an Instance Group with Custom Cloud Monitoring Metrics

This lab describes how to deploy an autoscaling Compute Engine instance group that is automatically scaled using a custom Cloud monitoring metric

45 minutes Advanced 7 Credits

### Setting up Jenkins on Kubernetes Engine

This hands-on lab will show you how to set up Jenkins on Google Kubernetes Engine to help orchestrate your software delivery pipeline.

1 hour Advanced 7 Credits

### Continuous Delivery Pipelines with Spinnaker and Kubernetes Engine

Create a Kubernetes Engine cluster, deploy an application, and use Spinnaker to continuously deploy the application when changes are made to the application.

1 hour 30 minutes Expert 9 Credits

### Deploying a Fault-Tolerant Microsoft Active Directory Environment

In this Qwiklab, you set up a redundant pair of Windows Domain Controllers (DC) with AD using a new Virtual Private Cloud (VPC) network and multiple subnets on Google Cloud Platform (GCP).

1 hour Expert 9 Credits

## Deploying Memcached on Kubernetes Engine

In this lab you'll learn how to deploy a cluster of distributed Memcached servers on Kubernetes Engine using Kubernetes, Helm, and Mcrouter.

1 hour | Advanced | 7 Credits

## Running Dedicated Game Servers in Google Kubernetes Engine

This lab will show you how to use an expandable architecture for running a real-time, session-based multiplayer dedicated game server using Kubernetes on Google Container Engine.

1 hour | Expert | 9 Credits

## Distributed Load Testing Using Kubernetes

Lab has instructions to conduct distributed load testing with Kubernetes, which includes a sample web application, Docker image, and Kubernetes deployments/services.

1 hour | Fundamental | 5 Credits

## Quest Complete!

Congrats! You completed this quest and earned a badge. Become a cloud expert and start another.