

Homework - Google Cloud Platform (GCP) with Node.js

Using the instructions below one can establish a service using GCP App Engine. Once established, you will be able to move your Node.js program developed for Assignment #3 to your Google App Engine website and have it executed there.

1. Sign ups

This section assumes that you have performed the installation for homework #5, including (1) have a google account, and (2) obtained \$50 GCP coupon and applied it.

2. Set up Node.js on Google Cloud Platform (GCP) App Engine

2.1 Tutorial: Deploy Node.js on App Engine

“Build a Node.js app on App Engine”, with “Hello from App Engine!” sample and Tutorial is available here:

<https://cloud.google.com/appengine/docs/standard/nodejs/building-app>

The “Hello from App Engine!” sample shows how to deploy a basic web server app using Express on App Engine and there are no costs with running the sample app since it does not exceed the free quota.

You should complete all 5 steps listed in the sample tutorial.

2.2 Tutorial: Deploy Node.js on Cloud Run

“Quickstart: Build and deploy a Node.js web app to Cloud Run”, with “helloworld” sample and Tutorial is available here:

<https://cloud.google.com/run/docs/quickstarts/build-and-deploy/deploy-nodejs-service>

This is an alternative to running Nodejs on App Engine. You should complete all steps listed in the sample tutorial.

2.3 Node.JS on Google Cloud Platform

Additional documentation for Node.js on all GCP Services, including, Quickstart using Cloud Run, API & Libraries, Tutorials, Code samples is available at the *“Node.js on Google Cloud”* web page at:

<https://cloud.google.com/nodejs/>

3. Angular on GCP App Engine

To develop Angular applications, we recommend these tutorials:

What is Angular and tutorial:

<https://angular.io/tutorial>

<https://angular.dev/overview>

<https://v17.angular.io/tutorial/first-app>

Setting up the local environment and workspace:

<https://angular.dev/tools/cli/setup-local>

Add Bootstrap 5 to Angular 13 with example & tutorial:

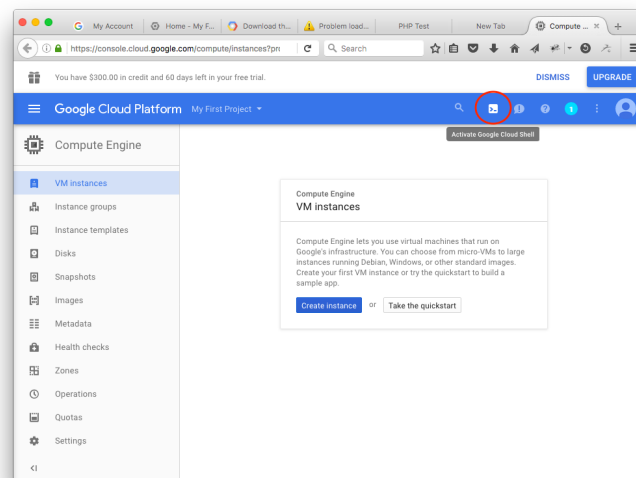
<https://www.techiediaries.com/angular-bootstrap/>

4. Set up Exploring Your instance (Optional)

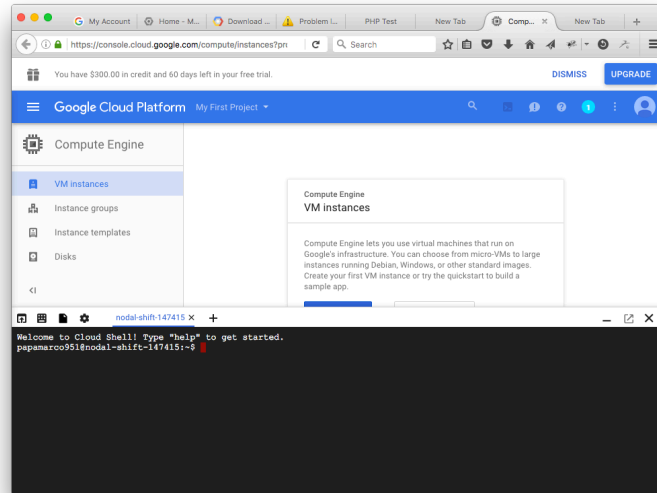
If you want to explore your server instance you can activate the **Google Cloud Shell**.

<https://console.cloud.google.com/compute>

Select the **helloappengine** project from the dropdown (the project you created in section 2.1). Now click on the **Activate Google Cloud Shell** icon next to **helloappengine**.



After waiting a few minutes for Google to establish the connection, you will see the shell appear at the bottom of the browser window. You can now use Linux commands to manage your Cloud Platform Console projects and resources.

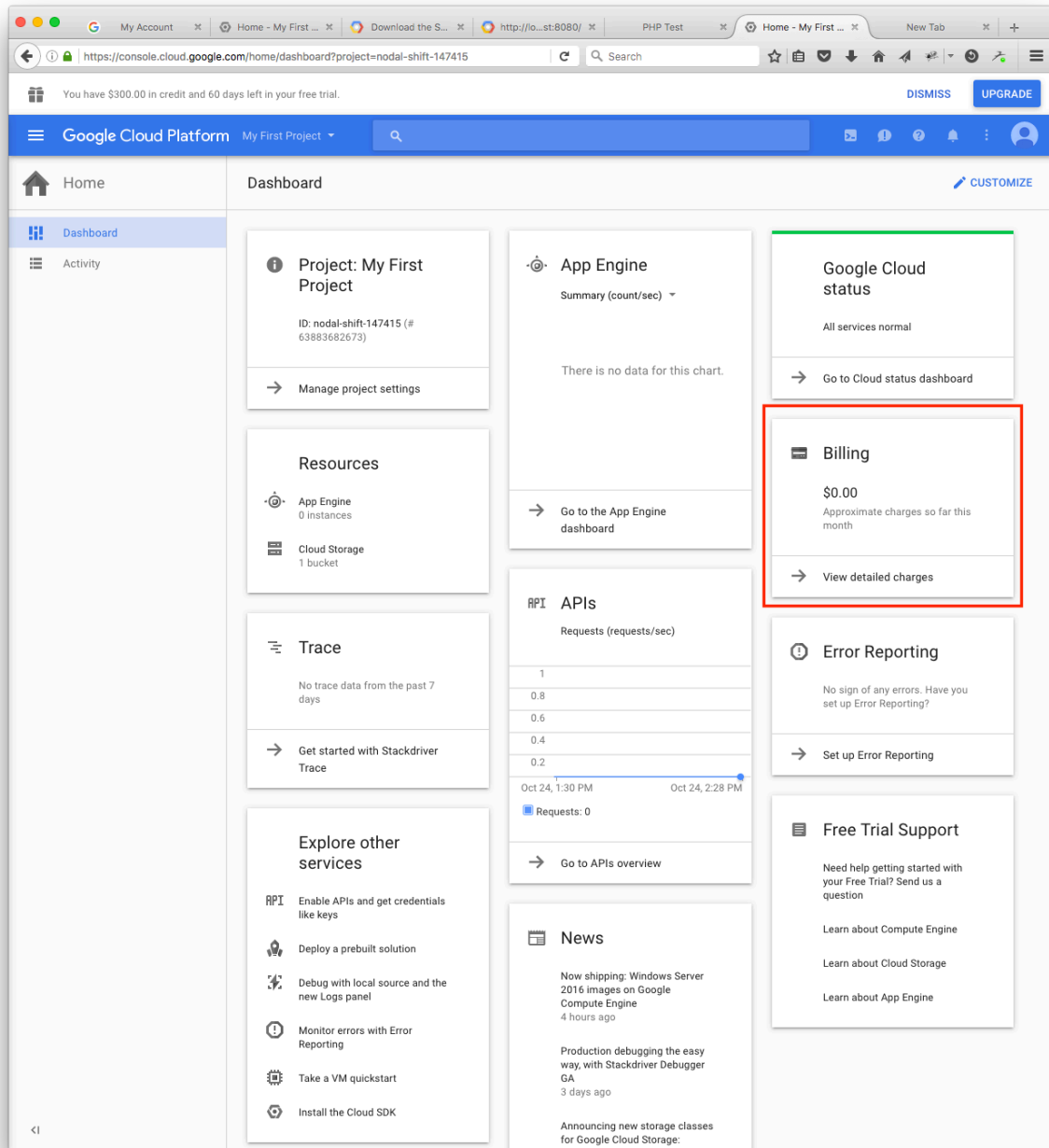


You can read more about the **Google Cloud Shell** here:

<https://cloud.google.com/cloud-shell/docs/>

10. Monitoring your instance and you Bill

Select Google Cloud Platform and go to the Dashboard. Under **Billing** you will see if you are incurring any charges.



Have fun exploring Google Cloud Platform!!