

Module 2: Managing GCP

Assignment Solution - 2

Problem Statement:

Focus Area: Cloud SDK, GCP Projects

The Logistics company Highway-63 has a developer team, a quality assurance team, and the audit team. All the teams need isolation between their resources and should have complete network isolation. The developer team wants to create a virtual machine programmatically instead of using Google Cloud Console. The audit team wants to see all the activity and logs of all the applications.

Steps:

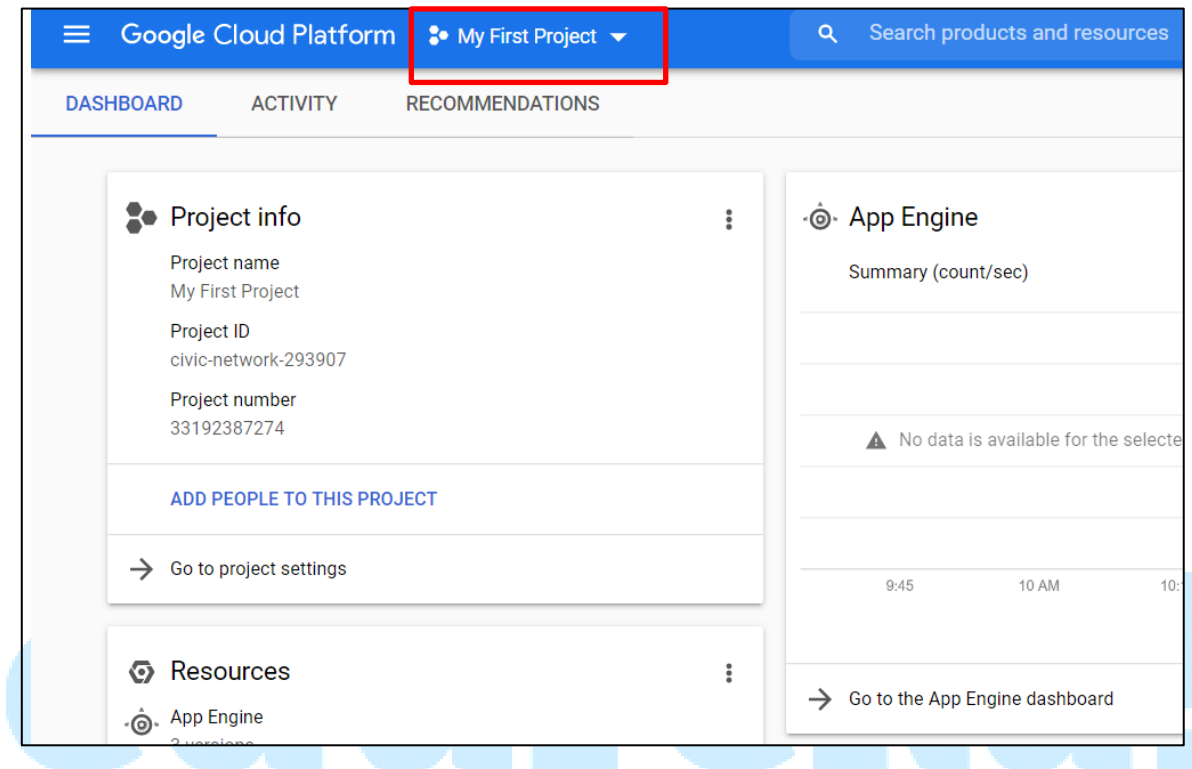
1. Create 3 projects for 3 teams.
2. Use GCloud SDK to deploy VM instead of Console.
3. Find the logs on the server in the Cloud logging and API activity under Google Activity

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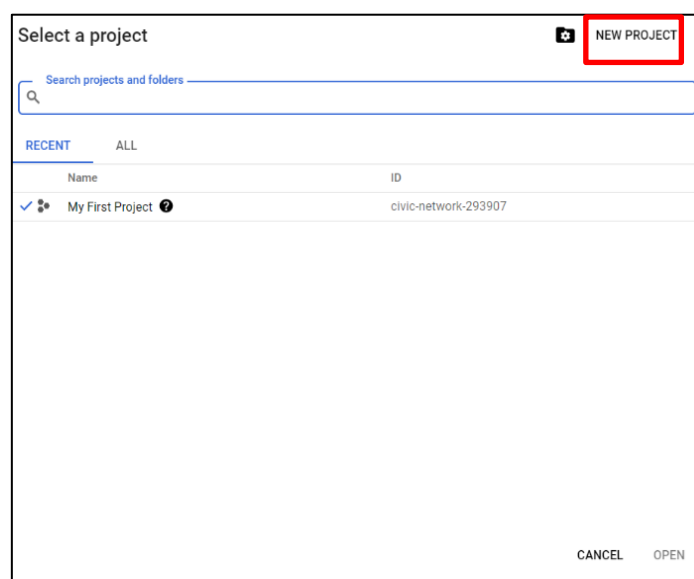
Solution:

Step-1: Create 3 Projects for 3 Environments:

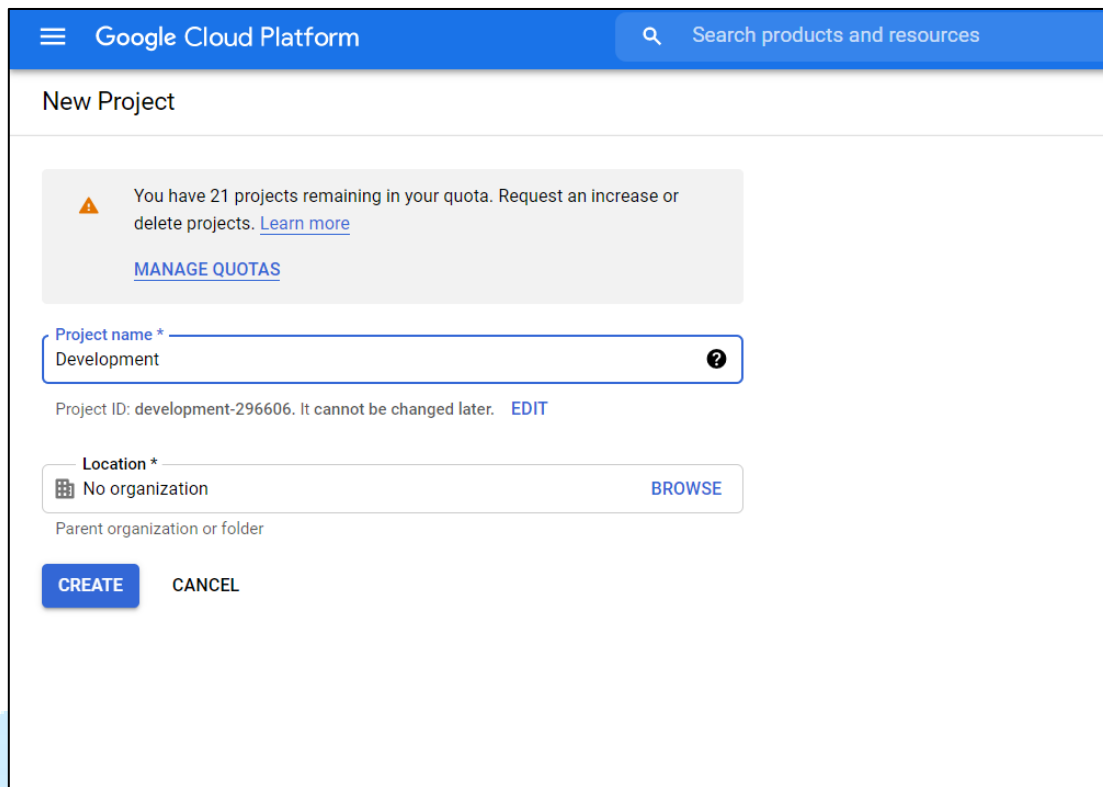
1. Go the Google Cloud Console and Click on the Project ID in the top navigation bar.



2. Click on New Project on the top right corner.

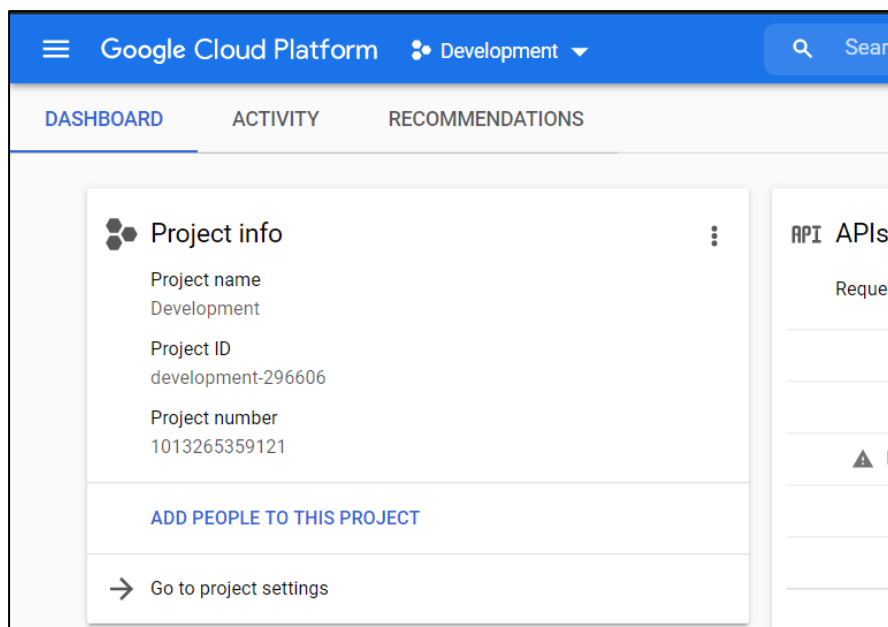


3. Enter the Project Name and Select the Location (This will be applicable if you are under an organization, you have to select a place in the organization hierarchy) and Click on **Create**



The screenshot shows the 'New Project' page in the Google Cloud Platform console. At the top, there's a blue header with the Google Cloud Platform logo and a search bar. Below the header, the page title is 'New Project'. A warning message states: 'You have 21 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)'. Below this, there's a link to 'MANAGE QUOTAS'. The 'Project name' field is required and contains the text 'Development'. Below the name field, it shows the 'Project ID: development-296606. It cannot be changed later. [EDIT](#)'. The 'Location' field is also required and currently shows 'No organization' with a 'BROWSE' button. Below the location field, it says 'Parent organization or folder'. At the bottom, there are two buttons: 'CREATE' and 'CANCEL'.

4. After a few seconds the project will be created.

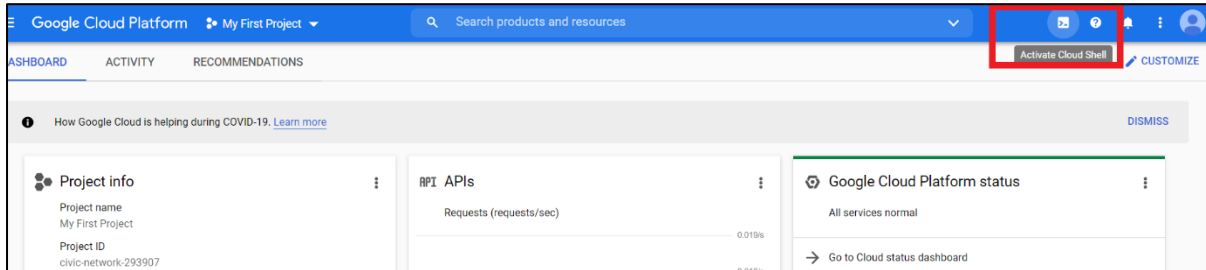


The screenshot shows the 'Project info' section of the Google Cloud Platform dashboard for the 'Development' project. The top navigation bar includes the Google Cloud Platform logo, the project name 'Development', and a search bar. Below the navigation bar, there are three tabs: 'DASHBOARD', 'ACTIVITY', and 'RECOMMENDATIONS'. The 'Project info' section displays the following details: Project name: Development, Project ID: development-296606, and Project number: 1013265359121. Below the details, there is a link to 'ADD PEOPLE TO THIS PROJECT' and a button to 'Go to project settings'.

5. Repeat the same process for other projects also.

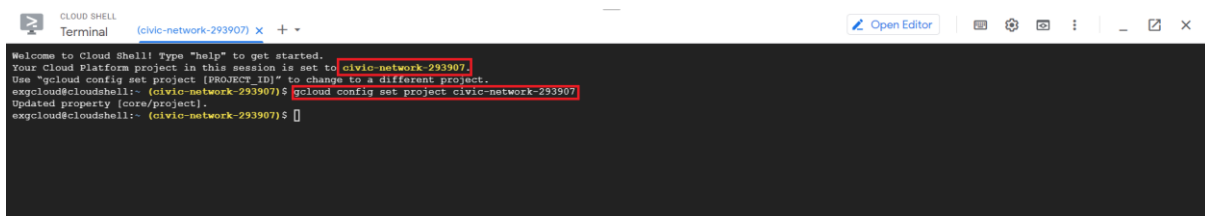
Step-2: Using GCloud SDK to deploy VM instead of Console.

1. Start the Cloud Shell



2. Set the project id in the shell

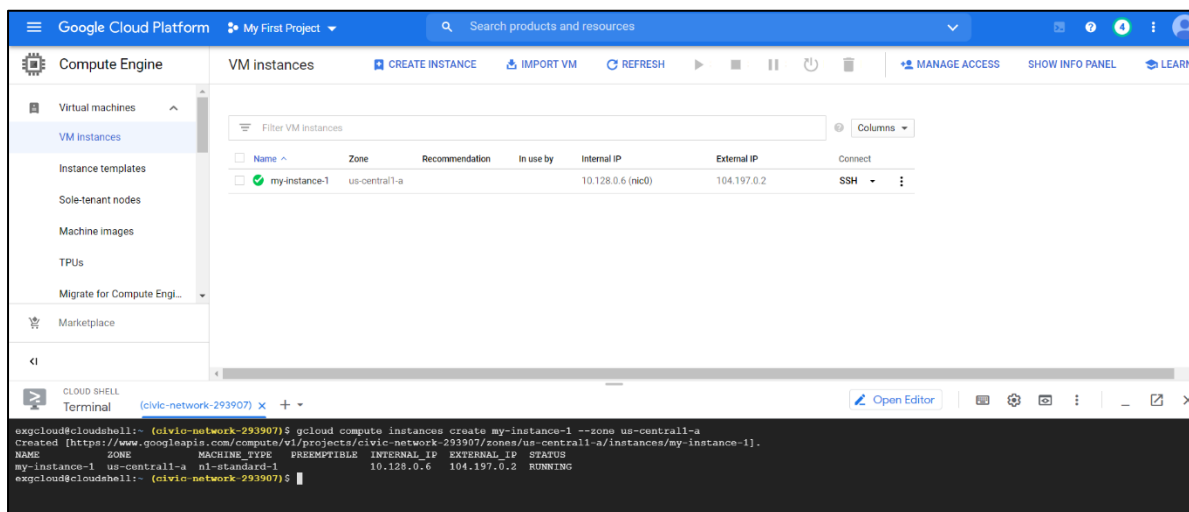
3. To create a compute engine, we are going to use the following command with some options



gcloud compute instances create

4. First, we are going to make a VM with a default configuration. Run the following command in the shell

gcloud compute instances create my-instance-1 --zone us-central1-a

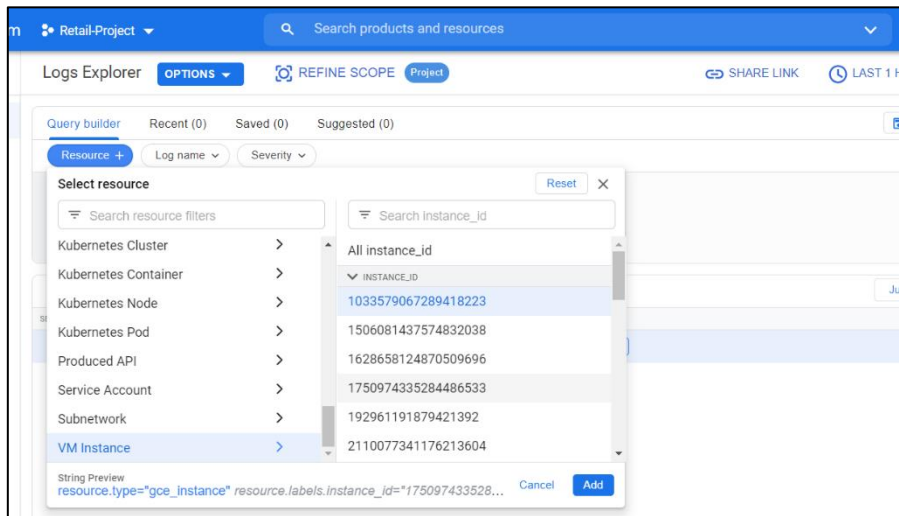


- There are many customizations we can do to our VM. To know different options available in the SDK, go to the following link to explore:

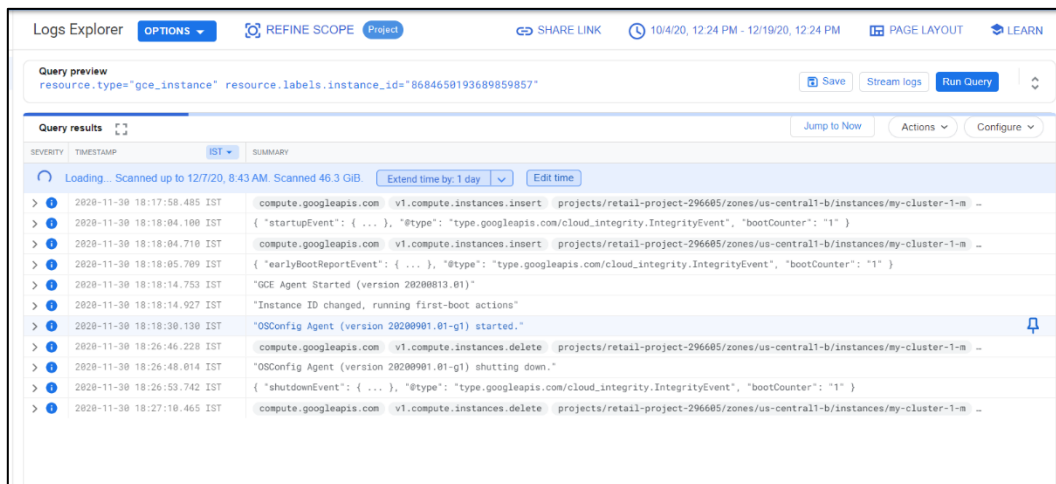
<https://cloud.google.com/sdk/gcloud/reference/compute/instances>

Step-3: Find the logs of the VM instance in Cloud Logging

- In the Cloud Console, select **Navigation menu > Logging > Logs Viewer**.
- Under the search box in the first drop-down, choose VM instance.



- You can observe the logs of the VM instance created



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