



Semester: V
Academic Year: 2025-26
Class / Branch: TE IT B
Subject: Advanced Devops Lab (ADL)
Name of Instructor: Prof. Manjusha K.

Name of Student: Tanmay Padule
Student ID: 23104156

EXPERIMENT NO. 13

Aim: To demonstrate working of cloud launcher to launch the web application and Manage and Monitor the Application.

Theory:

To demonstrate the working of **Google Cloud Launcher (Google Cloud Marketplace)** to launch a web application, The purpose of this lab is to deploy a web application using a pre-configured environment from the Google Cloud Marketplace and

Prerequisites

- A **Google Cloud Platform (GCP)** account.
- **Billing enabled** on your GCP account (to avoid deployment restrictions).
- Basic knowledge of **web applications** (e.g., web servers, databases).
- Familiarity with the **Google Cloud Console**.

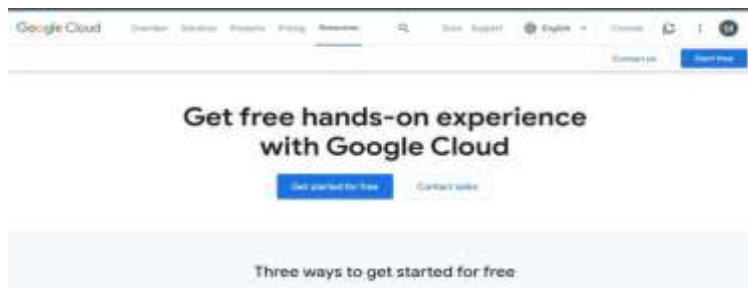
Step 1: Setting Up Your GCP Account 1.

Login to Google Cloud Console:

- Visit the Google Cloud Console.
- Sign in using your Google account credentials.



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Try Google Cloud for free

Step 1 of 2 Account Information



M.N. Kashikar
mkashikar@apst.edu.in

SWITCH ACCOUNT

Country

India

By using this application, you agree to the [Google Cloud Platform EULA](#), [Supplemental Free Trial EULA](#), and any applicable services and APIs [Terms of Service](#).

AGREE & CONTINUE

Access to all Google Cloud products

Get everything you need to build and run your apps, websites and services, including Firebase and the Google Maps API.

\$300 credit for free

Put Google Cloud to work with \$300 in credit to spend over the next 90 days.

No autocharge after free trial ends

We ask you for your credit card to make sure you are not a robot. If you use a credit or debit card, you won't be charged unless you manually activate your full account.



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The screenshot displays two overlapping modal windows from the Google Cloud console. The background window is titled 'Step 2 of 2 Payment Information' and shows a 'Create new payments profile' button. The foreground window is titled 'Create a payments profile' and contains the following fields: 'Profile type' (dropdown menu set to 'Organization'), 'Organization name' (text input with 'apsit' entered), and 'Legal name' (text input with 'M.N. Kashikar' entered). Below these fields are 'Cancel' and 'Create' buttons. A second modal window, titled 'Add credit or debit card', is also visible. It includes a 'Card number' field, 'MM/YY' and 'CVC' fields, and a 'Cardholder name' field with 'M.N. Kashikar' entered. A checkbox labeled 'Billing address and legal address are the same' is checked. 'Cancel' and 'Save card' buttons are at the bottom.

Create a New Project:

- Click on the **project drop-down** on the top-left corner of the console.
- Select **New Project**.
- Name the project (e.g., "Cloud Launcher Demo") and select your billing account.
- Click **Create**



You have 22 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)

[MANAGE QUOTAS](#)

Project name *

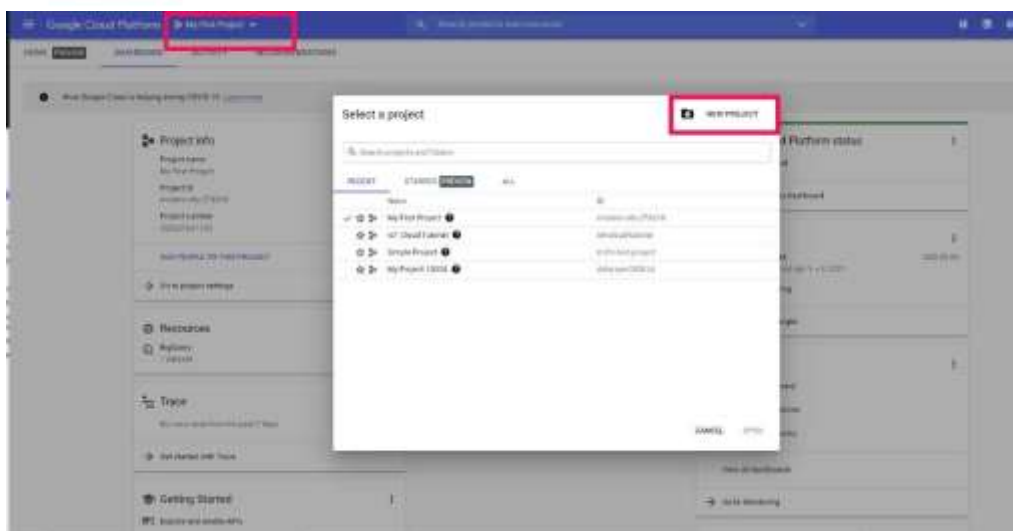
The name is required.

Location *

No organization [BROWSE](#)

Parent organization or folder

[CREATE](#) [CANCEL](#)



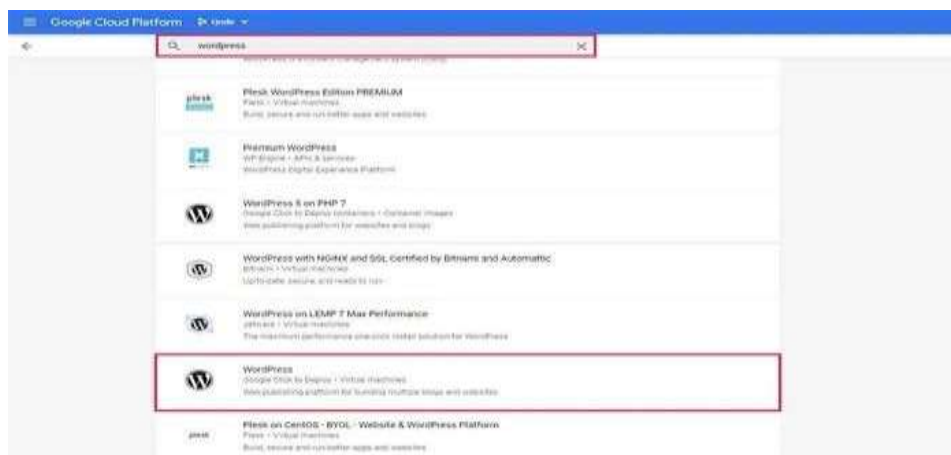
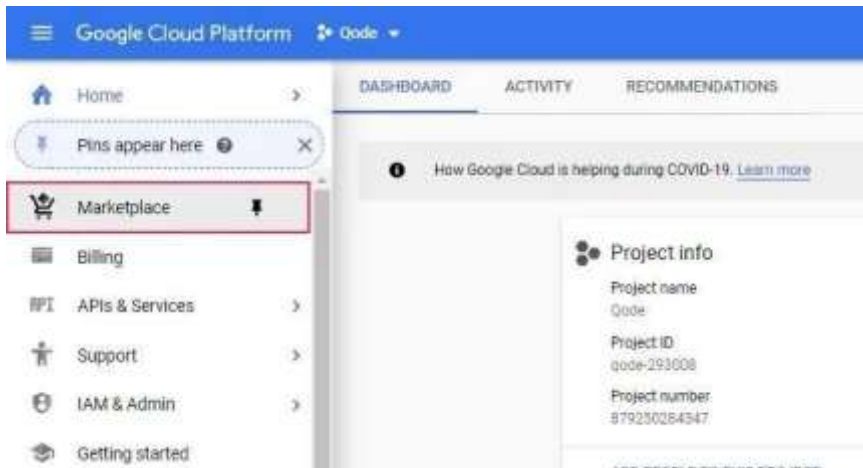
Step 2: Navigating Google Cloud Marketplace

1. Open Google Cloud Marketplace:

- In the **left-hand menu**, navigate to **Marketplace**.
- This section allows you to find pre-configured solutions such as WordPress, LAMP stack, or Django, as well as other web application frameworks and services.

2. Search for a Web Application:

- Use the **search bar** in the Marketplace to find a web application you want to deploy.
For this demo, let's deploy a simple **WordPress** instance.
- Type "**WordPress**" and select the official package from the search results.



Step 3: Deploying the Web Application

1. Launch the WordPress App:

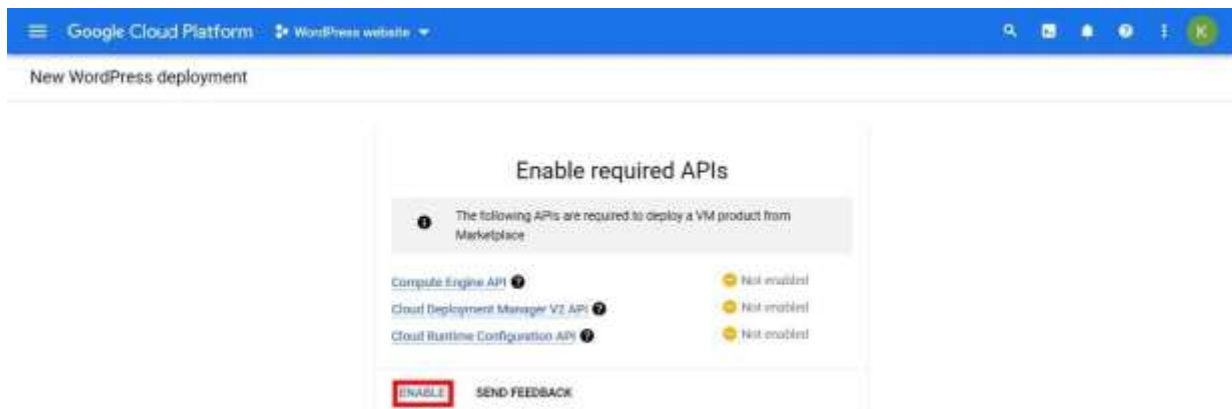
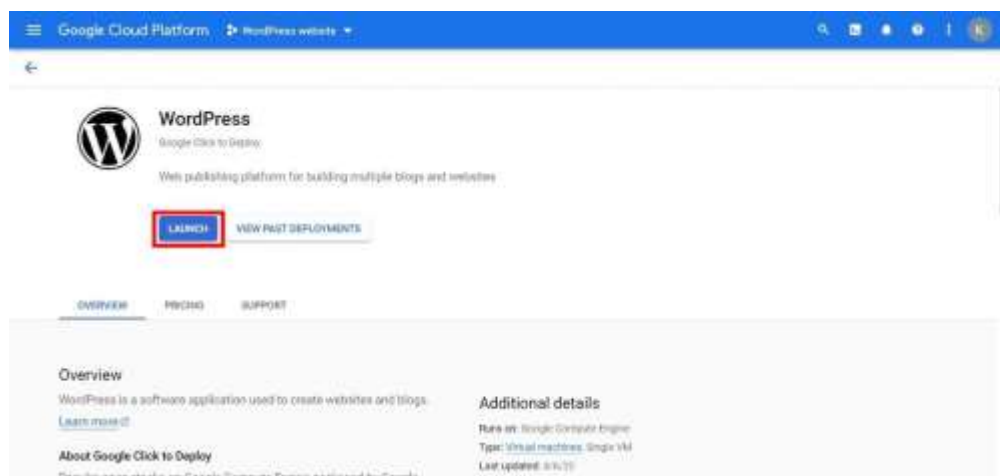
- On the WordPress product page, click **Launch on Compute Engine**.
- You'll be taken to a page to configure the deployment.

2. Configure Deployment Settings:

- Choose the **zone** where you want to deploy the application (e.g., us-central1).
- Select the **machine type** (e.g., e2-small) which will allocate the appropriate CPU and memory resources.
- **Disk type:** Choose either the default **Persistent Disk** or **SSD** (for faster performance).



- **Networking:** Leave the default networking settings, or create a new Virtual Private Cloud (VPC) if necessary.
3. **Click Deploy:**
- After selecting your settings, click **Deploy** to start the process. GCP will automatically create the necessary infrastructure, including a virtual machine (VM), storage, and network configuration.





Step 4-Accessing the Web Application 1.

Monitor Deployment Progress:

See the progress of the deployment in the Google Cloud Console. This includes setting up the virtual machine, installing WordPress, and configuring the environment.

2. Get the External IP Address:

Once deployment is complete, go to the **VM instances** page from the left-hand menu under **Compute Engine**.

Locate the deployed WordPress instance, and note the **External IP Address** assigned to the VM.

3. Access the Web Application:

- Open a new browser tab and navigate to the External IP address you noted. ○

You should see the WordPress installation page, where you can set up the site (e.g., language, admin credential **Step 5 -Configuring the Web Application**

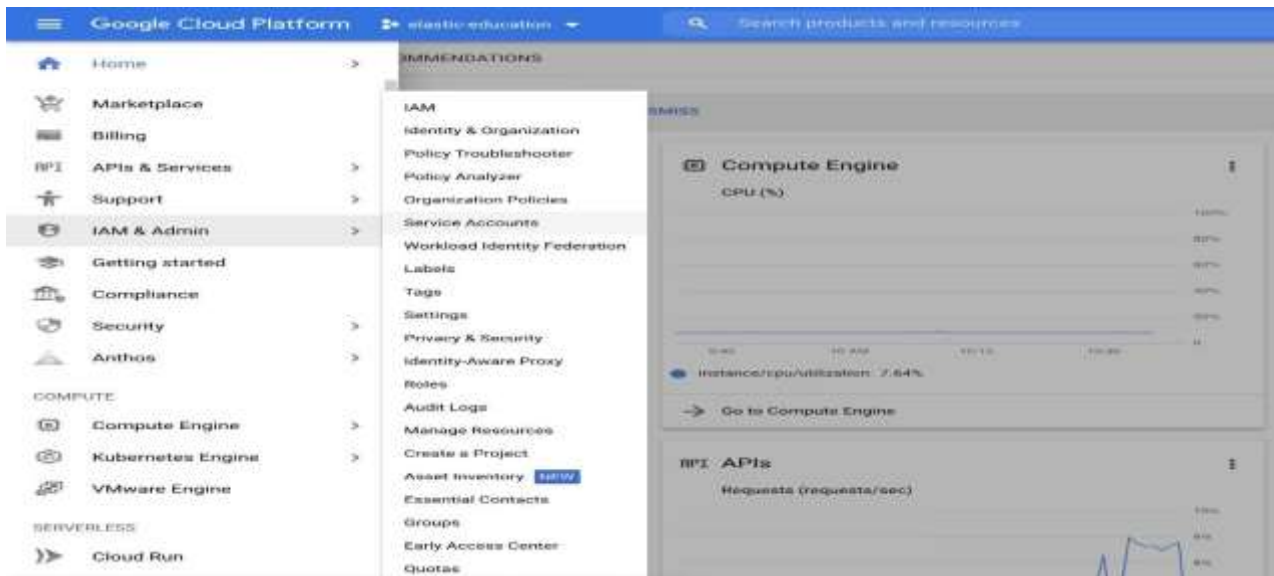
1. Set Up WordPress:

- Follow the on-screen instructions to complete the WordPress setup. ○
Choose your site's title, create an admin username, and password. ○
After setup, log in to the WordPress admin panel to customize your site.



2. Explore the Admin Dashboard:

- Once logged in, explore the admin dashboard where you can add new content, change the theme, or install plugins.



Step 6: Manage and Monitor the Application

1. View Logs and Performance:

- Go to the **Operations** menu in the Cloud Console and select **Logs Explorer**.
- This allows you to view real-time logs from the web server, which can be useful for troubleshooting and monitoring application performance.





2. Scaling and Auto-healing:

- Discuss how you can modify the configuration to enable auto-scaling and high availability.
- For advanced users, demonstrate how to enable **Cloud Monitoring** and **Alerting** to get notified if the web server is under heavy load or goes down.

Step 7 : Clean Up Resources

1. Delete Resources:

- To avoid unnecessary billing charges, delete the resources you created after the lab.
 - Go to **Compute Engine > VM Instances**, and select the instance you deployed (WordPress).
 - Click **Delete** to remove the virtual machine and associated resources.

2. Verify Billing:

- Check your **billing dashboard** to ensure there are no active resources still incurring charges.

Conclusion: Thus we have deployed a WordPress instance, accessed it through the web, and explored management and monitoring functionalities within GCP.