Google managed platform to run your app.

GCP app engine

PAAS

Platform as a Service

Since it is a managed service, you should only focus on the application & Google will manage the resources required to run the application.

Oldest service launched in 2008.

Application in app engine run across multiple servers which is created & managed by GCP.

Key features

1) **fully managed** :- in Appengine Google handles servers, networking, scaling / patching & security.

- App-engine makes deployment, maintenance, scalability, security easy- so that user can focus on Innovation

2) **Supports Multiple Languages** :- Python, Java, Node.js, Go, PHP, Ruby, .NET & custom Runtime using Docker.

3) **Automatic scaling** :- you app scales up & down automatically based on traffic.

How it works:

1) you write your application code.
2) you define configurations in app.yaml ✓
3) Deploy using CLI → gcloud app deploy ✓
4) GAE (Google app engine) automatically provisiones resources, handles traffic, and manages scalability.

App engine features

App engine standard Environment

Infra is managed by GCP & you will not have any control

serverless →

→ completely abstracted - you dont get any visibility or control over underlying VM.

→ Google runs your app on Sandboxed environment

→ you deploy the code, Google takes care of Rest.

→ you will not able to see Infra on which your app is deployed

App engine flexible environment

Infra is managed by GCP but accesible

→ uses Google compute engine VM which you can acss

→ you can see the VMs in compute engine section.

→ you cannot fully manage the Infra but most part you can manage.

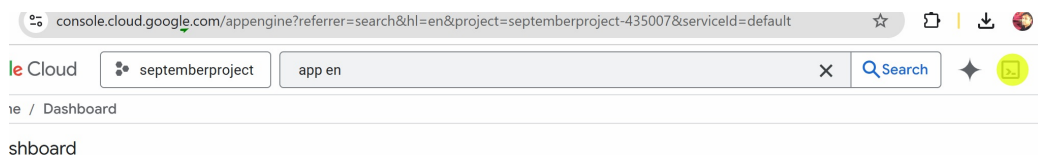
Features	Standard	Flexible
Instance Startup	Sec	minutes
SSH	NO	yes
Need of VPC	NO	yes
Pricing	After free daily use / pay per Instance class, automatic shutdown (Pay only when app is accessed)	Pay for resources / hour.
Scale to zero	yes	min 1 Instance

In a single project, only one app engine can be deployed.

App engine is designed to have only one app engine application per GCP project because it defines a "region and several backend setttings at a project level not at a resource level.

LAB

1) Create a new project
2) open cloud shell



3) git clone https://github.com/akshu20791/app-engine-standard-demo/

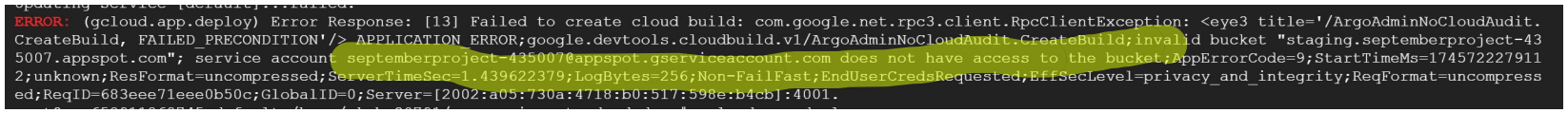
4) cd app-engine-standard-demo

5) ls

you will be able to see all the files

6) gcloud app deploy

Now error u might get in here::



Go to iam -> find the service account like project_id@appspot.gserviceaccount.com ....edit permission-> add another role-> storage admin -> save

and go back to cli
gcloud app deploy