Assignment and Exam Content

App Engine

Disable Your App Engine when not using it.
Go To App Engine-> Settings

Always Delete your Cloud Resources to Avoid $$ Charges.

App Engine lab

App Engine Lab Contains – Three major areas below to say complete Lab ☺

A

Create App Engine

App Engine is Locations Specific – Regional.

B

Deploy Application

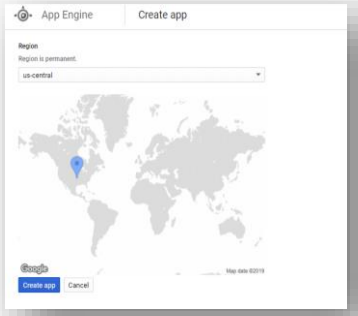
Once the cluster is ready , you can deploy Sample Application Bundle. Available to deploy.

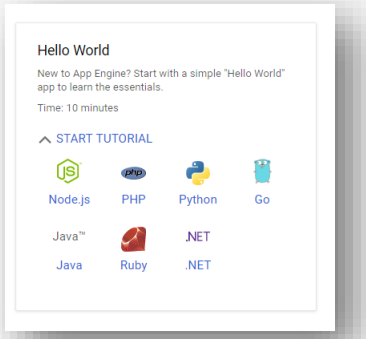
3

Manage Application on in App Engine.

Monitor App, Traffic Splitting/ Canary Deployment etc etc

App Engine – Steps in Summary





1 Create App

OR

$ gcloud app create

2 Deploy Application

3 Manage App Lifecycle

3.1 Traffic Splitting

3.2 Version Control

1

Create App Engine

- GCP Provide standard way to create App engine
- You must specify region and optionally specify Language and Environment

2

Deploy Application

- Make Build , Write App.yaml file
- Deploy application

3

Manage Application and Its lifecycle

1. Traffic Splitting
2. Version Control.

1 App Engine Creation

Create App Engine
- GCP Provide standard way to create App engine
- You must specify region and optionally specify Language and Environment

Deploy Application
- Make Build , Write App.yaml file
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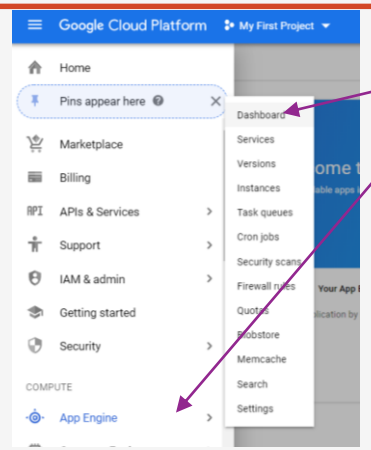
Manage Application and Its lifecycle
1. Traffic Splitting
2. Version Control.

1 Go To -> COMPUTE -> App Engine-> Dashboard



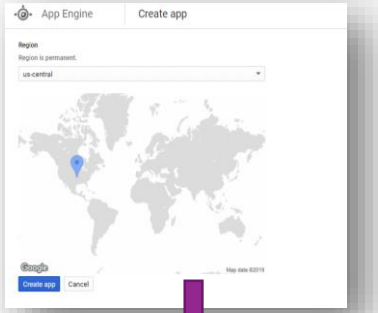
Kubernetes Clusters

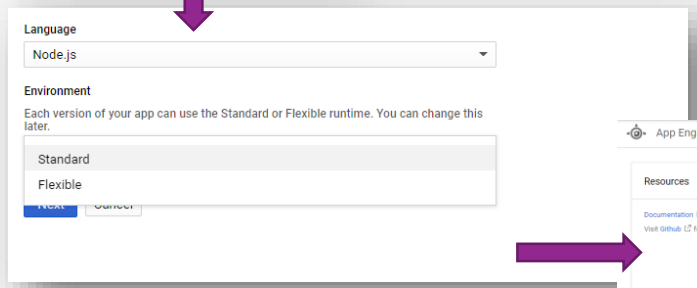
2 There are multiple way you can create App Engine – If you project have it.

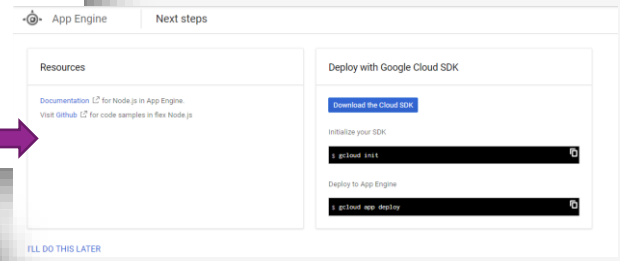
Console (UI)

Dashboard -> Create App Engine -> Select Location (region) ->

Next page – Select Node.js or your own choice and Select Standard env and Click next. App Engine is created







Alternatively Go to Cloud Shell (CLI)

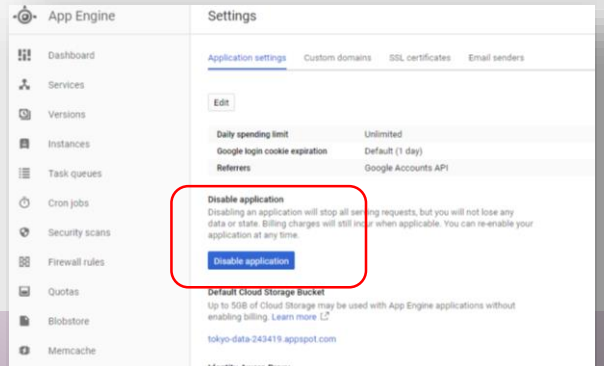
```
$ gcloud app create
```

For Current lab

Use Any method and create app engine with region of your choice.

You can disable App Engine – if you don't want Google to charge you continuously

Please disable App if not in use



2 Application Deployment

Create App Engine
- GCP Provide standard way to create App engine
- You must specify region and optionally specify Language and Environment

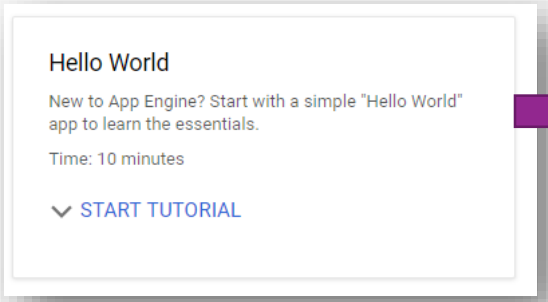
Deploy Application
- Make Build , Write App.yaml file
- Deploy application

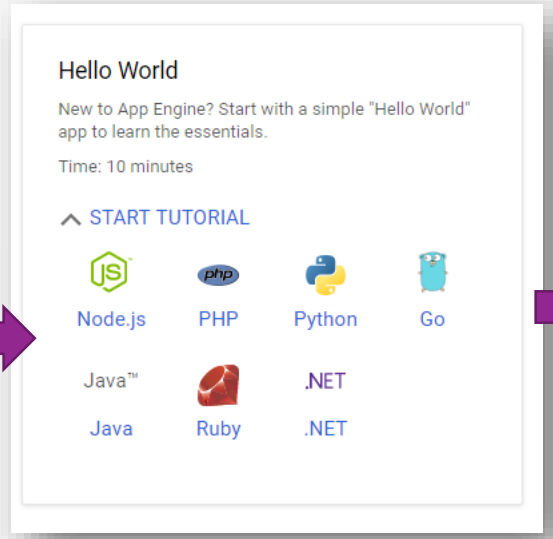
Manage Application and Its lifecycle
1. Traffic Splitting
2. Version Control.

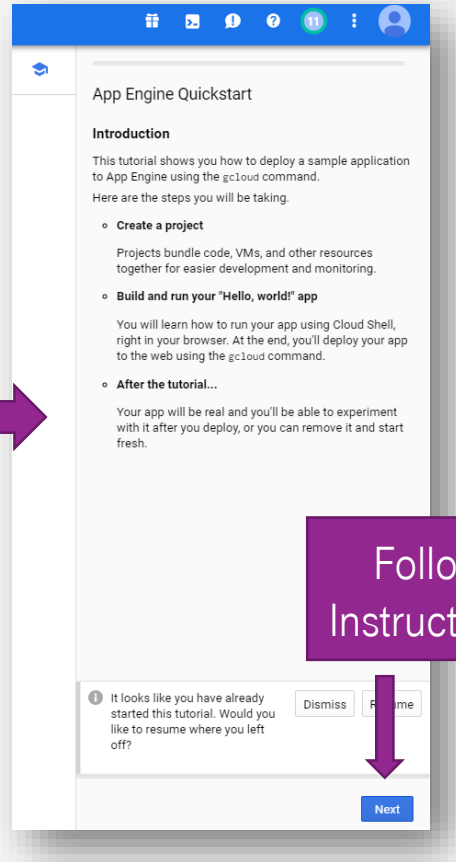
2 You can deploy App using CLI and UI , The Best way to start and learn is UI and App Engine provides sample helloworld application for all supported language.

Go to Dashboard -> Hello World -> Start Tutorial

Choose language of your choice e.g. Node.js or Java







Follow Instructions

Congratulations You have deployed App.

If you are in project folder – You can deploy application using just one command

$ gcloud app deploy

or

$ gcloud app deploy ~/my_app/app.yaml

If you want to look at all options – Please check this link -> https://cloud.google.com/sdk/gcloud/reference/app/deploy

My Command Log

$ git clone https://github.com/GoogleCloudPlatform/nodejs-getting-started

Cloning into 'nodejs-getting-started'...

remote: Enumerating objects: 3497, done.

remote: Total 3497 (delta 0), reused 0 (delta 0), pack-reused 3497

Receiving objects: 100% (3497/3497), 1.26 MiB | 0 bytes/s, done.

Resolving deltas: 100% (2642/2642), done.

$ cd nodejs-getting-started/1-hello-world

$ export PORT=8080 && npm install

> core-js@2.6.9 postinstall /home/ujjwalmusale/nodejs-getting-started/1-hello-world/node_modules/core-js

> node scripts/postinstall || echo "ignore"

Thank you for using core-js (https://github.com/zloirock/core-js) for polyfilling JavaScript standard library!

The project needs your help! Please consider supporting of core-js on Open Collective or Patreon:

> https://opencollective.com/core-js

> https://www.patreon.com/zloirock

Also, the author of core-js (https://github.com/zloirock) is looking for a good job -)

npm notice created a lockfile as package-lock.json. You should commit this file.

npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.9 (node_modules/fsevents):

npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.9: wanted {"os":"darwin","arch":"any"} (current: {"os":"linux","arch":"x64"})

added 856 packages from 672 contributors and audited 6675 packages in 39.961s

found 1 low severity vulnerability

run `npm audit fix` to fix them, or `npm audit` for details

$ npm start

> nodejs-getting-started@1.0.0 start /home/ujjwalmusale/nodejs-getting-started/1-hello-world

> node app.js

App listening on port 8080

^C

$ gcloud app deploy

Services to deploy:

descriptor: [/home/ujjwalmusale/nodejs-getting-started/1-hello-world/app.yaml]

source: [/home/ujjwalmusale/nodejs-getting-started/1-hello-world]

target project: [tokyo-data-11111]

target service: [default]

target version: [20190611t214249]

target url: [https://tokyo-data-243419.appspot.com]

Do you want to continue (Y/n)?

Beginning deployment of service [default]...

╔═══╗

╠═ Uploading 6 files to Google Cloud Storage ═╣

╚═══╝

File upload done.

Updating service [default]...done.

Setting traffic split for service [default]...done.

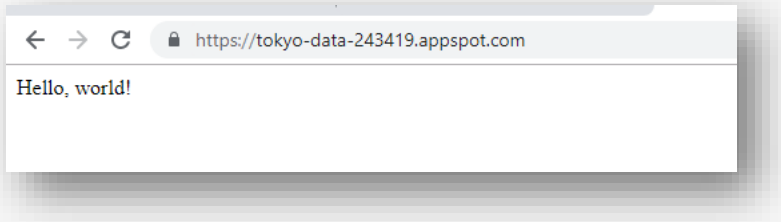
Deployed service [default] to [https://tokyo-data-243419.appspot.com]

You can stream logs from the command line by running:

$ gcloud app logs tail -s default

To view your application in the web browser run:

$ gcloud app browse



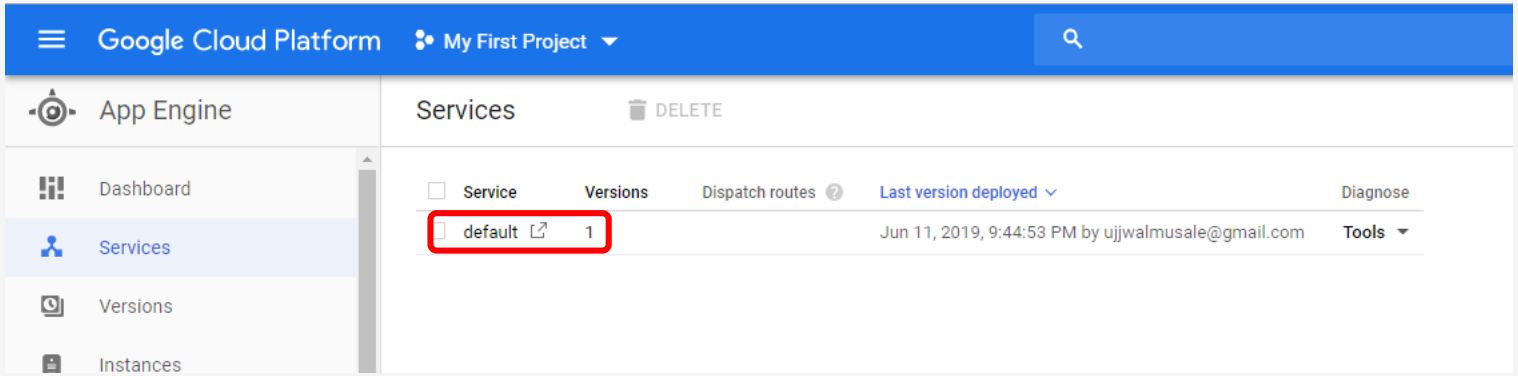
View Application

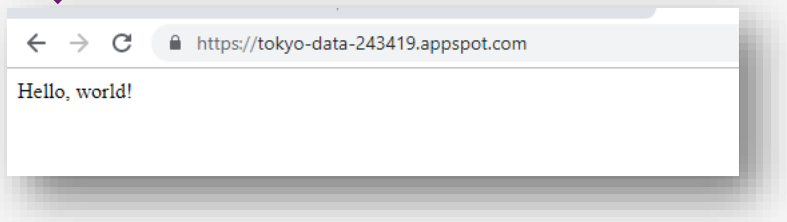
Go To Service

COMPUTE -> App Engine -> SERVICES

Click on Endpoint

- You should see





3 Explore Application

Create App Engine
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Deploy Application
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Manage Application and Its lifecycle
1. Traffic Splitting
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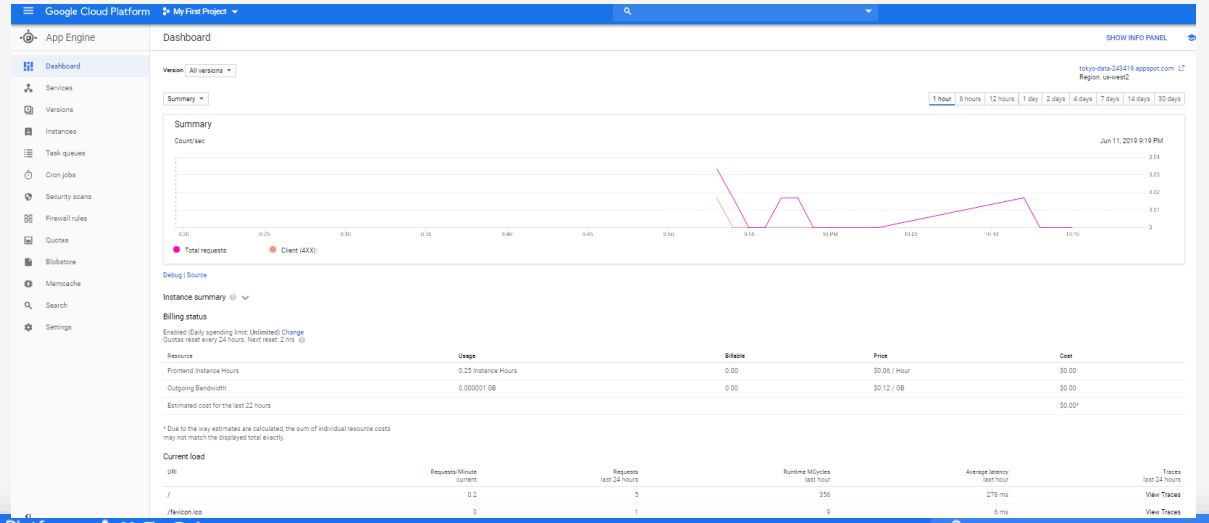
Explore Application Make some request from browser

1 Go to Dashboard - See Summary, Billing Status , Current Load and Errors

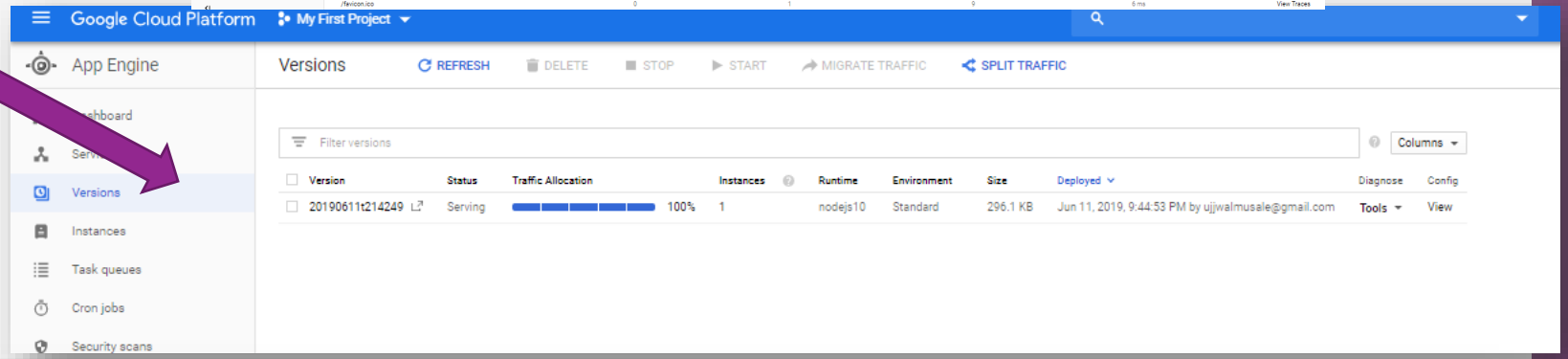


2. Click On service and go to -> Diagnose. Under Tools You can find multiple options explore.

3. Go To Instance and See versions -. If you have one application – All Traffic must be served by same version.

Open app.js and add Version 2 along with Hello World

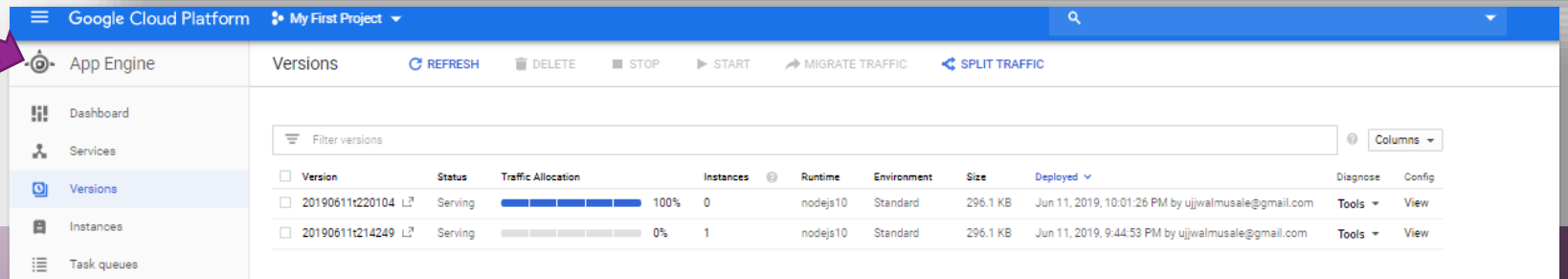
"Hello, world! Version 2"



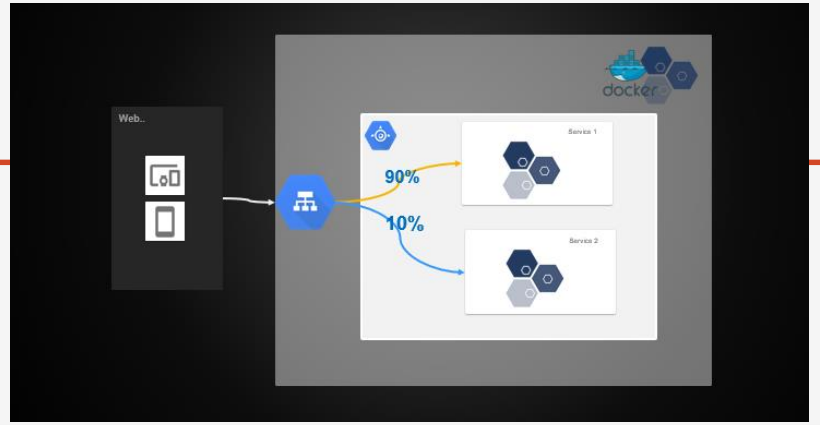
Deploy application again.

Now You can see Multiple versions running

But only one version serving traffic.

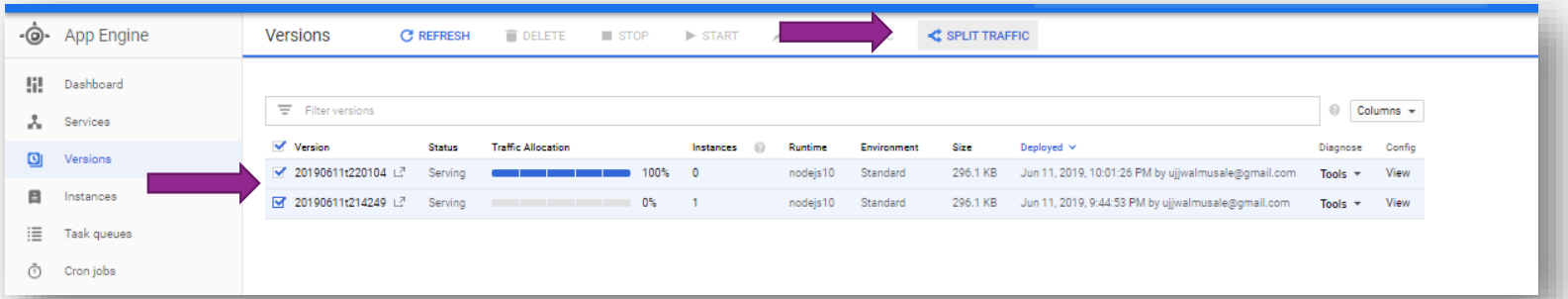


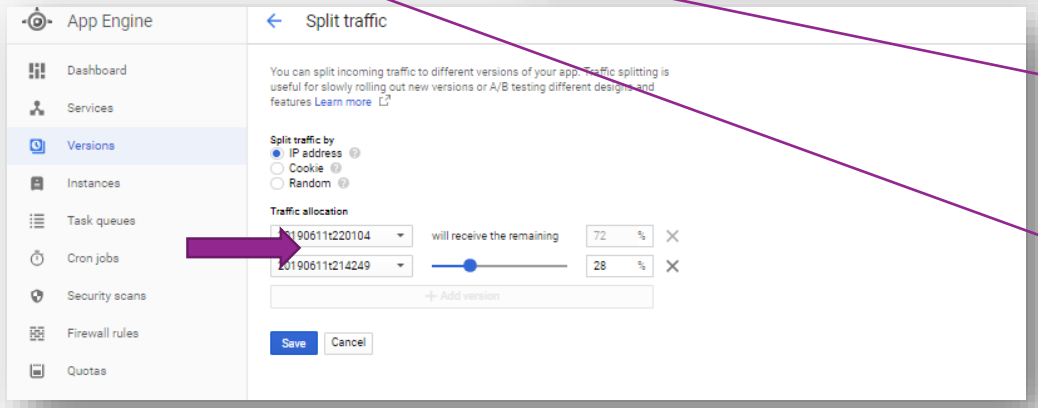
Traffic Splitting

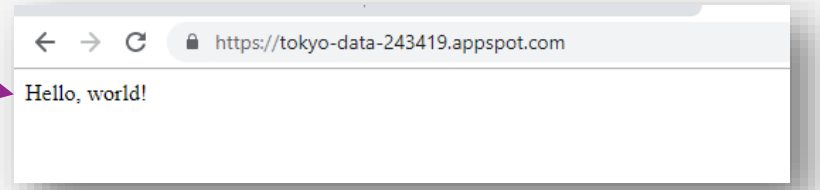


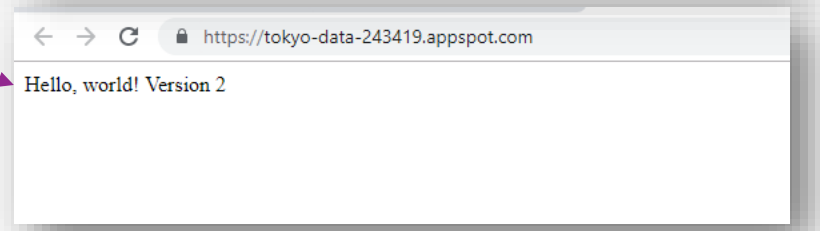
We already saw we can do traffic Splitting using App Engine

- Select both versions and Click SPLIT TRAFFIC
- Select IP Address (Session Affinity)
- Define your own % for traffic.
- Now You should See Hello World message Depends on % Traffic









Additional workshops

- Try different programming as Sample Application
- Explorer remaining Menus in App Engine
- Explorer all available information in Instance
- Build your own deployment configuration for Flexible App Engine and provide Resources required.

Disable Your App Engine when not using it.
Go To App Engine-> Settings

Important For Exam

- App Versions
- App Engine Location
- Multiple App Deployment - > Using Different Service.
- Applications with different Programming
- Providing Custom resources for Flexible App Engine.

Disable Your App Engine when not using it.
Go To App Engine-> Settings

Disable Your App Engine
when not using it.
Go To App Engine-> Settings

End of App Engine lab

Always Delete your Cloud Resources to Avoid $$ Charges.
Disable App Engine