

Assignment 3 – Cloud Functions

DS 561 – Cloud Computing

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GitHub Url: <https://github.com/vishwas21/DS561-vishwas-assignments>

Steps to run the First app locally:

1. Download the code from the above link.
2. Install all the python dependencies using the command `python pip3 install -r requirements.txt`.
3. We can run the python code using the command `functions-framework-python --target ds561_fileRequest_http --debug`
4. Now this function can be tested using the browser using the link <http://localhost:8080>

Steps to run the Second App:

1. Download the code if you have not already downloaded using the git clone command
2. Install all the python dependencies using the command `python pip3 install -r requirements.txt`.
3. Run the Consumer Code using the command – `python3 consumerApp.py`

Commands used to deploy the Cloud Function:

```
gcloud functions deploy ds561-python-http-server \
--gen2 \
--runtime=python311 \
--region=us-central1 \
--source=. \
--entry-point=ds561_fileRequest_http \
--trigger-http \
--allow-unauthenticated \
--memory=256MB \
```

```
--max-instances=83
```

Command to describe the Cloud function which was just deployed:

```
gcloud functions describe ds561-python-http-server \
--region us-central1
```

Output:

```
buildConfig:
build: projects/776935284294/locations/us-central1/builds/2f374b1b-59d1-4ca5-a2d6-a0297a26c471
dockerRegistry: ARTIFACT_REGISTRY
entryPoint: ds561_fileRequest_http
runtime: python311
source:
storageSource:
bucket: gcf-v2-sources-776935284294-us-central1
generation: '1696977664596551'
object: ds561-python-http-server/function-source.zip
sourceProvenance:
resolvedStorageSource:
bucket: gcf-v2-sources-776935284294-us-central1
generation: '1696977664596551'
object: ds561-python-http-server/function-source.zip
environment: GEN_2
labels:
deployment-tool: cli-gcloud
name: projects/ds561-visb-assignment/locations/us-central1/functions/ds561-python-http-server
serviceConfig:
allTrafficOnLatestRevision: true
availableCpu: '0.1666'
availableMemory: 256M
ingressSettings: ALLOW_ALL
maxInstanceCount: 83
maxInstanceRequestConcurrency: 1
revision: ds561-python-http-server-00001-cot
service: projects/ds561-visb-assignment/locations/us-central1/services/ds561-python-http-server
```

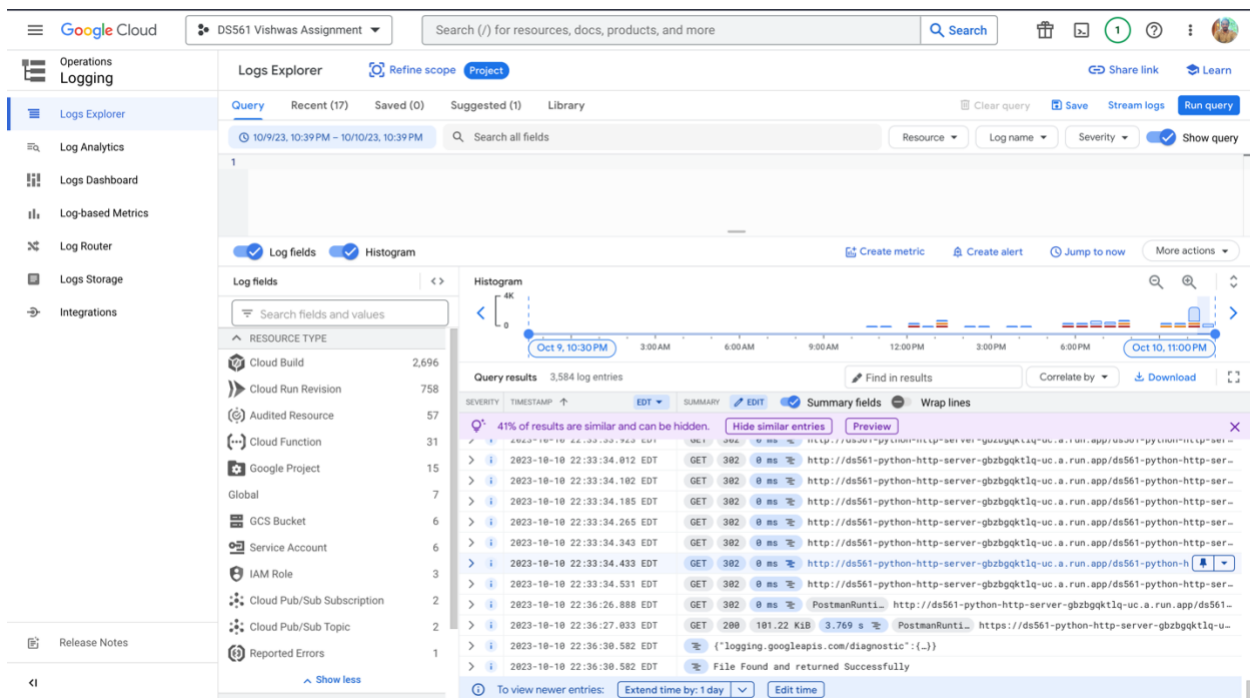
```
serviceAccountEmail: 776935284294-compute@developer.gserviceaccount.com
timeoutSeconds: 60
uri: https://ds561-python-http-server-gbzbqkltq-uc.a.run.app
state: ACTIVE
updateTime: '2023-10-10T22:42:28.557170555Z'
url: https://us-central1-ds561-visb-assignment.cloudfunctions.net/ds561-python-http-server
```

Command used to run the http_client.py:

```
python3 http_client.py -d ds561-python-http-server-gbzbqkltq-uc.a.run.app -b
/ds561-python-http-server/ds561_fileRequest_http -i 10000 -n 200 -v -w none
```

Screenshots:

After running the http_client.py code - Logs



Browser Call – GET Request

ds561-python-http-server-gbzbgqk...

← → ↻

https://ds561-python-http-server-gbzbgqkqliq-uc.a.run.app/ds561-python-http-server/ds561_fileRequest_http/5813.html

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Inspector Console Debugger Network Style Editor Performance Memory Storage Accessibility Application

Filter URLs

Status	Method	Domain	File	Initiator	Type	Transferred	Size	0 ms	2.56 s	6.12 s
200	GET	ds561-python-http-serve...	5813.html	document	html	103.27 kB (raced)	102.99 kB			5381 ms
404	GET	ds561-python-http-serve...	favicon.ico	FaviconLoader.sys.mjs:178 [L...	html	cached	96 B			0 ms

Browser Call – POST Request

New Request Search Blocking

Stat... Met... Domain File Initiator Type Transferred Size

POST https://ds561-python-http-server-gbzbgqk... 500 GET ds561-py... 5813.html document html 103.27 kB (r... 102...

URL Parameters

name value

503 POST ds561-py... 5813.html NetURL.sys... html 294 B 19 B

Headers

☒ Host ds561-python-http-server-gbzbgqkqliq...

☒ Accept-E... gzip, deflate, br

☒ Connection keep-alive

☒ Upgrade-L... 1

☒ Sec-Fetch... document

☒ Sec-Fetch... navigate

☒ Sec-Fetch... none

☒ Sec-Fetch... 71

☒ User-Agent Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7; rv:109.0) Gecko/20100101 Firefox/115.0

Clear Send

3 requests 103.11 kB / 103.57 kB transferred Finish: 3.16 min DOMContentLoaded: 5.34 s load: 5.1 s

Filter Headers

POST

Scheme: https

Host: ds561-python-http-server-gbzbgqkqliq-uc.a.run.app

Filename: ds561-python-http-server/ds561_fileRequest_http/5813.html

Address: 216.239.32.53:443

Status: 501

Version: HTTP/2

Transferred: 294 B (19 B size)

DNS Resolution: DNS over HTTPS

Response Headers (275 B) Raw

alt-svc: h3="443"; ma=2592000,h3-29="443"; ma=2592000

content-length: 19

content-type: text/html; charset=utf-8

date: Wed, 11 Oct 2023 03:06:27 GMT

Curl Command – GET Method

```
+ assignment3 git:(master) ✕ curl --location 'http://ds561-python-http-server-gbzbqk1q-uc.a.run.app/ds561-python-http-server/ds561_fileRequest_http/5813.html' \
--header 'X-Country: India'
<!DOCTYPE html>
<html>
<body>
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