



Google Cloud : Serverless GAE : Practical

Presented By :
Amrit Choudhary

GAE



Pre-Requisites:

Gcloud sdk installed, gcloud account created.

Npm, NodeJs installed on your machine.

Cloud Build API to be enabled via gcloud console of cloud

Create a separate directory structure gcloud/SERVERLESS/GAE

```
cd /Users/ihealth/Desktop/gcloud/SERVERLESS/GAE
```

```
git clone https://github.com/ellisonleao/clumsy-bird
```

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Project Setup:

Create a new project for GAE application.

Below commands may be useful :

gcloud init : configure the project, configs, credentials for usage

gcloud config list : get account and project details

gcloud config set account trainmefordevsecops@gmail.com : for setting up email for the account

gcloud config set project : set the project

Git link : <https://github.com/trainmefordevsecops/SERVERLESS.git>

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Code Changes :

Gruntfile.js changes: change port 8001 to 8080

for running the script automatically via npm, make changes in package.json as shown below

```
"engines": { "node": ">=10.0" },  
"scripts": { "start": "grunt connect" },  
add dependencies :"grunt-cli": "~1.2.0"  
"grunt": "~0.4.5"
```



create the deployment file named : app.yaml

Above file is needed for deployment in GAE

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Package.json



43 lines (43 sloc) | 1.12 KB

Raw Blame History

```
1  {
2    "name": "clumsy-bird",
3    "version": "0.1.0",
4    "description": "Clumsy Bird - A MelonJS port of the famous Flappy Bird game",
5    "homepage": "",
6    "repository": {
7      "type": "git",
8      "url": "https://github.com/trainmefordevsecops/SERVERLESS/tree/master/GAE/clumsy-bird"
9    },
10   "bugs": {
11     "url": "https://github.com/trainmefordevsecops/SERVERLESS/tree/master/GAE/issues"
12   },
13   "licenses": [
14     {
15       "type": "MIT License",
16       "url": "https://github.com/trainmefordevsecops/SERVERLESS/tree/master/GAE/gae-clumsy-bird-project/LICENSE"
17     }
18   ],
19   "author": {
20     "name": "trainmefordevsecops",
21     "email": "trainmefordevsecops@gmail.com"
22   },
23   "engines": {
24     "node": ">=10.0"
25   },
26   "dependencies": {
27     "grunt": "~0.4.5",
28     "grunt-contrib-jshint": "~0.8.0",
29     "grunt-contrib-concat": "~0.2.0",
30     "grunt-contrib-clean": "~0.4.0",
31     "grunt-contrib-uglify": "~0.2.7",
32     "grunt-contrib-nodeunit": "~0.1.2",
33     "grunt-contrib-connect": "^0.7.1",
34     "grunt-replace": "~0.4.3",
35     "grunt-manifest": "~0.4.0",
36     "grunt-cli": "~1.2.0"
37   },
38   "scripts": {
39     "start": "grunt connect"
40   },
41   "devDependencies": {
42   }
43 }
```

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Package.json :

package.json describes our module, and in it we can see a list of all installed dependencies and devDependencies that we have installed and added to our project.

dependencies : dependencies are modules which are also required at runtime.

Eg. React, Redux, Express, and Axios etc.

devDependencies section : devDependencies are modules which are only required during development

Eg. Nodemon, Babel, ESLint, and testing frameworks like Chai, Mocha, Enzyme, etc.

Note: When gcloud spins up it runs npm install and only has access to dependencies and not devDependencies.

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app.yaml

Branch: master ▾

[SERVERLESS](#) / [GAE](#) / [gae-clumsy-bird-project](#) / [app.yaml](#)

[Find file](#) [Copy path](#)

 trainmefordevsecops added gae project

deb3472 6 days ago

1 contributor

16 lines (14 sloc) | 510 Bytes

[Raw](#) [Blame](#) [History](#)   

```
1 ## required for the env that is used by app ##
2 runtime : nodejs10
3
4 ## list of url patterns and how it should be handled ##
5 handlers:
6 - url: /favicon\.ico
7   static_files: data/img/favicon.ico
8   upload: favicon.ico
9
10 ## HTTP response code returned when performing a redirect required ##
11 - url:.*/
12   secure: always
13 ## automatically redirect to https by using above line ##
14   redirect_http_response_code: 301
15   script: auto
16 ## script element is auto because all traffic is served using the entrypoint command ##
```

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Deploy to GAE: gcloud app deploy

```
[amrits-MacBook-Pro:clumsy-bird ihealth$ gcloud app deploy
You are creating an app for project [gae-100].
WARNING: Creating an App Engine application for a project is irreversible and the region
cannot be changed. More information about regions is at
<https://cloud.google.com/appengine/docs/locations>.

Please choose the region where you want your App Engine application
located:

[1] asia-east2      (supports standard and flexible)
[2] asia-northeast1 (supports standard and flexible)
[3] asia-northeast2 (supports standard and flexible)
[4] asia-northeast3 (supports standard and flexible)
[5] asia-south1     (supports standard and flexible)
[6] asia-southeast2 (supports standard and flexible)
[7] australia-southeast1 (supports standard and flexible)
[8] europe-west     (supports standard and flexible)
[9] europe-west2   (supports standard and flexible)
[10] europe-west3  (supports standard and flexible)
[11] europe-west6  (supports standard and flexible)
[12] northamerica-northeast1 (supports standard and flexible)
[13] southamerica-east1 (supports standard and flexible)
[14] us-central     (supports standard and flexible)
[15] us-east1       (supports standard and flexible)
[16] us-east4       (supports standard and flexible)
[17] us-west2       (supports standard and flexible)
[18] us-west3       (supports standard and flexible)
[19] us-west4       (supports standard and flexible)
[20] cancel

Please enter your numeric choice: 5

Creating App Engine application in project [gae-100] and region [asia-south1]....done.
Services to deploy:

descriptor:      [/Users/ihealth/Desktop/gcloud/SERVERLESS/GAE/clumsy-bird/app.yaml]
source:          [/Users/ihealth/Desktop/gcloud/SERVERLESS/GAE/clumsy-bird]
target project:  [gae-100]
target service:  [default]
target version:  [20200613t142834]
target url:      [https://gae-100.el.r.appspot.com]

Do you want to continue (Y/n)?
```

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Check logs : gcloud app logs tail -s default

```
[amrits-MacBook-Pro:clumsy-bird ihealth$ gcloud app deploy
Services to deploy:

descriptor:      [/Users/ihealth/Desktop/gcloud/SERVERLESS/GAE/clumsy-bird/app.yaml]
source:          [/Users/ihealth/Desktop/gcloud/SERVERLESS/GAE/clumsy-bird]
target project:  [gae-100]
target service:  [default]
target version:  [20200613t144024]
target url:      [https://gae-100.el.r.appspot.com]

Do you want to continue (Y/n)?  y

Beginning deployment of service [default]...
[ Uploading 1 file to Google Cloud Storage ]
File upload done.
Updating service [default]...done.
Setting traffic split for service [default]...done.
Deployed service [default] to [https://gae-100.el.r.appspot.com]

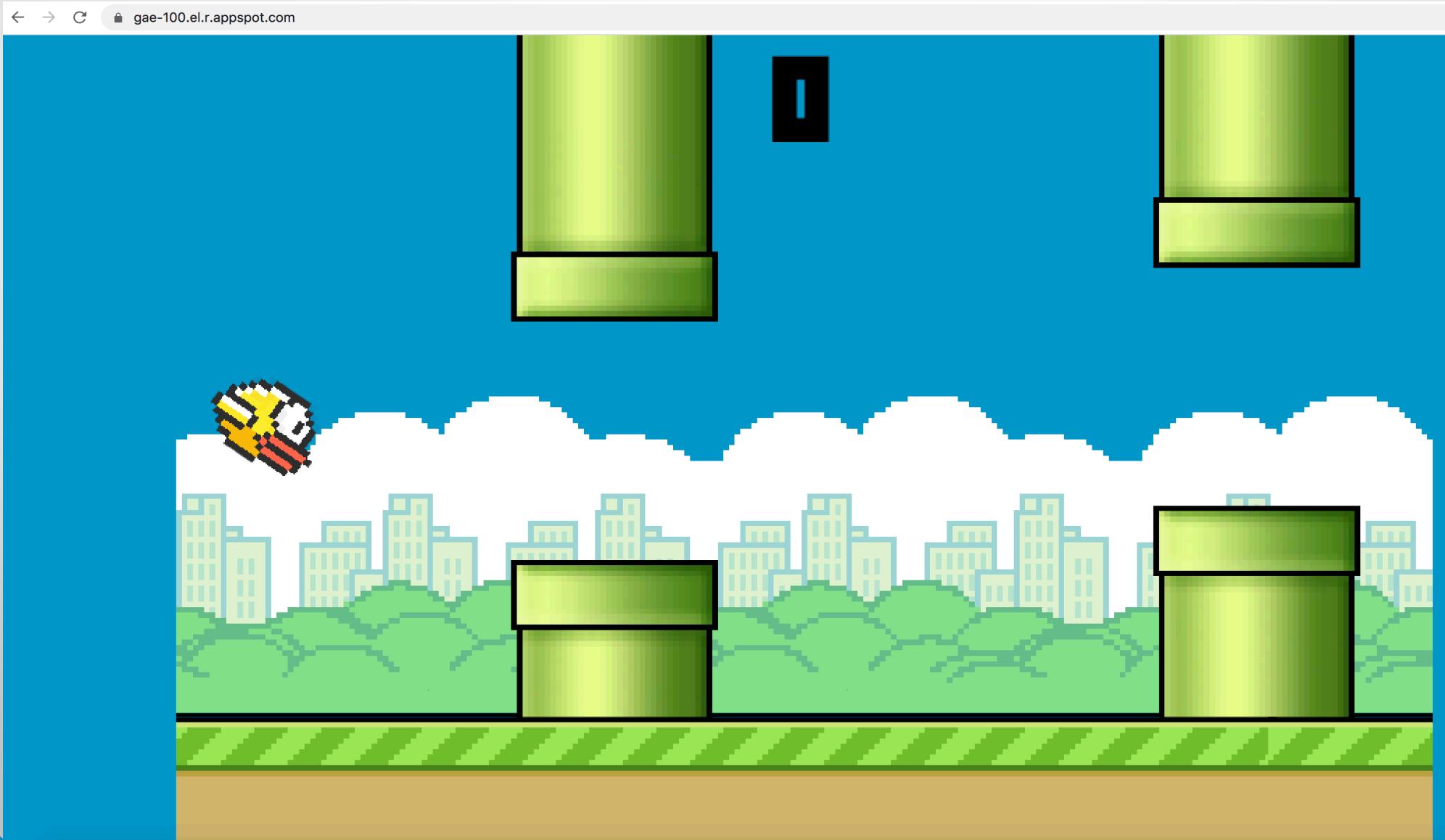
You can stream logs from the command line by running:
$ gcloud app logs tail -s default

To view your application in the web browser run:
$ gcloud app browse
amrits-MacBook-Pro:clumsy-bird ihealth$ gcloud app logs tail -s default
Waiting for new log entries...
```

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Game : Ready to Play



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Dashboard

Google Cloud Platform gae-100 Search products and resources SHOW INFO PANEL

App Engine Dashboard Services Versions Instances Task queues Cron jobs Security scans Firewall rules Quotas Memcache Search Settings

Summary RESET ZOOM 1 hour 6 hours 12 hours 1 day 2 days 4 days 7 days 14 days 30 days

Summary

Count/sec

2:10 2:15 2:20 2:25 2:30 2:35 2:40 2:45 2:50 2:55 3 PM 3:05

Client (4XX): 0 Server (5XX): 0 Total requests: 0

Debug

Instance summary

Billing status

Free (Daily spending limit: \$0.00 boosted by \$9,223,372.03) [Settings](#)

Quotas reset every 24 hours. Next reset: 24 hrs [?](#)

Resource	Usage ↓	Billable	Price	Cost
Frontend Instance Hours	0.09 Instance Hours	0	\$0.058 / Hour	\$0.00
Outgoing Bandwidth	0.00011 GB	0	\$0.12 / GB	\$0.00