

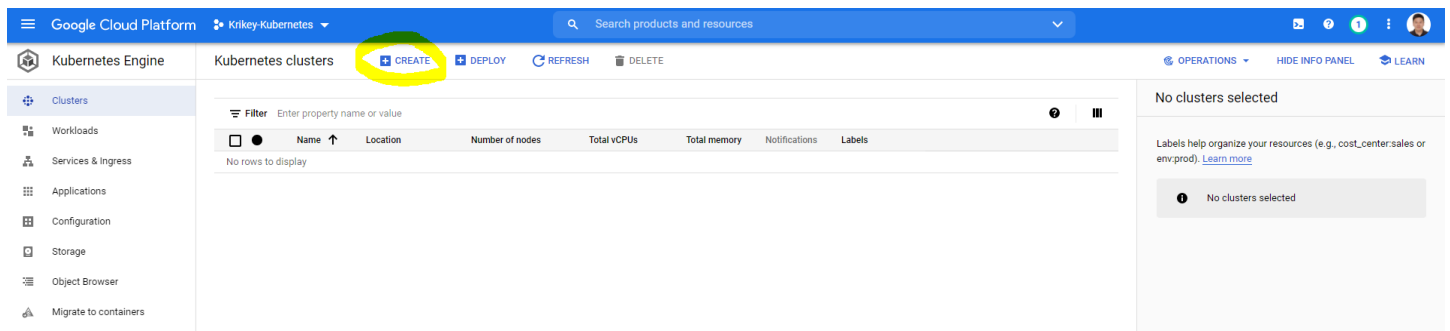
Google Cloud Platform - Deploy Docker compose

Requirement

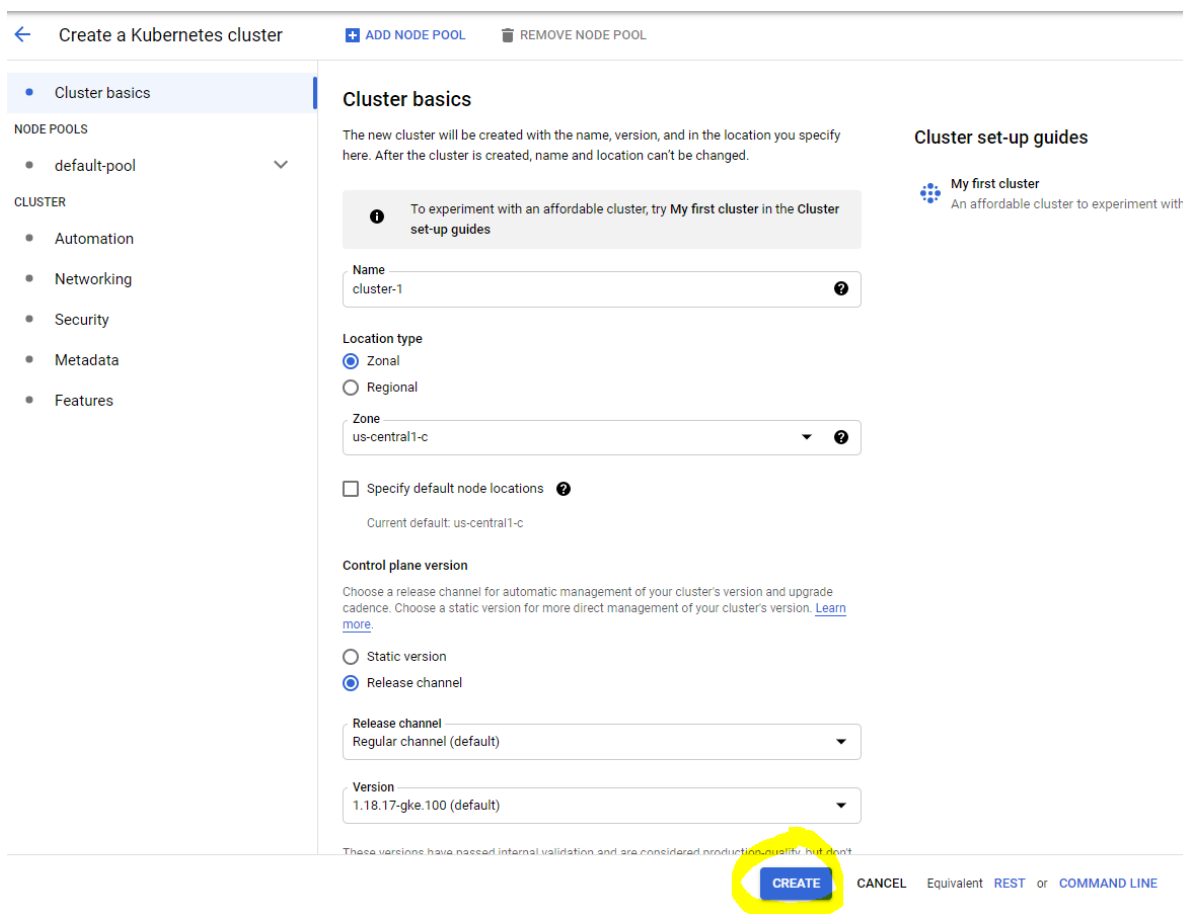
1. Must pull all my Node js applications on Github (!important)
2. Require "Dockerfile" for Node application
3. Require "docker-compose.yml" for combining Node application and PostgreSQL

Deployment Process

1. Login GCP
2. Search Product: Kubernetes Engine and enable API



3. Create Kubernetes cluster (Yellow Circle)
4. Choose Standard
5. Select CREATE



6. When it finishes, select right option button and click CONNECT

Filter Enter property name or value

	Name ↑	Location	Number of nodes	Total vCPUs	Total memory	Notifications	Labels
<input type="checkbox"/>	cluster-1	us-central1-c	3	6	12 GB	Low resource requests	—

Actions Edit
Connect
Delete

7. Now, you can connect Google cloud shell on Kubernetes

Connect to the cluster

You can connect to your cluster via command-line or using a dashboard.

Command-line access

Configure [kubectl](#) command line access by running the following command:

```
$ gcloud container clusters get-credentials cluster-1 --zone us-central1-c --project krikey-kubernetes
```

RUN IN CLOUD SHELL

Cloud Console dashboard

You can view the workloads running in your cluster in the Cloud Console [Workloads dashboard](#).

OPEN WORKLOADS DASHBOARD

OK

8. You can see the CLOUD SHELL at the bottom.

Google Cloud Platform Krikey-Kubernetes

Kubernetes Engine Kubernetes clusters CREATE DEPLOY REFRESH DELETE

Filter Enter property name or value

	Name ↑	Location	Number of nodes	Total vCPUs	Total memory	Notifications	Labels
<input type="checkbox"/>	cluster-1	us-central1-c	3	6	12 GB	Low resource requests	—

No clusters selected

Labels help organize your resources (e.g., cost_centers/sales or env/prod). [Learn more](#)

CLOUD SHELL Terminal (krikey-kubernetes) x +

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to krikey-kubernetes.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
foggyoon@cloudshell:~ (krikey-kubernetes)$ gcloud container clusters get-credentials cluster-1 --zone us-central1-c --project krikey-kubernetes
```

9. Press enter and Authorize

10. Clone Node application from github

git clone <https://github.com/jungwony629/Krikey-Backend.git>

```
foggyoon@cloudshell:~ (krikey-kubernetes)$ git clone https://github.com/jungwony629/Krikey-Backend.git
Cloning into 'Krikey-Backend'...
Username for 'https://github.com': jungwony629
Password for 'https://github.com':
remote: Enumerating objects: 76, done.
remote: Counting objects: 100% (76/76), done.
remote: Compressing objects: 100% (51/51), done.
remote: Total 76 (delta 30), reused 67 (delta 21), pack-reused 0
Unpacking objects: 100% (76/76), done.
foggyoon@cloudshell:~ (krikey-kubernetes)$ ll
total 64
drwxr-xr-x 11 foggyoon foggyoon 4096 May  8 23:55 ./
drwxr-xr-x  4 root      root      4096 May  8 19:46 ../
-rw-r----- 1 foggyoon foggyoon 1883 May  8 23:55 .bash_history
-rw-r--r--  1 foggyoon foggyoon  220 Apr 18  2019 .bash_logout
-rw-r--r--  1 foggyoon foggyoon 3564 May  4 18:49 .bashrc
drwxr-xr-x  3 foggyoon foggyoon 4096 May  8 21:29 .cache/
drwxr-xr-x  2 foggyoon foggyoon 4096 May  8 21:30 .cloudcode/
drwxr-xr-x  4 foggyoon foggyoon 4096 May  8 21:30 .config/
drwxr-xr-x  2 foggyoon foggyoon 4096 May  8 19:46 .docker/
drwxr-xr-x  6 foggyoon foggyoon 4096 May  8 23:55 Krikey-Backend/
drwxr-xr-x  2 foggyoon foggyoon 4096 May  8 19:47 .kube/
-rw-r--r--  1 foggyoon foggyoon 807 Apr 18  2019 .profile
-rw-r--r--  1 foggyoon foggyoon 913 May  8 23:53 README-cloudshell.txt
drwx----- 2 foggyoon foggyoon 4096 May  8 21:31 .ssh/
drwxr-xr-x  6 foggyoon root      4096 May  8 21:47 .theia/
drwxr-xr-x  3 foggyoon foggyoon 4096 May  8 21:29 .yarn/
foggyoon@cloudshell:~ (krikey-kubernetes)$
```

11. Enter Krikey-Backend folder

cd Krikey-Backend/

12. Type "docker build -t foggyoon/krikey-node-app ."

```
foggyoon@cloudshell:~/Krikey-Backend$ docker build -t foggyoon/krikey-node-app .
Sending build context to Docker daemon 160.3kB
Step 1/7 : FROM node:12
--> 29be39bd6917
Step 2/7 : WORKDIR /usr/src/app
--> Using cache
--> af22262b3b9b
Step 3/7 : COPY package*.json ./
--> Using cache
--> 1ebcec0d9509
Step 4/7 : RUN npm install
--> Using cache
--> c4d620156a3d
Step 5/7 : COPY . .
--> Using cache
--> a86a94196684
Step 6/7 : EXPOSE 8080
--> Using cache
--> 8b5a3f72fb70
Step 7/7 : CMD npm run migrate && npm run start
--> Using cache
--> 547dad4592da
Successfully built 547dad4592da
Successfully tagged foggyoon/krikey-node-app:latest
foggyoon@cloudshell:~/Krikey-Backend$
```

13. Check Docker completely create an image file
docker images

```
foggyoon@cloudshell:~/Krikey-Backend$ docker images
REPOSITORY          TAG          IMAGE ID          CREATED           SIZE
foggyoon/krikey-node-app  latest      547dad4592da     About a minute ago  927MB
node                 12          29be39bd6917     4 weeks ago       918MB
```

14. Type “docker-compose up -d”

```
foggyoon@cloudshell:~/Krikey-Backend$ docker-compose up -d
Creating network "krikey-backend_default" with the default driver
Pulling db (postgres:)...
latest: Pulling from library/postgres
f7ec5a41d630: Pull complete
d073cd070242: Pull complete
03790957a916: Pull complete
b3776ac15dab: Pull complete
7144fd00aec4: Pull complete
54f6491bd120: Pull complete
247ab23c6036: Pull complete
57800498c536: Pull complete
bcb15a4d14f4: Pull complete
cfc751ecbc6e: Pull complete
bbf042afd4a4: Pull complete
453056a20de6: Pull complete
d5b1a75378ef: Pull complete
7841e2074775: Pull complete
Digest: sha256:61d5d8ef6cb4e2035f053f26b6b455c201a809354084cc8426b6904b8dd35602
Status: Downloaded newer image for postgres:latest
Creating krikey-backend_web_1 ... done
Creating krikey-backend_db_1 ... done
```

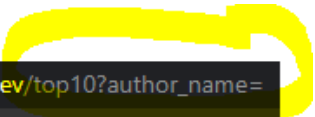
15. Check the container is working well
docker container list

```
foggyoon@cloudshell:~/Krikey-Backend$ docker container list
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
3f9e3e8e8bc7   postgres      "docker-entrypoint.s..." About a minute ago Up About a minute 0.0.0.0:5432->5432/tcp, :::5432->5432/tcp krikey-backend_db_1
6a5f332c4cf1   foggyoon/krikey-node-app "docker-entrypoint.s..." About a minute ago Up About a minute 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp krikey-backend_web_1
foggyoon@cloudshell:~/Krikey-Backend$
```

16. Click “Web Preview” on the top right button



17. Finally, we can preview our web application



```
8080-6dd1a424-ced4-4628-adf7-18d4279b581b.cs-us-west1-olvl.cloudshell.dev/top10?author_name=  
Apps  YouTube  LinkedIn Learning  THELAB  USC  FAVORITE  ETC  EDU  API  
{  
  "success": true,  
  "statusCode": 200,  
  "msg": "",  
  "results": [  
    {  
      "name": "Michael Smith",  
      "total": "$136,805,204.54"  
    },  
    {  
      "name": "Maria Hernandez",  
      "total": "$132,872,286.97"  
    },  
    {  
      "name": "Mary Smith",  
      "total": "$132,653,106.55"  
    },  
    {  
      "name": "David Smith",  
      "total": "$132,277,241.60"  
    },  
  ]  
}
```