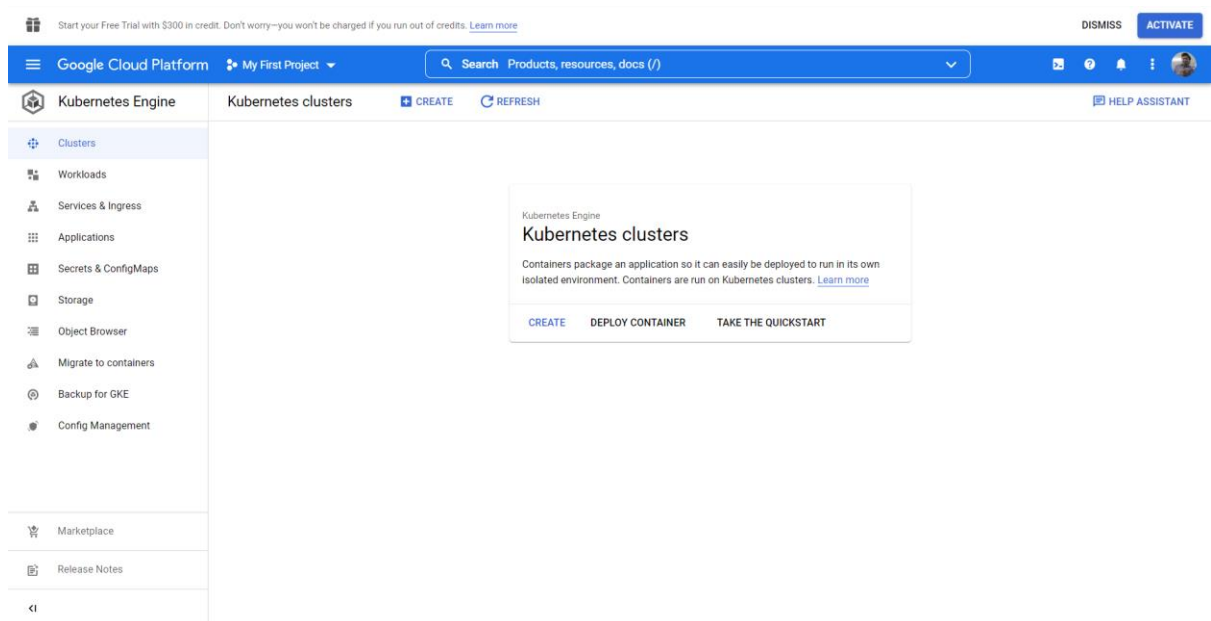


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Angkatan : TI 2019  
MK : Cloud Computing  
Latihan 3

- Langkah awal silahkan login kedalam akun kalian masing-masing kemudian tekan menu kemudian pilih menu kubernetes engine dan tunggu hingga selesai



- Tekan create cluster, kemudian isikan data name node, zona dimana anda ingin deploy, dst. Disini kita akan melakukan proses deploy dengan menggunakan location zonal bertipe zona, dan zona yang digunakan adalah us-central1. Dilanjutkan menggunakan versi default dari kubernetes cluster.

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DISMISS ACTIVATE

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Create a Kubernetes cluster ADD NODE POOL REMOVE NODE POOL USE A SETUP GUIDE HELP ASSISTANT

**Cluster basics**

The new cluster will be created with the name, version, and in the location you specify here. After the cluster is created, name and location can't be changed.

To experiment with an affordable cluster, try [My first cluster in the Cluster set-up guides](#)

Name  
raflinodeapp

Location type  
Resource prices may vary between certain regions. [Learn more](#)

☒ Zonal  
☐ Regional

Zone  
us-central1-c

☐ Specify default node locations  
Current default: us-central1-c

Control plane version  
Choose a release channel for automatic management of your cluster's version and upgrade cadence. Choose a static version for more direct management of your cluster's version. [Learn](#)

CREATE CANCEL Equivalent REST or COMMAND LINE

Setelah selesai tekan create, kemudian tunggu hingga proses selesai dan services kubernetes cluster berwarna hijau.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	raflinodeapp	us-central1-c	3	6	12 GB	—	⋮
--------------------------	-------------------------------------	--------------	---------------	---	---	-------	---	---

- Setelah selesai silahkan menekan connect untuk deploy docker image yang kita buat.

<input type="checkbox"/>	Status	Name ↑	Location	Number of nodes	Total vCPUs	Total memory	Notifications	Labels	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	raflinodeapp	us-central1-c	3	6	12 GB	—		⋮

Edit  
Connect  
Delete

- Kemudian akan muncul pilihan, lalu pilih open workloads dashboard, sehingga akan dimunculkan service yang jalan dalam sistem seperti berikut.

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Kubernetes Engine Workloads REFRESH DEPLOY DELETE OPERATIONS HELP ASSISTANT

Clusters Workloads Services & Ingress Applications Secrets & ConfigMaps Storage Object Browser Migrate to containers Backup for GKE Config Management Marketplace Release Notes

Workloads are deployable units of computing that can be created and managed in a cluster.

OVERVIEW COST OPTIMIZATION

Filter Filter workloads

<input type="checkbox"/>	Name ↑	Status	Type	Pods	Namespace	Cluster
<input type="checkbox"/>	event-exporter-gke	OK	Deployment	1/1	kube-system	rafinodeapp
<input type="checkbox"/>	fluentbit-gke	OK	Daemon Set	3/3	kube-system	rafinodeapp
<input type="checkbox"/>	gke-metrics-agent	OK	Daemon Set	3/3	kube-system	rafinodeapp
<input type="checkbox"/>	gke-metrics-agent-windows	⚠ DaemonSet has no nodes selected	Daemon Set	0/0	kube-system	rafinodeapp
<input type="checkbox"/>	connectivity-agent	OK	Deployment	3/3	kube-system	rafinodeapp
<input type="checkbox"/>	connectivity-agent-autoscaler	OK	Deployment	1/1	kube-system	rafinodeapp
<input type="checkbox"/>	kube-dns	OK	Deployment	2/2	kube-system	rafinodeapp
<input type="checkbox"/>	kube-dns-autoscaler	OK	Deployment	1/1	kube-system	rafinodeapp
<input type="checkbox"/>	kube-proxy	⚠ DaemonSet has no nodes selected	Daemon Set	0/0	kube-system	rafinodeapp
<input type="checkbox"/>	kube-proxy-gke-rafinodeapp-default-pool-7277c172-9424	Running	Pod	1/1	kube-system	rafinodeapp
<input type="checkbox"/>	kube-proxy-gke-rafinodeapp-default-pool-7277c172-fs59	Running	Pod	1/1	kube-system	rafinodeapp
<input type="checkbox"/>	kube-proxy-gke-rafinodeapp-default-pool-7277c172-s37b	Running	Pod	1/1	kube-system	rafinodeapp
<input type="checkbox"/>	i7-default-backend	OK	Deployment	1/1	kube-system	rafinodeapp
<input type="checkbox"/>	metadata-proxy-v0.1	⚠ DaemonSet has no nodes selected	Daemon Set	0/0	kube-system	rafinodeapp

- Selanjutnya tekan deploy, kemudian pada halaman container pilih new container image untuk mengarahkan proses lanjutan ke github. Dan jangan lupa aktifkan API Cloud Sources Repositories API, dan Cloud Build API dengan mengklik linknya.
- Pastikan kedua API ini telah di aktifkan dengan menekan tombol enable
- Kemudian kembali ke halaman container kemudian pilih github, lalu login menggunakan akun github kita menggunakan username dan password github kita masing2.. lalu lilih pada repository pilih reposiroty cloud nodejs yang telah kita upload sebelumnya.

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Create a deployment

1 Container

Edit container

☐ Existing container image

☒ New container image

Repository Provider

GitHub

Authenticated as rafilgo. Change user

Repository \*

rafilgo/CloudGKE

Dockerfile path

Path to the Dockerfile from the root of the repository. Defaults to 'Dockerfile'.

Image name \*

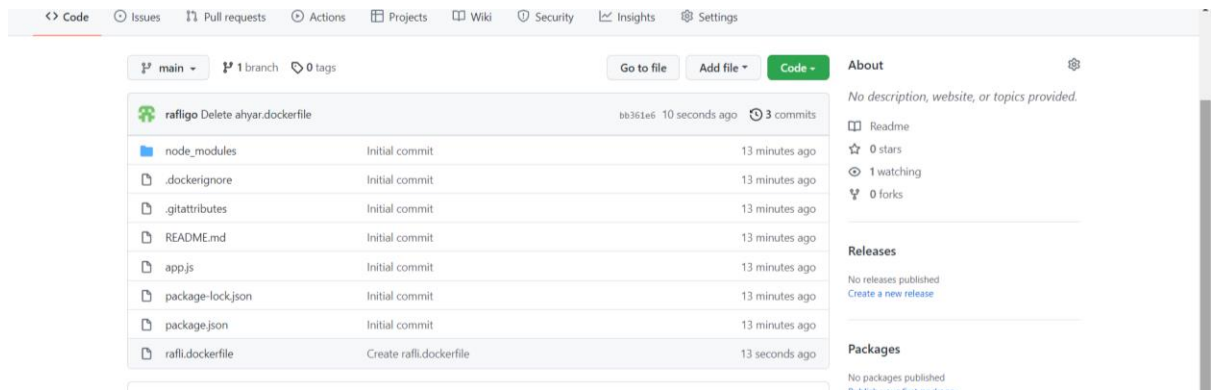
gcr.io/qualified-sum-345514/github.com/rafilgo/cloudgke:\$SHORT\_SHA

The built image will be pushed to Google Container Registry with this name. Supported variables: \$PROJECT\_ID, \$REPO\_NAME, \$BRANCH\_NAME, \$COMMIT\_SHA, \$SHORT\_SHA

Environment variables

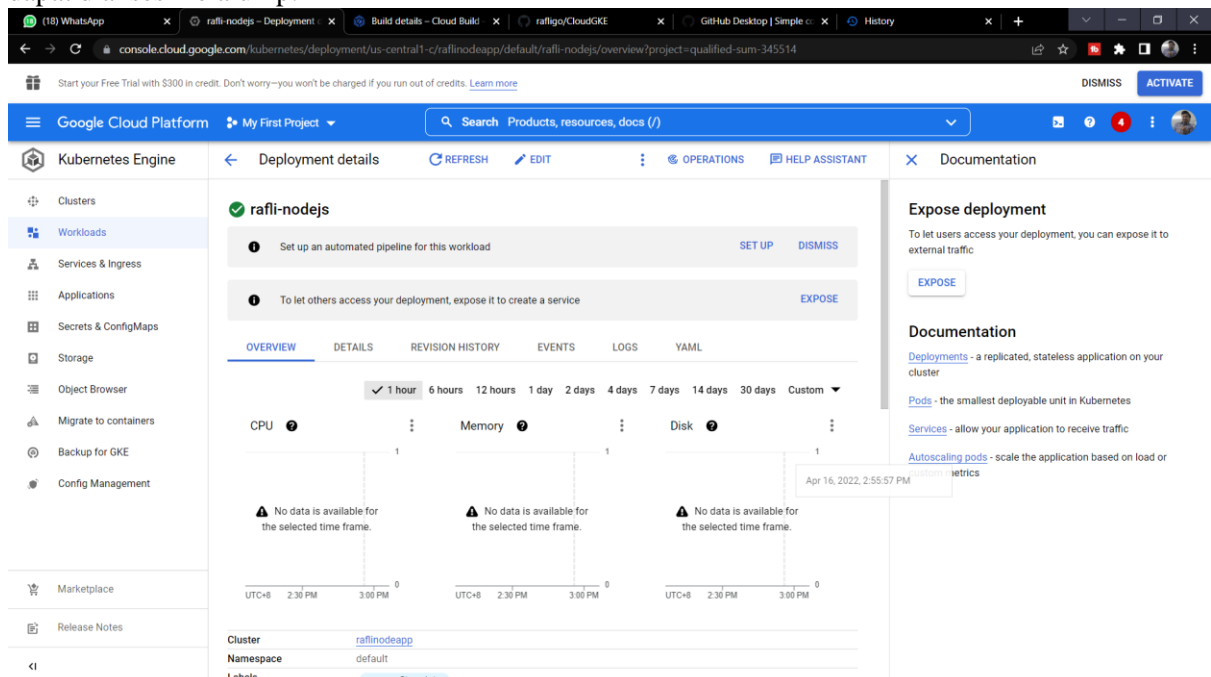
qualified-sum-345514 ENVIRONMENT VARIABLE

- Selanjutnya isikan dockerfile path dengan nama file docker kita yang ada pada github. Sebagai contoh, pada github kita nama dockerfile adalah rafli.dockerfile.



Maka pada dockerfile path kita mengisikan rafligo.dockerfile dimana dockerfile ini yang akan nantinya di proses untuk dibuat menjadi file image docker untuk di deploy pada Kubernetes engine. Sebagai contoh secara lengkap isian container sebagai berikut dan lanjutkan dengan menekan continue

- Selanjutnya pada configuration pastikan mengisi nama aplikasi sesuai dengan keinginan kita sebagai contoh berikut, dan lanjutkan dengan menekan Deploy
- TUNGGU proses hingga service berjalan dan berwarna hijau kemudian tekan expose agar aplikasi dapat diakses melalui ip.



- Selanjutnya tentukan port mapping yang akan digunakan dan isi target port dengan port yang kita expose pada container. Kita perlu menentukan juga protocol, service type, dan nama service yang akan digunakan sebagai contoh kita menggunakan port 8000, kemudian tekan expose untuk memulai.

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Kubernetes Engine Expose a deployment HIDE INFO PANEL HELP ASSISTANT

Exposing a deployment creates a Kubernetes Service. A service lets your deployment receive traffic and defines how your deployment is exposed.

### Port mapping

Port 1: 80 Target port 1: 8000 Protocol 1: TCP

+ ADD PORT MAPPING

Service type: Load balancer

Service name: rafli-nodejs-service

EXPOSE VIEW YAML

\* Indicates required field

### External port

This service will provide networking and IP support to your deployment's Pods.

The external port specifies the port number configured on the service. The target port specifies the port number that is used by the Pod.

- Selanjutnya tunggu hingga service berjalan, dan membuat external ip agar aplikasi dapat diakses dari luar. Setelah selesai kita dapat mengcopy alamat ip berikut kedalam browser untuk dapat kita lihat hasilnya.

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Kubernetes Engine Service details REFRESH EDIT DELETE KUBECTL HIDE INFO PANEL OPERATIONS HELP ASSISTANT

rafli-nodejs-service

OVERVIEW DETAILS EVENTS LOGS YAML

CPU 0.005 Memory 150MB Disk 60GB

Cluster: rafli-nodeapp Namespace: default Labels: app: rafli-nodejs Logs: rafli-nodejs Type: LoadBalancer External endpoints: 173.255.115.72:80

### Load balancer

This service has a fixed external IP to route traffic to your application.

The IP address is externally facing. Visit the address to see the deployment.

### Suggested next steps

[Scale the deployment](#) by changing the number of replicas in the deployment

[Perform a rolling update](#) to change the deployment image

[Deploy a stateful application](#) to your cluster

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Kubernetes Engine

Service details

REFRESHEDITDELETEKUBECTL

HIDE INFO PANELOPERATIONSHELP ASSISTANT

Clusters

Workloads

Services & Ingress

Applications

Secrets & ConfigMaps

Storage

Object Browser

Migrate to containers

Backup for GKE

Config Management

Marketplace

Release Notes

Logsrafi-nodejs

TypeLoadBalancer

External endpoints173.255.115.72:80

Load Balancer

Cluster IP10.120.14.250

Load balancer IP173.255.115.72

Load balancera4f74f06f486c4b28818cb3fdab19e5a

Deployments

Name	Status	Pods
rafi-nodejs	OK	3/3

Serving pods

Name	Status	Endpoints	Restarts	Created on
rafi-nodejs-686d74877b-zf927	Running	10.116.2.7	0	Apr 16, 2022, 3:05:57 PM
rafi-nodejs-686d74877b-dqk7b	Running	10.116.2.6	0	Apr 16, 2022, 3:05:57 PM
rafi-nodejs-686d74877b-mdsrp	Running	10.116.0.5	0	Apr 16, 2022, 3:05:57 PM

Ports

Port	Node Port	Target Port	Protocol
80	30507	8000	TCP

PORT FORWARDING

Load balancer

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[Perform a rolling update](#) to change the deployment image

[Deploy a stateful application](#) to your cluster

Not secure | 173.255.115.72

Hello world!