

# Cloud infrastructure Project checkpoint

Kishore Kumar Perumalsamy

## Project option 1

Link of docker images :

<https://hub.docker.com/repository/docker/kish7/jupyternote>

<https://hub.docker.com/repository/docker/kish7/hadoop>

<https://hub.docker.com/repository/docker/kish7/sonarqube>

<https://hub.docker.com/repository/docker/kish7/spark>

## Spark Kubernetes deployment and service (Load Balancer)

The screenshot displays the Google Cloud Platform console for 'My First Project'. The left sidebar shows the navigation menu with 'Services & Ingress' selected. The main content area shows the 'Service details' for a 'Load Balancer' service. The 'External endpoints' section lists two IP addresses: 34.135.54.251:8080 and 34.135.54.251:7077. The 'Load Balancer' section shows the Cluster IP as 10.88.2.94, the Load balancer IP as 34.135.54.251, and the Load balancer name as ad3278cd372ec45f78978478f553ab5e. The 'Deployments' section shows a single deployment named 'spark' with a status of 'OK' and 3/3 pods. The 'Serving pods' section shows three pods: spark-5f88f97cf9-5r2lp, spark-5f88f97cf9-67m97, and spark-5f88f97cf9-fpcf, all with a status of 'Running'. The 'Ports' section shows two ports: 8080-to-8080-tcp and 7077-to-7077-tcp, both with a status of 'PORT FORWARDING'.

**Google Cloud Platform** My First Project Search products and resources

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

**External endpoints**

- 34.135.54.251:8080
- 34.135.54.251:7077

**Load Balancer**

Cluster IP: 10.88.2.94

Load balancer IP: 34.135.54.251

Load balancer: ad3278cd372ec45f78978478f553ab5e

**Deployments**

Name	Status	Pods
spark	OK	3/3

**Serving pods**

Name	Status	Endpoints	Restarts	Created on
spark-5f88f97cf9-5r2lp	Running	10.84.1.6	0	Oct 31, 2021, 11:34:15 PM
spark-5f88f97cf9-67m97	Running	10.84.0.4	0	Oct 31, 2021, 11:34:15 PM
spark-5f88f97cf9-fpcf	Running	10.84.0.5	0	Oct 31, 2021, 11:34:15 PM

**Ports**

Name	Port	Node Port	Target Port	Protocol
8080-to-8080-tcp	8080	31910	8080	TCP
7077-to-7077-tcp	7077	32271	7077	TCP

**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

## Sonarqube Deployment

Google Cloud Platform My First Project Search products and resources

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

Clusters Workloads **Services & Ingress** Applications Configuration Storage Object Browser Migrate to containers Config Management

Marketplace Release Notes

### Deployments

Name	Status	Pods
sonarqube	OK	3/3

### Serving pods

Name	Status	Endpoints	Restarts	Created on
sonarqube-655b77dbd4-62wrd	Running	10.84.0.8	0	Oct 31, 2021, 11:39:59 PM
sonarqube-655b77dbd4-q5gq	Evicted		0	Oct 31, 2021, 11:39:59 PM
sonarqube-655b77dbd4-pwtgz	Running	10.84.1.7	0	Oct 31, 2021, 11:39:59 PM
sonarqube-655b77dbd4-nzr2r	Evicted		0	Oct 31, 2021, 11:40:47 PM
sonarqube-655b77dbd4-5plv4	Evicted		0	Oct 31, 2021, 11:40:48 PM
sonarqube-655b77dbd4-n5gvq	Evicted		0	Oct 31, 2021, 11:40:48 PM
sonarqube-655b77dbd4-h6rhj	Evicted		0	Oct 31, 2021, 11:40:48 PM
sonarqube-655b77dbd4-w5zhd	Evicted		0	Oct 31, 2021, 11:40:48 PM
sonarqube-655b77dbd4-q5jgq	Evicted		0	Oct 31, 2021, 11:40:48 PM
sonarqube-655b77dbd4-pmgvb	Evicted		0	Oct 31, 2021, 11:40:48 PM

Rows per page: 10 1 - 10 of 18

### Ports

Port	Node Port	Target Port	Protocol
8080	32533	8088	TCP

PORT FORWARDING

### 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

## Hadoop Deployment

Google Cloud Platform My First Project Search products and resources

Kubernetes Engine Deployment details REFRESH EDIT DELETE OPERATIONS Documentation

Clusters Workloads **Services & Ingress** Applications Configuration Storage Object Browser Migrate to containers Config Management

Marketplace Release Notes

### Managed pods

Revision	Name	Status	Restarts	Created on
1	hadoop-587dcc4897-9gvs8	CrashLoopBackOff	3	Oct 31, 2021, 11:45:41 PM
1	hadoop-587dcc4897-pp9rz	CrashLoopBackOff	3	Oct 31, 2021, 11:45:41 PM
1	hadoop-587dcc4897-rfjnj	CrashLoopBackOff	3	Oct 31, 2021, 11:45:41 PM

### Exposing services

No matching services

EXPOSE

### Autoscaler

Status: Unable to read all metrics

Min/max replicas: 1 / 5

Metrics: 1 CPU metric

### Expose deployment

To let users access your deployment, you can expose it to external traffic

EXPOSE

### Documentation

[Deployments](#) - a replicated, stateless application on your cluster

[Pods](#) - the smallest deployable unit in Kubernetes

[Services](#) - allow your application to receive traffic

[Autoscaling pods](#) - scale the application based on load or custom metrics

Jupyter Notebook deployment

Google Cloud Platform

My First Project

Search products and resources

Kubernetes Engine

Clusters

Workloads

Services & Ingress

Applications

Configuration

Storage

Object Browser

Migrate to containers

Config Management

Marketplace

Release Notes

Service details

REFRESH

EDIT

DELETE

KUBECTL

HIDE INFO PANEL

OPERATIONS

Logs

jupyter

Type

LoadBalancer

External endpoints

34.136.255.137:8888

Load Balancer

Cluster IP

10.88.4.177

Load balancer IP

34.136.255.137

Load balancer

a882f1b89bd634f80a89b2562fdafd7d

Deployments

Name	Status	Pods
jupyter	OK	3/3

Serving pods

Name	Status	Endpoints	Restarts	Created on
jupyter-6f4ff6c4b-pmcg9	Running	10.84.0.10	0	Oct 31, 2021, 11:50:48 PM
jupyter-6f4ff6c4b-8kqtd	Running	10.84.2.10	0	Oct 31, 2021, 11:50:48 PM
jupyter-6f4ff6c4b-nxbb7	Running	10.84.0.11	0	Oct 31, 2021, 11:50:48 PM

Ports

Port	Node Port	Target Port	Protocol
8888	31257	8888	TCP

PORT FORWARDING

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