

Projet Docker & Kubernetes :

- Clone le repository : <https://github.com/lholmquist/react-web-app>

```
git clone https://github.com/lholmquist/react-web-app
```

```
npm install  
npm start
```

```
touch Dockerfile  
nano Dockerfile
```

Output :

```
FROM node:<your-node-version>  
COPY package.json .  
RUN npm install  
COPY public ./public  
COPY src ./src  
CMD [ "npm", "start" ]
```

```
docker build --tag <your-project>:1.0 .
```

```
docker run --publish 8989:3000 -d --name <your-project>:1.0
```

Ou

```
docker run -d -p 8989:3000 <IMAGE_ID>
```

```
docker tag <IMAGE_ID> <DOCKER_USERNAME>/<DOCKER_REPO_NAME>:tag-name
```

```
docker push <USERNAME>/<DOCKER_REPO_NAME>:tag-name
```

Installer le SDK Google Cloud

<https://cloud.google.com/sdk/docs/install#linux>

<https://cloud.google.com/kubernetes-engine/docs/tutorials/hello-app>

```
gcloud auth login
```

```
gcloud auth configure-docker
```

```
docker tag <IMAGE_ID> gcr.io/<GOOGLE-PROJECT-ID>/project-name:tag-name  
docker push gcr.io/<GOOGLE-PROJECT-ID>/project-name:tag-name
```

```
kubectl get pods
```

Output :

```
amoundao@cloudshell:~ (plexiform-pilot-296114)$ kubectl get pods  
NAME                                READY   STATUS    RESTARTS   AGE  
projectkubernetes-76c4d578bb-lnvnk  1/1     Running   0           2m11s  
projectkubernetes-76c4d578bb-vhq7k  1/1     Running   0           2m11s  
projectkubernetes-76c4d578bb-x5jjh  1/1     Running   0           2m11s
```

```
kubectl expose deployment deployment-name --name=service-name  
--type=ClusterIP --port 8989 --target-port 3000
```

Output :

```
amoundao@cloudshell:~ (plexiform-pilot-296114)$ kubectl expose deployment projectkubernetes --name=servicekubernetes --type=NodePort --port 8989 --target-port 3000  
service/servicekubernetes exposed
```

```
kubectl get service
```

Output :

```
amoundao@cloudshell:~ (plexiform-pilot-296114)$ kubectl get service  
NAME            TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE  
kubernetes      ClusterIP   10.56.0.1    <none>        443/TCP          23h  
servicekubernetes NodePort    10.56.3.254  <none>        8989:31474/TCP   10s
```

```
kubectl get ingress
```

Output :

```
amoundao@cloudshell:~ (plexiform-pilot-296114)$ kubectl get ingress  
NAME                HOSTS    ADDRESS          PORTS    AGE  
ingresskubernetes  *       34.120.139.16    80       41m
```

```
kubectl autoscale deployment deployment-name --cpu-percent=65 --min=3  
--max=50
```

Output :

```
amoundao@cloudshell:~ (plexiform-pilot-296114)$ kubectl autoscale deployment projectkubernetes --cpu-percent=65 --min=3 --max=50  
horizontalpodautoscaler.autoscaling/projectkubernetes autoscaled
```

Adresse IP de l'ingress final de l'application : <http://34.120.139.16/>