Docker Ethereum app in kubernetes

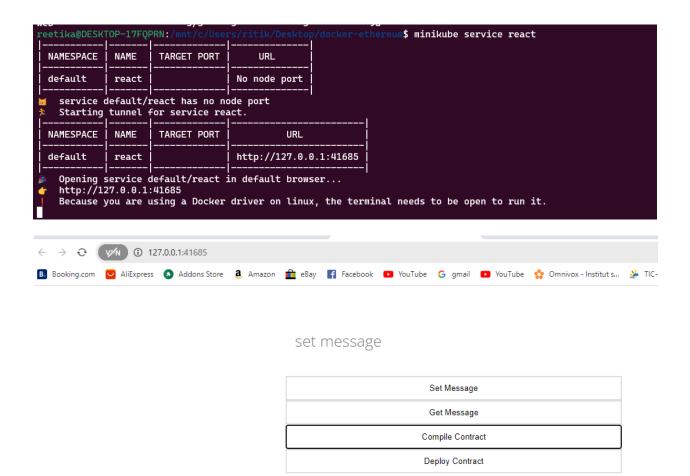
```
https://ubuntu.com/engage/secure-kubernetes-at-the-edge

This message is shown once a day. To disable it please create the 
/home/reetika/.hushlogin file.
reetika@DESKTOP-17FQPRN:: /mt/c/Users/ritik/Desktop/docker-ethereum
reetika@DESKTOP-17FQPRN:: /mt/c/Users/ritik/Desktop/docker-ethereum$ sudo snap install kompose
[Sudo] password for reetika:
kompose 1.7.10 from Ricardo Amendoeira (ric2b) installed
reetika@DESKTOP-17FQPRN: /mt/c/Users/ritik/Desktop/docker-ethereum$ kompose convert -f docker-compose.yml
INFO Kubernetes file "dapp-service.yaml" created
INFO Kubernetes file "ganache-service.yaml" created
INFO Kubernetes file "ganache-service.yaml" created
INFO Kubernetes file "ganache-deployment.yaml" created
reetika@DESKTOP-17FQPRN:/mt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f .

Command 'Kubectl' not found, but can be installed with:
sudo snap install kubectl
reetika@DESKTOP-17FQPRN:/mt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f .

deployment.apps/dapp created
deployment.apps/ganache created
service/panache service/panache deployment.yaml panache deployment.yaml panache deployment.yaml panache deployment.yaml panache d
```

		_						
NAME			READ'				STARTS	AGE
dapp-9d994d54c-8s6nq			0/1		nerCreating			3m55s
dapp-9d994d54c-rxwvt			0/1		nerCreating			66s
demo-pod			1/1	Running			(5m47s ago)	
ganache-7b4c86b4c5-cm6hd			0/1		nerCreating			65s
ganache-7b4c86b4c5-qmxbb			1/1	Running		0		3m54s
mongo-express-deployment-b	88f6d45	f-hnvth	1/1	Running	,		(5m47s ago)	
mongodb-stateful-set-0			1/1	Running	,		(5m47s ago)	
mongodb-stateful-set-1			1/1	Running	,		(5m47s ago)	
my-pod			1/1	Running	J		(5m47s ago	
nginx-deployment-584fbb974	d-4ktcp		1/1	Running	J	4 ((5m47s ago)	9d
nginx-deployment-584fbb974	d-dfr8p		1/1	Running	J	4 ((5m47s ago)	9d
nginx-deployment-584fbb974	d-lrlpf		1/1	Running	J	4 ((5m47s ago)	9d
nginx-m5pzr			1/1	Running	J	4 ((5m47s ago)	9d
note-deployment-74cc946cd8	-25gfq		1/1	Running	J	3 ((5m47s ago)	7d2h
note-deployment-74cc946cd8	-2t56b		1/1	Running	j	3 ((5m47s ago)	7d2h
note-server-deployment-6fb	5fcb67f	-txvrh	1/1	Running	J		(5m47s ago)	
note-server-deployment-6fb	5fcb67f	-wnnb4	1/1	Running	J	2 ((5m47s ago)	7d2h
react-6c46cbfc45-8trbp			1/1	Running	J	Θ		3m52s
react-6c46cbfc45-pvtfg			1/1	Running	j	Θ		64s
web-0			0/1	Pending	j	Θ		9d
web-db44c7d4f-4x6nf			1/1	Running	j	4 ((5m47s ago)	9d
web-db44c7d4f-csflf			1/1	Running	ı	4 ((5m47s ago)	9d
web-db44c7d4f-hpqpw			1/1	Running	j	4 ((5m47s ago)	9d
reetika@DESKTOP-17FQPRN:/m					-ethereum\$	kubect	:l get depl	oyments.
NAME	READY	UP-TO-E		AVAILABLE	AGE			
dapp	0/2	2		0	4m29s			
ganache	1/2	2		1	4m28s			
mongo-express-deployment	1/1	1		1	7d2h			
nginx-deployment	3/3	3		3	9d			
note-deployment	2/2	2		2	7d2h			
note-server-deployment	2/2	2		2	7d2h			
react	2/2	2		2	4m27s			



Contract compiled successfully!

```
reetika@DESKTOP-17FQPRN:~$ kubectl port-forward service/dapp 4000:4000
Forwarding from 127.0.0.1:4000 -> 4000
Forwarding from [::1]:4000 -> 4000
Handling connection for 4000
Handling connection for 4000
```



set message



0x023E565aFebCF731BED65fB6452b68659c32A9Fb

set message



Hello World!

--- replicaset ---

reetika@DESKTOP-17FQPRN:~\$ kubectl get po NAME	READY	STATUS	RESTARTS	AGE	
lapp-9d994d54c-8s6nq	1/1	Running	0	10m	
lapp-9d994d54c-rxwvt	1/1	Running	0	7m49s	
demo-pod	1/1	Running	1 (12m ago)	4d	
ganache-7b4c86b4c5-cm6hd	1/1	Running	0	7m48s	
ganache-7b4c86b4c5-qmxbb	1/1	Running	0	10m	
nongo-express-deployment-b88f6d45f-hnvth	1/1	Running	2 (12m ago)	7d2h	
nongodb-stateful-set-0	1/1	Running	2 (12m ago)	7d2h	
nongodb-stateful-set-1	1/1	Running	2 (12m ago)	7d2h	
ny-pod	1/1	Running	13 (12m ago)	2d8h	
nginx-deployment-584fbb974d-4ktcp	1/1	Running	4 (12m ago)	9d	
nginx-deployment-584fbb974d-dfr8p	1/1	Running	4 (12m ago)	9d	
nginx-deployment-584fbb974d-lrlpf	1/1	Running	4 (12m ago)	9d	
nginx-m5pzr	1/1	Running	4 (12m ago)	9d	
note-deployment-74cc946cd8-25gfq	1/1	Running	3 (12m ago)	7d2h	
note-deployment-74cc946cd8-2t56b	1/1	Running	3 (12m ago)	7d2h	
note-server-deployment-6fb5fcb67f-txvrh	1/1	Running	2 (12m ago)	7d2h	
note-server-deployment-6fb5fcb67f-wnnb4	1/1	Running	2 (12m ago)	7d2h	
react-6c46cbfc45-8trbp	1/1	Running	0	10m	
react-6c46cbfc45-pvtfg	1/1	Running	0	7m47s	
veb−0	0/1	Pending	0	9d	
web-db44c7d4f-4x6nf	1/1	Running	4 (12m ago)	9d	
web-db44c7d4f-csflf	1/1	Running	4 (12m ago)	9d	
web-db44c7d4f-hpqpw	1/1	Running	4 (12m ago)	9d	
reetika@DESKTOP-17FQPRN:~\$ kubectl delete					
pod "dapp-9d994d54c-8s6ng" deleted					
reetika@DESKTOP-17FQPRN:~\$ kubectl get po	ds				
NAME	READY	STATUS	RESTARTS	AGE	
dapp-9d994d54c-qt7tc	1/1	Running	0	7s	
dapp-9d994d54c-rxwvt	1/1	Running	0	8m37s	
demo-pod	1/1	Running	1 (13m ago)	4d	
ganache-7b4c86b4c5-cm6hd	1/1	Running	0	8m36s	
		,			

--- secret ----

```
reetika@DESKTOP-17FQPRN:-$ cd /mnt/c/Users/ritik/Desktop/docker-ethereum
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f dapp-config.yaml
configmap/node-app-config created
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f dapp-deployemnt.yaml
error: the path "dapp-deployemnt.yaml" does not exist
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f dapp-deployement.yaml
error: the path "dapp-deployement.yaml" does not exist
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f dapp-deployement.yaml
deployment.apps/dapp configured
```

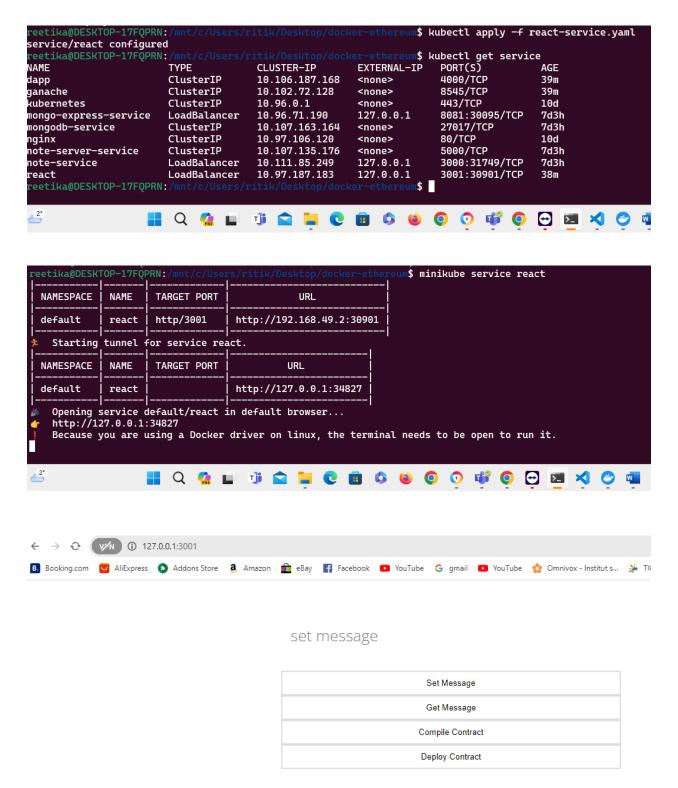
```
$ kubectl exec dapp-5f85856bf7-glfht -- env
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
HOSTNAME=dapp-5f85856bf7-glfht
NODE_PORT=8080
NGINX_SERVICE_PORT=80
NOTE_SERVICE_PORT_3000_TCP_PORT=3000
GANACHE_SERVICE_PORT=8545
DAPP_SERVICE_PORT_4000=4000
NOTE_SERVICE_PORT_3000_TCP_ADDR=10.111.85.249
REACT_SERVICE_PORT=3000
MONGODB_SERVICE_PORT=tcp://10.107.163.164:27017
KUBERNETES_SERVICE_PORT_HTTPS=443
KUBERNETES_PORT_443_TCP_PORT=443
DAPP_SERVICE_HOST=10.106.187.168
REACT_SERVICE_PORT_3000=3000
MONGODB_SERVICE_PORT_27017_TCP=tcp://10.107.163.164:27017
KUBERNETES_SERVICE_HOST=10.96.0.1
KUBERNETES_PORT_443_TCP=tcp://10.96.0.1:443
GANACHE_PORT_8545_TCP_ADDR=10.102.72.128
DAPP_SERVICE_PORT=4000
NGINX_PORT_80_TCP_PORT=80
REACT_PORT=tcp://10.97.187.183:3000
MONGODB_SERVICE_PORT_27017_TCP_PORT=27017
GANACHE_PORT_8545_TCP_PORT=8545
MONGO_EXPRESS_SERVICE_PORT_8081_TCP_PROTO=tcp
MONGO_EXPRESS_SERVICE_PORT_8081_TCP_ADDR=10.96.71.190
NOTE_SERVICE_SERVICE_PORT=3000
```

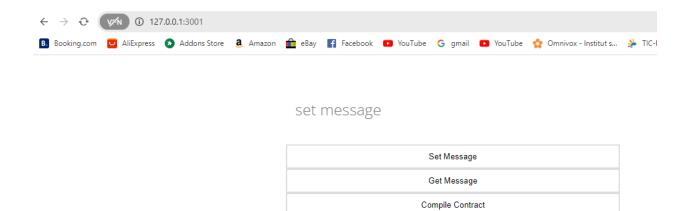
--- HPA scaling ---

```
reetika@DESKTOP-17FQPRN:/mmt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f react-deployment.yaml
deployment.apps/react configured
reetika@DESKTOP-17FQPRN:/mmt/c/Users/ritik/Desktop/docker-ethereum$ kubectl autoscale deployment react --cpu-percent=50 --min=1 --max
=10
horizontalpodautoscaler.autoscaling/react autoscaled
reetika@DESKTOP-17FQPRN:/mmt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f react-hpa.yaml
error: the path "react-hpa.yaml" does not exist
reetika@DESKTOP-17FQPRN:/mmt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f hpa.yaml
Warning: resource horizontalpodautoscalers/react is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is
required by kubectl apply. Nubectl apply should only be used on resources created declaratively by either kubectl create --save-confi
g or kubectl apply. The missing annotation will be patched automatically.
horizontalpodautoscaler.autoscaling/react configured
reetika@DESKTOP-17FQPRN:/mmt/c/Users/ritik/Desktop/docker-ethereum$
```

```
kubectl get hpa
NAME
                        TARGETS
                                 MINPODS
                                         MAXPODS
                                                  REPLICAS
       REFERENCE
                                                            AGE
react
       Deployment/react
                        0%/50%
                                         5
                                                            7m16s
reetika@DE
                                                          n$ kubectl get hpa
NAME
       REFERENCE
                        TARGETS
                                                  REPLICAS
                                MINPODS
                                         MAXPODS
                                                            AGE
      Deployment/react
                        67%/50%
                                                            7m30s
react
                                         5
                                                  1
                                1
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$
                  🔡 Q 🤽 🖆 😘 🍙 🤚 🕲 📵 🗯 👂 🌘 🗿 🖼 🔘 🚇
```

--- Load balancing -----





0x9bA94F7e7ef966Cc9c6d55B2008CFde5F3D4c5b3



set message



Deploy Contract

Hello World!

---Role binding-----

```
$ openssl genrsa -out reetika.key 2048
$ openssl req -new -key reetika.key -out reetika.csr -subj "/CN=re
                                                     inpa.yaml react-deployment.yaml role-binding.yaml kubectl-pod-1.yaml reettka.csr ganache-deployment.yaml package-lock.json reetika.kev
etika/0=dev/0=example.org"
Dockerfile.ganache cluster-role.yaml
                      cluster-rolebinding.yaml
LICENSE .md
README.md
                      dapp-deployment.yaml
                                                                         reum$ openssl x509 -req -CA ~/.minikube/ca.crt -CAkey ~/.minikube/ca.ke
y -CAcreateserial -days 730 -in reetika.csr -out reetika.crt
Certificate request self-signature ok
subject=CN = reetika, 0 = dev, 0 = example.org
                                                      ctop/docker-ethereum$ kubectl config set-credentials reetika --client-certificate=reet
ika.crt --client-key=reetika.key
      "reetika" set.
                                    Users/ritik/Desktop/docker-ethereum$ kubectl config set-context reetika-minikube --cluster=minikube
-user=reetika --namespace=default
Context "reetika-minikube" created.
 eetika@DESKTOP-17FQPRN:/mnt
                                                                    ethereum$ kubectl config get-contexts
                                 /c/Users/ritik/Desktop/docker-eth
CLUSTER AUTHINFO NAMESPACE
                                              minikube
           minikube
           reetika-minikube minikube
                                             reetika
                                                           default
                                              ik/Desktop/docker-ethereum$ kubectl config use-context reetika-minikube
Switched to context "reetika-minikube".
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl get pods
Error from server (Forbidden): pods is forbidden: User "reetika" cannot list resource "pods" in API group "" in the namespace "defaul
reetika@DESKTOP-17FOPRN:/
                                   /Users/ritik/Desktop/docker-ethereum$ kubectl config use-context minikube
Switched to context "minikube".
                                      ers/ritik/Desktop/docker-ethereum$ kubectl apply -f role.yaml
role.rbac.authorization.k8s.io/pod-reader created
                                                         p/docker-ethereum$ kubectl apply -f role-binding.yaml
```

```
n$ kubectl apply -f role-binding.yaml
rolebinding.rbac.authorization.k8s.io/read-pods created
                                                                          um$ kubectl config use-context reetika-minikube
Switched to context "reetika-minikube".
                                                                          m$ kubectl get pods
ARTS AGE
reetika@DESKTOP-17FQPRN:/mnt/c/Users/riti
NAME
                                                                     RESTARTS
                                                 READY
                                                          STATUS
dapp-5f85856bf7-glfht
                                                          Running
                                                                                       41m
demo-pod
ganache-7b4c86b4c5-cm6hd
                                                Running
                                                                        (62m ago)
                                                                                       4d
                                                          Running
                                                                                       58m
ganache-7b4c86b4c5-qmxbb
                                                          Running
                                                                                      61m
mongo-express-deployment-b88f6d45f-hnvth
mongodb-stateful-set-0
                                                                       (62m ago)
                                                          Running
                                                                                       7d3h
                                                          Running
                                                                        (62m ago)
                                                                                       7d3h
mongodb-stateful-set-1
                                                                        (62m ago)
                                                          Running
                                                                                       7d3h
my-pod
nginx-deployment-584fbb974d-4ktcp
                                                                     14 (95s ago)
                                                          Running
                                                                                       2d9h
                                                                     4 (62m ago)
4 (62m ago)
4 (62m ago)
                                                          Running
                                                                                       9d
nginx-deployment-584fbb974d-dfr8p
nginx-deployment-584fbb974d-lrlpf
                                                                                       9d
                                                          Running
                                                                                       9d
                                                          Running
                                                                       (62m ago)
(62m ago)
nginx-m5pzr
                                                          Running
                                                                                       10d
                                                          Running
note-deployment-74cc946cd8-25gfq
                                                                                       7d3h
note-deployment-74cc946cd8-2t56b
                                                          Running
                                                                     3 (62m ago)
                                                                                       7d3h
note-server-deployment-6fb5fcb67f-txvrh
note-server-deployment-6fb5fcb67f-wnnb4
react-95c5d68df-n2lg2
                                                          Running
                                                                     2
                                                                        (62m ago)
                                                                                       7d3h
                                                          Running
                                                                        (62m ago)
                                                                                       7d3h
                                                          Running
                                                                                       34m
                                                          Pending
                                                                                       10d
web-0
web-db44c7d4f-4x6nf
                                                          Running
                                                                     4 (62m ago)
                                                                                       10d
web-db44c7d4f-csflf
                                                          Running
                                                                                       10d
web-db44c7d4f-hpqpw
                                                                     4 (62m ago)
                                                          Running
                                                                                       10d
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/De
2°
                       📘 Q 🥻 🔲 🐧 🍙 🤚 🕲 📋 💪 🐞 🧔 💿 🕣 🛣 🔘 🖸 🖼 🔺 🖰 👊 🗥 🖼 🗞 🕸
```

```
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl run nginx --image=nginx
Error from server (Forbidden): pods is forbidden: User "reetika" cannot create resource "pods" in API group "" in the namespace "defa
                                      /c/Users/ritik/Desktop/docker-ethereum$ kubectl config use-context minikube
Switched to context "minikube".
                                                                       ocker-ethereum$ kubectl create ns test
namespace/test created
                                                                 op/docker-ethereum$ kubectl run nginx --image=nginx -n test
              SKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl get pods -n test
NAME READY STATUS RESTARTS AGE nginx 1/1 Running 0 11s reetika@DESKTOP-17FQPRN:/mnt/c/Users/riti
                                                       k/Desktop/docker-ethereum$ kubectl apply -f cluster-role.yaml
clusterrole.rbac.authorization.k8s.io/pod-reader created
                                                                                 hereum$ kubectl apply -f cluster-rolebinding.yaml
clusterrolebinding.rbac.authorization.k8s.io/pod-reader-global created
                                                  ritik/Desktop/docker-ethereum$ kubectl config use-context reetika-minikube
Switched to context "reetika-minikube".
reetika@DESKTOP-17FQPRN:/mr
NAME READY STATUS F
nginx 1/1 Running @
reetika@DESKTOP-17FQPRN:/mr
                                                     tik/Desktop/docker-ethereum$ kubectl get pods -n test
          DESKTOP-17FQPRN:/mnts/
READY STATUS RESTARTS AGE
1/1 Running 0 2m10s
anesktop-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl config use-context minikube
                                  nnt/c/Users/rit
RESTARTS AGE
Switched to context "minikube".
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl get sa

NAME SECRETS AGE
default 0 10d
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl get sa -n test

NAME SECRETS AGE
default 0 3m11s
        a@DESKTOP-17FQPRN:/
                                                 /ritik/Desktop/docker-ethereum$ kubectl create sa test-sa
serviceaccount/test-sa created
                                             ers/ritik/Desktop/docker-ethereum$ kubectl config use-context reetika-minikube
Switched to context "reetika-minikube".
```

```
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl config use-context reetika-minikube
Switched to context "reetika-minikube".
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f kubectl-pod.yaml
Error from server (Forbidden): error when creating "kubectl-pod.yaml": pods is forbidden: User "reetika" cannot create resource "pods
" in API group "" in the namespace "default"
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl exec -it kubectl-pod1 -- bash
Error from server (NotFound): pods "kubectl-pod1" not found
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl config use-context minikube
Switched to context "minikube".
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f role-binding-1.yaml
rolebinding.rbac.authorization.k8s.io/read-pods configured
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl apply -f kubectl-pod-1.yaml
pod/kubectl-pod1 created
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl exec -it kubectl-pod1 -- bash
error: unable to upgrade connection: container not found ("kubectl")
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl exec -it kubectl-pod1 -- bash
I have no name!@kubectl-pod1:/$
```

```
reetika@DESKTOP-17FQPRN:-$ cd /mnt/c/Users/ritik/Desktop/docker-ethereum
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl config use-context minikube
Switched to context "minikube".
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl auth can-i create pods
yes
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl config use-context reetikah-minikube
error: no context exists with the name: "reetikah-minikube"
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl config use-context reetika-minikube
Switched to context "reetika-minikube".
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl auth can-i create pods
no
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$ kubectl auth can-i get pods
yes
reetika@DESKTOP-17FQPRN:/mnt/c/Users/ritik/Desktop/docker-ethereum$
```