## KUBERNETES - TOPICS LEARNED

- Kubernetes Architecture
- Kubernetes Setup and Minikube Installation
- Pods, Replicaset, Deployments
- YAML file creation
- Replication Controllers and ReplicaSets
- Update and Rollback in Deployments
- Networking in Kubernetes
- Services - NodePort, ClusterIP, Load Balancer
- Kubernetes on Cloud – GCP, AWS, Azure

## SAMPLE APPLICATION DEPLOYMENT ON KUBERNETES

GitHub Repository Link: https://github.com/raji-sridharan/Exercise/tree/main/Kubernetes

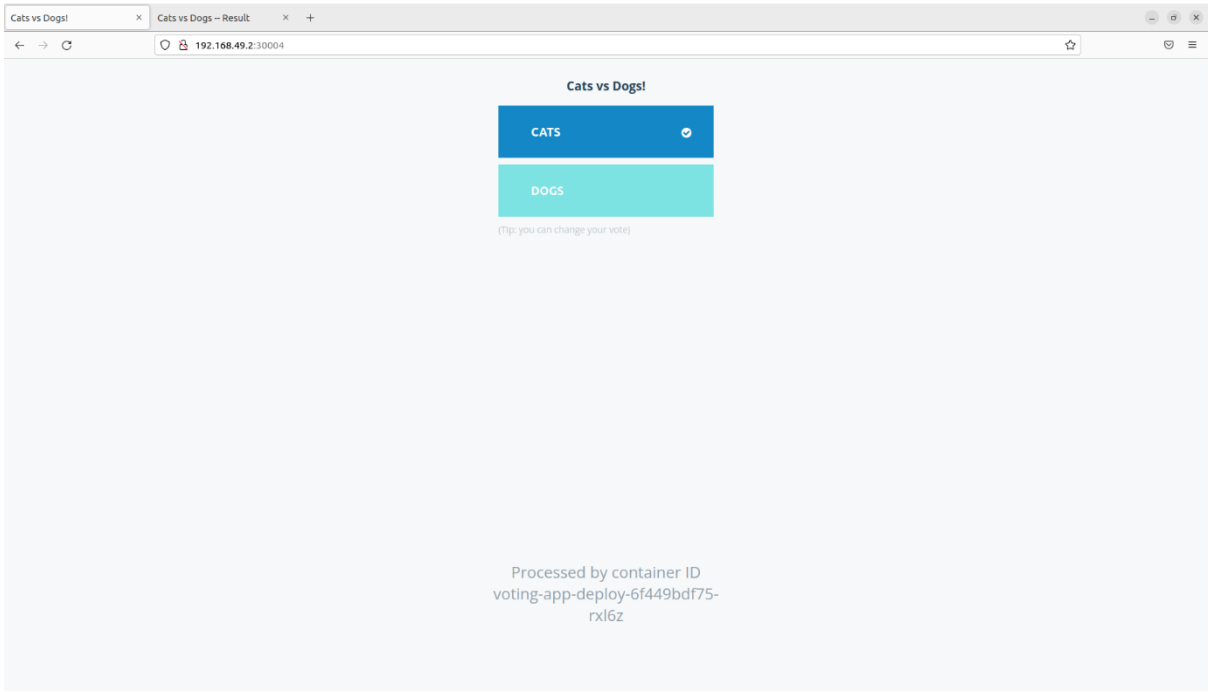
```
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f voting-app-deploy.yaml
deployment.apps/voting-app-deploy created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f voting-app-service.yaml
service/voting-service created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f redis-deploy.yaml
deployment.apps/redis-deploy created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f redis-service.yaml
service/redis created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f worker-app-deploy.yaml
deployment.apps/worker-app-deploy created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f postgres-deploy.yaml
deployment.apps/postgres-deploy created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f postgres-service.yaml
service/db created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f result-app-service.yaml
service/result-service created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl create -f result-app-deploy.yaml
deployment.apps/result-app-deploy created
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$
```

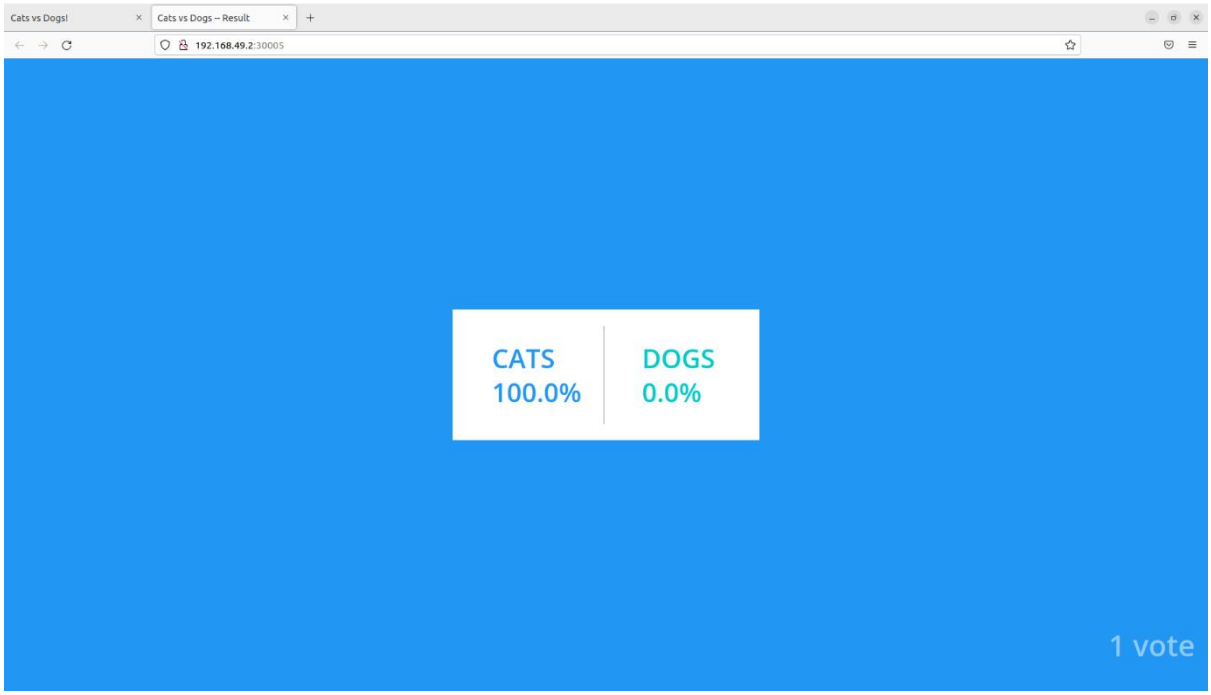
```
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ kubectl get pods,svc,deployments
NAME                                    READY   STATUS    RESTARTS   AGE
pod/postgres-deploy-bfd4fd474-76xsd     1/1     Running   0          118s
pod/redis-deploy-c747f8f64-b487x        1/1     Running   0          2m9s
pod/result-app-deploy-d8b8bb466-9lzv7   1/1     Running   0          107s
pod/voting-app-deploy-6f449bdf75-rxl6z  1/1     Running   0          2m29s
pod/worker-app-deploy-d84fddf59-7slsp   1/1     Running   0          94s

NAME                     TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)        AGE
service/db               ClusterIP   10.99.199.79     <none>        5432/TCP       113s
service/kubernetes       ClusterIP   10.96.0.1        <none>        443/TCP        14d
service/redis            ClusterIP   10.105.147.236   <none>        6379/TCP       2m6s
service/result-service   NodePort    10.108.207.253   <none>        80:30005/TCP   102s
service/voting-service   NodePort    10.110.75.145    <none>        80:30004/TCP   2m25s

NAME                                READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/postgres-deploy     1/1     1            1           119s
deployment.apps/redis-deploy        1/1     1            1           2m9s
deployment.apps/result-app-deploy   1/1     1            1           107s
deployment.apps/voting-app-deploy   1/1     1            1           2m30s
deployment.apps/worker-app-deploy   1/1     1            1           94s
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ minikube service voting-service --url
http://192.168.49.2:30004
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$ minikube service result-service --url
http://192.168.49.2:30005
raji@raji-VivoBook-ASUSLaptop-X409MA:~/practice/kubernetes/application/deployment$
```

## Output


Cats vs Dogs!
Cats vs Dogs -- Result
192.168.49.2:30004
Cats vs Dogs!
CATS
DOGS
(Tip: you can change your vote)
Processed by container ID voting-app-deploy-6f449bdf75-rxl6z


Cats vs Dogs!
Cats vs Dogs -- Result
192.168.49.2:30005
CATS
100.0%
DOGS
0.0%
1 vote