

# Running Voting App on Kubernetes Cluster

1. SSH to your AWS Workstation and run the below commands.

```
$ sudo su
# mkdir /home/devops/voting-app/
# cd /home/devops/voting-app/
# git clone https://github.com/LovesCloud/Docker-Voting-Application.git
```

2. Cd to the Cloned Directory

```
# cd Docker-Voting-Application/k8s-specifications/
```

3. Apply the mandatory deployments on the Kubernetes Cluster.

```
# kubectl create ns vote
# kubectl apply -f mandatory/
```

4. Update the vote deployment.

```
# vim vote-deployment.yaml
```

Update <your-name> with your name.

5. Update the vote service

```
# vim vote-service.yaml
```

Update <your-name> with your name.

6. Deploy the vote application and service.

```
# cd ..
# kubectl apply -f k8s-specifications/
```

7. Check the node where your **Vote** and **Result** applications are deployed.

```
# kubectl get pods --selector=app=vote-<your-name> -n vote -o wide
```

```
root@ip-172-31-90-47: /home/devops/voting-app/Docker-Voting-Application# kubectl get pods --selector=app=vote-albert -n vote -o wide
NAME                                READY   STATUS    RESTARTS   AGE   IP              NODE                                NOMINATED NODE
vote-albert-85b849559d-wmd8j        1/1     Running   0           12m   10.28.2.4       gke-cluster-1-default-pool-a729d5fc-pwgg   <none>
root@ip-172-31-90-47: /home/devops/voting-app/Docker-Voting-Application#
```

```
root@ip-172-31-90-47: /home/devops/voting-app/Docker-Voting-Application# kubectl get pods --selector=app=result -n vote -o wide
NAME                                READY   STATUS    RESTARTS   AGE   IP              NODE                                NOMINATED NODE
result-7f9b75dcb5-ppw7m            1/1     Running   0           19m   10.28.6.2       gke-cluster-1-default-pool-a729d5fc-7nk2   <none>
root@ip-172-31-90-47: /home/devops/voting-app/Docker-Voting-Application#
```

In this example the Vote app has been deployed on Node **gke-cluster-1-default-pool-a729d5fc-pwgg** and the results app has been deployed also on **gke-cluster-1-default-pool-a729d5fc-7nk2**

8. Check the NodePort on which the **result** and **vote** app are exposed on

```
# kubectl get svc -n vote
```

```
root@ip-172-31-90-47: /home/devops/voting-app/Docker-Voting-Application# kubectl get svc -n vote
NAME         TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
db           ClusterIP     10.31.241.25   <none>         5432/TCP         21m
redis        ClusterIP     10.31.245.175  <none>         6379/TCP         21m
result       NodePort      10.31.241.254  <none>         5001:31001/TCP   21m
vote-albert  NodePort      10.31.255.59   <none>         5000:30147/TCP   16m
root@ip-172-31-90-47: /home/devops/voting-app/Docker-Voting-Application#
```

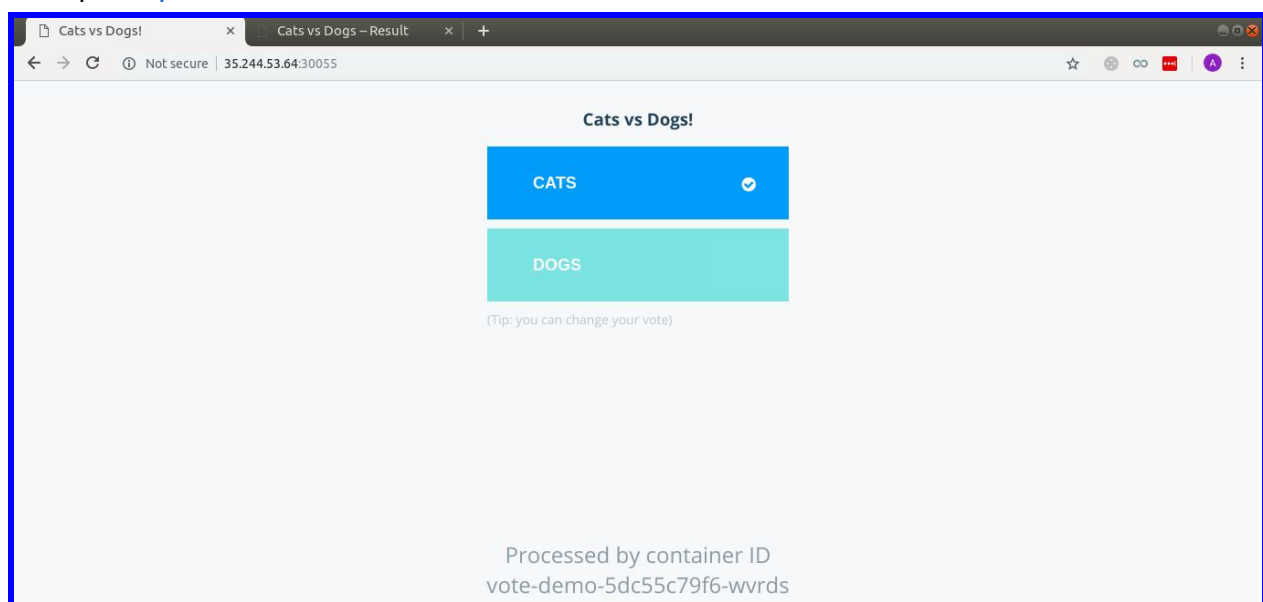
9. Check the **Public IP** of the **NODE** on which the **result** and **vote** apps are deployed.

```
# kubectl get nodes -n vote -o wide
```

```
root@ip-172-31-90-47: /home/devops/voting-app/Docker-Voting-Application# kubectl get nodes -n vote -o wide
NAME                                STATUS    ROLES    AGE   VERSION   INTERNAL-IP    EXTERNAL-IP    OS-IMAGE
gke-cluster-1-default-pool-a729d5fc-2tsc Ready    <none>   9h    v1.12.6-gke.10  10.156.0.5     35.246.195.222  Container-Optimized OS from Google
gke-cluster-1-default-pool-a729d5fc-4glj Ready    <none>   9h    v1.12.6-gke.10  10.156.0.6     35.246.185.128  Container-Optimized OS from Google
gke-cluster-1-default-pool-a729d5fc-7nk2 Ready    <none>   116m   v1.12.6-gke.10  10.156.0.9     35.246.136.191  Container-Optimized OS from Google
gke-cluster-1-default-pool-a729d5fc-f9fz Ready    <none>   9h    v1.12.6-gke.10  10.156.0.2     35.198.120.115  Container-Optimized OS from Google
gke-cluster-1-default-pool-a729d5fc-lbqb Ready    <none>   9h    v1.12.6-gke.10  10.156.0.4     35.246.172.220  Container-Optimized OS from Google
gke-cluster-1-default-pool-a729d5fc-nsfs Ready    <none>   116m   v1.12.6-gke.10  10.156.0.8     35.246.168.35   Container-Optimized OS from Google
gke-cluster-1-default-pool-a729d5fc-pwgg Ready    <none>   9h    v1.12.6-gke.10  10.156.0.7     35.246.233.147  Container-Optimized OS from Google
gke-cluster-1-default-pool-a729d5fc-zj7p Ready    <none>   9h    v1.12.6-gke.10  10.156.0.3     35.242.251.251  Container-Optimized OS from Google
root@ip-172-31-90-47: /home/devops/voting-app/Docker-Voting-Application#
```

10. Access your **Vote** application from the **Public IP** of the Node followed by the **NodePort** (step 8) on which it is exposed at.

Example <http://35.244.53.64:30055/>



11. Access your results application from the **Public IP** of the Node followed by the **NodePort** (step 8) on which it is exposed at.

Example <http://35.244.53.64:31001/>

