

Voting APP

Step -1: Make changes in the vote and result service yaml files (Note: for worker-node vote service : 31002 , result service : 31003)

Command Used:

```
vim vote-service.yaml
vim result-service.yaml
kubectl apply -f .
kubectl get pods
kubectl get svc
kubectl get all
```

```
[root@ip-172-31-40-39 k8s-specifications]# kubectl apply -f .
deployment.apps/db created
service/db created
deployment.apps/redis created
service/redis created
deployment.apps/result created
service/result created
deployment.apps/vote created
service/vote created
deployment.apps/worker created
[root@ip-172-31-40-39 k8s-specifications]# kubectl get pods
```

NAME	READY	STATUS	RESTARTS	AGE
db-b54cd94f4-5jjhm	1/1	Running	0	6s
redis-868d64d78-7hqgc	1/1	Running	0	5s
result-5d57b59f4b-znct6	1/1	Running	0	5s
vote-94849dc97-5lqkz	1/1	Running	0	5s
worker-dd46d7584-4pcdq	1/1	Running	0	5s

```
[root@ip-172-31-40-39 k8s-specifications]# kubectl get svc
```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
db	ClusterIP	10.107.5.191	<none>	5432/TCP	53s
kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	2m31s
redis	ClusterIP	10.97.74.190	<none>	6379/TCP	52s
result	NodePort	10.110.50.60	<none>	5001:31003/TCP	52s
vote	NodePort	10.105.3.45	<none>	5000:31002/TCP	52s

```
[root@ip-172-31-40-39 k8s-specifications]# kubectl get all
```

NAME	READY	STATUS	RESTARTS	AGE
pod/db-b54cd94f4-5jjhm	1/1	Running	0	5m7s
pod/redis-868d64d78-7hqgc	1/1	Running	0	5m6s
pod/result-5d57b59f4b-znct6	1/1	Running	0	5m6s
pod/vote-94849dc97-5lqkz	1/1	Running	0	5m6s
pod/worker-dd46d7584-4pcdq	1/1	Running	0	5m6s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/db	ClusterIP	10.107.5.191	<none>	5432/TCP	5m7s
service/kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	6m45s
service/redis	ClusterIP	10.97.74.190	<none>	6379/TCP	5m6s
service/result	NodePort	10.110.50.60	<none>	5001:31003/TCP	5m6s
service/vote	NodePort	10.105.3.45	<none>	5000:31002/TCP	5m6s

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/db	1/1	1	1	5m7s
deployment.apps/redis	1/1	1	1	5m6s
deployment.apps/result	1/1	1	1	5m6s
deployment.apps/vote	1/1	1	1	5m6s
deployment.apps/worker	1/1	1	1	5m6s

NAME	DESIRED	CURRENT	READY	AGE
replicaset.apps/db-b54cd94f4	1	1	1	5m7s
replicaset.apps/redis-868d64d78	1	1	1	5m6s
replicaset.apps/result-5d57b59f4b	1	1	1	5m6s
replicaset.apps/vote-94849dc97	1	1	1	5m6s
replicaset.apps/worker-dd46d7584	1	1	1	5m6s

```
[root@ip-172-31-40-39 k8s-specifications]#
```

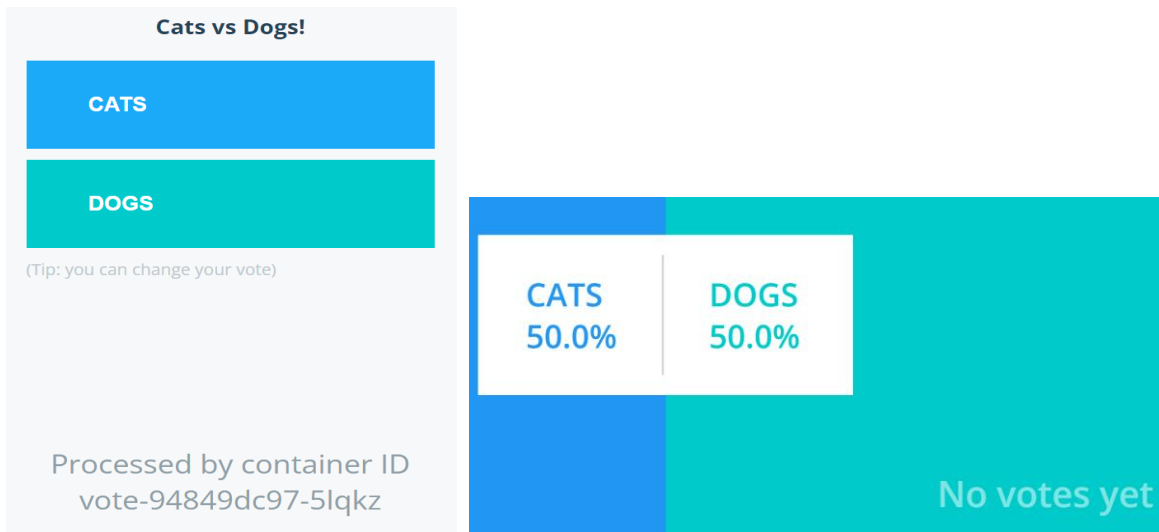
Step 2: Try Voting and see the results:

(a) The address for vote and result application:

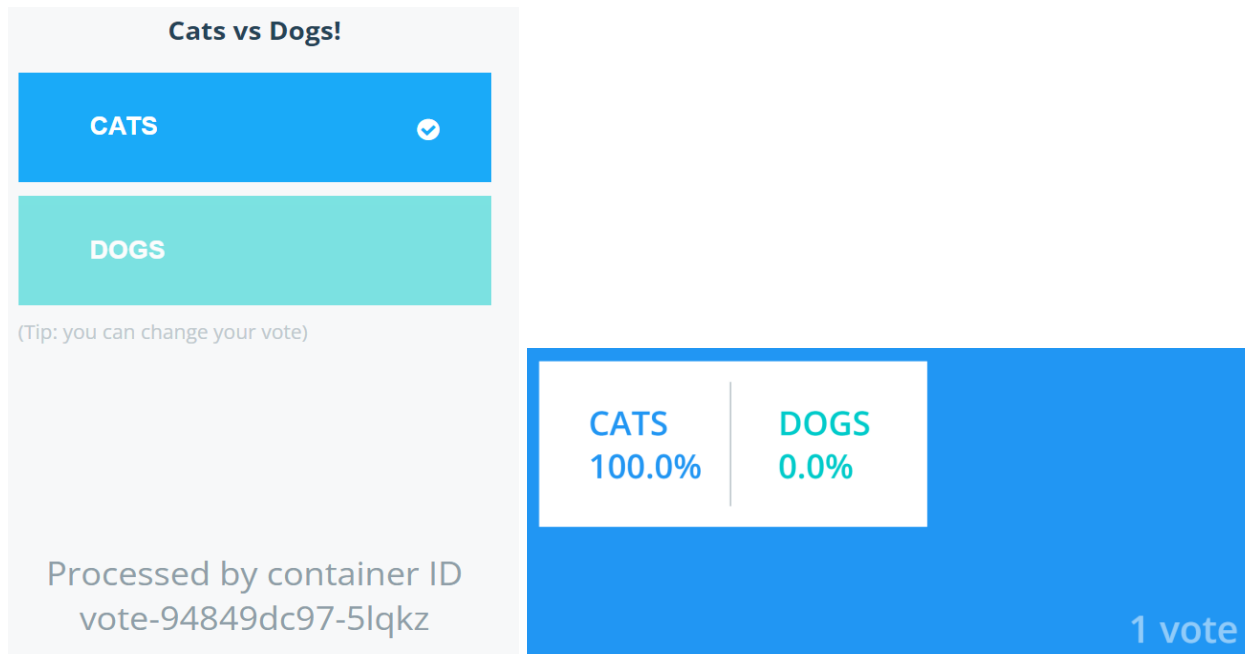
Vote address → <http://18.143.129.171:31002/>

Result address → <http://18.143.129.171:31003/>

(b) Before Voting: 50% each for both cats and dogs



(c) After Voting: 100% for Cats and 0% for Dogs (Since we voted for Cats)



Step-3: Deleting voting Pod:

Command Used:

```
kubectl delete pod vote-94849dc97-5lqkz  
kubectl get pods
```

Frontend: worked fine without any breaks (new page came for new vote-pod 'vote-94849dc97-bd9vn')

Unix: new vote pod is created without disrupting the application.

```
[root@ip-172-31-40-39 k8s-specifications]# kubectl delete pod vote-94849dc97-5lqkz  
pod "vote-94849dc97-5lqkz" deleted  
[root@ip-172-31-40-39 k8s-specifications]# kubectl get pods  
NAME                                READY   STATUS    RESTARTS   AGE  
db-b54cd94f4-5jjhm                 1/1     Running   0           20m  
redis-868d64d78-7hqqc              1/1     Running   0           20m  
result-5d57b59f4b-znct6            1/1     Running   0           20m  
vote-94849dc97-bd9vn               1/1     Running   0           90s  
worker-dd46d7584-4pcdq             1/1     Running   0           20m
```

Cats vs Dogs!

CATS



DOGS

(Tip: you can change your vote)

Processed by container ID
vote-94849dc97-bd9vn

Step -4: Deleting worker pod:

Command Used:

```
kubectl delete pod worker-dd46d7584-4pcdq  
kubectl get pods
```

Frontend: worked fine without any breaks. No changes were observed.

Unix: new worker pod is created without disrupting the application.

```
[root@ip-172-31-40-39 k8s-specifications]# kubectl delete pod worker-dd46d7584-4pcdq  
pod "worker-dd46d7584-4pcdq" deleted  
[root@ip-172-31-40-39 k8s-specifications]# kubectl get pods  
NAME                                READY   STATUS    RESTARTS   AGE  
db-b54cd94f4-5jjhm                 1/1     Running   0           22m  
redis-868d64d78-7hqqc              1/1     Running   0           22m  
result-5d57b59f4b-znct6            1/1     Running   0           22m  
vote-94849dc97-bd9vn               1/1     Running   0           3m7s  
worker-dd46d7584-6tfvw             1/1     Running   0           13s  
[root@ip-172-31-40-39 k8s-specifications]#
```

Step-5: Deleting db pod:

Command Used:

```
kubectl delete pod db-b54cd94f4-5jjhm  
kubectl get pods  
kubectl delete pod db-b54cd94f4-thjlx  
kubectl get pods
```

Frontend: votes became 50-50 (i.e., no votes - previous vote data got deleted)

Unix: took some time to create new db-pod for db; result-pod and worker-pod were restarted.

```
[root@ip-172-31-40-39 k8s-specifications]# kubectl delete pod db-b54cd94f4-5jjhm  
pod "db-b54cd94f4-5jjhm" deleted  
[root@ip-172-31-40-39 k8s-specifications]# kubectl get pods  
NAME                                READY   STATUS    RESTARTS   AGE  
db-b54cd94f4-thjlx                 1/1     Running   0           52s  
redis-868d64d78-7hqqc              1/1     Running   0           25m  
result-5d57b59f4b-znct6            1/1     Running   1           25m  
vote-94849dc97-bd9vn               1/1     Running   0           6m17s  
worker-dd46d7584-6tfvw             1/1     Running   1           3m23s  
[root@ip-172-31-40-39 k8s-specifications]#  
[root@ip-172-31-40-39 k8s-specifications]# kubectl delete pod db-b54cd94f4-thjlx  
pod "db-b54cd94f4-thjlx" deleted  
[root@ip-172-31-40-39 k8s-specifications]# kubectl get pods  
NAME                                READY   STATUS    RESTARTS   AGE  
db-b54cd94f4-jqjf2                 1/1     Running   0           92s  
redis-868d64d78-7hqqc              1/1     Running   0           31m  
result-5d57b59f4b-znct6            1/1     Running   2           31m  
vote-94849dc97-bd9vn               1/1     Running   0           12m  
worker-dd46d7584-6tfvw             1/1     Running   2           9m26s
```



Q1: Your comment on WHY result app STOPPED working after db pod stop

Ans: The data source for result app is db. When we deleted the db pod, the data stored in it got deleted (since pods do not save the data). To overcome this issue we need volumes.

Q2: Your answer to HOW YOU MADE THE RESULT POD work.

- After deleting the db pod, new db pod is created. But worker is trying to push vote to old db (through old socket).
- The new socket connection is made available through worker restart, and finds the new db.
- Both worker and result pod restart.
- We can now cast vote again (after refreshing the page we can see the vote result)