Ketan Pawar

kubernetes

Deploying a Voting App Using Kubernetes

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Step 01

Clone the Repository

To begin, clone the repository containing the Voting App's Kubernetes specifications

```
controlplane $ git clone https://github.com/dockersamples/example-voting-app.git
Cloning into 'example-voting-app'...
remote: Enumerating objects: 1179, done.
remote: Total 1179 (delta 0), reused 0 (delta 0), pack-reused 1179 (from 1)
Receiving objects: 100% (1179/1179), 1.21 MiB | 10.37 MiB/s, done.
Resolving deltas: 100% (450/450), done.
```

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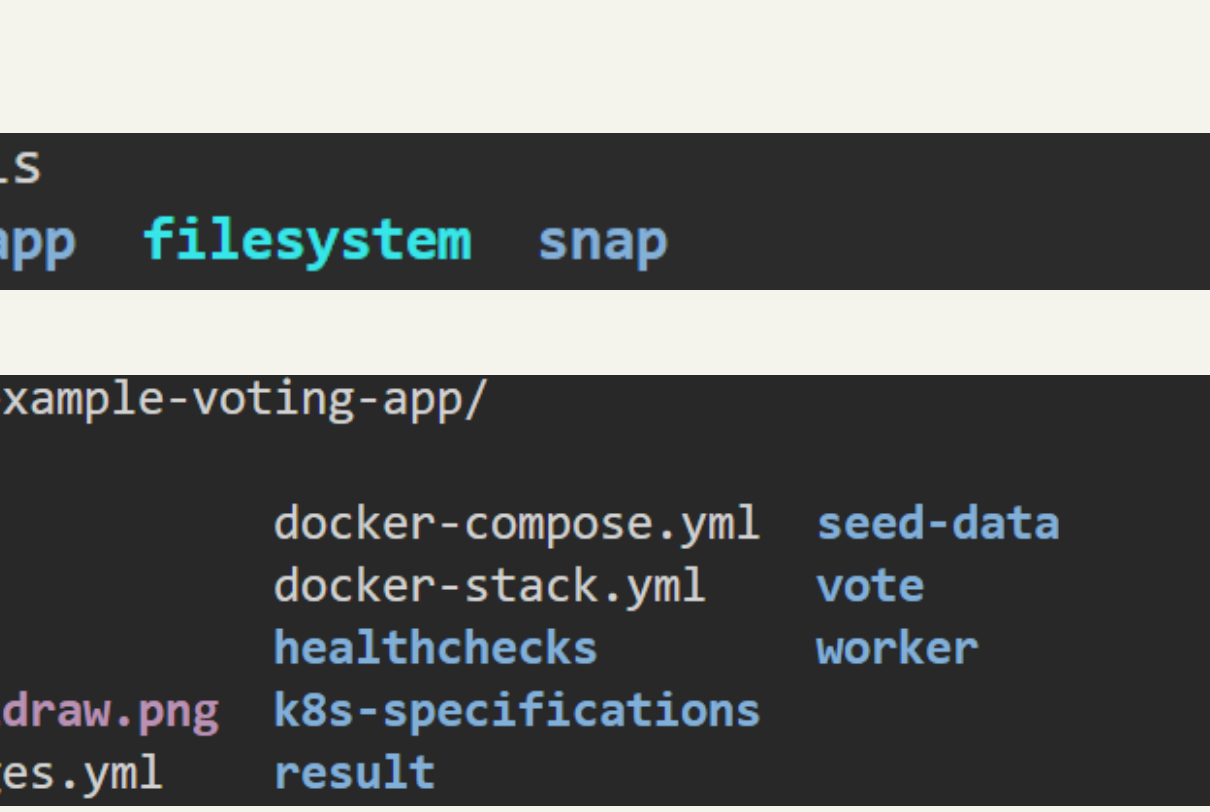
Step 02

Navigate to the Repository Folder

After cloning, navigate to the repository directory:

```
controlplane $ ls
example-voting-app  filesystem  snap
```

```
controlplane $ cd example-voting-app/
controlplane $ ls
LICENSE                     docker-compose.yml  seed-data
MAINTAINERS                 docker-stack.yml    vote
README.md                   healthchecks        worker
architecture.excalidraw.png  k8s-specifications
docker-compose.images.yml   result
```



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Step 03

Explore Kubernetes YAML Files

The Kubernetes YAML files are located in the k8s-specifications folder. List the contents:

```
controlplane $ ls k8s-specifications/
db-deployment.yaml       result-service.yaml
db-service.yaml          vote-deployment.yaml
redis-deployment.yaml    vote-service.yaml
redis-service.yaml       worker-deployment.yaml
result-deployment.yaml
```

Deploy the Application

Run the following command to deploy all components of the application:

```
controlplane $ kubectl create -f k8s-specifications/
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
```

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Step 04

Verify Pods and Services

Check Pod Status:

```
controlplane $ kubectl get pod -o wide
NAME                      READY   STATUS              RESTARTS   AGE   IP             NODE          NOMINATED NODE   READINESS GATES
db-5b8f566868-74lpq       1/1     Running             0          29s   192.168.1.4    node01        <none>           <none>
redis-5b65678587-72hq8    1/1     Running             0          29s   192.168.1.5    node01        <none>           <none>
result-6894cfb789-zgh48   0/1     ContainerCreating   0          29s   <none>         node01        <none>           <none>
vote-6fc94b9897-nhjgc     0/1     ContainerCreating   0          28s   <none>         node01        <none>           <none>
```

Check Service Status:

```
controlplane $ kubectl get svc
NAME         TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
db           ClusterIP   10.110.63.59     <none>        5432/TCP         53s
kubernetes   ClusterIP   10.96.0.1        <none>        443/TCP          17d
redis        ClusterIP   10.105.0.91      <none>        6379/TCP         53s
result       NodePort    10.97.77.13      <none>        8081:31001/TCP   52s
vote         NodePort    10.107.171.228   <none>        8080:31000/TCP   52s
```

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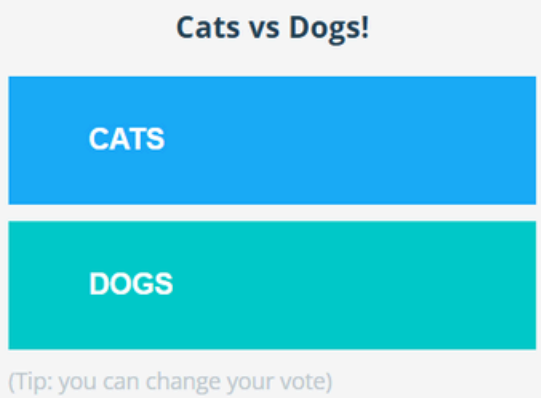
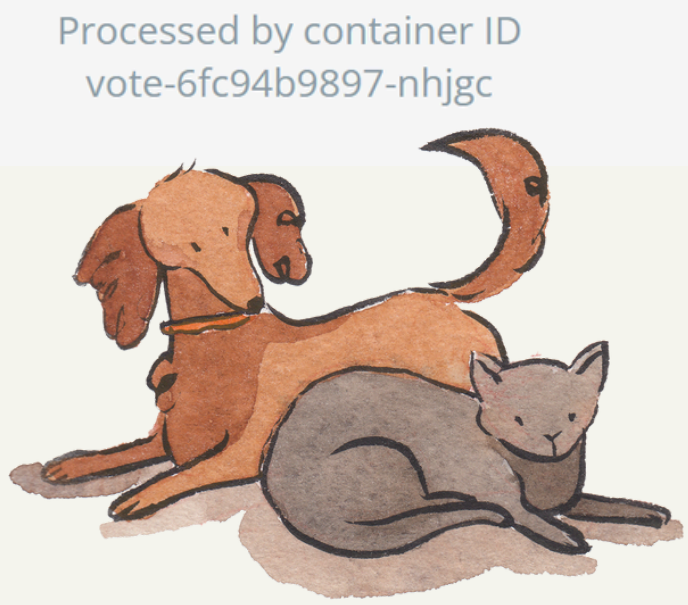
Step 05

Access the VotingApplications

Voting App: This is where users can cast their votes for Cats or Dogs.





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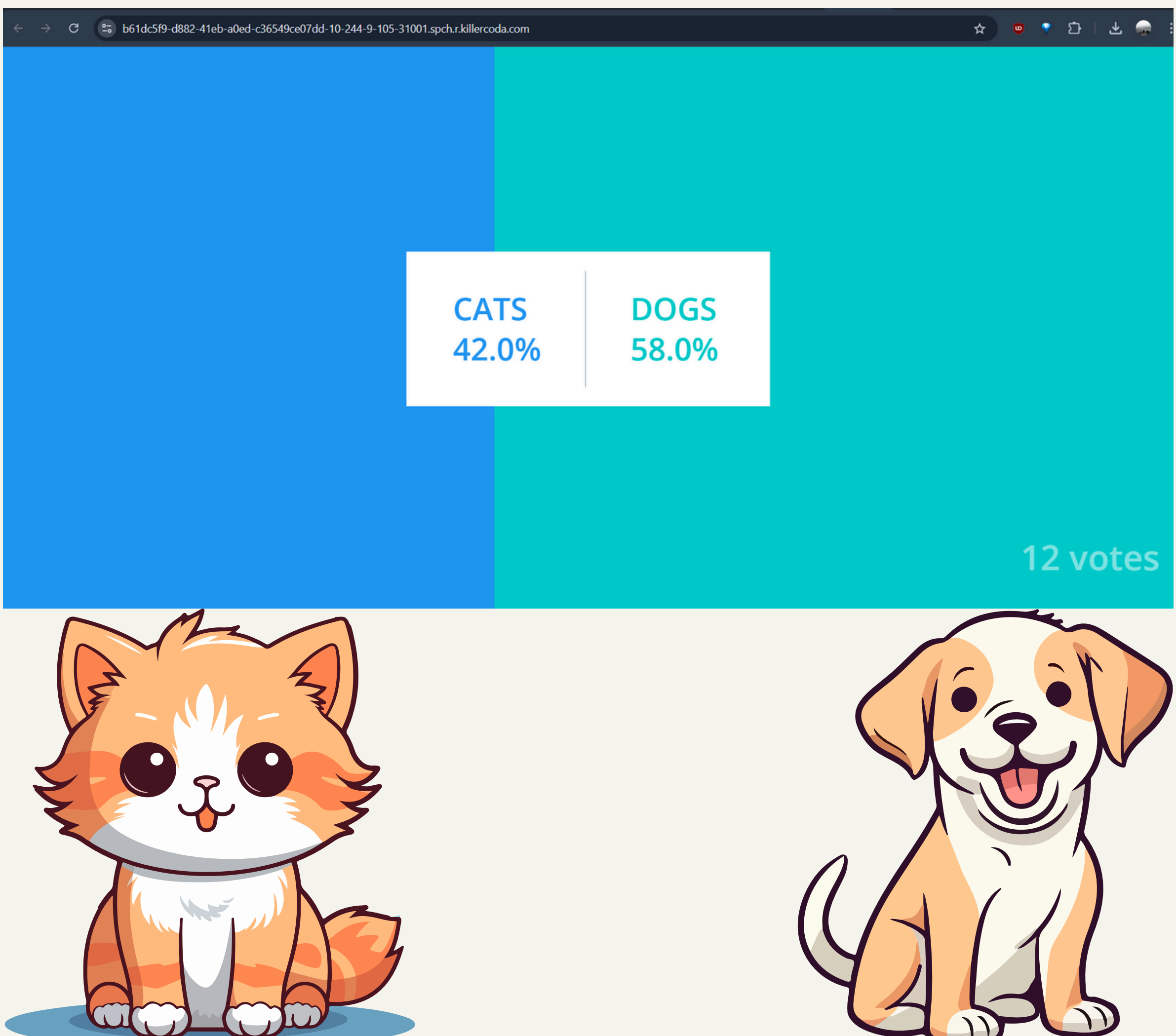
Step 06

Result App:

This displays the real-time voting results.



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Step 07

Share QR Codes for Voting

Generate QR codes for Voting App to share with friends.

Note: If the services are not running, the QR codes will not work.

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Thank You