

Lab 3

```
akshatsrivastava@Akshats-Air kubernetes-demo % minikube stop
minikube delete
minikube start

🔥 Stopping node "minikube" ...
🔥 Powering off "minikube" via SSH ...
🔥 1 node stopped.
🔥 Deleting "minikube" in docker ...
🔥 Deleting container "minikube" ...
🔥 Removing /Users/akshatsrivastava/.minikube/machines/minikube ...
🔥 Removed all traces of the "minikube" cluster.
🔥 minikube v1.33.1 on Darwin 14.5 (arm64)
🔥 Automatically selected the docker driver
🔥 Using Docker Desktop driver with root privileges
🔥 Starting "minikube" primary control-plane node in "minikube" cluster
🔥 Pulling base image v0.0.44 ...
🔥 Creating docker container (CPUs=2, Memory=2200MB) ...
🔥 Preparing Kubernetes v1.30.0 on Docker 26.1.1 ...
  ▪ Generating certificates and keys ...
  ▪ Booting up control plane ...
  ▪ Configuring RBAC rules ...
🔥 Configuring bridge CNI (Container Networking Interface) ...
🔥 Verifying Kubernetes components...
  ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🔥 Enabled addons: storage-provisioner, default-storageclass
🔥 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
akshatsrivastava@Akshats-Air kubernetes-demo % minikube status

minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f secrets/mongodb-secret.yml
error: the path "secrets/mongodb-secret.yml" does not exist
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes-demo/kubernetes/secrets/mongodb-secret.yml
secret/mongodb-secret created
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes-demo/kubernetes/stateful-sets/mongodb-stateful-set.yml
statefulset.apps/mongodb-stateful-set created
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes-demo/kubernetes/services/mongodb-service.yml
service/mongodb-service created

akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes-demo/kubernetes/deployments/note-server-depl.yml
deployment.apps/note-server-deployment created
akshatsrivastava@Akshats-Air kubernetes-demo % minikube dashboard
  🔥 Enabling dashboard ...
    ▪ Using image docker.io/kubernetes/dashboard:v2.7.0
    ▪ Using image docker.io/kubernetes/metrics-scraper:v1.0.8
  ⚠ Some dashboard features require the metrics-server addon. To enable all features please run:

      minikube addons enable metrics-server

  🚧 Verifying dashboard health ...
  🚧 Launching proxy ...
  🚧 Verifying proxy health ...
  🚧 Opening http://127.0.0.1:51619/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default browser
  ...
  📄
```

```
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes-demo/kubernetes/services/note-server-service.yml
service/note-server-service created
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes-demo/kubernetes/deployments/note-depl.yml
deployment.apps/note-deployment created
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes-demo/kubernetes/services/note-service.yml
service/note-service created
akshatsrivastava@Akshats-Air kubernetes-demo % minikube service note-service

|-----|
| NAMESPACE | NAME       | TARGET PORT | URL                               |
|-----|
| default   | note-service | 3000        | http://192.168.49.2:31720       |
|-----|
  🔥 Starting tunnel for service note-service.

|-----|
| NAMESPACE | NAME       | TARGET PORT | URL                               |
|-----|
| default   | note-service |             | http://127.0.0.1:51755         |
|-----|
  🚧 Opening service default/note-service in default browser...
  ! Because you are using a Docker driver on darwin, the terminal needs to be open to run it.
  📄
```

```
● akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes-demo/kubernetes/de
ployments/mongo-express-depl.yml
deployment.apps/mongo-express-deployment created
● akshatsrivastava@Akshats-Air kubernetes-demo % kubectl apply -f /Users/akshatsrivastava/Blockchain/Docker/Lab3/kubernetes/se
rvices/mongo-express-service.yml
service/mongo-express-service created
○ akshatsrivastava@Akshats-Air kubernetes-demo % minikube service mongo-express-service

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NAMESPACE	NAME	TARGET PORT	URL
default	mongo-express-service	8081	http://192.168.49.2:30873

```

Starting tunnel for service mongo-express-service.

```

NAMESPACE	NAME	TARGET PORT	URL
default	mongo-express-service		http://127.0.0.1:51799

```

Opening service default/mongo-express-service in default browser...
! Because you are using a Docker driver on darwin, the terminal needs to be open to run it.

```

```
● akshatsrivastava@Akshats-Air kubernetes-demo % echo -n "cm9vdA==" | base64 --decode
root
● akshatsrivastava@Akshats-Air kubernetes-demo % kubectl get svc mongodb-service

```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
mongodb-service	ClusterIP	10.98.47.179	<none>	27017/TCP	19m

```

○ akshatsrivastava@Akshats-Air kubernetes-demo % kubectl port-forward service/mongodb-service 27017:27017
Forwarding from 127.0.0.1:27017 -> 27017
Forwarding from [::1]:27017 -> 27017
Handling connection for 27017
Handling connection for 27017

```

127.0.0.1:51755/assignments

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note.

AssignmentsAdd AssignmentNotesAdd Note

Search Assignments

Name:

Search

LAB_3

```
_id: ObjectId('665bd325b0672e3a8a99ca18')
name: "LAB_3"
deadline: 2024-06-02T00:00:00.000+00:00
subject: "Scalable Blockchain"
priority: true
createdAt: 2024-06-02T02:04:21.120+00:00
assignImg: "..."
__v: 0
```

127.0.0.1:51755/assignments/view

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note.

AssignmentsAdd AssignmentNotesAdd Note

LAB_3

LAB 3

Deadline: 2024-06-02

Subject: Scalable Blockchain

Important

EditDelete

```
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
mongo-express-deployment-77bd456f64-nzvfp    1/1     Running   0           29m
mongodb-stateful-set-0                      1/1     Running   0           32m
mongodb-stateful-set-1                      1/1     Running   0           32m
note-deployment-677bf6c757-69jgl            1/1     Running   0           29m
note-deployment-677bf6c757-8jfch            1/1     Running   0           29m
note-server-deployment-c5d4dd7b8-2mnhr       1/1     Running   0           32m
note-server-deployment-c5d4dd7b8-tbph4       1/1     Running   0           32m
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl delete pod note-deployment-677bf6c757-69jgl
pod "note-deployment-677bf6c757-69jgl" deleted
akshatsrivastava@Akshats-Air kubernetes-demo % kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
mongo-express-deployment-77bd456f64-nzvfp    1/1     Running   0           30m
mongodb-stateful-set-0                      1/1     Running   0           33m
mongodb-stateful-set-1                      1/1     Running   0           33m
note-deployment-677bf6c757-8jfch            1/1     Running   0           31m
note-deployment-677bf6c757-bq8bt            1/1     Running   0           7s
note-server-deployment-c5d4dd7b8-2mnhr       1/1     Running   0           33m
note-server-deployment-c5d4dd7b8-tbph4       1/1     Running   0           33m
akshatsrivastava@Akshats-Air kubernetes-demo %
```