Anishkumar Pankajkumar Patel

BCDV 4032

Building Scalable Blockchain Apps

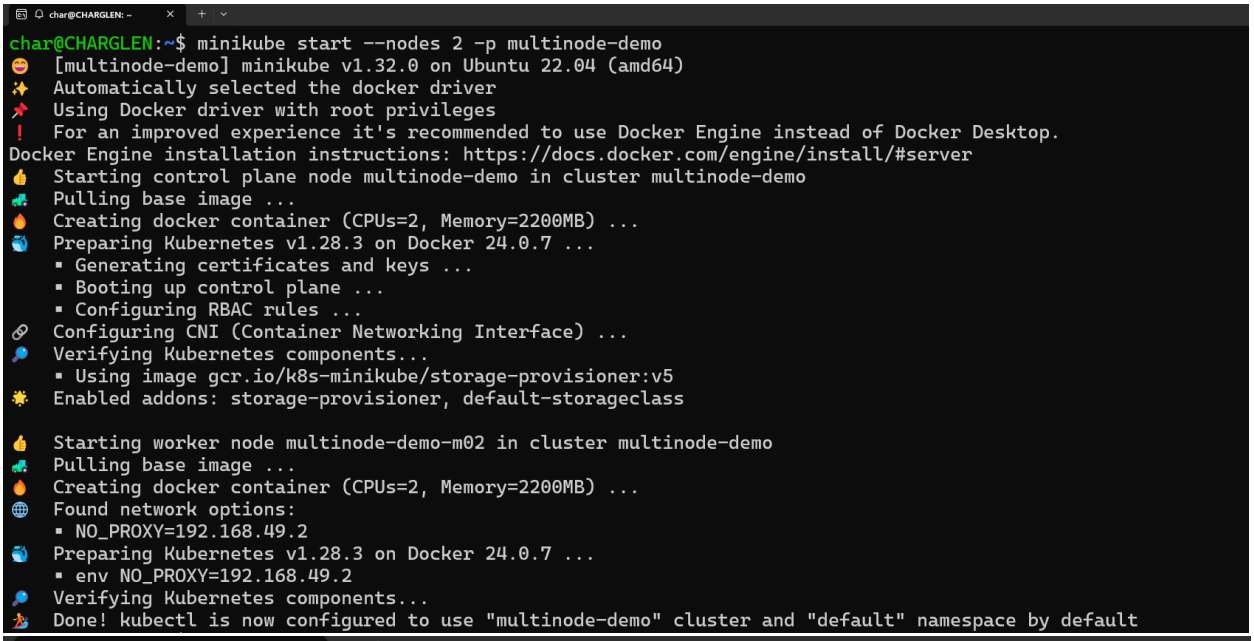
Lab 03

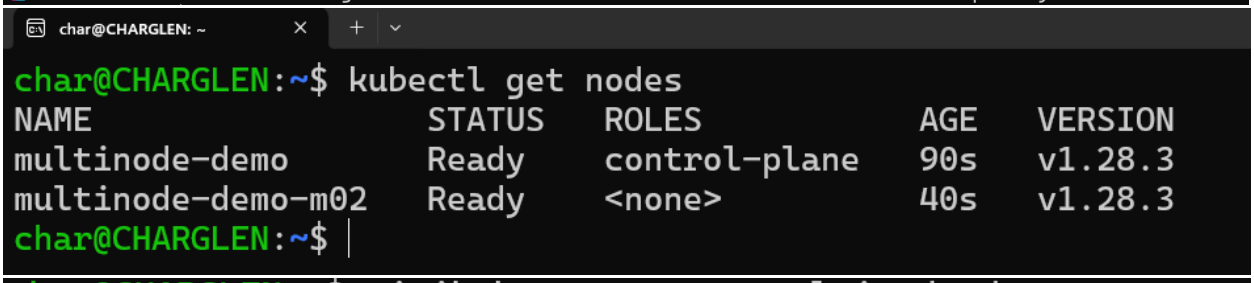
19th Jan 2024

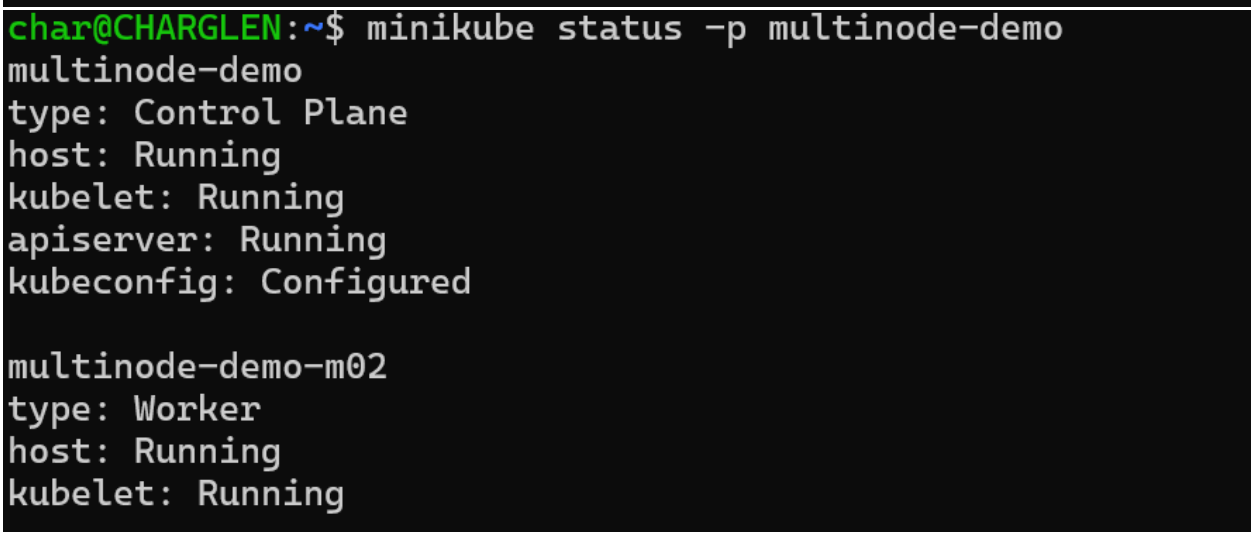
Keerthi Nelaturu

Lab 3

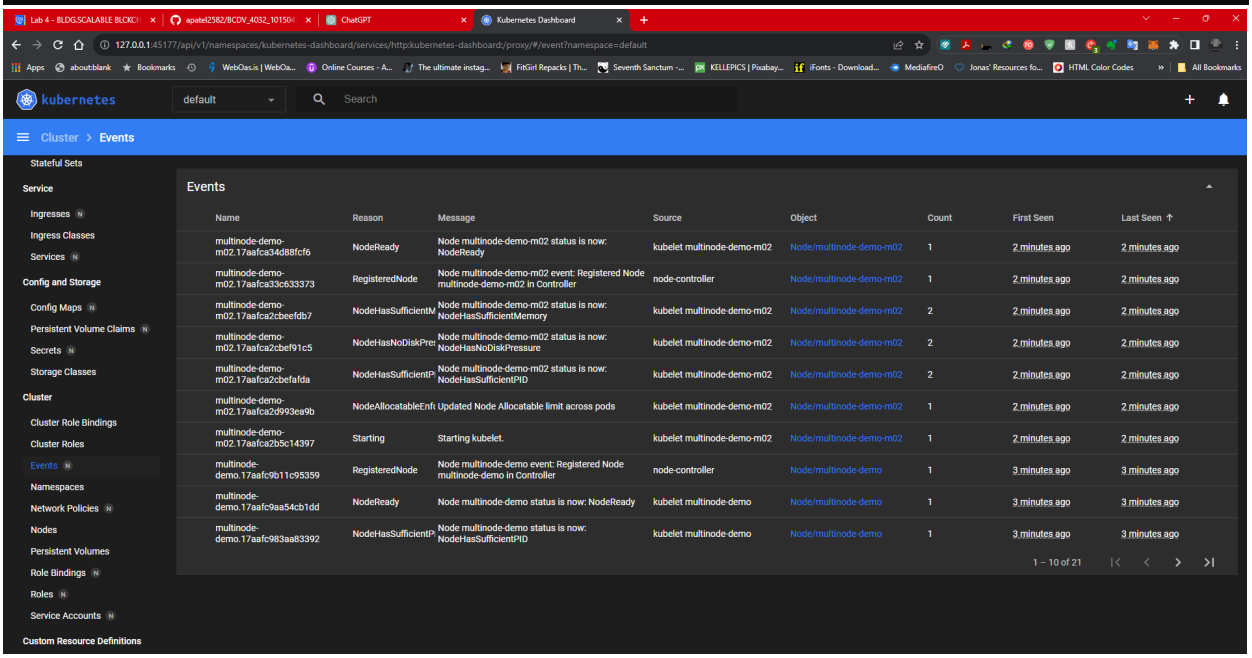
Section 1 – Multi-Node Cluster Commands

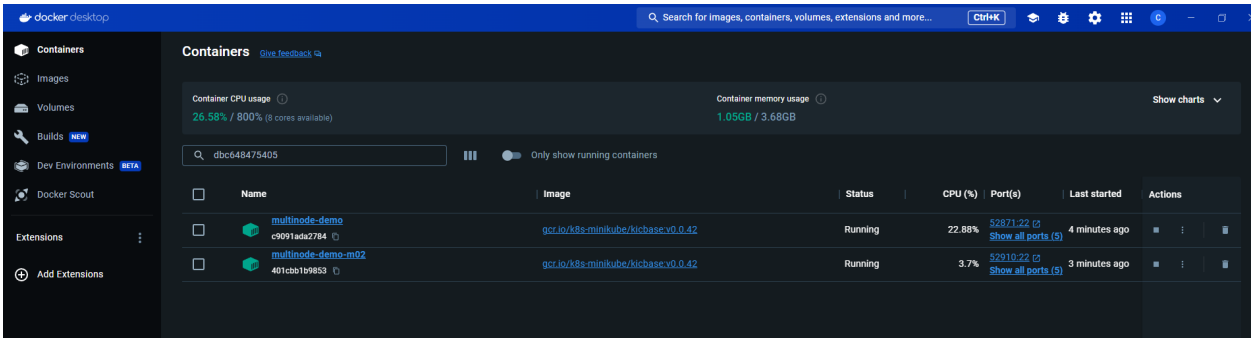






```
char@CHARGLEN:~$ minikube dashboard -p multinode-demo
🔌  Enabling dashboard ...
    ▪ Using image docker.io/kubernetesui/metrics-scraper:v1.0.8
    ▪ Using image docker.io/kubernetesui/dashboard:v2.7.0
💡  Some dashboard features require the metrics-server addon. To enable all features please run:

        minikube -p multinode-demo addons enable metrics-server


🤔  Verifying dashboard health ...
🚀  Launching proxy ...
🤔  Verifying proxy health ...
🎉  Opening http://127.0.0.1:45177/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default browser...
👉  http://127.0.0.1:45177/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/
```



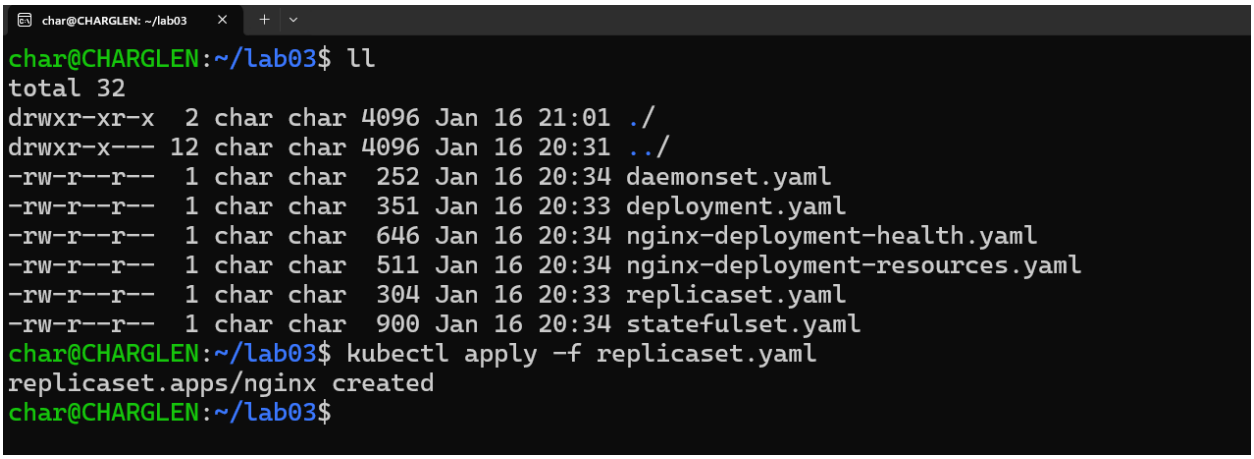


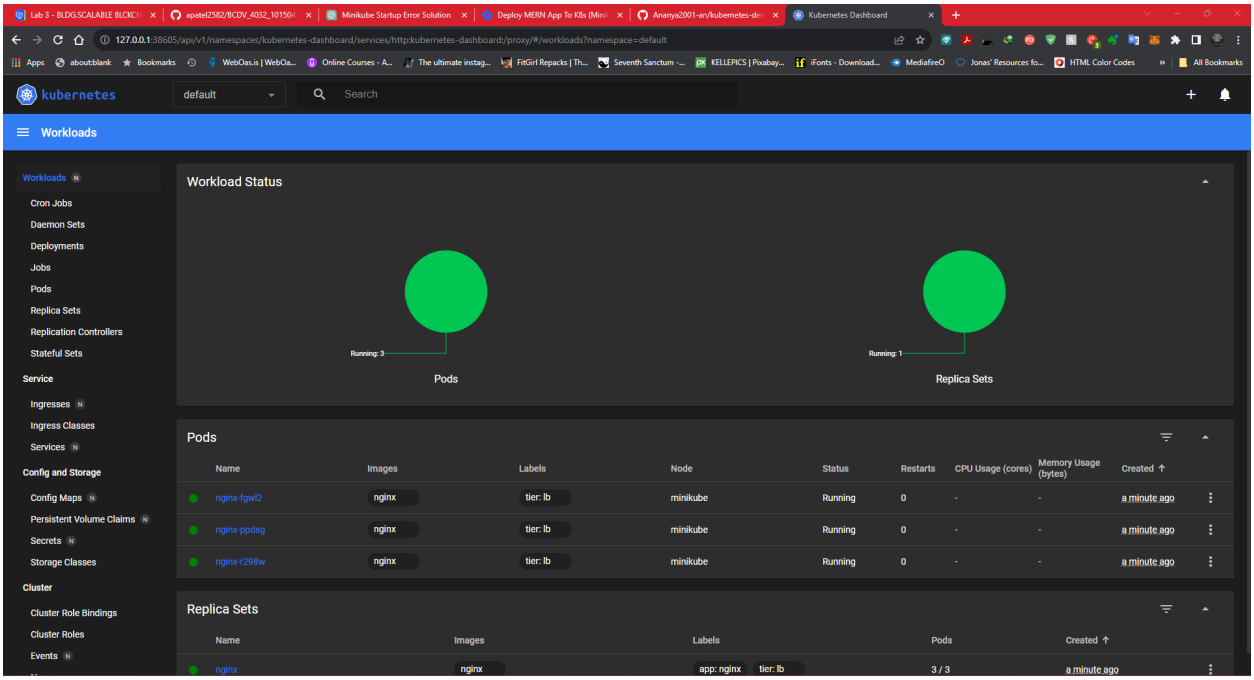
```
char@CHARGLEN:~$ minikube stop -p multinode-demo
✋  Stopping node "multinode-demo"  ...
🛑  Powering off "multinode-demo" via SSH ...
✋  Stopping node "multinode-demo-m02"  ...
🛑  Powering off "multinode-demo-m02" via SSH ...
🛑  2 nodes stopped.
char@CHARGLEN:~$ kubectl get nodes
E0116 20:04:29.900299    8550 memcache.go:265] couldn't get current server API group list: Get "http://localhost:8080/api?tim
eout=32s": dial tcp 127.0.0.1:8080: connect: connection refused
E0116 20:04:29.901636    8550 memcache.go:265] couldn't get current server API group list: Get "http://localhost:8080/api?tim
eout=32s": dial tcp 127.0.0.1:8080: connect: connection refused
E0116 20:04:29.903475    8550 memcache.go:265] couldn't get current server API group list: Get "http://localhost:8080/api?tim
eout=32s": dial tcp 127.0.0.1:8080: connect: connection refused
E0116 20:04:29.903943    8550 memcache.go:265] couldn't get current server API group list: Get "http://localhost:8080/api?tim
eout=32s": dial tcp 127.0.0.1:8080: connect: connection refused
E0116 20:04:29.905502    8550 memcache.go:265] couldn't get current server API group list: Get "http://localhost:8080/api?tim
eout=32s": dial tcp 127.0.0.1:8080: connect: connection refused
The connection to the server localhost:8080 was refused - did you specify the right host or port?
char@CHARGLEN:~$ minikube status -p multinode-demo
multinode-demo
type: Control Plane
host: Stopped
kubelet: Stopped
apiserver: Stopped
kubeconfig: Stopped

multinode-demo-m02
type: Worker
host: Stopped
kubelet: Stopped
```

```
char@CHARGLEN:~$ minikube delete --all
🔥  Deleting "multinode-demo" in docker ...
🔥  Removing /home/char/.minikube/machines/multinode-demo ...
🔥  Removing /home/char/.minikube/machines/multinode-demo-m02 ...
💀  Removed all traces of the "multinode-demo" cluster.
🔥  Successfully deleted all profiles
char@CHARGLEN:~$ minikube status -p multinode-demo
🤷  Profile "multinode-demo" not found. Run "minikube profile list" to view all profiles.
👉  To start a cluster, run: "minikube start -p multinode-demo"
char@CHARGLEN:~$
```

```
char@CHARGLEN:~/lab03$ minikube start
😄  minikube v1.32.0 on Ubuntu 22.04 (amd64)
✨  Automatically selected the docker driver
📌  Using Docker driver with root privileges
❗  For an improved experience it's recommended to use Docker Engine instead of Docker Desktop.
Docker Engine installation instructions: https://docs.docker.com/engine/install/#server
👍  Starting control plane node minikube in cluster minikube
🚜  Pulling base image ...
🔥  Creating docker container (CPUs=2, Memory=2200MB) ...
🐳  Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
    ▪ 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: default-storageclass, storage-provisioner
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
char@CHARGLEN:~/lab03$ kubectl get pods
No resources found in default namespace.
char@CHARGLEN:~/lab03$ kubectl get nodes
NAME       STATUS   ROLES           AGE   VERSION
minikube   Ready    control-plane   42s   v1.28.3
char@CHARGLEN:~/lab03$ screen
[detached from 16705.pts-5.CHARGLEN]
char@CHARGLEN:~/lab03$ screen -ls
There is a screen on:
        16705.pts-5.CHARGLEN    (01/16/24 21:10:29)     (Detached)
1 Socket in /run/screen/S-char.
char@CHARGLEN:~/lab03$
```

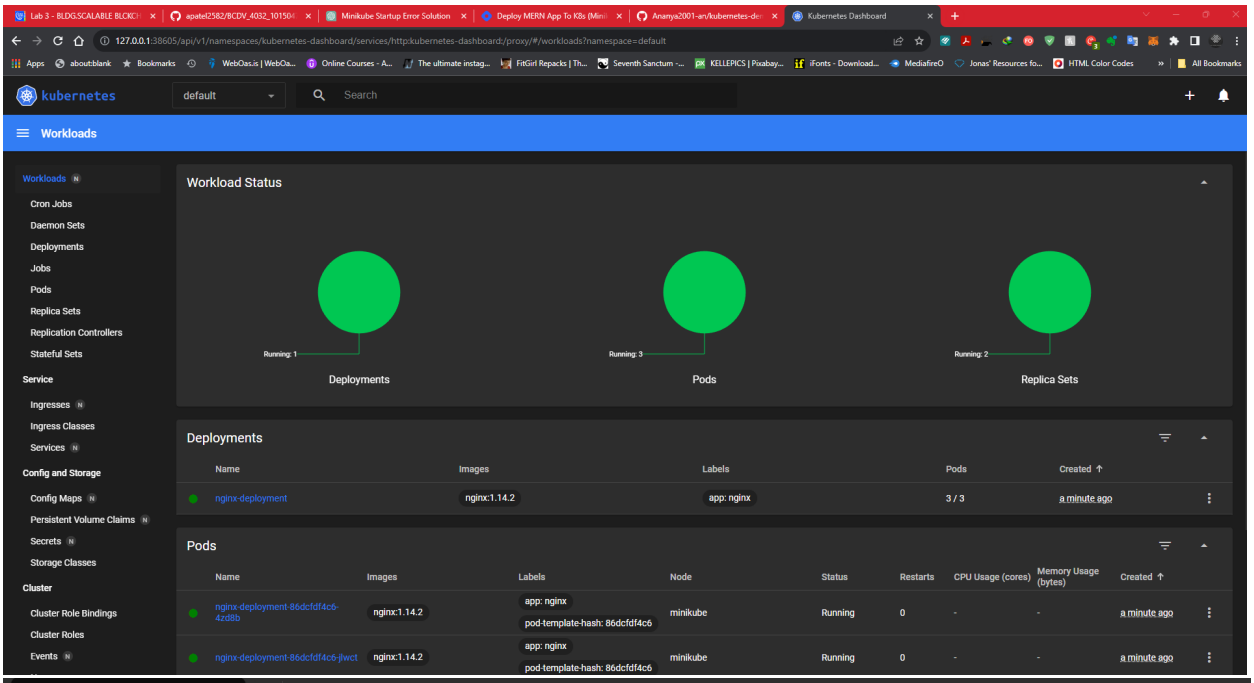
Section 2 – Deployment YAML commands of Different Sets



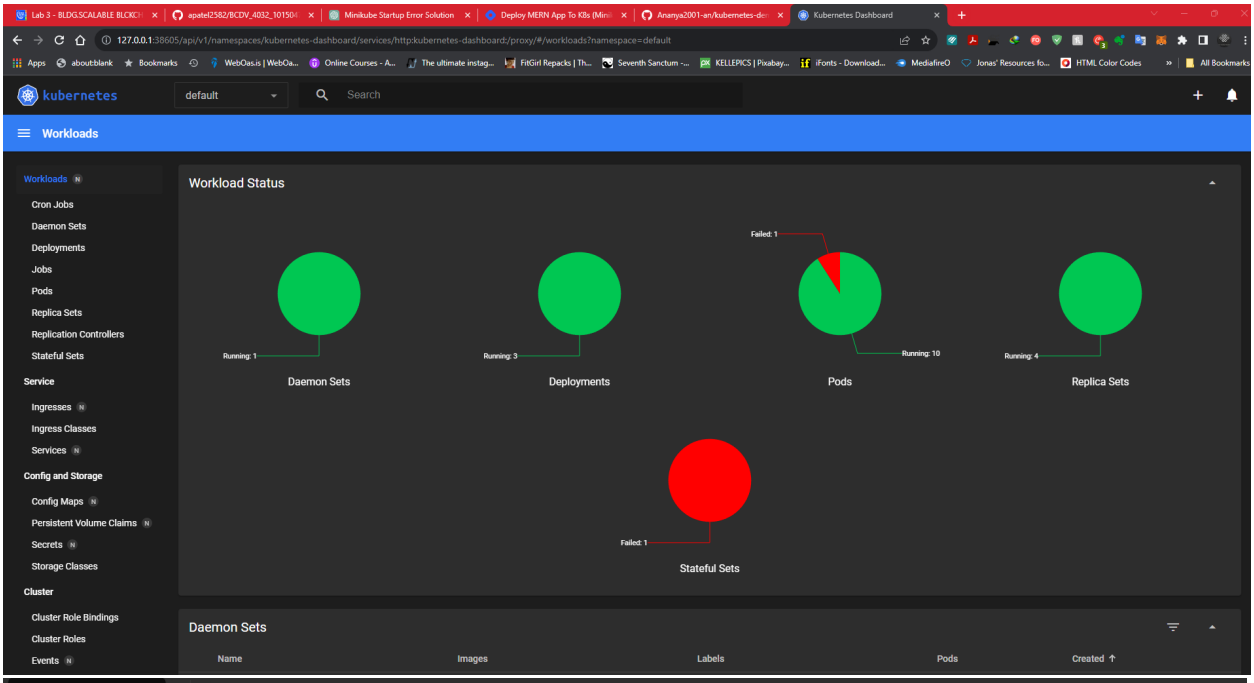


```
char@CHARGLEN: ~/lab03
total 32
drwxr-xr-x  2 char char 4096 Jan 16 21:01 ./
drwxr-x--- 12 char char 4096 Jan 16 20:31 ../
-rw-r--r--  1 char char  252 Jan 16 20:34 daemonset.yaml
-rw-r--r--  1 char char  351 Jan 16 20:33 deployment.yaml
-rw-r--r--  1 char char  646 Jan 16 20:34 nginx-deployment-health.yaml
-rw-r--r--  1 char char  511 Jan 16 20:34 nginx-deployment-resources.yaml
-rw-r--r--  1 char char  304 Jan 16 20:33 replicaset.yaml
-rw-r--r--  1 char char  900 Jan 16 20:34 statefulset.yaml
char@CHARGLEN:~/lab03$ kubectl apply -f replicaset.yaml
replicaset.apps/nginx created
char@CHARGLEN:~/lab03$ kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx-fgwl2   1/1     Running   0          2m24s
nginx-ppdsg   1/1     Running   0          2m24s
nginx-r298w   1/1     Running   0          2m24s
char@CHARGLEN:~/lab03$ kubectl get replicasets
NAME    DESIRED   CURRENT   READY   AGE
nginx   3         3         3       2m30s
char@CHARGLEN:~/lab03$ kubectl delete pod nginx-fgwl2
pod "nginx-fgwl2" deleted
char@CHARGLEN:~/lab03$ kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx-kdhhq   1/1     Running   0          15s
nginx-ppdsg   1/1     Running   0          3m10s
nginx-r298w   1/1     Running   0          3m10s
char@CHARGLEN:~/lab03$ kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx-kdhhq   1/1     Running   0          18s
nginx-ppdsg   1/1     Running   0          3m13s
nginx-r298w   1/1     Running   0          3m13s
char@CHARGLEN:~/lab03$
```

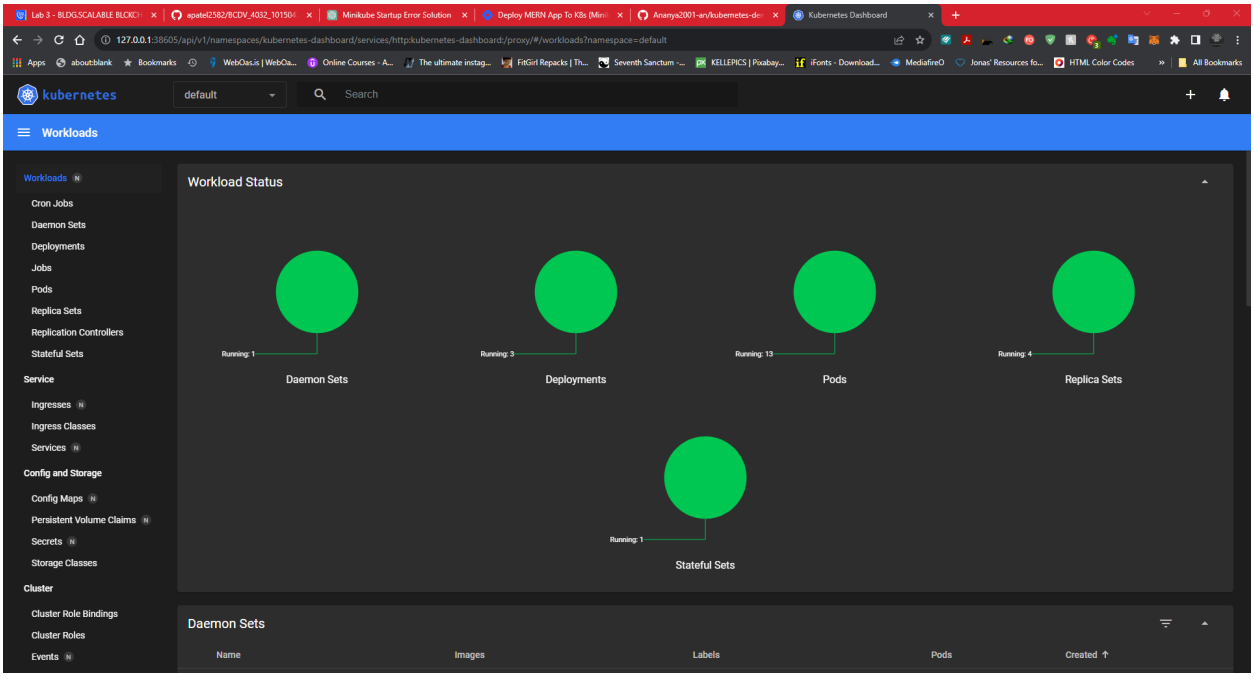
```
char@CHARGLEN: ~/lab03
char@CHARGLEN:~/lab03$ kubectl apply -f deployment.yaml
deployment.apps/nginx-deployment created
char@CHARGLEN:~/lab03$ kubectl get deployments
NAME               READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment   3/3     3            3           29s
char@CHARGLEN:~/lab03$ kubectl rollout status deployment/nginx-deployment
deployment "nginx-deployment" successfully rolled out
char@CHARGLEN:~/lab03$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
nginx-deployment-86dcfdf4c6-4zd8b   1/1     Running   0          107s
nginx-deployment-86dcfdf4c6-jlwct   1/1     Running   0          109s
nginx-deployment-86dcfdf4c6-ndddx   1/1     Running   0          2m3s
char@CHARGLEN:~/lab03$ kubectl get deployments
NAME               READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment   3/3     3            3           2m10s
char@CHARGLEN:~/lab03$
```

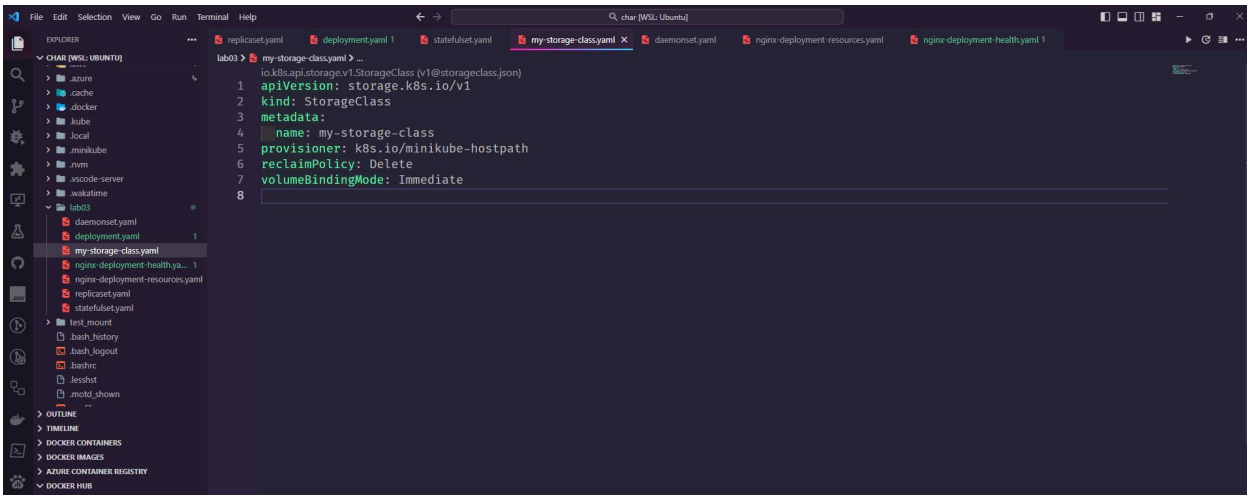



```
char@CHARGLEN: ~/lab03
char@CHARGLEN:~/lab03$ kubectl apply -f statefulset.yaml
service/nginx unchanged
statefulset.apps/web created
char@CHARGLEN:~/lab03$ kubectl get statefulsets
NAME   READY   AGE
web    0/3     19s
char@CHARGLEN:~/lab03$ kubectl apply -f daemonset.yaml
daemonset.apps/nginx created
char@CHARGLEN:~/lab03$ kubectl get daemonsets
NAME    DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR   AGE
nginx   1         1         0       1            0           <none>          4s
char@CHARGLEN:~/lab03$ kubectl apply -f nginx-deployment-resources.yaml
deployment.apps/nginx-deployment-resources created
char@CHARGLEN:~/lab03$ kubectl get deployments
NAME                          READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment              3/3     3            3           9m20s
nginx-deployment-resources    3/3     3            3           5s
char@CHARGLEN:~/lab03$ kubectl apply -f nginx-deployment-health.yaml
deployment.apps/nginx-deployment-health created
char@CHARGLEN:~/lab03$ kubectl get deployments
NAME                          READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment              3/3     3            3           9m38s
nginx-deployment-health       0/3     3            0           5s
nginx-deployment-resources    3/3     3            3           23s
char@CHARGLEN:~/lab03$ kubectl get deployments
NAME                          READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment              3/3     3            3           9m50s
nginx-deployment-health       3/3     3            3           17s
nginx-deployment-resources    3/3     3            3           35s
char@CHARGLEN:~/lab03$
```

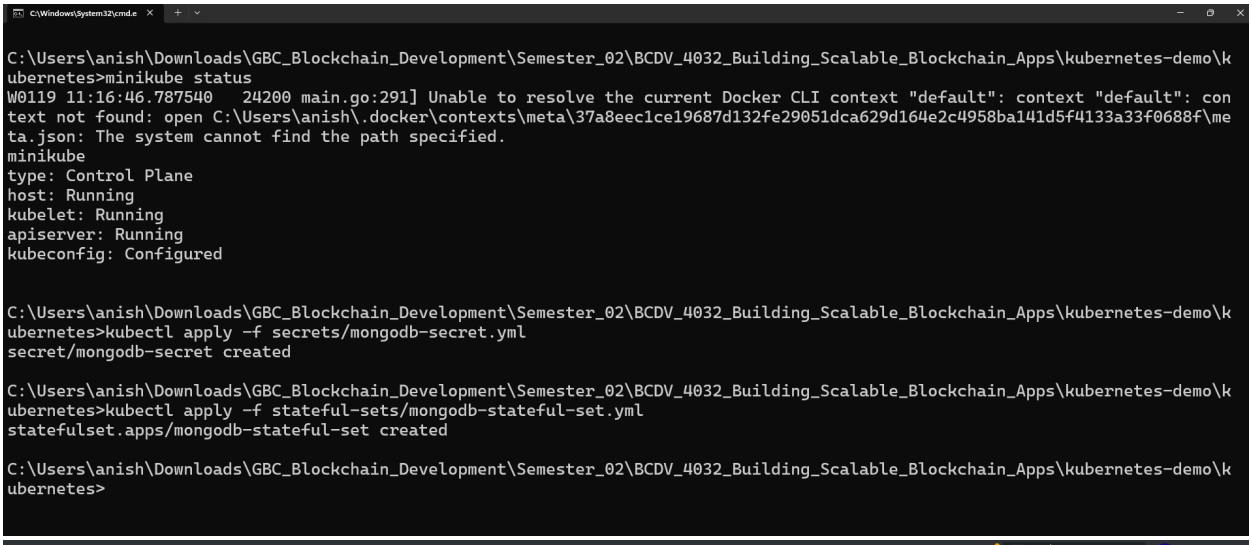


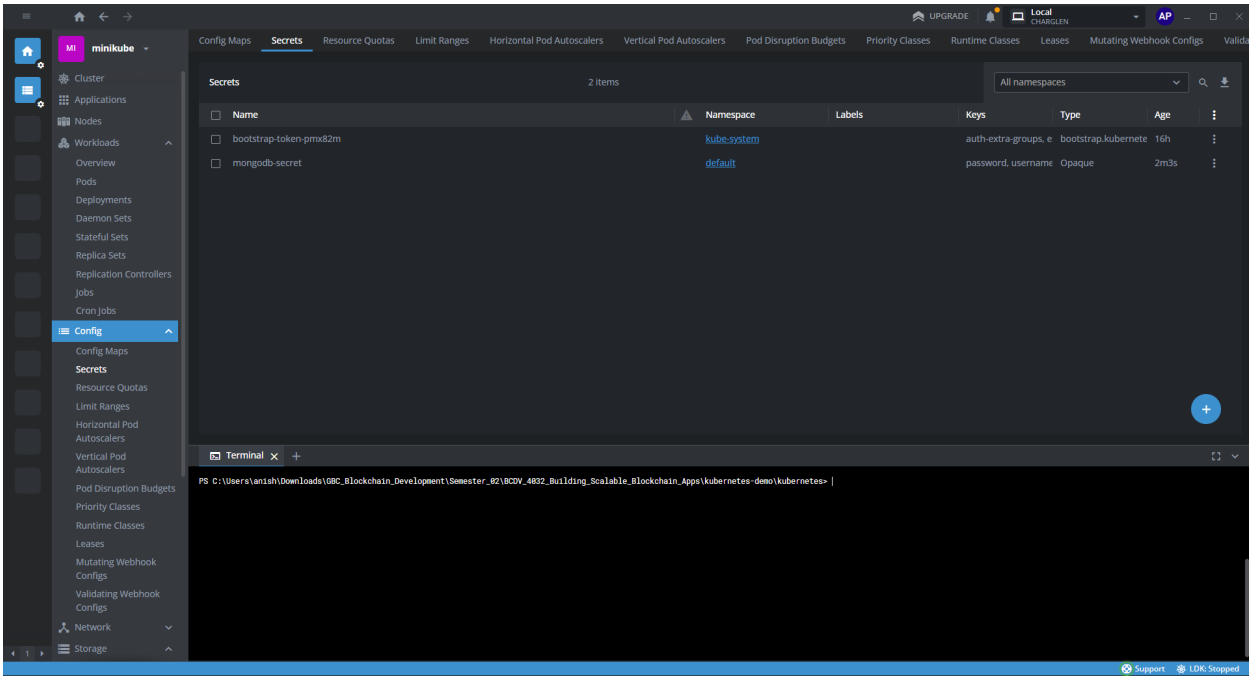

```
char@CHARGLEN:~/lab03$ kubectl apply -f statefulset.yaml
service/nginx unchanged
The StatefulSet "web" is invalid: spec: Forbidden: updates to statefulset spec for fields other than 'replicas', 'ordinals',
'template', 'updateStrategy', 'persistentVolumeClaimRetentionPolicy' and 'minReadySeconds' are forbidden
char@CHARGLEN:~/lab03$ kubectl apply -f my-storage-class.yaml
storageclass.storage.k8s.io/my-storage-class created
char@CHARGLEN:~/lab03$ kubectl apply -f statefulset.yaml
service/nginx unchanged
statefulset.apps/web configured
char@CHARGLEN:~/lab03$ kubectl get pvc
NAME        STATUS   VOLUME                                     CAPACITY   ACCESS MODES   STORAGECLASS       AGE
www-web-0   Bound    pvc-cdd54281-8103-4f72-9d4c-b36266953079   1Gi        RWO            my-storage-class   16m
char@CHARGLEN:~/lab03$ kubectl get statefulsets
NAME   READY   AGE
web    3/3     12m
char@CHARGLEN:~/lab03$
```

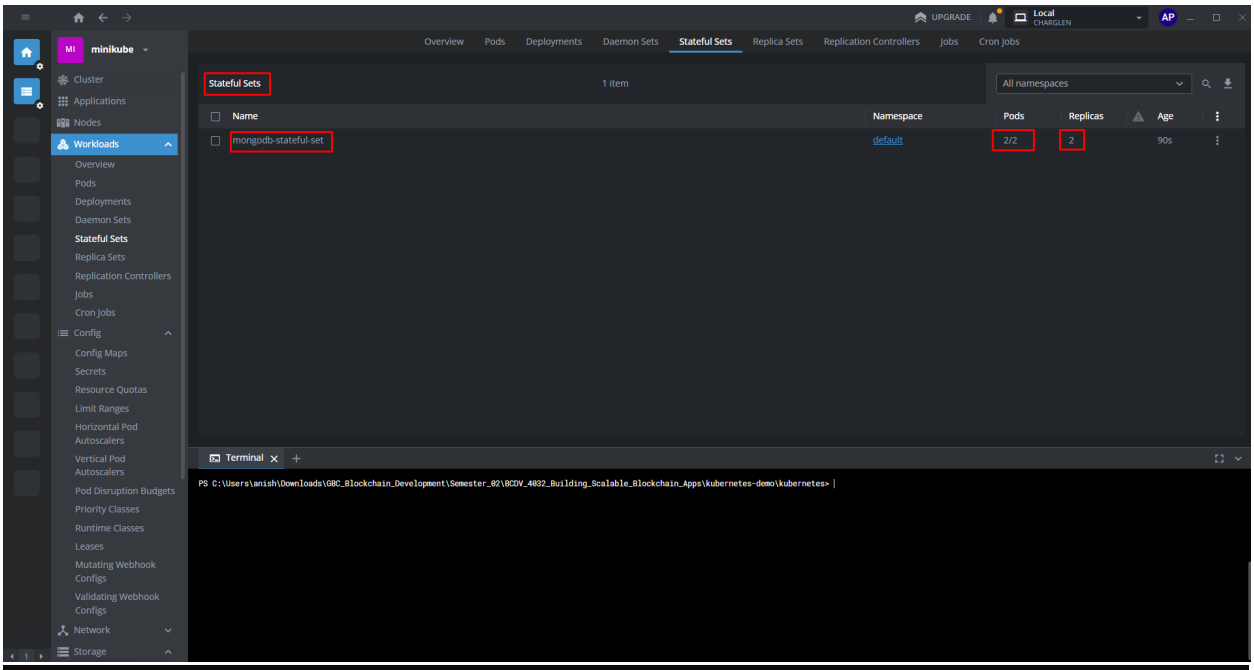



File Edit Selection View Go Run Terminal Help
char [WSL: Ubuntu]
EXPLORER
CHAR [WSL: UBUNTU]
.azure
.cache
.docker
.kube
.local
.minikube
.nvm
.vscode-server
.wakatime
lab03
daemonset.yaml
deployment.yaml 1
my-storage-class.yaml
nginx-deployment-health.ya... 1
nginx-deployment-resources.yaml
replicaset.yaml
statefulset.yaml
test_mount
.bash_history
.bash_logout
.bashrc
.lesshst
.motd_shown
OUTLINE
TIMELINE
DOCKER CONTAINERS
DOCKER IMAGES
AZURE CONTAINER REGISTRY
DOCKER HUB
replicaset.yaml
deployment.yaml 1
statefulset.yaml
my-storage-class.yaml
daemonset.yaml
nginx-deployment-resources.yaml
nginx-deployment-health.yaml 1
lab03 > my-storage-class.yaml > ...
io.k8s.api.storage.v1.StorageClass (v1@storageclass.json)
1 apiVersion: storage.k8s.io/v1
2 kind: StorageClass
3 metadata:
4 name: my-storage-class
5 provisioner: k8s.io/minikube-hostpath
6 reclaimPolicy: Delete
7 volumeBindingMode: Immediate
8

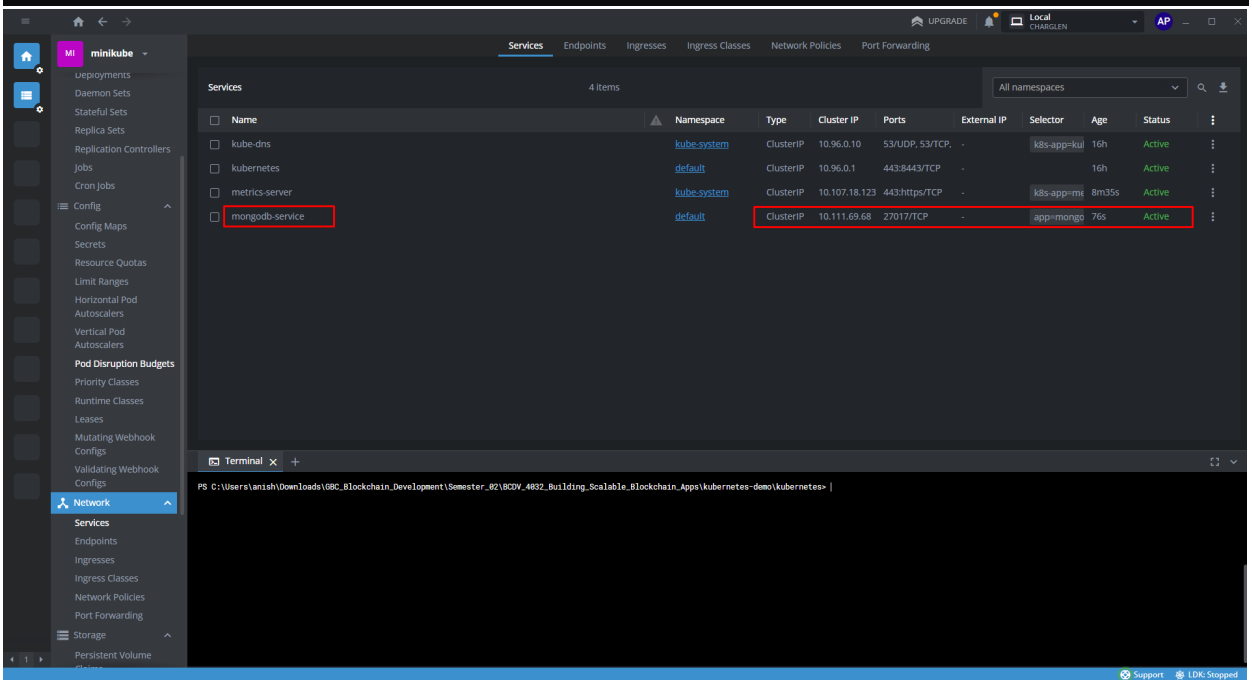
Section 3 – Full-Stack Application Deployment

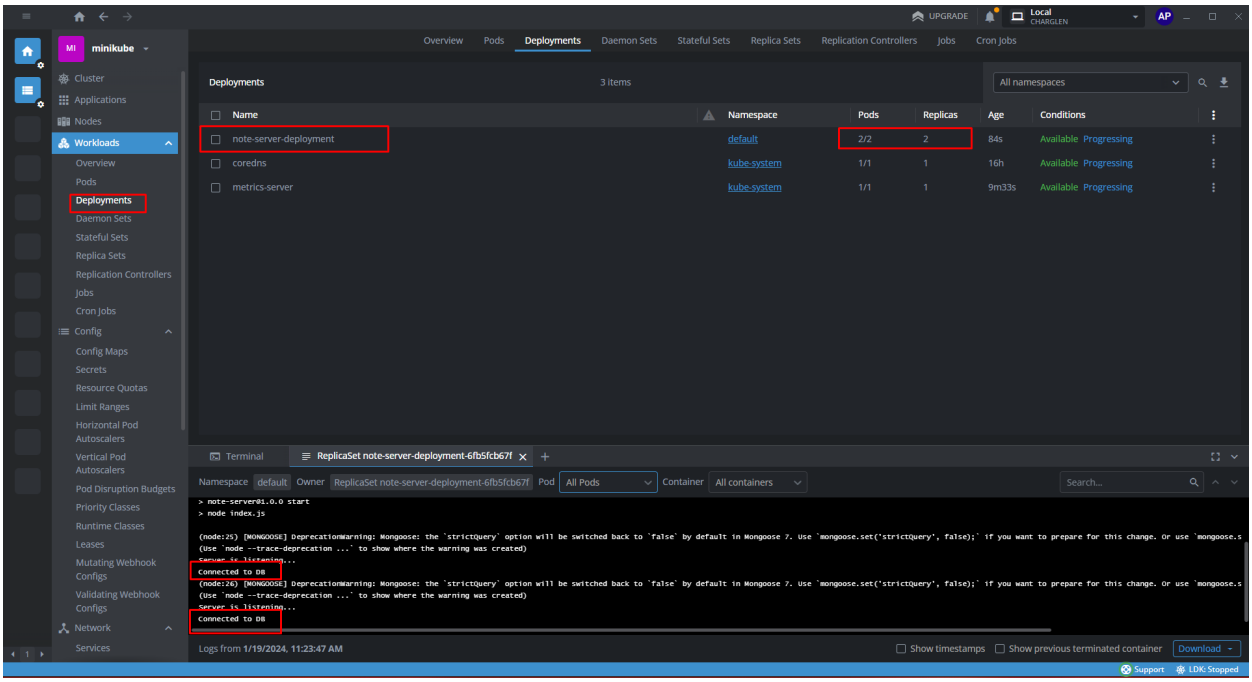




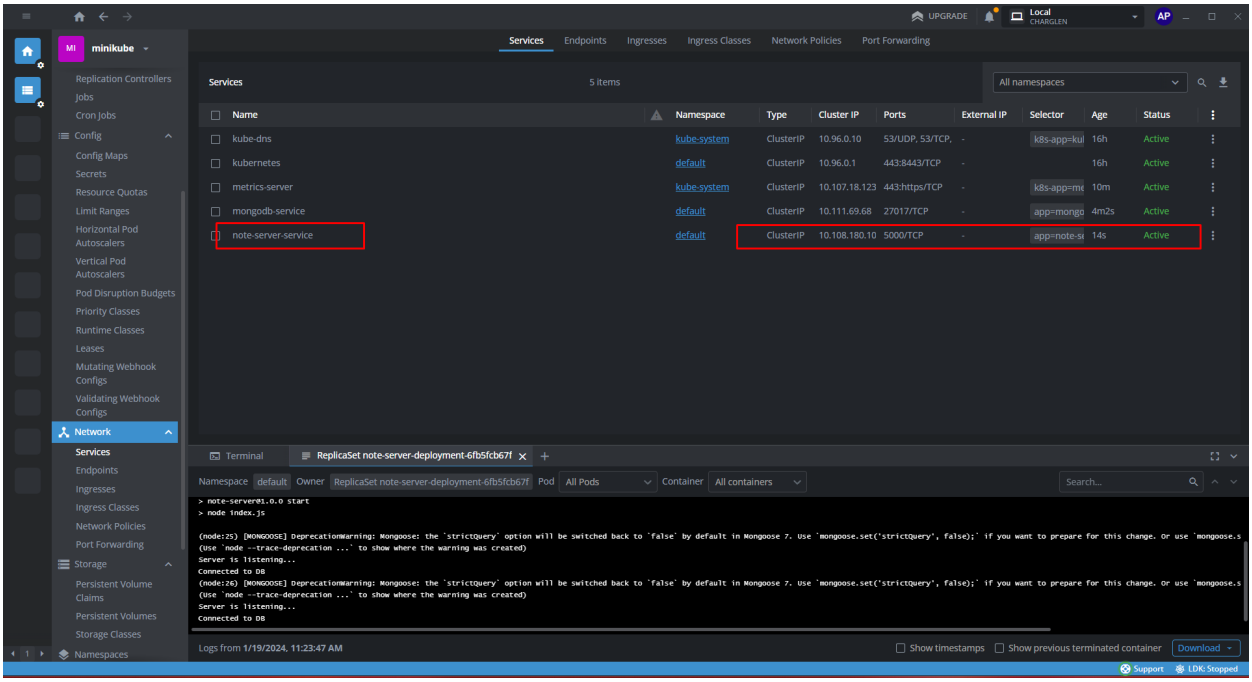


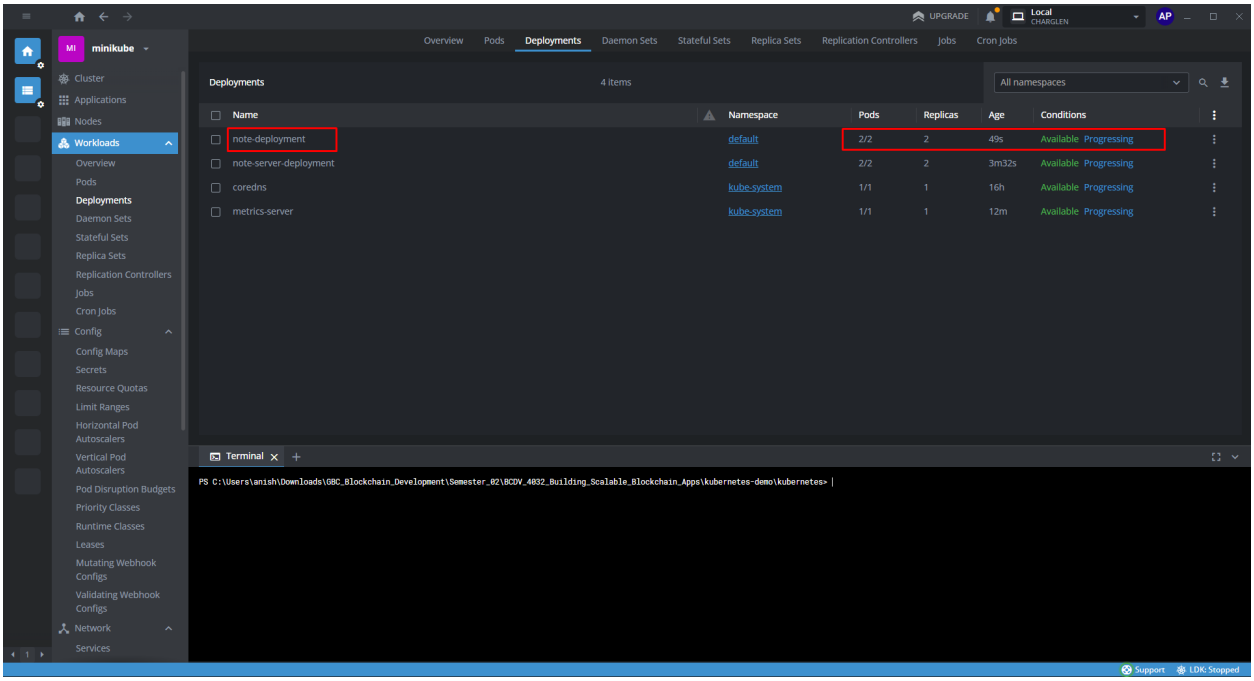

```
C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>kubectl apply -f services/mongodb-service.yml
service/mongodb-service created

C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>kubectl apply -f deployments/note-server-depl.yml
deployment.apps/note-server-deployment created

C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>
```



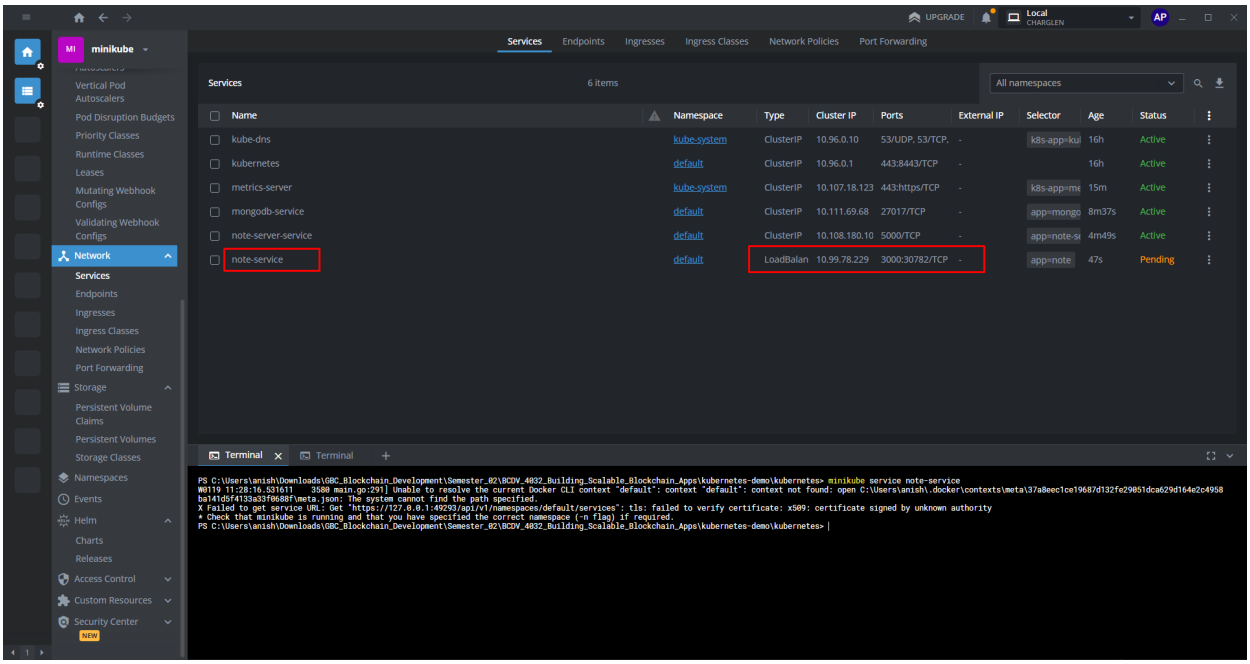


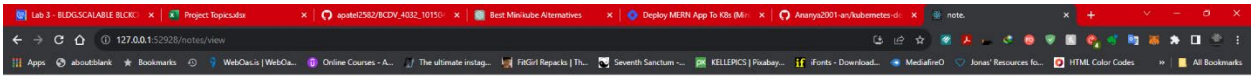

```
C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>kubectl apply -f services/note-server-service.yml
service/note-server-service created

C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>kubectl apply -f deployments/note-depl.yml
deployment.apps/note-deployment created

C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>kubectl apply -f services/note-service.yml
service/note-service created
```






```
C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\k
ubernetes>kubectl apply -f services/note-service.yml
service/note-service created

C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\k
ubernetes>minikube service note-service
W0119 11:29:11.331987    4424 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": con
text not found: open C:\Users\anish\.docker\contexts\meta\37a8eec1ce19687d132fe29051dca629d164e2c4958ba141d5f4133a33f0688f\me
ta.json: The system cannot find the path specified.
|-----------|--------------|-------------|---------------------------|
| NAMESPACE |     NAME     | TARGET PORT |            URL            |
|-----------|--------------|-------------|---------------------------|
| default   | note-service |        3000 | http://192.168.49.2:30782 |
|-----------|--------------|-------------|---------------------------|
* Starting tunnel for service note-service.
|-----------|--------------|-------------|------------------------|
| NAMESPACE |     NAME     | TARGET PORT |          URL           |
|-----------|--------------|-------------|------------------------|
| default   | note-service |             | http://127.0.0.1:52928 |
|-----------|--------------|-------------|------------------------|
* Opening service default/note-service in default browser...
! Because you are using a Docker driver on windows, the terminal needs to be open to run it.
```

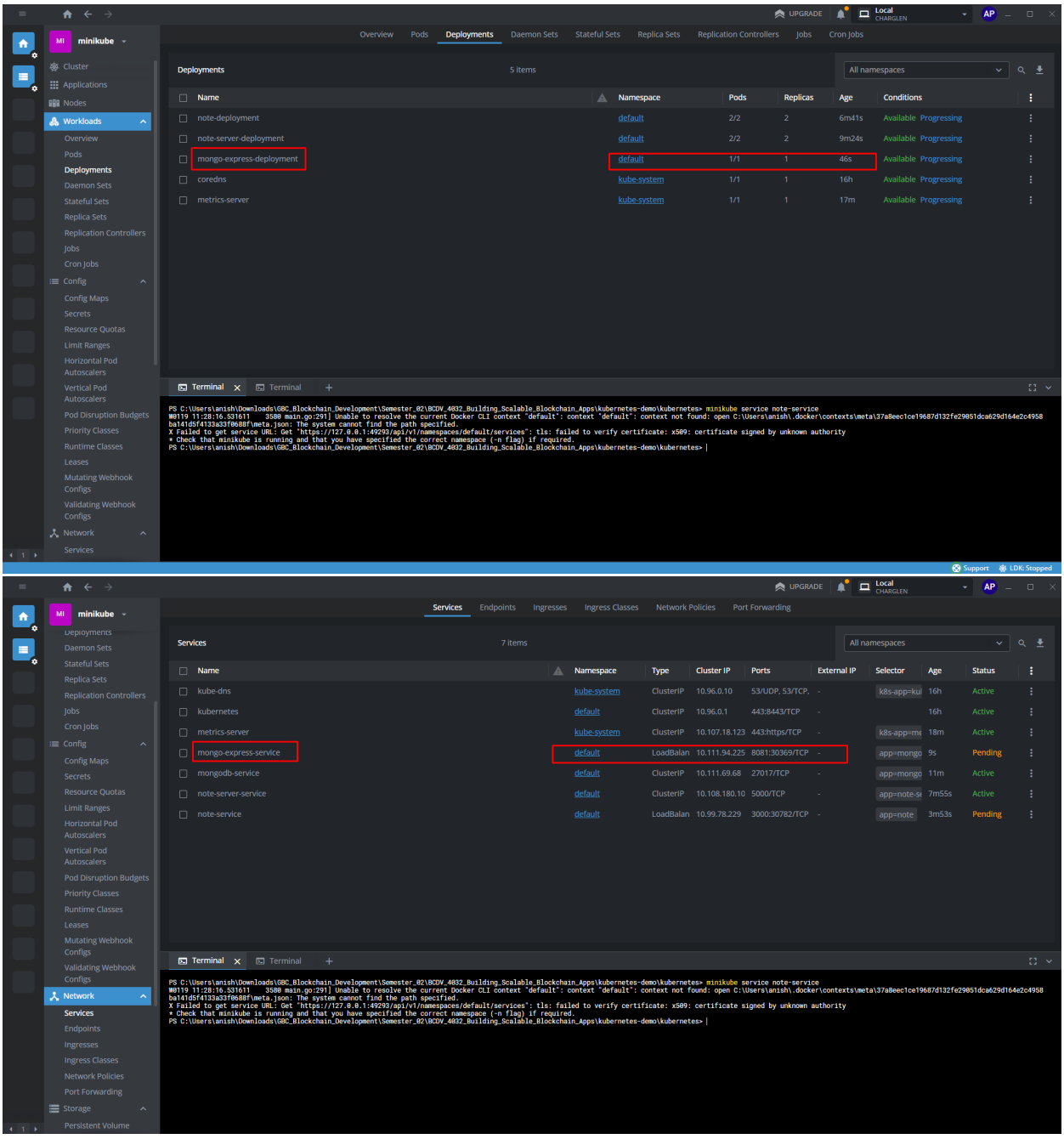




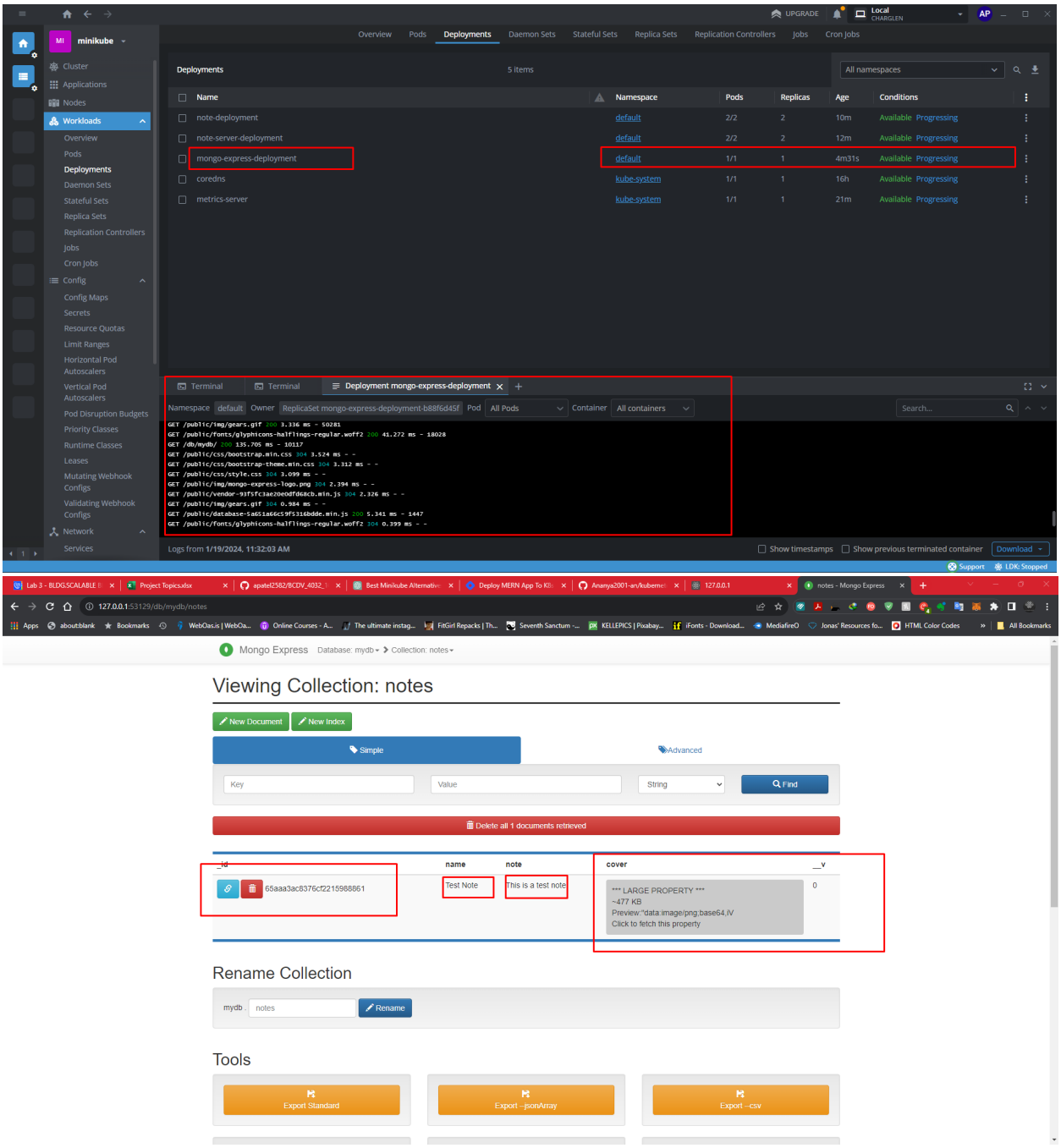
Test Note

This is a test note

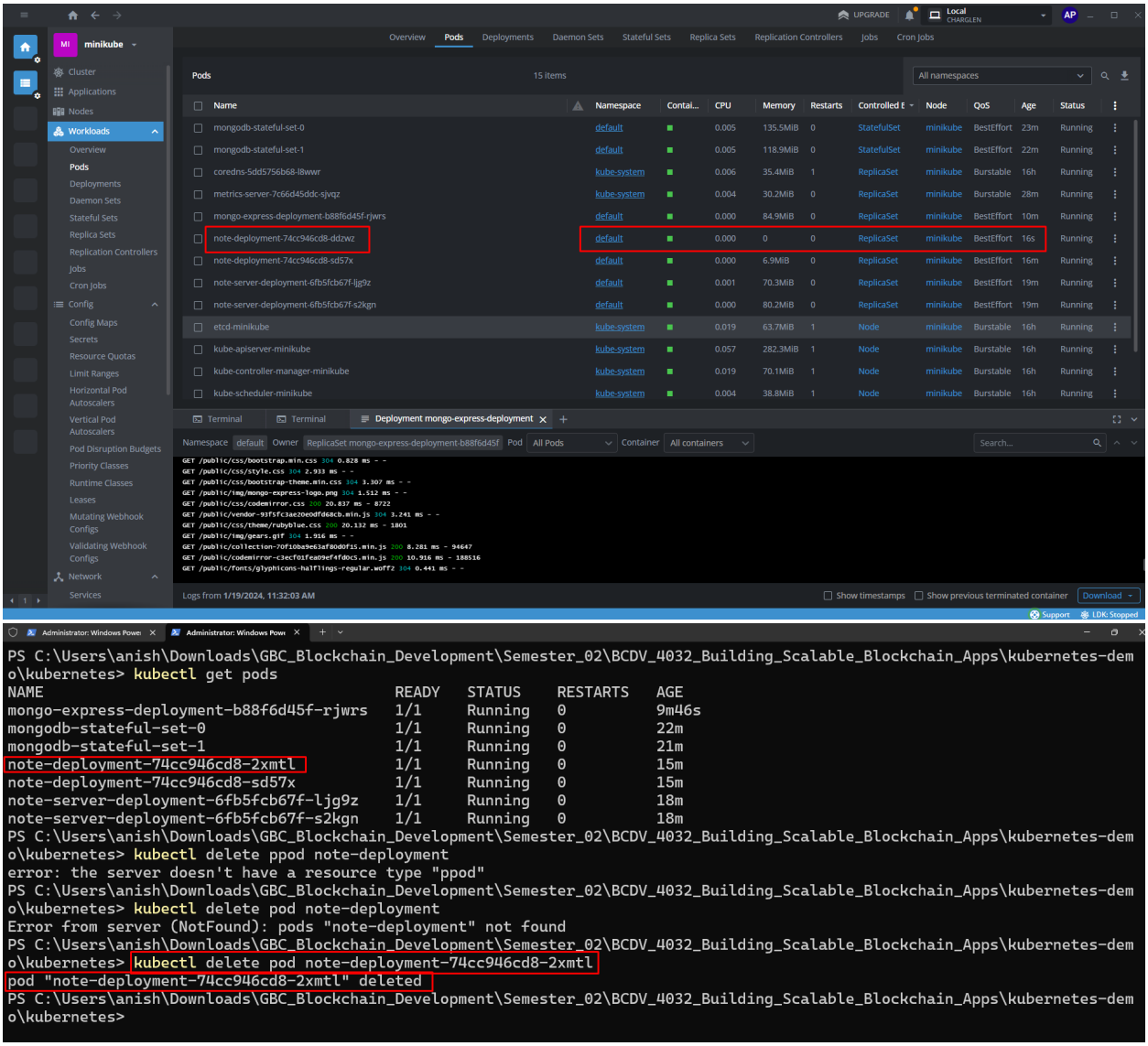
Edit Delete


minikube
Overview
Pods
Deployments
Daemon Sets
Stateful Sets
Replica Sets
Replication Controllers
Jobs
Cron Jobs
Deployments
5 items
All namespaces
Name
Namespace
Pods
Replicas
Age
Conditions
note-deployment
default
2/2
2
6m41s
Available Progressing
note-server-deployment
default
2/2
2
9m24s
Available Progressing
mongo-express-deployment
default
1/1
1
46s
Available Progressing
coredns
kube-system
1/1
1
16h
Available Progressing
metrics-server
kube-system
1/1
1
17m
Available Progressing
Terminal
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> minikube service note-service
W0119 11:28:16.531611 3580 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": context not found: open C:\Users\anish\.docker\contexts\meta\37a8eec1ce19687d132fe29051dca629d164e2c4958ba141d5f4133a33f0688f\meta.json: The system cannot find the path specified.
X Failed to get service URL: Get "https://127.0.0.1:49293/api/v1/namespaces/default/services": tls: failed to verify certificate: x509: certificate signed by unknown authority
* Check that minikube is running and that you have specified the correct namespace (-n flag) if required.
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>
Support
LDK: Stopped

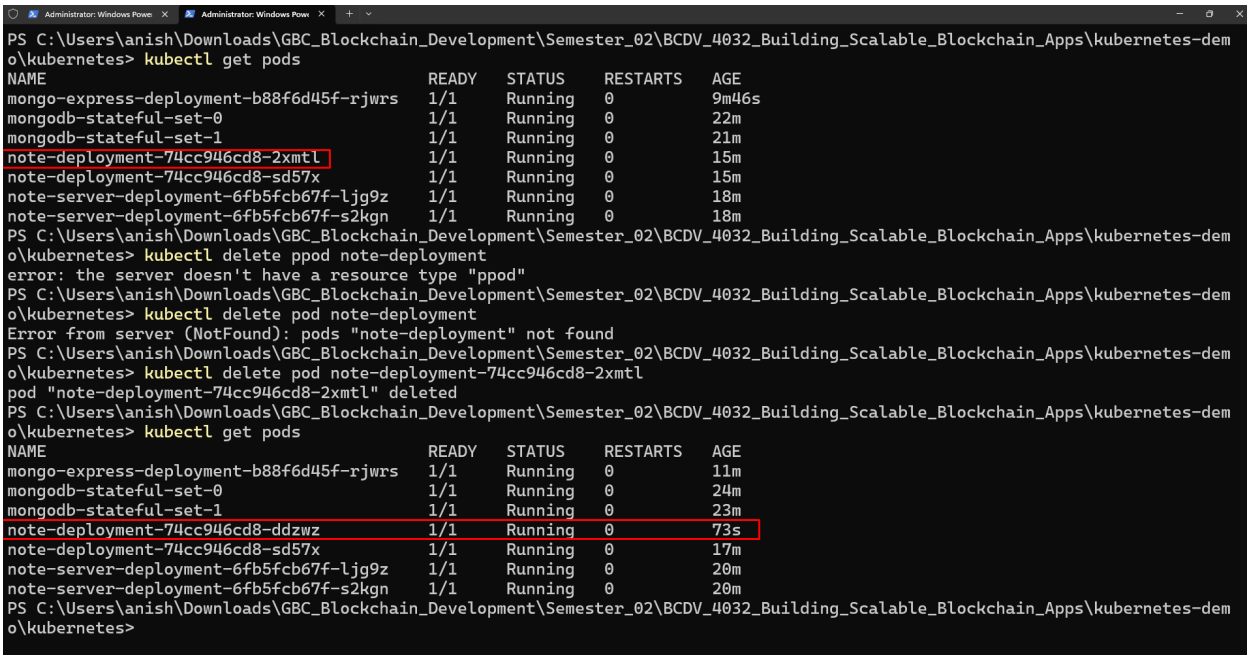
minikube
Services
Endpoints
Ingresses
Ingress Classes
Network Policies
Port Forwarding
Services
7 items
All namespaces
Name
Namespace
Type
Cluster IP
Ports
External IP
Selector
Age
Status
kube-dns
kube-system
ClusterIP
10.96.0.10
53/UDP, 53/TCP,
16h
Active
kubernetes
default
ClusterIP
10.96.0.1
443:8443/TCP
16h
Active
metrics-server
kube-system
ClusterIP
10.107.18.123
443:https/TCP
18m
Active
mongo-express-service
default
LoadBalan
10.111.94.225
8081:30369/TCP
app=mongo
9s
Pending
mongodb-service
default
ClusterIP
10.111.69.68
27017/TCP
app=mongo
11m
Active
note-server-service
default
ClusterIP
10.108.180.10
5000/TCP
7m55s
Active
note-service
default
LoadBalan
10.99.78.229
3000:30782/TCP
app=note
3m53s
Pending
Terminal
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> minikube service note-service
W0119 11:28:16.531611 3580 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": context not found: open C:\Users\anish\.docker\contexts\meta\37a8eec1ce19687d132fe29051dca629d164e2c4958ba141d5f4133a33f0688f\meta.json: The system cannot find the path specified.
X Failed to get service URL: Get "https://127.0.0.1:49293/api/v1/namespaces/default/services": tls: failed to verify certificate: x509: certificate signed by unknown authority
* Check that minikube is running and that you have specified the correct namespace (-n flag) if required.
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>


minikube
Overview
Pods
Deployments
Daemon Sets
Stateful Sets
Replica Sets
Replication Controllers
Jobs
Cron Jobs
Deployments
5 items
All namespaces
Name
Namespace
Pods
Replicas
Age
Conditions
note-deployment
default
2/2
2
10m
Available Progressing
note-server-deployment
default
2/2
2
12m
Available Progressing
mongo-express-deployment
default
1/1
1
4m31s
Available Progressing
coredns
kube-system
1/1
1
16h
Available Progressing
metrics-server
kube-system
1/1
1
21m
Available Progressing
Terminal
Terminal
Deployment mongo-express-deployment
Namespace default Owner ReplicaSet mongo-express-deployment-b88f6d45f Pod All Pods Container All containers
GET /public/img/gears.gif 200 3.336 ms - 50281
GET /public/fonts/glyphicons-halflings-regular.woff2 200 41.272 ms - 18028
GET /db/mydb/ 200 135.705 ms - 10117
GET /public/css/bootstrap.min.css 304 3.524 ms - -
GET /public/css/bootstrap-theme.min.css 304 3.312 ms - -
GET /public/css/style.css 304 3.099 ms - -
GET /public/img/mongo-express-logo.png 304 2.394 ms - -
GET /public/vendor-93f5fc1ae20e0df068cb.min.js 304 2.326 ms - -
GET /public/img/gears.gif 304 0.984 ms - -
GET /public/database-5a651a66c59f5316bdde.min.js 200 5.341 ms - 1447
GET /public/fonts/glyphicons-halflings-regular.woff2 304 0.399 ms - -
Logs from 1/19/2024, 11:32:03 AM
Show timestamps
Show previous terminated container
Download
Support
LDK: Stopped
127.0.0.1:53129/db/mydb/notes
Mongo Express
Database: mydb
Collection: notes
Viewing Collection: notes
New Document
New Index
Simple
Advanced
Key
Value
String
Find
Delete all 1 documents retrieved
_id
name
note
cover
__v
65aaa3ac8376cf2215988861
Test Note
This is a test note
*** LARGE PROPERTY ***
~477 KB
Preview:"
Click to fetch this property
0
Rename Collection
mydb .
notes
Rename
Tools
Export Standard
Export --jsonArray
Export --csv

Taking down 1 Pod of Note Deployment –




```
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl get pods
NAME                                    READY   STATUS    RESTARTS   AGE
mongo-express-deployment-b88f6d45f-rjwrs   1/1     Running   0          9m46s
mongodb-stateful-set-0                  1/1     Running   0          22m
mongodb-stateful-set-1                  1/1     Running   0          21m
note-deployment-74cc946cd8-2xmtl        1/1     Running   0          15m
note-deployment-74cc946cd8-sd57x        1/1     Running   0          15m
note-server-deployment-6fb5fcb67f-ljg9z    1/1     Running   0          18m
note-server-deployment-6fb5fcb67f-s2kgn    1/1     Running   0          18m
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl delete ppod note-deployment
error: the server doesn't have a resource type "ppod"
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl delete pod note-deployment
Error from server (NotFound): pods "note-deployment" not found
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl delete pod note-deployment-74cc946cd8-2xmtl
pod "note-deployment-74cc946cd8-2xmtl" deleted
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>
```


Administrator: Windows Powe
Administrator: Windows Powe
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl get pods
NAME READY STATUS RESTARTS AGE
mongo-express-deployment-b88f6d45f-rjwrs 1/1 Running 0 9m46s
mongodb-stateful-set-0 1/1 Running 0 22m
mongodb-stateful-set-1 1/1 Running 0 21m
note-deployment-74cc946cd8-2xmtl 1/1 Running 0 15m
note-deployment-74cc946cd8-sd57x 1/1 Running 0 15m
note-server-deployment-6fb5fcb67f-ljg9z 1/1 Running 0 18m
note-server-deployment-6fb5fcb67f-s2kgn 1/1 Running 0 18m
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl delete ppod note-deployment
error: the server doesn't have a resource type "ppod"
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl delete pod note-deployment
Error from server (NotFound): pods "note-deployment" not found
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl delete pod note-deployment-74cc946cd8-2xmtl
pod "note-deployment-74cc946cd8-2xmtl" deleted
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes> kubectl get pods
NAME READY STATUS RESTARTS AGE
mongo-express-deployment-b88f6d45f-rjwrs 1/1 Running 0 11m
mongodb-stateful-set-0 1/1 Running 0 24m
mongodb-stateful-set-1 1/1 Running 0 23m
note-deployment-74cc946cd8-ddzwz 1/1 Running 0 73s
note-deployment-74cc946cd8-sd57x 1/1 Running 0 17m
note-server-deployment-6fb5fcb67f-ljg9z 1/1 Running 0 20m
note-server-deployment-6fb5fcb67f-s2kgn 1/1 Running 0 20m
PS C:\Users\anish\Downloads\GBC_Blockchain_Development\Semester_02\BCDV_4032_Building_Scalable_Blockchain_Apps\kubernetes-demo\kubernetes>