

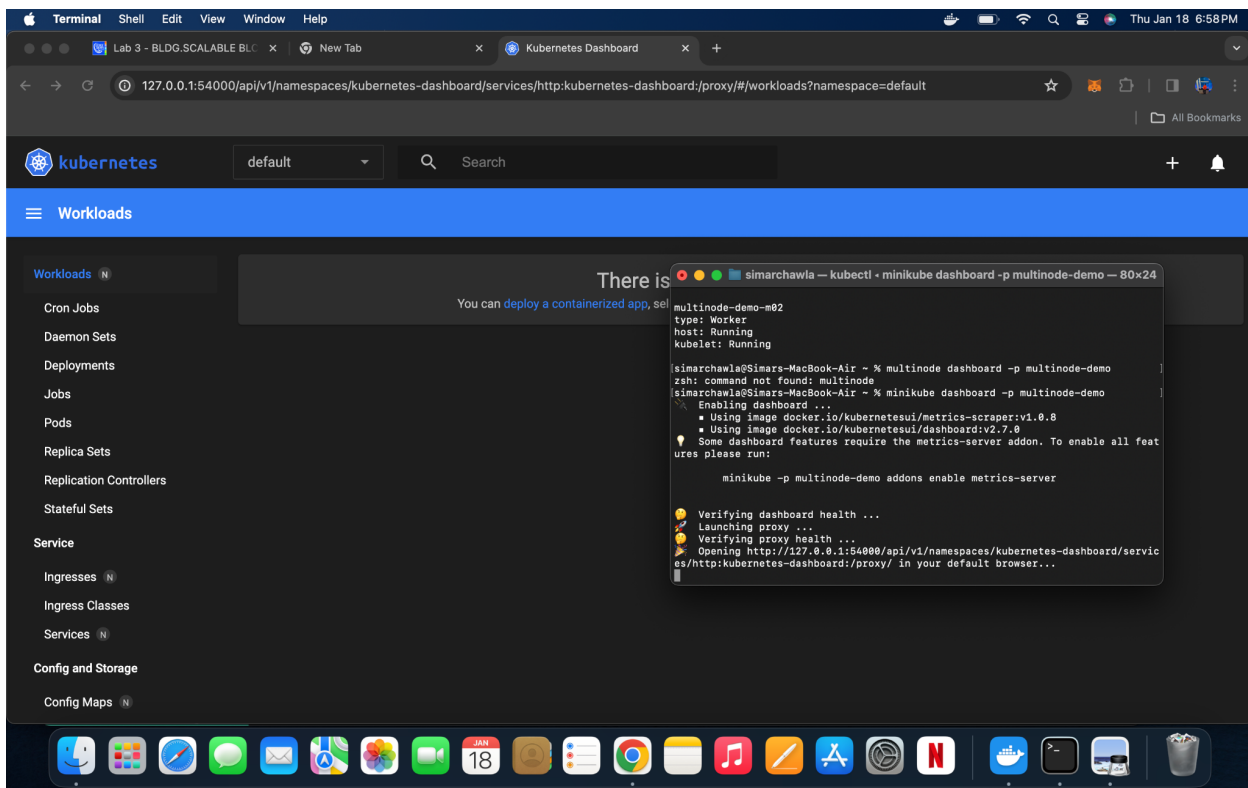
```
simarchawla — -zsh — 80x24

Last login: Thu Jan 18 18:48:56 on ttys002
[simarchawla@Simars-MacBook-Air ~ % minikube start --nodes 2 -p multinode-demo ]
😊 [multinode-demo] minikube v1.32.0 on Darwin 14.2.1 (arm64)
✨ Automatically selected the docker driver
🔧 Using Docker Desktop driver with root privileges
👍 Starting control plane node multinode-demo in cluster multinode-demo
🚚 Pulling base image ...
📦 Downloading Kubernetes v1.28.3 preload ...
> preloaded-images-k8s-v18-v1...: 341.16 MiB / 341.16 MiB 100.00% 5.47 Mi
> gcr.io/k8s-minikube/kicbase...: 410.58 MiB / 410.58 MiB 100.00% 6.38 Mi
🔥 Creating docker container (CPUs=2, Memory=2200MB) ...
❗ Executing "docker ps -a --format {{.Names}}" took an unusually long time: 3.119537958s
💡 Restarting the docker service may improve performance.
🐳 Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  ■ Generating certificates and keys ...
  ■ Booting up control plane ...
  ■ Configuring RBAC rules ...
🔗 Configuring CNI (Container Networking Interface) ...
🔍 Verifying Kubernetes components...
  ■ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟 Enabled addons: storage-provisioner, default-storageclass
👍 Starting worker node multinode-demo-m02 in cluster multinode-demo
```

```
simarchawla — -zsh — 80x24
■ NO_PROXY=192.168.49.2
🐳 Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
■ env NO_PROXY=192.168.49.2
🔍 Verifying Kubernetes components...
🏆 Done! kubectl is now configured to use "multinode-demo" cluster and "default" namespace by default
[simarchawla@Simars-MacBook-Air ~ % kubectl get nodes]
NAME                STATUS    ROLES          AGE   VERSION
multinode-demo      Ready    control-plane   70s   v1.28.3
multinode-demo-m02  Ready    <none>         48s   v1.28.3
[simarchawla@Simars-MacBook-Air ~ % minikube status -p multinode-demo]
multinode-demo
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

multinode-demo-m02
type: Worker
host: Running
kubelet: Running

simarchawla@Simars-MacBook-Air ~ %
```



```

simarchawla — -zsh — 80x24
les.
👉 To start a cluster, run: "minikube start -p multinode"
[simarchawla@Simars-MacBook-Air ~ % minikube profile list
|-----|-----|-----|-----|-----|-----|-----|
| Profile | VM Driver | Runtime | IP | Port | Version | Status |
| Nodes | Active | | | | | |
|---|---|---|---|---|---|---|
| multinode-demo | docker | docker | 192.168.49.2 | 8443 | v1.28.3 | Running |
| 2 |
|-----|-----|-----|-----|-----|-----|-----|
! Found 1 invalid profile(s) !
minikube
💡 You can delete them using the following command(s):
$ minikube delete -p minikube
[simarchawla@Simars-MacBook-Air ~ % 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.
simarchawla@Simars-MacBook-Air ~ %

```

```

simarchawla — -zsh — 80x24
| multinode-demo | docker | docker | 192.168.49.2 | 8443 | v1.28.3 | Running |
| 2 |
|-----|-----|-----|-----|-----|-----|-----|
! Found 1 invalid profile(s) !
minikube
💡 You can delete them using the following command(s):
$ minikube delete -p minikube
[simarchawla@Simars-MacBook-Air ~ % 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.
[simarchawla@Simars-MacBook-Air ~ % minikube delete --all
🔥 Deleting "multinode-demo" in docker ...
🔥 Removing /Users/simarchawla/.minikube/machines/multinode-demo ...
🔥 Removing /Users/simarchawla/.minikube/machines/multinode-demo-m02 ...
💀 Removed all traces of the "multinode-demo" cluster.
❌ Failed to stop ssh-agent process: failed loading config: cluster "minikube"
does not exist
💀 Removed all traces of the "minikube" cluster.
🔥 Successfully deleted all profiles
simarchawla@Simars-MacBook-Air ~ %

```

```

Use "kubectl <command> --help" for more information about a given command.
Use "kubectl options" for a list of global command-line options (applies to all commands).
simarchawla@Simars-MacBook-Air lab3 % ls
ReplicaSet.yaml hello.yaml
simarchawla@Simars-MacBook-Air lab3 % kubectl apply -f ReplicaSet.yaml
The connection to the server localhost:8080 was refused - did you specify the right host or port?
simarchawla@Simars-MacBook-Air lab3 % minikube start
🐳 minikube v1.32.0 on Darwin 14.2.1 (arm64)
🔧 Automatically selected the docker driver
👉 Using Docker Desktop driver with root privileges
👉 Starting control plane node minikube in cluster minikube
📶 Pulling base image ...
🔥 Creating docker container (CPUs=2, Memory=2200MB) ...
⚠️ Executing "docker ps -a --format {{.Names}}" took an unusually long time: 3.079528333s
💡 Restarting the docker service may improve performance.
🔧 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: storage-provisioner, default-storageclass
👉 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
simarchawla@Simars-MacBook-Air lab3 % kubectl apply -f ReplicaSet.yaml
replicaset.apps/nginx created
simarchawla@Simars-MacBook-Air lab3 %

```

```

simarchawla@Simars-MacBook-Air lab3 % kubectl apply -f ReplicaSet.yaml
replicaset.apps/nginx created
simarchawla@Simars-MacBook-Air lab3 % kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx-d67jl   1/1     Running   0           30s
nginx-hbr6h   1/1     Running   0           30s
nginx-mrdpq   1/1     Running   0           30s
simarchawla@Simars-MacBook-Air lab3 % kubectl delete pod nginx-d67jl
zsh: command not found: kubectl
simarchawla@Simars-MacBook-Air lab3 % kubectl delete pod nginx-d67jl
pod "nginx-d67jl" deleted
simarchawla@Simars-MacBook-Air lab3 % kubectl delete pod nginx-hbr6h
pod "nginx-hbr6h" deleted
simarchawla@Simars-MacBook-Air lab3 % kubectl delete pod nginx-mrdpq
pod "nginx-mrdpq" deleted
simarchawla@Simars-MacBook-Air lab3 % kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx-n67lv   1/1     Running   0           11s
nginx-n6xjj   1/1     Running   0           23s
nginx-nqtsk   1/1     Running   0           48s
simarchawla@Simars-MacBook-Air lab3 %

```

```

simarchawla@Simars-MacBook-Air lab3 % kubectl get replicaset
NAME      DESIRED   CURRENT   READY   AGE
nginx     3          3          3      5m53s
simarchawla@Simars-MacBook-Air lab3 %

```

```

simarchawla@Simars-MacBook-Air lab3 % kubectl apply -f StatefulSet.yaml
deployment.apps/nginx-deployment created
simarchawla@Simars-MacBook-Air lab3 % kubectl get statefulsets
No resources found in default namespace.
simarchawla@Simars-MacBook-Air lab3 % kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx-deployment-86dcfd4c6-jk5lj  1/1     Running   0           35s
nginx-deployment-86dcfd4c6-ngvxm  1/1     Running   0           20s
nginx-deployment-86dcfd4c6-pdzhs  1/1     Running   0           21s
simarchawla@Simars-MacBook-Air lab3 % kubectl get deployments
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment  3/3      3             3           60s
simarchawla@Simars-MacBook-Air lab3 %

```

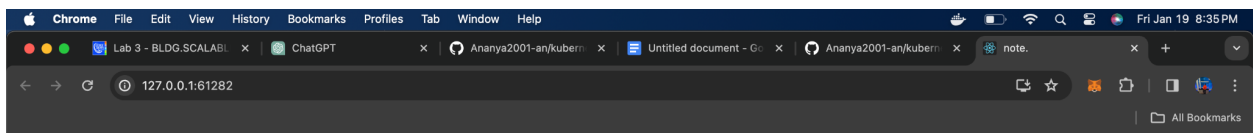
```

simarchawla@Simars-MacBook-Air kubernetes-demo % cd kubernetes
simarchawla@Simars-MacBook-Air kubernetes % kubectl apply -f secrets/mongodb-secret.yml
secret/mongodb-secret unchanged
simarchawla@Simars-MacBook-Air kubernetes % kubectl apply -f stateful-sets/mongodb-stateful-set.yml
statefulset.apps/mongodb-stateful-set created
simarchawla@Simars-MacBook-Air kubernetes % kubectl apply -f services/mongodb-service.yml
service/mongodb-service created
simarchawla@Simars-MacBook-Air kubernetes % kubectl apply -f deployments/note-server-depl.yml
deployment.apps/note-server-deployment created
simarchawla@Simars-MacBook-Air kubernetes % kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
mongodb-stateful-set-0  0/1     ContainerCreating   0           19s
note-server-deployment-6fb5fcb67f-6hm7j  0/1     ContainerCreating   0           6s
note-server-deployment-6fb5fcb67f-vtwql  0/1     ContainerCreating   0           6s
simarchawla@Simars-MacBook-Air kubernetes %

```

```
note-server-deployment-6fb5fcb67f-vtwql 0/1 ContainerCreating 0s
simarchawla@Simars-MacBook-Air:~$ kubectl apply -f services/note-server-service.yml
service/note-server-service created
simarchawla@Simars-MacBook-Air:~$ kubectl apply -f deployments/note-depl.yml
deployment.apps/note-deployment created
simarchawla@Simars-MacBook-Air:~$ kubectl get pods
NAME                                READY   STATUS             RESTARTS   AGE
mongodb-stateful-set-0             1/1     Running            0          69s
mongodb-stateful-set-1             0/1     ContainerCreating  0          26s
note-deployment-74cc946cd8-88c6n   0/1     ContainerCreating  0          10s
note-deployment-74cc946cd8-rwpj    0/1     ContainerCreating  0          10s
note-server-deployment-6fb5fcb67f-6hm7j 0/1     ContainerCreating  0          56s
note-server-deployment-6fb5fcb67f-vtwql 0/1     ContainerCreating  0          56s
simarchawla@Simars-MacBook-Air:~$
```

```
simarchawla@Simars-MacBook-Air:~$ kubectl apply -f services/note-service.yml
service/note-service created
simarchawla@Simars-MacBook-Air:~$ minikube service note-service
|-----|
| NAMESPACE | NAME       | TARGET PORT | URL                |
|-----|
| default   | note-service | 3000        | http://192.168.49.2:31397 |
|-----|
* Starting tunnel for service note-service.
|-----|
| NAMESPACE | NAME       | TARGET PORT | URL                |
|-----|
| default   | note-service |             | http://127.0.0.1:61282 |
|-----|
! 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.
```

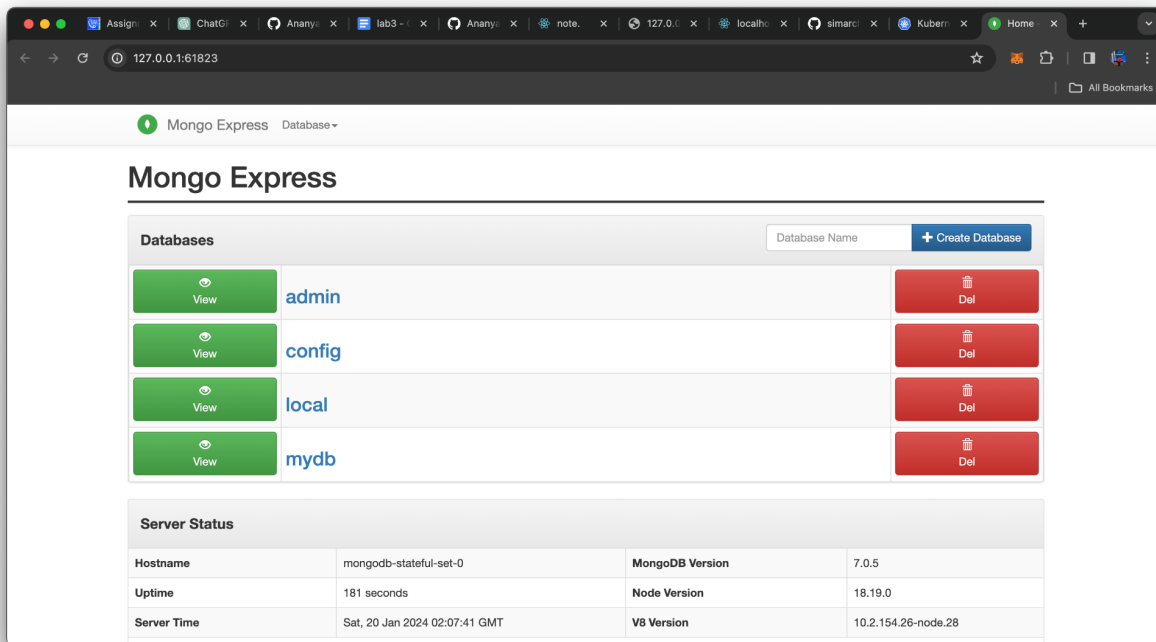


note.

Assignments Add Assignment Notes Add Note

Important Assignments





```
simarchawla@Simars-MacBook-Air kubernetes % kubectl apply -f services/mongo-express-service.yml
service/mongo-express-service unchanged
simarchawla@Simars-MacBook-Air kubernetes % minikube service mongo-express-service
NAMESPACE   NAME           TARGET PORT   URL
default     mongo-express-service  8081          http://192.168.49.2:32101
Starting tunnel for service mongo-express-service.
NAMESPACE   NAME           TARGET PORT   URL
default     mongo-express-service  8081          http://127.0.0.1:61347
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.
```