

Unit 4.3 Graded Assignment:

Instructions:

Display logs of a running MongoDB container. Add a document to the DB via Mongo Express frontend. Get into the pod and verify the document's existence via *mongosh*.

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Solution:

```
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ minikube start
W0515 15:50:59.150756 209564 main.go:291] Unable to resolve the current Docker CLI context "default": context "default" does not exist
🐳 minikube v1.30.1 on Ubuntu 22.04
🔧 Using the docker driver based on existing profile
👉 Starting control plane node minikube in cluster minikube
📡 Pulling base image ...
🔄 Restarting existing docker container for "minikube" ...
📦 Preparing Kubernetes v1.26.3 on Docker 23.0.2 ...
🔗 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
```

```
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ kubectl apply -f mongo-secret.yaml
secret/mongodb-secret unchanged
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ kubectl apply -f mongodb-deployment.yaml
deployment.apps/mongo-deployment unchanged
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ kubectl apply -f mongodb-service.yaml
service/mongo-service unchanged
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ kubectl apply -f mongo-configmap.yaml
configmap/mongodb-configmap unchanged
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ kubectl apply -f mongo-express-deployment.yaml
deployment.apps/mongo-express unchanged
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ kubectl apply -f mongo-express-service.yaml
service/mongo-express-service unchanged
```

```
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ kubectl get services
NAME                                TYPE                CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
kubernetes                         ClusterIP            10.96.0.1        <none>            443/TCP           6d1h
mongo-express-service              LoadBalancer        10.103.127.150   192.168.0.10     8080:30001/TCP    3d4h
mongo-service                      ClusterIP            10.109.213.83    <none>            27017/TCP         3d4h
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
mongo-deployment-85bbdc6549-qzp8h   1/1     Running   5 (2m17s ago)    3d4h
mongo-express-5bcd46fcff-l8cdr       1/1     Running   14 (91s ago)     3d4h
saifrehman@all-MS-7D35:~/Documents/eme/SaifUrRehman-DEG-007/Assignment_4.3(kubernetes)/hands-on$ minikube service mongo-express-service
W0515 15:53:47.350037 219765 main.go:291] Unable to resolve the current Docker CLI context "default": context "default" does not exist
+-----+-----+-----+-----+
| NAMESPACE | NAME           | TARGET PORT | URL               |
+-----+-----+-----+-----+
| default   | mongo-express-service | 8080        | http://192.168.49.2:30001 |
+-----+-----+-----+-----+
🌐 Opening service default/mongo-express-service in default browser...
/snap/core20/current/lib/x86_64-linux-gnu/libstdc++.so.6: version 'GLIBCXX_3.4.29' not found (required by /lib/x86_64-linux-gnu/libproxy.so.1)
```

```
saifrehman@all-MS-7035:~/Documents/eme/SaifurRehman-DEG-007/Assignment 4.3(kubernetes)/hands-on$ kubectl exec -it mongo-deployment-85bbdc6549-qzp8h -- /bin/bash
root@mongo-deployment-85bbdc6549-qzp8h:/# mongosh -u $MONGO_INITDB_ROOT_USERNAME -p $MONGO_INITDB_ROOT_PASSWORD
Current Mongosh Log ID: 646212d39b620b15d4ae8b0b
Connecting to:      mongodb://<credentials>@127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+1.8.2
Using MongoDB:      6.0.5
Using Mongosh:      1.8.2

For mongosh info see: https://docs.mongodb.com/mongosh-shell/

To help improve our products, anonymous usage data is collected and sent to MongoDB periodically (https://www.mongodb.com/legal/privacy-policy).
You can opt-out by running the disableTelemetry() command.

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The server generated these startup warnings when booting
2023-05-15T10:51:40.215+00:00: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem
2023-05-15T10:51:40.215+00:00: mmapv1 journaling is too slow
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Open File in editor \(ctrl + click\)

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Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
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test> use cars
```

```
test> use cars
switched to db cars
cars> show available
MongoshInvalidInputError: [COMMON-10001] 'available' is not a valid argument for "show".
cars> show available
MongoshInvalidInputError: [COMMON-10001] 'available' is not a valid argument for "show".
cars> show collection
MongoshInvalidInputError: [COMMON-10001] 'collection' is not a valid argument for "show".
cars> db.available.find({})
[
  {
    _id: ObjectId("64621285825c1f00070f56bf"),
    name: 'Honda Civic',
    model: 'civic-turbo',
    maker: 'Honda',
    price: '20,000 USD'
  }
]
cars> []
```