ASSIGNMENT 4.3

on

Kubernetes

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and

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Task 01:

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*.

1. **Pull mongo related files from the repository**

All files are pulled successfully.

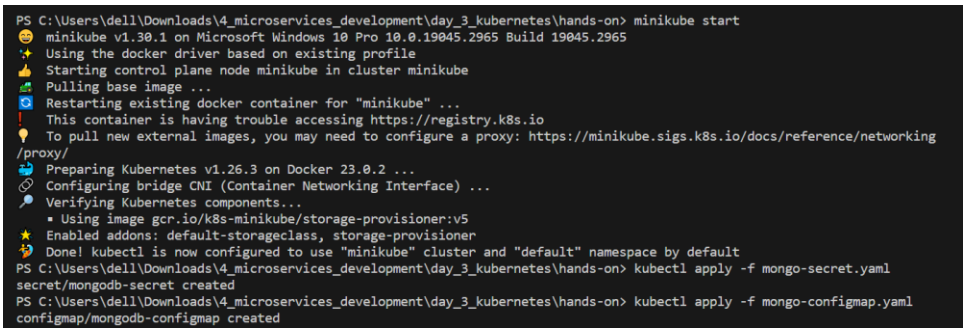
2. **Support yourself with the slides, README and knowledge from the internet.**

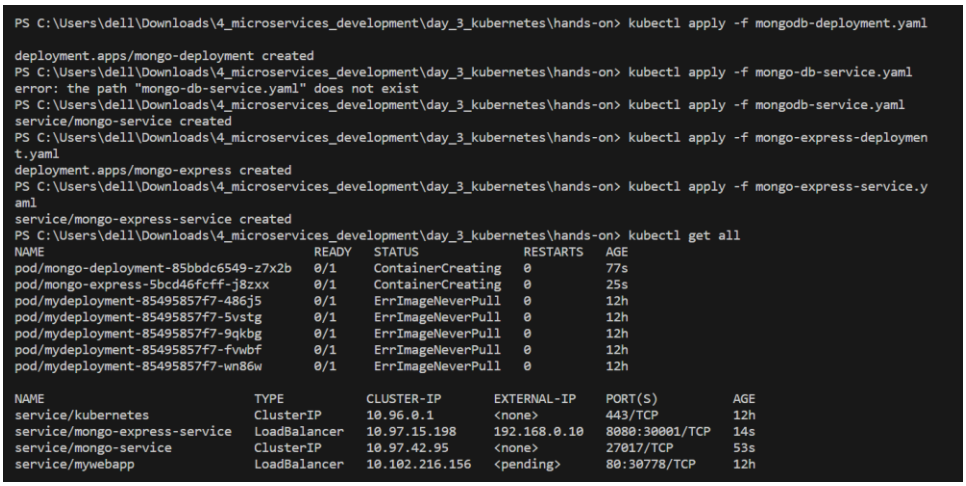
Slides and readme files are reviewd, additionaly we have uss internet for further understanding and delaling with errors.

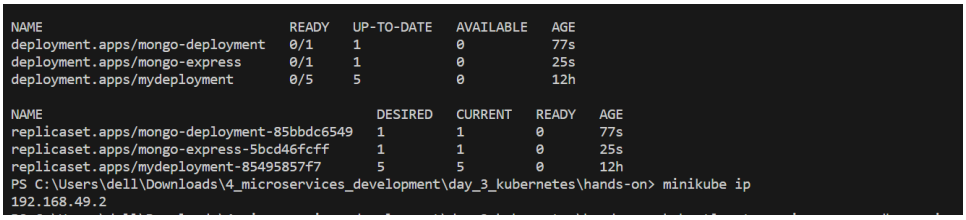
3. **Review all the files to learn the dependencies between Kubernetes objects**

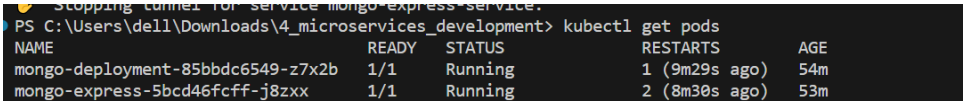
All files has been reviewed and the dependencies are understood.

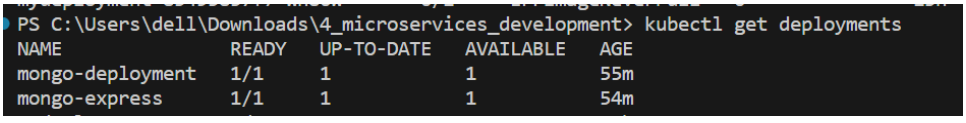
4. **Run the objects so you have both mongo-service and mongo-express-service deployed (list, pods, deployments, services and configmaps) - document with screenshots**











```
PS C:\Users\dell\Downloads\4_microservices_development> kubectl get services
NAME                    TYPE           CLUSTER-IP       EXTERNAL-IP    PORT(S)          AGE
kubernetes              ClusterIP      10.96.0.1        <none>         443/TCP          13h
mongo-express-service   LoadBalancer   10.97.15.198     192.168.0.10   8080:30001/TCP   55m
mongo-service           ClusterIP      10.97.42.95      <none>         27017/TCP        55m
mywebapp                LoadBalancer   10.102.216.156   <pending>      80:30778/TCP     13h
PS C:\Users\dell\Downloads\4_microservices_development>
```

```
PS C:\Users\dell\Downloads\4_microservices_development> kubectl get configmaps
NAME                 DATA   AGE
kube-root-ca.crt     1      13h
mongodb-configmap    1      57m
PS C:\Users\dell\Downloads\4_microservices_development>
```

5. **Run describe on a deployment, pod, service, configmap or choice. - document with screenshots**

Note: Description text files are uploaded in the current directory named assignment 4.3 of my repo.

- Description of pods is stored in txt files named: mongo-deployments.txt and mongo-express.txt

```
PS C:\Users\dell\Downloads\4_microservices_development> kubectl describe pod mongo-express-5bcd46fcff-j8zxx > mongo-express-5bcd
46fcff-j8zxx.txt
```

```
PS C:\Users\dell\Downloads\4_microservices_development> kubectl describe pod mongo-deployment-85bbdc6549-z7x2b > mongo-deploymen
t.txt
```

- Description of services is stored in txt files named: ds_mongo-service.txt and ds_mongo-express-service.txt

```
PS C:\Users\dell\Downloads\4_microservices_development> kubectl describe service mongo-service > ds_mongo-service.txt
PS C:\Users\dell\Downloads\4_microservices_development> kubectl describe service mongo-express-service > ds_mongo-express-servic
e.txt
PS C:\Users\dell\Downloads\4_microservices_development>
```

- Description of deployment is stored in txt files named: dd_mongo-deployment.txt and dd_mongo-express.txt

```
PS C:\Users\dell\Downloads\4_microservices_development> kubectl describe deployments mongo-deployment > dd_mongo-deployment.txt
PS C:\Users\dell\Downloads\4_microservices_development> kubectl describe deployments mongo-express > dd_mongo-express.txt
PS C:\Users\dell\Downloads\4_microservices_development>
```

- Description of configmap is stored in txt file named: dc_mongodb-configmap.txt.

```
PS C:\Users\dell\Downloads\4_microservices_development> kubectl describe configmaps mongodb-configmap > dc_mongodb-configmap.txt

PS C:\Users\dell\Downloads\4_microservices_development>
```

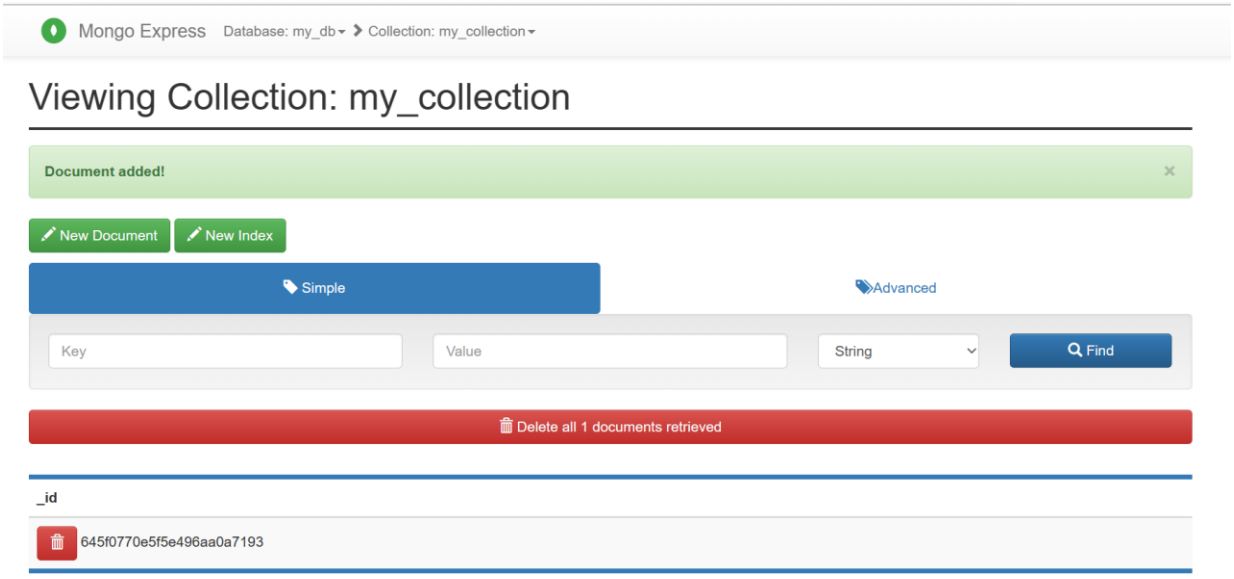
6. **Show logs from a pod of choice - document with a screenshot**
   - Logs of pod are stored in file named: logs-mongo-deployment.txt

```
Error from server (NotFound): pods "pod" not found
PS C:\Users\dell\Downloads\4_microservices_development> kubectl logs mongo-deployment-85bbdc6549-z7x2b > logs_mongo-deployment.t
xt
PS C:\Users\dell\Downloads\4_microservices_development> kubectl get services
```

7. **Run minikube service <proper_service_name> to make the service appear in a browser and expose it for network traffic.**

```
xt
PS C:\Users\dell\Downloads\4_microservices_development> kubectl get services
NAME                    TYPE           CLUSTER-IP       EXTERNAL-IP    PORT(S)          AGE
kubernetes              ClusterIP      10.96.0.1        <none>         443/TCP          13h
mongo-express-service   LoadBalancer   10.97.15.198     192.168.0.10   8080:30001/TCP   77m
mongo-service           ClusterIP      10.97.42.95      <none>         27017/TCP        78m
mywebapp                LoadBalancer   10.102.216.156   <pending>      80:30778/TCP     13h
PS C:\Users\dell\Downloads\4_microservices_development> minikube service mongo-express-service
|-----------|-----------------------|-------------|---------------------------|
| NAMESPACE |         NAME          | TARGET PORT |            URL            |
|-----------|-----------------------|-------------|---------------------------|
| default   | mongo-express-service |        8080 | http://192.168.49.2:30001 |
|-----------|-----------------------|-------------|---------------------------|
🏃  Starting tunnel for service mongo-express-service.
|-----------|-----------------------|-------------|------------------------|
| NAMESPACE |         NAME          | TARGET PORT |          URL           |
|-----------|-----------------------|-------------|------------------------|
| default   | mongo-express-service |             | http://127.0.0.1:55820 |
|-----------|-----------------------|-------------|------------------------|
🎉  Opening service default/mongo-express-service in default browser...
❗  Because you are using a Docker driver on windows, the terminal needs to be open to run it.
✋  Stopping tunnel for service mongo-express-service.
```

8. **Add db, collection and a document in the WebUI.**



9. **Enter the pod for mongodb run mongosh to see if the document was created in collection in db.**
10. **You may need some additional parameters (and use the environment variables from the .yaml files.)**