

Problem Statement

You are working as a Devops Administrator. You've been tasked to deploy a multi-tier application on Kubernetes Cluster. The application is a NodeJS application available on Docker Hub with the following name:

devopsedu/employee

This NodeJS application works with a mongo database. MongoDB image is available on DockerHub with the following name:

mongo

You are required to deploy this application on Kubernetes:

- NodeJS is available on port 8888 in the container and will be reaching out to port 27017 for mongo database connection
- MongoDB will be accepting connections on port 27017

You must deploy this application using the CLI.

Once your application is up and running, ensure you can add an employee from the NodeJS application and verify by going to Get Employee page and retrieving your input.

Hint: Name the Mongo DB Service and deployment, specifically as "mongo".

```

-rw-r--r-- 1 vagish999 vagish999 647 Mar 12 18:29 nodejs-deployment.yml
drwxr-xr-x 4 vagish999 vagish999 4096 Mar 12 16:58 SubmissionFiles/
vagish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl create deployment employee-app --image=devopsedu/employee
deployment.apps/employee-app created
vagish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl create deployment mongo --image=mongo
deployment.apps/mongo created
vagish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl get all
NAME                                READY    STATUS    RESTARTS   AGE
pod/employee-app-7fcd8467b-ldx25    1/1      Running   0           24s
pod/mongo-7fd695869b-242mg          0/1      ContainerCreating   0           7s

NAME                                TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
service/kubernetes                  ClusterIP      10.72.0.1     <none>          443/TCP    3m53s

NAME                                READY    UP-TO-DATE    AVAILABLE    AGE
deployment.apps/employee-app        1/1      1              1            25s
deployment.apps/mongo              0/1      1              0            8s

NAME                                DESIRED    CURRENT    READY    AGE
replicaset.apps/employee-app-7fcd8467b 1          1          1        25s
replicaset.apps/mongo-7fd695869b        1          1          0        8s
vagish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl get all
NAME                                READY    STATUS    RESTARTS   AGE
pod/employee-app-7fcd8467b-ldx25    1/1      Running   0           37s
pod/mongo-7fd695869b-242mg          1/1      Running   0           20s

NAME                                TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
service/kubernetes                  ClusterIP      10.72.0.1     <none>          443/TCP    4m6s

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NAME DESIRED CURRENT READY AGE
replicaset.apps/employee-app-7fcd8467b 1 1 1 38s
replicaset.apps/mongo-7fd695869b 1 1 1 21s
vaghish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl expose deployment employee-app --type=LoadBalancer --port=8888
service/employee-app exposed
vaghish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl get all
NAME READY STATUS RESTARTS AGE
pod/employee-app-7fcd8467b-ldx25 1/1 Running 0 111s
pod/mongo-7fd695869b-242mg 1/1 Running 0 94s

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
service/employee-app LoadBalancer 10.72.15.206 <pending> 8888:31756/TCP 4s
service/kubernetes ClusterIP 10.72.0.1 <none> 443/TCP 5m19s

NAME READY UP-TO-DATE AVAILABLE AGE
deployment.apps/employee-app 1/1 1 1 112s
deployment.apps/mongo 1/1 1 1 95s

NAME DESIRED CURRENT READY AGE
replicaset.apps/employee-app-7fcd8467b 1 1 1 112s
replicaset.apps/mongo-7fd695869b 1 1 1 95s
vaghish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ minikube service list
|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|
| default | emp-app-nodeport | 8888 | http://192.168.49.2:32045 |
| default | employee-app | 8888 | http://192.168.49.2:30678 |
| default | kubernetes | No node port |
| default | mongo | No node port |
| kube-system | kube-dns | No node port |

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vaghish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl get services -o wide
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE SELECTOR
employee-app LoadBalancer 10.72.15.206 34.68.94.174 8888:31756/TCP 5m10s app=employee-app
kubernetes ClusterIP 10.72.0.1 <none> 443/TCP 10m <none>
vaghish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$

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Firewall - VPC network - Ed... Cloud Shell how to deploy mongodb im... Docker / Kubernetes - Mong... MongoDB Wire Protocol...
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Cloud Shell Editor
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vagish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl expose deployment mongo --typ
e=ClusterIP --port=27017
service/mongo exposed
vagish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl get all
NAME READY STATUS RESTARTS AGE
pod/employee-app-6f9ff86b6b-kr5th 1/1 Running 0 31m
pod/mongo-7fd695869b-r14c1 1/1 Running 0 6m15s

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
service/employee-app LoadBalancer 10.72.15.206 34.68.94.174 8888:31756/TCP 58m
service/kubernetes ClusterIP 10.72.0.1 <none> 443/TCP 63m
service/mongo ClusterIP 10.72.13.65 <none> 27017/TCP 5s

NAME READY UP-TO-DATE AVAILABLE AGE
deployment.apps/employee-app 1/1 1 1 31m
deployment.apps/mongo 1/1 1 1 6m16s

NAME DESIRED CURRENT READY AGE
replicaset.apps/employee-app-6f9ff86b6b 1 1 1 31m
replicaset.apps/mongo-7fd695869b 1 1 1 6m17s
vagish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ minikube service list
|-----|-----|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|-----|-----|
| default | emp-app-nodeport | 8888 | http://192.168.49.2:32045 |
| default | employee-app | 8888 | http://192.168.49.2:30678 |
| default | kubernetes | No node port |
| default | mongo | No node port |
| kube-system | kube-dns | No node port |
|-----|-----|-----|
vagish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$
```



34.68.94.174:8888/AddEmployee x +

← → ↻ Not secure | 34.68.94.174:8888/AddEmployee ☆ Incognito

Add New Employee

First Name :	<input type="text" value="A"/>
Last Name :	<input type="text" value="B"/>
ID :	<input type="text" value="123"/>
Department :	<input type="text" value="X"/>
Designation :	<input type="text" value="Y"/>
Salary :	<input type="text" value="1"/>

Added employee with id 123 into the employee collection failed.

Firewall - VPC network - Ed... Cloud Shell how to deploy mongodb in... Docker / Kubernetes - Mono... node.js - MongoError: Unsu... +

← → ↻ shell.cloud.google.com/?hl=en_US&fromcloudshell=true&show=terminal

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```
kr5th
-bash: kubectl: command not found
vaghish999@cloudshell:~/ExternalFiles/GIT/Edureka-Assignment/CaseStudy7-Kubernetes/Edureka-DevOps-Assignments (edureka-handson)$ kubectl logs employee-app-6f9ff86b6b-kr5th
npm info it worked if it ends with ok
npm info using npm@2.15.6
npm info using node@v4.4.7
npm info prestart insert-title-here@1.0.0
npm info start insert-title-here@1.0.0

> insert-title-here@1.0.0 start /opt/sample/Employee
> node app.js

Server running at http://127.0.0.1:8888
{ fname: 'Q',
  lname: 'W',
  empid: '1',
  dept: '2',
  dsgr: '3',
  sal: '4' }
Connection established to mongodb://10.72.11.164:27017/employee
{ [MongoError: Unsupported OP_QUERY command: insert. The client driver may require an upgrade. For more details see https://dochub.mongodb.org/core/legacy-opcode-removal]
  name: 'MongoError',
  message: 'Unsupported OP_QUERY command: insert. The client driver may require an upgrade. For more details see https://dochub.mongodb.org/core/legacy-opcode-removal',
  ok: 0,
  errmsg: 'Unsupported OP_QUERY command: insert. The client driver may require an upgrade. For more details see https://dochub.mongodb.org/core/legacy-opcode-removal',
  code: 352,
  codeName: 'UnsupportedOpQueryCommand' }
```

