

# Ebpf Project progress report

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JULY 15TH 2022

# Minikube

## Installing:

for linux x86-64 stable debian package:

- `$ curl -LO`  
`https://storage.googleapis.com/minikube/releases/latest/minikube_latest_amd64.deb`
- `$ sudo dpkg -i minikube_latest_amd64.deb`

# Minikube start

**\$ minikube start**

(takes time to install stuff)

**Error:** Exiting due to DRV\_NOT\_HEALTHY: Found driver(s) but none were healthy. See above for suggestions how to fix installed drivers.

**Solution:**

```
testuser@localhost:~$ sudo usermod -aG docker testuser && newgrp docker
```

# Installing kubectl

Download the latest release with the command:

```
$ curl -LO "https://dl.k8s.io/release/$(curl -L -s  
https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl"
```

Validate the binary

Download the kubectl checksum file:

```
$ curl -LO "https://dl.k8s.io/$(curl -L -s  
https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubect  
l.sha256"
```

# Installing kubectl continued ....

```
$ echo "$ (cat kubectl.sha256) kubectl" | sha256sum --check
```

output should be :OK

Install kubectl:

```
$ sudo install -o root -g root -m 0755 kubectl  
/usr/local/bin/kubectl
```

# Installing kubectl continued ....

## Note:

If you do not have root access on the target system, you can still install kubectl to the `~/local/bin` directory:

```
$ chmod +x kubectl
```

```
$ mkdir -p ~/.local/bin
```

```
$ sudo mv ./kubectl ~/.local/bin/kubectl
```

```
$ kubectl version --client
```

The problem or  
challenge

Various Errors faced and  
their SOLUTIONS;

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# Crashloop BackOff Error in pod Status

Solution : ADD below code in DEPLOYMENT YAML file of the pod giving error.

Go to : template:

Spec:

Containers:

**Add here**

-args:

-infinity

Command:



Major error faced



# Troubleshooting connection refused error



# Approach one

## Using Helm Charts:

```
$ helm install RELEASE_NAME HELM_CHART_REPO_PATH
```

using this command as:

```
$ helm install death-star /home/user1/DeathStarBench/socialNetwork/helm-chart/socialnetwork
```

Error:

Error: INSTALLATION FAILED: failed post-install: pod setup-collection-sharding-hook failed

the `$ helm list` shows status as **failed** for my release death-star .

**Wrong approach**

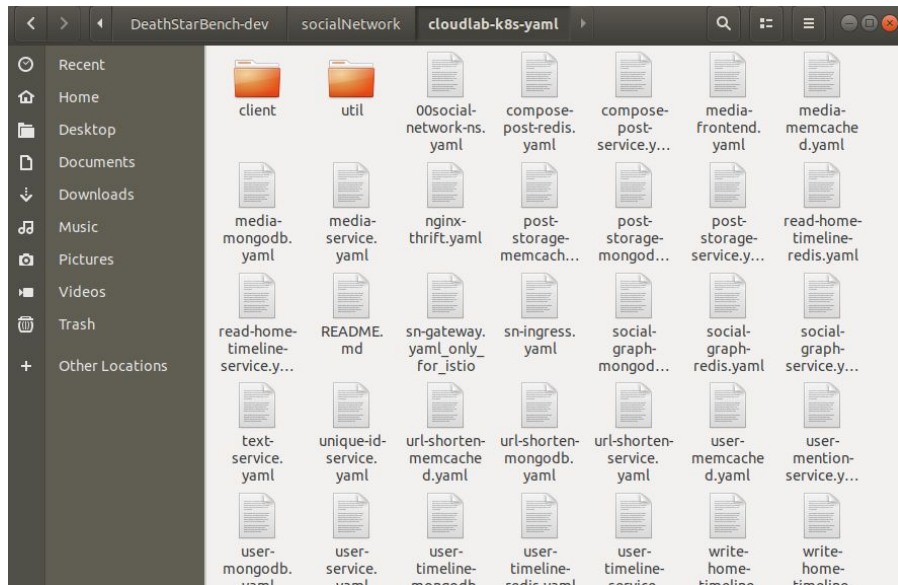
# Approach two

## Using different version of deathstarbench

<https://github.com/Panlichen/DeathStarBench/tree/dev/socialNetwork>

Same issue of connection  
refused with this version too

Wrong approach again



# Approach three

## Using older version of deathstarbench with support for kubernetes

<https://github.com/delimitrou/DeathStarBench/tree/6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork>

Faced a different issue :

```
$ kubectl -n social-network get pods
```

```
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ kubectl -n social-network get pods
NAME                                READY    STATUS    RESTARTS   AGE
compose-post-redis-69b6f58955-z3dpk  1/1      Running   0           15h
compose-post-service-544ffbc9c-nvgwk  1/1      Running   0           15h
home-timeline-redis-757f254bc9-qhkps  1/1      Running   0           15h
home-timeline-service-78564df47-f5127  1/1      Running   0           15h
jaeger-5b788d0f8-sngt3                1/1      Running   0           15h
media-frontend-59fcd08f8-qkq21         1/1      Running   0           40m
media-frontend-5574d89bdc-wg3np        0/1      CrashLoopBackOff   1 (20s ago)    22s
media-memcached-767456c9ce-b9jst       1/1      Running   0           15h
media-mongodb-6dc7b884d-hdenv          1/1      Running   0           15h
media-service-64ccc3f84b-fxltd         1/1      Running   0           15h
nginx-thrift-774b794746-wtd72         1/1      Running   0           15h
post-storage-memcached-656dd9dbd-zqf5  1/1      Running   0           15h
post-storage-mongodb-4d774edcbb-fg4q9  1/1      Running   0           15h
post-storage-service-67577c8c96-qg7q6  1/1      Running   0           15h
social-graph-mongodb-468f7c959a-5ezan  1/1      Running   0           15h
social-graph-redis-6965945d8-qzxrq     1/1      Running   0           15h
social-graph-service-63f8b76775-jp8v6  1/1      Running   0           15h
text-service-7bc99c9c56-k58g5          1/1      Running   0           15h
unique-id-service-cff45b889-gql8h       1/1      Running   0           15h
url-shorten-memcached-6f68cc3955-zmwh  1/1      Running   0           15h
url-shorten-mongodb-5b64ef77ff-5dghh   1/1      Running   0           15h
url-shorten-service-6469b0dc-xdnhk     1/1      Running   0           15h
user-memcached-48ff56c9b9-qgk9t        1/1      Running   0           15h
user-mention-service-8bc9894bc-abfcr    1/1      Running   0           15h
user-mongodb-6ff95fc5f9-ztv9d          1/1      Running   0           15h
user-service-84ff47d6d-xnfbg           1/1      Running   0           15h
user-timeline-mongodb-6c8bc3cf7-pgxn5  1/1      Running   0           15h
user-timeline-redis-897b277f9-grbkh     1/1      Running   0           15h
user-timeline-service-7bcfcdb309-mzgw  1/1      Running   0           15h
write-home-timeline-rabbitmq-5bf5f4c8bc-cp88f  1/1      Running   0           15h
write-home-timeline-service-687d984b89-cqd7f  0/1      CrashLoopBackOff   5 (10s ago)    15h
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$
```

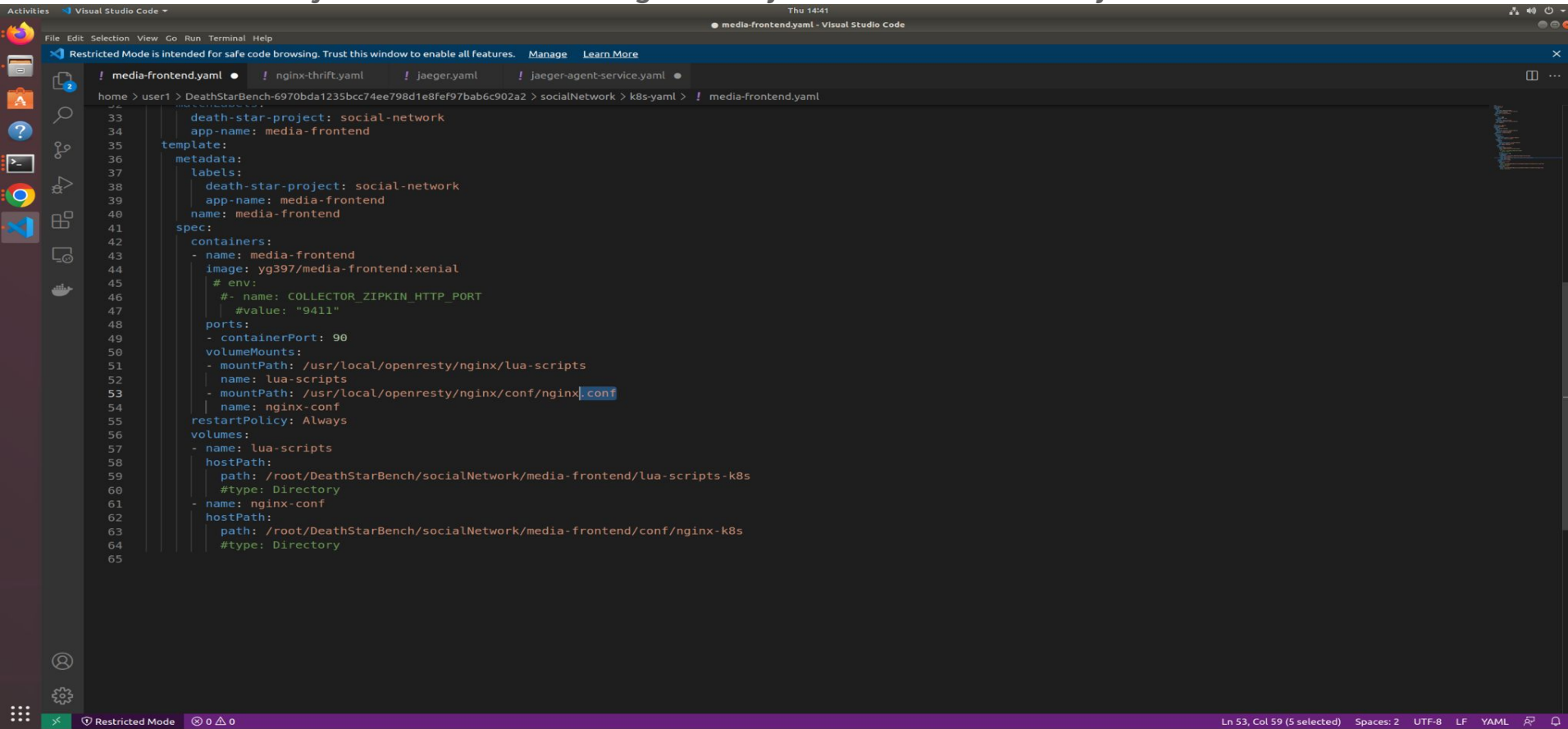
# Troubleshooting

## Error : OCI runtime create failed

```
Activities Terminal
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ kubectl -n social-network describe pod media-frontend-5d78d89bcd-wpznz
Name:         media-frontend-5d78d89bcd-wpznz
Namespace:    social-network
Priority:      0
Node:         minkube/192.168.49.2
Start Time:   Thu, 14 Jul 2022 14:27:15 -0700
Labels:       app=media-frontend
              death-star-project=social-network
Annotations:  pod-template-hash=5d78d89bcd
Status:       Running
IP:           172.17.0.22
IPs:          172.17.0.22
Controlled By: ReplicaSet/media-frontend-5d78d89bcd
Containers:
  media-frontend:
    Container ID:   docker://4b74bcf1ef49bbb136dcb0dadf8b941d6071dcadff4b5290b5b40f27524e827c
    Image:          yg397/media-frontend:xenial
    Image ID:       docker-pullable://yg397/media-frontend@sha256:272049995f2929435b91da34f20fc16216a7f974d1b8f9afa0ccbb529f1a9840
    Port:          90/tcp
    Host Port:      0/tcp
    State:          Waiting
    Reason:         CrashLoopBackOff
    Last State:     Terminated
    Reason:         ContainerCannotRun
    Message:        OCI runtime create failed: container_linux.go:380: starting container process caused: process_linux.go:545: container init caused: rootfs_linux.go:76: mounting "/root/DeathStarBench/socialNetwork/media-frontend/conf/nginx-k8s" to rootfs at "/usr/local/openresty/nginx/conf/nginx.conf" caused: mount through procfd: not a directory: unknown: Are you trying to mount a directory onto a file (or vice-versa)? Check if the specified host path exists and is the expected type
    Exit Code:      127
    Started:        Thu, 14 Jul 2022 14:30:07 -0700
    Finished:       Thu, 14 Jul 2022 14:30:07 -0700
    Ready:          False
    Restart Count:  5
    Environment:    <none>
    Mounts:
      /usr/local/openresty/nginx/conf/nginx.conf from nginx-conf (rw)
      /usr/local/openresty/nginx/lua-scripts from lua-scripts (rw)
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-tgtbb (ro)
Conditions:
  Type             Status
  Initialized       True
  Ready             False
  ContainersReady   False
  PodScheduled      True
Volumes:
  lua-scripts:
    Type:          HostPath (bare host directory volume)
    Path:          /root/DeathStarBench/socialNetwork/media-frontend/lua-scripts-k8s
    HostPathType:
  nginx-conf:
    Type:          HostPath (bare host directory volume)
    Path:          /root/DeathStarBench/socialNetwork/media-frontend/conf/nginx-k8s
    HostPathType:
  kube-api-access-tgtbb:
    Type:          Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName:    kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI:      true
  QoS Class:         BestEffort
  Node-Selectors:    <none>
  Tolerations:       node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
                    node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:
  Type    Reason      Age   From      Message
  ----    -
  Normal  Scheduled   4m45s    default-scheduler   Successfully assigned social-network/media-frontend-5d78d89bcd-wpznz to minkube
  Normal  Pulled      3m25s    kubelet        Container image 'yg397/media-frontend:xenial' already present on machine
  Normal  Created     3m25s    kubelet        Created container media-frontend
  Warning  Failed      3m25s    kubelet        Error: failed to start container "media-frontend": Error response from daemon: OCI runtime create failed: container_linux.go:380: starting container process caused: process_linux.go:545: container init caused: rootfs_linux.go:76: mounting "/root/DeathStarBench/socialNetwork/media-frontend/conf/nginx-k8s" to rootfs at "/usr/local/openresty/nginx/conf/nginx.conf" caused: mount through procfd: not a directory: unknown: Are you trying to mount a directory onto a file (or vice-versa)? Check if the specified host path exists and is the expected type
  Warning  BackOff     2m39s    kubelet        Back-off restarting failed container
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$
```

# Solution

## Remove .conf and .json from YAML files of nginx-thrift.yaml and media-frontend.yaml



```
home > user1 > DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2 > socialNetwork > k8s-yaml > ! media-frontend.yaml
32
33   death-star-project: social-network
34   app-name: media-frontend
35   template:
36     metadata:
37       labels:
38         death-star-project: social-network
39         app-name: media-frontend
40       name: media-frontend
41     spec:
42       containers:
43       - name: media-frontend
44         image: yg397/media-frontend:xenial
45         # env:
46         #   - name: COLLECTOR_ZIPKIN_HTTP_PORT
47         #     value: "9411"
48         ports:
49         - containerPort: 90
50         volumeMounts:
51         - mountPath: /usr/local/openresty/nginx/lua-scripts
52           name: lua-scripts
53         - mountPath: /usr/local/openresty/nginx/conf/nginx.conf
54           name: nginx-conf
55       restartPolicy: Always
56       volumes:
57       - name: lua-scripts
58         hostPath:
59           path: /root/DeathStarBench/socialNetwork/media-frontend/lua-scripts-k8s
60           #type: Directory
61       - name: nginx-conf
62         hostPath:
63           path: /root/DeathStarBench/socialNetwork/media-frontend/conf/nginx-k8s
64           #type: Directory
65
```



# Result:

\$ kubectl -n social-network get pods

```
Activities Terminal +
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ kubectl -n social-network get pods
NAME                                READY    STATUS    RESTARTS   AGE
compose-post-red1s-69b5f58955-zjdpk 1/1      Running   0           15h
compose-post-service-544ffbc9dc-nvgwk 1/1      Running   0           15h
home-timeline-red1s-757f654bc9-qkhp5 1/1      Running   0           15h
home-timeline-service-78856dd4f7-f51z7 1/1      Running   0           15h
jaeger-5b7b8bedf8-9bats              1/1      Running   0           15h
media-content-50fcd0f8f8-6kct7       1/1      Running   0           4h33m
media-memcached-76f58c8c64-99j6t     1/1      Running   0           15h
media-mongodb-6dc7b884d-h4mrv        1/1      Running   0           15h
media-service-64cc07f84b-z1td        1/1      Running   0           15h
nginx-thrift-7f4b794746-wtd72       1/1      Running   0           15h
post-storage-memcached-65add9dbbd-zqtr5 1/1      Running   0           15h
post-storage-mongodb-6d7744dcdb-fqso9 1/1      Running   0           15h
post-storage-service-67577c8c96-qg7q6 1/1      Running   0           15h
social-graph-mongodb-698fc76998-sqrxx 1/1      Running   0           15h
social-graph-red1s-69659458d8-gz3rq  1/1      Running   0           15h
social-graph-service-67ffb76775-jpavb 1/1      Running   0           15h
text-service-7bc99c956c-k5dg5        1/1      Running   0           15h
unique-id-service-cff45b889-6ql0h     1/1      Running   0           15h
url-shorten-memcached-6fc86c5955-2mhrh 1/1      Running   0           15h
url-shorten-mongodb-5b646777f-5dgbh   1/1      Running   0           15h
url-shorten-service-6449bbd8c-x4nhk    1/1      Running   0           15h
user-memcached-68ff56c9b9-qgk9t       1/1      Running   0           15h
user-mention-service-bbc9453cc-obfcr   1/1      Running   0           15h
user-mongodb-6ff95fc5f9-zlv9d         1/1      Running   0           15h
user-service-84ff47d64-xnfbg          1/1      Running   0           15h
user-timeline-mongodb-6c8bc4cf7-pxgns 1/1      Running   0           15h
user-timeline-red1s-897bb77f9-grbxh   1/1      Running   0           15h
user-timeline-service-7bdc9b569-mzgw   1/1      Running   0           15h
write-home-timeline-rabbitmq-5bf5f4cd8c-cp88f 1/1      Running   0           15h
write-home-timeline-service-687d984b89-cp47h 0/1      CrashLoopBackOff 60 (5m4s ago) 15h
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$
```

# Important check

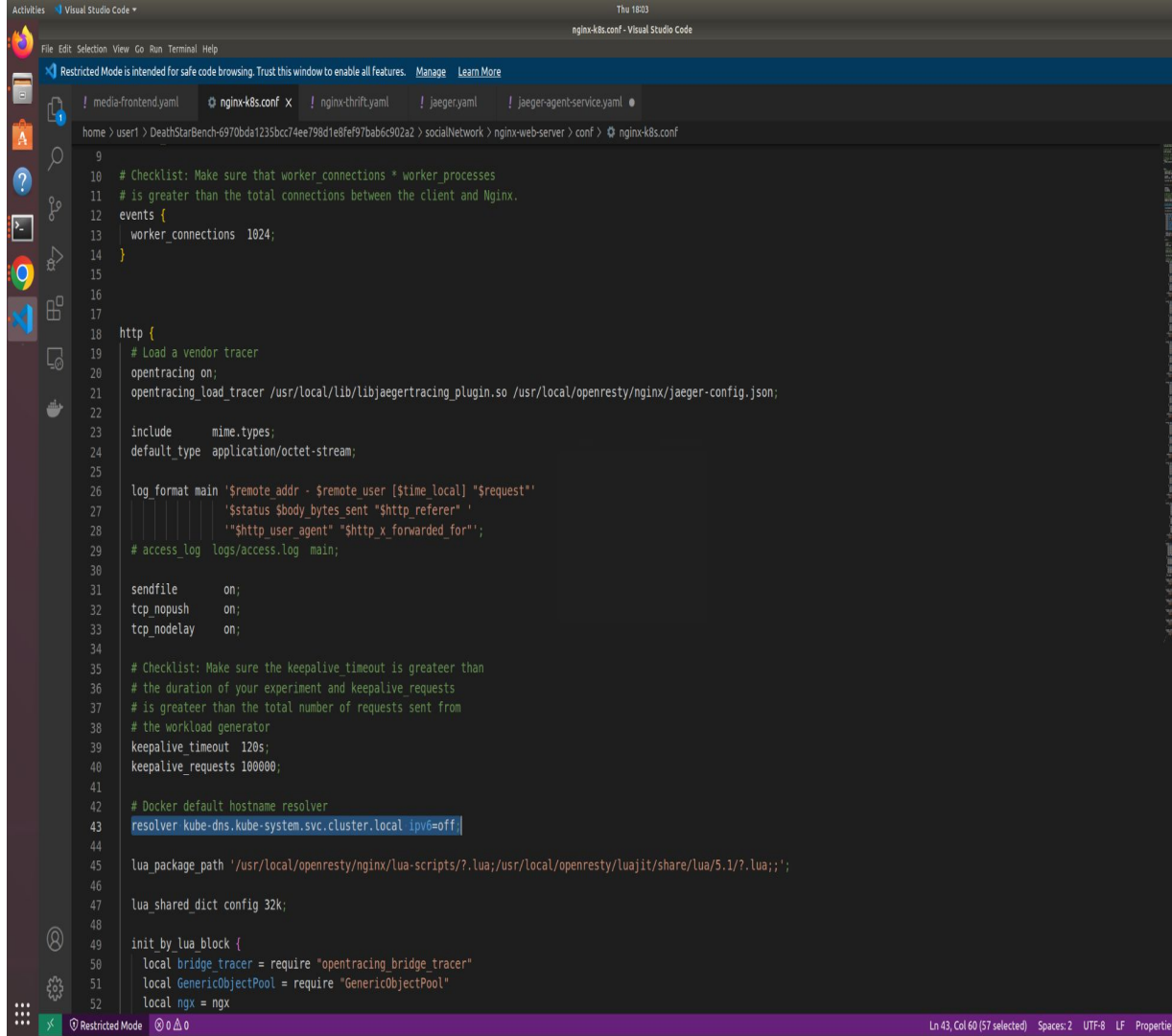
Set the resolver to be the **FQDN** of the core-dns or kube-dns service of your cluster in

<path-of-repo>/socialNetwork/nginx-web-server/conf/nginx-k8s.conf

and

<path-of-repo>/socialNetwork/media-frontend/conf/nginx-k8s.conf.

**Note:** If you do not deploy core-dns or kube-dns, I am not sure whether all things below still work.



# Steps to check the connection refused error

```
$ minikube start
```

```
$ kubectl apply -f
```

```
/home/user1/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml
```

```
$ kubectl -n social-network get pods (check if pods are in running state)
```

```
$ minikube ip (to check cluster IP)
```

ctd..

\$ kubectl -n social-network get services

jaeger-out , media-frontend and nginx-thrift should have TYPE as NodePort

```
Activities Terminal Thu 15:05
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ kubectl -n social-network get services
NAME                                TYPE                CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
compose-post-redis                  ClusterIP            10.97.130.183    <none>            6379/TCP          16h
compose-post-service                 ClusterIP            10.100.84.50     <none>            9090/TCP          16h
home-timeline-redis                  ClusterIP            10.110.64.13     <none>            6379/TCP          16h
home-timeline-service                 ClusterIP            10.105.128.169   <none>            9090/TCP          16h
jaeger                                ClusterIP            10.103.254.207   <none>            5775/UDP,5778/TCP,6831/UDP,6832/UDP,14250/TCP,14268/TCP  16h
jaeger-out                           NodePort              10.99.92.116     <none>            16686:30975/TCP   16h
media-frontend                       NodePort              10.103.103.230   <none>            8080:32276/TCP    16h
media-memcached                      ClusterIP            10.98.195.57     <none>            11211/TCP         16h
media-mongodb                         ClusterIP            10.105.8.32      <none>            27017/TCP         16h
media-service                         ClusterIP            10.109.5.232     <none>            9090/TCP          16h
nginx-thrift                         NodePort              10.99.219.175    <none>            8081:32022/TCP    16h
post-storage-memcached                ClusterIP            10.108.37.74     <none>            11211/TCP         16h
post-storage-mongodb                  ClusterIP            10.100.67.55     <none>            27017/TCP         16h
post-storage-service                  ClusterIP            10.103.150.223   <none>            9090/TCP          16h
social-graph-mongodb                  ClusterIP            10.104.73.128    <none>            27017/TCP         16h
social-graph-redis                    ClusterIP            10.105.219.186   <none>            6379/TCP          16h
social-graph-service                  ClusterIP            10.104.249.159   <none>            9090/TCP          16h
text-service                          ClusterIP            10.100.101.198   <none>            9090/TCP          16h
unique-ld-service                     ClusterIP            10.107.102.190   <none>            9090/TCP          16h
url-shorten-memcached                 ClusterIP            10.103.95.234    <none>            11211/TCP         16h
url-shorten-mongodb                   ClusterIP            10.104.61.215    <none>            27017/TCP         16h
url-shorten-service                   ClusterIP            10.101.126.93    <none>            9090/TCP          16h
user-memcached                        ClusterIP            10.98.115.185    <none>            11211/TCP         16h
user-mention-service                  ClusterIP            10.110.67.123    <none>            9090/TCP          16h
user-mongodb                          ClusterIP            10.102.164.110   <none>            27017/TCP         16h
user-service                          ClusterIP            10.110.236.252    <none>            9090/TCP          16h
user-timeline-mongodb                 ClusterIP            10.104.29.122    <none>            27017/TCP         16h
user-timeline-redis                   ClusterIP            10.110.17.175    <none>            6379/TCP          16h
user-timeline-service                 ClusterIP            10.99.238.70     <none>            9090/TCP          16h
write-home-timeline-rabbitmq          ClusterIP            10.101.72.219    <none>            4369/TCP,5671/TCP,5672/TCP,25672/TCP  16h
write-home-timeline-service           ClusterIP            10.107.187.173   <none>            9090/TCP          16h
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$
```

# ctd..

## \$ minikube -n social-network service --all

```
Activities Terminal
File Edit View Search Terminal Help
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ minikube -n social-network service --all
service social-network/compose-post-redis has no node port
service social-network/compose-post-service has no node port
service social-network/home-timeline-redis has no node port
service social-network/home-timeline-service has no node port
service social-network/jaeger has no node port
service social-network/media-memcached has no node port
service social-network/media-mongodb has no node port
service social-network/media-service has no node port
service social-network/post-storage-memcached has no node port
service social-network/post-storage-mongodb has no node port
service social-network/post-storage-service has no node port
service social-network/social-graph-mongodb has no node port
service social-network/social-graph-redis has no node port
service social-network/social-graph-service has no node port
service social-network/text-service has no node port
service social-network/unique-id-service has no node port
service social-network/url-shorten-memcached has no node port
service social-network/url-shorten-mongodb has no node port
service social-network/url-shorten-service has no node port
service social-network/user-memcached has no node port
service social-network/user-mention-service has no node port
service social-network/user-mongodb has no node port
service social-network/user-service has no node port
service social-network/user-timeline-mongodb has no node port
service social-network/user-timeline-redis has no node port
service social-network/user-timeline-service has no node port
service social-network/write-home-timeline-rabbitmq has no node port
service social-network/write-home-timeline-service has no node port

-----
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|-----|-----|-----|
| social-network | compose-post-redis | No node port |
| social-network | compose-post-service | No node port |
| social-network | home-timeline-redis | No node port |
| social-network | home-timeline-service | No node port |
| social-network | jaeger | No node port |
| social-network | jaeger-out | 16086 | http://192.168.49.2:30975 |
| social-network | media-frontend | 8080 | http://192.168.49.2:3276 |
| social-network | media-memcached | No node port |
| social-network | media-mongodb | No node port |
| social-network | media-service | No node port |
| social-network | nginx-thrift | 8081 | http://192.168.49.2:32022 |
| social-network | post-storage-memcached | No node port |
| social-network | post-storage-mongodb | No node port |
| social-network | post-storage-service | No node port |
| social-network | social-graph-mongodb | No node port |
| social-network | social-graph-redis | No node port |
| social-network | social-graph-service | No node port |
| social-network | text-service | No node port |
| social-network | unique-id-service | No node port |
| social-network | url-shorten-memcached | No node port |
| social-network | url-shorten-mongodb | No node port |
| social-network | url-shorten-service | No node port |
| social-network | user-memcached | No node port |
| social-network | user-mention-service | No node port |
| social-network | user-mongodb | No node port |
| social-network | user-service | No node port |
| social-network | user-timeline-mongodb | No node port |
| social-network | user-timeline-redis | No node port |
| social-network | user-timeline-service | No node port |
| social-network | write-home-timeline-rabbitmq | No node port |
| social-network | write-home-timeline-service | No node port |
-----
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$
```

# Going to the URL of jaeger-out service

```
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml
File Edit View Search Terminal Help
user1@master-node:~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ minikube -n social-network service --all
service social-network/compose-post-redis has no node port
service social-network/compose-post-service has no node port
service social-network/home-timeline-redis has no node port
service social-network/home-timeline-service has no node port
service social-network/jaeger has no node port
service social-network/media-memcached has no node port
service social-network/media-mongodb has no node port
service social-network/media-service has no node port
service social-network/post-storage-memcached has no node port
service social-network/post-storage-mongodb has no node port
service social-network/post-storage-service has no node port
service social-network/social-graph-mongodb has no node port
service social-network/social-graph-redis has no node port
service social-network/social-graph-service has no node port
service social-network/text-service has no node port
service social-network/unique-id-service has no node port
service social-network/url-shorten-memcached has no node port
service social-network/url-shorten-mongodb has no node port
service social-network/url-shorten-service has no node port
service social-network/user-memcached has no node port
service social-network/user-mention-service has no node port
service social-network/user-mongodb has no node port
service social-network/user-service has no node port
service social-network/user-timeline-mongodb has no node port
service social-network/user-timeline-redis has no node port
service social-network/user-timeline-service has no node port
service social-network/write-home-timeline-rabbitmq has no node port
service social-network/write-home-timeline-service has no node port

```

NAMESPACE	NAME	TARGET PORT	URL
social-network	compose-post-redis	No node port	
social-network	compose-post-service	No node port	
social-network	home-timeline-redis	No node port	
social-network	home-timeline-service	No node port	
social-network	jaeger	No node port	
social-network	jaeger-out	1656	http://192.168.49.2:30975
social-network	media-frontend	8080	http://192.168.49.2:32276
social-network	media-memcached	No node port	
social-network	media-mongodb	No node port	
social-network	media-service	No node port	
social-network	nginx-thrift	8081	http://192.168.49.2:32022
social-network	post-storage-memcached	No node port	
social-network	post-storage-mongodb	No node post	
social-network	post-storage-service	No node port	
social-network	social-graph-mongodb	No node port	
social-network	social-graph-redis	No node port	
social-network	social-graph-service	No node port	
social-network	text-service	No node port	
social-network	unique-id-service	No node port	
social-network	url-shorten-memcached	No node port	
social-network	url-shorten-mongodb	No node port	
social-network	url-shorten-service	No node port	
social-network	user-memcached	No node port	
social-network	user-mention-service	No node port	
social-network	user-mongodb	No node port	
social-network	user-service	No node port	
social-network	user-timeline-mongodb	No node port	
social-network	user-timeline-redis	No node port	
social-network	user-timeline-service	No node port	
social-network	write-home-timeline-rabbitmq	No node port	
social-network	write-home-timeline-service	No node port	

```
user1@master-node:~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$
```

# Successfully working on kubernetes

Activities Google Chrome 192.168.49.2 x Jaeger UI + Thu 17:52

← → ↻ ⚠ Not secure | 192.168.49.2:30975/search

Move End Of L... DeathStarBen... docker - Can't... "minikube ip"...

JAEGER UI Search Compare System Architecture Monitor

🔍 Lookup by Trace ID... About Jaeger ▾

Search JSON File

Service (1)

jaeger-query

Operation (3)

all

Tags ⓘ

http.status\_code=200 error=true

Lookback

Last Hour


Max Duration Min Duration

e.g. 1.2s, 100ms, 500us e.g. 1.2s, 100ms, 500us

Limit Results

20

Find Traces



Jaeger is an open source distributed tracing system.

Learn more about Jaeger

Sign Up for the Jaeger newsletter

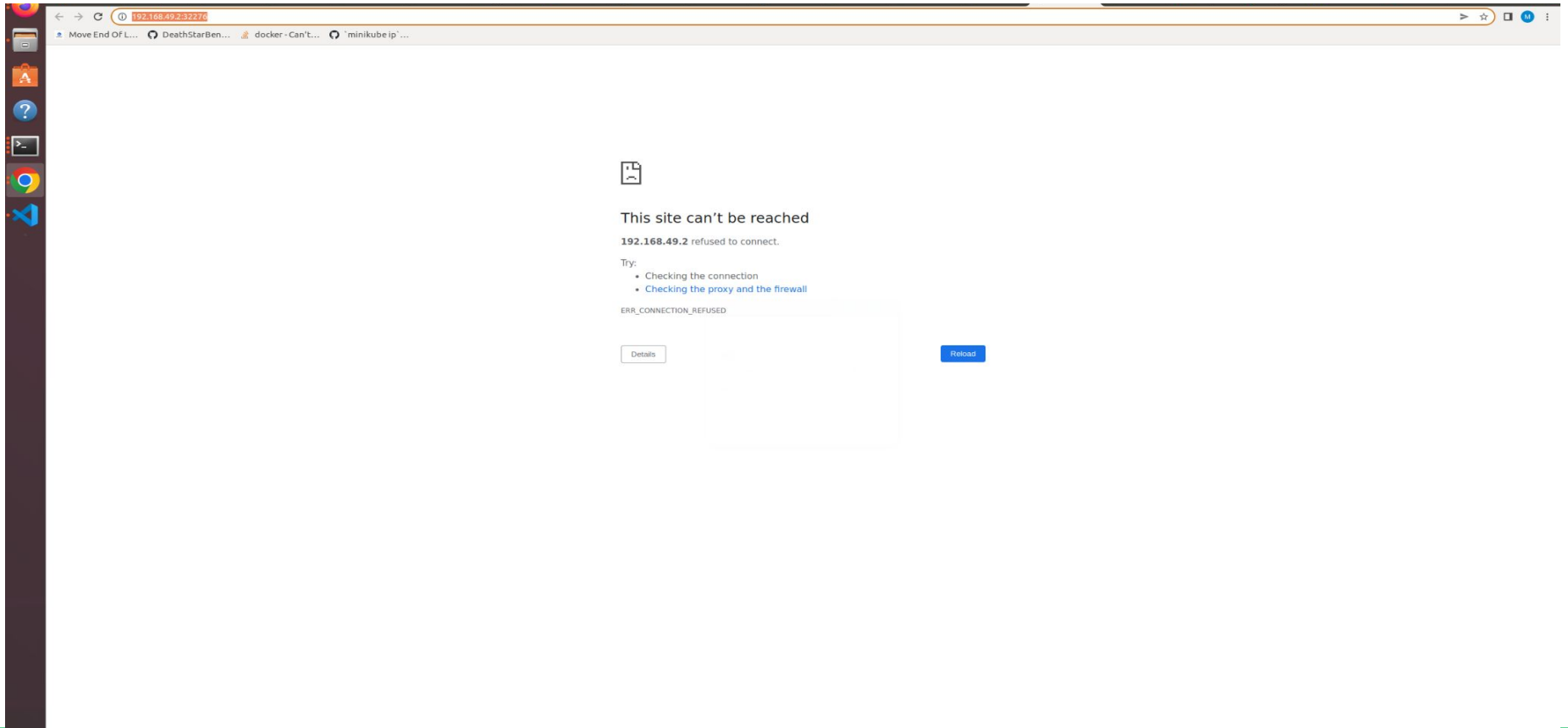


# Going to the URL of media-frontend service

```
Activities Terminal Thu 10:16
user1@master-node: ~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml
| social-network | user-timeline-service | No node port |
| social-network | write-home-timeline-rabbitmq | No node port |
| social-network | write-home-timeline-service | No node port |
|-----|
user1@master-node:~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ kubectl -n social-network apply -f media-frontend.yaml
service/media-frontend configured
deployment.apps/media-frontend configured
user1@master-node:~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ kubectl -n social-network apply -f nginx-thrift.yaml
service/nginx-thrift configured
deployment.apps/nginx-thrift configured
user1@master-node:~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$ minikube -n social-network service --all
service social-network/compose-post-redis has no node port
service social-network/compose-post-service has no node port
service social-network/home-timeline-redis has no node port
service social-network/home-timeline-service has no node port
service social-network/jaeger has no node port
service social-network/media-memcached has no node port
service social-network/media-mongodb has no node port
service social-network/media-service has no node port
service social-network/post-storage-memcached has no node port
service social-network/post-storage-mongodb has no node port
service social-network/post-storage-service has no node port
service social-network/social-graph-mongodb has no node port
service social-network/social-graph-redis has no node port
service social-network/social-graph-service has no node port
service social-network/text-service has no node port
service social-network/unique-id-service has no node port
service social-network/url-shorten-memcached has no node port
service social-network/url-shorten-mongodb has no node port
service social-network/url-shorten-service has no node port
service social-network/user-memcached has no node port
service social-network/user-mention-service has no node port
service social-network/user-mongodb has no node port
service social-network/user-service has no node port
service social-network/user-timeline-mongodb has no node port
service social-network/user-timeline-redis has no node port
service social-network/user-timeline-service has no node port
service social-network/write-home-timeline-rabbitmq has no node port
service social-network/write-home-timeline-service has no node port
|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|
| social-network | compose-post-redis | No node port |
| social-network | compose-post-service | No node port |
| social-network | home-timeline-redis | No node port |
| social-network | home-timeline-service | No node port |
| social-network | jaeger | No node port |
| social-network | jaeger-out | 10680 | http://192.168.49.2:30975 |
| social-network | media-frontend | 8080 | http://192.168.49.2:32276 |
| social-network | media-memcached | No node port |
| social-network | media-mongodb | No node port |
| social-network | media-service | No node port |
| social-network | nginx-thrift | 8081 | http://192.168.49.2:32022 |
| social-network | post-storage-memcached | No node port |
| social-network | post-storage-mongodb | No node port |
| social-network | post-storage-service | No node port |
| social-network | social-graph-mongodb | No node port |
| social-network | social-graph-redis | No node port |
| social-network | social-graph-service | No node port |
| social-network | text-service | No node port |
| social-network | unique-id-service | No node port |
| social-network | url-shorten-memcached | No node port |
| social-network | url-shorten-mongodb | No node port |
| social-network | url-shorten-service | No node port |
| social-network | user-memcached | No node port |
| social-network | user-mention-service | No node port |
| social-network | user-mongodb | No node port |
| social-network | user-service | No node port |
| social-network | user-timeline-mongodb | No node port |
| social-network | user-timeline-redis | No node port |
| social-network | user-timeline-service | No node port |
| social-network | write-home-timeline-rabbitmq | No node port |
| social-network | write-home-timeline-service | No node port |
|-----|
user1@master-node:~/DeathStarBench-6970bda1235bcc74ee798d1e8fef97bab6c902a2/socialNetwork/k8s-yaml$
```



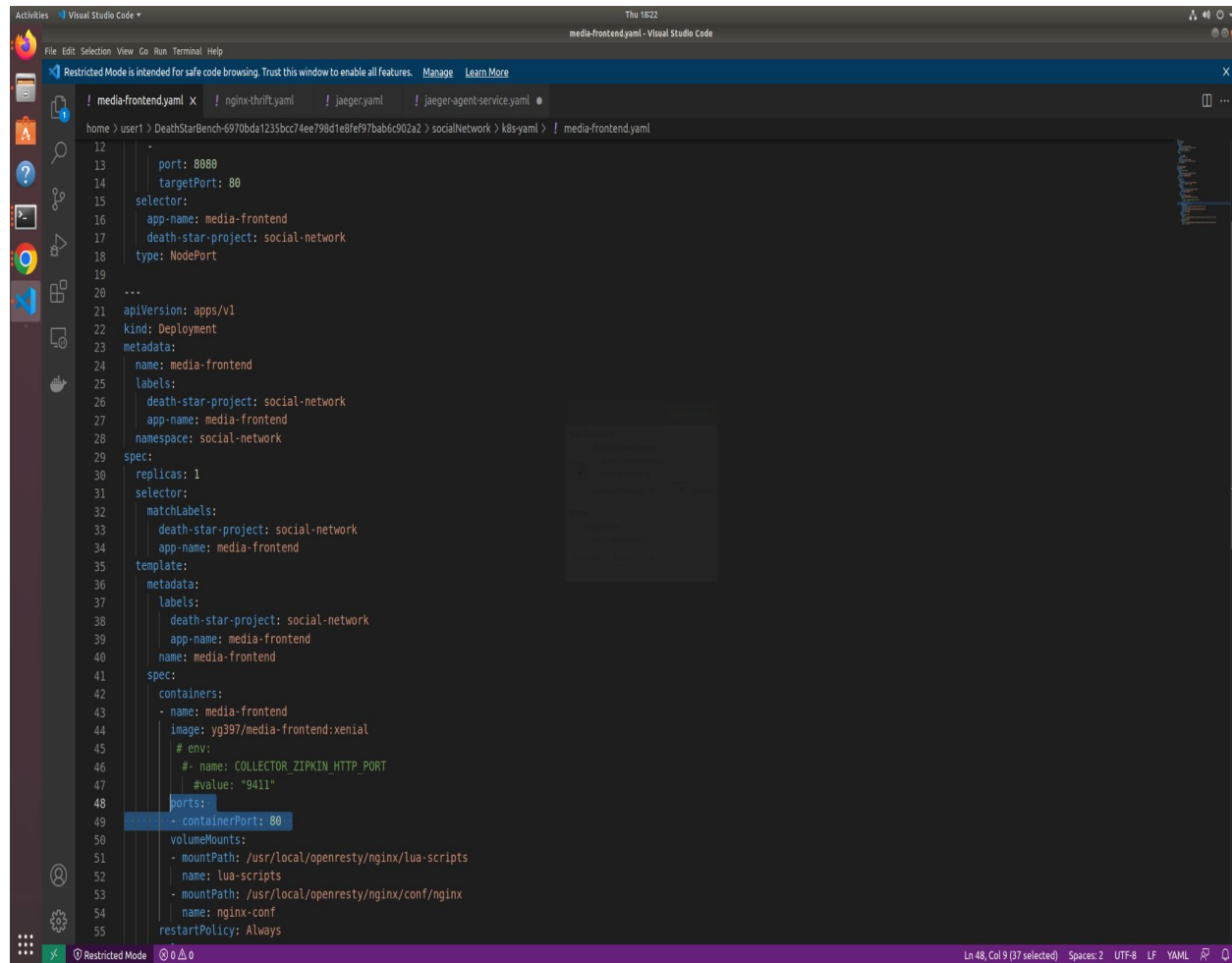
Gave the error shown below



# Solution:

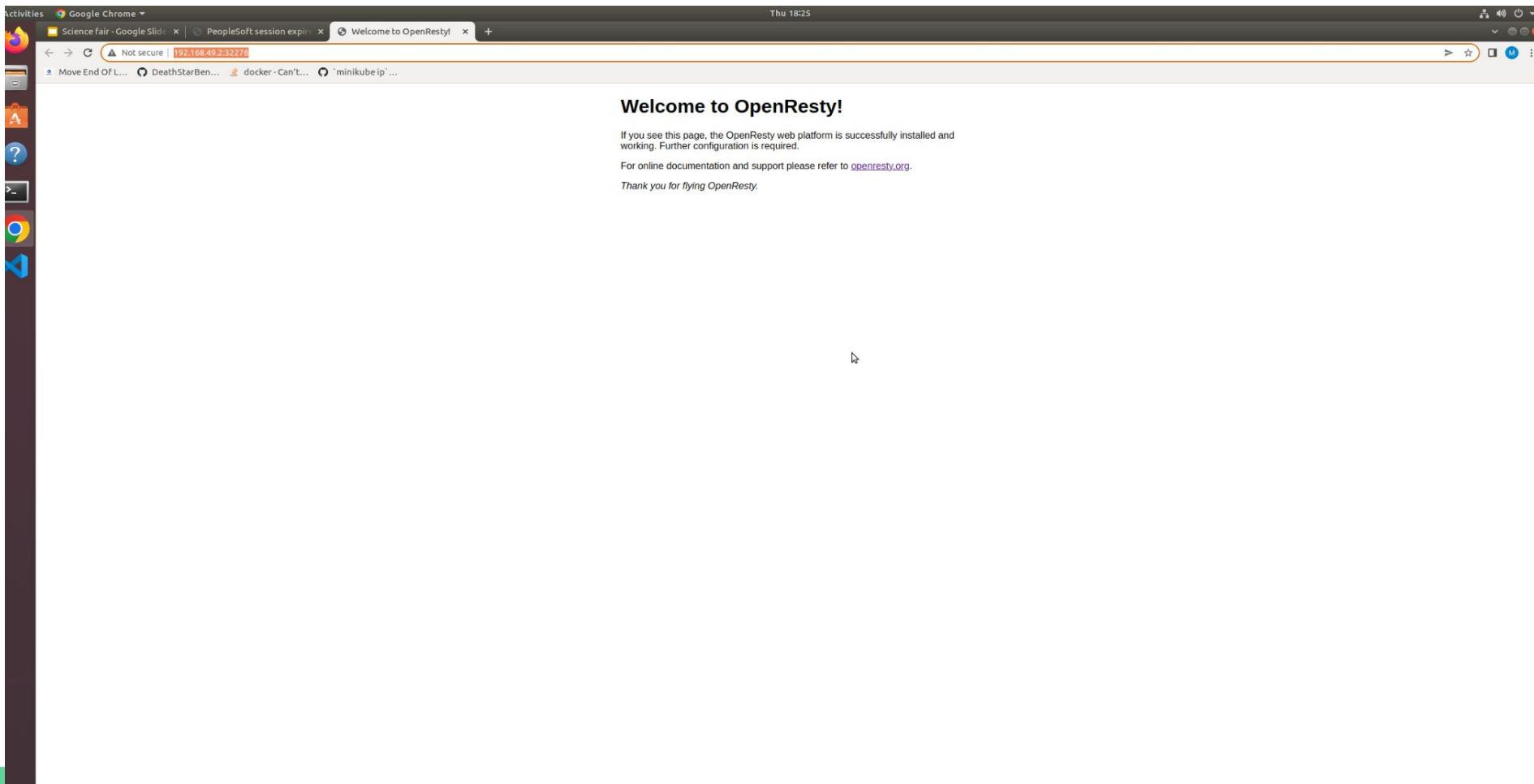
Change the container port to 80 in media-frontend.yaml

**Imp:** container port and target port should be same



```
12  port: 8080
13  targetPort: 80
14
15  selector:
16    app-name: media-frontend
17    death-star-project: social-network
18  type: NodePort
19
20 ---
21 apiVersion: apps/v1
22 kind: Deployment
23 metadata:
24   name: media-frontend
25   labels:
26     death-star-project: social-network
27     app-name: media-frontend
28   namespace: social-network
29 spec:
30   replicas: 1
31   selector:
32     matchLabels:
33       death-star-project: social-network
34       app-name: media-frontend
35   template:
36     metadata:
37       labels:
38         death-star-project: social-network
39         app-name: media-frontend
40         name: media-frontend
41     spec:
42       containers:
43       - name: media-frontend
44         image: yg397/media-frontend:xenial
45         # env:
46         # - name: COLLECTOR_ZIPKIN_HTTP_PORT
47         #   value: "9411"
48         ports:
49         - containerPort: 80
50       volumeMounts:
51       - mountPath: /usr/local/openresty/nginx/lua-scripts
52         name: lua-scripts
53       - mountPath: /usr/local/openresty/nginx/conf/nginx
54         name: nginx-conf
55       restartPolicy: Always
```

# Successfully working on kubernetes



THANK YOU.