

Linux-Foundation

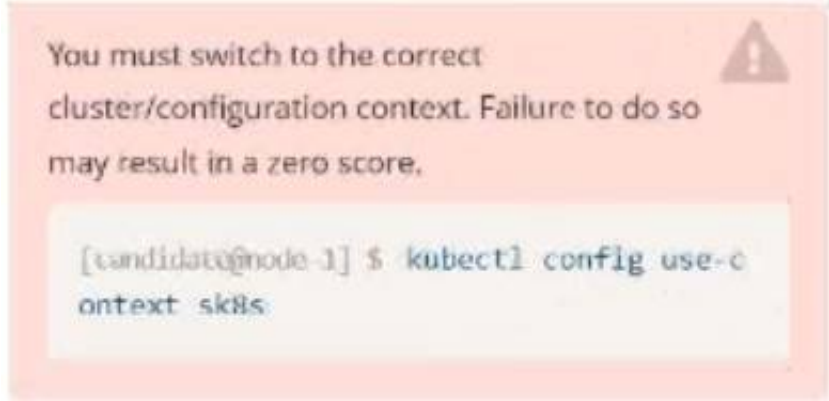
Exam Questions CKAD

Certified Kubernetes Application Developer (CKAD) Program



NEW QUESTION 1

Exhibit:

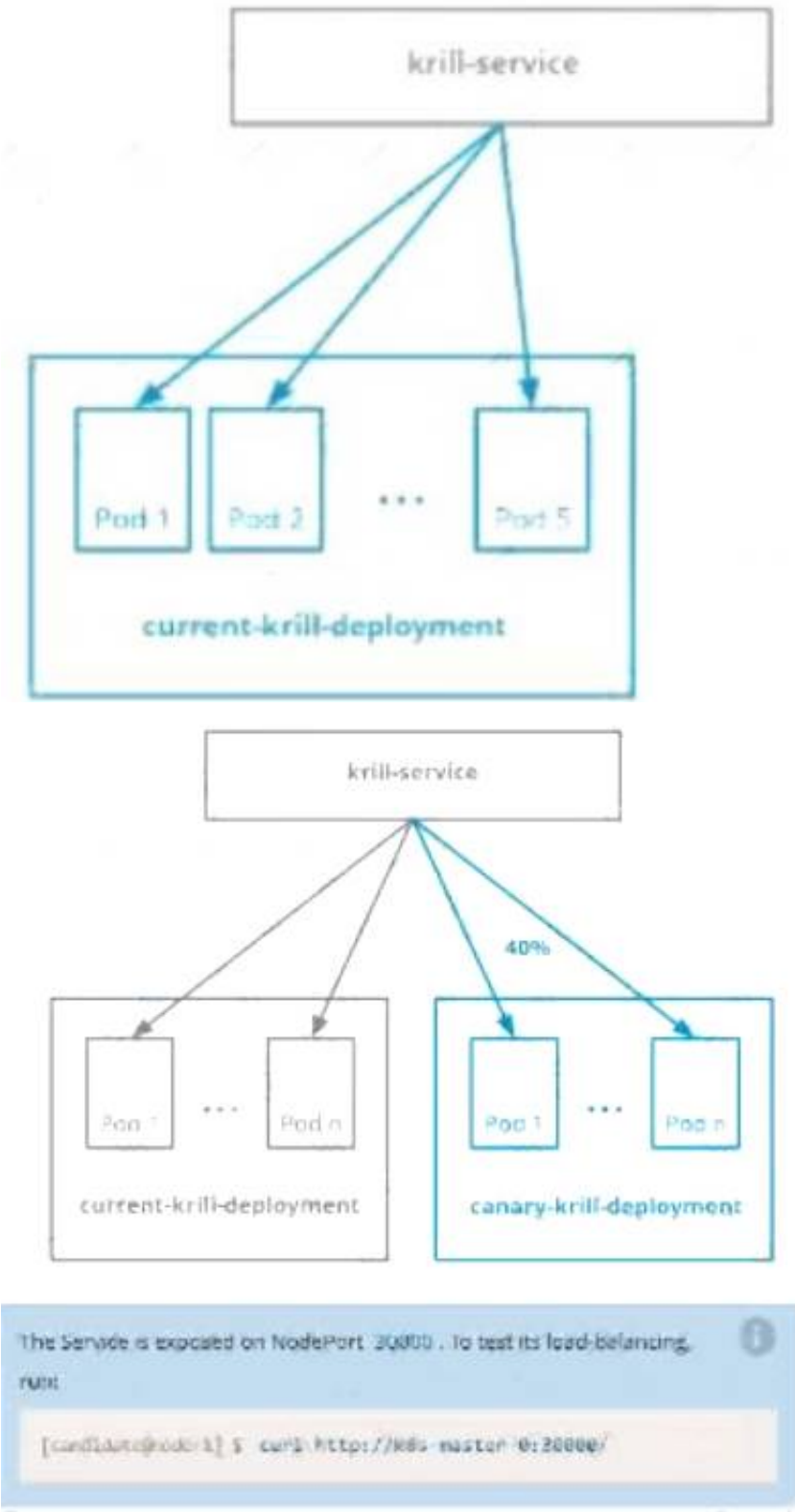


Context

You are asked to prepare a Canary deployment for testing a new application release.

Task:

A Service named krill-Service in the goshawk namespace points to 5 pod created by the Deployment named current-krill-deployment



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:

```
candidate@node-1:~/humane-stork$ kubectl scale deploy canary-krill-deployment --replicas 4 -n goshawk
deployment.apps/canary-krill-deployment scaled
candidate@node-1:~/humane-stork$ kubectl get deploy -n goshawk
NAME                                READY  UP-TO-DATE  AVAILABLE  AGE
canary-krill-deployment             4/4    4            4           46s
current-krill-deployment            5/5    5            5          7h22m
candidate@node-1:~/humane-stork$ wget https://k8s.io/examples/
```

Text Description automatically generated

```
File Edit View Terminal Tabs Help
candidate@node-1:~/humane-storks$ wget https://k8s.io/examples/admin/resource/quota-pod.yaml
--2022-09-24 11:43:51-- https://k8s.io/examples/admin/resource/quota-pod.yaml
Resolving k8s.io (k8s.io)... 34.107.204.206, 2600:1901:0:26f3::
Connecting to k8s.io (k8s.io)|34.107.204.206|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://kubernetes.io/examples/admin/resource/quota-pod.yaml [following]
--2022-09-24 11:43:52-- https://kubernetes.io/examples/admin/resource/quota-pod.yaml
Resolving kubernetes.io (kubernetes.io)... 147.75.40.148
Connecting to kubernetes.io (kubernetes.io)|147.75.40.148|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 90 [application/x-yaml]
Saving to: 'quota-pod.yaml'

quota-pod.yaml      100%[=====]          90  --.-KB/s   in 0s

2022-09-24 11:43:52 (15.0 MB/s) - 'quota-pod.yaml' saved [90/90]

candidate@node-1:~/humane-storks$ vim quota-pod.yaml

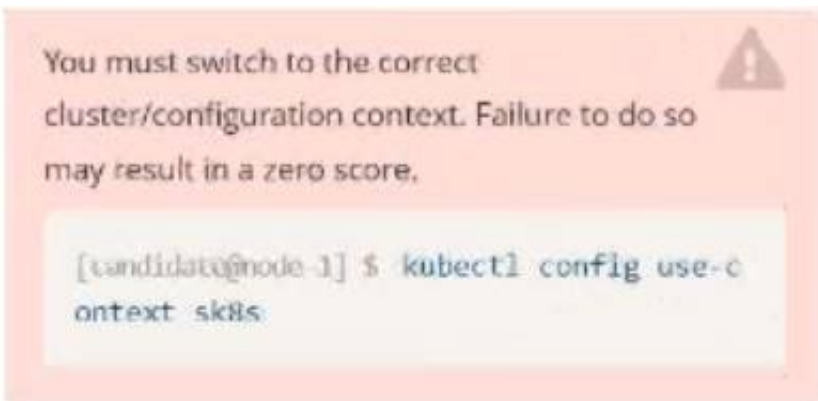
File Edit View Terminal Tabs Help

2022-09-24 11:43:52 (15.0 MB/s) - 'quota-pod.yaml' saved [90/90]

candidate@node-1:~/humane-storks$ vim quota-pod.yaml
candidate@node-1:~/humane-storks$ kubectl create -f quota-pod.yaml
resourcequota/pod-demo created
candidate@node-1:~/humane-storks$ kubectl get quota -n go
No resources found in go namespace.
candidate@node-1:~/humane-storks$ kubectl get quota -n goshawk
NAME      AGE      REQUEST    LIMIT
pod-demo  19s     pods: 9/10
candidate@node-1:~/humane-storks$ curl http://k8s-master-0:30000/
current-krill-deployment-fb7c7995c-kvtjr
app.kubernetes.io/name="current"
app.kubernetes.io/part-of="krill"
pod-template-hash="fb7c7995c"candidate@node-1:~/humane-storks$ curl http://k8s-master-0:30000/
current-krill-deployment-fb7c7995c-4whfm
app.kubernetes.io/name="current"
app.kubernetes.io/part-of="krill"
pod-template-hash="fb7c7995c"candidate@node-1:~/humane-storks$ curl http://k8s-master-0:30000/
canary-krill-deployment-5f78fd4786-dfk7l
app.kubernetes.io/name="canary"
app.kubernetes.io/part-of="krill"
pod-template-hash="5f78fd4786"candidate@node-1:~/humane-storks$ curl http://k8s-master-0:30000/
canary-krill-deployment-5f78fd4786-z5zrt
app.kubernetes.io/name="canary"
app.kubernetes.io/part-of="krill"
pod-template-hash="5f78fd4786"candidate@node-1:~/humane-storks$ curl http://k8s-master-0:30000/
canary-krill-deployment-5f78fd4786-2774b
app.kubernetes.io/name="canary"
app.kubernetes.io/part-of="krill"
pod-template-hash="5f78fd4786"candidate@node-1:~/humane-storks$
```

NEW QUESTION 2

Exhibit:



Task:



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:

```
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ vim ~/credible-mite/www.yaml
```

Text Description automatically generated


```
File Edit View Terminal Tabs Help
apiVersion: apps/v1
kind: Deployment
metadata:
  name: www-deployment
  namespace: cobra
spec:
  replicas: 3
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: "nginx:stable"
          ports:
            - containerPort: 80
          volumeMounts:
            - mountPath: /var/log/nginx
              name: logs
          env:
            - name: NGINX_ENTRYPOINT_QUIET_LOGS
              value: "1"
      volumes:
        - name: logs
          emptyDir: {}
```

Text Description automatically generated

```
File Edit View Terminal Tabs Help
deployment.apps/expose created
candidate@node-1:~$ kubectl get pods -n ckad00014
NAME                                READY   STATUS              RESTARTS   AGE
expose-85dd99d4d9-25675             0/1     ContainerCreating   0           6s
expose-85dd99d4d9-4fhcc             0/1     ContainerCreating   0           6s
expose-85dd99d4d9-fld7j             0/1     ContainerCreating   0           6s
expose-85dd99d4d9-tt6rm             0/1     ContainerCreating   0           6s
expose-85dd99d4d9-vjd8b             0/1     ContainerCreating   0           6s
expose-85dd99d4d9-vtzpq             0/1     ContainerCreating   0           6s
candidate@node-1:~$ kubectl get deploy -n ckad00014
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
expose    6/6     6            6           15s
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ vim ~/credible-mite/www.yaml
candidate@node-1:~$ vim ~/credible-mite/www.yaml
candidate@node-1:~$ kubectl apply -f ~/credible-mite/www.yaml
deployment.apps/www-deployment created
candidate@node-1:~$ kubectl get pods -n cobra
NAME                                READY   STATUS              RESTARTS   AGE
www-deployment-d899c6b49-d6ccg      1/1     Running             0           6s
www-deployment-d899c6b49-f796l      0/1     ContainerCreating   0           6s
www-deployment-d899c6b49-ztfcw      0/1     ContainerCreating   0           6s
candidate@node-1:~$ kubectl get deploy -n cobra
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
www-deployment  3/3     3            3           11s
candidate@node-1:~$ kubectl get pods -n cobra
NAME                                READY   STATUS              RESTARTS   AGE
www-deployment-d899c6b49-d6ccg      1/1     Running             0           14s
www-deployment-d899c6b49-f796l      1/1     Running             0           14s
www-deployment-d899c6b49-ztfcw      1/1     Running             0           14s
candidate@node-1:~$
```

NEW QUESTION 3

Exhibit:



Task

A deployment is falling on the cluster due to an incorrect image being specified. Locate the deployment, and fix the problem.

- A. Mastered
- B. Not Mastered

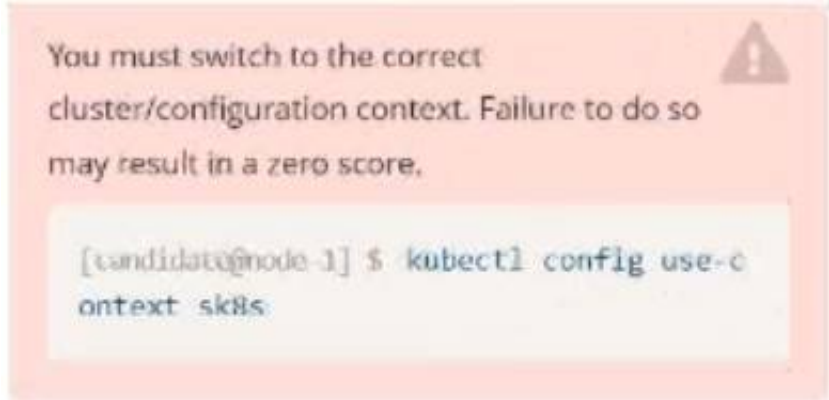
Answer: A

Explanation:

create deploy hello-deploy --image=nginx --dry-run=client -o yaml > hello-deploy.yaml
Update deployment image to nginx:1.17.4: kubec
nginx=nginx:1.17.4

NEW QUESTION 4

Exhibit:



Task:
Update the Pod ckad00018-newpod in the ckad00018 namespace to use a NetworkPolicy allowing the Pod to send and receive traffic only to and from the pods web and db

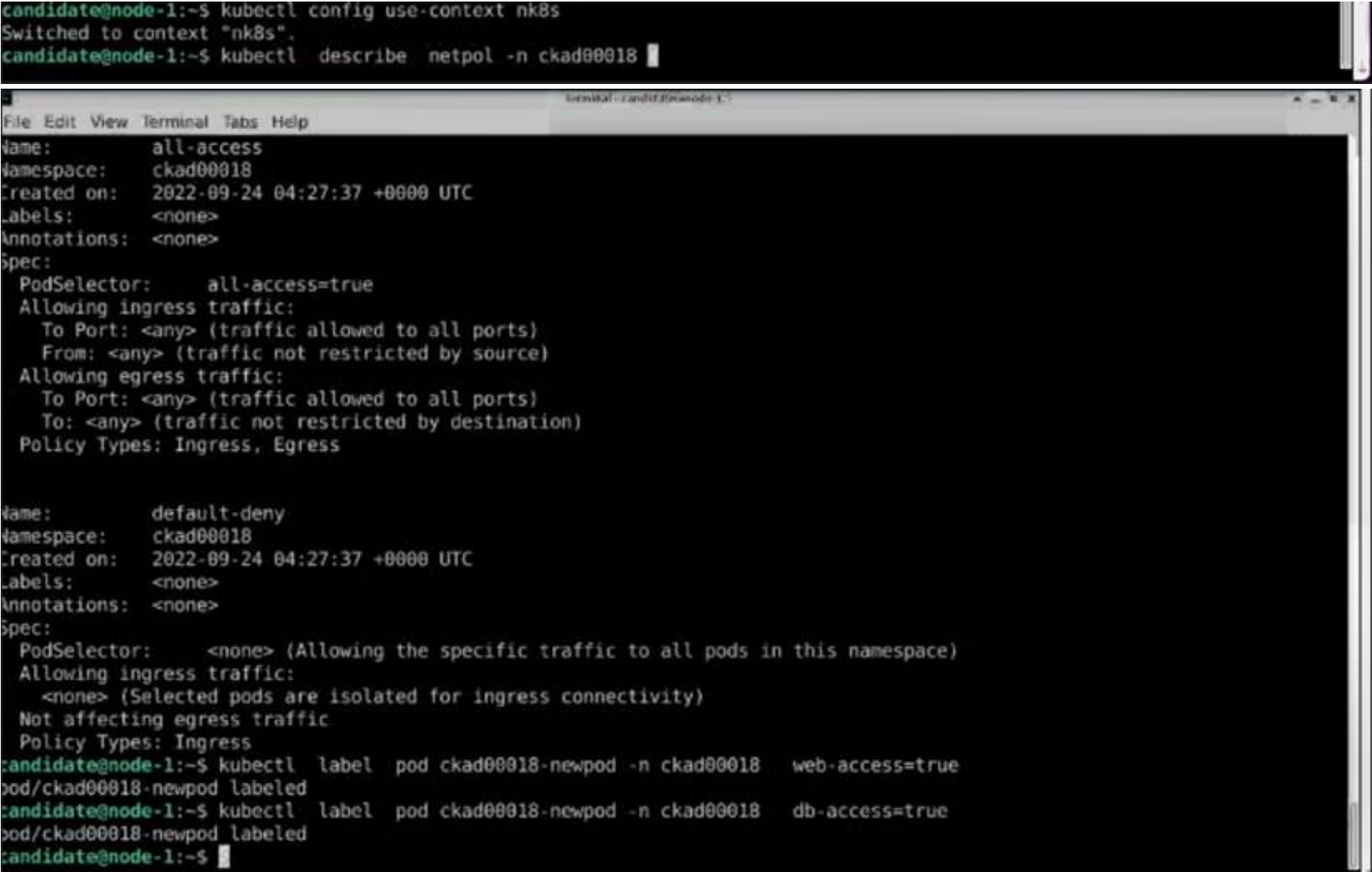


- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:



NEW QUESTION 5

Exhibit:



Context

You are tasked to create a ConfigMap and consume the ConfigMap in a pod using a volume mount. Task

Please complete the following:

- Create a ConfigMap named another-config containing the key/value pair: key4/value3
- start a pod named nginx-configmap containing a single container using the nginx image, and mount the key you just created into the pod under directory /also/a/path

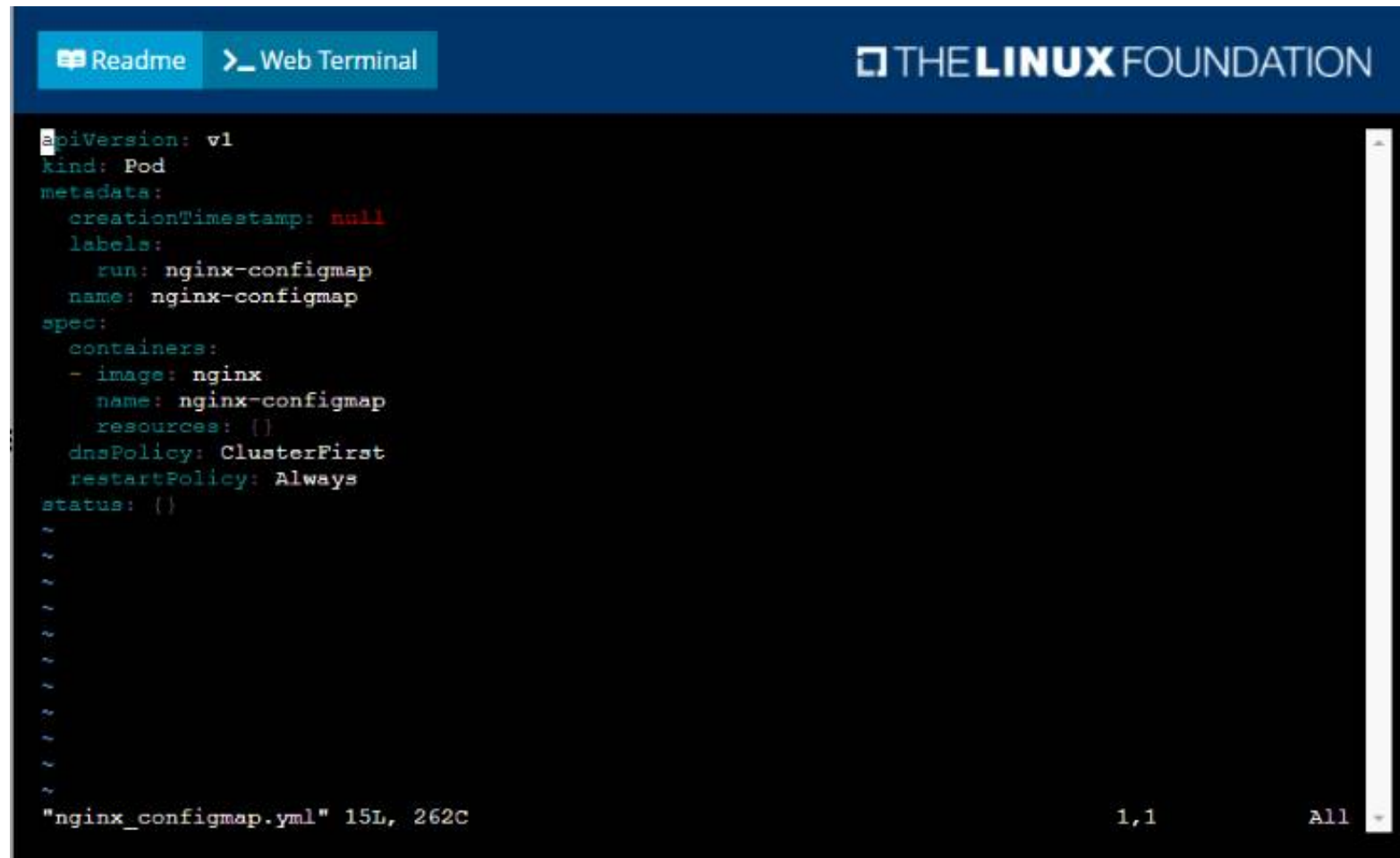
- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:

```
student@node-1:~$ kubectl create configmap another-config --from-literal=key4=value3
configmap/another-config created
student@node-1:~$ kubectl get configmap
NAME          DATA   AGE
another-config 1       5s
student@node-1:~$ kubectl run nginx-configmap --image=nginx --dry-run=client -o yaml > nginx_configmap.yml
student@node-1:~$ vim nginx_configmap.yml ^C
student@node-1:~$ mv nginx_configmap.yml nginx_configmap.yml
student@node-1:~$ vim nginx_co
```



Readme
Web Terminal
THE LINUX FOUNDATION

```

apiVersion: v1
kind: Pod
metadata:
  labels:
    run: nginx-configmap
  name: nginx-configmap
spec:
  containers:
  - image: nginx
    name: nginx-configmap
    volumeMounts:
    - name: myvol
      mountPath: /also/a/path
  volumes:
  - name: myvol
    configMap:
      name: another-config
~
~
~
~
~
~
~
~
~
~
13,6 All

```

```

student@node-1:~$ kubectl create configmap another-config --from-literal=key4=value3
configmap/another-config created
student@node-1:~$ kubectl get configmap
NAME          DATA      AGE
another-config 1          5s
student@node-1:~$ kubectl run nginx-configmap --image=nginx --dry-run=client -o yaml > nginx_conf
igmap.yaml
student@node-1:~$ vim nginx_configmap.yaml ^C
student@node-1:~$ mv nginx_configmap.yaml nginx_configmap.yaml
student@node-1:~$ vim nginx_configmap.yaml
student@node-1:~$

```

```

student@node-1:~$ kubectl run nginx-configmap --image=nginx --dry-run=client -o yaml > nginx_conf
igmap.yaml
student@node-1:~$ vim nginx_configmap.yaml ^C
student@node-1:~$ mv nginx_configmap.yaml nginx_configmap.yaml
student@node-1:~$ vim nginx_configmap.yaml
student@node-1:~$ kubectl create f nginx_configmap.yaml
Error: must specify one of -f and -k

error: unknown command "f nginx_configmap.yaml"
See 'kubectl create -h' for help and examples
student@node-1:~$ kubectl create -f nginx_configmap.yaml
error: error validating "nginx_configmap.yaml": error validating data: ValidationError(Pod.spec.c
ontainers[1]): unknown field "mountPath" in io.k8s.api.core.v1.Container; if you choose to ignor
e these errors, turn validation off with --validate=false
student@node-1:~$ vim nginx_configmap.yaml

```

Readme
Web Terminal
THE LINUX FOUNDATION

```

student@node-1:~$ kubectl create f nginx_configmap.yaml
Error: must specify one of -f and -k

error: unknown command "f nginx_configmap.yaml"
See 'kubectl create -h' for help and examples
student@node-1:~$ kubectl create -f nginx_configmap.yaml
error: error validating "nginx_configmap.yaml": error validating data: ValidationError(Pod.spec.c
ontainers[1]): unknown field "mountPath" in io.k8s.api.core.v1.Container; if you choose to ignor
e these errors, turn validation off with --validate=false
student@node-1:~$ vim nginx_configmap.yaml
student@node-1:~$ kubectl create -f nginx_configmap.yaml
pod/nginx-configmap created
student@node-1:~$ kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
liveness-http 1/1     Running   0           6h44m
nginx-101      1/1     Running   0           6h45m
nginx-configmap 0/1     ContainerCreating 0           5s
nginx-secret   1/1     Running   0           5m39s
poller         1/1     Running   0           6h44m
student@node-1:~$ kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
liveness-http 1/1     Running   0           6h44m
nginx-101      1/1     Running   0           6h45m
nginx-configmap 1/1     Running   0           8s
nginx-secret   1/1     Running   0           5m42s
poller         1/1     Running   0           6h45m
student@node-1:~$ l

```

NEW QUESTION 6

Exhibit:

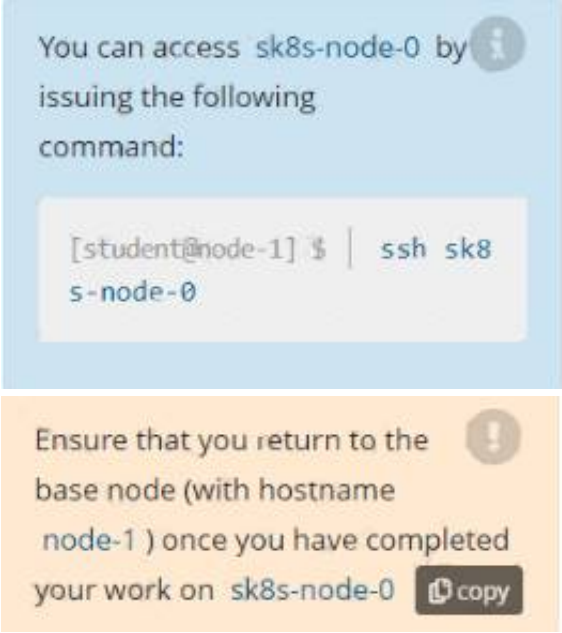


Context

A project that you are working on has a requirement for persistent data to be available. Task

To facilitate this, perform the following tasks:

- Create a file on node sk8s-node-0 at /opt/KDSP00101/data/index.html with the content Acct=Finance
- Create a PersistentVolume named task-pv-volume using hostPath and allocate 1Gi to it, specifying that the volume is at /opt/KDSP00101/data on the cluster's node. The configuration should specify the access mode of ReadWriteOnce . It should define the StorageClass name exam for the PersistentVolume , which will be used to bind PersistentVolumeClaim requests to this PersistenetVolume.
- Create a PefsissentVolumeClaim named task-pv-claim that requests a volume of at least 100Mi and specifies an access mode of ReadWriteOnce
- Create a pod that uses the PersistentVolmeClaim as a volume with a label app: my-storage-app mounting the resulting volume to a mountPath /usr/share/nginx/html inside the pod

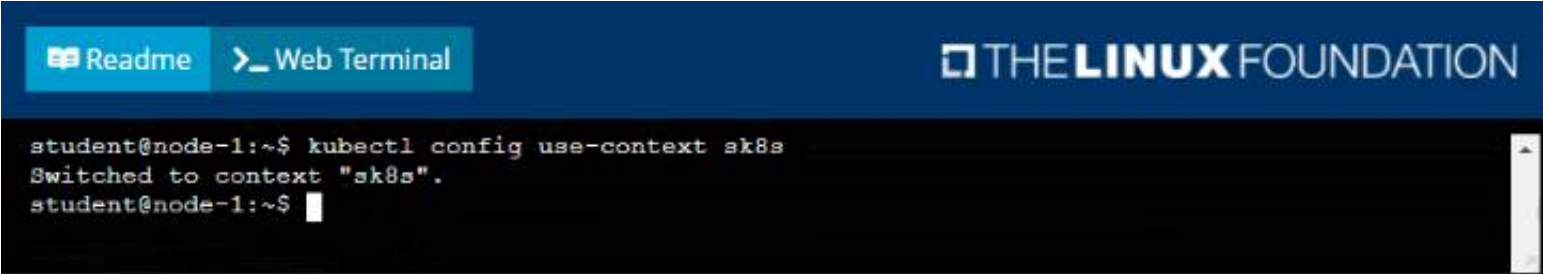


- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:



Readme
Web Terminal
THE **LINUX** FOUNDATION

```

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Fri Oct  9 08:52:09 UTC 2020

System load:  2.02           Users logged in:      0
Usage of /:   10.3% of 242.29GB IP address for eth0:   10.250.3.115
Memory usage: 2%           IP address for docker0: 172.17.0.1
Swap usage:   0%           IP address for cni0:   10.244.1.1
Processes:   38

* Kubernetes 1.19 is out! Get it in one command with:

  sudo snap install microk8s --channel=1.19 --classic

https://microk8s.io/ has docs and details.

7 packages can be updated.
1 update is a security update.

New release '20.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

student@sk8s-node-0:~$

```

Readme
Web Terminal
THE **LINUX** FOUNDATION

```

student@sk8s-node-0:~$ echo 'Acct=Finance' > /opt/KDSP00101/data/index.html
student@sk8s-node-0:~$ vim pv.yml

```

Readme
Web Terminal
THE **LINUX** FOUNDATION

```

-- INSERT --
0,1 All

```

Readme
Web Terminal
THE **LINUX** FOUNDATION

```

apiVersion: v1
kind: PersistentVolume
metadata:
  name: task-pv-volume
spec:
  capacity:
    storage: 1Gi
  accessModes:
    - ReadWriteOnce
  storageClassName: storage
  hostPath:
    path: /opt/KDSP00101/data
    type: Directory

```

Readme
Web Terminal
THE **LINUX** FOUNDATION

```

apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: task-pv-claim
spec:
  accessModes:
    - ReadWriteOnce
  resources:
    requests:
      storage: 100Mi
  storageClassName: storage
~

```

```

student@sk8s-node-0:~$ kubectl create -f pv.yml
persistentvolume/task-pv-volume created
student@sk8s-node-0:~$ kubectl create -f pvc.yml
persistentvolumeclaim/task-pv-claim created
student@sk8s-node-0:~$ kubectl get pv
NAME                CAPACITY  ACCESS MODES   RECLAIM POLICY   STATUS   CLAIM                                STORAGECLASS   AGE
task-pv-volume      1Gi       RWO            Retain           Bound    default/task-pv-claim              storageclass   11s
student@sk8s-node-0:~$ kubectl get pvc
NAME                STATUS   VOLUME          CAPACITY  ACCESS MODES   STORAGECLASS   AGE
task-pv-claim       Bound    task-pv-volume  1Gi       RWO            storage        9s
student@sk8s-node-0:~$ vim pod.yml

```

Readme
Web Terminal
THE **LINUX** FOUNDATION

```

apiVersion: v1
kind: Pod
metadata:
  name: mypod
  labels:
    app: my-storage-app
spec:
  containers:
    - name: myfrontend
      image: nginx
      volumeMounts:
        - mountPath: "/usr/share/nginx/html"
          name: mypod
  volumes:
    - name: mypod
      persistentVolumeClaim:
        claimName: task-pv-claim
~
~
~
~
~
~
~
~
17,32 All

```

```

student@sk8s-node-0:~$ kubectl create -f pod.yml
pod/mypod created
student@sk8s-node-0:~$ kubectl get

```

Readme
Web Terminal
THE **LINUX** FOUNDATION

```

student@sk8s-node-0:~$ kubectl get pods
NAME    READY   STATUS             RESTARTS   AGE
mypod   0/1     ContainerCreating   0           4s
student@sk8s-node-0:~$ kubectl get pods
NAME    READY   STATUS             RESTARTS   AGE
mypod   0/1     ContainerCreating   0           8s
student@sk8s-node-0:~$ kubectl get pods
NAME    READY   STATUS    RESTARTS   AGE
mypod   1/1     Running   0           10s
student@sk8s-node-0:~$ logout
Connection to 10.250.3.115 closed.
student@node-1:~$

```

NEW QUESTION 7

Exhibit:



Context

Your application's namespace requires a specific service account to be used.

Task

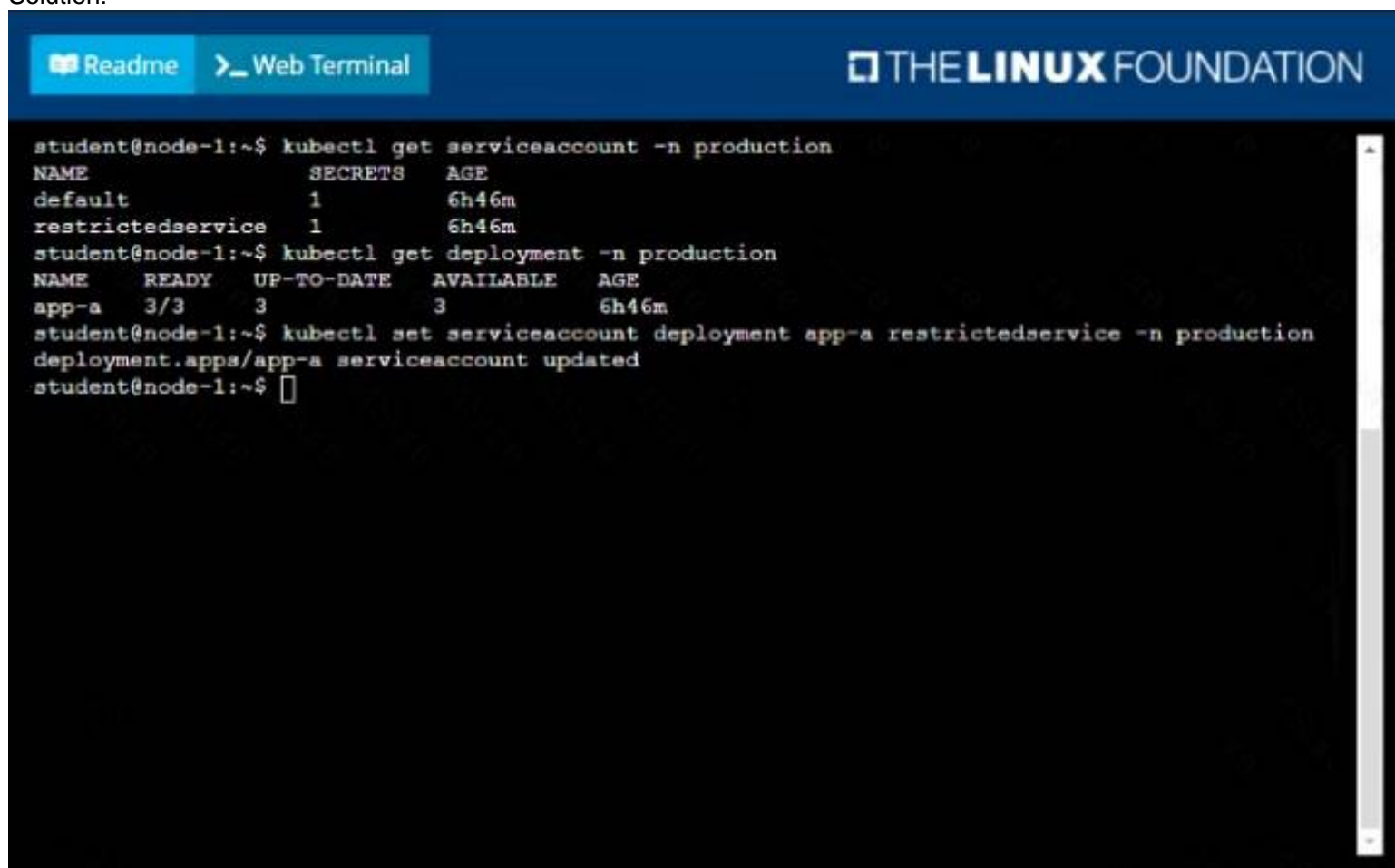
Update the app-a deployment in the production namespace to run as the restrictedservice service account. The service account has already been created.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:



NEW QUESTION 8

Exhibit:



Context

A container within the poller pod is hard-coded to connect the nginxsvc service on port 90. As this port changes to 5050 an additional container needs to be added to the poller pod which adapts the container to connect to this new port. This should be realized as an ambassador container within the pod.

Task

- Update the nginxsvc service to serve on port 5050.
- Add an HAProxy container named haproxy bound to port 90 to the poller pod and deploy the enhanced pod. Use the image haproxy and inject the configuration located at /opt/KDMC00101/haproxy.cfg, with a ConfigMap named haproxy-config, mounted into the container so that haproxy.cfg is available at /usr/local/etc/haproxy/haproxy.cfg. Ensure that you update the args of the poller container to connect to localhost instead of nginxsvc so that the connection is correctly proxied to the new service endpoint. You must not modify the port of the endpoint in poller's args . The spec file used to create the initial poller pod is available in /opt/KDMC00101/poller.yaml

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:

apiVersion: apps/v1 kind: Deployment metadata:

name: my-nginx spec:

selector:

matchLabels: run: my-nginx replicas: 2 template: metadata: labels:

run: my-nginx spec: containers:

- name: my-nginx image: nginx ports:

- containerPort: 90

This makes it accessible from any node in your cluster. Check the nodes the Pod is running on: `kubectl apply -f ./run-my-nginx.yaml`

`kubectl get pods -l run=my-nginx -o wide`

NAME READY STATUS RESTARTS AGE IP NODE

my-nginx-3800858182-jr4a2 1/1 Running 0 13s 10.244.3.4 kubernetes-minion-905m my-nginx-3800858182-kna2y 1/1 Running 0 13s 10.244.2.5 kubernetes-

minion-ljyd Check your pods' IPs:

`kubectl get pods -l run=my-nginx -o yaml | grep podIP` podIP: 10.244.3.4

podIP: 10.244.2.5

NEW QUESTION 9

Exhibit:



Context

A user has reported an aopticaun is unteachable due to a failing livenessProbe . Task

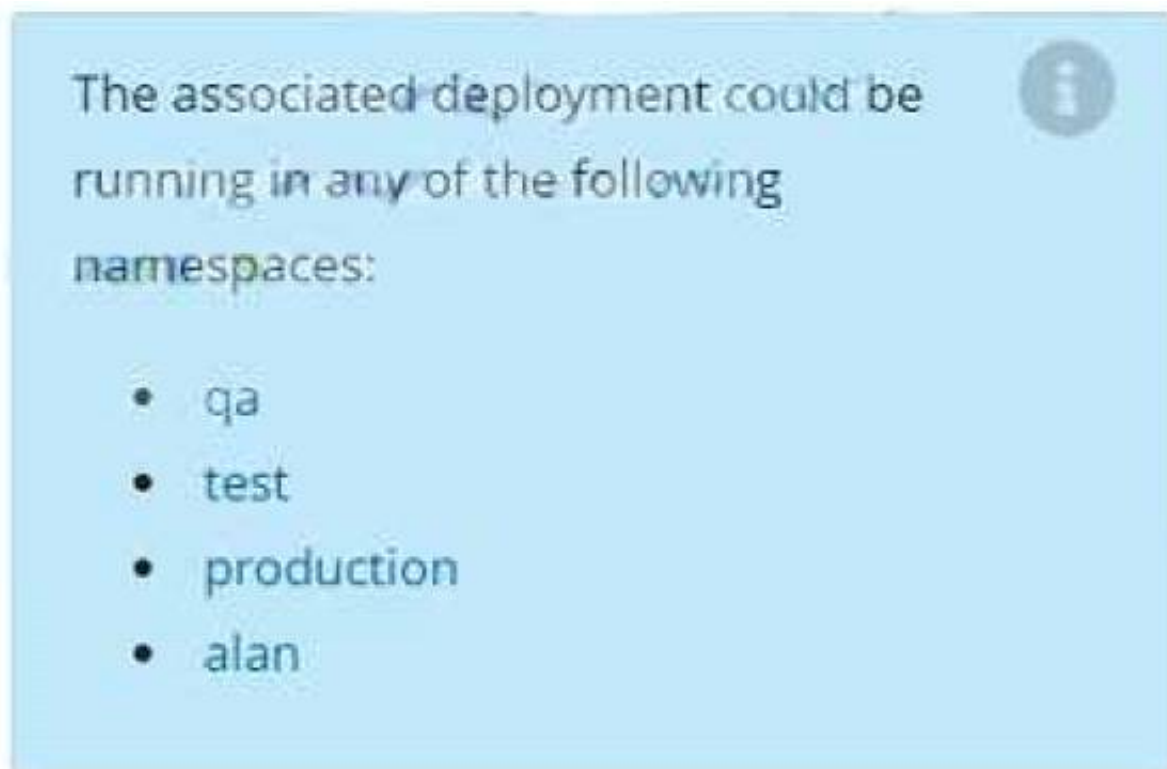
Perform the following tasks:

- Find the broken pod and store its name and namespace to /opt/KDOB00401/broken.txt in the format:



The output file has already been created

- Store the associated error events to a file /opt/KDOB00401/error.txt, The output file has already been created. You will need to use the -o wide output specifier with your command
- Fix the issue.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:

Create the Pod: `kubectl create`

`-f http://k8s.io/docs/tasks/configure-pod-container/`

```
exec-liveness.yaml
Within 30 seconds, view the Pod events: kubectl describe pod liveness-exec
The output indicates that no liveness probes have failed yet:
FirstSeen LastSeen Count From SubobjectPath Type Reason Message
-----
24s 24s 1 {default-scheduler } Normal Scheduled Successfully assigned liveness-exec to worker0
23s 23s 1 {kubelet worker0} spec.containers{liveness} Normal Pulling pulling image "gcr.io/google_containers/busybox"
23s 23s 1 {kubelet worker0} spec.containers{liveness} Normal Pulled Successfully pulled image "gcr.io/google_containers/busybox"
23s 23s 1 {kubelet worker0} spec.containers{liveness} Normal Created Created container with docker id 86849c15382e; Security:[seccomp=unconfined]
23s 23s 1 {kubelet worker0} spec.containers{liveness} Normal Started Started container with docker id 86849c15382e
After 35 seconds, view the Pod events again: kubectl describe pod liveness-exec
At the bottom of the output, there are messages indicating that the liveness probes have failed, and the containers have been killed and recreated.
FirstSeen LastSeen Count From SubobjectPath Type Reason Message
-----
37s 37s 1 {default-scheduler } Normal Scheduled Successfully assigned liveness-exec to worker0
36s 36s 1 {kubelet worker0} spec.containers{liveness} Normal Pulling pulling image "gcr.io/google_containers/busybox"
36s 36s 1 {kubelet worker0} spec.containers{liveness} Normal Pulled Successfully pulled image "gcr.io/google_containers/busybox"
36s 36s 1 {kubelet worker0} spec.containers{liveness} Normal Created Created container with docker id 86849c15382e; Security:[seccomp=unconfined]
36s 36s 1 {kubelet worker0} spec.containers{liveness} Normal Started Started container with docker id 86849c15382e
2s 2s 1 {kubelet worker0} spec.containers{liveness} Warning Unhealthy Liveness probe failed: cat: can't open '/tmp/healthy': No such file or directory
Wait another 30 seconds, and verify that the Container has been restarted: kubectl get pod liveness-exec
The output shows that RESTARTS has been incremented:
NAME READY STATUS RESTARTS AGE
liveness-exec 1/1 Running 1 m
```

NEW QUESTION 10

Exhibit:



Task
 Create a new deployment for running.nginx with the following parameters;

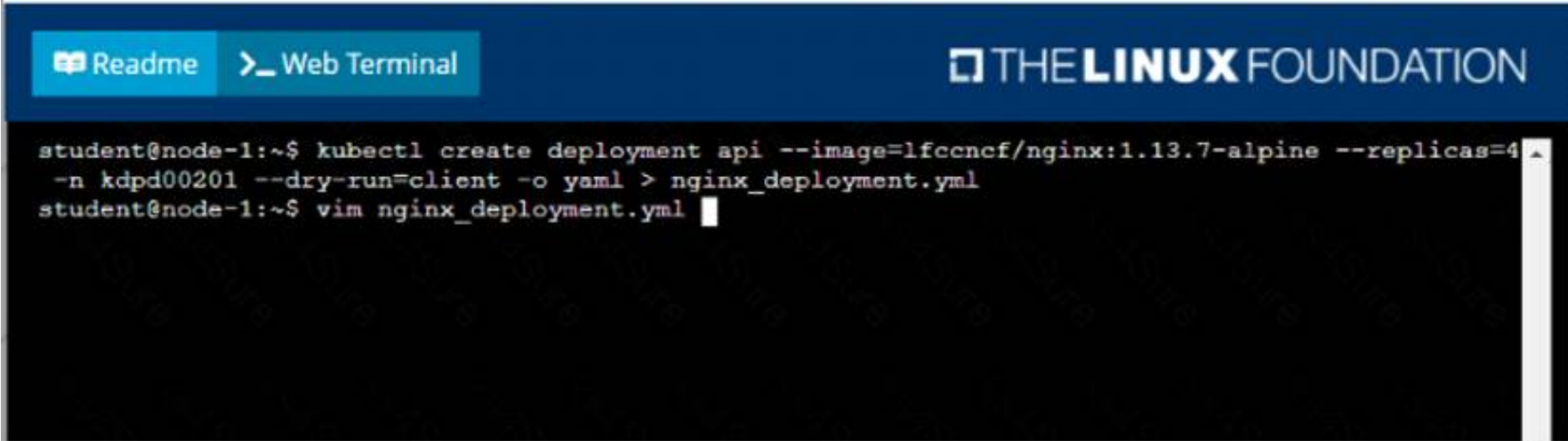
- Run the deployment in the kdpd00201 namespace. The namespace has already been created
- Name the deployment frontend and configure with 4 replicas
- Configure the pod with a container image of lfccncf/nginx:1.13.7
- Set an environment variable of NGINX PORT=8080 and also expose that port for the container above

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:



Readme
Web Terminal
THE **LINUX** FOUNDATION

```

apiVersion: apps/v1
kind: Deployment
metadata:
  creationTimestamp: null
  labels:
    app: api
  name: api
  namespace: kdpd00201
spec:
  replicas: 4
  selector:
    matchLabels:
      app: api
  strategy: {}
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: api
    spec:
      containers:
      - image: lfccncf/nginx:1.13.7-alpine
        name: nginx
        resources: {}
status: {}
~
"nginx_deployment.yml" 25L, 421C
4,1 All

```

Readme
Web Terminal
THE **LINUX** FOUNDATION

```

apiVersion: apps/v1
kind: Deployment
metadata:
  labels:
    app: api
  name: api
  namespace: kdpd00201
spec:
  replicas: 4
  selector:
    matchLabels:
      app: api
  template:
    metadata:
      labels:
        app: api
    spec:
      containers:
      - image: lfccncf/nginx:1.13.7-alpine
        name: nginx
        ports:
        - containerPort: 8080
      env:
      - name: NGINX_PORT
        value: "8080"
~
23,8 All

```

Readme
Web Terminal
THE **LINUX** FOUNDATION

```

student@node-1:~$ kubectl create deployment api --image=lfccncf/nginx:1.13.7-alpine --replicas=4
-n kdpd00201 --dry-run=client -o yaml > nginx_deployment.yml
student@node-1:~$ vim nginx_deployment.yml
student@node-1:~$ kubectl create nginx_deployment.yml
Error: must specify one of -f and -k

error: unknown command "nginx_deployment.yml"
See 'kubectl create -h' for help and examples
student@node-1:~$ kubectl create -f nginx_deployment.yml
error: error validating "nginx_deployment.yml": error validating data: ValidationError(Deployment.spec.template.spec): unknown field "env" in io.k8s.api.core.v1.PodSpec; if you choose to ignore these errors, turn validation off with --validate=false
student@node-1:~$ vim nginx_deployment.yml
student@node-1:~$ kubectl create -f nginx_deployment.yml
deployment.apps/api created
student@node-1:~$ kubectl get pods -n kdpd00201
NAME                                READY   STATUS    RESTARTS   AGE
api-745677f7dc-7hnmv               1/1     Running   0           13s
api-745677f7dc-9q5vp               1/1     Running   0           13s
api-745677f7dc-fd4gk               1/1     Running   0           13s
api-745677f7dc-mbnpc               1/1     Running   0           13s
student@node-1:~$

```

NEW QUESTION 10

Exhibit:



Given a container that writes a log file in format A and a container that converts log files from format A to format B, create a deployment that runs both containers such that the log files from the first container are converted by the second container, emitting logs in format B.

Task:

- Create a deployment named deployment-xyz in the default namespace, that:
- Includes a primary lfcncf/busybox:1 container, named logger-dev
- Includes a sidecar lfcncf/fluentd:v0.12 container, named adapter-zen
- Mounts a shared volume /tmp/log on both containers, which does not persist when the pod is deleted
- Instructs the logger-dev container to run the command

```
while true; do
echo "i luv cncf" >> /
tmp/log/input.log;
sleep 10;
done
```

which should output logs to /tmp/log/input.log in plain text format, with example values:

```
i luv cncf
i luv cncf
i luv cncf
```

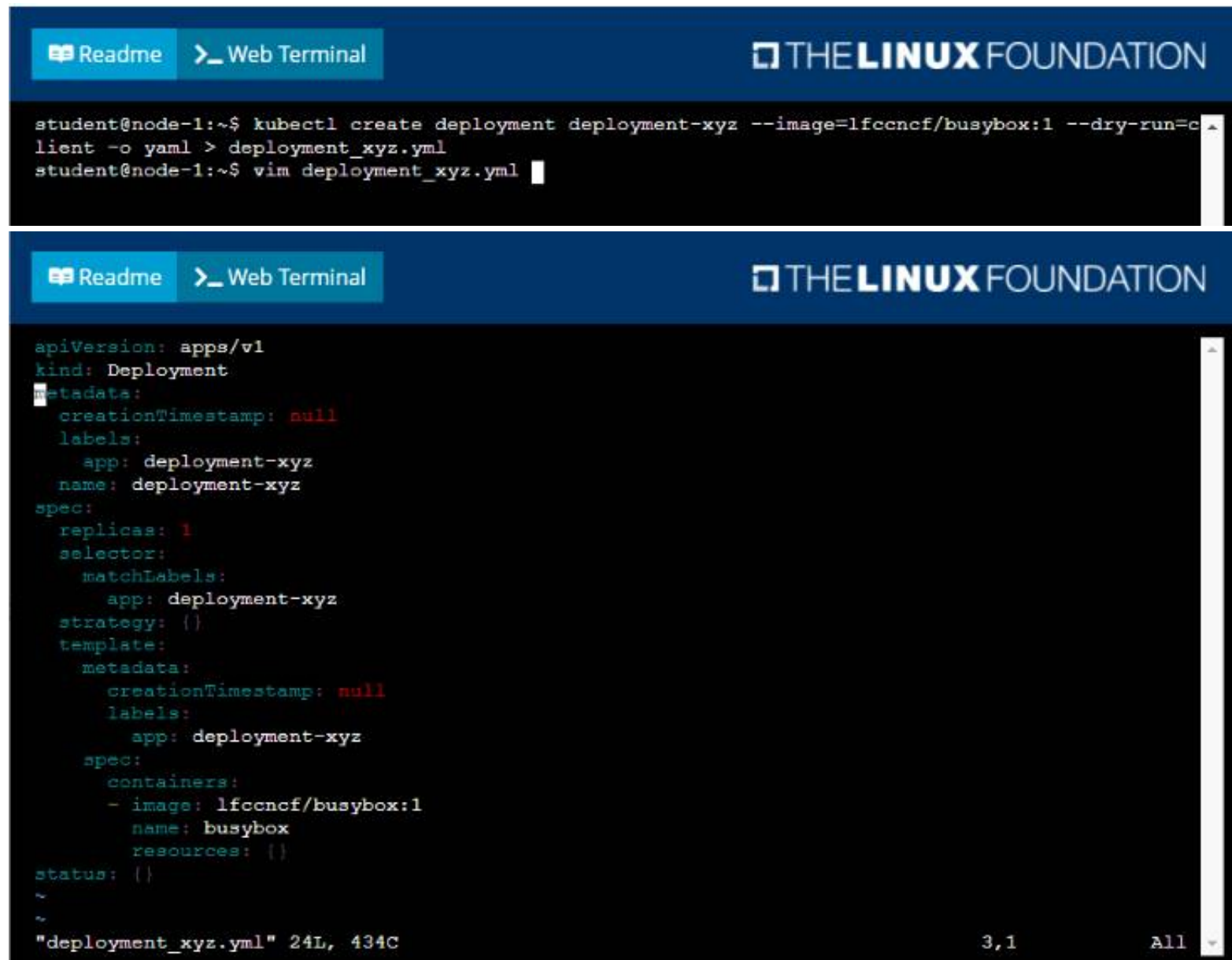
- The adapter-zen sidecar container should read /tmp/log/input.log and output the data to /tmp/log/output.* in Fluentd JSON format. Note that no knowledge of Fluentd is required to complete this task: all you will need to achieve this is to create the ConfigMap from the spec file provided at /opt/KDMC00102/fluentd-configmap.p.yaml , and mount that ConfigMap to /fluentd/etc in the adapter-zen sidecar container

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:



Readme
Web Terminal

THE LINUX FOUNDATION

```

kind: Deployment
metadata:
  labels:
    app: deployment-xyz
    name: deployment-xyz
spec:
  replicas: 1
  selector:
    matchLabels:
      app: deployment-xyz
  template:
    metadata:
      labels:
        app: deployment-xyz
    spec:
      volumes:
      - name: myvol1
        emptyDir: {}
      containers:
      - image: lfccncf/busybox:1
        name: logger-dev
        volumeMounts:
        - name: myvol1
          mountPath: /tmp/log
      - image: lfccncf/fluentd:v0.12
        name: adapter-zen
3 lines yanked
27,22
Bot

```

Readme
Web Terminal

THE LINUX FOUNDATION

```

replicas: 1
selector:
  matchLabels:
    app: deployment-xyz
template:
  metadata:
    labels:
      app: deployment-xyz
  spec:
    volumes:
    - name: myvol1
      emptyDir: {}
    containers:
    - image: lfccncf/busybox:1
      name: logger-dev
      command: ["/bin/sh", "-c", "while [ true ]; do echo 'i luv cnf' >> /tmp/log/input.log; sl
sleep 10; done"]
      volumeMounts:
      - name: myvol1
        mountPath: /tmp/log
    - image: lfccncf/fluentd:v0.12
      name: adapter-zen
      command: ["/bin/sh", "-c", "tail -f /tmp/log/input.log >> /tmp/log/output.log"]
      volumeMounts:
      - name: myvol1
        mountPath: /tmp/log
29,83
Bot

```

Readme
Web Terminal

THE LINUX FOUNDATION

```

metadata:
  labels:
    app: deployment-xyz
spec:
  volumes:
    - name: myvol1
      emptyDir: {}
    - name: myvol2
      configMap:
        name: logconf
  containers:
    - image: lfccncf/busybox:1
      name: logger-dev
      command: ["/bin/sh", "-c", "while [ true ]; do echo 'i luv cncf' >> /tmp/log/input.log; sleep 10; done"]
      volumeMounts:
        - name: myvol1
          mountPath: /tmp/log
    - image: lfccncf/fluentd:v0.12
      name: adapter-zen
      command: ["/bin/sh", "-c", "tail -f /tmp/log/input.log >> /tmp/log/output.log"]
      volumeMounts:
        - name: myvol1
          mountPath: /tmp/log
        - name: myvol2
          mountPath: /fluentd/etc

```

37,33 Bot

```

student@node-1:~$ kubectl create -f deployment_xyz.yml
deployment.apps/deployment-xyz created
student@node-1:~$ kubectl get deployment
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
deployment-xyz 0/1     1            0           5s
student@node-1:~$ kubectl get deployment
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
deployment-xyz 0/1     1            0           9s
student@node-1:~$ kubectl get deployment
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
deployment-xyz 1/1     1            1           12s
student@node-1:~$

```

NEW QUESTION 15

Exhibit:



Context

As a Kubernetes application developer you will often find yourself needing to update a running application. Task
 Please complete the following:

- Update the app deployment in the kdpd00202 namespace with a maxSurge of 5% and a maxUnavailable of 2%
- Perform a rolling update of the web1 deployment, changing the lfccncf/ngmx image version to 1.13
- Roll back the app deployment to the previous version

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Solution:

Readme
Web Terminal

THE LINUX FOUNDATION

```

student@node-1:~$ kubectl edit deployment app -n kdpd00202

```


Readme
Web Terminal

THE LINUX FOUNDATION

```

uid: 1dfa2527-5c61-46a9-8dd3-e24643d3ce14
spec:
  progressDeadlineSeconds: 600
  replicas: 10
  revisionHistoryLimit: 10
  selector:
    matchLabels:
      app: nginx
  strategy:
    rollingUpdate:
      maxSurge: 5%
      maxUnavailable: 2
    type: RollingUpdate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: nginx
    spec:
      containers:
      - image: lfocncf/nginx:1.13
        imagePullPolicy: IfNotPresent
        name: nginx
        ports:
        - containerPort: 80
          protocol: TCP
:wg!

```

Readme
Web Terminal

THE LINUX FOUNDATION

```

student@node-1:~$ kubectl edit deployment app -n kdpd00202
deployment.apps/app edited
student@node-1:~$ kubectl rollout status deployment app -n kdpd00202
Waiting for deployment "app" rollout to finish: 6 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 7 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 7 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 7 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 8 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 8 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 8 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 8 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 9 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 9 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 9 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 1 old replicas are pending termination...
Waiting for deployment "app" rollout to finish: 8 of 10 updated replicas are available...
Waiting for deployment "app" rollout to finish: 9 of 10 updated replicas are available...
deployment "app" successfully rolled out
student@node-1:~$ kubectl rollout undo deployment app -n kdpd00202
deployment.apps/app rolled back
student@node-1:~$ kubectl rollout status deployment app -n kdpd00202
student@node-1:~$ kubectl rollout status deployment app -n kdpd00202
Waiting for deployment "app" rollout to finish: 6 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 6 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 6 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 6 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 7 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 7 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 9 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 9 out of 10 new replicas have been updated...
Waiting for deployment "app" rollout to finish: 1 old replicas are pending termination...
Waiting for deployment "app" rollout to finish: 1 old replicas are pending termination...
Waiting for deployment "app" rollout to finish: 1 old replicas are pending termination...
Waiting for deployment "app" rollout to finish: 8 of 10 updated replicas are available...
Waiting for deployment "app" rollout to finish: 9 of 10 updated replicas are available...
deployment "app" successfully rolled out
student@node-1:~$

```

NEW QUESTION 19

.....

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