Free Questions for CKAD by dumpssheet

Shared by Flynn on 22-07-2024

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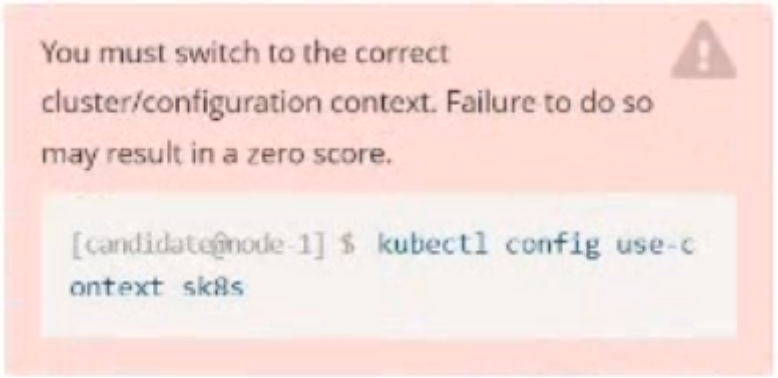
Question 1

Question Type: MultipleChoice

Refer to Exhibit.



Task:

Create a Pod named nginx resources in the existing pod resources namespace.

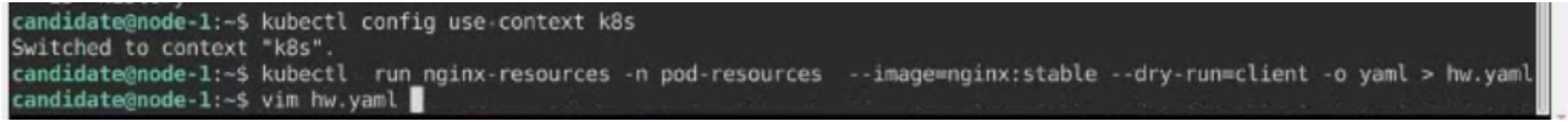
Specify a single container using nginx:stable image.

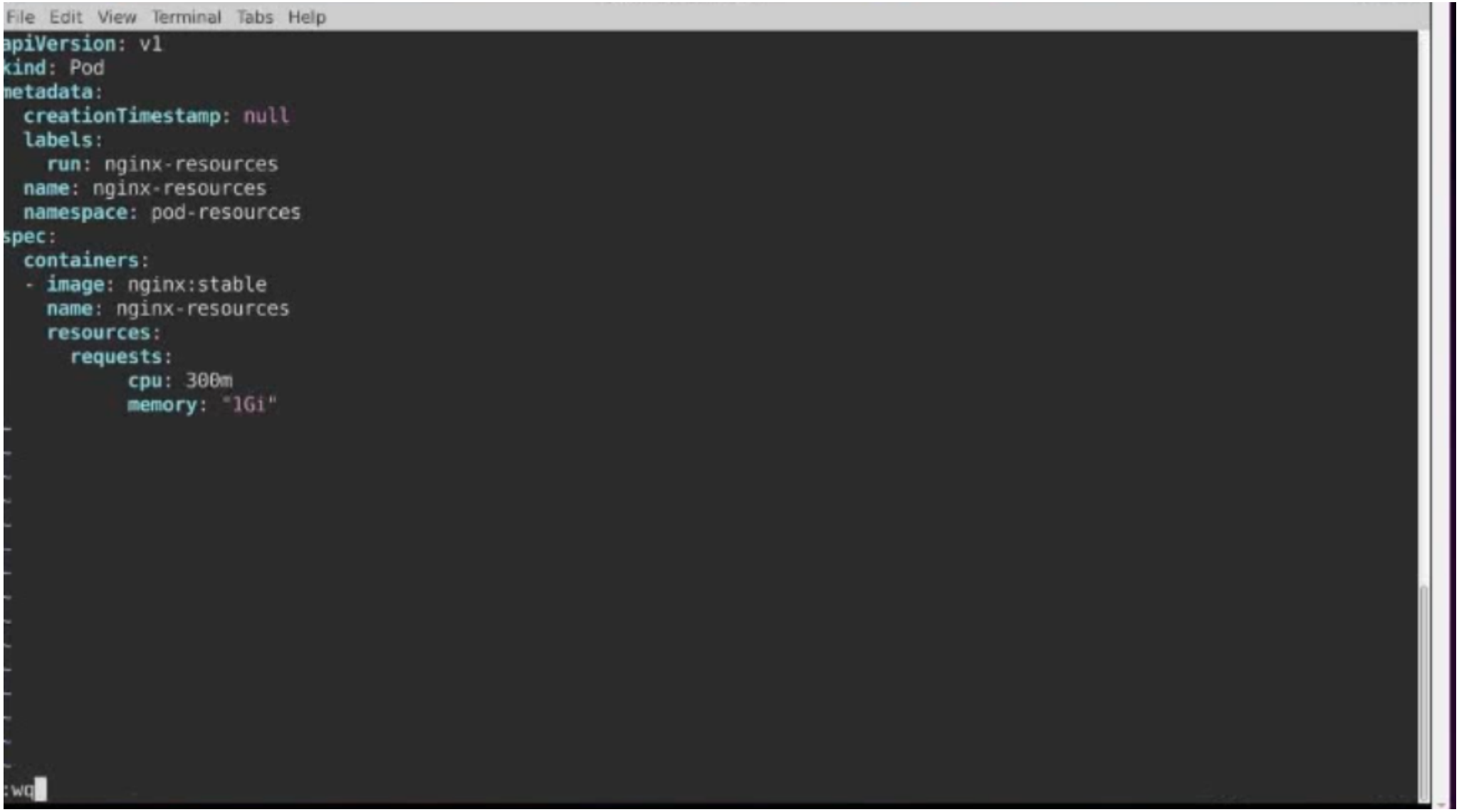
Specify a resource request of 300m cpus and 1G1 of memory for the Pod's container.

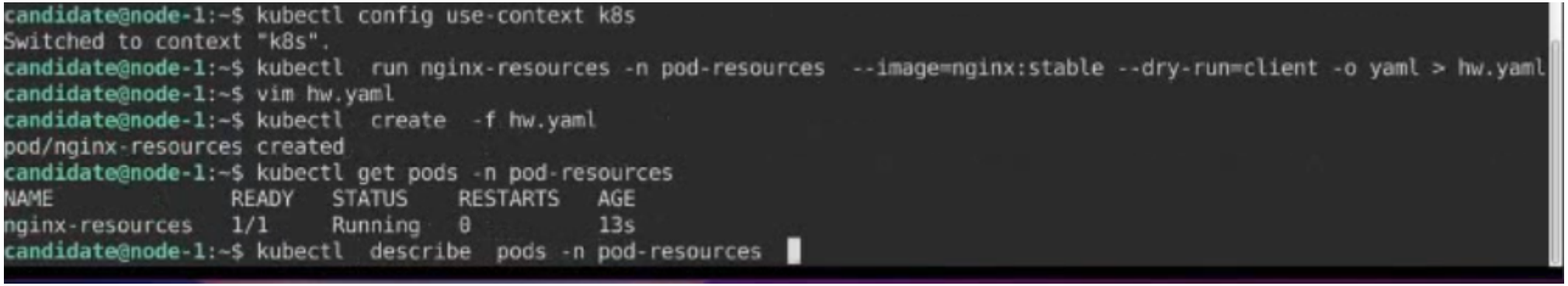
Options:

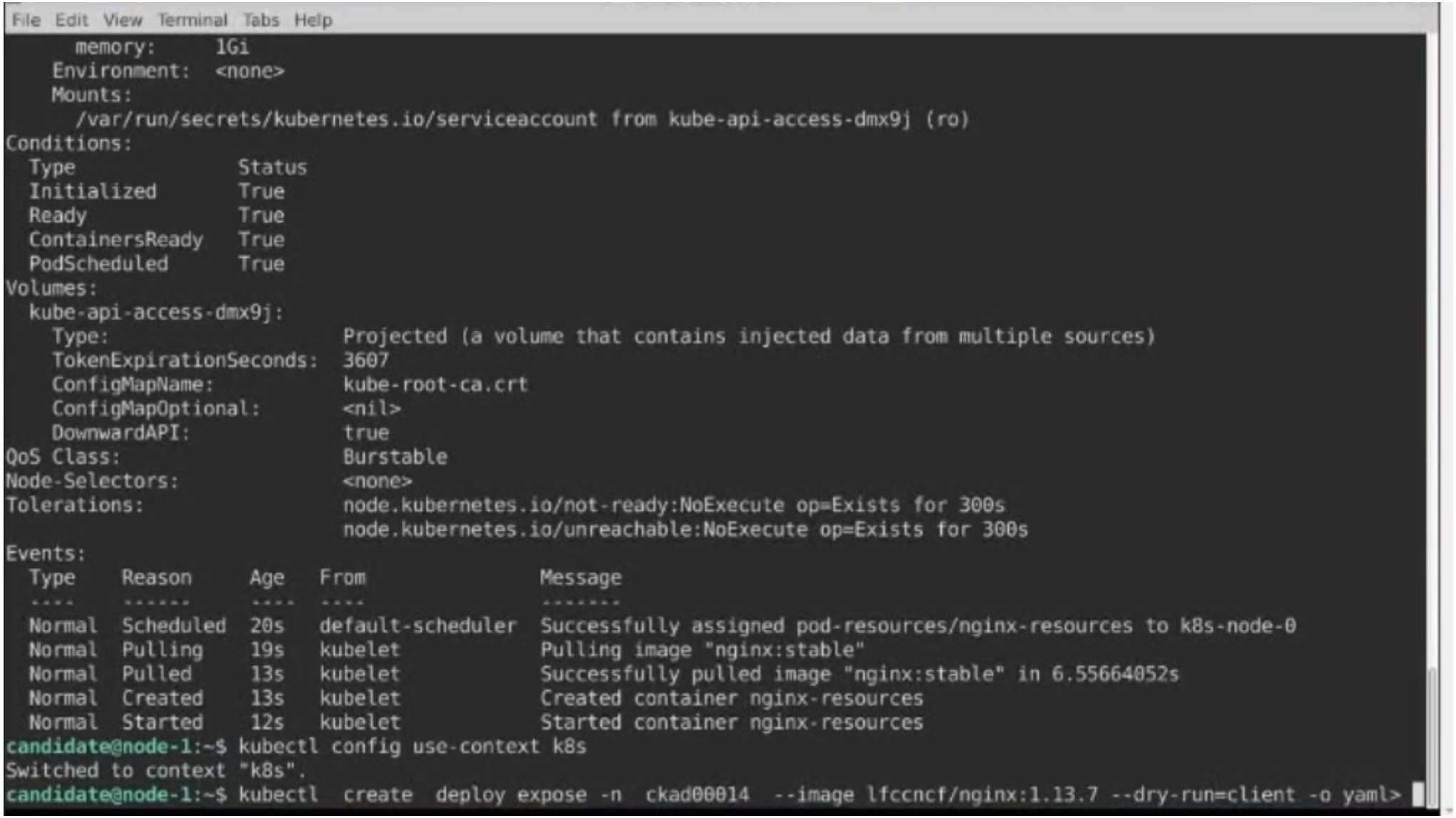
A- Explanation:

Solution:


candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl run nginx-resources -n pod-resources --image=nginx:stable --dry-run=client -o yaml > hw.yaml
candidate@node-1:~$ vim hw.yaml


File Edit View Terminal Tabs Help
apiVersion: v1
kind: Pod
metadata:
creationTimestamp: null
labels:
run: nginx-resources
name: nginx-resources
namespace: pod-resources
spec:
containers:
- image: nginx:stable
name: nginx-resources
resources:
requests:
cpu: 300m
memory: "1Gi"
:wq


candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl run nginx-resources -n pod-resources --image=nginx:stable --dry-run=client -o yaml > hw.yaml
candidate@node-1:~$ vim hw.yaml
candidate@node-1:~$ kubectl create -f hw.yaml
pod/nginx-resources created
candidate@node-1:~$ kubectl get pods -n pod-resources
NAME   READY   STATUS   RESTARTS   AGE
nginx-resources   1/1   Running   0   13s
candidate@node-1:~$ kubectl describe pods -n pod-resources


File Edit View Terminal Tabs Help
memory: 1Gi
Environment: <none>
Mounts:
/var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-dmx9j (ro)
Conditions:
Type Status
Initialized True
Ready True
ContainersReady True
PodScheduled True
Volumes:
kube-api-access-dmx9j:
Type: Projected (a volume that contains injected data from multiple sources)
TokenExpirationSeconds: 3607
ConfigMapName: kube-root-ca.crt
ConfigMapOptional: <nil>
DownwardAPI: true
QoS Class: Burstable
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 20s default-scheduler Successfully assigned pod-resources/nginx-resources to k8s-node-0
Normal Pulling 19s kubelet Pulling image "nginx:stable"
Normal Pulled 13s kubelet Successfully pulled image "nginx:stable" in 6.55664052s
Normal Created 13s kubelet Created container nginx-resources
Normal Started 12s kubelet Started container nginx-resources
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl create deploy expose -n ckad00014 --image lfccncf/nginx:1.13.7 --dry-run=client -o yaml>

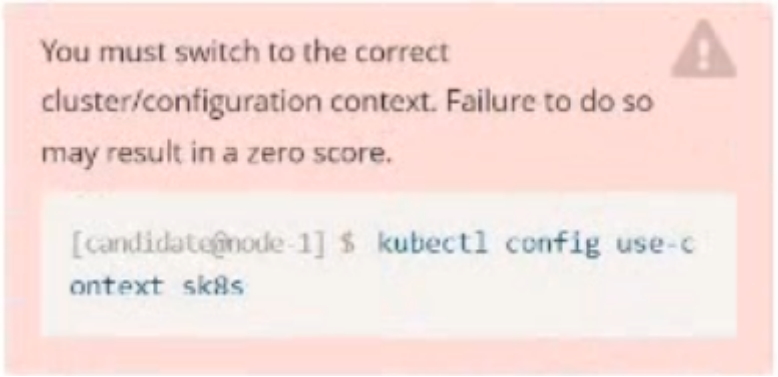
Answer:

A

Question 2

Question Type: MultipleChoice

Refer to Exhibit.



Task:

1) First update the Deployment cka00017-deployment in the ckad00017 namespace:

*To run 2 replicas of the pod

*Add the following label on the pod:

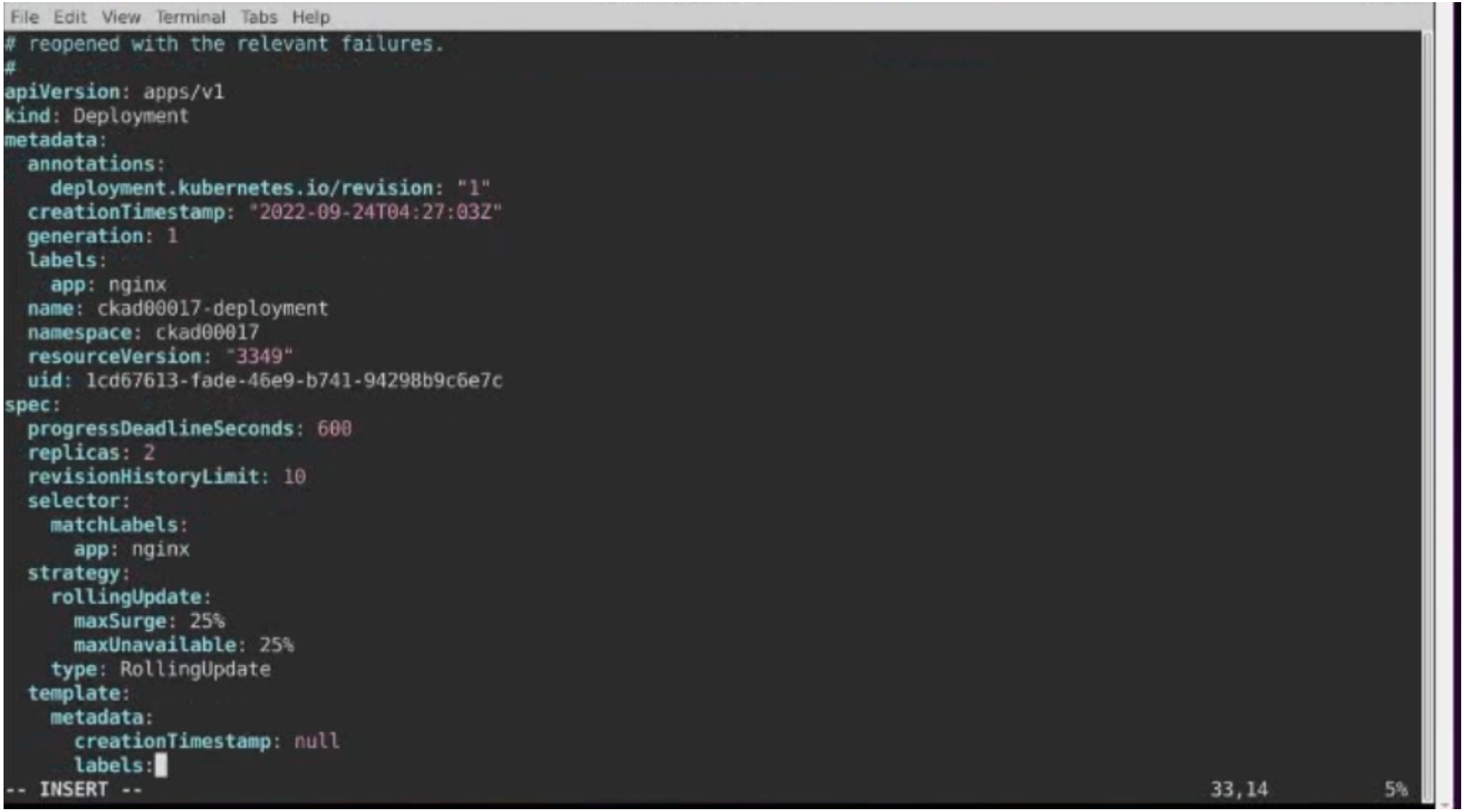
Role userUI

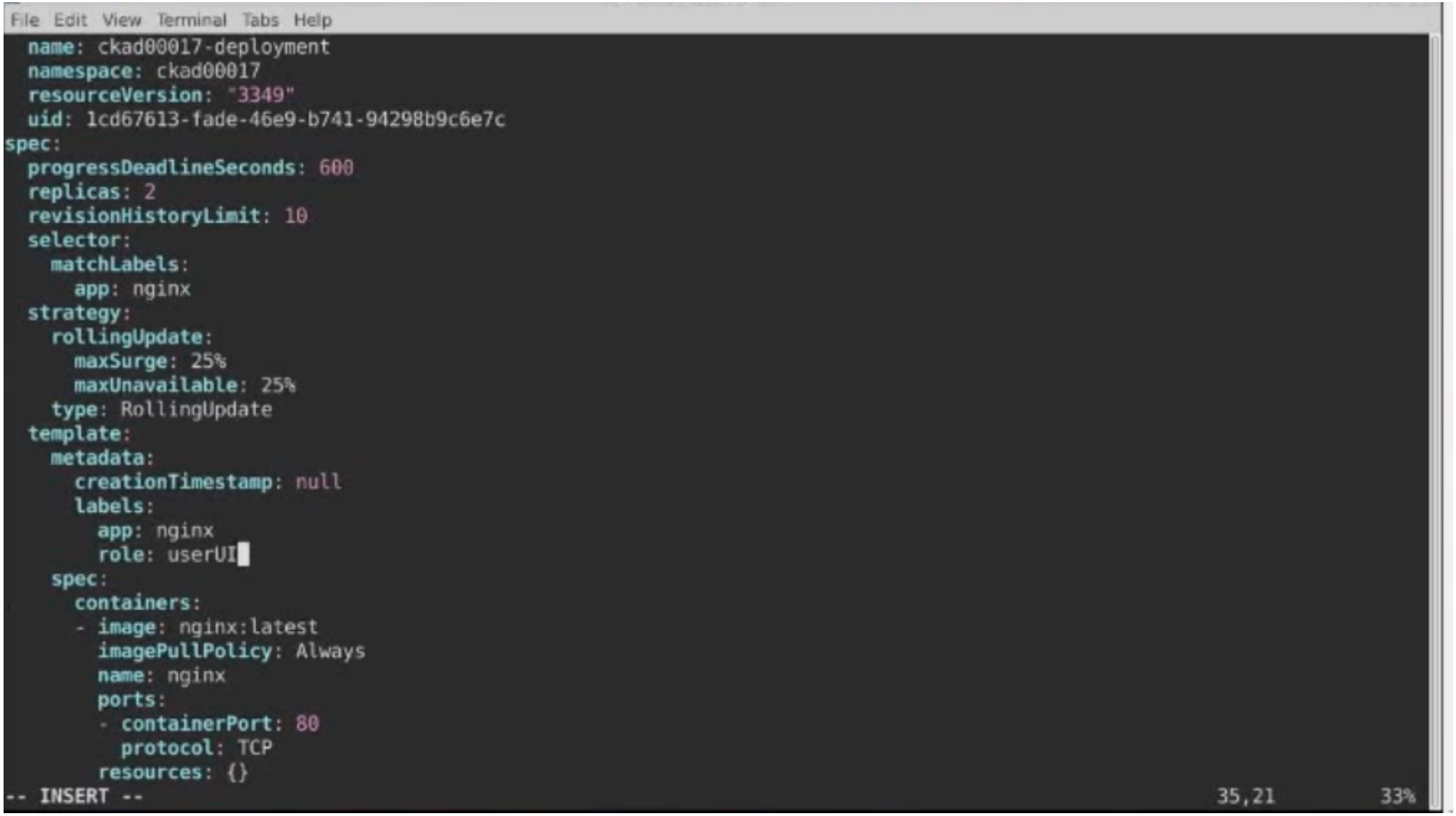
2) Next, Create a NodePort Service named cherry in the ckad00017 nmespace exposing the ckad00017-deployment Deployment on TCP port 8888

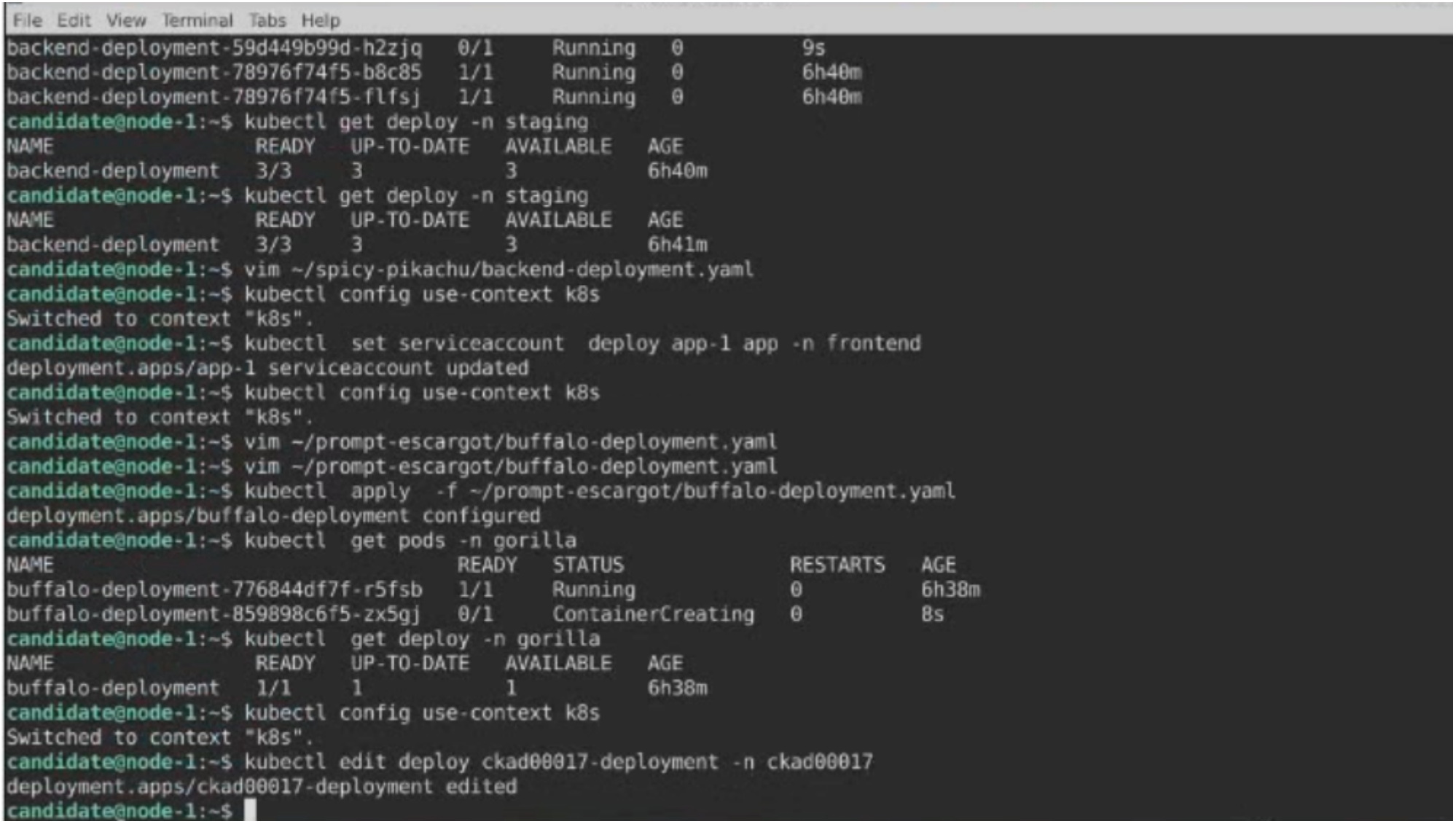
Options:

A- Explanation:

Solution:


File Edit View Terminal Tabs Help
reopened with the relevant failures.
#
apiVersion: apps/v1
kind: Deployment
metadata:
annotations:
deployment.kubernetes.io/revision: "1"
creationTimestamp: "2022-09-24T04:27:03Z"
generation: 1
labels:
app: nginx
name: ckad00017-deployment
namespace: ckad00017
resourceVersion: "3349"
uid: 1cd67613-fade-46e9-b741-94298b9c6e7c
spec:
progressDeadlineSeconds: 600
replicas: 2
revisionHistoryLimit: 10
selector:
matchLabels:
app: nginx
strategy:
rollingUpdate:
maxSurge: 25%
maxUnavailable: 25%
type: RollingUpdate
template:
metadata:
creationTimestamp: null
labels:
-- INSERT --
33,14
5%


File Edit View Terminal Tabs Help
name: ckad00017-deployment
namespace: ckad00017
resourceVersion: "3349"
uid: 1cd67613-fade-46e9-b741-94298b9c6e7c
spec:
progressDeadlineSeconds: 600
replicas: 2
revisionHistoryLimit: 10
selector:
matchLabels:
app: nginx
strategy:
rollingUpdate:
maxSurge: 25%
maxUnavailable: 25%
type: RollingUpdate
template:
metadata:
creationTimestamp: null
labels:
app: nginx
role: userUI
spec:
containers:
- image: nginx:latest
imagePullPolicy: Always
name: nginx
ports:
- containerPort: 80
protocol: TCP
resources: {}
-- INSERT --
35,21
33%


File Edit View Terminal Tabs Help
backend-deployment-59d449b99d-h2zjq 0/1 Running 0 9s
backend-deployment-78976f74f5-b8c85 1/1 Running 0 6h40m
backend-deployment-78976f74f5-flfsj 1/1 Running 0 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h41m
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl set serviceaccount deploy app-1 app -n frontend
deployment.apps/app-1 serviceaccount updated
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/prompt-escargot/buffalo-deployment.yaml
deployment.apps/buffalo-deployment configured
candidate@node-1:~$ kubectl get pods -n gorilla
NAME READY STATUS RESTARTS AGE
buffalo-deployment-776844df7f-r5fsb 1/1 Running 0 6h38m
buffalo-deployment-859898c6f5-zx5gj 0/1 ContainerCreating 0 8s
candidate@node-1:~$ kubectl get deploy -n gorilla
NAME READY UP-TO-DATE AVAILABLE AGE
buffalo-deployment 1/1 1 1 6h38m
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl edit deploy ckad00017-deployment -n ckad00017
deployment.apps/ckad00017-deployment edited
candidate@node-1:~$

File Edit View Terminal Tabs Help

```
candidate@node-1:~$ kubectl  get pods -n gorilla
NAME                                READY   STATUS              RESTARTS   AGE
buffalo-deployment-776844df7f-r5fsb   1/1     Running             0          6h38m
buffalo-deployment-859898c6f5-zx5gj   0/1     ContainerCreating   0          8s
candidate@node-1:~$ kubectl  get deploy -n gorilla
NAME                 READY   UP-TO-DATE   AVAILABLE   AGE
buffalo-deployment   1/1     1            1           6h38m
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl edit deploy ckad00017-deployment -n ckad00017
deployment.apps/ckad00017-deployment edited
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad00017 --name=cherry --port=8888 --type=NodePort
service/cherry exposed
candidate@node-1:~$
```

```
candidate@node-1:~$ kubectl get svc
NAME         TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
kubernetes   ClusterIP   10.96.0.1    <none>        443/TCP   77d
candidate@node-1:~$ kubectl get svc  -n ckad00017
NAME     TYPE       CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
cherry   NodePort   10.100.100.176   <none>        8888:30683/TCP   24s
candidate@node-1:~$ kubectl  expose  service   deploy ckad00017-deployment -n ckad00017 --name=cherry --port=8888 --type=N
odePort
Error from server (NotFound): services "deploy" not found
Error from server (NotFound): services "ckad00017-deployment" not found
candidate@node-1:~$ kubectl get svc  -n ckad00017
NAME     TYPE       CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
cherry   NodePort   10.100.100.176   <none>        8888:30683/TCP   46s
candidate@node-1:~$
```

```
File  Edit  View  Terminal  Tabs  Help
candidate@node-1:~$ kubectl  expose  service   deploy ckad00017-deployment -n ckad00017 --name=cherry --port=8888 --type=N
odePort
Error from server (NotFound): services "deploy" not found
Error from server (NotFound): services "ckad00017-deployment" not found
candidate@node-1:~$ kubectl get svc  -n ckad00017
NAME     TYPE       CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
cherry   NodePort   10.100.100.176   <none>        8888:30683/TCP   46s
candidate@node-1:~$ history
    1  vi ~/spicy-pikachu/backend-deployment.yaml
    2  kubectl config use-context sk8s
    3  vim .vimrc
    4  vim ~/spicy-pikachu/backend-deployment.yaml
    5  kubectl  apply  -f ~/spicy-pikachu/backend-deployment.yaml
    6  kubectl get  pods -n staging
    7  kubectl get deploy -n staging
    8  vim ~/spicy-pikachu/backend-deployment.yaml
    9  kubectl config use-context k8s
   10  kubectl  set serviceaccount  deploy app-1 app -n frontend
   11  kubectl config use-context k8s
   12  vim ~/prompt-escargot/buffalo-deployment.yaml
   13  kubectl  apply  -f ~/prompt-escargot/buffalo-deployment.yaml
   14  kubectl  get pods -n gorilla
   15  kubectl  get deploy -n gorilla
   16  kubectl config use-context k8s
   17  kubectl edit deploy ckad00017-deployment -n ckad00017
   18  kubectl  expose  deploy ckad00017-deployment -n ckad00017 --name=cherry --port=8888 --type=NodePort
   19  kubectl get svc
   20  kubectl get svc  -n ckad00017
   21  kubectl  expose  service   deploy ckad00017-deployment -n ckad00017 --name=cherry --port=8888 --type=NodePort
   22  kubectl get svc  -n ckad00017
   23  history
candidate@node-1:~$
```

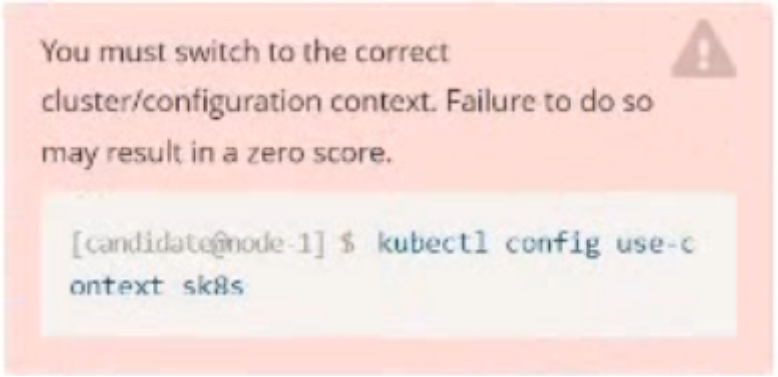
Answer:

A

Question 3

Question Type: MultipleChoice

Refer to Exhibit.



Task:

A pod within the Deployment named buffale-deployment and in namespace gorilla is logging errors.

1) Look at the logs identify errors messages.

Find errors, including User "system:serviceaccount:gorilla:default" cannot list resource "deployment" [...] in the namespace "gorilla"

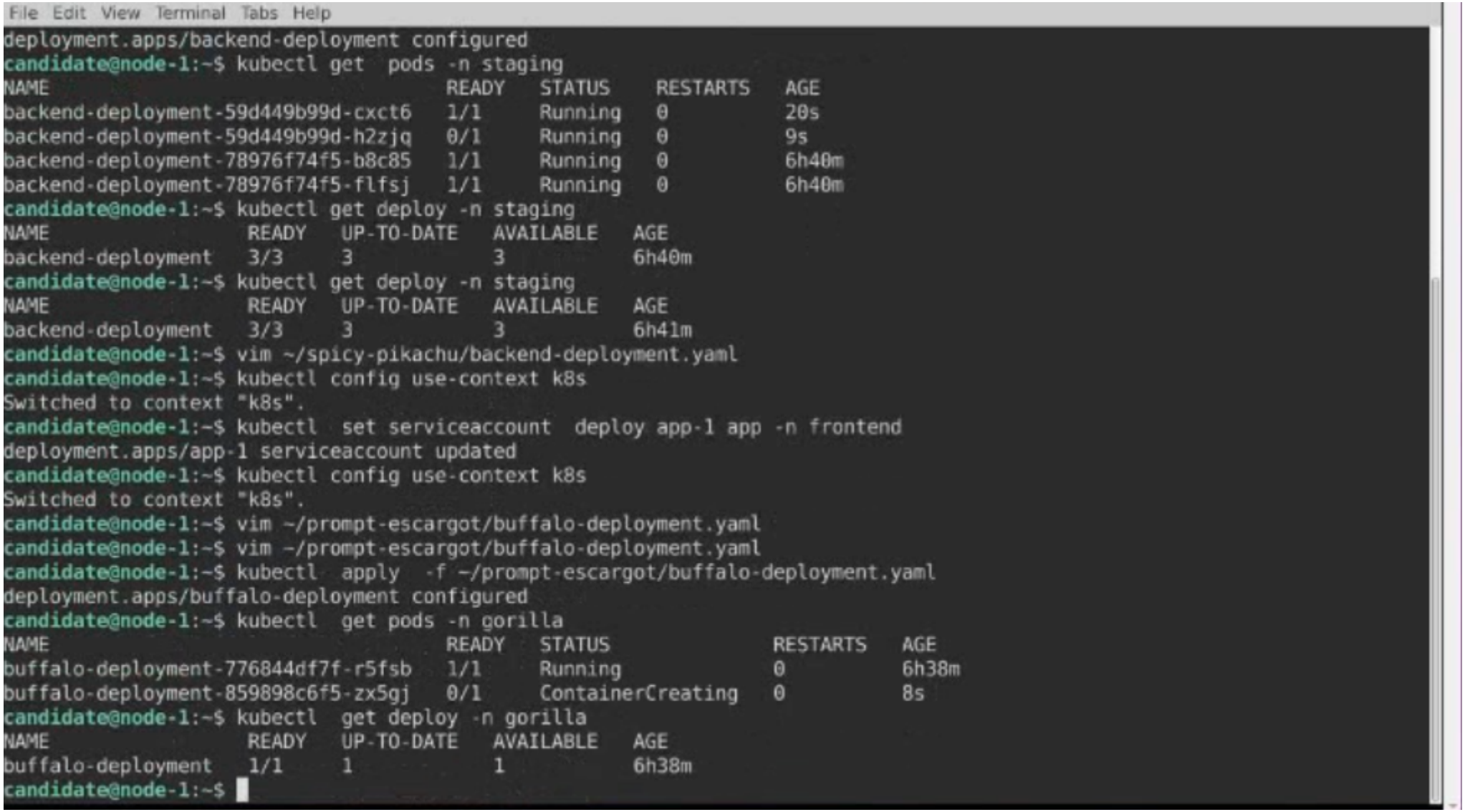
2) Update the Deployment buffalo-deployment to resolve the errors in the logs of the Pod.

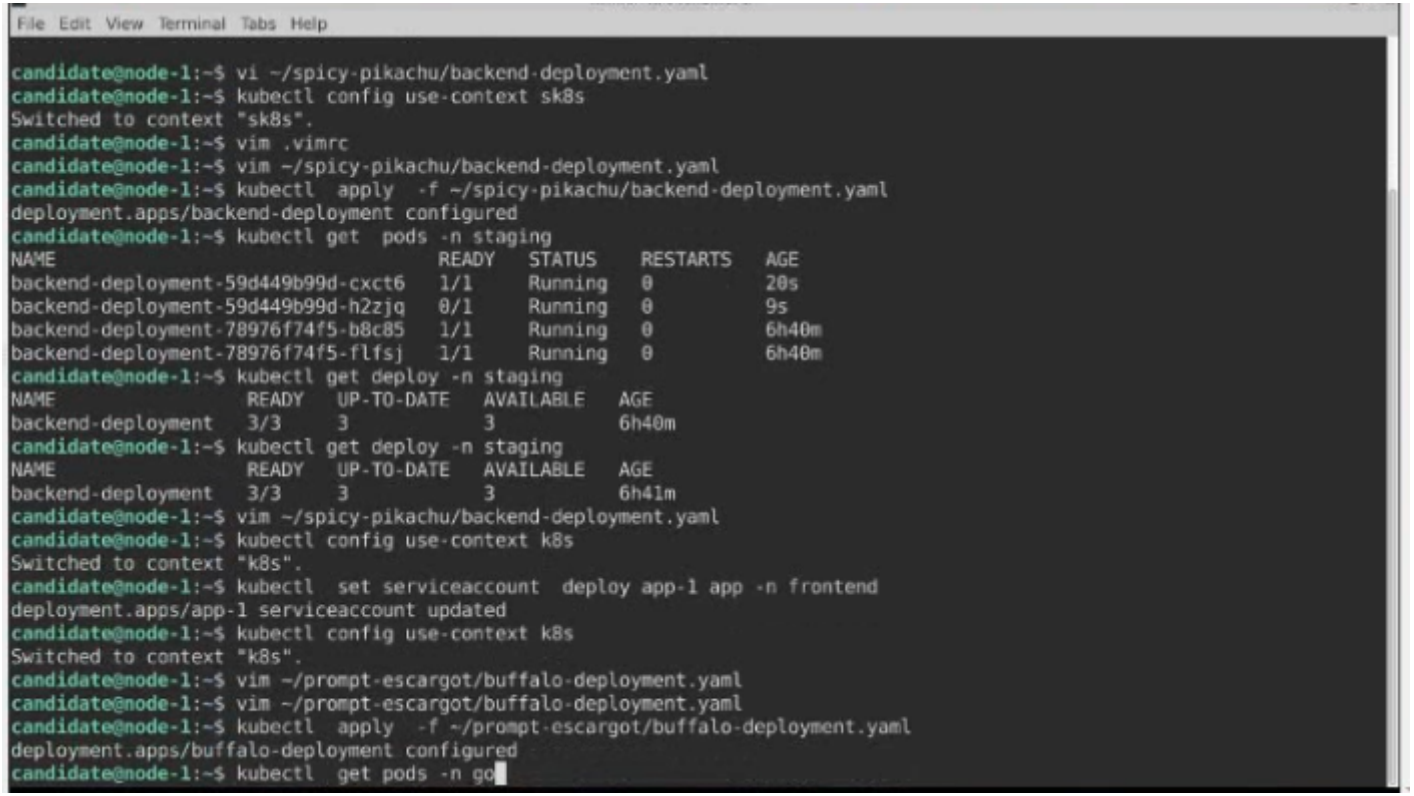
The buffalo-deployment 'S manifest can be found at -/prompt/escargot/buffalo-deployment.yaml

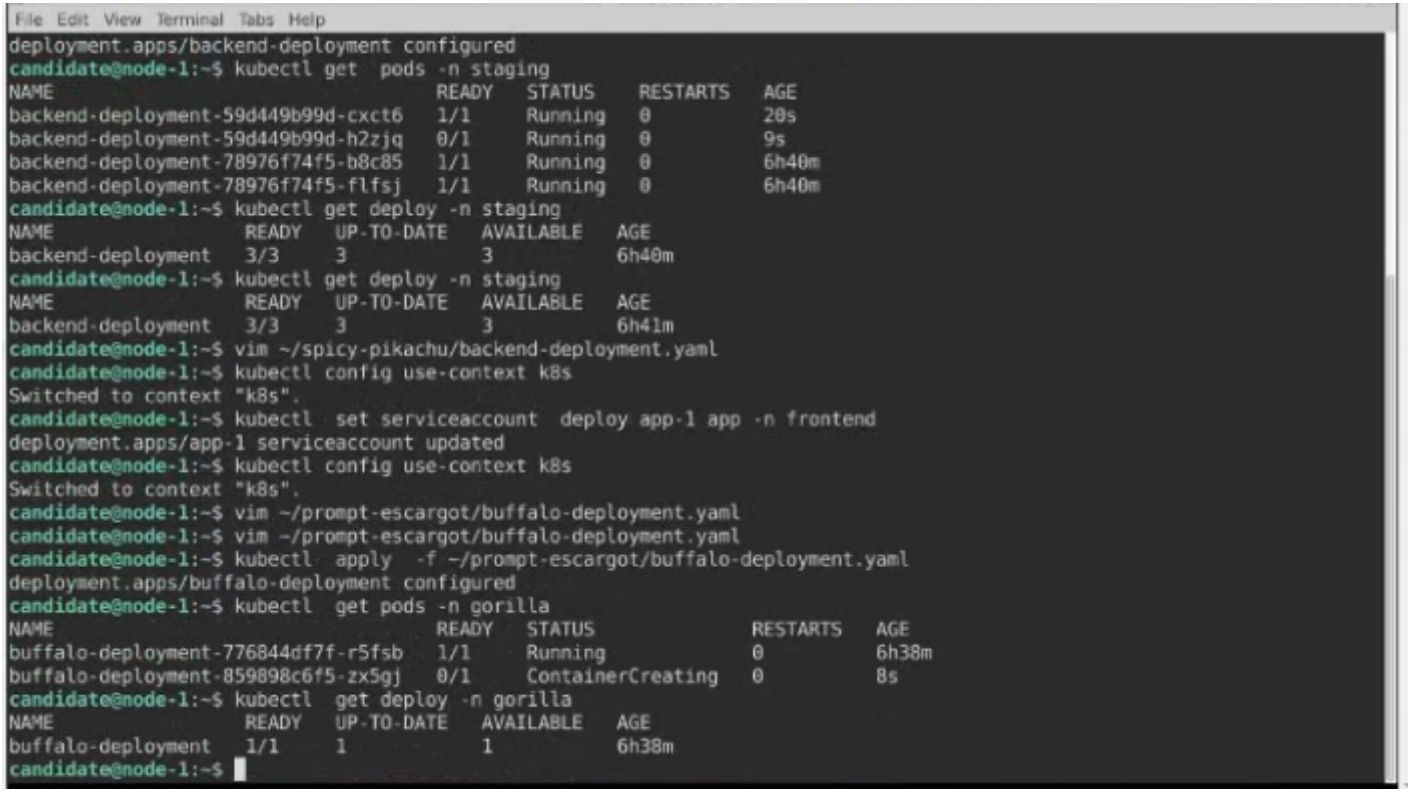
Options:

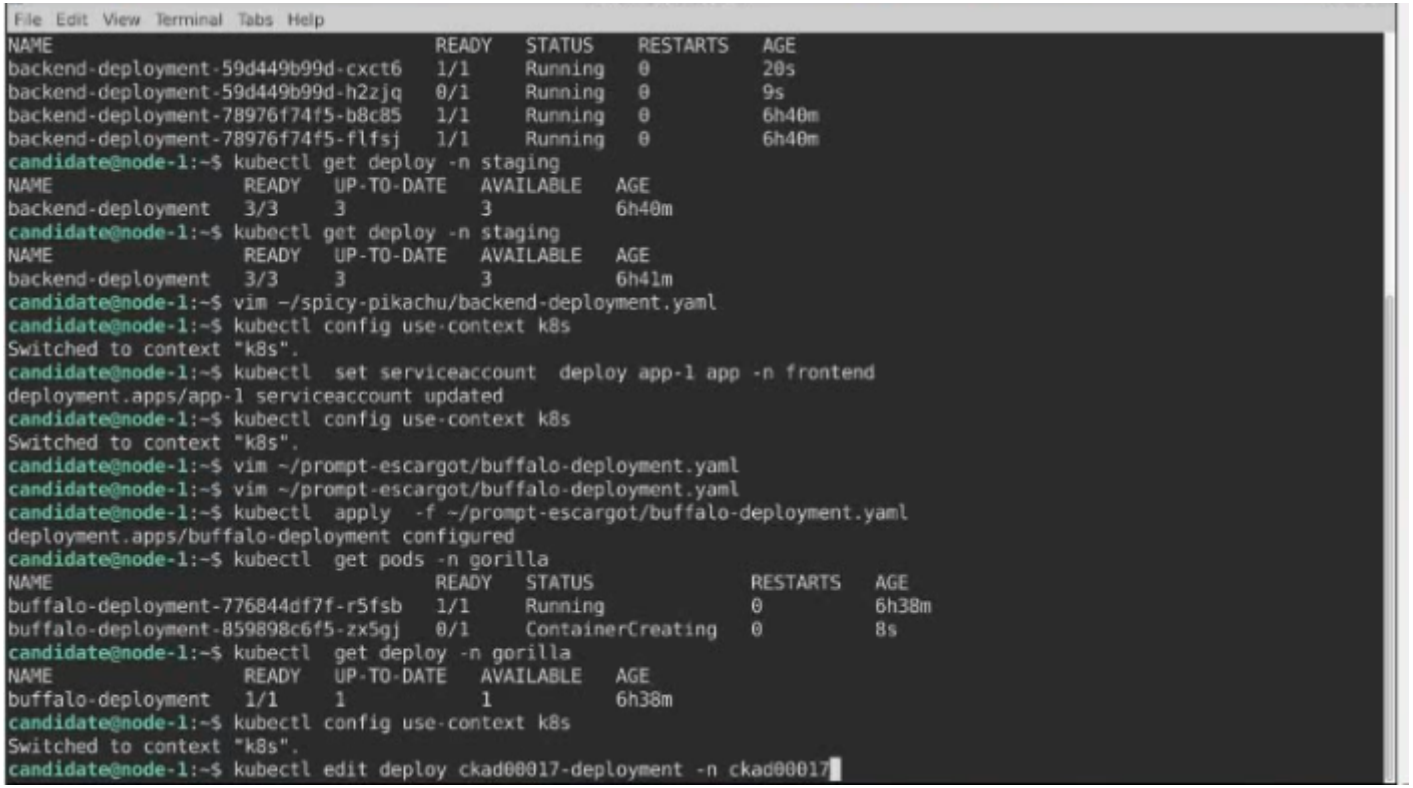
A- Explanation:

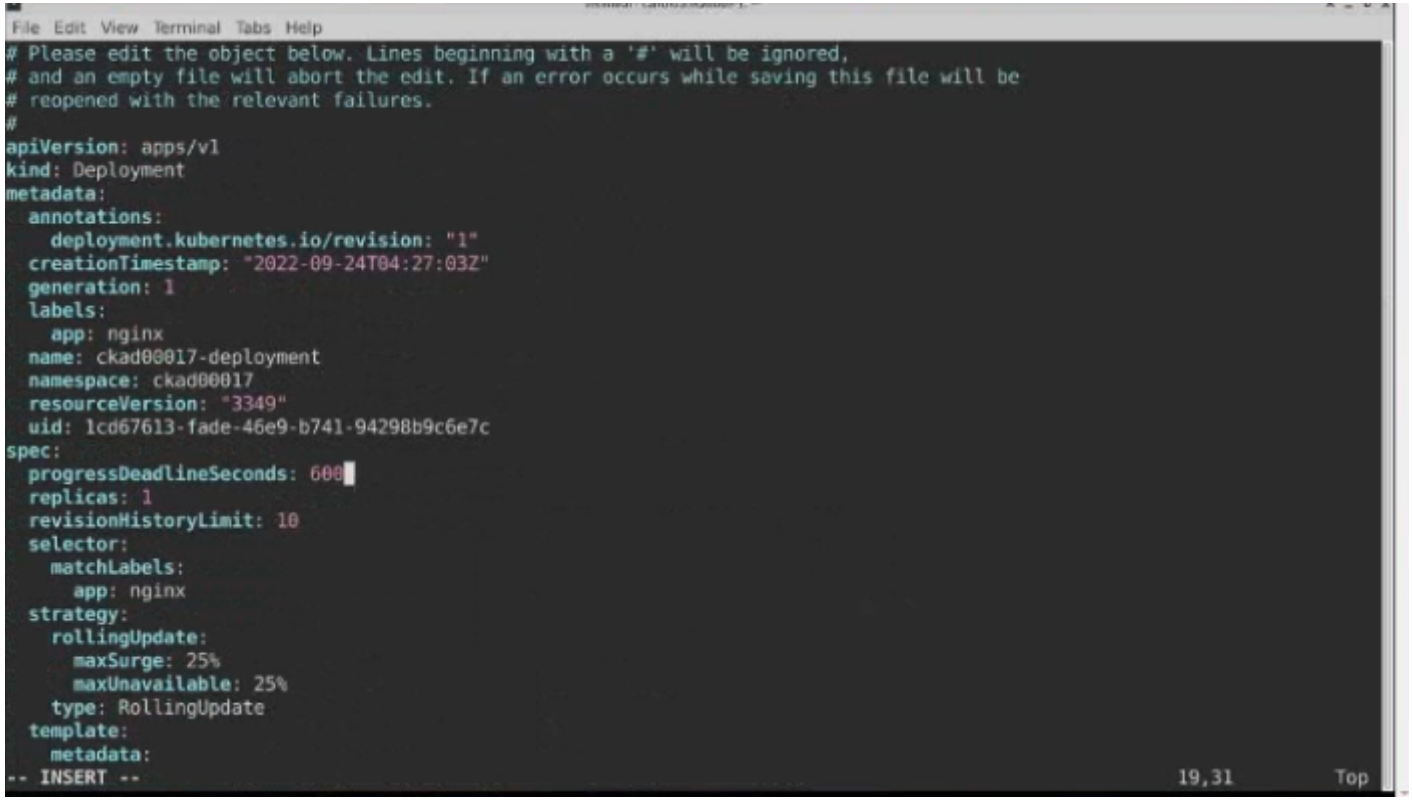
Solution:

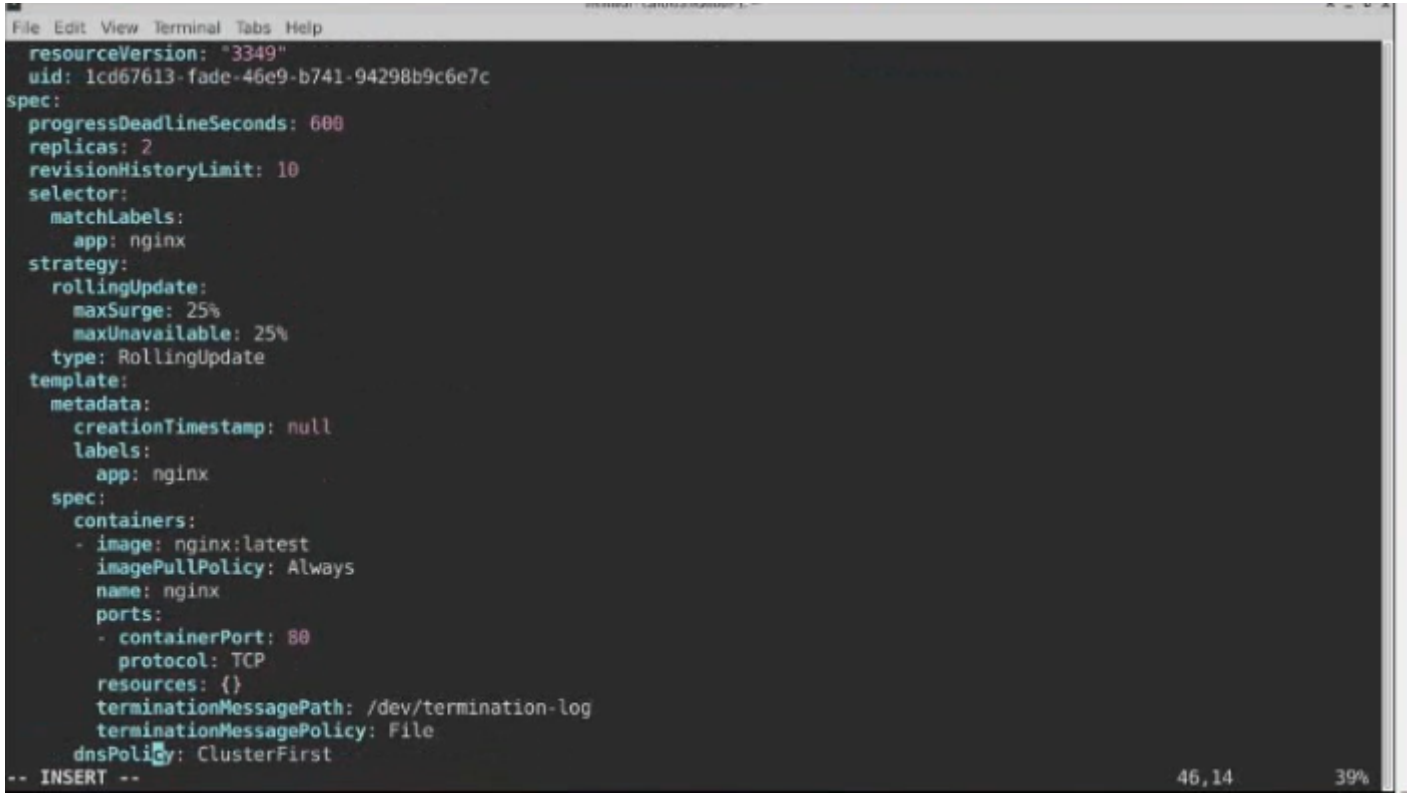

File Edit View Terminal Tabs Help
deployment.apps/backend-deployment configured
candidate@node-1:~$ kubectl get pods -n staging
NAME READY STATUS RESTARTS AGE
backend-deployment-59d449b99d-cxct6 1/1 Running 0 20s
backend-deployment-59d449b99d-h2zjq 0/1 Running 0 9s
backend-deployment-78976f74f5-b8c85 1/1 Running 0 6h40m
backend-deployment-78976f74f5-flfsj 1/1 Running 0 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h41m
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl set serviceaccount deploy app-1 app -n frontend
deployment.apps/app-1 serviceaccount updated
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/prompt-escargot/buffalo-deployment.yaml
deployment.apps/buffalo-deployment configured
candidate@node-1:~$ kubectl get pods -n gorilla
NAME READY STATUS RESTARTS AGE
buffalo-deployment-776844df7f-r5fsb 1/1 Running 0 6h38m
buffalo-deployment-859898c6f5-zx5gj 0/1 ContainerCreating 0 8s
candidate@node-1:~$ kubectl get deploy -n gorilla
NAME READY UP-TO-DATE AVAILABLE AGE
buffalo-deployment 1/1 1 1 6h38m
candidate@node-1:~$

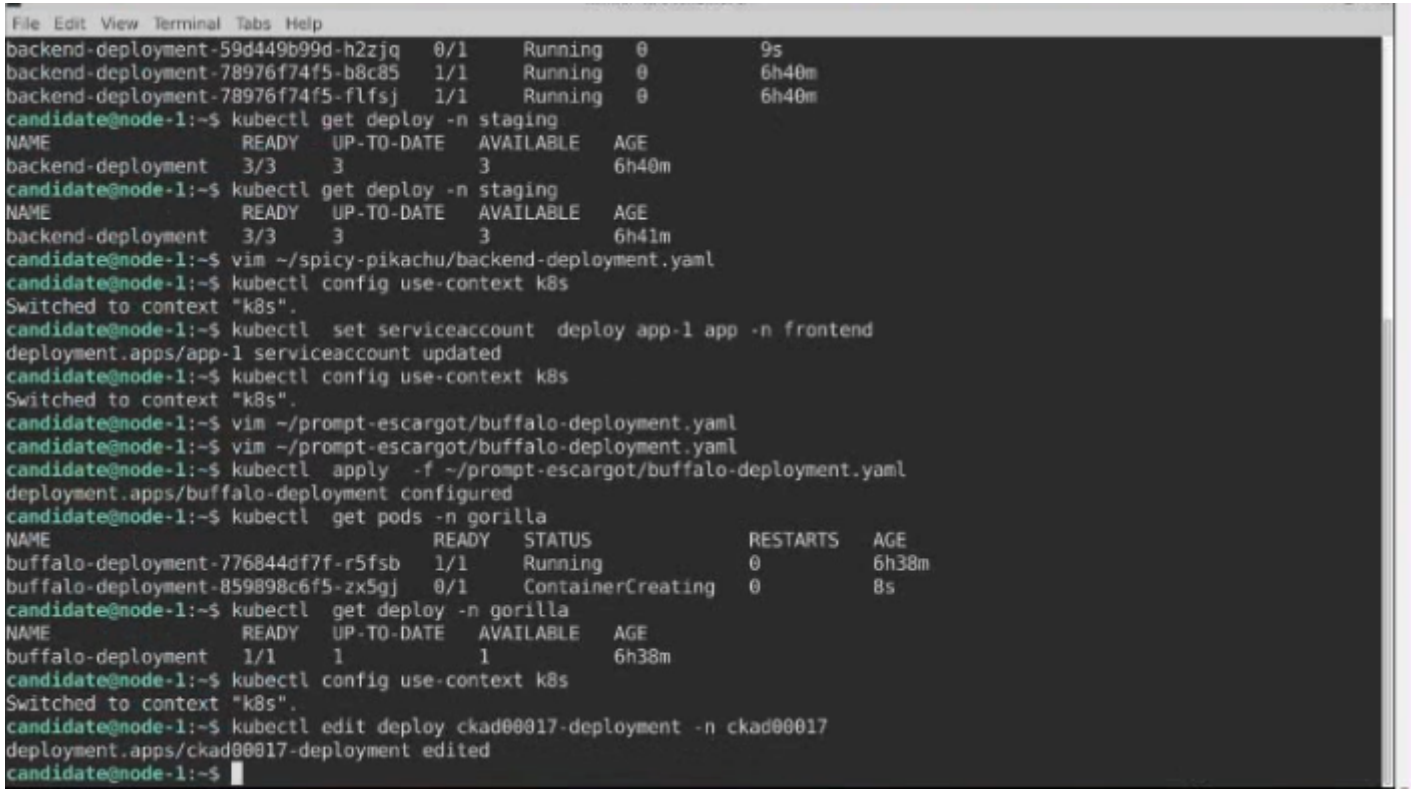

File Edit View Terminal Tabs Help
candidate@node-1:~$ vi ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context sk8s
Switched to context "sk8s".
candidate@node-1:~$ vim .vimrc
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/spicy-pikachu/backend-deployment.yaml
deployment.apps/backend-deployment configured
candidate@node-1:~$ kubectl get pods -n staging
NAME READY STATUS RESTARTS AGE
backend-deployment-59d449b99d-cxct6 1/1 Running 0 20s
backend-deployment-59d449b99d-h2zjq 0/1 Running 0 9s
backend-deployment-78976f74f5-b8c85 1/1 Running 0 6h40m
backend-deployment-78976f74f5-flfsj 1/1 Running 0 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h41m
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl set serviceaccount deploy app-1 app -n frontend
deployment.apps/app-1 serviceaccount updated
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/prompt-escargot/buffalo-deployment.yaml
deployment.apps/buffalo-deployment configured
candidate@node-1:~$ kubectl get pods -n go


File Edit View Terminal Tabs Help
deployment.apps/backend-deployment configured
candidate@node-1:~$ kubectl get pods -n staging
NAME READY STATUS RESTARTS AGE
backend-deployment-59d449b99d-cxct6 1/1 Running 0 20s
backend-deployment-59d449b99d-h2zjq 0/1 Running 0 9s
backend-deployment-78976f74f5-b8c85 1/1 Running 0 6h40m
backend-deployment-78976f74f5-flfsj 1/1 Running 0 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h41m
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl set serviceaccount deploy app-1 app -n frontend
deployment.apps/app-1 serviceaccount updated
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/prompt-escargot/buffalo-deployment.yaml
deployment.apps/buffalo-deployment configured
candidate@node-1:~$ kubectl get pods -n gorilla
NAME READY STATUS RESTARTS AGE
buffalo-deployment-776844df7f-r5fsb 1/1 Running 0 6h38m
buffalo-deployment-859898c6f5-zx5gj 0/1 ContainerCreating 0 8s
candidate@node-1:~$ kubectl get deploy -n gorilla
NAME READY UP-TO-DATE AVAILABLE AGE
buffalo-deployment 1/1 1 1 6h38m
candidate@node-1:~$


File Edit View Terminal Tabs Help
NAME READY STATUS RESTARTS AGE
backend-deployment-59d449b99d-cxct6 1/1 Running 0 20s
backend-deployment-59d449b99d-h2zjq 0/1 Running 0 9s
backend-deployment-78976f74f5-b8c85 1/1 Running 0 6h40m
backend-deployment-78976f74f5-flfsj 1/1 Running 0 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h41m
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl set serviceaccount deploy app-1 app -n frontend
deployment.apps/app-1 serviceaccount updated
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/prompt-escargot/buffalo-deployment.yaml
deployment.apps/buffalo-deployment configured
candidate@node-1:~$ kubectl get pods -n gorilla
NAME READY STATUS RESTARTS AGE
buffalo-deployment-776844df7f-r5fsb 1/1 Running 0 6h38m
buffalo-deployment-859898c6f5-zx5gj 0/1 ContainerCreating 0 8s
candidate@node-1:~$ kubectl get deploy -n gorilla
NAME READY UP-TO-DATE AVAILABLE AGE
buffalo-deployment 1/1 1 1 6h38m
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl edit deploy ckad00017-deployment -n ckad00017

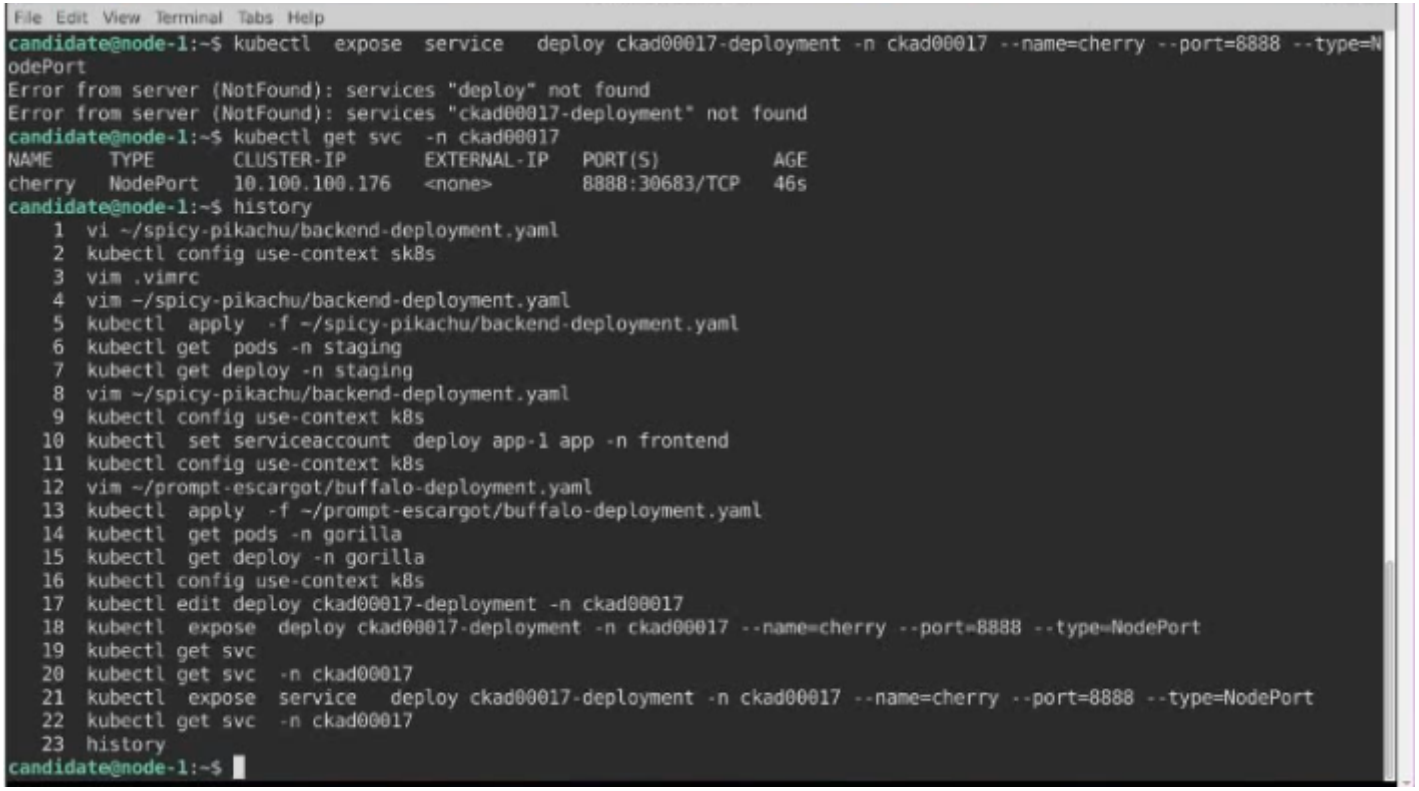

File Edit View Terminal Tabs Help
Please edit the object below. Lines beginning with a '#' will be ignored,
and an empty file will abort the edit. If an error occurs while saving this file will be
reopened with the relevant failures.
#
apiVersion: apps/v1
kind: Deployment
metadata:
annotations:
deployment.kubernetes.io/revision: "1"
creationTimestamp: "2022-09-24T04:27:03Z"
generation: 1
labels:
app: nginx
name: ckad00017-deployment
namespace: ckad00017
resourceVersion: "3349"
uid: 1cd67613-fade-46e9-b741-94298b9c6e7c
spec:
progressDeadlineSeconds: 600
replicas: 1
revisionHistoryLimit: 10
selector:
matchLabels:
app: nginx
strategy:
rollingUpdate:
maxSurge: 25%
maxUnavailable: 25%
type: RollingUpdate
template:
metadata:
-- INSERT --
19,31
Top


File Edit View Terminal Tabs Help
resourceVersion: "3349"
uid: 1cd67613-fade-46e9-b741-94298b9c6e7c
spec:
progressDeadlineSeconds: 600
replicas: 2
revisionHistoryLimit: 10
selector:
matchLabels:
app: nginx
strategy:
rollingUpdate:
maxSurge: 25%
maxUnavailable: 25%
type: RollingUpdate
template:
metadata:
creationTimestamp: null
labels:
app: nginx
spec:
containers:
- image: nginx:latest
imagePullPolicy: Always
name: nginx
ports:
- containerPort: 80
protocol: TCP
resources: {}
terminationMessagePath: /dev/termination-log
terminationMessagePolicy: File
dnsPolicy: ClusterFirst
-- INSERT --
46,14
39%


File Edit View Terminal Tabs Help
backend-deployment-59d449b99d-h2zjq 0/1 Running 0 9s
backend-deployment-78976f74f5-b8c85 1/1 Running 0 6h40m
backend-deployment-78976f74f5-flfsj 1/1 Running 0 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h41m
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl set serviceaccount deploy app-1 app -n frontend
deployment.apps/app-1 serviceaccount updated
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ vim ~/prompt-escargot/buffalo-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/prompt-escargot/buffalo-deployment.yaml
deployment.apps/buffalo-deployment configured
candidate@node-1:~$ kubectl get pods -n gorilla
NAME READY STATUS RESTARTS AGE
buffalo-deployment-776844df7f-r5fsb 1/1 Running 0 6h38m
buffalo-deployment-859898c6f5-zx5gj 0/1 ContainerCreating 0 8s
candidate@node-1:~$ kubectl get deploy -n gorilla
NAME READY UP-TO-DATE AVAILABLE AGE
buffalo-deployment 1/1 1 1 6h38m
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl edit deploy ckad00017-deployment -n ckad00017
deployment.apps/ckad00017-deployment edited
candidate@node-1:~$

File Edit View Terminal Tabs Help

```
buffalo-deployment   1/1     1            1           6h38m
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl edit deploy ckad00017-deployment -n ckad00017
deployment.apps/ckad00017-deployment edited
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad0001
ckad00014  ckad00015  ckad00017
candidate@node-1:~$ kubectl  expose  deploy ckad00017-deployment -n ckad00017 --name=cherry --port=8888 --type=NodePort
service/cherry exposed
candidate@node-1:~$ kubectl get svc
NAME         TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
kubernetes   ClusterIP   10.96.0.1    <none>        443/TCP   77d
candidate@node-1:~$ kubectl get svc  -n ckad00017
NAME     TYPE       CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
cherry   NodePort   10.100.100.176   <none>        8888:30683/TCP   24s
candidate@node-1:~$ kubectl get svc
```



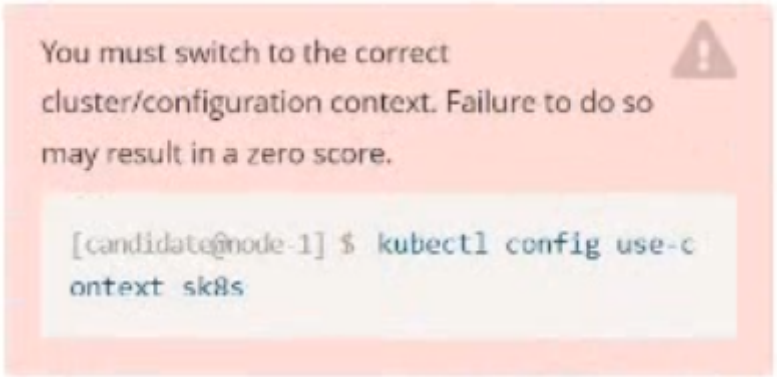
Answer:

A

Question 4

Question Type: MultipleChoice

Refer to Exhibit.



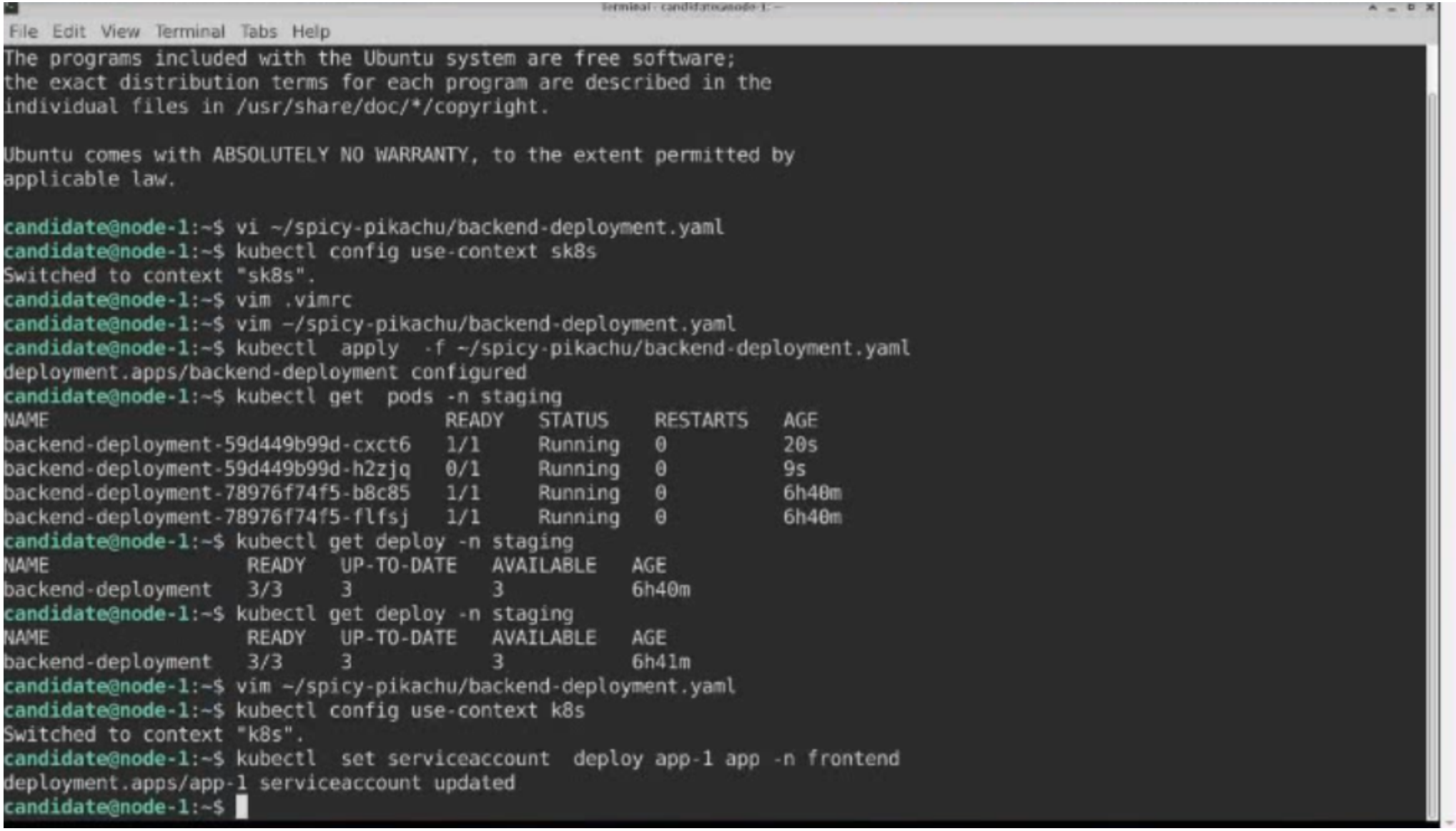
Task:

Update the Deployment app-1 in the frontend namespace to use the existing ServiceAccount app.

Options:

A- Explanation:

Solution:


File Edit View Terminal Tabs Help
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
candidate@node-1:~$ vi ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context sk8s
Switched to context "sk8s".
candidate@node-1:~$ vim .vimrc
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/spicy-pikachu/backend-deployment.yaml
deployment.apps/backend-deployment configured
candidate@node-1:~$ kubectl get pods -n staging
NAME READY STATUS RESTARTS AGE
backend-deployment-59d449b99d-cxct6 1/1 Running 0 20s
backend-deployment-59d449b99d-h2zjq 0/1 Running 0 9s
backend-deployment-78976f74f5-b8c85 1/1 Running 0 6h40m
backend-deployment-78976f74f5-flfsj 1/1 Running 0 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h41m
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context k8s
Switched to context "k8s".
candidate@node-1:~$ kubectl set serviceaccount deploy app-1 app -n frontend
deployment.apps/app-1 serviceaccount updated
candidate@node-1:~$

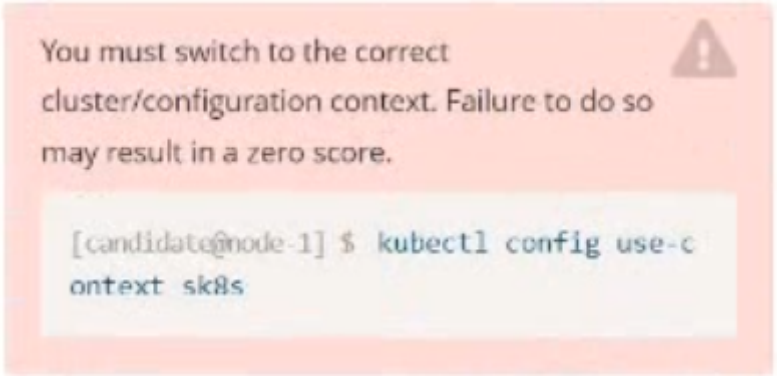
Answer:

A

Question 5

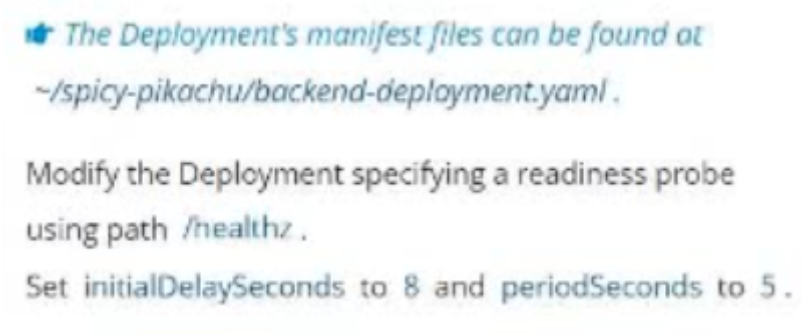
Question Type: MultipleChoice

Refer to Exhibit.



Task

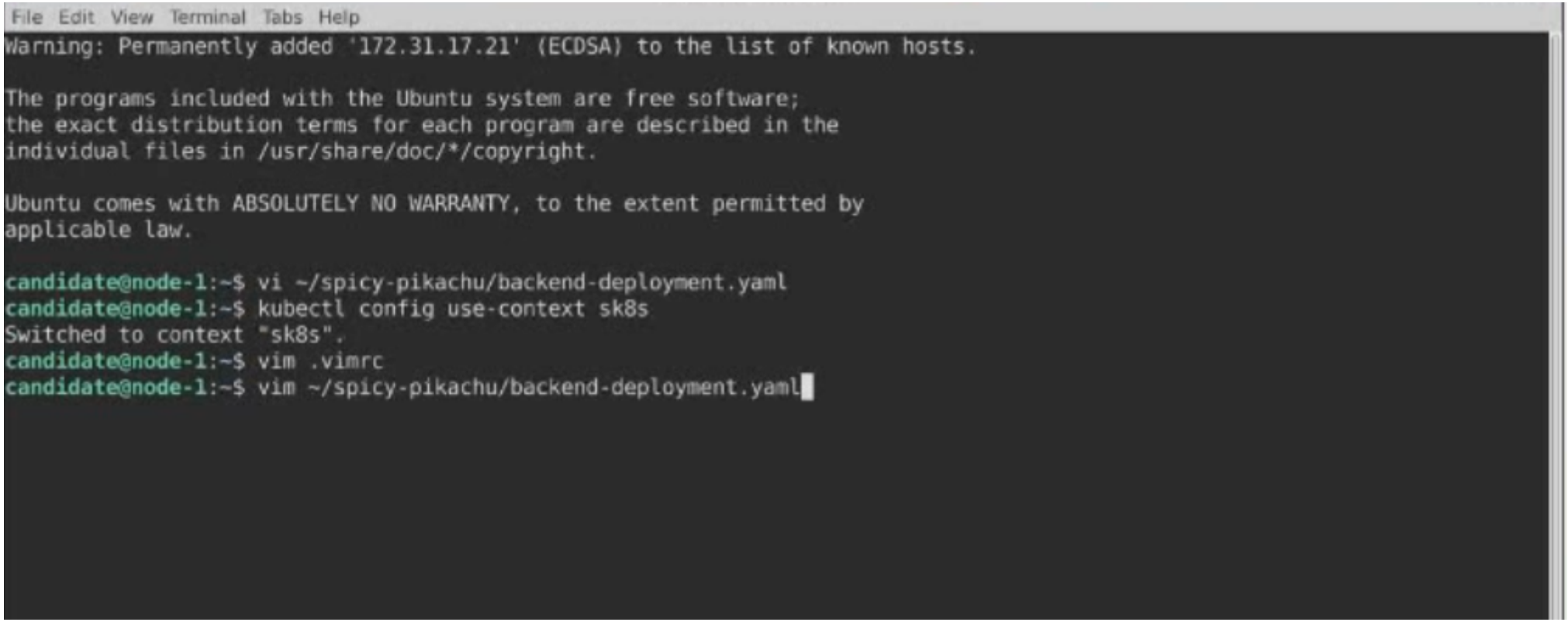
A Deployment named backend-deployment in namespace staging runs a web application on port 8081.



Options:

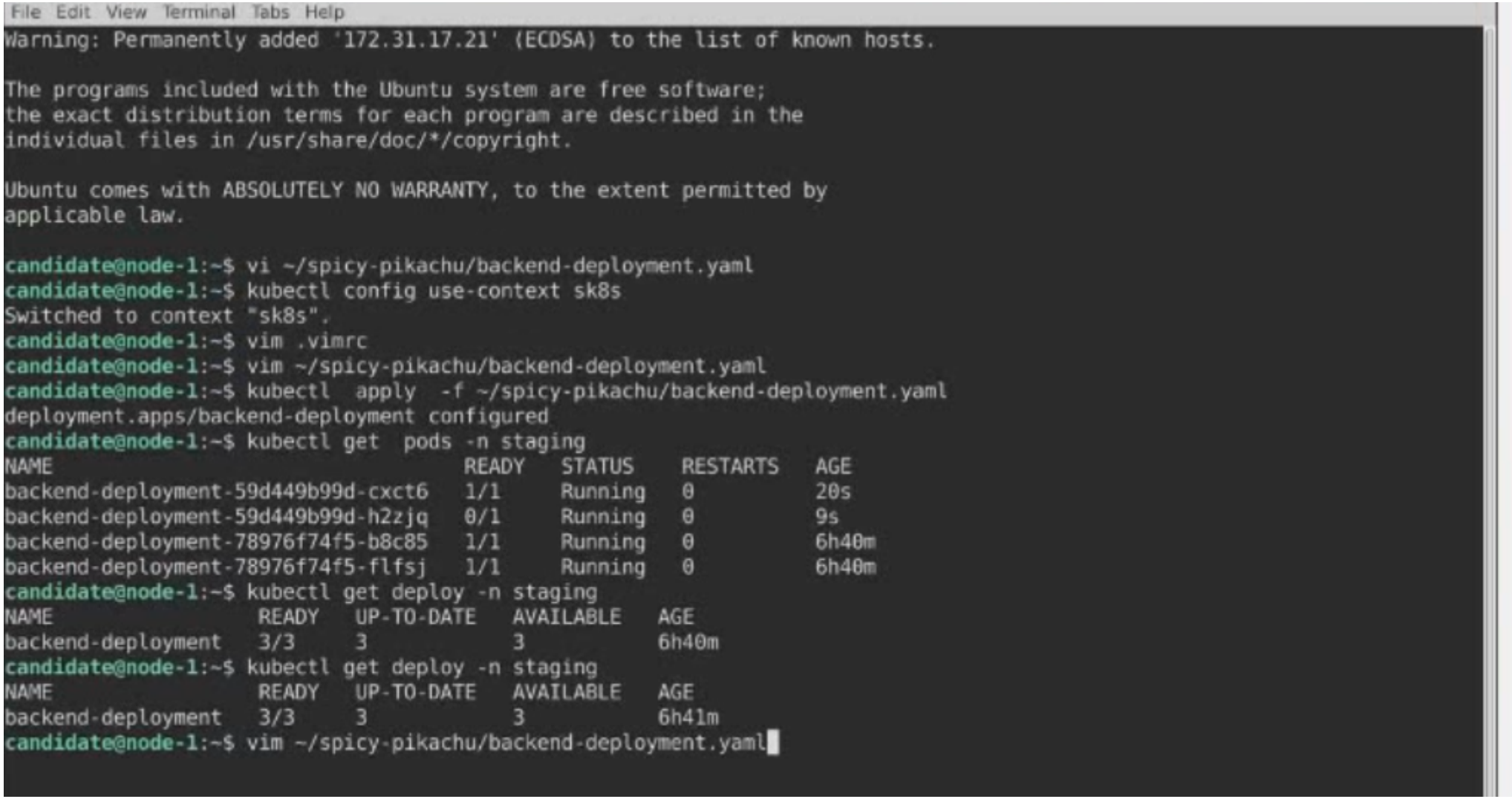
A- Explanation:

Solution:


File Edit View Terminal Tabs Help
Warning: Permanently added '172.31.17.21' (ECDSA) to the list of known hosts.
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
candidate@node-1:~$ vi ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context sk8s
Switched to context "sk8s".
candidate@node-1:~$ vim .vimrc
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml

File Edit View Terminal Tabs Help

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: backend-deployment
  namespace: staging
spec:
  selector:
    matchLabels:
      app: nginx
  replicas: 3
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: nginx:1.14.2
          ports:
            - containerPort: 8081
          readinessProbe:
              initialDelaySeconds: 8
              periodSeconds: 5
              httpGet:
                 path: /healthz
                 port: 8081
          volumeMounts:
            - mountPath: /etc/nginx/conf.d/
              name: config
            - mountPath: /usr/share/nginx/html/
              name: www
-- INSERT --                                                    26,28         Top
```


File Edit View Terminal Tabs Help
Warning: Permanently added '172.31.17.21' (ECDSA) to the list of known hosts.
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
candidate@node-1:~$ vi ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl config use-context sk8s
Switched to context "sk8s".
candidate@node-1:~$ vim .vimrc
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml
candidate@node-1:~$ kubectl apply -f ~/spicy-pikachu/backend-deployment.yaml
deployment.apps/backend-deployment configured
candidate@node-1:~$ kubectl get pods -n staging
NAME READY STATUS RESTARTS AGE
backend-deployment-59d449b99d-cxct6 1/1 Running 0 20s
backend-deployment-59d449b99d-h2zjq 0/1 Running 0 9s
backend-deployment-78976f74f5-b8c85 1/1 Running 0 6h40m
backend-deployment-78976f74f5-flfsj 1/1 Running 0 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h40m
candidate@node-1:~$ kubectl get deploy -n staging
NAME READY UP-TO-DATE AVAILABLE AGE
backend-deployment 3/3 3 3 6h41m
candidate@node-1:~$ vim ~/spicy-pikachu/backend-deployment.yaml

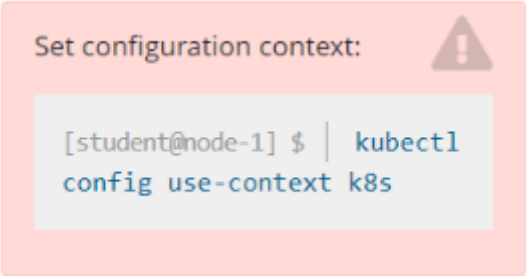
Answer:

A

Question 6

Question Type: MultipleChoice

Refer to 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

lfccncf/busybox:1 container, named logger-dev

* includes a sidecar Ifccncf/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:

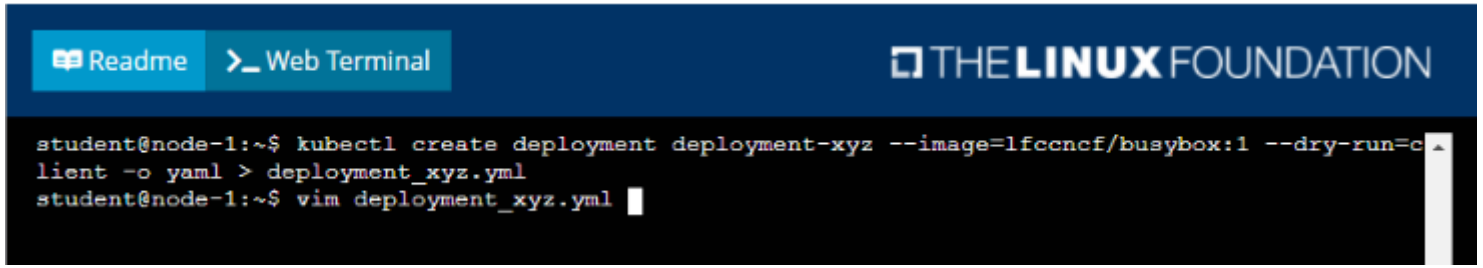
```
i luv cncf
i luv cncf
i luv cncf
```

* 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-configma p.yaml , and mount that ConfigMap to /fluentd/etc in the adapter-zen sidecar container

Options:

A- Explanation:

Solution:

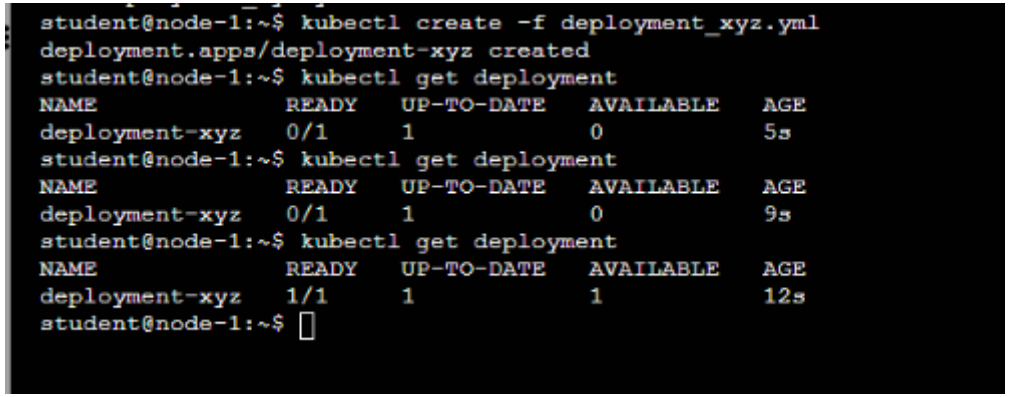



Readme
Web Terminal
THE LINUX FOUNDATION
apiVersion: apps/v1
kind: Deployment
metadata:
creationTimestamp: null
labels:
app: deployment-xyz
name: deployment-xyz
spec:
replicas: 1
selector:
matchLabels:
app: deployment-xyz
strategy: {}
template:
metadata:
creationTimestamp: null
labels:
app: deployment-xyz
spec:
containers:
- image: lfccncf/busybox:1
name: busybox
resources: {}
status: {}
~
~
"deployment_xyz.yml" 24L, 434C
3,1
All


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 cncf' >> /tmp/log/input.log; sl
eep 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; sl
eep 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



Answer:

A

Question 7

Question Type: MultipleChoice

Refer to Exhibit.

Context

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

Task

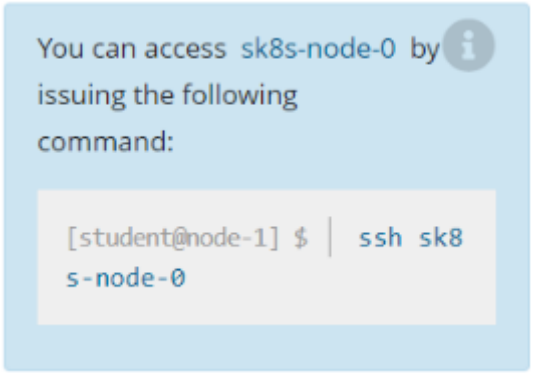
To facilitate this, perform the following tasks:

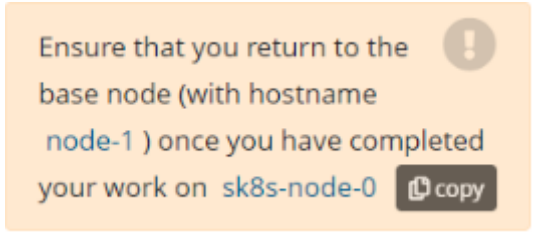
* Create a file on node sk8s-node-0 at /opt/KDSP00101/data/index.html with the content Acct=Finance

* 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

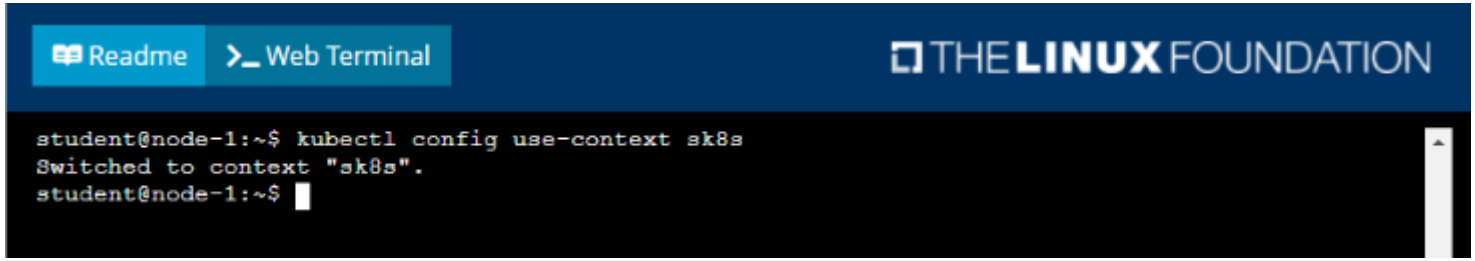


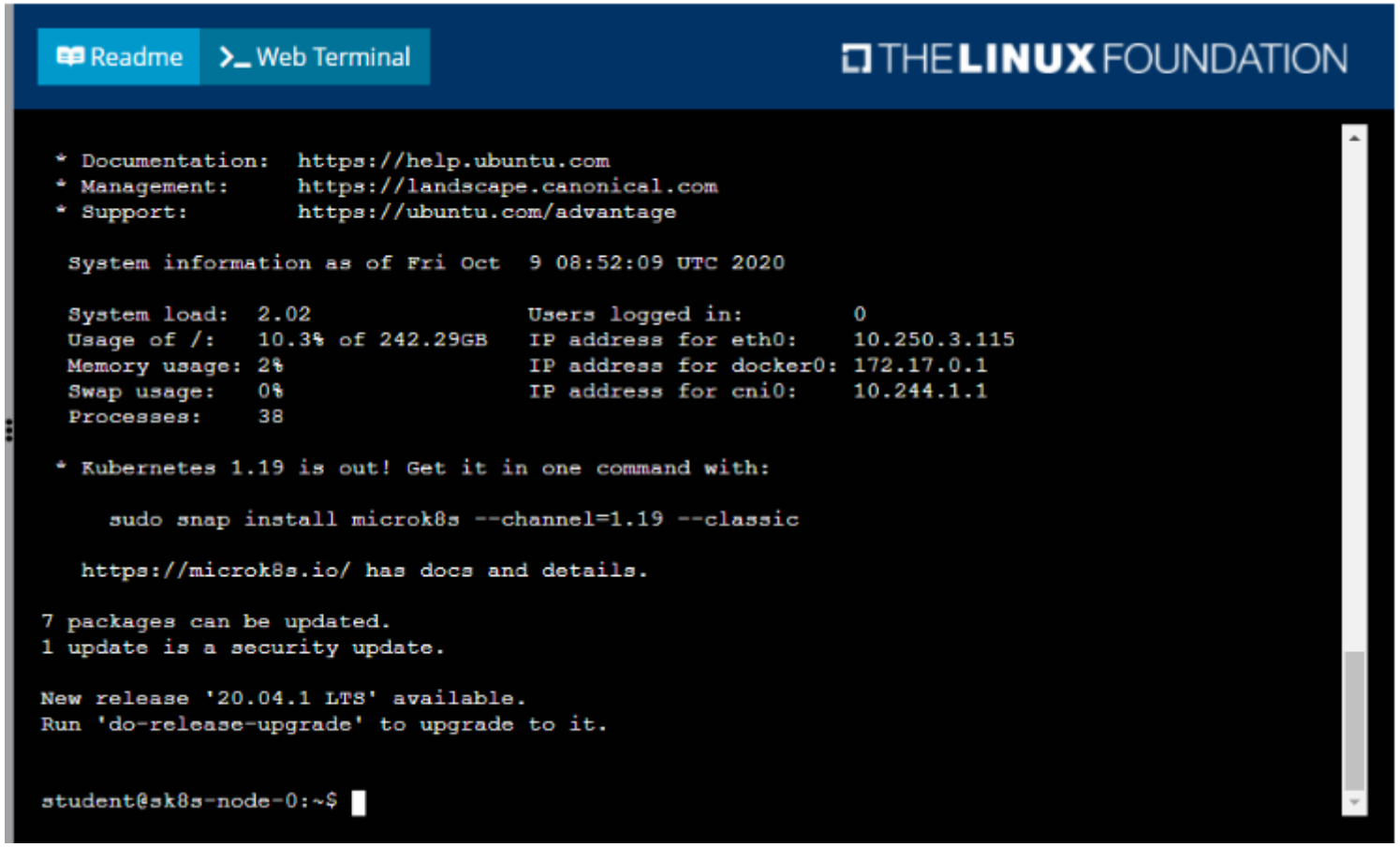


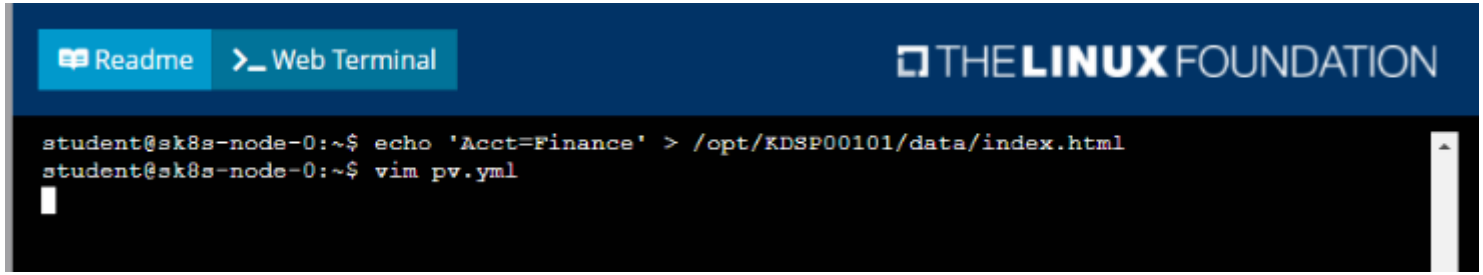
Options:

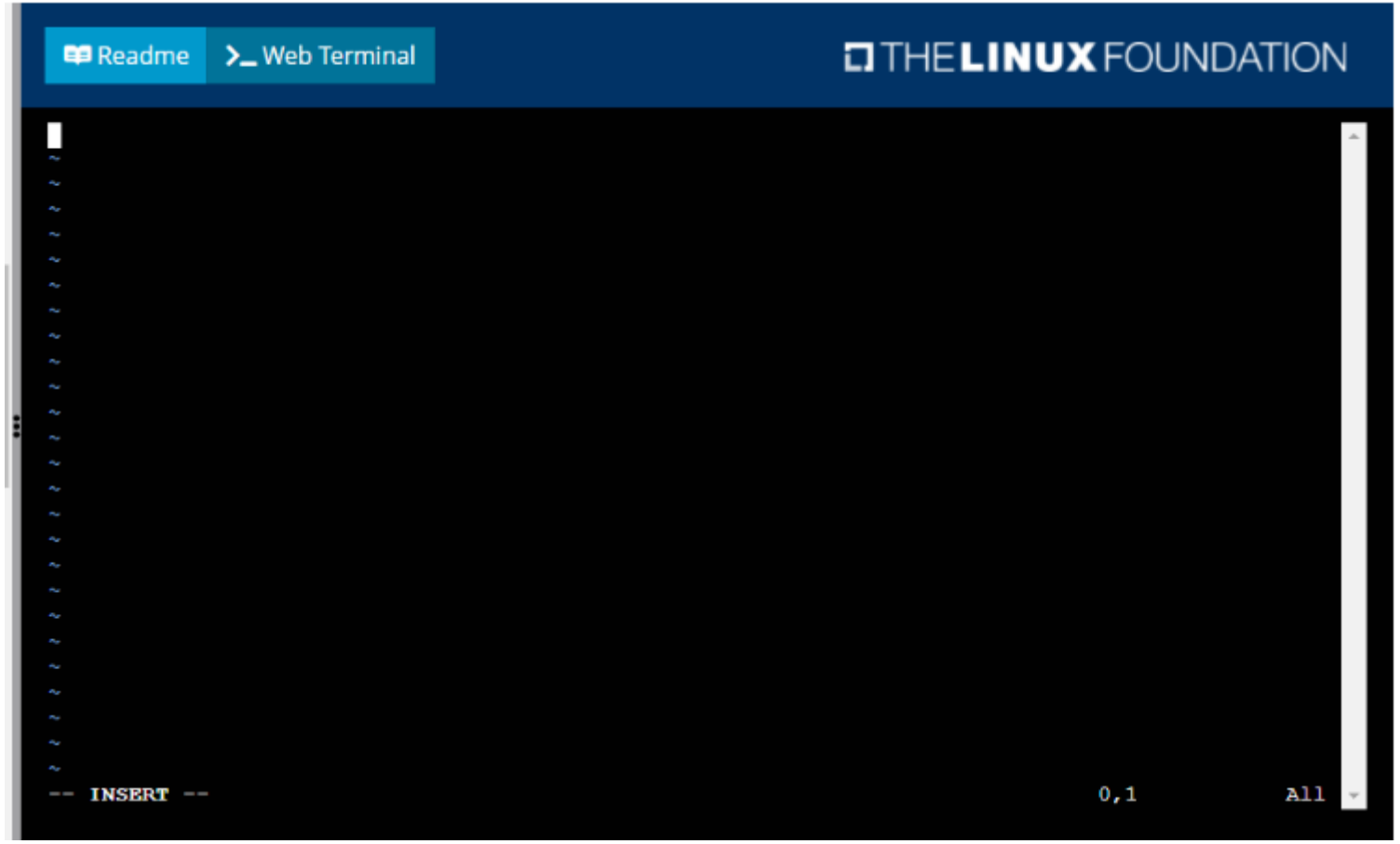
A- Explanation:

Solution:

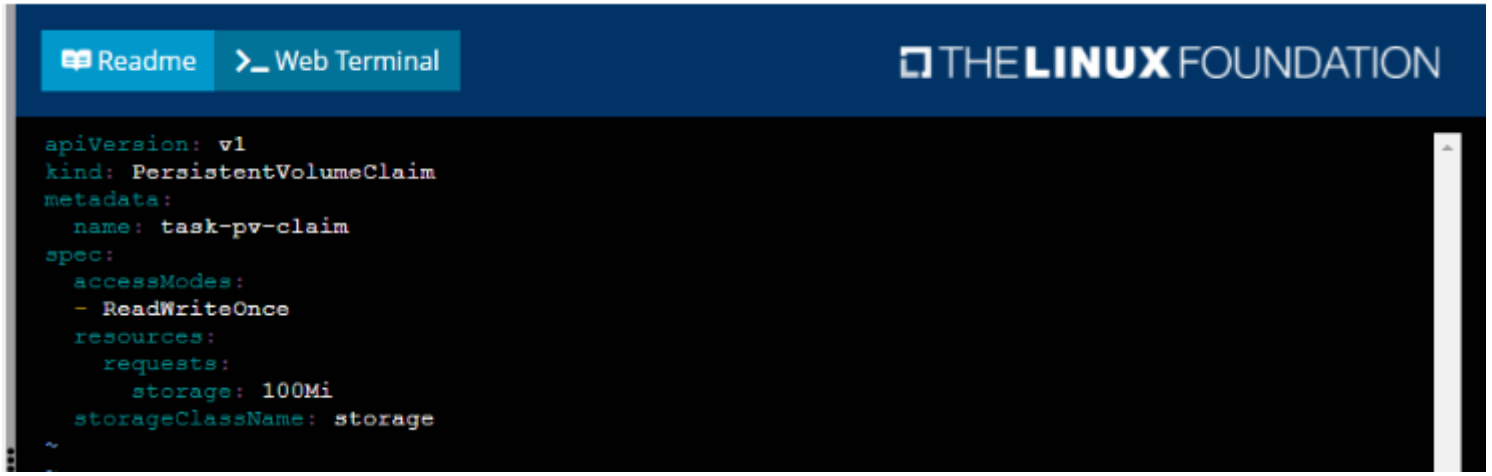

Readme
Web Terminal
THE LINUX FOUNDATION
student@node-1:~$ kubectl config use-context sk8s
Switched to context "sk8s".
student@node-1:~$

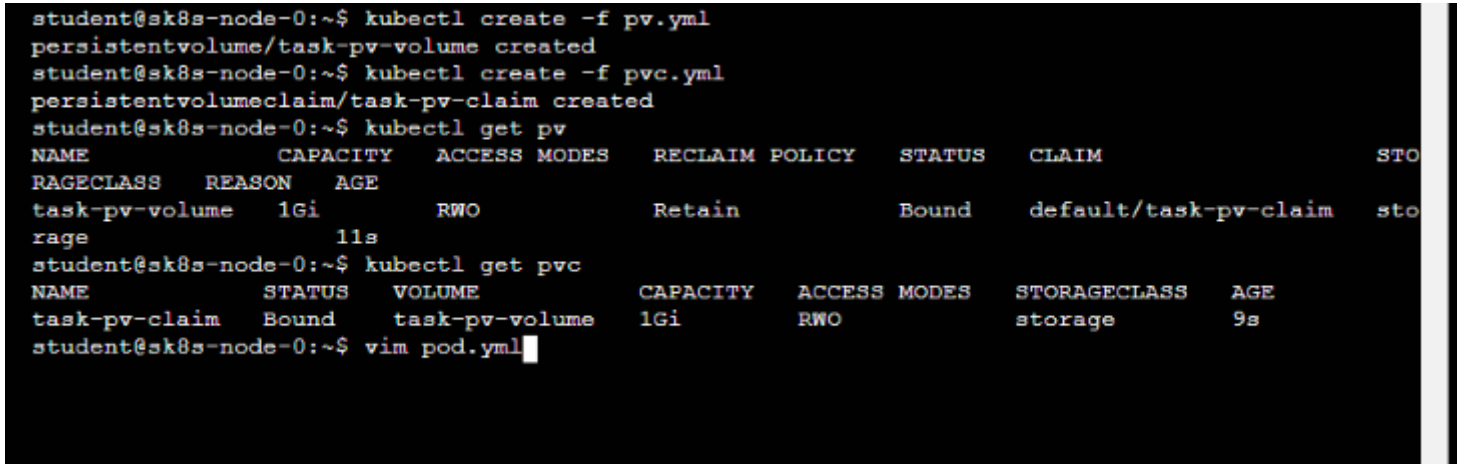

Readme
Web Terminal
THE LINUX FOUNDATION
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/advantage
System information as of Fri Oct 9 08:52:09 UTC 2020
System load: 2.02
Usage of /: 10.3% of 242.29GB
Memory usage: 2%
Swap usage: 0%
Processes: 38
Users logged in: 0
IP address for eth0: 10.250.3.115
IP address for docker0: 172.17.0.1
IP address for cni0: 10.244.1.1
* 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

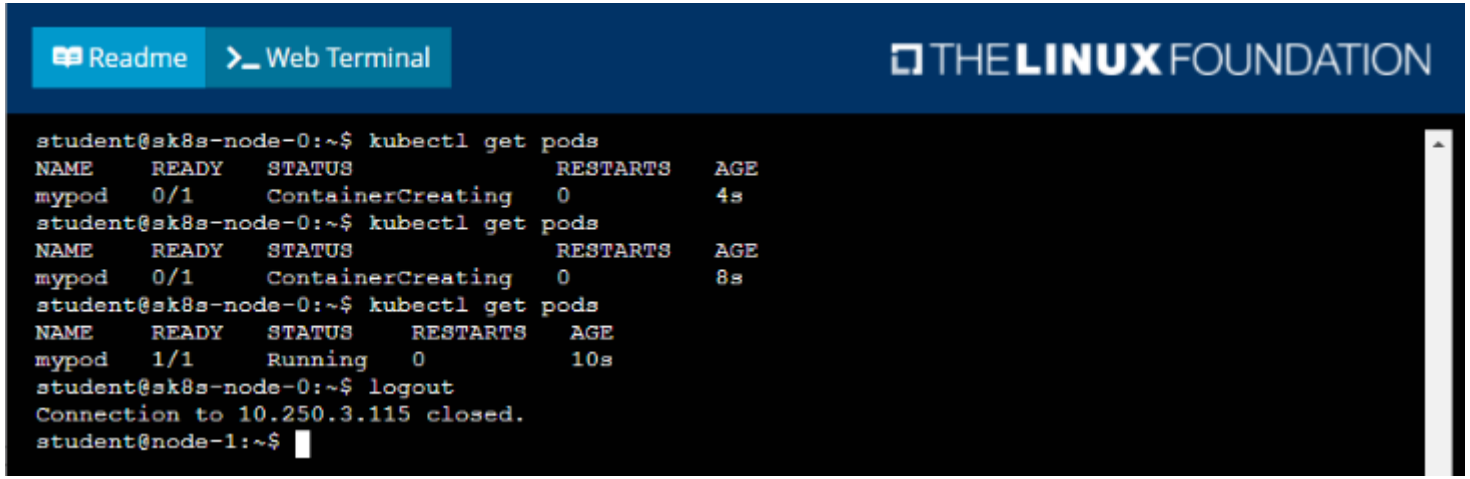

student@sk8s-node-0:~$ kubectl create -f pv.yml
persistentvolume/task-pv-volume created
student@sk8s-node-0:~$ kubectl create -f pvc.yml
persistentvolumeclaim/task-pv-claim created
student@sk8s-node-0:~$ kubectl get pv
NAME CAPACITY ACCESS MODES RECLAIM POLICY STATUS CLAIM STO
RAGECLASS REASON AGE
task-pv-volume 1Gi RWO Retain Bound default/task-pv-claim sto
rage 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-clai
~
~
~
~
~
~
~
~
~
                                                    17,32         All
```

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



Answer:

A

Question 8

Question Type: MultipleChoice

Refer to Exhibit.

Set Configuration Context:

[student@node-1] $ | kubectl

Config use-context k8s

Context

A user has reported an aopticauon 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:

/

```
<namespace>/<pod>
```

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.

Options:

A- Explanation:

To find the broken pod and store its name and namespace to /opt/KDOB00401/broken.txt, you can use the kubectl get pods command and filter the output by the status of the pod.

kubectl get pods --field-selector=status.phase=Failed -o jsonpath='{.items[*].metadata.namespace}/{.items[*].metadata.name}' > /opt/KDOB00401/broken.txt

This command will list all pods with a status of Failed and output their names and namespaces in the format <namespace>/. The output is then written to the /opt/KDOB00401/broken.txt file.

To store the associated error events to a file /opt/KDOB00401/error.txt, you can use the kubectl describe command to retrieve detailed information about the pod, and the grep command to filter the output for error events.

kubectl describe pods --namespace | grep -i error -B5 -A5 > /opt/KDOB00401/error.txt

Replace and with the name and namespace of the broken pod you found in the previous step.

This command will output detailed information about the pod, including error events. The grep command filters the output for lines containing 'error' and also prints 5 lines before and after the match.

To fix the issue, you need to analyze the error events and find the root cause of the issue.

It could be that the application inside the pod is not running, the container image is not available, the pod has not enough resources, or the liveness probe configuration is incorrect.

Once you have identified the cause, you can take appropriate action, such as restarting the application, updating the container image, increasing the resources, or modifying the liveness probe configuration.

After fixing the issue, you can use the kubectl get pods command to check the status of the pod and ensure

Answer:

A

Question 9

Question Type: MultipleChoice

Refer to Exhibit.

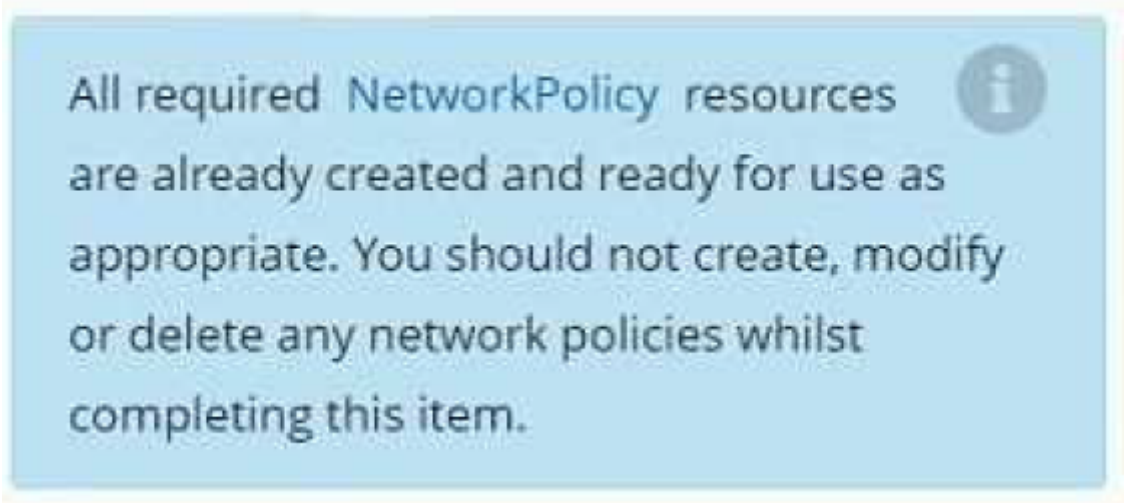
Set Configuration Context:

[student@node-1] $ | kubectl

Config use-context k8s

Task

You have rolled out a new pod to your infrastructure and now you need to allow it to communicate with the web and storage pods but nothing else. Given the running pod kdsn00201 -newpod edit it to use a network policy that will allow it to send and receive traffic only to and from the web and storage pods.



Options:

A- Explanation:

To allow a pod to send and receive traffic only to and from specific pods, you can use network policies in Kubernetes.

First, you will need to create a network policy that defines the allowed traffic. You can create a network policy yaml file with the following rules:

apiVersion: networking.k8s.io/v1
kind: NetworkPolicy
metadata:
name: newpod-network-policy
namespace: default
spec:
podSelector:
matchLabels:
app: kdsn00201-newpod
ingress:
- from:
- podSelector:
matchLabels:
app: web
- podSelector:
matchLabels:
app: storage

This policy will only allow incoming traffic to the pod with the label app=kdsn00201-newpod from pods with the label app=web or app=storage. If you have different labels on your web and storage pods please update the matchLabels accordingly.

Once you have created the network policy, you can apply it to the cluster by running the following command:

kubectl apply -f <network-policy-file>.yaml
This will apply the network policy to the cluster, and the newpod will only be able to send and receive traffic to and from the web and storage pods.
Please note that, NetworkPolicy resource is not available by default, you need to enable the NetworkPolicy feature on your Kubernetes cluster. This feature is enabled by default on some clusters and must be explicitly enabled on others. You can check if NetworkPolicy is available by running the command kubectl api-versions | grep networking
Also, you need to ensure that the pods that you want to allow traffic to and from are running on the same namespace.

Answer:

A