Linux-Foundation

Exam Questions CKAD

Certified Kubernetes Application Developer (CKAD) Program

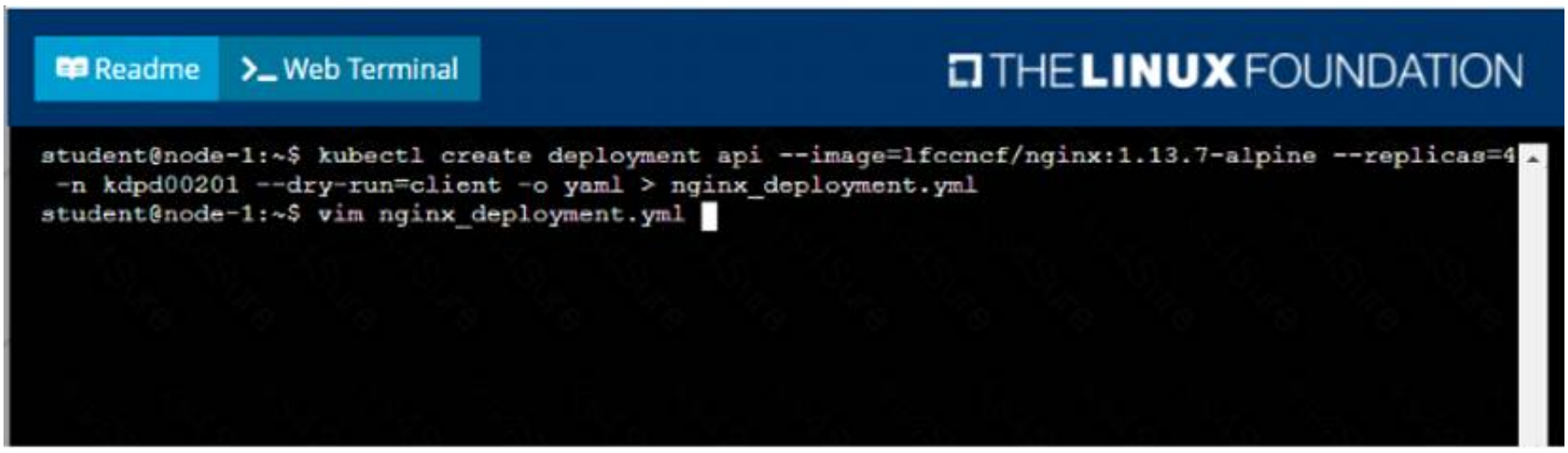
NEW QUESTION 1
Exhibit:

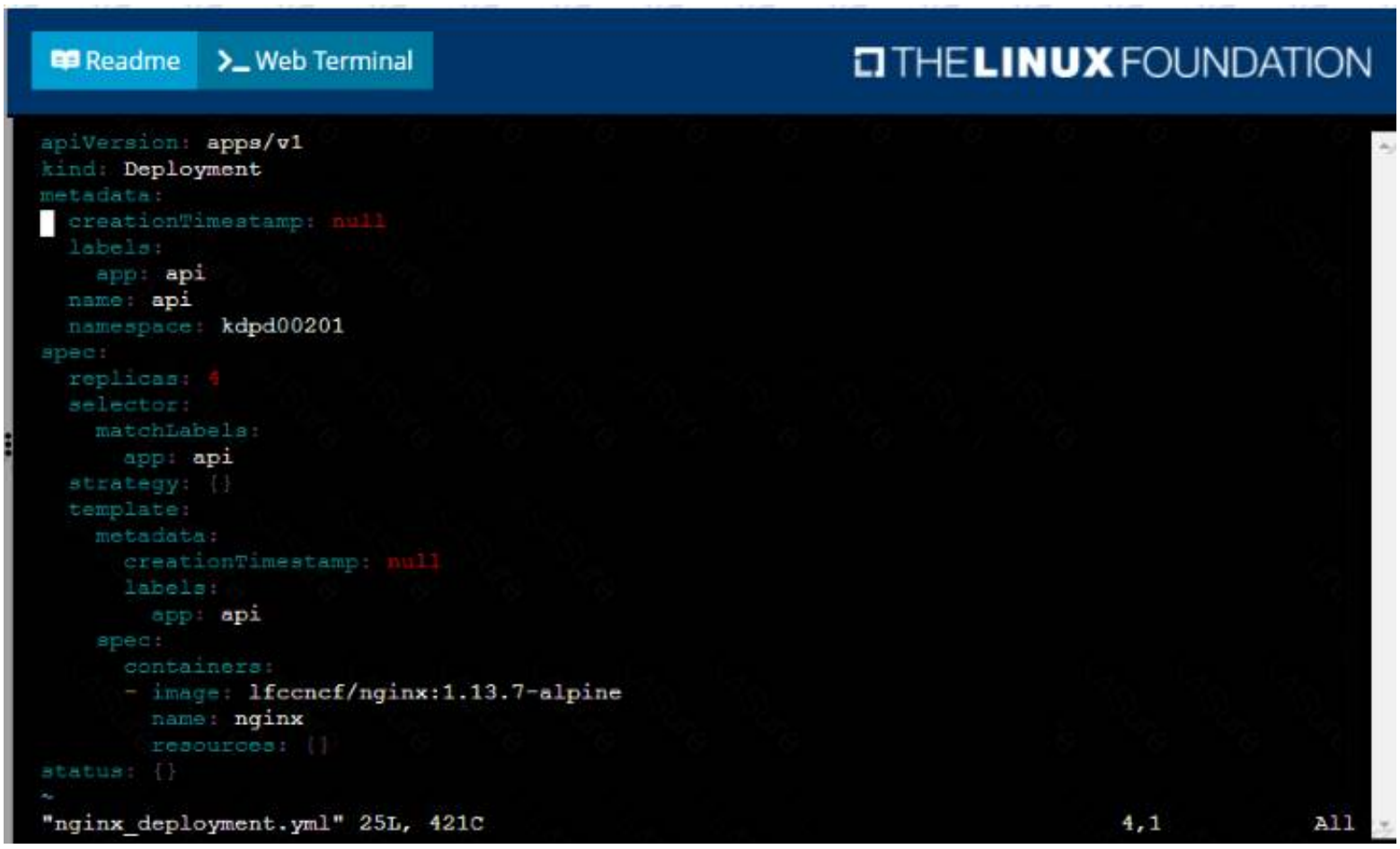
Task
Create a new deployment for running.nginx with the following parameters;
• Run the deployment in the kdpd00201 namespace. The namespace has already been created
• Name the deployment frontend and configure with4replicas
• Configure the pod with a container image of lfccncf/nginx:1.13.7
• Set an environment variable of NGINX PORT=8080and also expose that port for the container above Answer:
See the solution below.

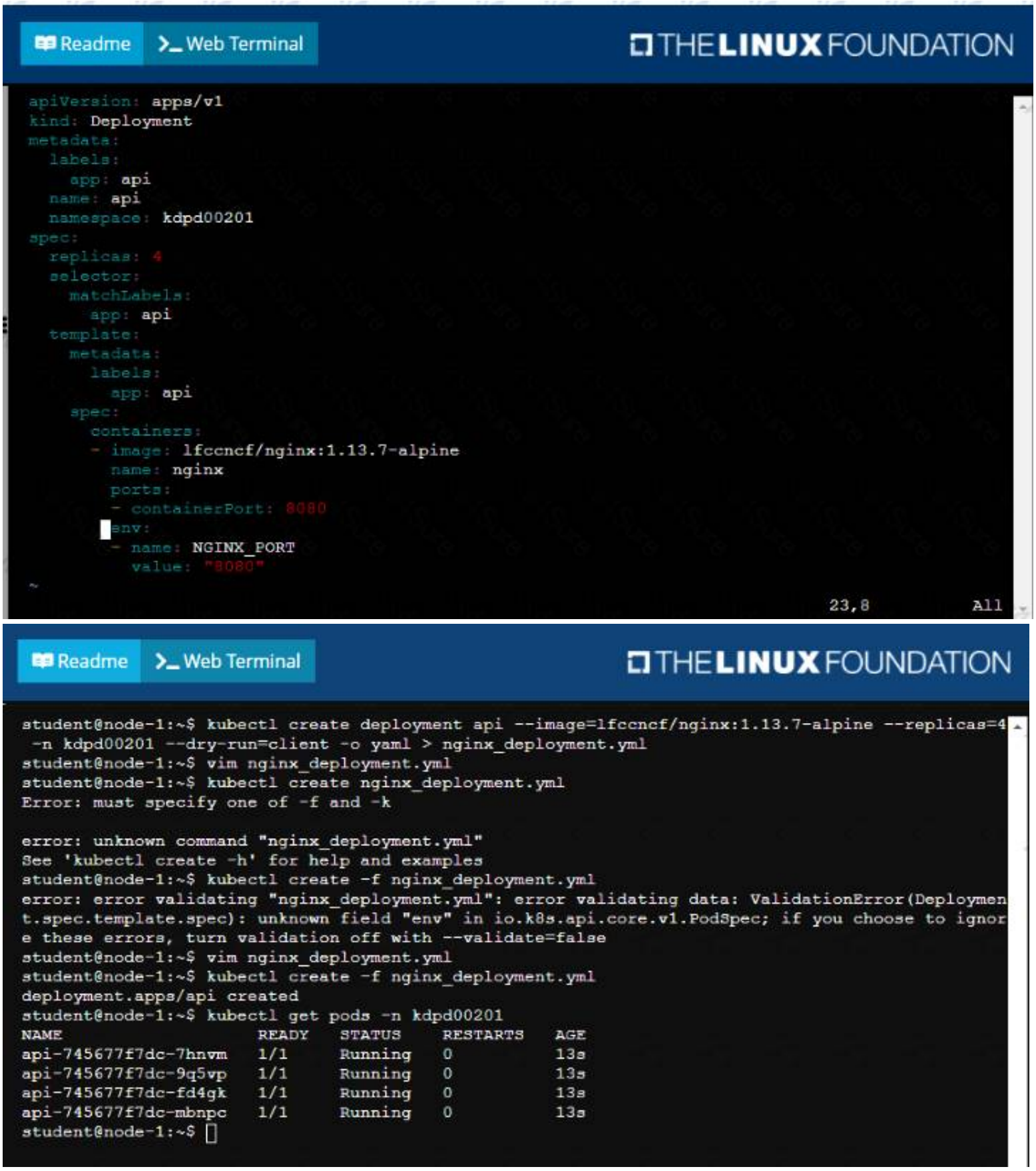
A. Mastered
B. Not Mastered

Answer: A

Explanation:
Solution:







NEW QUESTION 2
Exhibit:

Context
You are tasked to create a secret and consume the secret in a pod using environment variables as follow:
Task
• Create a secret named another-secret with a key/value pair; key1/value4
• Start an nginx pod named nginx-secret using container image nginx, and add an environment variable exposing the value of the secret key key 1, usingCOOL_VARIABLE as the name for the environment variable inside the pod

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Solution:

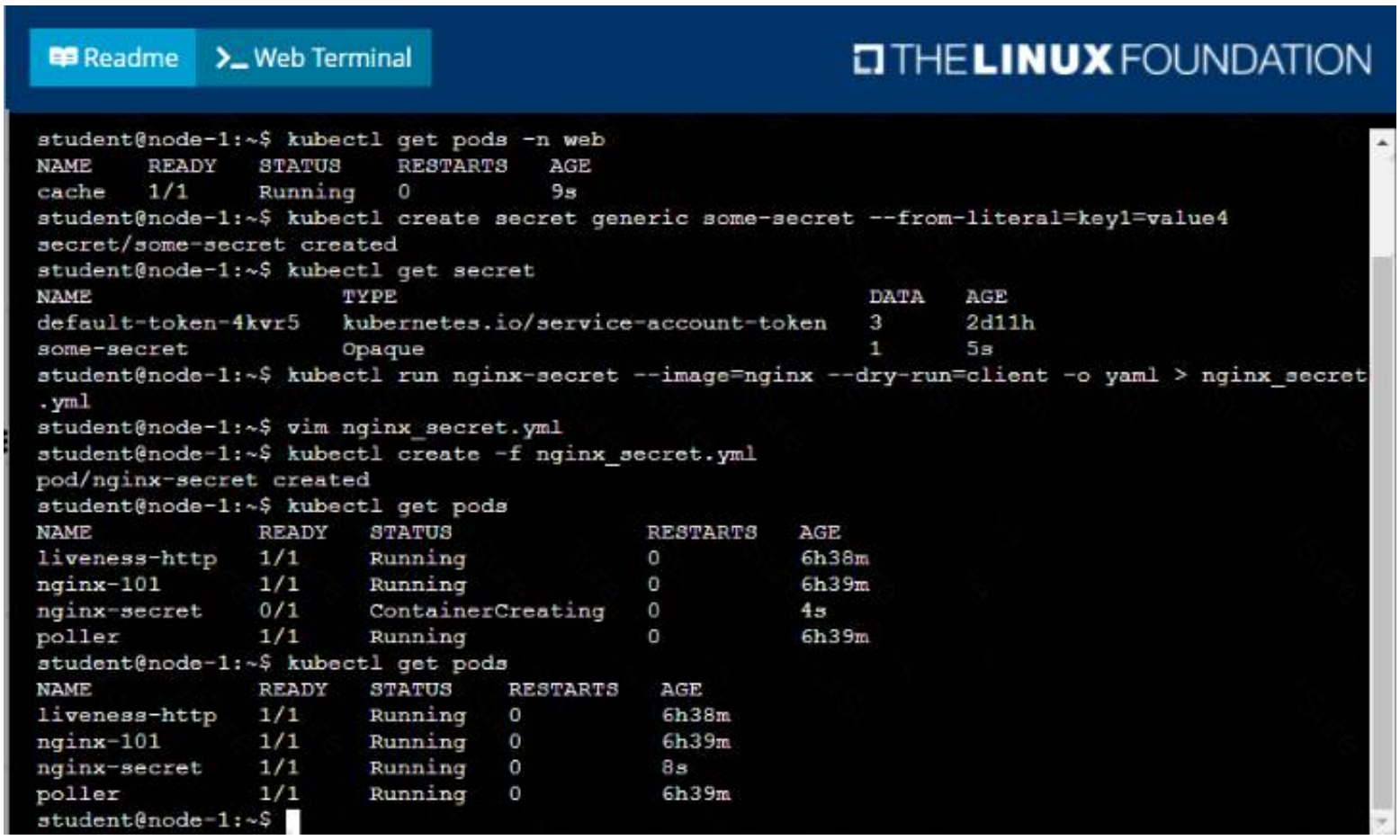
```
student@node-1:~$ kubectl create secret generic some-secret --from-literal=key1=value4
secret/some-secret created
student@node-1:~$ kubectl get secret
NAME                  TYPE                                  DATA   AGE
default-token-4kvr5   kubernetes.io/service-account-token   3      2d11h
some-secret           Opaque                                1      5s
student@node-1:~$ kubectl run nginx-secret --image=nginx --dry-run=client -o yaml > nginx_secret
.yml
student@node-1:~$ vim nginx_secret.yml
```

Readme | Web Terminal — THE LINUX FOUNDATION

```
apiVersion: v1
kind: Pod
metadata:
  creationTimestamp: null
  labels:
    run: nginx-secret
  name: nginx-secret
spec:
  containers:
  - image: nginx
    name: nginx-secret
    resources: {}
  dnsPolicy: ClusterFirst
  restartPolicy: Always
status: {}
~
~
~
~
~
~
~
~
~
~
~
"nginx_secret.yml" 15L, 253C                                  1,1           All
```

Readme | Web Terminal — THE LINUX FOUNDATION

```
apiVersion: v1
kind: Pod
metadata:
  labels:
    run: nginx-secret
  name: nginx-secret
spec:
  containers:
  - image: nginx
    name: nginx-secret
    env:
    - name: COOL_VARIABLE
      valueFrom:
        secretKeyRef:
          name: some-secret
          key: key1
~
~
~
~
~
~
~
~
~
~
~
-- INSERT --                                          16,20         All
```



NEW QUESTION 3
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 lfccncf/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

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Solution:

Readme | Web Terminal — THE LINUX FOUNDATION

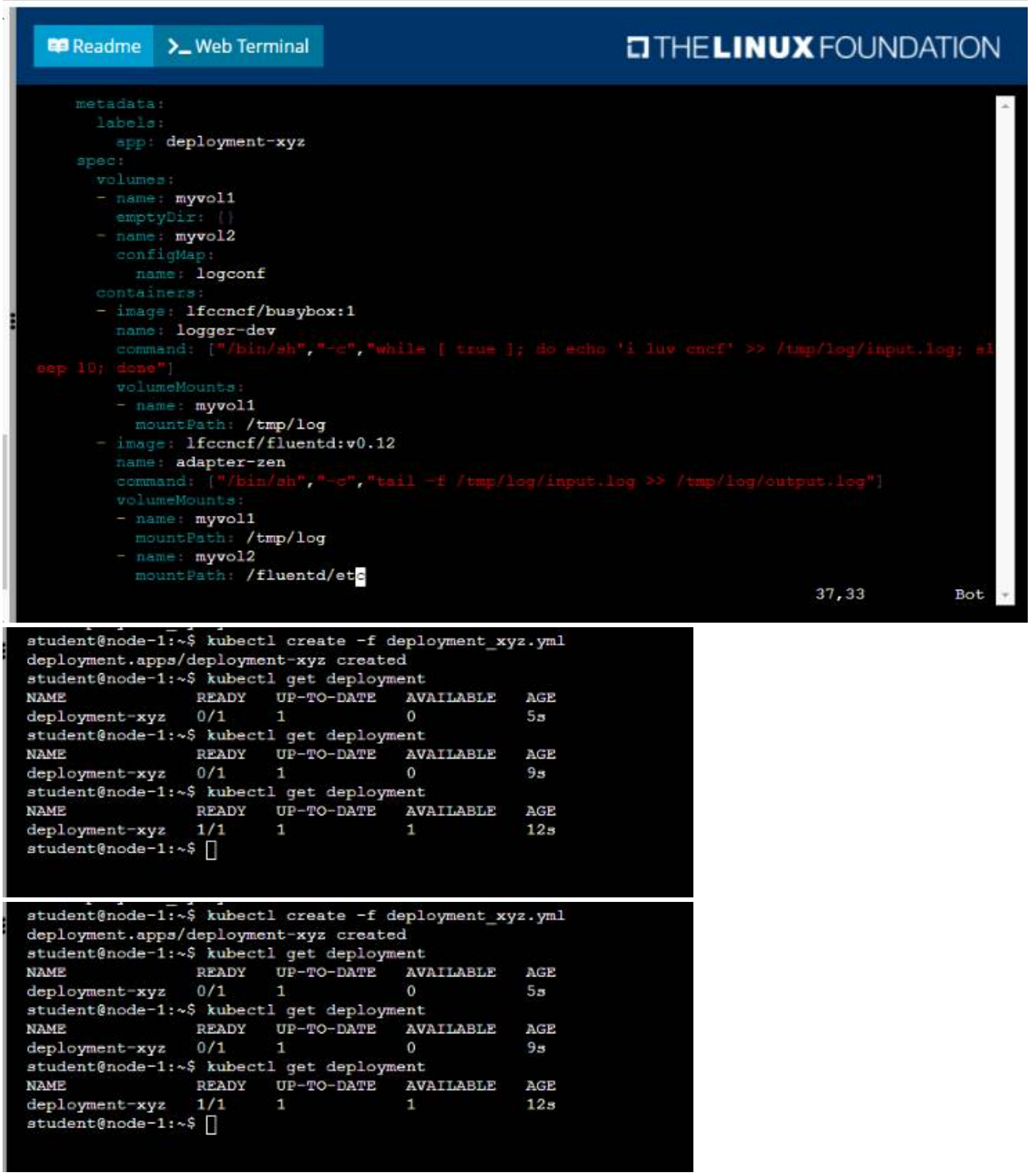
```
student@node-1:~$ kubectl create deployment deployment-xyz --image=lfccncf/busybox:1 --dry-run=client -o yaml > deployment_xyz.yml
student@node-1:~$ vim deployment_xyz.yml
```

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
```



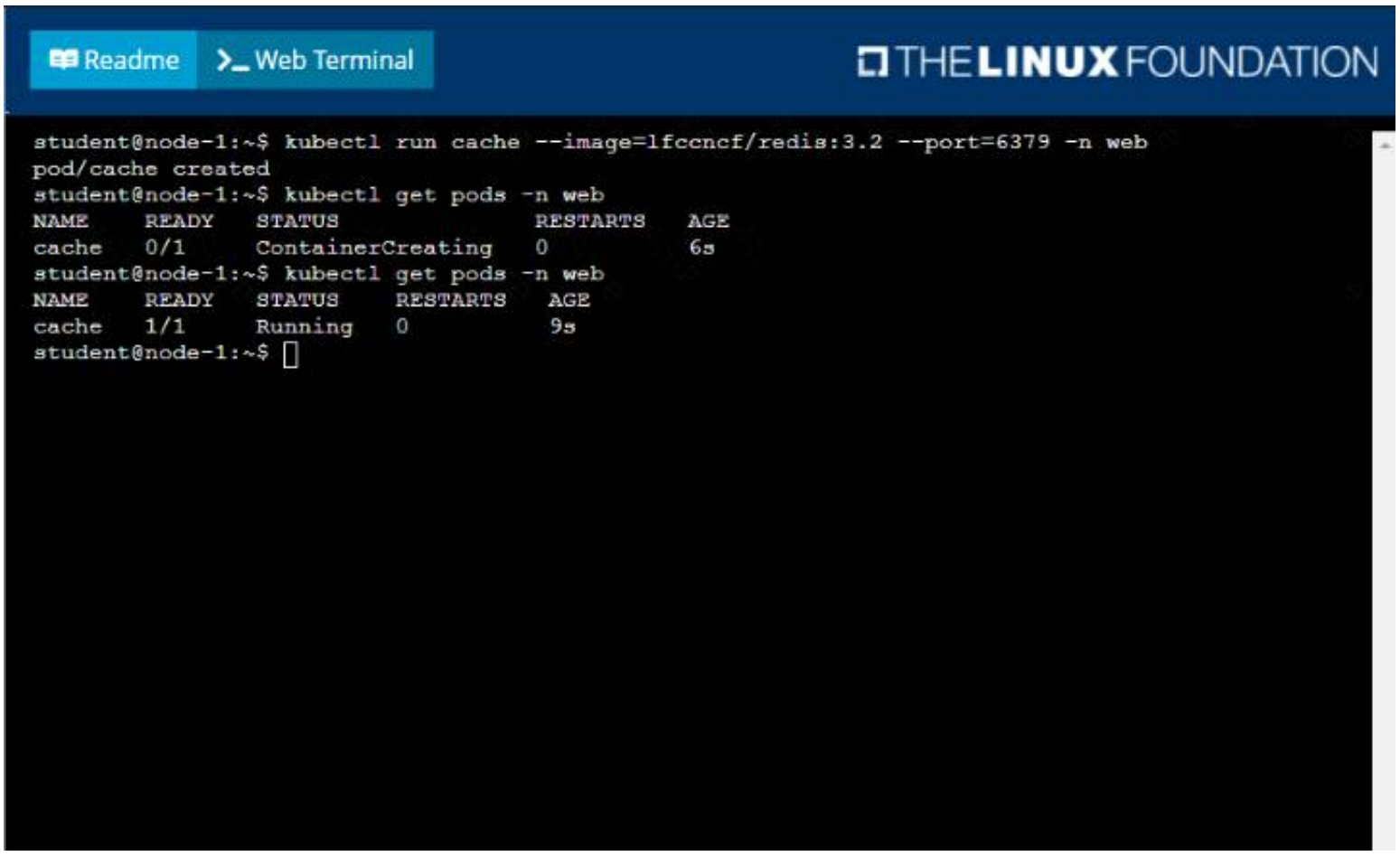
NEW QUESTION 4
Exhibit:

Context
Your application's namespace requires a specific service account to be used.
Task
Update the app-adeployment in theproductionnamespace to run as therestrictedserviceservice account. The service account has already been created.

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Solution:



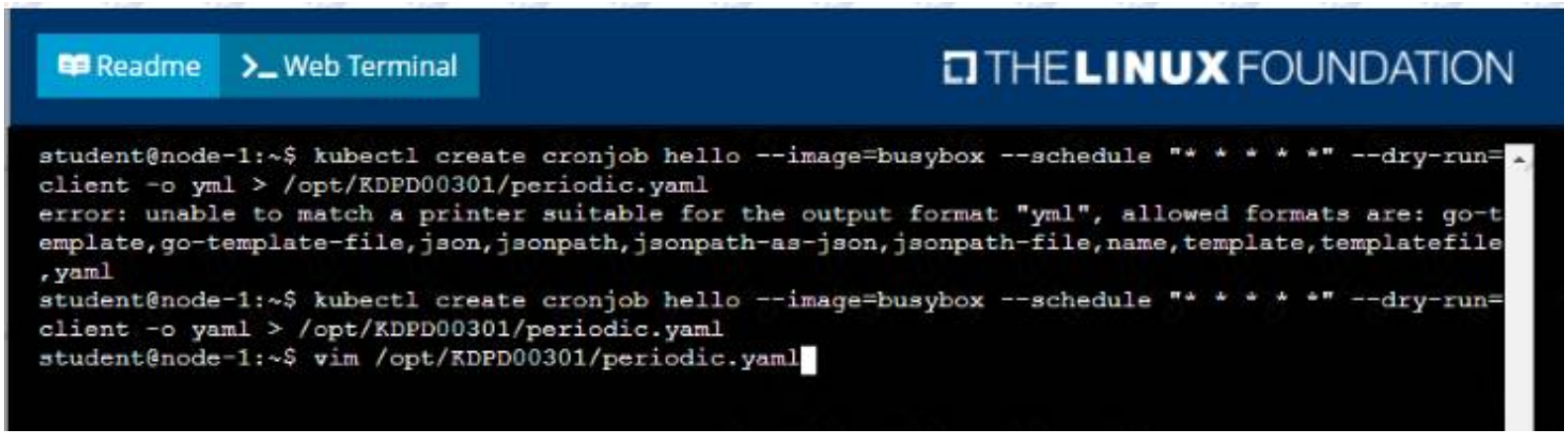
NEW QUESTION 5
Exhibit:

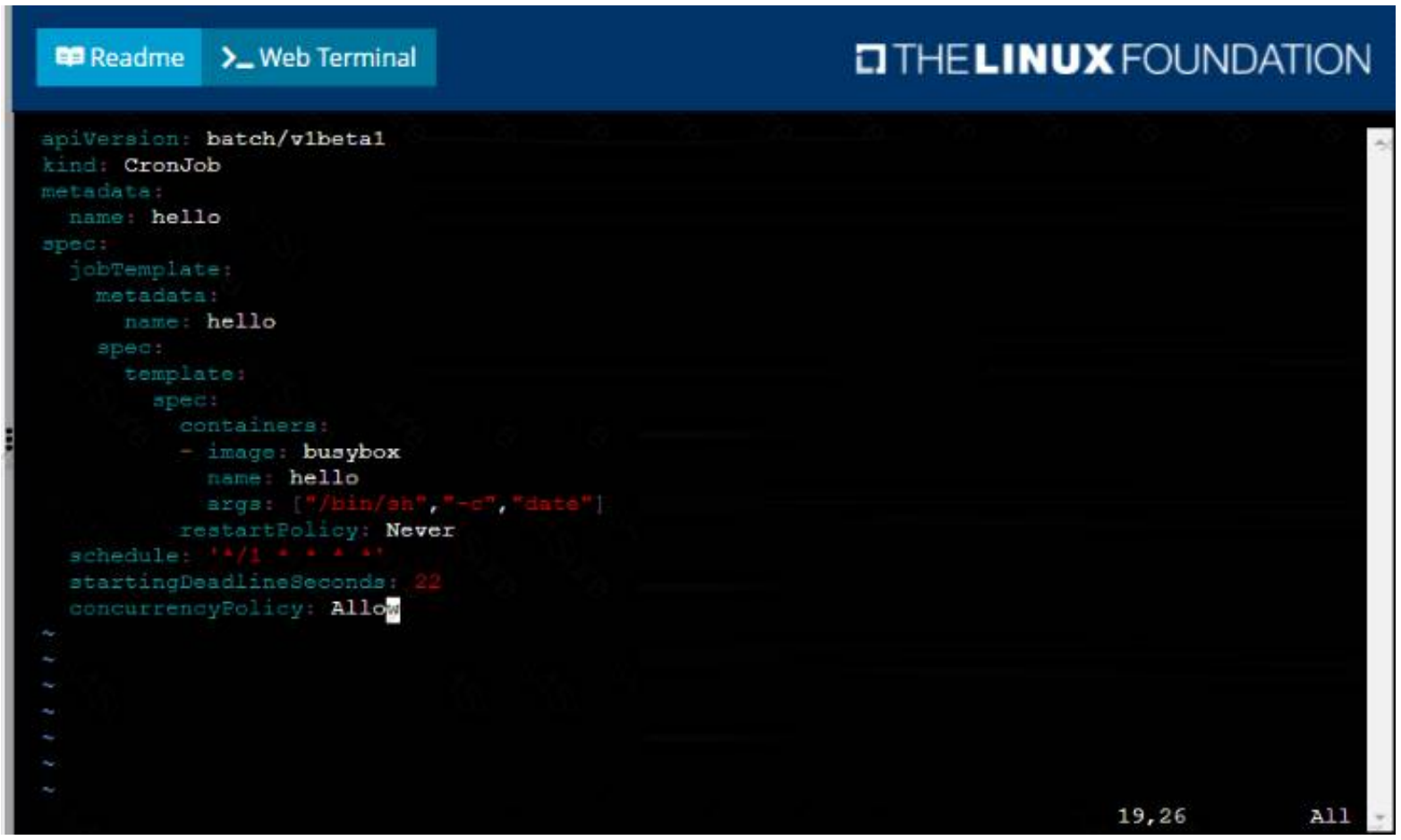
Context
Developers occasionally need to submit pods that run periodically. Task
Follow the steps below to create a pod that will start at a predetermined time and]which runs to completion
only once each time it is started:
• Create a YAML formatted Kubernetes manifest /opt/KDPD00301/periodic.yaml that runs the following shell command: date in a single busybox container. The command should run every minute and must complete within22seconds or be terminated oy Kubernetes. The Cronjob namp and container name should both be hello
• Create the resource in the above manifest and verify that the job executes successfully at least once

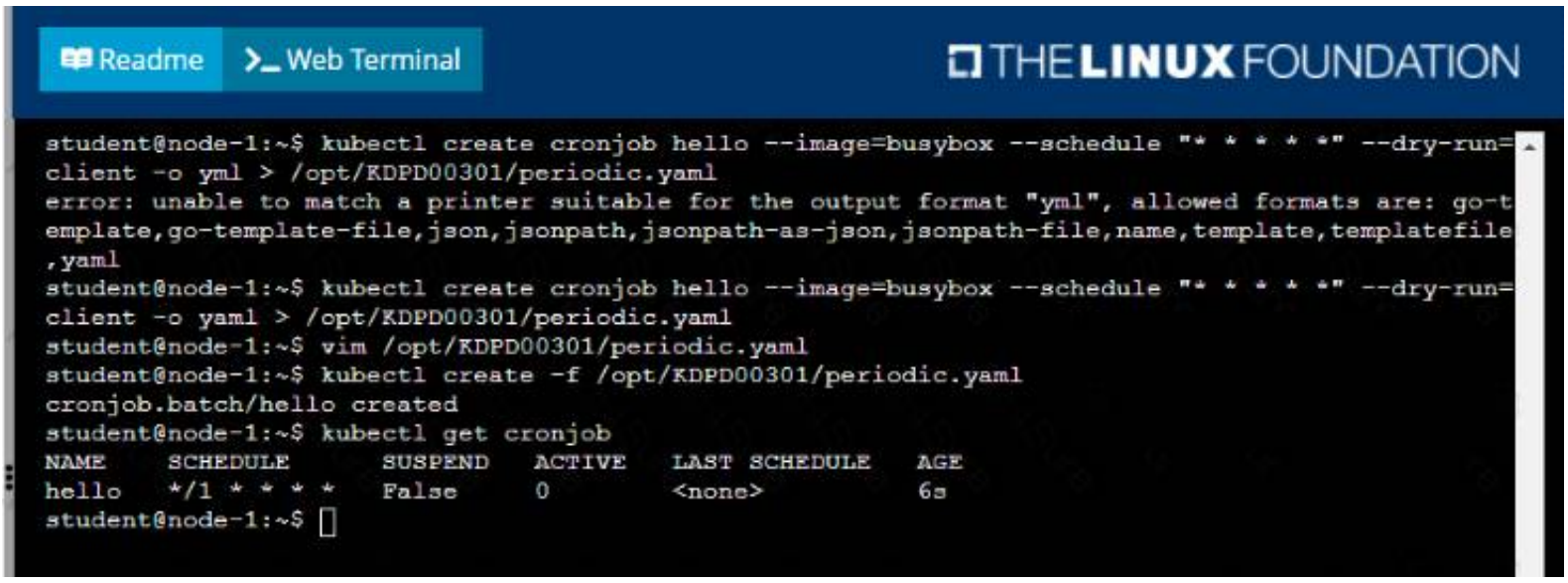
A. Mastered
B. Not Mastered

Answer: A

Explanation:
Solution:







NEW QUESTION 6
Context
Anytime a team needs to run a container on Kubernetes they will need to define a pod within which to run the container.
Task
Please complete the following:
• Create a YAML formatted pod manifest
/opt/KDPD00101/podl.yml to create a pod named app1 that runs a container named app1cont using image lfccncf/arg-output
with these command line arguments: -lines 56 -F
• Create the pod with the kubect1 command using the YAML file created in the previous step
• When the pod is running display summary data about the pod in JSON format using the kubect1 command and redirect the output to a file named
/opt/KDPD00101/out1.json
• All of the files you need to work with have been created, empty, for your convenience

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Solution:

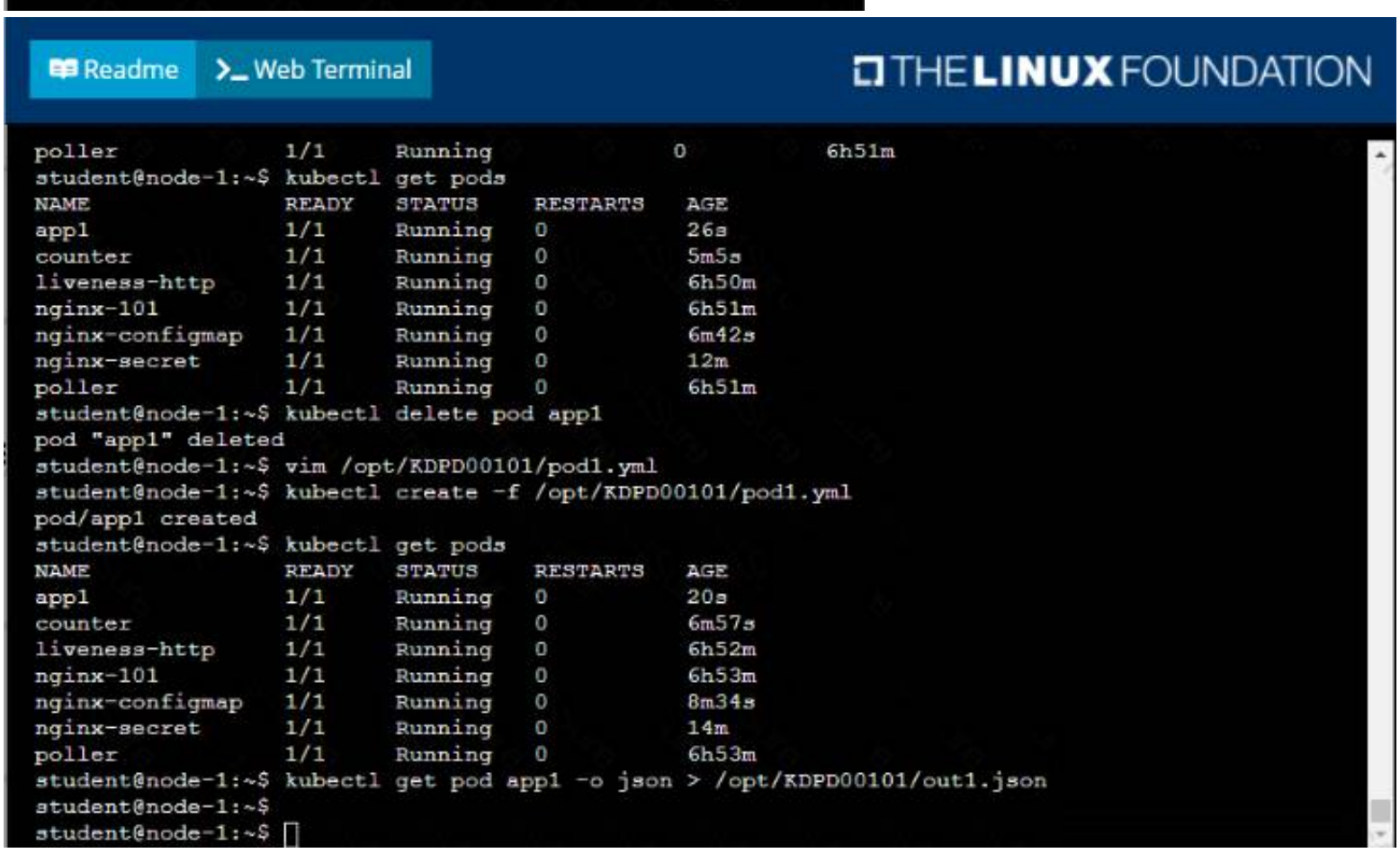
Readme | Web Terminal — THE LINUX FOUNDATION

```
apiVersion: v1
kind: Pod
metadata:
  creationTimestamp: null
  labels:
    run: app1
  name: app1
spec:
  containers:
  - image: lfccncf/arg-output
    name: app1
    resources: {}
  dnsPolicy: ClusterFirst
  restartPolicy: Always
status: {}
~
~
~
~
~
~
~
~
~
~
~
~
"/opt/KDPD00101/pod1.yml" 15L, 242C                    3,1           All
```

Readme | Web Terminal — THE LINUX FOUNDATION

```
apiVersion: v1
kind: Pod
metadata:
  labels:
    run: app1
  name: app1
spec:
  containers:
  - image: lfccncf/arg-output
    name: app1
    args: ["--lines","56","-f"]
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
                                                       11,30         All
```

```
pod/app1 created
student@node-1:~$ kubectl get pods
NAME              READY   STATUS              RESTARTS   AGE
app1              0/1     ContainerCreating   0          5s
counter           1/1     Running             0          4m44s
liveness-http     1/1     Running             0          6h50m
nginx-101         1/1     Running             0          6h51m
nginx-configmap   1/1     Running             0          6m21s
nginx-secret      1/1     Running             0          11m
poller            1/1     Running             0          6h51m
student@node-1:~$ kubectl get pods
NAME              READY   STATUS    RESTARTS   AGE
app1              1/1     Running   0          26s
counter           1/1     Running   0          5m5s
liveness-http     1/1     Running   0          6h50m
nginx-101         1/1     Running   0          6h51m
nginx-configmap   1/1     Running   0          6m42s
nginx-secret      1/1     Running   0          12m
poller            1/1     Running   0          6h51m
student@node-1:~$ kubectl delete pod app1
pod "app1" deleted
student@node-1:~$ vim /opt/KDPD00101/pod1.yml
```



NEW QUESTION 7
Exhibit:

Context
You have been tasked with scaling an existing deployment for availability, and creating a service to expose the deployment within your infrastructure. Task
Start with the deployment named kdsn00101-deployment which has already been deployed to the namespace kdsn00101 . Edit it to:
• Add the func=webFrontEndkey/value label to the pod template metadata to identify the pod for the service definition
• Have 4 replicas
Next, create ana deploy in namespace kdsn00l01 a service that accomplishes the following:
• Exposes the service on TCP port 8080
• is mapped to me pods defined by the specification of kdsn00l01-deployment
• Is of type NodePort
• Has a name of cherry

A. Mastered

B. Not Mastered

Answer: A

Explanation:
Solution:

```
student@node-1:~$ kubectl edit deployment kdsn00101-deployment -n kdsn00101
```

Readme | Web Terminal — THE LINUX FOUNDATION

```
# 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: "2020-10-09T08:50:39Z"
  generation: 1
  labels:
    app: nginx
  name: kdsn00101-deployment
  namespace: kdsn00101
  resourceVersion: "4786"
  selfLink: /apis/apps/v1/namespaces/kdsn00101/deployments/kdsn00101-deployment
  uid: 8d3ace00-7761-4189-ba10-fbc676c311bf
spec:
  progressDeadlineSeconds: 600
  replicas: 1
  revisionHistoryLimit: 10
  selector:
    matchLabels:
      app: nginx
  strategy:
"/tmp/kubectl-edit-d4y5r.yaml" 70L, 1957C                    1,1           Top
```

Readme | Web Terminal — THE LINUX FOUNDATION

```
  uid: 8d3ace00-7761-4189-ba10-fbc676c311bf
spec:
  progressDeadlineSeconds: 600
  replicas: 4
  revisionHistoryLimit: 10
  selector:
    matchLabels:
      app: nginx
  strategy:
    rollingUpdate:
      maxSurge: 25%
      maxUnavailable: 25%
    type: RollingUpdate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: nginx
        func: webFrontEnd
    spec:
      containers:
      - image: nginx:latest
        imagePullPolicy: Always
        name: nginx
        ports:
        - containerPort: 80
:
```

```
student@node-1:~$ kubectl edit deployment kdsn00101-deployment -n kdsn00101
deployment.apps/kdsn00101-deployment edited
student@node-1:~$ kubectl get deployment kdsn00101-deployment -n kdsn00101
NAME                   READY   UP-TO-DATE   AVAILABLE   AGE
kdsn00101-deployment   4/4     4            4           7h17m
student@node-1:~$ kubectl expose deployment kdsn00101-deployment -n kdsn00101 --type NodePort --
port 8080 --name cherry
service/cherry exposed
```

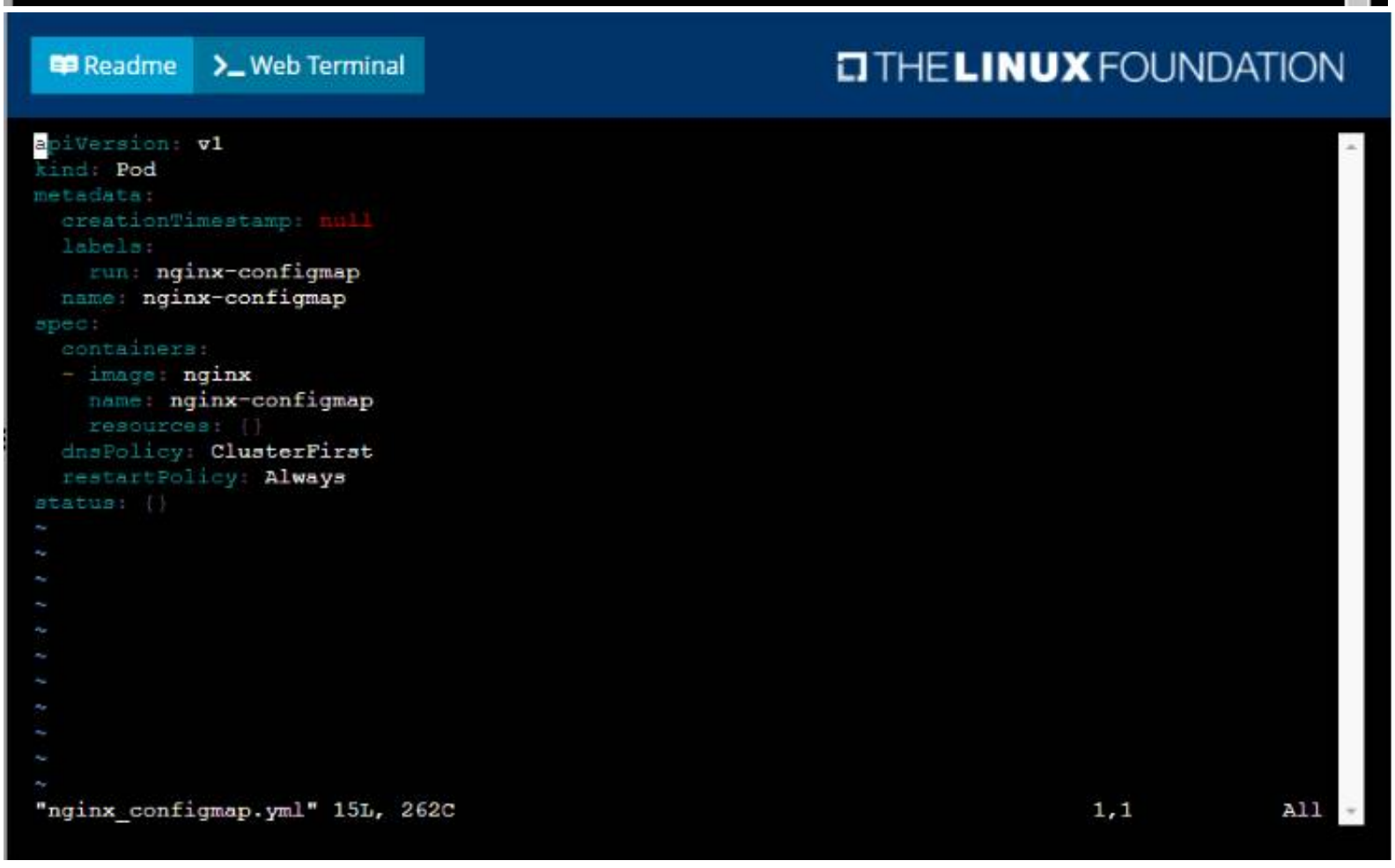
NEW QUESTION 8
Exhibit:

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 namedanother-config containing the key/value pair: key4/value3
• starta 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:



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 > ngin_conf
igmap.yml
student@node-1:~$ vim ngin_configmap.yml ^C
student@node-1:~$ mv ngin_configmap.yml nginx_configmap.yml
student@node-1:~$ vim nginx_configmap.yml
student@node-1:~$
```

Readme | Web Terminal — THE LINUX FOUNDATION

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

error: unknown command "f nginx_configmap.yml"
See 'kubectl create -h' for help and examples
student@node-1:~$ kubectl create -f nginx_configmap.yml
error: error validating "nginx_configmap.yml": 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.yml
student@node-1:~$ kubectl create -f nginx_configmap.yml
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 10

.....

Thank You for Trying Our Product

We offer two products:

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questons and Answers in PDF Format

CKAD Practice Exam Features:

* CKAD Questions and Answers Updated Frequently

* CKAD Practice Questions Verified by Expert Senior Certified Staff

* CKAD Most Realistic Questions that Guarantee you a Pass on Your FirstTry

* CKAD Practice Test Questions in Multiple Choice Formats and Updatesfor 1 Year