

# Buy Exam4Labs Linux Foundation CKAD Exam Questions With Free Updates

Achieve success by using our corrected Linux Foundation CKAD exam questions 2024. We offer success guarantee with our updated CKAD dumps.

## Linux Foundation CKAD Exam Questions [Rectified 2024] - Get Ready For The Exam

Are you taking the Certified Kubernetes Application Developer Exam and want to ensure perfect preparation for the CKAD Kubernetes Application Developer exam? CertsLink [Linux Foundation CKAD exam questions](#) preparation can help you get there with ease. CertsLink Linux Foundation CKAD exam questions is a comprehensive learning package that offers the CKAD Kubernetes Application Developer exam real questions and answers with key features so that you can prepare for the CKAD Certified Kubernetes Application Developer Exam smoothly.



## Real Linux Foundation CKAD Exam Questions In The PDF Format

The Kubernetes Application Developer CKAD exam questions are available in pdf format, which makes it convenient for you to save the Linux Foundation CKAD pdf to any device such as desktop, mac, smartphone, laptop, and tablet. It also means that the Linux Foundation CKAD exam questions is easily accessible no matter where you are, so you can prepare for your CKAD Certified Kubernetes Application Developer Exam at any time anywhere.

DOWNLOAD the newest Exam4Labs CKAD PDF dumps from Cloud Storage for free: [https://drive.google.com/open?id=1I-T5VD9b1zbdupdz6b8xOnASTald1\\_U](https://drive.google.com/open?id=1I-T5VD9b1zbdupdz6b8xOnASTald1_U)

Exam4Labs provides Linux Foundation Certified Kubernetes Application Developer Exam (CKAD) practice tests (desktop and web-based) to its valuable customers so they get the awareness of the Linux Foundation Certified Kubernetes Application Developer Exam (CKAD) certification exam format. Likewise, Linux Foundation Certified Kubernetes Application Developer Exam (CKAD) exam preparation materials for Linux Foundation Certified Kubernetes Application Developer Exam (CKAD) exam can be downloaded instantly after you make your purchase.

The CKAD certification exam is designed for developers with experience in containerization and Kubernetes, looking to validate their skills and knowledge to build, deploy, and manage cloud-native applications on Kubernetes. CKAD exam evaluates the candidate's understanding of Kubernetes architecture, Kubernetes objects, Kubernetes networking, Kubernetes storage, Kubernetes security, and Kubernetes troubleshooting. The CKAD certification is recognized globally by organizations and enterprises as a standard for Kubernetes application development expertise, making it a valuable credential for developers seeking to advance their careers in cloud computing and containerization.

To prepare for the CKAD certification exam, candidates should have a solid understanding of Kubernetes architecture and concepts, as well as experience working with Kubernetes in a production environment. The Linux Foundation offers a range of training courses and resources to help candidates prepare for the exam, including online courses, practice exams, and study guides. The Linux Foundation also provides a free Kubernetes training course, which covers the basic concepts of Kubernetes and is an excellent starting point for candidates who are new to the platform.

The CKAD Certification is highly regarded in the industry and is recognized by many employers as a valuable credential for Kubernetes developers. Linux Foundation Certified Kubernetes Application Developer Exam certification demonstrates a

candidate's ability to work with Kubernetes in a professional setting and shows that they have the skills and knowledge required to deploy and manage applications on Kubernetes clusters. The CKAD certification is a great way for developers to showcase their skills and advance their careers in the fast-growing field of Kubernetes development.

>> **CKAD Instant Access** <<

## Valid CKAD Exam Camp Pdf - Test CKAD Dumps Free

Challenges are omnipresent everywhere. This challenge of CKAD practice exam is something you do not need to be anxious with our CKAD practice materials. If you make choices on practice materials with untenable content, you may fail the exam with undesirable outcomes. Our Linux Foundation Certified Kubernetes Application Developer Exam practice materials are totally to the contrary. Confronting obstacles or bottleneck during your process of reviewing, CKAD practice materials will fix all problems of the exam and increase your possibility of getting dream opportunities dramatically.

## Linux Foundation Certified Kubernetes Application Developer Exam Sample Questions (Q160-Q165):

### NEW QUESTION # 160

Exhibit:

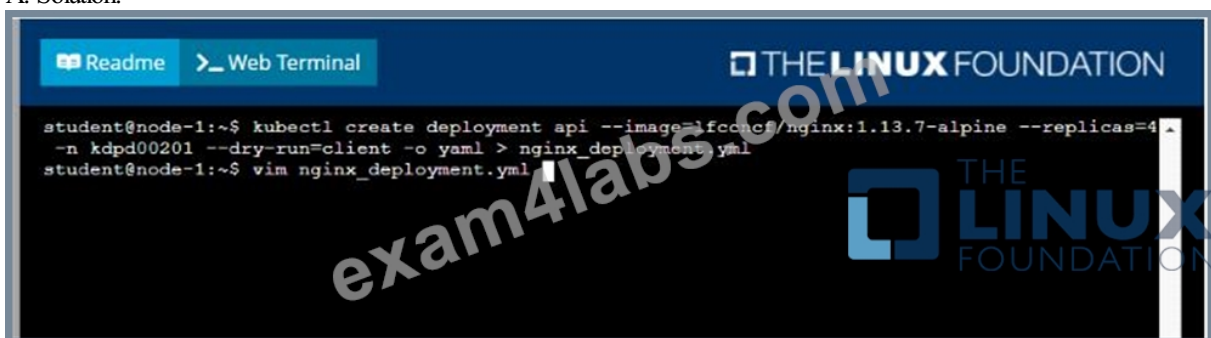


Task

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 lfcncf/nginx:1.13.7
- \* Set an environment variable of NGINX\_\_PORT=8080 and also expose that port for the container above

- A. Solution:



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
  strategy: {}
  template:
    metadata:
      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: {}
```

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 --namespace=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-7hnm	1/1	Running	0	13s
api-745677f7dc-9q5vp	1/1	Running	0	13s
api-745677f7dc-fd4gk	1/1	Running	0	13s
api-745677f7dc-mbnp	1/1	Running	0	13s

```
student@node-1:~$
```

- B. Solution:

```

Readme Web Terminal THE LINUX FOUNDATION

student@node-1:~$ kubectl create deployment api --image=lfcncf/nginx:1.13.7-alpine --replicas=4
-n kdpd00201 --dry-run=client -o yaml > nginx_deployment.yml
student@node-1:~$ vim nginx_deployment.yml

```

```

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:
    type: RollingUpdate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: api
    spec:
      containers:
      - image: lfcncf/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: lfcncf/nginx:1.13.7-alpine
        name: nginx
        ports:
        - containerPort: 80
        env:
        - name: NGINX_PORT
          value: "8080"
~
23,8 All

```



```
Readme Web Terminal THE LINUX FOUNDATION

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

error: unknown command "nginx_deployment.yaml"
See 'kubectl create -h' for help and examples
student@node-1:~$ kubectl create -f nginx_deployment.yaml
error: error validating "nginx_deployment.yaml": 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.yaml
student@node-1:~$ kubectl create -f nginx_deployment.yaml
deployment.apps/api created
student@node-1:~$ kubectl get pods -n kdpd00201
NAME                                READY   STATUS    RESTARTS   AGE
api-745677f7dc-7hnm                1/1     Running   0           13s
api-745677f7dc-9q5vp                1/1     Running   0           13s
api-745677f7dc-fd4gk                1/1     Running   0           13s
api-745677f7dc-bbnp                1/1     Running   0           13s
student@node-1:~$
```

Answer: B

## NEW QUESTION # 161

Refer to Exhibit.



Set Configuration Context:

```
[student@node-1] $ kubectl
```

```
Config use-context k8s
```

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

Answer:

Explanation:

Solution:

To update the nginxsvc service to serve on port 5050, you will need to edit the service's definition yaml file. You can use the kubectl edit command to edit the service in place.

```
kubect edit svc nginxsvc
```

This will open the service definition yaml file in your default editor. Change the targetPort of the service to 5050 and save the file.

To add an HAproxy container named haproxy bound to port 90 to the poller pod, you will need to edit the pod's definition yaml file located at /opt/KDMC00101/poller.yaml.

You can add a new container to the pod's definition yaml file, with the following configuration:

containers:

- name: haproxy

image: haproxy

ports:

- containerPort: 90

volumeMounts:

- name: haproxy-config

mountPath: /usr/local/etc/haproxy/haproxy.cfg

subPath: haproxy.cfg

args: ["haproxy", "-f", "/usr/local/etc/haproxy/haproxy.cfg"]

This will add the HAproxy container to the pod and configure it to listen on port 90. It will also mount the ConfigMap haproxy-config to the container, so that haproxy.cfg is available at /usr/local/etc/haproxy/haproxy.cfg.

To inject the configuration located at /opt/KDMC00101/haproxy.cfg to the container, you will need to create a ConfigMap using the following command:

```
kubectl create configmap haproxy-config --from-file=/opt/KDMC00101/haproxy.cfg
```

You will also need to update the args of the poller container so that it connects to localhost instead of nginxsvc. You can do this by editing the pod's definition yaml file and changing the args field to args: ["poller", "--host=localhost"].

Once you have made these changes, you can deploy the updated pod to the cluster by running the following command:

```
kubectl apply -f /opt/KDMC00101/poller.yaml
```

This will deploy the enhanced pod with the HAproxy container to the cluster. The HAproxy container will listen on port 90 and proxy connections to the nginxsvc service on port 5050. The poller container will connect to localhost instead of nginxsvc, so that the connection is correctly proxied to the new service endpoint.

Please note that, this is a basic example and you may need to tweak the haproxy.cfg file and the args based on your use case.

## NEW QUESTION # 162

You are building a microservices application with two services, 'user-service' and 'order-service'. Both services have dedicated Dockerfiles for building their container images. You want to optimize the image build process by minimizing the size of the final images. You also want to ensure that the image build process is reproducible and reliable. How can you achieve these goals using Dockerfile best practices and multi-stage builds?

### Answer:

Explanation:

See the solution below with Step by Step Explanation.

Explanation:

Solution (Step by Step) :

1. Use Multi-Stage Builds:

- Define two stages in your Dockerfile: a 'build' stage for compiling dependencies and a 'runtime' stage for running the final application.

- Copy only the essential files and dependencies from the 'builds stage to the 'runtime' stage.

dockerfile

```
FROM golang:1.18 as build
```

```
WORKDIR /app
```

```
COPY . .
```

```
RUN go mod download
```

```
RUN go build -o user-service .
```

```
FROM alpine:latest as runtime
```

```
COPY --from-build lapp/user-service fuser-service
```

```
CMD ["/user-service"]
```

2. Minimize Image Size:

- Use a minimal base image: 'alpine:latest' is a lightweight Linux distribution.

- Remove unnecessary files: Use 'SRIJN apt-get clean' to remove package cache.

- Leverage Docker layers: Separate build steps to minimize the number of layers recreated during subsequent builds.

- Use 'COPY' instead of 'ADD': 'COPY' avoids unpacking archives, making the image smaller.

- Install only required dependencies: use package managers to install only the necessary libraries and tools.

### 3. Reproducibility and Reliability:

- Define a clear build context: use a '.dockerignore' file to exclude unnecessary files from the build context.
- Leverage Docker caching: Arrange Dockerfile instructions to maximize the use of cached layers.
- Use 'go mod vendor' to vendor dependencies for improved build reproducibility.
- Use a consistent environment for building images: Use a Dockerfile builder image that is compatible with the development environment.

### 4. Implement for Both Services:

- Apply the same best practices to the 'order-service' Dockerfile.
- Create a separate Dockerfile for each service and use consistent naming conventions (e.g. 'Dockerfile.user-service', 'Dockerfile-order-service').

### 5. Test and Validate.

- Build and push the images to a registry-
- Run the services in a Kubernetes cluster and verify their functionality.
- Measure image sizes to confirm that the optimization efforts have been successful.

By implementing these steps, you can create smaller, more reproducible, and reliable Docker images for your microservices, leading to faster build times and more efficient deployments.,

## NEW QUESTION # 163

You have a Deployment running a microservice that is responsible for processing user data. To ensure the security of this data, you need to implement a NetworkPolicy that restricts network traffic to and from the microservice's pods.

**Answer:**

Explanation:

See the solution below with Step by Step Explanation.

Explanation:

Solution (Step by Step) :

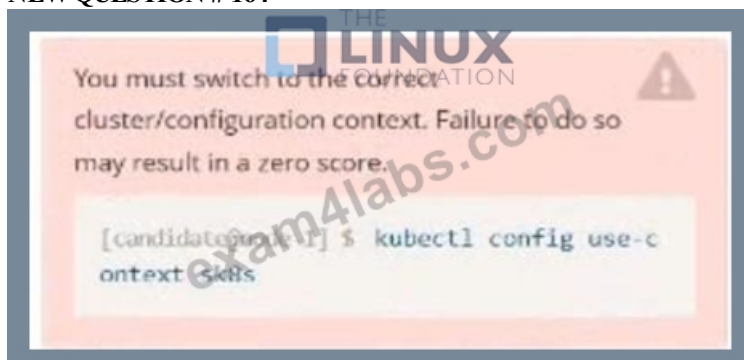
#### 1. Create a NetworkPolicy:

- Create a NetworkPolicy YAML file to define the traffic rules:

```
apiVersion: networking.k8s.io/v1
kind: NetworkPolicy
metadata:
  name: restrict-microservice-traffic
  namespace: my-microservice-namespace
spec:
  podSelector:
    matchLabels:
      app: my-microservice
  ingress:
    - from:
        - podSelector:
            matchLabels:
              app: my-database # Allow traffic from database pods
      - ipBlock:
          cidr: 10.96.0.0/12 # Allow traffic to specific IP range
    - to:
        - ipBlock:
            cidr: 10.96.0.0/12 # Allow traffic to specific IP range
```

2. Apply the NetworkPolicy: - Apply the NetworkPolicy configuration to your Kubernetes cluster: `basn kubectl apply -f restrict-microservice-traffic.yaml`
3. Test the NetworkPolicy: - Create a pod in a different namespace or on a different node. - Attempt to connect to the microservice pod from the new pod. - Verify that the connection is blocked as per the defined NetworkPolicy rules.

## NEW QUESTION # 164



Task:

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

Role userUI

2) Next, Create a NodePort Service named cherry in the ckad00017 namespace exposing the ckad00017-deployment Deployment on TCP port 8888 See the solution below.

**Answer:**

Explanation:

Explanation

Solution:

Text Description automatically generated

```
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 --
```

Text Description automatically generated

```
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 --
```

Text Description automatically generated



```

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 ckad00017
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 service/cherry --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=NodePort
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:~$

```



DOWNLOAD the newest Exam4Labs CKAD PDF dumps from Cloud Storage for free: [https://drive.google.com/open?id=1I-T5VD9b1zbdupdz6b8xOnASTAld1\\_U](https://drive.google.com/open?id=1I-T5VD9b1zbdupdz6b8xOnASTAld1_U)