Certified Kubernetes Administrator (CKA) Practice Exam: Part 2

00:54:46 Exit Lab Complete Lab

1 hour duration Practitioner Rate this lab

VIDEOS GUIDE

Certified Kubernetes Administrator (CKA) Practice Exam: Part 2

Introduction

This lab provides practice scenarios to help prepare you for the Certified Kubernetes Administrator (CKA) exam. You will be presented with tasks to complete as well as server(s) and/or an existing Kubernetes cluster to complete them in. You will need to use your knowledge of Kubernetes to successfully complete the provided tasks, much like you would on the real CKA exam. Good luck!

Solution

Log in to the server using the credentials provided:

```
ssh cloud_user@<PUBLIC_IP_ADDRESS>
```

Edit the `web-frontend` Deployment to Expose the HTTP Port

1. Switch to the appropriate context with `kubectl`:

   ```
   kubectl config use-context acgk8s
   ```

2. Edit the `web-frontend` deployment in the `web` namespace:

   ```
   kubectl edit deployment -n web web-frontend
   ```

3. Change the Pod template to expose port 80 on our NGINX containers:

   ```
   spec:
     containers:
     - image: nginx:1.14.2
   ```

```
      ports:
      - containerPort: 80
```

4. Press **Esc** and enter `:wq` to save and exit.

Create a Service to Expose the `web-frontend` Deployment's Pods Externally

1. Open a `web-frontend` service file:

```
vi web-frontend-svc.yml
```

2. Define the service in the YAML document:

```
apiVersion: v1
kind: Service
metadata:
  name: web-frontend-svc
  namespace: web
spec:
  type: NodePort
  selector:
    app: web-frontend
  ports:
  - protocol: TCP
    port: 80
    targetPort: 80
    nodePort: 30080
```

3. Press **Esc** and enter `:wq` to save and exit.

4. Create the service:

```
kubectl create -f web-frontend-svc.yml
```

Scale Up the Web Frontend Deployment

1. Scale up the deployment:

```
kubectl scale deployment web-frontend -n web --replicas=5
```

Create an Ingress That Maps to the New Service

1. Create a `web-frontend-ingress` file:

```
vi web-frontend-ingress.yml
```

2. Define an Ingress in the YAML document:

```
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: web-frontend-ingress
  namespace: web
spec:
  rules:
  - http:
      paths:
      - path: /
        pathType: Prefix
        backend:
          service:
            name: web-frontend-svc
            port:
              number: 80
```

3. Press **Esc** and enter `:wq` to save and exit.

4. Create the Ingress:

```
kubectl create -f web-frontend-ingress.yml
```

Conclusion

Congratulations — you've completed this hands-on lab!

Tools

Lab Diagram | Instant Terminal

Credentials

How do I connect?

Cloud Server Exam Server

Username

cloud_user

Password

uHj&3ZI#

Exam Server Private IP

10.0.1.101

Exam Server Public IP

18.206.64.63

Launch Instant Terminal

How do I connect?

Additional Resources

This question uses the `acgk8s` cluster. After logging in to the exam server, switch to the correct context with the command `kubectl config use-context acgk8s`.

Each of the objectives represents a task which you will need to complete using the available cluster and server(s). Read each objective carefully and complete the task specified.

For some objectives, you *may* need to ssh into other nodes or servers from the exam server. You can do so using the `hostname/node` name (i.e., `ssh acgk8s-worker1`).

Note: You cannot ssh into another node, or use `kubectl` to connect to the cluster, from any node other than the root node. Once you have completed the necessary tasks on a server, be sure to exit and return to the root node before proceeding.

If you need to assume root privileges on a server, you can do so with `sudo -i`.

You can run the verification script located at `/home/cloud_user/verify.sh` at any time to check your work!

Learning Objectives

0 of 4 completed

- [ ] Edit the Web Frontend Deployment to Expose the HTTP Port
- [ ] Create a Service to Expose the Web Frontend Deployment's Pods Externally
- [ ] Scale Up the Web Frontend Deployment
- [ ] Create an Ingress That Maps to the New Service