Certified Kubernetes Administrator (CKA) Practice Exam: Part 3

00:54:06 Exit Lab Complete Lab

1 hour duration Practitioner Rate this lab

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Certified Kubernetes Administrator (CKA) - Practice Exam Part 3

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>
```

Create a Service Account

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

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

1. Create a service account:

   ```
   kubectl create sa webautomation -n web
   ```

Create a ClusterRole That Provides Read Access to Pods

1. Create a `pod-reader.yml` file:

   ```
   vi pod-reader.yml
   ```

2. Define the ClusterRole:

```
apiVersion: rbac.authorization.k8s.io/v1
kind: ClusterRole
metadata:
  name: pod-reader
rules:
- apiGroups: [""]
  resources: ["pods"]
  verbs: ["get", "watch", "list"]
```

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

4. Creat the ClusterRole:

```
kubectl create -f pod-reader.yml
```

Bind the ClusterRole to the Service Account to Only Read Pods in the `web` Namespace

1. Create the `rb-pod-reader.yml` file:

```
vi rb-pod-reader.yml
```

2. Define the RoleBinding:

```
apiVersion: rbac.authorization.k8s.io/v1
kind: RoleBinding
metadata:
  name: rb-pod-reader
  namespace: web
subjects:
- kind: ServiceAccount
  name: webautomation
roleRef:
  kind: ClusterRole
  name: pod-reader
  apiGroup: rbac.authorization.k8s.io
```

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

4. Create the RoleBinding:

```
kubectl create -f rb-pod-reader.yml
```

5. Verify the RoleBinding works:

```
kubectl get pods -n web --
as=system:serviceaccount:web:webautomation
```

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

2v#^Zk|f

Exam Server Private IP

10.0.1.101

Exam Server Public IP

3.80.220.46

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 3 completed

- [ ] Create a Service Account
- [ ] Create a ClusterRole That Provides Read Access to Pods
- [ ] Bind the ClusterRole to the Service Account to Only Read Pods in the web Namespace