Certified Kubernetes Administrator (CKA) Practice Exam: Part 1

00:54:29 Exit Lab Complete Lab

1 hour duration Practitioner Rate this lab

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Certified Kubernetes Administrator (CKA) Practice Exam: Part 1

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>
```

Count the Number of Nodes That Are Ready to Run Normal Workloads

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

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

2. Count the number of nodes ready to run a normal workload:

   ```
   kubectl get nodes
   ```

3. Check that the worker nodes can run normal workloads:

   ```
   kubectl describe node  acgk8s-worker1
   ```

4. Scroll to the top of the output and check the list of taints. You should see none.

5. Repeat the steps above for `acgk8s-worker2`. You should see no taints on that node either.
6. Save this number to the file `/k8s/0001/count.txt`:

```
echo 2 > /k8s/0001/count.txt
```

Retrieve Error Messages from a Container Log

1. Obtain error messages from a container's log:

```
kubectl logs -n backend data-handler -c proc
```

2. Return only the error messages:

```
kubectl logs -n backend data-handler -c proc | grep ERROR
```

3. Save this output to the file `/k8s/0002/errors.txt`:

```
kubectl logs -n backend data-handler -c proc | grep ERROR > /k8s/0002/errors.txt
```

Find the Pod That Is Utilizing the Most CPU within a Namespace

1. Locate which Pod in the `web` namespace with the label `app=auth` is using the most CPU (In some cases, other pods may show as consuming more cpu):

```
kubectl top pod -n web --sort-by cpu --selector app=auth
```

2. Save the name of this Pod to `/k8s/0003/cpu-pod.txt`:

```
echo auth-web > /k8s/0003/cpu-pod.txt
```

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

Jb3I&I=M

Exam Server Private IP

10.0.1.101

Exam Server Public IP

18.232.80.174

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

- [ ] Count the Number of Nodes That Are Ready to Run Normal Workloads
- [ ] Retrieve Error Messages from a Container Log
- [ ] Find the Pod That Is Utilizing the Most CPU within a Namespace