



Tips for the Certified Kubernetes Administrator (CKA) Exam

Exam Details

- You can take the CKA certification exam from any qualifying computer, anywhere there is internet, almost any time. No need to go to a test center. (see Hardware Compatibility Check below)
- The online exam consists of a set of 31 performance-based items (problems) to be solved in a command line.
- The exam is expected to take 3-4 hours to complete.

What You Need For Your Exam

- Make sure your ID is ready for the exam. You may use any current, non-expired government ID that has your photo and full name in the Latin alphabet
- Exams are delivered online and closely monitored by proctors via webcam, audio, and remote screen viewing.
- Candidates must provide their own front-end hardware to take exams, including a computer with:
 - Chrome or Chromium browser
 - reliable internet access
 - webcam
 - microphone

Hardware Compatibility Check

- Candidates should run the compatibility check tool provided by the Exam Proctoring Partner to verify that their hardware meets the minimum requirements.
- The tool is located at <https://www.examslocal.com/ScheduleExam/Home/CompatibilityCheck>. Select "Linux Foundation" as the Exam Sponsor and "CKA" as the Exam.
- At this time, only Chrome and Chromium browsers are supported and candidates need a functioning webcam so that the proctor can see them.

Rules during exam

- Candidates may browse the web for relevant technical (non exam-specific) documentation, e.g., <https://kubernetes.io/docs/reference/>.
- Candidates may use the Notepad feature accessible in the top menu bar of the exam console (notes entered here will not be retained or accessible after the exam has ended)
- Candidates are not allowed scratch paper, food or beverages during the exam however, you may request a bathroom break or to get a drink (the exam timer keeps running).
- If you need food or beverage accommodations for medical purposes, please contact certificationsupport@cncf.io a minimum of 2 weeks before the date of your exam.
- Please see the [CKA Candidate Handbook](#) for additional information covering policies and procedures.

Exam Results

- Results will be emailed 72-75 hours from the time that the exam was completed.
- Results will also be made available on My Portal.

Technical Instructions

You may access these instructions at any time while taking the exam by typing 'man cka_exam'.

1. Root privileges can be obtained by running 'sudo -i'.
2. Rebooting of your server IS permitted at anytime.
3. Do not stop or tamper with the gateone process as this will END YOUR EXAM SESSION.
4. Do not block incoming ports 8080/tcp, 4505/tcp and 4506/tcp. This includes firewall rules that are found within the distribution's default firewall configuration files as well as interactive firewall commands.
5. Use Ctrl+Alt+W instead of Ctrl+W.
 - 5.1. Ctrl+W is a keyboard shortcut that will close the current tab in Google Chrome.
6. Ctrl+C & and Ctrl+V are not supported in your exam terminal, nor is copy and pasting large amounts of text. To copy and paste limited amounts of text (1-2 lines) please use;
 - 6.1. For Linux: select text for copy and middle button for paste (or both left and right simultaneously if you have no middle button).
 - 6.2. For Mac: +C to copy and +V to paste.
 - 6.3. For Windows: Ctrl+Insert to copy and Shift+Insert to paste.
 - 6.4. In addition, you might find it helpful to use the Notepad (see top menu under 'Exam Controls') to manipulate text before pasting to the command line.
7. Installation of services and applications included in this exam may require modification of system security policies to successfully complete.
8. Only a single terminal console is available during the exam. Terminal multiplexers such as GNU Screen and tmux can be used to create virtual consoles.

General Notes

- The first exam item contains instructions and notes on the exam environment.
- Ensure you read this item thoroughly before commencing your exam.
- You can use the question navigation features to return to the first exam item at any time.

CKA Environment

- Each question on this exam must be completed on a designated cluster/configuration context.
- To minimize switching, the questions are grouped so that all questions on a given cluster appear consecutively.
- There are eight clusters that comprise the exam environment, made up of varying numbers of containers, as follows:

Cluster	Members	CNI	Description
k8s	1 CA, 1 etcd, 1 master, 2 worker	flannel	non-HA k8s cluster
Hk8s	1 CA, 3 etcd, 3 master, 1 loadbalancer, 2 worker	calico	HA k8s cluster
bk8s	1 CA, 1 etcd, 1 master, 1 worker	flannel	non-HA k8s cluster
wk8s	1 CA, 1 etcd, 1 master, 2 worker	flannel	non-HA k8s cluster
ek8s	1 CA, 1 etcd, 1 master, 2 worker	flannel	non-HA k8s cluster
fk8s	1 CA, 1 etcd, 1 base node none k8s cluster	none	missing master node
ik8s	1 CA, 1 etcd, 1 master, 1 base node	flannel	k8s cluster – missing worker node
tk8s	1 CA, 1 etcd, 1 master, 1 worker	flannel	non-HA k8s cluster

At the start of each question you'll be provided with the command to ensure you are on the correct cluster e.g.,

Set configuration context: `$ kubectl config use-context k8s`

Nodes comprising each cluster can be reached via ssh , using a command such as the following:

```
$ ssh bk8s-etcd-0
```

Elevated privileges can be assumed on any node with the following command:

```
$ sudo -i
```

When you have finished working on a node, you should return to the base node (with hostname node-1) before attempting any further questions. Nested-ssh is not supported.

Kubernetes worker nodes reported in kubectl output, and elsewhere, will have hostnames of the form juju-*, but are labelled appropriately, for example:

```
$ kubectl get no -l name=hk8s-node-1 --context=hk8s
```

will return a node such as:

```
juju-38fda5-9 Ready 3d v1.6.2
```

You can view all appropriate hostname mappings by consulting the commented entries in `/etc/hosts` on the base node, e.g.:

```
$ fgrep -w ik8s-node-0 /etc/hosts
```

will return an entry such as:

```
#10.250.4.15 ik8s-node-0 juju-b39e62-1
```

It is very important that these entries in `/etc/hosts` are not manipulated.

Further instructions for connecting to cluster nodes will be provided in the appropriate questions, and certain hints may be provided where required on specific items.

Important Considerations

1. The environment is currently running Kubernetes v1.6.2. If you are required to obtain additional k8s materials during the exam, you should ensure that you use artifacts for v1.6.2.
2. The environment is configured as an examination environment, not a Production deployment. You should consider this environment as being configured to test Kubernetes administration competencies, not for technology demonstration or best practices.
3. The environment is not configured with security in mind. It is in an isolated, sandboxed, examination environment. You may be required to perform security configuration work on one or more cluster nodes as part of the exam.
4. The environment is currently deployed using the Canonical Distribution of Kubernetes, with modifications and hints provided, where required. You should *not* be impacted by the use of CDK, and should not have to directly manipulate any CDK-specific deployment mechanisms (*juju* and *snap* commands are not required, for example).
5. You should not have to directly manipulate CNI during the exam.
6. You are free to search for *exam-relevant documentation* on the Internet at any time during the exam, in a separate browser tab. Please note, that your exam session is being monitored live, and recorded, and can be reviewed after the exam has been completed.