THE **LINUX** | Education
FOUNDATION

Exercise 2.6: Domain Review

⚠️ **Very Important**

The source pages and content in this review could change at any time. **IT IS YOUR RESPONSIBILITY TO CHECK THE CURRENT INFORMATION**.

1. Using a browser go to https://www.cncf.io/certification/ckad/ and read through the program description.

2. In the **Exam Resources** section open the Curriculum Overview and Candidate Handbook in new tabs. Both of these should be read and understood prior to sitting for the exam.

3. Navigate to the Curriculum Overview tab. You should see links for domain information for various versions of the exam. Select the latest version, such as **CKAD_Curriculum_V1.31.1.pdf**. The versions you see may be different. You should see a new page showing a PDF.

4. Read through the document. Be aware that the term `Understand`, such as `Understand Services`, is more than just knowing they exist. In this case expect it to also mean create, update, and troubleshoot.

5. Locate the **Application Design and Build** section. If you review the lab, you will see we have covered some of these steps such as multi-container Pod design. Again, please note this document will change, distinct from this book. **It remains your responsibility to check for changes in the online document**. They may change on an irregular basis.

Certified Kubernetes Application Developer (CKAD) Exam Curriculum

This document provides the curriculum outline of the Knowledge, Skills and Abilities that a Certified Kubernetes Application Developer (CKAD) can be expected to demonstrate.

CKAD Curriculum

20% - Application Design and Build

- Define, build and modify container images
- Understand Jobs and CronJobs
- Understand multi-container Pod design patterns (e.g. sidecar, init and others)
- Utilize persistent and ephemeral volumes

25% - Application Environment, Configuration and Security

- Discover and use resources that extend Kubernetes (CRD)
- Understand authentication, authorization and admission control
- Understanding and defining resource

Figure 2.10: **Application Design and Build Domain**

6. Navigate to the Candidate Handbook tab. You are strongly encourage to read and understand this entire document prior to taking the exam. Again, please note this document will change, distinct from this book. **It remains your responsibility to check for changes in the online document**. They may change on an irregular and unannounced basis.

                            THE **LINUX** | Education
FOUNDATION

7. Find the **Important Instructions: CKA and CKAD** section in the document. Read through the section, locate current Kubernetes version for exams, such as v1.31, and find the **Resources allowed during exam** section.

8. Note the domains and subdomains you can use during the exam, with some stated conditions.

Figure 2.11: **Exam Handbook Resources Allowed**

9. Search for good YAML examples from the allowed resources. Get to know what the good page looks like. During the exam you will be using a secure browser. There can be existing bookmarks, but more than you may require. It will save time to quickly recognize the page again. Ensure it works for the version of the exam you are taking.

10. Using a timer, see how long it takes you to create and verify each of the bullet points. Try it again and see how much faster you can complete and test each step:

    • A new pod with the **nginx** image. Showing all containers running and a `Ready` status.

    • A new service exposing the pod as a **nodePort**, which presents a working webserver configured in the previous step.

    • Update the pod to run the **nginx:1.11-alpine** image and re-verify you can view the webserver via a nodePort.

11. Find and use the `architecture-review1.yaml` file included in the course tarball. Your path, such as course number, may be different than the one in the example below. Use the **find** output. Determine if the pod is running. Fix any errors you may encounter. The use of **kubectl describe** may be helpful.

    ```
    student@cp:~$ find $HOME -name architecture-review1.yaml
    ```

    ```
    <some_long_path>/architecture-review1.yaml
    ```

    ```
    student@cp:~$ cp <copy-paste-from-above>  .
    ```

    ```
    student@cp:~$ kubectl create -f architecture-review1.yaml
    ```

12. Remove any pods or services you may have created as part of the review before moving on to the next section. For example:

    ```
    student@cp:~$ kubectl delete -f architecture-review1.yaml
    ```