Exercise A.2: Preparing for the CKA Exam

Very Important

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

Before Taking Exam

Use this exercise as a resource after you complete the course but before you take the exam. Review the resources, know what good YAML looks like, and practice creating and working with objects at exam speed to assist with review and preparation.

1. Using a browser go to https://www.cncf.io/certification/cka/ 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 **CKA_Curriculum_V1.25.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, configure, update, and troubleshoot.
5. Using only the exam-allowed URLs and sub-domains search for YAML examples for each domain or skill item. Ensure it works for the version of the exam you are taking, as the YAML may not have been re-tested after a new release. Become familiar with out to find each good example again, so you can find the page again during the exam.
6. Using a timer see how long it takes you to create and verify the objects listed below. Write down the time. Try it again and see how much faster you can complete and test each step.

"Practice until you get it right. Then practice until you can't get it wrong" -Unknown

Domain Review Items

This list is copied from competency domains found on the PDF. Again, **it remains your responsibility to check the web page for any changes to this list**.

- **Cluster Architecture, Installation & Configuration**
  - Manage role based access control (RBAC)
  - Use Kubeadm to install a basic cluster
  - Manage a highly-available Kubernetes cluster
  - Provision underlying infrastructure to deploy a Kubernetes cluster
  - Preform a version upgrade on a Kubernetes cluster using Kubeadm
  - Implement etcd backup and restore
- **Workloads & Scheduling**

  - Understand deployments and how to preform rolling updates and rollbacks
  - Use ConfigMaps and Secrets to configure applications
  - Know how to scale applications
  - Understand the primitives used to create robust, self-healing, application deployments
  - Understand how resource limits can affect Pod scheduling
  - Awareness of manifest management and common templating tools

- **Services & Networking**
  - Understand host networking configuration on the cluster nodes
  - Understand connectivity between Pods
  - Understand ClusterIP, NodePort, LoadBalancer service types and endpoints
  - Know how to use Ingress controllers and Ingress resources
  - Know how to configure and use CoreDNS
  - Choose an appropriate container network interface plugin

- **Storage**
  - Understand storage classes, persistent volumes
  - Understand volume mode, access modes and reclaim policies for volumes
  - Understand persistent volume claims primitive
  - Know how to configure applications with persistent storage

- **Troubleshooting**
  - Evaluate cluster and node logging
  - Understand how to monitor applications
  - Manage container stdout & stderr logs
  - Troubleshoot application failure
  - Troubleshoot cluster component failure
  - Troubleshoot networking