CORE CONCEPTS + MULTI-CONTAINER PODS

You have a maximum of 24 minutes for this section. Time yourself!

Ideally, answer on a terminal and write down your solutions somewhere. That way you can compare with the solutions that I will publish the next day.

To set up your environment similar to CKAD exam:

On your computer open your terminal and your browser. No other applications should be open.

You can only have one terminal console open, but you can use multiplexers (i.e: tmux, GNU Screen)

On your browser, you have access to ONE tab only and you can ONLY access the following domains:

- https://kubernetes.io/docs/ and its subdomains (this includes all available language translations of this page (e.g. https://kubernetes.io/zh/docs/)
- https://github.com/kubernetes/ and its subdomains
- https://kubernetes.io/blog/

No other tabs may be opened and no other sites may be navigated to

Good luck!

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Create a namespace called 'mynamespace' and a pod with image nginx called nginx on this namespace

Create the pod that was just described using YAML

Create a busybox pod (using kubectl command) that runs the command "env". Run it and see the output

Create a busybox pod (using YAML) that runs the command "env". Run it and see the output

Get the YAML for a new namespace called 'myns' without creating it

Get the YAML for a new ResourceQuota called 'myrq' with hard limits of 1 CPU, 1G memory and 2 pods without creating it

Get pods on all namespaces

Create a pod with image nginx called nginx and allow traffic on port 80

Change pod's image to nginx:1.7.1. Observe that the pod will be killed and recreated as soon as the image gets pulled

Get nginx pod's ip created in previous step, use a temp busybox image to wget its '/'

Get pod's YAML

Get information about the pod, including details about potential issues (e.g. pod hasn't started)

Get all pod logs

If pod crashed and restarted, get logs about the previous instance

Execute a simple shell on the nginx pod

Create a busybox pod that echoes 'hello world' and then exits

Do the same, but have the pod deleted automatically when it's completed

Create an nginx pod and set an env value as 'var1=val1'. Check the env value existence within the pod

Create a Pod with two containers, both with image busybox and command "echo hello; sleep 3600". Connect to the second container and run 'ls'