Exercise 4

1.

The pvc's YAML file defines "storageClassName" to be "hostpath". What is a storageclass, and what does "hostname storage class" mean?

“hostPath” is a type of storage class in Kubernetes that uses a file/directory to emulate network storage. This only supported for test environments on a single node cluster.

2.

Explain the differences between this week's Kubernetes "deployment" (as described in the YAML file) from last week's. Be specific.

* Specified a securityContext – this affects a number of access controls in the pod, in the case of this weeks deployment, it specifies the UID/GID to use for running processes in the pod.
* It combined the Service and deployment in one YAML file
* Sets up a liveness/readiness probe for checking when the deployment is ready for use
* Uses a PV and PVC to persist data across restarts
* Defines some controls for monitoring (Prometheus)

3.

Create a pipeline similar to lab2, except map the /root/.m2/repository directory to the pvc you created in lab 1 "jenkins-pv-claim". Once it is set up, run the pipeline twice. The second run should be faster.

Your pipeline should be in the Jenkinsfile in your own GitHub repository. Configure the pipeline to load your Jenkinsfile from GitHub.

Submit the Jenkinsfile. Submit the console logs for the second run. Explain your experiment and any problems you ran into. Find in the Jenkins logs where the agent pod is created and then torn down. Paste those lines into your submission and describe what Jenkins is doing in that intervening time.

RUN TIMES (Second run faster)

Essentially, by using a PV, the agent node does not have pull down the code repos on the second run.

Table

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CONSOLE LOGS

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JENKINS LOG(both runs)

When running the job, a k8s pod is created for the Maven project to run in. Once the job is completed (success, failure or abort), the pod is terminated

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