**Volumes**

1. sh -c "echo 'Hello from Kubernetes storage' > /home/kubernetes/Desktop/index.html"
2. kubectl apply -f pv-volume.yaml
   1. creates a persistent volume
3. kubectl get pv task-pv-volume
   1. view information about the volume created above
   2. The output shows that the PersistentVolume has a STATUS of Available
4. kubectl apply -f pv-claim.yaml
   1. Create persistent claim
   2. PersistentVolumeClaims allow a user to consume abstract storage resources
5. Run Step 3 again
6. kubectl get pvc task-pv-claim
   1. The output shows that the PersistentVolumeClaim is bound to your PersistentVolume
7. kubectl apply -f pv-pod.yaml
   1. create pod which uses this volume
8. kubectl get pod task-pv-pod
   1. check if the pod is created
9. kubectl exec -it task-pv-pod -- /bin/bash
   1. login to the pod and execute the below commands
   2. apt update
   3. apt install curl
   4. curl <http://localhost/>
      1. verify that the server is running
   5. exit
10. kubectl describe pod task-pv-pod
    1. check if the pod is using the volume created above
11. kubectl delete pod task-pv-pod
12. kubectl delete pvc task-pv-claim
13. kubectl delete pv task-pv-volume

**Logging**

1. stop and start minikube
2. kubectl apply -f counter-pod.yaml
   1. create a pod with basic logging
3. kubectl logs counter
   1. test the log
4. create a pod using tqo-files-counter-pod-streaming-sidecar.yaml
   1. this creates a multi container pod with separate logs directed towards its STDOUT
5. kubectl logs counter count-log-1
6. kubectl logs counter count-log-2