Learning Objectives

check\_circle**Create a PersistentVolume.**

1. Use the following YAML spec for the PersistentVolume named redis-pv.yaml:
2. apiVersion: v1
3. kind: PersistentVolume
4. metadata:
5. name: redis-pv
6. spec:
7. storageClassName: ""
8. capacity:
9. storage: 1Gi
10. accessModes:
11. - ReadWriteOnce
12. hostPath:

path: "/mnt/data"

1. Then, create the PersistentVolume:

kubectl apply -f redis-pv.yaml

check\_circle**Create a PersistentVolumeClaim.**

1. Use the following YAML spec for the PersistentVolumeClaim named redis-pvc.yaml:
2. apiVersion: v1
3. kind: PersistentVolumeClaim
4. metadata:
5. name: redisdb-pvc
6. spec:
7. storageClassName: ""
8. accessModes:
9. - ReadWriteOnce
10. resources:
11. requests:

storage: 1Gi

1. Then, create the PersistentVolumeClaim:

kubectl apply -f redis-pvc.yaml

check\_circle**Create the redispod image, with a mounted volume to mount path `/data`**

1. Use the following YAML spec for the pod named redispod.yaml:
2. apiVersion: v1
3. kind: Pod
4. metadata:
5. name: redispod
6. spec:
7. containers:
8. - image: redis
9. name: redisdb
10. volumeMounts:
11. - name: redis-data
12. mountPath: /data
13. ports:
14. - containerPort: 6379
15. protocol: TCP
16. volumes:
17. - name: redis-data
18. persistentVolumeClaim:

claimName: redisdb-pvc

1. Then, create the pod:

kubectl apply -f redispod.yaml

1. Verify the pod was created:

kubectl get pods

check\_circle**Connect to the container and write some data.**

1. Connect to the container and run the redis-cli:

kubectl exec -it redispod redis-cli

1. Set the key space server:name and value "redis server":

SET server:name "redis server"

1. Run the GET command to verify the value was set:

GET server:name

1. Exit the redis-cli:

QUIT

check\_circle**Delete `redispod` and create a new pod named `redispod2`.**

1. Delete the existing redispod:

kubectl delete pod redispod

1. Open the file redispod.yaml and change line 4 from name: redispod to:

name: redispod2

1. Create a new pod named redispod2:

kubectl apply -f redispod.yaml

check\_circle**Verify the volume has persistent data.**

1. Connect to the container and run redis-cli:

kubectl exec -it redispod2 redis-cli

1. Run the GET command to retrieve the data written previously:

GET server:name

1. Exit the redis-cli:

QUIT