



Use Storage in Kubernetes

Use Storage in K8s





K8s Storage Overview

- Volumes & VolumeMounts
- Sharing Volumes in Containers
- Common VolumeTypes
- Hands-On Demonstration

Volumes & Volume Mount

- **Volume** : In Pod Spec, user can define the storage volume available in for the Pod.
- **Volume** Specify the VolumeType and where the data is actually store.
- **VolumeMount** : VolumeMount in container spec, refer the Volume in Pod Spec and provide a MountPath.

```
apiVersion: v1
kind: Pod
metadata:
  name: pv-recycler
spec:
  volumes:
    - name: sample-vol
      hostPath:
        path: /data
  containers:
    - name: pv-recycler
      image: "k8s.gcr.io/busybox"
      command: ["/bin/sh", "-c", "echo Hello Team"]
      volumeMounts:
        - name: sample-vol
          mountPath: /output
```

emptyDir Volume

- **emptyDir** : emptyDir created when Pod is assigned to Node and Persist as long as Pod running on the Node.
- Multiple containers can refer the same **emptyDir** Volume.
- Multiple containers in the Pod can read and write the same files in the emptyDir volume, though that volume can be mounted at the same or different paths in each container.

```
apiVersion: v1
kind: Pod
metadata:
  name: pv-recycler
spec:
  volumes:
    - name: cache-vol
      emptyDir: {}
  containers:
    - name: pv-recycler
      image: "k8s.gcr.io/busybox"
      command: ["/bin/sh", "-c", "echo Hello Team"]
      volumeMounts:
        - name: cache-vol
          mountPath: /cache
```

Share Volume

- User can use the same volumeMounts to share the same Volume to multiple container within the Same Pod.
- This is very powerful feature which can be used to data transformation of Data Processing.
- **hostPath** & **emptyDir** volumeType support share volumes.

```
apiVersion: v1
kind: Pod
metadata:
  name: pv-recycler
spec:
  volumes:
    - name: cache-vol
      emptyDir: {}
  containers:
    - name: pv-recycler
      image: "k8s.gcr.io/busybox"
      command: ["/bin/sh", "-c", "echo Hello Team"]
      volumeMounts:
        - name: cache-vol
          mountPath: /cache
    - name: pv-recycler-1
      image: "k8s.gcr.io/busybox"
      command: ["/bin/sh", "-c", "echo Hello Team"]
      volumeMounts:
        - name: cache-vol
          mountPath: /cache/tmp
```

Hands On Demonstration

Thank You...

Don't be the Same! Be Better!!!
