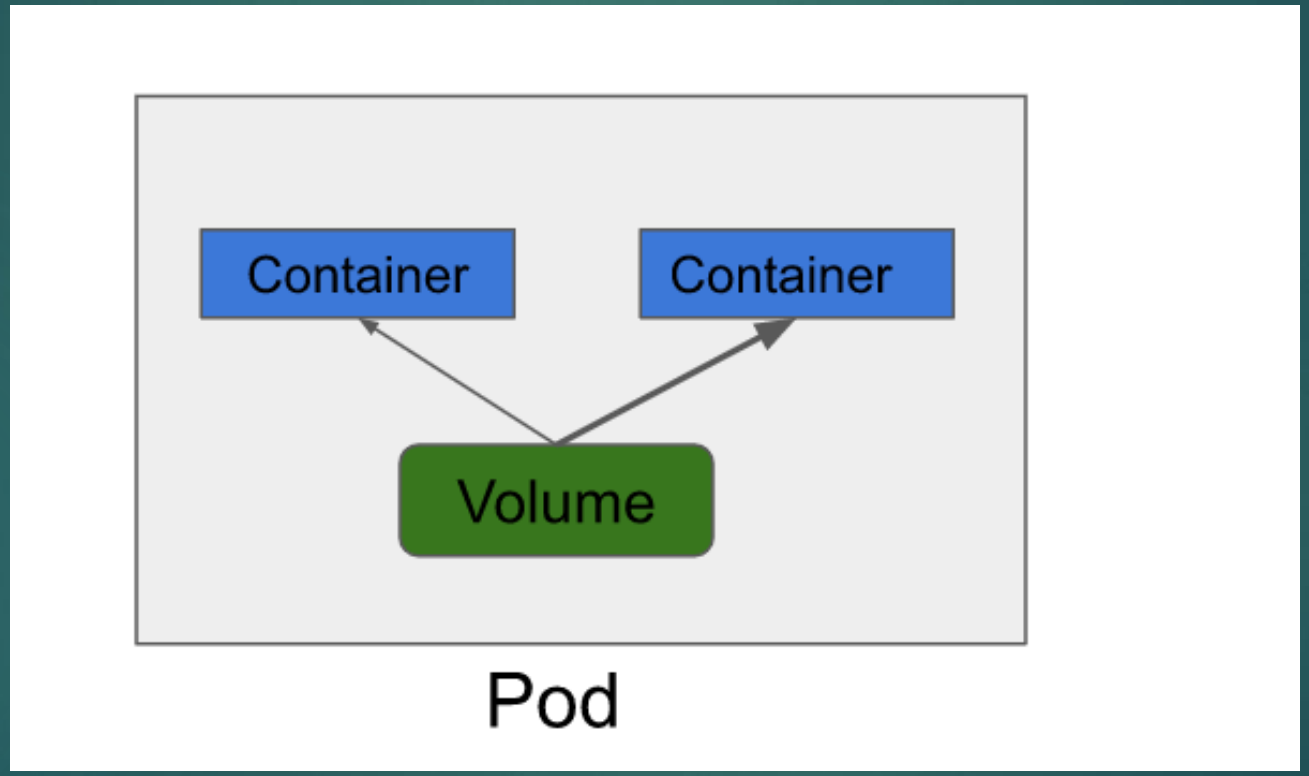
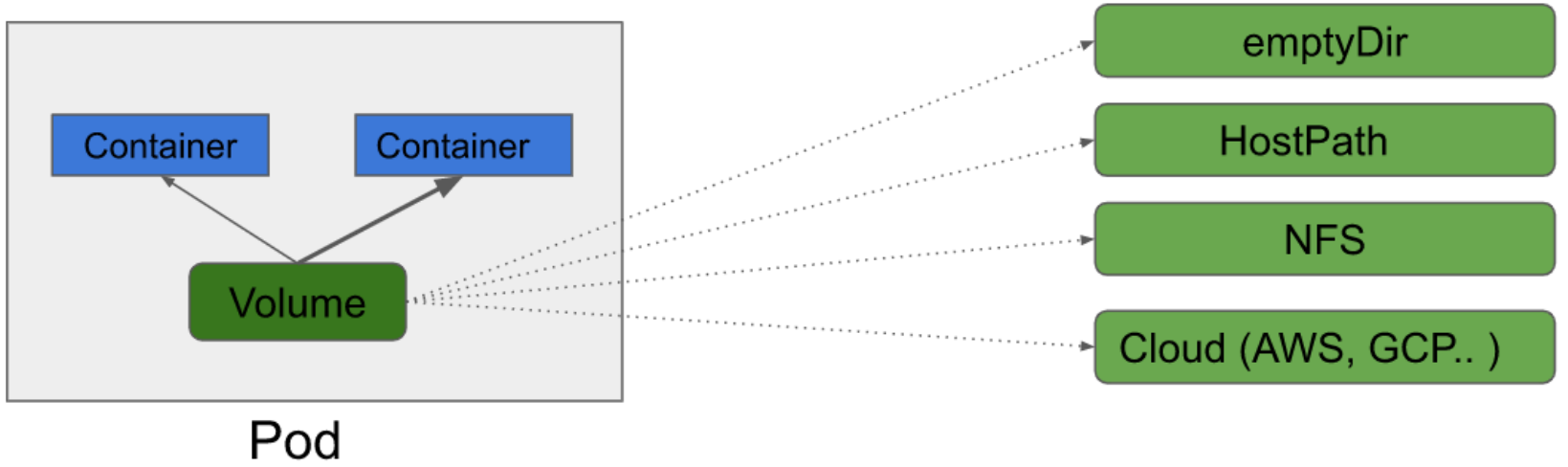
Storage Management in Kubernetes

Volume Management in PODS



Volume Management in Kubernetes

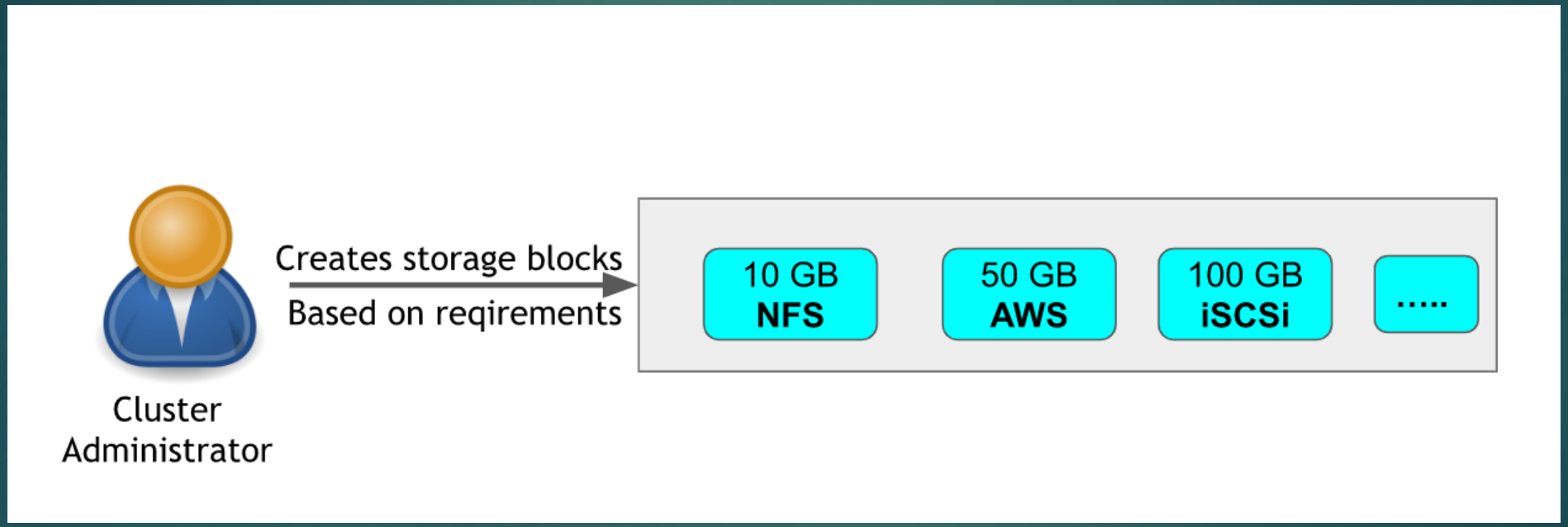


Volumes

```yaml
apiVersion: v1
kind: Pod
metadata:
  name: test-pd
spec:
  containers:
  - image: nginx:alpine
    name: web-container
    volumeMounts:
    - mountPath: /usr/share/nginx/html
      name: test-volume
  volumes:
  - name: test-volume
    hostPath:
      path: /mnt/html
```

```yaml
apiVersion: v1
kind: Pod
metadata:
  name: test-pd
spec:
  containers:
  - image:
gcr.io/google_containers/test-webserver
    name: test-container
    volumeMounts:
    - mountPath: /test-pd
      name: test-volume
  volumes:
  - name: test-volume
    # This GCE PD must already exist.
    gcePersistentDisk:
      pdName: my-data-disk
      fsType: ext4
```

Persistent Volumes

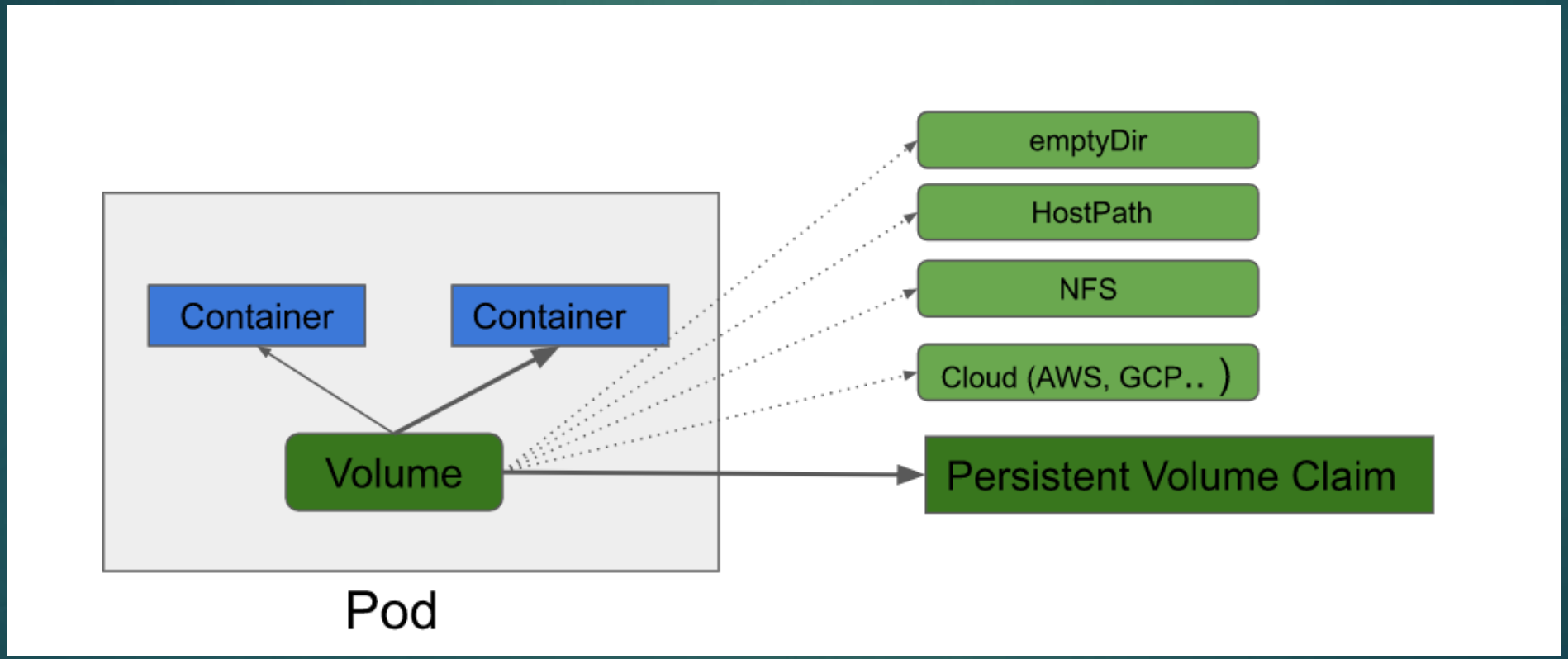


Persistent Volumes

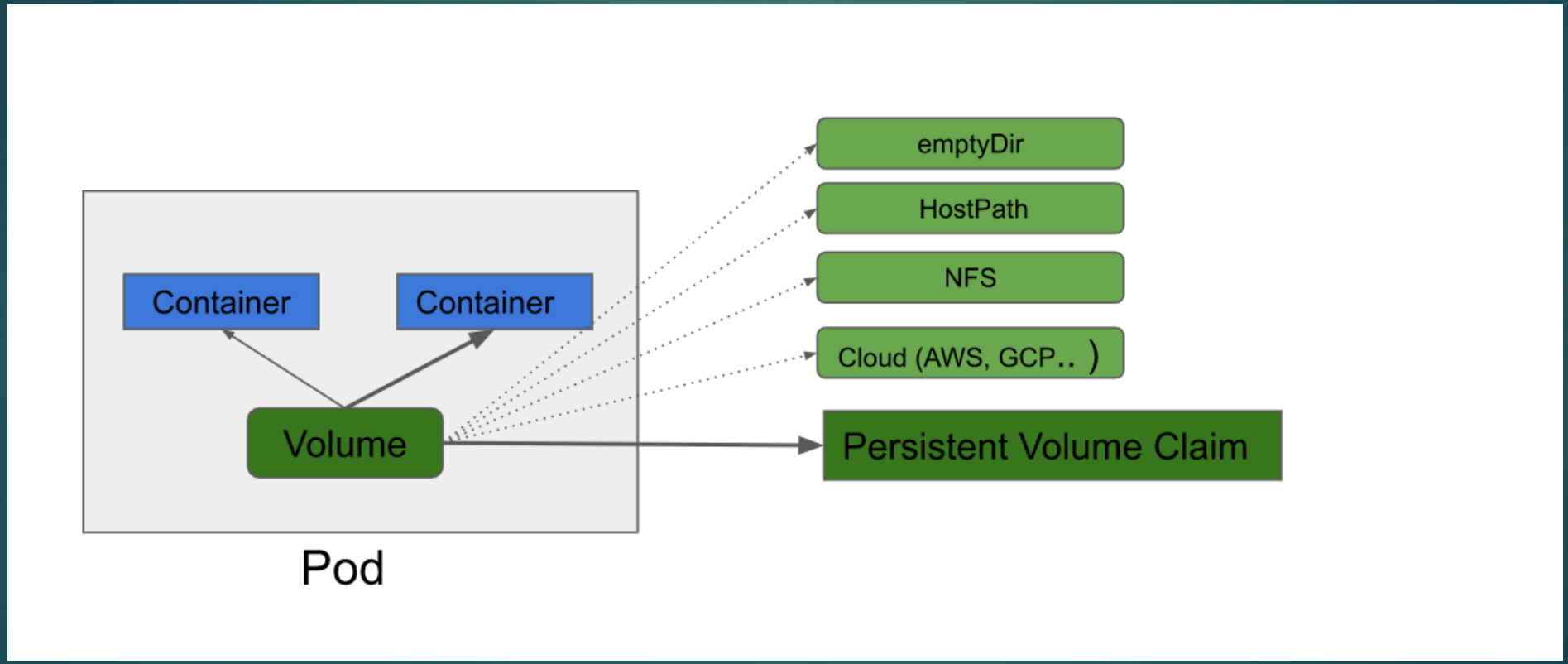
```
kind: PersistentVolume
apiVersion: v1
metadata:
  name: pv0001
  labels:
    type: local
spec:
  capacity:
    storage: 1Gi
  accessModes:
    - ReadWriteOnce
  hostPath:
    path: "/tmp/data01"
```

```
apiVersion: v1
  kind: PersistentVolume
  metadata:
    name: pv0003
  spec:
    capacity:
      storage: 5Gi
    accessModes:
      - ReadWriteOnce
    persistentVolumeReclaimPolicy:
Recycle
    storageClassName: slow
    mountOptions:
      - hard
      - nfsvers=4.1
    nfs:
      path: /tmp
      server: 172.17.0.2
```

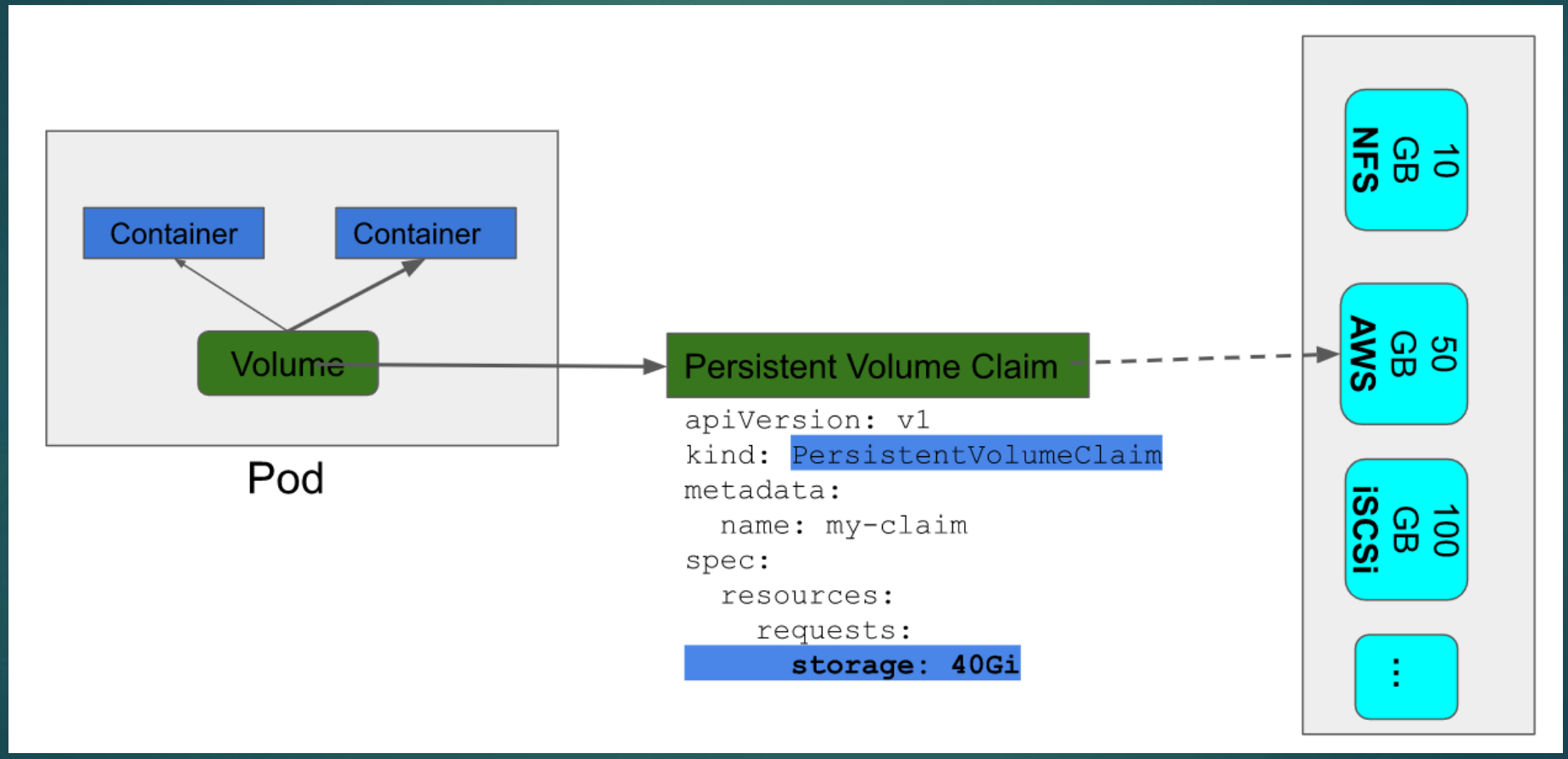
Volume Management in Kubernetes



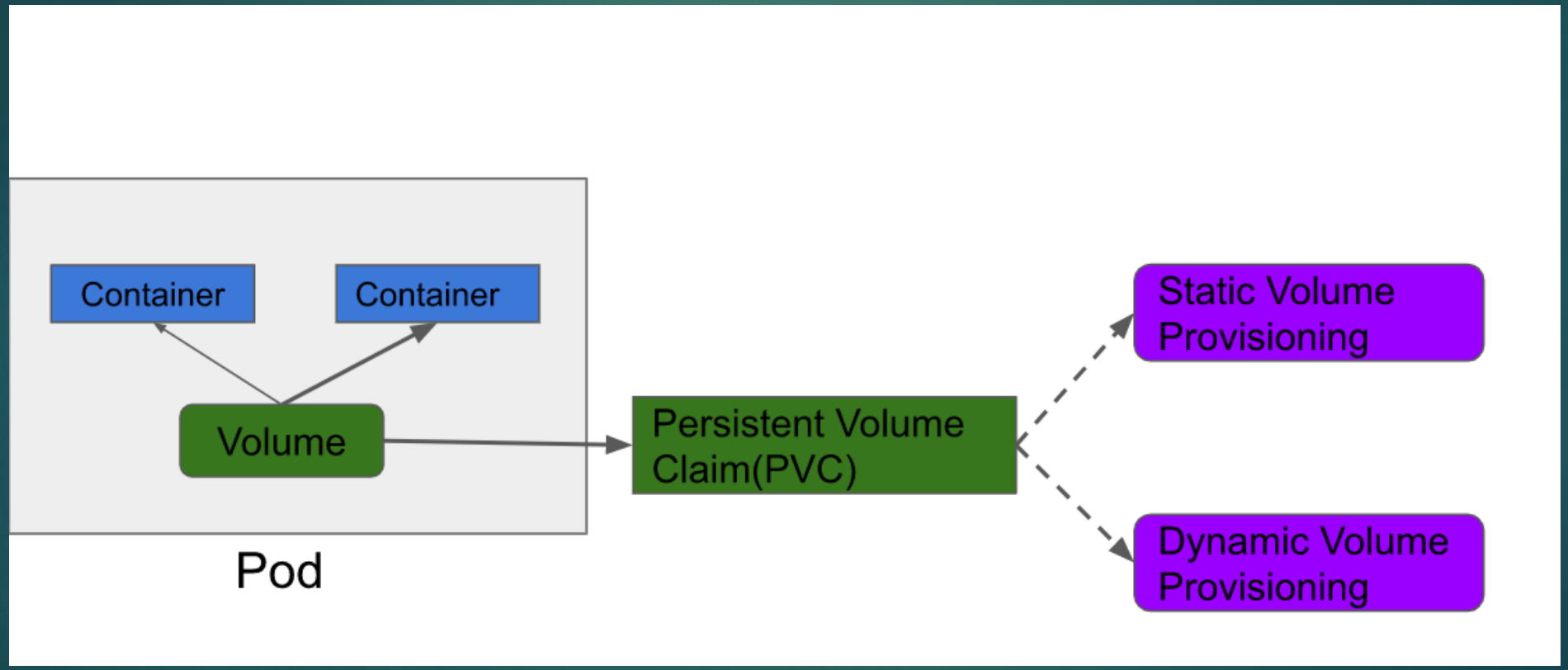
Volume Management in Kubernetes



Persistent Volume Claim



Persistent Volume Claim



Persistent Volumes Access Modes

- ReadWriteOnce(RWO) – Volume can be mounted as read-write by a single node
- ReadOnlyMany(ROX) - Volume can be mounted read-only by many nodes
- ReadWriteMany(RWX) – Volume can be mounted as read-write by many nodes

THANK YOU