

Persistent Volume and Persistent Volume Claim



TOPICS COVERED

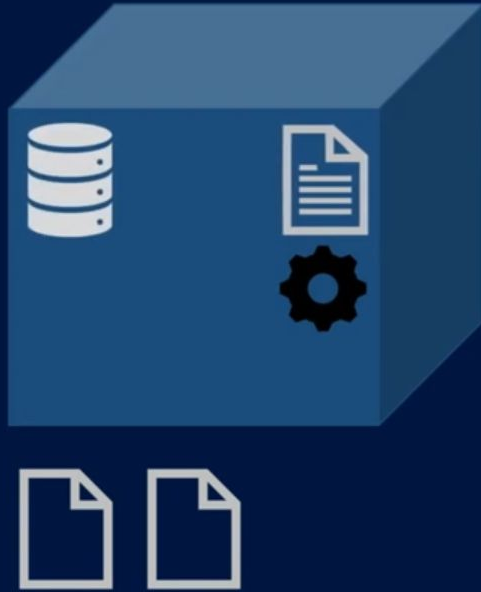
PV & PVC

DYNAMIC & STATIC PROVISIONING

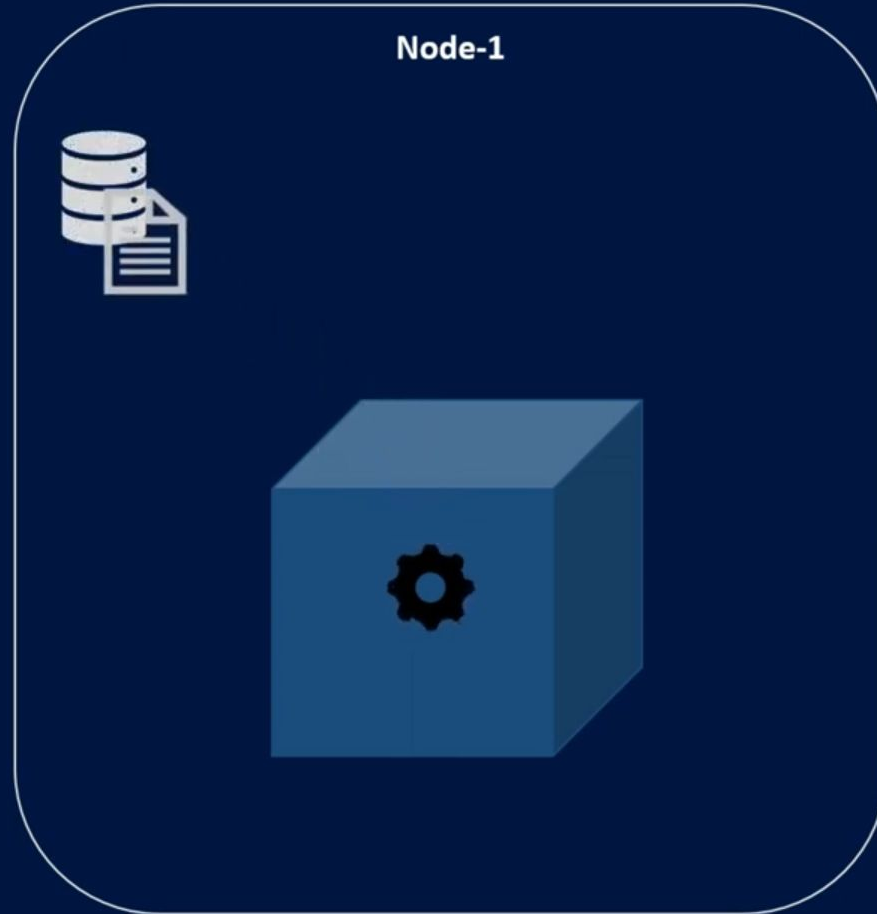
STORAGE CLASS



Volumes in Kubernetes



Volumes in Kubernetes



Volumes in Kubernetes

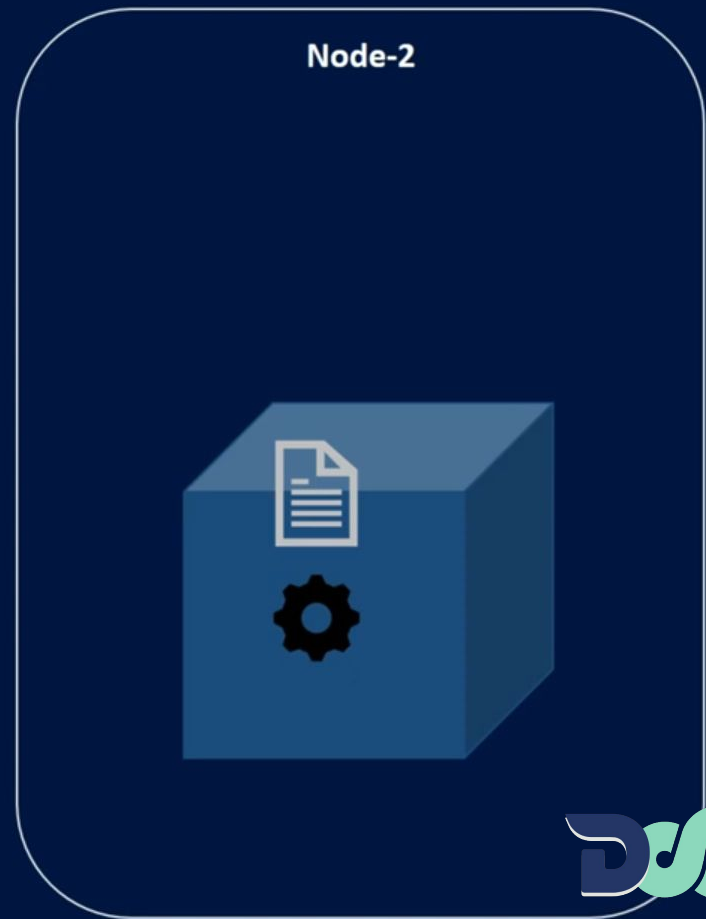
Node-1



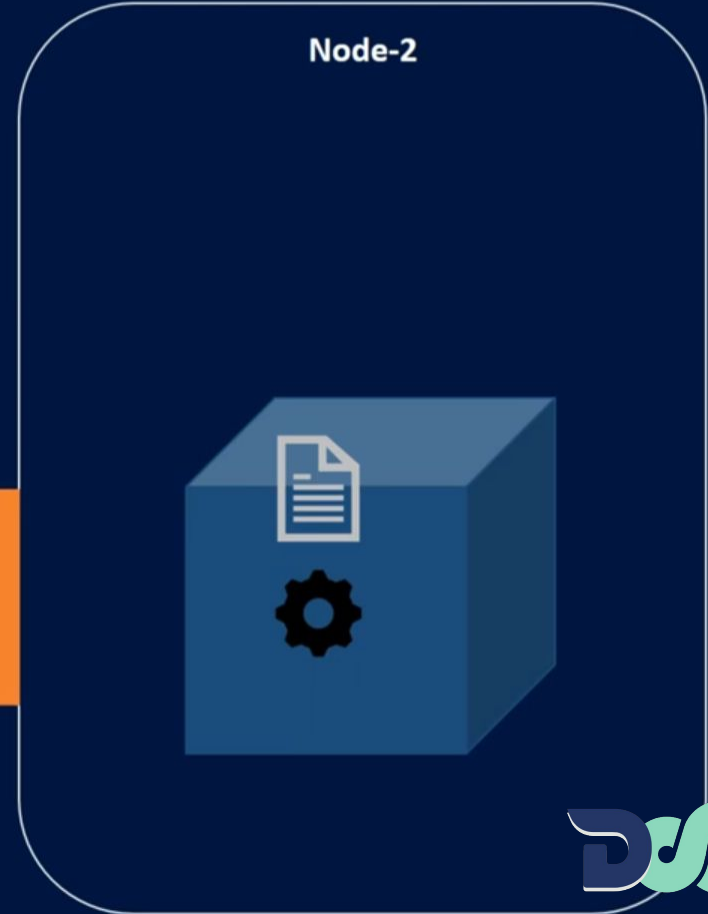
Node-2



Volumes in Kubernetes

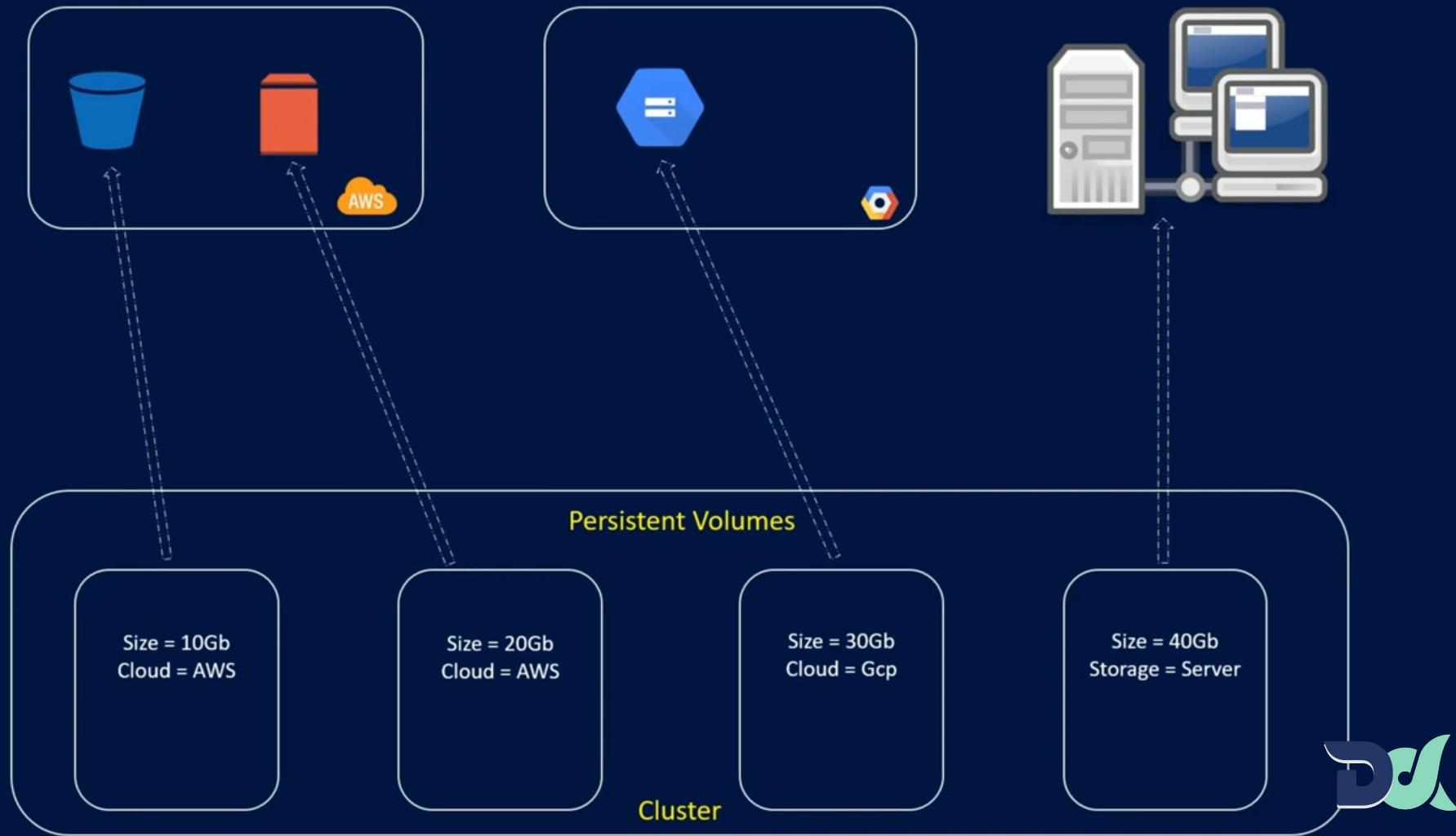


Volumes in Kubernetes



Persistent Volume and Persistent Volume Claim





Yaml File:-

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: pv-1
spec:
  capacity:
    storage: 5Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Retain
  awsElasticBlockStore:
    volumeID: "<volume id>"
    fsType: ext
```

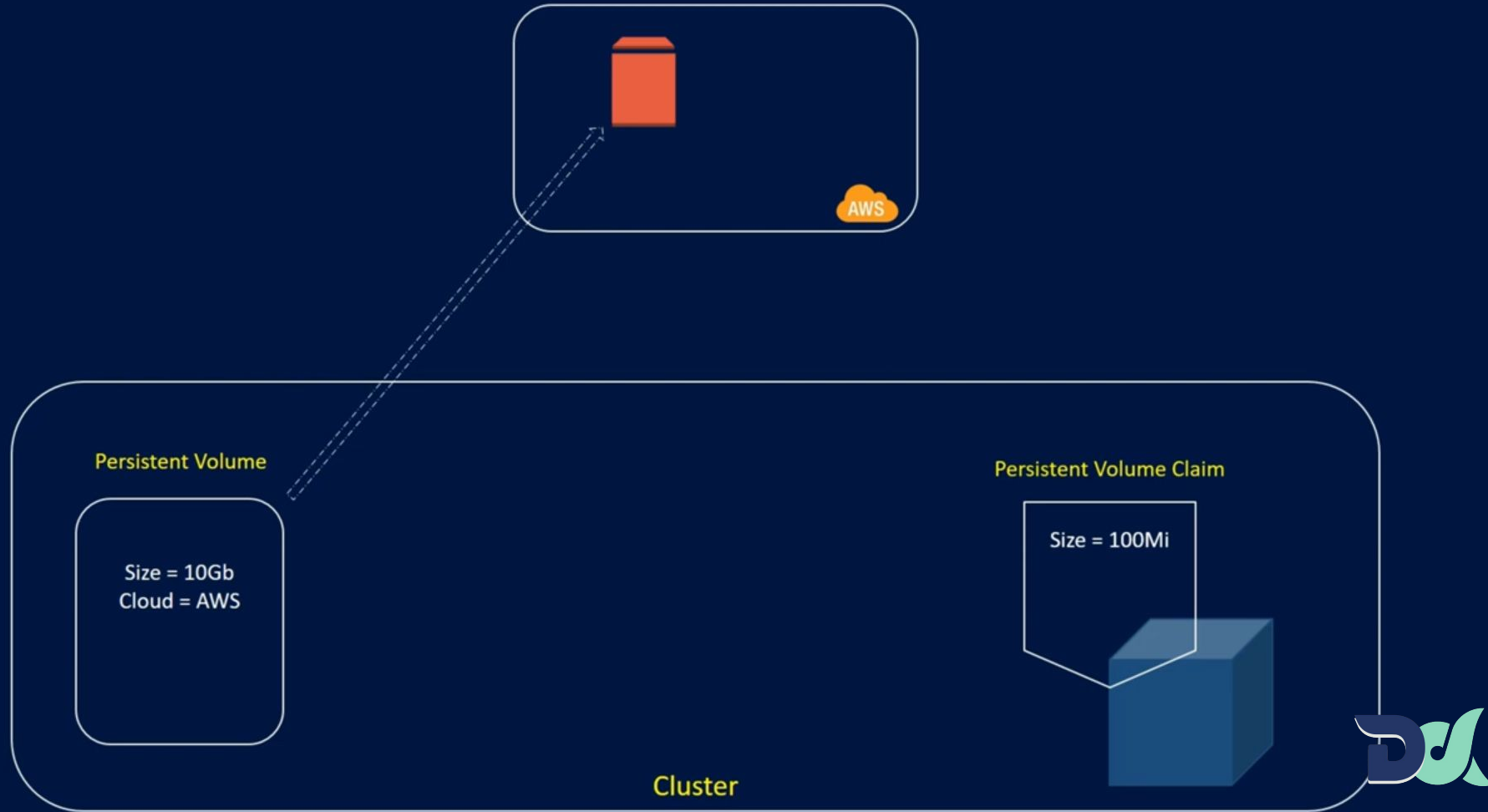


Yaml File:-

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: pv-1
spec:
  capacity:
    storage: 5Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Retain
  nfs:
    path: /tmp
    server: 172.17.0.2
```



Persistent Volume Claim



Yaml File:-

```
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: myclaim
spec:
  resources:
    requests:
      storage: 8Gi
  accessModes:
    - ReadWriteOnce
```





Bucket = 1
Cloud = AWS

Size = 10 Gb
Cloud = AWS
Storage = EBS

Size = 100 Gb
Cloud = AWS
Storage = EBS

Persistent Volumes



Persistent Volume Claim

Size = 100 Gb



Cluster



Bucket = 1
Cloud = AWS

Size = 10 Gb
Cloud = AWS
Storage = EBS

Size = 100 Gb
Cloud = AWS
Storage = EBS

Size = 100 Gb

Persistent Volumes



Cluster





Bucket = 1
Cloud = AWS



Size = 1 Gb
Cloud = AWS
Storage = EBS



Size = 100 Gb
Cloud = AWS
Storage = EBS



Size = 3 Gb
Cloud = AWS
Storage = EBS



Size = 10 Gb
Cloud = AWS
Storage = EBS



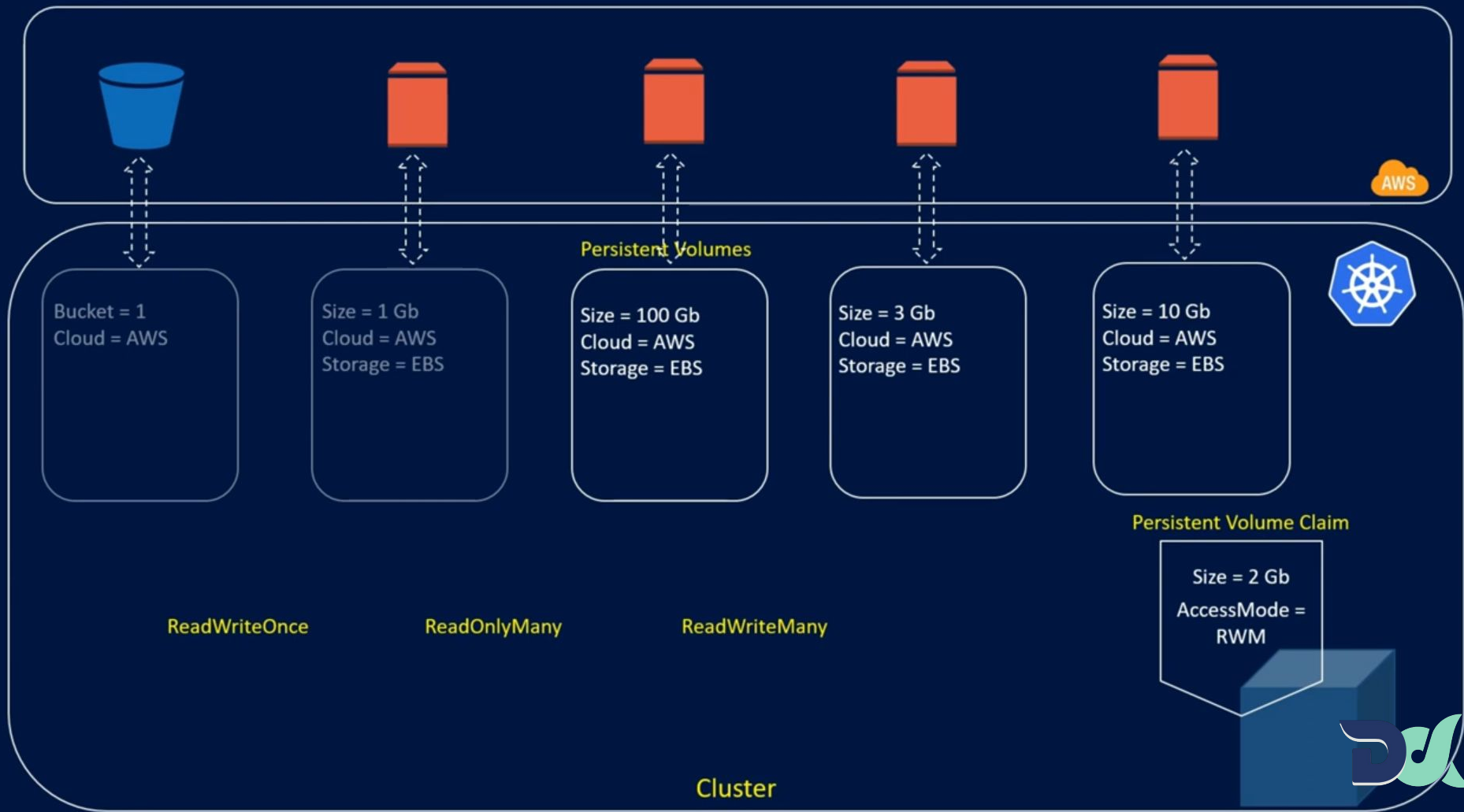
Persistent Volume Claim

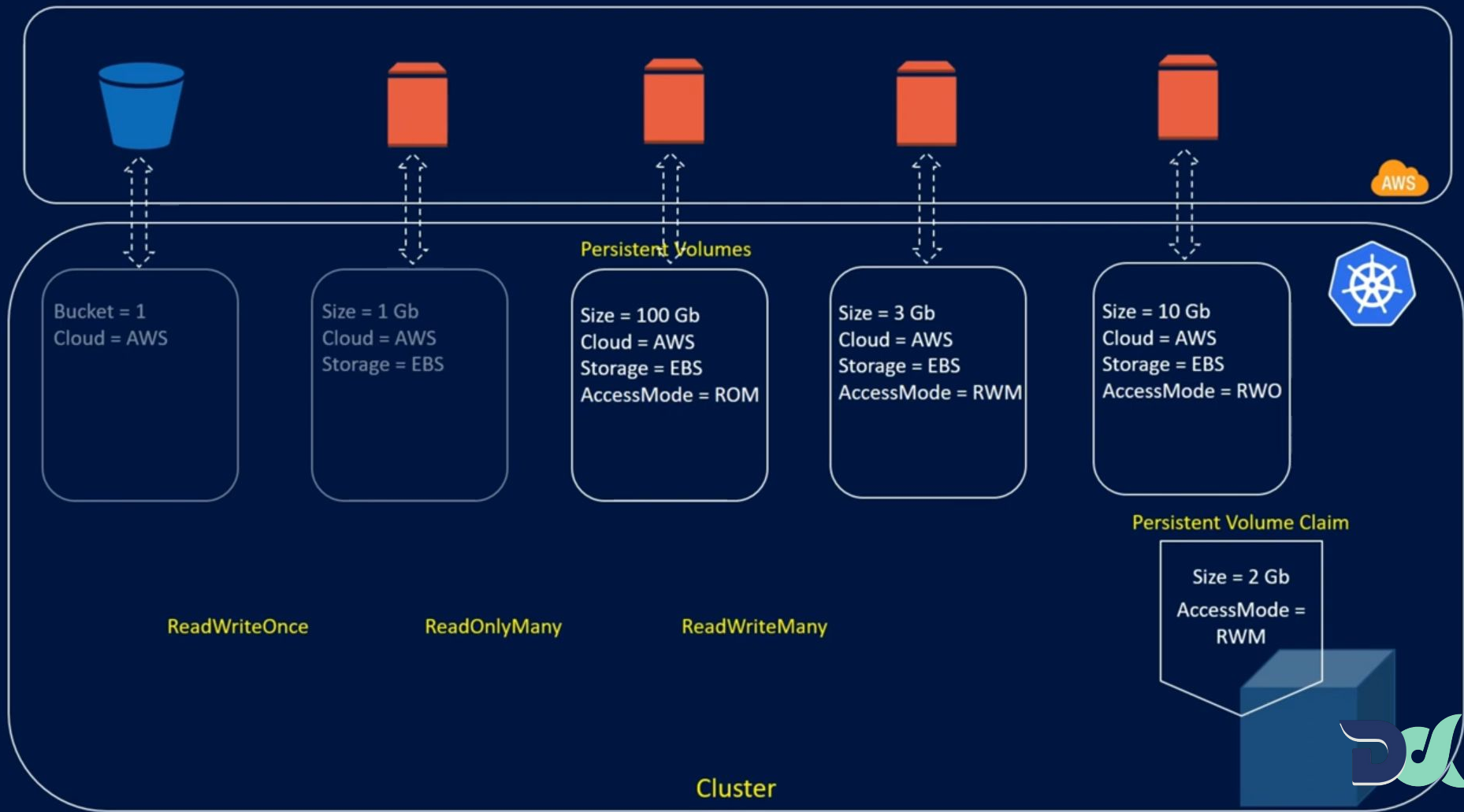
Size = 2 Gb
AccessMode =
RWM

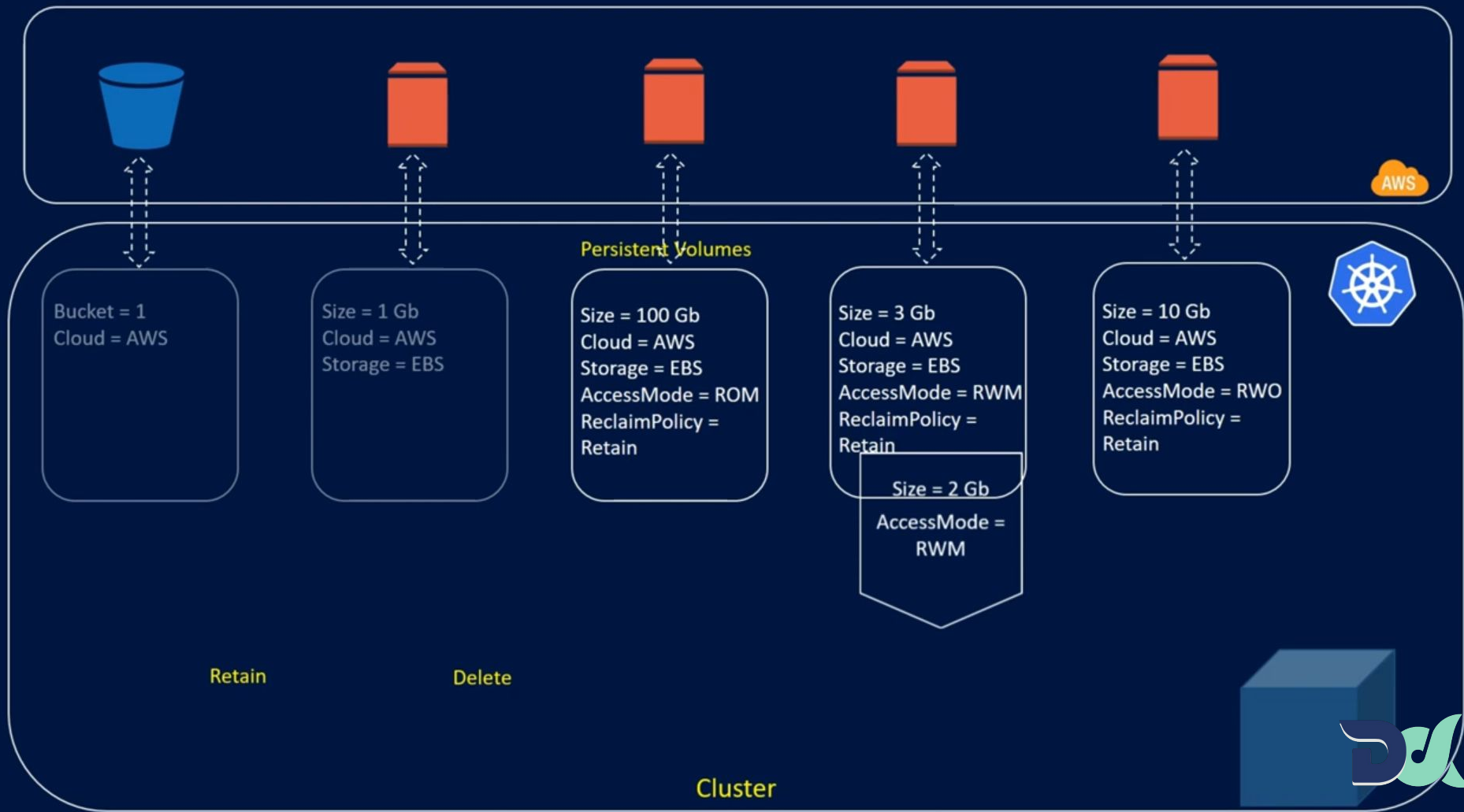


Cluster











Persistent Volumes

Size = 1 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 1 Gb
AccessMode = RWM

Size = 100 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 90 Gb
AccessMode = RWM

Size = 3 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 2 Gb
AccessMode = RWM

Size = 10 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain



Size = 1 Gb
AccessMode = RWM



Cluster





Persistent Volumes

Size = 1 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 1 Gb
AccessMode = RWM

Size = 100 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 90 Gb
AccessMode = RWM

Size = 3 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 2 Gb
AccessMode = RWM

Size = 10 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 1 Gb
AccessMode = RWM



Cluster





Persistent Volumes

Size = 1 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 1 Gb
AccessMode = RWM

Size = 100 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 90 Gb
AccessMode = RWM

Size = 3 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 2 Gb
AccessMode = RWM

Size = 10 Gb
Cloud = AWS
Storage = EBS
AccessMode = RWM
ReclaimPolicy = Retain

Size = 1 Gb
AccessMode = RWM



Pending

Size = 2 Gb
AccessMode = RWM

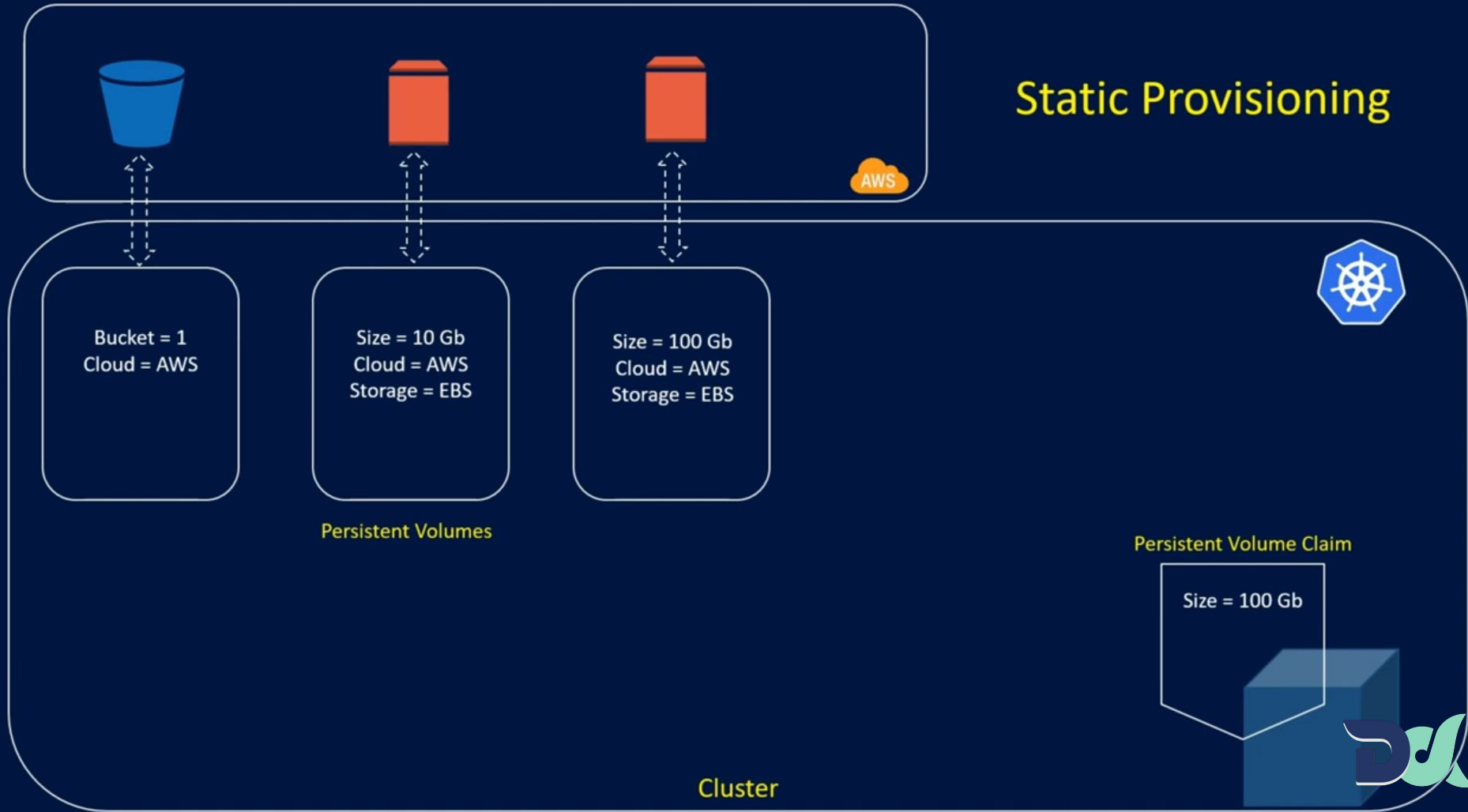
Cluster



Static and Dynamic Provisioning



Static Provisioning



Static Provisioning



Persistent Volumes



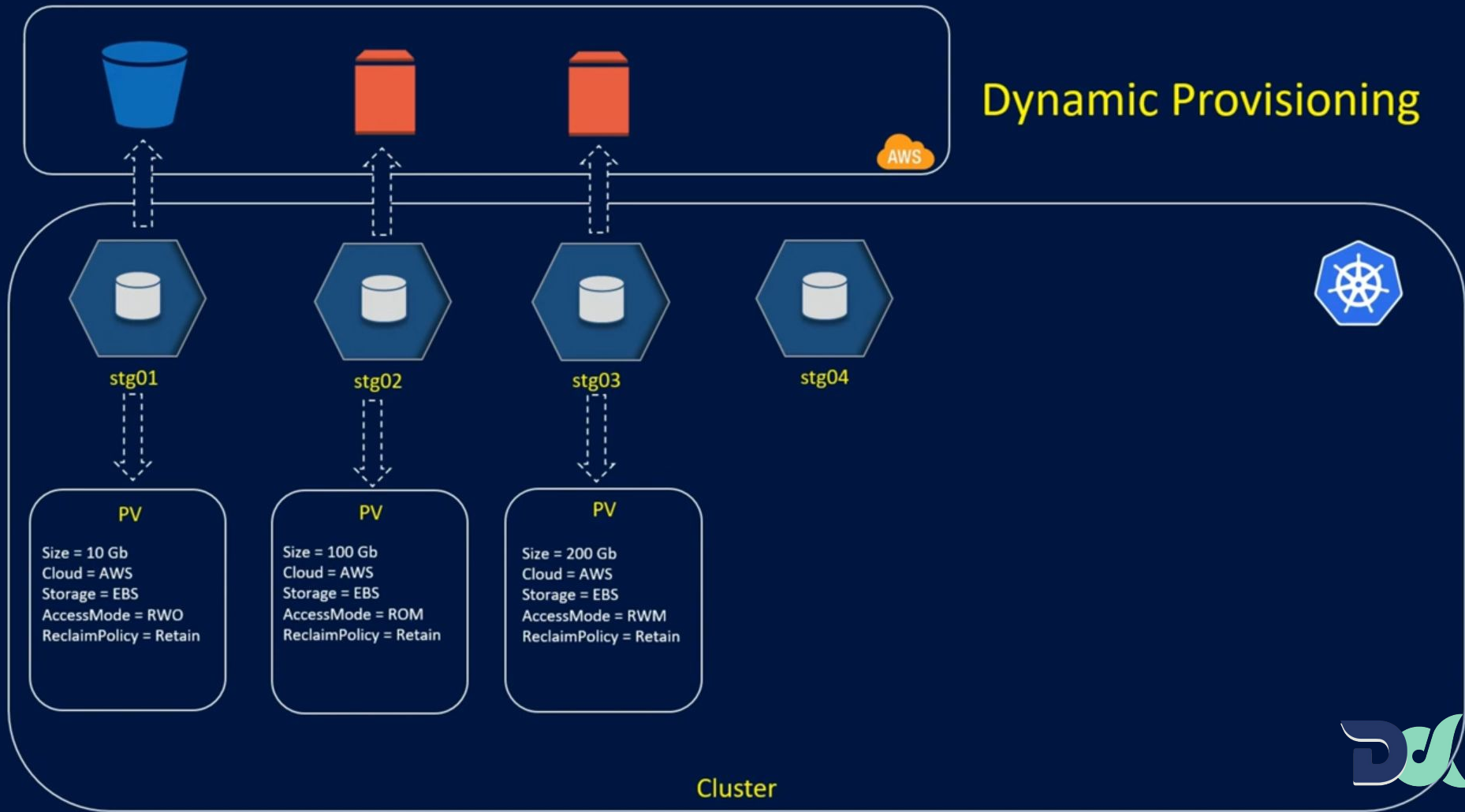
Persistent Volume Claim



Cluster



Dynamic Provisioning



Yaml File:-

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: standard
provisioner: kubernetes.io/aws-ebs
parameters:
  type: gp2
reclaimPolicy: Retain
```



Dynamic Provisioning

