



- 1. Headless Service**

- 2. Statefulset's YAML file
& creation**

- 3. VolumeClaim template
in statefulset**

DATABASE



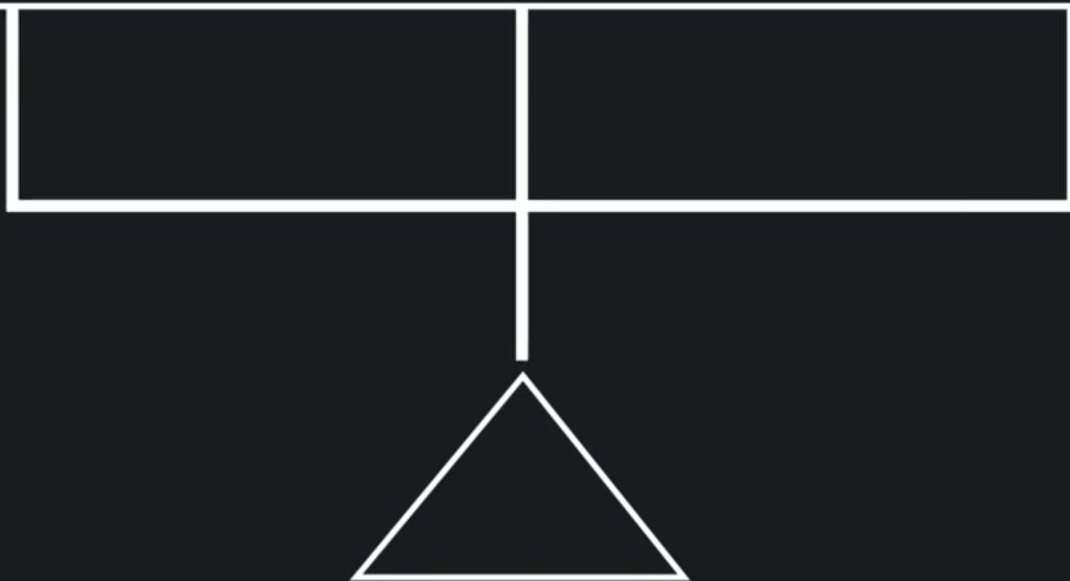
mysql-0



mysql-1

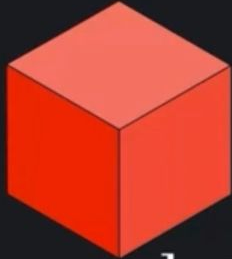


mysql-2

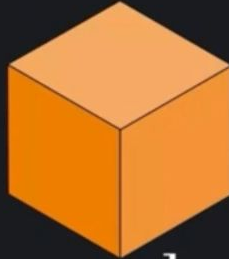




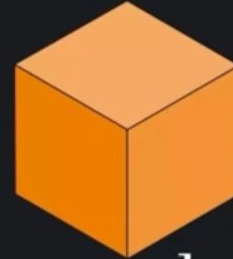
DATABASE



mysql-0



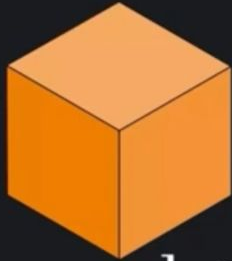
mysql-1



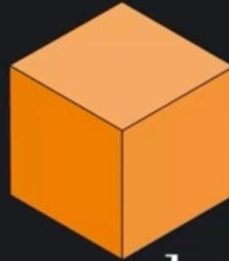
mysql-2



DATABASE



mysql-0



mysql-1



mysql-2

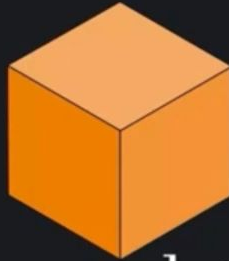
DNS Name



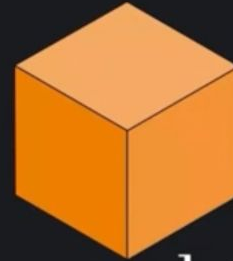
DATABASE



mysql-0



mysql-1



mysql-2

DNS Name





mysql-0

mysql-0.<headless_service_name>.<namespace>.svc.cluster.domain

mysql-0.headless-svc.default.svc.cluster.local



Headless Service creation

```
apiVersion: v1
kind: Service
metadata:
  name: headless-svc
spec:
  selector:
    app: nginx
  ports:
    - port: 80
      name: web
  clusterIP: None
```





```
devopspro:-$ kubectl apply -f svc.yml
```

```
service/headless-svc created
```

```
devopspro:-$ kubectl get service headless-svc
```

NAME	TYPE	CLUSTER_IP	EXTERNAL_IP	PORT(S)
headless-svc	ClusterIP	None	<none>	80/TCP



StatefulSet YAML

```
apiVersion: apps/v1
kind: StatefulSet
metadata:
  name: web
spec:
  serviceName: "headless-svc"
  replicas: 2
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: registry.k8s.io/nginx-slim:0.8
          ports:
            - containerPort: 80
              name: web
```





```
devopspro:~$ kubectl apply -f svc.yml
```

```
service/headless-svc created
```

```
devopspro:~$ kubectl get statefulset web
```

NAME	DESIRED	CURRENT	AGE
web	2	1	20s

```
devopspro:~$ kubectl get pods -w -l app=nginx
```

NAME	READY	STATUS	RESTART	AGE
web-0	0/1	Pending	0	0s
web-0	0/1	Pending	0	0s
web-0	0/1	Container creating	0	0s
web-0	0/1	Runing	0	19s
web-1	0/1	Pending	0	0s
web-1	0/1	Pending	0	0s
web-1	0/1	Container creating	0	0s
web-1	0/1	Runing	0	18s

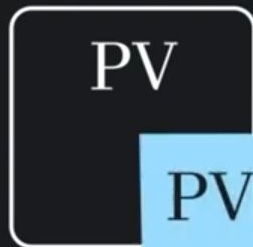
```
devopspro:~$ kubectl scale sts web --replica=4
```

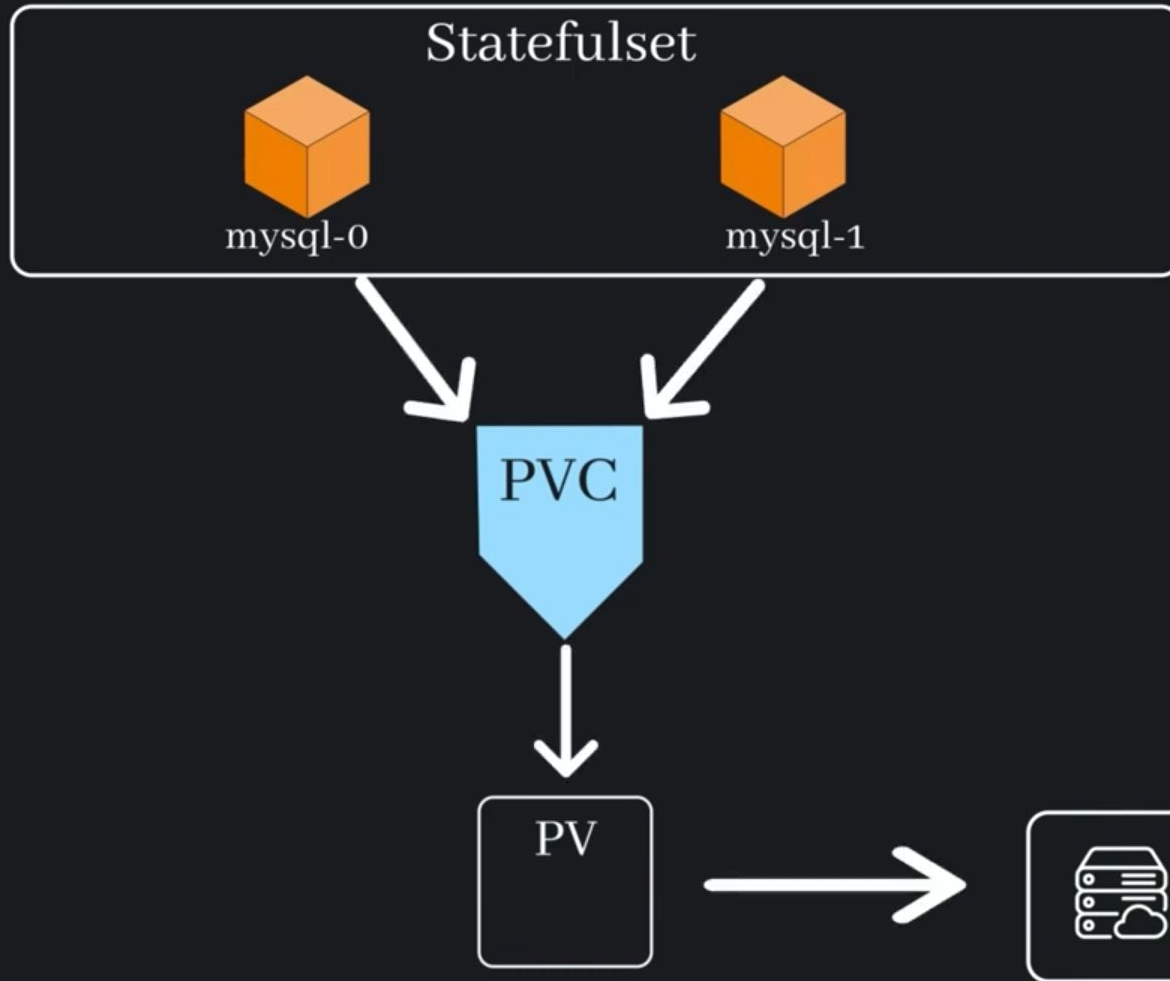
```
Statefulset/web scaled
```

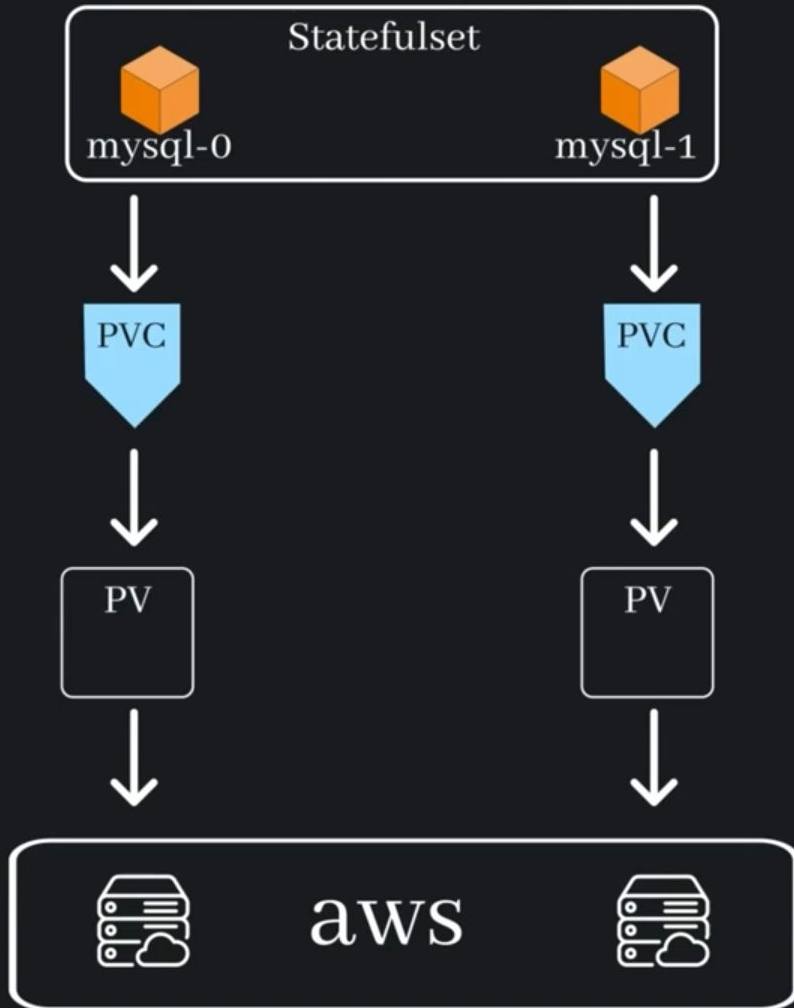
```
devopspro:~$ kubectl delete sts web
```

```
Statefulset/web deleted
```









```
apiVersion: apps/v1
kind: StatefulSet
metadata:
  name: web
spec:
  serviceName: "headless-svc"
  replicas: 2
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: registry.k8s.io/nginx-slim:0.8
          ports:
            - containerPort: 80
              name: web
          volumeMounts:
            - name: web-pvc
              mountPath: /usr/share/nginx/html
  volumeClaimTemplates:
    - metadata:
        name: web-pvc
      spec:
        accessModes: [ "ReadWriteOnce" ]
        resources:
          requests:
            storage: 1Gi
```



1. Headless service in kubernetes



2. Statefulset YAML file & its creation



3. VolumeClaim Templates in statefulset

