

# Convert PV from ReadWriteOnce to ReadWriteMany

## Change reclaim policy of the persistent volume to `Retain`

**This is required!!!** Before you delete the persistent volume claim to avoid a surprise that your data got wiped. The default reclaim policy is `Delete` and we do not want that to happen.

```
kubectl patch pv grafana-pv -n grafana -p '{"spec":{"persistentVolumeReclaimPolicy":"Retain"}}'
```

## Scale down any workloads (deployments, stateful sets etc etc) using the volume

In this step you are removing binds to the persistent volume. Check what is using it and scale it down to 0. No need to delete deployments, just scale them down to no pods running.

```
kubectl scale --replicas=0 -n grafana deployment grafana
```

When all workloads using the persistent volume have been scaled down to zero you should see the status of it change from `Bound` to `Released`. We are not done yet though.

# Delete existing persistent volume claim to be able to free persistent volume

NOTE: **Did you back up its manifest just in case?**

```
kubectl delete pvc grafana-pvc -n grafana
```

# Free persistent volume status to become Available

Here we just remove the reference to the deleted persistent volume claim from the persistent volume so that a new persistent volume claim can be set.

```
kubectl patch pv grafana-pv -n grafana -p '{"spec":{"claimRef":{"uid":""}}}'
```

You should see that status of the persistent volume changed to Available

# Change the persistent volume access mode to ReadWriteMany

Just run this command:

```
kubectl patch pv grafana-pv -n grafana -p '{"spec":{"accessModes":["ReadWriteMany"]}}'
```

# Recreate persistent volume claim with access mode ReadWriteMany

Here you either use your existing code to create this kubernetes resource with access mode `ReadWriteMany` or just use the backup we did in first step, edit its `spec.accessModes` and apply that.

I am just showing what the part of `spec` that is interesting to us should be, if you are editing existing manifest or backup, you will easily find the place to change it.

```
spec:  
  accessModes:  
    - ReadWriteMany
```

Apply the new persistent volume claim manifest (assuming we saved it to a file called `persistent_volume_claim_read_write_many.yaml`):

```
kubectl -n grafana apply -f pvc.yaml
```

# Scale the workloads back up to start using the volume with new access mode.

Adjust number of replicas to what your workloads manifests actually specify.

```
kubectl scale --replicas=1 -n grafana deployment grafana
```

The status of you persistent volume should become  now.

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