

## 14-persistentvolumeclaim

PersistentVolumeClaim (PVC) What it is PersistentVolumeClaim requests storage for workloads. When to use Any stateful workload needing persistent disk Decouple app from underlying storage implementation Key fields spec.resources.requests.storage spec.accessModes spec.storageClassName spec.volumeName (optional explicit binding) Common commands bash kubectl get pvc kubectl describe pvc app-data kubectl delete pvc app-data **YAML example** yaml apiVersion: v1 kind: PersistentVolumeClaim metadata: name: app-data spec: accessModes: - RReadWriteOnce storageClassName: standard resources: requests: storage: 5Gi Pod mount **example** yaml apiVersion: v1 kind: Pod metadata: name: app-with-pvc spec: containers: - name: app image: nginx:1.27 volumeMounts: - name: data mountPath: /usr/share/nginx/html volumes: - name: data persistentVolumeClaim: claimName: app-data **Practical notes** PVC stays bound across Pod reschedules. Deleting PVC behavior depends on PV reclaim policy.