

05-statefulset

StatefulSet What it is StatefulSet manages stateful Pods with stable identity and stable storage.
When to use Databases, queues, distributed systems Ordered startup/shutdown requirements
Persistent data per replica Key fields spec.serviceName: headless service for network identity
spec.replicas: number of instances spec.volumeClaimTemplates[]: per-Pod PVC
template spec.podManagementPolicy: OrderedReady or Parallel Common commands
bash kubectl get statefulset kubectl describe statefulset postgres
kubectl scale statefulset postgres --replicas=3 kubectl rollout status
statefulset/postgres kubectl delete statefulset postgres YAML example yaml
apiVersion: apps/v1 kind: StatefulSet metadata: name: postgres spec:
serviceName: postgres-headless replicas: 2 selector: matchLabels: app:
postgres template: metadata: labels: app: postgres spec: containers: -
name: postgres image: postgres:16 env: - name: POSTGRES_PASSWORD value:
change-me volumeMounts: - name: data mountPath: /var/lib/postgresql/data
volumeClaimTemplates: - metadata: name: data spec: accessModes:
["ReadWriteOnce"] resources: requests: storage: 10Gi Practical notes Pod names
are ordinal (postgres-0, postgres-1). Deleting StatefulSet does not automatically delete bound
PVCs unless separately configured.