Backend Deployment

apiVersion: apps/v1

kind: Deployment

metadata:

name: backend

namespace: my-app

spec:

replicas: 1

selector:

matchLabels:

app: backend

template:

metadata:

labels:

app: backend

spec:

containers:

- name: backend

image: spquantum/backend:v1

ports:

- containerPort: 8080

env:

- name: DB\_HOST

value: mysql-service

- name: DB\_USER

value: root

- name: DB\_PASSWORD

value: root

- name: DB\_NAME

value: quantumsoft

Backend Service

apiVersion: v1

kind: Service

metadata:

name: backend-service

namespace: my-app

spec:

selector:

app: backend

ports:

- port: 8080

targetPort: 8080

Frontend Deployment

apiVersion: apps/v1

kind: Deployment

metadata:

name: frontend

namespace: my-app

spec:

replicas: 1

selector:

matchLabels:

app: frontend

template:

metadata:

labels:

app: frontend

spec:

containers:

- name: frontend

image: spquantum/frontend:v2

ports:

- containerPort: 80

Frontend Service

apiVersion: v1

kind: Service

metadata:

name: frontend-service

namespace: my-app

spec:

type: NodePort # You MUST specify this to use nodePort

selector:

app: frontend

ports:

- protocol: TCP

port: 80

targetPort: 80

nodePort: 30008 # Must be within range 30000-32767

MySQL Deployment

apiVersion: apps/v1

kind: Deployment

metadata:

name: mysql

namespace: my-app

spec:

replicas: 1

selector:

matchLabels:

app: mysql

template:

metadata:

labels:

app: mysql

spec:

containers:

- name: mysql

image: mysql:8.0

env:

- name: MYSQL\_ROOT\_PASSWORD

value: root

- name: MYSQL\_DATABASE

value: quantumsoft

ports:

- containerPort: 3306

volumeMounts:

- name: mysql-storage

mountPath: /var/lib/mysql

volumes:

- name: mysql-storage

persistentVolumeClaim:

claimName: mysql-pvc

MySQL Service

apiVersion: v1

kind: Service

metadata:

name: mysql-service

namespace: my-app

spec:

selector:

app: mysql

ports:

- port: 3306

targetPort: 3306

MySQL PVC

apiVersion: v1

kind: PersistentVolumeClaim

metadata:

name: mysql-pvc

namespace: my-app

spec:

accessModes:

- ReadWriteOnce

resources:

requests:

storage: 1Gi

MySQL PV

apiVersion: v1

kind: PersistentVolume

metadata:

name: mysql-pv

namespace: my-app

spec:

capacity:

storage: 1Gi

accessModes:

- ReadWriteOnce

hostPath:

path: "/mnt/data"