**Configure health probes for pods**

Health probes in Kubernetes are used to check the health of containers running in pods. There are three types:

1. Liveness Probe: Checks if the container is running. If it fails, the container is restarted.

2. Readiness Probe: Checks if the container is ready to serve traffic. If it fails, the pod is removed from service endpoints.

3. Startup Probe: Checks if the application within the container has started. Useful for slow-starting apps.

**Configuring Health Probes**

pod-with-probes.yaml

apiVersion: v1

kind: Pod

metadata:

name: health-probe-demo

spec:

containers:

- name: myapp

image: nginx

ports:

- containerPort: 80

livenessProbe:

httpGet:

path: /

port: 80

initialDelaySeconds: 10

periodSeconds: 5

readinessProbe:

httpGet:

path: /

port: 80

initialDelaySeconds: 5

periodSeconds: 5

startupProbe:

httpGet:

path: /

port: 80

failureThreshold: 30

periodSeconds: 10

Probe Types and Options

We can use three types of actions for probes:

- httpGet: Performs an HTTP GET request.

- exec: Runs a command inside the container.

- tcpSocket: Checks if a TCP socket is open.

httpGet Example

yaml

livenessProbe:

httpGet:

path: /healthz

port: 8080

initialDelaySeconds: 15

periodSeconds: 20

exec Example

yaml

livenessProbe:

exec:

command:

- cat

- /tmp/healthy

initialDelaySeconds: 5

periodSeconds: 5

tcpSocket Example

yaml

livenessProbe:

tcpSocket:

port: 3306

initialDelaySeconds: 15

periodSeconds: 20

Apply

$ kubectl apply -f pod-with-probes.yaml