CKA-健康性检查

讲师：老段 RHCE/RHCA/COA/CKA

探测的目的

deployment的作用 用来维持 pod的健壮性

当pod挂掉之后，deployment会生成新的pod

但如果pod是正常运行的，但pod里面出了问题，此时deployment是监测不到的。

故此需要探测（probe）

用户定义 "出现什么样的状况 "才叫出问题

当probe监测到此问题，会认为pod出现了问题，执行"重启大法"来解决问题。

liveness probe --command

```
apiVersion: v1
kind: Pod
metadata:
 labels:
  test: liveness
 name: liveness-exec
spec:
 containers:
 - name: liveness
   image: busybox
   args:
   - /bin/sh
   - -c
   - touch /tmp/healthy; sleep 30; rm -rf /tmp/healthy; sleep 10
   livenessProbe:
    exec:
     command:
     - cat
     - /tmp/healthy
   initialDelaySeconds: 5   #容器启动的5s内不监测
   periodSeconds: 5       #每5s钟检测一次
```

liveness probe --httpGET/tcp

```
apiVersion: v1
kind: Pod
metadata:
 labels:
  test: liveness
 name: liveness-exec
spec:
 containers:
 - name: liveness
  image: nginx
  livenessProbe:
   failureThreshold: 3
   httpGet:
    path: /index.html
    port: 80
    scheme: HTTP
   initialDelaySeconds: 10
   periodSeconds: 10
   successThreshold: 1
   timeoutSeconds: 10
```

```
apiVersion: v1
kind: Pod
metadata:
 labels:
  test: liveness
 name: liveness-exec
spec:
 containers:
 - name: liveness
  image: nginx
  livenessProbe:
   failureThreshold: 3
   tcpSocket:
    port: 80
   initialDelaySeconds: 10
   periodSeconds: 10
   successThreshold: 1
   timeoutSeconds: 10
```

参数意义

initialDelaySeconds：容器启动后第一次执行探测是需要等待多少秒。

periodSeconds：执行探测的频率，默认是10秒，最小1秒。

timeoutSeconds：探测超时时间，默认1秒，最小1秒。

successThreshold：探测失败后，最少连续探测成功多少次才被认定为成功，默认是1，对于liveness必须是1，最小值是1。

failureThreshold：探测成功后，最少连续探测失败多少次才被认定为失败。默认是3。最小值是1。

readness probe --command

```
apiVersion: v1
kind: Pod
metadata:
 labels:
  test: readness
 name: readness-exec
spec:
 containers:
 - name: readness
   image: busybox
   args:
   - /bin/sh
   - -c
   - touch /tmp/healthy; sleep 30; rm -rf /tmp/healthy; sleep 10
   readinessProbe:
    exec:
     command:
     - cat
     - /tmp/healthy
   initialDelaySeconds: 5
   periodSeconds: 5
```

*readiness*检测到问题，并不重启

只是*svc*接收的请求不再转发给此*pod*

readiness probe --httpGET/tcp

```
apiVersion: v1
kind: Pod
metadata:
 labels:
  test: liveness
 name: liveness-exec
spec:
 containers:
 - name: liveness
  image: nginx
  readnessProbe:
   failureThreshold: 3
   httpGet:
    path: /index.html
    port: 80
    scheme: HTTP
   initialDelaySeconds: 10
   periodSeconds: 10
   successThreshold: 1
   timeoutSeconds: 10
```

```
apiVersion: v1
kind: Pod
metadata:
 labels:
  test: liveness
 name: liveness-exec
spec:
 containers:
 - name: liveness
  image: nginx
  readinessProbe:
   failureThreshold: 3
   tcpSocket:
    port: 80
   initialDelaySeconds: 10
   periodSeconds: 10
   successThreshold: 1
   timeoutSeconds: 10
```

谢谢