Configure liveness and readiness probes for Containers

SSH to your **AWS** Workstation

ssh devops@<public-ip-addr> of your Workstation

Password is: Dev0p\$!!/

Replace <your-name> with your name throughout the lab.

1. Run the below commands to create a pod object as <your-name>probe.yaml.

```
$ sudo su
# cd application/
# curl -f https://pastebin.com/raw/wsFvgeSZ > <your-name>-probe.yaml
# vim <your-name>probe.yaml
```

Update <your-name> with your Name

Note:

- touch /tmp/healthy; sleep 30; rm -rf /tmp/healthy; sleep 600

This command will create a healthy file in the /tmp dir for the first 30 secs and then deletes this file. When the pod is being scheduled the liveness probe will be able to find the file for the first 30 secs and when this file gets deleted the probe will fail and hence will kill the container and recreates it.

initialDelaySeconds: 5 Number of seconds after the container has started before liveness or readiness probes are initiated.

periodSeconds: 5 How often (in seconds) to perform the probe. Default to 10 seconds.timeoutSeconds: Number of seconds after which the probe times out. Defaults to 1 second.

Edit the fields test name image (your hub image)

2. Create a Pod

```
# kubectl create -f <your-name>probe.yaml
```

3. Within 30 seconds, view the Pod events:

```
# kubectl get po <your-name>

root@ip-172-31-40-214:/home/devops/application# kubectl get po albert

NAME READY STATUS RESTARTS AGE
albert 0/1 Running 0 47s

root@ip-172-31-40-214:/home/devops/application#
```

4. Run the below command to describe the pod and check pod events.

```
# kubectl describe pod <your-name>
```

The output indicates that Liveness probe failed and Readiness probe failed.

```
Events:

Type Reason Age From Message

Normal Scheduled 76s default-scheduler Successfully assigned default/albert to gke-demo-pool-1-66f23b9e-7686 pulling image "lovescloud/rildemo:default"

Normal Pulled 63s kubelet, gke-demo-pool-1-66f23b9e-7686 pulling image "lovescloud/rildemo:default"

Normal Created 62s kubelet, gke-demo-pool-1-66f23b9e-7686 Successfully pulled image "lovescloud/rildemo:default"

Normal Started 62s kubelet, gke-demo-pool-1-66f23b9e-7686 Started container

Normal Started 62s kubelet, gke-demo-pool-1-66f23b9e-7686 Started container

Warning Unhealthy 75 (x6 over 57s) kubelet, gke-demo-pool-1-66f23b9e-7686 Liveness probe failed: cat: /tmp/healthy: No such file or directory root@ip-172-31-40-214:/home/devops/application#
```

5. After 30 seconds, view the Pod events again:

```
# kubectl describe pod <pod-name>
```

At the bottom of the output, there are messages indicating that the liveness probes have failed, and the containers have been killed and recreated.

```
Events:

Type Reason Age From Message

Normal Scheduled 2m43s default-scheduler Successfully assigned default/albert to gke-demo-pool-1-66f23b9e-7686

Normal Pulled 2m30s kubelet, gke-demo-pool-1-66f23b9e-7686 kubelet, gke-demo-pool-1-66f23b9e-7686 Normal Started 86s (x2 over 2m29s) kubelet, gke-demo-pool-1-66f23b9e-7686 Warning Unhealthy 51s (x2 over 116s) kubelet, gke-demo-pool-1-66f23b9e-7686 Warning Unhealthy 24s (x13 over 2m24s) kubelet, gke-demo-pool-1-66f23b9e-7686 Warning Unhealthy 24s (x13 over 2m24s) kubelet, gke-demo-pool-1-66f23b9e-7686 Warning Unhealthy 24s (x13 over 2m29s) kubelet, gke-demo-pool-1-66f23b9e-7686 Warning Unhealthy 24s (x13 over 2m29s) kubelet, gke-demo-pool-1-66f23b9e-7686 Warning Unhealthy 24s (x13 over 2m24s) Warning U
```

6. Wait another 30 seconds, and verify that the Container has been restarted:

```
# kubectl get pod <pod-name>

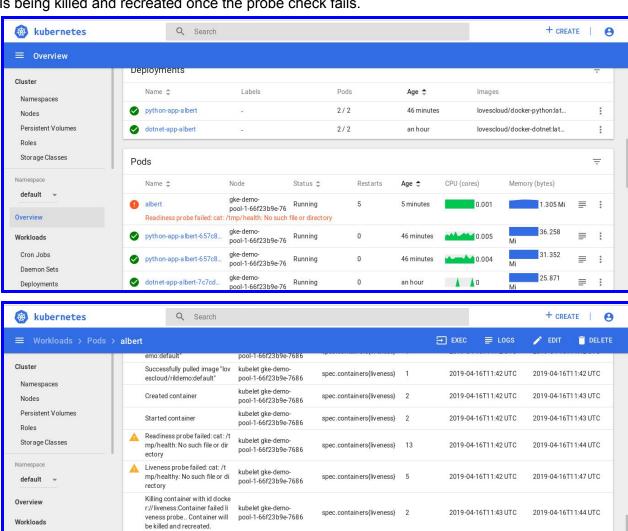
root@ip-172-31-40-214:/home/devops/application# kubectl get po albert

NAME READY STATUS RESTARTS AGE
albert 0/1 Running 3 3m54s

root@ip-172-31-40-214:/home/devops/application#
```

The output shows that RESTARTS has been incremented:

7. Login to your **Kubernetes Dashboard** and check the pod events. You can see that the pod Is being killed and recreated once the probe check fails.



Container image "lovescloud/

rildemo:default" already prese

nt on machine

kubelet gke-demo-

pool-1-66f23b9e-7686

spec.containers{liveness} 2

2019-04-16T11:43 UTC

2019-04-16T11:44 UTC

Cron Jobs

Daemon Sets

Deployments