#039 Kubernetes - Deployment Lab 1

Introduction

this is part 39 from the journey it's a long journey(360 day) so go please check previous parts , and if you need to walk in the journey with me please make sure to follow because I may post more than once in 1 Day but surely I will post daily at least one 😎.

And I will cover lot of tools as we move on.

Files for this lab

all the files can be found on the repository of this journey , if you already have it just pull if not clone it.
Files can be found here

Lab

the way to create deployment is very similar to replicasets instead we just change the kind to deployment.
here is a look at the app_039.yml

```
1 app_039.yml
3 apiVersion: apps/v1
2 kind: Deployment
1 metadata:
4     name: myapp-deployment
1
2 spec:
3   template:
4     metadata:
5       name: first-pod-dec
6       labels:
7         app: myapp
8         type: restapi
9
10    spec:
11      containers:
12        - name: simple-api
13          image: emondek/simple-api:latest
14
15   replicas: 6
16   selector:
17     matchLabels:
18       app: myapp
19       type: restapi
```

you can see it's the same we only change kind.

now to create our deployment we also do the same as replicas .

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl create -f app_039.yml
deployment.apps/myapp-deployment created
```

```
kubectl create -f app_039.yml
```

we got a message that our deployment successfully created.

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl get deployments
NAME                READY   UP-TO-DATE   AVAILABLE   AGE
myapp-deployment    6/6     6            6           34s
```

```
kubectl get deployments
```

he can see we have 1 deployment that we created right now.

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl get rs
NAME                        DESIRED   CURRENT   READY   AGE
myapp-deployment-598fc68b8b  6         6         6      52s
myapp-replicaset             6         6         6      7d23h
```

```
kubectl get rs
```

rs here is the shortcut of replicasets (yes we can use shortcuts in kubectl :D)
we can see he take the name of the deployment and give here and id.

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl get pods
NAME                              READY   STATUS    RESTARTS   AGE
myapp-deployment-598fc68b8b-cddm2  1/1     Running   0          60s
myapp-deployment-598fc68b8b-fx62f  1/1     Running   0          60s
myapp-deployment-598fc68b8b-lw75s  1/1     Running   0          60s
myapp-deployment-598fc68b8b-r8w8d  1/1     Running   0          60s
myapp-deployment-598fc68b8b-rfjlk  1/1     Running   0          60s
myapp-deployment-598fc68b8b-rgzq7  1/1     Running   0          60s
myapp-replicaset-6f9zm             1/1     Running   1          3d22h
myapp-replicaset-6h2r7             1/1     Running   3          7d23h
myapp-replicaset-b9lxh             1/1     Running   1          3d22h
myapp-replicaset-g6c5f             1/1     Running   3          7d23h
myapp-replicaset-kbgsr             1/1     Running   1          3d22h
myapp-replicaset-wg8sr             1/1     Running   1          3d22h
```

```
kubectl get pods
```

we can see also he create 6 deployments for us (6 is what we specify in yml)

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl describe deployments myapp-deployment
Name:                myapp-deployment
Namespace:           default
CreationTimestamp:   Thu, 23 Jul 2020 22:51:02 +0300
```

```
kubectl describe deployments myapp-deployment
```

we can describe the deployment using the command above (also we can describe the pod , I talk about it before).
here we got useful information about it as labels Image ports etc...

```
OldReplicaSets:  <none>
NewReplicaSet:   myapp-deployment-598fc68b8b (6/6 replicas created)
Events:
  Type    Reason           Age   From                  Message
  ----    ------           ----  ----                  -------
  Normal  ScalingReplicaSet 86s  deployment-controller  Scaled up replica set myapp-deployment-598fc68b8b to 6
(base) (master)in ~/Documents/DevOpsJourney/app_039
>
```

if we scroll down we see events , those are helpful in case we have errors , so we know where and when problem happens.

Take a stretch
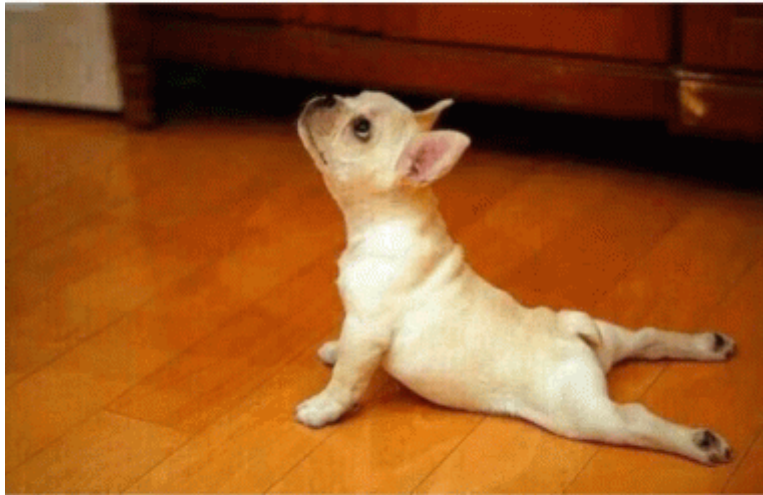
Back to lab

now to see what versions I made in deployment (history) We type

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl rollout history deployment/myapp-deployment
deployment.apps/myapp-deployment
REVISION   CHANGE-CAUSE
1          <none>
```

```
kubectl rollout history deployment/myapp-deployment
```

we can see CHANGE-CAUSE is because I didn't record what I edit when I create
the deployment.
Record is important (like git commit) to get information about what I do in these
version in case I need to go back to it later.
let's delete our deployment and made new one with record

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl delete deployments myapp-deployment
deployment.apps "myapp-deployment" deleted
```

```
kubectl delete deployments myapp-deployment
```

he will delete all the things related to it , replicas , pods and history.

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl get pods
NAME                                      READY   STATUS        RESTARTS   AGE
myapp-deployment-598fc68b8b-bqxm2         0/1     Terminating   0          7m35s
myapp-deployment-598fc68b8b-dnlqv         0/1     Terminating   0          7m35s
myapp-deployment-598fc68b8b-jrpqb         0/1     Terminating   0          7m35s
myapp-deployment-598fc68b8b-jtgmb         0/1     Terminating   0          7m35s
myapp-deployment-598fc68b8b-prp2j         0/1     Terminating   0          7m35s
myapp-deployment-598fc68b8b-w4hbh         0/1     Terminating   0          7m35s
myapp-replicaset-6f9zm                    1/1     Running       1          3d23h
myapp-replicaset-6h2r7                    1/1     Running       3          7d23h
myapp-replicaset-b9lxh                    1/1     Running       1          3d23h
myapp-replicaset-g6c5f                    1/1     Running       3          7d23h
myapp-replicaset-kbgsr                    1/1     Running       1          3d23h
myapp-replicaset-wg8sr                    1/1     Running       1          3d23h
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl get pods
NAME                      READY   STATUS    RESTARTS   AGE
myapp-replicaset-6f9zm    1/1     Running   1          3d23h
myapp-replicaset-6h2r7    1/1     Running   3          7d23h
myapp-replicaset-b9lxh    1/1     Running   1          3d23h
myapp-replicaset-g6c5f    1/1     Running   3          7d23h
myapp-replicaset-kbgsr    1/1     Running   1          3d23h
myapp-replicaset-wg8sr    1/1     Running   1          3d23h
(base) (master)in ~/Documents/DevOpsJourney/app_039
>
```

```
kubectl get pods
```

if we get the pods we see they start to terminate then deleted.

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl create -f app_039.yml --record
deployment.apps/myapp-deployment created
```

```
kubectl create -f app_039.yml --record
```

We recreate it with --record

```
(base) (master)in ~/Documents/DevOpsJourney/app_039
> kubectl rollout history deployment/myapp-deployment
deployment.apps/myapp-deployment
REVISION   CHANGE-CAUSE
1          kubectl create --filename=app_039.yml --record=true
```

```
kubectl rollout history deployment/myapp-deployment
```

We can see in the History we have the record of what we do in this REVISION 1.
That's it for this one see ya in lab 2 :)