Module-8: Container Orchestration using Kubernetes Part - I

Demo Document - 4

edureka!

DEMO-4: Rolling Updates and Roll Backs

To update the image of the running application

1. You can check the current version of your deployment app by using the describe command

   Command: kubectl describe pod <podName>

```
edureka@kmaster:~$ kubectl describe deployment nginx-deployment
Name:                   nginx-deployment
Namespace:              default
CreationTimestamp:      Fri, 20 Jul 2018 13:17:17 +0530
Labels:                 <none>
Annotations:            deployment.kubernetes.io/revision=1
                        kubectl.kubernetes.io/last-applied-configuration={"apiVersion"
ions":{},"name":"nginx-deployment","namespace":"default"},"spec":{"replicas":4,"se...
Selector:               app=nginx
Replicas:               2 desired | 2 updated | 2 total | 2 available | 0 unavailable
StrategyType:           RollingUpdate
MinReadySeconds:        0
RollingUpdateStrategy:  25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=nginx
  Containers:
   nginx:
    Image:        nginx:1.7.9
    Port:         80/TCP
    Host Port:    0/TCP
    Environment:  <none>
    Mounts:       <none>
  Volumes:        <none>
Conditions:
```

2. Edit the configuration file by changing the image version of nginx

   old file:

```
    spec:
      containers:
      - name: nginx
        image: nginx:1.7.9
        ports:
        - containerPort: 80
```

   New file:

```
    spec:
      containers:
      - name: nginx
        image: nginx:1.9.1
        ports:
        - containerPort: 80
```

3. Apply the configuration changes to the deployment

   Command: kubectl apply -f nginx.yaml –record=true

```
edureka@kmaster:~$ kubectl apply -f nginx.yaml --record=true
deployment.apps/nginx-deployment configured
```

4. Now, verify by running describe again

   Command: kubectl describe deployment <deploymentName>

```
edureka@kmaster:~$ kubectl describe deployment nginx-deployment
Name:                   nginx-deployment
Namespace:              default
CreationTimestamp:      Fri, 20 Jul 2018 13:17:17 +0530
Labels:                 <none>
Annotations:            deployment.kubernetes.io/revision=2
                        kubectl.kubernetes.io/last-applied-config
ions":{"kubernetes.io/change-cause":"kubectl apply --filename=ngi
                        kubernetes.io/change-cause=kubectl apply
Selector:               app=nginx
Replicas:               4 desired | 2 updated | 5 total | 3 avail
StrategyType:           RollingUpdate
MinReadySeconds:        0
RollingUpdateStrategy:  25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=nginx
  Containers:
   nginx:
    Image:        nginx:1.9.1
    Port:         80/TCP
    Host Port:    0/TCP
    Environment:  <none>
    Mounts:       <none>
  Volumes:        <none>
Conditions:
```

5. To check the rollout status

   Command: kubectl rollout status deployment/nginx-deployment

```
edureka@kmaster:~$ kubectl rollout status deployments/nginx-deployment
deployment "nginx-deployment" successfully rolled out
```

Rolling back update

6. To rollback the update you need to get revision number

   Command: kubectl rollout history deployment/nginx-deployment

```
edureka@kmaster:~$ kubectl rollout history deployments/nginx-deployment
deployments "nginx-deployment"
REVISION  CHANGE-CAUSE
1         <none>
2         kubectl apply --filename=nginx.yaml --record=true
```

7. To rollback use the undo command

   Command: kubectl rollout undo deployments/nginx-deployment –to-revision 1

```
edureka@kmaster:~$ kubectl rollout undo deployments/nginx-deployment --to-revision 1
deployment.extensions/nginx-deployment
```

8. Use the describe command to verify

```
edureka@kmaster:~$ kubectl describe deployments/nginx-deployment
Name:                   nginx-deployment
Namespace:              default
CreationTimestamp:      Fri, 20 Jul 2018 13:17:17 +0530
Labels:                 <none>
Annotations:            deployment.kubernetes.io/revision=3
                        kubectl.kubernetes.io/last-applied-configurati
ions":{"kubernetes.io/change-cause":"kubectl apply --filename=nginx.ya
Selector:               app=nginx
Replicas:               4 desired | 4 updated | 4 total | 4 available
StrategyType:           RollingUpdate
MinReadySeconds:        0
RollingUpdateStrategy:  25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=nginx
  Containers:
   nginx:
    Image:        nginx:1.7.9
    Port:         80/TCP
    Host Port:    0/TCP
    Environment:  <none>
    Mounts:       <none>
  Volumes:        <none>
Conditions:
```