Cloud Computing Assignment 2

PES1UG19CS592

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1 Deploying Kubernetes Pod

Figure 1: nginx pod is running and port-forwarding

Figure 2: nginx homepage on localhost via browser

2 Seal healing, updates and rollback with Kubernetes deployment


```
pes1ug19cs592@LAPTOP-3NK0JKVJ:~/CC$ kubectl delete pod/mynginx-pes1ug19cs592-5448645bbf-brmct
pod "mynginx-pes1ug19cs592-5448645bbf-brmct" deleted
pes1ug19cs592@LAPTOP-3NK0JKVJ:~/CC$ kubectl get all
NAME                                       READY   STATUS    RESTARTS   AGE
pod/mynginx-pes1ug19cs592-5448645bbf-mmpjn  1/1     Running   0          3m2s
pod/mynginx-pes1ug19cs592-5448645bbf-q6rtp  1/1     Running   0          5s
pod/mynginx-pes1ug19cs592-5448645bbf-xwzws  1/1     Running   0          73s

NAME                 TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
service/kubernetes   ClusterIP   10.96.0.1    <none>        443/TCP   23m

NAME                                    READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/mynginx-pes1ug19cs592   3/3     3            3           3m2s

NAME                                               DESIRED   CURRENT   READY   AGE
replicaset.apps/mynginx-pes1ug19cs592-5448645bbf   3         3         3       3m2s
pes1ug19cs592@LAPTOP-3NK0JKVJ:~/CC$
```

Figure 3: Deleted pod and seal healing of pods


```
pes1ug19cs592@LAPTOP-3NK0JKVJ:~/CC$ kubectl set image --record=true deployment/mynginx-pes1ug19cs592 mynginx-p
es1ug19cs592=nginx:1.16.1 --record=true
Flag --record has been deprecated, --record will be removed in the future
Flag --record has been deprecated, --record will be removed in the future
deployment.apps/mynginx-pes1ug19cs592 image updated
pes1ug19cs592@LAPTOP-3NK0JKVJ:~/CC$ kubectl rollout history deployment/mynginx-pes1ug19cs592
deployment.apps/mynginx-pes1ug19cs592
REVISION  CHANGE-CAUSE
1         <none>
2         kubectl set image deployment/mynginx-pes1ug19cs592 mynginx-pes1ug19cs592=nginx:1.16.1 --record=true
--record=true
```

Figure 4: Updates and revision history of deployment


```
pes1ug19cs592@LAPTOP-3NK0JKVJ:~/CC$ kubectl rollout undo deployment/mynginx-pes1ug19cs592
deployment.apps/mynginx-pes1ug19cs592 rolled back
pes1ug19cs592@LAPTOP-3NK0JKVJ:~/CC$ kubectl rollout status deployment/mynginx-pes1ug19cs592
Waiting for deployment "mynginx-pes1ug19cs592" rollout to finish: 2 out of 3 new replicas have been updated...
Waiting for deployment "mynginx-pes1ug19cs592" rollout to finish: 2 out of 3 new replicas have been updated...
Waiting for deployment "mynginx-pes1ug19cs592" rollout to finish: 2 out of 3 new replicas have been updated...
Waiting for deployment "mynginx-pes1ug19cs592" rollout to finish: 1 old replicas are pending termination...
Waiting for deployment "mynginx-pes1ug19cs592" rollout to finish: 1 old replicas are pending termination...
deployment "mynginx-pes1ug19cs592" successfully rolled out
```

Figure 5: Rollback of deployment

3   Scaling Kubernetes services

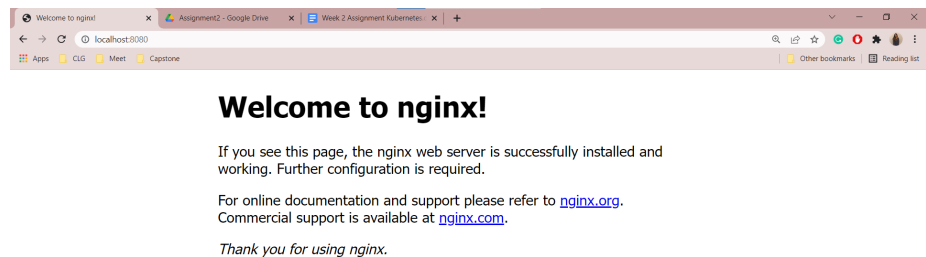Figure 6: Deploying and service creation, port forwarding

Figure 7: Scaling deployment

Figure 8: nginx homepage access through localhost