

Cloud Computing

UE19CS352

6th Semester, Academic Year 2021-22

Week #: 2 Assignment - Kubernetes

Date: 28/2/2022

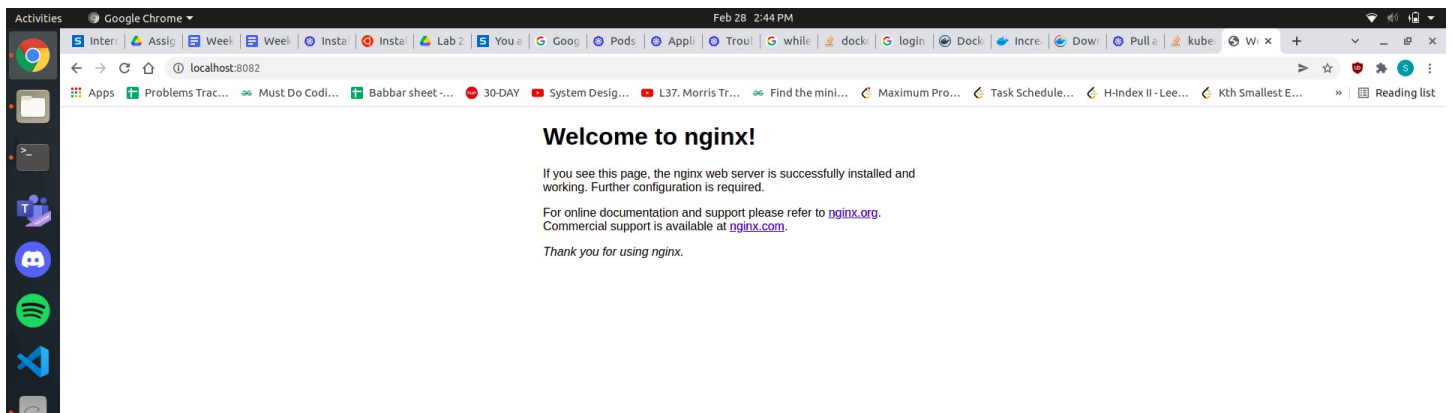
Name : SUMUKH RAJU BHAT	SRN : PES1UG19CS519	Section : H
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2a.jpg Screenshot of kubectl commands and port forwarding

```
sumukhbhat2701@SRBs-PC$ kubectl get all
NAME                                READY   STATUS    RESTARTS   AGE
pod/nginx-pes1ug19cs519            1/1     Running   0           2m24s

NAME                                TYPE     CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
service/kubernetes                 ClusterIP  10.96.0.1    <none>        443/TCP    167m
sumukhbhat2701@SRBs-PC$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
nginx-pes1ug19cs519                1/1     Running   0           2m26s
sumukhbhat2701@SRBs-PC$ kubectl port-forward pod/nginx-pes1ug19cs519 8082:80
Forwarding from 127.0.0.1:8082 -> 80
Forwarding from [::1]:8082 -> 80
Handling connection for 8082
```

2b.jpg Nginx home page access through localhost



3a.jpg Screenshot showing deleted pod and seal healing of pods in a deployment

```

sumukhbhat2701@SRBs-PC$ kubectl delete pod/mynginx-pes1ug19cs519-56f6b585f5-f8rk7
pod "mynginx-pes1ug19cs519-56f6b585f5-f8rk7" deleted
sumukhbhat2701@SRBs-PC$ kubectl get all
NAME                                     READY   STATUS              RESTARTS   AGE
pod/mynginx-pes1ug19cs519-56f6b585f5-b47s4 0/1     ContainerCreating   0          2s
pod/mynginx-pes1ug19cs519-56f6b585f5-fgvg5 1/1     Running             0          4m52s
pod/mynginx-pes1ug19cs519-56f6b585f5-tfxmc 1/1     Running             0          61s

NAME                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
service/kubernetes  ClusterIP   10.96.0.1    <none>        443/TCP    3h18m

NAME                                     READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/mynginx-pes1ug19cs519  2/3     3            2          4m52s

NAME                                     DESIRED   CURRENT   READY   AGE
replicaset.apps/mynginx-pes1ug19cs519-56f6b585f5 3         3         2       4m52s
sumukhbhat2701@SRBs-PC$ 

```

3b.jpg Screenshot showing updates and revision history of a deployment

```

sumukhbhat2701@SRBs-PC$ kubectl set image --record=true deployment/mynginx-pes1ug19cs519 mynginx-pes1ug19cs519=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-pes1ug19cs519 image updated
sumukhbhat2701@SRBs-PC$ kubectl rollout history deployment/mynginx-pes1ug19cs519
error: the server doesn't have a resource type "deployment"
sumukhbhat2701@SRBs-PC$ kubectl rollout history deployment/mynginx-pes1ug19cs519
deployment.apps/mynginx-pes1ug19cs519
REVISION   CHANGE-CAUSE
1          <none>
2          kubectl set image deployment/mynginx-pes1ug19cs519 mynginx-pes1ug19cs519=nginx:1.16.1 --record=true --record=true
sumukhbhat2701@SRBs-PC$ 

```

3c.jpg Screenshot showing rollback of deployment

```

sumukhbhat2701@SRBs-PC$ kubectl rollout undo deployment/mynginx-pes1ug19cs519
deployment.apps/mynginx-pes1ug19cs519 rolled back
sumukhbhat2701@SRBs-PC$ kubectl rollout status deployment/mynginx-pes1ug19cs519
deployment "mynginx-pes1ug19cs519" successfully rolled out

```

4a.jpg Screenshot showing: deployment and service creation, port forwarding, Scaling deployment

```
sumukhbhat2701@SRBs-PC$ kubectl create -f deploy_service.yaml
deployment.apps/mynginx-pes1ug19cs519 created
service/nginx-pes1ug19cs519 created
sumukhbhat2701@SRBs-PC$ kubectl port-forward service/nginx-pes1ug19cs519 8080:80
Forwarding from [::1]:8080 -> 80
Handling connection for 8080
^Z
[2]+  Stopped                  kubectl port-forward service/nginx-pes1ug19cs519 8080:80
sumukhbhat2701@SRBs-PC$ kubectl scale deploy mynginx-pes1ug19cs519 --replicas=10
deployment.apps/mynginx-pes1ug19cs519 scaled
sumukhbhat2701@SRBs-PC$ kubectl get all
```

NAME	READY	STATUS	RESTARTS	AGE
pod/mynginx-pes1ug19cs519-b94b6b4fd-4x4hg	1/1	Running	0	22s
pod/mynginx-pes1ug19cs519-b94b6b4fd-bcbvk	0/1	ContainerCreating	0	22s
pod/mynginx-pes1ug19cs519-b94b6b4fd-h6xbc	1/1	Running	0	22s
pod/mynginx-pes1ug19cs519-b94b6b4fd-kg92s	1/1	Running	0	2m7s
pod/mynginx-pes1ug19cs519-b94b6b4fd-kxhk6	0/1	ContainerCreating	0	22s
pod/mynginx-pes1ug19cs519-b94b6b4fd-lktcg	0/1	ContainerCreating	0	22s
pod/mynginx-pes1ug19cs519-b94b6b4fd-mt6s4	0/1	ContainerCreating	0	22s
pod/mynginx-pes1ug19cs519-b94b6b4fd-pr84j	1/1	Running	0	2m7s
pod/mynginx-pes1ug19cs519-b94b6b4fd-rnjdw	0/1	ContainerCreating	0	22s
pod/mynginx-pes1ug19cs519-b94b6b4fd-vsn6v	1/1	Running	0	22s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	6h25m
service/nginx-pes1ug19cs519	LoadBalancer	10.103.237.188	<pending>	80:30631/TCP	2m7s

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/mynginx-pes1ug19cs519	5/10	10	5	2m7s

NAME	DESIRED	CURRENT	READY	AGE
replicaset.apps/mynginx-pes1ug19cs519-b94b6b4fd	10	10	5	2m7s

```
sumukhbhat2701@SRBs-PC$
```

4b.jpg Nginx home page access through localhost

