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Branch & Batch: Btech CSE(DevOps) & B4

<u>Lab Exercise 10 – Creating Deployment in Kubernetes</u>

Below is a lab exercise that demonstrates how to create and manage a Deployment in Kubernetes.

Step 1: Create a Deployment Configuration File

Create a file named deployment.yaml with the following configuration:

Link of file: (Copy following code from my GitHub repo)

https://github.com/hkshitesh/ACO-LAB-2021-25/blob/main/scripts/deployment.yaml

apiVersion: apps/v1
kind: Deployment
metadata:
name: apache-deployment
labels:
app: web
spec:
replicas: 10
selector:
matchLabels:
app: web
template:
metadata:

```
labels:
app: web
spec:
containers:
- name: httpd
image: httpd
```

Step 2: Apply the Deployment Configuration

Apply the configuration to create the Deployment:

```
kubectl apply -f deployment.yaml
```

Step 3: View the Deployment and Pods

View the created Deployment and the associated Pods:

```
kubectl get deployments
```

kubectl get pods

```
• pavilion@shweta:~/Desktop/ACO/ACO_LAB$ kubectl get deployments
 NAME READY UP-TO-DATE AVAILABLE my-deployment 10/10 10 10
                                                 18h
• pavilion@shweta:~/Desktop/ACO/ACO_LAB$ kubect1 get pods
                                READY STATUS RESTARTS
 my-deployment-cb87b4875-54m2g
                                        Running
 my-deployment-cb87b4875-6qt75
                                        Running
                                                             18h
 my-deployment-cb87b4875-f26tq
                                        Running
                                                  0
                                                             18h
 my-deployment-cb87b4875-rx49v
                                        Running
                                                             18h
 my-deployment-cb87b4875-srvpm
                                        Running
my-deployment-cb87b4875-v4p97
                                        Running
 my-deployment-cb87b4875-vgv8m
                                1/1
                                        Running
                                                             18h
my-deployment-cb87b4875-w8sdj
                                        Running 0
                                                             18h
 my-deployment-cb87b4875-wwmlv
                                        Running
                                                  0
                                                             18h
 my-deployment-cb87b4875-xxxt9
                                        Running 0
pavilion@shweta:~/Desktop/ACO/ACO_LABs
```

Step 4: Accessing the Application running in the pods

```
• pavilion@shweta:~/Desktop/ACO/ACO_LAB$ curl localhost:30002
 <!DOCTYPE html>
 <head>
 <title>Welcome to nginx!</title>
 html { color-scheme: light dark; }
 body { width: 35em; margin: 0 auto;
 font-family: Tahoma, Verdana, Arial, sans-serif; }
 </style>
 </head>
 <body>
 <h1>Welcome to nginx!</h1>
 If you see this page, the nginx web server is successfully installed and
 working. Further configuration is required.
 For online documentation and support please refer to
 <a href="http://nginx.org/">nginx.org</a>.<br/>
 Commercial support is available at
 <a href="http://nginx.com/">nginx.com</a>.
 <em>Thank you for using nginx.</em>
 </body>
 </html>
 pavilion@shweta:~/Desktop/ACO/ACO_LAB$
```



Step 5: Changing the server from Nginx to Apache

```
! deployment.yml
1    apiVersion: apps/v1
2    kind: Deployment
3    metadata:
4     name: my-deployment
5    labels:
6    app: web
7    spec:
8    replicas: 10
9    selector:
10     matchLabels:
11     app: web
12    template:
13     metadata:
14    labels:
15     app: web
16    spec:
17     containers:
18     - name: my-nginx-cont
19    image: httpd
```

Step 6: Apply the changes made in deployment.yml using

```
kubectl apply -f deployment.yml

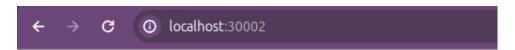
• pavilion@shweta:~/Desktop/ACO/ACO_LAB$ kubectl apply -f deployment.yml
deployment.apps/my-deployment configured
```

Step 7: Check the newly pods being created

pavilion@shweta:~/Desktop/ACO/ACO_LAB\$

```
pavilion@shweta:~/Desktop/ACO/ACO_LAB$ kubectl get pods
                                                              RESTARTS
 my-deployment-7655695675-5rgnl
                                         Running
 my-deployment-7655695675-627cv
                                         ContainerCreating
                                  0/1
                                                             0
                                                                         10s
 my-deployment-7655695675-6z88c
                                         Running
                                                             0
 my-deployment-7655695675-7jkcz
                                          Running
                                         ContainerCreating
 my-deployment-7655695675-99kvk
                                  0/1
                                         ErrImagePull
 my-deployment-7655695675-9t8jw
                                  0/1
                                                             0
                                                                        23s
 my-deployment-7655695675-hcvwm
                                  1/1
                                         Running
                                                             0
                                                                         29s
                                         Running
 my-deployment-7655695675-n8kts
 my-deployment-7655695675-nwwpg
                                          Running
 my-deployment-7655695675-zwfc9
                                         ContainerCreating 0
                                  0/1
                                                             Ø
                                                                        18h
 my-deployment-cb87b4875-w8sdj
                                  1/1
                                         Running
                                         Running
 my-deployment-cb87b4875-wwmlv
                                                                        18h
 pavilion@shweta:~/Desktop/ACO/ACO_LAB$ kubect1 get pods
                                  READY
                                                             RESTARTS
 my-deployment-7655695675-5rgnl
                                                                        41s
                                         Running
                                         ContainerCreating 0
 my-deployment-7655695675-627cv
                                 0/1
                                                                        16s
 my-deployment-7655695675-6z88c
                                         Running
 my-deployment-7655695675-7jkcz
                                         Running
                                                                        41s
 my-deployment-7655695675-99kvk
                                         Running
                                                                        20s
                                         ErrImagePull
 my-deployment-7655695675-9t8jw
                                  0/1
                                                                        29s
                                                             0
 my-deployment-7655695675-hcvwm
                                         Running
                                                             0
                                                                        35s
 my-deployment-7655695675-n8kts
                                          Running
 my-deployment-7655695675-nwwpg
                                          Running
 my-deployment-7655695675-zwfc9
                                         Running
                                                             0
                                                                        25s
                                 1/1
• pavilion@shweta:~/Desktop/ACO/ACO_LAB$ kubectl get pods
 NAME
                                  READY
                                                    RESTARTS
 my-deployment-7655695675-5rgnl
                                          Running
 my-deployment-7655695675-627cv
                                  1/1
                                          Running
                                                   0
                                                              27s
 my-deployment-7655695675-6z88c
                                                   0
                                  1/1
                                          Running
                                                              52s
 my-deployment-7655695675-7jkcz
                                  1/1
                                          Running
                                                   0
                                                              52s
 my-deployment-7655695675-99kvk
                                          Running
 my-deployment-7655695675-9t8jw
                                          Running
                                                   0
 my-deployment-7655695675-hcvwm
                                          Running
                                                   0
                                                              46s
 my-deployment-7655695675-n8kts
                                  1/1
                                          Running
                                                   Ø
                                                              52s
 my-deployment-7655695675-nwwpg
                                          Running
                                                    0
                                                               52s
 my-deployment-7655695675-zwfc9
                                          Running
 pavilion@shweta:~/Desktop/ACO/ACO_LAB$
```

Step 8: Access the Apache server application running in the same port 30002 after all its pods are created



It works!

Step 9: Roll back to the previous version(i.e., running the pods of nginx again)

	,						
• pavilion@shweta:~/Deskto	p/ACO/ACO_LA	B\$ kubec	tl get	all			
NAME		READY	STATUS		RESTARTS	AGE	
pod/my-deployment-765569	5675-5rgnl	1/1	Runnin	g	0	5m1s	
pod/my-deployment-765569	5675-7jkcz	1/1	Runnin	g	0	5m1s	
pod/my-deployment-765569	5675-99kvk	1/1	Runnin	g g	0	4m40s	
pod/my-deployment-765569	5675-9t8jw	1/1	Runnin	q	0	4m49s	
pod/my-deployment-765569		0/1	Termin	_	0	4m55s	
pod/my-deployment-765569		1/1	Runnin	a	0	5m1s	
pod/my-deployment-7655695675-nwwpg		1/1	Runnin	-	0	5m1s	
pod/my-deployment-7655695675-zwfc9		1/1	Runnin	_	0	4m45s	
pod/my-deployment-cb87b4875-9zr6k		0/1 ContainerCreating		_	0	1s	
pod/my-deployment-cb87b4875-p68hl		0/1 ContainerCreating		0	7s		
pod/my-deployment-cb87b4875-p756q		0/1 ContainerCreating		0	7s		
pod/my-deployment-cb87b4875-p86xq		0/1		nerCreating	0	7s	
pod/my-deployment-cb87b4875-stsct		0/1		nerCreating	0	7s	
pod/my-deployment-cb87b4875-v9254		1/1	Runnin		0	7s	
, , , , , , , , , , , , , , , , , , , ,							
NAME	TYPE	CLUSTER	R-IP	EXTERNAL-IP	PORT(S)	AGE	
service/kubernetes	ClusterIP	10.96.0		<none></none>	443/TCP		
service/my-service	NodePort	10.110.		<none></none>	80:3000		
service/my-service-web	NodePort	10.106.		<none></none>	80:3000		
NAME	READ	Y UP-T	O-DATE	AVAILABLE	AGE		
deployment.apps/my-deplo	yment 8/10	6		8	18h		
NAME		0	ESIRED	CURRENT	READY AG	E	
replicaset.apps/my-deplo	yment-765569	5675 7		7	7 5m	1s	
replicaset.apps/my-deplo	yment-cb87b4	875 6		6	1 18	h	
replicaset.apps/my-deplo pavilion@shweta:~/Deskto					1 18	h	
					1 18 RESTARTS		
• pavilion@shweta:~/Deskto	p/ACO/ACO_LA	B\$ kubec	tl get	all			
pavilion@shweta:~/Deskto NAME	p/ACO/ACO_LA 5675-5rgnl	B\$ kubec READY	tl get STATUS	all g	RESTARTS	AGE	
pavilion@shweta:~/Deskto NAME pod/my-deployment-765569	p/ACO/ACO_LA 5675-5rgnl 5675-7jkcz	READY 1/1	tl get STATUS Runnin	a11 9 9	RESTARTS 0	AGE 5m13s	
<pre>o pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw	B\$ kubec READY 1/1 1/1	tl get STATUS Runnin Runnin	all g g ating	RESTARTS Ø Ø	AGE 5m13s 5m13s	
<pre>pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts	B\$ kubec READY 1/1 1/1 1/1	tl get STATUS Runnin Runnin Termin	all g g ating g	RESTARTS 0 0 0	AGE 5m13s 5m13s 5m1s	
<pre>pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg	B\$ kubec READY 1/1 1/1 1/1 1/1	tl get STATUS Runnin Runnin Termin Runnin	all g g ating g	RESTARTS 0 0 0 0	AGE 5m13s 5m13s 5m1s 5m13s	
<pre>pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1	STATUS Runnin Runnin Termin Runnin Runnin Contai	all g g ating g	RESTARTS 0 0 0 0 0	AGE 5m13s 5m13s 5m1s 5m13s 5m13s	
<pre>pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq	MB\$ kubec READY 1/1 1/1 1/1 1/1 1/1 0/1	STATUS Runnin Runnin Termin Runnin Runnin Contai	all g g ating g g nerCreating	RESTARTS 0 0 0 0 0 0	AGE 5m13s 5m13s 5m1s 5m13s 5m13s 5m13s 5m13s	
<pre>pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k	READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1	STATUS Runnin Runnin Termin Runnin Runnin Contai Contai	all g g ating g g nerCreating nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m13s 5m1s 5m13s 5m13s 5m13s 5m13s 5s	
<pre>pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1	READY 1/1 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1	STATUS Runnin Runnin Termin Runnin Runnin Contai Contai	all g g ating g g nerCreating nerCreating nerCreating nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m13s 5m1s 5m13s 5m13s 5m13s 5m13s 5s 9s	
<pre>pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1 875-p68h1	READY 1/1 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1	STATUS Runnin Runnin Termin Runnin Runnin Contai Contai Contai Contai Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m13s 5m1s 5m13s 5m13s 5m13s 5s 9s 13s 0s	
<pre>pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4</pre>	p/ACO/ACO_LA 5675-5rgn1 5675-9t8jw 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1 875-p68h1 875-p756q	READY 1/1 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1	STATUS Runnin Runnin Termin Runnin Runnin Contai Contai Contai Contai Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m13s 5m1s 5m13s 5m13s 5m13s 5s 9s 13s 0s	
• pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4	p/ACO/ACO_LA 5675-5rgn1 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1 875-p68h1 875-p756q 875-p86xq	READY 1/1 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1	STATUS Runnin Runnin Termin Runnin Runnin Contai Contai Contai Runnin Contai Contai Contai	all g g ating g g nerCreating nerCreating nerCreating nerCreating nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m13s 5m1s 5m13s 5m13s 5s 9s 13s 0s 19s	
• pavilion@shweta: ~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4	p/ACO/ACO_LA 5675-5rgn1 5675-9t8jw 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-8vfwq 875-9zr6k 875-9jhgj1 875-p68h1 875-p756q 875-p86xq 875-p86xq 875-stsct	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s	
• pavilion@shweta: ~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4	p/ACO/ACO_LA 5675-5rgn1 5675-9t8jw 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-8vfwq 875-9zr6k 875-9jhgj1 875-p68h1 875-p756q 875-p86xq 875-p86xq 875-stsct	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Contai Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s	
• pavilion@shweta: ~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4	p/ACO/ACO_LA 5675-5rgn1 5675-9t8jw 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-8vfwq 875-9zr6k 875-9jhgj1 875-p68h1 875-p756q 875-p86xq 875-p86xq 875-stsct	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Contai Runnin Runnin Runnin Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s	
• pavilion@shweta: ~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1 875-p68h1 875-p68h1 875-p86xq 875-p86xq 875-v9254 TYPE ClusterIP	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Contai Runnin Runnin Contai Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating g nerCreating g	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0	AGE 5m13s 5m1s 5m1s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s	
• pavilion@shweta: ~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1 875-p56q 875-p756q 875-p86xq 875-p86xq 875-y8254	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Contai Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating g nerCreating g nerCreating	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0 PORT(S)	AGE 5m13s 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 4GE 42d	
pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1 875-p68h1 875-p68h1 875-p86xq 875-p86xq 875-v9254 TYPE ClusterIP	READY 1/1 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Contai Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating g g g EXTERNAL-IP <none></none>	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 443/TCP	AGE 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 19s 17s 4GE 42d 1/TCP 19h	
pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 NAME service/kubernetes service/my-service-web	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-n8wpg 875-6rvpx 875-8vfwq 875-92r6k 875-jhgj1 875-p68h1 875-p756q 875-p86xq 875-p86xq 875-p85cx 875-v9254 TYPE ClusterIP NodePort	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1 1/1 1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Contai Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating g nerCreating g nerCreating g erCreating g	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 443/TCP 80:3000	AGE 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 19s 17s 4GE 42d 1/TCP 19h	
pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-n8wpg 875-6rvpx 875-8vfwq 875-92r6k 875-jhgj1 875-p68h1 875-p756q 875-p86xq 875-p86xq 875-p85cx 875-v9254 TYPE ClusterIP NodePort	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1 1/1 1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Contai Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating g nerCreating g nerCreating g erCreating g	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 443/TCP 80:3000	AGE 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 19s 17s 4GE 42d 1/TCP 19h	
pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 NAME service/kubernetes service/my-service-web	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1 875-p68h1 875-p756q 875-p86xq 875-p86xq 875-p85ct 875-v9254 TYPE ClusterIP NodePort NodePort	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Runnin Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating g nerCreating g EXTERNAL-IP <none> <none></none></none>	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 PORT(S) 443/TCP 80:3000	AGE 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 19s 17s 4GE 42d 1/TCP 19h	
pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 NAME service/kubernetes service/my-service service/my-service-web NAME deployment.apps/my-deployment	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-8vfwq 875-9zr6k 875-jhgj1 875-p68h1 875-p756q 875-p86xq 875-p86xq 875-p85ct 875-v9254 TYPE ClusterIP NodePort NodePort	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Runnin Runnin Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating g nerCreating g rerCreating g nerCreating g erCreating g ATTERNAL-IP <none> <none> AVAILABLE 8</none></none>	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 PORT(S) 443/TCP 80:3000 80:3000 AGE	AGE 5m13s 5m13s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 19s 17cP 18h	
• pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 NAME service/kubernetes service/my-service service/my-service-web NAME deployment.apps/my-deployment.apps/	p/ACO/ACO_LA 5675-5rgn1 5675-9t8jw 5675-9t8jw 5675-n8kts 5675-nwwpg 875-6rvpx 875-9zr6k 875-9zr6k 875-p56q 875-p756q 875-p86xq 875-p86xq 875-p86xq 875-stsct 875-v9254 TYPE ClusterIP NodePort NodePort	B\$ kubec READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Runnin Runnin Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating g nerCreating g erCreating g nerCreating g Available 8 CURRENT	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 PORT(S) 443/TCP 80:3000 80:3000 AGE 18h READY AG	AGE 5m13s 5m1s 5m1s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 19s 19s 19s 19s 19	
• pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 NAME service/kubernetes service/my-service service/my-service-web NAME deployment.apps/my-deplo NAME replicaset.apps/my-deplo	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-9t8jw 5675-nwkpg 875-6rvpx 875-9zr6k 875-9zr6k 875-jhgj1 875-p756q 875-p86xq 875-p86xq 875-p86xq 875-y86xq 875-v9254 TYPE ClusterIP NodePort NodePort NodePort	READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1 1/1 1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Contai Runnin Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating g nerCreating g EXTERNAL-IP <none> <none> AVAILABLE 8 CURRENT 4</none></none>	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 0 PORT(S) 443/TCP 80:3000 80:3000 AGE 18h READY AG 4 5m	AGE 5m13s 5m1s 5m1s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 19s 19s 19s 19s 19	
• pavilion@shweta:~/Deskto NAME pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-765569 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 pod/my-deployment-cb87b4 NAME service/kubernetes service/my-service service/my-service-web NAME deployment.apps/my-deployment.apps/	p/ACO/ACO_LA 5675-5rgn1 5675-7jkcz 5675-9t8jw 5675-9t8jw 5675-nwkpg 875-6rvpx 875-9zr6k 875-9zr6k 875-jhgj1 875-p756q 875-p86xq 875-p86xq 875-p86xq 875-y86xq 875-v9254 TYPE ClusterIP NodePort NodePort NodePort	READY 1/1 1/1 1/1 1/1 1/1 1/1 0/1 0/1 0/1 1/1 1	STATUS Runnin Runnin Runnin Runnin Contai Contai Contai Runnin Runnin Runnin Contai Runnin Runnin Runnin Runnin	all g g ating g g nerCreating nerCreating nerCreating nerCreating g nerCreating g EXTERNAL-IP <none> <none> AVAILABLE 8 CURRENT 4</none></none>	RESTARTS 0 0 0 0 0 0 0 0 0 0 0 PORT(S) 443/TCP 80:3000 80:3000 AGE 18h READY AG	AGE 5m13s 5m1s 5m1s 5m13s 5m13s 5s 9s 13s 0s 19s 19s 19s 19s 19s 19s 19s 19s 19s 19	

```
pavilion@shweta:~/Desktop/ACO/ACO_LAB$ kubect1 get all
 Pavilion@snweta:~/Desktop/ACO/ACO_LAB$ kubectl get all

NAME READY STATUS REST

pod/my-deployment-cb87b4875-6rvpx 1/1 Running 0

pod/my-deployment-cb87b4875-9zr6k 1/1 Running 0

pod/my-deployment-cb87b4875-jhgjl 1/1 Running 0

pod/my-deployment-cb87b4875-jhgjl 1/1 Running 0

pod/my-deployment-cb87b4875-p68hl 1/1 Running 0

pod/my-deployment-cb87b4875-p756q 1/1 Running 0

pod/my-deployment-cb87b4875-p86xq 1/1 Running 0

pod/my-deployment-cb87b4875-stsct 1/1 Running 0

pod/my-deployment-cb87b4875-y4fwb 1/1 Running 0
                                                                                                                      RESTARTS
                                                                                                                                            49s
  pod/my-deployment-cb87b4875-v4fwb 1/1
                                                                                                 Running 0
  pod/my-deployment-cb87b4875-v9254
                                                                               1/1
                                                                                                 Running 0

        NAME
        TYPE
        CLUSTER-IP
        EXTERNAL-IP
        PORT(S)

        service/kubernetes
        ClusterIP
        10.96.0.1
        <none>
        443/TCP

        service/my-service
        NodePort
        10.110.225.1
        <none>
        80:30001

        service/my-service-web
        NodePort
        10.106.218.0
        <none>
        80:30002

                                                                                                                                                                                 AGE
                                                                                                                                                                                 42d
                                                                                                                                              80:30001/TCP 19h
                                                                                                                                              80:30002/TCP
                                                                                                                                                                                 18h
                                                                       READY UP-TO-DATE AVAILABLE AGE
 deployment.apps/my-deployment 10/10 10
                                                                                                                     10
                                                                                                                                             18h
                                                                                               DESIRED CURRENT READY
                                                                                                                                                            AGE
 NAME
  replicaset.apps/my-deployment-7655695675
                                                                                               0
                                                                                                                    0
                                                                                                                                          0
                                                                                                                                                            5m49s
                                                                                                                     10
                                                                                                                                          10
                                                                                                                                                            18h
  replicaset.apps/my-deployment-cb87b4875
                                                                                               10
  pavilion@shweta:~/Desktop/ACO/ACO_LAB$
```

Step 10: Access the server again running on the same port 30002

```
pavilion@shweta:~/Desktop/ACO/ACO_LAB$ curl localhost:30002
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
<body>
<h1>Welcome to nginx!</h1>
If you see this page, the nginx web server is successfully installed and working. Further configuration is required.
For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<em>Thank you for using nginx.</em>
</body>
</html>
pavilion@shweta:~/Desktop/ACO/ACO_LAB$
```

Step 11: Delete the Deployment

Delete the Deployment:

kubectl delete deployment my-deployment

pavilion@shweta:~/Desktop/ACO/ACO_LAB\$ kubectl delete deployment my-deployment deployment.apps "my-deployment" deleted
 pavilion@shweta:~/Desktop/ACO/ACO_LAB\$

Conclusion

This exercise demonstrated how to create, manage, and update a Deployment in Kubernetes. You learned how to scale the Deployment, update the image, and perform a rolling update to the Deployment. Experiment further with different configurations and update strategies to deepen your understanding of managing Deployments in Kubernetes.