

## Date- 03/05/2023

## KUBERNATES Deployment

The screenshot shows the Visual Studio Code interface with the Explorer, Problems, Output, Debug Console, and Terminal panels. The Explorer panel shows a project named 'FLASK OFFICIE' with files like 'app-deployment.yaml', 'app.py', 'database.sql', 'docker-compose.yml', 'dockerfile', 'mysql-deployment.yaml', and 'mysql-secret.yaml'. The Terminal panel shows the following commands and output:

```
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> minikube start
minikube v1.30.1 on Microsoft Windows 10 Pro 10.0.19045.2846 Build 19045.2846
Using the docker driver based on existing profile
Starting control plane node minikube in cluster minikube
Pulling base image ...
docker "minikube" container is missing, will recreate.
Creating docker container (CPUs=2, Memory=4000MB) ...
Preparing Kubernetes v1.26.3 on Docker 23.0.2 ...
Configuring bridge CNI (Container Networking Interface) ...
Verifying Kubernetes components...
  Using image gcr.io/k8s-minikube/storage-provisioner:v5
  Using image docker.io/kubernetes/dashboard:v2.7.0
  Using image docker.io/kubernetes/metrics-scraper:v1.0.8
Some dashboard features require the metrics-server addon. To enable all features please run:

    minikube addons enable metrics-server

★ Enabled addons: default-storageclass, storage-provisioner, dashboard
Done! kubect1 is now configured to use "minikube" cluster and "default" namespace by default
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubect1 get pods
NAME                                READY    STATUS    RESTARTS   AGE
flask-6bbf76975c-tfk29              1/1      Running   0           10m
helloworld-deployment-7dd6dbb864-2gn2w 0/1      InvalidImageName 0           6m37s
helloworld-deployment-7dd6dbb864-5p2wz 0/1      InvalidImageName 0           6m21s
helloworld-deployment-7dd6dbb864-p2qks 0/1      InvalidImageName 0           6m53s
mysql-cd569fbc5-gddgp               0/1      CreateContainerConfigError 0           23h
mysqldb-6f4d6b5df6-dsjz5            0/1      CreateContainerConfigError 0           3m33s
nginx-ing-746dfd4b85-bnppw          1/1      Running   6 (83s ago) 4d21h
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubect1 apply -f mysql-deployment.yaml
deployment.apps/mysqldb unchanged
service/mysql unchanged
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubect1 get pods
NAME                                READY    STATUS    RESTARTS   AGE
flask-6bbf76975c-tfk29              1/1      Running   1 (96s ago) 10m
helloworld-deployment-7dd6dbb864-2gn2w 0/1      InvalidImageName 0           6m51s
helloworld-deployment-7dd6dbb864-5p2wz 0/1      InvalidImageName 0           6m35s
```

The screenshot shows the Visual Studio Code interface with the Explorer, Problems, Output, Debug Console, and Terminal panels. The Explorer panel shows the same project as the first screenshot. The Terminal panel shows the following commands and output:

```
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubect1 apply -f mysql-deployment.yaml
deployment.apps/mysqldb unchanged
service/mysql unchanged
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubect1 get pods
NAME                                READY    STATUS    RESTARTS   AGE
flask-6bbf76975c-tfk29              1/1      Running   2 (44s ago) 27m
helloworld-deployment-7dd6dbb864-2gn2w 0/1      InvalidImageName 0           23m
helloworld-deployment-7dd6dbb864-5p2wz 0/1      InvalidImageName 0           23m
helloworld-deployment-7dd6dbb864-p2qks 0/1      ContainerCreating 0           23m
mysql-cd569fbc5-gddgp               0/1      ContainerCreating 0           23h
mysqldb-66958948cf-55brs            0/1      CreateContainerConfigError 0           15m
nginx-ing-746dfd4b85-bnppw          1/1      Running   7 (44s ago) 4d21h
NAME                                READY    STATUS    RESTARTS   AGE
helloworld-deployment-7dd6dbb864-2gn2w 0/1      InvalidImageName 0           24m
helloworld-deployment-7dd6dbb864-5p2wz 0/1      InvalidImageName 0           23m
helloworld-deployment-7dd6dbb864-p2qks 0/1      InvalidImageName 0           24m
mysql-cd569fbc5-gddgp               0/1      CreateContainerConfigError 0           23h
mysqldb-66958948cf-55brs            0/1      CreateContainerConfigError 0           15m
--name=web --port=5000
service/web exposed
helloworld-service LoadBalancer 10.110.72.56 <pending> 80:31086/TCP 4d21h
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 6d23h
mysql ClusterIP None <none> 3306/TCP 24h
web ClusterIP 10.98.19.74 <none> 5000/TCP 17s
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubect1 port-forward service/web 5000:5000
0
Forwarding from 127.0.0.1:5000 -> 5000
Forwarding from [::1]:5000 -> 5000
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubect1 describe pods flask-6bbf76975c-tf
k29
Name: flask-6bbf76975c-tfk29
Namespace: default
Priority: 0
Service Account: default
Node: minikube/192.168.49.2
Start Time: Wed, 03 May 2023 15:50:36 +0530
```

```
File Edit Selection View Go Run Terminal Help mysql-deployment.yaml - flask officie - Visual Studio Code
EXPLORER PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
FLASK OFFICIE
  > __pycache__
  > static
  > templates
    <> index.html
  ! app-deployment.yaml
  ! app.py
  ! database.sql
  ! docker-compose.yaml
  ! dockerfile
  ! mysql-deployment.yaml
  ! mysql-secret.yaml
  > OUTLINE
  > TIMELINE

PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl describe pods flask-6bbf76975c-tf
Name: flask-6bbf76975c-tfk29
Namespace: default
Priority: 0
Service Account: default
Node: minikube/192.168.49.2
Start Time: Wed, 03 May 2023 15:50:36 +0530
Labels: app=web
pod-template-hash=6bbf76975c
Annotations: <none>
Status: Running
IP: 10.244.0.67
IPs:
  IP: 10.244.0.67
Controlled By: ReplicaSet/flask-6bbf76975c
Containers:
  web:
    Container ID: docker://ffd982ab60a5bab98af77d4a942730ef83d78ccea11869a0113fb5c5b6e794e4
    Image: srishtirupa/infobell:1.0
    Image ID: docker-pullable://srishtirupa/infobell@sha256:24115ef475360b1b346bbab116c64ef158f75eb2413a43f
    Port: 8000/TCP
    Host Port: 0/TCP
    State: Running
      Started: Wed, 03 May 2023 16:17:26 +0530
    Last State: Terminated
      Reason: Error
      Exit Code: 255
      Started: Wed, 03 May 2023 16:00:22 +0530
      Finished: Wed, 03 May 2023 16:16:52 +0530
    Ready: True
    Restart Count: 2
    Environment: <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-lsrf7 (ro)
```

```
File Edit Selection View Go Run Terminal Help mysql-deployment.yaml - flask officie - Visual Studio Code
EXPLORER PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
FLASK OFFICIE
  > __pycache__
  > static
  > templates
    <> index.html
  ! app-deployment.yaml
  ! app.py
  ! database.sql
  ! docker-compose.yaml
  ! dockerfile
  ! mysql-deployment.yaml
  ! mysql-secret.yaml
  > OUTLINE
  > TIMELINE

Type: Projected (a volume that contains injected data from multiple sources)
TokenExpirationSeconds: 3607
ConfigMapName: kube-root-ca.crt
ConfigMapOptional: <nil>
DownwardAPI: true
QoS Class: BestEffort
Node-Selectors: <none>
Tolerations: node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
node.kubernetes.io/unreachable:NoExecute op=Exists for 300s

Events:
  Type Reason Age From Message
  ----
Normal Scheduled 36m default-scheduler Successfully assigned default/flask-6bbf76975c-tfk29 to minikube
Normal Pulling 36m kubelet Pulling image "srishtirupa/infobell:1.0"
Normal Pulled 33m kubelet Successfully pulled image "srishtirupa/infobell:1.0" in 2m10.947987522s (2m10.948146066s including waiting)
Normal Created 33m kubelet Created container web
Normal Started 33m kubelet Started container web
Normal SandboxChanged 26m kubelet Pod sandbox changed, it will be killed and re-created.
Normal Pulling 26m kubelet Pulling image "srishtirupa/infobell:1.0"
Normal Pulled 26m kubelet Successfully pulled image "srishtirupa/infobell:1.0" in 5.920
Normal Created 26m kubelet Created container web
Normal Started 26m kubelet Started container web
Normal SandboxChanged 9m15s kubelet Pod sandbox changed, it will be killed and re-created.
Normal Pulling 9m14s kubelet Pulling image "srishtirupa/infobell:1.0"
Normal Pulled 9m11s kubelet Successfully pulled image "srishtirupa/infobell:1.0" in 3.579963973s (3.580055446s including waiting)
Normal Created 9m11s kubelet Created container web
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl port-forward service/web 5000:500
Forwarding from 127.0.0.1:5000 -> 5000
Forwarding from [::1]:5000 -> 5000
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl scale --replicas=4 deployment/flask
deployment.apps/flask scaled
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl get pods
```

## Scale up to 4 - flask

Workloads

Workload Status

Deployments Pods Replica Sets

Deployments

Name	Images	Labels	Pods	Created
mysqlqldb	srishtirupa/infobell:mysql	-	0 / 1	an hour ago
flask	srishtirupa/infobell:1.0	app: web	4 / 4	an hour ago
mysql	mysql:5.7	app: mysql tier: database	0 / 1	a day ago
helloworld-deployment	<your-docker-image>:latest	-	0 / 3	4 days ago

```
File Edit Selection View Go Run Terminal Help mysql-deployment.yaml - flask officie - Visual Studio Code

EXPLORER
FLASK OFFICIE
  > __pycache__
  > static
  > templates
    > index.html
  ! app-deployment.yaml
  ! app.py
  ! database.sql
  ! docker-compose.yml
  ! dockerfile
  ! mysql-deployment.yaml
  ! mysql-secret.yaml

TERMINAL
Forwarding from 127.0.0.1:5000 -> 5000
Forwarding from [::]:5000 -> 5000
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl scale --replicas=4 deployment/flask
deployment.apps/flask scaled
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
flask-6bbf76975c-b9wpx              1/1     Running   0           12s
flask-6bbf76975c-grxpg              1/1     Running   0           12s
flask-6bbf76975c-rnpw6              1/1     Running   0           12s
flask-6bbf76975c-tfk29              1/1     Running   2 (14m ago) 41m
helloworld-deployment-7dd6dbb864-2gn2w 0/1     InvalidImageName 0           37m
helloworld-deployment-7dd6dbb864-5p2wz 0/1     InvalidImageName 0           37m
helloworld-deployment-7dd6dbb864-p2qks 0/1     InvalidImageName 0           37m
mysql-cd569fbc5-gddgp               0/1     CreateContainerConfigError 0           24h
mysqlb-66958948cf-55brs             0/1     CreateContainerConfigError 0           29m
nginx-img-746dfd4b85-bnppw          1/1     Running   7 (14m ago) 4d21h
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl dashboard
error: unknown command "dashboard" for "kubectl"
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> minikube dashboard
🔍 Verifying dashboard health ...
🚀 Launching proxy ...
🔍 Verifying proxy health ...
🌐 Opening http://127.0.0.1:54411/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default browser...
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl scale --replicas=2 deployment/flask
deployment.apps/flask scaled
PS C:\Users\hp\Desktop\srishtirupa\5_6235637170502109778\flask officie> kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
flask-6bbf76975c-b9wpx              1/1     Terminating   0           29m
flask-6bbf76975c-grxpg              1/1     Terminating   0           29m
flask-6bbf76975c-rnpw6              1/1     Running         0           29m
flask-6bbf76975c-tfk29              1/1     Running         2 (44m ago) 70m
helloworld-deployment-7dd6dbb864-2gn2w 0/1     InvalidImageName 0           67m
helloworld-deployment-7dd6dbb864-5p2wz 0/1     InvalidImageName 0           67m
```

Scale down from 4 to 2



