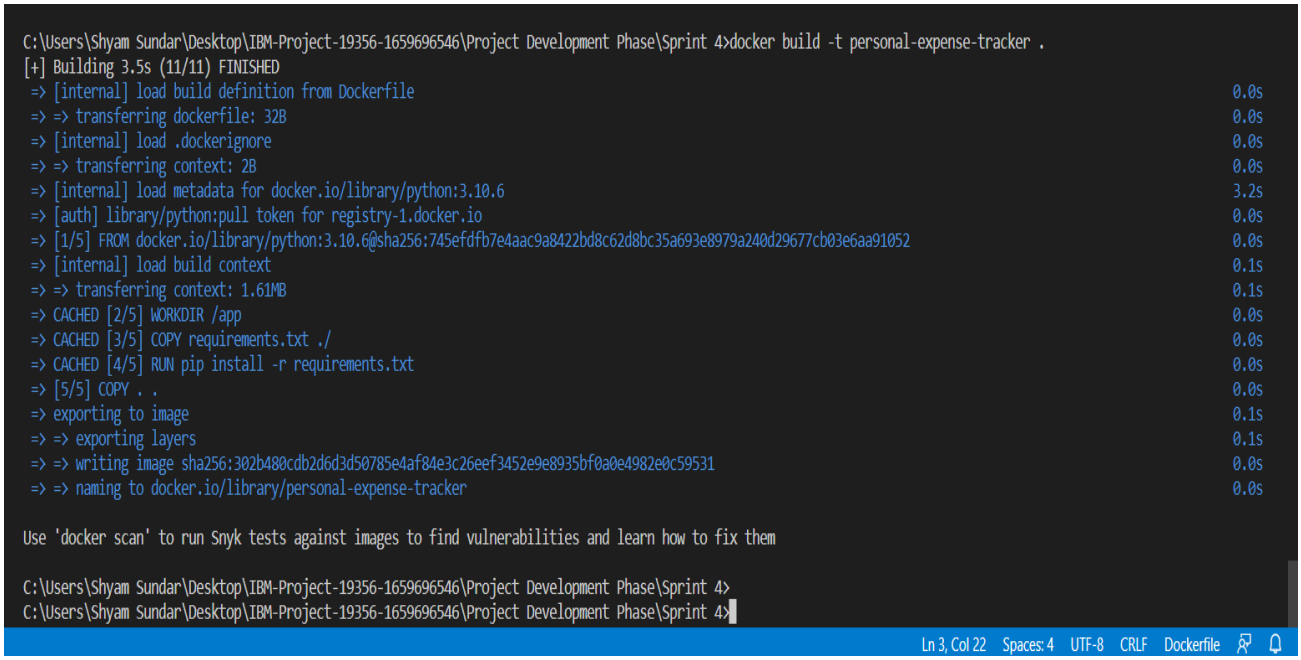
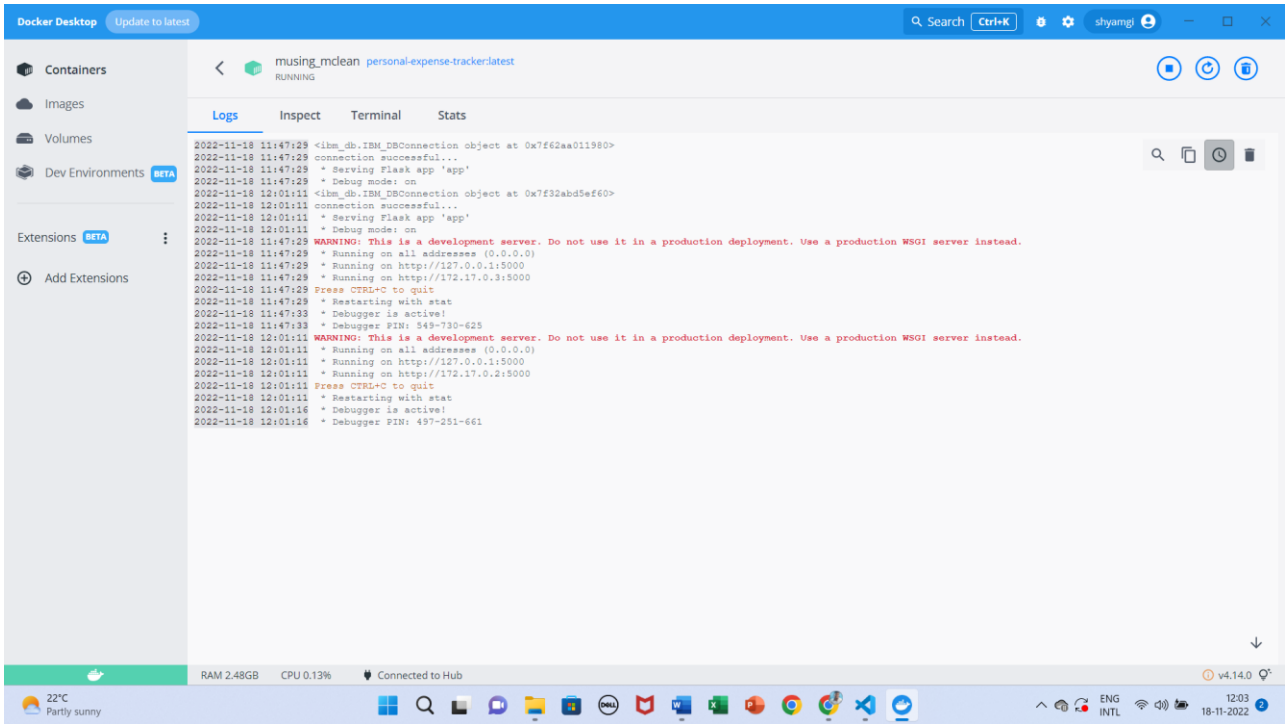
Date	19 September 2022
Team ID	PNT2022TMID02527
Project Name	Project – Personal Expense Tracker
Team Lead	Vinodhini A
Team Member 1	Shobana L
Team Member 2	Shyam Sundar G
Team Member 3	Varun Ba

DEPLOYING APP TO IBM CLOUD

1) BUILD A DOCKER IMAGE



2) RUN THE DOCKER IMAGE



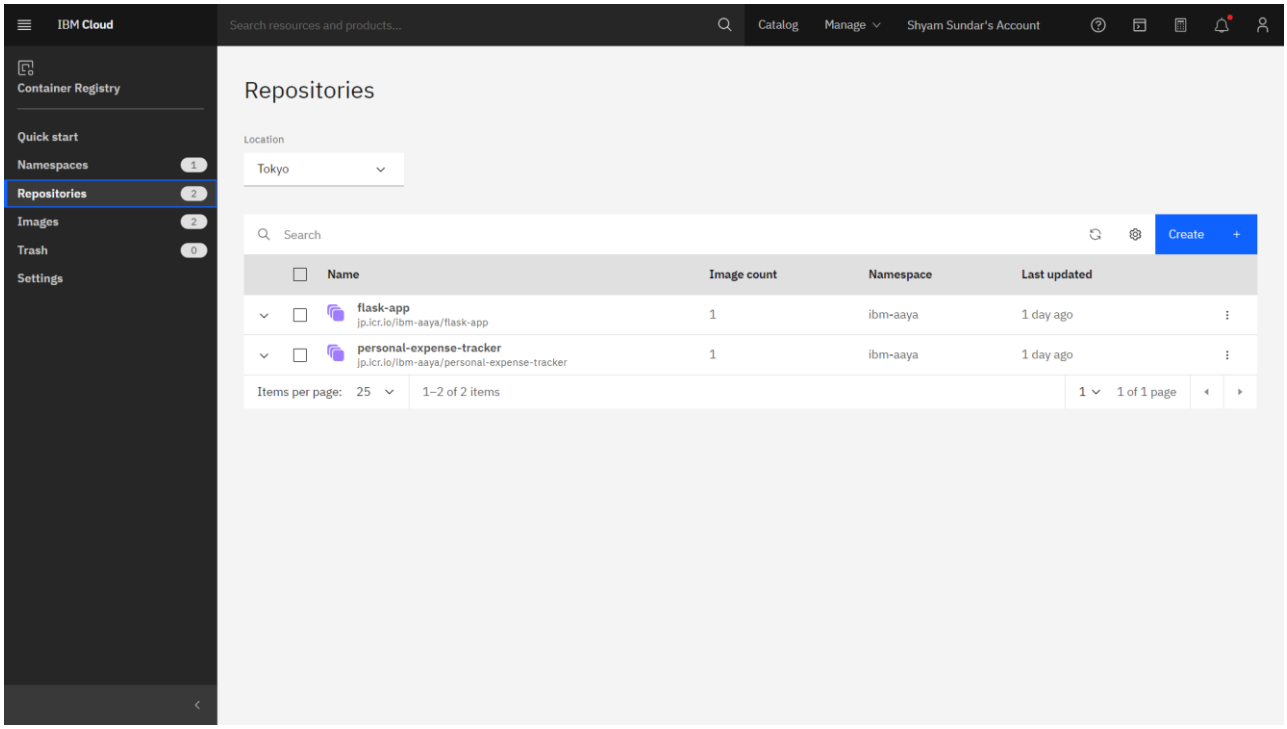

```
C:\Users\Shyam Sundar\Desktop\IBM-Project-19356-1659696546\Project Development Phase\Sprint 4>docker build -t personal-expense-t
racker .
[+] Building 1.3s (10/10) FINISHED
 => [internal] load build definition from Dockerfile
                0.0s
 => => transferring dockerfile: 32B
                0.0s
 => [internal] load .dockerignore
xpense-tracker
<ibm_db.IBM_DBConnection object at 0x7fa3e117ee70>
connection successful...
 * Serving Flask app 'app'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on all addresses (0.0.0.0)
 * Running on http://127.0.0.1:5000
 * Running on http://172.17.0.3:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 117-436-375
```

3) PUSH IMAGE TO DOCKERHUB

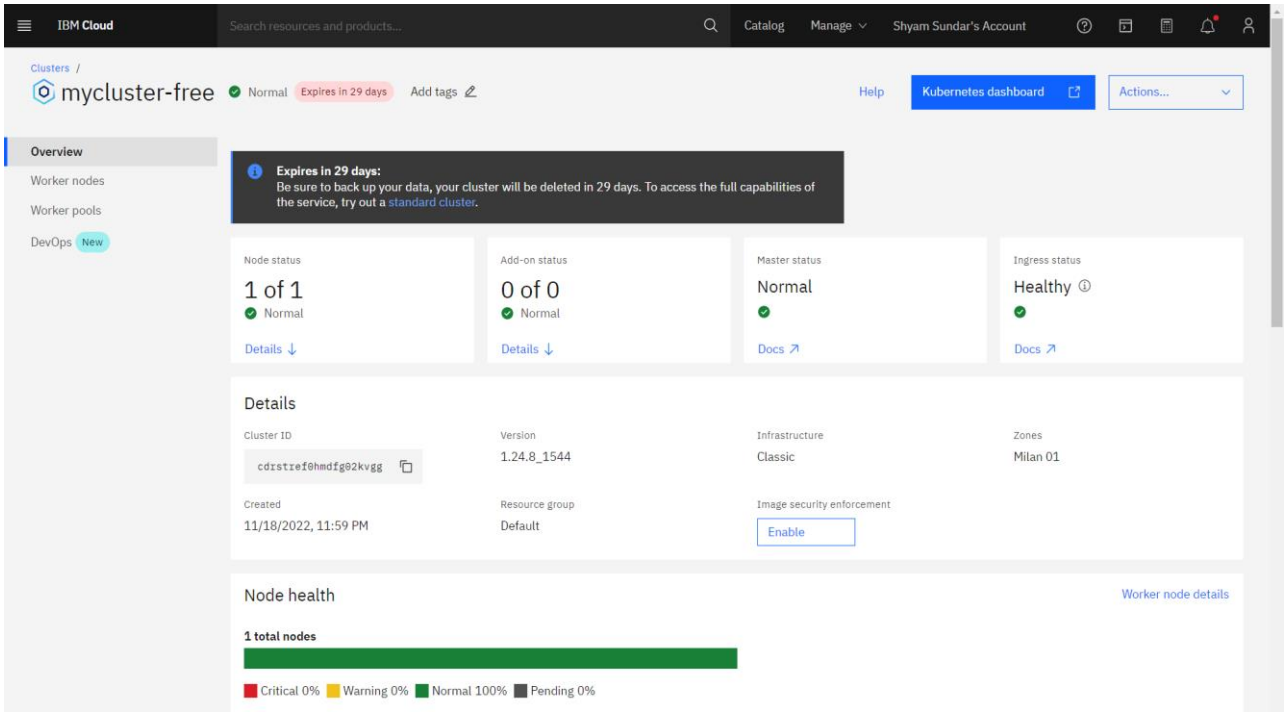
```
C:\Users\Shyam Sundar>docker push shyamgi/personal-expense-tracker
Using default tag: latest
The push refers to repository [docker.io/shyamgi/personal-expense-tracker]
8b7734b1693d: Layer already exists
214fdc78dedc: Layer already exists
b38ddd7666c7: Layer already exists
a211904ecd8b: Layer already exists
bfc1deb8136e: Layer already exists
1f123186824c: Layer already exists
3d6eb1152931: Layer already exists
100796cdf3b1: Layer already exists
54acb5a6fa0b: Layer already exists
8d51c618126f: Layer already exists
9ff6e4d46744: Layer already exists
a89d1d47b5a1: Layer already exists
655ed1b7a428: Layer already exists
latest: digest: sha256:72e9cad22a9291cf145f204dbd06637c9f7afd4b423ba82033d107ec71b8280b size: 3054

C:\Users\Shyam Sundar>
```

4) PUSH IMAGE TO IBM CONTAINER REGISTRY:

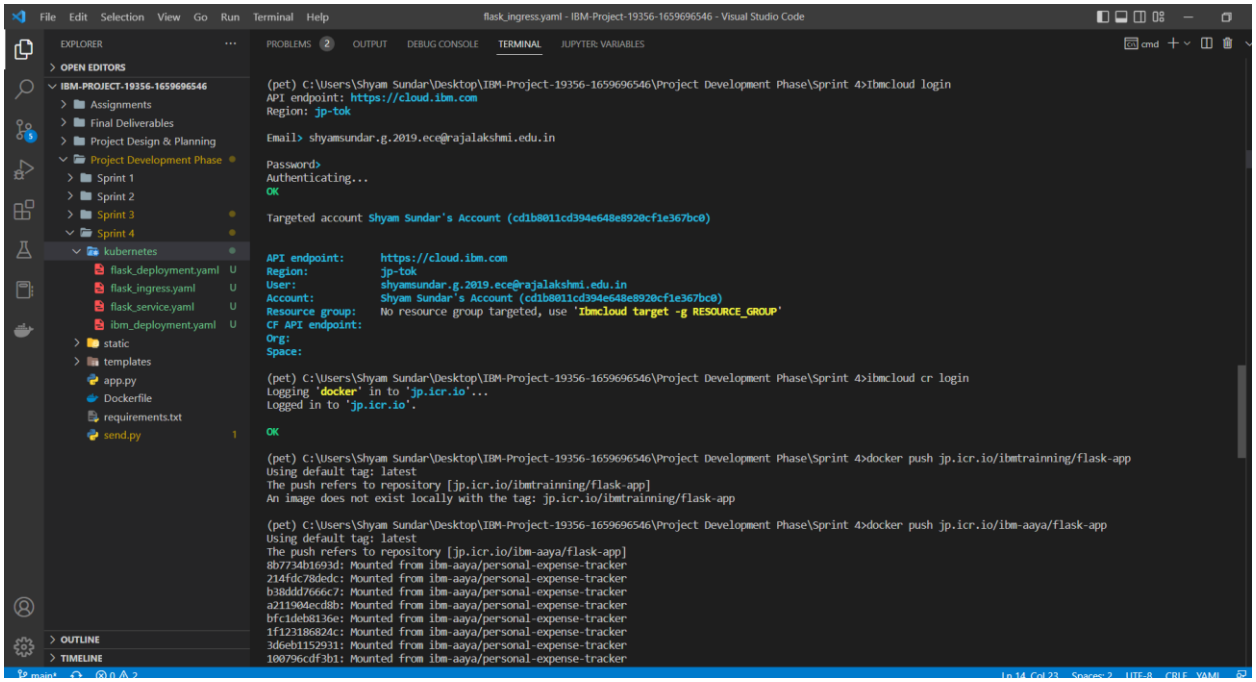
```
C:\Users\Shyam Sundar>docker push jp.icr.io/ibm-aaya/personal-expense-tracker:latest
The push refers to repository [jp.icr.io/ibm-aaya/personal-expense-tracker]
8b7734b1693d: Layer already exists
214fdc78dedc: Layer already exists
b38ddd7666c7: Layer already exists
a211904ecd8b: Layer already exists
bfc1deb8136e: Layer already exists
1f123186824c: Layer already exists
3d6eb1152931: Layer already exists
100796cdf3b1: Layer already exists
54acb5a6fa0b: Layer already exists
8d51c618126f: Layer already exists
9ff6e4d46744: Layer already exists
a89d1d47b5a1: Layer already exists
655ed1b7a428: Layer already exists
latest: digest: sha256:72e9cad22a9291cf145f204dbd06637c9f7afd4b423ba82033d107ec71b8280b size: 3054
```

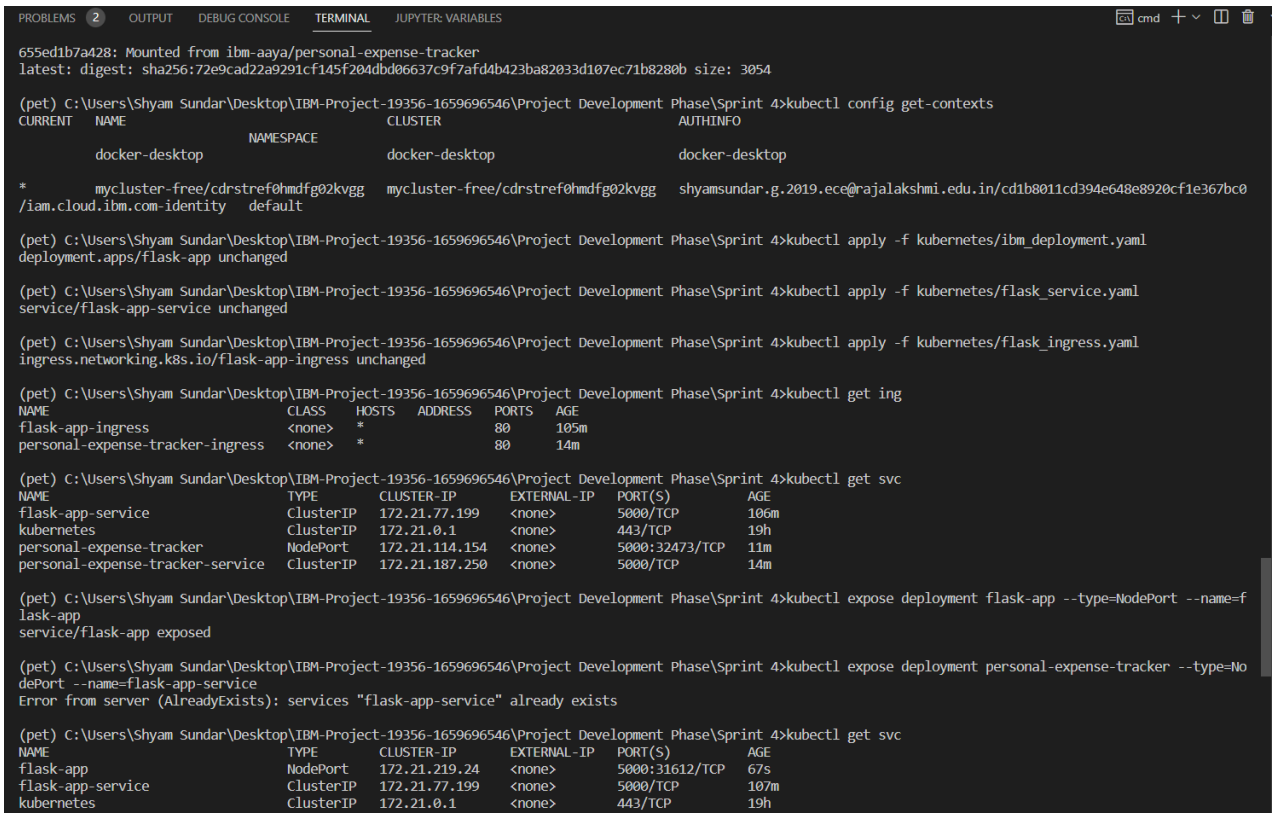


5) GETTING IBM KUBERNETES SERVICE



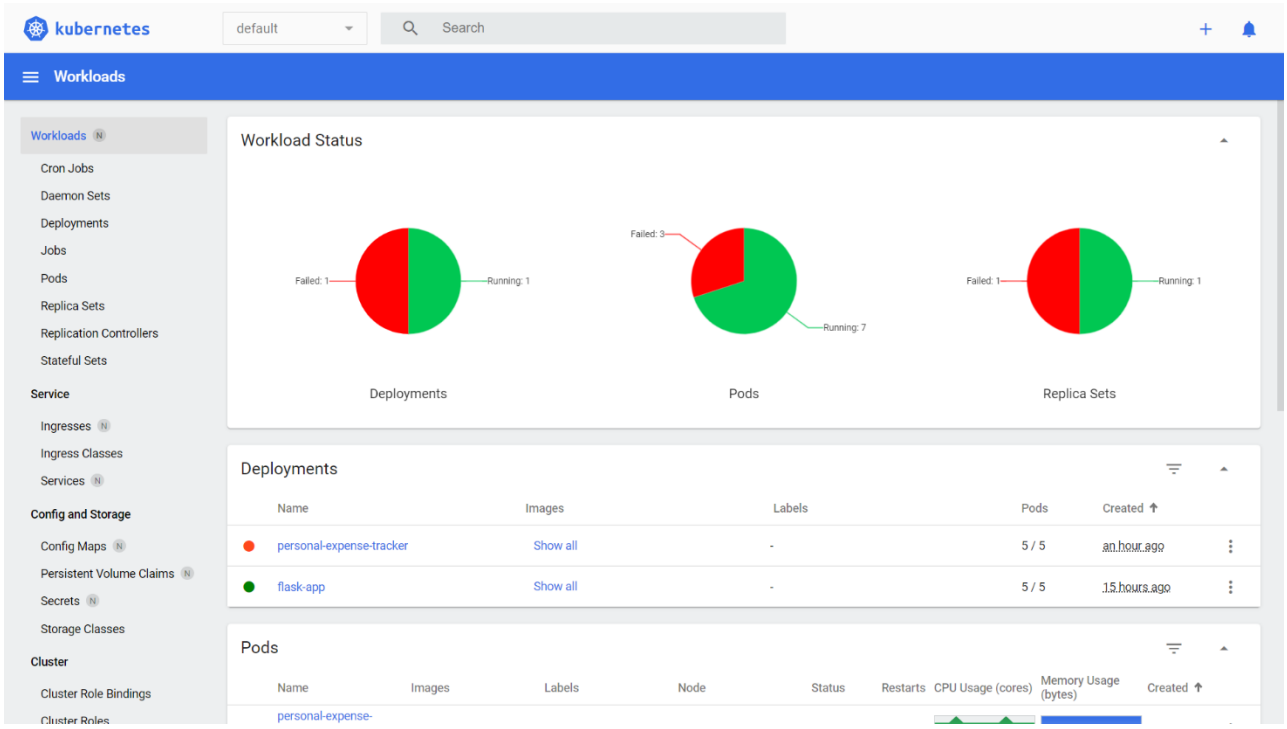
6) DEPLOYING FLASK APP IN PUBLIC IP HOSTING IN KUBERNETES:



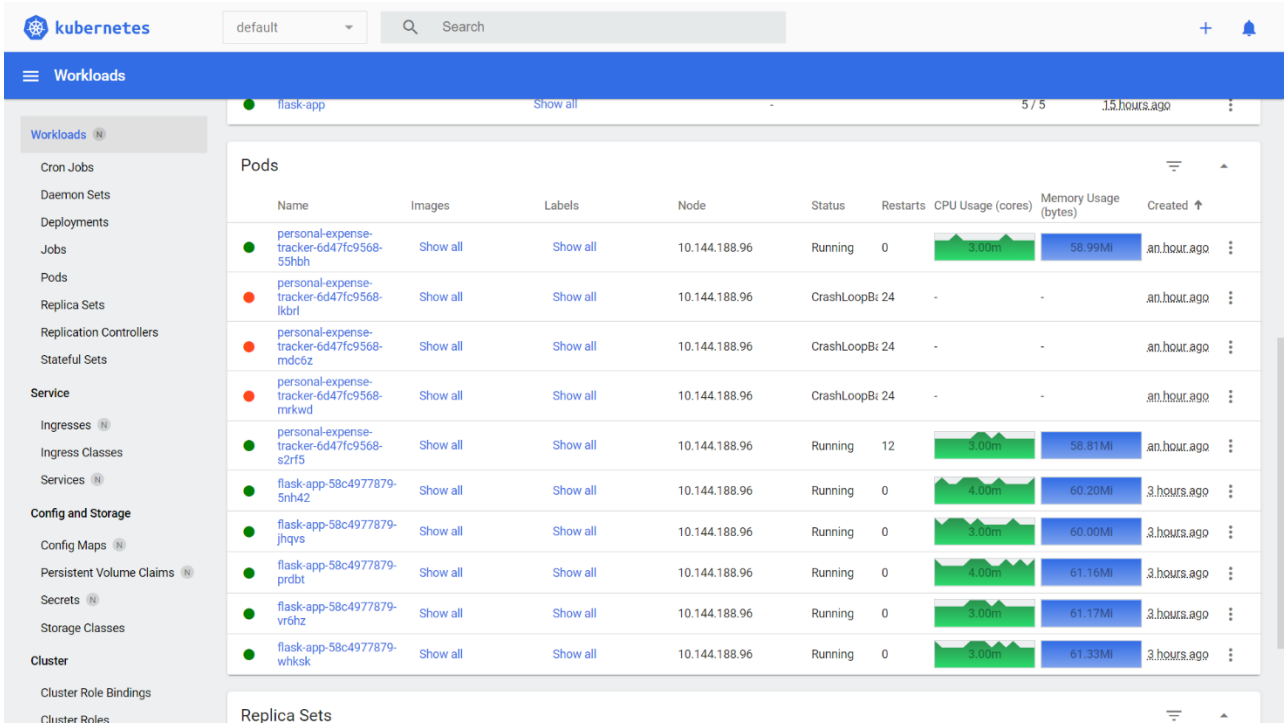


```
(pet) C:\Users\Shyam Sundar\Desktop\IBM-Project-19356-1659696546\Project Development Phase\Sprint 4>kubectl get svc
NAME                          TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
flask-app                     NodePort    172.21.219.24    <none>        5000:31612/TCP   97m
flask-app-service             ClusterIP   172.21.77.199    <none>        5000/TCP         3h24m
kubernetes                    ClusterIP   172.21.0.1       <none>        443/TCP          21h
personal-expense-tracker      NodePort    172.21.114.154   <none>        5000:32473/TCP   110m
personal-expense-tracker-service   ClusterIP   172.21.187.250   <none>        5000/TCP         113m

(pet) C:\Users\Shyam Sundar\Desktop\IBM-Project-19356-1659696546\Project Development Phase\Sprint 4>kubectl get nodes -o wide
NAME           STATUS   ROLES    AGE   VERSION       INTERNAL-IP     EXTERNAL-IP      OS-IMAGE             KERNEL-VERSION       CONTAINER-RUNTIME
10.144.188.96   Ready    <none>   21h   v1.24.7+IKS   10.144.188.96   169.51.206.153   Ubuntu 18.04.6 LTS   4.15.0-194-generic   containerd://1.6.8

(pet) C:\Users\Shyam Sundar\Desktop\IBM-Project-19356-1659696546\Project Development Phase\Sprint 4>
```

http://169.51.206.153:31612/ : Public IP running by hosting Kubernetes



Flask App running successfully with 5 pods above


kubernetes
default
Search
Workloads
Workloads
Cron Jobs
Daemon Sets
Deployments
Jobs
Pods
Replica Sets
Replication Controllers
Stateful Sets
Service
Ingresses
Ingress Classes
Services
Config and Storage
Config Maps
Persistent Volume Claims
Secrets
Storage Classes
Cluster
Cluster Role Bindings
Cluster Roles
flask-app Show all - 5 / 5 15 hours ago
Pods
Name Images Labels Node Status Restarts CPU Usage (cores) Memory Usage (bytes) Created
personal-expense-tracker-6d47fc9568-55hbh Show all Show all 10.144.188.96 Running 0 3.00m 58.99Mi an hour ago
personal-expense-tracker-6d47fc9568-lkbrl Show all Show all 10.144.188.96 CrashLoopB 24 - - an hour ago
personal-expense-tracker-6d47fc9568-mdc6z Show all Show all 10.144.188.96 CrashLoopB 24 - - an hour ago
personal-expense-tracker-6d47fc9568-mrkwd Show all Show all 10.144.188.96 CrashLoopB 24 - - an hour ago
personal-expense-tracker-6d47fc9568-s2rf5 Show all Show all 10.144.188.96 Running 12 3.00m 58.81Mi an hour ago
flask-app-58c4977879-5nh42 Show all Show all 10.144.188.96 Running 0 4.00m 60.20Mi 3 hours ago
flask-app-58c4977879-jhqvs Show all Show all 10.144.188.96 Running 0 3.00m 60.00Mi 3 hours ago
flask-app-58c4977879-prdbt Show all Show all 10.144.188.96 Running 0 4.00m 61.16Mi 3 hours ago
flask-app-58c4977879-vr6hz Show all Show all 10.144.188.96 Running 0 3.00m 61.17Mi 3 hours ago
flask-app-58c4977879-whksk Show all Show all 10.144.188.96 Running 0 3.00m 61.33Mi 3 hours ago
Replica Sets