

Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image or any other image and also expose the same app to run in nodeport.

1) Creating Kubernetes cluster in IBM cloud

The screenshot shows the IBM Cloud console interface. At the top, there's a navigation bar with 'IBM Cloud' and a search bar. Below it, the 'Clusters' section is active, showing a cluster named 'mycluster-free' with a status of 'Normal' and an expiration of '19 days'. The left sidebar has options like 'Overview', 'Worker nodes', 'Worker pools', and 'DevOps'. The main area displays a table of worker nodes. The table has columns: Name, Status, Worker pool, Zone, Private IP, Public IP, and Version. There is one node listed with ID '00000087', status 'Normal', worker pool 'default', zone 'Milan 01', private IP '10.144.187.177', public IP '159.122.178.218', and version '1.24.7_1543'.

Name	Status	Worker pool	Zone	Private IP	Public IP	Version
00000087	Normal	default	Milan 01	10.144.187.177	159.122.178.218	1.24.7_1543

2) deploy helloworld image or jobportal image and also expose the same app to run in noteport

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Windows PowerShell

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\Yaseen\Desktop\Assignment4> ibmcloud login -a cloud.ibm.com -r eu-de -g Default
API endpoint: https://cloud.ibm.com

Email> mdyaseen.246@gmail.com

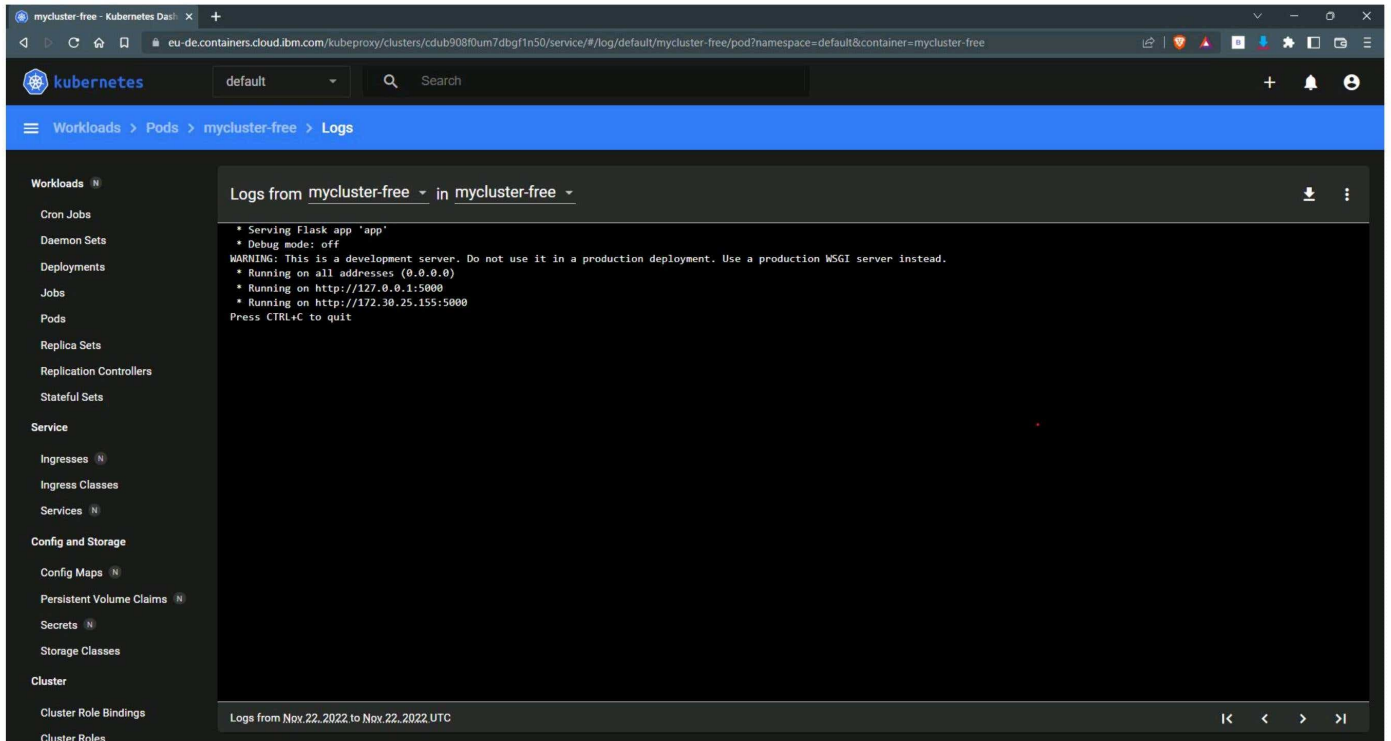
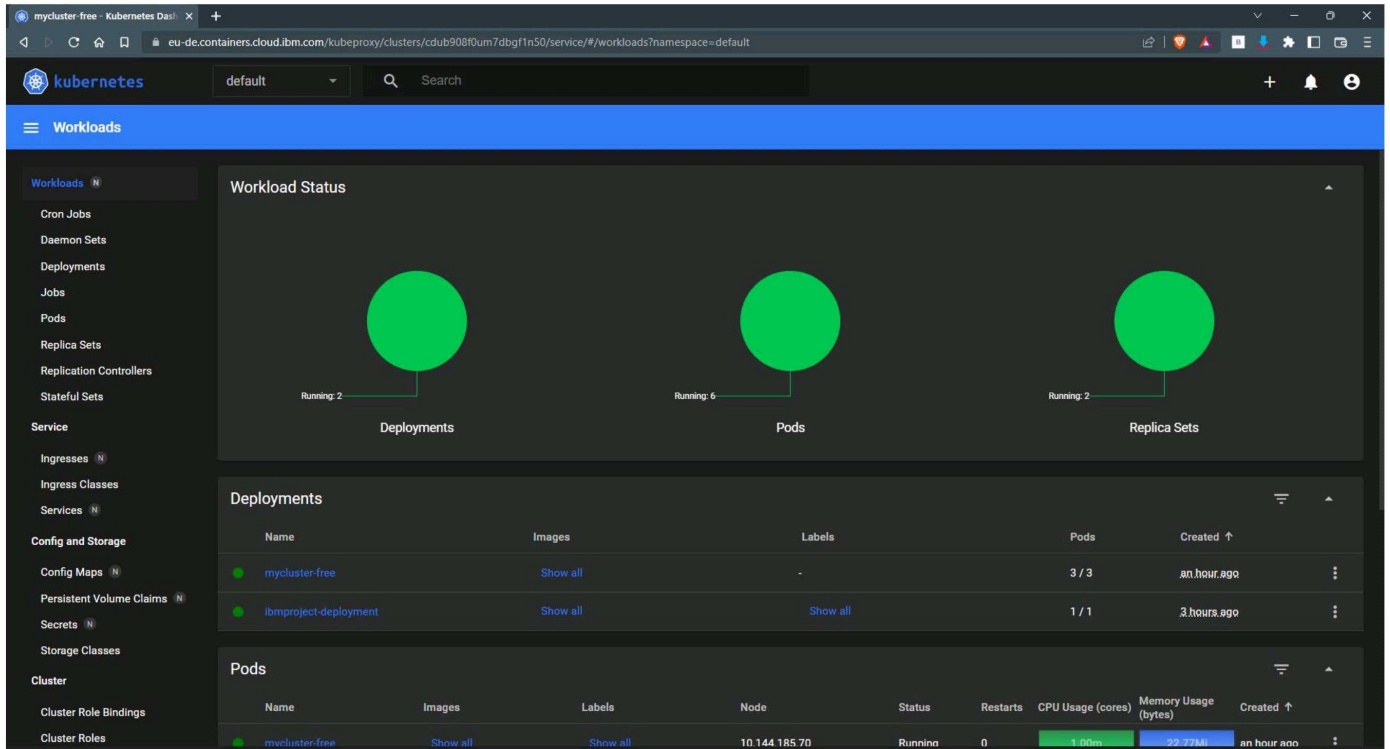
Password>
Authenticating...
OK

Targeted account Mohamed Yaseen's Account (b16c6751300c4cf5b9c374e8dd38ae18)

Targeted resource group Default

Targeted region eu-de

API endpoint: https://cloud.ibm.com
Region: eu-de
User: mdyaseen.246@gmail.com
Account: Mohamed Yaseen's Account (b16c6751300c4cf5b9c374e8dd38ae18)
Resource group: Default
CF API endpoint:
Org:
Space:
PS C:\Users\Yaseen\Desktop\Assignment4> kubectl apply -f .\kubernetes\ibm_deployment.yaml
deployment.apps/ibm-project created
PS C:\Users\Yaseen\Desktop\Assignment4> |
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Windows PowerShell

Targeted region eu-de

API endpoint:      https://cloud.ibm.com
Region:           eu-de
User:             mdyaseen.246@gmail.com
Account:          Mohamed Yaseen's Account (b16c6751300c4cf5b9c374e8dd38ae18)
Resource group:   Default
CF API endpoint:
Org:
Space:
PS C:\Users\Yaseen\Desktop\Assignment4> kubectl apply -f .\kubernetes\ibm_deployment.yaml
deployment.apps/ibm-project created
PS C:\Users\Yaseen\Desktop\Assignment4> kubectl get ing
NAME          CLASS    HOSTS    ADDRESS    PORTS    AGE
flask-app-ingress  <none>   *        80         106m
PS C:\Users\Yaseen\Desktop\Assignment4> kubectl expose deployment mycluster-free --type=NodePort --name=flask-service
service/flask-service exposed
PS C:\Users\Yaseen\Desktop\Assignment4> kubectl proxy
Starting to serve on 127.0.0.1:8001
PS C:\Users\Yaseen\Desktop\Assignment4> kubectl get svc
NAME          TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
flask-app-service  NodePort      172.21.169.184  <none>         5000:32672/TCP    110m
flask-service     NodePort      172.21.250.81   <none>         5000:32015/TCP    117s
ibmproject        NodePort      172.21.91.42    <none>         3000:30960/TCP    3h34m
kubernetes        ClusterIP     172.21.0.1      <none>         443/TCP           4h1m
mycluster-free-service  NodePort      172.21.163.161  <none>         5000:31134/TCP    92m
yaseen-project-service  ClusterIP     172.21.65.168   <none>         5000/TCP          119m
PS C:\Users\Yaseen\Desktop\Assignment4> |
```

