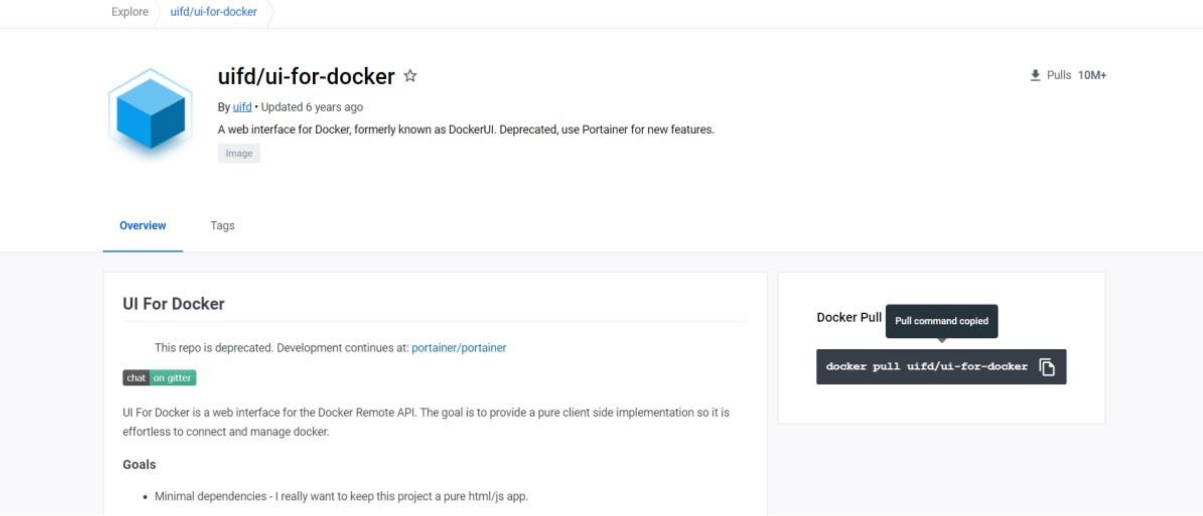
Assignment 4

Docker and Kubernetes

Assignment Date	21 October 2022
Student Name	Vaibav Bajra S
Student Roll Number	CITC1905056
Maximum Marks	2 Marks

Questions:

1. **Pull an image from docker hub and run it in docker playground**



uifd/ui-for-docker ☆

By uifd • Updated 6 years ago

A web interface for Docker, formerly known as DockerUI. Deprecated, use Portainer for new features.

UI For Docker

This repo is deprecated. Development continues at: portainer/portainer

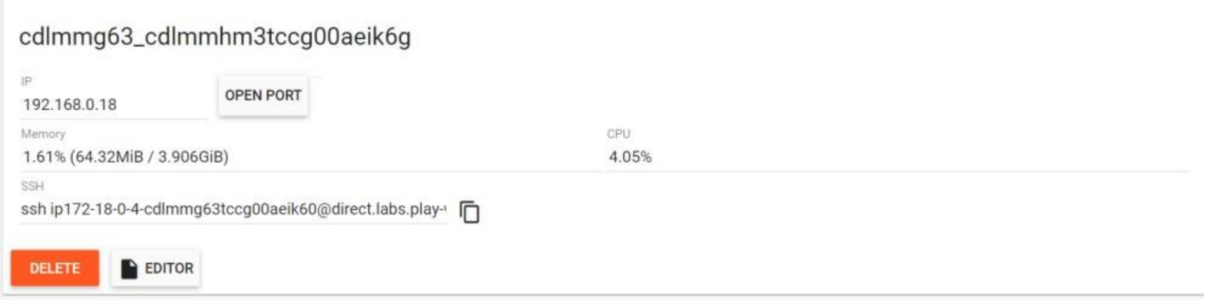
chat on gitter

UI For Docker is a web interface for the Docker Remote API. The goal is to provide a pure client side implementation so it is effortless to connect and manage docker.

Goals

- Minimal dependencies - I really want to keep this project a pure html/js app.

```
docker pull uifd/ui-for-docker
```



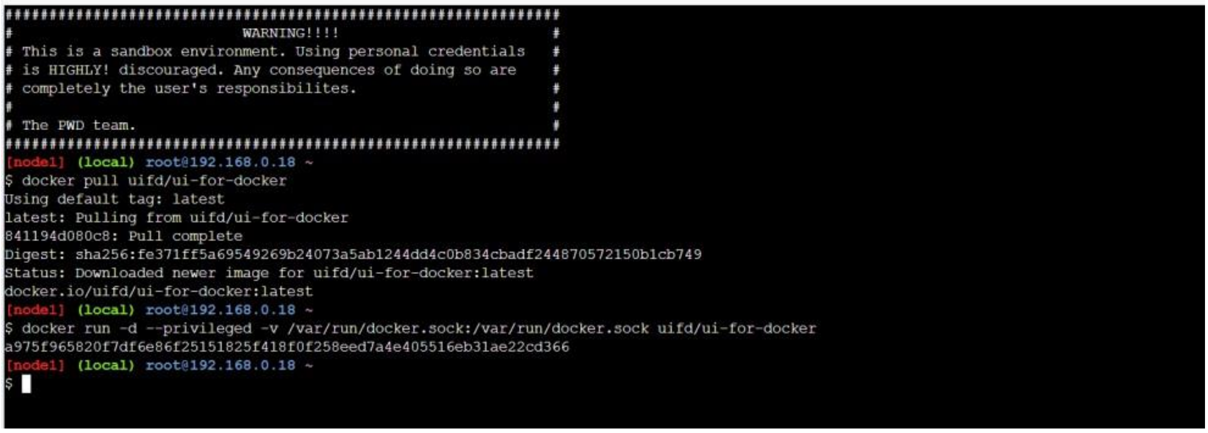
cdlmmg63_cdlmmhm3tccg00aeik6g

IP: 192.168.0.18

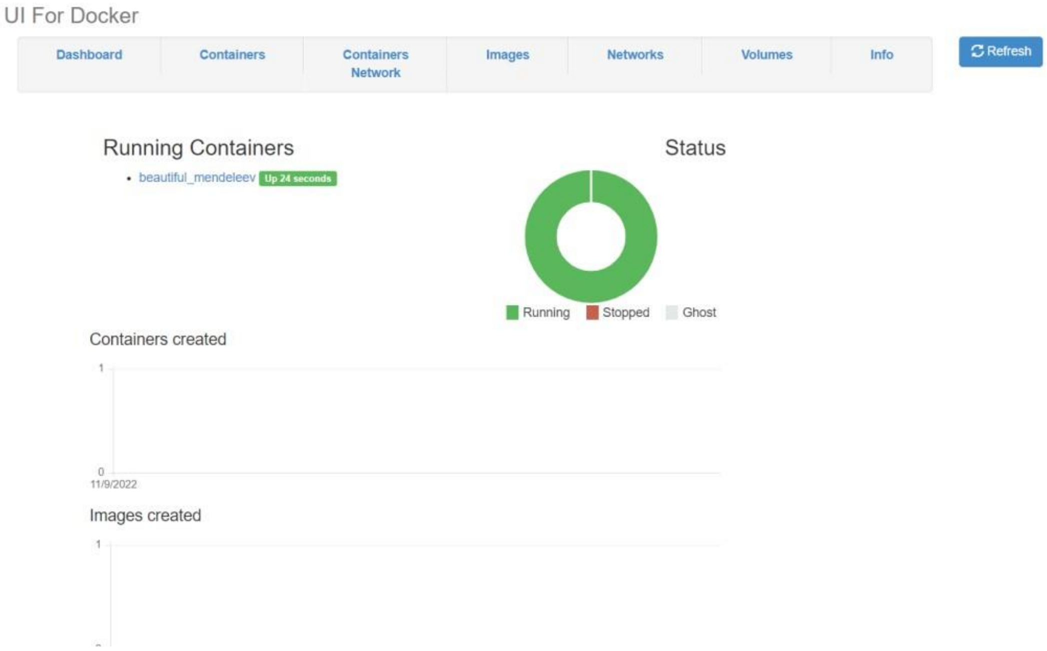
Memory: 1.61% (64.32MiB / 3.906GiB)

CPU: 4.05%

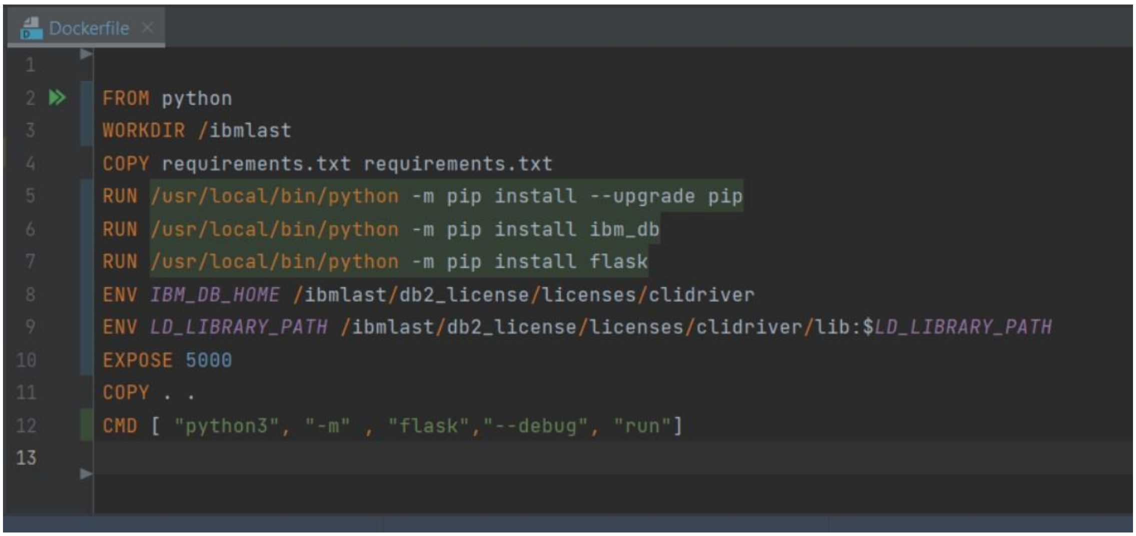
SSH: ssh ip172-18-0-4-cdlmmg63tccg00aeik60@direct.labs.play-



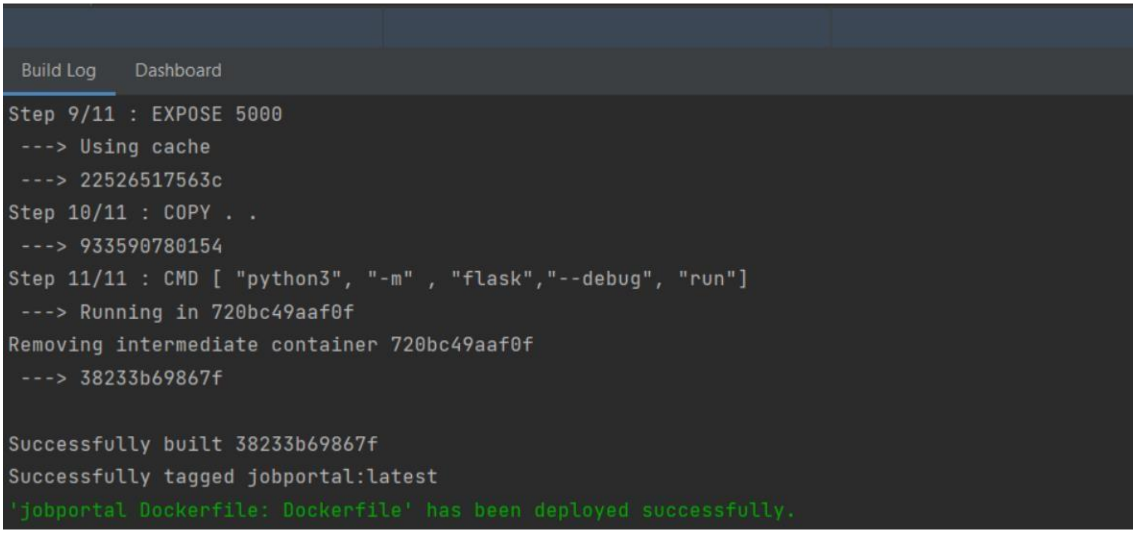
```
###############################################################
#                          WARNING!!!!                        #
# This is a sandbox environment. Using personal credentials   #
# is HIGHLY! discouraged. Any consequences of doing so are    #
# completely the user's responsibilites.                      #
#                                                             #
# The PWD team.                                               #
###############################################################
[node1] (local) root@192.168.0.18 ~
$ docker pull uifd/ui-for-docker
Using default tag: latest
latest: Pulling from uifd/ui-for-docker
841194d080c8: Pull complete
Digest: sha256:fe371ff5a69549269b24073a5ab1244dd4c0b834cbadf244870572150b1cb749
Status: Downloaded newer image for uifd/ui-for-docker:latest
docker.io/uifd/ui-for-docker:latest
[node1] (local) root@192.168.0.18 ~
$ docker run -d --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
a975f965820f7df6e86f25151825f418f0f258eed7a4e405516eb31ae22cd366
[node1] (local) root@192.168.0.18 ~
$ 
```



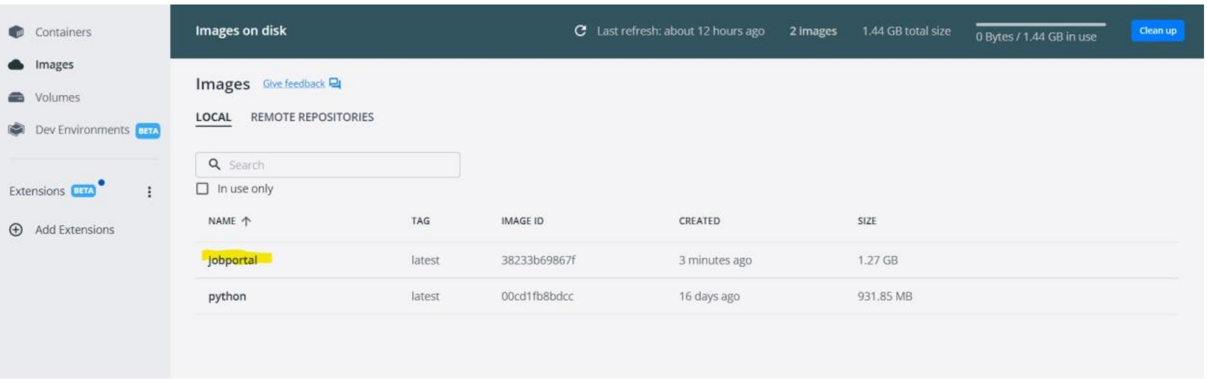
2. Create a docker file for the job application portal and deploy it in desktop application



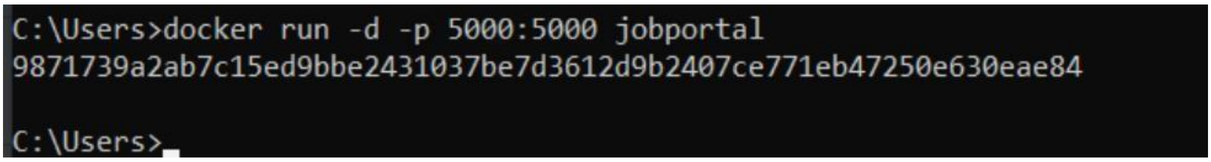
```
FROM python
WORKDIR /ibmlast
COPY requirements.txt requirements.txt
RUN /usr/local/bin/python -m pip install --upgrade pip
RUN /usr/local/bin/python -m pip install ibm_db
RUN /usr/local/bin/python -m pip install flask
ENV IBM_DB_HOME /ibmlast/db2_license/licenses/clidriver
ENV LD_LIBRARY_PATH /ibmlast/db2_license/licenses/clidriver/lib:$LD_LIBRARY_PATH
EXPOSE 5000
COPY . .
CMD [ "python3", "-m" , "flask","--debug", "run"]
```



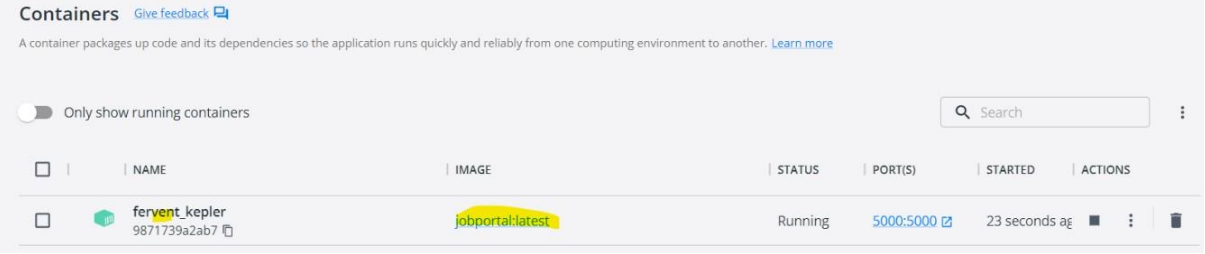
```
Step 9/11 : EXPOSE 5000
 ---> Using cache
 ---> 22526517563c
Step 10/11 : COPY . .
 ---> 933590780154
Step 11/11 : CMD [ "python3", "-m" , "flask","--debug", "run"]
 ---> Running in 720bc49aaf0f
Removing intermediate container 720bc49aaf0f
 ---> 38233b69867f

Successfully built 38233b69867f
Successfully tagged jobportal:latest
'jobportal Dockerfile: Dockerfile' has been deployed successfully.
```



NAME	TAG	IMAGE ID	CREATED	SIZE
jobportal	latest	38233b69867f	3 minutes ago	1.27 GB
python	latest	00cd1fb8bdcc	16 days ago	931.85 MB



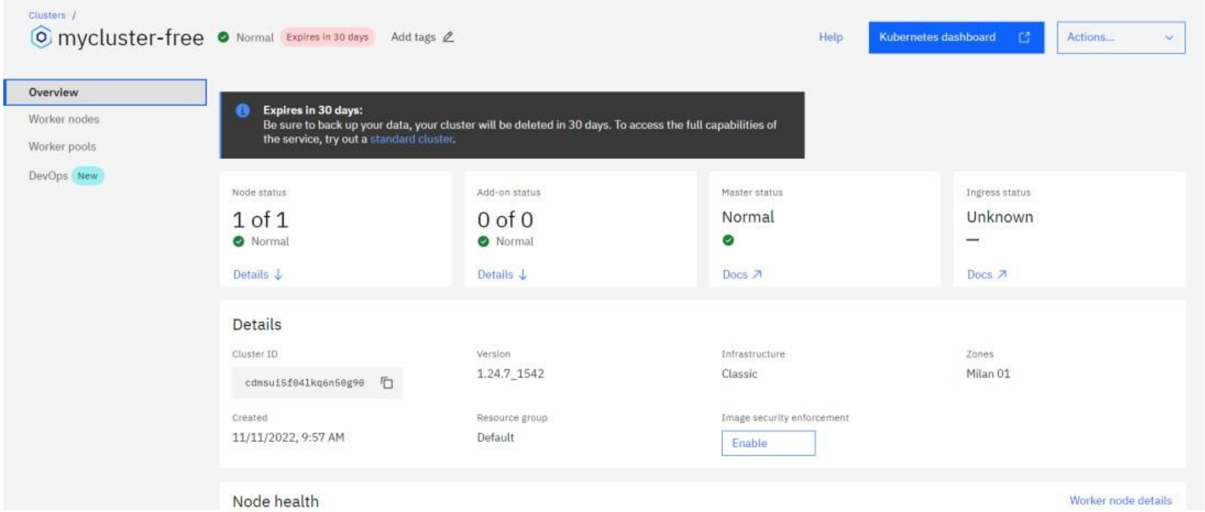
```
C:\Users>docker run -d -p 5000:5000 jobportal
9871739a2ab7c15ed9bbe2431037be7d3612d9b2407ce771eb47250e630eae84

C:\Users>_
```



A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more

NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
fervent_kepler 9871739a2ab7	jobportal:latest	Running	5000:5000	23 seconds ag	

3. Create an IBM container registry and deploy hello-world app or job-portal



Expires in 30 days:
Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a standard cluster.

Node status	Add-on status	Master status	Ingress status
1 of 1 Normal	0 of 0 Normal	Normal	Unknown —
Details ↓	Details ↓	Docs ↗	Docs ↗

Details

Cluster ID: cdmsu15f041kq6n50g90

Version: 1.24.7_1542

Infrastructure: Classic

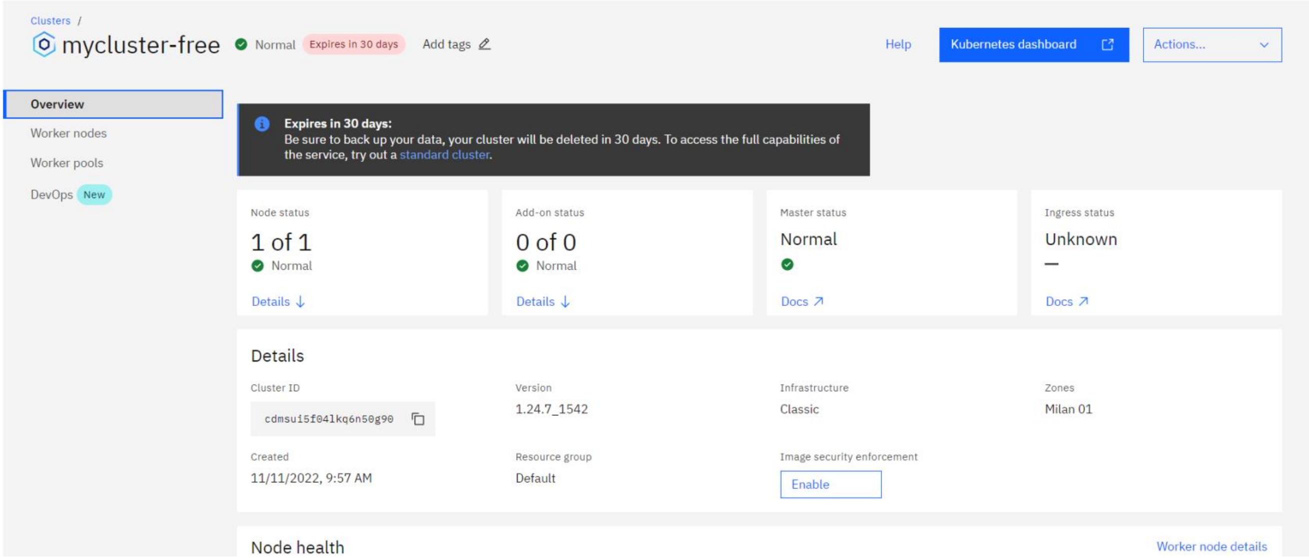
Zones: Milan 01

Created: 11/11/2022, 9:57 AM

Resource group: Default

Image security enforcement: Enable

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



mycluster-free Normal Expires in 30 days

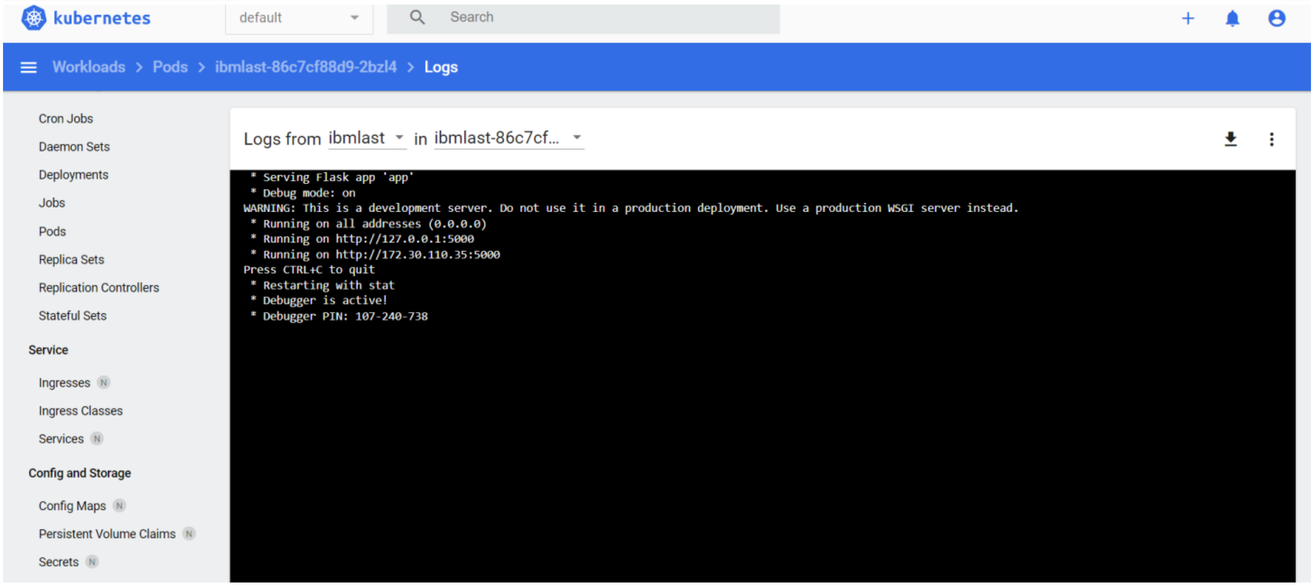
Expires in 30 days:
Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a standard cluster.

Node status: 1 of 1 Normal — Details
Add-on status: 0 of 0 Normal — Details
Master status: Normal — Docs
Ingress status: Unknown — Docs

Details

Cluster ID: cdmsui5f04lkq6n50g90
Version: 1.24.7_1542
Infrastructure: Classic
Zones: Milan 01
Created: 11/11/2022, 9:57 AM
Resource group: Default
Image security enforcement: Enable

Node health — Worker node details



Logs from ibmlast in ibmlast-86c7cf...

```
 * 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://172.30.110.35:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 107-240-738
```