

Deployment of App in IBM Cloud

Containerize the App (Docker Image Creation)

Date	19 NOV 2022
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Project Name	Skill and Job Recommender
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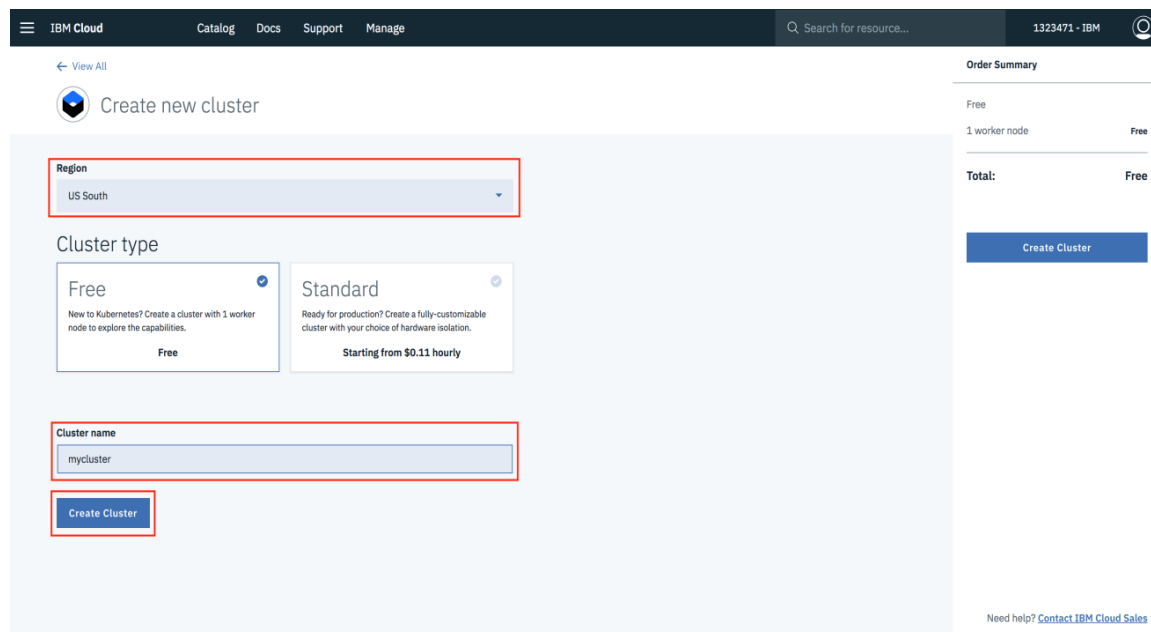
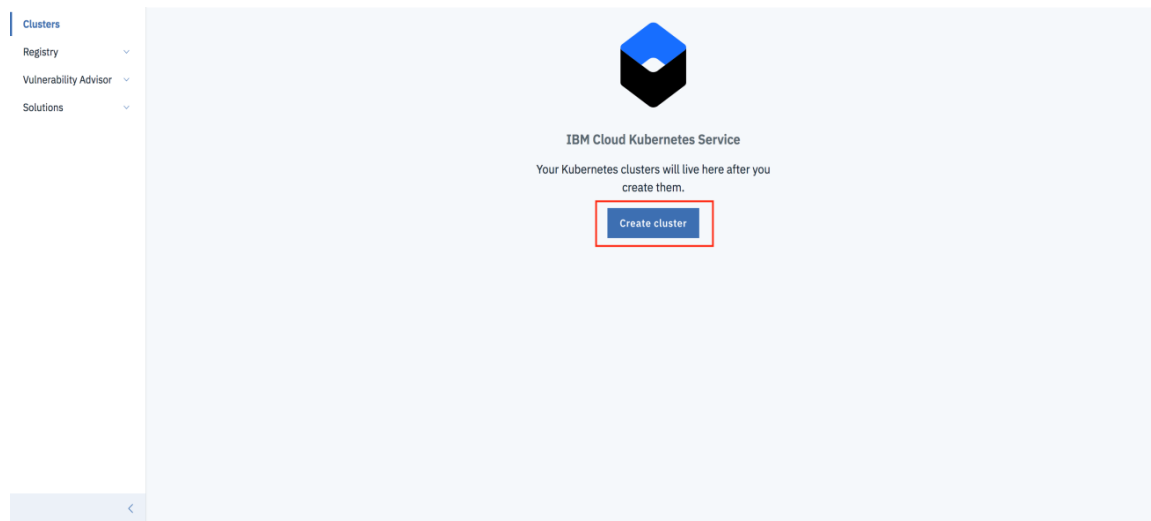
Step 1 :

Sign in to your [IBM Cloud Dashboard](#) And Open **IBM Kubernetes Service**.

The screenshot shows the IBM Cloud dashboard interface. On the left is a dark sidebar with navigation links: Kubernetes, Clusters, Reservations (highlighted), Helm catalog, and Container Registry. The main content area has a top navigation bar with a search bar and user information. Below the navigation bar, there's a section titled 'Save on your cluster costs by creating a reservation'. It includes a sub-header 'Your reservations are not physical instances, but rather a billing discount set up with certain attributes like location, flavor, and infrastructure.' and a blue 'Request access' button. Further down, there's a 'Pricing' section with a 'Calculate the worker node costs without a reservation and your potential savings with a 1 or 3 year contract.' text. To the right of this is a 'Customize cluster details' form with dropdowns for 'Infrastructure' (set to Classic) and 'Reservation' (set to None), and input fields for 'Worker nodes' (set to 3) and 'Zones' (set to 3). On the far right, a 'Calculated cost' box displays '\$1,905.12 per month estimated'.

Step 2 :

Create the **Cluster**. Give the Region and cluster type are need to create cluster.



Step 3 :

After creating the cluster Click the Work Node to Note the pubic Id.

IBM Cloud Catalog Docs Support Manage Search for resource... 1386681 - IBM

Clusters / cluster_kunal

cluster_kunal Expires in a month Normal

Kubernetes Dashboard

Access Overview **Worker Nodes** Worker Pools Services

Worker Nodes

Search Add Nodes

	Name	Status	Worker Pool	Zone	Private IP	Public IP	Kubernetes Version
>	w1	Normal	default	hou02	10.47.79.201	184.172.233.151	1.9.8_1517

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Step 4 :

Next Create a Docker file in Flask App and Type a Following Code within it

```
FROM python:2.7
LABEL maintainer="Kunal Malhotra, kunal.malhotra1@ibm.com"
RUN apt-get update
RUN mkdir /app
WORKDIR /app
COPY . /app
RUN pip install -r requirements.txt
EXPOSE 5000
ENTRYPOINT [ "python" ]
CMD [ "app.py" ]
```

Step 5 :

Open the terminal and type this command to build an image from your Dockerfile: `docker build -t <image_name>:<tag> .`

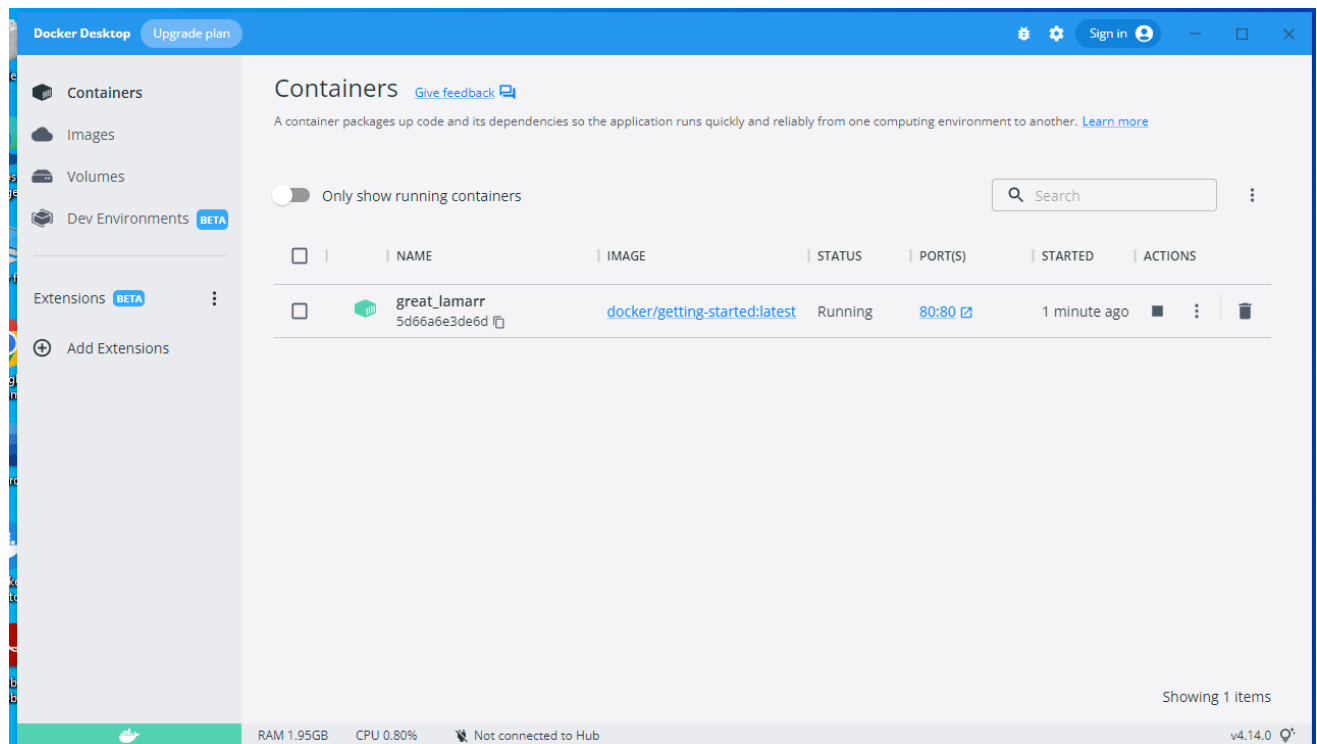
```

kunal@mbp:~$ docker build -t app:latest .
Sending build context to Docker daemon 348.2kB
Step 1/8 : FROM python:2.7
----> 6c76e39e7cfe
Step 2/8 : LABEL maintainer="Kunal Malhotra, kunal.malhotra@ibm.com"
----> Using cache
----> d8b57d41591c
Step 3/8 : RUN apt-get update
----> Using cache
----> 6262a134e40e
Step 4/8 : COPY ./app
----> f07f7378b99f
Step 5/8 : WORKDIR /app
Removing intermediate container f9010b99d2fe
----> 0bcc6af20e3d
Step 6/8 : RUN pip install -r requirements.txt
----> Running in 8153040b00b7
Collecting click==6.7 (from -r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/34/c1/8806f99713ddb993c5366c362b2f908f18269f8d792aff1abfd700775a77/click-6.7-py2.py3-none-any.whl (71kB)
Collecting Flask==1.0.2 (from -r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/7f/af/08578774ed4536d3242b14dcb4696386634607af824ed997202cd0edb4b/Flask-1.0.2-py2.py3-none-any.whl (91kB)
Collecting itsdangerous==0.24 (from -r requirements.txt (line 3))
  Downloading https://files.pythonhosted.org/packages/dc/b4/a60bcbda945c00f6d608d8975131ab3f25b22f2bcefdab221165194b2d4/itsdangerous-0.24.tar.gz (46kB)
Collecting Jinja2==2.10 (from -r requirements.txt (line 4))
  Downloading https://files.pythonhosted.org/packages/7f/ff/ae64bacdfc95f27a016a7bed8e8686763ba4d277a78ca76f32659220a731/Jinja2-2.10-py2.py3-none-any.whl (126kB)
Collecting MarkupSafe==1.0 (from -r requirements.txt (line 5))
  Downloading https://files.pythonhosted.org/packages/4d/de/32d741db316d8fdb7680822dd37001ef7a448255de9699ab4bfcdbf4172b/MarkupSafe-1.0.tar.gz
Collecting Werkzeug==0.14.1 (from -r requirements.txt (line 6))
  Downloading https://files.pythonhosted.org/packages/20/c4/12e3e56473e52375aa29c4764e78d1b8f3efa6682bef8d0aae04fe335243/Werkzeug-0.14.1-py2.py3-none-any.whl (322kB)
Building wheels for collected packages: itsdangerous, MarkupSafe
  Running setup.py bdist_wheel for itsdangerous: started
  Running setup.py bdist_wheel for itsdangerous: finished with status 'done'
  Stored in directory: /root/.cache/pip/wheels/2c/4a/61/5599631c1554768c6290b08c02c72d7317910374ca082ff1e5
  Running setup.py bdist_wheel for MarkupSafe: started
  Running setup.py bdist_wheel for MarkupSafe: finished with status 'done'
  Stored in directory: /root/.cache/pip/wheels/33/56/20/ebef49a5c612fffe1c5a632146b16596f9e6467676861e4e46
Successfully built itsdangerous MarkupSafe
Installing collected packages: click, itsdangerous, MarkupSafe, Jinja2, Werkzeug, Flask
Successfully installed Flask-1.0.2 Jinja2-2.10 MarkupSafe-1.0 Werkzeug-0.14.1 click-6.7 itsdangerous-0.24
Removing intermediate container 8153040b00b7
----> 66d2636b97bc
Step 7/8 : ENTRYPOINT [ "python" ]
----> Running in bdc1c83815e1
Removing intermediate container bdc1c83815e1
----> 73cefc38a1c
Step 8/8 : CMD [ "app.py" ]
----> Running in a784d430dd6f
Removing intermediate container a784d430dd6f
----> d86bb83763a5
Successfully built d86bb83763a5
Successfully tagged app:latest
kunal@mbp:~$

```

Step 6 :

After you build your image successfully, type: `docker run -d -p 5000:5000 app`.



Step 7 :

Docker Image Created Successfully.

