

1. Pull an Image from docker hub and run it in docker playground:

```
Activities Terminal Nov 6 13:56
sethuran@sethu: ~

sethuran@sethu:~$ docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
sethuran@sethu:~$ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
mongo         latest   d98599fddf65   3 months ago   696MB
mongo         <none>   aad77ae58e0c   15 months ago   682MB
redis         latest   aa4d65e670d6   15 months ago   105MB
mongo-express  latest   f8fe1b7702e7   16 months ago   136MB
hello-world    latest   d1165f221234   20 months ago   13.3kB
redis         4.0      191c4017dcdd   2 years ago    89.3MB

sethuran@sethu:~$ docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

sethuran@sethu:~$ docker run mongo
{"t":{"$date":"2022-11-06T08:26:09.463+00:00"},"s":"I",  "c":"NETWORK",  "id":"4915701", "ctx":"","msg":"Initialized wire specification","att
r":{"spec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":13},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":13}}}}
```

2. Create a docker file for the jobportal application and deploy it in Docker desktop application:

```
Activities Visual Studio Code Nov 6 16:08
app.py - JobPortal - Visual Studio Code

File Edit Selection View Go Run Terminal Help
Get Started sendmail.py apply.html U app.py requirements.txt Dockerfile
app.py
Gayathri222, 3 weeks ago | 1 author (Gayathri222)
1 from flask import Flask, render_template, request, redirect, url_for, session
2 import ibm_db
3 import re
4
5 app = Flask(__name__)
6
7 app.secret_key = 'a'
8
9 conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=b70af05b-76e4-4bca-a1f5-23dbb4c6a74e.clogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32
10
11 @app.route('/')
12
13 def homer():

PROBLEMS OUTPUT TERMINAL GITLENS DEBUG CONSOLE
sethuran@sethu:~/Desktop/CLG/IBM/JobPortal$ docker run -p 8080:8080 de5f6faaff52
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on all addresses.
  WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://172.17.0.2:5000/ (Press CTRL+C to quit)
172.17.0.1 - - [06/Nov/2022 10:37:28] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [06/Nov/2022 10:37:28] "GET /css/style.css HTTP/1.1" 404 -
172.17.0.1 - - [06/Nov/2022 10:37:29] "GET /static/img/smartinternz.png HTTP/1.1" 404 -
172.17.0.1 - - [06/Nov/2022 10:37:29] "GET /assets/img/favicon-32x32.png HTTP/1.1" 404 -

main* Gayathri222, 3 weeks ago Ln 1, Col 1 Spaces: 4 UTF-8 CRLF Python Go Live Prettier
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Activities

Google Chrome

Nov 6 16:08

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172.17.0.2:5000

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TryHackMe | B...

Usage With Ty...

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Redux Essenti...

JS Jest Mock for...

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Aboutus

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Mission

SMARTBRIDGE is an edTech organization with a vision to bridge the gap between academia & industry. Our outcome-based experiential learning programs on emerging technologies (Internet of Things, Machine Learning, Data Science, Artificial Intelligence, Robotics) are building skilled entry - level engineers, for the corporate world. .

Vission

Our main objective is to bridge the existing gaps between prevailing industry standards and what the academics offer to the graduates while passing out of university. SmartBridge offers suitable skill deployment and training to the young talent before on boarding their first job. Our skill development programs are designed considering the present expectations in the industry.

Objective

Well directed career guidance programs for educational institutions
Appropriate certification courses that suit the industry need
Train the trainers; expanded awareness about the current industry standards
Liaise with corporates to offer niche internships
Establish technology development centers in colleges
Specialised incubation centers in collaboration with corporates

JobPortal

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Get in Touch

- jobportal@gmail.com
- +91 8977787657

3.Create a IBM container registry and deploy helloworld app or jobportalapp:

Activities

Terminal

Nov 6 16:26

sethuram@sethu: ~/Downloads/IBM_Cloud_CLI_2.12.1_amd64/Bluemix_CLI

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```

sethuram@sethu:~/Downloads/IBM_Cloud_CLI_2.12.1_amd64/Bluemix_CLI$ ibmcloud cr namespace-add sethuram52001
No resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.

Adding namespace 'sethuram52001' in resource group 'Default' for account Sethuram Venkatesan's Account in registry icr.io...

Successfully added namespace 'sethuram52001'

OK
sethuram@sethu:~/Downloads/IBM_Cloud_CLI_2.12.1_amd64/Bluemix_CLI$ ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK
sethuram@sethu:~/Downloads/IBM_Cloud_CLI_2.12.1_amd64/Bluemix_CLI$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:e18f0a777aefabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
sethuram@sethu:~/Downloads/IBM_Cloud_CLI_2.12.1_amd64/Bluemix_CLI$ docker tag hello-world icr.io/sethuram52001/ibmsmartintern:hello-world
sethuram@sethu:~/Downloads/IBM_Cloud_CLI_2.12.1_amd64/Bluemix_CLI$ docker push icr.io/sethuram52001/ibmsmartintern:hello-world
The push refers to repository [icr.io/sethuram52001/ibmsmartintern]
e07ee1baac5f: Pushed
hello-world: digest: sha256:f54a58bc1aac5ea1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4 size: 525
sethuram@sethu:~/Downloads/IBM_Cloud_CLI_2.12.1_amd64/Bluemix_CLI$ ibmcloud cr image-list
Listing images...

Repository          Tag          Digest          Namespace          Created          Size          Security status
icr.io/sethuram52001/ibmsmartintern  hello-world  f54a58bc1aac     sethuram52001     1 year ago      2.5 kB      -

OK
sethuram@sethu:~/Downloads/IBM_Cloud_CLI_2.12.1_amd64/Bluemix_CLI$

```

Activities Google Chrome Nov 6 16:26

cloud.ibm.com/registry/images

IBM Cloud

Container Registry

Quick start

Namespaces 1

Repositories 1

Images 1

Trash 0

Settings

Search resources and products...

Catalog Manage Sethuram Venkatesan'

Images

Location: Global

View by: Digest Search Create +

Repository@digest	Tags	Manifest type	Created	Size	Se sta
sethuram52001/ibmsmartintern@sha256:f54a58bc1aac...	hello-world	Docker	408 days ago	2 KB	

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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:

Activities Google Chrome Nov 6 20:09

eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdjp7uuf05artqhfi0/service/#/deployment?namespace=default

Workloads default Search +

Workloads > Deployments

Workloads


- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods
- Replica Sets
- Replication Controllers
- Stateful Sets

Service

- Ingresses
- Ingress Classes
- Services

Deployments

Name	Images	Labels	Pods	Cre
hello-world	Show all	Show all	1 / 1	a.mi

 **kubernetes**

default

Search

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Workloads > Pods

Workloads ^N

Cron Jobs

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses ^N

Ingress Classes

Pods

	Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)
●	hello-world-cfdb8f84-6rsqb	Show all	Show all	10.144.195.52	CrashLoopBackOff 3	-	-	-

https://eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdjp7uuf05artqh5th0/service/#/pod?namespace=default