

DOCKER - POC

1. Write a docker file for Java

Launch EC2 instance

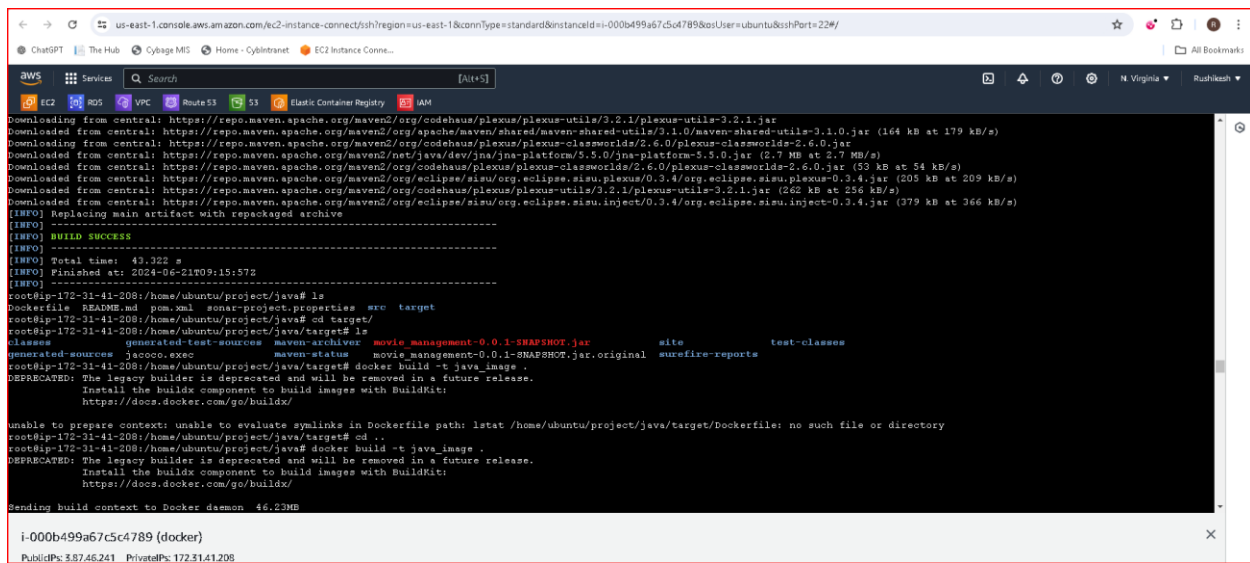
SSH into EC2 instance

Install Docker

Add Ubuntu user docker

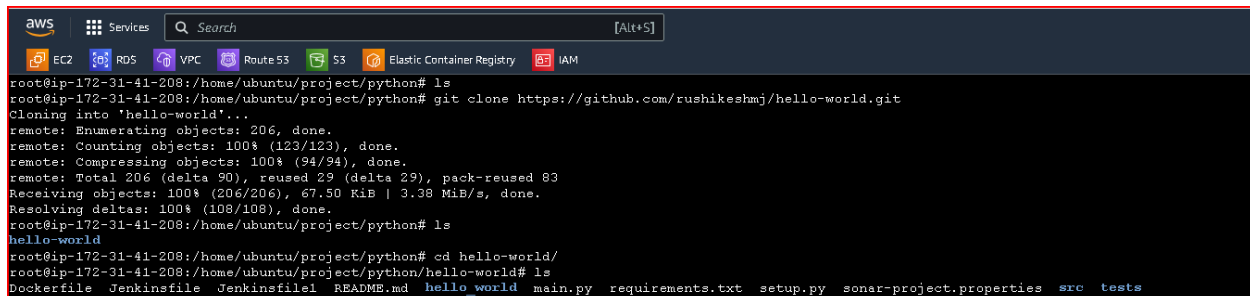
Install git

Install maven

A screenshot of the AWS Management Console showing a terminal session on an EC2 instance. The terminal output displays the installation of Maven and Docker, followed by a Docker build command. The build is successful, creating a Java image. The terminal text is as follows:

```
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.2.1/plexus-utils-3.2.1.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-shared-utils/3.1.0/maven-shared-utils-3.1.0.jar (164 kB at 179 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-classworlds/2.6.0/plexus-classworlds-2.6.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/net/java/dev/jna/jna-platform/5.5.0/jna-platform-5.5.0.jar (2.7 MB at 2.7 MB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-classworlds/2.6.0/plexus-classworlds-2.6.0.jar (53 kB at 54 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/eclipse.sisu/plexus/0.3.4/org.eclipse.sisu.plexus-0.3.4.jar (205 kB at 209 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.2.1/plexus-utils-3.2.1.jar (262 kB at 256 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/eclipse.sisu/org.eclipse.sisu.inject/0.3.4/org.eclipse.sisu.inject-0.3.4.jar (379 kB at 366 kB/s)
[INFO] Replacing main artifact with repackaged archive
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 43.322 s
[INFO] Finished at: 2024-06-21T09:15:57Z
[INFO] -----
root@ip-172-31-41-208:/home/ubuntu/project/java# ls
Dockerfile  README.md  pom.xml  sonar-project.properties  src  target
root@ip-172-31-41-208:/home/ubuntu/project/java# cd target/
root@ip-172-31-41-208:/home/ubuntu/project/java/target# ls
classes          generated-test-sources  maven-archiver  movie_management-0.0.1-SNAPSHOT.jar  site  test-classes
generated-sources  jacoco.exec           maven-status    movie_management-0.0.1-SNAPSHOT.jar.original  surefire-reports
root@ip-172-31-41-208:/home/ubuntu/project/java/target# docker build -t java_image .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/
unable to prepare context: unable to evaluate symlinks in Dockerfile path: lstat /home/ubuntu/project/java/target/Dockerfile: no such file or directory
root@ip-172-31-41-208:/home/ubuntu/project/java/target# cd ..
root@ip-172-31-41-208:/home/ubuntu/project/java# docker build -t java_image .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/
Sending build context to Docker daemon 46.23MB
i-000b499a67c5c4789 [docker]
PublicPc: 5.87.46.241 PrivatePc: 172.31.41.208
```

2. Write a docker file for Python

A screenshot of the AWS Management Console showing a terminal session on an EC2 instance. The terminal output displays the cloning of a GitHub repository, installation of Python, and the creation of a Dockerfile for a Python application. The terminal text is as follows:

```
root@ip-172-31-41-208:/home/ubuntu/project/python# ls
root@ip-172-31-41-208:/home/ubuntu/project/python# git clone https://github.com/rushikeshmj/hello-world.git
Cloning into 'hello-world'...
remote: Enumerating objects: 206, done.
remote: Counting objects: 100% (123/123), done.
remote: Compressing objects: 100% (94/94), done.
remote: Total 206 (delta 90), reused 29 (delta 29), pack-reused 83
Receiving objects: 100% (206/206), 67.50 KiB | 3.38 MiB/s, done.
Resolving deltas: 100% (108/108), done.
root@ip-172-31-41-208:/home/ubuntu/project/python# ls
hello-world
root@ip-172-31-41-208:/home/ubuntu/project/python# cd hello-world/
root@ip-172-31-41-208:/home/ubuntu/project/python/hello-world# ls
Dockerfile  Jenkinsfile  README.md  hello_world  main.py  requirements.txt  setup.py  sonar-project.properties  src  tests
```

```

Step 5/6 : RUN pip install --no-cache-dir -r requirements.txt
--> Using cache
--> c668687d75db
Step 6/6 : CMD ["python", "./main.py"]
--> Using cache
--> bea68e8875f7
Successfully built bea68e8875f7
Successfully tagged python_image:latest
ubuntu@ip-172-31-41-208:~/project/python/hello-world$ docker ps
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock": connect: permission denied
ubuntu@ip-172-31-41-208:~/project/python/hello-world$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
python_image         latest             bea68e8875f7       4 minutes ago      137MB
java_image           latest             db38ded8a490       6 minutes ago      517MB
<none>               <none>             a04f7c02143e       21 minutes ago     408MB
python               3.9-slim           462828d2b59e       3 months ago       126MB
openjdk              17                 5e28ba2b4c4b       2 years ago        471MB
openjdk              17-jdk-slim        37cb44321d04       2 years ago        408MB
ubuntu@ip-172-31-41-208:~/project/python/hello-world$ history
1  sudo su

```

3. How to override CMD command

```

ubuntu@ip-172-31-41-208:~/project/cmd$ sudo vi Dockerfile
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo cat Dockerfile
FROM ubuntu:20.04

```

```

CMD ["echo", "Hello, World!"]

```

```

ubuntu@ip-172-31-41-208:~/project/cmd$ █

```

i-000b499a67c5c4789 (docker)

PublicIPs: 3.87.46.241 PrivateIPs: 172.31.41.208

```

ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS    NAMES
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker run -d -p 8081:8081 cmd_single
ab1fd0c7c41f36df2f8463e07a0fe22e6356c29976c8ca4e3be3f2bef5eb2263
ubuntu@ip-172-31-41-208:~/project/cmd$ docker ps -a
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock": connect: permission denied
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS    NAMES
ab1fd0c7c41f   cmd_single   "echo 'Hello, World!'"   11 seconds ago    Exited (0) 11 seconds ago    intelligent_wescoff
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker logs ab1
Hello, World!
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS    NAMES
ab1fd0c7c41f   cmd_single   "echo 'Hello, World!'"   41 seconds ago    Exited (0) 40 seconds ago    intelligent_wescoff

```

```

Sending build context to Docker daemon  2.048kB
Step 1/3 : FROM ubuntu:20.04
----> 5f5250218d28
Step 2/3 : CMD ["echo", "Hello, World!"]
----> Using cache
----> e21fafe80d6e
Step 3/3 : CMD ["echo", "hellow Rushikesh...!!!"]
----> Running in 16ad143b9c67
Removing intermediate container 16ad143b9c67
----> a2c5ef6b60e4
Successfully built a2c5ef6b60e4
Successfully tagged cmd_double:latest
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker run -d -p 8082:8082 cmd_double
5a48ac1093d3614b3934ab8214f843e0f6cd7eb31d99b3083214f7109e9628b7
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker logs 5a48
hellow Rushikesh...!!!
ubuntu@ip-172-31-41-208:~/project/cmd$ free -m
              total        used        free      shared  buff/cache   available
Mem:            949          252          122           0           574          529
Swap:             0             0             0
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo cat Dockerfile
FROM ubuntu:20.04

CMD ["echo", "Hello, World!"]

CMD ["echo", "hellow Rushikesh...!!!"]
ubuntu@ip-172-31-41-208:~/project/cmd$ █

```

i-000b499a67c5c4789 (docker)

```

ubuntu@ip-172-31-41-208:~/project/cmd$ sudo vi Dockerfile
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker build -t cmd_double .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/

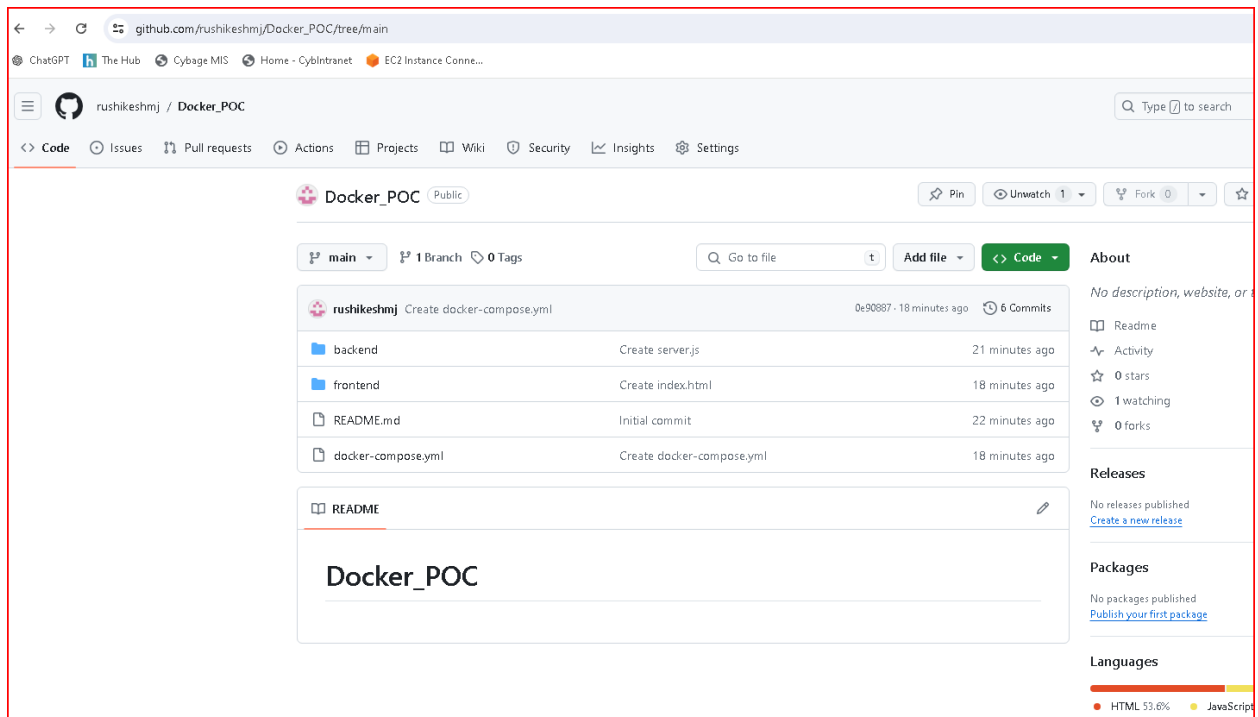
Sending build context to Docker daemon  2.048kB
Step 1/3 : FROM ubuntu:20.04
----> 5f5250218d28
Step 2/3 : CMD ["echo", "Hello, World!"]
----> Using cache
----> e21fafe80d6e
Step 3/3 : CMD ["echo", "hellow Rushikesh...!!!"]
----> Running in 16ad143b9c67
Removing intermediate container 16ad143b9c67
----> a2c5ef6b60e4
Successfully built a2c5ef6b60e4
Successfully tagged cmd_double:latest
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker run -d -p 8082:8082 cmd_double
5a48ac1093d3614b3934ab8214f843e0f6cd7eb31d99b3083214f7109e9628b7
ubuntu@ip-172-31-41-208:~/project/cmd$ sudo docker logs 5a48
hellow Rushikesh...!!!
ubuntu@ip-172-31-41-208:~/project/cmd$ free -m

```

4. Deploy 3 tier application in docker container expose frontend to internet on same machine

For a 3-tier application (typically frontend, backend, and database), we can use Docker Compose to orchestrate the deployment

Install docker-compose



Clone the project in new directory

```
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-000b499a67c5c4789&osUser=ubuntu&region=us-east-1&sshPort=22#/?

aws
Services
Search [Alt+S]
EC2 RDS VPC Route 53 S3 Elastic Container Registry IAM

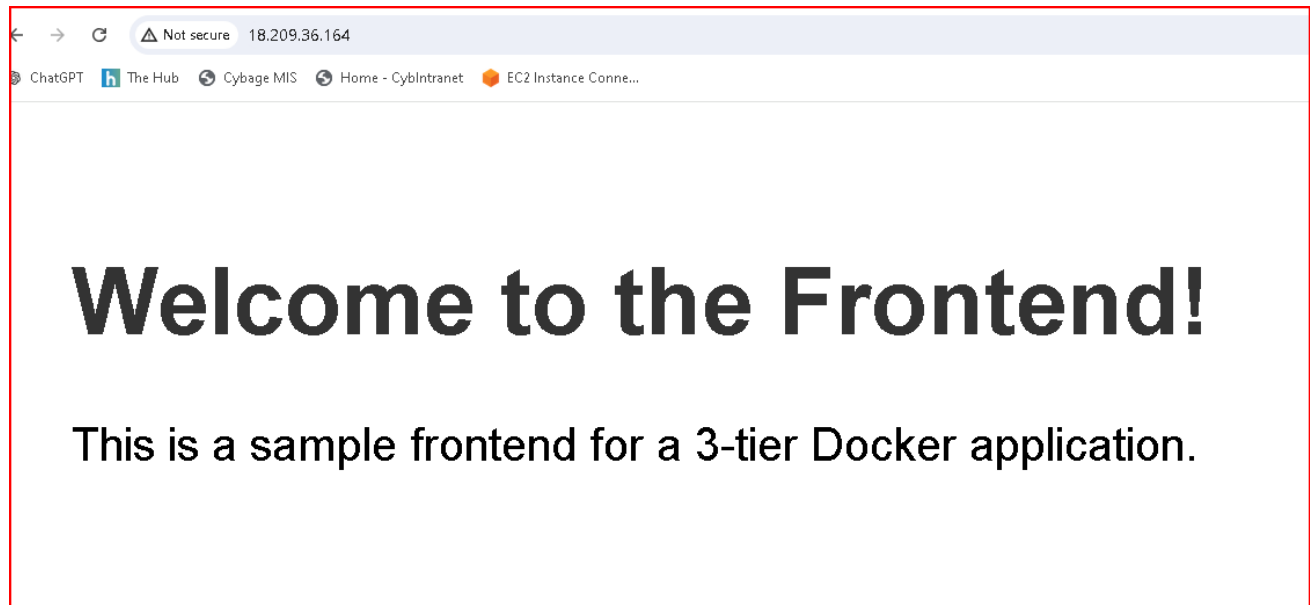
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC$ sudo docker-compose --version
docker-compose version 1.29.2, build 5bece4fc
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC$ sudo ln -s /usr/local/bin/docker-compose /usr/bin/docker-compose
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC$ sudo docker-compose up -d
Creating network "docker_poc_default" with the default driver
Building frontend
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
             Install the buildx component to build images with BuildKit:
             https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  3.072kB
Step 1/2 : FROM nginx:alpine
alpine: Pulling from library/nginx
b84a74cde5af: Pull complete
ec939b2456d7: Pull complete
4838760d22df: Pull complete
6b549263cbhd: Pull complete
3311a42582b3: Pull complete
56051d5eeced: Pull complete
36c95ade2e43: Pull complete
1102bae57027: Pull complete
Digest: sha256:a45ee5d042aaa9e81e013f97ae40c3dde26f8e98f22b6251acdfe28e579560d55
Status: Downloaded newer image for nginx:alpine
--> 099a2d701db1
Step 2/2 : COPY index.html /usr/share/nginx/html/index.html
--> fcc626134c85
Successfully built fcc626134c85
Successfully tagged docker_poc_frontend:latest
WARNING: Image for service frontend was built because it did not already exist. To rebuild this image you must use `docker-compose build` or `docker-compose up
Pulling database (mysql:latest)...
latest: Pulling from library/mysql
7af76bb36546: Pull complete
24d40f69204f: Pull complete
94e5412f594e: Pull complete
a00a64de64e2: Pull complete
```

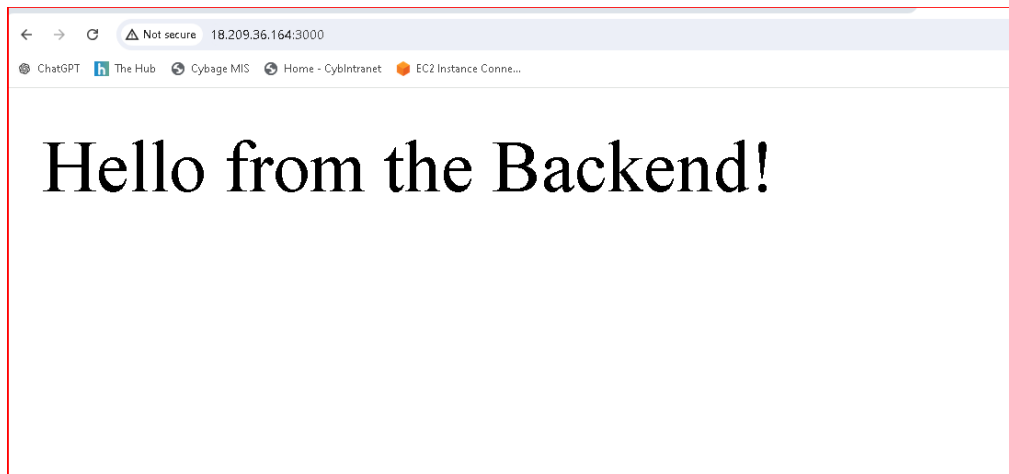
sudo docker-compose up -d

```
Successfully built 89d676276f01
Successfully tagged docker_poc_backend:latest
WARNING: Image for service backend was built because it did not already exist. To rebuild this image you must use `docker-compose build` or `docker-compose up --build`.
Creating docker_poc_frontend_1 ... done
Creating docker_poc_database_1 ... done
Creating docker_poc_backend_1 ... done
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC$ sudo docker ps
Command 'sud' not found, did you mean:
  command 'std' from snap std (1.0.1)
  command 'sup' from deb sup (20100519-3)
  command 'sudo' from deb sudo (1.9.9-1ubuntu2.4)
  command 'sudo' from deb sudo-ldap (1.9.9-1ubuntu2.4)
  command 'sed' from deb sed (4.8-1ubuntu2)
  command 'sbd' from deb sbd (1.5.1-1ubuntu2)
  command 's3d' from deb s3d (0.2.2.1-3build1)
  command 'snd' from deb snd-gui-jack (22.1-1)
  command 'snd' from deb snd-gui-pulse (22.1-1)
  command 'snd' from deb snd-nox (22.1-1)
  command 'sur' from deb subtle (0.11.3224-xi-2.2build4)
  command 'sul' from deb hxttools (20211204-1)
  command 'spd' from deb spd (1.3.0-1ubuntu3)
  command 'su' from deb util-linux (2.37.2-4ubuntu3)
  command 'sum' from deb coreutils (8.32-4.1ubuntu1)
See 'snap info <snapname>' for additional versions.
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC$ sudo docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
5be9fd076c0a   docker_poc_backend   "docker-entrypoint.s..." 36 seconds ago Up 35 seconds 0.0.0.0:3000->3000/tcp, :::3000->3000/tcp   docker_poc_backend_1
b6a9923c74f1   docker_poc_frontend   "/docker-entrypoint..." 37 seconds ago Up 35 seconds 0.0.0.0:80->80/tcp, :::80->80/tcp         docker_poc_frontend_1
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC$ sudo docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
```

Frontend



Backend



5. Tag docker image and push it to dockerhub(private repo)

Docker tag

```
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC/Docker_POC$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
docker_poc_backend  latest             89d676276f01       40 minutes ago     156MB
docker_poc_frontend latest             fcc626134c85       40 minutes ago     43.2MB
cmd_double          latest             a2c5ef6b60e4       3 days ago         72.8MB
cmd_single          latest             e21fafe80d6e       3 days ago         72.8MB
python_image        latest             bea68e8875f7       3 days ago         137MB
java_image          latest             db38ded8a490       3 days ago         517MB
<none>              <none>            a04f7c02143e       3 days ago         408MB
nginx               alpine            099a2d701db1       3 days ago         43.2MB
mysql               latest            05247af91864       5 days ago         578MB
node                alpine            08fd11527a7d       12 days ago        148MB
ubuntu              20.04            5f5250218d28       2 weeks ago        72.8MB
python              3.9-slim         462828d2b59e       3 months ago       126MB
openjdk             17               5e28ba2b4cdb       2 years ago        471MB
openjdk             17-jdk-slim      37cb44321d04       2 years ago        408MB
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC/Docker_POC$ sudo docker tag 89d676276f01 rushikeshmj/tag_push_image_to_hub:latest
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC/Docker_POC$ sudo docker login -u rushikeshmj
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
ubuntu@ip-172-31-41-208:~/project/3-tier-app/Docker_POC/Docker_POC$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
docker_poc_backend  latest             89d676276f01       43 minutes ago     156MB
rushikeshmj/tag_push_image_to_hub latest             89d676276f01       43 minutes ago     156MB
docker_poc_frontend latest             fcc626134c85       44 minutes ago     43.2MB
cmd_double          latest             a2c5ef6b60e4       3 days ago         72.8MB
cmd_single          latest             e21fafe80d6e       3 days ago         72.8MB
python_image        latest             bea68e8875f7       3 days ago         137MB
java_image          latest             db38ded8a490       3 days ago         517MB
<none>              <none>            a04f7c02143e       3 days ago         408MB
nginx               alpine            099a2d701db1       3 days ago         43.2MB

i-000b499a67c5c4789 (docker)
```

Docker push

```
ubuntu@ip-172-31-41-208:~/project/java$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
docker_poc_backend   latest             89d676276f01       48 minutes ago     156MB
rushikeshmj/tag_push_image_to_hub latest             89d676276f01       48 minutes ago     156MB
docker_poc_frontend  latest             fcc626134c85       49 minutes ago     43.2MB
cmd_double           latest             a2c5ef6b60e4       3 days ago         72.8MB
cmd_single           latest             e21fafe80d6e       3 days ago         72.8MB
python_image         latest             bea68e8875f7       3 days ago         137MB
rushikeshmj/89d676276f01 latest             db38ded8a490       3 days ago         517MB
java_image           <none>             a04f7c02143e       3 days ago         408MB
nginx                alpine            099a2d701db1       3 days ago         43.2MB
mysql                latest            05247af91864       5 days ago         578MB
node                 alpine            08fd11527a7d       12 days ago        148MB
ubuntu               20.04            5f5250218d28       2 weeks ago        72.8MB
python               3.9-slim         462828d2b59e       3 months ago       12.6MB
openjdk              17               5e28ba2b4cdb       2 years ago        471MB
openjdk              17-jdk-slim      37cb44321d04       2 years ago        408MB
ubuntu@ip-172-31-41-208:~/project/java$ sudo docker push rushikeshmj/tag_push_image_to_hub:latest
The push refers to repository [docker.io/rushikeshmj/tag_push_image_to_hub]
6a5e24d110a1: Pushed
5c2ab91d4439: Pushed
b3bf764c5db6: Pushed
44c760fd4142: Mounted from library/node
6d16f718f034: Mounted from library/node
252e9f2c85e3: Mounted from library/node
94e5f06ff8e3: Mounted from library/node
latest: digest: sha256:9bb1b42948a74d53ba93bcf6858b01a6ce3a9d913a57f00e3be0fa92e24f9de5 size: 1782
ubuntu@ip-172-31-41-208:~/project/java$
```

i-000b499a67c5c4789 (docker)

PublicIPs: 18.209.36.164 PrivateIPs: 172.31.41.208

Pushed into private registry

hub.docker.com/repository/docker/rushikeshmj/tag_push_image_to_hub/general

dockerhub

ExploreRepositoriesOrganizations

Search Docker Hub

ctrl+K

?

R

rushikeshmj / Repositories / tag_push_image_to_hub / General

Using 1 of 1 private repositories. [Get more](#)

GeneralTagsBuildsCollaboratorsWebhooksSettings

rushikeshmj/tag_push_image_to_hub

Updated less than a minute ago

This repository does not have a description

This repository does not have a category

Docker commands

To push a new tag to this repository:

docker push rushikeshmj/tag_push_image_to_hub:tagname

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
latest	🔥	Image	---	2 minutes ago

[See all](#)

Automated Builds

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions. [Read more about automated builds](#).

Upgrade

Repository overview

6. Set env variable using dockerfile as well as command line

Set env variable using dockerfile

```
ubuntu@ip-172-31-41-208:~/project/env$ cat Dockerfile
FROM alpine
ENV MY_ENV=from_dockerfile
CMD [ "/bin/sh", "-c", "export" ]
ubuntu@ip-172-31-41-208:~/project/env$
```

i-000b499a67c5c4789 (docker)

PublicIPs: 18.209.36.164 PrivateIPs: 172.31.41.208

```
ubuntu@ip-172-31-41-208:~/project/env$ sudo docker build -t env1 .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/
```

```
Sending build context to Docker daemon 2.048kB
Step 1/3 : FROM alpine
latest: Pulling from library/alpine
ec99f8b99825: Already exists
Digest: sha256:b89d9c93e9ed3597455c90a0b88a8bbb5cb7188438f70953fede212a0c4394e0
Status: Downloaded newer image for alpine:latest
--> a606584aa9aa
Step 2/3 : ENV MY_ENV=from_dockerfile
--> Running in 0f5a5e083c8a
Removing intermediate container 0f5a5e083c8a
--> 6a1f153e1b3b
Step 3/3 : CMD [ "/bin/sh", "-c", "export" ]
--> Running in fdb55b6c67a0
Removing intermediate container fdb55b6c67a0
--> 3da2b7e45e96
Successfully built 3da2b7e45e96
Successfully tagged env1:latest
```

```
ubuntu@ip-172-31-41-208:~/project/env$ sudo docker run env1
export HOME='/root'
export HOSTNAME='f4b50a4e38f7'
export MY_ENV='from_dockerfile'
export PATH='/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin'
export PWD='/'
export SHLVL='1'
```

```
ubuntu@ip-172-31-41-208:~/project/env$ sudo docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
env1                 latest      3da2b7e45e96  About a minute ago  7.8MB
my-java-app1        latest      b0fa130e6628  12 minutes ago  517MB
```

i-000b499a67c5c4789 (docker)

PublicIPs: 18.209.36.164 PrivateIPs: 172.31.41.208

Set env variable using From CLI

```
ubuntu@ip-172-31-41-208:~/project/env$ sudo docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
env1                 latest     3de2b7e45e96 About a minute ago  7.8MB
my-java-app1        latest     b0fa130e6628 12 minutes ago  517MB
my-java-app         latest     0e64c1b5db72 16 minutes ago  517MB
mysql-nodejs-docker-example_backend latest     0d840d070733 40 minutes ago  918MB
<none>              <none>     8c6ed7003147 44 minutes ago  918MB
<none>              <none>     d8b966d19d14b 48 minutes ago  918MB
<none>              <none>     0e3eff91d7af About an hour ago  918MB
envn                latest     7bd278bd7d70 About an hour ago  517MB
docker_poc_backend  latest     89d676276f01 3 hours ago      156MB
rushikeshmj/tag_push_image_to_hub latest     89d676276f01 3 hours ago      156MB
docker_poc_frontend latest     fcc626134e85 3 hours ago      43.2MB
java_image          latest     db38ded8a490 3 days ago       517MB
rushikeshmj/89d676276f01 latest     db38ded8a490 3 days ago       517MB
nginx               alpine     099d2d70dbd1 3 days ago       43.2MB
alpine              latest     a604584aa9aa 3 days ago       7.8MB
mysql               latest     05247af91864 5 days ago       578MB
node                alpine     08fd11527a7d 12 days ago      148MB
node                14        1d12470fa662 14 months ago    912MB
openjdk             17        5e28ba2b4edb 2 years ago      471MB
ubuntu@ip-172-31-41-208:~/project/env$ sudo docker logs 3da2
Error response from daemon: No such container: 3da2
ubuntu@ip-172-31-41-208:~/project/env$ sudo docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED    STATUS    PORTS                               NAMES
773ac6d5767e   docker_poc_backend  "docker-entrypoint.s..." 2 hours ago Up 2 hours 0.0.0.0:3000->3000/tcp, :::3000->3000/tcp  docker_poc_backend_1
d78024cfb641   docker_poc_frontend  "/docker-entrypoint. ..." 2 hours ago Up 2 hours 0.0.0.0:80->80/tcp, :::80->80/tcp  docker_poc_frontend_1
ubuntu@ip-172-31-41-208:~/project/env$ sudo docker container run --env MY_ENV=rushikesh env1:latest
export HOME="/root"
export HOSTNAME="ddeb037d933b"
export MY_ENV="rushikesh"
export PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
export PWD="/"
export SHLVL="1"
ubuntu@ip-172-31-41-208:~/project/env$ cat Dockerfile
FROM alpine
ENV MY_ENV=from_dockerfile
CMD [ "/bin/sh", "-c", "export" ]
ubuntu@ip-172-31-41-208:~/project/env$
```

i-000b499a67c5c4789 (docker)

PublicIPs: 18.209.36.164 PrivateIPs: 172.31.41.208

Use NGNIX as load balancer in 3rd task

github.com/rushikeshmj/Docker_POC/blob/main/frontend/Dockerfile

The Hub Cybage MIS Home - Cyblntranet EC2 Instance Conne...

ushikeshmj / Docker_POC

Issues Pull requests Actions Projects Wiki Security Insights Settings

Docker_POC / frontend / Dockerfile

rushikeshmj Create Dockerfile

Code Blame 2 lines (2 loc) · 67 Bytes Code 55% faster with GitHub Copilot

```
1 FROM nginx:alpine
2 COPY index.html /usr/share/nginx/html/index.html
```

le

ml

md

ompose.yml

7. Link mysql container with backend container

```
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack$ ls
docker-compose.yml  php
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack$ cd php/
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack/php$ ls
index.php
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack/php$ sudo vi index.php
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack/php$ cat index.php
<!-- ./php/index.php -->

<html>
  <head>
    <title>mysql linked with backend</title>
  </head>

  <body>
    <?php
      echo "mysql linked with backend...!!!";
    ?>
  </body>
</html>
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack/php$ █
```

i-000b499a67c5c4789 (docker)

PublIdPs: 52.202.165.146 PrivatelPs: 172.31.41.208

```
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack/php$ cd ..
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack$ ls
docker-compose.yml  php
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack$ cat docker-compose.yml
# ./docker-compose.yml

version: '3'

services:
  db:
    image: mysql:5.7
    environment:
      MYSQL_ROOT_PASSWORD: my_secret_pw_shh
      MYSQL_DATABASE: test_db
      MYSQL_USER: devuser
      MYSQL_PASSWORD: devpass
    ports:
      - "9906:3306"
  web:
    image: php:7.2.2-apache
    container_name: php_web
    depends_on:
      - db
    volumes:
      - ./php:/var/www/html/
    ports:
      - "8100:80"
    stdin_open: true
    tty: true
ubuntu@ip-172-31-41-208:~/project/link/lamp-stack$ █
```

i-000b499a67c5c4789 (docker)

PublIdPs: 52.202.165.146 PrivatelPs: 172.31.41.208

sudo docker-compose up -d

