

**FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING**

**Department of Computer Engineering**

**Course, Subject & Experiment Details**

Practical No:	
Title:	To study and Implement Containerization using Docker
Name of the Student:	Warren Fernandes
Roll No:	8940
Date of Performance:	11/04/2022
Date of Submission:	11/04/2022

**Evaluation:**

Sr. No.	Rubric	Grade
1	On time submission/completion (2)	
2	Preparedness (2)	
3	Skill (4)	
4	Output (2)	

**Signature of the Teacher**

## DOCKER

### Experiment 3: Docker Post Lab Questions

#### A. Difference between following

##### 1. docker containerization and Virtualization?

VirtualBox/Virtualization is software that creates a virtualized piece of hardware. Normally, an operating system runs on hardware, where communication between the hardware and operating system is done by moving data to addresses in memory and then issuing instructions that inform the hardware the data can be used (or that it needs to be read). VirtualBox (and other virtual machines) set up an environment where those memory locations are actually just regions of memory in the software, and the instructions are interpreted by the software instead of going directly to the underlying CPU. The practical upshot being that you run an operating system in VirtualBox, and, to the operating system, the VirtualBox application looks like a computer, hardware and all. It doesn't know it's actually running within another program.

Docker, on the other hand, doesn't virtualize the hardware at all. Instead, what it does is creates a filesystem that looks like a regular Linux filesystem, and runs applications in a locked down environment where all the files and resources are inside that filesystem. Effectively, the application container doesn't emulate any hardware, the app still runs on the hardware, it just isolates the running app and allows you to run applications with software and libraries that might be specific to that application and not the host operating system at all. This means that there's almost no overhead in starting or stopping a docker application, they don't require pre-allocations of memory and disk space, etc. So they are very easy to set up and take down. Further, Docker containers don't waste any overhead in running software that pretends to be various hardware components in the system - it uses the hardware directly.

## 2. Image vs container.

S.NO Docker Image

Docker Container

1 It is Blueprint of the Container.

It is instance of the Image.

2 Image is a logical entity.

Container is a real world entity.

3 Image is created only once.

Containers are created any number of times using image.

4 Images are immutable.

Containers changes only if old image is deleted and new is used to build the container.

5 Images does not require computing resource to work.

Containers requires computing resources to run as they run as Docker Virtual Machine.

6 To make a docker image, you have to write script in Dockerfile.

To make container from image, you have to run “docker build .” command

7 Docker Images are used to package up applications and pre-configured server environments.

Containers use server information and file system provided by image in order to operate.

8 Images can be shared on Docker Hub.

It makes no sense in sharing a running entity, always docker images are shared.

9 There is no such running state of Docker Image.

Containers uses RAM when created and in running state.

## 3. What is Dev server, Test Server and Production Server?

Development server

When work starts, most developers and programmers will have development environments set up for the work. This is where they can build and verify the work they are doing.

Developers and programmers use the development server to test code directly. This server is usually set up with the needed hardware, software and other necessary parts for debugging and deploying.

## Test Server

Once the developers or programmers complete the work they will deploy that finished work to a test server. A test server's set up and configurations will be for internal use by the team with necessary configurations. This allows the team to access the work for verification. The internal team completes the testing phase, usually with the use of a QA Tester. The tester will run various use cases to ensure that the product is functioning as it should. If the tester discovers bugs or other issues, they will create tasks for the developers or programmers to fix.

## Production Server

Production servers are the final location for all finished and approved work. When you deploy code to a production server, this means everyone has approved it to go live. At this stage, the work is considered complete and approved for widespread use. Working code should only be deployed to a production server after it has been tested and approved for going live. Work should never be done on a production server without the use of some type of version control as this will be a high risk for things breaking while the product is in use. In certain situations, when a product goes offline or a production server goes down, it can cost a company a lot of money and this is definitely not something anyone wants to occur.

## 4. docker hub vs docker compose vs dockerfile

Dockerfile: Used to create Docker images. If you wish to create a custom docker image, you can write all the details about it in the dockerfile.

Docker-compose.yml: Used to launch multiple container at the same time. You do so by writing the configurations for each container in the docker-compose.yml file.

Docker Hub is a Docker Registry, a cloud-hosted version, open-source, scalable server-side application, and stateless. It can manage the sharing and storage of [Docker images](#). Using Docker, developers can access it as public and create their own private repositories space and automate application build custom functions, work-groups, and webhooks.

## 5. Container port vs host port?

ContainerPort is the port in the container, one which your containerized app should listen on. HostPort is the port which will be visible on the Mesos Agent where container is running,

## A. Illustrate Docker advantages, disadvantages and applications?

### Advantages of Docker

- Docker produces an API for container management – Docker produces an API for container management in an image format and a chance to use a remote registry for sharing containers. This scheme serves both developers and system administrators with advantages for instance.
- Fast application deployment – containers carry the minimal runtime requirements of the application, decreasing their size and enabling them to be deployed instantly.
- Transferable across machines – an application and all its dependencies can be grouped into a separate container that is autonomous from the host version of Linux kernel,

platform configuration, or deployment type. This container can be assigned to another machine that runs Docker and performed there without adaptability issues.

- Version control and component retain – you can pursue succeeding versions of a container, inspect irregularities or go back to previous versions. Containers reuse segments from the preceding layers, which makes them remarkably light.
- Sharing – you can use a distant repository to share your container with others. Red Hat provides a registry for this purpose, and it is also desirable to configure your own individual repository.
- Light and minimal overhead – Docker images are typically very small, which promotes rapid delivery and reduces the time to deploy new application containers.

#### Disadvantages of Docker

- Containers don't work at bare-metal rates – Containers utilise resources more efficiently than virtual machines. But containers are however directed to performance overhead due to overlay networking, interfacing within containers and the host system and so on. If you want 100% bare-metal performance, you want to apply bare metal, not containers.
- The container ecosystem is split – But the core Docker platform is open source, some container products don't work with other ones.
- Data storage is intricate – By design, all of the data inside a container leaves forever when it closes down except you save it somewhere else first. There are ways to store data tenaciously in Docker, such as Docker Data Capacities, but this is arguably a test that still has yet to be approached in a seamless manner.
- Graphical applications do not operate well – Docker was created as a solution for deploying server applications that don't need a graphical interface. While there are some creative approaches that one can practice to run a GUI app inside a container, these solutions are solid at best.
- Few applications do not benefit from Docker Containers – In common, the applications that are intended to work as a collection of thoughtful microservices attain to get the most from containers. Contrarily, Docker's one real benefit is that it can interpret application delivery by giving an easy packaging mechanism.

#### Applications of Docker

- Portable deployment of applications as a single object versus process sandboxing;
- Application-centric versus machine/server-centric;
- Supports for automatic container builds;
- Built-in version tracking;
- Reusable components;
- Public registry for sharing containers; and
- A growing tools ecosystem from the published API.

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:04:35

CLOSE SESSION

Instances  

+ ADD NEW INSTANCE

192.168.0.28 node1

IP 192.168.0.28 OPEN PORT 3306 Memory 15.91% (636.4MB / 3.906GB) CPU 0.48% SSH ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play 

**DELETE** **EDITOR**

```

+-----+
| Exit      | 2019 |
| Midinght Runners | 2016 |
| Parasite   | 2019 |
| Space Sweepers | 2021 |
+-----+
4 rows in set (0.00 sec)

mysql> update `movies` set `title` = "Midnight Runners" where `release_year` = 2016;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from movies;
+-----+
| title      | release_year |
+-----+
| Exit      | 2019 |
| Midinght Runners | 2016 |
| Parasite   | 2019 |
| Space Sweepers | 2021 |
+-----+
4 rows in set (0.00 sec)

mysql> 
```

Type here to search 27°C ENG 15:03 09-02-2022

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:05:03

CLOSE SESSION

Instances  

+ ADD NEW INSTANCE

192.168.0.28 node1

IP 192.168.0.28 OPEN PORT 3306 Memory 15.91% (636.3MB / 3.906GB) CPU 0.72% SSH ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play 

**DELETE** **EDITOR**

```

-> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right
syntax to use near 'Runners where release_year = 2016' at line 1
mysql> update `movies` set `title` = Midinght Runners where `release_year` = 2
016;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right
syntax to use near 'Runners where `release_year` = 2016' at line 1
mysql> update `movies` set `title` = "Midinght Runners" where `release_year` = 2016;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from movies;
+-----+
| title      | release_year |
+-----+
| Exit      | 2019 |
| Midinght Runners | 2016 |
| Parasite   | 2019 |
| Space Sweepers | 2021 |
+-----+
4 rows in set (0.00 sec)

mysql> 
```

Type here to search 27°C ENG 15:03 09-02-2022

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgoeqoig x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgoeqoig

03:11:44

CLOSE SESSION

Instances  

+ ADD NEW INSTANCE

192.168.0.28 node1

IP 192.168.0.28 OPEN PORT 3306

Memory 15.91% (636.2MB / 3.906GB) CPU 0.91%

SSH ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play 

**DELETE** **EDITOR**

```
| title      | release_year |
| Exit       | 2019        |
| Parasite   | 2019        |
| Space Sweepers | 2021        |
+-----+
3 rows in set (0.00 sec)

mysql> insert into movies value("Camelia",2016);
Query OK, 1 row affected (0.00 sec)

mysql> select * from movies;
+-----+
| title      | release_year |
| Camelia   | 2016        |
| Exit       | 2019        |
| Parasite   | 2019        |
| Space Sweepers | 2021        |
+-----+
4 rows in set (0.00 sec)

mysql>
```

Type here to search 27°C 1456 09-02-2022

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgoeqoig x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgoeqoig

03:14:21

CLOSE SESSION

Instances  

+ ADD NEW INSTANCE

192.168.0.28 node1

IP 192.168.0.28 OPEN PORT 3306

Memory 15.96% (638.6MB / 3.906GB) CPU 1.11%

SSH ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play 

**DELETE** **EDITOR**

```
| mysql      |
| performance_schema |
| sys         |
+-----+
5 rows in set (0.00 sec)

mysql> use docker;
Database changed
mysql> create table movies(title varchar(25) not null,release_year int not null,primary key(title));
Query OK, 0 rows affected (0.03 sec)

mysql> insert into movies value("Exit",2019);
Query OK, 1 row affected (0.03 sec)

mysql> select * from movies;
+-----+
| title | release_year |
| Exit  | 2019        |
+-----+
1 row in set (0.00 sec)

mysql>
```

Type here to search 1454 09-02-2022

The screenshot shows a web browser window with a MySQL command-line interface. The title bar includes the URL `labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn_c81nr4tmregp00eqeoig`. The main content area displays a session for instance `node1` at IP `192.168.0.28` on port `3306`. The session status shows `15.76% (630.3MB / 3.906GB)` memory usage and `0.10%` CPU usage. Below the session details is an SSH connection string: `ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play`. At the bottom of the interface, there are buttons for `DELETE` and `EDITOR`, and a large text area containing the MySQL command history:

```
proxies_priv
replication_asynchronous_connection_failover
replication_asynchronous_connection_failover_managed
replication_group_configuration_version
replication_group_member_actions
role_edges
server_cost
servers
slave_master_info
slave_relay_log_info
slave_worker_info
slow_log
tables_priv
time_zone
time_zone_leap_second
time_zone_name
time_zone_transition
time_zone_transition_type
user
37 rows in set (0.00 sec)

mysql> 
```

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig x +

03:22:27

**c81nr1nn\_c81nr4tmrepgo0eqeoig**

IP: 192.168.0.28 OPEN PORT: 3306

Memory: 15.68% (627.1MB / 3.906GB) CPU: 1.30%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

**DELETE** **EDITOR**

```
Your MySQL connection id is 8
Server version: 8.0.28 MySQL Community Server - GPL
Copyright (c) 2000, 2022, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
4 rows in set (0.02 sec)

mysql>
```

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig x +

03:23:57

**c81nr1nn\_c81nr4tmrepgo0eqeoig**

IP: 192.168.0.28 OPEN PORT: 3306

Memory: 15.65% (626MiB / 3.906GiB) CPU: 1.82%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

**DELETE** **EDITOR**

```
(node1) (local) root@192.168.0.28 ~
$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
7b5b6279b611 mysql "docker-entrypoint.s..." 26 seconds ago Up 25 seconds 0.0.0.0:3306->3306/tcp, 33060/tcp bj
244bdd389d20 httpd:latest "httpd-foreground"
amujan
(node1) (local) root@192.168.0.28 ~
$ docker exec -it bj bash
root@7b5b6279b611:/# mysql -u root -ppassword
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.28 MySQL Community Server - GPL
Copyright (c) 2000, 2022, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig x +

03:24:00

**c81nr1nn\_c81nr4tmrepgo0eqeoig**

IP: 192.168.0.28 OPEN PORT: 3306

Memory: 15.65% (626MiB / 3.906GiB) CPU: 1.82%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

**DELETE** **EDITOR**

```
(node1) (local) root@192.168.0.28 ~
$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
7b5b6279b611 mysql "docker-entrypoint.s..." 26 seconds ago Up 25 seconds 0.0.0.0:3306->3306/tcp, 33060/tcp bj
244bdd389d20 httpd:latest "httpd-foreground"
amujan
(node1) (local) root@192.168.0.28 ~
$ docker exec -it bj bash
root@7b5b6279b611:/# mysql -u root -ppassword
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.28 MySQL Community Server - GPL
Copyright (c) 2000, 2022, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009 x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:27:09

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.28 node1

IP: 192.168.0.28 OPEN PORT: 3306

Memory: 15.93% (637.3MB / 3.906GB) CPU: 0.50%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

**DELETE** **EDITOR**

```
c202b0c2b4d5 httpd "httpd-foreground" 10 minutes ago Exited (0) 5 minutes ago my-running-app
244bdd389d20 httpd:latest "httpd-foreground" 17 minutes ago Up 17 minutes 80/tcp magical_ramanujan
d4f4b1924303 mysql:latest "docker-entrypoint.s..." 23 minutes ago Exited (1) 23 minutes ago reverent_merkle
d477a3db221f python "python3" 25 minutes ago Exited (0) 25 minutes ago peaceful_solomon
6187e3a609c0 ubuntu "bash" 26 minutes ago Exited (0) 25 minutes ago brave_keldysh
(node1) (local) root@192.168.0.28 ~

$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
python latest dfce7257b7ba 28 hours ago 917MB
ubuntu latest 54c9d81cb44 7 days ago 72.8MB
mysql latest d1dc36cf8d9e 13 days ago 519MB
httpd latest a8ea074f4566 2 weeks ago 144MB
(node1) (local) root@192.168.0.28 ~
$ docker run -d --name bj -p 3306:3306 -e MYSQL_ROOT_PASSWORD=password mysql
7b5b6279b61199a89233f31cfc2141ae29f6d9f4d4739004cd346336f50de3ba
(node1) (local) root@192.168.0.28 ~
$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
7b5b6279b611 mysql "docker-entrypoint.s..." 26 seconds ago Up 25 seconds 0.0.0.0:3306->3306/tcp, 33060/tcp bj
244bdd389d20 httpd:latest "httpd-foreground" 20 minutes ago Up 20 minutes 80/tcp magical_ram
anujan (node1) (local) root@192.168.0.28 ~
$
```

Type here to search

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009 x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:27:42

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.28 node1

IP: 192.168.0.28 OPEN PORT: 3306

Memory: 9.72% (388.7MB / 3.906GB) CPU: 55.26%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

**DELETE** **EDITOR**

```
- MYSQL_ALLOW_EMPTY_PASSWORD
- MYSQL_RANDOM_ROOT_PASSWORD
(node1) (local) root@192.168.0.28 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
02397a136146 mysql:latest "docker-entrypoint.s..." About a minute ago Exited (1) About a minute ago loving_dubinsky
c202b0c2b4d5 httpd "httpd-foreground" 10 minutes ago Exited (0) 5 minutes ago my-running-app
244bdd389d20 httpd:latest "httpd-foreground" 17 minutes ago Up 17 minutes 80/tcp magical_ramanujan
d4f4b1924303 mysql:latest "docker-entrypoint.s..." 23 minutes ago Exited (1) 23 minutes ago reverent_merkle
d477a3db221f python "python3" 25 minutes ago Exited (0) 25 minutes ago peaceful_solomon
6187e3a609c0 ubuntu "bash" 26 minutes ago Exited (0) 25 minutes ago brave_keldysh
(node1) (local) root@192.168.0.28 ~
$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
python latest dfce7257b7ba 28 hours ago 917MB
ubuntu latest 54c9d81cb44 7 days ago 72.8MB
mysql latest d1dc36cf8d9e 13 days ago 519MB
httpd latest a8ea074f4566 2 weeks ago 144MB
(node1) (local) root@192.168.0.28 ~
$ docker run -d --name bj -p 3306:3306 -e MYSQL_ROOT_PASSWORD=password mysql
7b5b6279b61199a89233f31cfc2141ae29f6d9f4d4739004cd346336f50de3ba
(node1) (local) root@192.168.0.28 ~
$
```

Type here to search

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009 x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:27:42

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.28 node1

IP: 192.168.0.28 OPEN PORT: 3306

Memory: 9.72% (388.7MB / 3.906GB) CPU: 55.26%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

**DELETE** **EDITOR**

```
- MYSQL_ALLOW_EMPTY_PASSWORD
- MYSQL_RANDOM_ROOT_PASSWORD
(node1) (local) root@192.168.0.28 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
02397a136146 mysql:latest "docker-entrypoint.s..." About a minute ago Exited (1) About a minute ago loving_dubinsky
c202b0c2b4d5 httpd "httpd-foreground" 10 minutes ago Exited (0) 5 minutes ago my-running-app
244bdd389d20 httpd:latest "httpd-foreground" 17 minutes ago Up 17 minutes 80/tcp magical_ramanujan
d4f4b1924303 mysql:latest "docker-entrypoint.s..." 23 minutes ago Exited (1) 23 minutes ago reverent_merkle
d477a3db221f python "python3" 25 minutes ago Exited (0) 25 minutes ago peaceful_solomon
6187e3a609c0 ubuntu "bash" 26 minutes ago Exited (0) 25 minutes ago brave_keldysh
(node1) (local) root@192.168.0.28 ~
$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
python latest dfce7257b7ba 28 hours ago 917MB
ubuntu latest 54c9d81cb44 7 days ago 72.8MB
mysql latest d1dc36cf8d9e 13 days ago 519MB
httpd latest a8ea074f4566 2 weeks ago 144MB
(node1) (local) root@192.168.0.28 ~
$ docker run -d --name bj -p 3306:3306 -e MYSQL_ROOT_PASSWORD=password mysql
7b5b6279b61199a89233f31cfc2141ae29f6d9f4d4739004cd346336f50de3ba
(node1) (local) root@192.168.0.28 ~
$
```

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009 x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:30:16

**c81nr1nn\_c81nr4tmrepgo0eqeoig**

IP: 192.168.0.28 OPEN PORT

Memory: 2.33% (93.37MiB / 3.906GiB) CPU: 0.36%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

**DELETE** **EDITOR**

```
2022-02-09 09:06:27+00:00 [ERROR] [Entrypoint]: Database is uninitialized and password option is not specified
You need to specify one of the following:
- MYSQL_ROOT_PASSWORD
- MYSQL_ALLOW_EMPTY_PASSWORD
- MYSQL_RANDOM_ROOT_PASSWORD
[node1] (local) root@192.168.0.28 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
02397a136146 mysql:latest "docker-entrypoint.s..." About a minute ago Exited (1) About a minute ago
c202b0c2b4d5 httpd "httpd-foreground" 10 minutes ago Exited (0) 5 minutes ago
244bd389d20 httpd:latest "httpd-foreground" 17 minutes ago Up 17 minutes 80/tcp
d4f4bf924303 mysql:latest "docker-entrypoint.s..." 23 minutes ago Exited (1) 23 minutes ago
d477a3db221f python "python3" 25 minutes ago Exited (0) 25 minutes ago
6187e3a609c0 ubuntu "bash" 26 minutes ago Exited (0) 25 minutes ago
[node1] (local) root@192.168.0.28 ~
$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
python latest dfce7257b7ba 28 hours ago 91.7MB
ubuntu latest 54c9d81cb44 7 days ago 72.8MB
mysql latest d1dc36cf8d9e 13 days ago 519MB
httpd latest a8ea074f4566 2 weeks ago 144MB
[node1] (local) root@192.168.0.28 ~
$
```

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009 x +

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:33:18

**c81nr1nn\_c81nr4tmrepgo0eqeoig**

IP: 192.168.0.28 OPEN PORT

Memory: 2.32% (92.87MiB / 3.906GiB) CPU: 0.22%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

**DELETE** **EDITOR**

```
6187e3a609c0 ubuntu "bash" 20 minutes ago Exited (0) 20 minutes ago brave_keldysh
[node1] (local) root@192.168.0.28 ~
$ docker run -p 3306
"docker run" requires at least 1 argument.
See 'docker run --help'.

Usage: docker run [OPTIONS] IMAGE [COMMAND] [ARG...]

Run a command in a new container
[node1] (local) root@192.168.0.28 ~
$ docker logs c202b0c2b4d5
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 172.17.0.3. Set the 'ServerName' directive
globally to suppress this message
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 172.17.0.3. Set the 'ServerName' directive
globally to suppress this message
[Wed Feb 09 08:57:01.584539 2022] [mpm_event:notice] [pid 1:tid 140384865779008] AH00489: Apache/2.4.52 (Unix) configured -- resuming normal operations
[Wed Feb 09 08:57:01.593823 2022] [core:notice] [pid 1:tid 140384865779008] AH00094: Command line: 'httpd -D FOREGROUND'
172.18.0.1 - - [09/Feb/2022:08:58:04 +0000] "GET / HTTP/1.1" 200 45
172.18.0.1 - - [09/Feb/2022:08:58:06 +0000] "GET /favicon.ico HTTP/1.1" 404 196
[Wed Feb 09 09:01:45.607222 2022] [mpm_event:notice] [pid 1:tid 140384865779008] AH00492: caught SIGWINCH, shutting down gracefully
[node1] (local) root@192.168.0.28 ~
$
```

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009 x + Restore Down

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:35:56

CLOSE SESSION

IP: 192.168.0.28 OPEN PORT

Instances  

+ ADD NEW INSTANCE

192.168.0.28 node1

**DELETE** **EDITOR**

```
c202b0c2b4d5 httpd "httpd-foreground" 4 minutes ago Up 4 minutes 0.0.0.0:8080->80/tcp my-running-a
pb 244bdd389d20 httpd:latest "httpd-foreground" 10 minutes ago Up 10 minutes 80/tcp magical_rama
nujan d4f4bf924303 mysql:latest "docker-entrypoint.s..." 16 minutes ago Exited (1) 16 minutes ago reverent_mer
kle d477a3db221f python "python3" 18 minutes ago Exited (0) 18 minutes ago peaceful_sol
omon 8187e3a609c0 ubuntu "bash" 19 minutes ago Exited (0) 19 minutes ago brave_keldys
h
(node1) (local) root@192.168.0.28 ~
$ docker stop c202b0c2b4d5
c202b0c2b4d5
(node1) (local) root@192.168.0.28 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
c202b0c2b4d5 httpd "httpd-foreground" 5 minutes ago Exited (0) 24 seconds ago my-running-app
244bdd389d20 httpd:latest "httpd-foreground" 11 minutes ago Up 11 minutes 80/tcp magical_rama_nuan
d4f4bf924303 mysql:latest "docker-entrypoint.s..." 17 minutes ago Exited (1) 17 minutes ago reverent_merkle
d477a3db221f python "python3" 19 minutes ago Exited (0) 19 minutes ago peaceful_solomon
8187e3a609c0 ubuntu "bash" 20 minutes ago Exited (0) 20 minutes ago brave_keldysh
(node1) (local) root@192.168.0.28 ~
$ 
```

Type here to search 27°C ENG 09-02-2022

Httpd - Official Image | Docker | x Docker Playground x ip172-18-0-68-c81nr1nnjsv0009 x + Restore Down

labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\_c81nr4tmrepgo0eqeoig

03:36:39

CLOSE SESSION

IP: 192.168.0.28 OPEN PORT

Instances  

+ ADD NEW INSTANCE

192.168.0.28 node1

**DELETE** **EDITOR**

```
(node1) (local) root@192.168.0.28 ~
$ docker run -dit --name my-running-app -p 8080:80 httpd
c202b0c2b4d5fe7d45801f9b0319e3f81fdfffeaf9114d91dda9c45747b4
(node1) (local) root@192.168.0.28 ~
$ ^C
(node1) (local) root@192.168.0.28 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
c202b0c2b4d5 httpd "httpd-foreground" 4 minutes ago Up 4 minutes 0.0.0.0:8080->80/tcp my-running-a
pb 244bdd389d20 httpd:latest "httpd-foreground" 10 minutes ago Up 10 minutes 80/tcp magical_rama
nujan d4f4bf924303 mysql:latest "docker-entrypoint.s..." 16 minutes ago Exited (1) 16 minutes ago reverent_mer
kle d477a3db221f python "python3" 18 minutes ago Exited (0) 18 minutes ago peaceful_sol
omon 8187e3a609c0 ubuntu "bash" 19 minutes ago Exited (0) 19 minutes ago brave_keldys
h
(node1) (local) root@192.168.0.28 ~
$ docker stop c202b0c2b4d5
c202b0c2b4d5
(node1) (local) root@192.168.0.28 ~
$ 
```

Type here to search 27°C ENG 09-02-2022

03:39:58

CLOSE SESSION

IP: 192.168.0.28 OPEN PORT 8080

Instances

+ ADD NEW INSTANCE

192.168.0.28 node1

DELETE EDITOR

```
Error: No such container: httpd
[node1] (local) root@192.168.0.28 ~
$ docker container inspect
"docker container inspect" requires at least 1 argument.
see 'docker container inspect --help'.
```

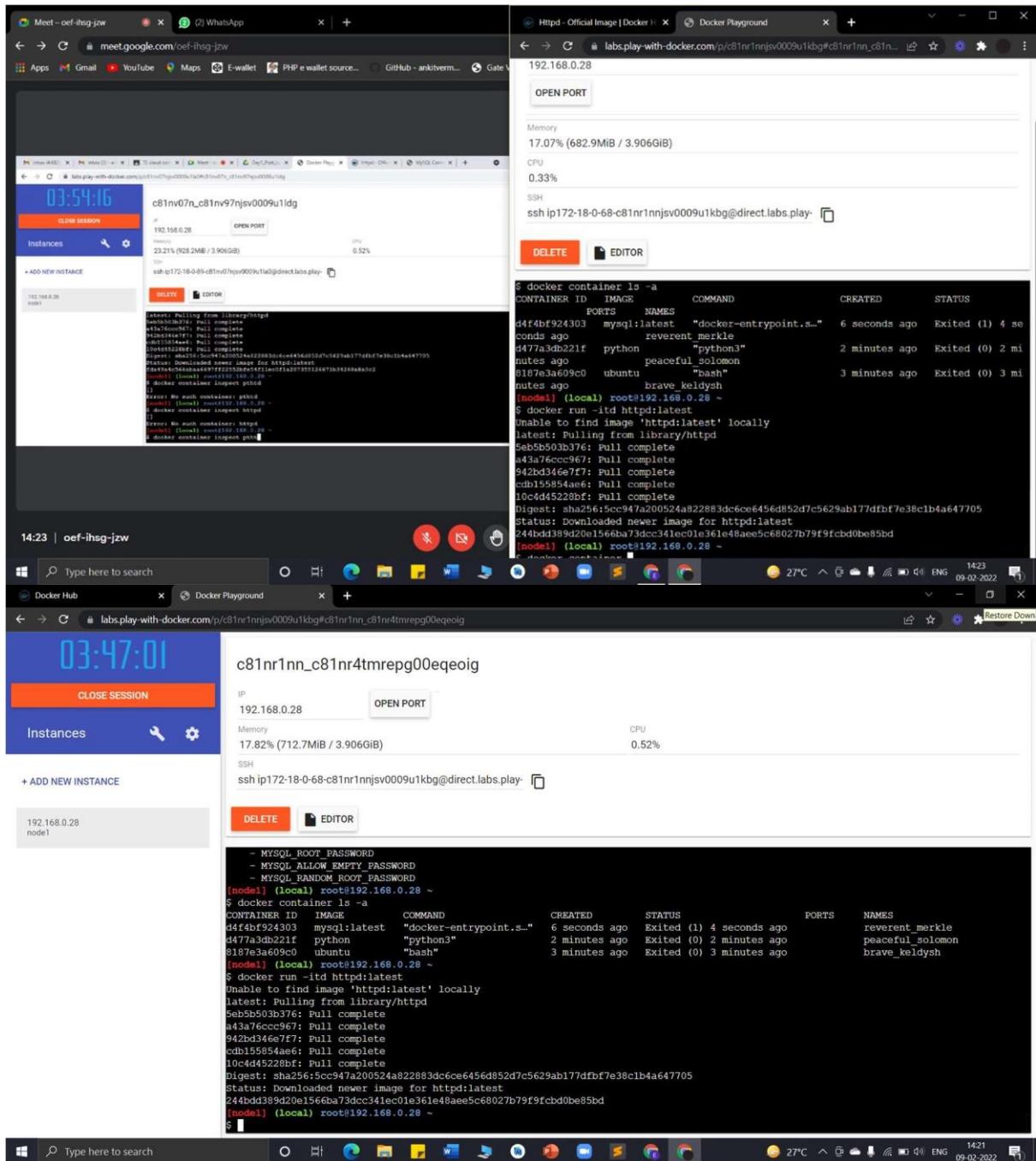
```
Usage: docker container inspect [OPTIONS] CONTAINER [CONTAINER...]
```

```
Display detailed information on one or more containers
[node1] (local) root@192.168.0.28 ~
$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
python latest dfce7257b7ba 28 hours ago 91.7MB
ubuntu latest 54c9d81cb44 7 days ago 72.8MB
mysql latest d1dc36cf8d9e 13 days ago 51.9MB
httpd latest a8ea074f4566 2 weeks ago 144MB
[node1] (local) root@192.168.0.28 ~
$ docker run -dit --name my-running-app -p 8080:80 httpd
c202b0c2b4df5f8e7d45801f9b0319e3f81fdfffeefaf9114d91dda9c45747b4
[node1] (local) root@192.168.0.28 ~
$ ^C
[node1] (local) root@192.168.0.28 ~
$ 
```



It works!





Docker Hub Docker Playground

[https://labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\\_c81nr4tmrpg00eqeoig](https://labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn_c81nr4tmrpg00eqeoig)

03:53:46

CLOSE SESSION

Instances  

+ ADD NEW INSTANCE

192.168.0.28 node1

IP: 192.168.0.28 OPEN PORT

Memory: 33.82% (1.321GiB / 3.906GiB) CPU: 0.15%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

```
[model] (local) root@192.168.0.28 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
d477a3db221f python "python3" About a minute ago Exited (0) About a minute ago
6187e3a69c0 ubuntu "bash" 2 minutes ago Exited (0) 2 minutes ago
[model] (local) root@192.168.0.28 ~
$ docker run mysql:latest
2022-02-09 08:44:33+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.28-1debbian10 started.
2022-02-09 08:44:33+00:00 [Note] [Entrypoint]: Switching to user 'mysql'
2022-02-09 08:44:33+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.28-1debbian10 started.
2022-02-09 08:44:33+00:00 [ERROR] [Entrypoint]: Database is uninitialized and password option is not specified
    You need to specify one of the following:
    - MYSQL_ROOT_PASSWORD
    - MYSQL_ALLOW_EMPTY_PASSWORD
    - MYSQL_RANDOM_ROOT_PASSWORD
[model] (local) root@192.168.0.28 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
d4f4bf924303 mysql:latest "docker-entrypoint.s..." 6 seconds ago Exited (1) 4 seconds ago
d477a3db221f python "python3" 2 minutes ago Exited (0) 2 minutes ago
6187e3a69c0 ubuntu "bash" 3 minutes ago Exited (0) 3 minutes ago
[model] (local) root@192.168.0.28 ~
```

Type here to search

Meet - oef-ihsg-jzw WhatsApp

27°C 14:14 09-02-2022

Docker Hub Docker Playground

[https://labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn\\_c81nr1nn\\_c81nr1nn](https://labs.play-with-docker.com/p/c81nr1nnjsv0009u1kbg#c81nr1nn_c81nr1nn_c81nr1nn)

OPEN PORT

Memory: 18.13% (725.2MiB / 3.906GiB) CPU: 192.95%

SSH: ssh ip172-18-0-68-c81nr1nnjsv0009u1kbg@direct.labs.play

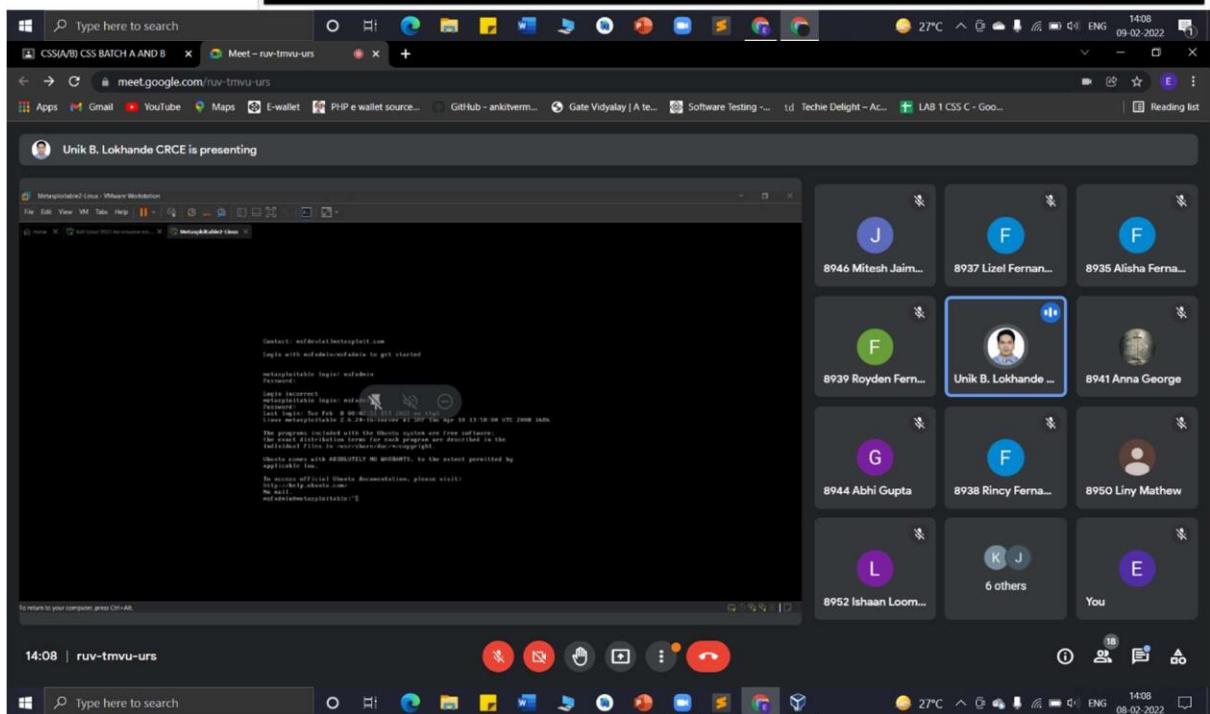
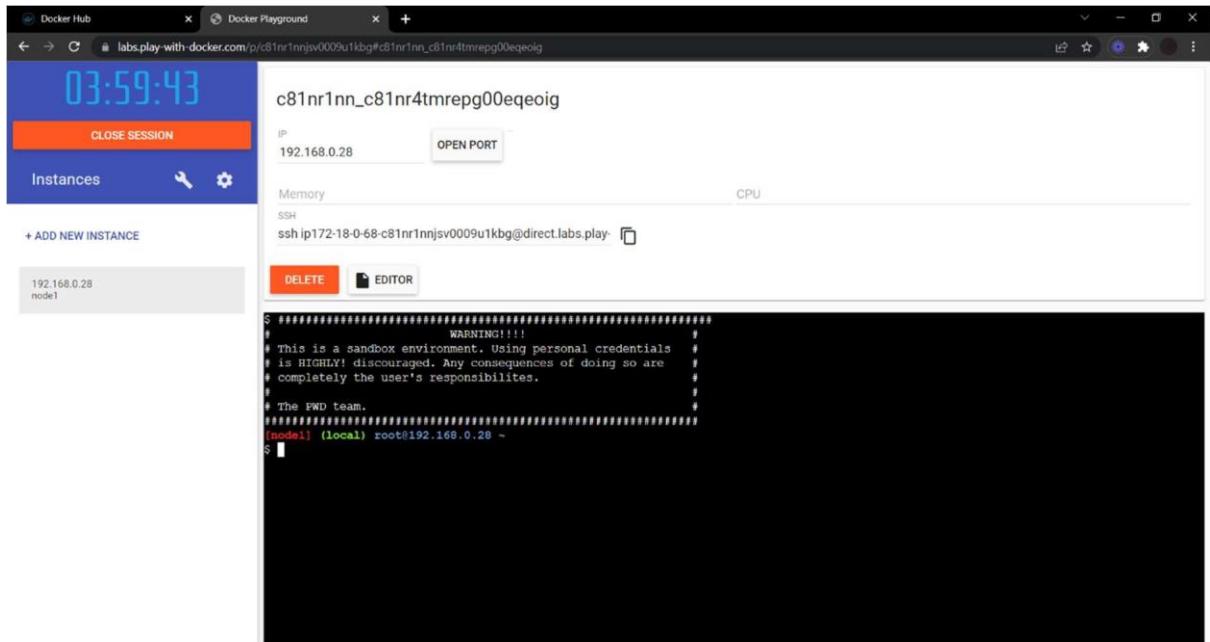
 

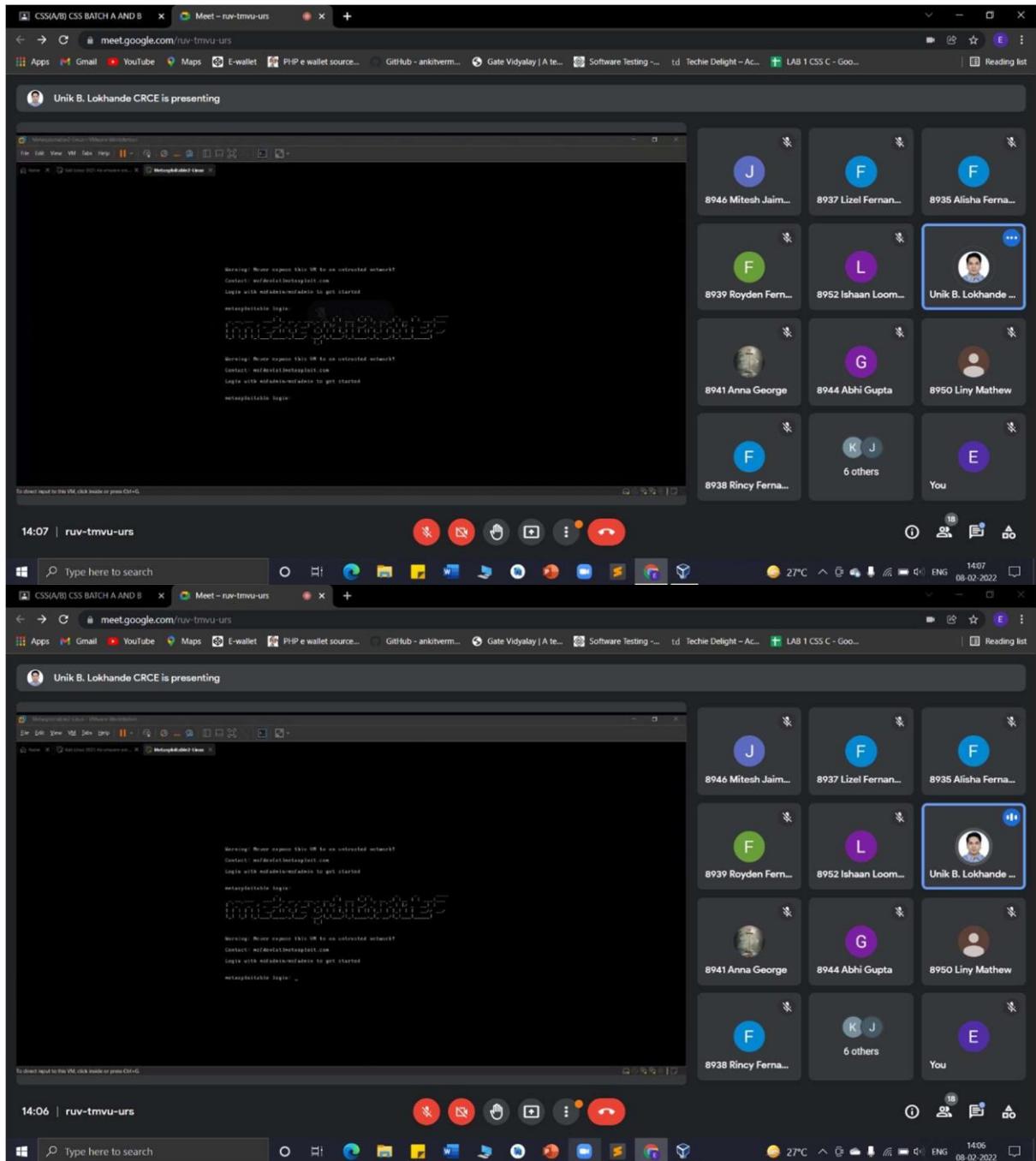
```
$ ls
[model] (local) root@192.168.0.28 ~
$ docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
08c01a0aec47: Pull complete
Digest: sha256:669e010b50ba55beb236b253c1fd5768333f0d1dbcb034f7c07a4dc93f474be
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
[model] (local) root@192.168.0.28 ~
$ docker pull python
Using default tag: latest
latest: Pulling from library/python
0c608fffc9c7e: Pull complete
412caad352a3: Pull complete
e6d3e61f7a50: Pull complete
461bb1d1c517: Extracting 50.14MB/54.57MB
808edda3c2e0: Download complete
724cf2d2cd19b: Download complete
1bb6570cd7ac: Download complete
aca06d6d45b1: Download complete
678714351737: Download complete
```

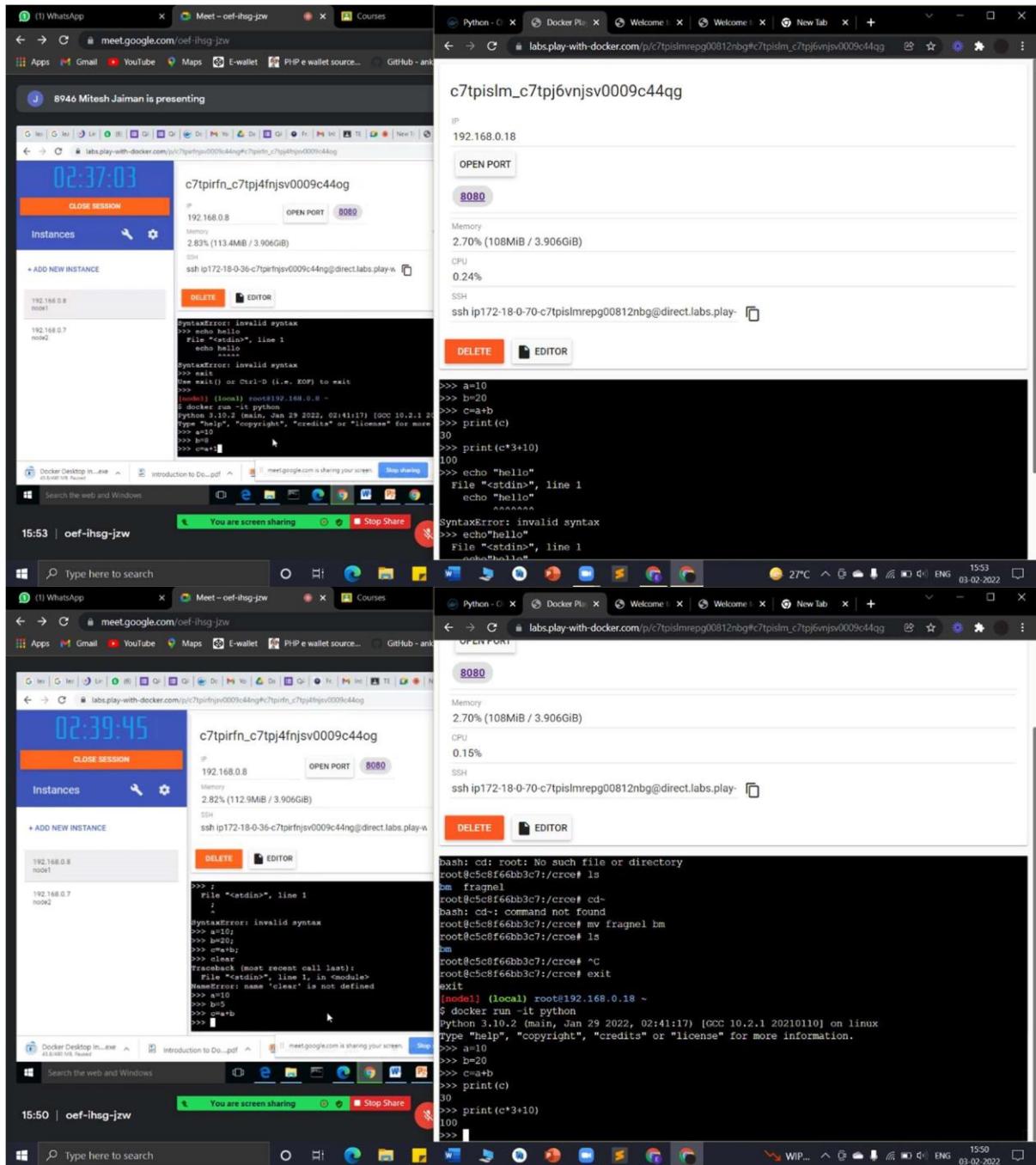
14:10 | oef-ihsg-jzw

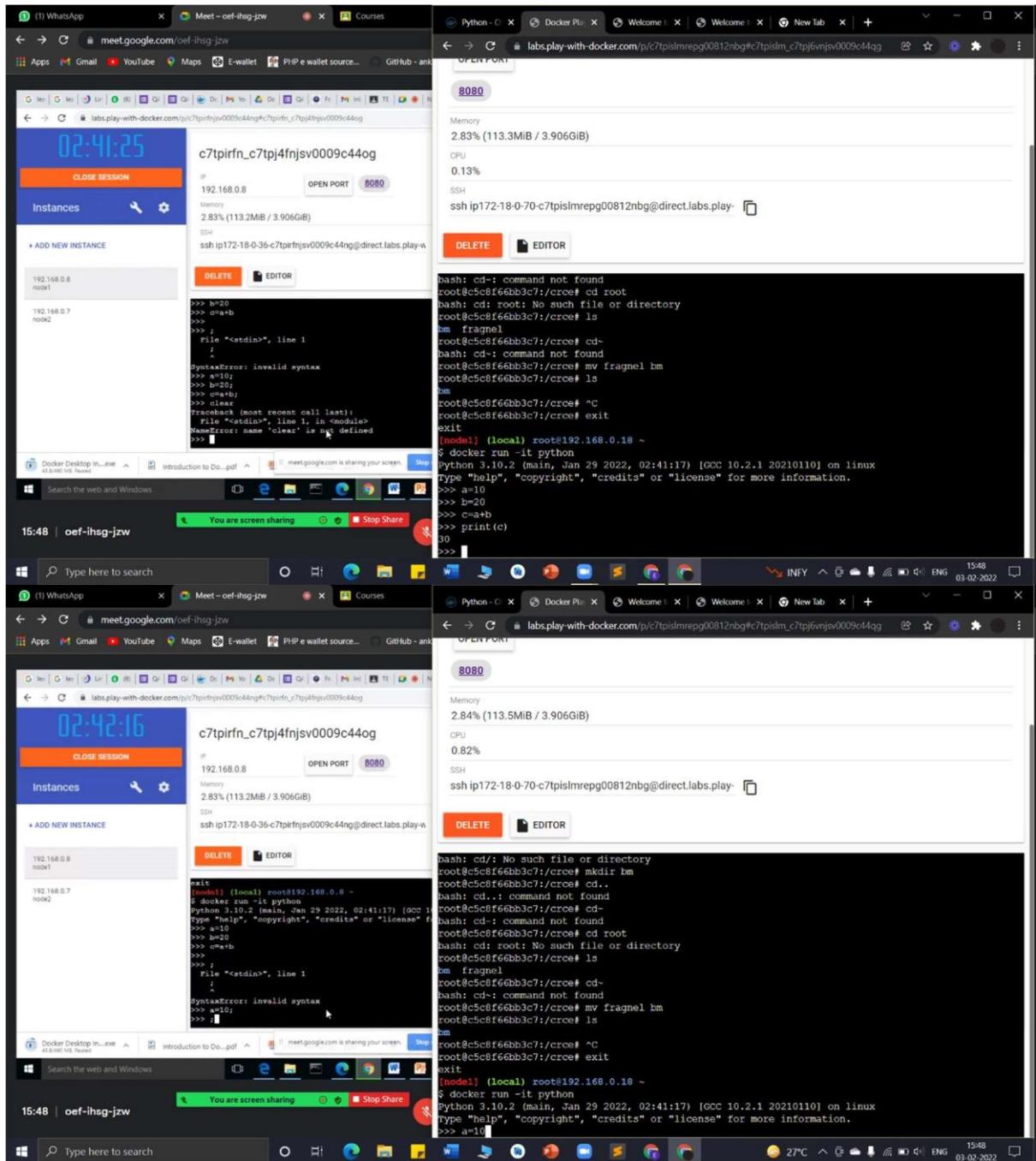
Type here to search

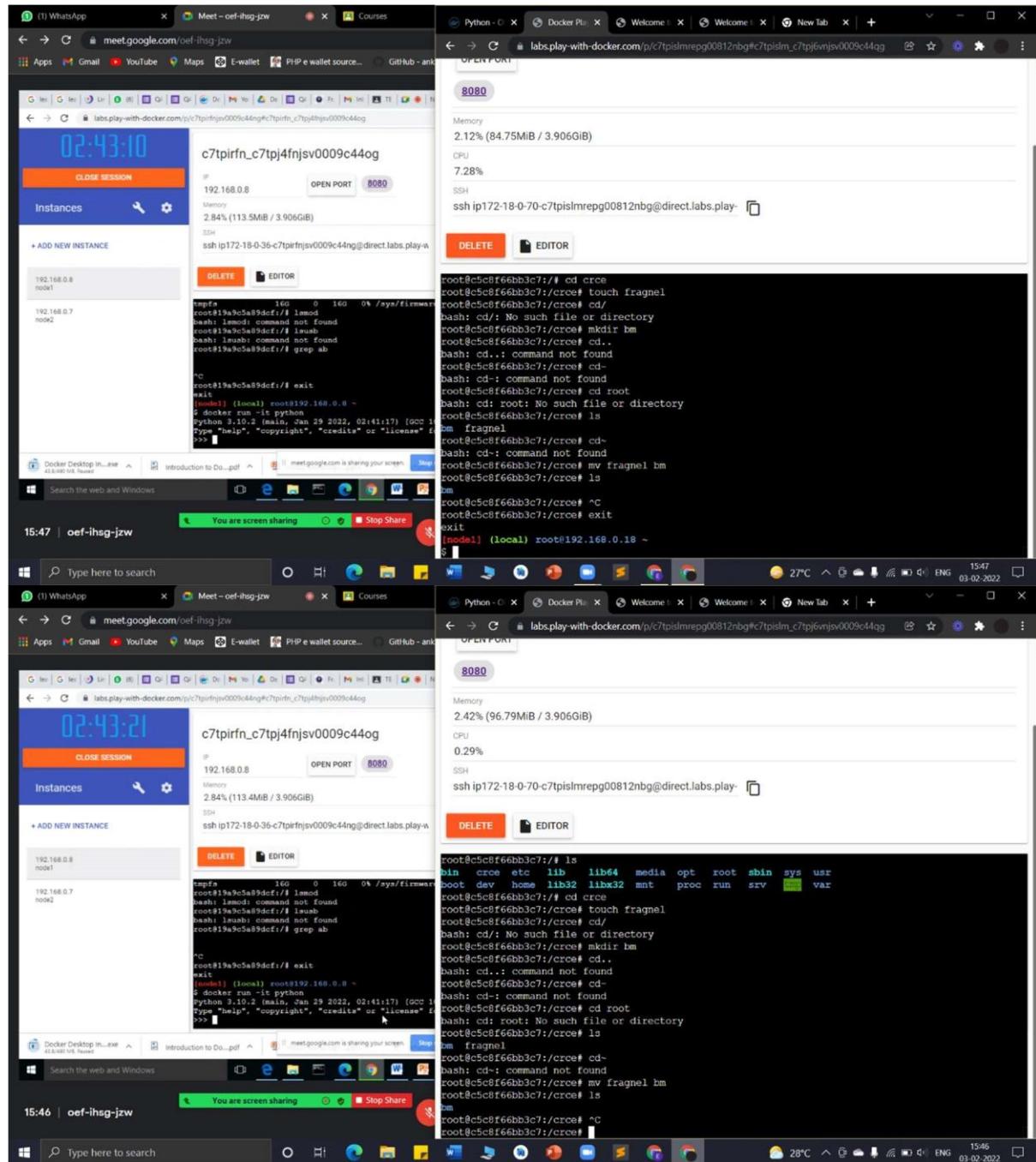
27°C 14:10 09-02-2022











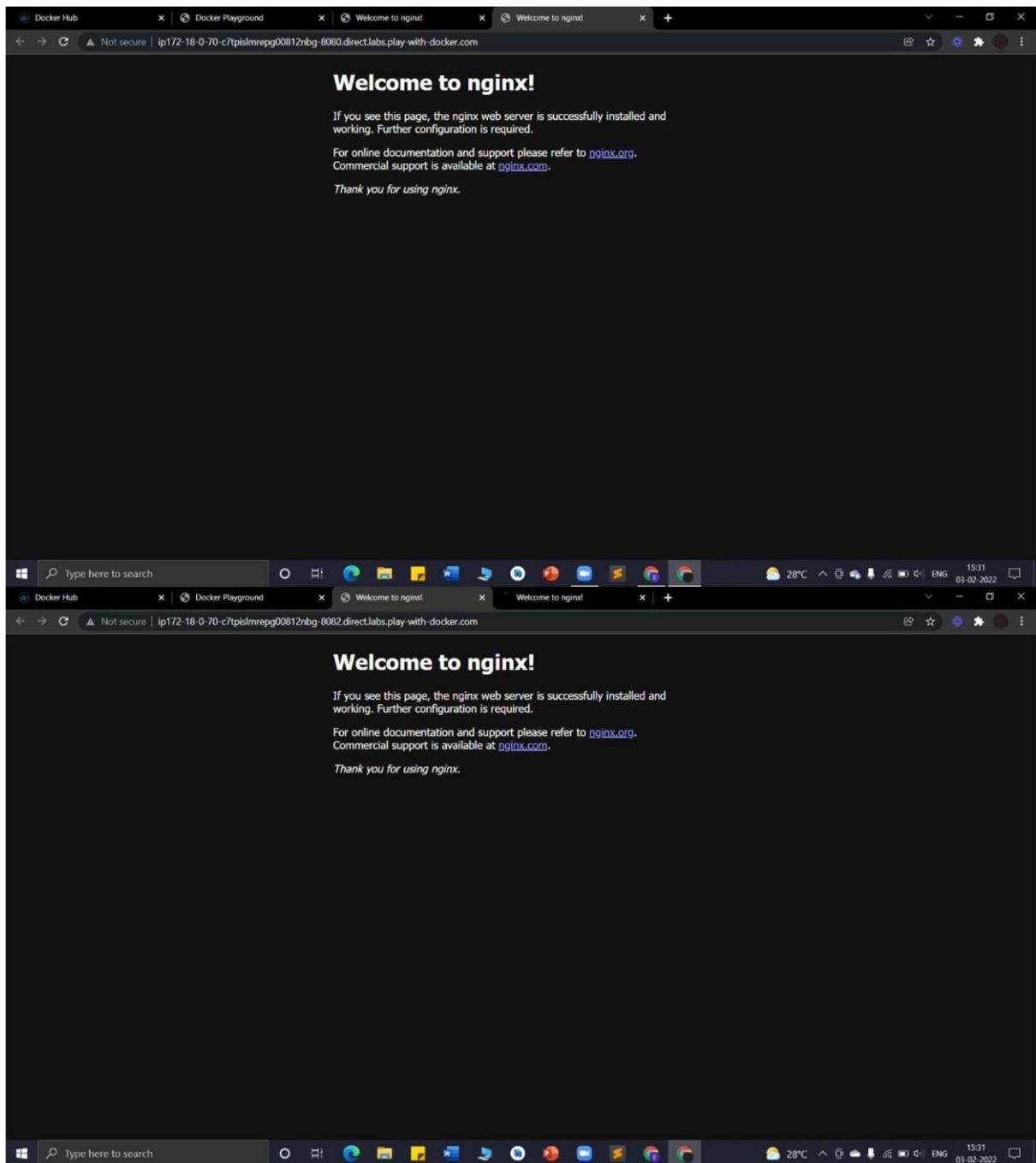
Two screenshots of a Windows desktop environment showing a Docker session sharing.

**Screenshot 1 (Top):**

- Left Window:** A Docker Desktop interface showing a screen share from "meet.google.com/oef-ihsg-jzw". The IP is 192.168.0.8, port 8080 is open, and memory usage is 2.37% (94.92MB / 3.906GB).
- Right Window:** A browser window at [https://labs.play-with-docker.com/p/c7tpirfn\\_c7tpj4fnjsv0009c44og](https://labs.play-with-docker.com/p/c7tpirfn_c7tpj4fnjsv0009c44og). It shows a terminal session with the command "ssh ip172-18-0-70-c7tpislmrep00812nbg@direct.labs.play-w". The terminal output shows various Docker images and their details.
- Taskbar:** Shows icons for WhatsApp, Meet, Courses, Docker Desktop, and a PDF titled "Introduction to Docker.pdf".

**Screenshot 2 (Bottom):**

- Left Window:** The same Docker Desktop interface as above, showing a screen share from "meet.google.com/oef-ihsg-jzw". The IP is 192.168.0.8, port 8080 is open, and memory usage is 2.05% (81.8MB / 3.906GB).
- Right Window:** A browser window at [https://labs.play-with-docker.com/p/c7tpirfn\\_c7tpj4fnjsv0009c44og](https://labs.play-with-docker.com/p/c7tpirfn_c7tpj4fnjsv0009c44og). It shows a terminal session with the command "ssh ip172-18-0-70-c7tpislmrep00812nbg@direct.labs.play-w". The terminal output shows various Docker images and their details.
- Taskbar:** Shows icons for WhatsApp, Meet, Courses, Docker Desktop, and a PDF titled "Introduction to Docker.pdf".



Docker Hub   Docker Playground   Welcome to nginx!   Welcome to nginx!

[labs.play-with-docker.com/p/c7tpislmrep00812nbg#c7tpislm\\_c7tpj6vnjsv0009c44qg](#)

02:58:35

**c7tpislm\_c7tpj6vnjsv0009c44qg**

IP: 192.168.0.18   OPEN PORT: 8080

Memory: 1.94% (77.68MiB / 3.906GiB)   CPU: 0.19%

SSH: ssh ip172-18-0-70-c7tpislmrep00812nbg@direct.labs.play

**DELETE**   **EDITOR**

```
jelastic/mysql      An image of the MySQL database server mainta... 2
centos/mysql-80-centos7    MySQL 8.0 SQL database server          2
widdpim/mysql-client    Dockerized MySQL Client (5.7) including Curl... 1
[OK]
[nodel] (local) root@192.168.0.18 ~
$ docker search --filter=stars=90 mysql
NAME                           DESCRIPTION                                STARS   OFFICIAL   AUTOMATED
mysql                          MySQL is a widely used, open-source relation... 12051  [OK]
mariadb                         MariaDB Server is a high performing open sou... 4619   [OK]
mysql/mysql-server              Optimized MySQL Server Docker images. Create... 901    [OK]
phpmyadmin                      phpMyAdmin - A web interface for MySQL and M... 440    [OK]
mysql/mysql-cluster             Experimental MySQL Cluster Docker images. Cr... 92     [OK]
centos/mysql-57-centos7        MySQL 5.7 SQL database server          92     [OK]
[OK]
[nodel] (local) root@192.168.0.18 ~
$ docker search --filter=stars=90 ubuntu
NAME                           DESCRIPTION                                STARS   OFFICIAL   AUTOMATED
ubuntu                         Ubuntu is a Debian-based Linux operating sys... 13634  [OK]
dorowu/ubuntu-desktop-lxde-vnc  Docker image to provide HTML5 VNC interface ... 605    [OK]
websphere-liberty               WebSphere Liberty multi-architecture images ... 283    [OK]
rastasheep/ubuntu-sshd          Dockerized SSH service, built on top of offic... 256    [OK]
consol/ubuntu-xfce-vnc         Ubuntu container with "headless" VNC session... 244    [OK]
ubuntu-upstart                  DEPRECATED, as is Upstart (find other proces... 112    [OK]
[OK]
```

Type here to search

WhatsApp   Meet - oef-ihsq-jzw   Courses

meet.google.com/oef-ihsq-jzw

15:30 | oef-ihsq-jzw

02:59:46

**c7tpirfn\_c7tpj4fnjsv0009c44og**

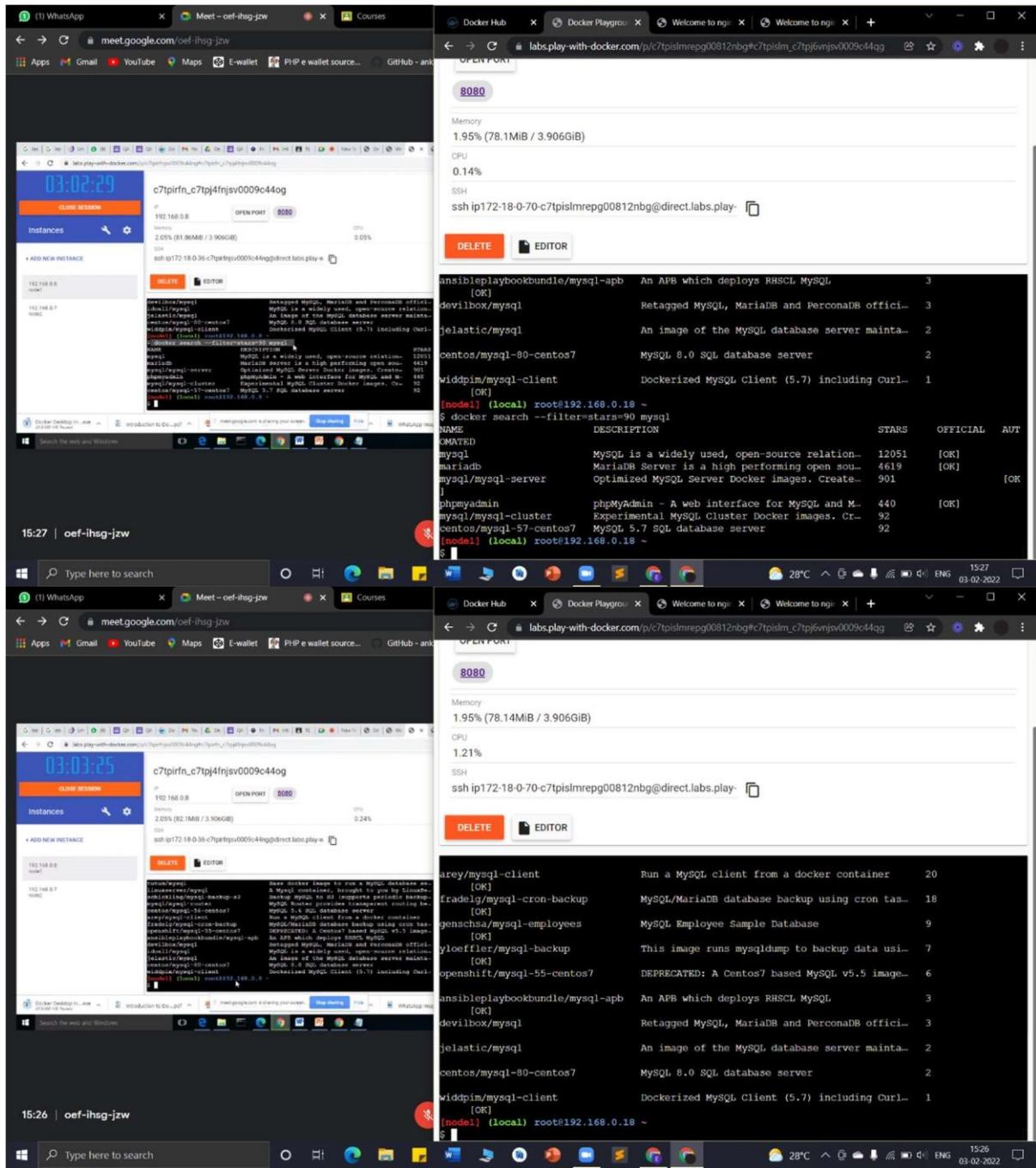
IP: 192.168.0.8   OPEN PORT: 8080

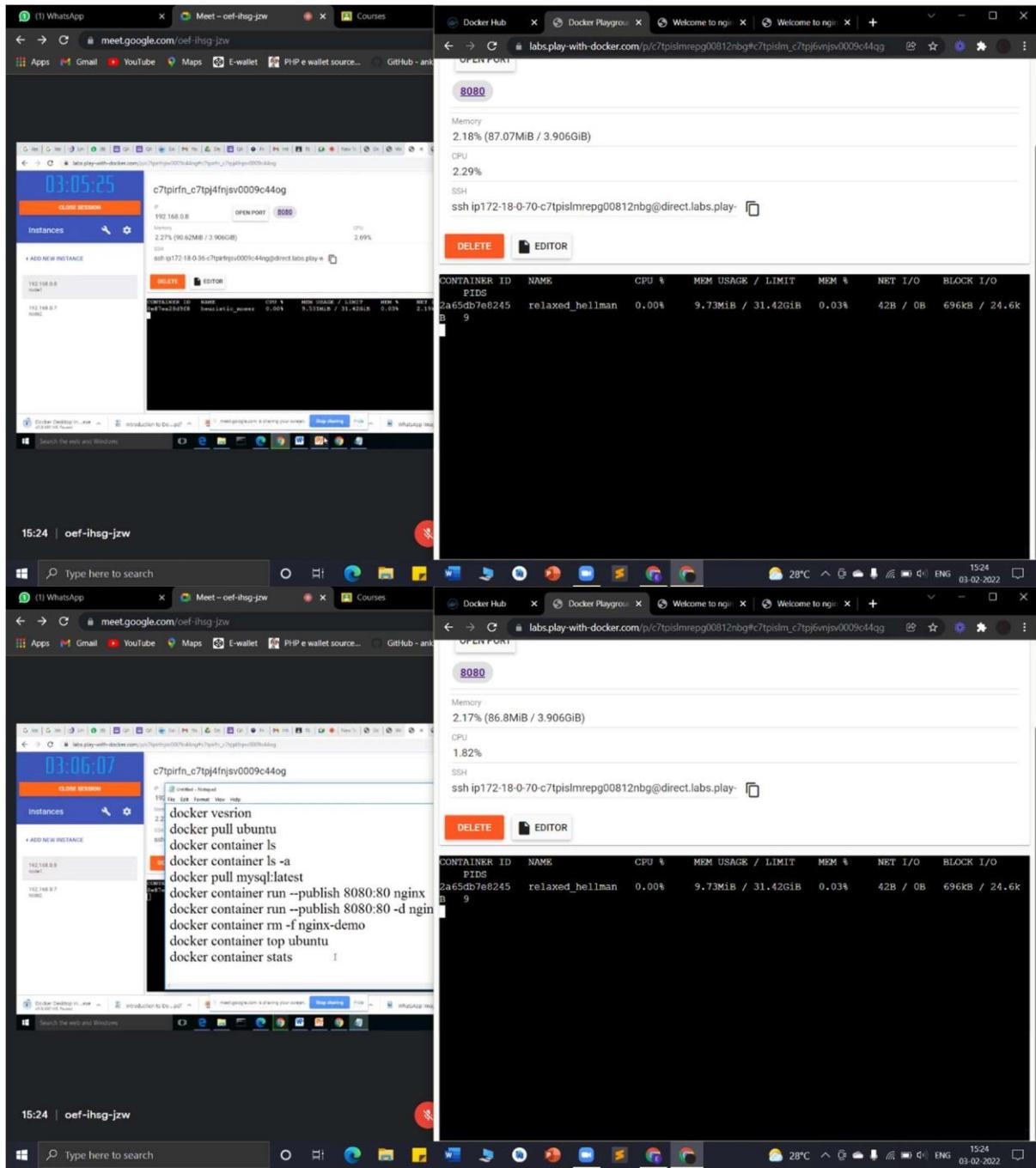
Memory: 2.05% (81.95MiB / 3.906GiB)

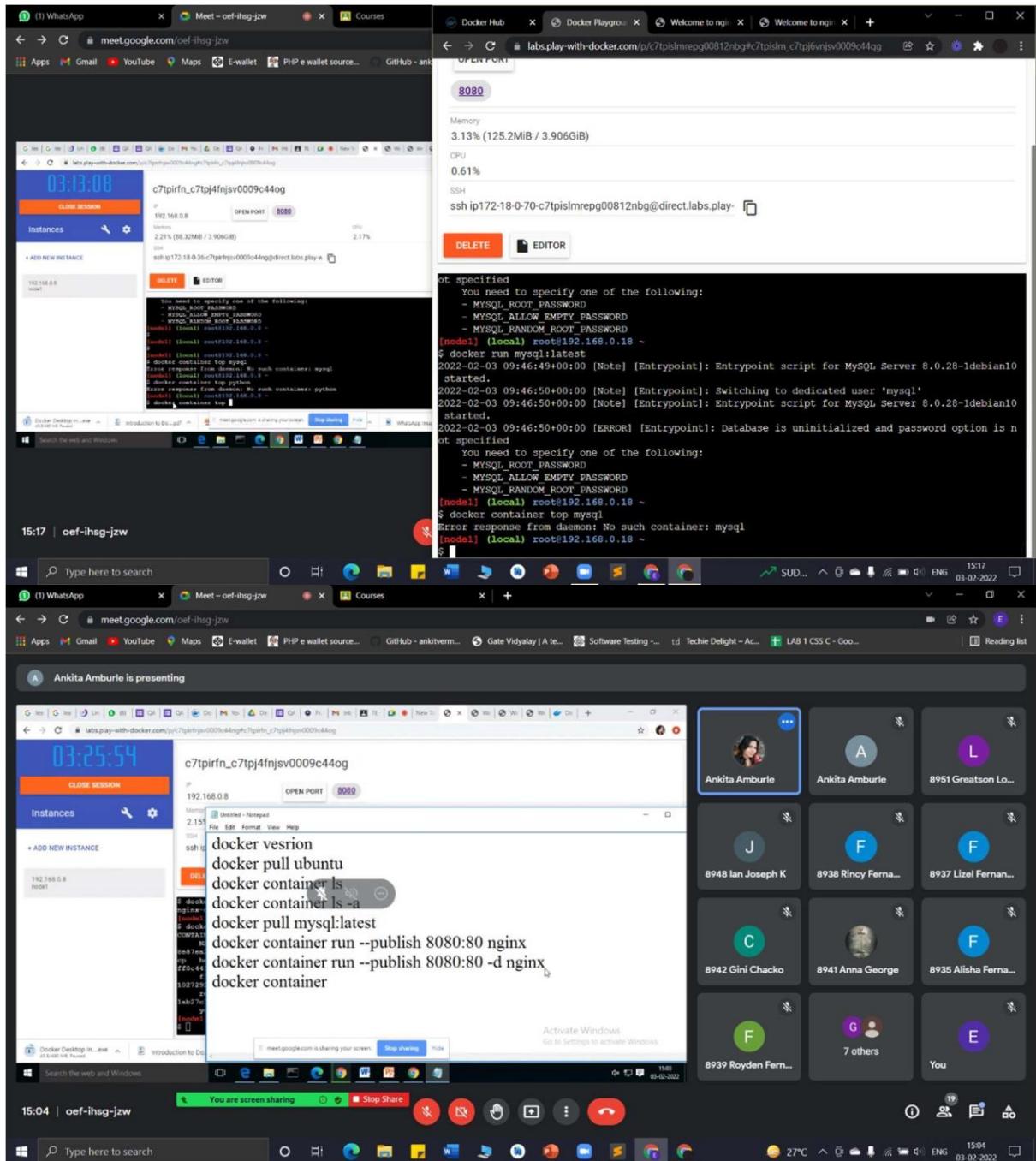
SSH: ssh ip172-18-0-36-c7tpirfnjsv0009c44ng@direct.labs.play

**DELETE**   **EDITOR**

```
mariadb                         MariaDB Server is a high performing open source MySQL... 901    [OK]
mysql/mysql-server                Optimized MySQL Server Docker images. Create... 440    [OK]
phpmyadmin                      phpMyAdmin - A web interface for MySQL and MySQLi... 92     [OK]
mysql/mysql-cluster              Experimental MySQL Cluster Docker images. Cr... 92     [OK]
centos/mysql-57-centos7          MySQL 5.7 SQL database server          92     [OK]
[OK]
[nodel] (local) root@192.168.0.8 ~
$ docker search --filter=stars=90 ubuntu
NAME                           DESCRIPTION                                STARS   OFFICIAL   AUTOMATED
ubuntu                         Ubuntu is a Debian-based Linux operating sys... 13634  [OK]
dorowu/ubuntu-desktop-lxde-vnc  Docker image to provide HTML5 VNC interface ... 605    [OK]
websphere-liberty               WebSphere Liberty multi-architecture images ... 283    [OK]
rastasheep/ubuntu-sshd          Dockerized SSH service, built on top of offic... 256    [OK]
consol/ubuntu-xfce-vnc         Ubuntu container with "headless" VNC session... 244    [OK]
ubuntu-upstart                  DEPRECATED, as is Upstart (find other proces... 112    [OK]
[OK]
```







15:03 | oef-ihsg-jzw

```

2.14% (85.73MiB / 3.906GiB)
CPU
8.92%
SSH
ssh ip172-18-0-70-c7tpislmrep00812nbg@direct.labs.play-. 

```

15:03 | oef-ihsg-jzw

```

$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
2a65d7e78245 nginx "/docker-entrypoint..." 3 minutes ago Up 3 minutes 0.0
0.0:080->80/tcp relaxed_hallman
cc0d943d7510 nginx "/docker-entrypoint..." 8 minutes ago Exited (0) 5 minutes ago
026172d3dc78 python "python3" 14 minutes ago Exited (0) 14 minutes ago
424ab4f5728e mysql "/docker-entrypoint.s..." 15 minutes ago Exited (1) 15 minutes ago
25c32599c6a ubuntu "bash" 27 minutes ago Exited (0) 27 minutes ago
mystifying_jemison
[node1] root@ip192.168.0.18 ~
$ docker container run --publish 8081:80 -d --name nginx-demo
"docker container run" requires at least 1 argument.
See 'docker container run --help'.

```

15:01 | oef-ihsg-jzw

```

$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
2a65d7e78245 nginx "/docker-entrypoint..." 3 minutes ago Up 3 minutes 0.0
0.0:080->80/tcp relaxed_hallman
cc0d943d7510 nginx "/docker-entrypoint..." 8 minutes ago Exited (0) 5 minutes ago
026172d3dc78 python "python3" 14 minutes ago Exited (0) 14 minutes ago
424ab4f5728e mysql "/docker-entrypoint.s..." 15 minutes ago Exited (1) 15 minutes ago
25c32599c6a ubuntu "bash" 27 minutes ago Exited (0) 27 minutes ago
mystifying_jemison
[node1] root@ip192.168.0.18 ~
$ docker container run [OPTIONS] IMAGE [COMMAND] [ARG...]
Run a command in a new container
[node1] root@ip192.168.0.18 ~
$ docker

```

Two screenshots of a Windows desktop showing Docker container logs and a browser.

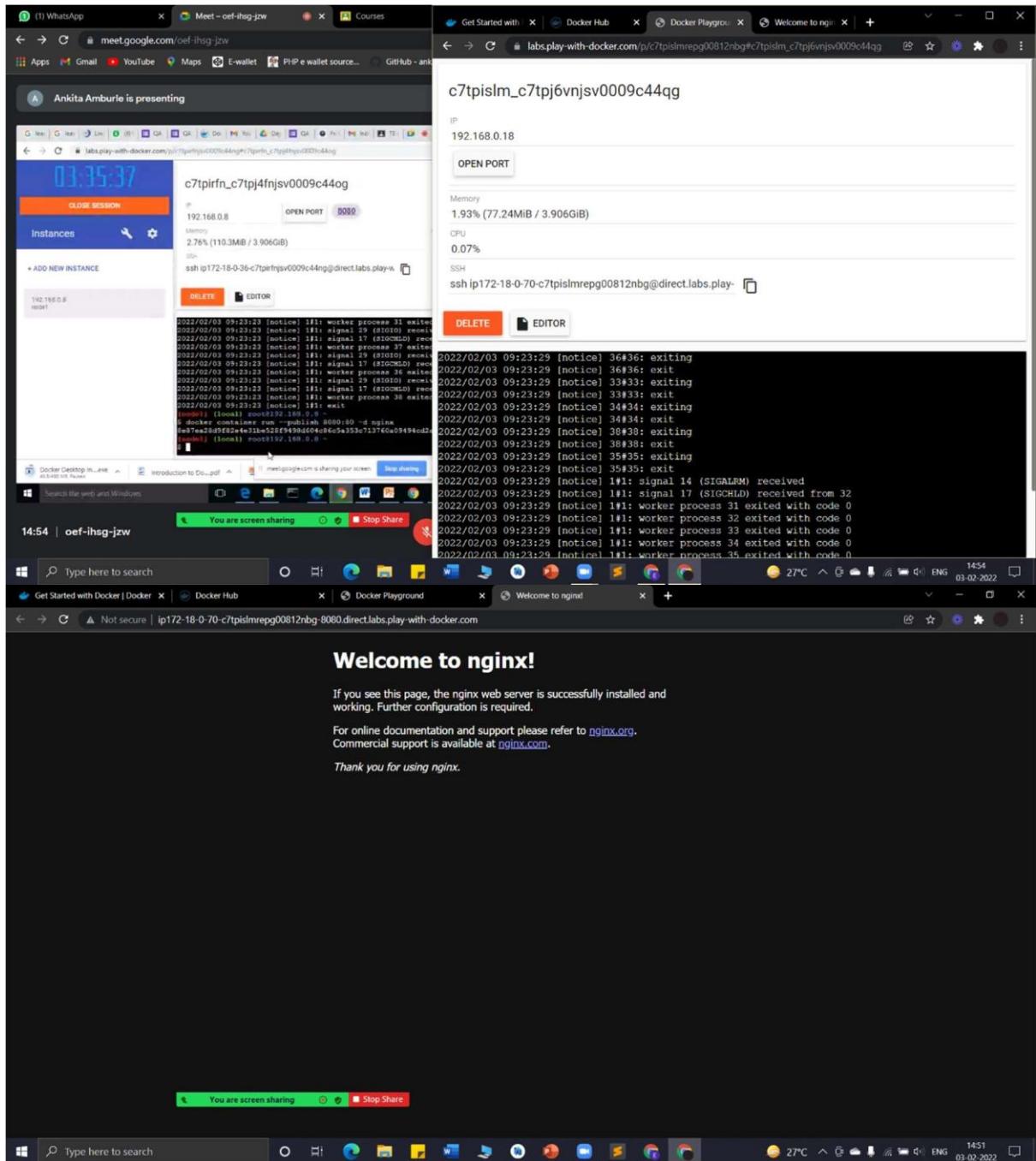
**Screenshot 1 (Top):**

- Left Panel:** A screenshot of a Google Meet session titled "Meet - oef-ihsg-jzw". It shows "Ankita Amburle is presenting". Below the video player, there's a "CLOSE SESSION" button.
- Middle Panel:** A screenshot of a Docker Desktop interface. It shows a container named "c7tpirfn\_c7tp4fnjsv0009c44og" with IP 192.168.0.8. An "OPEN PORT" button is set to port 8080. The terminal window shows the command:
 

```
$ docker container run --publish 8080:80 -d nginx
$ docker container ls -a
CONTAINER ID        IMAGE               COMMAND             CREATED            STATUS              PORTS
NAME
8e7ea2d9f8        nginx              "/docker-entrypoint..."   50 seconds ago    Up 50 seconds
ffcc41ec6c        "/docker-entrypoint..."   6 minutes ago     Up 6 minutes
flamboyant_stonebraker  1027297ec3       mysql              "/docker-entrypoint..."   12 minutes ago   Recurring
lab27e3c495        ubuntu              "bash"             23 minutes ago   Up 23 minutes
[node1] (local) root@192.168.0.8 ~
```
- Right Panel:** A browser window showing the Docker Playbook at [https://labs.play-with-docker.com/p/c7tpislmrep00812nbg/c7tpislm\\_c7tpj6vnjsv0009c44og](https://labs.play-with-docker.com/p/c7tpislmrep00812nbg/c7tpislm_c7tpj6vnjsv0009c44og). The page displays memory usage (2.24% / 89.66MiB / 3.906GiB), CPU usage (1.84%), and SSH logs. The logs show multiple worker processes exiting with code 0, and one exit with code 1. The log ends with a command to publish port 8080.

**Screenshot 2 (Bottom):**

- Left Panel:** Similar to Screenshot 1, showing a Google Meet session.
- Middle Panel:** Similar to Screenshot 1, showing the Docker Desktop interface with a different container configuration. The terminal command is identical to Screenshot 1.
- Right Panel:** A browser window showing the Docker Playbook at the same URL. The logs show a different sequence of events, starting with a signal 14 (SIGALRM) received from process 32, followed by multiple worker processes exiting with code 0, and finally an exit with code 1. The log ends with a command to publish port 8080.



Two screenshots of a Windows desktop showing a video call and a Docker playground interface.

**Screenshot 1 (Top):**

- Left Window:** A video call interface titled "Meet - oef-ihsq-jzw". It shows "Ankita Amburle is presenting". The timestamp is 03:42:09.
- Right Window:** A browser tab titled "Docker Playground" showing a terminal session. The command `ssh ip172-18-0-70-c7tpislmrep00812nbg@direct.labs.play-with-docker.com` is running. The terminal output shows several Docker containers listed with their status (Exited) and memory usage (e.g., 1.75% / 69.88MiB).
- Bottom:** The Windows taskbar with various pinned icons and the system tray showing the date and time (14:48 | oef-ihsq-jzw).

**Screenshot 2 (Bottom):**

- Left Window:** The same video call interface as above, now at 03:42:29.
- Right Window:** The same Docker playground terminal session as above, showing the same list of Docker containers.
- Bottom:** The Windows taskbar with the same pinned icons and system tray information (14:47 | oef-ihsq-jzw).

Two screenshots of a Windows desktop showing Docker operations.

**Screenshot 1 (Top):**

- Left Window:** A Google Meet session titled "Meet - oef-ihsq-jzw". A message from "Ankita Amburle" says "Are you talking? You Click the mic to turn on your microphone".
- Right Window:** A browser tab for "Docker Playground" at "labs.play-with-docker.com/p/c7tpislmregp00812nbg#c7tpislm\_c7pj6vnjsv0009c44qg". The "OPEN PORT" section shows a port mapping for "192.168.0.8" to "192.168.0.18". The terminal shows the following Docker commands and logs:
 

```
192.168.0.8
192.168.0.18
14.10% (563.9MB / 3.906GB)
SSH
ssh ip172-18-0-70-c7tpislmregp00812nbg@direct.labs.play-w.s
[...]
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS
026172d3dc78 python "python3" 46 seconds ago Exited (0) 43 seconds ago
424ab4f5728e mysql "docker-entrypoint.s..." About a minute ago Exited (1) About a minute ago
255c32599c6a ubuntu "bash" 13 minutes ago Exited (0) 13 minutes ago
[nodel] [local] root@192.168.0.18 ~
$ docker run python
[nodel] [local] root@192.168.0.18 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS
026172d3dc78 python "python3" 46 seconds ago Exited (0) 43 seconds ago
424ab4f5728e mysql "docker-entrypoint.s..." About a minute ago Exited (1) About a minute ago
255c32599c6a ubuntu "bash" 13 minutes ago Exited (0) 13 minutes ago
[nodel] [local] root@192.168.0.18 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS
026172d3dc78 python "python3" About a minute ago Exited (0) About a minute ago
424ab4f5728e mysql "docker-entrypoint.s..." 164KB (virtual 886MB)
255c32599c6a ubuntu "bash" 13 minutes ago Exited (0) 13 minutes ago
[nodel] [local] root@192.168.0.18 ~
$
```

**Screenshot 2 (Bottom):**

- Left Window:** A Google Meet session titled "Meet - oef-ihsq-jzw". A message from "Ankita Amburle" says "You are screen sharing".
- Right Window:** A browser tab for "Docker Playground" at "labs.play-with-docker.com/p/c7tpislmregp00812nbg#c7tpislm\_c7pj6vnjsv0009c44qg". The "OPEN PORT" section shows a port mapping for "192.168.0.8" to "192.168.0.18". The terminal shows the following Docker commands and logs:
 

```
192.168.0.8
192.168.0.18
14.09% (563.7MB / 3.906GB)
SSH
ssh ip172-18-0-70-c7tpislmregp00812nbg@direct.labs.play-w.s
[...]
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS
026172d3dc78 python "python3" 23 seconds ago Exited (1) 21 seconds ago
424ab4f5728e mysql "docker-entrypoint.s..." 23 seconds ago Exited (0) 21 seconds ago
255c32599c6a ubuntu "bash" 11 minutes ago Exited (0) 11 minutes ago
[nodel] [local] root@192.168.0.18 ~
$ docker run python
[nodel] [local] root@192.168.0.18 ~
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS
026172d3dc78 python "python3" 46 seconds ago Exited (0) 43 seconds ago
424ab4f5728e mysql "docker-entrypoint.s..." About a minute ago Exited (1) About a minute ago
255c32599c6a ubuntu "bash" 13 minutes ago Exited (0) 13 minutes ago
[nodel] [local] root@192.168.0.18 ~
$
```

