

# TRAINING CONTENT

Cloud Computing

YOUR NEXT DESTINATION  
OF SOFTWARE OUTSOURCING

# Lecture Outline



- Docker
- Container
- Containers vs Virtual Machines
- Docker Architecture Diagram
- Docker Installation
- Dockerfile
- Push Image into Registry
- Docker Networking
- Docker Compose
- Docker Compose Example
- Kubernetes Overview

# Downloading Docker images

```
docker pull ImageNAME
```

# Uploading the images in Docker Registry



Create one docker hub account or any other platform (like AWS,Azure,GCP)

Create a repository on Docker Hub [ex: dockertrainig]

Build your image locally:

```
docker build -t username/repository_name .
```

Then Login through CLI:

```
docker login
```

For push execute below command:

```
docker push bullet08/docker-push
```

**Go to your docker hub account you can see your uploaded image.**

# Docker Commands

docker

sudo docker search [keyword]

sudo docker search ubuntu

sudo docker pull [image-name]

sudo docker pull ubuntu

sudo docker images

sudo docker images

sudo docker run hello-world

sudo docker run -it ubuntu

sudo docker ps

sudo docker ps -a

sudo docker ps -l

sudo docker start [container-ID | container-name]

sudo docker stop [container-ID | container-name]

sudo docker rm [container-ID | container-name]

# Run container

Run a container using docker Hub Image:

```
docker run -it nginx
```

```
docker run --publish 80:80 nginx
```

Run Multiple container using docker Hub Image :

```
docker run --name MyContainer1 <same image id>
```

```
docker run --name MyContainer2 <same image id>
```

```
docker run --name MyContainer3 <same image id>
```

# Run and Check ip and ping

Run two busybox container:

```
sudo docker run -dit --name busybox1 busybox /bin/sh
```

```
sudo docker run -dit --name busybox2 busybox /bin/sh
```

Ping Test one : sudo docker exec busybox2 ping [www.google.com](http://www.google.com)

Curl Test: docker run --itd --rm my\_nginx nginx

Curl: <http://IP> it will show nginx default page

Find IP above container:

```
sudo docker inspect ContainerID | grep -i IPAddress
```

Check running container:

```
sudo docker ps
```

Go inside busybox1:

```
docker attach busybox1
```

```
/ # whoami
```

```
/ # hostname -I
```

```
/ # ping busybox2's Ip
```

following command will start an Nginx image and listen to port 80 on the host machine:

```
sudo docker run --rm -d --network host --name my_nginx nginx
```



# Thank You

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