

Practical-4

AIM: Introduction of Docker set-up and study of basic docker commands.

Setting up Docker on a Linux system and learning some basic Docker commands is a valuable skill for containerization and managing software applications. Perform the following tasks:

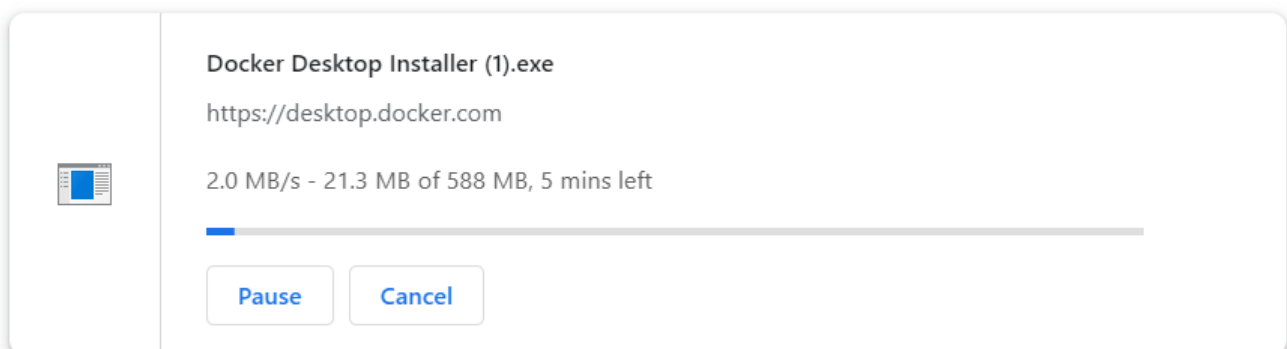
Task 1: Install the Docker Command Line Interface Tool from:

<https://docs.docker.com/desktop>

Install Docker Desktop on Windows

This page contains the download URL, information about system requirements, and instructions on how to install Docker Desktop for Windows.

Docker Desktop for Windows



Task 2: Hands-on on docker commands:

- Execute the different docker commands to work pull the image from the docker hub and run the image in your local system.

```
$ docker pull nginx:latest
latest: Pulling from library/nginx
Digest: sha256:10d1f5b58f74683ad34eb29287e07dab1e90f10af243f151bb50aa5dbb4d62ee
Status: Image is up to date for nginx:latest
docker.io/library/nginx:latest
```

- Commands to run the container with the name of your choice

```
$ docker run --name my_nginx_container nginx:latest
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
```

- Command to detach and attach the container

- To run a container in the background (detach):

```
$ docker run -d --name detached_container nginx:latest
ec3dd6918b60e9c6c5421d3b9e8cca98dafb46109cb99dd274eb89e21e98e693
```

- To reattach to a detached container:

```
$ docker attach detached_container
```

- Command to list all the images and containers

- list all the images

```
$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
nginx	latest	a6bd71f48f68	7 days ago	187MB

- list all the containers

```
$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
ec3dd6918b60	nginx:latest	"/docker-entrypoint...."	4 minutes ago	Exited (0) 2 minutes ago
b6fed98471db	nginx:latest	"/docker-entrypoint...."	7 minutes ago	Exited (0) 5 minutes ago
fa33176c9ca7	nginx	"/docker-entrypoint...."	15 minutes ago	Exited (0) 13 minutes ago

- Command to delete the specified image and containers

```
$ docker rm my_nginx_container
my_nginx_container
```

- Delete all the containers

```
$ docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
ec3dd6918b60e9c6c5421d3b9e8cca98dafb46109cb99dd274eb89e21e98e693
b6fed98471dbab7a34281cffd6eca0218f5b5032ac807fea3effee1ea4ad70bf
fa33176c9ca75b3079a83993a75882466d209609fcb883e3af842067849e75b6

Total reclaimed space: 3.279kB
```