

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/>

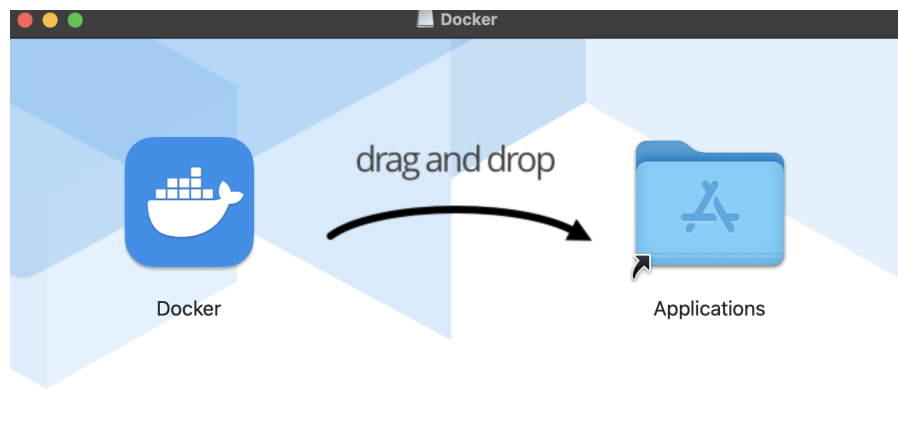
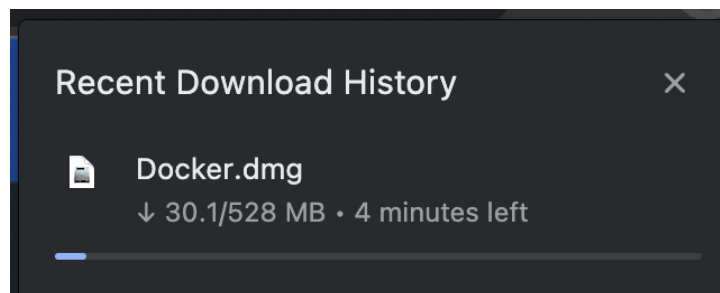
Install Docker Desktop on Mac

This page contains download URLs, information about system requirements, and instructions on how to install Docker Desktop for Mac.

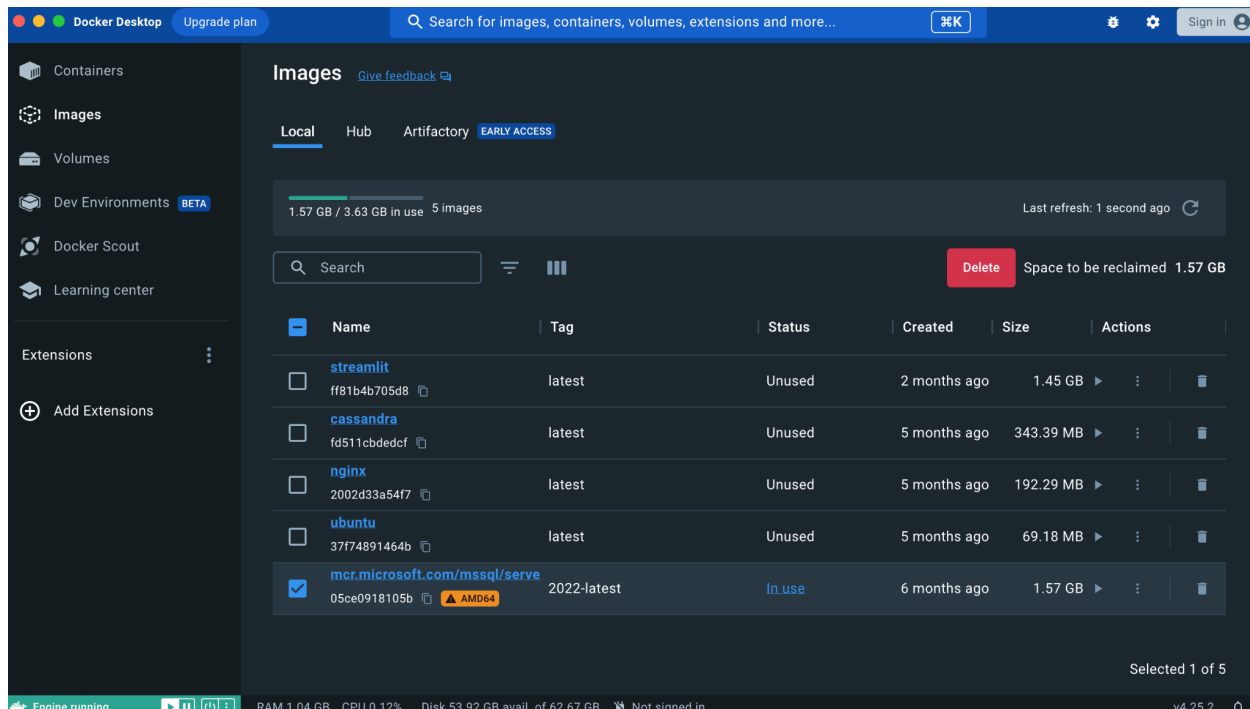
Docker Desktop for Mac with Apple silicon

Docker Desktop for Mac with Intel chip

For checksums, see [Release notes](#).



Docker Desktop



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

```
[(base) arthjani@Arths-MacBook-Air ~ % docker run --name ng1 nginx
/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
2023/11/28 06:50:40 [notice] 1#1: using the "epoll" event method
2023/11/28 06:50:40 [notice] 1#1: nginx/1.25.1
2023/11/28 06:50:40 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2023/11/28 06:50:40 [notice] 1#1: OS: Linux 6.4.16-linuxkit
2023/11/28 06:50:40 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/11/28 06:50:40 [notice] 1#1: start worker processes
2023/11/28 06:50:40 [notice] 1#1: start worker process 29
```

- Command to list all the images and containers

```
(base) arthjani@Arths-MacBook-Air ~ % docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
streamlit     latest    ff81b4b705d8   7 weeks ago    1.46GB
cassandra     latest    fd511cbdedcf   4 months ago   343MB
nginx         latest    2002d33a54f7   4 months ago   192MB
ubuntu        latest    37f74891464b   5 months ago   69.2MB
(base) arthjani@Arths-MacBook-Air ~ %
```

```
(base) arthjani@Arths-MacBook-Air ~ % docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS          NAMES
7cb4a8681cc3   nginx     "/docker-entrypoint..." 3 minutes ago  Up 3 minutes  80/tcp         nostalgic_lalande
(base) arthjani@Arths-MacBook-Air ~ %
```

- Command to delete the specified image and containers

```
(base) arthjani@Arths-MacBook-Air ~ % docker image rm ubuntu
Untagged: ubuntu:latest
Untagged: ubuntu@sha256:0bced47fffa3361afa981854fcabcd4577cd43cebbb808cea2b1f33a3dd7f508
Deleted: sha256:37f74891464b2067aacbde60d9e2888e002af047a0d5dfc0b06b701928e0b473
Deleted: sha256:c5ca84f245d30117a9a2720cb4297cedf3642816471d4d699f4d77e39e13a39c
```

```
(base) arthjani@Arths-MacBook-Air ~ % docker container rm ng1
ng1
```

- Delete all the containers

```
(base) arthjani@Arths-MacBook-Air ~ % docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Total reclaimed space: 0B
(base) arthjani@Arths-MacBook-Air ~ %
```