

Docker is multilayer image file.

When you want upgrade version of software at that time it **NOT download whole docker** , it just **download only upgraded layer** , base layer kept as it.

```

Last login: Sat Sep 28 10:57:20 on ttys001
Nanas-MBP:~ nanabiz$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS
fad0f8456ca7       postgres:9.6        "docker-entrypoint..." 45 seconds ago      Up 47 seconds      5432/tcp
eless_haibt
Nanas-MBP:~ nanabiz$

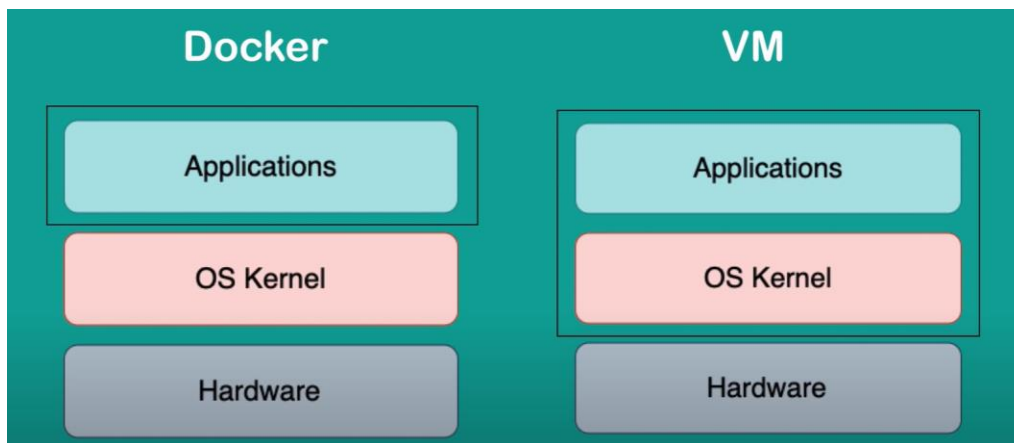
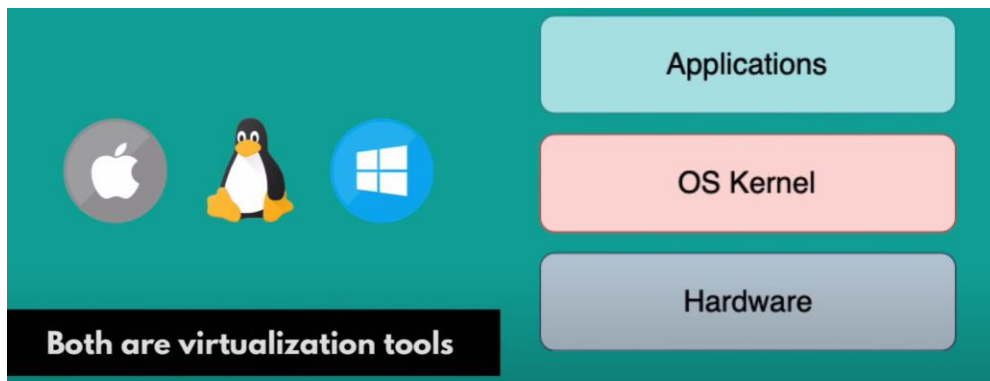
```

```

Nanas-MBP:~ nanabiz$ docker run postgres:10.10
Unable to find image 'postgres:10.10' locally
10.10: Pulling from library/postgres
8f91359f1fff: Already exists
c6115f5efcde: Already exists
28a9c19d8188: Already exists
2da4beb7be31: Already exists
fb9ca792da89: Already exists
cedc20991511: Already exists
b866c2f2559e: Already exists
5d459cf6645c: Already exists
6de9d066d892: Downloading [=====] 1.22 MB / 1.22 MB
401fcd8e29c4: Download complete
9b130e26214a: Download complete
1c048e77610c: Download complete
431b5e6c27b3: Download complete

```

some layers already exist ✓



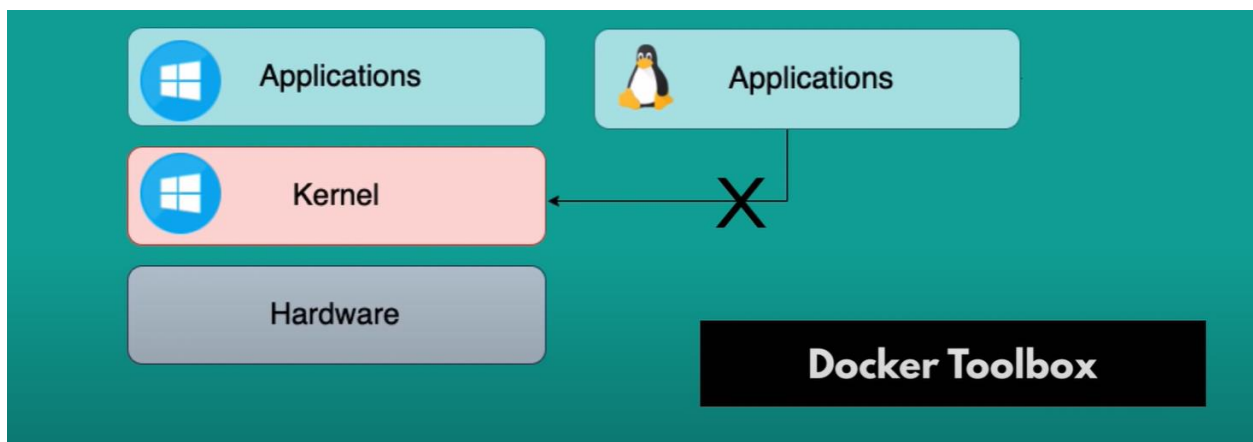
Docker virtualize at application layered where VM Virtualize at OS layered .

SIZE:- That why Docker is small in SIZE than VM

SPEED:- Docker is much faster then VM

OS Kernel Dependency (Compatibility) :- Docker run on any linux but if it window it extra Docker tool , When VM doesn't required , VM can run any host .

FOR Windows



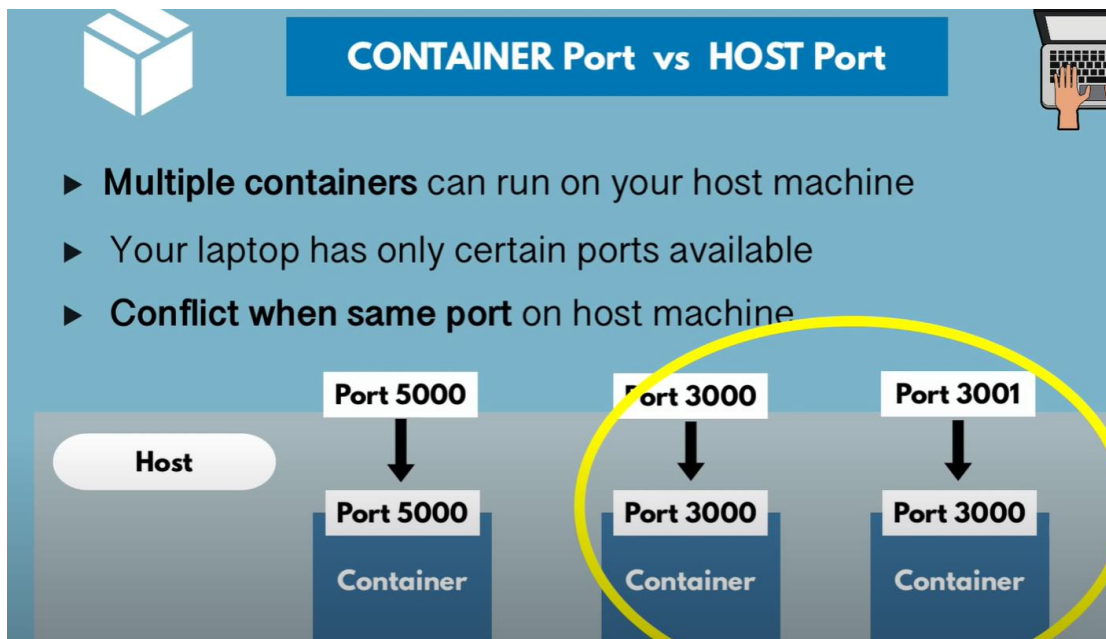
Workaround for Windows & Mac

Overview

- ✓ Before installing Docker - **pre-requisites**
- ✓ Install Docker on **Mac**
- ✓ Install Docker on **Windows**
- ✓ Install Docker on **Linux**

Install Docker

- ✓ **Docker Toolbox** for older Mac and Windows



What is port binding ?

docker run command	mongo-docker-compose.yaml
<pre> docker run -d \ --name mongo-express \ -p 8080:8080 \ -e ME_CONFIG_MONGODB_ ADMINUSERNAME=admin \ -e ME_CONFIG_MONGODB_ ADMINPASSWORD=password \ -e ME_CONFIG_MONGODB_ SERVER=mongodb \ --net mongo-network \ mongo-express </pre>	<pre> version: '3' services: mongodb: image: mongo ... mongo-express: image: mongo-express ports: - 8080:8080 environment: - ME_CONFIG_MONGODB_A.... </pre>

it's going to be easier
for you to edit the file

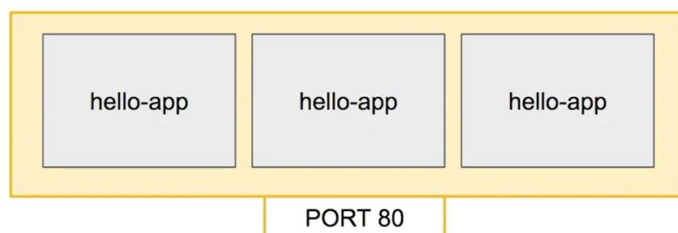
To Run docker compose file

```

~/Documents/K8s Tutorial/Demos/developing-with-docker/my-app — docker-com...
~/Documents/K8s Tutorial/Demos/developing-with-docker/my-app — docker-com... ~ -- -bash

[[my-app]$ docker-compose -f mongo.yaml up
Creating network "myapp_default" with the default driver
Creating myapp_mongodb_1
Creating myapp_mongo-express_1
  
```

With a Service



(My simple) definition:

Service = n containers all running with the same parameters,
available at the same port