



# What is Docker and Why we should use it?

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# What is Docker?

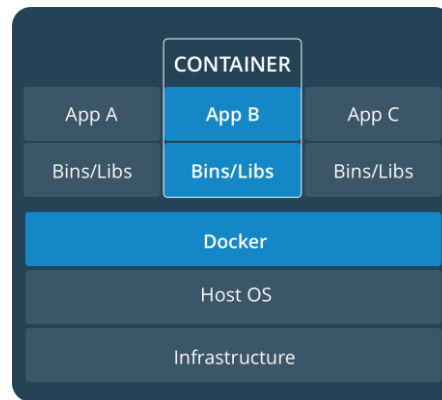
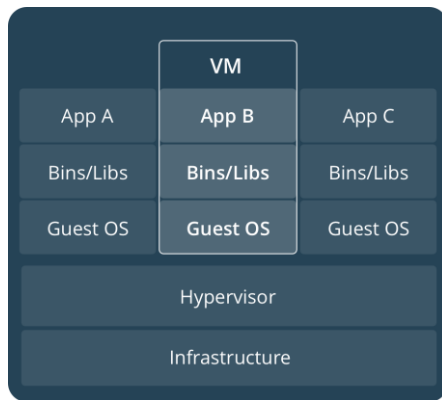
Docker is a software platform that allows you to **build**, **test**, and **deploy** applications quickly, **packaging** software into standardized units called **containers**.

# Why Docker is helpful?

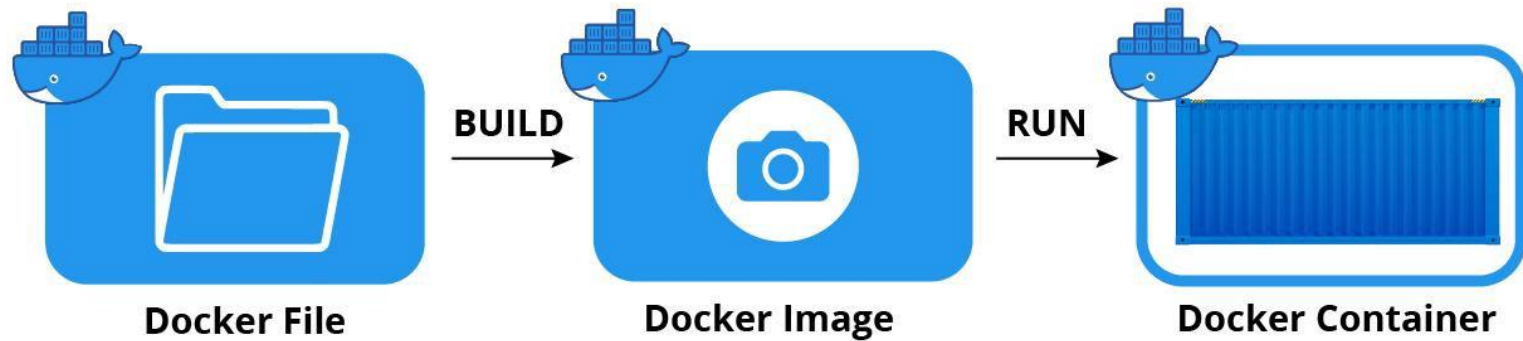


# Regarding containers

- Container  $\neq$  VM
- Isolated
- Share OS
- and sometimes bins/libs



# What is the building process?



# Dockerfile

It is possible to build your own images reading instructions from a Dockerfile

```
FROM centos:7
RUN yum install -y python-devel python-virtualenv
RUN virtualenv /opt/indico/venv
RUN pip install indico
COPY entrypoint.sh /opt/indico/entrypoint.sh
EXPOSE 8000
ENTRYPOINT /opt/indico/entrypoint.sh
```

# Docker Hub



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 <b>nginx</b> official	6.1K STARS	10M+ PULLS	<a href="#">&gt;</a> DETAILS
 <b>redis</b> official	3.8K STARS	10M+ PULLS	<a href="#">&gt;</a> DETAILS
 <b>busybox</b> official	1.0K STARS	10M+ PULLS	<a href="#">&gt;</a> DETAILS
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# Docker compose

Allows to run multi-container Docker applications reading instructions from a docker-compose.yml file

```
version: "2"
services:
  my-application:
    build: ./
    ports:
      - "8000:8000"
    environment:
      - CONFIG_FILE
  db:
    image: postgres
  redis:
    image: redis
    command: redis-server --save "" --appendonly no
    ports:
      - "6379"
```

# Some Docker commands

**docker run** - Use an image to run a container

**docker pull** - Pull an image from a registry

**docker build** - Build a Docker image

**docker images** - List available Docker images

**docker ps** - List running Docker containers

**docker exec** - Execute a command in a container

**docker stop** - Stop a running container

Thanks for watching!