

# **Docker & Docker Compose**

**Django Development II**

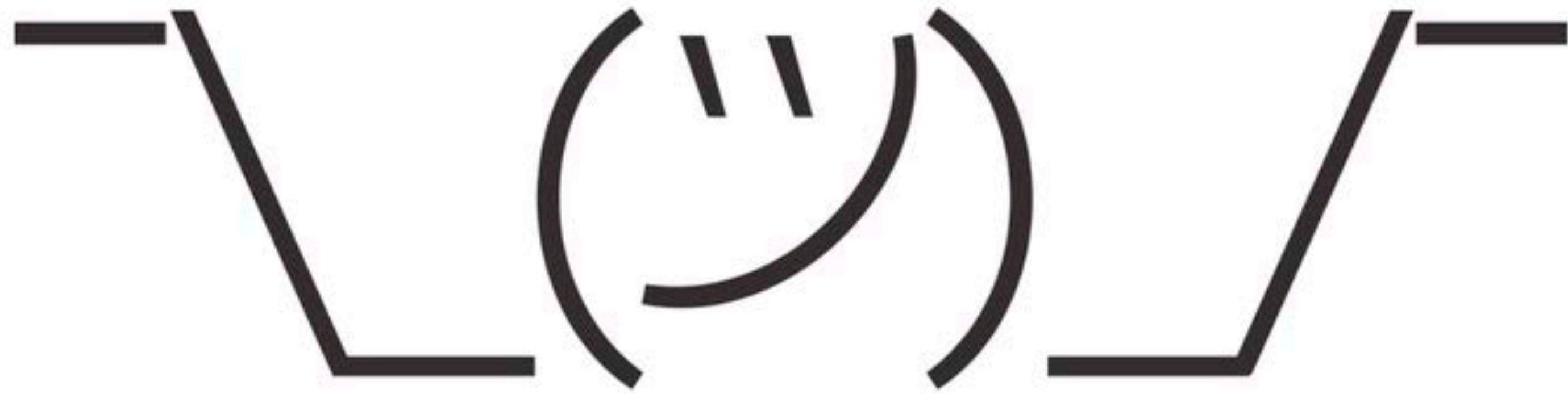
**Azimjon Pulatov | PDP Online**

# What's Docker?



docker

# Problem Before Docker

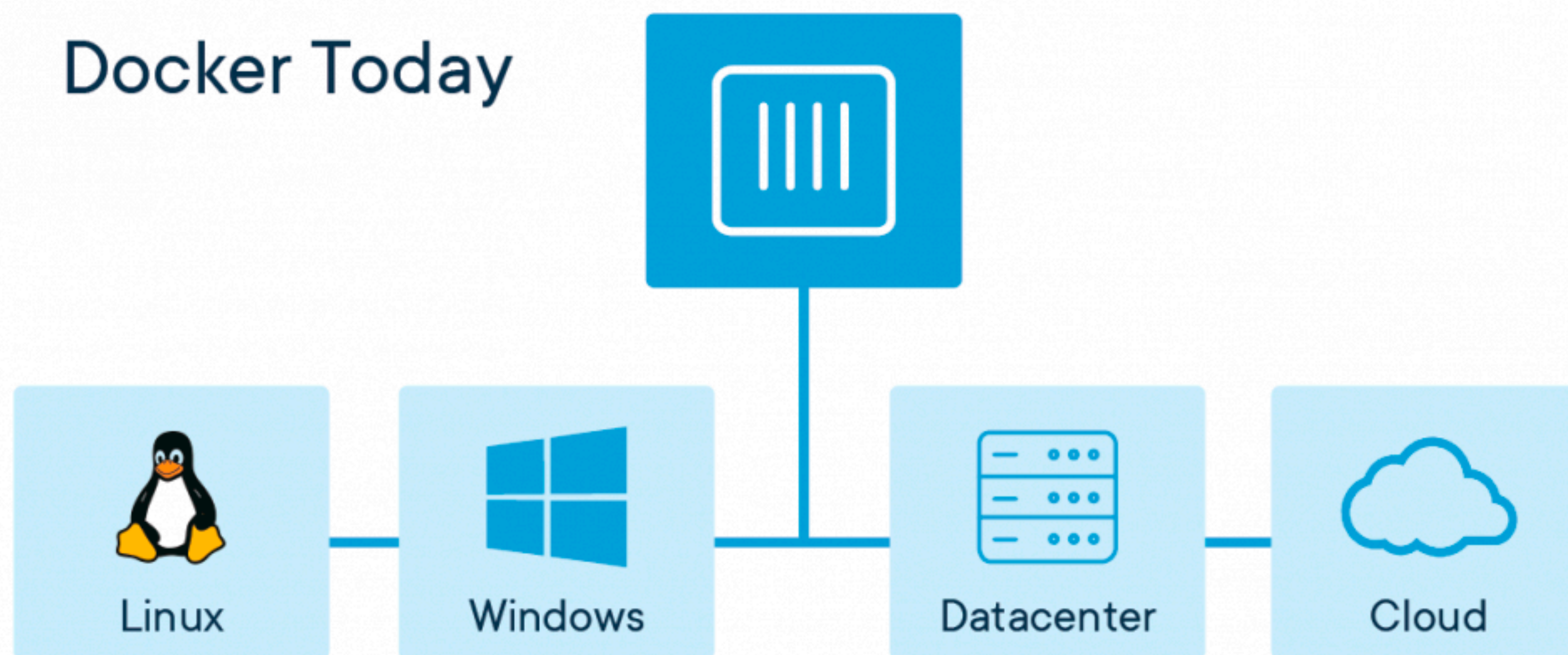


**IT WORKS**  
ON MY MACHINE

# What is a Container?

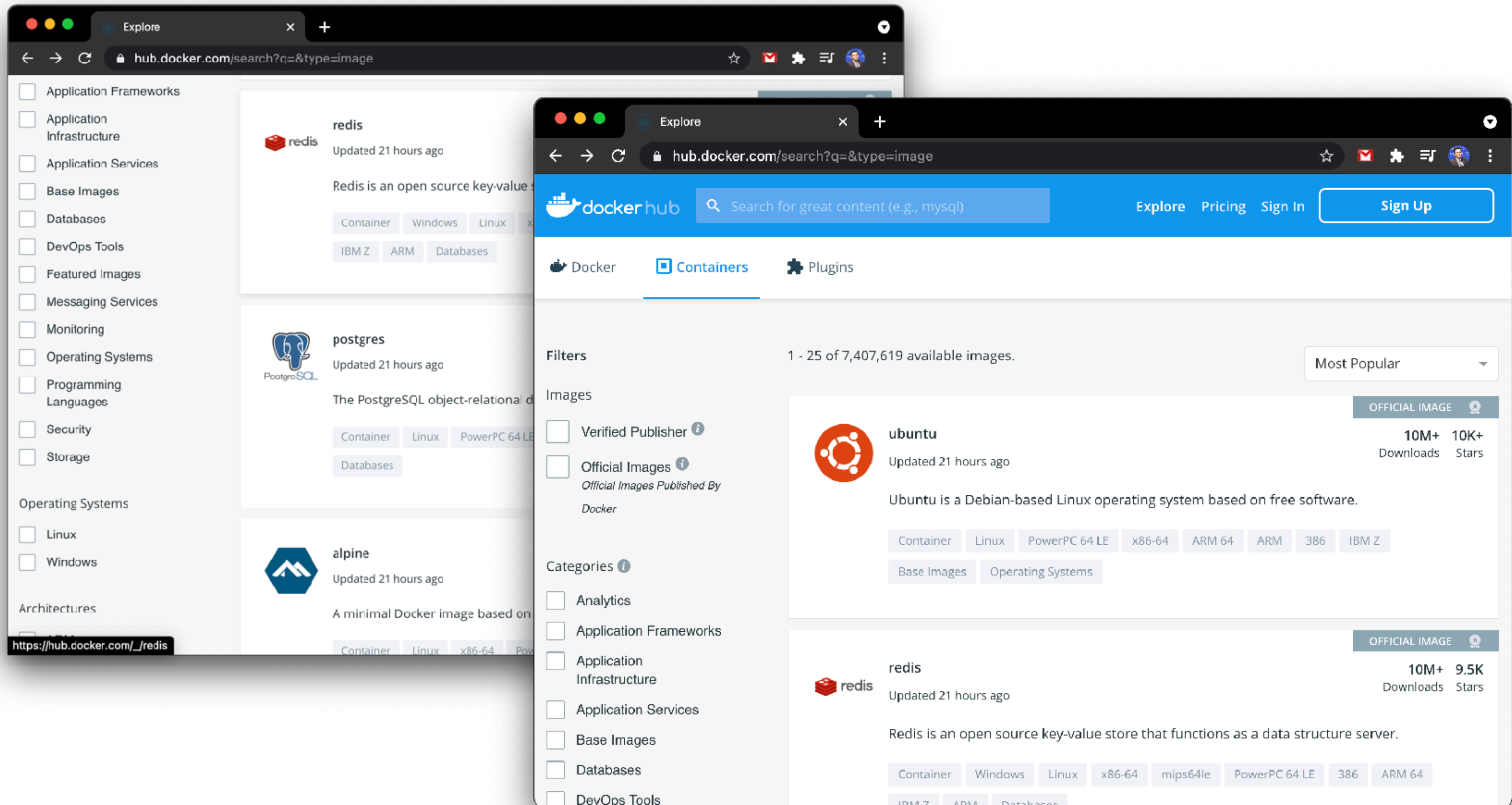
A standardized unit of software

Docker Today

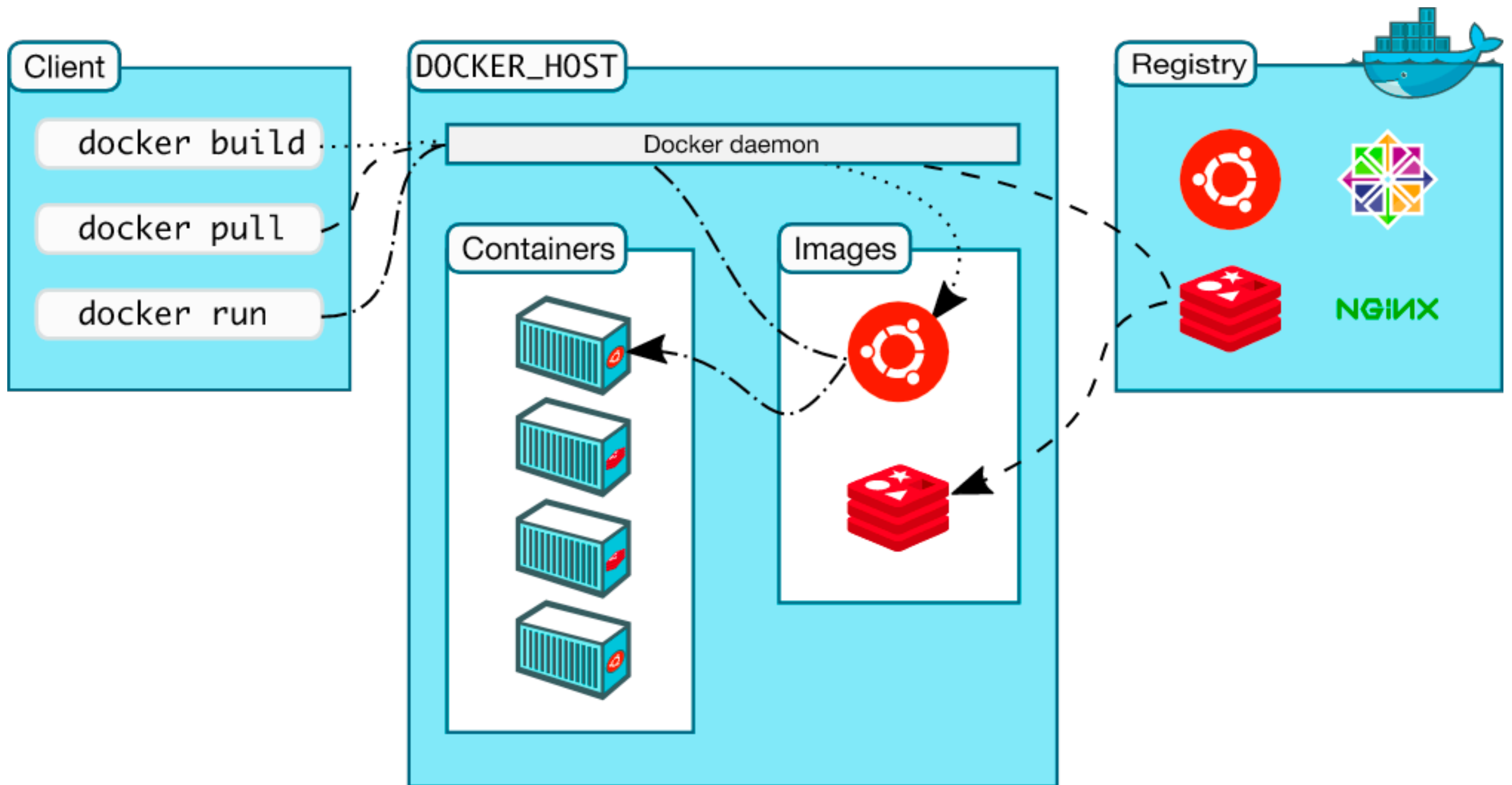




# Docker Hub & Docker Images









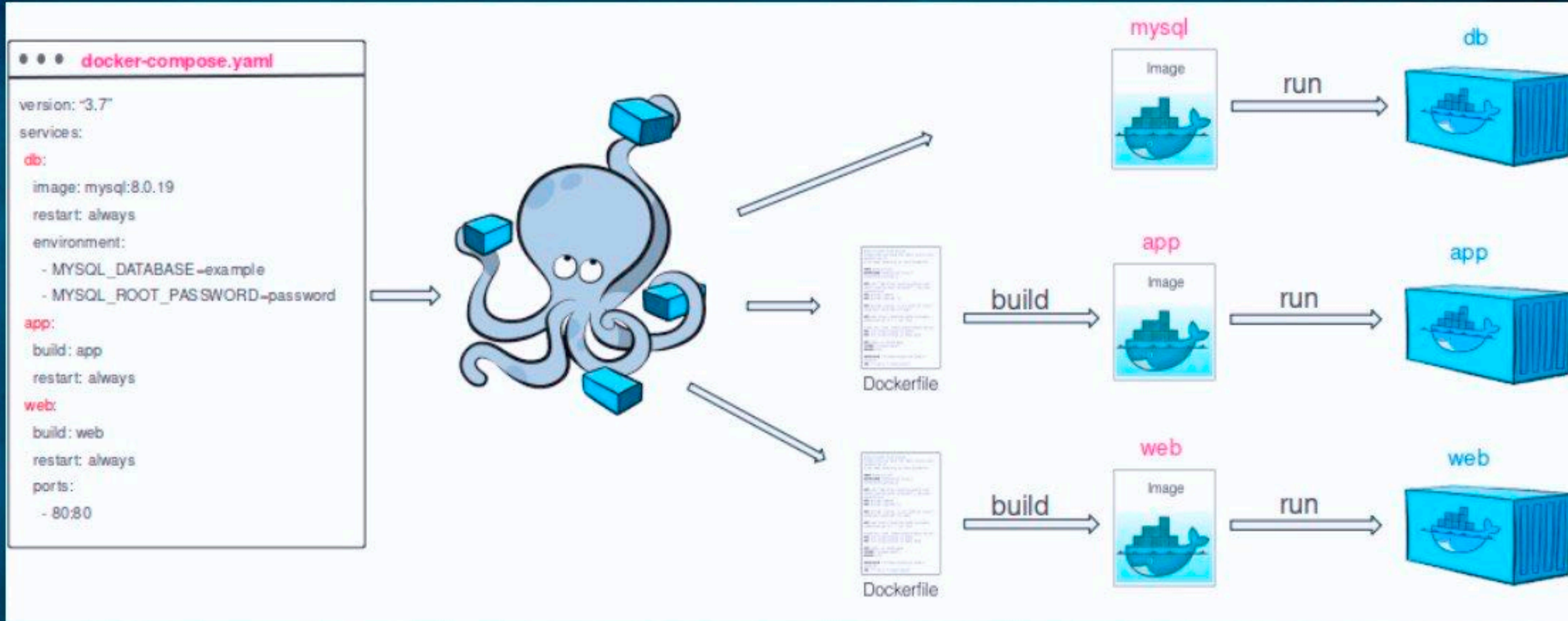
# Dockerfile

```
app.py  Dockerfile x requirements.txt
3
4  # Set the working directory to /app
5  WORKDIR /app
6
7  # Copy the current directory contents into the container at /app
8  COPY . /app
9
10 # Install any needed packages specified in requirements.txt
11 RUN pip install --trusted-host pypi.python.org -r requirements.txt
12
13 # Make port 80 available to the world outside this container
14 EXPOSE 80
15
16 # Define environment variable
17 ENV NAME World
18
19 # Define entry point
20 ENTRYPOINT ["python", "app.py"]
```





# Docker Compose



Run multiple containers as a service from 1 .yaml file



# Docker-Compose



```
3 services:
4   my-api-project:
5     image: ${DOCKER_REGISTRY-}my-api-project
6     build:
7       context: .
8       dockerfile: my-api-project/Dockerfile
9     depends_on:
10      - some-rabbit
11      - some-mongo
12   some-rabbit:
13     image: rabbitmq:3-management
14     ports:
15      - "5672:5672"
16      - "15672:15672"
17   some-mongo:
18     image: mongo
19     ports:
20      - "27017:27017"
21     volumes:
22      - mogodb-volume:/data/db
23
24 volumes:
25   mogodb-volume:
26     driver: local
```

```
1 version: "3"
2 services:
3   # Service for the Postgres database
4   db:
5     # Pull the latest 'postgres' image
6     image: "postgres"
7     container_name: "postgres_docker"
8
9     # Postgres environment parameters
10    environment:
11      - POSTGRES_USER = objectrocket
12      - POSTGRES_PASSWORD = "sTr0nGpAsSw0rD"
13      - POSTGRES_DB = some_database
14
15    # Bind mount the default Postgres port
16    ports:
17      - "54321:5432"
18
19    # Bind mount local volume for Postgres data
20    volumes:
21      - ./pg-data:/var/lib/postgresql/data
22
```