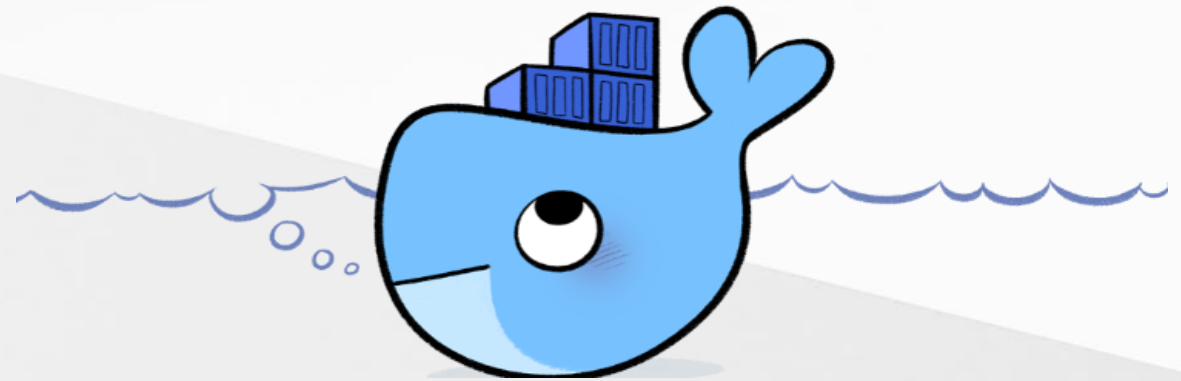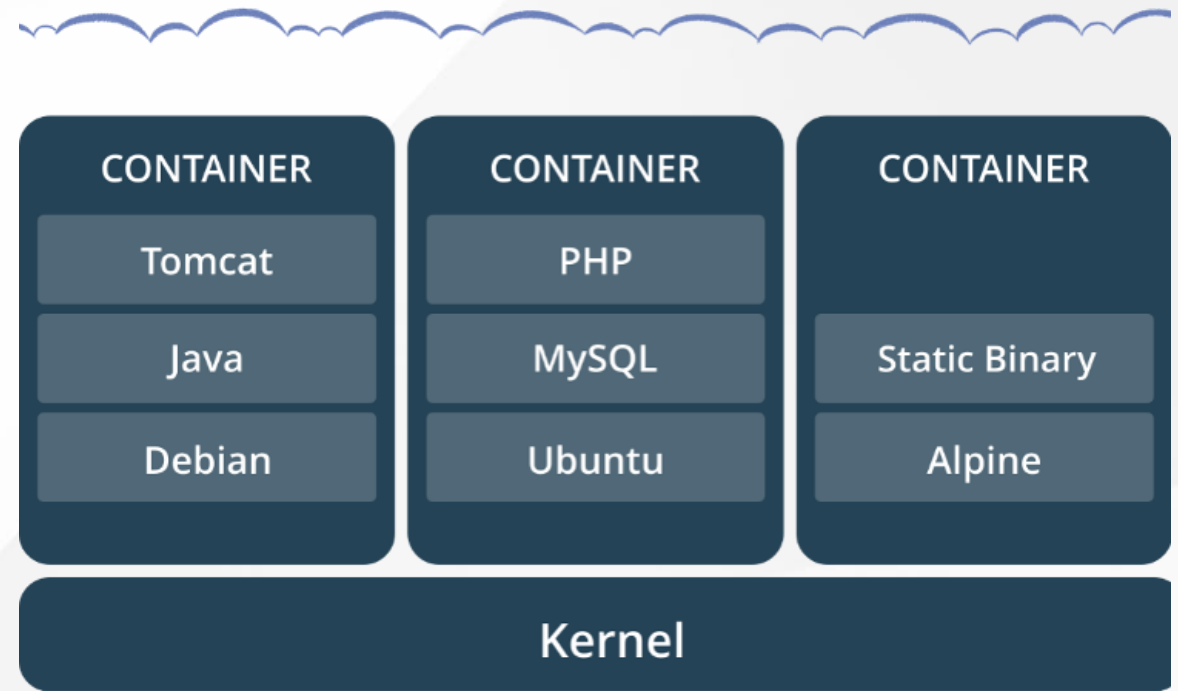# I AM A DEVELOPER, WHY SHOULD I CARE ABOUT DOCKER?

Raúl Lara Cabrera
Universidad Politécnica de Madrid

Docker is all about containers:

- Kind of a **very** lightweight VM.
- Works directly on top of the host OS kernel.
- **Everything** an application needs to work, sandboxed.
- If the user is able to run **Docker**, then the application runs flawlessly.

Docker kind of users

1. Consumer:

" I'm not into development, but I need to use applications and services that are often difficult to install and setup. "

2. Producer:

" I'm a developer and I want to distribute my application so it is as easy to setup as possible. In the meantime, I need to test in environments as close to production as possible "

3. ~~SysAdmin~~: out of scope!

Docker Hub

- Hosted repository of containerized applications and services.

- Free, but Docker account required.

- Community driven.

- Official container images.

Images

- [ ] **Verified Publisher** ⓘ
  Docker Certified And Verified Publisher Content
- [ ] **Official Images** ⓘ
  Official Images Published By Docker

Categories ⓘ

- [ ] Analytics
- [ ] Application Frameworks
- [ ] Application Infrastructure
- [ ] Application Services
- [ ] Base Images
- [ ] Databases
- [ ] DevOps Tools
- [ ] Featured Images
- [ ] Messaging Services
- [ ] Monitoring
- [ ] Operating Systems
- [ ] Programming Languages
- [ ] Security
- [ ] Storage

Operating Systems

- [ ] Linux
- [ ] Windows

Architectures

- [ ] ARM
- [ ] ARM 64
- [ ] IBM POWER
- [ ] IBM Z
- [ ] PowerPC 64 LE
- [ ] x86
- [ ] x86-64

Oracle WebLogic Server

Container | Docker Certified | Linux | x86-64 | Application Frameworks | Application Infrastructure

---

VERIFIED PUBLISHER

MySQL Server Enterprise Edition ✓ DOCKER CERTIFIED

By Oracle • Updated a year ago

The world's most popular open source database system

Container | Docker Certified | Linux | x86-64 | Databases

OFFICIAL IMAGE

couchbase

Updated 10 minutes ago

10M+ Downloads   592 Stars

Couchbase Server is a NoSQL document database with a distributed architecture.

Container | Linux | x86-64 | Storage | Application Frameworks

---

VERIFIED PUBLISHER

Db2 Developer-C Edition ✓ DOCKER CERTIFIED

By IBM • Updated a year ago

Full feature, free version for non-production environments. Ideal for developers.

Container | Docker Certified | Linux | x86-64 | IBM POWER | IBM Z | Analytics | Databases

---

VERIFIED PUBLISHER

IBM Security Access Manager ✓ DOCKER CERTIFIED

By IBM • Updated 12 hours ago

IBM Security Access Manager deploys a simplified access management solution for enterprises to defend from ...

Container | Docker Certified | Linux | x86-64 | Security | Application Infrastructure

---

OFFICIAL IMAGE

postgres

Updated 12 minutes ago

10M+ Downloads   7.9K Stars

The PostgreSQL object-relational database system provides reliability and data integrity.

4

Dockerfile

Specification of what your containerized application is made of and how does it work:

```dockerfile
FROM ubuntu:latest
RUN apt-get update -y
RUN apt-get install -y python-pip python-dev build-essential
COPY requirements.txt /usr/src/app/
RUN pip install --no-cache-dir -r /usr/src/app/requirements.txt
EXPOSE 5000
CMD ["python", "/usr/src/app/app.py"]
```

Think about it as a *script for creating and deploying* an application.

HANDS ON:

LET'S DOCKER!

DOCKER USE CASES

- Running services and applications effortlessly.

- Testing and running applications in ephemereal containers that mimmick a production environment.

- Distributing not only an application but also its requirements altogether in the same container.

- Reproducible science: code, libraries, experiments and configs that run in the same environment (container).

- Cloud computing, Kubernetes clusters, High Performance Computing, …