

Docker

Kristo Raun

Data Engineering 2022



UNIVERSITY OF TARTU

What is Docker?

- ◆ Docker is an open platform for developing, shipping, and running applications.

What is Docker?

- ◆ Docker is an open platform for developing, shipping, and running applications.
- ◆ Docker enables you to separate your applications from your infrastructure so you can deliver software quickly.

Why Docker?

Why Docker?

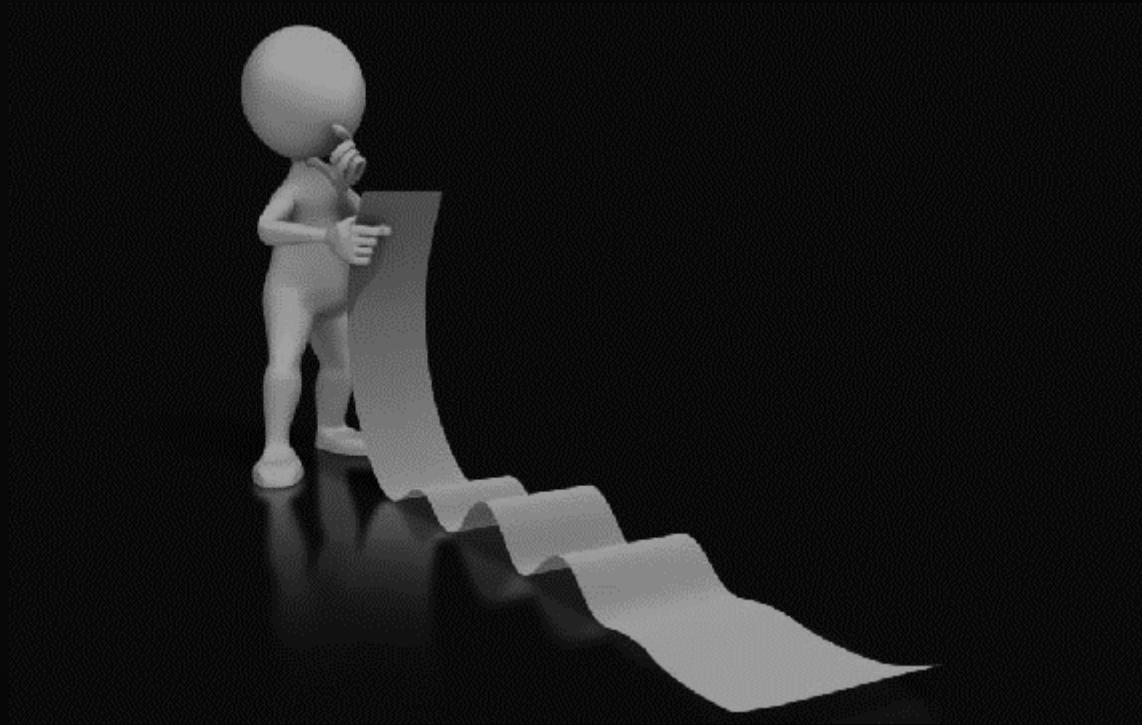
- ◆ Works on my machine

Why Docker?

- ◆ Works on my machine
 - ◆ You just need to install:

Why Docker?

- ◆ Works on my machine
 - ◆ You just need to install:



Why Docker?

- ◆ Works on my machine
 - ◆ You just need to install:
- ◆ OK, but VM?

Why Docker?

- ◆ Works on my machine
 - ◆ You just need to install:
- ◆ OK, but VM?



Why Docker?

- ◆ Works on my machine
 - ◆ You just need to install:
- ◆ OK, but VM?



Speed



Why Docker?

- ◆ Works on my machine
 - ◆ You just need to install:
- ◆ OK, but VM?



Speed



Size



Why Docker?

- ◊ Works on my machine
 - ◊ You just need to install:
- ◊ OK, but VM?



Speed



Size



Complexity



Why Docker?

- ◊ Works on my machine
 - ◊ You just need to install:
- ◊ OK, but VM?



Speed



Size



Complexity



Why Docker?

- ◆ Works on my machine
 - ◆ You just need to install:
- ◆ OK, but VM?



Why Docker?

- ◊ Works on my machine
 - ◊ You just need to install:
- ◊ OK, but VM?



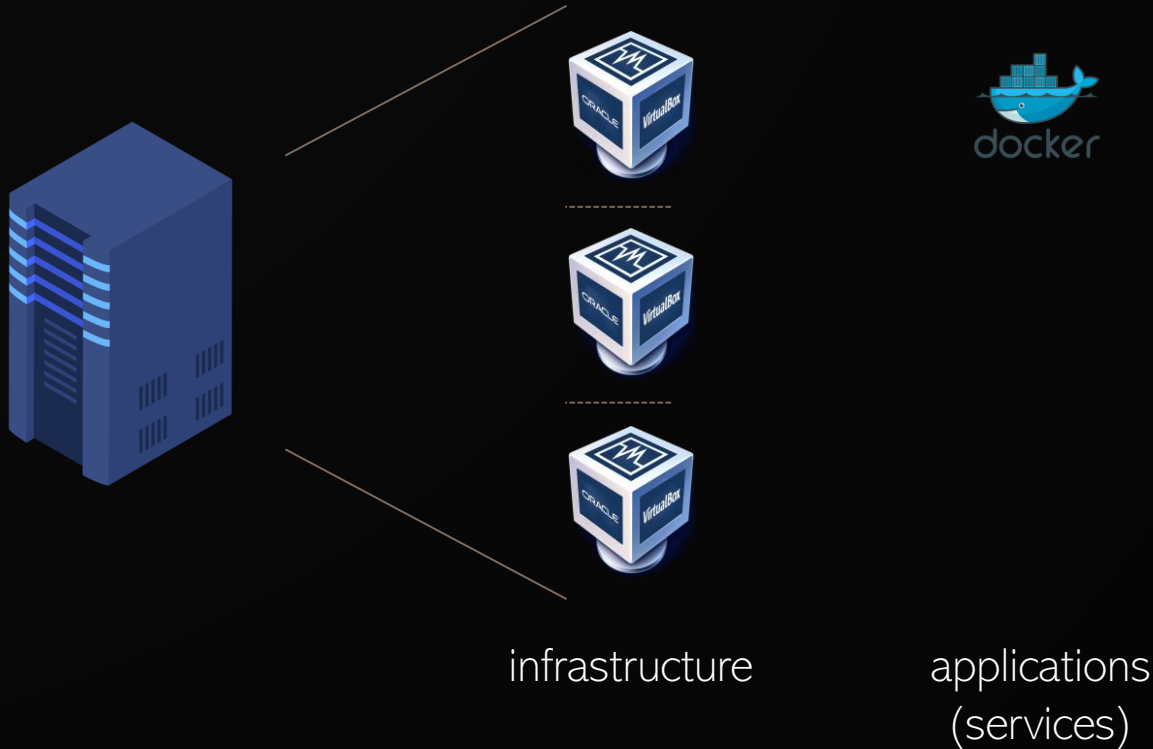
infrastructure



applications
(services)

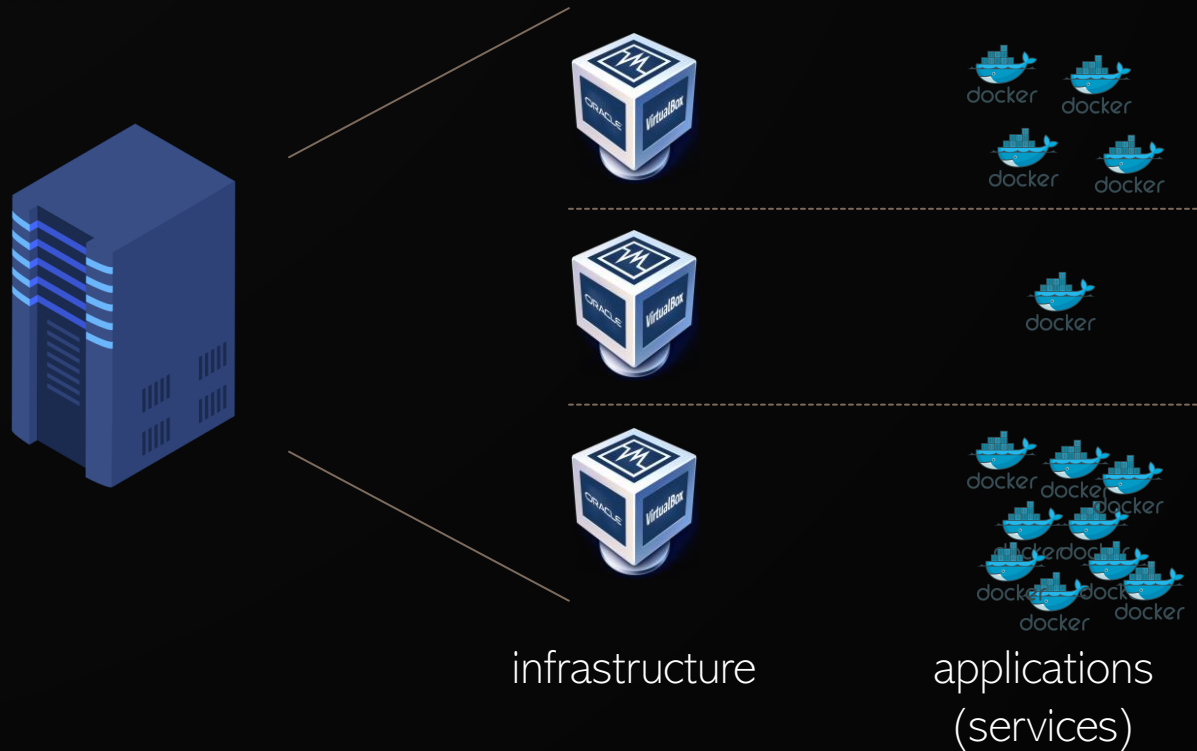
Why Docker?

- ◊ Works on my machine
 - ◊ You just need to install:
- ◊ OK, but VM?



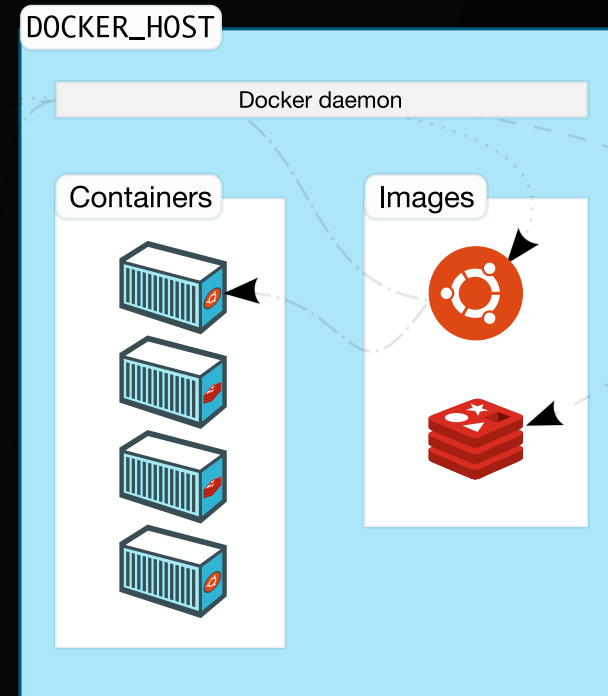
Why Docker?

- ◊ Works on my machine
 - ◊ You just need to install:
- ◊ OK, but VM?



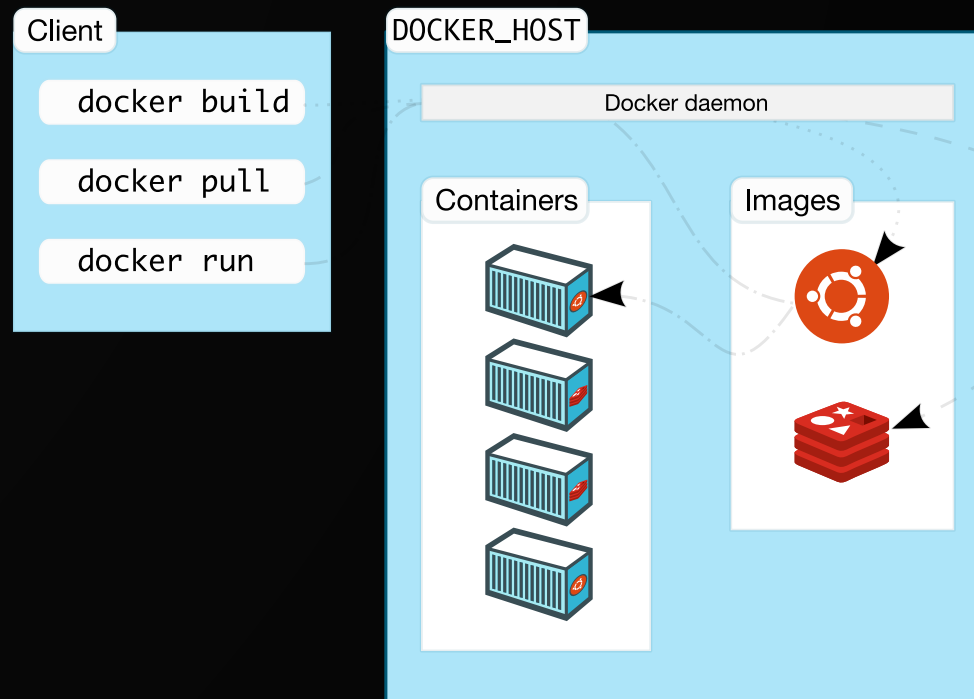
About

- ◇ Docker daemon (dockerd)
- ◇ Management



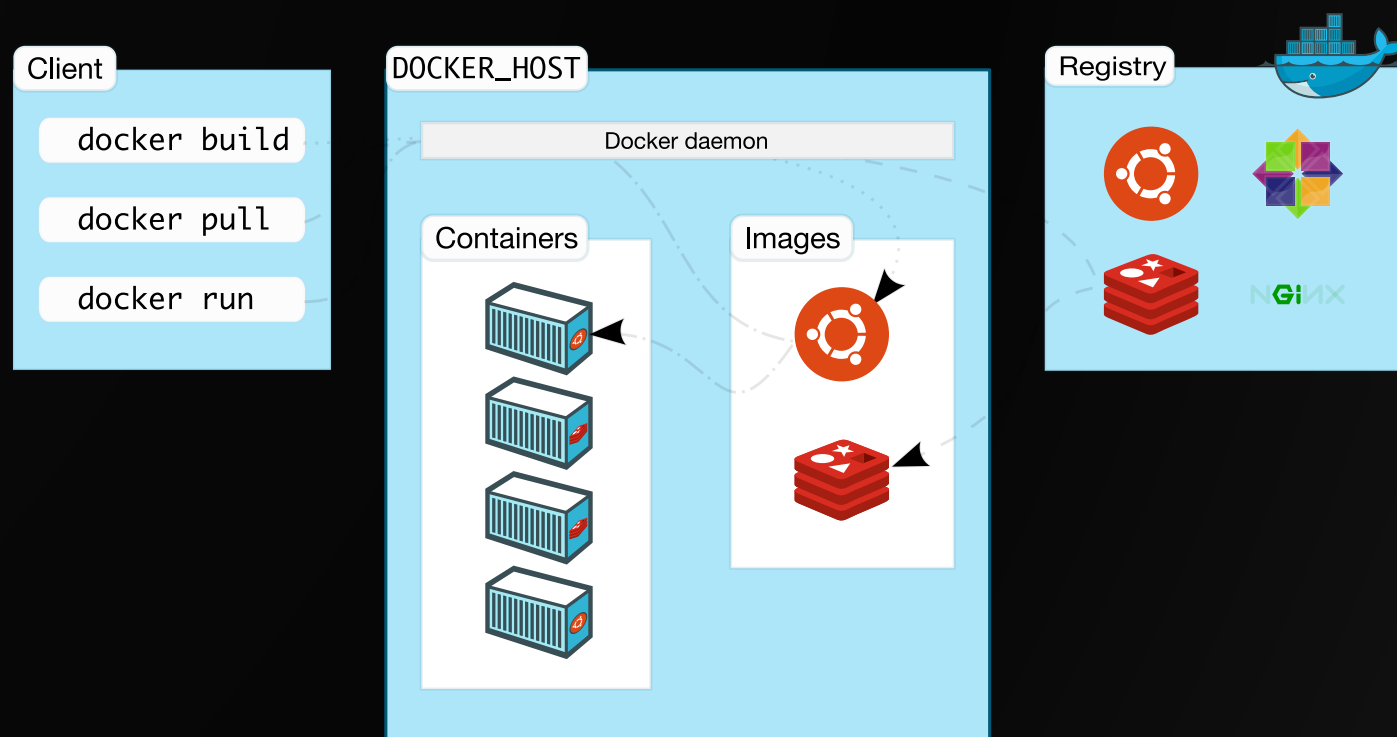
About

- ◇ Docker daemon (dockerd)
 - ◇ Management
- ◇ Client (eg CLI)
 - ◇ Interact with Docker daemon



About

- ◇ Docker daemon (dockerd)
 - ◇ Management
- ◇ Client (eg CLI)
 - ◇ Interact with Docker daemon
- ◇ Registry (eg Docker Hub)
 - ◇ Image store



Docker objects

Docker objects

- ◆ Image
 - ◆ = template
 - ◆ Types
 - ◆ Images in registry
 - ◆ From Dockerfile

Docker objects

- ◇ Image
 - ◇ = template
 - ◇ Types
 - ◇ Images in registry
 - ◇ From Dockerfile
- ◇ Container
 - ◇ = instance
 - ◇ Has
 - ◇ Storage
 - ◇ Network

Final words...

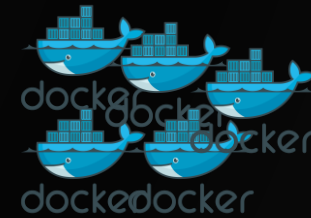
◇ How we will run:

◇ Docker CLI



Final words...

- ◇ How we will run:
 - ◇ Docker CLI
 - ◇ Docker Compose



Final words...

- ◆ How we will run:
 - ◆ Docker CLI
 - ◆ Docker Compose
- ◆ Out of scope:
 - ◆ Kubernetes (K8s)

