

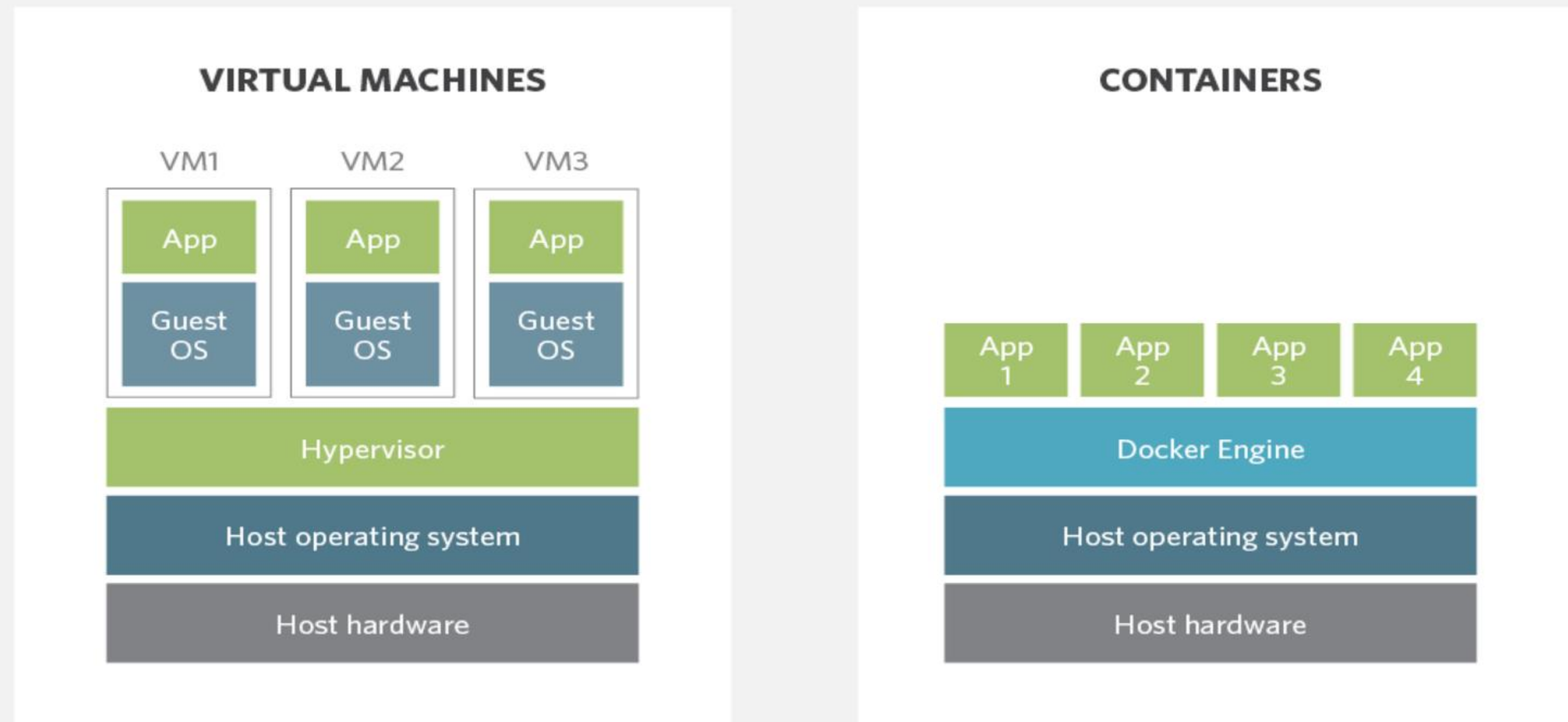
deltatre

Docker in action

VMs vs containers

Containers and VMs are similar in their goals: to isolate an application and its dependencies into a self-contained unit that can run anywhere.

Virtual machines versus containers



(OCI)
Containers

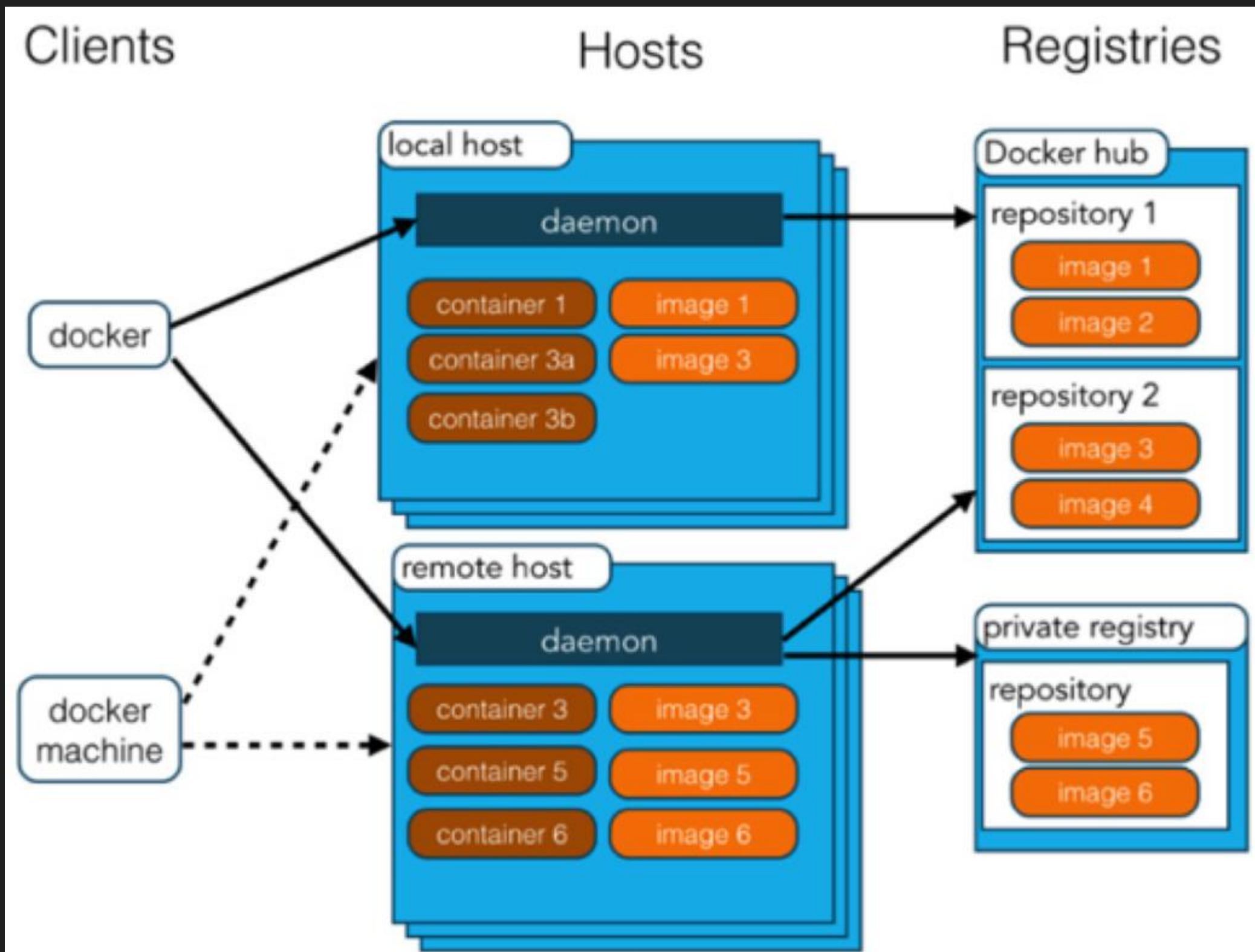
vs Dockers

Linux containers vs Windows containers



[HTTPS://12FACTOR.NET/](https://12factor.net/)

Docker architecture



Docker images

A recipe or template for creating Docker containers. It includes the steps for installing and running the necessary software.

Docker container

Like a tiny virtual machine that is created from the instructions found within the Docker image originated

Docker client

Command-line utility or other tool that takes advantage of the [Docker API](#) to communicate with a Docker daemon

Docker host

Physical or virtual machine that is running a Docker daemon and contains cached images as well as runnable containers created from images

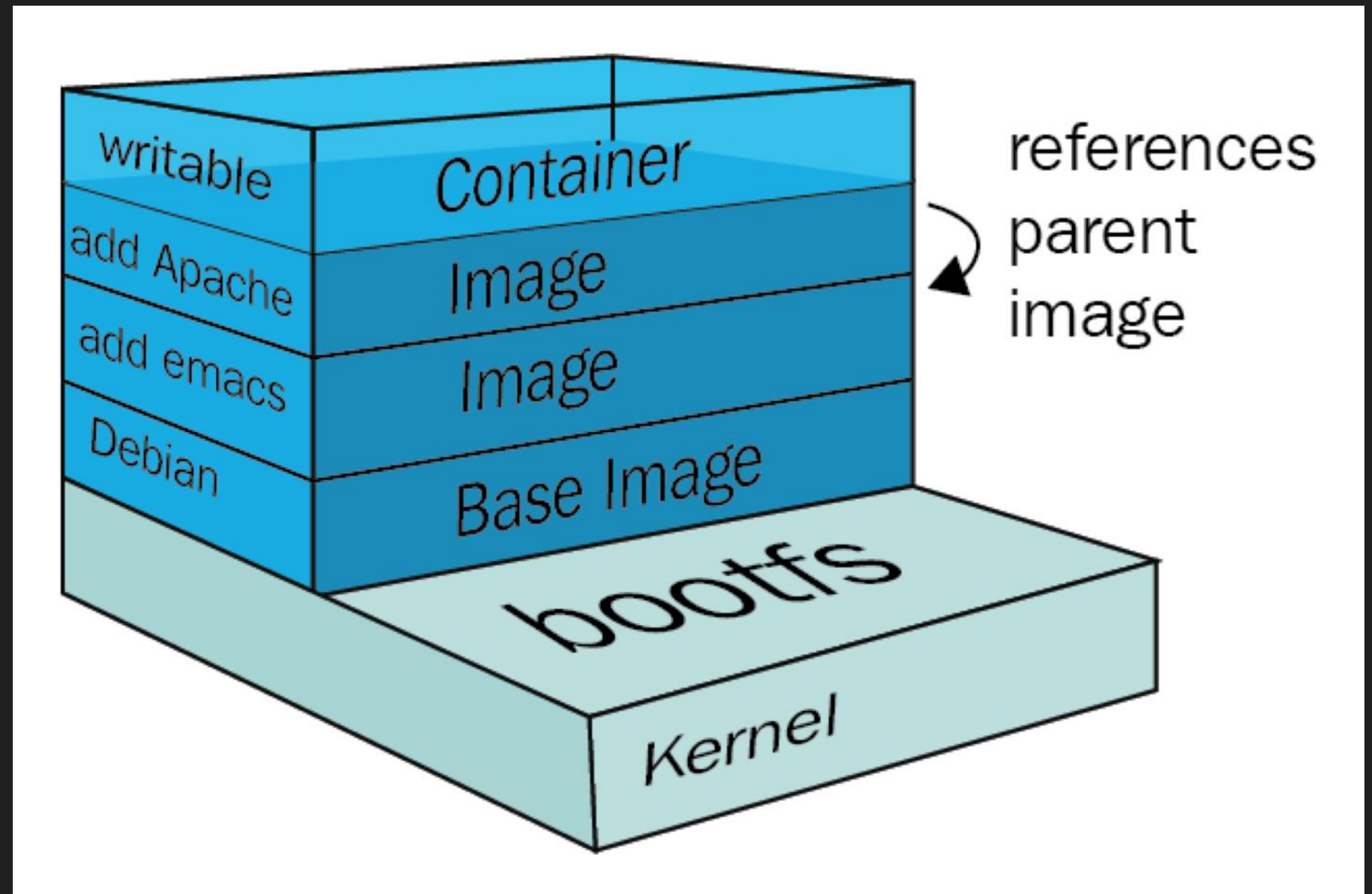
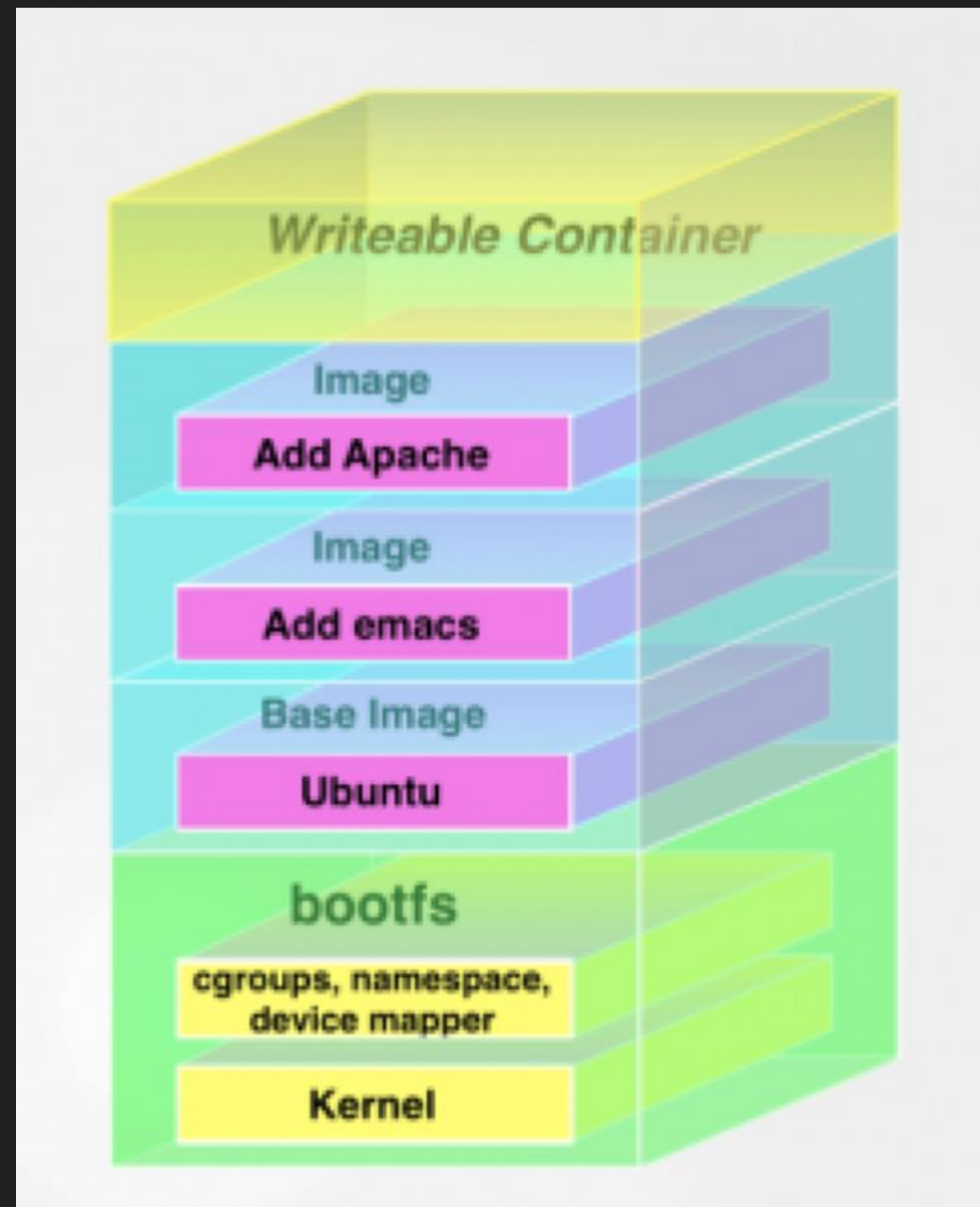
Docker registry

A repository of Docker images that can be used to create Docker containers. [Docker Hub](#) is the most popular social example of a Docker repository.

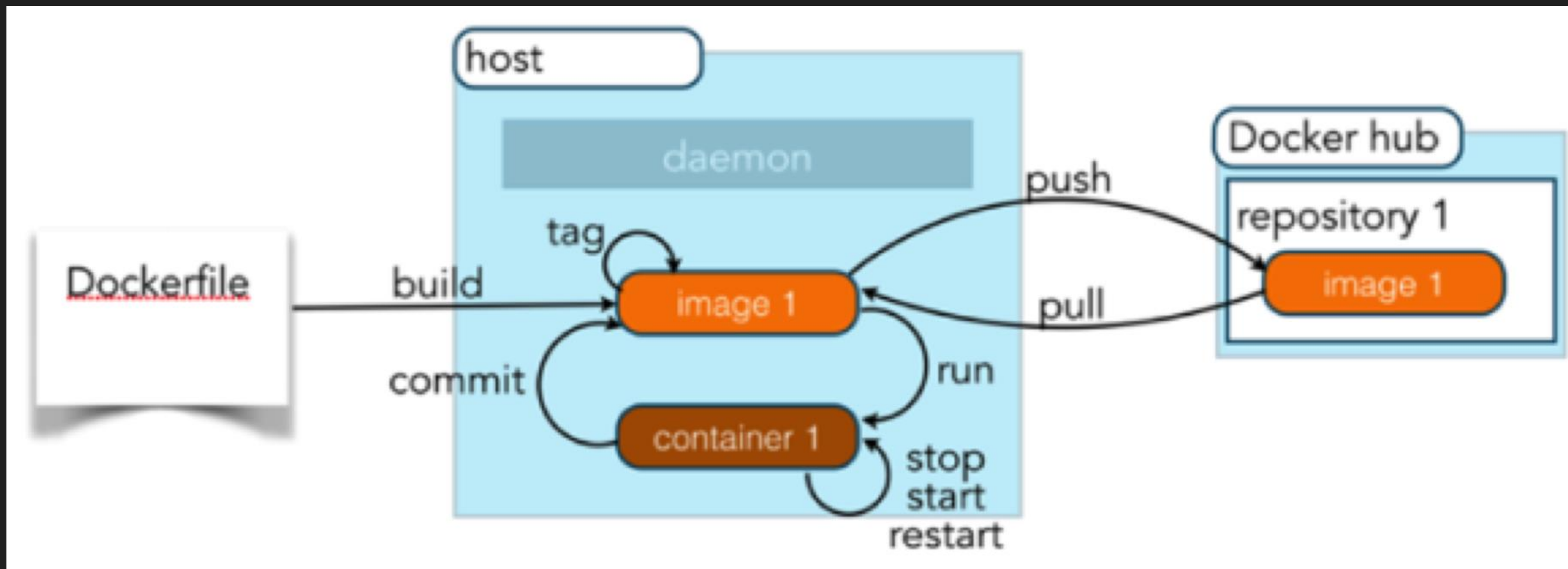
Docker machine

A utility for managing multiple Docker hosts, which can run locally in VirtualBox or remotely in a cloud hosting service such as Amazon Web Services, Microsoft Azure, or Digital Ocean.

Docker layered file system



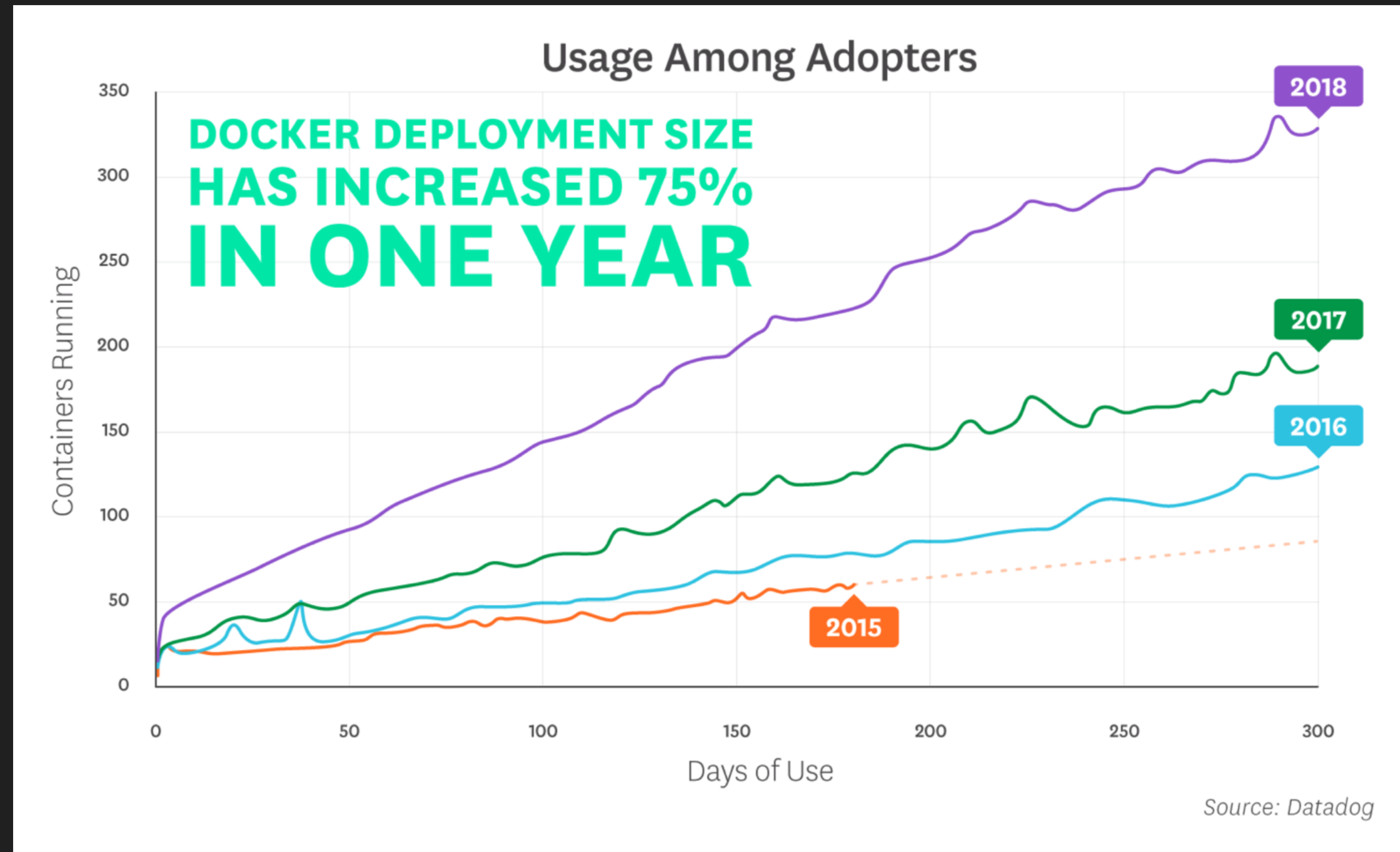
Docker workflow



Docker usages

- Provisioning backing services during development phase
- Development environment for application code
- Run tests
- DevOps application
- Create full local and testing environments
- Deployment/Packaging solution

Docker adoption trend



Software List request from E&L

Current way

- VS 2017
- VS Code
- git 2.20.1
- mongo 3.4.19
- mongo 2.6.12
- mongo 1.8.0
- rabbitmq 3.7.10
- SQL Server 2017
- node v10.15.0
- node v9.4.0
- node v8.2.0
- node v7.2.0
- node v5.1.1
- node v4.4.4
- ...TO BE CONTINUED...
- Deployment/Packaging solution

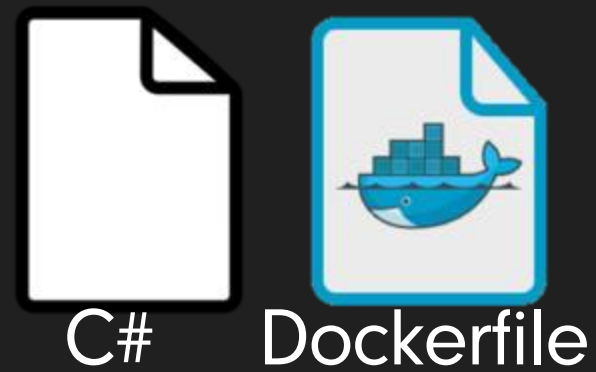
Docker way

- VS 2017
- VS Code
- git 2.20.1
- Docker Desktop

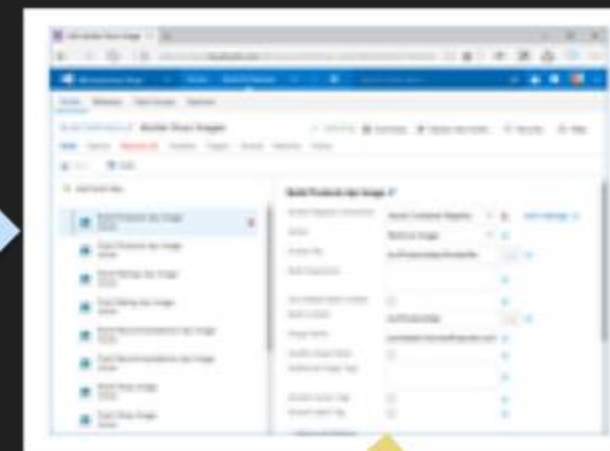
CI/CD

DevOps Server

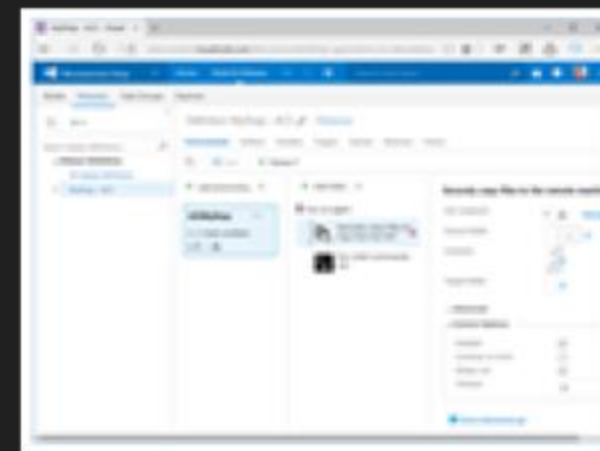
Source control



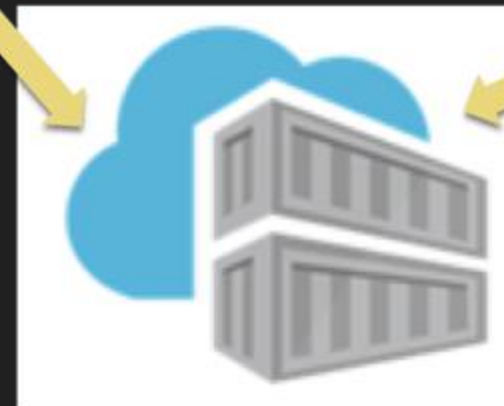
Build



Release

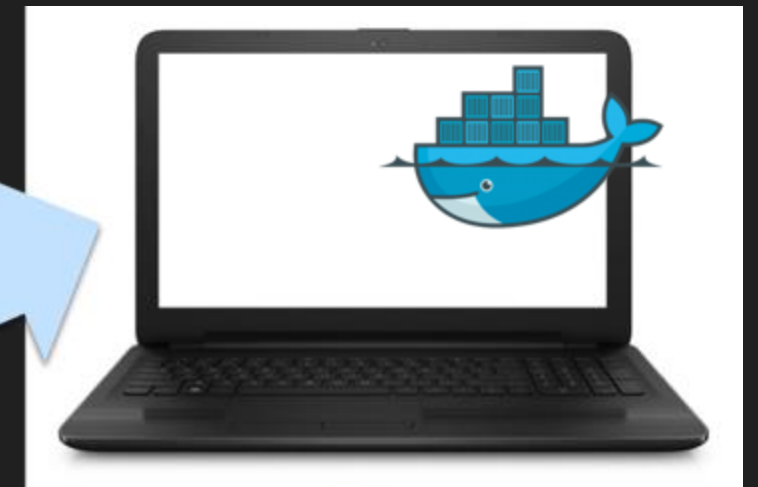


Docker Image

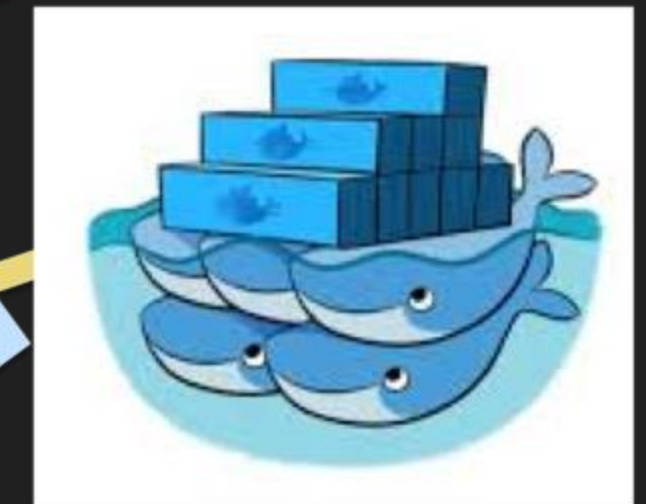


Azure Container Registry

Docker Engine



Docker Swarm



Demo

