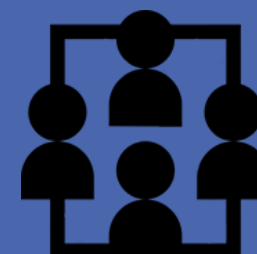
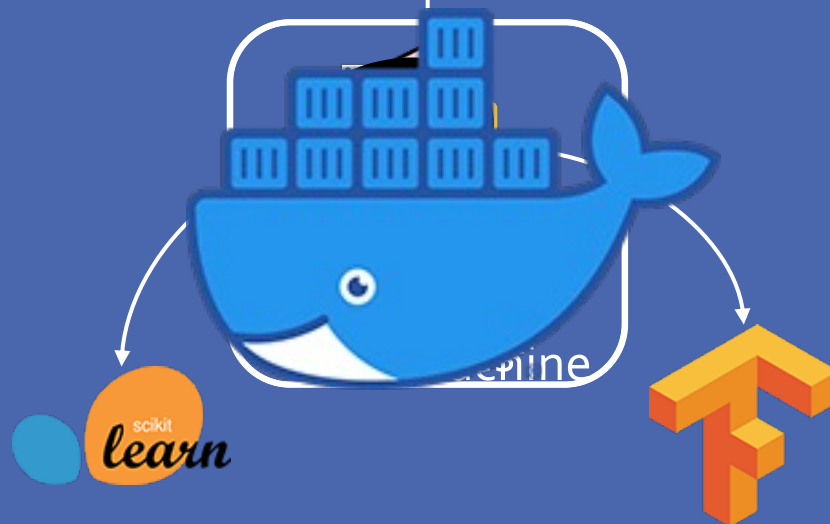


DOCKER



Plan

Planning
Requirement Gathering
Project Management

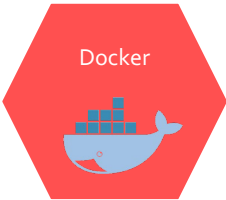
Develop

Issue Tracking
Source Control
Dev Env
CD

Test

Continuous
Testing

Release



Deployment
Config Management
Containers
Scripting

Operate

Monitoring
Issue Discovery

DevOps toolchain

What is Docker

- Docker is a tool designed to make it easier to create, deploy, and run applications by using containers.
- Containers allow a developer to package up an application with all the parts it needs, such as libraries and other dependencies, and deploy it as one package.
- Through containers, developers don't have to worry about their application not running on other devices; Everything the application needs to run is bundled with it.

The Invention of Containers



The Invention of Containers



The Invention of Containers

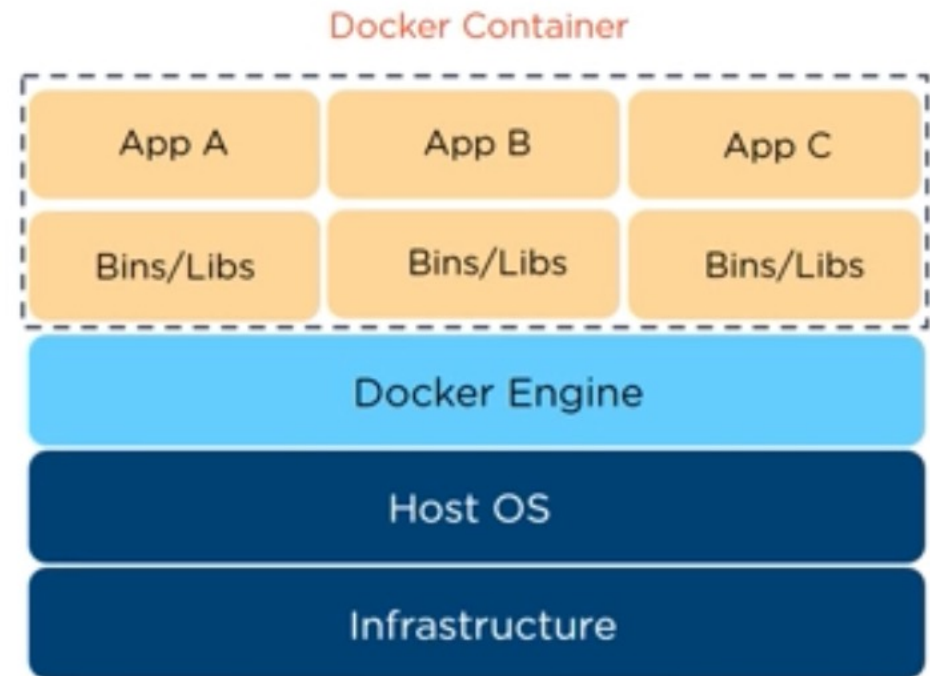
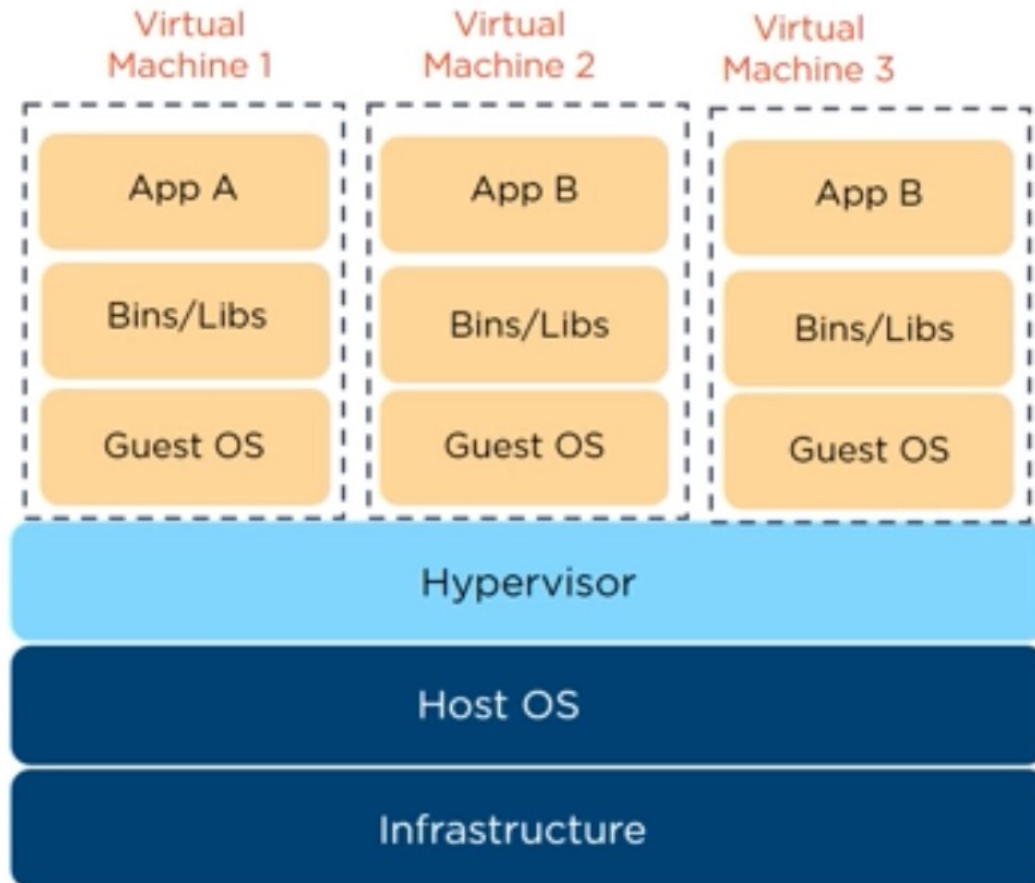


Docker vs Virtual Machines

Docker Containers are similar to virtual machines, but unlike a virtual machine:

1. Containers don't create a whole operating system
2. Only what is needed for the application to run is packaged inside the container.
3. Containers are much more light weight in terms of processing power and overhead computation.
4. Docker is **open source**.

Docker vs Virtual Machines



Installation

- On Windows:
 - Docker Desktop for Windows:
<https://hub.docker.com/editions/community/docker-ce-desktop-windows>
 - Uses windows virtualization technology (Hyper-V)
 - Under the hood, it creates a linux virtual system to run a Docker image on your system.
 - Requires windows 10 Enterprise / Professional OR Windows Server 2016

Installation

- On Mac:
 - Docker Desktop for Mac:
<https://hub.docker.com/editions/community/docker-ce-desktop-mac>
 - Under the hood, it creates a linux virtual system to run a Docker image on your mac.
 - Requires macOS Sierra 10.12 or newer

Installation

- On Linux:
 - Docker Engine:
<https://docs.docker.com/engine/install/>
 - Select your operating system, and follow the commands on screen.

References

- Documentation: <https://docs.docker.com/>
- Book:
 - The Docker Book: Containerization is the new virtualization (2018)
<https://dockerbook.com/>
- The docker blog: <https://www.docker.com/blog/>