

# Docker Lecture

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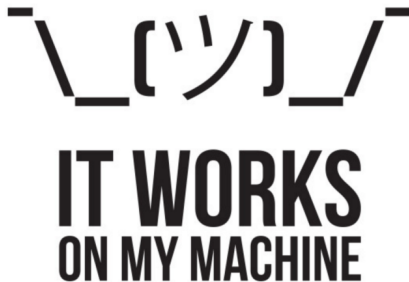
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# Overview

- 1 Why Docker?
- 2 Virtual Machine
- 3 Docker

# Why Docker?

- Change Server Environment
- Download & Install again
- Occurs error, ask to maintainer...



# Virtual Machine?

- Machine in the machine ~~in the machine in the machine ...~~
- Machines in the machine

However, VM (Virtual Machine) is ...

- Slow...
- Virtualizing from CPU → still slow.
- VM needs 'Guest OS' ∴ Performance leakage.

# Docker

- Does not require 'Guest OS'
- Sharing system call with Host OS
- (Almost) No performance leakage

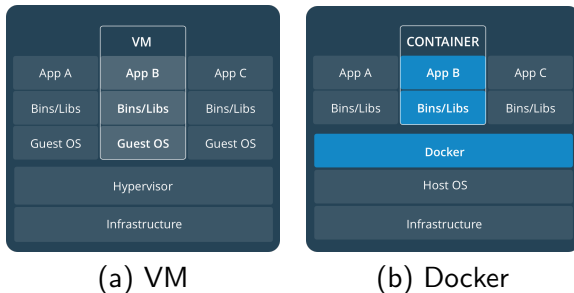


Figure: VM vs. Docker (Docker Docs)

# Docker Image & Container

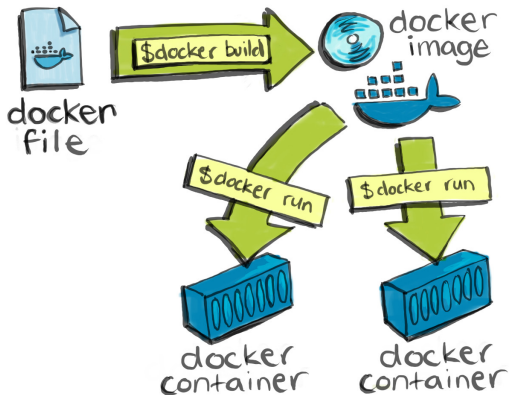


Figure: Docker Architecture ([cultivatehq.com](http://cultivatehq.com))

# Docker Image & Container (Cont.)

## Docker Image

- Hold anything required for running service
- Immutable

## Docker Container

- Executed version of Docker image
- Multiple containers can be made from same image
- Volatile, i.e. remove all information it contains