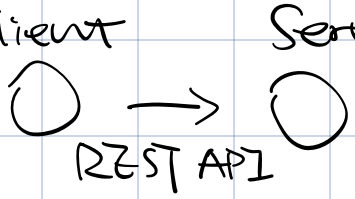
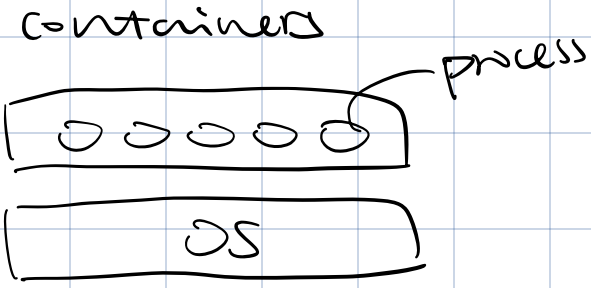
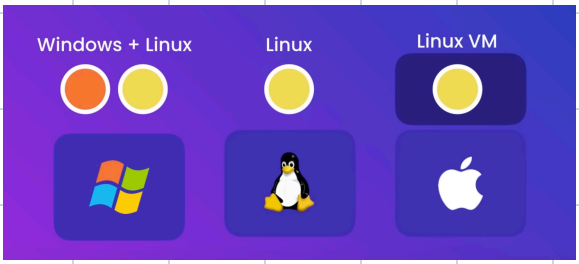
- 3 main elements:
  1° Dockerfile
  2° image
  3° container

- VM vs. Container
  - VM cons:
    1° each VM needs a full-blown OS
    2° slow to start
    3° resource intensive (内存, CPU...)
  - Containers pros:
    1° all running multiple Apps in isolation
    2° lightweight
    3° use OS of the host
    4° quick to start
    5° need less hardware resource

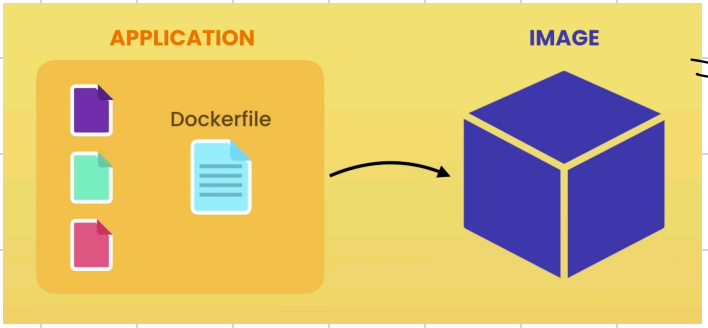
- Docker Architecture







- Development workflow



=

IMAGE

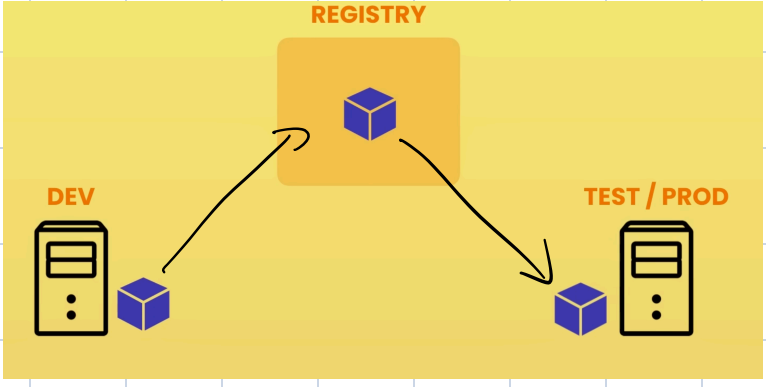
- A cut-down OS
- A runtime environment (eg Node)
- Application files
- Third-party libraries
- Environment variables

everything need to compile

↓

load image into container

run docker inside a container

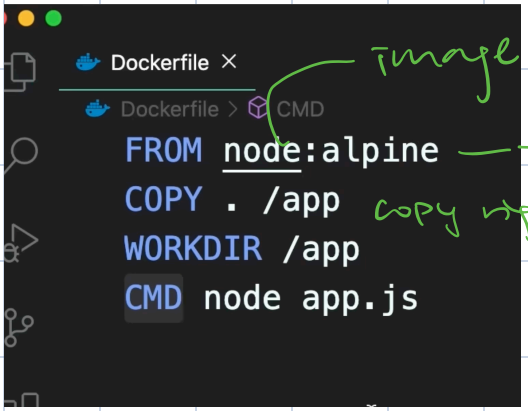


- Demo (Docker in Action)

INSTRUCTIONS

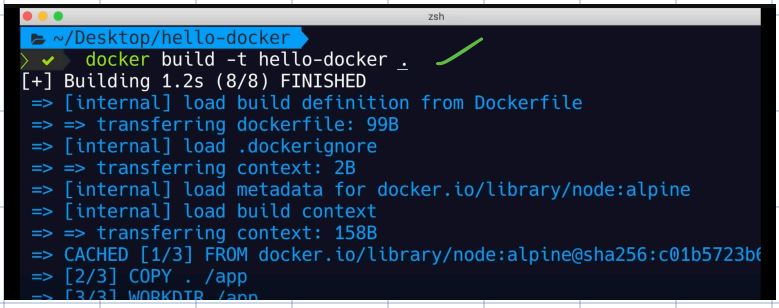
- Start with an OS
- Install Node
- Copy app files
- Run node app.js

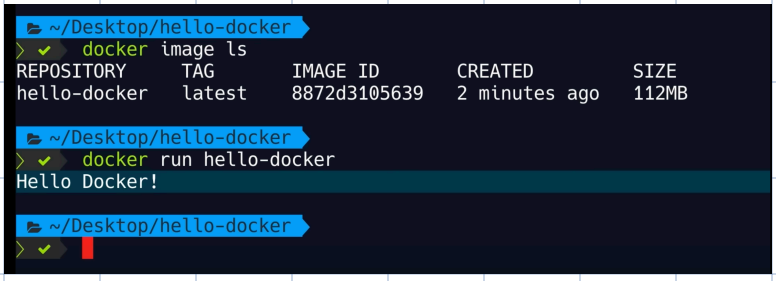
- Dockerfile



→ FROM image:tag

copy ~/Desktop/hello-docker to /app





- Linux-Distribution
  - Ubuntu