

CSCI-E-29 Session: Week 5

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October 2018

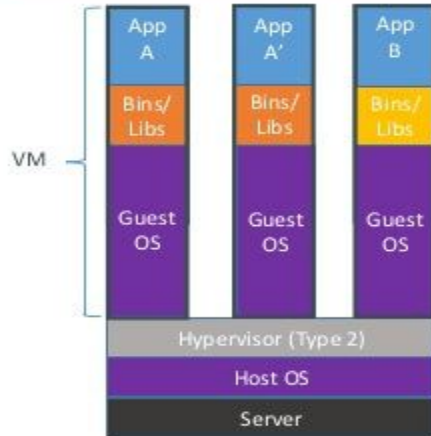
Topics

- Discussion: Pset-1 (10m)
- Docker Concepts (15m)
- REST Concepts (15m)
- Docker and REST (10m)
- Q&A (10)

Discussion: Pset-1

Docker Concepts

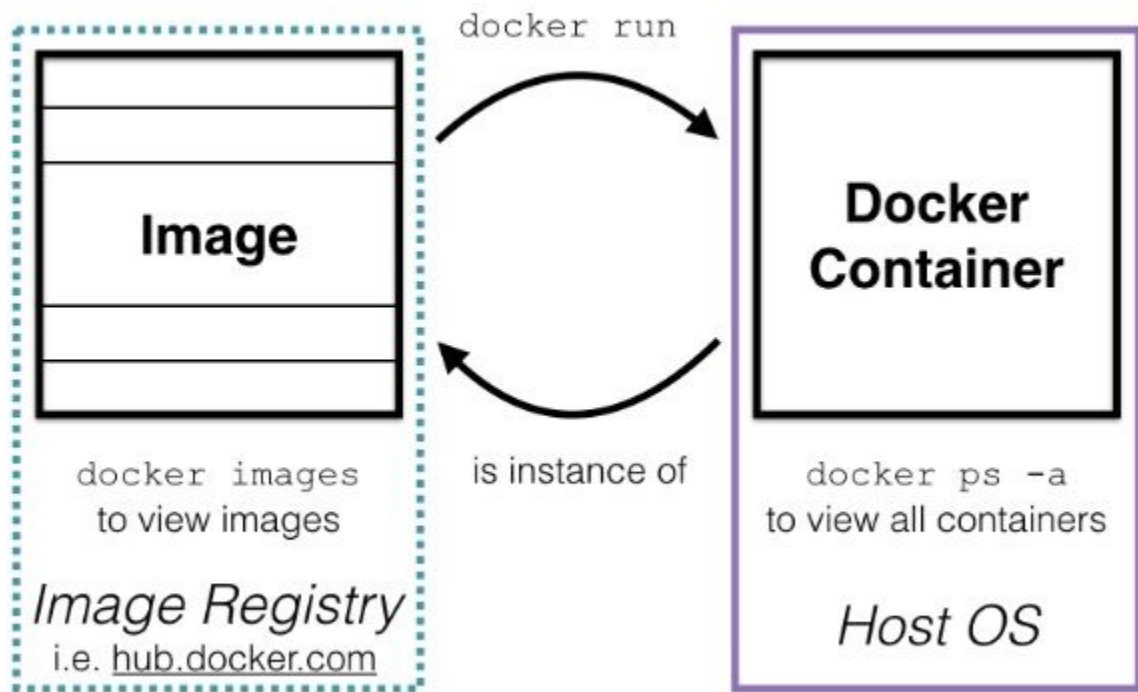
Docker Concepts: VM vs Container



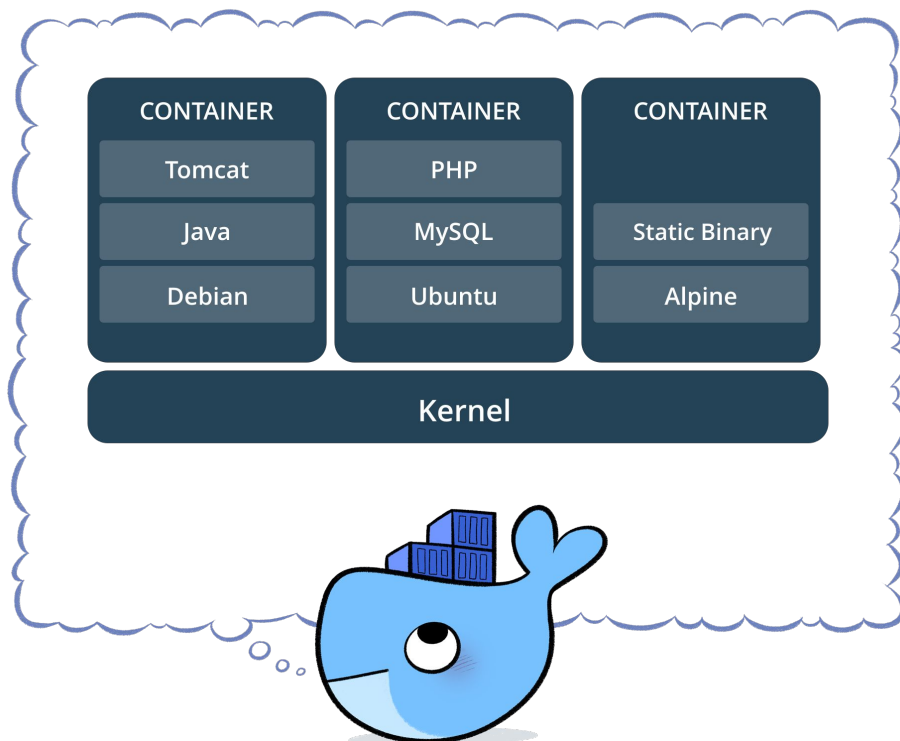
Containers are isolated, but share OS and, where appropriate, bins/libraries



Docker Concepts: Image vs Container



Docker Concepts: Container vs Virtualenv/Pipenv



Docker Concepts: Virtualenv/Pipenv vs requirements.txt

Managing Python Dependencies

with pip and virtual environments

```
$ pip install -r requirements.txt
beautifulsoup4==4.5.3
blinker==1.4
boto==2.46.1
certifi==2017.1.23
Chameleon==3.1
docopt==0.4.0 # pyup: <=0.4.0
html2text==2016.9.19
```

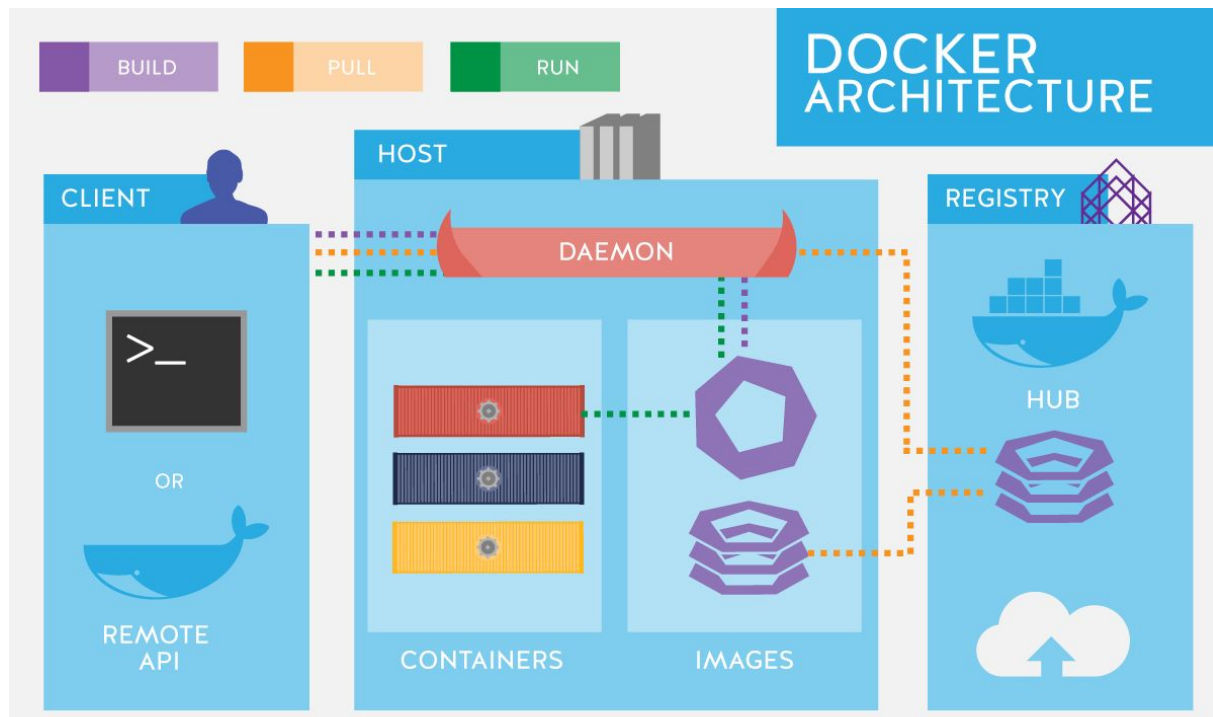


Representational State Transfer (REST)

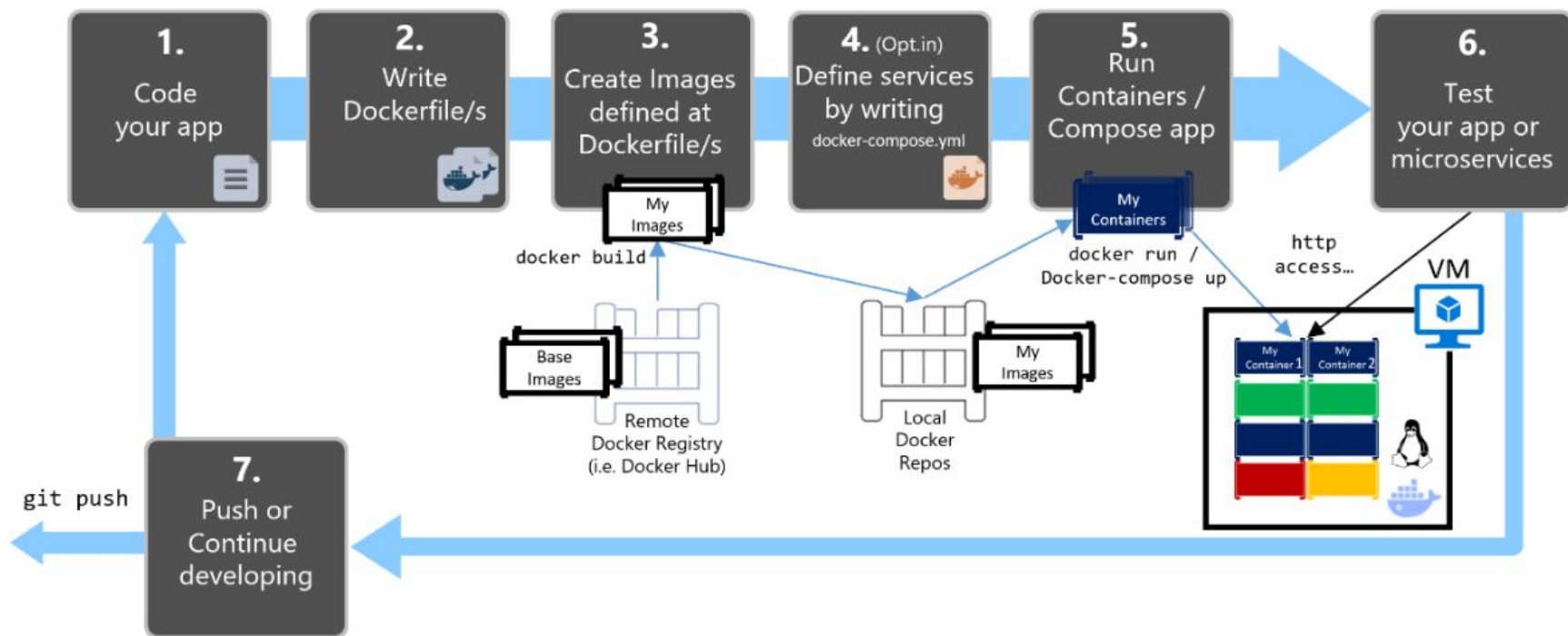
REST Concepts

- All teams will henceforth expose their data and functionality through service interfaces.
- Teams must communicate with each other through these interfaces.
- There will be no other form of inter-process communication allowed: no direct linking, no direct reads of another team's data store, no shared-memory model, no back-doors whatsoever. The only communication allowed is via service interface calls over the network.
- It doesn't matter what technology you use.
- All service interfaces, without exception, must be designed from the ground up to be externalize-able. That is to say, the team must plan and design to be able to expose the interface to developers in the outside world. No exceptions.
- Anyone who doesn't do this will be fired.
- Thank you; have a nice day!

REST Concepts: Client / Server



Docker Workflow



Q&A