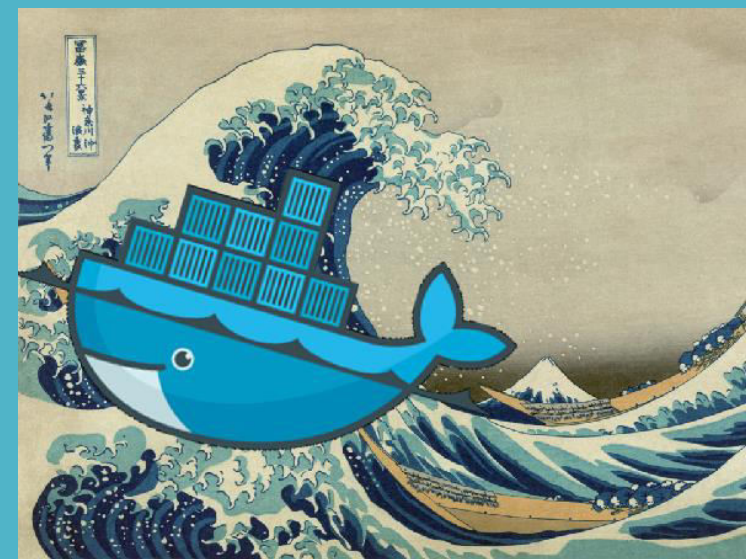# Docker

By Jonathan Song

What in the world is Docker?

Open-source engine that automates deployment of applications into containers

Lightweight and fast environment

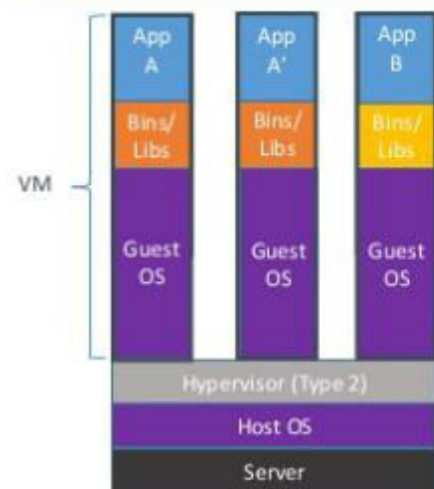*Application deployment engine on top of virtualized container execution environment*

Designed to be SIMPLE!

Aims to make containers easier to manage and automate

Up to this point, containers have not been widely used due to complexity and difficulty
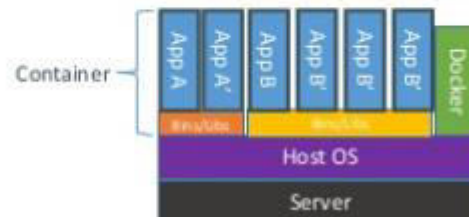
Quick Aside About Containers

Containers vs. VMs

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

...result is significantly faster deployment, much less overhead, easier migration, faster restart
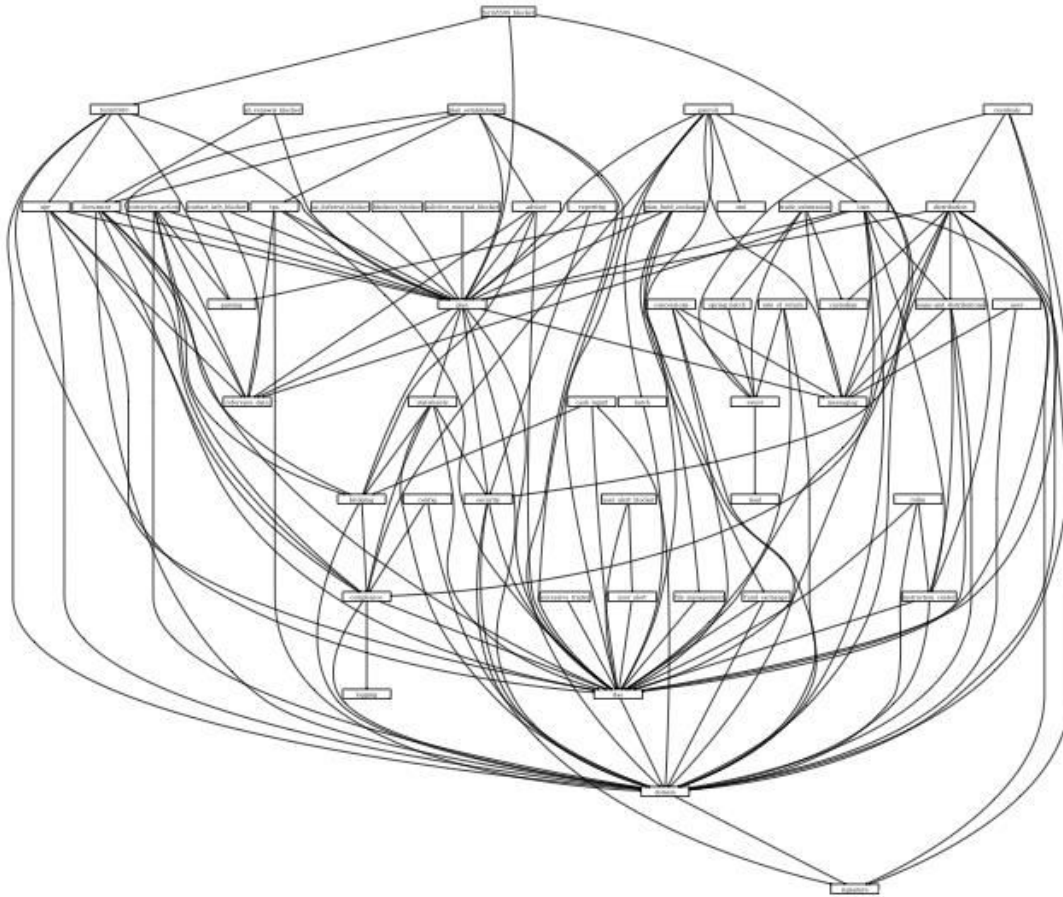
Docker's Mission

Easy and Lightweight

Logical segregation of duties

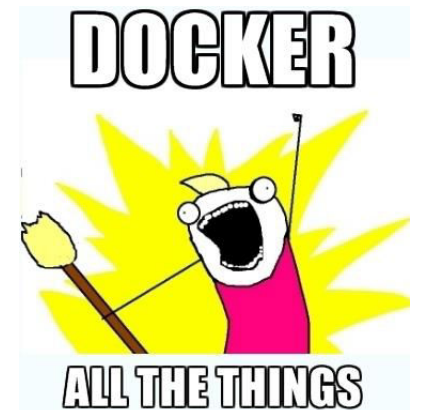Faster, more efficient development life cycle

To encourage service orientated architecture
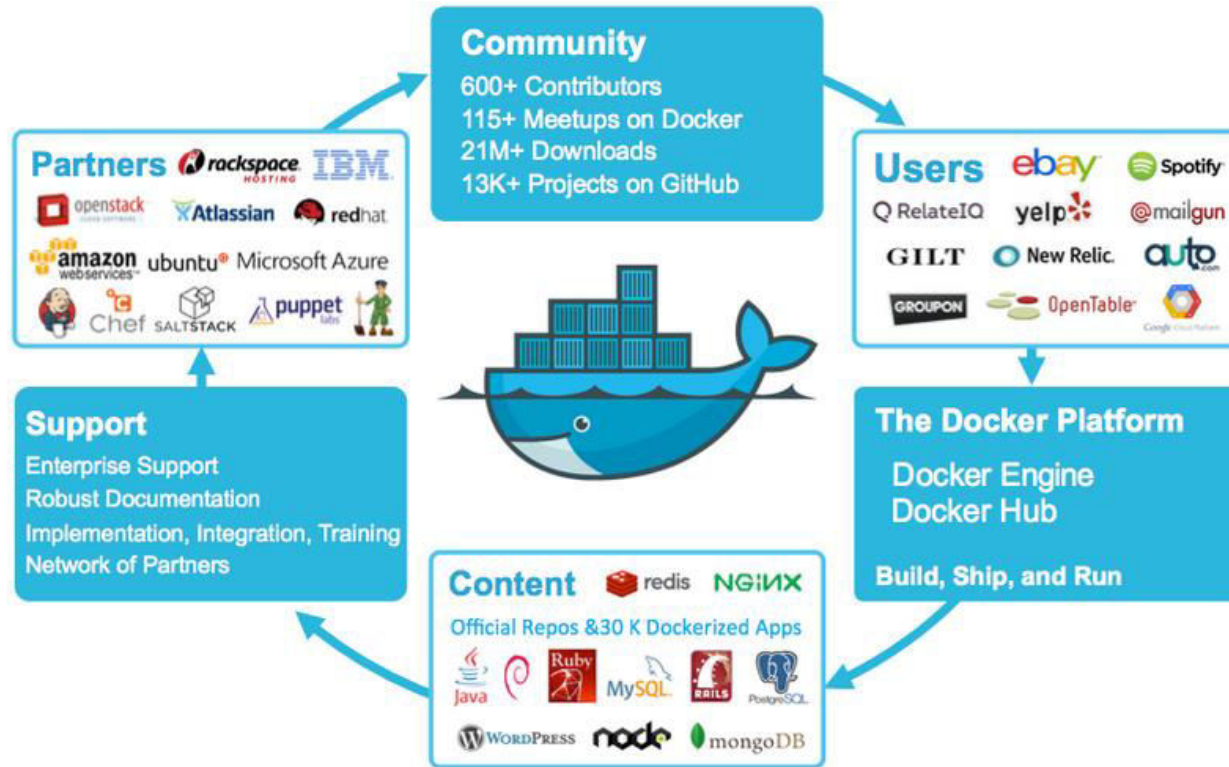
Fight Against Dependency Hell!

FLAGRANT SYSTEM ERROR

The system is down. I dunno what
you did, moron, but you sure
screwed everything up.
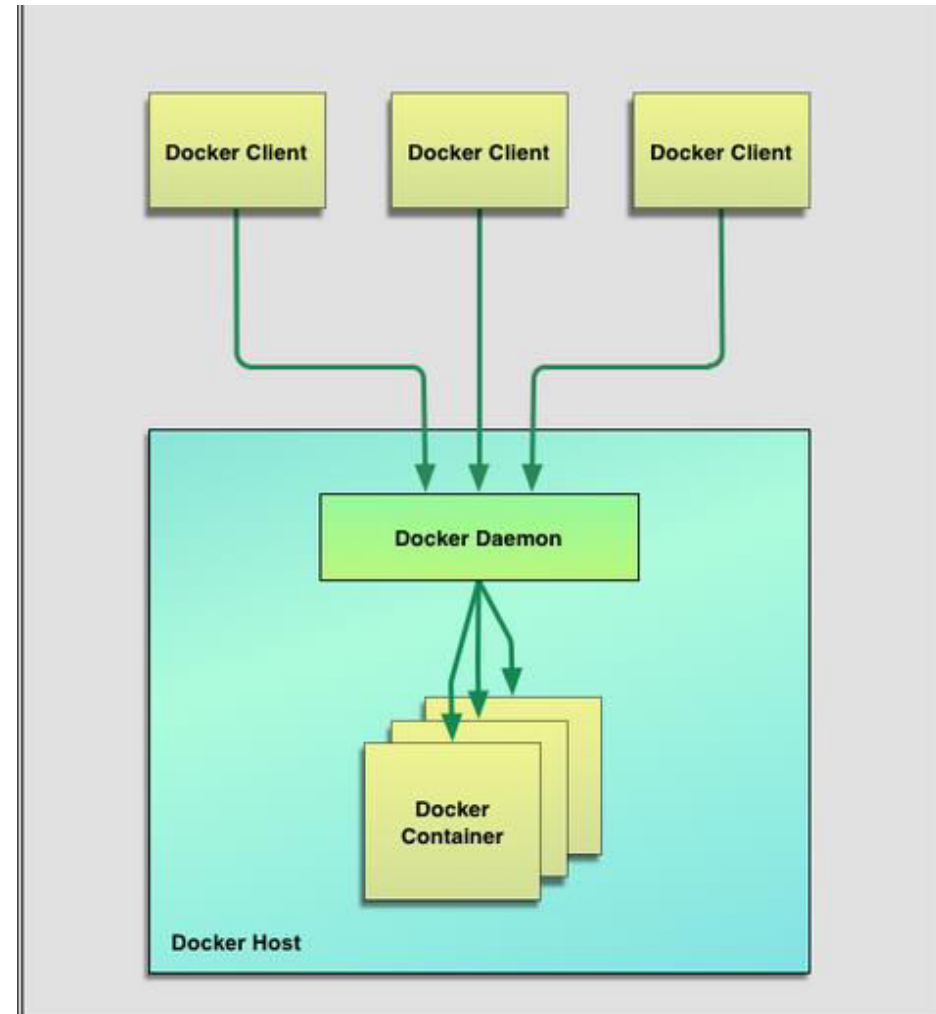
DOCKER

ALL THE THINGS

Docker Overview

Who Uses Docker?

Components

Docker is a client-server app

Client communicates with Daemon, or server

Run on same host

Or connect remotely

Components Continued
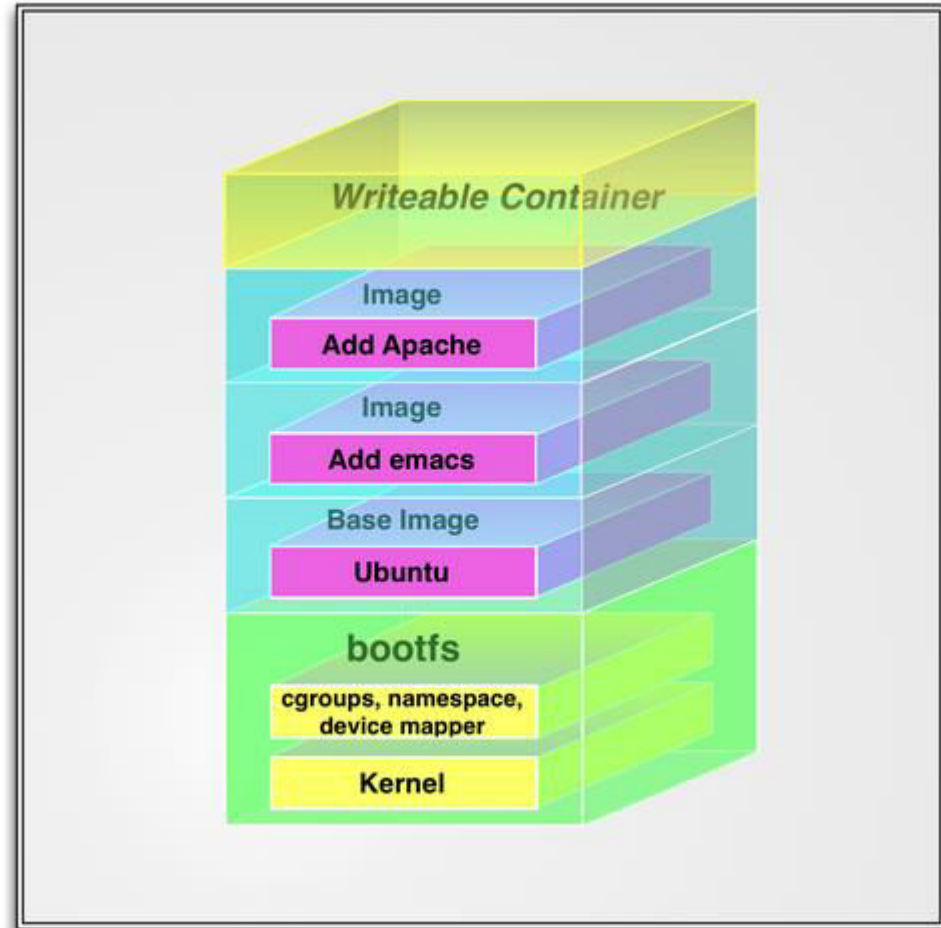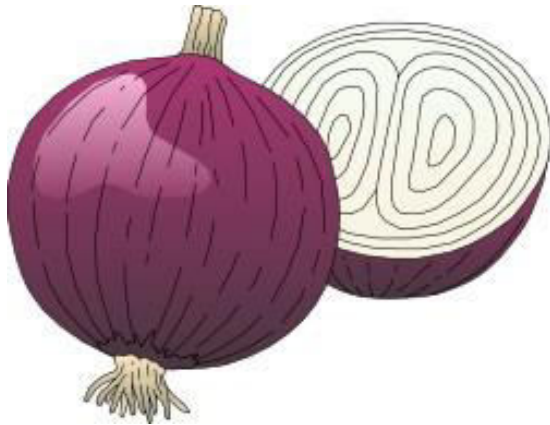
Images
    Building blocks of Docker
    Made up of layers of filesystems
    High portability
    "Copy on write"

Components Continued

Containers
    Created from images
    Running/execution side of Docker
    Package together applications/services
    Portable, interchangeable

Components Continued

Registries

Public registry: Docker Hub

Managed by Docker, Inc
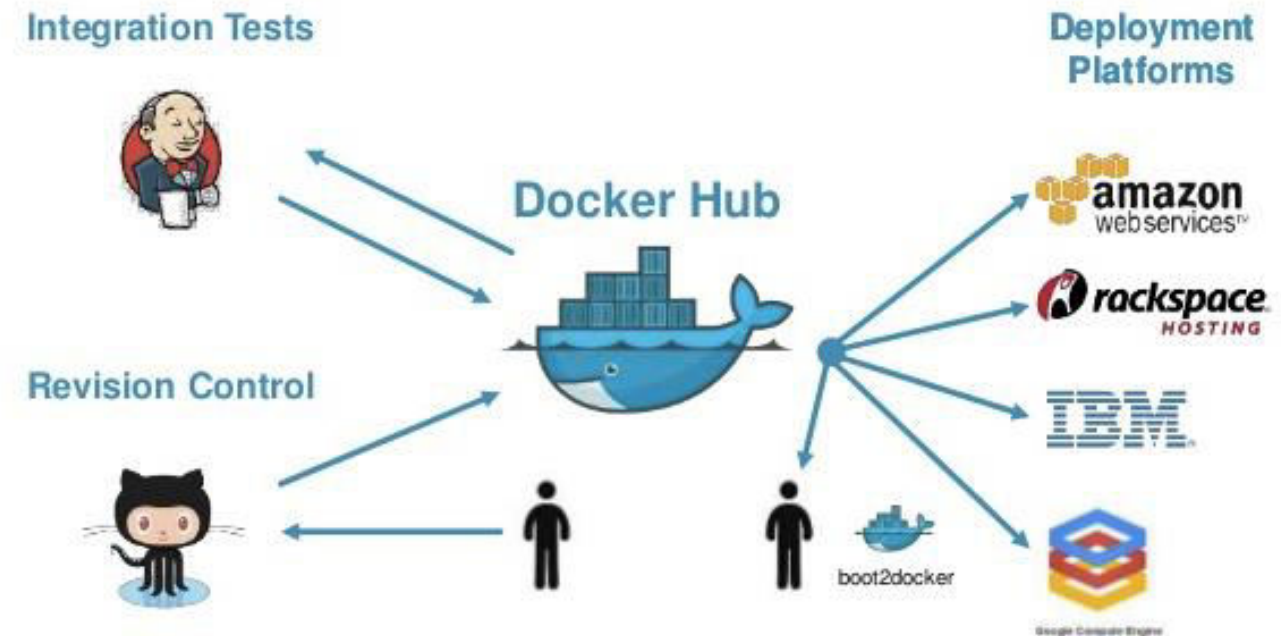
Open source

Public and Remote repos store images
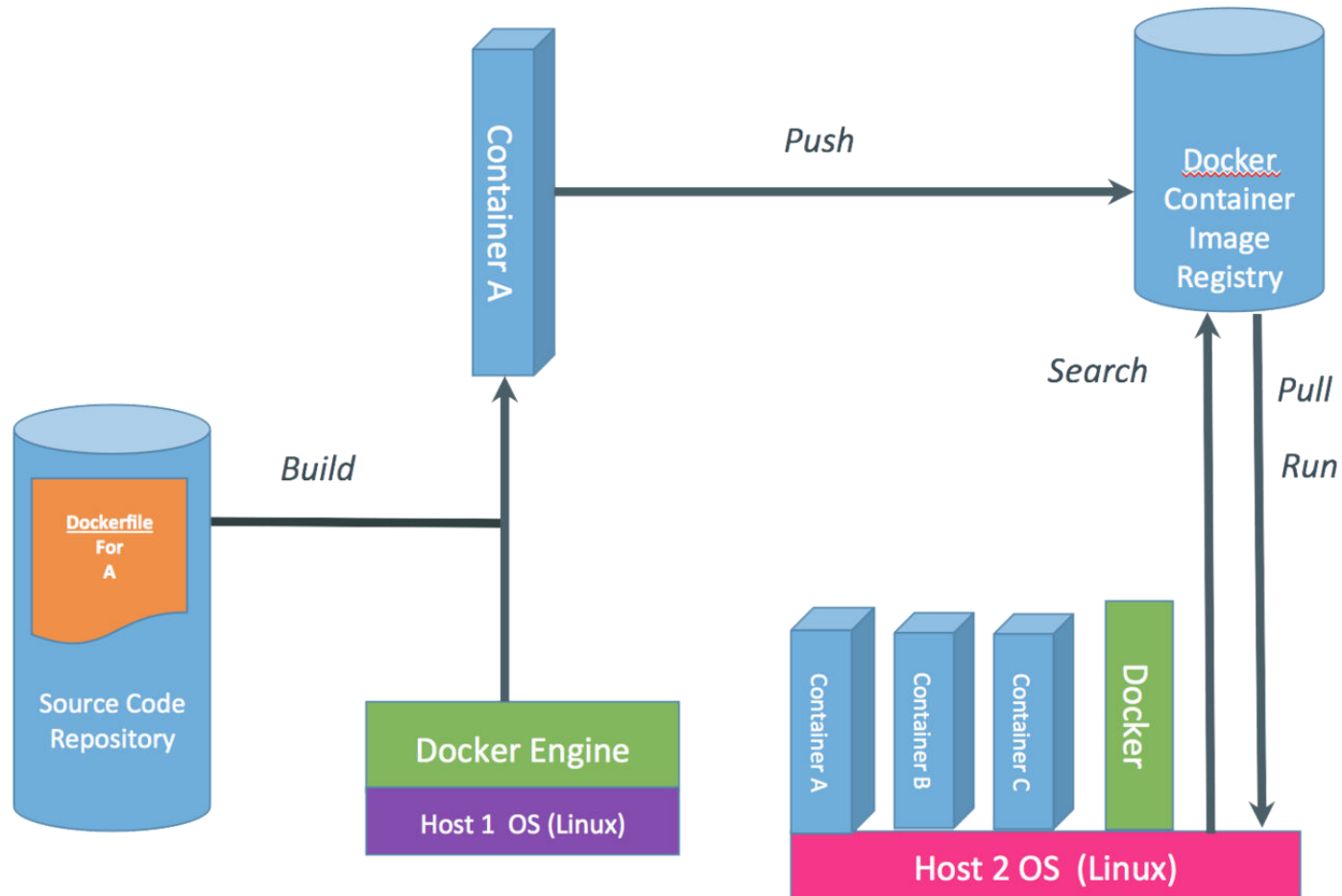
$ sudo docker pull redis:latest
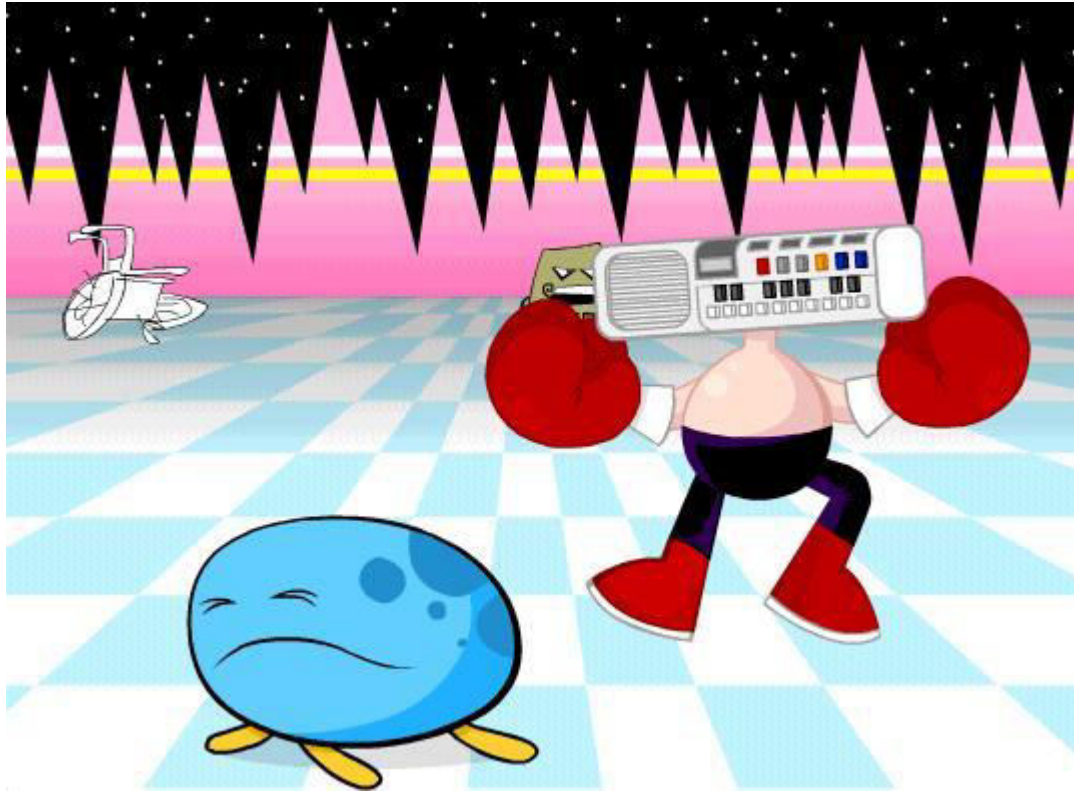
User Repos and Top-level Repos

ie. redruby67/sample

ie. ubuntu

Typical Docker Workflow

Play the Demo!

Resources

"The Docker Book, Containerization is the new virtualization" by James Turnbull

https://docs.docker.com/userguide/

https://www.docker.com/resources/

https://github.com/docker/docker