Docker Introduction

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"Code with Passion!"

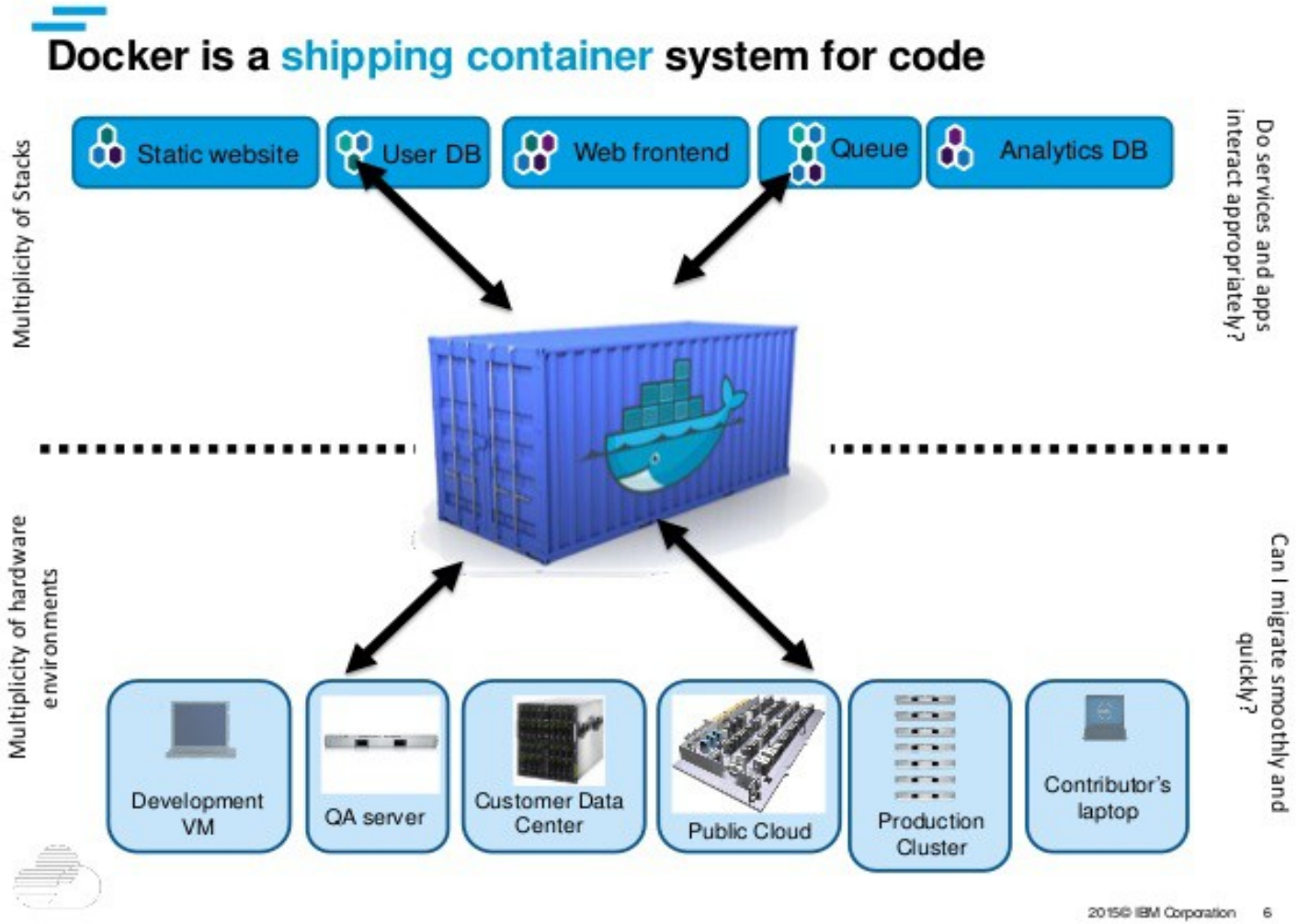
Topics

- What is and Why Docker?
- Docker ecosystem
- VMs vs Containers
- Docker architecture

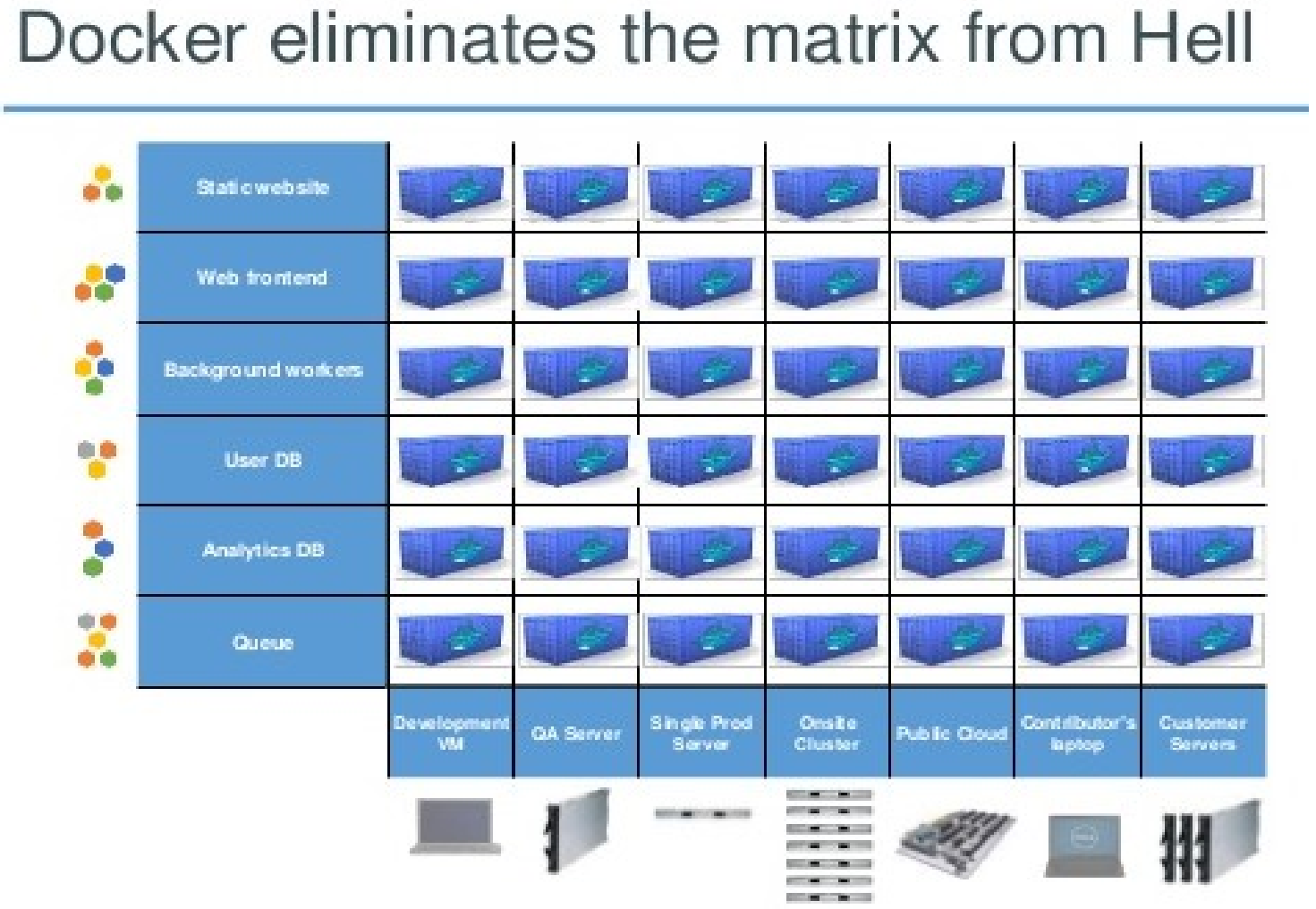
What is and Why Docker?

What is Docker?

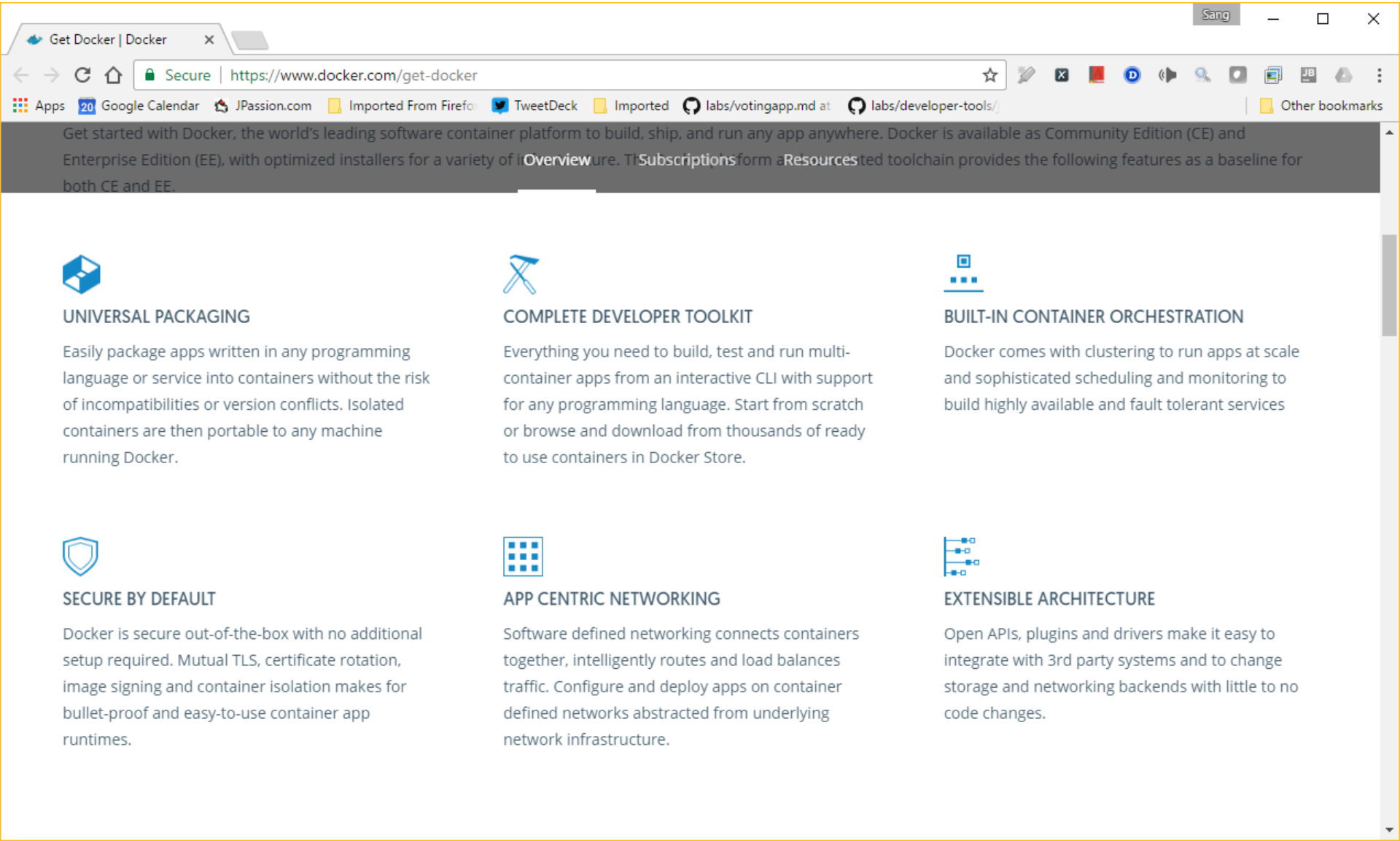
What is Docker?



Why Docker?

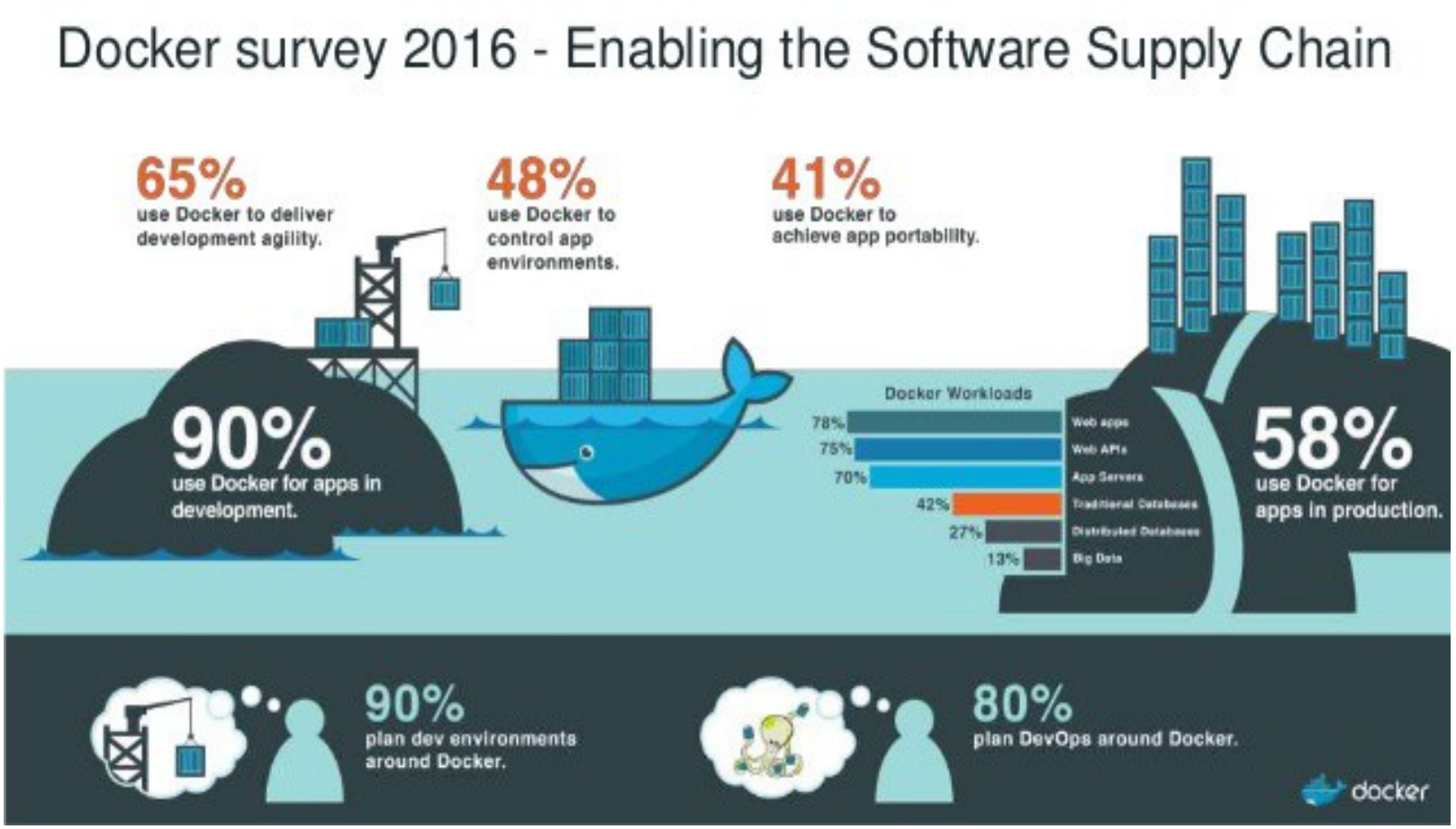

Docker eliminates the matrix from Hell
Static website
Web frontend
Background workers
User DB
Analytics DB
Queue
Development VM
QA Server
Single Prod Server
Onsite Cluster
Public Cloud
Contributor's laptop
Customer Servers

Why Docker?


Sang
Get Docker | Docker
Secure
https://www.docker.com/get-docker
Apps
Google Calendar
JPassion.com
Imported From Firefo
TweetDeck
Imported
labs/votingapp.md at
labs/developer-tools/
Other bookmarks
Get started with Docker, the world's leading software container platform to build, ship, and run any app anywhere. Docker is available as Community Edition (CE) and
Enterprise Edition (EE), with optimized installers for a variety of i ure. Th form a ted toolchain provides the following features as a baseline for
both CE and EE.
Overview
Subscriptions
Resources
UNIVERSAL PACKAGING
Easily package apps written in any programming language or service into containers without the risk of incompatibilities or version conflicts. Isolated containers are then portable to any machine running Docker.
COMPLETE DEVELOPER TOOLKIT
Everything you need to build, test and run multi-container apps from an interactive CLI with support for any programming language. Start from scratch or browse and download from thousands of ready to use containers in Docker Store.
BUILT-IN CONTAINER ORCHESTRATION
Docker comes with clustering to run apps at scale and sophisticated scheduling and monitoring to build highly available and fault tolerant services
SECURE BY DEFAULT
Docker is secure out-of-the-box with no additional setup required. Mutual TLS, certificate rotation, image signing and container isolation makes for bullet-proof and easy-to-use container app runtimes.
APP CENTRIC NETWORKING
Software defined networking connects containers together, intelligently routes and load balances traffic. Configure and deploy apps on container defined networks abstracted from underlying network infrastructure.
EXTENSIBLE ARCHITECTURE
Open APIs, plugins and drivers make it easy to integrate with 3rd party systems and to change storage and networking backends with little to no code changes.

Docker Ecosystem

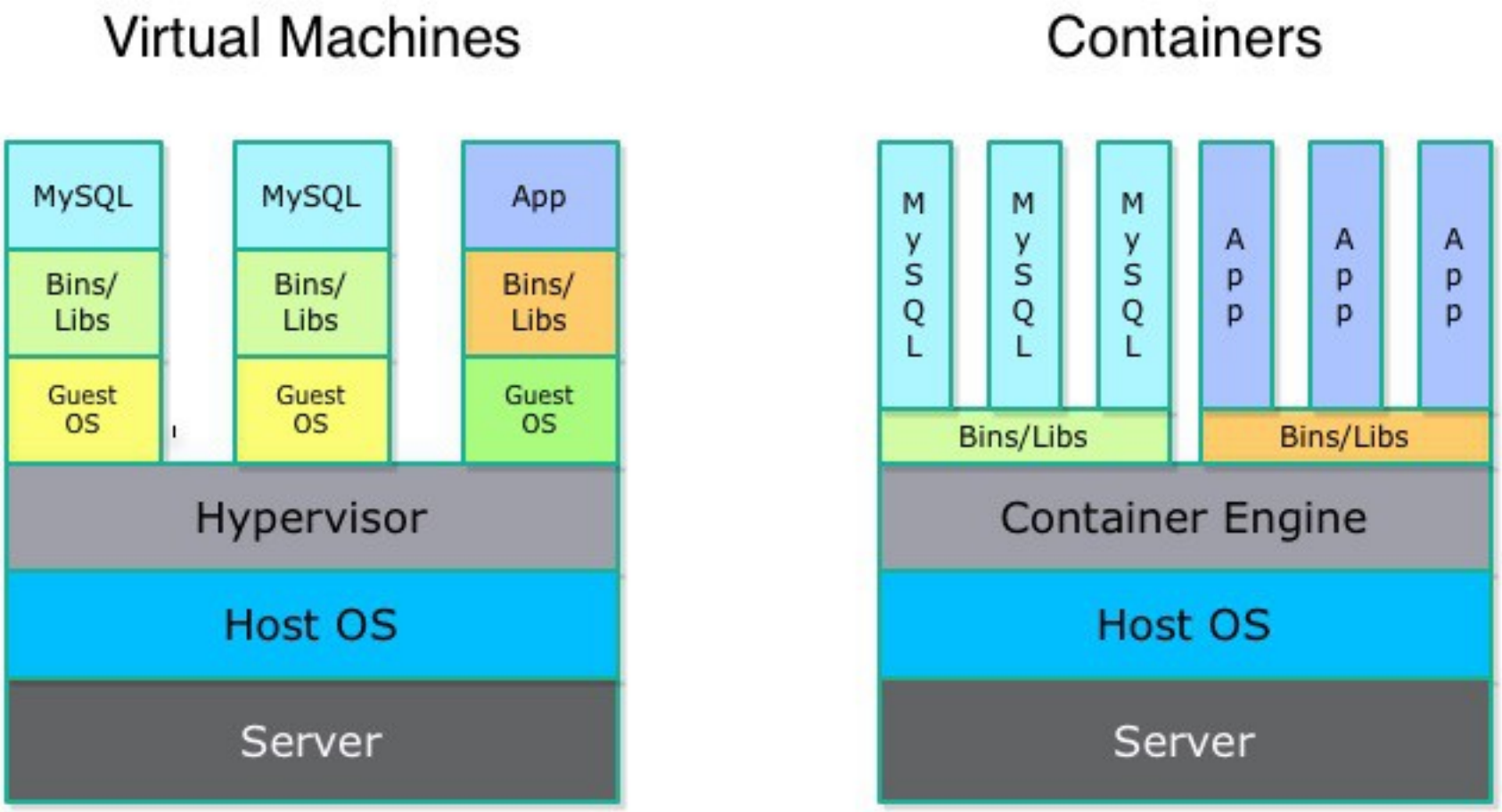
Docker Ecosystem



Docker Ecosystem

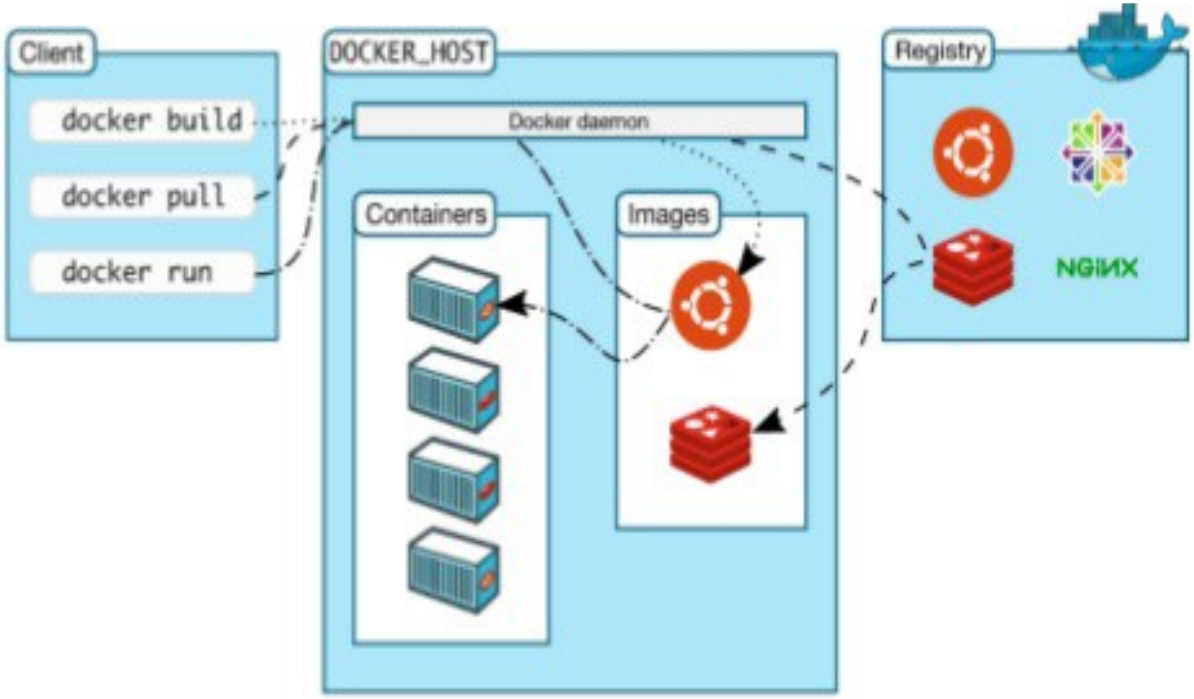
Virtual Machines(VMs) vs Containers

VM vs Containers



Docker Architecture

Docker Architecture



What makes up Docker?

- Images
  - The file system and configuration of our application which are used to create containers
- Containers
  - Running instances of Docker images - containers run the actual applications
- Docker daemon
  - The background service running on the host that manages building, running and distributing Docker containers
- Docker client
  - Command line tool that allows the user to interact with the Docker daemon
- Docker Hub
  - A registry of Docker images

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