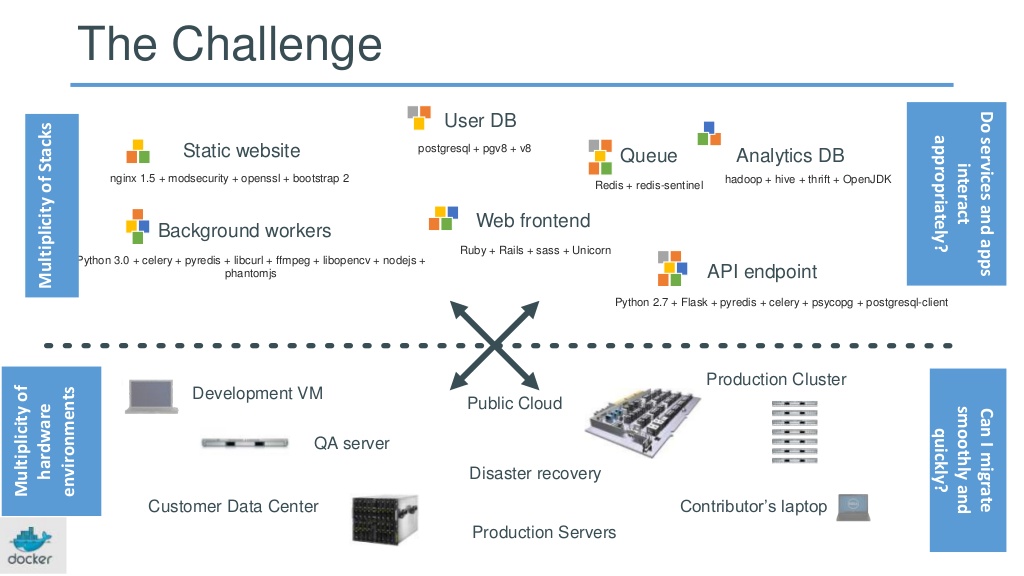
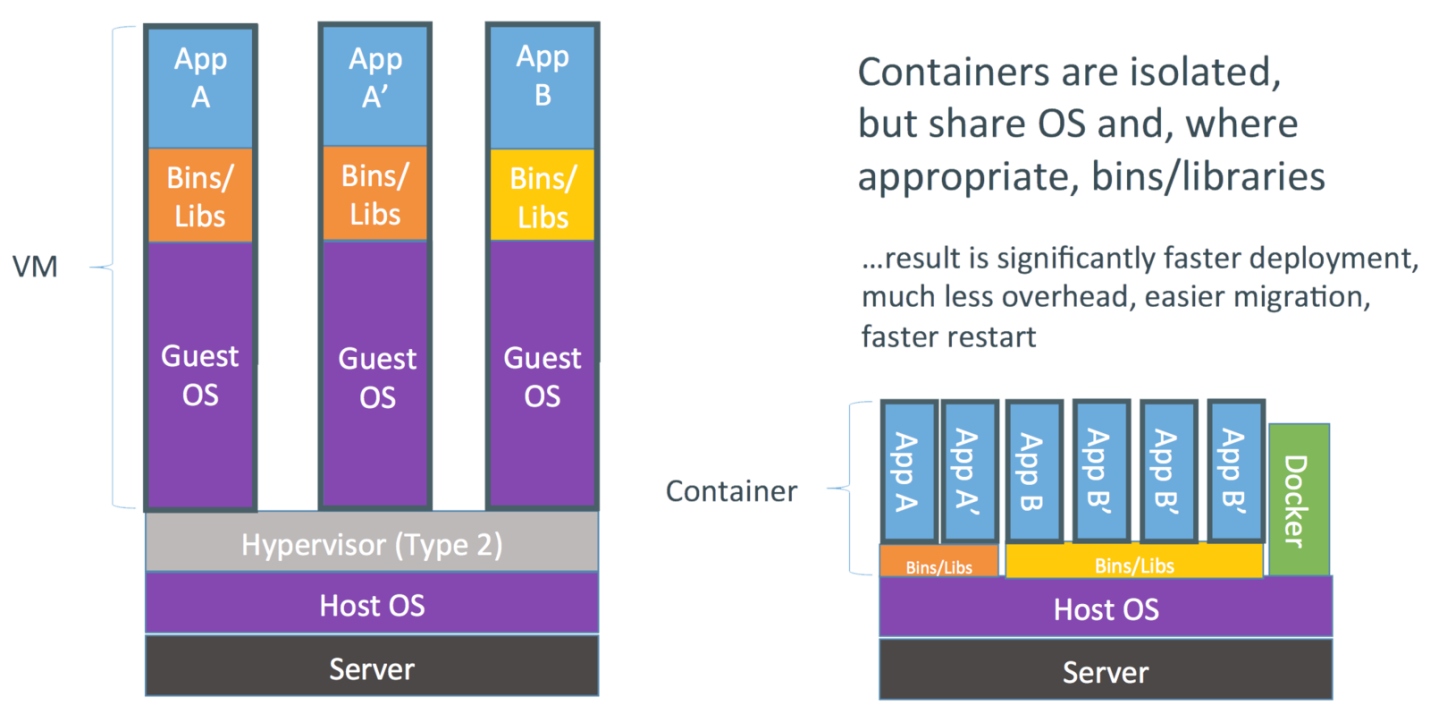
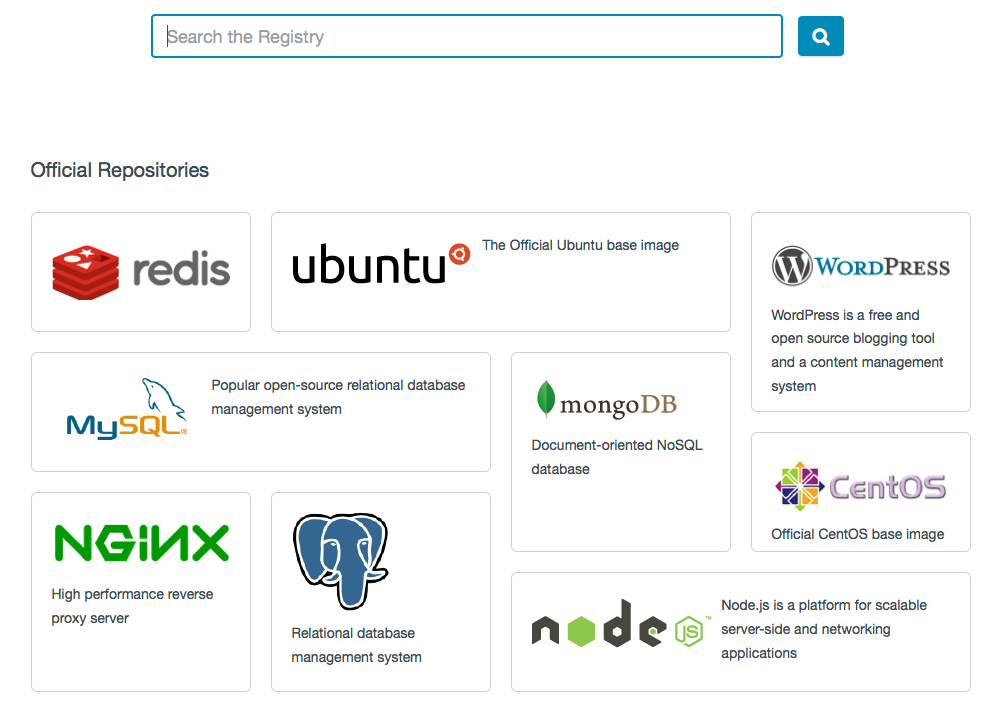
**WHY DOCKER?**



## CONTAINERS VS VMS



## DOCKER WORKFLOW



## DOCKER LINKS

* Applications are rarely monolithic
  + App, Web, & DB
* Create containers, expose ports, and link them

docker run -d --name docker\_mysql -p 3306:3306 -e MYSQL\_PASS="87654321" tutum/mysql

docker run --name docker\_wordpress01 --link docker\_mysql:mysql -e WORDPRESS\_DB\_USER="admin" -e WORDPRESS\_DB\_PASSWORD="87654321" -e WORDPRESS\_DB\_NAME="docker\_wordpress01" -p 8080:

80 -d wordpress



**DOCKERFILE**

* Like a Chef Cookbook but for creating Docker containers

From [tutum](https://registry.hub.docker.com/u/tutum/) / [mysql](https://registry.hub.docker.com/u/tutum/mysql/)

ROM ubuntu:trusty

MAINTAINER Fernando Mayo <fernando@tutum.co>, Feng Honglin <hfeng@tutum.co>

# Install packages

RUN apt-get update

RUN DEBIAN\_FRONTEND=noninteractive apt-get -y install mysql-server-5.6 pwgen

# Remove pre-installed database

RUN rm -rf /var/lib/mysql/\*

# Add MySQL configuration

ADD my.cnf /etc/mysql/conf.d/my.cnf

ADD mysqld\_charset.cnf /etc/mysql/conf.d/mysqld\_charset.cnf

# Add MySQL scripts

ADD create\_mysql\_admin\_user.sh /create\_mysql\_admin\_user.sh

ADD import\_sql.sh /import\_sql.sh

ADD run.sh /run.sh

RUN chmod 755 /\*.sh

# Exposed ENV

ENV MYSQL\_PASS \*\*Random\*\*

# Add VOLUMEs to allow backup of config and databases

VOLUME ["/etc/mysql", "/var/lib/mysql"]

EXPOSE 3306

CMD ["/run.sh"]

* Tutorial - http://blog.flux7.com/blogs/docker/docker-tutorial-series-part-3-automation-is-the-word-using-dockerfile

## DOCKER PROJECTS TO WATCH

* [Kubernetes](https://github.com/GoogleCloudPlatform/kubernetes) from Google
  + an open source implementation of container cluster management
* [Helios](https://github.com/spotify/helios) from Spotify
  + orchestration platform for deploying & managing containers across a fleet
* [Centurion](https://github.com/newrelic/centurion) from NewRelic
  + Takes containers from a Docker registry and runs them on a fleet of hosts with the correct environment variables, host volume & port mappings
* [Solumn](https://wiki.openstack.org/wiki/Solum) for OpenStack
  + Convert code into a managed application running on an OpenStack cloud
* [Clocker](https://github.com/brooklyncentral/clocker) from Apache Brooklyn
  + Contains Brooklyn entities, locations and examples that create a Docker cloud infrastructure
* [libswarm](https://github.com/docker/libswarm) from Docker
  + defines a standard interface for services in a distributed system to communicate with each other
* [libchan](https://github.com/docker/libchan) from Docker
  + networking library which lets network services communicate in the same way that goroutines communicate using channels