

# Primeros pasos con Docker

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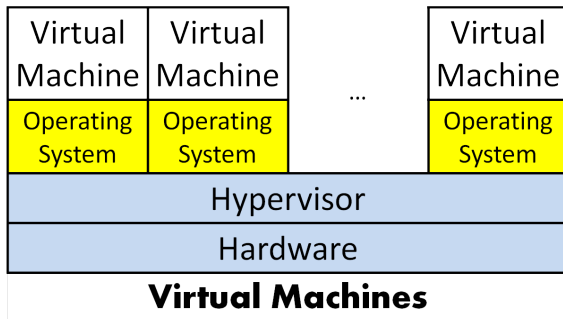
Nabenik

May 6, 2015





# Hipervisores



# VM/Hipervisores

## VM

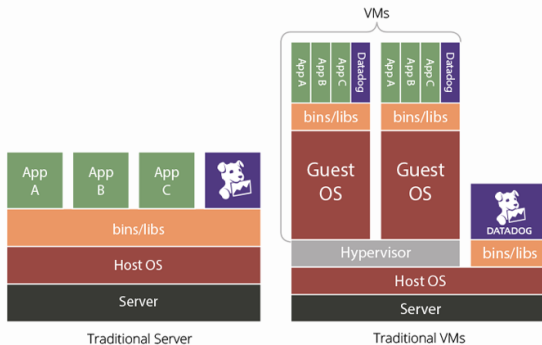
- ▶ VirtualBox
- ▶ VMWare Player
- ▶ MS Virtual Pc

## Hipervisores

- ▶ Xen
- ▶ KVM

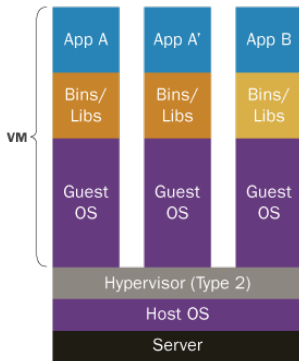


# Despliegue tradicional

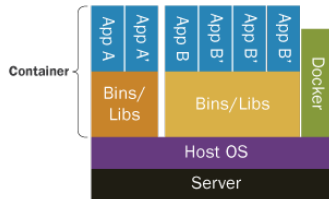


# Despliegue contenedores

## Containers vs. VMs



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





- ▶ Cgroups + Namespace: Isolamiento de recursos de un grupo y visibilidad entre procesos
- ▶ libcontainer (LXC/Libvirt/systemd-nspawn)
- ▶ SELinux, AppArmor, Netfilter





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- ▶ Ventajas: Boot time, menos overhead



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- ▶ Desventajas: Ecosistema joven (aka pocas GUI), Linux (meh!)



# Hands-On

- ▶ docker version
- ▶ docker images
- ▶ docker search -image-
- ▶ docker pull -image-



# Hands-On

```
tuxtor@star-destroyer ~ $ docker version
Client version: 1.6.0
Client API version: 1.18
Go version (client): go1.4.2
Git commit (client): 4749651
OS/Arch (client): linux/amd64
Server version: 1.6.0
Server API version: 1.18
Go version (server): go1.4.2
Git commit (server): 4749651
OS/Arch (server): linux/amd64
tuxtor@star-destroyer ~ $ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             VIRTUAL SIZE
jboss/wildfly-admin  latest             fdc9987f1424       About an hour ago   951.3 MB
tuxtor/apache        latest             eab539cb326a       2 hours ago        223.4 MB
ubuntu               latest             07f808c5e660       5 days ago         188.3 MB
jboss/wildfly        latest             2ac466861ca1       7 weeks ago        951.3 MB
tuxtor@star-destroyer ~ $ docker search jboss
NAME                DESCRIPTION                               STARS   OFFICIAL   AUTOMATED
jboss/wildfly       WildFly application server image          80      [OK]
tutum/jboss         JBoss image - listens in port 8080, 9990. ... 10      [OK]
jboss/torquebox     Ruby application platform                 10      [OK]
jboss/base-jdk      Backend as a Service                      8       [OK]
jboss/base          Backend as a Service                      5       [OK]
jboss/liveoak-server Backend as a Service                      4       [OK]
jboss/switchyard-wildfly Backend as a Service                    2       [OK]
jboss/keycloak      Backend as a Service                    1       [OK]
jboss/modeshape     Backend as a Service                    1       [OK]
jboss/forgo         Backend as a Service                    1       [OK]
jboss/immutable     Backend as a Service                    1       [OK]
jboss/keycloak-mysql Backend as a Service                    1       [OK]
inspectit/jboss     Backend as a Service                    0       [OK]
jboss/keycloak-examples Backend as a Service                  0       [OK]
jbosstools/jbosstools-website Allow to test and build aweestruct based to... 0       [OK]
arnaudprez/jboss-as Backend as a Service                  0       [OK]
nipun/jboss         Backend as a Service                  0       [OK]
sleshchenko/jboss   Backend as a Service                  0       [OK]
jboss/keycloak-adapter-wildfly Backend as a Service                0       [OK]
nipun/es-jboss       Backend as a Service                  0       [OK]
jboss/apiman-wildfly Backend as a Service                  0       [OK]
jorgemoralesspou/jboss Backend as a Service                  0       [OK]
arcus/jboss          Backend as a Service                  0       [OK]
jboss/aerogear-simplepush-server Backend as a Service                0       [OK]
sleshchenko/docker-jboss Backend as a Service                0       [OK]
tuxtor@star-destroyer ~ $ docker pull jboss/base
Pulling repository jboss/base
2ea8562cac7c: Download complete
511136ea3c5a: Download complete
782cf93a8f16: Download complete
7d3f07f8de5f: Download complete
1ef0a50fe8b1: Download complete
20e1abe1d9bf: Download complete
cd5bb934bb67: Download complete
379edb00ab07: Download complete
4d37cbbfc67d: Download complete
Status: Image is up to date for jboss/base:latest
tuxtor@star-destroyer ~ $
```

# Demo 1

- ▶ Imagen base (ubuntu)
- ▶ Ejecución
- ▶ Agregar paquete
- ▶ Commit
- ▶ Ejecución



# Demo 1

- ▶ `docker pull ubuntu`
- ▶ `docker run ubuntu echo "Hola ubuntu"`
- ▶ `docker run -it ubuntu /bin/bash`
- ▶ `apt-get update&&apt-get install apache`
- ▶ `docker ps`
- ▶ `docker commit -id- tuxtor/apache`
- ▶ `docker run -d -p 81:80 tuxtor/apache /usr/sbin/apache2ctl -D FOREGROUND`



# Demo 2

- ▶ App Java Web (usac-web)
- ▶ Imagen base (jboss/wildfly)
- ▶ Dockerfile
- ▶ Tag
- ▶ Ejecución





# Complementos

- ▶ Vagrant boxes
- ▶ Kubernetes
- ▶ CoreOS
- ▶ etcd



- ▶ [tuxtor@shekalug.org](mailto:tuxtor@shekalug.org)
- ▶ <http://tuxtor.shekalug.org>
- ▶ <http://github.com/tuxtor/slides>



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