

Fast, isolated development environments using



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Challenges



NOOOOOOOOOOOOO

Present-day solutions





docker

Survey

Who have heard of Docker?

Who have tried Docker ?

Who is using Docker for his work ?

Docker history

January 2013

Docker started as an internal project inside of dotCloud

March 2013

Docker 0.1 released to public

September 2013

Docker merged into Openstack

October 2014

Microsoft announced integration of the Docker engine into the next Server release

August 2015

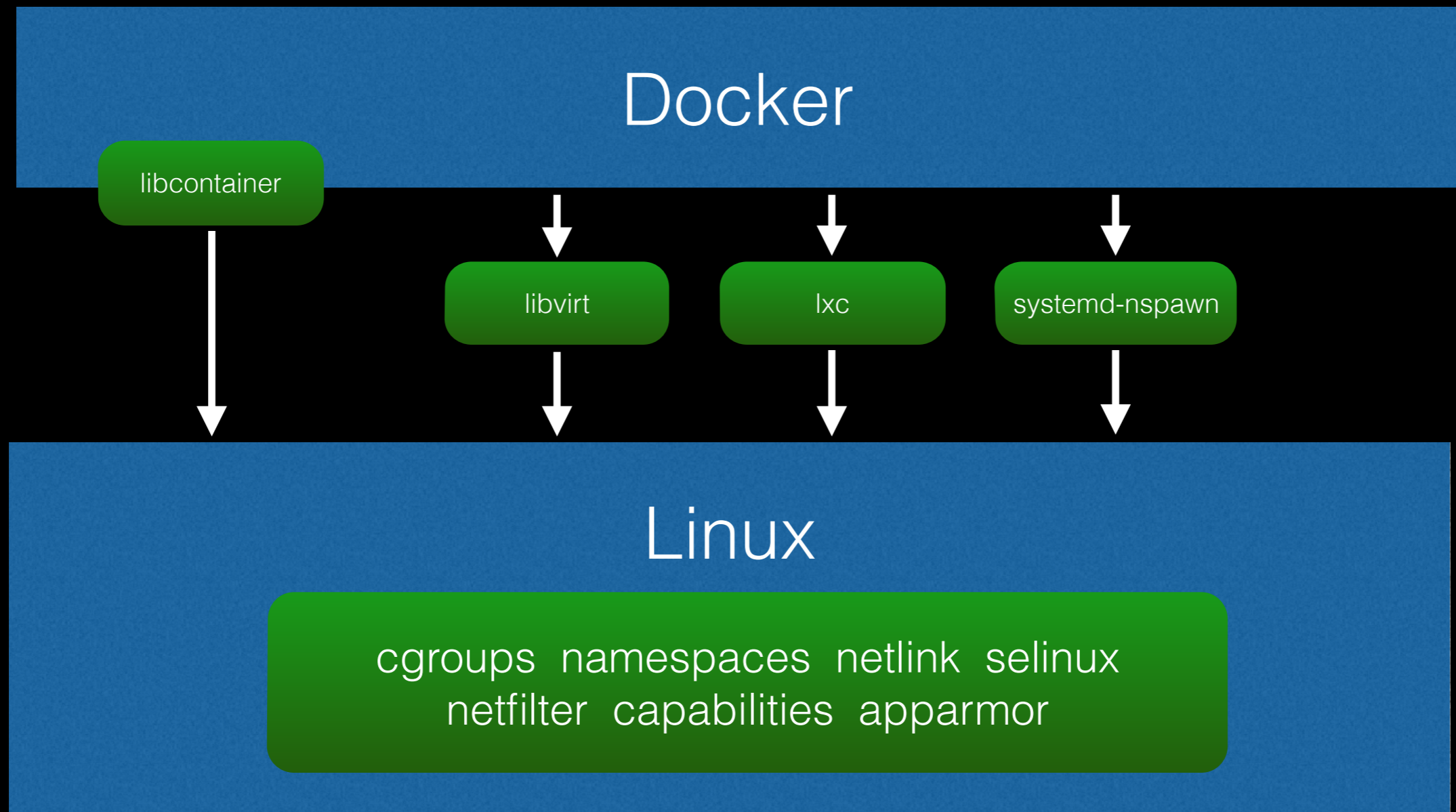
Docker released Docker Engine 1.8.0, Docker Compose 1.4.0, Docker Swarm and Docker Machine 0.4.0

About Docker

„Docker is an open-source engine to easily create lightweight, portable, self-sufficient containers from any application“

Lightweight Open Source Secure Written in GO

How does Docker work ?



Control Groups & Namespaces

Linux kernel features to limit,
account and isolate resources

Cpu
Memory
Disk i/o
Network

„chroot on steroids“



Why containers ?

Speed: Boots in seconds

Footprint: Hundreds of containers on one machine

Exchange: Containers can be shared easily

Docker requirements

Linux Kernel 3.10 or above

iptables 1.4 or later

git 1.7 or later

64-bit OS

Installing Docker

```
$> curl -sSL https://get.docker.com/ | sh
```

Basic commands

Get base image

```
$> docker pull ubuntu
```

List images on your system

```
$> docker images
```

Get containers

```
$> docker ps
```

Remove container

```
$> docker rm <containerid>
```

Remove image

```
$> docker rmi <imageid>
```

Stop container

```
$> docker stop <containerid>
```

Start container

```
$> docker run -d -p \
    1022:22 -p 1080:80 <imageid>
```

Exec bash in running container

```
docker exec -it <containerid> bash
```


Creating Docker images: the interactive way

Start container based on ubuntu image

```
$> docker run -i -t ubuntu /bin/bash
root@23c34ee50ce:/#
root@23c34ee50ce:/# apt-get update
root@23c34ee50ce:/# apt-get install nginx
root@23c34ee50ce:/# exit
```

Commit the created image

```
$> docker commit `docker ps -q -f opstack:nginx`
```

Start the newly created image

```
$> docker run -d -p 80:80 --name <containername> opstack:nginx
```

Creating Docker images: the scripted way

Create Dockerfile

```
# Nginx
FROM ubuntu:14.04
MAINTAINER Andreas Nanko <andreas@opstack.io>
```

RUN apt-get update

RUN apt-get install -y nginx

Build the image

```
docker build -t opstack:nginx .
```

Start the image

```
$> docker run -d -p 80:80 --name <containername> opstack:nginx
```

How does this help?



Oxid Setup in less than 5 minutes

Whats next ?

More information on



<https://docs.docker.com/>

<https://github.com/andreasnanko/OxidCE-dockerized>

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