云之彼端

Docker In Clouds

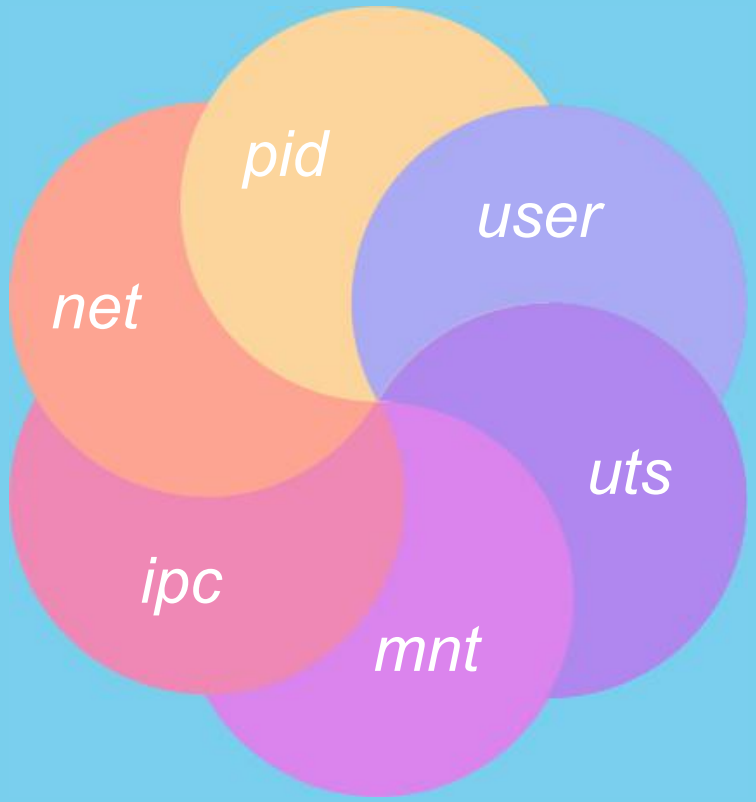
Agenda

- Isolate -> Namespaces
- Control Groups -> cgroups
- LXC -> Linux Container
- Why named Docker
- Docker is the next generation PaaS

Isolate

Namespaces

- *pid* namespace
- *net* namespace
- *mnt* namespace
- *ipc* namespace
- *uts* namespace



Resource Control

Control Groups - cgroups

- Memory
- CPU Share
- CPU Set
- Block I/O

CPU: 0,1
memory: 1G

CPU: 2, 3, 4
memory: 3G

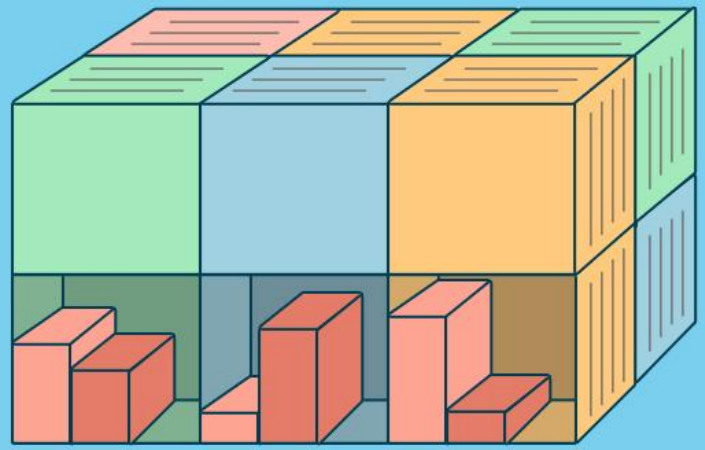
CPU: 5, 6, 7
memory: 512M

LXC - Linux Container

Provide powerful api and simple tools to manage resource through the namespaces and control groups aka cgroups.

Why named Docker?

Containers

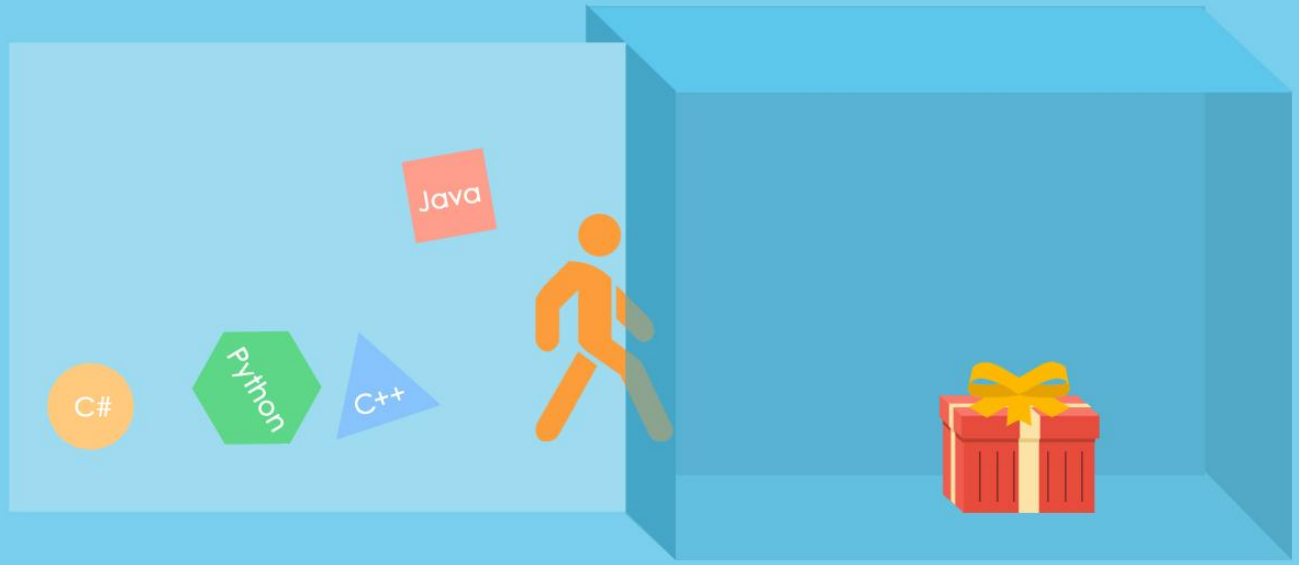


Docker

Build A Golang Docker

```
26  docker-version        0.6.1
27  FROM        ubuntu:12.04
28  MAINTAINER        Solomon Hykes <solomon@dotcloud.com>
29
30  # Prevent apt-get install from trying to prompt for stuff
31  ENV         DEBIAN_FRONTEND noninteractive
32
33  # Build dependencies
34  RUN         echo 'deb http://archive.ubuntu.com/ubuntu precise main universe' > /etc/apt/sources.list
35  RUN         apt-get update
36  RUN         apt-get install -y -q apt-utils
37  RUN         apt-get install -y -q curl
38  RUN         apt-get install -y -q git
39  RUN         apt-get install -y -q mercurial
40  RUN         apt-get install -y -q build-essential libsqlite3-dev
41
42  # Install Go
43  RUN         curl -s https://go.googlecode.com/files/go1.2.src.tar.gz | tar -v -C /usr/local -xz
44  ENV         PATH        /usr/local/go/bin:/usr/local/bin:/usr/local/sbin:/usr/bin:/usr/sbin:/bin:/sbin
45  ENV         GOPATH        /go:/go/src/github.com/dotcloud/docker/vendor
46  RUN         cd /usr/local/go/src && ./make.bash --no-clean 2>&1
47
48  # Cross compilation
49  ENV         DOCKER_CROSSPLATFORMS        darwin/amd64 darwin/386
50  # TODO add linux/386 and linux/arm
51  RUN         cd /usr/local/go/src && bash -xc 'for platform in $DOCKER_CROSSPLATFORMS; do GOOS=${platform%/*} GOARCH=${platfor
52
```

Docker is the next generation PaaS



Thanks

Meaglith Ma <genedna@gmail.com>
Twitter: @genedna
Weibo: @马全一