

Vagrant or Docker

Choice for development environment

Agenda

- Why
- Vagrant Usage
- Docker Usage
- Next step

为什么研发环境虚拟化

- 痛点
 - 操作系统不一致
 - 编译环境不一致
 - 运行的容器等不一致
 - 外部依赖
 - **It works on my PC**
- 理想的研发流程
 - 获取源代码
 - 运行代码
 - 修改代码
 - 运行 / 调试代码

研发虚拟化选择

- Vagrant
 - A Virtual Machine
 - All in one VM
 - Share Code Folder
 - Ports forward
 - Edit Code outside
 - Run app in box
- Docker
 - A Container
 - one container for one app
 - git style modification
 - Docker compose
 - Copy on volume share
 - Ports forward

VM vs Docker

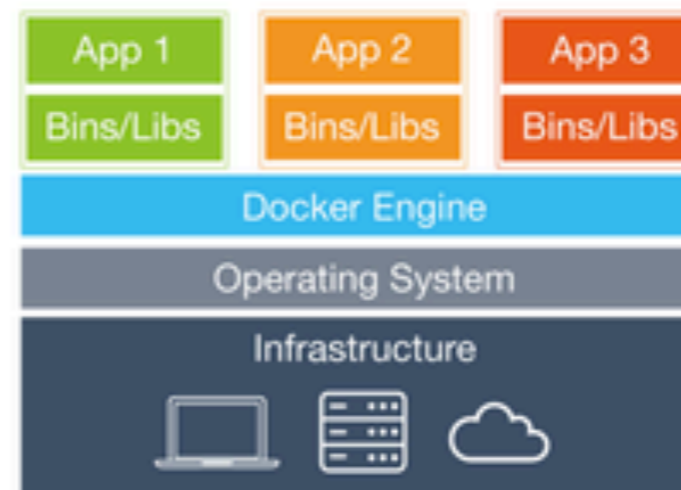
How is this different from virtual machines?

Containers have similar resource isolation and allocation benefits as virtual machines but a different architectural approach allows them to be much more portable and efficient.



Virtual Machines

Each virtual machine includes the application, the necessary binaries and libraries and an entire guest operating system - all of which may be tens of GBs in size.



Containers

Containers include the application and all of its dependencies, but share the kernel with other containers. They run as an isolated process in userspace on the host operating system. They're also not tied to any specific infrastructure - Docker containers run on any computer, on any infrastructure and in any cloud.

Vagrant usage

- Building box
 - Building an VM by Virtualbox/VMWare
 - Convert to vagrant box: vagrant package
 - Set the vagrant env: Vagrant init
 - Customize VagrantFile
- start the VM: vagrant up
- SSH to the VM: vagrant ssh
- Explore the code ...

Docker Usage

- Build images
 - DockerFile/Docker Pull
 - Docker commit
 - Docker push
- Docker run
- docker images
- docker ps / docker kill

Next Step

- 标准化 / 虚拟化研发环境两者都可用
- Vagrant box可以防在任意http服务器上
- Docker Image需要上传到Docker Hub (public / internal)
- Vagrant 在标准化研发环境更适合
- Docker更适合标准化发布(CI & Production)
- 两者可以结合起来使用

Let's try and make your choice

References

- Vagrant: <https://www.vagrantup.com/>
- Docker: <https://docs.docker.com/>
- Docker Doc: <https://docs.docker.com/>
- Vagrant Doc: <https://www.vagrantup.com/docs/>
- [Create a CentOS 6 Vagrant Base Box from Scratch Using VirtualBox](#)
- [Build you own docker images](#)
- [Dockerizing PostgreSQL](#)
- [Docker Compose and Django](#)

Thanks