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OpenShift Developer Advocate

redhat.

I’m Jorge Morales

I work at

as a Developer Advocate for

I do:

- demos
- workshops
- talks
- conferences
- blogs
- travel
- drink beer
- ...

And I wanted OpenShift in a VM

What did I already have access to?

A whole lot of options

- OpenShift Origin Vagrant
- CDKv2 (Container Development Kit)
- adb (Atomic Development Bundle)
- OpenShift 3 demo Vagrant environment
- Multi-Host OpenShift Enterprise via Vagrant
- OpenShift Enterprise v3 Automated Installation
- OpenShift Enterprise 3 nodes setup with Vagrant and quick installer
- oinc - OpenShift in Container
- Fabric8
- And many more...

OpenShift Origin Vagrant

- Official Image by OpenShift community for developing in Origin
- https://github.com/openshift/origin/blob/master/CONTRIBUTING.adoc#develop-on-virtual-machine-using-vagrant

PRO:

- Community version
- Continuously maintained

CON:

- Only set up the VM and git cloning. A lot of manual steps (Registry, Router, Monitoring, Logging,...)
- No easy update

Container Development Kit v2 CDKv2

- Red Hat's official Image for OpenShift Enterprise developers
- https://access.redhat.com/downloads/content/293/ver=2/rhel---7/2.0.0/x86_64/product-software

PRO:

- Full image. Ready to work
- Continuously maintained

CON:

- Enterprise version
- Installation process still incomplete (Beta4 at the moment)
- Vagrant plugins required to set up
- Multipurpose project. Lot of manual steps required to set up an OpenShift VM.

Atomic Developer Bundle

- Upstream version of CDK.
- https://github.com/projectatomic/adb-atomic-developer-bundle

PRO:

- Community version
- Full image. Ready to work
- Continuously maintained

CON:

- Vagrant plugins required to set up.
- Multipurpose project. Lot of manual steps required to set up an OpenShift VM.

OpenShift 3 demo Vagrant environment

- Automated installation of an environment for using with openshift/training material
- https://github.com/jorgemoralespou/jboss-virtual-environments/tree/master/vagrant-vms/openshift3

PRO:

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CON:

- Enterprise version
- Not maintained. Working with 3.0
- Not an all-in-one VM

Multihost OpenShift Enterprise via Vagrant

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- https://github.com/thoraxe/vagrant-openshift-multihost

PRO:

- Active developed.

CON:

- Enterprise version
- Not an all-in-one VM

OpenShift Enterprise 3 automated installation

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- https://github.com/jcordes73/ose-installation-automation

PRO:

-

CON:

- Enterprise version
- Not maintained. Working with 3.0
- Not an all-in-one VM

OpenShift Enterprise 3 nodes setup w/ Vagrant and quick installer

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- https://github.com/nekop/openshift-sandbox/tree/master/vagrant/openshift-enterprise

PRO:

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CON:

- Enterprise version
- Not maintained. Working with 3.0
-

OpenShift In Container (oinc)

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- https://github.com/mfojtik/oinc/

PRO:

- Community version

CON:

-

Fabric8 Vagrant Image

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- http://fabric8.io/guide/getStartedVagrant.html

PRO:

- Community version

CON:

- Vagrant plugins required to set up.
-

None of these worked for me!

When I say me, I mean my team.

To be more precise, I mean TheSteve0

What we wanted:

- Community based
- Open source
- Maintained up-to-date
- Easy to understand
- Flexible in options
  - VM provisioning configuration tunable
  - VM runtime configuration tunable
- Packageable. Can make a base-box for redistribution out of it.

So here, I’m presenting….

OpenShift Origin’s Vagrant EVG Version

As easy as:
vagrant up

No additional plugins required!

No fancy port redirection!

Fully configured!

Fully maintained and supported!

By me :-D

Provisioning options:

```
ORIGIN_REPO = ENV['ORIGIN_REPO'] || "openshift"
ORIGIN_BRANCH = ENV['ORIGIN_BRANCH'] || "master"
PUBLIC_ADDRESS = ENV['ORIGIN_VM_IP'] || "10.2.2.2"
PUBLIC_DOMAIN  = ENV['ORIGIN_VM_DOMAIN'] || "apps.#{PUBLIC_ADDRESS}.xip.io"
VM_MEM = ENV['ORIGIN_VM_MEM'] || "4096" # Memory used for the VM
ACTION  = ENV['ACTION'] || "none" # (none, clean, build, config)
CONFIG  = ENV['CONFIG'] || "osetemplates,metrics" # testusers,originimages,centosimages,rhelimages,
xpaasimages,otherimages,osetemplates,metrics
FORCE_PREREQS = ENV['FORCE_PREREQS']
FORCE_DOCKER  = ENV['FORCE_DOCKER']
FORCE_ADDONS  = ENV['FORCE_ADDONS']
BUILD_IMAGES  = ENV['BUILD_IMAGES'] || "false" # (true|false)
JOURNAL_SIZE = ENV['JOURNAL_SIZE'] || "100M" # (Use a number suffixed by M,G)
DOCKER_STORAGE_SIZE = ENV['DOCKER_STORAGE_SIZE'] || "30G" # (Use a number suffixed by G)
```

Runtime options:

```
vb.memory = "4096"
vb.cpus = 2
```

It works with:
Libvirt and **VirtualBox**

Scripted in:
bash

4 simple scripts:

os

docker

origin

addons

os:

- install docker git go
- limit journal size (configurable)

docker:

- configure and start docker
  - container filsystem size

origin:

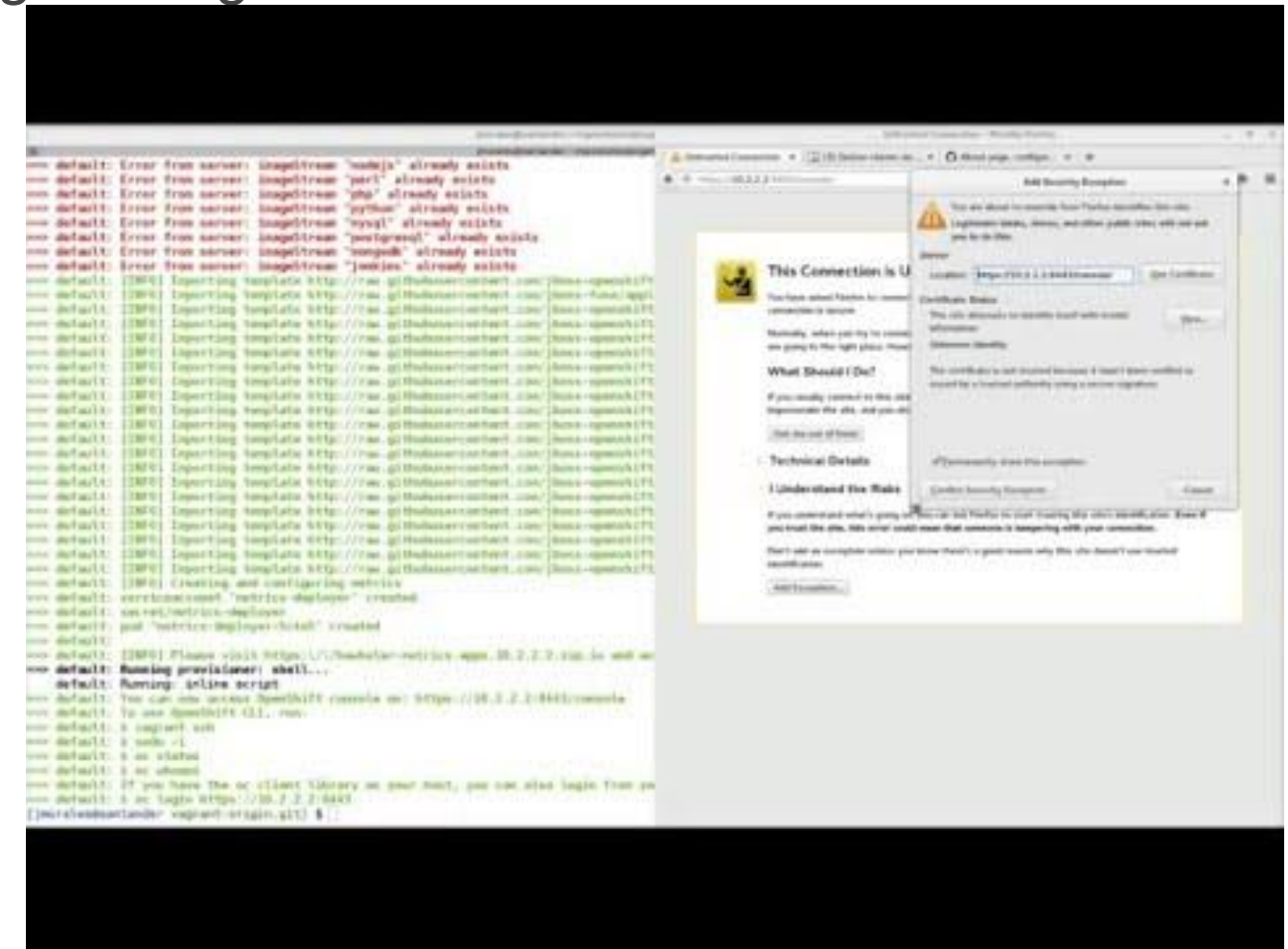
- checkout or update origin source code
- build origin
- configure origin
- start origin
- add services (registry, router, templates)

addons:

- metrics
- logging (WIP)
- ose templates
- additional users (WIP)
- pull down images (origin, centos builders, rhel builders, xpaas)

Creating an Origin VM from scratch

Updating an Origin VM with a contributor's branch



Check it out:
http://bit.ly/OpenshiftOriginEVGVagrant

Use it!

LINK TO OPENSHIFT.ORG/VM and THE USAGE DOCS

But don’t kill me if you don’t like it

Submit issues, PR, ...

Thank you for listening to me

or not

Thanks!

If you like this presentation, it’s online:

http://bit.ly/BuildYourOwnOpenshift-Presentation