
Jorge Morales
OpenShift Developer Advocate

redhat.

# I’m Jorge Morales

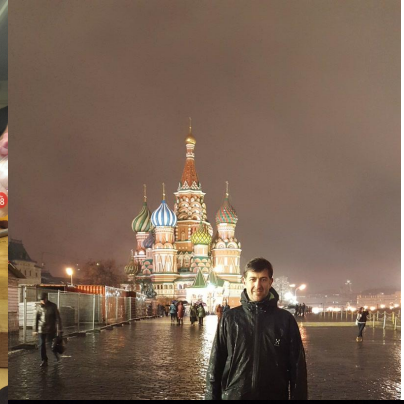
# I work at

# 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:**

-

**CON:**

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

# Multihost OpenShift Enterprise via Vagrant

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

**PRO:**

- Active developed.

**CON:**

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

# OpenShift Enterprise 3 automated installation

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

**PRO:**

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**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

- 
- 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)

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

**PRO:**

- Community version

**CON:**

-

# Fabric8 Vagrant Image

- 
- 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:

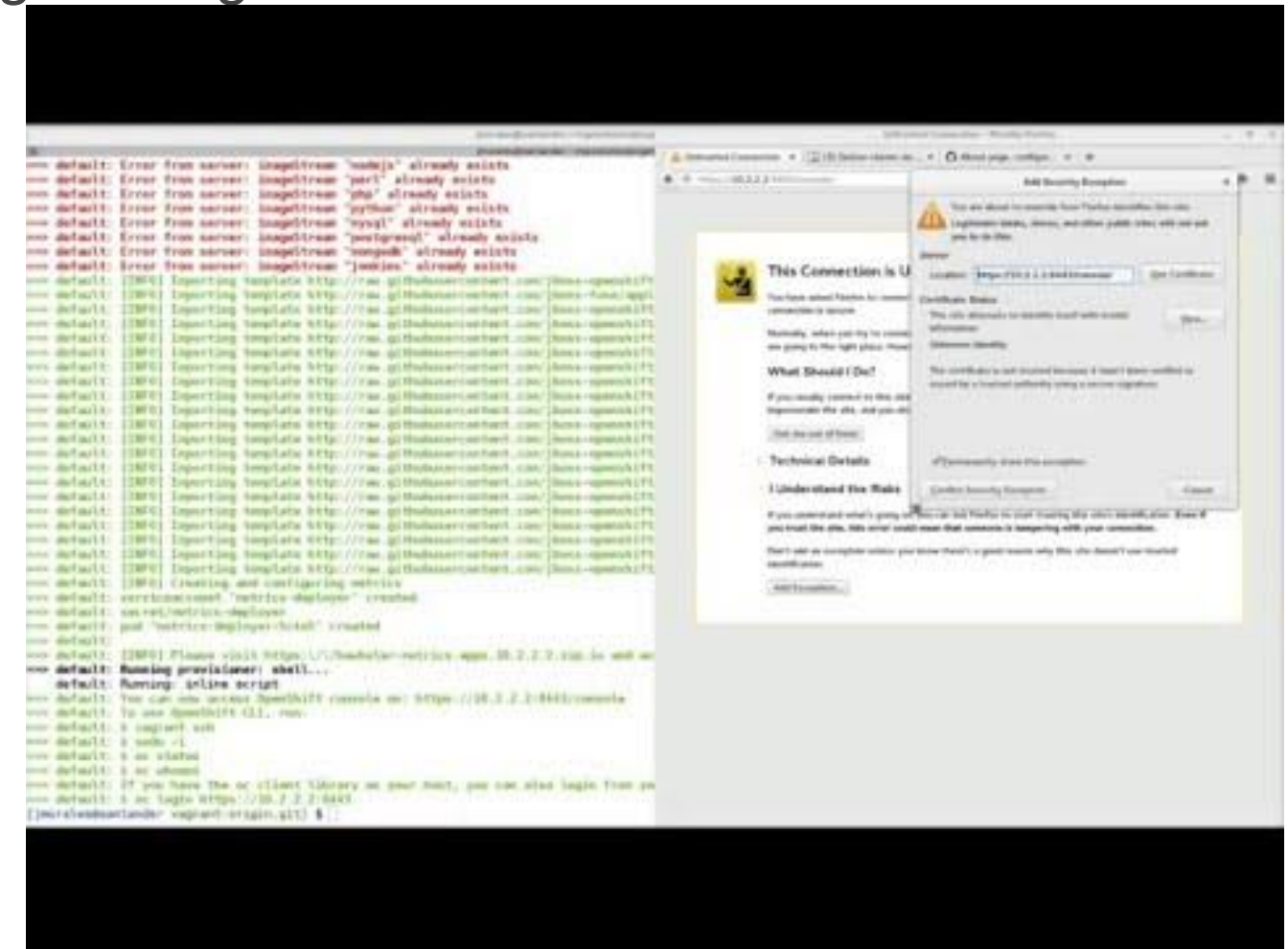
- checkout or update origin source code
- build origin
- configure origin
- start origin
- add services (registry, router, templates)

# 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:
YET TO BE RELEASED!!!

Use it!

http://bit.ly/OpenshiftOriginEVGVagrant

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

Submit issues, PR, ...

Thank you for listening to me

or not