Installing OpenShift Enterprise multi-nodes config using VirtualBox for demos

Gabriel Bechara

Principal Solution Architect @ Red Hat

https://github.com/gbechara/osedevops

Prerequisites

- Virtual Box (tested on Version 5.0.20 r106931)
- Vagrant (tested on 1.8.1)
- a valid RHEL7 and OpenShift Entreprise Subscription
- a Vagrant Box with a valid RHEL7 & OpenShift Entreprise Subscription
 - Create a VirtualBox with RHEL7 "Server"
 - Add to this VirtualBox your valid Subs
 - Convert this Box into a Vagrant Base Box located on your local disk Instruction are here https://www.vagrantup.com/docs/boxes/base.html name this base box rhel72-server-base.box (or change the name in the Vagrantfile) do not share this box: it contains your subscriptions

Usage

- Get the souce code
 - > git clone https://github.com/gbechara/osedevops.git
- Launch
 - > Change the passwords in the file Vagrantfile to match the root password of your box

This password is needed to copy the generated ssh key to all OpenShift nodes

- > cd osedevops
- > vagrant plugin install vagrant-cachier
- > vagrant up
- configure your host to add a dnsserver

on linux add in /etc/resolv.conf search example.com

10.100.192.201

on osx create 2 files named 'example.com' and 'router.default.svc.cluster.local' in /etc/resolver add to those files nameserver 10.100.192.201

• The openshift console is here

https://ose-master.example.com:8443/console/

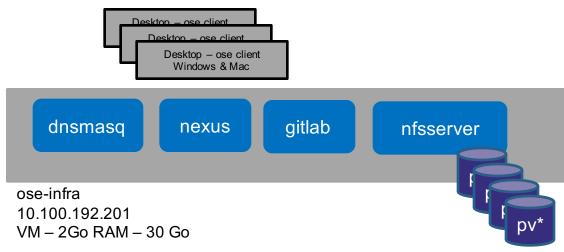
Target architecture

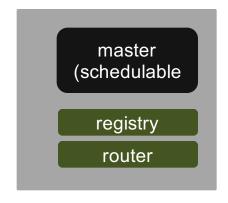
DNS entry for each VM

ose-master.example.com ose-infra.example.com ose-node-1.example.com

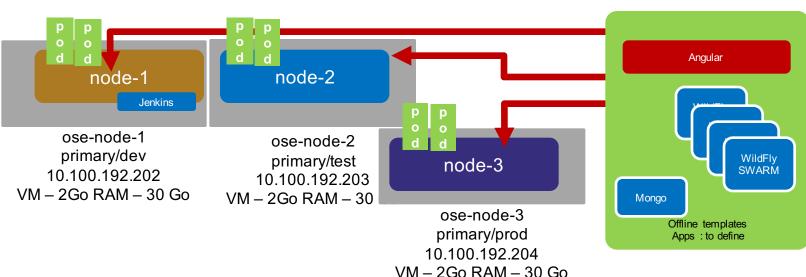
Wildcards

*.router.default.svc.cluster.local

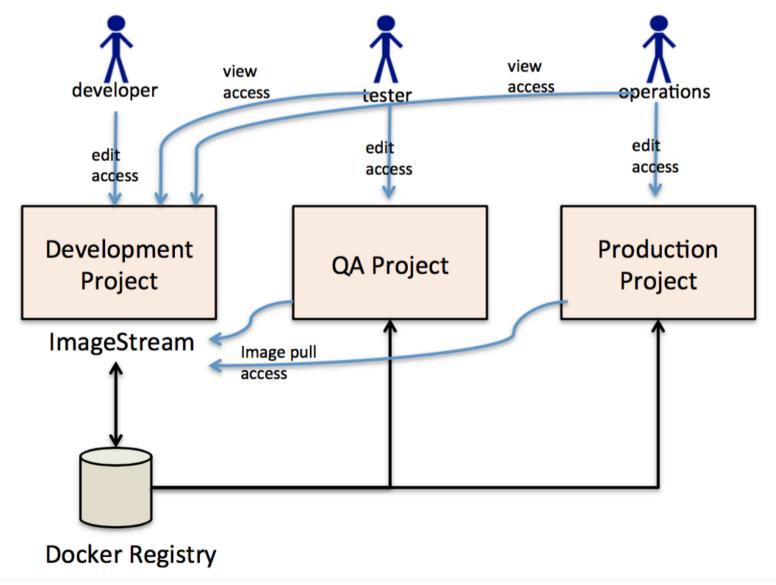




ose-master primary/master 10.100.192.200 VM – 4Go RAM – 30 Go



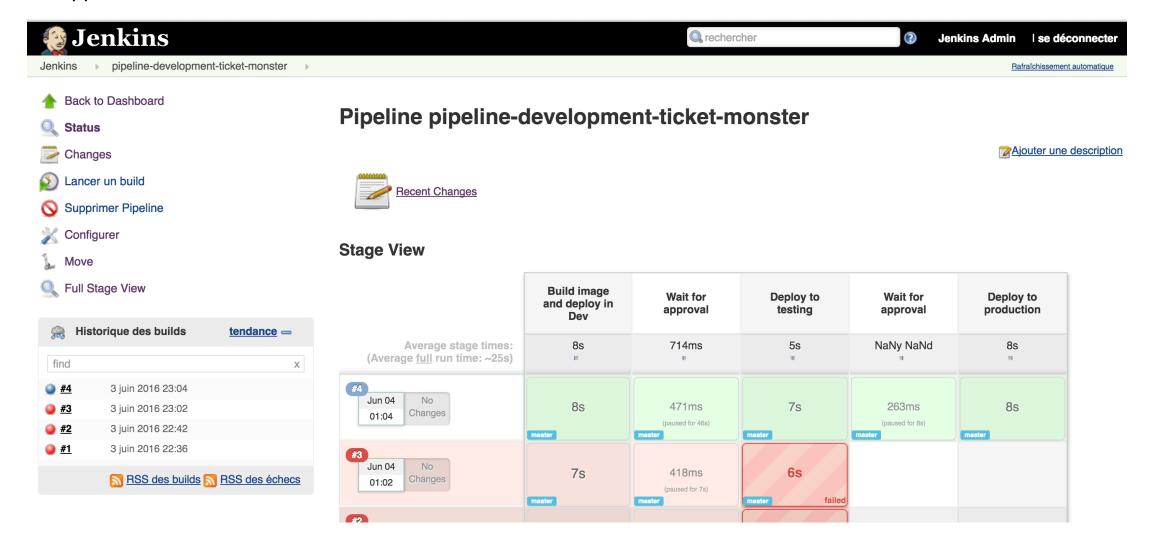
Example



Based on https://blog.openshift.com/promoting-applications-across-environments/

Jenkins Pipeline: from dev to production

→ Approvals between environments and creation of the next env if it does not exist



Limitations/Issues/Workaround

- Installation works only when connected to internet
 - OOTB Templates use github and maven repos

Roadmap

- ✓ Add NFS for persistent Volumes
- ✓ Add a git server
- ✓ Add a nexus
- ✓ Add templates for offline demos using the git server and the nexus
- Deploy and example to populate the docker registry, gitlab and nexus
- ✓ Showcase a application promotion across environments
- ✓ Showcase Jenkins with approval steps
- Add other samples
 - Deploying WildFly SWARM microservices on OpenShift
 - Covering the entire DevOps lifecycle
 - Other ideas?
 - •