VAGRANT UP!

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MACADMINS
CONFERENCE
AT PENN STATE

Me!

* Systems Administrator @ Penn State (*nix & Mac)

* @scottpgallagher

* https://vagrantcloud.com/scottpgallagher

Using Vagrant

* Who's heard of vagrant?

* Anybody using vagrant currently?

* Using vbox, vmware fusion, parallels, etc?

What is vagrant?

* Fully open source!

* Utility for building development environments

* Utility for easily distributing these environments

  * Vagrant cloud

Vagrant Support

* Linux

* Windows

* no Mac love ....yet

Why vagrant? Benefits!

✳ Manage VMs all through command line

   ✳ No switching back and forth between an application and a terminal

✳ Using configuration file to manage VM settings

✳ Someone has already created the box for you and...

✳ You can share your box with others! Sharing is cool!

   ✳ All the kids are doing it!!

More Benefits

* Easily bring people up to speed more quickly

* Boxes are easy to roll back; start over

* Repeatable, You know it's setup correctly

* Leverages puppet and/or chef code

Why else?

* $ vagrant init scottpgallagher/ubuntu

* $ vagrant up

  * 2 commands and your up and running!

  * More time to relax and have a beer!

Puppet/Chef code

* Can use puppet/chef code inside the Vagrantfile

    * Can be used to provision/configure the box

    * Install applications to box

* Can leverage the code you already have!

Why vagrant and not docker?

* Remembering to commit on Docker

* Easier to manage; less layers

* Full VM

Feature set

* Boxes

* Networking

* Synced Folders

* Multi-Machine

* Vagrant Share

* Plugins

Vagrant boxes

* Version controlled

    * Can push fixes and updates

    * Easy to pull updated boxes *(vagrant box update)*

* Automatic update checking

* vagrant box add <USER/BOX>

* vagrant up checks for new versions each time

Vagrant networking

* Forwarded ports

* Private network

* Public network

* Works across multiple providers (vbox, vmware, etc)

Synced Folders

* Sync a folder on the host to the guest

  * NFS, rsync, SMB

* Bi-directional too!

Vagrant Multi-Machine

✳ Can bring up multiple machines from one Vagrantfile

✳ Boxes that communicate with each other

  ✳ Web server + mysql server

  ✳ Testing an API to a service

Vagrant providers

* Virtualbox (default)

* VMWare

* Hyper-V

* Docker

* Custom providers (AWS for example)

Vagrant share

* 3 primary modes*

    * HTTP Sharing (provides link to share with others)

    * SSH Sharing (Provides only SSH access to VM)

    * General Sharing (Access any exposed ports)

* Uses encryption for connections

**all require vagrant cloud account*

Vagrant plugins

* Extend vagrant beyond the basics

* Examples

  * Jenkins, Additional providers/provisioners, etc

* https://github.com/mitchellh/vagrant/wiki/
  Available-Vagrant-Plugins

Using Vagrant Providers

* Defaults to virtualbox

* Can use vmware fusion (among others)

  * --provider=vmware_fusion

Vagrant + Docker

* Provision Docker containers from within Vagrant

```ruby
Vagrant.configure("2") do |config|

  config.vm.provision "docker" do |d|

    d.pull_images "ubuntu"

    d.pull_images "vagrant"

    d.run "ubuntu"

    d.run "vagrant"

  end

end
```

Vagrantfile

* Contains all configuration information for VM

  * Environment, URL of box, Private IP, SSH settings, synced folders, vagrant provider

* Run chef and puppet scripts against box

* Forward ports from Vagrant to localhost

Vagrant cloud

* vagrantcloud.com

  * Ability to find boxes others have created

  * Share your box configurations with others

    * Can use vagrant hosting or your own storage for the .box files

Vagrant box requirements

※ root password: vagrant

※ vagrant user (same password) + key pair

※ Passwordless sudo

※ SSH Usedns to no

※ Virtualbox additions

※ Package up the box

  ※ vagrant package --base <VM_name>

DEMO TIME!

Vagrant Notes

* Remember to halt/suspend machines

* Use folder structure for multiple VMs

* --provider=

Resources

* vagrantup.com

* vagrantcloud.com

* https://github.com/mitchellh/vagrant

* http://www.vagrantup.com/blog.html

* IRC

  * #vagrant

Resources

* Managing OS X with VMware Fusion

  * https://github.com/jedi4ever/veewee

  * http://derflounder.wordpress.com/2013/10/23/ create_vmware_osx_install_dmg-script- updated-with-mavericks-support/

Q & A

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