

Setting up learning environment for Puppet

Objectives



“ Objective is to create and launch virtual environment required to start learning puppet “

Tools of the Game

- VirtualBox

Tools of the Game

- VirtualBox
- Vagrant

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- VirtualBox
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- Git for Windows

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- VirtualBox
- Vagrant
- Git for Windows
- Sublime Editor

Virtualization



- Isolated environment
- Server vs Desktop
- Virtualbox
- Vagrant

Vagrant



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- Tool to rapidly deploy Virtual Environments
- Text Configuration - Reproducible
- Portable
- Supports various virtualisation and cloud platforms

Installation Steps

- Install Virtualbox
- Install Vagrant
- Install Git for Windows (on windows)
- Import Training box template provided into vagrant
- Create a VM

Vagrant Commands

```
Gouravs-MacBook-Pro:~ gouravshah$ vagrant
```

```
Usage: vagrant [-v] [-h] command [<args>]
```

-v, --version	Print the version and exit.
-h, --help	Print this help.

Available subcommands:

box	manages boxes: installation, removal, etc.
destroy	stops and deletes all traces of the vagrant machine
halt	stops the vagrant machine
help	shows the help for a subcommand
init	initializes a new Vagrant environment by creating a Vagrantfile
package	packages a running vagrant environment into a box
plugin	manages plugins: install, uninstall, update, etc.
provision	provisions the vagrant machine
reload	restarts vagrant machine, loads new Vagrantfile configuration
resume	resume a suspended vagrant machine
ssh	connects to machine via SSH
ssh-config	outputs OpenSSH valid configuration to connect to the machine
status	outputs status of the vagrant machine
suspend	suspends the machine
up	starts and provisions the vagrant environment

For help on any individual command run `vagrant COMMAND -h`

We are going to use

- vagrant box add
- vagrant init
- vagrant up
- vagrant halt
- vagrant destroy

Finding help

```
$ vagrant <command> -h
```

e.g.

```
$ vagrant box -h
```

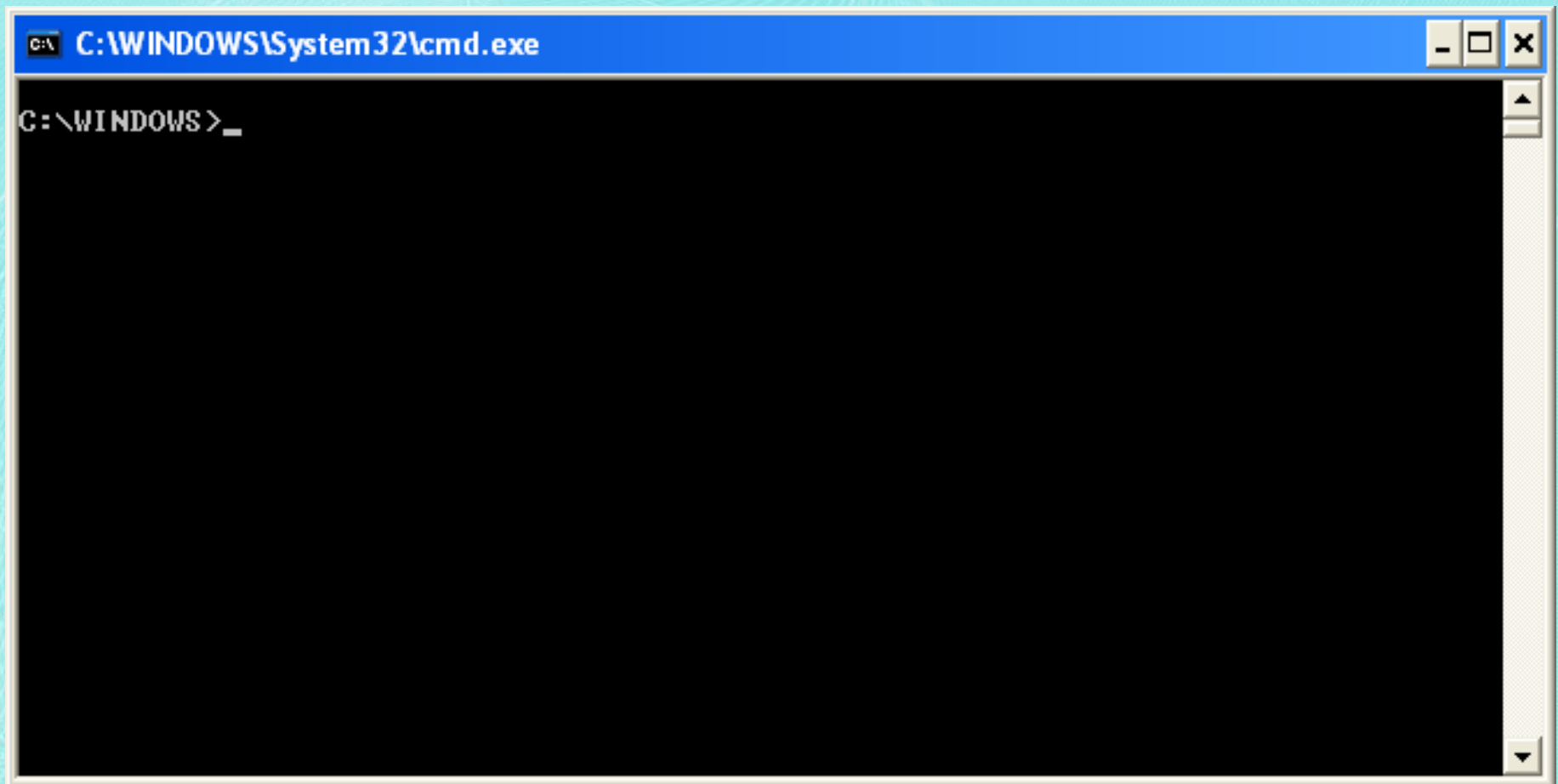
```
$ vagrant up -h
```


Training Environment

- OS: CentOS
- Version: 6.5
- Arch: 32 bit

Add box/template to Vagrant

Run the commands from inside cmd prompt or GIT Bash here on ..



Add box to vagrant with name puppet

Open CMD terminal, cd into the directory that contains the box downloaded earlier. Add this box to vagrant as a template using the following command,

```
$ vagrant box add puppet puppet-centos-offline.box
```


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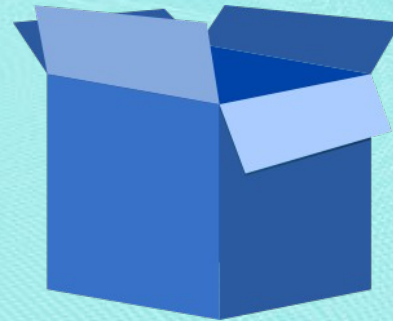
Name to add box with

Template
provided

Adding the box to vagrant makes it available as a template. However this is just a golden image/template

Boxes

- Box = AMI = Template = Image
- Contains a pre-installed and pre-configured environment
- Portable files which can be shared with others to setup identical environments
- Box Commands
 - add
 - list
 - remove
 - repackage



Lets now create a actual VM from this box which we will then use for the purpose of this training.

Creating Directories

```
#mkdir learn
```

```
#cd learn
```

```
#mkdir puppet
```

```
# cd puppet
```

```
#mkdir standalone
```

```
#cd standalone
```

```
learn
```

```
|
```

```
|_ puppet
```

```
|
```

```
|_ standalone
```

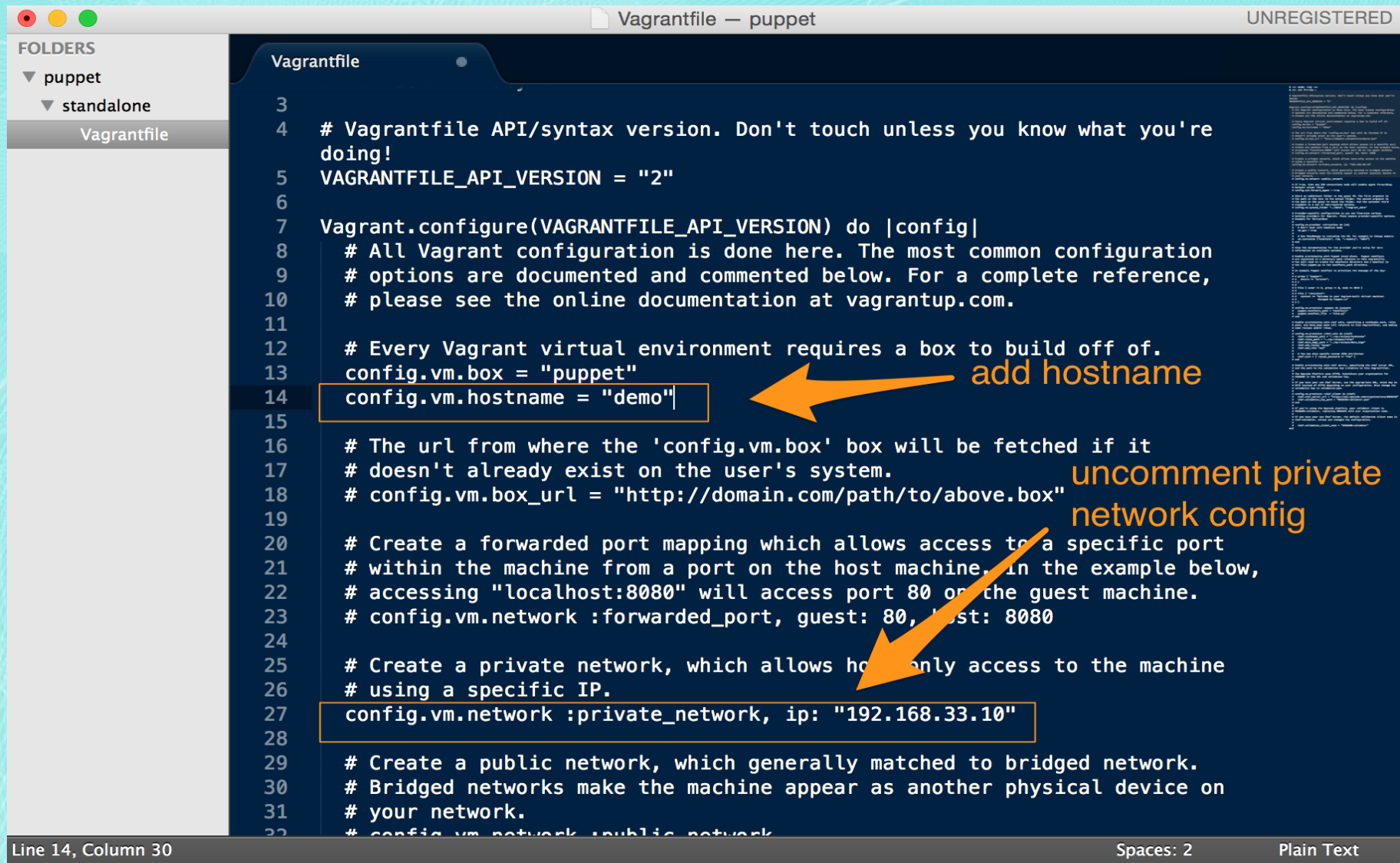

Initialize Vagrant Template

```
# vagrant init puppet
```

Edit Vagrantfile

- Add hostname configuration as
 `config.vm.hostname = "demo"`
- Uncomment line which configures private network
 (shown in the next slide)

Edit Vagrantfile



```
3
4 # Vagrantfile API/syntax version. Don't touch unless you know what you're
5   doing!
6   VAGRANTFILE_API_VERSION = "2"
7
8   Vagrant.configure(VAGRANTFILE_API_VERSION) do |config|
9     # All Vagrant configuration is done here. The most common configuration
10    # options are documented and commented below. For a complete reference,
11    # please see the online documentation at vagrantup.com.
12
13    # Every Vagrant virtual environment requires a box to build off of.
14    config.vm.box = "puppet"
15    config.vm.hostname = "demo"
16
17    # The url from where the 'config.vm.box' box will be fetched if it
18    # doesn't already exist on the user's system.
19    # config.vm.box_url = "http://domain.com/path/to/above.box"
20
21    # Create a forwarded port mapping which allows access to a specific port
22    # within the machine from a port on the host machine. In the example below,
23    # accessing "localhost:8080" will access port 80 on the guest machine.
24    # config.vm.network :forwarded_port, guest: 80, host: 8080
25
26    # Create a private network, which allows host-only access to the machine
27    # using a specific IP.
28    config.vm.network :private_network, ip: "192.168.33.10"
29
30    # Create a public network, which generally matched to bridged network.
31    # Bridged networks make the machine appear as another physical device on
32    # your network.
33    # config.vm.network :public_network
```

Line 14, Column 30

Spaces: 2 Plain Text

Launch VM and Login

```
#vagrant up
```

```
#vagrant ssh
```


Objectives

“ The training VM is pre built with Puppet, a local repository and a few other useful utilities such as editors, tree etc.

Validate

```
$ puppet --version
```

```
3.7.4
```

```
$ facter --version
```

```
2.4.1
```

```
$hostname
```

```
demo
```


ALL Set !

Installing Manually

“ If the validation steps do not show puppet installed, or if you would like to manually install it later, follow the rest of this presentation.”

Install Options (Redhat/CentOS)

- From Source
- Puppet Labs Repository
- EPEL

We will use Puppet Labs Repository

Setting up Repository

For CentOS/RedHat Version 6.x

```
$ sudo rpm -ivh  
http://yum.puppetlabs.com/el/6/products/i386/puppetlabs-  
release-6-7.noarch.rpm
```

 **You could skip this test as the current box is pre configured with the repository.**

Install Puppet : (Redhat/CentOS)

Install Puppet from Package Repository

```
$ sudo yum install puppet
```



You could skip this test as the current box is pre installed with puppet

Summary

- Set up Vagrant
- Setup Editor
- Setup Hostname
- Setup Repository
- Install Puppet (Standalone Package)