CS421/621 Lab03

Setup Virtual Machine with Vagrant

Objectives:

- Install and configure Ubuntu Server using Vagrant. Follow the instructions on page 182 (textbook) to install Vagrant.
- Compare the difference with Ubuntu server setup (lecture 5)
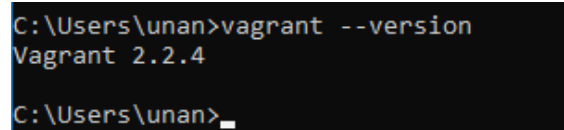
Submission:

A screenshot of your Ubuntu terminal through SSH (submit it to Canvas)

** You should have installed the VirtualBox in lecture 5, if not please check the lecture notes and install it.

Install Vagrant

1. Go to https://www.vagrantup.com/downloads.html and download the latest version
2. Install the vagrant using default settings and restart your computer
3. Check from your command line/terminal the version of vagrant

```
vagrant --version
```


4. Type `vagrant` and hit enter. It will display the basics of the vagrant

Set up a Vagrantfile for your project (do this once for a project)

1. Open the Windows command prompt
2. Type `mkdir vm1`. This makes a folder made vm1.
3. Type `cd vm1`. Now you are in vm1 folder.
4. Type `vagrant init`. Once the command completes, a file named `Vagrantfile` is placed in your dir.
5. Open `Vagrantfile` with a text editor such as Atom, Notepad++ …etc. Next, specify the version of Ubuntus' VirtualBox, and how to configure and provision the VM. For this exercise, we will only configure two items:

   a. Specify a virtual box that you want instead of the base box specified in the origin `Vagrantfile`.

   Change the line of `config.vm.box="base"` to the following block:

```
config.vm.define "ubuntutest" do |ubuntutest|
ubuntutest.vm.hostname = "ubuntutest"

ubuntutest.vm.box = "trusty-server"
```

```
ubuntutest.vm.box_url = "https://oss-
binaries.phusionpassenger.com/vagrant/boxes/latest/ubuntu-
14.04-amd64-vbox.box"

end
```

b. Create a forwarded port mapping which allows access to a specific port within the machine from a port on the host machine:

```
config.vm.network "forwarded_port", guest: 80, host: 8080
```

c. Save the file and exit the editor.

References for setting up a Vagrant file:

1) https://www.vagrantup.com/intro/getting-started/project_setup.html

2) https://www.vagrantup.com/intro/getting-started/boxes.html, the "Using a box" section

Up and SSH (do this whenever you need to start up the VM)

1. In the Command Prompt, while still in dir vm1, Type `vagrant up`.
2. Type `vagrant ssh`, OR, open putty from desktop. Set HostName: 127.0.0.1, Port: 2222. Click open.
3. (For putty: Click yes. Log in with username `vagrant` and password `vagrant`.)
4. You are now inside the virtual machine of Ubuntu. (save screenshot and submit it to canvas)
5. Check vagrant documentation for more information https://www.vagrantup.com/docs/index.html