Install vagrant GNU Linux and Rails

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Abstract

I will explain what you need to install a GNU Linux Virtual Machine (VM) to get familiar with the command line on linux.

How it fits together

This is just a preference of mine but I have used `vagrant` in the past and found it very easy.

What you will be doing is installing VM on your computer, a VM is a virtualised computer running on top of the main Operating System. The VM will be set up using system called vagrant which controls what is installed on a VM.

- VirtualBox - https://www.virtualbox.org/wiki/Downloads
- Vagrant - https://www.vagrantup.com/downloads.html

NOTE: If you are on windows you will also need PuTTY, this program allows you to connect through a protocol called Secure Shell (ssh) to the VM created.

- PuTTY - http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

Help

If you want help with this install get in touch with the Computing Society. http://aucs.org.uk, or come to meet us at 6 on Wednesday in Meston Room 205.

Installation

I would suggest people use Linux or possibly Apples OSX as a base for this that is just a personal preference but because most of you will base it on Windows I'll cover that below.

Windows

I don't use Windows, but there is an install guide on Sitepoint https://www.sitepoint.com/getting-started-vagrant-windows/ follow the guide and tell me how it goes.

IMPORTANT: When the guide asks you to `Browse the Vagrant Cloud...` you can use the Vagabond v0.2.1 image - https://atlas.hashicorp.com/fiercepunchstudios/boxes/vagabond/versions/0.2.1 - This will provide you with a VM with bash, git, ruby and rails, so it will be useful on future projects in your course.

IMPORTANT: When the guide tells you to:

```
vagrant init ubuntu/trusty64
```

Instead of that type in:

```
vagrant init fiercepunchstudios/vagabond
```

If this goes well you will hopefully get a message `default:  Machine booted and ready!` follow the Sitepoint guide above to use PuTTY to log into the VM

Lets Play

Command Line

Here are some simple commands to use in bash, is you are unfililiar with a comand line interface when you type a command like `ls` and press the enter key it will give you a *list* of files in the current directory.

If you type `ls` and press the enter key, what you will see is `Vagrantfile` an example of the prompt is below

```
09:43:51 vagrant@Vagabond:/vagrant
5 $ ls
Vagrantfile
09:45:40 vagrant@Vagabond:/vagrant
6 $
```

The command line break down.

On line 1 and 4 you get the `Time UserName@VMName:CurrentDirectory`. The Current Directory at the end of that line shows you where where you are in the vm file system the first `/` refers to root or base directory of the filesystem,

On line 2 and 5 is were the prompt will appear and you will enter commands. It increments the first number every time you enter a command, I am not sure why it does this, I see no use in it. The `$` denotes you are currently a logged in as normal user of the machine as above your user name in `vagrant`.

You can play here I'll give you come commands to play with below.

TIP: Tab Completion is useful, it will complete commands if you only partially type them and also help you when you are entering a filename

Basic Commands

Here are a few commands to get you started, a text command line option is denoted by `<...>` the `<>` should not be included in typed commands.

Command	Description
`ls`	Lists files in the current directory
`ls -l`	Lists files with extra information
`man <command>`	Will give you a manual page on how to use command, try `man ls`
`mkdir <directory name>`	Will create a directory
`cd <directory name>`	Change to the directory
`cd ..`	Change to the parent directory, go up a directory
`more <file name>`	Print the contents of a file
`nano <file name>`	A simple text editor
`cp <source> <destination>`	Copy a file or directory to a new name or location
`mv <source> <destination`	Move a file or directory to a new name or location
`rm <source> <destination`	Delete (Remove) a file, this is dangerous

That should get you going for now, try a Google search Bash Beginner Guide if you want more practice, just so you know I have been using this for about 20 years and I am still discovering new features.