Vagrant VM Setup

Vagrant VM Setup

- This section will guide you through using Vagrant to setup a dev workstation.
- At this time, we will NOT explain all of the commands we use. We will defer that discussion to the lectures about Vagrant.
- Your goal for this assignment is to get this environment setup.

Vagrant VM Setup

- VirtualBox is an open source virtual machine manager.
- Vagrant is a technology that is used to manage virtual machine configurations, setup, and deployments.
- NOTE: there may be some mistakes in this setup information and it is very easy to make a mistake. Be patient and keep trying.

Vagrant VM Setup (if needed)

- **Step 1: Install VirtualBox -** https://www.virtualbox.org/wiki/Downloads

- **Step 2: Install Vagrant** - https://www.vagrantup.com/downloads.html

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- **Step 3 Windows: Create folder $HOME\devops\vagrant**
  - on Windows this will be under c:\users\your-login − so create

    c:\users\your-login\devops\vagrant

    try: mkdir −p c:\users\your-login\devops\vagrant

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- **Step 3 Mac: Create folder $HOME/devops/vagrant**
  - on a Mac this is also under \Users\your-login

    from your home folder:

    mkdir −p ./devops/vagrant

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- **Step 4: Put Vagrantfile into your-home-dir/devops/vagrant folder**

  This file is in Canvas in the Files->Vagrantfile-fir Assignment-01

  - Windows:

    c:\users\your-login\devops\vagrant

  - Mac

    ~\devops\vagrant

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- **Step 5: Create pw.txt in ~/devops/vagrant.**

  Create your Linux ubuntu user logon password and enter it twice.

  We recommend you use password ubuntu for the ubuntu user for this class:

  --for example − here is a pw.txt

  ubuntu
  ubuntu

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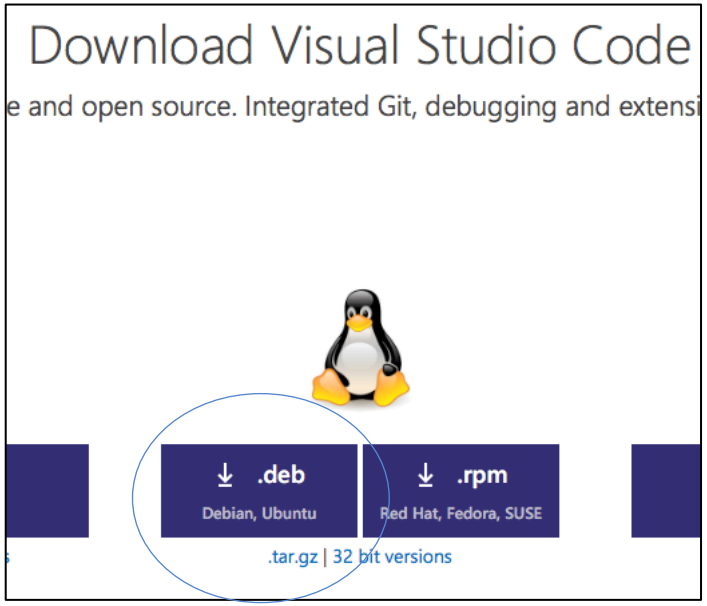
- **Step 6: Download vscode .deb file for Debian, Ubuntu into your**

  home-dir/devops/vagrant folder from:

  https://code.visualstudio.com/download



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NOTE: the name of this file will change with new updates to VSCode. So, be on the lookout for that. You will have to update the file name in the following steps.

Right now the file is named: code_1.22.2-1523551015_amd64.deb

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- **Step 6: If the name of the VS code file changes** –

  Edit Vagrantfile. Replace code_1.22.2-1523551015_amd64.deb in the line containing

  sudo dpkg -i /vagrant/**code_1.22.2-1523551015_amd64.deb**

  with the name of the newer VSCode file you downloaded.

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```
~/devops/vagrant$ ls -la
total 88848
drwxr-xr-x  5 jeffm  staff       160 Apr 15 17:02 .
drwxr-xr-x  6 jeffm  staff       192 Apr 15 16:57 ..
-rw-------@ 1 jeffm  staff      2918 Apr 15 17:02 Vagrantfile
-rw-r--r--@ 1 jeffm  staff  45479630 Apr 15 17:00 code_1.22.2-1523551015_amd64.deb
-rw-r--r--  1 jeffm  staff        15 Apr 15 16:59 pw.txt
```

Here are the files that should be in the ~/devops/vagrant folder.

If a new version of Visual Studio Code is available you can use that just make sure to update the Vagrantfile.

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- Step 7: From within the Vagant folder –

  your-home-dir/devops/vagrant

  open a terminal and enter command

  vagrant up --no-provision

- you will see some output flash by and this might take awhile

- Leave this terminal open

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- Step 8:

  vagrant provision --provision-with coreinstall

- Step 9:

  vagrant provision --provision-with installxrdp

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- Step 10:

  vagrant provision --provision-with installxfce

- Step 11:

  vagrant provision --provision-with installvscode

- Step 12:

  vagrant provision --provision-with reboot
  #as we saw in the class demo, there will be a time-lag during which you
  #cannot access the VM while it is rebooting

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- In a terminal in the vagrant folder run:

  vagrant ssh

- This will open a ssh terminal into your Ubuntu VM

- Run command:

  sudo reboot

  #as we saw in the class demo, there will be a time-lag during which you #cannot access the VM while it is rebooting

- This will logout you out of the ssh console

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- **To this point we have used Vagrant to:**
  - create a Ubuntu 16.04 VM
  - install some core libraries
  - install remote desktop support (RDP)
  - install the xfde desktop
  - install Visual Studio Code in the VM
  - rebooted from vagrant
  - rebooted from "vagrant ssh"

- Next, we have some manual steps to perform

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- If your are on a Mac and you do NOT have Microsoft's remote desktop installed. Download and install it from one of these sources:

  https://docs.microsoft.com/en-us/windows-server/remote/remote-desktop-services/clients/remote-desktop-mac

  https://itunes.apple.com/us/app/microsoft-remote-desktop/id715768417?mt=12

- RDP − remote desktop should already be on a Window's machine

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- Next, in a terminal in your devops/vagrant folder run command:

  vagrant rdp

- This should bring up the Microsoft RDP program
- Before logging in I suggest you make sure "full screen" is NOT checked
- The login is - user: ubuntu , password: ubuntu (if you used ubuntu as the password) as the password in the step where you created the pw.txt file

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- **Manual Step: In the RDP client, create VSCode Launcher as follows**
    1. Right click in desktop and select "Create Launcher"
    2. Name: vscode
    3. Command:

```
sh -c "env LD_LIBRARY_PATH\=\$HOME/lib  /usr/share/code/code" %U
```

    4. Working Directory: /home/ubuntu
    5. Select "Create"
    6. Double Click the "vscode" launcher icon on the desktop
    7. Select "Mark Executable"
    8. VSCode should appear. If not, double check Command.

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- **Manual Step: In the RDP client, create VSCode Launcher as follows**

  continued

  9. As we discussed in class, it appears this step (creating the VSCode launcher) can be automated by created a text file that has the same entries as those created when you create the launcher in the xfde desktop − and puttinf it in your

     ~/Desktop

     folder.

     This extra automation is optional, However, feel free to try this if you have time.
     The text needed for vscode.desktop is on the following slide.

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- **Manual Step: In the RDP client, create VSCode Launcher as follows**

- vscode.desktop file, place this in /home/ubuntu/Desktop by adding command(s) in your Vagrantfile

```
[Desktop Entry]
Version=1.0
Type=Application
Name=vscode
Comment=
Exec=sh -c "env LD_LIBRARY_PATH\\=\\$HOME/lib /usr/share/code/bin/code" %U
Icon=
Path=/home/ubuntu
Terminal=false
StartupNotify=false
```

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- To add copy/paste functionality between your VM and host system see this link:

  https://www.vagrantup.com/docs/virtualbox/boxes.html

  and/or

  https://dzone.com/articles/automatically-download-and

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- If Visual Studio Code has run once but you can no longer run it, reboot your VM using:

  vagrant reload −no-provision