

Setting up a virtual machine with Vagrant

Vagrant is a piece of software developed to make running virtual machines easier by simplifying them in to Vagrant boxes. A box contains what is essentially a stripped-down version of an operating system designed to be accessed from a host machine. Additionally, Vagrant has a simple interface for “synced folders,” which allow you to do all of your work on the host machine and access your files in the box through a designated folder.

Step 1: Install VirtualBox

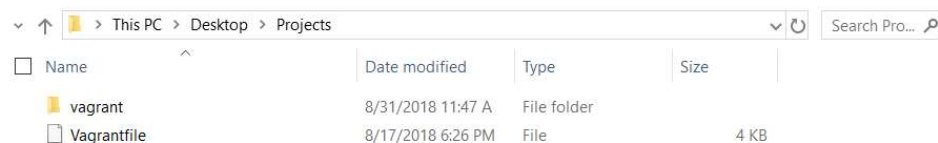
1. Download and install the latest version of VirtualBox for your platform from [virtualbox.org](https://www.virtualbox.org)
2. **If you are on a Mac and sync your Desktop/Documents folder with iCloud** (Apple tries to enable this by default), select the menu VirtualBox -> Preferences and make sure the Default Machine Folder is set to a folder outside of Documents (it should default to \$HOME/ VirtualBox VMs, which is fine). If you use another virtualization tool, such as VMWare or Parallels, make sure that tool does not store in Documents, or corruption may result.

Step 2: Install Vagrant

1. Download and install the latest version of Vagrant for your platform from [vagrantup.com](https://www.vagrantup.com)

Step 3: Set up the Vagrant directory

1. Download the file called Vagrantfile from Canvas, and save it in a folder on your computer. You may want to save it to a folder called CS2200. This file contains all of the configuration for the VM, which uses Ubuntu 18.04 as a base. You may be interested in looking in the file to see what sort of configuration is involved with the VM.
2. Create a folder within the same folder as the Vagrantfile called vagrant. This folder will contain any files you want to access from within the VM (source code, executables, etc).



Step 3: Run the Vagrantfile

1. Open the directory containing the Vagrant file in command prompt/terminal
2. Run `vagrant up`. This process may take a while. You may see multiple messages saying “Connection reset. Retrying...”, but this does not mean that your setup is not working.
3. You should eventually see a message saying that the CS2200 VM is running.

Step 4: Accessing the Vagrant box

The following commands on the host machine should be useful for accessing your VM. You should run them from command prompt/terminal in the same directory where you saved your Vagrantfile:

- `vagrant ssh`: After running this command, you should be able to enter commands into your VM from the command prompt. Any files in the `vagrant` folder on your host machine are available in the `/vagrant` directory in the VM. You can get to this directory by running `cd /vagrant`. To exit the VM, run `exit`.
- `vagrant halt`: This command stops the currently running VM. When you’re done working with the VM, you should run this command so it stops consuming resources on your computer.
- `vagrant up`: This command starts the VM after you’ve halted it. Run it before you try to access the VM with `vagrant ssh`.