VM Setup Instructions - VirtualBox

1. Download and install VirtualBox 6.x.x (https://www.virtualbox.org/wiki/Downloads)

2. Download and install VirtualBox 6.x.x Oracle VM VirtualBox Extension Pack. (https://www.virtualbox.org/wiki/Downloads)

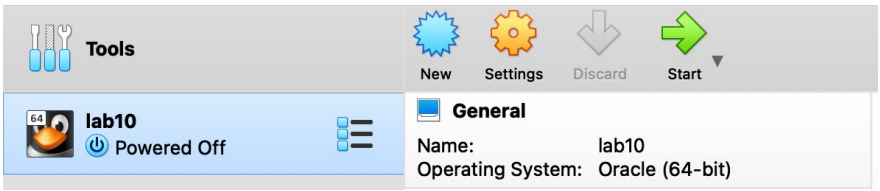
3. Download the preconfigured virtual machine (VM) image (~3.0 GB) if you have not already. It has Hadoop, Java, and Maven installed which you will be using.

4. The class VM is a 64-bit Ubuntu operating system and for it to work VirtualBox has a couple of requirements:
   A. Your Host OS needs to be 64-bits.
   B. You should enable VT-x or VT-d (depending on your computer, you may have either) setting in your BIOS or UEFI Firmware.
   C. You should disable (in Windows) the Hyper-V platform in your Windows Feature list.
   D. Refer to this blog post for more details.

5. Installing the class VM.
   A. Open VirtualBox and click File >> Import Appliance…
   B. Navigate to your downloaded VM and click Next.
   C. Keep all the default settings and click Import.
   D. VirtualBox will now install the VM.

6. Once the VM is installed, highlight it and click Start.

7. The username for the VM is **lab10**. The password for the VM is **hadooplab**.

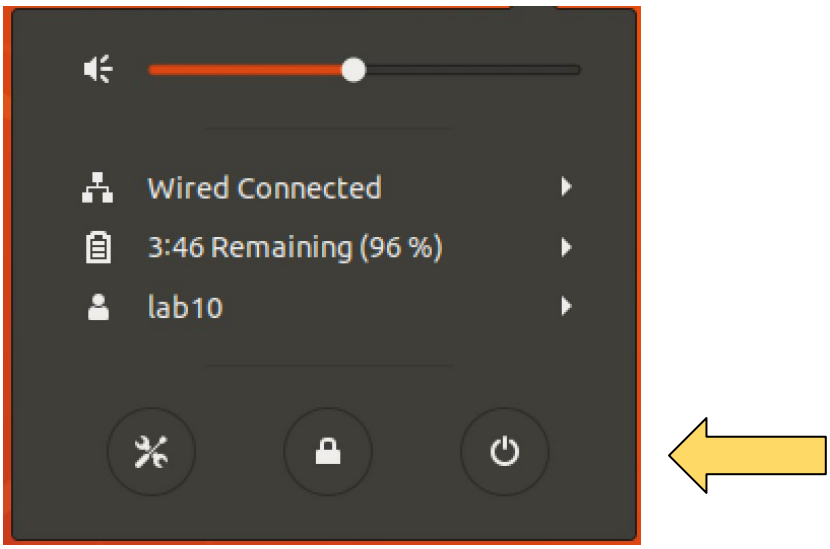


Additional Configuration (Optional)

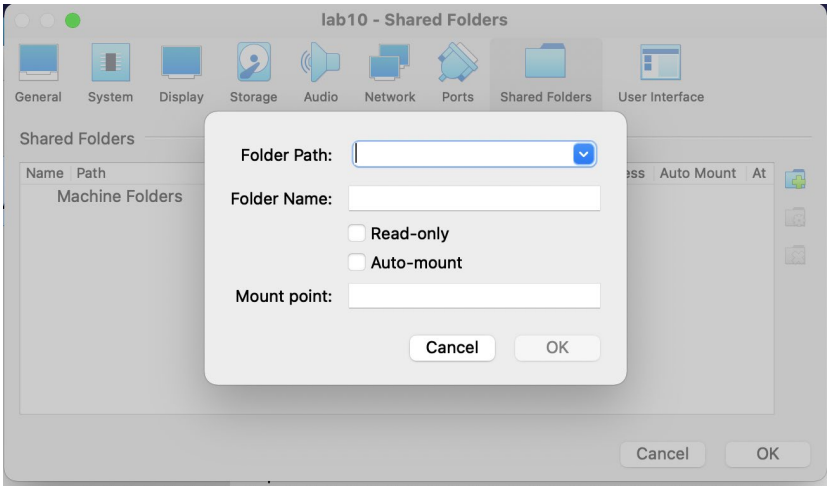
Create a shared folder. This will help make transferring files between your HOST operating system and the VM easy:

Part I

1. If your lab10 VM is running, shut it down. Click the upper right of the VM window and then click the shutdown button.



2. Create a folder on the HOST OS (the local machine where your VirtualBox is installed).
3. In VirtualBox, select the lab10 guest OS in the left panel, and click Settings.
4. Select the Shared Folders tab.
5. Click the + icon on the right. This will add a new shared folder.
6. Specify the path to the folder in your HOST OS, and give the folder name (e.g. lab10-local).
7. Select Auto-mount and then click Ok twice.



Part II

1. Start the lab10 VM. Once again, the username is **lab10** and password is **hadooplab**
2. Create a folder in the VM. For example, you can open the terminal, and run

   ```
   $ mkdir ~/lab10-vm
   ```

   to create a folder named "hw3-vm".

3. Mount the shared folder.

   ```
   $ sudo mount -t vboxsf lab10-local lab10-vm
   ```

   When you are prompted for a password enter: **hadooplab**

   Be advised that the "hw3-vm" and "hw3-local" folders will need to be re-mounted if the VM is restarted.

   When you are ready to move files out of the VM, files can be copied to the mounted share folder by entering the following command:

   ```
   $ sudo cp -r <enter file to copy> ~/hw3-vm
   ```

4. To check if you have successfully mounted the shared folder, look for a "lab10-vm" Icon on the left side of your desktop.

   Click this Icon to access the "lab10-vm" folder. This folder is now linked to your "lab10-local" folder in your HOST OS.

   Important!

   Working in the "lab10-vm" folder could cause you to encounter errors running Hadoop due to file permission issues between your HOST OS and the VM.

   After transfering files into the VM through your mounted shared folders, make sure you copy the files into your VM home directory. For example, if you created your

"hw3-vm" folder in the home directory and have placed your "Q1" skeleton folder in "hw3-vm", enter the following commands at the command prompt to copy the "Q1" folder to your home directory:

```
$ cp -r ~/hw3-vm/Q1 ~/Q1
$ cd ~/Q1
```

This will now be where you should be working.

Depending on your system and how you ultimately decided to transfer files into the VM, you may need to change file executable permissions. Enter the following at the command prompt:

```
$ cd ~/Q1
$ chmod -R 750 ./
```