VirtualBox Setup Tutorial

System Requirements

To properly run the provided Ubuntu image, we recommend the following at the minimum:

- 1GB of main memory
- 10GB of free disk space.

Overview

We will now set up the virtual machine for the class project. Roughly, you need to take the following steps.

1. [Download and install VirtualBox software](#)
2. [Download and import CS143 virtual machine image](#)
3. [Set up shared folder](#)
4. [Power on and log into the virtual machine](#)

Step 1: Install VirtualBox Software

1. Download and install the [VirtualBox software.](#)
    - In case you have a problem with other versions, Version 5.0.4 is known to work well.
2. Follow the screen instructions to complete the installation.
    - If it asks for installation permission, give the permission.

Step 2: Import Virtual Machine Image

1. Download the [CS143.ova](#) file. This is the virtual machine image for the class project. Since it is a very large file (~ 1GB), it will take a while to download.
2. Verify the integrity of the downloaded file by checking its checksum:

    - SHA-1 checksum: d134f1bf7ec0b059066f60f9f7096b9e014a5f29
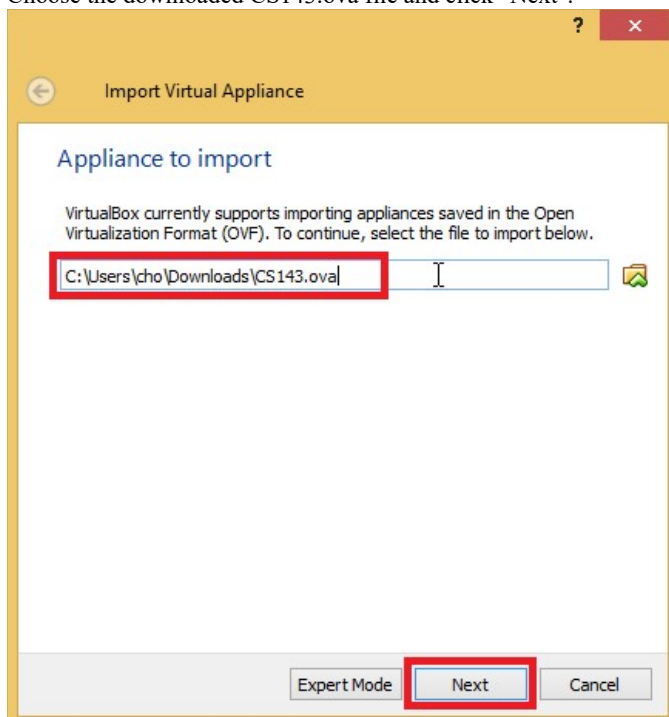   - MD5 checksum: dfe693e2e64523c02b7853260ab5497c

    On OS X, you can run "`shasum CS143.ova`" to compute the SHA1 checksum of the downloaded file. On Windows, you can use [this tool](#).
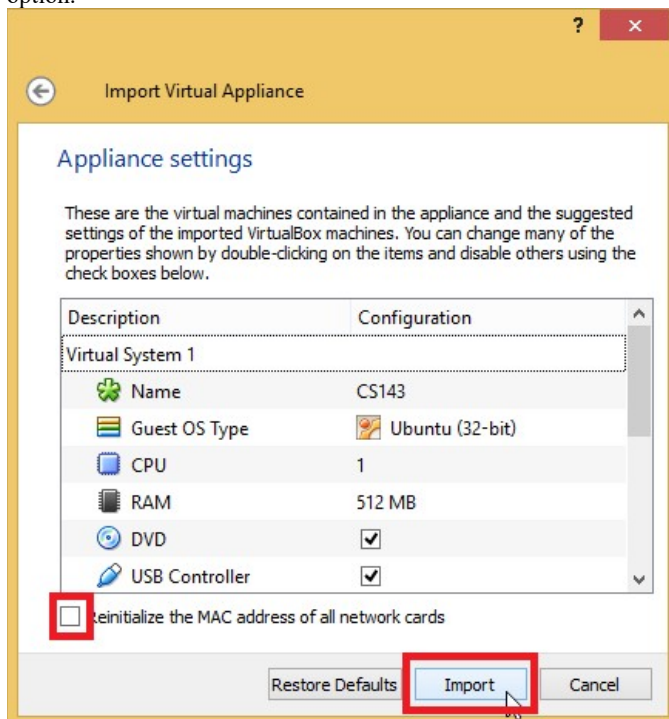
3. Start VirtualBox.

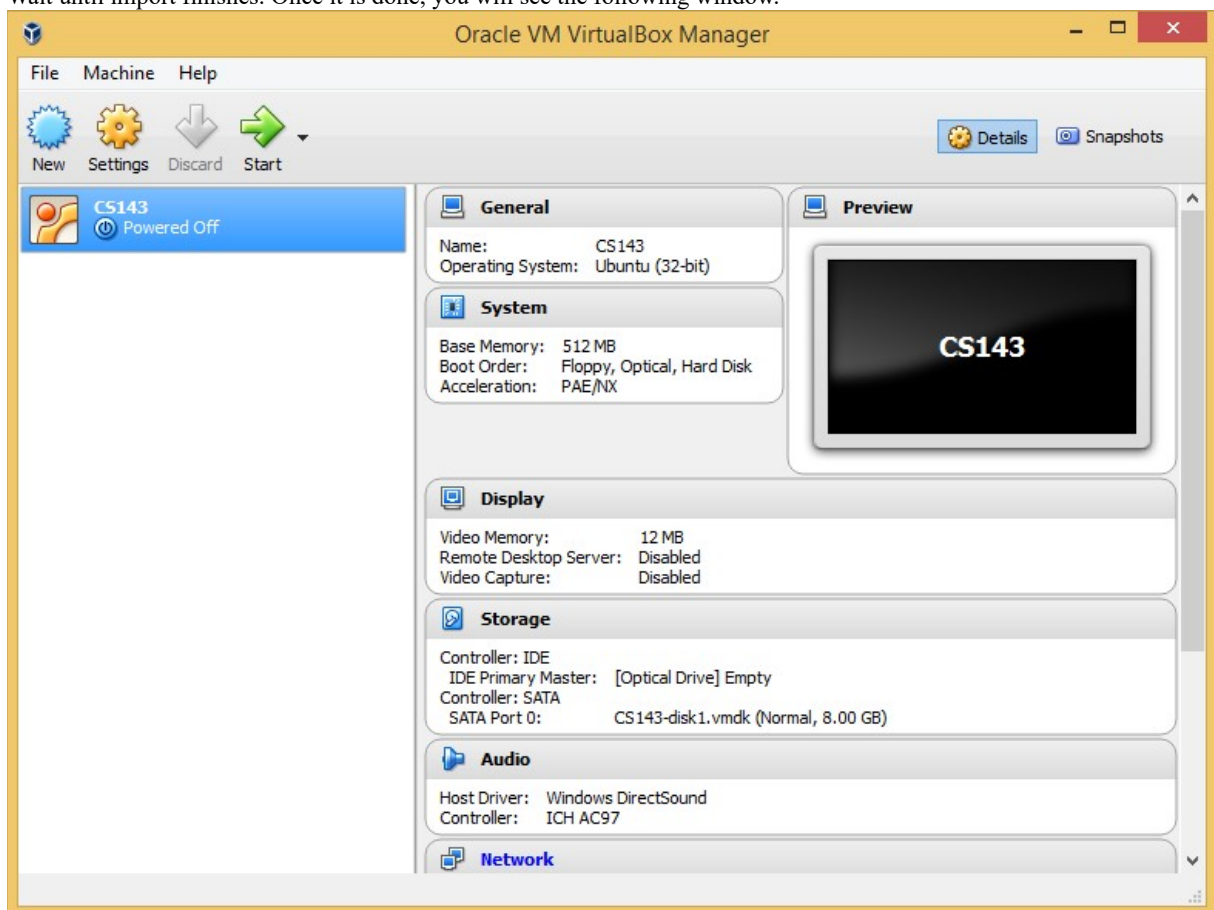4. Once it starts, select "File > Import Appliance..." menu.
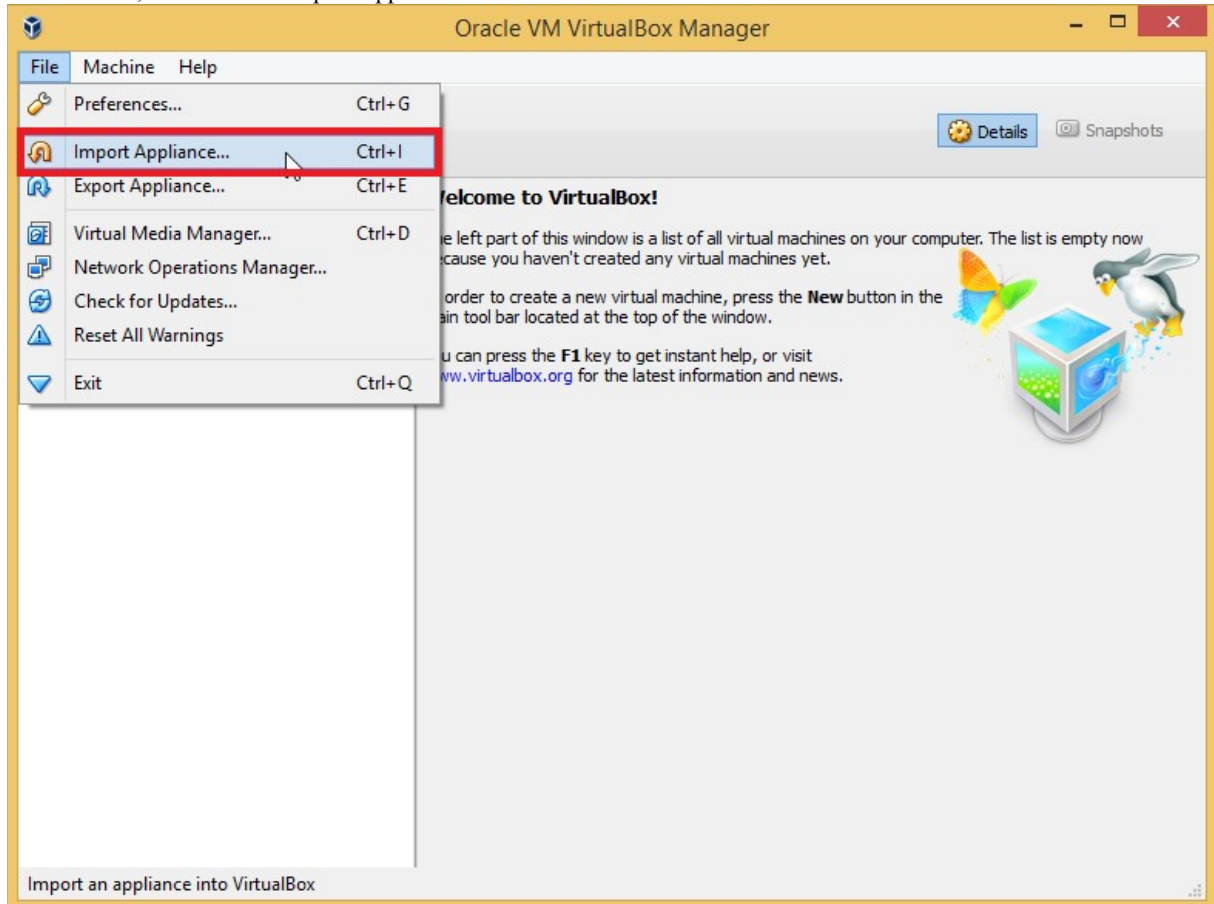
5. Choose the downloaded CS143.ova file and click "Next".

6. Keep the default setting and click "Import" button. ***Important*: DO NOT** select "Reinitialize the MAC address..." option.

7. Wait until import finishes. Once it is done, you will see the following window.


Step 3: Setup Shared Folder

You now need to set up a shared folder to transfer files between your host machine and the virtual machine easily.

1. Create a new folder, say "`C:\Users\cho\vm-shared`", on your machine. This folder will be used as the shared folder between the host machine and the virtual machine.
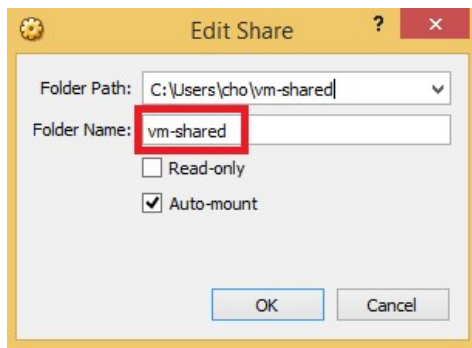
2. Press "Settings" button on VirtualBox.
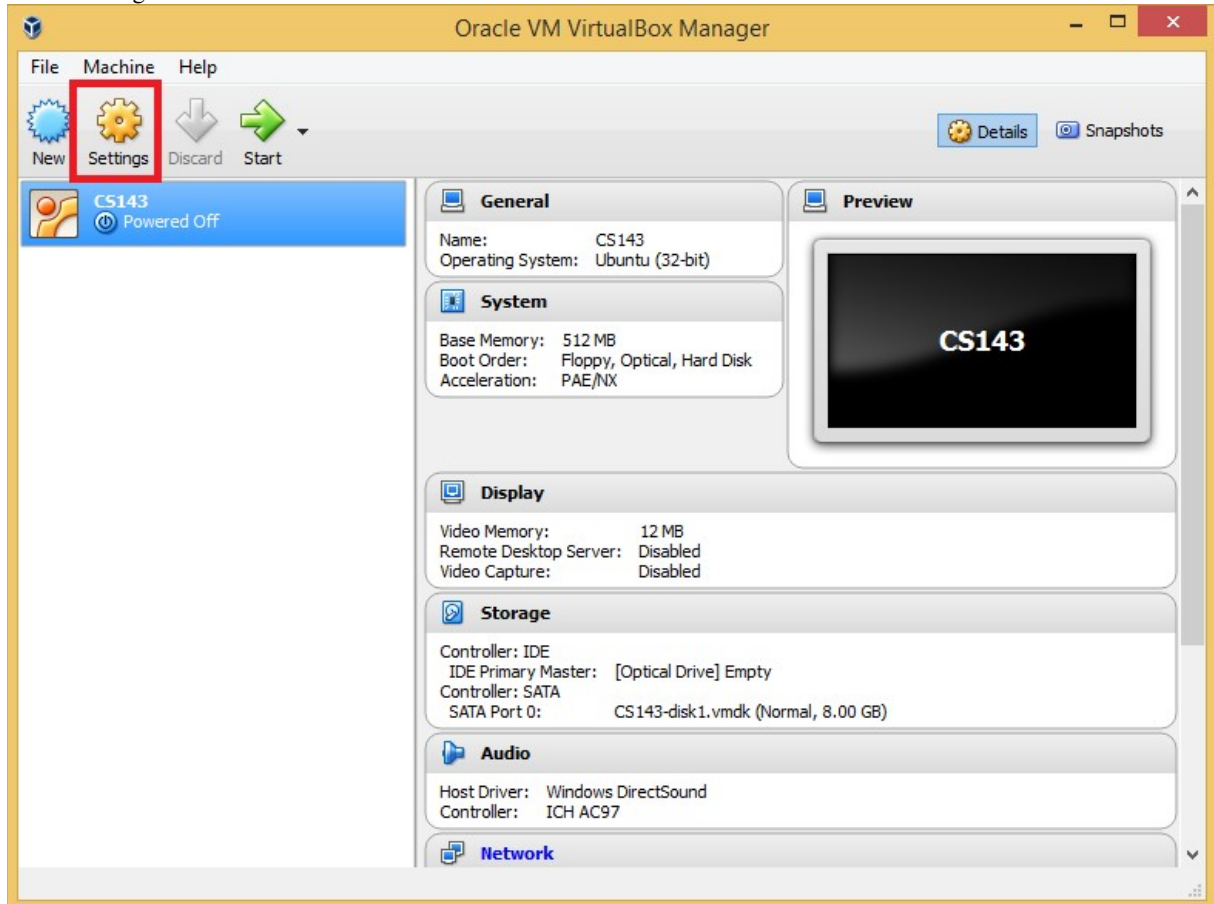
3. Select "Shared Folders" and double click "vm-shared" in "Folders List".
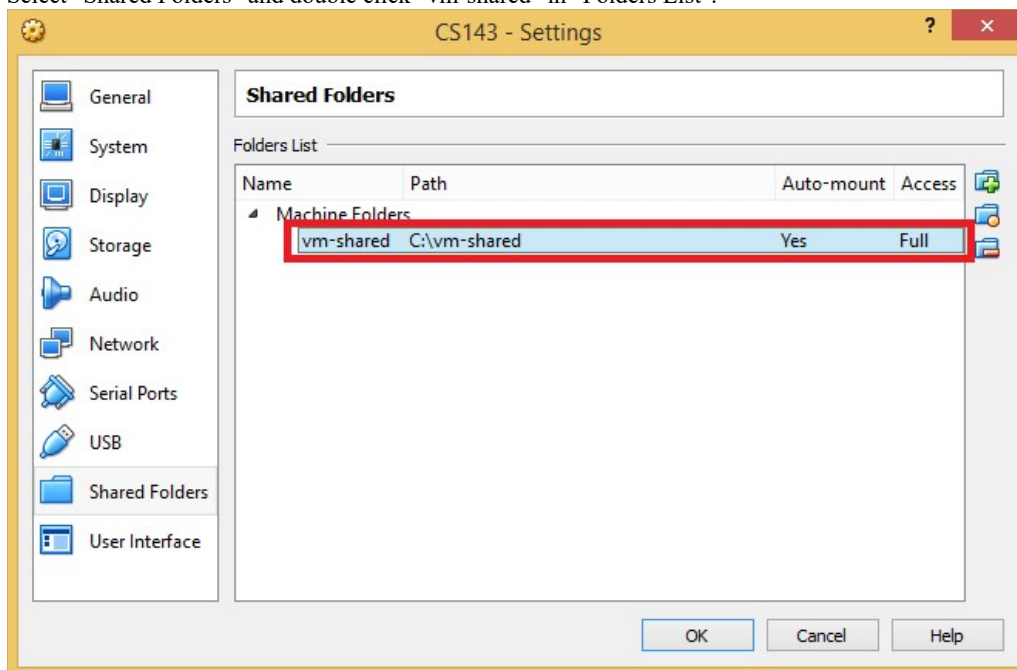
4. Fill in the following information in the dialog box
   ◦ Folder Path: select the shared folder that you created.
   ◦ Folder Name: **vm-shared**. (*It has to be vm-shared* even if your created folder name is different.)
   ◦ Do not select "Read-only" and select "Auto-mount"

5. Press "OK" buttons to close dialog boxes.

Now your shared folder is set up. From now on, the "C:\Users\cho\vm-shared" folder on your host machine is accessible at "/home/cs143/www/" in your virtual machine. If you copy a file to "C:\Users\cho\vm-shared" on your host machine, you can access the file in your virtual machine at "/home/cs143/www/" and vice versa.

Step 4: Start Virtual Machine and Login

1. Press "Start" button on your VirtualBox. Once the system finishes booting up, you will see the following screen.
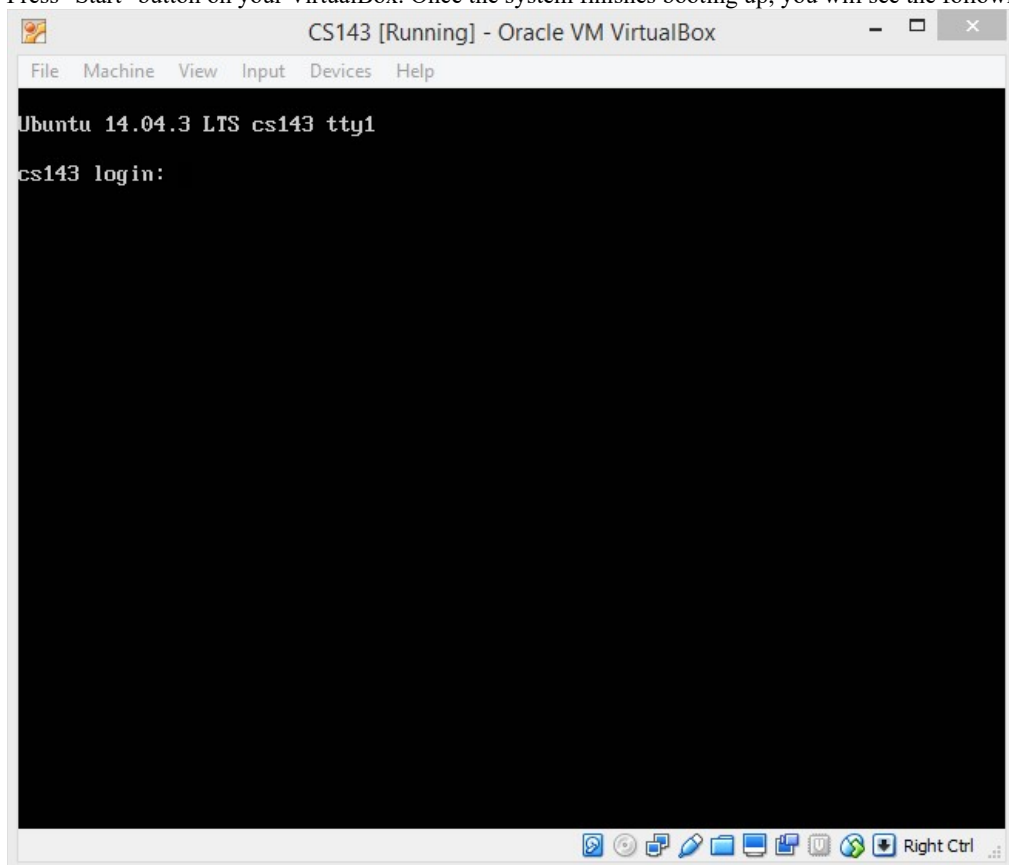
2. Now you can login to the virtual machine using username: **cs143** and password: **password**.

SSH login to Virtual Machine

If desired, you can login to the virtual machine at "localhost" port 1432 using a secure shell client from the host machine. This access method will make it easy to "cut-and-past" some text from host to a file in your virtual machine, for example.

On OS X, you can do it as follows:

- Open a terminal in the host and type the command 'ssh localhost -p 1432 -l cs143'
- If the terminal asks 'Are you sure you want to continue connecting?', type 'yes'.
- Then if the terminal asks for password, type 'password'.

- Now you are inside the virtual machine.


```
Last login: Tue Sep 29 22:23:10 on ttys003
willow:~> ssh localhost -p 1432 -l cs143
cs143@localhost's password:
Welcome to Ubuntu 14.04.3 LTS (GNU/Linux 3.19.0-30-generic i686)

 * Documentation:  https://help.ubuntu.com/

  System information as of Tue Sep 29 22:21:51 PDT 2015

  System load:  0.31              Processes:           85
  Usage of /:   25.6% of 7.26GB   Users logged in:     1
  Memory usage: 14%               IP address for eth0: 10.0.2.15
  Swap usage:   0%

  Graph this data and manage this system at:
    https://landscape.canonical.com/

Last login: Tue Sep 29 22:21:51 2015 from 10.0.2.2
cs143@cs143:~$
```
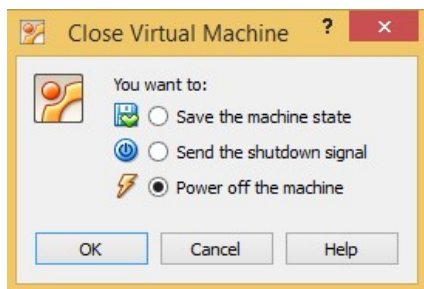
On Windows, you can use a secure shell client software, such as [PuTTY](#) and connect to 'localhost' at port 1432 with username 'cs143' and password 'password'.

Turning Off VirtualBox

To turn off your virtual machine, simply close the virtual machine terminal window. Then you will be prompted with 3 options.

- Save the machine state: Save the current state (and resume from the current sate later). This is the recommended "suspend" method.
- Send the shutdown signal: Turn off the machine gracefully. This is the recommended "power off" method.
- Power off the machine: Turns off the guest machine immdiately. Do **NOT** use this option.

For a reboot, type "sudo reboot" in the virtual machine terminal.