

**Computer Science Practice and Experience: Operating Systems (Comp Sci 3SH3),
Term 2, Winter 2018
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Practice Lab -1a – part II (Optional)

Adding Guest Additions

Outline – Installing Guest Additions

This practice lab is optional. However, I recommend installing the guest additions as it enables you to share files between your host machine and your guest (Linux image), enables you to share Clipboard and Drag n' Drop files (There are limitations however as to which files you can drag and drop.)

The VirtualBox Guest Additions consist of device drivers and system applications that optimize the operating system for better performance and usability. The usability features useful for this course are:

- 1) Sharing files between your host machine and Linux image
- 2) Sharing Clipboard and Drag and Drop Files

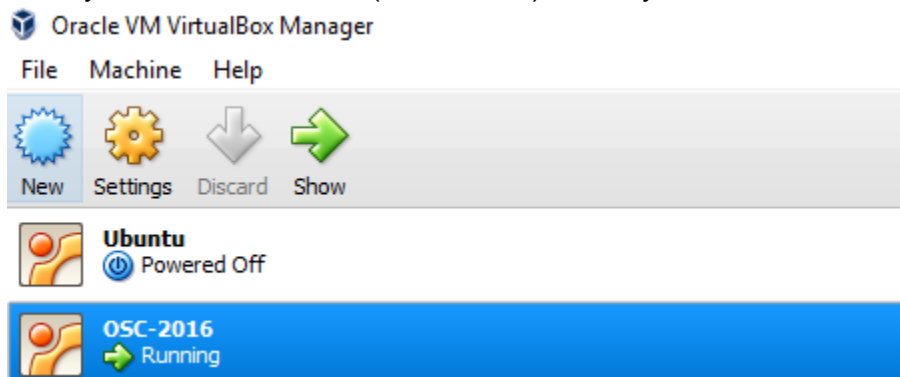
Important - You need to complete Practice -1a before working on adding the guest additions to your Linux image.

The below link has the instructions to install guest additions. However, for your convenience I have highlighted the steps below.

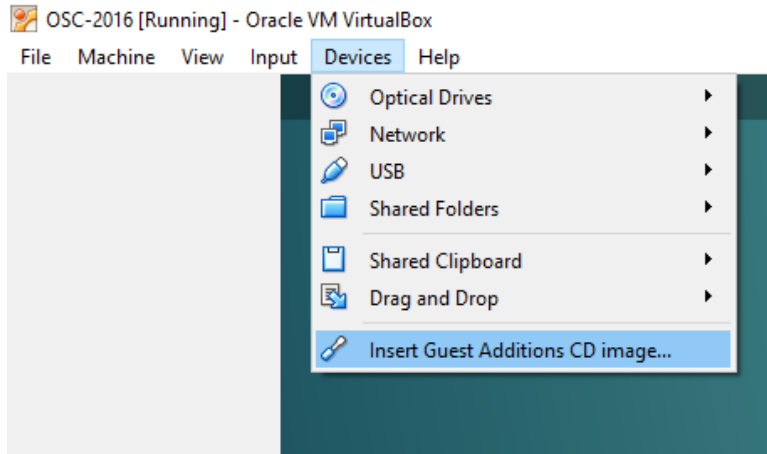
https://docs.oracle.com/cd/E36500_01/E36502/html/qs-guest-additions.html

Installing Guest Additions

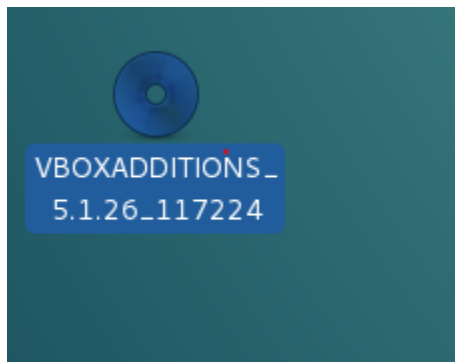
1. Start your Linux machine (OSC-2016) under your virtual machine.



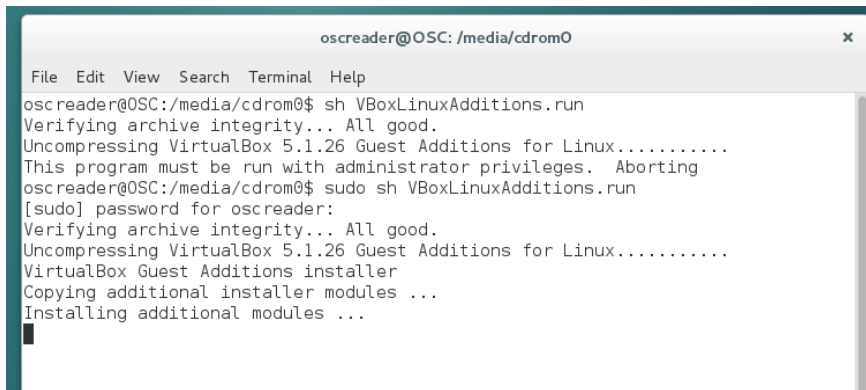
2. Once it is up and running click on Devices. Then select “Insert Guest Additions CD image” from the drop down menu.



- 3) You will see the VBoxAdditions CD icon on your desktop.



- 4) Right click on the VBoxAdditions icon and select “Open in Terminal” option from the menu.
- 5) In the terminal enter the following command:
\$ sudo sh VBoxLinuxAdditions.run
- 6) You will be prompted to enter your password on the machine. Enter your password and hit enter. You will see the additional modules being installed.



```
oscreader@OSC: /media/cdrom0
File Edit View Search Terminal Help
oscreader@OSC:/media/cdrom0$ sh VBoxLinuxAdditions.run
Verifying archive integrity... All good.
Uncompressing VirtualBox 5.1.26 Guest Additions for Linux.....
This program must be run with administrator privileges. Aborting
oscreader@OSC:/media/cdrom0$ sudo sh VBoxLinuxAdditions.run
[sudo] password for oscreader:
Verifying archive integrity... All good.
Uncompressing VirtualBox 5.1.26 Guest Additions for Linux.....
VirtualBox Guest Additions installer
Copying additional installer modules ...
Installing additional modules ...
```

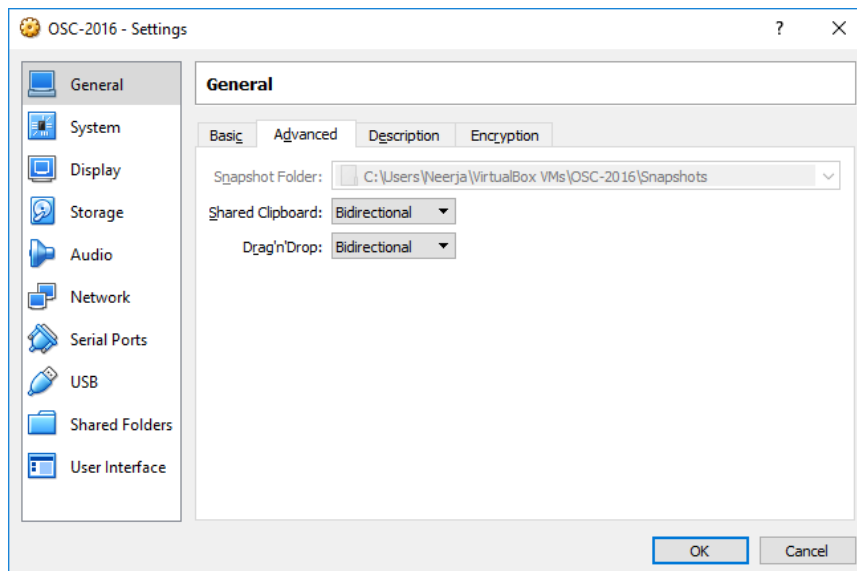
7) Restart your virtual machine.

Shared Clipboard and Drag n' Drop Feature

To enable Shared Clipboard and Drag n' Drop feature do the following:

- 1) Start your Linux image.
- 2) On your VM virtual manager, select your Linux image and click on settings.
- 3) Select the "General" option on the left menu.
- 4) Under this option click on the "Advanced" tab.
- 5) Select "Bidirectional" from the dropdown menu for the Shared Clipboard and Drag n' Drop options. Click OK to save these changes.

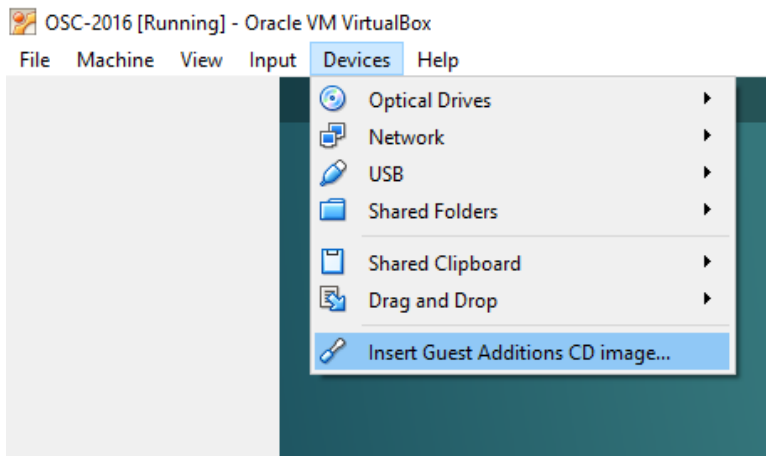
Note that, it is possible that you can just copy from the guest to your host machine, in spite of selecting the bidirectional option for Drag n' Drop.



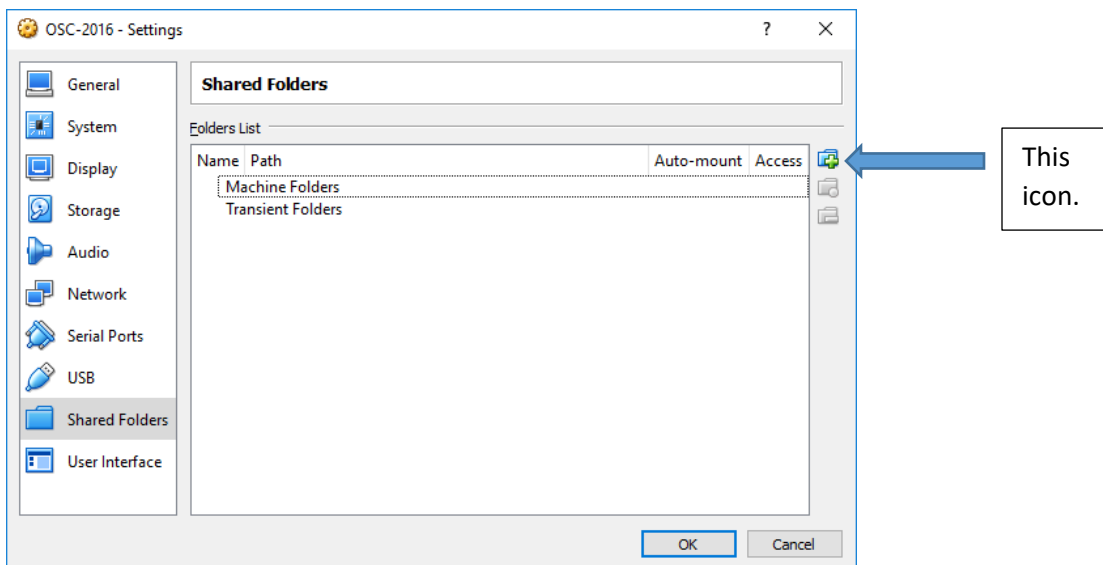
Shared Folders

An alternate method to sharing files between your host and guest machine is using shared folders.

- 1) If you don't have a shared folder created on your host machine to share with your guest machine, create one first (On my host, I named it "VirtualShare").
- 2) Then under devices select the "Shared Folders" option.

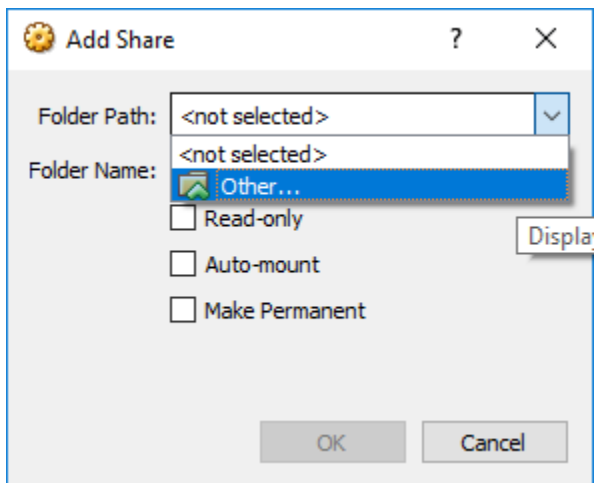


- 3) The following screen pops up. On this screen, select the Machine Folders and click on the folder icon on the right with the "+" sign.

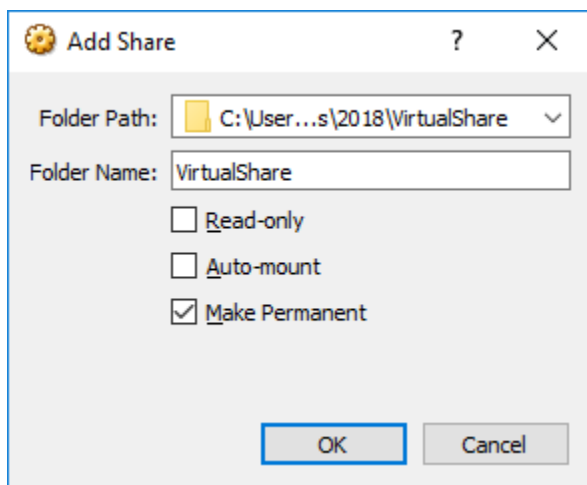


This icon.

- 4) The following window pops up. Select “Other” in the dropdown menu.



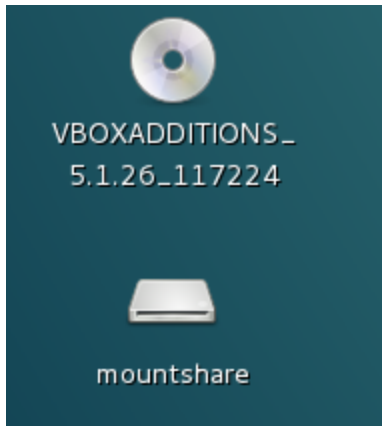
- 5) Select the folder you created on your host machine, and select the “Make Permanent” option to make the folder available each time you start your guest machine. Click OK to save your selection.



- 6) Restart your guest machine.
7) Create a new folder named "mountshare"
8) Open the Terminal in the same folder you created "mountshare"
9) Use the following command to mount your shared folder

\$ sudo mount -t vboxsf VirtualShare mountshare

- 10) You will see the shared folder on the desktop.



11) You can now use this to share files between your host and guest machine.