Using Ubuntu including within VirtualBox

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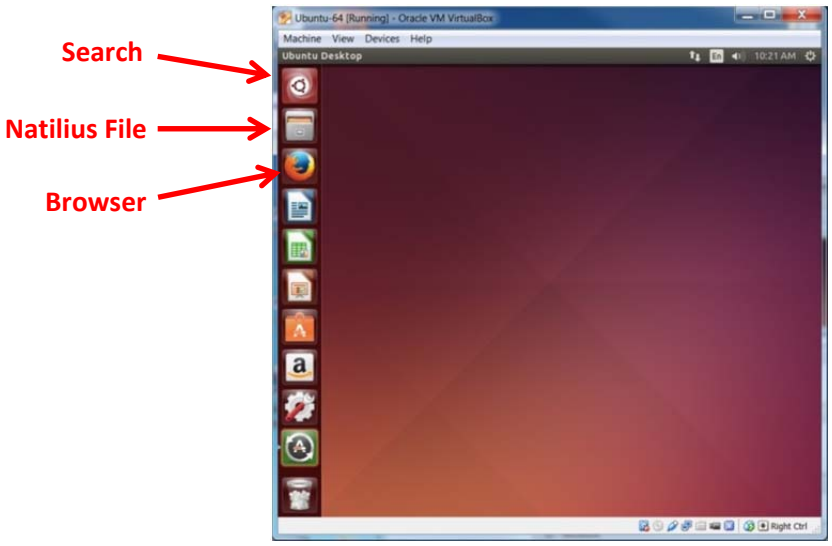
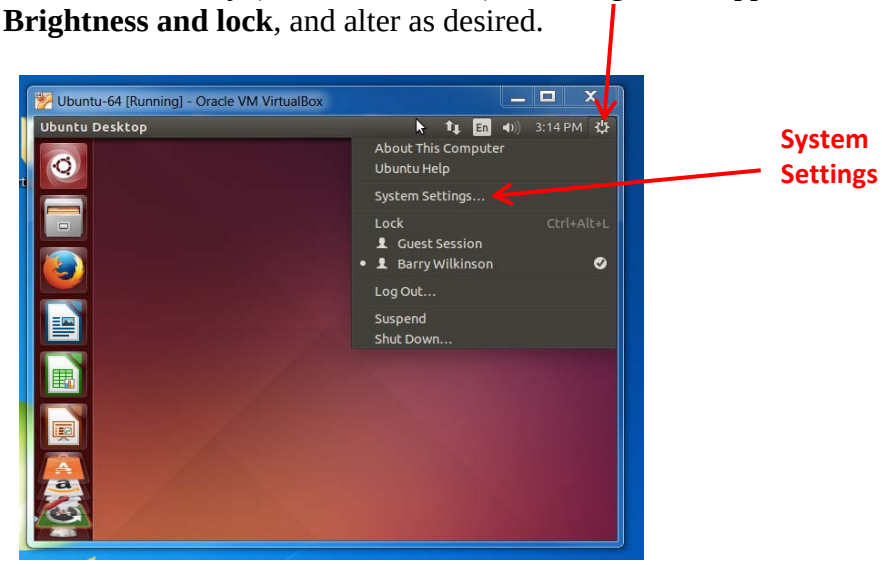
VirtualBox: Number of processors:

VirtualBox limits the number of cores available. Go to **Machines > Settings > System > Processors** to alter and reboot the OS.

Desktop:



Screen locking. For convenience on a private computer, you may wish to change the setting for locking the screen after user inactivity (default 5 minutes). Go to right side upper corner icon > **Systems Settings** > **Brightness and lock**, and alter as desired.

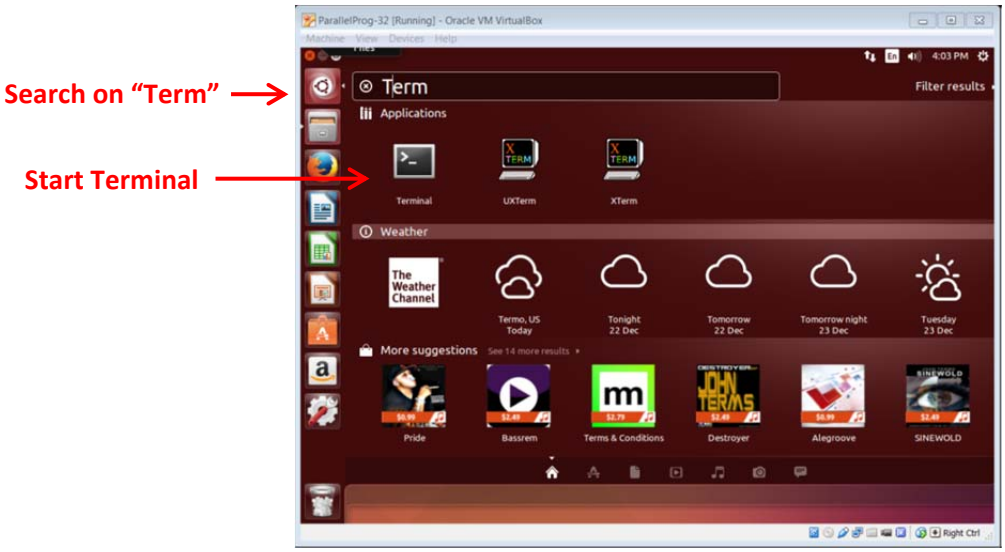


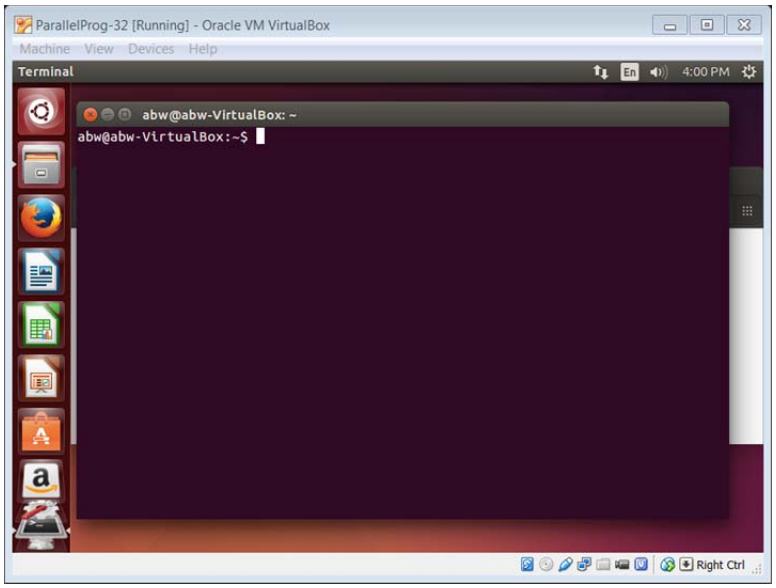
Copy-and-Paste across Host and Guest OS. The virtual machine is installed with VirtualBox "guest additions" that enable a number of important features such as copy-and-paste

across host and guest OS and desktop scaling. This makes your life much easier. After guest additions are installed, copy-and-paste across host and guest OS is then enabled by first selecting the machine icon (e.g. “ParallelProg-32”) and then setting from **Machine > Settings > Advanced > Shared Clipboard “Bidirectional” and Drag ’n’ Drop “Bidirectional”**. Note this only applies to a particular machine. If you have multiple virtual machines installed, you would need to do it for each machine.

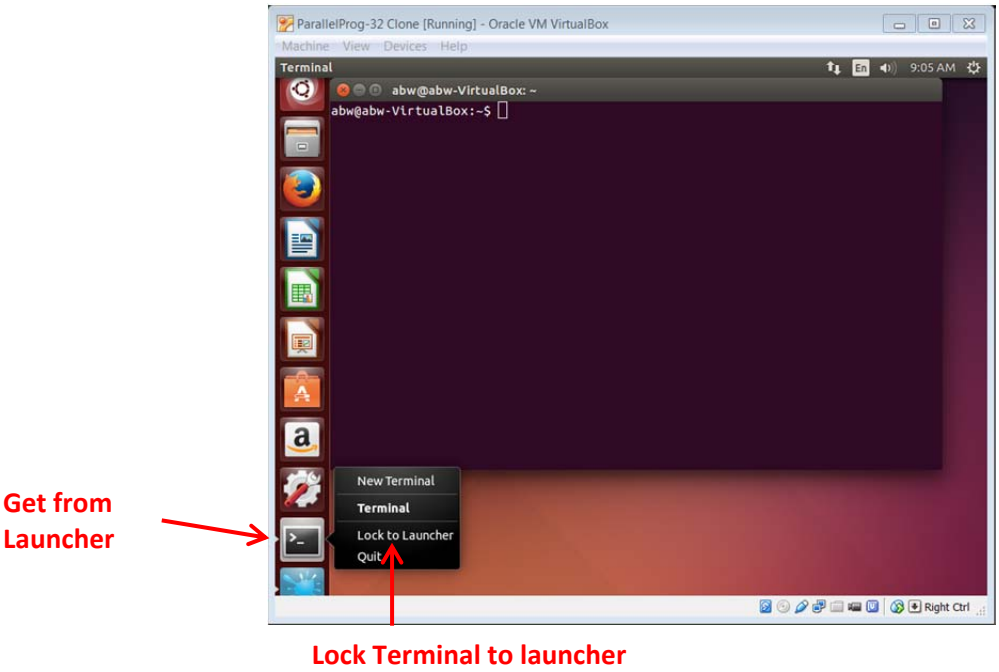
Closing the Machine. Note: When you close a virtual machine you have the option of *“Save the machine state”* or *“Power off the machine.”* *“Power off the machine”* is necessary if you need to reboot.

Terminal window. The first thing you are likely to need is a terminal. Start a terminal with **Control + Alt + T** or click the search icon (top icon on left side ribbon) to search on “Term” to find the terminal and start it:



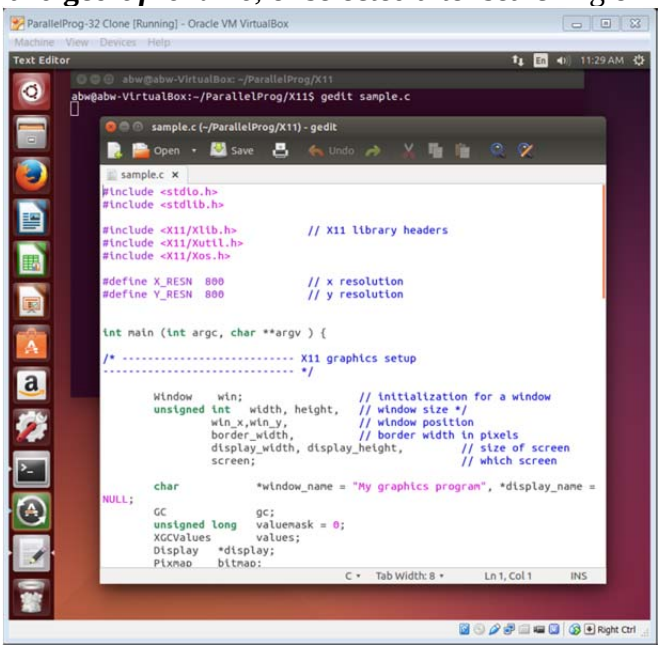


It is suggested that you lock the terminal to the Launcher so that next time you start Ubuntu, it is easier to get a terminal from Launcher:



Note in the course VM, the home directory is **/home/abw/** and is referred to as ~/. The Ubuntu default installation does not allow root logon. Use **sudo** for commands needing root permissions. You cannot use graphical menu commands, only command line for commands needing root permissions.

Ubuntu Editor. A graphical editor is also available on Ubuntu called **gedit**, which can be invoked with the command **gedit *filename***, or selected after searching on "gedit".

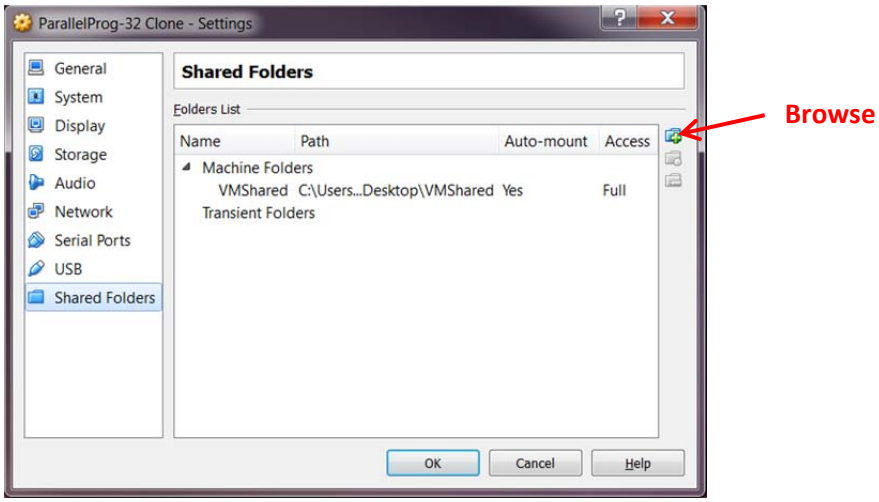


Notes on gedit: To switch between" insert" and "overwrite" press the "Insert" key. Mode will be indicated on the bottom right corner. To up/down one line, use the up arrow and down arrow keys. To quickly move down press "Page Down" key and to quickly move up, press the "Page up" key.

To use **gedit** on a remote server, you will need to connect with X11 forwarding using the **–X** option However gedit is not installed on the cci-gridgw cluster.

Shared file system

One of the most important things to have set up is a way to back up and transfer files. If you are using a VM running on a host, say a Windows system, Ubuntu provides a (potentially) easy way to set up shared directory on the Windows that can be access on the VM. First identify or create directory you want to share on the Windows system. Then on Ubuntu, go to **Machine > Settings > Shared Folders**. Browse for the directory on the Windows system you want to share. Select "Other." Check "Auto-mount and "Make Permanent"



Rebooting the system (**sudo reboot**) should mount the directory. The shared folder should then be found at **/media/sf_<directoryname>**. The prefix **sf_** is added by the system. (On the Nautilus file manager, go to **Devices > Computer** to reach the top directory to find **/media**.) The owner of the shared directory will be **root** and group **vboxsf** with no one else having access. So if necessary to get access, add yourself to the group **vboxsf** with the command:[1]

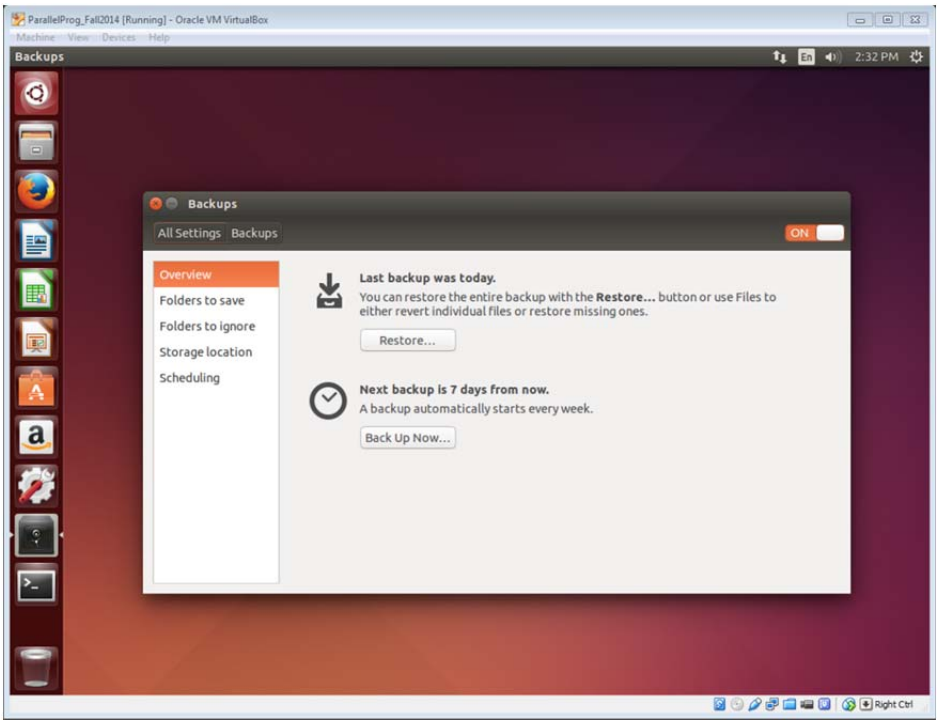
sudo adduser abw vboxsf

Reboot the system if necessary.

[1] If called with two non-option arguments, **adduser** will add an existing user to an existing group, see http://manpages.ubuntu.com/manpages/precise/man8/adduser.8.html
It may be the supplied VM has already added abw to vboxsf.

Ubuntu Backup Utility

Ubuntu does come with a utility called “Backups” (search on that) that provided a means of backing up and restoring a file system.[2]



It may already be set to back up once every week to a backup location on the VM. The storage location can be changed. Better would be to change the storage location to a shared location outside the VM, in case the whole VM becomes unusable.

[2] I have not had the need to try a restore yet.