These are more details for running MountainSort on WSL

MountainSort GitHub: https://github.com/flatironinstitute/mountainsort

**Installation**

Install the Windows Subsystem for Linux (WSL) on Windows 10

* <https://docs.microsoft.com/en-us/windows/wsl/install-win10>

Install the VcXsrv X server for GUI support with WSL and add the appropriate information to the .bashrc. See more detailed .bashrc information under **Aliases**

* Example X server instructions: <https://seanthegeek.net/234/graphical-linux-applications-bash-ubuntu-windows/>
* Launch the X server to use it or else the program requiring it in Linux will crash. It will stay active until you restart your computer or something like that
* I’m not sure what the libGL errors are sometimes, but it seems to work fine

Start Ubuntu and make a username/password

* Check Ubuntu version: <https://askubuntu.com/questions/686239/how-do-i-check-the-version-of-ubuntu-i-am-running>

WSL starts in a /home/<username> folder. The C: drive is available at /mnt/c

* Mount more drives: <https://blogs.msdn.microsoft.com/wsl/2017/04/18/file-system-improvements-to-the-windows-subsystem-for-linux/>
  + The following seems to work, although does not persist across WSL sessions. You may have to run it every time you open Ubuntu, but this may be fixed in a later release
  + $ sudo mkdir /mnt/q
  + $ sudo mount -t drvfs Q: /mnt/q
* It is more difficult to access Ubuntu files from the Windows side (e.g., through the Windows GUI) and I’ve been advised not to

**Installing behind a firewall**

If you are behind a firewall, add-apt-repository -y ppa:magland/mountainlab may not work

* See <https://askubuntu.com/questions/452595/cannot-add-ppa-behind-proxy-ubuntu-14-04>
* I typed export http\_proxy=http://’<username>’:’<password>’@<proxy>:<port>/ and then https\_proxy=https://‘<username>:’<password>’@<proxy>:<port>/
* Then append -E to all sudo commands for the apt installation commands the MountainSort docs give, e.g., sudo -E apt update

**Aliases**

Add aliases to shorten commonly used commands, like quickly navigating to MountainSort directories

* <https://www.hostingadvice.com/how-to/set-command-aliases-linuxubuntudebian/>

The .bashrc is in /home/<username>

* The ls command will not show it. Use ls -la or la (same function, here is an example of an alias) to see all files in the directory. More related commands: <https://www.rapidtables.com/code/linux/ls.html>
* The .bashrc runs every time when you open up Ubuntu
  + So you can add a cd command to the .bashrc to specify a starting directory

I usually edit the .bashrc using vim, a text editor that runs on Linux

* vim .bashrc to open the file
* My understanding of the basics of vim
  + There are different modes and each mode has specific key bindings
    - You start in “command mode.” You can’t edit the file in this mode and it’s used for moving around/viewing the file
    - In command mode, press “I” to enter “insert mode.” You edit the file in this mode
    - Press esc to return to command mode
    - In command mode, press “:” to enter “last-line mode.” Here, you will see the colon at the very bottom of the screen. In last-line mode, type “wq”-enter to save and exit, “q!” to exit without saving, “w” to save, and “q” to attempt quitting
  + Some Vim guides
    - <https://vim.rtorr.com/>
    - <https://www.linux.com/learn/vim-101-beginners-guide-vim>
  + Emacs and nano are alternatives

On the shared lab computer, I’ve added an alias, “goMS” that goes to the main Mountainsort working folder. Please keep in mind you may need to edit this alias if you change the path of the folder from which you run the sorting and analysis

**Bash scripts**

Bash scripts

* A starter guide: <http://matt.might.net/articles/bash-by-example/>