Pre-class computer preparation for Intro to Linux module of Elements of Research Computing (GRAD 778)

Welcome to the Intro to Linux module for Elements of Research Computing (GRAD 778)! There are a few things you will need to do in order to be ready for the class so that everything runs smoothly. We ask that you prep these things ahead of time in order to minimize the time we will need to spend troubleshooting and debugging during class!

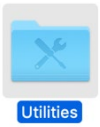
1). Terminal

You will need a functional linux/unix terminal environment on your local machine (whatever laptop or desktop you will use for the class). For Windows or Mac OS, please follow the instructions below for your operating system. For Linux or Chrome OS, you are already set.

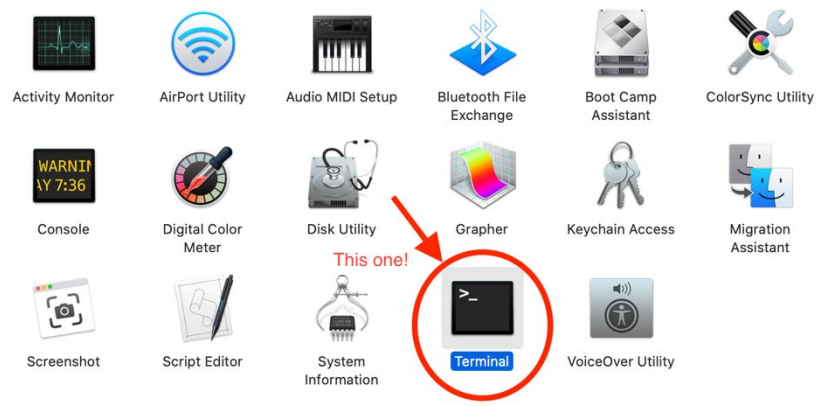
Mac

If you are on a Mac you already have a terminal app installed. You can find it several ways; simplest is to go to the Applications folder, which should be at the left in any Finder window you have open:

…and open the “Utilities” folder within that directory:



This is the terminal app:



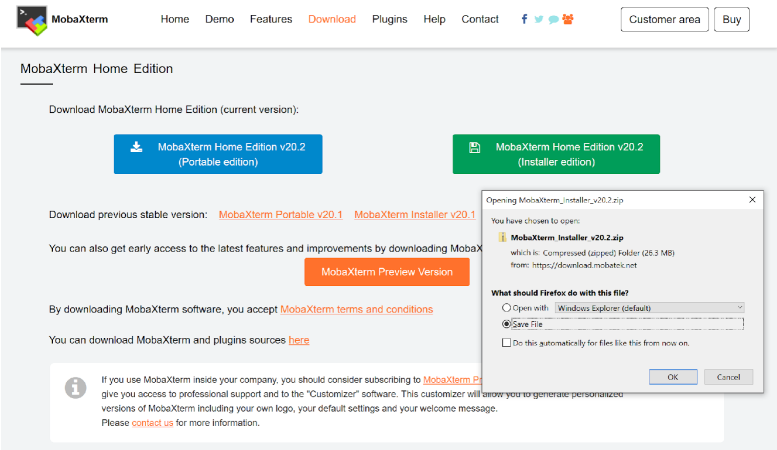
And it should look about like this when it opens:

Windows

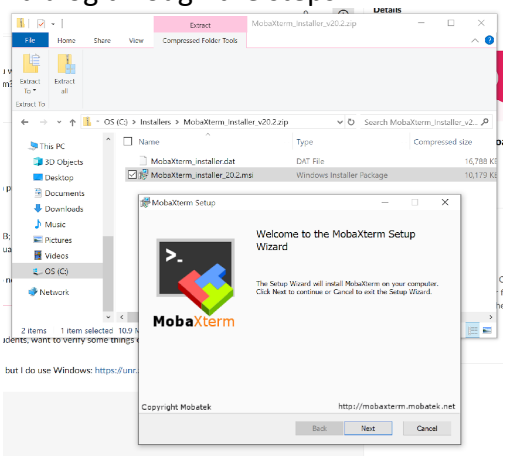
For windows, please install the mobaxterm app. This is a terminal window program for Microsoft Windows OS that enables remote access and other functionality using Unix commands.

To download, go here: https://mobaxterm.mobatek.net/

Select the free home edition (current version, installer edition) indicated in green below:



Click “OK” to save the *.zip file to a location on your computer (e.g. downloads folder) then navigate to that folder and unzip the file. In the unzipped folder, doubleclick the installer MobaXterm_installer_20.2.msi in this example (see below). Then click “Next” in the Setup window and follow the install dialog through the steps.



After clicking install, you will have to give Windows permission to install the software; click “yes”.

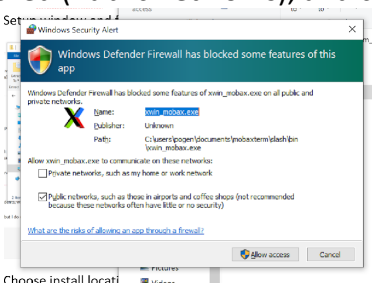
Choose install location (the default is fine): C:\Program Files (x86)\Mobatek\MobaXterm\

Then click finish.

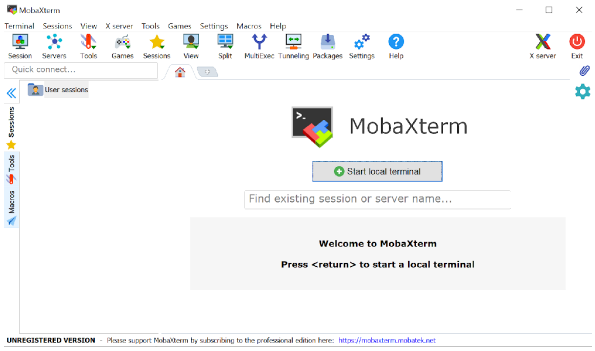
Note: if you run into errors saying “source file not found” you may have forgotten to unzip before clicking the install file.

After installation is complete, start the MobaXterm application from the start menu.

When starting the application for the first time you will get a Windows Security Alert shown below. Leave the default box checked (Public networks), and click the “Allow access” button.



Once the application is running, you can click “Start a local terminal” to open a new terminal window.



You are now ready to use MobaXterm.

2) Install a plain text editor

We recommend one of the following:
Sublime Text: https://www.sublimetext.com/
Atom: https://atom.io/
Text Wrangler: https://www.barebones.com/products/textwrangler/

3) Prepare for remote access

Mac

Please install Microsoft Remote Desktop client from the Apple app store. If you are on a fairly old version of MacOS (Earlier than 10.12 or 10.13), you may not be able to install this program – if you are unable to upgrade your OS version in order to install Microsoft Remote Desktop, please contact the instructors for help.
A video walkthrough of how to configure Remote Desktop to connect to machines on the UNR network via Putty is given in the remote computing video that is now available on webcampus, here: https://unr.canvaslms.com/courses/57767/files/5406736?module_item_id=1380101
PLEASE NOTE: this video was originally made for a different class, and as such, a few details are different for this class. Specifically and importantly, ***the machines you log into will be different***. See below for the login information. Also, the video explains more than just how to configure Remote Desktop; you do NOT need to watch and absorb the whole video, you will have time to review the rest of this video during class. The relevant explanation you should look at before class is from 5:35 to 8:54.
The host name for the computer you log into is given in this Google document. Please find your name and to the right of it will be the hostname you should use. For example, if your name is Daffy Duck, per that Google document, your computer would be grad7780760.acs.unr.edu (your computer will be different! Check the document!)

You can also follow the instructions on this page, which should be identical: https://oit.unr.edu/services-and-support/computers-and-devices/remote-access/remote-services/remote-application-connections/macosx-remote-applications-connection/

Windows

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3) Download data for class

We will be using an example dataset from the software carpentry website. Software carpentry is an organization that provides materials and training to teach many programming and programming-related skills. Download the data here: https://swcarpentry.github.io/shell-novice/data/data-shell.zip

Please save the .zip file to your Desktop. Unzip it there – on Mac, this is simply involves double-clicking it. On Windows, double-click the zip file that you have downloaded. Double clicking will open a window that shows a view of what is in the archive, but *this does not unzip the archive!* Please click "Extract" at the menu at the top of this window, which will unzip the contents of the zip archive to a normal folder on your computer.

After un-zipping the file, you should see a folder called "data-shell" on your desktop. We will be exploring this folder and the files within it via the command line in the first class.