

Remotely logging on to a LINUX system

Using a local Windows computer and Putty

Written by [Dave Pawlowski](#)

Introduction

One of the best things about Linux is the ease in which you can perform remote operations. The goal of this document is to teach you how to login to a linux machine from a windows computer. First, it is necessary to understand two terms: **local computer** and **remote computer**. The **local computer** is the computer that you are actively sitting in front of and typing at. The **remote computer** is the machine that you are accessing using the internet. The goal here is to use the local computer and an internet connection so that you can directly interact with the remote computer.

In order to login to a remote linux computer from a local windows computer, we need some software. The software we will use is called PuTTY. PuTTY basically allows you to open up a “terminal” on a remote Linux machine so that you can interact with the computer via the command line. Best of all, it’s free.

Putty

We will be using the free and widely used Windows program PuTTY as our ssh client. You can download it at:

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>.

PuTTY is a type of software called an SSH client. SSH is simply a type of remote login. It stands for secure shell, the important bit being that it is secure. The file that you want from the website is **putty.exe**. That is the actual program, not an installation file or anything like that. You just download it and put it somewhere, like the desktop or in “Program Files”. Once downloaded, just double click the icon, shortcut, or whatever to open it up.

Using PuTTY

Once PuTTY is open, you’ll notice there are all sorts of configuration options, but don’t worry about those, we’ll only use a few. You can do all sorts of cool things like change the color of the terminals that you open and use a specific font size and type. As you

get the hang of using PuTTY, feel free to change these at will. For example, I was always a bit preferential to the blue background and yellow lettering.

The first screen is the one that tells PuTTY what computer system you would like to log into. This information goes in the **hostname** dialog box. A hostname is basically the name of a computer. You are familiar with hostnames in the context of web URLs. The first part of a URL, after the `http://`, but before the next `/` is the hostname. Typically, it is comprised of the host's local name (the name of the Mac in my office is `chuck`) and the name of the domain (such as `emich.edu`). If you put the two together, `chuck.emich.edu`, you are providing a specification that is uniquely defined on the internet. In other words, by putting that domain in the address box in Firefox, you will access my computer. Sort of.

The physics department has a cluster that can be accessed from any place that has an internet connection. It's hostname is currently `physics-229-10.emich.edu`. In addition to the hostname, you need to tell PuTTY which port to use, set that to 22 if it isn't already. Whenever you use SSH to access a remote computer, you typically will want to access port 22.

So now that you have something in the **hostname** box and are specifying the correct port. You can click **Open** to log on. Put in your username and password and hit enter, and the next thing you know you should be logged in.

Tips

- If you start a process on Linux that uses up your terminal, you can **suspend** that process so that you can regain use of your terminal by typing **Cntl-z**. To get the process back, type **fg** then hit enter.
- Any programs that you start will close (without saving!) if you close the PuTTY session. So, you know, be careful. This isn't like Microsoft Word that autosaves everything every 2 seconds.
- Remember, you are working remotely, which means that you are dependent on your internet connection for everything you do. It is possible to have graphics (i.e. plots) that are created on the remote machine and reside on the remote machine, drawn on the local machine so you can actually see them. However, that process can be quite slow unless your internet connection is very fast. For this reason, it is generally better to save any graphics to a file, and then transfer that file to your local machine for local viewing.