

Connecting to the Math Department with the Secure Shell

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1. Ssh (Secure Shell)

On Unix-like environments such as Linux you can login remotely and transfer files between machines using **ssh**, **scp** and **sftp**. For non-Unix environments such as Windows see below.

For security reasons, in general it is not possible to connect to a machine inside the Math Department from outside the university unless you are using [VPN](#). On the other hand, if you are inside the university network (or using VPN) and your machine has **ssh** (the *secure shell*) installed, then you may be able to connect to some selected public machines in the Math department with a command like this:

```
ssh lunt.math.northwestern.edu
```

If you have different login names on the local and remote machines, type

```
ssh username@lunt.math.northwestern.edu
```

where *username* is your username in the department computer network.

The connection provided by **ssh** is secure because all the information is transmitted encrypted.

The **ssh** command works pretty much like **rlogin**, but you cannot use it for transferring files. For that purpose use **scp** or **sftp**. For instance, in order to copy the file *foo* from your home directory on the department network to the directory */tmp* on your local machine type:

```
scp username@lunt.math.northwestern.edu:foo /tmp
```

The program **sftp** works like **ftp**, i.e., you open first a session

```
sftp username@lunt.math.northwestern.edu
```

and then transfer files with the usual commands *put*, *get*, etc. The session ends with *exit*, *quit*, or *bye*.

Note: The secure shell (**ssh**) should also be used instead of **telnet** or **rlogin** for any connection between machines *inside* the Math Department, since it provides higher security.

2. PuTTY

[PuTTY](#) is a free implementation of Telnet and SSH for Win32 platforms, written and maintained primarily by Simon Tatham.

3. Mac ssh

Under the hood Mac OS X is (BSD) Unix. Hence you can use ssh on a terminal Window as you would on any Unix-like environment.

4. Crossplatform solutions

[FileZilla](#) is a free crossplatform easy to use solution for transferring files between machines. Download the FileZilla Client for your OS and follow the instructions on their website. NOTE: the version downloaded using the big green button may come with [adware](#), i.e., ad generating software. We recommend to go to "Show additional download options" to get a link to an adware-free version of FileZilla.