02a – SSH

CS 2043: Unix Tools and Scripting, Spring 2019 [1]

Matthew Milano

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Cornell University

Table of Contents

Working Remotely via SSH: Lab time!

Some Terminology

- The server you are logging into is called the `remote` (host).
- The user (you) are referred to as the `client`.
- The remote `port` is an integer, by default 22.
    - more on what a `port` is will have to wait

On your laptops/tablets/phones:

- Windows with Ubuntu / WSL: open bash
- Mac OS: open terminal
- Android/IOS: install any popular SSH program from the app store
    - JuiceSSH is popular on Android
    - Termius is popular everywhere
- Windows: Install any SSH client
    - puTTY is reliable and popular
    - Terminus is gaining ground
- **You have 5-10 minutes; ask for help as soon as you need it!**

Logging into a Remote Host: the SSH command

Secure Shell

`ssh <username>@remote`

- `username` is the username on the *remote* host.
- `remote` is the url of the server you want to log into.
  - IP Address, e.g., `128.253.141.34`
  - Symbolic name, e.g., `wash.cs.cornell.edu`
- Use `@` to specify username.
  - `ssh username@remote`

`ssh` Examples

- On `wash` I am `mpm288`:
  - v1: `ssh mpm288@128.253.3.197`
  - v2: `ssh mpm288@wash.cs.cornell.edu`
  - (**or** fill in the fields if you're using a graphical SSH client)
  - (if you need the port number, it's 22)

- **Now:** `ssh` to `wash.cs.cornell.edu`.
  - same username (netID) and password (you changed it, right?) as before
- **Do not log out**. If you are waiting, then...
- Welcome to wash, again! Type **who** (then press enter) to see who's online!

Connecting to Servers

- Warning: you are being *heavily* monitored. Always.
  - Think before you try to do something even *remotely* dubious.
- Are there other servers I can SSH to? Maybe!
  - *netID*`@ugclinux.cs.cornell.edu`
  - *netID*`@cslinux.cs.cornell.edu`
  - These might require separate accounts. Try it, see if it works!
- Cornell `ugclinux` and `cslinux` are *elastic*!
  - If you have access, use them for whatever you want!
- `Wash` is *not* elastic; beefy, but alone. Don't run crazy stuff on it.
- Off campus, you need to log into the campus VPN
  - Install: `https://it.cornell.edu/cuvpn`
  - After installing, Run `Cisco AnyConnect`, then `ssh` in.
  - Your username is your `NetID`. Password same as `CMS` / `studentcenter`.

CS Servers: More Information

- More info: https://it.cornell.edu/coecis/linux-ugc-lab-computing-and-information-science-cis

Important Excerpt from Above Article

Students should copy or delete their files in home directories at the end of each academic year. Home directories for students not currently enrolled in a CS course will be purged to reclaim server storage space. If you need assistance copying files off the server, please submit a Help Desk ticket.

References

[1] Stephen McDowell, Bruno Abrahao, Hussam Abu-Libdeh, Nicolas Savva, David Slater, and others over the years. “Previous Cornell CS 2043 Course Slides”.