Tools at your end:
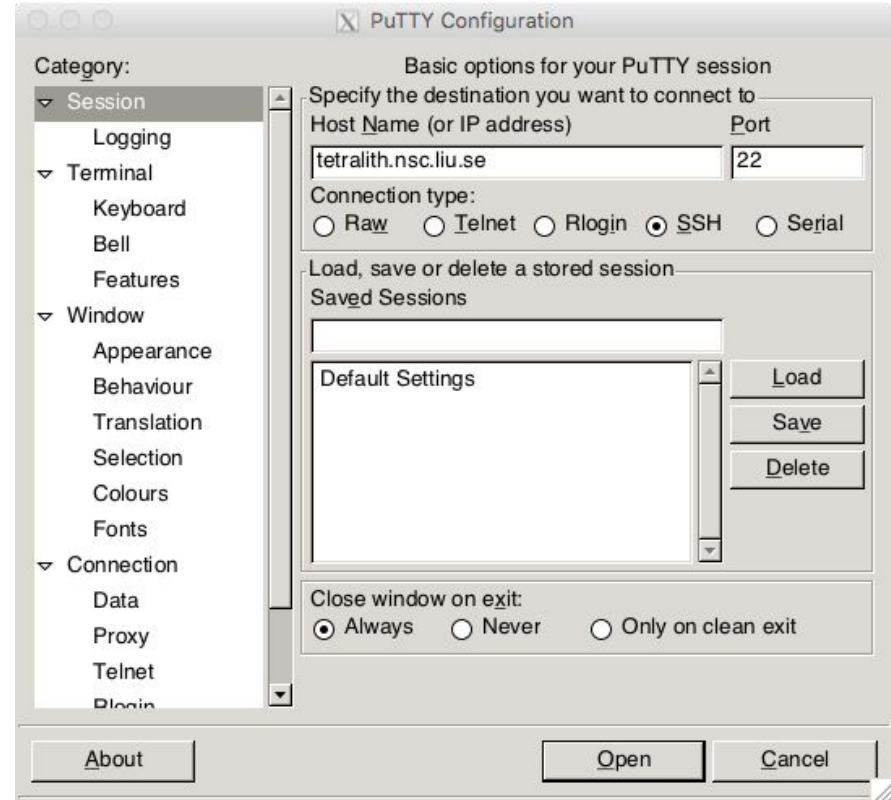## how to connect and get started

Logging in

Logging in: ssh (linux, MacOS)

- ssh "secure shell" (ssh home page)
- terminal e.g.

```
[mylaptop@home]$  ssh x_abcde@tetralith.nsc.liu.se
Password: **********
[x_abcde@tetralith]$
```
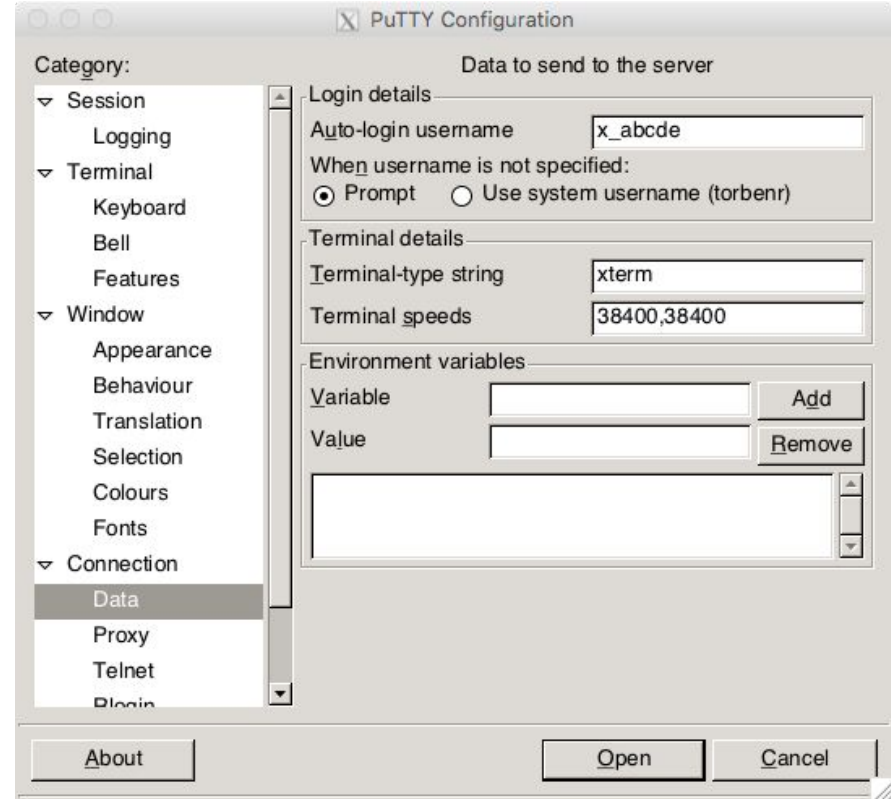
- ssh functionality

Logging in: PuTTY (Windows)

Host name in "Session tab"

Logging in: PuTTY (Windows)

- [further reading](#)

User name in "Data tab"

Logging in: ssh keys

- An alternative to username + password is ssh keys
- When used correctly, ssh keys can:
  - Be a convenience tool
    - And make life even easier using an ssh config file
  - Improve your account security

Logging in: ssh keys

- <u>Example</u>
  a. Generate keys on local computer
  b. Copy the public key to HPC

- Be careful with file permissions
- Always use a key phrase when generating keys

Logging in: Remote desktop

- An alternative the the terminal login is Virtual Network Computing (<u>VNC</u>)
  - e.g. <u>ThinLinc</u>

Getting data to and from the cluster

- scp, sftp, rsync (Linux, MacOS)
- PuTTY, Filezilla, … (Windows)

- Tips for transferring data across networks

Working on HPC: Getting started

Getting started: linux

- Learn to love the linux command line
  - Online resources (cheat sheet)
  - man pages and `[command] --help,` e.g.
    - `$ man df`
    - `$ df --help`

Command line shortcuts

Command	Explanation
ctrl-c	Interrupt (kill) the current foreground process
ctrl-d	Close the shell
ctrl-l	Clear the screen in the terminal
ctrl-a	Go to the beginning of the line
ctrl-e	Go to the end of the line
left arrow	Go left one character
right arrow	Go right one character
ctrl-k	Cut the part of the line after the cursor
ctrl-u	Cut the part of the line before the cursor
ctrl-_	Undo your last key press
up arrow	Go to the previous command in the history
down arrow	Go to the following command in the history
ctrl-r	Search command history
ctrl-j	Stop history search and allow to edit command

Getting started: linux

- Tab completion
- linux history

Getting started: linux

- Some favorite linux commands
  - grep
  - find
  - type

Getting started: Convenience tools

- Persistent sessions
  - screen
  - tmux
  - ThinLinc