Accessing Linux Server Remotely and Using Basic Linux Commands

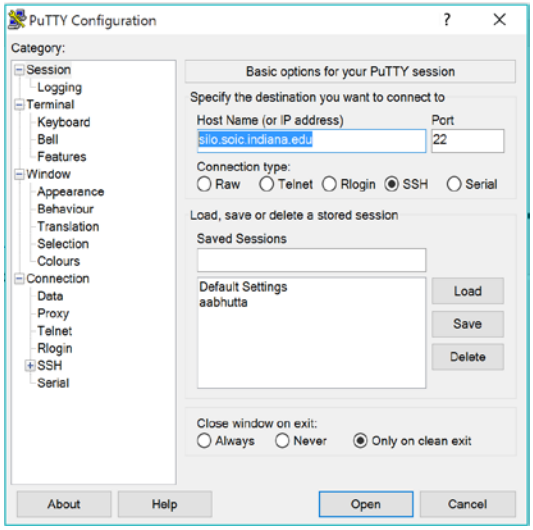
SOIC has *several Linux servers* which can be used by students and faculty. You can find more details about those here. We will use one such server called `silo.soic.indiana.edu`

As we access these servers remotely, we will be using **puTTY** (which can be downloaded from IUWare for windows) or SSH (inside a terminal) for mac (see example here or here)

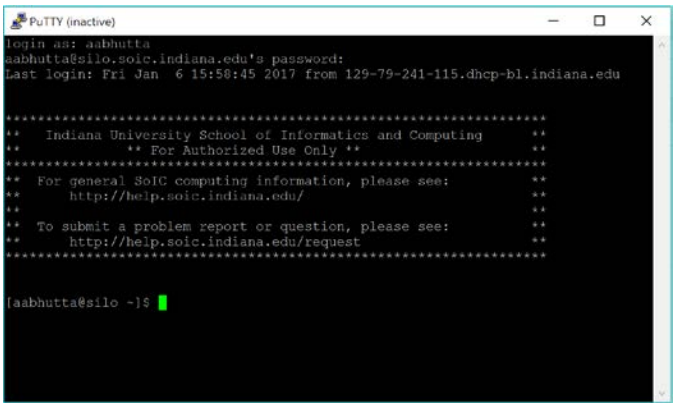
For Mac:
Open terminal and type: ssh username@silo.soic.indiana.edu then enter your IU password. Username here is your IU username.

For Windows:
Here are some steps to help you walk through this process:

1. Open PuTTY and login to the remote server by connecting to silo.soic.indiana.edu



2. Enter your IU username and password to login



Note: We are assuming that you already have a silo account created for you. If that is not the case (especially for those who enrolled in the class late), you will need to request an account. You can do that by placing a **service request** from https://help.soic.indiana.edu/request/. Just be sure to specify the course number and that you are late addition to the course.

Now you can type any commands on it. See a list below:

By the way, here is a guide on "How do I view, kill, or nice processes I have running on a Linux system?"
If you are not familiar with linux file system, review this

Basic Linux Commands (Note: all commands are case sensitive)

Command	Usage	Examples
$ pwd	Print Working Directory or current location	$ pwd

$ ls	List of Files and Directories
	List all files and directories (including hidden files)
	List all files and directories (including hidden files) with detail
	List all files with txt extension
		$ ls
		$ ls –a
		$ ls –al
		$ ls *.txt

$ mkdir	Create a directory	$ mkdir c291

$ cd	Change to a new Directory
	Change to your home directory
	Change to parent directory
		$ cd c291
		$ cd ~
		$ cd ..

$ cp	Copy a file	$ cp file1 file2
$ mv	Rename or Move a file	$ mv file1 ./c291/file1.txt

$ rm	Delete a file or Directory
	Delete empty directory
	Delete directory and contents
	Delete file or directory without prompt / confirmation
		$ rm file2
		$ rm –d c291
		$ rm –r c291
		$ rm –f xyz

$ clear	Clear the console / shell screen	$ clear

$ cat	Display contents of a file
	Write user input to file2.txt (Stop with Cntl+D)
	Append user input to list.txt (Stop with Cntl+D)
		$ cat file1.txt
		$ cat > file2.txt
		$ cat >> list.txt

$ grep	Search contents of a file
	Search (case insensitive) contents of a file
	Display search results with line numbers
	Display the number (or count) of search results
		$ grep Hello file1.txt
		$ grep –i hello file1.txt
		$ grep –n hello file1.txt
		$ grep –c hello file1.txt

$ man	**On-line Manual** (q to quit)	$ man grep
$ chmod	Change file permissions (rwx stands for read, write, execute) Give everyone (Owner, group, everyone) full access	$ chmod a+r file1.txt $ chmod 777 file1.txt

$ ps	Display all processes (identified by process IDs)
	Displays all processes in tree (from where they originated)
	Displays information about running processes
		$ ps
		$ pstree
		$ top

$ who	Displays list of users currently using ths system Displays your user id	$ who $ whoami
$ quota	To check your quota of space	$ quota –v
$ df	To check how much space is left (available)	$ df .
$ lscpu	Shows information about CPU	$ lscpu
$ history	To see list of commands used on shell To see the last command used (press UP ARROW as well)	$ history $!!
$ tree	Displays directory structure in tree format	$ tree
$ kill	To kill a process (or force close it) using process ID	$ kill -9 PID $ kill –KILL PID

Understanding Linux File List (from ls –al)