

# How to Use a Linux Server

2020-07-21

# Get Connected to the Server

See `get_connected_to_server.pdf`

# Command-Line Basic Navigation

# Viewing Stuff on the Command Line

- Ls

- -l or ll
- -h

- Can combine options
- --help for all options

```
$ ls
```

```
file1.txt file2.txt
```

```
$ ls -l
```

```
-rwxr--r--. 1 kkeith research 44 Jul 9 14:45 file1.txt.gz  
-rwxr--r--. 1 kkeith research 2048 Jul 9 14:45 file2.txt
```

file permissions

file owner

file size (in bits)

file/directory name

number of links

file group

time file last modified

# Viewing Files

- Viewing files
  - head = prints the first 10 lines
  - tail = prints the last 10 lines
  - more = fills screen with file; hit enter to advance one line
  - less = page through text in a different screen; can go backwards and forwards; q to exit
  - cat = concatenate; used with no other flags it will print the entire file; use zcat for gzipped files
- Making new files
  - touch
  - With editors
    - nano
    - vim

```
$ ls
file1.txt file2.txt
$ head file1.txt
A is for aardvark
B is for bumblebee
C is for chihuahua
D is for donkey
E is for elephant shrew
F is for flamingo
G is for Galapagos tortoise
H is for hippopotamus
I is for iguana
J is for jackal
```

# Navigating the Filesystem

- pwd = "print working directory"; prints the absolute path of the current folder
- cd = "change directory"
  - Can do multiple directories at once
  - ~ = your home directory
  - . = current directory
  - .. = directory above my directory
  - - = last directory

```
$ pwd
/home/user/examples
$ cd /home
$ ls
user user1 user2 user3
$ cd ~
$ pwd
/home/user/
$ cd ..
$ pwd
/home/
$ cd -
$ pwd
/home/user/
```

# File Wrangling

- cp = “copy”
- mv = “move”; Can move the file location OR rename the file
- rm = “remove”; rm -r to remove a directory and all its files

```
$ ls
folder file.txt example.txt
$ rm example.txt
$ ls
folder
$ rm folder
rm: cannot remove 'folder/': Is a
directory
$ rm -r folder
$ ls
file.txt
```

**WARNING: There is NO RECYCLING BIN; when you delete something it's gone forever**

# File Wrangling

- cp = “copy”
- mv = “move”; Can move the file location OR rename the file
- rm = “remove”; rm -r to remove a directory and all its files
- mkdir = “make directory”; make a new directory/folder
- rmdir = “remove directory”; only works if the directory/folder is empty

```
$ ls
file.txt
$ mkdir new_folder
$ ls
file.txt new_folder
$ rmdir new_folder
$ ls
file.txt
$ mkdir second_folder
$ touch second_folder/file.txt
$ rmdir second_folder
Rmdir: failed to remove
'second_folder/'; Directory not
empty
$ rm second_folder/file.txt
$ rmdir second_folder
$ ls
file.txt
```



# Wildcards

- \* = match all characters

```
$ ls
```

```
f1.txt f1.log f2.txt f2.log f3.txt  
f3.log f4.txt f4.log f5.txt f5.log
```

```
$ ls *.txt
```

```
f1.txt f2.txt f3.txt f4.txt f5.txt
```

# Miscellaneous Useful Things

- history = remembers (up to, on our system) the 1,000 previous commands
- up arrow = if you hit up, it fills in the previous command; can do this multiple times
- clear / ctrl + L = if you want a blank screen, type “clear” or hit ctrl + L to clear the screen
- There is tab completion (like in Rstudio) for command names and file paths (tab completion is your friend)