

SJSU HPC commands

July 26, 2018

1 SJSU HPC commands

1.1 SSH Config

Add the following to your `.ssh/config` file to create a shortcut

```
In [ ]: Host SJSU_01
        Hostname spartan01.sjsu.edu
        User <Your username>
```

Type `ssh SJSU_01` and the username and hostname will be set automatically.

1.2 Basic terminal commands can be used on HPC

1.2.1 manual pages with detailed instructions.

```
In [ ]: man <command name>
```

1.2.2 change directory & present working directory

```
In [ ]: cd
        pwd
```

1.2.3 list files in the current directory & flag `-l` for files along with all the details about ownership and permissions

```
In [ ]: ls
        ls -l
```

1.2.4 create new directory

```
In [ ]: mkdir
```

1.2.5 remove files and directory

CAUTION: THERE IS NO UNDOING THIS COMMAND.

```
In [ ]: rm <filename>
        rm -ri <directory name> #remove dir and files with prompt
        rm -rf <directory name> #remove dir and files without prompt
        rmdir <directory name> #remove empty directory
```

1.2.6 copy file to new location

```
In [ ]: cp <sourcefile> <destinationfile>
        cp -r <sourcefile> <destinationfile>
```

1.2.7 Move a file to a new location.

```
In [ ]: mv <file1> <file2>
```

1.2.8 print entire content of file

```
In [ ]: cat <filename>
```

1.2.9 print lines from the top & end of the file

```
In [ ]: head -3 <filename>
        tail -3 <filename>
```

1.3 Editors

nano (run **man nano** for more help), vim (run **man vim** or https://blog.interlinked.org/tutorials/vim_tutorial.html for more help), emacs (run **man emacs** or <http://insti.physics.sunysb.edu/itp/computing/doc/emacs-intro.html> for more help)

1.4 Modules

1.4.1 list all available modules on the cluster

```
In [ ]: module avail
```

1.4.2 list all currently loaded modules

```
In [ ]: module list
```

1.4.3 load and unload module

```
In [ ]: module load <module name>
        module unload <module name>
```

1.5 Advanced Linux Commands

1.5.1 star wildcard (*)

```
In [ ]: ls *.txt #returns all files with txt extension
```

1.5.2 display disk quota

```
In [ ]: quota # TBD
```

1.5.3 Find text in a file. grep will return every line in the file that matches your search term.

```
In [ ]: grep <flag> <search term> <filename>
        # -v return everyline except the ones with search term
        # -i flag will search without case-sensitivity
```

1.5.4 find file

```
In [ ]: find <path> -name <filename>
```

1.5.5 The pipe command, |, takes the output of one command and passes it to another

```
In [ ]: head -5 <filename> | grep <search term>
```

1.5.6 Display the command history

```
In [ ]: history <optional integer>
```

1.5.7 modify the permissions of files and directories

```
In [ ]: chmod
```

1.5.8 transfer files between workstation and cluster

```
In [ ]: scp <flag> <source_file> <destination_file>
        # -r To copy a directory along with all its contents
```