Week 1 - Unix for Biologists

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Liberally Stolen from: http://korflab.ucdavis.edu/Unix_and_Perl/
Terminal

- Required for ssh
- Required for connecting
Mac Terminal / X11

4-6) longgen(gpu,fat); generic (gpu, or fat) node w/ 4 day time limit
7-9) xlonggen(gpu,fat); generic (gpu, or fat) node w/ 2 week time limit
10) student; generic nodes for students only (1 day)

The queues are subject to change depending on needs. Let us know what we can do to better meet your needs.

NEWS:
1/31/2012 The OS has been upgraded on all ACISS nodes.
3/27/2012 Latest OS and driver updates applied across all nodes
3/28/2012 Cloud images rolled out across generic nodes
Torque upgraded to 2.5.11
4/23/2012 1 TB drives added to some fatnodes, mounted as /scratch
use "-q fatnodes -l nodes=1:scratch" to select fatnodes with extra space

****Students and first time users, please read the following file for a brief introduction to using ACISS: /INFO/first-time-users.txt

****Do not run jobs on the head node, please use the queuing system!

If you have any questions or need any assistance, please send email to systems@aciss.uoregon.edu
[ndunn@hn1 ~]$

Thursday, May 10, 12
Windows Terminal - Putty
Navigation
Navigation

• **ls**: list files / directories

```
NathanDunn:~ ls
Desktop   Library     Public     local
Desktop   Movies      VirtualBox VMs log
Documents  Music       git        pear
Downloads  Pictures    hg         svn
```

• **cd**: change directory: `~` = home, `..` = up

```
NathanDunn:~ cd VirtualBox\ VMs
NathanDunn:VirtualBox VMs% ls
CloVR         ubuntu 64
  galaxy VM   ubuntu 64 - 10
galaxyVM fresh install ubuntu 64
NathanDunn:VirtualBox VMs% cd ..
NathanDunn:~ ls
Desktop   Library     Public     local
Desktop   Movies      VirtualBox VMs log
Documents  Music       git        pear
Downloads  Pictures    hg         svn
```
Navigation

• `pwd` ‘present working directory’

```
NathanDunn:NathanDunn% pwd
/Users/NathanDunn
```

• also: `ls -ltrc`

• any command: `man <command>`

```
NathanDunn:NathanDunn% pwd
/Users/NathanDunn
```
Create / Destroy File(s)

- `touch <filename>`

```bash
NathanDunn:NathanDunn% touch test.txt
NathanDunn:NathanDunn% ls
Desktop      Library      Public      local
Desktop      Movies       VirtualBox VMs log
Documents    Music        git         pear
Downloads    Pictures     hg          svn
```

- `rm <filename>`

```bash
NathanDunn:NathanDunn% rm test.txt
remove test.txt? y
NathanDunn:NathanDunn% ls
Desktop      Library      Public      local
Desktop      Movies       VirtualBox VMs log
Documents    Music        git         pear
Downloads    Pictures     hg          svn
```
Manage File(s)

• `mv <A> <B>`: move files (and directories)

```
NathanDunn:~ > mv test.txt moved.txt
NathanDunn:~ > ls
Desktop  Library  Public  local  svn
Desktop  Movies  VirtualBox VMs  log  web,downloads
Documents  Music  git
Downloads  Pictures  hg
```

• `cp <A> <B>`: copy files

```
NathanDunn:~ > cp moved.txt test.txt
NathanDunn:~ > ls
Desktop  Library  Public  local  svn
Desktop  Movies  VirtualBox VMs  log  web,downloads
Documents  Music  git
Downloads  Pictures  hg
```
Manage File(s): Bulk

- `mv {expression} <B>`: move lost of files (and directories)

```
NathanDunn:NathanDunn% mkdir TEMP
NathanDunn:NathanDunn% mv *.txt TEMP
NathanDunn:NathanDunn% ls TEMP
moved.txt test.txt
```

- same for copy
Directories

- `mkdir`: make directory

  ```bash
  NathanDunn:NathanDunn% mkdir test
  NathanDunn:NathanDunn% ls
  Desktop   Library   Public   local
  Desktop   Movies    VirtualBox VMs   log
  Documents  Music     git       pear
  Downloads  Pictures  hg       svn
  test
  ```

- `rm -r`: remove directory

  ```bash
  NathanDunn:NathanDunn% rmdir test
  NathanDunn:NathanDunn% ls
  Desktop   Library   Public   local
  Desktop   Movies    VirtualBox VMs   log
  Documents  Music     git       pear
  Downloads  Pictures  hg       svn
  ```
View File(s)

• less <filename> : view files
• ‘q’ is quit
• ‘space’ to move ahead
• ‘/’ to search ‘n’ for next, ‘shift-n’ for previous
• ‘g’ go to top
• more <filename>: same idea
Edit File(s)

• nano <filename>: edit files  
  • instructions listed 
  • ^ is the control key 
• pico <filename>  
  • probably same
Other Commands

- `ls -ltrc`
  - `# list everything, order by last touched`
- `cp -r <from> <to>`
  - `copy directory and contents`