

useful server basics

PUBS 2018 | Jean Costello

log in/out

To log in:

- `$ ssh username@servername.domainname.edu`

Enter your password when prompted.

To log out (use any):

- `$ logout`
- `$ exit`
- `$ ctrl+D`

create an alias

To avoid having to type out the full server name and domain every time, create an alias.

1. open the file `~/.ssh/config`
2. add the following three lines to the file:
 - Host *nickname*
 - HostName *domain*
 - User *username*
3. save and exit
4. login by typing: `ssh nickname`

An example in vim:

1. `$ vim ~/.ssh/config`
2. type “i” to enter insert mode
3. enter the text (example):
 - Host pubs
 - HostName derisilab105.ucsf.edu
 - User my_pubs_group
4. type esc to exit insert mode
5. type “:wq” to save and quit (if the program says you may not edit the file, use ! to override: `:wq!`)
6. `$ ssh pubs`

transfer files

To move files between your local machine and the server, use the scp (securely copy files) command.

local to remote

- `$ scp username@server:file.txt /local/directory/`

Or, if you've set up an alias:

- `$ scp nickname:file.txt /local/directory/`

remote to local

- `$ scp file.txt username@server:/remote/directory/`
- `$ scp file.txt nickname:/remote/directory/`

directories

To transfer directories, use the option `r`:

- `$ scp -r /local/directory/ nickname:/remote/directory/`
- `$ scp -r nickname:/remote/directory/ /local/directory/`

files

List files and file sizes:

- `$ ls -lh`

List the number of lines in a file:

- `$ wc -l file.txt`

Display the first `n` lines in a file:

- `$ head -n file.txt`

Display the last `n` lines in a file:

- `$ tail -n file.txt`

Zip a file:

- `$ gzip file.txt`

Unzip a file:

- `$ gunzip file.txt.gz`

continue processes after logout

prefix your command with nohup:

- `$ nohup command arguments`

Example:

- `$ nohup python myscript.py`

This allows you to logout or disconnect from the server or exit the shell without aborting the command.

To save the output to a file:

- `$ nohup python myscript.py > file.txt`

return to shell prompt immediately

suffix your command with &

- `$ nohup command arguments &`

The command will run in the background.

viewing and killing processes

To view processes (use either):

- `$ top`
- `$ htop`

To exit out of the process view: - q

To kill, use top or htop to find the job PID.

- `$ kill PID`

If that doesn't work, use signal 9:

- `$ kill -9 PID`