

Lab 5: The Linux Labs – Standard Linux Commands

CSI4103 – Web Application Software Design

Faculty of Engineering – University of Ottawa

Objective:

Understand and practice how to use linux command line instructions. This is useful when working on server backends through a terminal window (e.g. using telnet or an SSH connection). This part of the lab continues on another time with a review of some more basic linux commands that are needed when navigating and using the file system from a linux command line

Instructions:

Using ? to replace a single character

1. `mkdir child1 child2 child3 sandbox`

2. `mv child? sandbox`

- Are there children in the sandbox
-

3. `touch f1 f2 f3 f10 f20 f30 f11 f12 f13 f33 fffff`

4. `mkdir dir1 dir2 dir3`

5. `cp f?0 dir1`

- Which files have been copied?
-

- How do you know?
-

6. `cp f?0 dir2`

- Which files have been copied?
-

7. `cp ? ?????? dir3`

- Which files have been copied?
-

8. `cp f?3 dir3`

- Which files have been copied?
-

9. `rmdir sandbox`

- Did the command work? Why? _____

10. `rmdir -r sandbox dir1 dir2 dir3`

- Did the command work? Why? _____

Using wildcards: Using * to replace a single character

- `ls`
- `rm *3`
 - What files have been deleted? _____
- `rm f*1`
 - What files have been deleted? _____
- `rm f*`
 - What files have been deleted? _____

Using Wildcards: Using [] to replace single characters.

- `touch hat hot heat hut hit`
- `ls h[ao]t`
 - Record the output? _____
- `ls h[aeiou]t`
 - Record the output? _____
- `ls h[aeiou]*`
 - Record the output? _____
 - Which additional file is displayed? _____
 - Why? _____
- `rm h*t`
- `touch had hdb hdc hdd`
- `ls hd[abc]`
 - Record the output? _____
- `ls hd[a-c]`
 - Record the output? _____
- `ls hd[a-d]`
 - Record the output? _____
- `touch hda1 hdb2 hdc3 hdd4`
- `ls hd[b-d][1-3]`
 - Record the output? _____
 - Why did this command display what is did? _____

- `rm hd[a-d][1-4]`

Using Redirection

Creating a text file

- `cat > myfile`
 - The cursor waits for text to be entered. Type “Hello World”. Press enter and then CTRL-D
- `cat myfile`
- `cat > myfile`
 - Type your name. Press enter and then CTRL-D.
- `cat myfile`
 - What do you notice? _____

Appending

Appending to an existing file

- `cat >> myfile`
 - The cursor waits for text to be entered. Type “Hello Canada”. Press enter and then *CTRL-D*
- `cat myfile`
 - What do you notice? _____

Concatenating text files

- `cat > f1`
 - Enter the following text: Hello everybody
- `cat > f2`
 - Enter the following text: My name is [fill in your name]
- `cat > f3`
 - Enter the following text; Goodbye
- `cat f1 f2 f3 > f4`
- `cat f4`
 - What do you notice? _____
- `cat f1 f2 f3`
 - What do you notice? _____

Using pipelines

- `ls -l /bin`
- `ls -l /bin } less`
 - Use the page-up and page-down down keys to navigate. Press “q” to quit.

- What do you notice? _____
- `cp /etc/fstab .`
 - What does this do? _____
- `cat fstab`
- `cat fstab | grep ext`
- `cat fstab | grep "/dev"`
- `cat fstab | grep "/dev" | grep "ext"`
- `ps aexf`
- `ps aexf | grep -I bash`
- `set | grep bin`

Listing aliases.

- `alias myls='ls -al'`
 - What does this do? Use the MAN pages. _____
- `alias`
 - Record the output: _____
- `ls`
- `mysls`
 - What is different? _____

Removing an alias.

- `unalias myls`
- `alias`
- `mysls`
 - Record the error message: _____

Using brace expansion

- `Cd`
- `Mkdir -p backup/{old,new}/labs{1,2,3},lecture{1,2,3}`
 - What does this do? _____
- `ls -l backup`
 - Record the output: _____
- `Cd backup`
- `Ls -l old new`
 - Record the output: _____

- `Touch new/lecture{1,2,3}/{notes,grades,demos}`
- `Cd new`
- `Clear`
- `Ls -l lecture`

- Record the output: _____
