

Introduction to Linux: Basic Commands

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| Command | Definition/Purpose of Command | Example |
| pwd | Prints out the directory that you are currently in | **$ pwd**  Output: /home/User |
| ls | Used to see what files are in the current directory.  Options:  “-a” Lists all content, including hidden files  “-l” Lists all contents in long form  “-t” Lists files and directory by time last modified  Can be combined into “-alt” to list directory will all previous additions | **$ ls**  Output:  Desktop Documents Downloads |
| cd | Used to select and enter a specific directory  Can link multiple commands using a “/”  Options:  “~” Will return you to home directory  “.” Will leave you in same directory  “..” Will move you up one directory  “~username” Will put you in username’s home directory  “-” return to previous directory | **$ cd Documents**  **$ pwd**  Output:  /home/User/Documents  $cd ..  $ pwd  /home/User |
| mkdir | Creates a new subdirectory in your current working directory | **$ mkdir newfolder**  **$ cd new folder**  **$ pwd**  Output:  /home/user/Documents/newfolder |
| rmdir | Removes any directory that is located inside your current working directory | **$ rmdir newfolder**  **$ ls**  Output:  //Nothing, because there are no directories left in that directory |
| touch | Creates a file inside the directory, you can add an extension such as .txt to make it a Text File | **$ touch a.txt**  **$ ls**  Output:  a.txt |
| cp | Used to copy files or group of files, needs at least two filenames in its argument.  Options:  “-i” (Interactive) Command will prompt for a response, if you press y then it overwrites the file with any other option leave it uncopied  “-b” (Backup) This creates a backup of the destination file in the same folder with the different name and in different format  “-f” (Force) If user does not have permissions, this command forces the destination file to be deleted, and then the copying of content is done from source to destination  “-r” or “-R” (Recursive) Copies directory structure as well  “-p” -> Preserves source file characteristics when copying over | 3 major modes of operation:  -Two file names  “cp Src\_File Des\_file”  **$ ls**  a.txt  **$ cp a.txt b.txt**  **$ ls**  a.txt b.txt  -One or more arguments  “cp Src\_file1 Src\_file2 Src\_file3 Dest\_directory”  **$ ls**  a.txt b.txt new  //Initially new is empty  **$ ls new**  **$ a.txt b.txt new**  **$ls new**  a.txt b.txt  Two directory names  “cp -R Src\_directory Dest\_directory”  If Dest\_directory doesn’t exist, cp will create it and copy contents of Src\_directory recursively, but if it does exist it will copy Src\_directory and create a sub-directory under Dest\_directory |
| mv | This is used to move one or more files or directories from one place to another in a file system. Does two distinct functions  (i) It renames a file or folder  (ii) Moves group of files to a different directory  Options:  “-n” (No-clobber) Command will prevent an existing file from being overwritten  “-version” Used to see which version of mv is running  Can use the same options like cp; “-i”, “-b”, “-f” | “mv [option] source destination”  **$ ls**  a.txt b.txt c.txt d.txt  **$ mv a.txt geek.txt**  **$ ls**  b.txt c.txt d.txt geek.txt |
| rm | This command allows you to remove objects such as files, directories, symbolic links, etc. By default it does not remove directories unless with the rmdir command.  Options:  “-i”, “-f”, “-r” | **$ rm geek.txt**  **$ ls**  b.txt c.txt d.txt e.txt  //More than one file at a time  **$ rm b.txt c.txt**  **$ ls**  d.txt e.txt |
| cat | Allows you to display the contents within a file  Options:  “>” Takes the output on the left and copies/redirects it to the right  “>>” Takes the output on the left and appends it to the right  “-n” Will display text file contents with line number  “-s” (Suppress) Will suppress empty lines into the output | **$ cat d.txt**  Output: “This Text File d contains this line.”  **$cat -n d.txt e.txt**  Output:  1) This Text File d contains this line.  2) This Text File e contains this line. |
| less | Used to read contents of text file one page (or one screen) at a time  Options:  “-E” (Exit) Causes less to automatically exit the first time it reaches end of file  “-f” Forces non-regular file to open  “-F” Causes less to exit if entire file can be displayed on first screen  “-g” Highlight the string which was found by last search command  “-G” Suppresses all highlighting of strings found by search commands  “-i” (Ignore) Cause search to ignore case  “-n” Suppresses line numbers  “-p” (Pattern) lets less know to start at the first occurrence of pattern in the file  “-s” Causes consecutive blank lines to be squeezed into a single blank line | **$ less d.txt**  Outputs “This Text File d contains this line.”  If it contained anything else, it would be limited to the contents on the screen. |
| | | Form of redirection to send this command to another command  Pipe can be used to combine two or more commands to be an input in another command and so forth. | **$ cat d.txt | less**  This command will output the contents of d.txt, but also apply the less command to it |
| apt-get | Allows you to install, remove, and manage packets  Options:  “update” This will make sure that source list is up-to-date  “upgrade” This will make sure that all installed packages are upgraded | “apt-get install <package\_name> <package\_name2>”  **$ apt-get install ubuntu-desktop** |
| apt-cache | Used to find new packages  Options:  “search” Will search for specific packages that you are looking for | **$** **apt-cache search vsftpd**  Output:  Vsftpd – lightweight, efficient FTP server written for security |
| su | Also stands for “substitute user”, and also usually defaults to the superuser account  Options:  “-c” Allows you to run specific commands in the other user account  “-p” Preserve the current environment that you are in | “su [options] [username]”  **$ su guest**  Password: //Enter password  **$ pwd**  /home/guest |
| chmod | Used to change mode, and to determine permissions for files  Options:  “-R” To include objects in the subdirectories as well  “-f” Allows for processing to continue even if there is an error  “-v” verbose, to show objects changed  Permissions:  “-r” Permission to read the file  “-w” Permission to write (or delete) the file  “-x” Permission to execute the file, or, in the case of a directory, search it | “chmod [reference][operator][mode] file…”  **$ chmod u = rw Newdirectory**  //Applying the u=rw command, the user (owner) cannot change/enter the directory  **$ cd Newdirectory**  -bash: cd: New: Permission denied |
| chown | Used to change ownership for files | $ ls -l  -rw-rw-rw- 1 user user 20 Oct 18 15:00 d.txt  $chown guest:guest d.txt  -rw-rw-rw- 1 guest guest 20 Oct 18 15:00 d.txt  This command allowed for changing the owner and the group of the text file. |