

Common

| | |
|------------------------|---|
| pwd | print current working dir |
| cd | change directory |
| cd ../ | change directory up 1 |
| cd ~/ | change dir to home. |
| ls | list content of directory |
| ls -l | detailed list |
| ls -h | readable byte format |
| ls -F | list all files + extension attributes |
| ls -lF | list files, ext, attrib, size, etc -> more detailed |
| tree | list directory in a tree like format |
| file | file command displays type of any file |
| file Desktop | will return Desktop: Directory |
| alias | to list all current alias for system/user |
| alias LC="newFunction" | creates a new alias "LC" that does "newFunction" |
| man | man pages |
| man -k | very similar to apropos |
| apropos | list all available man pages for specific word |

Text + Redirection Examples

| | |
|---------------------------|--|
| echo "string" | sends string to stdout (terminal) |
| echo "string" > file1.txt | sends string to file1.txt (redirection) |
| echo -e "\tNewString" | -e = enables extra character (?) use. \t option is for tab -> writes NewStringAfterTab after a tab, not space! |
| echo -e "\nNewString" | same as above but writes newstring after newline instead of tab. |
| cat | reads content of txt file and sends it to stdout (terminal) |
| cat > file.txt | with redirection before any file is mentioned -> will allow you to enter text at Terminal screen until Ctrl+d command (end) and sends it to file.txt |

Text + Redirection Examples (cont)

| | |
|----------------------------|---|
| cat <<exit> | same as above but need to type exit as end command instead of Ctrl+d |
| cat file1.txt > file2.txt | reads content from file1.txt, sends it to file2.txt AND replaces any content! |
| cat file1.txt >> file2.txt | appends content of file1.txt to end of file2.txt |
| tac | same as cat but reads file in reverse! |
| head | show first 10 line of a file |
| head -n (X) | show the first X lines of a file |
| tail | show last 10 lines of text file |
| tail -n (X) | show last X lines of text file |
| more | displays first page of file |
| less | displays the last page of a file and allows to move through pages with enter + spacebar |

Wildcards

| | | |
|-----------|---|----------|
| * | Matches 0 or more occurrences of the previous character | Common |
| ? | matches 0 or 1 occurrences of the previous char | Extended |
| + | matches 1 or more occurrences of prev char | Extended |
| . | Matches 1 character of any type | Common |
| [...] | Matches 1 character from the specified range | Common |
| [^...] | Matches 1 character NOT from the range specified within braces | Common |
| { } | Matches a specific number or range of the prev char | Extended |
| ^ | Matches the following characters if they are the first characters on the line | Common |
| \$ | Matches the previous characters if they are the last char on the line | Common |
| (... ...) | Matches either of two sets of characters | Extended |

misc

| | |
|----------------|--|
| echo \$PATH | see the content of the \$PATH variable currently loaded in memory |
| which "-grep" | to search directories of the PATH variable for a file called grep. |
| ln (link) | command to hard-link files |
| ln -s | command to create a symbolic link between 2 files |
| whoami | find out which user you are logged on as |
| groups | lists groups for current user unless we specify a user |
| cat /etc/group | to list all groups that exists on the current system |
| chown | change user |
| chown -R | change owner/permissions recursively (-R) |
| chgrp | change group command |

Permissions

| | |
|-----------------|--|
| chown | change owner |
| chgrp | change group |
| chmod | change mode of file (permissions) |
| u | user |
| g | group |
| o | other |
| a | All categories |
| + | adds a permission |
| - | removes a permission |
| = | makes a permission equal to |
| chmod u+w file1 | change user permissions to write for file1 |
| rx | 4+2+1 = 7 |
| rw- | 4+2 = 6 |
| r-x | 4+1 = 5 |
| r-- | 4 |
| -wx | 2+1 = 3 |
| -w- | 2 |
| --x | 1 |
| --- | 0 |

Compression + Exatraction

| | |
|-------------------------|--|
| compress -v file1 file2 | compresses file1 into file1.z and file2 into file2.z |
| zcat compressedfile1.z | command to display contents of a compressed file |

Compression + Exatraction (cont)

| | |
|--------------------------|---|
| uncompress -v | command to uncompress the file |
| gzip -v file1 | compresses file1 with gzip utility (better compression ratio) to file1.gz |
| gunzip -v file1.gz | to decompress a .gz file |
| bzip2 -v file1 | compress file1 using bzip2 utility to file1.bz2 |
| bunzip2 -v file1.bz2 | uncompress command |
| tar | tape archive utility. Used for backups and compression! |
| tar -cvf /backup.tar * | command to create an archive called backup.tar that contains the contents of the current directory |
| tar -tvf /backup.tar | command to view the contents of an archive |
| tar -xvf /backup.tar | extract the contents of the archive to our current directory |
| tar -zcvf /backup.tar.gz | creates a gzip-compressed archive called /backup.tar.gz that contains the contents of the current directory |
| tar -ztvf /backup.tar.gz | to view the contents of a gzip-compressed archive |
| tar -zxvf /backup.tar.gz | to extract contents of a gzip-compressed archive |
| cpio | similar to tar utility |

Directory + files

| | |
|-----------------------------|--|
| mkdir | make directory |
| rmdir | remove directory -> unlike rm -rf |
| touch | can be used to create file.txt |
| rm | remove file |
| rm -rf | DELETE ALL! -> remove files recursively and force it |
| rm -i | -i option to prompt for removal before deletion |
| mv file1.txt Newfile.txt | Ironically -> command to rename files. Rename file1.txt to Newfile.txt |
| cp /dir/file1 /newdir/file1 | copy command to copy file1 from dir to newdir |

File search + Manipulation

| | |
|----------------------------------|---|
| find | find for files in a directory hierarchy |
| locate | find files by name |
| cut | with options -> can cut out sections and fields of a text file and send it to stdout |
| cut -d ' ' -f (X) | -d = delimiter option. Anything that separates the first field by the delimiter will be counter as 2...3...4...5 in field. -f = field option. |
| date | sends out the current date to stdout. Useful with redirections |
| grep string file.txt | look for anything that contains string in file.txt |
| grep -i string | return any hit that matches string exactly |
| grep -i string | Can also be used to exclude case sensitiveness |
| grep -r string | -r = looks for string recursively down all files in the current directory tree. |
| grep -c 'string' Test.txt | Returns the numbers of instances of string in Test.txt. Similar to wc (word count) command |
| grep -v string text1.txt | -v option -> return lines that do not contain string |
| grep -e | extended grep - same as egrep |
| egrep | extended grep |
| egrep "(lodge lake)" text1.txt | View lines that contain either lodge of lake. |
| sed | stream editor -> can be used instead of cut & to search + replace. |
| sed -i -e 's/few/asd/g' Test.txt | replace all instances of few in the file Test.txt with 'asd'. Find and replace command |

Vi Commands

| | |
|-------------------|---|
| vi text.txt | opens text.txt in VI editor |
| i | enter insert mode |
| a | Changes to insert mode & places cursor after the current character to enter text |
| o | Change to insert and opens new line beneath current |
| l | changes to insert mode and places cursor at start of current line |
| A | Changes to insert mode and places cursor at end of line |
| Escape | leave insert mode |
| \$ | go to end of line in reg mode |
| :wq | save and exit |
| :q! | exit and do not save |
| ctrl+s-hift+v | paste keyboard shortcuts |
| G | move the cursor to last line of document |
| x | deletes character cursor is on |
| d\$ | deletes the cursor character to the end of the line |
| u | undo the last function |
| . | repeats the last function |
| y\$ | Copies the current line into a temporary buffer in memory for later use |
| p | Pastes the content underneath current line or after current word |
| P | Pastes content above current line or after current word |
| w filename | Saves the current document to file named filename |
| :r !date | reads output of date command into document under the current line |
| :set all | displays all vi environment settings |
| :s/the/THE/g | searches for reg expression "the" and replaces each occurrence globally throughout the current line with the word "THE" |
| :1,\$ s/the/THE/g | same as above but does this globally from line 1 to the end of the document |



| filesystem | |
|------------------------------|---|
| cat /dev/proc | show all devices currently used by the system & it's major number |
| mount | mount command |
| mount -t | to specify which filesystem to be mounted use -t option |
| umount | unmount command |
| mkfs | make filesystem command |
| mkfs -t ext | use -t command + filesystem chosen to specify filesystem to be used |
| mke2fs | make ext2 file system. |
| fuser -u | to check if a directory or device is currently used by a user |
| cat /etc/fstab | list contents of fstab file which is file to edit to add devices to auto-mount at boot. |
| mkisofs | make iso image command |
| fdisk | partitioning utility |
| cdisk | Same as fdisk but with GUI |
| pvcreate /dev/sda4 | creates physical volume |
| vgcreate vg00 /dev/sda4 | create volume group |
| lvcreate -L 5GB -n Data vg00 | create logical volume named Data that's 5GB in size. |
| df | disk free space command (shows free space on all mounted filesystems) |
| df -h | readable format |
| du | directory usage -> useful to know which directory is using up the most space |
| fsck | filesystemcheck |
| lsblk | list block devices (including Partitions) |



By **cerr221**
cheatography.com/cerr221/

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