

Linux Handbook

Name	Symbol	Example
Home directory	~	~\$
Change directory	cd	~\$ cd Documents/ ->>> ~/Documents\$
The directory directly above the current directory	..	~/Downloads\$ cd .. ->>> ~\$
List files	ls	~\$ ls ->>> Desktop Downloads Music Public Videos Documents lyrics.txt Pictures Templates vsftpd.log
View files (concatenate) Prints out file concepts — Can print out multiple files at once	cat	~\$ cat reminders ->>> 1. Learn Linux commands 2. Learn cybersecurity — ~\$ cat reminders notes ->>> 1. Learn Linux commands 2. Learn cybersecurity use "cd" to change directory
Create files	touch	~\$ touch mix_tape_ideas.txt
Show custom text	echo	~\$ echo "Hello World"
Output redirection Single > will overwrite the file —	> >>	~\$ echo “Get inspiration from 1980s music” > mix_tape_ideas.txt —

Double >> will append the information to a file		~\$ echo "Get inspiration from 1980s music" >> mix_tape_ideas.txt
Chain commands (pipe) Joins multiple commands together		~\$ cat mix_tape_ideas.txt wc
Line/word/byte count — Just lines — Just words — Just bytes	wc — wc -l — wc -w — wc -c	~\$ cat mix_tape_ideas.txt wc
Remove files	rm	~\$ rm mix_tape_ideas.txt
Create folder	mkdir	~\$ mkdir ideas
Move file	mv	~\$ mv notes ideas/
Remove folder	rm -r	~\$ rm -r ideas/
Linux permissions File type / file owner / group owner / everyone else — Permission to read — Permission to write — Permission to execute — directory	 r w x d	 drwxrwxrwx drwxrwxr-x

See permission	ls -lh	~\$ ls -lh script.sh
Change permission (change mode)	chmod	~\$ chmod +x script.sh
Head Prints the first # items in a file	head -n #	~\$ cat name_ranking head -n 3 ->>> #1, Liam #2, Emma #3, Noah
Tail prints the last # items in a file	tail -n #	~\$ cat name_ranking tail -n 5 ->>> #5, William #6, Ava #7, James #8, Isabella #9, Oliver
Cut Cuts file lines into pieces at the given delimiter. Then, it prints only the # piece	cut -d '[delimiter]' -f #	~\$ cat name_ranking tail -n 5 cut -d ',' -f 2 ->>> William Ava James Isabella Oliver
Sort Sorts lines Default: alphabetically (numbers first)	sort	~\$ cat name_ranking tail -n 5 cut -d ',' -f 2 sort ->>> Ava Isabella James Oliver William
Unique lines Must use sort because it only looks at adjacent lines	uniq	~\$ cat lyrics.txt sort uniq wc -l
Count the number of times each line appears in a file	uniq -c	~\$ cat lyrics.txt sort uniq -c
Search text	grep	~\$ cat lyrics.txt grep "give you up"

See command manual	man	~\$ man uniq
Looks up IP address or domain info	whois	~\$ whois 128.8.69.142 ~\$ whois google.com
Find information about a domain Record types: IPv4 - A IPv6 - AAAA Mail Service - MX Text - TXT Canonical Name - CNAME Service - SRV Pointer - PTR	dig -#	~\$ dig jump.aces.umd.edu A ->>> 129.2.245.214
Port Scanning Scans the first 1000 ports by default — Can specify # ports to search for: list, give a range sV tells you what's running on the port — Can stop initial ping if needed	nmap domain/IP nmap domain -p # -sV nmap domain -Pn	~\$ nmap aces.umd.edu — ~\$ nmap aces.umd.edu -p 22,80,443 -sV
CPU	uptime	~\$ uptime
RAM In megabytes	free free -m	~\$ free
Disk	df	~\$ df
Package manager	apt dpkg	~\$ apt ~\$ dpkg
Process management Process snapshot Real-time feed	 ps top	~\$ ps ~\$ top

Logs (directory)	/var/log	~\$ cd /var/log ~/var/log\$ ls
Search packages	apt search [search term]	
Install packages	apt install [package name]	
Remove packages	apt remove [package name]	
Fetch available updates	apt update	
Install updates	apt upgrade	
List all installed packages	dpkg -l	
Switch user Allows you to switch to another user and perform the command as the other user	sudo	~\$ sudo apt-get install package
Administrator account Has access to everything, required to make mods	root	
Get file type/info	file [filename]	~\$ file mystery.pdf
Take input from standard input (stdin) and writes it to a file	tee [filepath]	~\$ echo "I'm root" sudo tee /root/message