

Favorite Linux Commands

I went through my terminal history and picked out my most used commands and switches I use. Some commands I learned this year. Others I've been using over 20 years, so I honestly don't remember what all the switches do. I just sort of automatically type them when I'm at a terminal.

My hope is you'll find a couple you didn't know about and add them to your collection.

Tips and Tricks

1. People sometimes comment that I type extremely fast at the terminal. That's not the case at all. I just use tab to complete what I type. You can partially type any command and hit "tab" to autocomplete the rest. If more than one option is available, it won't complete. But if you hit tab twice and it will show you all your options. Also, I often use the fish shell which will tab - complete based on your history.
2. Use screen when working on remote servers in case you get disconnected (screen command below).
3. Learn how to use Vim. It will help you in the long run.
4. If you are dealing with a string with a space quote it. E.g. 'echo hello' doesn't need quotes but 'echo "hello world"' does.
5. In most terminal programs selecting the text automatically copies it. And right-click or Control+Insert will paste.

Working with Files

ls -alh

List all files in a directory with detailed format and human readable sizes.

tail -F /var/log/syslog

Monitors the syslog in real-time for changes

tail -n 120 /var/log/syslog

Outputs the last 120 lines of a file.

grep "hello" *

Searches for the string "hello" inside of all files in the current directory.

grep -R "hello" *

Searches for the string "hello" inside of all files in the current and all subdirectories.

grep -v "hello" *

Find all lines that do NOT have this value.

updatedb

Update the locate database

locate index.html

Find all filenames with "index.html"

locate filename | egrep -v var

Locate all files named "filename" except those with "var" in the path.

man echo

Look up the manual for any command (echo in this case).

tar -xmf archive.tar.gz

Decompress, unarchive, preserve permissions and timestamps of files all one command.

touch filename

Create an empty file

chmod -R 755 foldername

Grant owner write access and all other users read access to foldername recursively.

chown -R bob:wwwgroup foldername

Set owner to user, group to wwwgroup on foldername recursively.

cat /var/log/syslog | more

Use "| more" at the end of any comment to page break any output.

du -h

List all files and their sizes recursively

du -h --max-depth=1

Same as above but only print the files/folder structure 1 layer deep.

cd ~

Change to the current user's home directory

pwd

Print working directory

cd ..

Go up one directory

cd --

Return to the previous directory you were in.

cp filename1 filename2

Copy a file

mv filename1 filename2

Move (rename) a file

cp -R /home/ben/folder1 /home/eli/

Copy recursively folder1 to its new location

more filename

Read a file, one screen at a time.

vim filename

Edit a file with vim (you should really learn how to use Vim, it's a good skill to have)

mkdir folder

Create a directory

rmdir folder

Remove a directory

rm -Rf /home/ben/somefolder

Remove somefolder and all subfolders and files in it recursively regardless of file permissions and no warning prompts.

tree

Print out the current file/folder structure in a tree format

ln -s filea fileb

Create a symbolic link that points fileb to filea (can also do this to folders)

diff filename1 filename2

Show the difference between two files.

file filename

Show information about a file

System Commands

crontab -e

Create cron jobs for the current user.

vipw

Edit users

vigr

Edit groups

adduser ben

Create a user named ben

ssh-import-id-gh yourgithubusername

Import public ssh keys from your github account

sudo su

Become root

sudo apt update

Download the latest repository updates

sudo apt upgrade

Upgrade all packages to the latest version

sudo apt autoremove

Remove packages that are no longer needed (cleans up the /boot partition of older kernels as well).

sudo apt install vim

Install any program (vim in this example)

sudo apt-cache search vim

Search for all programs in the repository with the name "vim"

sudo apt-cache show vim

Get package and version information on vim

dmesg

Useful for finding hardware attached to the system

df -h

See all mounted filesystems and their capacity and usage.

history

See command history

history|grep somestring

Find all entries in the history that include the string "somestring"

!123

Re-run the command from line 123 in the history

clear

Clear the screen

screen

Screen allows your ssh session to be recovered if you lose connection

screen -r

Connect to your last screen session

Control+a+d

Pressing this while in screen will detach the screen session and let it run in the background (you can logout and it won't kill the process)

ssh-keygen

Generate a public/private keypair

which command

Find out where the command is located.

ansiweather -l Sandpoint -u imperial -h

Get the current weather for a city

cowsay "Hello"

Make an ASCII cow that says "Hello"

beep

Make the PC speaker beep

calc 1+2

Prints 3

export HELLO=hi

Set a system variable

echo \$HELLO

Print the value of a variable.

reboot

Reboot

poweroff

Power off system

ps -aux

List all running processes on a system

service nginx restart

Restart the service (nginx)

service nginx stop

Stop a service

service nginx start

Start a service

exit

Exit the shell or system (or press Control+D)

Network Commands

ping b3n.org

Ping a host

mtr b3n.org

Traceroute to host with continuous pings. Good to monitor a connection.

ssh -l root@someotherhost

ssh as a different user (root) to another host

ip addr show

Show your current IP address

ifconfig

Show current networking information

nmap b3n.org

Find open ports on host

nmap -sP 10.2.0.0/16

ping sweep a network

netstat -ln

See what port numbers the server is listening on

whois b3n.org

Find out who owns a domain and what nameservers it's pointing at.

sipcalc 10.2.0.1/20

Calculate network subnet into a human readable information

more /etc/services

This file tells you pretty much what service every port on the internet normally runs.

dig b3n.org

Lookup DNS A records for a host

dig b3n.org -t mx

Lookup DNS MX records for a host

dig b3n.org -t txt

Lookup TXT records for a host

dig @1.1.1.1 b3n.org

Lookup a DNS record for a host against a particular DNS server (1.1.1.1).

nslookup b3n.org

Get the IP address of a host from DNS

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# wget b3n.org
```

Download a webpage or file

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# wget b3n.org -S
```

Print header information

```
# rsync -aze ssh ben@server.b3n.org:/home/ben/folder/ /home/ben/folder -v --progress
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Copy files from remote server to local server (reverse to do the other way) using compression and preserving permissions and verbose.