LINUX Commands + Modern Alternatives

@xtremepentest

Modern Alternatives

This commands might not come pre-installed on your system, so you may need to install them first. You can find the installation instructions from the link provide

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Viewing Processes
- **ps** — List process.
- **procs** — A modern replacement for ps written in Rust. https://github.com/dalance/procs
- **pgrep** — searches for processes currently running on the system, based on a complete or partial process name, or other specified attributes. ps 1
- **uptime** — View the system load.
- **w** — List active processes for all users.
- **top** — Monitor resource-intensive processes interactively.
- **htop** — a cross-platform interactive process viewer
- **gtop** — System monitoring dashboard for terminal. https://github.com/aksakalli/gtop
- **hyperfine** — A command-line benchmarking tool. https://github.com/sharkdp/hyperfine
- **glances** — Glances an Eye on your system. A top/htop alternative for GNU/Linux, BSD, Mac OS and Windows operating systems. https://github.com/nicolargo/glances
- **btop** — Resource monitor that shows usage and stats for processor, memory, disks, network and processes. https://github.com/aristocratos/btop
- **bottom** — Yet another cross-platform graphical process/system monitor. https://github.com/ClementTsang/bottom
- **iotop** — used to display and monitor the disk I/O usage details and even gets a table of existing I/O utilization by the process.
- **powertop** — used to diagnose issues with power consumption and power management.
- **gnome-system-monitor** — Monitor system load and processes graphically.
- **xload** — Simple, graphical monitor of system load.
- **free** — Display free memory.
- **pidof** — Command, which looks up and prints the PID of a process by its name
- **nmon** — displays and records host system information. The command can run either in interactive or recording mode.

Controlling Processes
- **kill** — Terminate a process (or send it a signal).
- **killall** — a utility command used for killing any running process on the system based on a given name.
- **nohup** — nohup (No Hang Up) is a command in Linux systems that runs the process even after logging out from the shell/terminal.
- **nice** — Invoke a program at a particular priority.
- **renice** — Change a process's priority as it runs.
- **cpulimit**

Scheduling Jobs
- **sleep** — Wait a set number of seconds, doing nothing.
- **watch** — Run a program at set intervals.
- **at** — Schedule a job for a single, future time.
- **crontab** — Schedule jobs for many future times.

Logins, Logouts, and Shutdowns
- **shutdown** — Halts or reboots a Linux system
- **halt** — is used to instruct the hardware to stop all the CPU functions. Basically, it reboots or stops the system.

Users and Their Environment
- **logname** — Print your login name.
- **whoami** — Print your current, effective username.
- **id** — Print the user ID and group membership of a user.
- **who** — List logged in users, long output.
- **users** — List logged-in users, short output.
- **finger** — Print information about users.
- **last** — Determine when someone last logged in.
- **printenv** — Print your environment.

User Account Management
- **useradd** — Create an account.
- **userdel** — Delete an account.
- **usermod** — Modify an account.
- **passwd** — Change a password.
- **chfn** — Change a user's personal information.
- **chsh** — Change a user's shell.

Group Management
- **groups** — Print the group membership of a user.
- **groupadd** — Create a group.
- **groupdel** — Delete a group.
- **groupmod** — Modify a group.

Host Information
- **uname** — Print basic system information.
- **hostname** — Print the system's hostname.
- **dnsdomainname** — Same as hostname -d.
- **domainname** — Same as hostname -y.
- **nisdomainname** — Same as hostname -y.
- **ypdomainname** — Same as hostname -y.
- **ip** — Set and display network interface information.
- **ifconfig** — Older command to set and display network interface information.

Host Location
- **host** — Look up hostnames, IP addresses, and DNS info.
- **whois** — Look up the registrants of Internet domains.
- **ping** — Check if a remote host is reachable.
- **traceroute** — View the network path to a remote host.

Shell Job Control
- **jobs** — List your jobs.
- **&** — Run a job in the background.
- **^Z** — Suspend the current (foreground) job.
- **suspend** — Suspend a shell.
- **fg** — Unsuspend a job; bring it into the foreground.
- **bg** — Make a suspended job run in the background.

Network Connections
- **ssh** — Securely log into a remote host, or run commands on it.
- **telnet** — Log into a remote host (insecure!).
- **scp** — Securely copy files to/from a remote host (batch).
- **sftp** — Securely copy files to/from a remote host (interactive).
- **rcp** — Copy files to/from a remote host (interactive, insecure!).

Linux Listing Commands
- **lsattr** — List file attributes on a Linux second extended file system
- **lsb_release** — prints certain LSB (Linux Standard Base) and Distribution information.
- **lsblk** — List block devices
- **ls** — List information about file(s)
- **lsof** — List open files
- **lspci** — List all PCI devices
- **lsmem** — shows the memory block size, the device size, and the amount of memory in online and offline state.

Email
- **thunderbird** — Graphical mail client.
- **evolution** — Graphical mail client.
- **mutt** — Text-based mail client.
- **mail** — Minimal text-based mail client.
- **mailq** — View the outgoing mail queue on your system.

Usenet News
- **slrn** — Usenet newsreader

Instant Messaging
- **gaim** — Instant messaging and IRC client.
- **talk** — Linux/Unix chat program.
- **write** — Send messages to a terminal.
- **mesg** — Prohibit talk and write.
- **tty** — Print your terminal device name.

Math and Calculations
- **xcalc** — Display a graphical calculator.
- **expr** — Evaluate simple math on the command line.
- **dc** — Text-based calculator.
- **bc** — Arbitrary precision calculator language

Dates and Times
- **xclock** — Display a graphical clock.
- **cal** — Display a calendar.
- **date** — Print or set the date and time.
- **ntpdate** — Set the system time using a remote timeserver.

Graphics and Screensavers
- **eog** — Display graphics files.
- **geeqie** — Display graphics files and slideshows.
- **ksnapshot** — Take a screenshot (screen capture).
- **gimp** — Edit graphics files.
- **dia** — Draw structured diagrams.
- **gnuplot** — Create graphs and plots.
- **xscreensaver** — Run a screensaver.

Audio
- **amarok, rhythmbox, xmms** — Audio file players (MP3, WAV, OGG).
- **grip** — CD player, ripper, and MP3 encoder.
- **cdparanoia** — Rip audio from CDs to WAV files.
- **lame** — Convert from WAV to MP3.
- **id3tag** — Edit ID3 tags.
- **audacity** — Edit audio files.
- **k3b** — CD burner with graphical interface.

Video
- **mplayer** — Video file playback.
- **gxine** — Simple DVD player.
- **kino** — Video editor.
- **HandBrake** — Video ripper.

Network
- **traceroute** — View the network path to a remote host.
- **ss** — ss (socket statistics) tool is a CLI command used to show network statistics.
- **ifconfig** — Older command to set and display network interface information.
- **netstat** — prints network connections, routing tables, interface statistics, masquerade connections, and multicast memberships
- **who** — List logged in users, long output.
- **tcpdump** — a command-line utility that you can use to capture and inspect network traffic going to and from your system.
- **ping** — Check if a remote host is reachable.
- **gping** — Ping, but with a graph. https://github.com/orf/gping
- **ifdown** — disables a network interface, placing it in a state where it cannot transmit or receive data.
- **ifup** — brings the network interface up, allowing it to transmit and receive data.
- **ifquery** — displays information about a network interface's configuration.
- **nslookup** — Nslookup (stands for "Name Server Lookup") is a useful command for getting information from the DNS server.
- **dig** — allows you to query information about various DNS records, including host addresses, mail exchanges, and name servers.
- **dog** — A user-friendly command-line DNS client, dig on steroids. https://github.com/ogham/dog
- **mtr** — mtr combines the functionality of the traceroute and ping programs in a single network diagnostic tool

Transfer files between remote and local systems
- **scp** — allows you to securely copy files and directories between two locations over SSH.
- **rsync** — a fast and versatile command-line utility for synchronizing files and directories between two locations over a remote shell, or from/to a remote Rsync daemon.
- **sftp** — a secure file protocol that is used to access, manage, and transfer files over an encrypted SSH transport.
- **sshfs** — allows us to mount a remote directory locally

Basic File Operations
- **ls** — List files in a directory. Is does more than that.
- **exa** — exa is a modern replacement for ls. https://github.com/ogham/exa
- **lsd** — The next gen file listing command. Backwards compatible with ls. https://github.com/Peltoche/lsd
- **cp** — Copy a file.
- **mv** — Rename ("move") a file.
- **rm** — Delete ("remove") a file.
- **rmdir** — utility for deleting empty directories.
- **ln** — Create links (alternative names) to a file.
- **shred** — Completely erase a file when the file is deleted. IP
- **rename** — rename files or multiple files

Directory Operations
- **cd** — Change your current directory.
- **zoxide** — zoxide is a smarter cd command https://github.com/ajeetdsouza/zoxide
- **broot** — A new way to see and navigate directory trees https://github.com/Canop/broot
- **tree** — a tiny, cross-platform command line program used to recursively list or display the content of a directory in a tree-like format
- **pwd** — Print the name of your current directory, i.e., "where you are now" in the filesystem.
- **basename** — Print the final part of a file path.
- **dirname** — Print a file path without its final part.
- **mkdir** — Create (make) a directory.
- **rmdir** — Delete (remove) an empty directory.
- **rm -r** — Delete a nonempty directory and its contents.

File Viewing
- **cat** — print the content of a file onto the standard output stream
- **tac** — print the content of a file in reverse into standard output stream
- **bat** — A cat clone with syntax highlighting and Git integration. https://github.com/sharkdp/bat
- **glow** — Glow is a terminal based markdown reader designed from the ground up to bring out the beauty—and power—of the CLI https://github.com/charmbracelet/glow
- **more** — View text files one page at a time.
- **less** — View text files one page at a time.
- **head** — View the first lines of a text file.
- **tail** — View the last lines of a text file.
- **nl** — View text files with their lines numbered.
- **strings** — Display text that's embedded in a binary file.
- **od** — View data in octal (or other formats).
- **xxd** — View data in hexadecimal.
- **acroread** — View PDF files.
- **gv** — View PostScript or PDF files.
- **xdvi** — View TeX DVI files.

File Creation and Text Editors
- **touch** — used to create, change and modify timestamps of a file
- **emacs** — Text editor from Free Software Foundation.
- **vim** — Text editor, extension of Unix vi.
- **nano** — an easy to use command line text editor for Unix and Linux operating systems.
- **soffice** — Office suite for editing Microsoft Word, Excel, and PowerPoint documents.
- **abiword** — Edit Microsoft Word documents.
- **gnumeric** — Edit Excel spreadsheets.
- **tee** — Copy a file and print it on standard output, simultaneously.

File Properties
- **stat** — Display attributes of files and directories. IP
- **wc** — Count bytes, words, lines in a file or STDIN.
- **file** — Identify (guess) the type of a file.
- **touch** — Change timestamps of files and directories.
- **chmod** — Change protection mode of files and directories.
- **chgrp** — Change group ownership of files and directories.
- **chown** — Change owner and group of files and directories.
- **umask** — Set a default mode for new files and directories.
- **chattr** — Change extended attributes of files and directories.
- **lsattr** — List extended attributes of files and directories.

Print Text
- **echo** — Print simple text on standard output.
- **printf** — Print formatted text on standard output.
- **yes** — Print repeated text on standard output.
- **seq** — Print a sequence of numbers on standard output.
- **clear** — Clear the screen or window.

Search File Location
- **fd** — A simple, fast and user-friendly alternative to find.
- **locate** — searches the file system for files and directories whose name matches a given pattern
- **find** — searches for files and directories in a directory hierarchy based on a user given expression and can perform user-specified action on each matched file
- **which** — Locate executables in your search path (command).
- **fzf** — A general purpose command-line fuzzy finder. https://github.com/junegunn/fzf
- **whereis** — Locate executables, documentation, and source files.
- **type** — Locate executables in your search path (bash built-in).

Miscellaneous
- **help** — the simplest way to get information regarding a built-in shell command.
- **man** — used to display the user manual of any command that we can run on the terminal.
- **tldr** — A community effort to simplify man pages with practical examples. https://github.com/tldr-pages/tldr
- **cheat** — Create and view interactive cheatsheets on the command-line. https://github.com/cheat/cheat
- **!** — used to execute the previous command.
- **history** — a very useful command to show you all of the last commands that have been recently used.
- **mcfly** — Fly through your shell history. Great Scott! https://github.com/cantino/mcfly
- **xargs** — used in a UNIX shell to convert input from standard input into arguments to a command)

Web Browsing
- **firefox** — Full-featured web browser.
- **curl** — cURL, which stands for client URL, is a command line tool that developers use to transfer data to and from a server.
- **wget** — Download web pages and files.
- **curlie** — Curlie is a frontend to curl that adds the ease of use of httpie, without compromising on features and performance. https://github.com/rs/curlie
- **httpie** — A modern, user-friendly command-line HTTP client for the API era. https://github.com/httpie/httpie
- **xh** — A friendly and fast tool for sending HTTP requests. It reimplements as much as possible of HTTPie's excellent design, with a focus on improved performance. https://github.com/ducaale/xh
- **lynx** — Text-only web browser.

File Text Manipulation
- **grep** — Find lines in a file that match a regular expression.
- **ripgrep** — An extremely fast alternative to grep that respects your gitignore https://github.com/BurntSushi/ripgrep
- **ack** — ack is a grep-like source code search tool.
- **ag** — A code searching tool similar to ack, but faster. https://github.com/ggreer/the_silver_searcher
- **sed** — stream editor used for text substitution , find & replace but it can also perform other text manipulations like insertion, deletion, search etc.
- **sd** — An intuitive find & replace CLI (sed alternative). https://github.com/chmln/sd
- **jq** — sed for JSON data. https://github.com/stedolan/jq
- **awk/gawk** — AWK command in Unix is used for pattern processing and scanning.
- **cut** — Extract columns from a file.
- **choose** — A human-friendly and fast alternative to cut and (sometimes) awk https://github.com/theryangeary/choose
- **paste** — Append columns.
- **tr** — Translate characters into other characters.
- **sort** — Sort lines of text by various criteria.
- **uniq** — Locate identical lines in a file.

File Compression and Packaging
- **tar** — Package multiple files into a single file.
- **gzip** — Compress files with GNU Zip.
- **gunzip** — Uncompress GNU Zip files.
- **bzip2** — Compress files in BZip format.
- **bunzip2** — Uncompress BZip files.
- **bzcat** — Compress/uncompress BZip files via standard input/output.
- **compress** — Compress files with traditional Unix compression.
- **uncompress** — Uncompress files with traditional Unix compression.
- **zcat** — Compress/uncompress file via standard input/output. (
- **zip** — Compress files in Windows Zip format.
- **unzip** — Uncompress Windows Zip files.
- **metamail** — Extract MIME data to files.

File Comparison
- **diff** — Line-by-line comparison of two files or directories.
- **comm** — Line-by-line comparison of two sorted files.
- **cmp** — Byte-by-byte comparison of two files.
- **md5sum** — Compute a checksum of the given files (MD5).

Printing
- **lpr** — Print a file.
- **lpq** — View the print queue.
- **lprm** — Remove a print job from the queue.

Spell Checking
- **look** — Look up the spelling of a word quickly.
- **aspell** — Interactive spelling checker.
- **spell** — Batch spelling checker.

Disks and Filesystems
- **df** — get a full summary of available and used disk space usage of the file system on the Linux system.
- **fdisk** — check the partitions on a disk
- **duf** — A better df alternative, used to show disk usage https://github.com/muesli/duf
- **du** — Measure disk usage of files and directories.
- **dust** — A more intuitive version of du written in rust. https://github.com/bootandy/dust
- **mount** — Make a disk partition accessible.
- **umount** — Unmount a disk partition (make it inaccessible).
- **fsck** — Check a disk partition for errors.
- **sync** — Flush all disk caches to disk.
- **sfdisk** — Sfdisk is another utility with a purpose similar to fdisk, but with more features. It can display the size of each partition in MB.
- **inxi** — a very useful command line program that can display information about various hardware components present on the system.
- **lsblk** — Lists out all the storage blocks, which includes disk partitions and optical drives.
- **hwinfo** — a general purpose hardware information tool and can be used to print out the disk and partition list.
- **quota** — Display disk usage and limits.

Backups and Remote Storage
- **dump** — Write a disk partition to a backup medium.
- **restore** — Restore the results of a dump.
- **cdrecord** — Burn a CD, DVD, or Blu-ray disc.
- **rsync** — Mirror a set of files onto another device or host.
- **mt** — Control a tape drive.