



Kali Linux Basics: Cheat Sheet for Beginners

November 05, 2024



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Navigation & Directory Management

Command	Description	Example
pwd	Print current directory	pwd
ls	List directory contents	ls
ls -l	List contents with details	ls -l
ls -a	Include hidden files in listing	ls -a
cd [directory]	Change directory	cd Documents

<code>cd ..</code>	Move up one directory	<code>cd ..</code>
<code>cd ~</code>	Go to the home directory	<code>cd ~</code>
<code>mkdir [folder_name]</code>	Create a new directory	<code>mkdir new_folder</code>
<code>rm [file]</code>	Delete a file	<code>rm file.txt</code>
<code>rm -r [directory]</code>	Remove a directory and contents	<code>rm -r old_folder</code>
<code>cp [source] [dest]</code>	Copy files or directories	<code>cp file1.txt file2.txt</code>
<code>mv [source] [dest]</code>	Move or rename files or directories	<code>mv file.txt newname.txt</code>



File Operations

Command	Description	Example
<code>cat [file]</code>	Display file contents	<code>cat notes.txt</code>
<code>less [file]</code>	View contents with scroll option	<code>less notes.txt</code>
<code>head -n [num] [file]</code>	Show the first n lines of a file	<code>head -n 5 notes.txt</code>
<code>tail -n [num] [file]</code>	Show the last n lines of a file	<code>tail -n 5 notes.txt</code>
<code>nano [file]</code>	Open file in nano editor	<code>nano notes.txt</code>
<code>vim [file]</code>	Open file in vim editor	<code>vim notes.txt</code>



Search for Files and Text

Command	Description	Example
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<code>find [path] -name [filename]</code>	Find files by name in a path	<code>find / -name file.txt</code>
<code>locate [filename]</code>	Quickly locate files (uses index)	<code>locate file.txt</code>
<code>grep '[text]' [file]</code>	Search text within a file	<code>grep 'error' log.txt</code>
<code>grep -r '[text]' [dir]</code>	Recursively search text in a directory	<code>grep -r 'error' /var/logs</code>

Package Management with APT

Command	Description	Example
<code>sudo apt update</code>	Refresh list of available packages	<code>sudo apt update</code>
<code>sudo apt upgrade</code>	Install updates for all installed packages	<code>sudo apt upgrade</code>
<code>sudo apt install [package]</code>	Install a specific package	<code>sudo apt install vim</code>
<code>sudo apt remove [package]</code>	Uninstall a specific package	<code>sudo apt remove vim</code>
<code>dpkg -i [file.deb]</code>	Manually install a .deb package	<code>dpkg -i mypackage.deb</code>

Permissions and Ownership

Command	Description	Example
<code>chmod [mode] [file]</code>	Change permissions (rwx) for a file	<code>chmod 755 script.sh</code>
<code>chown [user]:[group] [file]</code>	Change ownership of a file or directory	<code>chown root:staff file.txt</code>

<code>chown -R [user]: [group] [dir]</code>	Change ownership for directory and contents	<code>chown -R user:user /project</code>
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Example of Permissions with chmod

Each number in chmod represents permissions for **Owner**, **Group**, and **Others**:

Number	Permissions	Meaning
7	rwX	Read, Write, Execute
5	r - x	Read, Execute
6	rw -	Read, Write
4	r - -	Read only

Examples

- `chmod 755 file.sh` → Owner has full access (7 = rwX); group and others can read and execute (5 = r - x).
- `chmod 644 file.sh` → Owner can read and write (6 = rw -); group and others can only read (4 = r - -).



System Monitoring

Command	Description	Example
<code>top</code>	Monitor running processes in real-time	<code>top</code>
<code>htop</code>	Colorized view of running processes	<code>htop</code>
<code>df -h</code>	Show disk usage in human-readable format	<code>df -h</code>
<code>du -sh [directory]</code>	Show size of a directory	<code>du -sh /home</code>
<code>free -h</code>	Show memory usage	<code>free -h</code>

<code>uname -a</code>	Display system information	<code>uname -a</code>
<code>ps aux</code>	Show all running processes	<code>ps aux</code>

Network Essentials

Command	Description	Example
<code>ifconfig</code>	Show network interface configuration	<code>ifconfig</code>
<code>ip a</code>	List IP addresses of interfaces	<code>ip a</code>
<code>ping [host]</code>	Check connectivity to a host	<code>ping google.com</code>
<code>netstat -tuln</code>	List open ports	<code>netstat -tuln</code>
<code>curl [URL]</code>	Fetch data from a URL	<code>curl http://example.com</code>
<code>wget [URL]</code>	Download files from a URL	<code>wget http://example.com/file.zip</code>

File Compression and Archiving

Command	Description	Example
<code>tar -cvf archive.tar [dir]</code>	Create a .tar archive of a directory	<code>tar -cvf backup.tar /data</code>
<code>tar -xvf archive.tar</code>	Extract contents of a .tar archive	<code>tar -xvf backup.tar</code>
<code>gzip [file]</code>	Compress a file	<code>gzip file.txt</code>
<code>gunzip [file.gz]</code>	Decompress a .gz file	<code>gunzip file.txt.gz</code>

<code>zip [archive.zip] [file]</code>	Compress files into a .zip archive	<code>zip archive.zip file.txt</code>
<code>unzip [archive.zip]</code>	Extract contents of a .zip file	<code>unzip archive.zip</code>

Process Management

Command	Description	Example
<code>kill [PID]</code>	Terminate a process by its ID	<code>kill 1234</code>
<code>pkill [name]</code>	Terminate a process by name	<code>pkill firefox</code>
<code>bg</code>	Move a job to the background	<code>bg</code>
<code>fg</code>	Bring a background job to the foreground	<code>fg</code>
<code>jobs</code>	List background jobs	<code>jobs</code>

Scheduling with Cron

Command	Description	Example
<code>crontab -e</code>	Edit the current user's cron jobs	<code>crontab -e</code>
Cron syntax	* * * * * command (min, hour, day, month, weekday)	<code>*/5 * * * * /script.sh</code>

SSH & Remote Access

Command	Description	Example
ssh user@host	Connect to a remote system	ssh user@192.168.1.10
scp [source] user@host:[dest]	Copy files to a remote system	scp file.txt user@192.168.1.10:/path
rsync -av [source] [dest]	Sync files between local and remote systems	rsync -av /local user@host:/remote
