The Most Used LINUX Commands For Sysadmins And Pentesters

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File and Directory Operations

ls	List directory contents
cd	Change the current directory
pwd	Show the current directory path
cat	Display file contents
more	Display file contents page by page
less	View file contents with backward scrolling
cp	Copy files and directories
mv	Move or rename files or directories
rm	Remove files or directories
mkdir	Create directories
rmdir	Remove empty directories
touch	Create empty files or update timestamps
alias	Create custom command aliases
cut	Remove sections of each line in a file
basename	Extract the filename from a path
dirname	Extract the directory part of a file path
find	Search for files in directories
ln	Create symbolic or hard links

User Management

useradd	Add a new user
userdel	Delete a user
usermod	Modify a user account
passwd	Change a user's password
chown	Change ownership of a file or directory
chgrp	Change group ownership of a file or directory
chsh	Change the default shell for a user
groups	Show groups of a user
who	Show who is logged in
whoami	Display the current user
finger	Display information about system users
su	Switch to another user

Text Processing

awk	Pattern scanning and processing
grep	Search for patterns in text
sed	Stream editor for text manipulation
cut	Remove sections of each line in a file
head	Display the first lines of a file
tail	Display the last lines of a file
printf	Format and display text
sort	Sort lines in text files
uniq	Filter out duplicate lines
wc	Count words, lines, and characters
tr	Translate or delete characters
paste	Merge lines from multiple files

Archiving and Compression

tar	Archive files
gzip	Compress files
gunzip	Decompress files
bzip2	Compress files using BZIP2
bgzip	Block compress files
zcat	Display compressed file contents
zip	Create ZIP archives
unzip	Extract ZIP archives
split	Split large files into smaller parts

Disk and Filesystem Management

blkid	Show block device attributes
df	Show disk space usage
du	Show directory size usage
fdisk	Partition disk management
mkfs	Create a new filesystem
mount	Mount a filesystem
umount	Unmount a filesystem
tune2fs	Adjust ext2/ext3/ext4 filesystem parameters
fsck	Check and repair a filesystem

System Management

shutdown	Power off or restart the system
reboot	Restart the system
systemctl	Manage services and system initialization
journalctl	View system logs
uptime	Show system uptime and load
uname	Display system information

Networking Commands

ping	Test network connectivity
ifconfig	Display network interface information
iwconfig	Manage wireless network interfaces
ip	Network interface management
ipcalc	Perform IP address calculations
iperf	Measure network bandwidth
netstat	Display network connections
nmcli	Network Manager Command Line Interface
traceroute	Show the route packets take
curl	Transfer data from URLs
dig	Query DNS information
ftp	File transfer over networks
scp	Secure file copy
sftp	Secure file transfer
telnet	Remote communication with servers
tcpdump	Network packet capture
nslookup	Query DNS servers
route	Show or modify routing tables
arp	Display or manipulate ARP table
ethtool	Display or modify Ethernet device settings
ss	Show socket statistics
nc	Netcat for network debugging

Process Management

ps	Show running processes
top	Display real-time process information
htop	Interactive process viewer
kill	Terminate a process by PID
killall	Terminate processes by name
jobs	List background jobs
bg	Resume a job in the background
fg	Resume a job in the foreground
nice	Run a program with adjusted priority
renice	Change the priority of a running process
wait	Wait for background processes to finish

Security and Firewall

iptables	Manage packet filtering rules
ufw	Uncomplicated Firewall management
fail2ban	Protect against brute-force attacks

Development Utilites

gcc	GNU Compiler Collection for C/C++
make	Build automation tool
objdump	Display information about object files
nano	Text editor
vim	Advanced text editor
vi	Classic text editor

Monitoring and Diagnostics

free	Show memory usage
vmstat	Report on system performance
iostat	Display CPU and I/O statistics
sar	Collect, report, and save system activity
dmesg	Print system boot and error messages
lscpu	Display CPU information
lsblk	List block devices
lsmod	List loaded kernel modules
lsof	List open files
lsusb	List USB devices
stat	Display detailed file information

Administrative Utilities

sudo	Execute commands as another user (usually root)
env	Display or modify the environment
export	Set environment variables
time	Measure execution time of commands
crontab	Schedule recurring tasks
depmod	Generate kernel module dependency files
modinfo	Display information about a kernel module
modprobe	Add or remove kernel modules

File Transfer and Backup

rsync	Remote file synchronization
pv	Monitor data progress through a pipeline

Varied Commands

clear	Clear the terminal screen
watch	Periodically execute a command
xargs	Build and execute command lines from standard input
expr	Evaluate expressions
test	Evaluate conditional expressions
echo	Print text to the terminal
tac	Reverse the contents of a file
tee	Redirect output to multiple destinations
alias	Create custom command aliases
history	View command history