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Linux Basic Commands

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Linux Commands by Topic

File Management

Command	Description
ls	List files in a directory.
cd	Change directory.
mkdir	Create a new directory.
touch	Create an empty file.
cp	Copy files or directories.
mv	Move or rename files.
rm	Remove files or directories.
find	Search for files or directories.
du	Check disk usage of a directory.
df	Check available disk space.

Command	Description
pwd	Print the current directory.
stat	Display file or directory information.
ln	Create symbolic or hard links.
basename	Extract the filename from a path.
dirname	Extract the directory name from a path.
chmod	Change file permissions.
chown	Change file ownership.
cat	Display file content.
more	View file content page by page.
less	View file content (with backward navigation).

Command	Description
head	Show the first 10 lines of a file.
tail	Show the last 10 lines of a file.
split	Split files into smaller parts.
wc	Count words, lines, and characters in a file.
tar	Archive files into a single file.
gzip	Compress files.
gunzip	Decompress .gz files.
zip	Create compressed .zip files.
unzip	Extract .zip files.
file	Determine a file's type.

User Management

Command	Description
whoami	Display the current user.
id	Show user and group IDs.
users	List logged-in users.
who	Show who is logged in.
w	Show logged-in users and their activities.
passwd	Change the user's password.
su	Switch to another user.
adduser	Add a new user.
useradd	Add a new user (alternative).
usermod	Modify an existing user.

Command	Description
deluser	Remove a user.
userdel	Remove a user (alternative).
groupadd	Create a new group.
groupdel	Delete a group.
groups	Show groups for the current user.
chage	Manage user password expiration.
finger	Display information about a user.
last	Show the login history of users.
sudo	Execute commands with superuser privileges.
visudo	Edit the sudoers file safely.

Command	Description
logname	Display the current user's login name.
whoami	Confirm the logged-in user.
getent	Retrieve user account entries.
gpasswd	Manage group passwords.
newgrp	Switch to a different group.
usermod	Add a user to a group.
pkill -u	Kill all processes for a user.
smbpasswd	Change Samba user password.
net usershare	Manage Samba user shares.
hostnamectl	Change or query the system's hostname.

Networking Basics

Command	Description
ifconfig	Display or configure network interfaces.
ip	Manage IP addresses and routes.
ping	Check the connection to another host.
tracert	Trace the route packets take to a host.
netstat	Show network connections and statistics.
ss	Display socket statistics.
nslookup	Query DNS for domain name or IP information.
dig	Perform DNS queries.
curl	Transfer data from or to a server.
wget	Download files from the internet.

Command	Description
scp	Copy files over SSH.
rsync	Synchronize files between systems.
ftp	Connect to an FTP server.
telnet	Connect to a remote host.
ssh	Log into a remote machine securely.
arp	Display or modify the ARP table.
route	Show or change the routing table.
nmap	Scan a network for open ports.
tcpdump	Capture and analyze network packets.
ethtool	Display or modify Ethernet device settings.

Process Management

Command	Description
nmcli	Control NetworkManager from the CLI.
iwconfig	Configure wireless network interfaces.
netcat (nc)	Network utility for reading/writing.
ip route	Manage network routes.
bridge	Manage network bridges.
tcpflow	Capture and reconstruct TCP flows.
iperf	Measure network bandwidth.
mtr	Combine ping and traceroute.
host	Look up DNS entries.
systemctl restart networking	Restart the networking service.

Command	Description
ps	Show running processes.
top	Display real-time process info.
htop	Interactive process manager.
kill	Terminate a process by PID.
killall	Terminate processes by name.
pgrep	Find process IDs by name.
pkill	Kill processes by name.
bg	Resume a suspended job in the background.
fg	Bring a job to the foreground.
jobs	List active jobs.

Command	Description
nice	Set a priority for a process.
renice	Change process priority.
nohup	Run a process immune to hangups.
strace	Trace system calls made by a process.
lsof	List open files.
uptime	Show system uptime.
vmstat	Report system performance stats.
iostat	Display CPU and I/O stats.
sar	Collect, report, and save system stats.
watch	Run a command periodically.

Command	Description
at	Schedule a one-time task.
cron	Schedule recurring tasks.
crontab	Edit or view cron jobs.
systemctl	Control system services.
service	Start, stop, or restart services.
uptime	Show system uptime.
pidof	Find process ID by name.
tload	Display system load graphically.
schedtool	Manage CPU affinity of processes.
taskset	Set or retrieve CPU affinity of tasks.