Linux Cheat Sheet

Linux

File Commands

Command	Description
cat <file>	Print file contents
touch <file>	Create file (or update timestamp)
cp <src> <dst>	Copy a file
mv <src> <dst>	Move / rename a file
rm <file>	Remove file
head <file>	Print first 10 lines of file
tail <file>	Print last 10 lines of file
tail -f <file>	Print last 10 lines and any new lines added to file

Directory Commands

Command	Description
ls	List files in the current directory
ls <dir>	List files in <dir>
ls -l	List files with details
ls -a	List all files (including hidden)
ls -al	List all files with details
pwd	Print the current/working directory
cd <dir>	Change current directory to <dir>
cd ..	Go up one directory
mkdir <dir>	Create directory
mkdir -p <dir>	Create directory and any missing parent directories
cp -r <src> <dst>	Copy a directory and its contents
mv <src> <dst>	Move / rename a directory
rmdir <dir>	Remove an empty directory
rm -r <dir>	Remove a directory and its contents

Directory Aliases

Alias	Directory
.	Current directory
..	Parent directory
~	Home directory

Link Commands

Command	Description
ln -s <target> <link>	Create symbolic link
ln <target> <link>	Create hard link
readlink -f <file>	Print absolute path of file

Search Commands

Command	Description
grep <pattern> <file...>	Search for pattern in file(s)
grep -r <pattern> <dir>	Search for pattern recursively in a directory
grep -i <pattern> <file>	Search for pattern case-insensitively
grep -v <pattern> <file>	Search for lines not matching pattern
grep -n <pattern> <file>	Search and print line numbers
find <dir> -name <name>*	Find files in <dir> with name starting with <name>
find <dir> -type <type>	Find files in <dir> of type <type>

Superuser Commands

Command	Description
sudo <cmd>	Run command as superuser (root)
su	Switch to superuser (root)
su <user>	Switch to user <user>

File Permission Commands

Command	Description
chmod <mode> <file>	Change file permissions
chmod u+x <file>	Add execute permission for the owner
chmod 644 <file>	Set file permissions to 644 (read/write for owner, read for group and everyone else)
chmod -R g+w <dir>	Add write permission for the group recursively to a directory
chown <owner> <file>	Change file owner
chown -R <owner> <dir>	Change directory owner recursively
chown <owner>:<group> <file>	Change file owner and group
chgrp <group> <file>	Change file group

File Permission Bits

Bit	Description
4	Read (r)
2	Write (w)
1	Execute (x)

First digit represents the owner, the second digit represents the group, and the third digit represents everyone else.

For example, 640 means read/write for owner, read for group, and no permissions for everyone else.

File Permission User Types

User Type	Description
u	Owner
g	Group
o	Everyone else
a	All

System Information Commands

Command	Description
df	Show file system disk usage
df -h	Show disk usage in MB/GB/TB
du	Show disk usage per directory
du -h	Show disk usage in MB/GB/TB
free	Show memory usage
free -h	Show memory usage in MB/GB/TB
uptime	Show uptime
whoami	Show current user
uname	Show system information
uname -a	Show all system information

Shutdown/Reboot Commands

Command	Description
shutdown	Power off the system after 1 minute
shutdown now	Power off the system immediately
shutdown 16:30	Power off the system at 16:30
shutdown -c	Cancel a scheduled shutdown
reboot	Reboot system
poweroff	Power off system

Process Commands

Command	Description
ps	List processes
ps -ef	List all processes
top	Display processes in real time
kill <pid>	Kill process
pkill <name>	Kill process with name
killall <name>	Kill all processes with name

Secure Shell (SSH) Commands

Command	Description
ssh-keygen	Generate SSH key pair
ssh-add <key>	Add SSH key to SSH agent
ssh-add -l	List SSH keys in SSH agent
ssh-copy-id <user>@<host>	Copy SSH key to <host> for <user>
ssh <host>	Connect to <host> as current user
ssh <user>@<host>	Connect to <host> as <user>
scp <src> <host>:<dest>	Copy local file <src> to <dest> on <host>
scp <host>:<src> <dest>	Copy file <src> from <host> to local <dest>

APT Commands (Debian/Ubuntu)

Command	Description
apt install <pkg>	Install package
apt remove <pkg>	Remove package
apt purge <pkg>	Remove package and config files
apt update	Update package list
apt upgrade	Upgrade packages
apt search <term>	Search for package

Other Commands

Command	Description
echo <msg>	Print message to stdout
man <cmd>	Display manual page for <cmd>
history	Display history of given commands
which <cmd>	Find path to executable <cmd>
whereis <cmd>	Locate binary, source, and manual page for <cmd>

IO Redirection

Command	Description
<cmd> > <file>	Replace contents of file with output
<cmd> >> <file>	Append output to file
<cmd> < <file>	Redirect input from file
<cmd> 2> <file>	Redirect stderr to file
<cmd> &> <file>	Redirect stdout and stderr to file

Pipe Commands

Command	Description
<cmd1> | <cmd2>	Pipe stdout to next cmd
<cmd1> |& <cmd2>	Pipe stderr to next cmd

Bash Shortcuts

Shortcut	Description
Ctrl + C	Stop current command
Ctrl + A	Go to beginning of line
Ctrl + E	Go to end of line
Ctrl + K	Cut current line
Ctrl + L	Clear screen

Directory Structure

Directory	Description
/	Root
/bin	Binary or executable programs
/etc	System configuration files
/home	User home directories
/opt	Optional or third-party software
/tmp	Temporary files
/usr	User programs
/var	Variable data
/var/log	Log files