

LINUX COMMAND LINE CHEAT SHEET

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1 - SYSTEM INFORMATION

<code>uname -a</code>	# Display Linux system information
<code>uname -r</code>	# Display kernel release information
<code>lsb_release -a</code>	# Show which version of ubuntu installed
<code>uptime</code>	# Show how long the system has been running + load
<code>hostname</code>	# Show system host name
<code>hostname -I</code>	# Display the IP addresses of the host
<code>last reboot</code>	# Show system reboot history
<code>date</code>	# Show the current date and time
<code>cal</code>	# Show this month's calendar
<code>w</code>	# Display who is online
<code>whoami</code>	# Who you are logged in as

2 - HARDWARE INFORMATION

<code>cat /proc/cpuinfo</code>	# Display CPU information
<code>cat /proc/meminfo</code>	# Display memory information
<code>free -h</code>	# Display free and used memory (-hfor human readable, -mfor MB, -gfor GB.)
<code>lspci -tv</code>	# Display PCI devices
<code>lsusb -tv</code>	# Display USB devices
<code>dmidecode</code>	# Display DMI/SMBIOS (hardware info) from the BIOS
<code>hdparm -i /dev/sda</code>	# Show info about disk sda
<code>hdparm -tT /dev/sda</code>	# Perform a read speed test on disk sda

3 - PERFORMANCE MONITORING AND STATISTICS

<code>top</code>	# Display and manage the top processes
<code>mpstat 1</code>	# Display processor related statistics
<code>vmstat 1</code>	# Display virtual memory statistics
<code>iostat 1</code>	# Display I/O statistics
<code>tcpdump -i eth0</code>	# Capture and display all packets on interface eth0
<code>tcpdump -i eth0 'port 80'</code>	# Monitor all traffic on port 80 (HTTP)

ls	# List all open files on the system
ls -u user	# List files opened by user
free -h	# Display free and used memory (-h for human readable, -m for MB, -g for GB.)
watch df -h	# Execute "df -h", showing periodic updates

4 - USER INFORMATION AND MANAGEMENT

id	# Display the user and group ids of your current user.
last	# Display the last users who have logged onto the system.
who	# Show who is logged into the system.
w	# Show who is logged in and what they are doing.
groupadd test	# Create a group named "test".
useradd -c "John Smith" -m john	# Create an account named john, with a comment of "John Smith" and create the user's home directory.
userdel john	# Delete the john account.
usermod -aG sales john	# Add the john account to the sales group

5 - FILE AND DIRECTORY COMMANDS

ls -al	# List all files in a long listing (detailed) format
pwd	# Display the present working directory
mkdir directory	# Create a directory
rm file	# Remove (delete) file
rm -r directory	# Remove the directory and its contents recursively
rm -f file	# Force removal of file without prompting for confirmation
rm -rf directory	# Forcefully remove directory recursively
rmdir	# Delete a file or files
cp file1 file2	# Copy file1 to file2
cp -r source_directory destination	# Copy source_directory recursively to destination. If destination exists, copy source_directory into destination, otherwise create destination with the contents of source_directory.
mv file1 file2	# Rename or move file1 to file2. If file2 is an existing directory, move file1 into directory file2

<code>ln -s /path/to/file linkname</code>	# Create symbolic link to linkname
<code>touch file</code>	# Create an empty file or update the access and modification times of file.
<code>cat file</code>	# View the contents of file
<code>less file</code>	# Browse through a text file
<code>head file</code>	# Display the first 10 lines of file
<code>tail file</code>	# Display the last 10 lines of file
<code>tail -f file</code>	# Display the last 10 lines of file and "follow" the file as it grows
<code>lpr</code>	# Spool file for line printing
<code>chgrp</code>	# Change file group
<code>more, page</code>	# Display file data at your terminal
<code>file</code>	# Determine file type
<code>vi</code>	# GNOME text editor
<code>gedit</code>	# Standard text editor

6 – MANIPULATING DATA

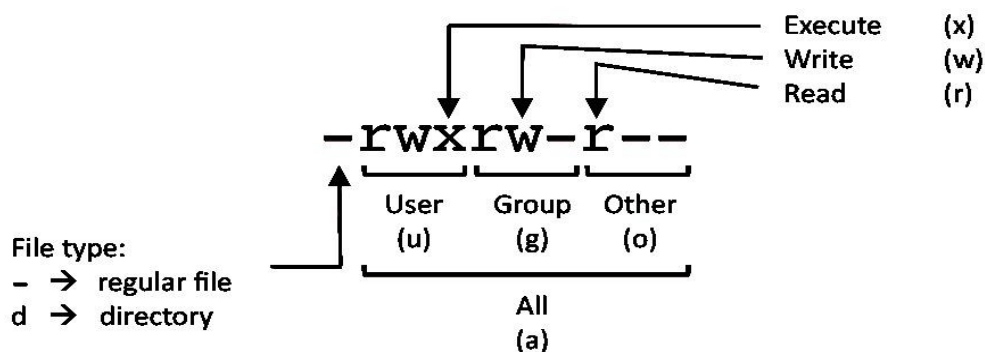
<code>awk</code>	# Pattern scanning and processing language
<code>perl</code>	# Data manipulation language
<code>cmp</code>	# Compare the contents of two files
<code>paste</code>	# Merge file data
<code>sed</code>	# Stream text editor
<code>cut</code>	# Cut out selected fields of each line of a file
<code>sort</code>	# Sort file data
<code>diff</code>	# Differential file comparator
<code>split</code>	# Split file into smaller files
<code>expand, unexpand</code>	# Expand tabs to spaces, and vice versa
<code>tr</code>	# Translate characters
<code>uniq</code>	# Report repeated lines in a file
<code>join</code>	# Join files on some common field
<code>look</code>	# Find lines in sorted data
<code>wc</code>	# Count words, lines, and characters

gzip	# Compress files
zmore	# File perusal filter for crt viewing of compressed text
uncompress	# Uncompress files
zcat	# Cat a compressed file
gunzip	# Uncompress gzipped files
zcmp, zdiff	# Compare compressed files

7 - PROCESS MANAGEMENT

ps	# Display your currently running processes
ps -ef	# Display all the currently running processes on the system.
ps -ef grep processname	# Display process information for processname
top	# Display and manage the top processes
htop	# Interactive process viewer (top alternative)
kill pid	# Kill process with process ID of pid
killall processname	# Kill all processes named processname
program &	# Start program in the background
bg	# Display stopped or background jobs
fg	# Brings the most recent background job to foreground
fg n	# Brings job n to the foreground

8 - FILE PERMISSIONS



PERMISSION

U	G	W
rw	rw	rw
rw	rw	r-x
rw	r-x	r-x
rw-	rw-	r--
rw-	r--	r--

EXAMPLE

```

chmod 777 filename
chmod 775 filename
chmod 755 filename
chmod 664 filename
chmod 644 filename

```

LEGEND

U = User
G = Group
W = World

r = Read
w = write
x = execute
- = no access

9 - NETWORKING

ifconfig -a	# Display all network interfaces and ip address
ifconfig eth0	# Display eth0 address and details
ethtool eth0	# Query or control network driver and hardware settings
ping host	# Send ICMP echo request to host
whois domain	# Display whois information for domain
dig domain	# Display DNS information for domain
dig -x IP_ADDRESS	# Reverse lookup of IP_ADDRESS
host domain	# Display DNS ip address for domain
hostname -i	# Display the network address of the host name.
hostname -l	# Display all local ip addresses
wget http://domain.com/file	# Download http://domain.com/file
netstat -nutlp	# Display listening tcp and udp ports and corresponding programs
ftp	# File transfer program
tftp	# Trivial file transfer program
sftp	# Secure shell file transfer program
rcp	# Remote file copy
scp	# Secure shell remote file copy
wget	# Non-interactive network downloader
telnet	# Make terminal connection to another host
ssh	# Secure shell terminal or command connection
rlogin	# Remote login to a Linux host
rsh	# Remote shell
curl	# Transfer data from a url

10 - ARCHIVES (TAR FILES)

<code>tar cf archive.tar directory</code>	<code># Create tar named archive .tar containing directory.</code>
<code>tar xf archive.tar</code>	<code># Extract the contents from archive.tar. tar czf</code>
<code>archive.tar.gz directory</code>	<code># Create a gzip compressed tar file name archive.tar.gz</code>
<code>tar xzf archive.tar.gz</code>	<code># Extract a gzip compressed tar file.</code>
<code>tar cjf archive.tar.bz2 directory</code>	<code># Create a tar file with bzip2 compression</code>
<code>tar xjf archive.tar.bz2</code>	<code># Extract a bzip2 compressed tar file.</code>

11 - INSTALLING PACKAGES

<code>yum search keyword</code>	<code># Search for a package by keyword.</code>
<code>yum install package</code>	<code># Install package.</code>
<code>yum info package package.</code>	<code># Display description and summary information about</code>
<code>rpm -i package.rpm</code>	<code># Install package from local file named package.rpm</code>
<code>yum remove package</code>	<code># Remove/uninstall package</code>
<code>tar zxvf sourcecode.tar.gz cd sourcecode ./configure make make install</code>	<code># Install software from source code.</code>

12 - SEARCH

<code>grep pattern file</code>	<code># Search for pattern in file</code>
<code>grep -r pattern directory</code>	<code># Search recursively for pattern in directory</code>
<code>locate name</code>	<code># Find files and directories by name</code>
<code>find /home/john -name 'prefix*'</code>	<code># Find files in /home/john that start with "prefix".</code>
<code>find /home -size +100M</code>	<code># Find files larger than 100MB in /home</code>

13 - SSH LOGINS

<code>ssh host</code>	<code># Connect to host as your local username.</code>
<code>ssh user@host</code>	<code># Connect to host as user</code>
<code>ssh -p port user@host</code>	<code># Connect to host using port</code>

14 - FILE TRANSFERS

<code>scp file.txt server:/tmp</code>	<code># Secure copy file.txt to the /tmp folder on</code>
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	server
scp server:/var/www/*.html /tmp	# Copy *.html files from server to the local /tmp folder.
scp -r server:/var/www /tmp	# Copy all files and directories recursively from server to the current system's /tmp folder.
rsync -a /home /backups/	# Synchronize /home to /backups/home
rsync -avz /home server:/backups/	# Synchronize files/directories between the local and remote system with compression enabled

15 - DISK USAGE

df -h	# Show free and used space on mounted filesystems
df -i	# Show free and used inodes on mounted filesystems
fdisk -l	# Display disks partitions sizes and types
du -ah	# Display disk usage for all files and directories in human readable format
du -sh	# Display total disk usage off the current directory

16 - DIRECTORY NAVIGATION

cd ..	# To go up one level of the directory tree. (Change into the parent directory.)
cd	# Go to the \$HOME directory
cd /etc	# Change to the /etc directory

17 - PROGRAMMING

make	# Maintain groups of programs
size	# print program's sizes
nm	# print program's name list
strip	# remove symbol table and relocation bits
bcpp	# make C++ beautifier
gcc	# GNU ANSI C Compiler
ctrace	# C program debugger
indent	# indent and format C program source
cxref	# generate C program cross reference
g++	# GNU C++ Compiler