

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>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
<code>free -h</code>	# Display free and used memory (-h for human readable, -m for MB, -g for GB.)

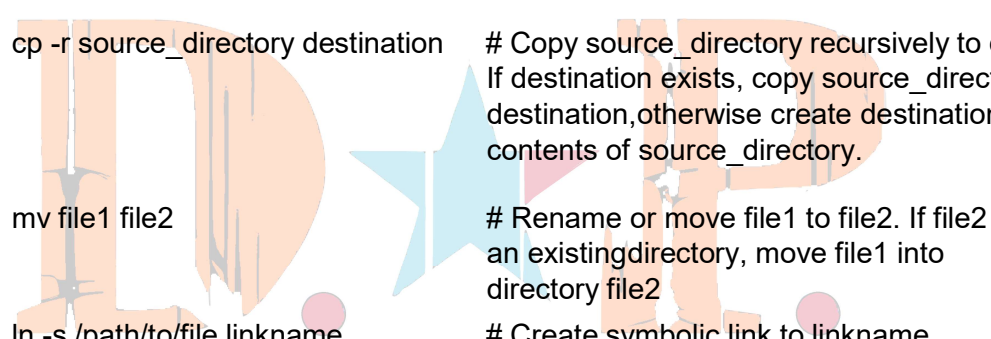
3 - PERFORMANCE MONITORING AND STATISTICS

top	# Display and manage the top processes
mpstat 1	# Display processor related statistics
vmstat 1	# Display virtual memory statistics
iostat 1	# Display I/O statistics
tcpdump -i eth0	# Capture and display all packets on
lsof	# List all open files on the system
lsof -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 interface
eth0tcpdump -i eth0 'port 80'	# Monitor all traffic on port 80 (HTTP)

4 - USER INFORMATION AND MANAGEMENT

id	# Display the user and group ids of your current user.
last system.	# 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 homedirectory.
userdel john	# Delete the john account.
usermod -aG sales john	# Add the john account to the sales group

5 - FILE AND DIRECTORY COMMANDS



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

more, page	# Display file data at your terminal
file	# Determine file type
x	# GNOME text editor
gedit	# Standard text editor

6 – MANIPULATING DATA

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

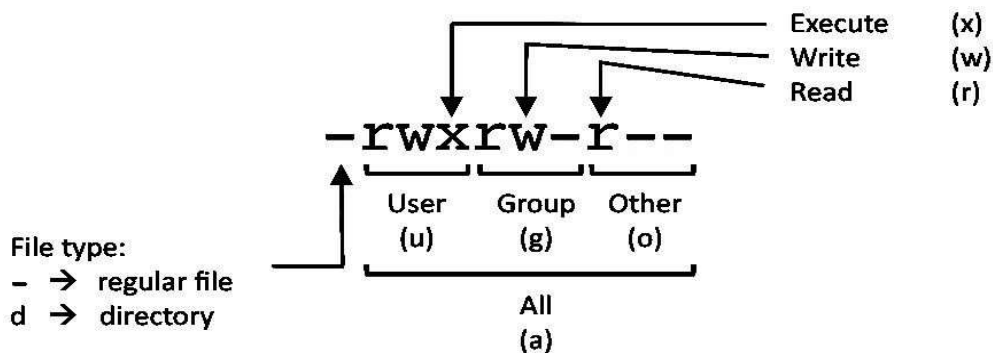
program & # Start program in the background

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
rwx	rwx	rwx	
rwx	rwx	r-x	
rwx	r-x	r-x	
rw-	rw-	r--	

EXAMPLE
chmod 777 filename
chmod 775 filename
chmod 755 filename
chmod 664 filename

```
rw- r-- r--      chmod 644 filename
```

LEGEND

- U = User
- G = Group
- W = World

r = Read

w = write

x = execute

- = no access

9 - NETWORKING

<code>ifconfig -a</code>	# Display all network interfaces and ip address
<code>ifconfig eth0</code>	# Display eth0 address and details
<code>ethtool eth0 settings</code>	# Query or control network driver and hardware
<code>ping host</code>	# Send ICMP echo request to host
<code>whois domain</code>	# Display whois information for domain
<code>dig domain</code>	# Display DNS information for domain
<code>dig -x IP_ADDRESS</code>	# Reverse lookup of IP_ADDRESS
<code>host domain</code>	# Display DNS ip address for domain
<code>hostname -i</code>	# Display the network address of the host name.
<code>hostname -l</code>	# Display all local ip
<code>wget http://domain.com/file</code>	# Download
<code>http://domain.com/file</code>	
<code>netstat -tul</code>	# Display listening tcp and udp ports and corresponding programs
<code>ftp</code>	# 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)

tar cf archive.tar directory	# Create tar named archive .tar containing directory.
tar xf archive.tar	# Extract the contents from
archive.tar. tar czfarchive.tar.gz directory	# Create a gzip
compressed tar file name	archive.tar.gz
tar xzf archive.tar.gz	# Extract a gzip compressed tar file.
tar cjf archive.tar.bz2 directory	# Create a tar file with bzip2
compressiontar xjf archive.tar.bz2	# Extract a bzip2 compressed

11 - INSTALLING PACKAGES

tar file.	
yum search keyword	# Search for a package by keyword.
yum install package	# Install package.
yum info package information aboutpackage.	# Display description and summary
rpm -i package.rpm	# Install package from local

file named package.rpm

yum remove package # Remove/uninstall package

tar zxvf sourcecode.tar.gz # Install software from

source code.cd sourcecode

./configure

make

make install

12 - SEARCH

grep pattern file # Search for pattern in file

grep -r pattern directory # Search recursively for

pattern in directory locate name # Find files and directories by Me

find /home/john -name 'prefix*' # Find files in /home/john that start

with "prefix". find /home -size +100M # Find files larger than 100MB in

home

13 - SSH LOGINS

ssh host # Connect to host as your local username.

ssh user@host # Connect to host as user

ssh -p port user@host # Connect to host using port

14 - FILE

scp file.txt server:/tmp # Secure copy file.txt to the /tmp folder on 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

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

16 - DIRECTORY NAVIGATION

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

17 - PROGRAMMING

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