LINUX COMMANDS CHEAT SHEET

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System Information Commands

uname -a	shows Linux system info
uname -r	shows kernel release info
cat /etc/redhat-release	shows installed redhat version
uptime	displays system running/life time
hostname	shows system host name
hostname -I	shows ip addresses of the host
last reboot	displays system reboot history
date	displays current date and time
cal	displays monthly calendar
mount	shows mounted filesy-stems

File Commands

ls -l	shows file type and access permission
ls -a	lists also hidden files
ls -al	lists files and directories detailly
pwd	shows present directory
mkdir directory	creates a directory
rm xyz	deletes file xyz
rm -r /xyz	deletes directory /xyz and its contents recursively
rm -f abc	forcefully deletes abc file without confirmation
rm -rf /xyz	forcefully deletes directory /xyz recursively
cp aaa bbb	copies aaa file to bbb file
cp -r /xxx /yyy	copies /xxx directory to /yyy directory
mv aaa bbb	renames or moves file aaa to file bbb
touch abc	creates an empty file named abc
cat abc	used to view file abc
less abc	browse through a text file abc
head abc	displays first 10 lines of file abc
tail abc	displays last 10 lines of file abc
tail -f abc	displays last 10 lines of file abc and follow it as it grows
tail -F abc	outputs last lines of abc as it changes
file abc	gets type of abc
gpg -c abc	encrypts file abc
gpg abc	decrypts file abc
gpg abc	decrypts file abc
gpg abc	decrypts file abc
dir	shows files in the current directory
put abc	uploads file 'abc' from local to remote device
get file	downloads file 'abc' from remote to local device

User Information Commands

id	shows user&group ids of the current user
last	shows the last users logged on
whoami	shows who you are logged in as
who	shows who is logged into the system
w	shows who is logged in and what they do
groupadd test	creates group "test"
useradd -c "GK" -m Gokhan	creates "Gokhan" account with comment "GK"
userdel Gokhan	deletes account "Gokhan"
usermod -aG Networkers Gokhan	adds account "Gokhan" to the "Networkers" group

File Permission

chown user	changes ownership of a file/directory
chown user:group filename	changes user and group for a file or directory
File Permissions	r (read) permission, 4
	w (write) permission, 2
	x (execute) permission, 1
	-= no permission
File Owner	owner/group/everyone
File Permissions Examples	777 | Owner, Group, Everyone has rwx permissions
	744 | Owner has rwx permission, Group, Everyone has r permission
	755 | Owner has rwx permission, Group, Everyone has rx permissions
	776 | Owner, Group has rwx permission, Everyone has rw

Search Commands

grep x file	searches for x in file
grep -i	case insens-itive search
grep -r	recursive search
grep -v	inverted search
grep -o	shows only matched part of the file
find /dir/ -name aaa*	finds files starting with aaa in dir
find /dir/ -user Gokhan	finds files owned by Gokhan in dir
find /dir/ -mmin 10	finds files modifed less than 10 minutes ago in dir
find /home -size +500M	finds files larger than 500MB in /xyz
find [/folder/location] -name [x]	finds file names starting with character x
whereis aaa	locates the binary, source, and manual page of aaa
locate abc	finds the location of abc quickly

ls Options

-a	shows all (including hidden)
-R	recursive list
-r	reverse order
-t	sort by last modified
-S	sort by file size
-l	long listing format
-1	one file per line
-m	comma--sep-arated output
-Q	quoted output

Process Management Commands

ps	displays currently running processes
ps PID	gives the status of a particular process
pidof	gives the process ID of a process
ps -ef	displays all running processes on the system
ps -ef	grep xyz	displays process information for xyz
top	displays and manages the top processes
htop	interactive process viewer (top alternative)
kill pid	kills process with process ID of pid
pkill xyz	kills process with name xyz
killall abc	kills all processes named abc
program &	starts program in the background
bg	lists and resumes stopped jobs in the background
fg	brings the most recent background job to foreground.
fg x	brings job x to the foreground
nice	starts a process with a given priority
renice	changes priority of an already running process
pstree	displays processes in a tree-like diagram
pmap	displays a memory usage map of processes
lsof	lists files opened by running processes

Search Commands

command -h / command –help	to review all available options of the "command"
info command	to find info documents about the "command"
whatis command	displays a single line description about the"command"
$ man UNIXCOMMAND	to view detailed man page of the "command"
apropos	used to search man pages for available commands on a specific

File Transfer Commands

scp file.txt server:/tmp	secure copy file.txt to the /tmp folder on server
scp server:/var/www/*.html /tmp	secure copy *.html files in /var/www/ directory on server to
scp -r server:/var/www /tmp	secure copy all files and directories recursively from server to the
rsync -a /home /backups/	synchronize /home to /backups/
rsync -avz /home server:/backups/	Synchronize files/directories between the local and remote

Disk Usage Commands

df	shows free hard disk space on the system
df -h	shows free and used space on mounted filesystems
df -i	shows free and used inodes on mounted filesystems
fdisk -l	shows free and used inodes on mounted filesystems
du -sh	shows total disk usage off the current directory
du -ah	shows disk usage for all files and directories in readable format
free	shows free RAM on the system
free -h	shows free and used memory
findmnt	shows target mount point for all filesystem
mount /xyz /abc	mounts a device in /xyz to /abc

Compress and Decompress Commands

gzip abc	compresses abc file using gzip.
bzip2 abc	compresses abc file using bzip2.
zip abc.zip abc	compresses abc file into the archive abc.zip.
tar -czvf archive.tar.gz /home/temp2/	compresses a full directory with all subdirectories
gzip -d xyz.gz	extracts xyz.gz with gzip utility
gunzip xyz.gz	extracts xyz.gz with gzip utility
bzip2 -d file.php.bz2	extracts xyz.gz with bzip2 utility
bunzip2 file.php.bz2	extracts xyz.gz with bzip2 utility
unzip xyz.zip	extracts xyz.zip with zip utility
gunzip -c output.txt.gz	to view the contents of both files without extracting
tar cf archive.tar directory	creates tar named archive.tar containing directory
tar xf archive.tar	extracts the contents from archive.tar
tar czf archive.tar.gz directory	creates a gzip compressed tar file name archive.tar.gz
tar xzf archive.tar.gz	extracts a gzip compressed tar file
tar cjf archive.tar.bz2 directory	creates a tar file with bzip2 compression
tar xjf archive.tar.bz2	extracts a bzip2 compressed tar file

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Networking Commands

arp	displays ARP table of the device
arpwatch	displays ethernet activity and Ethernet/ip pairings
bmon	displays bandwidth, captures
curl	used for for file transfer
dhclient	used to analyze clients ip address, subnet mask, gateway, dns server
dig	used for simple DNS lookup
dstat	collects and shows system resources
ethtool	used to check settings of your NIC
ftp	used for for file transfer
host	used for IP-Name matchings
hping3	used for packet analyze
ifstat	used to monitor network interface statistics
ip addr	used to check network interfaces and routing activities
iptables	used for ip packet filtering
iftop	displays current bandwidth usage
ifup/ifdown	used to enable or disable interfaces
iwconfig	used to configure wireless interfaces
netstat	to check network connections
nload	used as bandwidth monitoring tool
nmap	used for security audits
nslookup	used also for DNS query
ping	used to check reachability
route	displays IP Routing Table
scp	secured file transfer
sftp	secured file transfer
ss	gives detailed information about the sockets
ssh	used for secure connection
tshark	analyzing and capturing
tcpdump	used for analyzing and capturing
telnet	used for classical unsecure connection
tshark	used for packet analyze
tracepath	used for path tracking
traceroute	used for path tracking
w	used to check the current system activity
wget	used to download the content of the web servers
whois	checks the whois database and return with IP and Domain info

Install Commands

yum search keyword	compresses abc file using gzip.
yum install abc	installs abc package
yum info abc	displays description and summary info about abc package
rpm -i abc.rpm	installs package from local file named abc.rpm
yum remove abc	Remove/uninstall abc package
yum list installedl	lists all installed packages with yum
yum search [keyword]	finds a package by a related keyword
yum info [package_name]	shows package information and summary
yum install [package_name.rpm]	installs a package using the YUM package manager
dnf install [package_name.rpm]	installs a package using the DNF package manager
apt-get install [package_name]	installs a package using the APT package manager
rpm -i [package_name.rpm]	installs an .rpm package from a local file
rpm -e [package_name.rpm]	removes an .rpm package

Hardware Information Commands

dmesg	displays messages in kernel ring buffer
cat /proc/cpuinfo	displays CPU information
cat /proc/meminfo	displays memory information
lspci -tv	displays PCI devices
lsusb -tv	displays USB devices
dmidecode	displays DMI/SMBIOS from BIOS
hdparm -i /dev/sda	displays info about disk sda
hdparm -tT /dev/sda	performs a read speed test on disk sda
badblocks -s /dev/sda	tests for unreadable blocks on disk sda