

# LINUX COMMANDS CHEAT SHEET

by Gokhan Kosem, [www.ipcisco.com](http://www.ipcisco.com)

## System Information Commands

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

## File Commands

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

## User Information Commands

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

## File Permission

<b>chown user</b>	changes ownership of a file/directory
<b>chown user:group filename</b>	changes user and group for a file or directory
<b>File Permissions</b>	r (read) permission, 4
	w (write) permission, 2
	x (execute) permission, 1
	-- no permission
<b>File Owner</b>	owner/group/everyone
<b>File Permissions Examples</b>	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

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



# LINUX COMMANDS CHEAT SHEET

by Gokhan Kosem, [www.ipcisco.com](http://www.ipcisco.com)

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

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

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

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

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

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



# LINUX COMMANDS CHEAT SHEET

by Gokhan Kosem, [www.ipcisco.com](http://www.ipcisco.com)

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

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

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

