## System Related Commands

These commands are used to view and manage Linux system-related information.

**1.** [**uname**](https://linoxide.com/linux-command/uname-command/) : Displays linux system information. With -a switch you can view all the information, with -r switch you can view kernel release information and with -o you can view OS information

**2. cat /etc/redhat\_release** : Shows which version of redhat installed

**3.** [**uptime**](https://linoxide.com/linux-command/linux-uptime-command/) : Shows how long the system has been running

**4.** [**hostname**](https://linoxide.com/linux-command/display-set-hostname-linux/) : Shows system host name. With -i switch you can view the ip address of the machine and with -d you can view the domain name

**5.** [**last**](https://linoxide.com/linux-command/linux-last-command/) **reboot** : Shows system reboot history

**6.** [**date**](https://linoxide.com/linux-command/date-command-linux/) : Shows the current date and time. You can specify the format you want to view the date as well. As an example, by using 'date +%D' you can view the date in 'MM/DD/YY' format

**7.** [**cal**](https://linoxide.com/linux-command/cal-ncal-commands-display-calender-linux/) : Shows the calendar of the current month. With -y switch you can view the calendar of the whole current year

**8. w** : [Displays who is logged](https://linoxide.com/linux-command/linux-w-command/) on and what they are doing

**9.** [**whoami**](https://linoxide.com/linux-command/linux-whoami-command/) : Shows current user id

**10.** [**finger**](https://linoxide.com/linux-command/finger-command-user-details/) **user** : Displays information about user

**11. reboot** : Reboots the system

**12.** [**shutdown**](https://linoxide.com/linux-command/examples-linux-shutdown-commands/) : Shuts down the system

## Hardware Related Commands

These commands are used to view and manage hardware-related aspects of the Linux machine.

**13.** [**dmesg**](https://linoxide.com/linux-command/linux-dmesg-command/) : Displays all the messages from Kernel ring buffer. With -k switch you can view kernel messages and with -u you can view userspace messages

**14. cat /proc/cpuinfo** : Displays information about processes and CPUs of the system

**15. cat /proc/meminfo** : Displays details on hardware memory

**16. cat /proc/interrupts** : Lists the number of interrupts per CPU per I/O device

**17. lshw** : Displays information on hardware configuration of the system. But this command must be run as super user or it will only report partial information

**18. lsblk** : Displays block device related information of the machine. With -a you can view all block devices

**19. free -m** : [Shows used and free memory](https://linoxide.com/linux-command/linux-free-command/) (-m for MB)

**20. lspci -tv** : [Shows information on PCI](https://linoxide.com/how-tos/linux-list-pci-devices/) buses devices

**21. lsusb -tv** : [Shows information on USB](https://linoxide.com/linux-command/linux-lsusb-command-print-usb/) devices

**22.** [**dmidecode**](https://linoxide.com/linux-command/how-to-display-system-hardware-information-in-bios/) : Shows hardware info from the BIOS (vendor details)

**23. hdparm -i /dev/sda** : Shows info about disk sda

**hdparm -tT /dev/sda** : Performs a read speed test on disk sda

**24. badblocks -s /dev/sda** : Tests for [unreadable blocks](https://linoxide.com/linux-how-to/how-to-fix-repair-bad-blocks-in-linux/) on disk sda

## Statistic Related Commands

These set of commands are used to view various kinds of stats of the Linux system

**25. mpstat 1** : Displays [processors related statistics](https://linoxide.com/linux-command/linux-mpstat-command/)

**26. vmstat 2**  : Displays [virtual memory statistics](https://linoxide.com/linux-command/linux-vmstat-command-tool-report-virtual-memory-statistics/)

**27. iostat 2** : Displays [I/O statistics](https://linoxide.com/linux-command/linux-iostat-command/)

**28. tail -n 500 /var/log/messages** : [Displays the last](https://linoxide.com/linux-command/linux-tail-command/) 500 kernel/syslog messages

**29. tcpdump -i eth1** : [Captures all packets](https://linoxide.com/linux-how-to/14-tcpdump-commands-capture-network-traffic-linux/) flow on interface eth1. With -w switch you can specify a file where you can direct the output to

**tcpdump -i eth0 'port 80'** : Monitors all traffic on port 80 on interface eth0

**30. lsof** : [Lists all open files](https://linoxide.com/how-tos/lsof-command-list-process-id-information/) belonging to all active processes

**lsof -u testuser** : Lists files opened by a specific user

**31. free -m** : Shows RAM memory details

**32. watch df -h** : [Watches changeable](https://linoxide.com/linux-command/linux-watch-command/) disk usage continuously

## User-Related Commands

These commands are used to manage Linux users

**33. id** : [Shows the active user and group information](https://linoxide.com/linux-command/linux-id-command/). With -G switch you can view the IDs of groups

**34. last** : Shows a list of last logins on the system. Using -a switch you can add the hostname to the last column of the output

**35. who** : [Shows who is logged](https://linoxide.com/linux-command/linux-who-command/) on the system

**36. groupadd admin** : [Adds the group](https://linoxide.com/linux-command/groupadd-command/) "admin"

**37. useradd -c "Sam Tomshi" -g admin -m sam** : Creates user "sam" and adds to group "admin"

**38. userdel sam** : Deletes user sam

**39. adduser sam** : [Adds user](https://linoxide.com/linux-command/linux-user-add-command/) "sam"

**40. usermod** : Modifies user information

**41. passwd user1** : Changes the password of user1

## File Related Commands

These commands are used to handle files and directories

**42. ls -al** : Displays all [information about files/directories](https://linoxide.com/linux-command/linux-ls-command/). This includes displaying all hidden files as well

**43. pwd** : Shows [current directory path](https://linoxide.com/linux-command/linux-pwd-command/)

**44. mkdir directory-name**  : [Creates a directory](https://linoxide.com/linux-command/linux-mkdir-command/)

**45. rm file-name** : [Deletes file](https://linoxide.com/linux-command/linux-rm-command/)

**rm -r directory-name** : Deletes directory recursively

**rm -f file-name** : Forcefully removes file

**rm -rf directory-name** : Forcefully removes directory recursively

**46. cp file1 file2** : [Copies linux files](https://linoxide.com/linux-command/linux-cp-command/), here file1 to file2

**cp -r dir1 dir2** : Copies dir1 to dir2, creates dir2 if it doesn't exist

**47. mv file1 file2** : [Moves files](https://linoxide.com/linux-command/mv-command-linux/) from one place to another/renames file1 to file2

**48. ln -s /path/to/file-name link-name** : [Creates a symbolic link](https://linoxide.com/linux-how-to/create-soft-link-linux/) to file-name

**49. touch file** : [Creates empty file](https://linoxide.com/linux-command/linux-touch-command/)

**50. cat file** : [Prints the file content](https://linoxide.com/linux-command/13-cat-command-examples/) in terminal

**51. more file** : Display the [contents of file](https://linoxide.com/linux-command/linux-more-command/)

**52. head file**: [Display the first](https://linoxide.com/linux-command/linux-head-command/) 10 lines of file

**53. tail file**: Outputs the last 10 lines of file

**tail -f file:** Outputs the contents of file as it grows starting with the last 10 lines

**54. gpg -c file**: [Encrypts file](https://linoxide.com/security/gpg-command-encrypt-decrypt-file/)

**gpg file.gpg**: Decrypts file

**55. cksum file**  : View the checksum of the file

**56. diff file1 file2**  : View the differences between contents of file1 and file2

**57. ln -s link file**  : Create a soft link named link to the file

**58. sort** : Sorts files in alphabetical order

**59. uniq** : Compares adjacent lines in a file and removes/reports any duplicate lines

**60. wc** : Counts number of words/lines

**61. dir** : Lists the content of the directory

**62. tee** : Command for [chaining and redirection](https://linoxide.com/linux-how-to/linux-tee-command-examples/)

**63. tr** : Command for [translating characters](https://linoxide.com/how-tos/linux-tr-command/)

## Process Related Commands

These commands are used to handle Linux processes

**64. ps** : Displays your currently active processes

**ps aux | grep 'telnet'** : Displays all process ids related to telnet process

**65. pmap** : [Display Memory map](https://linoxide.com/linux-command/pmap-command/) of process

**66. top**  : Display all running [processes and cpu/memory usage](https://linoxide.com/linux-command/linux-top-command-examples-screenshots/)

**67. kill pid**  : [Kills process](https://linoxide.com/linux-how-to/linux-kill-command-examples/) with mentioned pid

**68. killall proc**  : [Kills all processes](https://linoxide.com/linux-command/linux-killall-my-options/) named proc

**69. pkill processname** : Sends kill signal to a process with its name

**70. bg**  : Resumes suspended jobs [without bringing them to foreground](https://linoxide.com/linux-command/fg-bg/)

**71. fg**  : Brings the most recent job to foreground

**fg n**  : Brings job n to the foreground

## File Permission Related Commands

These commands are used to change permissions of the files

**72. chmod octal file-name** : [Changes the permissions](https://linoxide.com/linux-command/chmod-command/) of file to octal

**chmod 777 /data/test.c**  : Sets rwx permission for owner , group and others

**chmod 755 /data/test.c** : Sets rwx permission for owner and rx for group and others

**73. chown owner-user file**  : [Changes owner](https://linoxide.com/linux-command/chown-command/) of the file

**chown owner-user:owner-group file-name** : Changes owner and group owner of the file

**chown owner-user:owner-group directory**  : Changes owner and group owner of the directory

**74. chgrp group1 file**  : Changes the group ownership of the file to group1

## Network Related Commands

These commands are used to view and edit network configurations related aspects of the system

**75. ifconfig -a** : [Displays all network interface](https://linoxide.com/how-tos/linux-ifconfig/) and set ip address

**76. ifconfig eth0**  : Displays eth0 ethernet port ip address and details

**77. ip addr show**  : [Display all network interfaces](https://linoxide.com/linux-command/use-ip-command-linux/) and ip addresses

**78. ip address add 192.168.0.1 dev eth0**  : Sets ip address of eth0 device

**79. ethtool eth0**  : Linux tool to show ethernet status

**80. mii-tool eth0**  : Linux tool to show eth0 status

**81. ping host**  : [Sends echo requests](https://linoxide.com/linux-how-to/ping-ipv6-address-windows-linux-cli/) to the host to test ipv4 connection

**82. whois domain**  : Gets who is information for domain

**83. dig domain**  : Gets [DNS nameserver information](https://linoxide.com/how-tos/useful-options-dig/) for domain

**dig -x host**  : Reverse lookup host

**84. host google.com**  : [Lookup DNS](https://linoxide.com/linux-command/learn-host-command/) ip address for the name

**85. hostname -i**  : Lookup local ip address

**86. wget file**  : Downloads file

**87. netstat -tupl**  : Lists all [active listening ports](https://linoxide.com/linux-how-to/linux-netstat-commands-basic-advanced-examples/)

**88. nslookup**  : Resolves domain names to IP addresses

## Compression / Archive Related Commands

These commands are used to compress and decompress files

**89. tar cf home.tar home**  : [Creates a tar](https://linoxide.com/linux-how-to/16-tar-commands-compress-extract-files-linux/) named home.tar containing home/

**tar xf file.tar**  : Extracts the files from file.tar

**tar czf file.tar.gz files**  : Creates a tar with gzip compression

**90. gzip file**: Compresses file and renames it to file.gz

**91. bzip2 -z file**: Compresses file and renames it to file.bz2

**bzip2 -d file.bz2**: Decompress the file

## Package Installation Related Commands

These commands are used to manage Linux packages

**92. rpm -i pkgname.rpm**: Installs rpm based package

**rpm -e pkgname**: Removes package

**93. make**: [Install from source](https://linoxide.com/how-tos/linux-make-command-examples/) file

## Search Related Commands

These commands are used to search for files and patterns

**94. grep pattern files**: Searches for pattern in files

**grep -r pattern dir**: Searches recursively for pattern in dir

**95. locate file**: Finds all instances of file

**96. find /home/tom -name 'index\*'**: Finds file names that start with "index" inside /home/tom directory

**find /home -size +10000k**: Finds files larger than 10000k in /home

## Login Related Commands

These commands are used to log into another host

**97. ssh user@host**: [Securely connect](https://linoxide.com/linux-command/learn-ssh-connection-options/) to a host as user

**ssh -p port $ user@host**: Connects to host using specific port

**98. telnet host**: Connects to the system using telnet port

## File Transfer Related Commands

These commands are used to copy files from one system to another system

**99. scp file.txt server2:/tmp**: Secure copy file.txt to remote host /tmp folder

**scp nixsavy@server2:/www/\*.html /www/tmp**: Copies \*.html files from remote host to current host /www/tmp folder

**scp -r nixsavy@server2:/www /www/tmp:** Copies all files and folders recursively from remote server to the current system /www/tmp folder

**100. rsync -a /home/apps /backup/**: [Synchronizes source to destination](https://linoxide.com/how-tos/rsync-copy/)

**rsync -avz /home/apps $ linoxide@192.168.10.1**:/backup : Synchronize files/directories between the local and remote system with compression enabled

## Disk Usage Related Commands

These commands are used to view disk statistics

**101. df -h:** [Shows free space](https://linoxide.com/linux-command/linux-df-command/) on mounted filesystems

**df -i**: Shows free inodes on mounted filesystems

**102. fdisk -l**: [Shows disks partitions](https://linoxide.com/linux-command/fdisk-commands-manage-partitions-in-linux/) sizes and types

**103. du -ah**: [Displays disk usage](https://linoxide.com/linux-command/linux-du-command/) in human readable form

**du -sh**: Displays total disk usage on the current directory

**104. findmnt**: [Displays target mount point](https://linoxide.com/linux-command/powerful-findmnt-command/) for all filesystems

**105. mount device-path mount-point**: Mounts a device to the device-path

## Directory Traverse Related Commands

These commands are used to change the directory

**106. cd ..**  : Goes up one level of the directory tree

**cd**  : Goes to $HOME directory

**cd /test**  : Changes to /test directory