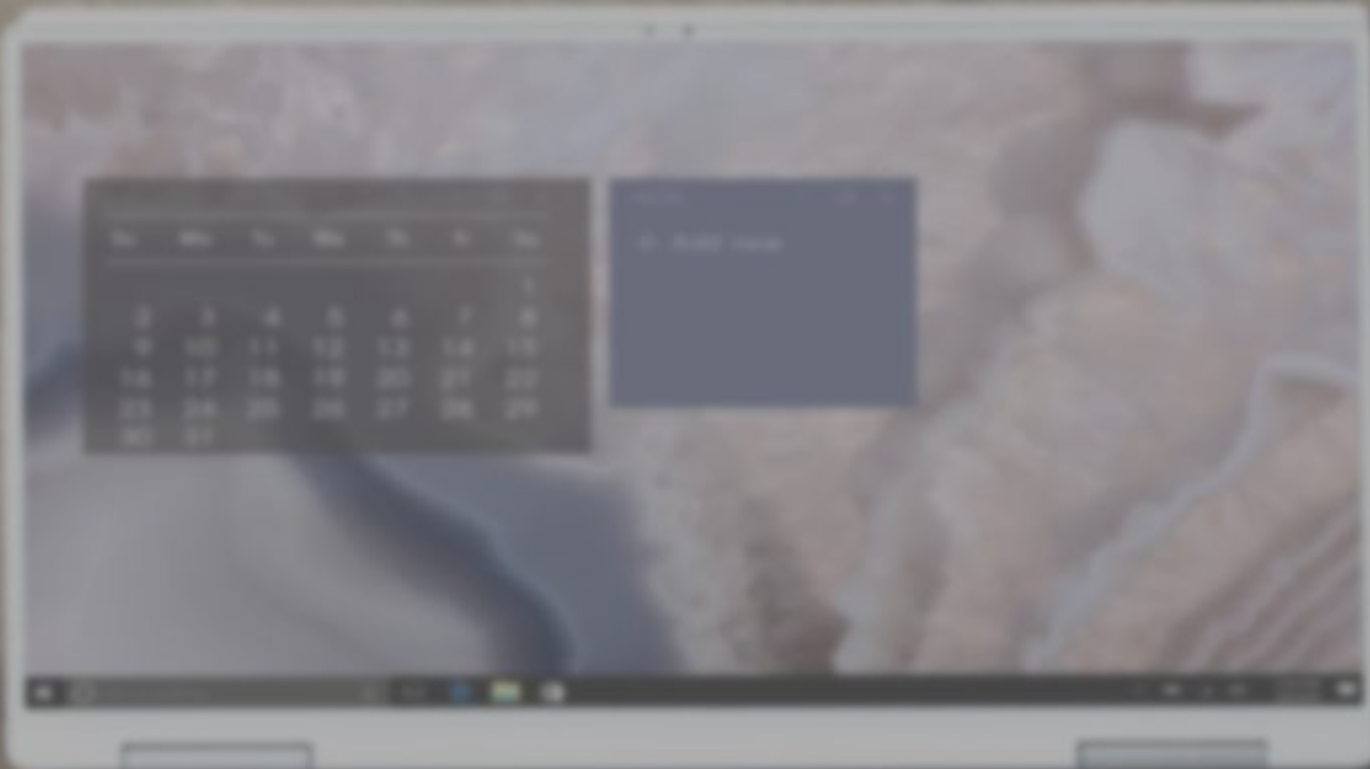Linux

Linux Cheat Sheet

BASIC LINUX CHEATSHEET

Linux

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❑ SYSTEM INFO COMMANDS

- **To show how long system has been running$ uptime**
  $ uptime
- **To display username of current user**
  $ whoami
- **To display kernel version**
  $ uname –r
- **To check the current working terminal**
  $ tty
- **To display username of user currently logged in**
  $ users
- **To display list of users currently logged in**
  $ who
- **To view the list of running processes**
  $ top
- **To check the manual instruction**
  $ man command-name
- **To display the list of commands you used**
  $ history
- **To display which user is online**
  $ w

❑ DIRECTORY COMMANDS

- **To create a directory to the system**
  $ mkdir <<dirname>>
- **To remove a directory**
  $ rmdir <<dirname>>
- **To remove a directory recursively**
  $ rm -r <<dirname>>
- **To remove a directory forcefully**
  $ rm -rf <<dirname>>
- **To copy the content of dir1 to dir2**
  $ cp -r <<dir1>> <<dir2>>

❑ LISTINGS COMMANDS

- **To list all the content of a directory**
  $ ls
- **To display hidden files starting with'.'**
  $ ls-a
- **To list files in reverse order**
  $ ls-r
- **To display recursive listing**
  $ ls-R

❏ MANAGING FILE PERMISSIONS

- **To change file permission of a file to octal**
  $ chmod <octal number> <<filename>>
- **To set rwx permission to owner, r_x to group and everyone**
  $ chmod 755 <<data>> <<test>>
- **To change ownership of a file**
  $ chown <<owner>> <<user-file>>
- **To change the group ownership of a file or directory**
  $ chgrp <<filename>>

❏ DIRECTORY COMMANDS

- **To go one directory back**
  $ cd ..
- **To change directory to $Home directory**
  $ cd
- **To change directory to /thinknyx directory**
  $ cd /thinknyx

❏ USER/GROUP COMMANDS

- **To add a user to the system**
  $ adduser <<username>>
- **To delete a user accountThinkay**
  $ userdel <<username>>
- **To add a group to the system**
  $ addgroup <<groupname>>
- **To delete a group from system**
  $ delgroup <<groupname>>
- **To modify a user account**
  $ usermod
- **To modify a group account**
  $ groupmod
- **To change password of user account**
  $ passwd
- **To lock user's account**
  $ usermod -L <<username>>
- **To unlock user's account**
  $ usermod -U <<username>>

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❏ FILE COMMANDS

- **To display current directory file path**
  $ pwd
- **To remove a file**
  $ rm <<filename>>
- **To copy content of file1 to file 2**
  $ cp <<file1>> << file2>>
- **To move content of file1 to file2 # rename a file**
  $ mv <<file1 >> <<file2>>
- **To create a text file**
  $ touch <<file>>
- **To display the first 10 lines of the file**
  $ head <<file>>
- **To display the last 10 lines of the file**
  $ tail <<file>>
- **To display the content of the file**
  $ cat <<file>>
- **To create a symbolic link**
  $ ln -s<<source>> << destination>>
- **To sort the data in ascending order**
  $ sort <<file>>
- **To sort the data in descending order**
  $ sort -r <<file>>

❏ SEARCH COMMANDS

- **To search for given pattern in files**
  $ grep pattern <<files>>
- **To search recursively for given pattern**
  $ grep -r pattern dir
- **To find all the files under /home dir with name thinknyx.txt**
  $ find /home/ -name thinknyx.txt

❏ COMPRESSION COMMANDS

- **To compress the file into a zip archive**
  $ zip <<archive_name>> <<filename>>
- **To unzip the file**
  $ unzip <<zip_filename>>
- **To compress a tar file**
  $ tar -czvf <<file.tar.gz>>
- **To extract a compressed file with tar**
  $ tar -xvf<<filename.tar>>

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❑ NETWORK COMMANDS

- **To ping host and output results**
  $ ping <<host>>
- **To get whois information for domain**
  $ whois <<domain>>
- **To show info about DNS server**
  $nslookup <<domain>>
- **To get DNS information for domain**
  $ dig <<domain>>
- **To check if port is open on a server**
  $ telnet <<server_ip>> <<port>>
- **To download wget file**
  $ wget <<file>>
- **To check if a cable is plugged into network foreground interface**
  ifplugstatus
- **To display all network interfaces and ip address**
  $ ifconfig -a
- **To download files from internet through CLI**
  $ curl -o <<fileLink>>
- **To display the network address of the host name**
  $ hostname -i

- **To configure wireless network interface**
  $ iwconfig
- **To detect the delay and determine the path way to your target**
  $ traceroute <<destination>>
- **To detect network delay**
  $ tracepath <<destination>>

❑ SSH COMMANDS

- **To connect to host as use**
  $ ssh <<user@host>>
- **To connect host on port <port> as <user>**
  $ ssh -p <<port>> <<user>>@<<host>>
- **To connect with help of identity file or ssh key**
  ssh-i <<identity_file>> <<user>>@<<host>>
- **To add your key to host for user to enable a keyed or passwordless login**
  $ ssh-copy-id <<user@host>>

❑ **INSTALATTION COMMANDS**

- **To install software from source code**
  $ tar zxvf sourcecode.tar.gz
  $ cd sourcecode
  $ ./configure
  $ make
  $ make install
- **To search for a package by keyword**
  $ yum search keyword
- **To install package**
  $ yum install package
- **To display description and summary information about package**
  $ yum info package
- **To remove/uninstall package**
  $ yum remove package

❑ **PERFORMANCE MONITORING AND STATISTICS COMMANDS**

- **To display processor related statistics**
  $ mpstat

- **To display virtual memory statistics**
  $ vmstat
- **To display I/O statistics**
  $ iostat
- **To show network statistics**
  $ netstat
- **To list all open files on the system**
  $ lsof

❑ **DISK USAGE COMMANDS**

- **To show device name info, total blocks, total disk space, total used space etc**
  $ df
- **To show free and used space on mounted filesystems**
  $ df –h
- **To display disk partitions, sizes and types**
  $ fdisk-l
- **To display disk usage for all files and directories in human readable format**
  $ du-ah
- **To display disk usage of all the file system** $ du -a

❑ PROCESS MANAGEMENT COMMANDS

- **To display your currently active processes**
  $ ps
- **To display all running processes**
  $ top
- **To kill process id or pid**
  $ kill <<pid>>
- **To kill all process named proc**
  $ killall <<proc>>
- **To list stopped or background jobs/ Resume a stopped job in the background**
  $ bg
- **To bring the most recent job to foreground**
  $fg
- **To bring the most recent job to foreground**
  $ fg <<n>>

❑ DISK USAGE COMMANDS

- **To logout current user session**
  $ Ctrl + D
- **To autocomplete what you are typing**
  $ Tab
- **To go to previous command**
  $ Up arrow
- **To halt/terminate the current process**
  $ Ctrl + C
- **To execute last command**
  $!!
- **To clear the screen**
  $ Ctrl + L

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❑ **apt list**
- List all available packages

❑ **apt list --installed**
- List all installed packages in system

❑ **apt-get update**
- Update the list of packages

❑ **apt-get upgrade**
- Upgrade all installed packages to their latest version

❑ **apt-get upgrade package_name**
- Upgrade specific package

❑ **apt search package_name**
- To search for a package

❑ **apt show package_name**
- To view information of a package

❑ **apt-get install package_name**
- To install package

❑ **apt-get remove package_name**
- To remove package

❑ **apt-get purge package_name**
- To remove packages completely

❑ **apt-get autoremove**
- To remove automatically all unused packages

❑ **apt edit-sources**
- To edit the source information file

❑ **add-apt-repository 'repository_name'**
- To add repository

❑ **apt-get installed package_name=package_version**
- To install package with specific version

DNF Package Manager Cheatsheet

❑ **dnf list all**
- List installed and available packages

❑ **dnf list installed**
- List all installed packages

❑ **dnf update**
- Update all packages with available updates

❑ **dnf check-update**
- To check for updates across all enabled repositories

❑ **dnf distro-sync**
- Synchronise all packages to the latest stable release

❑ **dnf info package_name**
- To show the details of a specific package

❑ **dnf install package_name**
- To install a specific package

❑ **dnf remove package_name**
- To remove a specific package

❑ **dnf autoremove**
- To remove any packages that are no longer required

❑ **dnf repolist all**
- List all the repositories that are configured on your system

❑ **dnf repolist disabled**
- List of all disabled repositories

❑ **dnf history undo transaction_id**
- To undo the changes made by dnf command through its transaction Id which can be obtained from the history command

YUM Package Manager Cheatsheet

❑ **yum list available**
- List all available packages

❑ **yum list installed**
- List all installed packages

❑ **yum list all**
- List installed and available packages

❑ **yum update**
- Update all packages with available updates

❑ **yum deplist package_name**
- To display dependencies for a package

❑ **yum updateinfo package_name**
- Get information about available package updates

❑ **yum groupinfo package_name**
- To display description and contents of a package group

❑ **yum install package_name**
- To install a package from a repository to your system

❑ **yum remove package_name**
- To remove package

❑ **yum swap package_name package_name**
- To remove one package and install another

❑ **yum autoremove**
- To remove automatically all unused packages

❑ **yum downgrade package_name**
- To downgrade a package to an earlier version

❑ **yum-config-manager --add-repo [url]**
- To add repository source

❑ **yum search package_name**
- To search package names and descriptions

AWK Cheatsheet

- **awk -F: '{print $1}' File_Name**
  - Print first field of all lines using a colon as a field separator

- **awk '/regex/' File_Name**
  - Print only lines that match regex in file

- **awk '!/regex/' File_Name**
  - Print only lines that do not match regex in file

- **awk '/root/ {print $1,$3}' File_Name**
  - Print the line of matched pattern, find only between 1 and 3 lines.

- **awk '/regex/{getline;print}' File_Name**
  - Print line immediately after regex, but not line containing regex in file

- **awk -F: 'NR % 2 == 0' File_Name**
  - Print the even records.

- **awk '/foo/{n++}; END {print n+0}' File_Name**
  - Print total number of lines that contain foo

- **awk 'length> 32' File_Name**
  - Print lines with more than 32 characters in file

- **awk 'NR==12' File_Name**
  - Print line number 12 of file

- **awk 'END{print NR}' File_Name**
  - Print the total number of lines

- **awk -F: '{print $NF}' File_Name**
  - Print last field of all lines

- **awk -F: 'NR==3, NR==5' File_Name**
  - Print the 3 to 5 records.

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- **sed -n '3p' file_name**
  - Prints 3rd line of a file

- **sed –n '$p' file_name**
  - Displays the last record of the file

- **sed -n '2,5p' file_name**
  - Prints specified range of lines from the file

- **sed -i 's/oldstring/newstring/g' file_name**
  - Replaces all the occurrences of string in the given file

- **sed -i 's/oldstring/newstring/2' file_name**
  - Replaces the 2nd occurrence of string in the given file

- **sed –n '3,6!p' file_name**
  - Ignores the display of specified range of lines from a file

- **sed –n '/pattern/p' file_name**
  - Print all the lines with the specific pattern

- **sed -i '3d' file_name**
  - Deletes the 3rd line from the given file

- **sed -i '$d' file_name**
  - Deletes the last line of the given file

- **sed -i G file_name**
  - Inserts one blank line after each line of text

- **sed -i '/^$/d' file_name**
  - Deletes extra blank lines of the file

- **sed -i 's/[[:space:]]//g' file_name**
  - Removes white spaces of the file

- **sed -i '3i\This line will be inserted before line 3' file_name**
  - Inserts the specified line before 3rd line of file

- **sed -i '3a\This line will be inserted after line 3' file_name**
  - Inserts a line after 3rd line of the file

Linux

File Permission Cheatsheet

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Octal representation for roles/permissions

0 : no permissions (---)	**4** : read-only permission (r--)
1 : execute-only permission (--x)	**5** : read and execute permissions (r-x)
2 : write-only permission (-w-)	**6** : read and write permissions (rw-)
3 : write and execute permissions (-wx)	**7** : read, write and execute permissions (rwx)

❑ **chmod 777 <filename>**
- Grants read, write and execute permissions to all users to the file using octal representation.

❑ **chmod 755 <filename>**
- Grants read, write, and execute permissions to the Owner, and read with execute permissions to Groups & Others.

❑ **chmod 700 <filename>**
- Grants read, write, and execute permissions to the Owner, and no permission to Group & Others.

❑ **chmod 711 <filename>**
- Grants read, write, and execute permissions to the Owner and execute only permission to Group & Others.

❑ **chmod 754 <filename>**
- Grants read, write & execute permissions to the Owner, read & execute permissions to Group, only read permission to Others.

❑ **chmod 600 <filename>**
- Grants read and write permissions to the Owner, and no permission to Group & Others.

❑ **chmod 666 <filename>**
- Grants read and write permissions to all users.

❑ **chmod 400 <filename>**
- Grants read-only permissions to the Owner and no permission to Group & others.

File Permission Cheatsheet

Symbolic representation for roles/permissions

u is for user	**r** is for read permission
g is for group	**w** is for write permission
o is for others	**x** is for execute permission

❑ **chmod +x <filename>**
- Grants execute permission to all users to the file

❑ **chmod o+r <filename>**
- Grants read permission to other users to the file

❑ **chmod go+rw <filename>**
- Grants read and write permission to group and other users to the file

❑ **chmod a+r <filename>**
- Grants read permission to all (user, group and others) to the file

❑ **chmod o-rw <filename>**
- Removes read and write permission of other users from the file

❑ **chmod u=rwx,go= <filename>**
- Grants all permission to user that owns the file, removes all permission of group and others

❑ **chmod a-x <filename>**
- Removes execute permission of all users from the file

❑ **chmod g-w <filename>**
- Removes write permission of group from the file

File Permission Cheatsheet

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Symbolic representation for roles/permissions

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o is for others	**x** is for execute permission

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- Grants read and write permission to group and other users to the file

❑ **chmod a+r <filename>**
- Grants read permission to all (user, group and others) to the file

❑ **chmod o-rw <filename>**
- Removes read and write permission of other users from the file

❑ **chmod u=rwx,go= <filename>**
- Grants all permission to user that owns the file, removes all permission of group and others

❑ **chmod a-x <filename>**
- Removes execute permission of all users from the file

❑ **chmod g-w <filename>**
- Removes write permission of group from the file

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