* How do you display the first 10 lines of a file using the command line?

The command is head. by default, head <file name> shows you the first 10 lines of a file. if we need to more or less lines the command syntax is head -<no of lines> <file name>

* How do you display the last 5 lines of a file using the command line?

The command is tail. by default, tail <file name> shows you the last 10 lines of a file. if we need to more or less lines the command syntax is tail -<no of lines> <file name>

* How do you sort the contents of a file in ascending order using the command line?

Ascending order : sort <file name> # display ascending order

Decending order: sort -r <file name># display decending order

specific column : sort -k <no of column> <file name>

* How do you count the number of occurrences of a specific word in a file using the command line?

grep -c "search word" <file name># display count of words

grep -o "search word" <file name># display no of word with orange color

* How do you find and replace a specific word in a file using the command line?

Use Stream EDitor (sed) as follows:

sed -i 's/old-text/new-text/g' a.txt

It tells sed to find all occurrences of ‘old-text‘ and replace with ‘new-text‘ in a file named a.txt

The s is the substitute command of sed for find and replace. The -i tells to update the file. The / is the default delimiter, but it can be any character other than a backslash (\)[1] or newline (\n)[1] can be used instead of a slash (/) to delimit the regex and the replacement. For example, use \ character as delimiter instead of the default / to find all occurrences of ‘FOO‘ and replace with ‘BAR‘:

sed -i 's\hello\solomon\g' a.txt

## OR use the ‘@‘ as delimiter ##

sed -i 's@hello@solomon@g' a.txt

Verify that file has been updated: more a.txt

cat a.txt

* How do you display the size of a file in human-readable format using the command line?

use ls command, ls -l to show file size

ls -lh show the human readable format

ls lhs show the file size in a human readable format and all other details

* How do you display the current date and time in a specific format using the command line?

date +"%Y-%m-%d %H:%M:%S"

* How do you find the process ID (PID) of a running process using the command line?

-a – show processes for all users.

-u – display the current user’s processes.

-x – include processes without a terminal.

ps aux | grep <running process name>

* How do you kill a process using its process ID (PID) using the command line?

kill -l

This lists all Linux process signal types, including:

SIGTERM (15) – this is the default and safest way to kill a running process in Linux. It allows the process to terminate gracefully.

SIGKILL (9) – this signal immediately stops any primary or background process without allowing it to clean up.

SIGSTOP (19) – pauses a current process without terminating it.

SIGHUP (1) – this signal reports that the user’s terminal is disconnected, often leading to the process’s termination.

SIGINT (2) – this signal interrupts a process, typically sent from the keyboard shortcut Ctrl+C.

When using kill signals, you can specify the signal name or its numeric value. It’s crucial to choose the right kill signal based on the scenario and the impact you want on the process.

For instance, the SIGTERM signal is preferred for safe process control in Linux, allowing processes to save their state and exit cleanly. SIGKILL, while practical, should be sparingly used as it may lead to data loss or corruption.

kill using pid number

* How do you create a compressed tar archive of a directory and exclude specific files from it using the command line?

create tar file : tar -czf myA.tar.gz a.txt

tar --exclude='a.txt' -czf newx.tar.gz dir1

* How do you set an environment variable in Linux using the command line?

syntax : export <env name> = <value>

create env : export solo = solomon

display variable : echo $solo # output : solomon

unset solo # env assign value erased

all env unset : env -i bash

reset all env : exit

* How do you list all installed packages on a Debian-based Linux distribution using the command line?

apt list --installed | grep program\_name

* How do you change the permissions of a file to read-only for the owner and group using the command line?

chmod 440 a.txt or chmod ug+r a.txt

ls -lhs # see the permission like that -, r--, r--, ---

* How do you find all files with a specific extension in a directory and its subdirectories using the command line?

find . -type f -name "\*.txt" # show the txt file

fine . -type f -name "\*.tar.gz" # show all tar file

* How do you create a backup of a file with a timestamp in its filename using the command line?

cp a.txt my.backup.$(date --iso-8601=second)

* How do you search for a specific string in all files within a directory and its subdirectories using the command line?

grep -r "hello" \*

* How do you display the current network configuration (IP address, subnet mask, etc.) using the command line?

private ip Address : hostname -I

all details : ip link show

device: type: state: connection:--nmcli device status

* How do you create a new user with a specific home directory and set their password using the command line?

useradd -m -d dir1 uksolo

passwd uksolo

* How do you display the available disk space on your system using the command line?

df -H --output=size,used,avail

* How do you schedule a command or script to run at a specific time using the cron system?

crontab -e

-e : configuration file for the current user.

-l : display the current user cron jobs.

-r: delete the current user cron jobs.

5 4 \* \* sun echo 'Hello world!' # 4:05 on sunday