<https://techgoeasy.com/unix-awk-command/>

Example :1) Displaying partial text of a file

With sed, we can view only some part of a file rather than seeing whole file. To see some lines of the file, use the following command,

[linuxtechi@localhost ~]$ sed -n 22,29p testfile.txt

here, option ‘n’ suppresses printing of whole file & option ‘p’ will print only line lines from 22 to 29.

Example :2) Display all except some lines

To display all content of a file except for some portion, use the following command,

[linuxtechi@localhost ~]$ sed 22,29d testfile.txt

Option ‘d’ will remove the mentioned lines from output.

Example :3) Display every 3rd line starting with Nth line

Do display content of every 3rd line starting with line number 2 or any other line, use the following command

[linuxtechi@localhost ~]$ sed -n '2-3p' file.txt

Example :4 ) Deleting a line using sed command

To delete a line with sed from a file, use the following command,

[linuxtechi@localhost ~]$ sed Nd testfile.txt

where ‘N’ is the line number & option ‘d’ will delete the mentioned line number. To delete the last line of the file, use

[linuxtechi@localhost ~]$ sed $d testfile.txt

Example :5) Deleting a range of lines

To delete a range of lines from the file, run

[linuxtechi@localhost ~]$ sed '29-34d' testfile.txt

This will delete lines 29 to 34 from testfile.txt file.

Example :6) Deleting lines other than the mentioned

To delete lines other than the mentioned lines from a file, we will use ‘!’

[linuxtechi@localhost ~]$ sed '29-34!d' testfile.txt

here ‘!’ option is used as not, so it will reverse the condition i.e. will not delete the lines mentioned. All the lines other 29-34 will be deleted from the files testfile.txt.

Example :7) Adding Blank lines/spaces

To add a blank line after every non-blank line, we will use option ‘G’,

[linuxtechi@localhost ~]$ sed G testfile.txt

Example :8) Search and Replacing a string using sed

To search & replace a string from the file, we will use the following example,

[linuxtechi@localhost ~]$ sed 's/danger/safety/' testfile.txt

here option ‘s’ will search for word ‘danger’ & replace it with ‘safety’ on every line for the first occurrence only.

Example :9) Search and replace a string from whole file using sed

To replace the word completely from the file, we will use option ‘g’ (globally) with ‘s’ (substitute),

[linuxtechi@localhost ~]$ sed 's/danger/safety/g' testfile.txt

Example :10) Replace the nth occurrence of string pattern

We can also substitute a string on nth occurrence from a file. Like replace ‘danger’ with ‘safety’ only on second occurrence,

[linuxtechi@localhost ~]$ sed ‘s/danger/safety/2’ testfile.txt

To replace ‘danger’ on 2nd occurrence of every line from whole file, use

[linuxtechi@localhost ~]$ sed 's/danger/safety/2g' testfile.txt

Example :11) Replace a string on a particular line

To replace a string only from a particular line, use

[linuxtechi@localhost ~]$ sed '4 s/danger/safety/' testfile.txt

This will only substitute the string from 4th line of the file. We can also mention a range of lines instead of a single line,

[linuxtechi@localhost ~]$  sed '4-9 s/danger/safety/' testfile.txt

Example :12) Add a line after/before the matched search

To add a new line with some content after every pattern match, use option ‘a’ ,

[linuxtechi@localhost ~]$ sed '/danger/a "This is new line with text after match"' testfile.txt

To add a new line with some content a before every pattern match, use option ‘i’,

[linuxtechi@localhost ~]$ sed '/danger/i "This is new line with text before match" ' testfile.txt

Example :13) Change a whole line with matched pattern

To change a whole line to a new line when a search pattern matches we need to use option ‘c’ with sed,

[linuxtechi@localhost ~]$ sed '/danger/c "This will be the new line" ' testfile.txt

So when the pattern matches ‘danger’, whole line will be changed to the mentioned line.

Advanced options with sed

Up until now we were only using simple expressions with sed, now we will discuss some advanced uses of sed with regex,

Example :14) Running multiple sed commands

If we need to perform multiple sed expressions, we can use option ‘e’ to chain the sed commands,

[linuxtechi@localhost ~]$  sed -e 's/danger/safety/g' -e 's/hate/love/' testfile.txt

Example :15) Making a backup copy before editing a file

To create a backup copy of a file before we edit it, use option ‘-i.bak’,

[linuxtechi@localhost ~]$ sed -i.bak -e 's/danger/safety/g'  testfile.txt

This will create a backup copy of the file with extension .bak. You can also use other extension if you like.

Example :16) Delete a file line starting with & ending with a pattern

To delete a file line starting with a particular string & ending with another string, use

[linuxtechi@localhost ~]$ sed -e 's/danger.\*stops//g' testfile.txt

This will delete the line with ‘danger’ on start & ‘stops’ in the end & it can have any number of words in between , ‘.\*’ defines that part.

Example :17) Appending lines

To add some content before every line with sed & regex, use

[linuxtechi@localhost ~]$ sed -e 's/.\*/testing sed &/' testfile.txt

So now every line will have ‘testing sed’ before it.

Example :18) Removing all commented lines & empty lines

To remove all commented lines i.e. lines with # & all the empty lines,  use

[linuxtechi@localhost ~]$ sed -e 's/#.\*//;/^$/d' testfile.txt

To only remove commented lines, use

[linuxtechi@localhost ~]$ sed -e 's/#.\*//' testfile.txt

Example :19) Get list of all usernames from /etc/passwd

To get the list of all usernames from /etc/passwd file, use

[linuxtechi@localhost ~]$  sed 's/\([^:]\*\).\*/\1/' /etc/passwd

a complete list all usernames will be generated on screen as output.

Example :20) Prevent overwriting of system links with sed command

‘sed -i’ command has been known to remove system links & create only regular files in place of the link file. So to avoid such a situation & prevent ‘**sed -i**‘ from destroying the links, use ‘**–follow-symklinks**‘ options with the command being executed.

Let’s assume i want to disable SELinux on CentOS or RHEL Severs

[linuxtechi@localhost ~]# sed -i --follow-symlinks 's/SELINUX=enforcing/SELINUX=disabled/g' /etc/sysconfig/selinux

These were some examples to show sed, we can use these reference to employ them as & when needed. If you guys have any queries related to this or any article, do share with us.