**Sed Command in Linux/Unix with examples**

SED command in UNIX is stands for stream editor and it can perform lot’s of function on file like, searching, find and replace, insertion or deletion. Though most common use of SED command in UNIX is for substitution or for find and replace. By using SED you can edit files even without opening it, which is much quicker way to find and replace something in file, than first opening that file in VI Editor and then changing it.

SED is a powerful text stream editor. Can do insertion, deletion, search and replace(substitution).

SED command in unix supports regular expression which allows it perform complex pattern matching.

**Syntax:**

sed OPTIONS... [SCRIPT] [INPUTFILE...]

**Example:**

Consider the below text file as an input.

$cat > geekfile.txt

*unix is great os. unix is opensource. unix is free os.*

*learn operating system.*

*unix linux which one you choose.*

*unix is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.*

**Sample Commands**

Replacing or substituting string : Sed command is mostly used to replace the text in a file. The below simple sed command replaces the word “unix” with “linux” in the file.

$sed 's/unix/linux/' geekfile.txt

Here the “s” specifies the substitution operation. The “/” are delimiters. The “unix” is the search pattern and the “linux” is the replacement string.

By default, the sed command replaces the first occurrence of the pattern in each line and it won’t replace the second, third…occurrence in the line.

Replacing the nth occurrence of a pattern in a line : Use the /1, /2 etc flags to replace the first, second occurrence of a pattern in a line. The below command replaces the second occurrence of the word “unix” with “linux” in a line.

$sed 's/unix/linux/2' geekfile.txt

Replacing all the occurrence of the pattern in a line : The substitute flag /g (global replacement) specifies the sed command to replace all the occurrences of the string in the line.

$sed 's/unix/linux/g' geekfile.txt

Replacing from nth occurrence to all occurrences in a line : Use the combination of /1, /2 etc and /g to replace all the patterns from the nth occurrence of a pattern in a line. The following sed command replaces the third, fourth, fifth… “unix” word with “linux” word in a line.

$sed 's/unix/linux/3g' geekfile.txt

Parenthesize first character of each word : This sed example prints the first character of every word in paranthesis.

$ echo "Welcome To The Geek Stuff" | sed 's/\(\b[A-Z]\)/\(\1\)/g'

Output:

(W)elcome (T)o (T)he (G)eek (S)tuff

Replacing string on a specific line number : You can restrict the sed command to replace the string on a specific line number. An example is

$sed '3 s/unix/linux/' geekfile.txt

Output:

unix is great os. unix is opensource. unix is free os.

learn operating system.

linux linux which one you choose.

unix is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful

Duplicating the replaced line with /p flag : The /p print flag prints the replaced line twice on the terminal. If a line does not have the search pattern and is not replaced, then the /p prints that line only once.

$sed 's/unix/linux/p' geekfile.txt

Output:

linux is great os. unix is opensource. unix is free os.

linux is great os. unix is opensource. unix is free os.

learn operating system.

linux linux which one you choose.

linux linux which one you choose.

linux is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.

linux is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.

Printing only the replaced lines : Use the -n option along with the /p print flag to display only the replaced lines. Here the -n option suppresses the duplicate rows generated by the /p flag and prints the replaced lines only one time.

$sed -n 's/unix/linux/p' geekfile.txt

Output:

linux is great os. unix is opensource. unix is free os.

linux linux which one you choose.

linux is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.

Replacing string on a range of lines : You can specify a range of line numbers to the sed command for replacing a string.

$sed '1,3 s/unix/linux/' geekfile.txt

Output:

linux is great os. unix is opensource. unix is free os.

learn operating system.

linux linux which one you choose.

unix is easy to learn.unix is a multiuser os.Learn unix .unix is a powerf

Here the sed command replaces the lines with range from 1 to 3. Another example is

$sed '2,$ s/unix/linux/' geekfile.txt

Output:

unix is great os. unix is opensource. unix is free os.

learn operating system.

linux linux which one you choose.

linux is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful

Deleting lines from a particular file : SED command can also be used for deleting lines from a particular file. SED command is used for performing deletion operation without even opening the file

Examples:

1. To Delete a particular line say n in this example

Syntax:

$ sed 'nd' filename.txt

Example:

$ sed '5d' filename.txt

2. To Delete a last line

Syntax:

$ sed '$d' filename.txt

3. To Delete line from range x to y

Syntax:

$ sed 'x,yd' filename.txt

Example:

$ sed '3,6d' filename.txt

5. To Delete from nth to last line

Syntax:

$ sed 'nth,$d' filename.txt

Example:

$ sed '12,$d' filename.txt

6. To Delete pattern matching line

Syntax:

$ sed '/pattern/d' filename.txt

Example:

$ sed '/abc/d' filename.txt