



Sed

Sed is a stream editor, this sed cheat sheet contains sed commands and some common sed tricks.

Getting started

Sed Usage

Syntax

```
$ sed [options] command [input-file]
```

With pipeline

```
$ cat report.txt | sed 's/Nick/John/g'
```

```
$ echo '123abc' | sed 's/[0-9]+//g'
```

Option Examples

Option	Example	Description
-i	sed -i bak 's/On/Off/' php.ini	Backup and modify input file directly
-E	sed -E 's/[0-9]+//g' input-file	Use extended regular expressions
-n	sed -n '3 p' config.conf	Suppress default pattern space printing
-f	sed -f script.sed config.conf	Execute sed script file
-e	sed -e 'command1' -e 'command2' input-file	Execute multiple sed commands

Multiple commands

```
$ echo "hello world" | sed -e 's/h/H/g' -e 's/w/W/g'
Hello World
```

Use **-e** to execute multiple sed commands

Sed script

```
$ echo 's/h/H/g' >> hello.sed
$ echo 's/w/W/g' >> hello.sed
$ echo "hello world" | sed -f hello.sed
Hello World
```

Use **-f** to execute sed script file

Examples

```
$ sed 's/old/new/g' file.txt
$ sed 's/old/new/g' file.txt > new.txt

$ sed 's/old/new/g' -i file.txt
$ sed 's/old/new/g' -i.backup file.txt
```

See: [Sed examples](#)

Sed commands

Commands

Command	Example	Description
p	sed -n '1,4 p' input.txt	Print lines 1-4
p	sed -n -e '1,4 p' -e '6,7 p' input.txt	Print lines 1-4 and 6-7
d	sed '1,4 d' input.txt	Print lines except 1-4
w	sed -n '1,4 w output.txt' input.txt	Write pattern space to file
a	sed '2 a new-line' input.txt	Append line after
i	sed '2 i new-line' input.txt	Insert line before

Space commands

n	Print pattern space, empty pattern space, and read next line
x	Swap pattern space with hold space
h	Copy pattern space to hold space
H	Append pattern space to hold space

g	Copy hold space to pattern space
---	----------------------------------

G	Append hold space to pattern space
---	------------------------------------

See also: [File spacing](#)

Flags

```
$ sed 's/old/new/[flags]' [input-file]
```

g	Global substitution
---	---------------------

1,2...	Substitute the nth occurrence
--------	-------------------------------

p	Print only the substituted line
---	---------------------------------

w	Write only the substituted line to a file
---	-------------------------------------------

I	Ignore case while searching
---	-----------------------------

e	Substitute and execute in the command line
---	--------------------------------------------

Loops commands

b label	Branch to a label (for looping)
---------	---------------------------------

t label	Branch to a label only on successful substitution (for looping)
---------	--------------------------------------------------------------------

:label	Label for the b and t commands (for looping)
--------	----------------------------------------------

N	Append next line to pattern space
---	-----------------------------------

P	Print 1st line in multi-line
---	------------------------------

D	Delete 1st line in multi-line
---	-------------------------------

Misc Flags

/ ^ @ ! #	Substitution delimiter can be any character
-------------	---------------------------------------------

&	Gets the matched pattern
---	--------------------------

() \1 \2 \3	Group using (and). Use \1, \2 in replacement to refer the group
--------------	----------------------------------------------------------------------

Sed examples

Replacing text

Replace all occurrences of a string

```
$ sed 's/old/new/g' file.txt
```

Replace only the nth occurrence of a string

```
$ sed 's/old/new/2' file.txt
```

Replace a string only on the 5th line

```
$ sed '5 s/old/new/' file.txt
```

Replace "world" with "universe" but only if the line begins with "hello"

```
$ sed '/hello/s/world/universe/' file.txt
```

Remove "" from the end of each line

```
$ sed 's/\$//' file.txt
```

Remove all whitespace from beginning of each line

```
$ sed 's/^s*//' file.txt
```

Remove comments. Even those that are at the end of a line

```
$ sed 's/#.*$//' file.txt
```

Search for text

Search for a string and only print the lines that were matched

```
$ sed -n '/hello/p' file.txt
```

Case insensitive search

```
$ sed -n '/hello/Ip' file.txt
```

Search for a string but only output lines that do not match

```
$ sed -n '/hello/!p' file.txt
```

Appending lines

Append line after line 2

```
$ sed '2a Text after line 2' file.txt
```

Append line at the end of the file

```
$ sed '$a THE END!' file.txt
```

Append line after every 3rd line starting from line 3

```
$ sed '3~3a Some text' file.txt
```

Numbering

Number line of a file (simple left alignment)

```
$ sed = file.txt | sed 'N;s/\n/\t/'
```

Number line of a file (number on left, right-aligned)

```
$ sed = file.txt | sed 'N; s/^/  /; s/ *\(.{6,}\)\n/\1  /'
```

Number line of file, but only print numbers if line is not blank

```
$ sed '/./=' file.txt | sed '/./N; s/\n/ /'
```

Count lines (emulates "wc -l")

```
$ sed -n '$='
```

Prepending lines

Insert text before line 5

```
$ sed '5i line number five' file.txt
```

Insert "Example: " before each line that contains "hello"

```
$ sed '/hello/i Example: ' file.txt
```

Deleting lines

Delete line 5-7 in file

```
$ sed '5,7d' file.txt
```

Delete every 2nd line starting with line 3

```
$ sed '3~2d' file.txt
```

Delete the last line in file

```
$ sed '$d' file.txt
```

Delete lines starting with "Hello"

```
$ sed '/^Hello/d' file.txt
```

Delete all empty lines

```
$ sed '/^$/d' file.txt
```

Delete lines starting with "#"

```
$ sed '/^#/d' file.txt
```

File spacing

Double space

```
$ sed G
```

Delete all blank lines and double space

```
$ sed '/^$/d;G'
```

Triple space a file

```
$ sed 'G;G'
```

Undo double-spacing

```
$ sed 'n;d'
```

Insert a blank line above line which matches "regex"

```
$ sed '/regex/{x;p;x;}'
```

Insert a blank line below line which matches "regex"

```
$ sed '/regex/G'
```

Insert a blank line around line which matches "regex"

```
$ sed '/regex/{x;p;x;G;}'
```

See also

[sed cheatsheet](#) (gist.github.com)

POPULAR

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