

grep

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- <http://www.cyberciti.biz/faq/grep-regular-expressions/>
- <https://www.ubuntupit.com/practical-grep-command-for-linux-enthusiasts/>

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```
# . (period)
> grep dev.sda /etc/fstab
/dev/sda3    /          reiserfs    noatime,ro 1 1
/dev/sda1    /boot      reiserfs    noauto,noatime,notail 1 2
/dev/sda2    swap       swap        sw 0 0
#/dev/sda4   /mnt/extra reiserfs     noatime,rw 1 1

# [ ]
> grep dev.sda[12] /etc/fstab
/dev/sda1    /boot      reiserfs    noauto,noatime,notail 1 2
/dev/sda2    swap       swap        sw 0 0

# [^12] [1,2]
> grep dev.sda[^12] /etc/fstab
/dev/sda3    /          reiserfs    noatime,ro 1 1
#/dev/sda4   /mnt/extra reiserfs     noatime,rw 1 1

# [^#]
> grep '^#' /etc/fstab

# /etc/fstab: static file system information.
#

> grep '^#.*$' /etc/fstab
# /etc/fstab: static file system information.
#
```

```
> grep 'foo$' filename
```

```
# [REDACTED]
```

```
> echo "AAA BBB ccc ddd" | grep -wE -o "(cc|BBB|ddd)"
```

```
# [REDACTED]
```

```
> grep -w "boo" myfile.txt
```

```
> grep "\<boo\>" myfile.txt
```

```
# [REDACTED] *** [REDACTED]
```

```
> grep '\*\*\*' myfile.txt
```

```
# [REDACTED] email [REDACTED]
```

```
> grep -E -o "\b[A-Za-z0-9._%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,6}\b" /path/to/data
```

```
# [REDACTED], 1-XXX-ZZZ-YYYY, XXX-ZZZ-YYYY
```

```
> grep -E '(1-)?[[:digit:]]{3}-[[:digit:]]{3}-[[:digit:]]{4}' sample.txt
```

```
# [REDACTED] IP [REDACTED]
```

```
> egrep '\b(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\. {3} (25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)' /etc/hosts
```

```
> grep -E -o "(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\. (25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\. (25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\. (25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)" /var/log/auth.log
```

```
# [REDACTED]
```

```
> grep '[vV][il][Vv][Ee][kK]' filename
```

```
> grep '[vV]ivek' filename
```

```
> grep -w '[vV]ivek[0-9]' filename
```

```
> grep 'foo[0-9][0-9]' filename
```

```
> grep '[A-Za-z]' filename
```

```
> grep [wn] filename
```

?????

```
> ????????(???????)
```

```
ls /var/log/ | grep -E "http|secure"
```

```
ls /var/log/ | grep "http|secure"
```

```
grep -Ev "^(#|;)" example.txt
```

> ??????????????

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```
cd /var/www/html
grep -r "[\[\]\{\}\|\]" *

grep -Ril "specific_text" /path/to/dir
```

> ??????????????

???????????????????? AIX ? `grep -p`

???: [grepp.awk](#)

> ??????????????????

```
# Before n lines
grep -B1 "^SQL" runstats.log

# After n lines
grep -A1 "^SQL" runstats.log

# Without separator '--'
grep -B1 --no-group-separator "^SQL" runstats.log
```

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```
CONFIG_CHECK=`grep "^# SparkleShare$" /etc/ssh/sshd_config`
if ! [ "$CONFIG_CHECK" = "# SparkleShare" ]; then
  echo "" >> /etc/ssh/sshd_config
  echo "# SparkleShare" >> /etc/ssh/sshd_config
  echo "Match User storage" >> /etc/ssh/sshd_config
  echo "  PasswordAuthentication no" >> /etc/ssh/sshd_config
fi
```

?? grep ?????? ps ?

```
↪ ps -ef | grep 'plank'                                2022-04-24 (三) 09:30:51 CST
alang      2575   2166  0 09:22 ?        00:00:02 plank
```

alang 4831 3916 0 09:30 pts/0 00:00:00 grep --color=auto plank <=====

→ ps -ef | grep '[p]lank'

20220424 (00) 09:30:55 CST

alang 2575 2166 0 09:22 ? 00:00:02 plank

Cheat Sheet

GREP CHEATSHEET

Usage

```
grep [OPTION...] PATTERNS [FILE...]  
grep [OPTION...] -e PATTERNS ... [FILE...]  
grep [OPTION...] -f PATTERN_FILE ... [FILE...]
```

Description

grep searches each FILE for PATTERNS. PATTERNS is a string that contains one or more patterns separated by newline characters, and grep prints each line that matches a pattern. When using grep in a shell command, PATTERNS should usually be quoted.

A FILE of "-" denotes standard input. If no FILE is specified, recursive searches examine the working directory, while nonrecursive searches read standard input.

Furthermore, the variant programs egrep, fgrep, and rgrep are equivalent to grep -E, grep -F, and grep -r, respectively. These variants are obsolete, but remain available for backward compatibility.

Options Examples

grep 'alias' filename	find all occurrences of a string (basic usage)
-c grep -c 'error' /var/log/syslog	count the number of matches
-e grep -e 'linux\$' filename	use regex (lines ending with 'linux')
-f grep -f pattern_file .bashrc	take PATTERNS from FILE
-i grep -i 'Alias' .bashrc	ignore case search
-l grep -l 'alias' /home/trau/*	returns files with matches
-L grep -L 'alias' /home/trau/*	returns files without matches
-r grep -r 'error' /var/log/log.txt	recursive search (within subdirs)
-v grep -v 'warning' /home/trau/log.txt	select non-matching lines
-m grep -m 3 'alias' .bashrc	limit grep Output upto 3 lines.
-n grep -n 'sudo' .bashrc	print line numbers of the matches.
-o grep -o 'search string' .bashrc	only show the matching part of the string.
-x grep -x 'linux is love' filename	match only whole lines
-w grep -w 'alias' .bashrc	match only whole words
-A grep -A 6 'error' error.log	print 6 lines after a match
-B grep -B 2 'warning' error.log	print 2 lines before a match
-C grep -C 7 'info' error.log	print 7 lines before and after a match
-E grep -E 'b(a e)g' filename	Extended regex (lines containing bag or bag)

Grep Regular Expressions

Wildcards

Wildcard	Description
.	Match any Character Except New Line
?	Match 0 or One characters
*	Match 0 or More characters
+	Match 1 or More characters

Characters

Character Class	Description
[A-Za-z]	Any lower and upper case letter.
[0-9]	Any number.
[0-9A-Za-z]	Any lower and upper case letter or digit.

BRE, ERE & PCRE

Basic Regular Expressions (BRE)

Unless they are preceded by a backslash, these characters have a special meaning in BRE: ^ \$. * { } \ .

However, unless they are preceded by a backslash, these characters have no special meaning: ? + () | ()

Extended Regular Expressions (ERE)

Unless they are escaped with a backslash, ERE gives each of these characters a unique meaning: ^ \$. * + ? [] { } | ()

Perl Compatible Regular Expressions (PCRE)

Additional anchors and character classes, lookahead/lookbehind, conditional expressions, comments, and other features are available in PCRE.

Quantifiers

Quantifier	Description
{n}	Matches exactly n times
{n,}	Matches n or More
{,n}	matches up to n (maximum)
{n,m}	Matches between n and m (Minimum, Maximum)

Posix

Posix Character Class	Description
[:alpha:]	any alphabetical character, either upper or lower case
[:alnum:]	Matches any alphanumeric character 0-9, A-Z, or a-z
[[blank]]	Matches a space or Tab character
[:digit:]	Matches a numerical digit from 0 through 9
[[lower:]]	Matches any lowercase alphabetical character a-z
[[print:]]	Matches any printable character
[[punct:]]	Matches a punctuation character
[[upper:]]	Matches any uppercase alphabetical character A-Z
[[space:]]	Matches any whitespace character: space, Tab, NL (newline), FF (formfeed), VT (vertical tab), CR (carriage return)

Position

Position	Description
^	Beginning of line.
\$	End of line.
^\$	Empty line.
\b	Start of word.
\b	End of word.



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