

Last updated Friday, Mar 13, 2020

# Linux and Unix cut command tutorial with examples

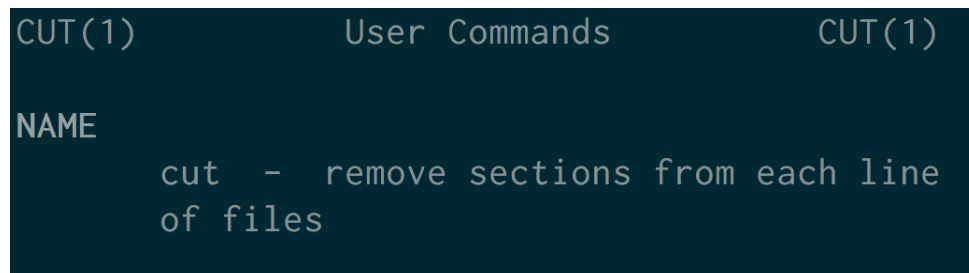
Tutorial on using cut, a UNIX and Linux command for cutting sections from each line of files. Examples of cutting by character, byte position, cutting based on delimiter and how to modify the output delimiter.

*Estimated reading time: 3 minutes*

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## What is the cut command in UNIX?

The **cut** command in UNIX is a command line utility for cutting sections from each line of files and writing the result to standard output. It can be used to cut parts of a line by byte position, character and delimiter. It can also be used to cut data from file formats like CSV.

## How to cut by byte position

To cut out a section of a line by specifying a byte position use the **-b** option.

```
echo 'baz' | cut -b 2
a
echo 'baz' | cut -b 1-2
ba
echo 'baz' | cut -b 1,3
bz
```

## How to cut by character

To cut by character use the **-c** option. This selects the characters given to the **-c** option. This can be a list of comma separated numbers, a range of numbers or a single number.

Where your input stream is character based `-c` can be a better option than selecting by bytes as often characters are more than one byte.

In the following example character '♣' is three bytes. By using the `-c` option the character can be correctly selected along with any other characters that are of interest.

```
echo '♣foobar' | cut -c 1,6
♣a
echo '♣foobar' | cut -c 1-3
♣fo
```

## How to cut based on a delimiter

To cut using a delimiter use the `-d` option. This is normally used in conjunction with the `-f` option to specify the field that should be cut.

In the following example a CSV file exists and is saved as `names.csv`.

```
John,Smith,34,London
Arthur,Evans,21,Newport
George,Jones,32,Truro
```

The delimiter can be set to a comma with `-d ','`. `cut` can then pull out the fields of interest with the `-f` flag. In the following example the first field is cut.

```
cut -d ',' -f 1 names.csv
John
Arthur
George
```

Multiple fields can be cut by passing a comma separated list.

```
cut -d ',' -f 1,4 names.csv
John,London
Arthur,Newport
George,Truro
```

## How to cut by complement pattern

To cut by complement use the `--complement` option. Note this option is not available on the BSD version of `cut`. The `--complement` option selects the *inverse* of the options passed to cut.

In the following example the `-c` option is used to select the first character. Because the `--complement` option is also passed to `cut` the second and third characters are cut.

```
echo 'foo' | cut --complement -c 1
oo
```

## How to modify the output delimiter

To modify the output delimiter use the `--output-delimiter` option. Note that this option is not available on the BSD version of `cut`. In the following example a semi-colon is converted to a space and the first, third and fourth fields are selected.

```
echo 'how;now;brown;cow' | cut -d ';' -f 1,3,4 --output-delimiter='
how brown cow
```

## Further reading

- [cut man page \(http://linux.die.net/man/1/cut\)](http://linux.die.net/man/1/cut)
- [10 Practical Linux Cut Command Examples to Select File Columns \(http://www.thegeekstuff.com/2013/06/cut-command-examples\)](http://www.thegeekstuff.com/2013/06/cut-command-examples)
- [Linux and Unix cut command \(http://www.computerhope.com/unix/ucut.htm\)](http://www.computerhope.com/unix/ucut.htm)
- [Cut Command in Unix \( Linux\) Examples \(http://www.folkstalk.com/2012/02/cut-command-in-unix-linux-examples.html\)](http://www.folkstalk.com/2012/02/cut-command-in-unix-linux-examples.html)

Have an update or suggestion for this article? [You can edit it here and send me a pull request.](https://github.com/shapedshed/shapedshed.com/edit/master/content/posts/unix-cut.md)  
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## About the author

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