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Linux Delete Folder Recursively Command

Author: Vivek Gite • Last updated: January 31, 2021 • [8 comments](#)

How do I delete folder recursively under Linux operating systems using a bash command line options?



You need to use the `rm` command to remove files or directories (also known as folders) recursively. The `rmdir` command removes only empty directories. So you need to use `rm` command to delete folder recursively under Linux.

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rm command syntax to delete directories recursively

The syntax is as follows:

Tutorial details	
Difficulty level	Easy
Root privileges	No
Requirements	None
Est. reading time	2m

```
rm -r dirName
## OR ##
rm -r folderName
## OR ##
rm -rf folderName
```

Did you know?

Everything is a file in Linux and Unix-like systems. In other words, your pictures, documents, directories/folders, SSD/hard-drives, NIC, USB devices, keyboards, printers, and some network communications all are files.

Examples that examples how to delete folder recursively

In this example, recursively delete `data` folder in the current home directory:

```
rm -r /home/vivek/data/
```

The specified `/home/vivek/data/` will first be emptied of any subdirectories including their subdirectories and files and then data directory removed. The user is prompted for removal of any write-protected files in the directories unless the `-f` (force) option is given on command line:

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```
rm -rf dirname-here
```

OR

```
rm -r -f /path/to/folder/
```

To remove a folder whose name starts with a `-`, for example `--dsaatia`, use one of these commands:

```
rm -rf -- --dsaatia
```

OR

```
rm -rf ./--dsaatia
```

We can add the `-v` option to see verbose outputs. In other words, the `rm` command will explain what is being done to our files and folders on Linux. For instance:

```
rm -rfv /path/to/dir1
rm -r -f -v /home/vivek/oldpartpics
```

Removing folders with names containing strange characters

Your folders and files may have while spaces, semicolons, backslashes and other chracters in Linux. For example:

```
ls -l
```

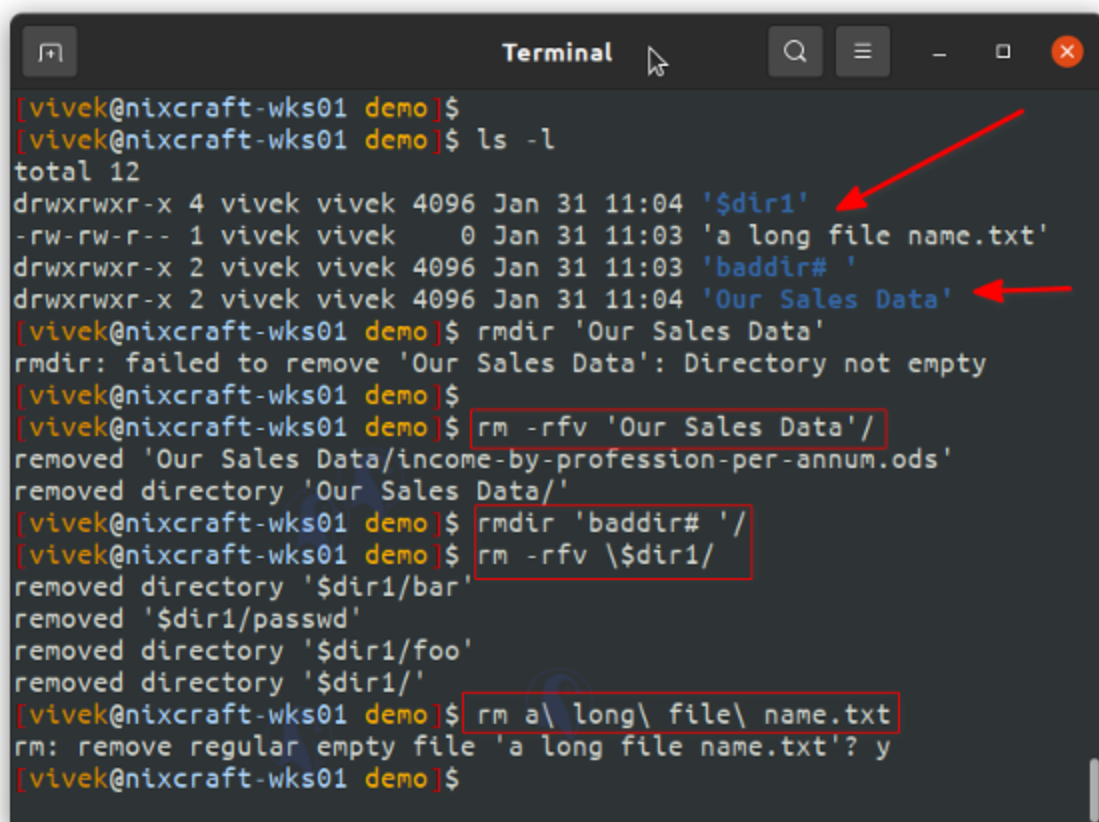
Let us say we have a folder named `"Our Sales Data"` and `"baddir#"` or `"dir2 ;#"`. So how do we delete those directories with special names containing

strange characters? The answer is simple. We try to enclose our troublesome filename or folder name in quotes. For example:

```
rm 'Our Sales Data'
rm -rfv '/path/to/Dir 1 ;'
rm -r -f -v "baddir#"
rm a\ long \dir1 \name
```

Sometimes, we need insert a backslash (`\`) before the meta-character in your filename or folder name:

```
rm \$dir1
```

A terminal window titled 'Terminal' showing a series of commands and their outputs. The user is in a directory 'demo'. They first list files with 'ls -l', showing files like '\$dir1', 'a long file name.txt', 'baddir# ', and 'Our Sales Data'. Then they try 'rmdir 'Our Sales Data'', which fails with 'Directory not empty'. Next, they use 'rm -rfv 'Our Sales Data'' which succeeds. Then they use 'rmdir 'baddir# '/ and 'rm -rfv \\$dir1/' which also succeed. Finally, they use 'rm a\ long\ file\ name.txt' to delete a file with spaces, which succeeds. Red boxes highlight the recursive deletion commands, and red arrows point to the file names in the 'ls' output.

```
[vivek@nixcraft-wks01 demo]$
[vivek@nixcraft-wks01 demo]$ ls -l
total 12
drwxrwxr-x 4 vivek vivek 4096 Jan 31 11:04 '$dir1'
-rw-rw-r-- 1 vivek vivek  0 Jan 31 11:03 'a long file name.txt'
drwxrwxr-x 2 vivek vivek 4096 Jan 31 11:03 'baddir# '
drwxrwxr-x 2 vivek vivek 4096 Jan 31 11:04 'Our Sales Data'
[vivek@nixcraft-wks01 demo]$ rmdir 'Our Sales Data'
rmdir: failed to remove 'Our Sales Data': Directory not empty
[vivek@nixcraft-wks01 demo]$
[vivek@nixcraft-wks01 demo]$ rm -rfv 'Our Sales Data/'
removed 'Our Sales Data/income-by-profession-per-annum.ods'
removed directory 'Our Sales Data/'
[vivek@nixcraft-wks01 demo]$ rmdir 'baddir# '/
[vivek@nixcraft-wks01 demo]$ rm -rfv \$dir1/
removed directory '$dir1/bar'
removed '$dir1/passwd'
removed directory '$dir1/foo'
removed directory '$dir1/'
[vivek@nixcraft-wks01 demo]$ rm a\ long\ file\ name.txt
rm: remove regular empty file 'a long file name.txt'? y
[vivek@nixcraft-wks01 demo]$
```

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Deleting folder recursively command summary

rm command options for removing dirs/folders recursively

Command and options	Description
<code>-f</code>	Forceful option. Ignore nonexistent files and arguments
<code>-r</code>	remove directories and their contents recursively
<code>-v</code>	Verbose output
<code>rm -- '-dir1'</code>	Remove a dir/file whose name starts with a '-'
<code>rm ./-dir1</code>	Same as above
<code>rm -rfv 'dir name here'</code>	Enclose your troublesome filename/folder in quotes
<code>rm -rfv \\${dirname1}</code>	Same as above

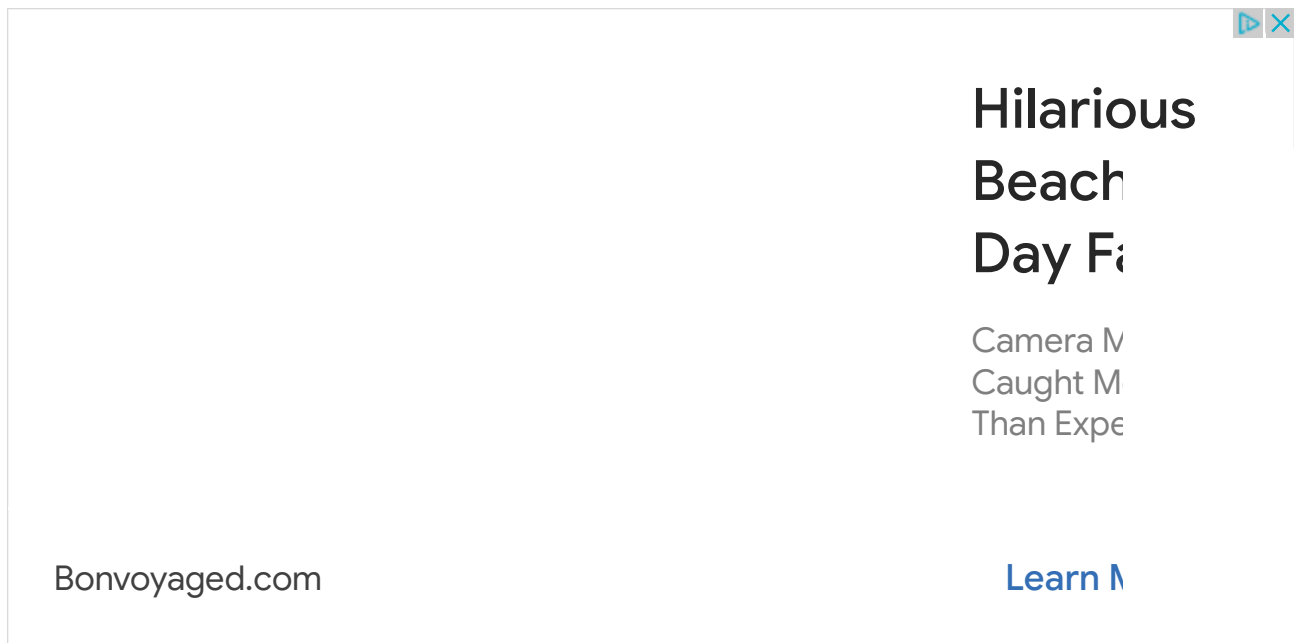
See Linux rm(1) command man page or rm command example page for more [information](#):

```
man rm
rm --help
```

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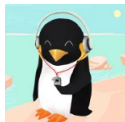
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Thota Madhu Sudhan • Mar 11, 2013 @ 18:11

What is the significance of `-r` in the code ?

```
rm -r dirname
```

what is the difference in using `-rf` and `-r` ?

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K-hole • Mar 18, 2014 @ 14:34

- `-r` :recursive
- `-f` :force (no prompt)

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WP Dev • Jan 31, 2021 @ 6:02

You can combine `-f`, `-i`, `-v` and all other such options per your needs.

we can see a list of all options by running bash command

```
rm --help
```

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tuunga • Jul 9, 2013 @ 13:42

```
# rm -r dirName
```

on centos ask every file to be deleted

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script • Jan 30, 2021 @ 22:09

you have to use “rm -rf dirName” if you not want that system ask you every file to be deleted

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Miloslav Havrda • Jan 22, 2016 @ 11:54

Thank you very much.

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Dima • Feb 10, 2016 @ 1:21

Thanks. Great article.

I have a question. How can I delete all subfolders /wp-content/cache/* in all folders in /home/ directory?

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WP Dev • Jan 31, 2021 @ 5:59

cd into /home/

```
cd /home/
```

```
ls -l
```

Then go to /wp-content/cache/:

```
cd /wp-content/cache/
```

```
rm -rfv *
```

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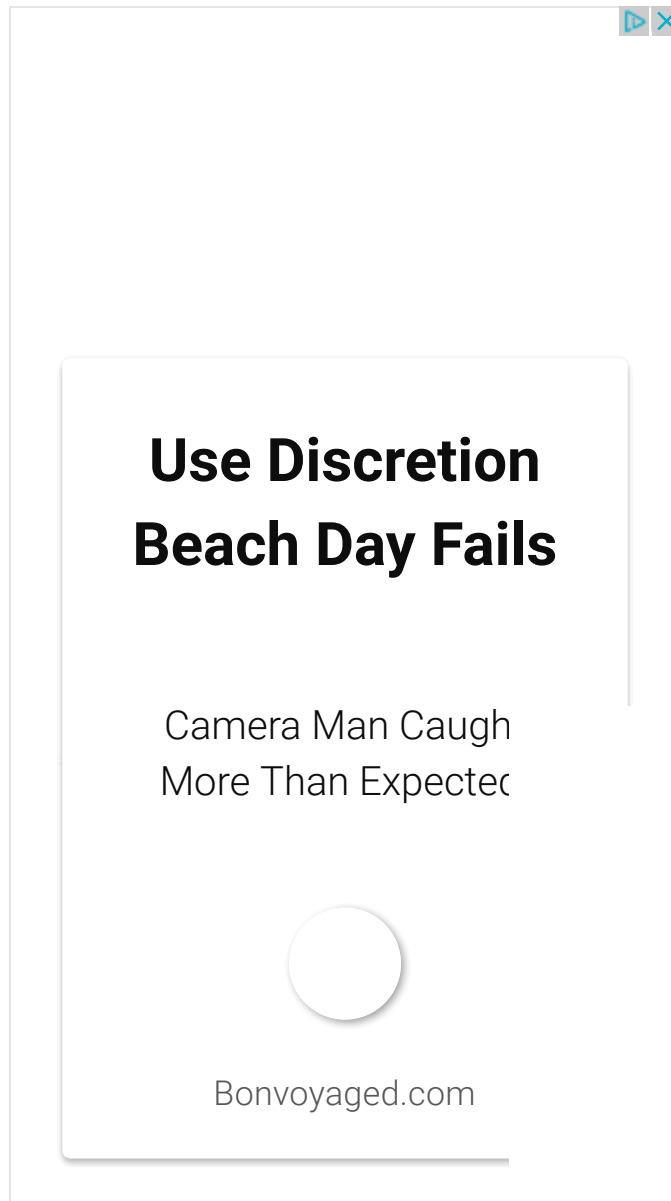
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