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How to Search Files by Name or Extension Using find Command

Aaron Kili | Last Updated: August 7, 2024 | Read Time: 3 mins | Linux Commands | 13 Comments

Many times, we find ourselves in a situation where we need to search for multiple files with different extensions, which is a common scenario for many Linux users, especially when working within the terminal.

There are several Linux utilities that we can use to locate files on the file system, but finding files with multiple extensions can sometimes prove tricky and require specific commands.

One of the many utilities for locating files on a Linux file system is the find utility. In this how-to guide, we will walk through a few examples of using **find** to help us locate multiple filenames at once.

Before we dive into the actual commands, let us look at a brief introduction to the Linux `find` utility.

Introduction to the find Command

The **find** command is a versatile tool used to search for files and directories in a Linux file system.

The simplest and most general syntax of the find utility is as follows:

```
find directory options [expression]
```

Here's a brief overview of its components:

- **directory**: The directory where you want to start the search.
- **options**: Additional parameters to refine your search.
- **expression**: Conditions to match files or directories.

Let us proceed to look at some examples of **find** command in Linux.

Searching for Multiple File Extensions

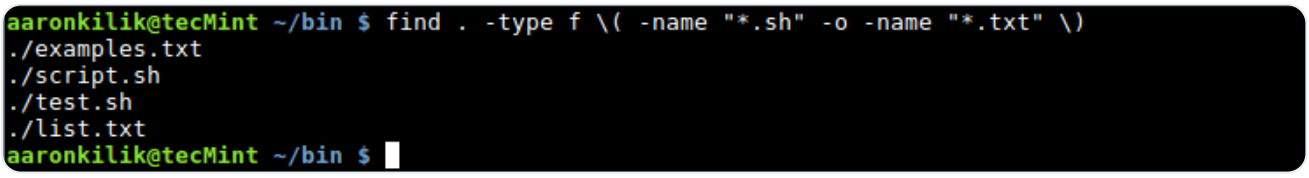
To find files with different extensions, you can use the `-name` option combined with the `-o` (OR) operator, which allows you to specify multiple patterns to match different file types.

Let's go through some examples to illustrate how this works.

Example 1: Finding .sh and .txt Files

Assuming that you want to find all files in the current directory with `.sh` and `.txt` file extensions, you can do this by running the command below:

```
find . -type f \( -name "*.sh" -o -name "*.txt" \)
```



Find .sh and .txt Extension Files in Linux

Interpretation of the command above:

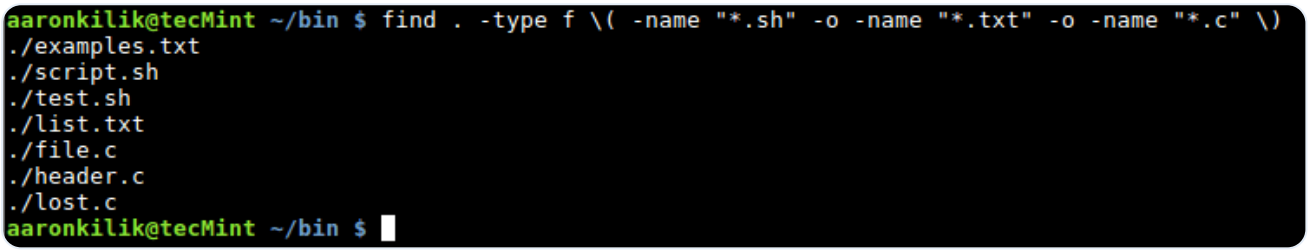
- `.` means the current directory
- `-type` option is used to specify file type and here, we are searching for regular files as represented by `f`
- `-name` option is used to specify a search pattern in this case, the file extensions
- `-o` means "OR"

It is recommended that you enclose the file extensions in a bracket, and also use the `\` (back slash) escape character as in the command.

Example 2: Finding .sh, .txt, and .c Files

To find three filenames with `.sh`, `.txt` and `.c` extensions, issues the command below:

```
find . -type f \( -name "*.sh" -o -name "*.txt" -o -name "*.c" \)
```



Find Multiple File Extensions in Linux

Example 3: Finding .png, .jpg, .deb, and .pdf Files

Here is another example where we search for files with `.png`, `.jpg`, `.deb` and `.pdf` extensions:

```
find /home/aaronkilik/Documents/ -type f \( -name "*.png" -o -name "*.jpg"
```

```
aaronkilik@tecMint ~ $ find /home/aaronkilik/Documents/ -type f \( -name "*.png" -o -name "*.jpg"
-o -name "*.deb" -o -name ".pdf" \)
/home/aaronkilik/Documents/sudo.png
/home/aaronkilik/Documents/festival3.jpg
/home/aaronkilik/Documents/true.jpg
/home/aaronkilik/Documents/keyboard.jpg
/home/aaronkilik/Documents/programmers.jpg
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```

Find More than 3 File Extensions in Linux

Example 4: Using Wildcards to find

You can also use wildcards to match patterns. For instance, to find all files with `.log`, `.txt`, or `.cfg` extensions:

```
find /var/log/ -type f \( -name "*.log" -o -name "*.txt" -o -name "*.cfg" \
```

Example 5: Finding Files with Complex Patterns

Suppose you want to find files that end with `.tar.gz` or `.zip`:

```
find /path/to/search/ -type f \( -name "*.tar.gz" -o -name "*.zip" \)
```

When you critically observe all the commands above, the little trick is using the `-o` option in the find command, it enables you to add more filenames to the search array, and also know the filenames or file extensions you are searching for.

Conclusion

In this guide, we have explored how to use the find command to search for files with multiple extensions. By using the `-name` option in combination with the `-o` operator, you can easily locate files that match various patterns in a single command.

To dive deeper into the **find** command and its many capabilities, you can refer to the find manual page by typing `man find` in your terminal.

```
man find
```

Feel free to experiment with these commands and adapt them to your specific needs!

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Aaron Kili

Aaron Kili is a Linux and F.O.S.S enthusiast, an upcoming Linux SysAdmin, web developer, and currently a content creator for TecMint who loves working with computers and strongly believes in sharing knowledge.

Each tutorial at TecMint is created by a team of experienced Linux system administrators so that it meets our high-quality *standards.*

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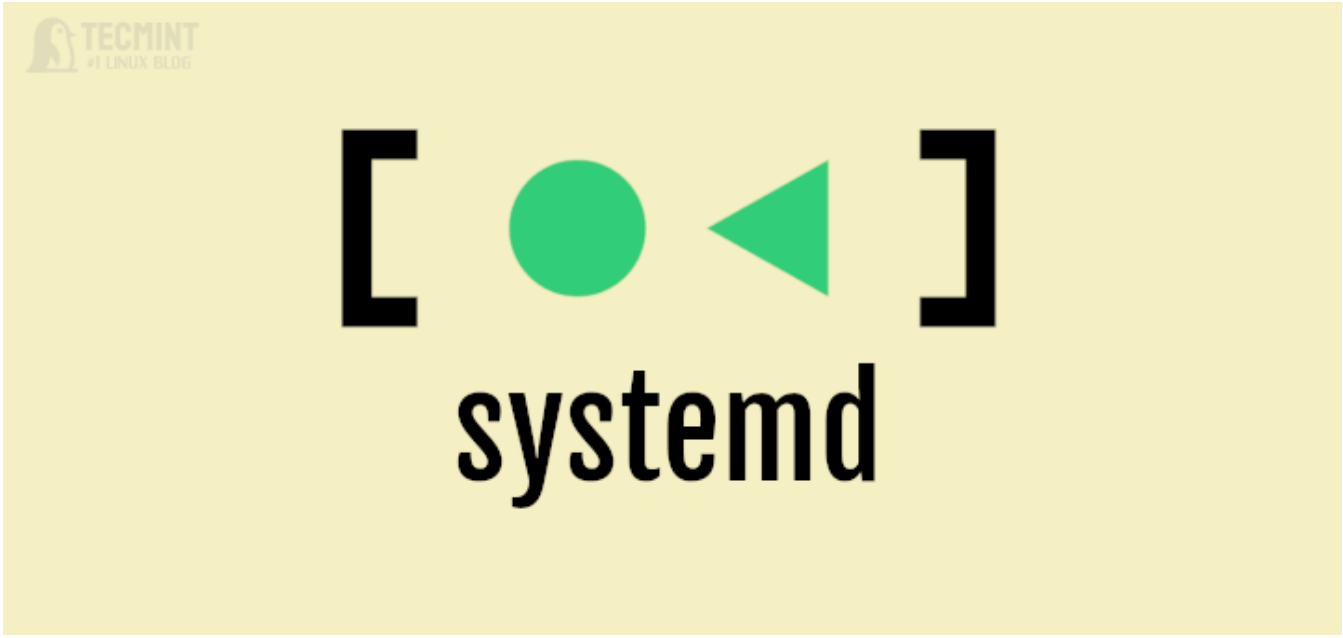

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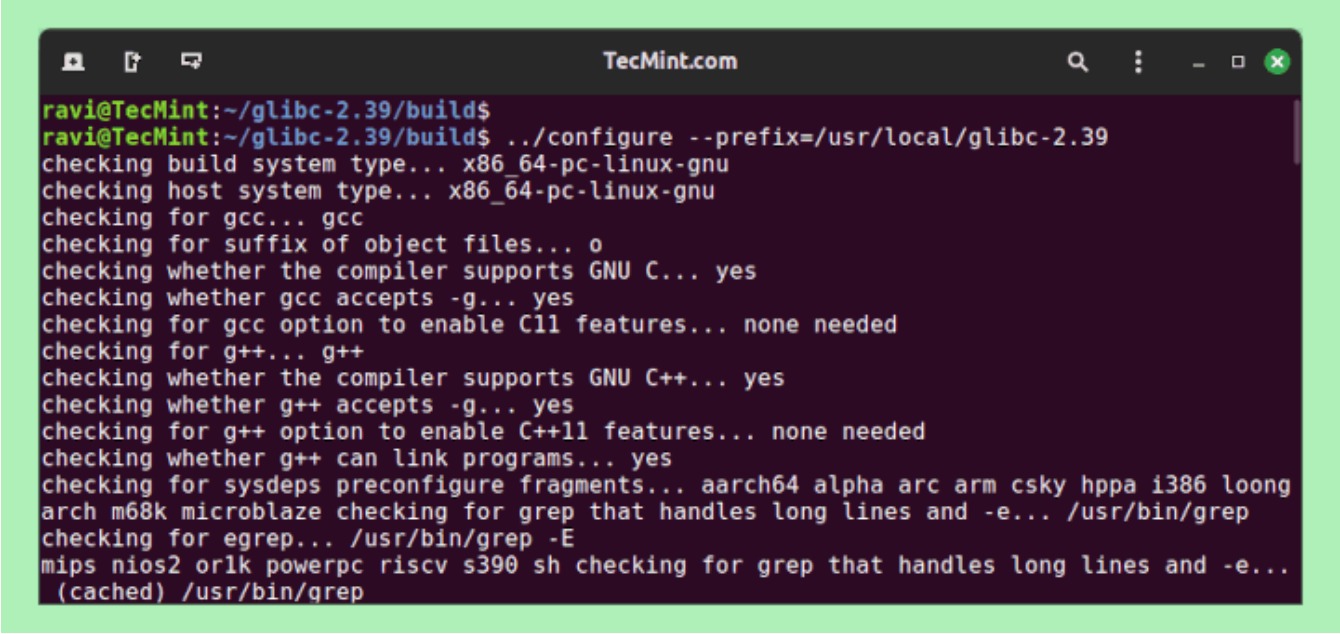

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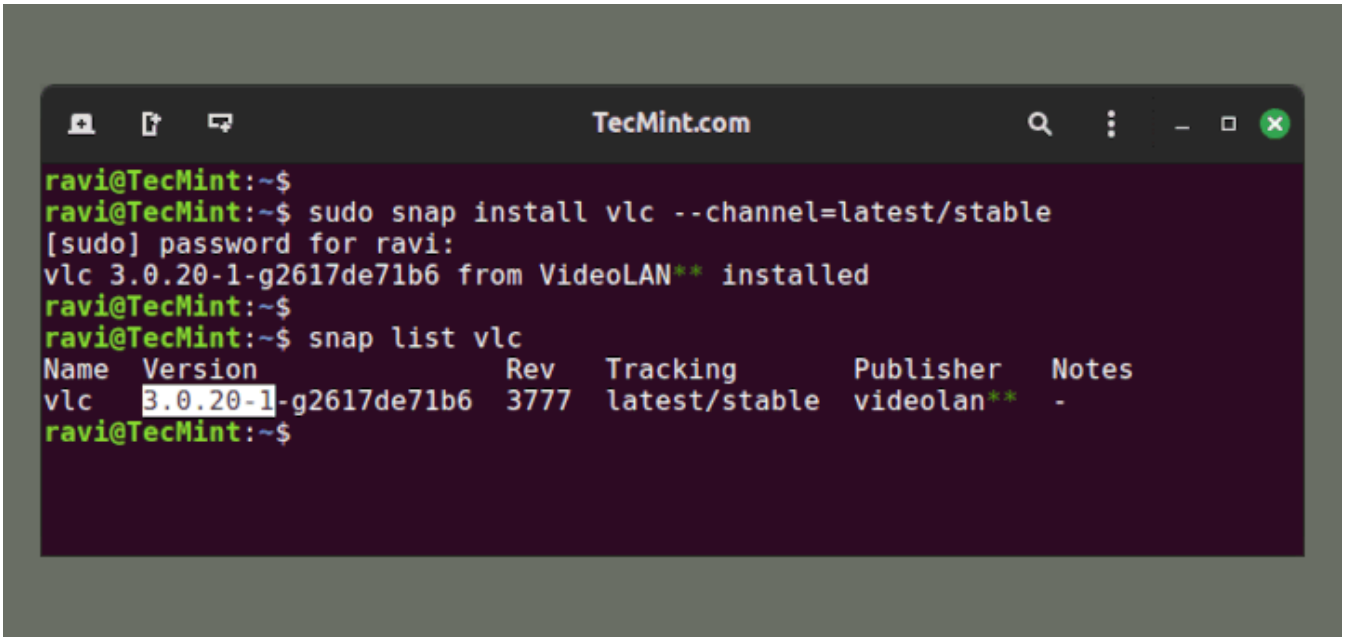

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tyson

March 6, 2020 at 11:59 am

Very helpful post, it helped me to remove malicious files from 20 WordPress sites, it was hard to find and manually delete them.

Reply

Aaron Kili

March 9, 2020 at 2:04 pm

@tyson

We are glad that this guide helped you. Thanks for the feedback.

Reply

sudarshan

January 15, 2019 at 6:14 pm

copying alternate lines from file to specified directory

Reply

Anusha

December 4, 2018 at 12:59 pm

How to find all `.cpp` files which consist of sub string shares in the file name?

Reply

Karl

June 16, 2018 at 12:54 am

Ravi,

Thanks for sharing.

How to use the find command to search for a file with a range of dates?

Reply

Aaron Kili

December 5, 2018 at 9:37 am

@Karl

You can use a similar command like this:

```
$ find . -newerct "1 Dec 2018" ! -newerct "4 Dec 2018" -ls
```

For more information, see the find man page.

Reply

anonymous

November 16, 2016 at 5:35 am

You can pipe the output of **find** to **egrep**:

```
# find . -type f | egrep -i "[.]sh$|[.]txt$"
```

Reply

Aaron Kili

January 2, 2018 at 11:20 am

@anonymous

Useful tip, thanks for sharing.

Reply

vlad

July 22, 2016 at 1:37 pm

ls *.ext1 *.ext2

seems to be way simpler.

Reply

Aaron Kili K

July 22, 2016 at 4:44 pm

@vlad

That works but it may not be efficient and reliable enough for the job, especially when you want to search in several locations.

Reply

Surya

January 1, 2018 at 2:54 pm

"ls" works only for current directory content listing. It won't search files recursively in any sub directories if available. So, we need to use find command only which will search in sub-directories also.

Reply

libreman

July 21, 2016 at 1:53 am

Another way is using `-regextype` and `-iregex` switch, fore example:

```
$ find . -regextype posix-egrep -iregex '.*\.(xml|txt)$' -type f
```

The above command find all files with **xml** or **txt** extension.

Reply

Admin

Ravi Saive

July 21, 2016 at 12:38 pm

@Libreman,

Thanks for the great tip, If find it really very useful commandline trick to achieve the same results, hope it will be useful to others..

Reply

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