How To Find a File In Linux From the Command Line

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Locate Linux Files by Their Name or Extension

Type *find* into the command line to track down a particular file by its name or extension. If you want to look for *.err files in the /home/username/ directory and all sub-directories, try this:

`find /home/username/ -name "*.err"`

Typical Linux *Find* Commands and Syntax

find command expressions look like this:

`find command options starting/path expression`

Let's break down a Linux find command where we don't just want Linux find file by name:

`find -O3 -L /var/www/ -name "*.html"`

It enables the top-level optimization (-O3) and permits *find* to follow symbolic links (-L). The *find* command in Linux searches through the whole directory hierarchy under /var/www/ for files that have .html on the end.

Basic Examples

1. `find . -name thisfile.txt`

If you need to know how to find a file in Linux called thisfile.txt, it will look for it in current and sub-directories.

2. `find /home -name *.jpg`

Look for all .jpg files in the /home and directories below it.

3. `find . -type f -empty`

Look for an empty file inside the current directory.

4. `find /home -user randomperson-mtime 6 -iname ".db"`

Look for all .db files (ignoring text case) that have been changed in the preceding 6 days by a user called *randomperson*.

Options and Optimization for *Find* Command for Linux

find is configured to ignore symbolic links (shortcut files) by default. If you'd like the*find* command to follow and show symbolic links, just add the -L option to the command, as we did in this example.

find can help Linux find file by name. The Linux*find* command enhances its approach to filtering so that performance is optimised. The user can find a file in Linux by selecting three stages of optimisation-*O1, -O2,* and *-O3. -O1* is the standard setting and it causes *find* to filter according to filename before it runs any other tests.

-O2 filters by name and type of file before carrying on with more demanding filters to find a file in Linux. Level -O3 reorders all tests according to their relative expense and how likely they are to succeed.

- `-O1` – (Default) filter based on file name first
- `-O2` – File name first, then file-type
- `-O3` – Allow find to automatically re-order the search based on efficient use of resources and likelihood of success
- `-maxdepth X` – Search this directory along with all sub-directories to a level of X
- `-iname` – Search while ignoring text case.
- `-not` – Only produce results that don't match the test case

- `-type f` – Look for files
- `-type d` – Look for directories

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