

NAME

`tree` – list contents of directories in a tree-like format.

SYNOPSIS

tree [-acdfghilnpqrstuvxACDFQNSUX] [-L *level* [-R]] [-H *baseHREF*] [-T *title*] [-o *filename*] [--no-links] [-P *pattern*] [-I *pattern*] [--inodes] [--device] [--noreport] [--dirsfirst] [--version] [--help] [--file-limit #] [--si] [--prune] [--du] [--timefmt *format*] [--matchdirs] [--fromfile] [--] [*directory* ...]

DESCRIPTION

Tree is a recursive directory listing program that produces a depth indented listing of files, which is colored ala *dircolors* if the **LS_COLORS** environment variable is set and output is to tty. With no arguments, *tree* lists the files in the current directory. When directory arguments are given, *tree* lists all the files and/or directories found in the given directories each in turn. Upon completion of listing all files/directories found, *tree* returns the total number of files and/or directories listed.

By default, when a symbolic link is encountered, the path that the symbolic link refers to is printed after the name of the link in the format:

name -> real-path

If the **-I** option is given and the symbolic link refers to an actual directory, then *tree* will follow the path of the symbolic link as if it were a real directory.

OPTIONS

Tree understands the following command line switches:

LISTING OPTIONS

- a** All files are printed. By default *tree* does not print hidden files (those beginning with a dot '.'). In no event does *tree* print the file system constructs '.' (current directory) and '..' (previous directory).
- d** List directories only.
- l** Follows symbolic links if they point to directories, as if they were directories. Symbolic links that will result in recursion are avoided when detected.
- f** Prints the full path prefix for each file.
- x** Stay on the current file-system only. Ala **find -xdev**.
- L *level***
Max display depth of the directory tree.
- R** Recursively cross down the tree each *level* directories (see **-L** option), and at each of them execute **tree** again adding '-o 00Tree.html' as a new option.
- P *pattern***
List only those files that match the wild-card *pattern*. Note: you must use the **-a** option to also consider those files beginning with a dot '.' for matching. Valid wildcard operators are '*' (any zero or more characters), '?' (any single character), '['...''] (any single character listed between brackets (optional - (dash) for character range may be used: ex: [A-Z]), and '['^...']' (any single character not listed in brackets) and '|' separates alternate patterns.
- I *pattern***
Do not list those files that match the wild-card *pattern*.
- ignore-case**
If a match pattern is specified by the **-P** or **-I** option, this will cause the pattern to match without regards to the case of each letter.

--matchdirs

If a match pattern is specified by the **-P** option, this will cause the pattern to be applied to directory names (in addition to filenames). In the event of a match on the directory name, matching is disabled for the directory's contents. If the **--prune** option is used, empty folders that match the pattern will not be pruned.

--prune

Makes tree prune empty directories from the output, useful when used in conjunction with **-P** or **-I**. See **BUGS AND NOTES** below for more information on this option.

--noreport

Omits printing of the file and directory report at the end of the tree listing.

--charset *charset*

Set the character set to use when outputting HTML and for line drawing.

--filelimit *#*

Do not descend directories that contain more than *#* entries.

--timefmt *format*

Prints (implies **-D**) and formats the date according to the format string which uses the **strftime(3)** syntax.

-o *filename*

Send output to *filename*.

FILE OPTIONS

- q** Print non-printable characters in filenames as question marks instead of the default.
- N** Print non-printable characters as is instead of as escaped octal numbers.
- Q** Quote the names of files in double quotes.
- p** Print the file type and permissions for each file (as per **ls -l**).
- u** Print the username, or UID *#* if no username is available, of the file.
- g** Print the group name, or GID *#* if no group name is available, of the file.
- s** Print the size of each file in bytes along with the name.
- h** Print the size of each file but in a more human readable way, e.g. appending a size letter for kilobytes (K), megabytes (M), gigabytes (G), terabytes (T), petabytes (P) and exabytes (E).
- si** Like **-h** but use SI units (powers of 1000) instead.
- du** For each directory report its size as the accumulation of sizes of all its files and sub-directories (and their files, and so on). The total amount of used space is also given in the final report (like the **'du -c'** command.) This option requires tree to read the entire directory tree before emitting it, see **BUGS AND NOTES** below. Implies **-s**.
- D** Print the date of the last modification time or if **-c** is used, the last status change time for the file listed.
- F** Append a **'/'** for directories, a **'=**' for socket files, a **'***' for executable files, a **'>**' for doors (Solaris) and a **'|'** for FIFO's, as per **ls -F**
- inodes**
Prints the inode number of the file or directory
- device**
Prints the device number to which the file or directory belongs

SORTING OPTIONS

- v** Sort the output by version.
- t** Sort the output by last modification time instead of alphabetically.

- c** Sort the output by last status change instead of alphabetically. Modifies the **-D** option (if used) to print the last status change instead of modification time.
- U** Do not sort. Lists files in directory order. Disables **--dirsfirst**.
- r** Sort the output in reverse order. This is a meta-sort that alter the above sorts. This option is disabled when **-U** is used.
- dirsfirst**
List directories before files. This is a meta-sort that alters the above sorts. This option is disabled when **-U** is used.
- sort[=]type**
Sort the output by *type* instead of name. Possible values are: **ctime (-c)**, **mtime (-t)**, **size**, or **version (-v)**.

GRAPHICS OPTIONS

- i** Makes tree not print the indentation lines, useful when used in conjunction with the **-f** option. Also removes as much whitespace as possible when used with the **-J** or **-x** options.
- A** Turn on ANSI line graphics hack when printing the indentation lines.
- S** Turn on CP437 line graphics (useful when using Linux console mode fonts). This option is now equivalent to `--charset=IBM437` and may eventually be depreciated.
- n** Turn colorization off always, over-ridden by the **-C** option.
- C** Turn colorization on always, using built-in color defaults if the `LS_COLORS` or `TREE_COLORS` environment variables are not set. Useful to colorize output to a pipe.

XML/JSON/HTML OPTIONS

- X** Turn on XML output. Outputs the directory tree as an XML formatted file.
- J** Turn on JSON output. Outputs the directory tree as an JSON formatted array.
- H *baseHREF***
Turn on HTML output, including HTTP references. Useful for ftp sites. *baseHREF* gives the base ftp location when using HTML output. That is, the local directory may be `/local/ftp/pub`, but it must be referenced as `'ftp://hostname.organization.domain/pub'` (*baseHREF* should be `'ftp://hostname.organization.domain'`). Hint: don't use ANSI lines with this option, and don't give more than one directory in the directory list. If you wish to use colors via CSS style-sheet, use the **-C** option in addition to this option to force color output.
- T *title*** Sets the title and H1 header string in HTML output mode.
- nolinks**
Turns off hyperlinks in HTML output.

INPUT OPTIONS

- fromfile** Reads a directory listing from a file rather than the file-system. Paths provided on the command line are files to read from rather than directories to search. The dot (.) directory indicates that tree should read paths from standard input.

MISC OPTIONS

- help** Outputs a verbose usage listing.
- version**
Outputs the version of tree.
- Option processing terminator. No further options will be processed after this.

FILES

- `/etc/DIR_COLORS` System color database.
- `~/.dircolors` Users color database.

ENVIRONMENT

LS_COLORS	Color information created by <code>dircolors</code>
TREE_COLORS	Uses this for color information over <code>LS_COLORS</code> if it is set.
TREE_CHARSET	Character set for tree to use in HTML mode.
CLICOLOR	Enables colorization even if <code>TREE_COLORS</code> or <code>LS_COLORS</code> is not set.
CLICOLOR_FORCE	Always enables colorization (effectively <code>-C</code>)
LC_CTYPE	Locale for filename output.
LC_TIME	Locale for timefmt output, see <code>strftime(3)</code> .
TZ	Timezone for timefmt output, see <code>strftime(3)</code> .

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BUGS AND NOTES

Tree does not prune "empty" directories when the `-P` and `-I` options are used by default. Use the `--prune` option.

The `-h` and `--si` options round to the nearest whole number unlike the `ls` implementations which rounds up always.

Pruning files and directories with the `-I`, `-P` and `--filelimit` options will lead to incorrect file/directory count reports.

The `--prune` and `--du` options cause tree to accumulate the entire tree in memory before emitting it. For large directory trees this can cause a significant delay in output and the use of large amounts of memory.

The timefmt expansion buffer is limited to a ridiculously large 255 characters. Output of time strings longer than this will be undefined, but are guaranteed to not exceed 255 characters.

XML/JSON trees are not colored, which is a bit of a shame.

Probably more.

SEE ALSO

`dircolors(1)`, `ls(1)`, `find(1)`, `du(1)`, `strftime(3)`