NAME

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

SYNOPSIS

tree [**-acdfghilnpqrstuvxACDFJQNSUX**] [**-L** *level* [**-R**]] [**-H** *baseHREF*] [**-T** *title*] [**-o** *filename*] [**-P** *pattern*] [**-I** *pattern*] [**--gitignore**] [**--matchdirs**] [**--metafirst**] [**--ignore-case**] [**--nolinks**] [**--inodes**] [**--device**] [**--sort**[**=**]*name*] [**--dirsfirst**] [**--filesfirst**] [**--filelimit** *#*] [**--si**] [**--du**] [**--prune**] [**--timefmt**[**=**]*format*] [**--fromfile**] [**--info**] [**--noreport**] [**--version**] [**--help**] [**--**] [*directory* ...]

DESCRIPTION

Tree is a recursive directory listing program that produces a depth indented listing of files, which is colorized 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 '**-l**' 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*. You may have multiple -P options. 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 zero or more characters as well as null /'s, i.e. /**/ may match a single /), '?' (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 'l' separates alternate patterns. A '/' at the end of the pattern matches directories, but not files.

-I *pattern*
Do not list those files that match the wild-card *pattern*. You may have multiple -I options. See *-P* above for information on wildcard patterns.

--gitignore
Uses git **.gitignore** files for filtering files and directories. Also uses **$GIT_DIR/info/exclude** if present.

--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.

--metafirst
Print the meta-data information at the beginning of the line rather than after the indentation lines.

--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.

--info Prints file comments found in .info files. See **.INFO FILES** below for more information on the format of .info files.

--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.

--filesfirst
List files before directories. 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, however overrides CLICOLOR_FORCE if present.

-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 a 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. NOTE: this is only suitable for reading the output of a program such as find, not 'tree -fi' as symlinks cannot (at least as yet) be distinguished from files that simply contain ' -> ' as part of the filename.

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.

.INFO FILES

.info files are similiar to .gitignore files, if a .info file is found while scanning a directory it is read and added to a stack of .info information. Each file is composed of comments (lines starting with hash marks (#),) or wild-card patterns which may match a file relative to the directory the .info file is found in. If a file should match a pattern, the tab indented comment that follows the pattern is used as the file comment. A comment is terminated by a non-tab indented line. Multiple patterns, each to a line, may share the same comment.

FILES

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

.gitignore	Git exclusion file
$GIT_DIR/info/exclude	Global git file exclusion list
.info	File comment file
/usr/share/finfo/global_info	Global file comment file

ENVIRONMENT

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

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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.

As of version 2.0.0, in Linux, tree will attempt to automatically output a compact JSON tree on file descriptor 3 (what I call stddata,) if present. It is hoped that some day a better Linux/Unix shell may take advantage of this feature, though BSON would probably be a better format for this.

SEE ALSO

dircolors(1), **ls**(1), **find**(1), **du**(1), **strftime**(3) **gitignore**(5)