

NAME

pdftex – PDF output from TeX

SYNOPSIS

pdftex [*options*] [**&format**] [*file**commands*]

DESCRIPTION

Run the pdf \TeX typesetter on *file*, usually creating *file.pdf*. If the file argument has no extension, ".tex" will be appended to it. Instead of a filename, a set of pdf \TeX commands can be given, the first of which must start with a backslash. With a **&format** argument pdf \TeX uses a different set of precompiled commands, contained in *format.fmt*; it is usually better to use the **-fmt format** option instead.

pdf \TeX is a version of \TeX , with the e- \TeX extensions, that can create *PDF* files as well as *DVI* files.

In *DVI* mode, pdf \TeX can be used as a complete replacement for the \TeX engine.

The typical use of pdf \TeX is with a pregenerated formats for which PDF output has been enabled. The **pdftex** command uses the equivalent of the plain \TeX format, and the **pdfflatex** command uses the equivalent of the L^A \TeX format. To generate formats, use the **-ini** switch.

The **pdfninitex** and **pdfvirtex** commands are pdf \TeX 's analogues to the **initex** and **virtex** commands. In this installation, if the links exist, they are symbolic links to the **pdftex** executable.

In *PDF* mode, pdf \TeX can natively handle the *PDF*, *JPG*, *JBIG2*, and *PNG* graphics formats. pdf \TeX cannot include PostScript or Encapsulated PostScript (EPS) graphics files; first convert them to PDF using **epstopdf(1)**. pdf \TeX 's handling of its command-line arguments is similar to that of of the other \TeX programs in the *web2c* implementation.

OPTIONS

This version of pdf \TeX understands the following command line options.

-draftmode

Sets \pdfdraftmode so pdf \TeX doesn't write a PDF and doesn't read any included images, thus speeding up execution.

-enc Enable the enc \TeX extensions. This option is only effective in combination with **-ini**. For documentation of the enc \TeX extensions see <http://www.olsak.net/encTex.html>.

-etex Enable the e- \TeX extensions. This option is only effective in combination with **-ini**. See **etex(1)**.

-file-line-error

Print error messages in the form *file:line:error* which is similar to the way many compilers format them.

-no-file-line-error

Disable printing error messages in the *file:line:error* style.

-file-line-error-style

This is the old name of the **-file-line-error** option.

-fmt format

Use *format* as the name of the format to be used, instead of the name by which pdf \TeX was called or a %& line.

- halt-on-error**
Exit with an error code when an error is encountered during processing.
- help** Print help message and exit.
- ini** Start in *INI* mode, which is used to dump formats. The *INI* mode can be used for typesetting, but no format is preloaded, and basic initializations like setting catcodes may be required.
- interaction** *mode*
Sets the interaction mode. The mode can be either *batchmode*, *nonstopmode*, *scrollmode*, and *errorstopmode*. The meaning of these modes is the same as that of the corresponding `\commands`.
- ipc** Send DVI or PDF output to a socket as well as the usual output file. Whether this option is available is the choice of the installer.
- ipc-start**
As **-ipc**, and starts the server at the other end as well. Whether this option is available is the choice of the installer.
- jobname** *name*
Use *name* for the job name, instead of deriving it from the name of the input file.
- kpathsea-debug** *bitmask*
Sets path searching debugging flags according to the bitmask. See the *Kpathsea* manual for details.
- mktex** *fnt*
Enable `mktex` *fnt*, where *fnt* must be either *tex* or *tfm*.
- mltex** Enable ML \TeX extensions. Only effective in combination with **-ini**.
- no-mktex** *fnt*
Disable `mktex` *fnt*, where *fnt* must be either *tex* or *tfm*.
- output-comment** *string*
In *DVI* mode, use *string* for the *DVI* file comment instead of the date. This option is ignored in *PDF* mode.
- output-directory** *directory*
Write output files in *directory* instead of the current directory. Look up input files in *directory* first, then along the normal search path.
- output-format** *format*
Set the output format mode, where *format* must be either *pdf* or *dvi*. This also influences the set of graphics formats understood by pdf \TeX .
- parse-first-line**
If the first line of the main input file begins with `%&` parse it to look for a dump name or a **-translate-file** option.
- no-parse-first-line**
Disable parsing of the first line of the main input file.
- progname** *name*
Pretend to be program *name*. This affects both the format used and the search paths.

-recorder

Enable the filename recorder. This leaves a trace of the files opened for input and output in a file with extension *.fls*.

-shell-escape

Enable the `\write18{command}` construct. The *command* can be any shell command. This construct is normally disallowed for security reasons.

-no-shell-escape

Disable the `\write18{command}` construct, even if it is enabled in the *texmf.cnf* file.

-src-specials

In *DVI* mode, insert source specials into the *DVI* file. This option is ignored in *PDF* mode.

-src-specials where

In *DVI* mode, insert source specials in certain places of the *DVI* file. *where* is a comma-separated value list: *cr*, *display*, *hbox*, *math*, *par*, *parent*, or *vbox*. This option is ignored in *PDF* mode.

-translate-file tcxname

Use the *tcxname* translation table to set the mapping of input characters and re-mapping of output characters.

-default-translate-file tcxname

Like **-translate-file** except that a `%&` line can overrule this setting.

-version

Print version information and exit.

ENVIRONMENT

See the Kpathsea library documentation (e.g., the ‘Path specifications’ node) for precise details of how the environment variables are used. The **kpsewhich** utility can be used to query the values of the variables.

One caveat: In most pdf \TeX formats, you cannot use `~` in a filename you give directly to pdf \TeX , because `~` is an active character, and hence is expanded, not taken as part of the filename. Other programs, such as Metafont, do not have this problem.

TEXMFOUTPUT

Normally, pdf \TeX puts its output files in the current directory. If any output file cannot be opened there, it tries to open it in the directory specified in the environment variable `TEXMFOUTPUT`. There is no default value for that variable. For example, if you say *pdftex paper* and the current directory is not writable and `TEXMFOUTPUT` has the value */tmp*, pdf \TeX attempts to create */tmp/paper.log* (and */tmp/paper.pdf*, if any output is produced.) `TEXMFOUTPUT` is also checked for input files, as \TeX often generates files that need to be subsequently read; for input, no suffixes (such as “.tex”) are added by default, the input name is simply checked as given.

TEXINPUTS

Search path for `\input` and `\openin` files. This should start with “.”, so that user files are found before system files. An empty path component will be replaced with the paths defined in the *texmf.cnf* file. For example, set `TEXINPUTS` to “./home/user/tex:” to prepend the current directory and “/home/user/tex” to the standard search path.

TEXFORMATS

Search path for format files.

TEXEDIT

Command template for switching to editor. The default, usually `vi`, is set when pdf \TeX is compiled.

TFMFORMATS

Search path for font metric (*.tfm*) files.

SOURCE_DATE_EPOCH

If set, its value, taken to be in epoch-seconds, will be used for the timestamps in the PDF output, such as the `CreationDate` and `ModDate` keys. This is useful for making reproducible builds.

FORCE_SOURCE_DATE

If set to the value "1", the time-related \TeX primitives (`\year`, `\month`, `\day`, `\time`) are also initialized from the value of `SOURCE_DATE_EPOCH`. This is not recommended if there is any viable alternative.

pdf \TeX also has several primitives to support reproducible builds, which are preferable to setting these environment variables; see the main manual.

Many, many more environment variables may be consulted related to path searching. See the *Kpathsea* manual.

FILES

The location of the files mentioned below varies from system to system. Use the `kpsewhich` utility to find their locations.

pdftex.map

Font name mapping definitions.

**.tfm* Metric files for pdf \TeX 's fonts.

**.fmt* Predigested pdf \TeX format (*.fmt*) files.

NOTES

Starting with version 1.40, pdf \TeX incorporates the e- \TeX extensions, and pdf $e\TeX$ is just a copy of pdf \TeX . See `etex(1)`. This manual page is not meant to be exhaustive. The complete documentation for this version of pdf \TeX can be found in the *pdf \TeX manual* and the info manual *Web2C: A TeX implementation*.

BUGS

This version of pdf \TeX fails to trap arithmetic overflow when dimensions are added or subtracted. Cases where this occurs are rare, but when it does the generated *DVI* file will be invalid. Whether a generated *PDF* file would be usable is unknown.

AVAILABILITY

pdf \TeX is available for a large variety of machine architectures and operating systems. pdf \TeX is part of all major \TeX distributions.

The pdf \TeX home page: <http://www.pdfTeX.org>.

pdf \TeX on CTAN: <http://www.ctan.org/pkg/pdftex>.

pdf \TeX mailing list for all discussion: <http://lists.tug.org/pdftex>.

SEE ALSO

The full pdf \TeX manual can be accessed from the home page or CTAN page. Same for the Web2C, Kpathsea, and other manuals. Some related programs: **epstopdf(1)**, **etex(1)**, **latex(1)**, **luatex(1)**, **mptopdf(1)**, **tex(1)**, **mf(1)**.

AUTHORS

The primary authors of pdf \TeX are Han The Thanh, Petr Sojka, Jiri Zlatuska, and Peter Breitenlohner (e \TeX).

\TeX was designed by Donald E. Knuth, who implemented it using his WEB system for Pascal programs. It was ported to Unix at Stanford by Howard Trickey, and at Cornell by Pavel Curtis. The version now offered with the Unix \TeX distribution is that generated by the WEB to C system (**web2c**), originally written by Tomas Rokicki and Tim Morgan.

The enc \TeX extensions were written by Petr Olsak.