

Script runtexfile

—
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1 Introduction

The Lua program `runtexfile` parses an \LaTeX -document for lines starting with `%! HV`. The «HV» has no meaning, it should only be a significant marker for the command lines. Such lines can define commands which will be executed by `runtexfile`. These lines must be at the beginning of the document. Only empty lines before will be ignored. `runtexfile` will stop parsing for commands if a line without a preceding `%! HV` is found. If there is no such line, it runs by default `lualatex`.

1.1 Syntax

The syntax is `runtexfile [...] <file>` where `[...]` are optional arguments, either in short or long form which, of course, can be mixed:

```
runtexfile [-h,--help] [-v,--verbose] [-V,--version ] filename
```

Every executed command gets an own logfile `runtexfile-?.log` in which the question mark is the number of the corresponding command line in the document. This allows to locate any problem in the several external runs. With the option `-v` (verbose) a short logfile which lists more or less only the important steps from within the script is `runtexfile.log`.

All \LaTeX commands are startet with the option

```
--interaction=nonstopmode
```

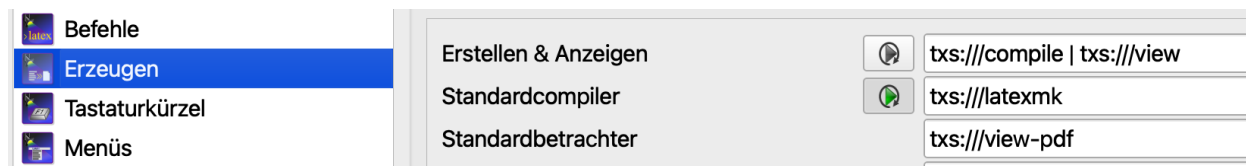
The supported \LaTeX -commands are

```
local commands = {"lualatex", "luatex", "luahbtex", "latex", "pdflatex",  
                  "xelatex", "xetex" }
```

This is not really of interest, because it is only needed for the decision to use the option `--interaction=nonstopmode` or not. It is only valid for any run depending to a \LaTeX -program. The optional filename `<file>` must always be used if the current command expects another filename (see example for multiple index files).

1.2 \TeX studio

For \TeX studio use as default compiler `latexmk` and simply replace the name by `runtexfile` (see last line in the second image):



| Befehle | | |
|-------------------------|-------------------------|--|
| Erzeugen | Externer PDF-Betrachter | open %.pdf > /dev/null |
| Tastaturkürzel | DviPs | dvips -o %.ps %.dvi |
| Menüs | DviPng | dvipng -T tight -D 120 %.dvi |
| Symbolleisten | Ps2Pdf | ps2pdf -dALLOWPSTRANS PareNCY -dNoSafer %.ps |
| GUI-Skalierung | DviPdf | dvipdfmx %.dvi |
| Editor | BibTeX | bibtex %.aux |
| Erweiterter Editor | BibTeX 8-Bit | bibtex8 %.aux |
| Syntaxhervorhebung | Biber | biber % |
| Vervollständigung | Makeindex | makeindex %.idx |
| Sprache prüfen | Texindy | texindy %.idx |
| Vorschau | Xindex | xindex -k %.idx |
| Interner PDF-Betrachter | Makeglossaries | makeglossaries % |
| SVN/GIT | MetaPost | mpost -interaction=nonstopmode ?me) |
| | Asymptote | asy ?m*.asy |
| | Ghostscript | gs "?am.ps" |
| | Latexmk | runtexfile ?m |

2 examples

2.1 This document

The header looks like

```

Command lines for this document

%! HV luatex
%! HV biber
%! HV xindex
%! HV luatex
%! HV luatex

%% .11462025 07 1907 38 43
%
\listfiles\setcounter{errorcontextlines}{100}
\documentclass[paper=a4,fontsize=11pt,DIV=14,parskip=half-,
               captions=tableabove,twoside=on]{scrartcl}
\usepackage{fontspec}
[...]
```

In this case no extra filename is needed, running `runtexfile runtexfile-doc` is sufficient. More complex is the header of example `test2`:

2.2 Document test

This document uses package `imakeidx` which itself runs the index commands. (Beccari and Gregorio 2016)

Example test

```
%! HV luatex --shell-escape
%! HV biber <test.aux>
%! HV luatex --shell-escape
%! HV luatex --shell-escape

%% The index files are run by imakeidx
[...]
```

The filename for biber is not really needed, because it also works with the main filename.

2.3 Document test2

A more complex example:

Example test2

```
%! HV luatex --shell-escape
%! HV biber
%! HV luatex --shell-escape
%! HV xindex
%! HV xindex --config DIN2 -l DE -o test2.vwd <test2.vwx>
%! HV xindex --config DIN2 -l DE -o test2.dbd <test2.dbx>
%! HV luatex --shell-escape
%! HV luatex --shell-escape
```

There is an optional argument for luatex and options with another filename for two of the three xindex runs. (Voß 2025)

References

Beccari, Claudio and Enrico Gregorio (Oct. 15, 2016). *The imakeidx package. A package for producing multiple indexes*. Version 1.3e. URL: <https://ctan.org/pkg/imakeidx>.

Voß, Herbert (Jan. 28, 2025). *The xindex package. Unicode-compatible index generation*. Version 0.64. URL: <https://ctan.org/pkg/xindex>.

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