

ABOUT TEXSHOP 2.45

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1. THIS DOCUMENT

If you are a new TeXShop user, you can skip this document and begin using the program.

The default behavior of TeXShop can be modified in two ways: by making Preference changes, and by editing files in `~/Library/TeXShop`. Here `~/Library` is the Library folder in your home directory.

New versions of TeXShop generally do not change these user modifications because users don't like changes made behind their backs. But sometimes, new features require a few modifications. This paper explains what to do.

In the future, please read this document when you upgrade. Each release of TeXShop will contain a new version.

2. CHANGES IN 2.45 RELATED TO SHELL ESCAPE

It is very important that users make the two changes listed first. You may want to read this entire section before making the changes, but here are instructions when you are ready:

- Go to TeXShop Preferences and select the Engine tab. Press both “Default” buttons in the pdfTeX section of the pane in the middle of the left side.
- Go to the Library folder in your home directory. In this Library folder, there is a TeXShop folder containing several subfolders. Inside TeXShop/New/Templates is a template named “LatexTemplate.tex”. Move this to TeXShop/Templates, overwriting the old template with the same name. If you edited this old template, you'll need to merge your changes with the changes from the new version.

The key feature of TeXShop 2.45 (and TeXShop 3.10) is removal of the “-shell-escape” flag for the pdfTeX and pdfLaTeX engines. This flag gives TeX permission to call other programs during typesetting. Unfortunately, the flag allows *any* shell program to be run, including for instance a short command which erases everything in your home folder. So when the flag is set, you could download a TeX file from a malicious web site, typeset it, and lose all of your files.

Pushing the two “Default” buttons in Preferences removes the flags.

Why was this flag activated in previous versions of TeXShop? A primary reason is that many users have old documents containing eps illustrations. While pdfTeX and pdfLaTeX can accept illustrations in many formats, including pdf, jpg, and png, they cannot accept eps illustrations. But the *epstopdf* package can call Ghostscript during typesetting and automatically convert eps illustrations to pdf illustrations. The flag gave pdfTeX permission to call Ghostscript.

Two years ago, the TeX Live distribution made this easier and safer. A new “restricted shell escape” command was added to T_EX giving T_EX permission to call a carefully limited list of programs during typesetting, including Ghostscript. Then the *graphicx* package was modified to automatically convert eps illustrations to pdf format during typesetting, without explicitly including epstopdf. This means that old projects with eps illustrations will automatically typeset with pdf_latex, provided the source includes the *graphicx* package.

At the time of these changes, we did not remove “-shell-escape” because it was still needed to convert tiff files to png format automatically during typesetting. This conversion is done by `/usr/bin/convert`, a program from ImageMagick which is installed as part of MacTeX. Unfortunately, TeX Live could not add convert to the restricted shell escape list because in the Windows world there is a program with this name which can do dangerous things. Also we knew that tex4ht, which can be used to typeset T_EX source and output html pages, calls convert.

Recently, we discovered that while the tex4ht *script* calls convert, the convert program is not called by the pdf_latex portion of the script. So the flag is not needed for tex4ht.

TeXShop 2.45 contains a new command in the File menu called “Convert tiff.” This item is active when a TeX source window is active. Selecting the item brings up a dialog listing all files and folders in the directory containing the source file. Only tiff files are active in this dialog; others are grayed out. Multiple items can be chosen in the dialog. Pushing the “Convert” button at the bottom of the dialog will create png versions of all selected tif or tiff illustrations.

The *Convert tiff* dialog could be strengthened in the future to provide other graphic conversions, if there is sufficient demand.

The new Latex Template removes the inclusion of epstopdf because it is no longer necessary, and removes code to automatically convert tiff files to png using *convert* because it will not run without “-shell-escape” and has been replaced with the new TeXShop menu command.

3. OTHER CHANGES IN 2.44 AND 2.45

The purpose of TeXShop 2.45 is to bring to the Series 2 versions of TeXShop most features of the Series 3 versions of TeXShop that do not require Lion. Version 2.44 was not widely distributed.

Currently, there are two primary forms of TeXShop, the series 2.** releases for Tiger, Leopard, and Snow Leopard and the series 3.** releases for Lion and Mountain Lion. The Sparkle update system will only upgrade TeXShop 2.** to later 2.** releases and will only upgrade TeXShop 3.** to later 3.** releases. It will never upgrade, say, TeXShop 2.45 to TeXShop 3.10.

We list here changes which may require user intervention.

The pdfflatexmk engine is now active by default for new users. Older users can activate it by finding “pdfflatexmk.engine” in `~/Library/TeXShop/Engines/Inactive/Latexmk` and dragging it to `~/Library/TeXShop/Engines`.

Previously TeXShop provided two ways to create projects governed by a master root file with several include files. The earlier method used a menu command *Create Project Root*. The later more powerful method involves adding “% !TEX root = ...” to the first few lines of included files. This is the preferred method.

We have removed the menu item *Create Project Root*. Old projects using this mechanism will still typeset correctly, but new projects should use the “% !TEX root = ...” syntax instead.

The folder `~/Library/TeXShop/CommandCompletion` has a new subfolder named *Gratzer-MathCC*. This folder contains an optional `CommandCompletion.txt` file with additional completions by George Gratzer, useful when typesetting mathematics. It also contains documentation by Gratzer and Herbert Shultz about these extensions.

To obtain the folder, move it from `~/Library/TeXShop/New/CommandCompletion` to `~/Library/TeXShop/CommandCompletion`. To activate the new completions, move `CommandCompletion.txt` from the new folder up a level to the main `CommandCompletion` folder, replacing the similarly named file there now.

4. CHANGES IN 2.42 AND 2.43

There are revised engines in `~/Library/TeXShop/Engines/Inactive` for ConTeXt running on top of LuaTeX, XeTeX, and pdfTeX. In particular, the ConTeXt (LuaTeX) engine is now a default engine, replacing ConTeXt-MKIV in previous versions of TeXShop. Drag this file from `~/Library/TeXShop/Engines/Inactive/ConTeXt` to `~/Library/TeXShop/Engines`.

5. CHANGES IN 2.41

The only change is an updated Command Completion.pdf document and various French translations of the documents. Find these documents in

`~/Library/TeXShop/New/CommandCompletion`

and move them to

`~/Library/TeXShop/CommandCompletion`

6. CHANGES IN 2.40

If you already have 2.39, no changes are needed for 2.40.

7. CHANGES IN 2.39

One new item is provided for `~/Library/TeXShop/CommandCompletion`: a French translation of Herbert Schulz's documentation named `Complement2011.pdf`. Find this item in

`~/Library/TeXShop/New/CommandCompletion`

and move it to

`~/Library/TeXShop/CommandCompletion`

8. CHANGES IN 2.38

Three new items are provided for `~/Library/TeXShop/CommandCompletion`: a revised document *Command Completion for TeXShop.pdf* and two folders named `IndentedCC` and `Quick Start Guide for Command Completion`. Find these three items in

`~/Library/TeXShop/New/CommandCompletion`

and move them to

`~/Library/TeXShop/CommandCompletion`

The documentation in `~/Library/TeXShop/Engines/Inactive` has been revised, but the revised version is installed automatically, so no action is needed when upgrading. According to the revised documentation, users of the ConTeXt-MKIV engine must run the following command ONCE in Terminal before the engine will work:

```
luatools --generate
```

9. CHANGES IN 2.35, 2.36, AND 2.37

If you already have 2.36, no changes are needed for 2.37.

If you already have 2.34 and are upgrading to 2.37, read this section and ignore everything else. The only significant change is that there is a new active engine: ConTeXt-MKIV. This is the version of ConTeXt running on top of LuaTeX.

Find the ConTeXt-MKIV.engine in `~/Library/TeXShop/Engines/Inactive/ConTeXt`. Drag or copy it to `~/Library/TeXShop/Engines`. Done.

10. CHANGES IN 2.34

If you already have 2.33 and are upgrading to 2.34, read this section and ignore everything else. The only significant change is that there is a new active engine: LuaLaTeX. That is because LuaLaTeX, under development for several years, has reached the stage in TeX Live 2010 when it can be used for serious work. TeX Live 2010 will be released shortly.

Find LuaLaTeX.engine in `~/Library/TeXShop/Engines/Inactive/LuaTeX`. Drag or copy it to `~/Library/TeXShop/Engines`. Done.

11. PREFERENCE CHANGES; NO NEW CHANGES AFTER 2.30

TeXShop 2.30 can find errors in projects governed by a root document. When the user selects “Goto Error,” the source file containing the error is opened and the line with the error is highlighted. TeXShop finds errors by parsing the console output. In the default operation of TeX, the console error message does not identify the source file, but this can be changed if TeX is run with the “file-line-error” flag. Therefore, the following Preference changes are needed under the Engine tab. If you modified TeXShop’s defaults earlier, for instance by omitting the shell-escape flag, modify the suggestions below appropriately.

Under the engine tab, the pdfTeX item should be

```
pdftex --file-line-error --shell-escape --synctex=1
```

the pdfLaTeX item should be

```
pdflatex --file-line-error --shell-escape --synctex=1
```

the TeX item for TeX + dvips + distiller should be

```
simpdftex etex --maxpfb --extratexopts "-file-line-error -synctex=1"
```

and the corresponding Latex item should be

```
simpdftex latex --maxpfb --extratexopts "-file-line-error -synctex=1"
```

12. A REFRESHER COURSE; NO ACTION REQUIRED

TeXShop creates a folder `~/Library/TeXShop` containing several subfolders. One of these folders is named “Templates”; it contains templates for various kinds of TeX documents. I’ll use that folder as an example, although it has not changed recently. Users can edit these templates, add templates of their own, and throw away inappropriate templates. TeXShop displays these templates in a pulldown menu on the source toolbar; users select a template to insert its source code in their document.

When TeXShop is upgraded, there might be new versions of the default templates, but it would certainly be inappropriate to reach into the user’s carefully edited Templates folder and change its contents. Therefore, TeXShop upgrades install the new templates in `~/TeXShop/New`. Users can examine them at their leisure and activate ones they like by moving those to `~/TeXShop/Templates`.

For the record, there is a way to obtain the exact contents of `~/Library/Templates` as seen by a brand new user. To get it, quit TeXShop and move the entire Templates folder to the desktop. Then restart TeXShop. When it discovers that the Templates folder is completely missing, TeXShop replaces it with a new default copy. The same mechanism works with any subfolder of `~/Library/TeXShop`. However, this drastic action should almost never be necessary because of changes introduced in TeXShop 2.33.

13. A SLIGHT UPGRADE CHANGE FROM 2.33 ONWARD

In the past, upgrades did not modify any folder in `~/Library/TeXShop`. Starting with TeXShop 2.33, three folders are touched: `bin`, `Engines/Inactive`, and `Scripts`. Extra files added to those folders by users are left unchanged, but default TeXShop files are replaced by new versions and new default TeXShop files are added. Note that active Engine files are not changed because they don’t live in the Inactives folder.

These changes make upgrading engines much easier. Support files are automatically upgraded, so users only need to upgrade by hand the actual engine files, which seldom change.

14. EASY STEPS FOR SOME USERS

Some TeXShop users have never edited files in `~/Library/TeXShop`, except perhaps to modify the default Templates, have never added new Macros to the Macro menu, have never added new Engines, and have never used Command Completion or at least never added words to the Completion Dictionary. These users can complete the upgrade easily. Quit TeXShop, open `~/Library/TeXShop`, and move the following three folders to the desktop: `CommandCompletion`, `Macros`, `Keyboard`. Then restart TeXShop. Done. But it might be nice to keep the old desktop copies of these folders for a few days in case you made a modification you had forgotten, and find that TeXShop’s behavior has changed.

15. NEW AND IMPROVED ENGINES

In version 2.30, Nicola Vitacolonna made beautiful new engines for metapost and metafun, To obtain these engines, move nv-metafun.engine and nv-metapost.engine from

`~/Library/TeXShop/Engines/Inactive/Metapost`

to `~/Library/TeXShop/Engines`.

The XeTeX and XeLaTeX engines have been modified to contain the file-line-error flag. To obtain these new versions, move XeTeX.engine and XeLaTeX.engine from

`~/Library/TeXShop/Engines/Inactive/XeTeX`

to `~/Library/TeXShop/Engines`, replacing the older versions there now.

In 2.31 there is a new Sage engine by Dan Drake. If you used the old Sage engine, you will need to switch to the new one because SageTeX is now included in Sage. Because there are several changes in SageTeX, you need to read “About Sage” in

`~/Library/TeXShop/Engines/Inactive/Sage`

for important details.

The latexmk engines maintained by Herbert Schulz are upgraded regularly. Schulz has modified these engines and their support files so that in the future upgrades will occur automatically without user action. But users must make one change in 2.32 to switch to the new files; if this change is not made, the old latexmk from TeXShop 2.30 will stay in place and continue working.

Changing is easy for most users. Latexmk comes with six engine files, located in

`~/Library/TeXShop/Engines/Inactive/Latexmk`

Drag new versions of those which you use from this location to `~/Library/TeXShop/Engines`, replacing the older versions there now. Done.

A small number of users may have edited support files for latexmk that used to be in `~/Library/TeXShop/bin`. These edited versions will remain unchanged in this location, but new support files are now provided in `~/Library/TeXShop/bin/tslatexmk`. In the new latexmk, these support files should not be edited because they will be upgraded by TeXShop upgrades. Instead, Schulz has provided a mechanism to add personal changes to a new editable file. Read the documentation in

`~/Library/TeXShop/Engines/Inactive/Latexmk`

to see how this is done. It is only necessary to take action if you edited the previous support files.

16. MACROS; NO NEW CHANGES AFTER 2.30

Alan Munn provided a wonderful new macro named “Paste Spreadsheet Cells.” Using his macro, you can copy cells from a spreadsheet and paste these cells, embedded in appropriate TeX code, into your source. To obtain the macro, go to

```
~/Library/TeXShop/New/Macros
```

and copy the file `PasteSpreadsheetCells.plist` to the desktop. Then open TeXShop and in the Macro menu select “Open Macro Editor.” Select the “Add macros from file...” item in this menu, navigate to the desktop copy of `PasteSpreadsheetCells.plist`, and choose it. A new “Paste Spreadsheet Cells” macro will be added to your Macro list. If you desire, drag it to a different spot in the list, and then hit the Save button.

17. KEYBOARD SHORTCUTS; NO NEW CHANGES AFTER 2.31

TeXShop has the ability to remap Keyboard Shortcuts. This feature was activated by only a few users, and stopped working some time ago because the file controlling it contained comments within comments, which is illegal in xml. If you modified Keyboard Shortcuts in the past, copy the file

```
~/Library/TeXShop/Menus/KeyEquivalents.plist
```

to the desktop. Then in all cases find the file

```
~/Library/TeXShop/New/Menus/KeyEquivalents.plist
```

and move it to the folder

```
~/Library/TeXShop/Menus
```

overwriting the old file. The new file is only an template explaining how to make changes, but the changes it makes are commented out. In the unlikely event that you edited the old `KeyEquivalents.plist`, merge in your changes from the desktop copy.

18. COMMAND COMPLETION CHANGES IN 2.31

TeXShop has Command Completion. Type the beginning of a command and hit the Escape key. TeXShop will complete the command. If several completions are possible, hit Escape several times to cycle between them. The list of known completions is stored in `~/Library/TeXShop/CommandCompletion` and can be edited within TeXShop.

This facility has been expanded by Herbert Schulz in version 2.30. To use his additions, you need a new `CommandCompletion` file. If you modified the default `Command Completions` sometime in the past, copy the file

```
~/Library/TeXShop/CommandCompletion/CommandCompletion.txt
```


to the desktop. Then in all cases find the file

```
~/Library/TeXShop/New/CommandCompletion/CommandCompletion.txt
```

and move it to the folder

```
~/Library/TeXShop/CommandCompletion
```

overwriting the old file. If you modified the old file, you must edit `CommandCompletions.txt` with TeXShop or TextEdit and merge in your changes from the desktop copy.

19. DOCUMENTATION CHANGES IN 2.30

The “Paste Spreadsheet Cells” macro by Alan Munn is documented in TeXShop Help under Macros Help, Default Applescript Macros.

Herbert Schulz’s extensions to Command Completion are explained in a short paper he wrote, which can be found in `~/Library/TeXShop/New/CommandCompletion`.

Nicola Vitacolonna’s new engines for MetaPost, `nv-metafun` and `nv-metapost`, are explained in his ReadMe in `~/Library/TeXShop/Engines/Inactive/MetaPost`. This folder also contains a folder of examples.