

TUG-TEXLIVE-2013

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1. TEXLIVE-2013

This is the portion of the TUG documentation which deals with making the TeXLive-2013 and TeXLive-2013-DVD packages. This is the key component of the build directory.

Warning: It is important that the folders in which packages are built live on the hard disk rather than an external disk. Building constructs folders named “root” which are copies of material to be installed. This root folder and its contents are often owned by root. But material on an external drive is owned by the user instead.

A clean package file will contain

- Files “buildPackage.sh”, “buildPackageDVD.sh”, and “signPackages.sh
- Files “background.jpg”, “License.rtf”, “ReadMe.rtf”, and “Welcome.rtf”
- A folder named DVD containing analogous files “background.jpg”, “License.rtf”, “ReadMe.rtf”, and “Welcome.rtf”
- This DVD folder also contains a subfolder named scripts containing files “Description.rtf”, “postinstall”, “setloginpath”, “setmanpath”, “texdist”, “TeXDist-description.rtf”, “TeXDistVersion”, “TeXManPath”, and “TeXPath”. The DVD/scripts folder also has a subfolder named PrefPane containing a file, “Info.plist”, and the “TeX Distribution” preference pane
- Later on, as the package is built, the DVD directory will contain two additional files, “texlive.profile” and “texlivea4.profile”
- In the main folder, there is another “PreferencePane” folder containing a file, “Info.plist”, and the “TeX Distribution” preference pane. This folder also contains the source code for the Preference Pane.
- The main folder also has a scripts folder containing files “Description.rtf”, “postinstall”, “setloginpath”, “setmanpath”, “texdist”, “TeXDist-description.rtf”, “TeXDistVersion”, “TeXManPath”, and “TeXPath”. The scripts folder also has a subfolder named PrefPane containing a file, “Info.plist”, and the “TeX Distribution” preference pane

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- Two project files for PackageMaker, TeXLiveBuild and TeXLiveDVDBuild
- “TUG” folder with this document
- “xzDVD” folder, used to make an xz file with the package to submit to TUG; this file contains the xz Universal Binary and an xzscript
- A folder named “OldStyle” containing a few files needed to make a legacy version of TeXLive-2013-DVD.pkg.

2. UPDATING FOR A NEW YEAR

To update the two packages for a new year, edit “buildPackage.sh”, and “buildPackageDVD.sh” to reflect the new package names, which contain the year.

Also edit the License.rtf, ReadMe.rtf, and Welcome.rtf files both at the root level of the folder and inside the DVD folder.

Edit the two postflight scripts appropriately, mainly by changing the year. For instance, to change from 2010 to 2013, use Search and Replace to change the many, many occurrences of 2010 to 2013 in these files.

3. CREATING THE TWO PACKAGES

Now comes the central step. Issue the commands

```
cd /usr
sudo mv local local-temp
```

Then make sure local configuration files for TeX Live are disabled, perhaps by writing

```
cd
cd Library
mv texmf texmfold
rm -R texlive
```

Then install TeX Live 2013 using the tlpptest material. To do that, make a directory named texlive2013pretest and then

```
cd
cd texlive2013pretest
rsync -a --delete --exclude="mactex*" ftp.math.utah.edu::texlive/tlpptest .
```

The last line here obtains a copy from the utah mirror site for pretest releases. If time is of the essence, but not otherwise, download directly from the tug home site:

```
cd
cd texlive2013pretest
rsync -a --delete --exclude="mactex*" ftp.tug.org::texlive/tlpretest .
```

It is important to wait until the new binaries for OS X have been submitted and installed in the tlpretest site.

Then install TeX Live from the svn directory by

```
TEXLIVE_INSTALL_NO_CONTEXT_CACHE=1
export TEXLIVE_INSTALL_NO_CONTEXT_CACHE
cd
cd texlive2013/Master
sudo env TEXLIVE_INSTALL_NO_CONTEXT_CACHE=$TEXLIVE_INSTALL_NO_CONTEXT_CACHE \\\
./install-tl
```

The install script will present a short menu of configuration options. Modify defaults as follows:

- Use the “B” option to select both universal-darwin and x86_64-darwin binaries.
- Use the “D” option to change some directories:
 - Use the “5”, TEXMFVAR, option to select


```
~/Library/texlive/2013/texmf-var
```
 - Use the “6”, TEXMFCONFIG, option to select


```
~/Library/texlive/2013/texmf-config
```
 - Use the “7”, TEXMFHOME, option to select


```
~/Library/texmf
```
- Use the “O” option to select “use letter size instead of A4 by default”

Then start installation.

When installation is complete, switch the default tlmgr repository to the final value using the command (assuming that the TeXLive-2013 install package is made on an Intel system)

```
sudo /usr/local/texlive/2013/bin/universal-darwin/tlmgr option repository \
http://mirror.ctan.org/systems/texlive/tlnet
```

When installation is complete, go to

```
/usr/local/texlive/2013/tlpkg
```

and copy the file `texlive.profile` to the DVD build directory inside this TeXLive-2013 build folder, replacing the current copy of `texlive.profile` there. This profile will be added to the DVD install package, to be used when TeX Live is installed from the independent copy on the TUG DVD.

In addition, duplicate `texlive.profile` in the DVD directory, calling the new copy `texlivea4.profile`. Then edit this new file, changing “option.letter 1” to “option.letter 0” near the end of the file.

After these steps, the final TeXLive directories “root” and “rootDVD” can be built, using the commands:

```
sudo sh buildPackage.sh
sudo sh buildPackageDVD.sh
```

Finally

```
cd
cd /usr
sudo rm -R local
sudo mv local-temp local
```

These root and rootDVD files are all that are needed to make MacTeX. But if desired, you can optionally build install packages for TeXLive-2013 and TeXLive-2013-DVD, as described below.

4. MAKING THE OLD STYLE TEXLIVE-2013-DVD.PKG

Change directory to OldStyle and issue the command

```
sudo sh buildOldPackage.sh
```

5. MAKING THE XZ FILE

This step is optional, and will only be useful if Karl wants a copy of the TeXLive-2013-DVD install script, which is highly unlikely.

Put `TeXLive-2013-DVD.mpkg` in the `xzDVD` folder. Then create the `xz` file using the command

```
sh xzscript
```

6. BUILDING TEXLIVE-2013 WITH PACKAGEMAKER

Every step from this point on is optional; there is little point in doing any of these steps, and some consume a lot of computer time.

This step is optional if making MacTeX. It builds an install package for TeXLive.

Edit TeXLiveBuild, the Packagemaker project file, using the GUI interface, as follows.

- (1) Click the top item on the left. The right side will change to a view with three tabs. First select the Configuration tab. Edit so
 - (a) Title: TeXLive-2013
 - (b) User Sees: Easy Install Only
 - (c) Install Destination: System volume
 - (d) Certificate: Leave this blank. You might think that putting a certificate name here would correctly sign the package, but experiments show that it does not. The package needs to be signed after it is constructed.
 - (e) Description: Empty
- (2) The Requirements and Actions tab entries for the top item can be left blank
- (3) Click the entry TeXLive-2013 in the Contents section on the left. The right side will change to a view with two tabs. Select the Configuration tab. Edit so
 - (a) Choice Name: TeXLive-2013
 - (b) Identifier: choice1
 - (c) Initial State: Selected and Enabled
 - (d) Destination: Leave Blank
 - (e) Tooltip: Leave Blank
 - (f) Description: Leave Blank
- (4) The Requirements tab entries for this contents item can be left blank
- (5) Open the TeXLive-2013 entry in the bottom left column. This item should show an “texlive” directory, obtained by dragging root/usr/local/texlive to the left column. The right side will change to a view with four tabs. It is not necessary to edit the items under the Contents or Components tabs. The items under the Configuration tab should be edited as follows:
 - (a) Install: root/usr/local/texlive (The item on the right should have selected “Relative To Project”)

- (b) Destination: /usr/local (The item on the right should have selected “Relative To Project”)
- (c) Do not check “Allow custom location”
- (d) Patch: No patch root selected
- (e) Package Identifier: org.tug.mactex.texlive2013
- (f) Package Version: 1.0
- (g) Restart Action: None
- (h) Check “Require admin authentication”
- (i) PackageLocation: Self-Contained

The items under the Scripts tab should be edited to read

- (a) Scripts directory: scripts (The item on the right should have selected “Relative To Project”)
- (b) Preinstall: Leave Blank
- (c) Postinstall: scripts/postinstall (The item on the right should have selected “Relative To Project”)

After verifying all these items, build the install package by clicking the “Build” icon. When asked to select a name, choose “TeXLive-2013-Temp”.

7. BUILDING TEXLIVE-2013-DVD WITH PACKAGEMAKER

This step is optional if making MacTeX. It builds an install package for TeXLive-DVD.

Edit TeXLiveDVDBuild, the Packagemaker project file, using the GUI interface, as follows.

- (1) Click the top item on the left. The right side will change to a view with three tabs. First select the Configuration tab. Edit so
 - (a) Title: TeXLive-2013-DVD
 - (b) User Sees: Easy Install Only
 - (c) Install Destination: System volume
 - (d) Certificate: Leave this blank. You might think that putting a certificate name here would correctly sign the package, but experiments show that it does not. The package needs to be signed after it is constructed.
 - (e) Description: Empty
- (2) The Requirements and Actions tab entries for the top item can be left blank
- (3) Click the entry TeXLive-2013-DVD in the Contents section on the left. The right side will change to a view with two tabs. Select the Configuration tab. Edit so
 - (a) Choice Name: TeXLive-2013-DVD
 - (b) Identifier: choice1
 - (c) Initial State: Selected and Enabled
 - (d) Destination: Leave Blank
 - (e) Tooltip: Leave Blank
 - (f) Description: Leave Blank
- (4) The Requirements tab entries for this contents item can be left blank
- (5) Open the TeXLive-2013-DVD entry in the bottom left column. This item should show an “local” directory, obtained by dragging rootDVD/usr/local to the left column. The right side will change to a view with four tabs. It is not necessary to edit the items under the Contents or Components tabs. The items under the Configuration tab should be edited as follows:
 - (a) Install: rootDVD/usr/local (The item on the right should have selected “Relative To Project”)
 - (b) Destination: /usr/local (The item on the right should have selected “Relative To Project”)

- (c) Do not check “Allow custom location”
- (d) Patch: No patch root selected
- (e) Package Identifier: org.tug.mactex.texlive2013-dvd
- (f) Package Version: 1.0
- (g) Restart Action: None
- (h) Check “Require admin authentication”
- (i) PackageLocation: Self-Contained

The items under the Scripts tab should be edited to read

- (a) Scripts directory: DVD/scripts (The item on the right should have selected “Relative To Project”)
- (b) Preinstall: Leave Blank
- (c) Postinstall: DVD/scripts/postinstall (The item on the right should have selected “Relative To Project”)

After verifying all these items, build the install package by clicking the “Build” icon. When asked to select a name, choose “TeXLive-2013-DVD-Temp”.

8. SIGNING

Finally, sign both packages using the single command

```
sh signPackages.sh
```