

# READ-ME

RICHARD KOCH

## 1. TeXLIVE-2021

This is the major piece of the MacTeX-2021 package. Recall again that only the TeXLive-2021-Start.pkg is needed, so there is no need to create the full package or notarize.

## 2. CREATING THE ROOT FOLDER

The compile system must contain X11. Get it at X11Quartz if it isn't there.

On the compile system, issue the commands

```
cd /usr/local
sudo mv texlive texlive-old
```

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

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

Then create a folder containing the tlpptest, which will later be updated with the same command. To do that, make a directory named texlive2021pretest and then

```
cd
cd texlive2021pretest
rsync -a --delete --exclude="mactex*" ftp.math.utah.edu::tlptest .
```

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 texlive2021pretest
rsync -a --delete --exclude="mactex*" ftp.tug.org::tlpretext .
```

When first building binaries, it is necessary to submit them to Karl, wait for him to install them in the pretest and wait overnight for the pretest to make its way to mirror sites.

Then install TeX Live from the svn directory by

```
TEXLIVE_INSTALL_NO_CONTEXT_CACHE=1
export TEXLIVE_INSTALL_NO_CONTEXT_CACHE
cd
cd texlive2021pretest
sudo env TEXLIVE_INSTALL_NO_CONTEXT_CACHE=$TEXLIVE_INSTALL_NO_CONTEXT_CACHE ./install-tl
```

This will run the graphic Unix install script. If not, change “./install-tl” to “./install-tl -gui tcl”. The default values will be correctly chosen for the Macintosh. Change the paper size option to “letter”. Then start installation.

When installation is complete, switch the default tlmgr repository to the final value using the command

```
sudo /usr/local/texlive/2021/bin/x86_64-darwin/tlmgr option repository \
    http://mirror.ctan.org/systems/texlive/tlnet
```

After these steps, the final TeXLive directory “root” can be built, using the command:

```
sudo sh buildPackage.sh
```

Finally repair /usr/local by

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

This root file is all that is needed to make MacTeX.

Most binaries will be signed, but some will not, so sign and adopt a hardened runtime for everything using

```
sudo sh liposcriptsignallapps
```

This script signs lz4, wget, and xz in tlpkg/installer, and over 100 apps in the app directory. Note that mf and xdvi and dvisvgm require third party library exceptions because they link with X11; dvisvgm also links with libgs. The four luatex binaries require two exceptions.

We also remove four pieces of documentation which causes notarize problems in April and May of 2021. It would be good to discuss this with Apple and eventually remove these fixes.

### 3. CREATING THE INSTALL PACKAGE

Then after reviewing the various scripts and the folders MyResources and Scripts,

```
sudo sh buildPackage.sh
cd CreateInstallPackage
sudo sh pkgbuildscript.sh
```