

# TUG-MACTEX-FOR-DVD

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## 1. MACTEX

This is the portion of the TUG documentation which deals with making the MacTeX install package for the DVD. The ultimate product of this work will be a folder named MacTeX-Install to be placed in the DVD mactex folder. This install folder will contain one document, “MacTeX Install Part 1” , and an install package constructed below, “MacTeX Install Part 2.pkg”.

## 2. SIGNING, TIMESTAMPING, AND ADOPTING HARDENED RUNTIMES FOR BINARIES

Binaries in this package have already been signed and notarized, and have already adopted a hardened runtime.

## 3. BUILDING THE FINAL INSTALL PACKAGE

The install package is constructed using scripts in the folder “CreateInstallPackage.” This folder also contains Resources and Scripts which will become part of the package. We first build “MacTeX Install Part 2-Temp.pkg” by

```
sudo sh productbuildscript.sh
```

We then create a signed package “MacTeX Install Part 2.pkg” by running the script

```
sh signPackage.sh
```

This script contains my Apple signing identity; future builders will first have to join Apple’s Developer Support and get their own signing identity.

The CreateInstallPackage folder contains the packages for the three component pieces: Ghostscript-9.27Start.pkg, GUI-ApplicationsStart.pkg, and TeXDist-2019Start.pkg.

The CreateInstallPackage folder also contains two other files and one other script. The files are requirement.xml and distribution.xml, and the script is create\_distribution.sh. The script used requirement.xml to restrict to installation on macOS 10.12 and above, and created distribution.xml. This time, a fair amount of hand editing of the resulting distribution file was required.

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#### 4. NOTARIZING THE FINAL INSTALL PACKAGE

Scripts to notarize “MacTeX Install Part 2.pkg” are in the folder “NotarizePackage” inside “CreateInstallPackage.” The actual “MacTeX Install Part 2.pkg” created above can be left where it is; it need not be moved to the new folder.

To notarize,

```
sh sendnotarizerequest.sh
```

There will be a delay when nothing is printed in Terminal as the package is uploaded to Apple. When the upload is complete, a message of the form

```
RequestUUID = 96f0932f-b50f-4d73-ad65-1220fd9c8efe
```

will be printed. This magic number can be used to discover what went wrong if notarization fails, so I recommend copying it to the file requestUUID.tex. There will be a pause of about ten minutes and then a notification from Apple and an email from Apple will arrive. If all is well, this message says that notarization succeeded. To add the certificate to the install package

```
sh stapleresult.sh
```

The package “MacTeX Install Part 2.pkg” is then ready for uploading and release.

In case of failure, open the script detailedinfo.sh and notice that the magic UUID number is part of this script. Copy and paste the new number from requestUUID.tex to this script. Then run it.

```
sh detailedinfo.sh
```

The script will ask for a password. More on that in a second. Then it will report a web url. Use Safari to go to that url, where a very detailed error report will clearly state what went wrong.

The detailedinfo script runs a command named xcrun which communicates with developer support. Apple has adopted two-factor authentication security for such communication, but this security is not very convenient when running shell scripts. So developers can log into their Apple developer account and assign a password to xcrun and a few similar commands. Then when the script runs, typing this password is enough to run the command. Note that the detailedinfo script contains my account name and password. When someone else makes these packages, they will replace this information with their own personal information.