

How to get Mark run on a Mac M1 - OS 11

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Open a Terminal console from Rosetta (tick “open using rosetta” after clicking command+i on the Terminal icon from the Applications folder. The Terminal is in the Utilities subfolder).

Architecture problem of the gfortran librairies, which are in arm64 on M1 chips and should be in x86_64 to run Mark.

To check which architecture the dynamic libraries use, type and execute the following code in the Terminal:

```
cd /usr/local/lib/  
file libgfortran.5.dylib  
  
cd /usr/local/lib/  
file libgfortran.3.dylib
```

Locate the correct directory:

```
cd /usr/local/bin/  
otool -L ./mark
```

Check which version and where it is stored:

```
find /usr/local/ -name "libgfortran*"  
find /usr/local/ -name "libgomp*"  
find /usr/local/ -name "libquadmath"
```

Charge an older version of gcc:

```
brew search gcc
```

Chose v.8 as it has a x86_64 architecture:

```
brew reinstall gcc@8
```

create symbolic links:

```
cd /usr/local/lib/ #this command enables to be in the correct directory right away  
  
sudo ln -s /usr/local//Cellar/gcc/11.1.0/lib/gcc/11 lib #we add lib if we are not in the correct direct  
sudo ln -s /usr/local//Cellar/gcc@5/5.5.0_6/lib/gcc/5  
sudo ln -s /usr/local//Cellar/gcc@8/8.5.0/lib/gcc/8/libgfortran.5.dylib  
sudo ln -s /usr/local//Cellar/gcc@10/10.3.0/lib/gcc/10/libgfortran.5.dylib  
sudo ln -s /usr/local//Cellar/gcc@8/8.5.0/lib/gcc/8/libgomp.1.dylib  
sudo ln -s /usr/local//Cellar/gcc@8/8.5.0/lib/gcc/8/libquadmath.0.dylib  
sudo ln -s /usr/local//Cellar/gcc@8/8.5.0/lib/gcc/8/strataG.so  
sudo ln -s /Library/Java/JavaVirtualMachines/adoptopenjdk-16.jdk/Contents/Home/lib/server/libjvm.dylib
```

Delete a directory (delete symbolic link):

```
rm -rf
```

Check which architecture dynamic libraries use:

```
cd /usr/local/lib/  
file libgfortran.5.dylib
```

```
cd /usr/local/lib/  
file libgfortran.3.dylib  
file libjvm.dylib
```

Now it should work!

Other stuff

gcc intel for rosetta.

Reinstall gcc with rosetta:

```
sudo rm -rf /usr/local/gfortran /usr/local/bin/gfortran  
sudo pkgutil --forget com.gnu.gfortran  
brew reinstall gcc
```

Run Rjava on a M1 Mac with R v.4.1

Install java to run rJava on Big Sur with R 4.1.1

- go to <https://www.oracle.com/index.html>
- click Product -> Software -> Java
- click Download Java
- select macOS
- download Arm 64 DMG installer

Then install JDK17

And it should work!

EN FRANÇAIS

On ouvre le Terminal depuis Rosetta (cocher “open using rosetta” quand on clique command+i sur l’icone du terminal dans les applications).

Problème d’architecture des librairies gfortran, qui sont en arm64 sur les puces M1 et qui nécessitent d’être en x86_64 pour faire tourner Mark.

Pour voir quelle architecture les bibliothèques dynamiques utilisent :

```
cd /usr/local/lib/  
file libgfortran.5.dylib
```

```
cd /usr/local/lib/  
file libgfortran.3.dylib
```

Se mettre dans le répertoire :

```
cd /usr/local/bin/  
otool -L ./mark
```

Pour voir ce qu’il y a comme version et où c’est rangé :

```
find /usr/local/ -name "libgfortran*"
find /usr/local/ -name "libgomp*"
find /usr/local/ -name "libquadmath"
```

Charger une ancienne version de gcc :

```
brew search gcc
```

On choisit la version 8 car elle est en x86_64 :

```
brew reinstall gcc@8
```

Lien symbolique :

```
cd /usr/local/lib/
```

```
sudo ln -s /usr/local//Cellar/gcc/11.1.0/lib/gcc/11 lib #on ajoute lib si on n'est pas dans le bon répertoire
sudo ln -s /usr/local//Cellar/gcc@5/5.5.0_6/lib/gcc/5
sudo ln -s /usr/local//Cellar/gcc@8/8.5.0/lib/gcc/8/libgfortran.5.dylib
sudo ln -s /usr/local//Cellar/gcc@10/10.3.0/lib/gcc/10/libgfortran.5.dylib
sudo ln -s /usr/local//Cellar/gcc@8/8.5.0/lib/gcc/8/libgomp.1.dylib
sudo ln -s /usr/local//Cellar/gcc@8/8.5.0/lib/gcc/8/libquadmath.0.dylib
sudo ln -s /usr/local//Cellar/gcc@8/8.5.0/lib/gcc/8/strataG.so
sudo ln -s /Library/Java/JavaVirtualMachines/adoptopenjdk-16.jdk/Contents/Home/lib/server/libjvm.dylib
```

Pour supprimer un répertoire (supprimer le lien symbolique) :

```
rm -rf
```

Pour voir quel architecture les libraries dynamiques utilisent :

```
cd /usr/local/lib/
```

```
file libgfortran.5.dylib
```

```
cd /usr/local/lib/
```

```
file libgfortran.3.dylib
```

```
file libjvm.dylib
```

Maintenant, cela devrait fonctionner !

Autres trucs

gcc intel pour rosetta.

Pour réinstaller gcc avec rosetta :

```
sudo rm -rf /usr/local/gfortran /usr/local/bin/gfortran
sudo pkgutil --forget com.gnu.gfortran
brew reinstall gcc
```

Faire tourner Rjava sur un Mac à puce M1 dans R v.4.1

- se rendre sur <https://www.oracle.com/index.html>
- cliquer sur Product -> Software -> Java
- cliquer Download Java
- sélectionner macOS
- télécharger Arm 64 DMG installer

Puis, installer JDK17

Cela devrait fonctionner maintenant !