

Running the tools (CMT, SubSeasonal Packages,...) developed by NOAA/CPC/International Desks:

Prerequisite Packages Installation for Mac Users

NOAA/CPC/International Desks

System Requirements

- **OS version:**
 - Mac
- **MEMORY:** 4GB or more (if possible)
- **Free DISK SPACE:** 10GB or more
- **Internet Connection**
- **SOFTWARE:**
 - GrADS (v2.0.2)
 - GNU FORTRAN Compiler,
 - GNU precision calculator (bc),
 - gedit
 - wget
 - ImageMagick
 - GDAL (v2.1.2 or later)

Prerequisite Packages for Mac Users

perl

gcc

GNU bc Maths

curl

wget

GNU Fortran

GDAL

ImageMagick

gedit

XQuartz

openGrADS

Pre-Installed packages

Usually Mac comes with preinstalled packages such as: **perl**, **gcc**,**bc**,and **curl**. You may check this out typing:

```
which perl; echo $?
```

```
which gcc; echo $?
```

```
which bc; echo $?
```

```
which curl; echo $?
```

For each of these command lines, check status number display on the terminal:
if you see 0, then the package is installed; but if you have 1, the package is not installed.

Missing packages

You may not have some packages on your Mac such as: **wget**, **gfortran**, **GDAL**, **ImageMagick**, **gedit**, Xquartz and **Grads** (openGrADS).

➤ For **wget** and **gfortran**, check out by typing:

```
which wget; echo $?
```

```
which gfortran; echo $?
```

➤ For **GDAL**, check if **gdal_rasterize** is install:

```
which gdal_rasterize; echo $?
```

➤ For **ImageMagick**, check if **convert** is install:

```
which convert; echo $?
```

➤ For **gedit**, **XQuartz** and **GrADS** (openGrADS), check by typing:

```
which gedit; echo $?
```

```
which xquartz; echo $?
```

```
which grads; echo $?
```

For each of these command lines, check status number display on the terminal:
if you see 0, then the package is installed; but if you have 1, the package is not installed.

Installing or Updating HomeBrew

Your password may be required

- to make sure that you have homebrew install and up to date, using your terminal, enter the following command line and press enter:

```
ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)" < /dev/null 2> /dev/null
```

Installing : wget, gfortran and gdal

Your password may be required

- Install wget :

brew install wget

To check if the installation was completed, in terminal type **wget** and press enter. The tools is correctly install if you see the following message:

wget: missing URL

Usage: wget [OPTION]... [URL]...

- Install gfortran :

brew cask install gfortran

To check if the installation was completed, in terminal type **gfortran** and press enter. The tools is correctly install if you see the following message:

gfortran: fatal error: no input files

compilation terminated

then you successfully installed gfortran

- Install gdal :

brew install gdal

To check if the installation was completed, in terminal type **gdal_rasterize** and press enter. The tools is correctly install if you see the following message:

ERROR 6: One and only fone of -3d, -burn or -a is required.

Usage: gdal_rasterize [[-i] [-at] ...*

Installing ImageMagick, gedit and XQuartz

Your password may be required

- **Install ImageMagick :**

brew install imagemagick

To check if the installation succeed, in terminal type **which convert; echo \$?** and press enter. ImageMagick is correctly installed if you see the following message:

```
/usr/local/bin/convert  
0
```

- **Install gedit :**

brew install gedit or brew cask install gedit

To check if the installation was completed, in terminal type **which gedit; echo \$?** and press enter. gedit is correctly installed if you see the following message:

```
/usr/local/bin/gedit  
0
```

- **Install XQuartz:**

brew install xquartz or brew cask install xquartz

To check if the installation was completed, in terminal type **which XQuartz; echo \$?** and press enter. XQuartz is correctly installed if you see the following message:

```
/opt/X11/bin/xquartz  
0
```


Installing GrADS (opengrads)

Your password may be required

- Using your linux terminal change your directory to /usr/local/bin, by typing

```
cd /usr/local/bin
```

- Download grads package using:

```
sudo wget
```

```
https://sourceforge.net/projects/opengrads/files/grads2/2.0.2.oga.2/Mac%20OS%20X/grads-2.0.2.oga.2-bundle-x86\_64-apple-darwin13.2.0.tar.gz
```

- Unpack the package using:

```
sudo tar -xzvf grads-2.0.2.oga.2-bundle-x86_64-apple-darwin13.2.0.tar.gz
```

- Copy GrADS binaries and associated files into the current folder:

```
sudo cp -rf grads-2.0.2.oga.2/Contents/* .
```

- You may remove the unwanted files and folders:

```
sudo rm -rf grads-2.0.2.oga.2
```

```
sudo rm -rf grads-2.0.2.oga.2-bundle-x86_64-unknown-linux-gnu.tar.gz
```

- Test your GrADS installation:

- Close and reopen the terminal and type **grads -p**
- your installation is successful, if GrADS runs without error message