

Prerequisite Packages Installation for Windows Users

NOAA's CPC International Desks

System requirements to run CPC International Desks tools

- **OS version:** Windows (32 or 64 bit, Windows version 7.0 or above) + Cygwin
- **Memory:** 4GB or more (if possible)
- **Free disk space:** 10GB or more
- **Internet connection**
- **Winzip or 7-zip utility to unpack a tar file**
- **Software:**
 - GrADS (v2.0.x or later)
 - wget
 - curl
 - GNU precision calculator (bc)
 - GDAL
 - unzip
 - ImageMagick

Cygwin installation (1/6)

- 1) Go to the website: <https://cygwin.com/install.html>
- 2) Depending on your system type, click on either the 64-bit or 32-bit link to download the installation file (**setup-x86_64.exe** for 64-bit system or **setup-x86.exe** for 32-bit).

The screenshot shows the Cygwin website's installation page. The browser's address bar displays <https://cygwin.com/install.html>. The page features a navigation sidebar on the left with links such as 'Install Cygwin', 'Update Cygwin', and 'Search Packages'. The main content area is titled 'Cygwin' with the tagline 'Get that Linux feeling - on Windows.' Below this, the section 'Installing and Updating Cygwin Packages' contains three sub-sections: 'Installing and Updating Cygwin for 64-bit versions of Windows', 'Installing and Updating Cygwin for 32-bit versions of Windows', and 'General installation notes'. In the 64-bit and 32-bit sections, the file names 'setup-x86_64.exe' and 'setup-x86.exe' are circled in blue. The 'General installation notes' section explains that the setup*.exe utility does not install every package by default and provides instructions on how to use the --no-admin option on Windows Vista and later.

← → ↻ <https://cygwin.com/install.html>

Cygwin

Get that *Linux* feeling - on Windows.

Installing and Updating Cygwin Packages

Installing and Updating Cygwin for 64-bit versions of Windows

Run [setup-x86_64.exe](#) any time you want to update or install a Cygwin package for 64-bit windows. The [signature](#) for [setup-x86_64.exe](#) can be used to verify the validity of this binary using [this](#) public key.

Installing and Updating Cygwin for 32-bit versions of Windows

Run [setup-x86.exe](#) any time you want to update or install a Cygwin package for 32 bit windows. The [signature](#) for [setup-x86.exe](#) can be used to verify the validity of this binary using [this](#) public key.

General installation notes

When installing packages for the first time, `setup*.exe` *does not install every package*. Only the **minimal base packages** from the Cygwin distribution are installed by default, which takes up about 100 MB.

Clicking on categories and packages in the `setup*.exe` package installation screen allows you to select what is installed or updated.

Individual packages like `bash`, `gcc`, `less`, etc. are released independently of the Cygwin DLL, so the Cygwin DLL version is not useful as a general Cygwin release number. The `setup*.exe` utility tracks the versions of all installed components and provides the mechanism for **installing** or **updating** everything available from this site for Cygwin.

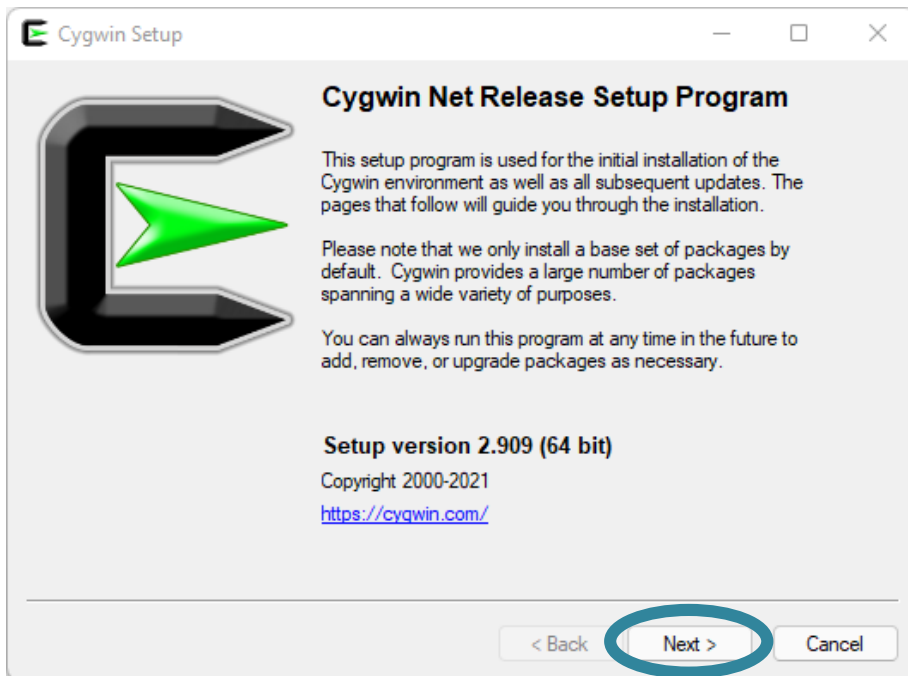
Once you've installed your desired subset of the Cygwin distribution, `setup*.exe` will remember what you selected so rerunning the program will update your system with any new package releases.

On Windows Vista and later, `setup*.exe` will check by default if it runs with administrative privileges and, if not, will try to elevate the process. If you want to avoid this behaviour and install under an unprivileged account just for your own usage, run `setup*.exe` with the `--no-admin` option.

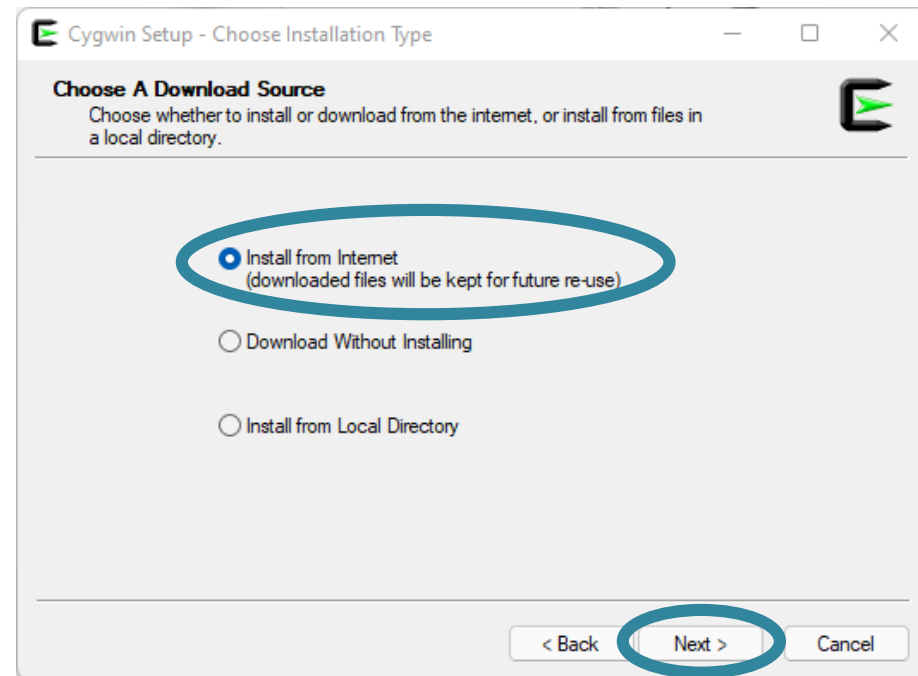
Cygwin installation (2/6)

Look for the setup file in your download folder, and double click on it to initiate the Cygwin installation: 

1) Click on **Next** to go to the next step



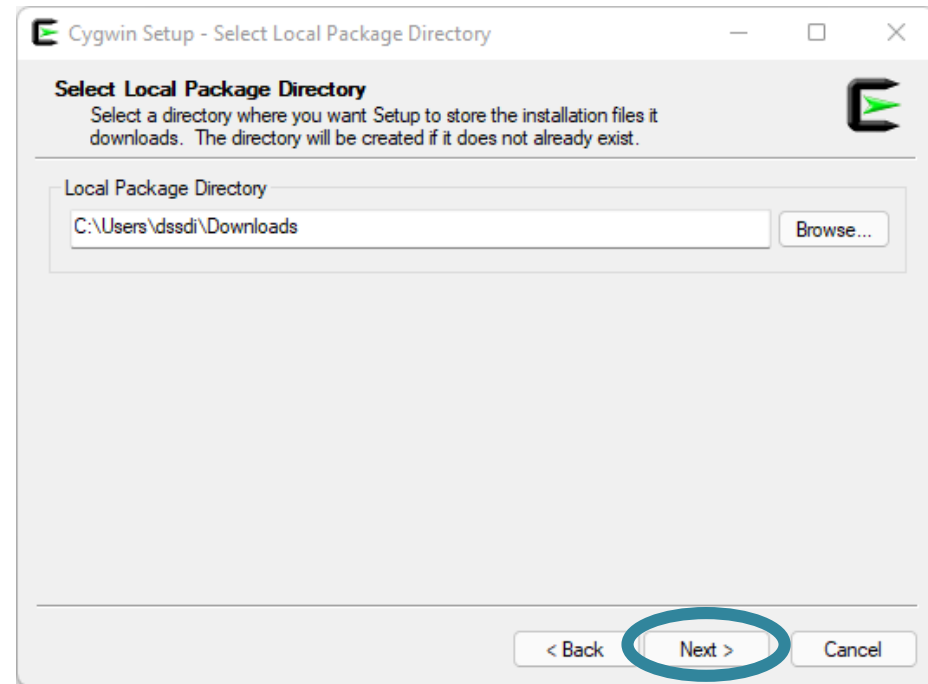
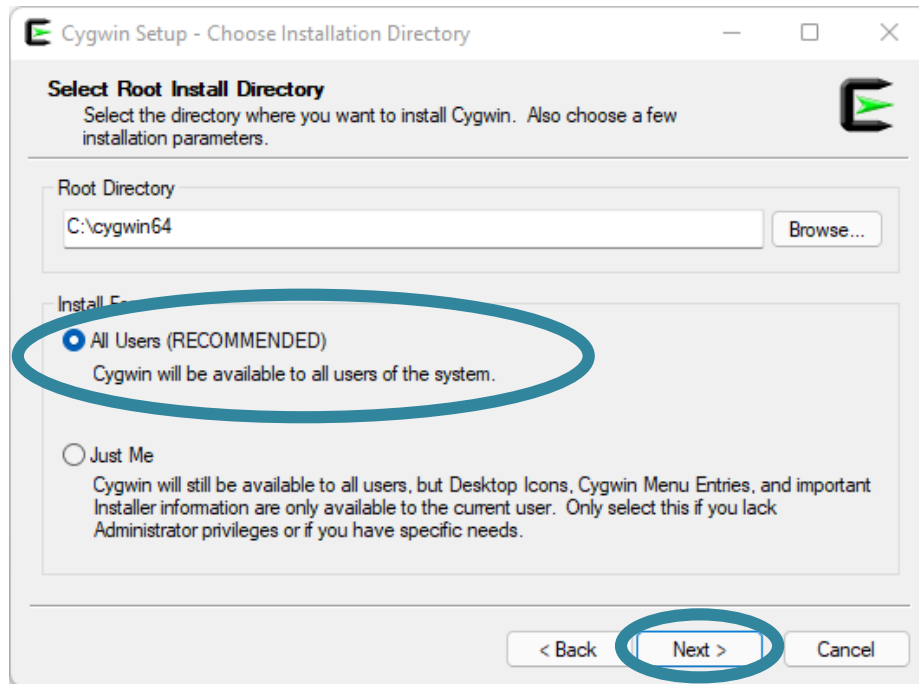
2) Click on **Next** to install from Internet



Cygwin installation (3/6)

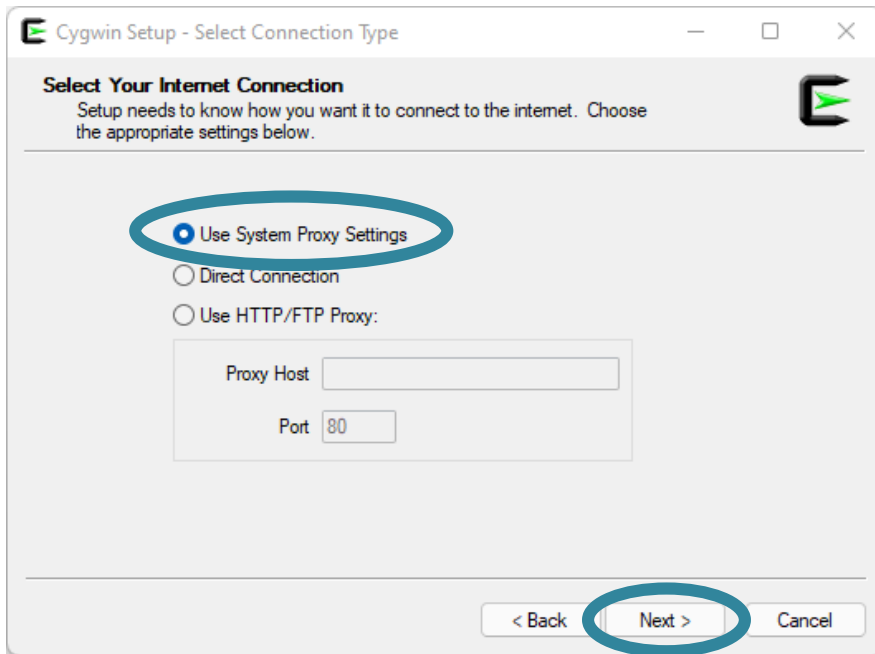
1) Click on **Next** to proceed with the recommended selection

2) Click on **Next** to proceed with the default installation location

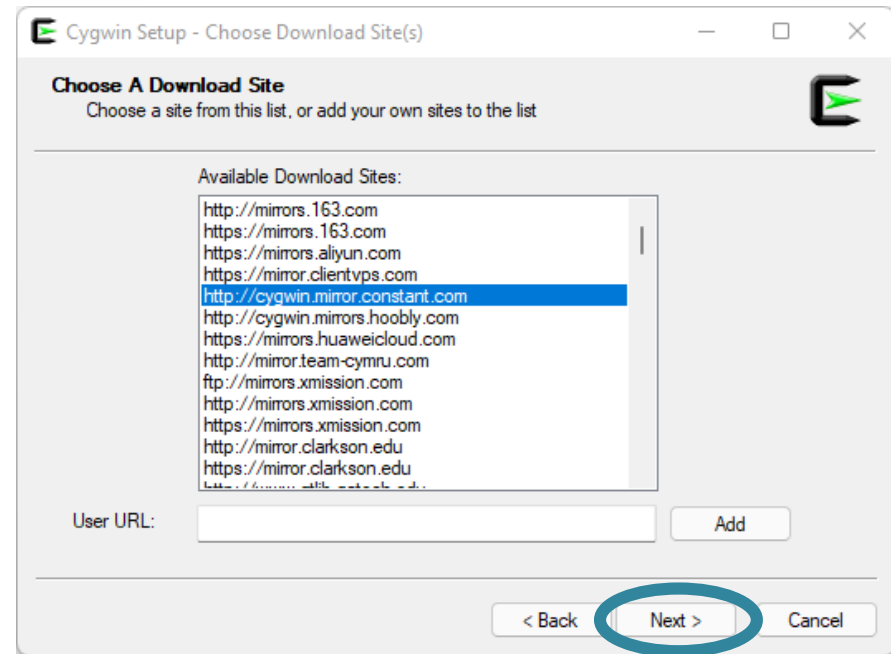


Cygwin installation (4/6)

1) Click on **Next** to proceed with the default installation location



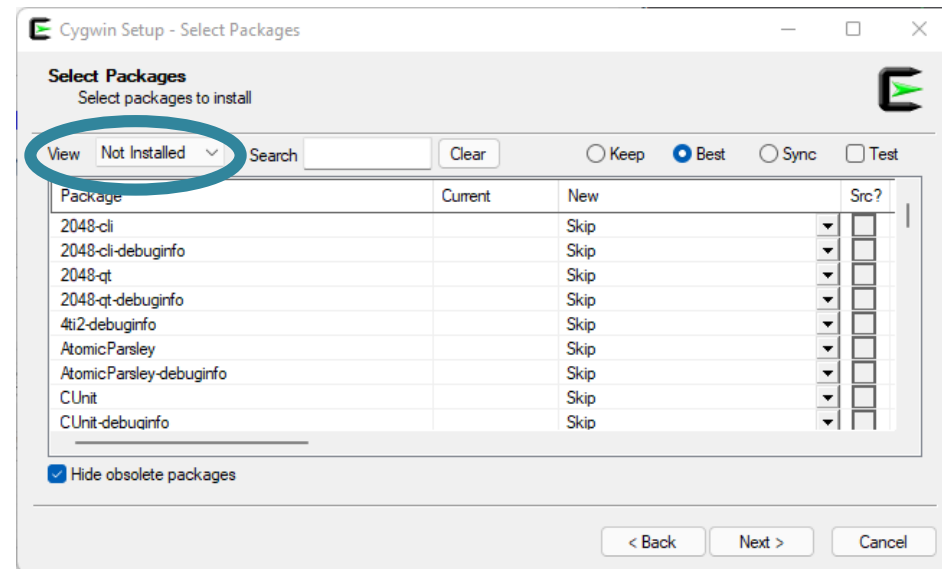
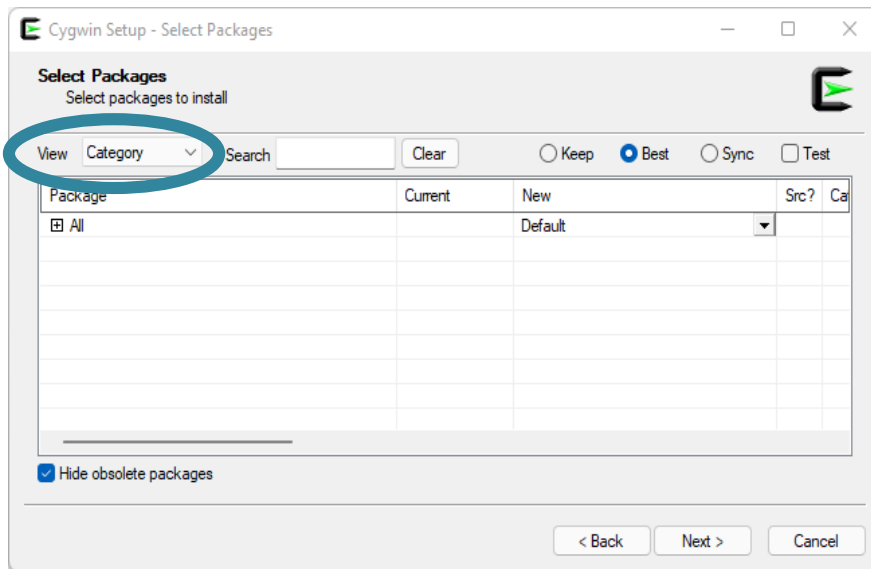
2) Select one of the download sites, click on **Next** to initiate Cygwin download



Cygwin installation (5/6)

Adding complementary packages

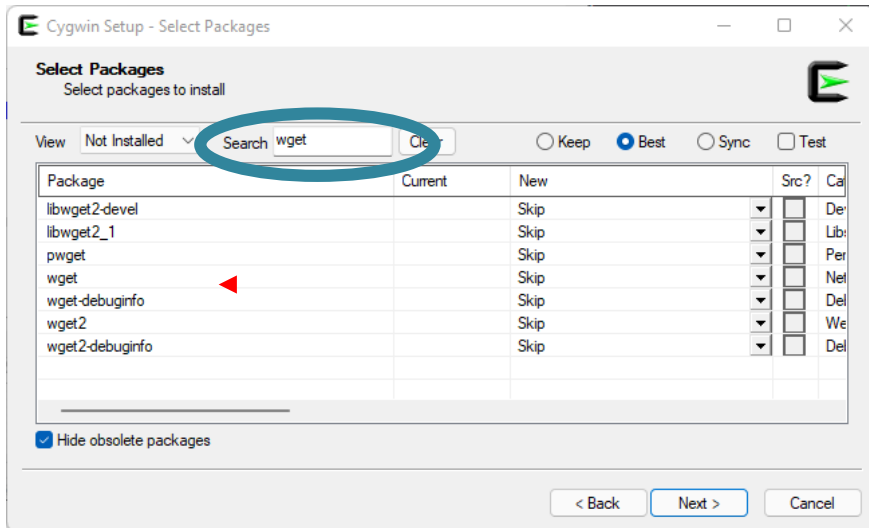
Under *View*, use the dropdown menu and choose **Not Installed**



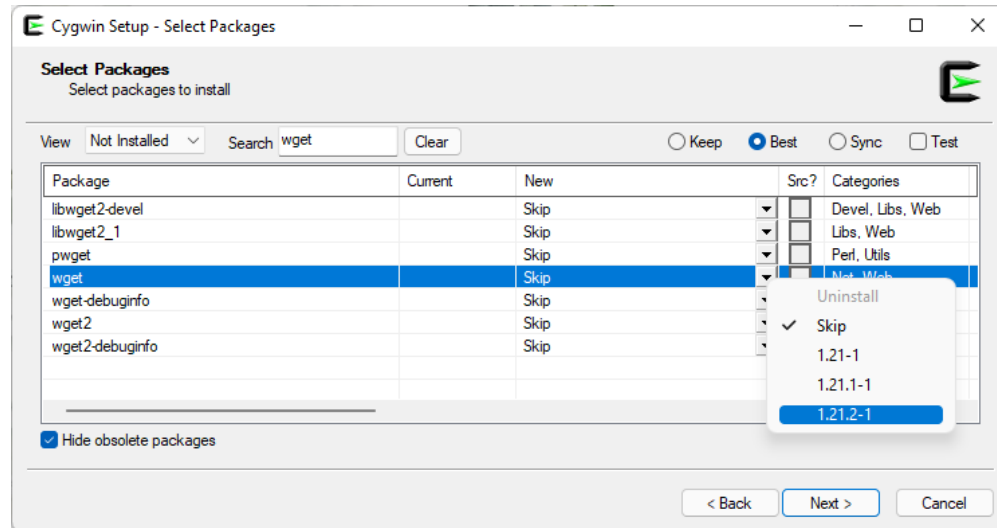
Cygwin installation (5/6)

Adding complementary packages – **WGET**

1) Type **wget** in the *Search* bar



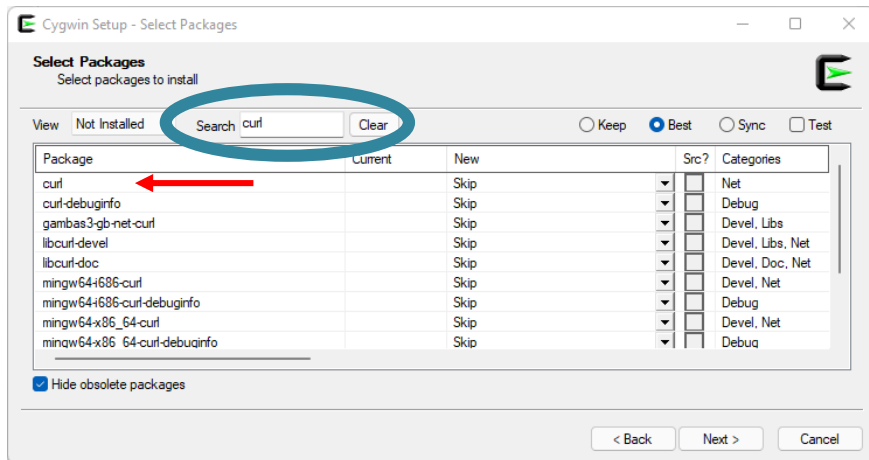
2) Click on the skip next to **wget** and choose the latest version (**1.21.2-1**)



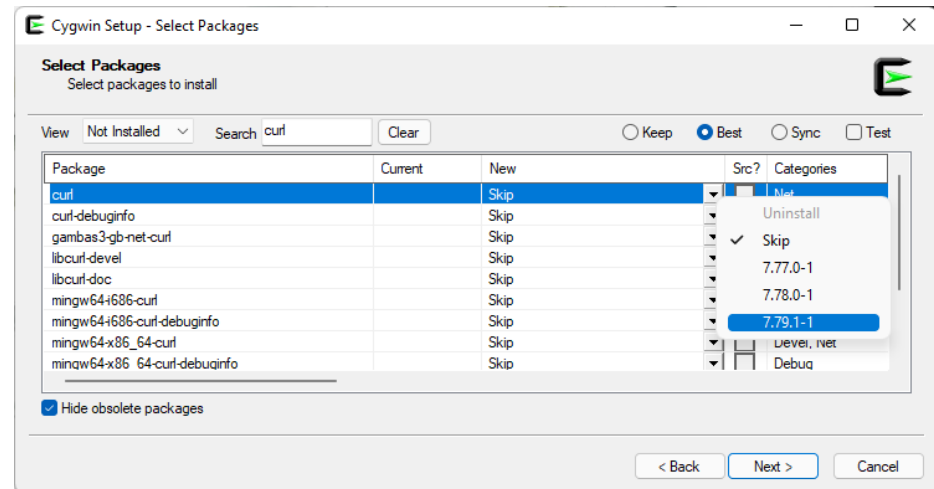
Cygwin installation (5/6)

Adding complementary packages – **CURL**

1) Type **curl** in the *Search* bar



2) Click on the skip next to **curl** and choose the latest version (**7.79.1-1**)

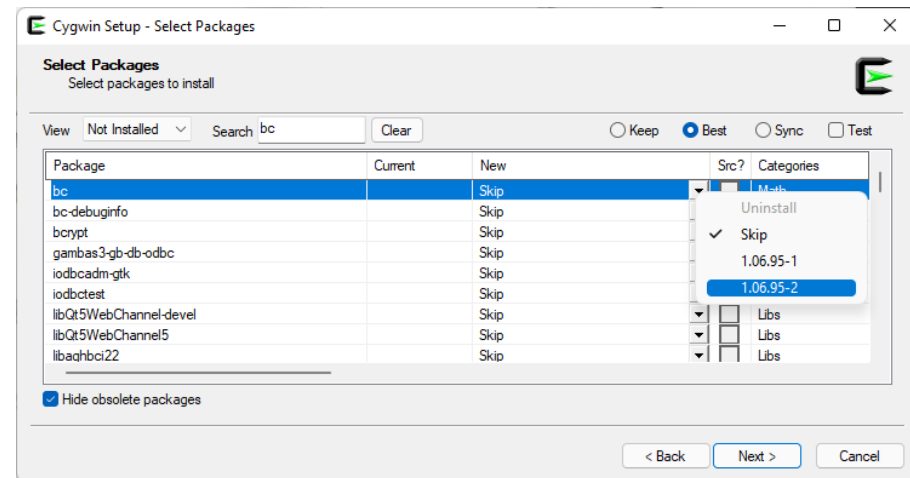
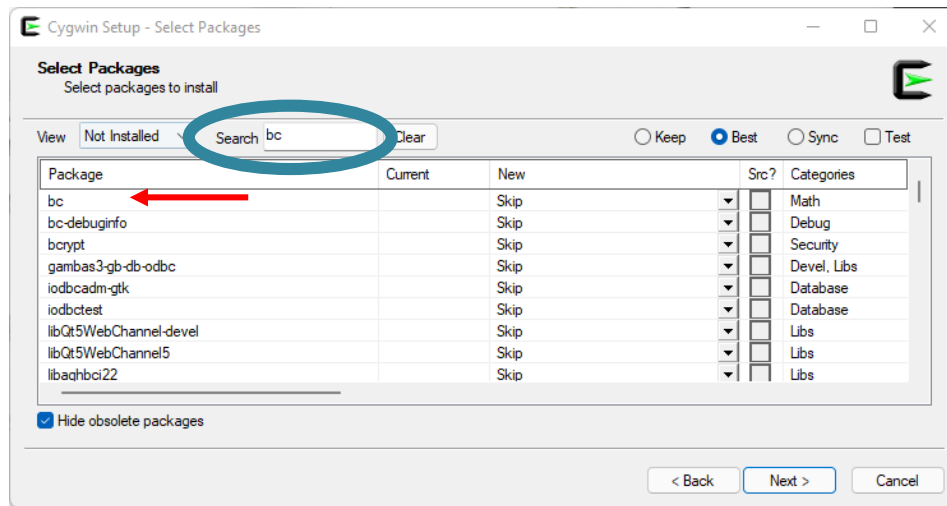


Cygwin installation (5/6)

Adding complementary packages – BC

1) Type **bc** in the *Search* bar

2) Click on the skip next to **bc** and choose the latest version (**1.06.95-2**)

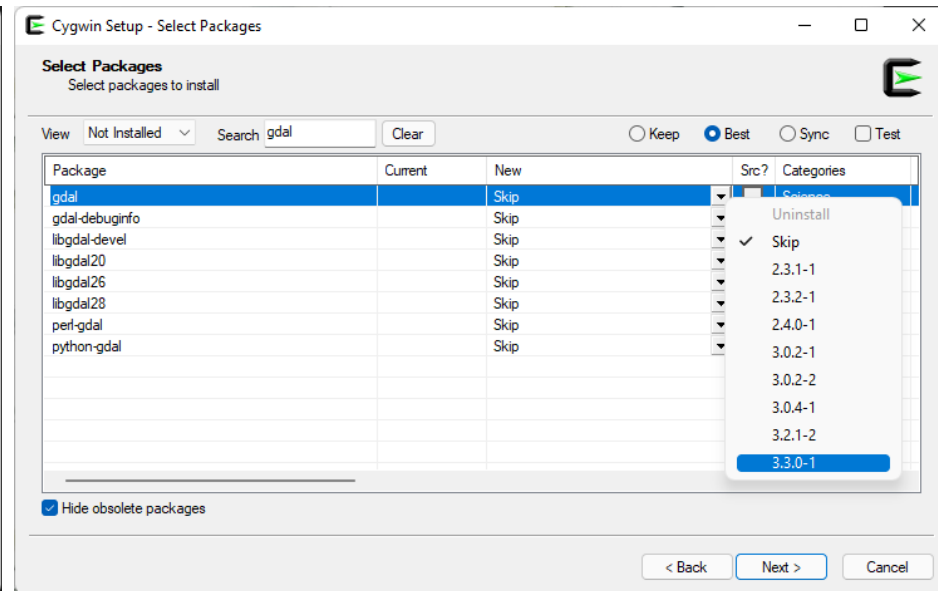
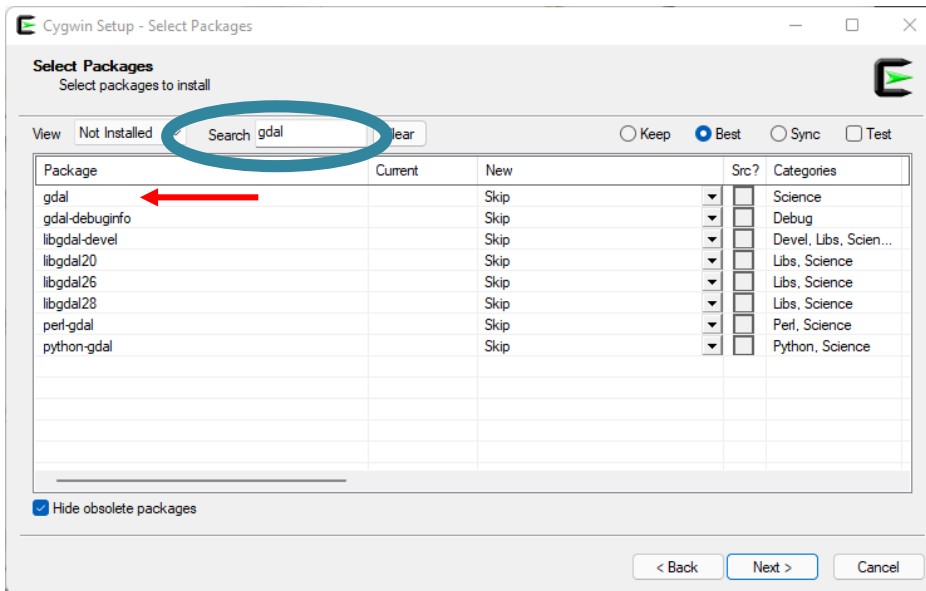


Cygwin installation (5/6)

Adding complementary packages – GDAL

1) Type **gdal** in the *Search* bar

2) Click on the skip next to **gdal** and choose the latest version (**3.3.0-1**)

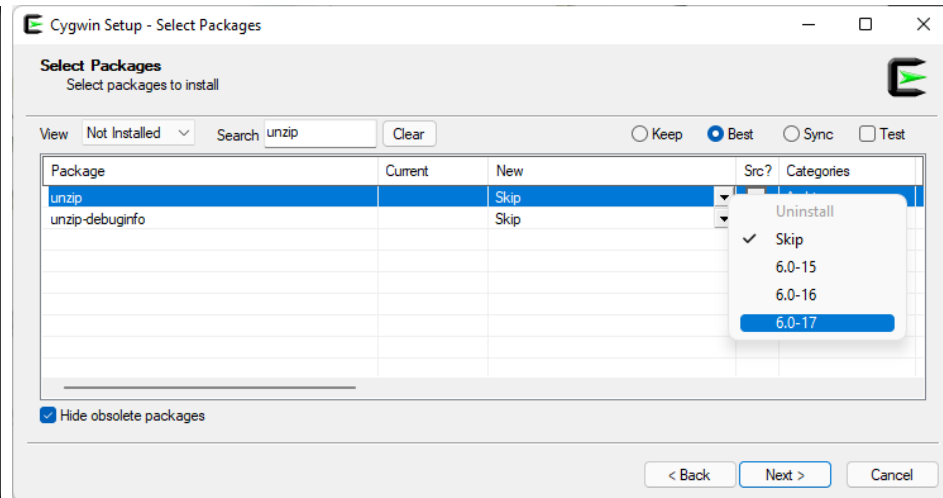
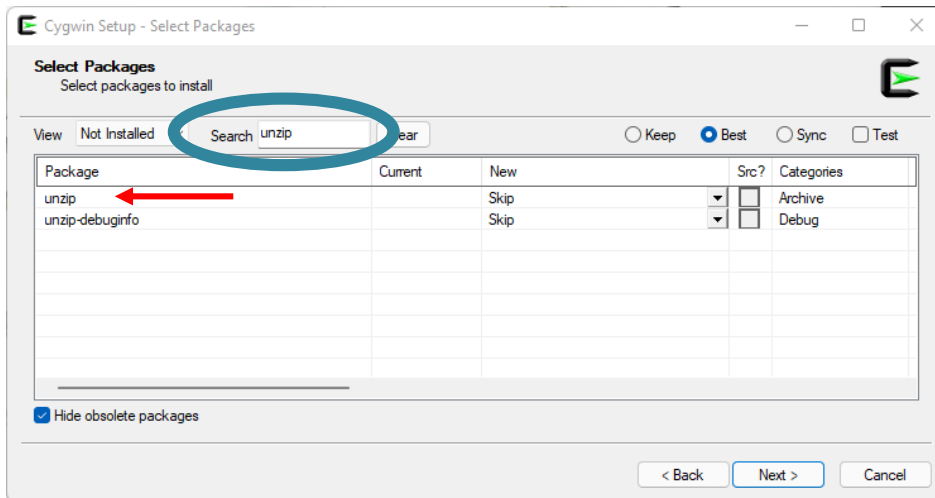


Cygwin installation (5/6)

Adding complementary packages – UNZIP

1) Type **unzip** in the *Search* bar

2) Click on the skip next to **unzip** and choose the latest version (**6.0-17**)

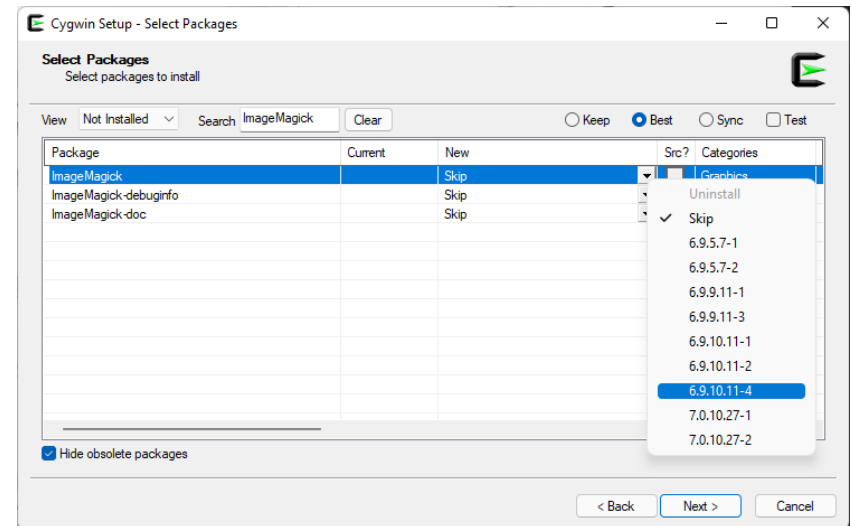
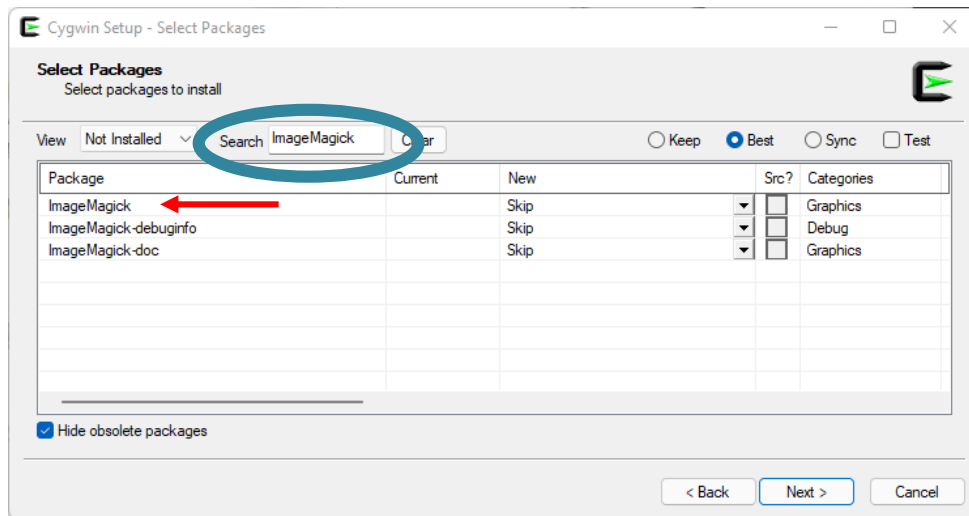


Cygwin installation (5/6)

Adding complementary packages – ImageMagick

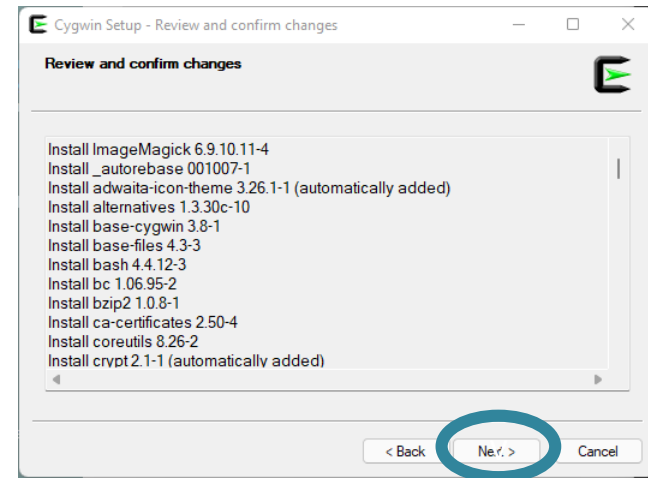
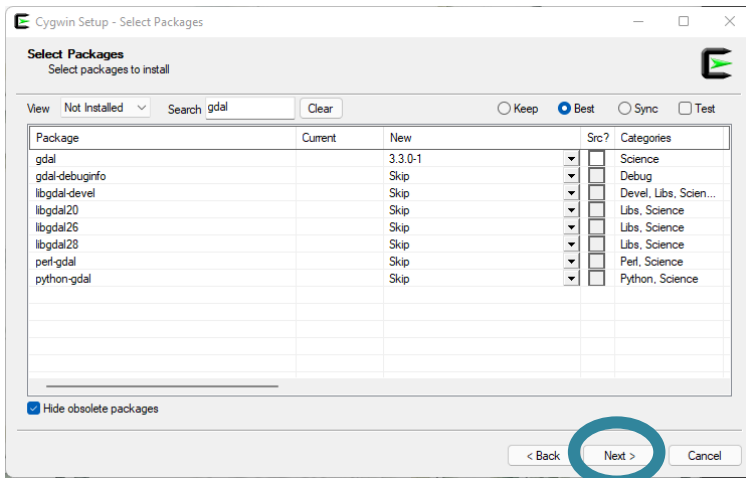
1) Type **ImageMagick** in the *Search* bar

2) Click on the skip next to **ImageMagick** and choose the version (**6.9.10.11-4**)

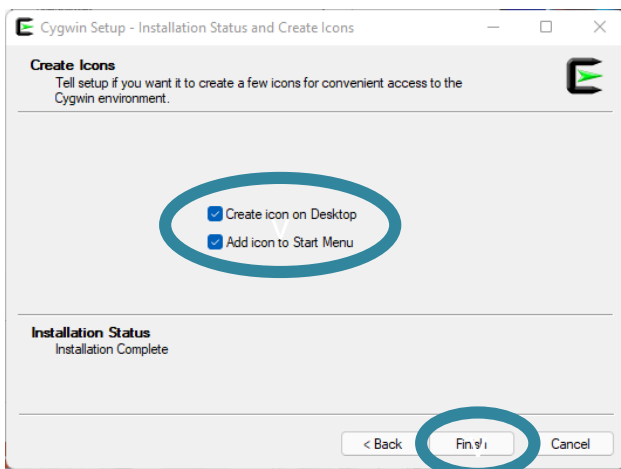


Cygwin installation (6/6)

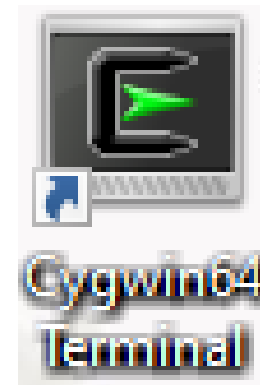
1) Click on **Next** several times to finalize the Cygwin installation



2) Check the two boxes and click on **Finish**



3) If everything goes well, you should see the Cygwin shortcut icon on your desktop



Package installation check

Open your Cygwin/Linux terminal and use the `which` command to locate the prerequisite executable files:

1) Check the **wget** package

```
which wget
```

```
dssdi@DESKTOP-LBE5830 ~  
$ which wget  
/usr/bin/wget
```

2) Check the **curl** package

```
which curl
```

```
dssdi@DESKTOP-LBE5830 ~  
$ which curl  
/usr/bin/curl
```

3) Check the **bc** package

```
which bc
```

```
dssdi@DESKTOP-LBE5830 ~  
$ which bc  
/usr/bin/bc
```

4) Check the **gdal** package

```
which gdal_rasterize
```

```
dssdi@DESKTOP-LBE5830 ~  
$ which gdal_rasterize  
/usr/bin/gdal_rasterize
```

5) Check the **unzip** package

```
which unzip
```

```
dssdi@DESKTOP-LBE5830 ~  
$ which unzip  
/usr/bin/unzip
```

6) Check the **ImageMagick** package

```
which convert
```

```
dssdi@DESKTOP-LBE5830 ~  
$ which convert  
/usr/bin/convert
```

Please contact the NOAA's team before the workshop if you **don't get the same path.**

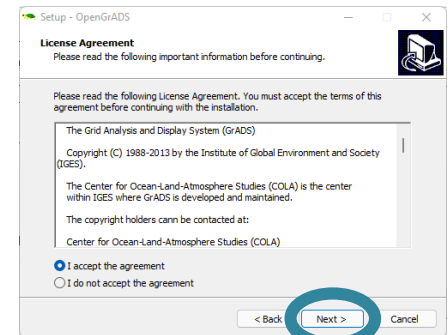
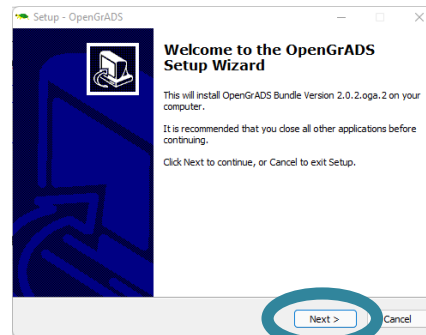
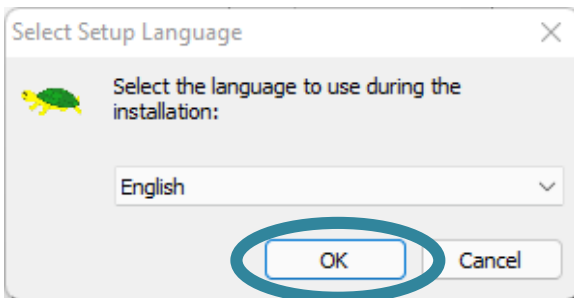
OpenGrADS installation

1) Download OpenGrADS installation file from:

https://sourceforge.net/projects/opengrads/files/grads2/2.0.2.oga.2/Windows/grads-2.0.2.oga.2-win32_superpack.exe

2) Double-click on the executable file **grads-2.0.2.oga.2-win32_superpack.exe**.

3) Select the language **English** to use during the installation. Click **Next**. Select **I agree** and click **Next** several times



4) Open the Cygwin window and type:
grads -l

```
dssdi@DESKTOP-LBE5830 ~  
$ grads -l
```

