

Cygwin: getting the setup tool

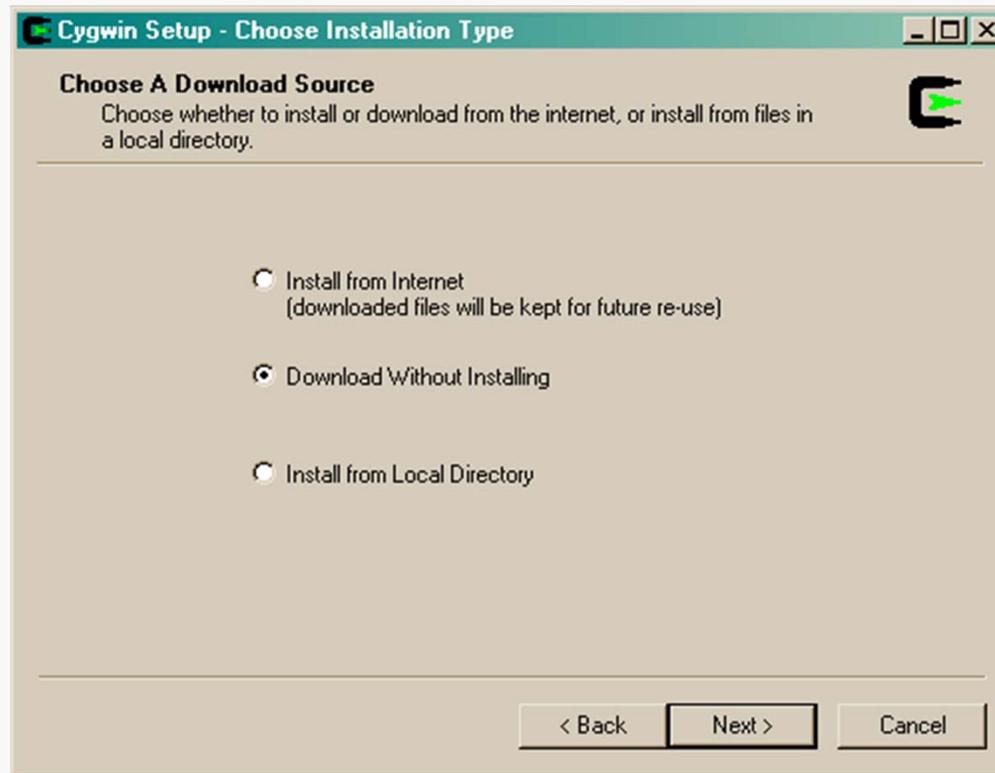
Free, almost complete UNIX environment emulation for computers running MS Windows. Very handy.

First, go to the Cygwin Site: <http://www.cygwin.org/cygwin/>

Download the setup utility (setup.exe); create a directory and save it there. For this discussion, I'll assume you're saving it in C:\cygtemp. Run setup:

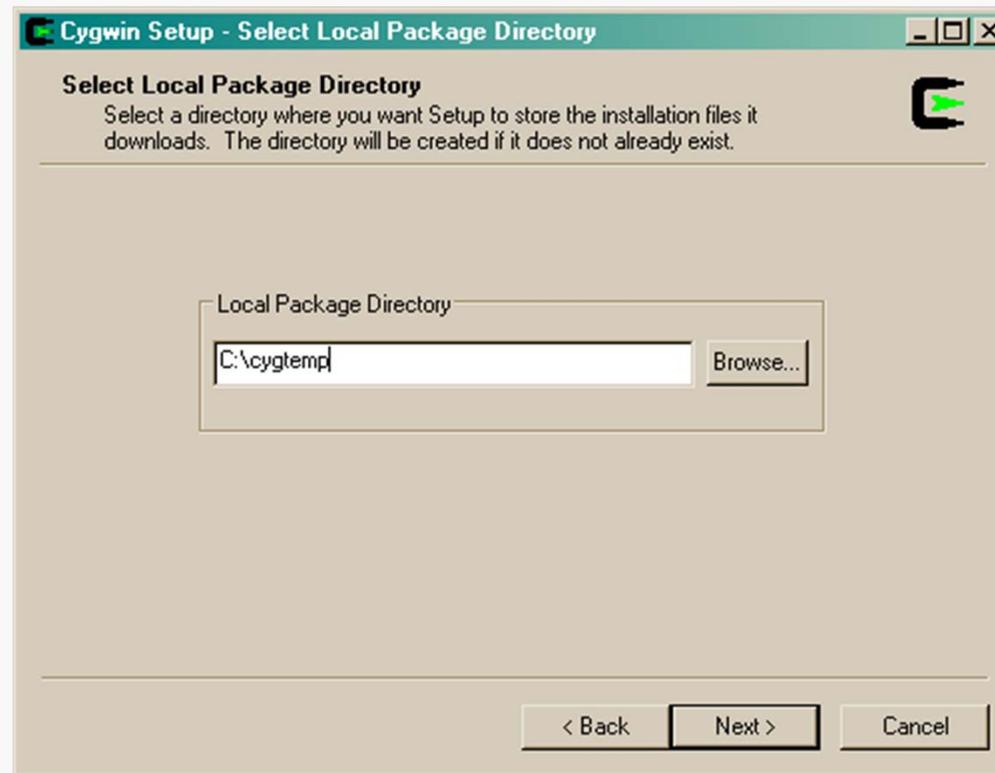


Click Next and choose “Download without installing”:



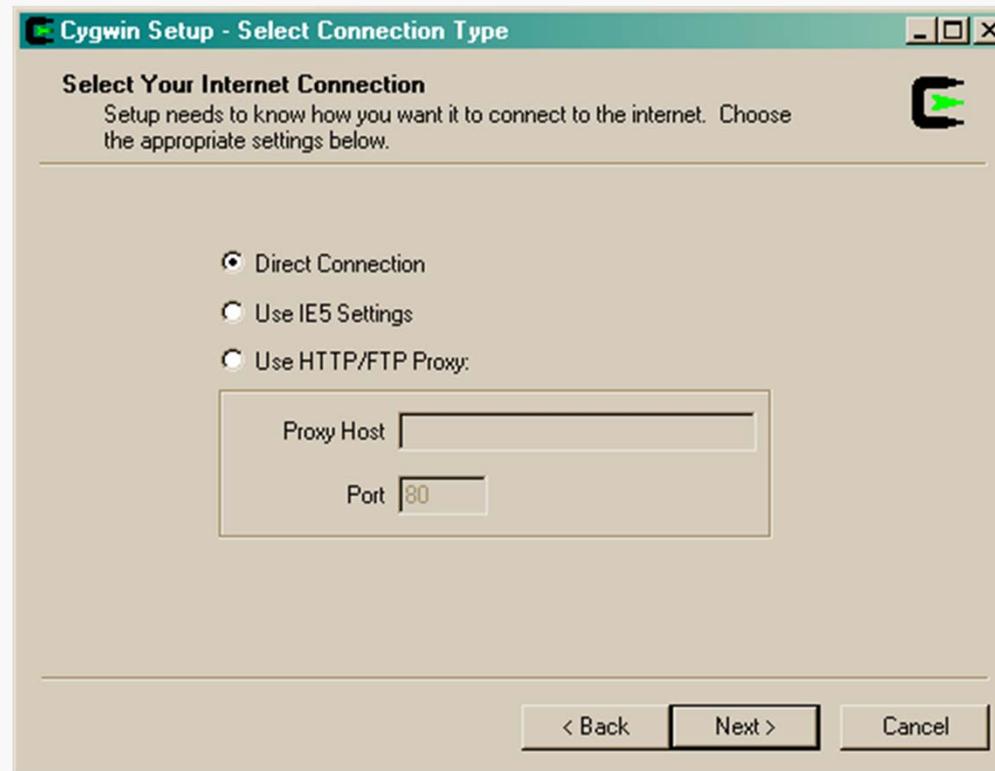
This is the best option because the download process can take some time and it occasionally fails to complete on the first try. The downloaded files are saved, in any case, so feel free to Install from Internet if you prefer.

Click Next and choose a root directory for the Cygwin repository:



Note: this is not where you will actually install Cygwin.

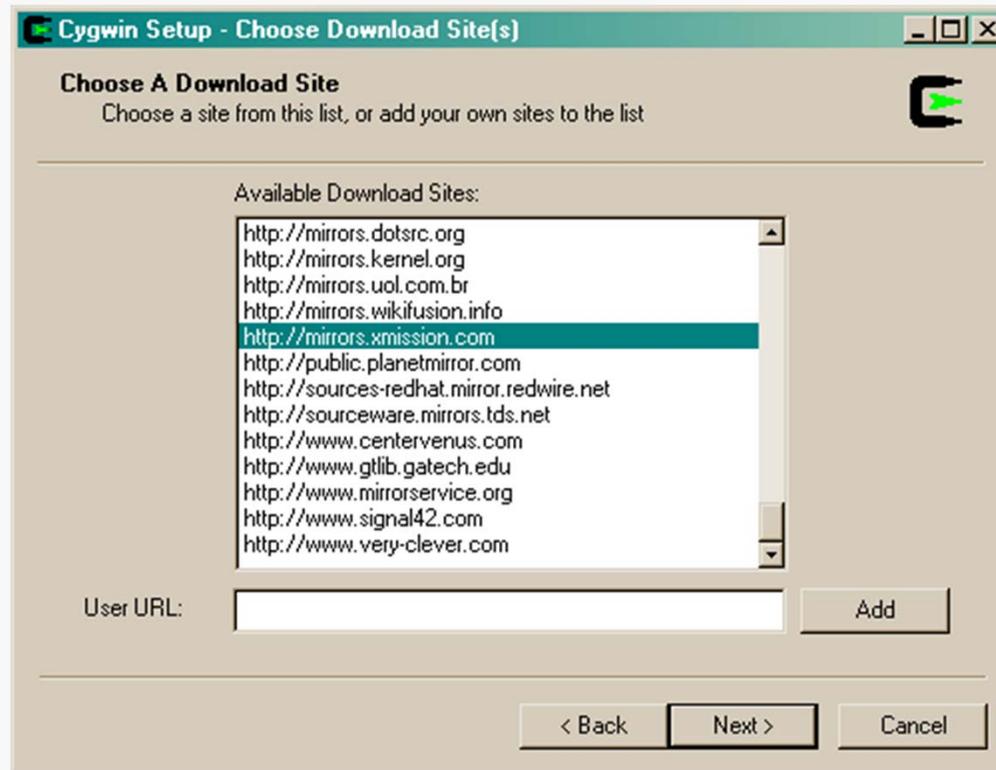
Select your connection type (almost certainly Direct Connection):



Click Next...

Cygwin: choosing the mirror

Select a mirror:



Note: there is a mirror at VT, which may (or may not) be fastest.

Click Next...

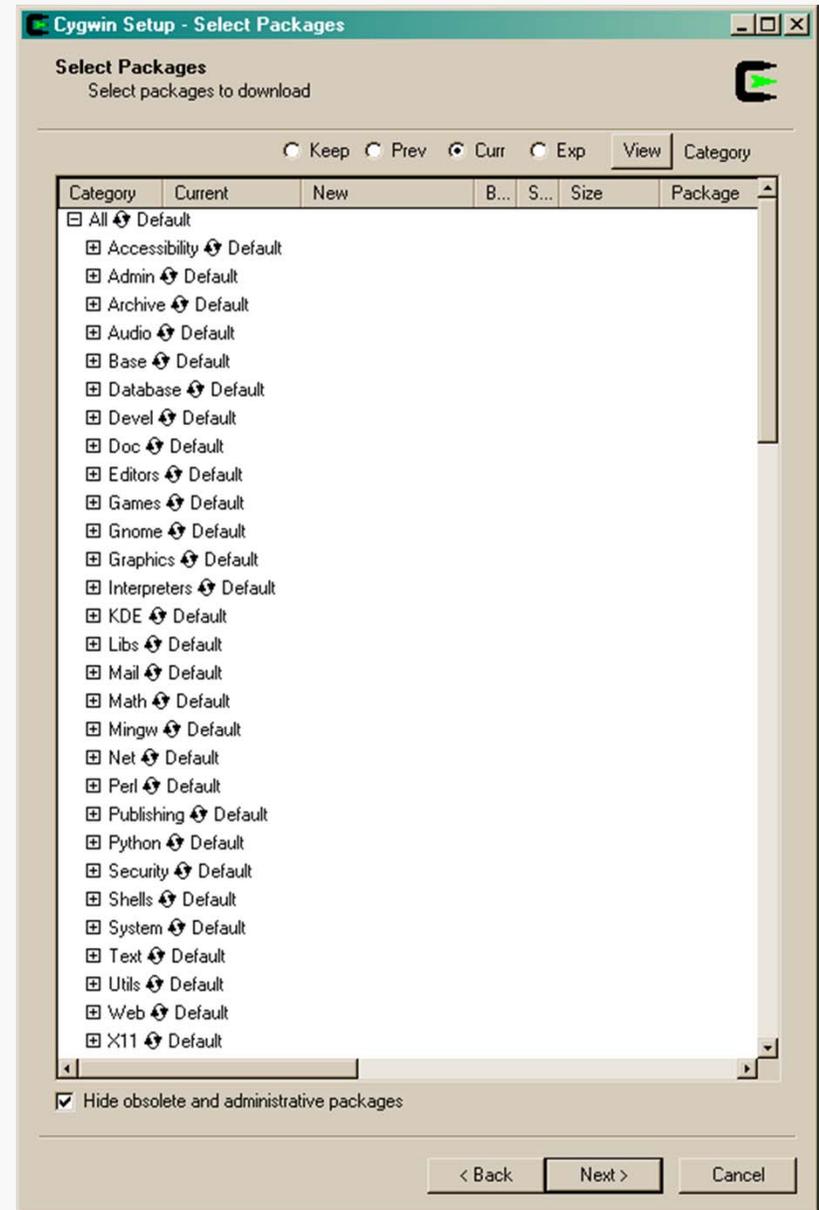
Cygwin: minimal installation

Setting up Cygwin 6

There are many packages, but for some purposes (such as obtaining a Windows version of `grep` for 2104 assignments), just taking the default install files will be sufficient.

If this is all you need, don't bother looking at the details of any of the various packages...

... just click Next and skip to slide 10.



Cygwin: full installation

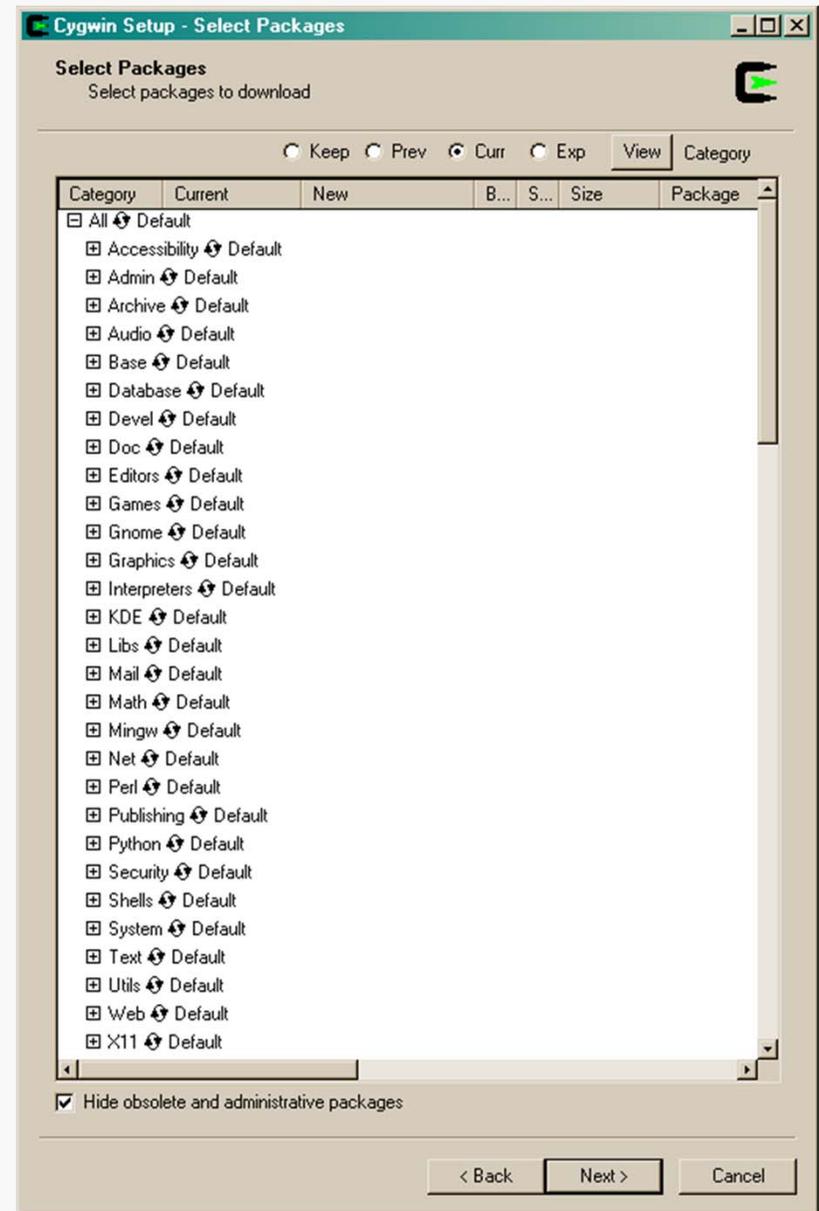
Setting up Cygwin 7

There are many packages; you'll expand some of them and choose specific options.

You can get it all (about 1.4 GB), or be selective.

If you don't have any serious concerns about disk space or download time, my advice is to simply go through the packages one by one and choose every available feature.

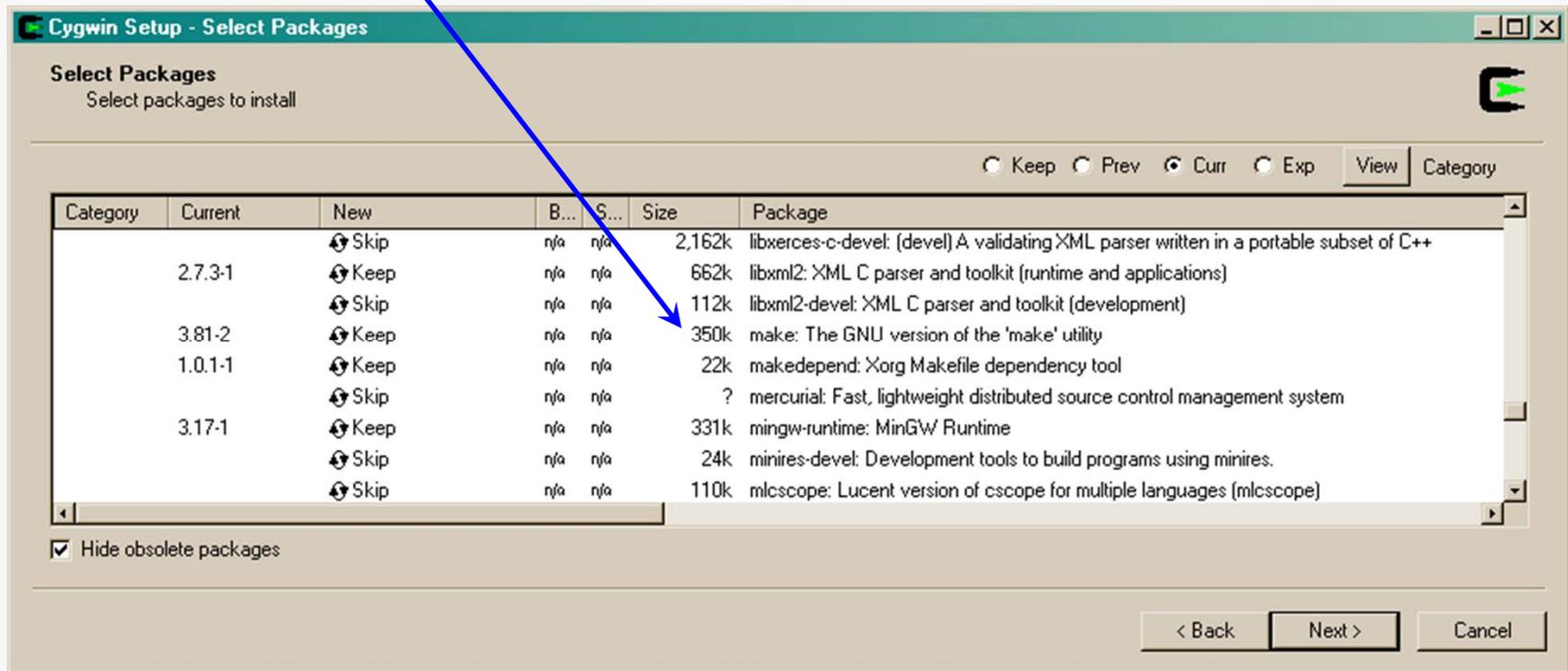
That way, you can be sure that you will have everything you will need, plus lots of other interesting things...



Cygwin: choosing the build tools

If you don't do a full install, expand the Devel tree...

Be sure the GNU make tool is selected.



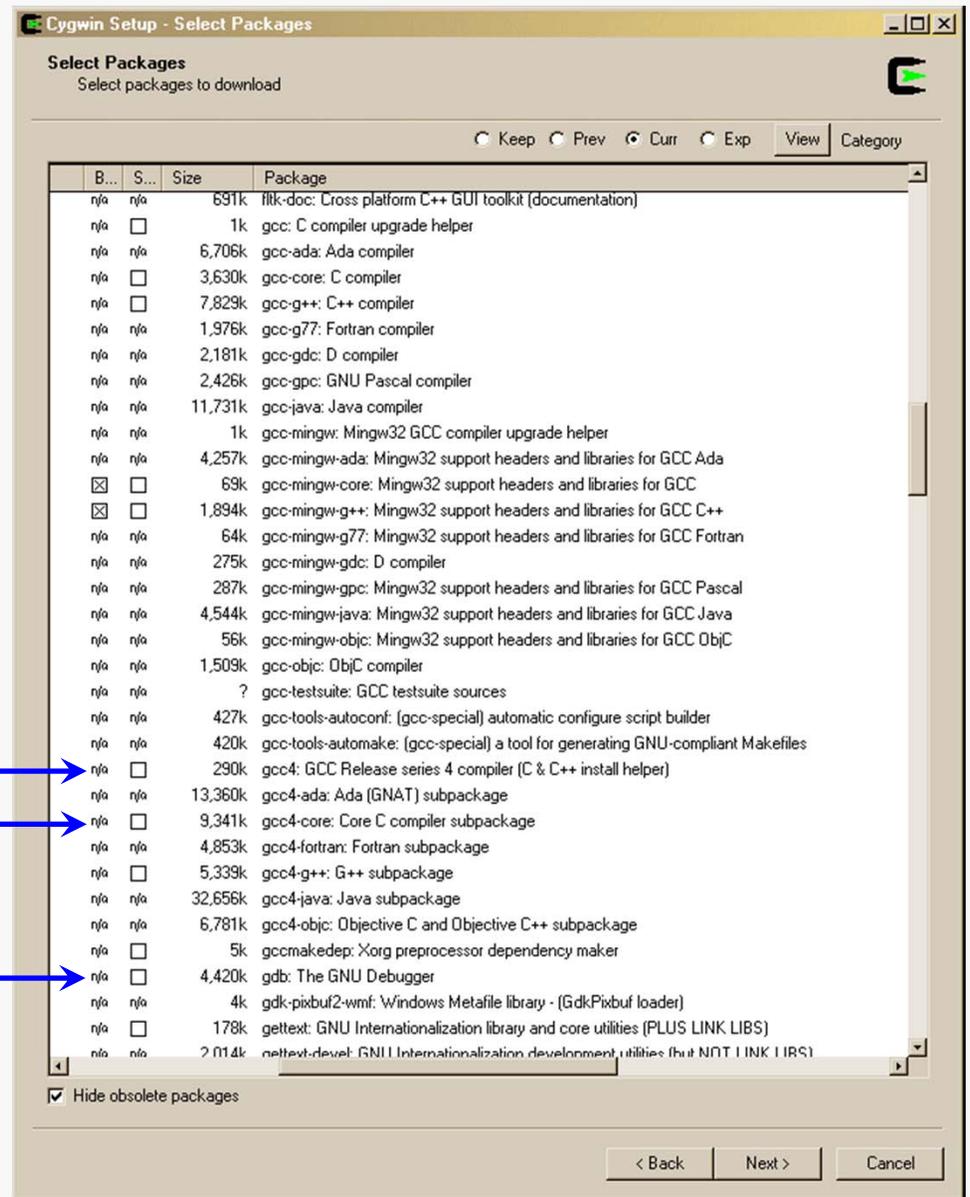
Cygwin: choosing the build tools

Note: gcc is the GNU Compiler Collection, which includes tools for a number of languages. All you need are the C/C++ tools.

The current release of Cygwin includes both gcc 3.3.4 and gcc 4.3.2.

I selected both, but at minimum you need the tools that are indicated below.

Once you've selected all of the tools you want to install, click Next...

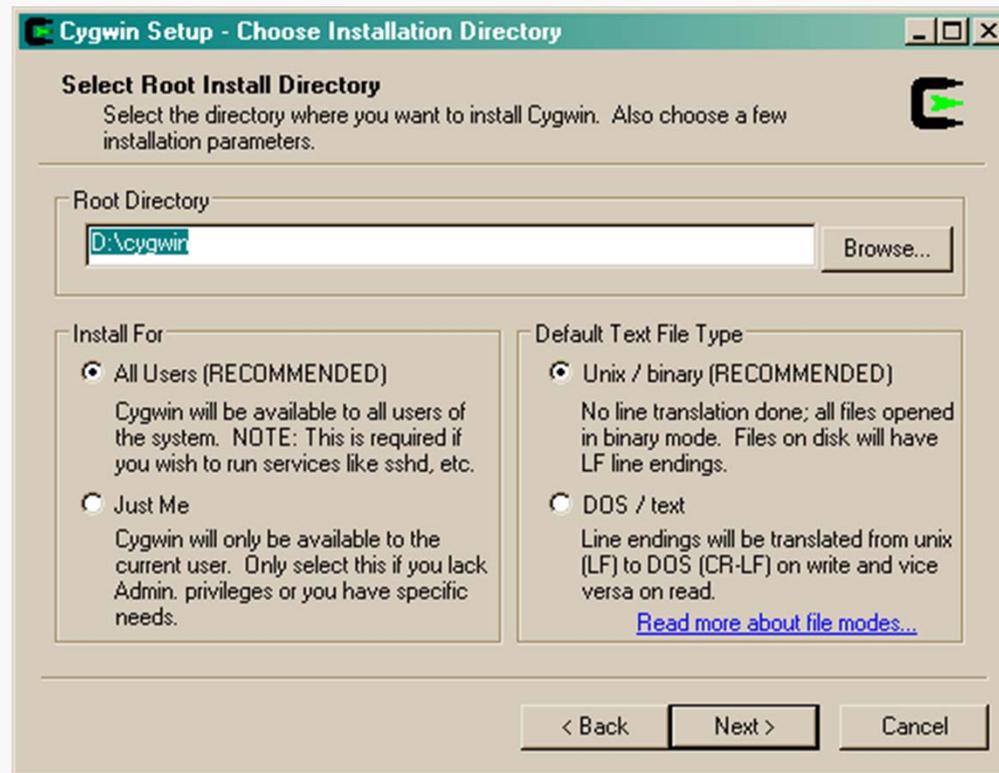


The download might take a considerable amount of time, especially if you've chosen a busy mirror.

It's possible to abort the download, then re-run the setup program and choose a different mirror.

The important thing is to be sure you download and install everything necessary.

Once the download is complete, start the setup tool again, and select Install from Local Directory.



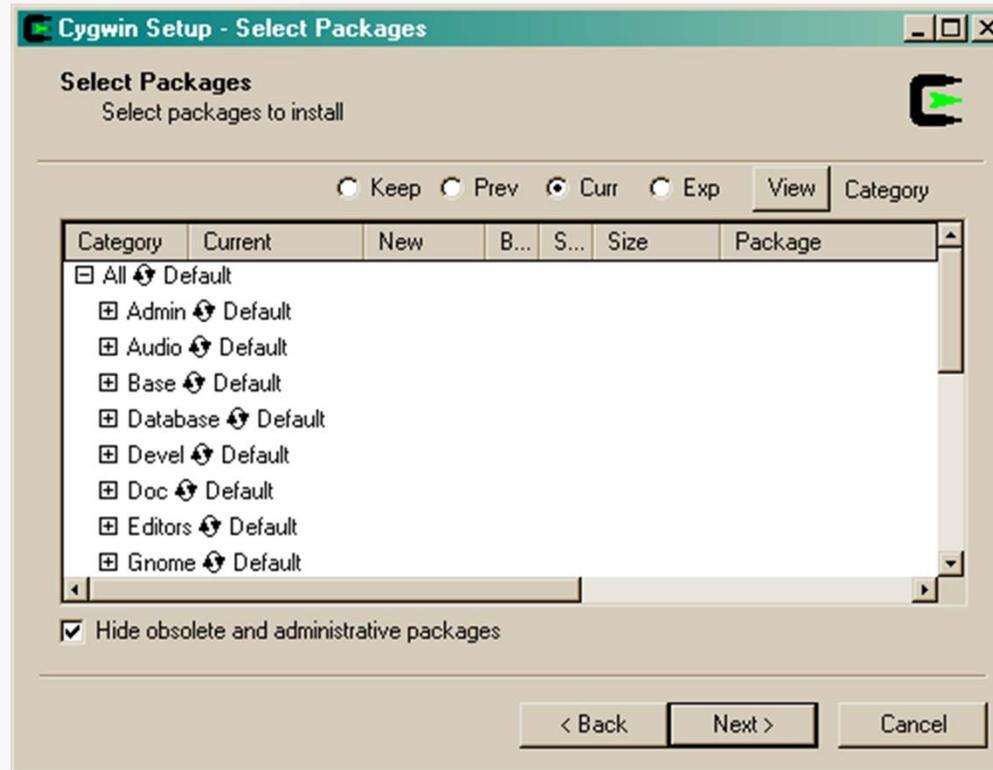
Choose the root directory for the Cygwin installation (different from the repository, but Eclipse seems to need for it to be in a root-level directory, like C:\cygwin).

I recommend sticking with Unix/binary as the default file type.
Click Next...

Cygwin: choosing installation settings

Setting up Cygwin 12

Go through the package listing again and make sure that everything you need is still selected for installation:



Click Next... wait until the installation completes...

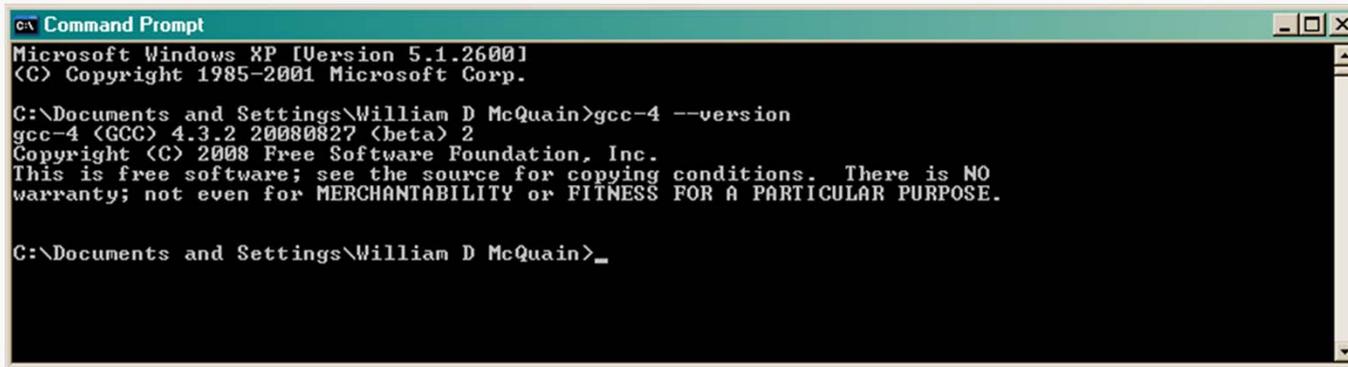
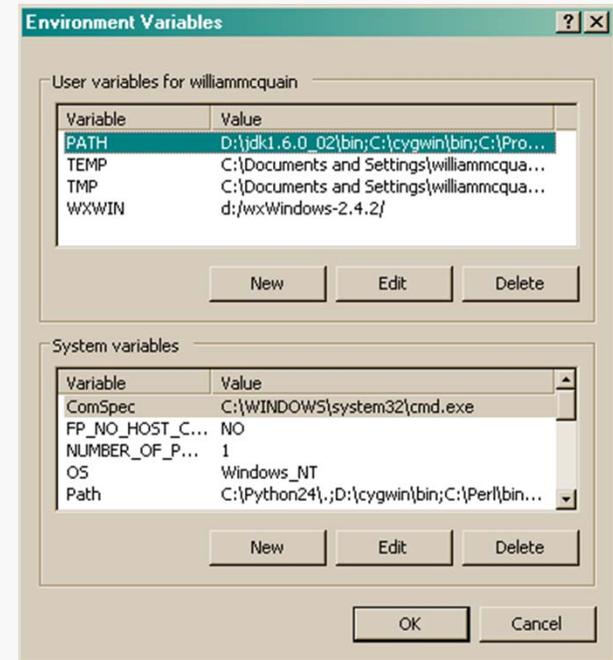
Cygwin: setting the Windows environment

Setting up Cygwin 13

Cygwin doesn't add itself to the Windows path automatically. Go to Control Panel and run the System applet. Select the Advanced tab, and click on Environment Variables.

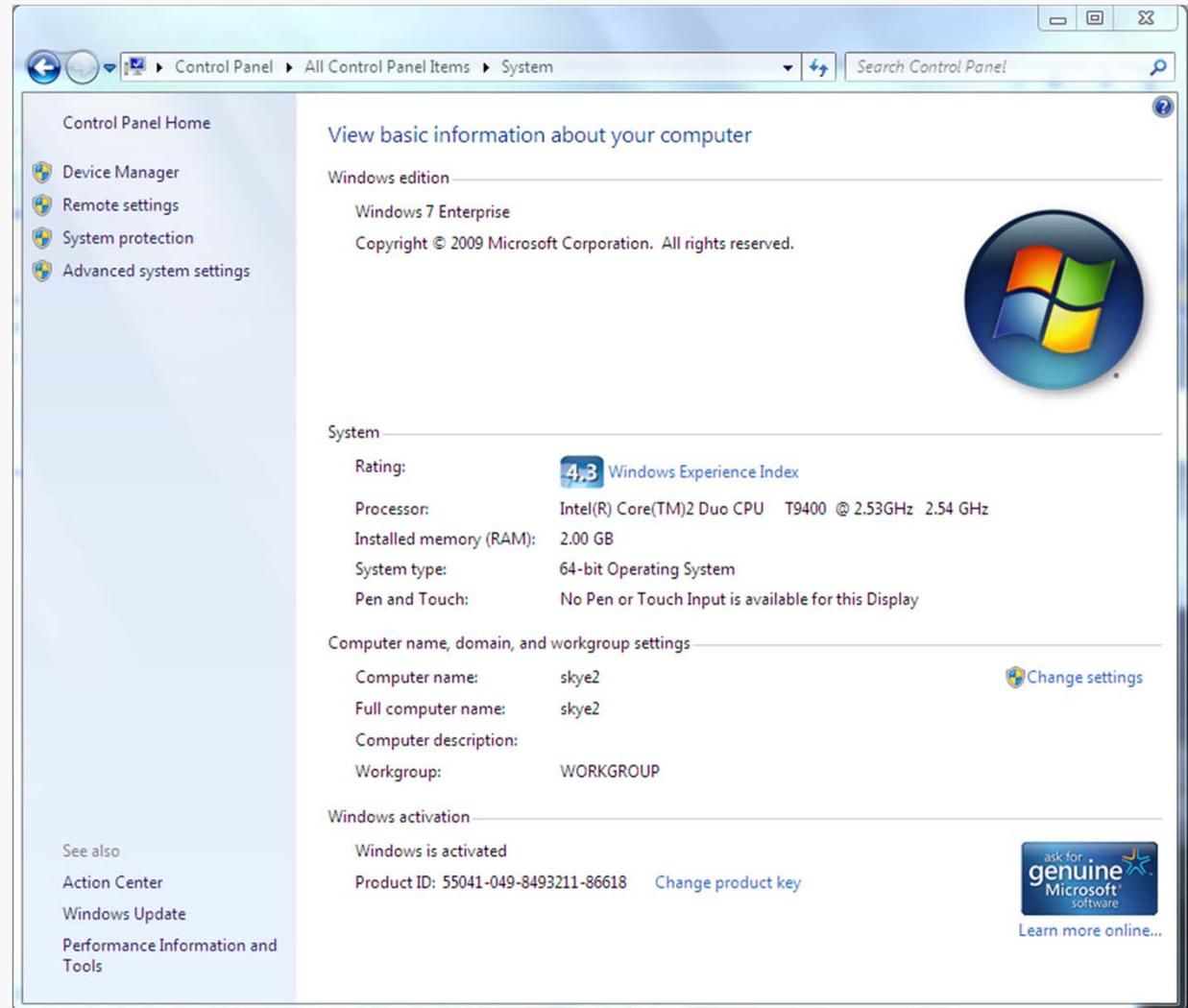
Select Path under System variables and add the path to the bin subdirectory of your Cygwin installation. You can see mine listed as the second entry in the Path at right. Path entries are separated by semicolons and are not case-sensitive.

To check your installation (in a very minimal way), open a Windows command shell and see if gcc is recognized:



This looks slightly different with the default Windows 7 theme:

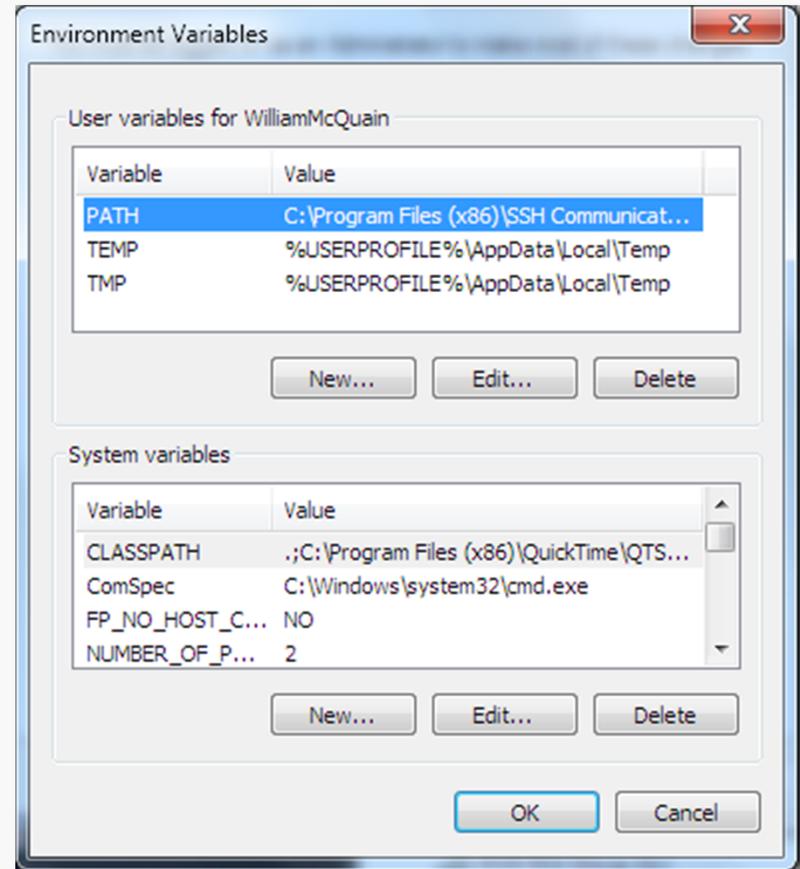
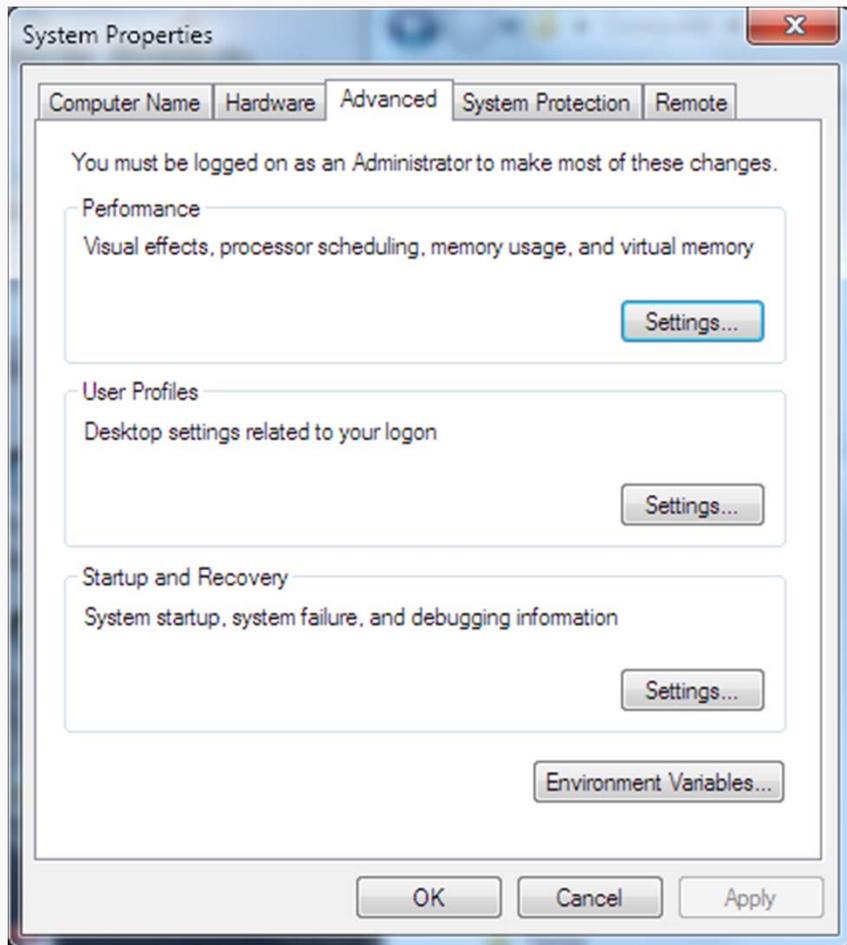
Select Advanced system settings...



Cygwin: setting the Win 7 environment

Setting up Cygwin 15

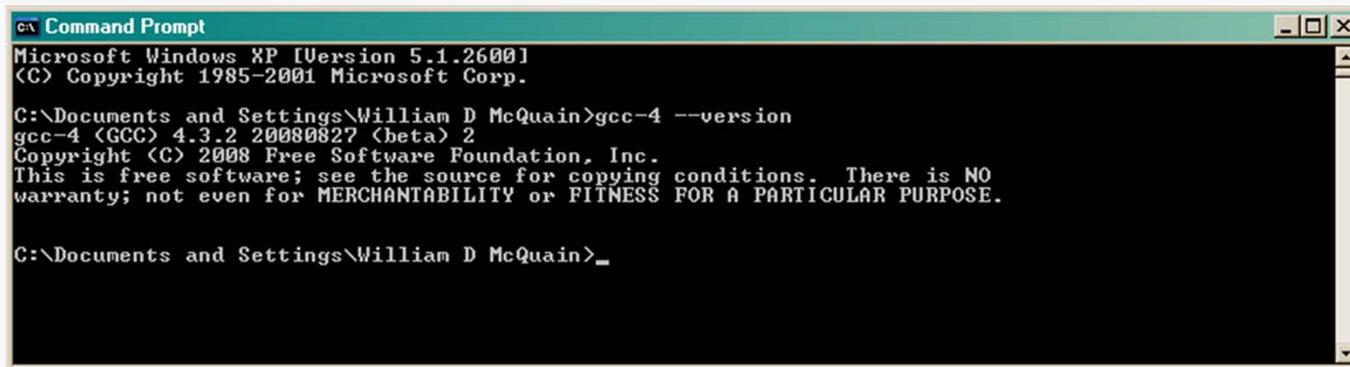
Select Environment Variables...



Select Path under System variables and add the path to the bin subdirectory of your Cygwin installation. If you installed Cygwin in the directory `c:\cygwin`, which is the default, you'd add the string `"c:\cygwin\bin;"` (without the quotes) to the beginning of the Path string.

Path entries are separated by semicolons and are not case-sensitive.

To check your installation (in a very minimal way), open a Windows command shell and see if `gcc` is recognized (or try typing `"grep -help"` to test that):



```
CA Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\William D McQuain>gcc-4 --version
gcc-4 (GCC) 4.3.2 20080827 (beta) 2
Copyright (C) 2008 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

C:\Documents and Settings\William D McQuain>_
```