



# GATS Companion to Installing Cygwin

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## Overview

Cygwin is a UNIX-like runtime environment for Windows. It's a great way to get started with UNIX and Linux development without having to fully commit to a new operating system or use a virtual machine.

## Installation

Go to the Cygwin website (<https://www.cygwin.com/>) and download the installer *setup-x86\_64.exe*.

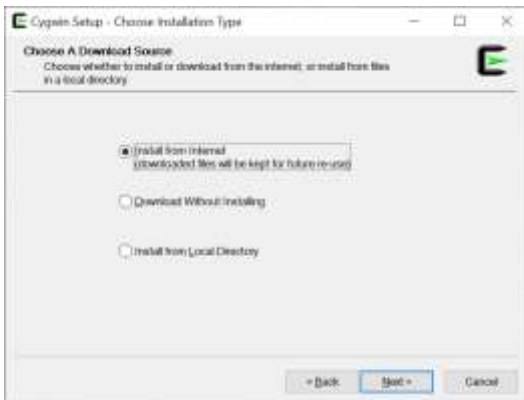
Run the installer<sup>1</sup>.



Click Next.

## Choosing the download source

I usually go with “Install from Internet”



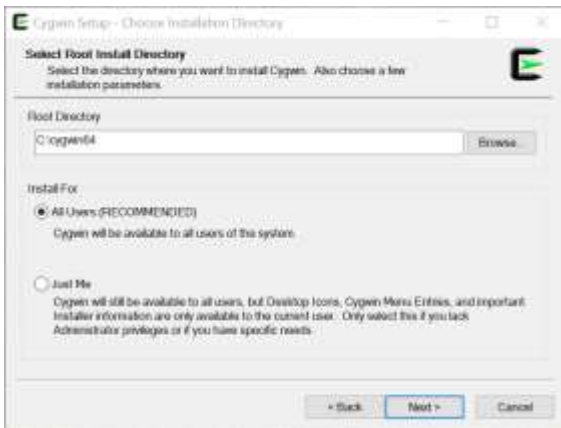
Click Next.

## Select the install location

Default is in the root of your primary drive (drive C:). Usually a good choice as the system has a lot of small files and the primary drive is usually an SSD.

<sup>1</sup> At the time of this edit, the installer was version 2.905.

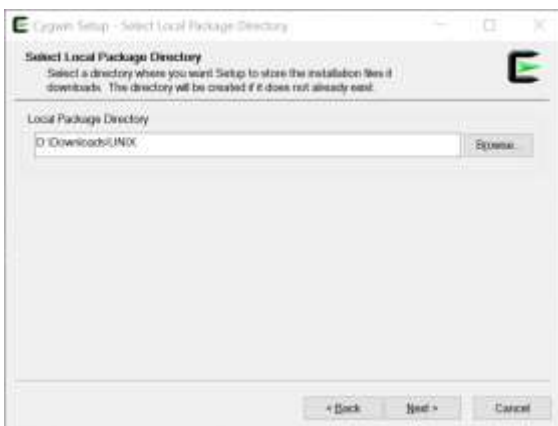
“All Users” is typical, unless there is some reason for restricting access to Cygwin.



Click Next.

## Select Local Package Directory

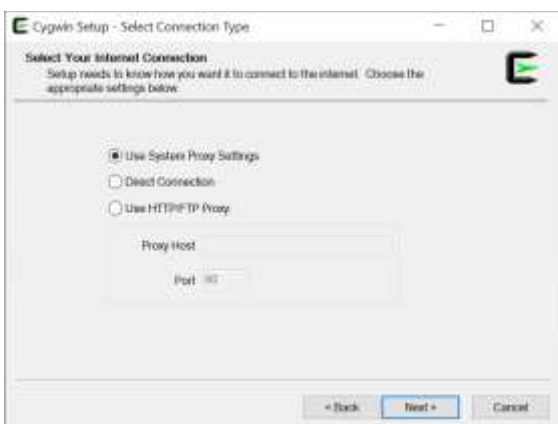
By default, Cygwin will store the download files (for future use) in the same folder from which you ran the setup program. In my case, it selected my download folder which is on a larger slower HDD since these files are only used during installation and updating.



Click Next.

## Select Your Internet Connection

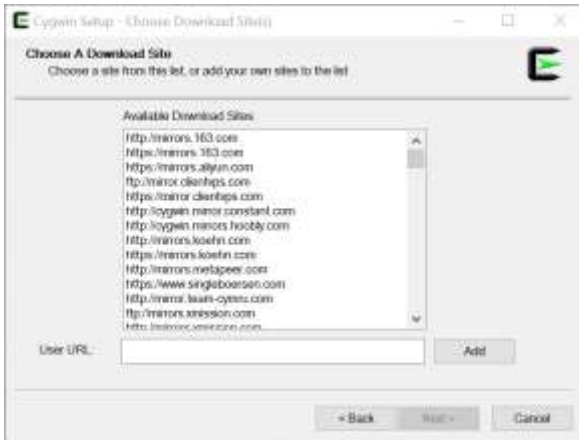
Select defaults, its usually the best for your system.



Click Next.

## Choose A Download Site

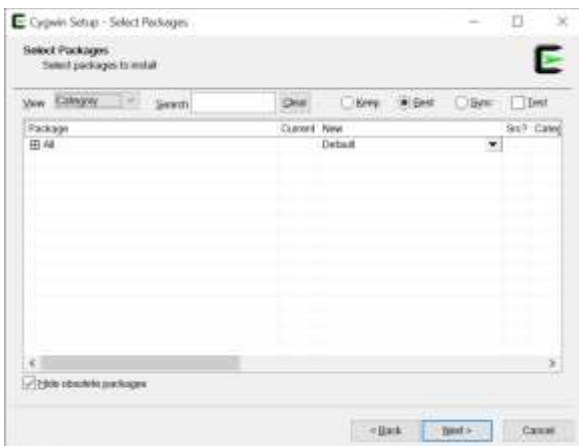
I've never found that the choice of site matters... pick any.



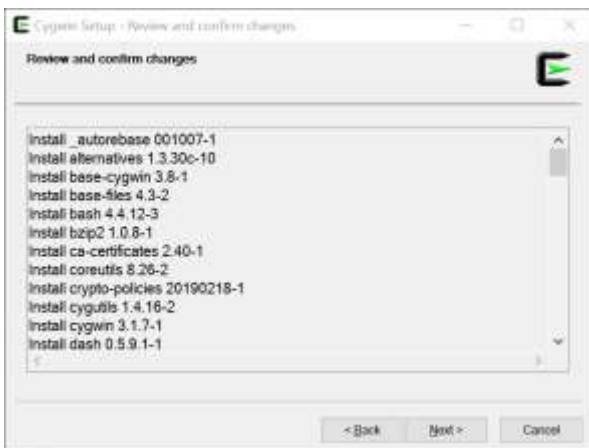
Select any site and click Next.

## Select Packages

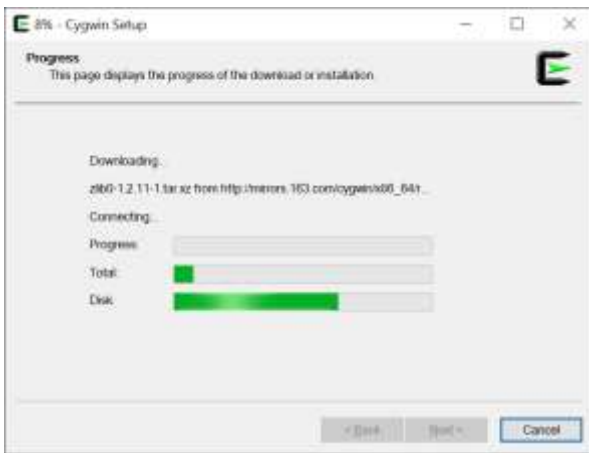
Trying the default...



Click Next.



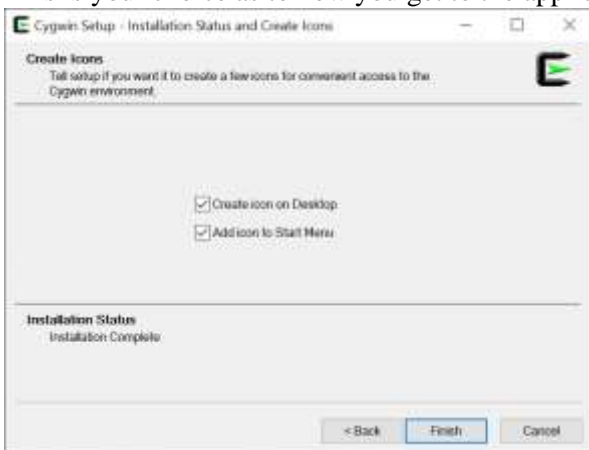
Click Next.



Is what you'll see for a while...

## Create Icons

This is your choice as to how you get to the application. Select both checkbox options:



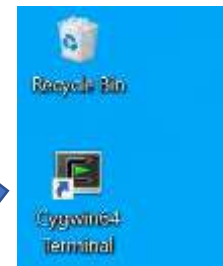
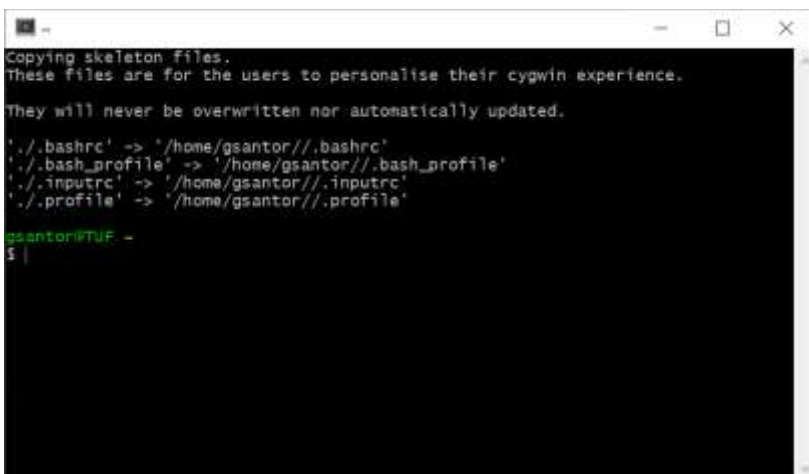
Click Finish

## Running Cygwin

There should now be an icon on the desktop to start Cygwin Terminal.

Double-click "Cygwin64 Terminal."

On the first run you will see:



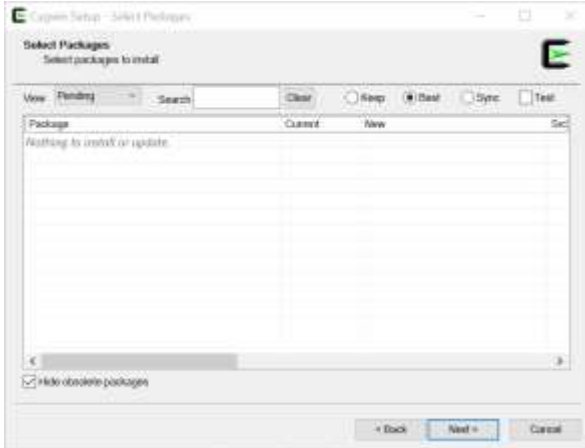
## Adding compilers

With the default installation, there are no development tools.

Let's add C and C++.

Run the setup tool again – *setup-x86\_64.exe* – which should still be in your download folder.

Select all the same options until you get to the select packages form.



Select View: Category



Then expand the All tree,

Then the Devel tree

## Which packages?

Using the dropdown arrow, select the latest version for each of the following packages:

- gcc-core (C, OpenMP)
- gcc-g++ (C++)
- gdb (GNU Debugger)
- indent (C/C++ language source code formatting program)
- make
- nasm

Click Next and work your way towards Finish.

Your customization is complete. Run “Cygwin64 Terminal” again.

Type “cc” at the command prompt. If you see:

A screenshot of a Cygwin64 Terminal window. The window has a title bar with standard Windows window controls (minimize, maximize, close). The terminal background is black with green text. The prompt is 'gsantor@PUP ~'. The user has entered the command '\$ cc'. The output is 'cc: fatal error: no input files' followed by 'compilation terminated.' on the next line. The prompt returns to 'gsantor@PUP ~' with a cursor on the next line.

```
gsantor@PUP ~  
$ cc  
cc: fatal error: no input files  
compilation terminated.  
gsantor@PUP ~  
$
```

Then you’re good! The error message confirms that the C-compiler has been installed.

**Done!**