

GATS Companion Installing Cygwin

Editors: Trinh Hān Copyright Dates: 2020, 2023 Version: 1.1.0 (2023-09-17)

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 installer¹.



Click Next.

Choosing the download source

I usually go with "Install from Internet"

Cygwin Se	tup - Choose Installation Type		-		\times
Choose A D Choose v in a local	ownload Source whether to install or download from directory.	the internet, or install from fi	les	E	
	Install from Internet (downloaded files will be	kept for future re-use)			
	O Download Without Insta	lling			
	O Install from Local Directo	ory			
		- Devile	Marcha	0	
		< Back	Next >	Canc	el

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.

¹ 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.

egymn seup - select courractuge sheetory			
Select Local Package Directory Select a directory where you want Setup to store the installation files downloads. The directory will be created if it does not already exist.	t	l	
Local Package Directory			
D:\Downloads\UNIX		Browse	

Click Next.

Select Your Internet Connection

Select defaults, its usually the best for your system.

lect Your Internet Connection Setup needs to know how you want it to connect to the internet. Chor appropriate settings below.	ose the	
Use System Proxy Settings		
O Direct Connection		
O Use HTTP/FTP Proxy:		
Proxy Host		
Port 80		

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

fiew Category Y Search	Clear	⊙⊻еер	● <u>B</u> est	() <u>S</u> ync		[est
Package	Current	New			Src?	Categ
⊞ All		Default		•		
(>

Cygwin Setup - Review and confirm changes		—	
Review and confirm changes			E
Install _autorebase 001007-1 Install alternatives 1.3.30c-10 Install base-cygwin 3.8-1 Install base-files 4.3-2 Install bash 4.4.12-3 Install bash 4.4.12-3 Install coreutificates 2.40-1 Install coreutifis 8.26-2 Install corputies 8.2090218-1 Install crypto-policies 20190218-1 Install cygutifis 1.4.16-2			^
Install cygwin 3.1.7-1 Install dash 0.5.9.1-1 <			>
	- Dook	Nexts	Cancel

Click Next.

Click Next.

🗲 8% - Cygwin Setup			_		\times
Progress This page displays the	progress of the download o	or installation.		1	
Downloading zlib0-1.2.11-1.t Connecting Progress:	ar.xz from http://mirrors.163	.com/cygwin/x86_64	ír		
Total:					
Disk:					
		< <u>B</u> ack	<u>N</u> ext >	Can	ncel

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:

E Cygwin Setup - Installa	ition Status and Create Icons	- 0	\times
Create Icons Tell setup if you want it Cygwin environment.	to create a few icons for convenient access to the		E
	Create icon on Desktop		
Installation Status Installation Complete			
	< Back	Finish	Cancel

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:



Recycle Bin

F

Terminal

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.

Pending Y Search	Clear	⊖Keep ●Best ○	Sync Test
Package	Current	New	Src
Nothing to install or update.			
<			>

Select View: Category

w Category ~ Search	Clear						⊖Коер	 Best) Sync	Test
ackage	Ourrent	New		Src?	Categories	Size	Description			
AI .		Default	•							
E Accessibility (4)		Default	•							
E Admin (9)		Default	•							
Archive (66)		Default	-							
Audio (200)		Default	•							
Base (37)		Default	•							
Database (60)		Default	•							
E Debug (2106)		Default	•							
Devel (1217)		Default	•	_						
aalb-devel		Skip	•		Devel, Graphics	58k	An asci art library - (developmen)		
algol68g		Skip	•		Devel, Interpreters	394k	Algol 68 Genie			
anjuta		Skip	-	Ц	Devel	4,407k	GNOME C/C++ IDE			
anjuta-extras		Skip	•		Devel	1,601k	GNOME C/C++ IDE (additional p	lugins)		
appstream		Skip	•	Ц	Devel	112k	AppStream metadata utility			
appstream-builder		Skip	•		Devel	8k	AppStream builder			
appstream-glib		Skip	•		Devel	97k	AppStream utilities			
astyle		Skip	•		Dovel, Utils	145k	Artistic Style is a reindenter and	eformatter of	of C, C++, C#	and Java
autobuild		Skip	•		Devel	115k	Generate summary information t	iom build log	1 5	
autoconf		Skip	•		Devel	4k	Wrapper scripts for autoconf con	mands		
autoconf-archive		Skip	•	Ц	Devel	558k	Collection of additional Autocont	macros		
autoconf2.1		Skip	•		Devel	201k	Stable version of the automatic of	onfigure sor	ipt builder	
autoconf2.5		Skip	•	ш	Devel	701k	Current version of the automatic	configure so	ript builder	
autogen		Skip	•		Devel	544k	Automated text and program ger	eration tool		
automake		Skip	•		Devel	3k	Whapper for multiple versions of .	Automake		
automake1.10		Skip	-		Devel	689k	(1.10) a tool for generating GNU	compliant N	lakefiles	
automake1.11		Skip	•		Devel	836k	(1.11) a tool for generating GNU	compliant N	takotilos	
automake1.12		Skip	•		Devel	706k	(1.12) a tool for generating GNU	compliant N	takefiles	
automake1.13		Skip	•	Ц	Devel	749k	(1.13) a tool for generating GNU	compliant N	takeføs	
automake1.14		Skip	•	Ц	Devel	773k	(1.14) a tool for generating GNU	compliant N	aketies	
automake1.15		Skip	•	Ц	Devel	598k	(1.15) a tool for generating GNU	compliant N	lakefles	
automake1.16		Skip	•	н	Devel	812k	(1.16) a tool for generating GNU	compliant N	lakeføs	
automake1.4		Skip	•	Н	Devel	248k	(1.4) a tool for generating GNU-c	ompliant Ma	Refles	
automake1.5		Skip	•	н	Devel	332k	(1.5) a tool for generating GNU o	ompliant Ma	kelles	
automaka 1.6		SHIP	•	H	Devel	365k	(1.0) a tool for generating GNU-o	ompliant Ma	acros	
automake 1.7		Skip	•	H	Devel	426k	(1.7) a tour tor generating GNU-	ompliant Ma	Refiles	
automake 1.0		owp	•	H	Devel	4908	(1.6) a tool or generating GNU c	ompitiant Ma	CONTRACTOR OF	
automake 1.9		SNIP	•	H	Devel	557k	(1.9) a tool for generating GNU-c	ompliant Ma	ACTION .	
automoce		SNP	•	H	Dava, KDE	25k	LIMAKE ROOKS for Q14 mod gener	ation		
bashdo		SNP	•	H	Devel	140k	Debugger for bash scripts			
conoper		SNP	•	H	Devel	28k	A bitmap rone compiler			
onuns		SNP	•	H	Devel	24,430k	GNU assencer, linker, and smill	ar utanies		
						0.004	The rest of the second states in the			>

Which packages?

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

- binutils
- gcc-core (C, OpenMP)
- gcc-g++ (C++)
- gdb (GNU Debugger)
- git

Click <u>N</u>ext and work your way towards <u>F</u>inish.

Your customization is complete. Run "Cygwin64 Terminal" again.

Then expand the All tree,

Then the Devel tree

- indent (C/C++ language source code formatting program)
- make
- nasm
- vim

Type "cc" at the command prompt. If you see:²



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

Docum	nent Hist	tory
Version	Date	Activity
1.0.0	2020-10-24	Initial release
1.1.0	2023-09-17	Added binutils, git, and vim to the package list

2