

TP-LINK®			Name: Description - CYGWIN environment for CONVINJECT-1 Project
№	Number, version	Date	Author
1	Version 1.0	15 September 2016	Konstantin Mauch, Engineer

Introduction

Declaratively and practically (such conclusion is based on results of numerous tests) is working on following operating systems: Ubuntu 12.04, Ubuntu 14.04; and on following environments: CygWIN x86_32 on Windows7, CygWIN x86_64 on Windows10.

The present document describes how to install CygWIN x86_64 (on Windows10, etc) with set of components required for successful compilation of “CONVINJECT-1” Project. Pay attention, that installation (of components) for rest cases - on Ubuntu, Fedora, RedHat is done mostly be means of native package managers (aptitude, apt-get, dpkg, rpm, etc) and (to some degree) resembles the process of installation described below.

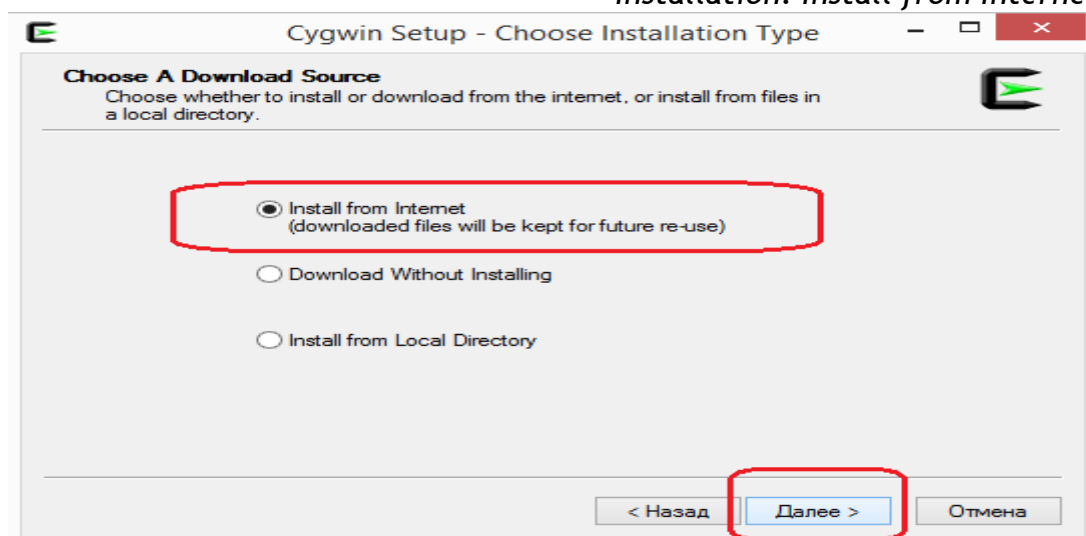
Cygwin Install Software Download and Launch

Download the installation software from <https://cygwin.com/setup-x86_64.exe> and launch it with sufficient user credentials. (The one will modify your filesystem, so run it either with Administrator rights, either from folder of current user.)

During the first phase of installation, select the “Install from Internet” option - fastest and simplest way to install the CygWIN (Linux-alike command line environment for Windows).

1

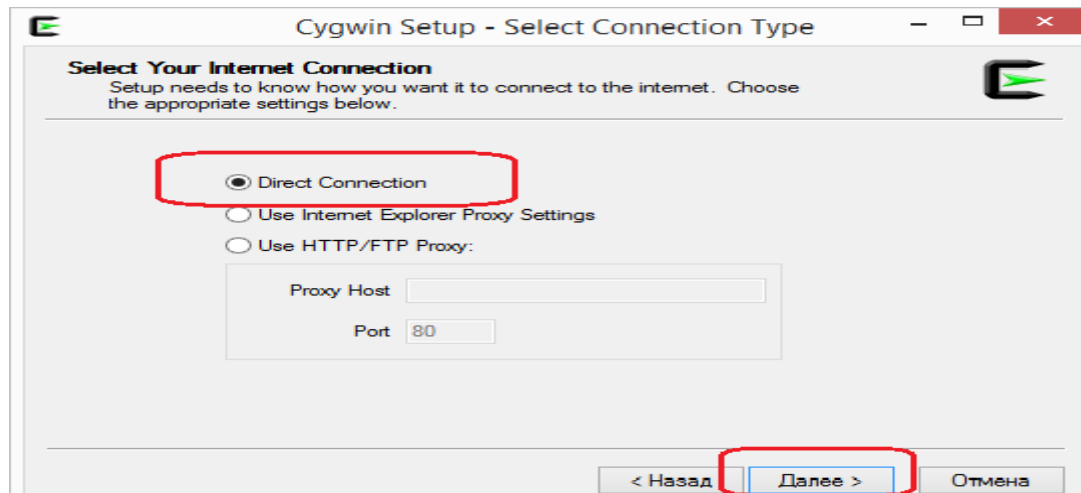
Installation: Install from Internet



Press “Next”. Then, select the Direct Connection to Interned, as you (presumably) have it.

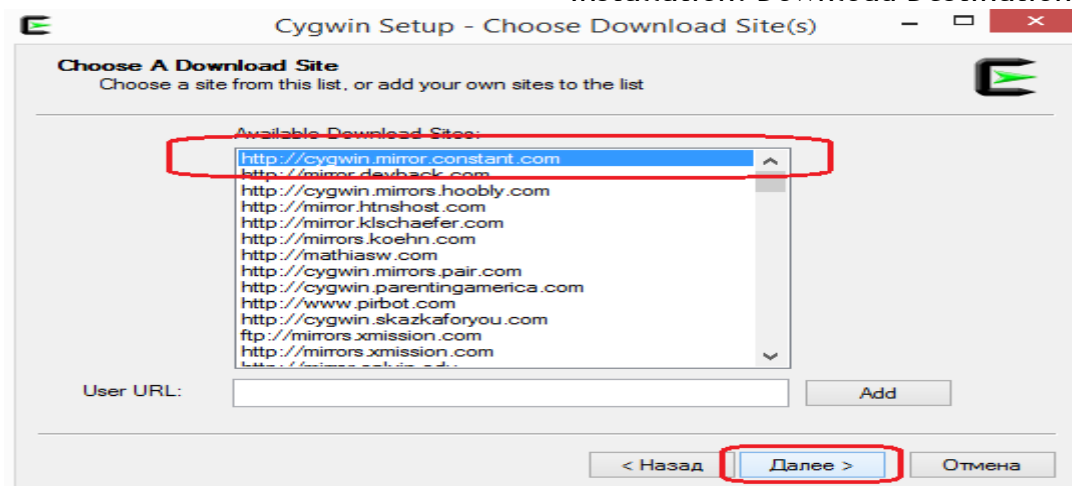
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Installation: Direct Connection to Internet



Press “Next”. Then, among a wide range of sites to download from select the first one, namely <http://cygwin.mirror.constant.com> - the one definitely will be working, or, alternatively, choice another one which you trust more.

Installation: Download Destination



2

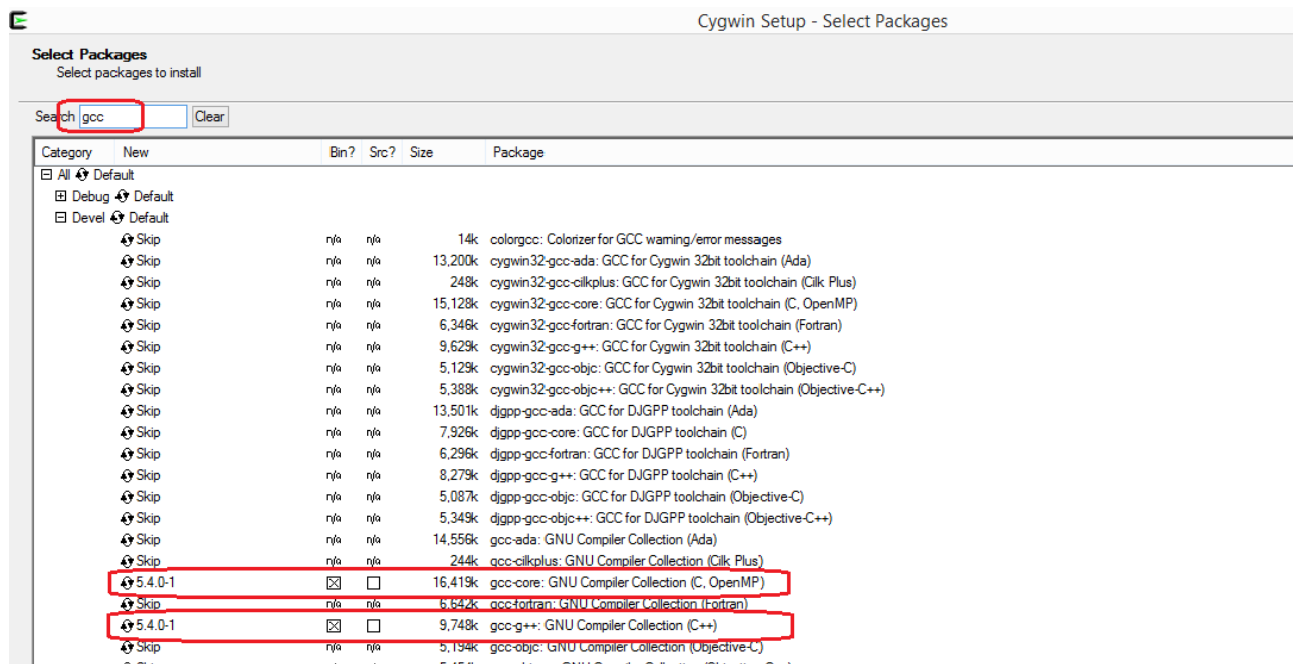
Packages to be Installed

To build and - further - deploy the “CONVINJECT-1” Project it’s required to install specific platform components on CygWIN. By the way once some of component should be, say, re-installed (or maybe some other one installed *additionally*, then it’s possible to re-run the installation executable https://cygwin.com/setup-x86_64.exe, and then to re-select new component, or selected anew, or disable, etc.)

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First of all, let's install compilers. Type in search box "gcc" and select GNU Compiler Collections "gcc-core" and "gcc-g++". Don't press "Next".

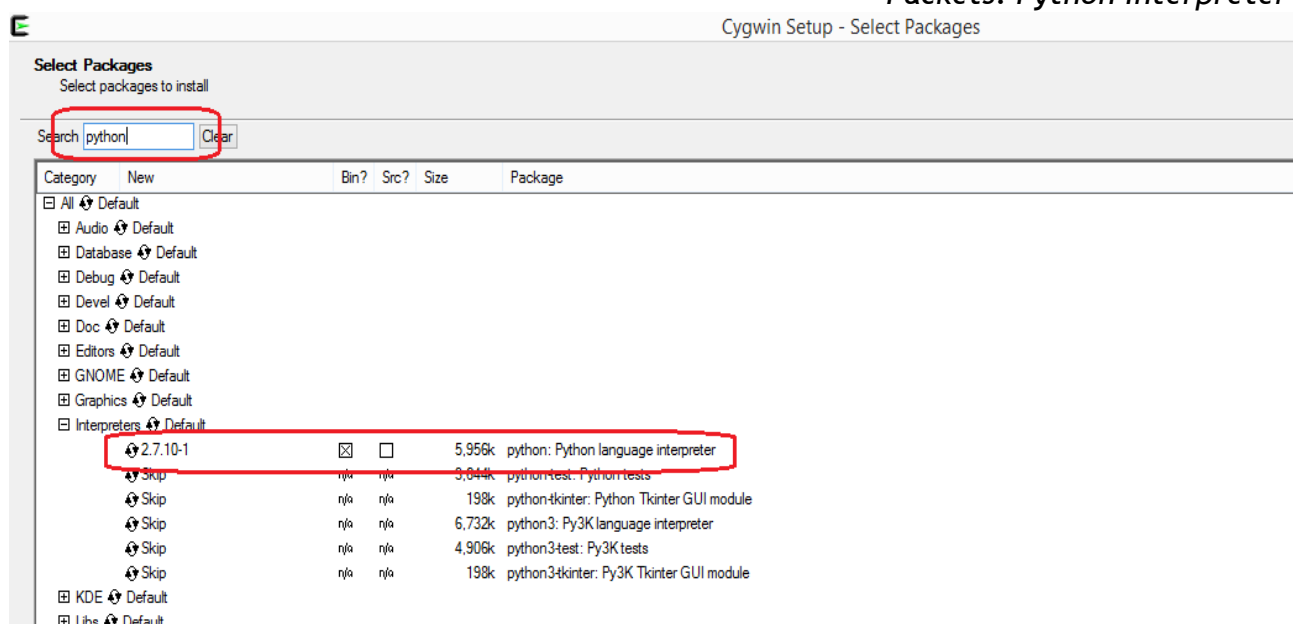
Packets: C and C++



3

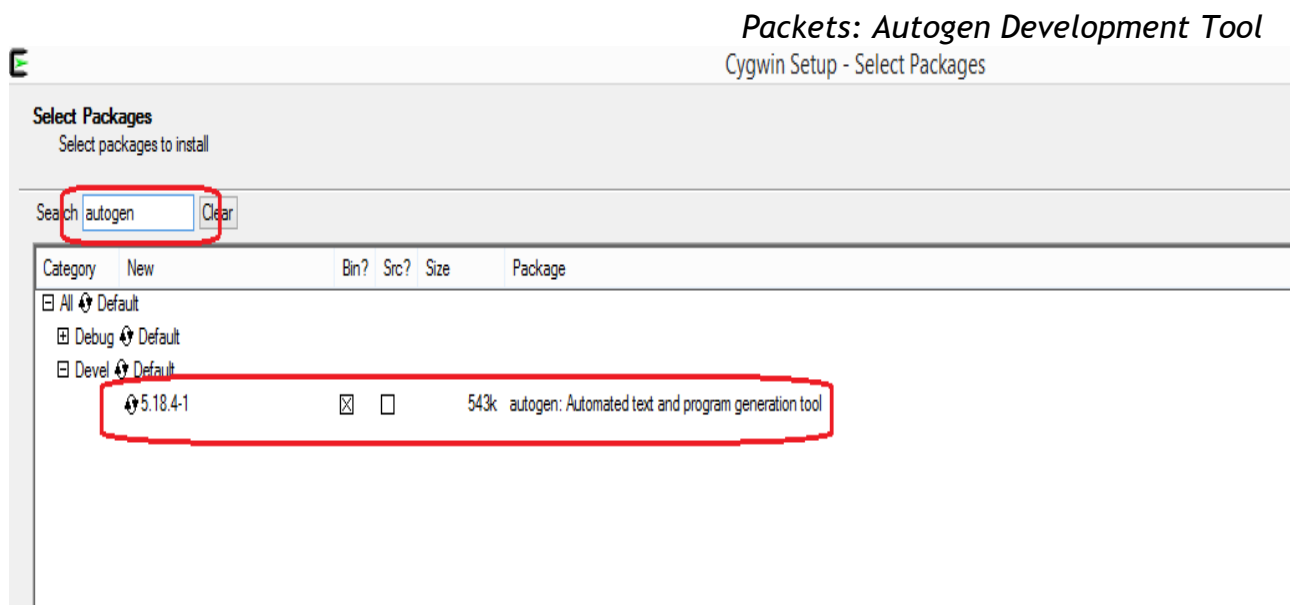
Type in search box "python" and select Python Language Interpreter "python".

Packets: Python Interpreter



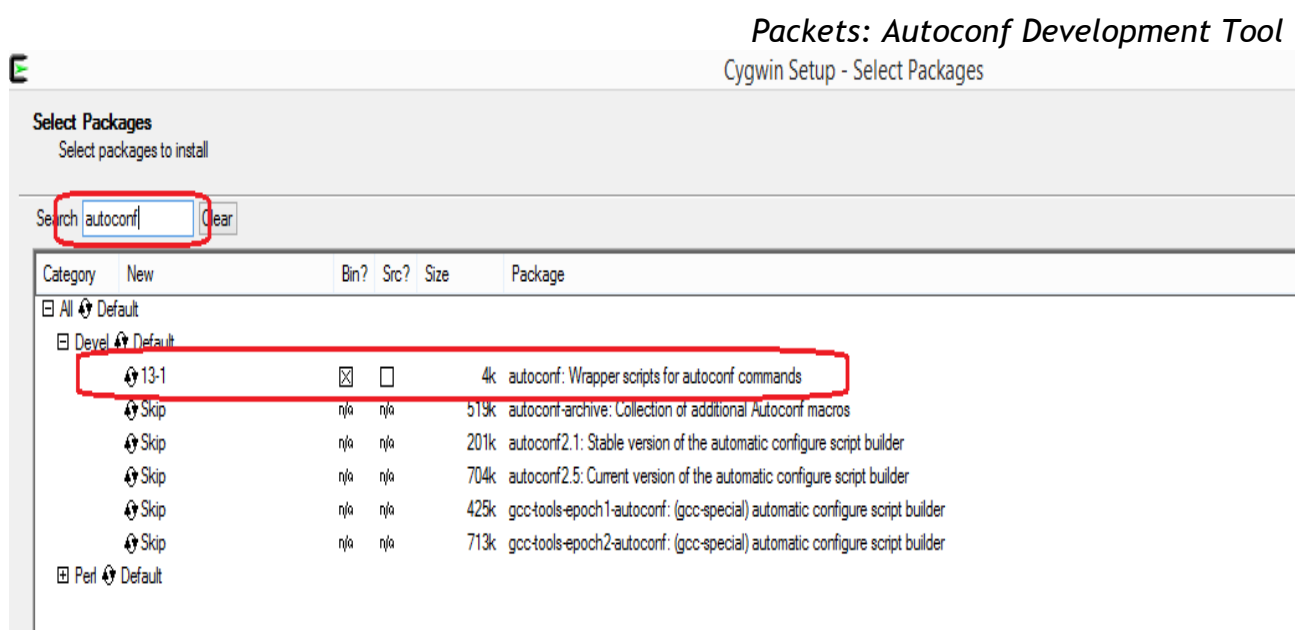
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Don't press "Next". Type in search box "autogen" and select Automated Text and Program Generator Tool "autogen".



Don't press "Next". Type in search box "autoconf" and select Wrapper Scripts for Autoconf Commands "autoconf".

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Don't press "Next". Type in search box "make" and select "automake", "cmake", and "make" - Wrapper Scripts for Automake Aclocal, Crossplatform Makefile Generator System, and the GNU Version of the 'make' Utility, respectively.

Packets: Automake Development Tool
Cygwin Setup - Select Packages

Select Packages
Select packages to install

Search

Category	New	Bin?	Src?	Size	Package
<input type="checkbox"/> All <input checked="" type="checkbox"/> Default <input type="checkbox"/> Archive <input checked="" type="checkbox"/> Default <input type="checkbox"/> Debug <input checked="" type="checkbox"/> Default <input type="checkbox"/> Devel <input checked="" type="checkbox"/> Default					
<input checked="" type="checkbox"/> 9-1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		3k	automake: Wrapper scripts for automake and aclocal
<input checked="" type="checkbox"/> Skip	n/a	n/a		714k	automake1.10: (1.10) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		860k	automake1.11: (1.11) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		733k	automake1.12: (1.12) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		780k	automake1.13: (1.13) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		581k	automake1.14: (1.14) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		781k	automake1.15: (1.15) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		248k	automake1.4: (1.4) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		332k	automake1.5: (1.5) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		365k	automake1.6: (1.6) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		426k	automake1.7: (1.7) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		499k	automake1.8: (1.8) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		557k	automake1.9: (1.9) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> 3.6.2-1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		3.711k	cmake: Cross-platform makefile generation system
<input checked="" type="checkbox"/> Skip	n/a	n/a		863k	cmake-doc: Cross-platform makefile generation system (documentation)
<input checked="" type="checkbox"/> Skip	n/a	n/a		1.233k	cmake-gui: Cross-platform makefile generation system (GUI)
<input checked="" type="checkbox"/> Skip	n/a	n/a		163k	extra-cmake-modules: Extra CMake Modules for KDE
<input checked="" type="checkbox"/> Skip	n/a	n/a		419k	gcc-tools-epoch1-automake: (gcc-special) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		589k	gcc-tools-epoch2-automake: (gcc-special) a tool for generating GNU-compliant Makefiles
<input checked="" type="checkbox"/> Skip	n/a	n/a		6k	gccmakedep: X Makefile dependency tool for GCC
<input checked="" type="checkbox"/> Skip	n/a	n/a		34k	imake: X Imake legacy build system
<input checked="" type="checkbox"/> 4.2.1-1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		449k	make: The GNU version of the 'make' utility
<input checked="" type="checkbox"/> Skip	n/a	n/a		30k	makedepend: X Makefile dependency tool

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Don't press "Next". Type in search box "libtool" and select the Generic Library Support Script "libtool".

Packets: Libtool Development Utility
Cygwin Setup - Select Packages

Select Packages
Select packages to install

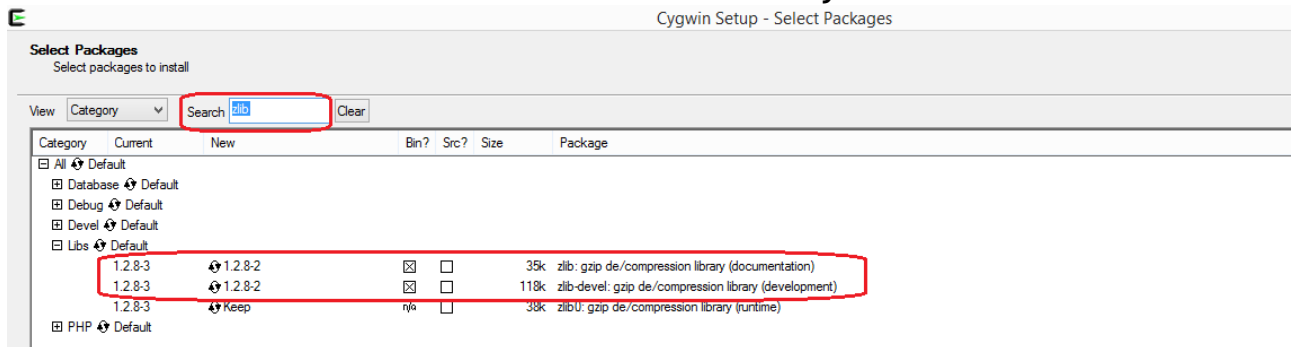
Search

Category	Current	New	Bin?	Src?	Size	Package
<input type="checkbox"/> All <input checked="" type="checkbox"/> Default <input type="checkbox"/> Debug <input checked="" type="checkbox"/> Default <input type="checkbox"/> Devel <input checked="" type="checkbox"/> Default						
<input checked="" type="checkbox"/> Skip	n/a	n/a			383k	cygwin64-libtool: libtool for Cygwin 64-bit toolchain
<input checked="" type="checkbox"/> 2.4.6-4	<input checked="" type="checkbox"/>	<input type="checkbox"/>			705k	libtool: Generic library support script

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Don't press "Next". Type in search box "zlib" and select in Compression Library "zlib" and Compression Library Headers with Necessary Environment "zlib-devel".

Packets: Library ZLIB and Headers ZLIB-DEVEL



The screenshot shows the 'Cygwin Setup - Select Packages' window. The search box contains 'zlib'. The results table is as follows:

Category	Current	New	Bin?	Src?	Size	Package
All	Default					
Database	Default					
Debug	Default					
Devel	Default					
Libs	Default					
	1.2.8-3	1.2.8-2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	35k	zlib: gzip de/compression library (documentation)
	1.2.8-3	1.2.8-2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	118k	zlib-devel: gzip de/compression library (development)
	1.2.8-3	Keep	n/a	<input type="checkbox"/>	38k	zlibU: gzip de/compression library (runtime)
PHP	Default					

Don't press "Next". Type in search box "wget" and select Utility to Retrieve files via HTTP/FTP "wget".

Packets: WGET Utility



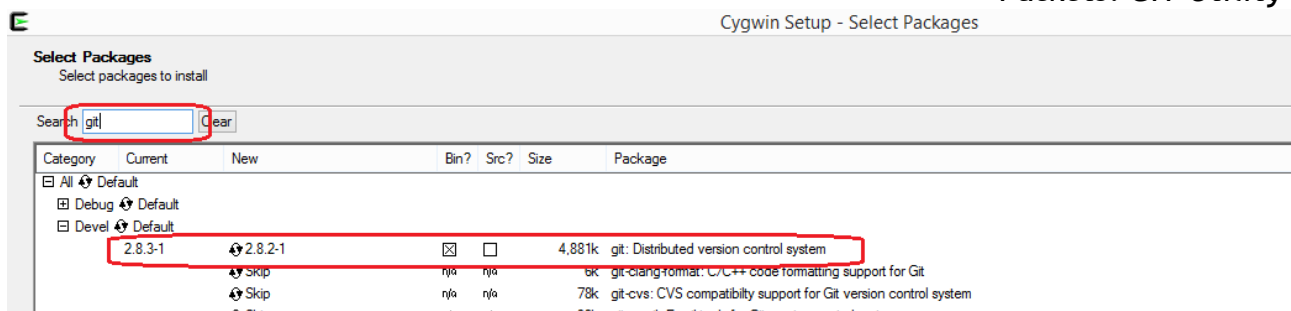
The screenshot shows the 'Cygwin Setup - Select Packages' window. The search box contains 'wget'. The results table is as follows:

Category	Current	New	Bin?	Src?	Size	Package
All	Default					
Debug	Default					
Perl	Default					
Utils	Default					
Web	Default					
	1.18-1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	746k	wget: Utility to retrieve files from the WWW via HTTP and FTP

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Don't press "Next". Type in search box "git" and select Client Software for Distributed Version Control System "git".

Packets: GIT Utility



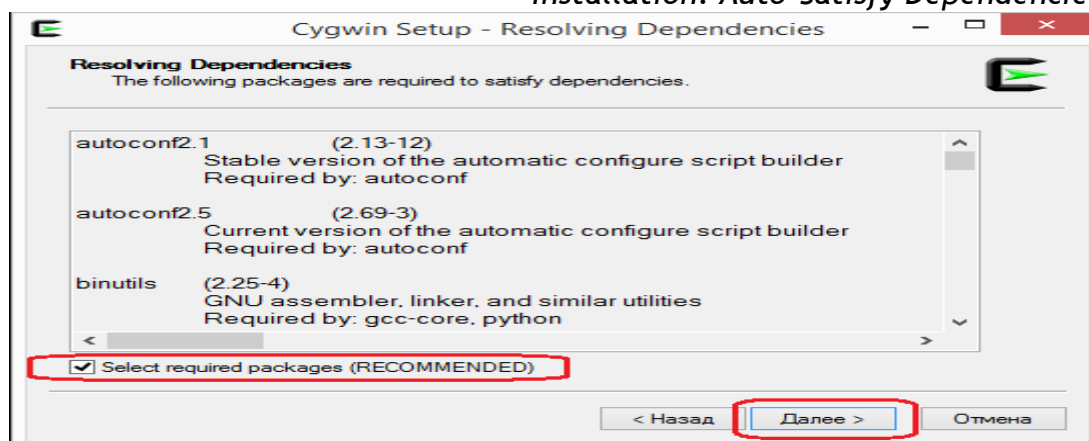
The screenshot shows the 'Cygwin Setup - Select Packages' window. The search box contains 'git'. The results table is as follows:

Category	Current	New	Bin?	Src?	Size	Package
All	Default					
Debug	Default					
Devel	Default					
	2.8.3-1	2.8.2-1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4,881k	git: Distributed version control system
	Skip		n/a	n/a	6k	git-clang-format: C/C++ code formatting support for Git
	Skip		n/a	n/a	78k	git-cvs: CVS compatibility support for Git version control system
	Skip		n/a	n/a	22k	git-email: Email tools for Git version control system

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Press “Next”. Once the proposal to install not resolved dependencies appears select the Checkbox “Select Required Packages (RECOMMENDED)” to install them automatically.

Installation: Auto-Satisfy Dependencies



Pre “Next” several time, interacting (where needed) with installation program. Press “Done” in the end.

Download of “CONVINJECT-1” Project

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After you’re done with Libraries and Utilities, it’s time (to start optionally - Midnight Commander, and) to download the sources of “CONVINJECT-1” Project from <https://github.com/metallistov20/convinject-1> with “Git” utility.

For this type `<git clone https://github.com/metallistov20/convinject-1.git>` in command

Project “CONVINJECT-1” Download from Online Git Repository

```

E
mc [developer@notebook]:~
Copying skeleton files.
These files are for the users to personalise their cygwin experience.
They will never be overwritten nor automatically updated.
'./bashrc' -> '/home/developer//.bashrc'
'./bash_profile' -> '/home/developer//.bash_profile'
'./inputrc' -> '/home/developer//.inputrc'
'./profile' -> '/home/developer//.profile'
developer@notebook ~
$ mc
$ git clone https://github.com/metallistov20/convinject-1.git

```

line, enter the directory `<./convinject-1>` by typing `<cd ./convinject-1>` and proceed with building the “CONVINJECT-1” Project.

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The procedure of building and deployment is described in “Description - conversation injector.pdf”, (permanent URL: <https://github.com/metallistov20/convinject-1>).

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