

gbutils -- Cygwin installation

Author: Angelo Secchi
Author: Giulio Bottazzi
Contact: <secchi@sssup.it>
Date: 4 October 2011
Revision: 5.4
Copyright: GPL

Contents

Installing Cygwin	1
Required Cygwin packages	2
Installing X and Gnuplot	2
Installing GNU matheval library	2
Installing gbutils	3

Installing Cygwin

The present document provides a short description of how to install the gbutils package inside a *Cygwin/X* environment. The installation of optional libraries and of related programs is also discussed.

Cygwin/X is a port of the X Window System to the Microsoft Windows family of operating systems. *Cygwin/X* runs on all recent consumer and business versions of Windows; as of 2003-12-27 those versions are specifically Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, Windows XP, and Windows Server 2003.

PLEASE NOTICE that *Cygwin/X* is licensed under an X style license, which is NOT a GNU GPL license; *Cygwin* is licensed under a modified GNU General Public License that specifically allows libcygwin1.a to be linked to programs that are licensed under an Open Source compliant license without such linking requiring that those Open Source programs be licensed under the GNU General Public License (see the *Cygwin* licensing page for more information). Source code and binaries for both projects are freely available.

You can find binaries and source code at

<http://x.cygwin.com/>

with detailed instructions for installation.

Required Cygwin packages

In these guidelines it is assumed you have a working Cygwin installation on your computer in C:\cygwin(if you choose a different location for Cygwin please adapt the following instructions accordingly).

Before installing the gbutils you need to select in the Cygwin packages list the following items:

crypt *	(Encryption/Decryption utility and library)
flex *	(A fast lexical analyzer generator)
gcc-g++	(C++ compiler)
gcc-g77	(Fortran compiler)
gsl	(GNU Scientific Libraries)
guile-devel *	(Development headers and static libraries for GUILE)
make	(GNU version of the 'make' utility)

Packages with * are required by GNU mathval libraries (see below). Then if you are not planning to install this library you can avoid installing them.

Installing X and Gnuplot

If you want to exploit gbutils to plot data or functions you may select from the Cigwin package list:

gnuplot	(A command-line driven interactive plotting utility)
X-startup-script	(Cygwin/X startup scripts)

To launch X in Cygwin type:

```
startx
```

from the command line.

Installing GNU matheval library

Many programs in gbutils do not require ANY external library apart from the standard ones. There are however few exceptions, see README for more details. In particular, the program gbfun uses the GNU matheval library (version $\geq 1.1.1$).

After step 1 “Install Cygwin” the installation of the Gnu Matheval library should be straightforward.

Get the latest version of the library at

<http://www.gnu.org/software/libmatheval/>

and save it in C:\cygwinusrlocal. Then unpack the file:

```
tar xvzf libmatheval-{version}.tar.gz
```

move inside the source directory:

```
cd libmatheval-{version}
```

run the configure script specifying the prefix /usr

```
./configure --prefix=/usr
```

then build the files:

```
make
```

and install them:

```
make install
```

for more detailed instructions see the file INSTALL inside the GNU matheval source directory (you can use the command `less INSTALL`).

Installing gbutils

The installation of gbutils should go now smoothly. Unpack the package:

```
tar xvzf gbutils-{version}.tar.gz
```

move inside the source directory:

```
cd gbutils-{version}
```

run the configure script:

```
./configure
```

then build the files:

```
make
```

and install them:

```
make install
```

for more detailed instructions see the file `INSTALL` inside the `gbutils` source directory.

You may clean up the source tree with:

```
make clean
```

This is the END, enjoy your `gbutils` :-)