Win32CompileCygwin

From RetroShare Wiki

Contents

Introduction

This is a guide for Windows users with a step-by-step instruction to download, install, configure and build your libretroshare.a .

This guide uses **Cygwin** a Linux-like environment for Windows used for compilation of the libretroshare.a .

Start off by creating a RetroShare and a download folder on your hard drive where you can put all the installation files:

```
C:\Downloads
```

For further reference, the assumption is made that the local user will be 'Administrator'.

Download and Install Cygwin

Download the latest Cygwin setup and save it in your download location:

```
C:\Downloads\
```

More info about Cygwin can be found at http://www.cygwin.com or http://sourceware.org/cygwin

Selecting Cygwin packages to install

Run the setup program with the following options:

1 Next

2 Installation type : Install from Internet (default) NEXT

3 Root directory : C:\cygwin (default) NEXT

4 Local Package directory : C:\cygwin\download (your download location) NEXT

5 Internet Connection : Direct Connection (preferred, if it fails try another) NEXT

6 Select a mirror close to you, Choose Download Site : Choose a download site closest to you (FTP preferred)NEXT

7 Select the following packages:

```
Devel -> gcc, gcc-g++, gdb, make, patchutils, subversion
Utils -> diffutils
Web   -> wget
```

8 NEXT

9 FINISH

Download and Install QT4 Opensource for Windows

Download the QT4 Opensource for Windows (Qt with the MinGW compiler): qt-win-opensource-4.4.3-mingw.exe after download finished Install it and go to the next step.

Download and Unpack RetroShare Build Kit

Download the RetroShareBuild-2008-11-26.zip and save it in your download location:

```
C:\Downloads\
```

So you have downloaded it, now unzip into this directory:
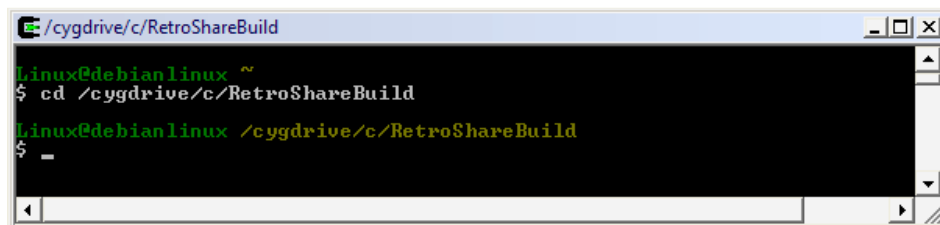
```
C:\Downloads\RetroShareBuild
```

The following Picture shows the command to start cygwin in a path, unpack into

```
C:\RetroShareBuild
```

Start the cygwin shell

cd to the directory with this buildkit. use cd .. to go to the top level several times. then "cd /cygdrive/" is the command and then add the path, where you unzipped the RetroShareBuild folder: "c/RetroShareBuild"

```
cd /cygdrive/c/RetroShareBuild
```


In the end the command was successful, if you just have a "$" in the next line, as the pic shows.

Run the scripts

./1_make_build_env.sh

run the scripts in order (by default downloads this Build Kit SVN Revision 767 for compile! -> the SVN for Retroshare 767 is meant, as we today have SVN 1047 for retroshare already, maybe the script needs to be updated to download retroshare SVN 1047 at least ???):

```
./1_make_build_env.sh
```

Message "Error: miniupnp.a is only needed" is ok, as only miniupnp.a is needed.

in RetroShareBuild/src will be four folders. Copy them to the <Build dir> then make tricks

- cd to <Build dir>/pthreads-w32-2-8-0-release . type

```
make  clean GC
```

and, after it

```
make clean GC-debug
```

This will create a pthreadGCE2d.dll, this file should be placed near RetroShare.exe.

- The openssl-0.9.7g-xpgp-0.1c/include folder contains a lot of links to some headers. For futher compilation under mingw you'll need real headers, not links. So, replace links with real files, as I did here . Another way is to download that archive and unpack it in <Build dir>.

- Create <Build dir>/lib folder. copy all static libs into it - libz.a from zlb folder - libminiupnp.a from miniupnpc - libpthreadGC2d.a and libpthreadGC2.a from pthreads - libssl.a and libcrypto.a from openssl - libws2_32.a, libuuid.a, libole32.a, libiphlpapi.a, libcrypt32-cygwin.a, libgdi32.a, libwinmm.a from <Cygwin dir>\lib\w32api\

./2_prepare_retroshare.sh

```
./2_prepare_retroshare.sh
```

Now you need to accept the SVN sf.net server certificate, press "p" for permanent accept. Indeed the version SVN 767 is checked out, but after compile cygwin gives you the notice:

_____ " run 3 and 4 in cygwin, and if it works, update with this command (in qt command promt I guess): cd src/RetroShare-work; svn-update; make clean " If you later test this command, it is not working, try just "make clean" It should automatically open the right path, if not, try "cd src/RetroShare-work; svn-update; make clean" or go to the "src/RetroShare-work"-path with "cd src" command.

The command SVN-update is not working for cygwin here. So change in the file "2_prepare_retroshare.sh" (open with txt editor or better VIM) the revision 767 (line 3 of the sh-file) to a higher, more actual revision and start the whole process new.

_____

so we live now with version SVN 767 and do first step 3 and 4:

./3_build_libretroshare.sh

```
./3_build_libretroshare.sh
```

Several warnings in the build notices.. we can ignore.

when is don leave the cygwin shell.

I changed a bit file upnp\upnputil.c, commented one block, and uncommented another

```
//~ // Unix at the moment!
//~ #if MINIUPNPC_VERSION >= 12
      //~ /* Starting from miniupnp version 1.2, lease duration parameter is gone */
  //~ r = UPNP_AddPortMapping(urls->controlURL, data->servicetype,
                         //~ eport, iport, iaddr, 0, proto);
//~ #else
  //~ r = UPNP_AddPortMapping(urls->controlURL, data->servicetype,
                         //~ eport, iport, iaddr, 0, 0, proto);
//~ #endif

//   r = UPNP_AddPortMapping(urls->controlURL, data->servicetype,
//                       eport, iport, iaddr, 0, leaseDuration, proto);

  r = UPNP_AddPortMapping(urls->controlURL, data->servicetype,
                         eport, iport, iaddr, 0, proto);
```

Real problem is that compiler doesn't recognize MINIUPNPC_VERSION macro. I don't know how to fix it

and, my libretroshare.pro is

```
win32 {
QMAKE_CC = g++

   OBJECTS_DIR = temp/obj
  MOC_DIR = temp/moc
   DEFINES = WINDOWS_SYS WIN32 STATICLIB
  DESTDIR = lib

  SSL_DIR = ../../../../openssl-0.9.7g-xpgp-0.1c/include
  UPNPC_DIR = ../../../../miniupnpc-1.0
  PTHREADS_DIR = ../../../../pthreads-w32-2-8-0-release
   ZLIB_DIR = ../../../../zlib-1.2.3

   INCLUDEPATH += . $${SSL_DIR} $${UPNPC_DIR} $${PTHREADS_DIR} $${ZLIB_DIR}
   #INCLUDEPATH += . $${PTHREADS_DIR} $${ZLIB_DIR}
}
```

qmake and make, and move the libretroshare.a to others in <Build dir>/lib

Build RetroShare Gui: 4_build_retroshare-gui.bat

build Retroshare-gui pro file has

```
win32 {
   OBJECTS_DIR = temp/obj
   RCC_DIR = temp/qrc
  UI_DIR  = temp/ui
  MOC_DIR = temp/moc

  LIBS += -L"../../../../lib" -lretroshare -lssl -lcrypto -lpthreadGC2d -lminiupnpc -lz
  LIBS += -lws2_32 -luuid -lole32 -liphlpapi -lcrypt32-cygwin -lgdi32
  LIBS += -lole32 -lwinmm

  RC_FILE = gui/images/retroshare_win.rc
}
```

Fixed "-lgdi32" instead of "-gdi32"

usual qmake/make for build

and the last thing -- copy pthreadGC2d.dll and pthreadGC2.dll to the folder with RetroShare.exe

Or try to use the build script (second method):

now start with double click 4_build_retroshare-gui.bat

after compiling is finished you get the RetroShare Windows binary in

```
src/RetroShare-work/retroshare-gui/src/release/RetroShare.exe
```
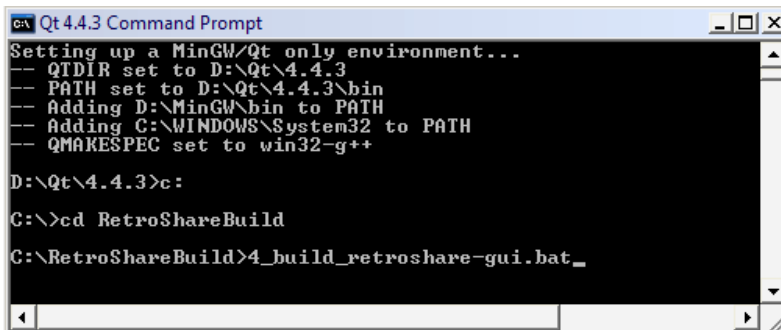
When you have trouble that the *.bat will not start?, then open "QT 4.4.3 Command Prompt":

"cd .." is the command to get one path higher. then use "cd downloads" and then "cd RetroShareBuild" to find the right path.
Then you can type the command "4_build_retroshare-gui.bat "

(be sure that in the filename: the _ _ follows a "-" (minus), not again "_")

and qt compiles...

———

cd:ing to build-kit dir and run *.bat-file

follow the rest of the instructions in doc/readme.txt (looked it up, but there is no more additionally information, so you do not need to look it up).
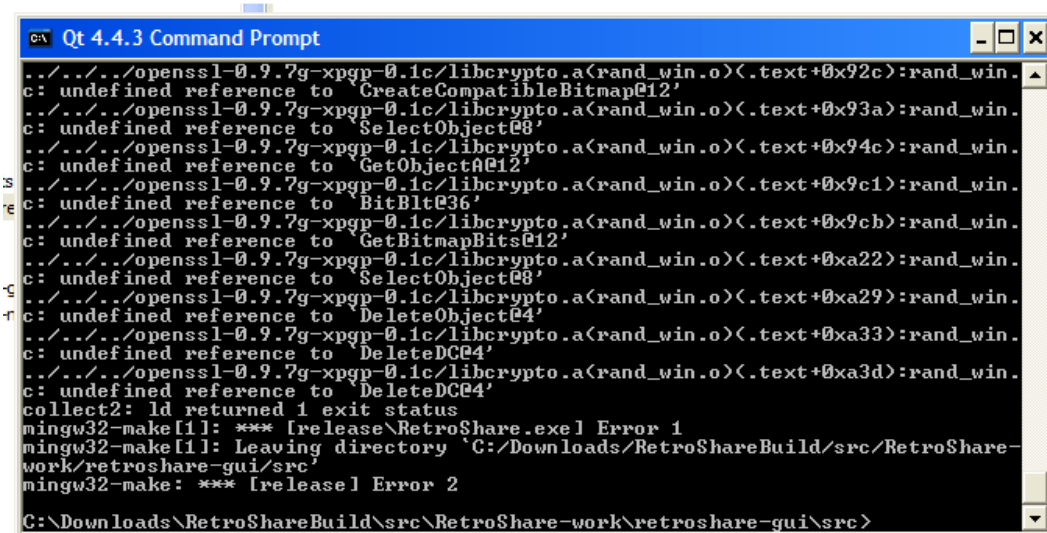
Errors to build the gui 1 (should be fixed)

The following errors should not appear using the script above, as as well described here:
http://retroshare.sourceforge.net/forum/viewtopic.php?f=17&t=551#p2838

If not followed this (here in the wiki integrated process) you should - using the build-script only the following errors:

The gui build process stops with this error:

described here as well: http://retroshare.sourceforge.net/forum/viewtopic.php?f=17&t=576

So it is the file libcrypto.a (and libssl.a) which has not been build proper with the build script.

The error is generated by libcrypto.a and libssl.a

alternatively:

find another libcrypto.a file (same there for libssl.a)

e.g. from here (compiled by mahendra out of version 0411, SVN 1030 or so)
http://retromessenger.svn.sourceforge.net/viewvc/retromessenger/QTRS-retromessenger/QTRS-gui/lib/

or from here but older and might not have all references (compiled by drbob with version 0409b)
http://retromessenger.svn.sourceforge.net/viewvc/retromessenger/archive/libretroshare/branches/cygwin_library_0409b/retroshare-winlib-pack-v0.4.09b/lib/libcrypto.a?view=log

Errors to build the gui 2

If you follow this skript in the wiki (same as here: http://retroshare.sourceforge.net/forum/viewtopic.php?f=17&t=551#p2838) the compile should work, some get this error still:

```
rsserver\p3face-startup.cc:1420: error: `CRYPTPROTECT_PROMPTSTRUCT' has not been
declared
```

we will test again..

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