http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/

**How To Compile Qt with Visual Studio**

February 1, 2011

This post is a step-by-step guide on how to compile Qt 4.x.x with MSVC 2010.

Although we use Qt 4.7.1 as an example (for historical reasons), you can also find suggestions on building newer versions of Qt by MSVC 2012 and even by Intel Compiler for both platforms **x86** and **x64**. All kudos go to numerous contributors, who spend their time to do all the tweaking and testing (see updates below).

In particular there are instructions on how to build **Qt 5** for **x64** platform contributed by [Vincenzo Mercuri](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7546).

**December 21, 2012**. [Vincenzo Mercuri](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7546) shared instructions for building **Qt 5.0.0** in **x64** configuration.

**December 19, 2012**. [Vincenzo Mercuri](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7529) informed that he have compiled **Qt 4.8.4-x64** by the guide. Also he shared his instructions for [building Qt with Intel C++ Compiler](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7537) into static library.

**November 4, 2012**: As reported by [Mike Pelton](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7324), [whatnick](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7265) and [Borislav Stanimirov](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7257), **32 & 64bit** versions of **Qt 4.8.3** have been successfully compiled by this guide, by both **Visual Studio 2010 & 2012**. Be aware that Qt might not be adjusted yet for Windows 8 (as reported [here](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7325)).

**June 4, 2012**: As reported by [Wenqing](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-7005), **Qt 4.8.2** has been successfully compiled by this guide.

**April 5, 2012**: As reported by [Snouty](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-6940), 32bit version of **Qt 4.8.1** has been successfully compiled by this guide.

**December 20, 2011**: As reported by [Evon](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-6783), 64bit version of **Qt 4.8.0** has been successfully compiled by this guide. To do 64bit compilation, please use Visual Studio x64 Win64 Command Prompt (2010) in step 8. Also please use jom 1.06 and don’t forget to install Service Pack 1 for Visual Studio.

**September 16, 2011**: **Qt 4.7.4** has been successfully compiled by this guide.

**August 14, 2011**: In order to build Qt for **64 bits** just use Visual Studio x64 Win64 Command Prompt (2010) in step 8. Also install Service Pack 1 for Visual Studio 2010 beforehand – it fixes few bugs related to x64 compilation.

**July 18 2011**: **Qt 4.7.3** and **Qt 4.8 (beta)** has been successfully compiled by this guide. Just replace version number where applicable.

1. Visual C++ 2010 contains all necessary SDKs for Qt compilation. However if you plan to use Qt with Phonon you need to install DirectX SDK first.
2. Install [Perl](http://www.perl.org/get.html) if you are going to compile Qt >= 4.8.0
3. Download and extract [Qt 4.7.1 Source Code](http://get.qt.nokia.com/qt/source/qt-everywhere-opensource-src-4.7.1.zip). ([Qt 4.8.0](http://get.qt.nokia.com/qt/source/qt-everywhere-opensource-src-4.8.0.zip" \o "Qt 4.8.0) or [Latest snapshot](http://qt.gitorious.org/qt/qt)).
4. Copy contents of the folder qt-everywhere-opensource-src-4.7.1 to the directory where you intend to install Qt. In our case this is C:\Qt\4.7.1.
5. Set up environmental variables  
   QTDIR=C:\Qt\4.7.1  
   QMAKESPEC=win32-msvc2010
6. Update PATH variable to include %QTDIR%\bin
7. Download the latest version of [jom](ftp://ftp.qt.nokia.com/jom/).
8. Extract jom files to C:\Qt\jom folder
9. Start Visual Studio 2010 Command Prompt:  
   Start > Programs > Microsoft Visual Studio 2010 > Visual Studio Tools > Visual Studio Command Prompt.
10. NOTE: to use MSVC 2012, it is necessary to replace

src\3rdparty\webkit\source\JavaScriptCore\wtf\HashSet.h by the one in this directory

1. Run following commands in it (every line is a different command: type it then press Enter):  
   cd c:\Qt\4.7.1  
   configure -debug-and-release -opensource -platform win32-msvc2010  
   ..\jom\jom.exe -j N

Where N is number of CPU cores you want to utilize for Qt compilation. Larger is better.

1. Download and install [Qt Visual Studio Add-in](http://qt.nokia.com/downloads/visual-studio-add-in).
2. Run Visual Studio 2010. Integrate just compiled Qt to IDE using menu Qt > Qt Options > Qt Versions > Add

Usually compilation takes about 10 hours, but thanks to jom and Intel SSD drive it took only 2 hours 40 minutes on my machine (Windows 7, 64bits)

**Remarks**

**\*** Jom is nmake replacement for Qt compilation on multi-core CPU. Its parameter -j N allows to setup number of parallel processes for compilation. Number of physical CPU cores is a good choice for N.

**\*\*** Do not forget to use /d switch if you want to change drive in command prompt, e.g: cd /d d:. Usual cd d: does not work anymore – a little “surprise” from Microsoft.

**Contributions**

**\*** As Evon pointed in comments, Qt folder has huge size (approx. 7GB) after compilation. One can safely shrink its size by deleting temporary files created during the process. Once compiled Qt doesn’t depend on these intermediate files – and they can be erased without affecting Qt functionality. Run as last command in step 10:

..\jom\jom.exe clean

Note that PDB files will be deleted too (the files are rarely needed, only for debugging of Qt itself).

**\*\*** Rob provided his [compilation script](http://www.holoborodko.com/pavel/2011/02/01/how-to-compile-qt-4-7-with-visual-studio-2010/#comment-6641) based on nmake with multi-core support.

Jom is ok, but you can just use the -mp switch with nmake.

Here’s my script to do an out of source build on the latest git located in C:\Qt\qt-git-build  
  
@ECHO OFF  
rmdir /Q /S C:\Qt\qt-git-build  
mkdir C:\Qt\qt-git-build  
cd C:\Qt\qt-git-build  
..\qt-git\configure -opensource -mp -qt-zlib  
nmake  
nmake qdoc3  
editbin /STACK:0x200000 bin\qdoc3.exe  
nmake docs  
nmake install  
nmake clean  
cd ..

Just open up a Visual Studio x64 command prompt and run the batch file. This also builds the docs, the editbin command fixes a stack overflow that none of the developers seem to care about because it only shows up in 64-bit windows. The nmake install copies the header files over instead of dummy files to the qt-git directory, and the clean gets rid of the temporary files. This builds a nice copy of Qt that you can move from computer to computer, albeit pretty large.