CERTI Compilation HOWTO

Guide for the compilation of CERTI from Source!!

This notes has been written for compiling CERTI on Windows, but the steps are roughly the same on other platform if you replace Windows version of software (and screen shots) with their Linux (or your favourite system) counterpart.

1/ Tools for the development of CERTI

CERTI compilation requires a working C++ compiler and some development tools, you may have them already installed on your system or you may download & install the missing tools. All used tools are Open Source softwares.

- CMake
 http://www.cmake.org/HTML/Download.html
- Flex/Bison
 - On Linux
 - Fedora: yum install flex bison
 - Debian/Ubuntu: apt-get install flex bison
 - On Windows <u>http://gnuwin32.sourceforge.net/packages/bison.htm</u> <u>http://gnuwin32.sourceforge.net/packages/flex.htm</u>
 - m4 : bison needs the installation of this software http://gnuwin32.sourceforge.net/packages/m4.htm
- (optional) NSIS for building an Installer: <u>http://nsis.sourceforge.net/Main_Page</u>
- (optional) libxml2
 - On Linux
 - Fedora: yum install libxml2-devel
 - Debian/Ubuntu: apt-get install libxml2-devel
 - for Windows http://www.zlatkovic.com/libxml.en.html

2/ Download the Source Package

Take a look at <u>http://download.savannah.gnu.org/releases/certi/</u> for getting the last package. Unzip it! Adventurous people may try beta snapshot (at your own risk): <u>http://download.savannah.gnu.org/releases/certi/beta</u>

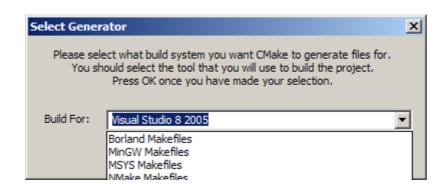
<u>3/ Configure the source tree</u>

Launch CMake-GUI :

Enter the folder for the source code (here \certi , created during the previous step) Enter the folder for building the programs (here \tempo)

<u> CMake 2.4 - patch</u>	7					_ 0	x
Where is the source c	ode: D:\DVP	Cert\CertiSav\certi		Browse			
Where to build the bin	aries: D:\DVP	Cert\CertiSav\temr	0	Browse	🔲 Show Advar	nced Values	
- Cache Values			_				_
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1							
	Right click F	t on a cache value Press Configure to ι Press ΟΚ to gen	for additional optic update and display ierate selected bu	ons (delete, ignore,) new values in red ild files and exit.	and help).		
	Configure	OK	Cancel	Delete Cache	Help		
billard documentation dir	ectory						

Hit Configure button



Choose the appropriate Generator:

Select Generator	×
Please select what build system you want CMake to generate f You should select the tool that you will use to build the proj Press OK once you have made your selection.	
Build For: Visual Studio 8 2005	•
OK Cancel	

🝌 CMake 2.4 - patch 7			
Where is the source code: D:\DVP Cert\CertiSav\certi	Browse		
📃 Show Advanced Values			
Where to build the binaries: D:\DVP Cert\CertiSav\tempo	Browse		
Cache Values			
BUILD_API_DOC	OFF 🗕		
BUILD_SHARED	ON		
CMAKE_BACKWARDS_COMPATIBILITY	2.4		
CMAKE_INSTALL_PREFIX	C:/Program Files/CERTI		
EXECUTABLE_OUTPUT_PATH			
HAVE_DLFCN_H	HAVE_DLFCN_H-NOTFOUND		
HAVE_INTTYPES_H	HAVE_INTTYPES_H-NOTFOUND		
HAVE_MEMORY_H	HAVE_MEMORY_H-NOTFOUND		
HAVE_STDINT_H	HAVE_STDINT_H-NOTFOUND		
HAVE_STDLIB_H	HAVE_STDLIB_H-NOTFOUND		
HAVE_STRINGS_H	HAVE_STRINGS_H-NOTFOUND		
HAVE_STRING_H	HAVE_STRING_H-NOTFOUND		
HAVE_SYS_SELECT_H	HAVE_SYS_SELECT_H-NOTFOUND		
HAVE_SYS_SOCKET_H	HAVE_SYS_SOCKET_H-NOTFOUND		
HAVE_SYS_STAT_H	HAVE_SYS_STAT_H-NOTFOUND		
HAVE_SYS_TYPES_H	HAVE_SYS_TYPES_H-NOTFOUND		
HAVE_UNISTD_H	HAVE_UNISTD_H-NOTFOUND		
LEX_PROGRAM	C:/WINDOWS/system32/flex.exe		
LIBRARY_OUTPUT_PATH			
YACC_PROGRAM	C:/WINDOWS/system32/bison.exe		
Right click on a cache value for additio Press Configure to update an Press OK to generate sel	nd display new values in red.		
Configure OK Ca	ncel Delete Cache Help		
A yacc-compatible parser generator			

Verify the the paths for the different tools (flex, bison..) before hitting "Configure" again

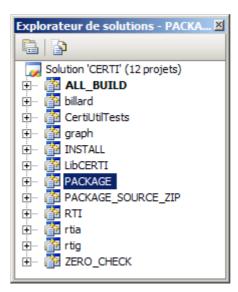
Repeat "Configure" until you get a valid OK box .

🛕 CMake 2.4 - patch 7	
Where is the source code: D:\DVP Cert\CertiSav\certi	Browse
· · · · · · · · · · · · · · · · · · ·	Show Advanced Values
Where to build the binaries: D:\DVP Cert\CertiSav\tempo	Browse
Cache Values	
BUILD_API_DOC	OFF 🗾
BUILD_SHARED	ON
CMAKE_BACKWARDS_COMPATIBILITY	2.4
CMAKE_INSTALL_PREFIX	C:/Program Files/CERTI
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HAVE_DLFCN_H	HAVE_DLFCN_H-NOTFOUND
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HAVE_MEMORY_H	HAVE_MEMORY_H-NOTFOUND
HAVE_STDINT_H	HAVE_STDINT_H-NOTFOUND
HAVE_STDLIB_H	HAVE_STDLIB_H-NOTFOUND
HAVE_STRINGS_H	HAVE_STRINGS_H-NOTFOUND
HAVE_STRING_H	HAVE_STRING_H-NOTFOUND
HAVE_SYS_SELECT_H	HAVE_SYS_SELECT_H-NOTFOUND
HAVE_SYS_SOCKET_H	HAVE_SYS_SOCKET_H-NOTFOUND
HAVE_SYS_STAT_H	HAVE_SYS_STAT_H-NOTFOUND
HAVE_SYS_TYPES_H	HAVE_SYS_TYPES_H-NOTFOUND
HAVE_UNISTD_H	HAVE_UNISTD_H-NOTFOUND
LEX_PROGRAM	C:/WINDOWS/system32/flex.exe
LIBRARY_OUTPUT_PATH	
YACC_PROGRAM	C:/WINDOWS/system32/bison.exe
Right click on a cache value for additi Press Configure to update ar Press OK to generate sel	nd display new values in red.
	ncel Delete Cache Help
Configuring done	

You should get a BUILD folder (named tempo in our example) which looks like that:

D:\DVP Cert\CertiSav\tempo						_ 🗆	×
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Adresse 🛅 D:\DVP Cert\CertiSav\tempo)					💌 🔁 o	ĸ
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🗆 🚞 DVP Cert	•	CMakeFiles		Dossier de fichiers	05/02/2008 14:05		
	-	adoc		Dossier de fichiers	05/02/2008 14:05		
E CertiCurrent		include		Dossier de fichiers	05/02/2008 14:05		
E CertiDepot		ibcerti [Dossier de fichiers	05/02/2008 14:05		
CertiSav		ibrti 🔁		Dossier de fichiers	05/02/2008 14:05		
		RTIA		Dossier de fichiers	05/02/2008 14:05		
E C base		RTIG		Dossier de fichiers	05/02/2008 14:05		
🗄 🥁 buse		🚞 test		Dossier de fichiers	05/02/2008 14:05		
E 🔂 installed		ALL_BUILD.vcproj	23 Ko	VC++ Project	05/02/2008 14:05		
		ALL_BUILD.vcproj.cmake	23 Ko	Fichier CMAKE	05/02/2008 14:05		
E CMakeFiles		CERTI.sln	20 Ko	Microsoft Visual Stu	05/02/2008 14:05		
⊡ ⊡ doc		📼 cmake_install.cmake	4 Ko	Fichier CMAKE	05/02/2008 14:05		
E indude		CMakeCache.txt	15 Ko	Document texte	05/02/2008 14:05		-
E 🛅 libCERTI		h config.h	4 Ko	C/C++ Header	05/02/2008 14:02		
		CPackConfig.cmake	5 Ko	Fichier CMAKE	05/02/2008 14:02		
		CPackSourceConfig.cmake	5 Ko	Fichier CMAKE	05/02/2008 14:02		
		INSTALL.vcproj	23 Ko	VC++Project	05/02/2008 14:05		
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	<u> </u>	mmwCFRTI env csh		Fichier CSH	05/02/2008 14:02		1
aille :19,1 Ko Type:Microsoft Visual Stu	dio Solution Ver	rsion: Visual Studio 2005 Date de mod	fication : 05/02/200	8 14:05	19	,1 Ko 😔 Poste de travail	

Launch CERTI.sln (here Visual C++ 2005 version)



Build all... Take a look at your folder ...

🗿 D:\DVP Cert\CertiSav\tempo\debug					
Fichier Edition Affichage Favoris Out	ils ?				
🔆 Précédente 🔹 💮 🖌 🏂 🔎 Rec	hercher 😥 Dossiers 🛄 🔹				
Adresse 🛅 D:\DVP Cert\CertiSav\tempo\debu	g				💽 🄁 ок
Dossiers	× Nom	Taille	Туре 🔺	Date de modification	
🖂 🧰 CertiSav	billard.exe	164 Ko	Application	04/02/2008 15:45	
Generations	CertiUtilTests.exe	38 Ko	Application	04/02/2008 15:45	
E C base	Ttia.exe	308 Ko	Application	04/02/2008 15:45	
🖂 🛄 base	rtig.exe	328 Ko	Application	04/02/2008 15:45	
CVS	RTIG.log	3 Ko	Document texte	04/02/2008 15:49	
	🔄 🕋 Test.xml	1 Ko	Document XML	29/05/2005 23:20	
include	CERTI.exp	495 Ko	Exports Library File	04/02/2008 15:44	
	1 RTI.exp	32 Ko	Exports Library File	04/02/2008 15:44	
	S CERTI.dll	1 492 Ko	Extension de l'applic	04/02/2008 15:44	
	🔊 RTI.dll	244 Ko	Extension de l'applic	04/02/2008 15:44	
	RTIA_1160_Test.fed	1 Ko	Fichier FED	04/02/2008 15:49	
	RTIA_2248_Test.fed	1 Ko	Fichier FED	04/02/2008 15:48	
⊡ test	RTIA_3336_Test.fed	1 Ko	Fichier FED	04/02/2008 15:48	
⊡ installed	RTIA_3504_Test.fed	1 Ko	Fichier FED	04/02/2008 15:49	
	Test.fed	1 Ko	Fichier FED	27/10/2003 11:48	
⊡ Lempo ⊡ ALL BUILD.dir		788 Ko	Incremental Linker File	04/02/2008 15:45	
CMakeFiles	CERTI.ilk	18 796 Ko	Incremental Linker File	04/02/2008 15:44	-
	CertiUtilTests.ilk	376 Ko	Incremental Linker File	04/02/2008 15:45	
U debug ⊡ doc	RTI.ilk	1 413 Ko	Incremental Linker File	04/02/2008 15:44	
± 🛄 doc € 🧰 include	@rtia.ilk	1 275 Ko	Incremental Linker File	04/02/2008 15:45	
± incude € ibCERTI	@rtig.ilk	1 212 Ko	Incremental Linker File	04/02/2008 15:45	
	CERTI.lib	796 Ko	Object File Library	04/02/2008 15:44	
E 🛅 libRTI	graph.lib	3 Ko	Object File Library	04/02/2008 15:43	
E C RTIA	RTI.lib	53 Ko	Object File Library	04/02/2008 15:44	
E C RTIG	j 🍯 billard.pdb	1 188 Ko	Program Debug Dat		
	🗾 👰 certi.ndb		Program Debug Dat	04/02/2008 15:44	
8 objet(s) (Espace disque disponible : 104 Go)				4	43,7 Mo 😔 Poste de travail

4) Check the test out

- open a windows command prompt before running RTIG
- open another windows command prompt before running the billard program.
- Don't forget the parameters : -n 1 fTest FTest.fed

C:\WINDOWS\system32\cmd.exe - rtig	
D:\DUP Cert\CertiSav\base\debug>rtig Updating : CERTI_HOME=rtig\ CERTI RTIG 3.2.6cvs - Copyright 2002-2006 ONERA This is free software ; see the source for copying conditions. There is NO warranty ; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.	
CERTI RTIG up and running New federation: Test Looking for FOM file Trying Test.fed opened.	
<pre>(FED (federation "Test") (FEDversion "v1.3") (federate "fed" "Public") (spaces (space "Geo" (id 1) (dimension "X" (id 1)) (dimension "X" (id 2)))) (objects (class "ObjectRoot" (id 1) (attribute "privilegeToDelete" (id 1) reliable timestamp) (class "Bille" (id 3) (attribute "PositionX" (id 2) reliable timestamp) (attribute "PositionX" (id 3) reliable timestamp) (class "Boule" (id 4)</pre>	
TCP Socket(RecevoirTCP) : No error RTIG dropping client connection 1860. TCP Socket 1860 : total = 358267b sent TCP Socket 1860 : total = 889984b received UDP Socket 1904 : total = 0b sent UDP Socket 1904 : total = 0b received	-