VS2008/2013编译MongoDB C++ Driver

# VS2015 with newer driver version

## 编译环境

Windows server 2008 r2

Visual Studio 2015 update 3

Cmake 3.9.2

Mongo-c-driver 1.6.2

## 步骤

使用cmake生成vs项目文件，msbuild编译。

Ref: <http://mongoc.org/libmongoc/1.6.2/installing.html#building-on-windows>

Building on Windows requires Windows Vista or newer and Visual Studio 2010 or newer. Additionally, cmake is required to generate Visual Studio project files.

Let's start by generating Visual Studio project files for libbson, a dependency of the C driver. The following assumes we are compiling for 64-bit Windows using Visual Studio 2015 Express, which can be freely downloaded from Microsoft.

cd mongo-c-driver-1.6.2\src\libbson

cmake -G "Visual Studio 14 2015 Win64" "-DCMAKE\_INSTALL\_PREFIX=C:\mongo-c-driver"

(Run cmake -LH . for a list of other options.)

Now that we have project files generated, we can either open the project in Visual Studio or compile from the command line. Let's build using the command line program msbuild.exe

msbuild.exe ALL\_BUILD.vcxproj

Now that libbson is compiled, let's install it using msbuild. It will be installed to the path specified by CMAKE\_INSTALL\_PREFIX.

msbuild.exe INSTALL.vcxproj

You should now see libbson installed in C:\mongo-c-driver

Now let's do the same for the MongoDB C driver.

cd mongo-c-driver-1.6.2

cmake -G "Visual Studio 14 2015 Win64" \

"-DCMAKE\_INSTALL\_PREFIX=C:\mongo-c-driver" \

"-DBSON\_ROOT\_DIR=C:\mongo-c-driver"

msbuild.exe ALL\_BUILD.vcxproj

msbuild.exe INSTALL.vcxproj

All of the MongoDB C Driver's components will now be found in C:\mongo-c-driver.

# VS2008

## 编译环境

Windows 7 Ultimate x64 sp1

Visual Studio 2008 w/ SP1

Boot prebuild 1.58.0 for MSVC 9.0 32

python-2.7.10

scons-2.4.0

## 步骤

### 环境准备

安装vs2008并打上SP1补丁

安装boot prebuild到C:\lib\boost\_1\_58\_0

安装python到C:\Python27

安装scons（自动发现python目录）

### 增加类型定义文件

将自定义的stdint.h和cstdint放入C:\Program Files\Microsoft SDKs\Windows\v6.0A\Include

#### stdint.h

#ifndef stdint\_h\_\_USER

#define stdint\_h\_\_USER

typedef signed char int8\_t;

typedef short int16\_t;

typedef int int32\_t;

typedef unsigned char uint8\_t;

typedef unsigned short uint16\_t;

typedef unsigned int uint32\_t;

#ifndef int64\_t

typedef long long int64\_t;

#endif

#ifndef uint64\_t

typedef unsigned long long uint64\_t;

#endif

#ifndef intptr\_t

typedef long long intptr\_t;

#endif

#ifndef uintptr\_t

typedef unsigned long long uintptr\_t;

#endif

#endif

#### cstdint

#ifndef cstdint\_h\_\_USER

#define cstdint\_h\_\_USER

namespace std

{

typedef signed char int8\_t;

typedef short int16\_t;

typedef int int32\_t;

typedef unsigned char uint8\_t;

typedef unsigned short uint16\_t;

typedef unsigned int uint32\_t;

#ifndef int64\_t

typedef long long int64\_t;

#endif

#ifndef uint64\_t

typedef unsigned long long uint64\_t;

#endif

#ifndef intptr\_t

typedef long long intptr\_t;

#endif

#ifndef uintptr\_t

typedef unsigned long long uintptr\_t;

#endif

} // namespace std

#endif // cstdint\_h\_\_USER

### 修改部分文件

#### windows\_basic.h

src\mongo\platform\windows\_basic.h

删除第92行

#error "32 bit mongo does not support Windows versions older than XP Service Pack 3"

#### hash\_namespace.h

src\mongo\platform\hash\_namespace.h

第46行

#include <tr1/functional>

修改为

#include <boost/tr1/tr1/functional>

#### time\_support.h

src\mongo\util\time\_support.h

第26行添加

#include <stdint.h>

### 设置编译路径

运行 Visual Studio 2008 命令提示

(Microsoft Visual Studio 2008 -> Visual Studio Tools -> Visual Studio 2008 命令提示)

会自动设置VS环境变量

命令行输入命令

path = C:\Python27\Scripts;%path%

添加scons路径到path

### 使用scons编译driver

编译参数

32位，静态链接boost库，DEBUG/RELEASE版，windows MT库:

scons --32=FORCE32 --cpppath=C:\lib\boost\_1\_58\_0 --msvc-version=9.0 --dynamic-boost=off --dbg=on install

scons --32=FORCE32 --cpppath=C:\lib\boost\_1\_58\_0 --msvc-version=9.0 --dynamic-boost=off --release=RELEASE install

编译时间大约各2分钟，完成后头文件和库文件存放于build\install目录下。

## 备注

### boost库依赖:

(debug, mt版本)

libboost\_chrono-vc90-mt-sgd-1\_58.lib

libboost\_date\_time-vc90-mt-sgd-1\_58.lib

libboost\_regex-vc90-mt-sgd-1\_58.lib

libboost\_system-vc90-mt-sgd-1\_58.lib

libboost\_thread-vc90-mt-sgd-1\_58.lib

### lib使用

新建项目，使用MT/MTd库。

添加预处理定义：项目设置中或再mongoclient头文件之前预定义宏

STATIC\_LIBMONGOCLIENT

添加头文件路径：

$(mongo-cxx-driver-legacy-1.0.6)\build\install\include

$(boost\_1\_58\_0)

添加lib库路径

$(mongo-cxx-driver-legacy-1.0.6)\build\install\lib

将boost依赖库复制到上述lib库目录，或添加lib库路径

$(boost\_1\_58\_0)\lib32-msvc-9.0

# VS2013

类似VS2008，不过不需要修改部分文件，直接使用scons即可完成编译。