FYI. 1.3 Agent compiles and seems to work on Win 7 64 bit platform. Suppose some fixes could be pull requests.

Below are the steps I did after downloading MSVC 2015 community edition (free version) to compile the MTConnect 1.3 agent in C++ (not the agent in the master branch). I don't use CMake as it hardcodes the project links.

0) Create console project - no precompiled ATL, etc.  
a) Setup project as multibyte not Unicode string  
b) Make Project options: Compiler-> code generation-> Runtime static lib use of C lib

1) Create MTCAgent folder copy in agent/lib/win32 code

2) Preprocessor - Add these definitions  
a) \_Windows  
  
b) WIN64 for 64 bit configurations for later #pragma lib includes described below  
c) \_NO\_CRT\_STDIO\_INLINE for problem (9) doesn't solve but should

3) Include file : In project properties, Projects->Compiler->Command line Add: @IncludeDirs.txt  
You will have to adapt the full path to the location of your   
FIle IncludeDirs.txt:

-I.  
-I"C:\Users\michalos\Documents\Visual Studio 2015\Projects\MTConnectAgent1\_3\MTConnectAgent\agent"  
-I"C:\Users\michalos\Documents\Visual Studio 2015\Projects\MTConnectAgent1\_3\MTConnectAgent\lib"  
-I"C:\Users\michalos\Documents\Visual Studio 2015\Projects\MTConnectAgent1\_3\MTConnectAgent\win32\libxml2-2.9\include"  
-I"C:\Users\michalos\Documents\Visual Studio 2015\Projects\MTConnectAgent1\_3\MTConnectAgent"  
-I"C:\Users\michalos\Documents\Visual Studio 2015\Projects\MTConnectAgent1\_3\NIST"

4) No gets() in service.cpp in VS 2015

*The most recent revision of the C standard (2011) has definitively removed this function from its specification.  
The function is deprecated in C++ (as of 2011 standard, which follows C99+TC3).*  
from  
<http://stackoverflow.com/questions/12893774/what-is-gets-equivalent-in-c11>

Subsituted:

while(gets\_s(line, sizeof(line)) != NULL) {

5) timezone not declared   
globals.cpp(241): error C2065: 'timezone': undeclared identifier

uint64\_t time = (mktime(&timeinfo) - timezone) \* 1000000;

Removed timezone to make it compile - but not really FIXED!

6) In new project main file (or in some source cpp file) have to declare link path and lib of libxml:

#define MTCLIBPATH(X) "C:\Users\michalos\Documents\Visual Studio 2015\Projects\MTConnectAgent1\_3\MTConnectAgent\win32\libxml2-2.9\lib\" ## X

#if defined( WIN64 ) && defined( \_DEBUG )  
#pragma message( "DEBUG x64" )  
#pragma comment(lib, MTCLIBPATH("libxml2\_64d.lib"))  
#elif !defined( \_DEBUG ) && defined( WIN64 )  
#pragma message( "RELEASE x64" )  
#pragma comment(lib, MTCLIBPATH("libxml2\_64.lib"))  
#endif

7) ConnectAgent1\_3.obj : error LNK2005: main already defined in cppagent.obj  
remove main from console project empty main

8) ibxml2d\_a\_v120\_64.lib(error.obj) : error LNK2001: unresolved external symbol \_\_iob\_func

<http://stackoverflow.com/questions/30412951/unresolved-external-symbol-imp-fprintf-and-imp-iob-func-sdl2>

Added to project main file:

FILE \_iob[] = {\*stdin, \*stdout, \*stderr};  
extern "C" FILE \* \_\_cdecl \_\_iob\_func(void)  
{  
return \_iob;  
}

9) unresolved external symbol vfprintf   
#pragma comment(lib, "legacy\_stdio\_definitions.lib")

10) Add libcmt.lib to Linker Ignore Library Project Properties  
This didn't work: /NODEFAULTLIB:library in Linkerv-> properties -> Command Line

11) Runtime error: Couldn't find agent.cfg (not given full path)

5522 FATAL [0] init.config: Agent failed to load: Please make sure the configur  
ation file probe.xml or Devices.xml is in the current directory or specify the c  
orrect file in the configuration file agent.cfg using Devices =   
Agent failed to load: Please make sure the configuration file probe.xml or Devic  
es.xml is in the current directory or specify the correct file in the configurat  
ion file agent.cfg using Devices =

in agent.cpp:

static std::string ExeDirectory()  
{  
TCHAR buf[1000];  
GetModuleFileName(NULL, buf, 1000);  
std::string path(buf);  
path=path.substr( 0, path.find\_last\_of( '\' ) +1 );  
return path;  
}

somewhere in code before initialize():

SetCurrentDirectory(ExeDirectory().c\_str());

12. Problem with service.{h,cpp} caused service start to bomb – "function not found". Replaced with old service.{hpp,cpp} and it worked. I removed code from service.{hpp,cpp} that attempted to read registry.