GROMACS - Bug #1844

Build system does not respect GMX_EXTERNAL_BOOST=OFF

10/16/2015 12:34 PM - Teemu Murtola

<table>
<thead>
<tr>
<th>Status:</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority:</td>
<td>Normal</td>
</tr>
<tr>
<td>Assignee:</td>
<td>Teemu Murtola</td>
</tr>
<tr>
<td>Category:</td>
<td>build system</td>
</tr>
<tr>
<td>Target version:</td>
<td>5.1.1</td>
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<tr>
<td>Affected version - extra info:</td>
<td>5.1</td>
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<td>Affected version:</td>
<td>5.1</td>
</tr>
<tr>
<td>Difficulty:</td>
<td>uncategorized</td>
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Description
At least on OS X, having boost installed in /opt/local/include (together with some other dependencies), setting GMX_EXTERNAL_BOOST=OFF still uses the external boost, even though gmx --version in the final version claims that internal boost was used (the version number is still from the external version).

I really cannot understand why this does not work, or whether this is the same on all platforms. The include directory for the internal boost is the first on the compiler command line, and uses -isystem.

Associated revisions
Revision 411d1811 - 10/22/2015 03:23 PM - Teemu Murtola
Use include_directories(SYSTEM ...) consistently

Apparently, at least some compilers treat -isystem differently from -I in that no matter what the order on the command line is, -I always takes precedence. This means that some of the include_directories(BEFORE SYSTEM ...) did not work correctly, and in particular GMX_EXTERNAL_BOOST=OFF was broken. Likely also #1539 was (again) broken.

Make all includes that come from outside the source tree use SYSTEM, so that the include directory for internal boost still takes precedence over them.

Fixes #1844.

Change-Id: Ib536c24a0d13c6538f78daac145dc9d38135819d

History

#1 - 10/16/2015 01:39 PM - Teemu Murtola
- Affected version changed from 5.x to 5.1

This seems to be caused by the use of -isystem instead of -I. -I takes precedence over -isystem, no matter what the include order is. Not sure whether there is some meaningful workaround, or what all compilers are affected. So it was broken by the last-minute merge of ldcdf3872b5a169e8690721bbe83922a4ab280da8 before 5.1, and so 5.1.x is affected.

#2 - 10/18/2015 05:09 AM - Teemu Murtola
Probably the fix will be to use include_directories(SYSTEM ...) for everything that comes from outside our source tree.

#3 - 10/18/2015 05:18 AM - Teemu Murtola
- Status changed from New to Fix uploaded
- Assignee set to Teemu Murtola
- Target version set to 5.1.1

#4 - 10/18/2015 05:21 AM - Gerrit Code Review Bot
Gerrit received a related patchset '1' for Issue #1844
Uploader: Teemu Murtola (teemu.murtola@gmail.com)
#5 - 10/22/2015 03:30 PM - Teemu Murtola
- Status changed from Fix uploaded to Resolved

Applied in changeset 411d1811420d0fdd9d782658f0d87017380bde5c.

#6 - 11/23/2015 05:45 PM - Mark Abraham
- Status changed from Resolved to Closed