

Ruby master - Bug #13748

[PATCH] Fix mul overflow detection for LLP64 arch.

07/15/2017 01:36 PM - larskanis (Lars Kanis)

| | | |
|--|--|--|
| Status: | Closed | |
| Priority: | Normal | |
| Assignee: | | |
| Target version: | | |
| ruby -v: | ruby 2.5.0dev (2017-07-15 trunk 57962) [x64-mingw32] | Backport: 2.2: DONTNEED, 2.3: DONTNEED, 2.4: DONTNEED |
| Description | | |
| <p>FIXNUMs are expected to fit into a long type, but the test in MUL_OVERFLOW_FIXNUM_P() is about the VALUE type. Since long is smaller than VALUE on LLP64, the overflow is not detected. As an exemplary result "2**31" evaluates to "-2147483648" instead of "2147483648" on Windows when built with gcc-7.1.0.</p> <p>This also results in many more test failures as described in this github issue: https://github.com/oneclick/rubyinstaller2/issues/55</p> <p>gcc versions before 7.1.0 don't provide __builtin_mul_overflow_p() and ruby-2.4.x doesn't use this function, so that they don't show this broken behavior.</p> <p>The attached patch fixes the issue. However I'm currently unable to run a full "make test-all" to verify whether this fixes all gcc-7.1.0 related issues.</p> | | |

Associated revisions

Revision c04b6232 - 09/25/2017 08:19 AM - naruse (Yui NARUSE)

Fix overflow detection for LLP64 arch [Bug #13748]

FIXNUMs are expected to fit into a long type, but the test is about a VALUE type. Since long is < than VALUE on LLP64, the overflow is not detected. As a result "2**31" evaluates to "-2147483648" on Windows with gcc-7.1.0.

patched by Lars Kanis lars@greiz-reinsdorf.de

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@60019 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 60019 - 09/25/2017 08:19 AM - naruse (Yui NARUSE)

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patched by Lars Kanis lars@greiz-reinsdorf.de

History

#1 - 07/15/2017 04:15 PM - MSP-Greg (Greg L)

Just updated to gcc 7.1.0, and built trunk ruby 2.5.0dev (2017-07-15 trunk 59341) [x64-mingw32] with Lars' patch, and **all tests results were as expected**.

Build/test logs are at Bintray - [z_logs_2017-07-15_59341.7z](#), build files at [ruby_trunk.7z](#) & [ruby_trunk.7z.sig](#).

Test result tables updated at [Ruby MinGW Test Results](#). This morning's doc updates to the site ([Ruby trunk](#) and [Rails master](#)) were generated using the build.

Lars - thanks again. For those that don't know, Lars is the creator of RubyInstaller2 for Windows. My build system is a little different, but both are MSYS2/MinGW based. My build system uses the runtime files he created for RI2, which allow the installation/compiling of extension gems.

#2 - 07/29/2017 04:58 PM - larskanis (Lars Kanis)

- *Subject changed from Fix mul overflow detection for LLP64 arch. to [PATCH] Fix mul overflow detection for LLP64 arch.*

#3 - 09/25/2017 08:19 AM - naruse (Yui NARUSE)

- *Status changed from Open to Closed*

Applied in changeset [trunk|r60019](#).

Fix overflow detection for LLP64 arch [Bug [#13748](#)]

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patched by Lars Kanis lars@greiz-reinsdorf.de

#4 - 09/25/2017 08:20 AM - naruse (Yui NARUSE)

- *Backport changed from 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: UNKNOWN to 2.2: DONTNEED, 2.3: DONTNEED, 2.4: DONTNEED*

Files

| | | | |
|--|------------|------------|------------------------|
| 0001-Fix-overflow-detection-for-LLP64-arch.patch | 1010 Bytes | 07/15/2017 | larskanis (Lars Kanis) |
|--|------------|------------|------------------------|