

Ruby trunk - Bug #8349

[mingw] adding -mfpmath=sse -msse2 causes segv on Windows 7

04/30/2013 06:37 PM - h.shirosaki (Hiroshi Shirosaki)

Status:	Closed	
Priority:	Normal	
Assignee:	naruse (Yui NARUSE)	
Target version:	2.1.0	
ruby -v:	ruby 2.1.0dev (2013-04-30 trunk 40528) [i386-mingw32]	Backport: 1.9.3: UNKNOWN, 2.0.0: DONE

Description

I tried -mfpmath=sse -msse2 with mingw on Windows 7 and got 2 segv while make test-all.

Here is the detail.

<https://gist.github.com/anonymous/5487498>

I don't know why these options causes segv, but adding volatile seems to fix this.
Is this ok to commit?

```
diff --git a/re.c b/re.c
index fe7e390..5c96276 100644
--- a/re.c
+++ b/re.c
@@ -154,7 +154,8 @@ rb_memsearch_qs(const unsigned char *xs, long m, const unsigned char *ys, long n
{
const unsigned char *x = xs, *xe = xs + m;
const unsigned char *y = ys;
```

- VALUE i, qstable[256];
- volatile VALUE i;

- VALUE qstable[256];

```
/* Preprocessing /
for (i = 0; i < 256; ++i)
diff --git a/regcomp.c b/regcomp.c
index 1373ff2..8c0e2b5 100644
--- a/regcomp.c
+++ b/regcomp.c
@@ -5306,7 +5306,7 @@ set_optimize_exact_info(regex_t reg, OptExactInfo* e)
static void
set_optimize_map_info(regex_t* reg, OptMapInfo* m)
{
```

- int i;
- volatile int i;

```
for (i = 0; i < ONIG_CHAR_TABLE_SIZE; i++)
reg->map[i] = m->map[i];
```

Associated revisions

Revision **b5faf430 - 01/09/2014 11:49 AM - nobu (Nobuyoshi Nakada)**

configure.in: -mstackrealign

- configure.in: -mstackrealign is necessary for -msse2 working. [ruby-core:54716] [Bug #8349]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@44539 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 44539 - 01/09/2014 11:49 AM - nobu (Nobuyoshi Nakada)

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Revision c83ad9aa - 02/16/2014 12:13 AM - naruse (Yui NARUSE)

merge revision(s) 44474,44538,44539,44890,44896: [Backport #9495]

* configure.in: use SSE2 instructions for drop unexpected precisions. [ruby-core:54738] [Bug #8358]

* configure.in: use SSE2 instructions to drop unexpected precisions on other than mingw. [ruby-core:59472] [Bug #8358]

* configure.in: -mstackrealign is necessary for -msse2 working. [ruby-core:54716] [Bug #8349]

* configure.in: -mstackrealign is necessary for -msse2 working. [ruby-core:54716] [Bug #8349]

* configure.in: add quoting brackets and append wildcard for the rest after target_cpu, to properly detect platform for SSE2 instructions. [ruby-core:60576] [Bug #8358]

* configure.in: Fix compilation error.
<https://bugs.ruby-lang.org/issues/8358#note-16>

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby_2_1@44993 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 712da8a8 - 06/23/2014 09:20 AM - usa (Usaku NAKAMURA)

merge revision(s) 44474,44538,44539,44890,44896,45954: [Backport #8358]

* configure.in: use SSE2 instructions for drop unexpected precisions. [ruby-core:54738] [Bug #8358]

* configure.in: use SSE2 instructions to drop unexpected precisions on other than mingw. [ruby-core:59472] [Bug #8358]

* configure.in: -mstackrealign is necessary for -msse2 working. [ruby-core:54716] [Bug #8349]

* configure.in: -mstackrealign is necessary for -msse2 working. [ruby-core:54716] [Bug #8349]

- * configure.in: add quoting brackets and append wildcard for the rest after target_cpu, to properly detect platform for SSE2 instructions. [ruby-core:60576] [Bug #8358]
- * configure.in: Fix compilation error. <https://bugs.ruby-lang.org/issues/8358#note-16>
- * configure.in: enable SSE2 on mingw. target='i386-pc-mingw32'. [ruby-core:62095] [Bug #8358]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby_2_0_0@46514 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 46514 - 06/23/2014 09:20 AM - usa (Usaku NAKAMURA)

merge revision(s) 44474,44538,44539,44890,44896,45954: [Backport #8358]

- * configure.in: use SSE2 instructions for drop unexpected precisions. [ruby-core:54738] [Bug #8358]
- * configure.in: use SSE2 instructions to drop unexpected precisions on other than mingw. [ruby-core:59472] [Bug #8358]
- * configure.in: -mstackrealign is necessary for -msse2 working. [ruby-core:54716] [Bug #8349]
- * configure.in: -mstackrealign is necessary for -msse2 working. [ruby-core:54716] [Bug #8349]
- * configure.in: add quoting brackets and append wildcard for the rest after target_cpu, to properly detect platform for SSE2 instructions. [ruby-core:60576] [Bug #8358]
- * configure.in: Fix compilation error. <https://bugs.ruby-lang.org/issues/8358#note-16>
- * configure.in: enable SSE2 on mingw. target='i386-pc-mingw32'. [ruby-core:62095] [Bug #8358]

History

#1 - 04/30/2013 07:37 PM - naruse (Yui NARUSE)

#####SSE #####
objdump #####

#2 - 04/30/2013 08:08 PM - phasis68 (Heesob Park)

I think -mstackrealign flag is the proper solution of this issue.

Refer to

- http://www.peterstock.co.uk/games/mingw_sse/
- http://gcc.gnu.org/onlinedocs/gcc/i386-and-x86_002d64-Options.html#index-mpc80-1472

#3 - 04/30/2013 10:37 PM - h.shirosaki (Hiroshi Shirosaki)

- Status changed from Assigned to Closed

phasis68 (Heesob Park) wrote:

I think -mstackrealign flag is the proper solution of this issue.

Refer to

- http://www.peterstock.co.uk/games/mingw_sse/
- http://gcc.gnu.org/onlinedocs/gcc/i386-and-x86_002d64-Options.html#index-mpc80-1472

Thank you. I'll use -mstackrealign with sse.

I've confirmed that with disassemble.

<https://gist.github.com/shirosaki/5488699>

#4 - 06/19/2014 03:16 PM - nagachika (Tomoyuki Chikanaga)

- Backport changed from 1.9.3: UNKNOWN, 2.0.0: UNKNOWN to 1.9.3: UNKNOWN, 2.0.0: DONE

r44539 was already backported into ruby_2_1 at r44993.