Ruby master - Bug #5240

Hang when using threads + forks on Debian GNU/kFreeBSD

08/28/2011 06:10 AM - lucas (Lucas Nussbaum)

Status: Closed
Priority: Normal
Assignee: ko1 (Koichi Sasada)
Target version: 2.6
ruby -v: -

Backport: 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: UNKNOWN

Description

Hi,

The following test script (derived from a test in bootstraptest/test_fork.rb) hangs very frequently on Debian GNU/kFreeBSD:

```ruby
fork { }
puts "after fork"
t = Thread.start { fork{ } }
puts "after fork in thread"
t.join
puts "after join"
```

Using git bisect, I determined that the commit introducing that regression is SVN revision 32244:

- that revision hangs
- 32243 does not hang

This bug makes 1.9.3 unsuitable for being uploaded to Debian. So it would be great if it was fixed before the release. Also, there are other test failures that I'd like to analyze (but I can't because of that one), so I feel quite worried about this.

History

#1 - 08/28/2011 09:48 AM - kosaki (Motohiro KOSAKI)
- Status changed from Open to Feedback
- Target version set to 2.0.0

Please send us an analysis and a patch.

#2 - 08/28/2011 03:11 PM - lucas (Lucas Nussbaum)

I'm sorry, I'm not familiar with that code at all.

What I can provide is a kfreebsd amd64 qemu image inside which it is easy to reproduce the problem (I used it to bisect).

#3 - 08/30/2011 03:08 PM - Petr.Salinger@seznam.cz (Petr Salinger)

- File rb-th.diff added
- File rb-main.diff added

I looked at the change and in general should work even for our slightly broken pthread semantic on GNU/kFreeBSD. It should be possible to workaround it by encapsulating timer_thread_pipe_owner_proces usage, as shown in first attached diff. We need to put somewhere during initialization

```c
pthread_atfork(NULL, NULL, timer_thread_child_at_fork)
```

Even on fully conforming pthread implementation might be GNU/kFreeBSD variant better, as getpid() might be costly system call.

The problem is that place in main.c (as shown in 2nd diff) does not link.

03/19/2022
Please could you advice where to put this part of code. After that I would like to test it, whether it really works for us as expected.

Please advice me.

#4 - 09/09/2011 03:44 PM - lucas (Lucas Nussbaum)
Dear Ruby developers,

Could you comment on Petr Salinger’s patch, and especially about where to put the pthread_atfork() call?

Thanks

#5 - 09/09/2011 05:07 PM - kosaki (Motohiro KOSAKI)
- Status changed from Feedback to Assigned
- Assignee set to ko1 (Koichi Sasada)

sasada-san, could you please tell us your opinion?

#6 - 09/10/2011 12:23 AM - ko1 (Koichi Sasada)
- ruby -v changed from 1.9.3 to -

Hi,

(2011/08/29 23:08), Petr Salinger wrote:

The problem is that place in main.c (as shown in 2nd diff) does not link.
Please could you advice where to put this part of code. After that I would like to test it, whether it really works for us as expected.

Please advice me.

How about to add pthread_atfork() at rb_thread_create_timer_thread()?

--
// SASADA Koichi at atdot dot net

#7 - 11/26/2012 09:23 AM - ko1 (Koichi Sasada)
- Status changed from Assigned to Feedback
- Target version changed from 2.0.0 to 2.6

#8 - 01/31/2017 09:14 AM - ko1 (Koichi Sasada)
- Status changed from Feedback to Closed
- Description updated

No discussion.

Files

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<th>Author</th>
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<td><a href="mailto:Petr.Salinger@seznam.cz">Petr.Salinger@seznam.cz</a> (Petr Salinger)</td>
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<td><a href="mailto:Petr.Salinger@seznam.cz">Petr.Salinger@seznam.cz</a> (Petr Salinger)</td>
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