

Ruby trunk - Bug #14432

Ruby crashes with "[BUG] pthread_mutex_destroy: Device or resource busy (EBUSY)"

02/02/2018 06:51 AM - gfx (Goro FUJI)

Status:	Open		
Priority:	Normal		
Assignee:			
Target version:			
ruby -v:	ruby 2.4.2p198 (2017-09-14 revision 59899) [x86_64-linux]	Backport:	2.3: UNKNOWN, 2.4: UNKNOWN, 2.5: UNKNOWN

Description

We notice that sidekiq (sidekiq pro) workers crash by rb_bug_errno().

The very line that the issue raised is here: https://github.com/ruby/ruby/blob/v2_4_2/thread_pthread.c#L260

```
static void
native_mutex_destroy(pthread_mutex_t *lock)
{
    int r = pthread_mutex_destroy(lock);
    mutex_debug("destroy", lock);
    if (r != 0) {
        rb_bug_errno("pthread_mutex_destroy", r); // HERE!
    }
}
```

log/sidekiq.log:

```
[BUG] pthread_mutex_destroy: Device or resource busy (EBUSY)
ruby 2.4.2p198 (2017-09-14 revision 59899) [x86_64-linux]
-- Control frame information -----
-- C level backtrace information -----
/usr/local/rbenv/versions/2.4.2/bin/ruby(rb_vm_bugreport+0xcf4) [0x558eb7577584] vm_dump.c:684
/usr/local/rbenv/versions/2.4.2/bin/ruby(rb_bug+0xd0) [0x558eb756bcf0] error.c:491
/usr/local/rbenv/versions/2.4.2/bin/ruby(rb_bug_errno+0x3a) [0x558eb756be9a] error.c:520
/usr/local/rbenv/versions/2.4.2/bin/ruby(thread_start_func_2+0x98d) [0x558eb74a0e9d] thread_pthread.c:260
/usr/local/rbenv/versions/2.4.2/bin/ruby(thread_start_func_1+0xd0) [0x558eb74a0fd0] thread_pthread.c:887
/lib/x86_64-linux-gnu/libpthread.so.0(start_thread+0xca) [0x7f9c1bf536ba]
/lib/x86_64-linux-gnu/libc.so.6(__clone+0x6d) [0x7f9c1b54441d]
-- Other runtime information -----
* Loaded script: sidekiq 5.0.5 kibela [1 of 5 busy]
* Loaded features:
 0 enumerator.so
 1 thread.rb
 2 rational.so
 3 complex.so
 4 /usr/local/rbenv/versions/2.4.2/lib/ruby/2.4.0/x86_64-linux/enc/encdb.so
 5 /usr/local/rbenv/versions/2.4.2/lib/ruby/2.4.0/x86_64-linux/enc/trans/transdb.so
 6 /usr/local/rbenv/versions/2.4.2/lib/ruby/2.4.0/unicode_normalize.rb
 7 /usr/local/rbenv/versions/2.4.2/lib/ruby/2.4.0/x86_64-linux/rbconfig.rb
 8 /usr/local/rbenv/versions/2.4.2/lib/ruby/2.4.0/rubygems/compatibility.rb
 9 /usr/local/rbenv/versions/2.4.2/lib/ruby/2.4.0/rubygems/defaults.rb
... omit about 5000 lines
```

Unfortunately, it occurs only in the production environment, so the condition is not clear. We also issued it to the Sidekiq Pro support team, but it seems a bug in cruby.

versions:

- ruby 2.4.2
- rails 5.1.4

- sidekiq 5.0.5
- sidekiq-pro 3.7.0

sidekiq's concurrency: 1 (see <https://github.com/mperham/sidekiq/wiki/Advanced-Options> for details)

History

#1 - 02/02/2018 06:57 AM - gfx (Goro FUJI)

- Description updated

#2 - 02/02/2018 06:59 AM - gfx (Goro FUJI)

- Description updated

#3 - 02/02/2018 08:21 AM - normalperson (Eric Wong)

gfuji@cpan.org wrote:

The very line that the issue raised is here: https://github.com/ruby/ruby/blob/v2.4.2/thread_pthread.c#L260

OK, that means a pthread_mutex is held while destroy is happening. Unfortunately we can't look at the Sidekiq-pro source code...

If there's many Mutex objects being destroyed and you can try Ruby 2.5, that might fix the problem because I reimplemented the Ruby Mutex class to not rely on native mutexes at all.

Otherwise, there's th->interrupt_lock which might get destroyed when the thread dies.

Can you get a core dump and see if it's th->interrupt_lock or something else being destroyed while locked?

Do you get this during normal running or during shutdown?

Are there a lot of signals hitting the process when this happens?

```
/usr/local/rbenv/versions/2.4.2/bin/ruby(thread_start_func_2+0x98d) [0x558eb74a0e9d] thread_pthread.c:260
/usr/local/rbenv/versions/2.4.2/bin/ruby(thread_start_func_1+0xd0) [0x558eb74a0fd0] thread_pthread.c:887
/lib/x86_64-linux-gnu/libpthread.so.0(start_thread+0xca) [0x7f9c1bf536ba]
```

Not enough info there about what's getting destroyed, unfortunately...

#4 - 03/29/2018 01:39 AM - gfx (Goro FUJI)

This issue is no longer reproduced after upgrading Ruby to v2.5.0, as normalperson predicted. Thanks.