

## Ruby master - Bug #16782

### `lock': deadlock; recursive locking (ThreadError) in 2.7.1

04/13/2020 03:42 AM - ioquatix (Samuel Williams)

<b>Status:</b>	Open	
<b>Priority:</b>	Normal	
<b>Assignee:</b>	ko1 (Koichi Sasada)	
<b>Target version:</b>		
<b>ruby -v:</b>		<b>Backport:</b> 2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: UNKNOWN

#### Description

Using the latest async-http repo:

```
% bundle exec rspec spec/async/http/performance_spec.rb
```

Traceback (most recent call last):

```
 11: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/task.rb:258:in `block in make_e_fiber'
 10: from /home/samuel/.gem/ruby/2.7.1/gems/async-io-1.28.0/lib/async/io/socket.rb:73:in `block in accept'
   9: from /home/samuel/.gem/ruby/2.7.1/gems/async-io-1.28.0/lib/async/io/server.rb:32:in `block in accept_each'
   8: from /home/samuel/Documents/socketry/async-http/lib/async/http/server.rb:67:in `accept'
   7: from /home/samuel/Documents/socketry/async-http/lib/async/http/protocol/http1/connection.rb:80:in `close'
   6: from /home/samuel/.gem/ruby/2.7.1/gems/protocol-http1-0.12.0/lib/protocol/http1/connection.rb:135:in `close'
   5: from /home/samuel/.gem/ruby/2.7.1/gems/async-io-1.28.0/lib/async/io/stream.rb:224:in `close'
   4: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/wrapper.rb:164:in `close'
   3: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/wrapper.rb:215:in `cancel_monitor'
   2: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/wrapper.rb:215:in `close'
   1: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/wrapper.rb:215:in `deregister'
/home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/wrapper.rb:215:in `lock': SIGTERM (SignalException)
   9: from /home/samuel/.gem/ruby/2.7.1/gems/async-container-0.14.1/lib/async/container/forked.rb:64:in `block in spawn'
   8: from /home/samuel/.gem/ruby/2.7.1/gems/async-container-0.14.1/lib/async/container/group.rb:42:in `fork'
   7: from /home/samuel/.gem/ruby/2.7.1/gems/async-container-0.14.1/lib/async/container/group.rb:42:in `fork'
   6: from /home/samuel/.gem/ruby/2.7.1/gems/async-container-0.14.1/lib/async/container/forked.rb:67:in `block (2 levels) in spawn'
   5: from /home/samuel/.gem/ruby/2.7.1/gems/async-container-0.14.1/lib/async/container/controller.rb:47:in `block in async'
   4: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/reactor.rb:58:in `run'
   3: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/reactor.rb:58:in `ensure in run'
   2: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/reactor.rb:250:in `close'
   1: from /home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/reactor.rb:250:in `close'
/home/samuel/.gem/ruby/2.7.1/gems/async-1.24.2/lib/async/reactor.rb:250:in `lock': deadlock; recursive locking (ThreadError)
  runs benchmark
```

```
Finished in 4.5 seconds (files took 0.2483 seconds to load)
```

```
2 examples, 0 failures
```

```
% ruby --version
```

```
ruby 2.7.1p83 (2020-03-31 revision a0c7c23c9c) [x86_64-linux]
```

About 1 in 10-100 runs will trigger this result. I also tried current head and could reproduce:

```
Running 2s test @ http://127.0.0.1:9294/
 8 threads and 8 connections
Thread Stats   Avg      Stdev     Max   +/-  Stdev
  Latency    10.35ms  14.03ms  46.73ms  78.86%
  Req/Sec    0.99k   454.60   2.30k   63.80%
16122 requests in 2.10s, 787.51KB read
Requests/sec: 7675.89
Transfer/sec: 374.94KB
4.66s error: Async::Task [oid=0x1360] [pid=69337] [2020-04-13 15:40:21 +1200]
| ThreadError: deadlock; recursive locking
| → /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/wrapper.rb:215 in `lock'
| /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/wrapper.rb:215 in `deregister'
| /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/wrapper.rb:215 in `close'
| /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/wrapper.rb:215 in `cancel_monitor'
| /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/wrapper.rb:164 in `close'
| /home/samuel/.gem/ruby/2.8.0/gems/async-io-1.28.0/lib/async/io/shared_endpoint.rb:78 in `ensure in block (2 levels) in bind'
| /home/samuel/.gem/ruby/2.8.0/gems/async-io-1.28.0/lib/async/io/shared_endpoint.rb:78 in `block (2 levels) in bind'
| /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/task.rb:258 in `block in make_fiber'
| Caused by Async::Stop: Async::Stop
| → /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/task.rb:66 in `yield'
| /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/wrapper.rb:233 in `wait_for'
| /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/wrapper.rb:124 in `wait_readable'
| /home/samuel/.gem/ruby/2.8.0/gems/async-io-1.28.0/lib/async/io/generic.rb:220 in `async_send'
| /home/samuel/.gem/ruby/2.8.0/gems/async-io-1.28.0/lib/async/io/socket.rb:62 in `accept'
| /home/samuel/.gem/ruby/2.8.0/gems/async-io-1.28.0/lib/async/io/server.rb:36 in `accept_each'
| /home/samuel/.gem/ruby/2.8.0/gems/async-io-1.28.0/lib/async/io/shared_endpoint.rb:104 in `block in accept'
| /home/samuel/.gem/ruby/2.8.0/gems/async-io-1.28.0/lib/async/io/shared_endpoint.rb:76 in `block (2 levels) in bind'
| /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/task.rb:258 in `block in make_fiber'
Traceback (most recent call last):
 9: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/forked.rb:64:in `block in spawn'
 8: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/group.rb:42:in `fork'
 7: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/group.rb:42:in `fork'
 6: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/forked.rb:67:in `block (2 levels) in spawn'
 5: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/controller.rb:47:in `block in async'
 4: from /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:56:in `run'
 3: from /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:234:in `run'
 2: from /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:204:in `run_once'
 1: from /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:204:in `select'
/home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:204:in `lock': SIGTERM (SignalException)
 9: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/forked.rb:64:in `block in spawn'
 8: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/group.rb:
```

```
42:in `fork'
  7: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/group.rb:
42:in `fork'
  6: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/forked.rb
:67:in `block (2 levels) in spawn'
  5: from /home/samuel/.gem/ruby/2.8.0/gems/async-container-0.14.1/lib/async/container/controlle
r.rb:47:in `block in async'
  4: from /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:58:in `run'
  3: from /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:58:in `ensure in r
un'
  2: from /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:250:in `close'
  1: from /home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:250:in `close'
/home/samuel/.gem/ruby/2.8.0/gems/async-1.24.2/lib/async/reactor.rb:250:in `lock': deadlock; recur
sive locking (ThreadError)
  runs benchmark

Finished in 4.56 seconds (files took 0.31919 seconds to load)
2 examples, 0 failures
```

It's relatively straight forward to reproduce.

## History

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### #1 - 04/13/2020 03:43 AM - ioquatix (Samuel Williams)

Total stab in the dark, but I wonder if it's because the signal handling is interrupting the same thread it's already on? Or something else weird?

### #2 - 05/07/2020 07:29 AM - ko1 (Koichi Sasada)

deadlock; recursive locking

seems not difficult error, the same thread tries to lock a mutex twice without unlocking.  
can you check it?