Ruby master - Bug #17561
The timeout option for Addrinfo.getaddrinfo is not reliable on Ruby 2.7.2

01/19/2021 02:40 PM - smcgivern (Sean McGivern)

Status: Closed
Priority: Normal
Assignee: Glass_saga (Masaki Matsushita)
Target version: 2.7.2
Backport: 2.5: DONTNEED, 2.6: DONTNEED, 2.7: DONE, 3.0: DONTNEED

Description
#15553 introduced a timeout option for Addrinfo.getaddrinfo, which uses getaddrinfo_a internally. It appears this has since been reverted in the development branch via https://github.com/ruby/ruby/commit/5d8bcc48706433 (due to #17220 maybe; I didn't quite follow the discussion).

However, Ruby 2.7.2 is still not reliable, even without forking:

$ ruby -v
ruby 2.7.2p137 (2020-10-01 revision 5445e04352) [x86_64-linux]

$ ruby -e "require 'resolv'; 10000.times { |i| p [i, Addrinfo.getaddrinfo('2130706433', 80, nil, :STREAM, timeout: 5)] }" | tail
Traceback (most recent call last):
 3: from -e:1:in `<main>'
 2: from -e:1:in `times'
 1: from -e:1:in `block in <main>'
-e:1:in `getaddrinfo': getaddrinfo_a: All requests done (SocketError)
[1473, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1474, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1475, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1476, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1477, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1478, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1479, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1480, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1481, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]
[1482, [#<Addrinfo: 127.0.0.1:80 TCP (2130706433)>>]]

This is on a VirtualBox VM and fails fairly quickly. On a 'real' Linux system, I need to try a few times or bump the number of iterations, but it also fails consistently with consecutive requests. I'm choosing 2130706433 (the decimal representation of 127.0.0.1) as that's what our test suite uses, and that's what failed when I tried to use the timeout option.

On Ruby 3.0.0-dev this does not fail due to the aforementioned revert, but should this also be removed from Ruby 2.7 until it's ready?

History

#1 - 02/17/2021 08:51 AM - stanhu (Stan Hu)
I agree that this should be removed from Ruby 2.7. In https://gitlab.com/gitlab-org/gitlab/-/issues/11951#note_510756578, we were able to trigger a seg fault by doing this:

```ruby
require 'socket'

loop do
  Addrinfo.getaddrinfo('localhost', nil, timeout: 0)
  rescue SocketError
  end
```

#2 - 06/15/2021 04:47 AM - ko1 (Koichi Sasada)
confirmed on my machine:

```
$ ruby -ve "require 'resolv'; 10000.times { |i| p [i, Addrinfo.getaddrinfo('2130706433', 80, nil, :STREAM, timeout: 0)] }"
ruby 2.7.3p183 (2021-04-05 revision 6847ee089d) [x86_64-linux]
*** stack smashing detected ***: terminated
```

09/20/2021
#3 - 06/15/2021 04:50 AM - mame (Yusuke Endoh)
- Assignee set to Glass_saga (Masaki Matsushita)
- Status changed from Open to Assigned

Glass_saga (Masaki Matsushita) Could you handle this?

#4 - 06/15/2021 05:51 AM - Glass_saga (Masaki Matsushita)
- Backport changed from 2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: UNKNOWN, 3.0: UNKNOWN to 2.5: DONTNEED, 2.6: DONTNEED, 2.7: REQUIRED, 3.0: DONTNEED

Although I can't reproduce the issue on my machine (I tried several times), I agree that this should be removed from 2.7. I will create a patch.

#5 - 06/17/2021 05:46 AM - usa (Usaku NAKAMURA)

About 2.7, to make raise ArgumentError (or other exception) is not acceptable because it's *stable* branch. I strongly hope to fix this problem at master branch and the fix can be backportable, but at this time, we should simply ignore timeout: argument and note it on documentation.

#6 - 07/01/2021 07:33 PM - jeremyevans0 (Jeremy Evans)

usa (Usaku NAKAMURA) wrote in #note-5:

About 2.7, to make raise ArgumentError (or other exception) is not acceptable because it's *stable* branch. I strongly hope to fix this problem at master branch and the fix can be backportable, but at this time, we should simply ignore timeout: argument and note it on documentation.

I sent a pull request to disable the timeout option: https://github.com/ruby/ruby/pull/4618

I couldn't see where the timeout option was documented, so I didn't modify the documentation.

I don't think we'll be able to backport a fix to the issue. The use of getaddrinfo_a was completely removed in 5d8bcc487069a1ab1ee05346346f241d4a805aada5.

#7 - 07/31/2021 12:30 PM - usa (Usaku NAKAMURA)

- Backport changed from 2.5: DONTNEED, 2.6: DONTNEED, 2.7: REQUIRED, 3.0: DONTNEED to 2.5: DONTNEED, 2.6: DONTNEED, 2.7: DONE, 3.0: DONTNEED

merged into ruby_2_7 at d9ff8b3e86a03499a5c6bc36fae1592914a25b9c

#8 - 07/31/2021 05:11 PM - jeremyevans0 (Jeremy Evans)

- Status changed from Assigned to Closed