[PATCH] modernize Timeout usage in net/{http,pop,smtp,telnet}

Object#timeout is deprecated, so use Timeout.timeout instead

Additionally, rely on raising Timeout::Error instead of
temporary Class object. Using a temporary Class object only
benefits nested timeouts, but the code paths in net/* do not
nest timeouts.

Unfortunately, any performance benefit of avoiding temporary
Class objects is nullified here because Errno::EAGAIN is
extended with IO::WaitReadable or IO::WaitWritable:
https://bugs.ruby-lang.org/issues/5138

A better version of this patch would use timeouts via select()
when handling DNS lookup and non-blocking connect(). That
requires more effort to deal with hostnames that resolve to
multiple addresses, so we'll revisit that later.

This change is also pullable:
git pull git://bogomips.org/ruby modern-timeout

Related issues:
Related to Ruby master - Feature #6088: Add Net::ReadTimeout to distinguish w... Closed 02/26/2012
Related to Ruby master - Bug #6001: Retry idempotent HTTP requests for more e... Closed 02/11/2012

Associated revisions
Revision 09f27873 - 02/28/2012 05:15 AM - drbrain (Eric Hodel)
- lib/net/protocol.rb: Add OpenTimeout subclass of Timeout::Error
- lib/net/http.rb: Modernize Timeout usage. Patch by Eric Wong. Use
  Net::OpenTimeout instead of Timeout::Error. [Bug #5765]
- lib/net/smtp.rb: ditto
- lib/net/telnet.rb: ditto
git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@34843 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 34843 - 02/28/2012 05:15 AM - drbrain (Eric Hodel)
- lib/net/protocol.rb: Add OpenTimeout subclass of Timeout::Error
  - lib/net/pop.rb: Modernize Timeout usage. Patch by Eric Wong. Use Net::OpenTimeout instead of Timeout::Error. [Bug #5765]
  - lib/net/http.rb: ditto
  - lib/net/smtp.rb: ditto
  - lib/net/telnet.rb: ditto

Revision 34843 - 02/28/2012 05:15 AM - drbrain (Eric Hodel)
- lib/net/protocol.rb: Add OpenTimeout subclass of Timeout::Error
  - lib/net/pop.rb: Modernize Timeout usage. Patch by Eric Wong. Use Net::OpenTimeout instead of Timeout::Error. [Bug #5765]
  - lib/net/http.rb: ditto
  - lib/net/smtp.rb: ditto
  - lib/net/telnet.rb: ditto

Revision 34843 - 02/28/2012 05:15 AM - drbrain (Eric Hodel)
Revision 34843 - 02/28/2012 05:15 AM - drbrain (Eric Hodel)

- lib/net/protocol.rb: Add OpenTimeout subclass of Timeout::Error
  - lib/net/pop.rb: Modernize Timeout usage. Patch by Eric Wong. Use Net::OpenTimeout instead of Timeout::Error. [Bug #5765]
  - lib/net/http.rb: ditto
  - lib/net/smtp.rb: ditto
  - lib/net/telnet.rb: ditto

Revision 34843 - 02/28/2012 05:15 AM - drbrain (Eric Hodel)

- lib/net/protocol.rb: Add OpenTimeout subclass of Timeout::Error
  - lib/net/pop.rb: Modernize Timeout usage. Patch by Eric Wong. Use Net::OpenTimeout instead of Timeout::Error. [Bug #5765]
  - lib/net/http.rb: ditto
  - lib/net/smtp.rb: ditto
  - lib/net/telnet.rb: ditto

Revision 34843 - 02/28/2012 05:15 AM - drbrain (Eric Hodel)

- lib/net/protocol.rb: Add OpenTimeout subclass of Timeout::Error
  - lib/net/pop.rb: Modernize Timeout usage. Patch by Eric Wong. Use Net::OpenTimeout instead of Timeout::Error. [Bug #5765]
  - lib/net/http.rb: ditto
  - lib/net/smtp.rb: ditto
  - lib/net/telnet.rb: ditto

History

#1 - 02/25/2012 02:09 PM - ko1 (Koichi Sasada)

Any progress?

I think it is good timing that you become a committer :) 
(I'm sorry if you already are)

#2 - 02/25/2012 03:23 PM - mame (Yusuke Endoh)

2012/2/25 Koichi Sasada redmine@ruby-lang.org:

I think it is good timing that you become a committer :) 
(I'm sorry if you already are)

An enthusiastic +1.

--
Yusuke Endoh mame@tsq.ne.jp

#3 - 02/26/2012 06:23 AM - normalperson (Eric Wong)

Koichi Sasada redmine@ruby-lang.org wrote:

Any progress?

Patch still applies to trunk with offsets. I was hoping somebody else can review it (I never trust anything I write :)

I think it is good timing that you become a committer :) 
(I'm sorry if you already are)

Thank you for the thought, but as with [ruby-core:38807], I am not interested in being a committer.

#4 - 02/26/2012 07:15 AM - drbrain (Eric Hodel)

I like this patch.
This patch will collide with #6001, though, since I introduce Net::HTTP::OpenTimeout as a subclass of Timeout::Error. Should we add Net::OpenTimeout instead of Net::HTTP::OpenTimeout?

See also #6088 where I introduce Net::ReadTimeout. The division between Net::ReadTimeout and Net::OpenTimeout will allow users to distinguish which operation timed out. For a read timeout they may wish to retry the operation.

#5 - 02/26/2012 07:22 AM - drbrain (Eric Hodel)
- File net.modernize_timeout_usage.open_timeout.patch added

The attached patch combines the original patch with the introduction of Net::OpenTimeout.

#6 - 02/26/2012 07:53 AM - normalperson (Eric Wong)

Eric Hodel drbrain@segment7.net wrote:

I like this patch.

This patch will collide with #6001, though, since I introduce
Net::HTTP::OpenTimeout as a subclass of Timeout::Error. Should we add
Net::OpenTimeout instead of Net::HTTP::OpenTimeout?

Yes, I vastly prefer Net::OpenTimeout since timeouts shouldn't be
limited to HTTP.

See also #6088 where I introduce Net::ReadTimeout. The division
between Net::ReadTimeout and Net::OpenTimeout will allow users to
distinguish which operation timed out. For a read timeout they may
wish to retry the operation.

Excellent. Your net.modernize_timeout_usage.open_timeout.patch looks
good to me. Thanks!

#7 - 02/28/2012 02:16 PM - drbrain (Eric Hodel)
- Status changed from Open to Closed
- % Done changed from 0 to 100

This issue was solved with changeset r34843.
Eric, thank you for reporting this issue.
Your contribution to Ruby is greatly appreciated.
May Ruby be with you.

- lib/net/protocol.rb: Add OpenTimeout subclass of Timeout::Error
  - lib/net/pop.rb: Modernize Timeout usage. Patch by Eric Wong. Use Net::OpenTimeout instead of Timeout::Error. [Bug #5765]
  - lib/net/http.rb: ditto
  - lib/net/smtp.rb: ditto
  - lib/net/telnet.rb: ditto

#8 - 02/28/2012 02:17 PM - drbrain (Eric Hodel)

Since the original patch was approved and Net::HTTP::OpenTimeout was approved in #6001, I applied a combined patch in r34843, replacing Net::HTTP::OpenTimeout.

#9 - 02/29/2012 06:53 AM - normalperson (Eric Wong)

Eric Hodel drbrain@segment7.net wrote:

Since the original patch was approved and Net::HTTP::OpenTimeout was approved in #6001, I applied a combined patch in r34843, replacing Net::HTTP::OpenTimeout.

Thanks! I hope to make Timeout itself better/less-racy in the future.

Files

<table>
<thead>
<tr>
<th>Patch Name</th>
<th>Size</th>
<th>Date</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>net.modernize_timeout_usage.open_timeout.patch</td>
<td>4.56 KB</td>
<td>02/26/2012</td>
<td>drbrain (Eric Hodel)</td>
</tr>
</tbody>
</table>