Ruby - Feature #15553

Addrinfo.getaddrinfo supports timeout

01/21/2019 03:58 AM - Glass_saga (Masaki Matsushita)

Status:	Closed	
Priority:	Normal	
Assignee:	Glass_saga (Masaki Matsushita)	
Target version:	2.7	

Description

Currently, we use Timeout in Net::HTTP and other standard libraries.

lib/net/http.rb

```
945       s = Timeout.timeout(@open_timeout, Net::OpenTimeout) {
946         begin
947           TCPSocket.open(conn_address, conn_port, @local_host, @local_port)
948         rescue => e
949           raise e, "Failed to open TCP connection to " +
950             "#{conn_address}:#{conn_port} (#{e.message})"
951         end
952       }
```

Socket.tcp supports connect_timeout, but Addrinfo.getaddrinfo doesn't support timeout.
We need to use Timeout to wait name resolution.
In this patch, Addrinfo.getaddrinfo support timeout and Socket.tcp accepts resolv_timeout.
It uses getaddrinfo_a(3) if available, otherwise it uses Timeout.
We can avoid thread creation to make a TCP connection if getaddrinfo_a(3) is available.

Related issues:

Related to Ruby - Feature #14430: net/http: use Socket.tcp with connect_timeo...	**Open**
Related to Ruby - Bug #14997: Socket connect timeout exceeds the timeout valu...	**Closed**
Related to Ruby - Feature #16381: Accept resolv_timeout in Net::HTTP	**Open**

History

#1 - 01/21/2019 06:36 AM - Glass_saga (Masaki Matsushita)

- Related to Feature #14430: net/http: use Socket.tcp with connect_timeout, instead of TCPSocket.open wrapped in Timeout.timeout added

#2 - 01/21/2019 08:58 AM - ahorek (Pavel Rosický)

thanks for this PR. Many requests for fully async support in stdlib are blocked by this.

I think on Windows 8+ we can use https://docs.microsoft.com/cs-cz/windows/desktop/api/ws2tcpip/nf-ws2tcpip-getaddrinfoexa to avoid timeout?

#3 - 01/23/2019 02:13 PM - naruse (Yui NARUSE)

Why hrtime.h is included?

#4 - 01/23/2019 09:47 PM - Glass_saga (Masaki Matsushita)

> Why hrtime.h is included?

It's unnecessary. I'll remove it.

#5 - 02/06/2019 09:22 AM - akr (Akira Tanaka)

I'm positive to use getaddrinfo_a if it is available.

However, if getaddrinfo_a is not available and timeout option is not set,
timeout library should not be loaded.

Also, it's welcome to improve resolv.rb.

#6 - 02/06/2019 12:44 PM - akr (Akira Tanaka)

I think timeout library is not effective for getaddrinfo method (without getaddrinfo_a).

What the patch tries to change on a platform which has no getaddrinfo_a?

#7 - 02/06/2019 07:08 PM - Eregon (Benoit Daloze)

akr (Akira Tanaka) wrote:

> I think timeout library is not effective for getaddrinfo method (without getaddrinfo_a).

That was also my experience trying to use SIGVTALRM to interrupt getaddrinfo(3): it had no effect, the code ignores EINTR and only ends after 5 seconds (its default timeout I guess).

#8 - 03/24/2019 05:39 AM - Glass_saga (Masaki Matsushita)

- File patch2.diff added

I updated the patch.

- get rid of Timeout from ext/socket/lib/socket.rb. If getaddrinfo_a() is not available, timeout is ignored.

#9 - 04/03/2019 10:40 AM - maciej.mensfeld (Maciej Mensfeld)

This is also related to it: https://bugs.ruby-lang.org/issues/14997 - once the DNS timeout is in place (when available) I could give the #14997 a shot adding per ip timeout and including the resolving timeout in the overall timeout.

#10 - 07/30/2019 03:35 AM - Glass_saga (Masaki Matsushita)

- Related to Bug #14997: Socket connect timeout exceeds the timeout value for added

#11 - 08/30/2019 03:23 AM - shyouhei (Shyouhei Urabe)

Reviewed the patch and found no issues. So LGTM.

#12 - 08/30/2019 08:07 AM - Glass_saga (Masaki Matsushita)

Thank you for reviewing. I will commit it.

#13 - 09/09/2019 06:39 AM - Glass_saga (Masaki Matsushita)

- Status changed from Open to Closed

- Assignee set to Glass_saga (Masaki Matsushita)

committed in 6382f5cc91ac9e36776bc854632d9a1237250da7

#14 - 08/27/2020 04:17 PM - Glass_saga (Masaki Matsushita)

- Related to Feature #16381: Accept resolv_timeout in Net::HTTP added

Files

patch.diff	13.2 KB	01/21/2019	Glass_saga (Masaki Matsushita)
patch2.diff	11.6 KB	03/24/2019	Glass_saga (Masaki Matsushita)