

Ruby master - Bug #13513

Resolv::DNS::Message.decode hangs after detecting truncation in UDP messages

04/26/2017 04:13 PM - iamasmith (Andrew Smith)

Status:	Assigned	
Priority:	Normal	
Assignee:	akr (Akira Tanaka)	
Target version:		
ruby -v:		Backport: 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: UNKNOWN

Description

ruby-core:32407 introduced support for a TCP requestor in `fetch_resource` if `Resolv::DNS::Message.decode` returned `RCode::NoError` and a reply `tc` of 1.

Unfortunately `Resolv::DNS::Message.decode` proceeds to attempt to unpack all answers based upon the answer count from the message regardless of truncation which causes exception behaviour which is then silently retried as this is seen as the response to the request never being seen (see `begin`, `ensure`).

To avoid this issue I add a return to `Message.decode` once the truncation is detected.

To patch this in a portable fashion I use the attached monkey patch which causes the truncation to propagate correctly back to `fetch_resource` and allows it to proceed correctly with the TCP based query.

History

#1 - 04/26/2017 05:32 PM - iamasmith (Andrew Smith)

After further consideration I had a look at `rfc1035` with regard to the handling of record counts in truncated messages and it discusses `ANCOUNT` as being the number of answers in the answer section and not necessarily the number of answers that the DNS server knows about.

I'm testing against `SkyDNS` and this appears to return in my test the 50 records that I added as the number for the `ANCOUNT` field but does correctly report truncated.

The validity of the change I mention to Ruby perhaps is less correct if `SkyDNS` is at fault and it is appropriate that it is fixed, however, since Ruby implements the suggested fallback to use TCP the records provided in the UDP response are not available to the caller and therefore the change to handle excessive counts in `ANCOUNT` on truncated messages seems useful for the growing number of environments using `SkyDNS`.

I'll compare some others and potentially raise a separate bug if appropriate with the `SkyDNS` maintainers.

#2 - 07/15/2017 11:25 AM - shyouhei (Shyouhei Urabe)

- Assignee set to `akr` (Akira Tanaka)

- Status changed from `Open` to `Assigned`

Files

<code>resolv-monkey-tc.rb</code>	757 Bytes	04/26/2017	iamasmith (Andrew Smith)
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