

## Re: rfc1034 3rd step question.

**Source:**

<http://www.tech-archive.net/Archive/Windows/microsoft.public.windows.server.dns/2004-05/0290.html>

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**From:** Roger Abell (*mvpNOSpam\_at\_asu.edu*)

**Date:** 05/18/04

Date: Tue, 18 May 2004 00:42:48 -0700

Hi William,

Be aware that RFC 2672 modified step 3.c in server processing section 4.3.2 of 1034  
RFC 2672 in section 4.1 presents a revised server processing algorithm

I try to comment on Q1:  
returning nx here is appropriate, as by entering step 3 for non-RD query we have entered (per step 2) the data of zone that is nearest ancestor to QName. As such looking further, as you speculate in Q1, is guaranteed fruitless. IOW, with your example, if sub1.test.com is a zone, then that is where we started doing processing of step 3; we did not leave step 2 to enter 3 at test.com unless RRs for sub1.test.com are within it (sub1.test.com is not a zone).

Q2 exit the whole process and return query results

Q3 punting for now, need to review context, as I never really thought about non IN types ...

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"William Stacey [MVP]" <staceywREMOVE@mvps.org> wrote in message news:eYZOWyDPEHA.640@TK2MSFTNGP12.phx.gbl...

> Trying to figure out the 3rd step and running into some mental blocks.

> Assume the following:

> Non-RD Query: www.sub1.test.com. A

>

> ;:test.com.db

> ; no record for www.sub1.test.com.

> sub1.test.com. NS ns1.test.com.

> ....

>

> 1) label www.sub1.test.com. does not exist. look to see if "\*" exists.

> 2) "\*" does not exist. QName equals orig qName so set nxdomain and exit.

>

> Q1) This does not seem right. It seems like 2 about will reply with

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> nxdomain instead of continuing marching down looking for next lable to
find
> the NS record for subl.test.com.  What am I missing here.
>
> Q2) Seems to gloss over what "exit" means here in two spots in 3c.
> "...error in the response and exit.  Otherwise just exit.".  What do these
> "exists" mean?  Exit just step 3 and goto 4?  Or exit whole process by
> returning current reply to client?  Or  other?
>
> Q3) At start of 3a.  Assume we found a label match.  If Type matches
> "...copy all RRs which match QTYPE into the answer section and go to step
> 6.".  What happens if label matches, but Type does not match?  Is that
> nxdomain right there and return to client or continue matching down
labels?
>
> TIA for your insights!
>
>
> 4.3.2. Algorithm
> "3c. If at some label, a match is impossible (i.e., the
> corresponding label does not exist), look to see if a
> the "*" label exists.
>
> If the "*" label does not exist, check whether the name
> we are looking for is the original QNAME in the query
> or a name we have followed due to a CNAME.  If the name
> is original, set an authoritative name error in the
> response and exit.  Otherwise just exit.
>
> If the "*" label does exist, match RRs at that node
> against QTYPE.  If any match, copy them into the answer
> section, but set the owner of the RR to be QNAME, and
> not the node with the "*" label.  Go to step 6."
>
> --
> William Stacey
>
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