

# Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]

*Source:* <http://unix.derkeiler.com/Mailing-Lists/AIX-L/2004-11/0277.html>

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*fmu\_at\_OERAG.DE*

*Date:* 11/23/04

Date: Tue, 23 Nov 2004 14:26:00 +0100  
To: aix-l@Princeton.EDU

o.k. now I understand this values. But which is the sense of this?  
Now I want change this parameters and think that is better for high availability.

Thank for your help!!!!

Best regards,  
Frank

Vesna Vranesic  
<vesna.vranesic@R An: aix-l@Princeton.EDU  
ZB.AT> Kopie:  
Gesendet von: IBM Thema: Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]  
AIX Discussion  
List  
<aix-l@Princeton.  
EDU>

23.11.2004 14:10  
Bitte antworten  
an IBM AIX  
Discussion List

The algorithm says: try to reach the primary after RES\_TIMEOUT for the first time and retry for RES\_RETRY times in sum.

The default value says concrete: if you can't find the primary wait 5 sec and try again. After that, try another 3 times: wait another 10 sec, try again; wait 20 sec, try again; and finally, wait 40 sec and try for the 4th time to reach the primary. If the 4th try fails, look for the secondary.

```
|-----+----->
||
|| fmu@OERAG.DE |
||
```

AIX-L: Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]

	Gesendet von:
	aix-1@Princeton.EDU
	23.11.2004 14:06
	Bitte antworten an
	aix-1

|----->  
>-----

|  
|  
|An: aix-1@Princeton.EDU  
|  
|Kopie:  
|  
|Blindkopie:  
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|Thema: Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]  
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>-----

Hi Holger,

that is o.k. You change the values and it works (now 15 seconds). But what is the reason that the client don't go after 5 seconds over the second entrie in the /etc/resolv.conf.

I think the client try to connect the first nameserver, after 5 seconds to the second nameserver. If the second nameserver is o.k. the nslookup comes back. After 5 seconds, not 15 seconds!

I don't understand this!

Best regards,  
Frank

Holger.VanKoll@SW  
ISSCOM.COM An:  
aix-1@Princeton.EDU  
Gesendet von: IBM Kopie:  
AIX Discussion Thema: Re: Antwort: Re:  
timeout by DNS? [Virus checked]  
List  
<aix-1@Princeton.  
EDU>

23.11.2004 13:49  
Bitte antworten  
an IBM AIX  
Discussion List

Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]

AIX-L: Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]

for me it works, see below  
what values did you set those variables to?

```
(0)root@sbe16098 173# time nslookup gd2y5d
*** Can't find server name for address 93.47.226.200:No response from
server
Server: dnsc.swissptt.ch
Address: 10.32.17.13
```

```
Name: gd2y5d.swissptt.ch
Address: 10.49.184.130
```

```
real 1m15.02s
user 0m0.00s
sys 0m0.00s
```

```
(0)root@sbe16098 174# export RES_RETRY=2
(0)root@sbe16098 175# export RES_TIMEOUT=5
(0)root@sbe16098 176# time nslookup gd2y5d
*** Can't find server name for address 93.47.226.200:No response from
server
Server: dnsc.swissptt.ch
Address: 10.32.17.13
```

```
Name: gd2y5d.swissptt.ch
Address: 10.49.184.130
```

```
real 0m15.01s
user 0m0.00s
sys 0m0.00s
```

```
(0)root@sbe16098 177# unset RES_RETRY RES_TIMEOUT
(0)root@sbe16098 178# time nslookup gd2y5d
*** Can't find server name for address 93.47.226.200:No response from
server
Server: dnsc.swissptt.ch
Address: 10.32.17.13
```

```
Name: gd2y5d.swissptt.ch
Address: 10.49.184.130
```

```
real 1m15.01s
user 0m0.00s
sys 0m0.00s
```

-----Original Message-----

From: IBM AIX Discussion List [mailto:aix-l@Princeton.EDU] On Behalf Of  
fmu@OERAG.DE  
Sent: Tuesday, November 23, 2004 1:35 PM  
To: aix-l@Princeton.EDU  
Subject: Antwort: Re: timeout by DNS? [Virus checked]

Hi Vesna,

Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]

thanks for your answer.

Your explanation is good and something about this I found in the Internet.

Which I do not understand, if the first entry is wrong or the first nameserver was crashed, the second entry should function after 5 seconds.

But why functioned that not and it does run all cycles through (75s).

Best regards,  
Frank Mueller

Vesna Vranesic  
<vesna.vranesic@R An:  
aix-l@Princeton.EDU  
ZB.AT> Kopie:  
Gesendet von: IBM Thema: Antwort: Re:  
timeout by DNS? [Virus checked]  
AIX Discussion  
List  
<aix-l@Princeton.  
EDU>

23.11.2004 13:17

Bitte antworten  
an IBM AIX  
Discussion List

The quotation I have found few years ago about this issue:

"On AIX, a DNS query will wait a total of 75 seconds before

failing over to the second nameserver entry in the resolv.conf.

The 75 sec timeout period comes from two values RES\_RETRY and RES\_TIMEOUT. The way it works is the dns client will try to contact the dns server, then if it doesn't get an answer back it will wait 5 seconds and try again, then it will wait 10 secs and try again, 20 sec and try again, 40 secs and try again.

.  
 $5 + 10 + 20 + 40 = 75$  seconds

If you want to change these on the dns client do the following:

.  
# export RES\_RETRY=value  
# export RES\_TIMEOUT=value  
.

The timeout is defined by two values :

RES\_TIMEOUT (default 5 sec)

RES\_RETRY (default 4 times)

Each retry the initial timeout value is multiplied by 2 .

Example :

$5 + 10 + 20 + 40 = 75$  <---- default timeout .

The Cust can export other values to change this behaviour .

AIX-L: Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]

Example :

```
export RES_TIMEOUT=10
```

```
export RES_RETRY=2
```

10 + 20 = 30 seconds timeout

In order for these to remain in effect after a reboot you need to vi

/etc/environment and add these in the file."

I am not sure if something has changed recently (read: for AIX5L).

Ciao

Vesna

```
|-----+----->
||
|| hdkutz@HDKUTZ.DE |
||
|| Gesendet von: |
|| aix-1@Princeton.EDU |
|| 23.11.2004 12:48 |
|| Bitte antworten an |
|| aix-1 |
||
|-----+----->
```

```
>-----|
```

```
|
|
|An: aix-1@Princeton.EDU
|
|Kopie:
|
|Blindkopie:
|
|Thema: Re: timeout by DNS? [Virus checked]
|
```

```
>-----|
```

On Tue, Nov 23, 2004 at 12:25:38PM +0100, Holger.VanKoll@SWISSCOM.COM wrote:

```
> >Now I change the first entrie to a wrong IP-adress for the first
> nameserver, the nslookup needs a long time to go to the second
> nameserver.
> then, dont do that ;-)
```

```
>
```

Antwort: Re: Antwort: Re: timeout by DNS? [Virus checked]

> >Now my question is, what is the parameter to tune the timeout for  
DNS?

>

> well, the timeouts for nslookup , host, dig are different – so it

> looks like its up to the application nslookup has (afair) a  
-timeout=option

>

> I doubt there is a system-wide parameter that you can tune

>

> if dns-response time is critical, run a local caching-only nameserver

Hmm. Why isn't "options rotate" like in Linux or Solaris implemented in  
AIX?

Recently we had a problem with our Production Nameserver. All Solaris  
and Linux Boxes went fine, only AIX got into trouble resolving Names  
from the secondary Nameserver, waiting for timeout of the primary DNS.

Cheers,

ku

--

C-3PO:

Sir, the possibility of successfully navigating  
an asteroid field is approximately 3,720 to 1!

Han Solo:

Never tell me the odds!

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