

# Re: How to disable the "implicit mx record" in Exchange

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<http://www.tech-archive.net/Archive/Exchange/microsoft.public.exchange.admin/2007-03/msg00481.html>

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  - *Date:* Sat, 3 Mar 2007 19:45:08 -0800
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Just a followup that I have responded here:

<http://www.microsoft.com/technet/community/newsgroups/dgbrowser/en-us/default.mspx?query=evan&dg=microsoft>

"Ace Fekay [MVP]" wrote:

In <news:F509A047-A343-4433-A4F7-B5C1A669C958@xxxxxxxxxxxxxx>, Evan McNally <[EvanMcNally@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:EvanMcNally@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx)> stated, which I commented on below:

I am having a problem with exchange sending to hosts in recipient domains where these hosts are not actually mail servers. After a lot of review of the SMTP logs, I realized that sometimes Exchange is sending to the correct MX record host, and sometimes it is sending to the host with the A record for the actual domain. When I say the record for the domain, I mean an A record that references the bare domain name rather than an individual host in the domain.

So when Exchange gets a DNS timeout looking up an MX record, it falls back to sending to the domain A record. This causes an immediate failure with no further retry in cases where the MX and A records go to different IP addresses and the A record host accepts mail but not for the particular recipients we are sending to—we get the "cannot relay for that user" type error.

This link explains how this behavior is by design according to the RFC:

<http://exchangeopedia.com/blog/2006/11/rfc-2821-and-implicit-mx-rule-can-you.html>

I feel that this problem is a combination of saturated bandwidth causing DNS request packets to be dropped and poor performance with our ISP's DNS and perhaps slow response from the recipient domain's DNS servers during recursive lookup. BUT, it is not feasible to fix those problems quickly.

Does anyone know if it is possible to tell Exchange to do one of the following:

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1. Retry the MX lookup more times. I have already increased the DNS timeout value in the forwarder section of our internal DNS server, but it does not help when the DNS packet is simply lost.
2. Disable the fall back to using the domain A record. If it would just retry the MX lookup after a while, we would be fine.

I believe I can also "fix" this by entering Exchange routing rules with an explicit recipient host for the problem domains, but that's kind a crummy way to cover up the problem.

Thanks for any advice!

Evan

You know, I don't post into this group, but this subject caught my eye and I had to read the post. Why did it catch my eye? An MX record is a type of DNS record, and any record must be explicitly entered. It either exists or it doesn't. And you don't disable an MX record, whether the infrastructure uses their own Exchange or other type of mail server under their own domain name, or an ISP or someone else hosting it for them. A record is a record. If you don't want the record, delete it.

This whole thing could be simply a bad Forwarder issue, as was pointed out by Oliver. Try 4.2.2.2 as a forwarder. That is always a winner.

This can also be an EDNS0 issue with an older firewall or a firewall that needs to be updated. Up until recently, DNS UDP traffic max packet size is 512 bytes. If the response packet is larger than 512 bytes, such as with domains that have numerous records, the traffic then switches up to TCP to allow the larger traffic. However if Windows 2003 DNS is left to default, which supports EDNS0 =, which means it will support a UDP packet size to 1280 bytes, then it will fail with a router that cannot support it. EDNS0 is a new industry standard and a great feature to increase resolution efficiency. Windows 2003 is one of the early adopters. Many other are following. if they haven't already.

828263 – DNS query responses do not travel through a firewall in Windows Server 2003:

<http://support.microsoft.com/?id=828263>

828731 – An External DNS Query May Cause an Error Message in Windows Server 2003:

<http://support.microsoft.com/?id=828731>

The other folks offer a lot of great information and suggestions as well. If I were you, I would consider all suggestions and test them to see which one will do the trick.

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Infinite Diversities in Infinite Combinations  
Assimilation Imminent. Resistance is Futile  
"Very funny Scotty. Now, beam down my clothes."