

# Re: Strange PPPoe problem

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*Source:* <http://linux.derkeiler.com/Mailing-Lists/Debian/2006-03/msg02644.html>

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- *From:* Gene Heskett <[gene.heskett@xxxxxxxxxxx](mailto:gene.heskett@xxxxxxxxxxx)>
  - *Date:* Fri, 24 Mar 2006 11:49:56 -0500
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On Friday 24 March 2006 07:55, Jacob S wrote:

-----BEGIN PGP SIGNED MESSAGE-----  
Hash: SHA1

On Thu, 23 Mar 2006 14:35:20 -0600

anoop aryal <[aaryal@xxxxxxxxxxxxxxxxxxx](mailto:aaryal@xxxxxxxxxxxxxxxxxxx)> wrote:

On Thursday 23 March 2006 10:58, Jacob S wrote:

-----BEGIN PGP  
SIGNED MESSAGE-----  
Hash: SHA1

Howdy list,

I recently changed ISPs,  
away from static ips on a dsl  
line to  
a single dynamic ip on  
Veriz\*n's new Fi\*S (fiber  
optic)  
service. The new service  
uses PPPoe – not a problem,  
or so I  
thought – I have PPPoe on  
my firewall.

Now, I have used PPPoe  
from this very same firewall  
on a  
different dsl line before and  
it worked great. But for  
some  
reason when I do PPPoe for  
the new fiber line only http  
traffic

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works properly. When downloading e-mail, everything is fine until it tries to download the mail (I see it login, get the number of messages to download, and then it tries to start downloading). At this point the e-mail just hangs until it finally times out. It does not seem to be port-related, as I have setup the e-mail server with port-forwarding rules to allow me to download mail on non-standard ports and it exhibits the same problem. And if I do PPPoe on the provided D-Link router, instead of on my firewall, everything (including e-mail) works great.  
<snip>

google PMTU to read about this in more detail, but it seriously sounds like icmp 3/4 packets are being dropped somewhere. if you setup your firewall to allow icmp packets of type 3/4 thru, you should be all set (well, you'd hope so anyway). a set of rules like so should do the trick:

```
-A INPUT -p icmp --icmp-type fragmentation-needed -j ACCEPT
-A OUTPUT -p icmp --icmp-type fragmentation-needed -j ACCEPT
-A FORWARD -p icmp --icmp-type fragmentation-needed -j ACCEPT
```

then, make sure you have the iptutils-ping package installed (not the netkit-ping) and try:

```
ping your.mail.host -c 1 -M do -s 1472
```

and you should get back an icmp reply saying what the mtu should be. subtract 28 from it and try pinging with that size and it should go thru. eg, if the reply says mtu = 1492, try:

```
ping your.mail.host -c 1 -M do -s 1464
```

and it should go thru just fine. if you get a request timeout, that means that some routers are just dropping your packets without an icmp 3/4 message. keep reducing the size of your packet and see if

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you can get anything thru. read up on PMTU for possible solutions.  
there are ways to stop automatic PMTU discovery etc.

Ok, things are getting stranger here.

I ran the iptables rules you suggested and here's the ping results:

```
# ping longbow.arroway.com -c 1 -M do -s 1472
PING longbow.arroway.com (66.252.129.166) 1472(1500) bytes of data.
- From pool-71-244-52-50.dllstx.fios.verizon.net (71.244.52.50)
icmp_seq=1 Frag needed and DF set (mtu = 1492)
```

```
- --- longbow.arroway.com ping statistics ---
0 packets transmitted, 0 received, +1 errors
```

```
# ping longbow.arroway.com -c 1 -M do -s 1464
PING longbow.arroway.com (66.252.129.166) 1464(1492) bytes of data.
1472 bytes from longbow.arroway.com (66.252.129.166): icmp_seq=1
ttl=49 time=163 ms
```

```
- ---- longbow.arroway.com ping statistics ----
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 163.150/163.150/163.150/0.000 ms
```

So then I added the line

```
pty "/usr/sbin/pppoe -I eth0 -T 80 -m 1464"
```

to /etc/ppp/peers/dsl-provider, but the problem continued. After commenting that line back out (so that no pty... -m declaration had been made in the dsl-provider config), I was able to successfully download one single e-mail from a server. There was only one e-mail in that account and it downloaded like normal. So I sent an e-mail to that account, being that it was on a different server from my normal tests, but that one would not download successfully. So it would seem like it had something to do with the size and speed of the one that downloaded properly.

In short, it's still a no go and I have no clue why. The D-Link router still works great, but pppoe from the firewall doesn't.

The d-link works... And does this also go thru the same iptables rules as the PPPoE?

If so, then playing with iptables is only going to break something. In any event, a run of "/etc/init.d/iptables stop" (as root of course) will open things up and prove or disprove that theory. I wouldn't leave it off for very long though.

If you persist in using PPPoE rather than a good router, then I believe I'd take this problem to the Roaring Penguin folks to see if they've a

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new version that fixes this, or can use you for a test bed to see about fixing it.

Any more clues or suggestions, anyone?

TIA,  
Jacob

-----BEGIN PGP SIGNATURE-----

Version: GnuPG v1.4.2.2 (GNU/Linux)

iD8DBQFEI+xfkpJ43hY3cTURApHFAJ4iBDI5kXdVEWYTH7QXjumLRDZNdwCggIKf  
dM3uKlC/tn117IKyUa17/e4=

=8AOI

-----END PGP SIGNATURE-----

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Cheers, Gene

People having trouble with vz bouncing email to me should add the word 'online' between the 'verizon', and the dot which bypasses vz's stupid bounce rules. I do use spamassassin too. :-)

Yahoo.com and AOL/TW attorneys please note, additions to the above message by Gene Heskett are:

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