

Packet "Mixing" Between Multiple NICs on Host

Source: <http://linux.derkeiler.com/Mailing-Lists/Fedora/2004-03/6023.html>

From: Jonathan B. Horen (*horen_at_mail.iucc.ac.il*)

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To: fedora-list@redhat.com

Shalom!

In, perhaps, a misguided desire for elegance, I moved our DNS server from an aged and infirm host onto our existing file/mail server (Dell PowerEdge/2450 w/dual PIII/866 CPUs and 2GB RAM, running Fedora Core 1 w/all updates). Since the DNS server sat on a different subnet, I added a second NIC to the file/mail server and created the appropriate files in /etc/sysconfig/network-scripts (ifcfg-eth1 and route-eth{0,1}).

"route -n" shows:

```
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
128.139.197.0 0.0.0.0 255.255.255.0 U 0 0 0 eth1
128.139.206.0 0.0.0.0 255.255.255.0 U 0 0 0 eth0
169.254.0.0 0.0.0.0 255.255.0.0 U 0 0 0 eth1
127.0.0.0 0.0.0.0 255.0.0.0 U 0 0 0 lo
0.0.0.0 128.139.197.16 0.0.0.0 UG 0 0 0 eth1
0.0.0.0 128.139.206.1 0.0.0.0 UG 1 0 0 eth0
```

The problem is that although packets received from the two subnets arrive through the corresponding device, *packets sent to a host on a subnet other than 128.139.197.0 exit through eth1.*

Running "ping 128.139.206.12" from a host on the 128.139.206.0 subnet shows that packets exit via eth1, rather than via eth0:

```
root@efes network-scripts# tcpdump -i eth1 host horen.tau.ac.il
tcpdump: listening on eth1
11:54:38.192269 efes.iucc.ac.il > horen.tau.ac.il: icmp: echo reply
11:54:39.202538 efes.iucc.ac.il > horen.tau.ac.il: icmp: echo reply
11:54:40.212855 efes.iucc.ac.il > horen.tau.ac.il: icmp: echo reply
```

I understand that this is because the metric for eth1 is "0", while the metric for eth0 is "1". If I understand correctly, changing the metric for eth0 to "0" would mean that every packet would be sent to *both* interfaces, giving me a 50% packet loss.

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Is there a way to configure routing on this server so that a packet's source-address is "honored" by the system when responding?

worst-case, I'll cobble together a separate DNS server from an unused PIII/500...

TIA!

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JONATHAN B. HOREN

E: horen@mail.iucc.ac.il

T: +972-(0)3-640-5203

F: +972-(0)3-640-9118

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fedora-list@redhat.com

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UNIX SYSTEMS ADMINISTRATOR

Inter-University Computation Center

Tel-Aviv University

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