

Re: [opensuse] Two NIC's, one connected, Ping Both...?

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Source: <http://linux.derkeiler.com/Mailing-Lists/SuSE/2008-07/msg01794.html>

- *From:* "Brian K. White" <brian@xxxxxxxx>
 - *Date:* Thu, 17 Jul 2008 01:56:39 -0400
-

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

From: "William Hammond" <tech@xxxxxxxx>
To: "Brian K. White" <brian@xxxxxxxx>; <opensuse@xxxxxxxx>
Sent: Wednesday, July 16, 2008 2:42 AM
Subject: Re: [opensuse] Two NIC's, one connected, Ping Both...?

At 02:06 AM 7/14/2008, Brian K. White wrote:

----- Original Message ----- *From:* "William Hammond"
<tech@xxxxxxxx>
To: "open SuSE mail list" <opensuse@xxxxxxxx>
Sent: Monday, July 14, 2008 4:24 AM
Subject: [opensuse] Two NIC's, one connected, Ping Both...?

The real problem here is that I so far have been unable to connect to a remote 10.3 Server.

Firewall is active, but all necessary ports are open, Server is behind a Router, and the Router is doing Port Forwarding.
the this case, 5901,5801,22 ----

This is the only site I can;t get into with Putty. (SSH on 22)

One thing that bothers me is the Server.

Like most modern boards it has two built in NIC.s and 100MB and a 1GB.
Both are configured with Private IP's xxx.xxx.xxx.200 and xxx.xxx.xxx.201
(I bet nobody can guess what the xx's represent.. ;-)

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Only one of these RJ45 Ports is connected, but I can Ping them both.

Is that normal...? and is it okay..? or could it be part of my problem..?

It's perfectly normal.

If you configured any nic with an ip, whether it's connected or not, and couldn't ping it from localhost, that would be an indication the nic was bad. Not counting completely broken firewall rules.

Start by turning off the firewall, double-checking that you are running ssh, and connecting from a localhost. ie:

```
rcSuSEfirewall2 stop
chkconfig sshd on
rcsshd start
ssh localhost.
```

If that works then leave the firewall off and connect (ssh) from a local pc on the lan.

If that works then enable the firewall and try again

If that works then try connecting(ssh) from remote.

What to look for depends on which of the above works and doesn't work.

For example:

If you turn the firewall off and still can't ssh localhost, then you are most likely not running sshd.

Either way, check netstat -an for attempted tcp connections, and check syslog for possible messages from sshd or possibly the kernel ip filter.

After that comes various routing/netmask/firewall things but I can't very well write the entire process of debugging a service access problem in an email.

Don't rely on ping unless you know that all routers and switches between you & the target are passing icmp.

It's more and more common for routers to block icmp (ping, traceroute, etc) these days. You can't ping through one of those.

Are the basic network settings correct?

```
ip, netmask, default-route, nameserver(s)?
ifconfig -a
netstat -rn
cat /etc/resolv.conf
```

Re: [opensuse] Two NIC's, one connected, Ping Both...?

First, let me thank you again, rarely do I see such a complete description of the debugging process. Very helpful.

I can SSH from a local workstation into the Server.
The plus is that I can access the workstation remotely and then SSH to the server.

I followed you script, but my knowledge is thin, so I don't know how to interpret the results.

```
ifconfig -a
eth0 Link encap:Ethernet HWaddr 00:01:6C:DB:24:ED
inet addr:192.168.1.200 Bcast:192.168.1.255 Mask:255.255.255.0
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:36408756 errors:0 dropped:0 overruns:0 frame:0
TX packets:34308001 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:1285106723 (1225.5 Mb) TX bytes:3512018401 (3349.3 Mb)
Interrupt:17 Base address:0x8000
```

```
eth1 Link encap:Ethernet HWaddr 00:01:6C:DB:24:EC
inet addr:192.168.1.201 Bcast:192.168.1.255 Mask:255.255.255.0
UP BROADCAST MULTICAST MTU:1500 Metric:1
RX packets:434 errors:0 dropped:0 overruns:0 frame:0
TX packets:165 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:28255 (27.5 Kb) TX bytes:16142 (15.7 Kb)
Interrupt:22
```

```
lo Link encap:Local Loopback
inet addr:127.0.0.1 Mask:255.0.0.0
UP LOOPBACK RUNNING MTU:16436 Metric:1
RX packets:2263227 errors:0 dropped:0 overruns:0 frame:0
TX packets:2263227 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:260237911 (248.1 Mb) TX bytes:260237911 (248.1 Mb)
```

```
netstat -rn
Kernel IP routing table
Destination Gateway Genmask Flags MSS Window irtt Iface
192.168.1.0 0.0.0.0 255.255.255.0 U 0 0 0 eth0
192.168.1.0 0.0.0.0 255.255.255.0 U 0 0 0 eth1
169.254.0.0 0.0.0.0 255.255.0.0 U 0 0 0 eth0
127.0.0.0 0.0.0.0 255.0.0.0 U 0 0 0 lo
0.0.0.0 192.168.1.1 0.0.0.0 UG 0 0 0 eth1
```

OK, you didn't provide /et/resolv.conf so I don't know if you'r resolver is configured well but this is already a start.

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I would go into yast, network devices, network card, and delete eth1. Don't worry it doesn't actually remove the card, all that does is remove the ip settings, you can still give it new ip settings and use the nic any time later.

Then check netstat -rn again, the default route should be on eth0 now.

Reboot just to be a thousand percent sure that it comes up correctly on it's own (so that you can walk away and know that it's ok to reboot from remotely some other day when you need to)

Now Just ping 192.168.1.1

If it fails, then move the network cord to the other jack and it probably will work there.

Now that you know which jack is which, go to the nearest label maker and pry it out of the unfortunate secretaries resisting hands and label the jacks, right then. :)

The default route is "destination: 0.0.0.0" which is where all packets go that didn't find a match in some other route, which just means all packets except the few destined for LAN machines.

Currently the default route is set for 192.168.1.1, which is a perfectly good and probably correct address for the LAN side of your NAT router. So far so good.

But, you have lied to your machine and told it that there are two equally good ways to reach that address. Via eth0, and via eth1, when really, only one of those actually works.

The routing table above shows that, for whatever reason, the kernel has picked eth1 as the lucky winner of all internet-bound traffic.

My guess, only a guess still, is that eth1 has no cable plugged into it.

Don't fix it by just moving the cable. It will still be broken even if it seems to work fine from now until the next reboot. Or the next 20 reboots. It will flip-flop at the most carefully crafted inconvenient "random" time that powerful quad core 3ghz xeon can calculate.

Once you can ping 192.168.1.1, next try to ping any outside ip address, by ip not hostname. Well, you could try hostname and if it works then fine, but if it doesn't work then you really don't know why yet, connectivity, or merely name resolution. So first ping an outside ip. Your router's own WAN ip is the closest outside ip and is a perfect start.

If that works then you now have connectivity. Milestone one.

Then look in /etc/resolv.conf

It should list at least one valid nameserver.

likely suspects would be, 192.168.1.1, since many routers do dns proxy.

and/or whatever the real dns servers are for your net connection. The router will show them in its settings that it received via dhcp from the isp. The advantage of using 192.168.1.1 is that you never have to worry about updating the linux box if the isp changes their dns servers (which they do now and then) or if the customer changes isp's without even telling you (oh yeah, they never do that....). The router will always receive current settings from the isp, and will always forward for you, and you just point at the router and forget it.

The disadvantage of using the router's dns proxy is lots of times they suck and stop working and the linux box stops being able to resolve hostnames until someone power cycles the router. What really sucks is, just the dns proxy may stop, the rest of the router may still be working fine so no one will power cycle it. All the users' desks will be working fine. It will be a run-around for a while until you remember oh yeah that thing about the dns settings, yeah, try rebooting the router, yes I know the internet is up fine please just reboot it anyways I

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promise i'm not a retard and not wasting your time mr annoyed cutomer... heh ask me how I know...

Anyways, whichever form of "valid dns server" you put in there, and you can put both actually, up to 3 lines. then try to ping a hostname that you know is outside and that you know responds to ping. www.google.com is one.

If that works that's milestone two, name resolution.

Now if you still can't ssh in from outside it's things like firewall rules and port forwarding rues in the router.

That's really just a first basic step in establishing basic sanity though. You could have sme other problem, but, first stop walking on shifting sands and all that.

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Brian K. White brian@xxxxxxxx <http://www.myspace.com/KEYofR>
+++++[>++++[>++++>++++++<<-]<-]>>+.>++++.+++++++.-[>+<----]>+.
filePro BBx Linux SCO FreeBSD #callahans Satriani Filk!

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No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 270.4.11/1553 – Release Date: 7/15/2008 5:48 AM

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