

Re: Ethernet issue: works one way but not another

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/questions/2005-03/2277.html>

From: John A. (johna9999_at_gmail.com)

Date: 03/19/05

Date: Fri, 18 Mar 2005 19:58:13 -0500

To: freebsd-questions@freebsd.org

OK, lets see if this helps...

dmesg:

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FreeBSD 5.3-RELEASE #0: Fri Nov 5 04:19:18 UTC 2004

root@harlow.cse.buffalo.edu:/usr/obj/usr/src/sys/GENERIC

Timecounter "i8254" frequency 1193182 Hz quality 0

CPU: Pentium III/Pentium III Xeon/Celeron (451.02-MHz 686-class CPU)

Origin = "GenuineIntel" Id = 0x673 Stepping = 3

Features=0x383f9ff<FPU,VME,DE,PSE,TSC,MSR,PAE,MCE,CX8,SEP,MTRR,PGE,MCA,CMOV,PAT,PSE36,M

real memory = 134152192 (127 MB)

avail memory = 121622528 (115 MB)

npx0: [FAST]

npx0: <math processor> on motherboard

npx0: INT 16 interface

acpi0: <XXXXXX AWRDACPI> on motherboard

acpi0: Power Button (fixed)

Timecounter "ACPI-safe" frequency 3579545 Hz quality 1000

acpi_timer0: <24-bit timer at 3.579545MHz> port 0x4008-0x400b on acpi0

cpu0: <ACPI CPU (3 Cx states)> on acpi0

acpi_button0: <Power Button> on acpi0

pcib0: <ACPI Host-PCI bridge> port

0x5000-0x500f,0x4000-0x4041,0xcf8-0xcff on acpi0

pci0: <ACPI PCI bus> on pcib0

agp0: <Intel 82443BX (440 BX) host to PCI bridge> mem

0xd0000000-0xd3ffffff at device 0.0 on pci0

pcib1: <PCI-PCI bridge> at device 1.0 on pci0

pci1: <PCI bus> on pcib1

pci1: <display, VGA> at device 0.0 (no driver attached)

isab0: <PCI-ISA bridge> at device 7.0 on pci0

isa0: <ISA bus> on isab0

atapci0: <Intel PIIX4 UDMA33 controller> port

0xf000-0xf00f,0x376,0x170-0x177,0x3f6,0x1f0-0x1f7 at device 7.1 on

pci0

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ata0: channel #0 on atapci0
ata1: channel #1 on atapci0
uhci0: <Intel 82371AB/EB (PIIX4) USB controller> port 0xe000-0xe01f
irq 11 at device 7.2 on pci0
uhci0: [GIANT-LOCKED]
usb0: <Intel 82371AB/EB (PIIX4) USB controller> on uhci0
usb0: USB revision 1.0
uhub0: Intel UHCI root hub, class 9/0, rev 1.00/1.00, addr 1
uhub0: 2 ports with 2 removable, self powered
pci0: <bridge, PCI-unknown> at device 7.3 (no driver attached)
ahc0: <Adaptec 2940 Ultra SCSI adapter> port 0xe400-0xe4ff mem
0xd7000000-0xd7000fff irq 10 at device 9.0 on pci0
ahc0: [GIANT-LOCKED]
aic7880: Ultra Wide Channel A, SCSI Id=7, 16/253 SCBs
xl0: <3Com 3c905B-TX Fast Etherlink XL> port 0xe800-0xe87f mem
0xd7001000-0xd700107f irq 5 at device 13.0 on pci0
miibus0: <MII bus> on xl0
xlphy0: <3Com internal media interface> on miibus0
xlphy0: 10baseT, 10baseT-FDX, 100baseTX, 100baseTX-FDX, auto
xl0: Ethernet address: 00:10:4b:7a:e4:ec
fdc0: <floppy drive controller> port 0x3f7,0x3f2-0x3f5 irq 6 drq 2 on acpi0
fdc0: [FAST]
fd0: <1440-KB 3.5" drive> on fdc0 drive 0
sio0: <16550A-compatible COM port> port 0x3f8-0x3ff irq 4 flags 0x10 on acpi0
sio0: type 16550A
sio1: <16550A-compatible COM port> port 0x2f8-0x2ff irq 3 on acpi0
sio1: type 16550A
atkbd0: <Keyboard controller (i8042)> port 0x64,0x60 irq 1 on acpi0
atkbd0: <AT Keyboard> irq 1 on atkbd0
kbd0 at atkbd0
atkbd0: [GIANT-LOCKED]
psm0: <PS/2 Mouse> irq 12 on atkbd0
psm0: [GIANT-LOCKED]
psm0: model IntelliMouse, device ID 3
orm0: <ISA Option ROMs> at iomem 0xcc000-0xd07ff,0xc0000-0xcbfff on isa0
pmtimer0 on isa0
ppc0: parallel port not found.
sc0: <System console> at flags 0x100 on isa0
sc0: VGA <16 virtual consoles, flags=0x300>
vga0: <Generic ISA VGA> at port 0x3c0-0x3df iomem 0xa0000-0xbffff on isa0
Timecounter "TSC" frequency 451024000 Hz quality 800
Timecounters tick every 10.000 msec
Waiting 15 seconds for SCSI devices to settle
acpi_cpu: throttling enabled, 2 steps (100% to 50.0%), currently 100.0%
da0 at ahc0 bus 0 target 0 lun 0
da0: <SEAGATE ST34501W 0017> Fixed Direct Access SCSI-2 device
da0: 40.000MB/s transfers (20.000MHz, offset 8, 16bit), Tagged Queueing Enabled
da0: 4339MB (8887200 512 byte sectors: 255H 63S/T 553C)

rc.conf: (names have been changed to protect the innocent/guilty)

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```
gateway_enable="NO"  
hostname="myhost.domain.com"  
nisdomainname="domain.com"  
ifconfig_xl0="inet 192.168.79.254/24"  
defaultrouter="192.168.79.1"  
linux_enable="YES"  
moused_enable="YES"  
sshd_enable="YES"  
usbd_enable="YES"
```

ifconfig: (This is when connected to internal network through 3Com 100mb hub)

```
xl0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500  
options=9<RXCSUM,VLAN_MTU>  
inet6 fe80::210:4bff:fe7a:e4ec%xl0 prefixlen 64 scopeid 0x1  
inet 192.168.79.254 netmask 0xfffff00 broadcast 192.168.79.255  
ether 00:10:4b:7a:e4:ec  
media: Ethernet autoselect (100baseTX)  
status: active  
lo0: flags=8049<UP,LOOPBACK,RUNNING,MULTICAST> mtu 16384  
inet 127.0.0.1 netmask 0xff000000  
inet6 ::1 prefixlen 128  
inet6 fe80::1%lo0 prefixlen 64 scopeid 0x2
```

netstat -rn:

Routing tables

Internet:

```
Destination Gateway Flags Refs Use Netif Expire  
127.0.0.1 127.0.0.1 UH 0 0 lo0  
192.168.79 link#1 UC 0 0 xl0  
192.168.79.1 00:30:48:41:dc:58 UHLW 0 4 xl0 1084
```

Internet6:

```
Destination Gateway Flags  
Netif Expire  
::1 ::1 UH lo0  
fe80::%xl0/64 link#1 UC xl0  
fe80::210:4bff:fe7a:e4ec%xl0 00:10:4b:7a:e4:ec UHL lo0  
fe80::%lo0/64 fe80::1%lo0 U lo0  
fe80::1%lo0 link#2 UHL lo0  
ff01::/32 ::1 U lo0  
ff02::%xl0/32 link#1 UC xl0  
ff02::%lo0/32 ::1 UC lo0
```

ping -c 5 192.168.79.1:

```
PING 192.168.79.1 (192.168.79.1): 56 data bytes  
64 bytes from 192.168.79.1: icmp_seq=0 ttl=64 time=0.626 ms  
64 bytes from 192.168.79.1: icmp_seq=1 ttl=64 time=0.567 ms
```

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64 bytes from 192.168.79.1: icmp_seq=2 ttl=64 time=0.619 ms
64 bytes from 192.168.79.1: icmp_seq=3 ttl=64 time=0.464 ms
64 bytes from 192.168.79.1: icmp_seq=4 ttl=64 time=0.519 ms

--- 192.168.79.1 ping statistics ---

5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 0.464/0.559/0.626/0.061 ms

ifconfig xl0: (This is when connected directly to internet through wireless radio using a 3Com 10mb hub)

```
xl0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
options=9<RXCSUM,VLAN_MTU>
inet6 fe80::210:4bff:fe7a:e4ec%xl0 prefixlen 64 scopeid 0x1
inet XXX.XXX.75.254 netmask 0xfffff00 broadcast XXX.XXX.75.255
ether 00:10:4b:7a:e4:ec
media: Ethernet autoselect (10baseT/UTP)
status: active
```

Routing tables

Internet:

```
Destination Gateway Flags Refs Use Netif Expire
127.0.0.1 127.0.0.1 UH 0 0 lo0
XXX.XXX.75 link#1 UC 0 0 xl0
```

Internet6:

```
Destination Gateway Flags
Netif Expire
::1 ::1 UH lo0
fe80::%xl0/64 link#1 UC xl0
fe80::210:4bff:fe7a:e4ec%xl0 00:10:4b:7a:e4:ec UHL lo0
fe80::%lo0/64 fe80::1%lo0 U lo0
fe80::1%lo0 link#2 UHL lo0
ff01::/32 ::1 U lo0
ff02::%xl0/32 link#1 UC xl0
ff02::%lo0/32 ::1 UC lo0
```

ping XXX.XXX.75.1: (Ping eventually times out and says host is fown)

PING XXX.XXX.75.1 (XXX.XXX.75.1): 56 data bytes

--- XXX.XXX.75.1 ping statistics ---

9 packets transmitted, 0 packets received, 100% packet loss

netstat -rn: (After ping, host appears in routing table.)

Routing tables

Internet:

```
Destination Gateway Flags Refs Use Netif Expire
127.0.0.1 127.0.0.1 UH 0 0 lo0
```

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```
XXX.XXX.75 link#1 UC 0 0 x10  
XXX.XXX.75.1 00:60:3e:10:d7:e9 UHLW 0 17 x10 1200
```

Internet6:

Destination Gateway Flags

Netif Expire

```
::1 ::1 UH lo0  
fe80::%x10/64 link#1 UC x10  
fe80::210:4bff:fe7a:e4ec%x10 00:10:4b:7a:e4:ec UHL lo0  
fe80::%lo0/64 fe80::1%lo0 U lo0  
fe80::1%lo0 link#2 UHL lo0  
ff01::/32 ::1 U lo0  
ff02::%x10/32 link#1 UC x10  
ff02::%lo0/32 ::1 UC lo0
```

This happens the same way whether or not I define a default route. As I said previously, when I run tcpdump (with no arguments), it takes over 2 minutes to respond with the first packet captured. The time stamp on that packet is from when tcpdump started. When I connect this system to the 100mb hub, tcpdump responds normally showing my expected traffic and doesn't drop packets.

After scrounging around, I laid my hands on a 10mb hub with 1 100mb port. Plugging FBSD into 100mb, with radio in 10mb port, I was able to run tcpdump with expected results, but still could not ping the router (XXX.XXX.75.1).

A little background on myself: While I never claim to be an expert in FBSD, I have been working with BSDI at the isp I work for for the last 8 years. I have a FBSD 4.7 server running in my server farm doing backups and audio streaming for some radio stations. In all of these years, I don't recall ever seeing symptoms like these. It looks to me like it might be some kind of timing issue. I realize that most people are using 100mb or faster networks, but I can't believe that noone has tried to connect a FBSD 5.3 system to a 10mb network.

As for my network topology, I have an internal network that goes through a firewall. This network is 100mb. I have no problem using this network. Everything I have tried on FBSD works. I can ping FBSD from other systems on internal network.

My wireless network is for isp customers and I connect to it for monitoring purposes. The radios have 10mb ports on them, I have no choice. Since BSDI is no longer around, I have to move to another os. I prefer not to follow the other sys admin and convert to penguin. I have BSDI servers that have been up for over 2 years. On average, penguin boxes have to be rebooted every quarter. My FBSD streamer has been up for 281 days (and that was due to power and ups failure at a co-lo facility).

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I'm hoping that this will turn out to not be the head scratcher I fear it might. Hope this information helps.

John A.

On Fri, 18 Mar 2005 07:15:50 -0600, Greg Barniskis

<nalists@scls.lib.wi.us> wrote:

> *Abu Khaled wrote:*

> ...

>> *Am I the only one interested in this topic? Where is the rest of our*

>> *lovely community?*

>> *Come on guys let's scratch those gray cells and help John out.*

>>

>

> *Although progress is being made on getting detail, it's still*

> *insufficient (and, not entirely consistent? if the connection in*

> *question is *wired* then probably the fact that a wireless access*

> *point exists on the same subnet is not likely relevant). Anyway, I*

> *do not have a clear vision of what connects to what, how.*

>

> *The relevant portions of rc.conf, ifconfig output (and ipconfig*

> *output from the M\$ box), the syntax of the tcpdump, the specs of the*

> *box, and other relevant details might spur more response. A simple*

> *ASCII representation of the network might help.*

>

> *FWIW, I've seen tcpdump behave poorly if the box or card just*

> *doesn't have the horsepower required to parse the volume of all the*

> *packets being seen on the network.*

>

> *re: can't ping M\$ box... M\$ firewall sounds like the most likely*

> *culprit. If you try to ping and get no response, does the M\$ box*

> *nevertheless show up in FreeBSD's arp table (compare arp -an before*

> *and after the ping test)? If the MAC address shows up, you've got*

> *connectivity just fine, but something's dropping the ICMP packets.*

>

> *PS to Abu -- your written English is as good or better than many*

> *native speakers of the language, so don't apologize for it. =)*

>

> --

> *Greg Barniskis, Computer Systems Integrator*

> *South Central Library System (SCLS)*

> *Library Interchange Network (LINK)*

> *<gregb at scls.lib.wi.us>, (608) 266-6348*

>

freebsd-questions@freebsd.org mailing list

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