
Subject: Strange Behavior with multiple venet0 interfaces

Posted by [glic3rinu](#) on Thu, 09 Jul 2009 09:14:53 GMT

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Hi all,

I have Debian 5.0 based server with various network interfaces connected on different networks (eth0:77.178.25.0/24, eth1:10.0.0.0/24, eth2:10.0.10.0/24, eth3:10.10.0.0/24, and more...). Today I have been doing tests with an OpenVZ virtual machine with multiple venet0 interfaces (venet0:0, venet0:1 and venet0:2), each interface belonging to a different network (venet0:0 77.178.25.145/24, venet0:2 10.10.0.155/24, venet0:1 10.0.0.155/24).

I observe a strange behavior when I ping from OpenVZ VE to another machines on the network. The source IP address of the output packets for the VE is in all the cases 77.178.25.145, in spite of being 10.10.0.155 or 10.0.0.155

In the worst case it causes packet losing because some machines of the private network doesn't know how/to route packets to 77.178.25.145.

Whats the reason of this behavior? is this a bug? Is there any way to fix it? Perhaps a clue to solve the problem is that the interfaces are called venet0:0, venet0:1, venet0:2 instead of venet0, venet1 and venet2?

I know this problem disappears when using the Veth interfaces instead of Venet0, but I like to use the Venet0 system because it offer more performance and security.

I leave an example to ping 10.0.0.10 from the virtual machine.

1) Tcpcmdump show as on the hardware node packets leave by the correct interface (eth1: network 10.0.0.0/24) but with the source address changed, 77.178.25.145 instead of 10.0.0.155

```
tcpdump -i eth1
```

```
14:20:13.939721 IP 77.178.25.145 > 10.0.0.10: ICMP echo request, id 63234, seq 2, length 64
```

```
14:20:14.939208 IP 77.178.25.145 > 10.0.0.10: ICMP echo request, id 63234, seq 3, length 64
```

Then the answers returns for another interface (eth0: network 77.178.25.0/24)

```
tcpdump -i eth0
```

```
14:22:46.075225 IP 10.0.0.10 > 77.178.25.145: ICMP echo reply, id 63490, seq 6564, length 64
```

```
14:22:46.075473 IP 10.0.0.10 > 77.178.25.145: ICMP echo reply, id 63490, seq 6565, length 64
```

finally the packets are relayed to the virtual machine.

```
tcpdump -i venet0
```

12:24:45.211486 IP 10.0.0.10 > 77.178.25.145: ICMP echo reply, id 10500, seq 21, length 64
12:24:46.211202 IP 77.178.25.145 > 10.0.0.10: ICMP echo request, id 10500, seq 22, length 64

Configuration of the Virtual Machine - OpenVZ

```
test:~# route -n
```

```
Kernel IP routing table
```

Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface
192.0.2.1	0.0.0.0	255.255.255.255	UH	0	0	0	venet0
0.0.0.0	192.0.2.1	0.0.0.0	UG	0	0	0	venet0

```
test:~# ifconfig
```

```
lo Link encap:Local Loopback
```

```
inet addr:127.0.0.1 Mask:255.0.0.0
```

```
inet6 addr: ::1/128 Scope:Host
```

```
UP LOOPBACK RUNNING MTU:16436 Metric:1
```

```
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
```

```
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
```

```
collisions:0 txqueuelen:0
```

```
RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)
```

```
venet0 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
```

```
inet addr:127.0.0.1 P-t-P:127.0.0.1 Bcast:0.0.0.0 Mask:255.255.255.255
```

```
UP BROADCAST POINTOPOINT RUNNING NOARP MTU:1500 Metric:1
```

```
RX packets:177951 errors:0 dropped:0 overruns:0 frame:0
```

```
TX packets:179295 errors:0 dropped:0 overruns:0 carrier:0
```

```
collisions:0 txqueuelen:0
```

```
RX bytes:14947840 (14.2 MiB) TX bytes:15060736 (14.3 MiB)
```

```
venet0:0 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
```

```
inet addr:77.178.25.145 P-t-P:77.246.179.123 Bcast:0.0.0.0 Mask:255.255.255.255
```

```
UP BROADCAST POINTOPOINT RUNNING NOARP MTU:1500 Metric:1
```

```
venet0:1 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
```

```
inet addr:10.0.0.155 P-t-P:10.0.0.155 Bcast:0.0.0.0 Mask:255.255.255.255
```

```
UP BROADCAST POINTOPOINT RUNNING NOARP MTU:1500 Metric:1
```

```
venet0:2 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
```

```
inet addr:10.10.0.155 P-t-P:10.10.0.155 Bcast:0.0.0.0 Mask:255.255.255.255
```

```
UP BROADCAST POINTOPOINT RUNNING NOARP MTU:1500 Metric:1
```

Hardware Node configuration.

```
backup:~# route -n
```

Kernel IP routing table

Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface
77.178.25.145	0.0.0.0	255.255.255.255	UH	0	0	0	venet0
10.0.0.155	0.0.0.0	255.255.255.255	UH	0	0	0	venet0
10.10.0.155	0.0.0.0	255.255.255.255	UH	0	0	0	venet0
77.178.25.0	0.0.0.0	255.255.255.0	U	0	0	0	vmbr0
10.0.0.0	0.0.0.0	255.255.255.0	U	0	0	0	eth1
10.10.0.0	0.0.0.0	255.255.255.0	U	0	0	0	eth3
10.0.10.0	0.0.0.0	255.255.255.0	U	0	0	0	eth2
10.0.10.0	0.0.0.0	255.255.255.0	U	0	0	0	eth4
0.0.0.0	77.178.25.1	0.0.0.0	UG	0	0	0	vmbr0

```
/etc/vz/conf/101.conf
```

```
# CPU fair sheduler parameter
```

```
CPUUNITS="1000"
```

```
CPUS="1"
```

```
VE_ROOT="/var/lib/vz/root/$VEID"
```

```
VE_PRIVATE="/var/lib/vz/private/$VEID"
```

```
OSTEMPLATE="debian-5.0-standard_5.0-1_i386"
```

```
ORIGIN_SAMPLE="pve.auto"
```

```
IP_ADDRESS="77.178.25.145 10.0.0.155 10.10.0.155"
```

```
HOSTNAME="test.xxxx.org"
```

```
DESCRIPTION="Debian 5.0 (standard)"
```

```
NAMESERVER="208.67.222.222"
```

```
SEARCHDOMAIN="xxxxx.org"
```

Thanks very much!

Marc

Subject: Re: Strange Behavior with multiple venet0 interfaces

Posted by [maratrus](#) on Mon, 13 Jul 2009 11:15:33 GMT

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Hello,

you may specify what ip address should be used as a source ip address with help of "ip" utility inside VE just like it should be done on a ordinary Linux machine,

```
# ip r add 10.0.0.0/24 dev venet0 src 10.0.0.155
```

```
# ip r add 77.178.25.0/24 dev venet0 src 77.178.25.145
```

Subject: Re: Strange Behavior with multiple venet0 interfaces

Posted by [glic3rinu](#) on Tue, 14 Jul 2009 16:59:15 GMT

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This Works!!

Very thanXs maratrus
