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Subject: venet cannot listen on ip address specified  
Posted by [kdlsw](#) on Wed, 31 Jan 2018 10:42:18 GMT  
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I have a VPS Ubuntu running on OpenVZ, I think. The problem I am having is, some program requires user to manually specify an IP address for listening, I do not know which IP address to put with the Venet0 and Venet0:0.

Here is the 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:155139 errors:0 dropped:0 overruns:0 frame:0
      TX packets:155139 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:0
      RX bytes:275037011 (275.0 MB) TX bytes:275037011 (275.0 MB)

venet0  Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
      inet addr:127.0.0.2 P-t-P:127.0.0.2 Bcast:0.0.0.0 Mask:255.255.255.255
      inet6 addr: 2001:3e6:643:0:2:1:0:57/128 Scope:Global
      UP BROADCAST POINTOPOINT RUNNING NOARP MTU:1500 Metric:1
      RX packets:1826058 errors:0 dropped:0 overruns:0 frame:0
      TX packets:1040054 errors:0 dropped:1 overruns:0 carrier:0
      collisions:0 txqueuelen:0
      RX bytes:2360040465 (2.3 GB) TX bytes:120564554 (120.5 MB)

venet0:0  Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
      inet addr:183.181.101.87 P-t-P:183.181.101.87 Bcast:183.181.101.87
      Mask:255.255.255.255
      UP BROADCAST POINTOPOINT RUNNING NOARP MTU:1500 Metric:1
```

I did some experiments with netcat, and the results are really confusing. I first tried the public ip address on venet0:0 listening on port 80 `nc -l 183.181.101.87 80` didn't work, no connection received. Then I tried netcat default ip listening which only port parameter required `nc -l -p 80` it worked, so, with this command running, I want to find out which address it is listening on, I did `netstat -atvn`

```
The resultActive Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address          Foreign Address        State
tcp    0    0 127.0.0.1:8022        0.0.0.0:*              LISTEN
tcp    0    0 0.0.0.0:25           0.0.0.0:*              LISTEN
tcp    0    0 0.0.0.0:3843         0.0.0.0:*              LISTEN
tcp    0    0 0.0.0.0:80           0.0.0.0:*              LISTEN
...
tcp6   0    0 :::25                :::*                  LISTEN
tcp6   0    0 :::3843              :::*                  LISTEN
```

It shows netcat is listening on 0.0.0.0, I guess all program without requiring a specific listening address is setting default to 0.0.0.0, and all addresses will be included.

Then I tried to give 0.0.0.0 as a specified address to netcat nc -l 0.0.0.0 80Something strange happened, in netstat, it shows

Active Internet connections (servers and established)

Proto	Recv-Q	Send-Q	Local Address	Foreign Address	State
tcp	0	0	127.0.0.1:8022	0.0.0.0:*	LISTEN
tcp	0	0	0.0.0.0:25	0.0.0.0:*	LISTEN
tcp	0	0	0.0.0.0:3843	0.0.0.0:*	LISTEN
tcp	0	0	0.0.0.0:45690	0.0.0.0:*	LISTEN
...					
tcp6	0	0	:::25	:::*	LISTEN
tcp6	0	0	:::3843	:::*	LISTEN

Apparently port 80 becomes 45690, and this port is random. I also tested with other programs, this random port changing issue seems not happening. When I tried to connect netcat with my browser via port 45690, it shows invalid connection to [183.181.101.87] from (UNKNOWN) [101.229.171.186] 31559 and ended.

If I do nc -l -p 45690 connection from a browser gives something similar to GET / HTTP/1.1

Host: 183.181.101.87:45690

Connection: keep-alive

...

which is successful one.

I am not sure what happened here, and for other programs, even if the listening port is not randomized, I cannot establish any connection.

Any suggestions? Thank you

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