
Subject: IPv6 again but this time with veth
Posted by [Jan Tomasek](#) on Wed, 27 Jun 2007 15:42:06 GMT
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Hello,

few weeks ago I was trying to setup IPv6, but that doesn't work.
http://forum.openvz.org/index.php?t=msg&goto=12809&&srch=IPv6#msg_12809

I would really like to have this feature. So I'm trying to experiment with veth devices, but not much success again :(

My host node has IPv6 support:

```
> stj-dev:~# ifconfig
> eth0    Link encap:Ethernet  HWaddr 00:13:72:1B:0B:97
>         inet addr:195.113.233.4  Bcast:195.113.233.255  Mask:255.255.255.0
>         inet6 addr: 2001:718:1:e::23:3004/64 Scope:Global
>         inet6 addr: fe80::213:72ff:fe1b:b97/64 Scope:Link
>         UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
>         RX packets:2136 errors:0 dropped:0 overruns:0 frame:0
>         TX packets:1304 errors:0 dropped:0 overruns:0 carrier:0
>         collisions:0 txqueuelen:1000
>         RX bytes:211656 (206.6 KiB)  TX bytes:138480 (135.2 KiB)
>         Interrupt:17
```

It is accessible on IPv6:

```
> semik@staff:~$ ping6 -c1 2001:718:1:e::23:3004
> PING 2001:718:1:e::23:3004(2001:718:1:e::23:3004) 56 data bytes
> 64 bytes from 2001:718:1:e::23:3004: icmp_seq=0 ttl=63 time=0.129 ms
```

I setup IPv4 part this way:

```
> stj-dev:~# ifconfig veth012.0 0
> stj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/veth012.0/forwarding
> stj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/veth012.0/proxy_arp
> stj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/eth0/forwarding
> stj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/eth0/proxy_arp
> stj-dev:~# ip route add 195.113.233.0/24 dev veth012.0
```

and it works:

```
> semik:~$ping -c1 195.113.233.12
> PING 195.113.233.12 (195.113.233.12): 56 data bytes
> 64 bytes from 195.113.233.12: icmp_seq=0 ttl=61 time=0.252 ms
```

I'm trying to follow

http://wiki.openvz.org/Virtual_Ethernet_device#Virtual_ether_net_device_with_IPv6

but after executing (2nd, 3rd) lines

```
> stj-dev:~# echo 1 > /proc/sys/net/ipv6/conf/veth012.0/forwarding
> stj-dev:~# echo 1 > /proc/sys/net/ipv6/conf/eth0/forwarding
> stj-dev:~# echo 1 > /proc/sys/net/ipv6/conf/all/forwarding
```

host node stop responding to ping6. I'm stuck here... I also do not want run router advertisement daemon (if that is possible). My VE should have address 2001:718:1:e::23:3012.

Inside VE I setup:

```
> root@ip6v2-test:~# ifconfig
> eth0    Link encap:Ethernet  HWaddr 00:0C:29:63:A6:73
>         inet addr:195.113.233.12  Bcast:195.113.233.255  Mask:255.255.255.0
>         inet6 addr: 2001:718:1:e::23:3012/64 Scope:Global
>         inet6 addr: fe80::20c:29ff:fe63:a673/64 Scope:Link
>         UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
>         RX packets:88 errors:0 dropped:0 overruns:0 frame:0
>         TX packets:88 errors:0 dropped:0 overruns:0 carrier:0
>         collisions:0 txqueuelen:0
>         RX bytes:7012 (6.8 KiB)  TX bytes:6948 (6.7 KiB)

>
> root@ip6v2-test:~# cat /etc/network/interfaces
> auto lo
> iface lo inet loopback
>
> auto eth0
> iface eth0 inet static
>     address 195.113.233.12
>     netmask 255.255.255.0
>     network 195.113.233.0
>     broadcast 195.113.233.255
>     gateway 195.113.233.4
>     dns-nameservers 195.113.144.233 195.113.144.194
>     dns-search cesnet.cz
>
>
> eth0 inet6 static
>     iface eth0 inet6 static
>     address 2001:718:1:e::23:3012
>     netmask 64
```

veth interface is configured this way:

```
> NETIF=" ifname=eth0,mac=00:0C:29:63:A6:73,host_ifname=veth012.0,host
_mac=00:0C:29:63:A6:74 "
```

inside VE I see reasonable routes:

```
> root@ip6v2-test:~# route -6
```

```
> Kernel IPv6 routing table
```

> Destination	Next Hop	Flags	Metric	Ref	Use	Iface
> ::1/128	::	U	0	1	1	lo
> 2001:718:1:e::23:3004/128	2001:718:1:e::23:3004			UC	0	49 0
eth0						
> 2001:718:1:e::23:3012/128	::	U	0	142	1	lo
> 2001:718:1:e::/64	::	U	256	0	0	eth0
> fe80::20c:29ff:fe63:a673/128	::	U	0	0	1	lo
> fe80::/64	::	U	256	0	0	eth0
> ff02::16/128	ff02::16	UC	0	5	0	eth0
> ff00::/8	::	U	256	0	0	eth0

but I'm not able even to ping to my host:

```
> root@ip6v2-test:~# ping6 2001:718:1:e::23:3004
```

```
> PING 2001:718:1:e::23:3004(2001:718:1:e::23:3004) 56 data bytes
```

```
> From 2001:718:1:e::23:3012 icmp_seq=1 Destination unreachable: Address unreachable
```

it is very interesting, that host node see my ping requests:

```
> staj-dev:~# tcpdump -i veth012.0
```

```
> tcpdump: WARNING: veth012.0: no IPv4 address assigned
```

```
> tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
```

```
> listening on veth012.0, link-type EN10MB (Ethernet), capture size 96 bytes
```

```
> 18:48:53.301938 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has staj-dev6.cesnet.cz, length 32
```

```
> 18:48:54.301800 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has staj-dev6.cesnet.cz, length 32
```

```
> 18:48:55.302659 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has staj-dev6.cesnet.cz, length 32
```

but do not respond to ping :(

I'm trying this on 2.6.18-028stab035 system with vzctl version 3.0.16-5ds01.

Could anybody help? Thanks.

--

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