
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:

```
> staj-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:

```
> staj-dev:~# ifconfig veth012.0 0
> staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/veth012.0/forwarding
> staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/veth012.0/proxy_arp
> staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/eth0/forwarding
> staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/eth0/proxy_arp
> staj-dev:~# ip route add 195.113.233.012 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

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

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 3.0.16-5dso1.

Could anybody help? Thanks.

--

Jan Tomasek aka Semik
<http://www.tomasek.cz/>

Subject: Re: IPv6 again but this time with veth
Posted by [Jan Tomasek](#) on Thu, 28 Jun 2007 14:50:27 GMT
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Vitaliy Gusev wrote:

> Hello, do you use a bridge?

Probably not... if there is some place where I should RTFM, than just provide me URL please ;) I was hoping setup will be similar as is for IPv4. IPv6 itself is new for me, and with combination with OpenVZ quite hard to understand

> How I see <staj-dev> is a host-node,

Yes.

> but what is two others hosts <semik>,

that is just IPv4 capable box, used for demonstration that my veth012.0 interface is at least able to communicate on IPv4.

> <ip6v2-test>?

That is VE 233012 where I'm trying to get IPv6 working.

> What steps did you do for veth012.0 ?

```
staj-dev# vzctl set 233012 --netif_add  
eth0,00:0C:29:63:A6:73,veth012.0,00:0C:29:63:A6:74 --save
```

```
>> > staj-dev:~# ifconfig veth012.0 0  
>> > staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/veth012.0/forwarding  
>> > staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/veth012.0/proxy_arp  
>> > staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/eth0/forwarding  
>> > staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/eth0/proxy_arp  
>> > staj-dev:~# ip route add 195.113.233.012 dev veth012.0  
>>  
>> > staj-dev:~# echo 1 > /proc/sys/net/ipv6/conf/veth012.0/forwarding  
>> > staj-dev:~# echo 1 > /proc/sys/net/ipv6/conf/eth0/forwarding  
>> > staj-dev:~# echo 1 > /proc/sys/net/ipv6/conf/all/forwarding
```

Am I now more clear? Thanks for help.

--

Jan Tomasek aka Semik
<http://www.tomasek.cz/>

Subject: Re: IPv6 again but this time with veth
Posted by [Jan Tomasek](#) on Thu, 28 Jun 2007 18:44:48 GMT
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Vitaliy Gusev wrote:

> Well, can you draw interaction scheme of the all hosts and describe final goal that you expect?

I need IPv4 and IPv6 support in VE.

Host node have IPv4=195.113.233.4, IPv6=2001:718:1:e::23:3004/64. That is working ok.

VE 233012 is supposed to have IPv4=195.113.233.12, IPv6=2001:718:1:e::23:3012/64.

Gateway for IPv4 is 195.113.233.1 and for IPv6 it somehow works without GW. Config from host node:

```
> auto eth0
> iface eth0 inet static
>     address 195.113.233.4
>     netmask 255.255.255.0
>     network 195.113.233.0
>     broadcast 195.113.233.255
>     gateway 195.113.233.1
>     dns-nameservers 195.113.144.233 195.113.144.194
>     dns-search cesnet.cz
>
> iface eth0 inet6 static
>     post-up /sbin/sysctl -w "net.ipv6.conf.eth0.autoconf=0"
>     address 2001:718:1:e::23:3004
>     netmask 64
```

I've no idea how to draw that. Task is simple: Get IPv6 support inside VE 233012.

I would prefer venet interface, but that doesn't work. See thread:
http://forum.openvz.org/index.php?t=msg&goto=12809&&srch=IPv6#msg_12809

So I'm trying experiment with veth.

> I want to make a note that veth device is usually used with a bridge.

Ok. I will use anything which will make it to work. I tried to restart staj-dev to get clean environment and typed:

```
staj-dev:~# brctl addbr vzbr0
staj-dev:~# brctl addif vzbr0 veth012.0
```

```
staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/vzbr0/forwarding
staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/vzbr0/proxy_arp
staj-dev:~# ip route add 195.113.233.12 dev vzbr0
staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/eth0/forwarding
staj-dev:~# echo 1 > /proc/sys/net/ipv4/conf/eth0/proxy_arp
staj-dev:~# ip route add 2001:718:1:e::23:3012/64 dev vzbr0
staj-dev:~# ip route add 2001:718:1:e::23:3012 dev vzbr0
staj-dev:~# echo 1 > /proc/sys/net/ipv6/conf/eth0/forwarding
staj-dev:~# echo 1 > /proc/sys/net/ipv6/conf/vzbr0/forwarding
```

IPv4 is working fine. But IPv6 still not. :(

Thank you for your help so far.

Do you have any other suggestions?

--

Jan Tomasek aka Semik
<http://www.tomasek.cz/>

Subject: Re: IPv6 again but this time with veth
Posted by [Jan Tomasek](#) on Fri, 29 Jun 2007 07:35:47 GMT
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Vitaliy Gusev wrote:

```
> I still have some questions.
>
> You wrote that the host <semik> (or <staff>) is an IPv4 capable box,
>
>>> but what is two others hosts <semik>,
>> that is just IPv4 capable box, used for demonstration that my veth012.0
>> interface is at least able to communicate on IPv4.
>
> but I see you also use it as an IPv6 host:
```

<semik> is capable only of IPv4 (it is my workstation, that is reason why mention it here, sorry for complicating things).

IPv6 is available on <staff> I used it for testing if I correctly setup IPv6 on my host node.

```
>> 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
>
> In other words IPV6 worked but you did something and those pings was stopped.
```

>
> Did I understand right?

No IPv6 worked and works for host node IPv6=2001:718:1:e::23:3004.

It never worked for VE 233012 with IPv6=2001:718:1:e::23:3012.

--

Jan Tomasek aka Semik
<http://www.tomasek.cz/>

Subject: Re: IPv6 again but this time with veth
Posted by [Jan Tomasek](#) on Fri, 29 Jun 2007 08:23:28 GMT
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Oh. I got lost! Could I try to describe it again?

My HW node is staj-dev:

```
auto eth0
iface eth0 inet static
    address 195.113.233.4
    netmask 255.255.255.0
    network 195.113.233.0
    broadcast 195.113.233.255
    gateway 195.113.233.1
    dns-nameservers 195.113.144.233 195.113.144.194
    dns-search cesnet.cz
```

```
iface eth0 inet6 static
    post-up /sbin/sysctl -w "net.ipv6.conf.eth0.autoconf=0"
    address 2001:718:1:e::23:3004
    netmask 64
```

My VE node, has this config (ip6v2-test):

```
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
```

After executing:

```
brctl addbr vzbr0
brctl addif vzbr0 veth012.0
ifconfig vzbr0 0
echo 1 > /proc/sys/net/ipv4/conf/vzbr0/forwarding
echo 1 > /proc/sys/net/ipv4/conf/vzbr0/proxy_arp
echo 1 > /proc/sys/net/ipv4/conf/eth0/forwarding
echo 1 > /proc/sys/net/ipv4/conf/eth0/proxy_arp
ip route add 195.113.233.12 dev vzbr0
ip route add 2001:718:1:e::23:3012 dev vzbr0
```

****MARK****

VE starts to be reachable from Internet on IPv4. What should I do next?

```
echo 1 > /proc/sys/net/ipv6/conf/eth0/forwarding
```

somehow broke IPv6 for HW node.

```
echo 1 > /proc/sys/net/ipv6/conf/vzbr0/forwarding
```

cause no problem.

Well - returning to point marked as ****MARK****.

Route table on HW node:

```
> staj-dev:~# route -6
> Kernel IPv6 routing table
> Destination                Next Hop                Flags Metric Ref    Use Iface
> ::1/128                    ::                       U    0    6    1 lo
> 2001:718:1:e::23:3004/128  ::                       U    0    788  1 lo
> 2001:718:1:e::23:3012/128  ::                       U    1024  0    0 vzbr0
> 2001:718:1:e::/64          ::                       U    256   169  0 eth0
> fe80::/128                 ::                       U    0    0    2 lo
> fe80::1/128                ::                       U    0    0    1 lo
> fe80::20c:29ff:fe63:a674/128  ::                       U    0    0    1 lo
> fe80::20c:29ff:fe63:a674/128  ::                       U    0    0    1 lo
> fe80::213:72ff:fe1b:b97/128  ::                       U    0    32   1 lo
> fe80::/64                  ::                       U   256  0    0 eth0
> fe80::/64                  ::                       U   256  0    0 venet0
```



```

> fe80::/64          ::          U  256  0    0 veth012.0
> fe80::/64          ::          U  256  0    0 vzbr0
> f020::1/128      ff02::1    UC  0    165   0 eth0
> ff00::/8          ::          U  256  0    0 eth0
> ff00::/8          ::          U  256  0    0 venet0
> ff00::/8          ::          U  256  0    0 veth012.0
> ff00::/8          ::          U  256  0    0 vzbr0
> ::/0              fe80::215:faff:fe87:3100  UGDA 1024 167 0 eth0

```

Route table on VE node:

```

> 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::23:3012/128  ::                U    0    53   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
> ff00::/8             ::                U   256  0    0 eth0

```

VE is missing default GW, I expect it to show there somehow automatically like in HW node... maybe this is one of my bugs.

When I try to ping my HW node, for that I've routes there I get:

```

> 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
> From 2001:718:1:e::23:3012 icmp_seq=2 Destination unreachable: Address unreachable

```

and on HW node:

```

> staj-dev:~# tcpdump -i vzbr0
> tcpdump: WARNING: vzbr0: no IPv4 address assigned
> tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
> listening on vzbr0, link-type EN10MB (Ethernet), capture size 96 bytes
> 11:23:40.306129 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has staj-dev6.cesnet.cz, length 32
> 11:23:41.305975 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has staj-dev6.cesnet.cz, length 32

```

When I try oposite direction:

```

> staj-dev:~# ping6 2001:718:1:e::23:3012
> PING 2001:718:1:e::23:3012(2001:718:1:e::23:3012) 56 data bytes
> [... no output at all ...]

```

```
> root@ip6v2-test:/# tcpdump -n -i eth0
> tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
> listening on eth0, link-type EN10MB (Ethernet), capture size 96 bytes
> 09:32:01.755512 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has 2001:718:1:e::23:3004, length 32
> 09:32:01.755721 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request,
seq 27, length 64
> 09:32:02.756372 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request,
seq 28, length 64
> 09:32:02.757356 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has 2001:718:1:e::23:3004, length 32
> 09:32:03.756222 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request,
seq 29, length 64
> 09:32:03.757208 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has 2001:718:1:e::23:3004, length 32
> 09:32:04.756070 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request,
seq 30, length 64
> 09:32:04.757057 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has 2001:718:1:e::23:3004, length 32
> 09:32:05.755924 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request,
seq 31, length 64
> 09:32:06.755787 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request,
seq 32, length 64
> 09:32:06.756762 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has 2001:718:1:e::23:3004, length 32
```

Any thoughts, please?

--

Jan Tomasek aka Semik
<http://www.tomasek.cz/>

Subject: Re: IPv6 again but this time with veth
Posted by [gblond](#) on Fri, 29 Jun 2007 08:43:32 GMT
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venet device works with IPv6!
Describe steps which you did for venet device.

On the Thursday 28 June 2007 22:44 Jan Tomasek, wrote:

```
> I need IPv4 and IPv6 support in VE.
>
>
> I would prefer venet interface, but that doesn't work. See thread:
> http://forum.openvz.org/index.php?t=msg&goto=12809&&srch=IPv6#msg\_12809
```

> Do you have any other suggestions?

--

Vitaliy Gusev,

Subject: Re: IPv6 again but this time with veth
Posted by [gblond](#) on Fri, 29 Jun 2007 08:50:22 GMT
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You added veth012.0 device to the bridge br0. How about eth0 ?

On the Friday 29 June 2007 12:23 Jan Tomasek, wrote:

> Oh. I got lost! Could I try to describe it again?

>

> My HW node is staj-dev:

>

> auto eth0

> iface eth0 inet static

> address 195.113.233.4

> netmask 255.255.255.0

> network 195.113.233.0

> broadcast 195.113.233.255

> gateway 195.113.233.1

> dns-nameservers 195.113.144.233 195.113.144.194

> dns-search cesnet.cz

>

> iface eth0 inet6 static

> post-up /sbin/sysctl -w "net.ipv6.conf.eth0.autoconf=0"

> address 2001:718:1:e::23:3004

> netmask 64

>

> My VE node, has this config (ip6v2-test):

>

> 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
>
> After executing:
>
> brctl addbr vzbr0
> brctl addif vzbr0 veth012.0
> ifconfig vzbr0 0
> echo 1 > /proc/sys/net/ipv4/conf/vzbr0/forwarding
> echo 1 > /proc/sys/net/ipv4/conf/vzbr0/proxy_arp
> echo 1 > /proc/sys/net/ipv4/conf/eth0/forwarding
> echo 1 > /proc/sys/net/ipv4/conf/eth0/proxy_arp
> ip route add 195.113.233.12 dev vzbr0
> ip route add 2001:718:1:e::23:3012 dev vzbr0
>
> **MARK**
>
> VE starts to be reachable from Internet on IPv4. What should I do next?
>
> echo 1 > /proc/sys/net/ipv6/conf/eth0/forwarding
>
> somehow broke IPv6 for HW node.
>
> echo 1 > /proc/sys/net/ipv6/conf/vzbr0/forwarding
>
> cause no problem.
>
> Well - returning to point marked as **MARK**.

```

```

> Route table on HW node:

```

```

> > staj-dev:~# route -6

```

```

> > Kernel IPv6 routing table

```

| Destination | Next Hop | Flags | Metric | Ref | Use | Iface |
|------------------------------|----------|-------|--------|-----|-----|-----------|
| ::1/128 | :: | U | 0 | 6 | 1 | lo |
| 2001:718:1:e::23:3004/128 | :: | U | 0 | 788 | 1 | lo |
| 2001:718:1:e::23:3012/128 | :: | U | 1024 | 0 | 0 | vzbr0 |
| 2001:718:1:e::/64 | :: | U | 256 | 169 | 0 | eth0 |
| fe80::/128 | :: | U | 0 | 0 | 2 | lo |
| fe80::1/128 | :: | U | 0 | 0 | 1 | lo |
| fe80::20c:29ff:fe63:a674/128 | :: | U | 0 | 0 | 1 | lo |
| fe80::20c:29ff:fe63:a674/128 | :: | U | 0 | 0 | 1 | lo |
| fe80::213:72ff:fe1b:b97/128 | :: | U | 0 | 32 | 1 | lo |
| fe80::/64 | :: | U | 256 | 0 | 0 | eth0 |
| fe80::/64 | :: | U | 256 | 0 | 0 | venet0 |
| fe80::/64 | :: | U | 256 | 0 | 0 | veth012.0 |
| fe80::/64 | :: | U | 256 | 0 | 0 | vzbr0 |

```

> > f020::1/128          ff02::1          UC  0   165   0 eth0
> > ff00::/8             ::              U   256  0    0 eth0
> > ff00::/8             ::              U   256  0    0 venet0
> > ff00::/8             ::              U   256  0    0 veth012.0
> > ff00::/8             ::              U   256  0    0 vzbr0
> > ::/0                 fe80::215:faff:fe87:3100  UGDA 1024 167  0 eth0
>

```

> Route table on VE node:

```

>
> > 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::23:3012/128  ::                U   0    53   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
> > ff00::/8              ::                U  256  0    0 eth0
>

```

> VE is missing default GW, I expect it to show there somehow automatically like in HW node... maybe this is one of my bugs.

> When I try to ping my HW node, for that I've routes there I get:

```

> > 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
> > From 2001:718:1:e::23:3012 icmp_seq=2 Destination unreachable: Address unreachable
>

```

> and on HW node:

```

> > staj-dev:~# tcpdump -i vzbr0
> > tcpdump: WARNING: vzbr0: no IPv4 address assigned
> > tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
> > listening on vzbr0, link-type EN10MB (Ethernet), capture size 96 bytes
> > 11:23:40.306129 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has staj-dev6.cesnet.cz, length 32
> > 11:23:41.305975 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation,
who has staj-dev6.cesnet.cz, length 32
>

```

> When I try opposite direction:

```

> > staj-dev:~# ping6 2001:718:1:e::23:3012
> > PING 2001:718:1:e::23:3012(2001:718:1:e::23:3012) 56 data bytes
> > [... no output at all ...]
>

```

```

> > root@ip6v2-test:/# tcpdump -n -i eth0
> > tcpdump: verbose output suppressed, use -v or -vv for full protocol decode

```

> > listening on eth0, link-type EN10MB (Ethernet), capture size 96 bytes
> > 09:32:01.755512 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation, who has 2001:718:1:e::23:3004, length 32
> > 09:32:01.755721 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request, seq 27, length 64
> > 09:32:02.756372 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request, seq 28, length 64
> > 09:32:02.757356 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation, who has 2001:718:1:e::23:3004, length 32
> > 09:32:03.756222 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request, seq 29, length 64
> > 09:32:03.757208 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation, who has 2001:718:1:e::23:3004, length 32
> > 09:32:04.756070 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request, seq 30, length 64
> > 09:32:04.757057 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation, who has 2001:718:1:e::23:3004, length 32
> > 09:32:05.755924 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request, seq 31, length 64
> > 09:32:06.755787 IP6 2001:718:1:e::23:3004 > 2001:718:1:e::23:3012: ICMP6, echo request, seq 32, length 64
> > 09:32:06.756762 IP6 2001:718:1:e::23:3012 > ff02::1:ff23:3004: ICMP6, neighbor solicitation, who has 2001:718:1:e::23:3004, length 32

>
> Any thoughts, please?

--

Vitaliy Gusev,

Subject: Re: IPv6 again but this time with veth
Posted by [Jan Tomasek](#) on Fri, 29 Jun 2007 08:53:41 GMT
[View Forum Message](#) <> [Reply to Message](#)

Vitaliy Gusev wrote:

> venet device works with IPv6!
> Describe steps which you did for venet device.

I created VE 233005:
IPv4=195.113.233.5
IPv6=2001:718:1:e::23:3005

IPv4 is working ok.

When I try to add IPv6 I get:

```
staj-dev:~# vzctl set 233005 --ipadd '2001:718:1:e::23:3005' --save
```

Adding IP address(es): 2001:718:1:e::23:3005
Failed to bring up venet0:1.
Configure meminfo: 49152
Saved parameters for VE 233005

```
> stj-dev:~# vzctl enter 233005
> entered into VE 233005
> root@ipv6-pokus:/# ifconfig -a
> 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: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)
>
> venet0:0 Link encap:UNSPEC  HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
>         inet addr:195.113.233.5  P-t-P:195.113.233.5  Bcast:0.0.0.0  Mask:255.255.255.255
>         UP BROADCAST POINTOPOINT RUNNING NOARP  MTU:1500  Metric:1
```

There is no venet0:1 inside of VE 233005.

--

Jan Tomasek aka Semik
<http://www.tomasek.cz/>

Subject: Re: IPv6 again but this time with veth
Posted by [gblond](#) on Fri, 29 Jun 2007 10:12:01 GMT
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Possible it is a bug in vzctl's configuration script. Which OS do you use for VE/Host? What is vzctl version?

On the Friday 29 June 2007 12:53 Jan Tomasek, wrote:

```
> Vitaliy Gusev wrote:
> > venet device works with IPv6!
> > Describe steps which you did for venet device.
```

```
>
> I created VE 233005:
> IPv4=195.113.233.5
> IPv6=2001:718:1:e::23:3005
>
> IPv4 is working ok.
>
> When I try to add IPv6 I get:
>
> staj-dev:~# vzctl set 233005 --ipadd '2001:718:1:e::23:3005' --save
> Adding IP address(es): 2001:718:1:e::23:3005
> Failed to bring up venet0:1.
> Configure meminfo: 49152
> Saved parameters for VE 233005
>
> > staj-dev:~# vzctl enter 233005
> > entered into VE 233005
> > root@ipv6-pokus:/# ifconfig -a
> > 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: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)
> >
> > venet0:0 Link encap:UNSPEC  HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
> >         inet addr:195.113.233.5  P-t-P:195.113.233.5  Bcast:0.0.0.0  Mask:255.255.255.255
> >         UP BROADCAST POINTOPOINT RUNNING NOARP  MTU:1500  Metric:1
>
> There is no venet0:1 inside  of VE 233005.
>
--
```

Vitaliy Gusev,

Subject: Re: IPv6 again but this time with veth
Posted by [Jan Tomasek](#) on Fri, 29 Jun 2007 10:15:51 GMT
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Vitaliy Gusev wrote:

> Possible it is a bug in vzctl's configuration script. Which OS do you
> use for VE/Host? What is vzctl version?

Both systems are Debian etch.

```
staj-dev:~# vzctl --version  
vzctl version 3.0.16-5dso1
```

--

Jan Tomasek aka Semik
<http://www.tomasek.cz/>

Subject: Re: IPv6 again but this time with veth
Posted by [Jan Tomasek](#) on Fri, 29 Jun 2007 10:45:11 GMT
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Vitaliy Gusev wrote:

> You added veth012.0 device to the bridge br0. How about eth0 ?
>

It wasn't there. After adding it I finally could yell "IT WORKS!" but just for while. :(In few minutes it stopped working on IPv4 (v6 is still fine). I discovered that problem is in arp (my GW is .233.1):

```
> staj-dev:~# arp -n  
> Address          HWtype  HWaddress      Flags Mask    Iface  
> 195.113.233.224   (incomplete)                eth0  
> 195.113.233.12   ether    00:0C:29:63:A6:73  C          vzbr0  
> 195.113.233.254   (incomplete)                eth0  
> 195.113.233.92    (incomplete)                eth0  
> 195.113.233.193   (incomplete)                eth0  
> 195.113.233.99    ether    00:0C:29:6D:67:1A  C          vzbr0  
> 195.113.233.99    (incomplete)                eth0  
> 195.113.233.36    (incomplete)                eth0  
> 195.113.233.254   ether    00:13:72:39:61:AA  C          vzbr0  
> 195.113.233.2     (incomplete)                eth0  
> 195.113.233.1     (incomplete)                eth0  
> 195.113.233.245   (incomplete)                eth0  
> 195.113.233.246   (incomplete)                eth0
```

```
staj-dev:~# arp -s 195.113.233.1 00:15:FA:87:31:0
```

| > Address | HWtype | HWaddress | Flags | Mask | Iface |
|-------------------|--------|-------------------|-------|------|-------|
| > 195.113.233.91 | | (incomplete) | | | eth0 |
| > 195.113.233.246 | | (incomplete) | | | eth0 |
| > 195.113.233.34 | | (incomplete) | | | eth0 |
| > 195.113.233.12 | ether | 00:0C:29:63:A6:73 | C | | vzbr0 |
| > 195.113.233.74 | | (incomplete) | | | eth0 |
| > 195.113.233.1 | ether | 00:15:FA:87:31:00 | CM | | eth0 |

fixes problem. But that is really ugly hack, this way I have to add static arp records for every host in network 195.113.233.0/24 outside of this HW node. That is not good way.

Any idea why ARP (and IPv4) stop work? Command I do execute are:

```
brctl addbr vzbr0
ifconfig vzbr0 0
echo 1 > /proc/sys/net/ipv4/conf/vzbr0/forwarding
echo 1 > /proc/sys/net/ipv4/conf/vzbr0/proxy_arp
brctl addif vzbr0 veth012.0
brctl addif vzbr0 eth0
ip route add 195.113.233.12 dev vzbr0
```

--

Jan Tomasek aka Semik
<http://www.tomasek.cz/>