
Subject: IPv6 with venet

Posted by [Jan Tomasek](#) on Mon, 09 Jul 2007 13:40:18 GMT

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Hi,

after upgrade to vzctl version 3.0.18-1dso1 I got new set of /etc/vz/dists/scripts/. There were changes in IPv6 code for Debian.

Thanks to those changes now IPv6 works between HW node and VE:

```
> stj-dev:~# ping6 2001:718:1:e::23:3005
> PING 2001:718:1:e::23:3005(2001:718:1:e::23:3005) 56 data bytes
> 64 bytes from 2001:718:1:e::23:3005: icmp_seq=1 ttl=64 time=0.068 ms
```

Problem is that I still can not reach VE from outside (staff is box with IPv6 support).

```
> semik@staff:~$ ping6 2001:718:1:e::23:3005
> PING 2001:718:1:e::23:3005(2001:718:1:e::23:3005) 56 data bytes
```

ping does not show anything, it just hangs. In tcpdump on HW node I see:

```
> 15:38:41.465836 802.1d unknown version
> 15:38:41.498548 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 923, length 64
> 15:38:42.498349 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 924, length 64
> 15:38:43.462572 802.1d unknown version
> 15:38:43.498152 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 925, length 64
> 15:38:43.733136 arp who-has 195.113.233.73 tell 195.113.233.1
> 15:38:44.497951 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 926, length 64
> 15:38:45.427653 IP6 fe80::215:faff:fe87:3100 > ip6-allnodes: ICMP6, router advertisement, length 64
> 15:38:45.462453 802.1d unknown version
> 15:38:45.497753 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 927, length 64
> 15:38:46.497552 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 928, length 64
```

I was suspecting route problems but routes does look ok. VE:

```
> root@ipv6-pokus:/# route -6
> Kernel IPv6 routing table
> Destination                Next Hop                Flags Metric Ref    Use Iface
> ::1/128                    ::                      U    0    1    1 lo
```

```

> ::1/128          ::          U    0    0    1 lo
> 2001:718:1:e::23:3005/128      ::          U    0   13    1 lo
> 2001:718:1:101:20b:dbff:fe93:5c38/128  2001:718:1:101:20b:dbff:fe93:5c38    UC    0
101    0 venet0
> fe80::/64        ::          U  256    0    0 venet0
> ff00::/8         ::          U  256    0    0 venet0
> ::/0             ::          U  256    0    0 venet0

```

HW node:

```

> stj-dev:/proc/sys/net/ipv6/conf/venet0# route -6
> Kernel IPv6 routing table
> Destination          Next Hop          Flags Metric Ref    Use Iface
> ::1/128              ::              U    0    8    1 lo
> 2001:718:1:e::23:3004/128      ::              U    0   926    1 lo
> 2001:718:1:e::23:3005/128      ::              U   1024    0    0 venet0
> 2001:718:1:e:213:72ff:fe1b:b97/128  ::              U    0    0    1 lo
> 2001:718:1:e::/64          ::              U   256   302    0 eth0
> fe80::1/128            ::              U    0    0    1 lo
> fe80::213:72ff:fe1b:b97/128      ::              U    0    58    1 lo
> fe80::/64              ::              U   256    0    0 eth0
> fe80::/64              ::              U   256    0    0 venet0
> ff02::1/128            ff02::1         UC    0   327    0 eth0
> ff00::/8              ::              U   256    0    0 eth0
> ff00::/8              ::              U   256    0    0 venet0
> ::/0                  fe80::215:faff:fe87:3100    UGDA 1024  483    0 eth0

```

Please, does anyone have any sugestions?

--

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

Subject: Re: IPv6 with venet
Posted by [gblond](#) on Mon, 09 Jul 2007 15:16:57 GMT
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Please check /proc/sys/net/ipv6/conf/all/forwarding

On the Monday 09 July 2007 17:40 Jan Tomasek, wrote:

```

> Hi,
>
> after upgrade to vzctl version 3.0.18-1dso1 I got new set of
> /etc/vz/dists/scripts/. There were changes in IPv6 code for Debian.
>
> Thanks to those changes now IPv6 works between HW node and VE:

```

```

>
> > staj-dev:~# ping6 2001:718:1:e::23:3005
> > PING 2001:718:1:e::23:3005(2001:718:1:e::23:3005) 56 data bytes
> > 64 bytes from 2001:718:1:e::23:3005: icmp_seq=1 ttl=64 time=0.068 ms
>
> Problem is that I still can not reach VE from outside (staff is box with
> IPv6 support).
>
> > semik@staff:~$ ping6 2001:718:1:e::23:3005
> > PING 2001:718:1:e::23:3005(2001:718:1:e::23:3005) 56 data bytes
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> ping does not show anything, it just hangs. In tcpdump on HW node I see:
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length 64
> > 15:38:42.498349 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 924,
length 64
> > 15:38:43.462572 802.1d unknown version
> > 15:38:43.498152 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 925,
length 64
> > 15:38:43.733136 arp who-has 195.113.233.73 tell 195.113.233.1
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length 64
> > 15:38:45.427653 IP6 fe80::215:faff:fe87:3100 > ip6-allnodes: ICMP6, router advertisement,
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length 64
> > 15:38:46.497552 IP6 staff.cesnet.cz > 2001:718:1:e::23:3005: ICMP6, echo request, seq 928,
length 64
>
> I was suspecting route problems but routes does look ok. VE:
>
> > root@ipv6-pokus:/# route -6
> > Kernel IPv6 routing table
> > Destination Next Hop Flags Metric Ref Use Iface
> > ::1/128 :: U 0 1 1 lo
> > ::1/128 :: U 0 0 1 lo
> > 2001:718:1:e::23:3005/128 :: U 0 13 1 lo
> > 2001:718:1:101:20b:dbff:fe93:5c38/128 2001:718:1:101:20b:dbff:fe93:5c38 UC 0
101 0 venet0
> > fe80::/64 :: U 256 0 0 venet0
> > ff00::/8 :: U 256 0 0 venet0
> > ::0 :: U 256 0 0 venet0
>
> HW node:
>

```

```

> > staj-dev:/proc/sys/net/ipv6/conf/venet0# route -6
> > Kernel IPv6 routing table
> > Destination                Next Hop
> > ::1/128                    ::
> > 2001:718:1:e::23:3004/128  ::
> > 2001:718:1:e::23:3005/128  ::
> > 2001:718:1:e:213:72ff:fe1b:b97/128  ::
> > 2001:718:1:e::/64          ::
> > fe80::1/128                ::
> > fe80::213:72ff:fe1b:b97/128  ::
> > fe80::/64                  ::
> > fe80::/64                  ::
> > ff02::1/128                ff02::1
> > ff00::/8                   ::
> > ff00::/8                   ::
> > ::0                         fe80::215:faff:fe87:3100
>
> Please, does anyone have any sugestions?
>

```

--
Vitaliy Gusev

Subject: Re: IPv6 with venet
 Posted by [Jan Tomasek](#) on Tue, 10 Jul 2007 07:40:11 GMT
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Vitaliy Gusev wrote:
 > Please check /proc/sys/net/ipv6/conf/all/forwarding

It is disabled:

```

staj-dev:~# for f in /proc/sys/net/ipv6/conf/*/forwarding; do echo $f;
cat $f; done
/proc/sys/net/ipv6/conf/all/forwarding
0
/proc/sys/net/ipv6/conf/default/forwarding
0
/proc/sys/net/ipv6/conf/eth0/forwarding
0
/proc/sys/net/ipv6/conf/lo/forwarding
0
/proc/sys/net/ipv6/conf/venet0/forwarding
0

```

Problem is that when I do:

```
echo "1" > /proc/sys/net/ipv6/conf/all/forwarding
```

HW node stops responding on IPv6 ping, reason probably is that setting that removes default GW:

```
staj-dev:~# route -6
Kernel IPv6 routing table
Destination                                Next Hop
      Flags Metric Ref    Use Iface
::1/128
      U    0    13      1 lo
2001:718:1:e::/128
      U    0     0      2 lo
2001:718:1:e::23:3004/128
      U    0   266      1 lo
2001:718:1:e::/64
      U   256   217      0 eth0
fe80::/128
      U    0     0      2 lo
fe80::1/128
      U    0     0      1 lo
fe80::213:72ff:fe1b:b97/128
      U    0     8      1 lo
fe80::/64
      U   256    0      0 eth0
fe80::/64
      U   256    0      0 venet0
ff02::1/128
      UC    0   229      0 eth0
ff00::/8
      U   256    0      0 eth0
ff00::/8
      U   256    0      0 venet0
```

When I set GW manually it start work and it works also for VE. GREAT!

Well and now. Why setting forwarding=1 removes GW? Is there any way how to add it there automaticaly without my attention? I'm afraid that GW IP fe80::215:faff:fe87:3100 is somehow related to router MAC and that it will change when router become replaced. Any sugestion on this?

Thanks a lot!

--

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

Subject: Re: IPv6 with venet

Posted by [Thorsten Schifferdeck](#) on Tue, 10 Jul 2007 10:13:21 GMT

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Hi Jan,

Jan Tomasek schrieb:

> Vitaliy Gusev wrote:

>> Please check /proc/sys/net/ipv6/conf/all/forwarding

> [...]

> Problem is that when I do:

>

> echo "1" > /proc/sys/net/ipv6/conf/all/forwarding

>

> HW node stops responding on IPv6 ping, reason probably is that setting

> that removes default GW:

"Router Advertisements" (=autoconfiguration) are ignored on setting forward to 1 to IPv6 proc settings and your (automatic) default route (::0), is set to a RA IPv6 (link-local) address, is gone.

for Debian you can set IPv6 (addy and route) on your VE0 (hardware node):

```
--8<--( /etc/network/interfaces )--
```

```
[...]
```

```
iface <DEVICE>
```

```
[...]
```

```
iface <DEVICE> inet6 static
```

```
address <IPv6_ADDRESS>
```

```
netmask <NETMASK>
```

```
gateway <IPv6_ADDRESS_of_your_GATEWAY>
```

```
# set IPv6 forwarding here or in /etc/sysctl.conf
```

```
# read man page of interfaces (5)
```

```
[...]
```

```
-->8--
```

Regards,

Thorsten Schifferdecker
