Subject: VServers in three different networks: veth, venet or mixture?
Posted by divB on Wed, 08 Apr 2009 14:13:32 GMT
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Hi,

I am going to virtualize servers which are in three different networks and - if possible - should not be able to communicate with each other (if I do not allow it explicitely).

In the server there is an Intel E1000 with three VLANs: vlan2 (private network), vlan3 (public network with public IP addresses (/29-network)), vlan4 (semipublic network with RF1918 addresses). The VServer itself should only be connected to the vlan2 network, so it's the single device having an IP address. This is the Debian network configuration on the host:

```
auto lo vlan2 vlan3 vlan4

iface lo inet loopback

# private, LAN (192.168.200.0/24)
iface vlan2 inet static
        vlan-raw-device eth0
        address 192.168.200.1
        netmask 255.255.255.0
        gateway 192.168.200.120

# public
iface vlan3 inet manual
        vlan-raw-device eth0
        up ip link set vlan3 up
        down ip link set vlan3 down

# semi-plublic (192.168.0.0/24)
iface vlan4 inet manual
        vlan-raw-device eth0
        up ip link set vlan4 up
        down ip link set vlan4 down
```

So what's the best way to use OpenVZs network?

My thought would be: Forget about venet (swith it off completely if possible) and just use veth in each VServer.

On the host bridge all private VServers with vlan2, all public VServers with vlan3 and all semi-public VServers with vlan4.

Is this a good or a bad idea? Any hints or tips left?

Thank you,
divB

Subject: Re: VServers in three different networks: veth, venet or mixture?
Posted by maratrus on Thu, 09 Apr 2009 17:05:31 GMT
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Hi,

Quote:
On the host bridge all private VServers with vlan2, all public VServers with vlan3 and all semi-public VServers with vlan4.

Is this a good or a bad idea? Any hints or tips left?

Sounds good. There was a topic about VLANs some time ago which led to the article. It might be helpful in your situation.

http://en.gentoo-wiki.com/wiki/OpenVZ_VLANs

BTW, what does it mean "VServers"?

Subject: Re: VServers in three different networks: veth, venet or mixture?
Posted by divB on Thu, 09 Apr 2009 17:14:20 GMT
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Thank you for your answer!!

maratrus wrote on Thu, 09 April 2009 13:05Hi,

Quote:
On the host bridge all private VServers with vlan2, all public VServers with vlan3 and all semi-public VServers with vlan4.

Is this a good or a bad idea? Any hints or tips left?

Sounds good. There was a topic about VLANs some time ago which led to the article. It might be helpful in your situation.

http://en.gentoo-wiki.com/wiki/OpenVZ_VLANs

Thank you, I will look at it.

What I mean: For every VE I will get another interface.

maratrus wrote on Thu, 09 April 2009 13:05
BTW, what does it mean "VServers"?

Sorry, I come from "Linux VServer". I mean VE. This means if I have 10 VEs I will have to bridge 10 interfaces together plus one vlan on the host (bridge with 11 interfaces = 12 interfaces for 10 VEs!). In my opinion, this is not scaling very well...

Regards,
divB

Subject: Re: VServers in three different networks: veth, venet or mixture?
Posted by maratrus on Thu, 09 Apr 2009 17:27:19 GMT
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Quote:
In my opinion, this is not scaling very well...

Why not? What bothers you most?
Behind each virtual interface, veth101.0 for example, there is a subnet which only consists of single interface, eth0 inside VE for instance, so bridge will learn all VES' MACs and prevent flooding. Anyway, could you please let us know about results.

Subject: Re: VServers in three different networks: veth, venet or mixture?
Posted by divB on Thu, 09 Apr 2009 22:25:15 GMT
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maratrus wrote on Thu, 09 April 2009 13:27
Why not? What bothers you most?

Just the N interfaces for N vservers nothing more But when you say that this is a good concept I will keep it

maratrus wrote on Thu, 09 April 2009 13:27
Behind each virtual interface, veth101.0 for example, there is a subnet which only consists of

single interface, eth0 inside VE for instance, so bridge will learn all VES' MACs and prevent flooding. Anyway, could you please let us know about results.

What results do you mean? I have implemented what I described and it works well.

So the other question on the other way: There is only one venet available? So this means I can use venet only when I have all VEs in the same subnet?

Is there a way to turn off the venet completely?

Regards,
divB

Subject: Re: VServers in three different networks: veth, venet or mixture?
Posted by maratrus on Fri, 10 Apr 2009 06:10:57 GMT
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Hi,

Quote:
Just the N interfaces for N vservers nothing more

What's wrong with that?

Quote:
There is only one venet available?

Yes, venet is a special interface that is able to filter network packets. When a network packet reaches it the venet driver determine what VE this packet intends for.

Quote:
So this means I can use venet only when I have all VEs in the same subnet?

No.

Quote:
Is there a way to turn off the venet completely?

Unload vznetdev module.

Subject: Re: VServers in three different networks: veth, venet or mixture?
Posted by divB on Fri, 10 Apr 2009 10:06:09 GMT
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maratrus wrote on Fri, 10 April 2009 02:10Hi,
Quote:
Just the N interfaces for N vservers nothing more

What's wrong with that?

Nothing I just thought it would be wrong.

maratrus wrote on Fri, 10 April 2009 02:10
Quote:
There is only one venet available?

Yes, venet is a special interface that is able to filter network packets. When a network packet reaches it the venet driver determine what VE this packet intends for.
Quote:
So this means I can use venet only when I have all VEs in the same subnet?

No.

Small question concerning venet [1]: So venet is just one device on the VE0 which may contain multiple L3 IP networks? And the system routes the packets automatically to the appropriate interface on VE0? So venet works only if the VE0 is in the same subnet as the VEs (or with complex routing configuration)?

[...]

[1] I could not find a part in the WIKI where this device is explained so that I understand it. The one things I read are "It's relly simple to setup"

Subject: Re: VServers in three different networks: veth, venet or mixture?

Posted by maratrus on Fri, 10 Apr 2009 10:16:59 GMT
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Quote:
So venet is just one device on the VE0 which may contain multiple L3 IP networks?

venet0 on the HN doesn't contain any ip address.

Quote:
And the system routes the packets automatically to the appropriate interface on VE0?

After "--netif_add" command is invoked an additional route appears on the HN which points to venet0 interface.

Quote:
So venet works only if the VE0 is in the same subnet as the VEs

No.

Another useful tips I guess
http://forum.openvz.org/index.php?t=msg&&th=7401&amp ;goto=35611#msg_35633