
Subject: OpenVPN inside VPS

Posted by [CaptainCrunch](#) on Sat, 17 Dec 2005 17:25:42 GMT

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Has anybody ever managed to get a bridged OpenVPN-Setup working within a VPS?

I already created the tun-device as described within the docs, but I don't really know how I should bridge both the tun and venet-interface, mostly cause I can't see the tun one.

Any help here would be way cool.

Subject: Re: OpenVPN inside VPS

Posted by [dev](#) on Mon, 23 Jan 2006 10:50:01 GMT

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Just to exclude my guesses, can you, please, provide me the scenario how you want to use VPN in your network/configuration?

venet device is not ethernet based and cannot be bridged. We plan to introduce ethernet based venet device in future release, but you can try some workarounds as proxyarp which can help you in current configuration.

Some links related to proxyarp:

<http://www.shorewall.net/ProxyARP.htm>

<http://www.sjdjweis.com/linux/proxyarp/>

Will be glad to help you. Feel free to ask questions and contact me directly to speed up the process.

Subject: Re: OpenVPN inside VPS

Posted by [CaptainCrunch](#) on Mon, 23 Jan 2006 12:22:55 GMT

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Wow, I wouldn't have thought that somebody would ever answer to that one. Thanks in advance!

First of all, I'd like to clarify what I'm trying to do:

There's one VPS dedicated purely for OpenVPN. OpenVPN then should be able to open a tap-device (as described within the docs) that's bridged to the VPS-internal venet-device for letting the VPN-clients directly use the "internal" network.

e.g.:

OpenVZ-Host: 192.168.1.4

OpenVPN-VPS: 192.168.1.8

OpenVPN opens up a TAP device within the VPS-host bridged to the venet-one. VPN-Clients would get addresses from within 192.168.1.50-100, so no special routing etc. is needed for them.

I know this would be kinda easy with an own subnet for VPN-clients and correct routing, but I like to keep it simple, as I'm quite stupid.

Until now, I haven't thought about proxy-arp, but this sounds quite interesting. I'm pretty shure I'll bother you again regarding that one, but first of all, I'll give it a try. Thanks!

Subject: Re: OpenVPN inside VPS
Posted by [dev](#) on Mon, 23 Jan 2006 14:01:48 GMT
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Sorry for such delay... I must say it's not a common request But I will try to help with it.

I'm still in doubt what you do, so as far as I understand from your messages you want something like this:

```
-----  
| [vps1]   | host system |  
|         |         |  
| [vps2]   |         |  
|         | eth0   |  
| [vps-openvpn] | 192.168.1.4 | -----  
| venet0   |         | -- VPN channel over IP --  
| 192.168.1.8 |         | -----  
-----
```

So, actually it looks for me like you are trying to setup VPS <-> world communication in the following way:

VPS - VPS venet0 - host - vps-openvpn venet0 - vps-openvpn/openvpn software - /dev/net/tun - tap0 - bridge - vps-openvpn venet0 - host - eth0 -

I'd like to draw arrows here, but it's text :0

more questions

1. vps-openvpn - is VPS where you want to run OpenVPN software.
2. who are VPN clients? other VPSs? you want to assign 192.168.1.50-100 to them?

I would note that by default we have CONFIG_BRIDGE=n in our kernel. So you probably would need to rebuilt the kernel if want to organize network bridge. I can build a test kernel for you if required.

Another idea: you can run OpenVPN in host system (bridged with eth0), then you can assign your VPN IPs to VPSs.

Some other hints which you could (though unlikely for you to do so) have missed:

1. load kernel module 'tun' (modprobe tun)
2. VPSs by default have no access to tun/tap devices. To allow them to do so, exec:
[root@ts ~]# vzctl set VPSID --devices c:10:200:rw --save
[root@ts ~]# vzctl enter VPSID
entered into VPS VPSID
bash-3.00# mkdir /dev/net
bash-3.00# mknod /dev/net/tun c 10 200

Subject: Re: OpenVPN inside VPS
Posted by [khorenko](#) on Tue, 24 Jan 2006 16:15:05 GMT
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Christian, if i understood your last message correctly, the original gain is following:

You have a physical server with Virtuozzo installed on it.
You want VPSs running on that server be connected in a VPN, and have a possibility for remote node (possible from another physical subnet) to connect to the same VPN.

If my understaing of the problem is correct you can achive this without any bridging and using already released VZ kernel.

The idea is following:

1. To run OpenVPN as server in host system.
2. Make other VPSs to be able to access to tun/tap devices as Kirill described in previous post.
3. In each VPS run OpenVPN as client, connecting to the host system.
4. Run on the remote node (desired to be in the same VPN) OpenVPN as client, connecting to the host system.

And that's all!

Please, if i understood something wrong in the original gain - correct me!
And if you need any details, please, don't hesitate asking here!

Subject: Re: OpenVPN inside VPS
Posted by [CaptainCrunch](#) on Tue, 24 Jan 2006 18:51:23 GMT
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First of all sorry that I'm answering your very helpful questions so late. I've been quite busy for the last few days...

Seemingly, there's one point that's unclear to you. I'll try to answer most of them:

Quote:more questions Smile

1. vps-openvpn - is VPS where you want to run OpenVPN software.

Exactly

Quote:2. who are VPN clients? other VPSs? you want to assign 192.168.1.50-100 to them? I'm thinking of a typical "roadwarrior"-setup here. Clients from all over the world coming from officially routed IP addresses get through to Port 1194 UDP on vps-openvpn. Their TAP-device could get a "normal" IP from within the internal subnet (where also the host and VPSs are located (192.168.1.0/24)), so no routing etc. is required.

Quote:I would note that by default we have CONFIG_BRIDGE=n in our kernel. So you probably would need to rebuilt the kernel if want to organize network bridge. I can build a test kernel for you if required.

That's an interesting point. As other "normal" distro kernels include bridging-support nowadays, I have to admit I haven't checked that, so thanks for mentioning this. kernel (re) compiling is not a big problem, so when this is needed, I'll be a happy testperson for you.

Quote:You have a physical server with Virtuozzo installed on it.

You want VPSs running on that server be connected in a VPN, and have a possibility for remote node (possible from another physical subnet) to connect to the same VPN.

I'm not trying to run VPSs on the host in a VPN, what I'm trying to do is to dedicate one VPS strictly as the OpenVPN server. Of course I simply could run OpenVPN within the host system, but as I'm trying to divide as many functions (nameserver, Fileserver, mailserver, ...) as possible into their own VPSs.

It's a pity that I couldn't describe the goals until now, but english is not my mother tongue so tomorrow I'll try to draw a picture to clarify things a little bit more. What would be the preferred format for something like that? Normally I'd use Dia.

By the way: thanks a lot for trying to help me regarding this topic.

Subject: Re: OpenVPN inside VPS

Posted by [dev](#) on Fri, 03 Mar 2006 06:01:16 GMT

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CaptainCrunch,

snowdeal was able to setup bridged VPN,
see the thread on the forum:

<http://forum.openvz.org/index.php?t=tree&th=315&mid=1761&&rev=&reveal=>

I also hope he will add HOWTO soon.

Thanks a lot for your time and patience.

Subject: Re: OpenVPN inside VPS

Posted by [snowdeal](#) on Sun, 05 Mar 2006 01:33:38 GMT

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dev wrote on Fri, 03 March 2006 01:01I also hope he will add HOWTO soon.

i haven't forgotten and am planning on adding a HOWTO soon.
