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Subject: USB printer inside VE

Posted by [kierse](#) on Mon, 11 Feb 2008 03:52:50 GMT

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Hi everyone,

I'd like to setup a print server (using CUPS) inside of a VE to access a USB printer thats connected to the HN. I've added the printers device node (/dev/usb/lp0) to the VE with the following comand:

```
vzct set 777 --devnodes usb/lp0:rw
```

and verified that it does appear in the VE's config file

```
DEVNODES="usb/lp0:rw "
```

When setting up the printer from within the CUPS web interface, the printer is correctly identified and listed in the list of supported/available devices. Unfortunately, after completing the setup, I am unable to print to the device. I don't see any errors on screen nor in any of the CUPS log files. What I do see is the following alert:

```
"Printer not connected; will retry in 30 seconds..."
```

The device node appears in the VE as /dev/usb/lp0 (same as the HN) and I seem to have both read and write permission as I can cat and echo the device without error. I've checked that the usb printing module (usbip) is compiled and loaded before attempting to use the printer.

I've come across a wiki posting ([http://wiki.openvz.org/Printing\\_in\\_VE\\_with\\_Debian\\_stable](http://wiki.openvz.org/Printing_in_VE_with_Debian_stable)) and a forum posting ( [http://forum.openvz.org/index.php?t=msg&th=1350&#msg\\_7649](http://forum.openvz.org/index.php?t=msg&th=1350&#msg_7649)) indicating that printing from within a VE is supported. Is there something I need to know or do in order to get USB printing working? Is running a CUPS server supported?

Thank,  
Kierse

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Subject: Re: USB printer inside VE

Posted by [xemul](#) on Wed, 13 Feb 2008 10:05:12 GMT

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Does this printer work from the ve0?

If it does, please, show the /proc/vz/devperms file contents.

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Subject: Re: USB printer inside VE  
Posted by [kierse](#) on Thu, 14 Feb 2008 06:07:24 GMT  
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xemul wrote on Wed, 13 February 2008 03:05Does this printer work from the ve0?

What is the ve0? I have verified that the printer works when connected to the hardware node (via cups), if that is what you are asking.

xemul wrote on Wed, 13 February 2008 03:05If it does, please, show the /proc/vz/devperms file contents.

here ya go:

```
Version: 2.7
0 b 016 *.*
0 c 006 *.*
```

Kierse

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Subject: Re: USB printer inside VE  
Posted by [xemul](#) on Thu, 14 Feb 2008 07:45:01 GMT  
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Quote:I have verified that the printer works when connected to the hardware node  
Yes, this was what I was asking about. That's good.

Quote:here ya go:

```
Version: 2.7
0 b 016 *.*
0 c 006 *.*
```

OK. That's good.

Looks like configuration on HN and in VE differ. Can you strace the cups in both HN and VE, so that we could find the difference. Perhaps some proc file is missed, or empty, maybe some sysctl is RO for VE or some other problem.

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Subject: Re: USB printer inside VE  
Posted by [kierse](#) on Fri, 15 Feb 2008 05:30:08 GMT  
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After reading your comments I realized that the VE wasn't running when I captured the output of

/proc/vz/devperms. Here is the accurate data:

```
Version: 2.7
  0 b 016 *.*
  0 c 006 *.*
777 c 006 180:0
```

where '777' is the VE that I'm trying to print from.

Quote:

Looks like configuration on HN and in VE differ. Can you strace the cups in both HN and VE, so that we could find the difference. Perhaps some proc file is missed, or empty, maybe some sysctl is RO for VE or some other problem.

I've included the output of strace from both the HN and the VE when starting the cups daemon. When diff'd, there does appear to be a considerable number of differences between the two files. However most seem to be the kind you'd expect to see when examining system calls (ie differing memory addresses, resource ID's, etc). There are a couple of places where one or the other is missing a large block but nothing obvious (to me anyway) really seems to stand out. Mind you I don't really know what I'm supposed to be looking for

Kier

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#### File Attachments

- 1) [HN.txt](#), downloaded 429 times
  - 2) [VE.txt](#), downloaded 401 times
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Subject: Re: USB printer inside VE  
Posted by [kierse](#) on Tue, 19 Feb 2008 14:46:41 GMT  
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Any ideas?

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Subject: Re: USB printer inside VE  
Posted by [abougeard](#) on Fri, 26 Sep 2008 09:07:24 GMT  
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I've the same problem.  
I'm a newby  
I would like to configure a printer in a VPS

But I d'ont understand what you mean when you talk about VE or HN.  
VE=VPS??  
Can you explain

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Subject: Re: USB printer inside VE  
Posted by [kenjy](#) on Fri, 26 Sep 2008 17:36:57 GMT  
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VE= Virtual environment (your virtual machine)  
HN= Hardware Node (your physical machine)

Reading the user guide and the wiki should help you to understand and to learn to work with openvz.

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Subject: Re: USB printer inside VE  
Posted by [abougeard](#) on Sat, 27 Sep 2008 08:12:52 GMT  
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I'm sorry but terms used in that topic are different from official documentation.  
Could you help me about my usb problem?

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Subject: Re: USB printer inside VE  
Posted by [strites](#) on Mon, 03 Nov 2008 01:01:51 GMT  
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I have also problem with this:

I got to get cups work with an usb printer from inside a VE.

(in this case the printer is an epson cx3650)

I did "vzctl set 631 --devnodes usb/lp0:rw"

I can get escputils to show ink level from inside the VE, using the method requiring r/w to /dev/usb/lp0 works.

CUPS doesn't find the printer (when it comes to the "select device" part, no usb is listed.

Do I have to add something?

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Subject: Re: USB printer inside VE  
Posted by [Tenyo](#) on Sat, 08 Nov 2008 10:55:57 GMT

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Hi all!

I've started using openvz 1 month ago... wonderful project!  
Same problem here... (with openvz 2.6.26 compiled from git)

Cups doesn't show the usb printer (an epson epl-6200l in my case).  
I've used the same procedure successfully used in other VEs before:

1. created the the devices with mknod identical to the ones in the HN
2. exposed the devices in the VE

This worked perfectly in an MythTV and in an MPD VE, but not in this one.

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Subject: Re: USB printer inside VE  
Posted by [Tenyo](#) on Thu, 27 Nov 2008 13:13:45 GMT  
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SOLVED!!!

Pretty easy I've to admit, tested with Gentoo (HN and VE):

- 1) in HN lsusb to identify numbers relative to the usb port and the attached printer

Bus 008 Device 005: ID 04b8:0005 Seiko Epson Corp. Stylus Printer  
Bus 008 Device 001: ID 1d6b:0001

- 2) in VE go to /dev/bus/usb, create a directory equal to the Bus number and create there with mknod 2 devices: 1 for the usb port and 1 for the printer with the same device number in HN

```
crw-rw-r-- 1 root usb 189, 896 Nov 26 08:58 001
crw-rw-r-- 1 root usb 189, 900 Nov 27 12:29 005
```

- 3) now create in VE a device similar to the one in HN for the usbprinter and a link if needed:

```
crw-rw-rw- 1 root lp 180, 0 Nov 7 19:32 lp0

lrwxrwxrwx 1 root root 7 Nov 26 17:51 usb/lp0 -> usb/lp0
```

- 4) time to add devices permission on your VE configuration file:

```
DEVICES="c:180:0:rw c:189:896:rw c:189:900:rw"
```

5) start the VE and enter, with lsusb you should see both devices: the port and the printer

6) Cups should find the printer attached to the usb port

Good Luck

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Subject: Re: USB printer inside VE  
Posted by [abougeard](#) on Thu, 27 Nov 2008 14:58:23 GMT  
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wow,

I'm just a little small in linux to complete all your method.

could you add to the post the command that do what you explain?

arnaud

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Subject: Re: USB printer inside VE  
Posted by [Tenyo](#) on Fri, 28 Nov 2008 14:24:30 GMT  
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I've written an howto...  
hope this helps:

[http://wiki.openvz.org/USB\\_Printing\\_in\\_VE](http://wiki.openvz.org/USB_Printing_in_VE)

Bye^^

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Subject: Re: USB printer inside VE  
Posted by [maratrus](#) on Fri, 28 Nov 2008 17:23:17 GMT  
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Thank you very much.

We appreciate your kindness!