
Subject: ***SOLVED*** Installation on Debian - VFS: Cannot open root device
Posted by [pjdevries](#) on Tue, 26 Dec 2006 15:29:37 GMT

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I'm rather new to both Debian and OpenVZ and have been struggling with a problem for which I can not find a solution. I can't imagine that nobody has ran into this problem before or maybe I'm just plain stupid, but thusfar I haven't been able to find some concrete information anywhere.

On a fresh installation of Debian, I installed OpenVZ following the wiki guidelines "Installation on Debian" (http://wiki.openvz.org/Installation_on_Debian). When I reboot my system, it halts with the following message:

```
VFS: Cannot open root device "sda2" or unknown-block(0,0)
Please append a correct "root=" boot option
Kernel panic - not syncing: VFS: unable to mount root fs on unknown-block(0,0)
```

Has anyone seen this problem before and found a solution for it? If so, I very much like to hear about it.

Subject: Re: Installation on Debian - VFS: Cannot open root device
Posted by [Vasily Tarasov](#) on Wed, 27 Dec 2006 07:24:21 GMT

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Hello,

Please, boot in the working kernel and post here the contents of /boot/grub/menu.lst (or /boot/grub/grub.conf). Also, please, post listing of /boot directory and output of `lspci` and `lspci -n` commands.

The problem is that no driver for your block device is in kernel. The reasons can be various, for example: no or bad initrd image, unsupported hardware, etc.

Vasily.

Subject: Re: Installation on Debian - VFS: Cannot open root device
Posted by [pjdevries](#) on Wed, 27 Dec 2006 07:45:21 GMT

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Hi vasily,

Thanks very much for your reply. I figured it had something to do with a missing driver of some sort, but I can not figure out which one and/or how to add that missing driver.

Actually I just started with a fresh Debian install in an attempt to build my own kernel, so the information you requested does not show the details of the OpenVZ kernel. If you need that as

well, please let me know and I'll redo my previous installation to supply you with the missing pieces.

This is the information you asked for:

ls -l /boot:

total 6444

```
-rw-r--r-- 1 root root 55809 2005-08-16 14:41 config-2.6.8-2-386
drwxr-xr-x 2 root root 4096 2006-12-24 16:32 grub
-rw-r--r-- 1 root root 4546560 2006-12-24 16:31 initrd.img-2.6.8-2-386
-rw-r--r-- 1 root root 865767 2005-08-16 17:14 System.map-2.6.8-2-386
-rw-r--r-- 1 root root 1097554 2005-08-16 17:14 vmlinuz-2.6.8-2-386
```

/boot/grub/menu.lst:

```
title      Debian GNU/Linux, kernel 2.6.8-2-386
root       (hd0,1)
kernel     /boot/vmlinuz-2.6.8-2-386 root=/dev/sda2 ro
initrd     /boot/initrd.img-2.6.8-2-386
savedefault
boot
```

```
title      Debian GNU/Linux, kernel 2.6.8-2-386 (recovery mode)
root       (hd0,1)
kernel     /boot/vmlinuz-2.6.8-2-386 root=/dev/sda2 ro single
initrd     /boot/initrd.img-2.6.8-2-386
savedefault
boot
```

lspci:

```
0000:00:00.0 Host bridge: Intel Corp. 82875P Memory Controller Hub (rev 02)
0000:00:01.0 PCI bridge: Intel Corp. 82875P Processor to AGP Controller (rev 02)
0000:00:03.0 PCI bridge: Intel Corp. 82875P Processor to PCI to CSA Bridge (rev 02)
0000:00:1d.0 USB Controller: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #1 (rev 02)
0000:00:1d.1 USB Controller: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #2 (rev 02)
0000:00:1d.2 USB Controller: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #3 (rev 02)
0000:00:1d.3 USB Controller: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #4 (rev 02)
0000:00:1d.7 USB Controller: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB2 EHCI Controller (rev 02)
0000:00:1e.0 PCI bridge: Intel Corp. 82801 PCI Bridge (rev c2)
0000:00:1f.0 ISA bridge: Intel Corp. 82801EB/ER (ICH5/ICH5R) LPC Bridge (rev 02)
0000:00:1f.2 IDE interface: Intel Corp. 82801EB (ICH5) Serial ATA 150 Storage Controller (rev 02)
0000:00:1f.3 SMBus: Intel Corp. 82801EB/ER (ICH5/ICH5R) SMBus Controller (rev 02)
0000:02:01.0 Ethernet controller: Intel Corp. 82547GI Gigabit Ethernet Controller
0000:03:00.0 VGA compatible controller: ATI Technologies Inc Rage XL (rev 27)
0000:03:02.0 Ethernet controller: Intel Corp. 82541GI/PI Gigabit Ethernet Controller
```

lspci -n:

0000:00:00.0 0600: 8086:2578 (rev 02)
0000:00:01.0 0604: 8086:2579 (rev 02)
0000:00:03.0 0604: 8086:257b (rev 02)
0000:00:1d.0 0c03: 8086:24d2 (rev 02)
0000:00:1d.1 0c03: 8086:24d4 (rev 02)
0000:00:1d.2 0c03: 8086:24d7 (rev 02)
0000:00:1d.3 0c03: 8086:24de (rev 02)
0000:00:1d.7 0c03: 8086:24dd (rev 02)
0000:00:1e.0 0604: 8086:244e (rev c2)
0000:00:1f.0 0601: 8086:24d0 (rev 02)
0000:00:1f.2 0101: 8086:24d1 (rev 02)
0000:00:1f.3 0c05: 8086:24d3 (rev 02)
0000:02:01.0 0200: 8086:1075
0000:03:00.0 0300: 1002:4752 (rev 27)
0000:03:02.0 0200: 8086:1076

I hope you can figure out what the problem is. Please let me know if there is anything else I can do or information I can supply. I have been struggling with this problem for so many days now, so I hope to hear from you soon again. Thanks for the effort anyway.

Subject: Re: Installation on Debian - VFS: Cannot open root device
Posted by [Vasily Tarasov](#) on Wed, 27 Dec 2006 08:01:49 GMT
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Strange, but according to information, you've provided, there is only one kernel installed
Have you removed previous attempts?

Your hardware is quite usual. What config do you use while compiling the kernel? Is
CONFIG_BLK_DEV_PIIX enabled?

Thanks,
Vasily.

Subject: Re: Installation on Debian - VFS: Cannot open root device
Posted by [pjdevries](#) on Wed, 27 Dec 2006 08:27:37 GMT
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Yes, at this moment I have only one kernel installed. Before I got your initial reply, I had already done a fresh Debian install and started to try to do a kernel rebuild myself.

The first time I did not compile the kernel myself. I followed the instructions on "Installation on Debian" wiki.openvz.org (see http://wiki.openvz.org/Installation_on_Debian). I assumed that an 'aptitude install' is always safe. The configuration file that comes along with that kernel has
CONFIG_BLK_DEV_PIIX=y

Is that of any help?

Subject: Re: Installation on Debian - VFS: Cannot open root device

Posted by [curx](#) on Wed, 27 Dec 2006 14:56:10 GMT

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Hi pjdevries,

Have you download a precompiled "kernel-image" like ovzkernel-2.6.9 from debian.sys.org ?

Problem(s) ... you booted a standard Debian Kernel Image ...

Subject: Re: Installation on Debian - VFS: Cannot open root device

Posted by [pjdevries](#) on Wed, 27 Dec 2006 15:48:04 GMT

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Thanks for the reply Thorsten.

You could say I downloaded a precompiled kernel-image because that is what "aptitude install ovzkernel-2.6.9" does, doesn't it? As I explained to Vasily, I followed the instructions "Installation on Debian" on wiki.openvz.org (see http://wiki.openvz.org/Installation_on_Debian). That makes it even more frustrating, because there is hardly anything one can do wrong.

Don't be fooled by the info I posted earlier. That info was obtained from my system with a fresh Debian install, so without the OpenVZ kernel installed. After I installed the above mentioned kernel, my `/boot/grub/menu.lst` looks like this:

```
title Debian GNU/Linux, kernel 2.6.9-023stab037.3-ovz
root (hd0,1)
kernel /boot/vmlinuz-2.6.9-023stab037.3-ovz root=/dev/sda2 ro
savedefault
boot
```

```
title Debian GNU/Linux, kernel 2.6.9-023stab037.3-ovz (recovery mode)
root (hd0,1)
kernel /boot/vmlinuz-2.6.9-023stab037.3-ovz root=/dev/sda2 ro single
savedefault
boot
```

```
title Debian GNU/Linux, kernel 2.6.8-2-386
root (hd0,1)
kernel /boot/vmlinuz-2.6.8-2-386 root=/dev/sda2 ro
```

```
initrd /boot/initrd.img-2.6.8-2-386
savedefault
boot
```

```
title Debian GNU/Linux, kernel 2.6.8-2-386 (recovery mode)
root (hd0,1)
kernel /boot/vmlinuz-2.6.8-2-386 root=/dev/sda2 ro single
initrd /boot/initrd.img-2.6.8-2-386
savedefault
boot
```

As you can see, I did not boot a standard Debian Kernel but a custom (precompiled) OpenVZ kernel which I obtained from the Debian stable repository.

So, still no solution for my problem:(Any help is welcome and all efforts are enormously appreciated.

Subject: Anyone? I'm willing to pay a couple of Euro's!
Posted by [pjdevries](#) on Thu, 28 Dec 2006 07:12:02 GMT
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Can anyone help me out here? I'm willing to pay a couple of Euro's for the right information and a good solution.

Subject: Re: Anyone? I'm willing to pay a couple of Euro's!
Posted by [curx](#) on Thu, 28 Dec 2006 08:01:52 GMT
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Moin,

can you please paste the output of "dmesg" of you running OpenVZ kernel.

Subject: Re: Anyone? I'm willing to pay a couple of Euro's!
Posted by [pjdevries](#) on Thu, 28 Dec 2006 08:33:10 GMT
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The problem is I don't have a running OpenVZ kernel because, as I explained in my initial message, it won't boot

Subject: Re: Anyone? I'm willing to pay a couple of Euro's!

Posted by [curx](#) on Thu, 28 Dec 2006 09:55:49 GMT

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Hi Pieter-Jan,

sorry i mean to put your non-OpenVZ kernel dmesg,

but i put the old stable OpenVZ kernel with Version 2.6.8
(022stab078.21) to <http://forzza.systs.org/old/kernel/>

Please download it and boot with this 2.6.8er OpenVZ kernel.

Seems that your SATA Hardware has a prob with a 2.6.9er Kernel.

And afterwards can you post I've your mascine is booting and running the OpenVZ with Kernel 2.6.8.

Thanks
Thorsten

Subject: Re: Anyone? I'm willing to pay a couple of Euro's!

Posted by [pjdevries](#) on Thu, 28 Dec 2006 10:19:44 GMT

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Unforntunately that kernel doesn't boot either (fails with the same message). But shouldn't I have an initrd for this kernel? My default 2.6.8 kernel has one too. And if so, can you give me some pointers how to create one? Although I ran into some examples in various places, I'm not quite sure which modules to include and how/where. The fact that modules and modules.conf appear both in /etc and in /etc/mkinitrd make matters rather confusing.

Anyway, here is the dmesg output from my Fresh Debian install:

```
D hash table entries: 4096 (order 12: 32768 bytes)
Detected 2793.719 MHz processor.
Using pmtmr for high-res timesource
Console: colour VGA+ 80x25
Dentry cache hash table entries: 131072 (order: 7, 524288 bytes)
Inode-cache hash table entries: 65536 (order: 6, 262144 bytes)
Memory: 901692k/917504k available (1337k kernel code, 15024k reserved, 732k data, 204k init,
0k highmem)
Checking if this processor honours the WP bit even in supervisor mode... Ok.
Calibrating delay loop... 5226.49 BogoMIPS
Security Scaffold v1.0.0 initialized
Mount-cache hash table entries: 512 (order: 0, 4096 bytes)
CPU: After generic identify, caps: bfebfbff 00000000 00000000 00000000
CPU: After vendor identify, caps: bfebfbff 00000000 00000000 00000000
```

monitor/mwait feature present.
using mwait in idle threads.
CPU: Trace cache: 12K uops, L1 D cache: 16K
CPU: L2 cache: 1024K
CPU: After all inits, caps: bfebfbff 00000000 00000000 00000080
CPU: Intel(R) Pentium(R) 4 CPU 3.20GHz stepping 03
Enabling fast FPU save and restore... done.
Enabling unmasked SIMD FPU exception support... done.
Checking 'hlt' instruction... OK.
Checking for popad bug... OK.
enabled ExtINT on CPU#0
ESR value before enabling vector: 00000000
ESR value after enabling vector: 00000000
ENABLING IO-APIC IRQs
init IO_APIC IRQs
IO-APIC (apicid-pin) 2-0, 2-16, 2-17, 2-18, 2-19, 2-20, 2-21, 2-22, 2-23 not connected.
..TIMER: vector=0x31 pin1=2 pin2=-1
Using local APIC timer interrupts.
calibrating APIC timer ...
..... CPU clock speed is 2792.0730 MHz.
..... host bus clock speed is 199.0480 MHz.
checking if image is initramfs...it isn't (ungzip failed); looks like an initrd
Freeing initrd memory: 4440k freed
NET: Registered protocol family 16
EISA bus registered
PCI: PCI BIOS revision 2.10 entry at 0xfd88e, last bus=3
PCI: Using configuration type 1
mtrr: v2.0 (20020519)
ACPI: Subsystem revision 20040326
ACPI: Interpreter enabled
ACPI: Using IOAPIC for interrupt routing
ACPI: PCI Root Bridge [PCI0] (00:00)
PCI: Probing PCI hardware (bus 00)
PCI: Ignoring BAR0-3 of IDE controller 0000:00:1f.2
PCI: Transparent bridge - 0000:00:1e.0
ACPI: PCI Interrupt Routing Table [_SB_.PCI0._PRT]
ACPI: PCI Interrupt Routing Table [_SB_.PCI0.CSA._.PRT]
ACPI: PCI Interrupt Routing Table [_SB_.PCI0.AGP._.PRT]
ACPI: PCI Interrupt Routing Table [_SB_.PCI0.PCIB._PRT]
ACPI: PCI Interrupt Link [LNKA] (IRQs 3 10 11 14 15) *5
ACPI: PCI Interrupt Link [LNKB] (IRQs 3 *10 11 14 15)
ACPI: PCI Interrupt Link [LNKC] (IRQs 3 *10 11 14 15)
ACPI: PCI Interrupt Link [LNKD] (IRQs 3 10 *11 14 15)
ACPI: PCI Interrupt Link [LNKE] (IRQs 3 10 11 14 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKF] (IRQs 3 10 11 14 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKG] (IRQs 3 10 11 14 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKH] (IRQs 3 10 *11 14 15)
Linux Plug and Play Support v0.97 (c) Adam Belay


```

PnPBIOS: Scanning system for PnP BIOS support...
PnPBIOS: Found PnP BIOS installation structure at 0xc00f7150
PnPBIOS: PnP BIOS version 1.0, entry 0xf0000:0xbcb4, dseg 0x400
pnp: 00:09: ioport range 0xfe00-0xfe01 has been reserved
pnp: 00:0a: ioport range 0xfe10-0xfe11 has been reserved
pnp: 00:0d: ioport range 0x4d0-0x4d1 has been reserved
pnp: 00:0d: ioport range 0x1000-0x105f has been reserved
pnp: 00:0d: ioport range 0x1060-0x107f has been reserved
pnp: 00:0d: ioport range 0x1180-0x11bf has been reserved
PnPBIOS: 21 nodes reported by PnP BIOS; 21 recorded by driver
PCI: Using ACPI for IRQ routing
ACPI: PCI interrupt 0000:00:1d.0[A] -> GSI 16 (level, low) -> IRQ 169
ACPI: PCI interrupt 0000:00:1d.1[B] -> GSI 19 (level, low) -> IRQ 177
ACPI: PCI interrupt 0000:00:1d.2[C] -> GSI 18 (level, low) -> IRQ 185
ACPI: PCI interrupt 0000:00:1d.3[A] -> GSI 16 (level, low) -> IRQ 169
ACPI: PCI interrupt 0000:00:1d.7[D] -> GSI 23 (level, low) -> IRQ 193
ACPI: PCI interrupt 0000:00:1f.2[A] -> GSI 18 (level, low) -> IRQ 185
ACPI: PCI interrupt 0000:00:1f.3[B] -> GSI 17 (level, low) -> IRQ 201
ACPI: PCI interrupt 0000:02:01.0[A] -> GSI 18 (level, low) -> IRQ 185
ACPI: PCI interrupt 0000:03:00.0[A] -> GSI 16 (level, low) -> IRQ 169
ACPI: PCI interrupt 0000:03:02.0[A] -> GSI 18 (level, low) -> IRQ 185
number of MP IRQ sources: 15.
number of IO-APIC #2 registers: 24.
testing the IO APIC.....
IO APIC #2.....
.... register #00: 02000000
.....   : physical APIC id: 02
.....   : Delivery Type: 0
.....   : LTS       : 0
.... register #01: 00178020
.....   : max redirection entries: 0017
.....   : PRQ implemented: 1
.....   : IO APIC version: 0020
.... IRQ redirection table:
NR Log Phy Mask Trig IRR Pol Stat Dest Deli Vect:
00 000 00 1 0 0 0 0 0 0 0 00
01 001 01 0 0 0 0 0 0 1 1 39
02 001 01 0 0 0 0 0 0 1 1 31
03 001 01 0 0 0 0 0 0 1 1 41
04 001 01 0 0 0 0 0 0 1 1 49
05 001 01 0 0 0 0 0 0 1 1 51
06 001 01 0 0 0 0 0 0 1 1 59
07 001 01 0 0 0 0 0 0 1 1 61
08 001 01 0 0 0 0 0 0 1 1 69
09 001 01 0 1 0 0 0 0 1 1 71
0a 001 01 0 0 0 0 0 0 1 1 79
0b 001 01 0 0 0 0 0 0 1 1 81
0c 001 01 0 0 0 0 0 0 1 1 89

```



```
0d 001 01 0 0 0 0 0 1 1 91
0e 001 01 0 0 0 0 0 1 1 99
0f 001 01 0 0 0 0 0 1 1 A1
10 001 01 1 1 0 1 0 1 1 A9
11 001 01 1 1 0 1 0 1 1 C9
12 001 01 1 1 0 1 0 1 1 B9
13 001 01 1 1 0 1 0 1 1 B1
14 000 00 1 0 0 0 0 0 0 00
15 000 00 1 0 0 0 0 0 0 00
16 000 00 1 0 0 0 0 0 0 00
17 001 01 1 1 0 1 0 1 1 C1
```

Using vector-based indexing

IRQ to pin mappings:

```
IRQ0 -> 0:2
IRQ1 -> 0:1
IRQ3 -> 0:3
IRQ4 -> 0:4
IRQ5 -> 0:5
IRQ6 -> 0:6
IRQ7 -> 0:7
IRQ8 -> 0:8
IRQ9 -> 0:9
IRQ10 -> 0:10
IRQ11 -> 0:11
IRQ12 -> 0:12
IRQ13 -> 0:13
IRQ14 -> 0:14
IRQ15 -> 0:15
IRQ169 -> 0:16
IRQ201 -> 0:17
IRQ185 -> 0:18
IRQ177 -> 0:19
IRQ193 -> 0:23
```

..... done.

Simple Boot Flag at 0x36 set to 0x1

VFS: Disk quotas dquot_6.5.1

Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)

devfs: 2004-01-31 Richard Gooch (rgooch@atnf.csiro.au)

devfs: boot_options: 0x0

Initializing Cryptographic API

isapnp: Scanning for PnP cards...

isapnp: No Plug & Play device found

Serial: 8250/16550 driver \$Revision: 1.90 \$ 54 ports, IRQ sharing enabled

ttyS0 at I/O 0x3f8 (irq = 4) is a 16550A

ttyS1 at I/O 0x2f8 (irq = 3) is a 16550A

RAMDISK driver initialized: 16 RAM disks of 8192K size 1024 blocksize

serio: i8042 AUX port at 0x60,0x64 irq 12

serio: i8042 KBD port at 0x60,0x64 irq 1

USB Mass Storage support registered.
ACPI: Processor [CPU0] (supports C1 C3, 8 throttling states)
USB Universal Host Controller Interface driver v2.2
ACPI: PCI interrupt 0000:00:1d.0[A] -> GSI 16 (level, low) -> IRQ 169
uhci_hcd 0000:00:1d.0: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #1
PCI: Setting latency timer of device 0000:00:1d.0 to 64
uhci_hcd 0000:00:1d.0: irq 169, io base 00001400
uhci_hcd 0000:00:1d.0: new USB bus registered, assigned bus number 1
hub 1-0:1.0: USB hub found
hub 1-0:1.0: 2 ports detected
ACPI: PCI interrupt 0000:00:1d.1[B] -> GSI 19 (level, low) -> IRQ 177
uhci_hcd 0000:00:1d.1: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #2
PCI: Setting latency timer of device 0000:00:1d.1 to 64
uhci_hcd 0000:00:1d.1: irq 177, io base 00001420
uhci_hcd 0000:00:1d.1: new USB bus registered, assigned bus number 2
hub 2-0:1.0: USB hub found
hub 2-0:1.0: 2 ports detected
ACPI: PCI interrupt 0000:00:1d.2[C] -> GSI 18 (level, low) -> IRQ 185
uhci_hcd 0000:00:1d.2: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #3
PCI: Setting latency timer of device 0000:00:1d.2 to 64
uhci_hcd 0000:00:1d.2: irq 185, io base 00001440
uhci_hcd 0000:00:1d.2: new USB bus registered, assigned bus number 3
hub 3-0:1.0: USB hub found
hub 3-0:1.0: 2 ports detected
ACPI: PCI interrupt 0000:00:1d.3[A] -> GSI 16 (level, low) -> IRQ 169
uhci_hcd 0000:00:1d.3: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #4
PCI: Setting latency timer of device 0000:00:1d.3 to 64
uhci_hcd 0000:00:1d.3: irq 169, io base 00001460
uhci_hcd 0000:00:1d.3: new USB bus registered, assigned bus number 4
hub 4-0:1.0: USB hub found
hub 4-0:1.0: 2 ports detected
ACPI: PCI interrupt 0000:00:1d.7[D] -> GSI 23 (level, low) -> IRQ 193
ehci_hcd 0000:00:1d.7: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB2 EHCI Controller
PCI: Setting latency timer of device 0000:00:1d.7 to 64
ehci_hcd 0000:00:1d.7: irq 193, pci mem f8823000
ehci_hcd 0000:00:1d.7: new USB bus registered, assigned bus number 5
PCI: cache line size of 128 is not supported by device 0000:00:1d.7
ehci_hcd 0000:00:1d.7: USB 2.0 enabled, EHCI 1.00, driver 2004-May-10
hub 5-0:1.0: USB hub found
hub 5-0:1.0: 8 ports detected
usbcore: registered new driver usbkbd
drivers/usb/input/usbkbd.c: :USB HID Boot Protocol keyboard driver
usbcore: registered new driver hiddev
usbcore: registered new driver usbhid
drivers/usb/input/hid-core.c: v2.0:USB HID core driver
drivers/usb/serial/usb-serial.c: USB Serial support registered for Generic
usbcore: registered new driver usbserial_generic
usbcore: registered new driver usbserial

drivers/usb/serial/usb-serial.c: USB Serial Driver core v2.0
vga16fb: initializing
vga16fb: mapped to 0xc00a0000
fb0: VGA16 VGA frame buffer device
Console: switching to colour frame buffer device 80x30
inserting floppy driver for 2.6.8-2-386
FDC 0 is a post-1991 82077
ide0: I/O resource 0x1F0-0x1F7 not free.
ide0: ports already in use, skipping probe
ide1: I/O resource 0x170-0x177 not free.
ide1: ports already in use, skipping probe
usb 5-2: new high speed USB device using address 3
scsi2 : SCSI emulation for USB Mass Storage devices
Vendor: HL-DT-ST Model: DVD-RAM GSA-E10L Rev: LE05
Type: CD-ROM ANSI SCSI revision: 02
USB Mass Storage device found at 3
usb 1-1: new low speed USB device using address 2
input: Logitech USB Receiver on usb-0000:00:1d.0-1
drivers/usb/input/hid-core.c: ctrl urb status -32 received
drivers/usb/input/hid-core.c: ctrl urb status -32 received
input,hiddev96: USB HID v1.10 Mouse [Logitech USB Receiver] on usb-0000:00:1d.0-1
SCSI device sda: 625142448 512-byte hdwr sectors (320073 MB)
SCSI device sda: drive cache: write back
/dev/scsi/host0/bus0/target0/lun0: p1 p2 p3
Attached scsi disk sda at scsi0, channel 0, id 0, lun 0
SCSI device sdb: 781422768 512-byte hdwr sectors (400088 MB)
SCSI device sdb: drive cache: write back
/dev/scsi/host1/bus0/target0/lun0:
Attached scsi disk sdb at scsi1, channel 0, id 0, lun 0
sr0: scsi3-mmc drive: 48x/48x writer dvd-ram cd/rw xa/form2 cdda tray
Uniform CD-ROM driver Revision: 3.20
Attached scsi CD-ROM sr0 at scsi2, channel 0, id 0, lun 0
Linux Kernel Card Services
options: [pci] [cardbus] [pm]
e1000: Ignoring new-style parameters in presence of obsolete ones
Intel(R) PRO/1000 Network Driver - version 5.2.52-k4
Copyright (c) 1999-2004 Intel Corporation.
ACPI: PCI interrupt 0000:02:01.0[A] -> GSI 18 (level, low) -> IRQ 185
PCI: Setting latency timer of device 0000:02:01.0 to 64
e1000: eth0: e1000_probe: Intel(R) PRO/1000 Network Connection
ACPI: PCI interrupt 0000:03:02.0[A] -> GSI 18 (level, low) -> IRQ 185
e1000: eth1: e1000_probe: Intel(R) PRO/1000 Network Connection
kjournald starting. Commit interval 5 seconds
EXT3-fs: mounted filesystem with ordered data mode.
Adding 3903752k swap on /dev/sda1. Priority:-1 extents:1
EXT3 FS on sda2, internal journal
Generic RTC Driver v1.07
Capability LSM initialized

kjournald starting. Commit interval 5 seconds
EXT3 FS on sda3, internal journal
EXT3-fs: mounted filesystem with ordered data mode.
Linux agpgart interface v0.100 (c) Dave Jones
agpgart: Detected an Intel i875 Chipset.
agpgart: Maximum main memory to use for agp memory: 816M
agpgart: AGP aperture is 128M @ 0x80000000
cpci_hotplug: CompactPCI Hot Plug Core version: 0.2
pci_hotplug: PCI Hot Plug PCI Core version: 0.5
pciehp: PCI Express Hot Plug Controller Driver version: 0.4
shpchp: shpc_init : shpc_cap_offset == 0
shpchp: shpc_init : shpc_cap_offset == 0
shpchp: shpc_init : shpc_cap_offset == 0
shpchp: Standard Hot Plug PCI Controller Driver version: 0.4
hw_random: RNG not detected
input: PC Speaker
mice: PS/2 mouse device common for all mice
Attached scsi generic sg0 at scsi0, channel 0, id 0, lun 0, type 0
Attached scsi generic sg1 at scsi1, channel 0, id 0, lun 0, type 0
Attached scsi generic sg2 at scsi2, channel 0, id 0, lun 0, type 5
e1000: eth0: e1000_watchdog: NIC Link is Up 100 Mbps Full Duplex
NET: Registered protocol family 10
Disabled Privacy Extensions on device c02cc960(lo)
IPv6 over IPv4 tunneling driver
eth0: no IPv6 routers present

I'm very impressed if you can make sense out of that!!

Subject: Re: Anyone? I'm willing to pay a couple of Euro's!
Posted by [pjdevries](#) on Thu, 28 Dec 2006 14:02:43 GMT
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I just remembered that I did have a working OpenVZ setup some time ago, when I just started out experimenting with OpenVZ on this machine. Best of all: I still have an image of that installation so I managed to have that configuration up and running again in a matter of minutes.

The difference between the working and the failing situation is that previously I installed Debian on a (software) RAID-1 configuration. Later I decided to go for a two machine cluster using DRBD and Heartbeat and it seemed a bit over-redundant to use both DRBD and RAID-1.

So here is the "dmesg" output on a running OpenVZ kernel, although not exactly in the configuration I want:

```
000 00000000  
CPU: After vendor identify, caps: bfebfbff 00000000 00000000 00000000  
monitor/mwait feature present.
```

using mwait in idle threads.
CPU: Trace cache: 12K uops, L1 D cache: 16K
CPU: L2 cache: 1024K
CPU: After all inits, caps: bfebfbff 00000000 00000000 00000080
CPU: Intel(R) Pentium(R) 4 CPU 3.20GHz stepping 03
Enabling fast FPU save and restore... done.
Enabling unmasked SIMD FPU exception support... done.
Checking 'hlt' instruction... OK.
Checking for popad bug... OK.
enabled ExtINT on CPU#0
ESR value before enabling vector: 00000000
ESR value after enabling vector: 00000000
ENABLING IO-APIC IRQs
init IO_APIC IRQs
IO-APIC (apicid-pin) 2-0, 2-16, 2-17, 2-18, 2-19, 2-20, 2-21, 2-22, 2-23 not connected.
..TIMER: vector=0x31 pin1=2 pin2=-1
Using local APIC timer interrupts.
calibrating APIC timer ...
..... CPU clock speed is 2792.0679 MHz.
..... host bus clock speed is 199.0476 MHz.
checking if image is initramfs...it isn't (ungzip failed); looks like an initrd
Freeing initrd memory: 4484k freed
NET: Registered protocol family 16
EISA bus registered
PCI: PCI BIOS revision 2.10 entry at 0xfd88e, last bus=3
PCI: Using configuration type 1
mtrr: v2.0 (20020519)
ACPI: Subsystem revision 20040326
ACPI: Interpreter enabled
ACPI: Using IOAPIC for interrupt routing
ACPI: PCI Root Bridge [PCI0] (00:00)
PCI: Probing PCI hardware (bus 00)
PCI: Ignoring BAR0-3 of IDE controller 0000:00:1f.2
PCI: Transparent bridge - 0000:00:1e.0
ACPI: PCI Interrupt Routing Table [_SB_.PCI0._PRT]
ACPI: PCI Interrupt Routing Table [_SB_.PCI0.CSA_.PRT]
ACPI: PCI Interrupt Routing Table [_SB_.PCI0.AGP_.PRT]
ACPI: PCI Interrupt Routing Table [_SB_.PCI0.PCI0.PCI0.PRT]
ACPI: PCI Interrupt Link [LNKA] (IRQs 3 10 11 14 15) *5
ACPI: PCI Interrupt Link [LNKB] (IRQs 3 *10 11 14 15)
ACPI: PCI Interrupt Link [LNKC] (IRQs 3 *10 11 14 15)
ACPI: PCI Interrupt Link [LNKD] (IRQs 3 10 *11 14 15)
ACPI: PCI Interrupt Link [LNKE] (IRQs 3 10 11 14 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKF] (IRQs 3 10 11 14 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKG] (IRQs 3 10 11 14 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKH] (IRQs 3 10 *11 14 15)
Linux Plug and Play Support v0.97 (c) Adam Belay
PnPBIOS: Scanning system for PnP BIOS support...


```

PnPBIOS: Found PnP BIOS installation structure at 0xc00f7150
PnPBIOS: PnP BIOS version 1.0, entry 0xf0000:0x0bcb4, dseg 0x400
pnp: 00:09: ioport range 0xfe00-0xfe01 has been reserved
pnp: 00:0a: ioport range 0xfe10-0xfe11 has been reserved
pnp: 00:0d: ioport range 0x4d0-0x4d1 has been reserved
pnp: 00:0d: ioport range 0x1000-0x105f has been reserved
pnp: 00:0d: ioport range 0x1060-0x107f has been reserved
pnp: 00:0d: ioport range 0x1180-0x11bf has been reserved
PnPBIOS: 21 nodes reported by PnP BIOS; 21 recorded by driver
PCI: Using ACPI for IRQ routing
ACPI: PCI interrupt 0000:00:1d.0[A] -> GSI 16 (level, low) -> IRQ 169
ACPI: PCI interrupt 0000:00:1d.1[B] -> GSI 19 (level, low) -> IRQ 177
ACPI: PCI interrupt 0000:00:1d.2[C] -> GSI 18 (level, low) -> IRQ 185
ACPI: PCI interrupt 0000:00:1d.3[A] -> GSI 16 (level, low) -> IRQ 169
ACPI: PCI interrupt 0000:00:1d.7[D] -> GSI 23 (level, low) -> IRQ 193
ACPI: PCI interrupt 0000:00:1f.2[A] -> GSI 18 (level, low) -> IRQ 185
ACPI: PCI interrupt 0000:00:1f.3[B] -> GSI 17 (level, low) -> IRQ 201
ACPI: PCI interrupt 0000:02:01.0[A] -> GSI 18 (level, low) -> IRQ 185
ACPI: PCI interrupt 0000:03:00.0[A] -> GSI 16 (level, low) -> IRQ 169
ACPI: PCI interrupt 0000:03:02.0[A] -> GSI 18 (level, low) -> IRQ 185
number of MP IRQ sources: 15.
number of IO-APIC #2 registers: 24.
testing the IO APIC.....
IO APIC #2.....
.... register #00: 02000000
.....   : physical APIC id: 02
.....   : Delivery Type: 0
.....   : LTS           : 0
.... register #01: 00178020
.....   : max redirection entries: 0017
.....   : PRQ implemented: 1
.....   : IO APIC version: 0020
.... IRQ redirection table:
NR Log Phy Mask Trig IRR Pol Stat Dest Deli Vect:
00 000 00 1 0 0 0 0 0 0 0 00
01 001 01 0 0 0 0 0 0 1 1 39
02 001 01 0 0 0 0 0 0 1 1 31
03 001 01 0 0 0 0 0 0 1 1 41
04 001 01 0 0 0 0 0 0 1 1 49
05 001 01 0 0 0 0 0 0 1 1 51
06 001 01 0 0 0 0 0 0 1 1 59
07 001 01 0 0 0 0 0 0 1 1 61
08 001 01 0 0 0 0 0 0 1 1 69
09 001 01 0 1 0 0 0 0 1 1 71
0a 001 01 0 0 0 0 0 0 1 1 79
0b 001 01 0 0 0 0 0 0 1 1 81
0c 001 01 0 0 0 0 0 0 1 1 89
0d 001 01 0 0 0 0 0 0 1 1 91

```



```
0e 001 01 0 0 0 0 0 1 1 99
0f 001 01 0 0 0 0 0 1 1 A1
10 001 01 1 1 0 1 0 1 1 A9
11 001 01 1 1 0 1 0 1 1 C9
12 001 01 1 1 0 1 0 1 1 B9
13 001 01 1 1 0 1 0 1 1 B1
14 000 00 1 0 0 0 0 0 0 00
15 000 00 1 0 0 0 0 0 0 00
16 000 00 1 0 0 0 0 0 0 00
17 001 01 1 1 0 1 0 1 1 C1
```

Using vector-based indexing

IRQ to pin mappings:

```
IRQ0 -> 0:2
IRQ1 -> 0:1
IRQ3 -> 0:3
IRQ4 -> 0:4
IRQ5 -> 0:5
IRQ6 -> 0:6
IRQ7 -> 0:7
IRQ8 -> 0:8
IRQ9 -> 0:9
IRQ10 -> 0:10
IRQ11 -> 0:11
IRQ12 -> 0:12
IRQ13 -> 0:13
IRQ14 -> 0:14
IRQ15 -> 0:15
IRQ169 -> 0:16
IRQ201 -> 0:17
IRQ185 -> 0:18
IRQ177 -> 0:19
IRQ193 -> 0:23
```

..... done.

Simple Boot Flag at 0x36 set to 0x1

VFS: Disk quotas dquot_6.5.1

Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)

devfs: 2004-01-31 Richard Gooch (rgooch@atnf.csiro.au)

devfs: boot_options: 0x0

Initializing Cryptographic API

isapnp: Scanning for PnP cards...

isapnp: No Plug & Play device found

Serial: 8250/16550 driver \$Revision: 1.90 \$ 54 ports, IRQ sharing enabled

ttyS0 at I/O 0x3f8 (irq = 4) is a 16550A

ttyS1 at I/O 0x2f8 (irq = 3) is a 16550A

RAMDISK driver initialized: 16 RAM disks of 8192K size 1024 blocksize

serio: i8042 AUX port at 0x60,0x64 irq 12

serio: i8042 KBD port at 0x60,0x64 irq 1

input: AT Translated Set 2 keyboard on isa0060/serio0

Initializing USB Mass Storage driver...
usbcore: registered new driver usb-storage
USB Mass Storage support registered.
ACPI: Processor [CPU0] (supports C1 C3, 8 throttling states)
USB Universal Host Controller Interface driver v2.2
ACPI: PCI interrupt 0000:00:1d.0[A] -> GSI 16 (level, low) -> IRQ 169
uhci_hcd 0000:00:1d.0: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #1
PCI: Setting latency timer of device 0000:00:1d.0 to 64
uhci_hcd 0000:00:1d.0: irq 169, io base 00001400
uhci_hcd 0000:00:1d.0: new USB bus registered, assigned bus number 1
hub 1-0:1.0: USB hub found
hub 1-0:1.0: 2 ports detected
ACPI: PCI interrupt 0000:00:1d.1[B] -> GSI 19 (level, low) -> IRQ 177
uhci_hcd 0000:00:1d.1: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #2
PCI: Setting latency timer of device 0000:00:1d.1 to 64
uhci_hcd 0000:00:1d.1: irq 177, io base 00001420
uhci_hcd 0000:00:1d.1: new USB bus registered, assigned bus number 2
hub 2-0:1.0: USB hub found
hub 2-0:1.0: 2 ports detected
ACPI: PCI interrupt 0000:00:1d.2[C] -> GSI 18 (level, low) -> IRQ 185
uhci_hcd 0000:00:1d.2: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #3
PCI: Setting latency timer of device 0000:00:1d.2 to 64
uhci_hcd 0000:00:1d.2: irq 185, io base 00001440
uhci_hcd 0000:00:1d.2: new USB bus registered, assigned bus number 3
hub 3-0:1.0: USB hub found
hub 3-0:1.0: 2 ports detected
ACPI: PCI interrupt 0000:00:1d.3[A] -> GSI 16 (level, low) -> IRQ 169
uhci_hcd 0000:00:1d.3: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB UHCI #4
PCI: Setting latency timer of device 0000:00:1d.3 to 64
uhci_hcd 0000:00:1d.3: irq 169, io base 00001460
uhci_hcd 0000:00:1d.3: new USB bus registered, assigned bus number 4
hub 4-0:1.0: USB hub found
hub 4-0:1.0: 2 ports detected
ACPI: PCI interrupt 0000:00:1d.7[D] -> GSI 23 (level, low) -> IRQ 193
ehci_hcd 0000:00:1d.7: Intel Corp. 82801EB/ER (ICH5/ICH5R) USB2 EHCI Controller
PCI: Setting latency timer of device 0000:00:1d.7 to 64
ehci_hcd 0000:00:1d.7: irq 193, pci mem f8823000
ehci_hcd 0000:00:1d.7: new USB bus registered, assigned bus number 5
PCI: cache line size of 128 is not supported by device 0000:00:1d.7
ehci_hcd 0000:00:1d.7: USB 2.0 enabled, EHCI 1.00, driver 2004-May-10
hub 5-0:1.0: USB hub found
hub 5-0:1.0: 8 ports detected
usbcore: registered new driver usbkbd
drivers/usb/input/usbkbd.c: :USB HID Boot Protocol keyboard driver
usbcore: registered new driver hiddev
usbcore: registered new driver usbhid
drivers/usb/input/hid-core.c: v2.0:USB HID core driver
drivers/usb/serial/usb-serial.c: USB Serial support registered for Generic

usbcore: registered new driver usbserial_generic
usbcore: registered new driver usbserial
drivers/usb/serial/usb-serial.c: USB Serial Driver core v2.0
vga16fb: initializing
vga16fb: mapped to 0xc00a0000
fb0: VGA16 VGA frame buffer device
Console: switching to colour frame buffer device 80x30
inserting floppy driver for 2.6.8-2-386
FDC 0 is a post-1991 82077
ide0: I/O resource 0x1F0-0x1F7 not free.
ide0: ports already in use, skipping probe
ide1: I/O resource 0x170-0x177 not free.
ide1: ports already in use, skipping probe
usb 5-2: new high speed USB device using address 3
scsi2 : SCSI emulation for USB Mass Storage devices
Vendor: HL-DT-ST Model: DVDRAM GSA-E10L Rev: LE05
Type: CD-ROM ANSI SCSI revision: 02
USB Mass Storage device found at 3
usb 1-1: new low speed USB device using address 2
input: Logitech USB Receiver on usb-0000:00:1d.0-1
drivers/usb/input/hid-core.c: ctrl urb status -32 received
drivers/usb/input/hid-core.c: ctrl urb status -32 received
input,hiddev96: USB HID v1.10 Mouse [Logitech USB Receiver] on usb-0000:00:1d.0-1
SCSI device sda: 625142448 512-byte hdwr sectors (320073 MB)
SCSI device sda: drive cache: write back
/dev/scsi/host0/bus0/target0/lun0: p1 p2 p3
Attached scsi disk sda at scsi0, channel 0, id 0, lun 0
SCSI device sdb: 781422768 512-byte hdwr sectors (400088 MB)
SCSI device sdb: drive cache: write back
/dev/scsi/host1/bus0/target0/lun0: p1 p2 p3
Attached scsi disk sdb at scsi1, channel 0, id 0, lun 0
sr0: scsi3-mmc drive: 48x/48x writer dvd-ram cd/rw xa/form2 cdda tray
Uniform CD-ROM driver Revision: 3.20
Attached scsi CD-ROM sr0 at scsi2, channel 0, id 0, lun 0
Linux Kernel Card Services
options: [pci] [cardbus] [pm]
e1000: Ignoring new-style parameters in presence of obsolete ones
Intel(R) PRO/1000 Network Driver - version 5.2.52-k4
Copyright (c) 1999-2004 Intel Corporation.
ACPI: PCI interrupt 0000:02:01.0[A] -> GSI 18 (level, low) -> IRQ 185
PCI: Setting latency timer of device 0000:02:01.0 to 64
e1000: eth0: e1000_probe: Intel(R) PRO/1000 Network Connection
ACPI: PCI interrupt 0000:03:02.0[A] -> GSI 18 (level, low) -> IRQ 185
e1000: eth1: e1000_probe: Intel(R) PRO/1000 Network Connection
md: raid0 personality registered as nr 2
raid5: automatically using best checksumming function: pIII_sse
pIII_sse : 4364.000 MB/sec
raid5: using function: pIII_sse (4364.000 MB/sec)

md: raid5 personality registered as nr 4
md: md0 stopped.
md: bind<sdb2>
raid1: raid set md0 active with 1 out of 2 mirrors
kjournald starting. Commit interval 5 seconds
EXT3-fs: mounted filesystem with ordered data mode.
Adding 3903752k swap on /dev/sda1. Priority:-1 extents:1
Adding 3903752k swap on /dev/sdb1. Priority:-2 extents:1
EXT3 FS on md0, internal journal
Generic RTC Driver v1.07
Capability LSM initialized
md: md1 stopped.
md: bind<sdb3>
raid1: raid set md1 active with 1 out of 2 mirrors
kjournald starting. Commit interval 5 seconds
EXT3 FS on md1, internal journal
EXT3-fs: mounted filesystem with ordered data mode.
Linux agpgart interface v0.100 (c) Dave Jones
agpgart: Detected an Intel i875 Chipset.
agpgart: Maximum main memory to use for agp memory: 816M
agpgart: AGP aperture is 128M @ 0x80000000
pci_hotplug: CompactPCI Hot Plug Core version: 0.2
pci_hotplug: PCI Hot Plug PCI Core version: 0.5
pciehp: PCI Express Hot Plug Controller Driver version: 0.4
shpchp: shpc_init : shpc_cap_offset == 0
shpchp: shpc_init : shpc_cap_offset == 0
shpchp: shpc_init : shpc_cap_offset == 0
shpchp: Standard Hot Plug PCI Controller Driver version: 0.4
hw_random: RNG not detected
input: PC Speaker
mice: PS/2 mouse device common for all mice
Attached scsi generic sg0 at scsi0, channel 0, id 0, lun 0, type 0
Attached scsi generic sg1 at scsi1, channel 0, id 0, lun 0, type 0
Attached scsi generic sg2 at scsi2, channel 0, id 0, lun 0, type 5
e1000: eth0: e1000_watchdog: NIC Link is Up 100 Mbps Full Duplex
NET: Registered protocol family 10
Disabled Privacy Extensions on device c02cc960(lo)
IPv6 over IPv4 tunneling driver
ip_tables: (C) 2000-2002 Netfilter core team
NET: Registered protocol family 17
eth0: no IPv6 routers present

Subject: Re: Installation on Debian - VFS: Cannot open root device
Posted by [Alexandr Andreev](#) on Thu, 28 Dec 2006 15:56:02 GMT

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2 pjdevries:

You can boot your debian kernel, and then compare debian kernel .config vs openvz .config

You can find config files here:

/boot/config-YOUR_KERNEL_VERSION

or maybe here:

/lib/modules/YOUR_KERNELS/build/.config

Pay attention to options around CONFIG_BLK_DEV, maybe it is good idea to reconfigure OpenVZ kernel, and set CONFIG_BLK_DEV_DRBD=y.

I prefer to edit .config by hands. You have similar kernel versions, so you can just paste and copy block device options from debian .config to openvz .config, then say:

```
$ make oldconfig
```

in openvz kernel directory, and answer to some questions about new openvz options. (just press enter if unsure).

Then build the kernel:

```
$ make
```

```
$ make modules_install
```

```
$ make install
```

Subject: Re: Installation on Debian - VFS: Cannot open root device

Posted by [pjdevries](#) on Thu, 28 Dec 2006 19:10:09 GMT

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Thanks for the reply. I have been staring at the configuration files quite a couple of times already. Unfortunately I'm completely new to this and 2837 lines in the default config file and 1598 lines in the OpenVZ config file don't make things any easier. I just don't have the foggiest idea which options to configure. but I'll give it another try.

Subject: Re: Installation on Debian - VFS: Cannot open root device

Posted by [pjdevries](#) on Thu, 28 Dec 2006 19:17:16 GMT

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A question related to comparing and synchronising the two config files:

How do I handle options that are configured as 'm' in one configuration file but configured as 'y' in

the other? The default Debian installation has an initrd but the OpenVZ kernel doesn't. It also appears that the OpenVZ kernel has most options set to 'y'.

Subject: Re: Installation on Debian - VFS: Cannot open root device

Posted by [Alexandr Andreev](#) on Fri, 29 Dec 2006 13:05:22 GMT

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First of all, please make backup of original OVZ .config file

Kernel configuration can be done not only by 'hands', you can use:

```
$ make menuconfig
```

```
or
```

```
$ make xconfig
```

```
or
```

```
$ make config
```

in this case you will be able to see help messages for each option, try to understand what do you really want in block device section.

BTW, I'm not sure that it will work, but you can just do the followings:

```
$ cp Debian_Kernel_src/.config OVZ_Kernel_src/.config
```

```
$ cd OVZ_Kernel_src/
```

```
$ make oldconfig
```

```
(press 'enter' everywhere)
```

```
$ make
```

```
$ make modules_install
```

```
$ make install
```

If everything will be ok with compilation (I'm not sure), you can reboot and ensure that this OVZ kernel can mount your root filesystem.

Subject: Re: Installation on Debian - VFS: Cannot open root device

Posted by [Alexandr Andreev](#) on Fri, 29 Dec 2006 13:23:51 GMT

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Quote:

How do I handle options that are configured as 'm' in one configuration file but configured as 'y' in the other? The default Debian installation has an initrd but the OpenVZ kernel doesn't. It also appears that the OpenVZ kernel has most options set to 'y'.

AFAIK each 'nonembedded' kernel must have initrd enabled - it contains modules for your kernel.

The 'initrd /boot/initrd_for_your_OVZ' line must be present in bootloader configuration file for each kernel, but it is missed for OVZ kernels in your menu.lst!!!

Generally, "make install" add initrd line to bootloader config, but if the mkinitrd package is not installed in your Debian, or something else is broken, this line will not be added, but you can add this line by hands.

If /boot/initrd_for_your_OVZ file is also missed, please check that the 'mkinitrd' package is installed in your OS and the mkinitrd command works ok.

Subject: Re: Installation on Debian - VFS: Cannot open root device

Posted by [pjdevries](#) on Fri, 29 Dec 2006 14:49:20 GMT

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Thanks for all the advice Alexandr. I'll keep experimenting based on your suggestions and keep you posted on any positive results.

Subject: Re: Installation on Debian - Problem solved!!!

Posted by [pjdevries](#) on Fri, 29 Dec 2006 18:40:26 GMT

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At last I have a working OpenVZ kernel on my machine. Ultimately it was a matter of configuring the right devices as modules in the kernel configuration file and creating an initrd. In my case the device options to configure as modules are: CONFIG_BLK_DEV_SD, CONFIG_BLK_DEV_SR, CONFIG_SCSI_ATA_PII, CONFIG_BLK_DEV_PII and CONFIG_MOUSE_PS2. The latter not specifically to get the kernel to boot but to get rid of annoying error messages. I'm not sure if all of these are actually required, but it works.

Many thanks to Thorsten and Alexandr for their interest and support. Especially to Alexandr who gave me a few pointer that got me on the right track.

Subject: Re: Installation on Debian - Problem solved!!!

Posted by [curx](#) on Sat, 30 Dec 2006 21:35:37 GMT

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Hi Pieter-Jan,

perfect, but one question

I wonder why the stable ovzkernel (2.6.9) doesn't start, the needed modules :

CONFIG_BLK_DEV_SD=y

CONFIG_SCSI_ATA_PIIY=y
CONFIG_MOUSE_PS2=y

are build-in, (so the kernel should boot without a initrd)

CONFIG_BLK_DEV_SR=m (SCSI CDROM)
is build as loadable module in the ovzkernel-config.

Can you please poste what kind of modules have you enabled to start your ovzkernel.

Subject: Re: Installation on Debian - Problem solved!!!
Posted by [pjdevries](#) on Sun, 31 Dec 2006 11:42:02 GMT
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My thoughts exactly. In fact this has wrong-footed me right from the start and prevented me from exploring the option of making an initrd until the end. I have to admit that I'm still on unfamiliar territory and just making educated guesses. But the fact remains that my kernel boots after having changed those parameters from built in to loadable.

If by 'what kind of modules have you enabled to start your ovzkernel' you mean the contents of my /etc/modules, then this is it:

```
psmouse  
sd_mod  
sr_mod
```

Yo can see why I configured CONFIG_BLK_DEV_SD, ONFIG_MOUSE_PS2 and CONFIG_BLK_DEV_SR as loadable modules, although you are right with CONFIG_BLK_DEV_SR being configured as loadable by default. I can not remember why I also decided to configure CONFIG_SCSI_ATA_PIIY as loadable. It was more or less a guts feeling based on all kinds of information and error messages I saw during my various experiments. To be honest I'm not even sure if either of those options can be left configured as bulit in, because once it worked I didn't bother any more

If there is any additional information I can give to clear things up, just ask for it. I would prefer to have a better understanding of how things should work as well. After all: I still don't know exactly how to configure and build a kernel in the proper way. I got it to work by try and error and more or less educated guessing.

Do you konw of any good, detailed, monkey proof documentation or tutorial about building kernels, with or without initrd, that not only outlines the steps to be taken but also why they should be taken? It might enable me to solve the next problem I face: the loadable DRBD module in my working OpenVZ kernel. The problem is that the version of that module is 0.7.20 (api:79/proto:74) while the supported version of the drbd0.7-utils (and drbd0.7-module-source) available from the stable debian repository is 0.7.10 (api:77) and they don't work together. So either I get hold of a drbd0.7-utils version 0.7.20, which doesn't seem to be available as a debian package, or I compile

my current OpenVZ kernel with the available 0.7.10 module sources, which I don't know how to do.

Have a nice turn of the year!

Subject: Re: Installation on Debian - Problem solved!!!

Posted by [curx](#) on Thu, 18 Jan 2007 06:07:24 GMT

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Hi Pieter-Jan,

> Do you know of any good, detailed, monkey proof documentation or tutorial about building kernels [...]

Yes,

"Linux Kernel in a Nutshell" - Greg Kroah-Hartmann

<http://www.kernel.org/pub/linux/kernel/people/gregkh/lkn/>

Let's read!

Thorsten

Subject: Re: Installation on Debian - Problem solved!!!

Posted by [pjdevries](#) on Thu, 18 Jan 2007 07:14:44 GMT

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Thanks once again Thorsten. I will definitely dive into that.

I sort of have the idea that you know quite a bit about OpenVZ. If you can spare the time, would you be so kind to take a look at another issue I have posted about a week ago (<http://forum.openvz.org/index.php?t=msg&goto=9583&>)?
