Subject: SCSI DPT vs I2O problems [was: Will development now move to 2.6.16?] Posted by mephisto on Mon, 20 Mar 2006 17:31:40 GMT

View Forum Message <> Reply to Message

Hi,

now that linux 2.6.16 is released I'm wondering if development will be based on that instead on 2.6.15. I'm asking because 2.6.16 introduces some driver changes that are quite important to me.

Regards,

Mephisto

Subject: Re: Will development now move to 2.6.16? Posted by kir on Mon, 20 Mar 2006 19:08:13 GMT

View Forum Message <> Reply to Message

Yes, we will release a 2.6.16-based kernel Real Soon Now. I have already said that today in OpenVZ blog.

Quote:I'm asking because 2.6.16 introduces some driver changes that are quite important to me. If you have problem with a particular hardware driver (not working, missing, etc.) -- do not hesitate to file a bug report. We are already supporting a lot of new hardware in our stable kernel series (by either backporting stuff and/or taking vendor drivers).

Subject: Re: Will development now move to 2.6.16? Posted by mephisto on Mon, 20 Mar 2006 20:04:43 GMT View Forum Message <> Reply to Message

Great! I'll look into this. The problem is that I couldn't even get the 2.6.8 kernel to work on my server, yet - 2.6.15 patch was bootin with the same config, but was always crashing after the machine was running for 1-2 days. I'm about 150 miles away, to this is a bit problematic to look into.

Subject: Re: Will development now move to 2.6.16? Posted by dev on Mon, 20 Mar 2006 20:34:34 GMT View Forum Message <> Reply to Message

Can you please provide the output of Ispci and Ispci -n? It would help me to understand what hardware you use and which driver is responsible for it.

Thanks

Subject: Re: Will development now move to 2.6.16? Posted by mephisto on Mon, 20 Mar 2006 20:39:20 GMT

View Forum Message <> Reply to Message

```
Sure:
Ispci
00:00.0 Host bridge: Intel Corporation E7501 Memory Controller Hub (rev 01)
00:00.1 Class ff00: Intel Corporation E7500/E7501 Host RASUM Controller (rev 01)
00:02.0 PCI bridge: Intel Corporation E7500/E7501 Hub Interface B PCI-to-PCI Bridge (rev 01)
00:03.0 PCI bridge: Intel Corporation E7500/E7501 Hub Interface C PCI-to-PCI Bridge (rev 01)
00:1d.0 USB Controller: Intel Corporation 82801CA/CAM USB (Hub #1) (rev 02)
00:1d.1 USB Controller: Intel Corporation 82801CA/CAM USB (Hub #2) (rev 02)
00:1d.2 USB Controller: Intel Corporation 82801CA/CAM USB (Hub #3) (rev 02)
00:1e.0 PCI bridge: Intel Corporation 82801 PCI Bridge (rev 42)
00:1f.0 ISA bridge: Intel Corporation 82801CA LPC Interface Controller (rev 02)
00:1f.1 IDE interface: Intel Corporation 82801CA Ultra ATA Storage Controller (rev 02)
00:1f.3 SMBus: Intel Corporation 82801CA/CAM SMBus Controller (rev 02)
01:1c.0 PIC: Intel Corporation 82870P2 P64H2 I/OxAPIC (rev 04)
01:1d.0 PCI bridge: Intel Corporation 82870P2 P64H2 Hub PCI Bridge (rev 04)
01:1e.0 PIC: Intel Corporation 82870P2 P64H2 I/OxAPIC (rev 04)
01:1f.0 PCI bridge: Intel Corporation 82870P2 P64H2 Hub PCI Bridge (rev 04)
03:02.0 Ethernet controller: Intel Corporation 82546EB Gigabit Ethernet Controller (Copper) (rev
01)
03:02.1 Ethernet controller: Intel Corporation 82546EB Gigabit Ethernet Controller (Copper) (rev
01)
04:1c.0 PIC: Intel Corporation 82870P2 P64H2 I/OxAPIC (rev 04)
04:1d.0 PCI bridge: Intel Corporation 82870P2 P64H2 Hub PCI Bridge (rev 04)
04:1e.0 PIC: Intel Corporation 82870P2 P64H2 I/OxAPIC (rev 04)
04:1f.0 PCI bridge: Intel Corporation 82870P2 P64H2 Hub PCI Bridge (rev 04)
06:01.0 RAID bus controller: Adaptec (formerly DPT) SmartRAID V Controller (rev 01)
07:01.0 VGA compatible controller: ATI Technologies Inc Rage XL (rev 27)
Ispci -n
00:00.0 0600: 8086:254c (rev 01)
00:00.1 ff00: 8086:2541 (rev 01)
00:02.0 0604: 8086:2543 (rev 01)
00:03.0 0604: 8086:2545 (rev 01)
00:1d.0 0c03: 8086:2482 (rev 02)
00:1d.1 0c03: 8086:2484 (rev 02)
00:1d.2 0c03: 8086:2487 (rev 02)
00:1e.0 0604: 8086:244e (rev 42)
00:1f.0 0601: 8086:2480 (rev 02)
00:1f.1 0101: 8086:248b (rev 02)
00:1f.3 0c05: 8086:2483 (rev 02)
01:1c.0 0800: 8086:1461 (rev 04)
01:1d.0 0604: 8086:1460 (rev 04)
01:1e.0 0800: 8086:1461 (rev 04)
01:1f.0 0604: 8086:1460 (rev 04)
03:02.0 0200: 8086:1010 (rev 01)
03:02.1 0200: 8086:1010 (rev 01)
```

04:1c.0 0800: 8086:1461 (rev 04) 04:1d.0 0604: 8086:1460 (rev 04) 04:1e.0 0800: 8086:1461 (rev 04) 04:1f.0 0604: 8086:1460 (rev 04) 06:01.0 0104: 1044:a511 (rev 01) 07:01.0 0300: 1002:4752 (rev 27)

This is a Supermicro X5DP8-G2 running two SCSI raids (using aic79xx).

Subject: Re: Will development now move to 2.6.16? Posted by vaverin on Tue, 21 Mar 2006 06:50:42 GMT

View Forum Message <> Reply to Message

Hello mephisto,

Unfortunately I cannot understand what kind of problem you have on the node.

As far as I see from your Ispci, you have I2O zero-channel raid controller. It supported by our kernel and your node should work even on the 2.6.8 kernel.

To load our kernel on this hardware you should create correct initrd image. Could you please send me /etc/modprobe.conf file and

output of the following command

mkinitrd -v -v -f /boot/custom.initrd.img 2.6.8-022stab070.1

thank you, Vasily Averin

PS could you probably give me an access to the node?

Subject: Re: Will development now move to 2.6.16? Posted by mephisto on Tue, 21 Mar 2006 10:15:02 GMT

View Forum Message <> Reply to Message

Hi Vasily,

thank you for your answer. I'm getting "-bash: mkinitrd: command not found". I'm using Gentoo and so far made no use of the initrd, because I had all the important modules compiled in. I do have a initramfs-genkernel-x86-2.6.8-022stab070-smp under /boot, I'll check if it helps to include it into my lilo.conf

I'm sorry, but I can't give you access to the server.

My /etc/modprobe.conf looks like this

This file is automatically generated by modules-update

Please do not edit this file directly. If you want to change or add # anything please take a look at /etc/modules.conf and read # the manpage for modules-update. # alias binfmt-204 binfmt aout alias binfmt-263 binfmt aout alias binfmt-264 binfmt aout alias binfmt-267 binfmt aout alias binfmt-387 binfmt aout alias binfmt-332 iBCS alias binfmt--310 binfmt java alias block-major-1-* rd alias block-major-2-* floppy alias block-major-3-* ide-probe-mod alias block-major-7-* loop alias block-major-8-* sd_mod alias block-major-9-* md alias block-major-11-* sr mod alias block-major-13-* xd alias block-major-15-* cdu31a alias block-major-16-* gscd alias block-major-17-* optcd alias block-major-18-* sjcd alias block-major-20-* mcdx alias block-major-22-* ide-probe-mod alias block-major-23-* mcd alias block-major-24-* sonycd535 alias block-major-25-* sbpcd alias block-major-26-* sbpcd alias block-major-27-* sbpcd alias block-major-29-* aztcd alias block-major-32-* cm206 alias block-major-33-* ide-probe-mod alias block-major-34-* ide-probe-mod alias block-major-37-* ide-tape alias block-major-44-* ftl alias block-major-46-* pcd alias block-major-47-* pf alias block-major-56-* ide-probe-mod alias block-major-57-* ide-probe-mod alias block-major-58-* lvm-mod alias block-major-88-* ide-probe-mod alias block-major-89-* ide-probe-mod alias block-major-90-* ide-probe-mod alias block-major-91-* ide-probe-mod alias block-major-93-* nftl alias block-major-113-* viocd alias char-major-4-* serial

- alias char-major-5-* serial
- alias char-major-6-* lp
- alias char-major-9-* st
- alias char-major-10-0 busmouse
- alias char-major-10-2 msbusmouse
- alias char-major-10-3 atixImouse
- alias char-major-10-116 snd
- alias char-major-10-130 wdt
- alias char-major-10-131 wdt
- alias char-major-10-135 rtc
- alias char-major-10-139 openprom
- alias char-maior-10-144 nvram
- alias char-major-10-157 applicom
- alias char-major-10-175 agpgart
- alias char-major-10-181 toshiba
- alias char-major-10-183 hw_random
- alias char-major-10-184 microcode
- alias char-major-10-187 irnet
- alias char-major-10-189 ussp
- alias char-major-10-200 tun
- alias char-major-10-250 hci_vhci
- alias char-major-13-* input
- alias char-major-13-0 joydev
- alias char-major-13-32 mousedev
- alias char-major-14-* soundcore
- alias char-major-19-* cyclades
- alias char-major-20-* cyclades
- alias char-major-21-* sg
- alias char-major-22-* pcxx
- alias char-major-23-* pcxx
- alias char-major-27-* zftape
- alias char-major-34-* scc
- alias char-major-35-* tclmidi
- alias char-major-36-* netlink
- alias char-major-37-* ide-tape
- alias char-major-48-* riscom8
- alias char-major-49-* riscom8
- alias char-major-57-* esp
- alias char-major-58-* esp
- alias char-major-63-* kdebug
- alias char-major-90-* mtdchar
- alias char-major-96-* pt
- alias char-major-97-* pg
- alias char-major-99-* ppdev
- alias char-major-107-* 3dfx
- alias char-major-108-* ppp_generic
- alias char-major-109-* lvm-mod
- alias char-major-161-* ircomm-tty

alias char-major-171-* raw1394

alias char-major-195-* NVdriver

alias char-major-200-* vxspec

alias char-major-206-* osst

alias char-major-216-* rfcomm

alias dos msdos

alias dummy0 dummy

alias dummy1 dummy

alias iso9660 isofs

alias md-personality-1 linear

alias md-personality-2 raid0

alias md-personality-3 raid1

alias md-personality-4 raid5

alias md-personality-7 multipath

alias net-pf-1 unix

alias net-pf-2 ipv4

alias net-pf-4 ipx

alias net-pf-5 appletalk

alias net-pf-15 af_key

alias net-pf-17 af_packet

alias net-pf-20 atm

alias net-pf-23 irda

alias net-pf-24 pppoe

alias net-pf-25 wanrouter

alias net-pf-26 llc

alias net-pf-31 bluez

alias netalias-2 ip_alias

alias irlan0 irlan

alias irda-dongle-0 tekram

alias irda-dongle-1 esi

alias irda-dongle-2 actisys

alias irda-dongle-3 actisys

alias irda-dongle-4 girbil

alias irda-dongle-5 litelink

alias irda-dongle-6 airport

alias irda-dongle-7 old belkin

alias bt-proto-0 l2cap

alias bt-proto-2 sco

alias bt-proto-3 rfcomm

alias bt-proto-4 bnep

alias bt-proto-5 cmtp

alias bt-proto-6 hidp

alias bt-proto-7 avdtp

alias plip0 plip

alias plip1 plip

alias tunl0 ipip

alias cipcb0 cipcb

alias cipcb1 cipcb

alias cipcb2 cipcb alias cipcb3 cipcb alias ppp0 ppp_async alias ppp1 ppp_async alias slip0 slip alias slip1 slip alias tty-ldisc-1 slip alias tty-ldisc-3 ppp_async alias tty-ldisc-11 irtty alias tty-ldisc-14 ppp synctty alias tty-ldisc-15 hci uart alias ppp-compress-18 ppp mppe alias ppp-compress-21 bsd_comp alias ppp-compress-24 ppp_deflate alias ppp-compress-26 ppp_deflate alias ppp ppp_async alias parport lowlevel parport pc alias usbdevfs usbcore alias xfrm-type-2-50 esp4 alias xfrm-type-2-51 ah4 alias xfrm-type-2-108 ipcomp alias xfrm-type-10-50 esp6 alias xfrm-type-10-51 ah6 alias xfrm-type-10-108 ipcomp6 alias cipher_null crypto_null alias digest_null crypto_null alias compress_null crypto_null alias sha384 sha512 alias char-major-81-* bttv alias /dev/ppp ppp_generic alias loop-xfer-gen-0 loop gen alias loop-xfer-3 loop fish2 alias loop-xfer-gen-10 loop_gen alias cipher-2 des alias cipher-3 fish2 alias cipher-4 blowfish alias cipher-6 idea alias cipher-7 serp6f alias cipher-8 mars6 alias cipher-11 rc62 alias cipher-15 dfc2 alias cipher-16 rijndael alias cipher-17 rc5 alias char-major-89-* i2c-dev alias /dev/nvidiactl NVdriver alias binfmt-0064 binfmt_aout options sb io=0x220 irg=7 dma=1 dma16=5 mpu io=0x330

install binfmt-0000 /bin/true

install char-major-10 /bin/true
install char-major-10-1 /bin/true
install dummy0 /sbin/modprobe -o dummy0 --ignore-install dummy
install dummy1 /sbin/modprobe -o dummy1 --ignore-install dummy
install eth0 /bin/true
install net-pf-10 /bin/true
install net-pf-19 /bin/true
install net-pf-3 /bin/true
install net-pf-6 /bin/true
install scsi_hostadapter /bin/true

Subject: Re: Will development now move to 2.6.16? Posted by vaverin on Tue, 21 Mar 2006 10:32:58 GMT

View Forum Message <> Reply to Message

Hello Mephisto,

Usually we tried to include all the required drivers int kernels, but our i2o driver did not work by this way and we should be forced to compile it as module. Therefore you should use initrd or initramfs images for our kernels.

I hope our kernel will work when you include initrd image to your lilo.conf file.

Unfortunately I'm not familiar with Gentoo. I suppose that the list of requierd modules on this distributive are stores in /etc/modules.conf file. If you will have problems with our kernel, please send me /etc/modules.conf file and your initramfs file.

Thank you, Vasily Averin

Subject: Re: Will development now move to 2.6.16? Posted by dev on Tue, 21 Mar 2006 10:34:12 GMT

View Forum Message <> Reply to Message

BTW, do you have any bootup logs/screens with the information how 2.6.8 crashed on your machines?

Subject: Re: Will development now move to 2.6.16? Posted by mephisto on Tue, 21 Mar 2006 10:38:15 GMT

View Forum Message <> Reply to Message

2.6.8 never crashed, it didn't even start (could not mount root fs). It was 2.6.15. I have the feeling that it was a memory related problem because people complained that the server was getting slower and slower before beeing not available anymore - yes I'm using the node as a server even though it is not recommended.

Subject: Re: Will development now move to 2.6.16? Posted by mephisto on Tue, 21 Mar 2006 10:41:28 GMT

View Forum Message <> Reply to Message

I just realized that CONFIG_SCSI_DPT_I2O was not compiled into the openvz kernel while it was compiled into the running kernel - might have been my own stupidity all along.

Subject: Re: Will development now move to 2.6.16? Posted by dev on Tue, 21 Mar 2006 10:49:20 GMT

View Forum Message <> Reply to Message

Oh, ok. Give us to know whether it helped or some other efforts are needed from us to resolve it.

Subject: Re: Will development now move to 2.6.16? Posted by vaverin on Tue, 21 Mar 2006 11:19:43 GMT

View Forum Message <> Reply to Message

hello Mephisto

We use a new driver for this hardware: i2o_block (CONFIG_I2O_BLOCK) I would note that dpt_i2o driver also did not work inside kernel. I've tried to build dpt_i2o driver as module and it works OK,

But dpt_i2o and i2o_block drivers have a conflicts and cannot be loaded together.

Thank you, Vasily Averin

Subject: Re: Will development now move to 2.6.16? Posted by mephisto on Tue, 21 Mar 2006 16:07:02 GMT

View Forum Message <> Reply to Message

So i2o_block is a replacement for dpt_i2o? What is the advantage of i2o_block? In my running 2.6.14 kernel I have CONFIG_I2O_EXT_ADAPTEC=y - is that a replacement for CONFIG_I2O_BLOCK?

Dage 0 of 12 Concented from OpenI/7 Forum

Subject: Re: Will development now move to 2.6.16? Posted by vaverin on Tue, 21 Mar 2006 17:39:41 GMT

View Forum Message <> Reply to Message

Hello Mephisto,

yes, i2o_block is new driver for i2o hardware, it replaced old dpt_i2o driver in 2.6-based Red Hat disributions.

CONFIG_I2O_EXT_ADAPTEC is not the same as CONFIG_I2O_BLOCK There are 2 different suboption of new i2o layer.

to build new i2o layer you should enable at least following config options in kernel config file:

CONFIG I2O=m

CONFIG I2O CONFIG=m

CONFIG I2O BLOCK=m

CONFIG_I2O_SCSI=m

I would note that i2o_block driver used unusual device names:

instead usual scsi-like /dev/sda it uses /dev/i2o/hda device names. If you not use LABEL's on your filesystem, you may have troubles with partition mounting.

I would note that the best solution is to use the same driver as on your linux distribution. If Gentoo uses dpt_i2o driver -- that I would recommend you to _disable_ CONFIG_I2O option at all and enable compilation for old dpt_i2o driver:

CONFIG_SCSI_DPT_I2O=m

Thank you, Vasily Averin

Subject: Re: Will development now move to 2.6.16? Posted by dev on Wed, 22 Mar 2006 08:42:35 GMT

View Forum Message <> Reply to Message

Quote:I just realized that CONFIG_SCSI_DPT_I2O was not compiled into the openvz kernel while it was compiled into the running kernel - might have been my own stupidity all along.

mephisto, does it work now? have you managed starting it?

Subject: Re: Will development now move to 2.6.16?

Posted by mephisto on Wed, 22 Mar 2006 15:00:37 GMT

View Forum Message <> Reply to Message

So far not. I converted my fstab to use LABELS for my reiserfs partitions, but couldn't label my root partition. I'm uncertain what to add to my "root = " line in lilo.conf as /dev/i20/hda2 was not

accepted by lilo.

I recompiled my kernel to use dpt_i2o again and will try it later today.

Subject: Re: Will development now move to 2.6.16? Posted by mephisto on Fri, 24 Mar 2006 13:47:31 GMT

View Forum Message <> Reply to Message

I've been so far unable to boot the kernel with CONFIG_I2O_BLOCK. The 2.6.15 and 2.6.16 kernels boot with dpt_i2o, but get unstable after the node has been running for about a day. I've copied about 100GB of data using rsync without problems, but once the Samba fileserver on the hardware node was running and under regular use the machine got slower and slower until it wasn't usable anymore. No VPS was running at that time, just the VZ modules were loaded. I don't think it's a memory issue, because I trippled the memory from 512MB to 1,5GB and the time until it goes down is the same.

My 2.6.16 kernel config can be found here

I will investigate the problem with 2.6.8 once I get it to boot.

PS: I've been running 2.6.15-025stab014.1 without problems on another Gentoo system using the same build environment. That hardware node is running LAMP in addition to OpenVZ, so it must either be hardware related or related to Samba.

Subject: Re: Will development now move to 2.6.16? Posted by dev on Sat, 08 Apr 2006 17:56:52 GMT

View Forum Message <> Reply to Message

mephisto, any progress with booting 2.6.8?

can I help somehow? maybe you can provide boot messages from 2.6.8 when it doesn't boot (e.g. through serial or net console?)

Subject: Re: SCSI DPT vs I2O problems [was: Will development now move to 2.6.16?]

Posted by mephisto on Thu, 13 Apr 2006 11:56:12 GMT

View Forum Message <> Reply to Message

Here is the output of the not booting 2.6.8-022stab072:

Loading Adaptec I2O RAID: Version 2.4 Build 5go

Detecting Adaptec I2O RAID controllers...

ACPI: PCI interrupt 0000:06:01.0[A] -> GSI 72 (level, low) -> IRQ 72

Adaptec I2O RAID controller 0 irq=72 BAR0 f4807000 - size= 100000 BAR1 f4998000 - size= 1000000 dpti: If you have a lot of devices this could take a few minutes

dpti0: Reading the hardware ressource table.

dpti0: Get status timeout.

scsi0: Vendor: Adaptec Model:

mice: PS/2 mouse device common for all mice serio: i8042 AUX port at 0x60,0x64 irg 12

input: PS/2 Generic Mouse on isa0060/serio1

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

input: AT Translated Set 2 keyboard on isa0060/serio0

device-mapper: 4.1.0-ioctl (2003-12-10) initialised: dm@uk.sistina.com

NET: Registered protocol family 2

IP: routing cache hash table of 16384 buckets, 128Kbytes TCP: Hash tables configured (established 524288 bind 65536)

NET: Registered protocol family 1

Starting balanced_irq

VFS: Cannot open root device "sda2" or unknown-block(0,0)

Please append a correct "root=" boot option

Kernel panic: VFS: Unable to mount root fs on unknown-block(0,0)

Both kernels have these options set. While the 2.6.16 kernel boots, the 2.6.8 kernel doesn't:

CONFIG SCSI AIC79XX=y

CONFIG AIC79XX CMDS PER DEVICE=32

CONFIG_AIC79XX_RESET_DELAY_MS=15000

CONFIG_AIC79XX_BUILD_FIRMWARE is not set

CONFIG AIC79XX ENABLE RD STRM=y

CONFIG_AIC79XX_DEBUG_ENABLE=y

CONFIG AIC79XX DEBUG MASK=0

CONFIG_AIC79XX_REG_PRETTY_PRINT=y

CONFIG_SCSI_DPT_I2O=y

#

I2O device support

#

CONFIG_I2O=m

CONFIG 120 CONFIG=m

CONFIG_I2O_BLOCK is not set

CONFIG I2O SCSI=m

CONFIG I2O PROC=m

Subject: Re: SCSI DPT vs I2O problems [was: Will development now move to 2.6.16?]

Posted by khorenko on Fri, 21 Apr 2006 09:45:18 GMT

View Forum Message <> Reply to Message

mephisto, as vaverin have already said we had faced issues that i2o_block and dpt_i2o drivers do

not work properly in 2.6.8 kernel if compiled into the kernel.

Please, could you build a 2.6.8 OpenVZ kernel with _disabled_ CONFIG_I2O option and CONFIG_SCSI_DPT_I2O=m (message #2135)?

Yes, in that case you should create initrd file to boot, but it looks like this is the only possible way to make dpt_i2o driver working in 2.6.8 kernel.

Subject: Re: SCSI DPT vs I2O problems [was: Will development now move to 2.6.16?]

Posted by mephisto on Fri, 21 Apr 2006 09:52:07 GMT View Forum Message <> Reply to Message

I also tried that and it did not work. I'm sorry I have no error message but I'm happy the system is running now and I can't reboot it.