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Subject: Intermittent freeze at "initializing hardware... storage network audio"

Posted by [fgomes](#) on Wed, 11 Oct 2006 09:39:37 GMT

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I have a server with Dual Opteron CPU using CentOS 4.4 with OpenVZ RHEL4 kernel (ovzkernel-smp-2.6.9-023stab016.2.x86\_64.rpm).

After some initial problems to put everything working in 64 bits (it was the first 64 bit linux I install), now I manage to have several VEs running well and stable. The problem that I found lately is that the system sometimes hangs when booting the hardware node (about 50% or less of the boot times), at "initializing hardware... storage network audio". I usually reset it and enter in interactive boot and it always boot normaly when using interactive boot.

What can I do to diagnose this hanging problem?

What exactly does it mean ""initializing hardware... storage network audio"? The system has no audio... It is a server board and transport from Tyan - Tiger K8SSA (S3870) -

<http://www.tyan.com/products/html/tigerk8ssa.html>

Another doubt I have is if it can be related with the kernel used. I'm using RHEL 4 kernel, because is the most similar to the CentOS 4.4 (I think), am I correct, or should I change to the OpenVZ stable kernel (ovzkernel-smp-2.6.8-022stab078.21.x86\_64.rpm)?

Thanks for all your help!

Fernando

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Subject: Re: Intermittent freeze at "initializing hardware... storage network audio"

Posted by [Andrey Mirkin](#) on Wed, 11 Oct 2006 09:59:22 GMT

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Do you have a serial console on this machine (it is used for debugging, see

[http://wiki.openvz.org/Remote\\_console\\_setup](http://wiki.openvz.org/Remote_console_setup) for details)?

If you have then please Alt-SysRQ-P 5 times, then Alt-SysRQ-T and post here logs.

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Subject: Re: Intermittent freeze at "initializing hardware... storage network audio"

Posted by [dev](#) on Wed, 11 Oct 2006 10:00:31 GMT

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Can you press AltSysRq-P multiple times and AltSysRq-T when it hangs? Thanks!

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Subject: Re: Intermittent freeze at "initializing hardware... storage network audio"

Posted by [fgomes](#) on Wed, 11 Oct 2006 21:56:07 GMT

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Not much success with SysRq, it only writes SysRq: when I press Alt-SysRq-P or Alt-SysRq-T, both on the console and by the serial port

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I've made more than 10 boots now, it failed twice.  
The hard disks are connected to a 3ware 9550SX, there are no disks on the motherboard  
haddisk controllers.

The most strange things I saw in this log is that sometimes I have this (2d and 3d reason):

Uhhuh. NMI received for unknown reason 3d.  
Dazed and confused, but trying to continue  
Do you have a strange power saving mode enabled?

and always have this:

..MP-BIOS bug: 8254 timer not connected to IO-APIC  
failed.  
timer doesn't work through the IO-APIC - disabling NMI Watchdog!  
works.

Here is the log when it hangs:

Bootdata ok (command line is ro root=LABEL=/ console=ttyS0,57600 console=tty debug  
silencelevel=8)

Linux version 2.6.9-023stab016.2-smp (root@rhel4-64) (gcc version 3.4.5 20051201 (Red Hat  
3.4.5-2)) #1 SMP Fri Aug 11 00:06:19 MSD 2006

BIOS-provided physical RAM map:

BIOS-e820: 0000000000000000 - 000000000009e800 (usable)

BIOS-e820: 000000000009e800 - 00000000000a0000 (reserved)

BIOS-e820: 00000000000e0000 - 0000000000100000 (reserved)

BIOS-e820: 0000000000100000 - 00000000bfff0000 (usable)

BIOS-e820: 00000000bfff0000 - 00000000bfff0000 (ACPI data)

BIOS-e820: 00000000bfff0000 - 00000000c0000000 (ACPI NVS)

BIOS-e820: 00000000fec00000 - 00000000fec03000 (reserved)

BIOS-e820: 00000000fee00000 - 00000000fee01000 (reserved)

BIOS-e820: 0000000100000000 - 0000000140000000 (usable)

ACPI: RSDP (v002 ACPIAM ) @ 0x000000000000f72c0

ACPI: XSDT (v001 A M I OEMXSDT 0x09000620 MSFT 0x00000097) @ 0x00000000bfff0100

ACPI: FADT (v003 A M I OEMFACP 0x09000620 MSFT 0x00000097) @ 0x00000000bfff0290  
ACPI: MADT (v001 A M I OEMAPIC 0x09000620 MSFT 0x00000097) @ 0x00000000bfff0390  
ACPI: OEMB (v001 A M I AMI\_OEM 0x09000620 MSFT 0x00000097) @ 0x00000000bfff040  
ACPI: SRAT (v001 A M I OEMSRAT 0x09000620 MSFT 0x00000097) @ 0x00000000bfff3be0  
ACPI: DSDT (v001 0AAAA 0AAAA000 0x00000000 INTL 0x02002026) @ 0x0000000000000000

No mptable found.

On node 0 totalpages: 1310720

DMA zone: 4096 pages, LIFO batch:1

Normal zone: 1306624 pages, LIFO batch:16

HighMem zone: 0 pages, LIFO batch:1

DMI 2.3 present.

ServerWorks chipset detected. Disabling timer routing over 8254.

ACPI: PM-Timer IO Port: 0x508

ACPI: Local APIC address 0xfe00000

ACPI: LAPIC (acpi\_id[0x01] lapic\_id[0x00] enabled)

Processor #0 15:5 APIC version 16

ACPI: LAPIC (acpi\_id[0x02] lapic\_id[0x01] enabled)

Processor #1 15:5 APIC version 16

ACPI: LAPIC (acpi\_id[0x03] lapic\_id[0x82] disabled)

ACPI: LAPIC (acpi\_id[0x04] lapic\_id[0x83] disabled)

ACPI: LAPIC\_NMI (acpi\_id[0x01] high edge lint[0x1])

Setting APIC routing to flat

ACPI: IOAPIC (id[0x02] address[0xfec00000] gsi\_base[0])

IOAPIC[0]: apic\_id 2, version 17, address 0xfec00000, GSI 0-15

ACPI: IOAPIC (id[0x03] address[0xfec01000] gsi\_base[16])

IOAPIC[1]: apic\_id 3, version 17, address 0xfec01000, GSI 16-31

ACPI: IOAPIC (id[0x04] address[0xfec02000] gsi\_base[32])

IOAPIC[2]: apic\_id 4, version 17, address 0xfec02000, GSI 32-47

ACPI: INT\_SRC\_OVR (bus 0 bus\_irq 0 global\_irq 2 dfl dfl)

ACPI: IRQ0 used by override.

ACPI: IRQ2 used by override.

ACPI: IRQ9 used by override.

Using ACPI (MADT) for SMP configuration information

Allocating PCI resources starting at c4000000 (gap: c0000000:3ec00000)

Checking aperture...

CPU 0: aperture @ 0 size 32 MB

No AGP bridge found

Your BIOS doesn't leave a aperture memory hole

Please enable the IOMMU option in the BIOS setup

This costs you 64 MB of RAM

Mapping aperture over 65536 KB of RAM @ 8000000

Virtuozzo Fair CPU scheduler

Built 1 zonelists

Kernel command line: ro root=LABEL=/ console=ttyS0,57600 console=tty debug silencelevel=8

Initializing CPU#0

PID hash table entries: 4096 (order: 12, 131072 bytes)

time.c: Using 3.579545 MHz PM timer.

time.c: Detected 2194.566 MHz processor.

Console: colour VGA+ 80x25

Dentry cache hash table entries: 1048576 (order: 11, 8388608 bytes)

Inode-cache hash table entries: 524288 (order: 10, 4194304 bytes)

Memory: 4027060k/5242880k available (2990k kernel code, 166412k reserved, 1409k data, 216k init)

Calibrating delay using timer specific routine.. 4393.00 BogoMIPS (lpj=2196504)

Mount-cache hash table entries: 256 (order: 0, 4096 bytes)

CPU: L1 I Cache: 64K (64 bytes/line), D cache 64K (64 bytes/line)

CPU: L2 Cache: 1024K (64 bytes/line)

Page beancounter hash is 524288 entries.

CPU: L1 I Cache: 64K (64 bytes/line), D cache 64K (64 bytes/line)

CPU: L2 Cache: 1024K (64 bytes/line)

CPU0: AMD Opteron(tm) Processor 248 stepping 01

per-CPU timeslice cutoff: 1024.20 usecs.

task migration cache decay timeout: 2 msec.

Booting processor 1/1 rip 6000 rsp 1000cd47f58

Initializing CPU#1

Calibrating delay using timer specific routine.. 4388.43 BogoMIPS (lpj=2194216)

CPU: L1 I Cache: 64K (64 bytes/line), D cache 64K (64 bytes/line)

CPU: L2 Cache: 1024K (64 bytes/line)

AMD Opteron(tm) Processor 248 stepping 01

Total of 2 processors activated (8781.44 BogoMIPS).

Using local APIC timer interrupts.

Detected 12.469 MHz APIC timer.

checking TSC synchronization across 2 CPUs: passed.

Brought up 2 CPUs

Disabling vsyscall due to use of PM timer

time.c: Using PM based timekeeping.

checking if image is initramfs... it is

NET: Registered protocol family 16

PCI: Using configuration type 1

mtrr: v2.0 (20020519)

ACPI: Subsystem revision 20040816

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 0000:00:02.1

ACPI: PCI Interrupt Routing Table [\_SB\_.PCI0.\_PRT]

ACPI: PCI Interrupt Routing Table [\_SB\_.PCI0.P0P1.\_PRT]

ACPI: PCI Interrupt Routing Table [\_SB\_.PCI0.P0P1.P1P2.\_PRT]

ACPI: PCI Interrupt Link [LN00] (IRQs 3 4 5 \*7 9 11 12 14 15)

ACPI: PCI Interrupt Link [LN01] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.

ACPI: PCI Interrupt Link [LN02] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.

ACPI: PCI Interrupt Link [LN03] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.

ACPI: PCI Interrupt Link [LN04] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.

ACPI: PCI Interrupt Link [LN05] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.

ACPI: PCI Interrupt Link [LN06] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.

ACPI: PCI Interrupt Link [LN07] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN08] (IRQs 3 4 5 6 7 \*9 11 12 14 15)  
ACPI: PCI Interrupt Link [LN09] (IRQs 3 4 \*5 6 7 9 11 12 14 15)  
ACPI: PCI Interrupt Link [LN10] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN11] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN12] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN13] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN14] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN15] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN16] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN17] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN18] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN19] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN20] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN21] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN22] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN23] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN24] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN25] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN26] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN27] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN28] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN29] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.  
ACPI: PCI Interrupt Link [LN30] (IRQs 3 4 5 6 7 9 11 12 14 15) \*0, disabled.

ACPI: PCI Interrupt Link [LNUS] (IRQs \*10)

ACPI: PCI Interrupt Link [LNSA] (IRQs \*11)

SCSI subsystem initialized

PCI: Using ACPI for IRQ routing

ACPI: PCI interrupt 0000:00:03.0[A] -> GSI 10 (level, low) -> IRQ 10

ACPI: PCI interrupt 0000:00:03.1[A] -> GSI 10 (level, low) -> IRQ 10

ACPI: PCI interrupt 0000:00:03.2[A] -> GSI 10 (level, low) -> IRQ 10

GSI 16 sharing vector 0xA9 and IRQ 16

ACPI: PCI interrupt 0000:00:04.0[A] -> GSI 24 (level, low) -> IRQ 16

GSI 17 sharing vector 0xB1 and IRQ 17

ACPI: PCI interrupt 0000:00:05.0[A] -> GSI 25 (level, low) -> IRQ 17

ACPI: PCI interrupt 0000:01:0e.0[A] -> GSI 11 (level, low) -> IRQ 11

ACPI: PCI interrupt 0000:01:0e.1[A] -> GSI 11 (level, low) -> IRQ 11

GSI 18 sharing vector 0xB9 and IRQ 18

ACPI: PCI interrupt 0000:02:03.0[A] -> GSI 16 (level, low) -> IRQ 18

PCI-DMA: Disabling AGP.

PCI-DMA: aperture base @ 8000000 size 65536 KB

PCI-DMA: Reserving 64MB of IOMMU area in the AGP aperture

IA32 emulation \$Id: sys\_ia32.c,v 1.32 2002/03/24 13:02:28 ak Exp \$

VFS: Disk quotas dquot\_6.5.1

Dquot-cache hash table entries: 512 (order 0, 4096 bytes)

Initializing Cryptographic API

pci\_hotplug: PCI Hot Plug PCI Core version: 0.5

Real Time Clock Driver v1.12



Linux agpgart interface v0.100 (c) Dave Jones

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

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

Serial: 8250/16550 driver \$Revision: 1.90 \$ 20 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 16384K size 1024 blocksize

Compaq SMART2 Driver (v 2.6.0)

HP CISS Driver (v 2.6.10.RH1)

Uniform Multi-Platform E-IDE driver Revision: 7.00alpha2

ide: Assuming 33MHz system bus speed for PIO modes; override with idebus=xx

SvrWks HT1000: IDE controller at PCI slot 0000:00:02.1

SvrWks HT1000: chipset revision 0

SvrWks HT1000: not 100% native mode: will probe irqs later

ide0: BM-DMA at 0xffa0-0xffa7, BIOS settings: hda:pio, hdb:DMA

Probing IDE interface ide0...

hdb: CD-224E-N, ATAPI CD/DVD-ROM drive

Using cfq io scheduler

ide0 at 0x1f0-0x1f7,0x3f6 on irq 14

Probing IDE interface ide1...

warning: many lost ticks.

Your time source seems to be instable or some driver is hogging interrupts

rip \_\_do\_softirq+0x80/0x170

Probing IDE interface ide2...

Probing IDE interface ide3...

Probing IDE interface ide4...

Probing IDE interface ide5...

Adaptec aacraid driver (1.1-5[2412])

megaraid cmm: 2.20.2.6 (Release Date: Mon Mar 7 00:01:03 EST 2005)

megaraid: 2.20.4.6 (Release Date: Mon Mar 07 12:27:22 EST 2005)

GDT-HA: Storage RAID Controller Driver. Version: 3.04

GDT-HA: Found 0 PCI Storage RAID Controllers

3ware Storage Controller device driver for Linux v1.26.00.039.

3w-xxxx: No cards found.

3ware 9000 Storage Controller device driver for Linux v2.26.04.010.

ACPI: PCI interrupt 0000:02:03.0[A] -> GSI 16 (level, low) -> IRQ 18

scsi0 : 3ware 9000 Storage Controller

3w-9xxx: scsi0: Found a 3ware 9000 Storage Controller at 0xff2ff000, IRQ: 18.

3w-9xxx: scsi0: Firmware FE9X 3.01.01.028, BIOS BE9X 3.01.00.024, Ports: 4.

Vendor: AMCC Model: 9550SX-4LP DISK Rev: 3.01

Type: Direct-Access ANSI SCSI revision: 03

libata version 1.20 loaded.

sata\_svw 0000:01:0e.0: version 1.07

ACPI: PCI interrupt 0000:01:0e.0[A] -> GSI 11 (level, low) -> IRQ 11

ata1: SATA max UDMA/133 cmd 0xFFFFFFFF0000420000 ctl 0xFFFFFFFF0000420020 bmdma  
0xFFFFFFFF0000420030 irq 11

ata2: SATA max UDMA/133 cmd 0xFFFFFFFF0000420100 ctl 0xFFFFFFFF0000420120 bmdma  
0xFFFFFFFF0000420130 irq 11

ata3: SATA max UDMA/133 cmd 0xFFFFFFFF0000420200 ctl 0xFFFFFFFF0000420220 bmdma  
0xFFFFFFFF0000420230 irq 11

ata4: SATA max UDMA/133 cmd 0xFFFFFFFF0000420300 ctl 0xFFFFFFFF0000420320 bmdma 0xFFFFFFFF0000420330 irq 11

ata1: SATA link down (SStatus 4)

scsi1 : sata\_svw

ata2: SATA link down (SStatus 4)

scsi2 : sata\_svw

ata3: SATA link down (SStatus 4)

scsi3 : sata\_svw

ata4: SATA link down (SStatus 4)

scsi4 : sata\_svw

ACPI: PCI interrupt 0000:01:0e.1[A] -> GSI 11 (level, low) -> IRQ 11

SCSI device sda: 488259584 512-byte hdwr sectors (249989 MB)

SCSI device sda: drive cache: write back, no read (daft)

SCSI device sda: 488259584 512-byte hdwr sectors (249989 MB)

SCSI device sda: drive cache: write back, no read (daft)

sda: sda1 sda2 sda3

Attached scsi disk sda at scsi0, channel 0, id 0, lun 0

Fusion MPT base driver 3.02.62.01rh

Copyright (c) 1999-2005 LSI Logic Corporation

Fusion MPT SPI Host driver 3.02.62.01rh

Fusion MPT FC Host driver 3.02.62.01rh

Fusion MPT SAS Host driver 3.02.62.01rh

mice: PS/2 mouse device common for all mice

input: AT Translated Set 2 keyboard on isa0060/serio0

input: ImPS/2 Generic Wheel Mouse on isa0060/serio1

md: linear personality registered as nr 1

md: raid0 personality registered as nr 2

md: raid1 personality registered as nr 3

md: raid10 personality registered as nr 9

md: raid5 personality registered as nr 4

raid5: automatically using best checksumming function: generic\_sse

    generic\_sse: 213588.000 MB/sec

raid5: using function: generic\_sse (213588.000 MB/sec)

md: multipath personality registered as nr 7

md: md driver 0.90.0 MAX\_MD\_DEVS=256, MD\_SB\_DISKS=27

device-mapper: 4.5.0-ioctl (2005-10-04) initialised: dm-devel@redhat.com

device-mapper: dm-multipath version 1.0.4 loaded

device-mapper: dm-round-robin version 1.0.0 loaded

device-mapper: dm-emc version 0.0.3 loaded

NET: Registered protocol family 2

IP route cache hash table entries: 262144 (order: 9, 2097152 bytes)

TCP established hash table entries: 262144 (order: 10, 4194304 bytes)

TCP bind hash table entries: 262144 (order: 10, 4194304 bytes)

TCP: Hash tables configured (established 262144 bind 262144)

NET: Registered protocol family 1

ACPI: (supports S0 S1 S4 S5)

ACPI wakeup devices:

P0P1 PCIX USB0 USB1 USB2 PS2K PS2M GBE1 GBE2 SLT1 SLT2 SLT3 SLT4

Freeing unused kernel memory: 216k freed

kjournald starting. Commit interval 5 seconds

EXT3-fs: mounted filesystem with ordered data mode.

SysRq : SysRq : SysRq : SysRq : SysRq : SysRq : SysRq : SysRq : SysRq : SysRq :  
SysRq :

The SysRq : at the end are displayed everytime I press Alt-SysRq-P or Alt-SysRq-T

If you need any additional test or information please let me know!

Best regards

Fernando

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Subject: Re: Intermittent freeze at "initializing hardware... storage network audio"  
Posted by [dev](#) on Thu, 12 Oct 2006 10:22:19 GMT

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it looks like you have too strict loglevel.

Try pressing AltSysRq-8 before AltSysRq-p and -t.

It should print call traces now.

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