

Re: [RFC][PATCH] IO-APIC blacklist

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2007-06/msg00773.html>

- *From:* Tear <tarrqt@xxxxxxxx>
 - *Date:* Sat, 2 Jun 2007 16:53:19 -0700 (PDT)
-

Linus Torvalds <torvalds@xxxxxxxxxxxxxxxxxxxx> wrote:

On Sat, 2 Jun 2007, Tear wrote:

I have tested my system with different kernel command lines and have ruled out all of the four possibilities. Here's a matrix which summarizes the situation. My USB-enabled digital camera's data transfer rate is as follows:

That's not the interesting part.

There's no way the IO-APIC itself "cant' work". That's a normal Intel IO-APIC, it's fine. There's something else that causes things to not work, properly, and the question is why.

So the APIC choice triggers some other bug that then ACPI fixes up.

From the dmesg between "acpi=ht" and "acpi=force", the prime candidates would seem to be:

```
ENABLING IO-APIC IRQs
-...TIMER: vector=0x31 apic1=0 pin1=2 apic2=0 pin2=0 # slow
+...TIMER: vector=0x31 apic1=0 pin1=2 apic2=-1 pin2=-1 # fine
```

and

```
-uhci_hcd 0000:00:1f.2: irq 19, io base 0x0000ff80 # slow
+uhci_hcd 0000:00:1f.2: irq 17, io base 0x0000ff80 # fine
```

(Interestingly, your *other* USB controller at 0:1f.4 gets assigned irq 18 in both cases).

Now, I doubt it's the timer, and the UHCI irq thing sounds more likely to be a problem anyway, since it's USB that's slow, so it would be interesting to hear whether:

```
acpi=force pci=routeirq
```

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is still slow (it should enable ACPI, but then force the interrupt routing to use the PIRQ table anyway).

No, the camera is fast when I use `acpi=force` and `pci=routeirq`. It does not matter which USB port I use. I am attaching the dmesg output with `acpi=force` and `pci=routeirq` appended to the kernel command line.

Also, if you can figure out which USB ports are on the `_other_` controller (the one that gets irq 18 regardless of whether ACPI is on or off), it would also be interesting to hear whether the camera is always fast (or perhaps always slow) when connected to a part that is off that controller..

Originally I have been using the USB ports on the front panel of the computer. I had not tested the USB ports on the rear panel of the computer. I have just tested the USB ports on the rear panel of the computer with `acpi=ht`, and surprise, the camera is fast!

From this we learn that the problematic ports are on the front panel whereas the "always-working" ports are on the rear panel. The problematic ports work when `acpi=force` is appended to the kernel command line.

Finally, I wonder why that particular box is marked with an "acpi=ht" blacklisting in the first place. Rather than add a new blacklist, it might be better to remove an old (and perhaps incorrect) one.

That blacklist entry is `_ancient_`. It's entirely possible that it's just bogus: we've had so many ACPI fixes since it was added, that it's quite possible that the blacklist entry itself is bogus, and is the result of some old ACPI bug that triggered on that entry.

The Dell GX240 entry was added by commit 68e4ad79294 in the historic Linux archive:

Author: Len Brown <len.brown@xxxxxxxxxx>
Date: Sat Aug 9 15:00:59 2003 -0400

ACPI from 2.4:
build: add ACPI_HT, delete ACPI_HT_ONLY
boot: add `acpi={force, off, ht}`; delete "noht", "acpimp="
add DMI blacklist from UnitedLinux

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and since it sounds like the machine `_works_` with ACPI on, my real preference would be to just remove the black-list entry.

I would prefer to patch the kernel to prevent IO-APIC when ACPI is not enabled by using the "acpi_disabled" variable. But since you are the kernel developer among you and I, I guess you should have the right choose what the best option is.

In fact, I thought that patch already existed in the `-mm` tree?

Yes, I had made an attempt to get it out of the blacklist a couple of weeks ago. The patch is in the `-mm` tree. Could we please get that patch into the main tree?

Len – do you have any archives back from 2003 and earlier to indicate why the Dell GX240 was blacklisted?

In fact, googling for this shows some other users saying that removing the blacklist entry fixes things:

<http://forums.fedoraforum.org/showthread.php?t=107291>

and there is another report ("Lil_miss_linux") claiming that moving a USB cardreader from one USB plug to another just "fixed" the issue they had. So I'm doubly interested to hear whether maybe the camera works fine in another USB port (which I'd guess is the one presumably connected to `irq18`).

As I said above, with `acpi=ht`, the camera works fine when connected to the USB port on the back side of the computer. (Not the ports on the front side.)

Thank you for spending time on this problem. I really appreciate your efforts.

Regards,
– Tear

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Try the Yahoo! Mail Beta.

http://advison.webevents.yahoo.com/mailbeta/newmail_tools.html Linux version 2.6.21.3-smp (root@root) (gcc version 4.1.2 20061115 (prerelease) (Debian 4.1.1-21)) #25 SMP Sun Jun 3 01:56:11 EEST 2007

BIOS-provided physical RAM map:

sanitize start

sanitize end

copy_e820_map() start: 0000000000000000 size: 00000000000a0000 end: 00000000000a0000 type: 1

copy_e820_map() type is E820_RAM

copy_e820_map() start: 0000000000f00000 size: 0000000000100000 end: 0000000000100000 type: 2

copy_e820_map() start: 0000000001000000 size: 000000003ff77000 end: 000000003ff77000 type: 1

copy_e820_map() type is E820_RAM

copy_e820_map() start: 000000003ff77000 size: 0000000000020000 end: 000000003ff79000 type: 4

copy_e820_map() start: 000000003ff79000 size: 0000000000087000 end: 0000000040000000 type: 2

copy_e820_map() start: 00000000fec00000 size: 0000000000100000 end: 00000000fec10000 type: 2

copy_e820_map() start: 00000000fee00000 size: 0000000000100000 end: 00000000fee10000 type: 2

copy_e820_map() start: 00000000ffb00000 size: 0000000005000000 end: 0000000100000000 type: 2

BIOS-e820: 0000000000000000 - 0000000000a00000 (usable)

BIOS-e820: 0000000000f00000 - 0000000000100000 (reserved)

BIOS-e820: 0000000000100000 - 000000003ff77000 (usable)

BIOS-e820: 000000003ff77000 - 000000003ff79000 (ACPI NVS)

BIOS-e820: 000000003ff79000 - 0000000040000000 (reserved)

BIOS-e820: 00000000fec00000 - 00000000fec10000 (reserved)

BIOS-e820: 00000000fee00000 - 00000000fee10000 (reserved)

BIOS-e820: 00000000ffb00000 - 0000000100000000 (reserved)

127MB HIGHMEM available.

896MB LOWMEM available.

found SMP MP-table at 000fe710

Entering add_active_range(0, 0, 262007) 0 entries of 256 used

Zone PFN ranges:

DMA 0 -> 4096

Normal 4096 -> 229376

HighMem 229376 -> 262007

early_node_map[1] active PFN ranges

0: 0 -> 262007

On node 0 totalpages: 262007

DMA zone: 32 pages used for memmap

DMA zone: 0 pages reserved

DMA zone: 4064 pages, LIFO batch:0

Normal zone: 1760 pages used for memmap

Normal zone: 223520 pages, LIFO batch:31

HighMem zone: 254 pages used for memmap

HighMem zone: 32377 pages, LIFO batch:7

DMI 2.3 present.

Warning: acpi=force overrides DMI blacklist: acpi=ht

ACPI: RSDP 000FD560, 0014 (r0 DELL)

ACPI: RSDT 000FD574, 0034 (r1 DELL GX240 8 ASL 61)

ACPI: FACP 000FD5A8, 0074 (r1 DELL GX240 8 ASL 61)

ACPI: DSDT FFFE3C22, 2393 (r1 DELL dt_ex 1000 MSFT 100000D)

ACPI: FACS 3FF77000, 0040

ACPI: SSDT FFFE5FB5, 00A7 (r1 DELL st_ex 1000 MSFT 100000D)

ACPI: APIC 000FD61C, 005C (r1 DELL GX240 8 ASL 61)

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ACPI: BOOT 000FD678, 0028 (r1 DELL GX240 8 ASL 61)
ACPI: PM-Timer IO Port: 0x808
ACPI: Local APIC address 0xfe00000
ACPI: LAPIC (acpi_id[0x01] lapic_id[0x00] enabled)
Processor #0 15:0 APIC version 20
ACPI: LAPIC (acpi_id[0x02] lapic_id[0x01] disabled)
ACPI: IOAPIC (id[0x01] address[0xfec00000] gsi_base[0])
IOAPIC[0]: apic_id 1, version 32, address 0xfec00000, GSI 0-23
ACPI: INT_SRC_OVR (bus 0 bus_irq 0 global_irq 2 dfl dfl)
ACPI: INT_SRC_OVR (bus 0 bus_irq 9 global_irq 9 high level)
ACPI: IRQ0 used by override.
ACPI: IRQ2 used by override.
ACPI: IRQ9 used by override.
Enabling APIC mode: Flat. Using 1 I/O APICs
Using ACPI (MADT) for SMP configuration information
Allocating PCI resources starting at 50000000 (gap: 40000000:bec00000)
Built 1 zonelists. Total pages: 259961
Kernel command line: root=/dev/hda8 ro acpi=force pci=routeirq
mapped APIC to fffd000 (fee00000)
mapped IOAPIC to fffc000 (fec00000)
Enabling fast FPU save and restore... done.
Enabling unmasked SIMD FPU exception support... done.
Initializing CPU#0
PID hash table entries: 4096 (order: 12, 16384 bytes)
Detected 1694.587 MHz processor.
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: 1029056k/1048028k available (2028k kernel code, 18228k reserved, 921k data, 324k init, 130524k highmem)
virtual kernel memory layout:
fixmap : 0xfff4f000 - 0xfffff000 (704 kB)
pkmap : 0xff800000 - 0xffc00000 (4096 kB)
vmalloc : 0xf8800000 - 0xff7fe000 (111 MB)
lowmem : 0xc0000000 - 0xf8000000 (896 MB)
.init : 0xc03e8000 - 0xc0439000 (324 kB)
.data : 0xc02fb289 - 0xc03e1774 (921 kB)
.text : 0xc0100000 - 0xc02fb289 (2028 kB)
Checking if this processor honours the WP bit even in supervisor mode... Ok.
Calibrating delay using timer specific routine.. 3392.50 BogoMIPS (lpj=6785006)
Security Framework v1.0.0 initialized
SELinux: Disabled at boot.
Mount-cache hash table entries: 512
CPU: After generic identify, caps: 3febfbff 00000000 00000000 00000000 00000000 00000000
CPU: Trace cache: 12K uops, L1 D cache: 8K
CPU: L2 cache: 256K
CPU: Hyper-Threading is disabled
CPU: After all inits, caps: 3febfbff 00000000 00000000 00003080 00000000 00000000 00000000
Compat vDSO mapped to fffe000.
Checking 'hlt' instruction... OK.
SMP alternatives: switching to UP code

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Freeing SMP alternatives: 12k freed
ACPI: Core revision 20070126
CPU0: Intel(R) Pentium(R) 4 CPU 1700MHz stepping 0a
Total of 1 processors activated (3392.50 BogomIPS).
ENABLING IO-APIC IRQs
...TIMER: vector=0x31 apic1=0 pin1=2 apic2=-1 pin2=-1
Brought up 1 CPUs
NET: Registered protocol family 16
EISA bus registered
ACPI: bus type pci registered
PCI: PCI BIOS revision 2.10 entry at 0xfbe2e, last bus=2
PCI: Using configuration type 1
Setting up standard PCI resources
ACPI: Interpreter enabled
ACPI: (supports S0 S1 S3 S4 S5)
ACPI: Using IOAPIC for interrupt routing
ACPI: PCI Root Bridge [PCI0] (0000:00)
PCI: Probing PCI hardware (bus 00)
PCI quirk: region 0800-087f claimed by ICH4 ACPI/GPIO/TCO
PCI quirk: region 0880-08bf claimed by ICH4 GPIO
Boot video device is 0000:01:00.0
PCI: Transparent bridge - 0000:00:1e.0
ACPI: PCI Interrupt Routing Table [_SB_.PCI0._PRT]
ACPI: PCI Interrupt Routing Table [_SB_.PCI0.PCI1._PRT]
ACPI: PCI Interrupt Link [LNKA] (IRQs 3 4 *5 6 7 9 10 11 12 15)
ACPI: PCI Interrupt Link [LNKB] (IRQs 3 4 5 6 7 9 *10 11 12 15)
ACPI: PCI Interrupt Link [LNKC] (IRQs 3 4 5 6 7 *9 10 11 12 15)
ACPI: PCI Interrupt Link [LNKD] (IRQs 3 4 5 6 7 *9 10 11 12 15)
ACPI: PCI Interrupt Link [LNKE] (IRQs 3 4 5 6 7 9 10 11 12 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKF] (IRQs 3 4 5 6 7 9 10 11 12 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKG] (IRQs 3 4 5 6 7 9 10 11 12 15) *0, disabled.
ACPI: PCI Interrupt Link [LNKH] (IRQs 3 4 5 6 7 *9 10 11 12 15)
Linux Plug and Play Support v0.97 (c) Adam Belay
pnp: PnP ACPI init
pnp: PnP ACPI: found 13 devices
PnPBIOS: Disabled by ACPI PNP
PCI: Using ACPI for IRQ routing
PCI: Routing PCI interrupts for all devices because "pci=routeirq" specified
ACPI: PCI Interrupt 0000:00:1f.2[D] -> GSI 19 (level, low) -> IRQ 16
ACPI: PCI Interrupt 0000:00:1f.3[B] -> GSI 17 (level, low) -> IRQ 17
ACPI: PCI Interrupt 0000:00:1f.4[C] -> GSI 23 (level, low) -> IRQ 18
ACPI: PCI Interrupt 0000:00:1f.5[B] -> GSI 17 (level, low) -> IRQ 17
ACPI: PCI Interrupt 0000:01:00.0[A] -> GSI 16 (level, low) -> IRQ 19
ACPI: PCI Interrupt 0000:02:08.0[A] -> GSI 17 (level, low) -> IRQ 17
ACPI: PCI Interrupt 0000:02:0c.0[A] -> GSI 18 (level, low) -> IRQ 20
NET: Registered protocol family 8
NET: Registered protocol family 20
NetLabel: Initializing
NetLabel: domain hash size = 128
NetLabel: protocols = UNLABELED CIPSOv4
NetLabel: unlabeled traffic allowed by default

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pnnp: 00:00: iomem range 0x0-0x9ffff could not be reserved
pnnp: 00:00: iomem range 0x100000-0xfffff could not be reserved
pnnp: 00:00: iomem range 0x1000000-0x3ff76fff could not be reserved
pnnp: 00:00: iomem range 0xf0000-0xfffff could not be reserved
pnnp: 00:0c: ioport range 0x800-0x85f has been reserved
pnnp: 00:0c: ioport range 0xc00-0xc7f has been reserved
pnnp: 00:0c: ioport range 0x860-0x8ff could not be reserved
Time: tsc clocksource has been installed.
PCI: Bridge: 0000:00:01.0
IO window: e000-ffff
MEM window: ff800000-ff9fffff
PREFETCH window: f8000000-fbfffff
PCI: Bridge: 0000:00:1e.0
IO window: d000-dfff
MEM window: ff600000-ff7fffff
PREFETCH window: 50000000-500fffff
PCI: Setting latency timer of device 0000:00:1e.0 to 64
NET: Registered protocol family 2
IP route cache hash table entries: 32768 (order: 5, 131072 bytes)
TCP established hash table entries: 131072 (order: 8, 1572864 bytes)
TCP bind hash table entries: 65536 (order: 7, 524288 bytes)
TCP: Hash tables configured (established 131072 bind 65536)
TCP reno registered
checking if image is initramfs... it is
Switched to high resolution mode on CPU 0
Freeing initrd memory: 5477k freed
Simple Boot Flag at 0x7a set to 0x1
audit: initializing netlink socket (disabled)
audit(1180837391.204:1): initialized
highmem bounce pool size: 64 pages
VFS: Disk quotas dquot_6.5.1
Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)
io scheduler noop registered
io scheduler anticipatory registered
io scheduler deadline registered
io scheduler cfq registered (default)
isapnp: Scanning for PnP cards...
isapnp: No Plug & Play device found
Real Time Clock Driver v1.12ac
Serial: 8250/16550 driver \$Revision: 1.90 \$ 4 ports, IRQ sharing enabled
serial8250: ttyS0 at I/O 0x3f8 (irq = 4) is a 16550A
serial8250: ttyS1 at I/O 0x2f8 (irq = 3) is a 16550A
00:09: ttyS0 at I/O 0x3f8 (irq = 4) is a 16550A
00:0a: ttyS1 at I/O 0x2f8 (irq = 3) is a 16550A
RAMDISK driver initialized: 16 RAM disks of 65536K size 1024 blocksize
Uniform Multi-Platform E-IDE driver Revision: 7.00alpha2
ide: Assuming 33MHz system bus speed for PIO modes; override with idebus=xx
PNP: PS/2 Controller [PNP0303:KBD,PNP0f13:MOU] at 0x60,0x64 irq 1,12
serio: i8042 KBD port at 0x60,0x64 irq 1
serio: i8042 AUX port at 0x60,0x64 irq 12
mice: PS/2 mouse device common for all mice

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EISA: Probing bus 0 at eisa.0
EISA: Detected 0 cards.
TCP cubic registered
NET: Registered protocol family 1
Using IPI No-Shortcut mode
Freeing unused kernel memory: 324k freed
input: AT Translated Set 2 keyboard as /class/input/input0
ICH2: IDE controller at PCI slot 0000:00:1f.1
ICH2: chipset revision 18
ICH2: not 100% native mode: will probe irqs later
ide0: BM-DMA at 0xffa0-0xffa7, BIOS settings: hda:DMA, hdb:pio
ide1: BM-DMA at 0xffa8-0xffaf, BIOS settings: hdc:DMA, hdd:pio
Probing IDE interface ide0...
hda: SAMSUNG SP0802N, ATA DISK drive
ide0 at 0x1f0-0x1f7,0x3f6 on irq 14
Probing IDE interface ide1...
hdc: SAMSUNG CD-R/RW SW-252B, ATAPI CD/DVD-ROM drive
ide1 at 0x170-0x177,0x376 on irq 15
SCSI subsystem initialized
libata version 2.20 loaded.
hda: max request size: 512KiB
hda: 156368016 sectors (80060 MB) w/2048KiB Cache, CHS=16383/255/63, UDMA(100)
usbcore: registered new interface driver usbfs
usbcore: registered new interface driver hub
usbcore: registered new device driver usb
USB Universal Host Controller Interface driver v3.0
ACPI: PCI Interrupt 0000:00:1f.2[D] -> GSI 19 (level, low) -> IRQ 16
PCI: Setting latency timer of device 0000:00:1f.2 to 64
uhci_hcd 0000:00:1f.2: UHCI Host Controller
uhci_hcd 0000:00:1f.2: new USB bus registered, assigned bus number 1
uhci_hcd 0000:00:1f.2: irq 16, io base 0x0000ff80
usb usb1: configuration #1 chosen from 1 choice
hub 1-0:1.0: USB hub found
hub 1-0:1.0: 2 ports detected
hda: cache flushes supported
hda: hda1 hda2 hda3 hda4 < hda5<6>ACPI: PCI Interrupt 0000:00:1f.4[C] -> GSI 23 (level, low) -> IRQ 18
PCI: Setting latency timer of device 0000:00:1f.4 to 64
uhci_hcd 0000:00:1f.4: UHCI Host Controller
uhci_hcd 0000:00:1f.4: new USB bus registered, assigned bus number 2
uhci_hcd 0000:00:1f.4: irq 18, io base 0x0000ff60
usb usb2: configuration #1 chosen from 1 choice
hub 2-0:1.0: USB hub found
hub 2-0:1.0: 2 ports detected
hda6 hda7 hda8 hda9<6>ACPI: PCI Interrupt 0000:02:0c.0[A] -> GSI 18 (level, low) -> IRQ 20
3c59x: Donald Becker and others. www.scyld.com/network/vortex.html
0000:02:0c.0: 3Com PCI 3c905C Tornado at f882cc00.
hda10 hda11 >
hdc: ATAPI 52X CD-ROM CD-R/RW drive, 2048kB Cache, UDMA(33)
Uniform CD-ROM driver Revision: 3.20
usb 1-1: new full speed USB device using uhci_hcd and address 2
usb 1-1: configuration #1 chosen from 1 choice

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kjournald starting. Commit interval 5 seconds
EXT3-fs: mounted filesystem with ordered data mode.
Linux agpgart interface v0.102 (c) Dave Jones
pci_hotplug: PCI Hot Plug PCI Core version: 0.5
shpchp: Standard Hot Plug PCI Controller Driver version: 0.4
agpgart: Detected an Intel i845 Chipset.
agpgart: AGP aperture is 64M @ 0xf4000000
iTCO_vendor_support: vendor-support=0
iTCO_wdt: Intel TCO WatchDog Timer Driver v1.01 (21-Jan-2007)
iTCO_wdt: Found a ICH2 TCO device (Version=1, TCOBASE=0x0860)
iTCO_wdt: initialized. heartbeat=30 sec (nowayout=0)
intel_rng: FWH not detected
input: PC Speaker as /class/input/input1
ACPI: PCI Interrupt 0000:00:1f.3[B] -> GSI 17 (level, low) -> IRQ 17
Floppy drive(s): fd0 is 1.44M
FDC 0 is a post-1991 82077
parport: PnPBIOS parport detected.
parport0: PC-style at 0x378 (0x778), irq 7, dma 3 [PCSPP,TRISTATE,COMPAT,ECP,DMA]
drivers/usb/class/usblp.c: usblp0: USB Bidirectional printer dev 2 if 0 alt 1 proto 2 vid 0x03F0 pid 0x0917
usbcore: registered new interface driver usblp
drivers/usb/class/usblp.c: v0.13: USB Printer Device Class driver
logips2pp: Detected unknown logitech mouse model 1
ACPI: PCI Interrupt 0000:00:1f.5[B] -> GSI 17 (level, low) -> IRQ 17
PCI: Setting latency timer of device 0000:00:1f.5 to 64
input: PS/2 Logitech Mouse as /class/input/input2
intel8x0_measure_ac97_clock: measured 52046 usecs
intel8x0: clocking to 41151
EXT3 FS on hda8, internal journal
loop: loaded (max 8 devices)
device-mapper: ioctl: 4.11.0-ioctl (2006-10-12) initialised: dm-devel@xxxxxxxxxxx
ReiserFS: hda2: found reiserfs format "3.6" with standard journal
ReiserFS: hda2: using ordered data mode
ReiserFS: hda2: journal params: device hda2, size 8192, journal first block 18, max trans len 1024, max batch 900, max commit age 30, max trans age 30
ReiserFS: hda2: checking transaction log (hda2)
ReiserFS: hda2: Using r5 hash to sort names
ReiserFS: hda3: found reiserfs format "3.6" with standard journal
ReiserFS: hda3: using ordered data mode
ReiserFS: hda3: journal params: device hda3, size 8192, journal first block 18, max trans len 1024, max batch 900, max commit age 30, max trans age 30
ReiserFS: hda3: checking transaction log (hda3)
ReiserFS: hda3: Using r5 hash to sort names
Adding 1052216k swap on /dev/mapper/cryptoswap. Priority:-1 extents:1 across:1052216k
eth0: setting full-duplex.
NET: Registered protocol family 17
lp0: using parport0 (interrupt-driven).
ppdev: user-space parallel port driver
tsdev (compaq touchscreen emulation) is scheduled for removal.
See Documentation/feature-removal-schedule.txt for details.
Installing knfsd (copyright (C) 1996 okir@xxxxxxxxxxx).
NFSD: Using /var/lib/nfs/v4recovery as the NFSv4 state recovery directory

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NFSD: starting 90-second grace period
NET: Registered protocol family 10
lo: Disabled Privacy Extensions
Mobile IPv6
ip_tables: (C) 2000-2006 Netfilter Core Team
Netfilter messages via NETLINK v0.30.
nf_conntrack version 0.5.0 (8187 buckets, 65496 max)
[drm] Initialized drm 1.1.0 20060810
ACPI: PCI Interrupt 0000:01:00.0[A] -> GSI 16 (level, low) -> IRQ 19
[drm] Initialized r128 2.5.0 20030725 on minor 0
agpgart: Found an AGP 2.0 compliant device at 0000:00:00.0.
agpgart: Putting AGP V2 device at 0000:00:00.0 into 1x mode
agpgart: Putting AGP V2 device at 0000:01:00.0 into 1x mode
eth0: no IPv6 routers present