

# Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

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  - *Date:* Fri, 9 Mar 2007 15:06:50 +0000 (GMT)
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Note that I am amazed that the kernbench even worked.

The results without slub\_debug were not good except for IA64. x86\_64 and ppc64 both blew up for a variety of reasons. The IA64 results were

## KernBench Comparison

```
-----
2.6.21-rc2-mm2-clean 2.6.21-rc2-mm2-slub %diff
User CPU time 1084.64 1032.93 4.77%
System CPU time 73.38 63.14 13.95%
Total CPU time 1158.02 1096.07 5.35%
Elapsed time 307.00 285.62 6.96%
```

## AIM9 Comparison

```
-----
2.6.21-rc2-mm2-clean 2.6.21-rc2-mm2-slub
1 creat_clo 425460.75 438809.64 13348.89 3.14% File Creations and Closes/second
2 page_test 2097119.26 3398259.27 1301140.01 62.04% System Allocations & Pages/second
3 brk_test 7008395.33 6728755.72 -279639.61 -3.99% System Memory Allocations/second
4 jmp_test 12226295.31 12254966.21 28670.90 0.23% Non-local gotos/second
5 signal_test 1271126.28 1235510.96 -35615.32 -2.80% Signal Traps/second
6 exec_test 395.54 381.18 -14.36 -3.63% Program Loads/second
7 fork_test 13218.23 13211.41 -6.82 -0.05% Task Creations/second
8 link_test 64776.04 7488.13 -57287.91 -88.44% Link/Unlink Pairs/second
```

An example console log from x86\_64 is below. It's not particular clear why it went blamo and I haven't had a chance all day to kick it around for a bit due to a variety of other hilarity floating around.

```
Linux version 2.6.21-rc2-mm2-autokern1 (root@xxxxxxxxxxxxxxxxxxxxxxxxxxxx) (gcc version 4.1.1
20060525 (Red Hat 4.1.1-1)) #1 SMP Thu Mar 8 12:13:27 CST 2007
Command line: ro root=/dev/VolGroup00/LogVol00 rhgb console=tty0 console=ttyS1,19200 selinux=no
autobench_args: root=30726124 ABAT:1173378546 loglevel=8
BIOS-provided physical RAM map:
BIOS-e820: 0000000000000000 - 000000000009d400 (usable)
BIOS-e820: 000000000009d400 - 00000000000a0000 (reserved)
```

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

BIOS-e820: 0000000000e0000 – 000000000100000 (reserved)  
BIOS-e820: 000000000100000 – 000000003ffcddc0 (usable)  
BIOS-e820: 000000003ffcddc0 – 000000003ffd0000 (ACPI data)  
BIOS-e820: 000000003ffd0000 – 0000000040000000 (reserved)  
BIOS-e820: 00000000fec00000 – 0000000100000000 (reserved)  
Entering add\_active\_range(0, 0, 157) 0 entries of 3200 used  
Entering add\_active\_range(0, 256, 262093) 1 entries of 3200 used  
end\_pfn\_map = 1048576  
DMI 2.3 present.  
ACPI: RSDP 000FDFC0, 0014 (r0 IBM )  
ACPI: RSDT 3FFCFF80, 0034 (r1 IBM SERBLADE 1000 IBM 45444F43)  
ACPI: FACP 3FFCFEC0, 0084 (r2 IBM SERBLADE 1000 IBM 45444F43)  
ACPI: DSDT 3FFCDDC0, 1EA6 (r1 IBM SERBLADE 1000 INTL 2002025)  
ACPI: FACS 3FFCFCC0, 0040  
ACPI: APIC 3FFCFE00, 009C (r1 IBM SERBLADE 1000 IBM 45444F43)  
ACPI: SRAT 3FFCFD40, 0098 (r1 IBM SERBLADE 1000 IBM 45444F43)  
ACPI: HPET 3FFCFD00, 0038 (r1 IBM SERBLADE 1000 IBM 45444F43)  
SRAT: PXM 0 -> APIC 0 -> Node 0  
SRAT: PXM 0 -> APIC 1 -> Node 0  
SRAT: PXM 1 -> APIC 2 -> Node 1  
SRAT: PXM 1 -> APIC 3 -> Node 1  
SRAT: Node 0 PXM 0 0-40000000  
Entering add\_active\_range(0, 0, 157) 0 entries of 3200 used  
Entering add\_active\_range(0, 256, 262093) 1 entries of 3200 used  
NUMA: Using 63 for the hash shift.  
Bootmem setup node 0 0000000000000000-000000003ffcd000  
Node 0 memmap at 0xffff81003efcd000 size 16773952 first pfn 0xffff81003efcd000  
sizeof(struct page) = 64  
Zone PFN ranges:  
DMA 0 -> 4096  
DMA32 4096 -> 1048576  
Normal 1048576 -> 1048576  
Movable zone start PFN for each node  
early\_node\_map[2] active PFN ranges  
0: 0 -> 157  
0: 256 -> 262093  
On node 0 totalpages: 261994  
DMA zone: 64 pages used for memmap  
DMA zone: 2017 pages reserved  
DMA zone: 1916 pages, LIFO batch:0  
DMA32 zone: 4031 pages used for memmap  
DMA32 zone: 253966 pages, LIFO batch:31  
Normal zone: 0 pages used for memmap  
Movable zone: 0 pages used for memmap  
ACPI: PM-Timer IO Port: 0x2208  
ACPI: Local APIC address 0xfe00000  
ACPI: LAPIC (acpi\_id[0x00] lapic\_id[0x00] enabled)  
Processor #0 (Bootup-CPU)  
ACPI: LAPIC (acpi\_id[0x01] lapic\_id[0x01] enabled)  
Processor #1  
ACPI: LAPIC (acpi\_id[0x02] lapic\_id[0x02] enabled)

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

Processor #2  
ACPI: LAPIC (acpi\_id[0x03] lapic\_id[0x03] enabled)  
Processor #3  
ACPI: LAPIC\_NMI (acpi\_id[0x00] dfl dfl lint[0x1])  
ACPI: LAPIC\_NMI (acpi\_id[0x01] dfl dfl lint[0x1])  
ACPI: LAPIC\_NMI (acpi\_id[0x02] dfl dfl lint[0x1])  
ACPI: LAPIC\_NMI (acpi\_id[0x03] dfl dfl lint[0x1])  
ACPI: IOAPIC (id[0x0e] address[0xfec00000] gsi\_base[0])  
IOAPIC[0]: apic\_id 14, address 0xfec00000, GSI 0–23  
ACPI: IOAPIC (id[0x0d] address[0xfec10000] gsi\_base[24])  
IOAPIC[1]: apic\_id 13, address 0xfec10000, GSI 24–27  
ACPI: IOAPIC (id[0x0c] address[0xfec20000] gsi\_base[48])  
IOAPIC[2]: apic\_id 12, address 0xfec20000, GSI 48–51  
ACPI: INT\_SRC\_OVR (bus 0 bus\_irq 0 global\_irq 2 dfl dfl)  
ACPI: INT\_SRC\_OVR (bus 0 bus\_irq 11 global\_irq 11 low level)  
ACPI: IRQ0 used by override.  
ACPI: IRQ2 used by override.  
ACPI: IRQ11 used by override.  
Setting APIC routing to flat  
ACPI: HPET id: 0x10228203 base: 0xfecff000  
Using ACPI (MADT) for SMP configuration information  
Nosave address range: 000000000009d000 – 000000000009e000  
Nosave address range: 000000000009e000 – 00000000000a0000  
Nosave address range: 00000000000a0000 – 00000000000e0000  
Nosave address range: 00000000000e0000 – 0000000000100000  
Allocating PCI resources starting at 50000000 (gap: 40000000:bec00000)  
SMP: Allowing 4 CPUs, 0 hotplug CPUs  
PERCPU: Allocating 66368 bytes of per cpu data  
Built 1 zonelists. Total pages: 255882  
Kernel command line: ro root=/dev/VolGroup00/LogVol00 rhgb console=tty0 console=ttyS1,19200  
selinux=no autobench\_args: root=30726124 ABAT:1173378546 loglevel=8  
Initializing CPU#0  
PID hash table entries: 4096 (order: 12, 32768 bytes)  
Marking TSC unstable due to TSCs unsynchronized  
time.c: Detected 1993.781 MHz processor.  
Console: colour VGA+ 80x25  
Checking aperture..  
CPU 0: aperture @ dc000000 size 64 MB  
CPU 1: aperture @ dc000000 size 64 MB  
Memory: 1021548k/1048372k available (2878k kernel code, 26428k reserved, 1472k data, 340k init)  
SLUB V4: General Slabs=11, HW alignment=64, Processors=4, Nodes=64  
Calibrating delay using timer specific routine.. 3991.49 BogoMIPS (lpj=7982991)  
Security Framework v1.0.0 initialized  
SELinux: Disabled at boot.  
Capability LSM initialized  
Dentry cache hash table entries: 131072 (order: 8, 1048576 bytes)  
Inode-cache hash table entries: 65536 (order: 7, 524288 bytes)  
Mount-cache hash table entries: 256  
CPU: L1 I Cache: 64K (64 bytes/line), D cache 64K (64 bytes/line)  
CPU: L2 Cache: 1024K (64 bytes/line)  
CPU 0/0 -> Node 0

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

CPU: Physical Processor ID: 0  
CPU: Processor Core ID: 0  
SMP alternatives: switching to UP code  
ACPI: Core revision 20070126  
Using local APIC timer interrupts.  
result 12461150  
Detected 12.461 MHz APIC timer.  
SMP alternatives: switching to SMP code  
Booting processor 1/4 APIC 0x1  
Initializing CPU#1  
Calibrating delay using timer specific routine.. 3987.64 BogoMIPS (lpj=7975295)  
CPU: L1 I Cache: 64K (64 bytes/line), D cache 64K (64 bytes/line)  
CPU: L2 Cache: 1024K (64 bytes/line)  
CPU 1/1 -> Node 0  
CPU: Physical Processor ID: 0  
CPU: Processor Core ID: 1  
Dual Core AMD Opteron(tm) Processor 270 stepping 02  
SMP alternatives: switching to SMP code  
Booting processor 2/4 APIC 0x2  
Initializing CPU#2  
Calibrating delay using timer specific routine.. 3987.64 BogoMIPS (lpj=7975291)  
CPU: L1 I Cache: 64K (64 bytes/line), D cache 64K (64 bytes/line)  
CPU: L2 Cache: 1024K (64 bytes/line)  
CPU 2/2 -> Node 0  
CPU: Physical Processor ID: 1  
CPU: Processor Core ID: 0  
Dual Core AMD Opteron(tm) Processor 270 stepping 02  
SMP alternatives: switching to SMP code  
Booting processor 3/4 APIC 0x3  
Initializing CPU#3  
Calibrating delay using timer specific routine.. 3987.64 BogoMIPS (lpj=7975292)  
CPU: L1 I Cache: 64K (64 bytes/line), D cache 64K (64 bytes/line)  
CPU: L2 Cache: 1024K (64 bytes/line)  
CPU 3/3 -> Node 0  
CPU: Physical Processor ID: 1  
CPU: Processor Core ID: 1  
Dual Core AMD Opteron(tm) Processor 270 stepping 02  
Brought up 4 CPUs  
migration\_cost=413  
PM: Adding info for No Bus:platform  
NET: Registered protocol family 16  
PM: Adding info for No Bus:vtcon0  
ACPI: bus type pci registered  
PCI: Using configuration type 1  
ACPI: Interpreter enabled  
ACPI: (supports S0 S1 S4 S5)  
ACPI: Using IOAPIC for interrupt routing  
PM: Adding info for acpi:acpi\_system:00  
PM: Adding info for acpi:button\_power:00  
PM: Adding info for acpi:ACPI0007:00  
PM: Adding info for acpi:ACPI0007:01

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

PM: Adding info for acpi:ACPI0007:02  
PM: Adding info for acpi:ACPI0007:03  
PM: Adding info for acpi:device:00  
PM: Adding info for acpi:PNP0A03:00  
PM: Adding info for acpi:device:01  
PM: Adding info for acpi:device:02  
PM: Adding info for acpi:device:03  
PM: Adding info for acpi:device:04  
PM: Adding info for acpi:PNP0C02:00  
PM: Adding info for acpi:PNP0501:00  
PM: Adding info for acpi:PNP0501:01  
PM: Adding info for acpi:PNP0000:00  
PM: Adding info for acpi:PNP0003:00  
PM: Adding info for acpi:PNP0003:01  
PM: Adding info for acpi:PNP0003:02  
PM: Adding info for acpi:PNP0200:00  
PM: Adding info for acpi:PNP0100:00  
PM: Adding info for acpi:PNP0B00:00  
PM: Adding info for acpi:PNP0800:00  
PM: Adding info for acpi:PNP0C04:00  
PM: Adding info for acpi:PNP0C02:01  
PM: Adding info for acpi:device:05  
PM: Adding info for acpi:device:06  
PM: Adding info for acpi:device:07  
PM: Adding info for acpi:PNP0103:00  
PM: Adding info for acpi:device:08  
PM: Adding info for acpi:device:09  
PM: Adding info for acpi:device:0a  
PM: Adding info for acpi:device:0b  
PM: Adding info for acpi:device:0c  
PM: Adding info for acpi:device:0d  
PM: Adding info for acpi:thermal:00  
PM: Adding info for acpi:PNP0C0F:00  
PM: Adding info for acpi:PNP0C0F:01  
PM: Adding info for acpi:PNP0C0F:02  
PM: Adding info for acpi:PNP0C0F:03  
ACPI: PCI Root Bridge [PCI0] (0000:00)  
PM: Adding info for No Bus:pci0000:00  
Boot video device is 0000:01:04.0  
ACPI: PCI Interrupt Routing Table [\_SB\_.PCI0.\_PRT]  
ACPI: PCI Interrupt Routing Table [\_SB\_.PCI0.PCI2.\_PRT]  
ACPI: PCI Interrupt Routing Table [\_SB\_.PCI0.PCI3.\_PRT]  
ACPI: PCI Interrupt Routing Table [\_SB\_.PCI0.PCI1.\_PRT]  
PM: Adding info for pci:0000:00:06.0  
PM: Adding info for pci:0000:00:07.0  
PM: Adding info for pci:0000:00:07.3  
PM: Adding info for pci:0000:00:0a.0  
PM: Adding info for pci:0000:00:0a.1  
PM: Adding info for pci:0000:00:0b.0  
PM: Adding info for pci:0000:00:0b.1  
PM: Adding info for pci:0000:00:18.0

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

PM: Adding info for pci:0000:00:18.1  
PM: Adding info for pci:0000:00:18.2  
PM: Adding info for pci:0000:00:18.3  
PM: Adding info for pci:0000:00:19.0  
PM: Adding info for pci:0000:00:19.1  
PM: Adding info for pci:0000:00:19.2  
PM: Adding info for pci:0000:00:19.3  
PM: Adding info for pci:0000:01:00.0  
PM: Adding info for pci:0000:01:00.1  
PM: Adding info for pci:0000:01:04.0  
PM: Adding info for pci:0000:02:01.0  
PM: Adding info for pci:0000:02:01.1  
PM: Adding info for pci:0000:02:02.0  
ACPI: PCI Interrupt Link [LP00] (IRQs \*10)  
ACPI: PCI Interrupt Link [LP01] (IRQs \*7)  
ACPI: PCI Interrupt Link [LP02] (IRQs \*9)  
ACPI: PCI Interrupt Link [LP03] (IRQs \*5)  
Linux Plug and Play Support v0.97 (c) Adam Belay  
pnp: PnP ACPI init  
PM: Adding info for No Bus:npn0  
PM: Adding info for pnp:00:00  
PM: Adding info for pnp:00:01  
PM: Adding info for pnp:00:02  
PM: Adding info for pnp:00:03  
PM: Adding info for pnp:00:04  
PM: Adding info for pnp:00:05  
PM: Adding info for pnp:00:06  
PM: Adding info for pnp:00:07  
PM: Adding info for pnp:00:08  
PM: Adding info for pnp:00:09  
PM: Adding info for pnp:00:0a  
PM: Adding info for pnp:00:0b  
PM: Adding info for pnp:00:0c  
pnp: PnP ACPI: found 13 devices  
SCSI subsystem initialized  
usbcore: registered new interface driver usbfs  
usbcore: registered new interface driver hub  
usbcore: registered new device driver usb  
PCI: Using ACPI for IRQ routing  
PCI: If a device doesn't work, try "pci=routeirq". If it helps, post a report  
hpet0: at MMIO 0xfecff000, IRQs 2, 8, 0  
hpet0: 3 32-bit timers, 14318180 Hz  
pnp: 00:01: ioport range 0x510-0x517 has been reserved  
Time: hpet clocksource has been installed.  
pnp: 00:01: ioport range 0x504-0x507 has been reserved  
pnp: 00:01: ioport range 0x500-0x503 has been reserved  
pnp: 00:01: ioport range 0x520-0x53f has been reserved  
pnp: 00:01: ioport range 0x540-0x547 has been reserved  
pnp: 00:01: ioport range 0x460-0x461 has been reserved  
pnp: 00:0b: iomem range 0xfec00000-0xffffffff has been reserved  
PM: Adding info for No Bus:mem

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

PM: Adding info for No Bus:kmem  
PM: Adding info for No Bus:null  
PM: Adding info for No Bus:port  
PM: Adding info for No Bus:zero  
PM: Adding info for No Bus:full  
PM: Adding info for No Bus:random  
PM: Adding info for No Bus:urandom  
PM: Adding info for No Bus:kmsg  
PCI: Bridge: 0000:00:06.0  
IO window: 3000-3fff  
MEM window: fd000000-feafffff  
PREFETCH window: f0000000-fcfffff  
PCI: Bridge: 0000:00:0a.0  
IO window: 4000-4fff  
MEM window: ee000000-efffffff  
PREFETCH window: 50000000-500fffff  
PCI: Bridge: 0000:00:0b.0  
IO window: 5000-ffff  
MEM window: disabled.  
PREFETCH window: disabled.  
NET: Registered protocol family 2  
IP route cache hash table entries: 32768 (order: 6, 262144 bytes)  
TCP established hash table entries: 131072 (order: 10, 5242880 bytes)  
TCP bind hash table entries: 65536 (order: 9, 2097152 bytes)  
TCP: Hash tables configured (established 131072 bind 65536)  
TCP reno registered  
checking if image is initramfs... it is  
Freeing initrd memory: 1602k freed  
PM: Adding info for No Bus:mcelog  
PM: Adding info for No Bus:msr0  
PM: Adding info for No Bus:msr1  
PM: Adding info for No Bus:msr2  
PM: Adding info for No Bus:msr3  
PM: Adding info for No Bus:cpu0  
PM: Adding info for No Bus:cpu1  
PM: Adding info for No Bus:cpu2  
PM: Adding info for No Bus:cpu3  
PM: Adding info for platform:pcspkr  
audit: initializing netlink socket (disabled)  
audit(1173357216.800:1): initialized  
Total HugeTLB memory allocated, 0  
VFS: Disk quotas dquot\_6.5.1  
Dquot-cache hash table entries: 512 (order 0, 4096 bytes)  
io scheduler noop registered  
io scheduler anticipatory registered  
io scheduler deadline registered  
io scheduler cfq registered (default)  
pci\_hotplug: PCI Hot Plug PCI Core version: 0.5  
PM: Adding info for platform:vesafb.0  
ACPI: Processor [CPU3] (supports 8 throttling states)  
ACPI: Processor [CPU2] (supports 8 throttling states)

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

ACPI: Processor [CPU1] (supports 8 throttling states)  
ACPI: Processor [CPU0] (supports 8 throttling states)  
PM: Adding info for No Bus:tty  
PM: Adding info for No Bus:console  
PM: Adding info for No Bus:ptmx  
PM: Adding info for No Bus:tty0  
PM: Adding info for No Bus:ves  
PM: Adding info for No Bus:vesa  
PM: Adding info for No Bus:tty1  
PM: Adding info for No Bus:tty2  
PM: Adding info for No Bus:tty3  
PM: Adding info for No Bus:tty4  
PM: Adding info for No Bus:tty5  
PM: Adding info for No Bus:tty6  
PM: Adding info for No Bus:tty7  
PM: Adding info for No Bus:tty8  
PM: Adding info for No Bus:tty9  
PM: Adding info for No Bus:tty10  
PM: Adding info for No Bus:tty11  
PM: Adding info for No Bus:tty12  
PM: Adding info for No Bus:tty13  
PM: Adding info for No Bus:tty14  
PM: Adding info for No Bus:tty15  
PM: Adding info for No Bus:tty16  
PM: Adding info for No Bus:tty17  
PM: Adding info for No Bus:tty18  
PM: Adding info for No Bus:tty19  
PM: Adding info for No Bus:tty20  
PM: Adding info for No Bus:tty21  
PM: Adding info for No Bus:tty22  
PM: Adding info for No Bus:tty23  
PM: Adding info for No Bus:tty24  
PM: Adding info for No Bus:tty25  
PM: Adding info for No Bus:tty26  
PM: Adding info for No Bus:tty27  
PM: Adding info for No Bus:tty28  
PM: Adding info for No Bus:tty29  
PM: Adding info for No Bus:tty30  
PM: Adding info for No Bus:tty31  
PM: Adding info for No Bus:tty32  
PM: Adding info for No Bus:tty33  
PM: Adding info for No Bus:tty34  
PM: Adding info for No Bus:tty35  
PM: Adding info for No Bus:tty36  
PM: Adding info for No Bus:tty37  
PM: Adding info for No Bus:tty38  
PM: Adding info for No Bus:tty39  
PM: Adding info for No Bus:tty40  
PM: Adding info for No Bus:tty41  
PM: Adding info for No Bus:tty42  
PM: Adding info for No Bus:tty43

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

PM: Adding info for No Bus:tty44  
PM: Adding info for No Bus:tty45  
PM: Adding info for No Bus:tty46  
PM: Adding info for No Bus:tty47  
PM: Adding info for No Bus:tty48  
PM: Adding info for No Bus:tty49  
PM: Adding info for No Bus:tty50  
PM: Adding info for No Bus:tty51  
PM: Adding info for No Bus:tty52  
PM: Adding info for No Bus:tty53  
PM: Adding info for No Bus:tty54  
PM: Adding info for No Bus:tty55  
PM: Adding info for No Bus:tty56  
PM: Adding info for No Bus:tty57  
PM: Adding info for No Bus:tty58  
PM: Adding info for No Bus:tty59  
PM: Adding info for No Bus:tty60  
PM: Adding info for No Bus:tty61  
PM: Adding info for No Bus:tty62  
PM: Adding info for No Bus:tty63  
PM: Adding info for No Bus:rtc  
Real Time Clock Driver v1.12ac  
PM: Adding info for No Bus:hpet  
hpet\_resources: 0xfecff000 is busy  
Linux apgart interface v0.102 (c) Dave Jones  
Serial: 8250/16550 driver \$Revision: 1.90 \$ 4 ports, IRQ sharing enabled  
PM: Adding info for platform:serial8250  
serial8250: ttyS0 at I/O 0x3f8 (irq = 4) is a 16550A  
PM: Adding info for No Bus:ttyS0  
erial8250: ttyS1 at I/O 0x2f8 (irq = 3) is a 16550A  
PM: Adding info for No Bus:ttyS1  
PM: Adding info for No Bus:ttyS2  
PM: Adding info for No Bus:ttyS3  
PM: Removing info for No Bus:ttyS0  
00:02: ttyS0 at I/O 0x3f8 (irq = 4) is a 16550A  
PM: Adding info for No Bus:ttyS0  
PM: Removing info for No Bus:ttyS1  
00:03: ttyS1 at I/O 0x2f8 (irq = 3) is a 16550A  
PM: Adding info for No Bus:ttyS1  
RAMDISK driver initialized: 16 RAM disks of 16384K size 1024 blocksize  
tg3.c:v3.74 (February 20, 2007)  
ACPI: PCI Interrupt 0000:02:01.0[A] -> GSI 24 (level, low) -> IRQ 24  
PM: Adding info for No Bus:eth0  
eth0: Tigon3 [partno(BCM95704A41) rev 2100 PHY(serdes)] (PCIX:100MHz:64-bit) 1000Base-SX  
Ethernet 00:11:25:75:af:6e  
eth0: RXcsms[1] LinkChgREG[0] MIirq[0] ASF[1] Split[0] WireSpeed[0] TSOcap[0] eth0:  
dma\_rwctrl[769f4000] dma\_mask[64-bit]  
ACPI: PCI Interrupt 0000:02:01.1[B] -> GSI 25 (level, low) -> IRQ 25  
PM: Adding info for No Bus:eth1  
eth1: Tigon3 [partno(BCM95704A41) rev 2100 PHY(serdes)] (PCIX:100MHz:64-bit) 1000Base-SX  
Ethernet 00:11:25:75:af:6f

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

eth1: RXchecksums[1] LinkChgREG[0] MIirq[0] ASF[0] Split[0] WireSpeed[0] TSOcap[1] eth1:  
dma\_rwctrl[769f4000] dma\_mask[64-bit]  
PM: Adding info for No Bus:lo  
Uniform Multi-Platform E-IDE driver Revision: 7.00alpha2  
ide: Assuming 33MHz system bus speed for PIO modes; override with idebus=xx  
Probing IDE interface ide0...  
Probing IDE interface ide1...  
ide-floppy driver 0.99.newide  
Fusion MPT base driver 3.04.04  
Copyright (c) 1999-2007 LSI Logic Corporation  
Fusion MPT SPI Host driver 3.04.04  
ACPI: PCI Interrupt 0000:02:02.0[A] -> GSI 26 (level, low) -> IRQ 26  
mptbase: Initiating ioc0 bringup  
ioc0: 53C1030: Capabilities={Initiator}  
scsi0 : ioc0: LSI53C1030, FwRev=01032700h, Ports=1, MaxQ=222, IRQ=26  
PM: Adding info for No Bus:host0  
PM: Adding info for No Bus:target0:0:0  
scsi 0:0:0:0: Direct-Access IBM-ESXS ST973401LC FN B41D PQ: 0 ANSI: 4  
target0:0:0: Beginning Domain Validation  
target0:0:0: Ending Domain Validation  
target0:0:0: FAST-160 WIDE SCSI 320.0 MB/s DT IU RTI WRFLOW PCOMP (6.25 ns, offset 63)  
PM: Adding info for scsi:0:0:0:0  
SCSI device sda: 143374000 512-byte hdwr sectors (73407 MB)  
sda: Write Protect is off  
sda: Mode Sense: b3 00 10 08  
SCSI device sda: write cache: disabled, read cache: enabled, supports DPO and FUA  
SCSI device sda: 143374000 512-byte hdwr sectors (73407 MB)  
sda: Write Protect is off  
sda: Mode Sense: b3 00 10 08  
SCSI device sda: write cache: disabled, read cache: enabled, supports DPO and FUA  
sda: sda1 sda2  
sd 0:0:0:0: Attached scsi disk sda  
sd 0:0:0:0: Attached scsi generic sg0 type 0  
PM: Adding info for No Bus:target0:0:1  
PM: Removing info for No Bus:target0:0:1  
PM: Adding info for No Bus:target0:0:2  
PM: Removing info for No Bus:target0:0:2  
PM: Adding info for No Bus:target0:0:3  
PM: Removing info for No Bus:target0:0:3  
PM: Adding info for No Bus:target0:0:4  
PM: Removing info for No Bus:target0:0:4  
PM: Adding info for No Bus:target0:0:5  
PM: Removing info for No Bus:target0:0:5  
PM: Adding info for No Bus:target0:0:6  
PM: Removing info for No Bus:target0:0:6  
PM: Adding info for No Bus:target0:0:8  
PM: Removing info for No Bus:target0:0:8  
PM: Adding info for No Bus:target0:0:9  
PM: Removing info for No Bus:target0:0:9  
PM: Adding info for No Bus:target0:0:10  
PM: Removing info for No Bus:target0:0:10

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

PM: Adding info for No Bus:target0:0:11  
PM: Removing info for No Bus:target0:0:11  
PM: Adding info for No Bus:target0:0:12  
PM: Removing info for No Bus:target0:0:12  
PM: Adding info for No Bus:target0:0:13  
PM: Removing info for No Bus:target0:0:13  
PM: Adding info for No Bus:target0:0:14  
PM: Removing info for No Bus:target0:0:14  
PM: Adding info for No Bus:target0:0:15  
PM: Removing info for No Bus:target0:0:15  
PM: Adding info for No Bus:target0:1:0  
PM: Removing info for No Bus:target0:1:0  
PM: Adding info for No Bus:target0:1:1  
PM: Removing info for No Bus:target0:1:1  
PM: Adding info for No Bus:target0:1:2  
PM: Removing info for No Bus:target0:1:2  
PM: Adding info for No Bus:target0:1:3  
PM: Removing info for No Bus:target0:1:3  
PM: Adding info for No Bus:target0:1:4  
PM: Removing info for No Bus:target0:1:4  
PM: Adding info for No Bus:target0:1:5  
PM: Removing info for No Bus:target0:1:5  
PM: Adding info for No Bus:target0:1:6  
PM: Removing info for No Bus:target0:1:6  
PM: Adding info for No Bus:target0:1:8  
PM: Removing info for No Bus:target0:1:8  
PM: Adding info for No Bus:target0:1:9  
PM: Removing info for No Bus:target0:1:9  
PM: Adding info for No Bus:target0:1:10  
PM: Removing info for No Bus:target0:1:10  
PM: Adding info for No Bus:target0:1:11  
PM: Removing info for No Bus:target0:1:11  
PM: Adding info for No Bus:target0:1:12  
PM: Removing info for No Bus:target0:1:12  
PM: Adding info for No Bus:target0:1:13  
PM: Removing info for No Bus:target0:1:13  
PM: Adding info for No Bus:target0:1:14  
PM: Removing info for No Bus:target0:1:14  
PM: Adding info for No Bus:target0:1:15  
PM: Removing info for No Bus:target0:1:15  
Fusion MPT FC Host driver 3.04.04  
Fusion MPT SAS Host driver 3.04.04  
Fusion MPT misc device (ioctl) driver 3.04.04  
PM: Adding info for No Bus:mptctl  
mptctl: Registered with Fusion MPT base driver  
mptctl: /dev/mptctl @ (major,minor=10,220)  
Fusion MPT LAN driver 3.04.04  
mptlan: ioc0: PortNum=0, ProtocolFlags=08h (Itlb)  
mptlan: ioc0: Hmm... LAN protocol seems to be disabled on this adapter port!  
ohci\_hcd: 2006 August 04 USB 1.1 'Open' Host Controller (OHCI) Driver  
ACPI: PCI Interrupt 0000:01:00.0[D] -> GSI 19 (level, low) -> IRQ 19

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

ohci\_hcd 0000:01:00.0: OHCI Host Controller  
ohci\_hcd 0000:01:00.0: new USB bus registered, assigned bus number 1  
ohci\_hcd 0000:01:00.0: irq 19, io mem 0xfeaff000  
usb usb1: new device found, idVendor=0000, idProduct=0000  
usb usb1: new device strings: Mfr=3, Product=2, SerialNumber=1  
usb usb1: Product: OHCI Host Controller  
usb usb1: Manufacturer: Linux 2.6.21-rc2-mm2-autokern1 ohci\_hcd  
usb usb1: SerialNumber: 0000:01:00.0  
PM: Adding info for usb:usb1  
PM: Adding info for No Bus:usbdev1.1\_ep00  
usb usb1: configuration #1 chosen from 1 choice  
PM: Adding info for usb:1-0:1.0  
hub 1-0:1.0: USB hub found  
hub 1-0:1.0: 3 ports detected  
PM: Adding info for No Bus:usbdev1.1\_ep81  
PM: Adding info for No Bus:usbdev1.1  
ACPI: PCI Interrupt 0000:01:00.1[D] -> GSI 19 (level, low) -> IRQ 19  
ohci\_hcd 0000:01:00.1: OHCI Host Controller  
ohci\_hcd 0000:01:00.1: new USB bus registered, assigned bus number 2  
ohci\_hcd 0000:01:00.1: irq 19, io mem 0xfeafe000  
usb usb2: new device found, idVendor=0000, idProduct=0000  
usb usb2: new device strings: Mfr=3, Product=2, SerialNumber=1  
usb usb2: Product: OHCI Host Controller  
usb usb2: Manufacturer: Linux 2.6.21-rc2-mm2-autokern1 ohci\_hcd  
usb usb2: SerialNumber: 0000:01:00.1  
PM: Adding info for usb:usb2  
PM: Adding info for No Bus:usbdev2.1\_ep00  
usb usb2: configuration #1 chosen from 1 choice  
PM: Adding info for usb:2-0:1.0  
hub 2-0:1.0: USB hub found  
hub 2-0:1.0: 3 ports detected  
PM: Adding info for No Bus:usbdev2.1\_ep81  
PM: Adding info for No Bus:usbdev2.1  
USB Universal Host Controller Interface driver v3.0  
Initializing USB Mass Storage driver...  
usbcore: registered new interface driver usb-storage  
USB Mass Storage support registered.  
usbcore: registered new interface driver libusual  
usbcore: registered new interface driver hiddev  
usbcore: registered new interface driver usbhid  
drivers/usb/input/hid-core.c: v2.6:USB HID core driver  
PNP: No PS/2 controller found. Probing ports directly.  
PM: Adding info for platform:i8042  
serio: i8042 KBD port at 0x60,0x64 irq 1  
serio: i8042 AUX port at 0x60,0x64 irq 12  
PM: Adding info for serio:serio0  
PM: Adding info for serio:serio1  
mice: PS/2 mouse device common for all mice  
async\_tx: api initialized (sync-only)  
xor: automatically using best checksumming function: generic\_sse  
generic\_sse: 6105.000 MB/sec

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

xor: using function: generic\_sse (6105.000 MB/sec)  
PM: Adding info for No Bus:device-mapper  
device-mapper: ioctl: 4.11.0-iocli (2006-10-12) initialised: dm-devel@xxxxxxxxxxx  
TCP cubic registered  
Initializing XFRM netlink socket  
NET: Registered protocol family 1  
NET: Registered protocol family 17  
powernow-k8: Found 4 Dual Core AMD Opteron(tm) Processor 270 processors (version 2.00.00)  
powernow-k8: MP systems not supported by PSB BIOS structure  
powernow-k8: MP systems not supported by PSB BIOS structure  
powernow-k8: MP systems not supported by PSB BIOS structure  
powernow-k8: MP systems not supported by PSB BIOS structure  
Freeing unused kernel memory: 340k freed  
Write protecting the kernel read-only data: 984k  
Red Hat nash version 5.0.32 starting  
Mounting proc filesystem  
Mounting sysfs filesystem  
Creating /dev  
Creating initial device nodes  
Setting up hotplug.  
Creating block device nodes.  
Making device-mapper control node  
Scanning logical volumes  
Reading all physical volumes. This may take a while...  
Found volume group "VolGroup00" using metadata type lvm2  
Activating logical volumes  
4 logical volume(s) in volume group "VolGroup00" now active  
Creating root device.  
Mounting root filesystem.  
kjournald starting. Commit interval 5 seconds  
Setting up otherEXT3-fs: mounted filesystem with ordered data mode.  
filesystems.  
Setting up new root fs  
no fstab.sys, mounting internal defaults  
Switching to new root and running init.  
unmounting old /dev  
unmounting old /proc  
unmounting old /sys  
PM: Adding info for No Bus:vcs1  
PM: Adding info for No Bus:vcsa1  
PM: Removing info for No Bus:vcs1  
PM: Removing info for No Bus:vcsa1  
INIT: version 2.86 booting  
Welcome to Fedora Core  
Press 'I' to enter interactive startup.  
Setting clock (localtime): Thu Mar 8 12:33:58 CST 2007 [ OK ]  
Starting udev: [ OK ]  
Setting hostname bl6-13.ltc.austin.ibm.com: [ OK ]  
Setting up Logical Volume Management: 4 logical volume(s) in volume group "VolGroup00" now active  
[ OK ]  
Checking filesystems

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

Checking all file systems.

[/sbin/fsck.ext3 (1) -- /] fsck.ext3 -a /dev/VolGroup00/LogVol00 /dev/VolGroup00/LogVol00: clean, 363818/7929856 files, 3638923/7929856 blocks

[/sbin/fsck.ext3 (1) -- /boot] fsck.ext3 -a /dev/sda1 /boot: clean, 85/512512 files, 81422/512064 blocks  
[ OK ]

Remounting root filesystem in read-write mode: [ OK ]

Mounting local filesystems: [ OK ]

Enabling local filesystem quotas: [ OK ]

Enabling swap space: [ OK ]

INIT: Entering runlevel: 3

Entering non-interactive startup

Starting readahead\_early: Starting background readahead: [ OK ]

[ OK ]

FATAL: Error inserting acpi\_cpufreq

(/lib/modules/2.6.21-rc2-mm2-autokern1/kernel/arch/x86\_64/kernel/cpufreq/acpi-cpufreq.ko): No such device

Bringing up loopback interface: [ OK ]

Bringing up interface eth1: [ OK ]

Starting system logger: [ OK ]

Starting kernel logger: [ OK ]

Starting irqbalance: [ OK ]

Starting portmap: [ OK ]

Starting NFS statd: [ OK ]

Starting RPC idmapd: [ OK ]

Starting kdump: No kdump kernel image found.[WARNING]

Tried to locate /boot/vmlinuz--kdump[ OK ]

Starting system message bus: [ OK ]

Starting Bluetooth services:[ OK ][ OK ]

Mounting other filesystems: [ OK ]

Starting hidd: [ OK ]

Starting automount: [ OK ]

Starting smartd: [ OK ]

Starting acpi daemon: [ OK ]

Starting hpiod: [ OK ]

Starting hpssd: [ OK ]

Starting cups: [ OK ]

Starting sshd: [ OK ]

Starting sendmail: [ OK ]

Starting sm-client: [ OK ]

Starting console mouse services: [ OK ]

Starting crond: [ OK ]

Starting xfs: [ OK ]

Starting anacron: [ OK ]

Starting atd: [ OK ]

Starting Avahi daemon: general protection fault: 0000 [1] SMP last sysfs file: class/net/eth1/address

CPU 3 Modules linked in: ipv6 hidp rfcomm l2cap bluetooth sunrpc video button battery asus\_acpi ac lp parport\_pc parport nvram pcsprk amd\_rng rng\_core i2c\_amd756 i2c\_core

Pid: 0, comm: swapper Not tainted 2.6.21-rc2-mm2-autokern1 #1

RIP: 0010:<ffffffffff80483dbc> [<ffffffffff80483dbc>] inet\_putpeer+0x10/0x53

RSP: 0018:ffff810001813ec0 EFLAGS: 00010202

RAX: ffff810001623500 RBX: e805b300000003bf RCX: ffff8100039c8438

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

Re: [SLUB 0/3] SLUB: The unqueued slab allocator V4

RDX: ffff81000219c280 RSI: ffff81000104bf80 RDI: ffffffff80622970  
RBP: ffff81000219c280 R08: 0000000000000003 R09: ffff810002f54100  
R10: 00000000fc000106 R11: ffff8100039c83c0 R12: 0000000000000000  
R13: 0000000000000003 R14: 0000000000000000 R15: 0000000000000000  
FS: 00002ab1c24786f0(0000) GS:ffff810001401680(0000) knlGS:0000000000000000  
CS: 0010 DS: 0018 ES: 0018 CR0: 000000008005003b  
CR2: 00002ab1c2217000 CR3: 0000000003be8000 CR4: 000000000000006e0  
Process swapper (pid: 0, threadinfo ffff81000162e000, task ffff810001623500)  
Stack: ffff810002eb3600 ffffffff80483bfe ffff810001628000 ffff810002e88200  
ffff81000219c280 ffffffff8046c03b ffff81000219c500 ffff81000104bf80  
0000000000000001 ffffffff804801a8 0000000000000001 ffffffff8025d8e2

Call Trace:

<IRQ> [<ffffffffff80483bfe>] ipv4\_dst\_destroy+0x2c/0x58  
[<ffffffffff8046c03b>] dst\_destroy+0x85/0xdf  
[<ffffffffff804801a8>] dst\_rcu\_free+0x19/0x29  
[<ffffffffff8025d8e2>] \_\_rcu\_process\_callbacks+0x122/0x18a  
[<ffffffffff8023722b>] \_\_do\_softirq+0x55/0xc3  
[<ffffffffff8020acfc>] call\_softirq+0x1c/0x28  
[<ffffffffff8020c095>] do\_softirq+0x2c/0x7d  
[<ffffffffff80218ae6>] smp\_apic\_timer\_interrupt+0x49/0x5f  
[<ffffffffff80208ca4>] default\_idle+0x0/0x3d  
[<ffffffffff8020a7a6>] apic\_timer\_interrupt+0x66/0x70  
<EOI> [<ffffffffff80208ccd>] default\_idle+0x29/0x3d  
[<ffffffffff80208d6c>] cpu\_idle+0x8b/0xae

Code: f0 ff 4b 2c 0f 94 c0 84 c0 74 2b 48 8b 05 ba eb 19 00 48 c7 RIP [<ffffffffff80483dbc>]  
inet\_putpeer+0x10/0x53  
RSP <ffff810001813ec0>

Kernel panic – not syncing: Aiee, killing interrupt handler!  
— 0:conmux-control — time-stamp — Mar/08/07 10:34:35 —  
— 0:conmux-control — time-stamp — Mar/08/07 10:47:37 —  
(bot:conmon-payload) disconnected

—  
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