

[PATCH] [19/34] x86_64: move __vgetcpu_mode & __jiffies to the vsyscall_2 zone

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 - *Date:* Mon, 30 Apr 2007 17:49:51 +0200 (CEST)
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From: Eric Dumazet <dada1@xxxxxxxxxxxxxxxx>

We apparently hit the 1024 limit of vsyscall_0 zone when some debugging options are set, or if __vsyscall_gtod_data is 64 bytes larger.

In order to save 128 bytes from the vsyscall_0 zone, we move __vgetcpu_mode & __jiffies to vsyscall_2 zone where they really belong, since they are used only from vgetcpu() (which is in this vsyscall_2 area).

After patch is applied, new layout is :

```
ffffffff600000 T vgettimeofday
ffffffff60004e t vsysc2
ffffffff600140 t vread_hpet
ffffffff600150 t vread_tsc
ffffffff600180 D __vsyscall_gtod_data
ffffffff600400 T vtime
ffffffff600413 t vsysc1
ffffffff600800 T vgetcpu
ffffffff600870 D __vgetcpu_mode
ffffffff600880 D __jiffies
ffffffff600c00 T venosys_1
```

Signed-off-by: Eric Dumazet <dada1@xxxxxxxxxxxxxxxx>
Signed-off-by: Andi Kleen <ak@xxxxxxx>
Cc: Andi Kleen <ak@xxxxxxx>
Signed-off-by: Andrew Morton <akpm@xxxxxxxxxxxxxxxxxxxxxxxx>

arch/x86_64/kernel/vmlinux.lds.S | 10 ++++++----
1 file changed, 6 insertions(+), 4 deletions(-)

Index: linux/arch/x86_64/kernel/vmlinux.lds.S

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```
--- linux.orig/arch/x86_64/kernel/vmlinux.lds.S
+++ linux/arch/x86_64/kernel/vmlinux.lds.S
@@ -95,6 +95,12 @@ SECTIONS
```

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```
{ *(.vsyscall_gtod_data) }
vsyscall_gtod_data = VVIRT(vsyscall_gtod_data);

+
+ .vsyscall_1 ADDR(.vsyscall_0) + 1024: AT(VLOAD(.vsyscall_1))
+ { *(.vsyscall_1) }
+ .vsyscall_2 ADDR(.vsyscall_0) + 2048: AT(VLOAD(.vsyscall_2))
+ { *(.vsyscall_2) }
+
.vgetcpu_mode : AT(VLOAD(.vgetcpu_mode)) { *(.vgetcpu_mode) }
vgetcpu_mode = VVIRT(.vgetcpu_mode);

@@ -102,10 +108,6 @@ SECTIONS
.jiffies : AT(VLOAD(.jiffies)) { *(.jiffies) }
jiffies = VVIRT(.jiffies);

- .vsyscall_1 ADDR(.vsyscall_0) + 1024: AT(VLOAD(.vsyscall_1))
- { *(.vsyscall_1) }
- .vsyscall_2 ADDR(.vsyscall_0) + 2048: AT(VLOAD(.vsyscall_2))
- { *(.vsyscall_2) }
.vsyscall_3 ADDR(.vsyscall_0) + 3072: AT(VLOAD(.vsyscall_3))
{ *(.vsyscall_3) }
```

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