

[Patch] x86, x86_64: fix cpu model for family 0x6

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2005-09/8760.html>

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To: linux-kernel@vger.kernel.org

Andi, please pickup this patch and push to Andrew/Linus.

thanks,
suresh

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According to cpuid instruction in IA32 SDM-Vol2, when computing cpu model, we need to consider extended model ID for family 0x6 also.

Signed-off-by: Suresh Siddha <suresh.b.siddha@intel.com>

--- linux-2.6.14-rc2-git7/arch/i386/kernel/cpu/common.c~ 2005-09-29 17:44:12.030688920 -07

+++ linux-2.6.14-rc2-git7/arch/i386/kernel/cpu/common.c 2005-09-29 17:44:30.967810040 -0700

```
@@ -233,10 +233,10 @@ static void __init early_cpu_detect(void
    cpuid(0x00000001, &tfms, &misc, &junk, &cap0);
    c->x86 = (tfms >> 8) & 15;
    c->x86_model = (tfms >> 4) & 15;
-   if (c->x86 == 0xf) {
+   if (c->x86 == 0xf)
        c->x86 += (tfms >> 20) & 0xff;
+   if (c->x86 == 0x6 || c->x86 == 0xf)
        c->x86_model += ((tfms >> 16) & 0xF) << 4;
-   }
    c->x86_mask = tfms & 15;
    if (cap0 & (1<<19))
        c->x86_cache_alignment = ((misc >> 8) & 0xff) * 8;
--- linux-2.6.14-rc2-git7/arch/x86_64/kernel/setup.c~ 2005-09-29 18:05:26.503939536 -0700
+++ linux-2.6.14-rc2-git7/arch/x86_64/kernel/setup.c 2005-09-29 18:06:42.318413984 -0700
@@ -1059,10 +1059,10 @@ void __cpuinit early_identify_cpu(struct
    c->x86 = (tfms >> 8) & 0xf;
    c->x86_model = (tfms >> 4) & 0xf;
    c->x86_mask = tfms & 0xf;
-   if (c->x86 == 0xf) {
+   if (c->x86 == 0xf)
        c->x86 += (tfms >> 20) & 0xff;
+   if (c->x86 == 0x6 || c->x86 == 0xf)
        c->x86_model += ((tfms >> 16) & 0xF) << 4;
-   }
    if (c->x86_capability[0] & (1<<19))
        c->x86_clflush_size = ((misc >> 8) & 0xff) * 8;
    } else {
```

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