
Subject: [PATCH 2/2] p4-clockmod: use rdmsr_on_cpu(), wrmsr_on_cpu()
Posted by [adobriyan](#) on Wed, 31 Jan 2007 15:49:26 GMT
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Dances with cpu masks go away.

Signed-off-by: Alexey Dobriyan <adobriyan@openvz.org>

arch/i386/kernel/cpu/cpufreq/p4-clockmod.c | 30 +++++-----
1 file changed, 6 insertions(+), 24 deletions(-)

```
--- a/arch/i386/kernel/cpu/cpufreq/p4-clockmod.c
+++ b/arch/i386/kernel/cpu/cpufreq/p4-clockmod.c
@@ -62,7 +62,7 @@ static int cpufreq_p4_setdc(unsigned int
    if (!cpu_online(cpu) || (newstate > DC_DISABLE) || (newstate == DC_RESV))
        return -EINVAL;

- rdmsr(MSR_IA32_THERM_STATUS, l, h);
+ rdmsr_on_cpu(cpu, MSR_IA32_THERM_STATUS, &l, &h);

    if (l & 0x01)
        dprintk("CPU#%d currently thermal throttled\n", cpu);
@@ -70,10 +70,10 @@ static int cpufreq_p4_setdc(unsigned int
    if (has_N44_O17_errata[cpu] && (newstate == DC_25PT || newstate == DC_DFLT))
        newstate = DC_38PT;

- rdmsr(MSR_IA32_THERM_CONTROL, l, h);
+ rdmsr_on_cpu(cpu, MSR_IA32_THERM_CONTROL, &l, &h);
    if (newstate == DC_DISABLE) {
        dprintk("CPU#%d disabling modulation\n", cpu);
- wrmsr(MSR_IA32_THERM_CONTROL, l & ~(1<<4), h);
+ wrmsr_on_cpu(cpu, MSR_IA32_THERM_CONTROL, l & ~(1<<4), h);
    } else {
        dprintk("CPU#%d setting duty cycle to %d%%\n",
            cpu, ((125 * newstate) / 10));
@@ -84,7 +84,7 @@ static int cpufreq_p4_setdc(unsigned int
    */
    l = (l & ~14);
    l = l | (1<<4) | ((newstate & 0x7)<<1);
- wrmsr(MSR_IA32_THERM_CONTROL, l, h);
+ wrmsr_on_cpu(cpu, MSR_IA32_THERM_CONTROL, l, h);
    }

    return 0;
@@ -111,7 +111,6 @@ static int cpufreq_p4_target(struct cpuf
{
    unsigned int    newstate = DC_RESV;
```

```

    struct cpufreq_freqs freqs;
-   cpumask_t cpus_allowed;
    int i;

    if (cpufreq_frequency_table_target(policy, &p4clockmod_table[0], target_freq, relation,
&newstate))
@@ -132,17 +131,8 @@ static int cpufreq_p4_target(struct cpuf
/* run on each logical CPU, see section 13.15.3 of IA32 Intel Architecture Software
* Developer's Manual, Volume 3
*/
-   cpus_allowed = current->cpus_allowed;
-
-   for_each_cpu_mask(i, policy->cpus) {
-       cpumask_t this_cpu = cpumask_of_cpu(i);
-
-       set_cpus_allowed(current, this_cpu);
-       BUG_ON(smp_processor_id() != i);
-
+   for_each_cpu_mask(i, policy->cpus)
        cpufreq_p4_setdc(i, p4clockmod_table[newstate].index);
-   }
-   set_cpus_allowed(current, cpus_allowed);

/* notifiers */
for_each_cpu_mask(i, policy->cpus) {
@@ -256,17 +246,9 @@ static int cpufreq_p4_cpu_exit(struct cp

static unsigned int cpufreq_p4_get(unsigned int cpu)
{
-   cpumask_t cpus_allowed;
    u32 l, h;

-   cpus_allowed = current->cpus_allowed;
-
-   set_cpus_allowed(current, cpumask_of_cpu(cpu));
-   BUG_ON(smp_processor_id() != cpu);
-
-   rdmsr(MSR_IA32_THERM_CONTROL, l, h);
-
-   set_cpus_allowed(current, cpus_allowed);
+   rdmsr_on_cpu(cpu, MSR_IA32_THERM_CONTROL, &l, &h);

    if (l & 0x10) {
        l = l >> 1;

```
