

[PATCH 5/9] x86-64 fix smp boot failure with thread_info change

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2005-11/9638.html>

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Make sure that `stack_smp_processor_id()` gets set for all CPUs regardless of which path we take in `do_boot_cpu()`, as well as in upcoming case where `tsk->thread_info != task_thread_info(tsk)`.

Add a memory barrier to ensure this change is flushed before the other CPU comes up. My P4/HT machine was occasionally randomly failing to boot without this barrier.

```
---
 arch/x86_64/kernel/smpboot.c |    4 ++++
 1 files changed, 4 insertions(+), 0 deletions(-)
 applies-to: ff25c960b7af25819aba4fbecbd94bd3500a3a4a
 932262b117ba1c3a77078b64674e1a1823c169df
 diff --git a/arch/x86_64/kernel/smpboot.c b/arch/x86_64/kernel/smpboot.c
 index 50d018a..10b951b 100644
 --- a/arch/x86_64/kernel/smpboot.c
 +++ b/arch/x86_64/kernel/smpboot.c
 @@ -780,6 +780,9 @@ do_rest:

         cpu_pda[cpu].pcurrent = c_idle.idle;

 +         /* set the CPU for stack_smp_processor_id() */
 +         c_idle.idle->thread_info->cpu = cpu;
 +
         start_rip = setup_trampoline();

         init_rsp = c_idle.idle->thread.rsp;
 @@ -796,6 +799,7 @@ do_rest:
         * the targeted processor.
         */

 +         mb();
         atomic_set(&init_deasserted, 0);

         Dprintf("Setting warm reset code and vector.\n");
 ---
 0.99.9.GIT
 -
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```