

Re: SuSE 10.0 boot problems with CPU changed

Source: <http://linux.derkeiler.com/Newsgroups/comp.os.linux.misc/2006-08/msg02377.html>

- *From:* "composlinuxmisc" <altcomphardware@xxxxxxxxxxx>
 - *Date:* 27 Aug 2006 05:59:07 -0700
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Aragorn wrote:

On Sunday 27 August 2006 13:17, composlinuxmisc stood up and addressed the masses in /comp.os.linux.misc/ as follows...:

Hi guys. One of my SuSE Linux 10.0 i586 boxes recently had its AMD XP 2500+ CPU damaged, perhaps by my recent overclocking adventures.

The computer seemed to initiate a thermal shutdown soon after bootup -- sometimes even in/before the BIOS menu at stock speeds -- and the motherboard (Abit NF7) gave a two-tone siren.

Whilst it is being RMA'ed, I took an old AMD XP 1500+ CPU out to at least get that box running, if more slowly. The BIOS detects the CPU alright and when I shelved the 1500+ it was known to work.

Upon booting SuSE, I get a black screen and nothing else.

Does SuSE require a reinstall if the CPU is changed, or is it more likely that other hardware on the comp. is somehow damaged?

Most likely the latter, I'd say. I don't see why you would need to reinstall an entire distribution only because a CPU has been swapped for another one, especially if the new CPU is of the same brand and generation as the original CPU.

In your case, it wouldn't even make a difference if you were running Gentoo -- which is entirely compiled for your specific hardware, rather than to go with a generic "one size fits all" binary code for everything in the distribution.

As a sidenote, I've known entire installed distributions to work when the hard disk was simply moved to another computer, which included moving the disk from an Athlon XP based machine to a Pentium III. This variety of target computers is exactly why distribution vendors typically compile a "one size fits all" distro -- this is of course less so for /x86-64,/ since

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there are only two major types of CPU's in this class: the Intel EM64T and the AMD64 platform.

OK thanks Aragorn. I thought it might have been something like me needing to somehow change a config file for the CPU or something.

Sort of like how you won't get telinit 5 and will only have a minimal boot system if you had an entry in /etc/fstab out of place (e.g. a removed hard drive and fstab tries to point to what doesn't exist)

Most stock distribution kernels for /IA32/ have been compiled to work on a generic /i586/ or perhaps a /i686/, and they contain enough generic /x86/ code to keep the kernel happy whether it is running on an Intel Pentium 4 or on an AMD K-6. The Athlon XP is an /i686/ and should therefore be able to handle any generic /i586/ or /i686/ stock kernel and distribution. I believe SuSE is compiled as /i586/ code.

There is a good reason as to why overclocking is generally discouraged, and you are now experiencing that reason... Most likely you've burned more than just your CPU...

I hope not. The reason why I overclocked was because I can't afford a faster stock system to start with as a PhD student, even though I *really* need it for my computationally-orientated research. My tuition fees alone are £15000 a year and my annual income is ~£0 apart from some odd tutoring jobs for undergrads, you do the math :-)

I only need the systems to last for another year or two, then my research is done and I will probably after that get a salary where I can afford some spanking hardware :-)

Anyway, we shall see once I hopefully get a replacement XP 2500+...

With a bit of luck, it'll only be the memory modules, or perhaps you've accidentally disconnected something or knocked something out of the socket while you were replacing the CPU, but I suspect a lot more damage has been done... :-/

I also accidentally knocked my Radeon 9800 Pro whilst the system was on, causing a shutdown and for it to be destroyed. Replacing it seemed to fix the system though, so fingers crossed this did not cause any hardware damage either.

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While it is true that Intel CPU's can take less heat than a comparable AMD CPU, an Intel CPU has an overheating protection, and most recent Intels all have thermal throttling. As far as I know, AMD's don't have that and will allow you to toast them.

Yeah. This is why I am moving to Intel, apart from their really cool dual core Intel D 805 CPU :-)

Intel nags and freezes, but AMD goes all the way until it burns up. And that's apparently what happened to your original CPU. However, imagine what such a thermal torture does to the rest of the chips...

I myself have only had one machine going "black screen" on me before – even the POST information didn't appear on the screen – and that was because the machine had suffered a lightning strike through the cable modem. Needless to say that most of the hardware was toast, all except for the floppy drive, the Adaptec 29160 SCSI adapter, the IBM SCSI hard disk and the Plextor SCSI CD–RW device. A true testimonial of quality for the SCSI stuff – I'm actually using all of it in this very machine now, after it was all tested electronically – and it's already been running without any problems in this machine here for about two years now.

On the other hand, the Intel Pentium III and the i810 chipset–based Chaintech motherboard, the Chaintech videocard, the Hitachi monitor – which was in standby mode at the time of the strike – the Creative Soundblaster and the Iomega 2 GB Jaz – which was also SCSI, but Jaz drives were never really that good – were all waste.

Back when I was a schoolkid, I had an old Zoltrix 14.4k external modem that literally blew up after getting struck by lightning. Fortunately the damage stopped there. Was your modem an internal one? AIUI internal ones are more prone to cascading the damage to other components than external ones.

Computers are very sophisticated pieces of hardware, and they're not exactly given away for free in a pack of cookies either, so don't mess with the clock speeds anymore... ;-)

I'm really trapped between the devil & the deep blue sea. Can't afford stock performance of better hardware but really need the FLOPS.

Sorry for the lecture, but I guess it was necessary... ;-)

No problem, my friend. It was taken as friendly, constructive advice. I

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didn't see it as a lecture in the slightest.