

Re: asrock, problem with nic after windows–boot – Exact Opposite issue the OP is having

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Source: <http://linux.derkeiler.com/Newsgroups/comp.os.linux.networking/2006-06/msg00397.html>

- *From:* "iforone" <floydstestemail@xxxxxxxxx>
 - *Date:* 17 Jun 2006 11:42:18 -0700
-

Moe Trin wrote:

[Note; I've left in a fair amount of text, since it's been a few days since I posted/replied – though I do try hard to 'snip' as much as possible, without munging the relevant, pertinent info]

I was building computers long before IBM introduced the PC in 1981.
[...]

My small history with PCs started ~1990-ish, when I sold them, when I worked briefly in sales (a few months) for a major appliance/tv/stereo chain, ...yet I knew hardly anything about them (their inner workings).

Yup – just like the switch on the power strip that you used instead (so you had one switch to throw to turn on/off the computer, monitor, printer, modem, prom–zapper, and \$DEITY knows what else you had hanging off the PC).

You know? I never use/used a power strip in that manner (for *ATX* systems), and I never condoned it to others (and there are quite a few I've seen that use this method, with*out* shutting down properly first), for the simple fact that; in windblows, the 'dirty' bit would get set in that way, causing Scan/ChkDsk to have to always run on startup (though that could be circumvented, it isn't such an intelligent thing to do).

But yes, certainly; on AT systems (the message "It's Now Safe to Turn Off Your Computer" would be p–u–r–r fect for implementing the power strip method for all PC components and their appliances.

(which caused many a zapper for some – and allows for a RESET front panel button [and "turbo" mode :-]), and the Mobo could (potentially and literally) blowup in your face, if one forgot to discharge the capacitors, and/or unplug the power

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Heard some different legends before – this one is interesting.

Allow me to clarify (clean out the cobwebs, a bit ;-));
Check out this .WMV(56k) or the ASF version(150+k) , which comes as a courtesy from what I find to be an invaluable resource for new system builders, upgraders, any/all PC hardware related items – including older AT systems...

Visit; <<http://www.quepublishing.com/promotion/3033>>
(this is Scott Mueller's site (an Electrical Engineer, who publishes very useful info IMHO) – I own the 13th Edition of his major publication, "Upgrading And Repairing PCs")
Look for – "Power Supplies LPX Power Supplies" on that URL page I posted – d/l either the 56k version (for dialup users – slow, poorer video quality, .WMV file), -- or the 150k+ version (for those w/ Broadband access, though an ASF file, (which I don't seem to have the correct Voxware MPEG4 codec installed yet, for the Audio part in Linux) – the Video quality is much better nonetheless.

Now, more than likely, _you_ personally don't need to watch this, and likely know all that info already – but it explains what I mean about the Mobo 'blowing up', 'catching fire', etc.
Help yourself to review other Free, D/l video from his site, if you're interested – there's much there that's freely available, and much more, if one buys the Book,DVD...[/end promotion :-)]

Capacitors

storing energy – there are three types. The AC power at lines voltage is converted to DC (with big capacitors to smooth things out – maybe 50–200 uf at 150 – 300 Volts), which is used by a DC–DC converter (switcher)
[...snipped for brevity...]

I am nowhere near as well informed, nor educated in electrical engineering as you have proven to be, though I have a small grasp, and can follow along – you certainly know your stuff

Size mainly, but the real reason was the need for lots of 3.3 Volts instead of +5 for the second generation of Pentium chips (and later).

Right – and understood – I think I recall the early P4 mobos requiring an extra Aux connector (6pin) to supply more +3.3v and +5v, IIRC (oh heck, I forget exactly). Though I've read, viewed, and learned the 'specifics', yet because I rarely _use_ that knowledge on a day to day

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basis, many *specifics* kind of fade into the wild blue yonder for moi :-). But, when it comes to specs, one had better know exactly (especially when giving advice), and I can easily find (look up) that info, when really necessary...

I have always understood this to mean a *soft* or *warm* boot (as opposed to a *cold* boot, – since also the RAM doesn't necessarily get discharged (or checked) upon a restart ('shutdown –r now' , or through the GUI).

RAM getting discharged?

by "discharged" (which is admittedly an incorrect term to use here), I mean what you describe below concerning the RAM *full* "check" that lacks upon a warm boot (reboot).

The /RESET line going low for a long enough period restarts the processor – for the x86 family, that means it starts executing code at –0x10 (0xFFFFFFF0 for a 32 bit address bus), which is the power on section of the BIOS. RAM will be tested. (The concept goes back to the IBM PC, where you had to write something to every address in RAM space to set parity, lest you read something uninitialized and get a parity error – which forced a Non Maskable Interrupt that halted the computer.) The thing is, the /RESET signal is generated only by the power supply (the /PowerGood signal that the +5 is above a threshold), or by that reset switch. There is no other way to generate that signal. Thus, your warm boot could be configured to start the CPU at the same 0xFFFFFFF0 address, but the /RESET line isn't asserted, so the hardware doesn't get the reset to a known state. Oh, the[n] there is no /RESET pin on the RAM sockets.

I hadn't realized that the earlier IBM design required the 'write-to-every-address' requirement in order to set parity, but allow me to ask;
Is this a Registered(Buffered) thing, or a ECC(Unbuffered) related thing – or perhaps both?

This very detailed stuff interests me tremendously – and while I have a very 'small' grasp in understanding the Bootup sequence/process fully, until I "do–this–for–a–living", I'm afraid I may never really recollect all these intricacies. I'm well aware of the PowerOn, PowerGood signals.

See the "From–PowerUp–To–Bash–Prompt–HOWTO".

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Yes – I must do this (in earnest) – especially also to delve into BASH scripting

Briefly, when the CPU starts executing code at 0xFFFFF0, it runs through a memory check, a basic hardware check (can I talk to that hardware), and then looks for a bootloader on the disks. When it finds one, it runs that code (in this case, this would be GRUB) and make some kind of decision of which O/S to load. The boot loader then loads the initial parts of the O/S, and then points the CPU at that code "you take it from here".

Very well described, indeed!

Now what happens when windoze boots – I can't tell you. The last version of windoze I used was 3.1 running over DOS 5.0

Another resource, though Winblows related is at C(hris?) Quirke's site, which describes the MS winblows bootup sequence;
<<http://cquirke.mvps.org/9x/startup.htm>>

But from a purely hardware level (no OS involved), using the BIOS ROM code interaction with the PC components (x86), there is definitely differences between a 'warm' and a 'cold' boot – and while I can't pinpoint the specifics, and may be confusing the issue (on topic), I certainly suspect this diff (perhaps in combo with the WOL/WOR BIOS (DMI?) feature I mentioned earlier) is what's causing this ZeroConf networking issues, whether one uses Linux –or– Microshaft, or any other OS for that matter.

Another piece of possible relevant info;
I've totally disabled NetBIOS in win98 (those nasty 135–139 ports), something akin to this <<http://www.grc.com/su-rebinding9x.htm>>

"I am told" that should be no problem – but have no knowledge one way or the other. Perhaps it wants to talk to itself over the loopback to those ports – I have no way of knowing.

I'll have to look into that more as well – but I suspect something lower–level...we'll see, eventually if NetBIOS (the lack of) is playing a role.

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IOW – there's nothing in /usr/src/linux – there's not even a /linux subDIR in there.

That's OK – that's the `_source_files_` for the kernel, not the executable which is almost certainly in /boot/ (though it `_could_` be in /).

I was told previously (by another) that it too, is "OK" – thanks for the reassurance.

Rome was not built in a day. Generally, you learn best by doing, and that tends to mean start small. For *nix, the man and info pages are the primary sources, though some commands may offer a "usage" hint if you do something they don't understand (or cheat by simply typing "name_of_command --help"). Start with 'man man' and 'info info' to get the man and info pages respectively for man and info. 'whatis' and 'apropos' are nice to have

Will do – and I will follow up on these very useful suggestions, thanks for that :-)

and another command to learn is 'grep' and 'zgrep' (which handles compressed files as well). You can then use

I know 'grep', but would love to be able to use 'awk', 'grep' in small scripts and for 'plucking–out' only the relevant info – I hear ya though...in due time.

```
[compton ~]$ zgrep -lw whatis /usr/share/man/man1/*
/usr/share/man/man1/apropos.1.gz
/usr/share/man/man1/man.1.gz
/usr/share/man/man1/manpath.1.gz
/usr/share/man/man1/whatis.1.gz
[compton ~]$
```

to search the actual man pages, rather than the descriptions of those pages. The same trick works for info pages in /usr/share/info/.

I see, "Zgrep" is for Gzip files I presume (perhaps also for most compressed types) – but those DIRs you list above are not occupied with anything ATM;

```
~$ zgrep -lw whatis /usr/share/man/man1/*
gzip: /usr/shareman/man1/*:gz: No such file or directory
```

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upon what the thread's subject is about) – and that's why I always post the 'command' + the 'output' – so that others (newbs perhaps) can gain from it hopefully.

Would that others followed that philosophy. Yes, that's why I post the commands and output. This ALSO helps when someone is having a problem, and posts the command they ran. Showing what you did and what you got (hopefully editing out irrelevant stuff when posting)

I'm trying quite hard :-)) – sometimes though, a huge 'snipping' session can lead to incoherent threads/posts.

is going to get you a LOT more accurate help than trying to give a verbal description.

Indeed

memory retention (or more correctly, the lack thereof) is just one of those things that creeps up on you with age.

It's the second thing that goes.

What'd ya say ?? Lol :-))
though my hearing _is_ still pretty darn good....Oh – you mean the 'shaggy–doo' on top – ROFL

groups as in /etc/groups? Is the 'install–guide' and 'sag' installed on your system?

Will do....
Ok – hmmm....

```
$ sudo apt-get install sag
Reading Package Lists... Done
Building Dependency Tree... Done
E: Couldn't find package sag
```

```
~$ sudo apt-get install install-guide
Reading Package Lists... Done
Building Dependency Tree... Done
E: Couldn't find package install-guide
```

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* Installation and Getting Started Guide

version: 3.2

authors: Matt Welsh and others

last update: March 1998

available formats:

[...]

* The Linux System Administrators' Guide

version: 0.9

authors: Lars Wirzenius, Joanna Oja, Stephen Stafford, and Alex Weeks

last update: July 2005

available formats:

[...]

That's at <http://tldp.org/guides.html> if you don't have it.

!Doh! – the "install–guide" and "sag" are not part of the Main debian Distribution (or should I say Official Deb Packing System?).

I can be such a dunce sometimes – and I'm more concerned with just replying at this moment – I will certainly review (and revisit until I understand completely) the above info, and practice those commands, and install those packages eventually. Thanks for the info/guidance.

Genoa TurboExpress 486VL that's actually in a Everex boat anchor (real AT size) case – a 486DX–33 with 32 Megs of RAM and a 540 Meg disk ;–)

ahhh.....I have a 32MB Pentium 166 in a BabyAT here – it has a minimalist and tweaked win98 on it (runs great), yet I need to get it a NIC...there is an open PCI slot (as well as ISA slots), but I think I need an earlier PCI type that isn't so easy to find (New) nowadays...I'm sure I can find one, if only I can recall the requirements [inserts a brainfart] :-p

I eventually plan on using it as either something headless (some sort of Server) on the LAN – but most likely as a Firewall – maybe even as a mail IMAP Server box w/firewall or rules based (IP Tables),or just as a LAN/WAN firewall in a DMZ or somesuch – running Smoothwall, Shorewall, m0n0wall, or one of the other newer ones (any????*wall*) that I can't recall then names of ATM.

And I can see the reply by the O/P to my original reply – things are fine.

Old guy

Gotcha – and many Thanks again...

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