

## Self-Rebooting PC/Server ! What could it be ?

You are working away on your PC, writing a document, reading an e-mail, browsing the Net, and, suddenly, bang ..... it reboots itself automatically ! As if you had pressed the Reset button, except that ..... you did **not** press the Reset button !

Or you go away and leave your PC on, but when you come back it has obviously restarted itself and it is either in Windows, asking you to run **Scandisk** (Win9x/ME), or asking you to log on. Or, if this is a Windows NT4/2000/XP/2003, NetWare, or Linux server, you notice other tell-tale signs which clearly point to the server having rebooted itself ([like the up-time counter in The Ultimate Troubshooter](#) for example).

### The five likely causes

On a PC or server which is well taken care of with, say, [The Ultimate Troubshooter](#) and good antivirus & firewall software, the five most likely reasons for a PC/Server self-rebooting randomly are as follows :

- Electrical input problem
- A faulty Power Supply Unit (**PSU**)
- A faulty Uninterruptible Power Supply (**UPS**)
- A faulty network card or network cable
- A faulty motherboard

We have yet to encounter anything else that causes a PC/Server to self reboot.

**Electrical Input problem**

Your PC's connection to your electricity supply may have a problem :

- Check that your PC is definitely plugged in properly into the wall. Push the plug to make sure.
- Check that the mains lead is definitely fully plugged **right into** the back of your PC.
- If your monitor is plugged into the back of your PC, make sure that it too is well plugged into the back of your PC.
- If your PC is plugged into a multiple adapter like a 4-way mains gang, then plug it directly into the mains and see whether that makes a difference. If it does, then replace the multiple adapter.
- Finally, in very very rare cases, in countries where mains plugs include a fuse, as in the UK, the fuse's wire may be "*on its last legs*" and occasionally disconnects as a result. In such countries replacing the fuse (5amp), or the PC's mains lead altogether, is something that should also be tried.

**A faulty Power Supply Unit (PSU)**

If you have eliminated the connection of your PC to electricity as the source of the reboots, then your PC's internal **Power Supply Unit, the PSU**, is the most likely source of your problems (90% of the time), unless your PC is hooked up to a UPS, in which case read about UPS problems below before coming back to this section.

Our advice is as follows : if you have checked everything as regards the connection of your PC to the electricity supply, then replace your PC's PSU as the next step to solving the problem. Not only is the PSU the culprit in 90% of cases, but even if the problem should be the motherboard, our advice is always that **if you are replacing a motherboard because it self reboots the PC, then you should as a precaution also replace the PSU**. Additionally, given that a good PSU is still a relatively cheap component and one that can be replaced very quickly, unlike a motherboard which may require some software setup, then you might as well replace the PSU as your next step to solving the rebooting problem – **always use a very good quality PSU**.

Do not attempt to replace the PSU yourself unless you know what to do inside a PC. Your local PC repair shop should be able to do that for you at a very reasonable price (US \$60, say).

### A faulty Uninterruptible Power Supply (UPS)

We once were stumped for weeks trying to work out why a NetWare server at one of our customers kept rebooting itself every Monday morning at 7:00 ! We investigated everything : early morning office cleaners turning off the mains, power surge as air conditioning and lift systems came back up after the weekend, talked to Novell, checked the Novell Knowledgebase for possible NetWare problems, absolutely everything. No luck. Yet, the precision and rigorous timings of the reboots, 7:00 every Monday morning, seemed to point to either external factors, a running process problem, or an operating system problem. Nevertheless, after watching the fileserver one Monday morning at 7:00 we decided, just in case, to replace the UPS that the server was plugged into and, hey presto, the problem disappeared ! Yet the UPS, an APC UPS, had never shown, through the relevant self-test indicator, any sign of the battery having gone faulty, as you would expect of a Smart-UPS.

Moral of the story : If your UPS is at least **18-months old**, and you are experiencing an unexplainable rebooting problem, **replace it with a new one**. In any case UPS's are usually only warranted for two years, so if this is a fileserver, or you are in an area or building where it is crucial to have a reliable UPS, **then change your UPS if it is older than 18 months – it is money well spent !**

### A faulty Network Card or Network Cable

The complexity of the types of communications that a PC or Server gets involved in nowadays is such that, increasingly, we are coming across faulty network cards and network cables causing some PCs to reboot spontaneously. In our experience this was unheard of till 2004 – a network card, whether onboard or PCI, might go faulty but would never make a PC reboot. In our current era of Internet connected PCs and multiple applications, protocols, and client programs either accessing an Intranet or the Internet, we are now finding that, occasionally, the cause of a PC self-rebooting is, indeed, a faulty network card or a faulty network cable (eg. the cable has many twists, kinks, or has been regularly trampled by some office chair).

If you have any doubts about the condition of the network cable, replace it – the price of a network cable is so low you should not entertain second thoughts. If that does not solve your PC's spontaneous reboots, then replace the network card. If this is a server, use only the best : **3Com** (at the time of writing, 23-Dec-2005, the **3Com 3C905CX-TX-M** card is a good well priced medium range 10/100 Mbits card for the budget conscious person).

**A faulty Motherboard**

If you have tried all of the above and your PC is still spontaneously self rebooting on a random basis, then you have a **faulty motherboard** and it needs to be replaced.

If you do not know how to replace a motherboard, take your PC to your local PC repair shop and get them to replace the **motherboard** for you.

*As mentioned earlier, if you replace the motherboard we strongly recommend that you also replace the PSU at the same time.*

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