

Re: Can a computer virus kill the CPU?

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Sebastian Gottschalk wrote:

It is. How do you think all those fan control software packages work?

What happens when, for example, fan stops working on the CPU? CPU either throttles back or shuts down without damage. Do not confuse a computer crash with physical hardware damage.

Many assume if a computer crashes due to heat, then hardware has been damaged. Heat is actually a diagnostic tool. Long before anything can get hot enough to cause damage, the system crashes. Those fans are mostly so that computer will not crash (without hardware damage). And yet myths promote those fans as if hardware damage will otherwise occur.

Heat finds defective hardware. Put a hairdryer on high and selectively heat everything inside the computer to find defective hardware. That's right. Heat is an excellent diagnostic tool to find a component that is failing. Long before heat causes hardware damage, the system has crashed. Thermal cutoff is a hardware function installed in any chip that might be physically damaged by too much heat. Cut off those fans and the system may only crash.

Unfortunately many who never learned this will 'fix' a computer with more fans. IOW, instead of replacing a failing component, they install more fans to 'cure the symptom' – mask a defective part. If airflow is restricted, will the chip burn up? Of course not. Long before the chip gets physically damaged by heat, the computer has crashed.

So if a virus shuts down fans, then what happens? Computer crashes. Yes, the repair may get very expensive because the problem would be so difficult to find – so rare. Not expensive because hardware was damaged. Expensive because a human needs so much time and trouble finding a software problem that causes a crash.

And again, CPU does not burn up. Hardware functions inside the CPU (even dating back to 1980s for Intel CPUs) implement 'overheat protection'. Self protection that does not use 'machine code' software

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– that is implemented totally in hardware.