Keep PC Power on, or Turn Power off?

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Should I turn my computer off, or leave it on?

This is perhaps the most, if not one of the most questions we receive.

The reason so many people don't know the answer to this question, is because there are so many different answers out there! And most of them are not wrong, they are just not entirely correct.

The full answer is this:

"It depends."

Now that's not much of an answer is it? Let's take a closer look.

The computer can be broken up into 2 "types" of parts, electronic and mechanical.

Electronics

90% of the computer is electronic – made up of parts that don't move such as your RAM, CPU and motherboard. And for these components, the answer is "leave the computer on."

This is analogous to a light bulb. It's electronic, not made up of moving parts. When does a light bulb go bad? Nearly always when "flipping the switch", i.e. turning the power on. The surge of electricity that hits the light bulb causes it to go bad. Lights so very rarely go bad when left on, and the same is true for the computer, mostly.

Mechanical

Only a couple parts in the computer are mechanical, a couple fans and the hard drive (unless you have a solid state drive which is rare). These guys are spinning almost 100% of the time your computer is on. Some computers "power down" the hard drive after inactivity for a set number of minutes or hours, but for the most part hard drives are running continuously. These parts prefer to be turned off.

This is analogous to a car engine (or anything mechanical). They ware over time. The same is true for the fans and hard drive in computers. So, these guys prefer to be turned off.

Conclusion

So the full answer as to "should I leave my PC on or turn it off" boils down to "are you trying to conserve the mechanical parts, or the electronic parts?" It's kind of a "pick your poison" deal.

And of course, nothing would be complete without an *asterisk.

The Hard drive is made up of both electronic and mechanical parts. So turning the system off to preserve the mechanics of the hard drive can have a negative impact on the electronics of the hard drive. However it's far less expensive to repair electronic issues than to repair mechanical issues.

So what do we recommend at PcComputerGuy? – Do whatever makes you happy, but backup your computer regardless of the strategy you choose. Parts in the system can be replaced, or a new system can be purchased. Your data, pictures, documents and memories are much harder to recover in a failure and therefore are much more expensive. However in general, we recommend just using the default settings that most systems come with – in which they "go to sleep" after 30 minutes to an hour of no use. Not because it's any better per say at preserving the system, but rather it's a "middle of the road" solution and saves electricity as well as providing fast "wake up".

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Tech Tips Podcasts [4]

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