Power saving for computers - rumors and facts

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Saving electricity for computers has always been a headache, especially for laptop users. However, not all "word of mouth" tips are correct, sometimes leading to unexpected results.

Turning the computer on and off will reduce the device life. Excessive temperature changes when changing states cause stress on electronic devices (especially capacitors and diodes) in the machine.

Turning on / off electronic devices that are in good use does not cause machine stress. The devices in the computer are actually also used for many other machines, from medical equipment to factory lines, which are subject to extreme temperature changes or turn on and off continuously without any problems. However, experts agree to turn on / off computers continuously, which could exacerbate hidden errors that were not detected during use - which will "work out" sooner or later.

The CPU Watt parameters are a measure of the system's energy consumption performance

System performance is calculated by the percentage of energy converted, usually in the range of 50-90%. The alternating current cannot be converted into one way for the device in the device to turn into heat, increasing the load on the machine's heat dissipation system, and thereby causing the computer to consume more power. However, determining the power consumption efficiency of the power supply through conventional equipment is not easy, while the manufacturer usually does not publish specific figures. In the case of ordinary users, you can search the network of performance parameters of similarly configured computer systems, thereby estimating the performance of the 'steed'. using.

LCD monitors use very little power, so it is possible to turn on continuously

A typical LCD monitor eats about 35W of electricity. Leaving hundreds of screens in continuous mode in the office is unnecessary waste of power. Even the LCD screen is in standby mode, or the power is turned off: the monitor power supply needs 1-3W. The only way to save energy is to remove the screen completely from the socket.

In addition, many people believe that to turn on the screen continuously will help reduce the "heating" time of the screen backlight when booting from full rest mode, thereby enhancing longevity. The screen using LED does not require this 'heating' time.

The laptop does not use electricity when in standby or sleep mode (sleep). USB device charged via computer power supply

In fact, the 'sleep' mode (Windows) of Windows Vista and Standby on XP saves the current state of the system into RAM and maintains the power supplied to the RAM when the rest of the system is completely turned off. Therefore, these two modes still "eat" a small amount of power, about 1-3W although the computer looks like it doesn't run. In contrast, the 'winter break' (Hibernate) mode saves the status of the system to the hard drive, and then turns off the computer completely. On the next boot, Windows will retrieve the data from the hard drive to RAM, bringing the computer back to the same state before Hibernate.

To enable Hibernate in Windows XP, right-click the desktop, select **Properties** > **Screen Saver** > **Power** > **Hibernate** > **Enable Hibernation** . Hibernate selection will appear instead of **Standby** button when holding shift during shutdown.

Laptop battery gradually decreases life after a period of use

Many laptops come with an old Ni-CaD battery that comes with a battery storage accessory, allowing full discharge and full charge. Laptops using Lithium-ion batteries are not affected by the 'remember' mechanism which reduces the lifespan of the NiCad batteries above. However, unlike NiCad series, lithium batteries should not be exhausted before charging if you want to extend the life. Both of these batteries can extend the service life if removed completely from the source. However, this is not a convenient option if the area where you live & work often loses power, or the laptop does not support this function.

SSD flash hard drive reduces power consumption of laptop

Not every case of switching to an SSD reduces power consumption, which largely depends on the application you are using. If you often use office applications that do not require continuous hard drive access, SSDs do not appear to outperform traditional products. Video or movie processing applications etc. will benefit in terms of more power savings, thereby extending battery life.

Always buy the most energy efficient parts available in the market

Whether an individual user or manager of a computer room, a server, etc., hurriedly change components to get a new type advertised frantically just for the reason that 'electricity saving' is the wrong problem: you put out goods Hundreds of dollars just to save a few dozen electricity bills each year. Instead, pay attention to buying power-consuming components when the computer reaches replacement time.

Sometimes, regular cleaning and maintenance of the system also reduces power consumption, especially for desktop computers: thick dust on the fan and heat sink makes the cooling system work harder, thereby increasing Power consumption is not required.

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