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## Screen Saver, Sleep Mode, Hibernate Mode, What's the Difference?

A series of recent incidents prompted this newsletter... A few clients have had computer issues that only could be described as "weird". This is not a technical term of course; there should be an explanation for everything, and classifying them as "weird" is not a solution. Here are the situations, and the solutions found...

### **Weirdness #1: Web Filter drops connections**

A school had a new web filter installed, and along with it new login software that allowed teachers and staff more latitude to search websites than student level searching. However, it seemed not to work consistently, some days it did, others not at all, or inconsistently. No explanation or troubleshooting resulted in an answer...

### **Weirdness #2: Online Cloud Service drops connections**

A small business office converted to Microsoft Office 365 and things seemed OK for a day or two, but then users experienced intermittent "drops" similar to situation #1. There was no distinct pattern to it, it seemed completely random...

### **Weirdness #3: Network Connection Drops**

A brand-new laptop worked fine... for a day. After the first day of use, it refused to connect to the office WiFi network. No amount of begging, pleading, or cajoling could persuade it to connect again...

What's the connection? The answer is a feature intended to be a power-saving "green" feature of desktops and laptops manufactured since 2008: Sleep and Hibernate mode. The workings of how sleep and hibernate mode differ between each computer and operating system, but I will attempt to make things a bit clearer.

**First, let's dispense with Screen Saver mode:** it does not save any power at all. Screen Saver merely makes your screen blank, or displays a series of pictures on your screen. Originally intended to prevent "burn-in" on the old CRT monitors, which could display a "shadow" if one image appeared for too long on the screen. It's still around, but not really needed as newer LCD or LED flat screens do not suffer from "burn-in". Screen Saver mode does not reduce power needs, or shut off or power down any other parts of the computer, and was not the culprit in these cases.

**Why you may want to use Screen Saver anyway:** if you need to keep your machine on all the time, but need to keep information private, use Screen Saver with "Password Required" to un-blank the screen. As mentioned, it does not save any power, but does keep your screen blanked out from nosy bystanders.

**Sleep Mode does save power.** Depending on the hardware installed in your computer, sleep mode could: power down your hard disk, shut off a wireless adapter, dim or turn off your screen, slow down your CPU, turn off the keyboard backlight, and more. This applies to laptops primarily, but also most desktops can do the same.

**Hibernate Mode goes further:** it powers down components to the point that the entire computer is almost completely shut off. I have experienced laptops that had the charger and battery removed for almost a full day, and when power is restored they resumed right where they left off. Impressive, but it can cause lots of trouble.

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Note that both Sleep and Hibernate power down or power off the network connections, and this is the key to all three situations above. The two power saving modes are supposed to “wake up” the network connection and resume where they left off, but I have found this is not the case, especially with wireless networks. Wireless networks can be troublesome in the best situation and introducing an on/off connection into the mix makes it worse. Some operating systems don’t implement power saving or wake-up properly either: Apple’s OS-X “Yosemite” and Microsoft’s “Windows Vista” are prime examples.

### So what’s the recommendation?

**First, I do not recommend using Hibernate Mode.** To me, Hibernate Mode is a solution in search of a problem to solve. In fact, I have seen more issues with laptops and desktops that could not “wake up” from Hibernate and caused problems with hard disk corruption and wireless connections. **Find the setting to disable Hibernate Mode.**

**Sleep Mode is a good thing,** but my first recommendation is to use it sparingly. Depending on your usage patterns, you may not need sleep mode at all. For example, if you use your desktop or laptop constantly for hours at a time, sleep mode won’t save much power, and will become an annoyance. Disable sleep mode.

If you use your computer in small “chunks” of time, but are mostly away from it, sleep mode can have some benefits, especially if you want to stretch your battery life. But only set sleep mode on the two biggest power users: the screen and the hard disk. Allowing the wireless adapter to go to sleep saves very little and, as I said earlier, causes network connection issues.

[How to Set Windows Power Settings](#)

[How to set Mac OS-X Power Settings](#)

-John Becker