Uninterrupted Power Supplies: Boring, but necessary

Have you ever lost an entire hard-drive full of data? I hate to admit it, but I lost probably more than a dozen.

Only one was lost to a physical error, all the others to "delayed write failed" errors which are my most feared errors on Windows, even more so than the Blue Screen Of Death. Why? Because best case, you lose just a file or a folder, but sometimes the entire drive is gone. Which happened to me more often that I care to admit.

One of the main reason why I had these delayed write failed errors is power. To be precise, the lack of enough power. If power goes down while you write on a hard drive, the outcome is usually not that bad assuming both your hard drive and your computer go down at the same time. If power fluctuates while you write to a hard drive, the outcome is often disastrous. This is especially true when you connect multiple external hard drives through a USB hub and the hub is either not powered correctly or suffers from power fluctuations. When that happens, the results are entirely unpredictable, but in many cases the disk signature of my external hard drive was lost. The only way to recover was to reformat the drive, thus accepting a total loss of all my data. Talk about stress, esp. when you realize there might have been some data on that drive that you were not sure that it was backed up. And just in case you are wondering - yes, that can happen on both Windows and Mac OSX.

How can you protect yourself from disasters like these? Use a UPS (Uninterruptible Power Supply)! A UPS not only gives you battery backup for a limited time, but also protects you from power fluctuations, surges and brownouts. Depending on the vendor and the feature set of your UPS, you can automatically shut down all the computers connected to a UPS, if a power-out occurs. You can even reboot as soon as power is restored. But more importantly, it ensures that you either get enough power to all of your storage devices or that a controlled shutdown can be executed, so you have that peace of mind that you did everything you could to minimize power related storage failures.

How many UPS's do you need? It depends on your setup. While Scott uses two UPS's, I use three - my work area consisting of an iMac, some external drives and a USB hub is connected to one. My file server, my Drobo and my backup drive for the Drobo are connected to the second UPS. Both UPS's also use software that automatically shut down my iMac and my file server in case of a power failure. And I have a third, smaller UPS to keep my router and DSL modem alive, so I have a connection to the Internet for my laptops while the power is out. I don't use a UPS for my notebooks, since their batteries last longer than any UPS.

While there are several vendors providing UPS, I've been using APC, so far with no problems at all.. Their website features a handy protection calculator where you can determine what UPS you need based on the equipment you plan to connect and the features you would like to have. And they offer for free their PowerChute software which allows you to shutdown your PC or Mac in case of a power failure.

In case you are wondering: Ever since I put any of my external drives and USB hubs on a UPS, I have not received a single delayed write error!

I back up my Macs and PCs. I back up my backups. And I protect my backups and backups of backups. Call me anal retentive, but I sleep soundly at night. Do you?