

Planning for Disaster Can Save You Big Bucks

by Joe Stoddard

What's your computer data worth? My own "My Documents" folder contains 20,000 separate files. Some are no big deal, but others, like a set of CAD drawings or a complex construction schedule, could literally take months to recreate. For the sake of argument, let's assume replacing an average document would require an hour of someone's time at \$25 — probably a low estimate. That would make the value of my "My Documents" folder \$500,000. When you think about your data in terms of an asset that you'd have to pay to replace, it's easy to see how important a backup and disaster recovery plan is to your long-term business health.

UPS: An Ounce of Prevention

The best disaster recovery strategy is to avoid disaster in the first place. According to CBL Data Recovery Technologies Inc. of Armonk, N.Y. (800/551-3917), nearly half of all data loss is caused by hardware failure, followed by human error, and then software malfunction and viruses.

The two pieces of hardware in your computer that are most likely to fail and cause serious data loss are the hard drive (HDD) and the power supply. Dumped coffee and other mishaps aside, the main cause of component failure is "dirty" 110v power. Don't believe it? Have your power company come out and place a monitor on the outlet where you plug in your office equipment. When I checked mine recently, I found swings in voltage from brownouts of five volts to spikes well over three hundred — within minutes

of each other, and at all times of the day and night. These fluctuations happen so fast you normally wouldn't notice them, but they take a serious toll on your computer hardware.

The good news is that the addition of a UPS (uninterruptible power supply), also known as a "battery power backup," unit will clean up your line voltage and could double the life of your components. In real terms, that's enough extra lifespan for your hard drive to last until you're ready to replace the whole computer due to old age — instead of it leaving you high and dry the day of the big client presentation or the night before your payroll is due.

In addition to cleaning up the line voltage, the battery in a UPS unit provides a controlled shutdown for your computers in case of an outright power outage. The brand of UPS I've had the best luck with is APC (www.apc.com). It's important to properly size the unit based on what equipment you're going to plug into it, and APC provides a handy calculator for that purpose on its website (see Figure 1, page 2). Expect to pay \$200 to \$250 per PC if you're using a conventional display monitor, or \$100 if you have an LCD panel, which requires much less power.

Like any rechargeable battery, the UPS will eventually be unable to hold a charge and will need to be replaced, so add it to the list of things to check on a regular basis. Also, some "surge protector" power strips look a lot like the smaller UPS units. These are probably fine to protect office equipment like copiers and fax machines, but they

don't belong on your computers because they offer no brownout or shutdown protection — critical for the health of your computer's hard drive and power supply.

Finally, I'm often asked if laptop computers that have their own battery need an external UPS unit. While the laptop battery usually serves as a good buffer between the 110v outlet and the computer, it doesn't do anything to protect docking stations, external monitors and storage drives, or other peripherals you might use. Plus, in my own experience a laptop battery that is consistently charged from a conditioned power source will last longer than one that isn't, so buy a UPS with enough capacity to handle your laptops when they're in the office.

Begin With the End in Mind

My apologies to author Stephen Covey for stealing his catch phrase, but if you don't plan how you're going to recover all that data you've backed up, you'll still be up the creek with no paddle when disaster strikes.

Consider this true scenario. A mid-size construction company "upgraded" its network servers from Windows NT to Windows 2000, wiping out *all its data* by mistake in the process. We tried all the usual "undelete"-type recovery utilities but to no avail — the damage was done. Good thing the company had backup tapes, right? Wrong. Nobody checked to see if Windows 2000 software was available for the tape drive before they wiped out their hard drives (it wasn't). The old tape drive could not be reinstalled on a dif-

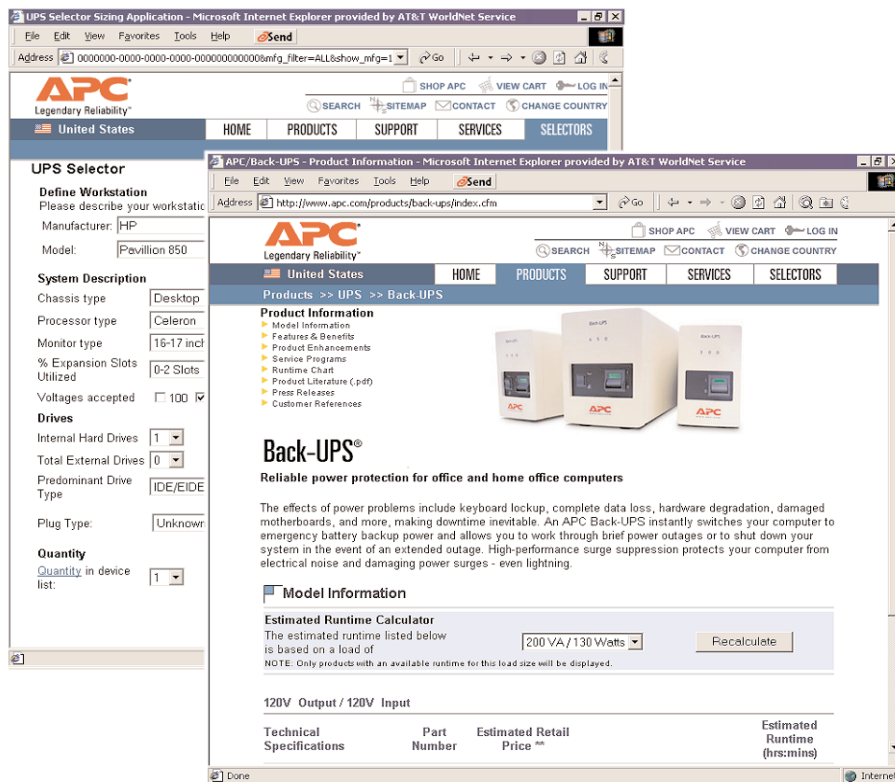


Figure 1. UPS units clean up “dirty” power sources and provide protection against unexpected power outages, making your computer gear last longer and work more reliably in the bargain. The APC website shown here features a handy calculator to properly size the UPS unit.

ferent NT computer either, because nobody thought to save the original installation disks. Furthermore, downloading the necessary software was not an option because the tape drive company had gone out of business.

After several days of not being able to enter project data or process payroll,

the contractor threw in the towel and sent the most recent set of backup tapes to a data recovery-conversion firm to have them reconstructed and copied to a modern tape format — all for the amazing price of only ... *charging* ... \$3,000 per tape (and there were five tapes per backup set). A few

days later they were back up and running, but all their old customer data and project files are still locked up on other old tapes they didn’t pay to have converted (yet).

The moral of the story? Don’t just back up your computer — plan and practice exactly how those backups will be restored. That means actually staging a recovery drill using a sample set of backups, using different computers to run the restore — the works. If you can’t do it when the pressure is off, there’s no way you’ll be able to do it when real disaster strikes. Regular recovery drills are also useful to snoop out failing UPS units, and can serve as a red flag for when it’s time to upgrade your backup hardware and software.

Most important, write down your step-by-step restore procedure and keep a copy of the plan — along with a fresh copy of any necessary software — in a bank safe deposit box or other secure place away from your office. Don’t forget to test the off-site software once a year to make sure it still works. In future columns, I’ll cover several specific backup and recovery scenarios.

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