Unplug.

We're in storm season again, and the storms are getting more dramatic. Most important: When you know a big storm is on the way, shut down your technology. Consider turning it all off from the surge supressor switch, because a computer that's just 'off' is still pulling enough power to run a clock and connect to a network, and that is quite enough to open a path for a surge.

There are three types of power issues, and they're happening more often now.

- **Power outages.** These are simple disconnects. A wire lost connection, usually from wind and wear, and the lights go out. These don't generally damage computer hardware, but can leave Windows files half-written,

and therefore corrupt. **Which** files matter. Some corrupt files break features (fixable remotely, in general) and some break the Windows start process (need in-person fixes).

- **Ground faults and intermittents.** These are mostly trees on a power line that's still connected. Transmission cables are not insulated, so a tree connects the line to the ground, badly, because these are mostly wet, windy events. The power voltage drops, called a brown-out, and there's sparking at the pole, and your voltage becomes erratic. Surge suppressors and battery backups with automatic voltage regulation provide some protection.
- **Direct lightning strikes.** Distance matters. If lightning strikes the fifth power pole away from you, you'll know it, but damage is not likely. If there is a direct lightning strike on the nearest pole, or on a building's electrical feed, no surge suppressor will block that.

Modern computers are designed to survive small events, just like crash zones on cars: Where power enters the computer, the network ports and power supplies fry, while storage devices survive. There's no guarantee of that, but I've seen drives survive lightning that fried every internal power cable in a building.
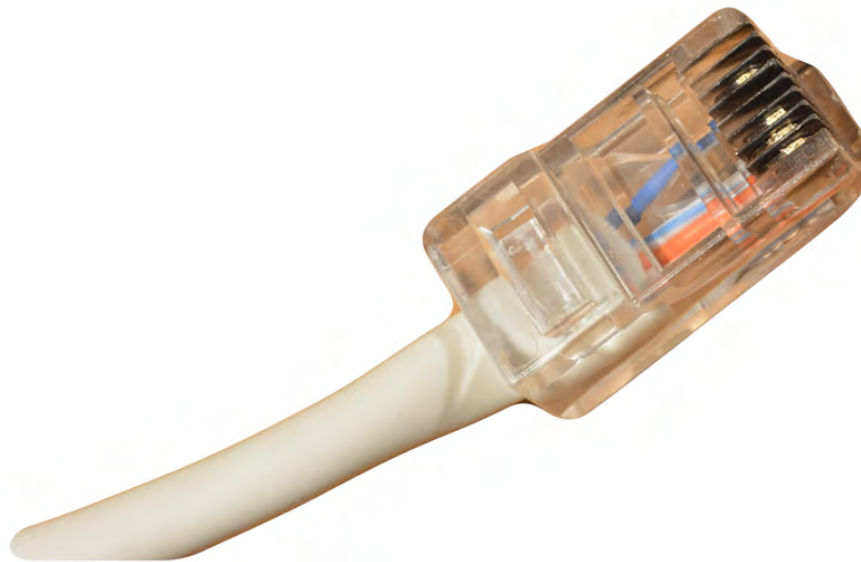
Joules Matter

Computers and printers should be plugged into surge suppressors. They should be marked, usually on the bottom, as surge suppressors or transient voltage suppressors. If it's an outlet strip marked on the bottom as a temporary power tap, it has no surge suppression. There should also be a joule rating; that's how much power the device can re-direct back to the ground wire. Don't

buy a surge suppressor with a joule rating below 1080 joules. Spend more for higher joule ratings if you are in an area with power lines on poles or frequent lightning strikes.

Laser printers should generally be plugged into their very own dedicated surge suppressor, and never a battery backup. They pull a lot of power to heat the fuser roller, that melts the plastic toner powder into the page, and giving them some separation from the computers avoids some power issues.

Servers should be plugged into uninterruptible power supplies, also known as battery backups. Test them every six months by unplugging them; everything plugged in on the 'battery' side of the UPS should continue working, and the alarm should sound. Don't test while Windows is logged in; run your test while Windows is on the sign-in screen.

Browser Extensions are Mostly PUPs Now

The good news is that the browser publishers, Edge, Brave, Firefox, and Chrome, and some others, have decided to all call browser add-ins 'Extensions.' The older names included plug-ins and browser helper objects, and it got confusing. So, Extensions. Unfortunately, 90% of them are PUPs

now, and it's the category of malware I have to clean up most often, because most security software has trouble blocking them.

PUP, defined: It's an acronym for 'Potentially Unwanted Programs.' Or software labeled by a cautious corporate lawyer, because if they label a product as evil, they could be accused of libel. Or maybe truth in advertising. Frequently, it's both.

So most extensions are spyware toolbars that do not quite reach the level of being auto-deleted by security software, but is still tracking you in the background of the browser, frequently even when the browser is completely closed. Some of these watch search histories, and some are grabbing logins and passwords. The topics where these show up are often search-related, offering fast access to maps, travel, recipes, and coupons. None of them do what they offer, most of them arrive silently without invitation, and many install additional malware without asking.

So think very carefully before allowing a PUP into your computer. They mostly make a mess, and track garbage everywhere. If you need to remove them, there is an item in the 3-bar menu, top-right of most browsers, marked Extensions, and they can be turned off and deleted from there.

96 Days to October 14th

Security patches for Windows 10 will end with a final set of patches on the second Tuesday ("Patch Tuesday") on October 14th. Upgrades to Windows 11 are available for most computers from 2018 and newer, and there will be some very limited one-year-only patch extensions that will become available soon. Call for help if you are still relying on Windows 10.

For computer help, call 410-871-2877
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