Why Rebooting Your Router Fixes So Many Problems

Your internet is down, but you know what to do: unplug your router or modem, wait ten seconds, then plug it back in. It's second nature at this point, but why does it actually work? And is there some magic to the ten second number?

And the even bigger question: is there some way you can *stop* doing this?

Routers can be mysterious, but they're not. And if you know what's going wrong, you can usually solve the problem.

Your Router Is a Computer

You might not think of it this way, but your router is a computer. Inside that plastic box is a CPU, memory, and local storage, all running an operating system. And like a computer, things can go wrong from time to time. Maybe a bug is causing a memory leak, maybe the CPU is overheating, or maybe a full blown kernel panic has taken down the entire system.

What's the simplest fix for these sorts of computer problems? Turning it off and back on again.

Do You Really Need to Wait 10 Seconds?

That answers why unplugging helps, but why do you need to unplug for 10 or 30 seconds? Well, have you ever unplugged a gadget only to see the power indicator light stay on for a few seconds? There's a reason that happens, and it's connected to this answer.

Most electronics make liberal use of capacitors, which are basically tiny batteries. You've seen these before if you've ever taken apart a computer or gadget.

They don't store a lot of energy, but can at times have just enough to keep a memory chip running for a few seconds. Waiting 10 seconds ensures that every capacitor is fully drained, and thus every bit of memory is cleared. This ensures that all the settings on your router are actually reset, including anything that might have caused the crash in the first place.

There are multiple reasons your router might need to be reset. Not all of these problems will require a 10 second discharge, which is why some problems can be solved without the wait. If you're troubleshooting a new problem, however, the 10 second wait might be the difference between working and not working.

What Causes Routers to Crash?

As with any piece of hardware, there are all sorts of potential reasons your router might crash and require a restart. Here are a few potential reasons:

- **Run-of-the-mill crashes**. As a computer, your router can crash because of bugs in the firmware eating up too much memory or causing a kernel panic.
- **IP Address conflicts**. Your router manages both private and public IP addresses, and sometimes it messes up. If two devices on your network have the same IP address, or if your router doesn't have an up-to-date public IP address, your connection might break. Restarting the router resets these IP assignments so things can start working again.
- **Overheating**. Like any computer, your router can overheat—especially if you keep it in an enclosed space to hide it from view—causing it to crash.

There are more potential reasons, but these are the most common. And there are a few relatively simple solutions for them.

One Solution: Update Your Firmware

When your computer has persistent bugs, a software solution is often the fix. The same goes for your router: it needs updates too.

The process isn't as hard as you think: you typically just need to open your web browser, type your router's IP address, and find the Update button.

If there's a documented reason your router keeps crashing, a firmware update should hopefully fix it.

Another Solution: Check for Overheating

Computers crash when they overheat, and your router is the same way. If it feels hot when you unplug, consider trying to solve for heat.

Your router likely has vents; ensure that they aren't covered up, just like you do for your computer. If your router is full of dust, consider cleaning it out with some compressed air.

It's also a good idea to assure your router is out in the open, not in a small cabinet surrounded by other electronics. Routers are ugly, but they really need to be out in the open—it'll help with heat management and give you better signal range, so it's really win-win.

A Temporary Solution: Automatically Reboot Your Router

In the meantime, while you're trying to troubleshoot the problem, you can solve some of your rebooting woes by rebooting your router on a schedule—that way, hopefully, you'll need to do it manually less often.

You have a few options here. You could stick your router on a run-of-the-mill outlet timer, which will cut the power at a time you specify, and let the power flow again at a time you specify. That way, you can set the router to reboot once or twice a day to keep things moving.

Again, this isn't a true solution, but it is a nice workaround that'll keep you from having to reboot it manually all the time…at least until you find a real solution.

If All Else Fails, Get a New Router

If none of this helps, it may be time to bite the bullet and upgrade to a new router. Just like a computer that won't stop having problems, sometimes it's just time to move on. You'll remove a piece of hardware that is constantly breaking, and you'll get access to all kinds of new features. Wireless technology has come a long way in the past few years, so if you're using something a bit older, you'll definitely get your money's worth by upgrading to something more modern anyway.

And you won't need to do the unplug-wait-replug ritual anymore.