

THE NEED FOR SPEED

Twenty-eight years ago, I worked for Florida State University and I remember when the campus IT gurus hooked us up to something called the “backbone” of the internet. I had the fastest internet connection I’d ever seen at 1 Mbps (1 megabit per second or 1,000 Kbps [kilobits per second]). Crazy thing is, there was nothing to do on the internet back in those days. I’d go home and use an old school dial-up modem at a “blazing” 14.4 Kbps speed to look at my five AOL emails. I was jealous of the connection I had at the office. My, how the tables have turned. In 2020, I have a faster internet connection at my home than I do at the office. The internet of things (IoT) means almost everything at my house is connected to the internet. Who knew that my blender would need to be connected to the internet one day? Everything being connected to the internet (a tenet of IoT) requires a lot of speed and bandwidth to work.

This term bandwidth is like asking if the pipe is big enough for your data. In theory, more bandwidth equals more speed. Ever see the buffering delays? Yep, not enough bandwidth either coming or going. The same now applies to your office. Digital transformation has led to all things electronic: phone calls, practice management systems, cloud-based backups, X-rays or cone beam CT scans that need a lot of bandwidth to store, save or use, so you need to make sure your internet speed is sufficient for that need. That’s usually measured in megabits

per second (Mbps). At the office, my personal usage is 120 Mbps while at home it’s more than 300 Mbps. How do I know these numbers? I don’t just rely on what my internet provider says I have. Neither should you.

Most internet providers have tiers of bandwidth plans. Whether at home or office, the concepts are the same. I recommend you test out your bandwidth. In a web browser on a computer that is “hardwired” (physically connected) to the internet, go to speedtest.net. Also test it with a device that uses Wi-Fi and see if it’s substantially different. You also can find speed test apps for phones and tablets, and internet providers may have their own incarnation of a speed test. At home, my provider is Comcast and they insist I use their version. If the speed is substantially slower than the tier you’re paying for, there’s a problem. For instance, my tier is 300 Mbps. One day, I checked the performance and it consistently was less than 100 Mbps. Not good. I called them, and sure enough, there was an unreported issue and they fixed it.

Two years ago, I went to the Florida Dental Association’s (FDA) Governmental Affairs Office (GAO) and used their computers for a day. Their internet bandwidth was horrible. I investigated it and found that their internet provider was limited by what they could bring



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into that old downtown location. At one point, the internet cable was run through a gutter! Time for a change. We went to a different type of provider that uses a cable modem, so speed is no longer an issue. Problem solved. I'm sure you seldom think about the speed of your internet connection until you've used a faster one. It was that difference that tipped me off that something was wrong at GAO. For them it was "normal"—for me, it was unacceptable.

Here are three takeaways from this:

- ❑ **Find out what your internet speed is supposed to be.** Your provider needs to tell you the tier you should expect to be in. You're looking for a number with Mbps behind it.
- ❑ **Test the speed over a series of days.** If you use one day, some providers will say it varies based on usage. Try off-peak times, for example, when the office is closed. If you're

not getting what you pay for, find out why. It could be the internet provider, your hardware, computer or network. You pay for it, so you deserve an explanation.

- ❑ **Buy all the bandwidth you can afford.** The need for bandwidth will keep growing and that growth will likely be exponential. We put a high-speed fiber connection here at the FDA that gives each person at least 120 Mbps, even in heavy usage. Our work is dependent on the internet now and that's not likely to change. Why put in a two-lane dirt road when you'll need an eight-lane superhighway soon? Every two years I go back to my home internet provider and they upgrade my bandwidth for free. This year they did it without me asking!

Bottom line: Make sure you're getting what you pay for when it comes to internet speed. 🌞