Home Network Tips for the Coronavirus Pandemic

Public health guidelines regarding social distancing have suddenly made staying at home the new normal for tens of millions of Americans. With kids home from school, parents teleworking full-time, and everyone needing Internet access, it's important to optimize the performance of your home network.

To help optimize your network performance, the FCC offers the following tips.

Check Your Plan

For starters, check your Internet plan. What speed of service do you subscribe to? Is it enough to meet any new demands? FCC consumer guides on household broadband use and broadband speeds may be helpful for you to determine your home Internet usage needs.

Test Your Speed

You can download broadband speed test apps, or visit speed test websites, to check your current broadband download and upload speeds, measured in Mbps (megabits per second).

If your speeds are slower than expected, you should contact your Internet service provider to find out if they offer troubleshooting tips, or if there is an outage or service disruption in your area that may be affecting your speeds. Sometimes a simple router reboot—by powering it off and then back on again—can resolve a problem.

If these tips don't work, you may have an equipment issue, such as an outdated router. Search the model number on your router to see if it's capable of providing your subscribed speeds. It might need to be updated to take advantage of higher speeds. If updates aren't available, you may need to purchase a new router or rent an upgraded router from your service provider.

In-Home Connectivity

The majority of households with home Internet service use the Wi-Fi (wireless) service on their home router. When multiple wireless devices are using the same Wi-Fi network, it can impact performance and create lag, or slower responses.

Modern wireless routers often have two or more Wi-Fi signals: one in the 2.4 GHz band and one in the 5 GHz band.

2.4 GHz connections generally offer broader coverage, but they process data less quickly than 5 GHz connections. 2.4 GHz is also the frequency on which many household devices and most Wi-Fi routers operate. If you see a list of other Wi-Fi networks available in your router's Wi-Fi settings, your performance could be impacted by those neighboring networks.

Routers that use a 5 GHz connection are faster, but their signal covers a shorter range than 2.4 GHz bands. In addition to faster speeds, the 5 GHz band may be less crowded by neighboring Wi-Fi networks and offer more stable connections.

Consider dedicating the 5 GHz network on your router to your most important uses, such as work or school. Change the password or manage the devices that access your Wi-Fi network to keep non-essential devices from connecting. For more advanced network partition options, consult your router's manual.

In order to maximize Wi-Fi coverage in your home, try to place your router in a central location. A Wi-Fi range extender or mesh network routers can also improve the Wi-Fi signal strength throughout your home.

A direct ethernet cable connection between your router and a device that accesses the Internet—such as a cord connecting your laptop and router—will provide the highest speeds and alleviate Wi-Fi congestion issues. Consider relocating your router to the room where you do most of your online activity so you can plug your device directly into the router. If your laptop (or other Internet device such as a streaming TV or a gaming system) does not have an ethernet port, consider using a USB ethernet adaptor.

Remember to always keep security in mind, particularly when working from home. Learn more in this FTC guide.

Create an Internet Schedule

Even the latest Wi-Fi routers with fast service speeds can get bogged down by a family of users trying to do things simultaneously like stream video, play graphics-intensive games, use virtual private networks (VPNs) for work, and video conference. Set guidelines with your family members and discuss daily schedules to avoid performance issues and prioritize usage.

If your job offers flexible hours, you may be able to work around high-traffic times on your home network.

Explore Your Options

If you get a good cellular signal in your home, another way to alleviate home Wi-Fi network congestion is to disconnect your cellular devices from your Wi-Fi network. You may also be able to use your cellular device as a mobile hotspot, through which you can connect non-cellular devices like a laptop to your cellular service. However, before switching any of your devices to cellular-only service, check your cellular data plan to make sure you won't go over any data caps and incur overage charges. You can also explore options for fixed wireless service or other cellular alternatives in your area.

If you're not seeing congestion on your in-home Wi-Fi network, turning on Wi-Fi and Wi-Fi calling from your smartphone can conserve data and reduce potential congestion on mobile networks. It can also help prevent data overage charges on your mobile phone plan.

Many service providers have committed to providing free Wi-Fi hotspots during the national coronavirus emergency. Some are offering discounts or temporary upgrades at low or no cost during the crisis, or eliminating caps on data plans. Learn more about what carriers are doing to support their customers.

Need Home Internet Service?

Visit EveryoneOn to search low-cost Internet service offers from providers responding to the COVID-19 crisis. EveryoneOn is a nonprofit dedicated to creating social and economic opportunity by connecting low-income families to affordable Internet service and computers, and providing digital skills training.

The Lifeline program also provides support to lower the cost of service for qualified households.

For more information about the FCC's efforts to connect Americans to broadband, visit our Bridging the Digital Divide for All Americans webpage.

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