



Home Internet Service Tips

We rely heavily on the internet to conduct our daily lives for work, school, and personal business. As the demand for bandwidth continues to increase, it can have an impact on the stability of your home network. Understanding a few basic principles will help you get the most from your service and maintain a solid connection.

The Basics

Everyone needs three things to connect to the internet: a device (computer, tablet, cell phone), a modem, and an Internet Service Provider (ISP).

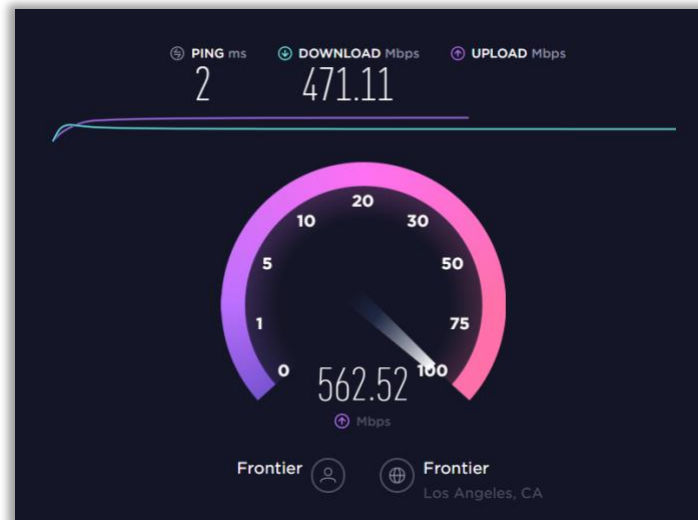
Internet Service Provider (ISP)

An ISP is a company that provides internet access. Choosing an ISP is fairly easy because you're typically limited to a few choices serving your neighborhood. There are many websites that can help you locate an ISP according to your area code. This article, from NerdWallet, gives a good overview of choosing service including how to decide what speed is best for your needs: [How to Choose the Best Internet Service](#).

Measure Your Internet Speed

After you set up internet service, test your connection from time to time by measuring the speed of your downloads and uploads. Your ISP may have an online tool to compare the various performance levels they offer, so you can decide how much you want to pay to achieve those levels. Alternatively, you can use one of the many sites and free apps available, including:

- <https://www.speedtest.net>
- <https://speedof.me>
- <https://fast.com/>



The best step in understanding your home environment is to measure internet speed at different locations using a laptop or mobile phone. Check your speeds in several rooms and take note of where the connection is fastest and achieves a higher score. Choose the room with the best results to conduct your meetings, classes and productivity.



Wireless Connections

The majority of households use Wi-Fi (wireless) service through a modem provided by their internet service provider. When multiple devices are using the same Wi-Fi network, it can impact performance and create lag, or slower response time.



What is a Modem?

The modem serves as a translator of all the different digital languages that cross between your ISP, router, and mobile devices. A modem can make a huge difference in the efficiency of your home Wi-Fi.

Your ISP will typically provide you with a modem when you sign up for service, but it may not be free. Ask about the cost for rental and consider buying a modem of your own to save on rental fees.



Consider upgrading your network with a Router

Routers are not typically included by your ISP but are highly recommended to purchase separately. A router will ensure much better consistency and performance in regards to WIFI and overall internet connection speed. Among other benefits such as security and privacy, a router can take your existing internet connection and split it to allow for more devices in your home to be connected to it simultaneously. Whether it be via WIFI or LAN, often referred to as “Hard Line” connection, a router is a great addition to your home network.

The location of the router plays a big role in getting a good signal. Have you noticed that your internet is faster in the living room where your router is than your bedroom? Changing the location of the router or moving closer could help find a stronger connection. However keep in mind that wireless signals often share the same frequency and as such household items such as microwaves can have a negative impact on your wireless signal.

Give Your Router a Break

Your router is working day and night to ensure a consistent internet connection. Give it a break and refresh the connection by restarting your router on a regular interval. There are many ways to accomplish this task and it depends on your model however one sure fire way to restarting your router is by simply unplugging it from power for about 30-45 seconds and plugging it back in. Refer to your manual on what the status lights on the front of your device are to determine connectivity has been re-established.



Wired Connections

A direct ethernet cable connection between your router and device 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 in your device directly to the router.



- Ethernet cables can be purchased from retail locations such as Best Buy, Amazon or Micro Center. There are various Categories of Ethernet cables however any Cat5 and above will be more than enough for home use. The only exception being if you plan on purchasing a cable longer than 300+ ft. In this case a Cat 6 rated cable would be beneficial. The category, labeled as Cat, will be printed on the packaging or the cable itself.

For best results, connect directly to the modem provided by your Internet Service Provider (ISP).

Peak Times

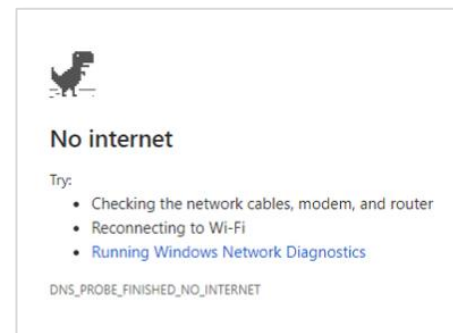
The Internet is like a major highway system with many roadways and intersections, each having their own capacity and speed limit. Like in any traffic congestion, data sent to your computer must wait for other data to pass through routers, switches, and hubs. Generally, the Internet's peak time is between 7pm to 11pm where people may be downloading files, refreshing social networks, surfing the web, playing games or steaming movies. When fewer people are online, you'll typically notice faster connectivity and performance.

Common Internet Issues

There are many easy solutions to common internet and Wi-Fi problems. Whether you're on a Zoom lecture with a choppy connection or BeachBoard won't load an exam, internet issues can usually be resolved with quick fixes that anyone can do. The most common issues include slow speeds, interruptions in service, or inability to connect to wi-fi.

If any of these issues occur, try the following:

- Reboot your router and modem by simply unplugging the power cord from the outlet (for about 30-45 seconds) and plug it back in.
- Make arrangements with your housemates in advance if you are expecting to need the internet for important activities, such as taking an exam. Slow internet could indicate that someone is putting a heavy load on the system by downloading a large file or streaming a video.
- Move closer to the modem or router. As a rule of thumb, the further you are from the access point (router or modem), the more service degradation you can expect. Walls or large items between your





devices and the access point can also weaken your wireless connection. Although newer technology may include networking hardware to mitigate these effects, distance from your router and modem will always affect your connection.

- If you are far from your router and moving closer is not an option, search online for Wi-Fi extenders for consistent, reliable high-speed Wi-Fi to every floor and corner of your home. An extender grabs existing Wi-Fi signals from your wireless router and re-broadcasts it. However, incorrect placement means the extender may not obtain enough Wi-Fi signal from your router so you may need to test your internet speed for the best spot. Some extenders come with ethernet ports that will allow you to connect your device via wired connection.
- Consider replacing your router and/or modem if it is more than four or five years old. Old equipment may not be capable to handle faster internet speeds. Check with your ISP to see if they are offering free upgrades as part of their services.
- Contact your ISP to ask if there are any internet outages in your area or network service changes. They may be able to reset your system remotely, or send a technician in person to diagnose the issue.

Finally, if you are consistently having an unsatisfactory experience, it may be time to upgrade your ISP service level to one that can handle the demands of your household.