



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



## 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.



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, Qq0.00000912 0 612 792 reWñBT/F1 1