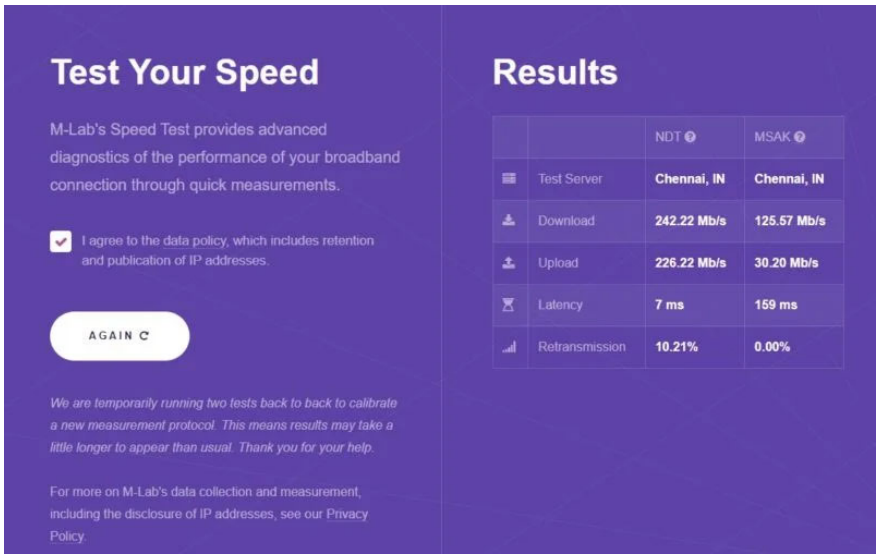
# Measure your internet speed online, no software required.

To check your internet and Wi-Fi speed, there are many internet speed testing apps and software available on your phone.

To check your internet and Wi-Fi speed, there are many internet speed testing apps on your phone and other network speed test software available. If you don't want to install software, you can also use many online network speed testing tools with simple procedures and instant results. Below are some internet and Wi-Fi speed testing tools that don't require installation on your computer.

## Test your network speed using Measurement Lab (M-Lab).

Measurement Lab is a non-profit internet speed test tool supported by organizations such as Google, Mozilla, and Cloudflare. This easy-to-use website performs a slightly longer test to measure both your download and upload speeds.



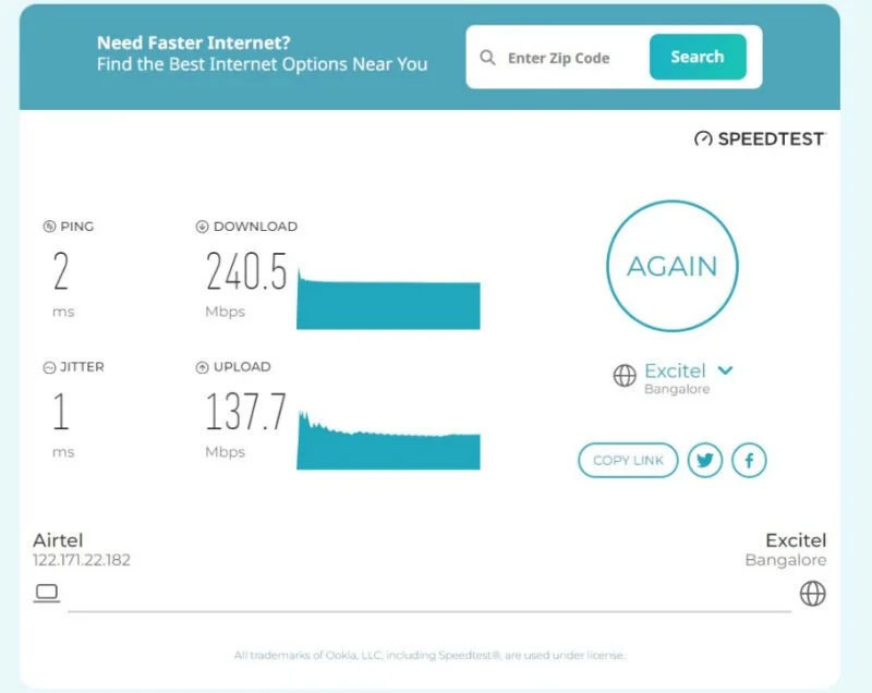

The M-LaB Internet speed test provides some additional information compared to other tests, such as retransmission rates and data from two different tests: NDT and MSAK. The MSAK test is administered by M-

Lab and measures the throughput and latency of network connections.

Although the M-Lab test seems to provide more information than some other tests, it yields nearly equivalent results. The positive point is that it has a nice interface and displays no ads.

# Check your network speed using TestMySpeed

TestMySpeed ??is quite similar to Ookla's Speedtest in terms of interface, settings, and results because it licenses Ookla's measurement testing to its own website.




Similar to Ookla Speedtest, you have the option to select the nearest server for more accurate results. It can also suggest the best internet options based on your zip code.

Besides download speed, upload speed, and ping, it also displays jitter information about your connection. This is a measure of the variation in the time it takes for packets to reach your computer. Both ping and jitter measure latency and indicate the quality of your connection.

# Check your internet speed using speed.cloudflare

**Step 1:**

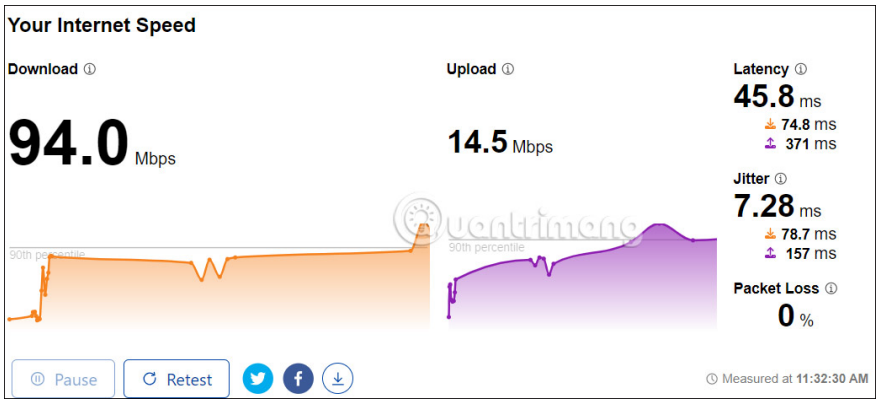
First, users access the speed.cloudflare website using the link below.

1. Visit speed.cloudflare

Then, on the website interface, wait for the tool to check your network speed on the computer or phone you are using.

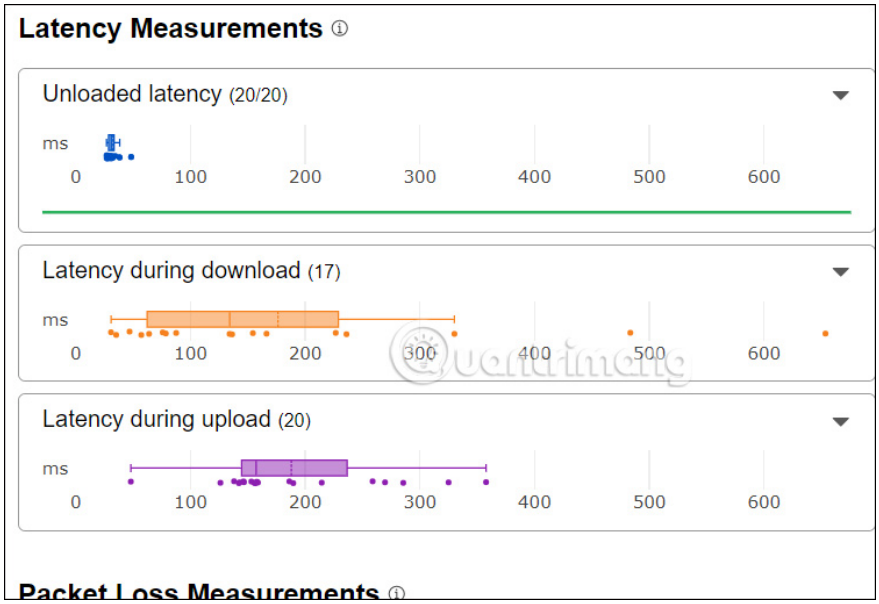
Once this network speed test is complete, users will see an interface displaying the upload and download speeds, as shown in the image below.

We can press Retest to re-check the network speed if necessary.



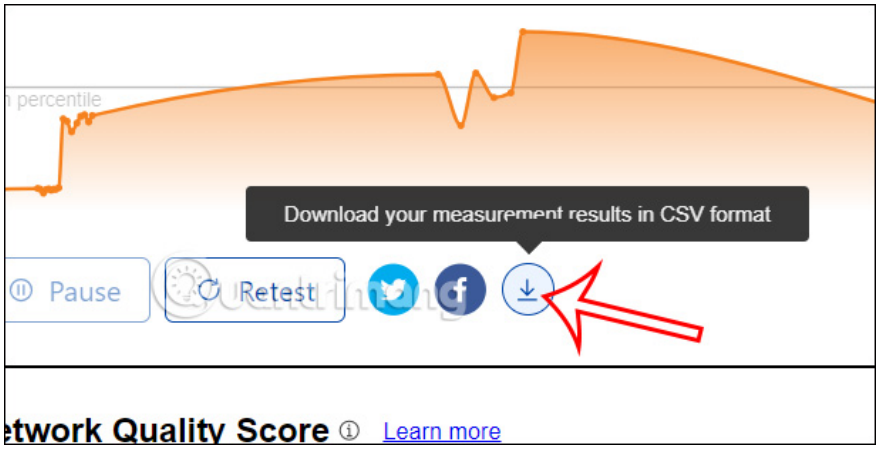

**Step 2:**

Specifically, below are **more detailed charts showing network speed** , including Latency Measurements charts that show both upload and download latency.




**Step 3:**

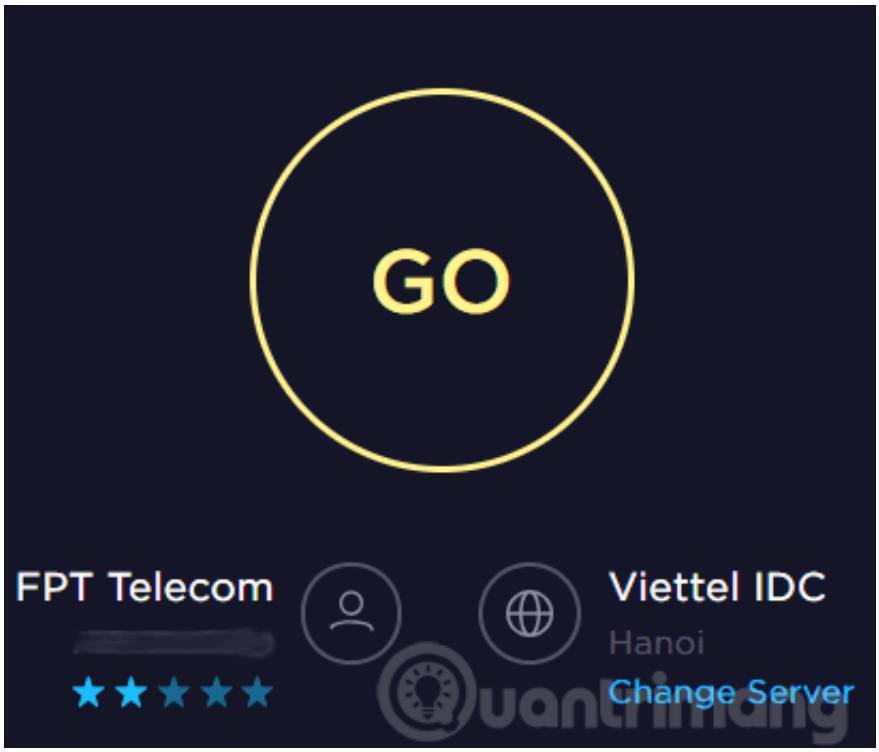
To **download the network speed test results from speed.cloudflare** , click **the download icon** to download the file in CSV format and open it in Excel if needed.




# Check your internet speed with SpeedTest.net

**Step 1:** Access the website **speedtest.net**

First, go to the homepage of the network speed test program. After accessing the **SpeedTest** website , you will see the following interface:




*The simplest and most common way to check and measure internet speed.*

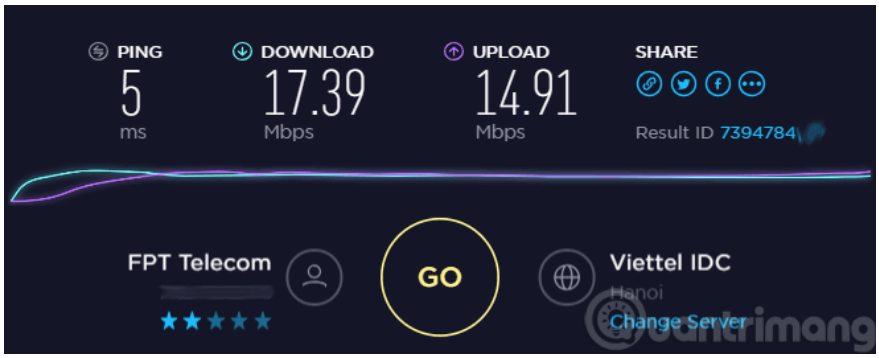
The highlight is the server location that **SpeedTest** recommends you use to test your internet connection speed from your computer. This will help you determine your internet data transmission and reception speeds.

**Step 2: Click the Go button** .

After clicking Go, a speed meter will appear and it will start displaying the download speed from your computer to the selected server and the data sending speed in the opposite direction (this is the **upload** and **download** process ). This will take a few minutes or a few seconds depending on your internet speed.

**Step 3: View the network speed test results.**

Once the network speed test is complete, you will see an interface like the one below with a table showing the upload and download speeds from your computer to the selected server on your network.




*Results of network speed test using SpeedTest*

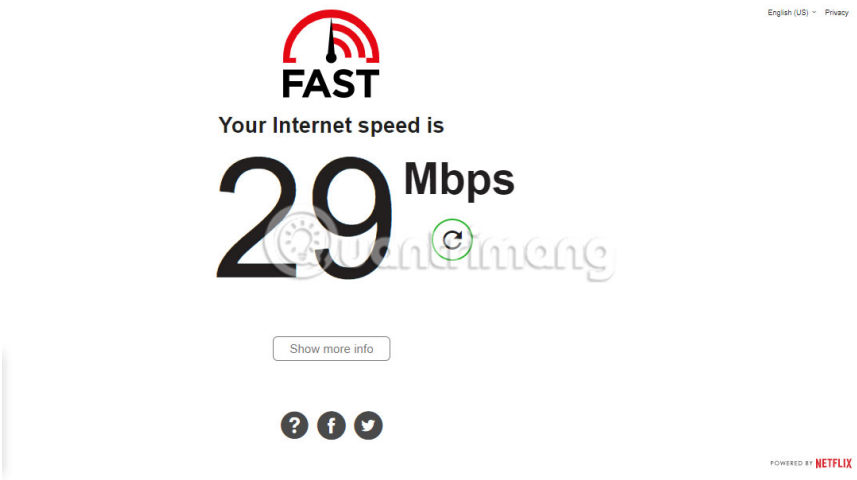
After the first test is complete, you can also re-test the connection speed to that server by clicking the yellow "Go" button in the image.

***Note*** : During the connection speed test, you must ensure that no programs are downloading or that no computers on the local network (if any) are using the internet connection to ensure the most accurate results. Additionally, you should conduct multiple tests on different servers in various locations to obtain the most accurate results.

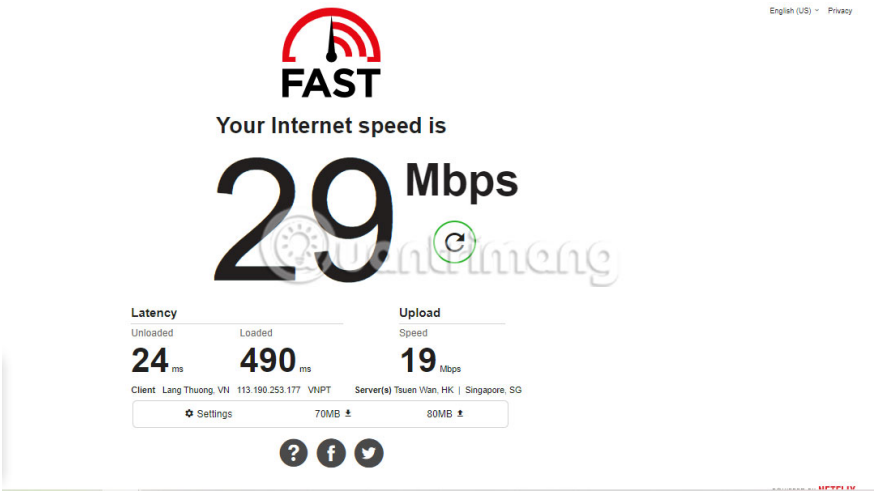
And with this method, you can accurately check the internet connection speed of service providers like FPT, Viettel, VNPT, or CMC without having to check through the modem or router.

# Check your internet speed using Fast.com

Fast.com is a simple, user-friendly internet speed test tool provided by Netflix. Unlike other speed test websites, it focuses solely on showing your internet download speed – a crucial factor for smooth streaming.




Fast.com's interface is clean and uncluttered, with no distracting ads. Your internet speed test will automatically begin when you open the website through your web browser, whether on a smartphone, laptop, or smart TV. While it only displays download speeds by default, you can view more details such as latency and upload speeds by clicking " **Show more info**" .




If you want to experience a dedicated app, you can download FAST Speed ??Test on iOS and Android devices to test your mobile internet speed while on the go.

Fast.com is particularly useful for users who want to assess whether their internet connection is fast enough to stream content on platforms like Netflix. Streaming video content, especially in high definition (HD) or ultra-high definition (UHD), requires a certain download speed to avoid stuttering and ensure a smooth playback experience. By using Fast.com, users can quickly determine if their internet connection meets the recommended speed for their desired video quality.

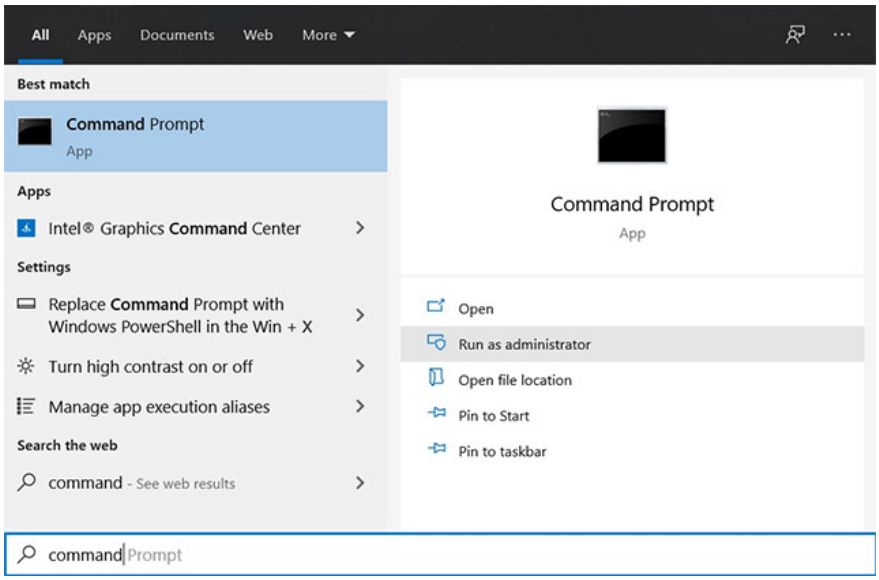
## How to check Wi-Fi signal strength using Command Prompt

Sometimes slow internet speeds aren't due to your internet connection but rather to your Wi-Fi signal strength and coverage. Before deciding to buy a new router or change your internet service provider (ISP), you should check your Wi-Fi signal strength and determine whether the slow performance issue originates from your ISP or

your router.

To check your Wi-Fi signal strength on Windows 10 using Command Prompt, follow these steps:

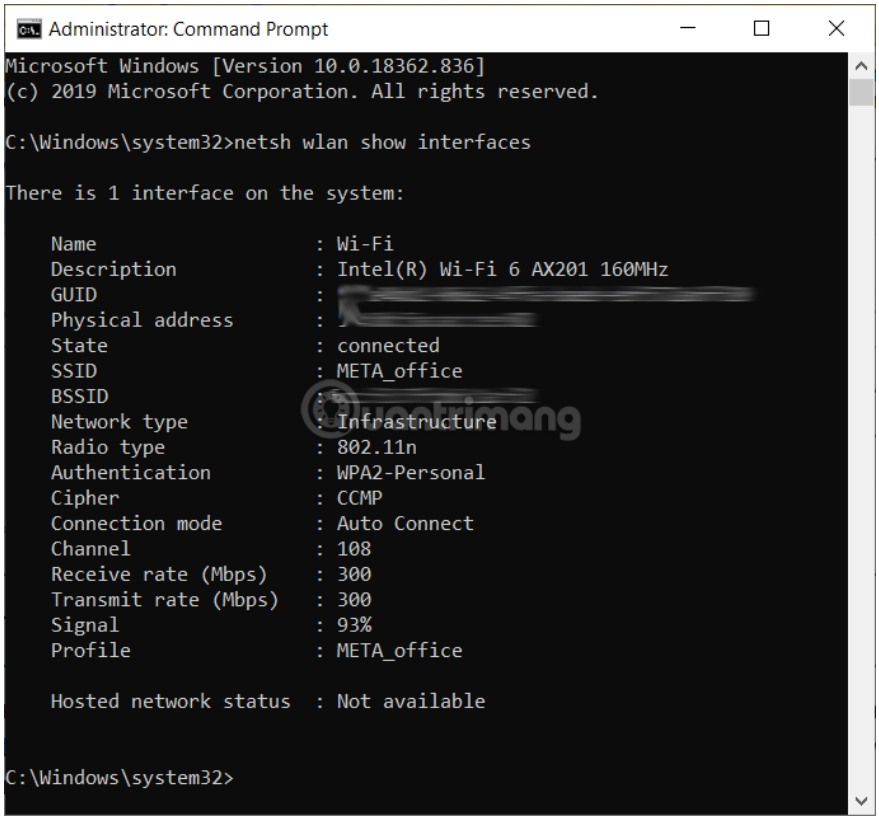
Open the Start menu > Type ' **command ' and you will see the ' Command Prompt** ' result returned > Click on **Command Prompt >** Select ' **Run as administrator** '.




In the Command Prompt window, you type:

```
netsh wlan show interfaces
```

The command above will display your network signal strength as a percentage. All details about the connected Wi-Fi network and network adapter are collected and presented in a specific table format as follows:




As you can see in the screenshot above, the 'Signal' section contains the percentage of your Wi-Fi router's signal quality. 75% is average; if it's below this percentage, you can try changing the router's location or connecting devices, then recheck your Wi-Fi signal strength.

# How to check Wi-Fi signal strength using PowerShell

To check your Wi-Fi signal strength on Windows 10 using PowerShell, follow these steps:

**Right-click on the Start menu icon or press the Windows + X** key combination > Click on '**Windows PowerShell (Admin)**' > In the PowerShell window, enter the following command:

```
(netsh wlan show interfaces) -Match '^s+Signal' -Replace '^s+Signals+:s+',''
```

The PowerShell command above shows you the exact Wi-Fi signal strength of your router.


# How is Wi-Fi speed tested?

Most Wi-Fi speed tests measure three factors:

1. Ping speed

2. Download speed
3. Upload speed

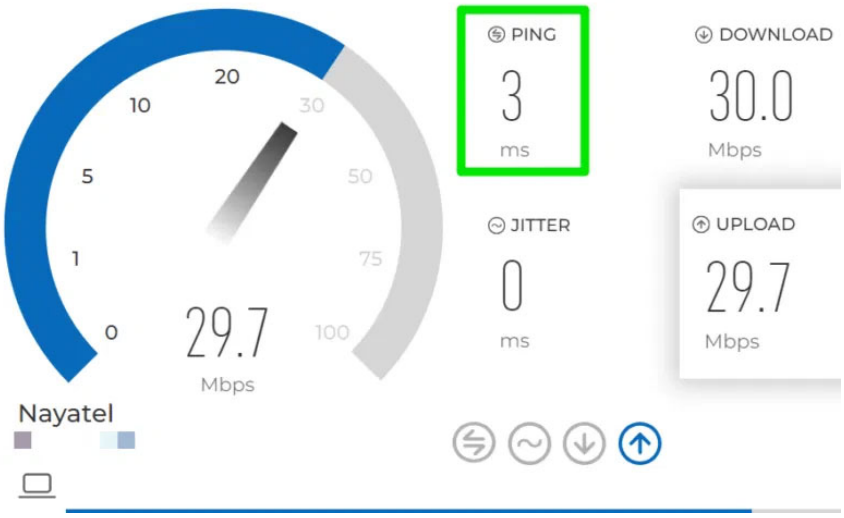
Let's check each of these three factors in turn!

## Ping Rate

The ping rate measures network latency. This is the time it takes for a data packet to send information to another machine and then receive a response.

High latency causes lag, which you definitely want to experience while gaming. A ping speed of over 150 milliseconds can cause lag during gameplay, while below 20 milliseconds is considered very low latency.

When you run a speed test, it also checks your ping by sending a small packet (an ICMP response request) to the server and then receiving a response in return. The total time taken for this round trip is your total ping.




In reality, the ping value you see in speed tests is useless, as it usually connects to the nearest server to run the speed test. In normal usage, you'll be connecting to different regions around the world on different websites, which will cause the ping value to change.

If you see high ping in games/applications while ping is stable in speed tests, it could be because the server is too far from you and there might be an issue with the route your ISP is using to connect to that particular server.

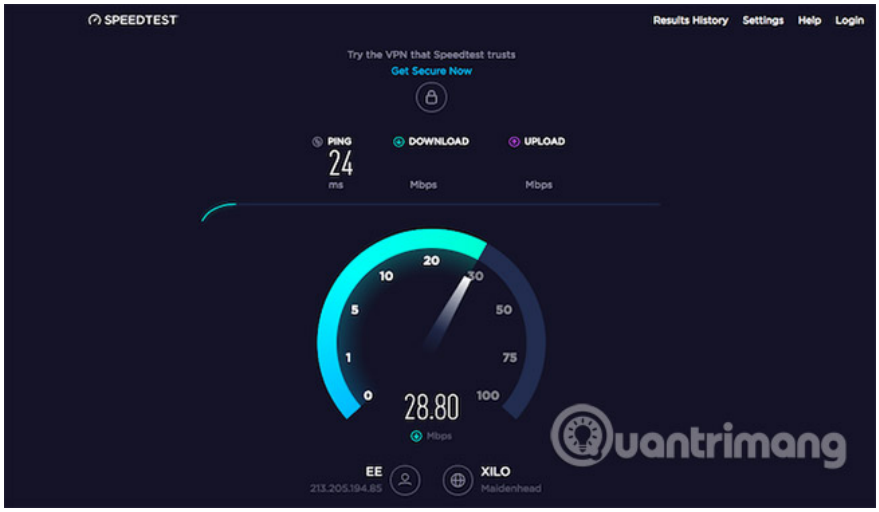
Another thing to note is that the ping value does not depend on download/upload speed. A low ping value does not necessarily mean your download speed is slow, and vice versa.

Along with the ping, you'll see the latency value also recorded in milliseconds. This is an important metric indicating the stability of the connection.

Latency measures the variation in the time it takes for multiple packets to be sent and received. Ideally, all packets should complete their journey back and forth at the same time. The variation in the travel times of packets is called latency. For example, if one packet takes 100ms to complete transmission and another takes 110ms, then 10ms is latency.

If the latency value is too high in the speed test, it means that packets are arriving with inconsistent latency. Latency values ??below 20ms are considered good for most tasks. At 20-50ms, you will start to notice issues in activities like online gaming or video calls. Any value higher will create problems in ping-dependent activities, making them impractical to use.

## Download speed




Download speed is the most important number. It indicates how quickly data is downloaded to your computer, measured in megabits per second.

The test works by downloading multiple data blocks to your computer, adjusting the size and number of connections used for the download as it runs. This maximizes your connection speed, ensuring it operates as quickly as possible.

To evaluate the results, you need to know the speed of the service you subscribed to, then compare them. For example, Netflix requires 25Mbps for 4K streaming or 5Mbps for 1080p HD streaming.

## Upload speed

Upload speed indicates how quickly you can upload data, such as when backing up files to a cloud service . Upload speeds are typically slower than download speeds and are not advertised by your internet service provider. Compare your speed test results to your provider's stated speeds to see how well your Wi-Fi is performing.

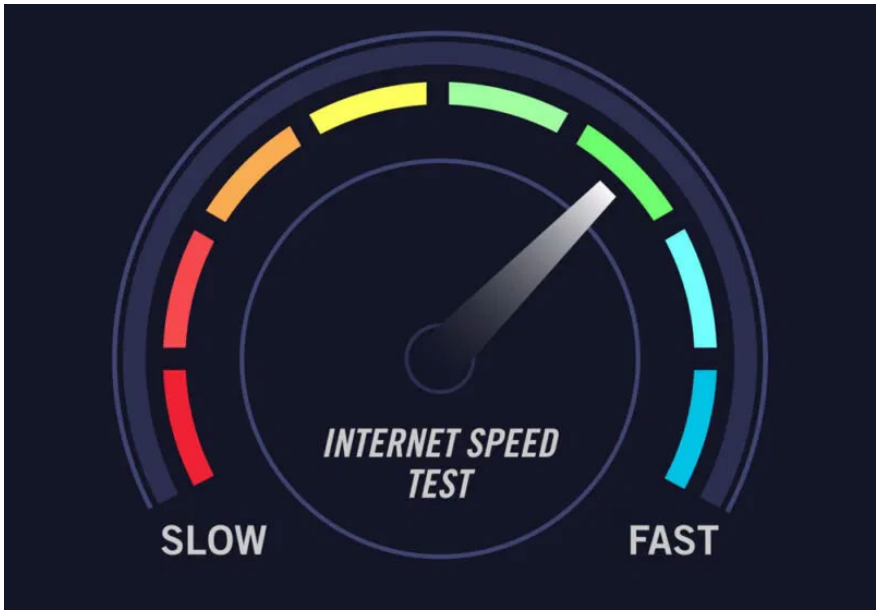
Upload speed tests work similarly to download speed tests, but in a different way. Your browser uploads data in chunks, with adjustments made to ensure it utilizes the full range of your connection.

In summary, these three tests will give you a complete picture of how your Wi-Fi setup is performing. You'll see that your internet speed matches the numbers your provider promised, if the connection speed is as fast as you expect and if you have a router with a strong enough signal.

1. How to properly crimp a network cable?

## What factors affect the results of a speed test?

Speed ??test results don't always accurately reflect the speeds promised by your ISP, as many factors can affect the results. First, make sure you're testing correctly. Try connecting using an Ethernet cable , close any programs that might be using the network, and run the test multiple times to check the average result.




If you're still getting slower speeds, then the type of internet connection is probably the cause, such as DSL, cable, fiber optic, etc. Here's what you should expect depending on your connection:

1. **DSL** : Its speed is affected by the distance between the router and your telephone exchange. It is also prone to congestion during peak hours. Expect to achieve 50% to 80% of the advertised speed under normal conditions.
2. **Cable** : Because this is a shared infrastructure, speeds may be slower when many people are connecting near your location. Expect to reach 80% to 95% of the advertised speed.
3. **Wireless/Cellular** : Speed ??is affected by distance and obstacles between the router and cell tower, as well as network congestion. Speeds vary greatly throughout the day and may only be 50% to 80% of the advertised speed.
4. **Fiber optic cable** : Fiber optic connections typically display speeds close to those advertised by your ISP and are very stable for both download and upload speeds. Although rare, you may still experience lower internet speeds on fiber optic cables due to secondary reasons.

Other secondary factors such as the number of connected devices, Wi-Fi interference, router/modem technology, and server load can all lead to speeds that differ from expectations. Unless you're getting extremely low speeds—like 20-30% of the advertised speed—fluctuations in internet speed are normal.

## What to do after checking your internet speed?

If, after checking your internet speed, you find it doesn't match what your internet service provider promised in your contract, even though your Wi-Fi signal strength is good, contact them for an explanation. If they said it was the promised speed but you still experience slower speeds than usual, it could be that a shark has bitten

through your network cable. If it's not a broken cable, try some of the methods to increase your internet speed that TipsMake.com has suggested:

1. Speed ??up your internet connection on your Windows 10 computer.
2. Speed ??up your internet by 20% in Windows.
3. Tips to boost your Wi-Fi signal to the highest level.

And you should also note that, in a LAN internet system, if you want to listen to music or watch YouTube videos online, choose a time when there are fewer users, or at least when the connection speed is stable and average, so as not to disturb others. Another solution is to download YouTube videos to your computer or laptop to watch offline . However, you should also choose "off-peak" times to download, such as at night, as the download speed will be better and will not affect other users. You can use IDM to download because it has a function to schedule the computer to shut down after the download is complete, or download normally through the browser, estimating the download time and then scheduling the computer to shut down. This way, you can leave your computer running all night to download without worrying about shutting down.

Hopefully, this service will give you more peace of mind regarding your service provider's connection speed and satisfaction with the speed of your current service package. Good luck!