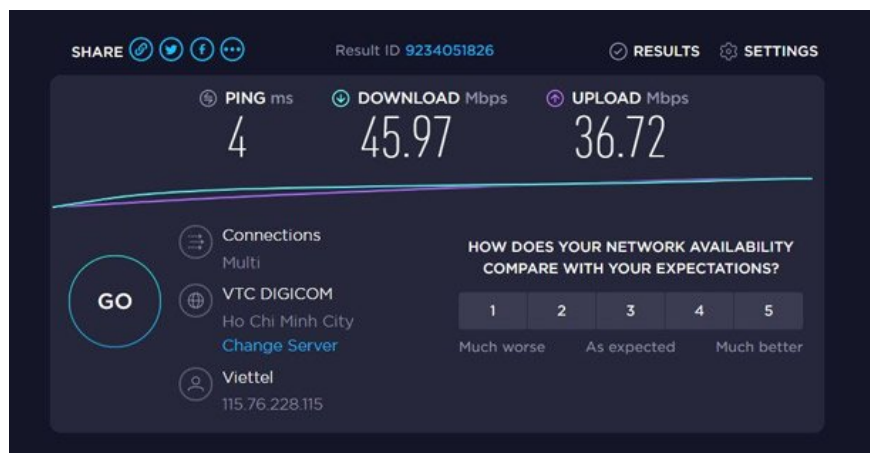


Advantages and disadvantages of Wifi and wired networks

Here are the pros / cons of two types of connectivity today: Wifi and wireless networks.

Data transfer rate

In recent years, wifi has made great strides with 802.11n speeds of 150Mb / s or 802.11ac with speeds of up to 866.7Mb / s. Wifi 6 has a theoretical speed of about 9.6 Gb / s. However, the speed of the wifi network is always slower than the wired network. Common Cat5e cables have speeds of 1Gb / s, even Cat6 network cables have speeds of up to 10Gb / s, which can easily allow wifi to 'smoke'.



That is the theory, but in fact there are very few Internet packages that can surpass the maximum speed of 150Mb / s of the 802.11n standard, so even if you switch to wired networks, the speed of Internet access will not increase very quickly. .

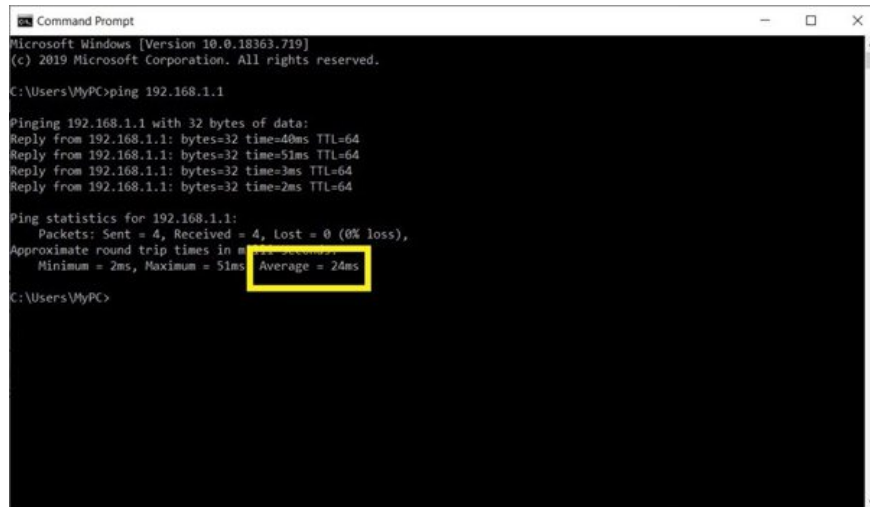
Therefore, the advantage of cable speed over wifi is only obvious when it is necessary to create a LAN to transfer files between different computers in the house. Using cables will make the most of the hardware speed and is faster than wifi.

Latency

Delayed time is the time it takes for a computer to receive or transmit information to servers. In the game, gamers call latency "ping". The lower the latency, the smoother the game will be. To reduce ping to the lowest level, you should use wired network for wifi offline.

You can use the Command Prompt to manually check the difference of ping numbers between cable and wifi connection. How to: Open Command Prompt in the Start Menu search bar -> type ping 192.168.1.1 or ping 192.168.0.1 -> Enter.

The number of milliseconds (ms) of the Average line is the actual ping, the delay from your computer to the router. To see the difference, check once with the wifi and once with the cable.



```
Microsoft Windows [Version 10.0.18363.719]
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C:\Users\MyPC>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=40ms TTL=64
Reply from 192.168.1.1: bytes=32 time=51ms TTL=64
Reply from 192.168.1.1: bytes=32 time=3ms TTL=64
Reply from 192.168.1.1: bytes=32 time=2ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milliseconds:
        Minimum = 2ms, Maximum = 51ms, Average = 24ms

C:\Users\MyPC>
```

Stability

Wifi is easily blocked by waves (because of thick walls, items .) and interference (due to neighbor wifi), so it is not as stable as wired network. This will cause you to experience problems such as disconnection, high ping and slowed down Internet connection.

With wired network, you only need to plug the cable into the machine to use, no worry about interference.

Maneuverability and convenience

Compared to the messy cables, wifi is definitely much more convenient, helping to increase the mobility of smartphone, tablet, and laptop devices.

In short, wifi will give you convenience and fiber optic cable has the advantage of speed, lower latency and stability. If you only have a single PC and want the smoothest gaming and movie experience possible, use an optical cable. Wifi is a more reasonable choice if you use mobile devices like laptops, smartphones .

Advantages High speed data transmission
Low latency
More stable
Disadvantages No maneuvering
Cords entangled

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