Broadband speed test

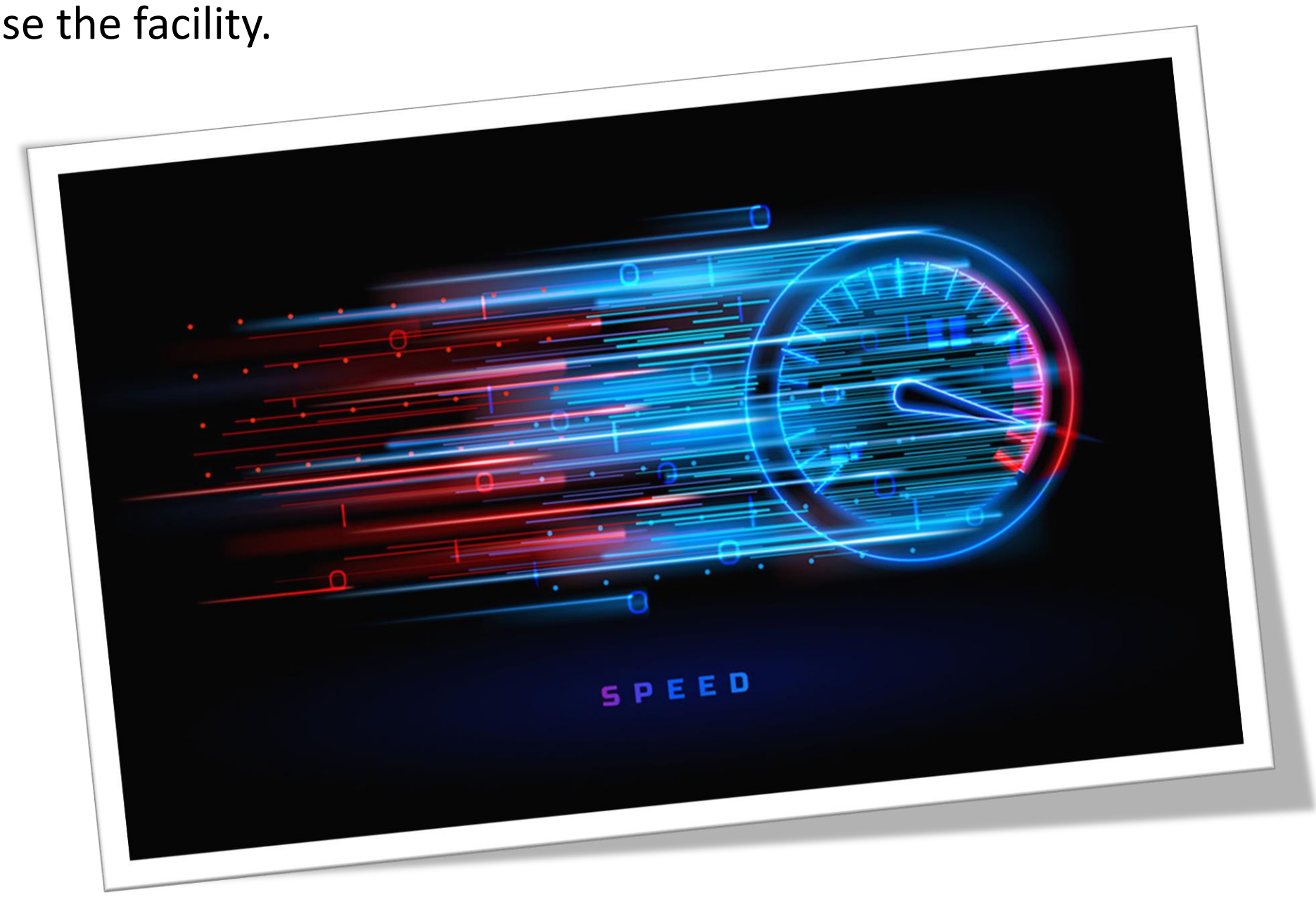
GIBRALTAR REGULATORY AUTHORITY

Using a broadband speed test

A broadband speed test provides users with an indication of the broadband speeds available to them at the time a test is performed.

Perform a quick search on your web browser and you will find an abundance of basic broadband speed tests. The majority of these are free of charge, will provide you with plenty of information and should be very easy to use. If you want to check what speed you're getting on your mobile device or tablet, check the relevant app store for dedicated applications which perform the same type of tests.

Some service providers offer their customers a broadband speed test, often found on their website and some even offer advice on how to properly use the facility.



What do these tests actually measure?

The speed tests primarily yield results for upload and download speeds as two separate readings. The results are usually provided in Megabits per second (Mbps) and higher numbers signify higher speeds. Results should normally be determined by the broadband package you are currently signed up to. In simple terms, if you are currently purchasing a 100Mbps broadband service, you should not expect results any higher than that.

Slow Speeds

Due to the virtual nature of the service, some broadband customers may be unaware if and when they're being undersupplied, especially if they are able to carry out their online activities without major disruption. Customers purchasing very high bandwidth broadband services would likely not feel an impact on their internet activity.

You don't need to run a speed test unless you suspect that you are being undersupplied or if you are simply curious to check your broadband speeds. Broadband speed tests give customers the ability to verify if their service provider is holding up their end of the deal or not.

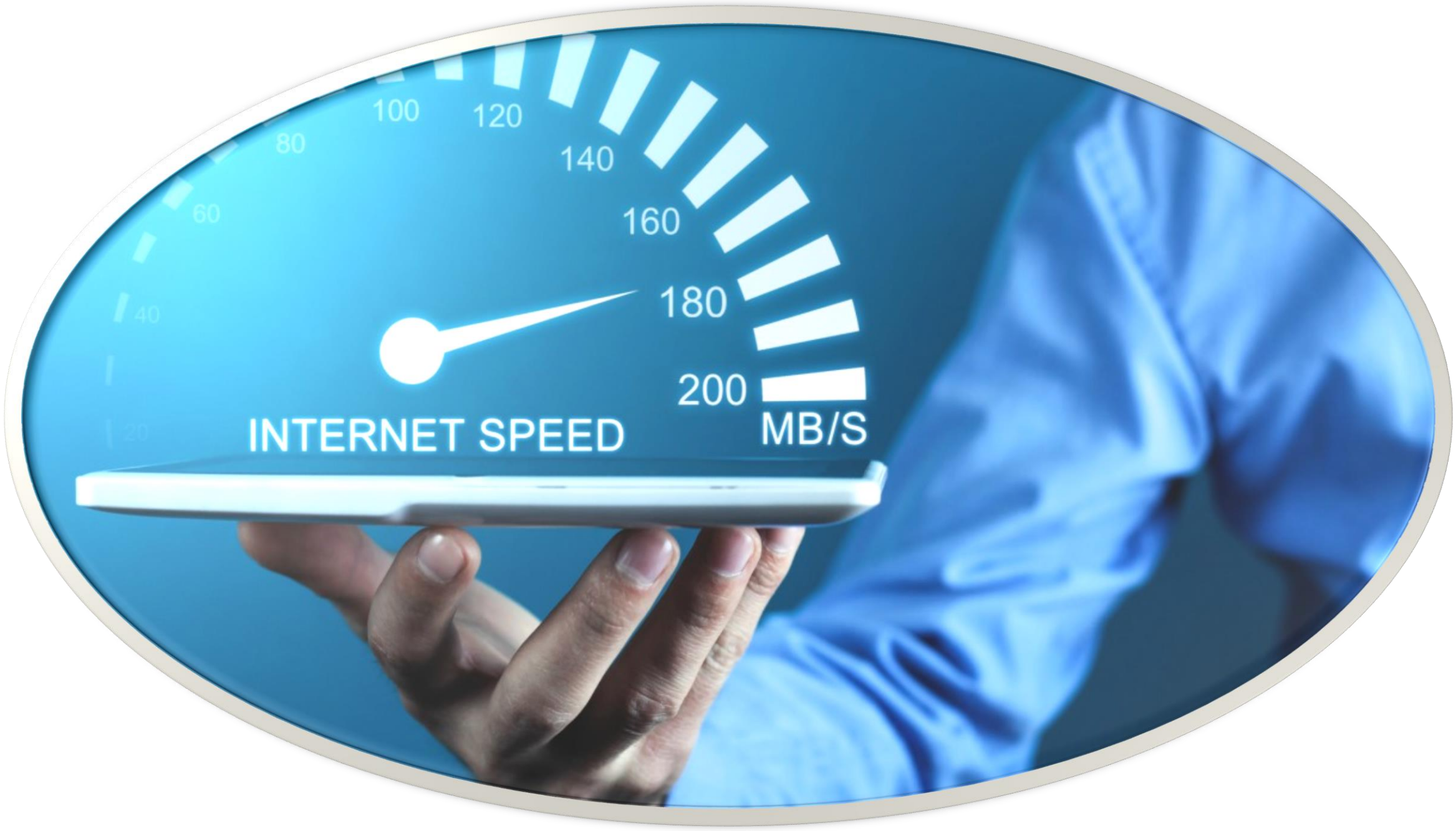
A word on Wi-Fi

Wi-Fi is not the most reliable way to perform a speed test. Some older or cheaper wireless devices (mobile phones, tablets, laptops etc) are equipped with Wi-Fi antennas which are incapable of receiving the full potential of your router. If your router happens to be a modern dual-band model (2.4Ghz and 5Ghz channel), you will find that each channel will yield different results, with the 5Ghz channel likely being the faster of the two.

However, like with most things, the 5Ghz channel has limited coverage and is therefore, better suited to use closer to the router, whereas the 2.4Ghz channel offers better coverage, but less overall speed.

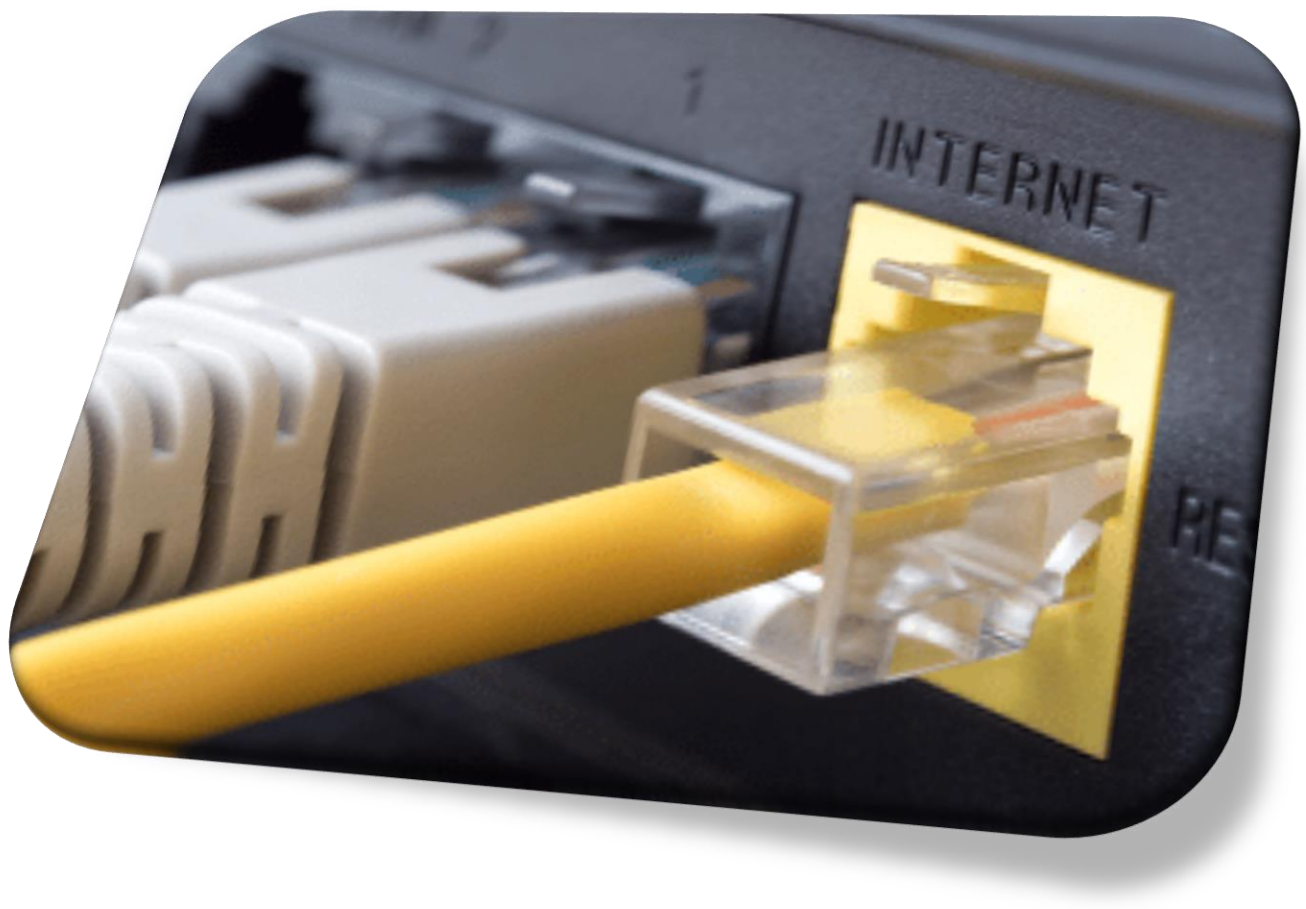
Top tip – Think about where in the house you are likely to use a specific device and determine if that device is better suited to being on the 2.4Ghz channel or 5Ghz channel. Since you can spread devices over both channels simultaneously, you may wish to connect static devices like smart-TVs to the 2.4Ghz band and have mobile phones and tablets on the 5Ghz band, minimising traffic on each channel and improving the overall browsing experience at home.

If you're struggling for coverage in the furthest end of your home, try a Wi-Fi range extender or wireless access point.



Ethernet cables

Most desktop computers and laptops will have an ethernet port. This offers users the chance to perform a speed test without encountering the issues that are synonymous with Wi-Fi. Although Wi-Fi offers mobility and freedom, ethernet is the golden standard of reliable internet and therefore, of broadband speed tests. Mobile devices and mobile phones generally do not have a ethernet port, so this section is not applicable to such devices.



Ethernet port and ethernet cable technology has developed over the years and in doing so, has allowed users to enjoy full use of the increasingly fast broadband services on offer.

Speed test accuracy

As a customer, all you can do is eliminate or minimise the variables which are known to negatively affect your broadband speed tests. Below is a list of steps which you may wish to take to ensure you get the most accurate speed tests possible.

Before you start, identify which Internet/broadband speed test you wish to use by searching on your preferred web browser or by using an app. Once you launch the application and are confident that you know how to carry out the test, proceed through the steps below.

There are a few important actions you can take to improve your chances of obtaining an accurate test result:

1. First check the download and upload speeds your service provider is meant to be supplying you with. If you are unsure, check your contract, your monthly bills, previous correspondence, or contact your service provider for confirmation.

2. Your router is essentially a small computer and performs tasks in the background which may impact the speed test results. Ensure that the router is focusing squarely on the task you want it to perform by removing all other devices from its Wi-Fi. For best results, restart the router prior to performing the speed test.

3. Wi-Fi is not the most reliable way to perform a speed test. Some older or cheaper devices are equipped with Wi-Fi antennas which are incapable of receiving the full potential of your router. If your router happens to be a modern dual band model (2.4Ghz and 5Ghz channel), you will find that each channel will yield different results, with the 5Ghz channel likely being the faster of the two. The drawback of using the 5Ghz channel over the 2.4Ghz channel, is that its coverage is slightly more limited than the 2.4Ghz channel.

For best results connect your laptop or desktop computer, to the router, by cable. This is the number one rule when performing broadband speed tests and eliminates the variability issues which are characteristic of Wi-Fi.

You must first locate your computer's ethernet port and get hold of an ethernet cable (Cat 5e, Cat 6, or Cat 6e cable is essential for speeds over 100Mbps). Connect one end of the cable into your computer's ethernet port and the other should be connected to the ethernet port on the back of your router.

4. Once you find a speed test that you are happy with, run the test and ensure that you test at different times of the day. If you have the time, run the test over a number of days, noting the results of each test.

To make a judgement on whether or not the speed test results are acceptable, you should compare the results with the broadband speeds you have contracted from your service provider.

Service providers should also provide information to their customers on the remedies available when there is continuous or regular discrepancy in speeds. Additionally, if you wish to submit a formal complaint to your service provider, the procedures for handling your complaint should be presented to you upon request and be available on their website.

Useful information for accurate tests.

It is important that you understand a little bit about ethernet ports and cables in order to understand if your hardware has inherent limitations before carrying out a speed test by cable. Although nowadays, “gigabit ethernet” (1Gb or 1000Mbps) is relatively common, some older routers and computers may have ethernet ports that are limited to as little as 10Mbps or 100Mbps, thus creating a bottleneck for broadband services with speeds in excess of those limits.

The ethernet cable used to connect to the router may also create a speed limitation. Ethernet cables come in various standards, but Cat 5e and newer are regarded as being able to handle speeds in excess of 100Mbps. If any of these components (ports and cables) are limited to 100Mbps, your service will also be subject to an upper limit of 100Mbps. Please refer to the device manufacturer specifications to check if your router or computer’s ethernet port is limited to 100Mbps.

When should I approach my service provider?

With these guidance notes, the GRA’s intention is to encourage consumers to properly inform themselves on what a broadband speed test entails, its purpose and limitations. When carried out properly, speed tests can provide users with an indication of the speeds they are being supplied with by their service provider.

Most users will only ever get to experience the user-end of the supply chain. A low speed test result alone, would not necessarily mean your service provider is undersupplying you. There could be a hardware failure, maybe your internal wiring has been damaged, or maybe the test is being carried out incorrectly.

It is not until you feel like the quality of service has deteriorated that you begin to ask yourself questions. This is both normal and understandable. High speed broadband is in the process of transitioning from being a luxury commodity to utility status, like having electricity or running water.

Shouldn't I always be getting the same speed?

In short, both yes and no. In theory, yes you should, but the reality is that the elements involved in delivering high speed (up to 100Mbps) or ultra-high speed (in excess of 100Mbps) broadband to customers, consistently, is an extremely complex process and the burden on these networks is likely to increase as users carry out more and more tasks over the internet. Due to the nature of how speed tests function, they can sometimes yield inaccurate results, in particular, if not carried out properly. A speed test result alone, should not be considered to be beyond question, nor should it be considered indicative of a service provider intentionally undersupplying you as their customer.

It is vitally important that broadband speed tests be used as an indication of potential problems with your broadband service. Take all the necessary precautions outlined in this document. If the results are less than satisfactory, only then should you contact your service provider and raise the matter.

A note on broadband services

Service providers generally offer asymmetrical broadband products, meaning that their offerings are made up of download speeds which are substantially higher than their corresponding upload speeds. For example, a 100Mbps download and a 10Mbps upload broadband service.

This is standard practice as service providers expect users to browse and download more content than they would upload. However, some providers offer symmetrical broadband products which means that your download and upload speeds would be equal.

GLOSSARY OF TERMS

Broadband - In telecommunications, broadband is wide bandwidth data transmission which transports multiple signals and traffic types. The medium can be coaxial cable, optical fibre, radio or copper pair. In the context of Internet access, broadband is used to mean any high-speed Internet access that is always on.

Download speed - The download speed is how fast you can pull data from the server to you. Most connections are designed to download much faster than they upload, since the majority of online activity, like loading web pages or streaming videos, consists of downloads. Download speed is measured in megabits per second (Mbps).

Upload speed - The upload speed is how fast you send data from you to others. Uploading is necessary for sending big files via email, or in using video-chat to talk to someone else online (since you have to send your video feed to them). Upload speed is measured in megabits per second (Mbps).