

Speed Glorious Speed

Everyone likes doing speed tests. Good results are great for showing off to friends and relatives but sometimes the results aren't as good as expected and B4RN is asked "If it's a 1000 Mbps connection why does my device see lower speeds?" This is the way to test your speed, although if you can stream live video you are doing fine and don't need to do all this! Use this app, not your web browser to test. The link to install the app on your computer <https://www.speedtest.net/apps/desktop> or go to the appstore or playstore to install it on phones/tablets etc.

So here are some things to consider if you want to do speed testing:

- Your connection to the router WiFi v Wired

You will only get the fastest speeds using an ethernet connection. The difference can be amazing. On my system with a laptop I consistently get 900+ Mbps on an ethernet connection but only around 150 - 200 Mbps on wifi. My old phone will only do 20 Mbps on wifi, my tablet does 40 Mbps but my daughters does 80 because it is newer.

If you imagine the WiFi transmitter is just a candle in a dark room and the receiver is a piece of A4 paper with writing on. A few centimetres from the candle the piece of paper will appear well lit, if you move it 1 metre away the writing will be poorly lit, 10 metres away and the paper will be barely visible. The intensity of light produced by the candle hasn't changed it's just that the "amount" reaching the paper reduces with distance. Wifi fades out with distance, and won't pass through metal backed insulation or thick old walls

- Your computer or other device
 - Many older computers and most laptops (even newer ones) have network adapters which are only capable of speeds up to 100Mbps so if you are seeing these lower speeds this is something to check. The easiest way to do this is to look at the ethernet connection to the router if the connection light on the router is green it's running at 1 Gbps (1 Gbps = 1000 Mbps), if orange it's 100 Mbps or even only 10Mbps
 - Older computers can fill up with 'electronic junk'; the remains of deleted applications, temporary files that didn't get removed, debris from computer crashes and so on, all of which slows them down. A new, 'clean' computer will usually give brilliant results but once you start adding applications and filling up the drive with photos, video clips and suchlike the memory will fill up and the computer will start to slow down.
 - My own experience shows how computers can vary; my laptop and desktop on the same connection show quite different results. For some reason the download speed on the desktop is about 1/3 of the upload which is around 700 Mbps while on my laptop which I have deliberately kept 'clean' I consistently get a symmetrical speed of around 900Mbps.

- What else is your computer doing?

There can be all sorts of things going on in the background on your computer that you aren't aware of

- virus scans

- application updates
- email downloading
- system self checks

These will all have an impact on the speed test. Also using the browser for speed testing can really slow the tests down, it is far better to install the Ookla app and use that

- Is something else using the connection at the same time?

No-one may appear to be logged on to a computer but a phone, tablet or laptop may have connected automatically to the wifi and be downloading stuff in the background or a smart device such as an internet radio or smart TV may be updating itself without you noticing. Your device may also be doing something in the background which slows down whatever work you are doing.

- The server you're connected to

Some speedtest servers can't handle the high speeds properly so we recommend using the [speedtest.net](https://www.speedtest.net) app, not the browser, and connecting to TNP at Manchester or B4RN Lancaster. Even then the server can be busy at times and return unsatisfactory results. Once you pick a server, stick to the same one for consistency. This is the link to install the app on your computer <https://www.speedtest.net/apps/desktop> or go to the appstore or playstore to install it on phones/tablets etc.

- General Internet traffic

B4RN does not slow down at peak times, but internet traffic can slow down and occasionally the speedtest sites can be busy, so test results may vary.

Remember B4RN delivers 1000 Mbps to your router.. They have no control over what happens at either end; on your home network or on the wider internet.

Do not worry if you can't do high speed tests, if your devices can stream video (youtube, netflix, iPlayer etc) then your connection is fine. If, however, you can't stream in areas you want to, then the B4RN computer club run by volunteers every Friday at our Melling HQ can provide help and advice, and lend you equipment to boost the signal round your house then you don't buy the wrong thing.