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t/a WISTEC

THE CURSE OF THE SPEED TEST

I am paying for a 10Mbps line with unlimited data, and I'm getting 1.54Mbps download and 0.65Mbps upload. My ISP is cheating me, and I will grind them till they give me what I pay for. WRONG...

Why is this the normal response ISP's across the globe get these days? And where did the narrative become skewed so much that the truth behind this got lost? Well, read on and I will try my best to straighten the narrative and get you back to the truth behind your line speed, and this useless speed tests these days.

First, we need to look at how things work, and then we can measure that up to how things get distorted. Here is a couple of examples of the most common internet products out there.



CAPPED PRODUCTS.

These products are focused on giving you more speed than you would actually need. And the simple reason behind it is to get you to burn through your data (GB) as fast as possible so you can top it up with more data bundles. This product loves it when you do speed tests, because that helps burn your monthly CAP even faster. When you pay for a 10Mbps product, be sure to get that 10Mbps. You will most probably get an average of 10Mbps and more times an 11 or 12Mbps line speed. But keep on doing those tests, your data is burning, and the companies are looking forward in charging you extra for your new data bundles. Also remember to start mailing them all the pictures of the tests you did when those line speeds went under the 10Mbps mark. That will definitely eat into your data plan. But don't despair, you have the need for speed, and that is just what you will get. Speed. Nope, not too much data, you asked for speed.

UNCAPPED PRODUCTS

For many years we have been told this uncapped internet thing, and believed it to be uncapped "data". Companies have even driven this narrative to accelerate sales. And it was all a clever marketing trick. Uncapped Internet is after all said and done, only what it said it was. Uncapped Internet. No, not uncapped data, Uncapped Internet. We will get back to uncapped data in the next product. So, what is this product then? The rules of uncapped internet are simple. Your internet should never be capped like in the capped products, it should continue to always work. Introducing the "Throttle Monster". You can't have uncapped data here, so in order to abide by the rules of this product, you need to throttle the line speed when you get to a specified data level. Secondly, ISP's does this to balance the network out and get the abusers to back off a bit so that the others can have a chance to do their thing on the internet. Have you ever seen this term: AUFUP? Acceptable Use Fair Use Policy. Go read it up. It's interesting, but that is what this product is all about.

UNLIMITED PRODUCTS

Or what you could refer to as an "Uncapped Data" solution. The aim here is to give the customer unlimited amounts of data. Yup, there is absolutely no end in that sea of data. All you can eat buffet. So, what is the catch here then? In order to give you the highest uncontended, unthrottled, unshaped, un-everything lines, you need to have an un-everything bank account as well. ISP's pays millions for their lines, and can't just go give a million Rand line to a customer for a fraction of the price. They need to break it up. So, an unlimited data plan must be contended. And there are many levels of contention. 1:10 is known as Premium services. Anything better

that that would start to eat into your pocket. So, it would be nice to have an unlimited product yes? Well, watch out. These products are never intended towards speeds. They are intended for you to have as much as possible data you can download. So, stop sending those speed tests on this product, because it just does not work, and a good waist of your time and effort.

SO HOW DOES A SPEED TEST WORK THEN?

I will spare you all the reading here and just drop the link. They would be more trustworthy than me... right.

<https://www.howtogeek.com/426757/how-do-internet-speed-tests-work-and-how-accurate-are-they/>

WHAT THIS IN ESSENCE SAY IS THAT:

- Speed tests are not accurate
- Speed tests gives you the lowest average – not the real throughput
- Speed tests only shows you what is left on your line, not what your line can do.

So, can I still say I'm not getting what I pay for? Well, you can, and we can test your theory on that, because this is why ISP's are there for. We have to help you. But the problem is not always on their side. Look at the following things to check before you start sending those nasty speed test pictures.

- Can you determine your current usage while doing the test?
- How far are you sitting away from your WiFi access point – the further, the weaker the signal, the worse the test
- What product do you have? Capped – uncapped – unlimited
 - Capped = Focus on speed
 - Uncapped = best of both worlds with a 70% guarantee
 - Unlimited = 10:1 contended. So how much does the other 9 do in your area to determine your speed? Did you do point 1 and 2 plus determine your contention in that specific point in time to know where your speed should be? – thus we say a speed test won't work here because it is virtually impossible to test
- Did you determine your device health? Some devices do better after an update or reboot. Or sometimes a device is just old and broken and full of nasty malware to drag your internet experience to the gutter.

All in all, why would we then want to use a speed test? They work to determine if things are really bad on your line, but because of all the inaccuracy, they cannot be trusted. And in the above we have proven that. So, what can you do? If you followed the steps to do a proper speed test and you still have a problem, contact your ISP then and I assure you, they will enjoy helping you out and fix whatever is needed to be fixed.

INTRODUCING SHAPED PRODUCTS.

Oh boy! I thought unshaped everything was the best? Wrong. It's like giving the client a bunch of Lego blocks and wishing him good luck on building a sports car. ISP's can actually help you have a much better internet experience by shaping your internet product.

So, what is shaping?

Traffic shaping

Is a bandwidth management technique used on computer networks which delays some or all datagrams to bring them into compliance with a desired traffic profile. Traffic shaping is used to optimize or guarantee performance, improve latency, or increase usable bandwidth for some kinds of packets by delaying other kinds. It is often confused with traffic policing, the distinct but related practice of packet dropping and packet marking. The most common type of traffic shaping is application-based traffic shaping. In application-based traffic shaping, fingerprinting tools are first used to identify applications of interest, which are then subject to

shaping policies. Some controversial cases of application-based traffic shaping include bandwidth throttling of peer-to-peer file sharing traffic. Many application protocols use encryption to circumvent application-based traffic shaping.

In lay man's terms let's look at a scale from 1 to 8 where 1 is the highest priority and 8 the lowest:

- VoIP traffic – Internet based phone systems – Priority 1
- HTTPS traffic – like banks and secure systems, work VPN etc – Priority 2
- Gaming – priority 3
- YouTube Traffic – Priority 4 – because it won't take so much bandwidth
- Streaming service – IE: Netflix etc – High bandwidth and data use – priority 5
- Integrated systems – like IOT or CCTV – priority 6
- Torrent downloads – Priority 7
- All the rest – priority 8

Now that is just an example, but it shows how shaping can actually help improve your entire internet experience by managing the way the Lego blocks gets delivered to you. But alas! Let's do a speed test here and see how this would work. So, your device is watching YouTube, while the others in your house are gaming or watching Netflix. Your priority is at level 4, thus the shaper assigned you a specific balanced link speed to your device according your need on the scale. See the problem yet? Not? Let's test this 10Mbps line. After the test you get only 1Mbps, and now you are angry, because you payed for a 10Mbps. See the issue here now? Speed tests are evil, because they do not know how big your line is, what shaper level you are on or what your contention even is. It's just a tool to pump up your blood. You need to trust that the shapers are doing their job. Or an ISP can add another shaper to the mix, and make all speed tests level 1. So, when you do a speed test, you can get all the bandwidth for that, and drop your wife watching "7de Laan" on DSTV now, end the session for your son in his last level of the game, make your daughter tear up because her YouTube stopped while watching Cinderella, because that is what a shaper does. It gives the priority to the application it was set to.

The aim of any good and reliable ISP is to ensure the client gets exactly what they are paying for. The reputation of the IPS hangs on this. And that reputation is what sells products, not the fancy applications and terms out there. A good ISP will explain the products to his clients, and only after a client have explained their need, suggest a product to them. A good ISP don't do "of the shelve" products.

Can your speeds get slow for any other reason than at your local place? YES, it can, and a good ISP will always be ready and eager to test the line with his customer. ISP's don't rely on speed test any longer, because they are so inaccurate and tell such fables about your internet. Call your ISP when you have tested the system yourself, and let them help you figure out what went wrong. Because a good ISP knows that things can go wrong, but has a plan to fix it as soon as you call them. Lastly, look at this link. It tells a story of why your internet could be getting slow.

<https://www.howtogeek.com/341538/why-is-my-internet-so-slow/>