Good Video Streaming Everyone!

Here at Bigpipe Towers we love statistics, charts, and techy stuff of all kinds. So when Netflix released their stats it was a day of wild celebration. Why? What did we learn? That NZ has good infrastructure for video streaming — and it's getting better all the time!

Netflix — who you may have heard of — publishes stats on average speeds that different ISPs get to Netflix servers.

In their own words, this is how they calculate this:

The Netflix ISP Speed Index lists the average prime time bitrate for Netflix content streamed to Netflix members during a particular month. For 'Prime Time', we calculate the average bitrate of Netflix content in megabits per second (Mbps) streamed by Netflix members per ISP. We measure the speed via all available end user devices. For a small number of devices, we cannot calculate the exact bitrates and streaming via cellular networks is exempted from our measurements. The speed indicated in the Netflix ISP Speed Index is not a measure of the maximum throughput or the maximum capacity of an ISP.

Translation: This data, when taken at a national average level, is probably a pretty good representation of overall how good the infrastructure in that country is. And <u>New Zealand is</u> doing pretty well.

So whilst it's *not* very reasonable to compare ISPs in NZ using the data (see bottom section for the reason why), it is *quite* reasonable, we think, to compare NZ with, say, Australia.

So, with that explanation of the data out of the way, how does NZ stack up vs other countries?

We downloaded <u>the global data</u>, and what do you know, NZ is sitting at joint 7th out of 32 countries for average throughput! Not bad, eh?



No measurement of broadband speed is perfect, of course, but what's interesting is that other comparisons (like those from the connection monitoring tools Akamai and Sandvine) often place NZ somewhere near the middle of the pack when it comes to performance, whereas using this metric, we are in the top 25% of countries.

Other notable country rankings: USA – ranked 19th Australia – ranked 16th UK – ranked 8th

Why this (probably) shouldn't be used to compare ISPs in NZ

For the USA, where different ISPs usually use different underlying infrastructure that they each own and manage

individually, the Netflix rankings are a pretty decent way of comparing how they perform against one another.

However, for NZ, where most ISPs are using the same underlying infrastructure (owned by Chorus for the most part), the differences between the ISPs is mostly reflected in the fact that they will have different proportions of customers on high and low speed plans that generally reflect the infrastructure available in that area.

Put another way: if an ISP has a lot of customers on ADSL (slower) and few on fibre (faster) their average speed (and ranking) will tend to be lower. At Bigpipe, a pretty high proportion of our customers are on ADSL connections – and we know for a fact that our ADSL connections do extremely well with streaming video, in the scheme of things. For instance, YouTube also collects data on streaming speed over time, but it presents data segmented by connection type as well as ISP – and, excellently, Bigpipe ADSL is HD-verified!



If the Netflix data was also segmented by connection type – the average streaming speed for each ISP on ADSL, VDSL or

fibre — then it would get *really* interesting, because it'd tell you exactly how well each ISP performs at the connection level.

But because it's an average of all connection types, the differences between the ISPs *doesn't* really tell you that one ISP in NZ is 'better' or 'worse' than the other, it's just down to the underlying technology their customers have, and how that mix changes over time. So at any given house, based on this data, you *cannot* say that one ISP will perform better than another for Netflix assuming you are not changing technology at the same time.

For example, Snap (now 2Degrees) was also one of the first ISPs to launch UFB and VDSL, and has experienced a lot growth since then. So it's pretty likely to have a very high proportion of customers on these higher speed plans, using quite modern modems with decent wifi, which will skew their average throughput to Netflix up a fair bit.

Spark, on the other hand, being the incumbent, has a very high proportion of the 'rural' market — meaning most of the customers who live with ADSL1 will be with Spark, and quite a lot of them will have very old modems with poor wifi that they got when they first got broadband 5+ years ago. This will skew their average down a bit. Nothing to do with Spark as an ISP, just the nature of the customer technology mix.

Most ISPs have improved their average speed over the past few months. This likely reflects the change in their customer base as the nationwide fibre rollout progresses and more and more people get UFB and VDSL (and also better modems) which brings the average speed up (as well as a one-off adjustment for putting in caching etc).

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Finally, when comparing ISPs, note that the speed difference between best and worst isn't really *that* much anyway (3.92Mbps

for 2Degrees at rank 1 vs 3.47 for Trustpower at bottom rank – a fair bit below the next 'worst' at 3.70).

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We reckon these rankings are a good indication of New Zealand's improving internet situation – and that it's getting better all the time.

Your thoughts? Let us know in the comments!