

Barometer of fixed internet connections in Belgium

Year 2018



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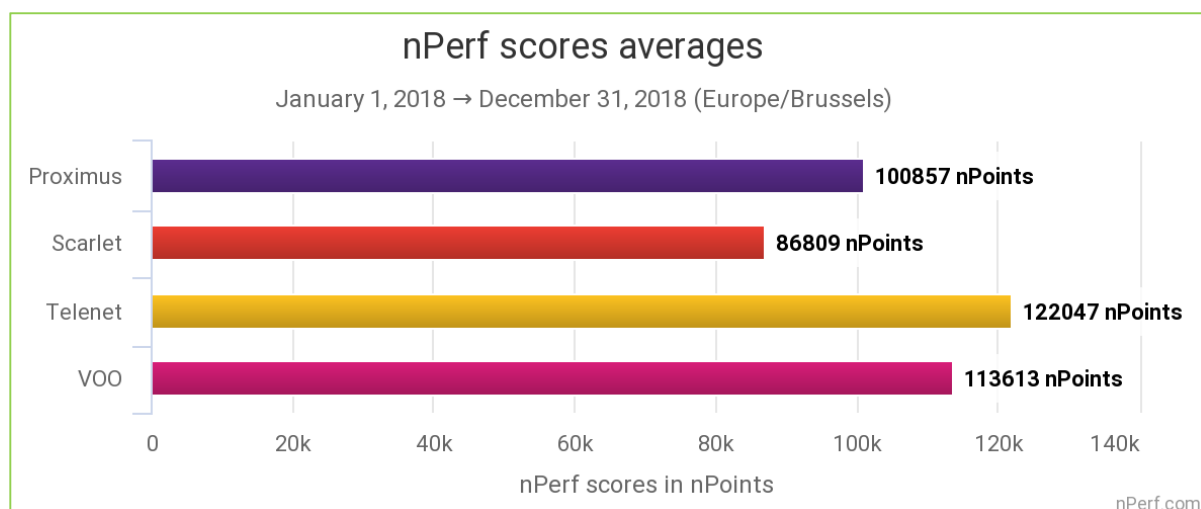


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1 Summary of global annual results

1.1 nPerf score, all technologies combined



The highest value is the best.

Telenet, the best fixed-line Internet performances in 2018.

2

1.2 Our analysis

In 2018, nPerf users conducted **123.209 connection tests** on **Belgium's four largest Internet Service Providers**.

The average download speed in Belgium was 15 Mb/s in 2018 where the average upload speed was 2 Mb/s.

Telenet offered its subscribers the best fixed-line Internet performances of the country in 2018.

By providing a very good download speed, a significant upload speed, and an excellent latency just behind VOO, Telenet is positioned as a leader in fixed-line Internet performance.

Beware nevertheless to VOO who will probably reduce the gap with his rival Telenet in 2019 if this ISP maintains its rise on his download throughput observed at the end of 2018.

2 Overall results, all technologies combined

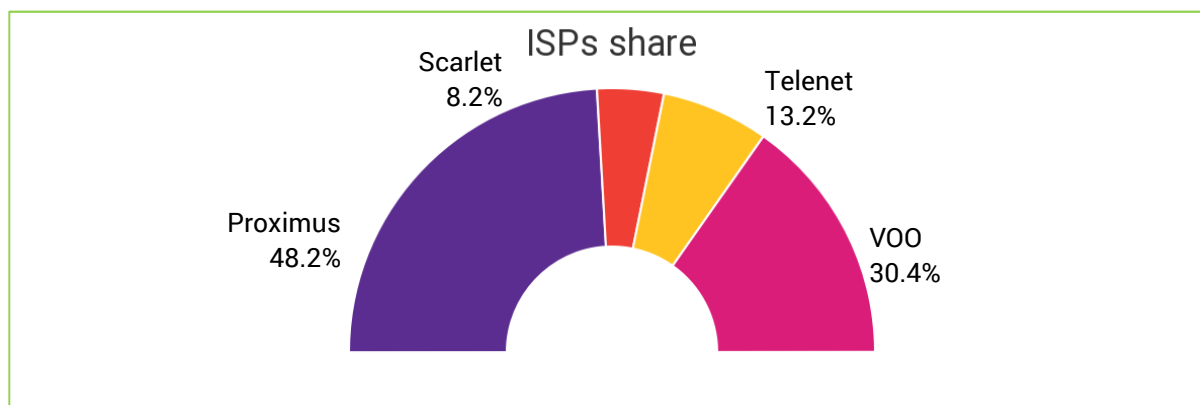
2.1 Data amount and distribution

From **January 1, 2018** to **December 31, 2018** we counted **123.209 tests**, distributed after filtering as follows:

Country	Tests
Belgium	102.087

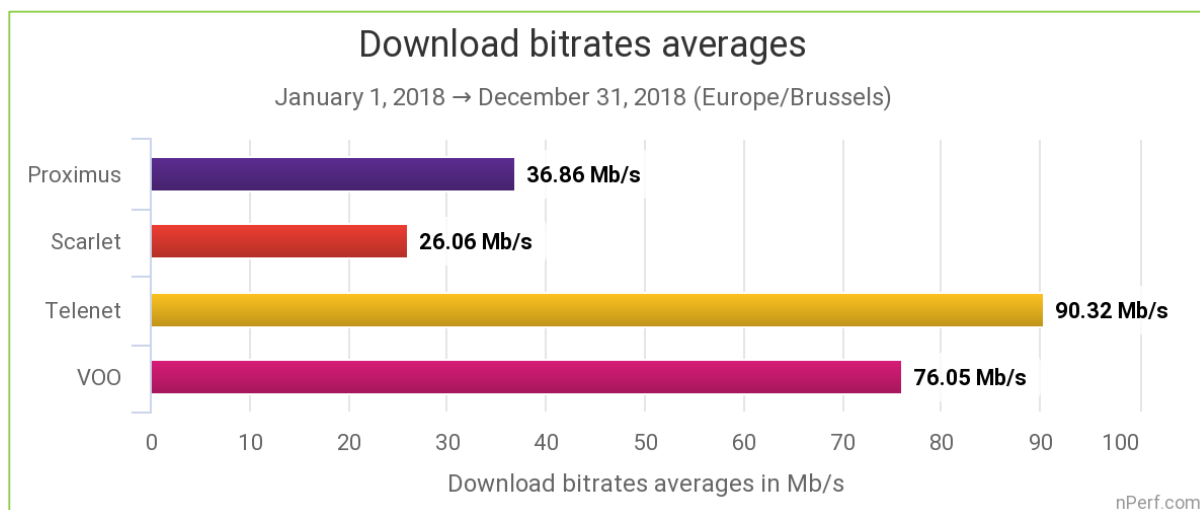
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Breakdown of tests by provider



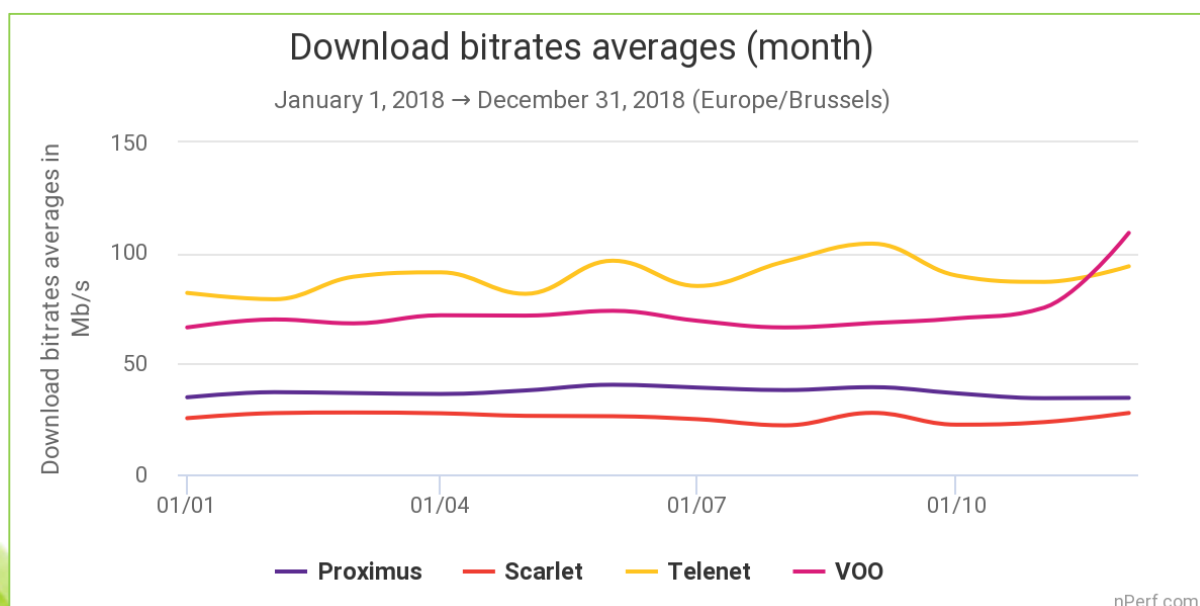
2.2 Download speed

In 2018, the average download speed in Belgium was 55 Mb/s.



The highest value is the best.

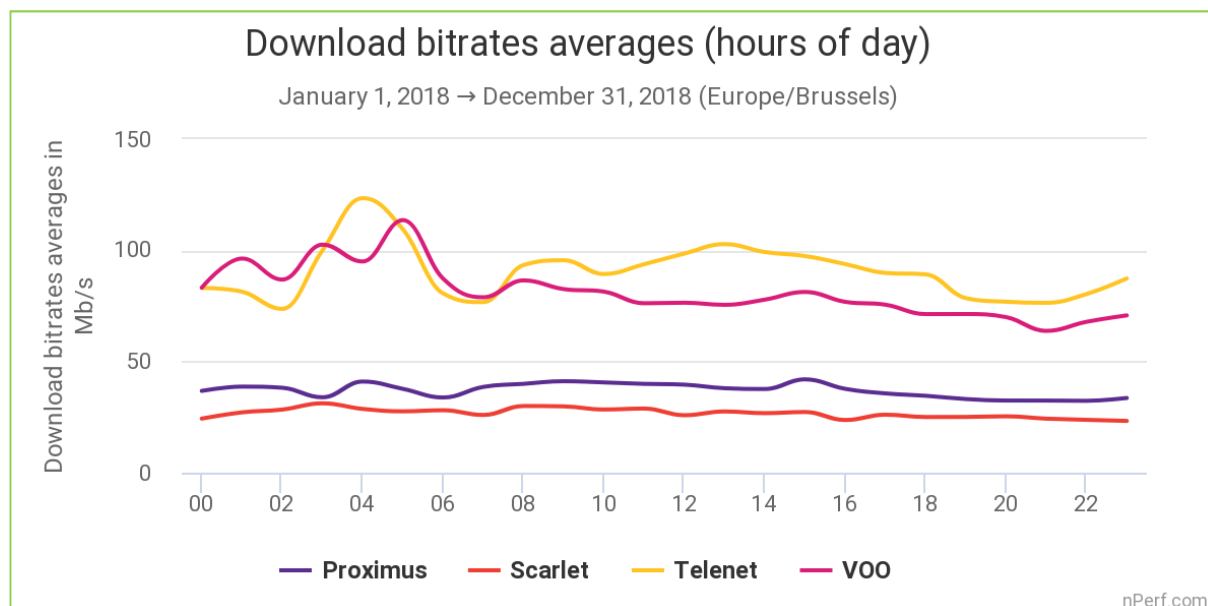
All technologies combined, **Telenet** has offered the best download speed to its subscribers in 2018.



The highest value is the best.

Above graph illustrates the ability of providers to maintain a constant download speed over the period regardless of network load (number of connected clients).

Over the year Telenet remains in the lead but VOO has given a boost to its download speed at the end of 2018 which augurs a great battle in 2019 if this trend is confirmed.

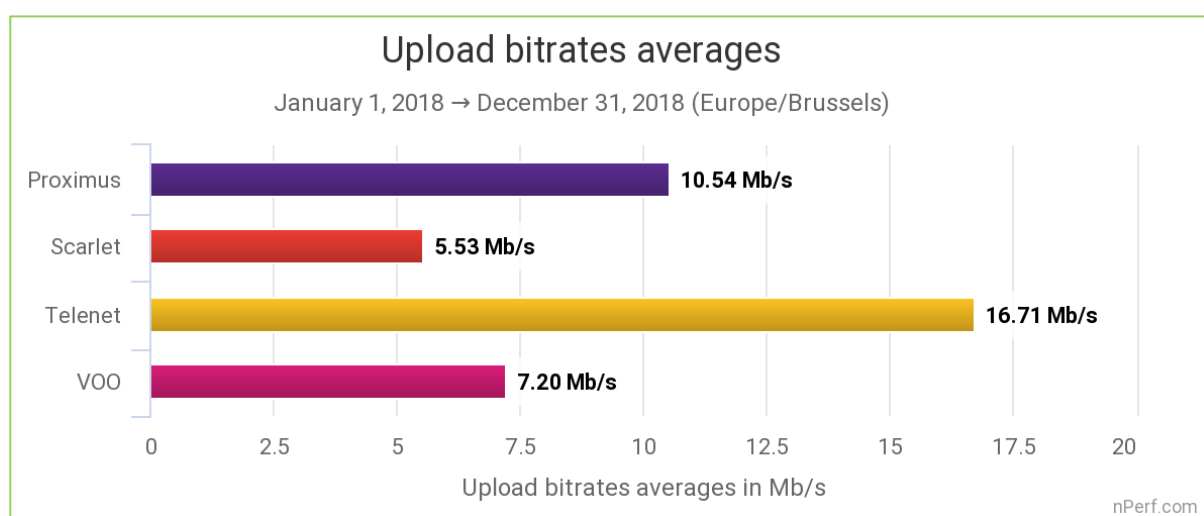


The highest value is the best.

This graph illustrates the ability of providers to ensure a constant download speed throughout the day, regardless of network load (number of connected clients). We note that there is no significant decline of the throughput during the busy hours which is a good performance from the ISPs.

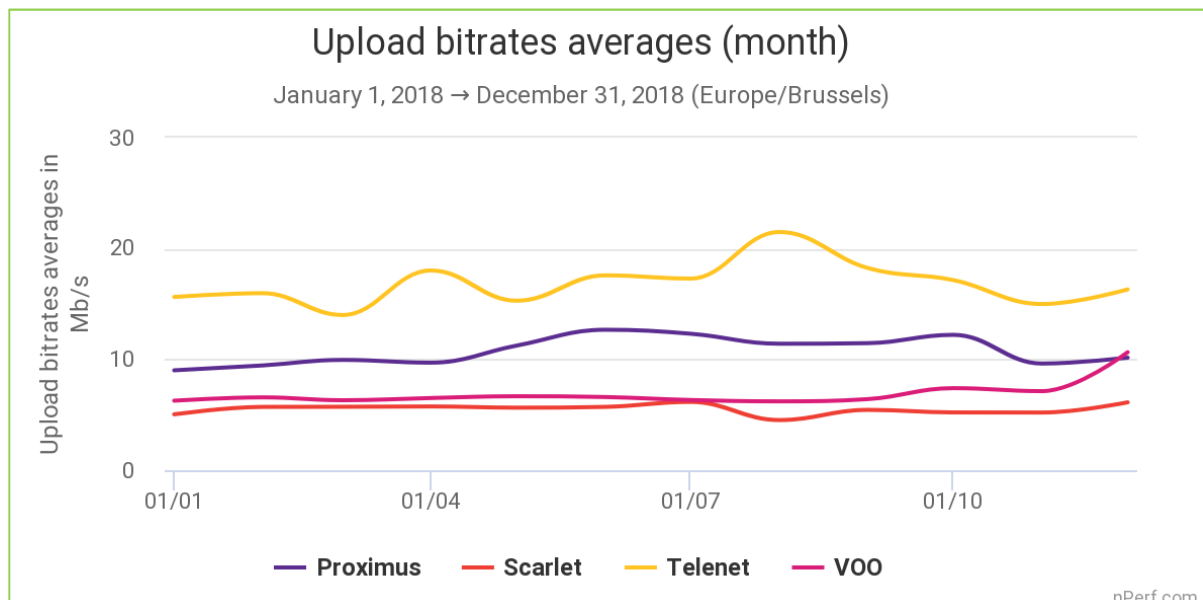
2.3 Upload speed

In 2018, the average upload speed in Belgium was 10 Mb/s.



The highest value is the best.

All technologies combined, **Telenet** has offered the best upload speed to its subscribers in 2018.



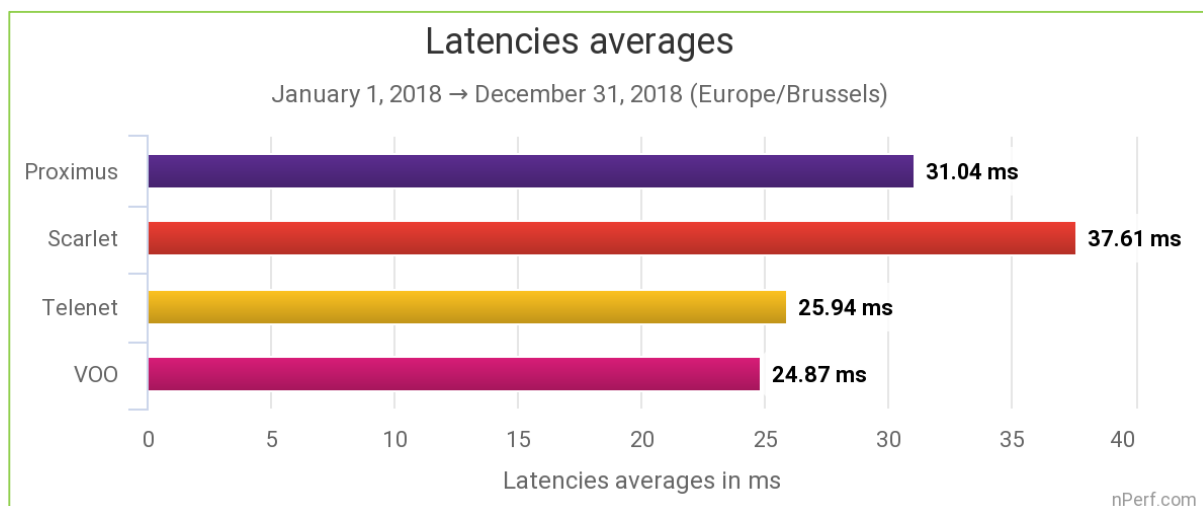
The highest value is the best.

Above graph illustrates the ability of providers to maintain a constant upload speed over the period regardless of network load (number of connected clients).

Telenet remains in the lead throughout the year with a large dominance over its competitors.

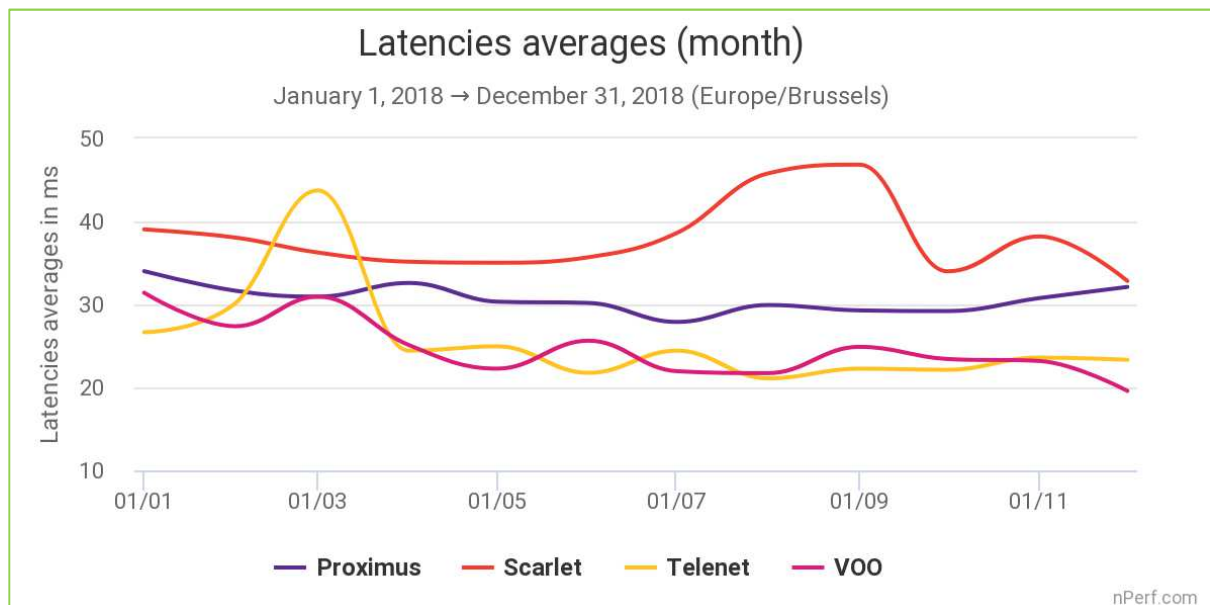
2.4 Latency

In 2018, the average latency in Belgium was 29 ms.



The lowest value is the best.

All technologies combined, **VOO** has offered the best average latency to their subscribers in 2018.



The lowest value is the best.

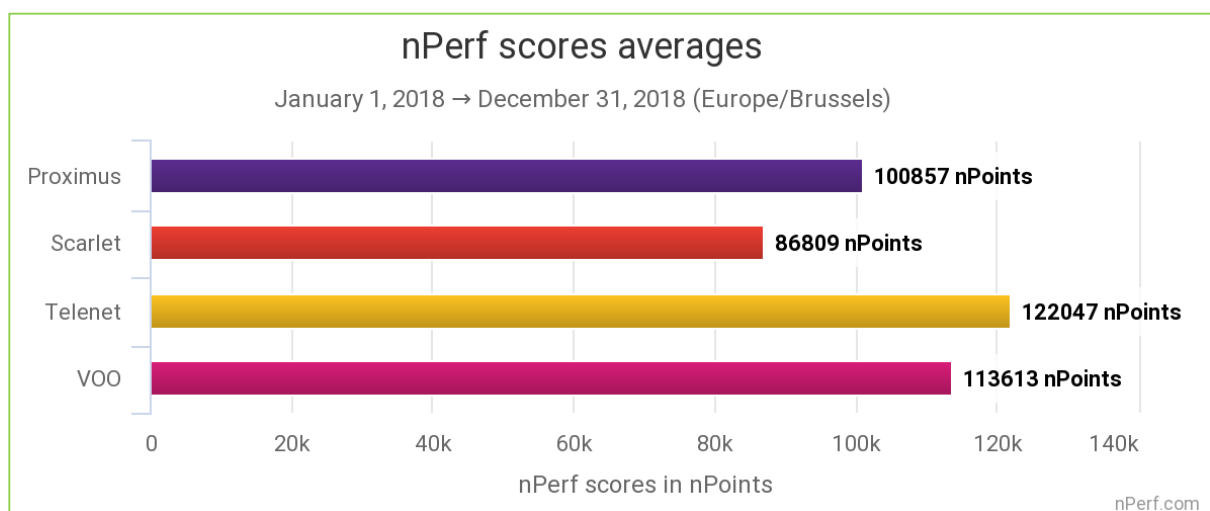
This graph illustrates the ability of providers to maintain a constant latency during the period, regardless of network load (number of connected clients).

VOO and Telenet offer a good and stable latency since Q2 2018.

2.5 nPerf score, all technologies combined

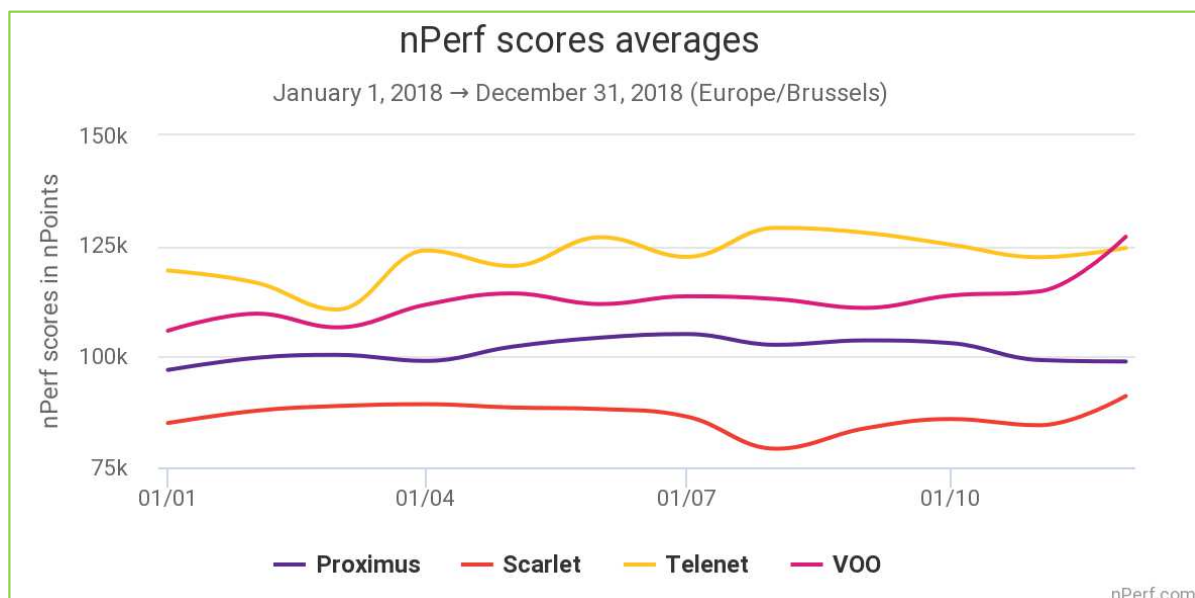
The nPerf score, expressed in nPoints, gives an overall picture of the quality of a connection. It takes into account measured bitrates (2/3 Download + 1/3 Upload) and latency. These values are calculated on a logarithmic scale to better represent the perception of the user.

Thus, this score reflects the overall quality of the connection for mainstream consumer use.



The highest value is the best.

Telenet, the best fixed-line Internet performances in 2018.



The highest value is the best.

VOO is catching up with Telenet at the end of 2018 but this remains to be confirmed for 2019.

3 Methodology

3.1 The panel

nPerf offers an Internet speed test application, which can be used for free at www.nPerf.com.

Everyone is free to use nPerf to measure the speed of their Internet connection. All users of the nPerf application form the panel of this study.

In addition, the results from the nPerf speed tests integrated on our partner websites are also included in the panel.

Thus, the nPerf study is based on thousands of tests, making it the study with the largest panel in Belgium.

3.2 Speed and latency tests

3.2.1 Objectives and operation of the speed and latency test

The purpose of the nPerf Speed Test is to measure the maximum capacity of the data connection in terms of data rates and latency.

To achieve this, nPerf establishes multiple connections simultaneously to saturate the bandwidth to accurately measure it. The speed used for the barometer is the average speed measured by the application.

Speed measurements thus reflect the maximum capacity of the data connection. This rate may not be representative of the user experience experienced during normal use of the Internet, as it is measured only on nPerf servers.

The measured bit rate can be impacted by the quality of the user's local network, especially since the expected flow is high. Thus, for an optical fiber internet connection, a local WiFi or Power-Line connection can greatly reduce performance. However, since these constraints are identical to all market operators, they do not bias the comparison. In addition, the user is made aware of these constraints and invited to use a wired local connection for testing very high speed.

3.2.2 nPerf servers

To ensure maximum user bandwidth at all times, nPerf relies on a network of servers dedicated to this task.

These servers are located with hosts in Belgium and abroad.

Local providers are welcome to install nPerf servers, that's free!

The total bandwidth available in Europe is greater than 300 Gb / s.

3.3 Filtering of test results

The results obtained are subject to automatic and manual checks to avoid duplication and to rule out possible abusive or fraudulent use (massive tests, robots ...).

Tests performed on cellular connections (2G, 3G, 4G) are also excluded from this barometer.

4 You too, participate in the nPerf panel!

To participate in the panel, simply test your connection on the website www.nperf.com. For mobile Internet, you can also use the nPerf app, available for free on the Apple AppStore for iPhone and iPad, on Google Play for Android devices and on the Windows Store for Windows Phone and Windows Mobile devices.

5 Custom analysis & contact

Do you need further study or want to get the raw data, punctually or automatically, to compile it yourself?

You can contact nPerf via www.nPerf.com "Contact Us" section or directly from the mobile app.

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