

Barometer of fixed Internet connections in Serbia



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H2 2019 – H1 2020

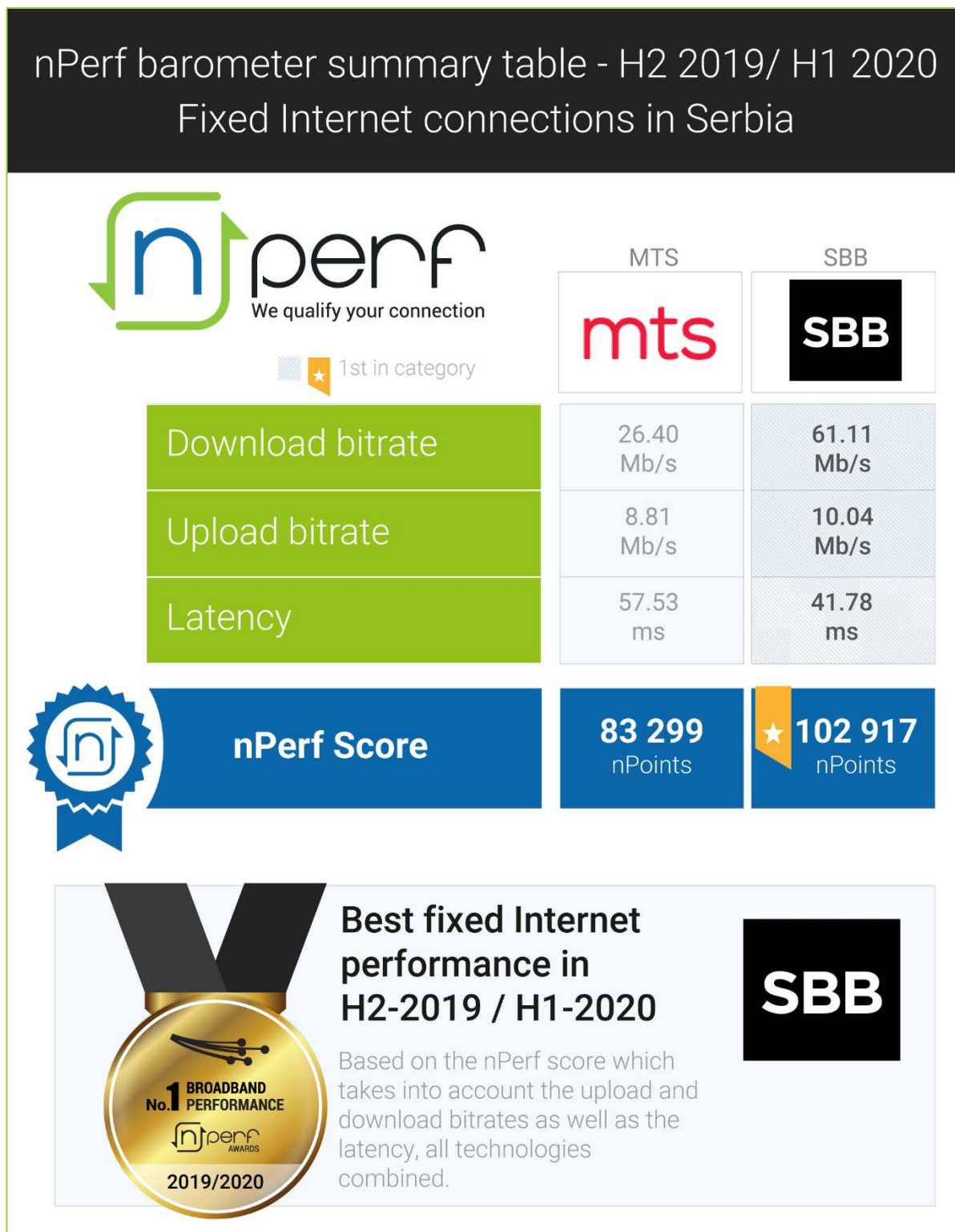


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1 Summary of global results

1.1 Summary table and nPerf score, all technologies combined



1.2 Our analysis

From July the 1st 2019 and June the 30th 2020, nPerf users conducted 203.681 connection tests on Serbia's two largest Internet Service Providers. SBB dominates the market in terms of performance of fixed Internet connections by being the first on download and upload speed tests but also on latency results. 40 Mb/s is the average download speed of Serbian people which is a good global performance. However, as in many other countries, this result probably hides the digital divide between areas.

SBB is the fastest Internet Provider far ahead

During the last 12 months, SBB has provided the fastest Internet connections on fixed networks in Serbia. With an average download speed of 61 Mb/s, SBB is far ahead from its competitors, indeed, the second one is MTS with 26 Mb/s.

With 61 Mb/s, SBB customers are sure to enjoy all the greedy uses in bandwidth such as watching a movie in 4K, multiscreen uses at home, 4K Gaming...

SBB first on latency, good news for gamers

Besides being the fastest provider on fixed networks, SBB is the most reactive with a very good latency, 41 ms; so if you are a gamer and need short latency, SBB does the job.

Conclusion

On fixed networks, one provider, SBB, clearly makes the difference.

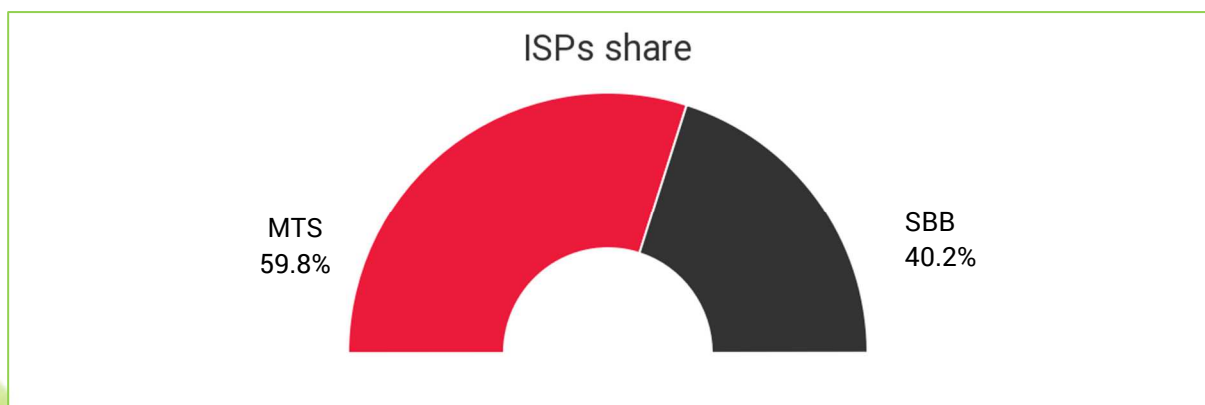
2 Overall results, all technologies combined

2.1 Data amount and distribution

From **July 1, 2019** to **June 30, 2020** we counted **203.681 tests**, distributed after filtering as follows:

Country	Tests
Serbia	175.310

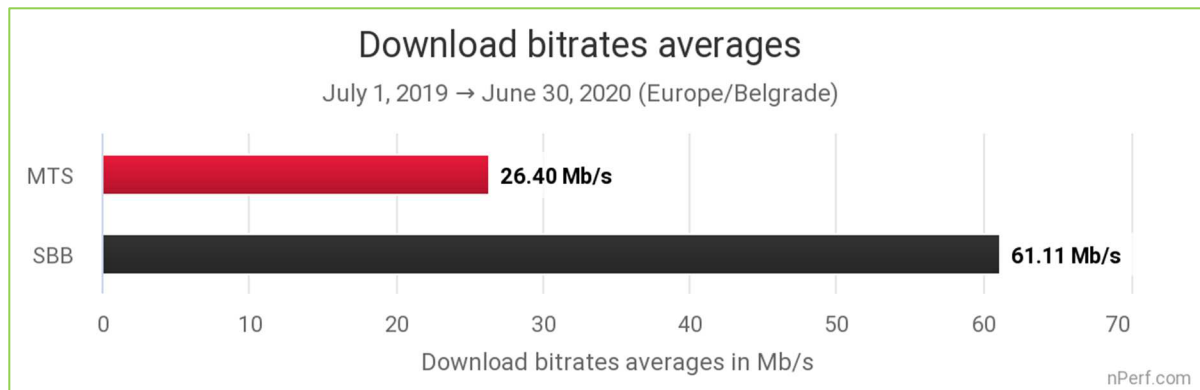
Breakdown of tests by provider



Orion is not included anymore in our publication because represents less than 5% of our volume of tests.

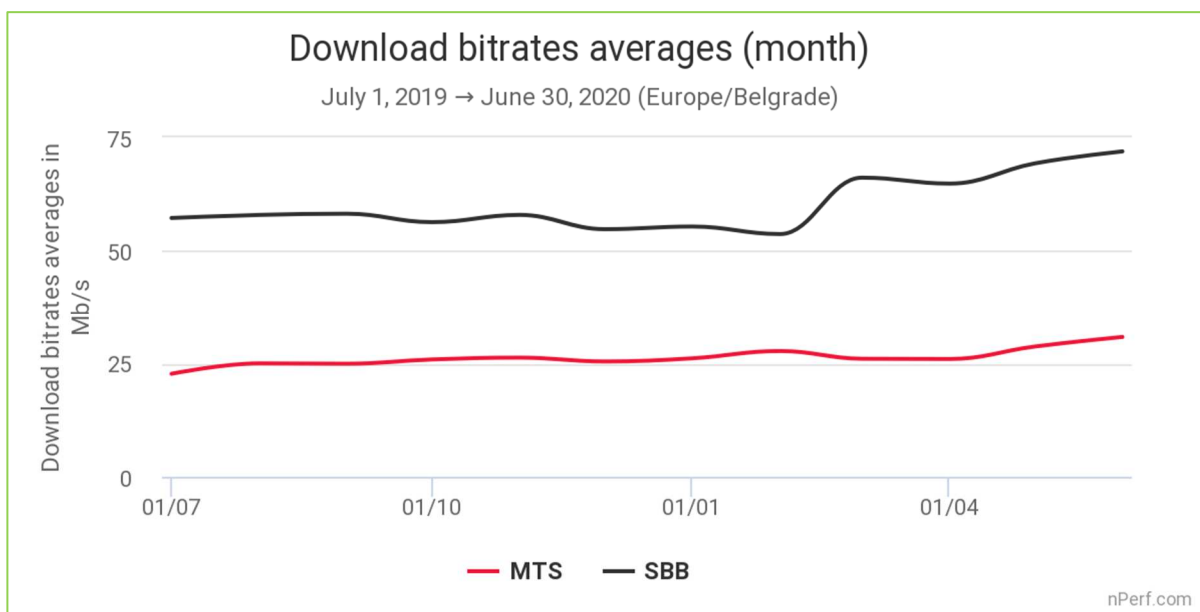
2.2 Download speed

The average download speed in Serbia was 40 Mb/s during the last 2 semesters.



The highest value is the best.

SBB has provided the best fixed download speed during the last 2 semesters.



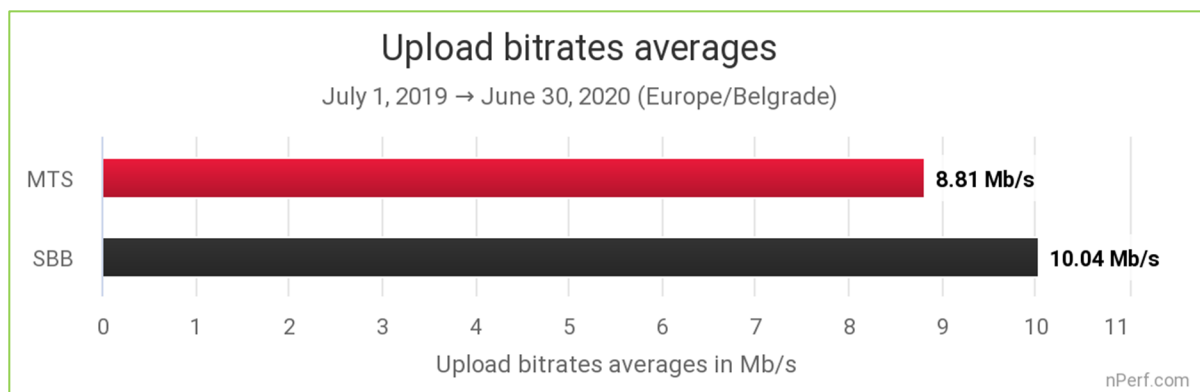
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Above graph illustrates the ability of providers to maintain a constant download speed over the period regardless of network load (number of connected clients).

We note that SBB has made the most progress on its download speed between February and March.

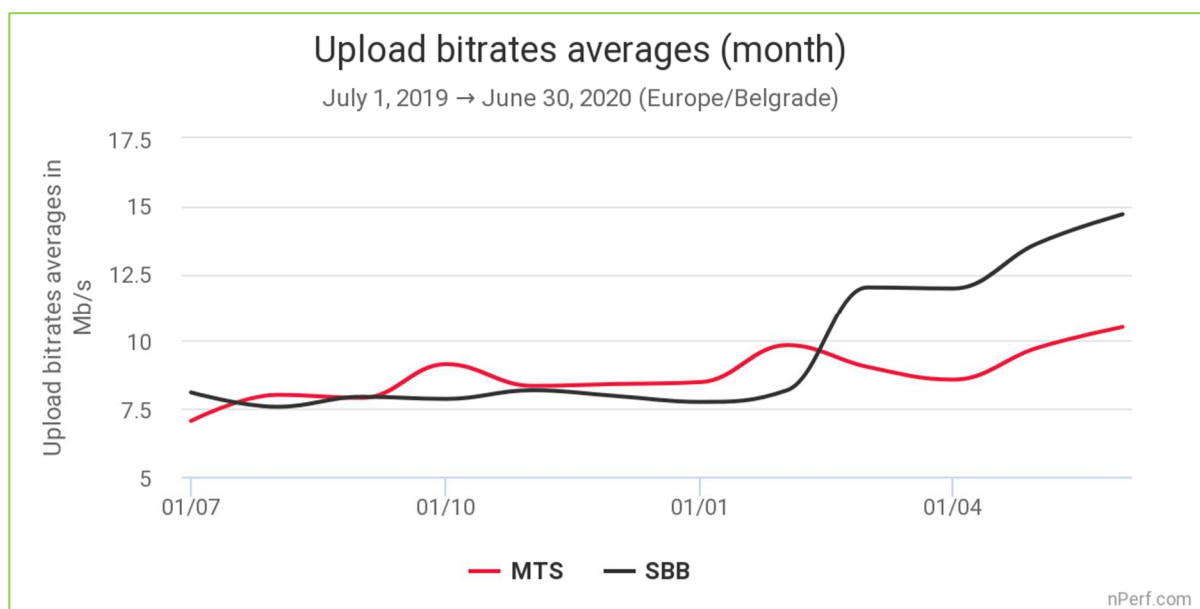
2.3 Upload speed

The average upload speed in Serbia was 9 Mb/s during the last 2 semesters.



The highest value is the best.

SBB has provided the best fixed upload speed during the last 2 semesters.



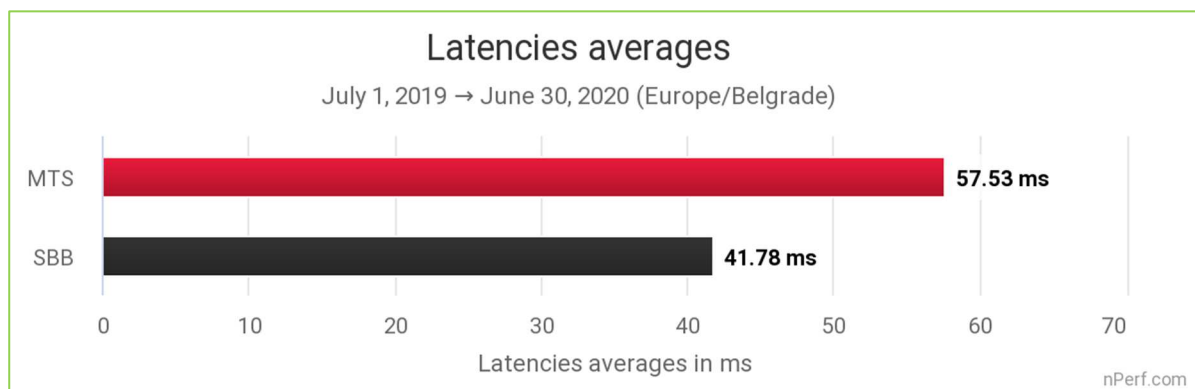
The highest value is the best.

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

We note that SBB has made the most progress on its upload speed between February and March.

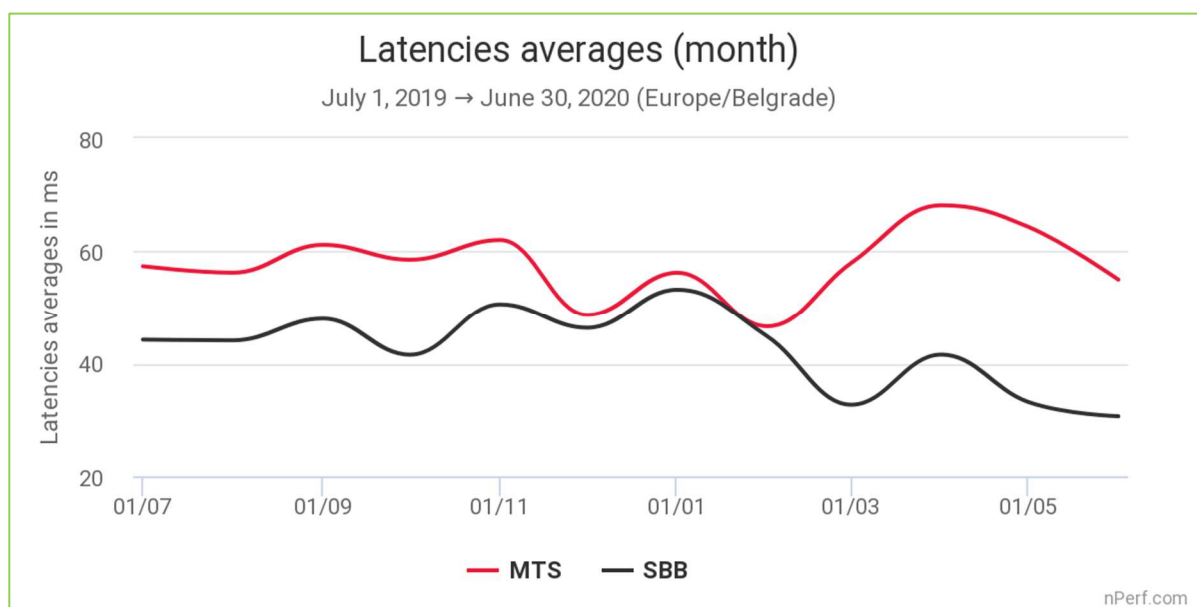
2.4 Latency

The average latency in Serbia was 51 ms during the last 2 semesters.



The lowest value is the best.

SBB has provided the best fixed latency during the last 2 semesters.



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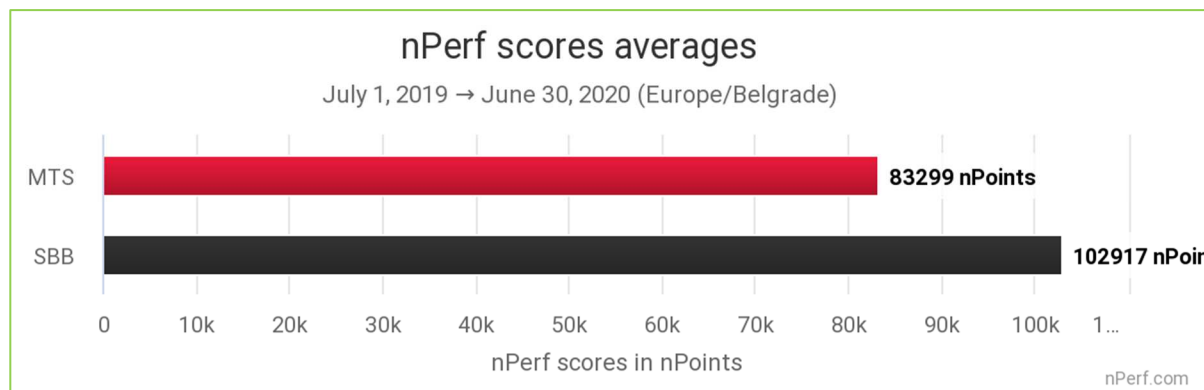
This graph illustrates the ability of providers to maintain a constant latency during the period, regardless of network load (number of connected clients).

We note that MTS provided fairly stable average latency, while SBB improved it.

2.5 nPerf score, all technologies combined

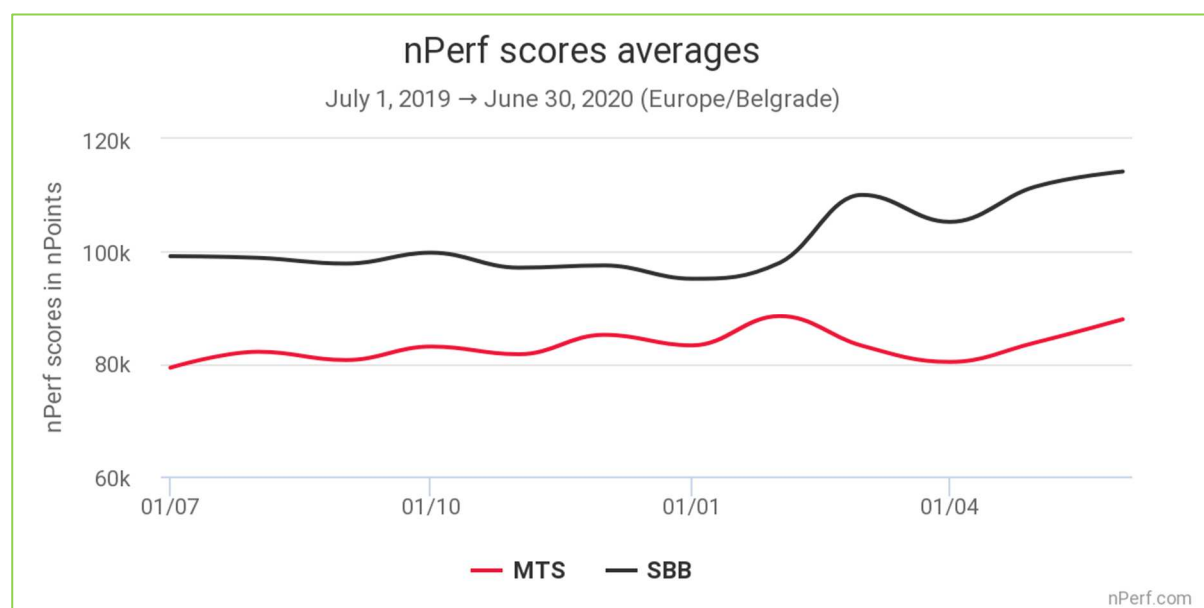
The nPerf score, expressed in nPoints, gives an overall picture of the quality of a connection. It takes into account measured bitrates (2/3 Download + 1/3 Upload) and latency. These values are calculated on a logarithmic scale to better represent the perception of the user.

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



The highest value is the best.

SBB, the best fixed Internet performance during the last 2 semesters.



The highest value is the best.

MTS has improved slightly its performance in the last two semesters while SBB has improved significantly since March.

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.

The largest number of speed tests have been carried out on the website of our partner in Serbia: <https://www.umrezen.in.rs/speedtest/>

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

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 Serbia abroad. [Local providers are welcome to install nPerf servers, that's free!](#)

The total bandwidth available worldwide is greater than 6 Tb/s with more than **1100** active nPerf servers.

3.3 Statistical accuracy

With regard to the total volume of unit tests, the statistical precision used in this publication is:

- ✓ 3% for absolute values

If, for a given indicator, one or more operators have results very close to the best, in the confidence interval defined above, these will be share first place.

3.4 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.

Phone contact: +33 482 53 34 11

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Stay in touch with us, follow us!

