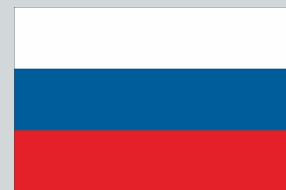


Barometer of Fixed Internet Connections in Russia

2019 Report



Publication of
February 17th, 2020

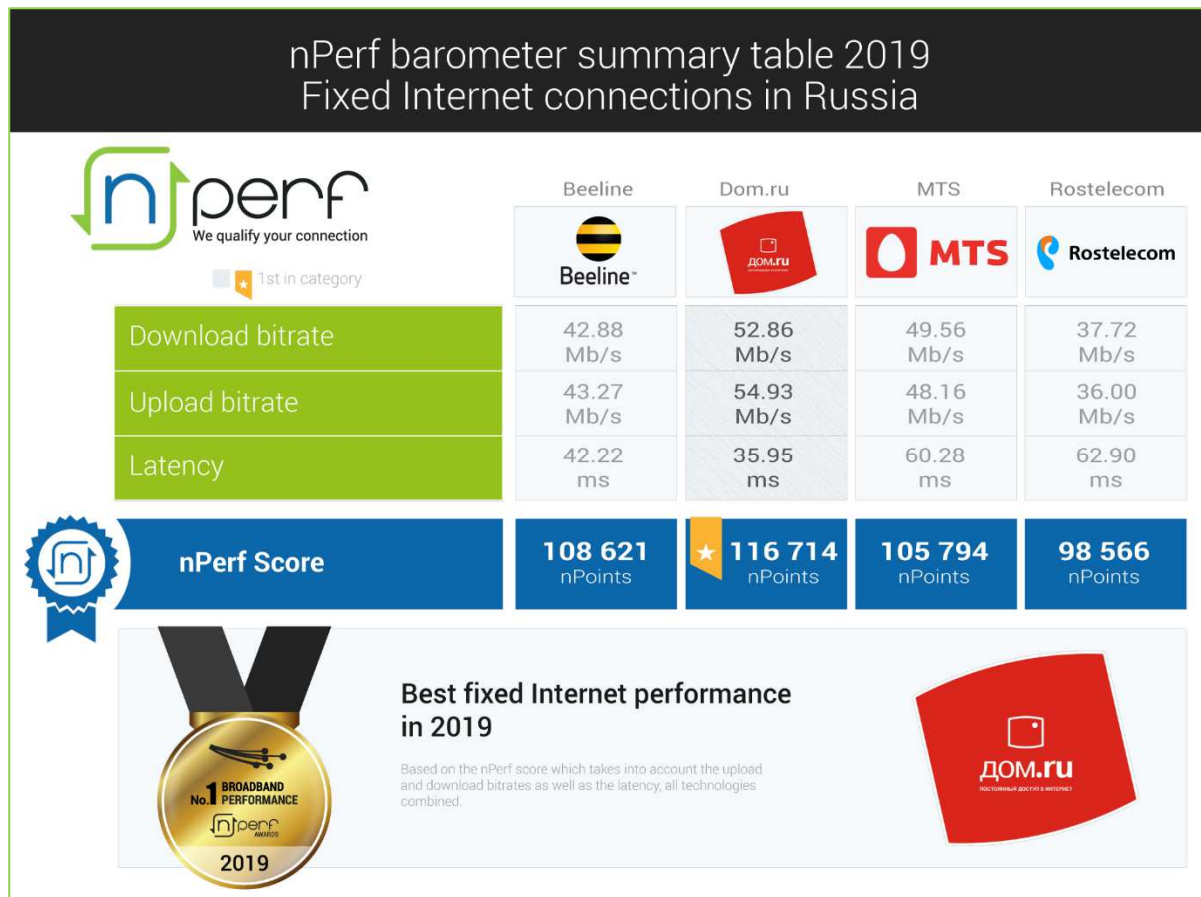


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1 Summary of results

1.1 Summary table and nPerf score, all technologies combined



***** Dom.ru, the best fixed Internet performance in 2019 *****

1.2 Our analysis

In 2019, nPerf users conducted **1,426,437** connection tests on the four largest Internet Service Providers in Russia. After filtering, our survey is based on **1,254,838** relevant tests.

With 116,714 nPoints, **Dom.ru has provided the best fixed Internet performance 2019.**

Dom.ru is the winner of all our categories :

- **Best download speed** with 52.9 Mb/s
- **Best upload speed** with 54.9 Mb/s
- **Best latency** with 36 ms

Dom.ru leaves no chance to its competitors !

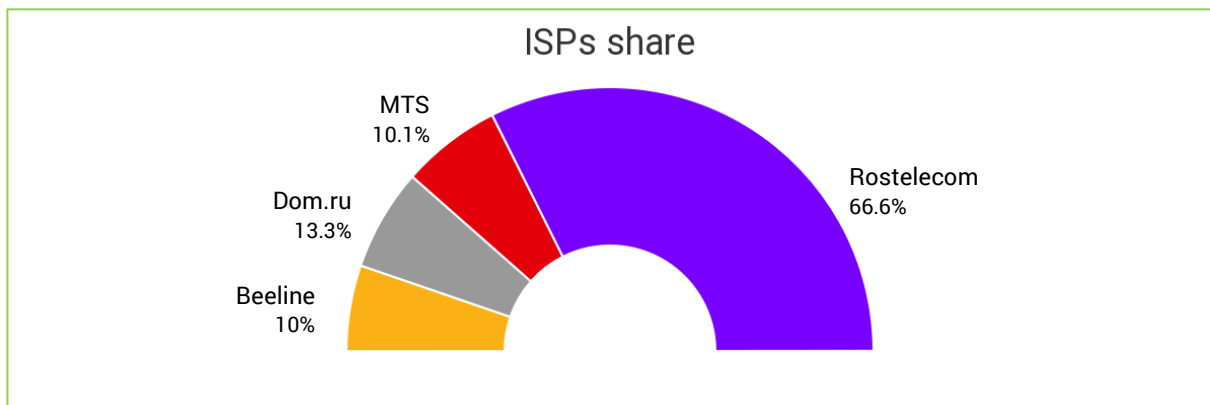
2 Overall results, all technologies combined

2.1 Data amount and distribution

Between January 1, 2019 – December 31, 2019, we counted **1,426,437** unit tests, distributed as follows, after filtering (see § 3.4):

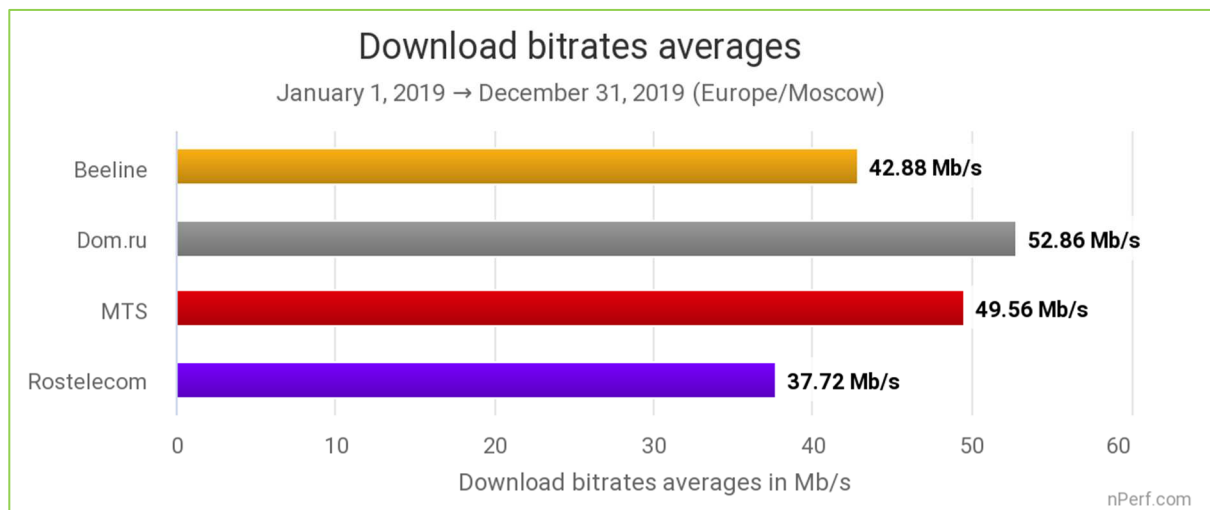
Country	Tests
Russia	1,254,838

Breakdown of tests by provider



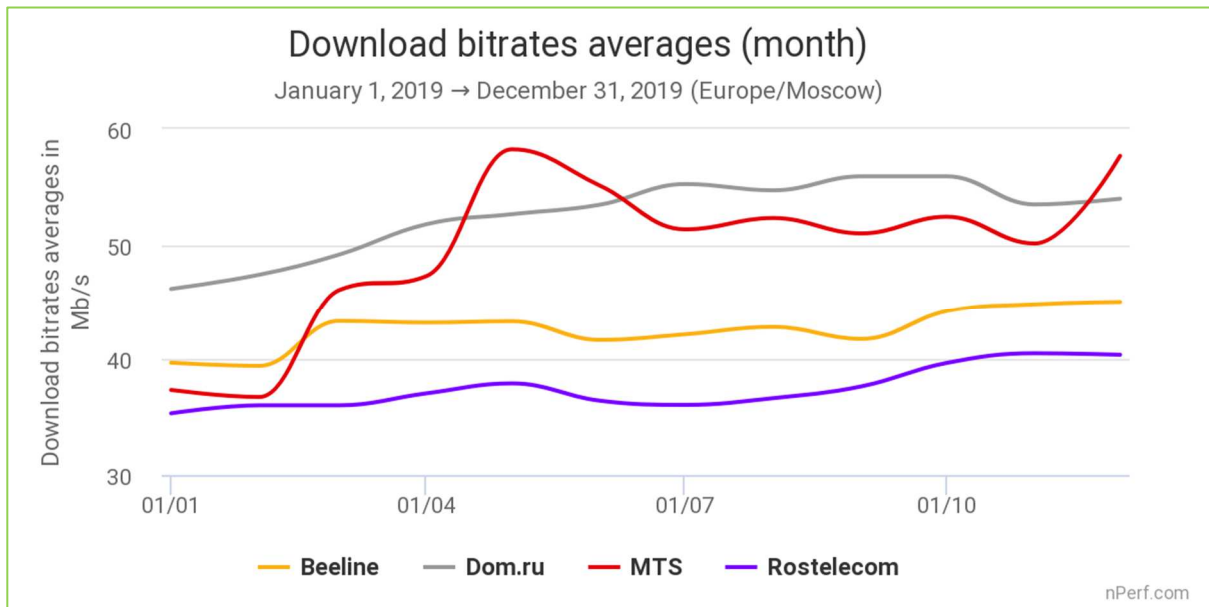
2.2 Download speed

In 2019, the average download speed in Russia was 41 Mb/s.



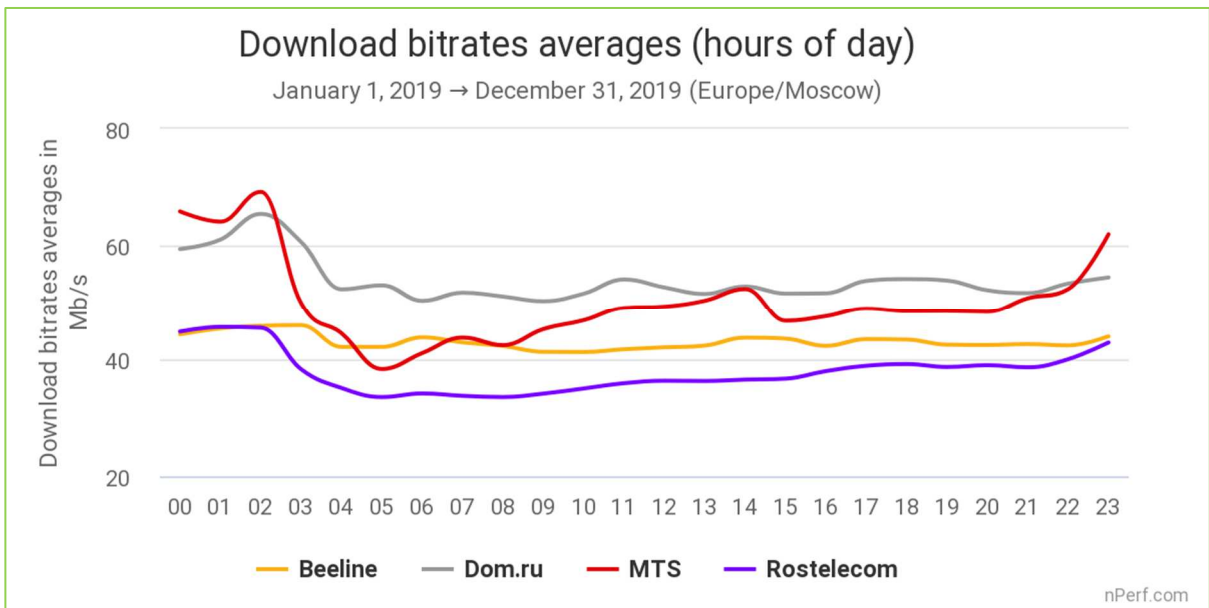
The highest value is the best.

Dom.ru has provided the best fixed download speed during 2019.



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

Globally, all ISPs have improved their download speeds over the period. A great battle is coming between Dom.ru and MTS...

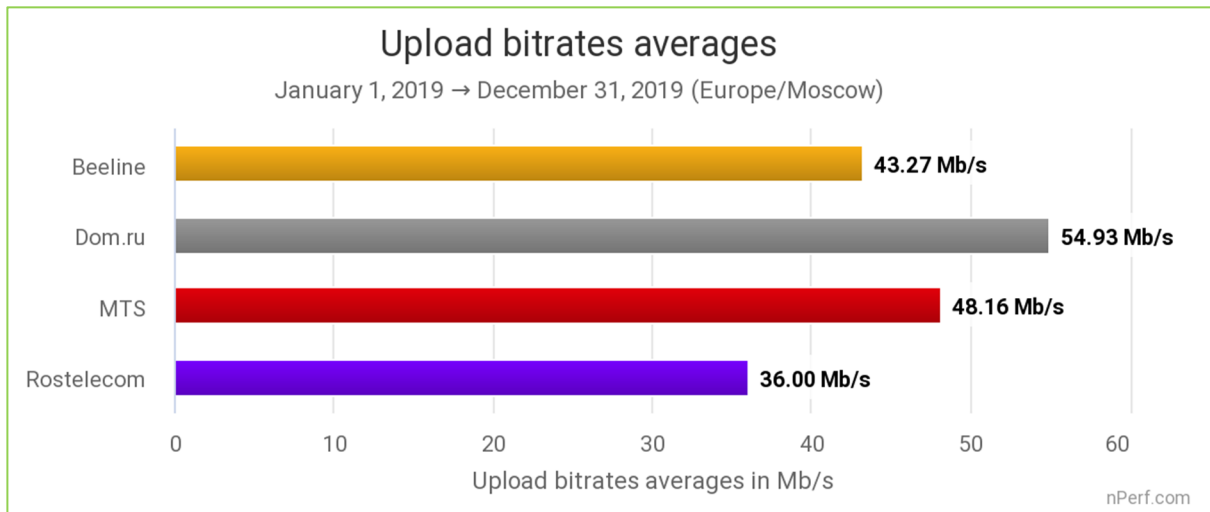


This graph illustrates the ability of providers to ensure a constant download speed throughout the day, regardless of network load (number of connected end-users).

We note that there is no decline of the throughput during the busy hours.

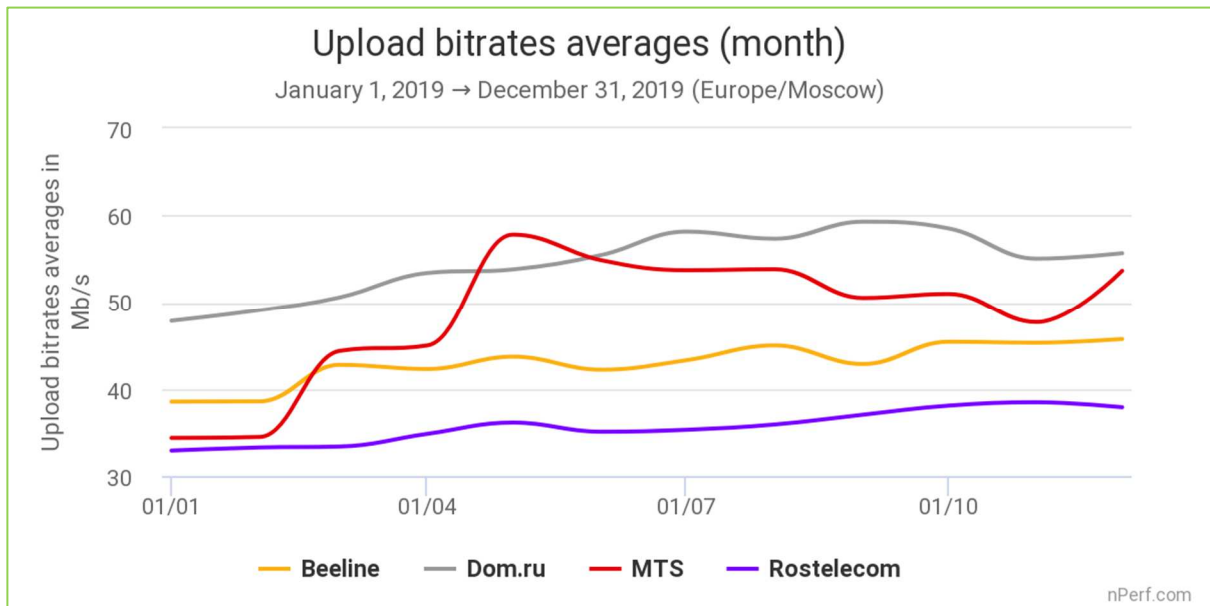
2.3 Upload speed

In 2019, the average upload speed in Russia was 40 Mb/s.



The highest value is the best.

Dom.ru has provided the best fixed upload speed during 2019.



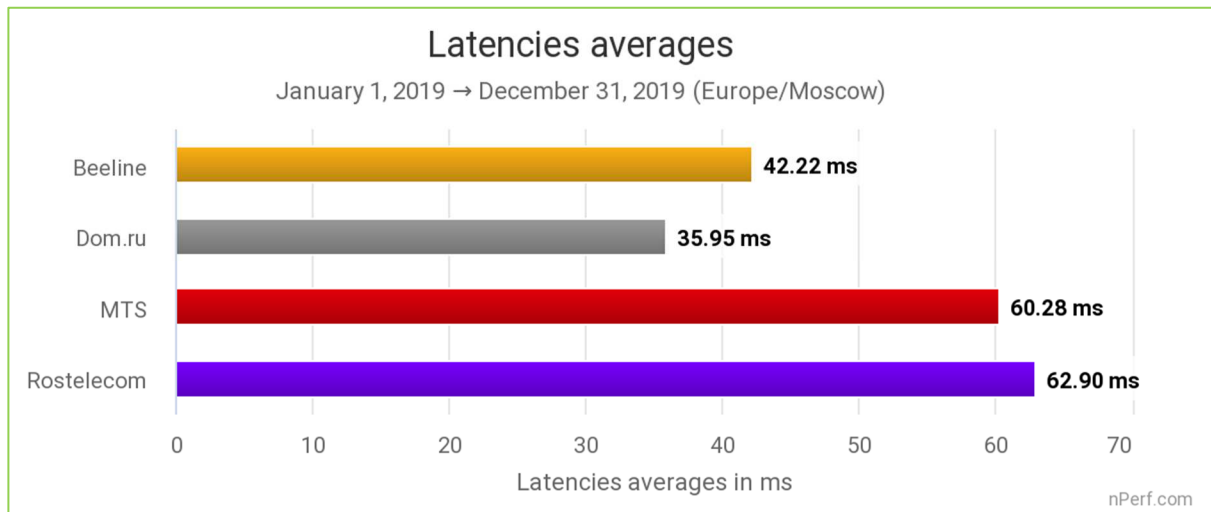
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Above graph illustrates the ability of providers to maintain a constant upload speed over the period regardless of network load (number of connected end-users).

Globally, all ISPs have improved their upload speeds over the period. A great battle is coming between Dom.ru and MTS...

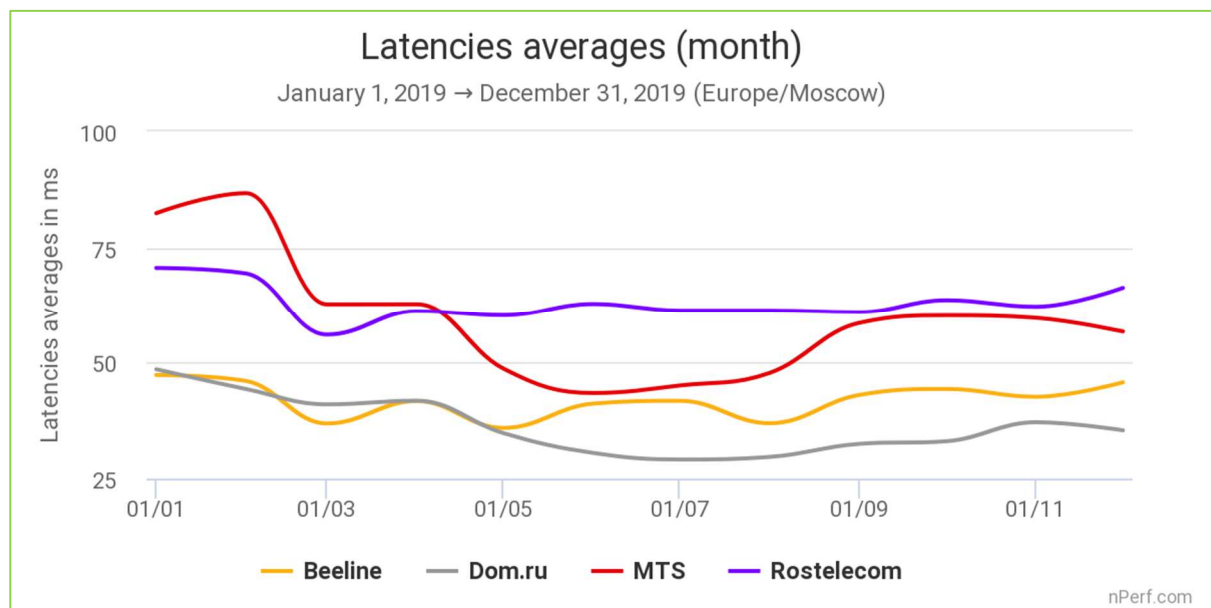
2.4 Latency

In 2019, the average latency in Russia was 57 ms.



The lowest value is the best.

All technologies combined, **Dom.ru** subscribers benefited from the best average latency in 2019.



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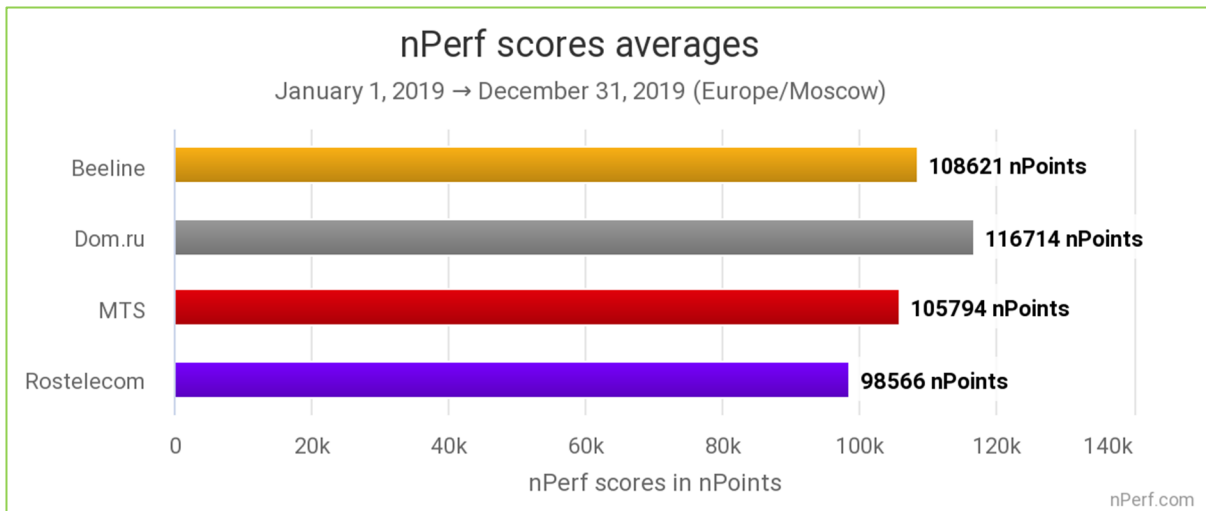
This graph illustrates the ability of providers to maintain a constant latency during the period, regardless of network load (number of connected end-users).

We note that **Dom.ru** and **MTS** improved the most their latency.

2.5 nPerf score, all technologies combined

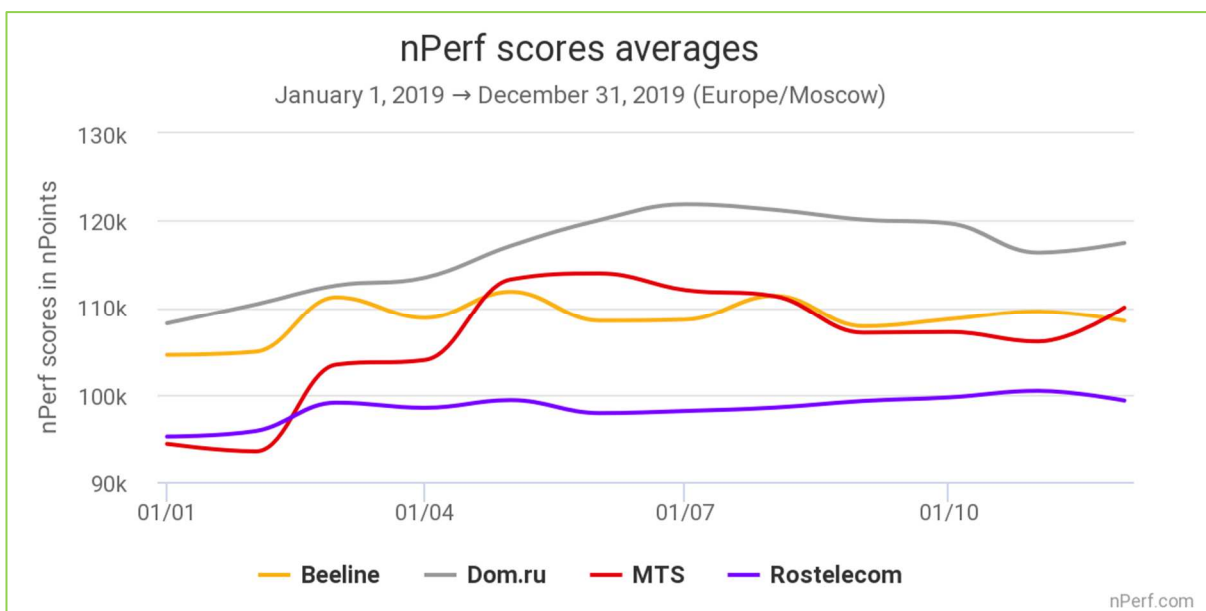
The nPerf score, expressed in nPoints, gives an overall picture of the quality of a connection. It takes into account measured bitrates (2/3 Download + 1/3 Upload) and latency. These values are calculated on a logarithmic scale to better represent the perception of the user.

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



The highest value is the best.

Dom.ru, the best fixed Internet performance in 2019.



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All the ISPs have improved their internet performance on fixed networks, particularly **Dom.ru** and **MTS**.

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 Russia.

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.

Speeds are measured in Mb/s, that is in Megabits per second.

Latency is measured in milliseconds (ms).

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 Russia and abroad.

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

The total bandwidth available for Russia is greater than **15 Gb/s**, and that for the world is greater than **4 Tb/s** with more than **1000** active nPerf servers!

3.3 Statistical accuracy

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

- ✓ 1% 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, 5G) 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

Address: nPerf SAS, 87 rue de Sèze, 69006 LYON, France

Stay in touch with us, follow us!

