

Barometer of fixed Internet connections in Japan



H2 2022 – H1 2023

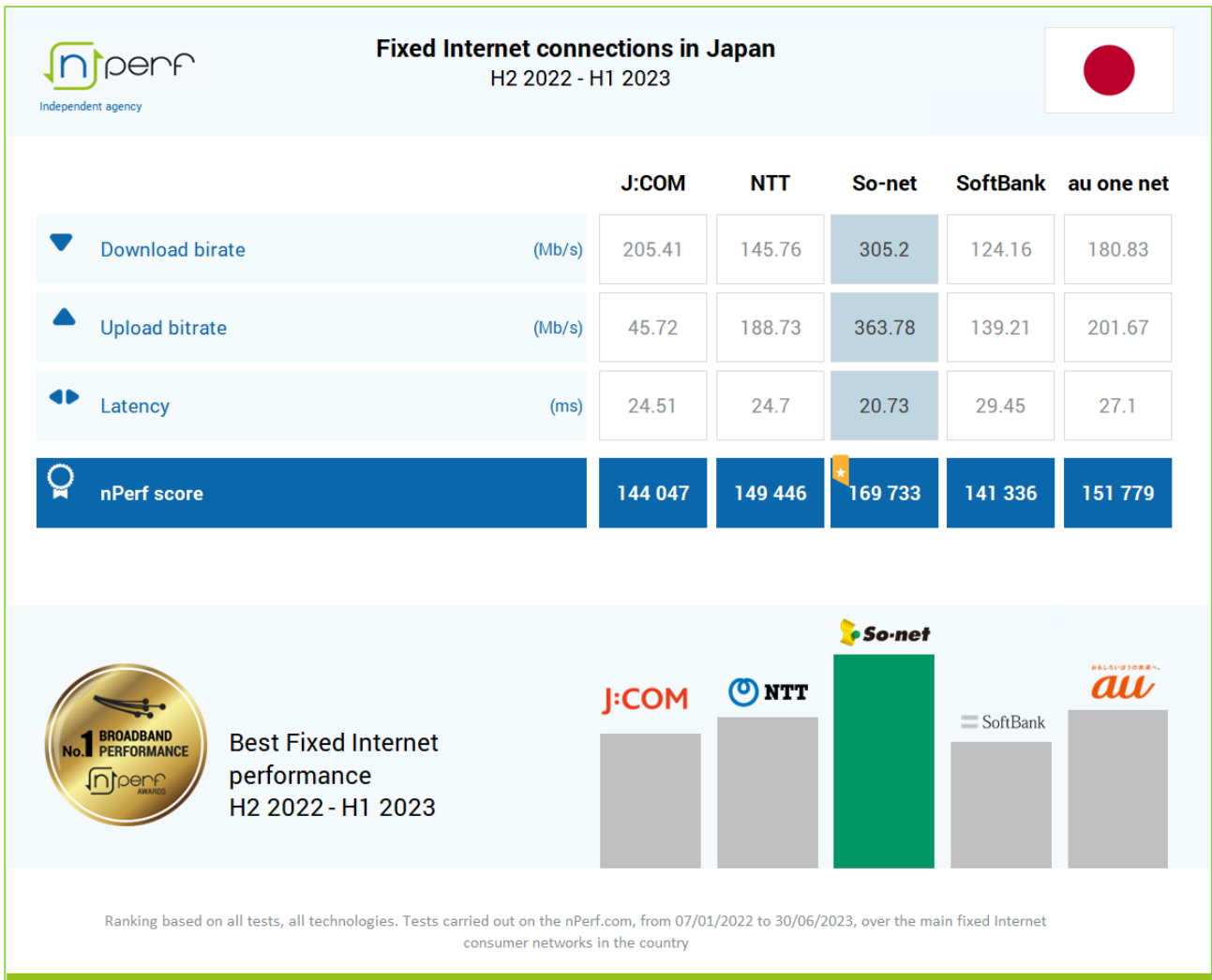


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1 Overall results

1.1 Summary table and nPerf score



So-net provided the best broadband Internet performances in Japan during the last two semesters.

1.2 Our analysis

This study is based on tests carried out by users of the nPerf website. During the last two semesters, users of the nPerf app in **Japan** completed, after filtering, **59,143 tests**.

So-net won the Japanese broadband Internet race during the two last semester. The company leads on all the KPIs, which means the fixed-line operator had the best download and upload speeds, and the best latency within the period, which ensures the top position with the best nPerf score in total (169,733 nPoints).

Au one net and NTT, in the battle for the second place.

Those ISP have done a good work throughout the period, and even if they finish around 20,000 nPoints under the leader, they will surely fight to be considered the main competitors for the leader. Their scores are tight (respectively 151,779 and 149,446 nPoints).

J:COM and SoftBank arrive last despite a good fight

With less than 145,000 points each, the victory seems a bit far away for both of them and the gap too large to catch up with the others. Nevertheless, let's remind that the Japanese market offers very high performances when it comes to fixed-broadband Internet. They have both very good KPIs.

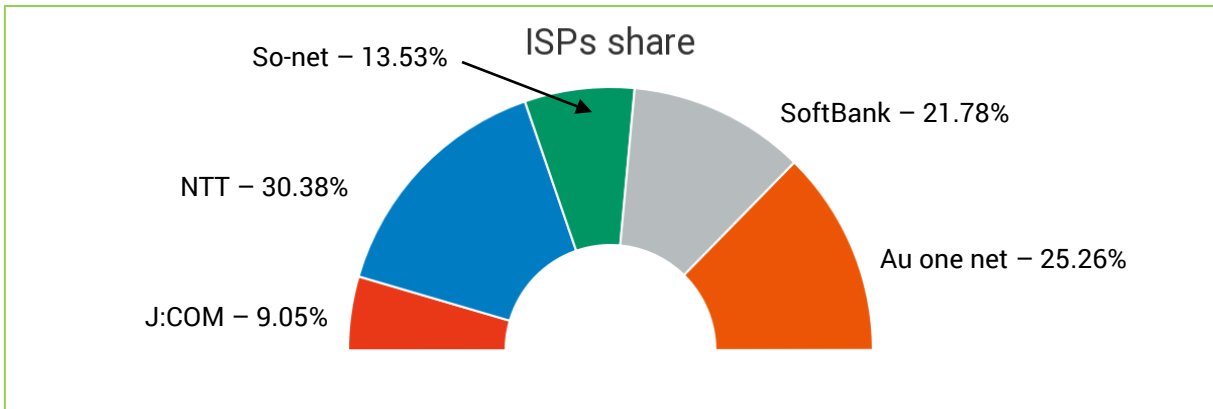
Will the upcoming months bring some surprises? Of course, nPerf will keep an eye on the situation!

1 Results, all technologies combined

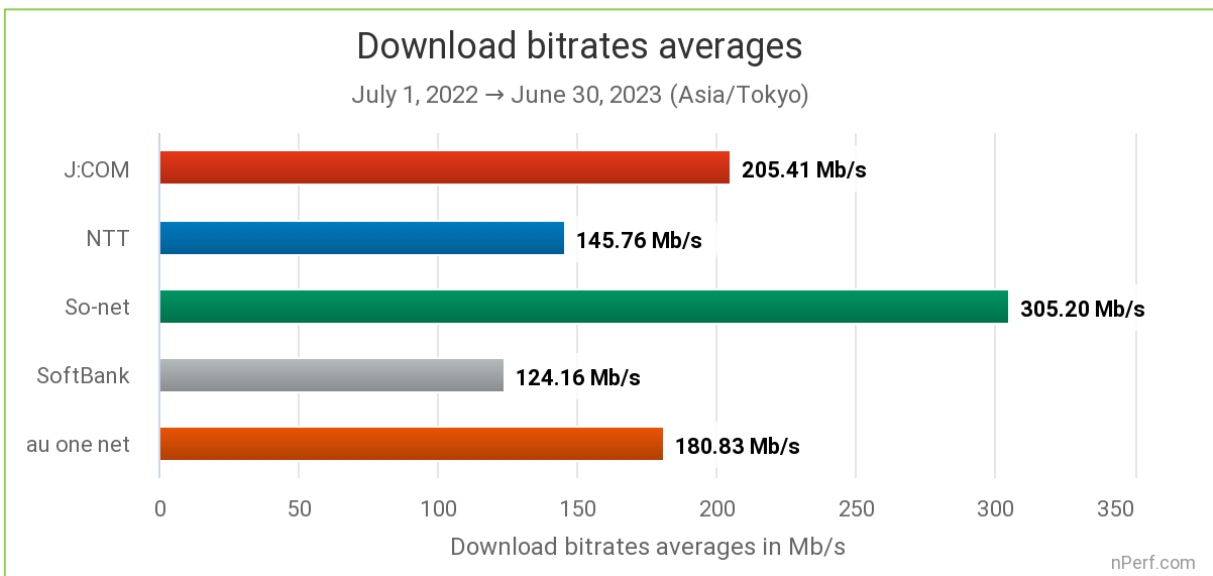
1.1 Data volume and distribution

Between **July 1st, 2022** and **June 30th, 2023** we counted in Japan after filtering 59 143 unit tests :

The overall distribution of the tests per provider is as follows:



1.2 Download speed

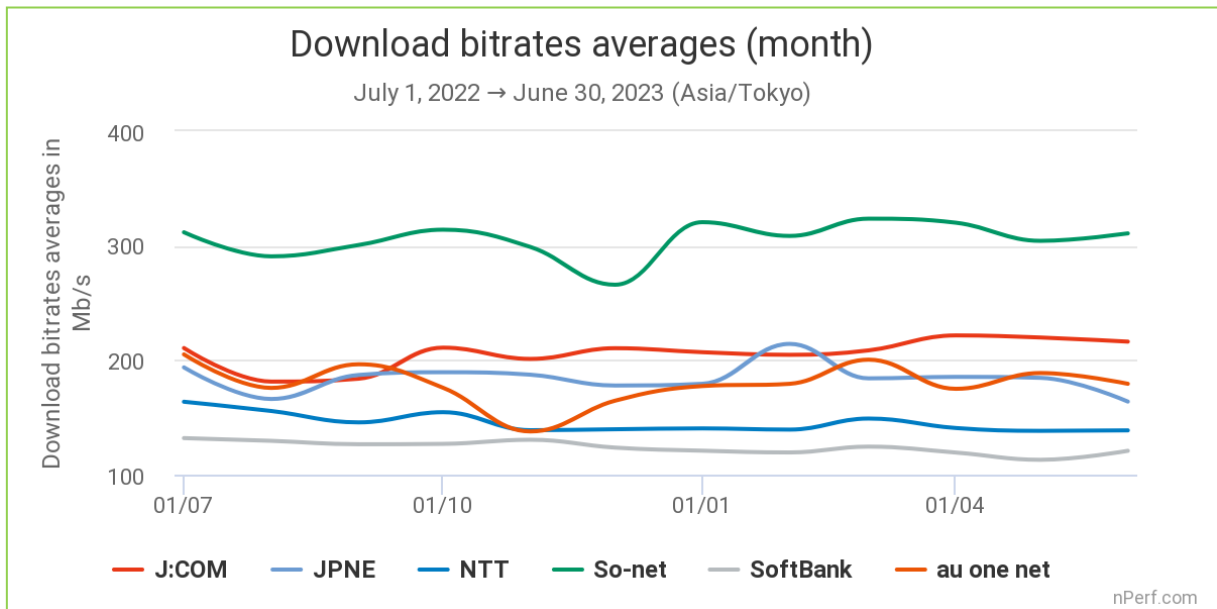


The highest speed is the best.

So-net subscribers enjoyed the best average broadband download speed, during the last two semesters.

With a very significant gap when it comes to download speed (305 Mb/s), the carrier does make the difference compared to its rivals, offering around 100 additional Mb/s than its closest competitor in this field.

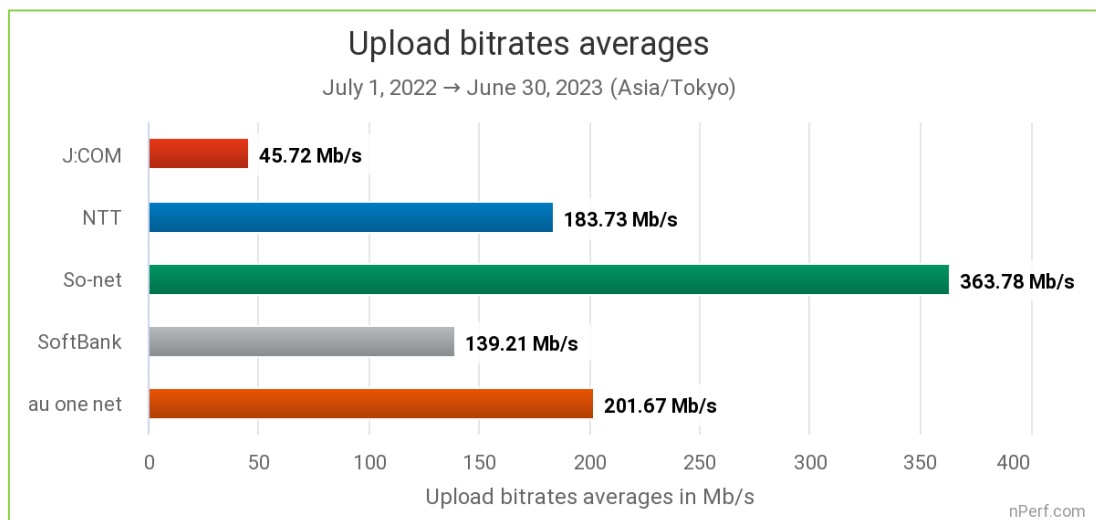
In any case, average performances of the Japanese providers on this field are quite high. The last position of this ranking is for SoftBank, which offers an average bitrate more than twice as slow than the leader.



The graph above shows the evolution of the *monthly* average bitrates throughout the period.

So-net has flown over this race from start to end, while its competitors have offered a lower-level scale but rather constant bitrates across the last months, without overrunning each other, around 140 to 200 Mb/s on average.

1.3 Upload speed

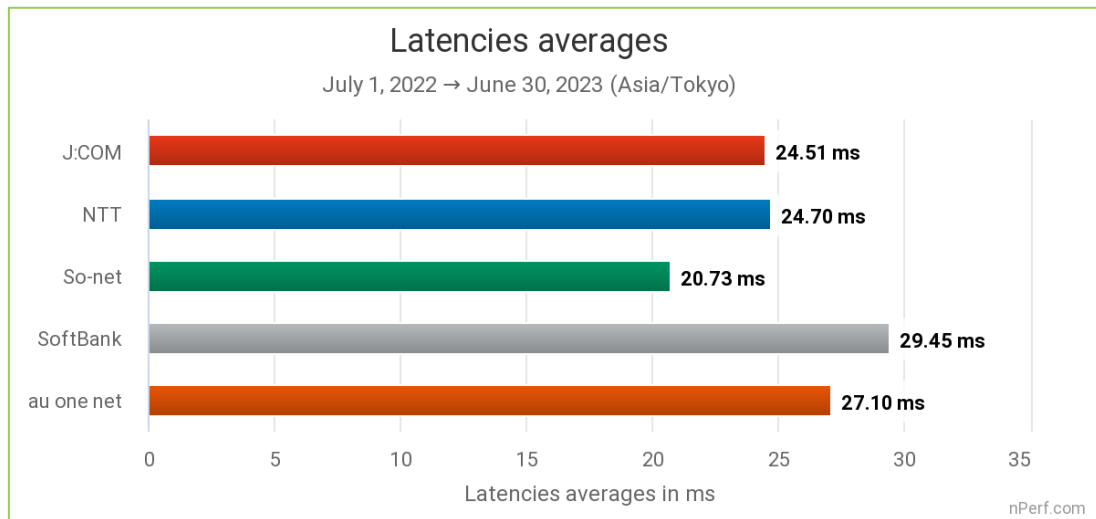


The highest speed is the best.

So-net subscribers enjoyed the best average broadband upload speed, during the last two semesters.

Excepting J:COM, which stays out of the race with an 8-time inferior speed than the leader on this KPI, it is important to note that Japanese carriers have offered a more than symmetrical upload speed, with very high upload speeds in average.

1.4 Latency



The shortest time is the best.

The subscribers of So-net enjoyed the best average broadband latency during the last two semesters. Despite a slight drop compared to last year, 20.73 ms is an impressive result.

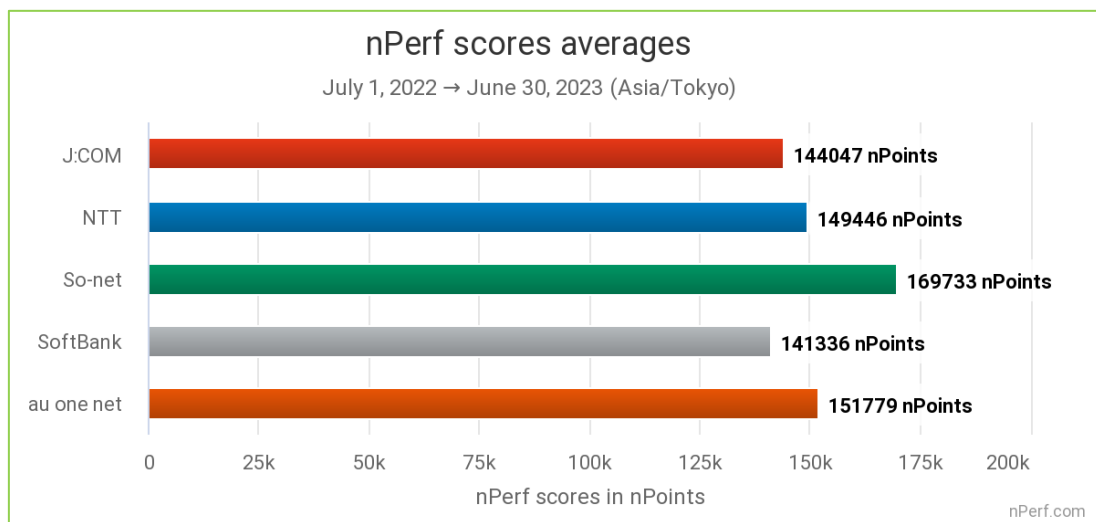
Nevertheless, the other competitors have not offered a bad performance at all either, given than the slowest time of response goes to SoftBank, with 29.45 ms.

1.5 nPerf scores

The nPerf score, expressed in nPoints, gives an overall picture of the quality of a connection. It takes into account the measured bitrates and the 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 **experienced by the user**.

The results below consider all the previous indicators and therefore all the tests carried out. As technologies are grouped together, the proportion of tests in different technologies strongly impacts this global trend.



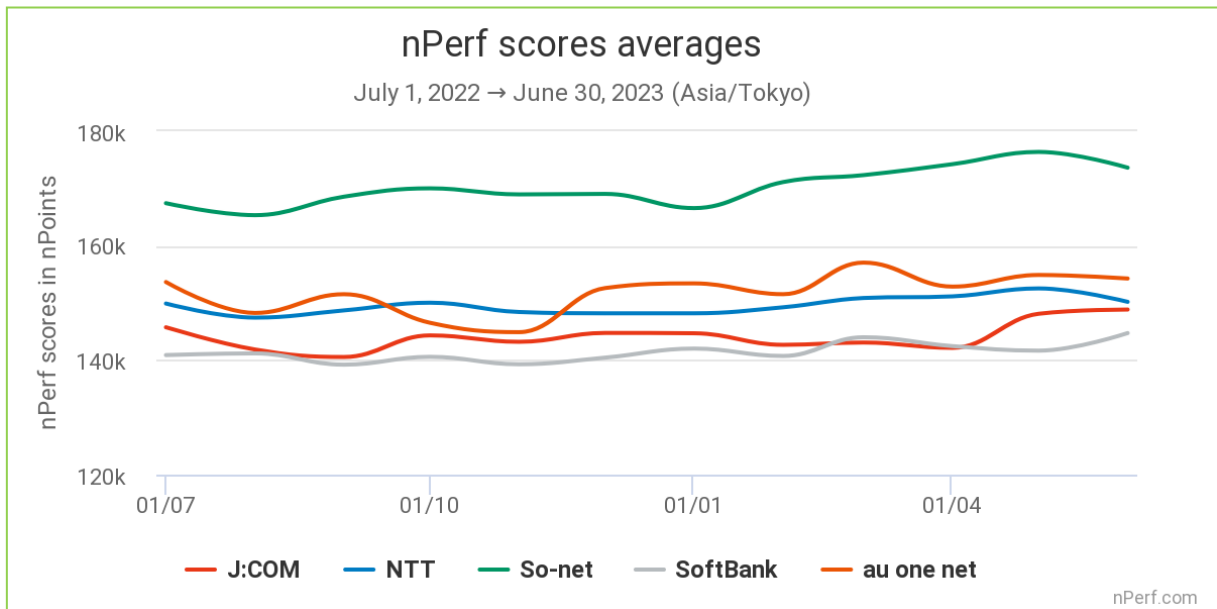
The highest value is the best.



So-net subscribers enjoyed the best broadband Internet performances during the last two semesters.

So-net dominates the market for several years in row, with a nice score of 169,733 nPoints.

Besides, we must highlight the very good upload speed in the country, the bitrates symmetry, and, in general, the very high standard of service offered by any provider. Japanese Internet users really do not have to worry about their Internet connection quality.



The graph above illustrates the evolution of the *monthly* average scores throughout the period. Once again, the Japanese market offers very high and stable Internet performances for its subscribers.



Find this global indicator directly in the website, or on your mobile device, via the « Compare » function at the end of the (full) test. It is updated in real time over 14 rolling days.

2 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 and on Google Play for Android devices.

3 Custom analysis & contact

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

You can contact nPerf via www.nperf.com through the "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!



4 Methodology

4.1 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 quality of their Internet connection. The panel of this study is formed by its users in Japan. 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 the **tens of thousands of tests** carried out yearly, exclusively by the operators' end customers, which makes it the "crowdsourced" study based on **one of the largest panels of the country**.

These tests reflect the **actual experience of the general public** on the various Internet networks.

4.2 Speed and latency tests

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 Wi-Fi 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.

4.3 nPerf servers

To ensure maximum user bandwidth at all times, nPerf relies on a network of servers dedicated to this task. These servers are hosted in the country and abroad. Indeed, nPerf has also installed dedicated servers directly at some providers' facilities, to maximize measurement reliability. **Local carriers are welcome [to install nPerf servers, that's free](#) !**

The total bandwidth available for Japan is **28 Gb/s**, and reaches more than **10 Tb/s** worldwide, with more than **2.300** active nPerf servers!

4.4 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...).

The exclusive nPerf algorithm retains only the relevant tests, thus eliminating biases related to the overrepresentation of certain terminals, users or test locations.

The results are classified by provider. Tests performed on cellular connections (2G, 3G, 4G & 5G), or on professional/business/military/academic networks are also excluded from this barometer.

4.5 Statistical accuracy

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

Category	Number of tests (filtered)	Absolute values	Percentages
Global	59,143	3%	1 point

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