

Barometer of fixed Internet connections in Turkey



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H2 2018 – H1 2019

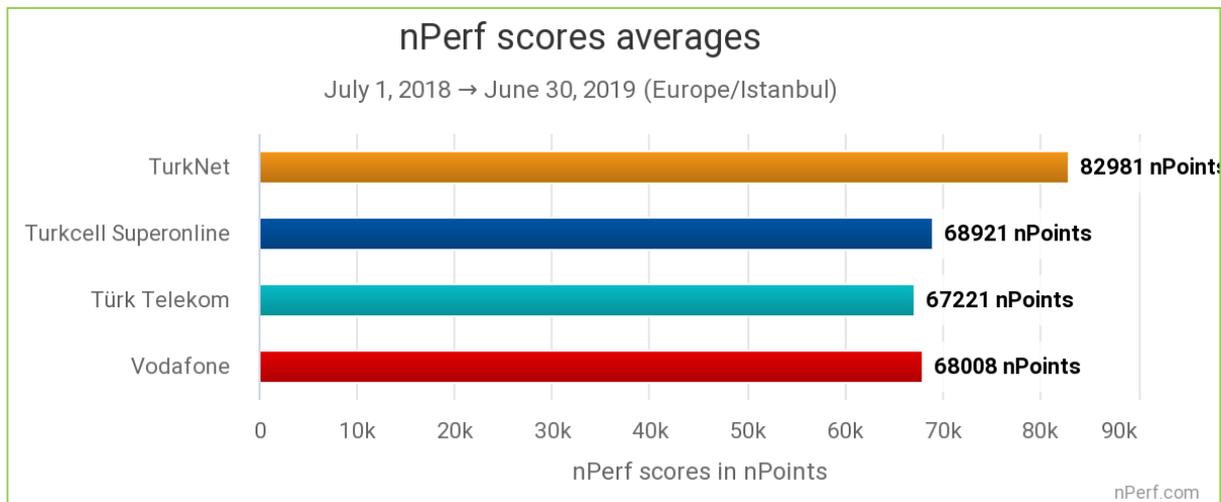


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1 Summary of global annual results

1.1 nPerf score, all technologies combined



The highest value is the best.

TurkNet subscribers enjoyed the best fixed Internet performance in the last two semesters.

1.2 Our analysis

From July the 1st 2018 and June the 30th 2019, nPerf users conducted 87.512 connection tests on Turkey's four largest Internet Service Providers. TurkNet dominates the market in terms of performance of fixed Internet connections by being the first on download speed tests and latency tests, and in second position on upload speed tests. 19 Mb/s is the average download speed of Turkish people which is a good global performance. However, as in many other countries, this result probably hides the digital divide between areas.

Turknet is the fastest Internet Provider far ahead

During the last 12 months, Turknet has provided the fastest Internet connections on fixed networks in Turkey. With an average download speed of 32,00 Mb/s, Turknet is far ahead from its competitors, indeed, the second one is Türk Telekom with 17,25 Mb/s ; so the gap between Turknet and its competitors is around 15 Mb/s !

With 32 Mb/s, Turknet customers are sure to enjoy all the greedy uses in bandwidth such as watching a movie in 4K, multiscreens uses at home, 4K Gaming...

Turknet first on latency, a good news for gamers

Besides being the fastest provider on fixed networks, Turknet is the most reactive with a very good latency, 48,86 ms; so if you are a gamer and need short latency, Turknet does the job.

Superonline first on upload speed

Regarding the upload speed, Turkcell superonline online has delivered the best upload speed on fixed networks with an average speed of 4,84 Mb/s. However, Superonline should be careful because from march 2019, Turknet has reached a speed of 6 Mb/s and seems to keep the first place from that time.

Conclusion

On fixed networks, one provider clearly makes the difference. With a download speed of 32 Mb/s Turknet has no rivals.

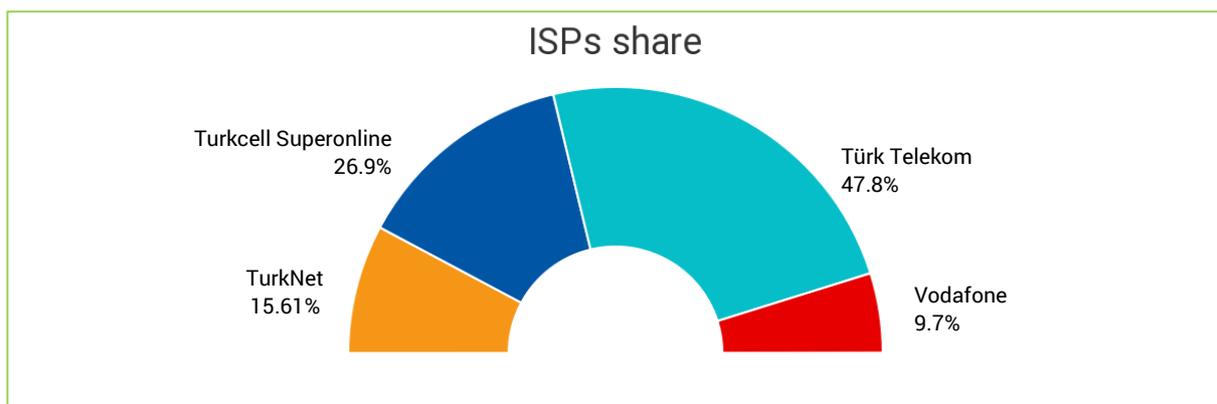
2 Overall results, all technologies combined

2.1 Data amount and distribution

From **July 1, 2018** to **June 30, 2019** we counted **87.512 tests**, distributed after filtering as follows:

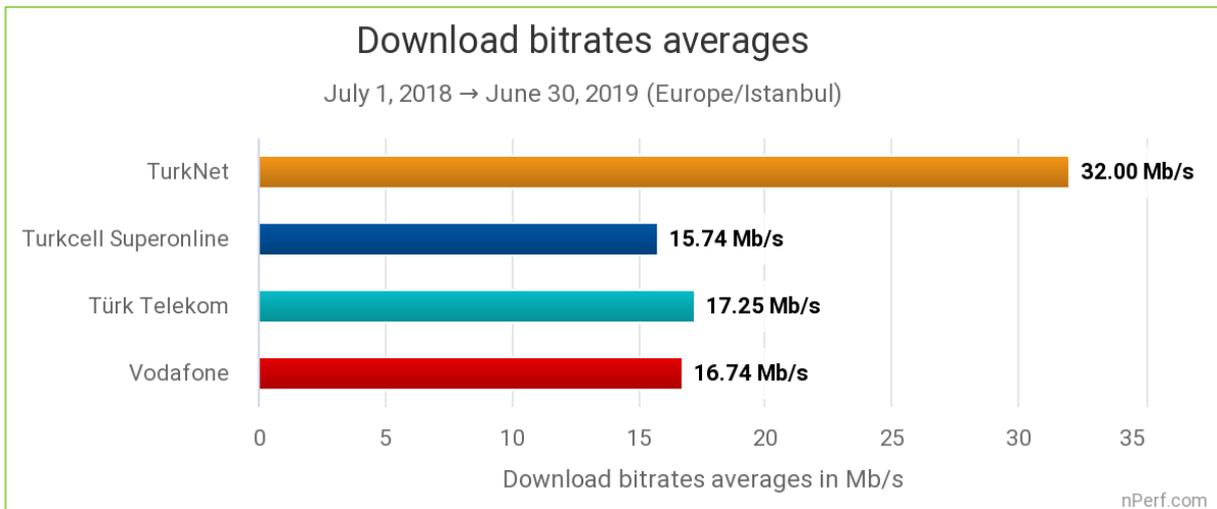
Country	Tests
Turkey	71.688

Breakdown of tests by provider



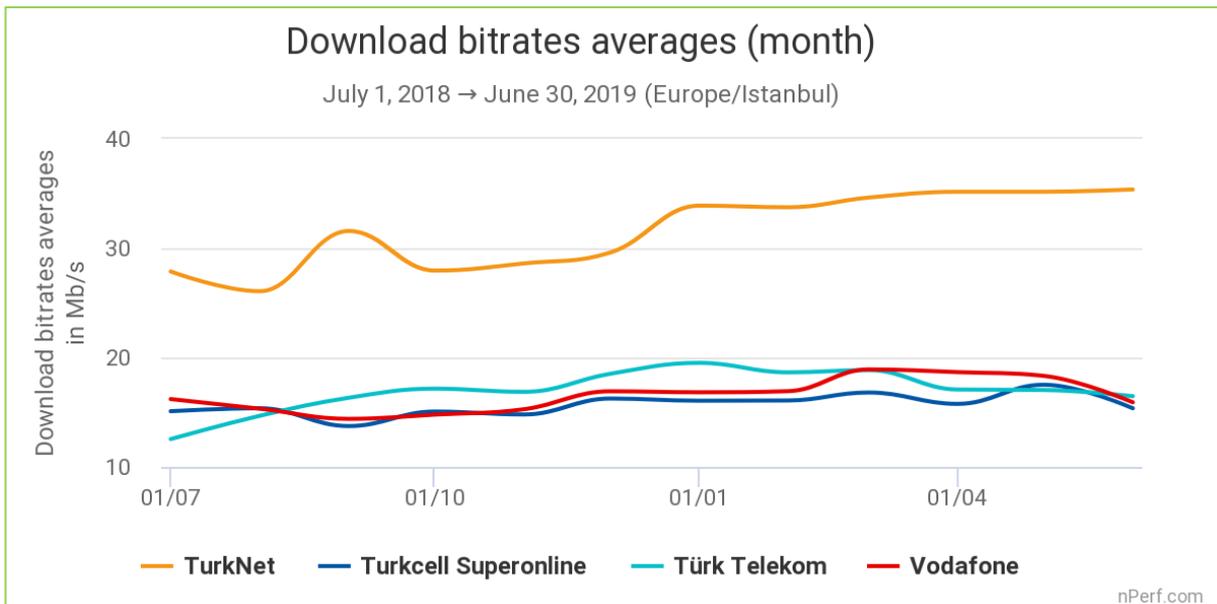
2.2 Download speed

In 2018-2019, the average download speed in Turkey was 19 Mb/s.



The highest value is the best.

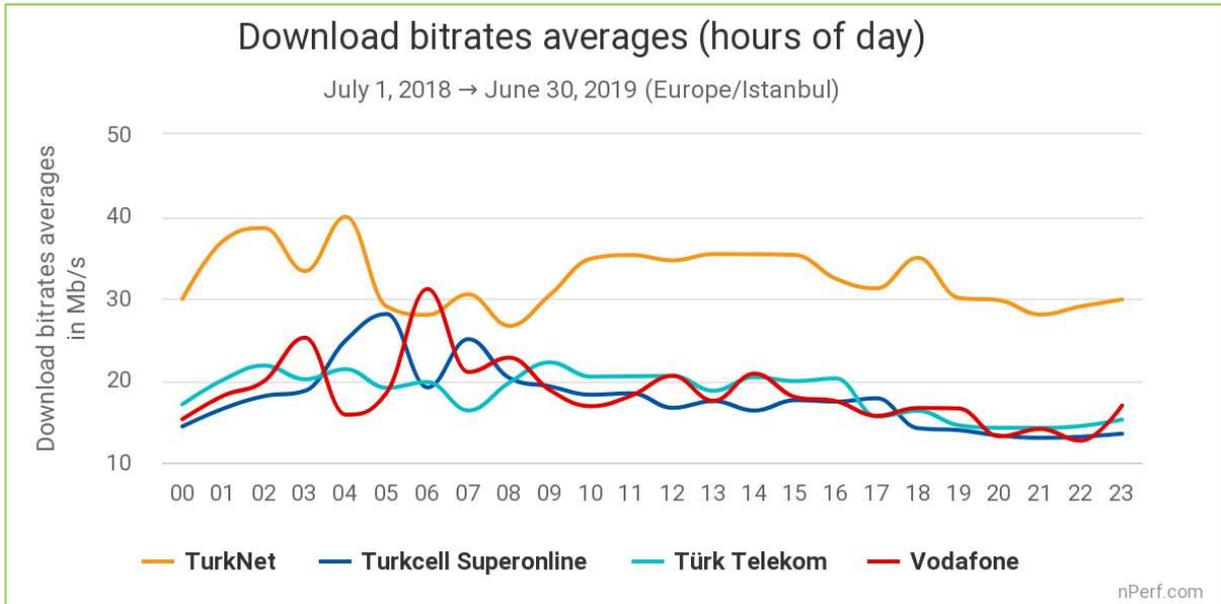
All technologies combined, **TurkNet** subscribers benefited from the best fixed internet download in the last two semesters.



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).

Globally, all ISPs improved slightly their performance throughout the 12 past months, but it is mostly TurkNet that has made the most progress and is thus at the top of the ranking on this KPI.



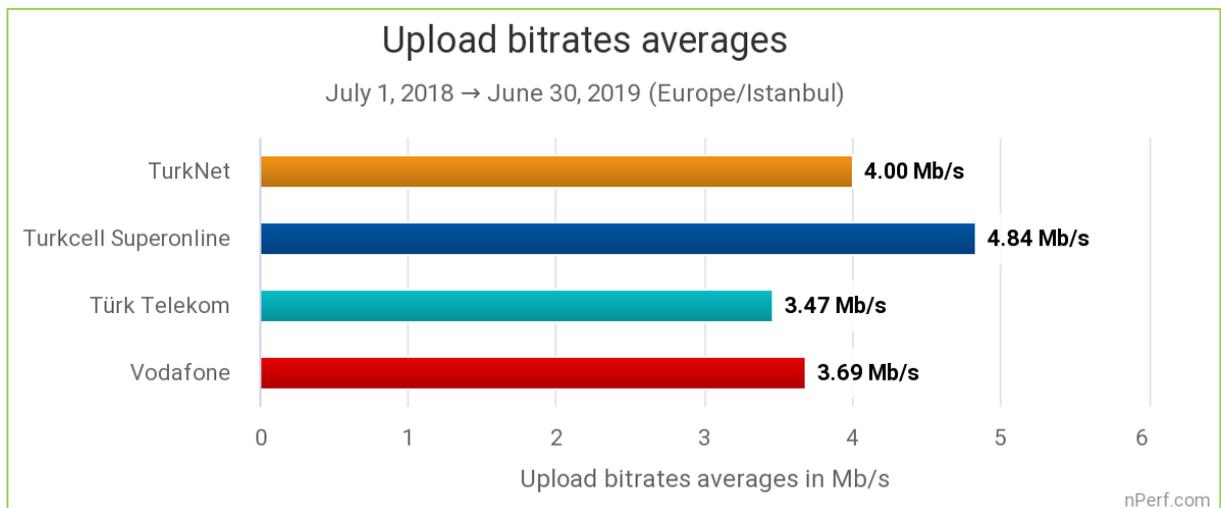
The highest value is the best.

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 a decline of the throughput during the busy hours.

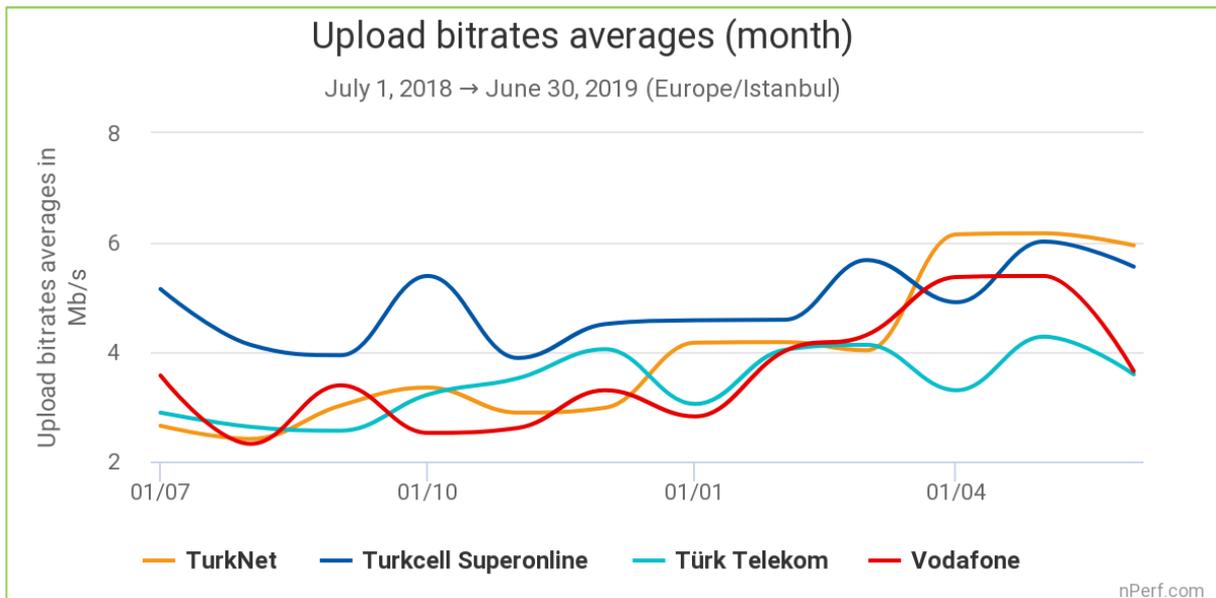
2.3 Upload speed

In 2018-2019, the average upload speed in Turkey was 4 Mb/s.



The highest value is the best.

All technologies combined, **Turkcell Superonline** subscribers benefited from the best fixed internet upload speed in the last two semesters.



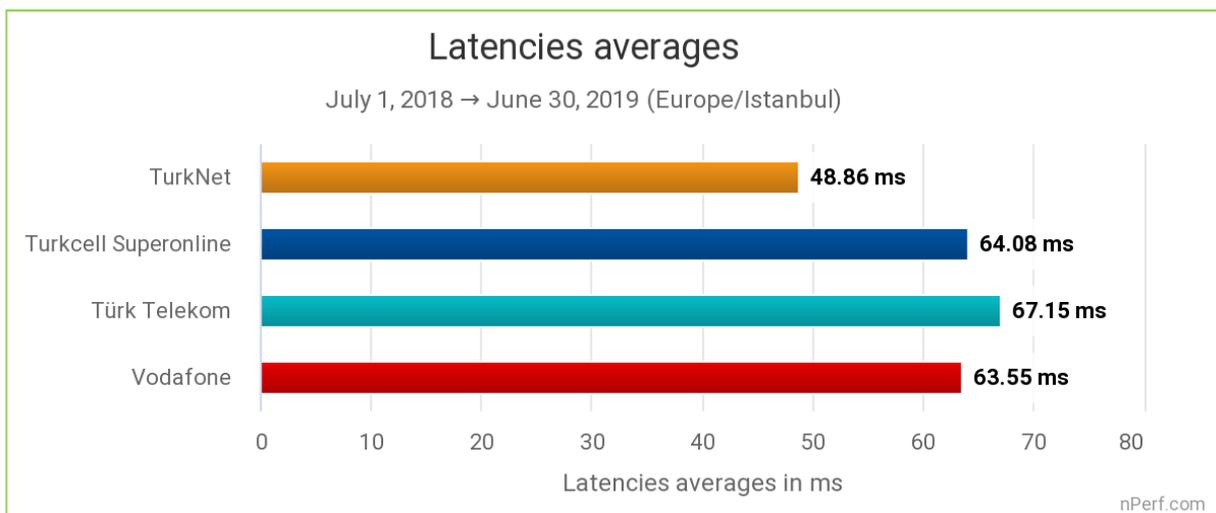
The highest value is the best.

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

Globally, all ISPs provided fairly stable performance during the second semester of 2018 and have improved their upload speed in 2019.

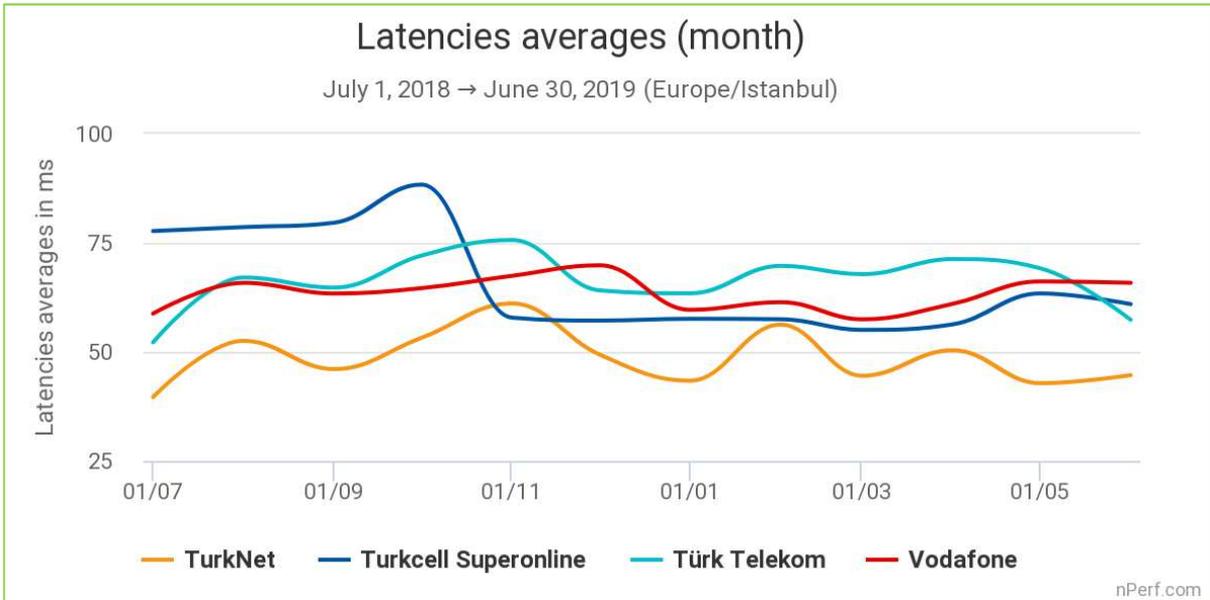
2.4 Latency

In 2018, the average latency in Turkey was 63 ms.



The lowest value is the best.

All technologies combined, **TurkNet** subscribers benefited from the best internet latency in the last two semesters.



The lowest value is the best.

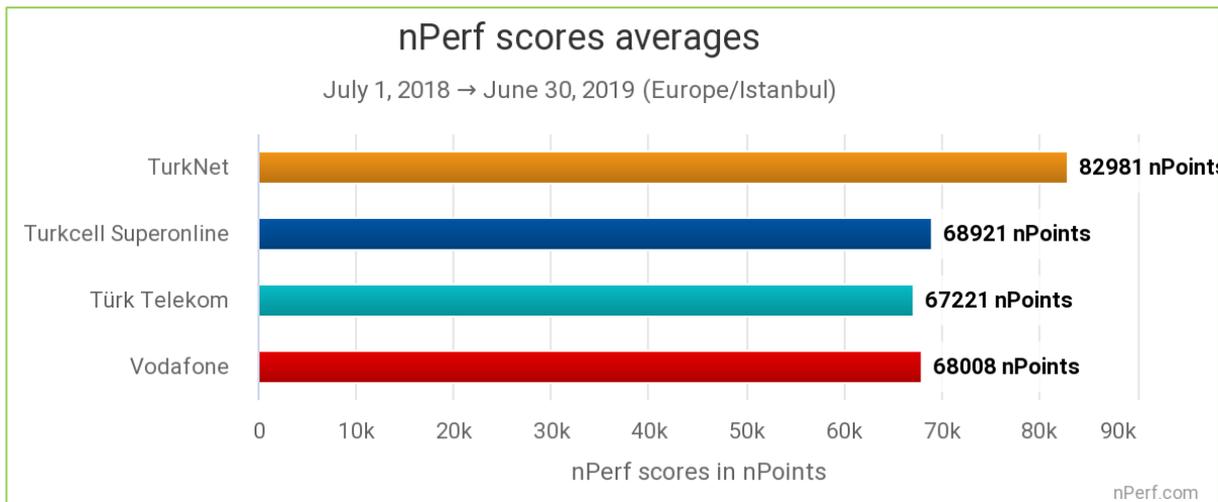
This graph illustrates the ability of providers to maintain a constant latency during the period, regardless of network load (number of connected clients).

We note a significant improvement for Turkcell Superonline last October while its competitors have provided fairly stable latencies.

2.5 nPerf score, all technologies combined

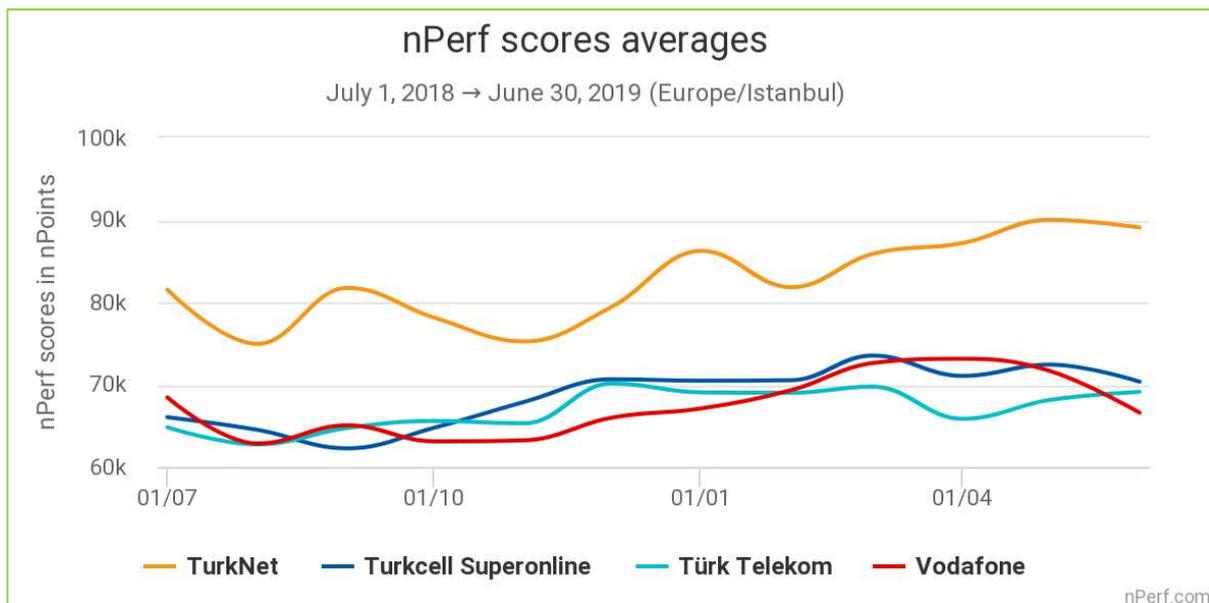
The nPerf score, expressed in nPoints, gives an overall picture of the quality of a connection. It takes into account measured bitrates (2/3 Download + 1/3 Upload) and latency. These values are calculated on a logarithmic scale to better represent the perception of the user.

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



The highest value is the best.

TurkNet subscribers enjoyed the best fixed Internet performance in the last two semesters.



The highest value is the best.

Globally, all ISPs have improved slightly their performance in the last two semesters but it is mostly TurkNet that has made the most progress and is thus at the top of our nPerf ranking.

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 Turkey.

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 Turkey abroad. nPerf has also installed dedicated servers directly at Turkey providers like Hrvatski Telekom to maximize measurement reliability.

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

The total bandwidth available for Turkey is greater than 10 Gb/s.

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.

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