

February 9, 2024



Barometer of mobile Internet connections in Bulgaria.

01/01/2023 - 31/12/2023



1

**Introducing
nPerf**

2

**Executive
summary**

3

Analysis

4

Methodology

5

**nPerf Network
assessment**

Expert in the telecom network optimization

nPerf is an independent French company based in Lyon (France). For over a decade, nPerf has been a trusted partner for both fixed and mobile operators, providing comprehensive network testing solutions and analysis. Our mission is to accurately measure, evaluate, and enhance the understanding of Internet connectivity around the world.

 **300k+** tests daily worldwide.

 **26Md+** coverage scans in total.

 **3k+** servers all around the world.

Test your Internet connection with nPerf!

nPerf allows you to test the quality of your fixed, mobile, or Wi-Fi Internet connections up to 10 Gb/s!
Download our app or visit our website!



2. Executive Summary



The subscribers of A1 enjoyed the best mobile Internet performances in Bulgaria during 2023.

Cellular Internet connections in Bulgaria

	A1	Vivacom	Yettel
Download bitrates (Mb/s)	221.05	106.65	85.04
Upload bitrates (Mb/s)	31.45	17.39	20.01
Latency (ms)	33.72	52.80	37.93
Web browsing (%)	72.16	69.17	69.16
Youtube streaming (%)	87.81	86.36	88.84
nPerf Score (nPoints)	108 869	87 311	91 124

Source : nperf.com



Best mobile Internet performance in 2023



Source : nperf.com



Source : nperf.com

Bulgaria's telecom sector is a vibrant arena of technological advancement and competitive prowess, showcasing the dynamic interplay between leading ISPs striving to enhance connectivity and digital services across the nation.

A1: leading the telecom performance

A1 Bulgaria sets the standard with astonishing download speeds of 221 Mb/s, complemented by upload speeds of 31 Mb/s, ensuring that its users experience unparalleled internet service. The latency stands at a commendable 34 ms, which, when combined with a navigation score of 72% and a streaming performance of 88%, underscores A1's commitment to quality and reliability. With an nPerf score of 108,869, A1 Bulgaria is not just a leader in speed but also a pioneer in delivering a comprehensive digital experience.

Yettel: balancing performance with quality

Yettel, with download speeds reaching 85 Mb/s and upload speeds of 20 Mb/s, offers a balanced and reliable service that caters to a

wide array of digital needs. A latency of 38 ms, paired with a navigation score of 69% and a slightly better streaming score of 89% than A1, positions Yettel as a strong contender in the market. Its nPerf score of 91,124 reflects a commitment to maintaining a high-quality service.

Vivacom: a reliable network

Vivacom provides its users with robust download speeds of 107 Mb/s and upload speeds of 17 Mb/s, making it a reliable choice for both casual and power internet users. Despite a higher latency of 53 ms, Vivacom manages to offer a consistent navigation score of 69% and a YouTube streaming rate of 86%. With an nPerf score of 87,311, Vivacom demonstrates its resilience and reliability in the competitive Bulgarian telecom market.

4. Methodology



nPerf provides a **free tool to assess Internet connection quality** via its website and mobile apps (Android, iOS). Daily, thousands of people rely on nPerf for speed tests in their country, contributing to a comprehensive crowdsourced database covering all operators.

The study employs a strong filtering method to reflect real customer experiences on a specific network (mobile or fixed line). Measures are taken to prevent probes and measurement robots from affecting the results.

For mobile connections, we assess:

▼ Download bitrate :

Indicates the amount of data your connection can receive in one second from the nPerf server. The highest the measured value, the best is the bitrate of your connection.

▲ Upload bitrate :

Indicates the amount of data your connection can send in one second from the nPerf server. The highest the measured value, the best is the bitrate of your connection.

◀▶ Latency (ping) :

It indicated the delay a small packet of data requires to make a round-trip from your computer to the nPerf server. The shorter the delay, the most reactive your connection is. The main is the minimum value.

🌐 Browsing performance :

The browsing test assesses the load time of the fully loaded pages, including images, JavaScript, CSS, and fonts, for the five most popular sites. This indicator reflects the user's perceived quality of the Internet network.

📺 Streaming performance :

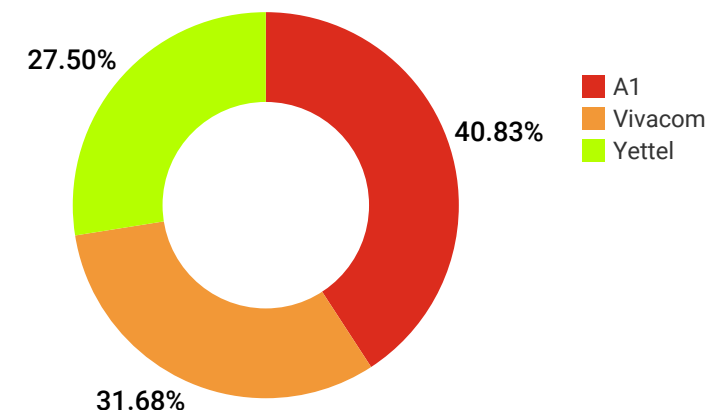
The video streaming test gauges the load time of a fully loaded video in three resolutions on YouTube, considering stalls during playback. This indicator reflects the user's perceived quality of the Internet network.

Statistical precision is crucial in accurately determining winners. At nPerf, we prioritize test quality, precise reporting, and transparency. Analyzing a large volume of tests in this study, we've achieved 3 % precision for absolute values and 1 point for percentage-based results, highlighting the reliability and accuracy of our data.

For a more comprehensive understanding of the user experience, our report features test results during both Busy hours (6 PM to 11 PM) and Idle hours (the rest of the day). Busy hours, marked by network strain, can impact user experience through congestion. This approach helps in understanding how network performance fluctuates throughout the day.

We only include national Internet service providers with test share above 5% share. The chart below shows the overall test distribution for each service provider.

Overall distribution of the tests per provider (ISPs Share)



Source : nperf.com



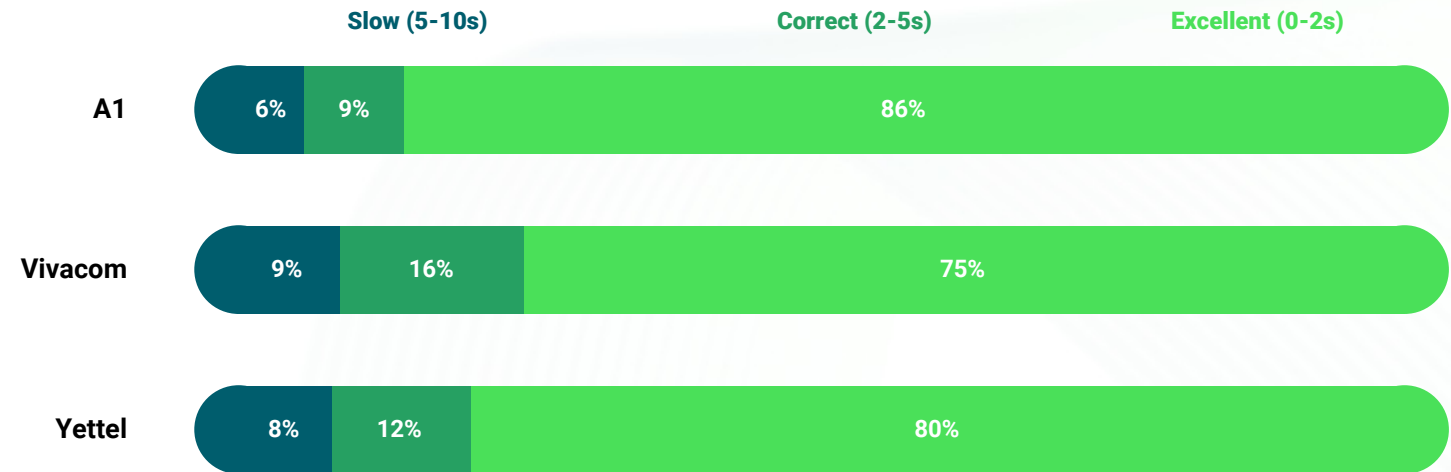
Browsing Performance rate (average)



Source : nperf.com

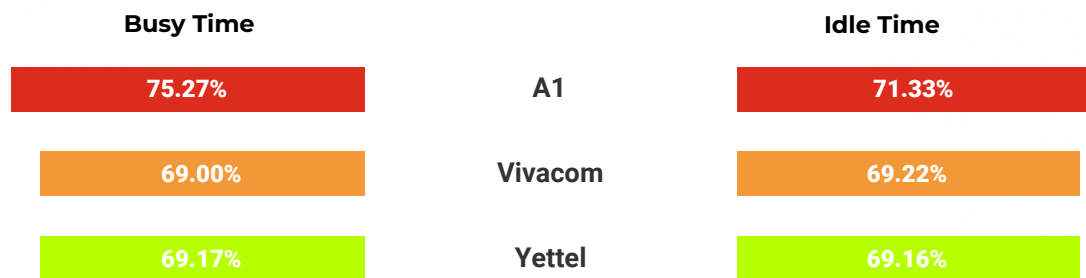
The subscribers of A1 enjoyed the best mobile Internet browsing performance in 2023.

Browsing Performance results ventilation (average)



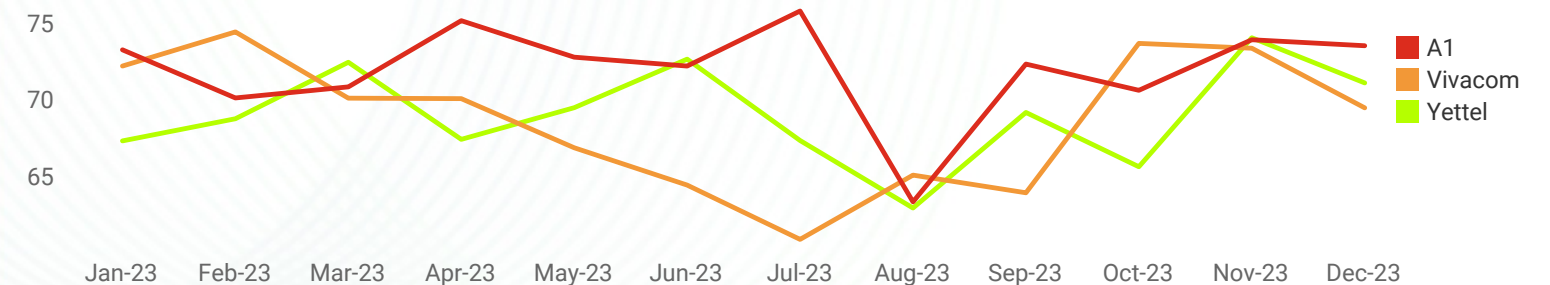
Source : nperf.com

Browsing Performance rate (average)



Source : nperf.com

Browsing performance rate (average) evolution over the year



Source : nperf.com



Streaming Performance rate (average)



Source : nperf.com

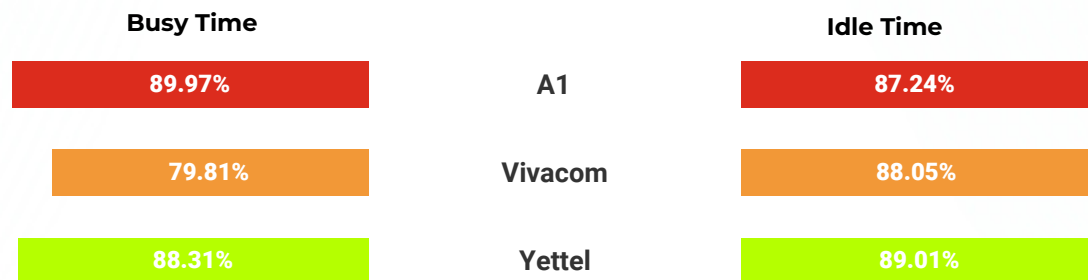
The subscribers of Yettel enjoyed the best mobile Internet streaming performance in 2023.

Streaming Performance results ventilation (average)



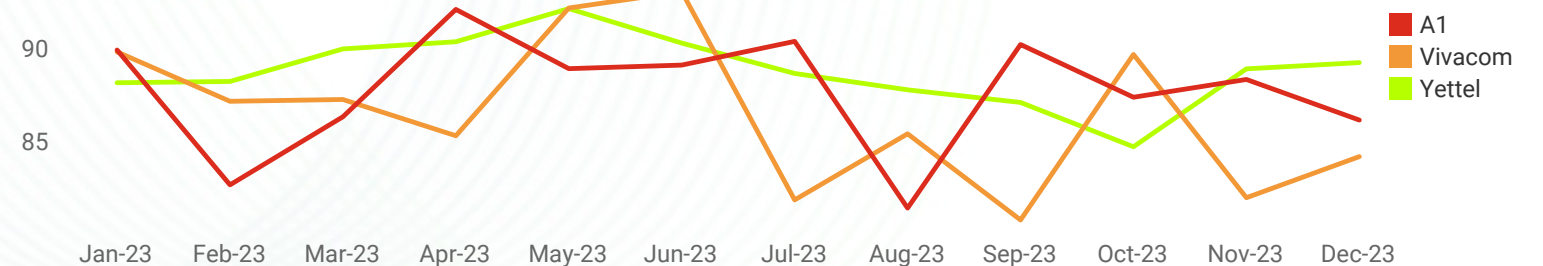
Source : nperf.com

Streaming Performance rate (average)



Source : nperf.com

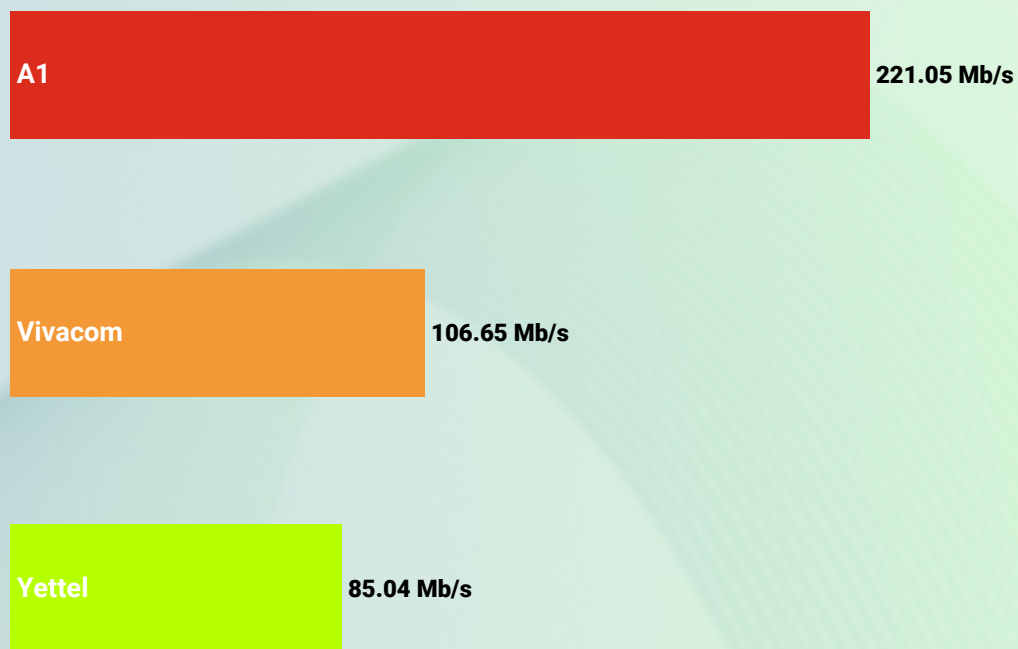
Streaming performance rate (average) evolution over the year



Source : nperf.com



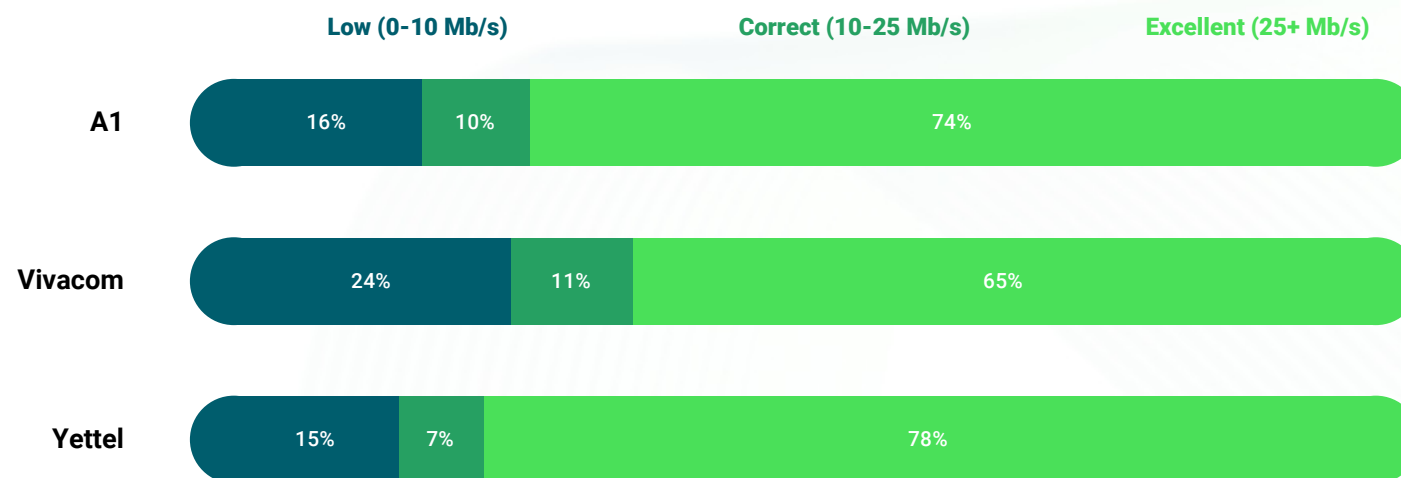
Download Speed (average)



Source : nperf.com

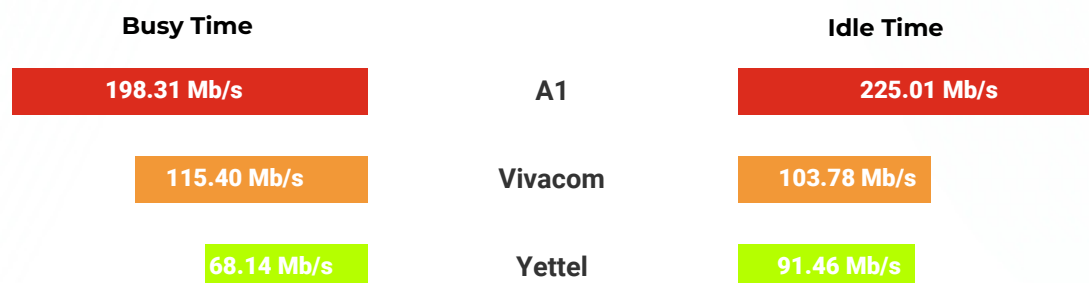
The subscribers of A1 enjoyed the best average mobile Internet download speed in 2023.

Download Speed results ventilation (average)



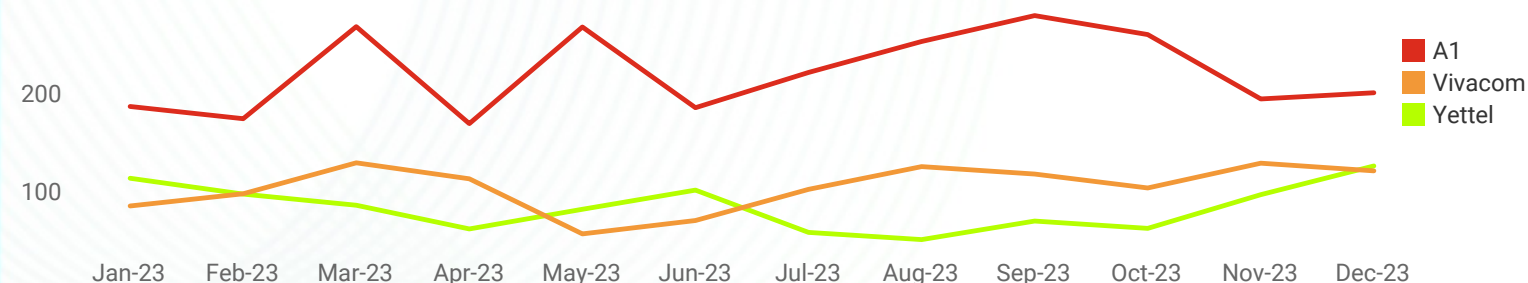
Source : nperf.com

Download Speed (average)



Source : nperf.com

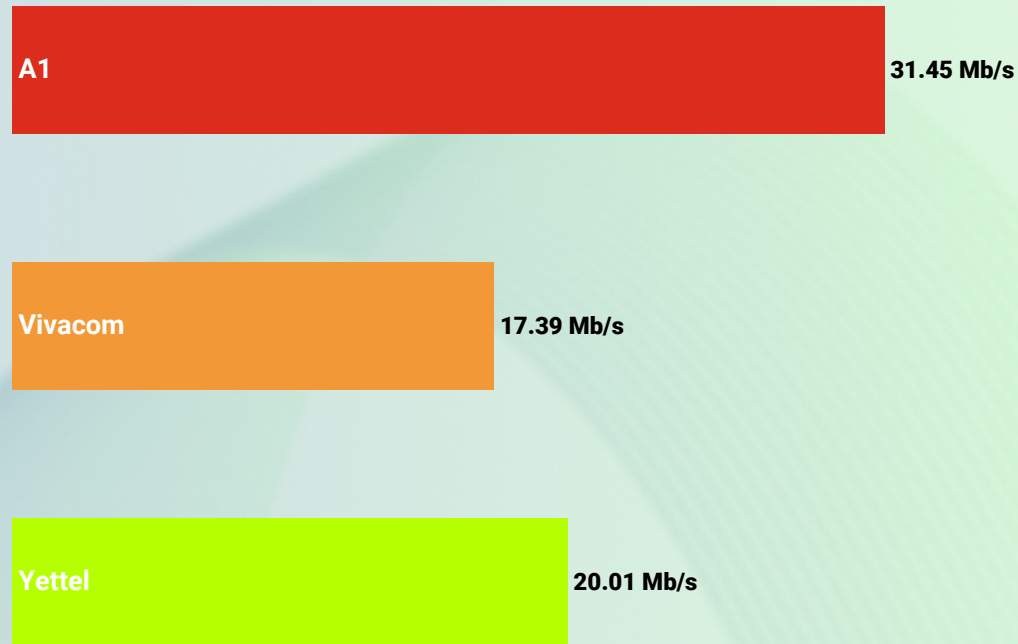
Download Speed evolution over the year (average)



Source : nperf.com



Upload Speed (average)



Source : nperf.com

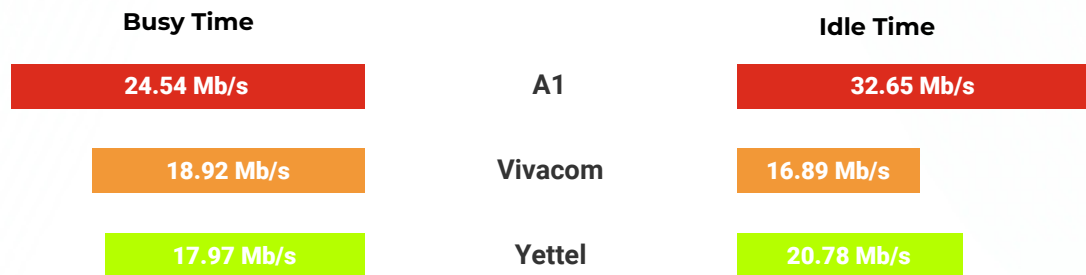
The subscribers of A1 enjoyed the best average mobile Internet upload speed in 2023.

Upload Speed results ventilation (average)



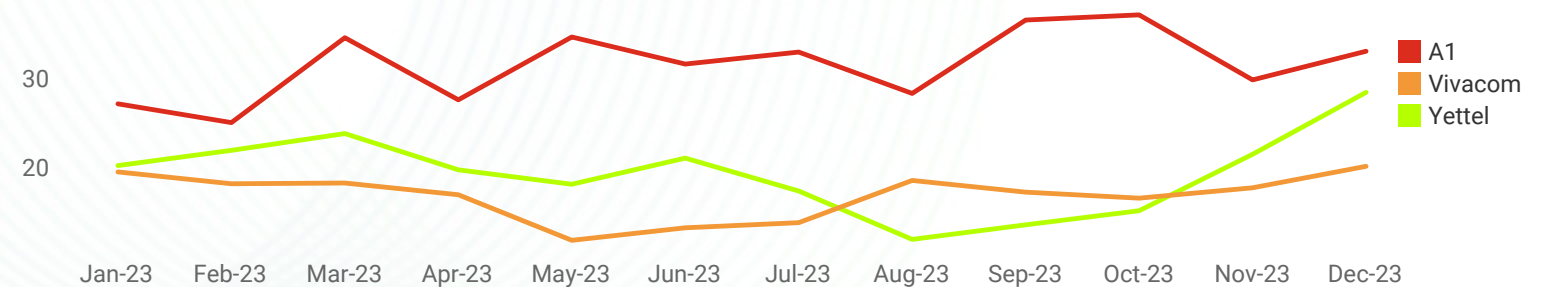
Source : nperf.com

Upload Speed (average)



Source : nperf.com

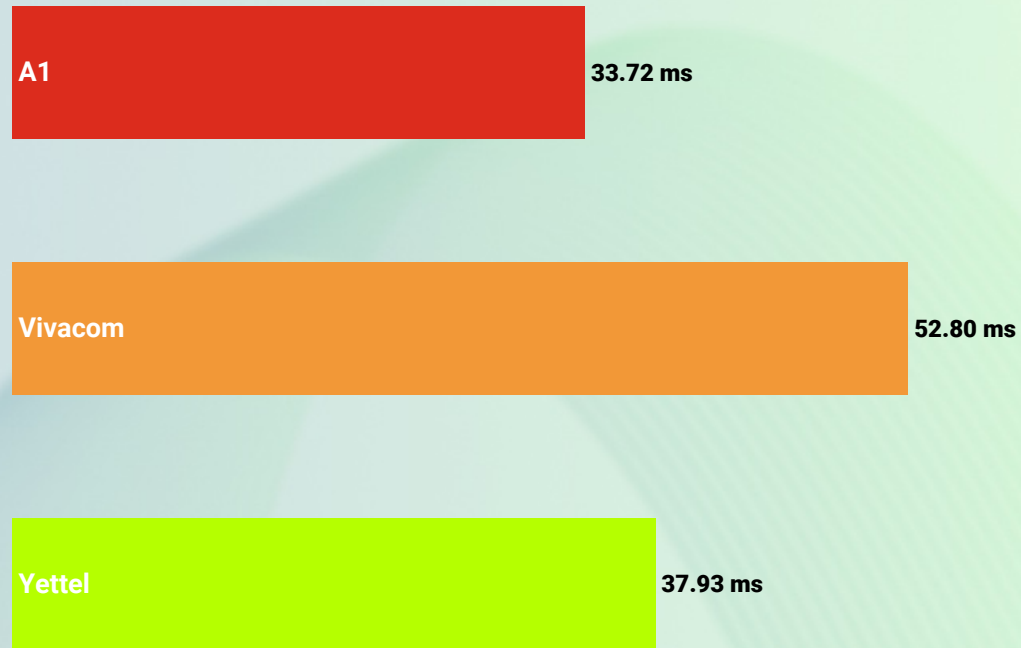
Upload Speed evolution over the year (average)



Source : nperf.com



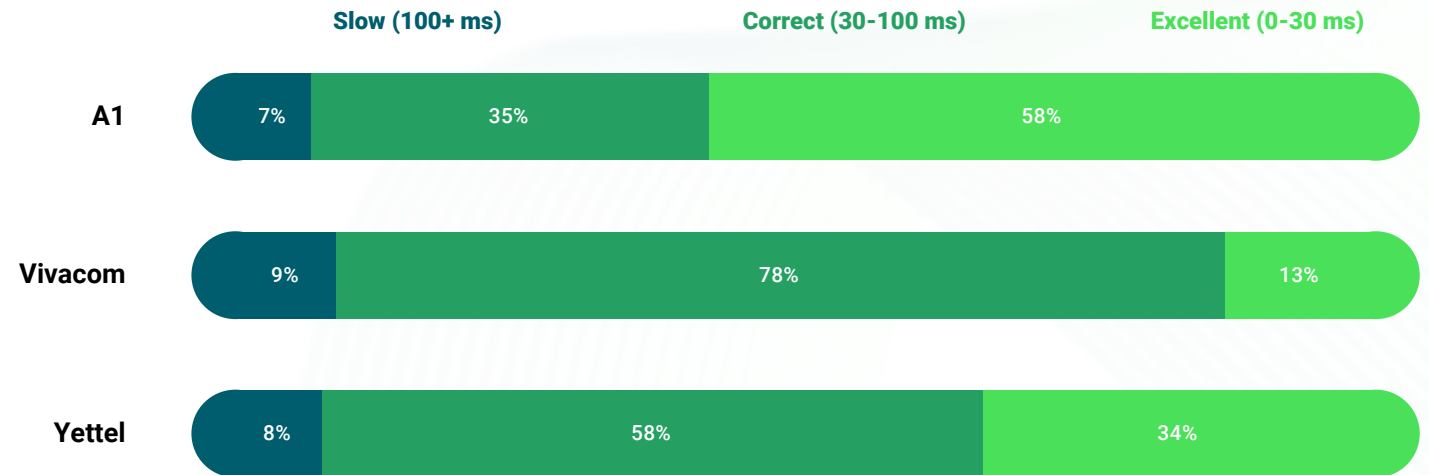
Latency Speed (average)



Source : nperf.com

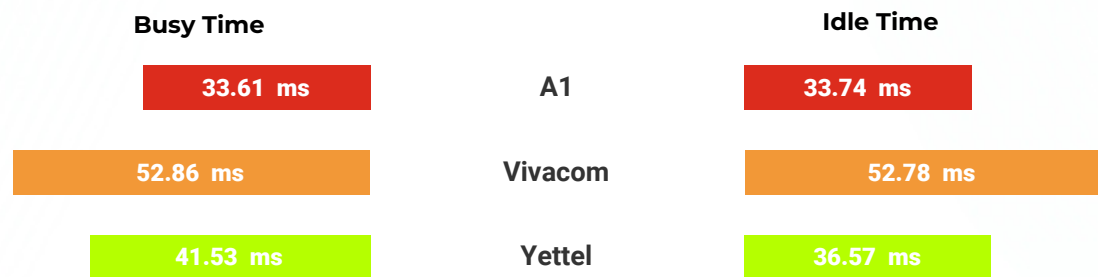
The subscribers of A1 enjoyed the best average mobile Internet latency speed in 2023.

Latency Speed results ventilation (average)



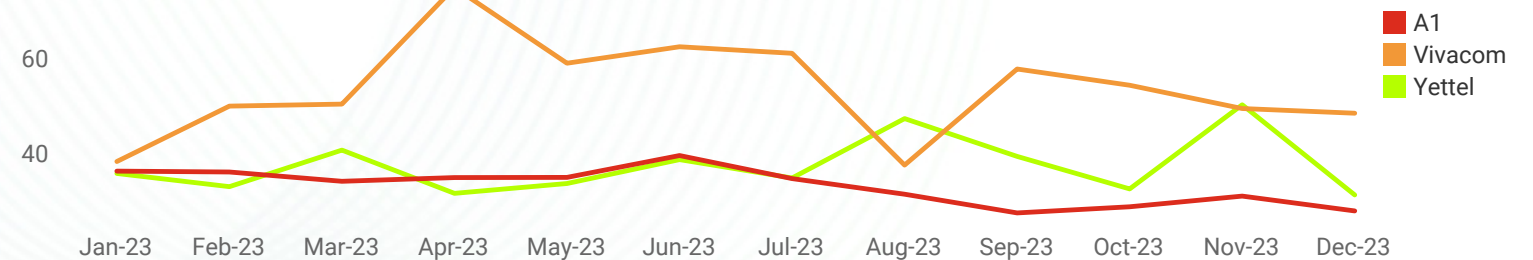
Source : nperf.com

Latency Speed (average)



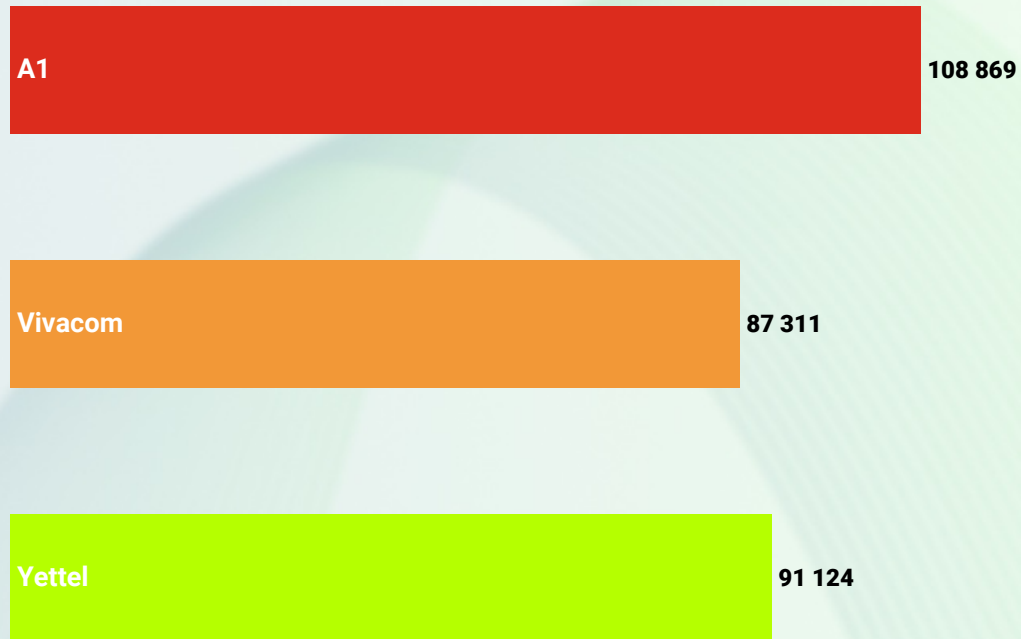
Source : nperf.com

Latency Speed evolution over the year (average)



Source : nperf.com

nPerf Score (nPoints)



Source : nperf.com

The subscribers of A1 enjoyed the best mobile Internet performances in Bulgaria during 2023.

The nperf score takes into account the measured bitrates, the latency and the Qoe tests. The value of the points for the rates and the latency is 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.

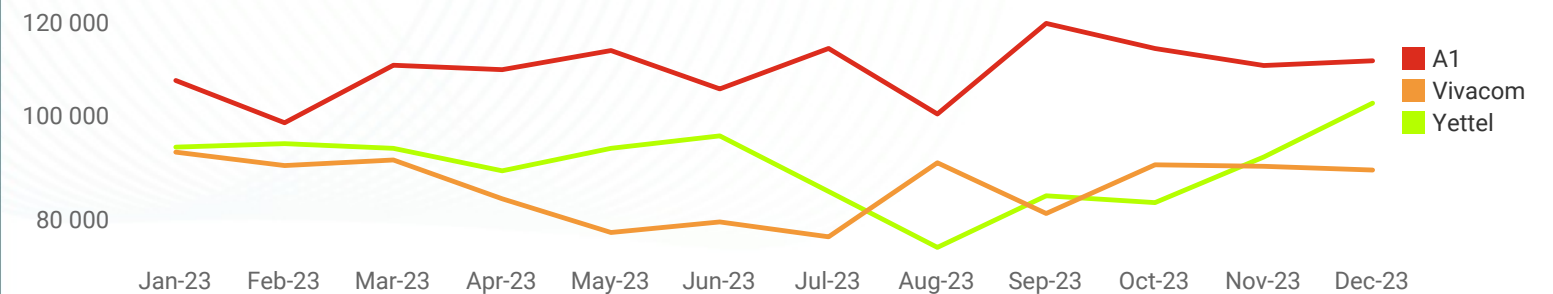
Source : nperf.com

A1
Best mobile Internet performance
in 2023



Source : nperf.com

nPerf score evolution over the year (average)



Source : nperf.com



We qualify your connection