



# Barometer of mobile Internet connections in Romania.

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.

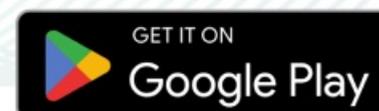
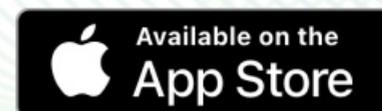
 **26Md+** coverage scans in total.

 **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 Orange enjoyed the best mobile Internet performances in Romania during 2023.

### Cellular Internet connections in Romania

	Digi	Orange	Telekom	Vodafone
▼ Download bitrates (Mb/s)	54.61	177.57	54.21	49.26
▲ Upload bitrates (Mb/s)	13.75	32.10	19.15	16.87
◀▶ Latency (ms)	38.17	32.25	46.63	37.29
🌐 Web browsing (%)	64.02	65.55	64.63	65.52
🎥 Youtube streaming (%)	82.02	85.76	73.06	85.22
nPerf Score (nPoints)	76 903	101 136	71 832	79 685

Source : nperf.com



Best mobile Internet performance in 2023



Source : nperf.com



Source : nperf.com

The subscribers of Orange enjoyed the best 5G mobile connections in Romania during 2023.

5G mobile connections in Romania

	Digi	Orange	Vodafone
▼ Download bitrates (Mb/s)	159.48	357.30	99.48
▲ Upload bitrates (Mb/s)	34.37	53.10	25.66
◀▶ Latency (ms)	29.44	25.61	34.39
🌐 Web browsing (%)	76.84	74.56	73.51
📺 Youtube streaming (%)	88.82	88.46	86.45
nPerf Score (nPoints)	111 222	124 780	97 237

Source: nperf.com

The Romanian mobile market demonstrates a dynamic competitive landscape where ISPs are rigorously evaluated based on their performance metrics. These metrics, crucial for assessing the quality of service, include download and upload bitrates, latency, web browsing success rates, YouTube streaming performance, and overall nPerf scores.

### **Orange shines with exceptional performance both in 5G**

Orange appears as the leading ISP in Romania with an exceptional nPerf score of 101,136 nPoints. It offers the highest download bitrate on the market at 177.57 Mb/s and an impressive upload bitrate of 32.1 Mb/s, ensuring fast and efficient data transfers. With a latency of just 32.25 ms, Orange offers a very responsive Internet experience. The percentages of web browsing and YouTube streaming are 65.55% and 85.76% respectively, highlighting Orange's commitment to providing premium browsing and video streaming services. With its leadership in 5G, Orange dominates the mobile market in Romania.

### **Vodafone: A major conqueror**

Vodafone maintains a strong presence with an nPerf score of 79,685 nPoints, driven by a download bitrate of 49.26 Mb/s and an upload bitrate of 16.87 Mb/s. The ISP achieves a latency of 37.29ms, providing a seamless internet experience. Vodafone's web browsing and YouTube streaming percentages are 65.52% and 85.22%, respectively, indicating a reliable and efficient service for web browsing and video streaming.

### **Digi: Desire to offer better service**

Digi presents reliable service with an nPerf score of 76,903 nPoints. The ISP offers a download bit rate of 54.61 Mb/s and an upload speed of 13.75 Mb/s. With a latency of 38.17 ms, Digi guarantees a smooth online experience. The success rates for web browsing and YouTube streaming stood at 64.02% and 82.02%, respectively, highlighting Digi's strong performance in providing quality Internet services.

### **Telekom: Room for improvement**

Telekom holds its ground with a nPerf score of 71,832 nPoints. The ISP delivers a download bitrate of 54.21 Mb/s and an upload speed of 19.15 Mb/s. Despite a slightly higher latency of 46.63 ms, Telekom supports a satisfactory online experience. The web browsing and YouTube streaming success rates are 64.63% and 73.06%, respectively, demonstrating Telekom's commitment to providing consistent internet services.

### **Conclusion**

Analysis of the Romanian mobile market reveals that Orange is the undisputed leader for all mobile generations (2G, 3G, 4G and 5G), setting the standard with unrivaled download and upload speeds, as well as browsing experiences and exceptional streaming. Vodafone and Digi offer competitive services with balanced performance across all parameters, while Telekom demonstrates a willingness to improve.

## 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 :

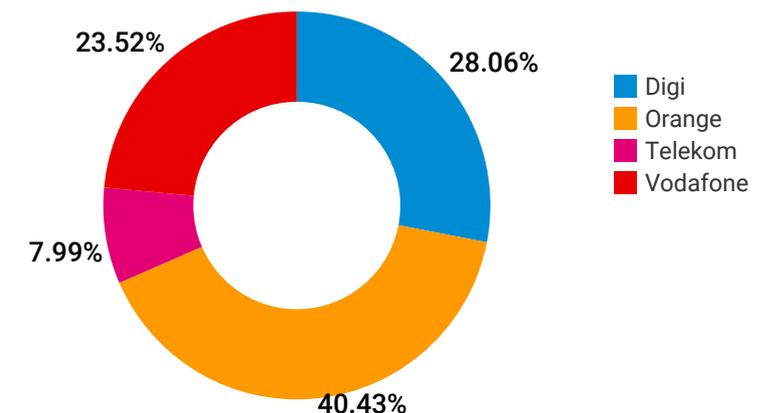
The video streaming test gauges the load time of a fully loaded video in three resolutions on YouTube, considering stalls during playback. This indicator reflects the user's perceived quality of the Internet network.

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



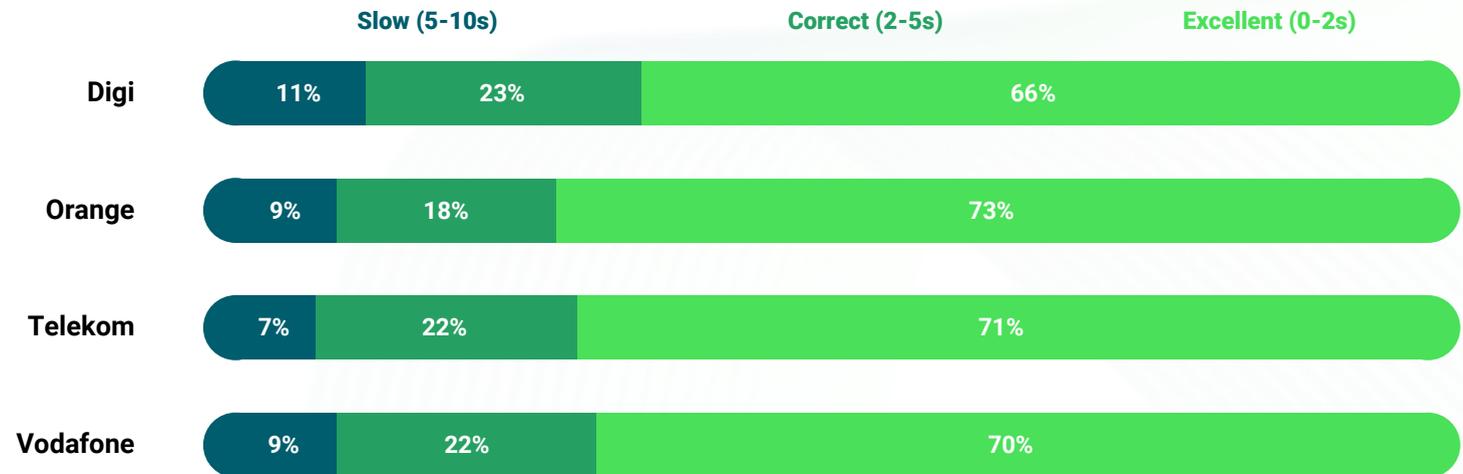
## Browsing Performance rate (average)



Source : nperf.com

The subscribers of Orange, Vodafone and Telekom enjoyed the best mobile Internet browsing performance in 2023.

## Browsing Performance results ventilation (average)



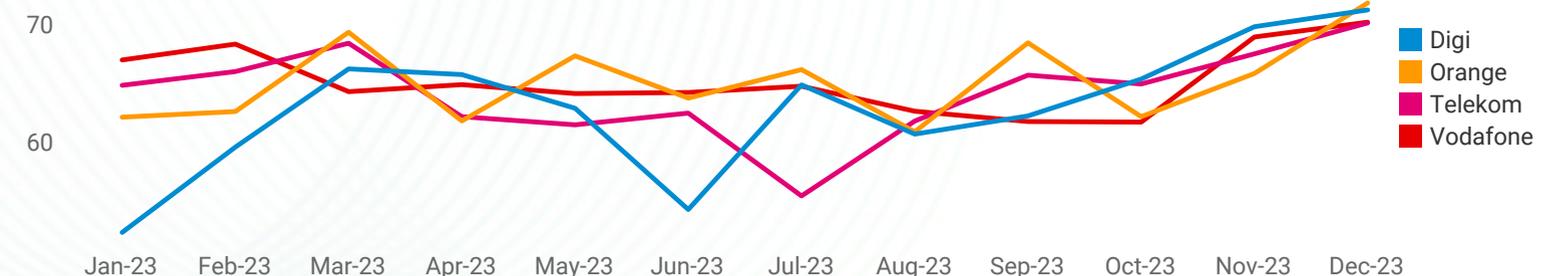
Source : nperf.com

## Browsing Performance rate (average)



Source : nperf.com

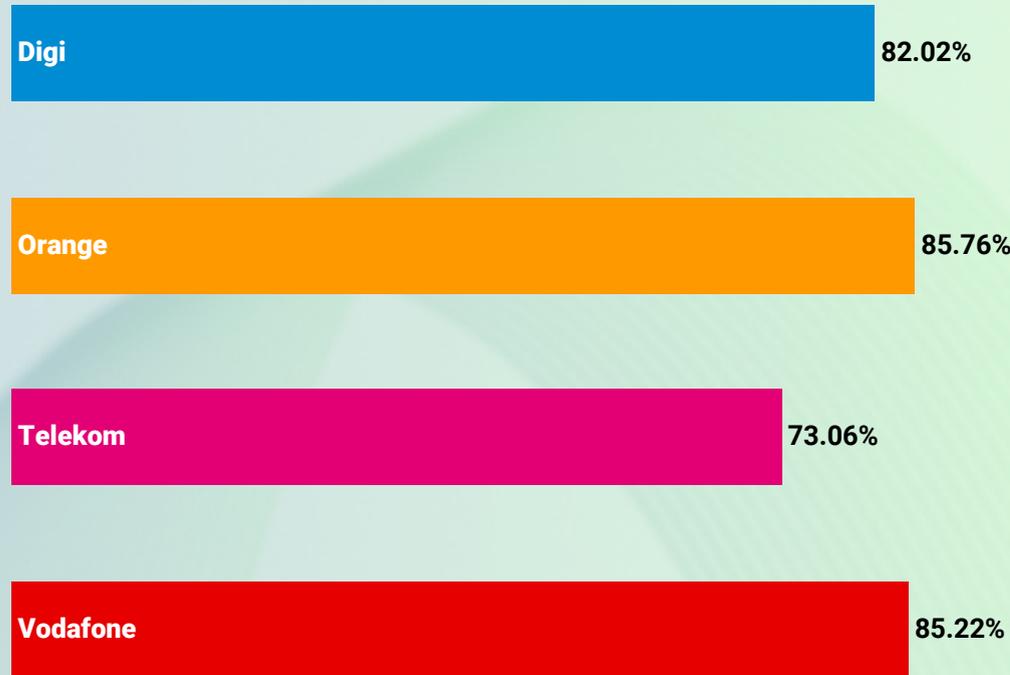
## Browsing performance rate (average) evolution over the year



Source : nperf.com



## Streaming Performance rate (average)



Source : nperf.com

The subscribers of Orange and Vodafone enjoyed the best mobile Internet streaming performance in 2023.

## Streaming Performance results ventilation (average)



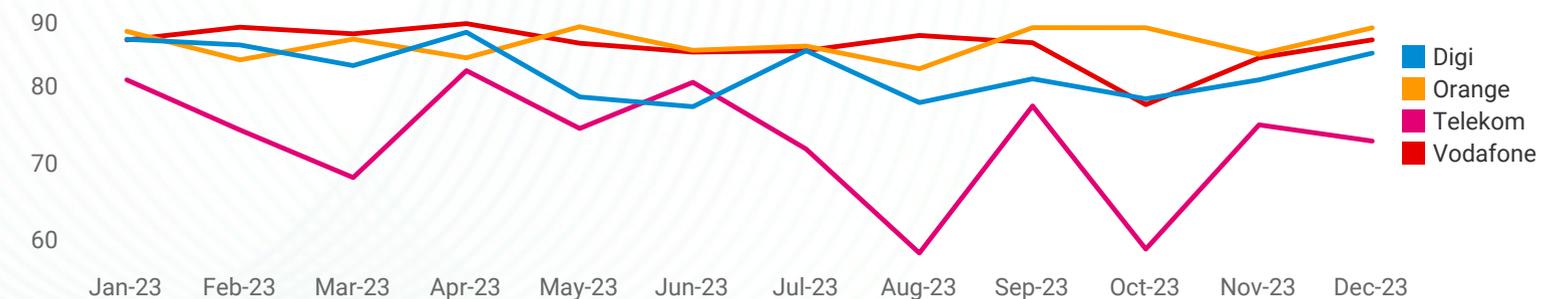
Source : nperf.com

## Streaming Performance rate (average)



Source : nperf.com

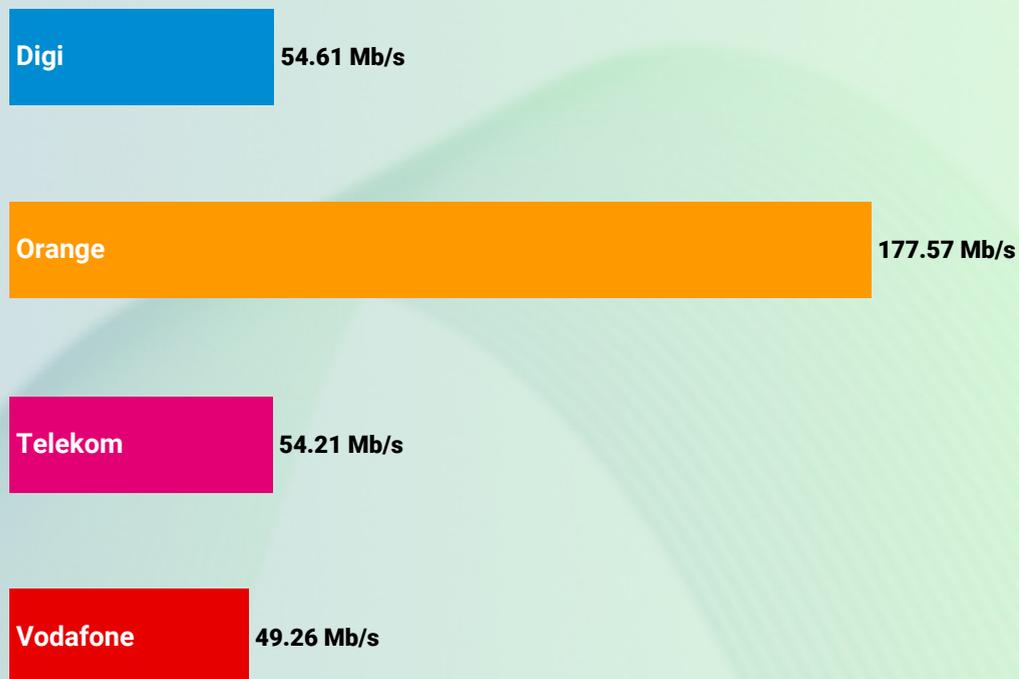
## Streaming performance rate (average) evolution over the year



Source : nperf.com



## Download Speed (average)



Source : nperf.com

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

## Download Speed results ventilation (average)



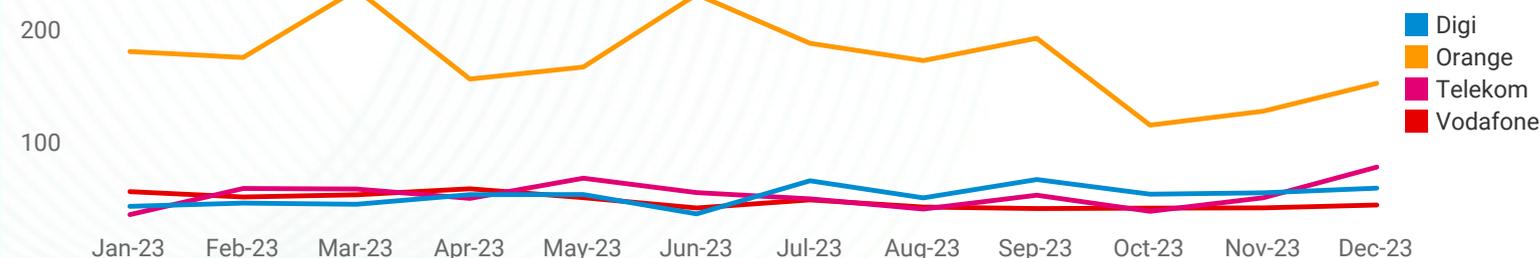
Source : nperf.com

## Download Speed (average)



Source : nperf.com

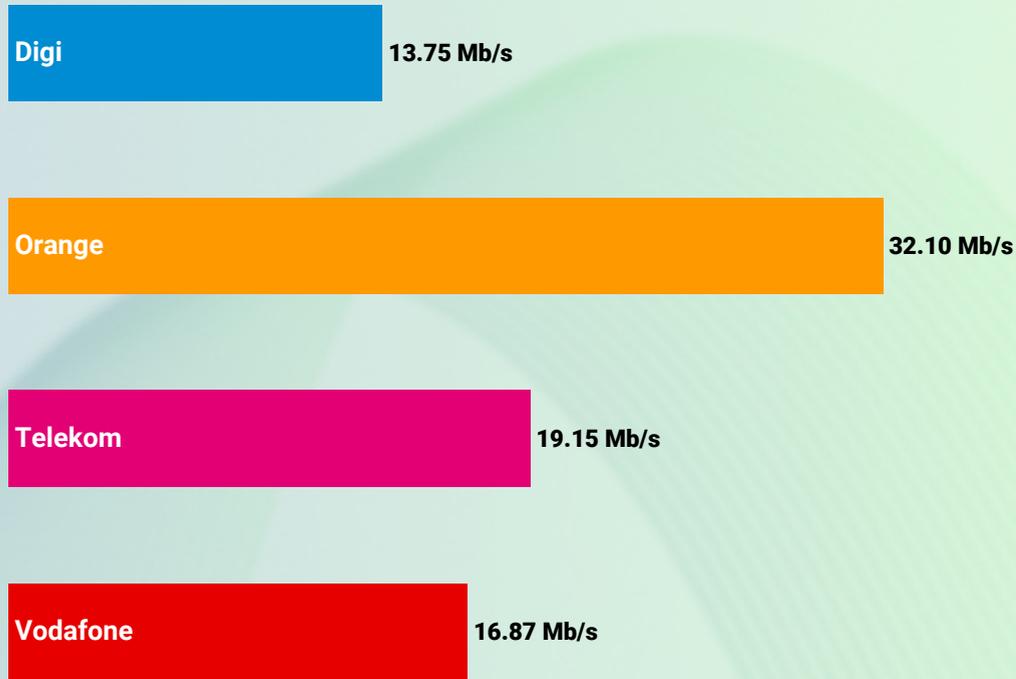
## Download Speed evolution over the year (average)



Source : nperf.com



## Upload Speed (average )



Source : nperf.com

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

## Upload Speed results ventilation (average)



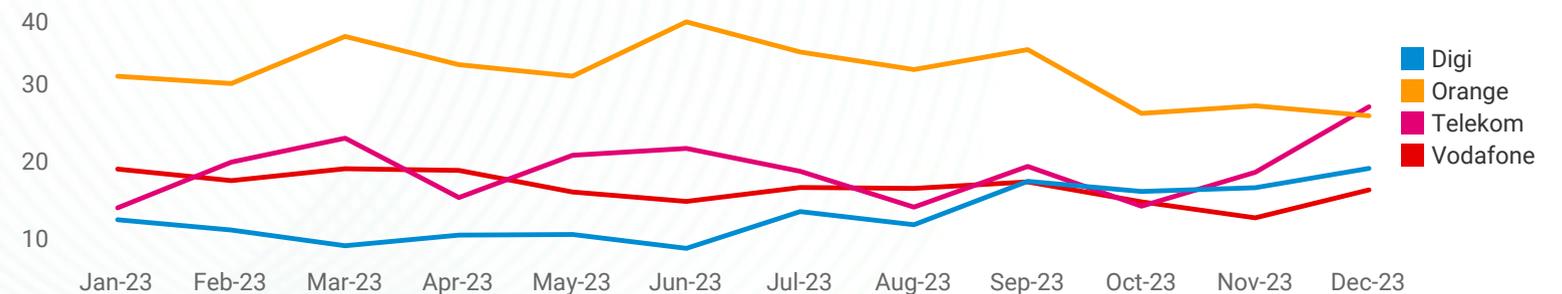
Source : nperf.com

## Upload Speed (average )



Source : nperf.com

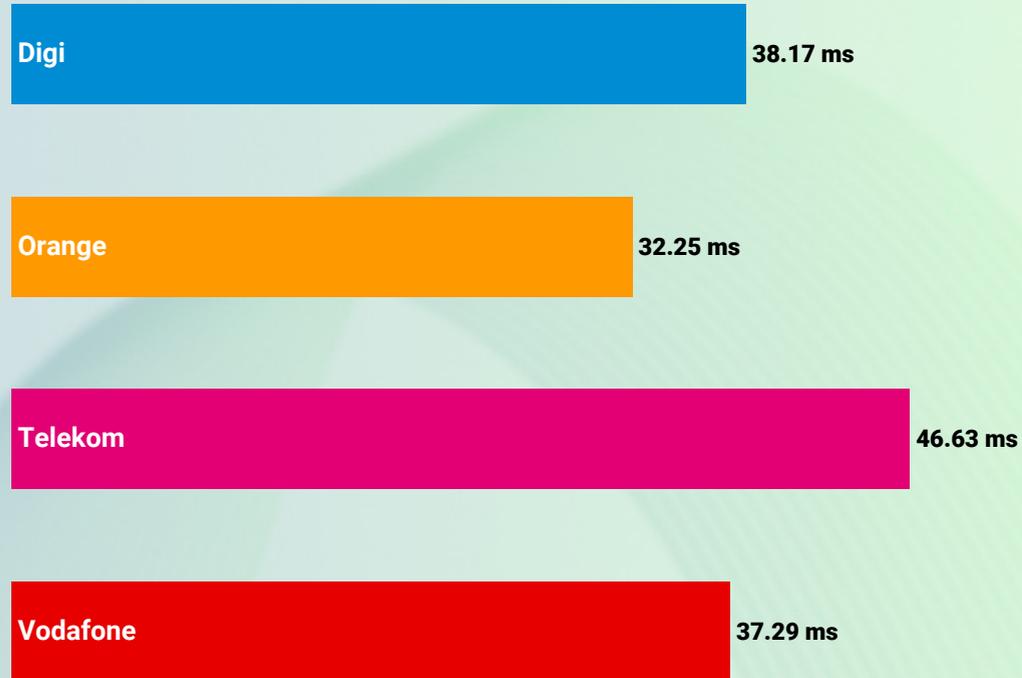
## Upload Speed evolution over the year (average)



Source : nperf.com



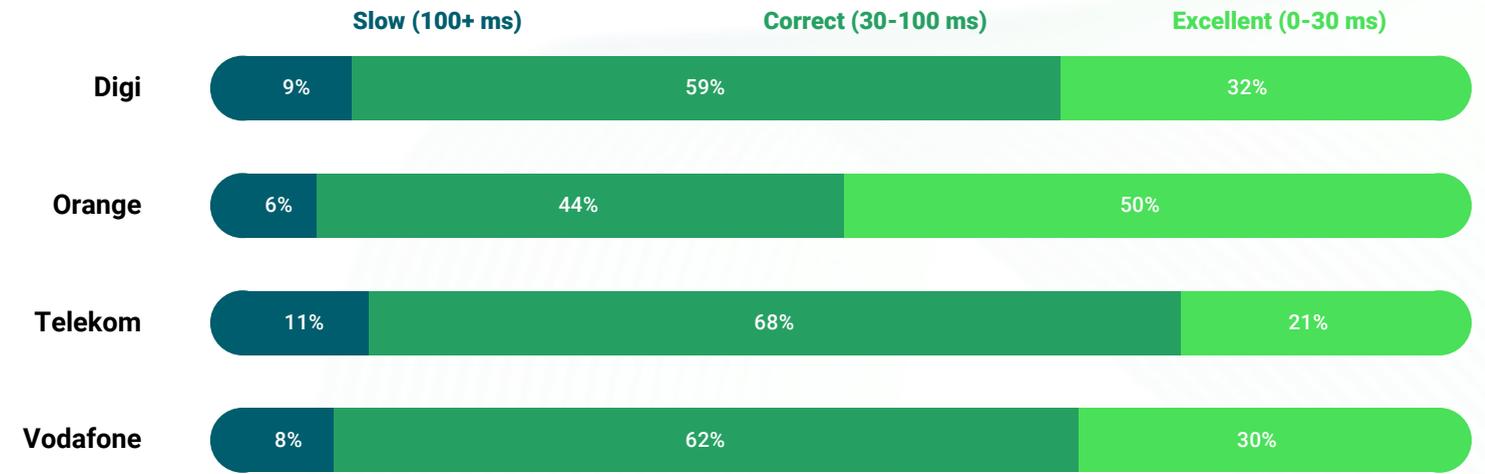
## Latency Speed (average)



Source : nperf.com

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

## Latency Speed results ventilation (average)



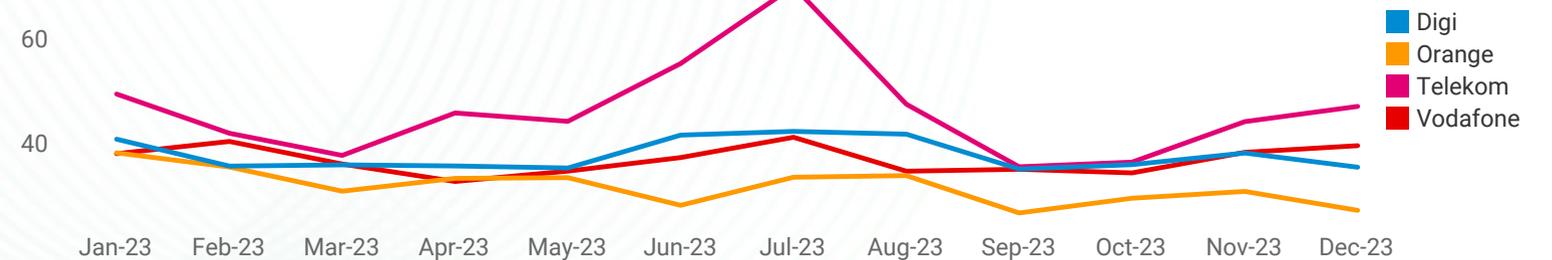
Source : nperf.com

## Latency Speed (average)

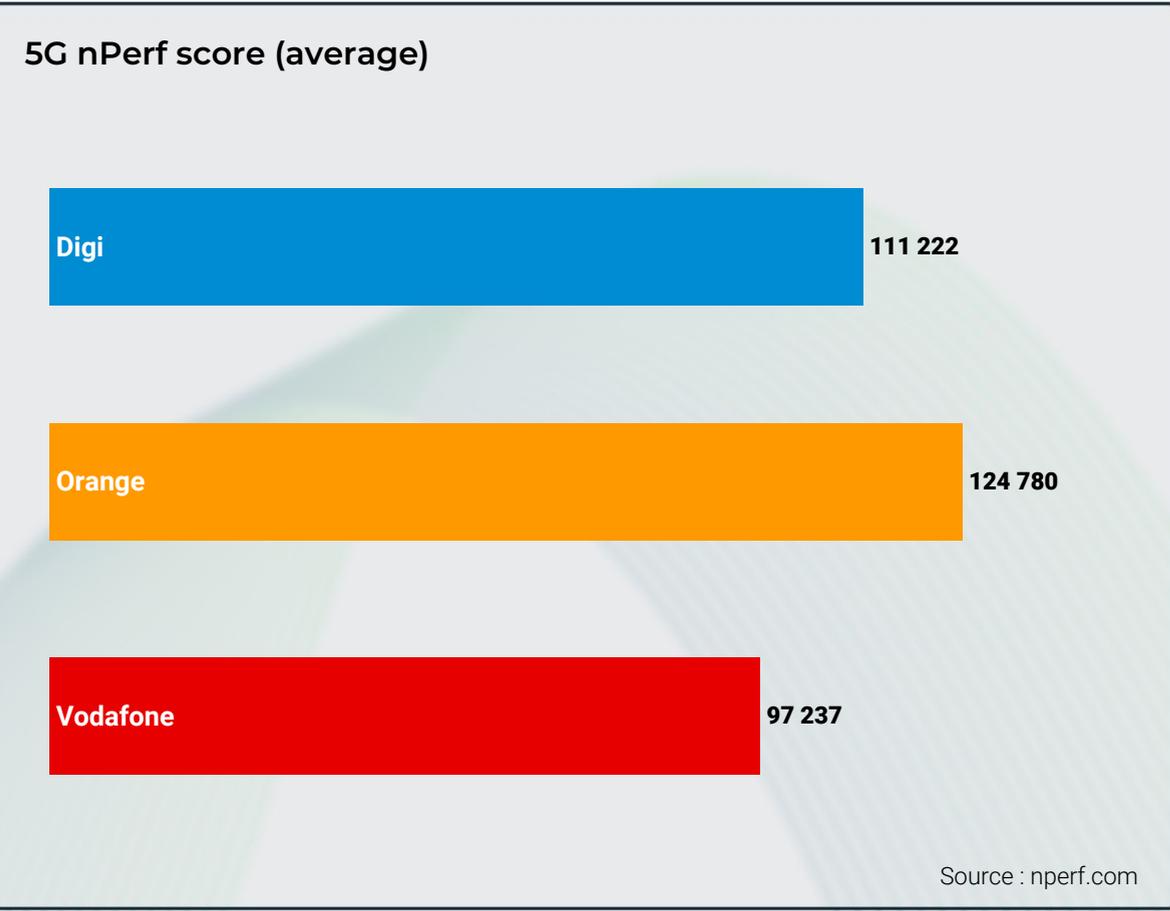


Source : nperf.com

## Latency Speed evolution over the year (average)

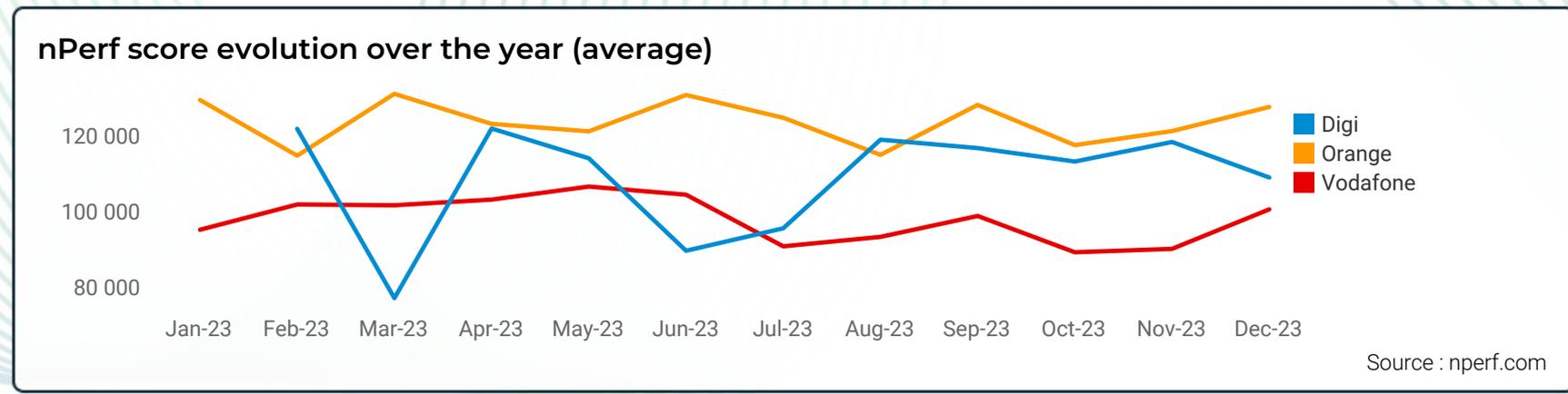
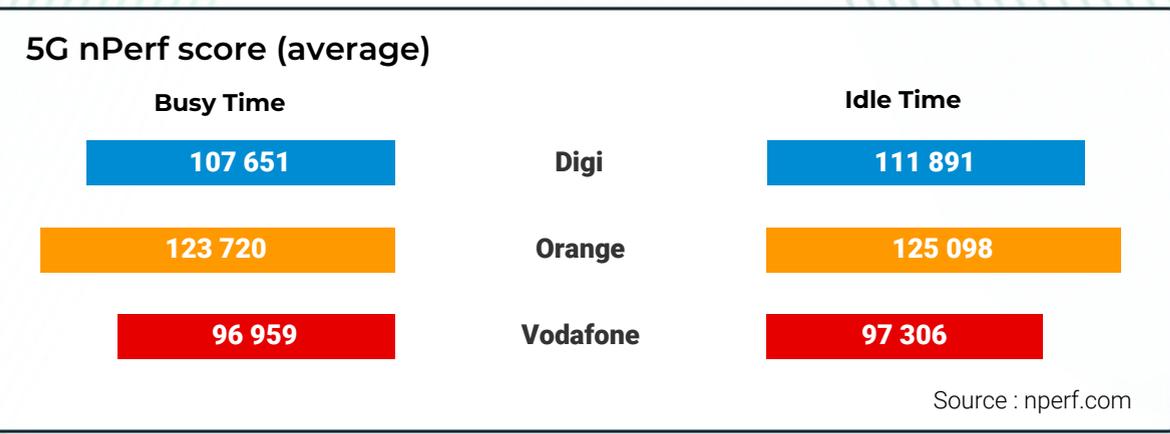


Source : nperf.com

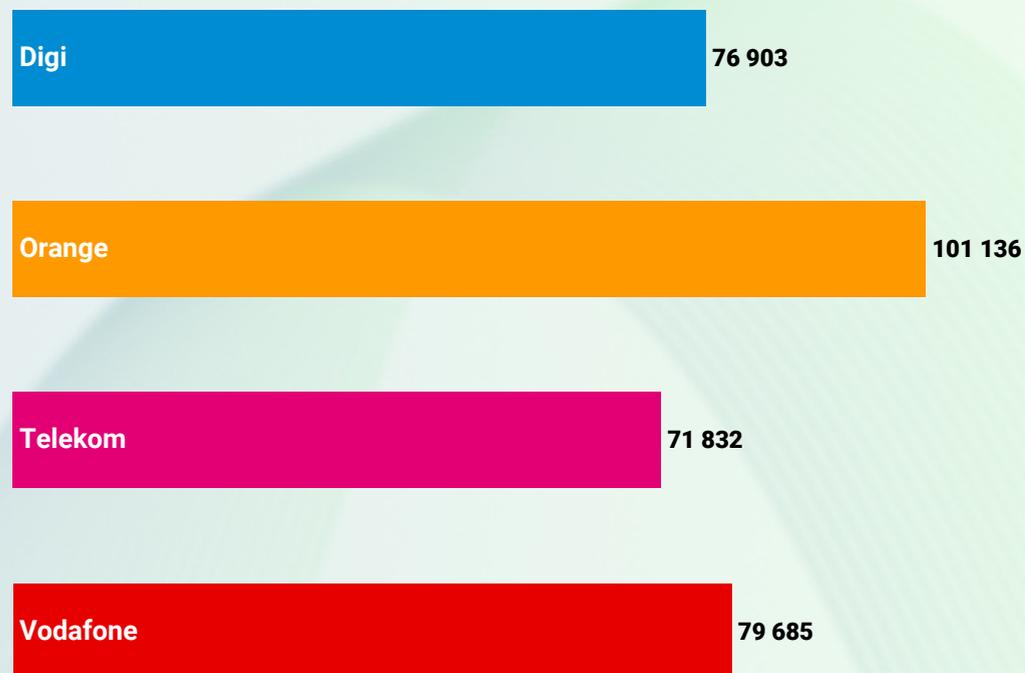


**The subscribers of Orange enjoyed the best 5G mobile connections in Romania during 2023.**

Source : nperf.com



## nPerf Score (nPoints)



Source : nperf.com

The subscribers of Orange enjoyed the best mobile Internet performances in Romania 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.

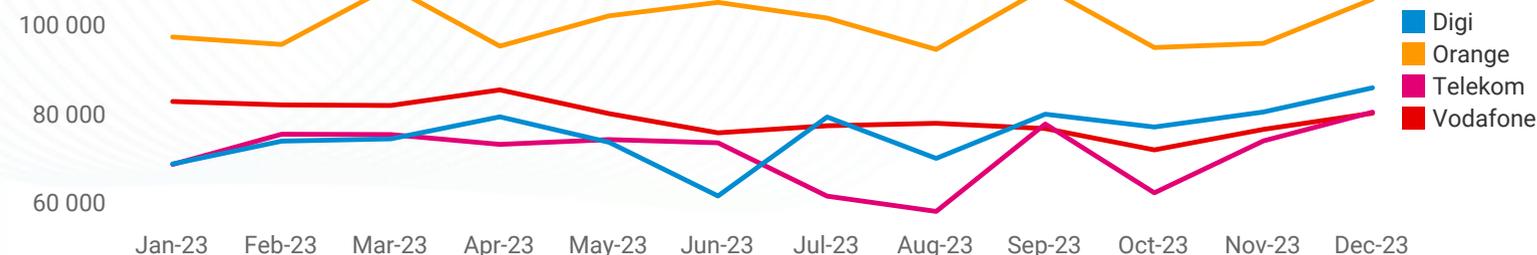
Source : nperf.com

Best mobile Internet performance in 2023



Source : nperf.com

## nPerf score evolution over the year (average)



Source : nperf.com



We qualify your connection