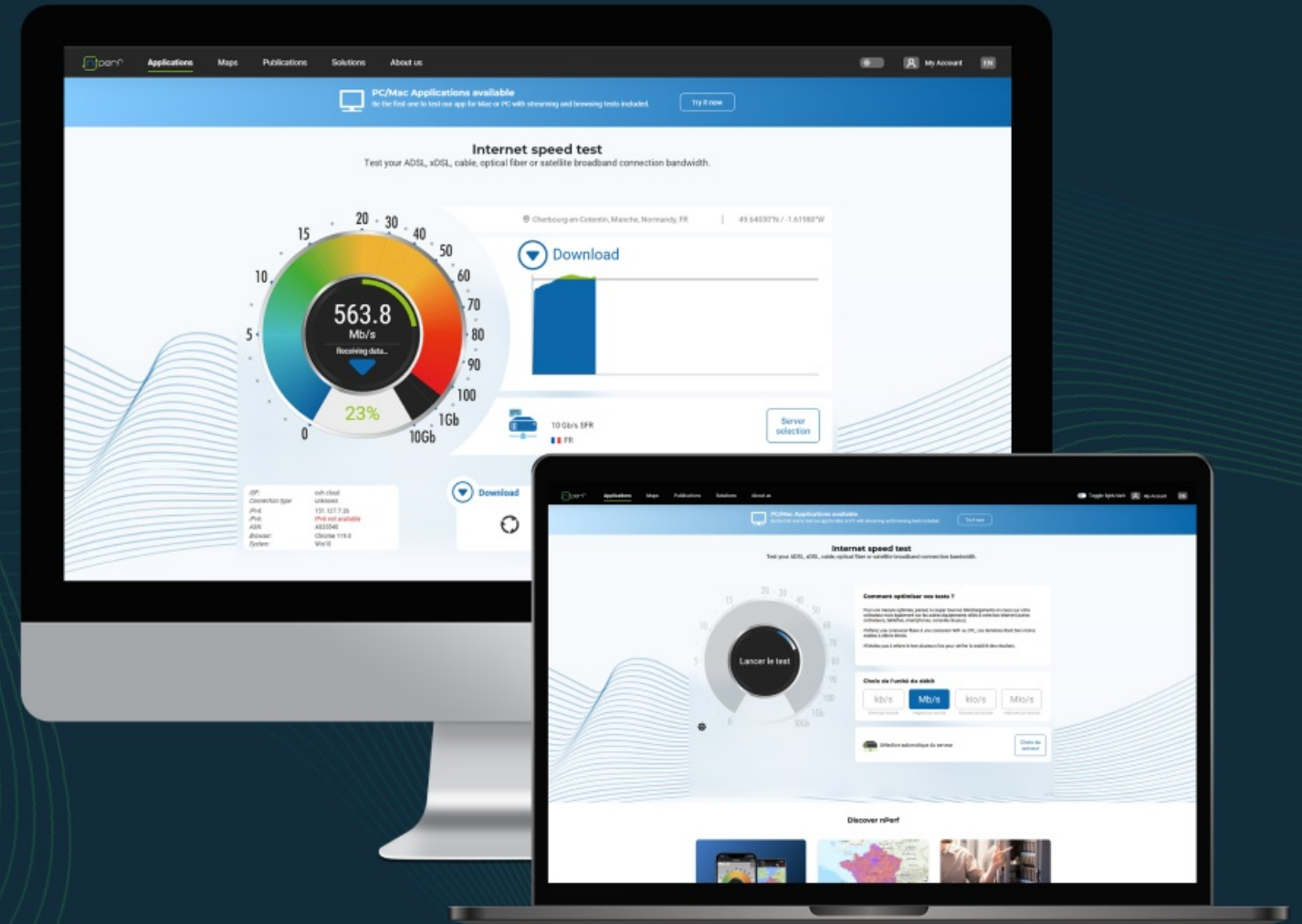




# Barometer of fixed Internet Connections in Romania.

01/01/2023 - 31/12/2023



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**nPerf Network  
assessment**



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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.



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## 2. Executive Summary



The subscribers of Digi enjoyed the best broadband performances in Romania during 2023.

### Fixed Internet connections in Romania

	Digi	Orange	Vodafone
▼ Download bitrates (Mb/s)	259.44	288.40	204.96
▲ Upload bitrates (Mb/s)	233.67	224.90	29.22
◀▶ Latency (ms)	15.97	23.23	20.74
 nPerf Score (nPoints)	168 073	162 944	143 623


**DIGI**

Best fixed Internet performance  
in 2023



Source : nperf.com

### FTTH Fixed Internet connections in Romania

	Digi	Orange
▼ Download bitrates (Mb/s)	466.62	521.29
▲ Upload bitrates (Mb/s)	425.76	411.92
◀▶ Latency (ms)	13.50	19.39
 nPerf Score (nPoints)	184 385	180 332

**DIGI**

**orange**

**vodafone**

Source : nperf.com



### 3. Analysis



This analysis focuses on the fixed Internet market in Romania, evaluating the service quality of various Internet Service Providers (ISPs) through key performance indicators (KPIs) like download and upload bitrates, latency, and nPerf scores. These metrics are essential for understanding the ISPs' ability to deliver high-quality internet services, which significantly affects user experiences in web browsing and streaming.

#### **Digi: Leader in tight competition**

Digi exhibits solid performance with a download bitrate of 259.44 Mb/s and an even more remarkable upload bitrate of 233.67 Mb/s, suggesting excellent content upload and download capability. This is especially beneficial for content creators and users who frequently use online backup and cloud services. Low ISP latency of 15.97ms improves online experience by reducing data transmission delays. Digi's nPerf score stands at 168,073 nPoints, highlighting its competitive advantage and robust service in the fixed Internet industry. Digi is positioned with Orange as leaders in residential internet (FTTH).

#### **Orange: Competitive with high download speeds**

Orange is closing in on the leader Digi in the Romanian fixed Internet market with an exceptional download speed of 288.4 Mb/s, thus establishing a high standard in Internet connectivity. This performance is crucial for users engaged in data-intensive activities such as HD video streaming and downloading large files. Despite a latency of 23.23 ms, slightly higher than that of its closest competitor, Orange's overall quality of service is reflected in its nPerf score of 162,944 nPoints, demonstrating a comprehensive service offering. Orange is also positioned, together with Digi, as leaders in residential fixed Internet (FTTH).

#### **Digi: Close Competition**

Digi showcases strong performance with a download bitrate of 259.44 Mb/s and an even more remarkable upload bitrate of 233.67 Mb/s, suggesting excellent capacity for both downloading and uploading content. This is particularly beneficial for content creators and users frequently engaging in online backup and cloud services. The ISP's low latency of 15.97 ms enhances the online experience by reducing delays in data transmission. Digi's nPerf score stands at 168,073 nPoints, highlighting its competitive edge and robust service in the fixed internet sector.

#### **Vodafone: Room for improvement**

Vodafone presents a consistent service with a download speed of 204.96 Mb/s, meeting well standard Internet usage needs such as browsing and streaming in standard definition. The download bitrate of 29.22 Mb/s, although significantly lower than its competitors, should be enough for average users' download needs. With a latency of 20.74ms, Vodafone offers a reasonable response time for online activities. The ISP's nPerf score is 143,623 nPoints, positioning it as a reliable option for users looking for a balanced Internet service.

#### **Conclusion**

The Romanian fixed internet market presents a competitive landscape with ISPs like Orange, Digi and Vodafone each bringing unique strengths. Leading Digi impresses with its balanced download and upload speeds, coupled with the lowest latency, catering to a wide range of internet activities while Orange leads with the highest upload speeds, crucial for streaming and downloading content. Vodafone, although lagging behind in terms of bitrates, still provides a consistent service that meets the basic needs of many users.

## 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 fixed 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) :

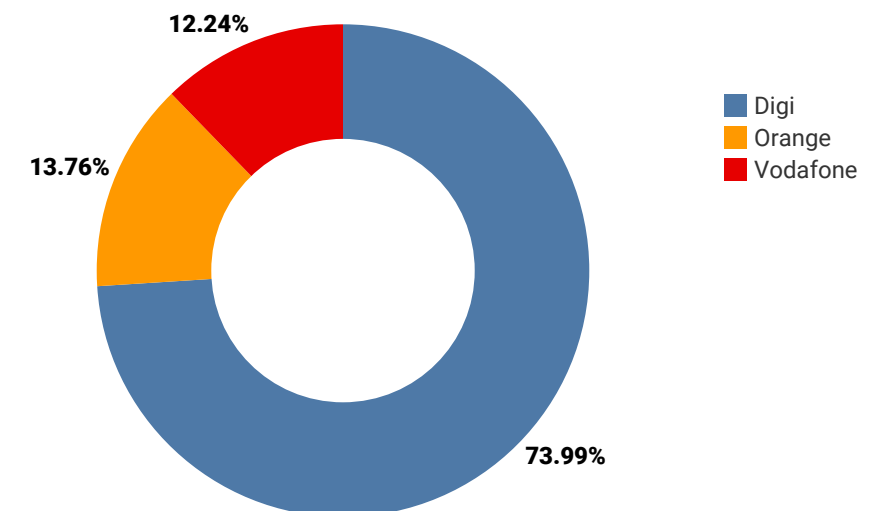
It indicated the delay a small packet of data requires to make a round-trip from your computer to the nPerf server. The shorter the delay, the most reactive your connection is. The main is the minimum value.

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)

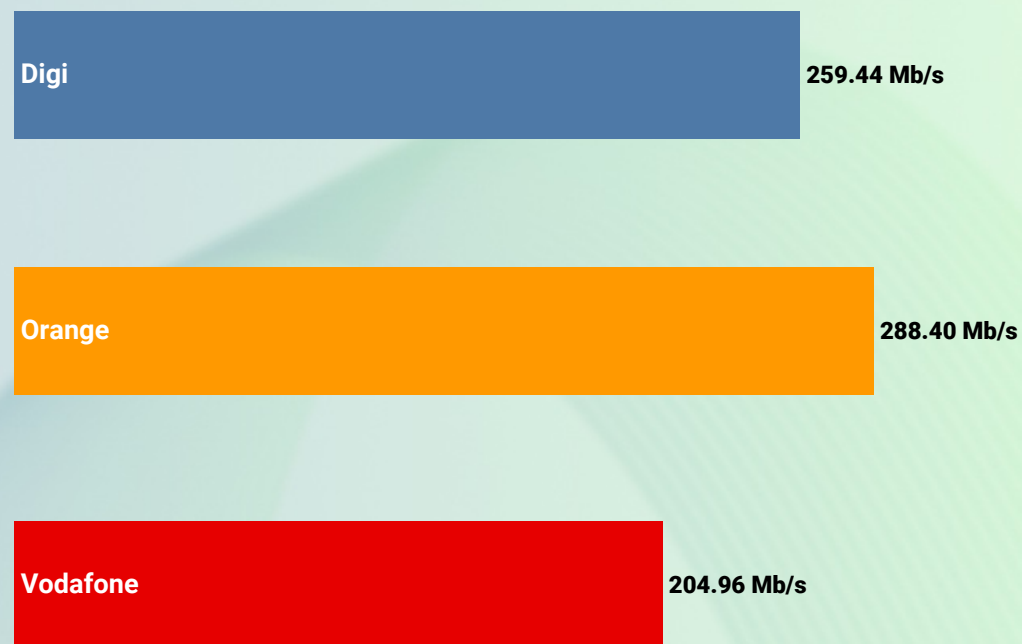


Source : nperf.com





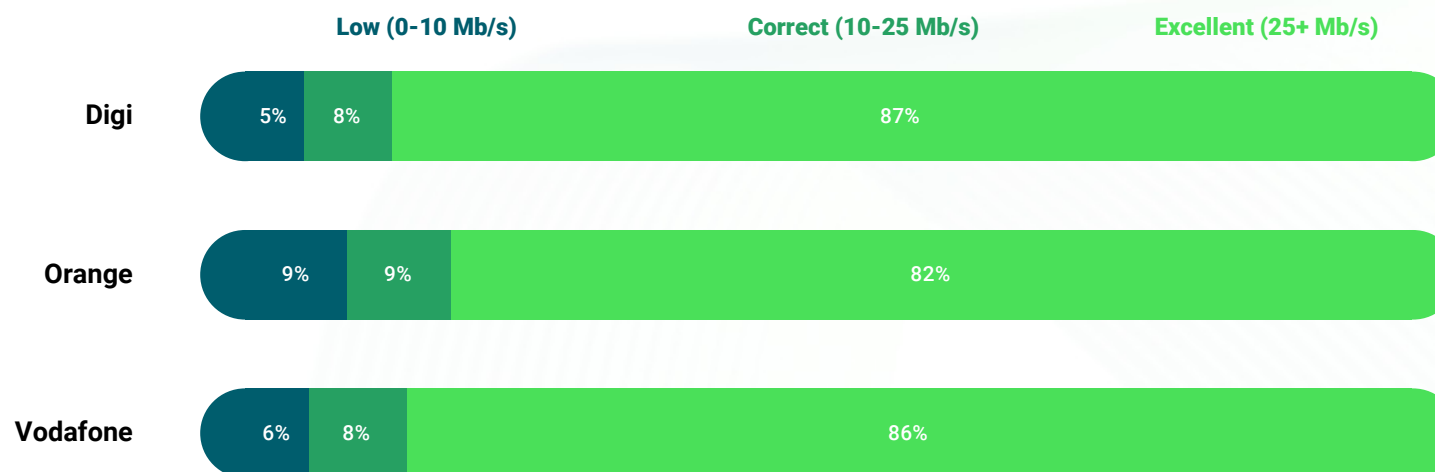
## Download Speed (average)



Source : nperf.com

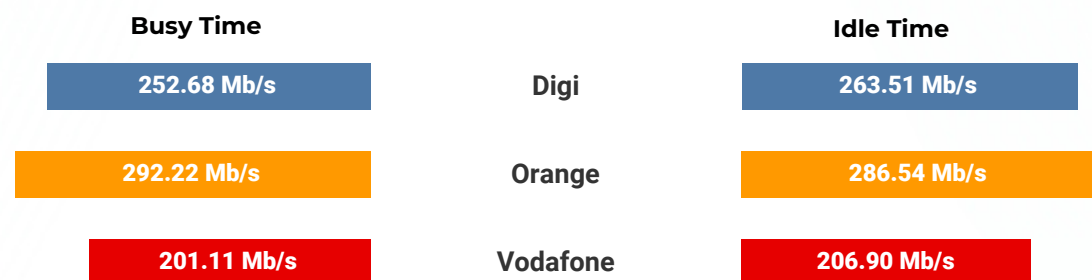
The subscribers of Orange enjoyed the best average broadband download speed in 2023.

## Download Speed results ventilation (average )



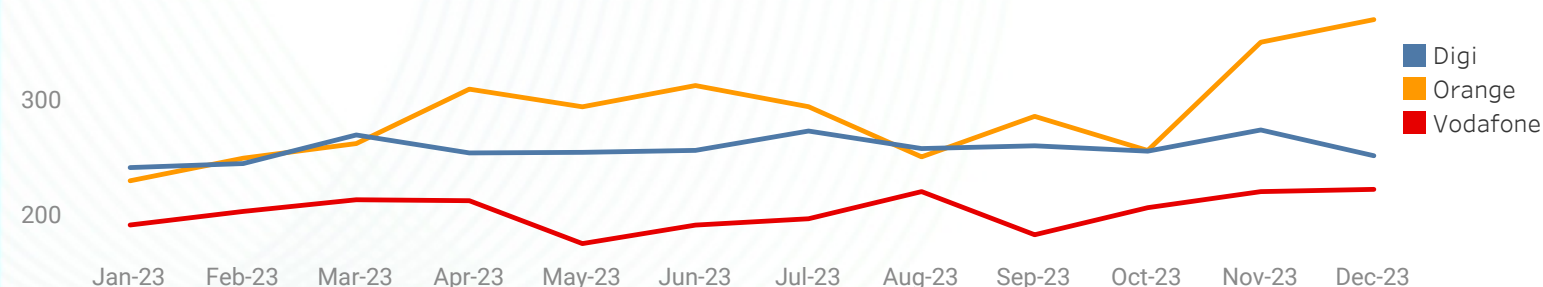
Source : nperf.com

## Download Speed (average )



Source : nperf.com

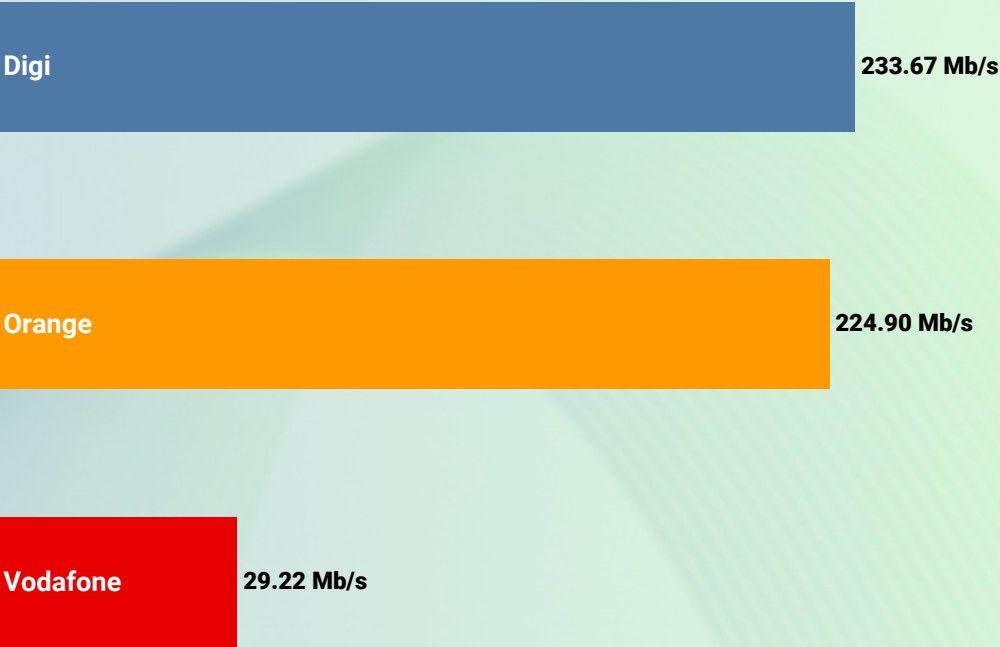
## Download Speed evolution over the year (average )



Source : nperf.com



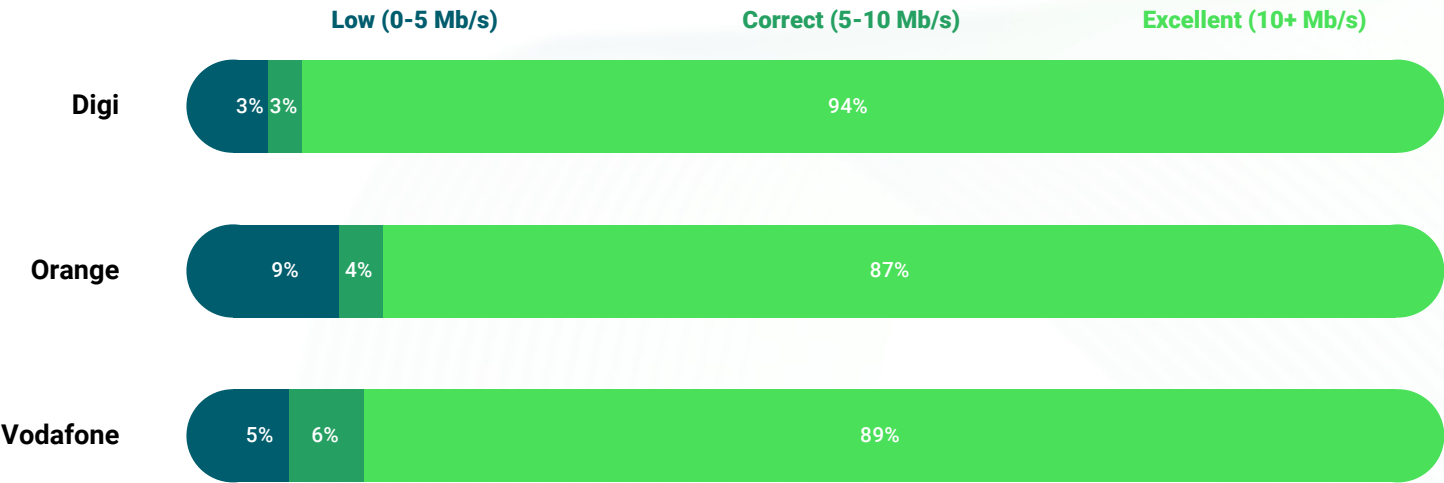
Upload Speed (average )



Source : nperf.com

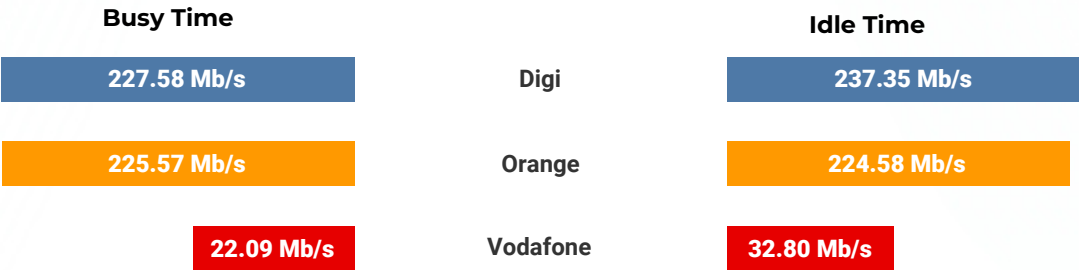
The subscribers of Digi enjoyed the best average broadband upload speed in 2023.

Upload Speed results ventilation (average)



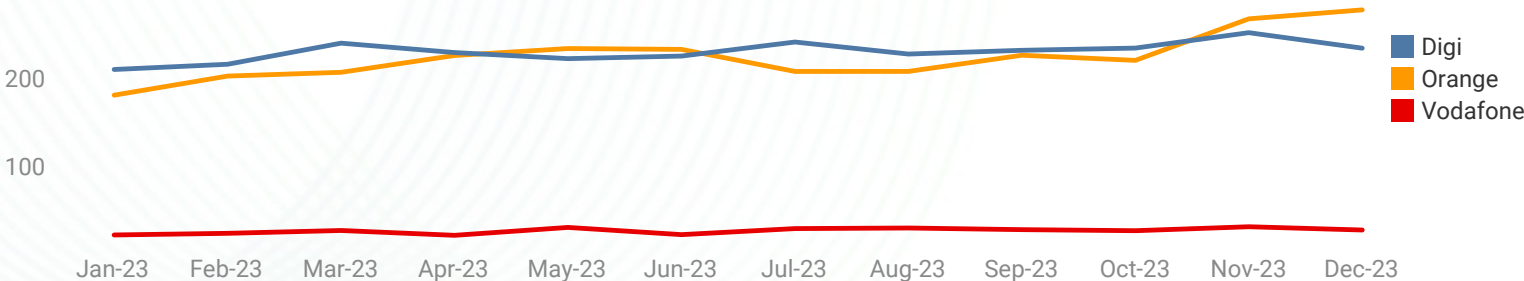
Source : nperf.com

Upload Speed (average)



Source : nperf.com

Upload Speed evolution over the year (average)



Source : nperf.com





Latency Speed (average)



Source : nperf.com

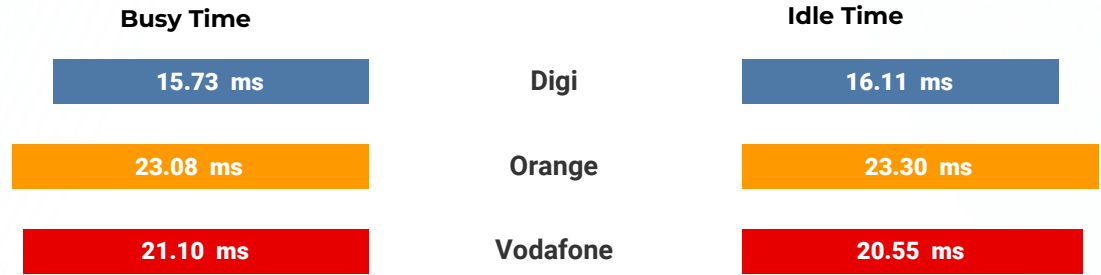
The subscribers of Digi enjoyed the best average broadband latency in 2023.

Latency Speed results ventilation (average)



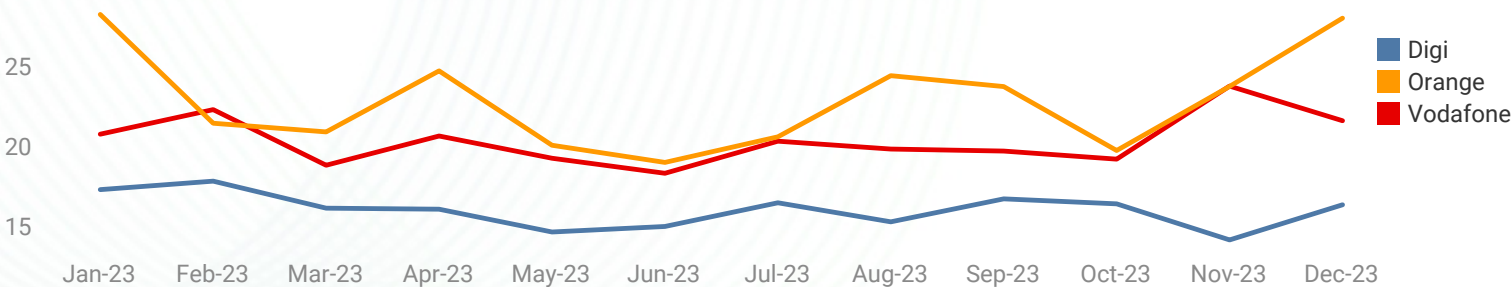
Source : nperf.com

Latency Speed (average)



Source : nperf.com

Average latency Speed evolution over the year



Source : nperf.com

nPerf Score (nPoints)



Source : nperf.com

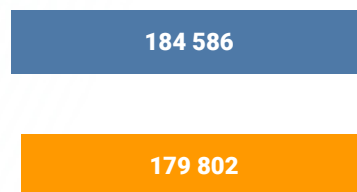
The subscribers of Digi and Orange enjoyed the best broadband performances in Romania during 2023 on FTTH.

- Best FTTH Internet Performance : Digi (184 385 nPoints) and Orange (180 332 nPoints)
- Best FTTH Download speed : Orange (521.29 Mb/s)
- Best FTTH Upload speed : Digi (425. 76Mb/s)
- Best FTTH Latency speed : Digi (13.50 ms)

Source : nperf.com

nPerf Score (nPoints)

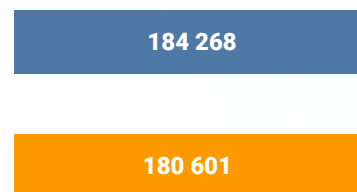
Heures chargées



Digi

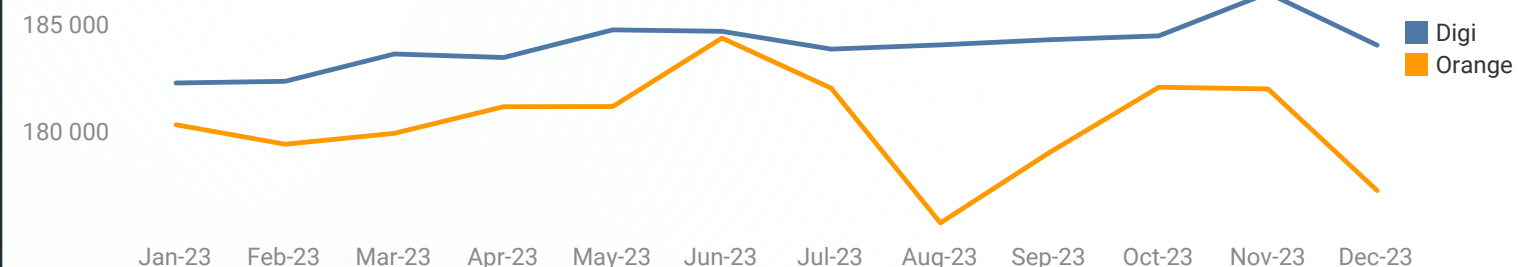
Orange

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Source : nperf.com

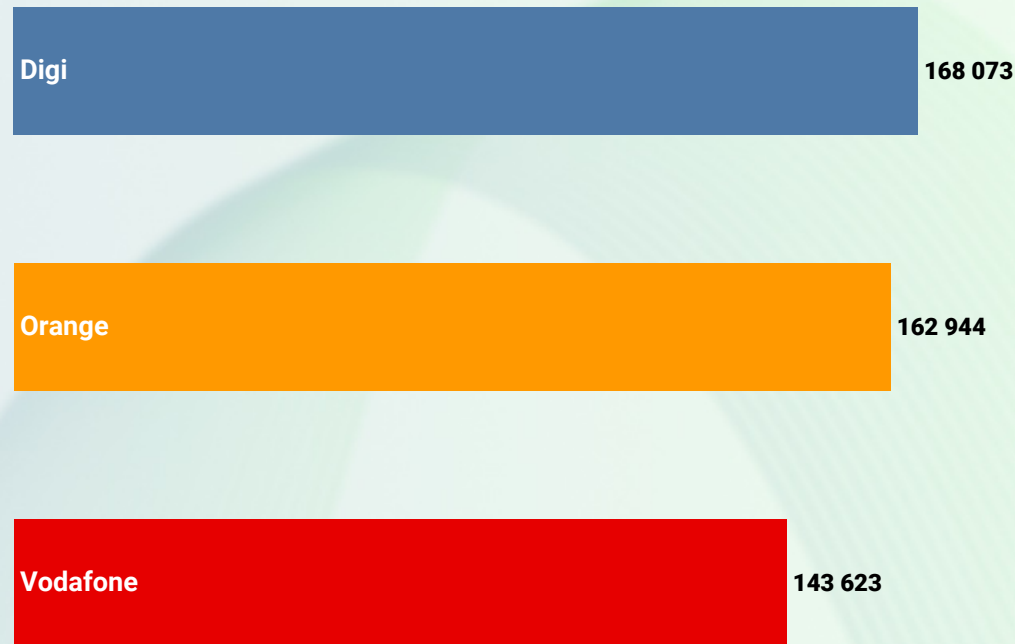
nPerf score evolution over the year (average)



Source : nperf.com



## nPerf Score (nPoints)



Source : nperf.com

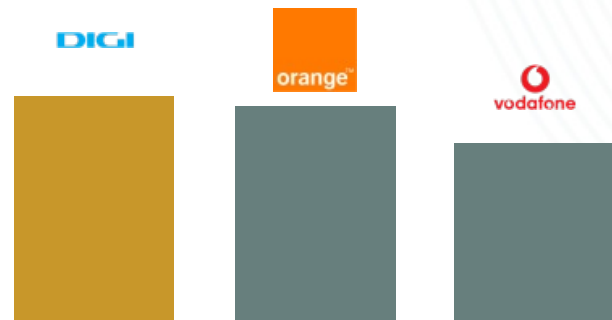
The subscribers of Digi enjoyed the best broadband performances in Romania during 2023.

The nperf score takes into account the measured bitrates and the latency. 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.

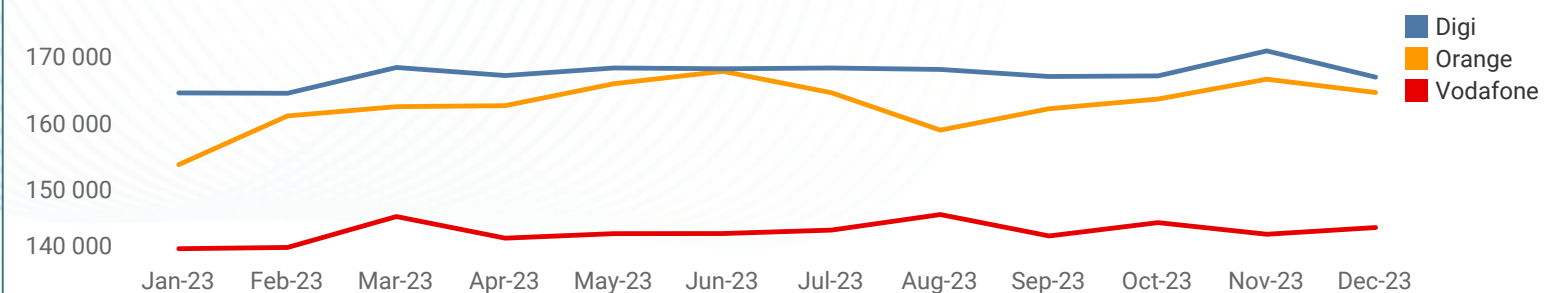
Source : nperf.com

**DIGI**  
Best fixed Internet performance  
in 2023



Source : nperf.com

## nPerf score evolution over the year (average)



Source : nperf.com

