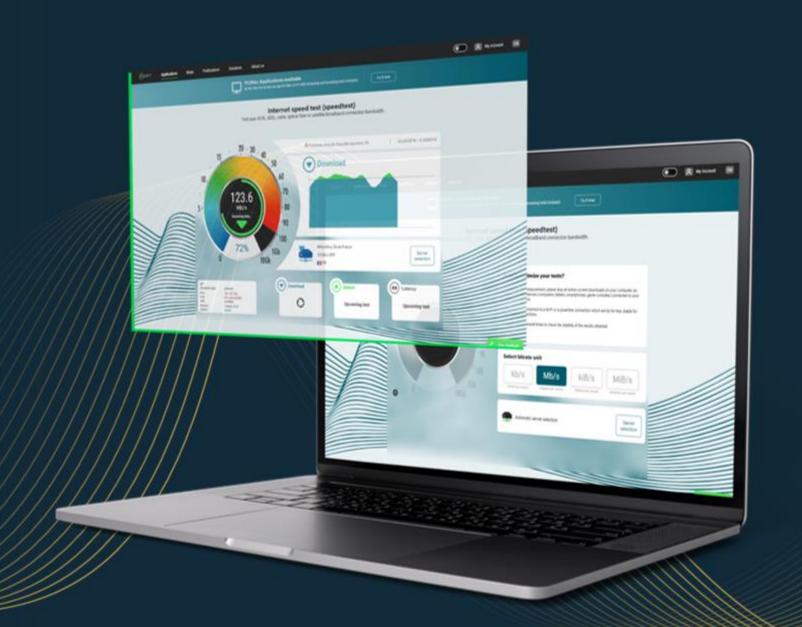
Barometer of fixed Internet connections in Ukraine

01/01/2024 - 12/31/2024







### 1. Introducing nPerf



### **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.





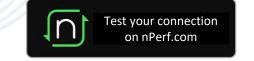


## **Test your Internet connection with nPerf!**

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







# 2. Executive Summary



The subscribers of Vega enjoyed the best fixed Internet performances in 2024.

	Kyivstar	Vega	Vodafone
Download bitrates (Mb/s)	116,68	210,48	120,10
Upload bitrates (Mb/s)	133,84	206,91	111,83
▶ Latency (ms)	16,77	21,93	28,52
Web browsing (%)	67,71	72,44	60,88
Youtube streaming (%)	86,28	87,61	81,91
nPerf Score (nPoints)	115 761	126 770	99 746







The subscribers of Kyivstar, Vega and Vodafone enjoyed the best FTTH Internet performances in Ukraine in 2024.

	Kyivstar	Vega	Vodafone	
Download bitrates (Mb/s)	377,49	397,97	366,06	
▲ Upload bitrates (Mb/s)	471,89	404,89	363,06	
<b>◆▶</b> Latency (ms)	13,50	19,82	13,21	
Web browsing (%)	76,30	77,67	76,83	
Youtube streaming (%)	91,98	92,05	89,63	
nPerf Score (nPoints)	153 022	148 978	149 472	

Source : nperf.com



The subscribers of Vega enjoyed the best WIFI Internet performances in Ukraine in 2024.

Fixed Internet connections in U	Vkraine  ✓ Download bitrates (Mb/s)	Kyivstar 72.60	Vega	Vodafone	
	Download bitrates (Mb/s)		Vega	Vodafone	
	Download bitrates (Mb/s)		Vega	Vodatone	
	Download bitrates (Mb/s)	72.60			
///		72,60	162,60	109,15	
	✓ Upload bitrates (Mb/s)	89,19	154,07	101,17	
	<b>◀▶</b> Latency (ms)	18,07	23,65	25,77	
	Web browsing (%)	69,90	73,15	66,91	
	Youtube streaming (%)	87,89	87,71	82,83	
	nPerf Score (nPoints)	109 250	121 142	104 356	

Source : nperf.com

### 3. Analysis



#### Introduction

The market analysis in 2024 highlights significant developments in the telecommunications sector in Ukraine. With a focus on fixed-line technology, specifically FTTH and WiFi, the market has seen a dynamic shift in leadership. The Score nPerf for Ukraine indicates an evolving competitive landscape, where new leaders have emerged. Vega has maintained its position as a market winner, while Kyivstar and Vodafone have also shown strong performances, particularly in specific categories. Vega continues to lead the market, demonstrating exceptional results in both download and upload speed, as well as maintaining its leadership in browsing. However, the latency category has seen a new leader with Kyivstar taking the forefront. In terms of focus areas, Vega remains dominant in WiFi, while the FTTH segment showcases strong competition among Kyivstar, Vega, and Vodafone.

### **Kyivstar: Excellence in Latency**

For the period Q1 2024 to Q4 2024, Kyivstar has shown remarkable performance improvements with a score of 115,761. It excels in the latency category, becoming the leader with a latency of 16.8 ms. This operator has also made significant strides in upload speed, showcasing a 13.6% improvement. Kyivstar's focus on providing low-latency services is a strong contribution to the market's competitive edge.

### **Vega: Leader of the Market with Exceptional Performance**

Vega stands out as the leader of the market with a global score of 126,770. It dominates in download speed (210.5 Mbps) and upload speed (206.9 Mbps), maintaining its leadership in browsing with a 72.4% score. Vega's consistent

performance in WiFi and FTTH underlines its pioneering role in the fixed-line sector. Its impressive upload improvement of 13.4% further solidifies its market-leading position.

### **Vodafone: Excellence in Download and Upload speed**

Vodafone has showcased exceptional growth with a score of 99,746, marking a 46.0% improvement. It excels in download (120.1 Mbps) and upload speed (111.8 Mbps), with remarkable improvements. Vodafone's significant progress in browsing with a 13.7% enhancement highlights its growing influence in the market.

#### Conclusion

Vega continues to lead the market with its outstanding performance across multiple categories, while Kyivstar excels in latency and Vodafone shows remarkable improvements in download and upload speed. The competitiveness and strengths of these operators highlight a positive outlook for the market, fostering innovation and improved services for consumers.

### 4. Methodology



nPerf provides a free application 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.

We assess:

#### Download birate

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 birate

Indicates the amount of data your connection can send in one second to 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 perceived quality by the user.

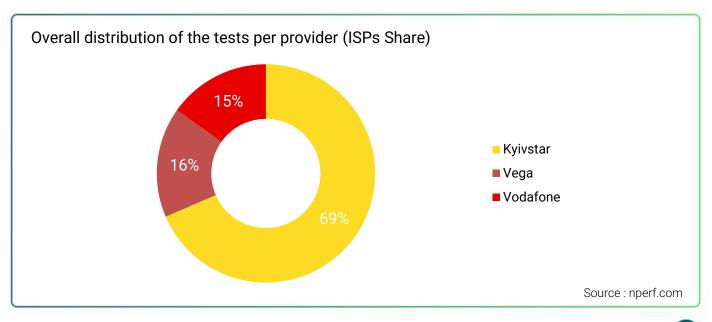
### Streaming performance

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 perceived quality by the user.

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, 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.

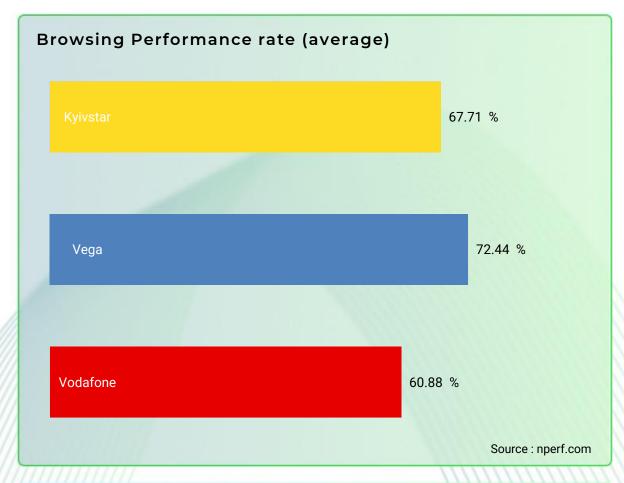
We only include national Internet service providers with test share above 5% share. The chart below shows the overall test distribution for each service provider.



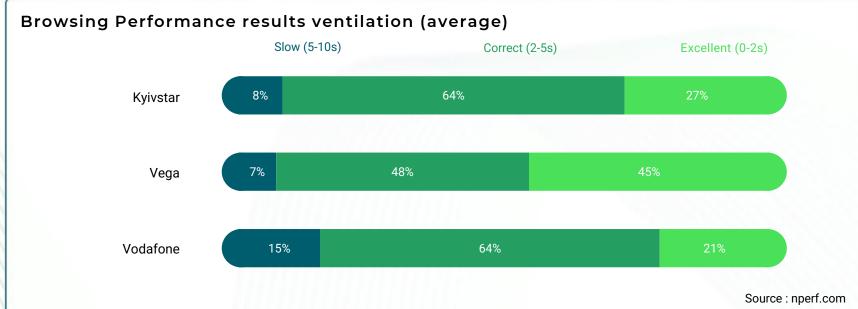


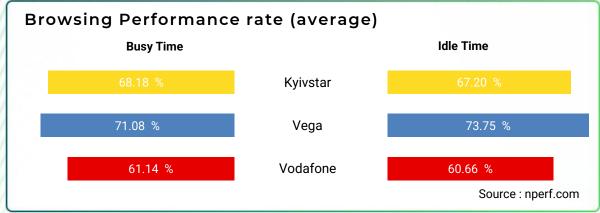
# **Quality of Experience: Browsing**

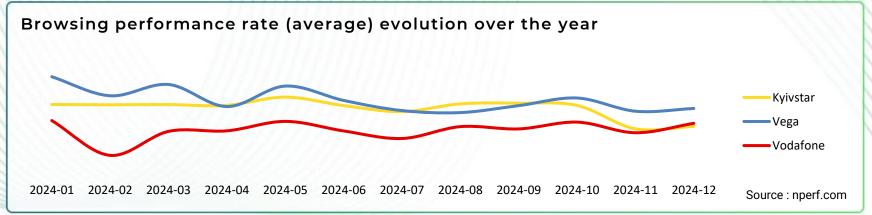




The subscribers of Vega enjoyed the best fixed Internet browsing performance in 2024.



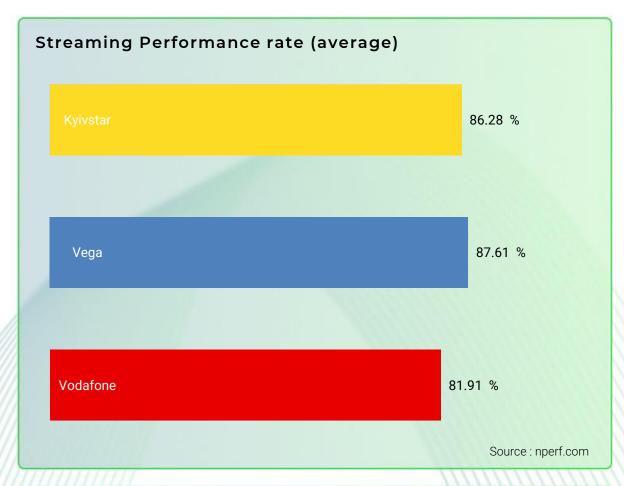




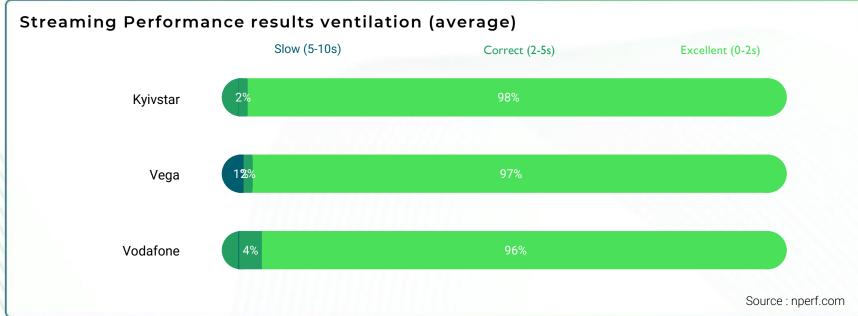


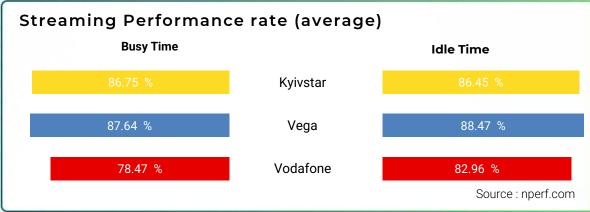
## **Quality of Experience: Streaming**

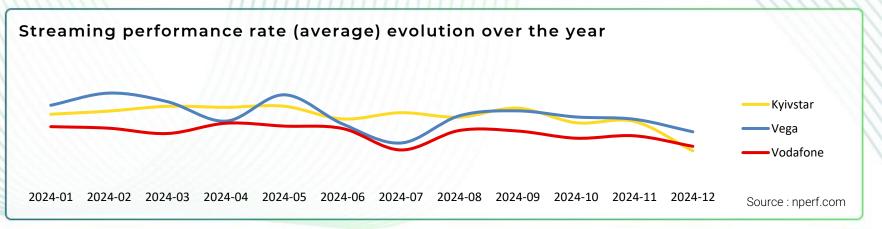




The subscribers of Vega enjoyed the best fixed Internet streaming performance in 2024.



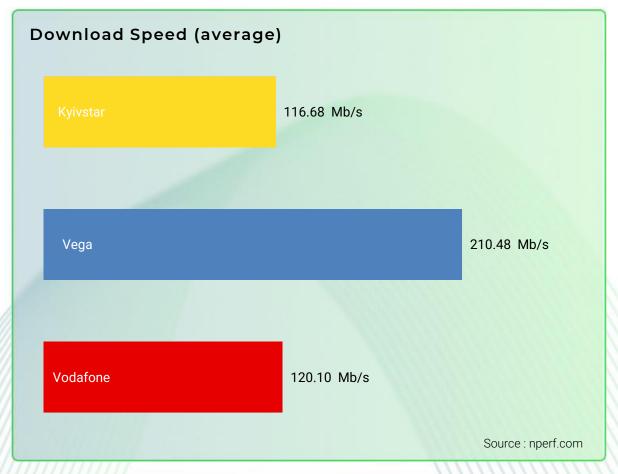




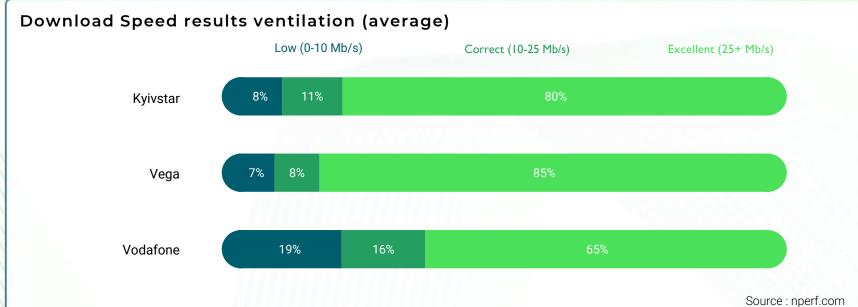


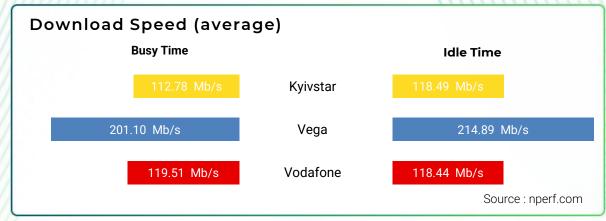
## Speed: Download

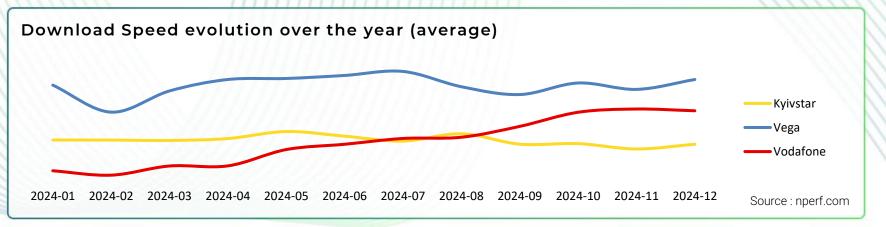




The subscribers of Vega enjoyed the best average fixed Internet download speed in 2024.



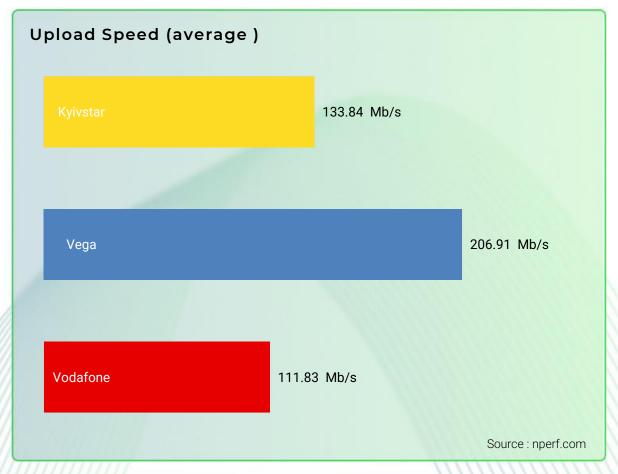




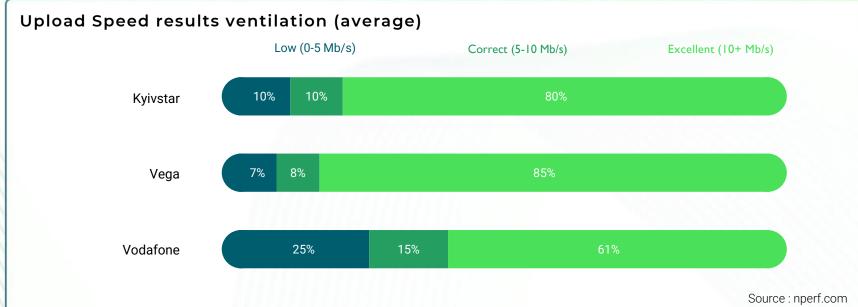


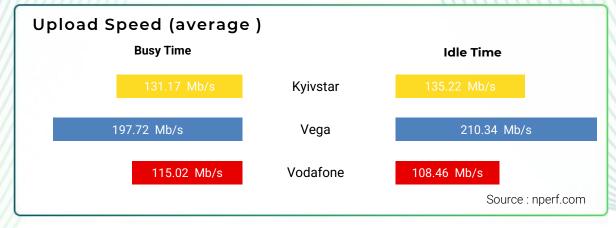
## Speed: Upload

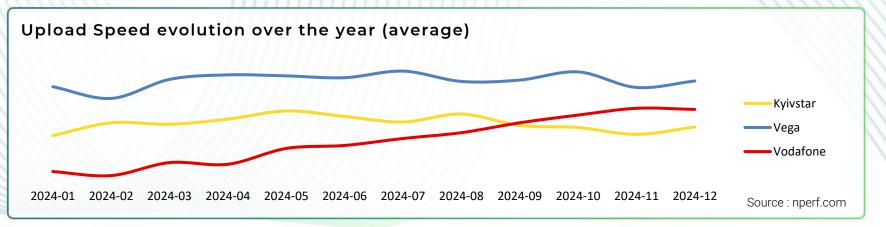




The subscribers of Vega enjoyed the best average fixed Internet upload speed in 2024.



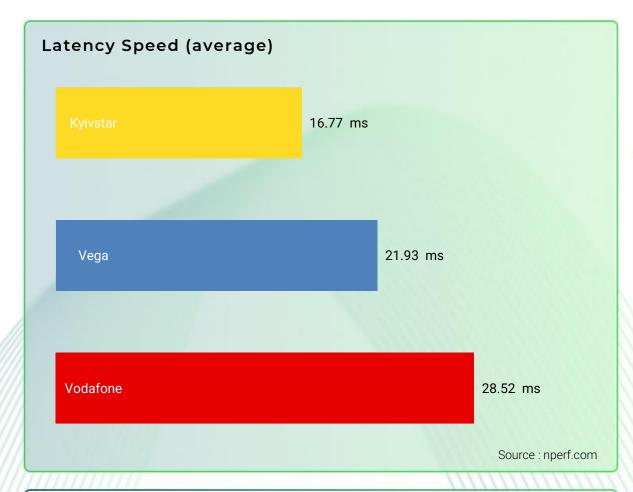




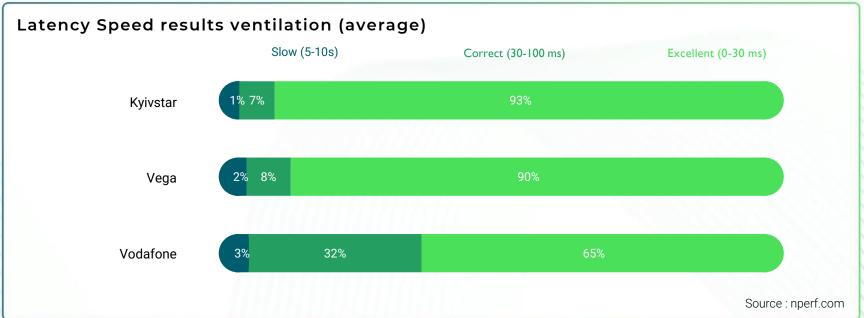


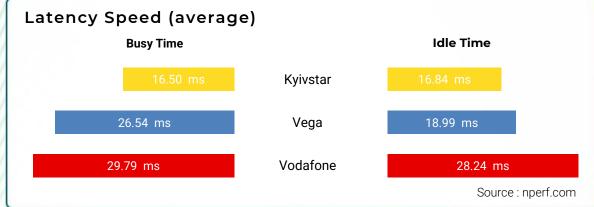
# Speed: Latency

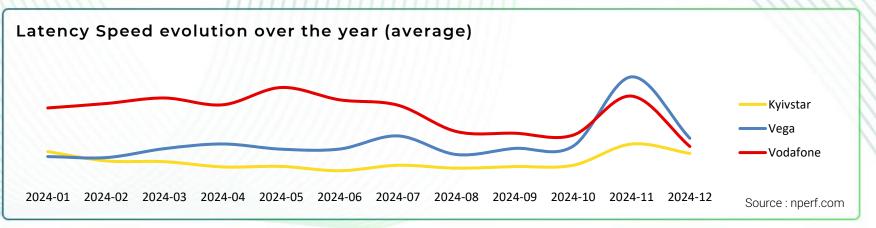




The subscribers of Kyivstar enjoyed the best average fixed Internet latency speed in 2024.

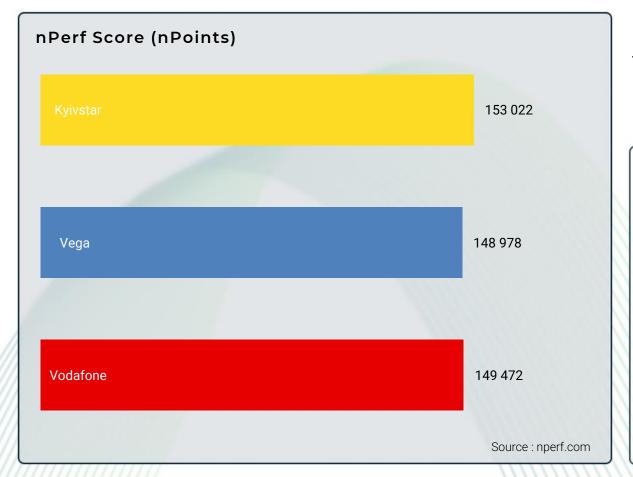






## Fixed Internet performance in Ukraine

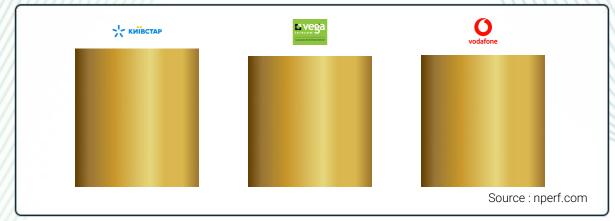


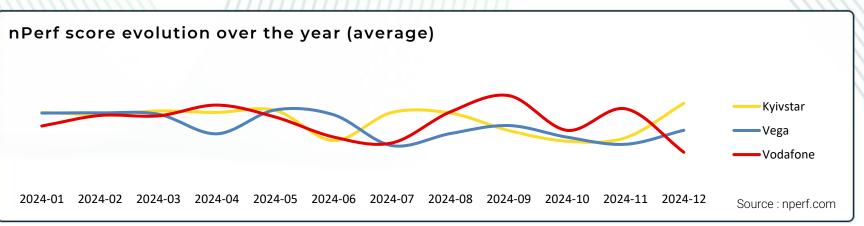


The subscribers of Kyivstar, Vega and Vodafone enjoyed the best FTTH Internet performances in 2024.

- Best performances FTTH: Kyivstar, Vega and Vodafone
- Best web browsing performances FTTH: Vega and Vodafone
- Best video streaming performances FTTH: Kyivstar and Vega
- Fastest performances (Download) FTTH: Vega
- Fastest performances (Upload) FTTH: Kyivstar
- FTTH connections with the lowest latency: Kyivstar and Vodafone

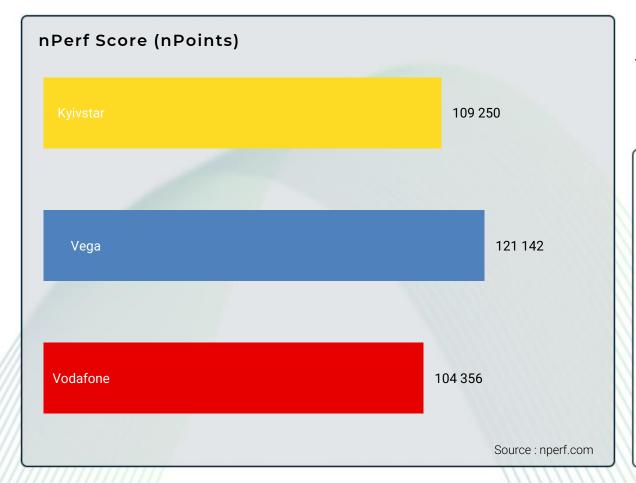
Source: nperf.com





# Fixed Internet performance in Ukraine

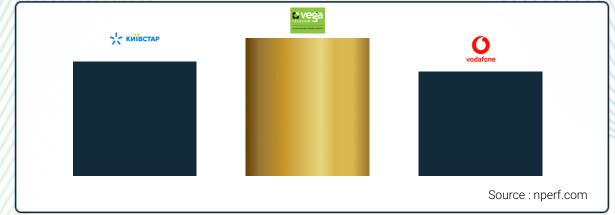


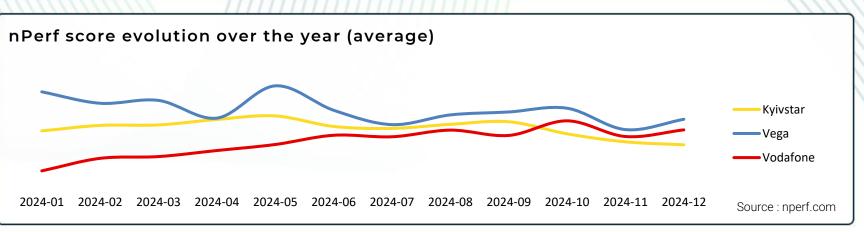


The subscribers of Vega enjoyed the best WIFI Internet performances in Ukraine in 2024.

- Best performances WIFI: Vega
- Best web browsing performances WIFI: Vega
- Best video streaming performances WIFI: Kyivstar and Vega
- Fastest performances (Download) WIFI: Vega
- Fastest performances (Upload) WIFI: Vega
- WIFI connections with the lowest latency: Kyivstar

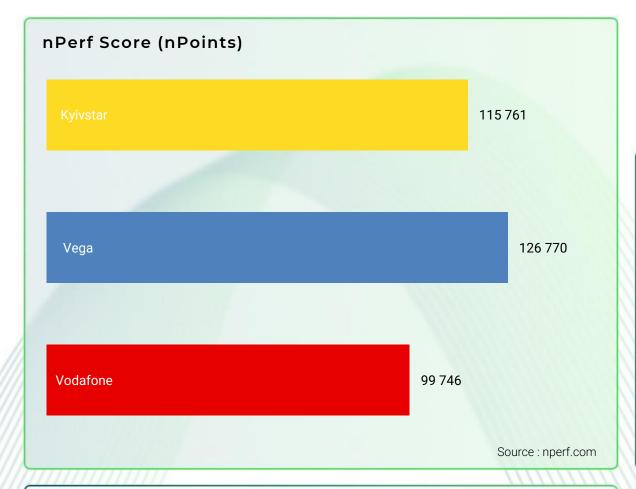
Source: nperf.com





## Fixed Internet performance in Ukraine





The subscribers of Vega enjoyed the best fixed Internet performances in 2024.

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

