

VPN TEST 2023

VPN Testing and Certification by AV-TEST

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Kaspersky VPN Secure Connection



Executive Summary

AV-TEST conducted a comprehensive independent evaluation of Kaspersky's VPN Secure Connection (Kaspersky VPN), version 21.14 for Windows and version 1.70 for Android in September 2023, focusing on its performance and security capabilities in September 2023. This assessment aimed to determine the effectiveness of Kaspersky's VPN in providing secure and reliable internet connectivity, particularly in the context of increasing accelerated cyber privacy threats and the need for robust online privacy protection we all demand.

The evaluation involved a series of tests designed to measure various aspects of the VPN's performance, including its connection stability, speed, encryption strength, and ability to maintain user anonymity. These tests were conducted the special way to simulate real-world usage scenarios, and similarly to the tests of previous years¹.

Key Findings:

1. **Connection Quality and Speed:** Testing revealed that Kaspersky VPN Secure Connection consistently maintains robust connection stability and high-speed performance increased year over year, facilitating uninterrupted online activities such as streaming in ultra-high definition, online gaming with low latency, and efficient handling of large-scale data transfers with minimal speed loss.
Kaspersky VPN continues to improve its performance and demonstrates even higher results in 2023 compared to 2022²:
 - a. In Local connections, Latency is improved 24% YoY, Download Speed is improved 23% YoY, Upload Speed is improved 32% YoY;
 - b. In Oversea connections, Latency improved by 3% YoY, Download Speed is remained the same, Upload speed improved 355% YoY.
2. **Advanced Encryption:** Kaspersky VPN uses top-tier encryption methods, including 256-bit AES encryption for Catapult Hydra and OpenVPN protocols, and chacha20-poly1305 for WireGuard, ensuring user data remains secure against advanced cyberthreats. This high level of encryption is paramount for users who manage sensitive information online.
3. **Privacy Protection:** The service is effective in concealing users' IP addresses, significantly reducing the risk of tracking and bolstering anonymity on the internet. This is particularly vital for users who engage in activities requiring a high degree of privacy and for those in regions with restrictive internet policies.
4. **Server Network Range:** Kaspersky VPN Secure Connection 's expansive and one of the largest server network is notable, providing users with a broad range of geographical options: 100+ locations in 80+ countries. This feature is instrumental for users looking to circumvent geo-restrictions and is an essential utility for international travelers needing access to content from their home countries.

¹ Public certification test 2022: <https://www.av-test.org/en/news/vpn-packages-put-to-the-test-more-security-and-anonymous-paths/>

² Comparative performance test 2022: https://www.av-test.org/fileadmin/pdf/reports/AV-TEST_Kaspersky_VPN_Test_Report_December_2022.pdf

5. User Interface and Usability: The VPN's user interface is designed with clarity and simplicity, making it accessible for users of varying technical backgrounds. The ease with which users can modify settings and preferences contributes to a positive user experience. New features were introduced in the recent product release: Smart Protection, Dark Theme, Favorite Locations, etc.

In essence, Kaspersky VPN Secure Connection has demonstrated its efficacy in fundamental operational areas, solidifying its reputation in the VPN landscape. It excels with its reliable and fast connection speeds, state-of-the-art encryption technologies, and extensive privacy features, rendering it an excellent choice for individuals seeking to improve their online security and privacy.

Meeting all certification criteria, Kaspersky VPN Secure Connection has got “Approved” certification badge into the record of previous years certifications³:



2020: <https://www.av-test.org/en/news/6-vpn-packages-put-to-the-test-under-windows-10/>
2021: <https://www.av-test.org/en/news/vpn-packages-for-private-users-put-to-the-test-under-windows-10/>
2022: <https://www.av-test.org/en/news/vpn-packages-put-to-the-test-more-security-and-anonymous-paths/>
2022: https://www.av-test.org/fileadmin/pdf/reports/AV-TEST_Kaspersky_VPN_Test_Report_December_2022.pdf

Virtual Private Networks (VPNs)

Virtual Private Networks, known widely as VPNs, are crucial for enhancing online security and ensuring the privacy of internet users. They establish a protected, encrypted channel for data to traverse the internet, which is a necessity for keeping sensitive information out of the hands of intruders and for concealing users' identities. VPNs act as a shield for secure communication, essential for both personal and corporate use, to prevent unauthorized access to private networks and to keep data confidential.

The primary function of VPNs is to secure data through encryption, making it difficult for cybercriminals to capture and decrypt information in transit. They hide users' IP addresses, which adds a layer of anonymity and shields personal details including user's geo-location. VPNs are also valuable for bypassing regional restrictions on content, which can be advantageous for personal enjoyment and professional tasks. In business scenarios, they enable secure remote network access, allowing employees to work from anywhere without compromising security.

Kaspersky VPN Secure Connection

Kaspersky VPN Secure Connection emerges as a robust solution within the VPN market, designed to deliver secure and encrypted internet access while safeguarding user privacy and data integrity. Through the comprehensive evaluation conducted in September 2023, Kaspersky's VPN service demonstrated its commitment to fulfilling the fundamental requirements expected from a trusted VPN provider.

The service's support for various protocols, including Catapult Hydra and WireGuard, caters to users' diverse needs by providing a balance between optimal speed and enhanced security. A central tenet of Kaspersky VPN Secure Connection is its strict no-logging policy, assuring users that their internet activities and connection details are not recorded or stored, thus reinforcing its stance on privacy protection.

Kaspersky VPN Secure Connection offers flexible payment and subscription options across different regions, accommodating a wide user base with varying payment preferences. Additionally, the service boasts an extensive global server network, enabling users to navigate geo-restrictions and access international content seamlessly.

A distinctive feature of Kaspersky's VPN is the kill switch, which secures user data by automatically disconnecting the internet if the VPN connection drops unexpectedly. This function is critical in preventing accidental data exposure.

Performance tests of Kaspersky VPN Secure Connection reveal its capability to maintain commendable download and upload speeds across various global locations, ensuring users can enjoy uninterrupted streaming, torrenting, and web browsing activities.

Drawing from the source data, Kaspersky VPN Secure Connection is presented as a competitive choice in the VPN market, prioritizing user privacy, offering versatile protocol support, and delivering consistent performance.

Introduction

This report aims to meticulously assess the protective capabilities of Kaspersky VPN Secure Connection regarding online privacy and security. The testing procedures were crafted to emulate a variety of common scenarios and user cases faced by users online, centering on the effectiveness of the security and privacy measures provided by the VPN across diverse digital landscapes.

Coverage Assessment

In the course of the testing scenarios, the proficiency of Kaspersky VPN Secure Connection was quantitatively assessed. The challenges ranged from sustaining stable connections to implementing advanced encryption and safeguarding user privacy. The collected data offers insight into the Kaspersky VPN's versatility in different digital situations, highlighting its ability to secure user data and maintain anonymity under varying network conditions and in multiple regions.

Quality of Protection Assessment

The review of the protection that Kaspersky VPN Secure Connection delivers was all-encompassing. It is essential to differentiate between the types of protection since their impact on user privacy and security is crucial. While a stable connection forms the basis, additional features like robust encryption protocols and a solid no-logs policy contribute to a more secure defense. This evaluation measured the Kaspersky VPN's effectiveness in shielding users from an array of cyber threats, promoting a secure and confidential online experience.

Test Results of Kaspersky VPN Secure Connection

Review of Key Features

Usability

The Kaspersky VPN Secure Connection includes features such as automatic reconnection and saving favored connections. It introduces Smart Protection, which activates the VPN in certain situations like unsecured Wi-Fi, visiting of sensitive sites, or running of specific apps. A Dark Theme is available for low-light conditions, and users can save frequently used locations for quick access. Favorite Locations lets user add preferable locations to Favorites to easy find them in the long list of all locations. The service provides a trial period and a money-back guarantee, along with a global server network to bypass geo-restrictions. There are flexible subscription plans, supporting various devices, with affordable rates and regional payment options. As of October 2023, a 7-day trial is offered in multiple regions, and the U.S. annual cost for a 5-device plan was priced at \$29.99 for the first subscription year.

Security

The VPN passes DNS Leak Tests consistently, ensuring ISPs cannot track user activity. It also secures against WebRTC leaks and supports safe peer-to-peer file-sharing and torrenting activities, keeping user locations private.

A vital feature of Kaspersky's VPN is the kill switch, which secures user data by automatically disconnecting the internet if the VPN connection drops unexpectedly. This function is critical in preventing accidental data exposure and works on all platforms.

Another feature for the most security conscious users, Double VPN uses nested encryption to route user's traffic through two VPN servers instead of just one. This prevents anybody to discover IP address of the second VPN server, where user's data is unscrambled. Double VPN feature provides incredibly strong protection against a range of privacy threats, including hackers, trackers and ISP spying. Currently it is available for Windows-based device only.

Privacy

Kaspersky VPN Secure Connection is dedicated to user privacy, implementing a no-logging policy that ensures user activities are not recorded or monitored. The service supports multiple protocols, including the most powerful Catapult Hydra and WireGuard in addition to OpenVPN, all reinforced by either 256-bit AES or ChaCha20-Poly1305 encryption for solid data protection. Those cater to users' diverse needs by providing a balance between optimal speed and enhanced security. It should be noted that Catapult Hydra has shown zero vulnerabilities in recent independent audit Aon Cyber Solutions Audit on November 2022⁴. The focus remains on encryption rather than ad blocking, emphasizing its commitment to safeguarding user data.

⁴ <https://www.pango.co/application-security-audit/>

Transparency

A central tenet of Kaspersky VPN Secure Connection is its strict no-logging policy, assuring users that their internet activities and connection details are not recorded or stored, thus reinforcing its stance on privacy protection. Additionally, it is worth noting the vendor's approach of no advertisement in both paid and free version of the product. Transparency in Kaspersky VPN Secure Connection is addressed through clear disclosures about data storage and logging practices.

The used proprietary protocol has successfully passed Aon Cyber Solutions Audit on November 2022⁵, and no critical severity findings were identified. Lesser severity findings were reviewed using a risk-based approach and remediated (where appropriate) and re-tested. Additionally, the solution has successfully undergone a comprehensive Service Organization Control for Service Organizations (SOC 2) Type 2 audit, demonstrating its adherence to high standards of service and privacy as of June 2023. Although detailed results and remediations from this audit are not specified, the consistent passing of SOC 2 audits since 2019 indicates a commitment to maintaining robust security and privacy controls. Kaspersky asserts that their VPN solution is governed by a clear transparency policy⁶, as part of their commitment to the Global Transparency Initiative. The company maintains a practice of regularly releasing transparency reports and updates⁷, demonstrating their adherence to rigorous data processing standards⁸. Furthermore, the Kaspersky VPN Secure Connection is integrated into the Kaspersky Bug Bounty program⁹, encouraging the identification and reporting of potential vulnerabilities.

Service Accessibility

With an extensive network covering 83 countries and 102 server locations, Kaspersky VPN Secure Connection offers widespread accessibility. Its support infrastructure is responsive, providing direct contact options for users needing assistance. Importantly, the VPN facilitates access to geo-restricted content, including streaming services like Netflix, without constraints in various global locations.

⁵ <https://www.pango.co/application-security-audit/>

⁶ <https://www.kaspersky.com/vpn-secure-connection-transparency-security>

⁷ <https://www.kaspersky.com/transparency-center#QA>

⁸ <https://www.kaspersky.com/about/transparency>

⁹ <https://support.kaspersky.com/vulnerability/report-a-vulnerability/12429#block2>

Review of Key Performances

This review scrutinizes Kaspersky VPN Secure Connection on performance indicators crucial for user experience, including streaming and torrenting capabilities, along with file transfer speeds and connection latency, comparing them against local benchmarks.

The measured reference values do not represent an average user but are intended to ensure that the testing network connection and hardware do not constrain the VPN's performance. Any decrease in reference network performance will not affect the VPN's performance unless the reference speed falls below the VPN's speed.

YouTube's "Stats for nerds" tool was utilized to assess the performance of a 4K video over 90 seconds, focusing on dropped frames and playback delay. The graphic below shows that the system with the product and the reference system both had minimal issues, with a loss of only 0.5 frames on duration of 90 seconds and a few milliseconds of delay, differences that are virtually undetectable in user experience. Keeping in mind that the Reference system (without VPN) demonstrated similar result, it is possible to conclude that the VPN solution causes no effect on the YouTube 4K video streaming.

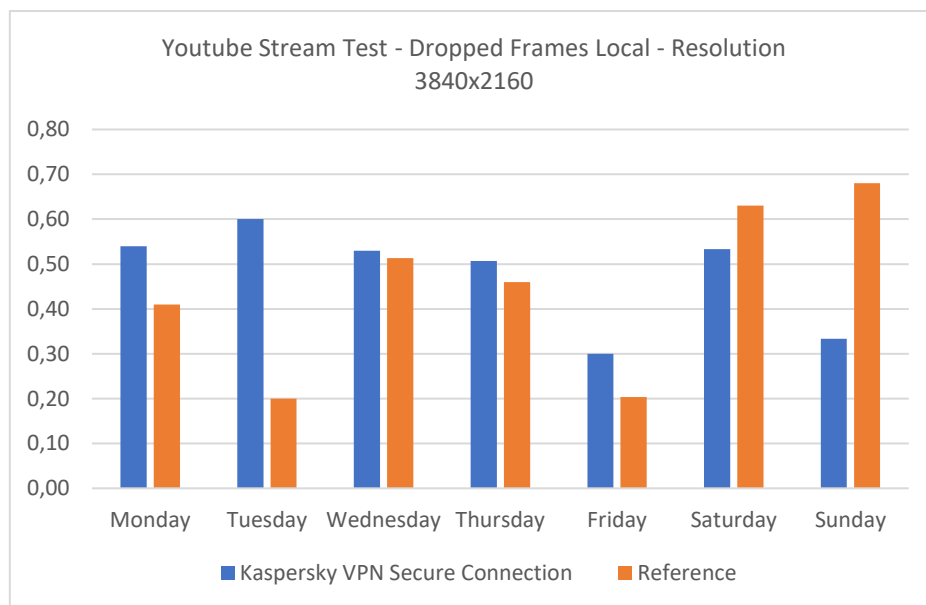


Figure 1: YouTube Stream Test - Dropped Frames Local - Resolution 3840x2160. Illustrates the performance of Kaspersky VPN Secure Connection in a YouTube live stream test, specifically focusing on the occurrence of dropped frames in a local geographical context at a resolution of 3840x2160 pixels.

The graph shows the torrent download speeds for local and overseas connections across three world regions (Asia, EU, US). All tested products, including Kaspersky VPN Secure Connection, were linked to the nearest server, either automatically or manually. The download speeds, generally capped by the protocol, were comparable for both local and overseas connections, indicating that the VPN's performance was on par with the reference system.

The download speed is limited by the torrent protocol in general, so the product results in both Local and Overseas scenarios were around the reference results of system with VPN product at all. The other words, the VPN product showed the very good performance.

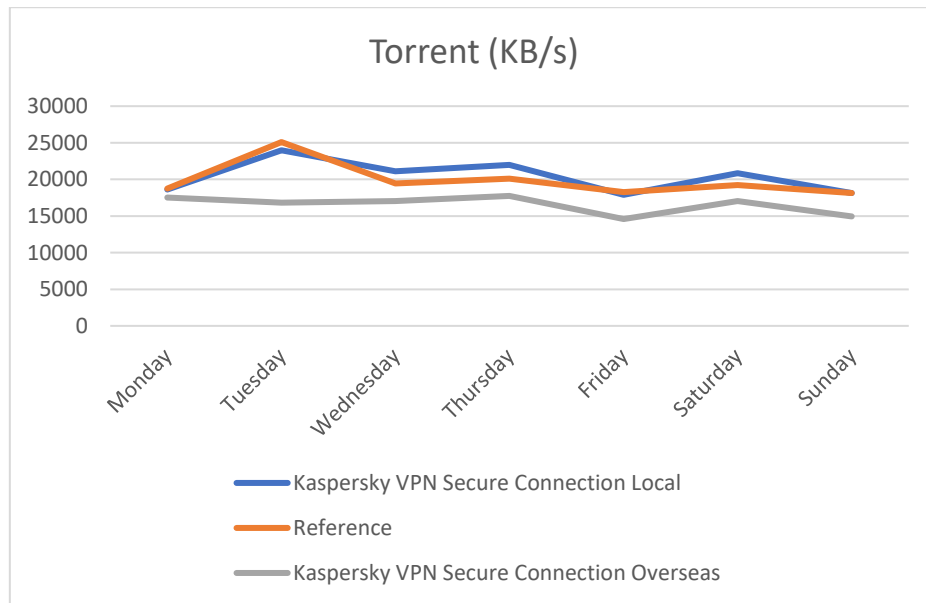


Figure 2: Torrent Performance - Kaspersky VPN Secure Connection vs. Reference. This graph provides a comprehensive analysis of Torrent performance by comparing Kaspersky VPN Secure Connection with the reference measures in both local and overseas geographical contexts.

Local Performances

Kaspersky VPN Secure Connection has shown to maintain high-quality streaming and efficient torrent downloading in local settings. Despite a small increase in latency and minor reductions in upload and download speeds, the performance remains very strong for an encrypted connection. These changes are unlikely to affect most users and common tasks, as the service still provides robust performance suitable for a range of online activities.

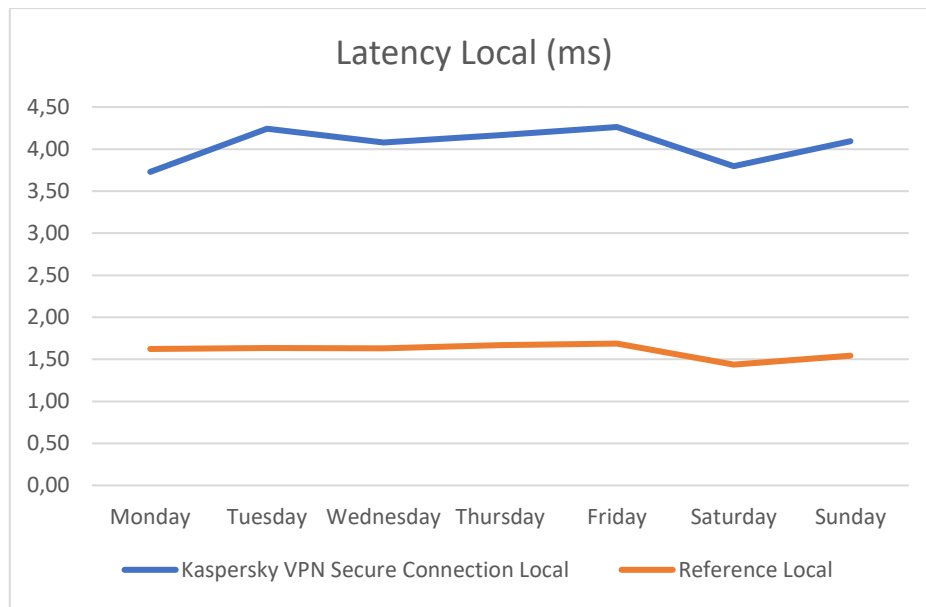


Figure 3: Local Latency - Kaspersky VPN Secure Connection vs. Reference. Presents an analysis of latency performance in a local geographical context, comparing Kaspersky VPN Secure Connection with the reference measures.

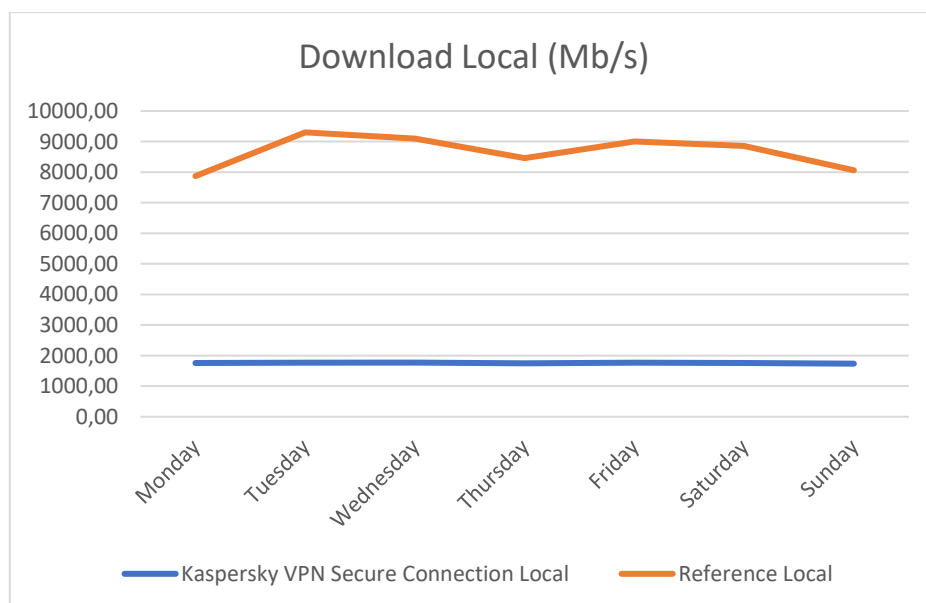


Figure 4: Local Download Speed - Kaspersky VPN Secure Connection vs. Reference. Showcases the download speeds achieved with Kaspersky VPN Secure Connection compared to the reference measures in a local geographical context.

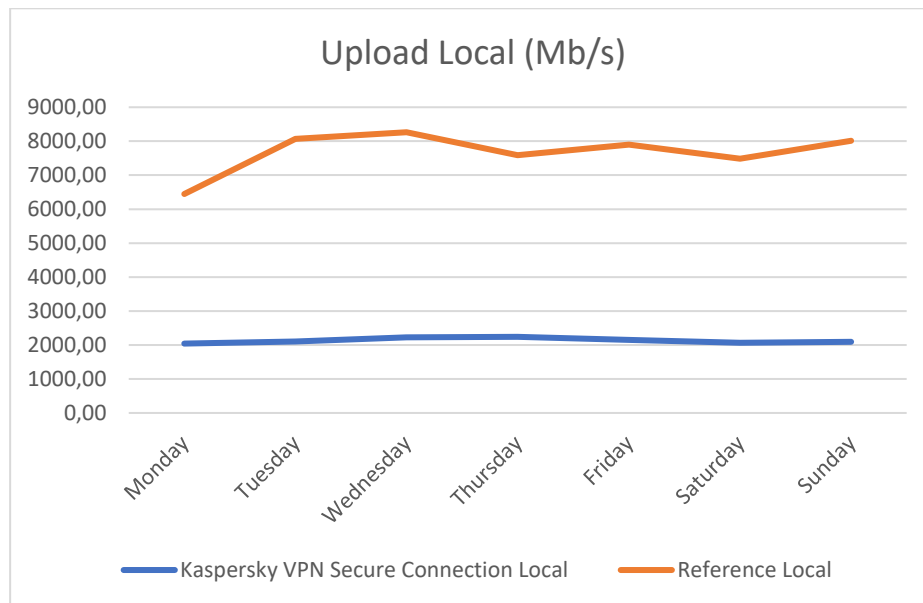


Figure 5: Local Upload Speed - Kaspersky VPN Secure Connection vs. Reference. Compares the upload speeds achieved using Kaspersky VPN Secure Connection with those of the reference measures in a local geographical context.

Overseas Performances

Kaspersky VPN Secure Connection's performance overseas shows commendable results in streaming and torrenting when compared to the unencrypted reference and even when compared to the local VPN connection. Streaming, as evidenced by dropped frames, was slightly better in Asia, while the EU and US saw some minor decrease, not enough to significantly affect the user experience. Torrent download speeds are close to the reference in the EU and the US, indicating marginal differences, while Asia experienced a more noticeable decrease. However, latency across all regions was nearly identical to the unencrypted reference, highlighting the VPN's adeptness at maintaining speed with minimal delay during data transmission.

Download and upload speeds varied between regions but still provided adequate performance for standard online activities, with the US standing out for higher upload speeds. These results affirm Kaspersky VPN Secure Connection as a strong contender for users needing reliable overseas connectivity.

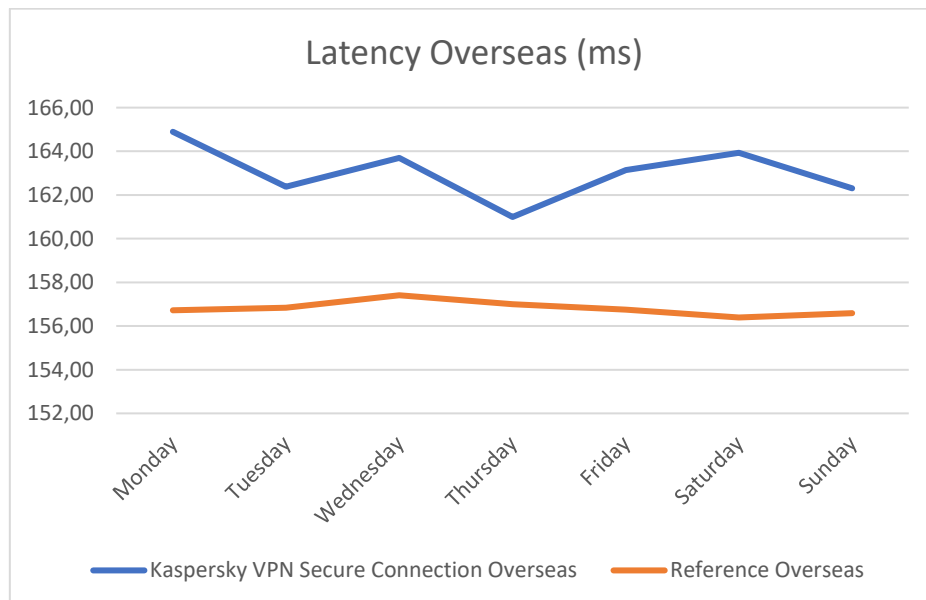


Figure 6: Overseas Latency - Kaspersky VPN Secure Connection vs. Reference. Analyzes latency performance in overseas geographical contexts, comparing Kaspersky VPN Secure Connection with the reference measures.

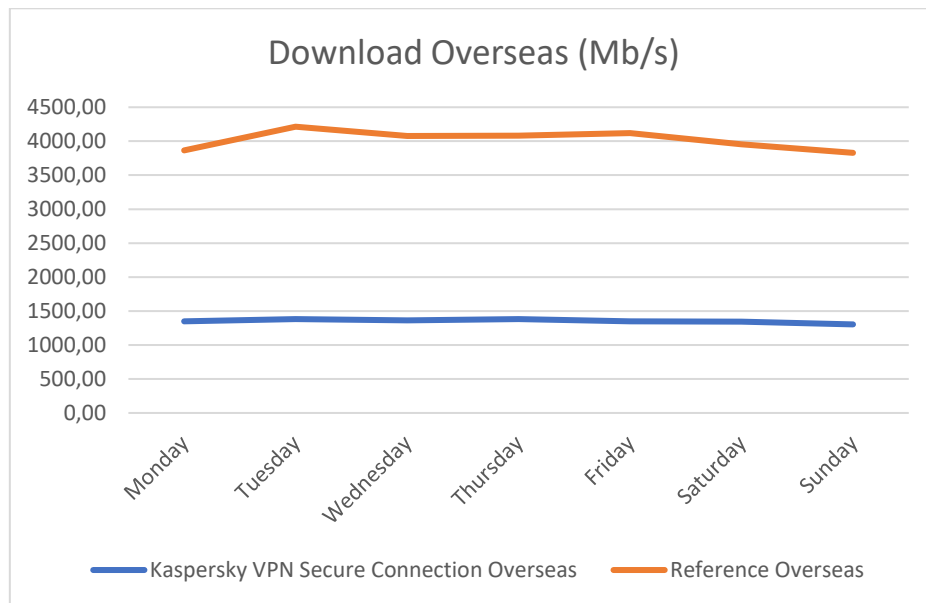


Figure 7: Overseas Download and Upload Speed - Kaspersky VPN Secure Connection vs. Reference. Showcases the download speeds achieved with Kaspersky VPN Secure Connection compared to the reference measures in overseas geographical contexts.

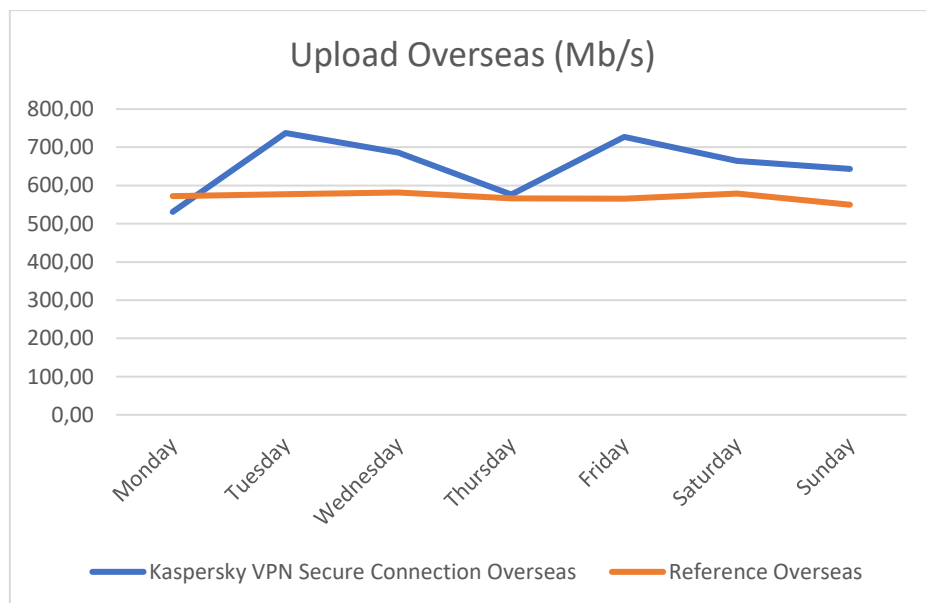


Figure 8: Overseas Upload Speed - Kaspersky VPN Secure Connection vs. Reference. Compares the upload speeds achieved using Kaspersky VPN Secure Connection with those of the reference measures in overseas geographical contexts.

Overall

Kaspersky VPN Secure Connection provides robust streaming and torrenting capabilities, maintaining performance close to non-VPN reference values. It achieves near-native latency across all regions, ensuring efficient real-time communication. While international download speeds experience expected decreases due to encryption, they remain sufficient for most online activities, and the VPN's upload speeds, especially in the US, are notably strong. This combination of secure encryption with minimal impact on speed and latency makes Kaspersky VPN a reliable choice for users seeking a balanced VPN experience.

Performances Comparison 2022 vs. 2023

Performance tests of Kaspersky VPN Secure Connection reveal its capability to maintain commendable download and upload speeds across various global locations, ensuring users can enjoy uninterrupted streaming, gaming, torrenting, and web browsing activities. It should be noted, that demonstrating the highest results in previous test of 2022, the product continues to improve its performance, and demonstrated even higher results in the research of 2023. Drawing from the source data, Kaspersky VPN Secure Connection is presented as a competitive choice in the VPN market, prioritizing user privacy, offering versatile protocol support, and delivering consistent performance.

Performance in scenarios of Local Download, Upload and Latency

The data indicates a notable enhancement in both the speed and efficiency of local connections between 2022 and 2023, reflecting the effectiveness of our ongoing optimization efforts. These enhancements are particularly evident in the areas of latency, download, and upload speeds, underlining Kaspersky's commitment to providing a secure yet high-performing service.

- Latency of local connection has improved by 24% Year over Year (2023 vs 2022)¹⁰.
- Download Local Speed has improved by 23% Year over Year (2023 vs 2022).
- Upload Local Speed has improved by 32% Year over Year (2023 vs 2022).

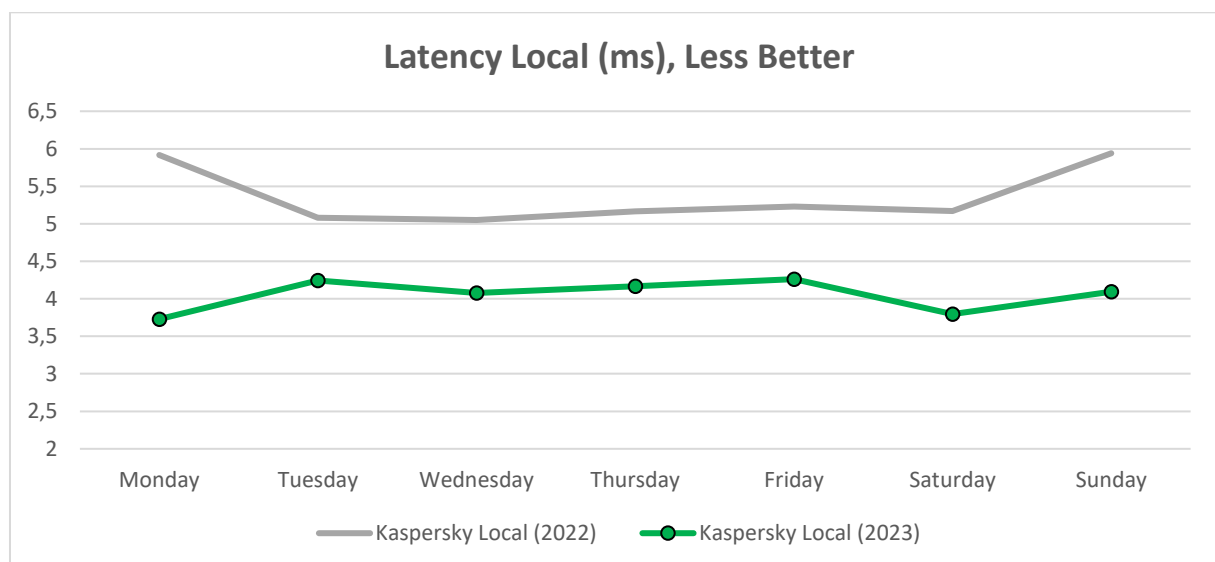


Figure 9: Local Latency - Kaspersky VPN Secure Connection in test of 2023 vs. Kaspersky VPN Secure Connection in test of 2022. Presents an analysis of latency performance in a local geographical context.

¹⁰ https://www.av-test.org/fileadmin/pdf/avtest_2022-12_vpn_software_test.pdf

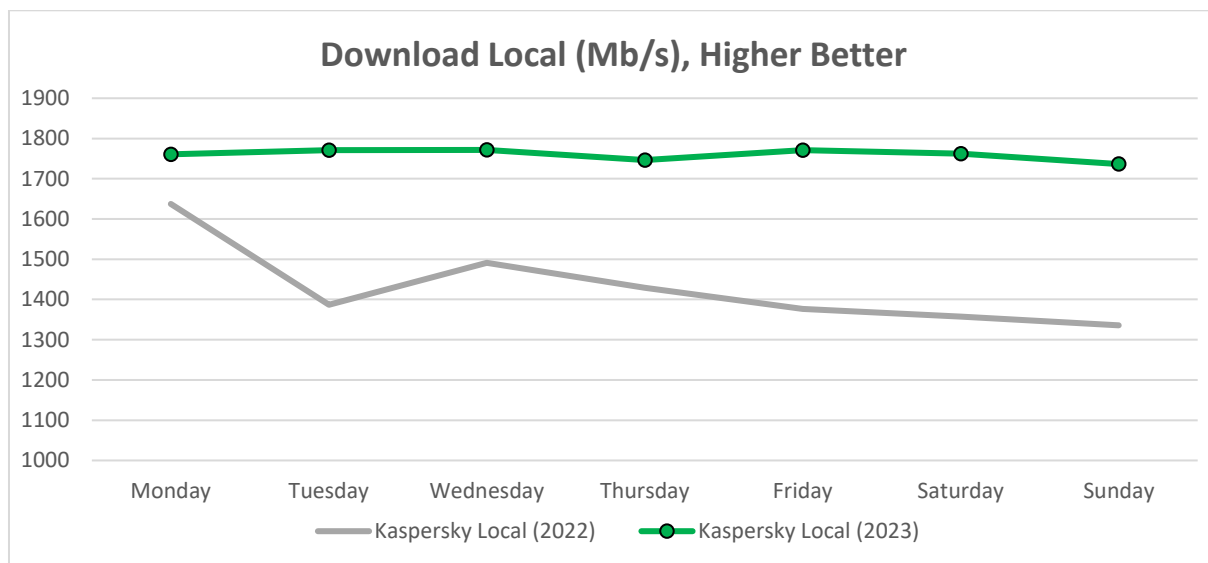


Figure 10: Local Download Speed - Kaspersky VPN Secure Connection in test of 2023 vs. Kaspersky VPN Secure Connection in test of 2022. Showcases the download speeds achieved with Kaspersky VPN Secure Connection in a local geographical context.

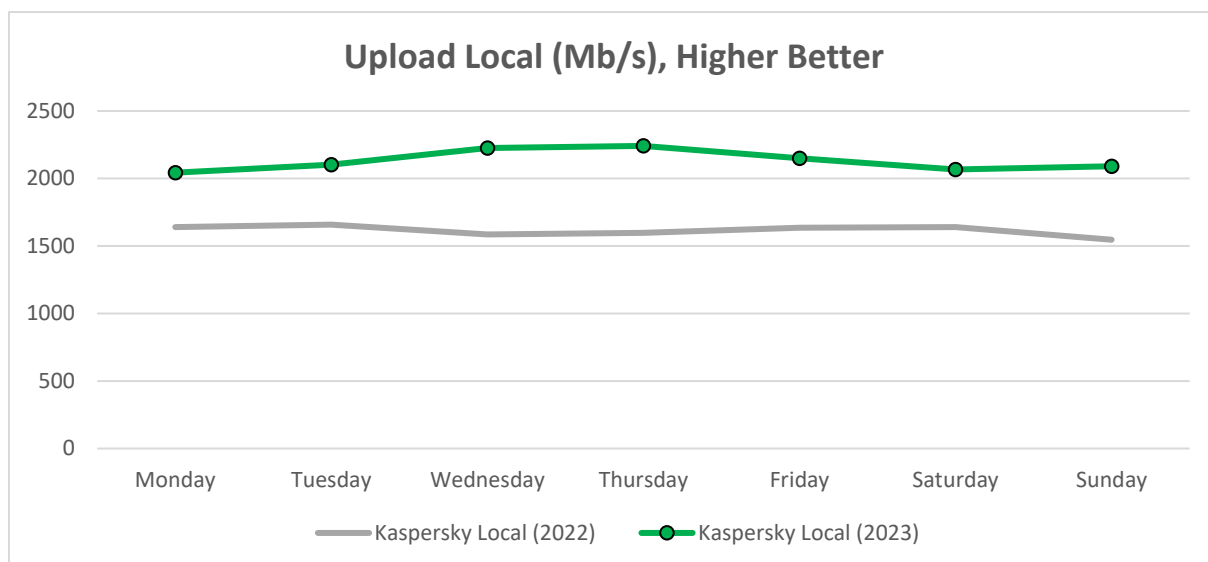


Figure 11: Local Upload Speed - Kaspersky VPN Secure Connection in test of 2023 vs. Kaspersky VPN Secure Connection in test of 2022. Compares the upload speeds achieved using Kaspersky VPN Secure Connection in a local geographical contexts.

Performance in scenarios of Oversea Download, Upload and Latency

The enhancements, observed between 2022 and 2023, span across a small latency reduction, and significant increases in upload speeds.

- Latency of Oversea connection was improved by 3% Year over Year (2023 vs 2022)¹¹.
- Download Oversea Speed remained even Year over Year (2023 vs 2022).
- Upload Oversea Speed was improved 652% Year over Year (2023 vs 2022).

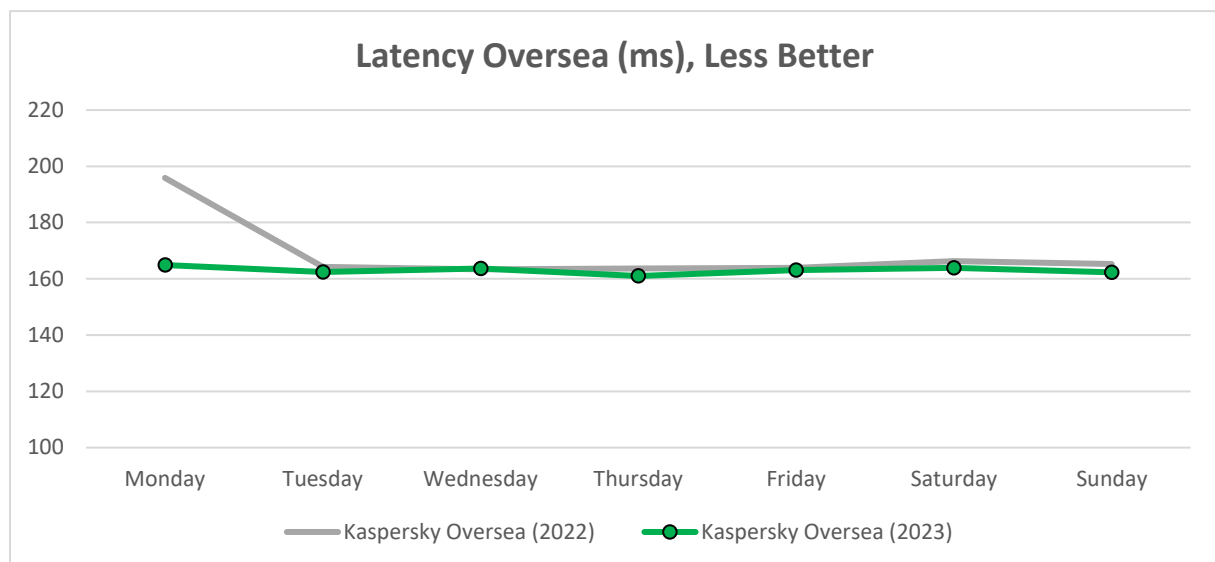


Figure 12: Overseas Latency - Kaspersky VPN Secure Connection in test of 2023 vs. Kaspersky VPN Secure Connection in test of 2022. Analyzes latency performance in overseas geographical contexts.

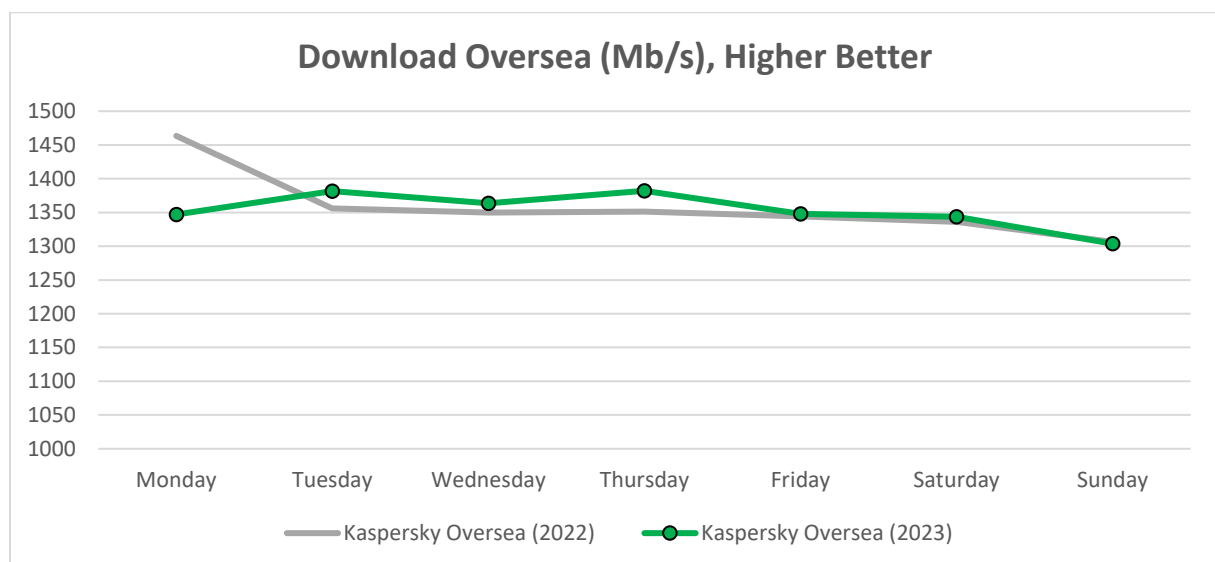


Figure 13: Overseas Download Speed - Kaspersky VPN Secure Connection in test of 2023 vs. Kaspersky VPN Secure Connection in test of 2022. Showcases the download speeds in overseas geographical contexts.

¹¹ https://www.av-test.org/fileadmin/pdf/avtest_2022-12_vpn_software_test.pdf

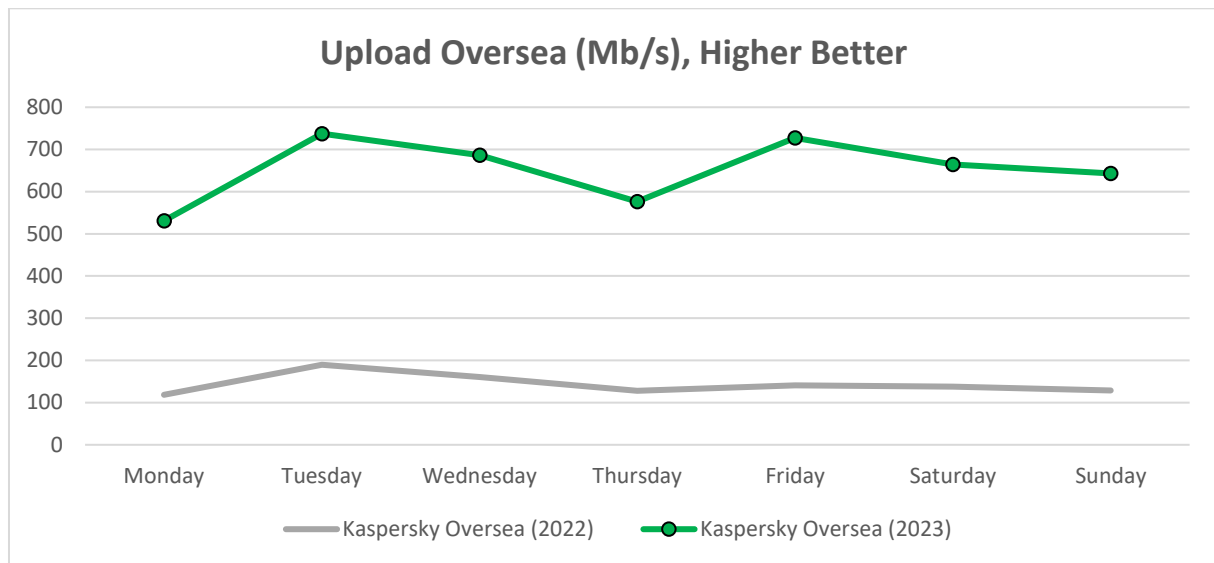


Figure 14: Overseas Upload Speed - Kaspersky VPN Secure Connection in test of 2023 vs. Kaspersky VPN Secure Connection in test of 2022. Compares the upload speeds in overseas geographical contexts.

Test Results Summary

Kaspersky VPN Secure Connection underwent rigorous testing under a range of performance conditions, assessing both local and international server connections. The findings underscore the VPN's commitment to user-centric functionality, such as automatic reconnection, an array of payment methods, and support for multiple devices. The security framework impresses with stout DNS and IP leak prevention and a dependable kill switch. Furthermore, its strong commitment to user privacy is evident through a strict no-logging policy and formidable encryption standards.

During local evaluations, Kaspersky VPN Secure Connection showcased its prowess in streaming, with minimal frame drops and a slight reduction in playtime delay, delivering a seamless viewing experience. The service also performed well in torrent download speeds. Any increases in latency and slight decreases in download speeds were within acceptable margins, which are considered normal, given the trade-offs required for encrypted connections.

For international use, Kaspersky VPN Secure Connection preserved a high level of performance in streaming tests. While increases in latency and decreases in download and upload speeds are anticipated with VPN usage, these did not substantially detract from the user experience. The VPN adeptly managed common online activities such as media streaming and file downloading in cross-border settings.

In summary, Kaspersky VPN Secure Connection confirms its dependability for typical online scenarios like streaming and web browsing. The assessment indicates that, despite slight speed reductions and latency increases inherent in encryption, these factors are generally not detrimental to the experience of private users. Thus, Kaspersky VPN Secure Connection distinguishes itself in the VPN market with a solid balance of extensive security and privacy features, along with performance levels that fully support everyday internet tasks.

Meeting all certification criteria, Kaspersky VPN Secure Connection has got “Approved” certification badge into the record of previous years certifications¹²:



2020: <https://www.av-test.org/en/news/6-vpn-packages-put-to-the-test-under-windows-10/>

2021: <https://www.av-test.org/en/news/vpn-packages-for-private-users-put-to-the-test-under-windows-10/>

2022: <https://www.av-test.org/en/news/vpn-packages-put-to-the-test-more-security-and-anonymous-paths/>

2022: https://www.av-test.org/fileadmin/pdf/reports/AV-TEST_Kaspersky_VPN_Test_Report_December_2022.pdf