

topDNS Report: Monthly Analysis for ISPs

**An initiative by eco –
Association of the Internet Industry
in collaboration with AV-TEST**

December 2025



topDNS

An initiative by **eco**



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ASSOCIATION OF THE
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Report Summary

This report is the twelfth publication from the topDNS Initiative's measurement initiative, topDNS Report: Monthly Analysis for ISPs. The purpose of this report is to establish a credible and consistent source of metrics for addressing abuse among Internet Service Providers (ISPs). We hope that it will facilitate targeted discussions and pinpoint opportunities to reduce abuse throughout the entire Internet ecosystem.

Key highlights from the overall data in the month of November 2025 include:

- **Malicious URL trends reached unprecedented levels in November 2025.**
Total malicious URLs climbed to approximately 1,298,300 (combining all categories), with malware URLs surging to 1,264,566 (+29.04% vs. October), establishing a new all-time peak and surpassing the previous October record by nearly 285,000 URLs. Malware accounted for 97% of all malicious URLs, maintaining the extreme concentration observed in October. Potentially unwanted applications (PUAs) declined slightly to 15,433 (-1.91% compared to October's 15,734), remaining near historic lows and representing just 1% of total malicious URLs. 'Other' malicious content increased to 18,301 (+16.36%), rising to approximately 1% of the total. The distribution thus remained heavily skewed toward malware dominance at 97%, while PUAs and 'other' content each accounted for only 1%, continuing the concentrated malware focus that has characterised recent months. November 2025 now holds the peak record for malware (1,264,566), while historical peaks for PUAs (July 2025: 105,835) and 'other' content (February 2025: 46,639) remain from earlier periods.
- **Phishing activity in November 2025 showed divergent trends.**
Potential phishing URLs decreased sharply to 84,658 (-47.55% vs. October's 161,406), falling to the lowest level in the entire reporting period and significantly below the 'all (potential) phishing' average of 295,905. Verified phishing URLs increased to 9,295 (+7.31% vs. October's 8,662), showing continued recovery from September's historic low but remaining approximately 20% below the verified-phishing average of 11,676. The share of verified phishing within potential phishing surged to 10.98%, up from 5.37% in October – the highest verification rate in the reporting period – suggesting either significantly improved detection capabilities or a shift in threat actor tactics towards more sophisticated campaigns. April 2025 continues to hold the peak for potential phishing URLs (542,081), while May 2025 holds the peak for verified phishing (21,492).
- **The November phishing landscape presents a notable paradox.**
While the absolute volume of potential phishing URLs plummeted to historic lows, the verification rate more than doubled, indicating that a higher proportion of detected attempts are confirmed as genuine threats. This 10.98% verification rate



suggests that security systems may be detecting true phishing attempts more accurately – or that threat actors are focusing on higher-quality, more targeted campaigns that are more likely to bypass initial filters. The 47.55% month-over-month decrease in potential phishing URLs, combined with only a 7.31% increase in verified phishing, points to a quality-over-quantity shift in the phishing threat landscape.

- **Top 50 ASNs accounted for 1,230,309 malicious URLs in November 2025.** This represents a substantial increase compared to October 2025's 936,206. The total includes 1,199,728 malware (97.51%), 14,768 PUAs (1.20%), and 15,813 'other' content (1.29%). The increase was predominantly driven by malware, which rose by more than 291,000 URLs month-over-month – a 32.15% increase – pushing malware's share to a new high within the Top 50 ASNs. PUAs remained near their lowest levels in the reporting period. Across the entire reporting period (June 2024 to November 2025), the Top 50 ASNs generated 11,122,926 URLs in total, including 10,005,397 malware (89.95%), 563,750 PUAs (5.07%), and 553,779 'other' content (4.98%). Malware's 97.51% share in November reflects an even more extreme concentration than October's 96.97%, underscoring the continued dominance of malware-hosting infrastructure among major autonomous systems.

This is our seventh report to cover a full 12-month period, with the reporting years rotating to make comparisons easier and patterns clearer. This is an important step towards identifying longer-term trends.

We encourage all readers to review this report and its methodology, as well as the data, and to contact us with any questions, ideas or suggestions that could help us improve and expand it. After all, our goal is to help the Internet industry and the wider community become better equipped to fight online abuse. The topDNS Initiative will publish this and future reports on the [topDNS website](#).

For more information on the topDNS Initiative's mission and the data and sources used, please refer to the 'Background' section at the end of this document.

Methodology

Understanding general trends in online abuse is useful for grasping phishing and malware across the ISP ecosystem, as well as identifying high-level trends over time. This report presents aggregated data for all months recorded at the time of publication.

The malware methodology includes the following labels:

- **Malware:** The majority of AV-TEST's scan results conclude that the sample belongs to the 'malware' category. This includes classic viruses and Trojans, but is also subdivided internally into malware families and names.
- **PUA:** This stands for 'Potentially Unwanted Application'. Such applications/samples do not directly exhibit malware behaviour, but they can disrupt the user experience through aggressive advertising, hidden functions, or impaired system performance.
- **Other:** This includes samples that cannot be attributed automatically to malware or potentially unwanted applications (PUAs).

Each URL is followed by a downloadable file (either directly or as a web page in the form of an HTML file). These files are downloaded and analysed by AV-TEST tools (VTEST -> AV multi-scanner system). These downloaded files are referred to as 'samples'.

The phishing methodology includes the following labels:

- **Potential Phishing:** URLs/websites that AV-TEST receives from phishing blocklists or whose source code generates a 'phishing' detection in VTEST's static analysis are declared as 'potential phishing'. (Potential) Phishing URLs are not only downloaded, but also visualised via a browser screenshot, which is used for AV-TEST's visual phishing analysis (Phinder).
- **Verified Phishing:** All 'Potential Phishing' URLs are checked with an automated visual comparison of the screenshots. This is based on manual pre-work, where screenshots are classified as 'Phishing' or 'No Phishing' by AV-TEST staff. If a 'Potential Phishing' URL is found to be similar to a 'Verified Phishing' URL, it is automatically classified as such.

This report uses the following definitions for Uniform Resource Locator (URL), Internet Service Provider (ISP), and Autonomous System Number (ASN):

- **Uniform Resource Locator (URL):** A URL is the address of a specific resource on the Internet. It consists of several components, including the protocol (e.g., HTTP or HTTPS), the domain name (e.g., example.com), and the path to the resource (e.g., /page). URLs are used to locate and access websites, images, videos, and other online content.



- **Internet Service Provider (ISP):** An ISP is a company or organisation that provides Internet access to individuals and businesses. ISPs offer various connection types, including broadband, fibre, DSL and mobile data. ISPs are responsible for transferring data between users and the Internet, and they often offer additional services such as email hosting and web hosting, and security features.
- **Autonomous System Number (ASN):** An ASN is a unique identifier assigned to an Autonomous System (AS), which is a network or group of Internet Protocol (IP) prefixes under the control of a single administrative entity, such as an Internet Service Provider (ISP), cloud provider, or large enterprise.



Chart: Aggregate Malware Trends

This chart provides a high-level view of how many malicious URLs with ASNs have been identified by the methodology and how abuse on the Internet is changing over time. It shows the absolute volume of unique URLs the methodology has identified that are engaged in phishing, malware, PUA and other malware, broken down by category:

- **Malware URLs**
- **PUA URLs**
- **Other URLs**

A total of **8,190,564 malicious URLs with ASNs** were identified in the period December 2024 to November 2025, of which:

- **7,518,721 URLs** could be **verified as malware**,
- **382,993 URLs** have been **classified as PUA**, and
- **288,850 URLs** as **other**.

The **highest number of malicious URLs for malware** was identified in **November 2025**, representing a **new record that surpassed the previous peak of October 2025**. Furthermore, **PUAs peaked in July 2025**, before **collapsing dramatically in August 2025** and **reaching their lowest point in November 2025**. In addition, 'other' content **peaked in February 2025** and reached its **lowest level in May 2025**. The **lowest level for malware was recorded in December 2024**.

In the latest month, November 2025, the **distribution shifted to unprecedented malware dominance**, with malware accounting for 97% of all malicious URLs, while PUAs represented just 2% and 'other' content approximately 1%. Unfortunately, this marks the most concentrated malware focus observed throughout the entire reporting period, departing significantly from the typical distribution seen in previous months.



Malicious URLs

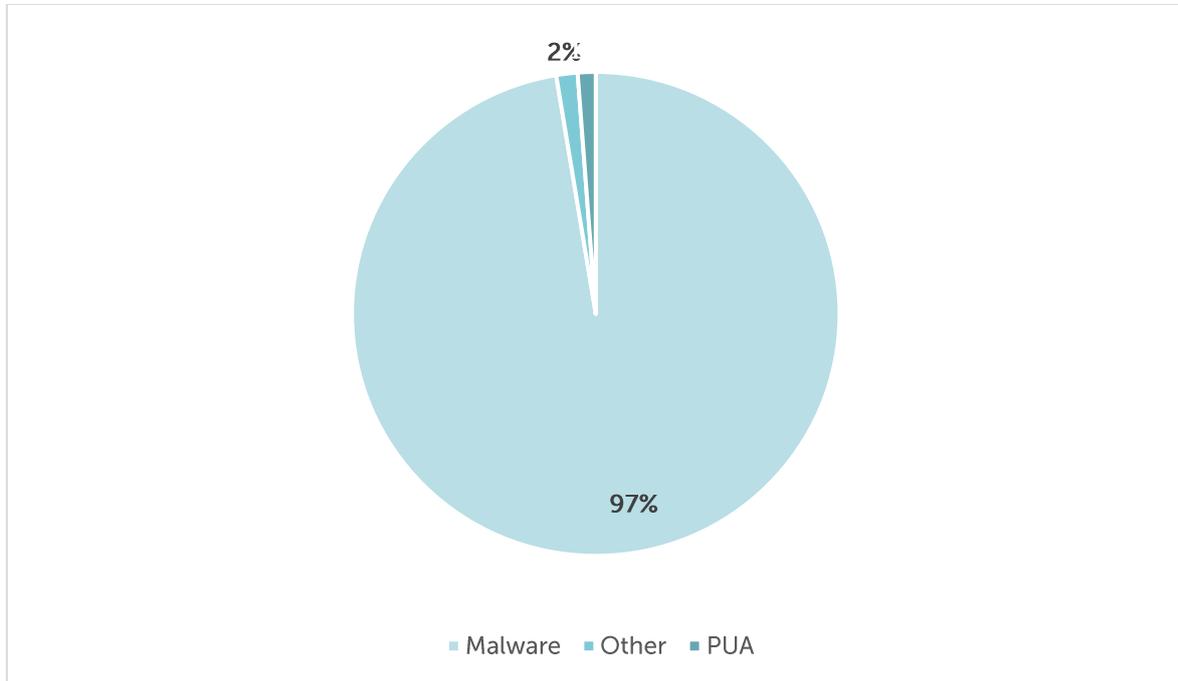


Figure 1: Aggregate Malware Trends - Malicious URLs - November 2025

History of Malicious URLs

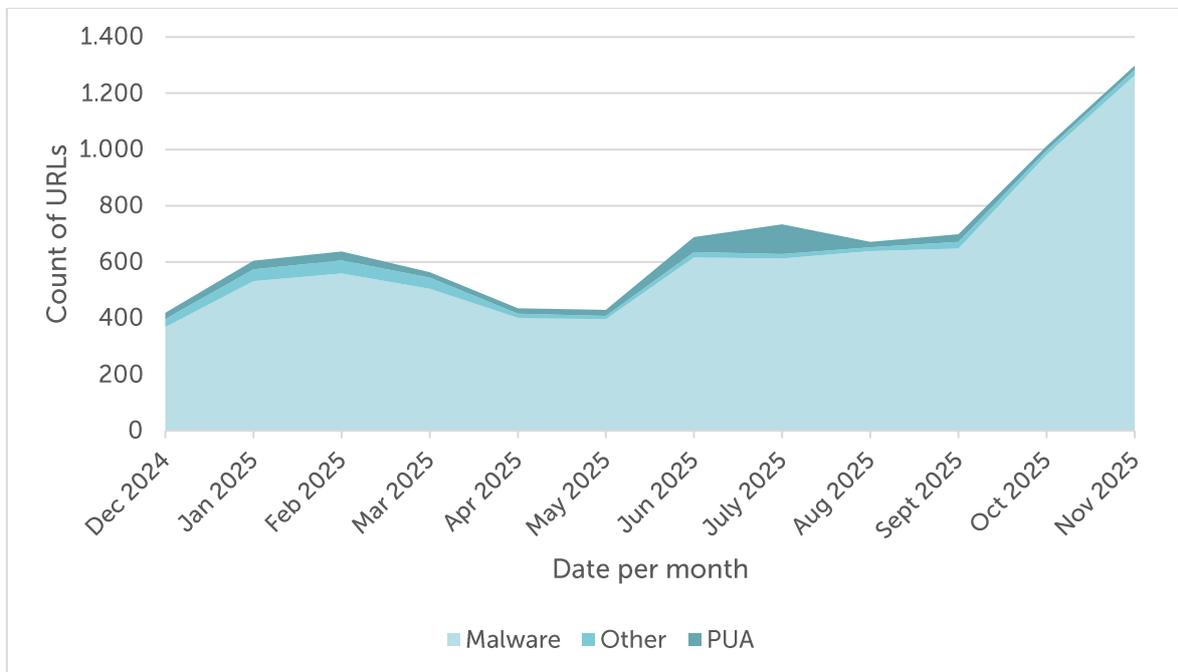


Figure 2: Aggregate Malware Trends - History of Malicious URLs - December 2024 to November 2025



History of Malicious URLs

	Malware	Change	PUA	Change	Other	Change
Dec 2024	368,246		22,345		28,432	
Jan 2025	531,473	+44.33%	30,652	+37.18%	42,139	+48.21%
Feb 2025	559,089	+5.20%	31,846	+3.90%	46,639	+10.68%
Mar 2025	504,027	-9.85%	20,104	-36.87%	39,830	-14.60%
Apr 2025	401,518	-20.34%	18,739	-6.79%	14,600	-63.34%
May 2025	396,207	-1.32%	21,305	+13.69%	12,011	-17.73%
Jun 2025	615,448	+55.33%	54,207	+154.43%	18,942	+57.71%
July 2025	612,196	-0.53%	105,835	+95.24%	15,686	-17.19%
Aug 2025	638,238	+4.25%	19,551	-81.53%	13,272	-15.39%
Sep 2025	647,740	+1.49%	27,242	+39.34%	23,270	+75.33%
Oct 2025	979,973	+51.29%	15,734	-42.24%	15,728	-32.41%
Nov 2025	1,264,566	+29.04%	15,433	-1.91%	18,301	+16.36%
Total	7,518,721		382,993		288,850	

Table 1: Aggregate Malware Trends - History of Malicious URLs - December 2024 to November 2025

Key Figures of Malicious URLs

	Malware	Month	PUA	Month	Other	Change
High	1,264,566	Nov 2025	105,835	Jul 2025	46,639	Feb 2025
Low	368,246	Dec 2024	15,433	Nov 2025	12,011	May 2025
Average	626,560		31,916		24,071	

Table 2: Aggregate Trends - Key Figures of Malicious URLs - December 2024 to November 2025



Commentary

The aggregate dataset covering December 2024 to November 2025 identified a total of 8,189,564 malicious URLs with ASNs, of which 7,518,721 were verified as malware, 382,993 classified as potentially unwanted applications (PUAs), and 288,850 as 'other' content. The **total number of malicious URLs increased substantially** from the previous reporting period, driven primarily by the unprecedented malware surge observed in October and November 2025 as these months entered the 12-month reporting window.

The **highest number of malware URLs was recorded in November 2025 at 1,264,566**, representing a **dramatic new peak** that surpassed the previous high of 979,973 in October 2025. In contrast, PUAs peaked in July 2025 at 105,835 URLs, before collapsing in August 2025 to just 19,551 and **reaching a new low in November 2025 at 15,433**. At the lower end, the minimum values occurred in December 2024 for malware (368,246), November 2025 for PUAs (15,433), and May 2025 for 'other' content (12,011). On average across the reporting period, monthly figures amounted to approximately 626,560 malware URLs, 31,916 PUAs, and 24,071 'other' URLs.

The dramatic surge in malware during November 2025 represents a **continuation of the escalation that began in October**, rising 29.04% from October's already record-breaking levels. Meanwhile, PUAs continued their downward trajectory, falling to a new minimum at 15,433 – a 1.91% decline from October. In November 2025, the distribution **maintained the extreme malware dominance** established in October, with **malware accounting for 97% of all malicious URLs**, while PUAs represented just 1% and 'other' content approximately 1% – continuing **the most concentrated malware focus** observed throughout the entire reporting period.

As Table 2 highlights, malware activity ranged from a **new high of 1,264,566 URLs in November 2025** to a **low of 368,246 in December 2024** – a span of over 896,000 URLs representing more than a threefold increase. PUAs fluctuated dramatically, from a **new low of 15,433 in November 2025** to their **peak of 105,835 in July 2025**, while 'other' content reached 46,639 in February 2025 but fell to 12,011 in May 2025. These figures **confirm malware's overwhelming dominance in absolute terms**, while PUAs and 'other' categories continue to show volatility, though both have declined significantly in recent months. Notably, the consecutive October-November 2025 malware surges appear to have absorbed activity that might otherwise have been distributed across other categories, resulting in an **unprecedented and sustained concentration of threat activity** within the malware classification.



Chart: Aggregate Phishing Trends

This chart provides an overview of how many phishing URLs with ASNs have been identified by the methodology, and illustrates how phishing on the Internet is changing over time. It shows the absolute volume of unique URLs identified by the methodology as being involved in the distribution of phishing, broken down by category:

- **(Potential) Phishing URLs**
- **Verified Phishing URLs**

A total of **3,550,859 phishing URLs with ASNs** were identified in the period from December 2024 to November 2025, of which **140,116 URLs** could be **verified**.

There was a further increase in January, February, March and April 2025, followed by a sharp decline in May 2025 and continued drops in June and July 2025, before a modest rise in August 2025. September 2025 saw a substantial rebound in potential phishing, but verified phishing reached a new low. **October 2025 reversed this pattern**, with potential phishing declining significantly while verified phishing rebounded moderately. November 2025 continued these divergent trends, with potential phishing plummeting to a historic low, while verified phishing increased modestly.

Between December 2024 and November 2025, the **highest number of all (potential) phishing URLs** was identified in April 2025, while **verified phishing URLs** peaked in **May 2025**. The **fewest of all (potential) phishing URLs** were identified in **November 2025**, marking a **new historic low for the reporting period**, while the **fewest verified phishing URLs** were identified in **September 2025**, before **rising again in October and November 2025**.

Notably, the verification rate (verified phishing as a share of potential phishing) reached its **highest point in November 2025 at 10.98%**, suggesting either improved detection precision or a shift toward more sophisticated, targeted phishing campaigns.



History of Phishing URLs

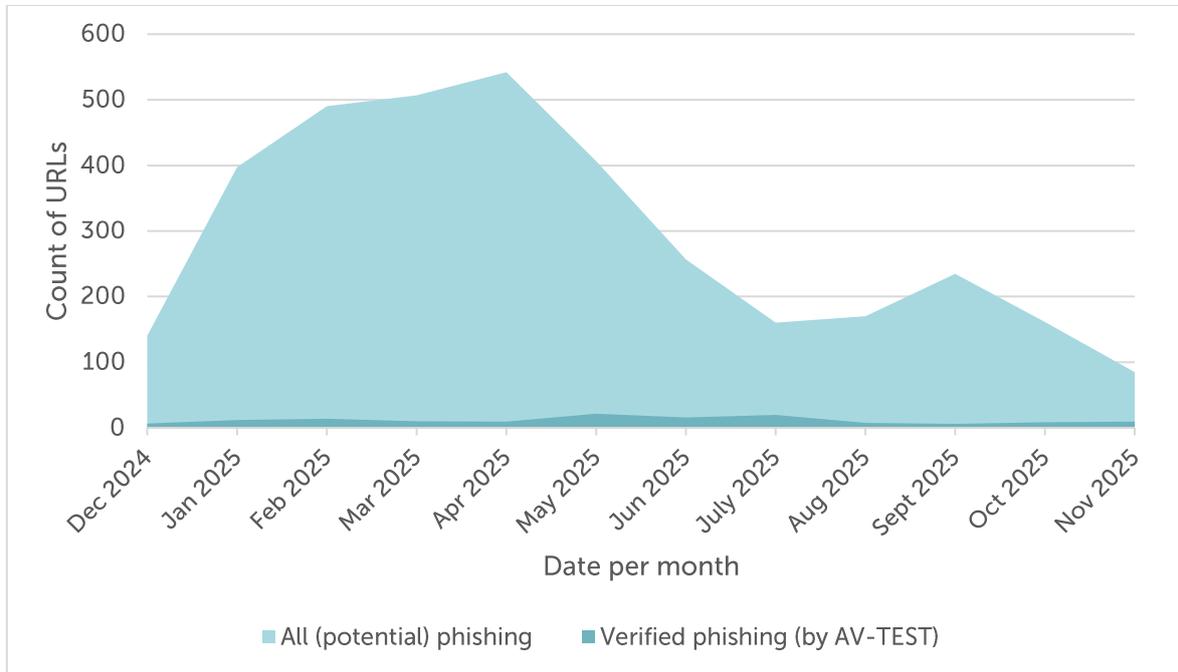


Figure 3: Aggregate Trends - History of Phishing URLs - December 2024 to November 2025



History of All (Potential) and verified Phishing URLs

	All (potential) phishing	Change	Share	Verified phishing	Change
Dec 2024	140,303		4.56%	6,403	
Jan 2025	397,214	+183.11%	3.03%	12,043	+88.08%
Feb 2025	490,080	+23.38%	2.85%	13,972	+16.02%
Mar 2025	506,671	+3.39%	1.96%	9,939	-28.86%
Apr 2025	542,081	+6.99%	1.72%	9,297	-6.46%
May 2025	406,756	-24.96%	5.28%	21,492	+131.17%
Jun 2025	256,529	-36.93%	6.20%	15,907	-25.99%
July 2025	160,240	-37.54%	12.27%	19,656	+23.57%
Aug 2025	169,908	+6.03%	4.36%	7,414	-62.28%
Sept 2025	235,013	+38.32%	2.57%	6,036	-18.59%
Oct 2025	161,406	-31.32%	5.37%	8,662	+43.51%
Nov 2025	84,658	-47.55%	10.98%	9,295	+7.31%
Total	3,550,859			140,116	

Table 3: Aggregate Trends - History of All (Potential) and Verified Phishing URLs - December 2024 to November 2025

Key Figures of All (Potential) and Verified Phishing URLs

	All (potential) phishing	Month		Verified phishing	Month
High	542,081	Apr 2025		21,492	May 2025
Low	84,658	Nov 2025		6,036	Sept 2025
Average	295,905			11,676	

Table 4: Aggregate Trends - Key Figures of All (Potential) and Verified Phishing URLs - December 2024 to November 2025



Commentary

The aggregated dataset covering December 2024 to November 2025 identified a total of 3,550,859 all (potential) phishing URLs and 140,116 verified phishing URLs. Monthly volumes of all (potential) phishing URLs exhibited **significant volatility throughout the reporting period**. After an initial rise from December 2024, which recorded 140,303 URLs, substantial increases were observed in January 2025 (+183.11%) through April 2025, **peaking at 542,081 URLs**. This was followed by a sharp decline in May 2025 (-24.96%) and continued drops in June (-36.93%) and July 2025 (-37.54%), before modest fluctuations in August and September. November 2025 recorded a **historic low of 84,658** all (potential) phishing URLs, reflecting a 47.55% decline from October.

Verified phishing URLs displayed a **different pattern, peaking in May 2025 at 21,492 URLs**, before declining through June and August to a **reporting-period low in September 2025 (6,036 URLs)**. October 2025 marked a moderate recovery (8,662 URLs), followed by a slight increase in November (9,295 URLs).

The share of verified phishing within all (potential) phishing URLs varied significantly across the reporting period. It ranged from a low of 1.72% in April 2025 to a peak of 12.27% in July 2025. November 2025 recorded a remarkable share of **10.98%**, nearly doubling October's 5.37% and representing the **second-highest verification rate** in the reporting period, **well above the average of 3.95%**. On average across the reporting period, monthly figures amounted to approximately 295,905 all (potential) phishing URLs and 11,676 verified phishing URLs.

The **contrasting trends** observed in November 2025 – sharp declines in potential phishing alongside moderate increases in verified phishing and a dramatically elevated verification rate – suggest either significant enhancements in detection and verification capabilities or a fundamental shift in threat-actor tactics toward higher-quality, more targeted phishing campaigns. The 10.98% verification rate, combined with the historic low in potential phishing volume, points to a **quality-over-quantity evolution** in the phishing threat landscape as the reporting period concludes.

Overall, the reporting period highlights not only the **persistent volatility** of phishing activity, but also a notable **shift toward more sophisticated, detectable campaigns** in the latter months.



Chart: Aggregated Share of Top50 ASNs

This table provides an anonymised high-level overview of the 50 largest autonomous systems identified by their assigned autonomous system number (ASN).

A **total of 11,122,926 URLs with ASNs** were identified among the Top50 ASNs in November 2025, of which:

- **10,005,397 URLs** could be **verified as malware**,
- **563,750 URLs** have been **classified as PUA**, and
- **553,779 URLs** as **other**.

If you are a network operator, please contact us for further details which of the URLs mentioned above are assigned to your autonomous system number (ASN): topdns@eco.de

Aggregated Share of Top 50 ASNs

	Malware	Share	PUA	Share	Other	Share	Total
June - Dec 2024	3,684,553	87.03%	217,343	5.13%	331,888	7.84%	4,233,784
Jan 2025	427,507	87.13%	27,240	5.55%	35,902	7.32%	490,649
Feb 2025	462,960	87.11%	28,352	5.33%	40,141	7.55%	531,453
Mar 2025	422,319	88.96%	18,240	3.84%	34,148	7.19%	474,707
Apr 2025	343,056	91.93%	18,154	4.86%	11,971	3.21%	373,181
May 2025	337,196	92.09%	19,209	5.25%	9,767	2.67%	366,172
Jun 2025	494,633	88.07%	52,762	9.39%	14,233	2.53%	561,628
July 2025	520,073	81.60%	104,899	16.46%	12,383	1.94%	637,355
Aug 2025	547,454	94.97%	19,470	3.37%	10,600	1.84%	577,524
Sept 2025	658,068	92.69%	28,218	3.97%	23,672	3.33%	709,958
Oct 2025	907,850	96.97%	15,095	1.61%	13,261	1.42%	936,206
Nov 2025	1,199,728	97.51%	14,768	1.20%	15,813	1.29%	1,230,309
Total	10,005,397		563,750		553,779		11,122,926

Table 5: Aggregate Trends - Aggregated Share of Top 50 ASNs - June 2024 to November 2025



Commentary

The aggregate dataset for the Top 50 ASNs covering June 2024 to November 2025 identified a total of 11,122,926 malicious URLs. Of these, 10,005,397 were linked to malware, 563,750 to potentially unwanted applications (PUAs), and 553,779 to 'other' content. Malware remained the overwhelming majority at 89.95%, while PUAs and 'other' content accounted for 5.07% and 4.98%, respectively.

While malware dominance has been consistent, the **volatility of PUAs in mid-to-late 2025 was particularly striking**. After surging to a record 104,899 entries in July 2025 (16.46% of the monthly total), PUAs fell sharply in August to 19,470 (3.37%), recovered modestly to 28,218 (3.97%) in September, before collapsing to 15,095 (1.61%) in October and reaching a new low of 14,768 (1.20%) in November – the lowest share recorded in the entire dataset. This pattern illustrates the highly dynamic nature of PUA campaigns, which can spike dramatically for short periods before subsiding just as rapidly.

Malware activity remained exceptionally strong throughout the period, with **November 2025 showing an unprecedented peak of 1,199,728 entries** (97.51% of the monthly total) – the highest malware concentration and absolute volume in the dataset. The overall total for November reached 1,230,309 malicious URLs, representing a 31.43% increase from October's already elevated 936,206. This near-total malware dominance in November, combined with the continued collapse of PUAs to historic lows, suggests that attackers have consolidated around traditional, reliable malware distribution strategies following the experimental PUA surge in mid-2025. 'Other' content increased slightly to 15,813 (1.29%) in November from October's 13,261 (1.42%), but remained relatively suppressed, indicating that diversification tactics remain limited and inconsistent.

In summary, while malware continues to be the primary driver of ASN-based threats, the **pronounced swings in PUAs** – particularly the July 2025 spike followed by consecutive October-November historic lows – underscore **how rapidly attacker strategies can shift**. The November 2025 surge represents the most concentrated malware activity observed throughout the entire reporting period, with the Top 50 ASNs accounting for 97.51% malware share. Network operators are encouraged to closely monitor both PUA and 'other' activity within their ASNs to anticipate potential surges and implement timely mitigation measures, while remaining vigilant against the sustained escalation of malware-based threats.



Background

Mission

The topDNS Initiative (<https://topdns.eco>) was founded in 2021 by members of eco – Association of the Internet Industry. The stable, safe and secure operation of the DNS has proven to be the foundation for the global expansion of the Internet as a universal public resource. However, like any other innovation and every technology, the Internet and the DNS are vulnerable to abuse, such as malware, botnets, phishing, pharming or spam. The topDNS Initiative and its members are committed to reducing online abuse and strengthening the Internet industry.

This report aims to measure malicious URLs at ISPs to improve the community's understanding of online abuse and ultimately enhance industry practices. We hope it will provide insight into how online abuse is changing over time, enabling concrete, specific conversations about the impact of abuse on not only the domain registration industry, but the Internet industry as a whole.

We intend to use this evidence to drive change within the Internet industry, improving understanding of where online abuse is concentrated and discussing effective ways to prevent and mitigate it. Our aim is to highlight good and best practices, as well as identifying areas for improvement and issues that require attention.

Online abuse affects everyone. We aim to leverage this insight to enhance the overall health of the Internet ecosystem. Our goal is to prevent or swiftly mitigate any harm to end users, businesses, governments, civil society organisations, public services and the general public, while safeguarding the advantages and principles of an open Internet.

Although the ultimate goal is to reduce abuse, mitigation should still take place at the appropriate level. The aim is to provide transparent resources for discussions about the prevalence and mitigation of phishing and malware on the open Internet.

Data & Sources

This report is a collaboration with AV-TEST, a member of the [Anti-Malware Testing Standards Organization](#), analysing samples from various sources with AV-TEST's AV Multiscanner system as well as static and dynamic analysis tools. The report aims to provide the industry with evidence and information on the distribution of phishing and malware across the ecosystem. The project will begin by examining the harm caused by malware and phishing. Phishing and malware have been chosen as the focus because there is generally sufficient verifiable evidence of the security threat they pose.

In future reports, we may include other types of abuse and additional metrics, or combine various data points, provided they are consistent with the mission of topDNS and the priorities



chosen for this report. The topDNS Initiative also works very closely with other initiatives, such as the NetBeacon Institute, to work together on data and to reduce online abuse. As a result, we view this report as a complement to the [NetBeacon MAP: Monthly Analysis](#) which provides detailed statistics and data for domain name registries and registrars.

It is important to recognise the limitations of this work. The universal challenge of understanding malicious activity in society means that we can only measure identified and verified harm.

Phishing and malware that has been identified and verified will always be a subset of all existing phishing and malware. There will also be 'false positives', i.e. URLs categorised as phishing or malware when they actually aren't, due to classification errors and differences in standards. Additionally, there is a possibility that reported abuse is biased towards particular geographic regions or activities that are more likely to be reported.

We are committed to refining this project as we go along, and we welcome insights from across the industry to help us improve and iterate. If you would like to get in touch with the topDNS Initiative, please contact: topdns@eco.de



About

eco – Association of the Internet Industry

With approximately 1,000 member companies, eco (<https://international.eco.de>) is the leading Association of the Internet Industry in Europe. Since 1995, eco has been highly instrumental in shaping the Internet, fostering new technologies, forming framework conditions, and representing the interests of its members in politics and international forums. eco has offices based in Cologne, Berlin and Brussels. In its work, eco primarily advocates for a high-performance, reliable and trustworthy ecosystem of digital infrastructures and services.

topDNS Initiative

The stable, safe and secure operation of the DNS has proven to be the foundation for the global expansion of the Internet as a universal public resource. However, like any other innovation and every technology, the Internet and the DNS are vulnerable to abuse, such as malware, botnets, phishing, pharming or spam. The topDNS Initiative (<https://topdns.eco>) and its members are committed to fighting DNS abuse.

AV-TEST Institute

AV-TEST (<https://www.av-test.org/en>) is an independent supplier of services in the fields of IT Security and Antivirus Research, focusing on the detection and analysis of the latest malicious software and its use in comprehensive comparative testing of security products.

Due to the timeliness of the testing data, malware can instantly be analysed and categorised, trends within virus development can be detected early, and IT-security solutions can be tested and certified. The AV-TEST Institute's results provide an exclusive basis of information helping vendors to optimize their products, special interest magazines to publish research data, and end users to make good product choices.

AV-TEST has operated out of Magdeburg (Germany) since 2004 and employs more than 30 team members, professionals with extensive practical experience. The AV-TEST laboratories include 500 client and server systems, where more than 3,500 terabytes of independently collected test data, containing both malicious and harmless sample information, are stored and processed.