



Cybersecurity

Insights From Cloudflare's Network

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A single network that delivers local capabilities with global scale

330+ cities



in 120+ countries, including mainland China



w/160+ cities

for AI inference powered by GPUs



~50 ms

from ~95% of the world's
Internet-connected population



~12,500 networks

directly connect to Cloudflare, including ISPs, cloud
providers, and large enterprises



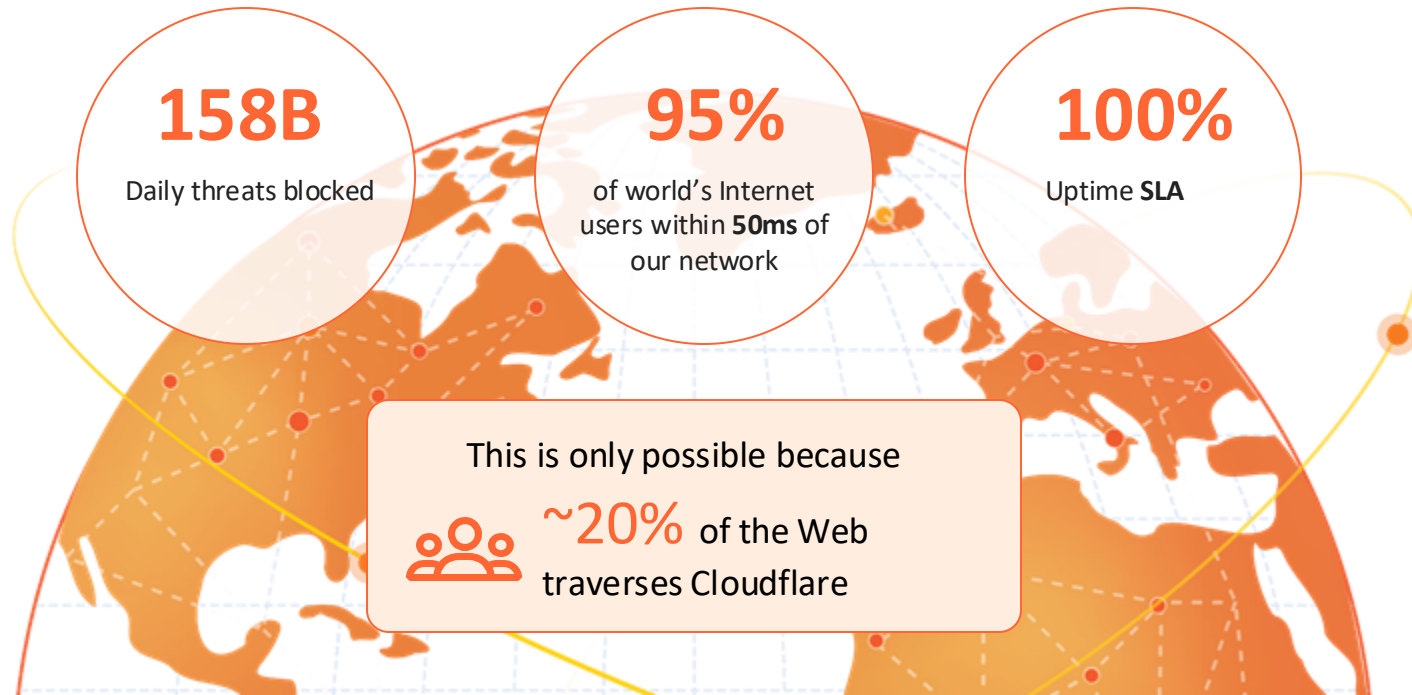
296 Tbps

of network capacity and growing

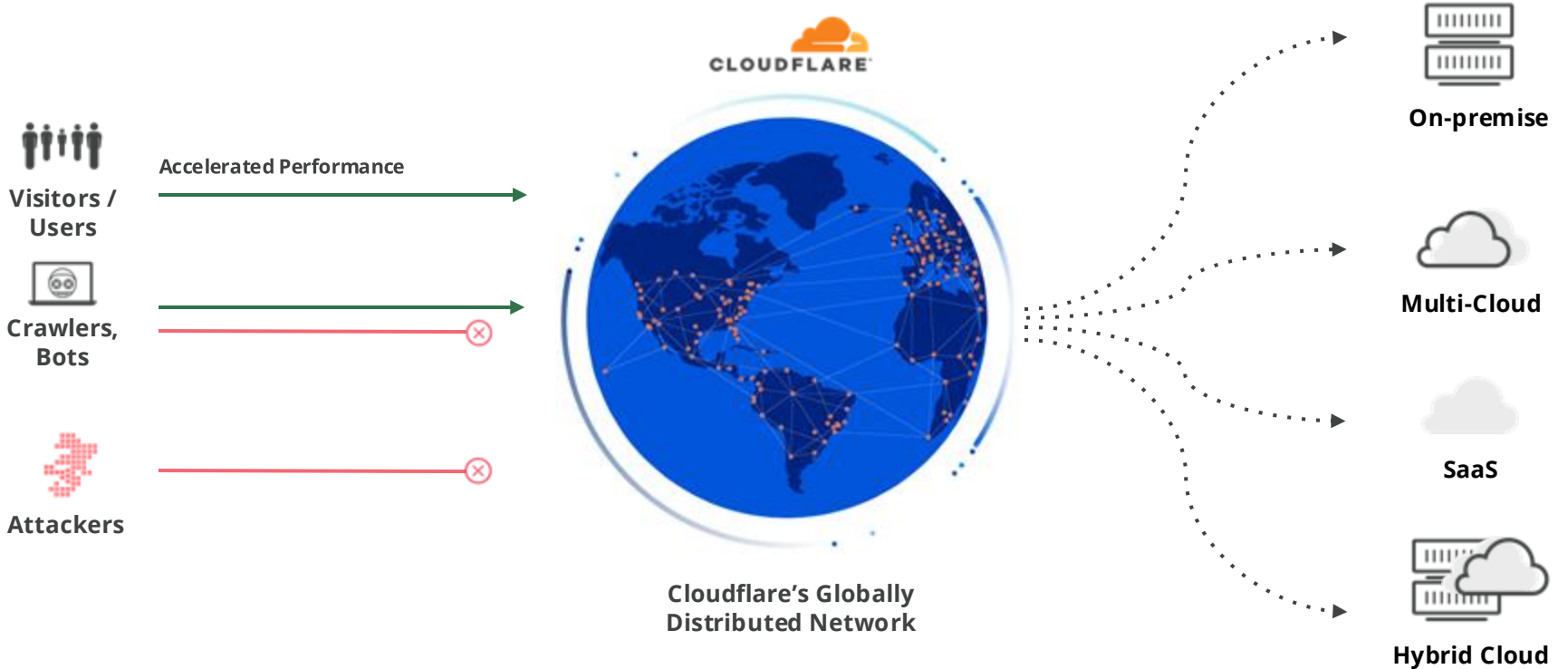


- Cloudflare city
(as of Q1 2024)
- Cloudflare backbone
(as of Q1 2024)

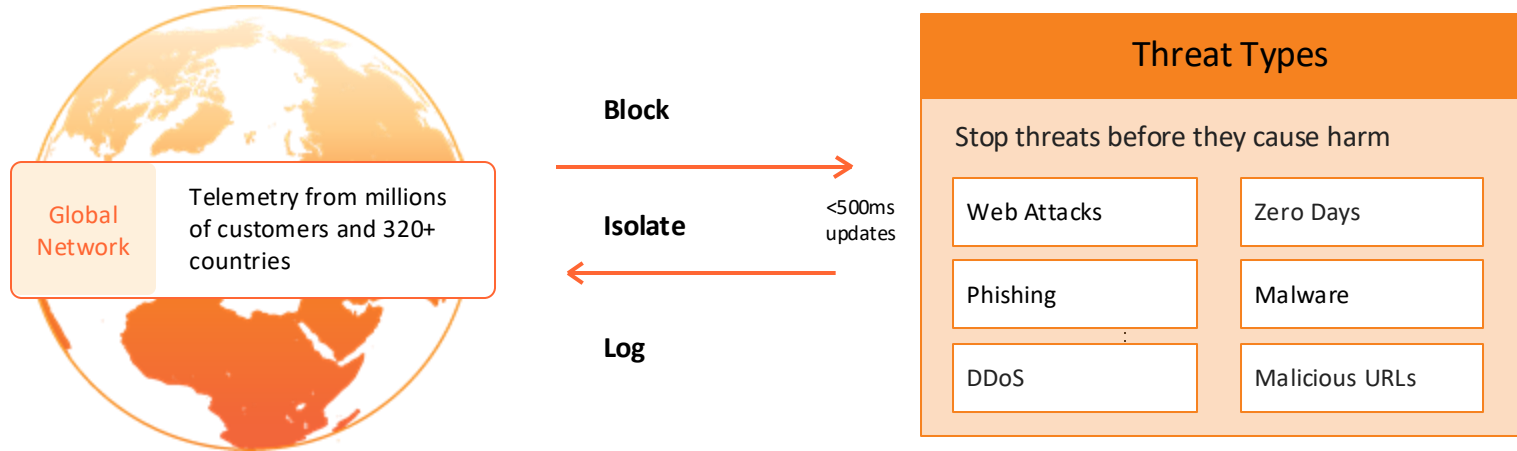
To provide a private, secure, reliable, performant, agile enterprise-grade Internet experience, Cloudflare is everywhere



How does it works ?



Shared intelligence provides comprehensive coverage against threats



Protecting Cloudflare Customers Across

People

- Secure Web Gateway
- Cloud Email Security
- Browser Isolation
- Brand Protection

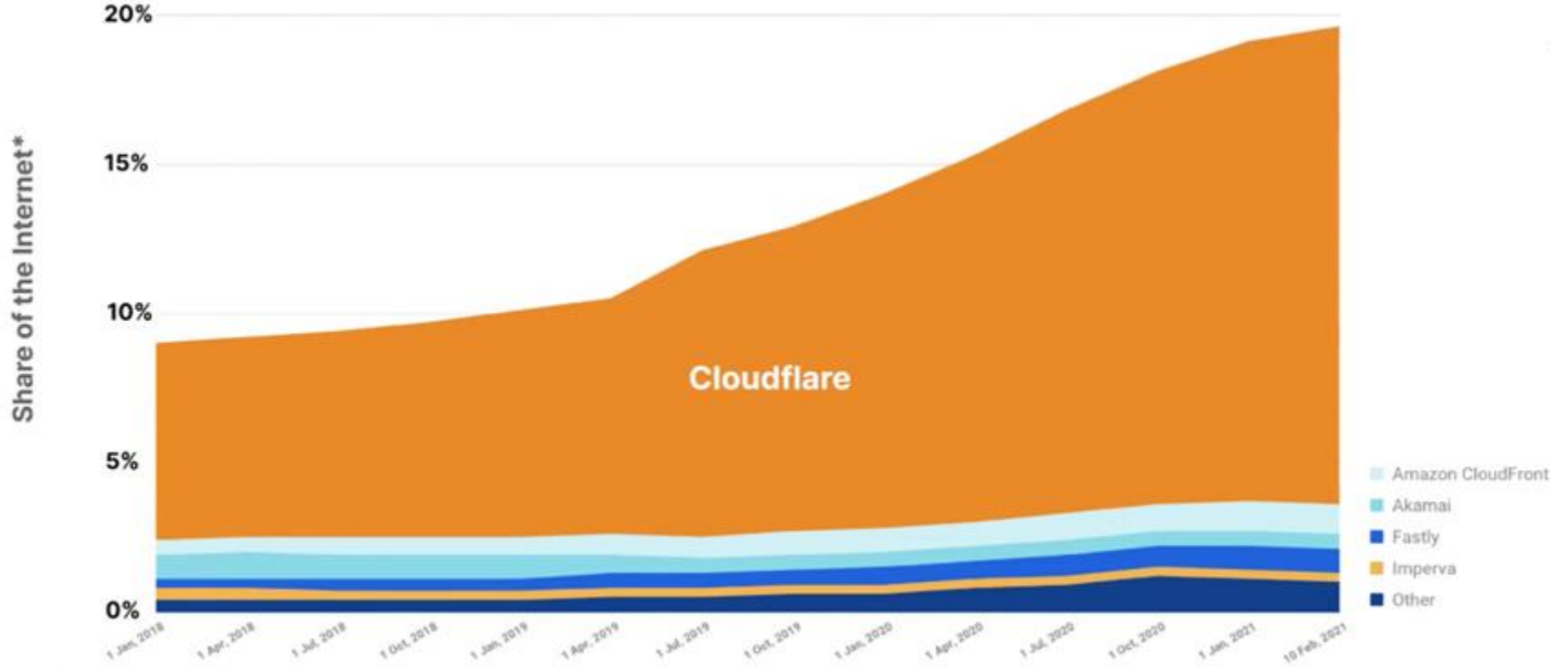
Applications

- Web Application Firewall
- Bot Management
- API Gateway
- L7 DDoS Protection
- Client-Side Security
- Fraud Detection

Networks

- Firewall as a Service
- L3/L4 DDoS Protection

Best security partner



* Based on reverse proxy analysis of W3Tech, a division of Q-Success, which is based on the top 10 million websites according to Alexa and Tranco.

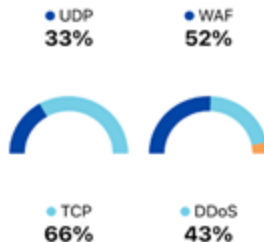
radar.cloudflare.com

Search for locations, autonomous systems, reports, domain and IP address information

- Overview
- Traffic
- Security & Attacks
- Adoption & Usage
- Domain Rankings
- Outage Center
- My Connection

Attack volume

Relative change from previous period



Top source of application layer attacks

Location	Percentage
1. United States	32.1%
2. Germany	4.9%
3. India	4.7%
4. United Kingdom	4.3%
5. China	3.7%



Global BGP Route Leaks

Detected route leaks originated by any ASN

From	By	To	Start	End	BGP Messages
AS3257	AS22356	AS262588	Fri, 3 Feb 2023 22:19	Sat, 4 Feb 2023 00:30	4
AS6762	AS25145	AS34964	Fri, 3 Feb 2023 23:21	Fri, 3 Feb 2023 23:21	3
AS3548	AS262217	AS52468	Fri, 3 Feb 2023 20:14	Fri, 3 Feb 2023 20:20	24
AS23520	AS52263	AS52468	Fri, 3 Feb 2023 20:13	Fri, 3 Feb 2023 21:45	128
AS13287	AS134739	AS13767	Fri, 3 Feb 2023 17:45	Fri, 3 Feb 2023 17:45	1
AS3481	AS17072	AS32098	Fri, 3 Feb 2023 15:16	Fri, 3 Feb 2023 15:16	80
AS6453	AS17072	AS32098	Fri, 3 Feb 2023 15:16	Fri, 3 Feb 2023 15:17	88
AS9299	AS133623	AS135607	Fri, 3 Feb 2023 02:06	Fri, 3 Feb 2023 02:06	67
AS6939	AS133623	AS135607	Fri, 3 Feb 2023 02:05	Fri, 3 Feb 2023 02:06	222
AS4637	AS58480	AS60725	Thu, 2 Feb 2023 22:31	Thu, 2 Feb 2023 22:43	99

Application layer attack activity

Top 10 attacks by target or source location



radar.cloudflare.com

Search for locations, autonomous systems, reports, domain and IP address information

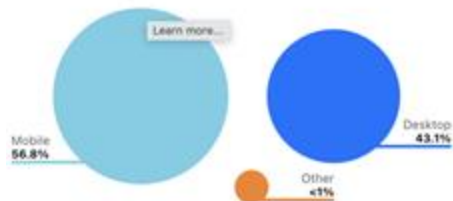
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- Reports
- API

Traffic

Insight into the composition of traffic seen by Cloudflare

Device types

Mobile vs. Desktop



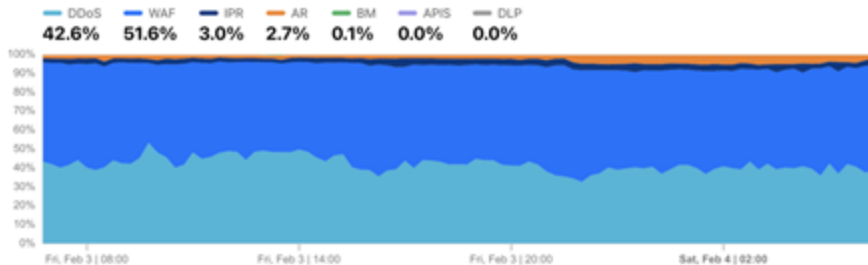
User classification

Bot vs. Human



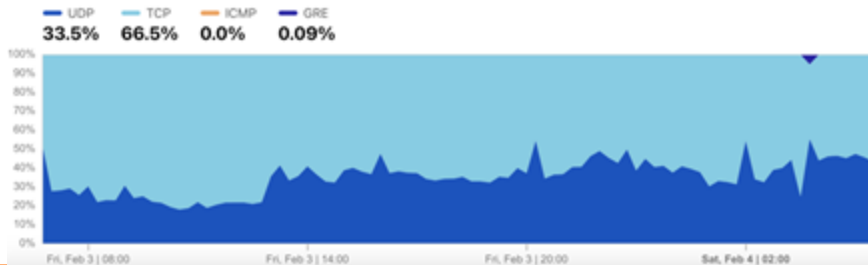
Mitigated traffic sources

Distribution of products used to mitigate application layer attack traffic



Attack methods

Distribution of network layer attack methods



Cloudflare Threat Visibility and Intelligence

Threat trends overview

773%

Increase in size of largest DDoS attack

From 26 million requests per second in 2022, to 201 million in 2023

33%

More APIs found via ML than what orgs self-reported

Organizations have larger API attack surface than they think

74%

Of orgs adopting Zero Trust **plan to or have replaced VPN** for all employees*



22 minutes

from POC to exploitation

Vulnerability weaponization is accelerating

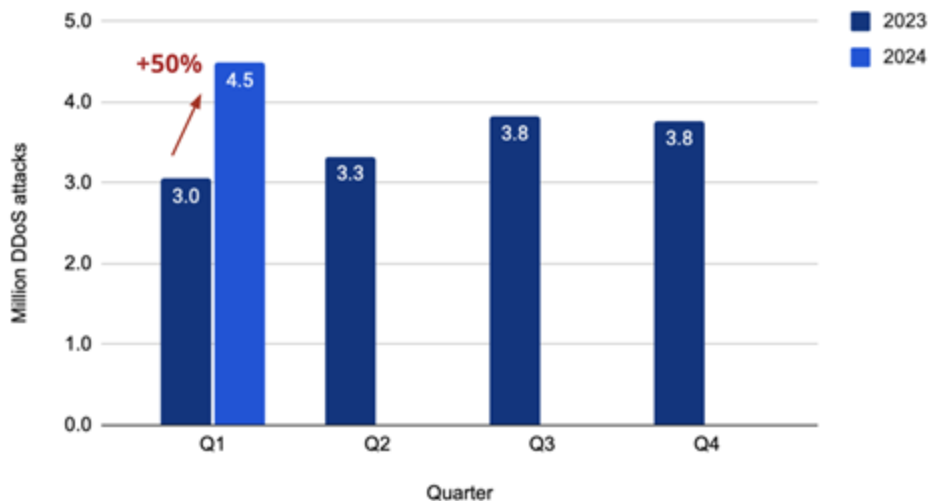


Phishing is still the #1 initial attack vector

DDoS Attack Trends

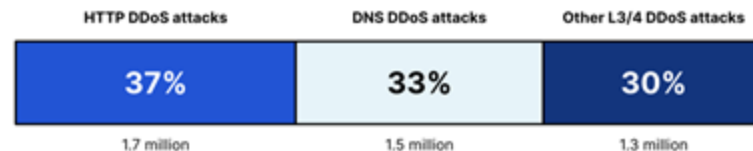
DDoS attacks increased in 2024, especially targeting DNS

DDoS attacks by year and quarter



Distribution of DDoS attack types

2024 Q1

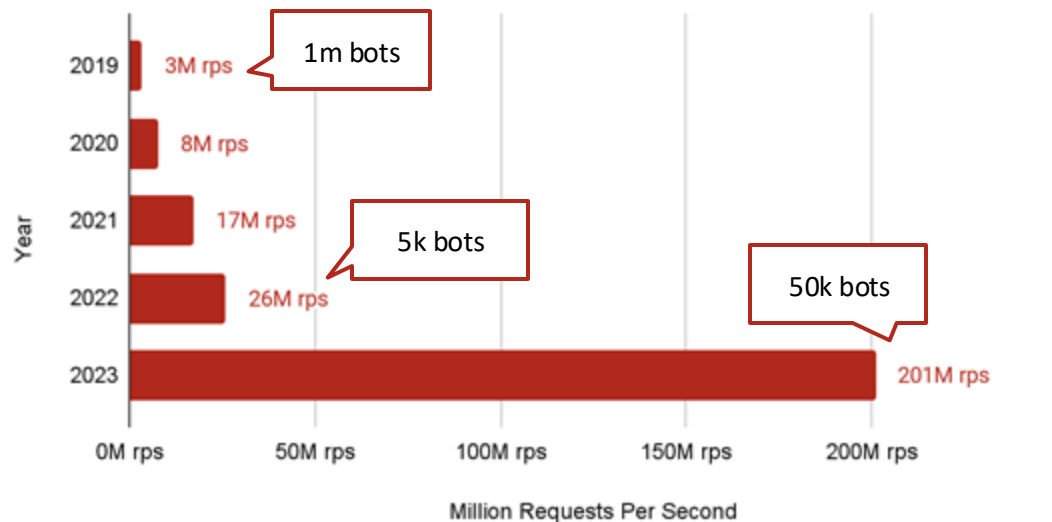


↑80% YoY

DDoS attacks are becoming more complex

Largest HTTP DDoS attacks

As seen by Cloudflare, by year



- In 2023, the max attack size grew by **773% YoY**
- State-level capabilities at the hands of the common cyber criminal
- Increased focus on vulnerabilities in Internet protocols to launch large attacks

DDoS attacks are cheaper than ever to launch

Sites offering DDoS-as-a-service charge as little as \$10 USD for a DDoS attack that lasts an hour as of 2023, or \$35-170 USD for a full day use of their botnets.

5 years ago, it was closer to \$30/hr or \$400/day.

Source: [Secure List by Kaspersky, 2023](#)



Attacks highly focused on causing disruption

- Attacks coincide with geopolitical events
- Global target base spanning numerous critical infrastructure sectors
- Motivations appears to be disruption of services and political opposition to ideological beliefs (no financial gain)



API Risks

Unmanaged APIs leave organizations exposed

58%

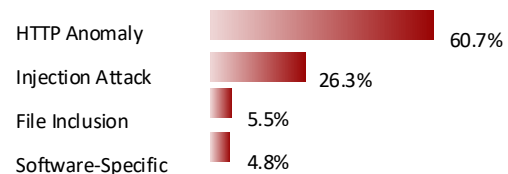
Of dynamic HTTP traffic on Cloudflare network is API related

33%

more API endpoints found by Cloudflare than what organizations self-reported

Top API threats

mitigated by Cloudflare WAF



Phishing Attack Trends

Phishing is still the #1 attack vector

9 of 10

successful cyber attacks start with phishing

~80%

of firms exposed to multi-channel phishing*

\$50 Billion

losses in BEC since 2013, up 17% YoY†

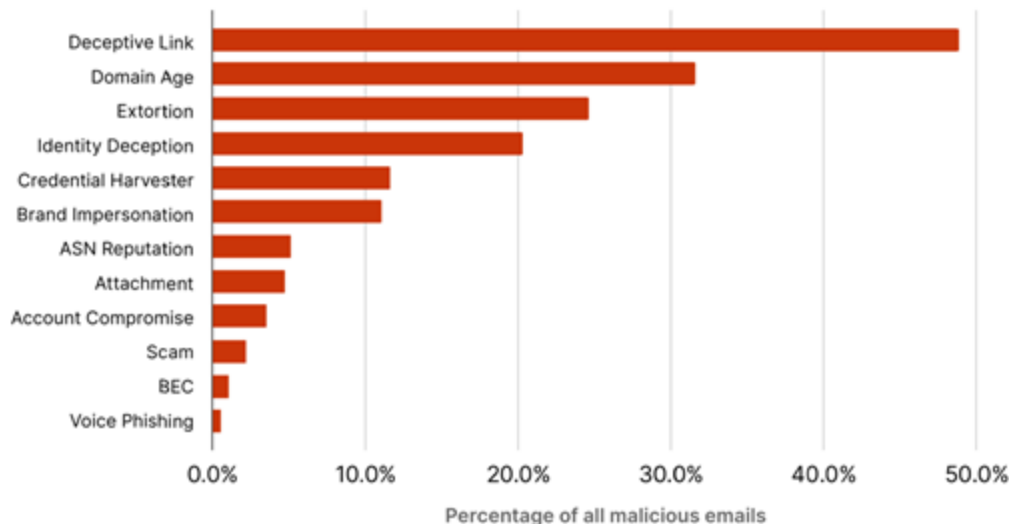


* Source: A commissioned study conducted by Forrester Consulting on behalf of Cloudflare, February 2023

† Source: FBI, [BEC the \\$50 Billion Scam](#)

Deceptive links are the most common threat, but BEC poses notable risk

Top threat categories in malicious emails



BEC attempt with entire faked conversation thread

On Wed, May 12, 2021 at 11:07AM [REDACTED] <[REDACTED]@[REDACTED].com> wrote:

Hi [REDACTED],

I have been told that it is ok to send you the payments ACH

Please send your bank information to me and cc: [REDACTED]

She will set you up with the bank.

[REDACTED]
Accounts Payable Supervisor

On Tue, May 11, 2021 at 11:07AM [REDACTED] <[REDACTED]@[REDACTED].com> wrote:

Good Afternoon [REDACTED]

Please be informed that our mailbox was vandalized overnight and any check mailed to us may not deliver till the issue is resolved. We are hoping to resolve the mailbox issue soon as possible and we can start accepting check payments again. We are respectfully asking you to kindly put a stop payment on the check that has been sent as we might not receive the check in our mailbox.

We now only accept all invoice payment through ACH

Do you have the ability to initiate ACH?

Kindly advise so I can provide you with our ACH Banking instructions

Thank you,
Best Regards,

[REDACTED]
Credit Representative

On Tue, May 11, 2021 at 11:07AM [REDACTED] <[REDACTED]@[REDACTED].com> wrote:

From: [REDACTED]

Sent: Thursday, March 11, 2021 1:01 PM

To: [REDACTED] <[REDACTED]@[REDACTED].com>

Cc: [REDACTED] <[REDACTED]@[REDACTED].com>

Subject: RE: (External) [REDACTED] INC. [REDACTED]

Good morning [REDACTED],

Check # [REDACTED] is in the process of getting signed and should be mailed by tomorrow.

Check # [REDACTED] pays invoices [REDACTED] [REDACTED] [REDACTED] less \$150 jumper fee. [REDACTED]

Best regards,

[REDACTED]
Accounts Payable Supervisor

Vulnerability Exploitation

Vulnerability disclosure and weaponization are accelerating

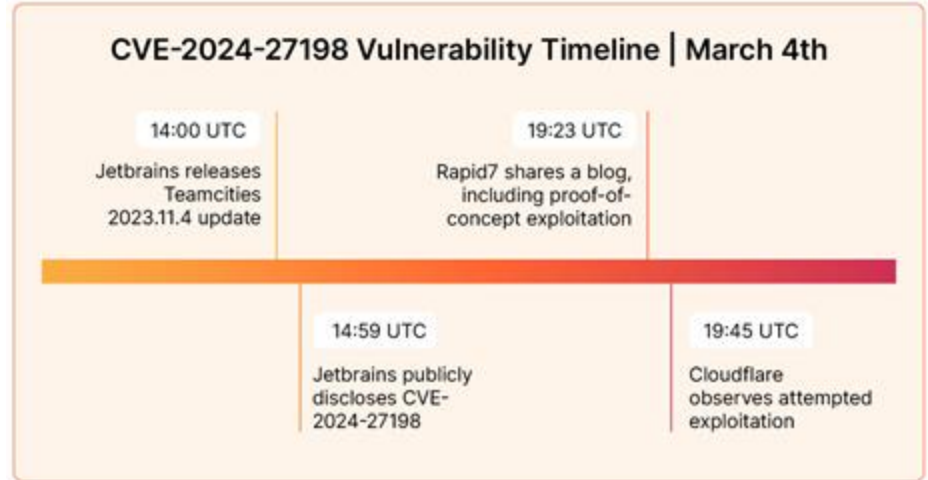
~100

zero-days in 2023, up 50%

29,000+

new CVEs disclosed in 2023

22 minutes from POC to exploitation



Organizations need to respond faster

Recommendations

Recommendations

- 1** Implement modern DDoS mitigation best practices
- 2** Adopt a multi-pronged approach to vulnerability response
- 3** Assess and apply phishing controls that span all exposed user channels
- 4** Measure and improve API maturity level over time
- 5** Get involved in LLM projects early

Under Attack - Always on

Under Attack?

Cyber Emergency Hotline

+1 (866) 325-4810

cloudflare.com/under-attack-hotline

Suffering an Attack?

Your company is currently suffering a cyber attack that threatens the availability, confidentiality or integrity of your internet facing system?

Got a Ransom Note?

You have received a ransom note with the threat of imminent attack or has credible threat intelligence indicating the same threat.

Need immediate onboarding?

You require urgent mitigation of said threat and commits to the immediate on-boarding of the Internet properties targeted by the attack



Cloudflare offers **Comprehensive Protection Against Cyber Attacks in minutes**



Protection Against DDoS, Website, Application, Workforce and Infrastructure Attacks in minutes



24/7 dedicated team to answer your requests - It only takes us hours to have you onboarded and our solution implemented.