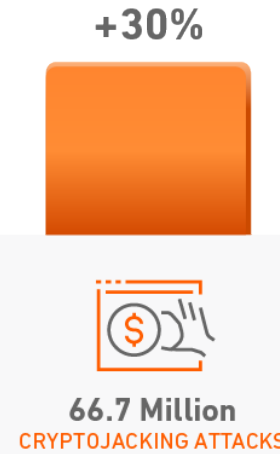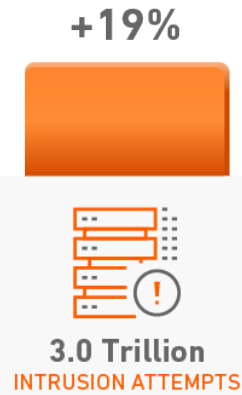**As world events increasingly shape the cyber threat landscape, SonicWall Capture Labs threat researchers have been tracking the shifting trends, targets and tactics observed during the first half of 2022.**

We've compiled our most critical findings in the mid-year update to the 2022 SonicWall Cyber Threat Report, which offers organizations of all sizes the actionable threat intelligence needed to safeguard against an increasingly volatile global threat environment.

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2022 GLOBAL CYBERATTACK TRENDS

The mid-year update to the 2022 SonicWall Cyber Threat Report highlights indicators of change in the threat landscape.

SonicWall's latest threat intelligence through the first half of 2022 uncovers what could be a seismic shift in the global cyber arms race due to geopolitical unrest and climbing cyberattacks.

-23%

236.1 Million
RANSOMWARE ATTACKS

+11%

2.8 Billion
MALWARE ATTACKS

+19%

3.0 Trillion
INTRUSION ATTEMPTS

+30%

66.7 Million
CRYPTOJACKING ATTACKS

+77%

57.0 Million
IoT MALWARE

+132%

4.9 Million
ENCRYPTED THREATS

January - June 2022

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2022 FIRST-HALF KEY FINDINGS

AS WARNED, MALWARE
ON THE RISE

RANSOMWARE
DOWN, FOR NOW

AI THREAT DETECTION
UP 45% IN EARLY 2022

'LOG4SHELL'
VULNERABILITIES STILL
BEING EXPLOITED

ENCRYPTED THREATS
BEATING STANDARD DEFENSES

IOT MALWARE
SPIKING GLOBALLY

CRYPTOJACKING
REACHES RECORD HIGH

ATTACKS ACROSS
NON-STANDARD PORTS
HOLDING STEADY

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Global Malware Volume

↑11%

Despite reaching a seven-year low in 2021, global malware volume was already rising in the second half — a trend that has continued into the first half of 2022 with an **11% surge**.
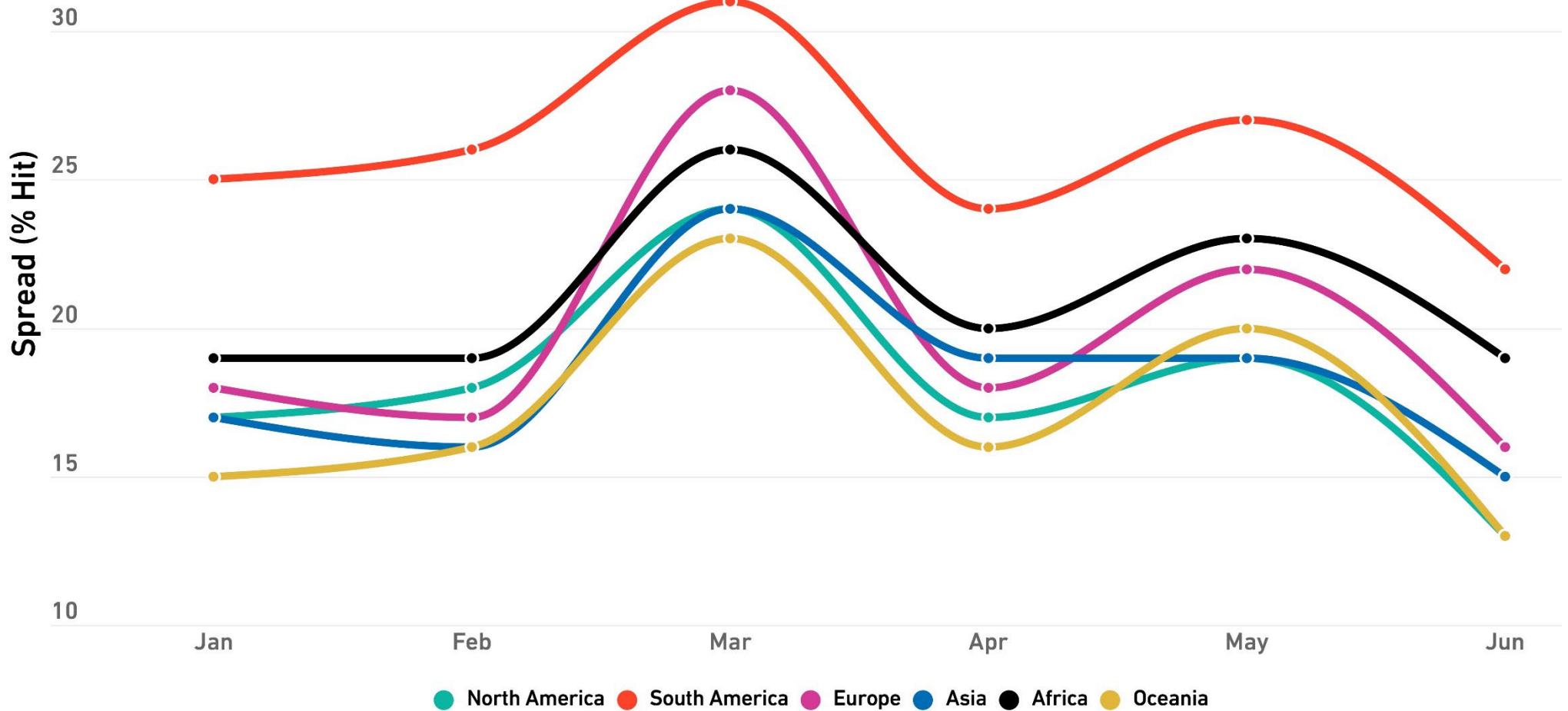
Month	2021	2022
Jan	420,926,267	492,993,576
Feb	365,785,002	438,124,007
Mar	450,188,448	529,695,018
Apr	380,609,926	462,521,699
May	446,478,457	463,161,497
Jun	423,986,360	364,720,683
Jul	397,287,408	
Aug	537,002,609	
Sep	567,220,436	
Oct	504,000,375	
Nov	400,431,808	
Dec	482,989,870	

● 2021   ● 2022

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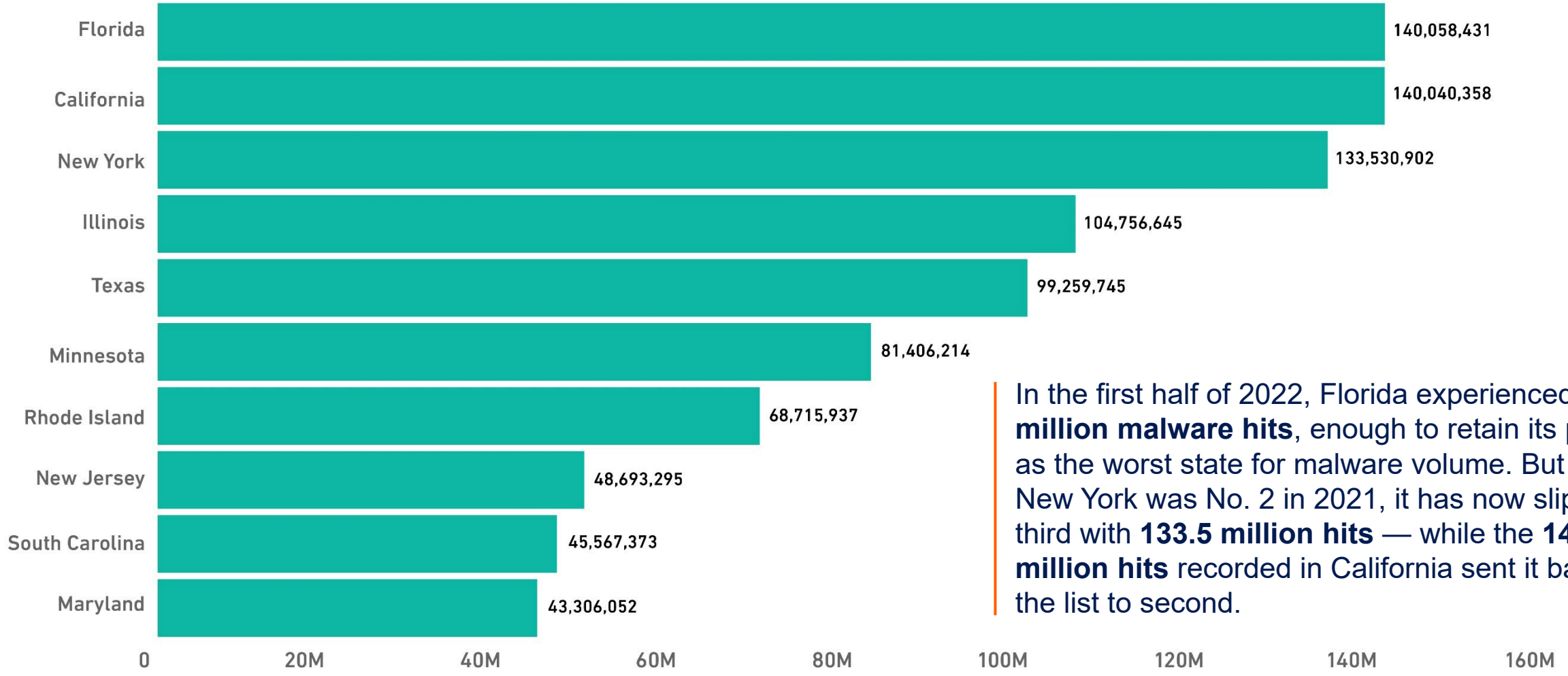
SonicWall tracks the overall spread of malware across global, regional and national footprints to monitor for any abnormal or large-scale trends.

Spread (% Hit)

Legend: ● North America ● South America ● Europe ● Asia ● Africa ● Oceania

MALWARE: TOP 10 U.S. STATES

State	Malware Hits
Florida	140,058,431
California	140,040,358
New York	133,530,902
Illinois	104,756,645
Texas	99,259,745
Minnesota	81,406,214
Rhode Island	68,715,937
New Jersey	48,693,295
South Carolina	45,567,373
Maryland	43,306,052

In the first half of 2022, Florida experienced **140.1 million malware hits**, enough to retain its position as the worst state for malware volume. But while New York was No. 2 in 2021, it has now slipped to third with **133.5 million hits** — while the **140 million hits** recorded in California sent it back up the list to second.
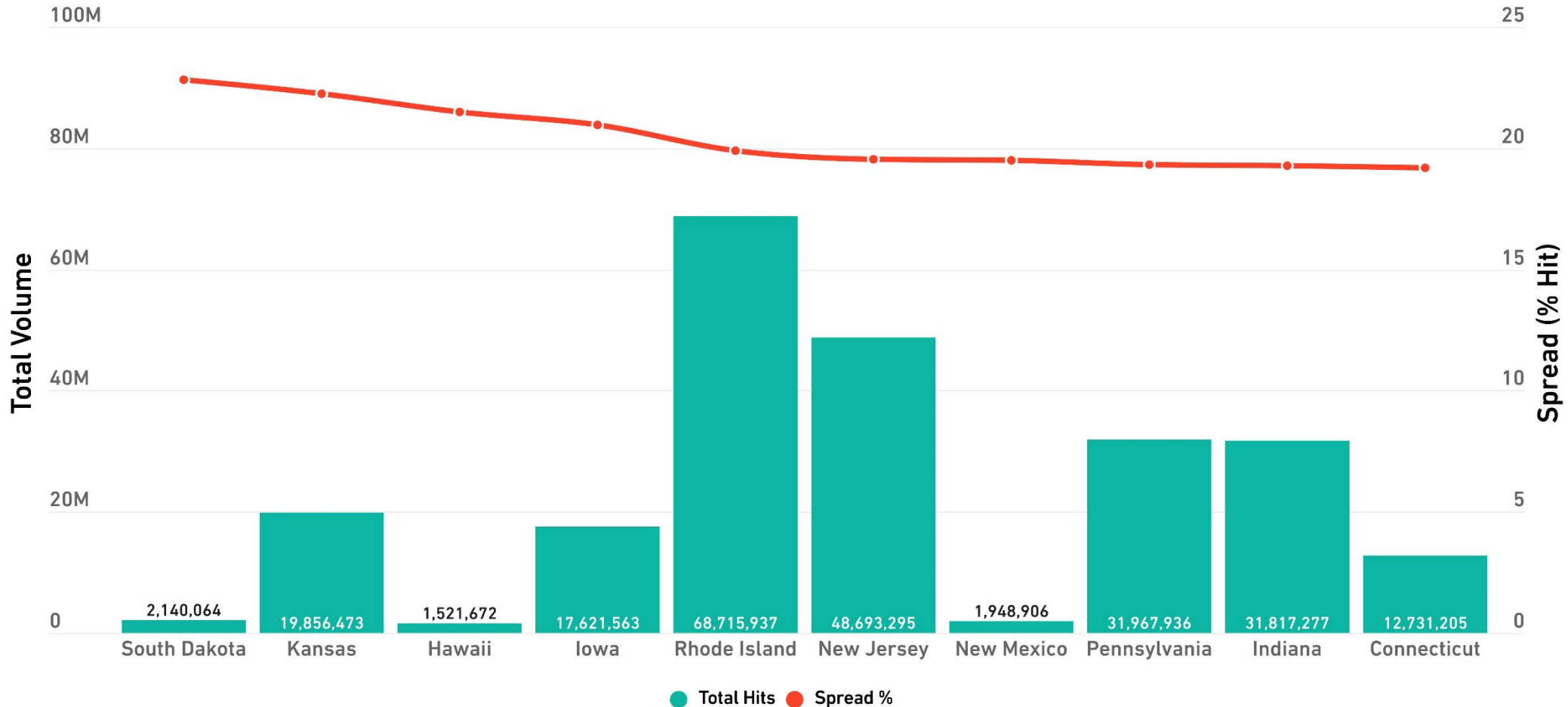
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AS WARNED, MALWARE ON THE RISE

2022 Malware Spread | Top 10 Riskiest U.S. States

SonicWall's spread metric helps track risk across global, national and regional footprints.

In the U.S., for example, an organization is more likely to encounter malware in South Dakota, Kansas and Hawaii, despite much lower volumes than larger states.

Total Volume (left axis): 0, 20M, 40M, 60M, 80M, 100M
Spread (% Hit) (right axis): 0, 5, 10, 15, 20, 25

State	Total Hits
South Dakota	2,140,064
Kansas	19,856,473
Hawaii	1,521,672
Iowa	17,621,563
Rhode Island	68,715,937
New Jersey	48,693,295
New Mexico	1,948,906
Pennsylvania	31,967,936
Indiana	31,817,277
Connecticut	12,731,205

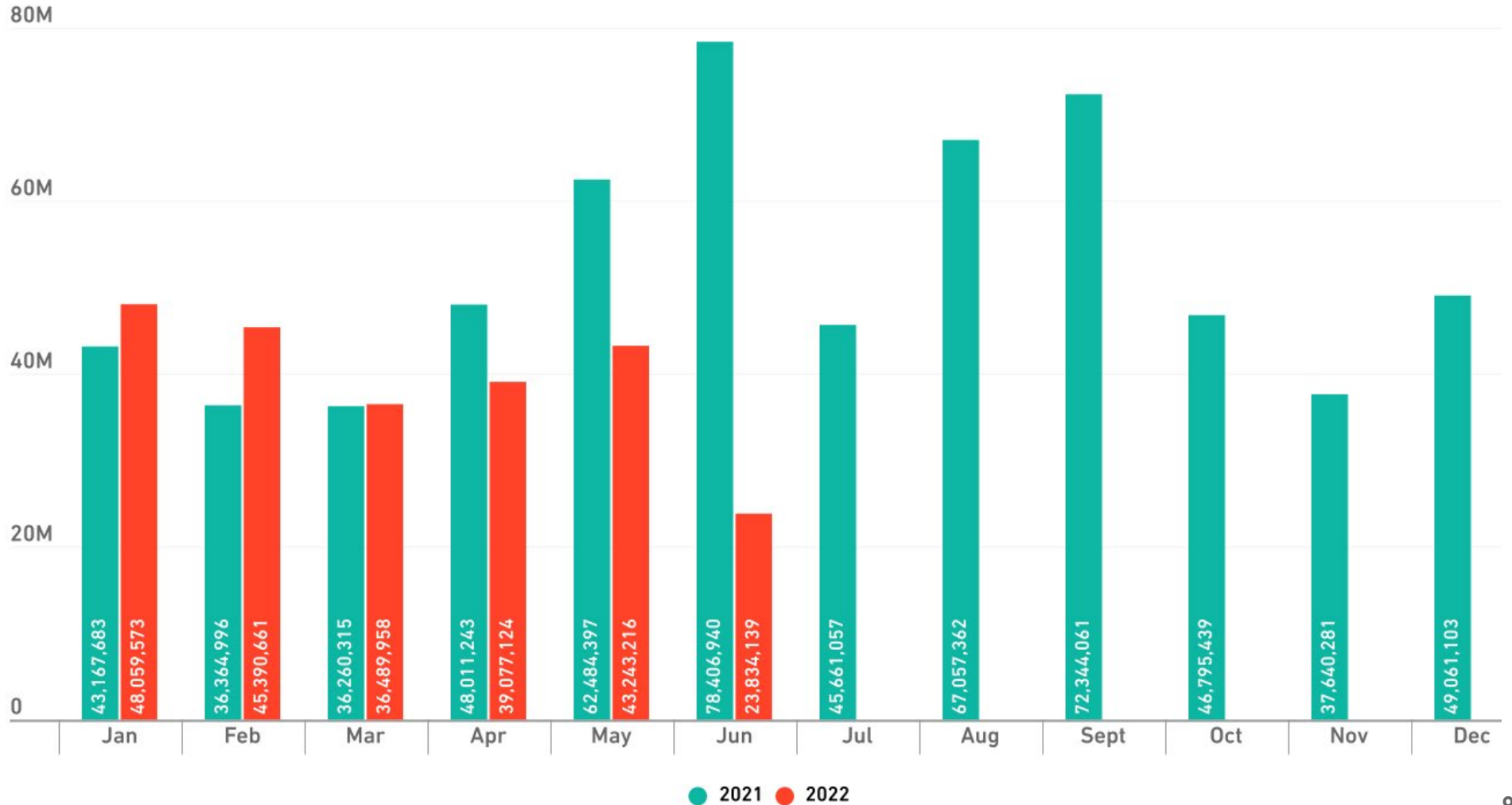Legend: ● Total Hits ● Spread %

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RANSOMWARE DOWN, FOR NOW

∨23%

While the past two years have seen a meteoric rise in ransomware, the first half of 2022 brought a long-awaited reversal, as global **ransomware volume fell 23%** year-to-date.

Global Ransomware Volume

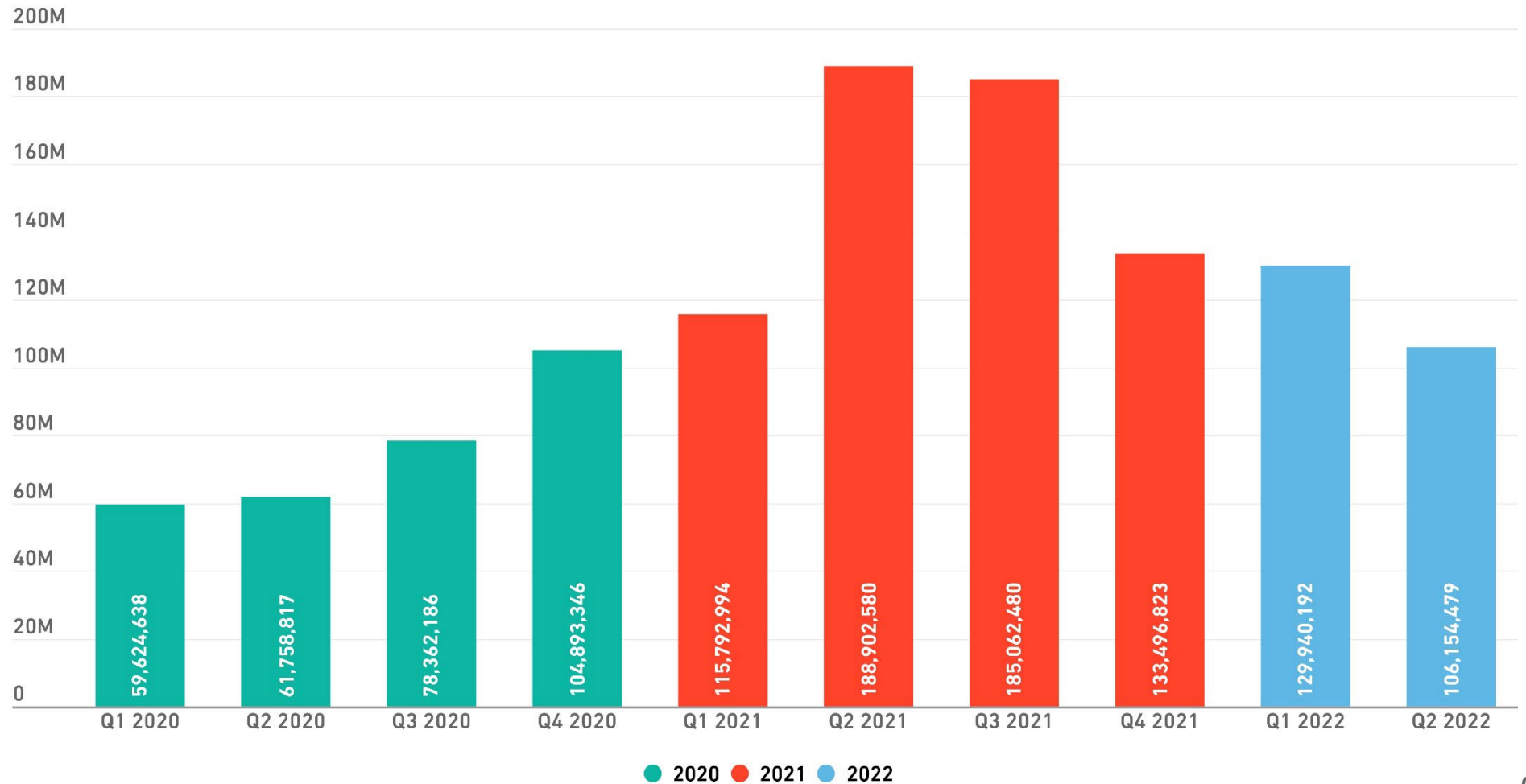| Month	2021	2022
Jan	43,167,683	48,059,573
Feb	36,364,996	45,390,661
Mar	36,260,315	36,489,958
Apr	48,011,243	39,077,124
May	62,484,397	43,243,216
Jun	78,406,940	23,834,139
Jul	45,661,057	
Aug	67,057,362	
Sept	72,344,061	
Oct	46,795,439	
Nov	37,640,281	
Dec	49,061,103	

● 2021 ● 2022

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RANSOMWARE DOWN, FOR NOW

After a record-breaking 2021, overall ransomware attacks have trended down in the first half of 2022, **decreasing globally for the fourth consecutive quarter.**

Government sanctions, supply-chain deficiencies, dropping cryptocurrency prices and limited availability of needed infrastructure are all making it more difficult for cybercriminals.
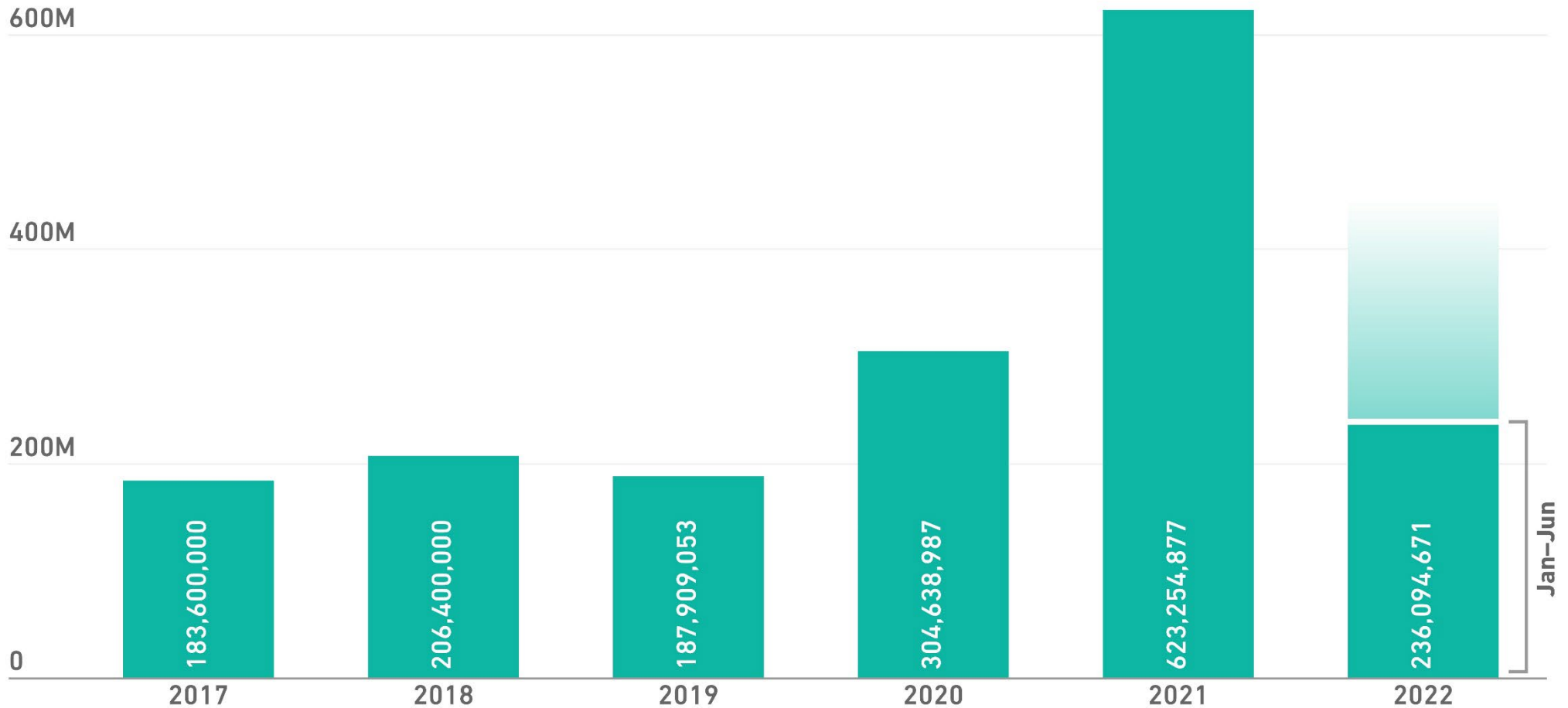
Global Ransomware by Quarter

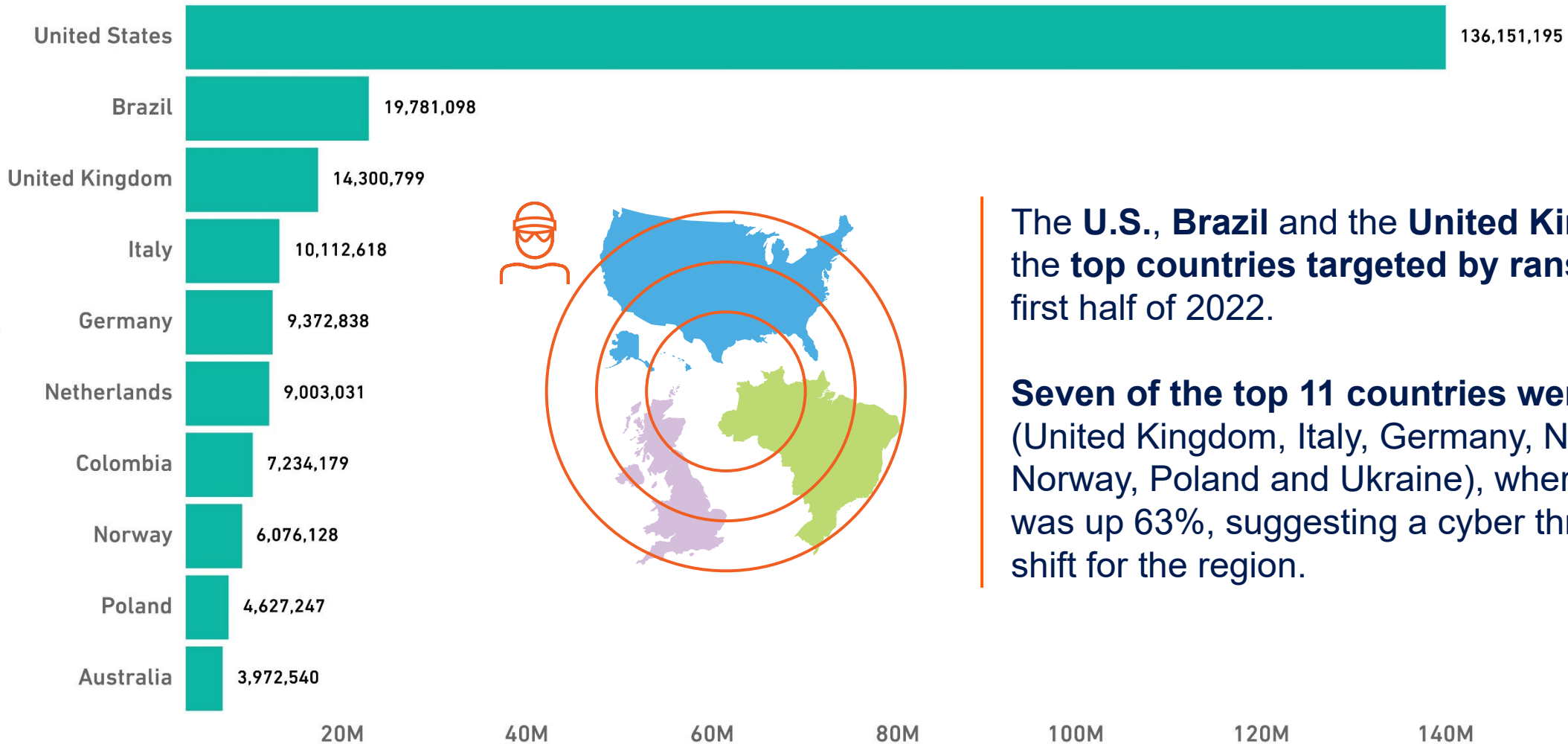| Quarter	Value
Q1 2020	59,624,638
Q2 2020	61,758,817
Q3 2020	78,362,186
Q4 2020	104,893,346
Q1 2021	115,792,994
Q2 2021	188,902,580
Q3 2021	185,062,480
Q4 2021	133,496,823
Q1 2022	129,940,192
Q2 2022	106,154,479

● 2020 ● 2021 ● 2022

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.0

RANSOMWARE DOWN, FOR NOW

Even in decline, year-to-date **ransomware volume exceeded full-year totals** of 2017, 2018 and 2019.

Global Ransomware Volume by Year

- 600M
- 400M
- 200M
- 0

Year	Volume
2017	183,600,000
2018	206,400,000
2019	187,909,053
2020	304,638,987
2021	623,254,877
2022	236,094,671 (Jan–Jun)

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RANSOMWARE: TOP 10 COUNTIRES

Country	Value
United States	136,151,195
Brazil	19,781,098
United Kingdom	14,300,799
Italy	10,112,618
Germany	9,372,838
Netherlands	9,003,031
Colombia	7,234,179
Norway	6,076,128
Poland	4,627,247
Australia	3,972,540

The **U.S.**, **Brazil** and the **United Kingdom** were the **top countries targeted by ransomware** in the first half of 2022.

Seven of the top 11 countries were in Europe (United Kingdom, Italy, Germany, Netherlands, Norway, Poland and Ukraine), where ransomware was up 63%, suggesting a cyber threat climate shift for the region.

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RTDMI DETECTIONS RISE DRAMATICALLY

↑45%

In the first half of 2022, SonicWall's patented RTDMI™ technology discovered **270,228** never-before-seen malware variants.

This marks a **45% increase** over the first half of 2021, and an average of 1,501 new variants discovered per day.

### 'Never-Before-Seen' Malware Variants Found by RTDMI™

Bar chart showing malware variants by quarter (Q1–Q4) for years 2018–2022.

Q1: 2018: 3,500; 2019: 39,082; 2020: 47,291; 2021: 68,703; 2022: 147,851
Q2: 2018: 8,900; 2019: 35,143; 2020: 73,619; 2021: 117,242; 2022: 122,377
Q3: 2018: 26,900; 2019: 38,458; 2020: 56,486; 2021: 121,571
Q4: 2018: 35,010; 2019: 41,226; 2020: 90,966; 2021: 141,390

Legend: ● 2018 ● 2019 ● 2020 ● 2021 ● 2022
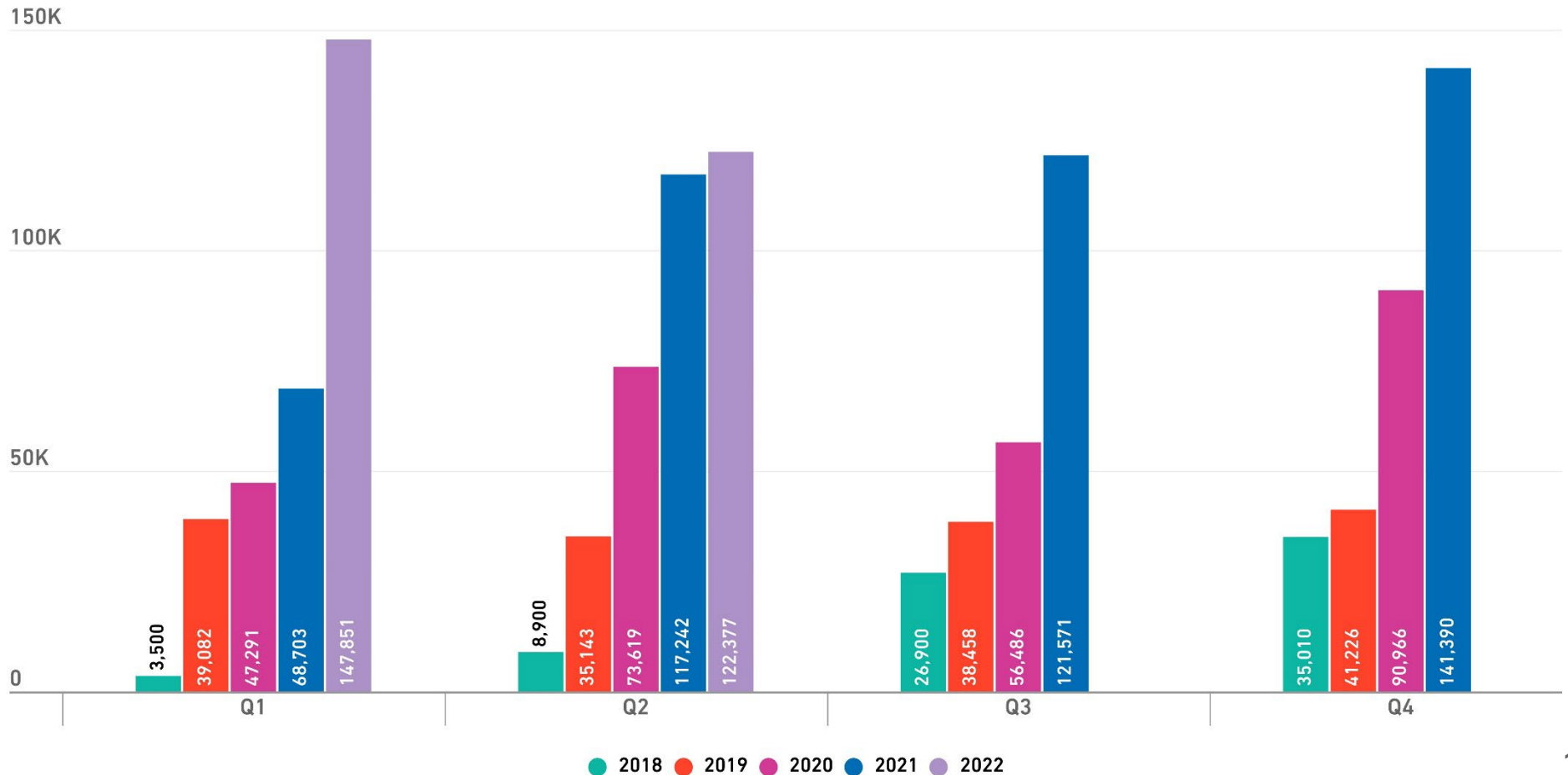
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RTDMI DETECTIONS RISE DRAMATICALLY

2022 New Malicious File Type Detections | Capture ATP

SonicWall recorded increases in both new malicious PDFs **(+9% YTD)** and Office files **(+18%)** in the first half of 2022.

Unsurprisingly, executable files made up **34%** of all new malicious file types detected in the first half of 2022, up from a **30%** share for full-year 2021.

Other 3.12%

PDF 18.27%

Scripts 18.70%

Archive 15.79%

Office 10.28%

Executables 33.83%
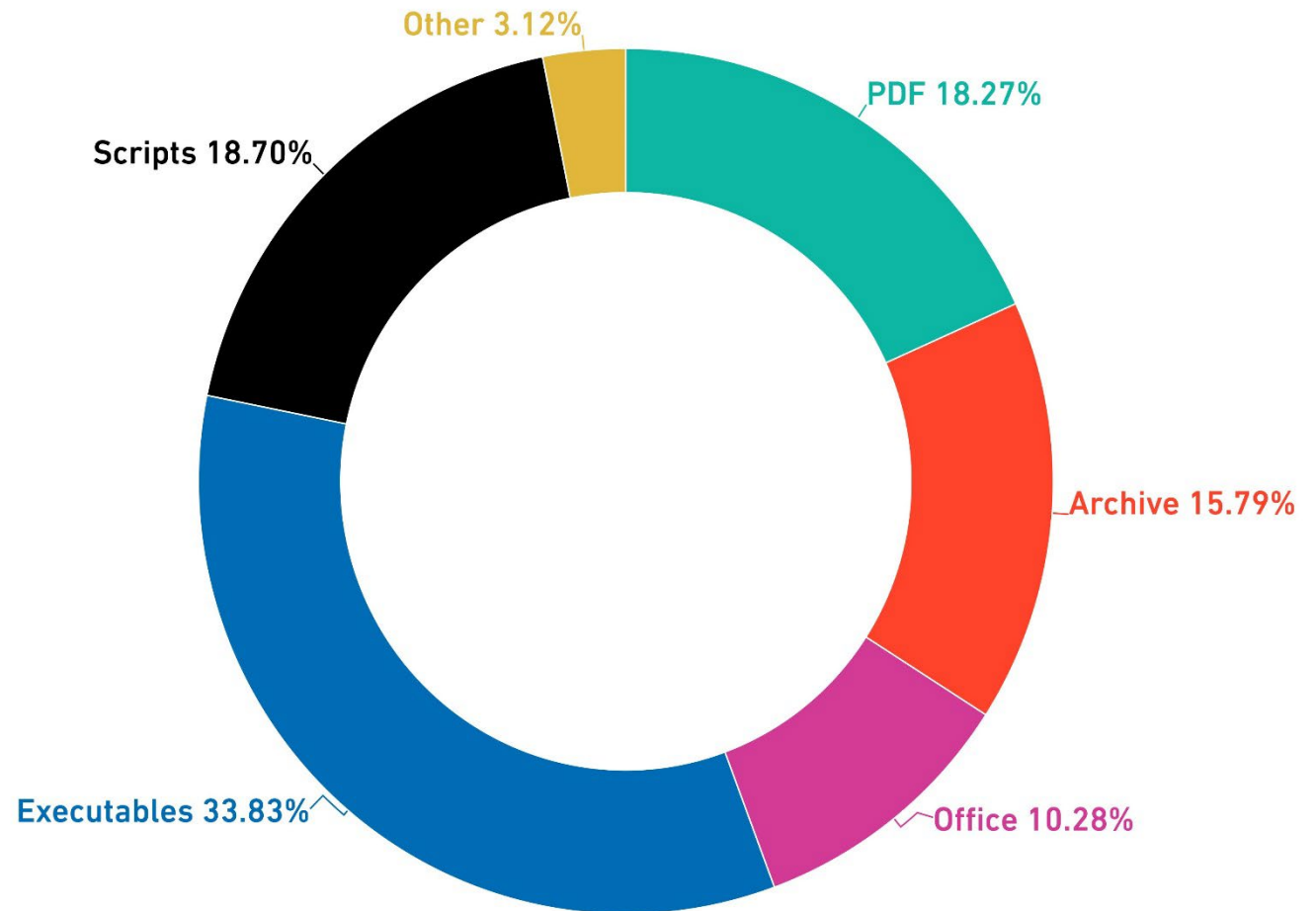
557.5M

Threat actors pivoted extremely quickly to attack Log4Shell vulnerabilities.

SonicWall recorded **557.5 million** Log4Shell exploit attempts from the onset around Dec. 11 through the end of June 2022.

That's an average of **2.8 million** exploits attempts *each day.*

Malicious Log4Shell Exploit Attempts

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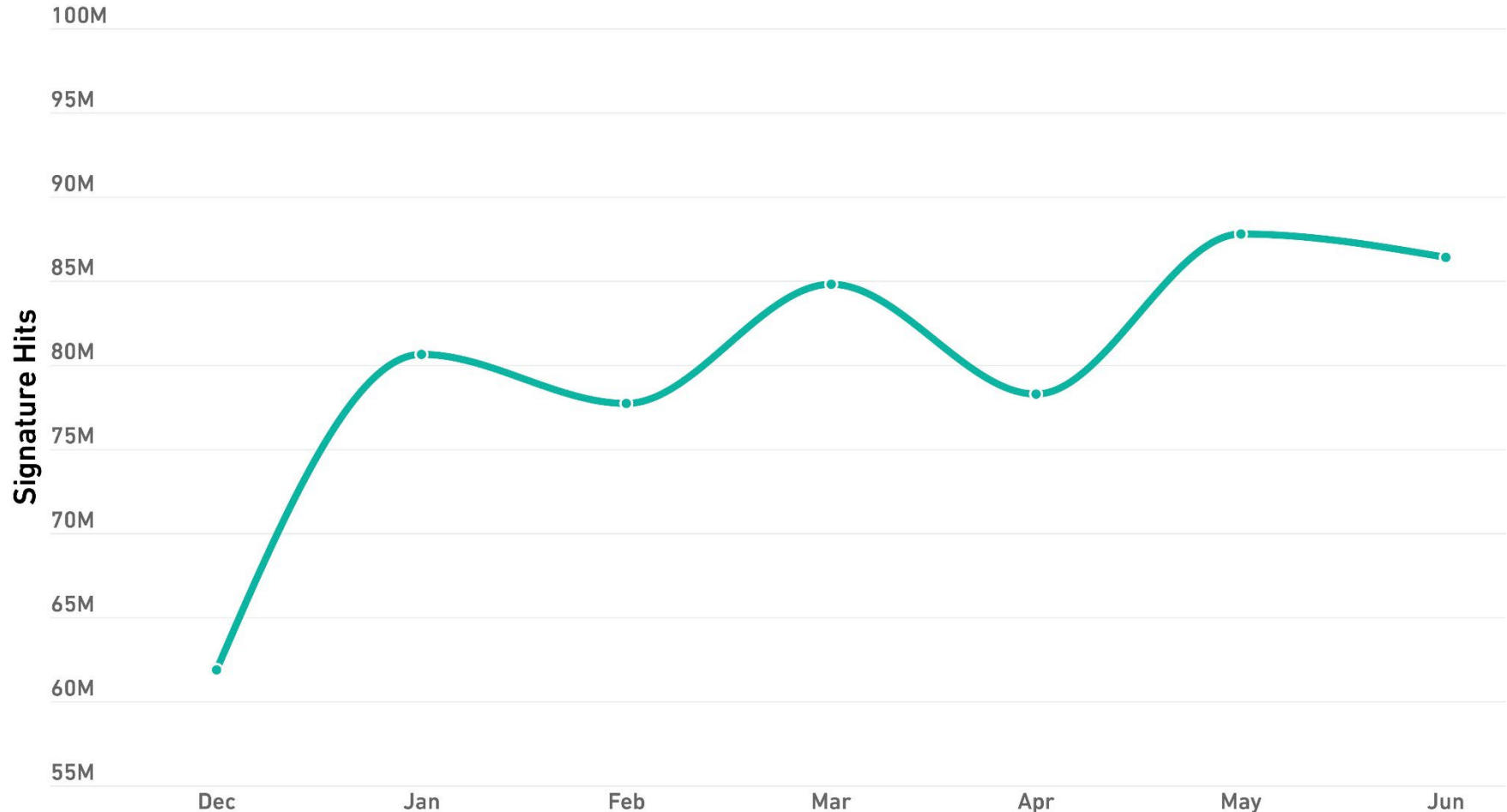
ENCRYPTED THREATS BEATING STANDARD DEFENSES

^ 132%

Encrypted threats (i.e., malware sent over HTTPs) **jumped 132%** year-to-date, with Q2 showing particularly strong increases across most key verticals.

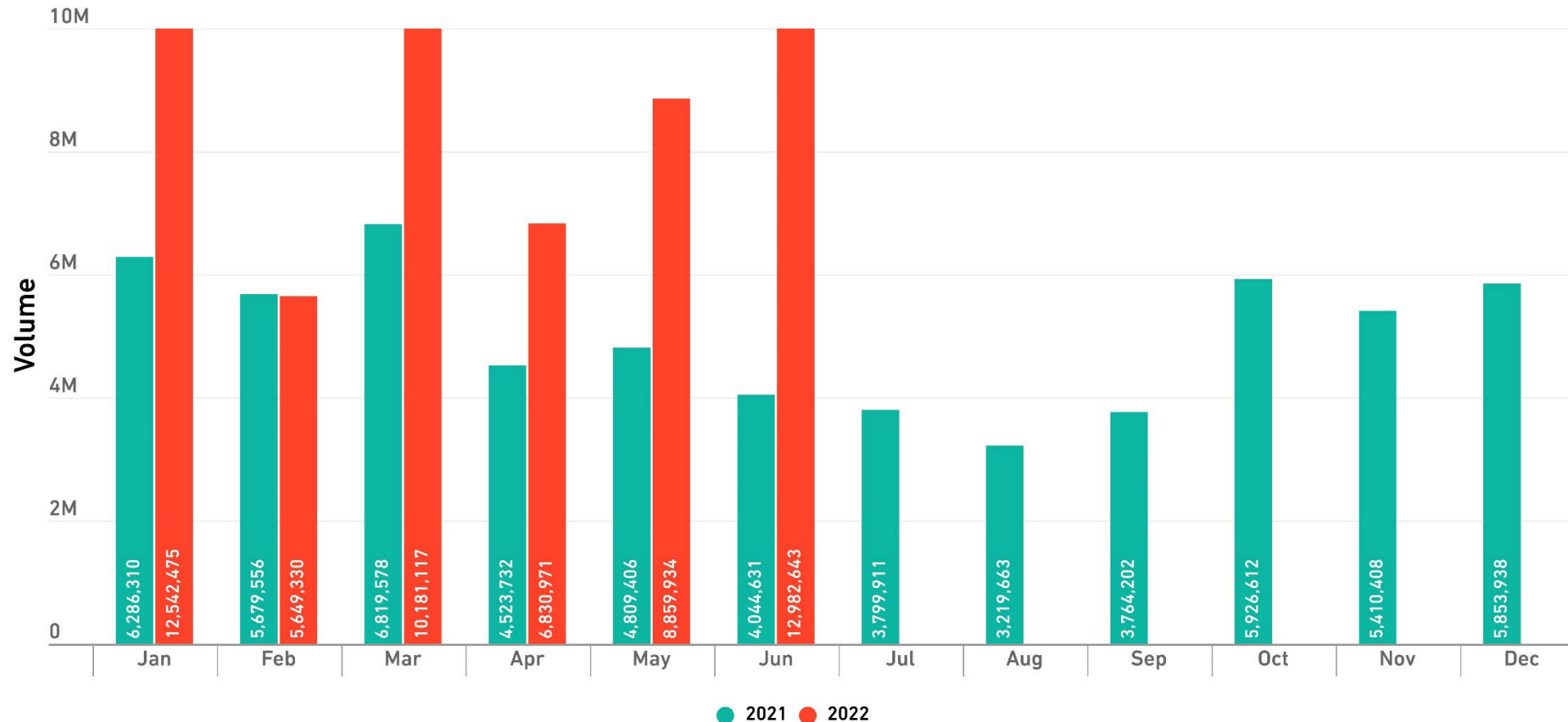## % of Customers Targeted by Malware over HTTPs in 2022

% Targeted

● Overall   ● Government   ● Education   ● Healthcare   ● Retail   ● Finance

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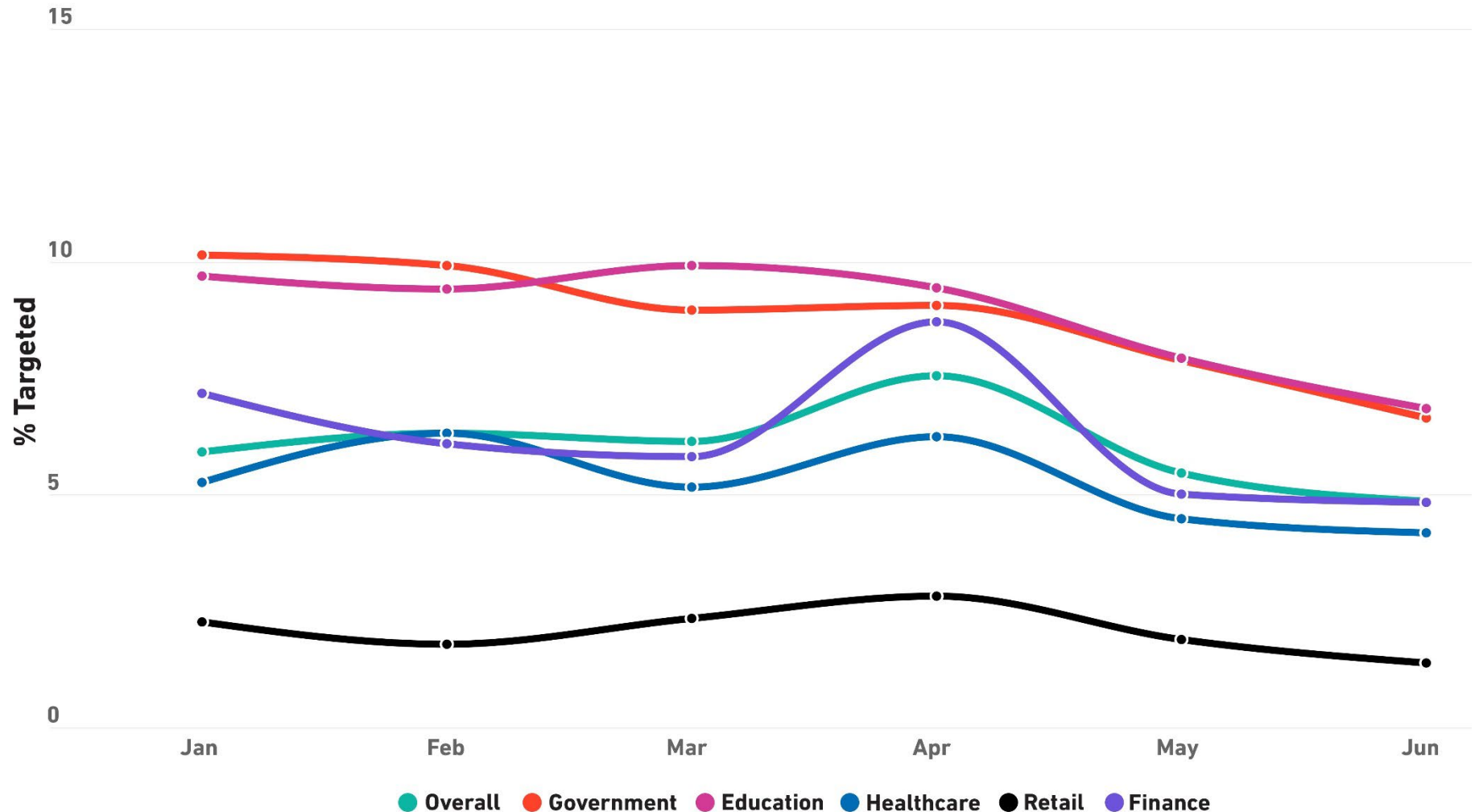
IoT MALWARE SPIKING GLOBALLY

^77%

In the first half of 2022, global **IoT malware volume rose 77%** to 57 million — the highest since SonicWall began tracking these attacks, and just short of the 60.1 million hits recorded in all of 2021.
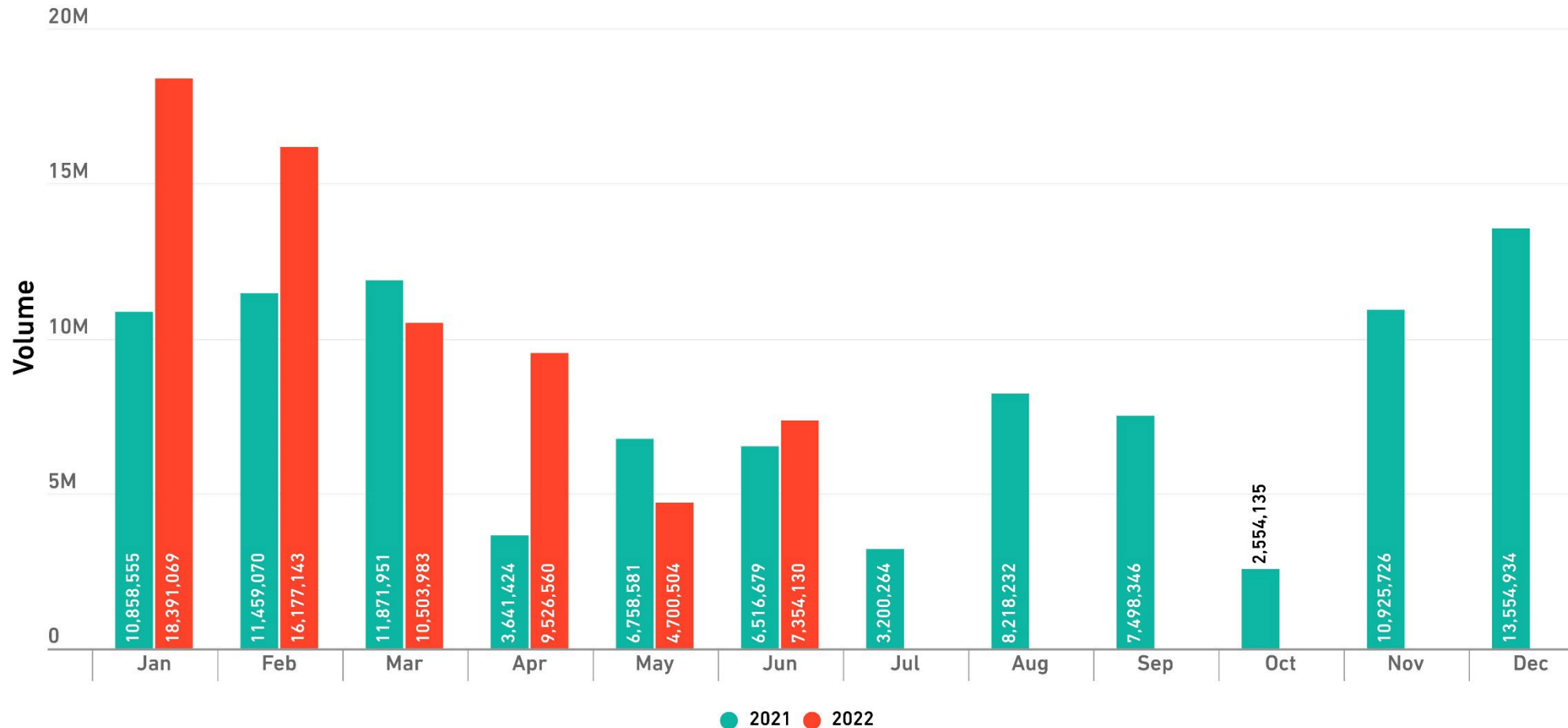
Global IoT Malware Volume

Month	2021	2022
Jan	6,286,310	12,542,475
Feb	5,679,556	5,649,330
Mar	6,819,578	10,181,117
Apr	4,523,732	6,830,971
May	4,809,406	8,859,934
Jun	4,044,631	12,982,643
Jul	3,799,911	
Aug	3,219,663	
Sep	3,764,202	
Oct	5,926,612	
Nov	5,410,408	
Dec	5,853,938	

● 2021 ● 2022

CRYPTOJACKING REACHES RECORD HIGH

Despite a drop in the price of cryptocurrency, global cryptojacking volume rose to **66.7 million** in the first half of 2022 — up **30%** over the first half of 2021.
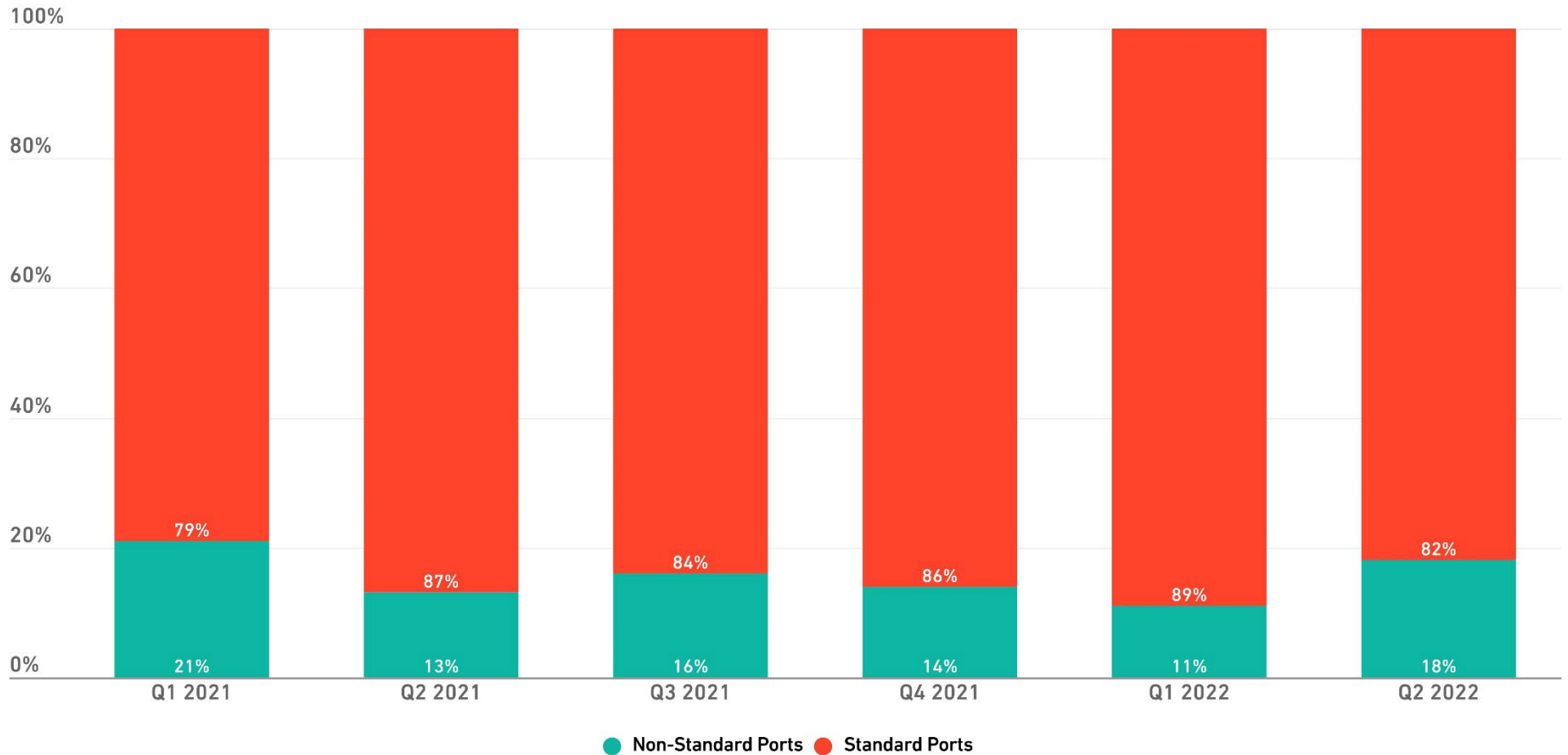
Global Cryptojacking Volume

Volume

Month	2021	2022
Jan	10,858,555	18,391,069
Feb	11,459,070	16,177,143
Mar	11,871,951	10,503,983
Apr	3,641,424	9,526,560
May	6,758,581	4,700,504
Jun	6,516,679	7,354,130
Jul	3,200,264	
Aug	8,218,232	
Sep	7,498,346	
Oct	2,554,135	
Nov	10,925,726	
Dec	13,554,934	

● 2021 ● 2022

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2021-22 Global Malware Attacks

15%

Use of non-standard ports to traffic malware remained flat in early 2022.

On average, **15% of malware was delivered via non-standard ports** for the first half of the year.

	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022
Standard Ports	79%	87%	84%	86%	89%	82%
Non-Standard Ports	21%	13%	16%	14%	11%	18%

● Non-Standard Ports ● Standard Ports

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