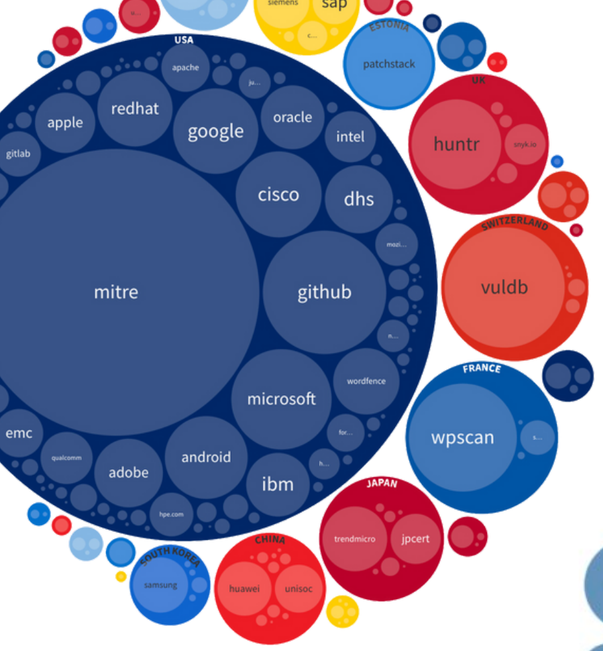

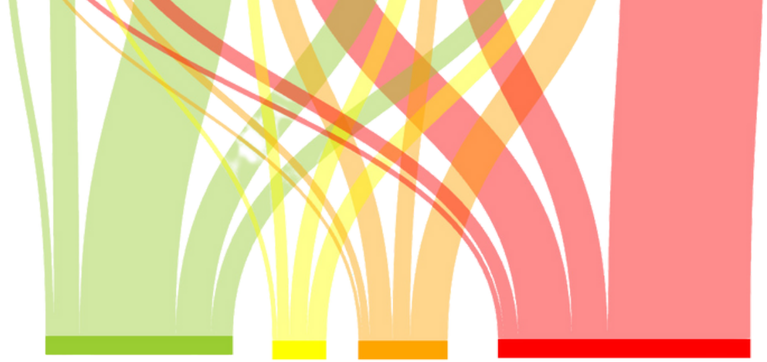

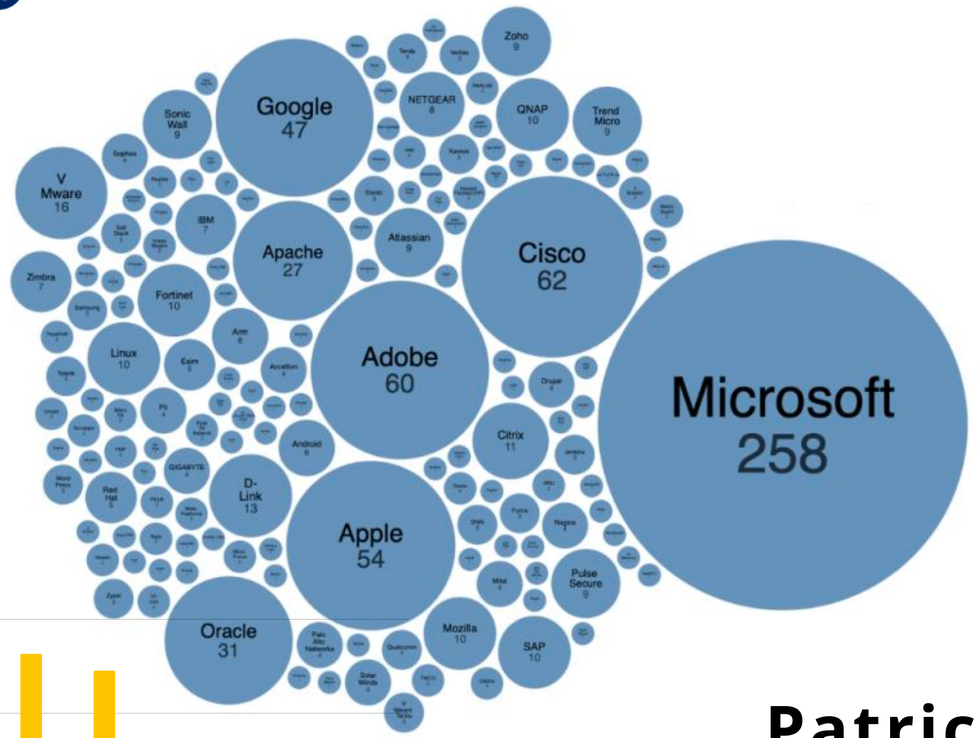

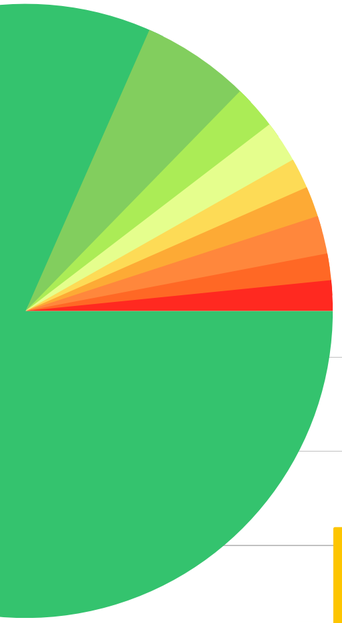

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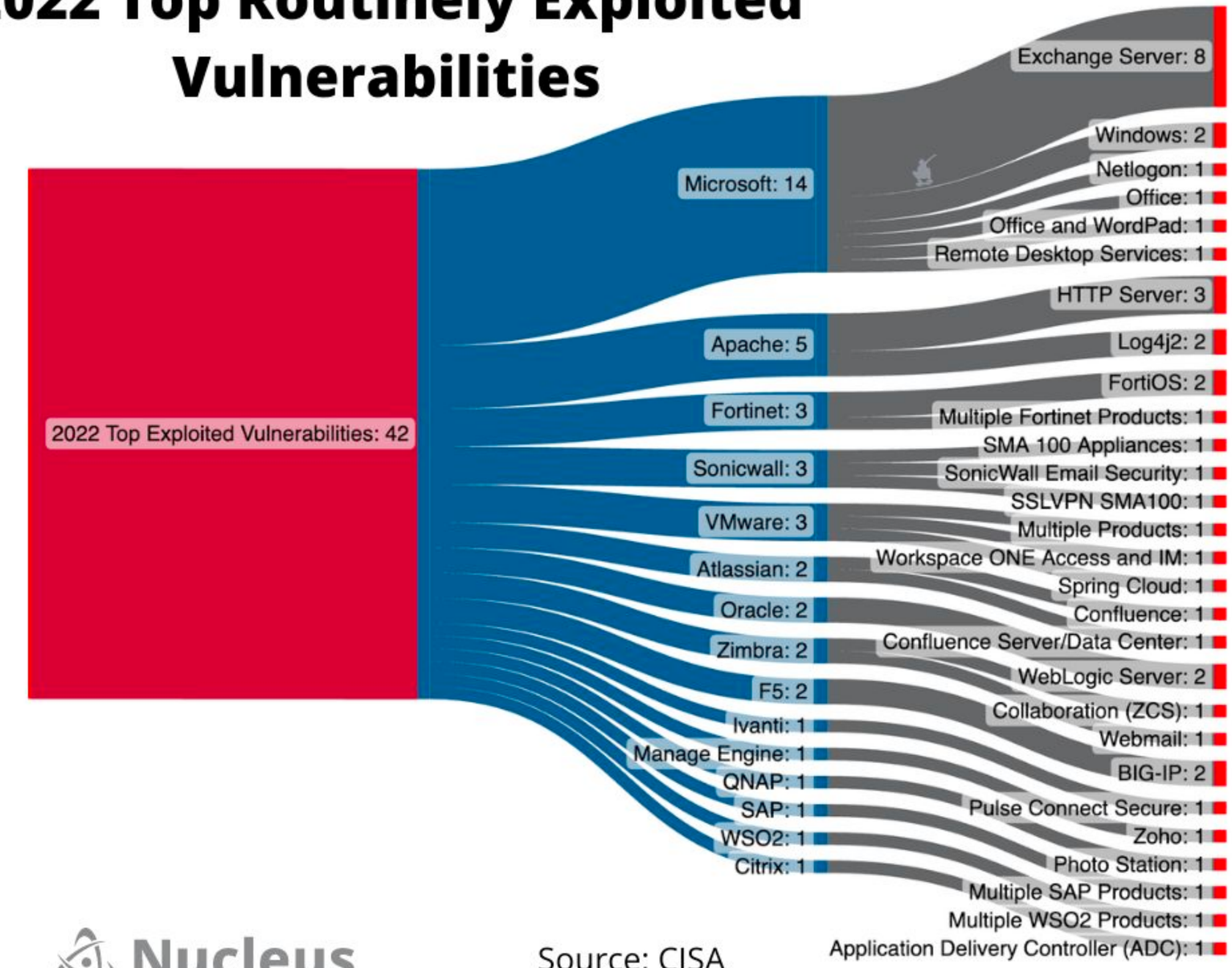
INSIGHTS INTO VULNERABILITY MANAGEMENT

Patrick Garrity
Security Researcher
/in/patrickmgarrity/


CYBERSECURITY & INFRASTRUCTURE
SECURITY AGENCY
CISA
KEV

2022 Top Routinely Exploited Vulnerabilities



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Source: CISA

Created By: Patrick Garrity, Security Researcher, Nucleus Security

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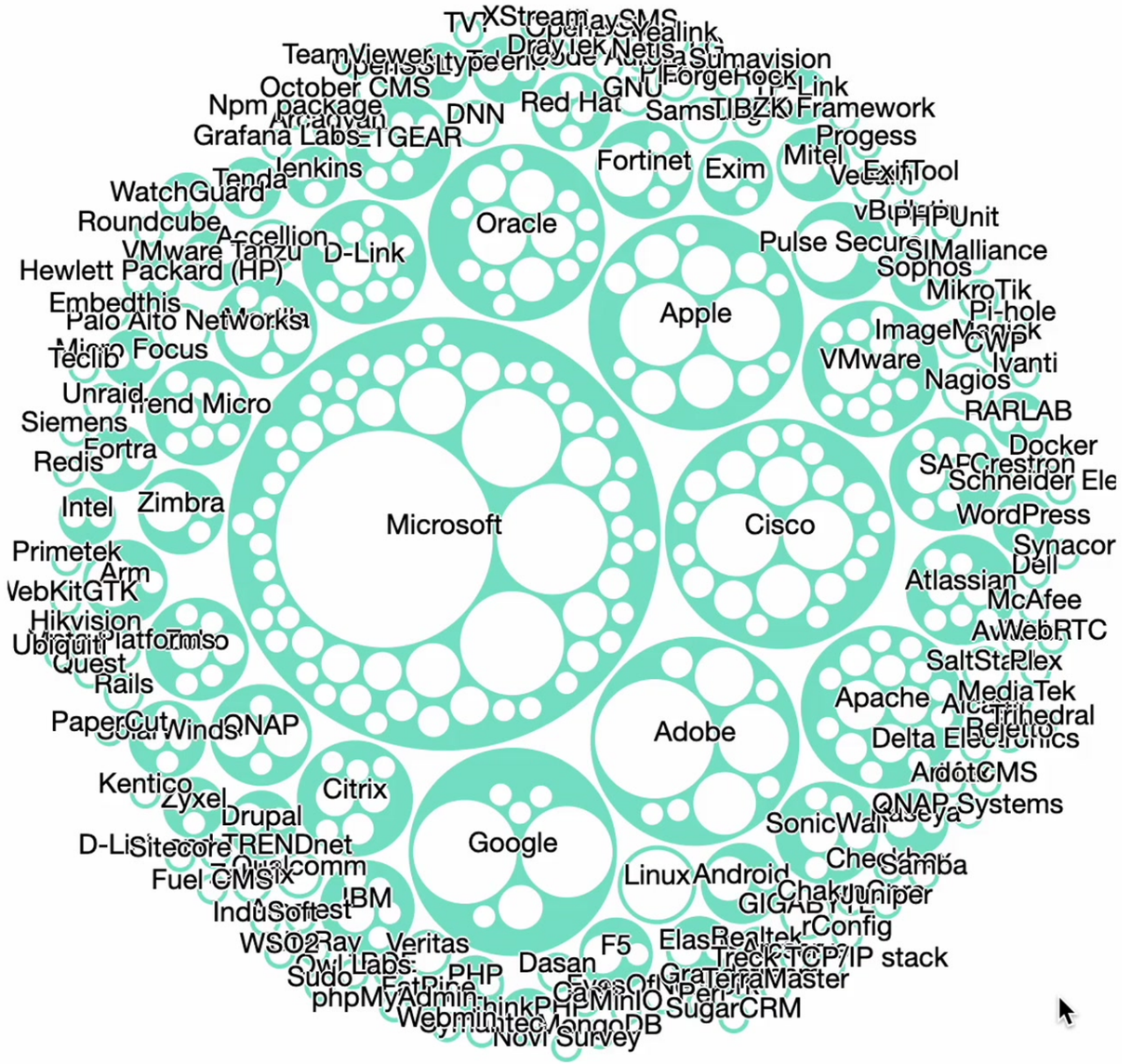
CISA Known Exploited Vulnerabilities (925)



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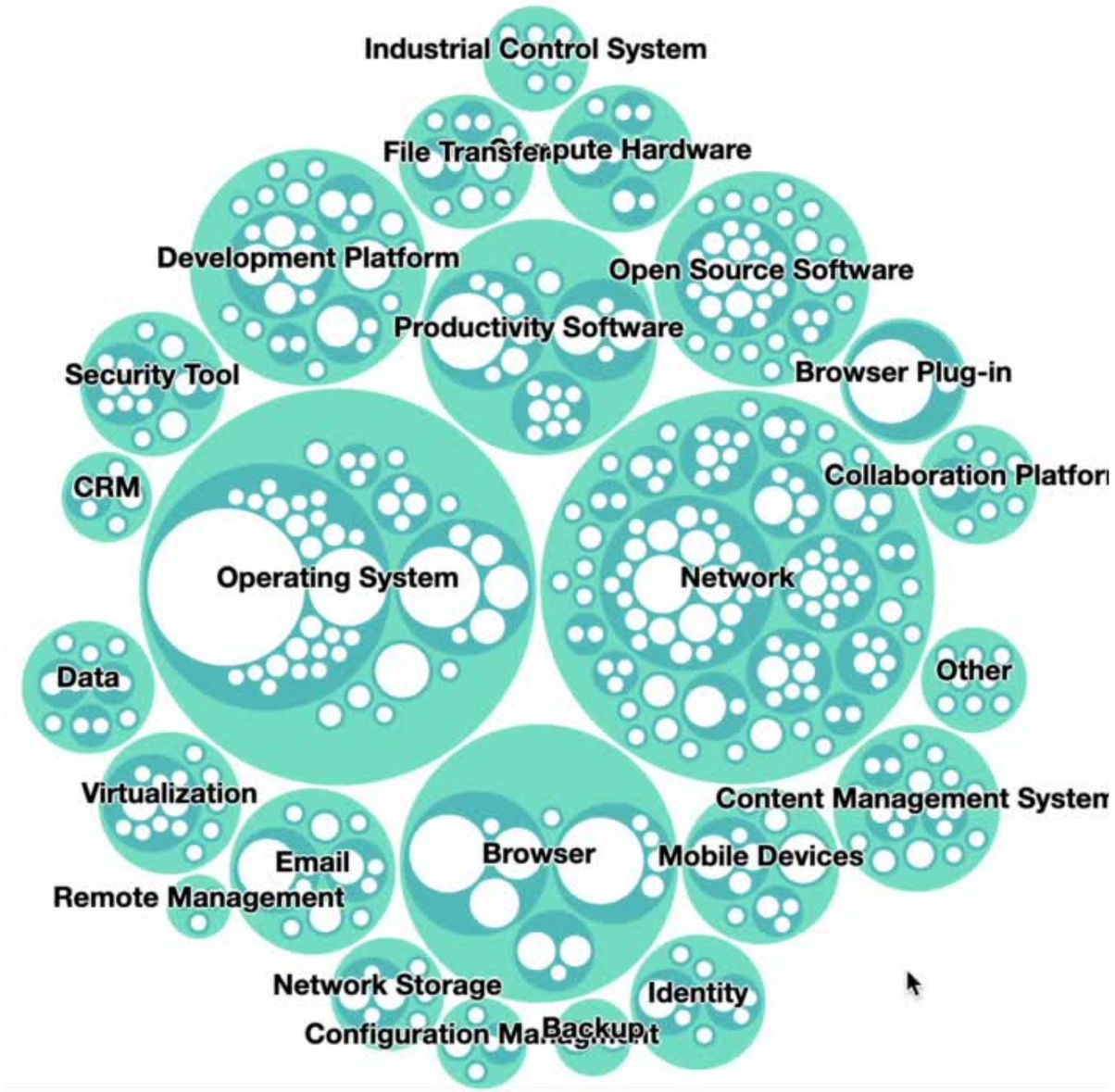
CISA Known Exploited Vulnerabilities Categorized by Type (977)



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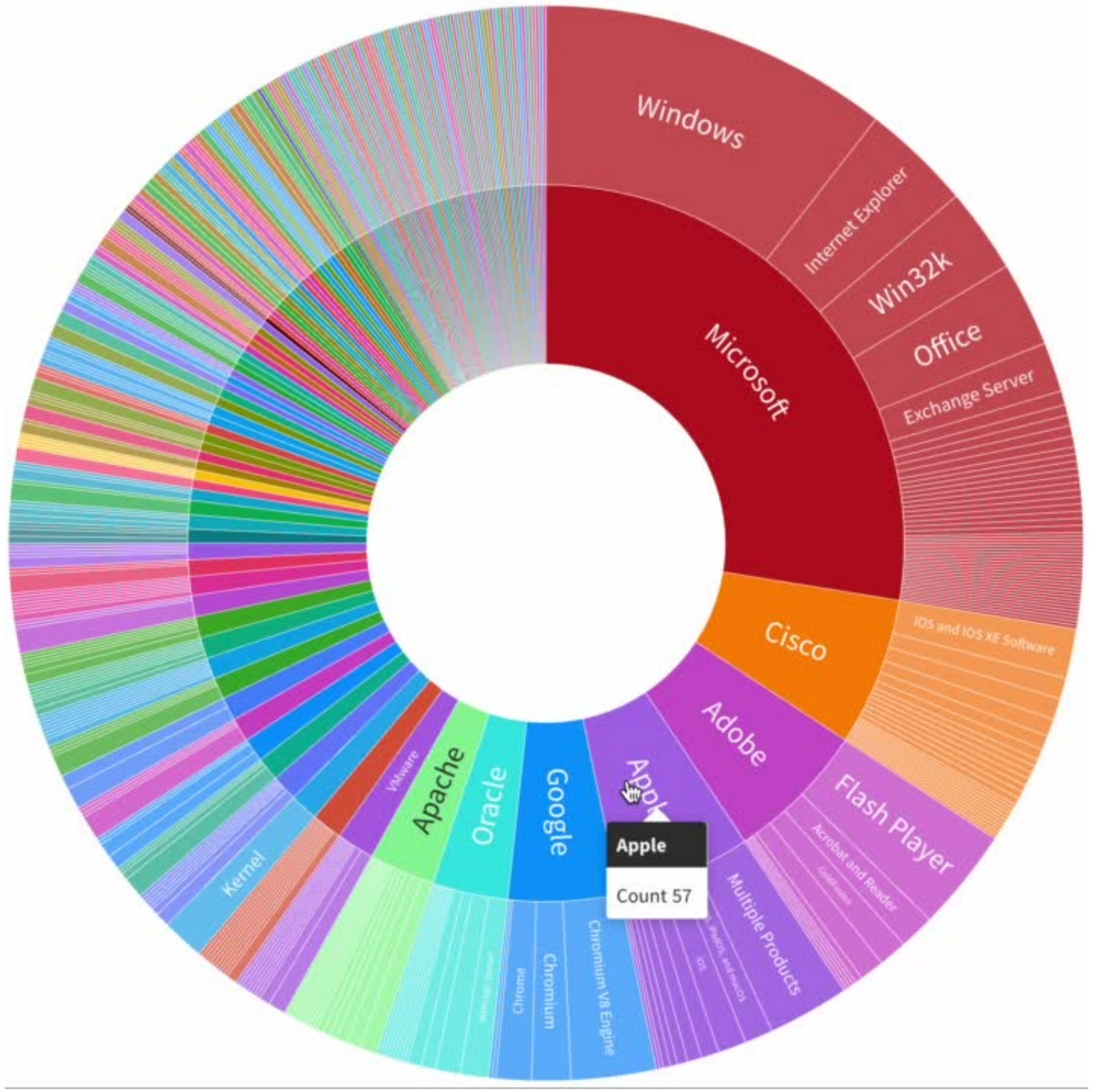
Interactive CISA KEV Vendor > Product Mapping to CVSS & EPSS



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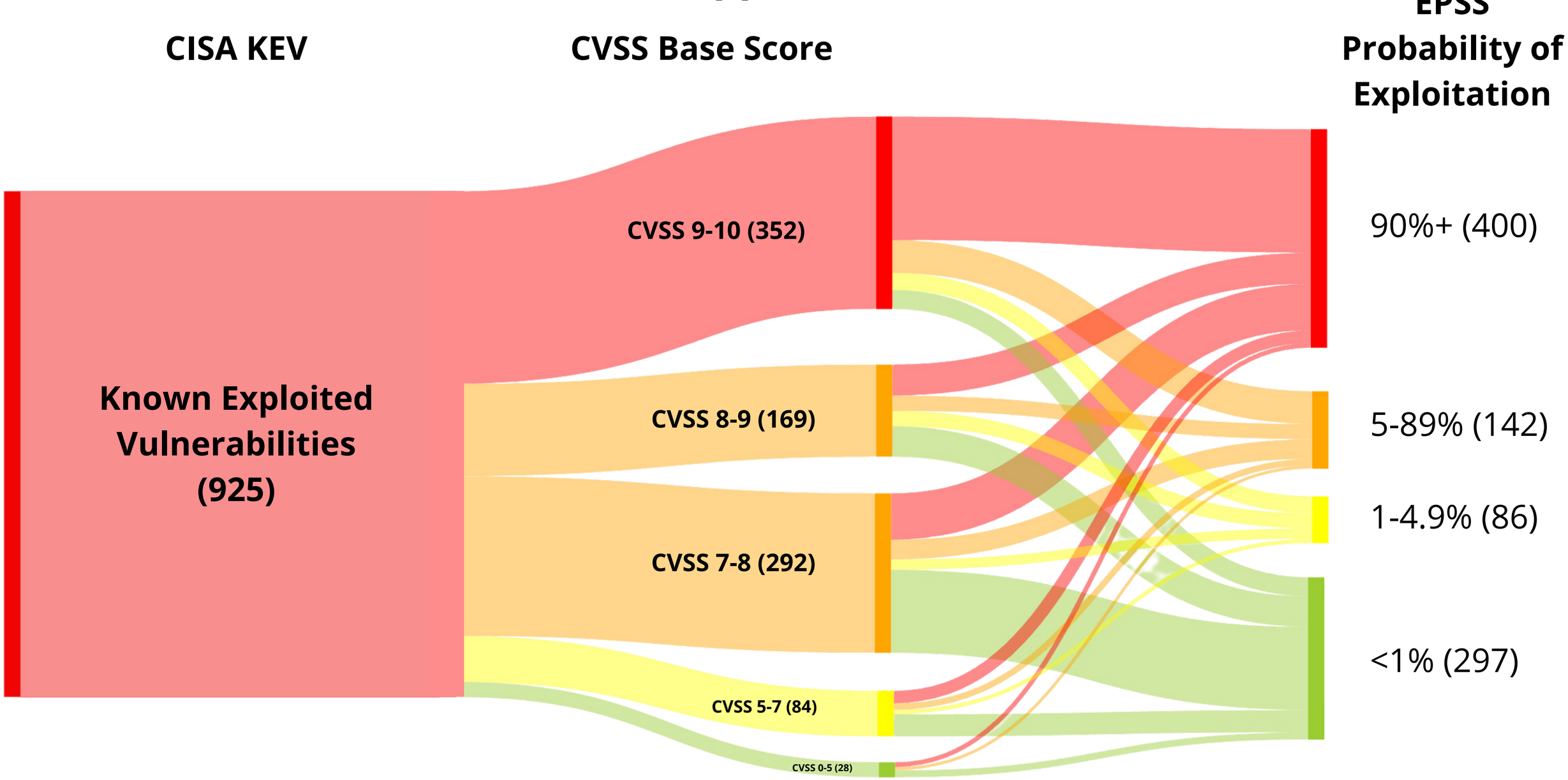
CISA KEV Mapped to CVSS & EPSS



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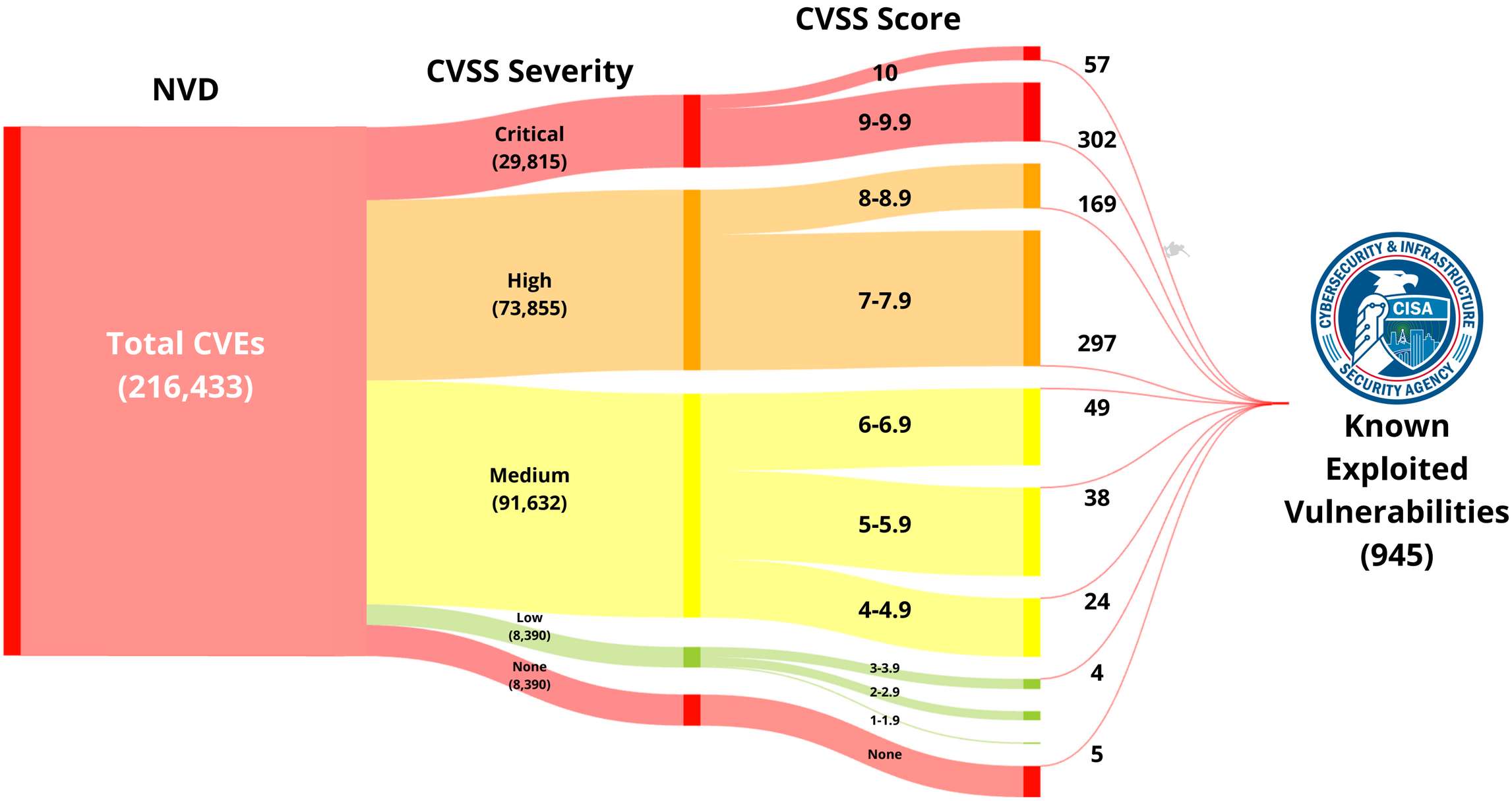
NVD Mapped to CVSS & CISA KEV



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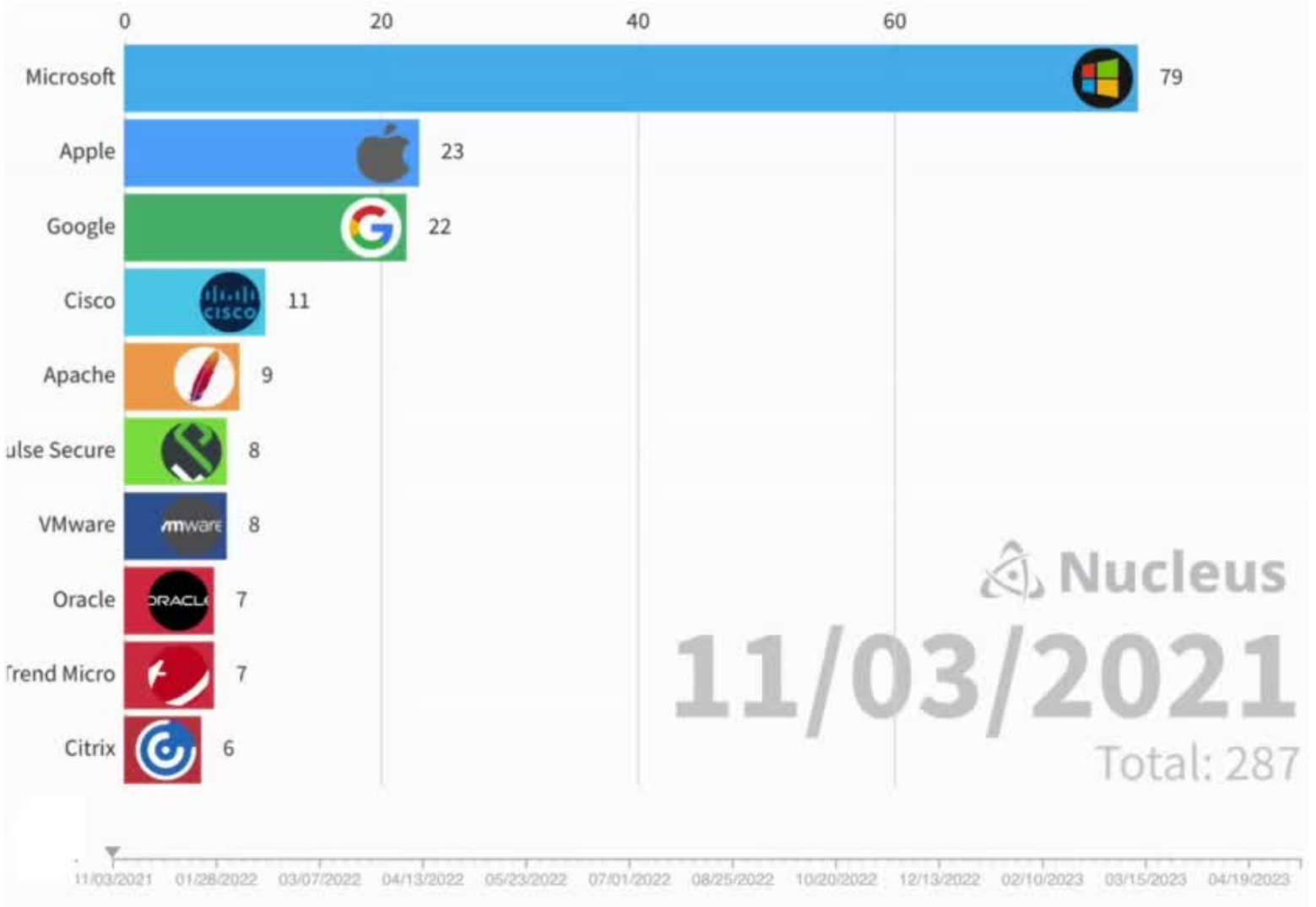
CISA Known Exploited Vulnerabilities (933)



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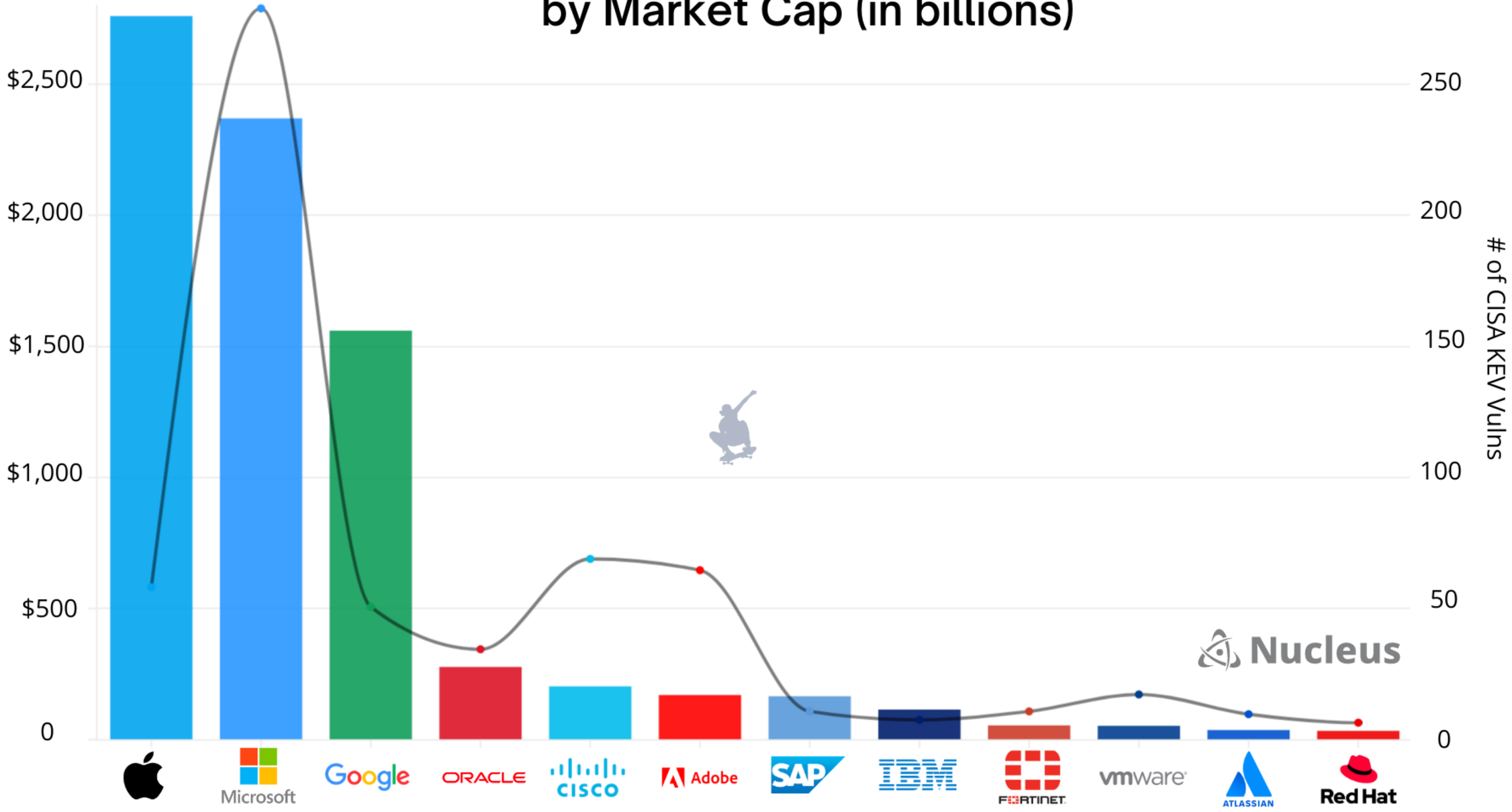
CISA Known Exploited Vulnerabilities by Market Cap (in billions)



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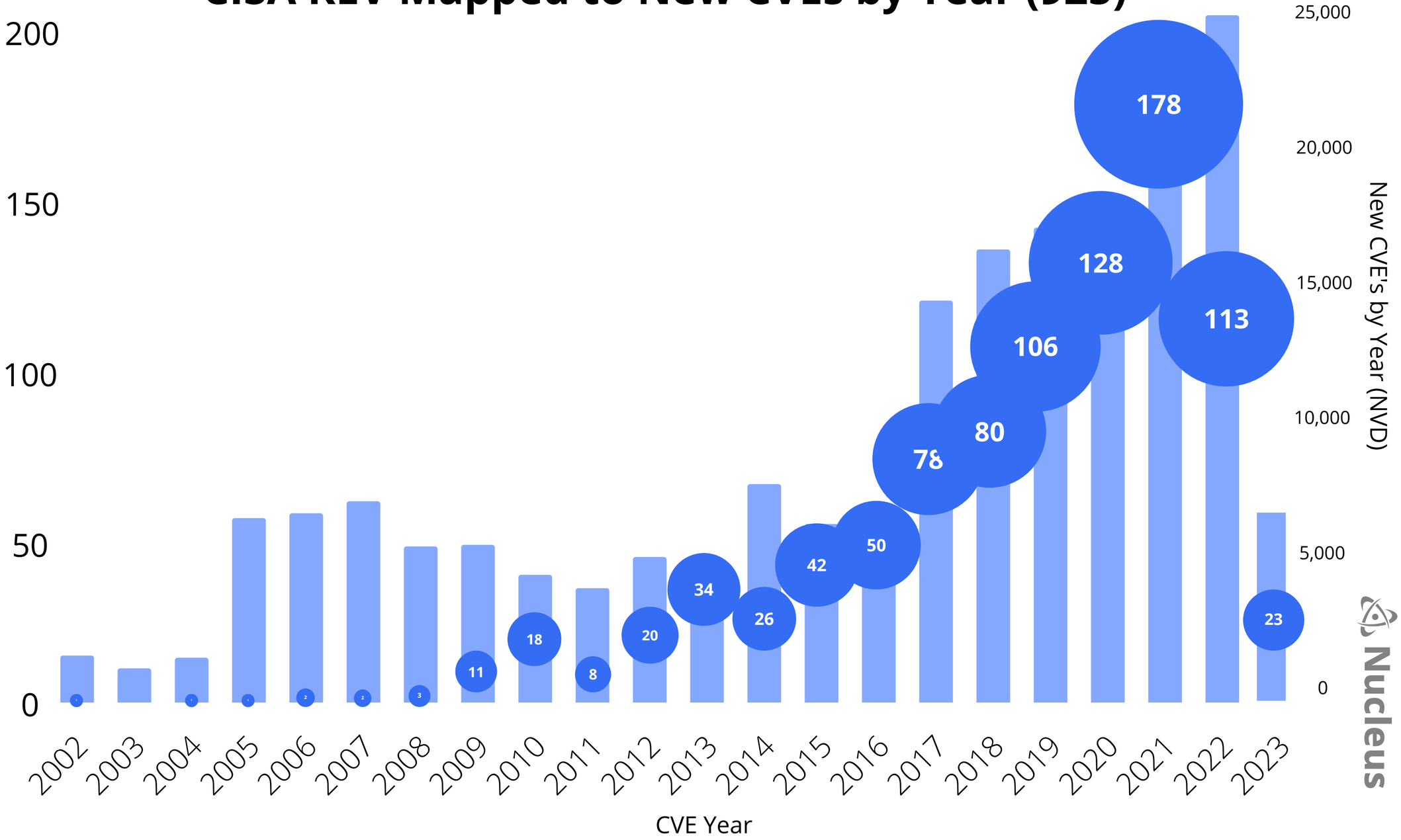
CISA KEV Mapped to New CVEs by Year (925)



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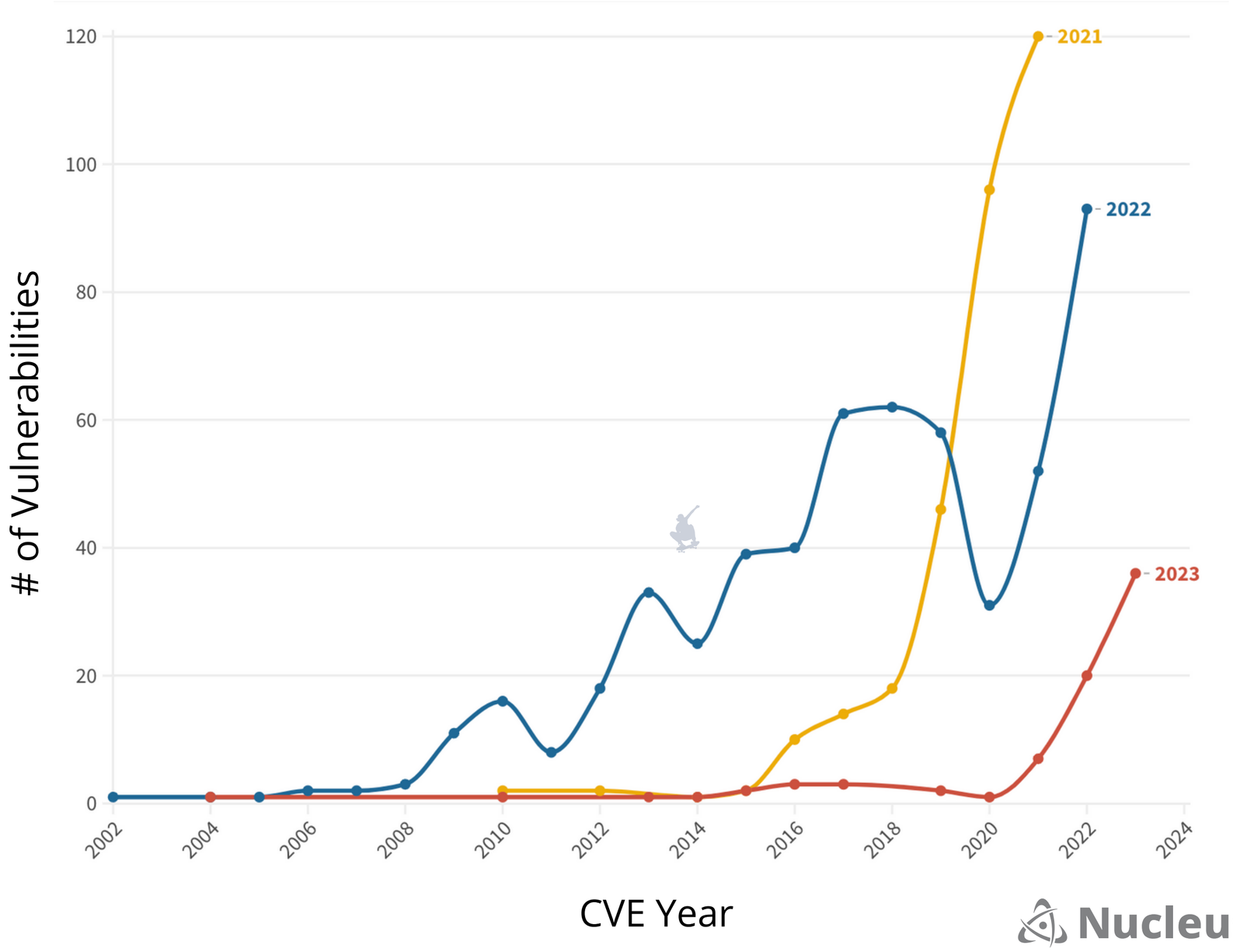
CISA KEV (YEAR ADDED TO KEV)



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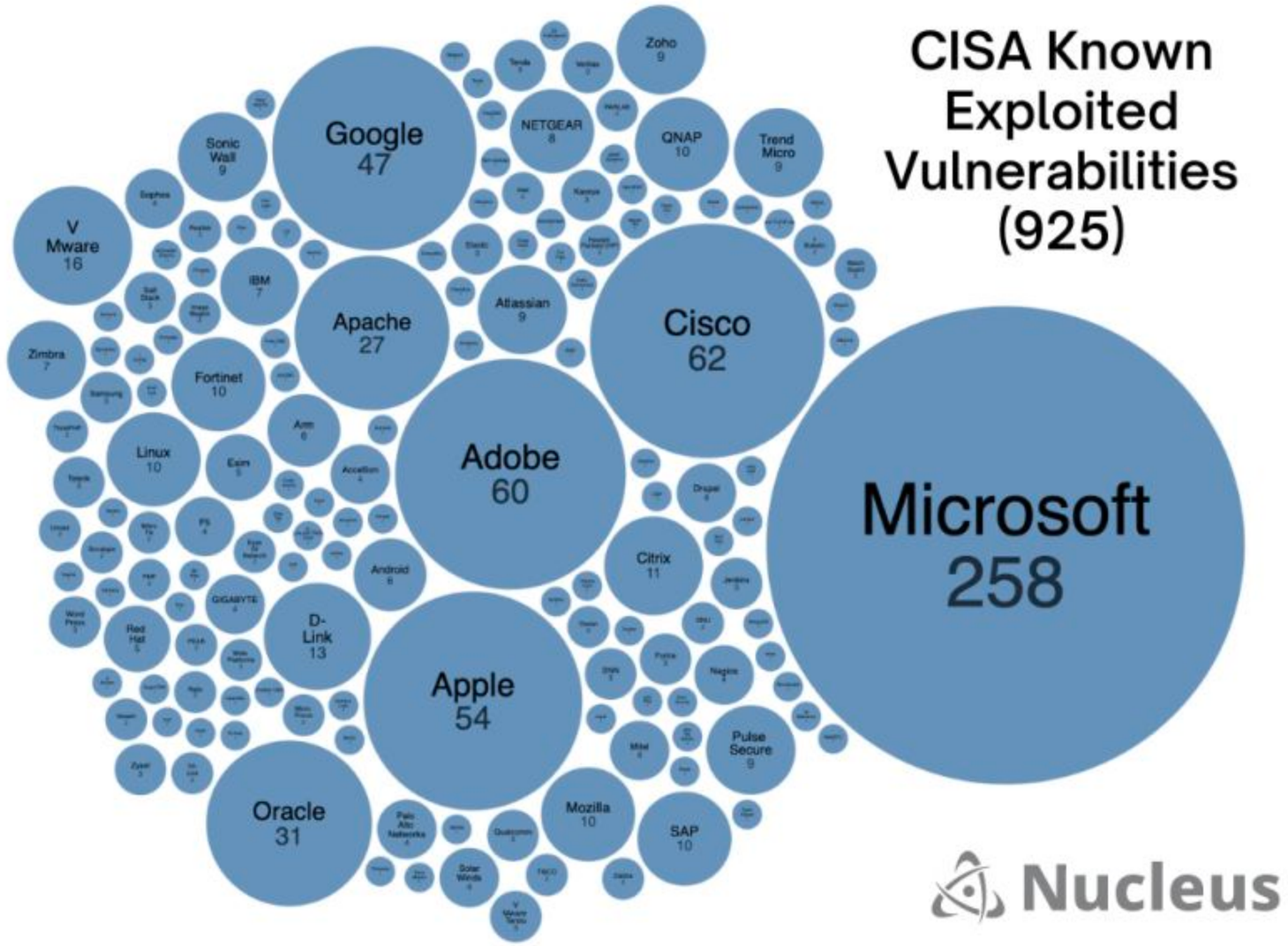
CISA Known Exploited Vulnerabilities by Vendor



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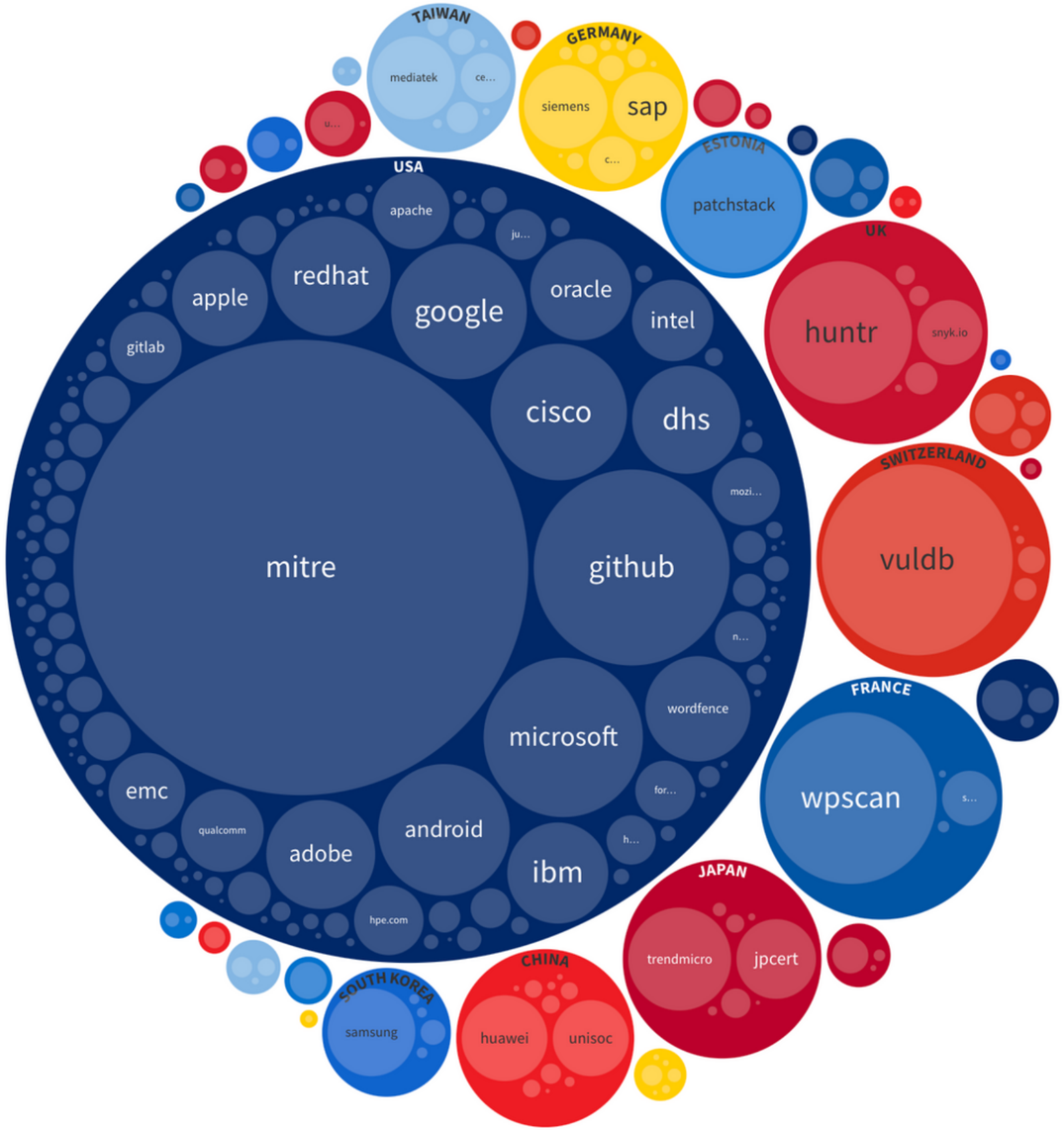
National Vulnerability Database (NVD)

CVE Distribution by CNA (2022-1H2023)



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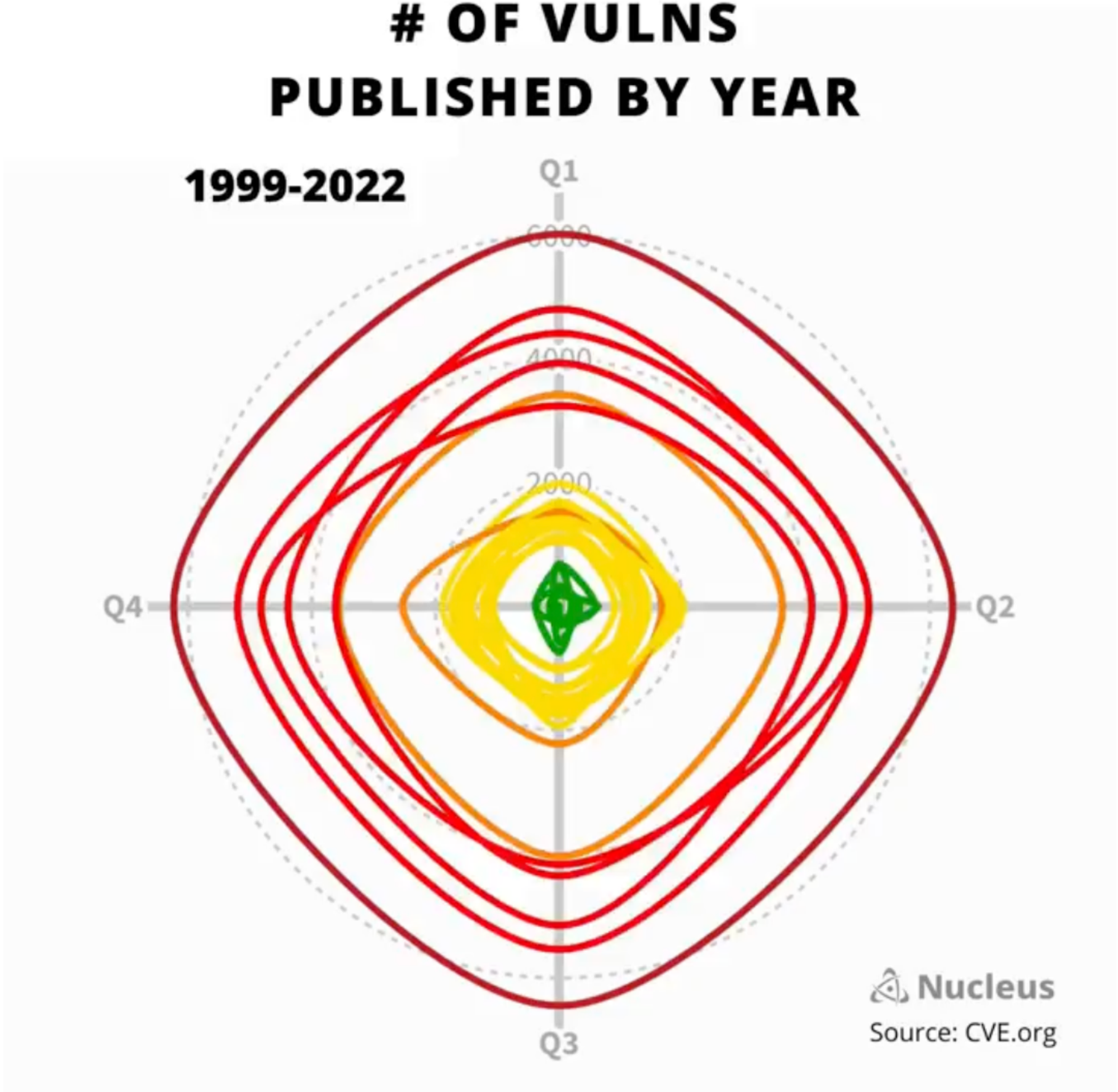
OF VULNS PUBLISHED BY YEAR



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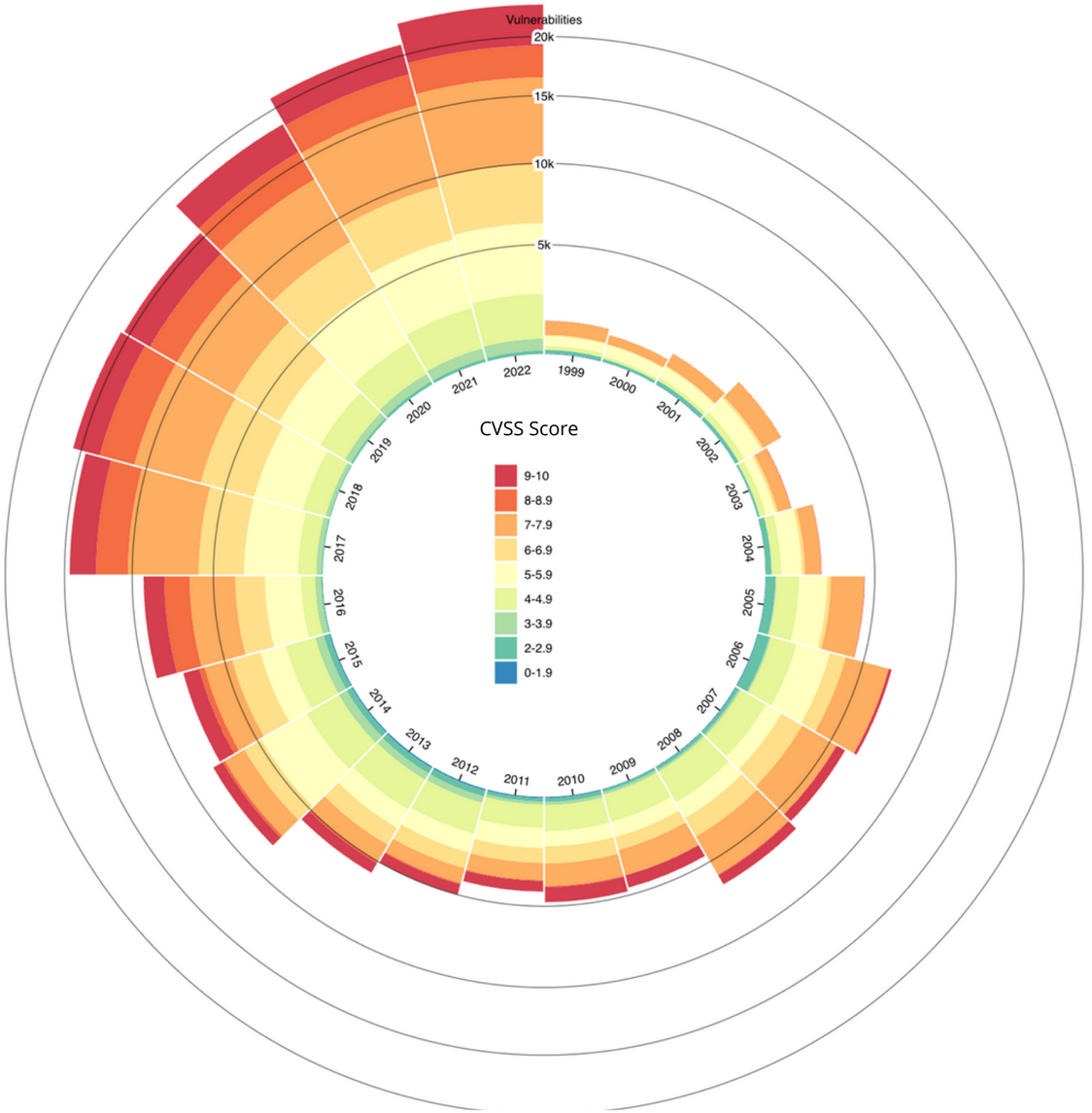
CVE Vulnerability Distribution Overtime by CVSS Score



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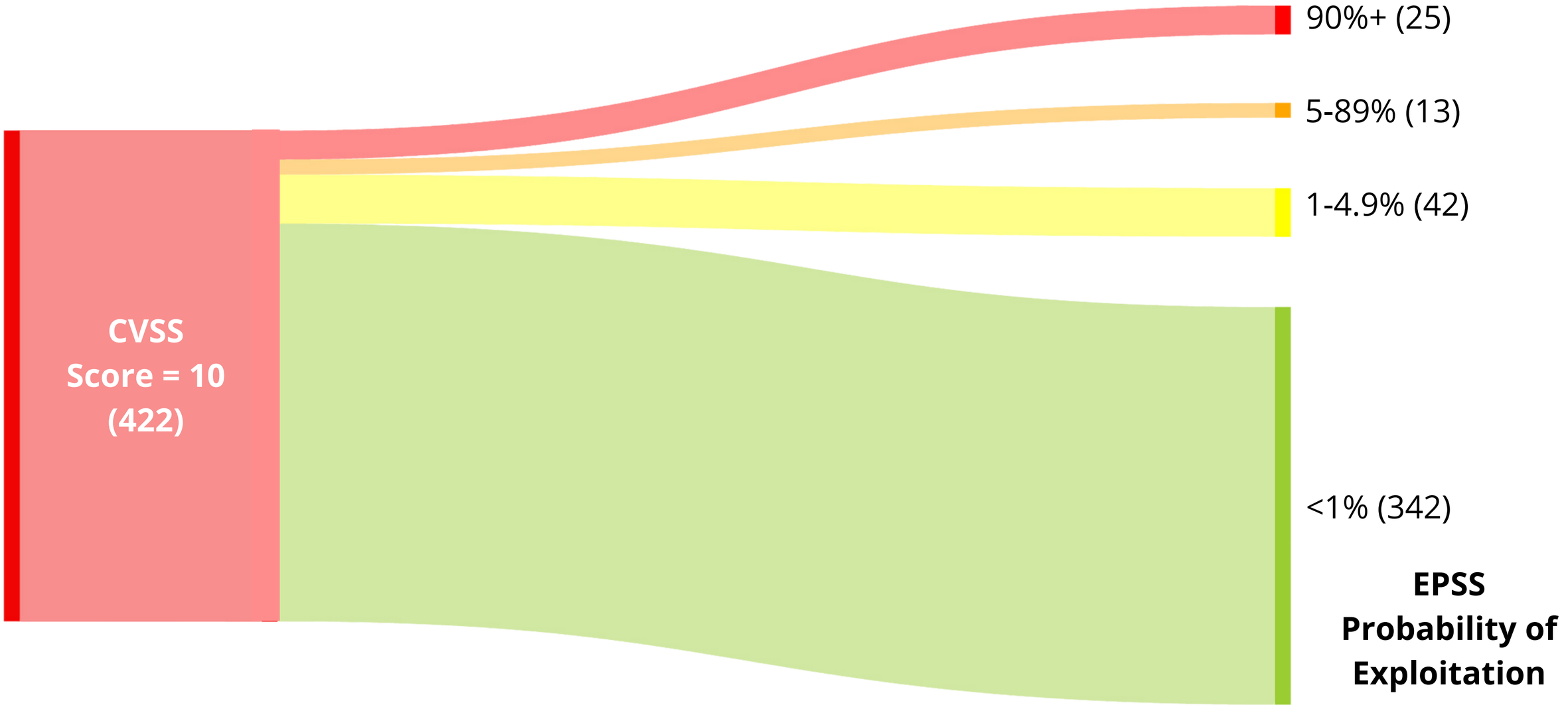
Exploit Prediction Scoring System (EPSS)

CVSS 10 Vulnerabilities Mapped to EPSS



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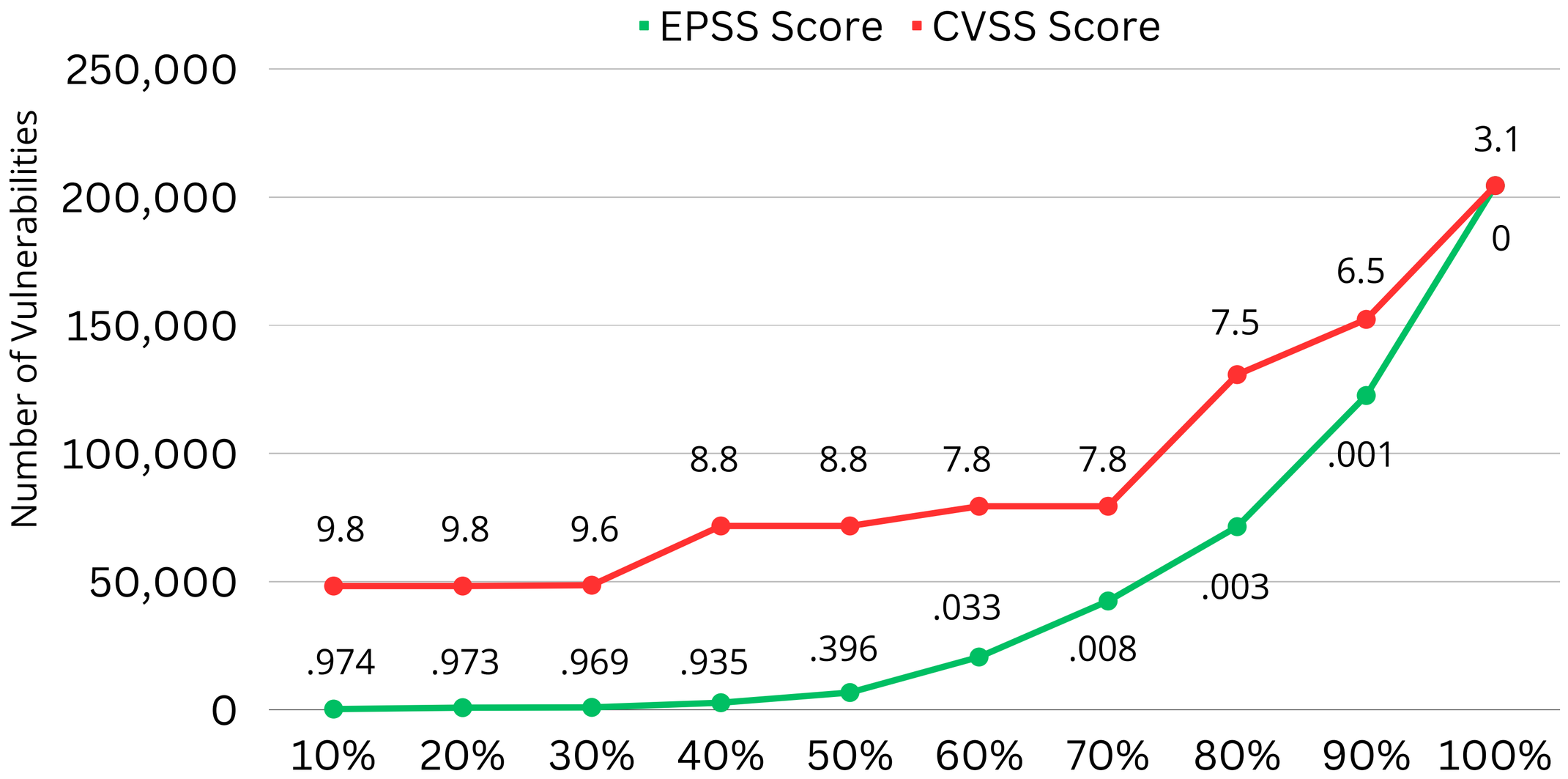
CISA KEV COVERAGE COMPARISON (CVSS / EPSS)



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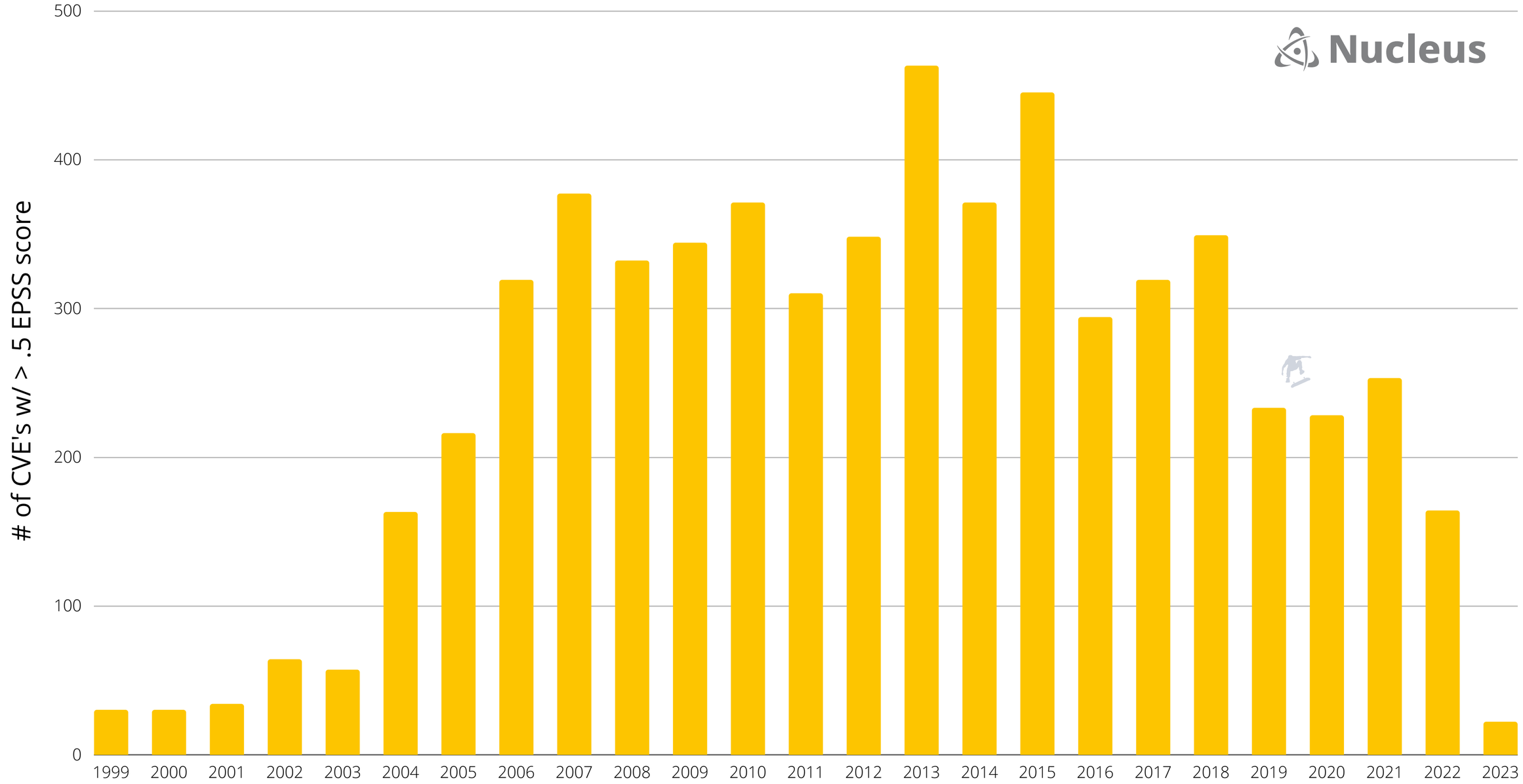
> 50% probability of exploitation in the next 30-days (Source: EPSS)



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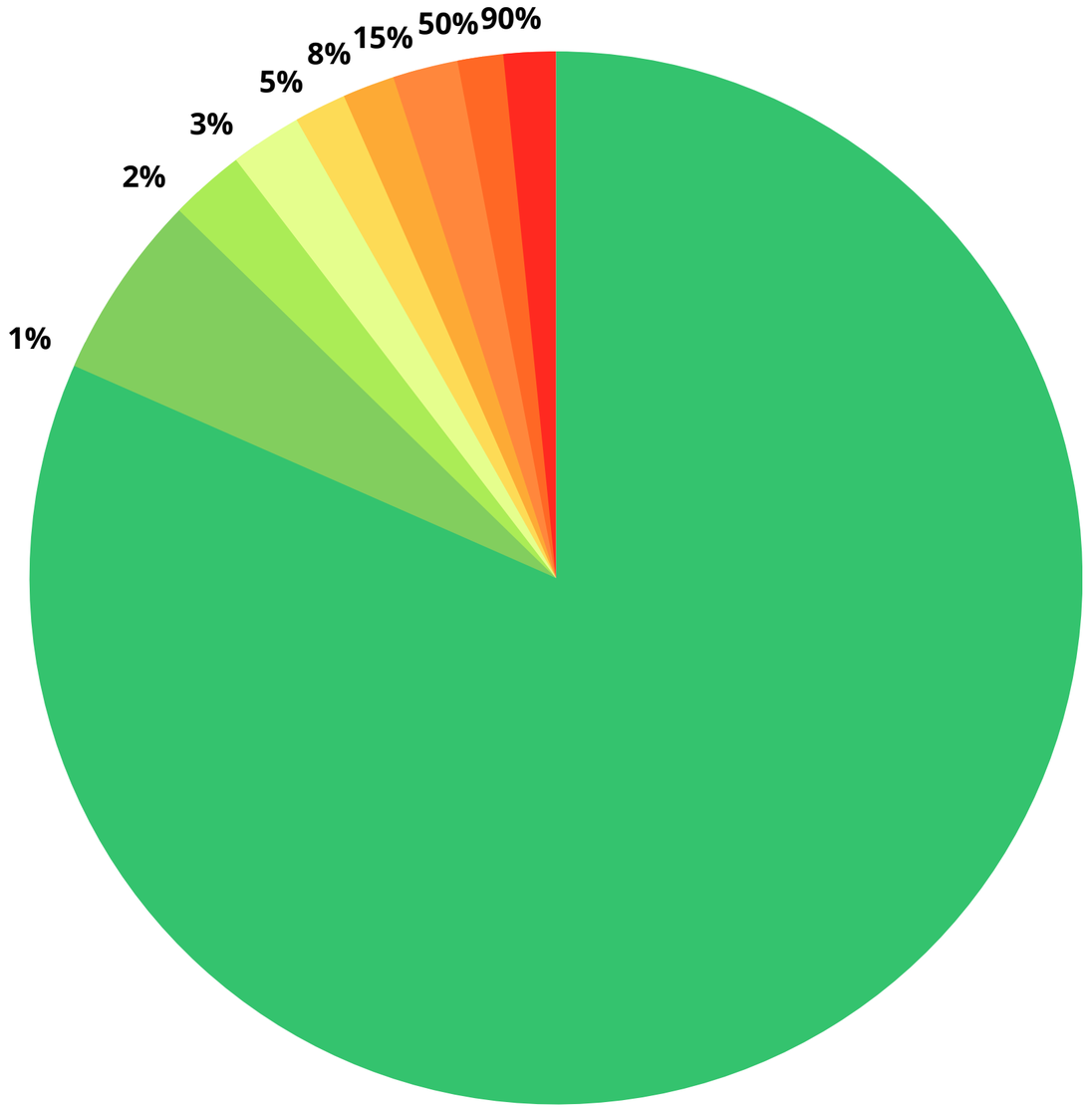
Exploit Prediction Scoring System Probability Distribution (NVD)



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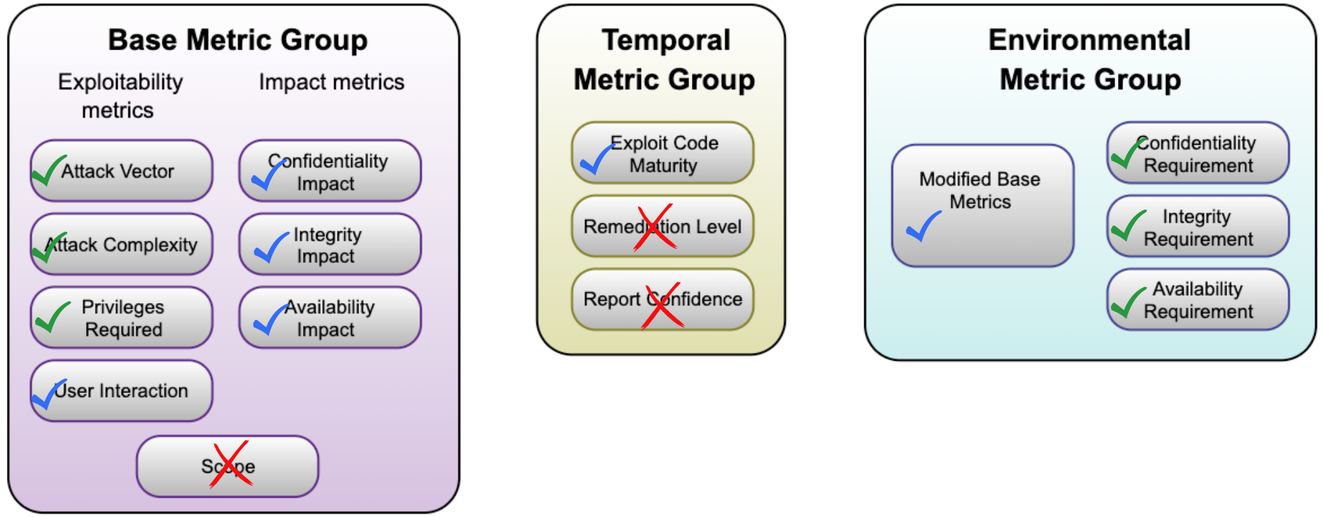
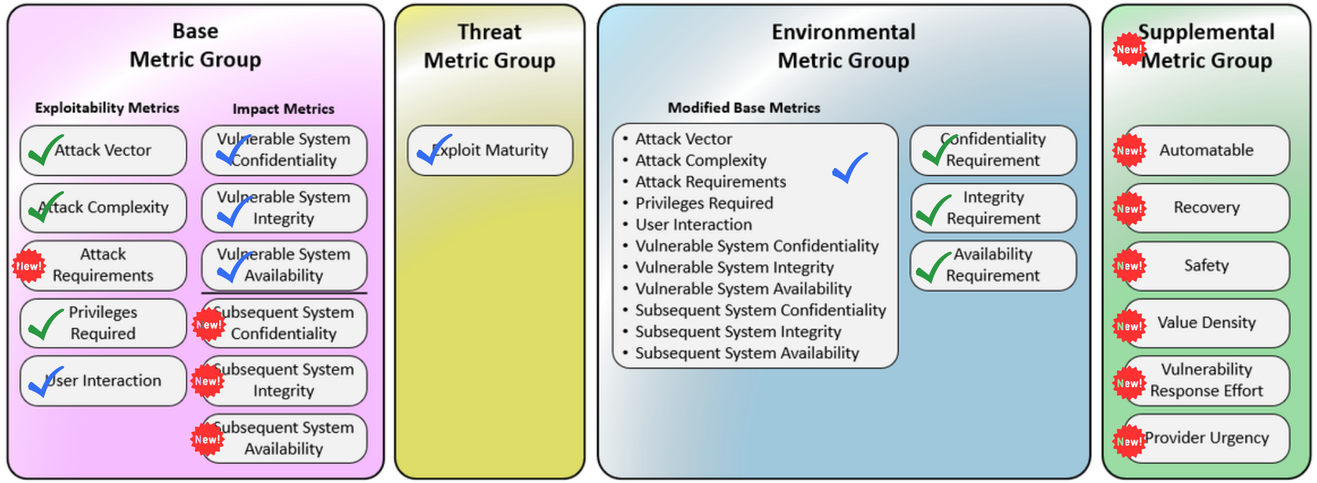
Common Vulnerability Scoring System (CVSS)

Common Vulnerability Scoring System v3.1



Common Vulnerability Scoring System v4



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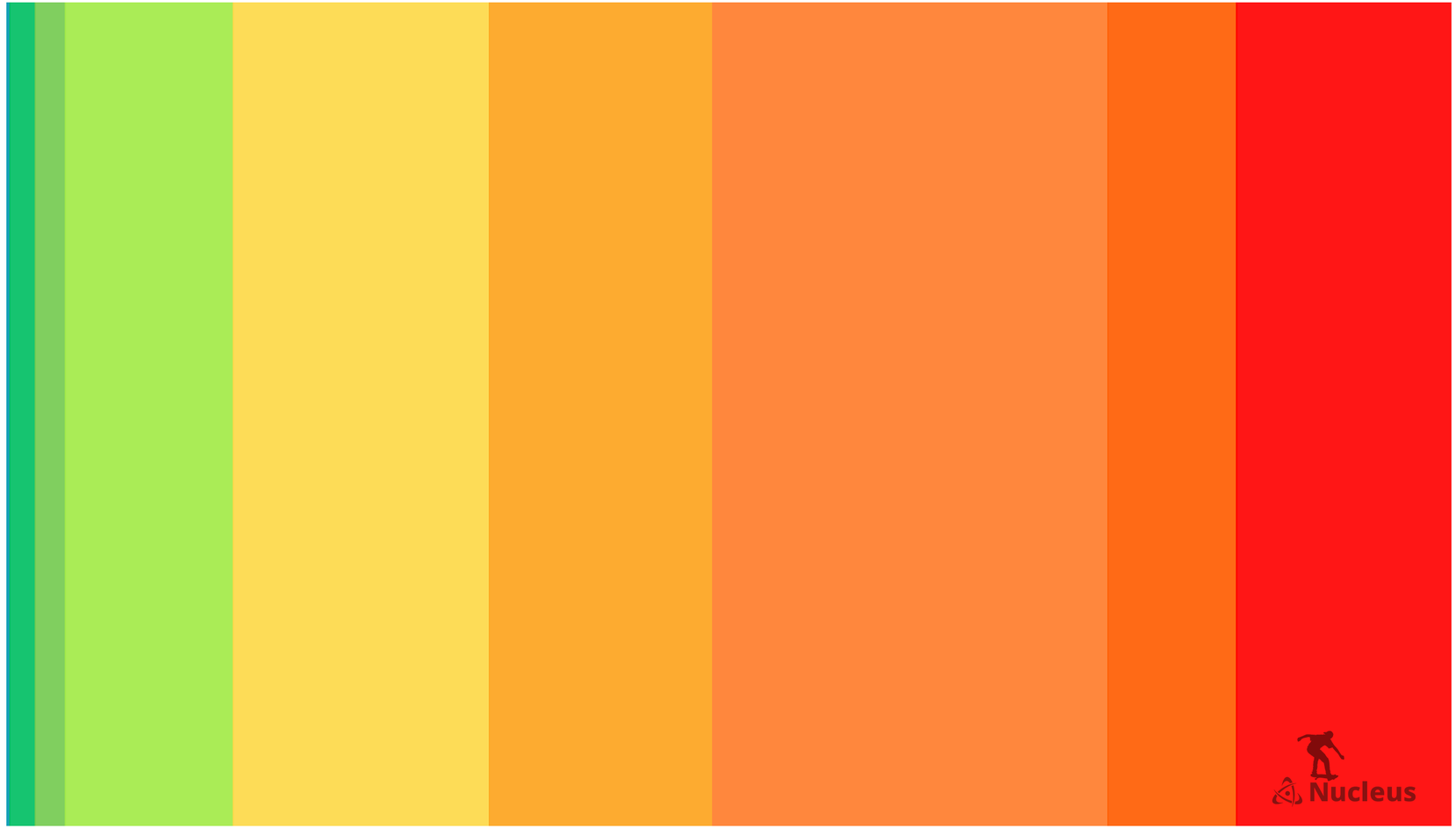
CVSS Base Score Distribution

TURN UP THE BASE



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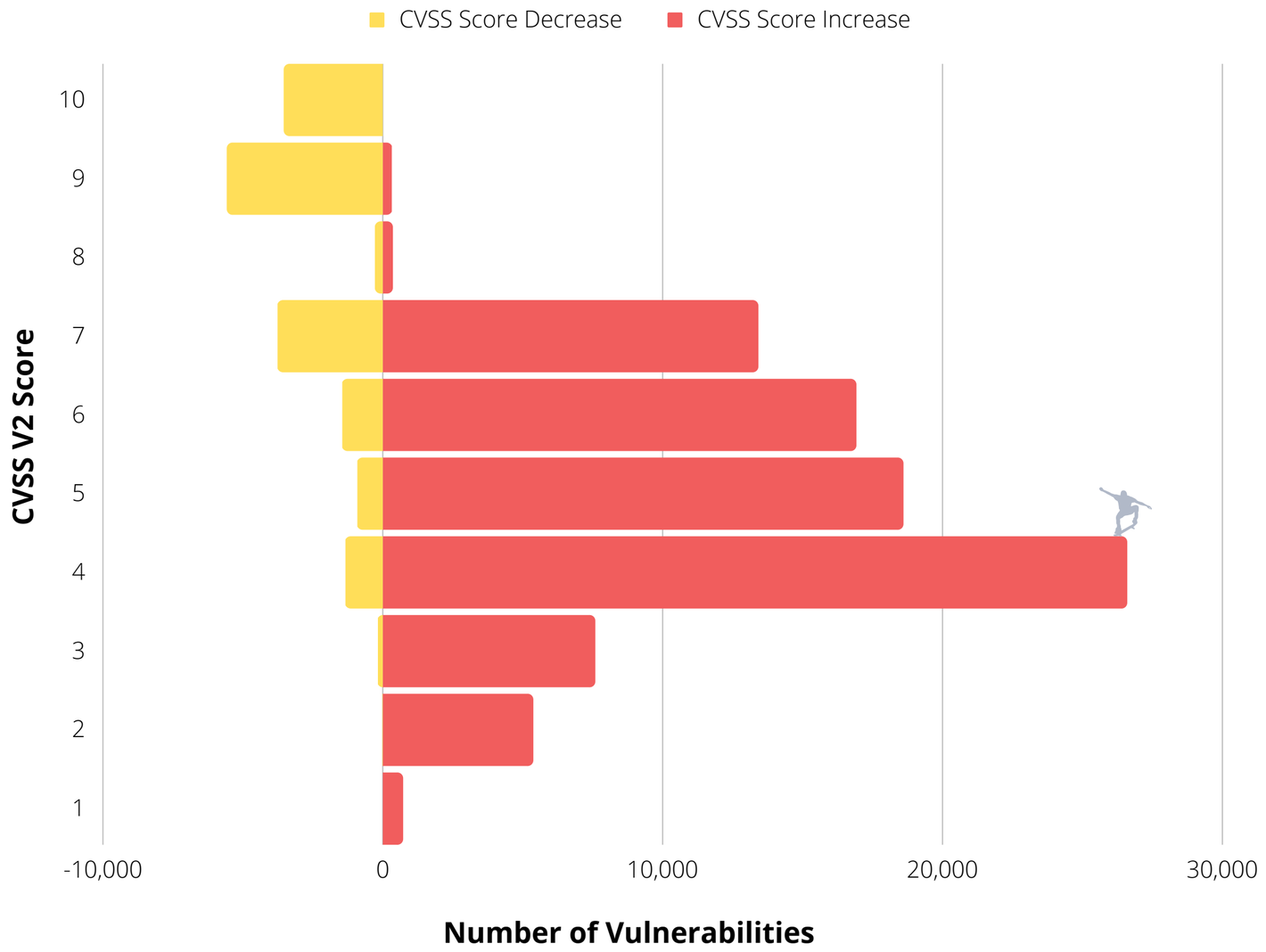
CVSS BASE SCORE CHANGE
CVSSv2 > CVSSv3.x



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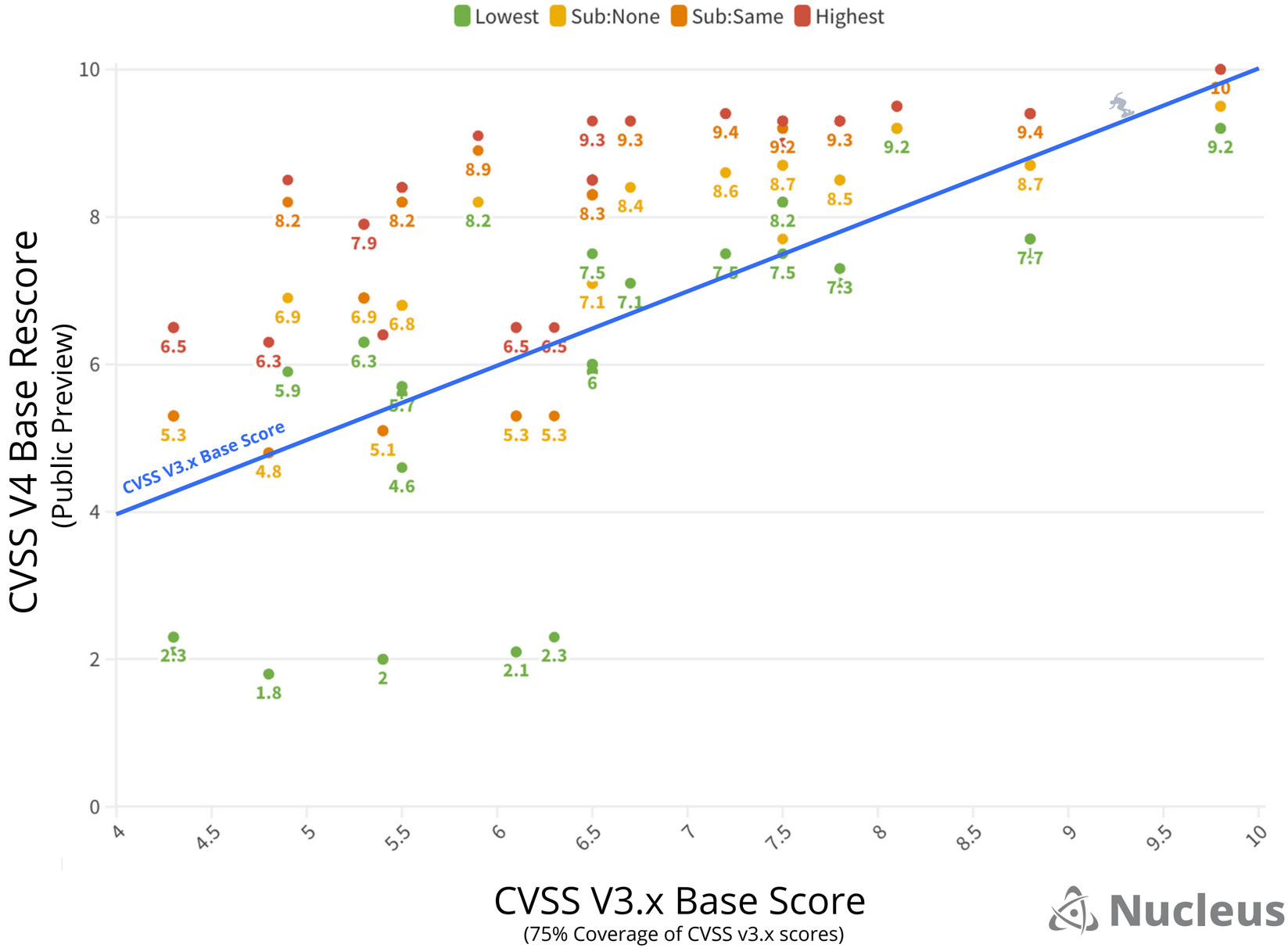
CVSS V4 BASE SCORE - RESCORING



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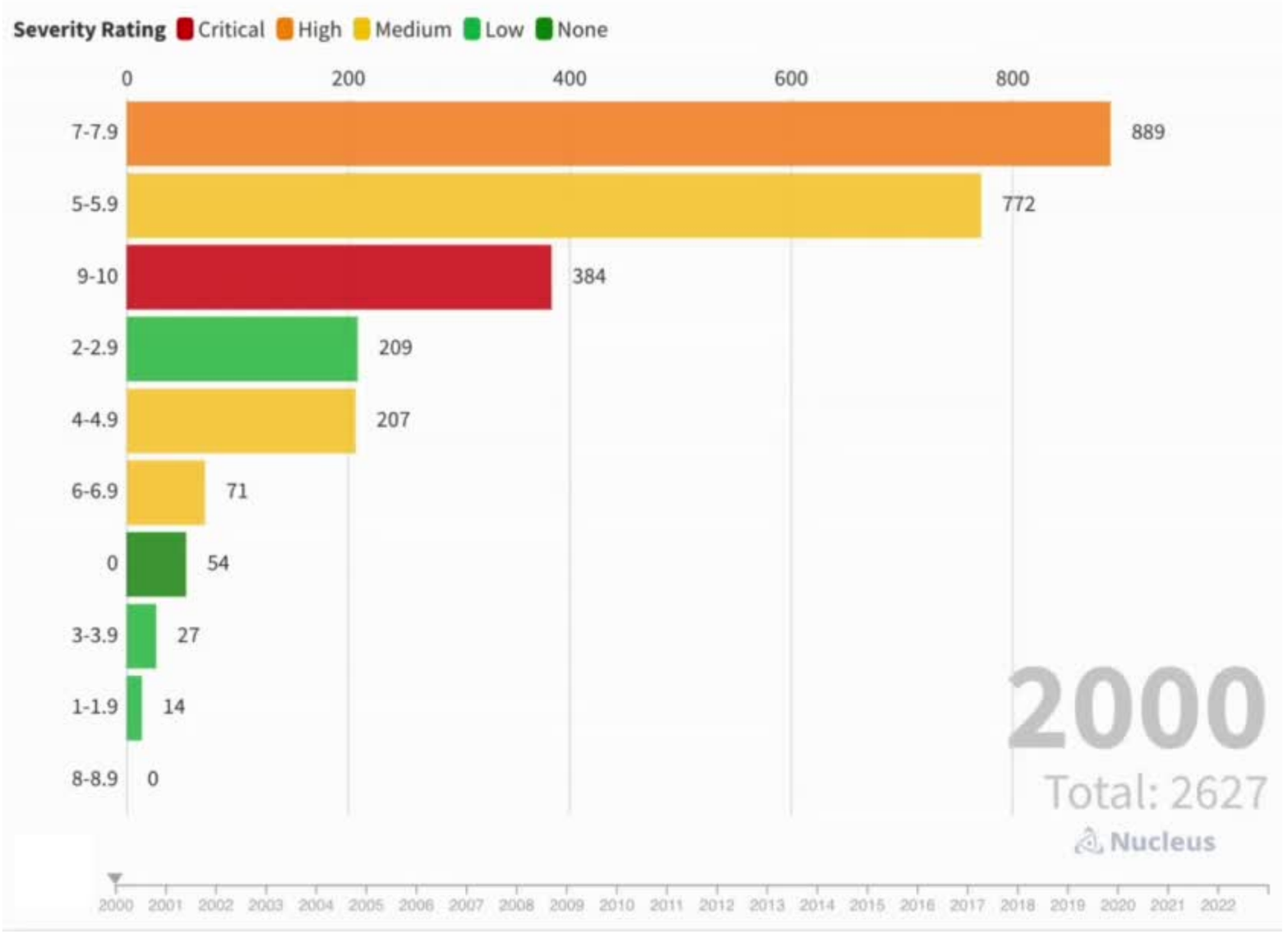
CVSS Scoring
Distribution Over Time



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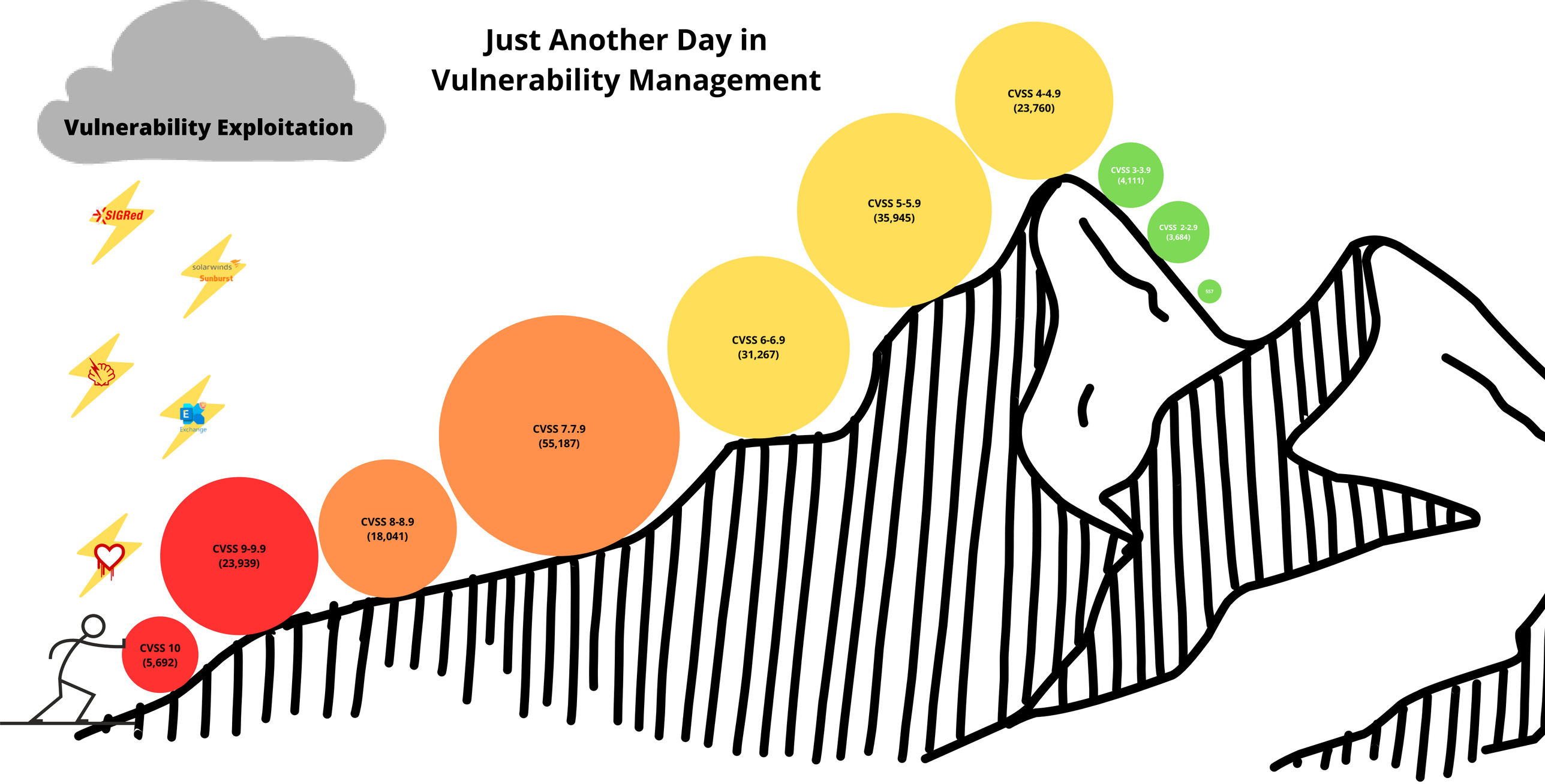
Just Another Day in Vulnerability Management



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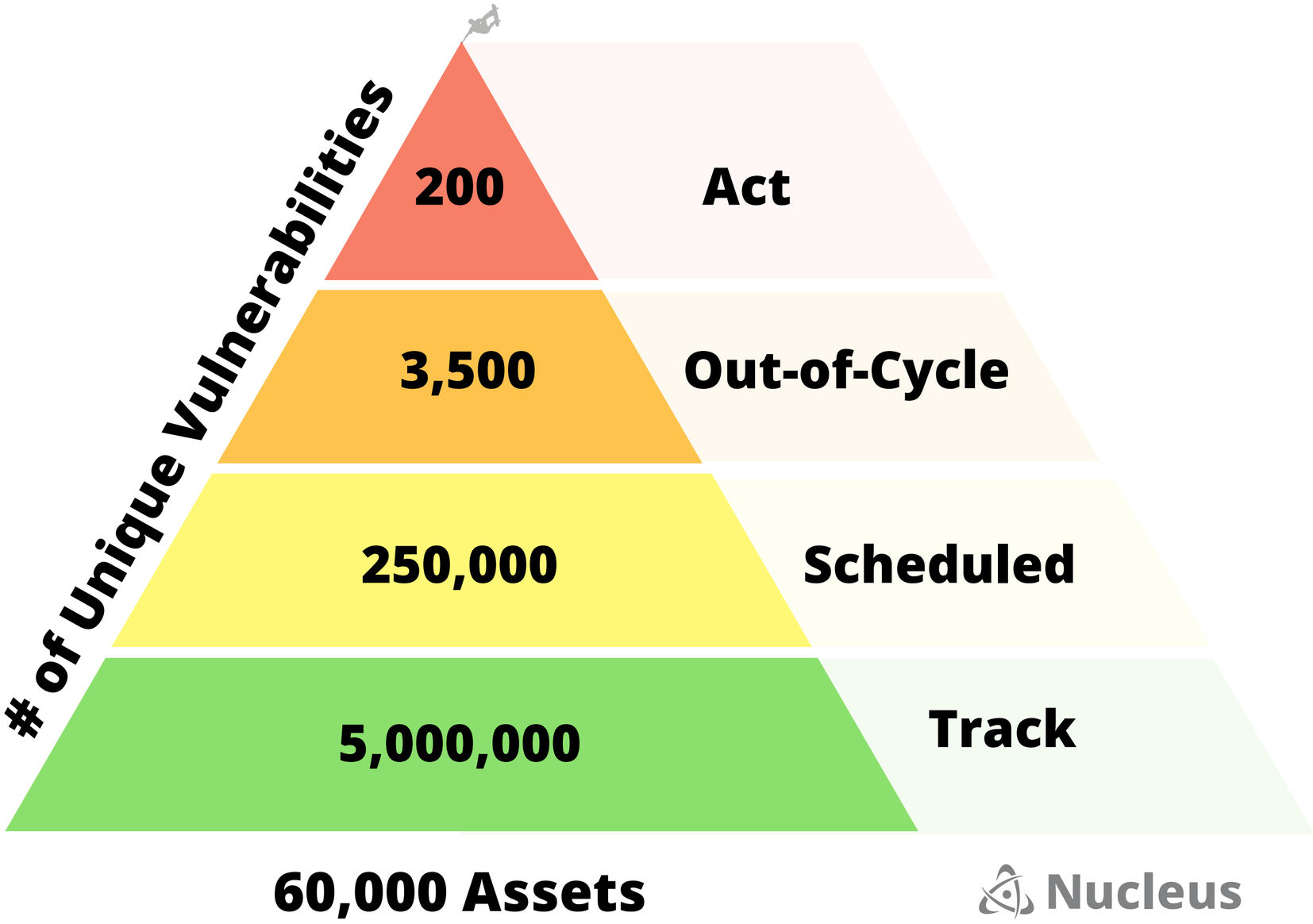
Stakeholder Specific Vulnerability Categorization (SSVC)

SSVC Vulnerability Prioritization Pyramid



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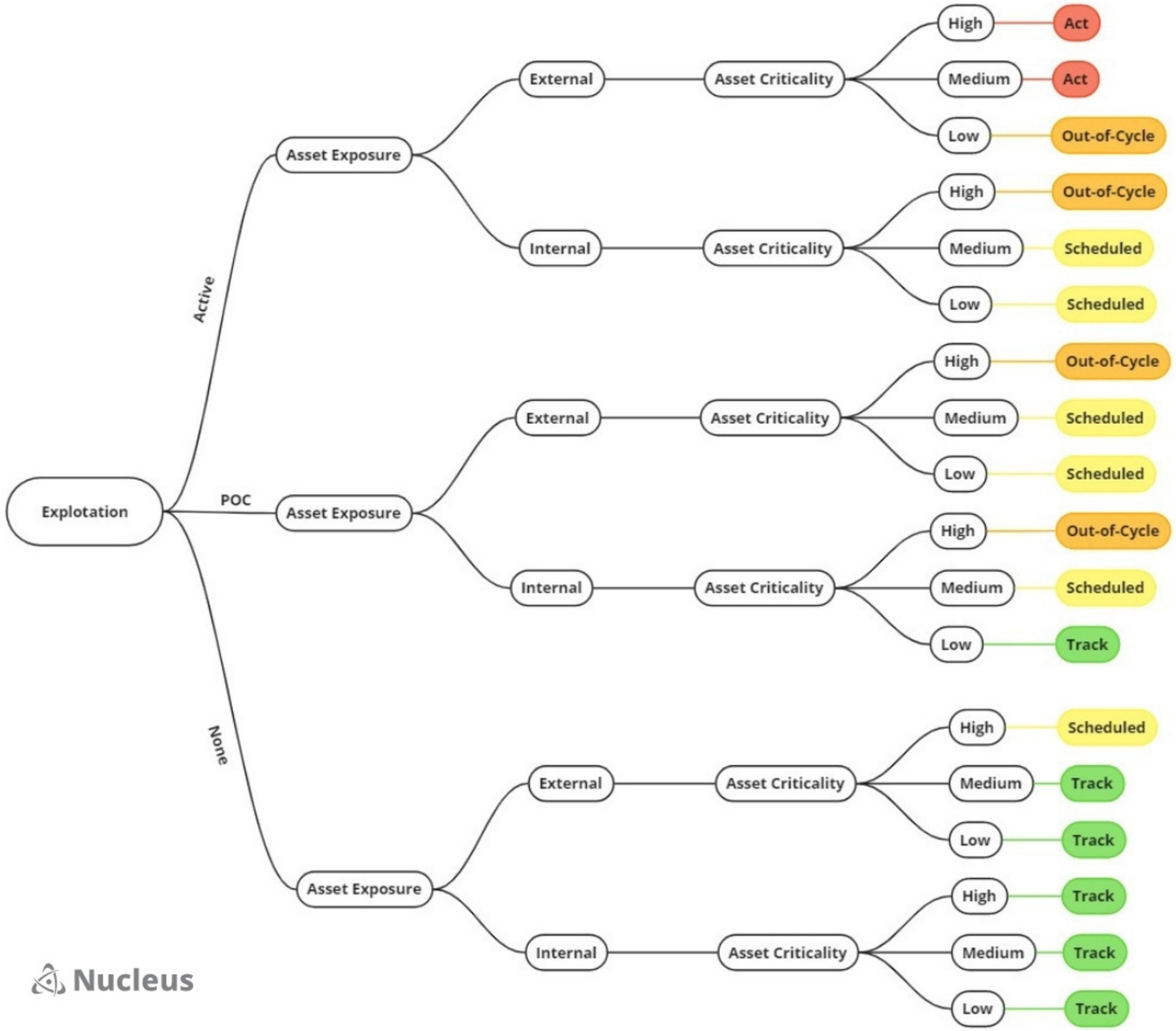
SSVC Decision Tree Example



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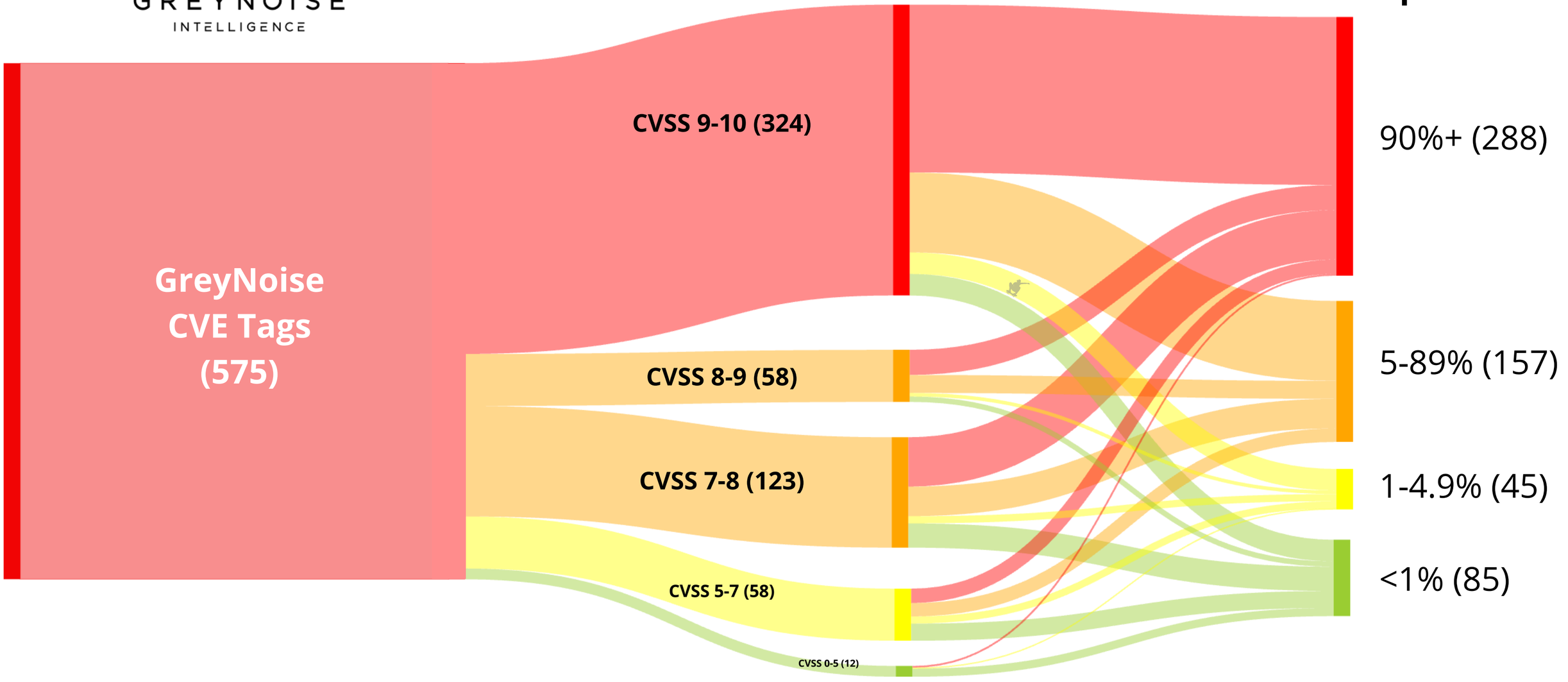
GreyNoise

GreyNoise Mapped to CVSS & EPSS

GREYNOISE
INTELLIGENCE



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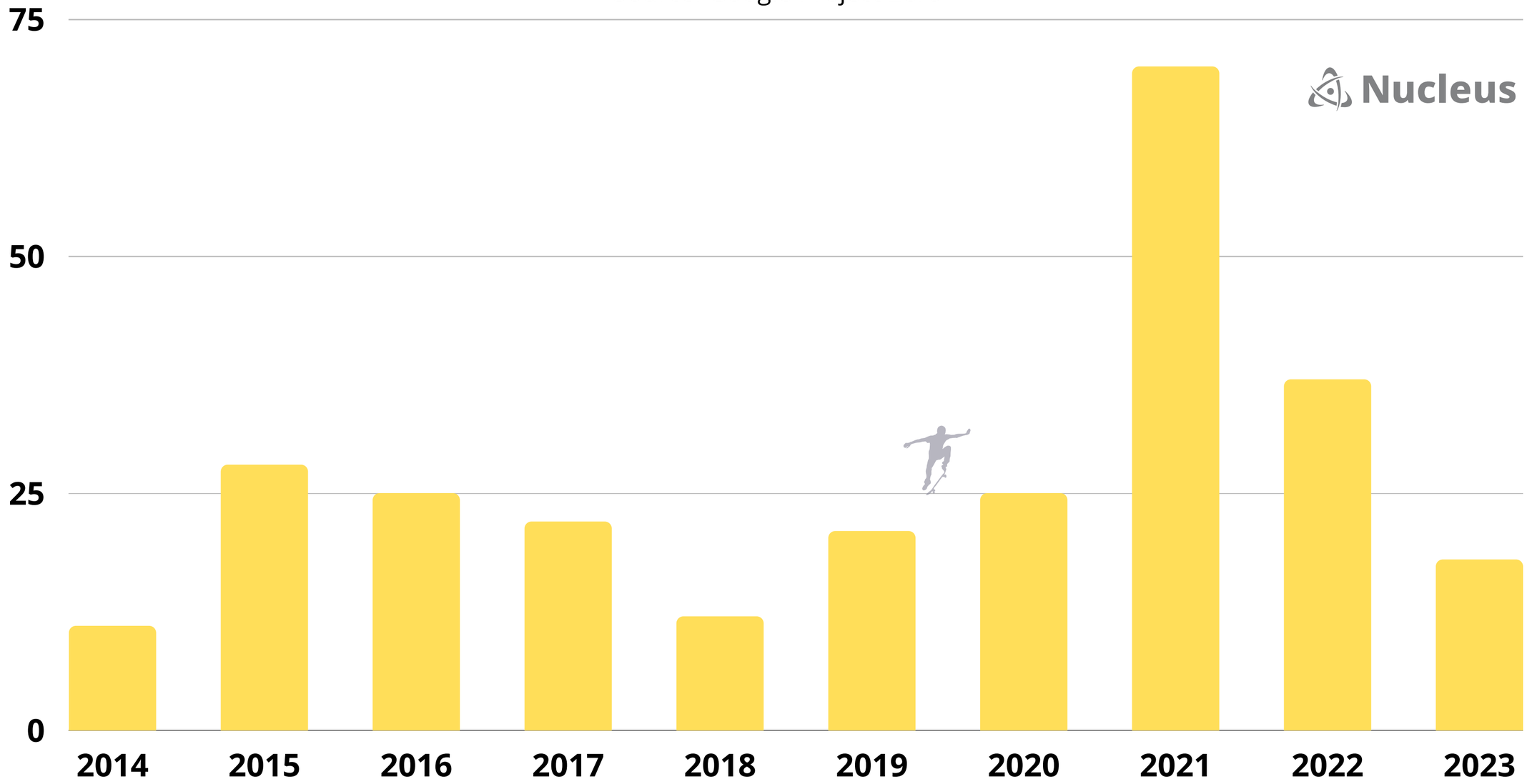
Zero Days

Zero-Day Vulnerabilities by Year (269)

Source: Google Project Zero



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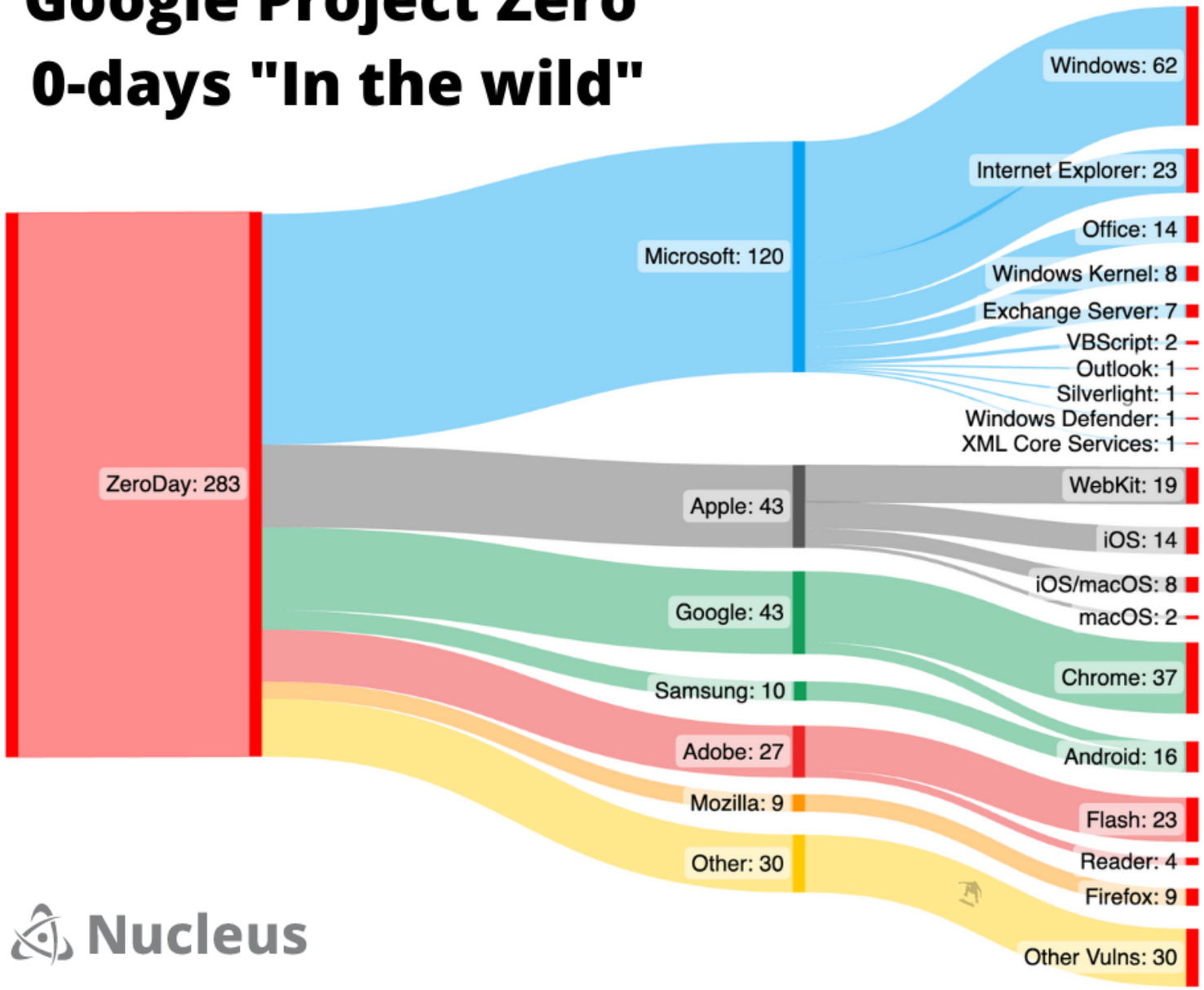
Google Project Zero
0-days "In the wild"



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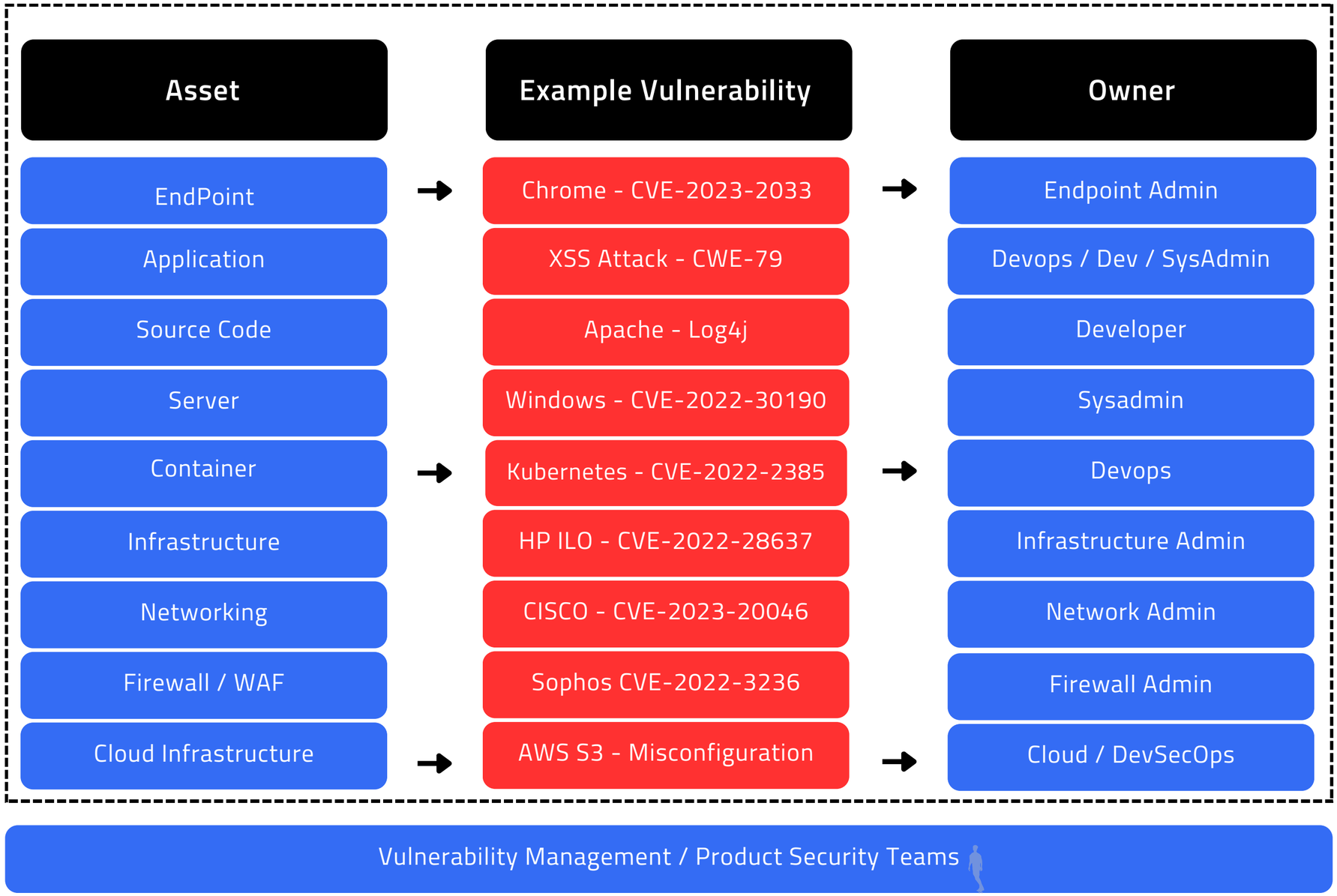
Security Team Considerations / Processes

Enterprise Vulnerability Management Responsibility Matrix



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