



RIPE78

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RIPE Meetings:
connecting the Internet
community

ripe78.ripe.net

Domain Abuse Activity Reporting (DAAR)

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Outline

- **DAAR definition**
- DAAR data collection & methodology
- DAAR analytics
- Next steps & RIPEstat

Motivation

“Systems are particularly prone to failure when the person **guarding** them is not the person who **suffers** when they fail.”

Therefore,

Insecurity is as much an **incentive** problem as it is a **technical** problem

Ross Anderson, 2001

Problem

A **growing** need for proactive detection and mitigation strategies by TLD operators & registrars

But there is lack of knowledge about

- Abuse concentrations in TLD networks
- Operators' abuse performance in comparison to their peers

Domain Abuse Activity Reporting (DAAR)

What is DAAR?

A system for reporting on domain name registration and abuse data across TLD registries and registrars

Outline

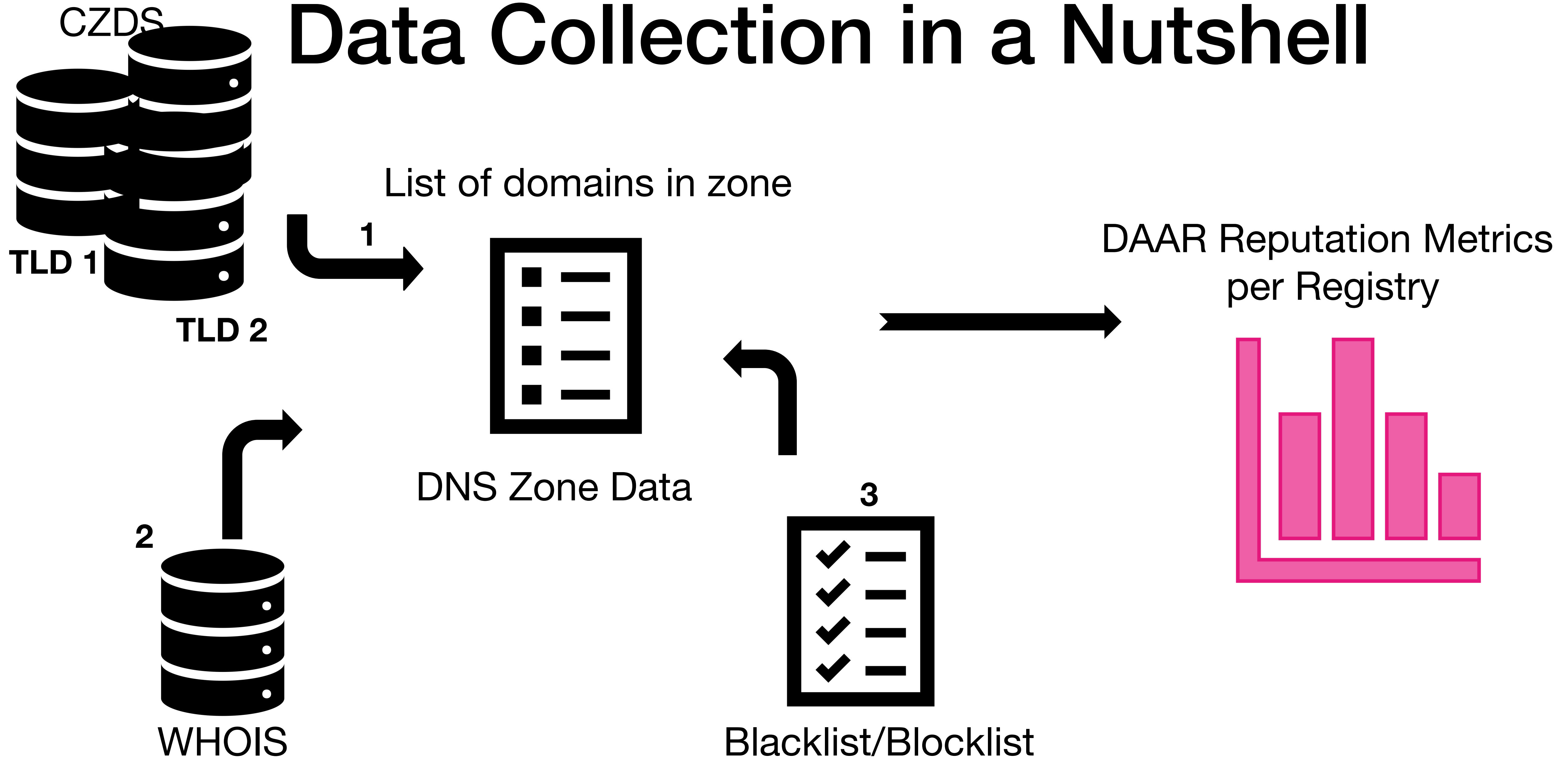
- DAAR definition
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Data Sources

1. DNS zone data
2. WHOIS
3. Open source or commercial abuse threat or reputation blacklist (RBL) data*

*Certain data feeds require a license or subscription

Data Collection in a Nutshell



Reputation Block Lists: Identifying Threats

DAAR collects domain data for

- Phishing
- Malware
- Spam
- Botnet Command & Control

Current Reputation List

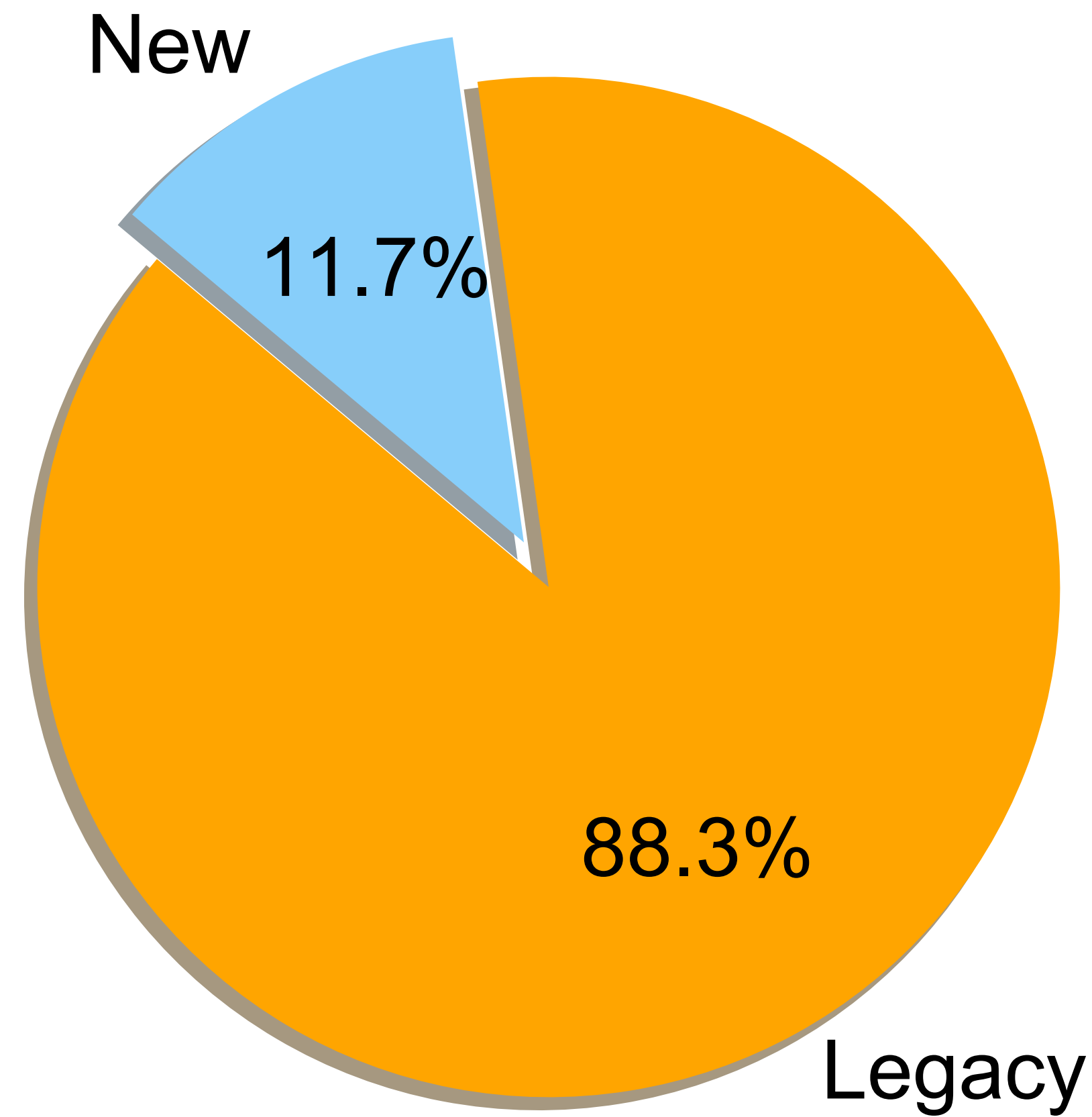
Domains only

- SURBL lists (Spam – Phishing - Malware)
- Spamhaus Domain Block List (Spam - Phishing - Malware - Botnet C&C)
- Anti-Phishing Working Group (Phishing)
- Malware Patrol (Malware, Ransomware, Botnet C&C)
- Phishtank (Phishing domains)
- ABUSE.CH (Ransomware tracker, Feodo tracker)

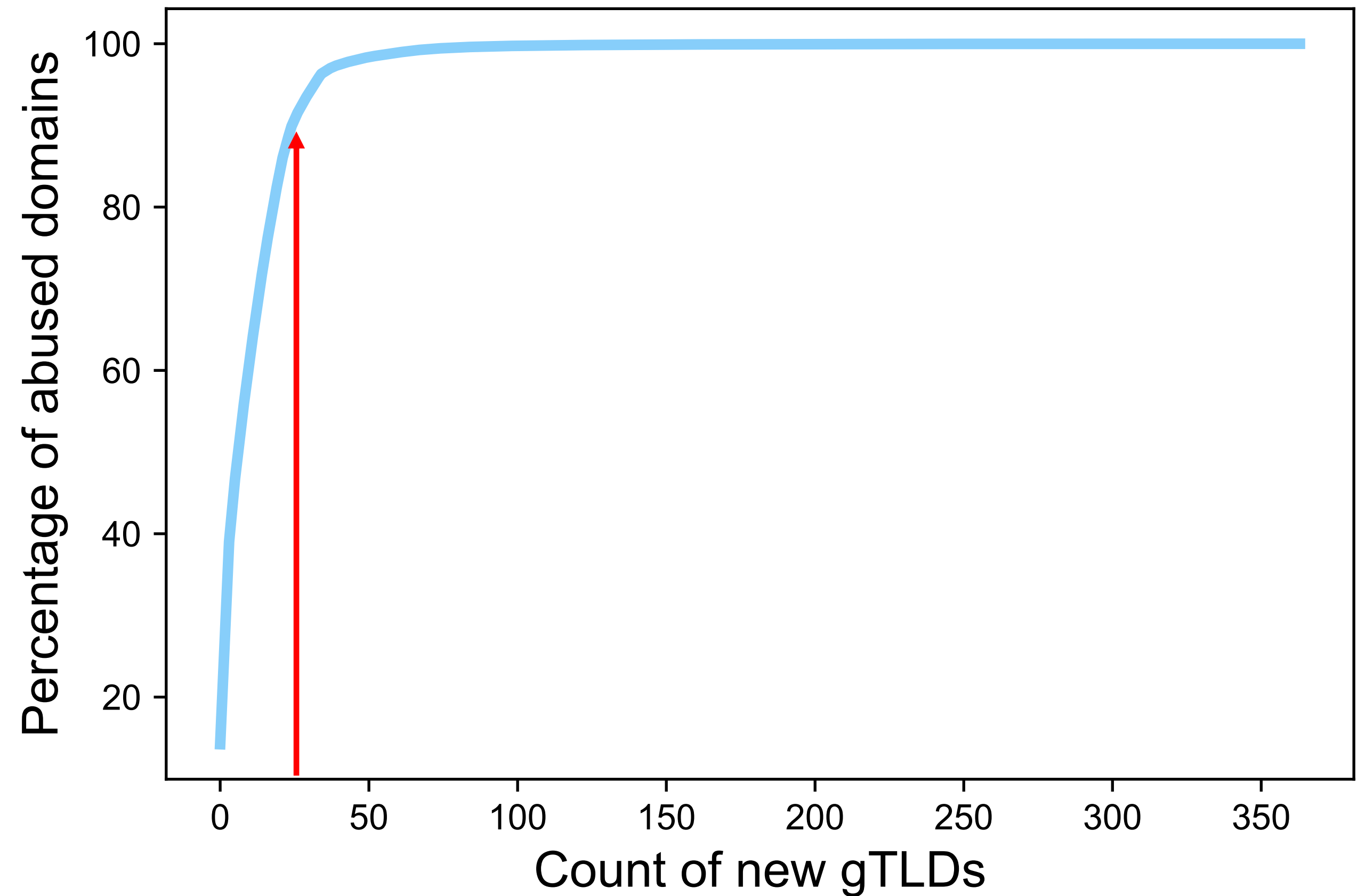
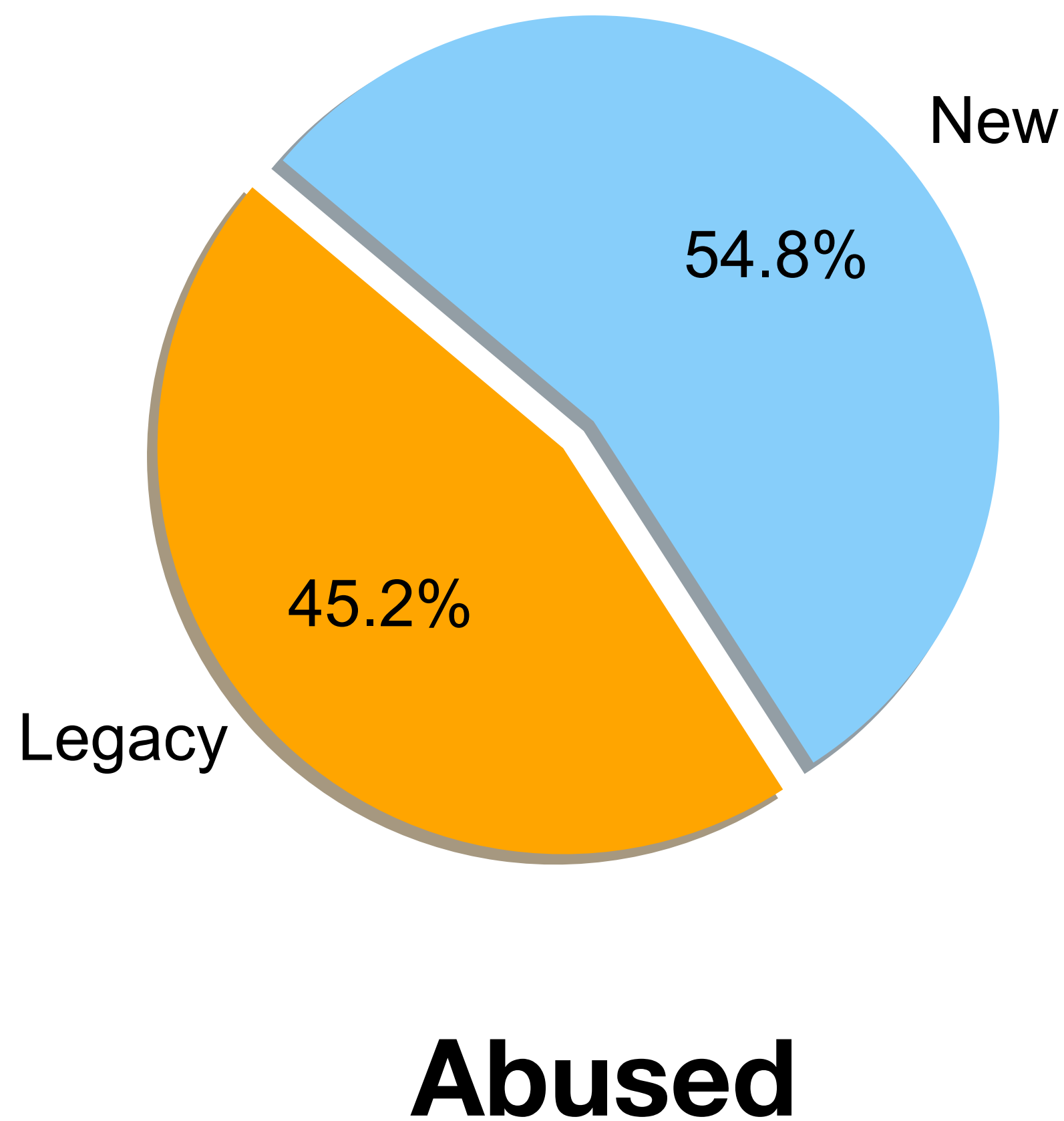
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Distribution of Domains in gTLD Zones



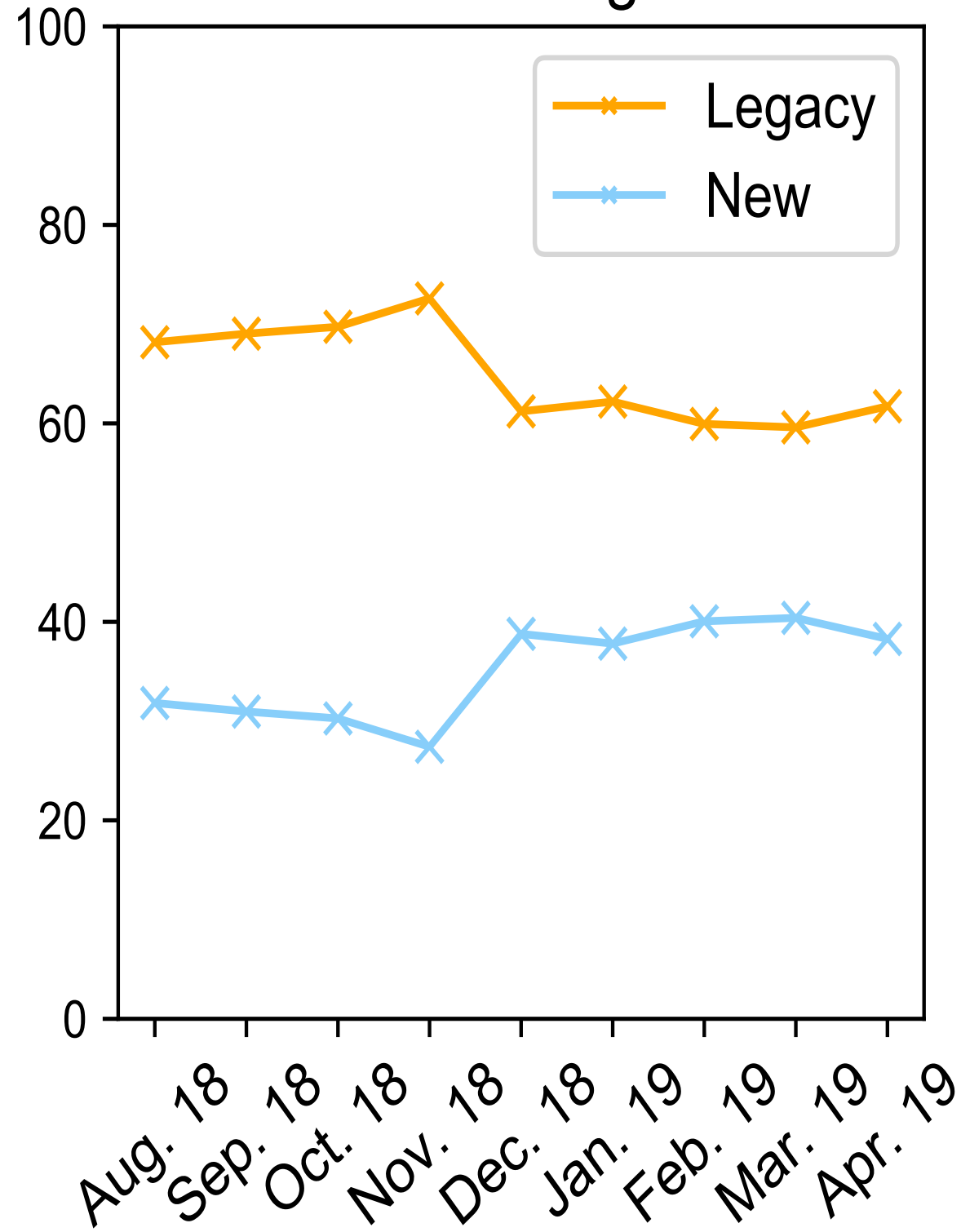
How Many gTLDs are Driving the Bulk?



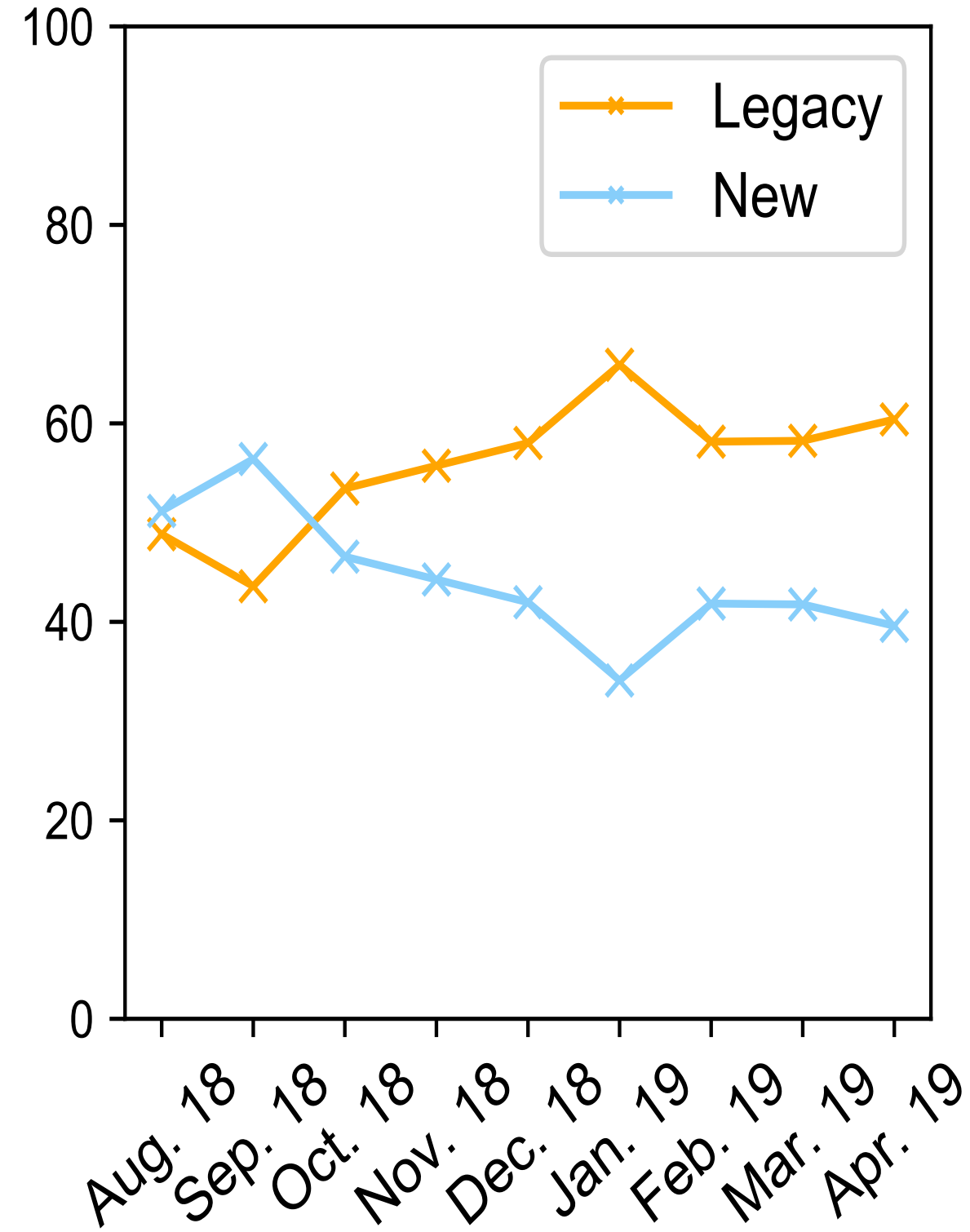
Abuse Type Breakdown

% of domains identified as security threats

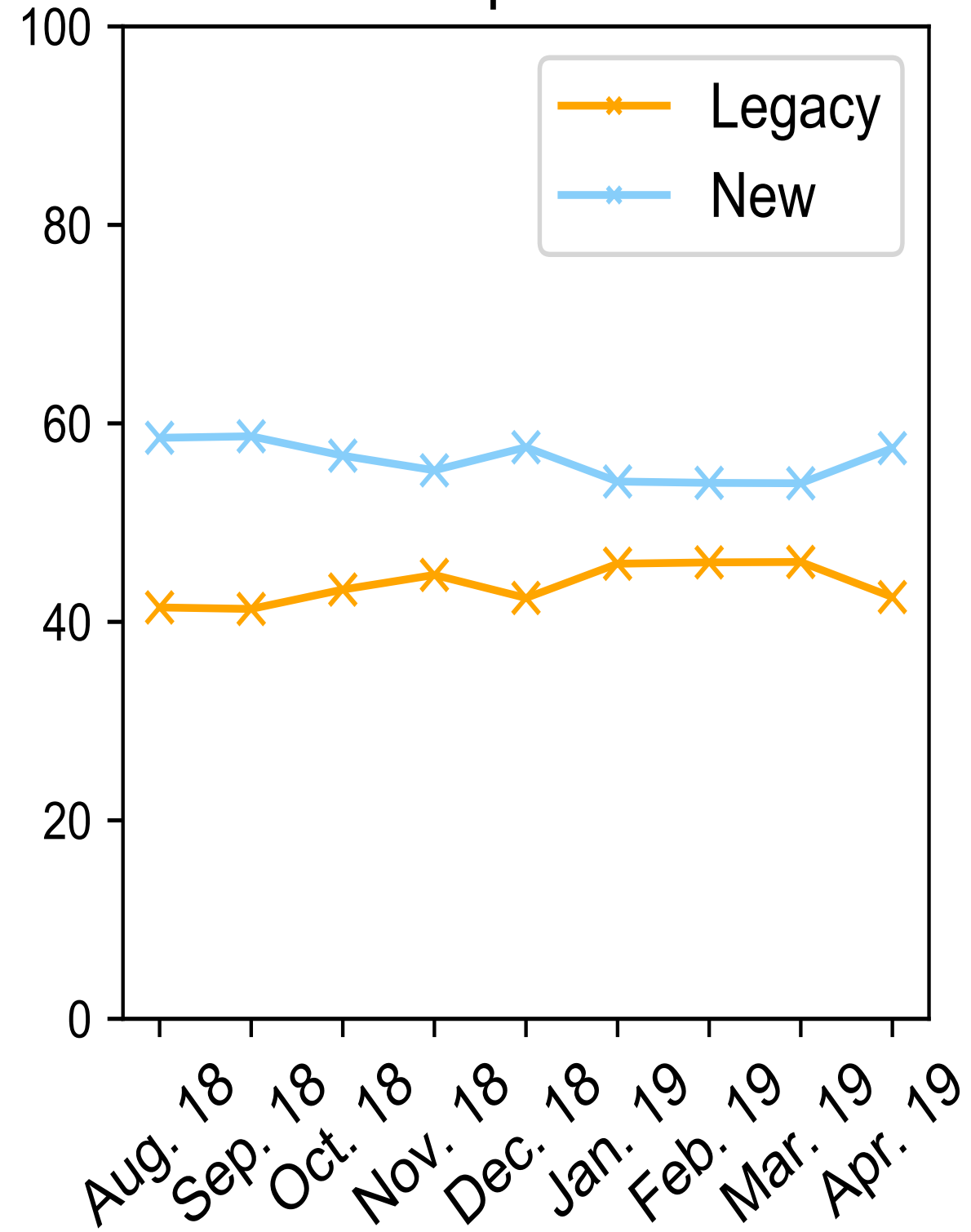
Phishing



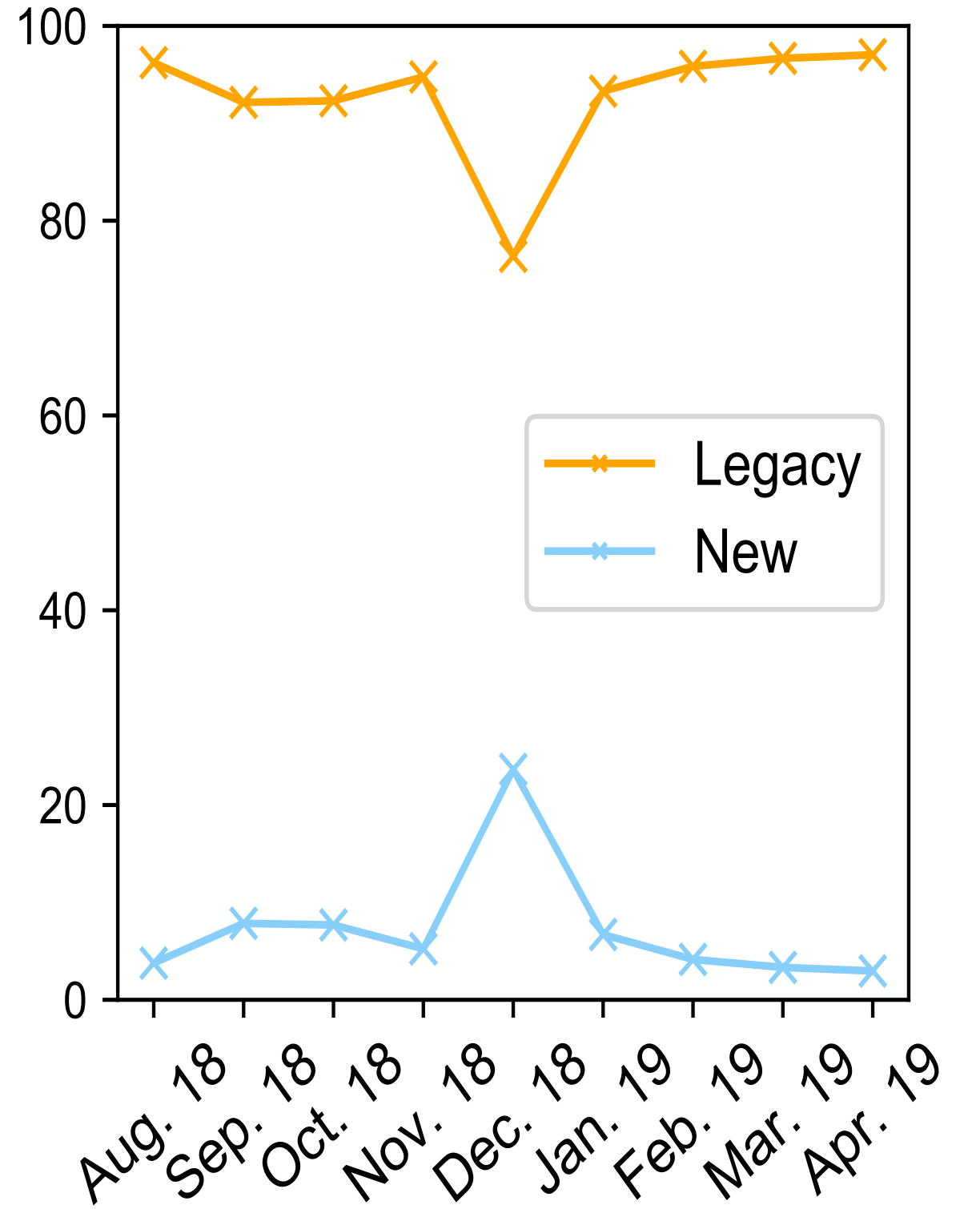
Malware

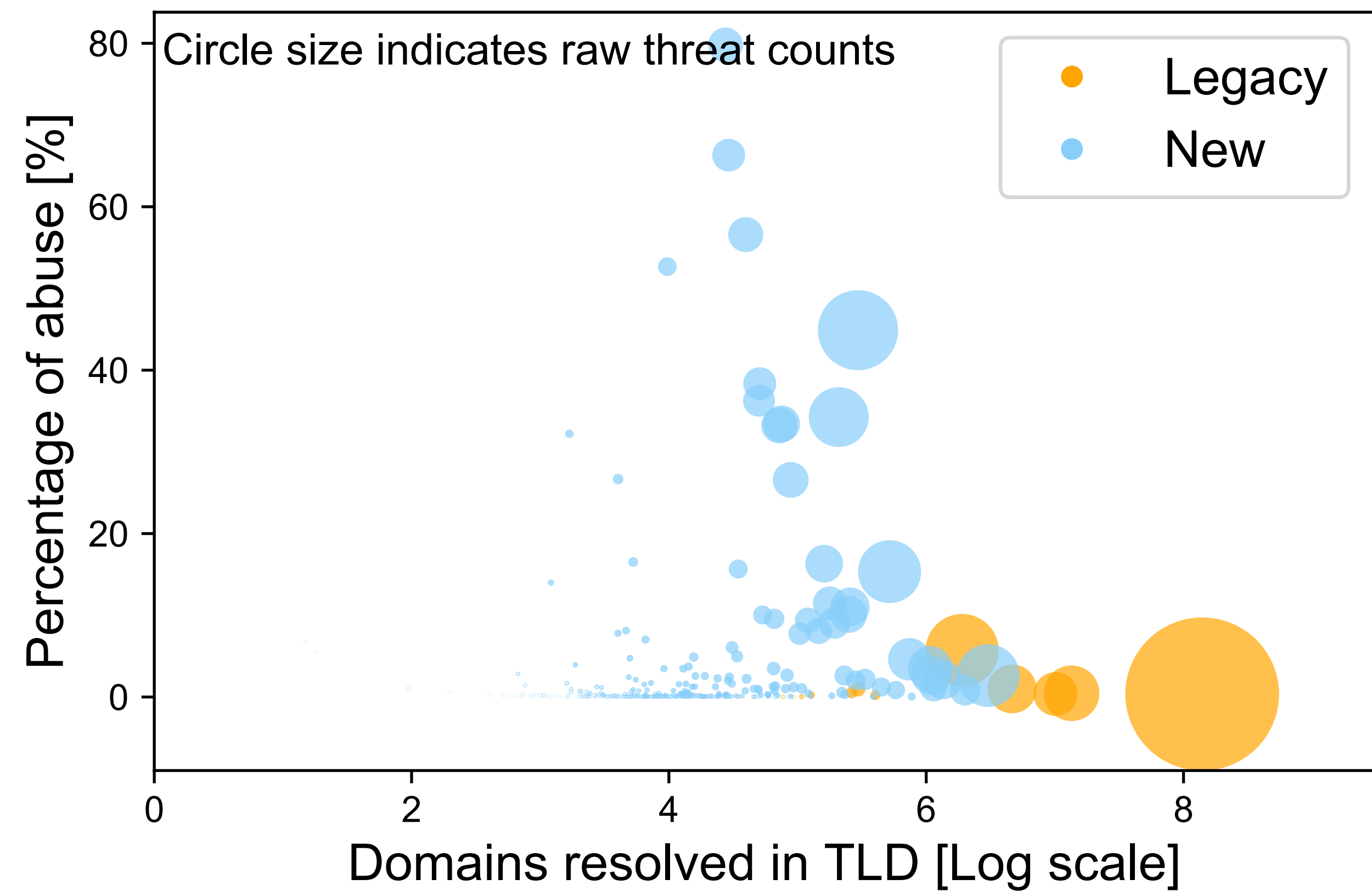
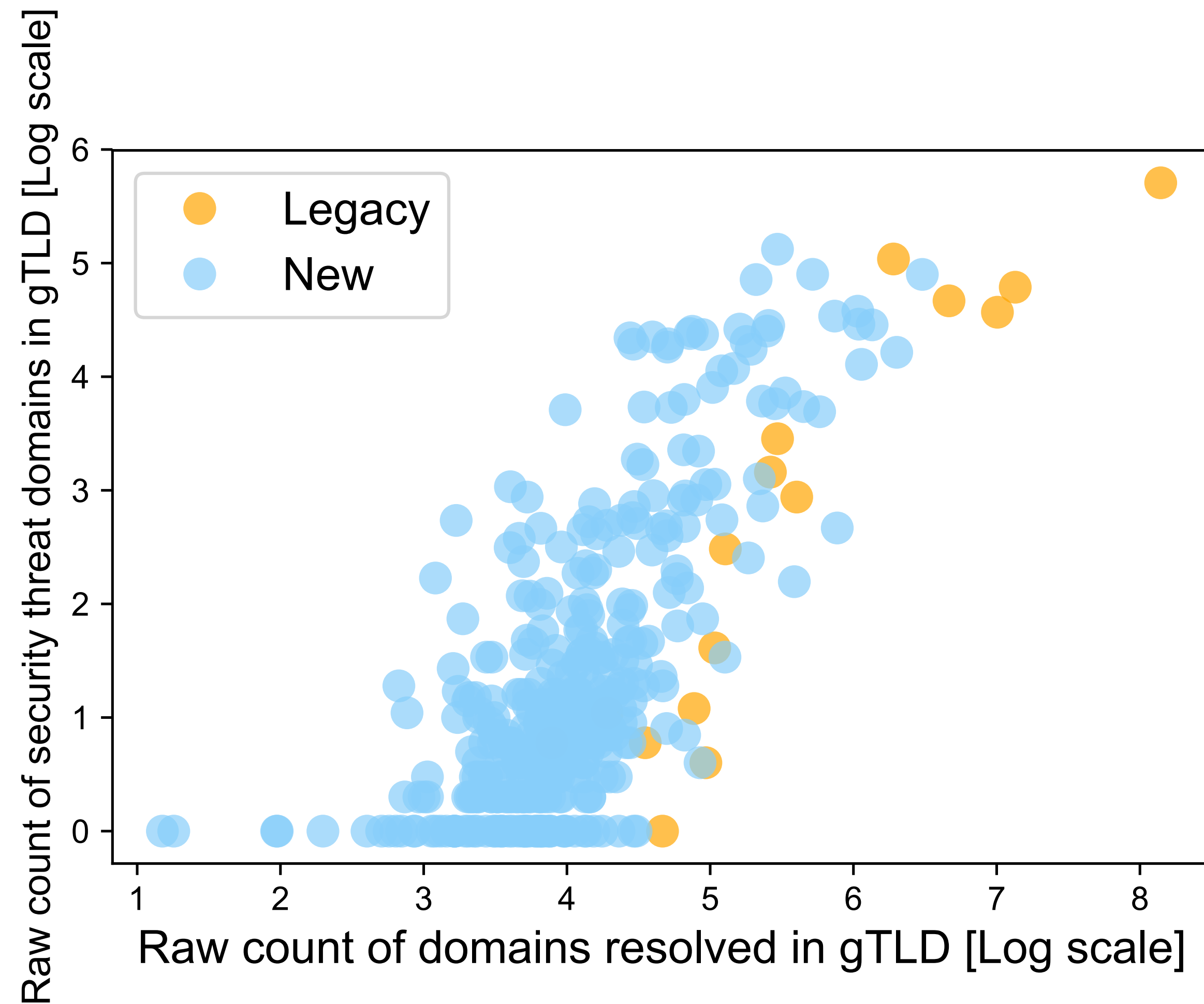


Spam



Command & Control





Abuse: raw counts vs normalized counts

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RIPEstat: Abuse Reporting

- Upcoming feature to be integrated into the RIPEstat
 - Domain/IP/Prefix/ASN Level Abuse Reporting
 - Diverse abuse threat types
 - Aggregated and longitudinal abuse metrics
- Initial steps
 - Develop a criteria for evaluating abuse reputation feeds
 - Maintain and aggregate abuse feeds
 - Create snapshot and longitudinal abuse analytics
 - Continuously update the approach based on the feedback from the community

Question or Comments?

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Check our recent article about “Website Popularity Rankings” on the RIPELab

https://labs.ripe.net/Members/samaneh_tajalizadehkhoob_1/the-tale-of-website-popularity-rankings