



# Security and Digital Trust: Addressing DNS Abuse

BCOP Forum

19<sup>th</sup> December 2025

# Measuring Abuse - Domain Metrics

Tackling Abuse - ICANN Contractual Compliance

# Why Does DNS Abuse Exist?

“Security failure is caused at least as often by **bad / misaligned incentives** as by bad design.”

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

Ross Anderson & Tyler Moore. “The Economics of Information Security” science 314.5799 (2006): 610-613.

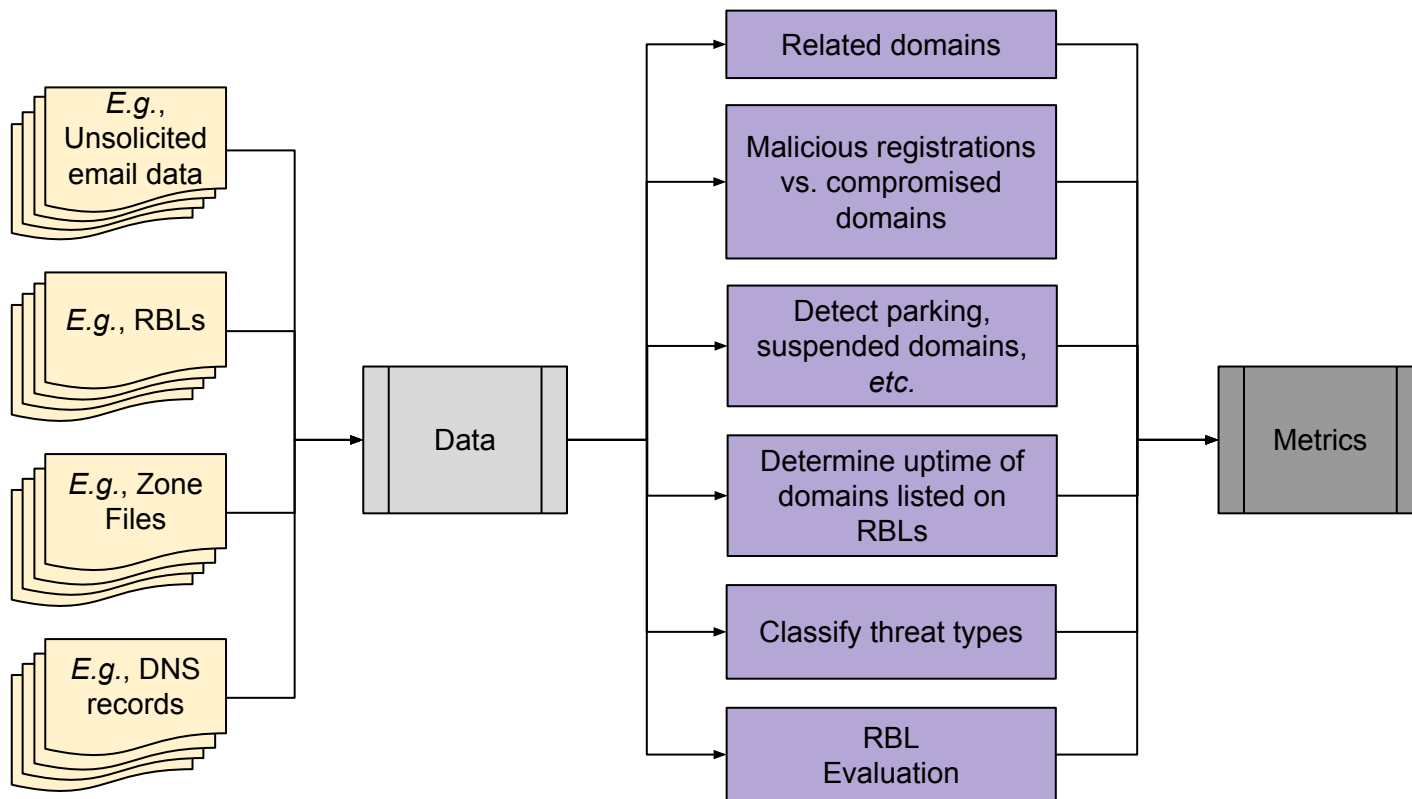
# How to Align / Improve Incentives

Simple Answer: High Quality Metrics

Metrics influence decision-making by **quantifying security performance**, allocating resources, and impacting priorities.

Poorly designed metrics can create **perverse incentives**, leading to unintended consequences and short-term focus.

# Data into Metrics



# ICANN Domain Metrics



**Collects, combines, and compares DNS metadata**



**Dynamic dashboards, interactive visualizations**



**Flexible API for direct data access**



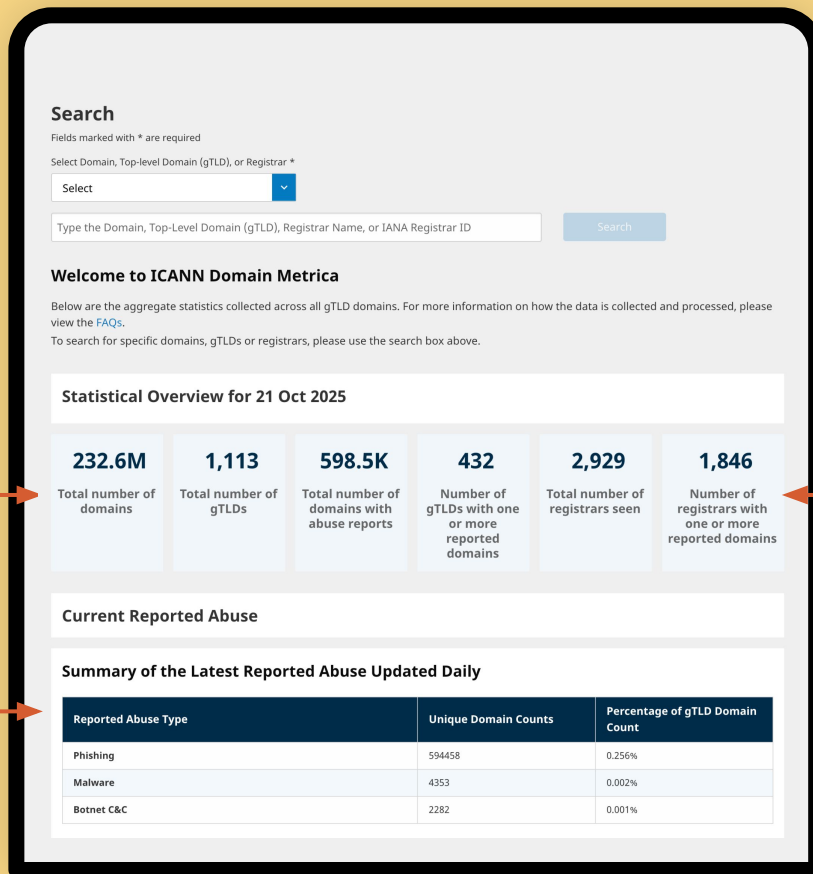
**Open and accessible for all ICANN account holders**

- Global DNS trends for general users
- Customized views for registries and registrars

# Dashboard

Total domains,  
gTLDs, domains  
with abuse reports.

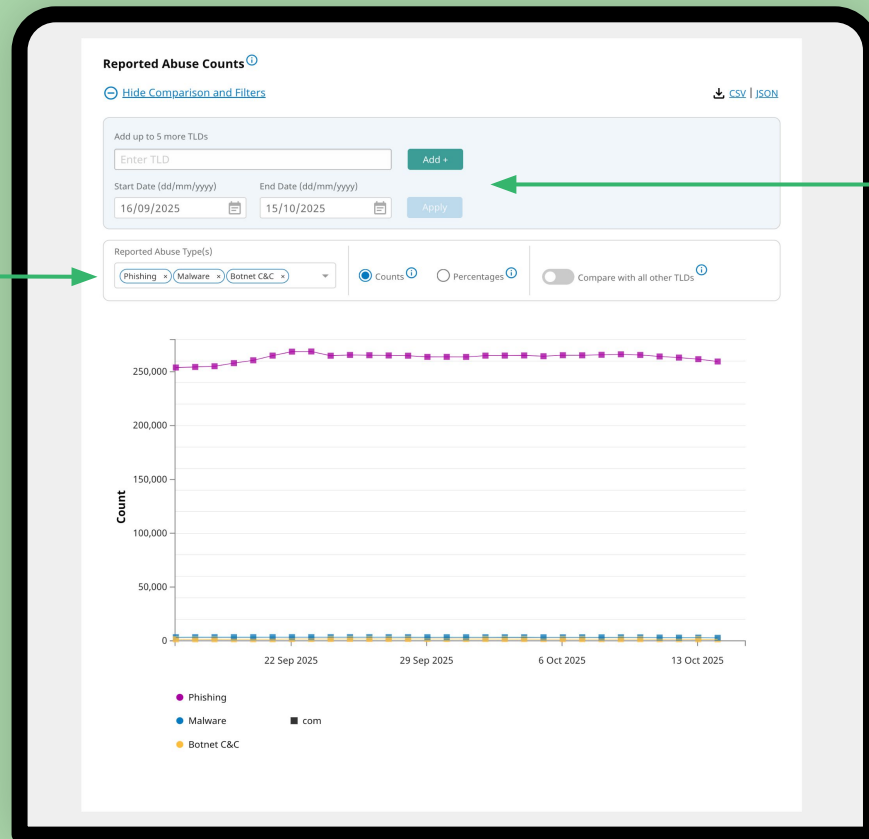
Summary of latest  
reported abuse  
by type (Phishing,  
Malware,  
Botnet C&C).



Number of  
gTLDs/registrars  
with reported  
domains.

# Interactive Charts

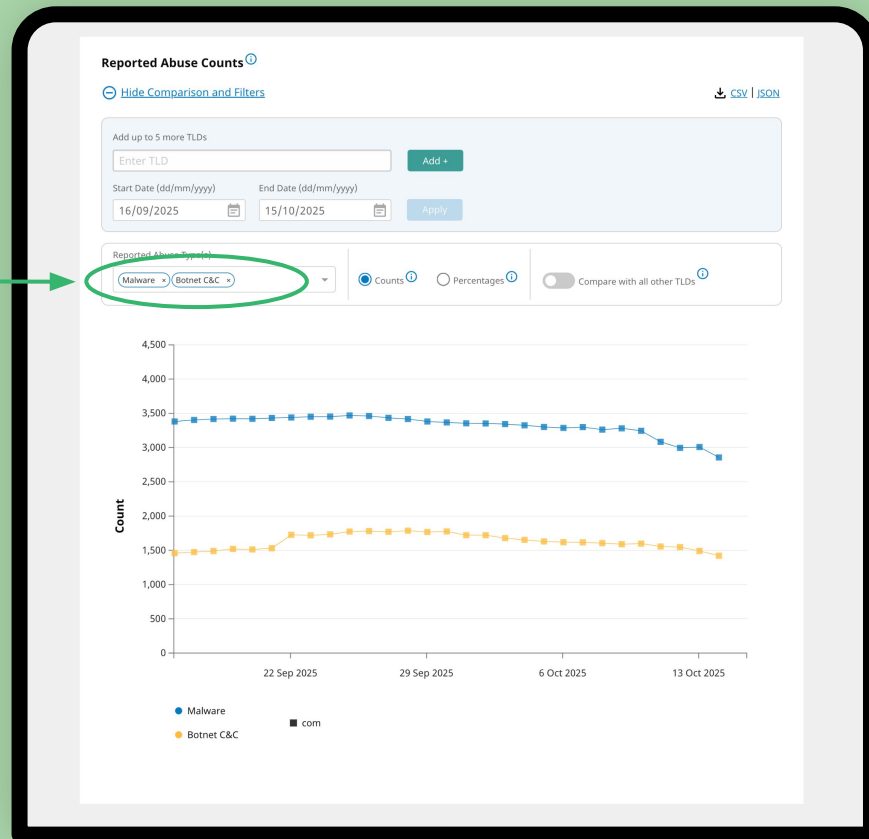
Filter by abuse type, change plot options.



Compare with other TLDs, change date window .

# Interactive Charts

Filter by abuse type, change plot options.



# API Access

- ✓ Retrieve daily statistics and zone sizes programmatically.
- ✓ Flexible endpoint with TLD/registrar/domain search along with start and end date parameters.

End point with gTLD specified

```
https://domainmetrics.icann.org/v1/domainmetrics/  
tld?tld=<TLD>&startDate=<STARTDATE>&endDate=  
<ENDDATE>
```

where:

TLD = gTLD to be searched on

STARTDATE = Date to search from, 'YYYY-MM-DD'  
(default 24 hours ago)

ENDDATE = Date to search to (default now)

Measuring Abuse - Domain Metrics

## Tackling Abuse - ICANN Contractual Compliance

# Introducing ICANN Contractual Compliance

## Enforcement

Requirements contained in agreements between ICANN and gTLD registry operators and registrars

Actions from external complaints, proactive and audit-related

## Publish

Metrics on complaints and enforcement actions

Timelines of formal enforcement actions taken (e.g. breach notices)

## Support

Policy and working groups regarding enforceability of proposed obligations

## Training

Outreach sessions to raise awareness about contractual obligations

# DNS Abuse Mitigation Requirements

**5th April 2024**

Agreements amended to include obligations around DNS abuse mitigation

**5th August 2025**

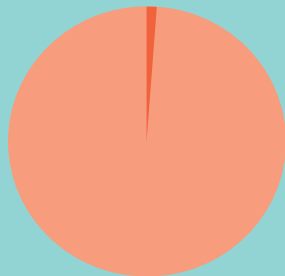
**400** DNS abuse related investigations  
**Four** formal breach notices  
**Two** audits

**~20k** malicious domains directly mitigated  
**100's of thousands** more addressed due to processes implemented

# Enforcement - not just formal

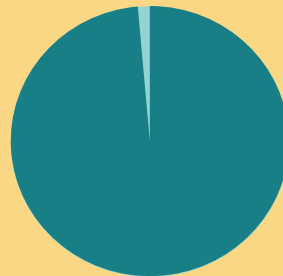
## DNS Abuse Mitigation Requirements

400 Investigations  
4 Formal Breach Notices



## All Policies & Agreements

2,970 Investigations  
19 Formal Breach Notices



# Enforcement Outcomes

## Remediation Plan

Targeted actions to address root causes

Aim to prevent recurrence of noncompliance

## Implement

Tracked by compliance

## Recurrence

Expedited compliance action if remediated issues return

## Process

Applied for formal and informal investigations

# More Information

## Measurements

<https://domainmetrica.icann.org/>

Read more here:

<https://www.icann.org/octo-ssr/metrica-en>

## Compliance

<https://www.icann.org/compliance>

Submitting DNS Abuse complaints to ICANN

<https://www.icann.org/en/system/files/files/submitting-dns-abuse-complaints-icann-gu-ide-17nov25-pt.pdf>

# Thank you!



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