

# Engineering Update

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# Agenda

- Services ARIN Engineering Supports
- Statistics
- Software Releases and Improvements

# Services ARIN Engineering Supports



## **Core Services** include:

- Resource Public Key Infrastructure (RPKI)
- ARIN Online
- Reg-RWS
- Internet Routing Registry (IRR)
- Domain Name System (DNS)
- Directory services (Whois/RWhois/Whois-RWS/RDAP)
- Email
- ARIN mailing lists
- ARIN website
- The Vault
- Operational Test and Evaluation Environment (OT&E)

# Services ARIN Engineering Supports



## **Internal Support** includes:

- ARIN Online (staff interface)
- Security and performance monitoring
- Cloud-based tools
- Various development/testing environments
- Email
- Analytics
- Infrastructure tools like Jira / Confluence, build agents, etc.
- Financial systems

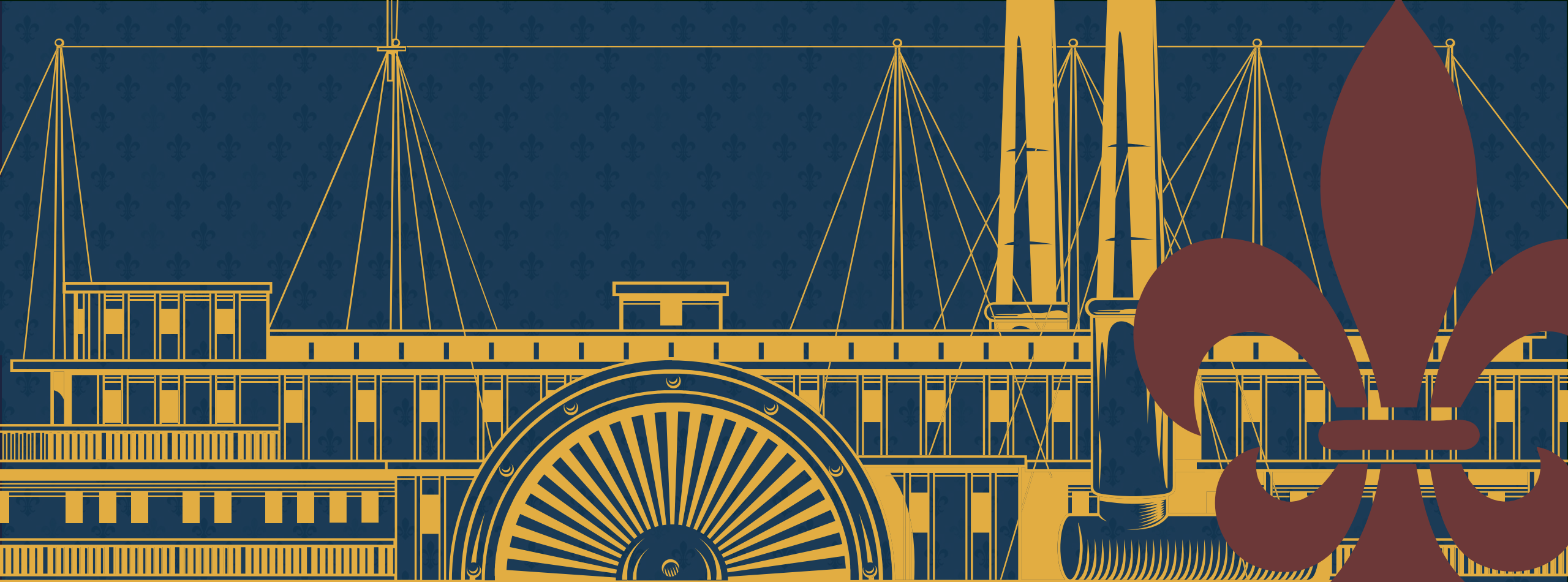
# Services We Can Simplify



**Four different ways to get  
directory service information**

Whois  
RWhois  
Whois-RWS  
RDAP

We are planning a consultation later this year to consider the retirement of RWhois and Whois-RWS.

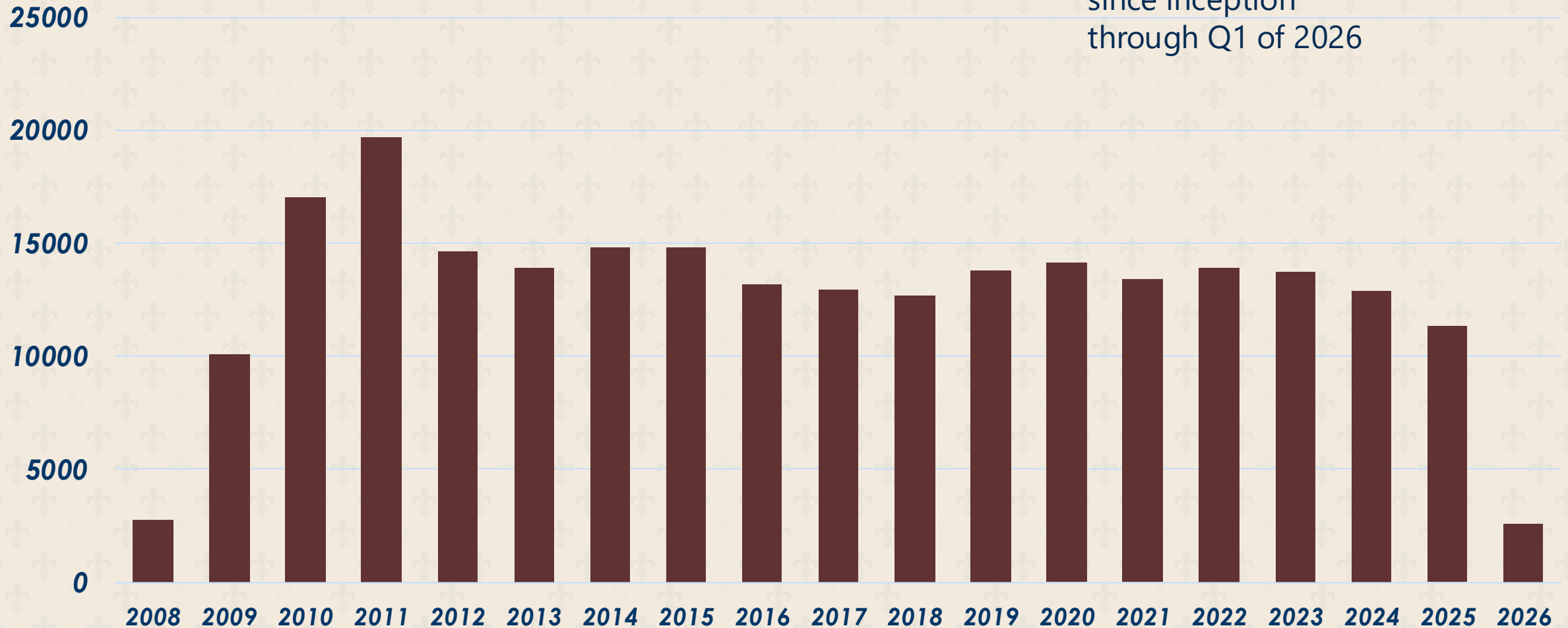


# Statistics

# ARIN Online

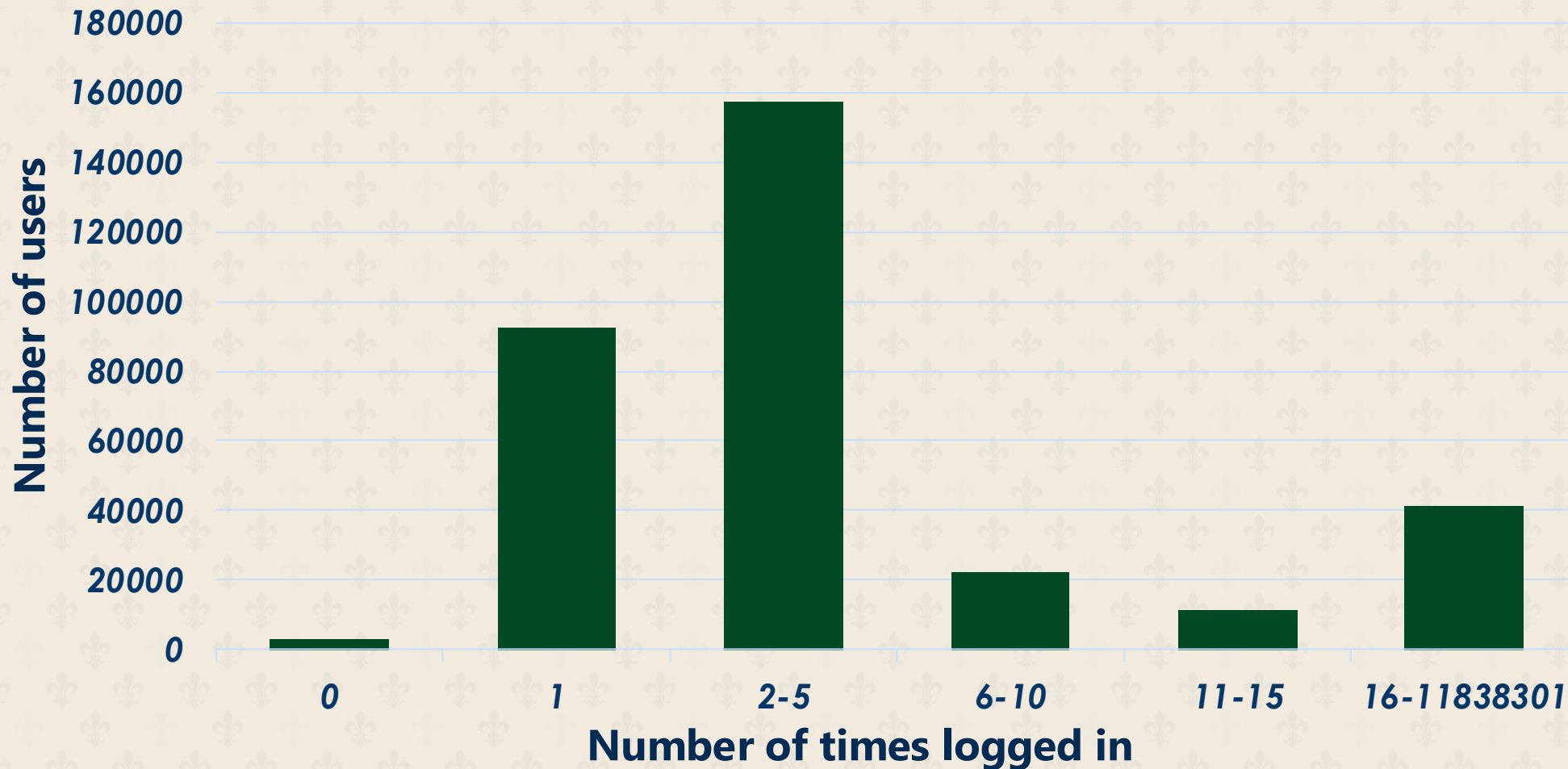
# 241,797

Accounts activated  
since inception  
through Q1 of 2026

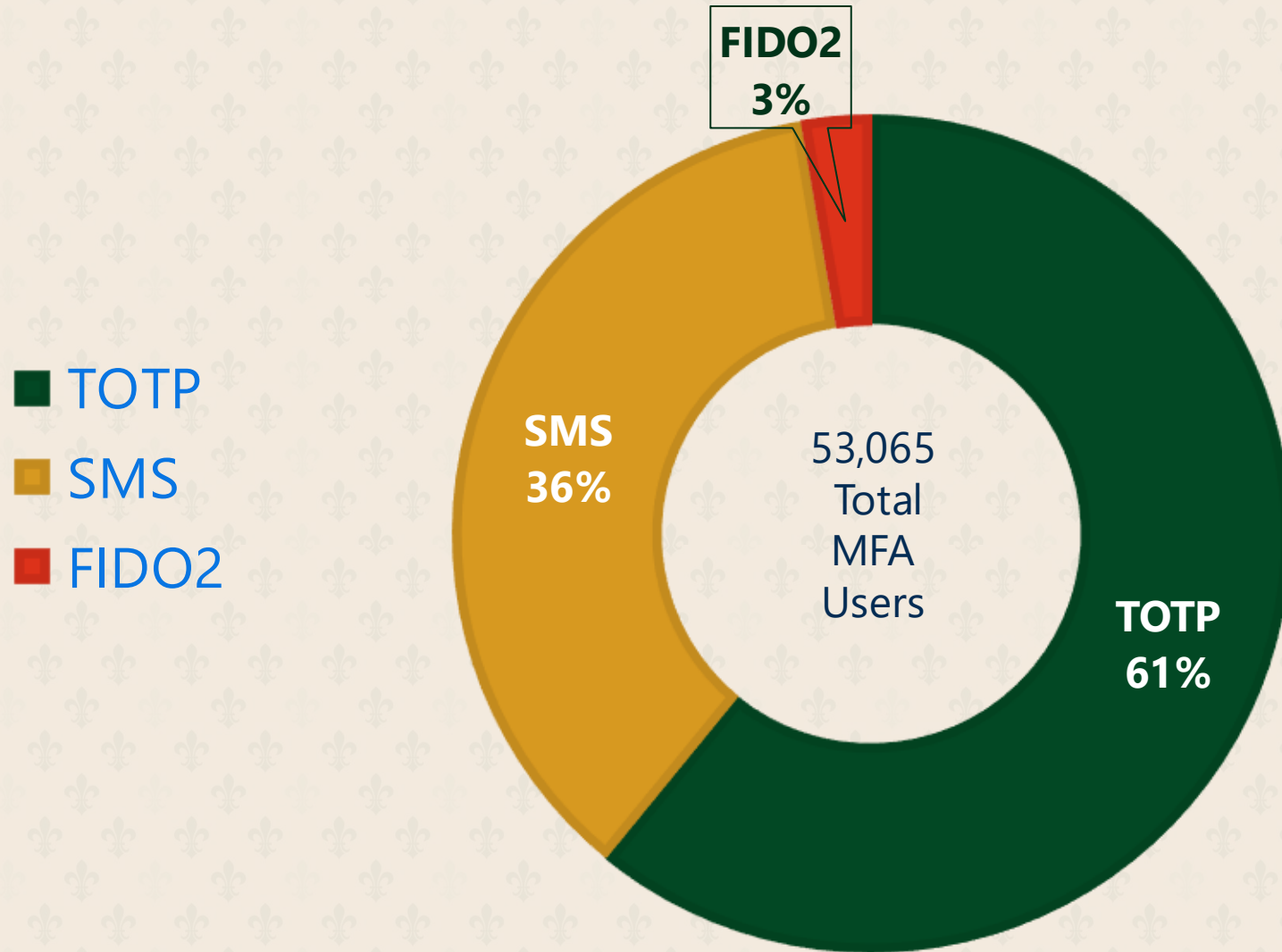


# ARIN Online Logins (Cumulative)

Logins from inception through Q1 of 2025

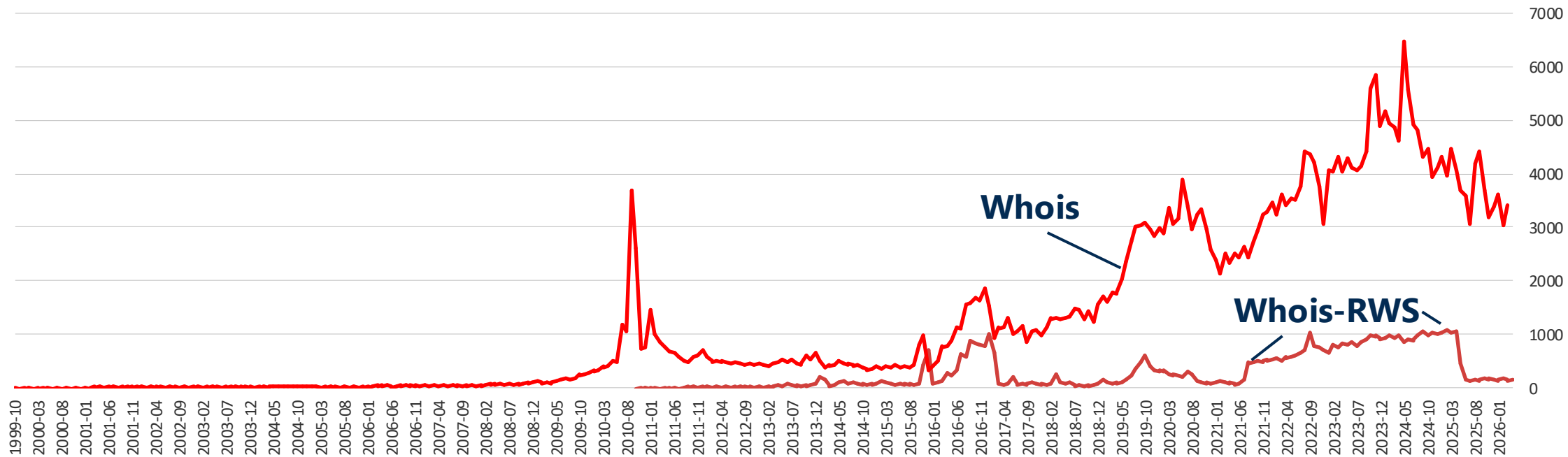


# Multifactor Authentication Adoption

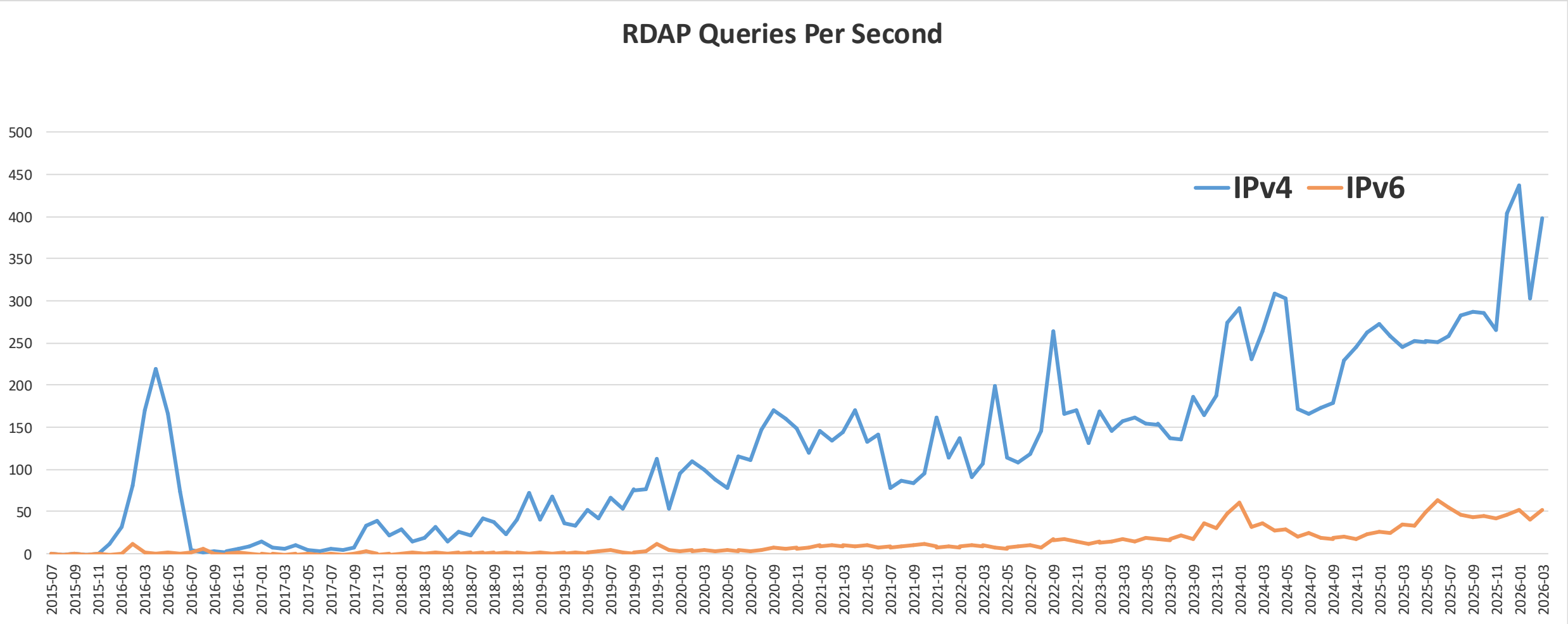


# Whois and Whois-RWS

Queries Per Second

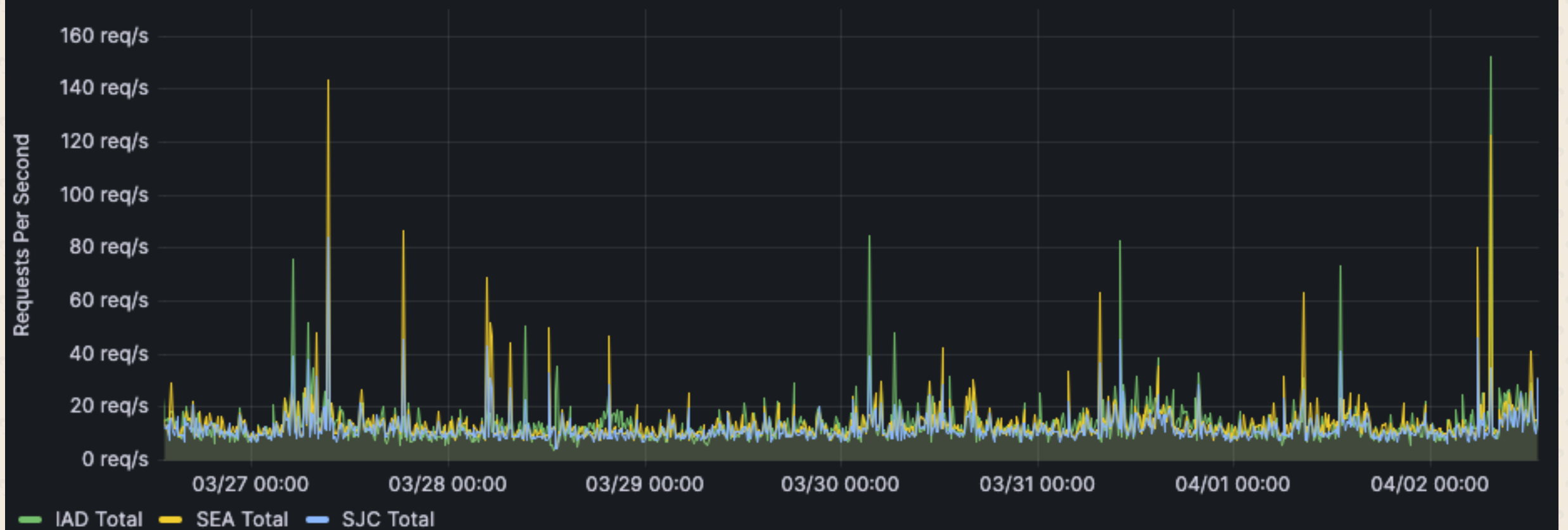


# Registration Data Access Protocol (RDAP)

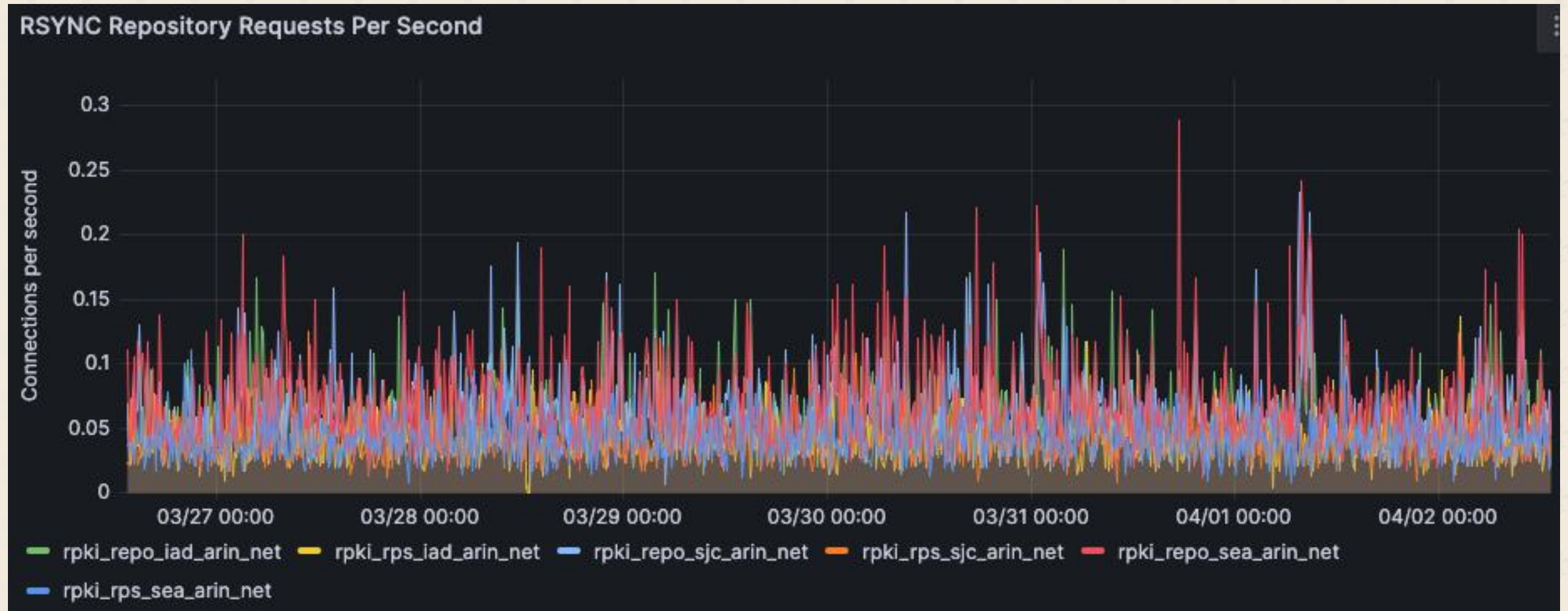


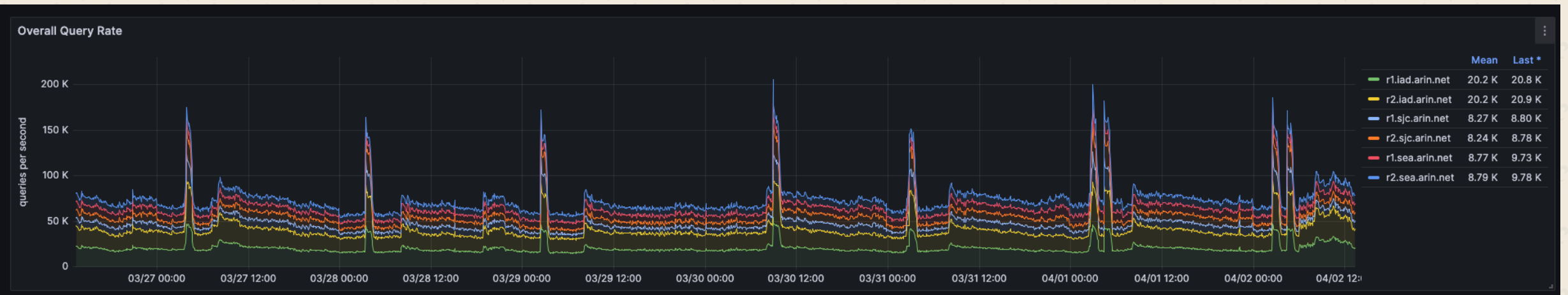
# RPKI – RRDP

RRDP Repository REQ/s

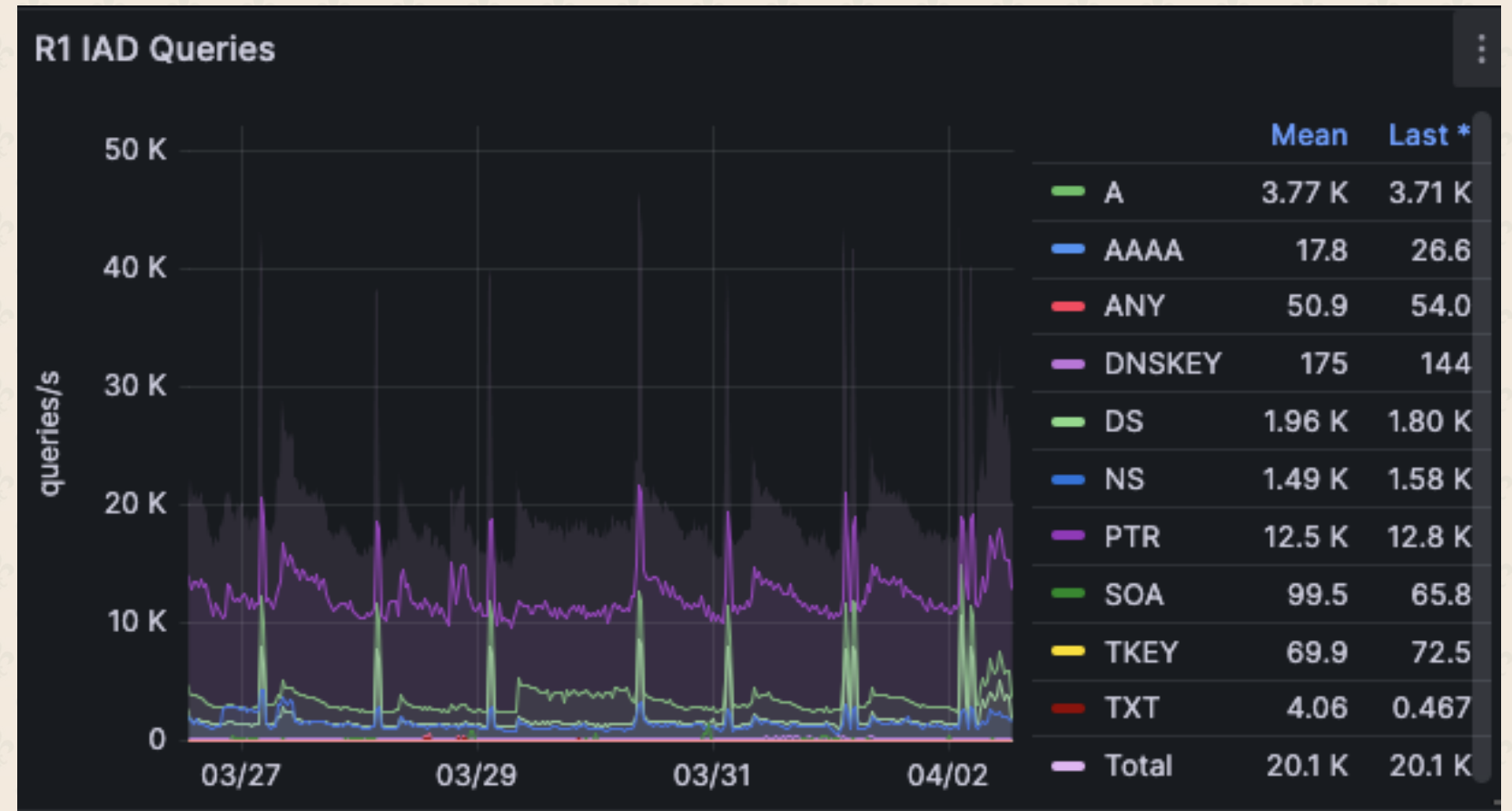


# RPKI – RSYNC

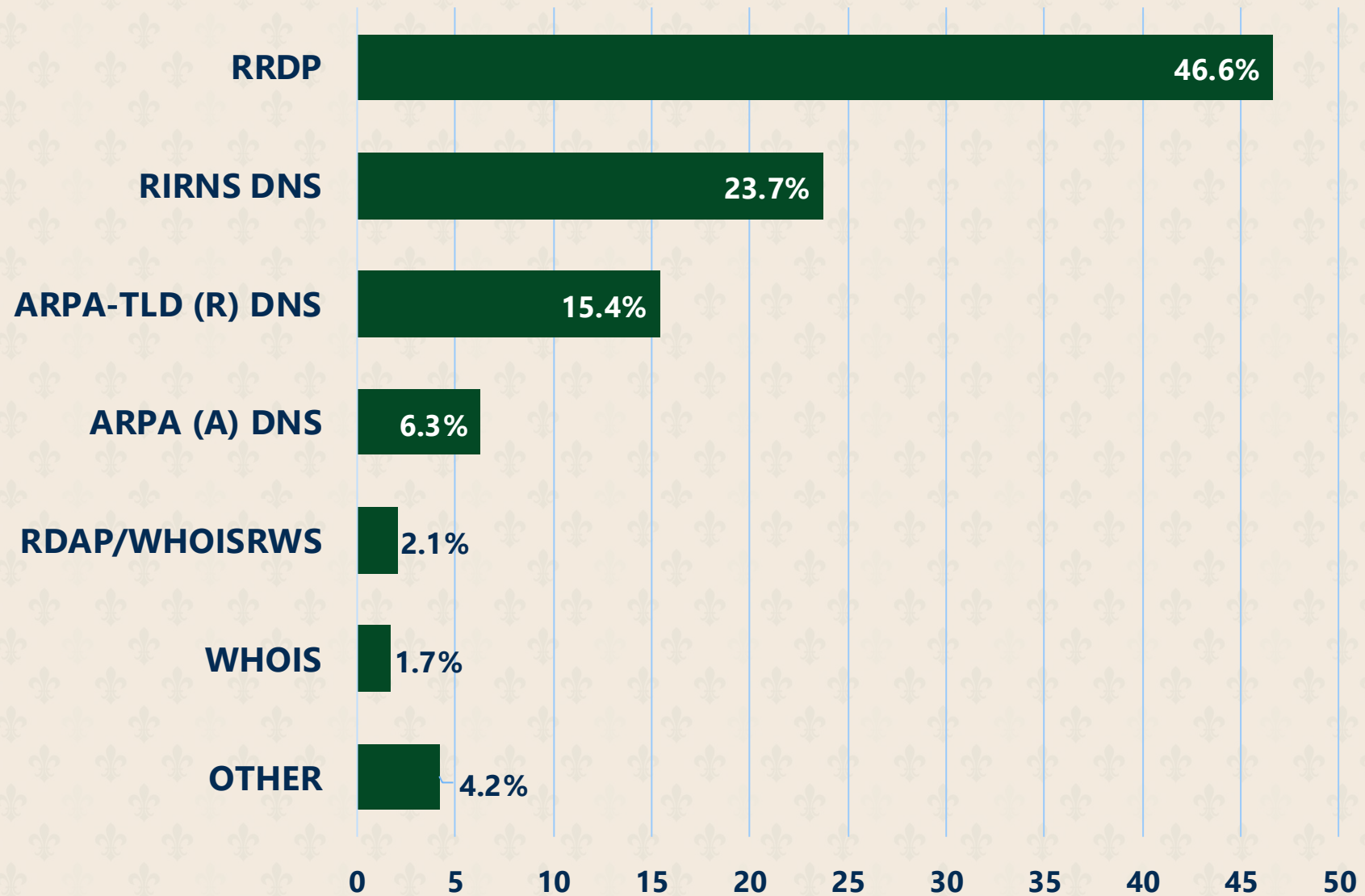


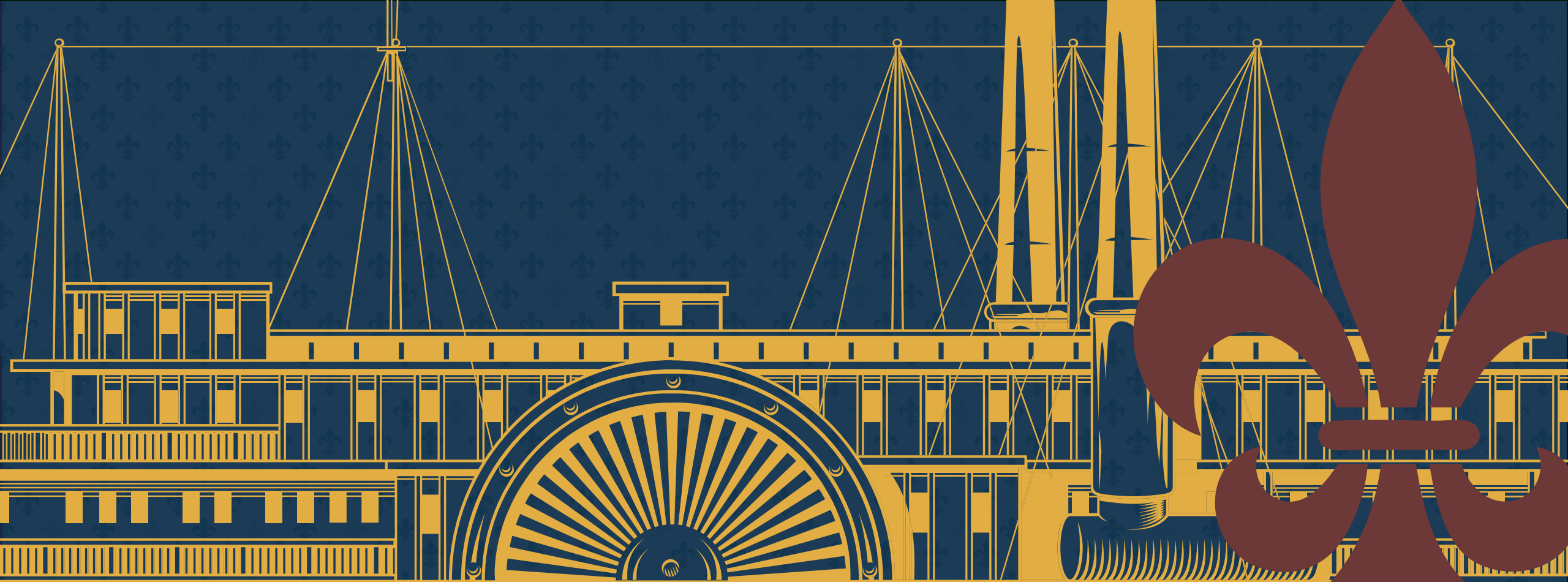


# DNS – ARIN-Managed /8s



# Public Facing Services Traffic Breakout





# Releases and Improvements



# Releases Since ARIN 55



## Public

- RPKI ROA Change Log
- ASPA Released
- All authorization now through ARIN Online (no more email authorizations)
- OriginAS removed
- Bug fixes

## Internal

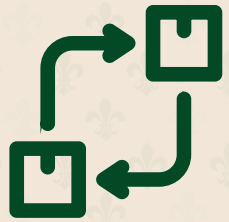
- Tech debt
- Financial controls

## Ongoing

- System and Organization Controls (SOC) 2 Type 2 audit
- Payment Card Industry (PCI) audit
- Reduction of technical debt – continued LARGE focus here
- Availability enhancements to the provisioning systems

# System Improvements Since ARIN 55

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End-of-life box replacement migration setup after move to new data center out of ARIN HQ



Rolled out new hardware for public-facing sites running Red Hat OpenShift Kubernetes Engine (OKE) with services running under OKE KubeVirt Virtual Machines



Prometheus monitoring operational in all sites running on Red Hat OpenShift, with applications being migrated away from Sensu

# New Data Center

Moved computer room from ARIN HQ to a new data center in Northern Virginia

## Objectives

- Remove technical debt
- Become more highly available
- No longer require HVAC certifications

## Improvement objectives being solved by

- New hardware for network, servers, and storage
- Moving to hosted Kubernetes clusters and current Linux platforms
- Focusing on Kubernetes work now

# Upcoming Planned Public Enhancements

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## Secure Routing Enhancements

- Routing Intelligence for RPKI

## Internal Improvements

- Create staff efficiencies
- Create authorization matrixes

## RDAP Enhancements

Parity with Whois/Whois-RWS and new features

- Geofeed
- RPKI directory service

## Standards Work

Depends when the standard is finalized within the Internet Engineering Task Force (IETF)

### **RDAP**

- Redaction
- RPKI directory service

### **RPKI**

- Autonomous System Provider Authorization (ASPA)
- Trust Anchor Constraints

# Number Resource Organization



## RPKI Trust Anchor Constraints

Leverage existing reports to attest what is in each Registry

- Extended Stats (shows what is in each registry)
- Extended Transfer Logs (specification work underway) that will show movement from RIR to RIR for Internet resource transfers

Supports IETF's constraining trust anchor draft

- <https://datatracker.ietf.org/doc/draft-snij-sidrops-constraining-rpki-trust-anchors/>
- Implemented in rpki-client

**ASPA coordination (ARIN and RIPE are done)**

# And... One more thing...

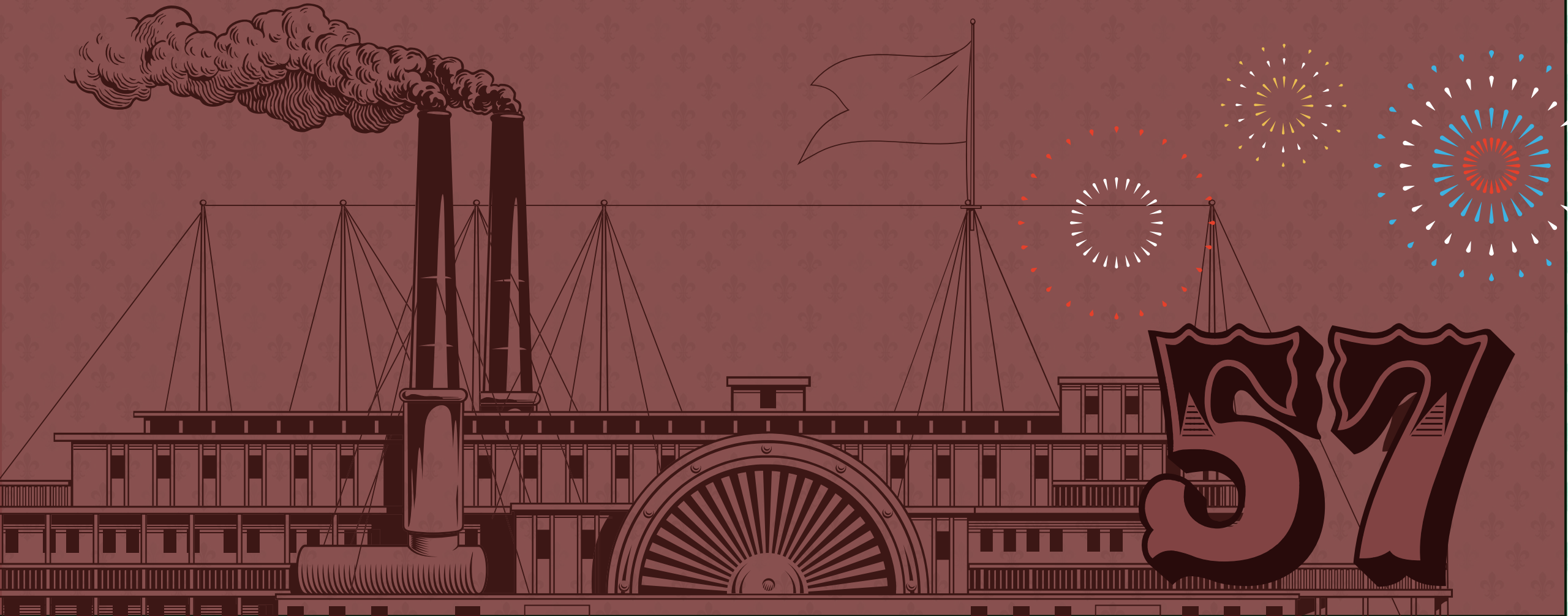
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**Reggie Forster** retired as Director of Operations this year

- First parking lot interview (during pandemic)
- First retirement from Engineering
- Served at ARIN for almost six years



# Questions and Comments?



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