RIPE NCC DNS Update

Anand Buddhdev | RIPE NCC | May 2025

Authoritative DNS instances

New locations since RIPE 89

- Caracas, Venezuela

- Paris, France

- Maracay, Venezuela

- Taipei, Taiwan

Host an AuthDNS instance

- https://hosted-dns.ripe.net

AuthDNS locations

ns.ripe.net retired
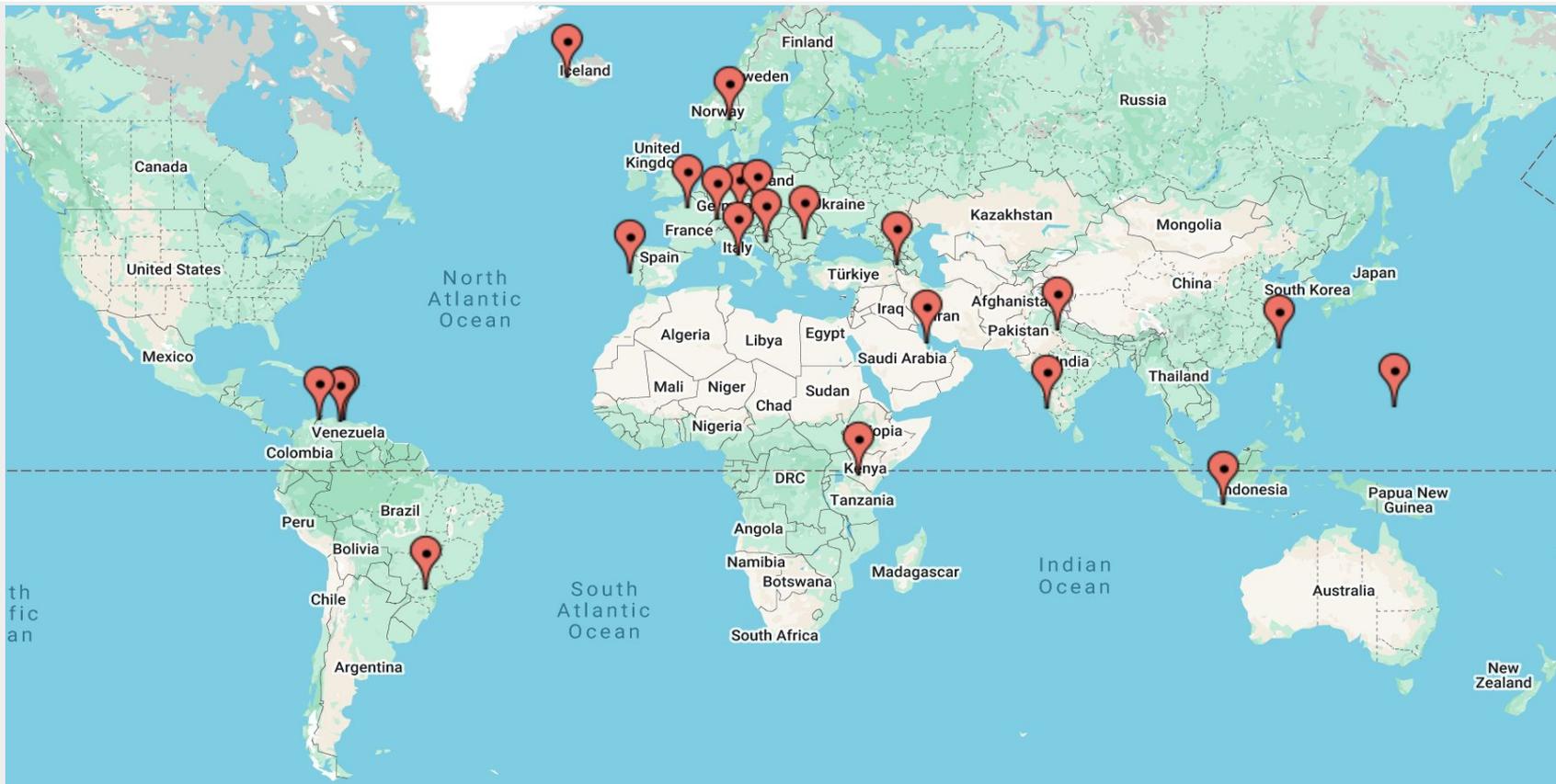
Summary

- Proposed in May 2024 in a RIPE Labs article

- https://labs.ripe.net/author/anandb/retiring-nsripenet/

- Discussion on the DNS WG mailing list, and presentation at RIPE 88

- Community supported the proposal

- Implementation started in June 2024

- Completed on 15 January 2025

Domain object update visualisation

Authoritative DNS IPv6 renumbering
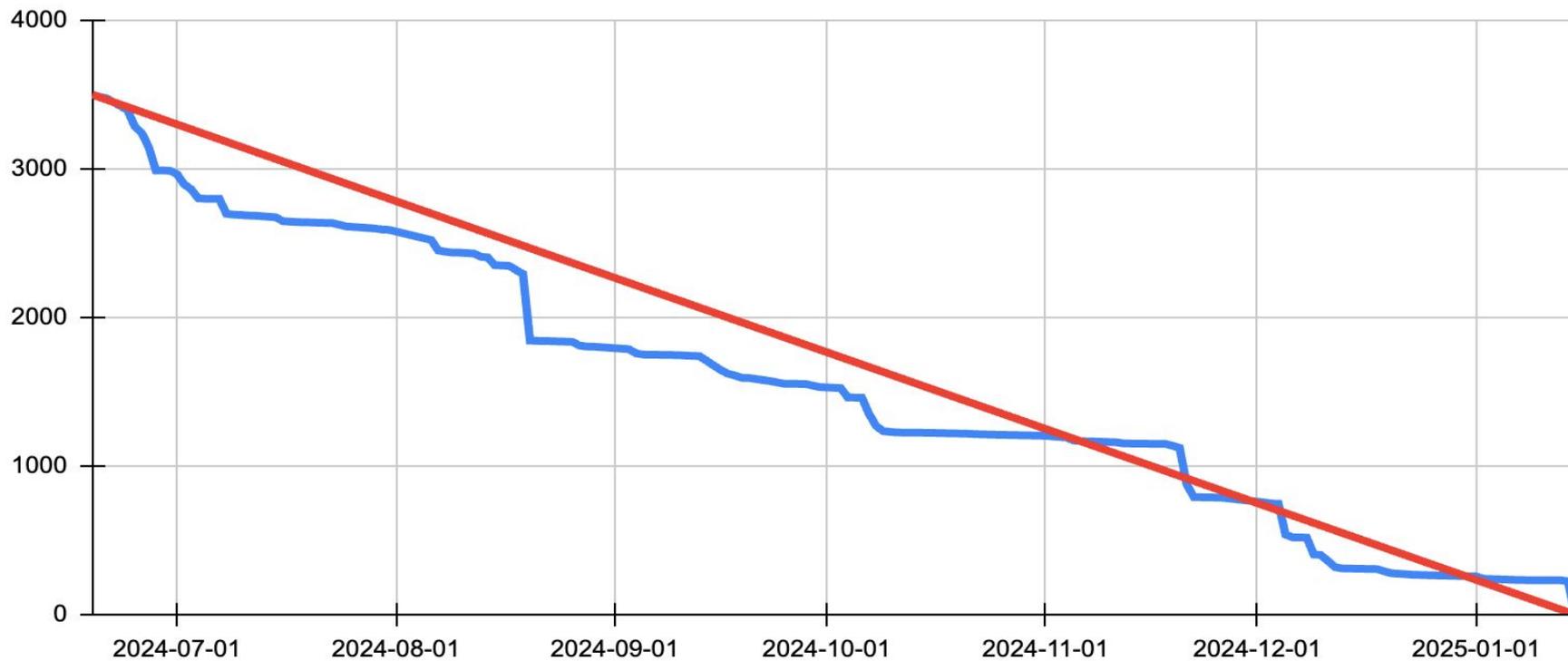
Operational problems

- Current prefix is **2001:67c:e0::/48**

- No room for less specific covering prefix

- No room for a test prefix

Authoritative DNS IPv6 renumbering

Solution

- RIPE NCC has 2a13:27c0::/29 for infrastructure

- /44 sized prefix set aside for AuthDNS

- **2a13:27c0:30::/48** is the new production prefix

- **2a13:27c0:3f::/48** is the new test prefix

- Prefixes are already being announced and DNS servers are configured

- Name servers will be renumbered over the coming months

- Some coordination will be required with third parties (eg. ccTLDs)

Statistics collection and graphing

Using Prometheus

- We have switched to Prometheus for collecting metrics

- We use DSC (DNS Statistics Collector) for DNS-specific metrics
  - We currently process the XML files to DAT files
  - Graphs displayed using the original perl grapher

- We are also processing XML files to Prometheus format files

- Prometheus scrapes the metrics and stores them

- Grafana is used to display the metrics

- We intend to switch completely by Q3

DNSSEC signer hardware replacement

- Current signers are a pair of Dell R440 servers, purchased in July 2018

- Warranty expires in July 2025, and cannot be extended

- We will purchase a pair of similar servers to replace these two

- There will be no change to the operating system, signer software or architecture

- We continue to add and improve monitoring

Questions
& Comments ?

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