rssac002.root-servers.org

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What is RSSAC002?

- RSSAC -> ICANN Root Server System Advisory Committee
- RSSAC002 is a set of measurements that root server operators publish
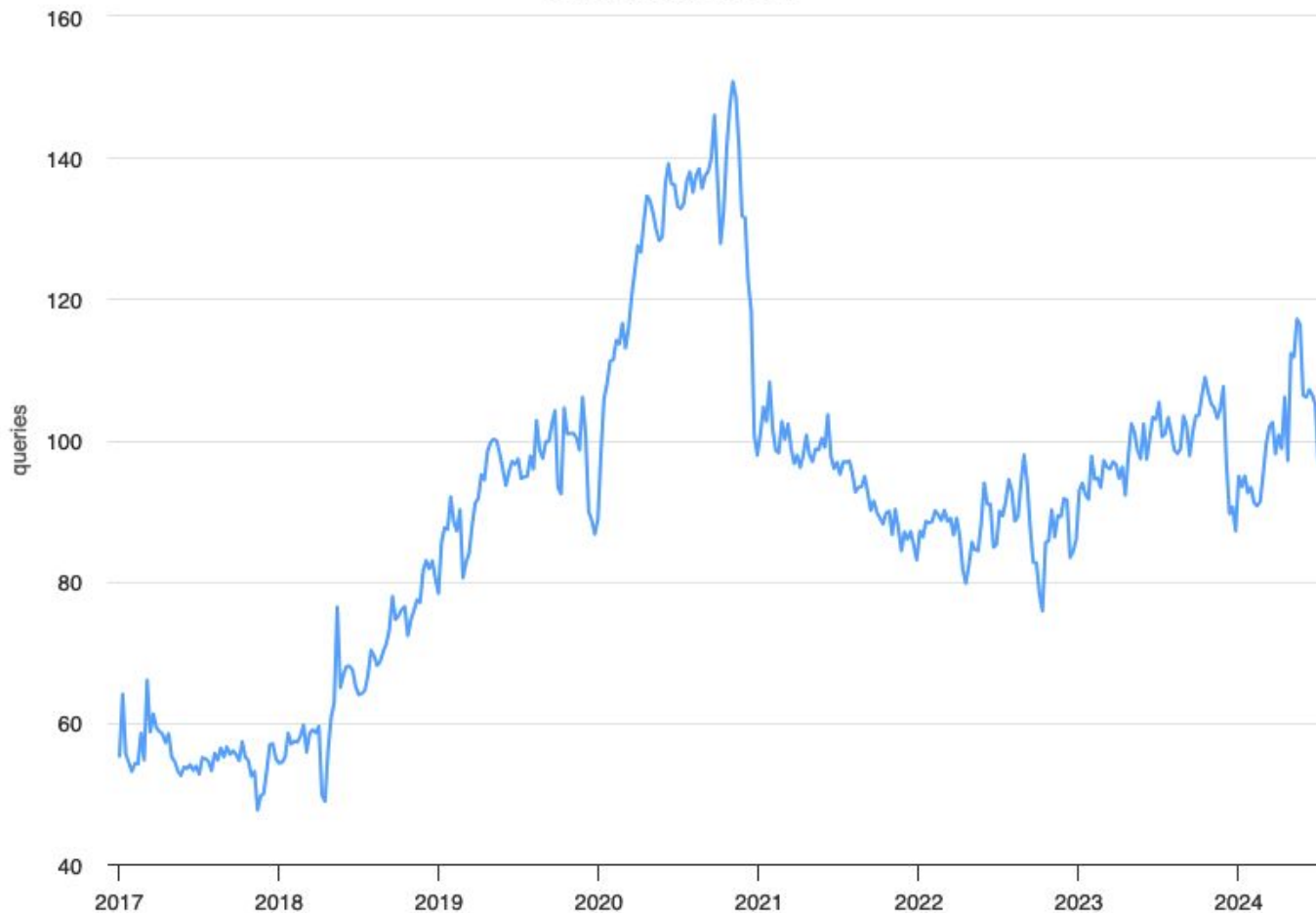 - Currently at version 5

- Lots of counters collected daily
  - Counts of queries and responses (udp/tcp, v4/v6)
  - Counts of RCODEs responded with
  - Counts of unique IP sources seen (v4/v6)
  - Query and response packet size distribution
  - Latency in the publication of the root zone

RSSAC002 Data Visualizations

- Hosted at https://rssac002.root-servers.org/
  - v1 deployed in 2021
  - v2 deployed in 2024
- V2 added data on RSS instances from root-servers.org.
- Useful for historical macro trend analysis (2017-01-01)
  - 3-week delay in visualization of data
  - This is <u>not</u> an operational tool
- All visualizations are interactive
- Open source
  - https://github.com/rssac-caucus/rssac002-charts
- Big thanks to these people for providing feedback
  - Fred Baker, Ray Bellis, Anand Buddhdev, Paul Hoffman, Ken Renard, Brad Verd, Duane Wessels, Lars-Johan Liman, Terry Manderson
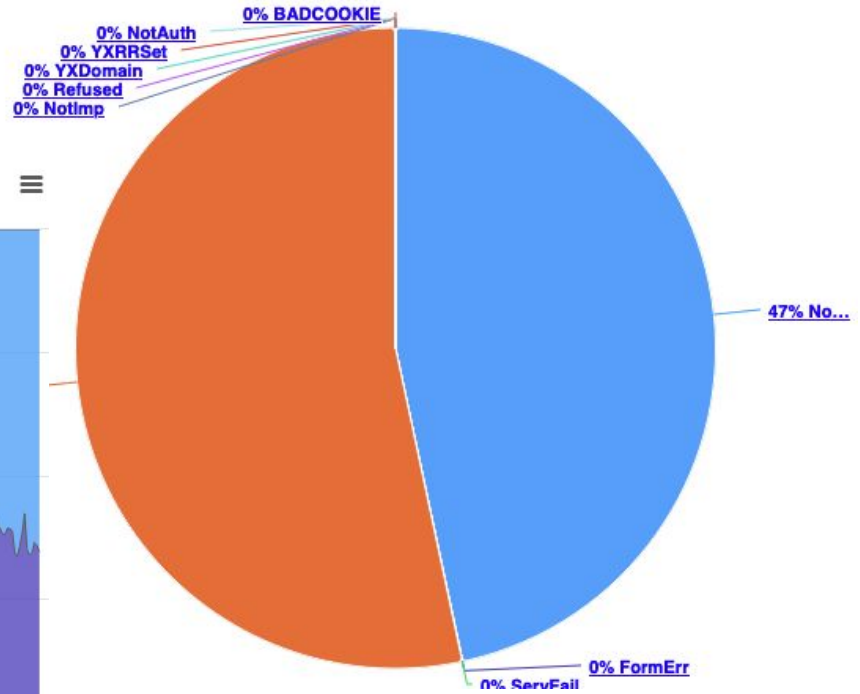
Queries Received by-week (billion) (daily average)
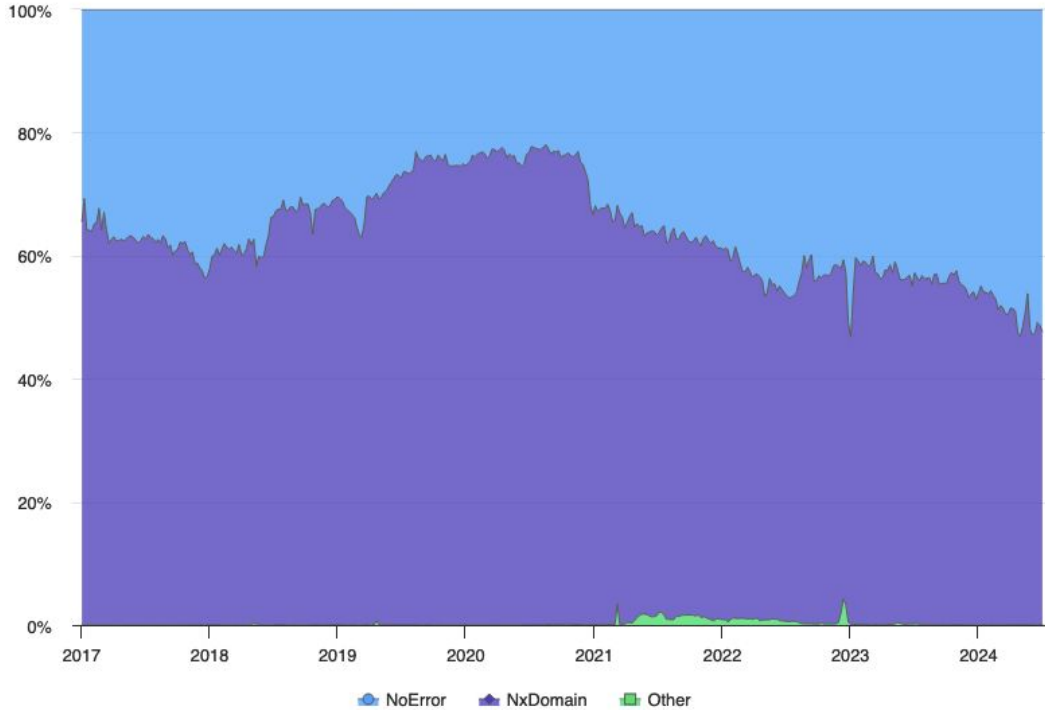
Source: RSSAC002 Data

4

NoError vs NxDomain by-week
Source: RSSAC002 Data

rcode-volume 2023-7-01 - 2024-07-01
Source: RSSAC002 Data

0% BADCOOKIE
0% NotAuth
0% YXRRSet
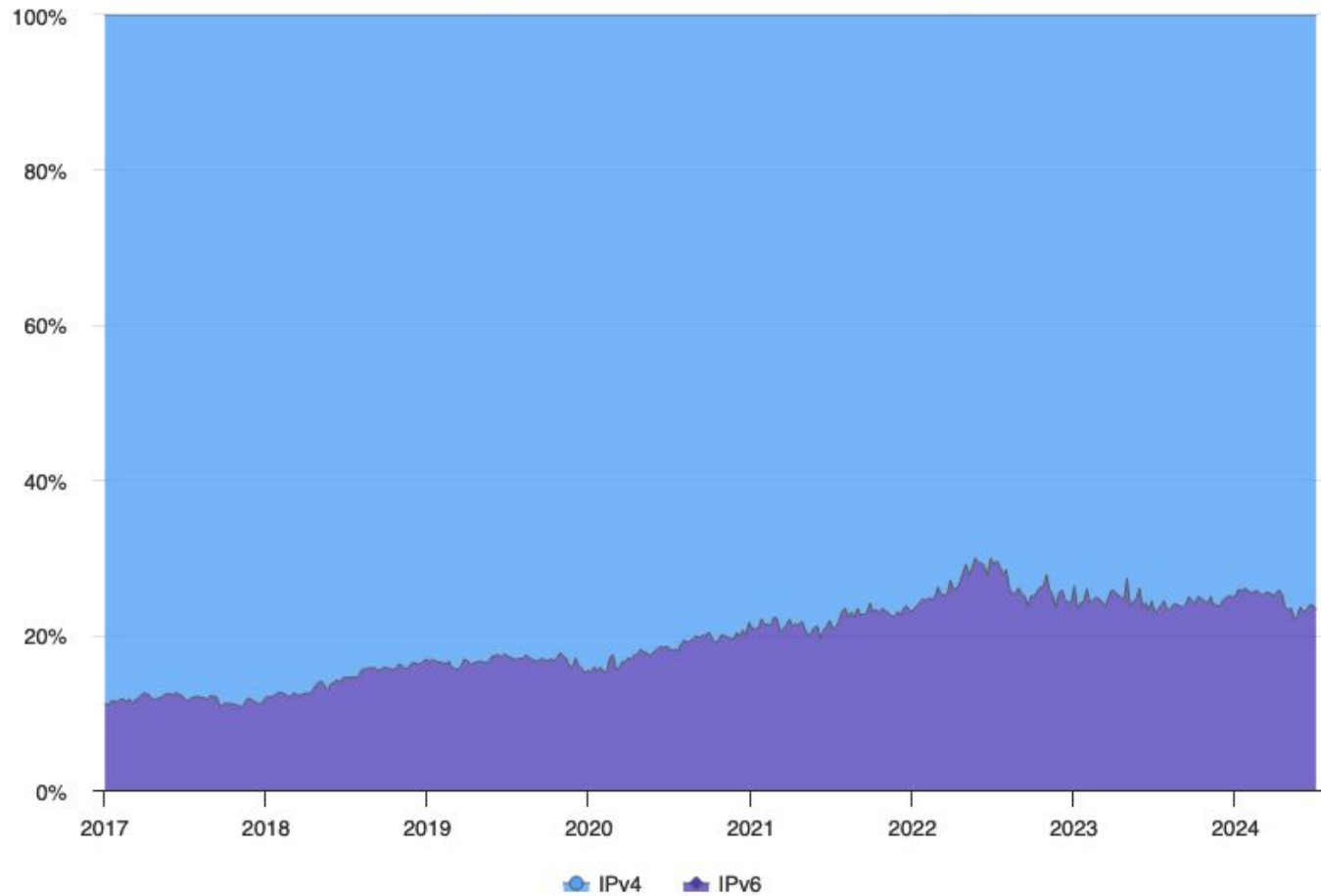0% YXDomain
0% Refused
0% NotImp

47% No...

0% FormErr
0% ServFail

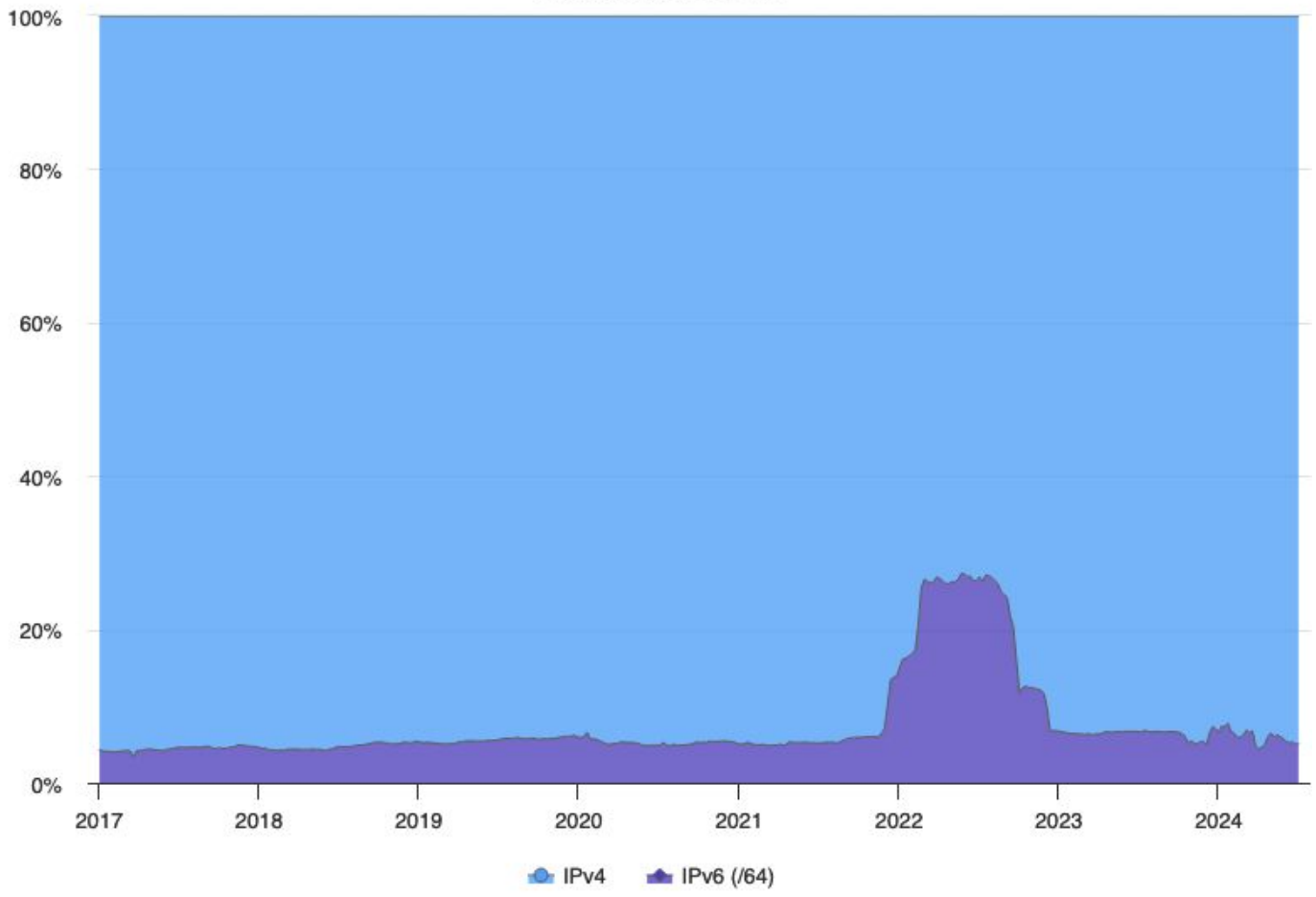NoError   NxDomain   Other

5

IPv4 vs IPv6 Queries per-week

Source: RSSAC002 Data

6

Unique IP Source Addresses per-week
Source: RSSAC002 Data

Legend: IPv4, IPv6 (/64)

7

Top 8 udp-request-sizes by-week (%) (daily average)

Source: RSSAC002 Data

Legend: 16-31, 32-47, 48-63, 64-79, 80-95, 96-111, 112-127, 128-143

IPv6 Enabled Instances
Source: https://root-servers.org

All Instances
Source: https://root-servers.org
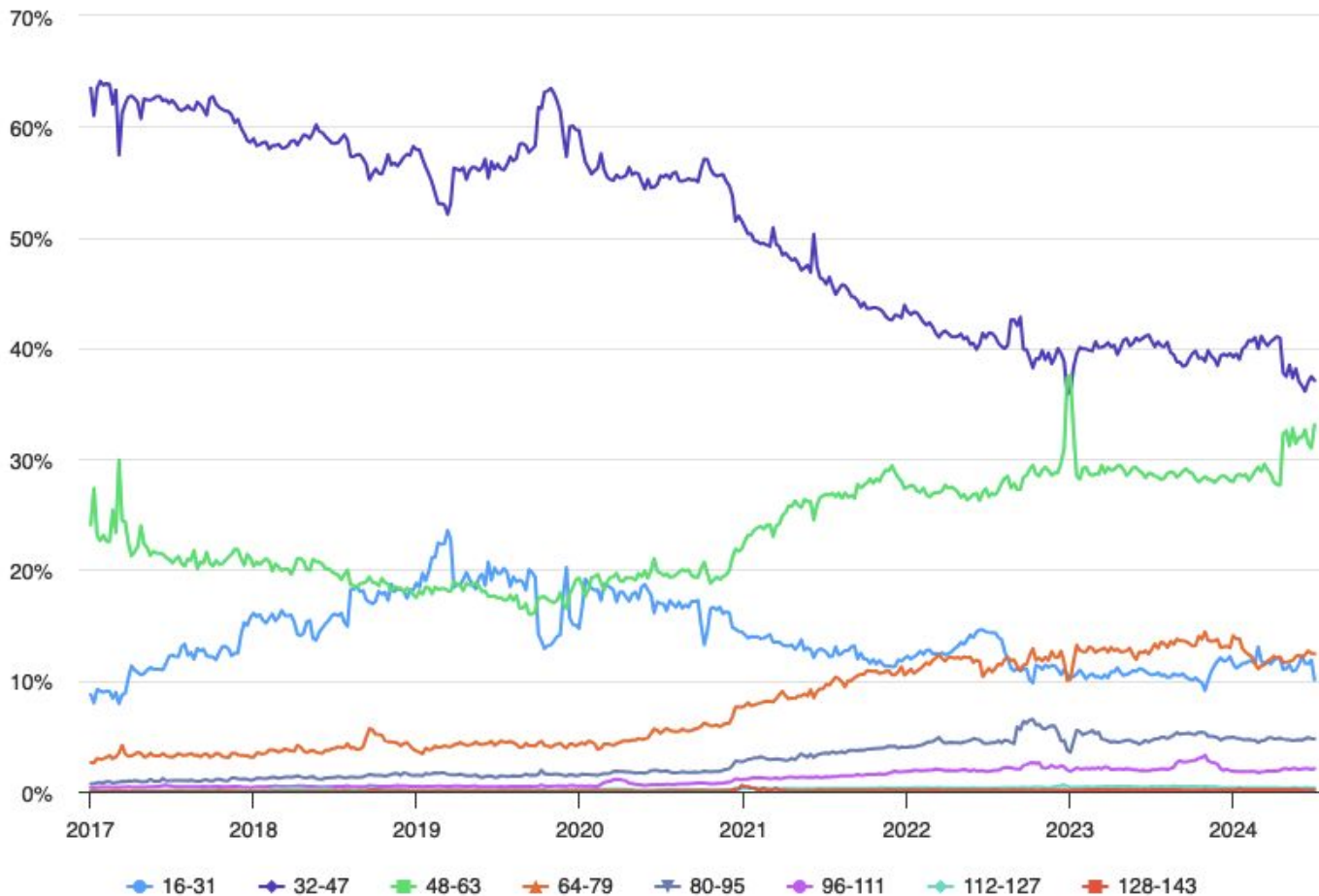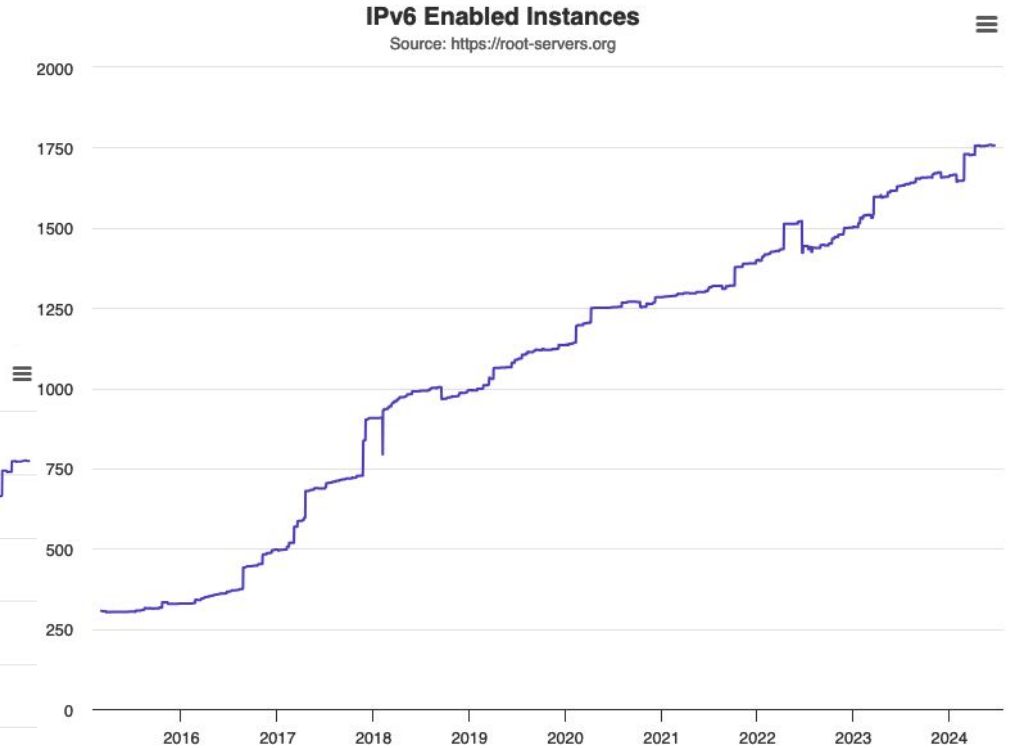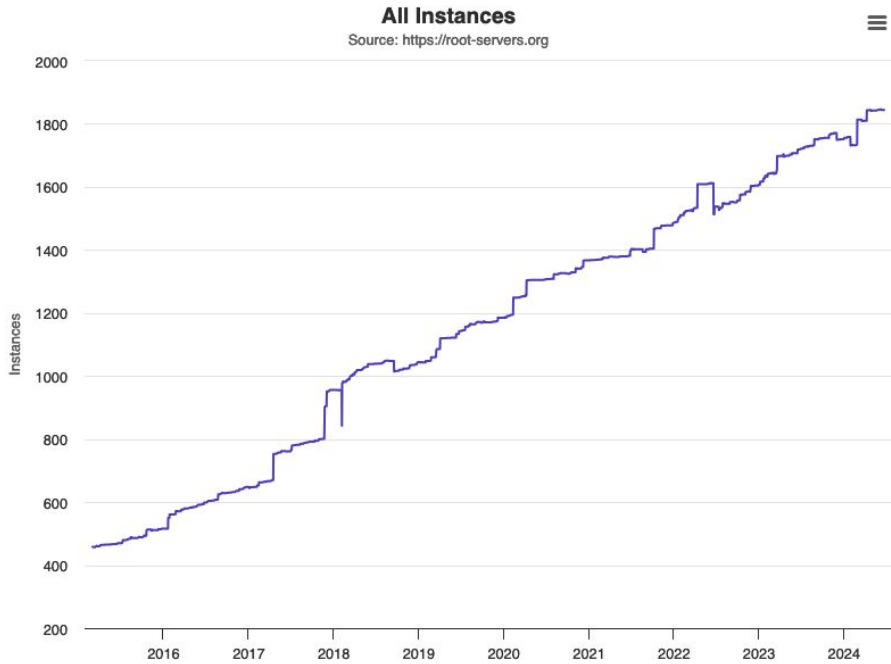
1846 instances in 1500 Sites as of 2024-07-19

Source: https://root-servers.org
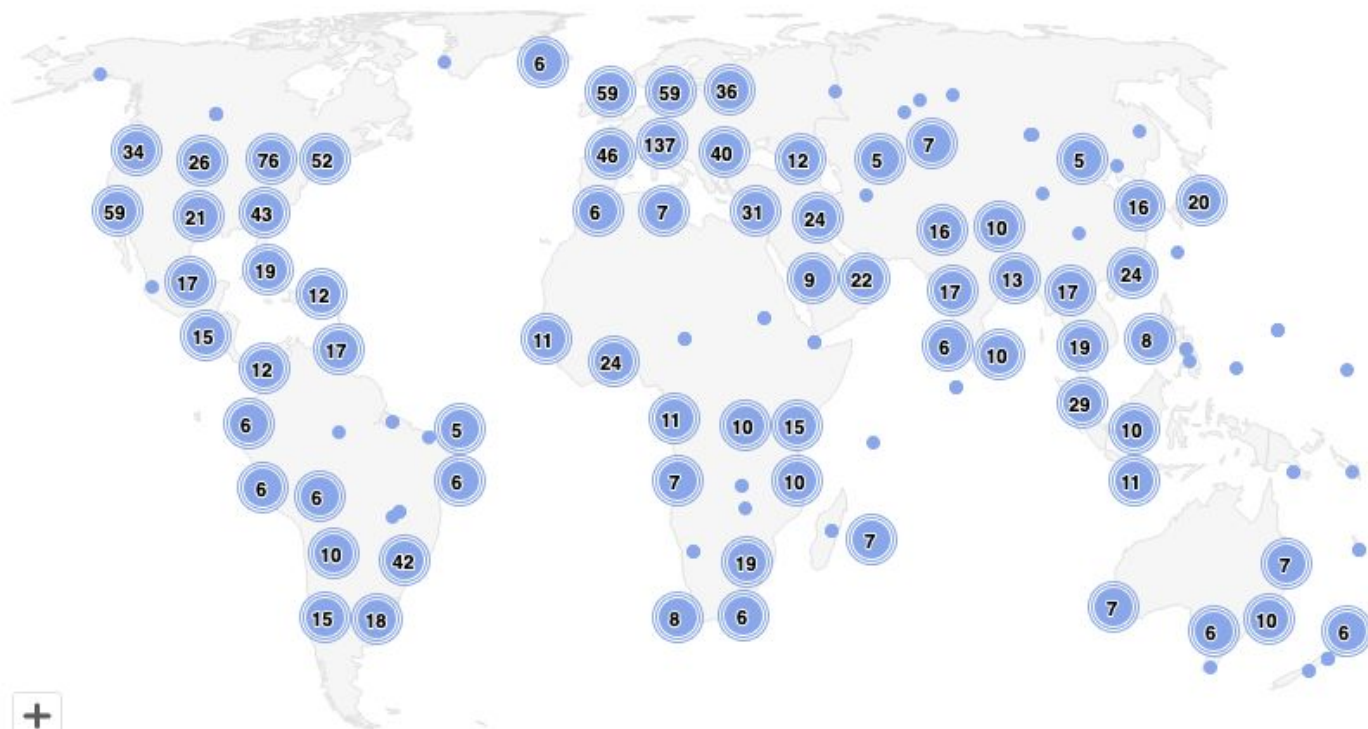
RSS ● a ● b ● c ● d ● e ● f ● g ● h ● i ● j ● k ● l ● m

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