

L-root Romania Traffic

Internet Measurement Day - Bucharest

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L-root presentation

1. Introduction
   a. Team Introduction
   b. DNS and Root Servers
   c. L-root location and Global presence

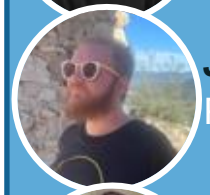
2. L-root Europe Traffic
   a. Europe Daily DNS L-root Zone Queries
   b. Europe Daily IPv4 vs IPv4 Root Queries
   c. Romania's L-root Traffic

1. Team presentation

Engineering



Benjamin Farine
Sr Lead Infrastructure Engineer



John Bond
Principal Infrastructure Engineer



Eduardo Corzo
Sr Infrastructure Engineer

Management



John Crain
SVP & CTO



Matt Larson
VP, OCTO

Policy



Sam Eisner
Deputy General Counsel

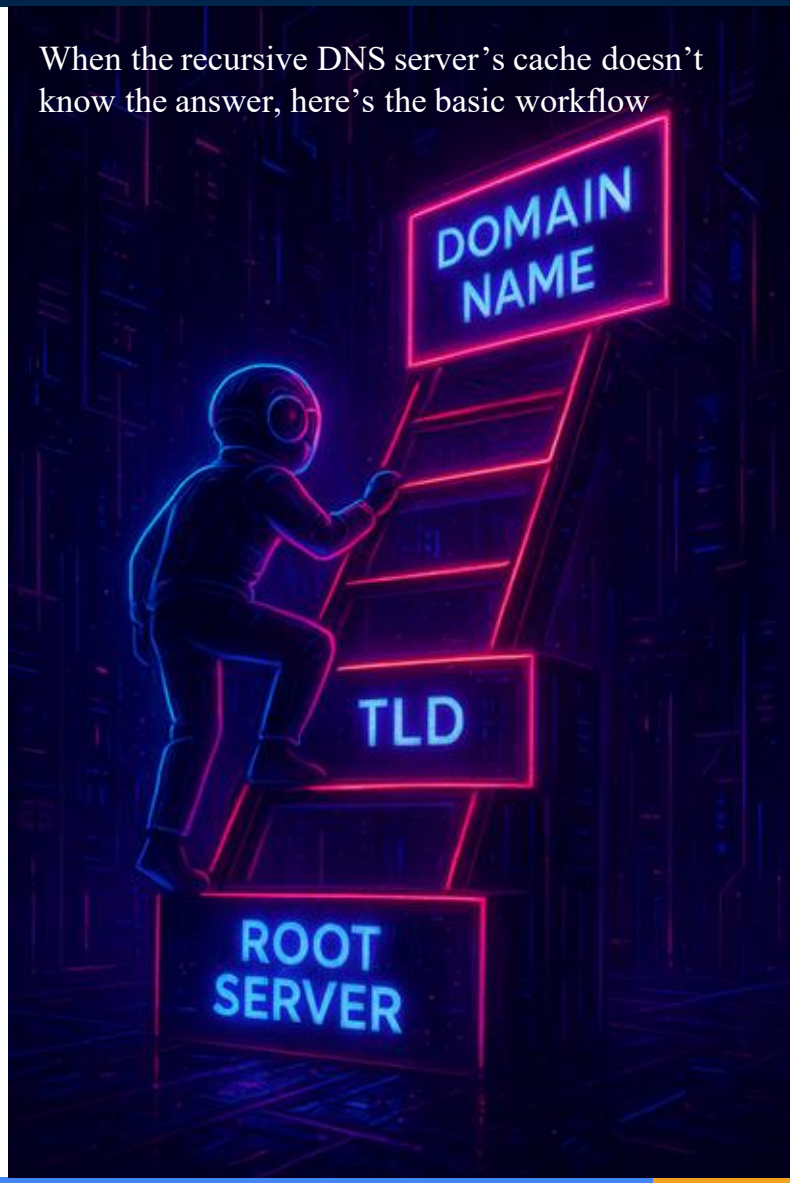
Project management



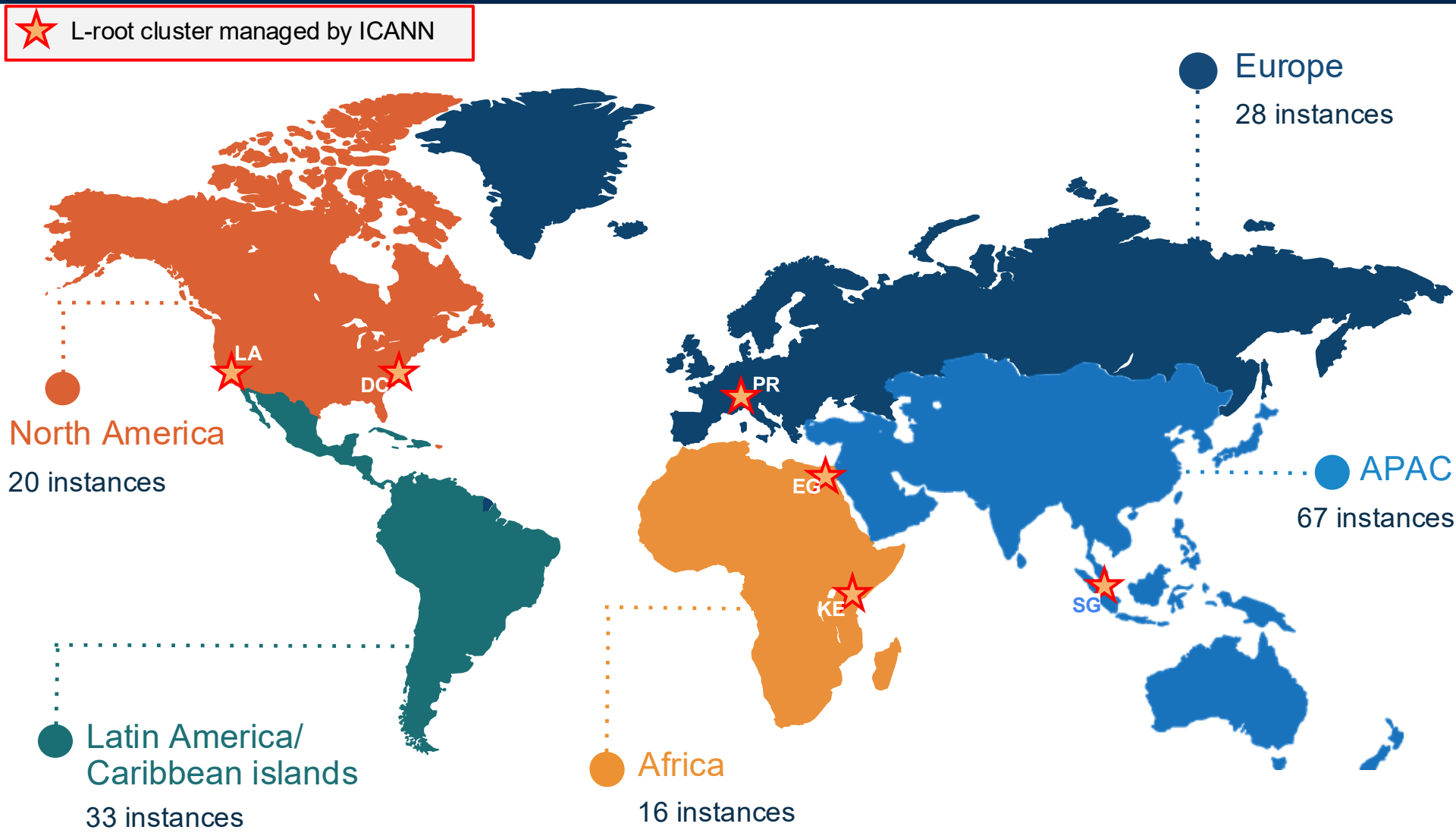
Hilary Jin
Project manager

1.Intro: DNS and Root Servers

- **DNS**: Domain Name System
  - Critical Internet directory which translates human readable Domain Names into IP addresses and vice versa.
  - Example:
    - *a.primary.rotld.ro* → *192.162.16.18*
- **Root Servers**
  - 12 Root Server Operators*
  - They hold the Root Zone Database
  - Root Servers are deployed worldwide by multiple organizations - including ICANN.
- **L-root**
  - ICANN has maintained and operated ONE of the 13 Root Servers since 2002.



1. L-root Locations and Global Presence (Sept 2026)

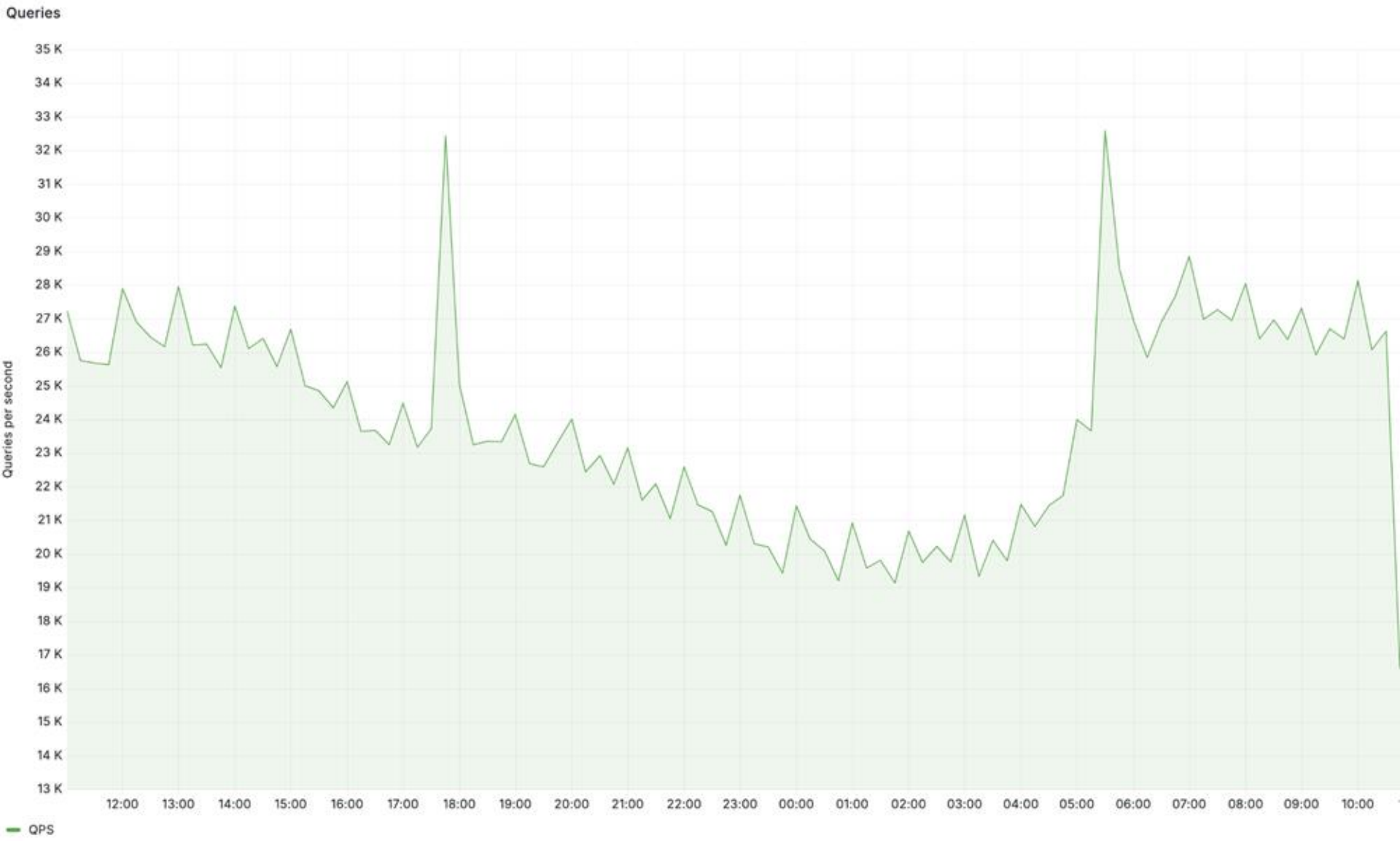


L-root EUROPE Traffic

1. Overview of the DNS L-root Europe traffic
   a. EU Daily L-root Zone Queries
   b. IPv4 vs IPv6 Queries

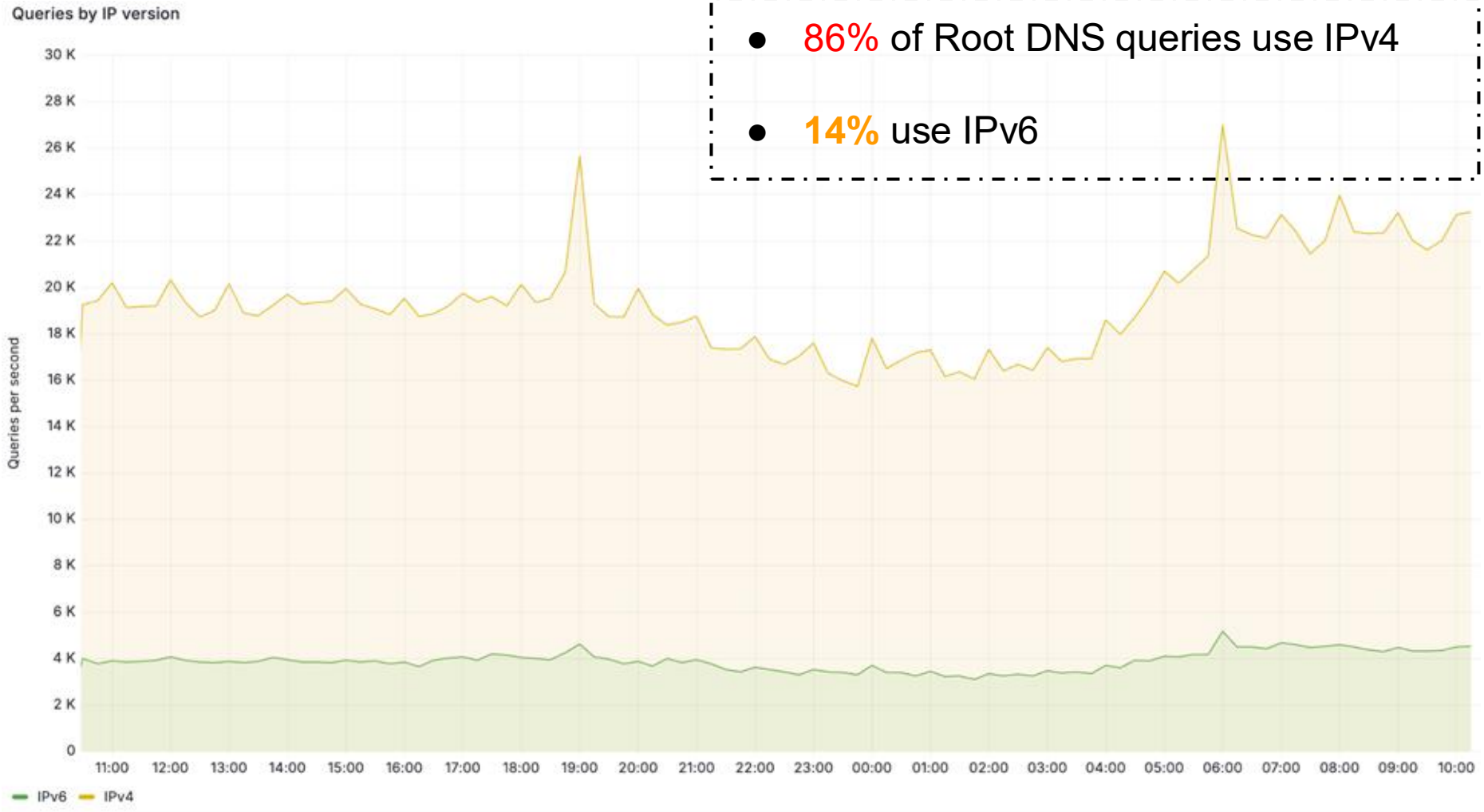
2. Romania L-Root Traffic: Where Does It Go?

1.a EU Daily DNS L-root Zone Queries



1.b EU Daily IPv4 vs IPv6 Root DNS Queries

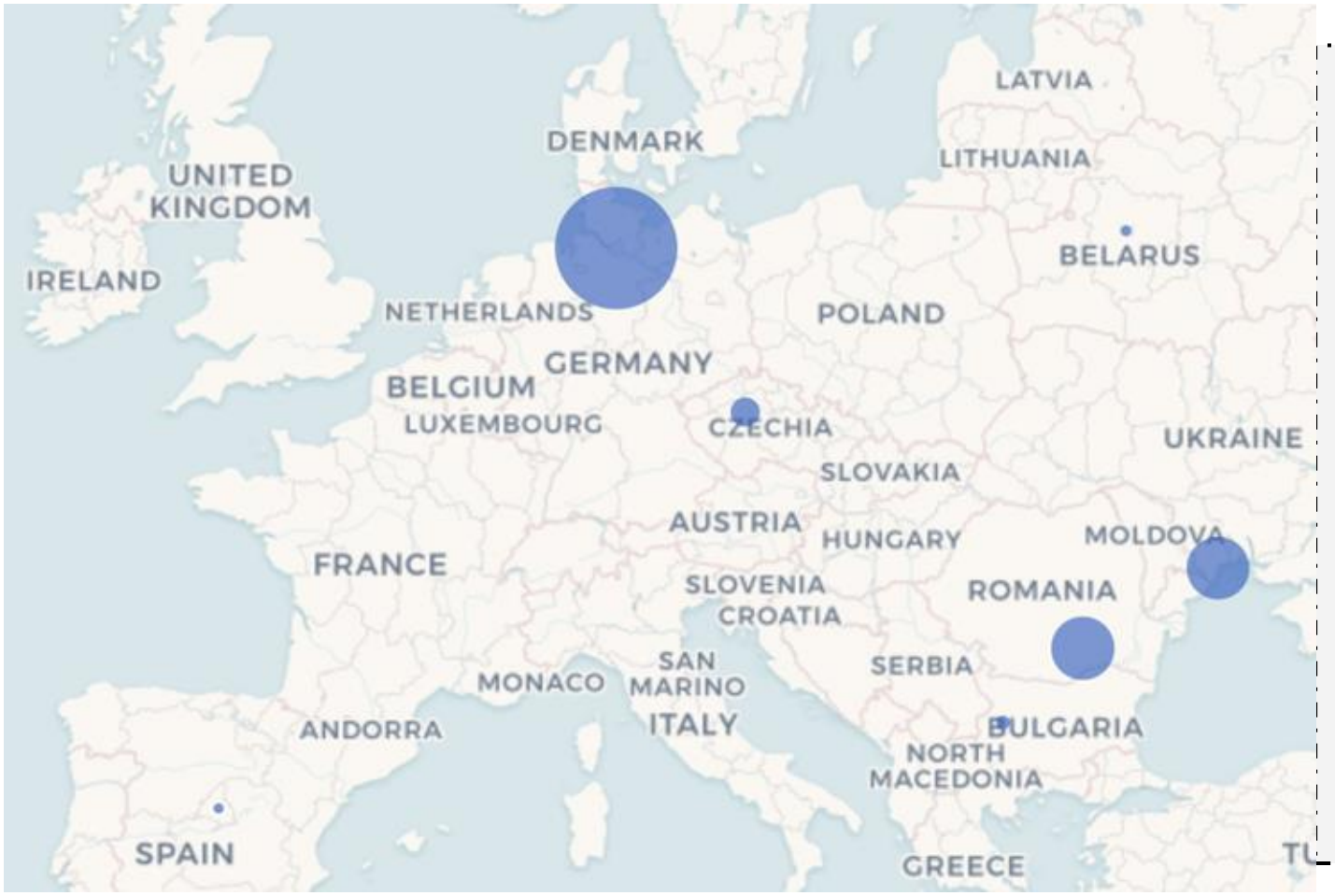
- 86% of Root DNS queries use IPv4
- 14% use IPv6



QPS = Queries Per Second

***Source**: ICANN DNS-STATS https://stats.dns.icann.org*

2. Romania L-root Traffic: Where Does It Go?



- 46% of Romania's Root DNS traffic is served by our L-root single node at Hamburg (de-ham)
- 22% is served by our L-root single node at Otopeni
- 20% by our instance at Odessa
- the last 12% is server by our cluster at prague

***Source**: ICANN DNS-STATS https://stats.dns.icann.org*

Conclusion

1. At present, we have only one L-root instance deployed in **Otopeni, Romania**.
2. **9 Root Server instances** at Bucharest.
3. It is important to note that **almost half of the traffic is served by our instance in Hamburg (DE)**, primarily due to its stronger peering and interconnection capabilities.
4. Going forward, we will work closely with the **ICANN OCTO team** and **Global Stakeholder team** to adopt a **data-driven methodology** for selecting **new deployment sites**.



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