RIPE NCC
RIPE NETWORK COORDINATION CENTRE

Internet in Albania

A view from the NCC

Jelena Ćosić | ANIX Meeting | December 2022
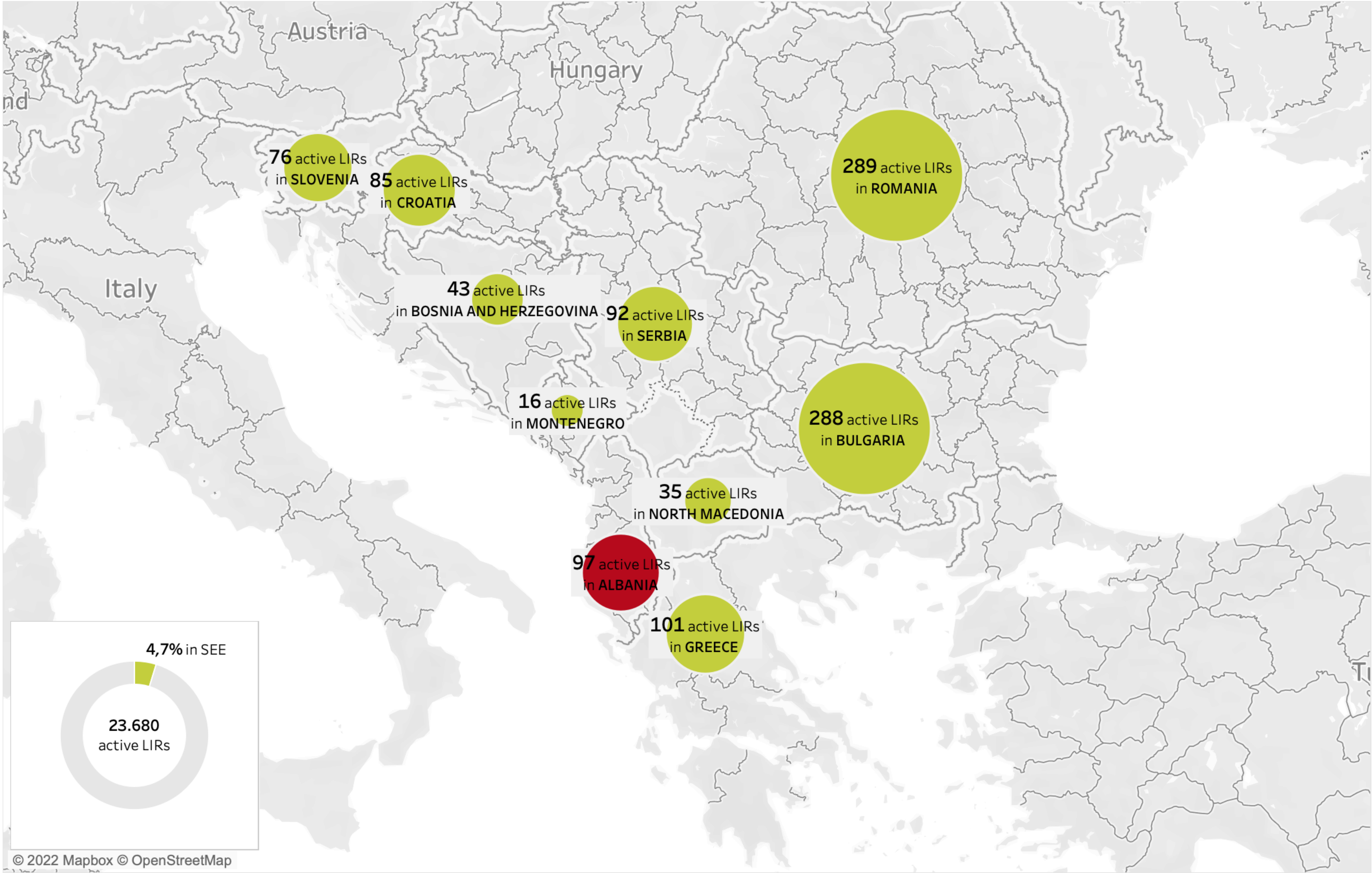
Albania

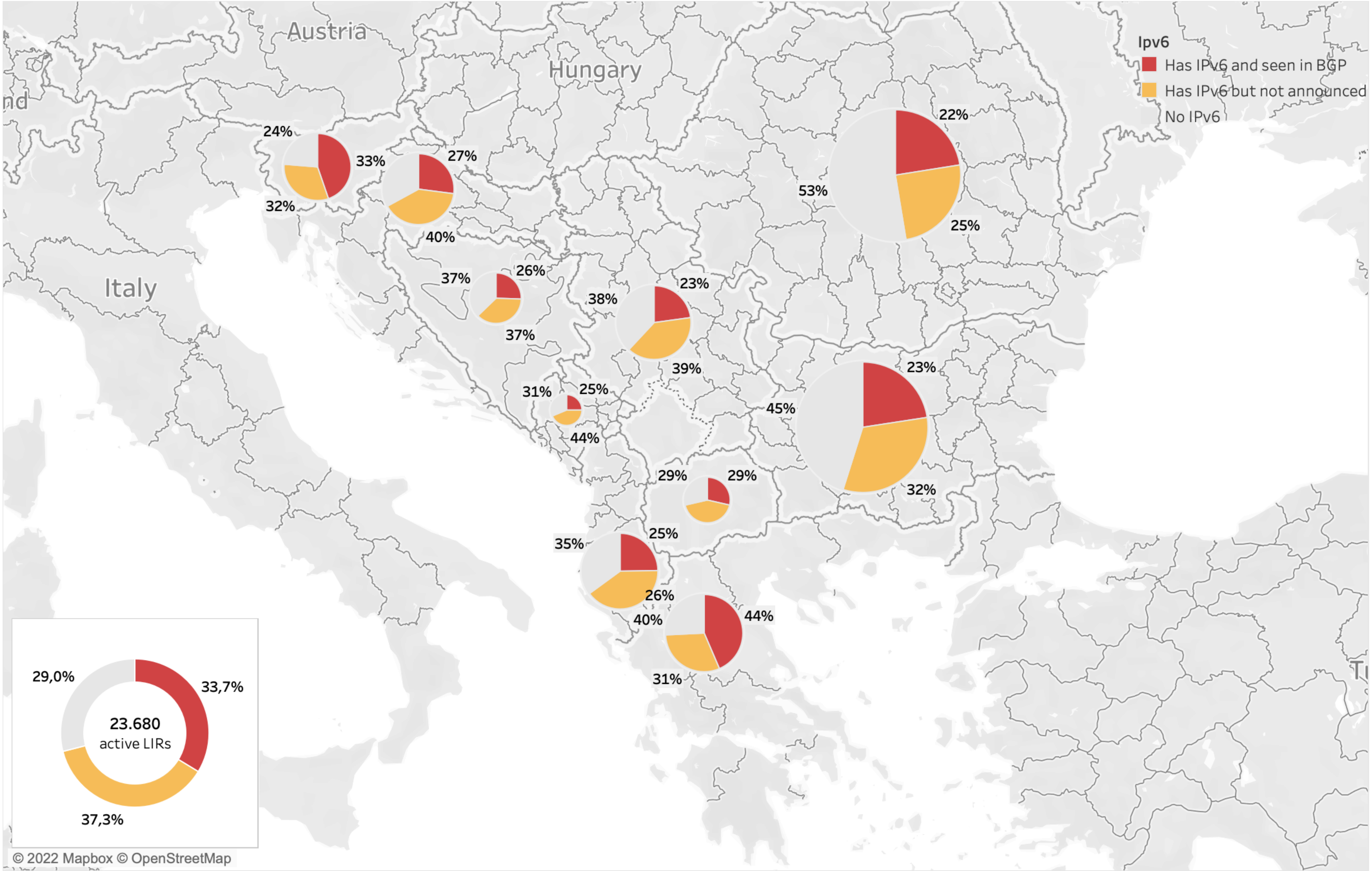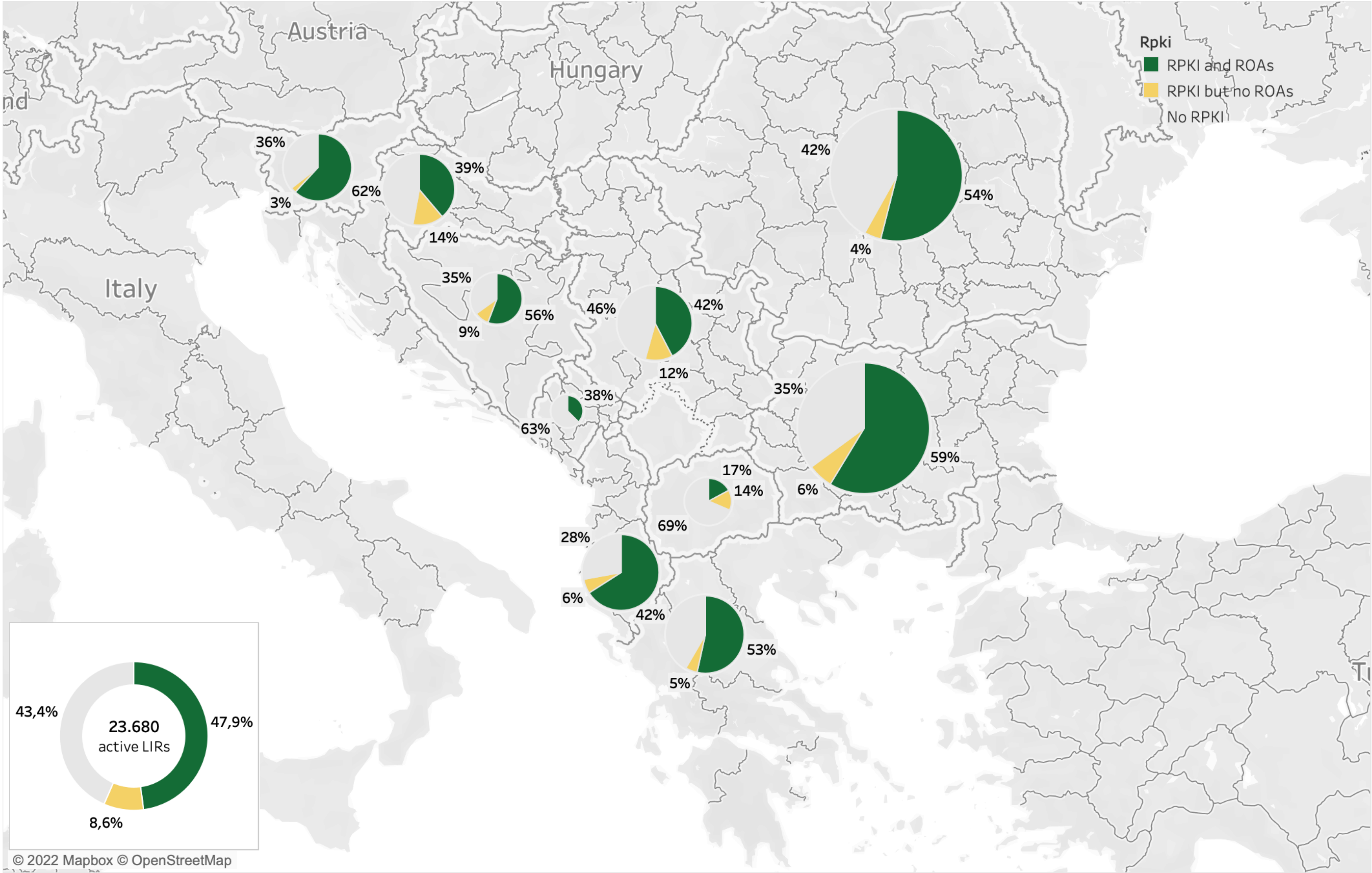A closer look

Albania

LIRs	IPv6	RPKI

76 active LIRs in **SLOVENIA**

85 active LIRs in **CROATIA**

289 active LIRs in **ROMANIA**

43 active LIRs in **BOSNIA AND HERZEGOVINA**

92 active LIRs in **SERBIA**

16 active LIRs in **MONTENEGRO**

288 active LIRs in **BULGARIA**

35 active LIRs in **NORTH MACEDONIA**

97 active LIRs in **ALBANIA**

101 active LIRs in **GREECE**

4,7% in SEE

23.680 active LIRs

© 2022 Mapbox © OpenStreetMap

Albania

LIRs	IPv6	RPKI

Ipv6
- Has IPv6 and seen in BGP
- Has IPv6 but not announced
- No IPv6

29,0%   33,7%

23.680
active LIRs

37,3%

© 2022 Mapbox © OpenStreetMap

Albania

| LIRs | IPv6 | RPKI |

Rpki
- RPKI and ROAs
- RPKI but no ROAs
- No RPKI

36%
62%
3%

39%
14%

35%
56%
9%

46%
42%
12%

38%
63%

42%
54%
4%

35%
59%
6%

17%
14%

28%
69%
6%
42%

53%
5%

23.680
active LIRs
43,4%
47,9%
8,6%
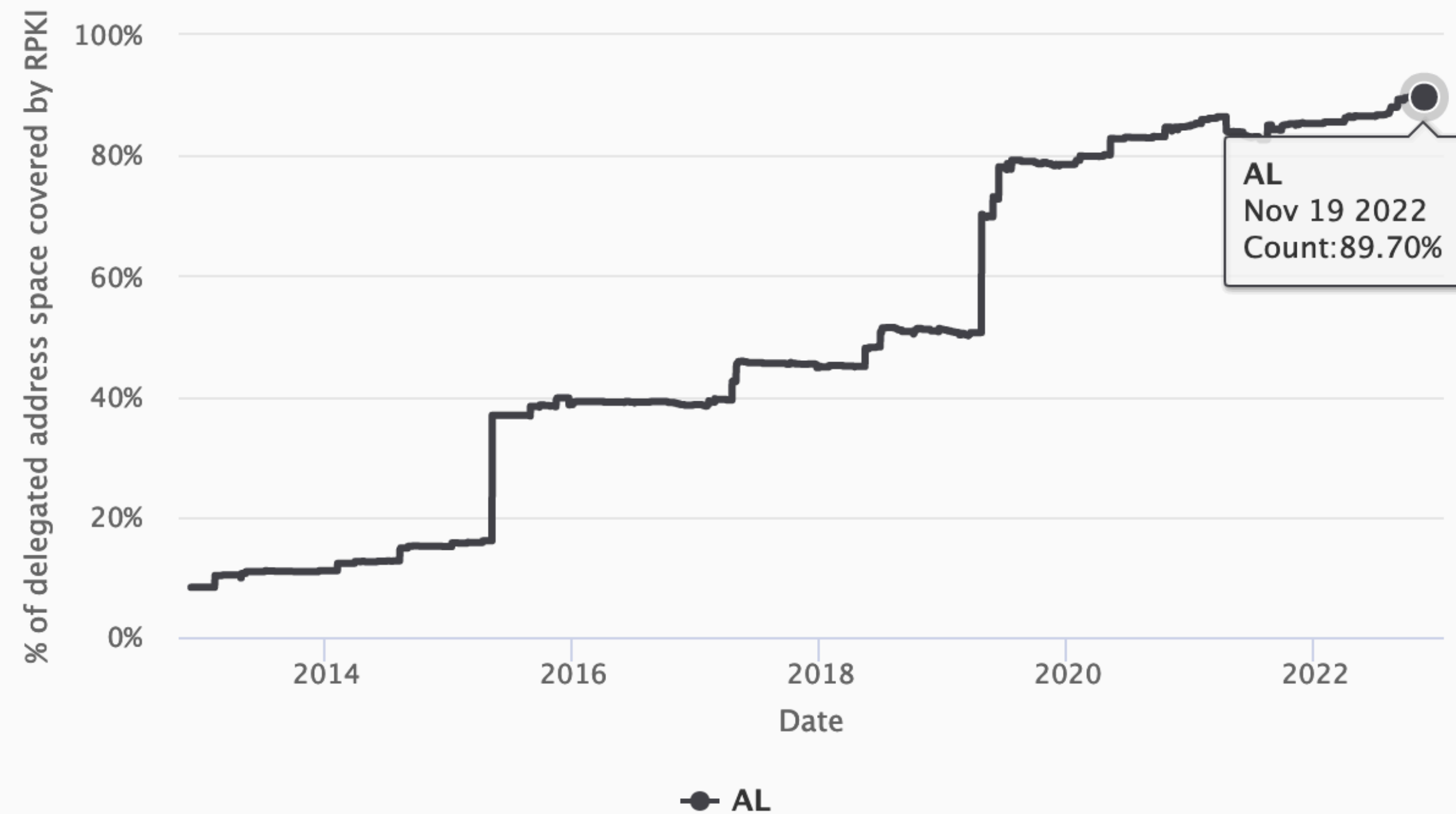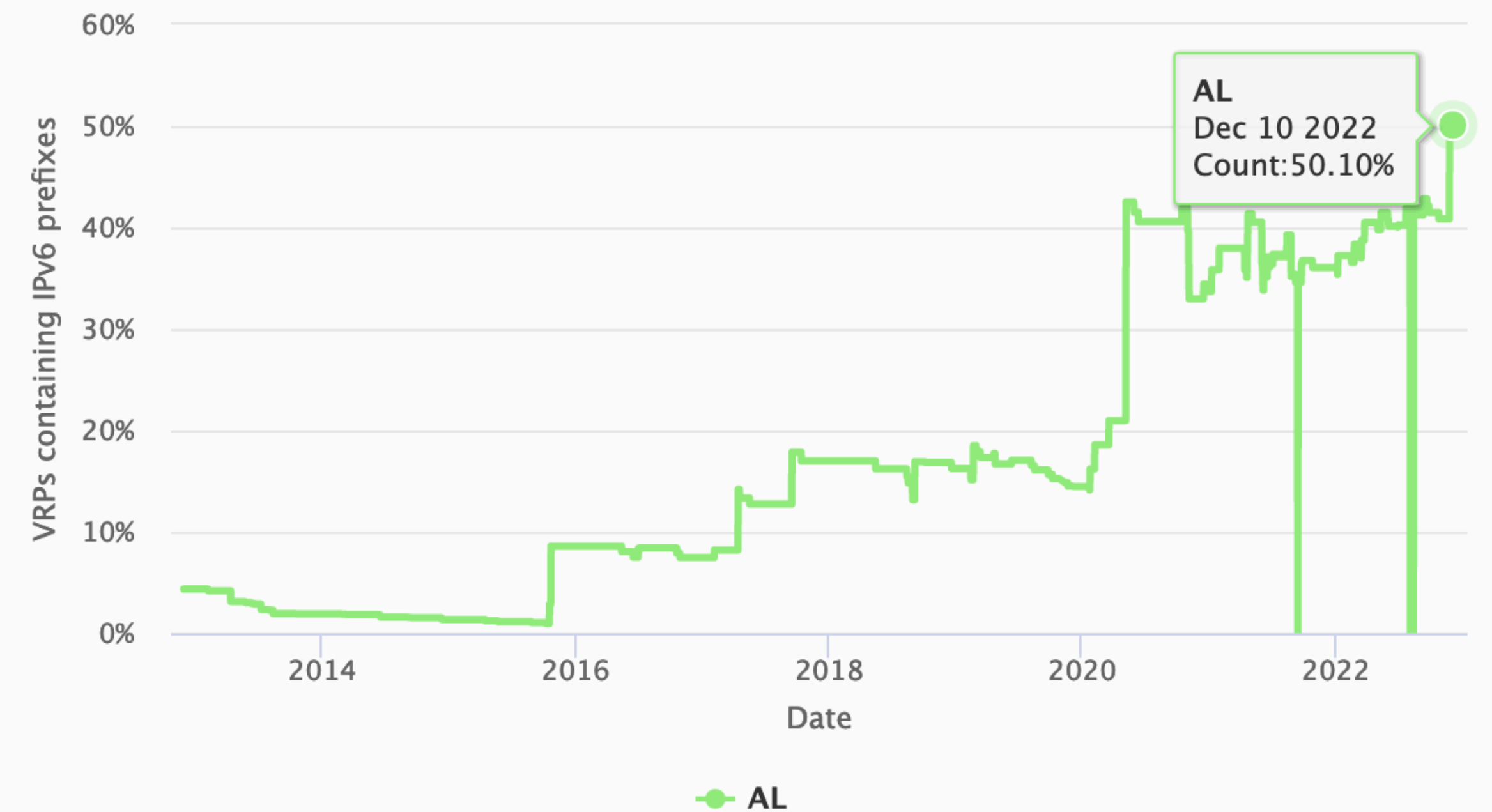
RPKI Albania

RPKI Italy
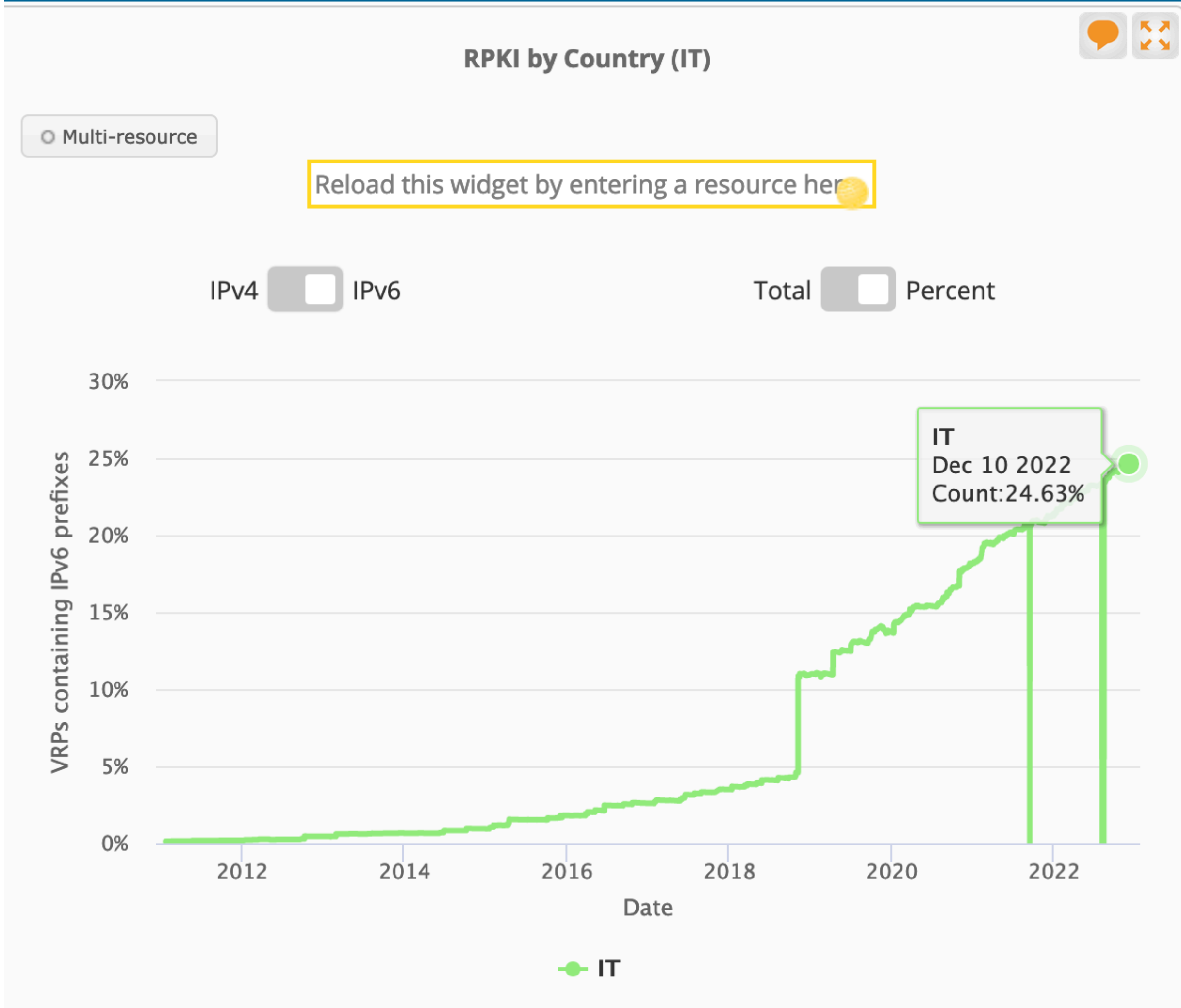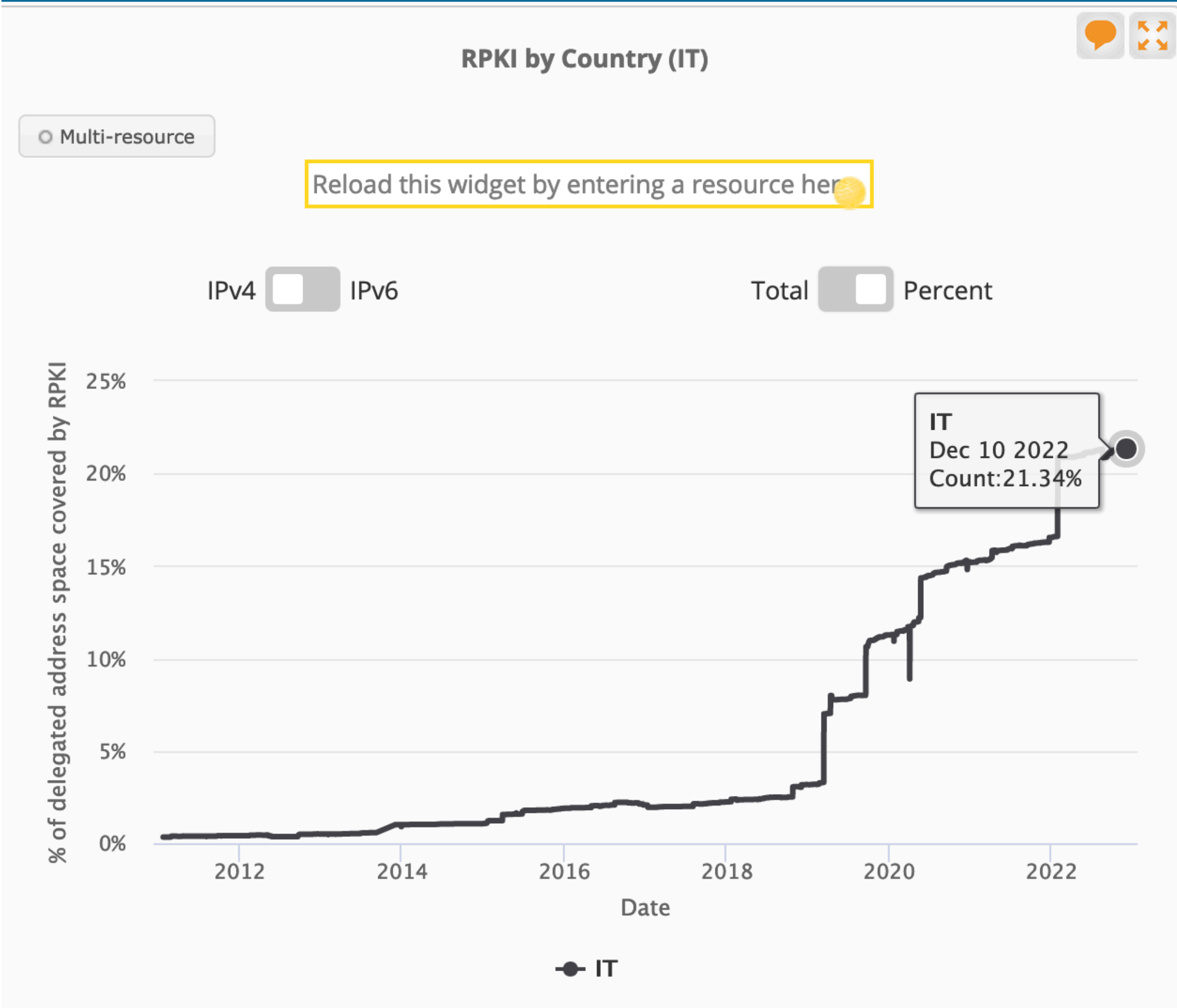
# Connectivity

SEE region and Albania

What is RIPE Atlas?

- A global platform for active Internet measurements

- Goal: Observability of the data plane

    - How do packets flow? What latencies do we see?

- Probes hosted by volunteers

- Data publicly available

- https://atlas.ripe.net

Probes and Anchors

- Globally deployed devices running active measurements 24/7

- Plug and play (also software probes)

- 11,000+ worldwide
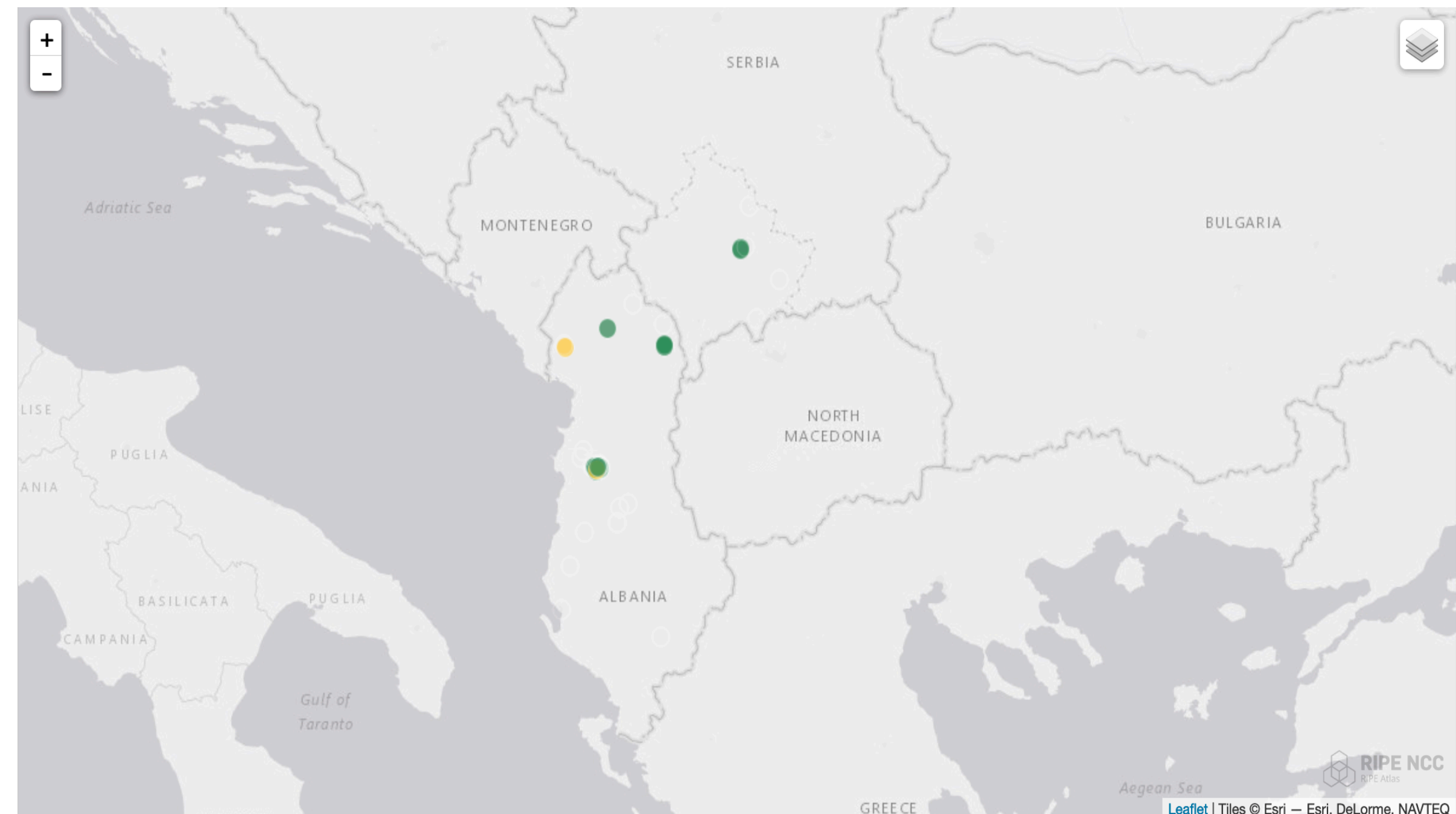
Routing Information Service

- RIS is a routing data collection platform

- Collecting BGP data since 1999

- Feeds data into many tools on top:

  - RIPEstat

  - bgp.he.net / bgp.tools / Internet Health Report

  - BGPAlerter

- Up-to-date routing information:

  - What is being announced

  - Which prefixes are seen and where

  - Which ones are not seen

  - What routes are available

Domestic connectivity
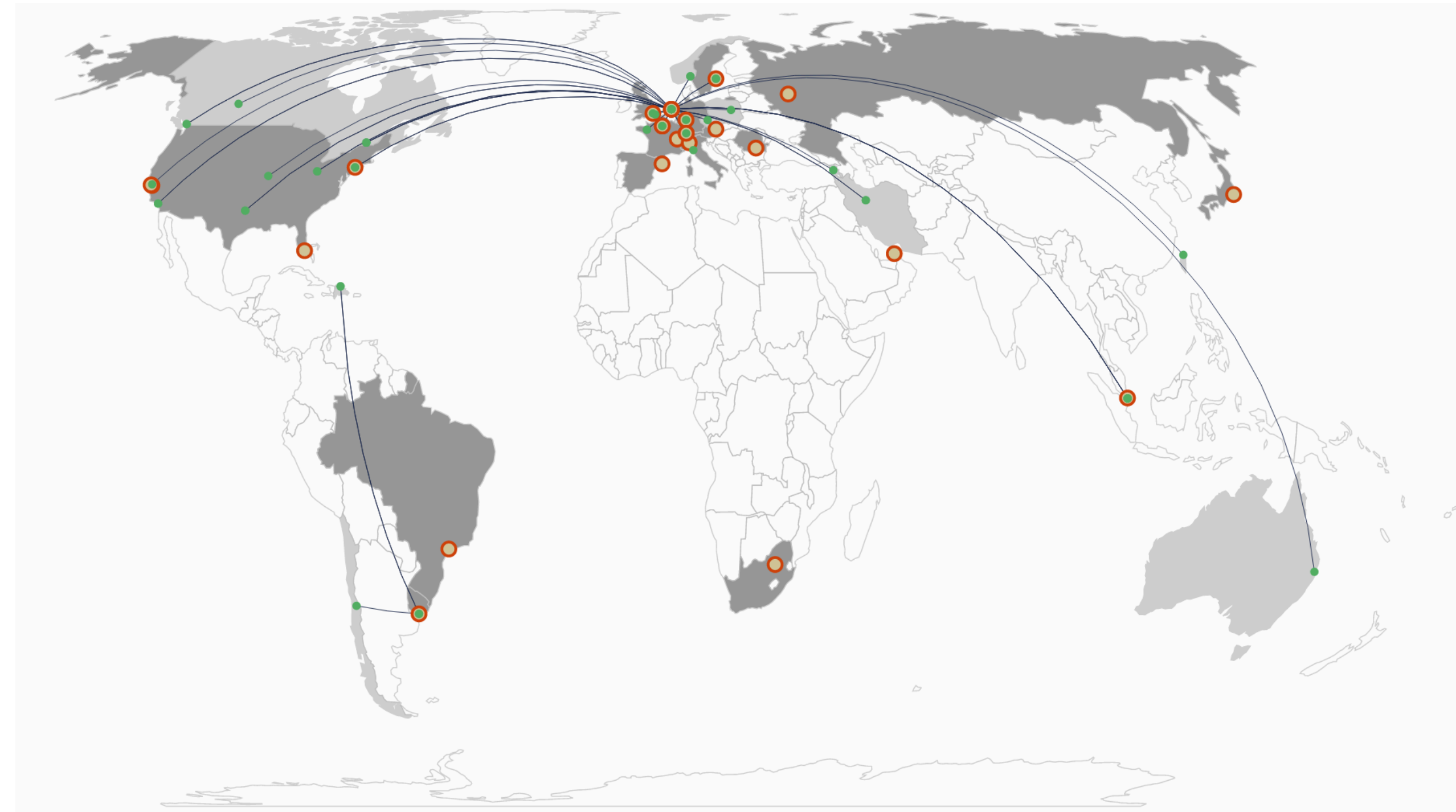
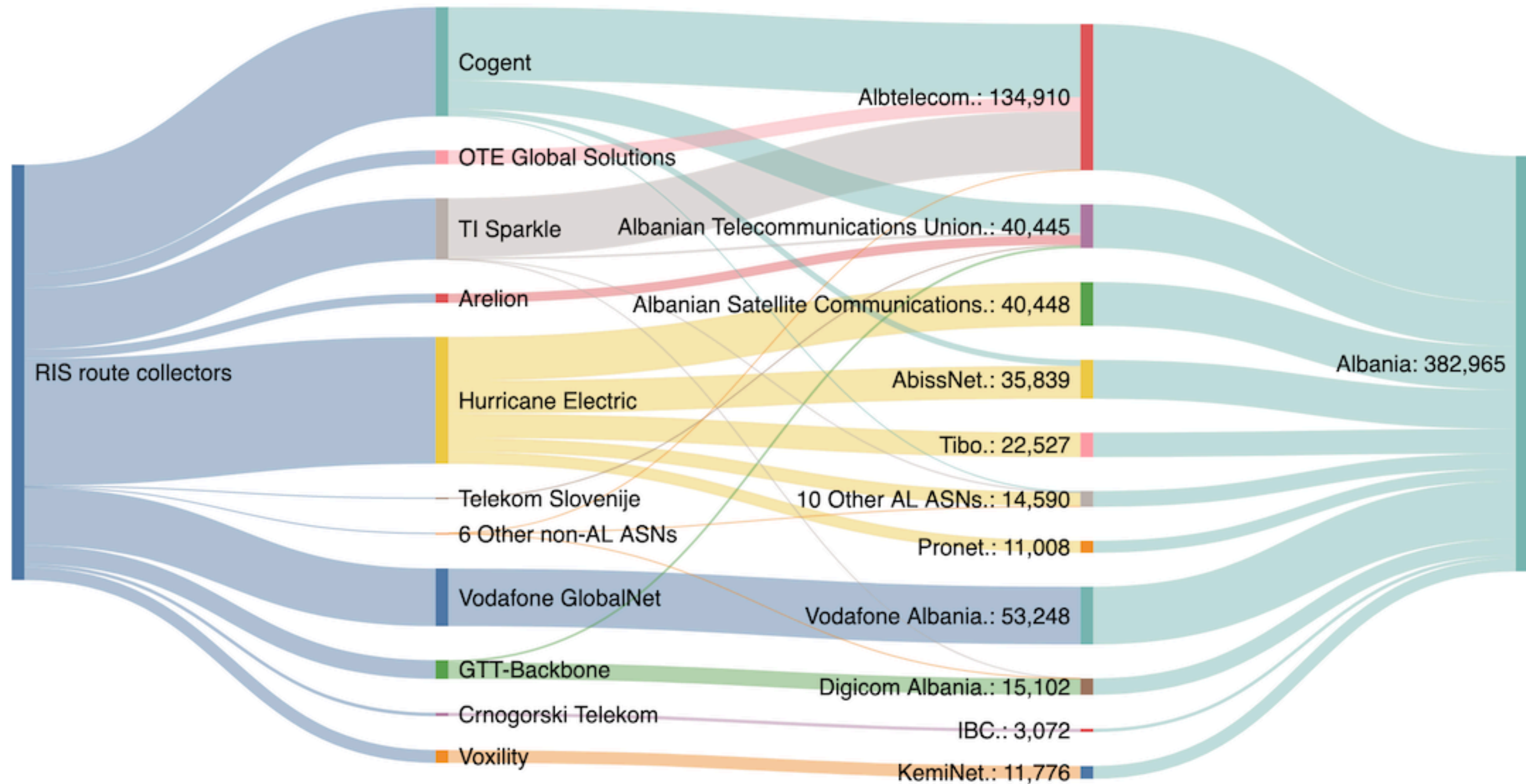# Domestic connectivity + Kosovo
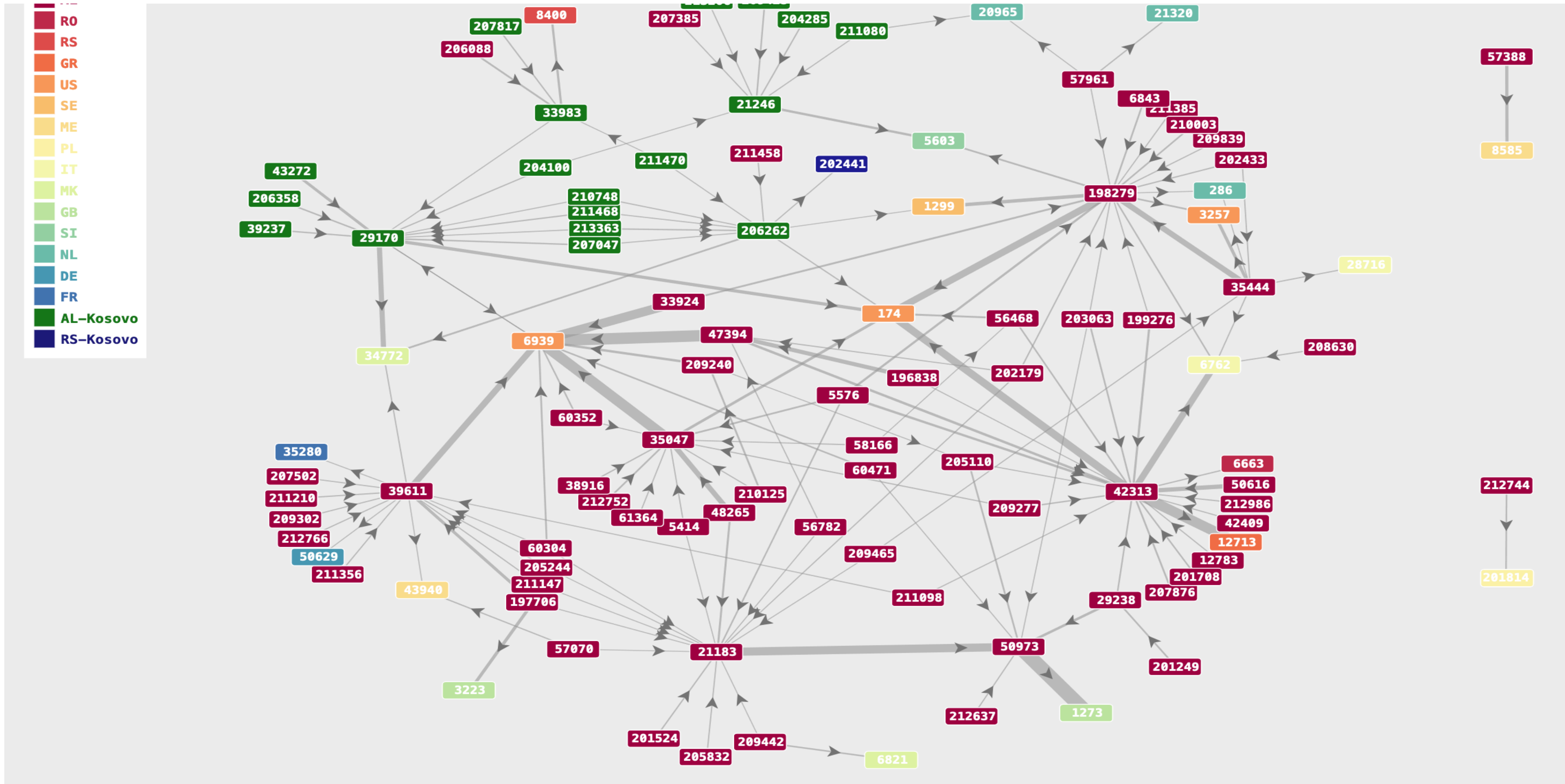
International connectivity

Keeping the local
traffic local

Country report SEE 2020

Figure 13:
Out-of-region traffic paths

Figure 14:
In-region traffic paths
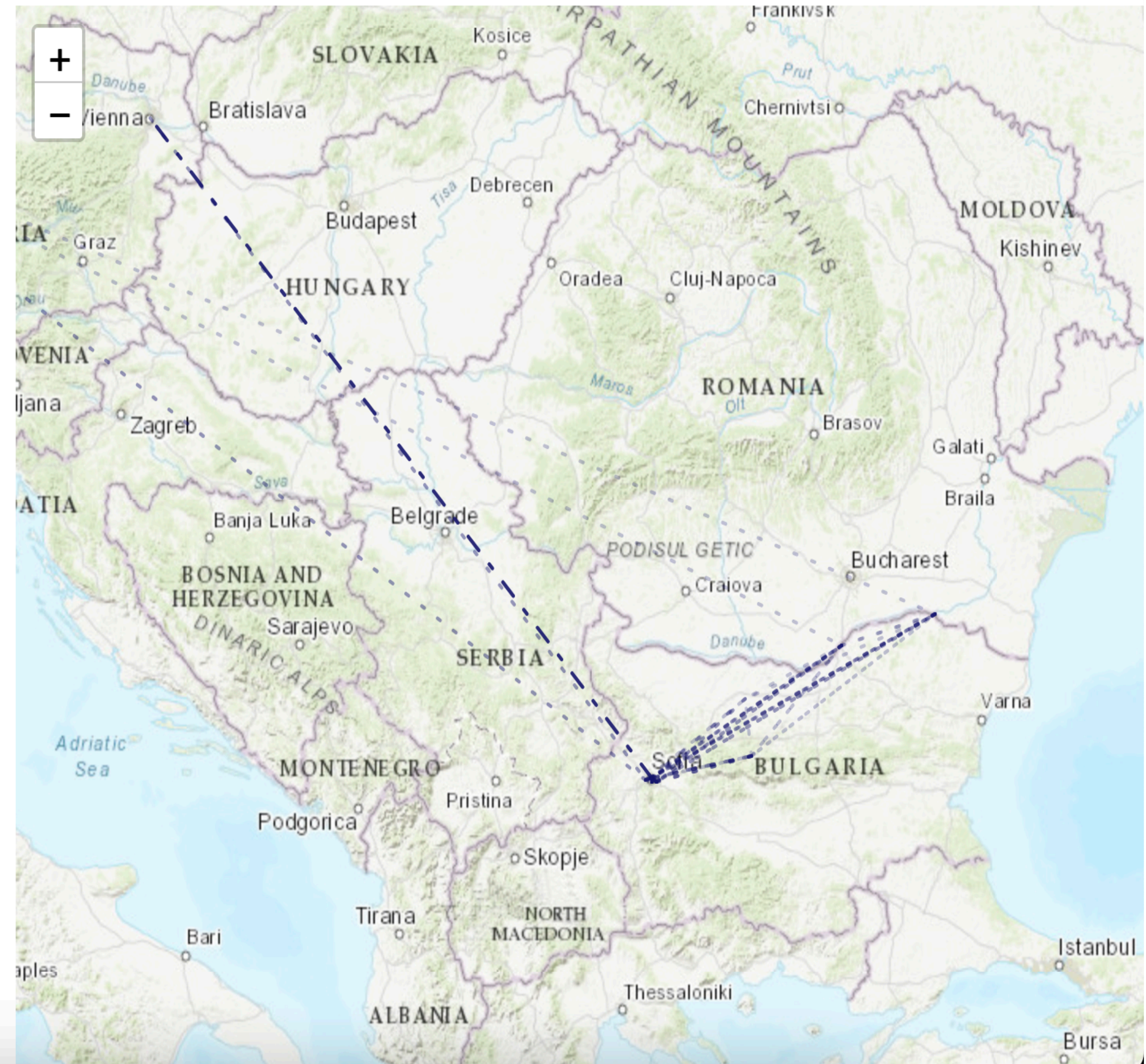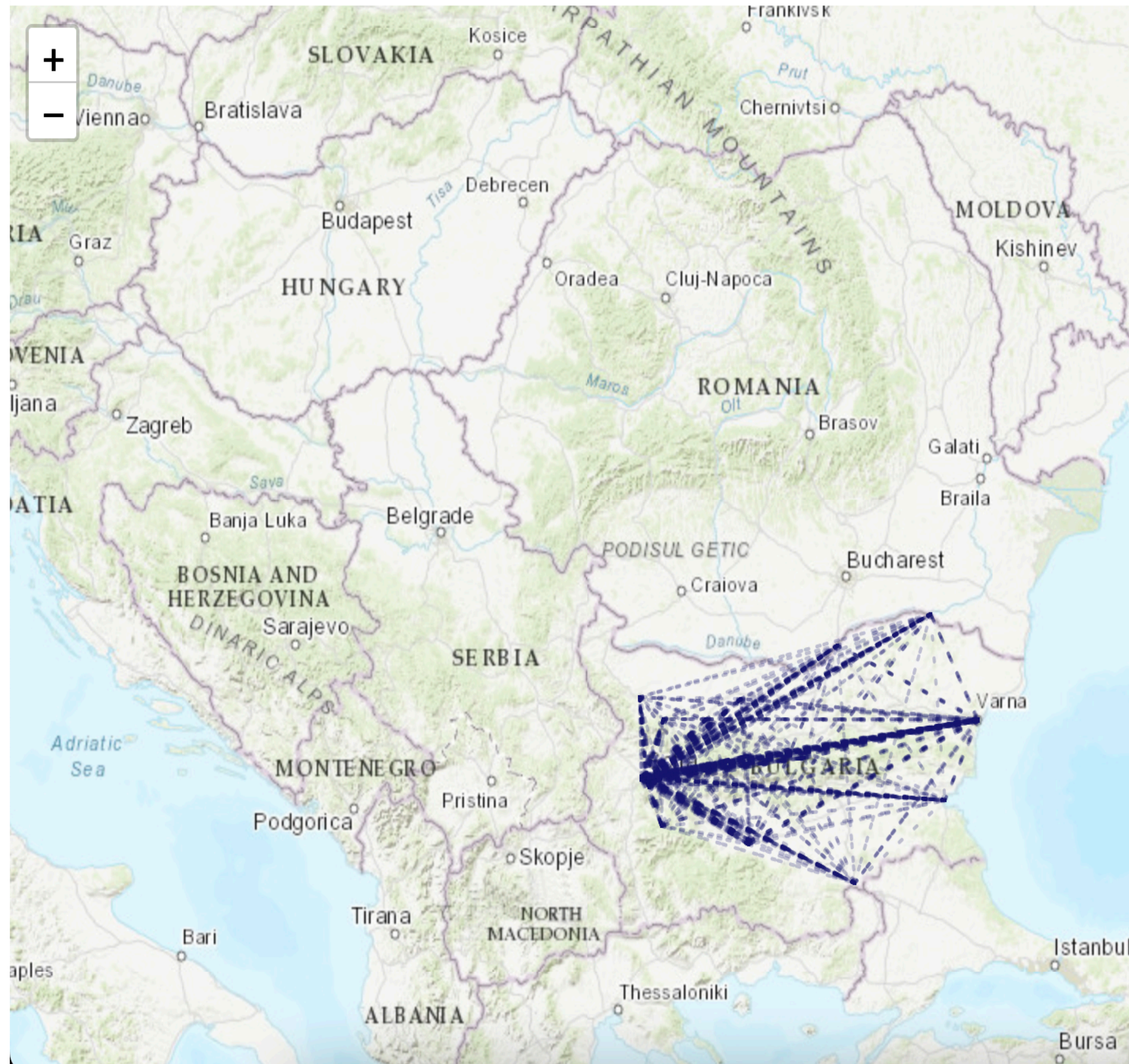
IXP Country Jedi Albania
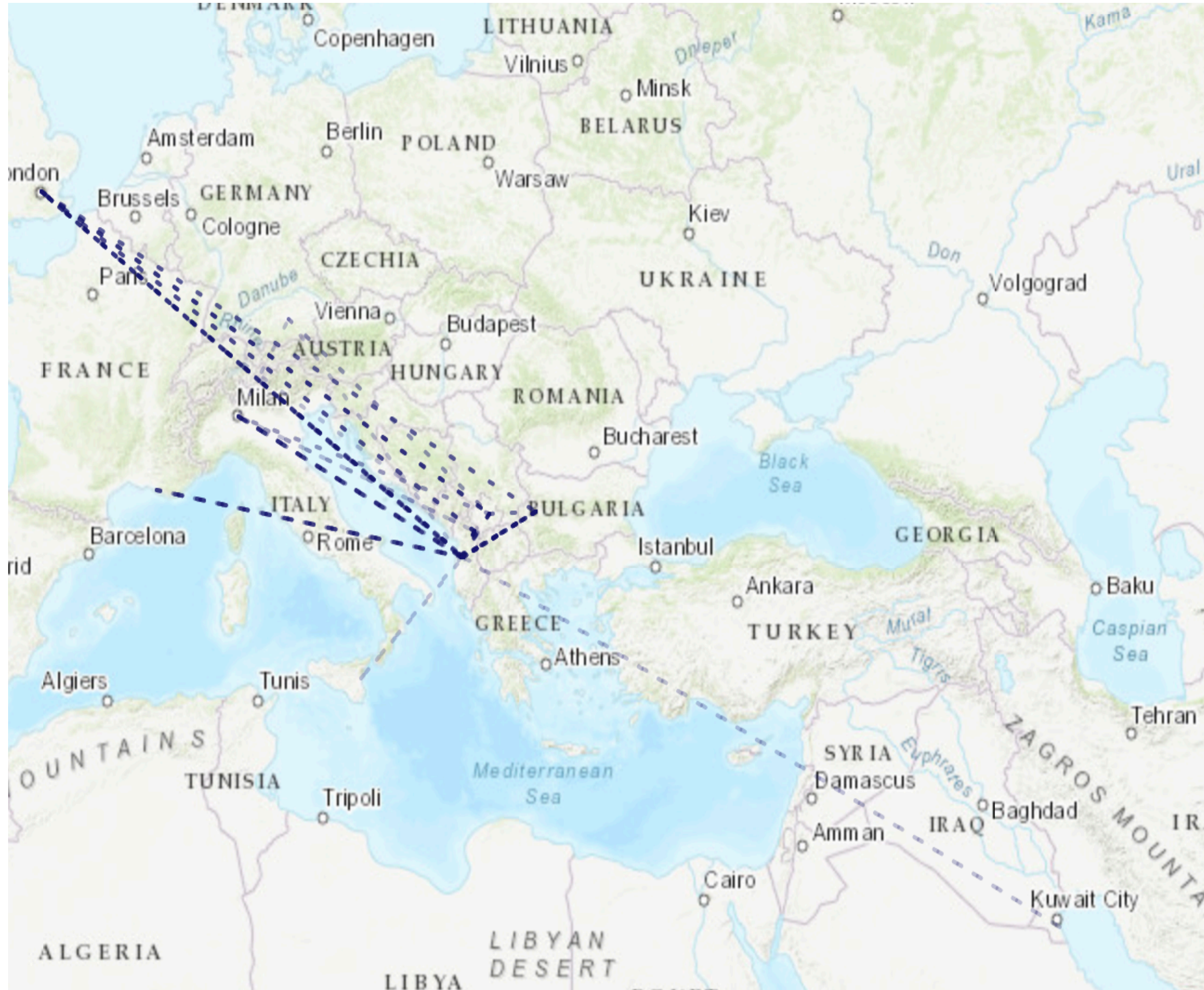
IXP Country Jedi Bulgaria

Contributing factors & negative impacts of hosting local content abroad

- Economic/business

- Technical/skills

- Policy/legal

- Cost

- Latency

- Usage

Top websites in Albania

Rank	Domain name
1	google.com
2	googleapis.com
3	gstatic.com
4	facebook.com
5	tiktokcdn.com
6	tiktokv.com
7	instagram.com
8	apple.com
9	doubleclick.net
10	microsoft.com

News portal	Hosted by	Location
abcnews.al	Cloudflare	Vienna
gazetaexpress.com	Cloudflare	Budapest
telegrafi.com	Cloudflare	Vienna
koha.net	Cloudflare	Budapest
tiranatimes.com	Contabo	Dusseldorf
Tvklan.al	Cloudflare	Vienna

Traceroute to 161.97.142.13 (161.97.142.13), 48 byte packets

1 192.168.1.1   1.373ms   0.647ms   0.605ms
2 10.18.0.1   24.42ms   24.066ms   24.67ms
3 10.1.0.74   25.285ms   25.534ms   24.961ms
4 10.4.1.253   26.157ms   25.452ms   25.807ms
5 10.4.1.5   28.315ms   25.154ms   25.702ms
6 10.1.8.2   25.434ms   25.159ms   25.155ms
7 149.14.98.81   te0-3-1-12.rcr51.tia01.atlas.cogentco.com   AS174   59.634ms   59.185ms   59.241ms
8 154.54.59.233   be2024.ccr51.beg03.atlas.cogentco.com   AS174   55.078ms   55.149ms   54.502ms
9 130.117.0.125   be3422.ccr31.bud01.atlas.cogentco.com   AS174   60.624ms   61.193ms   62.045ms
10 154.54.59.177   be3263.ccr22.bts01.atlas.cogentco.com   AS174   62.385ms   62.503ms   62.485ms
11 154.54.59.185   be3463.ccr52.vie01.atlas.cogentco.com   AS174   57.959ms   57.341ms   56.904ms
12 154.54.59.182   be3462.ccr22.muc03.atlas.cogentco.com   AS174   60.85ms   60.975ms   62.176ms
13 154.54.36.253   be2960.ccr42.fra03.atlas.cogentco.com   AS174   61.454ms   60.661ms   170.579ms
14 130.117.1.117   be3187.agr41.fra03.atlas.cogentco.com   AS174   53.927ms   54.556ms   53.858ms
15 154.54.37.38   be2115.rcr21.dus01.atlas.cogentco.com   AS174   57.834ms   57.876ms   58.326ms
16 149.6.139.226   AS174   58.162ms   61.749ms   97.719ms
17 161.97.142.13   vmi640940.contaboserver.net   AS51167   58.287ms   57.89ms   57.931ms
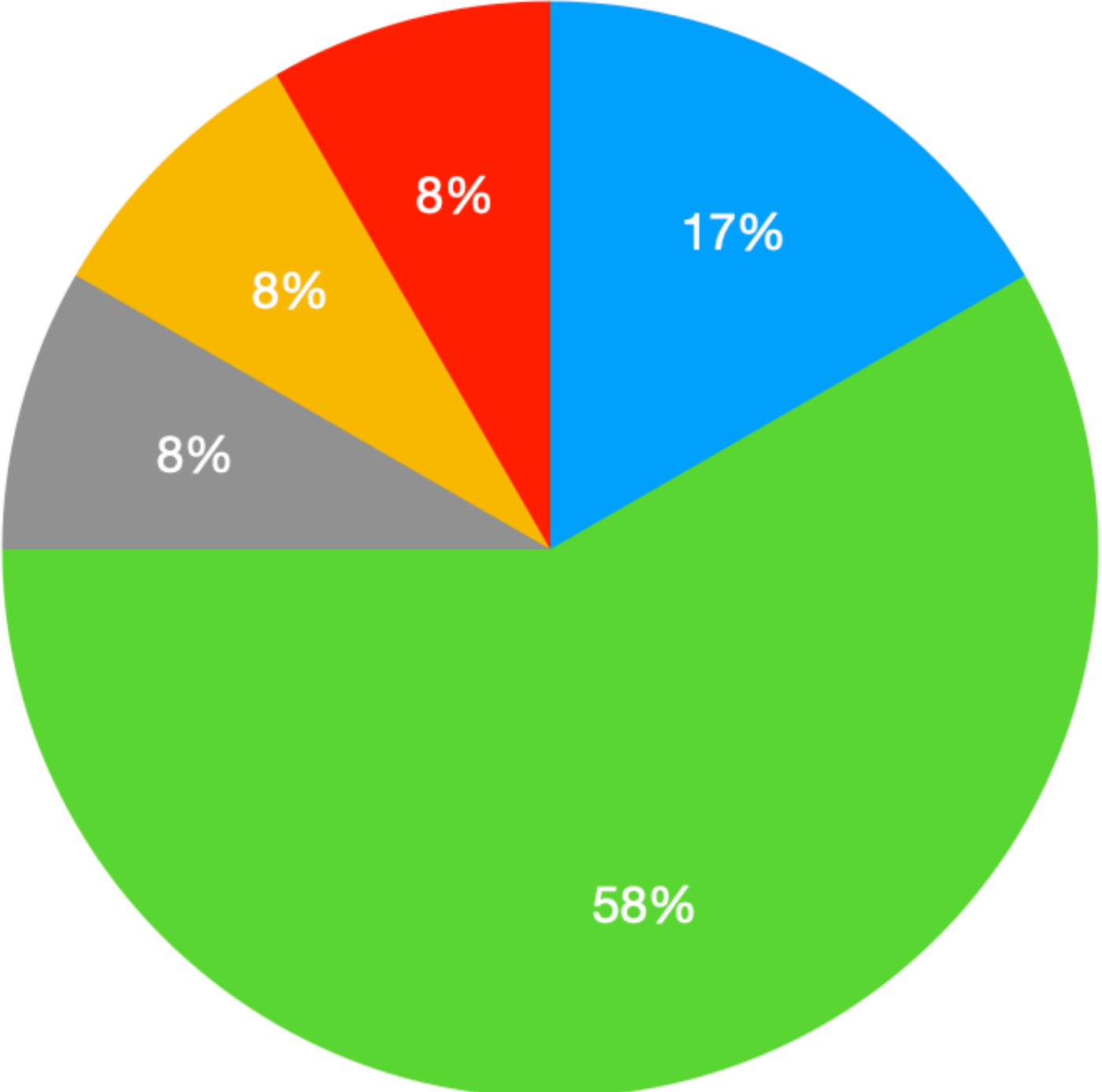
- Travels fast through private networks and then Cogent

- Hops in BEG, BTS, VIE, MUC, FRA, DUS
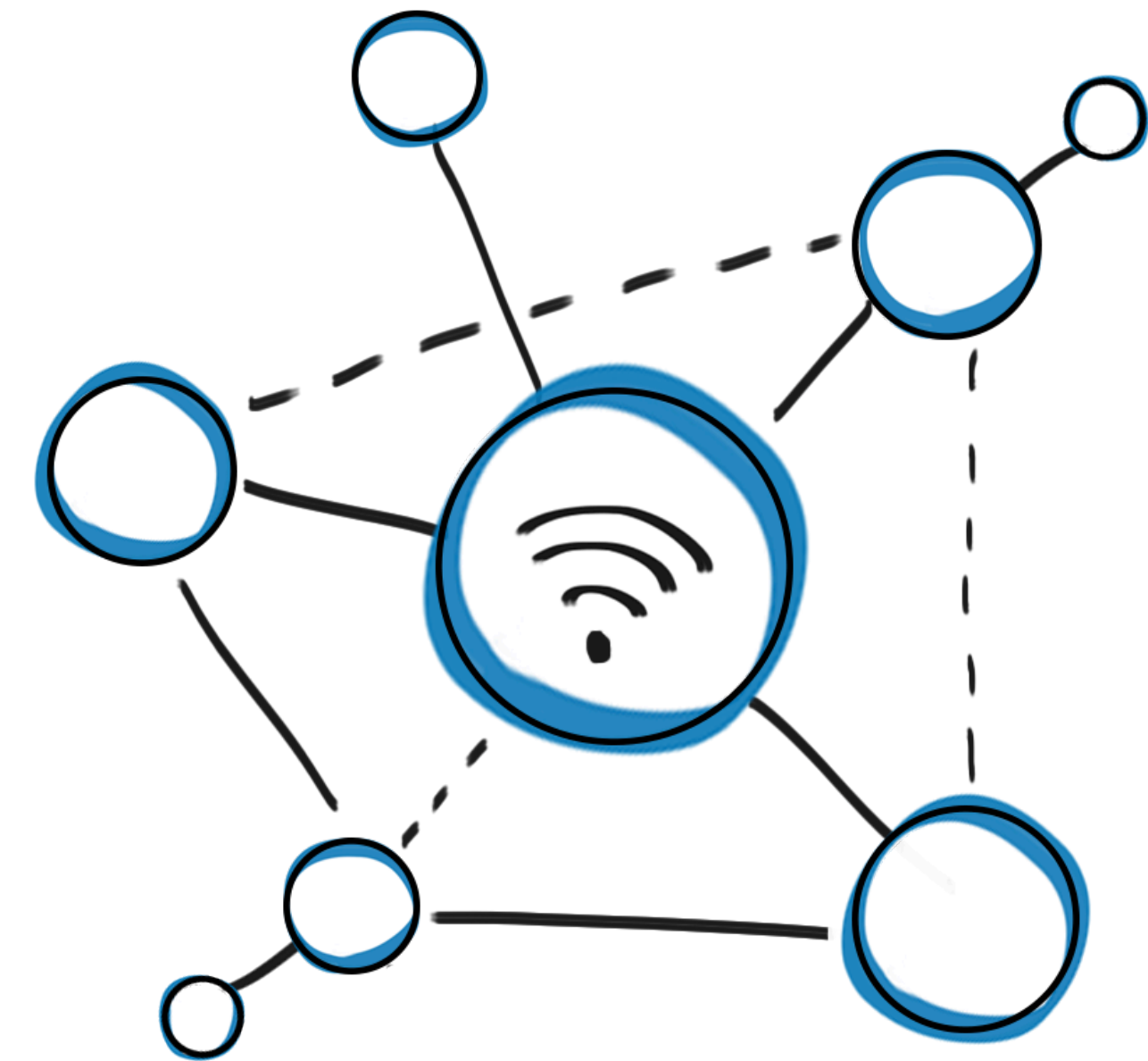
- Latency still acceptable
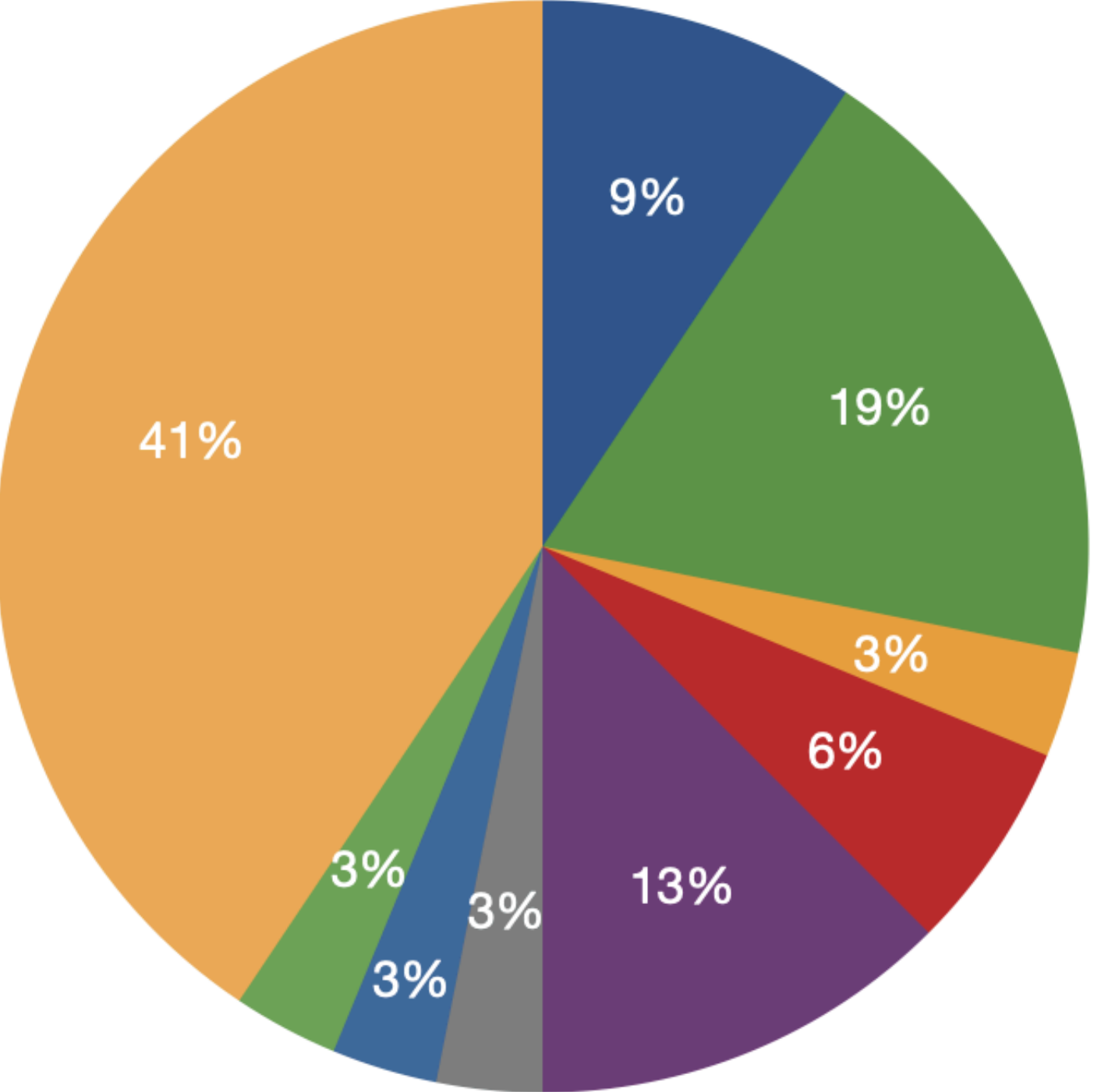
NEWS

BANKS

- Very few hosted in AL

- Most hosted by cloud providers

- Low utilisation of regional resources

Conclusions

- Apply to host K root

- Peer with RIS multi hop collector in Amsterdam

- Get locally relevant content to ANIX

- Host more Atlas probes/Anchors

- Re-start ALNOG

We want to see you in Croatia!

SEE 11

Split, Croatia
4 - 5 April 2023

… and at RIPE 86!

- RIPE 86 will be a hybrid meeting in Rotterdam from 22-26 May 2023:
  - https://ripe86.ripe.net

- RIPE NCC General Meeting (GM) from 24-26 May

- Remote attendance is free and you don't have to attend the entire week

Questions ?

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