RIPE NCC

RIPE NETWORK COORDINATION CENTRE

Spotting your latency issues with RIPE Atlas

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RIPE NCC in SEE region

- Community building
- Outreach
- Local contact

What is RIPE Atlas

- RIPE Atlas is a global active measurements platform
- Goal: view Internet reachability
- Probes hosted by volunteers
- Data publicly available

atlas.ripe.net

Probes

- Volunteer hosted
- Plug & play modified routers
- Runs active measurements (background + on-demand)
- Runs our Linux distro (→ software probes)
- 11, 000+ probes deployed worldwide (168 countries)

Anchors

- Volunteer hosted
- More substantial hardware
- Originator + target of measurements
- Runs our Linux distro (→ software anchors)
- 840 anchors worldwide

Web UI

- Measurements
- Internet maps
- Tools

Measurements

- Ping
- Traceroute
- DNS
- NTP
- SSL/TLS
- HTTP

The RIPE Atlas Community

- Users
- Hosts: probes and/or anchors
- Sponsors
- Ambassadors

Use cases

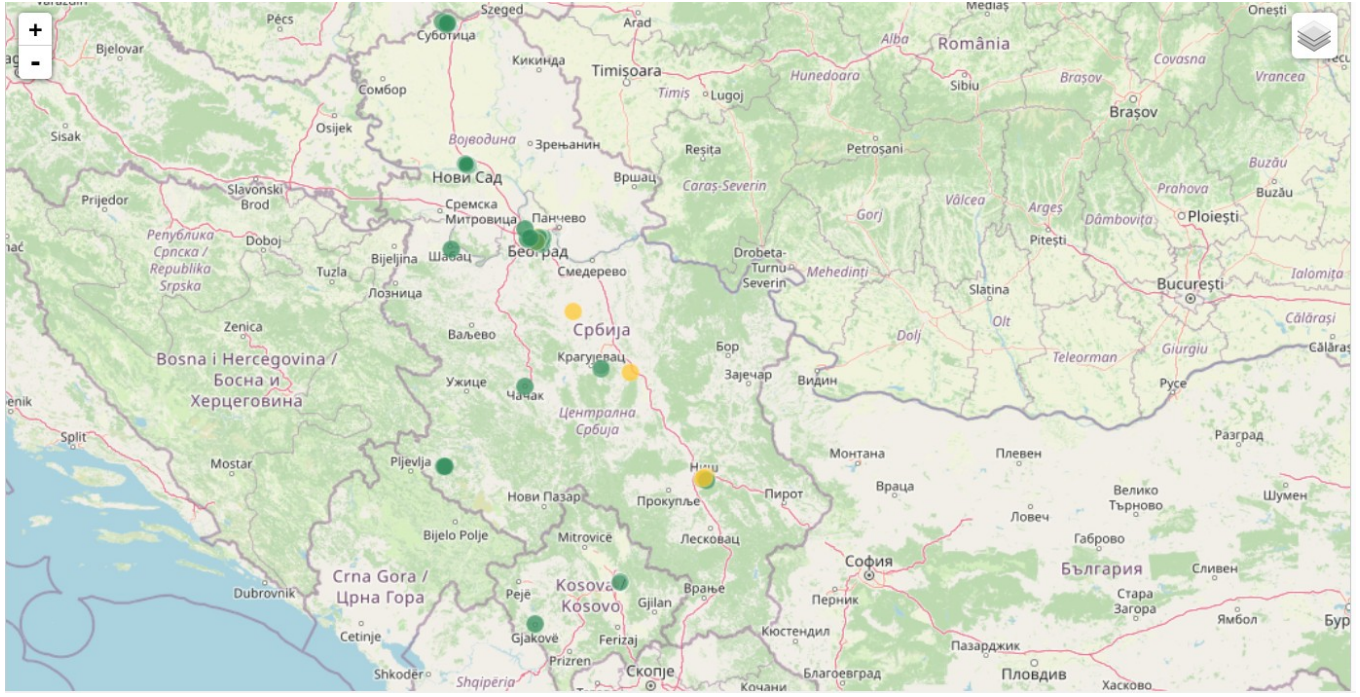
- Continuously monitor network reachability from thousands of vantage points around the globe
- Investigate and troubleshoot network issues with quick, flexible connectivity checks
- Check the responsiveness and proximity of DNS infrastructure, such as root name servers
- Test IPv6 connectivity

Probes in the SEE region

Country	Active probes
RS	32
BA	12
HR	33
SI	45
RO	77
BG	79

https://atlas.ripe.net/results/maps/network-coverage/?filter=Europe

Probes in Serbia



145 probes 32 connected 3 anchors

https://atlas.ripe.net/results/maps/network-coverage/?filter=Serbia+(rs)

Details for : **Serbia (RS)** | **View Serbia on RIPEstat**

Total Internet Users: **4758861**

Internet Users in networks with RIPE Atlas probes: **3485372**

https://sg-pub.ripe.net/petros/population_coverage/country.html?name=RS

Internet users coverage is estimated using percentage of IPv4 Public probes.

IPv4 Public Probes >= 3

3 > IPv4 Public Probes > 1

Search:

Network (ASN)	Network Name	Estimated User Population %	IPv4 Public Probes	IPv4 Private Probes	IPv4 Total Probes	IPv6 Public Probes	IPv6 Private Probes	IPv6 Total Probes	More
8400	TELEKOM-AS	40.29	4	1	5	0	0	0	View
31042	SERBIA-BROADBAND-AS	23.5	9	1	10	0	0	0	View
15958	CETIN_doo_AS	9.29	0	0	0	0	0	0	Apply for a probe
44143	A1SERBIA-AS	8.25	0	0	0	0	0	0	Apply for a probe
41937	MOJASUPERNOVA	5.32	2	0	2	0	0	0	View
9125	ORIONTELEKOM-AS	1.94	1	1	2	0	0	0	View
41897	SAT-TRAKT-AS	1.76	1	0	1	0	0	0	View

Becoming a host

- Many disconnected probes in Serbia!
- Applying for a new probe: SEE as an underrepresented region
- Putting an anchor in your network

MinRTT

- Minimum latency into each ASN and IXP from RIPE Atlas for a given day
- Visualising network deployments
- RIPE Atlas latency world map in Observable
- Limitations and possible solutions
- Credit to Emile Aben – emile.aben@ripe.net

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3.4GB/day

180M traces

Complex

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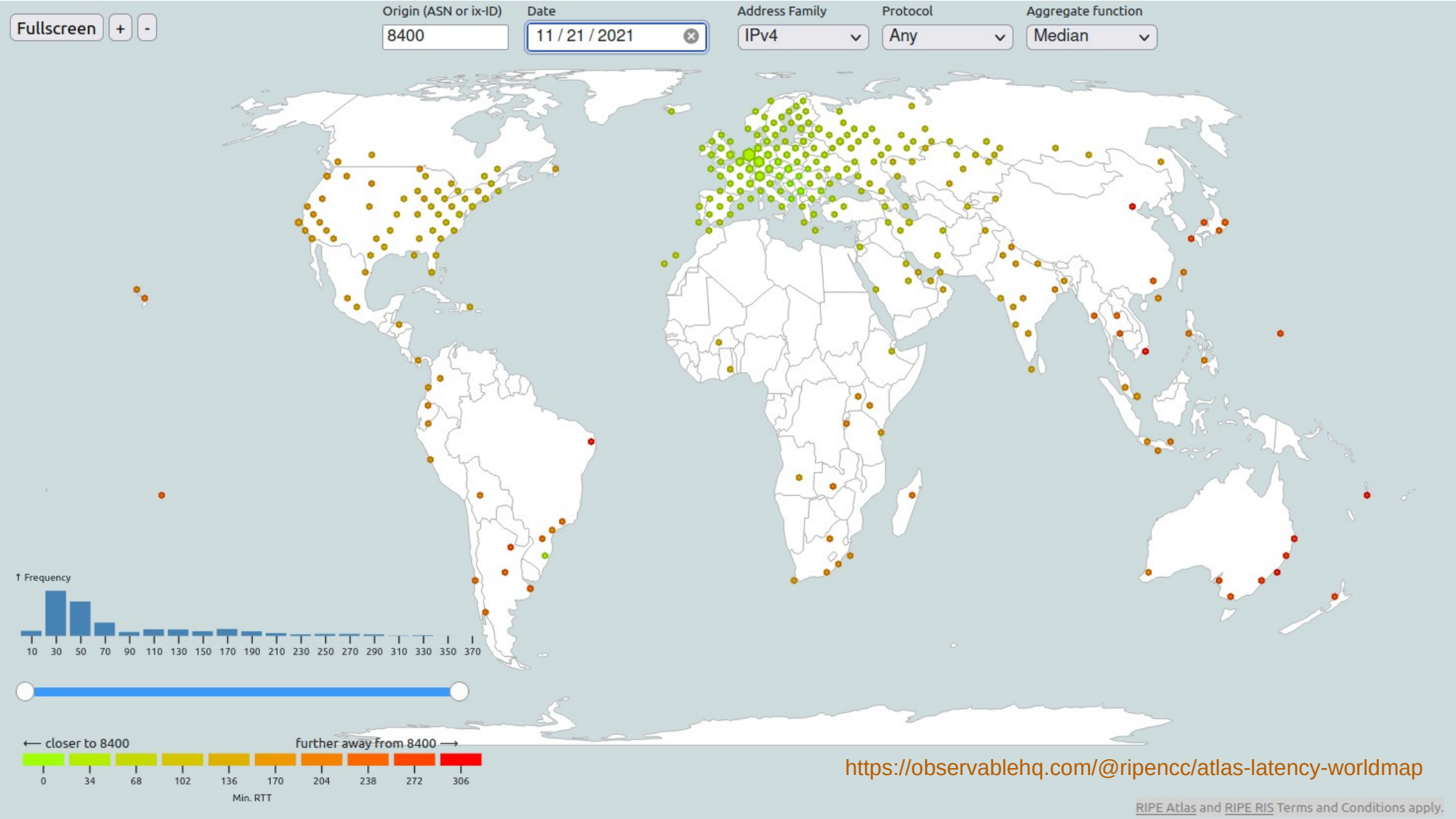
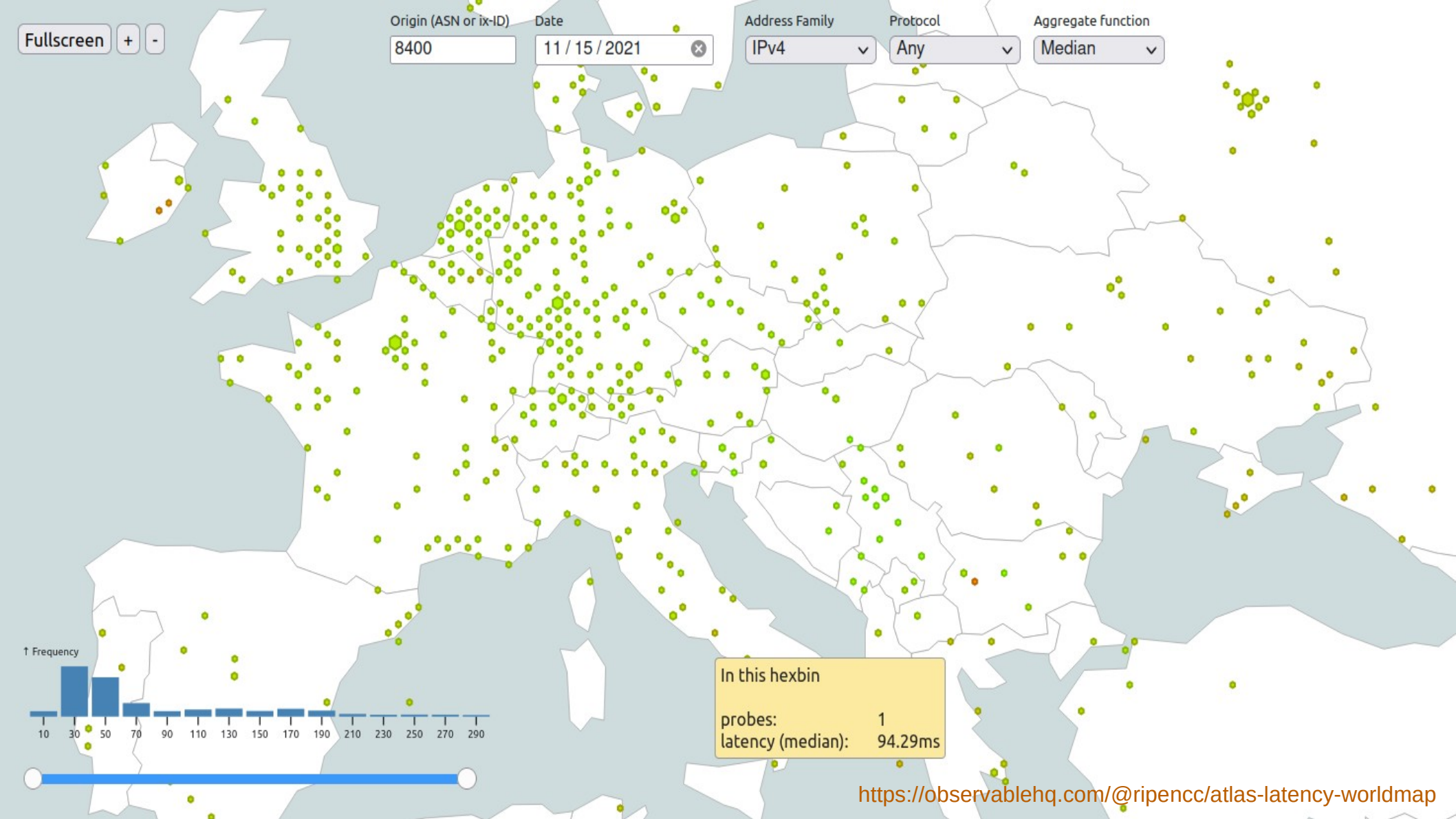
36MB/day

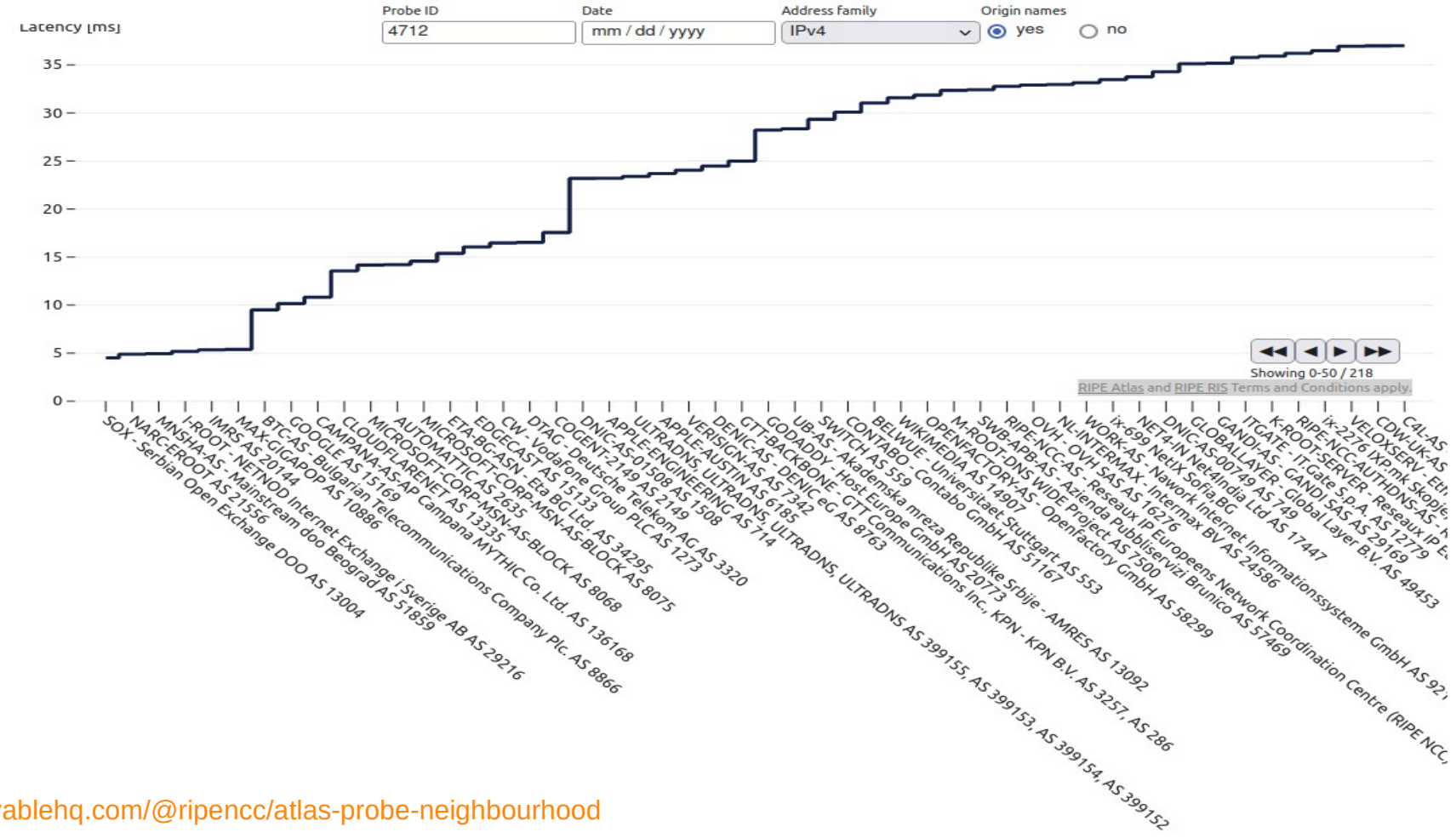
4.8M tuples

Simple




Fullscreen
+
-
Origin (ASN or ix-ID)
8400
Date
11 / 15 / 2021
Address Family
IPv4
Protocol
Any
Aggregate function
Median
↑ Frequency
10
30
50
70
90
110
130
150
170
190
210
230
250
270
290
In this hexbin
probes: 1
latency (median): 94.29ms
https://observablehq.com/@ripencc/atlas-latency-worldmap

Your network neighbourhood as see through RIPE Atlas



https://observablehq.com/@ripencc/atlas-probe-neighbourhood

Country minRTT

Country minRTT

What latencies do RIPE Atlas probes see for countries

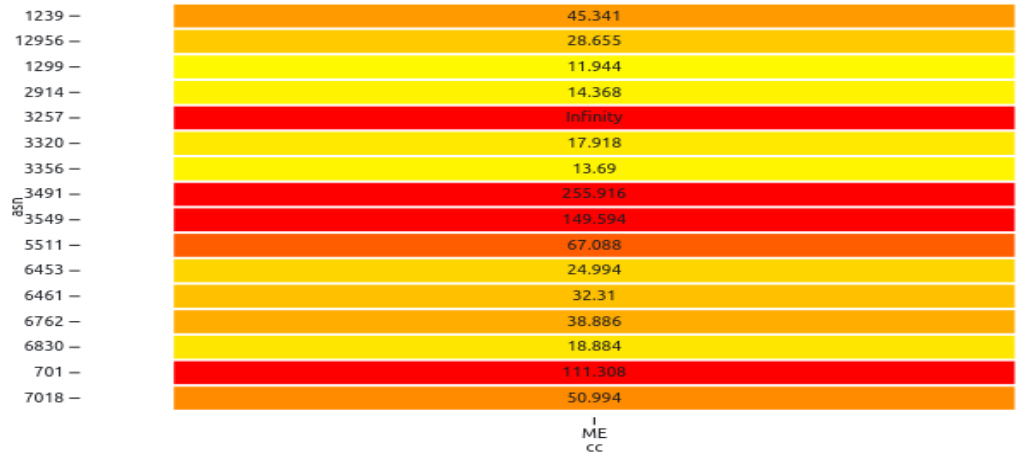
```
# Country minRTT
What latencies do RIPE Atlas probes see for countries
```

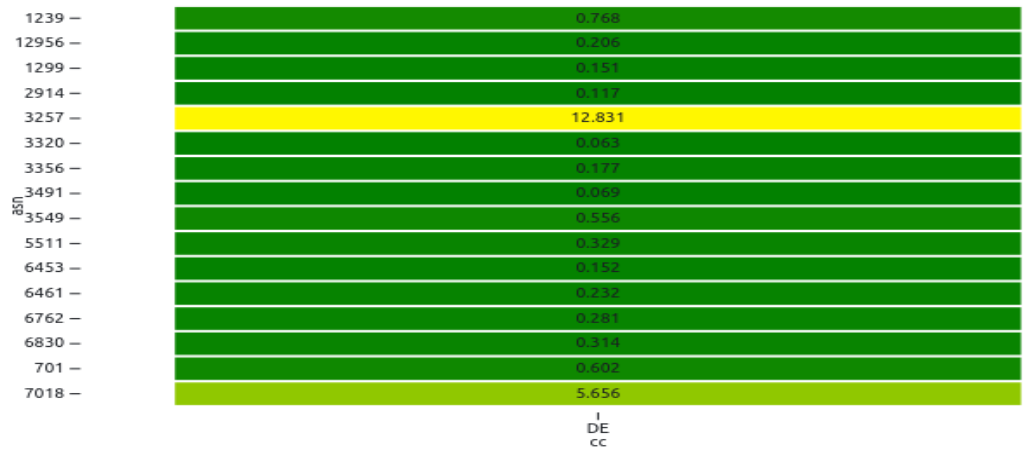
set of country codes, separated with ','

RS

Select a set of ASNs

tier1





https://observablehq.com/@emileaben/country-minrtt

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Questions, suggestions?

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