



**RIPE NCC**

RIPE NETWORK COORDINATION CENTRE

# Intro to RIPE and RIPE NCC

RIPE Atlas workshop

Jelena Cosic | University of Twente workshop | June 2023

# What will we talk about?



- RIPE (community) and the RIPE NCC
- Community participation with RIPE Atlas

# RIPE



- A community
- Formed in 1989
- Open, inclusive, bottom-up, transparent
- Sharing information and best practices
- Policy development

# The RIPE NCC



- Secretariat
- Formed in 1992
- Membership organisation
- Over 190 staff in offices in Amsterdam and Dubai
- Provides services
- Implements policies





**RIPE Community**



# The RIPE Community



- Join the mailing list!
  - <https://www.ripe.net/mailman/listinfo/ripe-list/>
- Public archives
- Work is structured around:
  - Working Groups (WGs)
  - Task Forces (TFs)

# Working groups



- Address Policy
- Anti-Abuse
- Connect
- Cooperation
- Open Source
- The Internet of Things (IoT)
- Database
- DNS
- IPv6
- Measurements & Tools (MAT)
- RIPE NCC Services
- Routing



# Working groups



- Anyone can join the discussion
  - On mailing lists
  - At RIPE meetings
- Remote participation
- Read and/or subscribe
  - [ripe.net/participate/ripe/wg](https://ripe.net/participate/ripe/wg)
- Learning opportunities





# RIPE Chair team



- The role of the RIPE Chair is to ensure the smooth functioning of the RIPE community
- There is a RIPE Chair and Vice
- Chair:
  - Mirjam Kühne, RIPE Chair
  - Niall O'Reilly, RIPE Vice Chair





**RIPE NCC**

# RIPE NCC



- One of five Regional Internet Registries in the world
  - allocate and register blocks of Internet number resources to ISPs and other organisations
- Provides a number of technical services and tools
  - K-root, RIPE Atlas, RIPEstat, RIS
- Involved in public policy discussions and Internet governance



# Where are the RIRs?





# What is a RIPE meeting?



- Five-day event where ISPs, network operators and other interested parties gather to
  - Discuss policies and procedures to allocate IP addresses and ASNs
  - Discuss current technical and policy issues
  - Share experiences, latest developments and best common practices
  - Network with peers
- Usually held twice a year





# RIPE Academic Cooperation Initiative (RACI)




- Funding for students and researchers to present their work to the RIPE community
  - Meeting ticket, flights and accommodation
  - Mailing list: [raci-list@ripe.net](mailto:raci-list@ripe.net)
- Topics:
    - Network measurement and analysis
    - IPv6 deployment
    - BGP routing
    - Network security
    - Internet governance
    - Peering and interconnection
    - Internet of Things (IoT)
    - Sustainability in ICT





# Get involved

- Other events organised by the RIPE NCC
  - Regional meetings, training courses, hackathons
- RIPE NCC's Community support
  - NOG support, Community Projects Fund
-  **RIPE Labs**



# **Community Participation**

With RIPE Atlas

# RIPE Atlas Community



- 30,000 probes given to volunteers
  - 13.000 probes active at any moment
- 12,000 active users
- 500 on the ripe-atlas@ripe.net mailing list
- 900+ anchors hosted by operators
- 500+ ambassadors, at many conferences

# GitHub



- Software Probe
  - <https://github.com/RIPE-NCC/ripe-atlas-software-probe>
- Multilingual documentatation
  - <https://github.com/RIPE-NCC/ripe-atlas-probe-doc/tree/master/manuals>
- CLI tools for querying RIPE Atlas data & creating measurements
  - <https://github.com/RIPE-NCC/ripe-atlas-tools>
- Tools contributed by the community
  - <https://github.com/RIPE-Atlas-Community/ripe-atlas-community-contrib>

# Hackathons and Deployathons



- RIPE Atlas DataViz (March 2015, Amsterdam)
- RIPE Atlas Tools for Operators (October 2015, Bucharest)
- RIPE Atlas Interfaces (April 2016, Copenhagen)
- IXP Tools (October 2016, Madrid)
- DNS Measurements (April 2017, Amsterdam)
- Version6 (November 2017, Copenhagen)
- Network Operators Tools (June 2018, Dublin)
- IoT Hackathon (November 2019, Rotterdam)
- RIPE Atlas Deployathon (November 2020, virtual)
- Quantum Internet Hackathon (December 2022, Amsterdam, Dublin, Padua, Poznan, Sarajevo)
- DNS Hackathon (May 2023, Rotterdam)



# Get involved



- Use RIPE Atlas and RIS for your purposes: data analysis, network troubleshooting, investigative journalism
- Do scientific research and add your paper to the Wikipedia page
- Contribute to the code and community tools
- Add multi-lingual content / documentation on GitHub
- Co-organise / sponsor / participate in a hackathon!
- Host a RIPE Atlas (virtual) anchor or a (SW) probe
- Write a RIPE Labs article

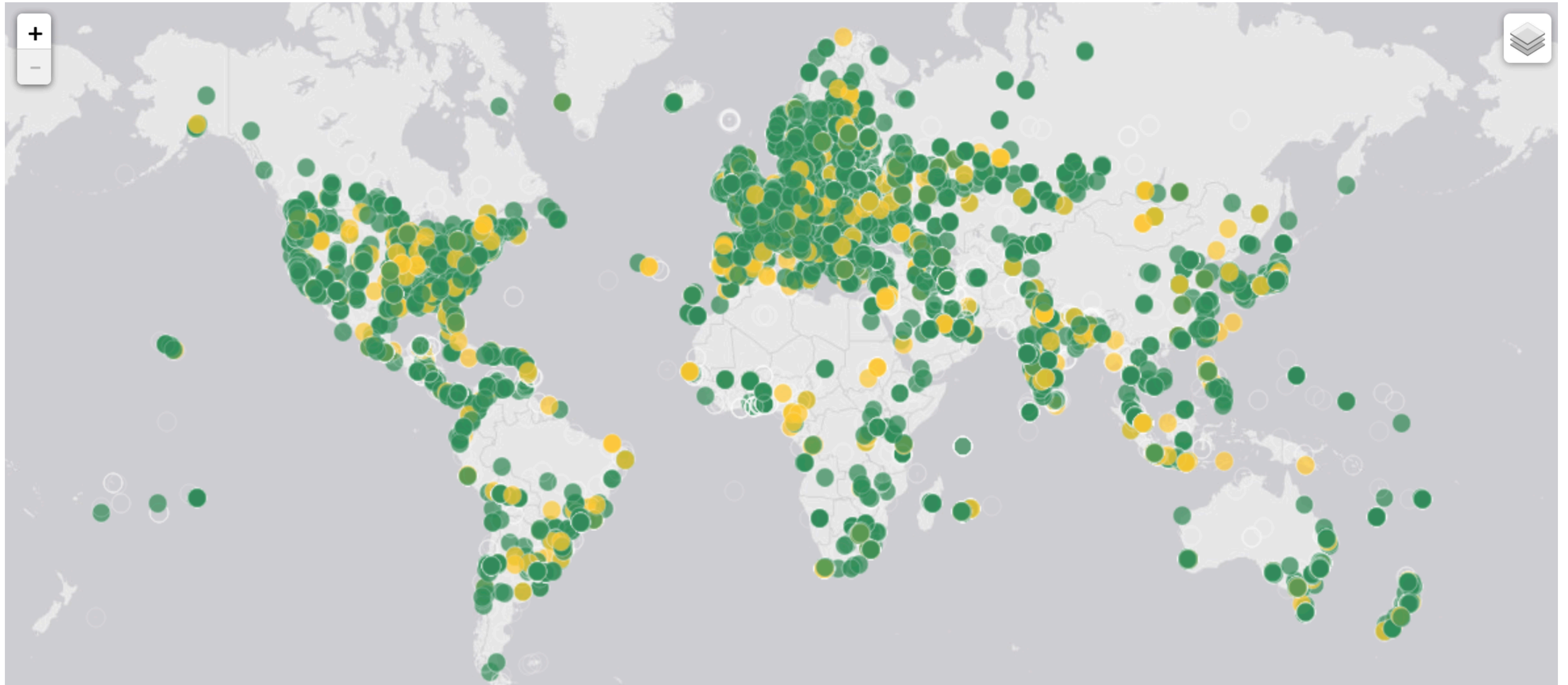
# Feedback appreciated



- What would you want to do with this data & tools?
- What is missing?
- What could be easier?



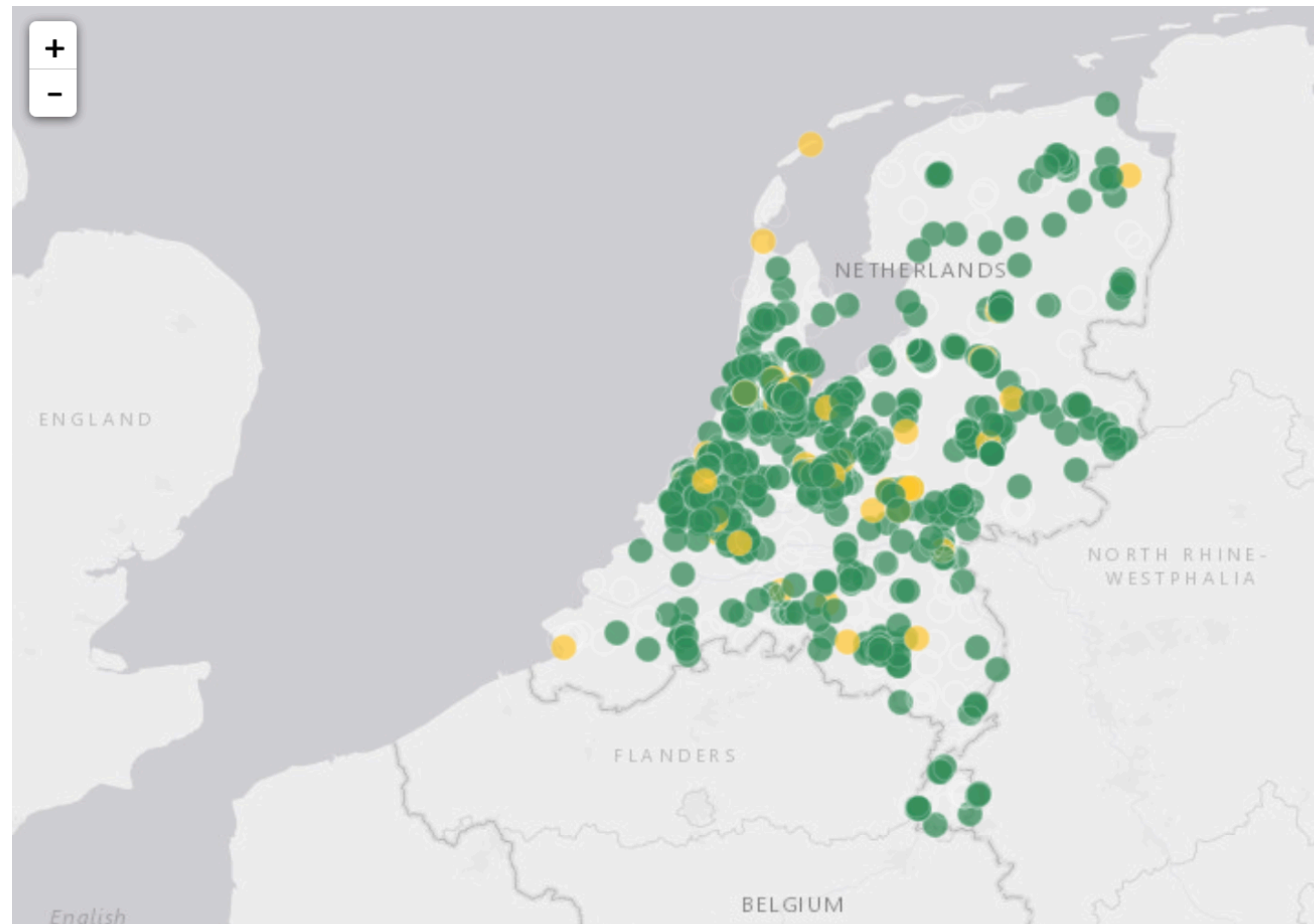
# RIPE Atlas coverage



# RIPE Atlas coverage in NL

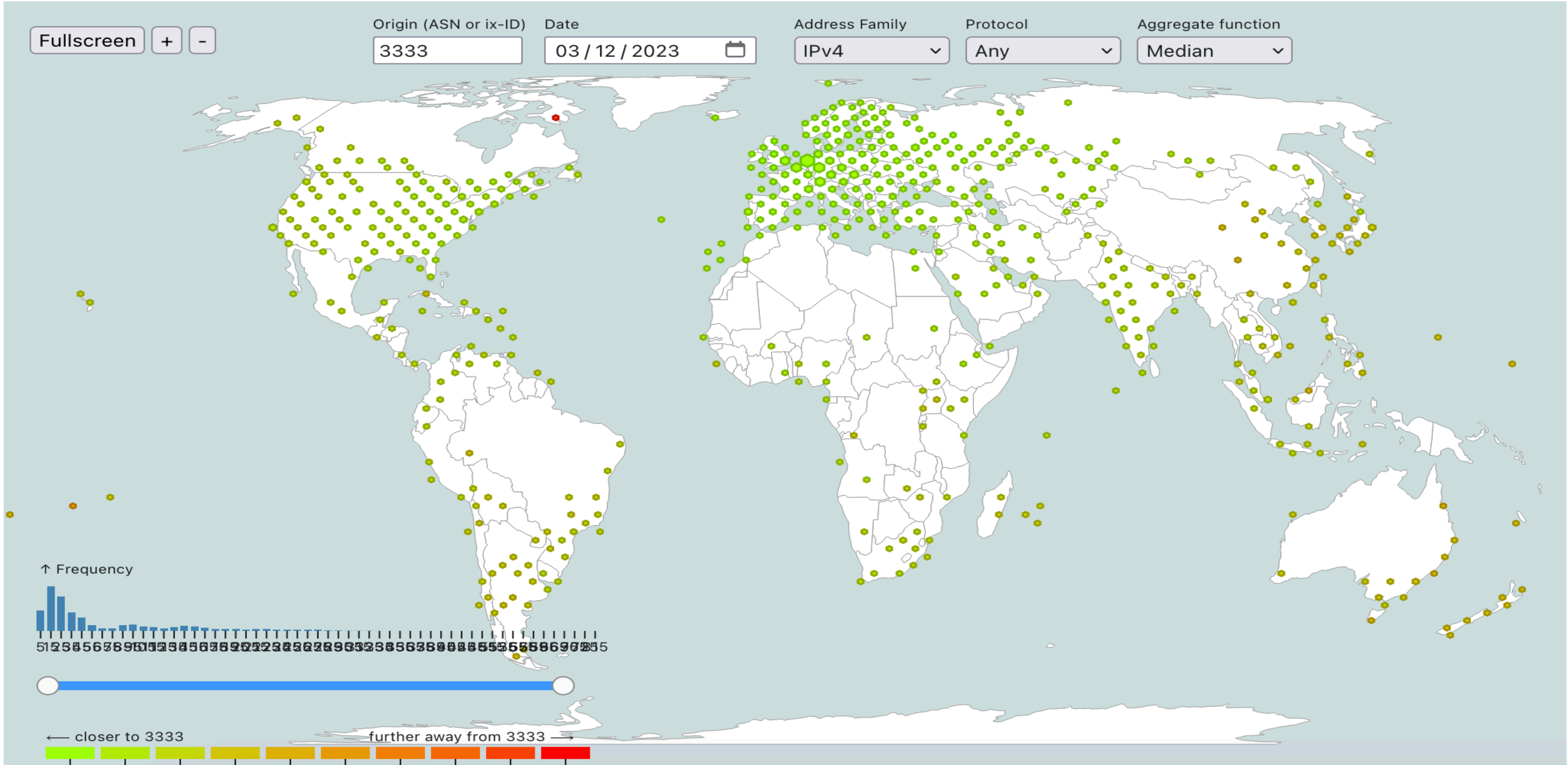


- Connected: 638
- Disconnected: 76
- Abandoned: 966





# Where in the World is This Network or IXP?



# Where in the World is This Network or IXP?



- The minimum latency into each ASN (and IXP!) from RIPE Atlas for a given day
- Aggregates probes that are physically close into a single hexagon
- What is the latency into a network as seen from over 10,000 vantage points all over the world?
- Which networks are close/far from a particular vantage point?

# Links



- Anomaly Alerting for RIPE Atlas, Hoge School Utrecht  
- <https://ripe84.ripe.net/presentations/86-RIPE-Alerts-idea-1.pdf>
- The RIPE Atlas Population Coverage  
- [https://sg-pub.ripe.net/petros/population\\_coverage/](https://sg-pub.ripe.net/petros/population_coverage/)
- ObservableHQ prototypes  
- <https://observablehq.com/@ripencc/internet-outages-as-seen-by-ripe-atlas>
- RIPE Atlas probes deployment stats for large cities  
- <https://observablehq.com/@emileaben/ripe-atlas-probes-deployment-stats-for-large-cities>

# Articles



- “The Resilience of the Internet in Ukraine - One Year On” (2023-04-14)  
<https://labs.ripe.net/author/emileaben/the-resilience-of-the-internet-in-ukraine-one-year-on/>
- “The Resilience of the Internet in Ukraine” (2022-03-10)  
<https://labs.ripe.net/author/emileaben/the-resilience-of-the-internet-in-ukraine/>
- “The Ukrainian Internet” (2022-02-28)  
<https://labs.ripe.net/author/emileaben/the-ukrainian-internet/>
- “The Kazakhstan Outage - As Seen from RIPE Atlas” (2022-01-07)  
<https://labs.ripe.net/author/emileaben/the-kazakhstan-outage-as-seen-from-ripe-atlas/>
- “You are Not Alone: RIPE Community Resilience” (2021)  
<https://labs.ripe.net/author/becha/you-are-not-alone-ripe-community-resilience/>
- “Our First Glance at the Uganda Internet Shutdown” (2021-01-14), Vesna Manojlovic  
<https://labs.ripe.net/author/becha/our-first-glance-at-the-uganda-internet-shutdown/>
- “Data Feminism: From Data Ethics to Data Justice”  
<https://labs.ripe.net/author/becha/data-feminism-from-data-ethics-to-data-justice/>
- “Report from the RIPE Atlas Software Probes Deployathon” (2020-12-11)  
<https://labs.ripe.net/author/becha/report-from-the-ripe-atlas-software-probes-deployathon>



# Presentations



- Emile Aben - Resiliency of the Internet in Ukraine , May 2022, RIPE84:
- - <https://ripe84.ripe.net/archives/video/738/>
- • Wolfram Friele - Anomaly Alerting for RIPE Atlas, May 2022, RIPE84:
- - <https://ripe84.ripe.net/archives/video/798/>
- • Ethics in Technology: Internet Measurements' Ethical Dilemmas and RIPE Atlas - SHA2017
- Vesna Manojlovic <https://www.ripe.net/about-us/press-centre/publications/presentations/2017/ethics-in-technology-internet-measurements-ethical-dilemmas-and-ripe-atlas-sha2017>
- • Technical Communities Resilience During COVID-19 Pandemic - NLUUG 2021 , Vesna Manojlovic, November 2021 (video: <https://youtu.be/2HstoqAFn9g> ,
- - slides: <https://www.ripe.net/about-us/press-centre/publications/presentations/2021/technical-communities-resilience-during-covid-19-pandemic-nlnog-day-2>
- • RIPE Internet Measurements - Internet Freedom Festival, Presentation given by Vesna Manojlovic & Emile Aben at the Internet Freedom Festival on 17 June 2020;
- “State of the Internet in Ukraine”, RIPE NCC Days in Kyiv | 2019-09-25 | Alex Semenyaka

# Podcast!



- RIPE Atlas: A Distributed View of the Internet  
[https://labs.ripe.net/author/alun\\_davies/ripe-atlas-a-distributed-view-of-the-internet/](https://labs.ripe.net/author/alun_davies/ripe-atlas-a-distributed-view-of-the-internet/)
- Revealing Bias in Internet Measurements  
[https://labs.ripe.net/author/alun\\_davies/revealing-bias-in-internet-measurements/](https://labs.ripe.net/author/alun_davies/revealing-bias-in-internet-measurements/)

**THE RIPE LABS  
PODCAST**

**EPISODE 3**

RIPE ATLAS:  
A DISTRIBUTED VIEW  
OF THE INTERNET

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**RIPE Labs**





# Questions



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