



Vesna Manojlovic  
Measurements Community Building  
MAT WG, RIPE68, May 2014, Warsaw

Vesna Manojlovic

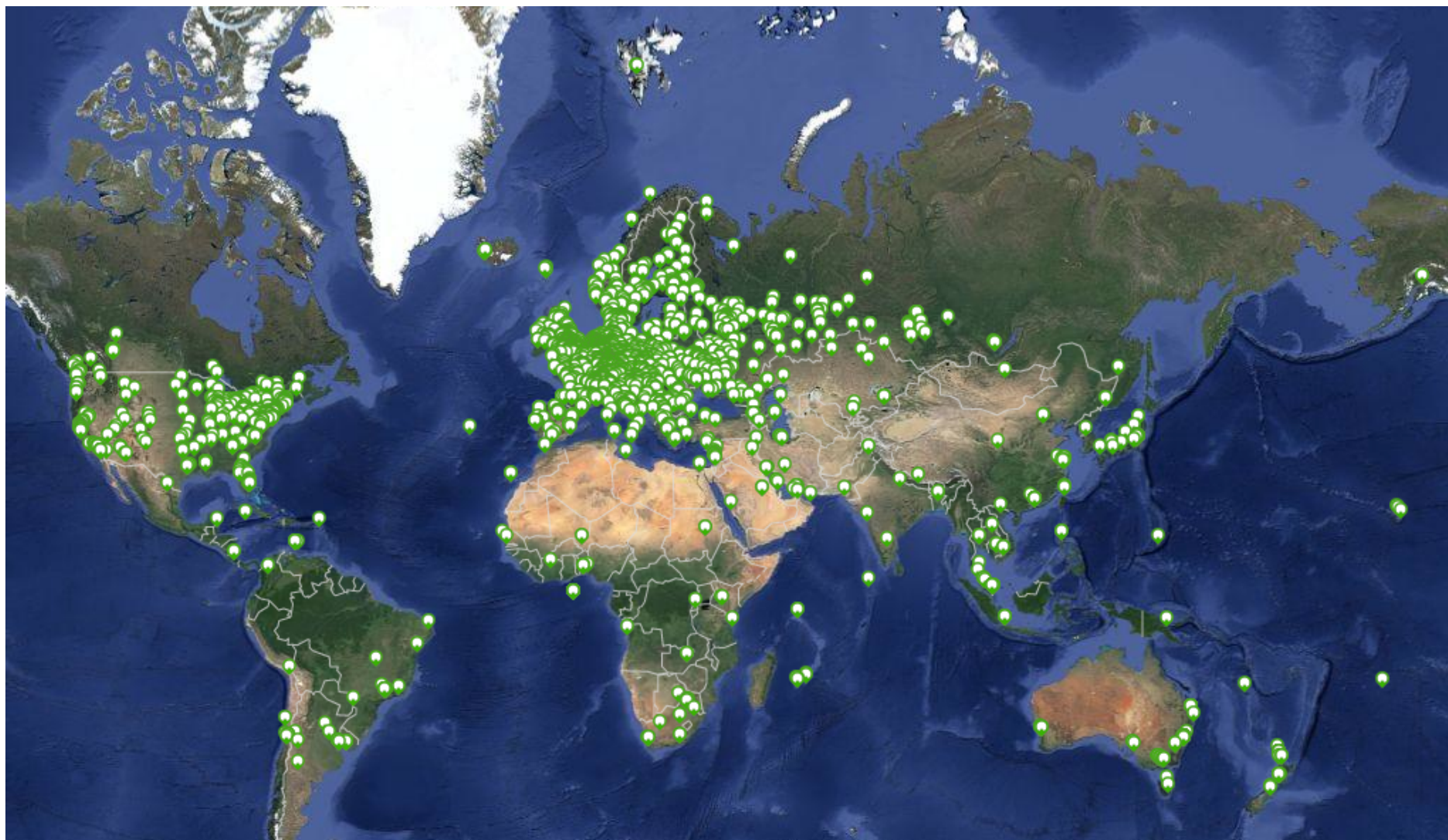
## Measurements Community Building

MAT WG, RIPE68, May 2014, Warsaw

# RIPE 68, May 2014, Warsaw

# RIPE Atlas Deployment

RIPE Atlas | 2



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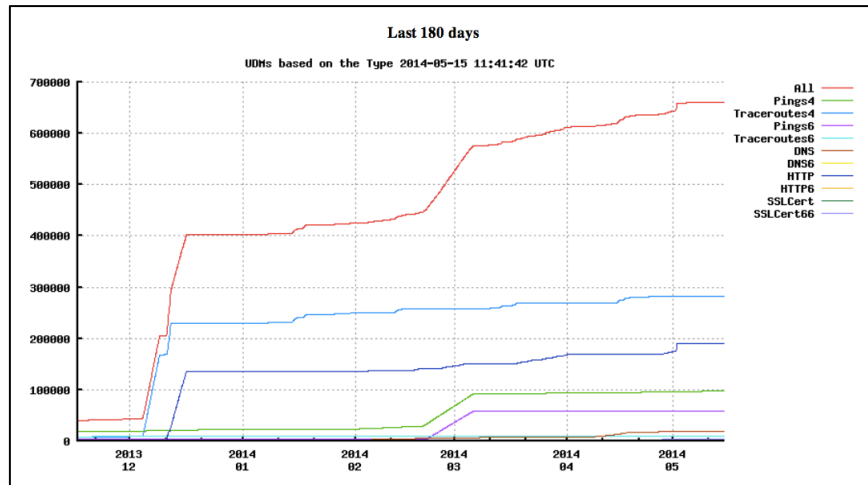


# Probes Photos

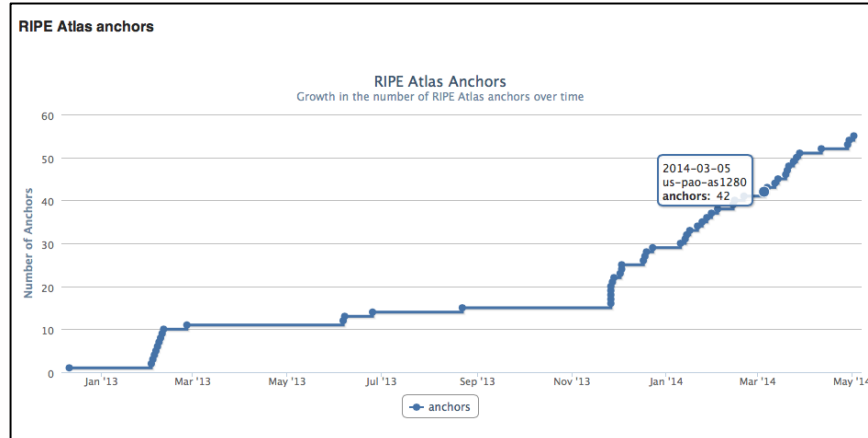
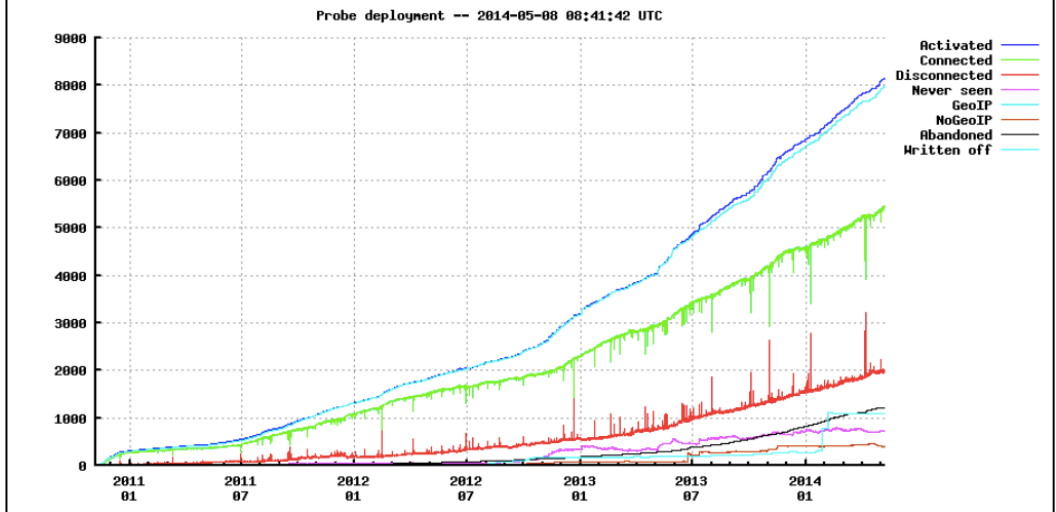
RIPE Atlas | 4



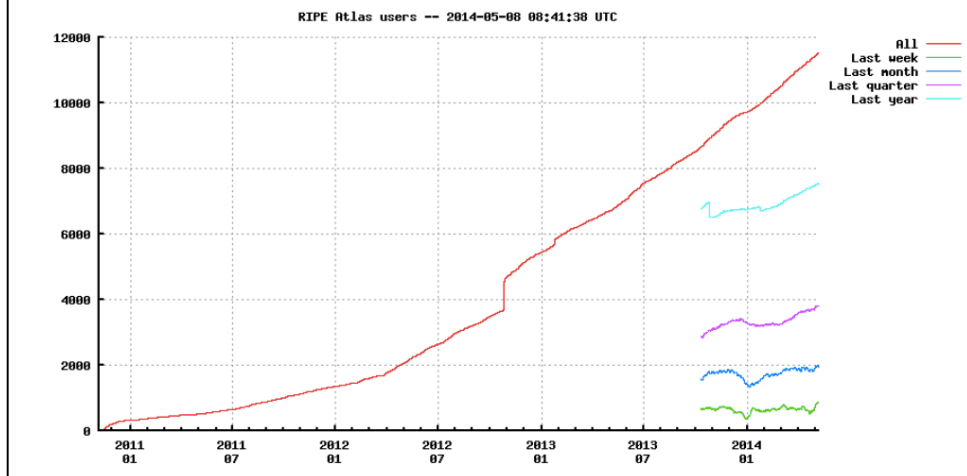
# Growth Graphs



## Probe deployment



## RIPE Atlas users





# Reasons to Celebrate...

RIPE Atlas | 6



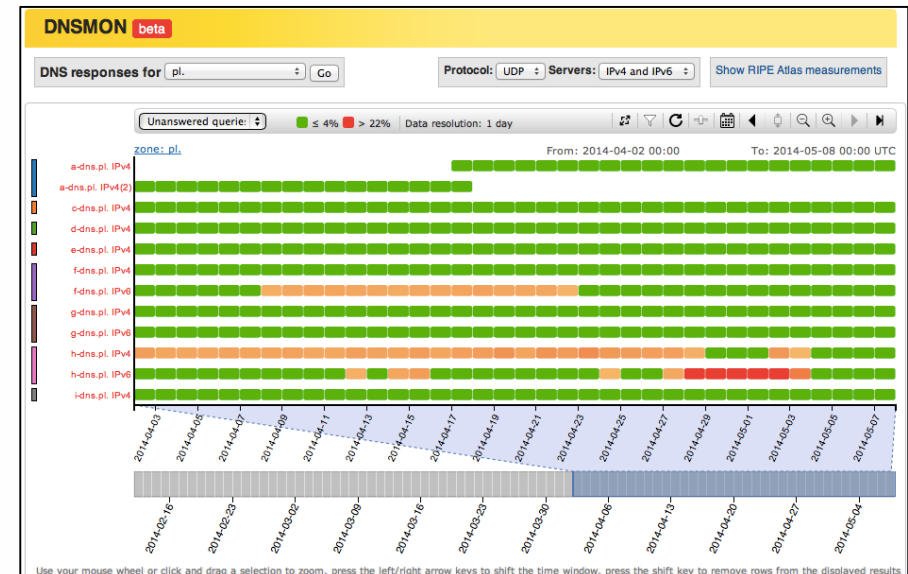
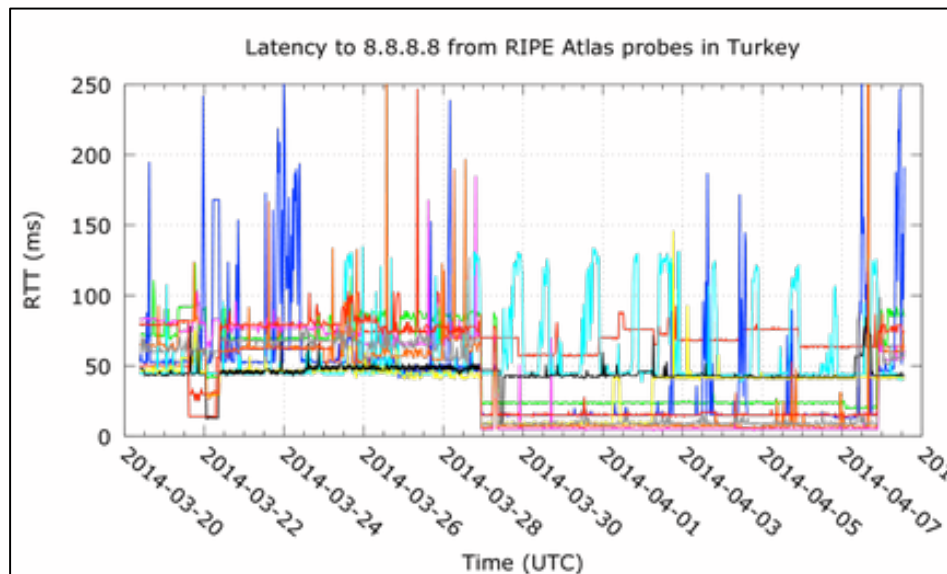
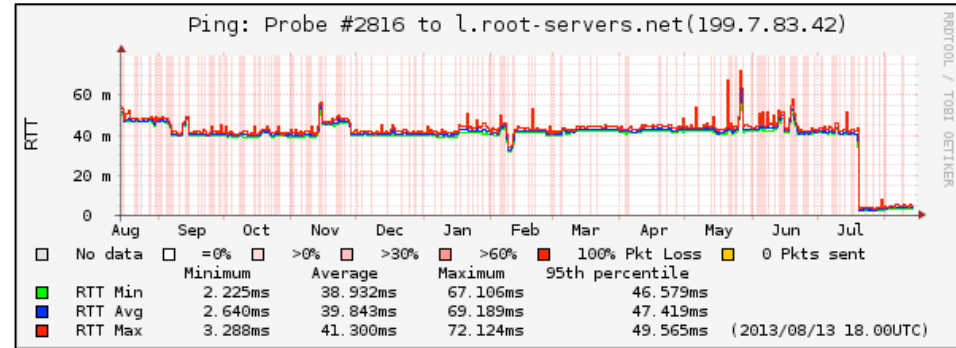
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# Success Stories

RIPE Atlas | 7





## Get Involved

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## Community Information

Find out more about the RIPE Atlas community, their contributions, and the hosts who stand out in the RIPE Atlas network.

Always Up

Big Spenders

New Arrivals

Sponsors

Anchor Hosts

Photos

New Arrivals are new hosts who connected a RIPE Atlas probe in the last ten days. (Note that the flags are representative of their probe locations and not necessarily their nationality.)



Andrea Speranza



herdir anon



Ferdinand  
BOISSIER



Arky R

Andre Els



Angus Hay



Pop Marcel Marcel



Marc Lagrange



mwizu sikanyika



fernando aversa



Mark Campbell



Jean Welman



Jeff Fletcher



Diederik  
Vandevenne



Marty Strong



Geert Jan de Groot

Rhys Smith



Sysadmin VRVis

Trevor Warwick



Pierre-Yves Gillier



Marc Chabrol



Lorenzo Cafaro



CERT SWITCH



Marko Eling



Ulrik Johansen



Roar Idsøe



Rafael Oliwa



Lukas Vescicik



Václav Hořejší



Tomas Pristach



Andrew Orange



Piotr Burzyński



Giulia Di Rienzo



Lucas Braga



Anibal Cañada



Martin Prager



Tomas Simonaitis



Steffie Jacob  
Eravuchira

Chris Russell



# Host a RIPE Atlas Anchor (part 1)

RIPE Atlas | 10



# Host a RIPE Atlas Anchor (part 2)

RIPE Atlas | 11





# Become an Ambassador

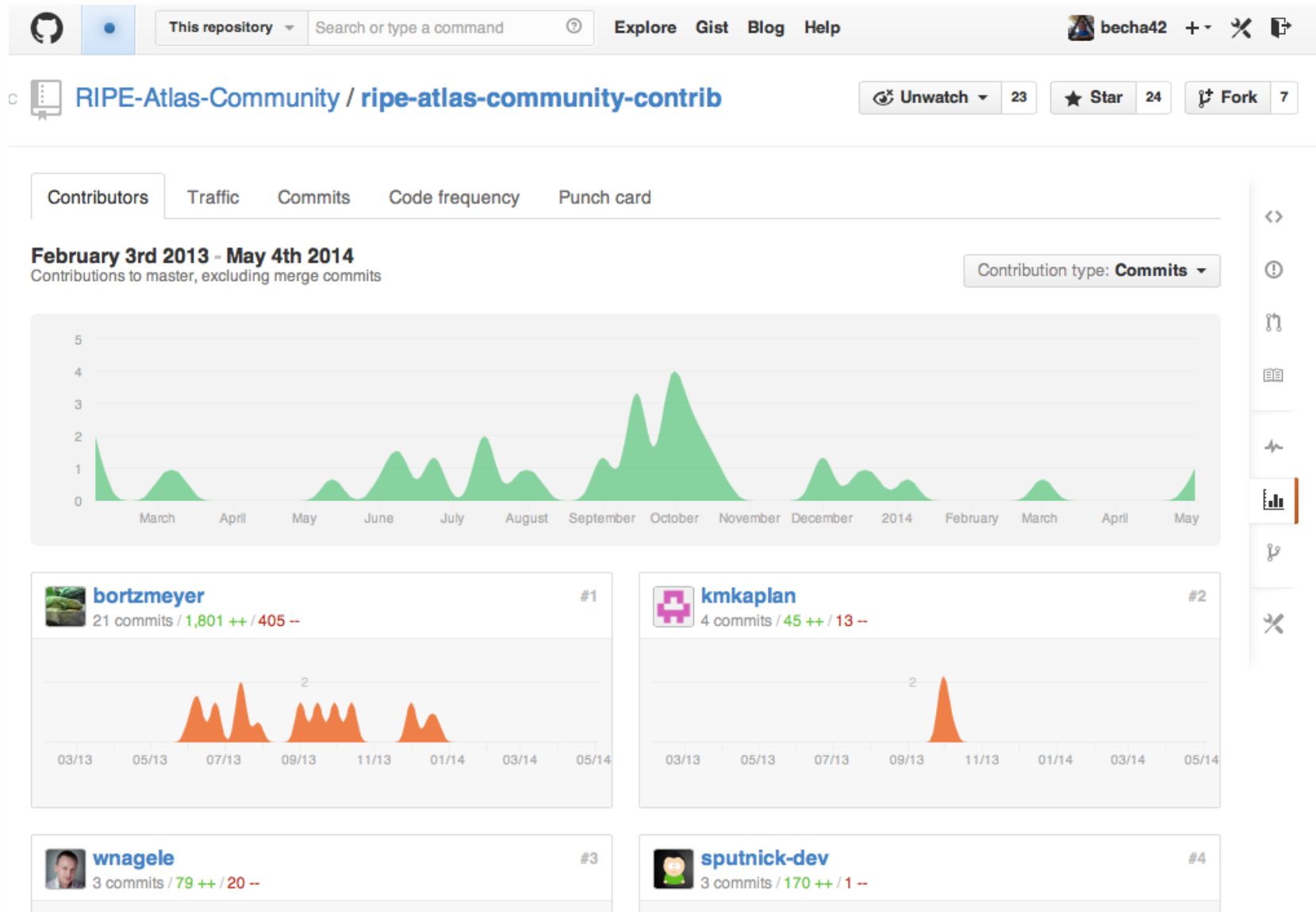
RIPE Atlas | 12



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# Contribute to the GitHub Repository

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# We are Grateful to our Sponsors!

RIPE Atlas | 14



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GLOBAL  
COMMUNICATION  
STUDIES



Cable&Wireless  
Worldwide





# Roadmap for the Future

Planned		In Progress	
<ul style="list-style-type: none"> <li>Additional features for RIPE Atlas anchors</li> </ul>		<ul style="list-style-type: none"> <li>Improve procedure for probe distribution by RIPE Atlas ambassadors</li> </ul>	
<ul style="list-style-type: none"> <li>WiFi Measurements</li> </ul>		<ul style="list-style-type: none"> <li>Regularly publish metadata</li> </ul>	
<ul style="list-style-type: none"> <li>Share my probe with a custom-made group</li> </ul>		<ul style="list-style-type: none"> <li>Regularly publish Names</li> </ul>	
<ul style="list-style-type: none"> <li>Sharing credits with colleagues</li> </ul>		<ul style="list-style-type: none"> <li>Improved Measurements Pages</li> </ul>	
<ul style="list-style-type: none"> <li>Restarting previous measurements</li> </ul>		<ul style="list-style-type: none"> <li>Improve number of connected probes</li> </ul>	
<ul style="list-style-type: none"> <li>Vantage points dropping out of existing user-defined measurements</li> </ul>		<ul style="list-style-type: none"> <li>Increase number of active RIPE Atlas anchors</li> </ul>	
<ul style="list-style-type: none"> <li>Improve IPv6 probe selection</li> </ul>		<ul style="list-style-type: none"> <li>Latest re</li> </ul>	
<ul style="list-style-type: none"> <li>Outsour</li> </ul>		<ul style="list-style-type: none"> <li>RIPE Atl</li> </ul>	
<ul style="list-style-type: none"> <li>Improve connect</li> </ul>		<ul style="list-style-type: none"> <li>Improve connect</li> </ul>	



- RIPE Atlas website: <https://atlas.ripe.net>
- Mailing list for active users: [ripe-atlas@ripe.net](mailto:ripe-atlas@ripe.net)
- Articles on RIPE Labs: <https://labs.ripe.net/atlas>
- Questions: [atlas@ripe.net](mailto:atlas@ripe.net)
- Twitter: @RIPE\_Atlas and #RIPEAtlas

# Questions?

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## Additional Information

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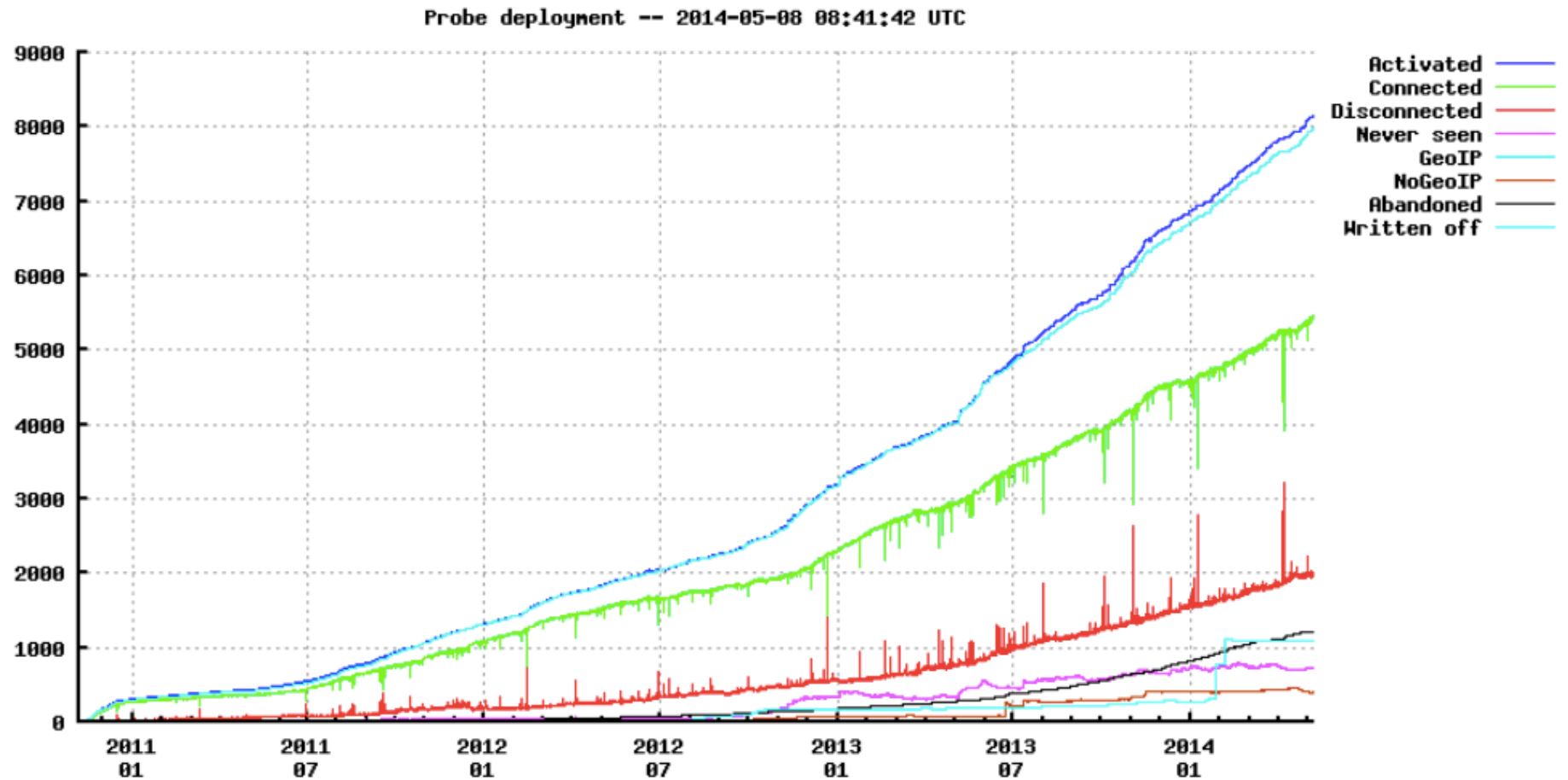


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- 5,500+ probes connected
- 8,000+ active users
- 55+ RIPE Atlas anchors
- 5,000+ built-in measurements daily
- 5,000+ user-defined measurements daily
  - Four types of user-defined measurements available to probe hosts and RIPE NCC members: ping, traceroute, DNS, SSL
- Goals by end 2014:
  - 10,000 probes connected
  - 100 anchors

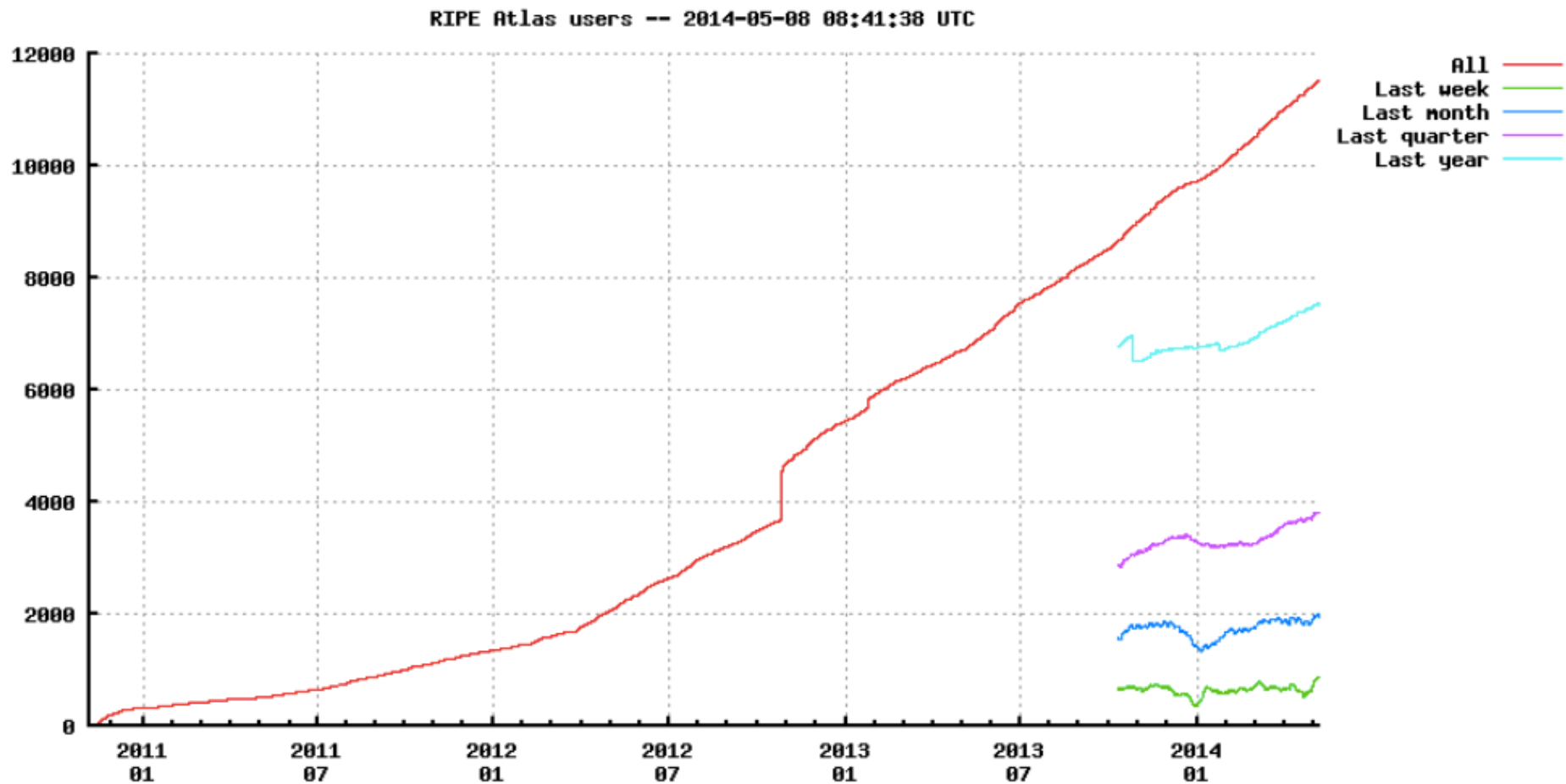
Country	Probes
United States	876
Germany	846
Russian Federation	726
United Kingdom	600
Netherlands	475
France	418
Ukraine	369
Belgium	194
Italy	179
Czech Republic	169

## Probe deployment



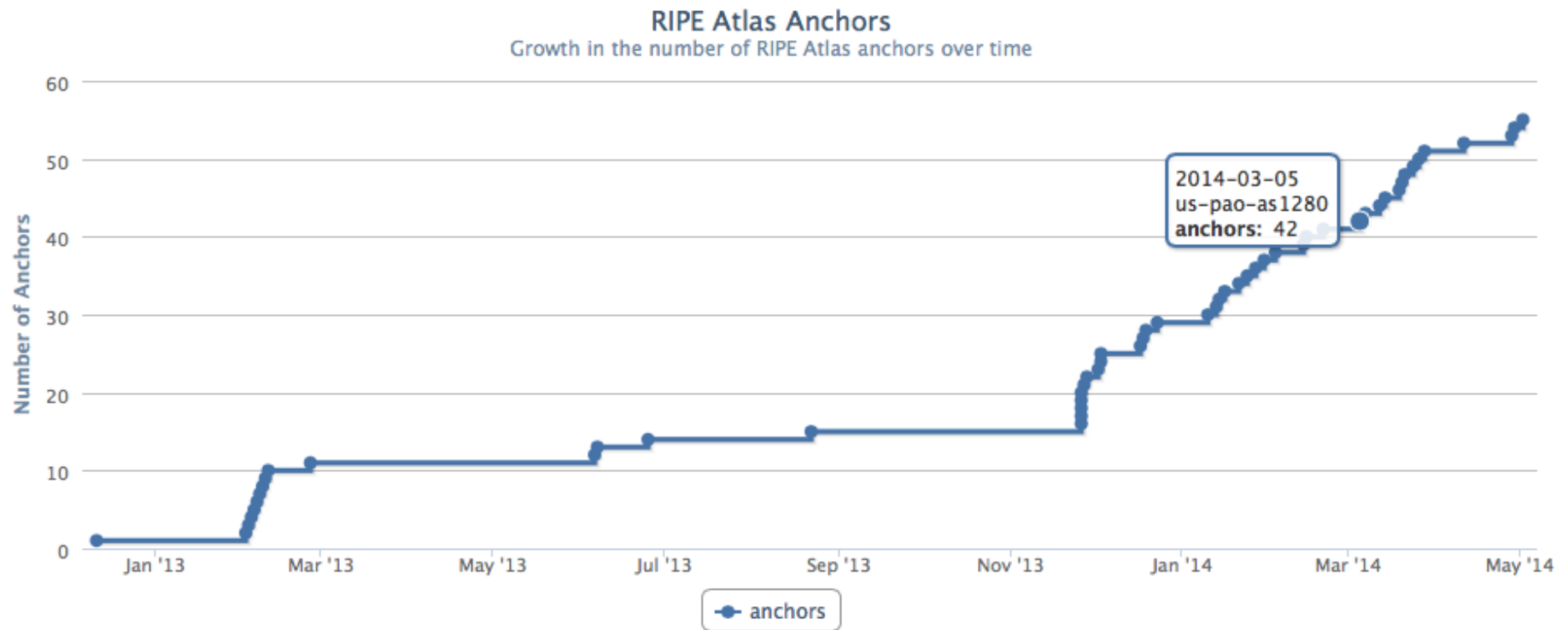
# Growth in Users

## RIPE Atlas users



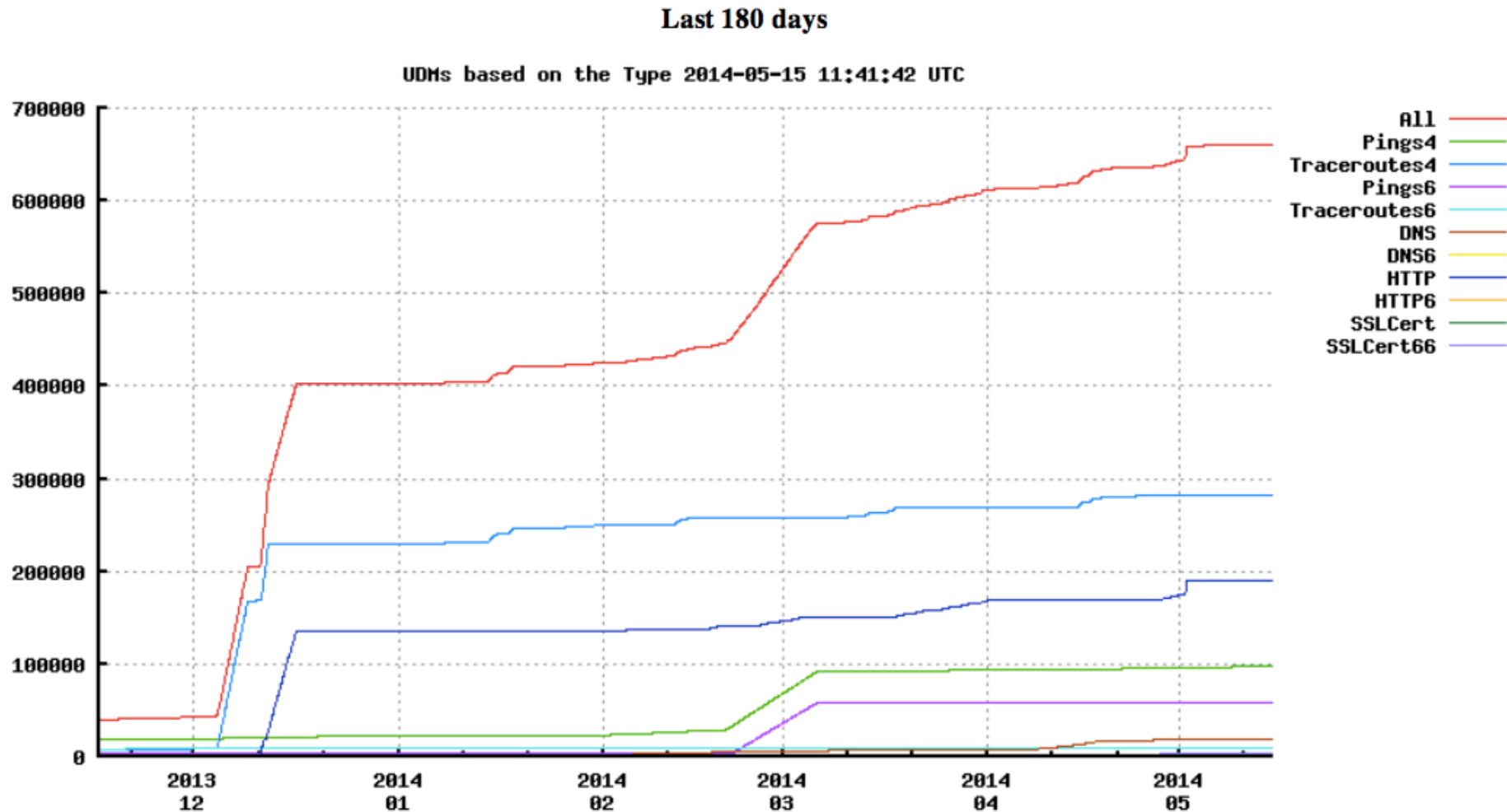


## RIPE Atlas anchors

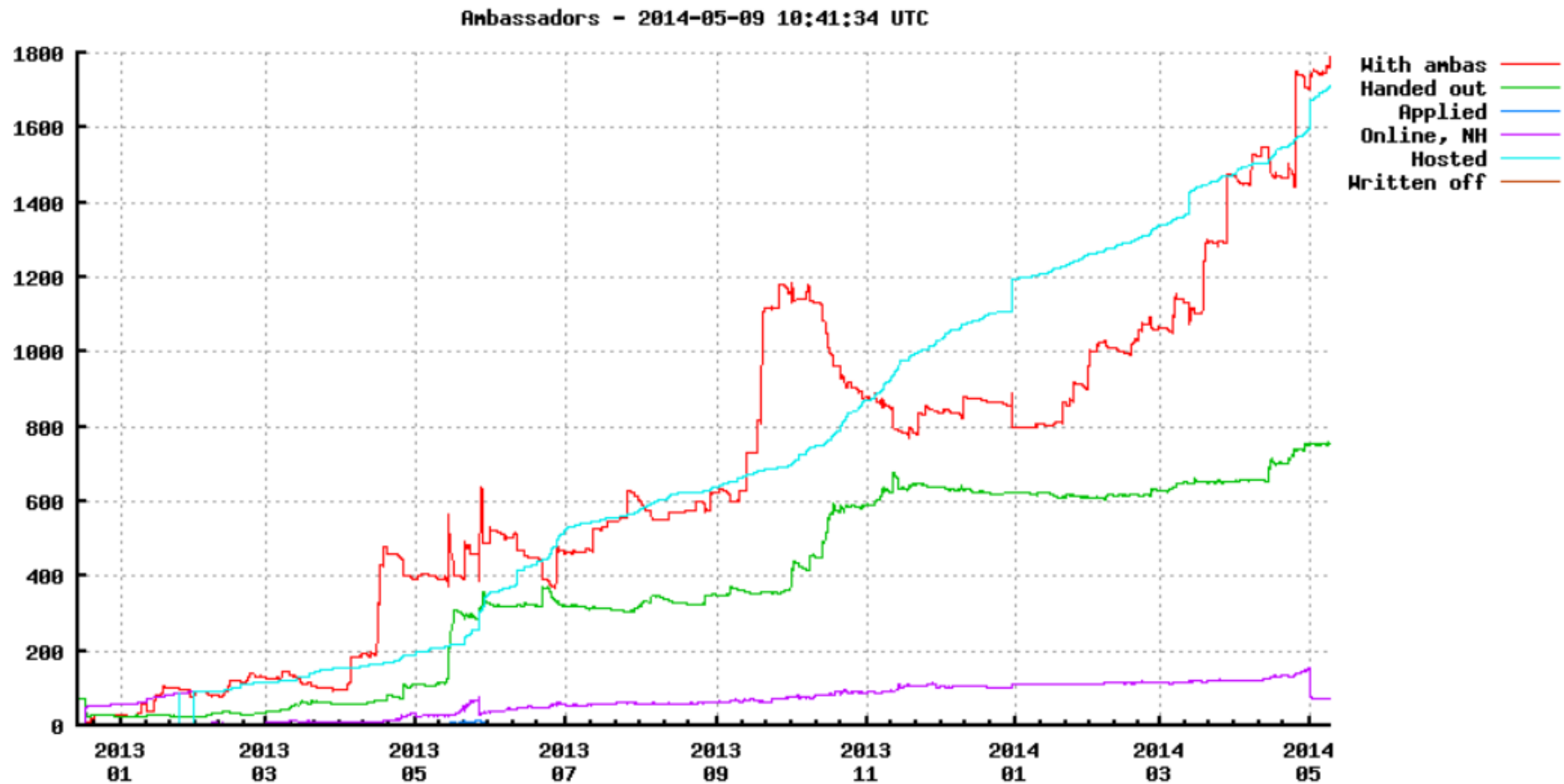


# Number of User Defined Measurements

RIPE Atlas | 23



# Probes Distributed by Ambassadors





## RIPE Atlas Use Cases

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- Benefits of using RIPE Atlas for monitoring
  - Doing pings from 1,000 out of 5,000+ probes around the world
  - Looking at your network from the outside
  - Plug into your existing practices
- Three easy steps for automatic alarms:
  1. Create a RIPE Atlas ping measurement
  2. Go to “status checks” URL
  3. Add your alerts in Icinga or Nagios



- General case - applicable for ping too!
- Log in to atlas.ripe.net
- Go to “My Atlas” and “Measurements”
- Choose “New Measurement” or “One-off”
  - Most measurements are periodic & last a long time
  - Choose type, target, frequency, # of probes, region...
  - You will spend credits (next slides)
- More details: <https://atlas.ripe.net/doc/udm>
- Or use the API:  
<https://atlas.ripe.net/docs/measurement-creation-api/>

- By hosting a probe, you earn credits
- To perform measurements, you spend credits
  - pings cost 10 credits, traceroutes cost 20, etc.
- Credit system introduced to ensure fairness and protect system from overload
- Extra credits can be earned by:
  - Being a RIPE NCC member
  - Hosting a RIPE Atlas anchor
  - Sponsoring multiple probes
- More details: <https://atlas.ripe.net/doc/credits>

## 2. Creating Status Checks

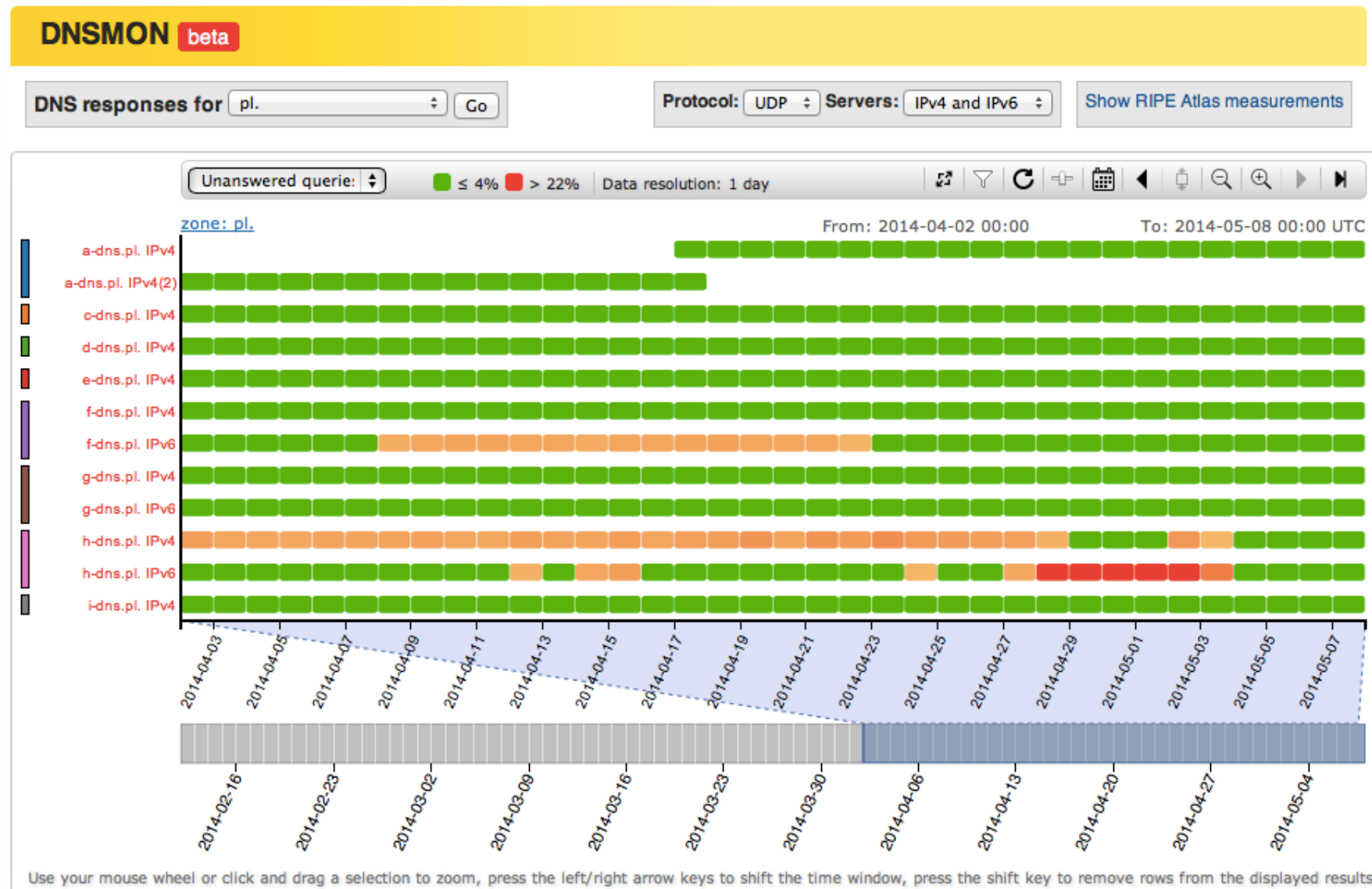
- Status Checks work via RIPE Atlas' RESTful API
  - [https://atlas.ripe.net/api/v1/status-checks/MEASUREMENT\\_ID/](https://atlas.ripe.net/api/v1/status-checks/MEASUREMENT_ID/)
- You define the alert parameters, for example:
  - Threshold for the % of probes that successfully received a reply
  - How many most recent measurements to base the status on
  - What is the maximum packet loss acceptable
- Documentation:
  - <https://atlas.ripe.net/docs/status-checks/>



- Community of operators contributed configuration code!
  - Making use of the built-in “check\_http” plugin
- GitHub repo examples
  - <https://github.com/RIPE-Atlas-Community/ripe-atlas-community-contrib/blob/master/scripts> for nagios icinga alerts
- Post on Icinga blog
  - <https://www.icinga.org/2014/03/05/monitoring-ripe-atlas-status-with-icinga-2/>

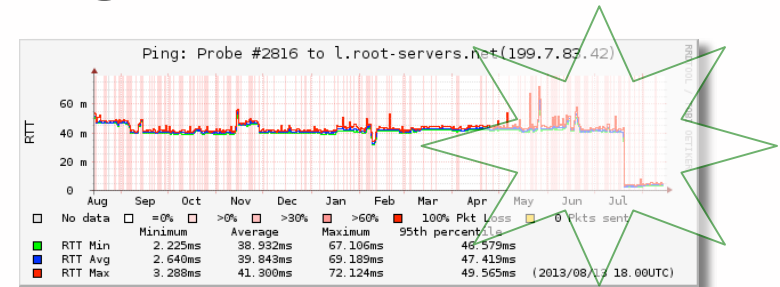
# Monitoring for DNS TLD operators

RIPE Atlas | 31

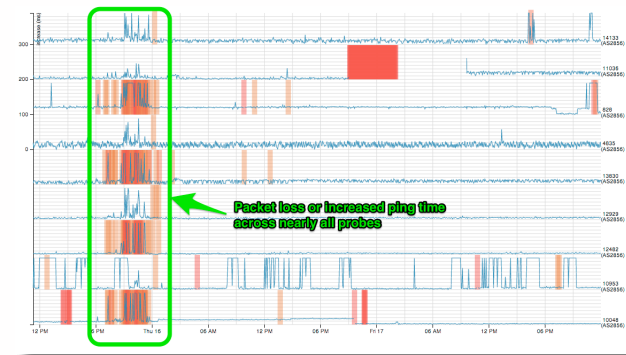


- “Old” DNSMON service migrated to RIPE Atlas
- RIPE Atlas anchors used as vantage points
  - Replacing TTM boxes
- Currently monitoring small selection of zones
  - root name servers
  - 30 ccTLDs and few gTLDs
- New zones will be added next year
- Give us feedback about DNS alerts!
- [https://labs.ripe.net/Members/fatemah\\_mafi/an-updated-dns-monitoring-service](https://labs.ripe.net/Members/fatemah_mafi/an-updated-dns-monitoring-service)

- IXP: Measuring the effect of installing L-root in Belgrade / SOX



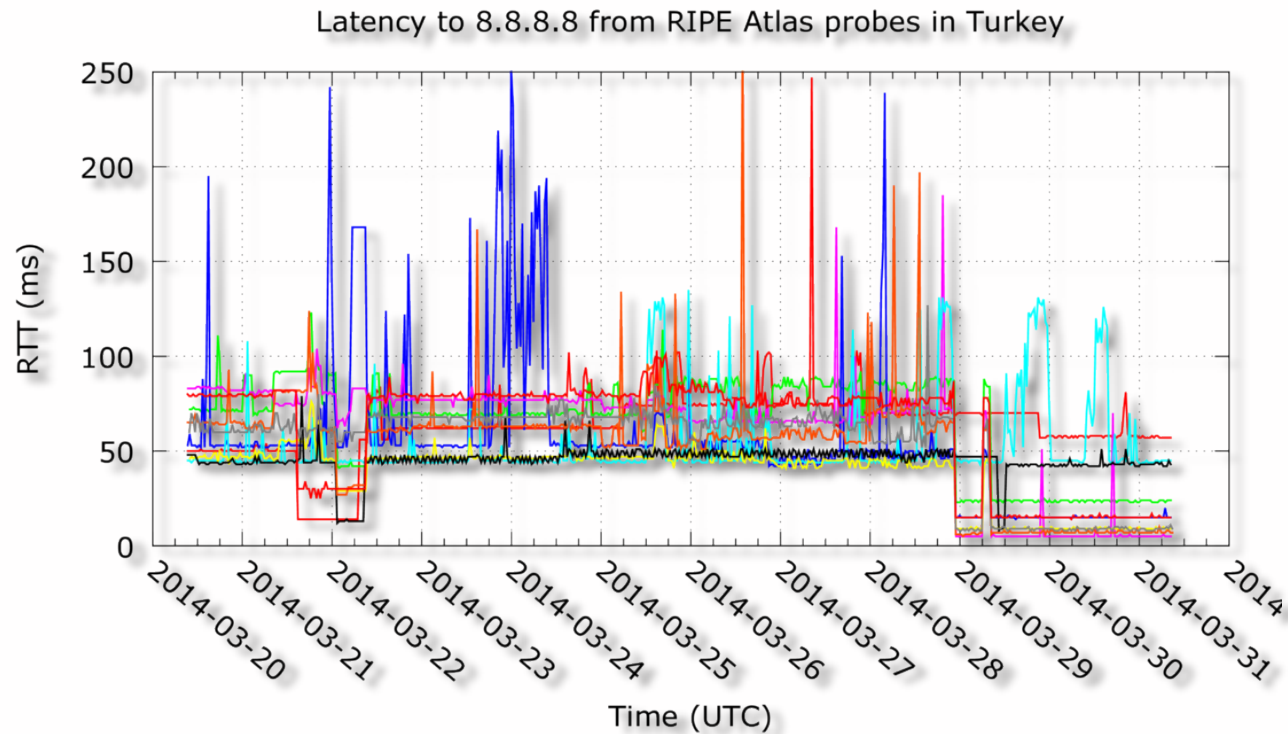
- DNS: Looking for most popular instances of .FR anycast servers



- Operators: investigating network disruptions

<http://engineering.freeagent.com/2014/01/24/atlas-probes/>



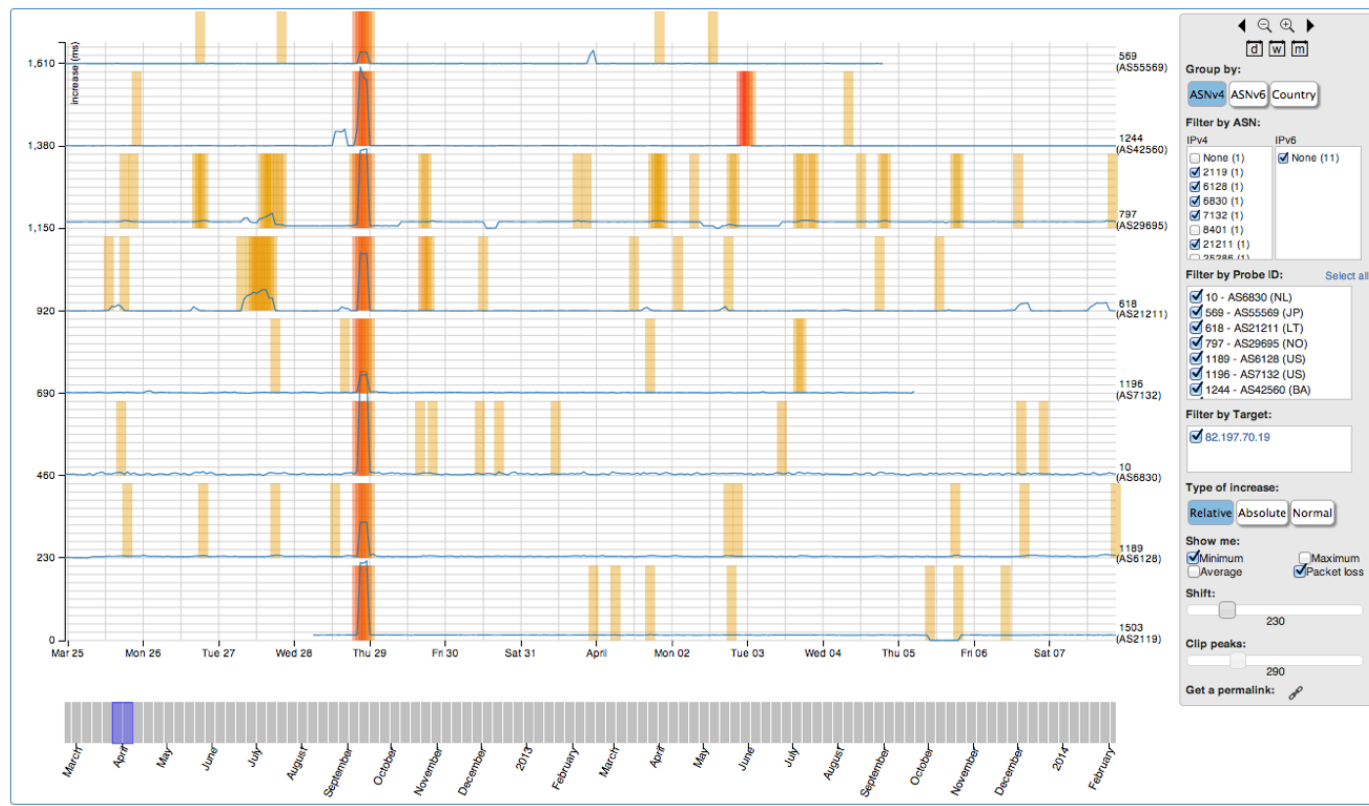


- A RIPE Atlas View of Internet Meddling in Turkey

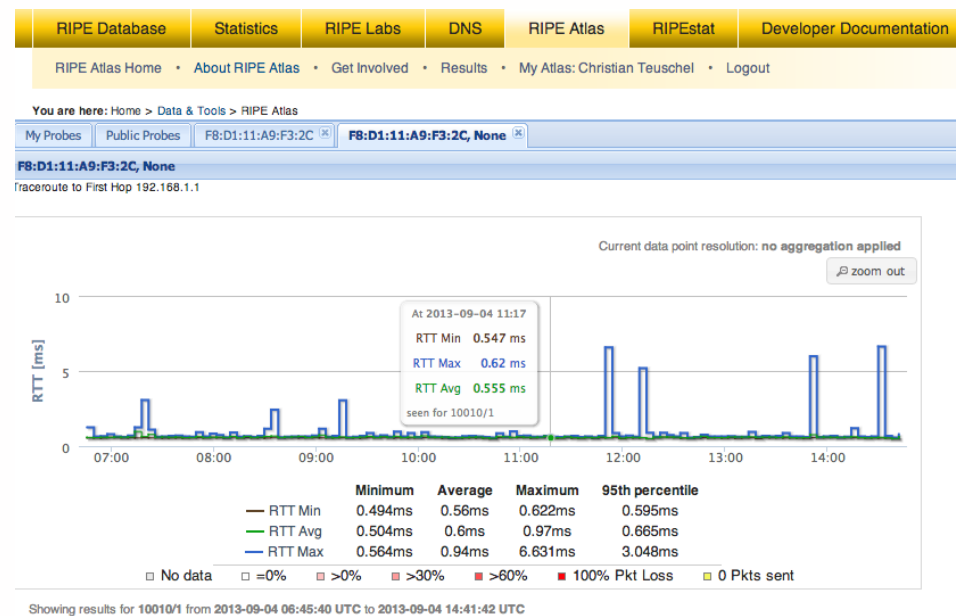
- Anchors: well-known targets and powerful probes
  - Regional baseline & “future history”
- Anchoring measurements
  - Measurements between anchors
  - 200 probes targeting each anchor with measurements
  - Each probe measures 4-5 anchors
- Vantage points for new DNSMON service
- Host are responsible for the hardware
- Benefits: <https://atlas.ripe.net/about/anchors/>



- Seismograph
  - Multiple ping measurements in one view
  - Stacked chart and interactive control panel



- Zoomable ping graph
  - Replacing multiple RRDs graphs: zoom in/out in time, in the same graph
  - Easier visualisation of an event's details
  - Selection of RTT class (max, min, average)



- If you are a programmer: contribute your code
  - <https://github.com/RIPE-Atlas-Community/>
- If you are researcher, look & contribute here:
  - <https://github.com/RIPE-Atlas-Community/RIPE-Atlas-data-analysis>
- Measurements source code available:
  - [https://labs.ripe.net/Members/philip\\_homburg/ripe-atlas-measurements-source-code](https://labs.ripe.net/Members/philip_homburg/ripe-atlas-measurements-source-code)
- New! Parsing library:
  - <https://github.com/RIPE-NCC/ripe.atlas.sagan>



- We're looking for volunteers to help us:
  - Distribute probes
  - Give workshops, tutorials and promote RIPE Atlas
- To become an ambassador:
  - <https://atlas.ripe.net/get-involved/become-a-ripe-atlas-ambassador/>
  - email [mcb@ripe.net](mailto:mcb@ripe.net) to find out how to obtain some probes
- Or become a sponsor:
  - <https://atlas.ripe.net/get-involved/become-a-sponsor/>

- <https://atlas.ripe.net>
- Apply for a probe: <https://atlas.ripe.net/apply>
- Apply for an anchor: <https://atlas.ripe.net/anchors/apply/>
- Mailing list for active users: [ripe-atlas@ripe.net](mailto:ripe-atlas@ripe.net)
- <https://atlas.ripe.net/get-involved/community/>
- Articles & updates on RIPE Labs:  
<https://labs.ripe.net/atlas>
- Roadmap: <http://roadmap.ripe.net/ripe-atlas/>
- Questions: [atlas@ripe.net](mailto:atlas@ripe.net)
- Twitter: @RIPE\_Atlas and #RIPEAtlas