



**RIPE
NCC**

RIPE NCC Tools and Measurements

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RIPE Atlas



RIPE
NCC



- 5,200+ active probes
- 7,000+ active users
- 50+ active RIPE Atlas anchors
- Four types of customised measurements available to probe hosts: Ping, Traceroute, DNS, SSL

- Anyone can become a RIPE Atlas probe host
- Major personal and operational benefit:
See your network from the outside!
 - Have at your fingertips ~5,000 external vantage points to do customised measurements towards the destination of your choice
- Built-in measurements data available to everyone
 - Maps, data from public probes, API to download raw data

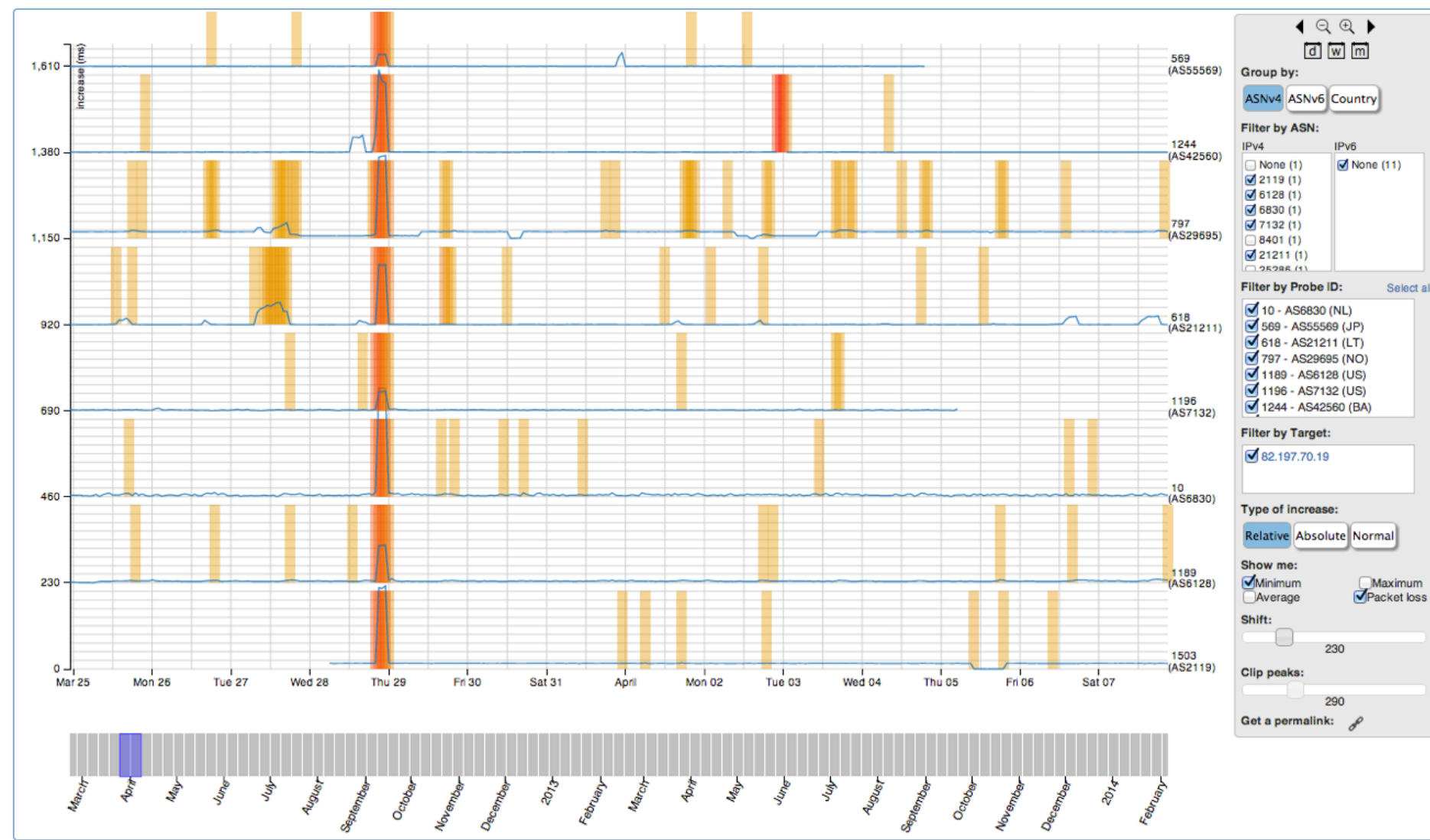
- v1 & v2: Lantronix XPort Pro
- v3: TP-Link TL-MR3020 powered from USB port
 - Does not work as a wireless router!
 - Same functionality as the old probe!
- RIPE Atlas anchor: Soekris net6501-70



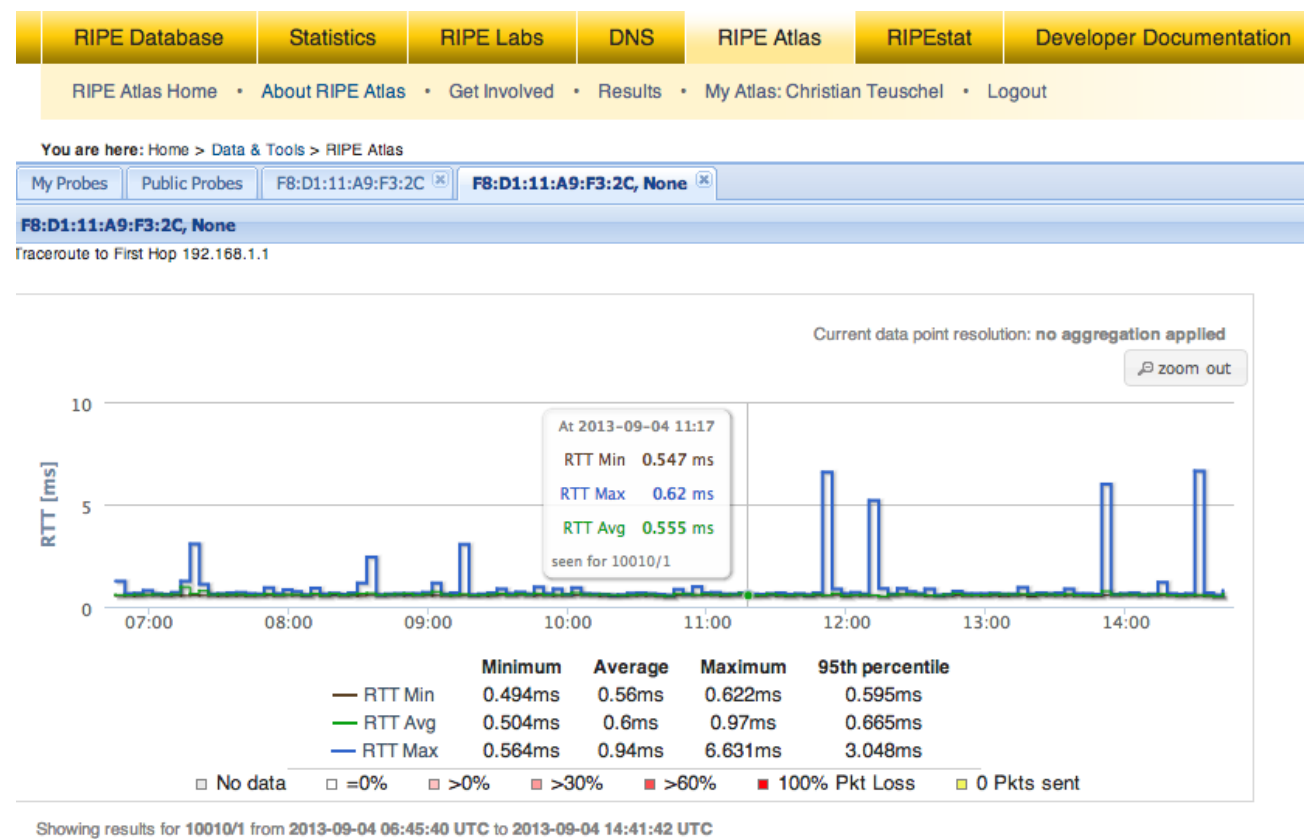
- Anchors: well-known targets and powerful probes
 - Regional baseline & “future history”
- Anchoring measurements
 - Measurements between anchors
 - 200 probes targeting each anchor with measurements
- Vantage points for new DNSMON service
- Benefits: <https://atlas.ripe.net/about/anchors/>
- Hardware is responsibility of the host



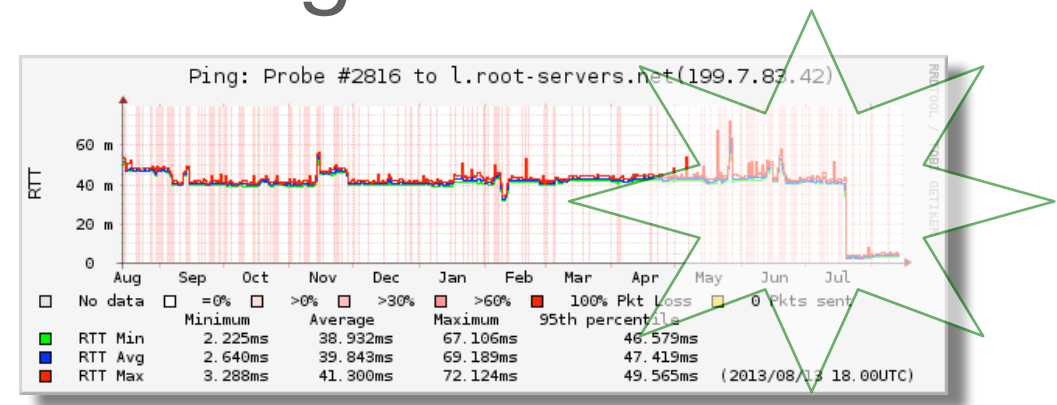
- Seismograph
 - Multiple ping measurements in one view
 - Stacked chart and interactive control panel



- 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)



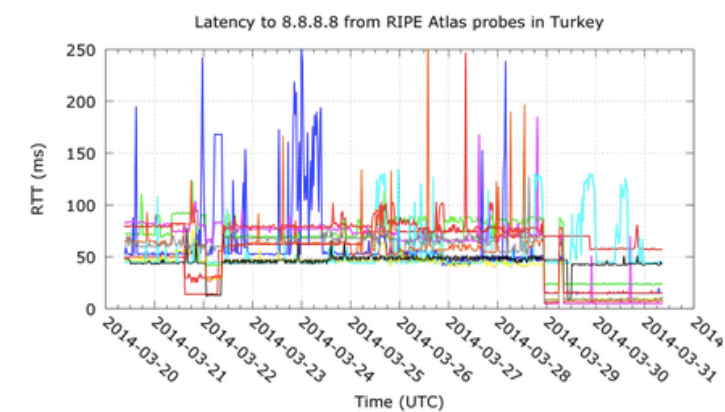
- IXP: Measuring the effect of installing L-root in Belgrade / SOX



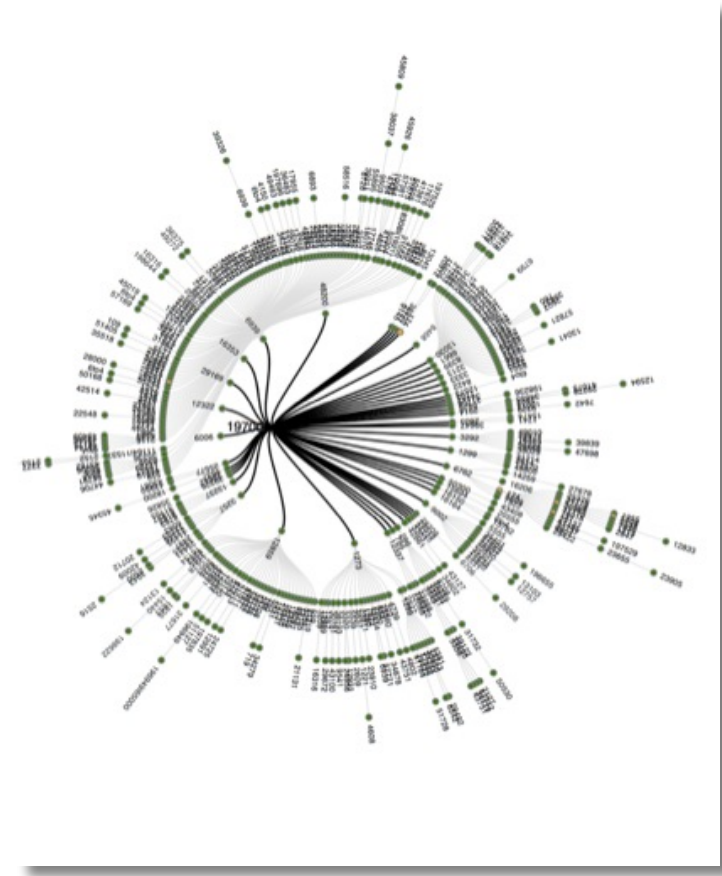
- DNS: Looking for most popular instances of .FR anycast servers

Name server instance	Nr. of probes connecting to instance	Percentage
dns.th2.nic.fr	173	36%
dns.fra.nic.fr	173	36%
dns.lon.nic.fr	47	10%
dns.lyn2.nic.fr	29	6%
dns.lyn1.nic.fr	25	5%
dns.bru.nic.fr	19	4%
dns.ix1.nic.fr	18	4%

- Events: A RIPE Atlas view of Internet Meddling in Turkey



- Only for RIPE NCC members!
- Via the LIR Portal
- Using 1,000 RIPE Atlas probes
- Visualising:
 - Completed paths
 - Unsuccessful paths
 - Clickable hops (ASNs)
- <https://labs.ripe.net/Members/becha/test-your-ipv6-reachability-using-ripe-atlas>
- <https://labs.ripe.net/Members/emileaben/visualise-your-ipv6-connectivity-using-ripe-atlas>



- Probe hosts and RIPE NCC members perform customised measurements using the targets and frequency of their choice
- API available for creating measurements
 - <https://atlas.ripe.net/docs/measurement-creation-api/>
- REST APIs for analysing measurements
 - <https://labs.ripe.net/Members/wilhelm/ripe-atlas-code-for-analysis-and-statistics-reporting>

- Log in to atlas.ripe.net
- Go to “My Atlas” and “My 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)
- To see results: “My Measurements”
- More details: <https://atlas.ripe.net/doc/udm>

- By hosting a probe, you earn credits
- To perform measurements, you spend credits
 - Ping costs 10 credits, traceroute costs 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 or sponsoring
- More details: <https://atlas.ripe.net/doc/credits>

- Steps for Status Checks:
 - Create a RIPE Atlas ping measurement
 - You can use up to 1,024 probes
 - https://atlas.ripe.net/api/v1/status-checks/MEASUREMENT_ID/
 - Come back later to see whether anything has changed
 - Define your alerts accordingly
- Creating Alerts in “Icinga”:
 - Make use of the built-in check_http plugin
- Documentation and examples:
 - <https://atlas.ripe.net/docs/status-checks/>

- <https://github.com/RIPE-Atlas-Community/>
- Measurements source code
 - https://labs.ripe.net/Members/philip_homburg/ripe-atlas-measurements-source-code
 - <https://github.com/RIPE-Atlas-Community/RIPE-Atlas-probe-fw-code-4520>
- <https://github.com/RIPE-Atlas-Community/RIPE-Atlas-data-analysis>

- If you want to...
 - Help distribute probes
 - Give workshops, tutorials and promote RIPE Atlas
- To become an ambassador:
 - Get in touch with mcb@ripe.net: we'll ship you some probes
- Or become a sponsor:
 - <https://atlas.ripe.net/get-involved/community/#!tab-sponsors>



- Integrating DNSMON into RIPE Atlas
- Tagging probes and measurements as “My Favourites” for easy viewing
- More IPv6-related features
- Increasing probe distribution via RIR cooperation
- Tell us your feature requests:
 - <http://roadmap.ripe.net/ripe-atlas/>

- <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
- Articles & updates on RIPE Labs:
<https://labs.ripe.net/atlas>
- Questions: atlas@ripe.net
- Twitter: @RIPE_Atlas and #RIPEAtlas

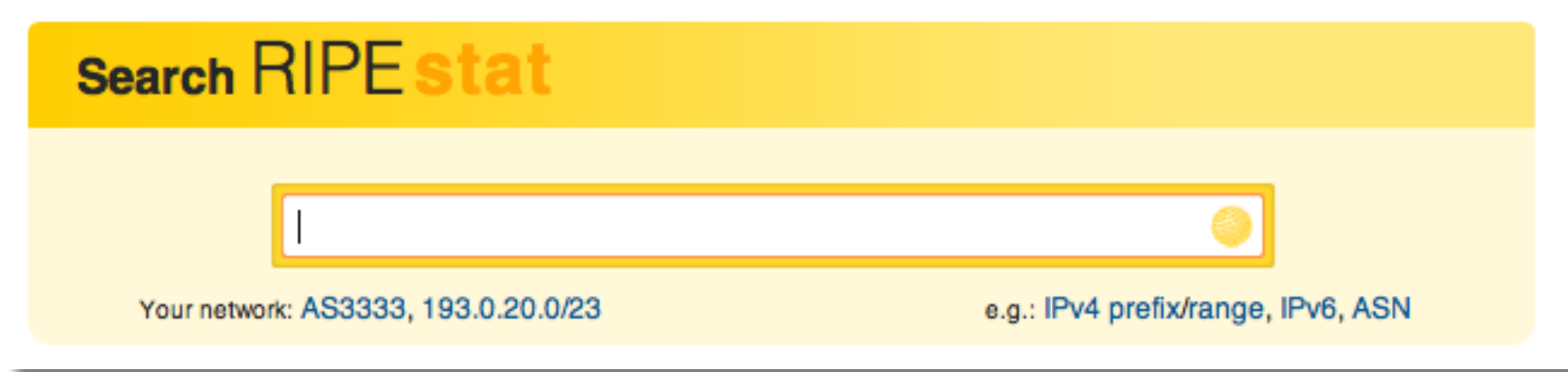


RIPEstat



RIPE
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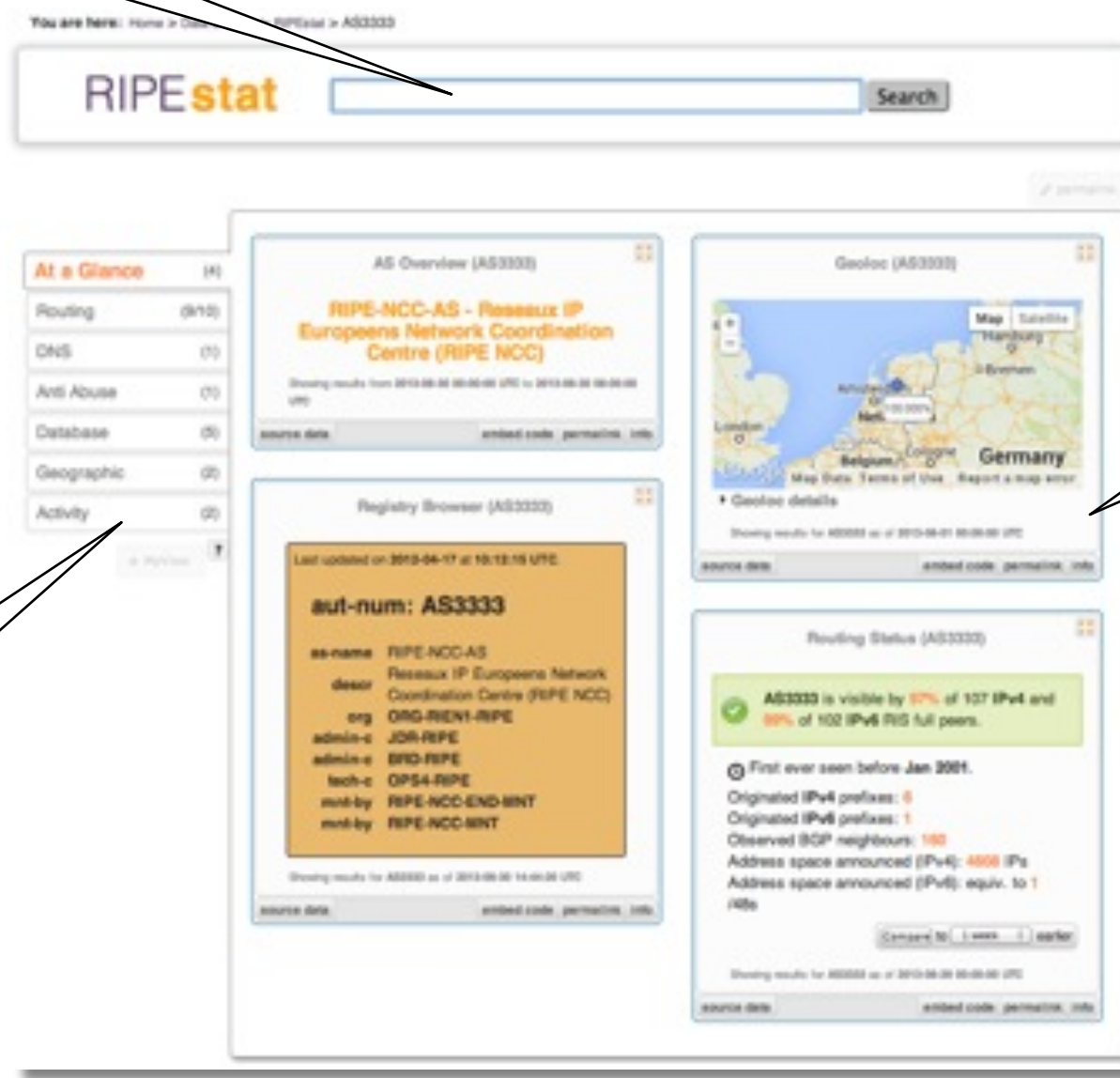
- RIPEstat is a “one-stop shop” for information about Internet number resources
 - RIPE NCC: registration data and RIPE Database, routing (RIS), reverse DNS, RIPE Atlas measurements
 - External sources: IRR, RIRs, geolocation, blacklists, M-Lab network activity

A screenshot of the RIPEstat search interface. It features a yellow header bar with the text "Search RIPEstat" in black. Below the header is a white search input field with a yellow border and a yellow magnifying glass icon on the right. Underneath the input field, there is a line of text: "Your network: AS3333, 193.0.20.0/23" on the left and "e.g.: IPv4 prefix/range, IPv6, ASN" on the right.

Search RIPEstat

Your network: AS3333, 193.0.20.0/23 e.g.: IPv4 prefix/range, IPv6, ASN

Search box

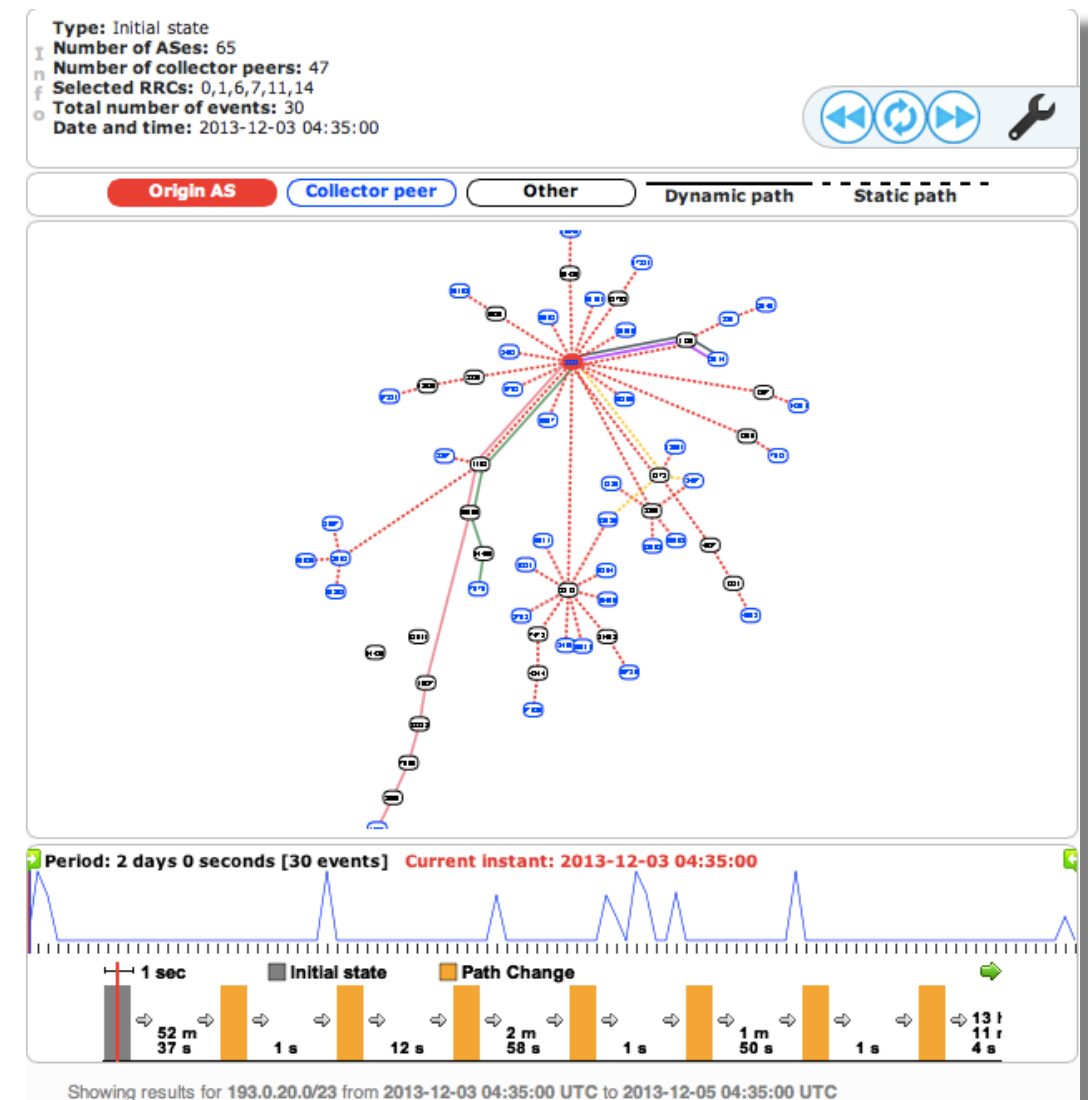


Widgets

Widgets grouped into thematic tabs

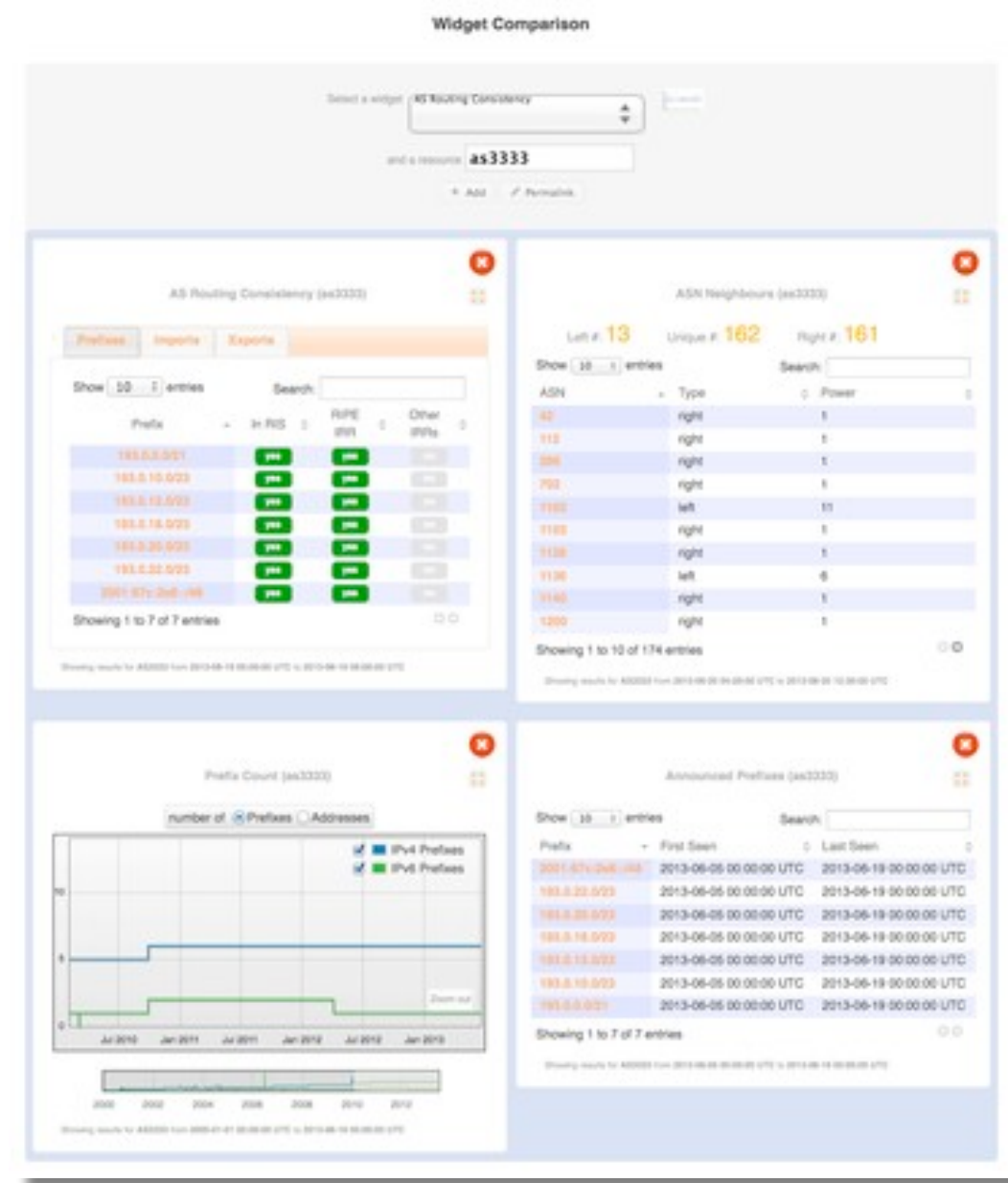
- Search by: IPv4, IPv6 address/prefix; AS Number; hostname; country; keywords (new)
- Web, widgets, data API, text service, mobile app
- Other features:
 - BGPlay2
 - Abuse Finder
 - Customisable “My Views”
 - History view for RIPE NCC members

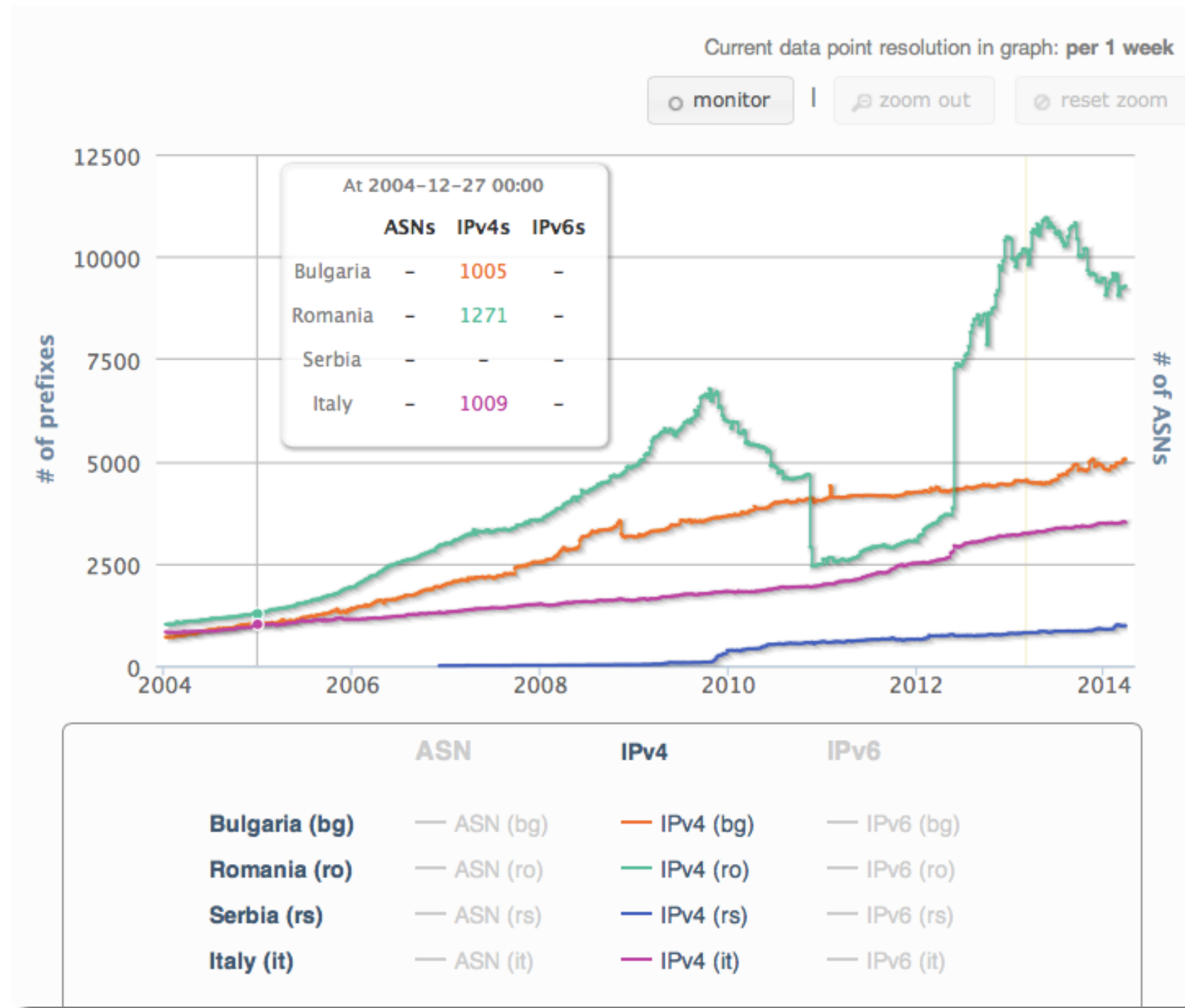
- The most famous incident: YouTube hijacked by Pakistan Telecom
- <https://www.ripe.net/internet-coordination/news/industry-developments/youtube-hijacking-a-ripe-ncc-ris-case-study>
- Video:
 - <http://www.youtube.com/watch?v=IzLPKuAOe50>



- Multiple widget and resource comparison
- In-widget comparison and monitoring
- Visualising bandwidth capacity and network activity using M-Lab data
- Main old RIS interfaces integrated into RIPEstat
- Tighter integration with RIPE Atlas
 - Zoomable ping graph, Seismograph
- Used extensively for Assisted Registry Checks by Registration Services and LIRs

- Making peering decisions
- https://labs.ripe.net/Members/suzanne_taylor_muzzin/ripestats-multiple-widget-and-resource-comparison





- Migrate RIS Dashboard features into RIPEstat
- Improve back-end stability to enable resilience of current services and scale for future growth
- Increase data quality and consistency
- Tell us your feature requests:
 - <http://roadmap.ripe.net/ripe-stat/>
 - stat@ripe.net
 - Twitter: @RIPE_NCC / #ripestat

Questions?

