RIPE Atlas & RIPEstat

MENOG 13

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RIPE Atlas - Active Measurements Network

https://atlas.ripe.net

- Next-generation Internet measurements network
  - Thousands of measurement vantage points
  - Probes run different measurements: ping, traceroute, SSL, DNS

- Instead of building small, individual, private infrastructures, build a HUGE common infrastructure that serves both private and community goals

RIPE Atlas Update

- 3,800 active probes and 8,400 users worldwide
  - Increasing number of requests
  - Working on next version of probes
- RIPE Atlas anchors pilot started
  - Collecting data as enhanced RIPE Atlas probes
  - Acting as targets for regional measurements
- New generation probes
  - TP-LINK TL-MR 3020

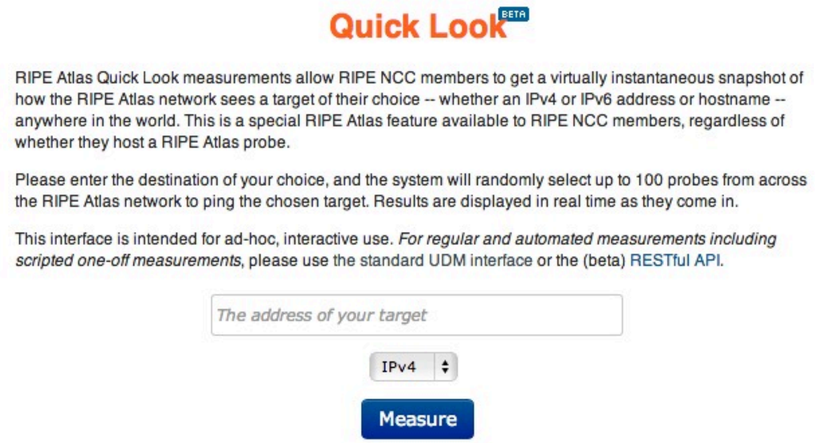
    (No WiFi capabilities for privacy reasons)

Recent Developments

- REST APIs to interact with the system
  - Probe API: info about vantage points
  - Measurement API: info about measurements
  - API for starting measurements
- Code released
  - For measurements and analysis
  - https://github.com/ripe-atlas-community

Recent Developments

- One-off measurements & Quick Look (members)
  - Allow for immediate, one-time measurements
  - In addition to user-defined measurements



RIPE Atlas Use Cases

Effects Hurricane Sandy had on parts of the Internet

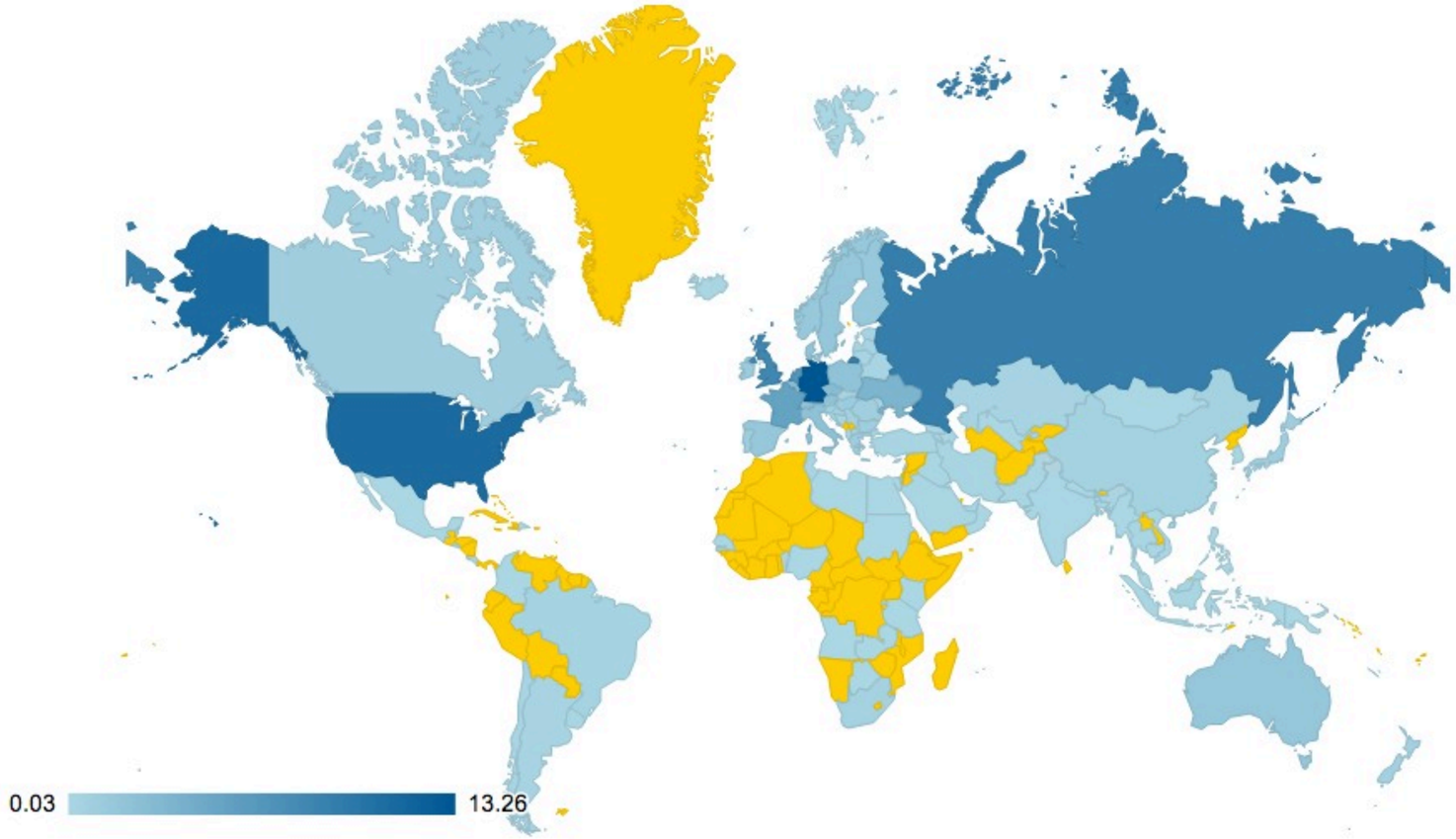
https://labs.ripe.net/Members/mirjam/sandy-2012

Find most popular instances of DNS 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%

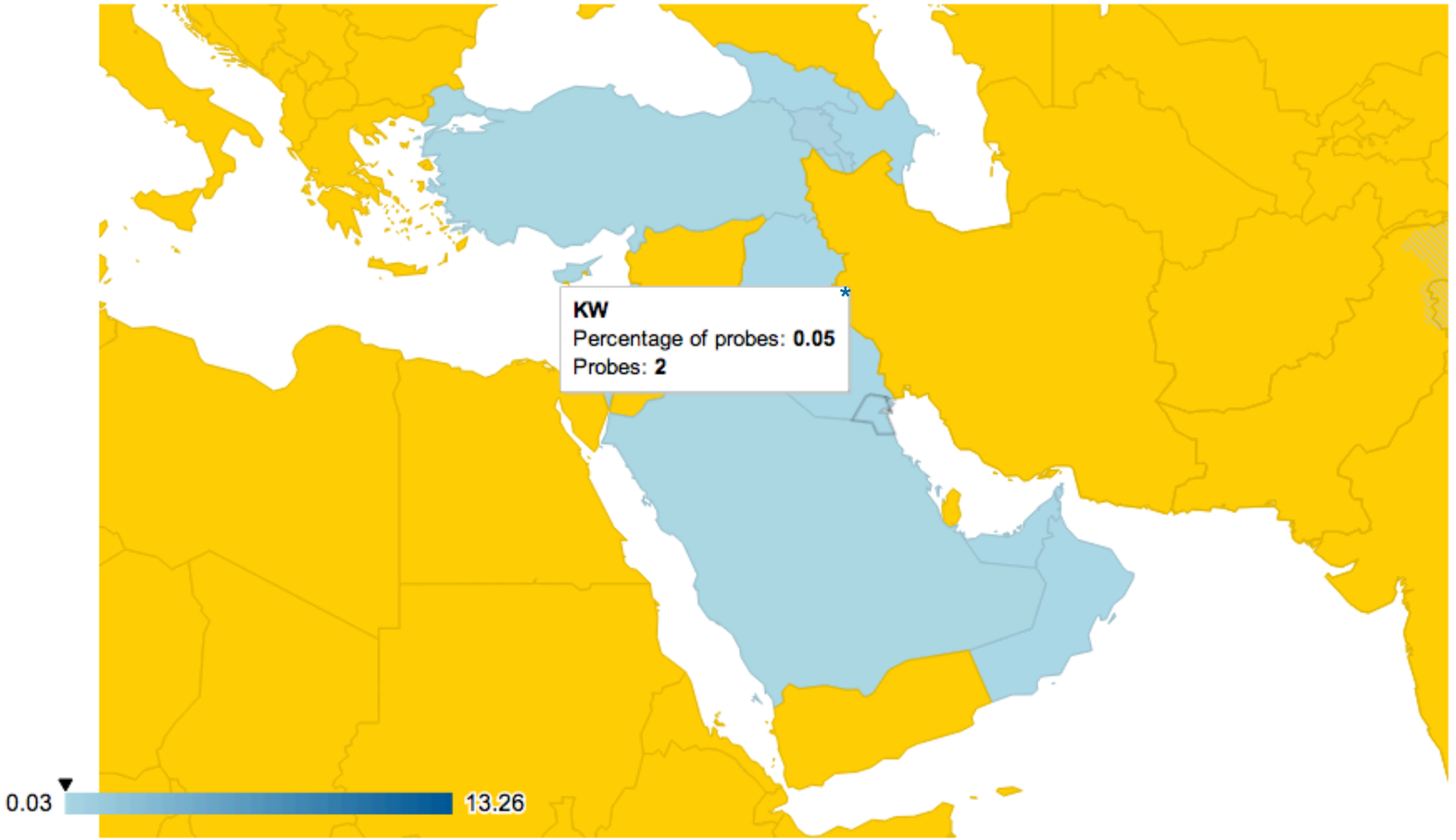
RIPE Atlas Probes per Country

As of 19-09-2013



Source: https://atlas.ripe.net/contrib/density.html

RIPE Atlas Probes per Country



* As of 19-09-2013

Source: https://atlas.ripe.net/contrib/density.html

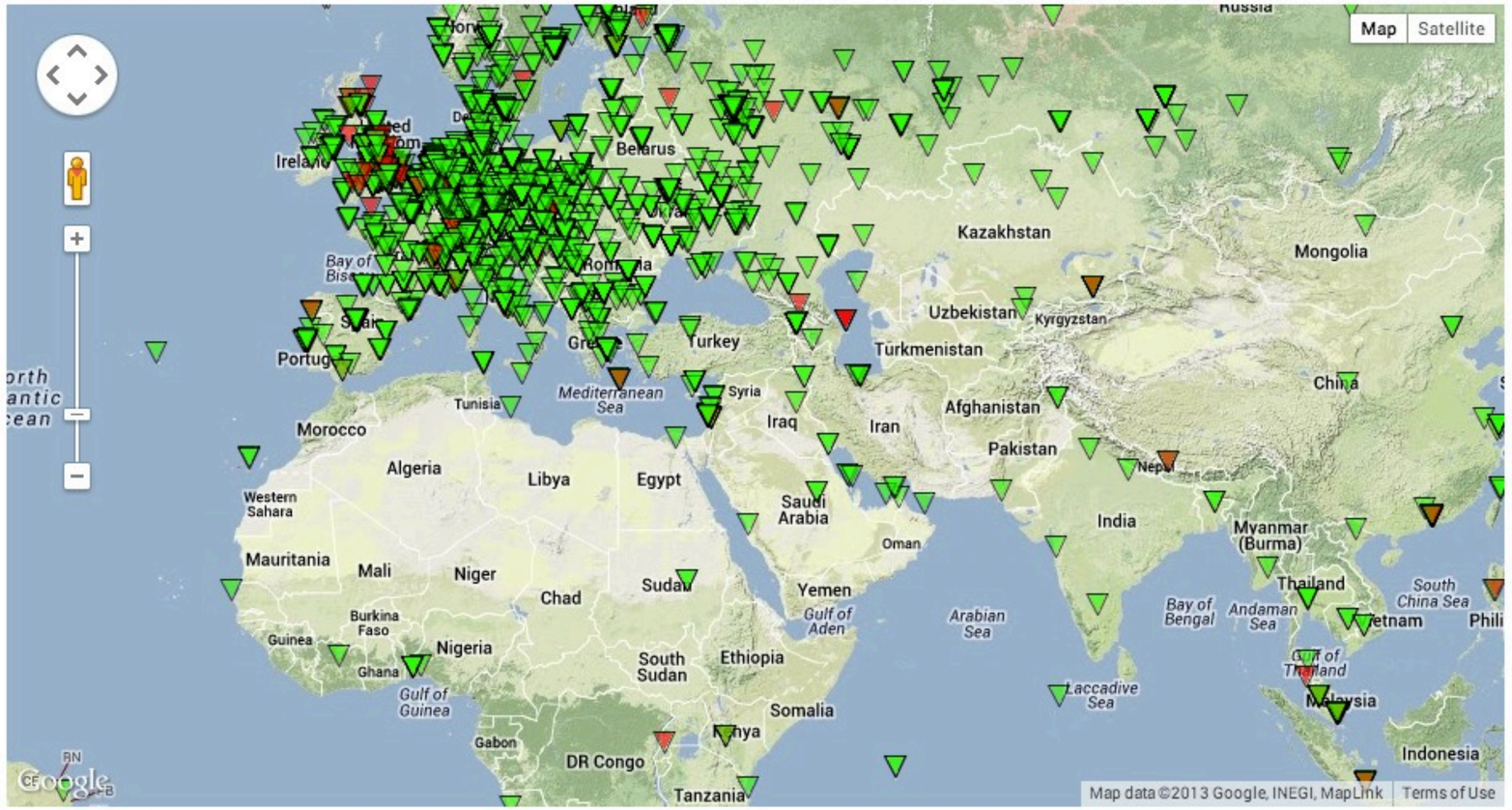
RIPE Atlas Probes Map - Reachability of K-Root

As of 19-09-2013

Source: https://atlas.ripe.net/contrib/msm_reachability.html?msm_id=1

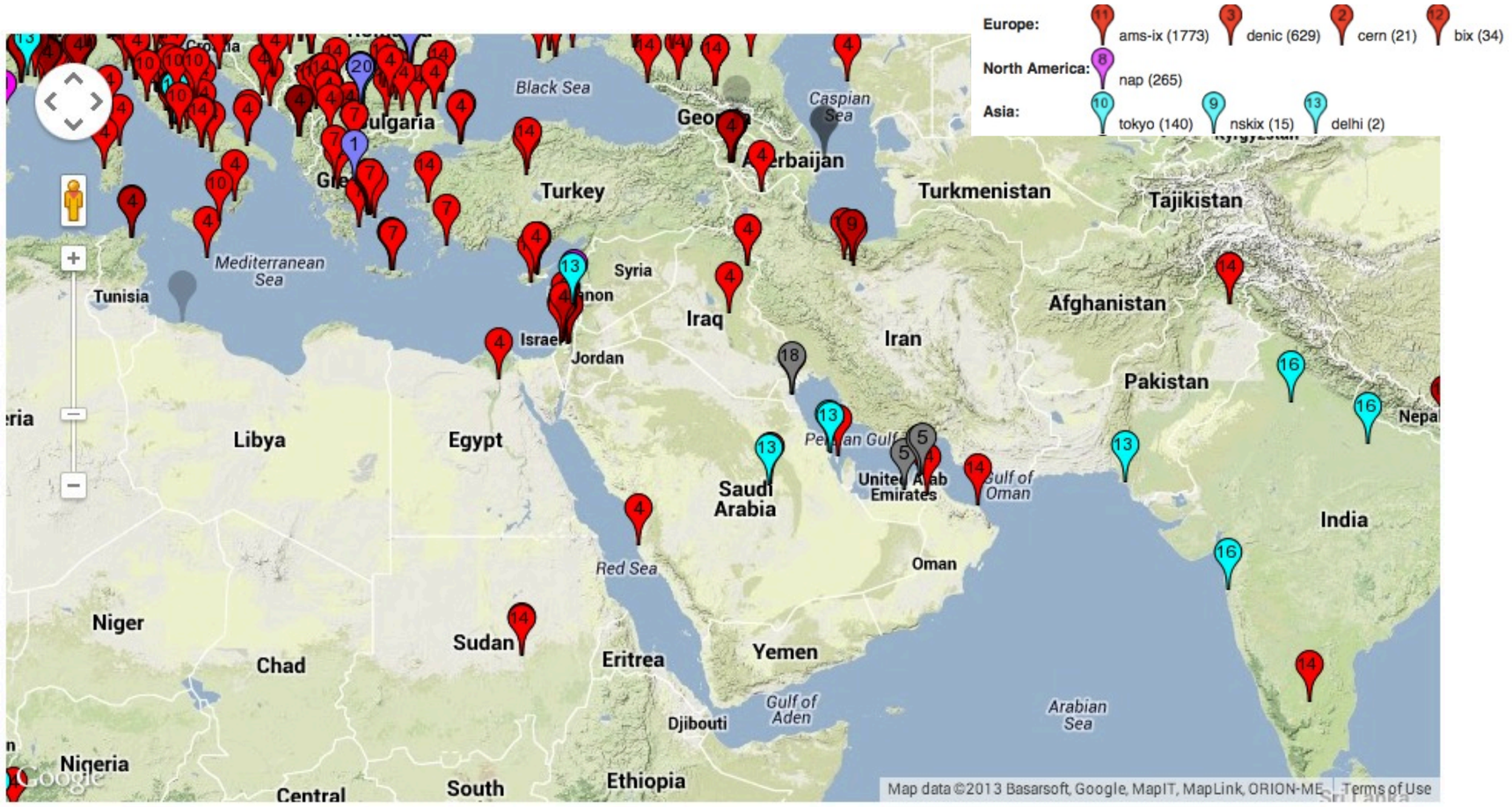
RIPE Atlas Probes Map - Reachability

As of 19-09-2013



Source: https://atlas.ripe.net/contrib/msm_reachability.html?msm_id=1

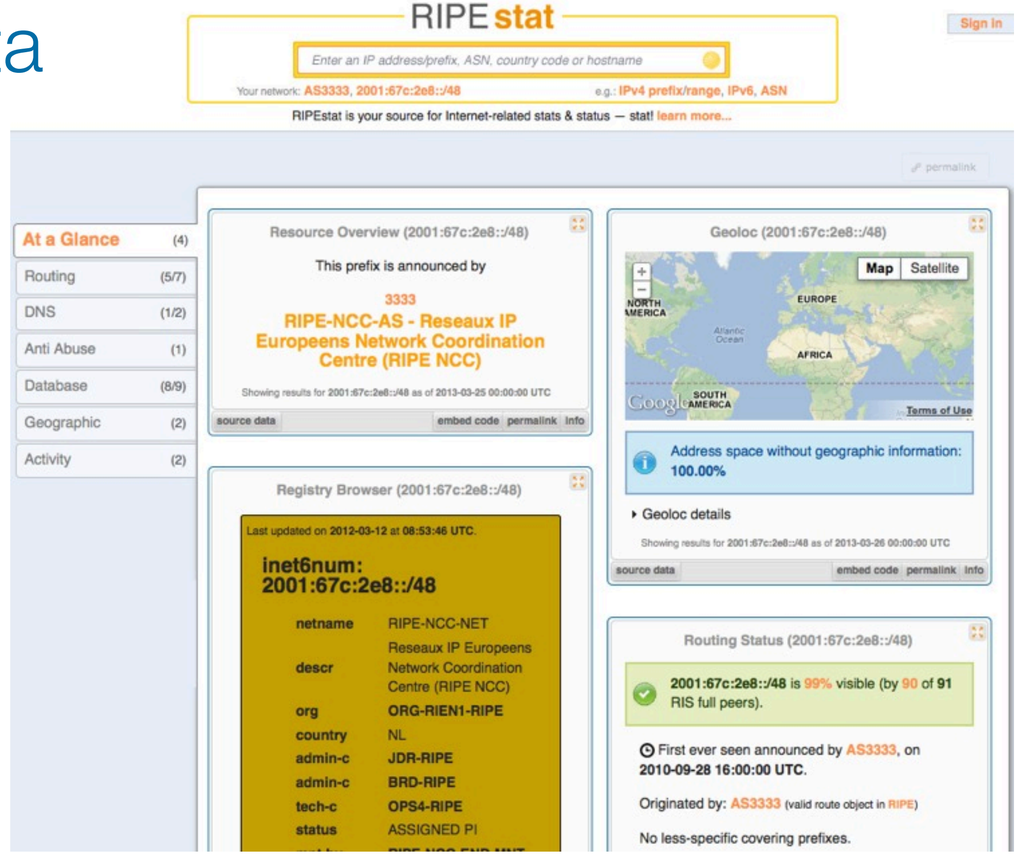
RIPE Atlas Probes Map - DNS K-Root Instances



Source: https://atlas.ripe.net/contrib/root_anycast.html?msm_id=1

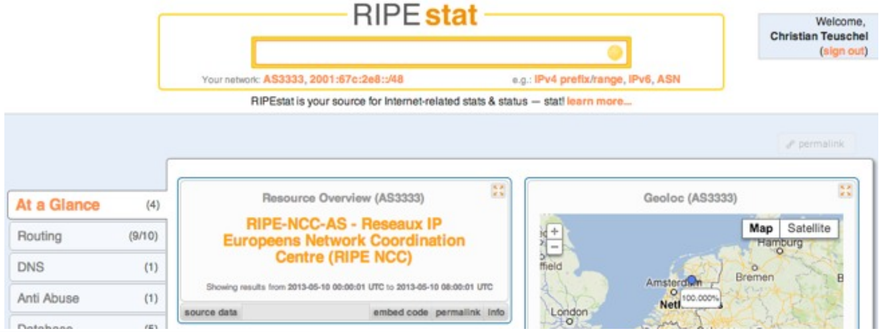
Introduction to RIPEstat

- Modular & extendable toolbox
- Single interface for Internet-related data
  - Routing data (collected by RRC network)
  - Registration data
  - DNS data
  - Geolocation data
  - Data collected by Atlas
  - ...
- RIPEstat is driven by user feedback

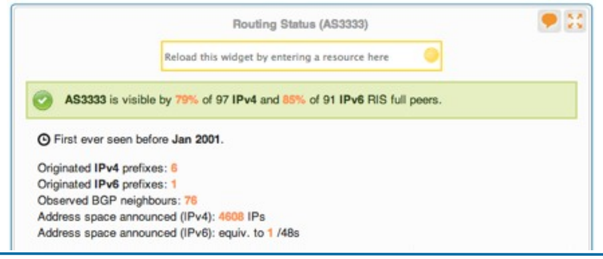


Introduction to RIPEstat

- https://stat.ripe.net



- RIPEstat Widget API



- RIPEstat Data API / RIPEstat Text API

https://stat.ripe.net/data/routing-status/data.json?resource=AS3333

RIPEstat

https://stat.ripe.net

Live Demo

Feedback

- RIPE Atlas
  - atlas@ripe.net
- RIPEstat
  - stat@ripe.net

- Future Developments
  - http://roadmap.ripe.net/

RIPE NCC