plus a taste of
DNSMON

RIPE Atlas & RIPEstat

MENOG 14

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RIPE NCC

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

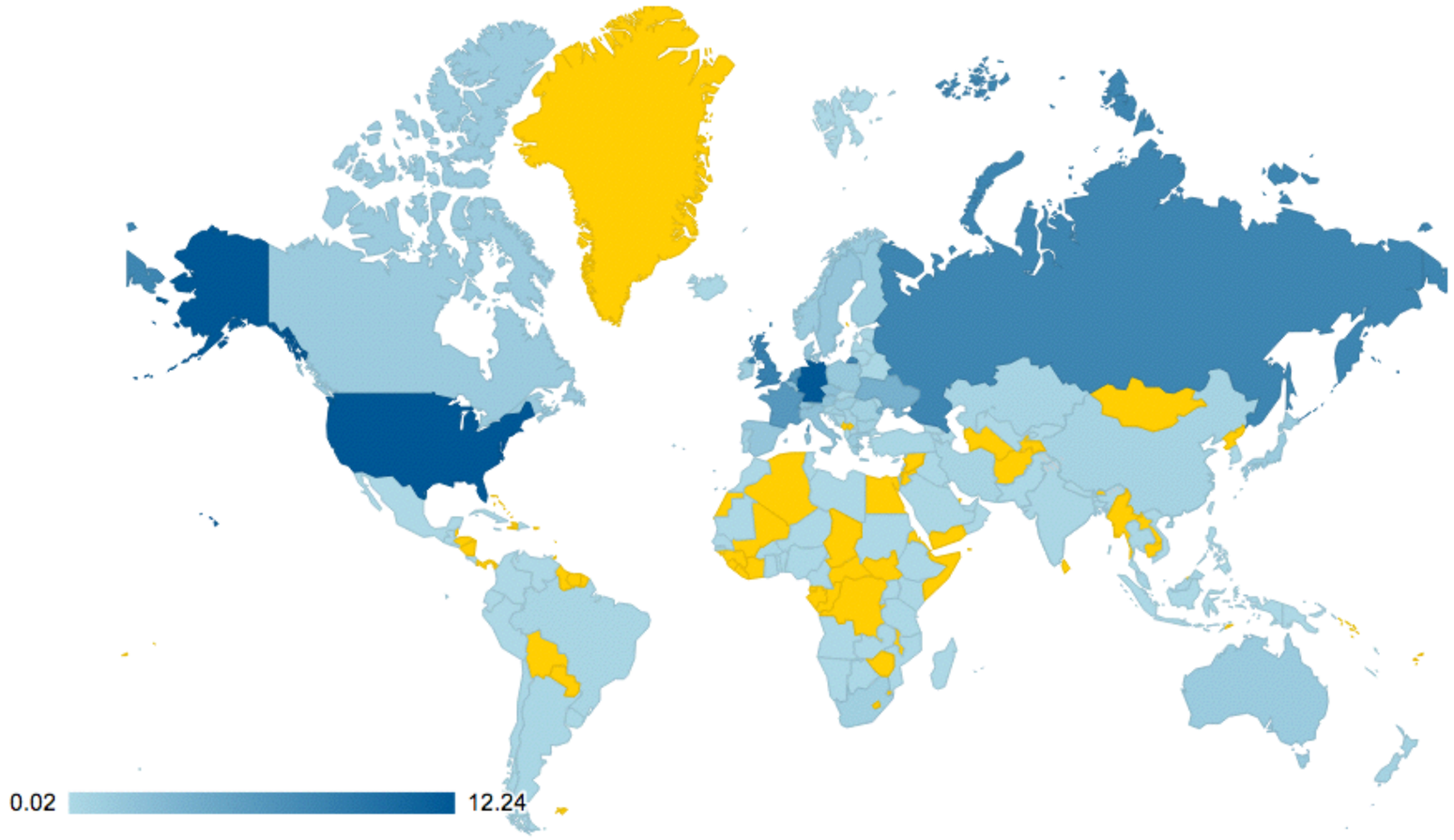
RIPE Atlas Update

- 5000+ active probes
- 7000+ active users worldwide

Source: https://atlas.ripe.net/results/maps/network-coverage/

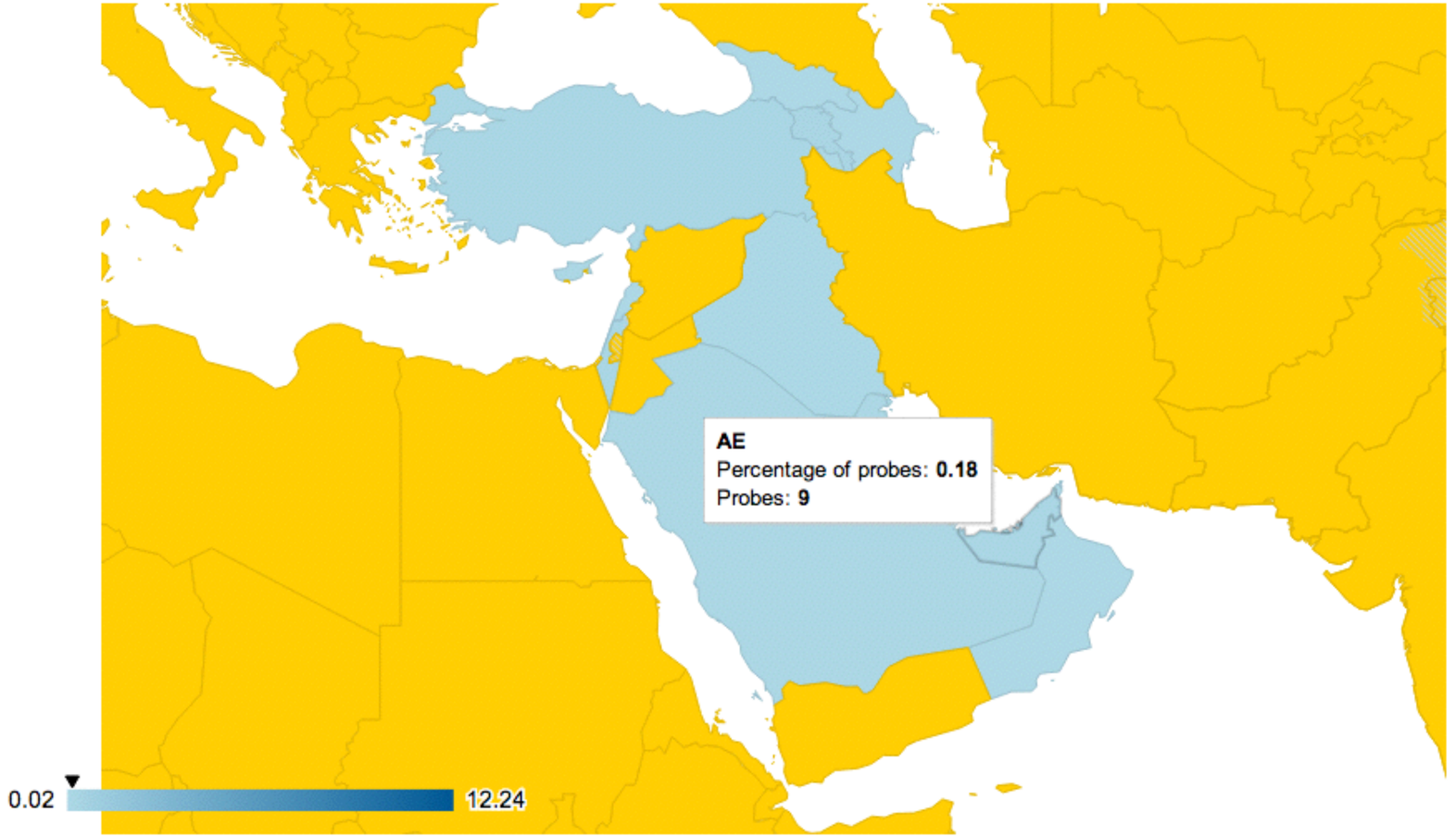
RIPE Atlas Probes per Country

As of 05-03-2014



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

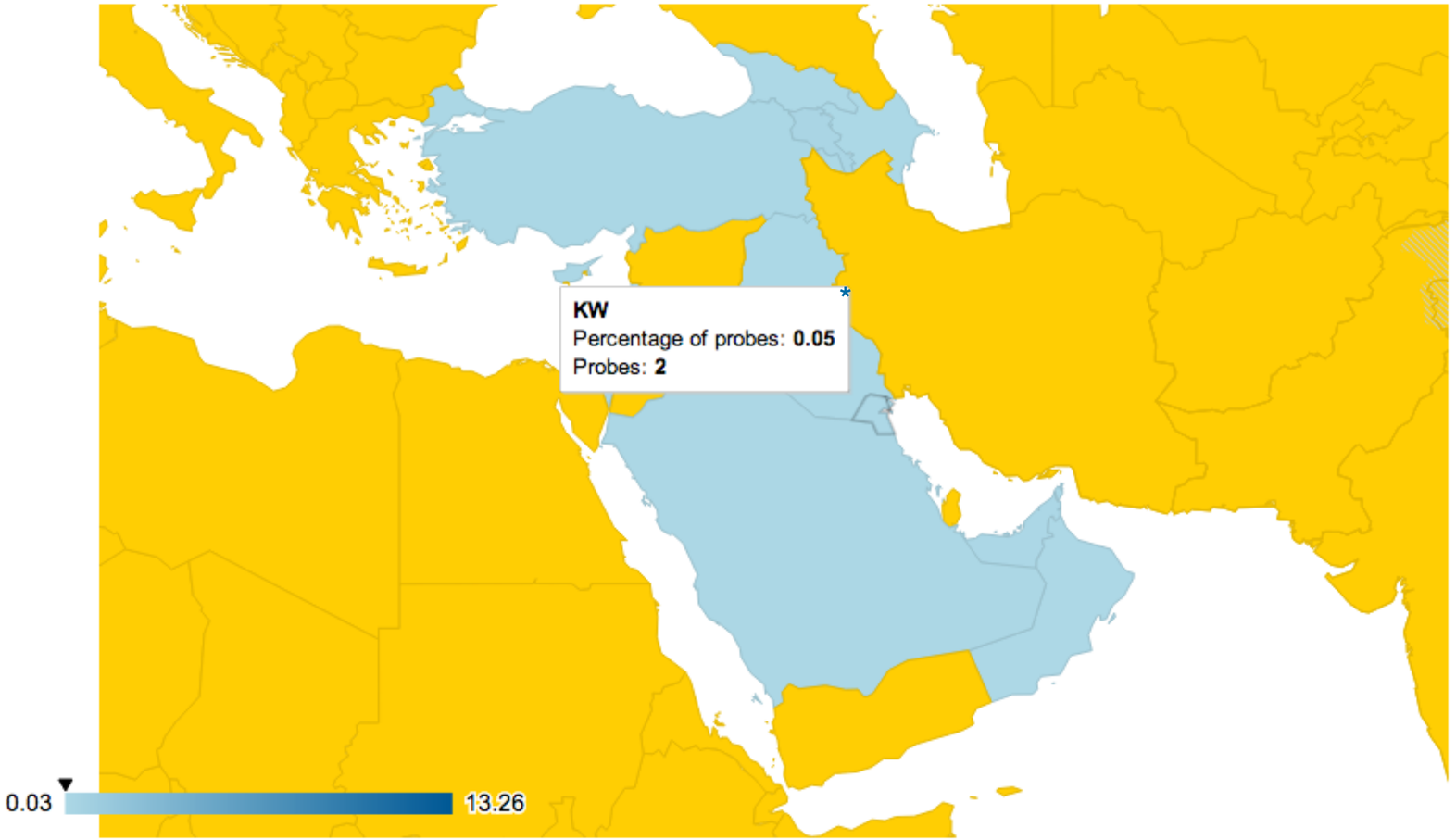
RIPE Atlas Probes per Country



* As of 05-03-2014

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

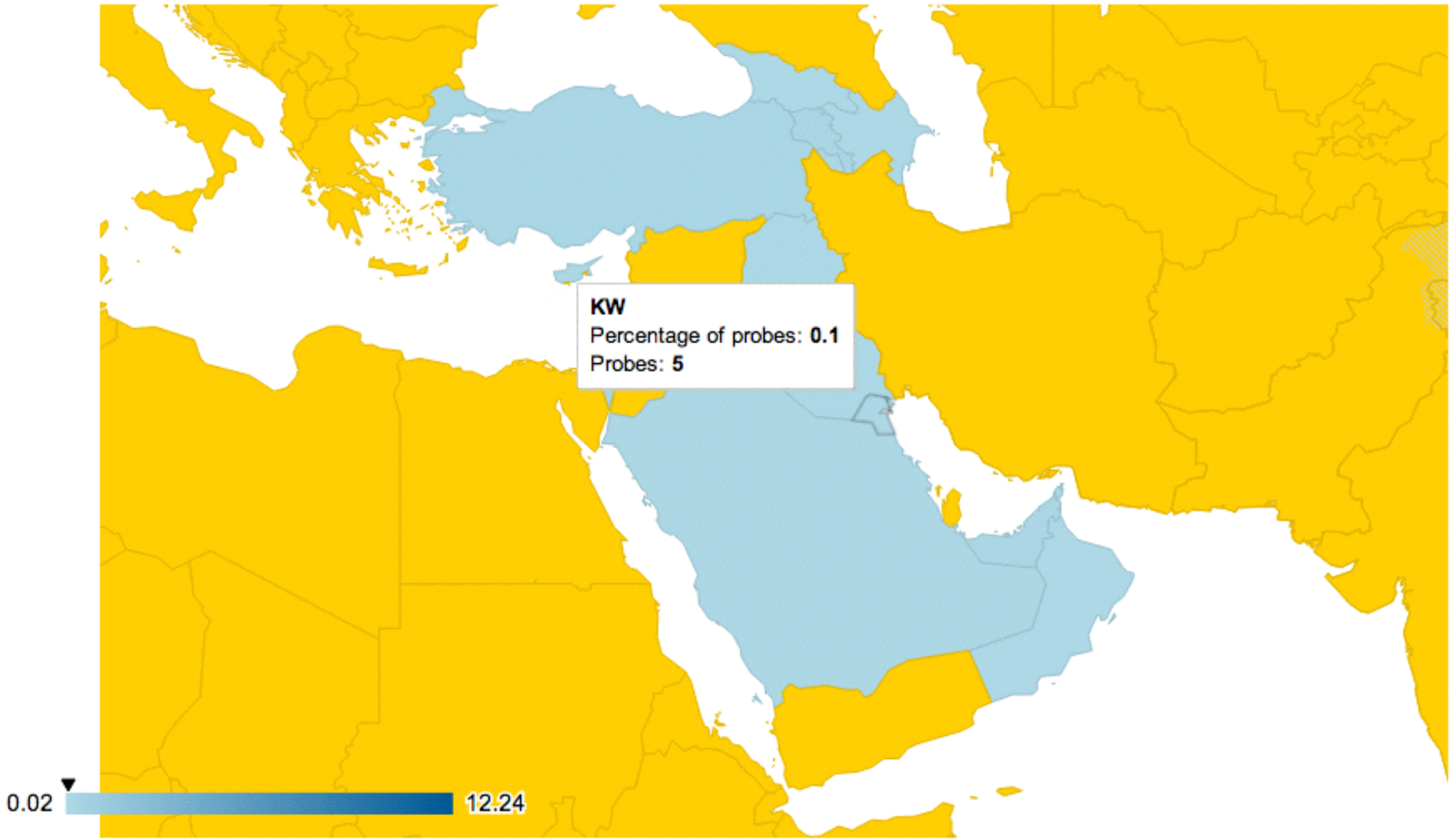
RIPE Atlas Probes per Country



* As of 19-09-2013

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

RIPE Atlas Probes per Country



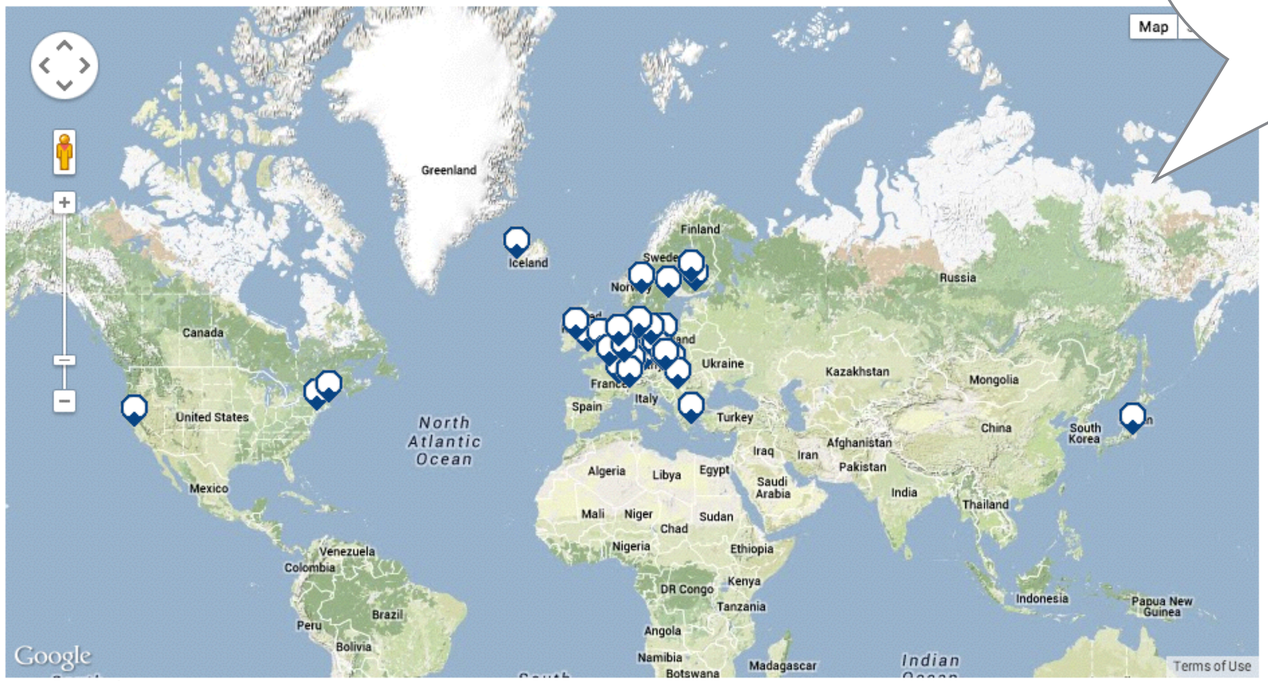
* As of 05-03-2014

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

RIPE Atlas Anchors

- RIPE Atlas anchors
  - Collecting data as enhanced RIPE Atlas probes
  - Acting as targets for regional measurements
  - Production since October 2013

40+ anchors (March 2014)



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

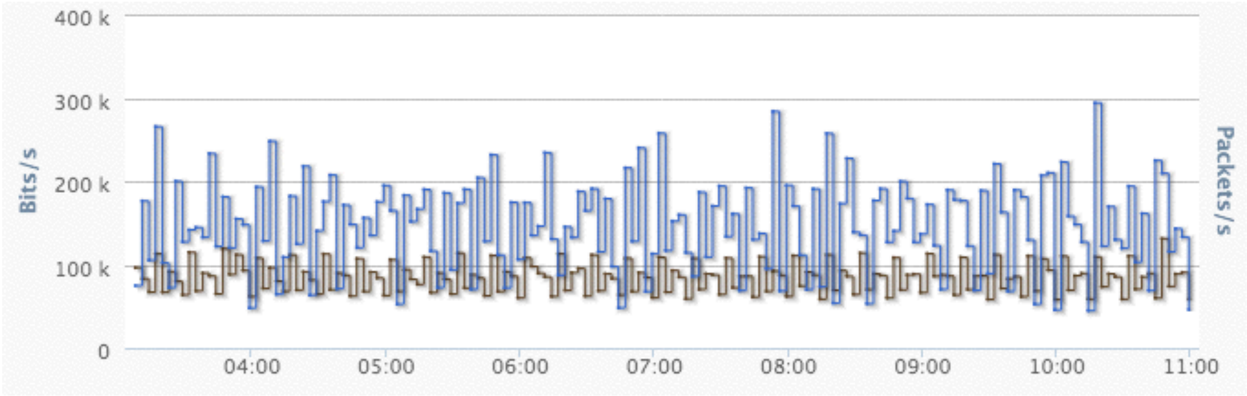
RIPE Atlas Anchors

- RIPE Atlas anchors

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

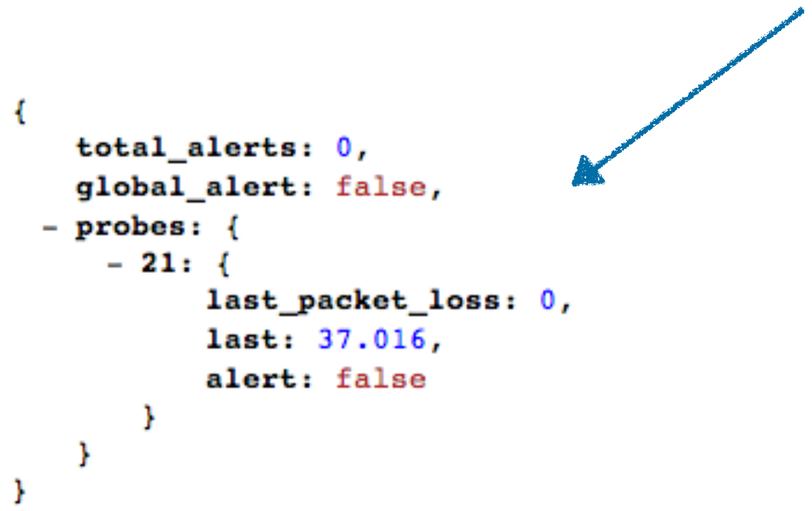
RIPE Atlas Anchors

- RIPE Atlas anchors
  - https://atlas.ripe.net/get-involved/become-an-anchor-host/
  - Bandwidth requirements
    - 10 Mbit stated but actually around 200 kbit



Recent Developments

- Status Checks
  - Use the power of Atlas to monitor your network
  - Simple steps:
    1. Create a ping measurement => measurement ID
    2. https://atlas.ripe.net/api/v1/status-checks/<measurementID>/



Recent Developments

- Status Checks
  - Usable in monitoring applications

Service	Status	La
Current Load	OK	201
Current Users	OK	201
Disk Space	OK	201
HTTP	OK	201
RIPE Atlas Alerts - #1034456	OK	201
RIPE Atlas Alerts - #1309762	OK	201
RIPE Atlas Alerts - #1395076	OK	201
RIPE Atlas Alerts - both checks	OK	201
RIPE Atlas Alerts - both checks +1	OK	201
RIPE Atlas Alerts - both checks +2	OK	201

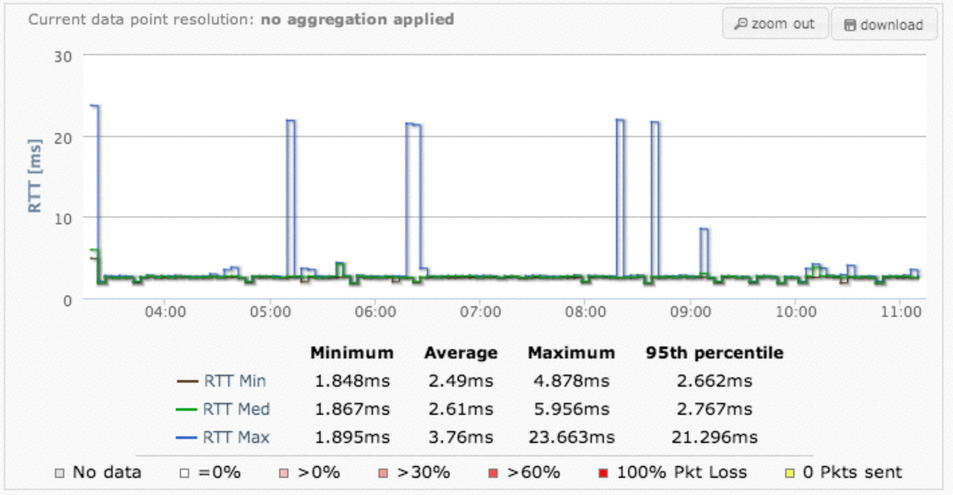
  - Options to customise
    - maximum packet loss before triggering alarm
    - number of measurements included…

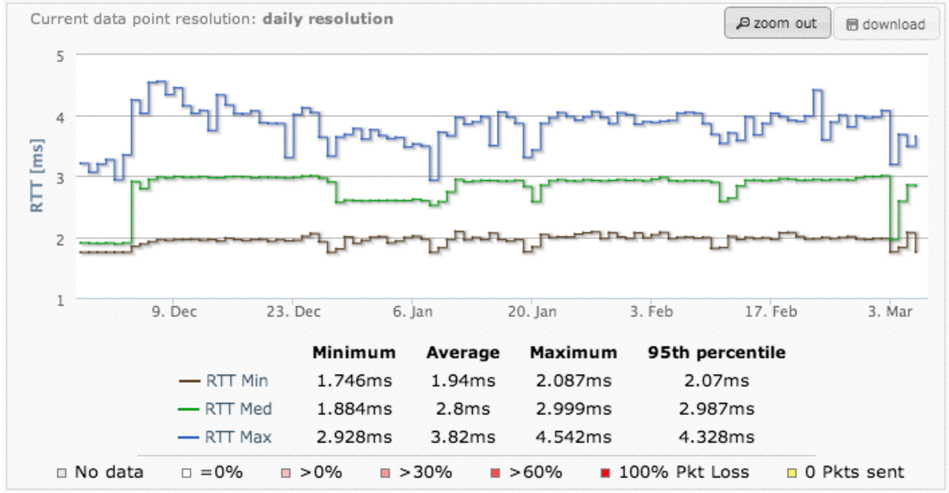
https://atlas.ripe.net/docs/status-checks/

- Beta status!

Recent Developments

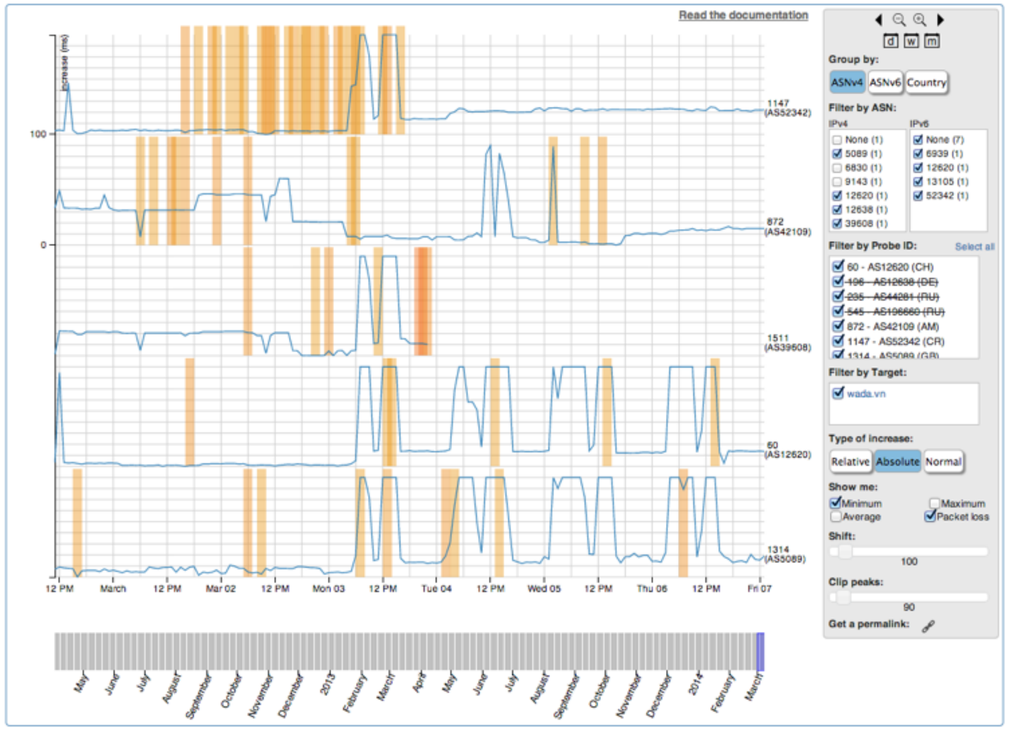
- Zoomable ping graphs (build-ins)

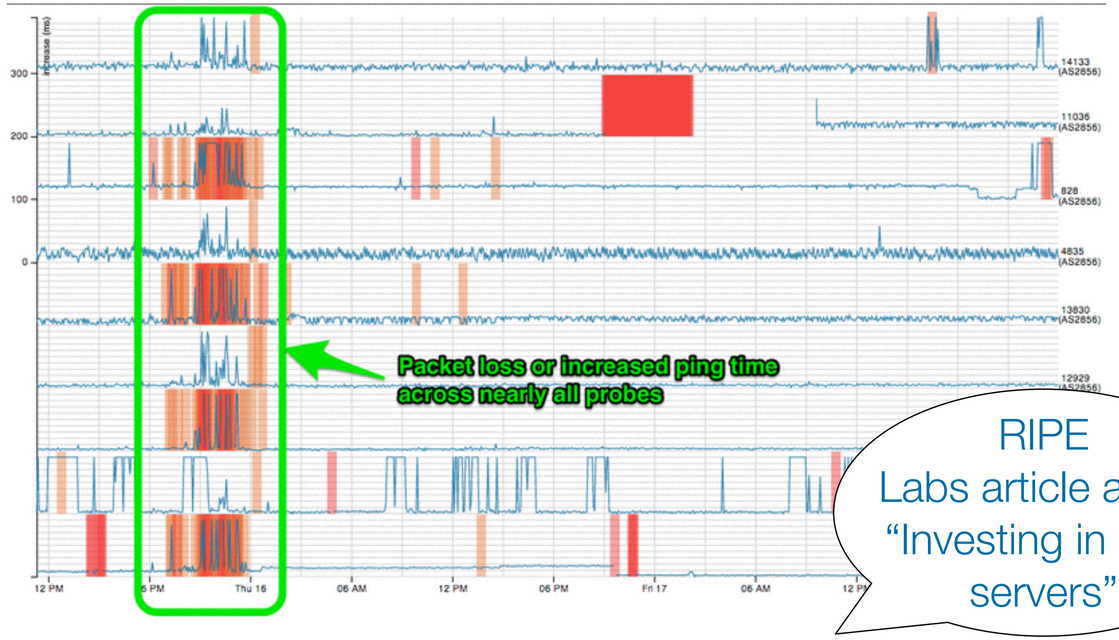




Recent Developments

- Seismograph (UDMs)

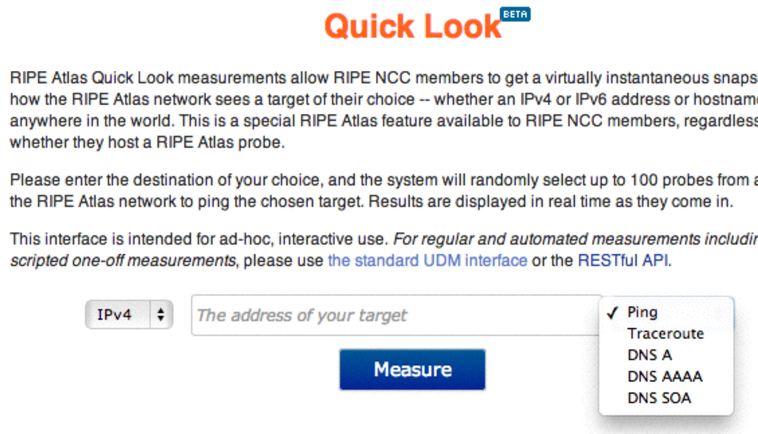




Source: https://labs.ripe.net/Members/suzanne_taylor_muzzin/using-ripe-atlas-to-investigate-slow-servers

Recent Developments

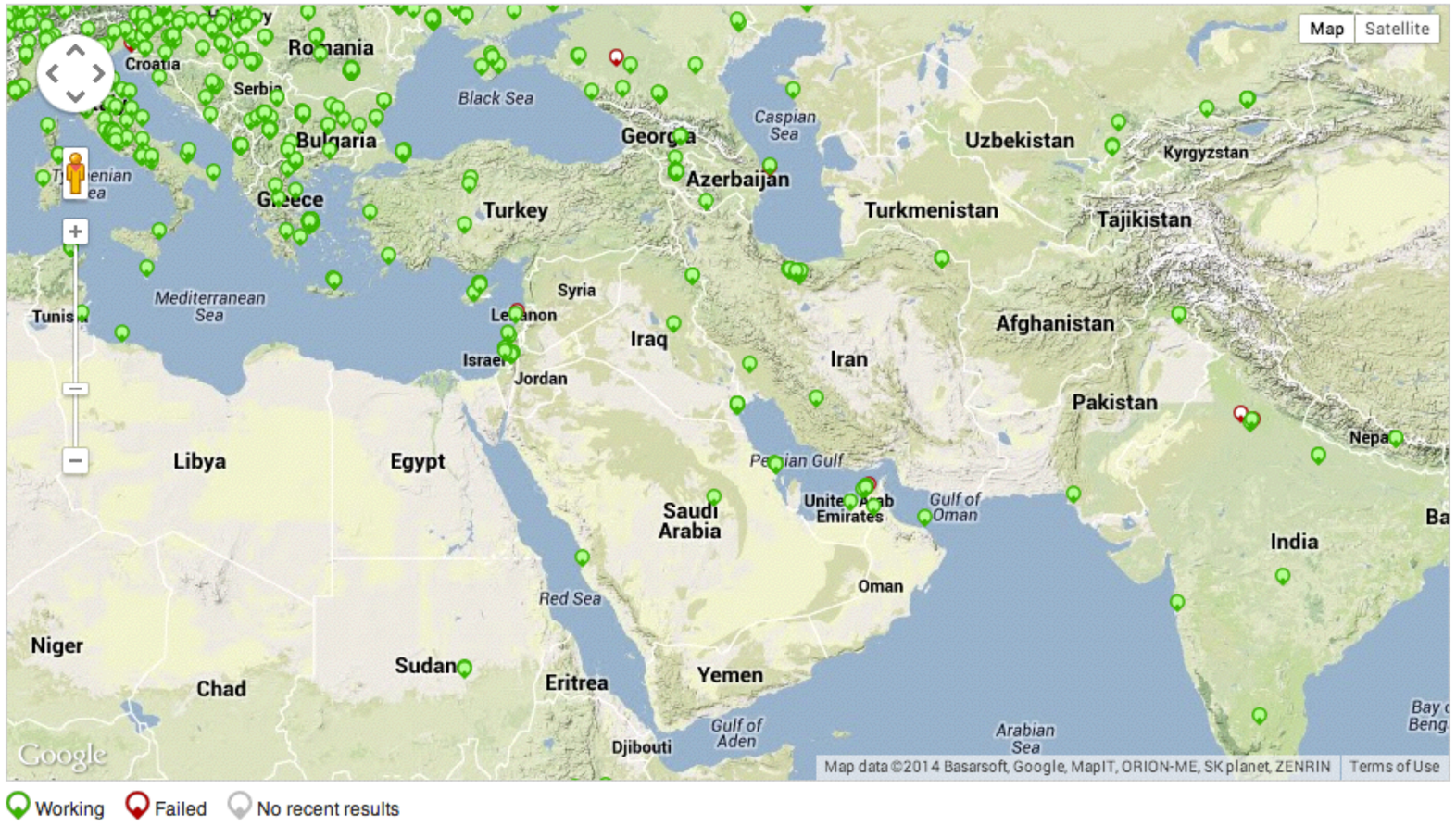
- Quick Look available for DNS, traceroute and ping



- On-going discussion about HTTP measurement
  - Restricted to anchors as targets

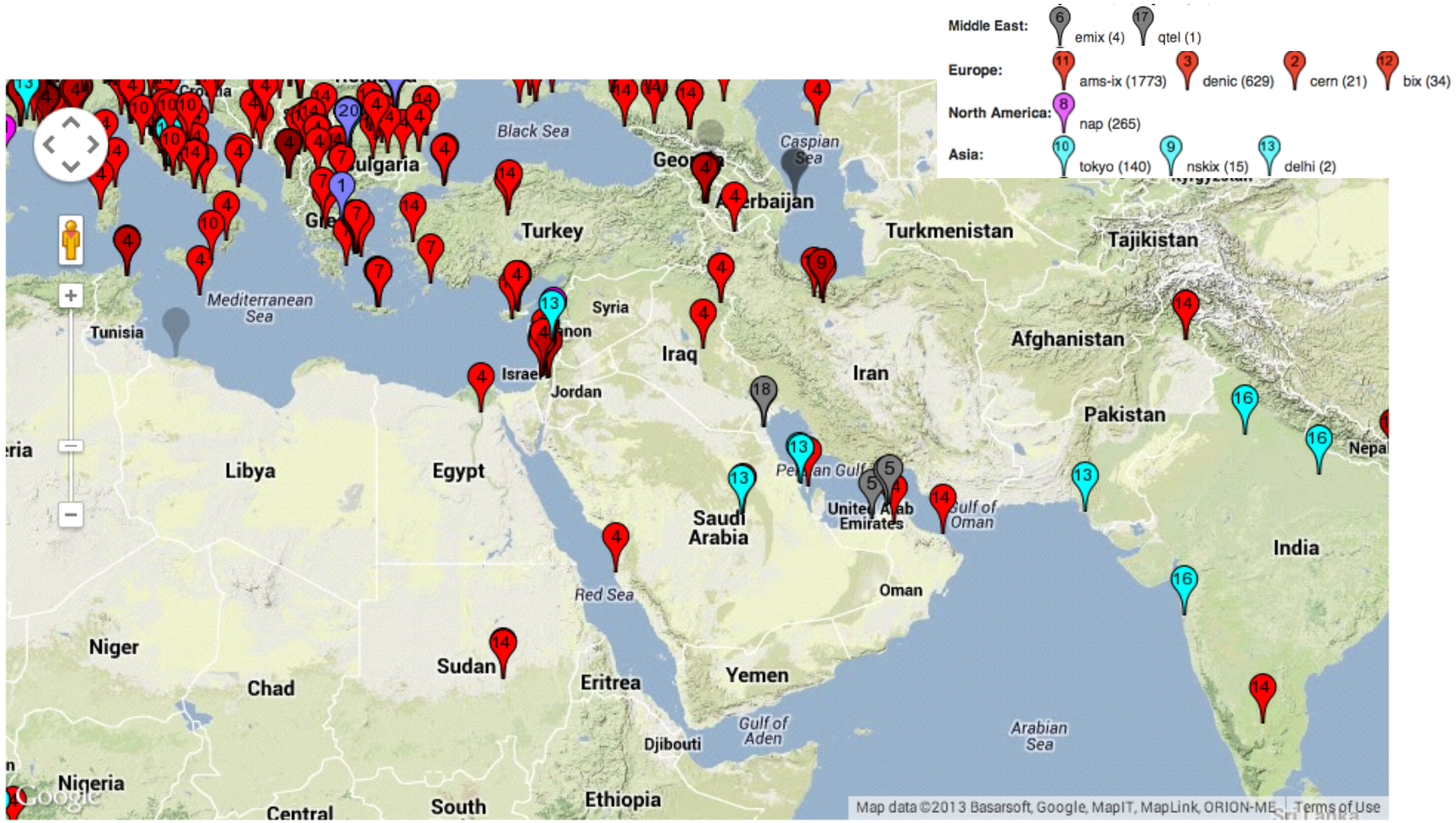
RIPE Atlas Probes Map - Reachability of K-Root

As of 05-03-2014



Source: https://atlas.ripe.net/results/maps/reachability/?id=1001

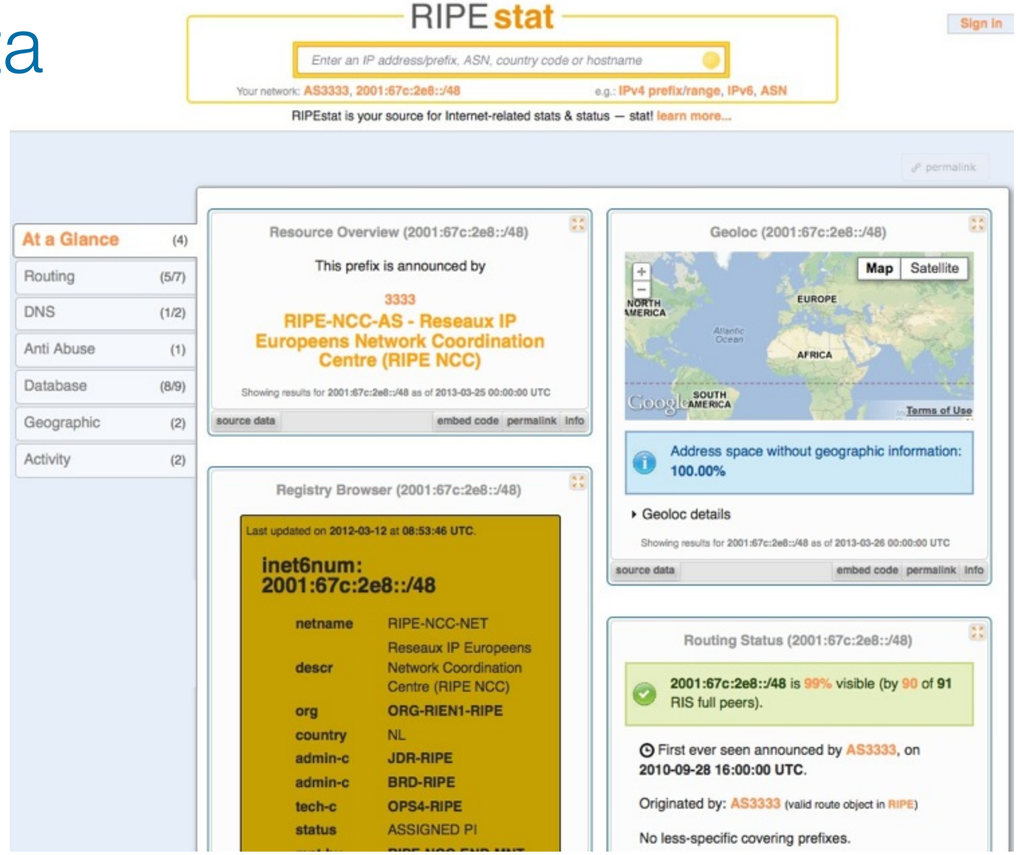
RIPE Atlas Probes Map - DNS K-Root Instances



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

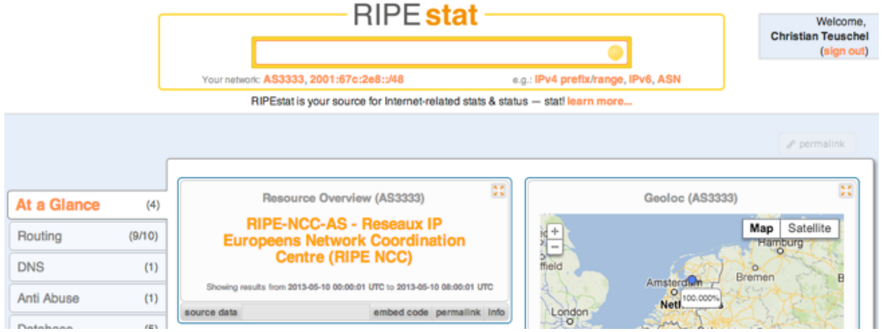
Introduction to RIPEstat

- 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

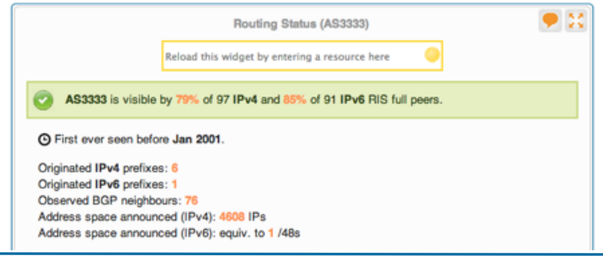


Introduction to RIPEstat

- https://stat.ripe.net



- RIPEstat Widget API



- RIPEstat Data API / RIPEstat Text API

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

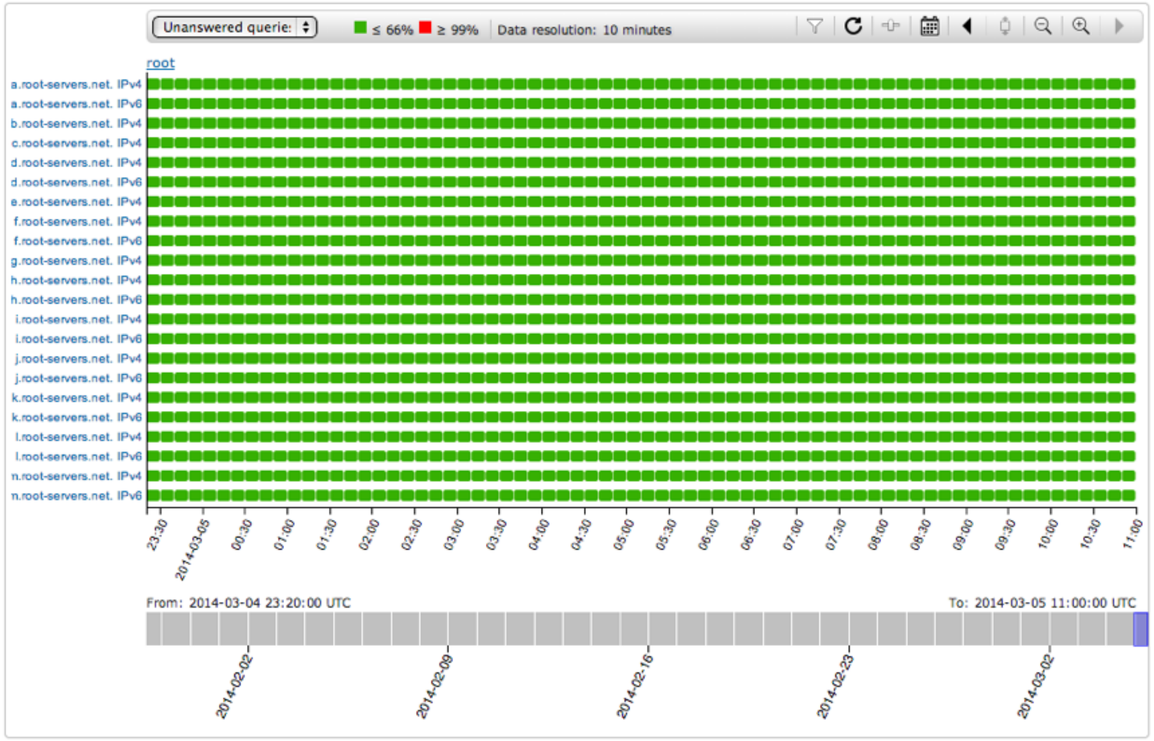
https://stat.ripe.net

Live Demo

Update on DNSMON

- Measures quality of high-level DNS servers
  - root serves & some TLD servers
- Based on Atlas anchor measurement data
- Current and historical data
- Public beta:

https://atlas.ripe.net/dnsmon/



Feedback

- RIPE Atlas
  - atlas@ripe.net
- RIPEstat
  - stat@ripe.net
- DNSMON
  - dnsmon@ripe.net
- Past/Current/Future Developments
  - http://roadmap.ripe.net/

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