RIPE Atlas
Continuing Development

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RIPE NCC

What is Atlas

- Next-generation active measurement network

- Geographically spread vantage points

- Small, easily-deployable probes
  - USB powered
  - Hardwired trust material
  - No open ports
  - Don't listen to local traffic
 - Firmware can be remotely updated

Benefits

- More vantage points

- Continuous measurements

- Cost-effective compared to individual efforts

- Independent source

  - Governments: comparative data about connectivity

  - LIRs: detect network abnormalities, optimise

  - Researchers: long baseline for trend analysis

  - Community: new tools based on aggregated data, situational awareness

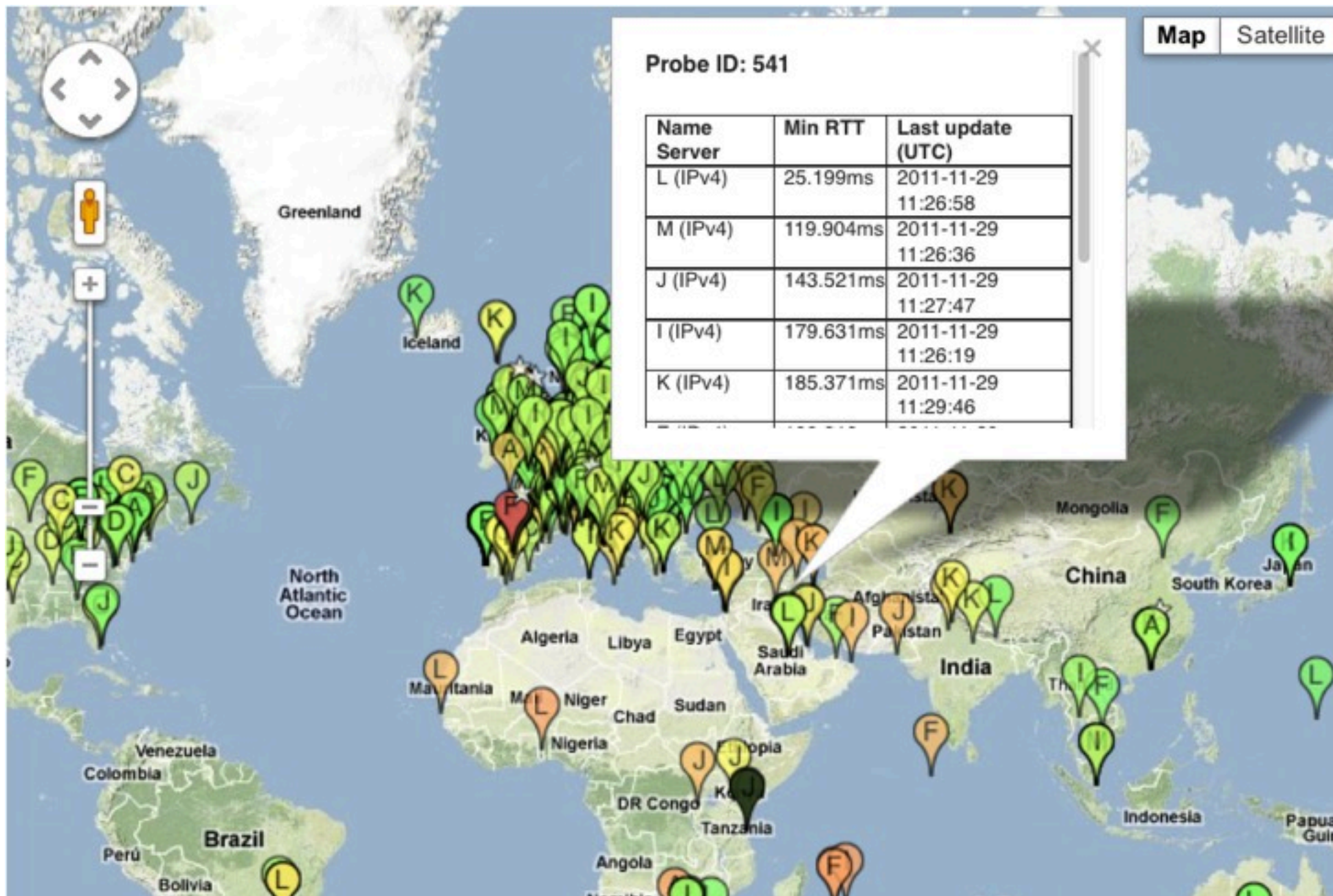# Maps

RTT to Fixed Destinations
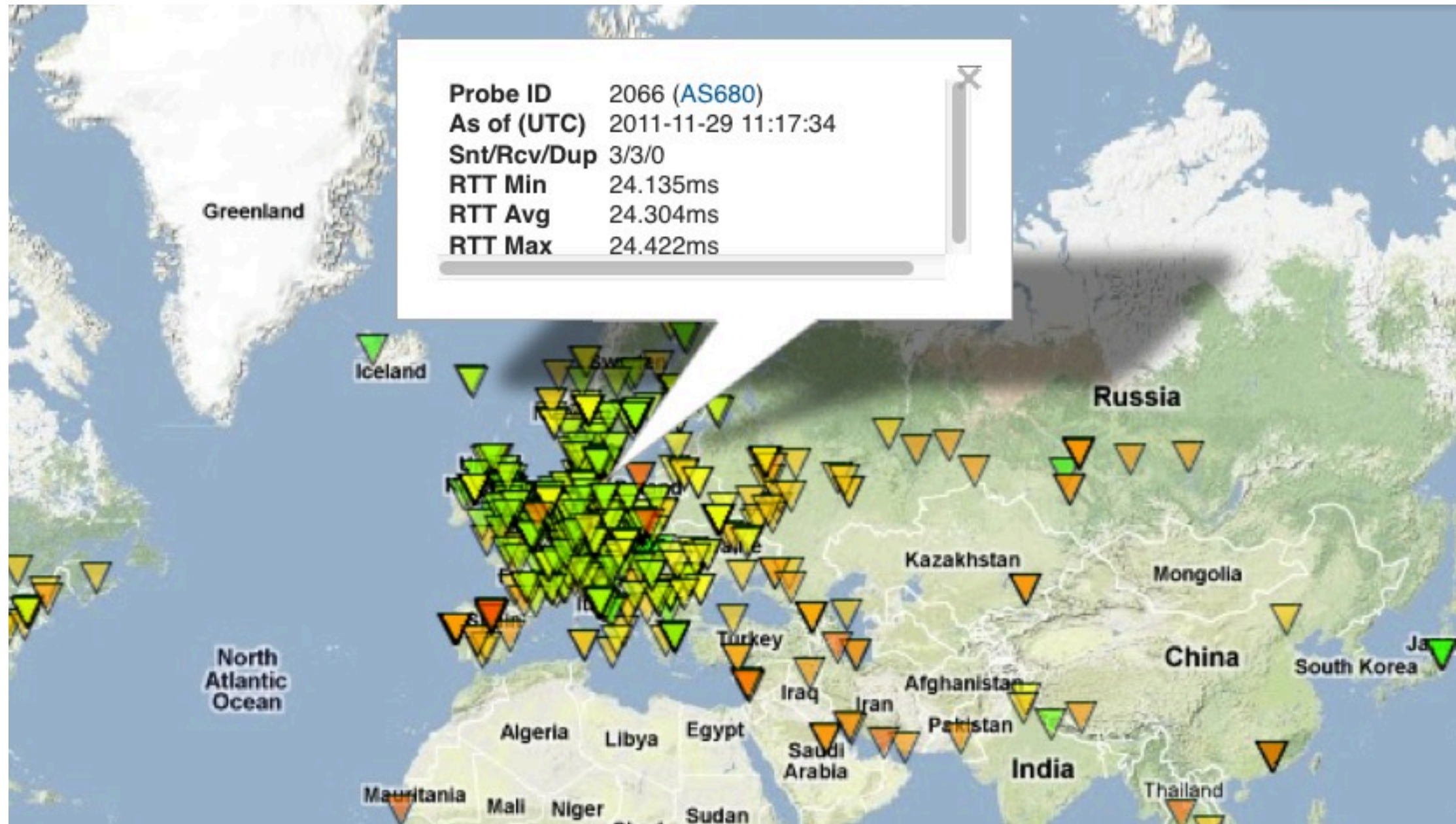
Maps

DNS Anycast Check (c-root)

Maps

Comparative DNS Root RTT

User Defined Measurements (UDM) Strategy

- Start with a small set of variables

- Enable features over time

- Allow more resource usage over time

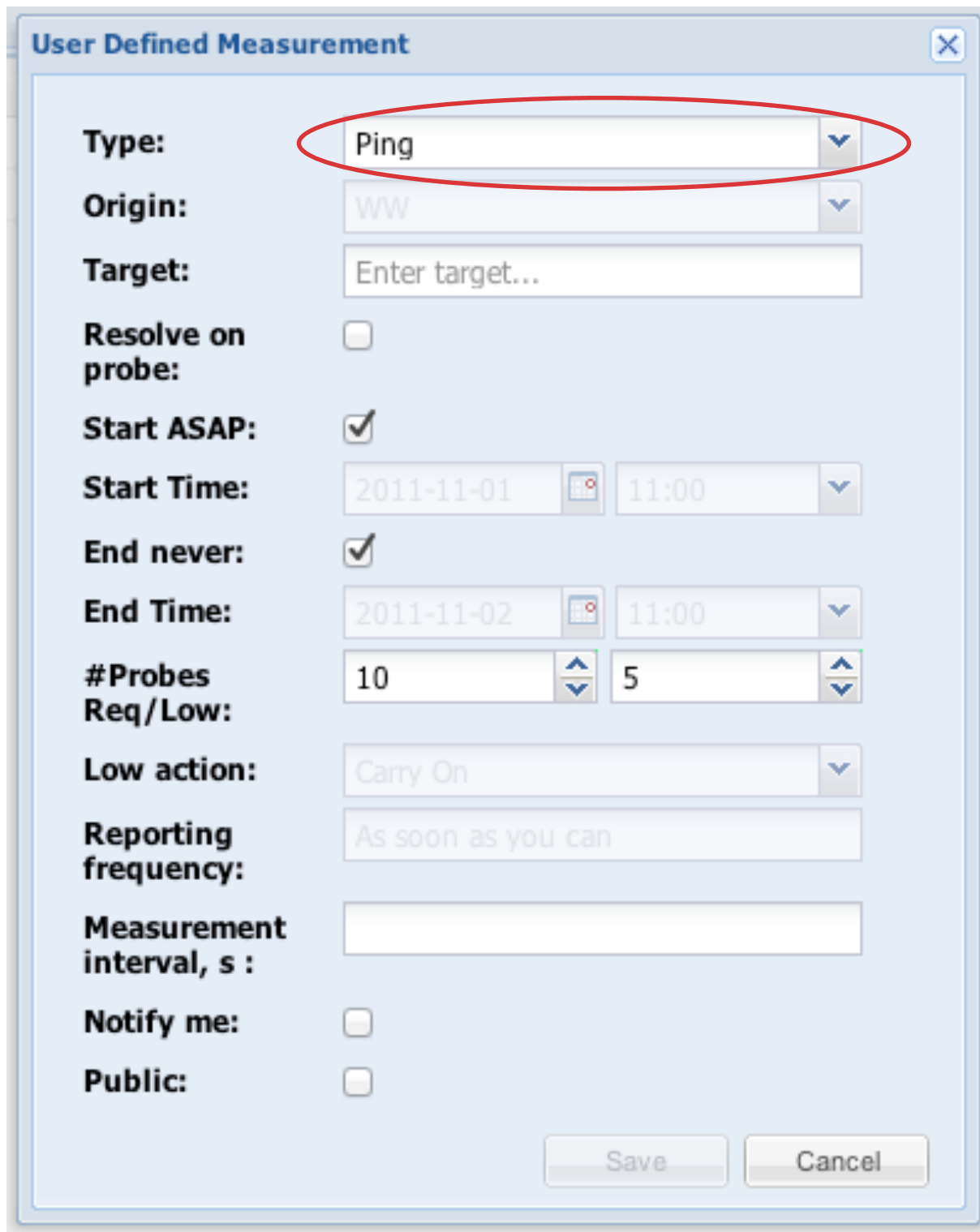- Add measurement types based on demand

UDM Implementation

- Tied to credit system

- Centralised scheduling

- Consideration for host's requirements

- In beta testing

    - Promising results
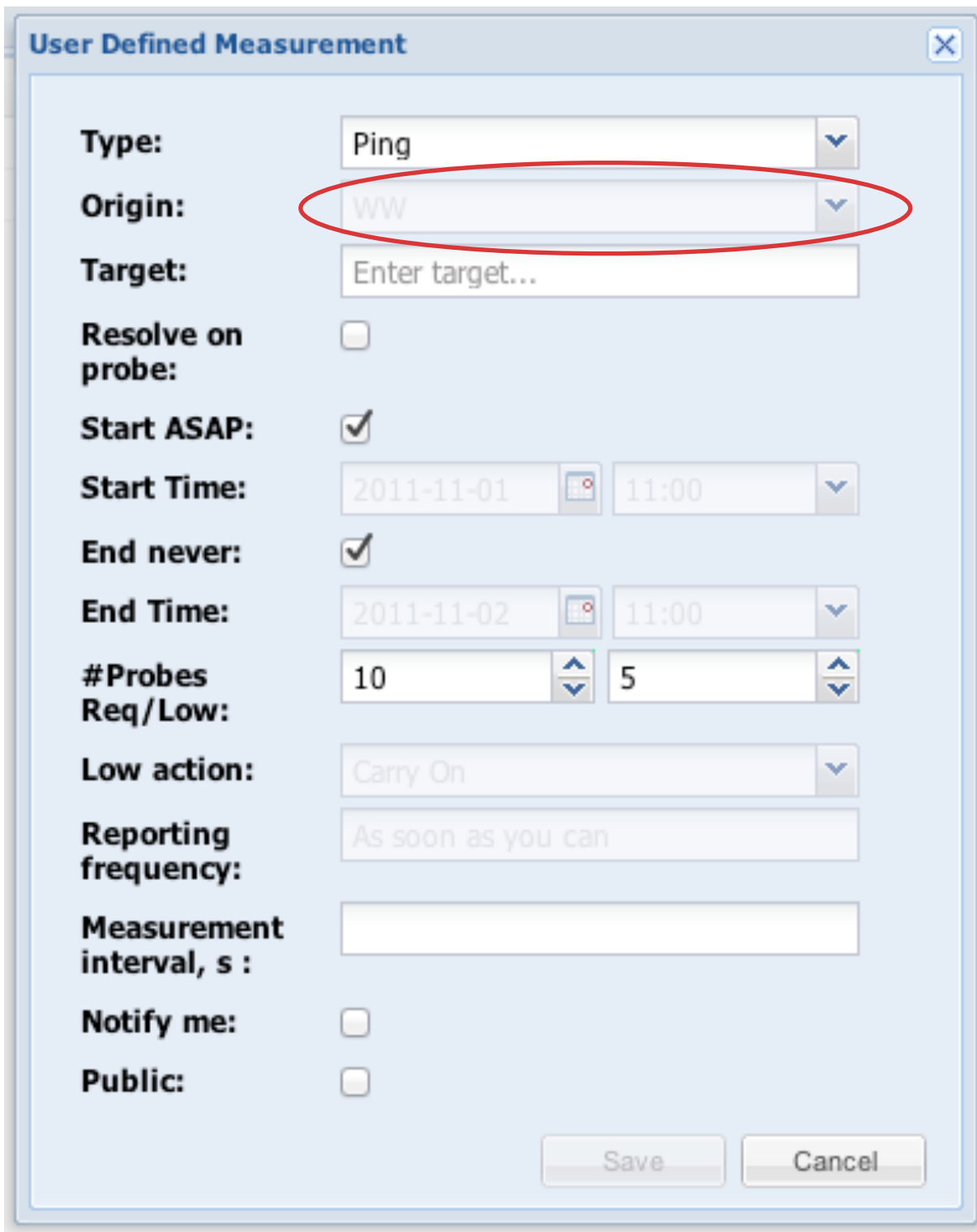
UDM (beta)

- Currently:
  - Ping (v4/v6)
  - Traceroute (v4/v6)

- Upcoming:
  - DNS query

UDM (beta)

- Currently:
  - Worldwide

- Upcoming:
  - Region
  - Country
  - AS
  - Prefix
  - Probe

UDM (beta)

- Configurable aspects:
  - Resolve on probe
  - Timing
  - Number of probes
  - Response to low number of probes
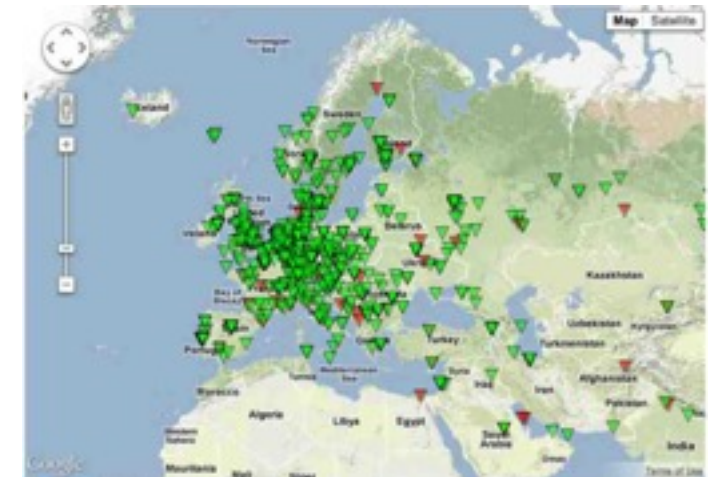 - Intervals
  - Notifications
  - Public

Results of 'ping' UDM
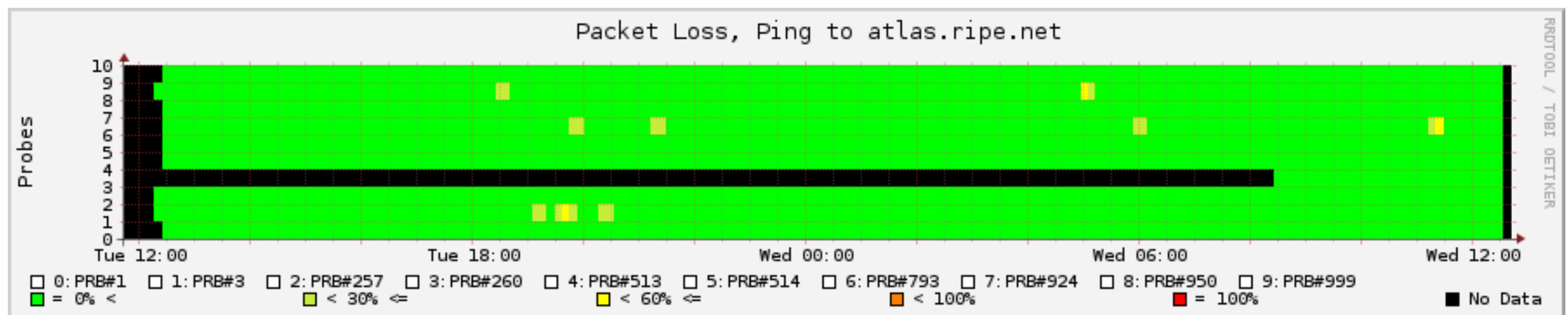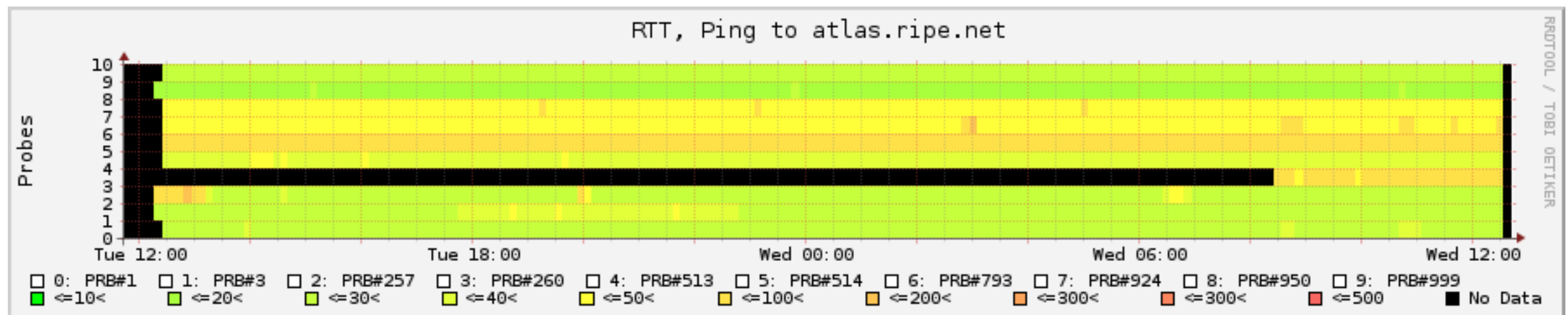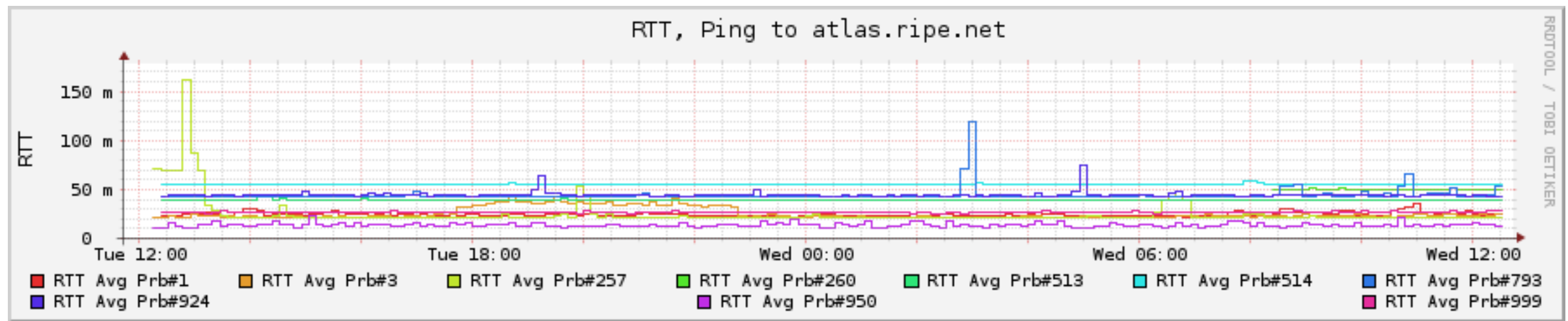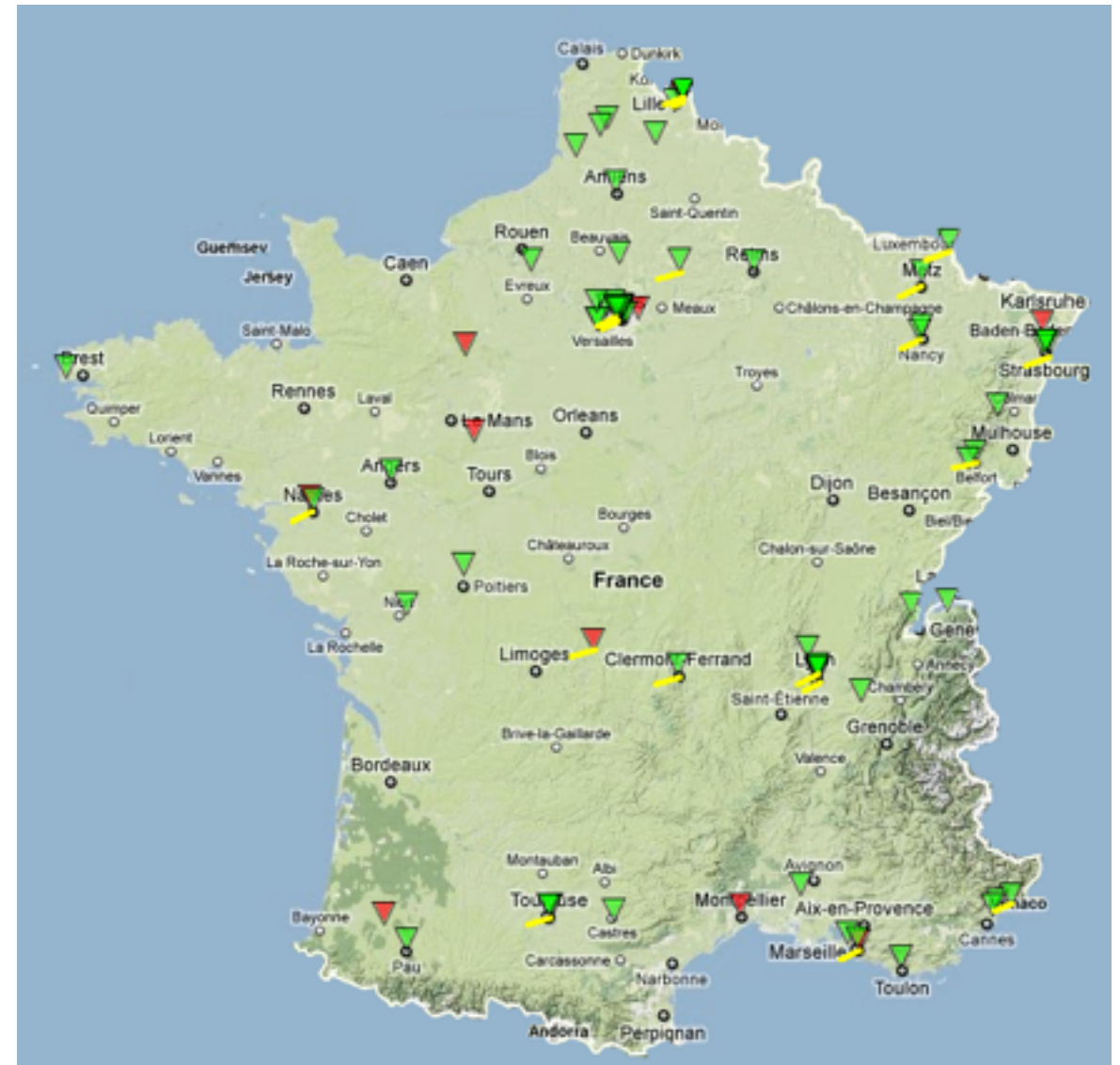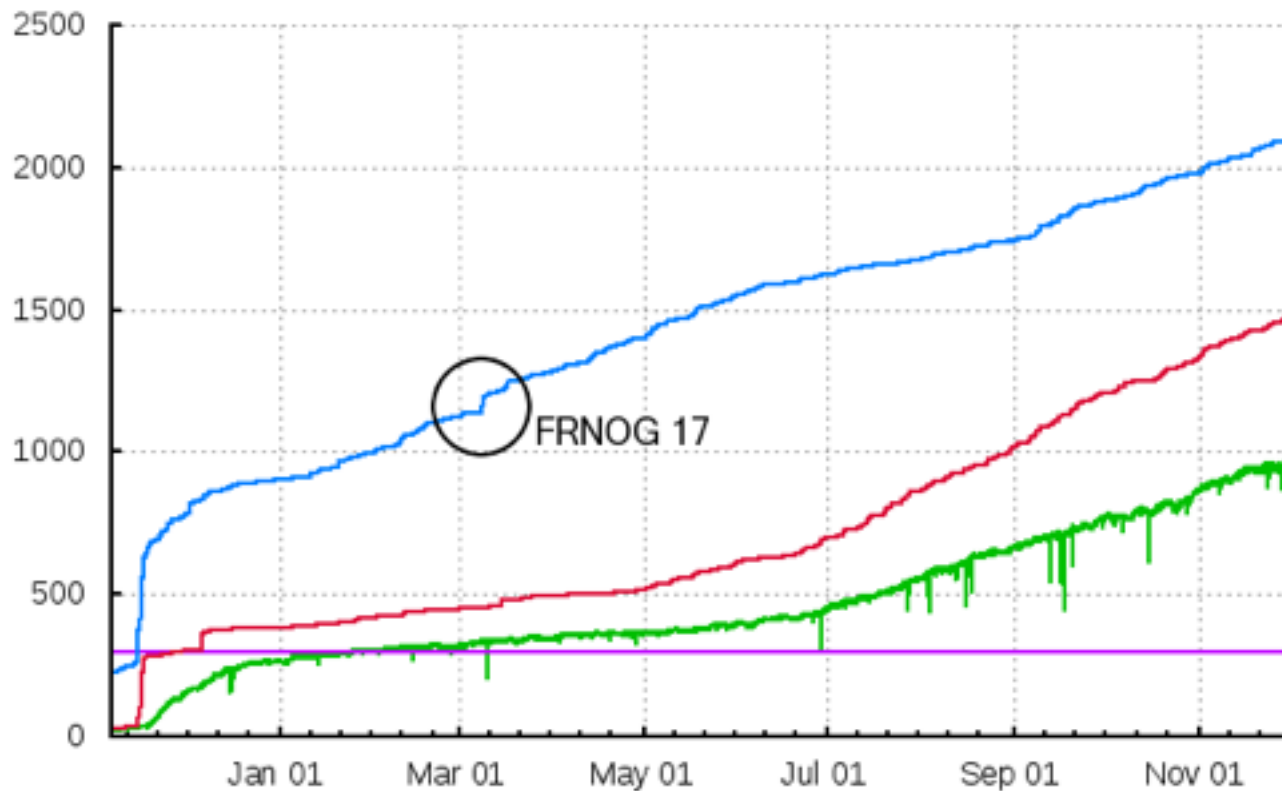
Planned Developments

- Roll-out of UDM

- More UDM types

- Real-time access to (raw) data

- APIs to the system

- Automatic alerts/notifications

- More (types of) maps

- More probes distributed and
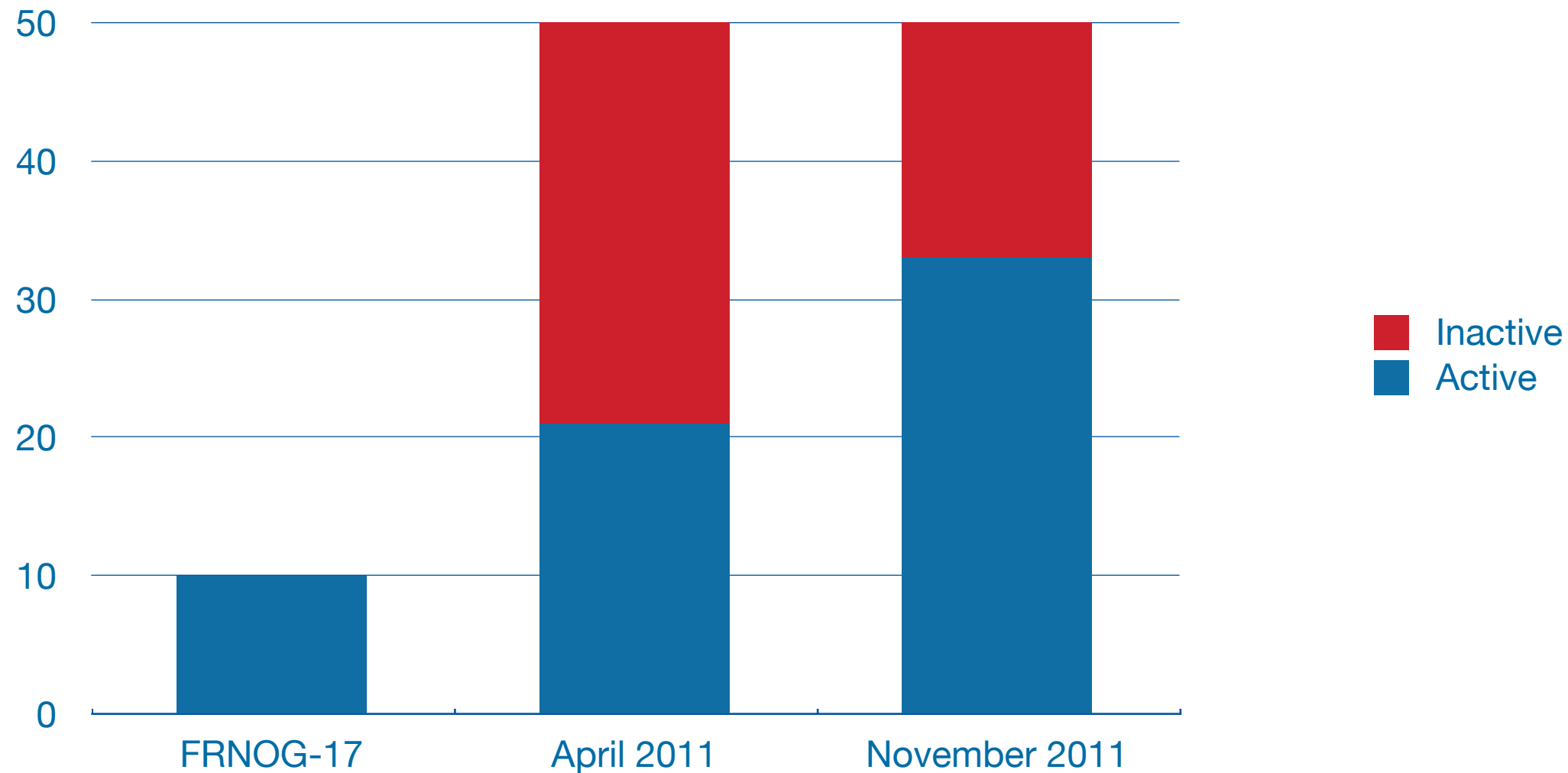 installed

Probes Distributed

- Register for a probe

- Collect your probe

Probes Deployed

- Register your probe

- Connect your probe

Links

- **Atlas:** http://atlas.ripe.net

- **Articles:** http://labs.ripe.net/atlas

- **UDM testing:** atlas-dev@ripe.net

- **Measurements Community Builders:**
mcb@ripe.net

- **RIPEstat:** http://stat.ripe.net

- **TTM:** ttm@ripe.net

- **Labs:** http://labs.ripe.net

Questions?