



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

**#InfoRedes #NetOX
#RIPEstat**

RIR Collaboration on
RIPEstat

What is RIPEstat?



- Open data platform for RIPE NCC data
 - RIPE Database, RIS and RIPE Atlas
- Information service for Internet-related data
- Insight through statistics!



RIPEstat Data Sources Available



- **More than 25 different datasets**

- RIPE Database (INR, IRR) and other RIRs
- BGP routing data (RIS)
- RIPE Atlas, M-Lab, Speedchecker etc.
- Geolocation
- Blacklist
- More details at <https://stat.ripe.net/data-sources>

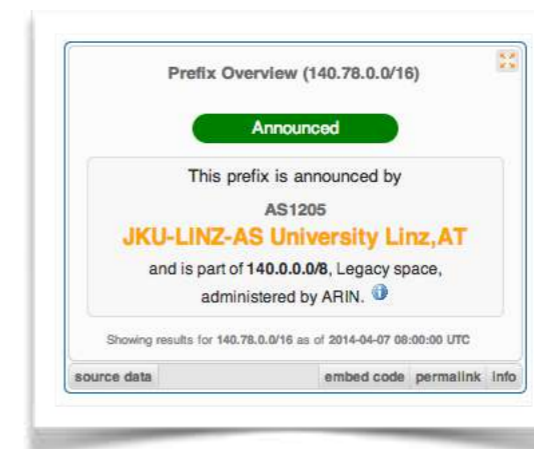
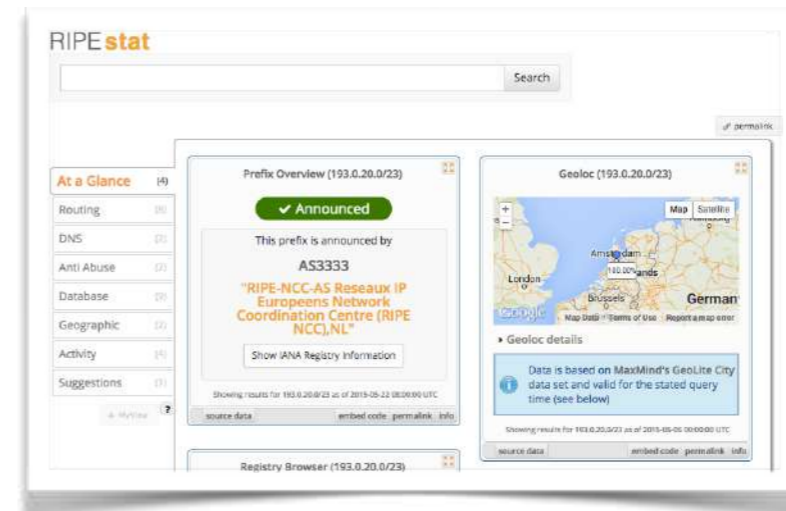


- **New datasets are constantly added!**

RIPEstat APIs



- <https://stat.ripe.net>
- RIPEstat widget API
- RIPEstat data API
 - <https://stat.ripe.net/data/routing-status/data.json?resource=...>



RIPEstat Data API



- JSON-RPC API
 - E.g. https://stat.ripe.net/data/prefix-overview/data.json?max_related=50&resource=193.0.20.0%2F23
- More than 50 data calls
- Documentation
 - https://stat.ripe.net/docs/data_api



RIPEstat Widget API

- HTML5/CSS/JS applications
- Standard Javascript
 - JQuery
 - Require.js
- More than 50 widgets
- Documentation
 - https://stat.ripe.net/docs/widget_api

RIPEstat Widget API



- Building blocks of RIPEstat web interface
<https://stat.ripe.net>

The screenshot displays the RIPEstat web interface. At the top left is the RIPE NCC logo and name. To the right, there's a user profile for Christian Teuschel and a search bar labeled "RIPE Database (Whois)" with the text "Search IP Address or ASN". Below this is a navigation menu with items: "Manage IPs and ASNs", "Analyse", "Participate", "Get Support", "Publications", and "About Us". The "Analyse" menu item is highlighted, and a breadcrumb trail shows "You are here: Home > Analyse > Statistics > RIPEstat".

The main heading is "RIPEstat". Below it is a large search input field with the placeholder text "Enter an IP address/prefix, ASN, country code or hostname" and a "Go" button. Below the search field, it shows "Your network: AS3333, 193.0.20.0/23" and a suggestion: "Try one of these: IPv4 prefix, IPv4 range, IPv6, ASN".

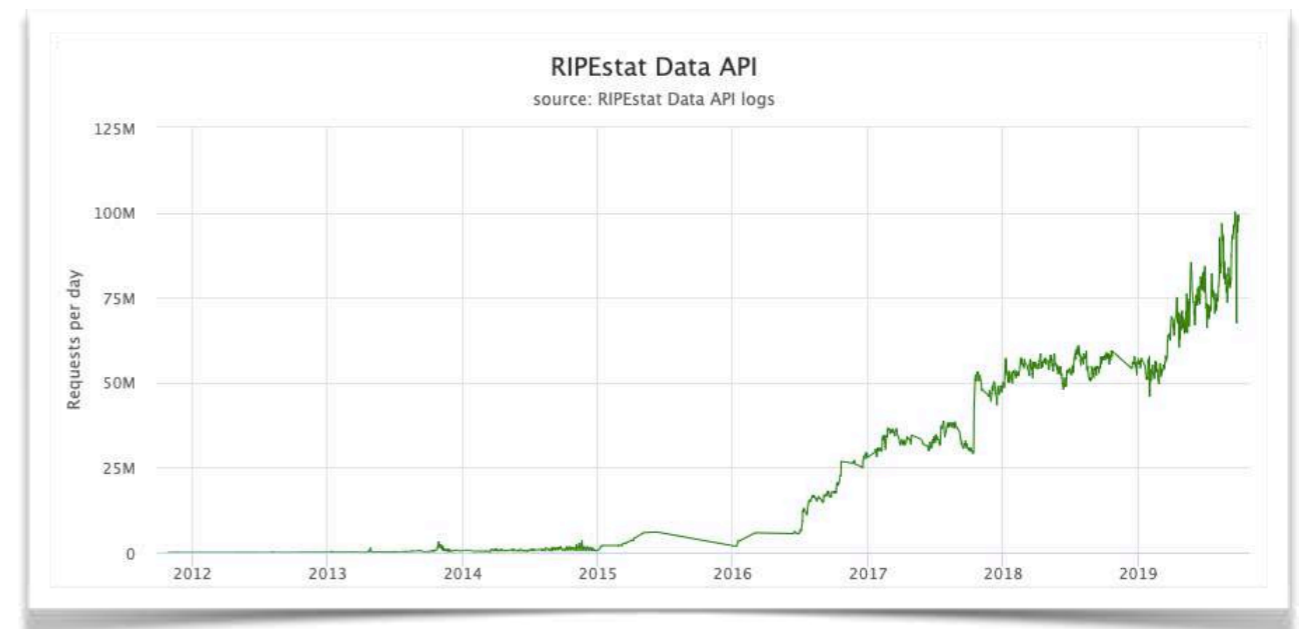
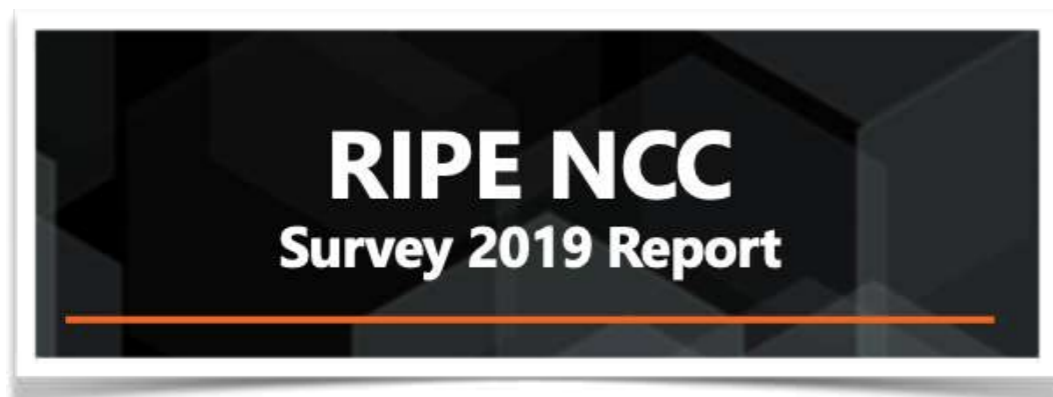
At the bottom, there are three columns of content:

- Twitter Feed:** Shows a tweet from Christian (RIPEstat) with the text "#RIPEstat feature fact: Every widget shows in the bottom for which resource and time the output is valid!".
- RIPE Labs Feed:** Lists three articles: "Historical Whois" (Apr 05, 2018), "Using RIPEstat to Analyse Cable Cuts in Chile" (Jan 05, 2018), and "BGP Meets Cat" (Jun 26, 2017).
- RIPEstat Links:** Lists three links: "About RIPEstat" (Get general information about RIPEstat), "Documentation" (Access the documentation for all RIPEstat APIs), and "Use Cases" (Read about use cases for RIPEstat).

Usage of RIPEstat



- **RIPEstat is popular!**
 - ~100 million requests per day
 - More than 1.5 million unique clients/IPs (daily)



“RIPEstat is the most used tool of the RIPE NCC tools and services...”

Usage of RIPEstat



- RIPEstat has a very diverse user base

The screenshot shows a table titled 'Country' with columns for 'COUNTRY' and 'VISITS'. The table lists 20 countries with their respective flags, names, percentages, and visit counts. The United States is the most visited country, followed by Germany, Russia, and the United Kingdom.

COUNTRY	VISITS
United States	23.2% 34,207
Germany	7.9% 11,609
Russia	7.4% 10,978
United Kingdom	7.2% 10,569
Poland	5% 7,385
Netherlands	3.1% 4,541
Spain	3% 4,384
France	2.8% 4,130
Italy	2.8% 4,101
Iran	2.7% 4,013
Ukraine	2.3% 3,372
Brazil	1.7% 2,454
Turkey	1.6% 2,296
Slovenia	1.4% 2,014
Switzerland	1.2% 1,791
Czechia	1.2% 1,762
South Korea	1.2% 1,762
Romania	1.2% 1,753
Japan	1.1% 1,633

Usage of RIPEstat



- Despite this diverse user base, users from other RIR regions are underrepresented
- Possible reasons
 - Lack of knowledge about the service
 - Language barrier
 - Not addressing local topic
- **We believe we can improve these points through cooperation with other RIRs**

RIR Cooperation



- **Phase 1**

- Customisation of the UI to LACNIC's design
- Localisation of textual content

- **Phase 2**

- Cooperation on system operation and dataset provisioning
- Example for dataset provisioning: collaboration on BGP route collectors between APNIC, LACNIC and RIPE NCC (already ongoing)
- Phase 1 and 2 are independent for data set provisioning

Phase 1 Details



- **Customisation of the UI to LACNIC's design**
 - The goal is to provide UI that reflects the affiliation to LACNIC. Users that go to stats.lacnic.net will see RIPEstat loaded with a LACNIC customised template e.g. LACNIC logo, header and footer. In the simplest case this requires a DNS entry for stat.lacnic.net pointing to RIPEstat and adaptations in the UI logic
- **Localisation of textual content**
 - The text that appears in RIPEstat widgets would be translated to Spanish and Portuguese. This would require language support in RIPEstat and the translation efforts

Benefits



- **Improved usability for users in LACNIC region**
 - Catering for regional information requirements
 - Removing language barrier
 - Access to regional datasets
 - Ability to show and share local events
 - Establishing feedback channel for regional matter to RIPEstat

InfoRedes



The screenshot shows a web browser window with the URL `info redes.labs.lacnic.net`. The page features a navigation menu with **ESPAÑOL**, **ENGLISH**, and **PORTUGUÊS**. The main heading is **lacnicinfo redes**. Below it, a paragraph explains the tool's purpose: "Información acerca de recursos de numeración de Internet utilizando RIPEstat. Ingrese una dirección o prefijo IPv4, IPv6 o un ASN para obtener información sobre routing, conectividad, RPKI y otra información útil para operadores de red." A search input field contains the placeholder text "Prefijo, ASN o Nombre de Dominio" and a blue **ENVIAR** button. Below the input, the text "Tu red: `AS3333 2001:67c:2e8::/48`" is displayed. To the right, a link suggests "Prueba alguno de estos ejemplos: [Prefijo IPv4](#), [Prefijo IPv6](#), [Rango IPv4](#), [ASN](#)". The footer contains the logo for **CASA DE INTERNET DE LATINOAMÉRICA Y EL CARIBE**, contact information for Rambla República de México 6125, Montevideo, Uruguay, and social media icons for Twitter, Facebook, Instagram, LinkedIn, YouTube, and It! A cookie notice at the bottom states: "Este sitio web utiliza cookies, si permanece aquí acepta su uso. Puede leer más sobre el uso de cookies en nuestra [política de privacidad](#)."

InfoRedes



- LACNIC's themed version of RIPEstat
- Localisations
 - Content
 - Decisions
 - Language
 - Feedback

InfoRedes



- LACNIC's themed version of RIPEstat
- Localisations
 - Content
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InfoRedes



- LACNIC's themed version of RIPEstat
- Localisations
 - Content
 - **Decisions**
 - Language
 - Feedback

InfoRedes



- LACNIC's themed version of RIPEstat
- Localisations
 - Content
 - Decisions
 - **Language**
 - Feedback

InfoRedes



- LACNIC's themed version of RIPEstat
- Localisations
 - Content
 - Decisions
 - Language
 - **Feedback**

InfoRedes



- LACNIC's themed version of RIPEstat
- Localisations
 - Content
 - Decisions
 - Language
 - Feedback
- Powered by RIPEstat Data API
- Implementation took two weeks



lacnic **News**

Casa de Internet Cooperation Cybersecurity Events IPv6
Internet governance LACNIC Policies Research Training

RESEARCH ← LACNIC NEWS HOME

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Cambiar tamaño de fuente: INSTITUTIONAL

30/09/2019

LACNIC Presents Inforedes: the Single Window for Open Data from Internet Resources

<https://prensa.lacnic.net/news/en/research/lacnic-presents-inforedes-the-single-window-for-open-data-from-internet-resources>

InfoRedes



- <https://info redes.labs.lacnic.net>
- Product manager: Guillermo Cicileo / guillermo@lacnic.net



The screenshot shows the lacnicinfo redes website interface. At the top, there are language options: ESPAÑOL, ENGLISH, and PORTUGUÉS. The main heading is "lacnicinfo redes". Below it, a search bar contains the prefix "2001:67c:2e8::/48" and an "ENVIAR" button. The search results show "Tu red: AS3333 2001:67c:2e8::/48" and a list of examples: "Prueba alguno de estos ejemplos: Prefijo IPv4, Prefijo IPv6, Rango IPv4, ASN". A navigation bar includes tabs for "Vista Rápida", "Enrutamiento", "DNS", "Anti Abuso", "Registro", "Geolocalización", "Actividad", and "Sugerencias". The main content area is divided into two panels. The left panel, titled "Prefix Overview (2001:67c:2e8::/48)", shows routing information (RIS) with two checked items: "Is visible as exact match" and "No more/less-specific prefixes are visible". Below this, it states "This prefix is announced by:" followed by "AS3333 - RPKI Status: 😊" and "RIPE-NCC-AS - Reseaux IP Europeens Network Coordination Centre (RIPE NCC)". The right panel, titled "Maxmind GeoLite (2001:67c:2e8::/48)", displays a world map with a red dot indicating the location of the prefix. A "SHOW DETAILS" button is visible at the bottom right of the map panel.

NetOX - Network Operators Toolbox



- <https://netox.apnic.net>
- Product manager: Sofia Silva Berenguer / sofia@apnic.net



The screenshot shows the APNIC NetOX web interface. The browser address bar displays 'netox.apnic.net'. The page title is 'APNIC NetOX' and the breadcrumb is 'APNIC NetOX > search > AS3333'. The main heading is 'Search Internet Number Resources'. Below this, there is a search input field containing 'AS3333' and a 'Search' button. A 'Feedback' button is visible on the right side. The search results are divided into two main sections: 'AS Overview (AS3333)' and 'Whois Matches (AS3333)'. The 'AS Overview' section includes 'Routing information (RIS)' with two green checkmarks: 'Originates prefixes visible' and 'Is seen in other routes'. Below this, it identifies the ASN holder as 'RIPE-NCC-AS - Reseaux IP Europeens Network Coordination Centre (RIPE NCC)'. The 'Whois Matches' section shows 'Whois results (1)' with a table of details:

Field	Value
aut-num	3333
as-name	RIPE-NCC-AS
descr	Reseaux IP Europeens Network Coordination Centre (RIPE NCC)
org	ORG-RIEN1-RIPE
status	ASSIGNED



Questions



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RIPE NCC

RIPE NETWORK COORDINATION CENTRE

RIPE Atlas

Global Measurement Network

Christian Teuschel | October 2019 | ESNOG 24

RIPE Atlas



-is a global, open, distributed Internet measurement platform, consisting of thousands of measurement devices that measure Internet connectivity in real time

Global active measurements platform



- Goal: View Internet reachability
- Probes hosted by volunteers
- Measurements towards root name servers
 - Visualised as Internet traffic maps
- Users can also run customised measurements
 - ping, traceroute, DNS & SSL/TLS, NTP and HTTP*
- Data publicly available

RIPE Atlas measurements



- **Built-in** global measurements towards root nameservers
 - Visualised as Internet traffic maps
- **Built-in** regional measurements towards “anchors”
- **Users** can run customised measurements
 - ping, traceroute, DNS, SSL/TLS, NTP and HTTP

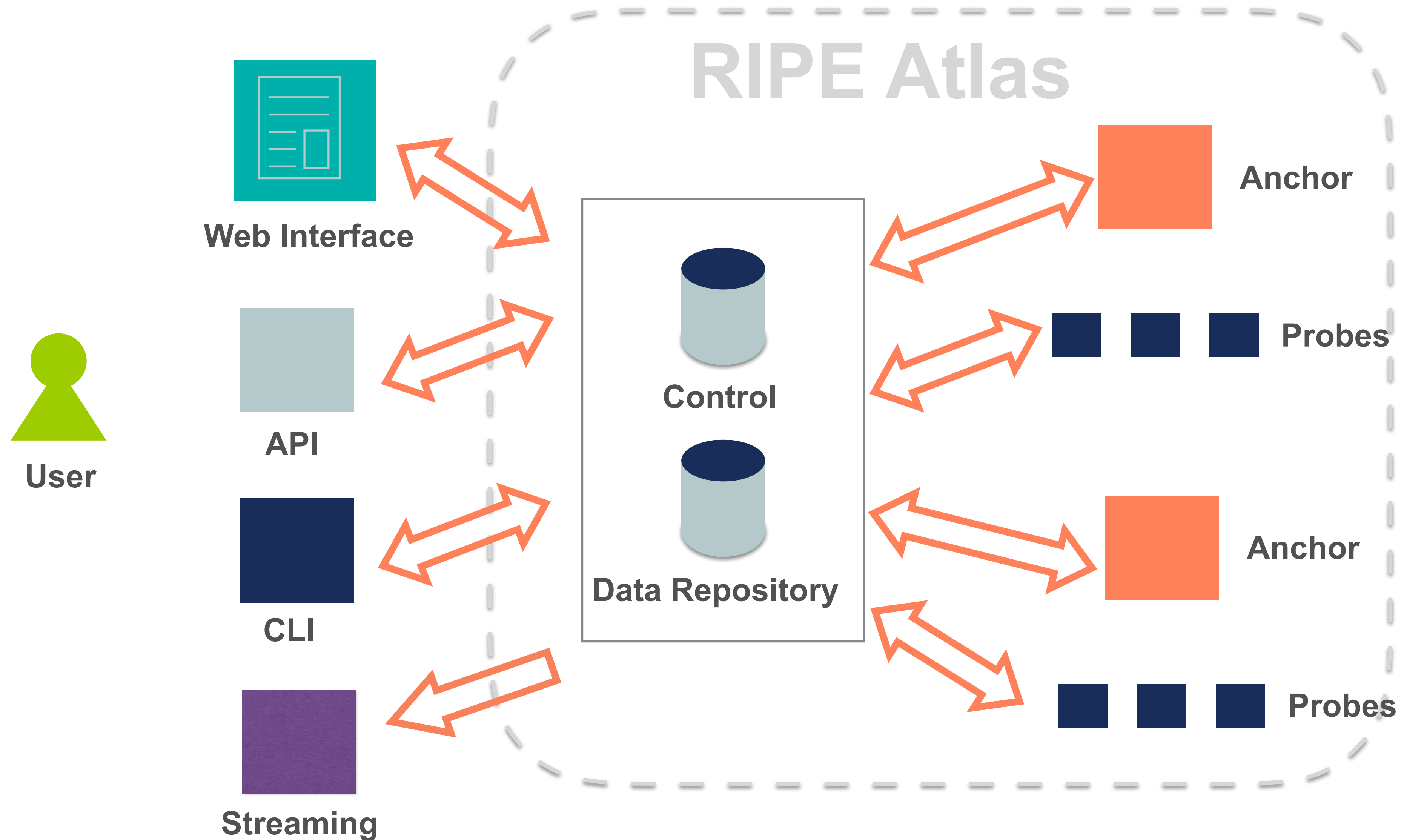


Probes and Anchors

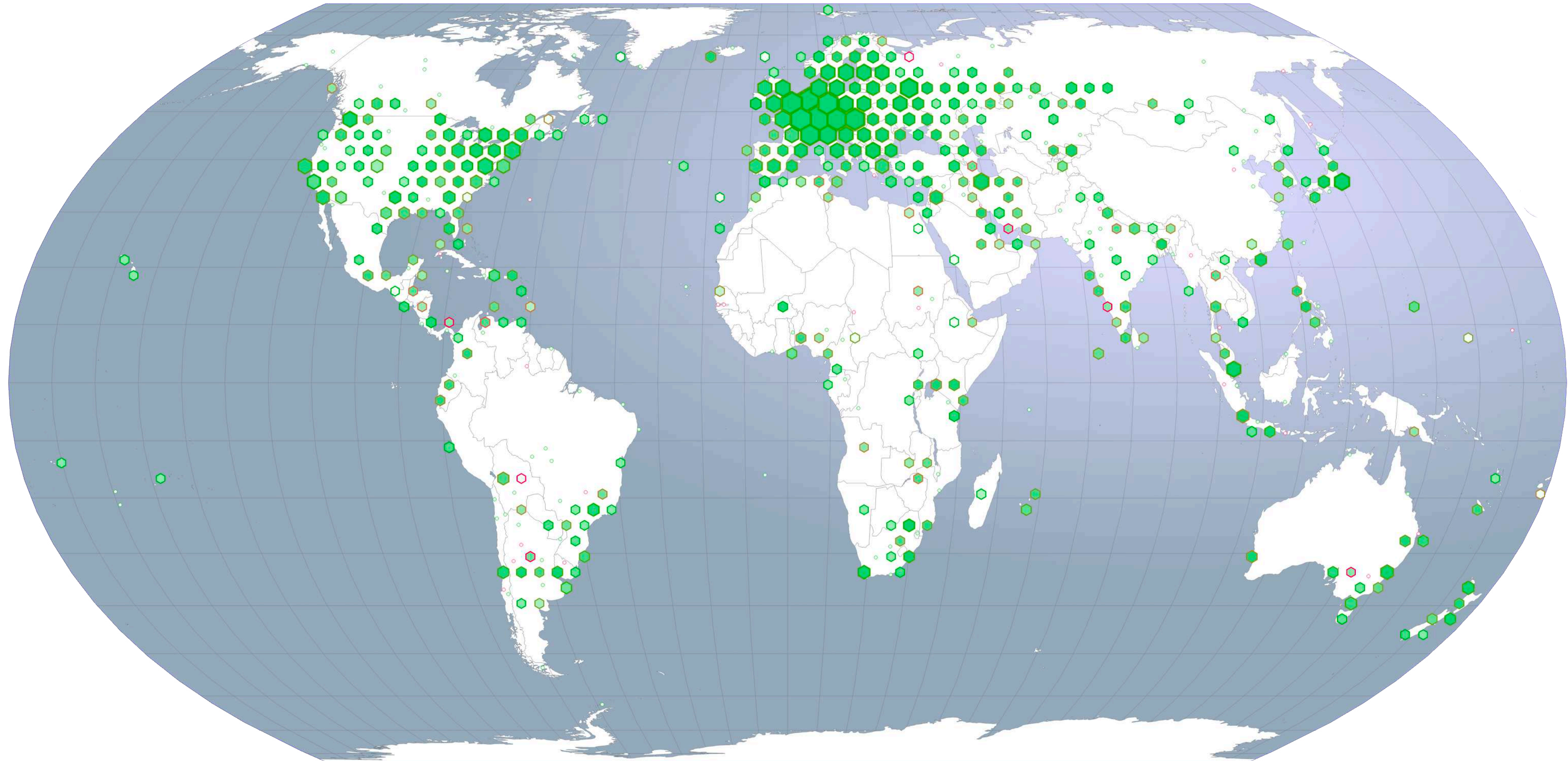
- 10,000+ probes connected (almost 500 Anchors)
- 7,500+ results collected per second
- 21,000+ measurements currently running



RIPE Atlas Overview



RIPE Atlas Global Coverage



Most Popular Features



- Six types of measurements: ping, traceroute, DNS, SSL/TLS, NTP and HTTP (to anchors)
- APIs and CLI tools to start measurements and get results
- Streaming data for real-time results
- Status checks



Using RIPE Atlas As a Visitor

Internet Traffic Maps



RIPE Atlas <<

About RIPE Atlas >

Get Involved >

Probes and Anchors >

Measurements, Maps and Tools v

Measurements

Internet Maps

Tools

Resources >


RIPE NCC Members

My Atlas >

Staff Pages >


Internet Maps

DNS Root Instances




Shows, for each probe, which root DNS server instance the probe ends up querying, when they ask a particular root server. In other words, it shows the "gravitational radius" for root DNS server instances.

Comparative DNS Root RTT




Shows a comparison of response time for DNS SOA queries to all the root DNS servers. For each probe, a marker shows the "best" root server with colour identifying the related minimum response time.

Root Server Performance




This map shows the reply time to the SOA query of a particular root DNS server, over the selected transport protocol (UDP, TCP or comparison of the two) for each probe.

RTT to Fixed Destinations



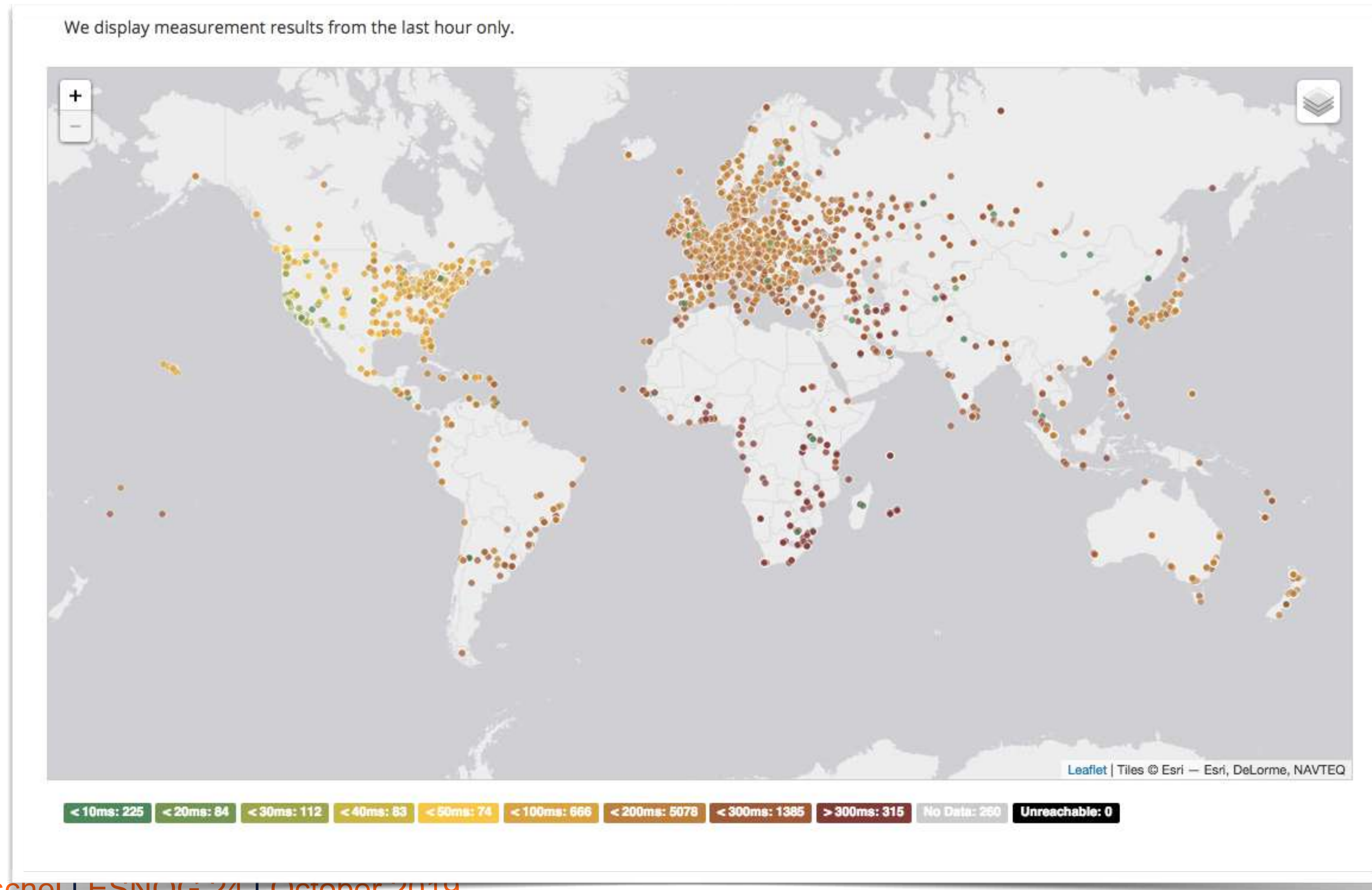
Shows the colour coding for the RTT value for the particular destination for each probe. The minimum / average / maximum values are based on standard "ping" measurements.

Reachability of Fixed Destinations

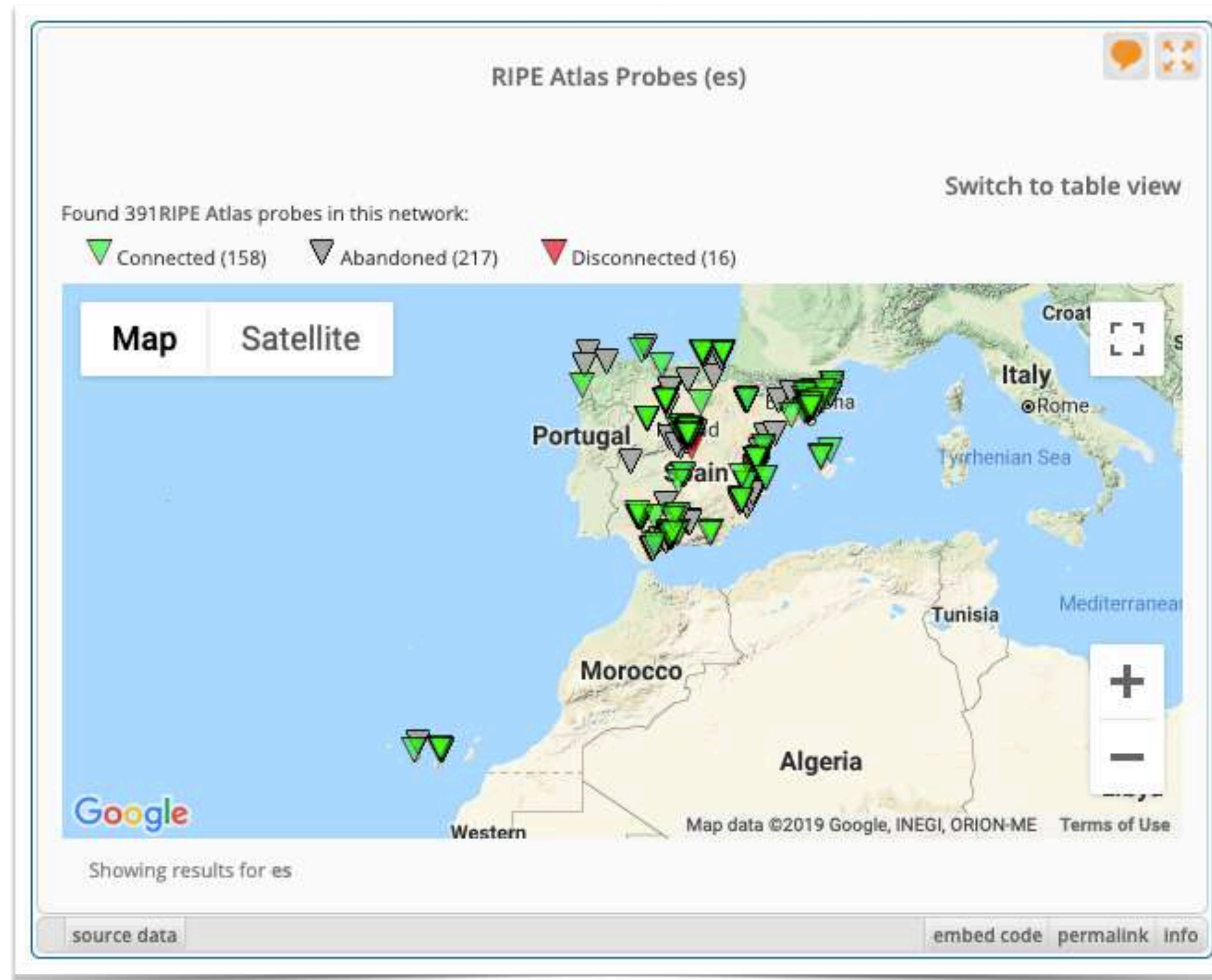


Shows if the particular fixed destination is reachable or not from each probe. Red markers indicate that the specific destination for these probes are unreachable and green reachable.

Where is B-root?

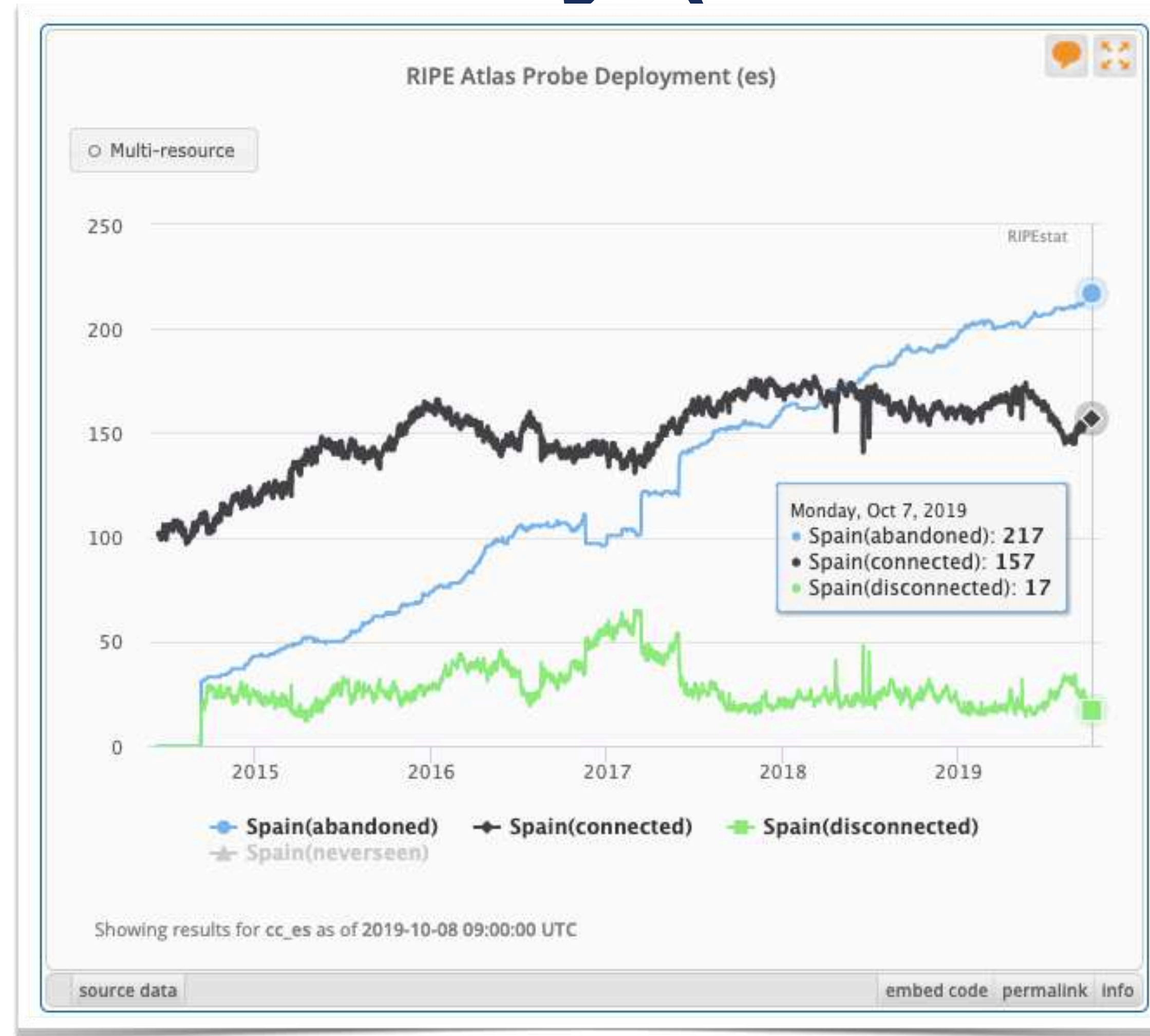


Probes per country (in RIPEstat)



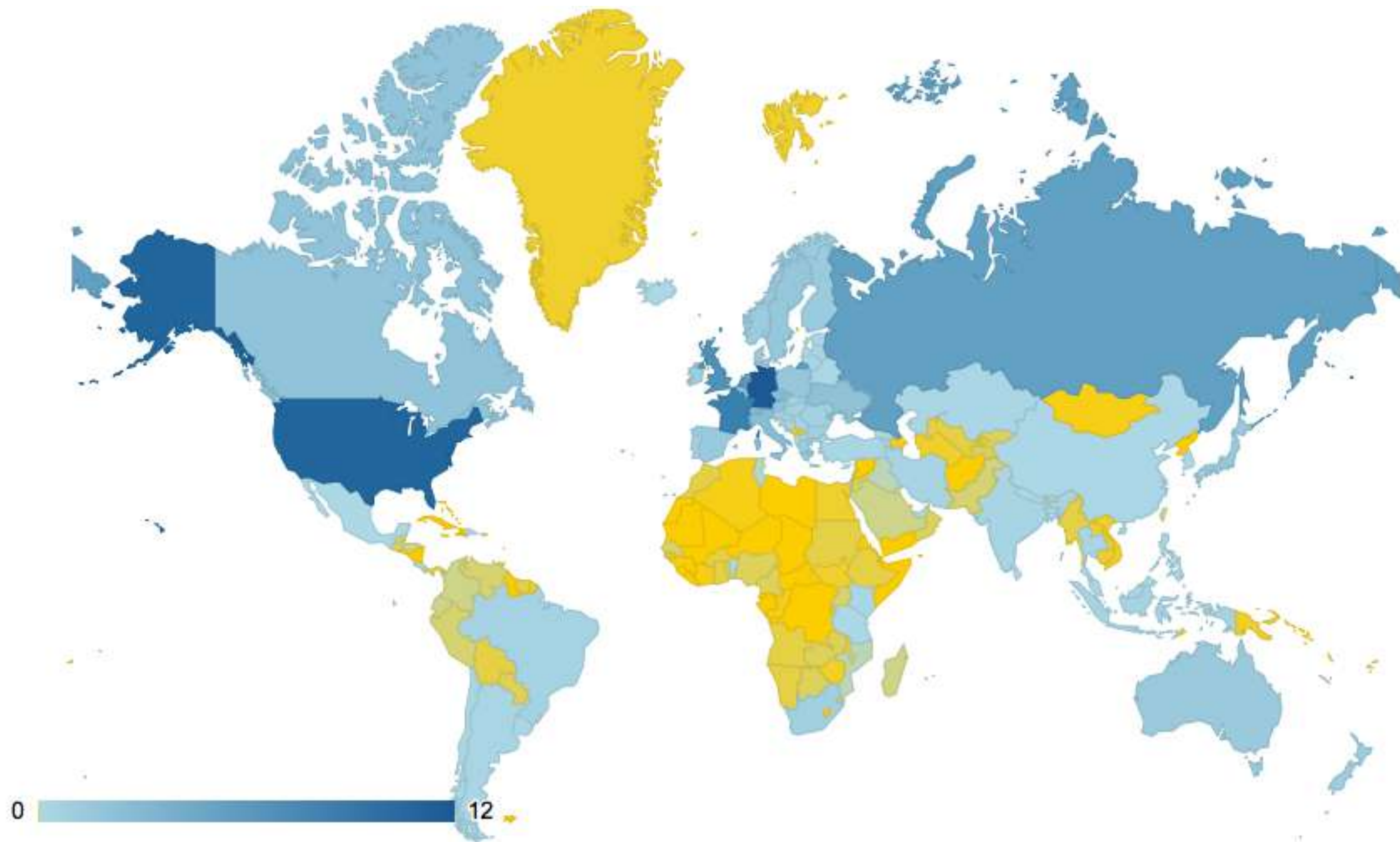
<https://stat.ripe.net/es#tabId=activity>

Probes per country (in RIPEstat)



<https://stat.ripe.net/es#tabId=activity>

Where we want to place probes





Looking Up Public Probes

Searching for Probes



The screenshot shows the RIPE NCC website's 'Probes' page. At the top, there is a search bar for IP addresses or ASNs. Below the navigation menu, a breadcrumb trail indicates the current location: Home > Analyse > Internet Measurements > RIPE Atlas > Probes. The main heading is 'Probes', followed by a brief description and three links: 'Learn more about probes', 'See the probes map', and 'Apply for your own probe'. A filter bar allows users to filter by 'id/asn/country/description', 'Any Status', 'IPv4/v6', and 'Any Country'. Below the filter bar, there are tabs for 'Public' and 'Login to see more'. The main content is a table of probes with columns for Id, ASN v4, ASN v6, Country, Description, and Connection Status. The table lists several probes, including SURFnet bv, Leaseweb Network B.V., and Afilias.

Id	ASN v4	ASN v6	Country	Description	Connection Status
6175	1103	1103	NL	SURFnet bv	4 weeks
6146	60781	60781	NL	Leaseweb Network B.V.	4 weeks
6152	28753	28753	DE	Leaseweb Network B.V.	4 weeks
6137	3333	3333	NL	nl-ams-as3333-preprod	4 weeks
6147	33280	33280	US	Afilias	4 weeks
6112	197216	197216	BG	Delta Softmedia Ltd	4 weeks
6161	27843	27843	SI	Optical Technologies	4 weeks
6142	63403	63403	US	Afilias	4 weeks
6008	2607	2607	MY	AA sk-bts-as2607	4 weeks
6001	3333	3333	NL	AA nl-ams-as3333	4 weeks

Filter based on
ASN, country,
location...

<https://atlas.ripe.net/probes/>

Probe Page



» You are here: Home > Analyse > Internet Measurements > RIPE Atlas > Probes > Probe #10010

Probe #10010 (Register)

General Network Built-in Measurements User-defined Measurements

General Information [Edit](#)

Id	10010
MAC Address	F8:D1:11:A9:F3:2C
Architecture	tl-mr3020
Firmware Version	4680 (1070)
Router Type	
Bandwidth Limit	Not set
DNS Entry	Off
Shared Publicly	Yes

User Tags: [NAT](#) [Chello 200MB](#)

System Tags: [V3](#) [Resolves A Correctly](#) [Resolves AAAA Correctly](#) [IPv4 Works](#) [Auto GEOIP city](#) [IPv4 Capable](#) [IPv4 RFC1918](#)

Connection & Traffic

5 k
2.5 k
0

08:00 12:00

Bits/s Packets/s

Connected Time

3 days, 9 hours

April May

[Update Location](#)

Management Sharing

Only the probe host is permitted to administer this probe. [Edit](#)

3 days, 9 hours

Firmware #10010
4680

Architecture
tl-mr3020

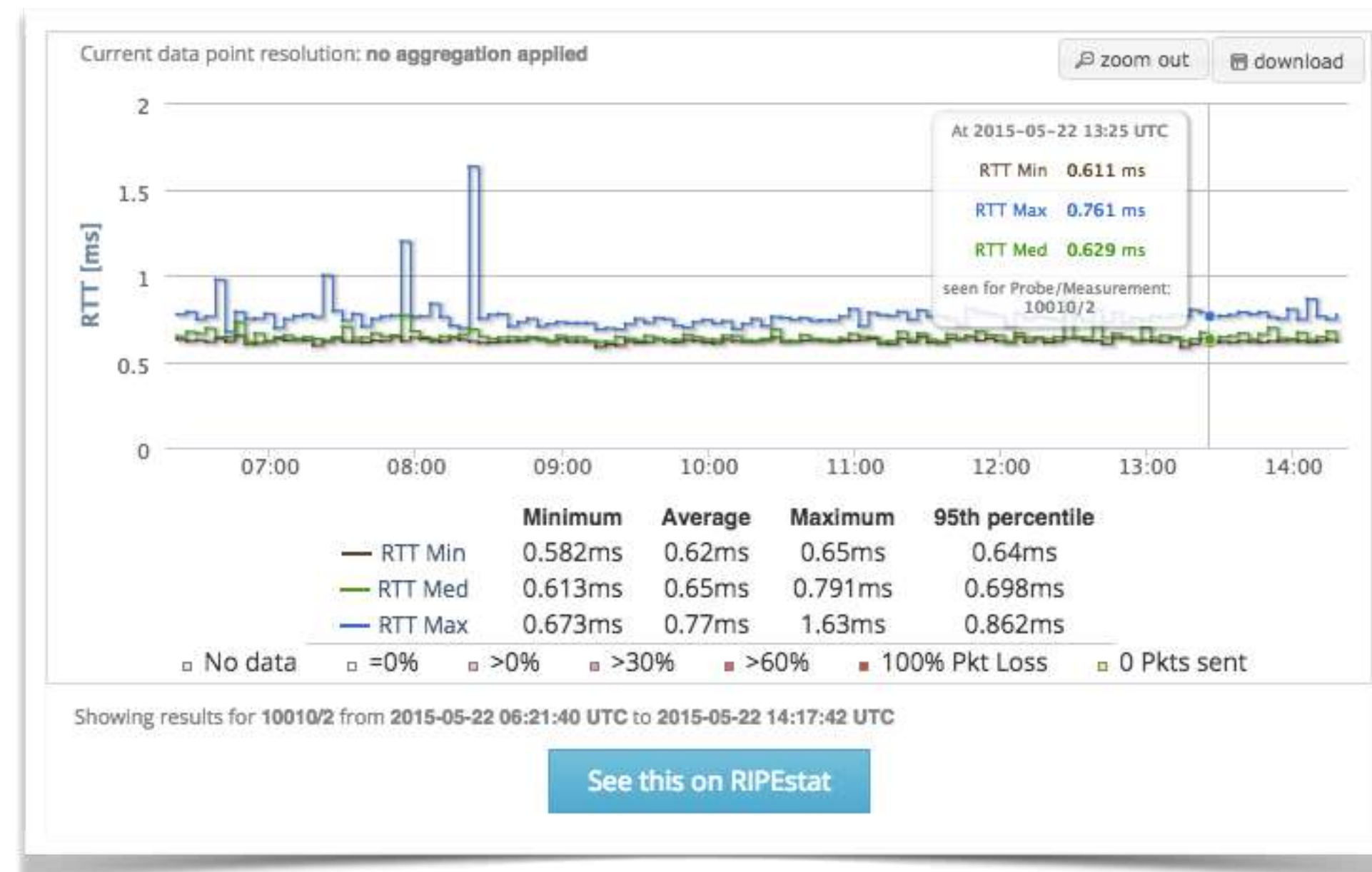
MAC Address
F8:D1:11:A9:F3:2C

The displayed location is an automatic best guess of the city based on IP address. By manually setting a more accurate location you can help to improve the usefulness and correctness of RIPE Atlas.

Zoomable Ping Graph



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

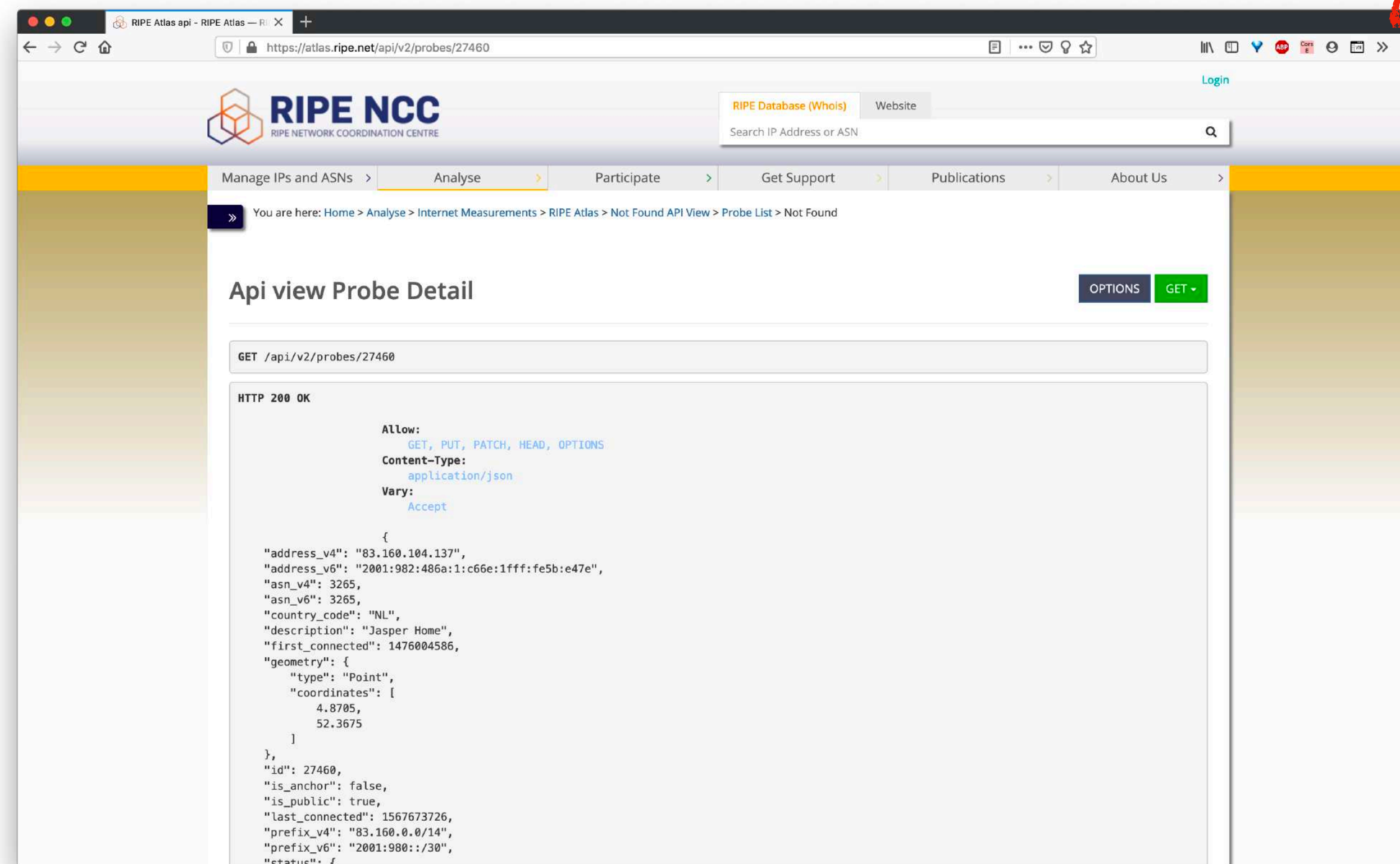


Searching probes with the API



- endpoint `https://atlas.ripe.net/api/v2/probes/`
- different formats, e.g. geojson

also works in a browser!





Finding Results of Public Measurements

Looking up Measurements Results



Manage IPs and ASNs > **Analyse** > Participate > Get Support > Publications > About Us >

>> You are here: Home > Analyse > Internet Measurements > RIPE Atlas > Measurements

Measurements

Search by target Any Status IPv4/v6 All types Of all time

Ping Traceroute DNS HTTP SSL NTP WiFi Built-in Anchoring

ID	Type	Target	Description	Probes	Interval	Time (UTC)	Status
9278562	Ping	www.ripe.net	Ping measurement to www.ripe.net	8	one-off	08-09-2017 14:02 Never	○
9278557	Ping	185.15.245.163	From script for latency checks for Monitoring	35	one-off	08-09-2017 13:58 Never	○
9278556	Ping	123.126.20.54	check unicom	10	one-off	08-09-2017 13:51 08-09-2017 14:00	■
9278555	Ping	r1.d1.de.recast-it.net	From script for latency checks for Monitoring	35	one-off	08-09-2017 13:50 08-09-2017 14:00	■
9278554	Ping	r1.a1.nl.recast-it.net	From script for latency checks for Monitoring	35	one-off	08-09-2017 13:50 08-09-2017 14:00	■
9278553	Ping	2001:6a8:28c0:2017::00:00:FF	Ping 6 BLUE measurement to 2001:6a8:28c0:2017::00:00:FF	956	one-off	08-09-2017 13:49 08-09-2017 13:55	■
9278550	Ping	2001:6a8:28c0:2017::00:00:FF	Ping6 measurement to 2001:6a8:28c0:2017::00:00:FF	484	one-off	08-09-2017 13:42 08-09-2017 13:50	■

<https://atlas.ripe.net/measurements/>

Available visualisations: ping



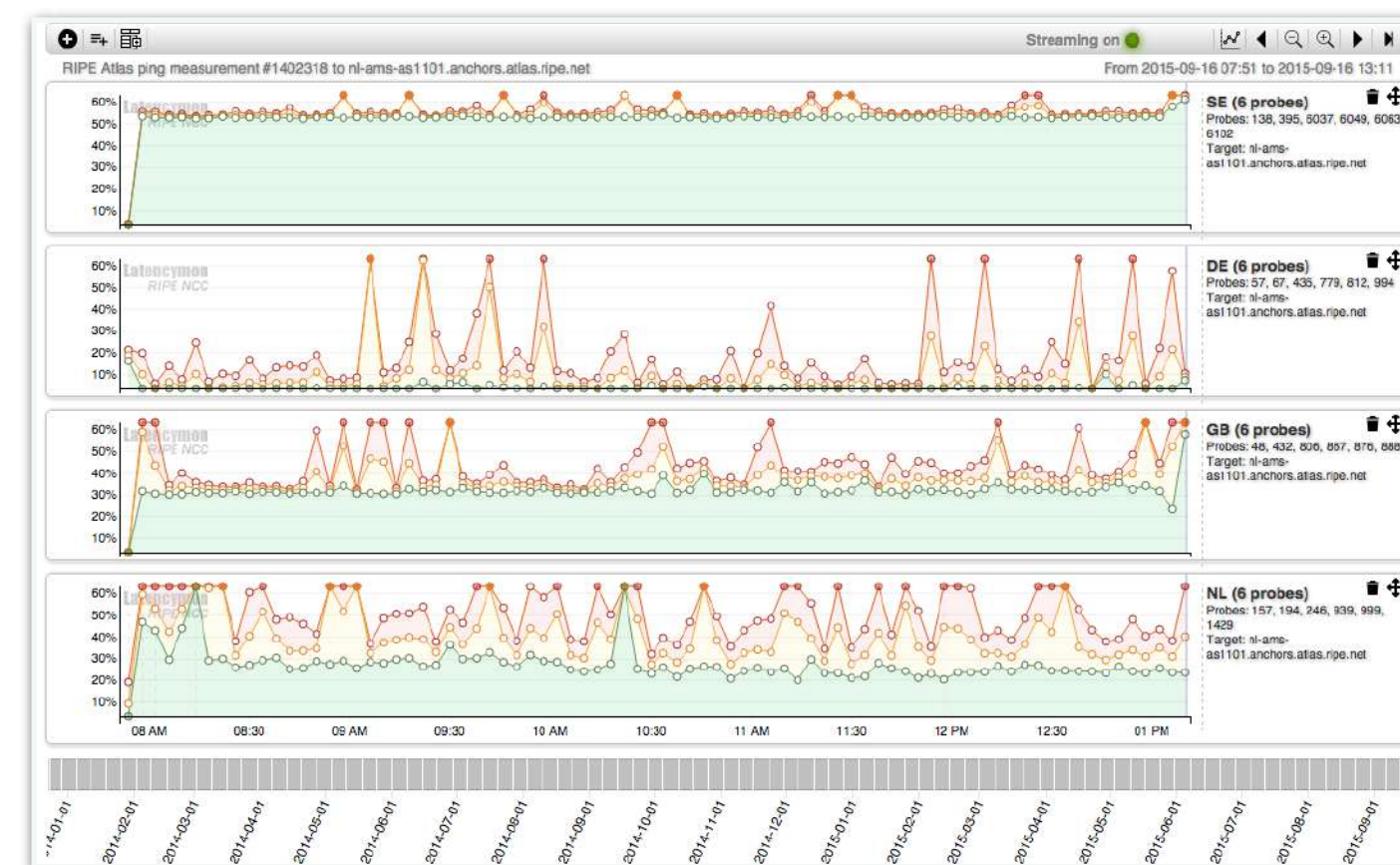
- List of probes: sortable by RTT

Probe	ASN (v4)	ASN (v6)		Time	RTT
6019	3333	3333		2015-05-19 09:23	1.157
6069	59469	59469		2015-05-19 09:23	15.253
6111	198068	198068		2015-05-19 09:23	37.760
6112	197216	197216		2015-05-19 09:23	35.494
10008	3851			2015-05-19 09:23	24.664
10218	6876			2015-05-19 09:23	37.952
10246	39608			2015-05-19 09:23	36.313
10252	50288			2015-05-19 09:23	62.441
10267	12322			2015-05-19 09:23	31.498
10296	51214			2015-05-19 09:23	✗ Unreachable

- Map: colour-coded by RTT



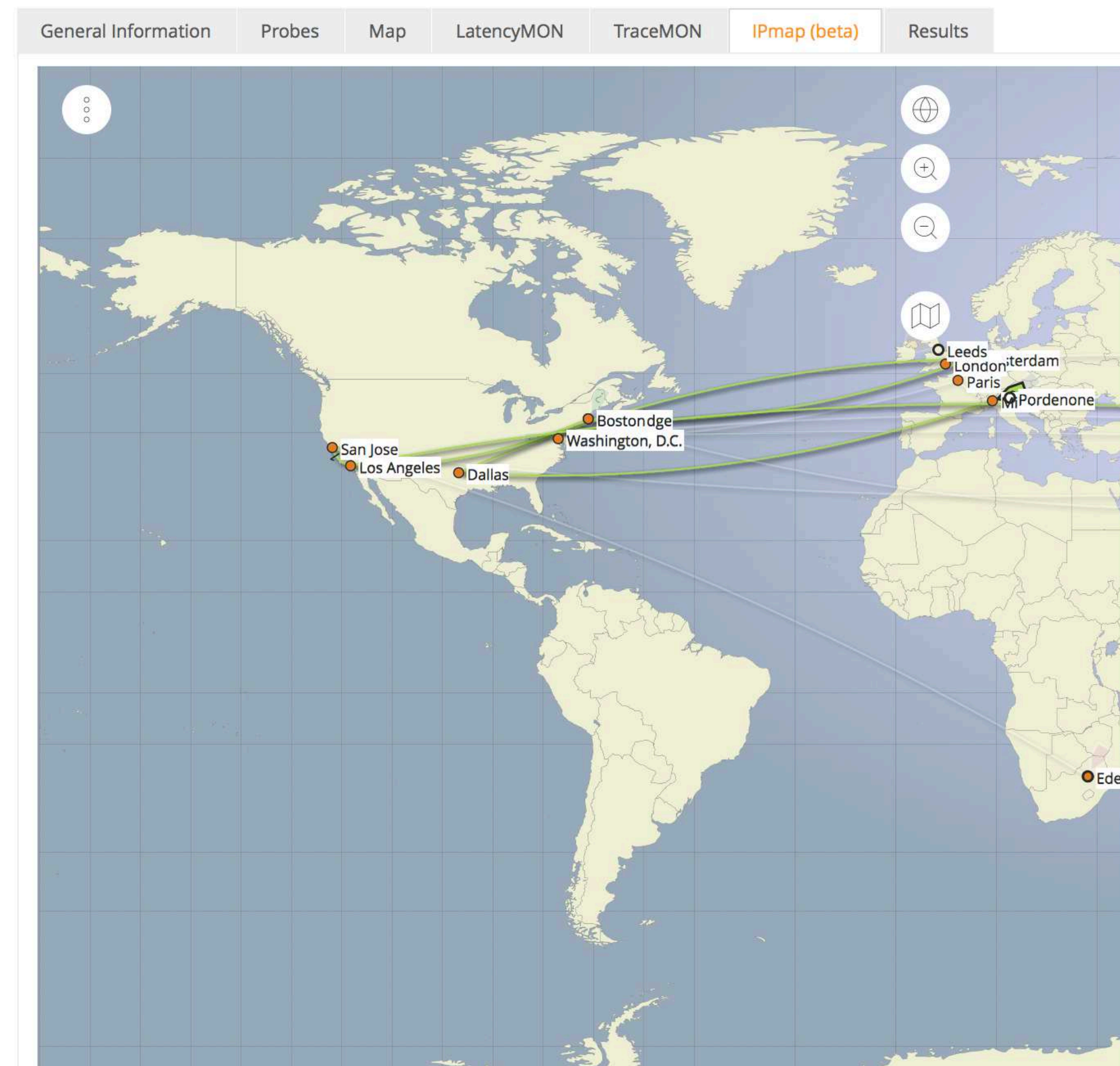
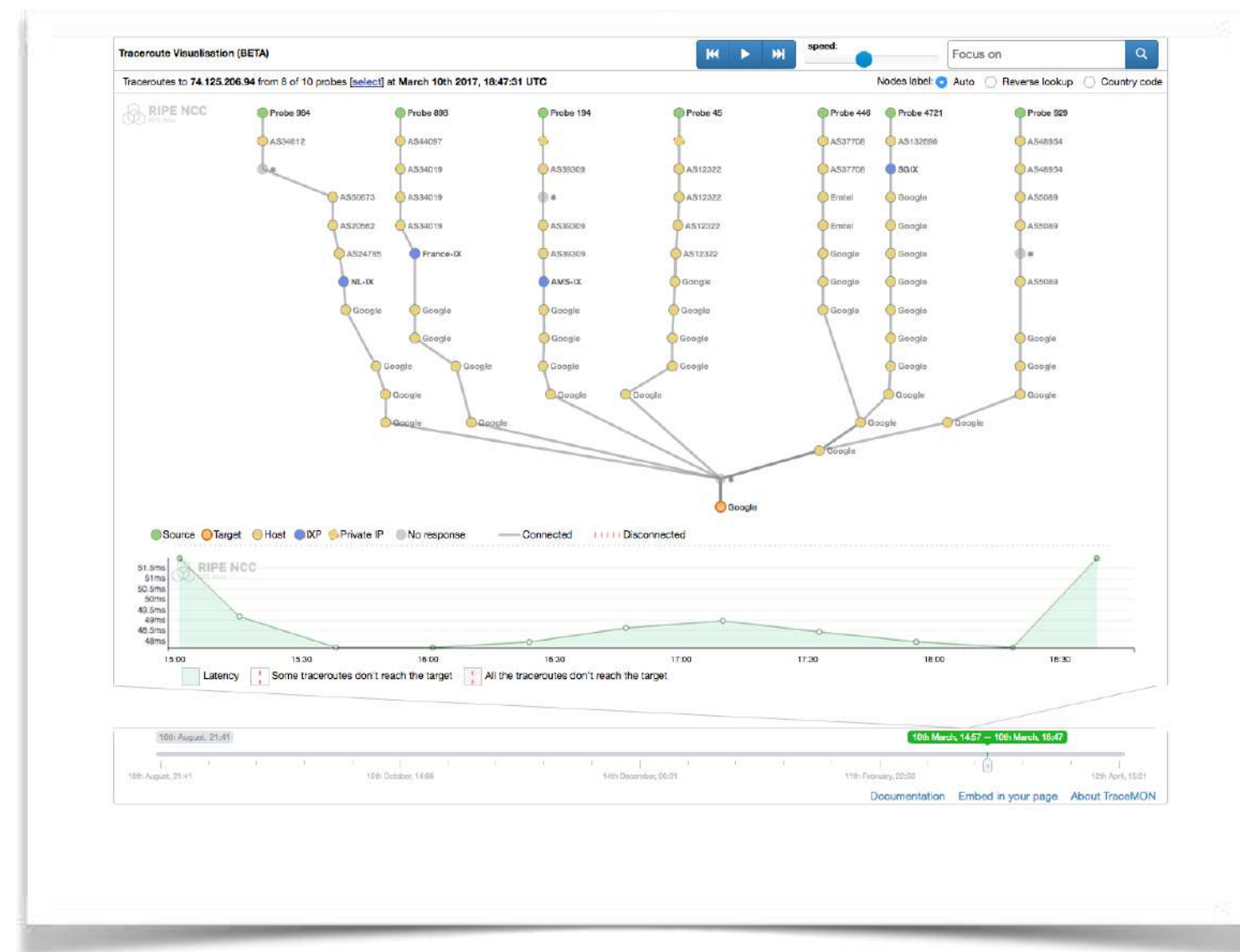
- LatencyMON: compare multiple latency trends



Available visualisations: traceroute



- TraceMON: network topology, latency and nodes information
- IPMap(beta): hops geolocation on map (prototype)



Available visualisations: traceroute



- List of probes, colour-coded number of hops

Probe	ASN (v4)	ASN (v6)	Time	RTT	Hops
2043	3313		2014-08-25 07:44	308.018	21
3246	41135		2014-08-25 07:41	259.912	12
3389	3302		2014-08-25 07:43	285.608	17
4092	37497		2014-08-25 07:40	452.889	19
4228	3269		2014-08-25 07:41	329.862	20
10024	42353		2014-08-25 07:44	×	1

Available visualisations: DNS



- Map, colour-coded response time or diversity
- List of probes, sortable by response time



DNS measurement to ns1.opteamax.de

Probe	ASN (v4)	ASN (v6)	Time	Name	Response Time
17840	6327		2015-05-19 09:38	null	362.009
18035	43030		2015-05-19 09:50	null	347.39
18129	327805		2015-05-19 09:49	null	207.743
15844	32098		2015-05-19 09:48	null	184.237
17857	852		2015-05-19 09:37	null	177.694
19894	6327		2015-05-19 09:36	null	168.689
19204	21513		2015-05-19 09:50	null	141.199
15922	30036		2015-05-19 09:47	null	133.309

Downloading Measurements Results



- Click on “Results”, then “Download”
- Or URL
- Or API
- Results in JSON
- Libraries for parsing

⚡⁶ Calibration for anchoring measurement: IPv6 Traceroute for ke-nbo-as37578.anchors.atlas.ripe.net

General Information Probes Map OpenIPMap Prototype **Results**

Download the raw measurement result data here.

You can use this form to download the data through your browser, or use the preview on the right to help you query the REST API directly.

Select Your Timeframe

Start Date*: 2017-09-13 (start time of this measuremer) All dates are start-of-day

Stop Date*: 2017-09-13 (start time of this measuremer) All dates are end-of-day

Format: json

URL Preview

```
https://atlas.ripe.net/api/v2/measurements/9304064/results/?start=1505260800&stop=1505347199&format=json
```

Download

Looking at the Result



Destination (IP
& name)

```
[{"af":6,"avg":61.32,  
"dst_addr":"2a00:1450:4004:802::1014","dst_name":"www.google.com",  
"dup":0,  
"from":"2001:8a0:7f00:b201:220:4aff:fec5:5b5b",  
"fw":4660,"lts":411,  
"max":62.148,"min":60.372,  
"msm_id":1004005,"msm_name":"Ping",  
"prb_id":722,"proto":"ICMP","rcvd":10,  
"result":[{"rtt":62.148}, {"rtt":61.437}, {"rtt":61.444}, {"rtt":61.448}, {"rtt":61.477}, {"rtt":60.372}, {"rtt":60.373}, {"rtt":61.384}, {"rtt":61.267}],  
"sent":10,"size":64,  
"src_addr":"2001:8a0:7f00:b201:220:4aff:fec5:5b5b",  
"step":240,"timestamp":1410220847,"ttl":54,"type":"ping"},
```

Source (probe
public IP address)

Reference
(msm ID)

Packet loss:
difference
between sent &
received!

Search for Measurements by Target in RIPEstat



RIPEstat — Internet Measurements and Analysis

https://stat.ripe.net/widget/atlas-targets#w.resource=8.8.8.8

You are here: Home > Data & Tools > RIPEstat > atlas-targets

RIPE Atlas Measurement Targets (8.8.8.8)

8.8.8.8

Show 10 targets/page Search:

Measurement ID	Stopped	Type	Target IP	Target Hostname
1040720	ongoing	ping	8.8.8.8	google-public-dns-a.google.com
1006491	ongoing	traceroute	8.8.8.8	not specified
1006192	ongoing	ping	8.8.8.8	not specified
1004827	ongoing	traceroute	8.8.8.8	not specified
1002630	ongoing	ping	8.8.8.8	not specified
1478085	2014-02-24 13:41 UTC	dns	8.8.8.5	not specified

Go to “RIPEstat > RIPE Atlas Activity”

Finding one specific measurement



- If you know the measurement ID:
 - <https://atlas.ripe.net/measurements/ID>
 - <https://atlas.ripe.net/measurements/2340408/>

Use Existing Measurements



- Many measurements already running!
- Search for existing public measurements first...
- Only then schedule your own measurement



Creating a Measurement

Benefits of your own measurements



- Customer problem: cannot reach your server
 - Schedule measurements (pings or traceroutes) from up to 1,000 RIPE Atlas probes worldwide to check where the problem is
- Measuring packet loss on suspected “bad” link
- Testing anycast deployment

Logging In



- Log in to atlas.ripe.net
 - Use your RIPE NCC Access account
 - Same account for LIR Portal, RIPE Atlas, RIPEstat, RIPE Labs...
 - Create an account if you don't already have one

The screenshot shows the RIPE Atlas website. The header includes the RIPE NCC logo and a search bar. The main content area features a 'Welcome to RIPE Atlas!' message, a 'Log In' button, and a 'Use Cases' section. A sidebar on the left lists navigation options like 'RIPE Atlas', 'About RIPE Atlas', and 'Get Involved'. A 'Statistics' section on the right displays metrics such as 'Probes connected to RIPE Atlas: 9397' and 'Measurements currently running: 11986'. The 'Current Sponsors' section includes the ICANN logo.

The screenshot shows the RIPE Atlas login page. The header includes the RIPE NCC logo and a search bar. The main content area features a 'Sign in using your RIPE NCC Access account' heading, a 'Log In' button, and a 'Forgot your password?' link. A sidebar on the left lists navigation options like 'Manage IPs and ASNs', 'Analyse', and 'Participate'. A 'New: Two-step verification. Learn more...' banner is visible at the bottom.

Credits system



- Measurements cost credits
 - ping = 10 credits, traceroute = 20, etc.
- Why? Fairness and to avoid overload
- Spending limit and max number of measurements

Credits overview



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

RIPE Database (Whois) Website

Search the content of this website

Manage IPs and ASNs > **Analyse** > Participate > Get Support > Publications > About Us

You are here: Home > Analyse > Internet Measurements > RIPE Atlas > My Atlas > My Credits

RIPE Atlas <<
About RIPE Atlas >
Get Involved >
Probes and Anchors >
Measurements, Maps and Tools >
Resources >
RIPE NCC Members
My Atlas >
Credits
API Keys
Messages
Anchors
Settings
Staff Pages >

Credits

Here you can see the history of your credit use and current consumption, transfer credits to someone else, and redeem a voucher for credits if you have one.

153,033,561
9,000.00 credits / hour

History Charts & Archives Transfer Standing Order Redeem voucher

Page 1 of 26

Comm	Change	Balance
Prob	+ 108,000	153,033,561
Probe ID	+ 108,000	152,925,561
Probe ID:6019 Anchor uptime 5x extra credit	+ 108,000	152,817,561
Probe ID:6019 Anchor host 5x extra credit	+ 108,000	152,709,561
2016-02-02 01:02 UTC Probe ID:6019 Anchor uptime 5x extra credit	+ 108,000	152,601,561
2016-02-02 01:02 UTC Probe ID:6019 Anchor host 5x extra credit	+ 108,000	152,493,561
2016-02-01 01:02 UTC Probe ID:6019 Anchor uptime 5x extra credit	+ 108,000	152,385,561
2016-02-01 01:02 UTC Probe ID:6019 Anchor host 5x extra credit	+ 108,000	152,277,561

Scheduling a measurement with the web interface



- Log in to atlas.ripe.net
- Navigate to Measurements, Maps and Tools -> Measurements in the left hand sidebar
- Click the green 'Create a Measurement' on the right side of the page

Scheduling a measurement (2)



1

2

Create a New Measurement

Step 1 Definitions

▼ Ping measurement to bbc.co.uk

Target:
bbc.co.uk
An IP address or hostname

Description:
Ping measurement to bbc.co.uk

Address Family*:
IPv4

Interval:
240
How often this should be done (seconds between samples). Note that this value is ignored for one-off measurements.

Packets:
3

Size:
48

Resolve on Probe:
Force the probe to do DNS resolution.

[Advanced Options](#)

+ Ping + Traceroute + DNS + SSL + HTTP + NTP

Step 2 Probe Selection

Worldwide 10

+ New Set - wizard + New Set - manual + IDs List + Reuse a set from a measurement

Step 3 Timing

This is a One-off:

Start time (UTC): As soon as possible

Stop time (UTC): Never

> Measurement API Compatible Specification

3 Create My Measurement(s)

Costs summary

Daily cost: 10800 credits

You will run out of credits in about 124 days

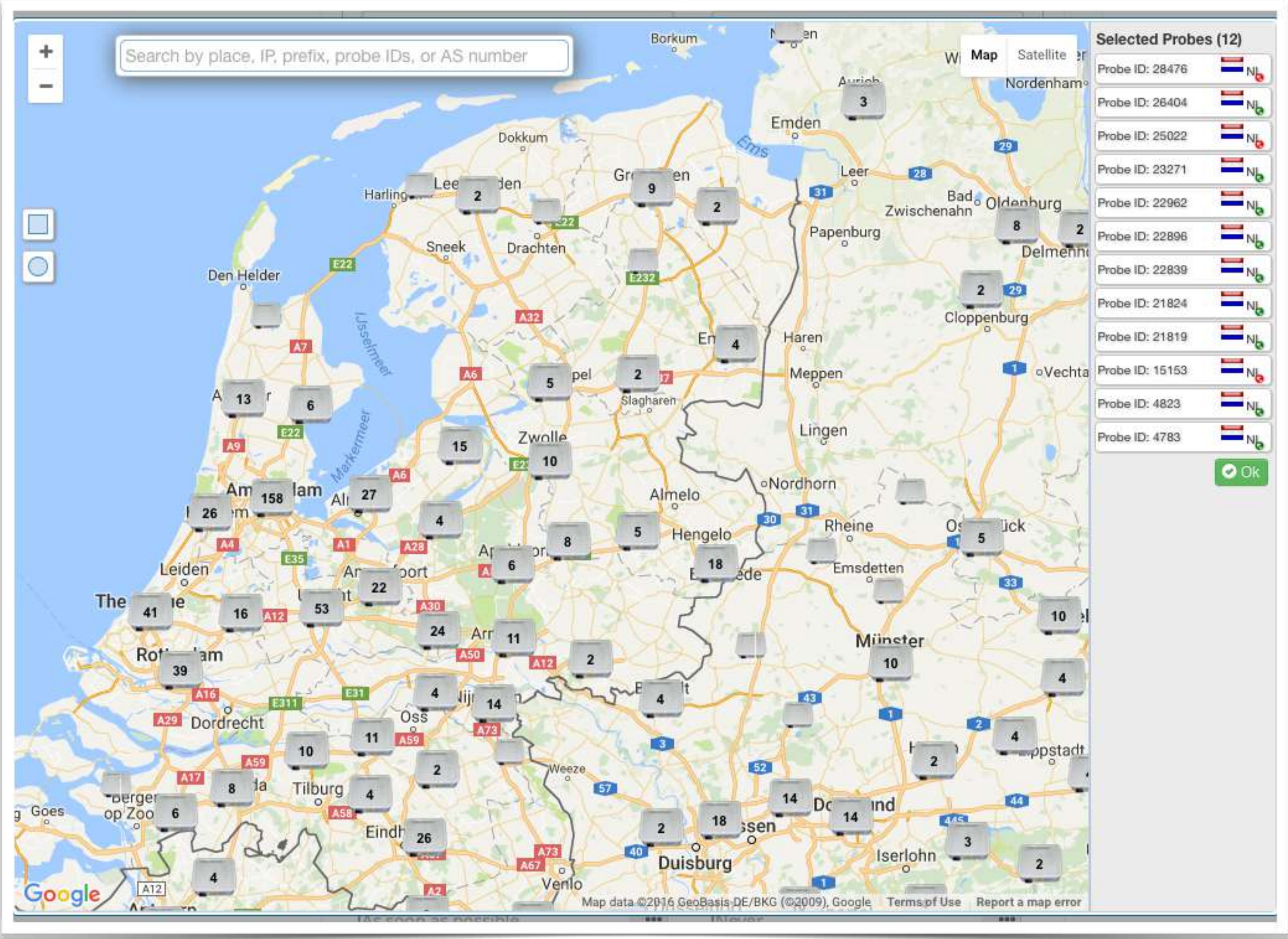
Users who will supply credits for this measurement:
ferenc@ripe.net



Scheduling a measurement (3)

- Recurring measurement: mostly used for a periodic, long-term measurement, or..
- One-off measurement: one run on all selected probes.
- Choose type, target, frequency, start/end time, # of probes, region...
- Each measurement will have **unique ID**
- “**API Compatible Specification**” is generated too

Selecting probes with new-set-wizard





Use Cases

Use cases (1)



Using RIPE Atlas to Validate International Routing Detours

[Anant Shah](#) — 30 Jan 2017

A Quick Look at the Attack on Dyn

[Massimo Candela](#) — 24 Oct 2016

Contributors: [Emile Aben](#)

Using RIPE Atlas to Monitor Game Service Connectivity

[Annika Wickert](#) — 14 Sep 2016

Using RIPE Atlas to Measure Cloud Connectivity

[Jason Read](#) — 06 Sep 2016

Using RIPE Atlas to Debug Network Connectivity Problems

[Stéphane Bortzmeyer](#) — 10 May 2016

RIPE Atlas IXP Country Jedi (1)



- Do paths between ASes stay in country?
- Any difference between IPv4 and IPv6?
- How many paths go via local IXP?
- Could adding peers improve reachability?

<https://www.ripe.net/ixp-country-jedi>

- Experimental tool
 - Feature requests welcome!
 - Depends on probe distribution in country

RIPE Atlas IXP Country Jedi (2)

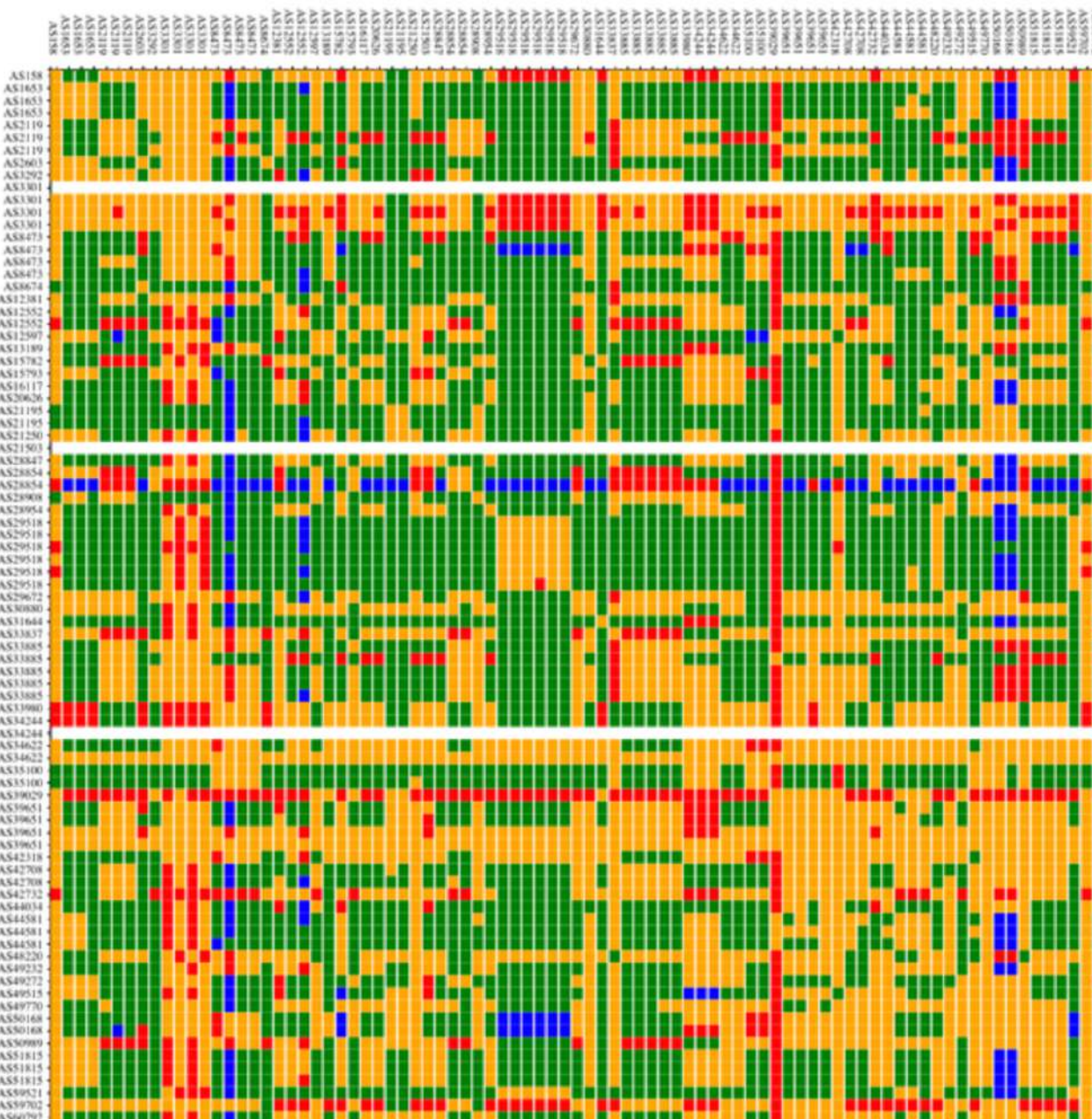


- Methodology
 - Trace route mesh between RIPE Atlas probes
 - Identifying ASNs in country using RIPEstat
 - Identifying IXP and IXP LANs in PeeringDB



Figure 1: Visual representation of IPv4 paths (left) and IPv6 paths (right) between selected RIPE Atlas probes in Sweden

■ IXP IPs: YES, out-of-country IPs: NO
■ IXP IPs: NO, out-of-country IPs: NO
■ IXP IPs: YES, out-of-country IPs: YES
■ IXP IPs: NO, out-of-country IPs: YES



Use Cases (2)



- DDoS Attack on Dyn DNS Servers (Oct. 2016)
 - 10s millions devices - Mirai botnet
 - Legitimate requests



Use Cases (3)



- Monitor Game Service Connectivity (Sept. 2016)
- Requirements:
 - Check General Reachability, Latency, Historical data
 - Supported by an active and helpful community
 - Integrate with their existing logging system
- Track down an outage in one upstream
- Became sponsors



Use Cases (4)



- Amsterdam Power Outage (March 2015)
- When and where the outage was happening





Take Part in the RIPE Atlas Community

RIPE Atlas community (part 1)



- Volunteers host probes in homes or offices
- Organisations host RIPE Atlas anchors
- Sponsor organisations give financial support or host multiple probes in their own networks

RIPE Atlas community (part 2)



- Ambassadors help distribute probes at conferences, give presentations, etc.
- Developers contribute free and open software
- Network operators create measurements to monitor and troubleshoot
- Researchers and students write papers



Hosting a probe

- Create a RIPE NCC Access account
- Go to <https://atlas.ripe.net/apply>
- You will receive a probe by post
- Register your probe
- Plug in your probe
- If you receive a probe from an ambassador (trainer, sponsor, someone at a conference), just register it and plug it in!



Questions



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