



# RIPE Atlas

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MAT-WG

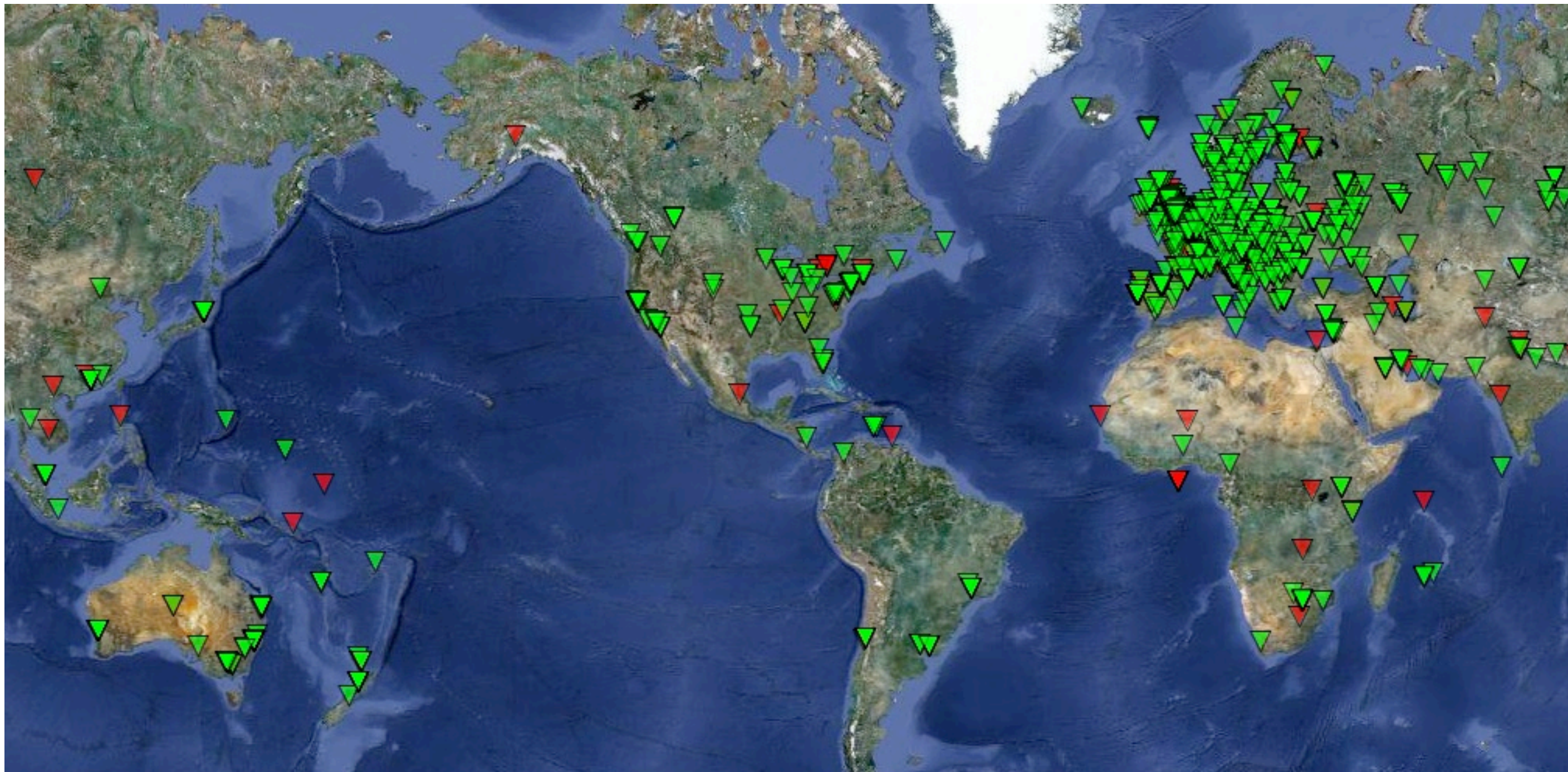
RIPE66, Dublin,  
16 May 2013

Vesna Manojlovic  
@Ms\_Measurements





# RIPE Atlas Deployment





# RIPE Atlas: May 2013

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- 3,000+ probes up and active
  - 1,100+ IPv6-capable probes
- 6,700+ registered users
  - 2,500+ users are from LIRs
- Four types of customised measurements available to **probe hosts** and **RIPE NCC members**:  
ping, traceroute, DNS, SSL

# RIPE Atlas Participation and Benefits

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- Anyone can become a RIPE Atlas probe host
- Major personal and operational benefit:  
See your network from the outside!
  - Have at your fingertips ~3,000 external vantage points to do pings & traceroutes towards your network
- Data of built-in measurements available to **everyone**
  - \_ Maps, data from public probes, API to download raw data

# RIPE Atlas News

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# Quick Look Measurements

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- For RIPE NCC members, via LIR Portal
- Instantaneous view of your target
  - for example, [www.taoiseach.ie](http://www.taoiseach.ie)
- Ping from 100 random probes
- Real-time display of results as they roll in
  - Map and table view (ProbeID, ASN, country, RTT)
  - also as JSON download
- <https://labs.ripe.net/Members/kistel/ripe-atlas-quick-look-for-members>



My measurements

Public measurements

1009045 - Can Ireland reach the Taoiseach? 

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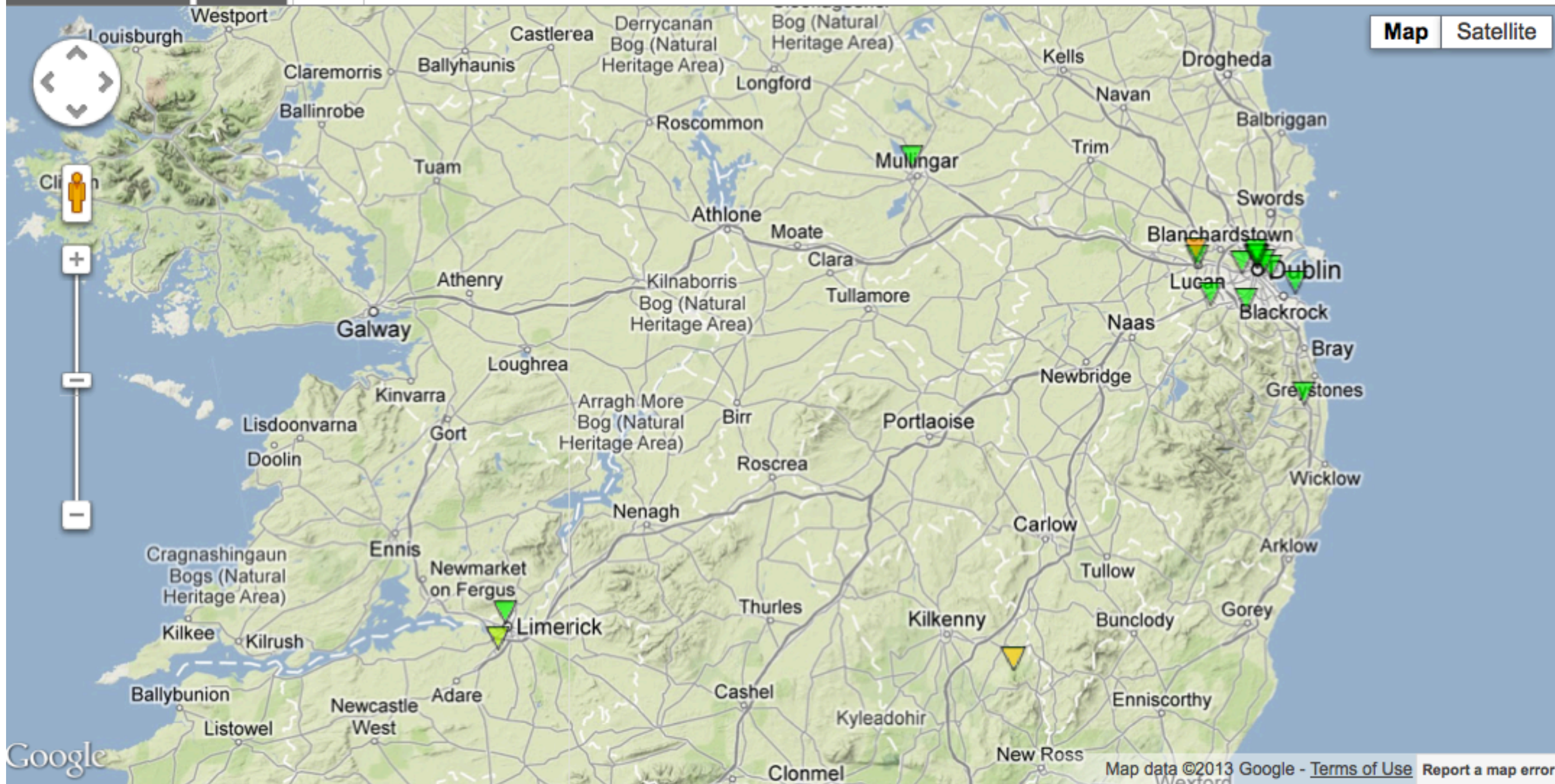
General Information

Probes

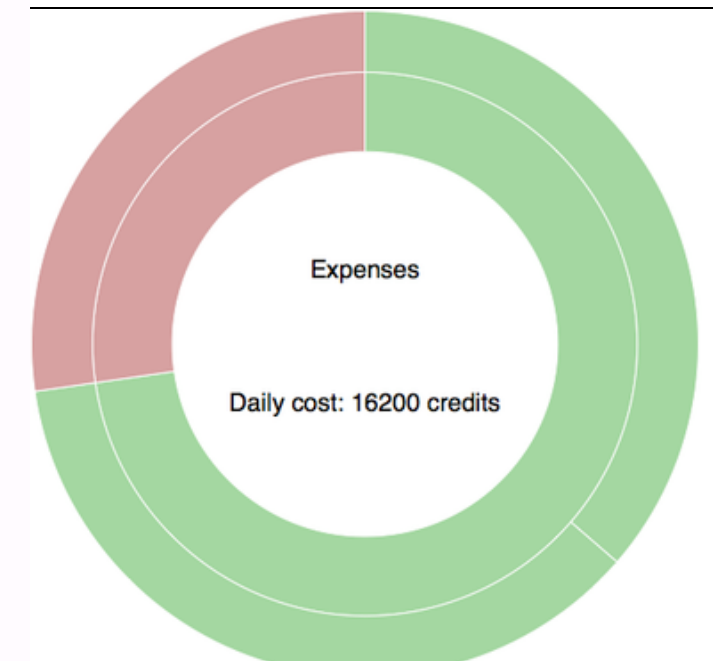
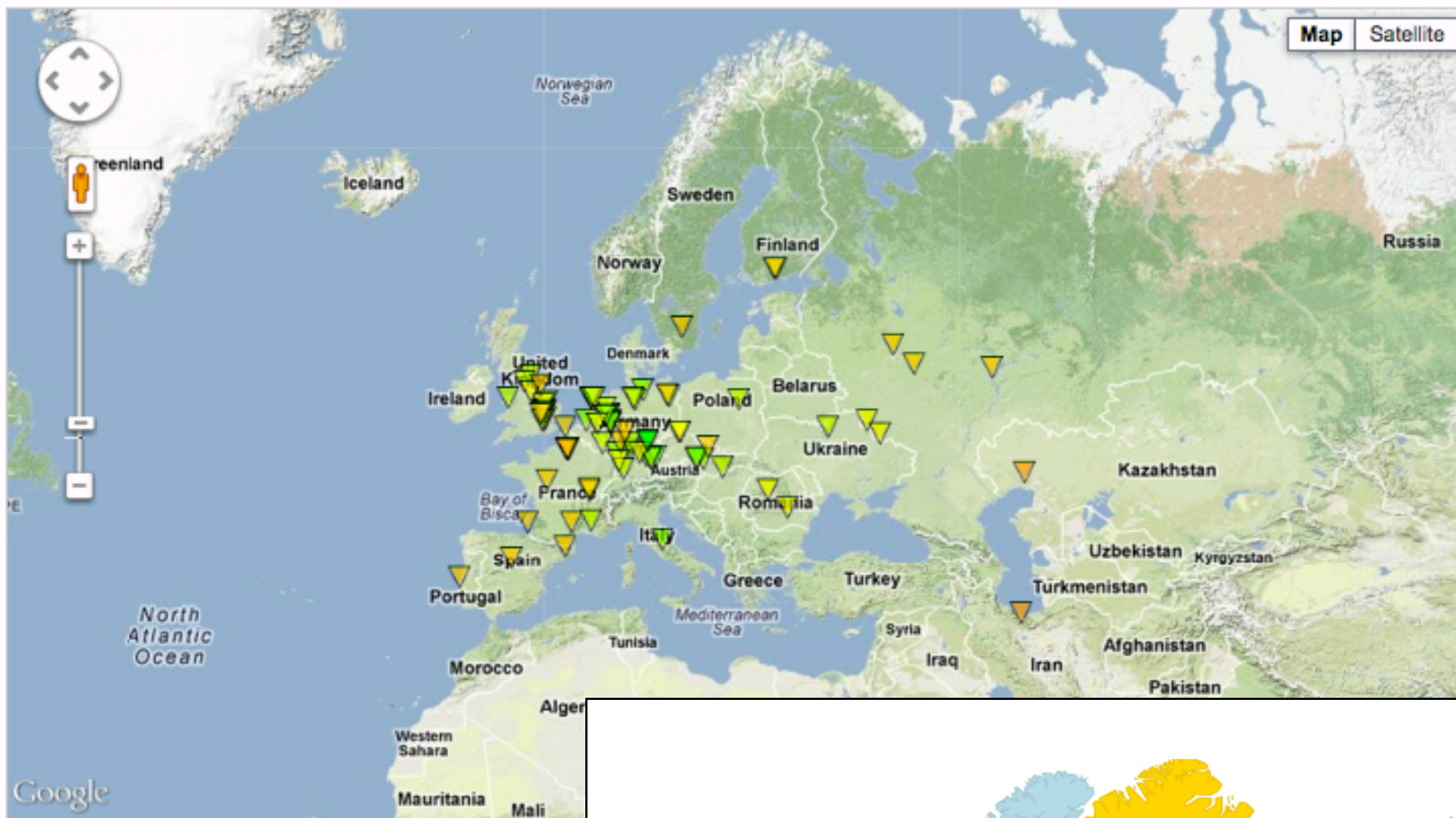
Map

Map

Satellite

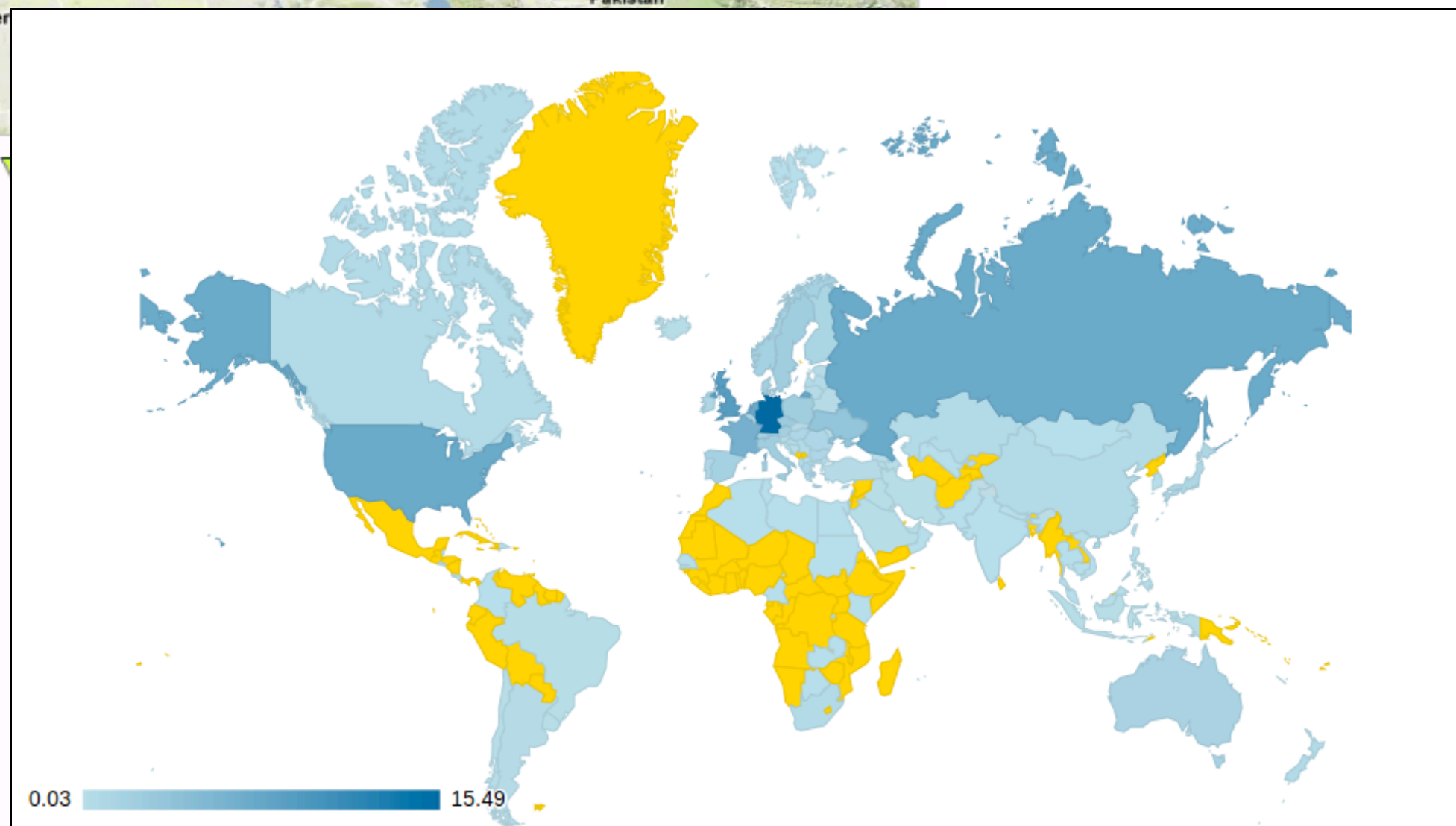






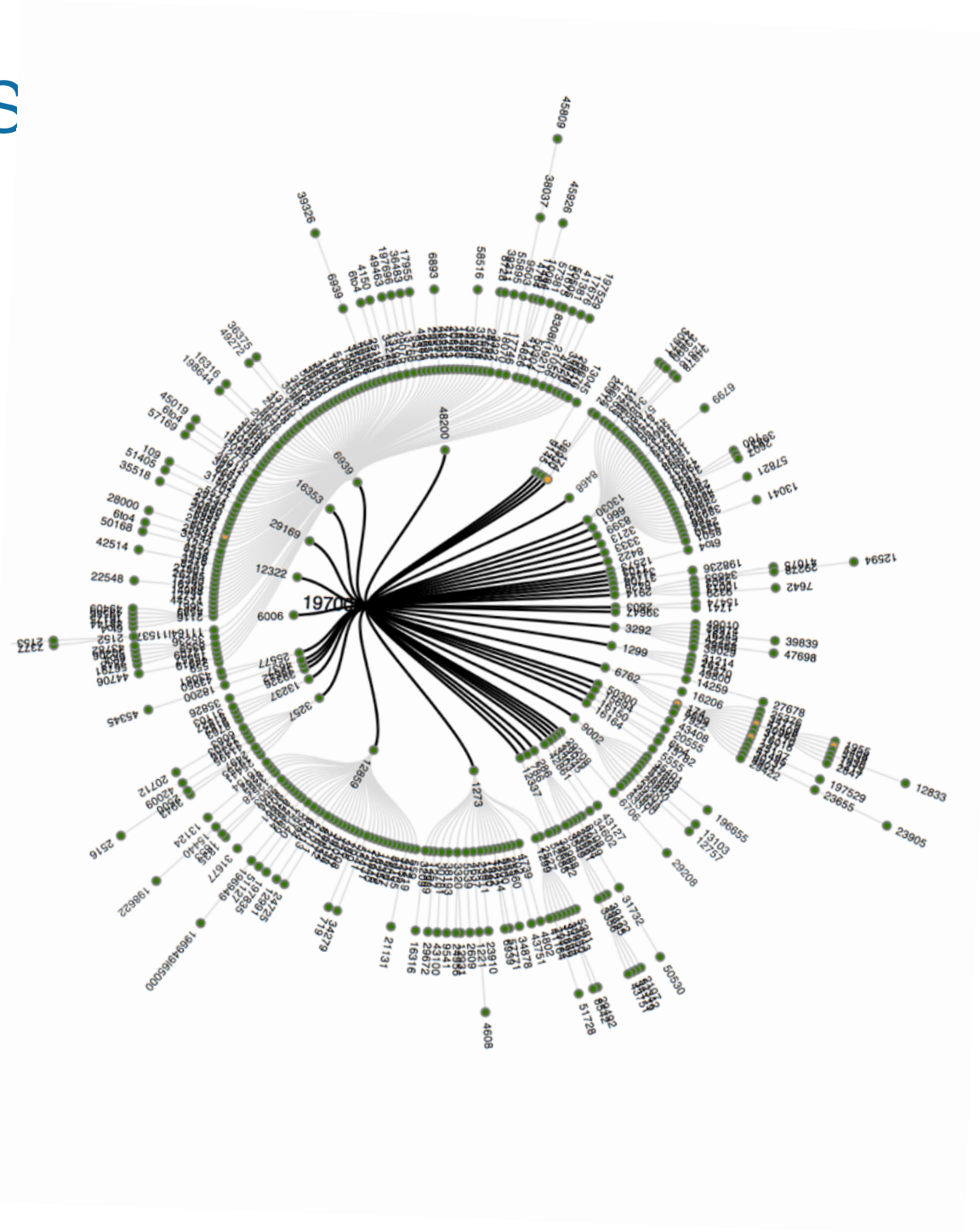
Minimum RTT (ms): ▼ <=10ms ▼ <=20 ▼ <=30

Probe	ASN	Flag	Power	Link	RTT (ms)
2074	33988				5.345
2112	12579				11.38
2009	3333				14.814
2139	24961				15.983
2034	39138				17.241
2267	8767				17.795
2179	8767				17.895
2011	3320				18.341
2060	25180				19.349
2134	8897				19.531



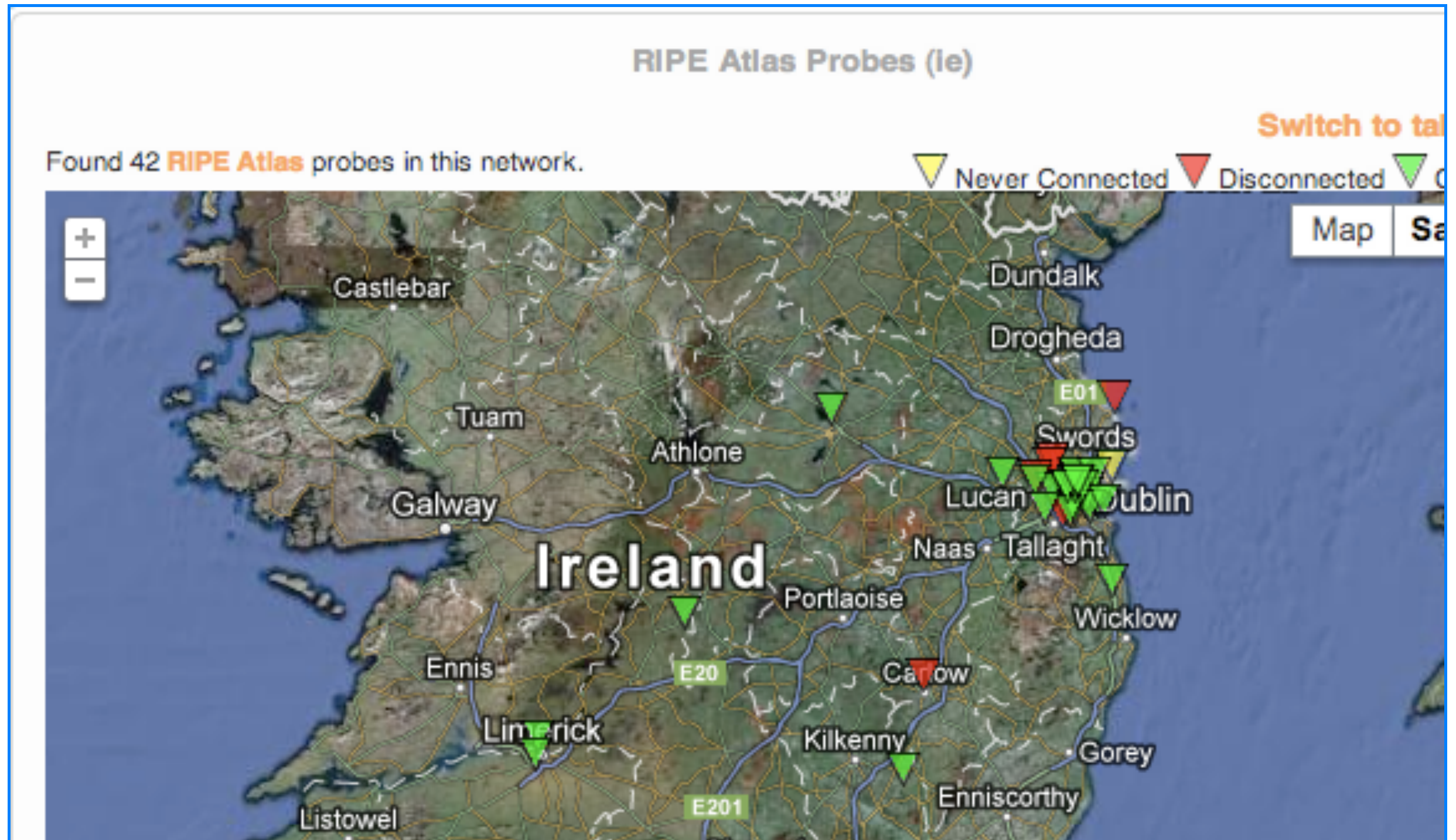
# RIPE NCC Member-Specific Services

- Quick Look measurements
- One-click kilo-traceroute:  
"Test your IPv6"
- Get 1,000,000 credits
- Apply for probe via the LIR Portal
- <https://lirportal.ripe.net/atla>





# Visible in RIPEstat: 42 probes in Ireland



# Many More New Features

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- One-off measurements
- REST API available for creating measurements
- Probe sharing with LIR colleagues
- [Published source code for probe software](#)
- Increased spending limits
- New visualisations (UDMs, countries...)
- New front page, content and navigation
- Personal dashboard view for logged-in users

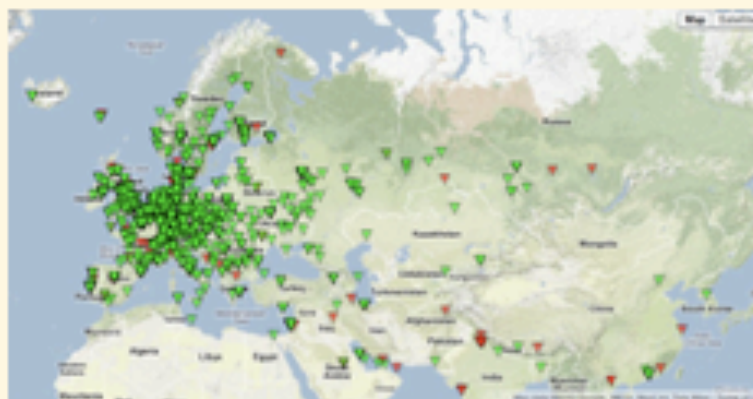


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## RIPE Atlas

With your help, the RIPE NCC is building the largest Internet measurement network ever made. RIPE Atlas employs a global network of probes that measure Internet connectivity and reachability, providing an unprecedented understanding of the state of the Internet in real time.

[View more RIPE Atlas maps](#) →

### System Statistics

Probes connected to  
RIPE Atlas

3033

Measurements  
currently running

1234

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## Measurements

0 
 4 
 0

	IPv4	belastingdienst.nl	20160.0 credits/day	28 March 2013 14:40	✓
	IPv4	test ts	28800.0 credits/day	17 December 2012 13:39	✓
	IPv4	test	2400.0 credits/day	28 June 2012 13:55	✓
	IPv4	piratebay.se	14400.0 credits/day	16 May 2012 16:13	✓

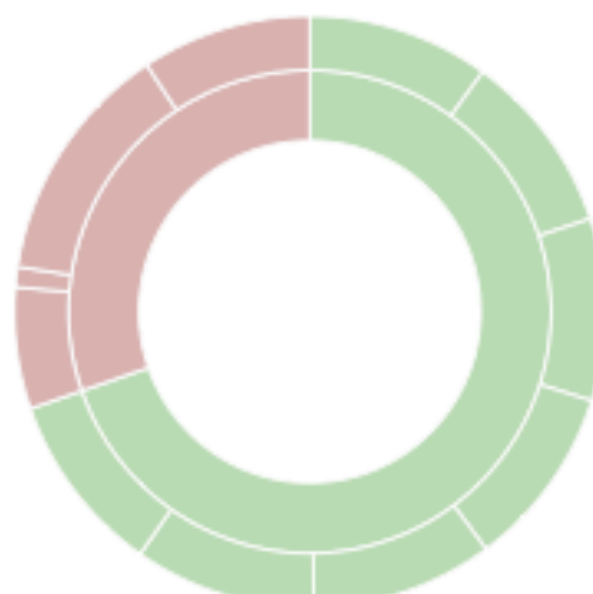
## Probes

2 
 13

	Andreas' Home	2 days, 12 hours	✓
	xs4all adsl 16/2 IPv6	1 day, 8 hours	✓
	Bert's home; xs4all vDSL 40/4 IPv6	1 day, 8 hours	✓
	BECHA's home	1 day, 8 hours	✓
	4027	5 months, 3 weeks	⚙
	4041	5 months, 3 weeks	⚙
	SudREN (POP1)	1 day, 8 hours	✓
	4073	5 months, 3 weeks	⚙
	4080	5 months, 3 weeks	⚙
	4087	5 months, 3 weeks	⚙
	4093	2 months, 1 week	⚙

## Credits

35,813,474.17 
 8,131.04



## API Keys

3

Download results of a user defined measurement

9788b7e0-9d4b-4787-8a42-fce8f2f2e929

Download results collected by a specific probe

## System Statistics

Probes connected to RIPE Atlas **3033**

Measurements currently running **1234**

## Current Sponsors



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## On RIPE Labs

[RIPE Atlas Code for Analysis and Statistics Reporting](#)   
 May 13, 2013

[Introducing RIPE Atlas "Quick Look"](#)   
 May 07, 2013



# RIPE Atlas Anchors

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- Anchors are well-known targets and powerful probes
  - Regional baseline & “future history”
- Currently in pilot phase
  - testing the OpenVZ virtualization
- 11 anchors installed, five more coming up
- Please come to the BoF if interested







# New RIPE Atlas Probe: Third Generation

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- TP-Link TL-MR3020 powered from USB port (500mA)
- 32 MB RAM, 4 MB flash built-in, 4GB flash on USB stick, firmware is updated remotely
- Runs OpenWRT
- 400 MHz MIPS CPU with MMU
- **Does not work as a wireless router!**
- **Same functionality as the old probe!**
  - Please keep your old probe connected
  - If you want a new one, must use it in another network

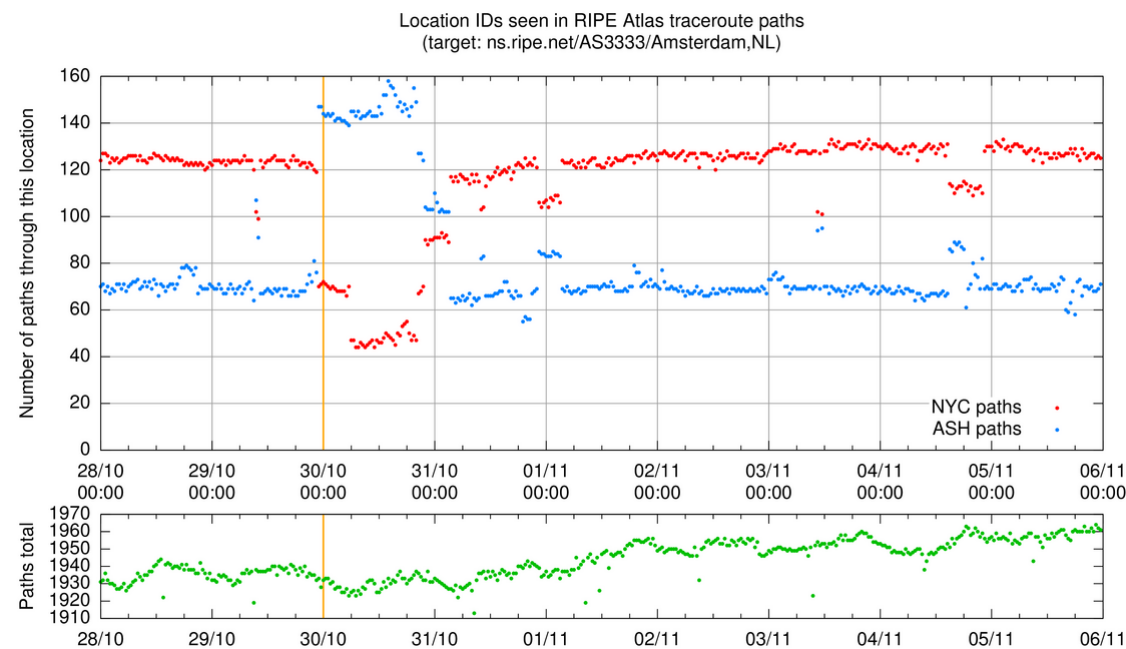






# Success Story: Measuring Hurricane Sandy

- Most RIPE Atlas probes in affected area unavailable during Hurricane Sandy
- Traffic partially shifted away from NYC as a transit hub

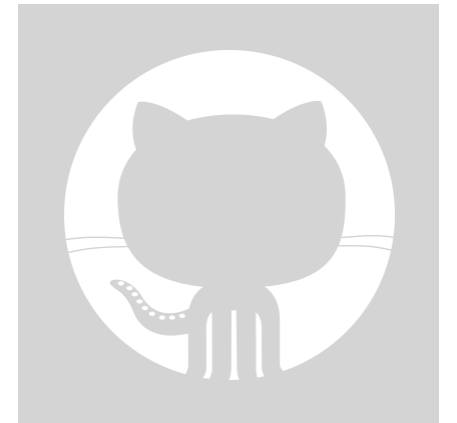


<https://labs.ripe.net/sandy-2012>

# Community News

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- Roadmap has a permanent home
- GitHub Community Repository
- New community pages (top ten users, photos, ...)
- Six new sponsors in 2013 (11 since RIPE65)
- RIPE Atlas Ambassadors program
- Established cooperation with interested parties: regulators, researchers, operators





# <http://roadmap.ripe.net/ripe-atlas/>

Requested	Planned	In Progress	Delivered
<ul style="list-style-type: none"><li>▶ Add NLNOG RING nodes as measurement targets</li></ul>	<ul style="list-style-type: none"><li>▶ Sharing credit management with colleagues</li></ul>	<ul style="list-style-type: none"><li>▶ Tools for interpreting results</li></ul>	<ul style="list-style-type: none"><li>▶ API keys</li></ul>
<ul style="list-style-type: none"><li>▶ Automatic alarms</li></ul>	<ul style="list-style-type: none"><li>▶ More visualisations for user-defined measurements</li></ul>	<ul style="list-style-type: none"><li>▶ RIPE Atlas anchors pilot - phase two</li></ul>	<ul style="list-style-type: none"><li>▶ Improved credit model documentation and accounting</li></ul>
<ul style="list-style-type: none"><li>▶ Involve each probe in anchoring measurements</li></ul>	<ul style="list-style-type: none"><li>▶ Release measurement source code</li></ul>	<ul style="list-style-type: none"><li>▶ Improving back-end infrastructure</li></ul>	<ul style="list-style-type: none"><li>▶ Membership specific services via LIR Portal</li></ul>
<ul style="list-style-type: none"><li>▶ Replace unsuitable probes</li></ul>		<ul style="list-style-type: none"><li>▶ List of available RIPE Atlas anchors</li></ul>	<ul style="list-style-type: none"><li>▶ RIPE Atlas anchors as measurement targets</li></ul>
<ul style="list-style-type: none"><li>▶ Vantage points dropping out of existing user-defined measurements</li></ul>		<ul style="list-style-type: none"><li>▶ Quick-Look connectivity measurements</li></ul>	<ul style="list-style-type: none"><li>▶ Improved bug documentation</li></ul>
<ul style="list-style-type: none"><li>▶ Share my probe with a custom-made group</li></ul>			<ul style="list-style-type: none"><li>▶ Measurements on GitHub</li></ul>
<ul style="list-style-type: none"><li>▶ Improve reporting when probe disconnects</li></ul>			<ul style="list-style-type: none"><li>▶ One-off measurements</li></ul>
<ul style="list-style-type: none"><li>▶ More controls for measurement distribution</li></ul>			<ul style="list-style-type: none"><li>▶ Allowed creation of measurements using API</li></ul>
<ul style="list-style-type: none"><li>▶ Credits APIs</li></ul>			<ul style="list-style-type: none"><li>▶ Improved RIPE Atlas website</li></ul>
			<ul style="list-style-type: none"><li>▶ Sharing probe management with colleagues</li></ul>
			<ul style="list-style-type: none"><li>▶ Increase maximum number of probes and measurements</li></ul>

# RIPE Atlas 2013 Sponsors

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# New Arrivals to the Community Since

SEE2



Lundrim Krasniqi



Onur Gashi



David Groep



Goce Gjorgijovski



Aleksandar Bojko



George Kargiotakis



Stefan Ivanovski



Ben Ward



Nikola Baltovski



Aleksandar Dokov



Leonidas Pouloupoulos



Mitja Jencek



Samih Oweinat



Frank Berger



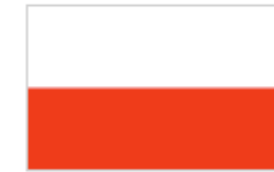
Manuel Padrón Martínez



Pier Carlo Chiodi



Ole Trøan



Bartosz Wierzejewski



Will Smith



Anton Chernomazov



Justin Hourigan



Ladislav Ruzicka



Alexey Zaharenkov



Igor Talevski



Matthias Möller



Petar Janev



kole mavrov



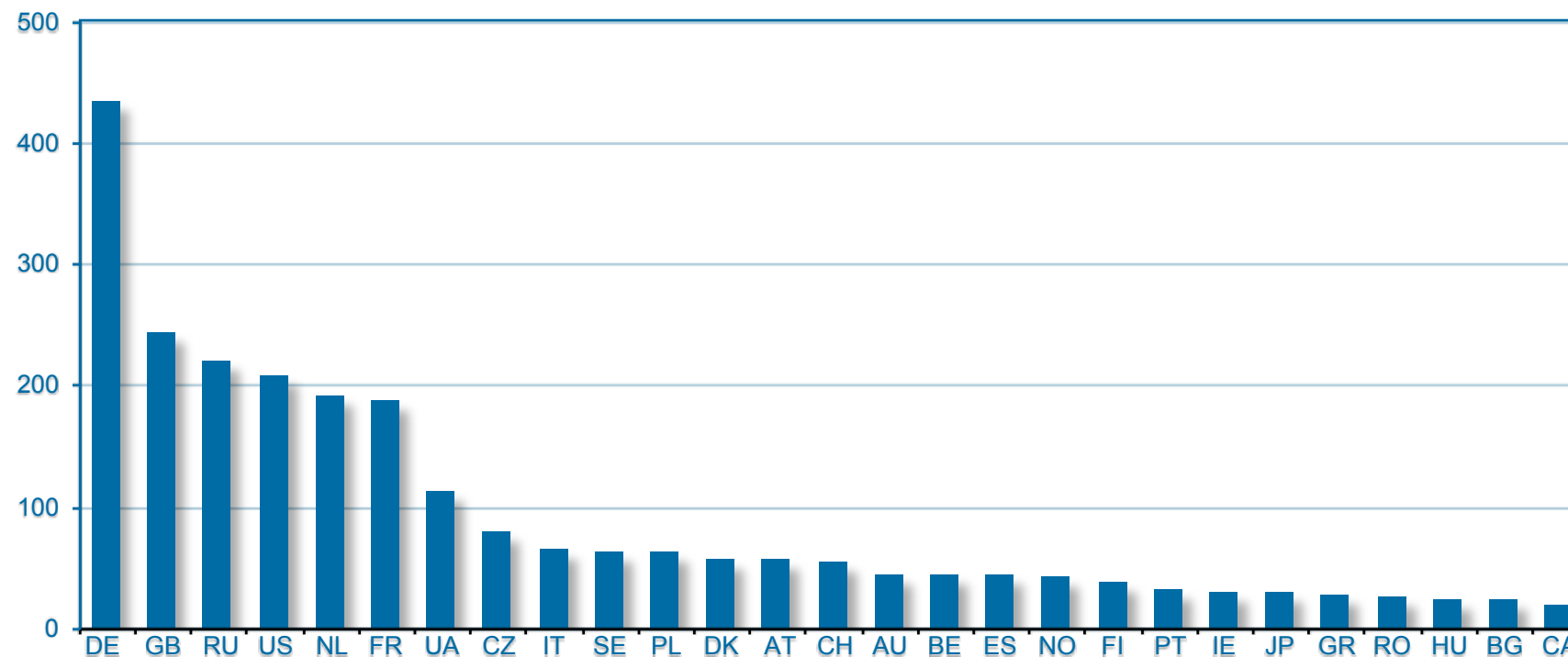
Carmelo Santana

[ht](#)

# RIPE Atlas Coverage

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- Probes deployed in 108 countries
- Network coverage criteria for distribution:  
varied ASNs and IP prefixes
- [\*\*https://atlas.ripe.net/contrib/coverage.html\*\*](https://atlas.ripe.net/contrib/coverage.html)





# RIPE Atlas Contact

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- [\*\*https://atlas.ripe.net\*\*](https://atlas.ripe.net)
- Get a probe: [\*\*https://atlas.ripe.net/apply\*\*](https://atlas.ripe.net/apply)
- Community:  
[\*\*https://atlas.ripe.net/atlas/community\*\*](https://atlas.ripe.net/atlas/community)
- Mailing list for active users: [\*\*ripe-atlas@ripe.net\*\*](mailto:ripe-atlas@ripe.net)
- Questions: [\*\*atlas@ripe.net\*\*](mailto:atlas@ripe.net)
- Twitter: **#RIPEAtlas** and **@RIPE\_Atlas**
- Community Builder, Vesna Manojlovic:  
[\*\*@Ms\\_Measurements\*\*](https://twitter.com/Ms_Measurements)

# Questions?

