



**RIPE
NCC**

RIPE Atlas Hackathon

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RIPE NCC

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- Welcome & Logistics
- Hackathon Goals & Structure
- Introduction to **TechInc** & RIPE & RIPE NCC
- Introduction to RIPE Atlas

- Take part in RIPE Atlas community

- Goal:
 - make cool #dataviz free software with RIPE Atlas data

- Organisers:
 - RIPE NCC: data, tools, support-staff & office (weekend)
 - Comcast (sponsoring awards & travel costs)
 - TechInc - local hackerspace, today's location

- Participants
 - YOU! (effort, enthusiasm, energy, skills...)
 - identified by name stickers ;-)

- Fire escape
 - press the red button to get out (also to go smoking)
 - can't come in without the fob/trusted person
- Toilets
- Tea (¬ coffee), Club Mate... = RevBank + Fridge
 - based on “donations”, let us know how much you had so RIPE NCC can pay it back to TechInc
- Snacks
- Communication: in person ;-)
 - also: [IRC.freenode.org #ripeatlas](https://irc.freenode.org/#ripeatlas), @RIPE_Atlas, mailing list

Friday:

- 12:00 * Vesna - Intro & Logistics 5'
- Self-intro: 35 x 1 minute
- **13:00 *LUNCH***
- 14:00 Presentations
 - Vesna - goals, tracks, intro - 10m
 - Robert - RIPE Atlas generics - 10m
 - Dan - APIs - 10m
 - Chris - streaming API - 10m
 - Emile - use cases - 20m
 - M. - DNSMON&seismograph - 10m
 - Christian - RIPEstat APIs - 10m
 - Vesna - github logistics - 5m
- 15:30 Teams Forming & Brainstorm
- 18:30 Dinner downstairs

Saturday

- 9:00 Breakfast
- 9:30 - 12:30 Work in Teams
- 12:30 Lunch
- 13:00 - 18:00 Work in Teams

Sunday

- 9:00 Breakfast
- 9:30 - 12:00 Work in Teams
- 12:00 Lunch
- 12:30 - 14:30 Final touches
- 15:00 PRESENTATION of Teams
- 17:30 (moving to Tara)
- 18:00 Party & Announcing the Winner



Hackathon Goals & Structure



- Goal
 - Visualising RIPE Atlas data in useful, new creative ways.
- Challenges
 - **Track 1:** Create a working prototype of a stand-alone application using any technology you want
(aka go crazy, surprise us!)
 - **Track 2:** Use technology that can be easily integrated into the RIPE Atlas system and maintained by RIPE Atlas developers
(aka stuff we can take over)
 - **Track 3:** Integrate RIPE Atlas data into existing software
(aka expose RIPE Atlas data to the world)

- Visually compelling view of the data
- Application and usefulness for the community (network operators, researchers, data analysts, general public)
- Solving one or more use cases
- Code is flexible and reusable
- Visualisation adjustable to the regional level (continental, RIR service regions, countries, etc.)
- Multiple datasets used

- Work in teams
 - e.g. developer + designer + operator
 - At least two teams per challenge / track
 - 3 to 6 people per team
- Team forming
 - pitch your idea & attract team members
 - state your skills, and the skills your team needs
- Find the work-space corner for your team
 - Flip-chart or white-board provided (or hacked)



Hackerspaces & Technologia Incognita



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Hackerspaces

- Shared space&tools
- Membership funded
- Consensus based
- (h)ACTA! = broedplaats
- TechInc, since 2011



- spaces
- unication
- hackerspaces
- ickerspaces
- a hackerspace
- events
- an event
- projects
- a project
- stings
- a job offer
- changes
- h
- Search
- nks here
- l changes
- pages
- le version
- ent link
- properties

RIPE Atlas

29 Hackerspaces with a [RIPE Atlas Probe](#)

To ask for a probe: atlas.ripe.net/apply

To add a probe to your hackerspace: edit the page of your hackerspace on this wiki; at the bottom add "equipment" -> choose "RIPE Probe". The map will be automatically generated to place your hackerspace on this map!

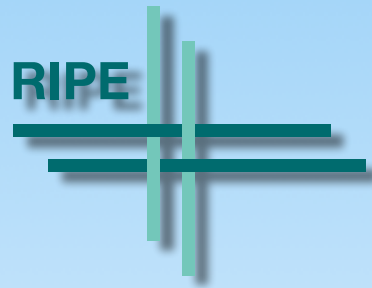
For more info, see [Project description "RIPE Atlas probes at hackerspaces"](#) and [the workshop at 29c3](#)





Introduction to the RIPE NCC



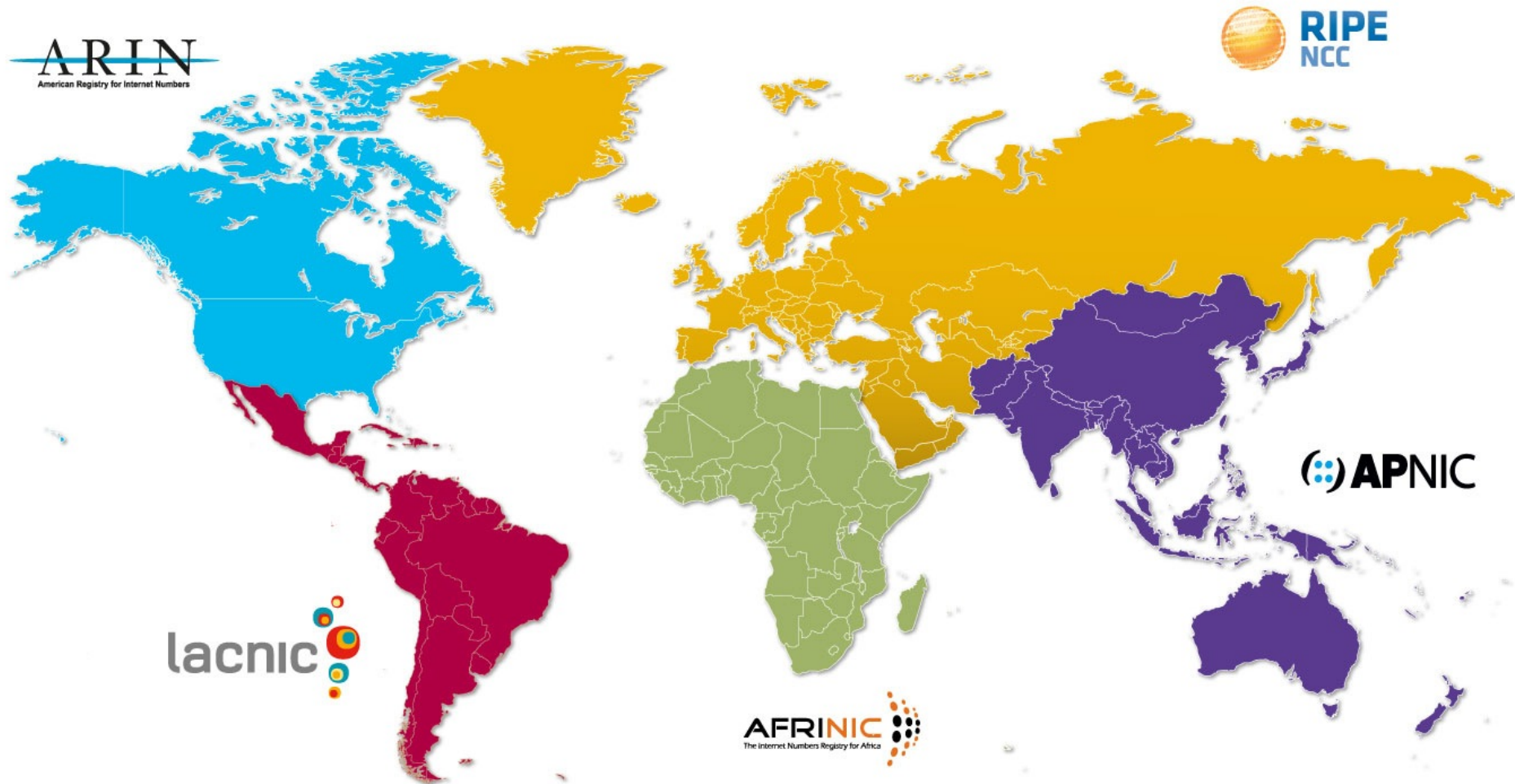


- Réseaux IP Européens
- Started in 1989
- Not a legal entity
- An open community
- No official membership
- Makes policies
- Meets twice a year
- Work is done in Working Groups on mailing lists



- RIPE Network Coordination Centre
- Started in 1992
- Not-for-profit organisation
- Located in Amsterdam
- Has members called Local Internet Registries (LIRs)
- Implements policies
- Facilitates two RIPE Meetings each year
- Provides services to both members and non-members
- Governed by an Executive Board elected by membership
- Neutral, Impartial, Open, Transparent

RIR SERVICE REGIONS





- Hosting K-root
- Collecting & providing statistics about Internet infrastructure (BGP, DNS, IPv6...)

<https://stat.ripe.net>

- Performing measurements

<https://atlas.ripe.net>

- **RACI = RIPE Academic Cooperation Initiative**
- **Sponsoring students to come to RIPE meetings**
- **Allows for presenting your research, learning from industry veterans, creating contacts**
- **Next RIPE meetings:**
 - **ripe70.ripe.net, May 2015, Amsterdam**
 - **ripe71.ripe.net, October 2015, Bucharest**
- **Apply today!**



Introduction to RIPE Atlas





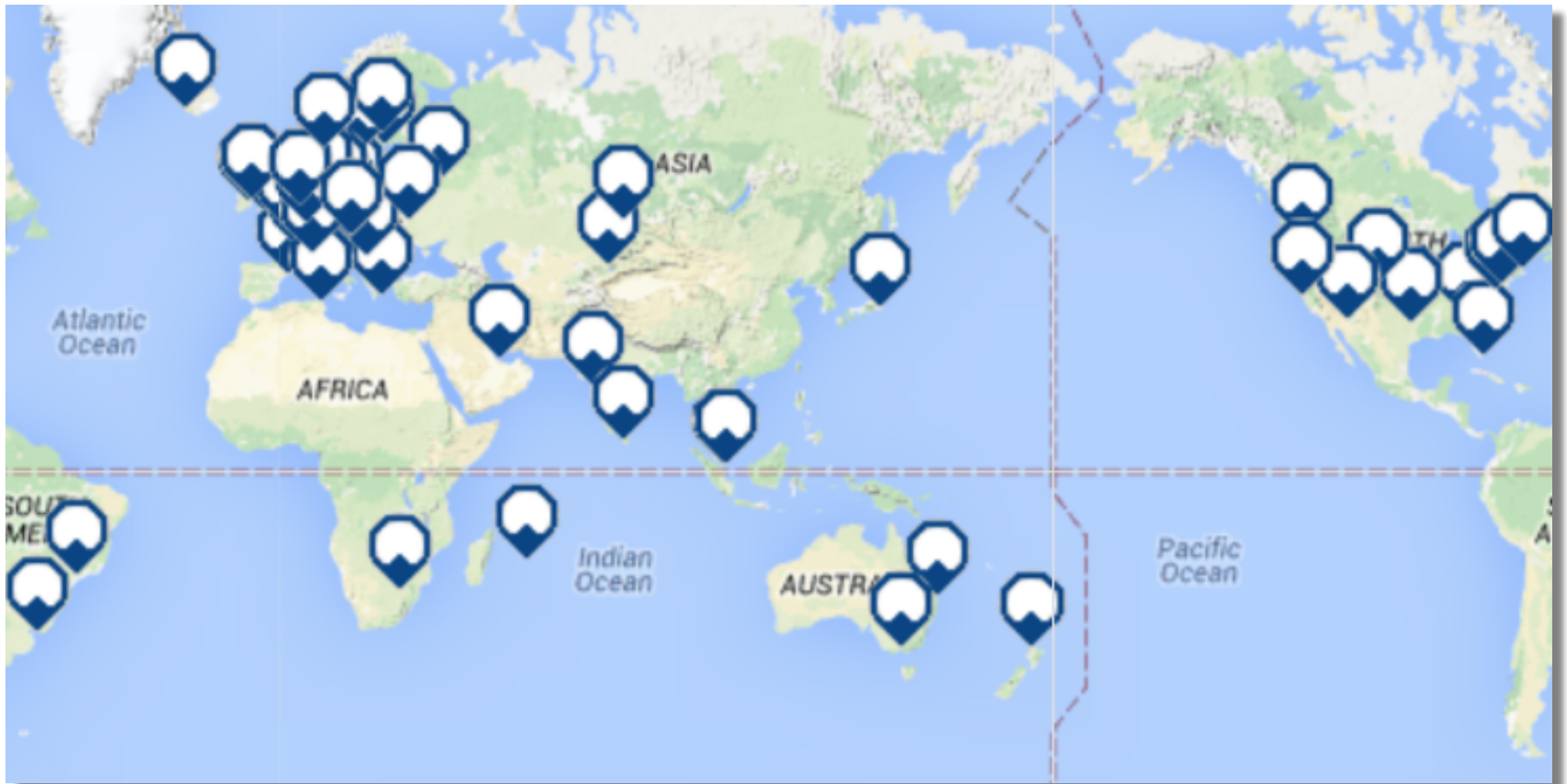
- 8,000+ probes connected
- 2,000+ active users monthly
- 1,000+ built-in measurements daily
 - e.g. one measurement = 8,000 pings
 - 5.5M pings, 0.5M traceroutes, 2M DNS
- 5,000+ user-defined measurements daily
 - **Five** types of user-defined measurements available to probe hosts and RIPE NCC members: ping, traceroute, DNS, SSL, **NTP**

Country	Probes
United States	930
Germany	792
France	743
United Kingdom	564
Nederland	433
Russia	427
Czech Republic	239
Italy	202
Belgium	198
Switzerland	194



- Well-known targets and powerful probes
 - Regional baseline and “future history”
- Anchoring measurements
 - Measurements between anchors
 - 200 probes targeting each anchor with measurements
 - Each probe measures 4-5 anchors
 - Vantage points for DNSMON service
- 114+ RIPE Atlas anchors





- <https://atlas.ripe.net/results/maps/network-coverage/#anchors>



RIPE Atlas Community



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1. Apply: <https://atlas.ripe.net/apply>
 2. You will receive a probe by post
 3. Register your probe
 4. 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!



Community

 Information, contributions, and hosts that stand out

[Prominent Probes](#)

[Big Spenders](#)

[New Arrivals](#)

[Sponsors](#)

[Anchor Hosts](#)

[Photos](#)

[Conferences](#)

New Arrivals are new hosts who connected a RIPE Atlas probe in the last ten days. (Note that the flags are representative of their probe locations and not necessarily the host's nationality.)



Marco B.



Kevin v. D.



Glenn V. d. W.



Francis S.



Simon W.



Marius S.



MASASHI S.



Arnaud F.



Lazarous T.



Fabian M.



Pieter H.



Matthias V.



Jeroen v. d. E.



Raphaël H.



Jacob P.



Francesco F.



Ryan g.



Eric L.



Pierre B.



Andrus E.



Thomas P.



Nico N.



Paolo P.



Ludmila P.



Sajal K.



jamie r.



Kai G.



Vincent C.



pop-interactive G.



Gaël M.



Max M.



Kamil M.



Mickael R.



Khetan S.



Hasse B.



Matus Z.



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Big Spenders are hosts who spend the most credits in a given month conducting their own customised measurements.

February/2015

User	Credits Spent
Atlas A.	1.6 billion
Comcast C.	17.3 million
FANOU F.	13.9 million
nocteam n.	11.1 million
Collin C.	8.9 million
Domain D.	8.2 million
Matt M.	7.9 million
Hendrik H.	7.6 million
Admin A.	5.7 million
Kevin K.	5.7 million
Matt M.	5.6 million
Peter P.	5.4 million
AusRegistry A.	5.1 million
Bruce B.	5.1 million

January/2015

User	Credits Spent
Matt M.	54.5 million
Comcast C.	19.1 million
Massimo M.	10.2 million
FANOU F.	9.5 million
Collin C.	8.8 million
Domain D.	8.1 million
Kevin K.	6.8 million
nocteam n.	6.5 million
Admin A.	6.2 million
Matt M.	6.1 million
Bruce B.	6.0 million
AusRegistry A.	5.9 million
Jean-Edouard J.	5.6 million
Michiel M.	5.1 million

- If you want to...
 - Help distribute probes outside RIPE NCC service region
 - Give workshops, tutorials and promote RIPE Atlas
- To become an ambassador:
 - <https://atlas.ripe.net/get-involved/become-a-ripe-atlas-ambassador/>
 - Email mcb@ripe.net and we'll ship you some probes
- Change in distribution model:
 - https://labs.ripe.net/Members/fatemah_mafi/changes-to-the-distribution-model-for-ripe-atlas-probes
 - From March 2015: 1 probe per person



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We want to meet you!

RIPE NCC Events

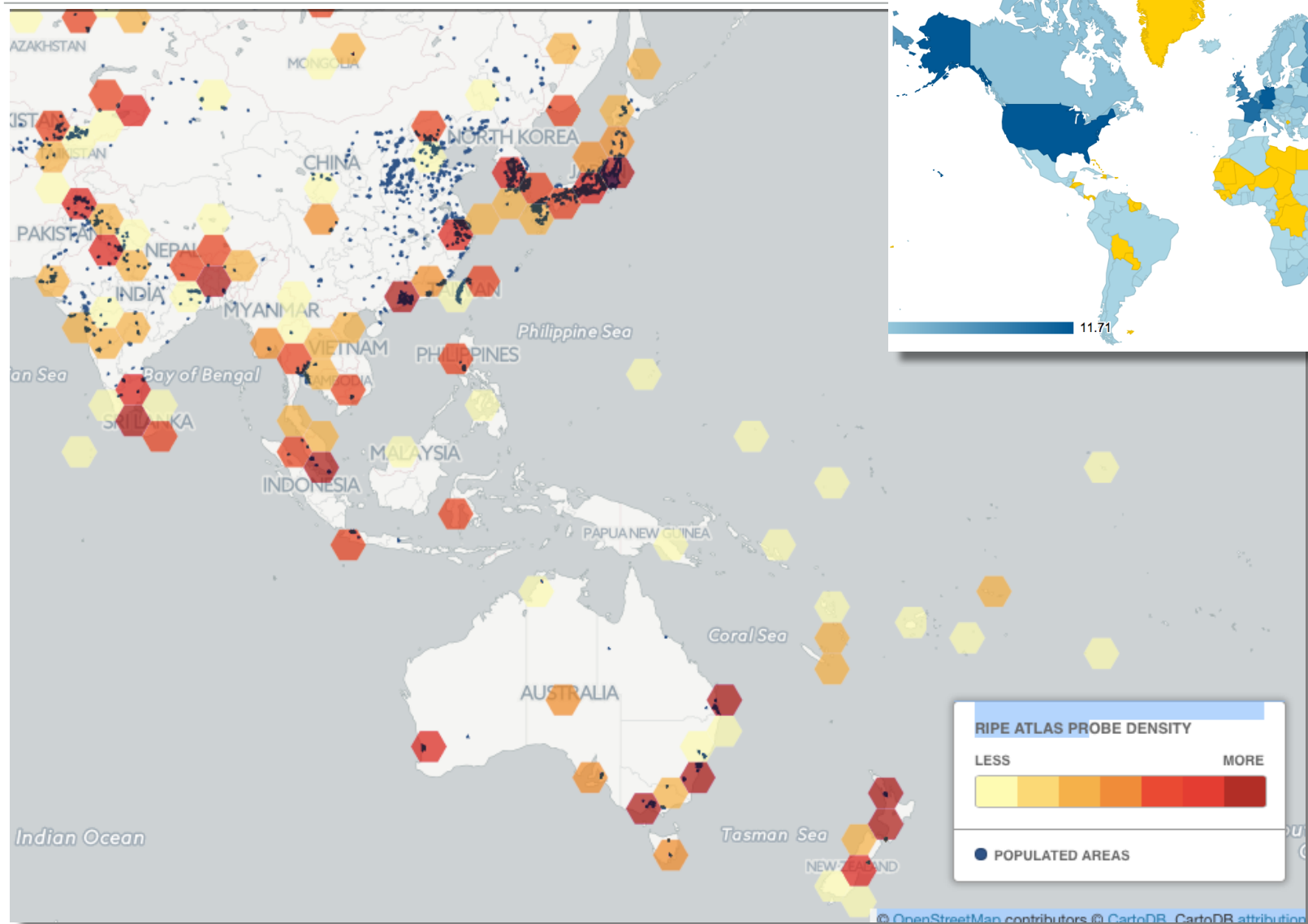
We're always interested in meeting RIPE Atlas users. You can check the [RIPE NCC calendar](#) to find out where and when RIPE NCC staff will be available. We often give RIPE Atlas presentations or workshops and have probes available to hand out, and we're always available to meet with you and answer questions about RIPE Atlas.

Other Events

RIPE Atlas ambassadors help us spread the word about RIPE Atlas and distribute probes. If you plan to attend any of these conferences and have questions about RIPE Atlas, or would like to acquire a probe, check the list below to see who will be there.

2015		
CAIDA AIMS 2015	Mar 31 - Apr 2	Robert Kisteleki
MENOG 15 Conference	Apr 1 - Apr 2	Alastair Strachan Hisham Ibrahim
Russian Internet Governance Forum (RIGF-2015)	Apr 7	Anton Baskov Maxim Burtikov
SAFNOG 2	Apr 7 - Apr 8	Nishal Goburdhan Alain Patrick AINA
UKNOF 31	Apr 20	Fearghas McKay
SEE 4/RIPE NCC Regional Meeting	Apr 21 - Apr	Kaveh Ranjbar Vesna Manojlovic Serge Radovic

Where to place the probes



Sponsors

- Sponsor benefits:
 - Promotion on RIPE Atlas website
 - Community recognition
 - Double credits for every probe distributed
 - <https://atlas.ripe.net/get-involved/become-a-sponsor/>



- Community-contributed code
 - <https://github.com/RIPE-Atlas-Community/>

- Probe (measurements) source code available
 - https://labs.ripe.net/Members/philip_homburg/ripe-atlas-measurements-source-code

- Guaranteed probe application
- Do NOT have to host a probe in order to perform customised measurements
- 1,000,000 extra credits monthly via LIR Portal
- “Quick Look” measurements via LIR Portal
- IPv6 reachability testing (free - no credits needed)
- Sharing probe management with LIR colleagues

- <https://atlas.ripe.net>
- Apply for an anchor: <https://atlas.ripe.net/anchors/apply/>
- Mailing list for active users: ripe-atlas@ripe.net
- Mailing list of RIPE Community — Measurements, Analysis & Tools Working Group (MAT-WG)

- Articles and updates: <https://labs.ripe.net/atlas>
- Questions: atlas@ripe.net
- Twitter: @RIPE_Atlas and #RIPEAtlas

- Feature requests come from
 - mailing list(s)
 - twitter
 - conferences
 - ticket queue
 - hackathons ;-)
- Feature requests will end up on the roadmap
<http://roadmap.ripe.net/ripe-atlas/>

Requested	Planned	In Progress	Delivered
<ul style="list-style-type: none">▶ Support for mobile devices	<ul style="list-style-type: none">▶ Additional features for RIPE Atlas anchors	<ul style="list-style-type: none">▶ Live Data Streaming	<ul style="list-style-type: none">▶ Improve measurements pages and creation
<ul style="list-style-type: none">▶ "Time Travel"	<ul style="list-style-type: none">▶ Share my probe with a custom-made group	<ul style="list-style-type: none">▶ Regularly publish names	<ul style="list-style-type: none">▶ Using tagging for probe selection when creating measurements
<ul style="list-style-type: none">▶ More controls for measurement distribution	<ul style="list-style-type: none">▶ Sharing credits with colleagues	<ul style="list-style-type: none">▶ WiFi Measurements	<ul style="list-style-type: none">▶ More control over probe selection
<ul style="list-style-type: none">▶ Credits APIs	<ul style="list-style-type: none">▶ Restarting previous measurements	<ul style="list-style-type: none">▶ Generic mesh measurements	<ul style="list-style-type: none">▶ Improve IPv6 probe selection
<ul style="list-style-type: none">▶ Measurements to detect BCP38 compliance	<ul style="list-style-type: none">▶ Vantage points dropping out of existing user-defined measurements	<ul style="list-style-type: none">▶ Provide additional information to the probe owner about the probe	<ul style="list-style-type: none">▶ Regularly published metadata
<ul style="list-style-type: none">▶ Reflect ASNs in traceroute measurement results	<ul style="list-style-type: none">▶ Improve reporting when probe disconnects	<ul style="list-style-type: none">▶ Improving back-end infrastructure	<ul style="list-style-type: none">▶ User-Settable tags for probes
<ul style="list-style-type: none">▶ "Raw TCP/UDP" measurements	<ul style="list-style-type: none">▶ Auto-measure "pingable" targets	<ul style="list-style-type: none">▶ Increase number of active RIPE Atlas anchors	<ul style="list-style-type: none">▶ Automatic tagging of probes
<ul style="list-style-type: none">▶ "SSL watch"		<ul style="list-style-type: none">▶ Discussion about HTTP measurements	<ul style="list-style-type: none">▶ Updated coverage and latency results maps
<ul style="list-style-type: none">▶ Software probe			

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

Requested	Planned	In Progress	Delivered
<ul style="list-style-type: none"> ▶ Make a whitelist of "bring it on" destinations 	<ul style="list-style-type: none"> ▶ Offer other, existing measurements against the target when refusing to add a new one 	<ul style="list-style-type: none"> ▶ NTP measurements 	<ul style="list-style-type: none"> ▶ Display messages to users about probe events
<ul style="list-style-type: none"> ▶ Automatically and manually refilling vantage points of existing user-defined measurements 	<ul style="list-style-type: none"> ▶ Anchors API 	<ul style="list-style-type: none"> ▶ Regularly publish DNS names 	<ul style="list-style-type: none"> ▶ Probe connection status available via API
<ul style="list-style-type: none"> ▶ Blacklisting targets 	<ul style="list-style-type: none"> ▶ Share my probe with a custom-made group 	<ul style="list-style-type: none"> ▶ Discuss HTTP measurements with the community 	<ul style="list-style-type: none"> ▶ Regularly published metadata
<ul style="list-style-type: none"> ▶ Probes deployment map improvements 	<ul style="list-style-type: none"> ▶ Adding new users in DNSMON 	<ul style="list-style-type: none"> ▶ Improving back-end infrastructure 	<ul style="list-style-type: none"> ▶ Automatic tagging of probes
<ul style="list-style-type: none"> ▶ Measurements towards multiple targets 	<ul style="list-style-type: none"> ▶ Provide compressed data 	<ul style="list-style-type: none"> ▶ Traceroute visualisation 	<ul style="list-style-type: none"> ▶ Updated coverage and latency results maps
<ul style="list-style-type: none"> ▶ Credits APIs 	<ul style="list-style-type: none"> ▶ Additional features for RIPE Atlas anchors 	<ul style="list-style-type: none"> ▶ Data Streaming improvements 	<ul style="list-style-type: none"> ▶ Increase number of active RIPE Atlas anchors
<ul style="list-style-type: none"> ▶ Support for mobile devices 	<ul style="list-style-type: none"> ▶ Sharing credits with colleagues 	<ul style="list-style-type: none"> ▶ Access to historical built-in measurements 	<ul style="list-style-type: none"> ▶ Terms and Conditions review
<ul style="list-style-type: none"> ▶ "Time Travel" 	<ul style="list-style-type: none"> ▶ Cloning of previous measurements 	<ul style="list-style-type: none"> ▶ Improve reporting when probe disconnects 	<ul style="list-style-type: none"> ▶ Improve measurements pages and creation
<ul style="list-style-type: none"> ▶ Reflect ASNs in traceroute measurements results 	<ul style="list-style-type: none"> ▶ Add IRC as Community channel 	<ul style="list-style-type: none"> ▶ Generic mesh measurements 	<ul style="list-style-type: none"> ▶ Live Data Streaming
<ul style="list-style-type: none"> ▶ "Raw TCP/UDP" measurements" 	<ul style="list-style-type: none"> ▶ Improved visualisations 	<ul style="list-style-type: none"> ▶ Provide additional information to the probe owner about the probe 	<ul style="list-style-type: none"> ▶ Latest results API and Sagan
<ul style="list-style-type: none"> ▶ "SSL watch" 	<ul style="list-style-type: none"> ▶ WiFi Measurements 		
<ul style="list-style-type: none"> ▶ Automatic alarms for DNSMON 			
<ul style="list-style-type: none"> ▶ Add "trace box" capability 			
<ul style="list-style-type: none"> ▶ Target view 			
<ul style="list-style-type: none"> ▶ Anycast measurements 			
<ul style="list-style-type: none"> ▶ Auto-measure "pingable" targets 			
<ul style="list-style-type: none"> ▶ Tagging of measurements 			
<ul style="list-style-type: none"> ▶ Domain checks 			
<ul style="list-style-type: none"> ▶ Improve graphs for better public reporting 			
<ul style="list-style-type: none"> ▶ WITHHELD Software probe 			
<ul style="list-style-type: none"> ▶ WITHHELD Bandwidth measurements 			

