

RIPE NCC Update

I will NOT talk about...



- RIPE (the Community) vs RIPE NCC (the Association)
- RIPE Policies and RIPE NCC Procedures
- What we do as a RIR
- What we do under our Network Coordination Centre hat

Today I'm giving you... updates!
(but if you don't know about that stuff feel free to ask me during the break) :)



Sponsorships of IPv4/IPv6 PI + ASNs

To hold resources (*) you must either have a direct relationship with us (member/LIR) or an indirect relationship via a LIR that will represent you before us (sponsored End User).

(*) "normal" resources, in our Registry

- RIPE NCC General Meeting May 2024: "The General Meeting approved Model C."
- Between the other increases, ASNs stopped being registered *for free*.
- "What do you mean with *continuous* relationship?"
- "Sponsorships are not *one-time*?"
- "We didn't care because it was for free"
- (DRAMATIZATION: MAY NOT HAVE HAPPENED)

2024 end-of-year was *interesting*.



Sponsorships of IPv4/IPv6 PI + ASNs

In October - November 2024 we contacted LIRs with a lot of resources/sponsorships:

- around 900 LIRs (~4% of our whole member base)
- response rate 20% from infra holders (expected), 70% from sponsors (unexpected)

~600 End Users (-3%), almost all the resources not in use (i.e. prone to abuse/hijack)

Last 12 months (May 2024 - April 2025), focusing on ASNs:

- ~2000 ASNs issued (5-year average ~2350, -15%)
- ~2500 ASNs returned (5-year average ~1500, +66%)
- ~1100 changes of sponsoring LIR

More awareness of LIR responsibilities, the world didn't end, and we have a lean(er) Registry.



16/32bit ASNs

In IETF-land: RFC 4893 May 2007. In the RIPE-land:

- ripe-679 states "From 1 January 2010 the RIPE NCC will cease to make any distinction between 16-bit AS Numbers and 32-bit only AS Numbers, [...]"
- In November 2023 "[...] recognized that many providers were not ready [...] consensus in 2009 suggested [...] temporarily continue [...] 12 months [...] but this effort was never undertaken [...]"
- In January 2024 "[...] this change has been successfully implemented."

Almost zero complaints. Why?

Your peers are already using them, the rest of the Internet is already using them.

- Communities? BGP Large Communities / RFC 8092 / RFC 8195 (from 2017).
- Old devices? Already a danger for your own network and for the rest of the Internet.
- Ego problems? Sorry, I cannot help with that.



Transfers of IPv6

- ripe-738 states "LIRs may qualify for an initial allocation greater than /29 by submitting documentation that reasonably justifies the request." and "LIRs that have received an IPv6 allocation may receive a subsequent allocation in accordance with the following policies."
- ripe-682 [now ripe-807] stated "Transferred resources are no different from allocations or assignments made directly by the RIPE NCC and so must be used by the receiving party in accordance with the respective policy documents."

It's complicated!™

Enforced since June 2024 ("Updated Approach to IPv6 Transfer Requests" in ap-wg).



Legacy

HAHAHAHAHAHA - I'm kidding! - I'm not going into that!

- Look at Marco's presentation at RIPE90
<https://ripe90.ripe.net/archives/video/1614/>

Then:

- Participate! (in address-policy-wg)
- Participate! (in ncc-services-wg)
- Participate! (at the GMs)

You're part of an association, and of a larger community, and your business depends on that. Maybe it's important?



Ergo, Policies and similar things! (accepted and implemented)

Policy Proposals:

- 2023-01: Reducing IXP IPv4 assignment default size to a /26 (address-policy-wg)
- 2023-02: Minimum Size for IPv4 Temporary Assignments (address-policy-wg)
- 2023-03: Voluntary Transfer Lock (ncc-services-wg)
- 2023-04: Add AGGREGATED-BY-LIR status for IPv4 PA assignments (address-policy-wg)

NWIs, from db-wg:

- NWI-4: "Role of status: field in multivalued status context"
(aka "New status: ALLOCATED-ASSIGNED PA")



Ergo, Policies and similar things! (ongoing proposals and discussions)

Policy Proposals, from address-policy-wg:

- 2024-01: Revised IPv6 PI Assignment Policy
- 2024-02: IPv6 Initial Allocations /28
- 2025-01: ASN assignment criteria revisited

Pre-proposal discussions, from routing-wg:

- Automatic Revocation of Persistently Non-functional Delegated RPKI CAs

Policy/BCOP, from connect-wg:

- BCOP for the use of IRR DBs in IXP RS



2025 RIPE Chair Selection

ripe-714 states "The RIPE chair ensures that the RIPE community functions well."
(e.g. agenda and location of the RIPE meetings, consensus around formal procedures, life-cycle of working groups, herding cats, etc. - some duties get delegated)

- Chair and Vice Chair
- Elected
- Five-year term with a two-term limit



RIPE NCC General Meeting May 2025

GMs are the "heartbeats" of the association: Financial Reports, Activity Plan and Budget docs, discharging of the Executive Board, choosing between Charging Scheme proposals, Executive Board elections, redistribution of the excess contributions/deficits, changes to Corporate Governance docs, even more reports, etc.

At the May 2025 GM:

- Reports from the RIPE NCC + Executive Board
- Adoption of the RIPE NCC Financial Report 2024 + Discharge of the Executive Board
- Amendments to the RIPE NCC Conflict Arbitration Procedure
- Report from the RIPE NCC Charging Scheme Task Force
- Voting on RIPE NCC Charging Scheme 2026
- RIPE NCC Executive Board Election



What has the RIPE NCC ever done for us?

Well, apart from medicine, irrigation, health, roads, cheese and *education*, baths and the Circus Maximus...

- New LIR Fundamentals e-learning course
- Revamped the Internet Measurements webinar
- Replaced the lab environment for the IPv6 Fundamentals face to face course
- Revamped the IPv6 Advanced face to face course
- Revamped the BGP Routing Security face to face course

Webinars are now open to non-members.

The RIPE NCC Academy itself is being revamped: <https://academy.ripe.net>



whowhat?

NWI-14: Authenticating References to Objects (db-wg)

NWI-19: Hierarchical AS-SETs (db-wg + routing-wg)

After the mandatory 2FA on all SSOs, now we're phasing out MD5-hashed passwords:

- Initial replacement: API keys
(password-like, expiring, tied to a specific SSO, eventually scoped to a specific MNTNER)
- Long term complement: OAuth 2.0 flows

<https://www.ripe.net/publications/documentation/quarterly-planning/ripe-database/>

<https://ripe90.ripe.net/archives/video/1651/>

Updates from the DNS-land



ns.ripe.net

Anybody here used it?

Retired in January 2025.



XXX

RIPE NCC Hosted CA:

- ROA History + Rollbacks + Changes Notifications (in the RPKI Dashboard UI)

ASPA:

- Previously on your screens at ITNOG7 (2023), yours truly:
"Coming Soon: ASPA" + "drafts, about to become RFC"
- Damn, I was wrong... But this time might happen for real! :)
- UI still tricky

<https://www.ripe.net/publications/documentation/quarterly-planning/rpki/>
<https://ripe90.ripe.net/archives/video/1659/>



UI2013 > UI2020 > UI2025!

Continuous UX/UI Improvements:

- We have released the first iteration of the updated RIPEstat user interface
- A middle ground between the two previous UIs
- We will continue making improvements to this user interface
- First ~~new toy~~ renewed user-facing feature: Looking Glass
<https://stat.ripe.net/lg>

Also:

- Modernisation of deployment and application code
- OS upgrades and other infrastructure changes
- Data Quality improvements and a lot of other stuff ongoing behind the scenes!
(for RIS as well)



You've got a nice IXP here. It'd be a shame if...

I mean "an unplanned OPPORTUNITY to study the resilience of the Italian Internet"!

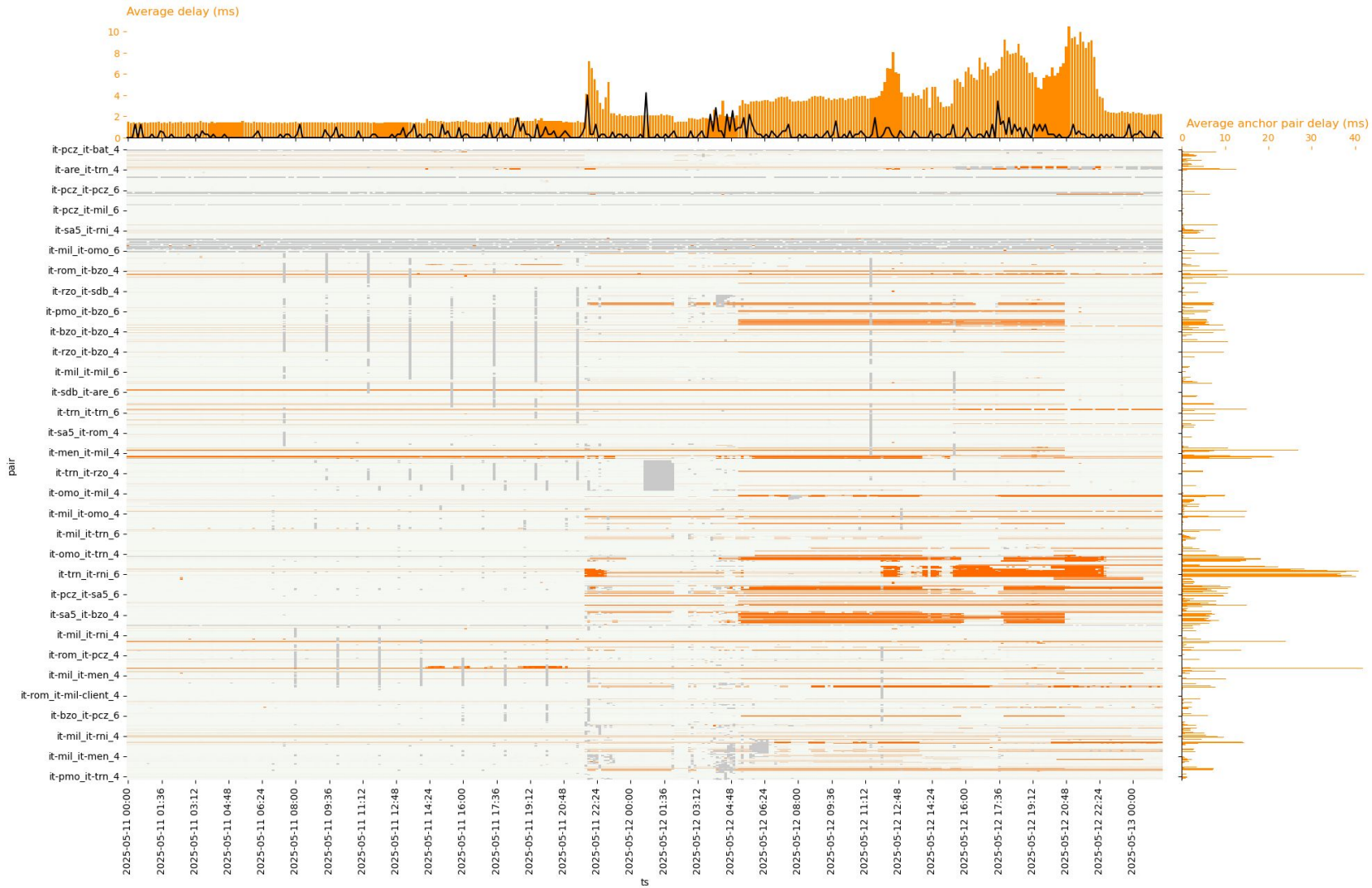
- (and another victim of Emile's law)

The data is there, thanks to RIPE Atlas, but its analysis and proper presentation takes effort:

- No time due to RIPE90
- Still Work In Progress (~~unruly perl scripts~~ unyielding pipelines)

We have a quick-and-dirty plot and a few numbers, nothing shining - sorry :)

- A non-event in the grand scheme of things?
- A huge thing but without proper coverage?
- Or, as always, it depends™?





Overall path differences using -4hrs (before) as baseline

Baseline vs +4hrs (after):

- IT.MIX-IT -38
- IT.MINAP Milan +20
- AS174 Cogent +10
- AS12779 IT.Gate +8
- AS201333 Naquadria +7
- AS41327 Fiber Telecom +7
- DE.DE-CIX Frankfurt +7
- AS1299 Arelion -7
- AS9002 RETN +7
- AS49088 TELMEKOM +6

Baseline vs +24hrs (after):

- IT.MIX-IT -291
- AS3257 GTT +185
- AS174 Cogent +111
- IT.MINAP Milan +91
- AS49088 TELMEKOM +82
- AS41327 Fiber Telecom +78
- AS6762 Telecom Italia Sparkle +49
- AS6517 ZEROMIST +47
- IT.Namex Rome +38
- AS34428 8ROUTE +33

Paths via IXPs only



IXP	-4h	+4h	+24h
AL.ANIX	0	4	6
BG.NetIX	1	1	3
DE.DE-CIX Dusseldorf	1	1	1
DE.DE-CIX Frankfurt	6	13	17
FR.France-IX Paris	2	2	2
GB.LINX LON1	4	5	6
NL.AMS-IX	7	8	9
PL.EPIX.Warszawa	0	0	2

IXP	-4h	+4h	+24h
IT.DE-CIX Palermo	8	8	7
IT.Equinix Milan	8	9	21
IT.Ge-DIX	1	1	1
IT.MINAP Milan	78	98	169
IT.MIX Palermo	0	0	4
IT.MIX-IT	292	254	2
IT.Namex Bari	0	0	1
IT.Namex Napoli	4	4	4
IT.Namex Rome	80	84	118
IT.PCIX	7	8	11
IT.TOP-IX	5	6	22
IT.VSIX	0	0	14



Questions & Comments



rstagni@ripe.net

THANK YOU!