Feedback from the RIPE NCC Registry Services

Marco Schmidt | RIPE 82 | 18 May 2021

Overview

- /24 Allocations vs Assignment Requirement

- IPv6 Stockpiling

- Unused AS Numbers

/24 Allocations versus Assignment Requirement

Allocations made by RIPE NCC

- Since Nov 2019, a single /24 allocation is provided to LIRs that have not previously received allocations by the RIPE NCC

- More the 1800 allocations have been made

- There are currently around 1,200 more available in the RIPE NCCs IPv4 pool

Monthly IPv4 Allocations since the Waiting List Activation
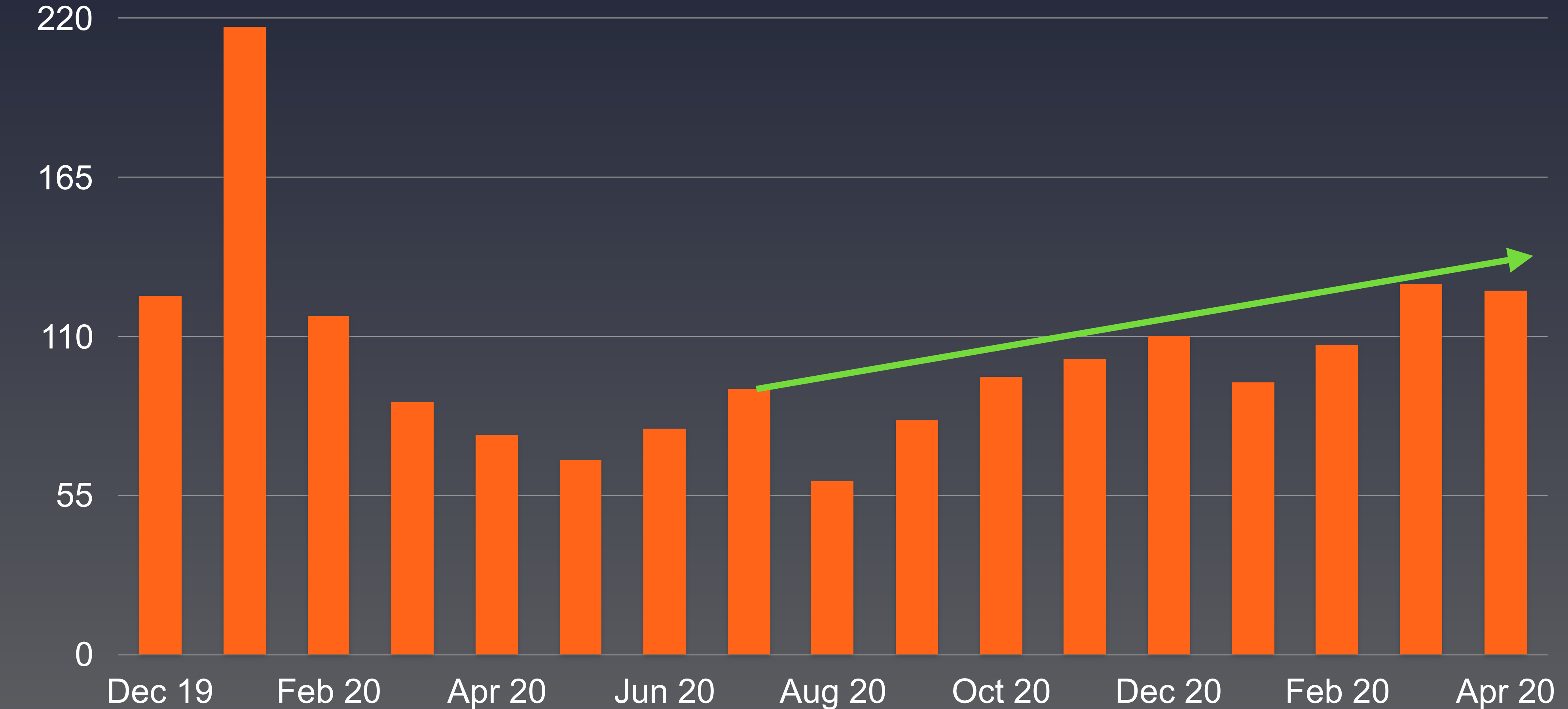
Out of 1,800 /24 allocations provided

- ~1100 (61%) are currently announced

- ~180 (10%) went to multiple LIR accounts of the same member

- ~275 (20%) have assignments registers
  - ~230 of them in announced allocations

- 81% of announced allocations are without assignments

Allocation vs Assignment

Historically allocations are used to create assignments and assignments are meant to document actual networks

- *"An allocation is a block of IPv4 addresses from which assignments are taken."*

- *"LIRs are allocated Provider Aggregatable (PA) address space. They sub-allocate and assign this to downstream networks."*

- *"ASSIGNED PA: This address space has been assigned to the issuing LIR infrastructure or an End User for use with services provided by the issuing LIR."*

https://www.ripe.net/publications/docs/ripe-733

The new reality

- Often /24 allocation = network

- Policy requirement to create assignments is difficult to understand

- Do the policy definitions for allocations and assignments need an update?

  - Re-define criteria for assignment

  - Introduce size limitation

  - …

Stockpiling IPv6

Some Observations

- Several members requesting several IPv6 allocations via multiple LIR accounts or the transfer policy

- Around 100 members that have collected multiple IPv6 allocations with totalling a size equivalent to a /26 or more

  - Maximum of 88 IPv6 allocations for one member (roughly equivalent to a /23)

- Over the past decade, only 12 members have been able to document the need for initial allocations of a /26 or more

- The policy requirement to justify larger IPv6 allocations is rendered useless

IPv6 Distribution

41%

59%

● One allocation per member
● Multiple allocations per member
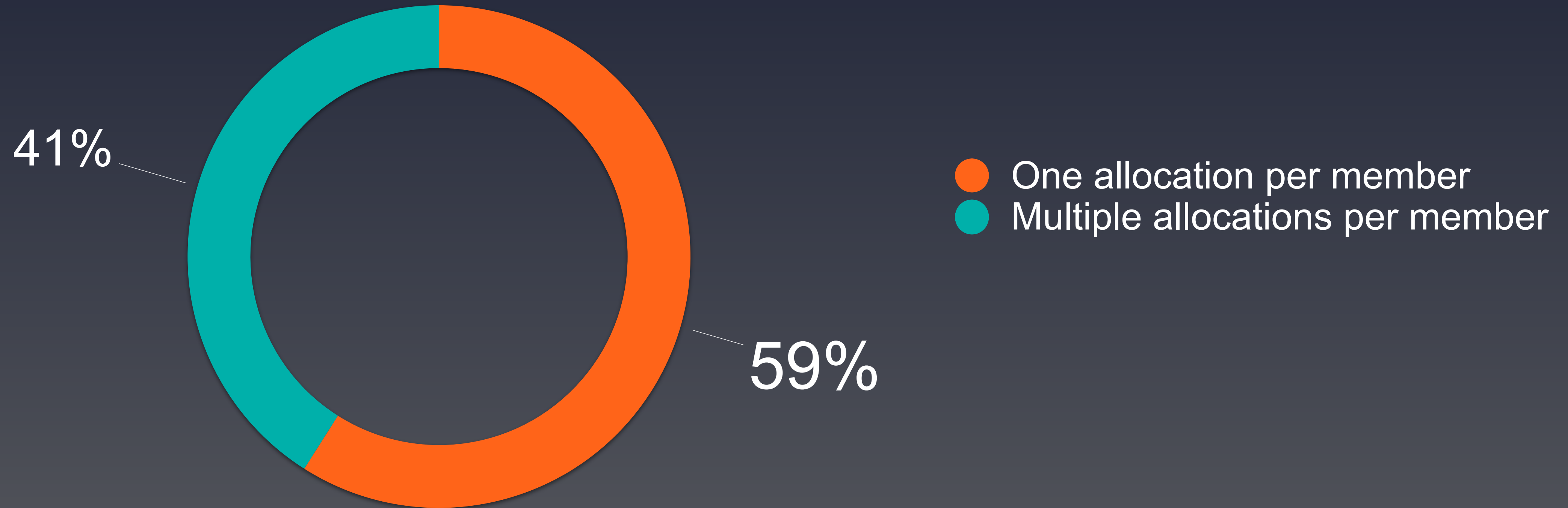
Questions for Discussions

- Is this within the intent of the IPv6 Policy?

- Did the policy proposal 2018-01: "Organisation-LIR Clarification in IPv6 Policy" work as intended?

  - An allocation per LIR (not per organisation)

- Do we need to make any changes to the IPv6 Policy?

- Should there be any restrictions on IPv6 transfers?

Unused ASNs

AS Number Clean-up

- Unused ASNs

  - Issued by the RIPE NCC or transferred at least one year ago

  - Not announced for at least 6 months

- In the last 12 months, we contacted LIRs for 866 unused ASNs

  - 423 ASNs were returned to the free pool and 135 ASNs are pending for return

  - Overall, half of the unused ASNs are being returned

- There are 5,501 ASNs not being advertised in the routing system

Unused ASNs

- The RIPE NCC does not charge for ASNs

  - We are the only RIR doing so

- No real incentive for ASN holders to return them

- There are as many ASNs issued that remain unused, as the number of ASNs in our free pool

- Abandoned ASNs are vulnerable to hijacks and malicious intent

- The solution to this problem might not lie in the RIPE Policy, but...

ASN Assignment Policy

- ASN Assignment Policy:
  "If an organisation no longer uses the AS Number, it should be returned to the public pool of AS Numbers."

- Should we consider replacing "should" with "must"?

- If yes, should a time frame be defined for an ASN to be considered as "unused"?

Questions ?

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