



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

Feedback from the RIPE NCC Registry Services

Overview



- IPv4 Status Report
- Allocations vs Assignment Requirement
- IPv6 Stockpiling



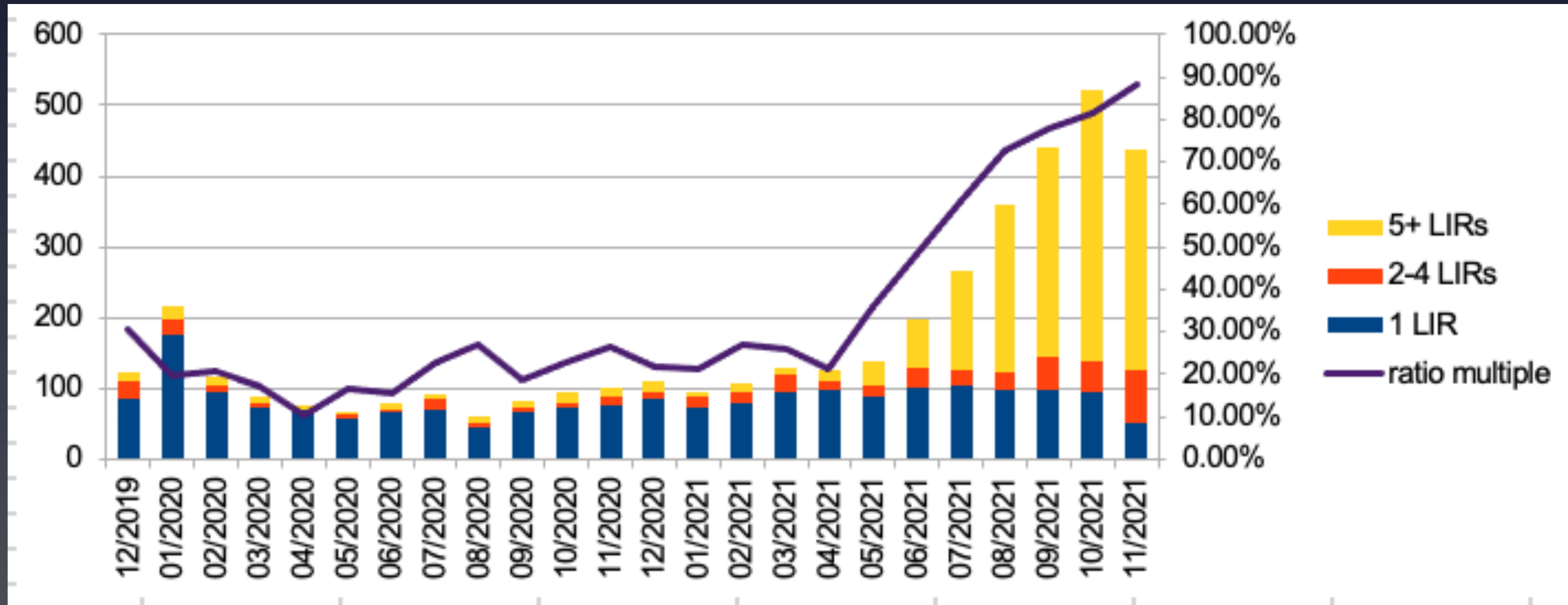
IPv4 Status

Allocations made by the RIPE NCC



- Since Nov 2019, a single /24 allocation is provided to LIRs that have not previously received allocations from the RIPE NCC
- Almost 3,700 allocations have been made
- After 1.5 years of no waiting time, the demand has exceeded the RIPE NCC reserve and new LIRs have to join the waiting list
- About 500 /24s are currently in quarantine and will be gradually released in the next six months

/24 allocation distribution



- Out of 3,700 /24 allocations, about 2,000 (54%) went to multiple LIR accounts of the same member



Multiple LIRs

- The market price for a /24 is about double setting up an LIR account for 3 years
- Even with moderate wait time, it will be more attractive to open another LIR account
- Wait time for real newcomers will be significantly longer

Conflict with policy intent



- Proposal 2019-02, IPv4 Waiting List Implementation
“The goal of this policy proposal is to keep providing newcomers with a minimal amount of IPv4 space from the RIR for as long as possible.”
<https://www.ripe.net/participate/policies/proposals/2019-02>
- Current development seems against the intent of the policy
- The situation can be approached through future charging schemes
- Eventually the policy can also be reviewed, e.g. change the provision “per LIR” to something else?



Allocations versus Assignment Requirement

Out of 3,667 /24 allocations provided



- ~2,600 (71%) are currently announced
- ~1,100 (30%) have assignments registered
 - ~960 of them in announced allocations
- 64% of announced allocations are without assignments

Allocation vs assignment



Historically, allocations were used to create assignments, and assignments were 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, a /24 allocation = a network
- The policy requirement to create assignments is difficult to understand
- Do the policy definitions for allocations and assignments need an update?
 - Redefine the criteria for an assignment
 - Introduce a size limitation
 - ...



Stockpiling IPv6

Some Observations



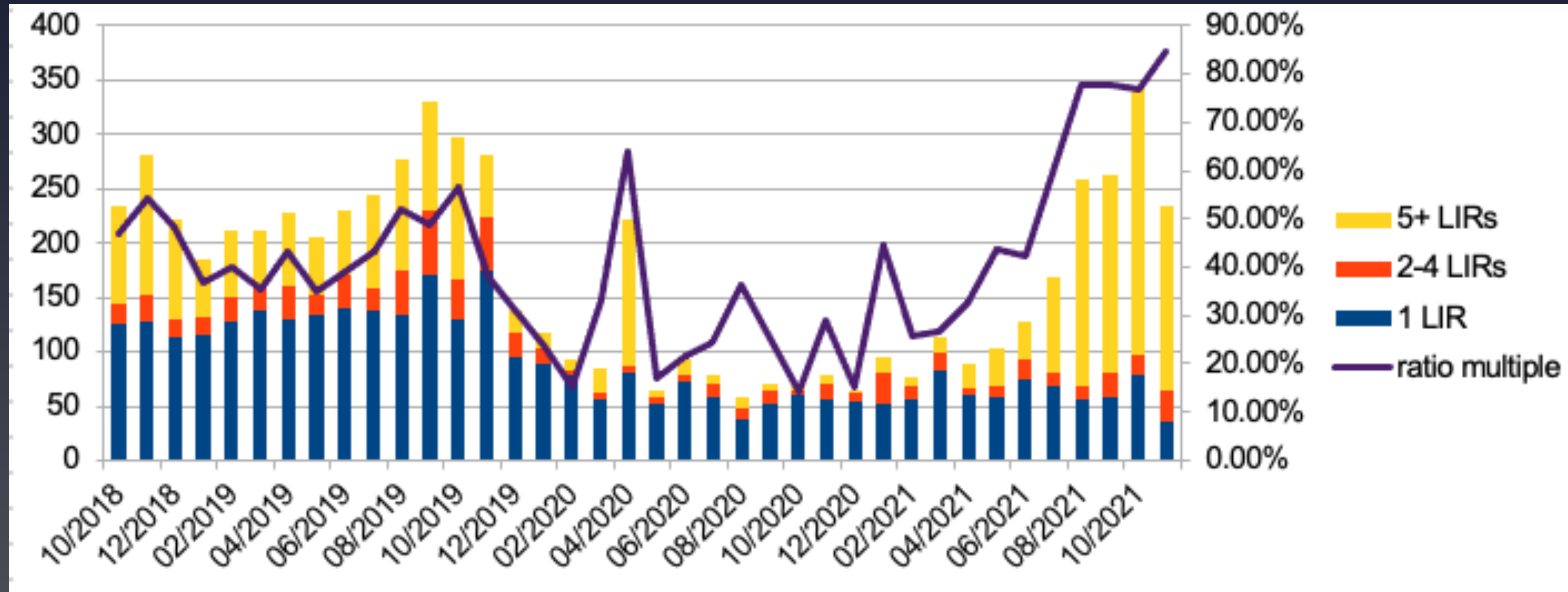
- Follow-up from RIPE82 and the discussion on the APWG mailing list
<https://www.ripe.net/ripe/mail/archives/address-policy-wg/2021-October/013306.html>
- Several members requesting several IPv6 allocations via multiple LIR accounts or the transfer policy
- Around 100 members that have collected multiple IPv6 allocations totalling a size equivalent to a /26 or more
 - Maximum of 102 IPv6 allocations for one member (more than a /23)



Potential Issues

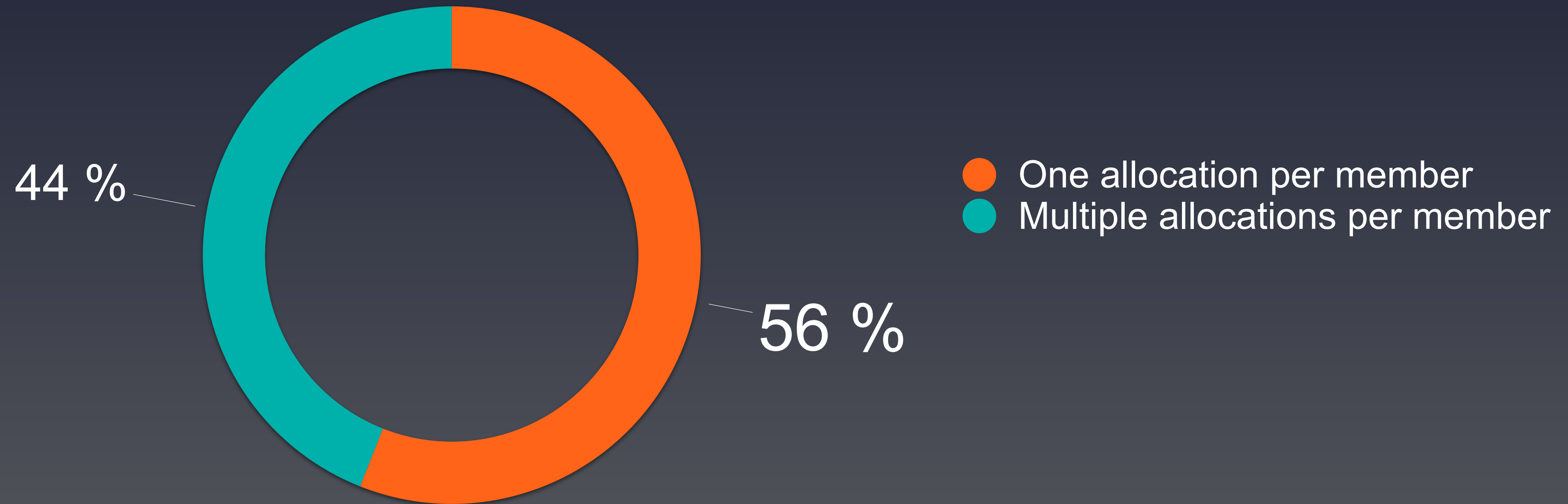
- IPv6 might be deployed in conflict with RIPE policies, resulting in challenges to that IPv6 deployment once the policy violation is discovered during an audit
- Negative impact on the quality of the registry if large parts of allocations are given to third parties without clear registration requirements
- The policy requirement to justify larger IPv6 allocations would then be rendered useless

Stockpiling through multiple LIRs



- Out of 6500 IPv6 Allocations about 3100 (48%) went to multiple LIR accounts of the same member

IPv6 distribution



Conflict with IPv6 goals



- Conservation

- Probably the smallest problem with IPv6; still, the policy says, “...*address policies should avoid unnecessarily wasteful practices. Requests for address space should be supported by appropriate documentation and stockpiling of unused addresses should be avoided.*”

- Registration

- Assigning or sub-allocating large IPv6 blocks to big network deployments without proper registration requirements for the resource user

- Aggregation

- Networks are being deployed over many ranges instead of one aggregated block

Questions for discussion



- Do the IPv6 goals need adjustment or the IPv6 allocation policy?
- Did the policy proposal 2018-01 “Organisation-LIR Clarification in IPv6 Policy” work as intended?
 - One allocation per LIR (not per organisation)
- Should there be any restrictions on IPv6 transfers?



Questions



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