

Proposal-062: Use of Final /8

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Introduction

- This proposal describes how APNIC should handle the final /8 which would be allocated to it by the IANA under a successful implementation of Proposal-055, "Global policy for the allocation of the remaining IPv4 address space"

Current Problem

- If Proposal-055 is implemented globally:
 - Each RIR will receive a /8 from the IANA
 - APNIC's existing IPv4 allocation rules would apply, negating the purpose and considerable effort that has been expended on Proposal-055 so far
- The goal of Proposal-055 is that each RIR community can plan to use its final /8 in a way that suits its needs

Situation in other RIRs

- This policy proposal has not been made in other RIR regions
 - We would like to recommend it for consideration
- LACNIC region has approved a similar proposal, LAC-2008-04
 - Reserves a /12 out of LACNIC's remaining pool once IANA free pool has run out
 - From this /12, new LIRs receive a /22, "critical infrastructure" receives a /24

Details of the Proposal

1. New LIRs receive one /22 (APNIC's minimum allocation) from this /8, regardless of LIR size or intended membership tier
 - They will receive this address space once they fulfil the criteria to receive IPv4 address according to APNIC's allocation policy in force at the time
 - Allocation size tracks APNIC's minimum allocation in force at the time of allocation

Details of the Proposal

2. Existing LIRs receive one /22 (APNIC's minimum allocation) from this /8, regardless of LIR size or current membership tier
 - They will receive this address space once they fulfil the criteria to receive IPv4 address according to APNIC's allocation policy in force at the time
 - Allocation size tracks APNIC's minimum allocation in force at the time of allocation

Details of the Proposal

3. A /16 is reserved for future use, as yet unforeseen
 - The Internet is a disruptive technology and we cannot predict what might happen. It is prudent to keep a /16 in reserve, just in case there is some future requirement
 - In the event that this /16 remains unused in the time the remaining /8 covered by this policy proposal has been allocated to LIRs, it returns to the pool to be distributed as per items 1. and 2.

Advantages

- APNIC's final /8 under Proposal-055 will have a special policy applicable to it
 - This avoids the risk of one or a few organisations consuming the entire block with a well crafted and fully justified resource application
- The proposal ultimately allows for 16384 LIRs (both new and existing) to receive exactly one /22 each
 - This is much larger than the existing APNIC membership and thus ensures that no organisation lacks real routable IPv4 address space during the coming transition to IPv6

Disadvantages

- Some organisations may believe and can demonstrate that their IPv4 requirements are larger than a /22
 - But this final /8 is not intended as a solution to the growth needs of a few organisations, but for assisting with the transition from IPv4 to IPv6
- Some organisations may set up multiple LIR registrations in an effort to get more address space than proposed
 - APNIC must be vigilant regarding these, but the authors accept that it is hard to ensure complete compliance. With 16384 possible allocations being proposed, this is not envisaged to be a major problem

Impact on APNIC members and NIRs

- This proposal allows APNIC LIRs (existing and new) to receive address space from the final /8 allocated to APNIC under Proposal-055
- This proposal has no direct impact on the operation of the NIRs but, as noted earlier, has direct impact on the ability of NIR members (existing and new) to receive address space from the final /8 allocated to APNIC under Proposal-055

Other considerations

- Proposal-055 requests IANA to assign a single /8 to each RIR so that each RIR region can plan for IPv4 run-out during IPv6 transition
- This Proposal-062 is such a plan
- Proposal-055 is untenable without a plan for that /8 in place
 - And much hard work will have come to nought

Other questions arising

- Should the allocations made under this proposal be linked to an IPv6 allocation?

Questions?

