

prop-073

Automatic allocation/assignment of IPv6

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Introduction

- Simplify the criteria for a member requesting an initial block of IPv6 addresses where the member already has an IPv4 assignment or allocation.
 - APNIC would 'reserve' an appropriately sized IPv6 block for each member that has IPv4 addresses but does not have IPv6 addresses.
 - Members holding IPv4 addresses would be able to request the IPv6 space pre-approved for them through a simple online process.

Summary of current problem

- We believe that some members:
 - think they are not entitled to IPv6
 - find doing the justification hard (time/\$\$)
 - can't get organisational approval to research process or do justification.

Summary of current problem

- We know that:
 - IPv4 address space is running out
 - IPv6 uptake is slower than we'd like
 - We've tried to encourage more IPv6 deployment
 - There are many barriers to IPv6
- This policy proposal aims to further simplify the process of applying for IPv6 resources

Situation in other RIRs

- RIPE - 2008-02, "Assigning IPv6 PA to Every LIR",
 - Withdrawn due to lack of support due to concern about the impact on member fees and that the proposal would make IPv6 a commodity.
 - <http://www.ripe.net/ripe/policies/proposals/2008-02.html>
- There have been no similar formal proposals in other regions.

Details - 4.1

- Alternative criteria be added to the IPv6 allocation and assignment policies to allow APNIC members that have IPv4 but no IPv6 space to qualify for an appropriately size IPv6 block under the matching IPv6 policy.

Details - 4.2

- APNIC pre-approve an appropriately sized IPv6 delegation for:
 - Any APNIC member that holds APNIC-managed IPv4 addresses, but does not yet have APNIC-managed IPv6 addresses
 - Any APNIC member in future that applies for and receives IPv4 addresses but has not yet received APNIC-managed IPv6 addresses

Details - 4.3

- The size of the pre-approved IPv6 block will be based on the following criteria:
 - A member that has an IPv4 allocation would get an IPv6 /32
 - A member that has an IPv4 assignment under the multihoming policy would get an IPv6 /48
 - A member that has received an IPv4 assignment under the IXP or Critical Infrastructure policies would get an IPv6 /48

Details - 4.4

- APNIC Secretariat may reserve prefixes for any or all qualifying members to allow for a seamless allocation process. It is a responsibility of the Secretariat to select an appropriate reservation schedule, and as such the reservation of a prefix is not fixed in size, scope, nor time.

Communicating the changes

- We recommend that the APNIC Secretariat communicate to members and others that the criteria for receiving IPv6 space have been reduced and that the process of obtaining IPv6 address space has been made simpler. We recommend this to show that there is no effective barrier to members obtaining IPv6 addresses.

Policy added to existing IPv6 policy

- Current IPv6 policies are still available for members who apply for IPv6 addresses without existing IPv4 addresses, or who apply for subsequent IPv6 resources.

Advantages...

- Allows APNIC to engage with all IPv4 resource holders alerting them to the need to start work on deploying IPv6 addressing.
- Pre-approves IPv6 resource delegations based on existing IPv4 holdings

...Advantages

- Increases member benefit by avoiding duplication and effort in applying to APNIC for IPv6 when they have already shown their network needs for an IPv4 delegation
- Removes another barrier to IPv6 adoption by providing all eligible organisations with an IPv6 assignment or allocation through a simple request

Disadvantages

- This proposal does not deal with the need to encourage holders of "Historic Internet resources" to apply for IPv6 address space

Effect on APNIC members

- Fees
 - No increase in any member's fees
- Responsibility
 - Additional responsibility for IPv6 resource in the APNIC registry framework
- Address consumption
 - Around 1300 APNIC members with no IPv6 resource – this could use up to a /21 of IPv6

Effect on NIRs

- Depends on whether an NIR adopts a proposal like this for their constituency

Conclusion

- Every member will need an IPv6 allocation eventually
- This proposal will make the process of getting that first IPv6 address block simpler

Questions?

- Discussion?