



Overview of policy proposals

Policy SIG

27 February 2008

APNIC 25, Taipei

prop-050: IPv4 resource transfers

- Problem this proposal aims to address
 - Current APNIC policies limit registration of transfers to resources related to mergers and acquisitions of operational networks
 - There is likely to be demand for IPv4 after the unallocated address pool is exhausted
 - There needs to be a way for the APNIC resource registry to accurately reflect current address distribution information



prop-050: IPv4 resource transfers

- Proposed solution

- Remove APNIC policy restrictions on transferring registration of IPv4 allocations and IPv4 portable assignments between current APNIC account holders.
 - Only IPv4 address blocks => /24 prefix may be transferred
 - Address block must be in APNIC administered range
 - Transferred block will be subject to all current APNIC policies from the time of transfer
 - Source of transfer cannot receive any further IPv4 address blocks from APNIC for 24 months after transfer



prop-050: IPv4 resource transfers

- Proposal stats
 - Version 1 presented APNIC 24
 - No consensus sought
 - Version 2 posted to Policy SIG mailing list 22 January 2008
 - Discussion on mailing list about version 2
 - 35 posts
 - 11 people
 - 3 from Australia
 - 3 from Japan
 - 5 from outside AP



prop-050: IPv4 resource transfers

- Discussion on mailing list to date
 - Similar proposals submitted in the RIPE and ARIN regions
 - How could inter-RIR transfers take place?
 - Would people come forward to register transfers?
 - Proposal allows a prefix to be swapped for another prefix, so a prefix doesn't need to leave the RIR pool it originally came from
 - Why limit the smallest address transfer size to /24?
 - Any organisation anywhere is free to become a member of APNIC and could be a recipient of APNIC-delegated space
 - An organisation to transfer part of its address block while keeping the rest of it



prop-052: Cooperative distribution of the end of the IPv4 free pool

- Problem this proposal aims to address
 - How should we distribute the remaining RIR unallocated IPv4 pools after the IANA free pool has been exhausted?



prop-052: Cooperative distribution of the end of the IPv4 free pool

- Proposed solution
 - When RIRs start running low of unallocated address space, RIRs work together to transfer space from the RIR with the most remaining space to RIRs needing space
 - When RIR is within 30 days of depleting its remaining pool, request a block sufficient for 3 months from RIR with longest allocation window
 - As less unallocated space is available, RIRs forward requests for addresses from their region to the RIR with the most remaining space at that point in time



prop-052: Cooperative distribution of the end of the IPv4 free pool

- Proposal stats
 - Posted on Policy SIG mailing list 28 November 2007
 - Discussion on mailing list
 - 1 post
 - 1 person from Japan
 - Comment:
 - Is this inter-RIR operational procedure rather than policy?

prop-053: Changing minimum IPv4 allocation size to /22

- Problem this proposal aims to address
 - Small ISPs in India cannot afford the annual Small membership tier fee of AU\$3,169 (for the minimum APNIC allocation size, a /21).



prop-053: Changing minimum IPv4 allocation size to /22

- Proposed solution
 - Change the minimum IPv4 allocation size from /21 to /22
 - Introduce a new membership tier of Tiny for /22 allocations



prop-053: Changing minimum IPv4 allocation size to /22

Proposal stats

- Version 1 posted to Policy SIG mailing list 8 January 2008
- Version 2 posted 19 February 2008
 - 21 posts
 - 9 people
 - 5 from Australia
 - 1 from India
 - 1 from Japan
 - 1 from Nepal
 - 1 from New Zealand



prop-053: Changing minimum IPv4 allocation size to /22

Discussion on mailing list to date (version 2)

- Changing proposed minimum allocation size from /24 to /22 removes objection to proposal
- Is the introduction of a new 'Tiny' membership tier appropriate?
- Initial IP resource application fee is the real issue. Why is it so expensive?
- Should fees be discussed in the Policy SIG or the AMM?

prop-055: Global policy for the allocation of the remaining IPv4 address space

- The problem...
 - To continue applying a global coordinated policy for distribution of the last piece(s) of each RIR's unallocated address block does not match the reality of the situation in each RIR region.
 - Issues each RIR region will face during the exhaustion period vary by region as the level of development of IPv4 and IPv6 are widely different. As a result, applying a global coordinated policy may not adequately address issues in a certain region while it could be work for the others.

prop-055: Global policy for the allocation of the remaining IPv4 address space

- The solution...
 - IANA will reserve one /8 for each RIR as soon as this proposal is adopted.
 - Later, when IANA receives a request for IPv4 address space that cannot be fulfilled using the remaining IANA IPv4 free pool, IANA will allocate each RIR a single /8 from the block reserved for this purpose.
 - Any remaining /8s in IANA free pool will then be allocated to the IR that makes the last request to IANA.



prop-055: Global policy for the allocation of the remaining IPv4 address space

- Proposal stats
 - Amalgamation of:
 - prop-051: Global policy for the allocation of the remaining IPv4 address space
 - prop-046: IPv4 countdown policy proposal
 - Posted to Policy SIG mailing list 23 January 2008
 - 8 posts
 - 5 people
 - 2 from Australia
 - 1 from Japan
 - 2 from outside AP



prop-055: Global policy for the allocation of the remaining IPv4 address space

Discussion on mailing list to date

- What should APNIC be doing with the last /8?
- RIRs do not have restrictions about allocating to organisations that are not in the RIR's region.
 - RIR shopping could be a consequence
 - May be a reduced problem since only 1 /8 involved
 - Without a restriction on requests from organisations outside an RIR's service region, this proposal has no impact other than raising awareness

prop-056: IPv4 soft landing

- Problems this proposal aims to solve
 - Availability of IPv4 addresses for allocation
 - Lack of deployment of IPv6
 - Promote efficient use of increasingly scarce IPv4 resources



prop-056: IPv4 soft landing

- For instance at a threshold of 10 /8s...
- Requesters must:
 1. Provide a response to a survey exploring requester IPv6 transition plans and impediments, anonymized summary data of which may be published by APNIC.
 2. Demonstrate efficient utilization of 100% of all previous IPv4 allocations and at least 90% utilization of the most recent allocation.
 3. For downstream customers:
 - Demonstrate an immediate requirement of 75% utilization
 - Demonstrate a one year requirement of 90% utilization



prop-056: IPv4 soft landing

- The solution...
 - APNIC would institute a set of IPv4 address allocation phases that vary the requirements for address allocation (using the amount of address space remaining unallocated by IANA as a metric).
 - As the amount of address space in the IANA free pool is reduced, the requirements for IPv4 address allocation become more stringent.
 - Phase 0: more than 40 /8s
 - Phase 1: less than 40
 - Phase 2: less than 25
 - Phase 3: less than 10



prop-056: IPv4 soft landing

- Proposal stats
 - Posted to Policy SIG mailing list 24 January 2008
 - 6 posts
 - 4 people
 - 1 from Australia
 - 1 from Japan
 - 2 from outside AP



prop-056: IPv4 soft landing

Discussion on mailing list to date

- In the light of Geoff Huston's projected figures, should this proposal be withdrawn?
 - Saving addresses is not the sole aim of this proposal
 - The proposal sends a clear message to the community about the need to make the transition to IPv6
 - The projected figures may not be reflected in reality
- New version to be discussed during APNIC 25



prop-057: Proposal to change IPv6 initial allocation criteria

- Problem
 - a plan for making 200 assignments within two years is being misunderstood
- Solution...
- Add an alternative criteria that allows an LIR to choose between
 - Have a plan for making at least 200 assignments to other organizations within two years, OR
 - Be an existing LIR with IPv4 allocations from an RIR/NIR which makes IPv6 assignments and/or sub-allocations to other organisations and announces the allocation in the inter-domain routing system within two years.



prop-057: Proposal to change IPv6 initial allocation criteria

- Proposal stats
 - Posted to Policy SIG mailing list 25 January 2008
 - 63 posts
 - 17 people
 - 7 from Australia
 - 1 from Hong Kong
 - 3 from Japan
 - 1 from Nepal
 - 2 from New Zealand
 - 1 from Vietnam
 - 2 from outside AP



prop-057: Proposal to change IPv6 initial allocation criteria

Discussion on mailing list to date (version 2)

- Revised additional criteria more acceptable
- Does 'plan' imply a commitment to implement it fully?
- Assume that any organisation with an IPv4 allocation also requires an IPv6 allocation
- Any policy-related impediment to IPv6 adoption should be removed

prop-058: Proposal to create IPv4 shared use address space among LIRs

- The problem...
 - LIRs providing firewall and IP connectivity services behind NATs using RFC 1918 address space face potential address space collisions between end user networks that are using the same RFC 1918 address ranges.
 - This is preventing LIRs and their end users from benefitting from the security and efficient IPv4 address use that firewalls and NATs can provide.
 - Instead, some LIRs are applying (and receiving) global IPv4 address allocations to providing firewall and IP connectivity services.
 - Furthermore, if LIRs assign only IPv6 addresses to end users, they cannot communicate with non-IPv6 ready site.



prop-058: Proposal to create IPv4 shared use address space among LIRs

- The solution...
 - APNIC to delegate one /8 block as IPv4 shared use address space for LIRs in the Asia Pacific region.
 - This shared use address space is intended to prevent collisions between two interconnected LIRs using the same RFC 1918 private address ranges.
 - Global uniqueness is not guaranteed under this proposal.



prop-058: Proposal to create IPv4 shared use address space among LIRs

- Proposal stats
 - Posted to Policy SIG mailing list 28 January 2008
 - 20 posts
 - 8 people
 - 1 from Australia
 - 2 from Japan
 - 1 from Nepal
 - 2 from New Zealand



prop-058: Proposal to create IPv4 shared use address space among LIRs

Discussion on mailing list to date (version 2)

- Could be useful in a double NAT world after unallocated IPv4 pool is exhausted
- Is APNIC the appropriate forum for this discussion? Is it IANA or IETF?
- Should this be a global policy?



Thanks and see you all tomorrow!



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