

# **GLOBAL POLICY FOR THE ALLOCATION OF THE REMAINING IPV4 ADDRESS SPACE**

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# Previews Information:

- The IANA Ipv4 Address Pool is exhausting (see IANA presentation during this meeting). Therefore conditions are changing for the allocation of Ipv4 addresses.
- Predictions for the IANA Unallocated Address Pool Exhaustion: 1<sup>st</sup> Semester 2010

(<http://www.potaroo.net/tools/ipv4/index.html>)

# Global Policy Development Process:

- Process Described by NRO doc: *NRO04*.
- *1. Common text needs to be ratified by each RIR, by methods of their own choice.*
- *2. This ratified common text is the projected global policy proposal that is being forwarded to the ASO Address Council for review. (6 days).*
- *3. NRO Exec. Board recommend to the ASO to forward the proposed policy to the ICANN Board. (60 days).*
- *4. ICANN Board approves the policy by a majority vote.*
- *5. The policy is published at the NRO web-page.*

# Current Global Policy:

- RIR may request for additional /8s if available space is less than 50% of one /8 or if the RIR's available space of IPv4 addresses is less than the established necessary space for the following 9 months.
- IANA shall make a single allocation of a whole number of /8 blocks, enough to satisfy the established NECESSARY SPACE of the RIR for an 18 month period.
- There is a “gentlemen” agreement that each RIR only accepts 2x/8 from each allocation.

# What are We Proposing?

- A new Global Policy for the allocation of IPv4 space from IANA to RIRs.
- Its a two phases proposal:
  - *Phase 1: We continue with the current policy.*
  - *Phase 2: An EQUAL size final allocation (size N) is made for each RIR.*

# Last Allocation Example:

- Lets say IANA Pool has 11 free /8 and  $N=2$ .
- RIR 1 requests  $2x/8$  and it qualifies for them by the current policy.
- If IANA allocates them, we will not have enough /8s for the equal allocation.
- What if a new RIR is added before the end of the Ipv4 pool?

# Our Proposal:

- IANA will reserve N allocation units (/8) from the free pool to each RIR at the time of the approval of the policy (or when the new RIR is recognized).
- *Phase 1: IANA will allocate Ipv4 addresses until a request for IPv4 address space from any RIR to IANA cannot be fulfilled with the remaining IPv4 space available at the IANA pool.*
- *Phase 2: IANA will automatically allocate the reserved IPv4 allocation units to each RIR (N units to each one) and respond to the last request with the remaining available allocation units at the IANA pool (M units).*

# How will it work?

- Lets say the IANA pool at the time of the approval of the policy has 30 free /8 and  $N=2$ .
- When the policy is approved IANA names 10x/8 as “reserved RIR Z”. The free pool goes down to 20x/8.
- When only 1x/8 remains, IANA receives a request for 2x/8s from RIR X. That will be the last allocation and Phase 2 is activated ( $M=1$ ).
- IANA informs NRO of the activation of the second phase.
- IANA allocates 3x/8 to RIR X and 2x/8 to each of rest of the RIRs.



# Do We Need a New Policy?

- The current policy does not give RIR certainty if it will get a last Ipv4 request. This is particularly problematic for smaller RIR. ¿what if the current agreement breaks?
- The current global policy makes implementing conservative policies or just different policies hard to sell at the RIR level.
- The exhaustion of Ipv4 addresses should be discussed in the RIRs community and approving this policy will release the pressure on the IANA central pool. It is a political issue...
- Today 44x /8 at IANA. The process takes some time. This is the moment to act!

# Are We Breaking Anything?

- The proposal has no technical consequences (IPv4 routing table, etc.).
- Are we moving the date forward? Most RIR will not perceive any difference compared with the current policy.
- RIR Shopping? This has been raised as an issue. However, it is independent to how we allocate Ipv4 addresses. It can still happen with the current policy.
- RFC 2050: Best Current Practice. “This document describes the IP assignment policies currently used by the Regional Registries to implement the guidelines developed by the IANA.”

# Why an Equal Size Allocation?

- It is simple and straight forward to implement.
- Again, most RIR will get the same number of allocations that they would with the current policy.
- We do not want to chop the last /8s.

# Which N Value?

- We are now looking for consensus on  $N=2$ .
- Rationale:
  - The value will be a compromise number (or an arbitrary number).
  - $N=2$  is the current gentlemen agreement for allocation from IANA.
  - Not significant addresses piling in different RIRs, compared with legacy holders or address market.
  - It will still allow RIRs to adopt more conservative policies, if they wish to.
  - Removes fear of pushing exhaustion phase forward as most RIR will feel no difference from current policy.

# Policy Situation:

- **Introduced in April 2007.**
- **LACNIC:**
  - Large consensus at LACNIC X. Waiting for board approval.
- **APNIC:**
  - No consensus reached yet, but there has been a “positive reaction” vote and they intend to work on this kind of policy through the mailing list.
- **AFRINIC:**
  - Consensus on the policy. Went back to the mailing list to discuss further the size of N.
- **ARIN & RIPE:** ...coming up soon...

## 2007-18 & 2007-23:

- We both agree that we need a new global policy with a equal last allocation for each RIR.
- The size of the last allocation it is the only important difference.
- We both would like to reach consensus on the policy principle moving details back to the mailing list.

# What is Next?

- Look for consensus on the policy principle.
- Go back to the ppml list to discuss the text and the size of the last allocation.
- Hopefully, consensus for the policy will be reached by mid 2008.
- ASO address Council and ICANN approval at 1Q-2009.

# Summary

- We are proposing a new Global Policy.
- We believe this process is an opportunity for the RIR community to give a united global message on this issue.
- Maintaining the current policy brings an unpredictable end to the IANA free pool and threatens the RIR system.
- 2x/8s for each RIR as a last allocation.



THANK YOU ! ...