Policy Implementation & Experience Report

Leslie Nobile

Recently Implemented Policies

- ARIN-2012-2 IPv6 Subsequent Allocations Utilization Requirement (NRPM 6.5.3)
  - **ISPs can qualify for an additional IPv6 allocation when they've assigned 90% of their space to serving sites**
  - **Assignments to serving sites must meet same requirements as are used to determine initial allocation size**
  - **No requests reviewed under this policy yet**
- Policy Proposal 186: Section 8.2 Reorganizations
  - **Put the term "reorganizations" back into 8.2 Mergers and Acquisitions**

Purpose of Policy Experience Report

- Review existing policies
  - **Ambiguous text/Inconsistencies/Gaps/Effectiveness**
- Identify areas where new or modified policy may be needed
  - **Operational experience**
  - **Customer feedback**
- Provide feedback to community and make recommendations when appropriate

Policies Reviewed

- ***4.5 Multiple Discrete Networks***
- ***10.3 IANA Policy for Allocation of ASN Blocks to RIRs***

4.5. Multiple Discrete Networks

*"When applying for additional internet address registrations from ARIN, **the organization must demonstrate utilization greater than 50% of both the last block allocated and the aggregate sum of all blocks allocated from ARIN to that organization."***

Issues

There are missing criteria in this policy:

- Policy only provides criteria for an organization to qualify for additional addresses for its existing sites
- No criteria defined for the new sites of an existing MDN customer
  - **How does a new site qualify?**
  - **What size block should be issued?**

Current Practice to Qualify New Sites

- Apply the general principles of the Immediate Need policy (NRPM 4.2.1.6)
  - **Verify ISP has connectivity at each new site by requesting recent bill/invoice for service OR**
  - **Signed connectivity agreement**
  - **Issue /22 minimum allocation unless more can be justified based on 30 day need as supported by:**
    - Signed customer contracts
    - Complete customer justification data
    - Deployment schedule
    - Equipment purchase invoices

Question for the Community

- Should specific criteria be added for the new sites of an existing MDN customer?
- Should staff continue their current practice of using the immediate need criteria?

NRPM 10.3 "IANA Policy for Allocation of ASN Blocks to RIRs"

"After Dec 31, 2010, IANA and the RIRs make no distinction between 2-byte and 4-byte ASNs and will operate from an undifferentiated 32-bit pool"

Issues

- IANA has now issued its last full block of 1024 2-byte ASNs (issued to APNIC on 9/11/13)
  - **There are only 495 remaining 2-byte ASNs in IANA's free pool**
- ARIN will likely not qualify for additional 2-bytes and must rely on existing supply
  - **Reclaimed ASNs are not a steady supply**

Statistics

- ARIN issues ~1400 ASNs per year
  - **Only 73 4-byte ASNs issued since policy inception in 2007**
    - 32 since May 2013 when we changed practice; 0 have been returned
- Current inventory
  - **677 2-byte ASNs**
  - **959 4-byte ASNs**
- Recovered 2-byte ASNs
  - **Anywhere from ~300 to ~1500 2-byte ASNs recovered per year over the past 6 year (not consistent number)**

Current Practice

- Issue 2-byte ASNs by default but first notify requestors of 2-byte depletion and ask to consider 4-byte ASN
  - **Implemented May 2013**
  - **Prior to that, issued from lowest to highest since virtually all 4 byte ASNs were being returned because "Upstream said their router wouldn't support 4-byte ASN"**

Question for the Community

- Should ARIN change its current practice to issuing 4-byte ASNs by default and 2-byte only when technical justification shows a 4-byte won't work?
  - **4-byte ASNs appear to be usable now**
  - **Facilitates a smooth transition rather than "hitting a brick wall" when 2-bytes run out**
  - **Aligns us with other RIRs**
    - APNIC, RIPE, and LACNIC issue 4-byte by default

Suggestions

- Expand the waiting list policy to include 2-byte ASNs
  - **Would go into effect when ARIN has depleted its supply of 2-byte ASN**
  - **Organizations unable to use 4-byte ASN could be placed on the waiting list until a 2-byte ASN becomes available**