Draft Policy ARIN-2015-1: Modification to Criteria for IPv6 Initial End-User Assignments

Problem Statement

- Current policy for assignment to end users excludes a class of users whose costs to renumber would far exceed what current policy is designed to mitigate.
- Without direct assignments, these smaller enterprises are less likely to adopt IPv6 soon, or are likely to adopt measures (such as using ULA + NAT66) widely held to be damaging to the IPv6 Internet.

Policy Statement

Add red text to NRPM 6.5.8.1:

Organizations may justify an initial assignment for addressing devices directly attached to their own network infrastructure, with an intent for the addresses to begin operational use within 12 months, by meeting one of the following criteria:

a. Having a previously justified IPv4 end-user assignment from ARIN or one of its predecessor registries, or;

b. Currently being IPv6 Multihomed or immediately becoming IPv6 Multihomed and using an assigned valid global AS number, or;

c. By having a network that makes active use of a minimum of 2000 IPv6 addresses within 12 months, or;

d. By having a network that makes active use of a minimum of 200 /64 subnets within 12 months, or;

e. By having a contiguous network that has a minimum of 13 active sites within 12 months, or;

f. By providing a reasonable technical justification indicating why IPv6 addresses from an ISP or other LIR are unsuitable.

Rationale

- Orgs with many sites have renumbering costs equal to end-users who would qualify for an assignment under 6.5.8.1 c. and d.
- To balance DFZ's costs of carrying the prefix vs. org's renumbering cost:
  - Sites must be in a contiguous network, so the assignment can be announced as one route
  - 13-site minimum threshold, based on NRPM 6.5.8.2 (which requires 13+ sites to receive a /40 initial assignment).

Example

Example of an end-user who would not qualify under 6.5.8.2 c. or d.:

- 50 locations (IPVPN) spread across the continent
- 10 staff per location (average; 500 total)
- 20 devices per location (average; 1000 total)
- 2 subnets (voice & data) per location (average, 100 total)
- Not multihomed
- Currently using RFC1918 IPv4 space + NAT

Existing options are wasteful

- Requiring the end-user to multihome under NRPM 6.5.8.2 b. is wasteful, as they are using an IPVPN, and multihoming provides benefit only for Internet transit, not within their IPVPN.
- Requiring the end-user to acquire and route an IPv4 direct assignment under NRPM 6.5.8.2.a. in order to be able to get a direct IPv6 assignment is also wasteful and expensive.

Discussion

- Do you support making it easier for organizations like this to get a direct IPv6 assignment from ARIN?
- Are the thresholds and constraints in this draft policy adequate? Too loose? Too strict?
- Are there any legitimate use cases this draft policy doesn't cover?
- Any other questions/concerns/suggestions?

Discussion