

Policy Proposal 2005-7:  
Rationalize Multi-Homing  
Definition and Requirement

ARIN XVI

Robert Seastrom

ARIN AC / Inter.Net

# Goals

# Policy Harmonization

The process for getting a /22 for multihoming purposes is currently more baroque than the process for getting a /20 under the “immediate need” policy. This doesn’t exactly make sense, but more on that later...

## Elimination of “make-work”

Current policy requires a complex series of steps before getting PI space for multihoming. These steps include a gratuitous renumbering exercise.

# The 2005-7 Objective

Streamline the process of acquiring a PI /22 for the purpose of multihoming, without compromising the principles of good stewardship.

# Who benefits?

1. The small ISP or end-site's customers (who don't have to suffer through a round of renumbering)
2. The small ISP or end-site requesting the block (no renumbering, easier process).
3. The transit ISPs (which no longer have to engage in an assign/IRR/announce/renumber/withdraw/ delete/return-to-pool exercise with the end-site).
4. ARIN (simple, one-step process to demonstrate intent to multihome rather than current analyst-intensive process).

# The 4.2.2.2 Ministry of Silly-Walks

*When requesting a /22, demonstrate the efficient utilization of a minimum contiguous or noncontiguous /23 (two /24s) from an upstream.*

In practice, one must announce and use a /23 (which is presumably temporary) before one can get an assignment of a /22 of PI space (presumably more permanent). Renumbering exercises are costly in terms of technician time and do not make the customers happy.

# Silly Walk Choreography

- Decide to multihome
- Sign contracts with 2 or more ISPs
- Get an ASN (requires contracts with ISPs)
- Get a /23 assigned from one upstream
- IRR update (add /23)
- Poke holes in aggregate, do announcements with upstreams
- Number customers into initial /23

(continued)

# Silly Walk Choreography (cont'd)

- Apply to ARIN for PI /22 under 4.2.2.2
- Get /22
- IRR update (add /22)
- Do announcements with upstreams
- Renumber customers into new /22 (could take weeks!)
- Withdraw /23
- IRR update (delete /23)
- Return old /23 to upstream where we got it



## Intent of 4.2.2.2

Provide a high degree of confidence that the applicant is actually going to use the assigned address space in the manner represented.

Question: How do we currently address this in other scenarios where there is no previous history of address utilization from the applicant?

# The 4.2.1.6 (Immediate Need) Policy

*If an ISP has an immediate need for address space, i.e., the need exists the day of the request, ARIN may issue a /20 if the organization, such as a new company, shows justification. However, these cases are exceptional.*

In practice this means submitting a big pile of supporting documentation showing that equipment has been purchased, upstream bandwidth contracts, ASNs, anticipated or existing customer base, etc. Fortunately, Accounting and BizDev have this information on tap, so that's not such an odious exercise.

# 2005-7 Policy Statement (verbatim)

*In existing policy 4.2.2.2, replace the phrase "multi-homed organizations must:" with the phrase "organizations applying under the multi-homed policy must:" In existing policy 4.2.2.2.2, replace "Provide information showing that the requested IP address space will be utilized within three months." with "Provide information showing that the requested IP address space will be utilized within three months and demonstrating an intent to announce the requested space in a multi-homed fashion."*

# Post-2005-7 Choreography

- Decide to multihome
- Sign contracts with 2 or more transit providers
- Get an ASN (needs contracts with transit providers)
- Apply for PI /22 under 4.2.2.2 (Show contracts and ASN to ARIN to demonstrate intent to multihome, or provide other supporting information as necessary)
- Get /22
- IRR update
- Do announcements with upstreams
- Number customers into /22
- ???
- Profit!

Recommendations/critiques to date

Concern: 2005-7 appears to only address ISPs, not end-user-sites (thank you Jim McBurnett)

Response: Actually, existing policy towards end-user-sites is inchoate - 4.3.2.2 (end site multihoming) has no specific guidance, and in practice the policy is inherited from 4.2.2.2.

Recommendation: Apply post-change 4.2.2.2 verbiage to 4.3.2.2 so that the symmetry is codified. This requires an addendum to 2005-7 but does not change its intent.

Questions? Comments?