2007-6: IPv4 PI minimum size change

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Proposed policy text

Replace the existing 4.3.2.2 with this text:

- For end-users who demonstrate an intent to announce the requested space in a multihomed fashion, the minimum block of IP address space assigned is a /24. If assignments smaller than a /24 are needed, multihomed end-users should contact their upstream providers. When prefixes are assigned which are longer than /20, they will be from a block reserved for that purpose.

Real intent and substance

- Change the *multi-homed* PI minimum size to */24*, nothing more!
- No other changes in any other requirements
- Editorial changes in micro-allocation section – but these are not really necessary

Some history

- We used to hand out /24s
  - They were called "class C" addresses
- Routing issues may it hard to scale with a lot of /24s in the default free zone
  - So we made the minimum PI size /20
- Routing devices got better
  - …and we passed 2002-3 to change the minimum for multi-homed PI to /22

A few notes

- Utilization requirements still stand
- ARIN has never guaranteed that any assignment will be globally routable (see NRPM 4.1.1)
- In general, experiments with route-views show that an arbitrary /24 is routable
- It's tempting to remove the minimum completely, and let the market decide what's routable and what isn't
  - ..but let's avoid excessive confusion and keep it to a block size that is presently routable

Pros

- Permits smaller organizations to request appropriately sized space
- Requirements are just as stringent as before – and are generally more rigorous than in PA space
- Not expected to impact routing table sizes
  - These organizations would qualify for a PA /24 anyway, so they would consume a slot anyway

PPML negative responses

- "May lead to a run on space."
  - Experience with other RIRs with a similar policy suggests otherwise
  - APNIC sees few requests for PI /24s
  - No data available from AfriNIC or LACNIC, but no one is pushing to remove their existing policy
  - RIPE has a similar proposal under discussion
    - There appears to be support for the concept
    - There are concerns about their specific proposal wording

That spam thing

- "Spammers may abuse this policy."
  - No evidence that this has occurred in other RIRs
  - Little actual data available
  - This might be a problem, but it seems rather unlikely that the time and monetary investment would be worth it for the spammers

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