Policy Proposal 2010-006

Registration Requirements for IPv6 End User Assignments

Current situation

- No need to register assignments of /48 or smaller in the public database (481-5.5)
- Required to register in your own database
  - Without a proper definition of database
  - Without specifying what data there needs to be
  - Accessible by the RIR, again without specs
- Needed to calculate HD-ratio
  - Additional allocation requests
  - Audit procedures

Current situation (2)

- Lot of uncertainty and ambiguity
  - Leads to a lot of questions
  - May lead to a lot of problems
- A lot of organizations hold a /32 but actually need a bigger alloc when deploying
- Two options:
  - Clean up and return, request a bigger one
  - Grow the current one (or additional alloc)

IPv4 current practice

- Bigger inetnum object in the database (assigned or infra-aw)
- Implicit one address per customer
- When /20 or above on broadband
  - Upon audit or additional assignment/ allocation requests you have to provide stats on actual usage in the block
    - Can be MRTG graphs of DHCP pool etc
- http://www.ripe.net/rs/ipv4/ipv4-verification.html

Proposal for IPv6

- Do something similar
- Register an inet6num object containing a less specific block covering your assignments in the public database
- However there is no implicit size per customer
- So you need an attribute to indicate what size assignment every customer gets

Solution

- Introduce a new status (AGGREGATED-BY-LIR)
- Introduce a new attribute (optional) for inet6num called assignment-size
- Make the optional attribute required for the status above (business rule)

Solution (example)

```
inet6num:          2001:980:3000::/36
netname:           XS4ALL-V6-RESIDENTIAL
assignment-size:   48
descr:             IPv6 assignments for residential DSL
descr:             subscribers
descr:             Complaints to abuse@xs4all.nl
country:           NL
admin-c:           XS42-RIPE
tech-c:            XS42-RIPE
status:            AGGREGATED-BY-LIR
mnt-by:            XS4ALL-MNT
changed:           marco@xs4all.net 20110101
source:            RIPE
```

Solution

- Provide statistics similar to IPv4
  - Number of customer in a specific block
- RIPE NCC can do the math
  - Multiply number of customers with size should give the usage
  - From there the HD-ratio is easy
- No discussion on data formats or contents

More benefits

- Everybody > 1000 customers probably has this already in place for v4
- More usage stats end up in the public domain as assignments are registered
- Can aid in aggregation for other purposes
  - Blackhole/block exactly one customer
  - Geo location