prop-070

maximum allocation size

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Aim

- To ensure an even distribution of the final IPv4 resources

Aim

Fairness

Problem

- Last people requesting address space get additional 6/12 months, while those coming a day later get nothing :-(

- Large LIR (with justification) requests a large portion of the remain IANA space, or exhaust APNIC's final space

The Question

- How can we more evenly distribute the remaining space ?

    - prop-063 is similar in intent

    - prop-070 also attempt this

    - A simple maximum resolves this too (/12?)

- Either way this is an issue needing a solution

Details

- Initial maximum /8 (or maybe a /10?)

- Maximum allocation reduces as the free poll reduces

30 x /8s	/8 (current)
25 x /8s	/9
20 x /8s	/12
15 x /8s	/14
10 x /8s	/16
5 x /8s	/18

Disadvantages

- If only implemented by APNIC, disadvantages AP region

- Based on current allocation sizes, creates **significantly** more work for APNIC

Considerations

- A timeframe or wait state (i.e. only 1 allocation per month)

  analogy - rate-limit

Different approach

- The QoS version of this policy ...

    - As Maximum allocation is implemented (per table), then wait state begins for request of that size and greater.

    - A large allocation can only be processed once the same amount of smaller allocations have been processed.

Example

- Example (free pool = 20* /8s)

    - LIR requests a /10
    - a /10 request enters a wait-state (>/12 per table)
    - an aggregate /10 of smaller request (i.e. /20s) is processed
    - Once a broader allocation of a /10 is completed, individual request for a /10 is processed

Final Distribution

- Example (free pool = 20* /8s)

    - LIR requests a /10
    - a /10 request enters a wait-state (>/12)
    - an aggregate /10 of smaller request (i.e. /20s) is processed
    - Once a broader allocation of a /10 is completed, individual request for a /10 is processed

Advantages

- Even 1:1 distribution between smaller members and larger member

- Promotes smaller request (serviced faster)

    - You may get a /12, but you will definitely get a smaller request

    - Solves 6/12 months horizon, LIR self regulates ...

        - longer wait for 12 month requirement
        - shorter wait for 3 month requirement

Advantages

- Does not overly disadvantage the AP region

    - Promotes smaller requests, more often (good!)

    - Doesn't mandate lots of smaller requests (good!)

Summary

- Allocating 12 months, when we have 12-24 months left in the pool, doesn't make sense

  Greatly advantages larger/richer members

- We need a solution, this is one, there are others

  ... but we need one

Comments