APIX Workshop @ Kyoto, Japan

Discussion on the policy change in APNIC region regarding IPv4 assignment size to IXPs

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Abstract of this proposal

- prop-154: Resizing of IPv4 assignment for the IXPs
  - https://www.apnic.net/community/policy/proposals/prop-154/
- Objective
  - This proposal suggests changing the default size of IPv4 assignments for IXPs from /23 to /26, which can be replaced up to a maximum of a /22 if the IXP returns the IPv4 address space previously assigned to them.
- Current status
  - To be discussed at APNIC 56
- Authors
  - Simon Sohel Baroi and Aftab Siddiqui

Summary of idea and background

(quote from an email on APIX member mailinglist by Toyama-san)

- The general idea is as follows:
  - Currently, IPv4 assignment for an IXP is /23
  - The initial assignment to an IXP should be changed to /26
  - If the IXP becomes bigger, /25 to /22 will be assigned if they replace and return the old space.

- The reason to propose this is like:
  - The IPv4 address becomes more and more precious
  - At the initial stage of many IXPs, they do not have enough members/customers
  - This is a waste of IPv4 address.

A similar policy in RIPE NCC (ripe-733)

- https://www.ripe.net/publications/docs/ripe-733

- 6.1. Assignments to Internet Exchange Points
  - New IXPs will be assigned a /24 by default. Once they require a larger assignment, they must return their current one (or existing PI used as an IXP peering LAN) and receive a replacement up to maximum of a /22. After one year, utilisation of the new assignment must be at least 50%, unless special circumstances are defined. On request or once there are no more assignments of /24 (or larger) available, assignments can be made down to /27.

Discussion

- Are there different thoughts depending on the situation?
  - IXPs in emerging areas or established areas
  - IXPs running in multiple national in APAC
  - IXPs operating multiple cities in a country/economy
- RFC 8950
  - Advertising IPv4 Network Layer Reachability Information (NLRI) with an IPv6 Next Hop
  - https://datatracker.ietf.org/doc/rfc8950/
- Any comments/considerations