IPv6 routing policies using RPSL

RIPE40

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IPv6 routing policies using RPSL

- Currently
  - RPSL does not define IPv6 usage for routing policies (RFC2622)
- Work to be done
  - Document IPv6 usage in current RPSL classes
  - Define new attributes where required

Current IPv6 RPSL classes

- Used in current 6Bone whois database
- New classes for IPv6 defined:
  - ipv6-site
    - origin: AS number of the site
    - prefix: route prefix(es) exported to the outside world
    - tunnel, native: describes the peering points of the site
  - inet6num
    - allocation of IPv6 address space
  - draft-ietf-ngtrans-6bone-registry-xx.txt

Creating IPv6 routing policies

- IPv6 support in current RPSL classes
  - aut-num
    - import: from AS2 accept { 2001:410::/35 }
  - route, route-set
    - route, members
  - inet-rtr
  - filter-set
  - peering-set

aut-num class

- Policy ambiguity
  - import: from AS2 accept ANY
    - import both IPv4 and IPv6 ?
  - Need new attributes to specify the protocol ?
    - import6, export6, default6 ?

route, route-set classes

- Can extend both route and route-set to support IPv6 addresses
- ipv6-site class offer similar information, and some
    - prefix (multiple)
    - origin
    - tunnel, native
- But ipv6-site does not support indirect members
- Use route/route-set or ipv6-site ?

Peering type

- IPv6 peering are done today using native and tunnel links
  - Information found in ipv6-site objects
- Do we make this information available to routing policies ? How ?

Next steps

- Form a *task force* to work on IPv6 RPSL
  - Send me (or David) an email if you are interested
  - Florent.Parent@viagenie.qc.ca
- Create task force mailing-list and send current draft
- Submit internet-draft for next IETF (?)
- Port RAtoolset to support IPv6