NAT64 Operational Experiences

draft-ietf-v6ops-nat64-experience-00

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Motivations

- Documented the experiences from real world
- Summarize the NAT64 scenarios and share experiences / lessons
- Encourage IPv6-only discussions and Intend to help operators who may just start out planning NAT64 in the near future
  - RFC6136 reported at least 30% operators plan to run some kind of translator (presumably NAT64/DNS64)
- A good example is RFC6586; Link to it was suggested
  - This draft is more specific on NAT64 network planning

Comments & Potential Changes

- Seek a example of NAT64-CGN location and more descriptions about the justifications
  - NAT64-CGN is considered feature of the AS border
  - Allows consistent attribution and traceability within one service provider domain
- HA Considerations
  - Short-lived sessions account for most of the bindings
  - Data statistics have been shared on the list (question was been answered)
- The term of "CE" may lead the unnecessary confusion of equivalence of "CPE"
  - We intended to change the term as "NAT64-FE(Front End)", which mostly indicates a traffic load balancer
- More revisions are needed so as to improve draft more concise and precise

Topics we covered: NAT64-CGN

- Positioning of NAT64-CGN
  - located NAT64-CGN to be close to IPv4 peers to reduce unnecessary backhaul costs and latency
- High Availability Consideration
  - cold-standby (VRRP); hot-standby (BIB sync)
- Traceability
  - Online (XFF, I-D.ietf-intarea-nat-reveal-analysis)
  - Offline (Syslog, Port allocation methods)
- Quality of Experience
  - ALG supporting for service richness
  - differentiated services
- Load Balance
  - I-D.zhang-behave-nat64-load-balancing
- MTU Consideration
  - Following I-D.ietf-6man-ipv6-atomic-fragments

Topics we covered: NAT64-FE

- Positioning of NAT64-FE
  - NAT64-FE(LB) suggestion is consistent with I-D.ietf-v6ops-icp-guidance (Section 7)
- Anti-DDoS/SYN Flood
  - L3 load balancer with capable of line rate DDOS defense
- User Behavior Analysis
  - Take a note that source address loss is unacceptable
- DNS Resolving
  - Follow RFC6144
- Load Balance
  - Collocated with load balancer
- MTU Consideration
  - Recommended configure IPv4 MTU>=1260

Status & Next Step

- Expecting more reviews from the group
- Trying to address all comments at next version and ask for WGLC
  - Any feedback?