NAT64 Deployment Guidelines in Operator and Enterprise Networks

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History

- Discussion in IETF regarding using only NAT64 in our network

- Suggested deploying 464XLAT instead

- Discussion: DNS64 breaks DNSSEC

- 464XLAT can be used w/o DNS64, which is not possible for (only) NAT64
  - Document presented in IETF 100

- WG suggested to be an "overall" NAT64 deployment guidelines document

Summary (1)

- ## Introduction

  - ### 3 issues

    - DNS64 breaks DNSSEC
    - NAT64/DNS64 don't work with literals and older APIs
    - NAT64 doesn't work for IPv4-only hosts or apps

- ## DNSSEC Considerations

- ## NAT64 Deployment scenarios

  - Network should work in all the cases
  - 6 possible cases, depending on location of NAT64, DNS64 and availability of CLAT

Summary (2)

- Possible DNSSEC workarounds:
  - Not using DNS64
  - DNSSEC validator aware of DNS64
  - Stub validator
  - CLAT with DNS proxy and validator
  - ACL of clients
  - Mapping-out IPv4 addresses
- DNS64 reverse mapping considerations

Summary (3)

- Issue with IPv4 literals and old APIs
- Issue with IPv4-only hosts or apps
- Using 464XLAT with/without DNS64
- Manual configuration of "foreign" DNS
- CLAT translation considerations
- Summary of deployment considerations for NAT64
- IANA considerations

Next steps

- Questions ?

- Become a WG item ?

- Inputs ?