Status report on Lame Delegations (work in progress)

George Michaelson

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Problem Summary

- Lame DNS reverse delegations can cause problems across the Internet:
- Delays in service binding for clients using affected address ranges:
  - timeouts in reverse-address lookup
    - Eg receiving party tries to resolve the calling source address.
- Refusal of service due to failures during DNS processing.

Problem Summary

– Increased DNS traffic

  • between caching DNS nameservers and the listed DNS authority chain down from the root

    – Processing requests which can only fail after timeout.

  • Measurable load on critical Infrastructure

    – The RIRs have been requested to investigate and reduce this traffic.

Problem Summary

- Lame DNS reverse delegations affect
  - The users of the network in question.
  - Unrelated third parties.
- End users cannot resolve problem directly
  - Due to hierarchical nature of authoritative delegation.
- If the network administrators do not correct errors in their DNS configurations
  - RIR has to resume control of the delegated domain (pending delegate resuming control)
  - disable the listing of the misconfigured servers.

Proposal

- Identify potential lameness.
  - (two points of test, AU & JP)
- Test the DNS reverse delegation
  - (15 day test period).
- Attempt to notify the domain holder
  - (45 day notice period).
- Disable lame DNS reverse delegation.
  - (If not corrected at end of notice period)

APNIC

Implementation

- This proposal will be implemented three months after it has been accepted by the APNIC community.
  - Extend current lame measurement to JP location
  - Implement decision logic for status checks
  - Implement communications process to delegates
  - Code disable function into DNS production cycle
  - Collect statistics on process for report back to DNS Ops SIG, other bodies

Project Status

- Work held over pending deployment of new DNS management system
  - Better (web based) tools to support maintenance of Reverse DNS
  - SQL based engine backing DNS and WHOIS
    - Integrated data available to manage lame status checking, de-listing functions
  - Support systems for staff
    - Contact scheduling system for HM dept
  - Project delivery re-scheduled for 2Q/04
    - Will report status at AMM18

Lame status of APNIC managed DNS

DNS Status by date

% total delegated

Date