

# DNS Hactivities during Hackathon, IETF121 Dublin

Philip Homburg   Stéphane Bortzmeyer   Shumon Huque   Ondřej  
Súry   Johan Stenstam

November 3, 2024

# Implementation of CHAIN Query Requests in DNS (RFC 7901)

Philip Homburg

- **What:** allow a stub resolver to request all DNS records needed for validation in one go (as opposed to sending many queries for DS and DNSKEY records)
- **Why:** 8 year old experimental RFC, no implementations (that I'm aware off) Test the flexibility of our Rust library (Domain crate)
- **Result:**
  - ▶ Very hacky server part
  - ▶ Hacky incomplete client part
  - ▶ But, it works!

## More stuff

### Stéphane Bortzmeyer and Shumon Huque

- Ossification of the DNS : hard to introduce new features
- Greasing, like in TLS and QUIC
- Implementation in an authoritative name server
- Issues raised : is it acceptable to risk breaking ?

And of course, disagreement about an existing RFC.

### Tamás Csillag

- DNSKEY ksk rollover - successfully tested a new idea to do a roll between two providers will follow up with some kind of summary or rfc draft

# DELEG implementation in BIND 9

Ondřej Surý

- Proof of Concept DELEG implementation in authoritative answers. **done for signed zones**
- Proof of Concept for using DELEG instead of NS records. **partly done**

# The Multi-Signer, Generalized Notify, DSYNC, DNS UPDATE, etc, Project

Lars-Johan Liman, Tomas Agard, Johan Stenstam

- In the multi-signer work we needed a "NOTIFY(DNSKEY)" when new DNSKEYs are introduced.
- That led to the work on Generalized Notify and NOTIFY(CDS) and NOTIFY(CSYNC). **DONE**
- That triggered the work on delegation sync via DNS UPDATE. **MOSTLY DONE**
- Now we're circling back to multi-signer and the NOTIFY(DNSKEY). **DONE**
- ... and multi-signer is becoming distributed: The zone designates the "signers" via the experimental MSIGNER RRset. **DONE**
- ... then the so-called "multi-signer sidecars" (next to each signer) locate each other via the MSIGNER RRset and establish authenticated communication. **ONGOING**