IETF Hackathon: Everything DNS

IETF 104
23-24 March, 2019
Prague

What got done

- As usual, many different projects:
    - 5 biggish projects, 6 other projects
    - 16 people

Vladimír Čunát
Stephane Borzmeyer
Ralph Dolmans
Shane Kerr

Extended Error codes

- Feb 2017: https://datatracker.ietf.org/doc/draft-ietf-dnsop-extended-error
- SERVFAIL - but why? This will tell you!

- RESULT: Done for *Knot resolver* & *Unbound*!
- *dnsdist* in progress

Witold Kręcicki
Pieter Lexis
Willem Toorop

Multi-vendor interoperable DNS Cookies

- RFC7873: DNS Cookies (May 2016) but interop problems!
- March 11: https://datatracker.ietf.org/doc/draft-sury-toorop-dns-cookies-algorithms/

- RESULT: Even before WG adoption working between:
  Bind, Knot, PowerDNS, NSD & Unbound!

Jan Včelák
Shannon Weyrick

DNS-over-QUIC

- April 2017: https://datatracker.ietf.org/doc/draft-huitema-quic-dnsoquic/
- Some previous work, but stalled...

- Client in *flamethrower* (C++ open source perf tool)
  - github.com/DNS-OARC/flamethrower/tree/dns-over-quic
- Server side: Proxy from quic to udp
  - https://github.com/ns1/doq-proxy

- RESULT: It works!

Pallavi Aras
Willem Toorop
Andreas Schulze
Jakob Walz

XoT - XFR over TLS

- March 11: https://datatracker.ietf.org/doc/draft-hzpa-dprive-xfr-over-tls/
  draft-hzpa-dprive-xfr-over-tls

- Work on DoT in NSD (OCSP, DNSSEC Chain Extension)

- Implemented opportunistic AXFR over TLS
    NSD (master) -> *Unbound* (secondary)

- RESULT: Implemented & Working! Auth model needs work.
- DSO (Stateful Operations) version of the draft coming soon!

Other topics

- **Petr Špaček, Pieter Lexis, Norman Kowalewski, Michal Vaško, Aleš Mrázek:** Minimal viable yang model for managing slave zones in an authoritative: Just the model, no implementation yet Yang & netconf for PowerDNS & Knot

- **Jim Hague**: Continued work on DoH support in stubby

- **Manu Bretelle & Jerry Lundström**: DNSTAP Multiplexer to offload and distribute DNSTAP processing

- **Paul Hoffman**: Working Resolver measurements testbed!

- **Ralf Weber**: Started working on DoT for dnspython

- **Dick Franks** (remote): ZONEMD in Net::DNS

Wrap Up

Team members:

Vladimír Čunát
Stephane Borzmeyer
Ralph Dolmans
Shane Kerr
Witold Kręcicki
Pieter Lexis
Pallavi Aras
Shumon Huque
Paul Hoffman
Andreas Schulze
Jan Včelák

Jim Hague
John Dickinson
Sara Dickinson

First timers @ IETF/Hackathon:

Shannon Weyrick
Jakob Walz
Norman Kowalewski
Michal Vaško
Aleš Mrázek
Remote:
Dick Franks