# 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: <a href="https://datatracker.ietf.org/doc/draft-ietf-dnsop-extended-error">https://datatracker.ietf.org/doc/draft-ietf-dnsop-extended-error</a>
- 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: <a href="https://datatracker.ietf.org/doc/draft-sury-toorop-dns-cookies-algorithms/">https://datatracker.ietf.org/doc/draft-sury-toorop-dns-cookies-algorithms/</a>
- RESULT: Even before WG adoption working between: Bind, Knot, PowerDNS, NSD & Unbound!

#### **DNS-over-QUIC**

- April 2017: <a href="https://datatracker.ietf.org/doc/draft-huitema-quic-dnsoquic/">https://datatracker.ietf.org/doc/draft-huitema-quic-dnsoquic/</a>
- 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 Schultze Jakob Walz

#### XoT - XFR over TLS



- March 11: <a href="https://datatracker.ietf.org/doc/draft-hzpa-dprive-xfr-over-tls/draft-hzpa-dprive-xfr-over-tls/">https://datatracker.ietf.org/doc/draft-hzpa-dprive-xfr-over-tls/</a>
  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**