

# IETF Hackathon: Everything DNS

IETF 104  
23-24 March, 2019  
Prague



# What got done

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

# 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*!
- *dnsmdist* in progress

# 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!*

# DNS-over-QUIC

- April 2017: <https://datatracker.ietf.org/doc/draft-huitema-quic-dnsquic/>
- Some previous work, but stalled...
- Client in *flamethrower* (C++ open source perf tool)
  - [github.com/DNS-OARC/flamethrower/tree/dns-over-quic](https://github.com/DNS-OARC/flamethrower/tree/dns-over-quic)
- Server side: Proxy from quic to udp
  - <https://github.com/DNS-OARC/flamethrower/tree/dns-over-quic>
- RESULT: It works!

# 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 TLS in NSD (good crypto, OCSP, DNSSEC Ch Ext)
- 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

- **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 DNS-over-TLS for dnspython
- **Dick Franks (remote):** ZONEMD in Net::DNS

# Wrap Up

## **Team members:**

Vladimír Čunát  
Stephane Borzmeyer  
Ralph Dollmans  
Shane Kerr  
Witold Kręcicki  
Pieter Lexis  
Pallavi Aras  
Shumon Huque

Paul Hoffman  
Andreas Schulz  
Jan Včelák  
Shannon Weyerick  
Jim Hague  
John Dickinson  
Sara Dickinson

**First timers @ IETF/Hackathon:**  
Shannon Weyerick