

# IETF Hackathon: DNS, DNS-SD, DPRIVE, & DOH

IETF 101  
17-18 March, 2018  
London



# Hackathon Plan

- DoH: DNS-over-HTTPS. Multiple implementations + inter-op of *draft-ietf-doh-dns-over-https-03*
- DNS, DNS-SD & DPRIVE: Many small projects

~50/50 split of  
people

# What got done: DoH

Work in Progress: More details in the [DOH branch of the IETF GitHub repo](#)

Language	Code	Client	Server	Who
C	<a href="#">getdns</a>	Y		Willem Toorop
Go	<a href="#">Go DNS CoreDNS</a>	-	-	Miek Gieben
Python/C	<a href="#">github</a>	Y	Y	Stéphane Borztemeyer
Python	<a href="#">github</a>	Y	Y	Manu Bretelle
nginx + Lua	<a href="#">github</a>		Y	Tony Finch
C + PHP	<a href="#">github</a>	Y	Y	Massimiliano Fantuzzi
Javascript	<a href="#">github</a>	Y		Tom Puseteri
Python	<a href="#">Test System</a>	-	-	Manu Bretelle

# What we learned: DoH

- Full report planned at the DOH working group
- **HEADLINE: Mostly it works!**
  - Inter-op was OK (also with public DoH servers).
- Draft updates:
  - GET/POST - SHOULD vs MUST might need to be specified...
  - Error handling is unspecified - needs to be
- Minor clarifications/bugs
- DoH *not a good fit* for Go DNS library (TLS was)
- Plus you can write a Perl DoH client in 20 lines of code!

DNS and HTTP  
folks talked!!

# What got done: DNS/DNS-SD

- DNS-Service Discovery (Ted Lemon + Stuart Cheshire)
  - *draft-sctl-dnssd-mdns-relay*
- DNS/DNSSEC
  - DNSSEC/IXFR: implementation *draft-mekking-mixfr* (expired). Reduces bandwidth. Goal was measurements - resurrect draft?
  - Perl Net::DNS::SEC: Edwards curve validation (**RFC8080**)
    - Epic fail! Acknowledgements to Nick Harper (ANS1 surgeon)
  - KSK Sentinel: *draft-ietf-dnsop-kskroll-sentinel* issues found
  - ANAME: *draft-ietf-dnsop-aname*

# What got done: DPRIVE

- **getdns/Stubby**: connect to resolver by name (*draft-ietf-dprive-dtls-and-tls-profiles*)

```
upstream_recursive_servers:  
# The SB's HTTPS server:  
- uri: "https://dns.bortzmeyer.fr"  
# The quad9 DNS over TLS server  
- name: "dns.quad9.net"
```

- (**RFC7858**) DNS-over-TLS
  - **systemd-resolved**: forwarding stub configuration work started
  - **BIND**: DNS-over-TLS, libidn 2008 support
  - **dnperf**: Adding [TLS support](#) for benchmarking
  - **EDNS0 Padding**: (**RFC7830**) in [Tenta](#), [pydig](#), CoreDNS
- **TLS DNSSEC Chain Ext**: (*draft-ietf-tls-dnssec-chain-extension*) [demo server code](#), server <http://dubai.signing-milter.org:853/>

# Teams

## DNS Team members:

- Shane Kerr
- Matthijs Mekking
- Dick Franks
- Evan Hunt
- Petr Špaček

## DPRIVE Team members:

- Willem Toorop
- Jim Hague
- Sara Dickinson
- Ondřej Surý
- Daniel Kahn Gillmor

## Remote DPRIVE:

- Andreas Shultz
- Logan Velvindron

## First timers @ Hackathon:

- Tony Finch
- Massimiliano Fantuzzi
- Logan Velvindron
- Dick Franks
- Matthijs Mekking