



Hackathon results & DNS Error Reporting

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Net::DNS::Resolver::Unbound

- Dick Franks and Willem Toorop
- Extends Net::DNS to use libunbound
- `ub_send()` and `ub_send_async()` for libunbound
- send and receive raw packets with libunbound

Encrypted Client Hello

- Implementation in [Connect by Name](#) – Philip Homburg
- Setup sessions Async, Happy Eyeballs, DANE, etc.
- Do SVCB and HTTPS and use the ech= parameter to setup connection to:
 - defol.io

What we learned

- We had a really good time
- The food was **amazing!!!**
- DNS Error reporting Rocks!

Wrap Up

Team members:

- Willem Toorop
- Dick Franks
- Roy Arends
- Shane Kerr
- Stéphane Bortzmeyer
- Philip Homburg
- Mark Andrews
- Tom Carpay



DNS Error Reporting

- [draft-ietf-dnsop-dns-error-reporting](#)
- Builds upon Extended DNS Errors [RFC8914], but reports to operator instead of querier
 - Resolver indicated support for reporting
 - Authoritative sends *agent domain* in EDNS0 option
 - Resolver sends errors to *report receiving agent* formatted as DNS query

DNS Error Reporting

- Provided feedback & suggestions for version -04:
 - Reporting QTYPE is TXT (was NULL).
 - resolver must indicate support (was unsolicited EDNS0 option in response). Avoids sending error reports about error reports.
 - Moved error code to the label after the broken QNAME, so it is in a consistent place.

DNS Error Reporting

- Implementation in Unbound - Willem Toorop
- In github on the *features/error-reporting-poc* branch
 - <https://github.com/NLnetLabs/unbound/tree/features/error-reporting-poc>
- Public (open) “testing” resolver at:
 - 185.49.141.28
 - 2a04:b900:0:100::28
- Authoritative side in eBPF:
<https://github.com/NLnetLabs/XDPeriments/tree/master/opt-extend>

DNS Error Reporting

- Implementation in Drink – Stéphane Bortzmeyer
Drink is an authoritative server. Great for experimentations.

<https://framagit.org/bortzmeyer/drink/>

Both the EDNS signaling and the report processing.

DNS Error Reporting

- Implementation in Trex  – Shane Kerr
 - NS1's proprietary authoritative server.
- Straightforward on authoritative side.
- Configure unique report receiving agent per server.

DNS Error Reporting

- Mark Andrews submitted ticket for BIND9
- <https://gitlab.isc.org/isc-projects/bind9/-/issues/3659>
- Tom Carpay updated develop-branch of Idns
- Idns-tesns can now easily be used to fake an Error reporting-supporting authoritative server.

DNS Error Reporting

Authors will request the Working Group chairs to consider a WG last call (on the mailing list) after version -04 is published.

Questions & suggestions
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