IETF Hackathon

DNS over CoAP Deployment

IETF 123

19-20 July 2025

Madrid, Spain

Hackathon Plan

✅ Continue porting of DNS over CoAP:

- draft-ietf-core-dns-over-coap
- Day 1: Work on Unbound implementation (PR#1252)
  - ⬜ Make OSCORE credentials non-constant and configurable
  - ⬜ Make CoAP resource path non-constant and configurable
  - ⬜ Find out why libcoap sends a piggybacked ACK-message for late responses instead of the correct CON-message
  - ⬜ Reuse TLS-PKI for DTLS
- Day 2: Shipping aiodnsprox for Fedora
  - ⬜ Publish to PyPI
  - ⬜ Various bug fixes

What got done

- Day 1: Work on Unbound implementation (PR#1252)
  - ✅ Make OSCORE credentials non-constant and configurable
  - ✅ Make CoAP resource path non-constant and configurable
  - ⬜ Find out why libcoap sends a piggybacked ACK-message for late responses instead of the correct CON-message
  - ⬜ Reuse TLS-PKI for DTLS
- Day 2: Shipping aiodnsprox for Fedora
  - ✅ Publish to PyPI
  - ✅ Various bug fixes

What we learned

- Unbound: Mostly code refactoring for configuration
- aiodnsprox: Implementation status of DTLS in Python still somewhat shaky
  (especially when using with CoAP)
  - OpenSSL: Does not export DTLS completely to Python
  - WolfSSL: Declared ciphers needed for CoAP as “insecure”
  - TinyDTLS: Python wrapper maintained by a single person, very finicky to use with Python

Wrap up

Team members:

- **Martine Lenders**
- Benson Muite (aiodnsprox)
- Christian Amsüss (aiodnsprox)

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