DNS over CoAP (DoC) "Bundle"

```
draft-ietf-core-dns-over-coap
draft-ietf-core-coap-dtls-alpn
draft-lenders-core-dnr
```

Martine S. Lenders (martine.lenders@tu-dresden.de), Christian Amsüss,
Thomas C. Schmidt, Matthias Wählisch
IETF 122, CoRE WG Meeting, 2025-03-18

`draft-ietf-core-dns-over-coap`

- WGLC; Addressed reviews by Carsten, Esko, Marco, and Mikolai
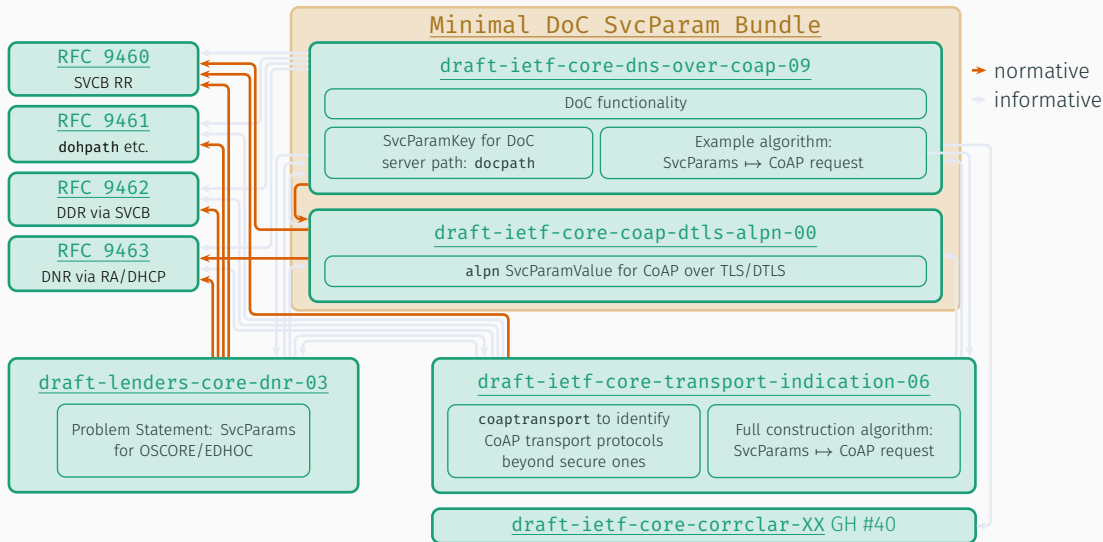   - Clarify that any OpCode beyond 0 is not supported for now

`draft-ietf-core-coap-dtls-alpn`

- WGLC; Addressed reviews by Esko and Marco

`draft-lenders-core-dnr`

- Add example scenarios:
    - NDP-discovered DoC server with EDHOC credentials
    - DHCP-discovered DoC server with ACE details
- Broaden objectives for ACE profiles

The Minimum DoC SvcParam Bundle

Minimal DoC SvcParam Bundle

draft-ietf-core-dns-over-coap-09

DoC functionality

SvcParamKey for DoC server path: `docpath`

Example algorithm: SvcParams ↦ CoAP request

draft-ietf-core-coap-dtls-alpn-00

`alpn` SvcParamValue for CoAP over TLS/DTLS

RFC 9460
SVCB RR

RFC 9461
`dohpath` etc.

RFC 9462
DDR via SVCB

RFC 9463
DNR via RA/DHCP

→ normative
→ informative

draft-lenders-core-dnr-03

Problem Statement: SvcParams for OSCORE/EDHOC

draft-ietf-core-transport-indication-06

`coaptransport` to identify CoAP transport protocols beyond secure ones

Full construction algorithm: SvcParams ↦ CoAP request

draft-ietf-core-corrclar-XX GH #40

Discovery of Network-designated OSCORE-based Resolvers: Problem Statement

- Sharpen into two (possibly independent) main topics:
    - *a*: Lead DoC client to do object security
    - *b*: Help DoC client to find security context
    - Example for $a \wedge \neg b$: EDHOC with WebPKI ("TLS-like EDHOC")

    Review by OSCORE/EDHOC/ACE experts appreciated!

Hackathon Report

Porting DoC to Unbound DNS resolver:

- Based on libcoap:
  - $\Rightarrow$ CoAPS support
  - $\Rightarrow$ OSCORE support
- Originally implemented for a Bachelor thesis $\approx$1 year ago
- Done: Rebase to current Unbound master and code cleanup
- Goal for the week: Get into merge-ready shape
  - (Conceptual cleanups and tests missing)

`digdoc` DoC client support for Fedora