IKEv2 Configuration for Encrypted DNS

draft-btw-add-ipsecme-ike-02

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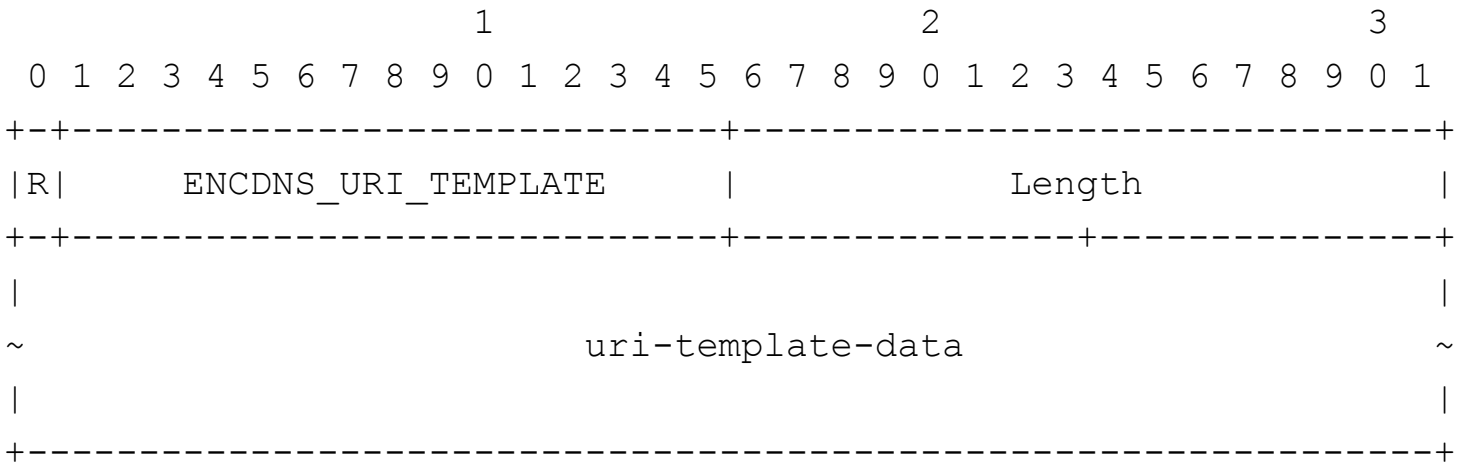
Status

- Presented at IETF#109
  - adoption of the draft was discussed
- Comments raised
  - wait for ADD WG to progress before adoption
    - ADD WG has progressed far enough to reconsider adoption of this draft
    - ADD WG adopted insecure discovery mechanisms: DHCP/RA (draft-ietf-add-dnr) and DNS (draft-ietf-add-ddr)
    - No conflict with the work in ADD WG
    - Commit to cross-review the document in ADD WG

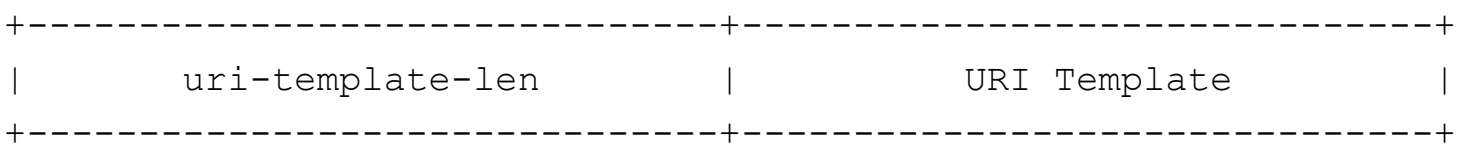
Changes from -01

- New Attribute `ENCDNS_URI_TEMPLATE` is added for conveying DOH URI Templates
- Clarification on authentication of a private encrypted DNS server
  - the encrypted DNS server hosted by VPN provider can get a domain-validate certificate from a public CA but it is only accessible to clients connected to the VPN

ENCDNS_URI_TEMPLATE Attribute Format



Each instance of the `uri-template-data` is formatted as follows:



DoH Specifics

- DoH servers may support more than one URI Template
- If DoH is requested, the initiator includes an empty `ENCDNS_URI_TEMPLATE` attribute (in addition to `ENCDNS_IP*_DOH` attributes) in the `CFG_REQUEST`
- If the responder includes `ENCDNS_IP4_DOH` or `ENCDNS_IP6_DOH` in the response, it MUST also include `ENCDNS_URI_TEMPLATE` carrying one or more URI Templates
- Avoids the need to rely on insecure discovery mechanisms (DHCP/RA), and on Do53 (which requires additional RTT and is not always secure, since using DNSSEC is not mandatory)
  - draft-schwartz-svcb-dns-01, Section 9.1

Next Steps

- Comments?
- Questions?
- Consider WG adoption

Thank you