OCSP over DNS

https://datatracker.ietf.org/doc/draft-pala-odin/

Massimiliano Pala <m.pala@cablelabs.com>
CableLabs / OpenCA

The Proposal

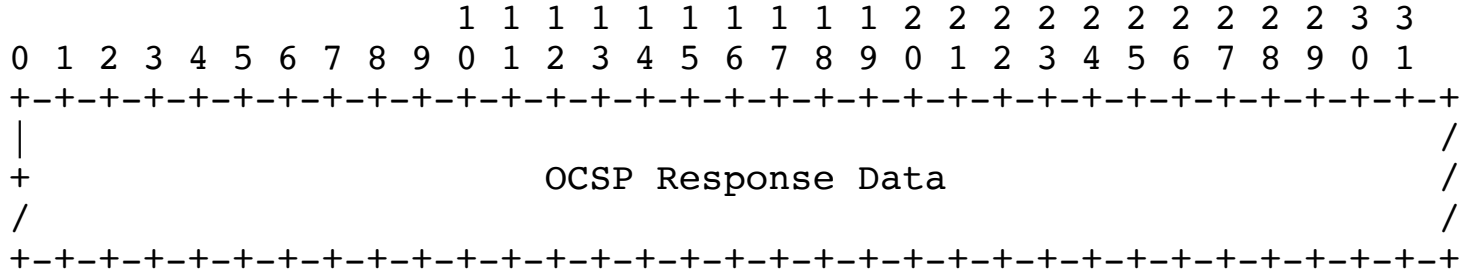
- Enable DNS as a distribution mechanism for OCSP responses

Benefits

- Increased the availability of OCSP responses by leveraging the distributed (close-to-the-user) caching of DNS
- Reduced operational costs associated with the distribution of revocation information
- The use of DNSSEC (when available) can help mitigating MITM and Reply attacks (solving the TLS circular reference)
- DNS queries accessible even when HTTP/S is not
- Simplified Query Messages

The (SIMPLE) Gory Details

- RDATA for OCSP RR



- URL Example for OCSPRR

```
dns://04A3E45534A1B5.ca1.example.com?type=OCSPRR
```

OCSP over DNS: How-To

a. Retrieve the OCSP URI provided in the AIA of the certificate to be checked
b. (If the scheme is “dns://”) retrieve the DNS record carrying the required OCSP response
c. Continue processing the retrieved data according to the OCSP protocol

OCSP over DNS (summary)

- The proposal details (draft-pala-odin-03)
  - OCSP RR Definition
  - Uses existing AIA accessMethod (id-ocsp)
  - DNS URL in certificates

- Benefits
  - Increased availability of Revocation information (closer to the user)
  - Reduced costs for providing revocation services
  - Deployment w/ DNSSEC can provide better security (HTTPS loophole)
  - Simplified query mechanism for applications

Questions and Next Steps

- Does this work belong in existing WG ?
- Shall we have a new WG with BoF ?
- Shall we have a new WG without BoF ?
- AD to sponsor without WG ?