draft-ietf-lamps-csr-attestation

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LAMPS 120

General Refresher

- This is the *“Whatever kind of attestation evidence you have, here’s how you put it in a CSR”* Internet-Draft
- New CSR extension `attr-evidence` (or `ext-evidence` for CRMF)
- Carries `EvidenceBundles` which carries `EvidenceStaments` and a bag of `Certificates`
- An EvidenceStatement is an OID and generic value – so just assign yourself an OID and stick in your remote attestation related data.

- This Internet-Draft IS NOT covering how you publish remote attestation data in an X.509 certificate – there are privacy implications here that we don’t want to touch.

New Since Last Time

Since we last met our heroes…

- Russ started a WGLC on May 20 (ended June 3)
  - https://mailarchive.ietf.org/arch/msg/spasm/JO2ES9ArtfLNaEP-TglVv8_HdRo/
  - Thread received 46 replies. Special thanks to Carl Wallace and Michael StJohns for deep review.
  - Generated 13 new github issues [1]. 7 have since been closed; 6 still open.
  - We'll clean up the remaining, then ask for another WGLC.
  - In the meantime, we would like to start early Sec AD, SecDir, and expert review (if we can find any experts who are not already involved – Ira McDonald maybe).

- We had a super successful time implementing the draft over the hackathon weekend in Brisbane (which produced the sample data in Appendix A.2).

[1]: https://github.com/lamps-wg/csr-attestation/issues?q=is%3Aissue+created%3A%3E%3D2024-05-20

Resolved Since Last Time (-08 – -10)

Since we last met our heroes…

- Lots of editorial and readability changes.
- Switched from our custom `CertificateAlternatives` to RFC6268 CertificateChoices with the restriction:

```
EvidenceBundle ::= SEQUENCE {
   evidence EvidenceStatements,
   certs SEQUENCE SIZE (1..MAX) OF CertificateChoices OPTIONAL
      -- CertificateChoices MUST only contain certificate or other
}
```

- The intended way to include multiple evidence statements is through multiple EvidenceBundles or multiple EvidenceStatements. So:

```
attr-evidence ATTRIBUTE ::= {
  TYPE EvidenceBundles
  COUNTS MAX 1
  IDENTIFIED BY id-aa-evidence
}
```

Resolved Since Last Time (-08 – -10)

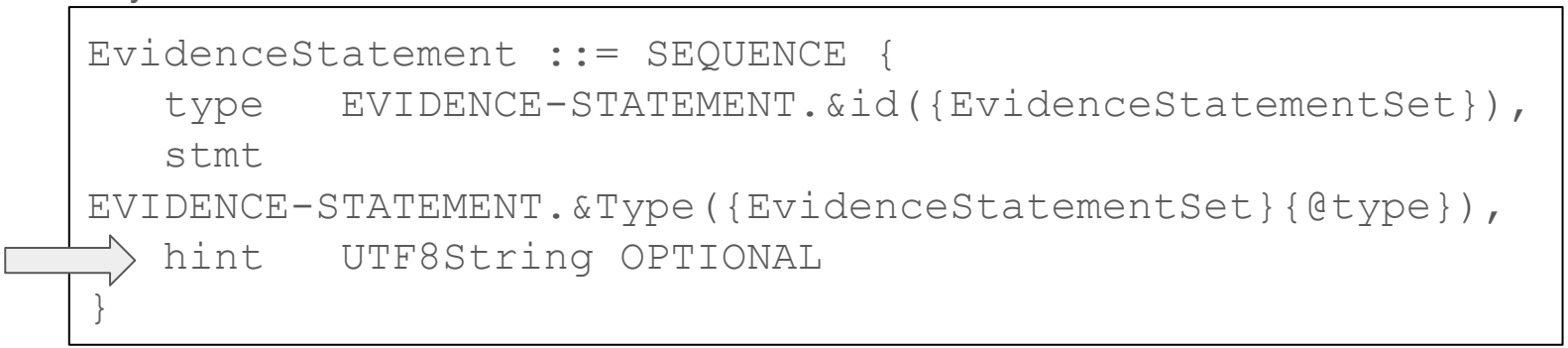
Since we last met our heroes…

- Received IANA early allocation of OID id-aa-evidence so that we could generate samples.

```
EvidenceBundle ::= SEQUENCE {
   evidence EvidenceStatements,
   certs SEQUENCE SIZE (1..MAX) OF CertificateChoices OPTIONAL
      -- CertificateChoices MUST only contain certificate or other
}
```

Still open

- **Issue #131**: EvidenceStatement.hint
  - <HANNES TO FILL IN>
  - Currently:



```
EvidenceStatement ::= SEQUENCE {
   type   EVIDENCE-STATEMENT.&id({EvidenceStatementSet}),
   stmt
EVIDENCE-STATEMENT.&Type({EvidenceStatementSet}{@type}),
   hint   UTF8String OPTIONAL
}
```

"The hint SHOULD contain a value that is unique to this Verifier, for example, a fully qualified domain name (FQDN), a uniform resource name (URN) [RFC8141], or a registered value corresponding to this Evidence format."

#131: https://github.com/lamps-wg/csr-attestation/issues/131

Still open

- **Issue #139**: the RATS Architecture does not actually define “attestation” or “key attestation”.
  - Clearly a LAMPS CSR spec is not the right place to bury an authoritative definition of those terms.
  - But if anyone knows of an existing definition that we could cite, please let us know.
- **Issue #144**: the DICE CMW example appendix has a stub ASN.1 module which should probably do its imports properly so that it compiles.
  - @NedSmith – this one’s on you to address.
- **Issue #150**: TPM CSR sample has an extranuous empty extensionRequest
  - Mike & Monty need to fix our hackathon sample code.
- **Issue #151**: More feedback on TPM appdx from MSJ
  - This feedback came in July 8; we haven’t looked at it in detail yet.

#139: https://github.com/lamps-wg/csr-attestation/issues/139
#144: https://github.com/lamps-wg/csr-attestation/issues/144
#150: https://github.com/lamps-wg/csr-attestation/issues/150
#151: https://github.com/lamps-wg/csr-attestation/issues/151

Still open

- **Issue #152**: Provide test vectors that exercise all functionality of the draft
  - The TPM example nicely exercises the “single evidence statement with cert chain” case.
  - For completeness, we should also provide samples of:
    - Case 3 - Multiple Evidence Bundles each with Complete Certificate Chains
    - Case 4 - Multiple Evidence Bundles with Certificate Transmission Optimization

    even if the actual evidence payload is a stub, like a JWS over the string “evidence”.

#152: https://github.com/lamps-wg/csr-attestation/issues/152