Bundesamt
für Sicherheit in der
Informationstechnik

BSI

An Archiving Profile for OASIS DSS

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DSS Archiving Profile

Agenda

- **Motivation**
- Architecture
- Interfaces
- Outlook

Motivation

- It is well known that cryptographic algorithms may become weak due to increased computational power or improved algorithms
- Hence the conclusiveness of digital signatures may decrease over time …
- … at least if one does not apply appropriate counter-measures such as
  - Archive Time-Stamps according to XAdES / CAdES
  - Evidence Records according to RFC 4998
- Some EU-member-states have explicit legal stipulations for long-term archiving of qualified electronic signatures (e.g. § 17 SigV in Germany)

☞ **It is an obvious approach to use DSS for long term archiving of signatures and signed data**

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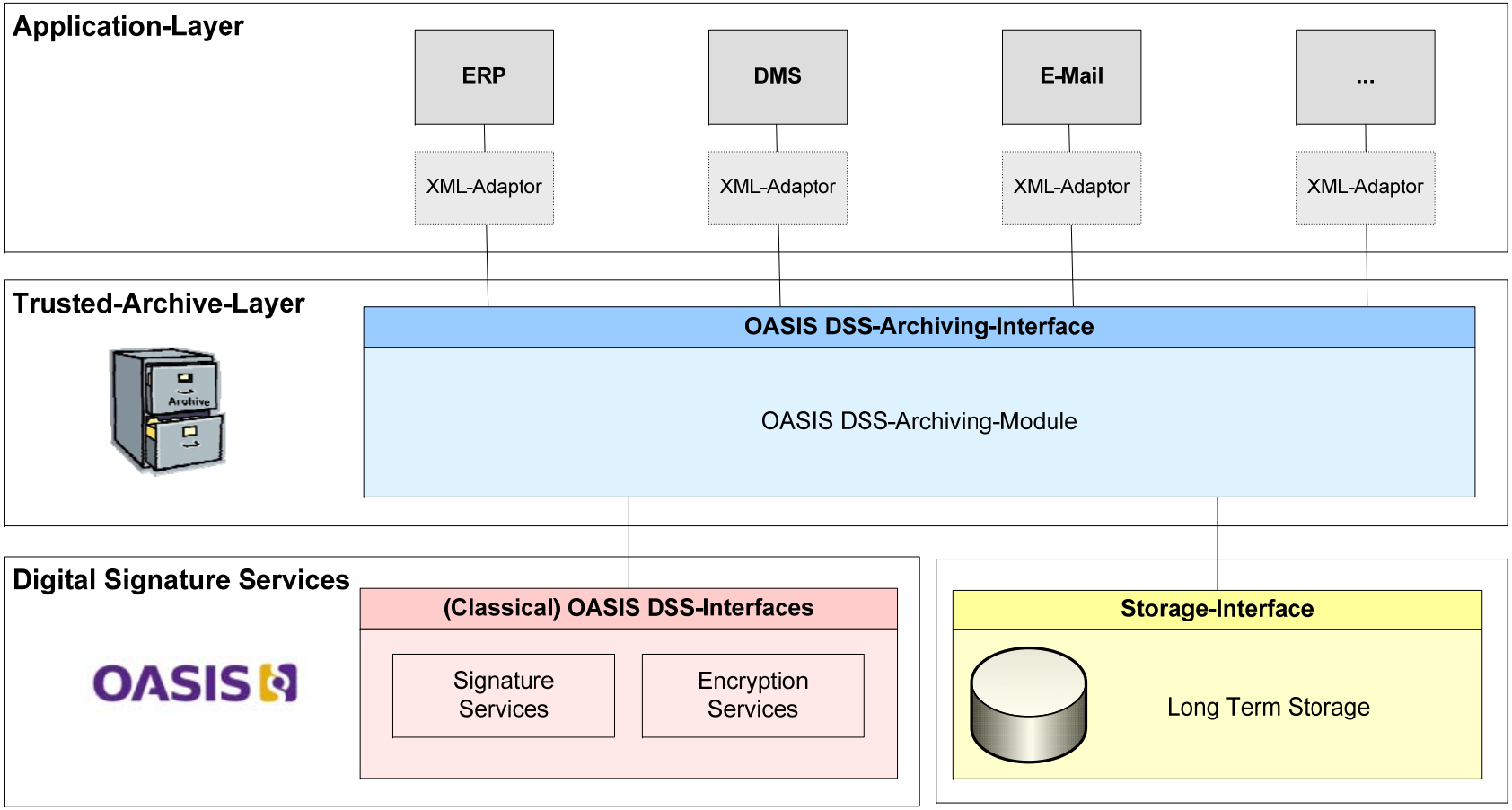
Architecture



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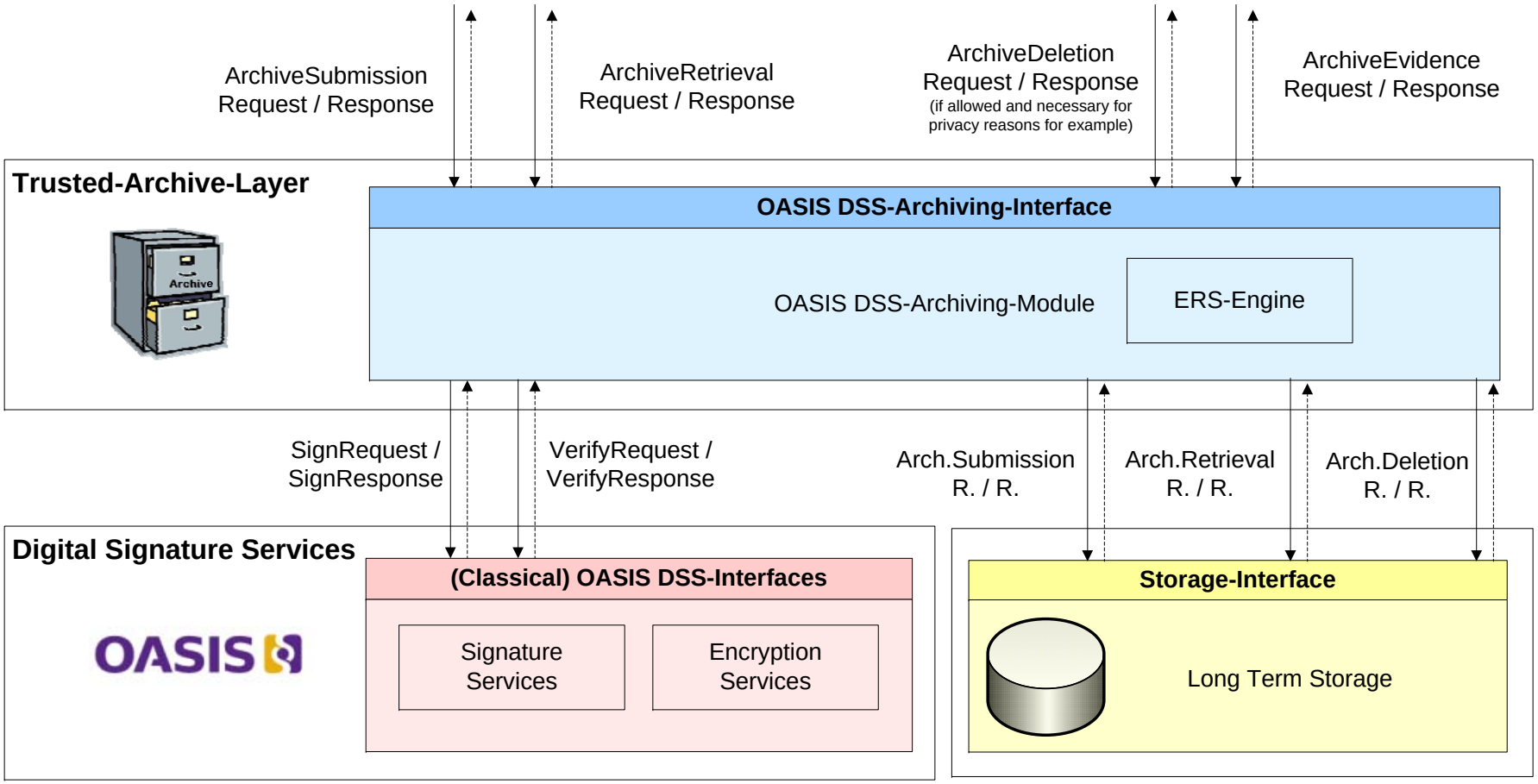
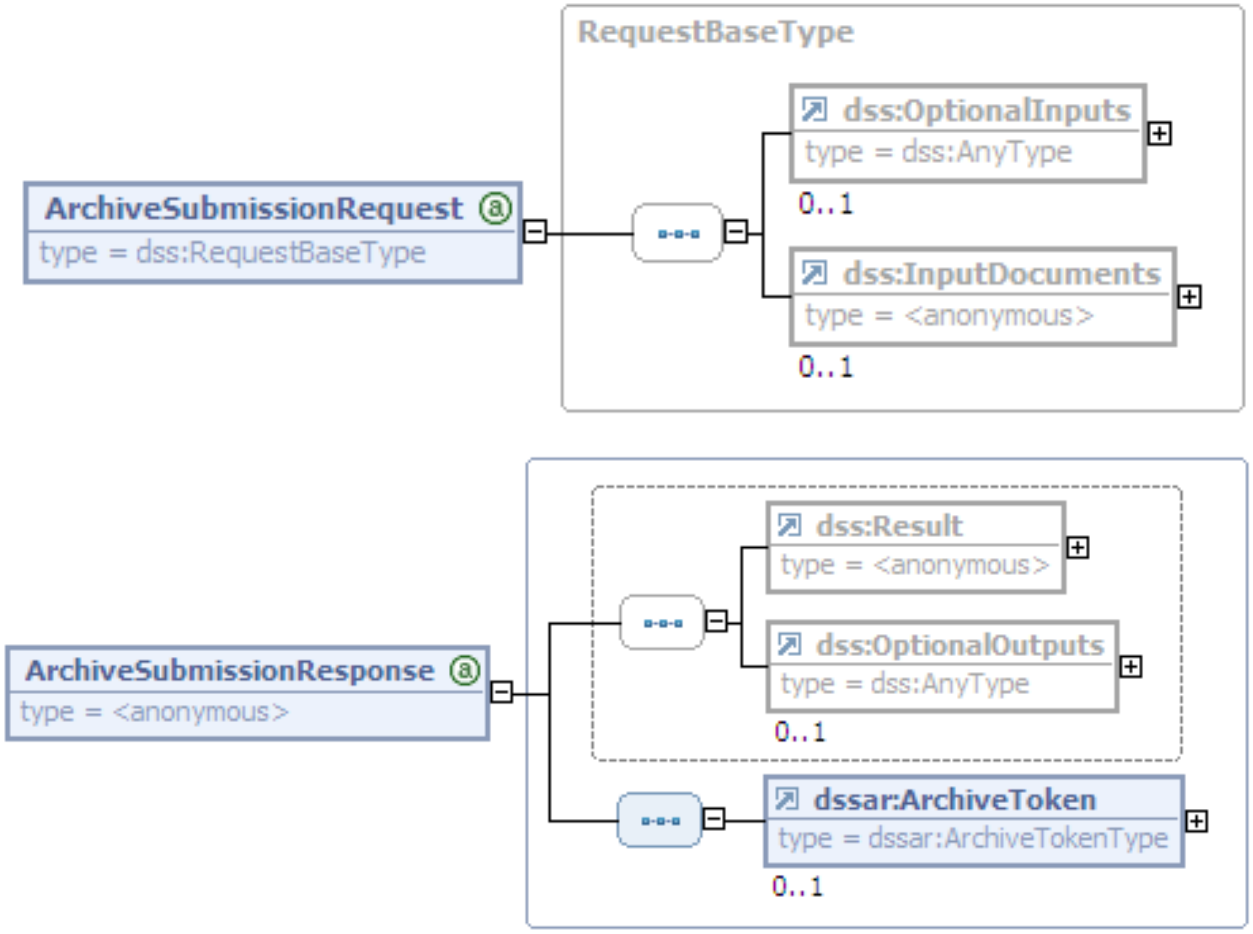
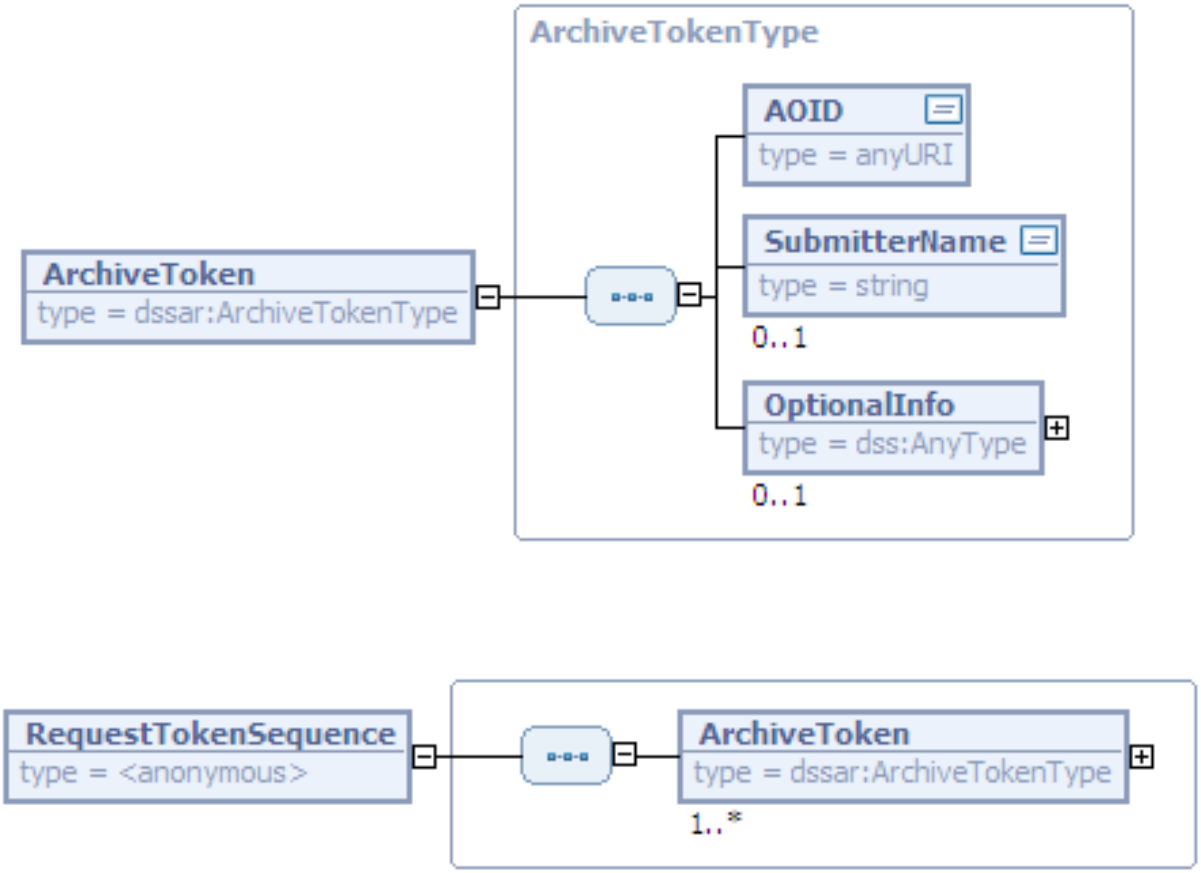
Interfaces


ArchiveSubmission
Request / Response
ArchiveRetrieval
Request / Response
ArchiveDeletion
Request / Response
(if allowed and necessary for
privacy reasons for example)
ArchiveEvidence
Request / Response
Trusted-Archive-Layer
Archive
OASIS DSS-Archiving-Interface
OASIS DSS-Archiving-Module
ERS-Engine
SignRequest /
SignResponse
VerifyRequest /
VerifyResponse
Arch.Submission
R. / R.
Arch.Retrieval
R. / R.
Arch.Deletion
R. / R.
Digital Signature Services
OASIS
(Classical) OASIS DSS-Interfaces
Signature
Services
Encryption
Services
Storage-Interface
Long Term Storage

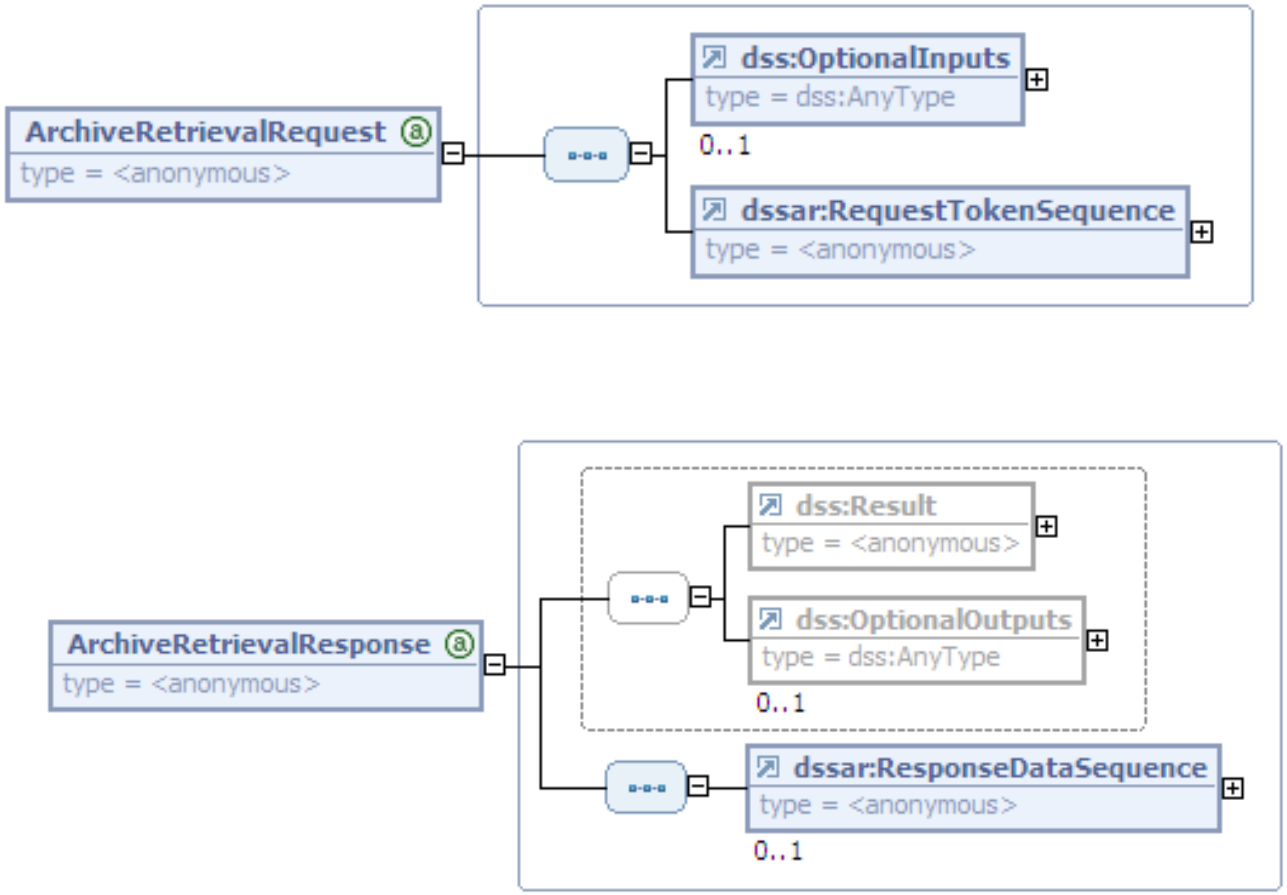
ArchiveSubmission Request / Response



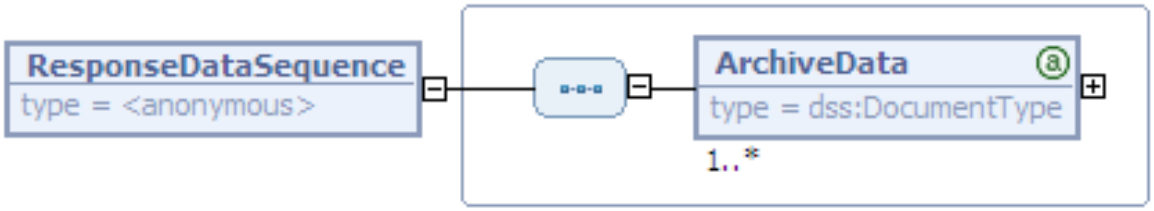
ArchiveToken & RequestTokenSequence



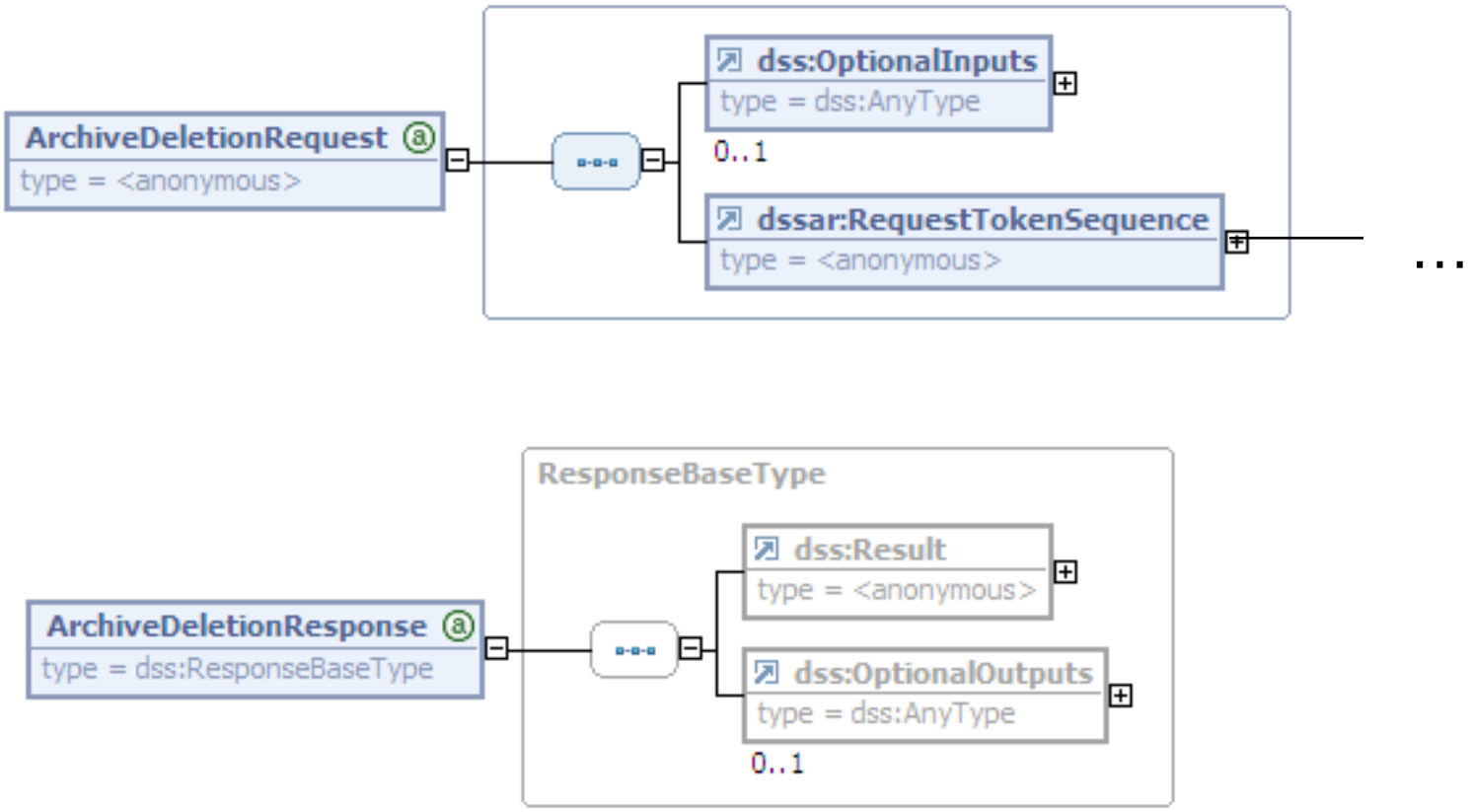
ArchiveRetrieval
Request / Response



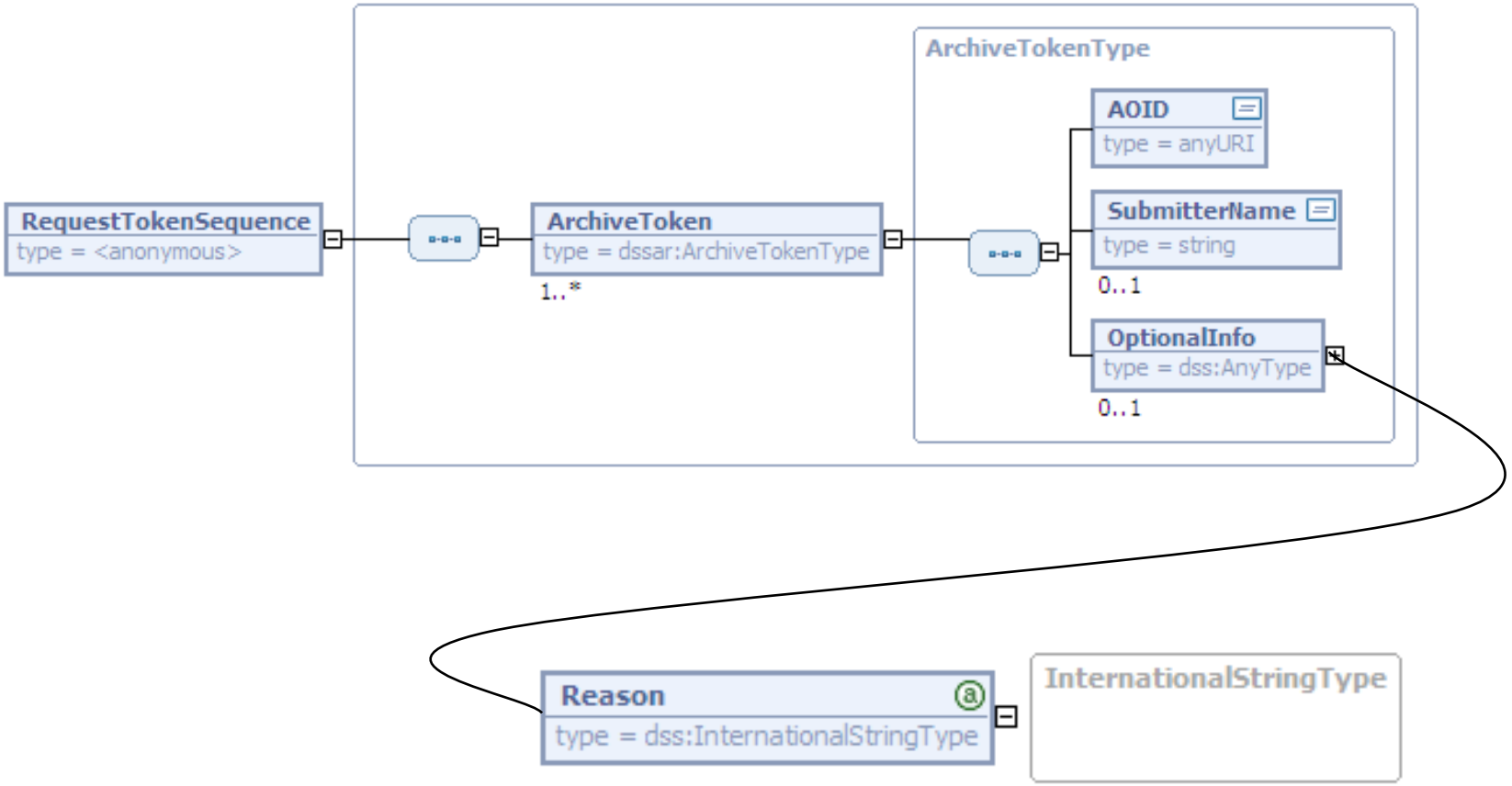
ResponseDataSequence



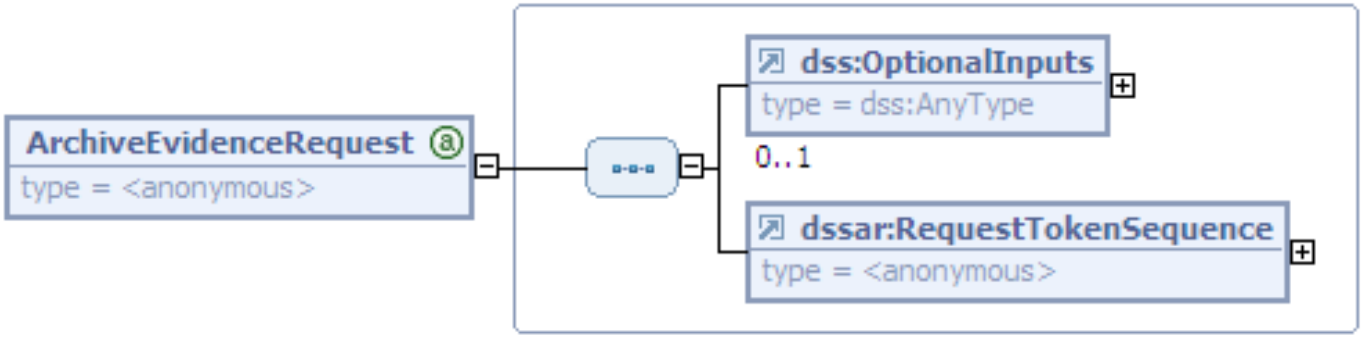
ArchiveDeletion
Request / Response

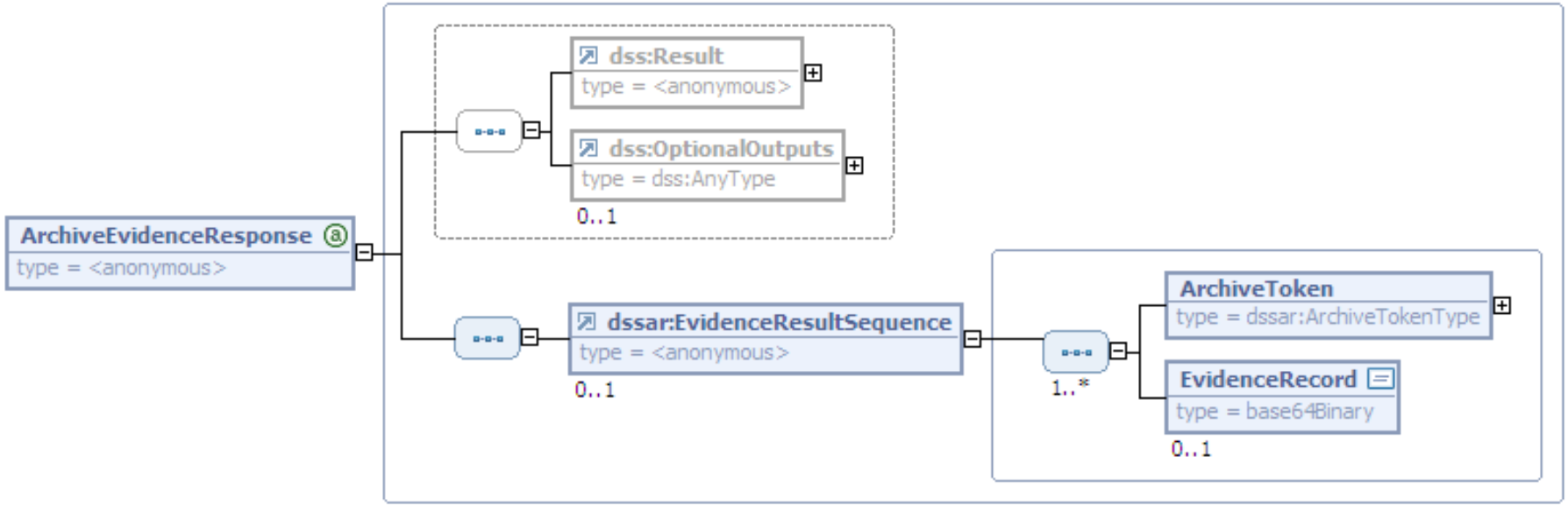


RequestTokenSequence @ ArchiveDeletionRequest

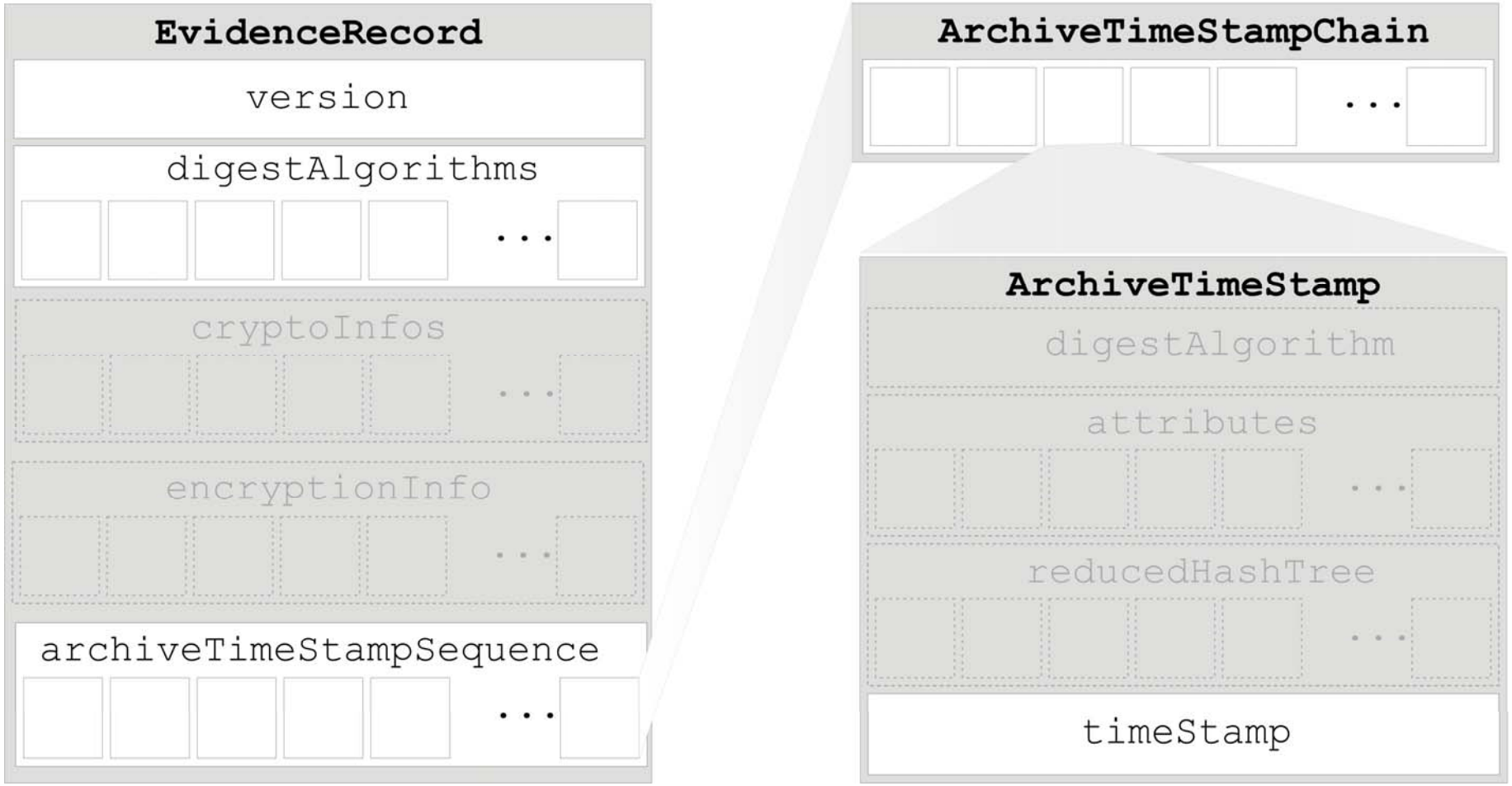


ArchiveEvidence
Request / Response





Evidence Record Syntax



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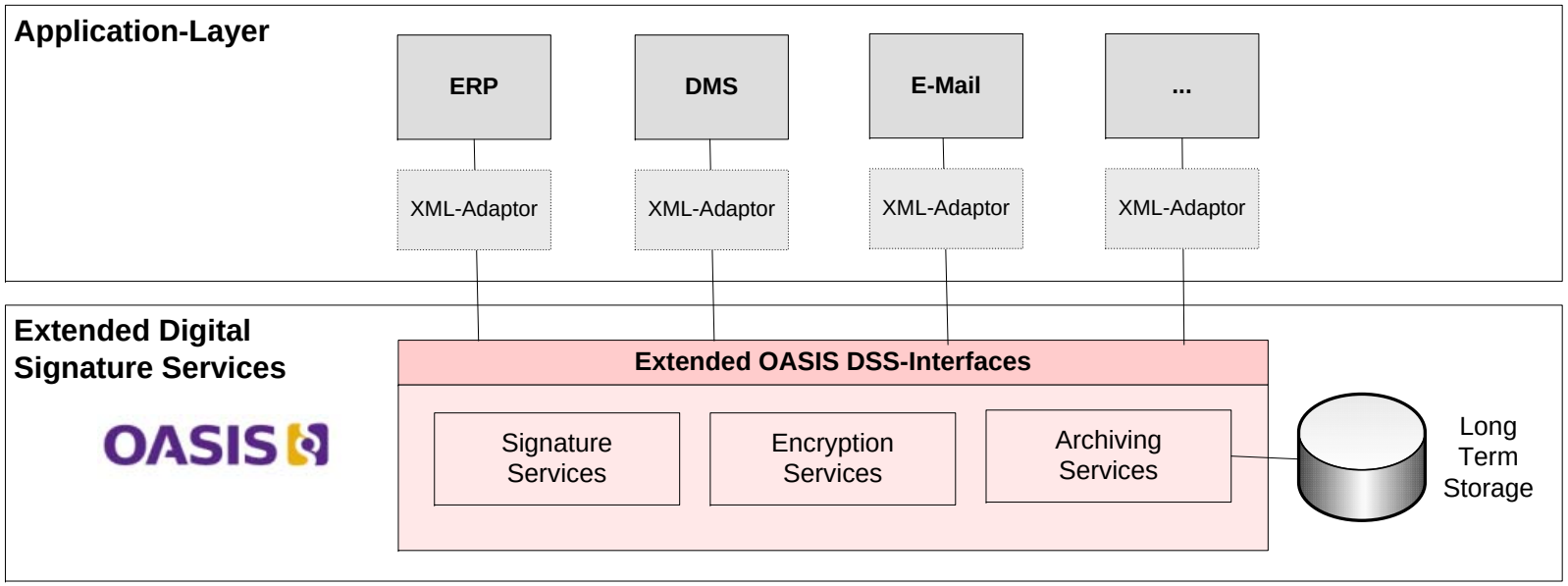
Outlook



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urn:oasis:names:tc:dss:1.0:profiles:archiving:operation:archivedocuments
urn:oasis:names:tc:dss:1.0:profiles:archiving:operation:archivesignature
…

Thank you very much for your kind attention!

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