SCEP - SSI-enabled contractual event passport

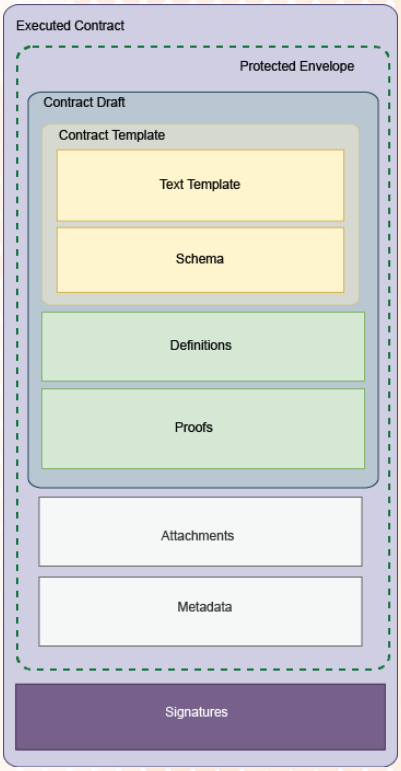
SCEP is a component that enables two or more Self Sovereign Identities to draft and execute an electronic contract and build contractual records (i.e. verifiable contract histories). It represents an executed contract as a verifiable credential that contains the data of the signatories and the contract's terms. By enabling the embedding of KYC-based verifiable credentials within a contract itself, and the ability to generate succeeding contractual events as derived verifiable credentials, SCEP's innovation is that it **extends the trust chain** beyond the simple credential exchange to also build **verifiable records**.

Main features:

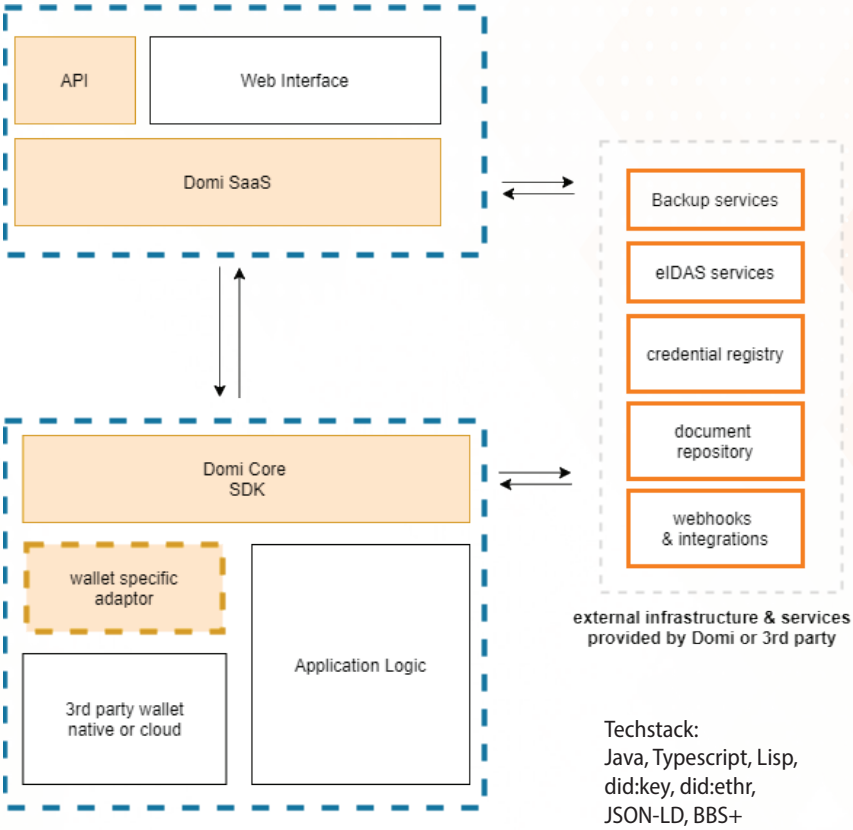
- **Know your signatory** - allows to confirm the identity of the signatory at the point of signing without additional verification overhead
- **Self-contained** and self-sufficient - executed contracts contain data about parties and key contract terms in a machine readable and verifiable form
- **Contractual events** - a contract can define a set of rules that governs the issuance of predefined VCs to contract parties whenever the execution of specific events occur.

A contract consist of an immutable **template** which includes the actual text, represented as blocks, with form fields. Additionally the template includes a **contract schema** which defines how the form fields are to be filled with values based on VCs in signatory's wallet, how the contract is to be represented as a credential and definitions of derived VCs corresponding to contractual events. The **definitions** blocks contains values provided by the signatories (i.e. values for the form fields), while the **proofs** block contains verifiable presentations of that data. Arbitrary file **attachments** e.g. a PDF generated from the contract itself and **searchable metadata** can be included. The final document is sealed with an electronic signature.

Contract data model*



*) simplified, several elements e.g. integrity protection of different blocks and data corresponding to append-only edits are omitted for better clarity.



an application using Domi's electronic contracting

external infrastructure & services provided by Domi or 3rd party

Techstack:
Java, Typescript, Lisp, did:key, did:ethr, JSON-LD, BBS+

SCEP comes as a SaaS platform that has a simple UI for creating and managing contract templates, drafts and executed documents. An API for integration with other software solutions is available. SCEP also provides the Core SDK targeted at edge applications. The SDK is lightweight and provides methods to work with SCEP data structures and APIs. It is intended to work with external W3C SSI wallets and may require a vendor specific adapter.

The SCEP platform is designed to also integrate with other 3rd party SSI services. The integrations we are working on include a backup service (e.g. **UBS by Jolocom**) and eIDAS service (e.g. **SSI4DTM by JOINYOURBIT**).

Current status: working PoC

Roadmap:

- visual contract editor
- integration of 3rd party SSI services
- Indy support

NEXT GENERATION INTERNET
INTERNET OF HUMANS
NGI ESSIF-LAB

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