

Casper AIBC 2021 Workshop

Smart Contracts -> Smart Lawyers

Use Case Document Notarisation

<https://github.com/CasperLabs/ucase-1-document-notarisation>

Use Case

Actors

Law Association

Law Firms

Lawyers

Legal Clerks

- **Notarisation of submissable evidence**
- **Multiple Signatures (clerk -> partner)**
- **Decentralised Document Archive**
- **Publish Checksums + Metadata**

Workflow

- **Step 0: Start test network**
- **Step 1: Set document checksum / metadata**
- **Step 2: Initialise accounts, keys & thresholds**
- **Step 3: Install smart contract**
- **Step 4: Set multi-signature deploy**
- **Step 5: Publish deploy to ledger**
- **Step 6: Verify**

Step 0

Network Setup

- **Start local NCTL network**
- **5 nodes logically isolated**
- **Initialised with accounts**
- **Await block production**

Step 0

Network Setup

A = Law Association

B = Legal Clerk

C = Lawyer

D = Partner

Step 1

Document

- **Document -> submissable evidence**
- **Sourced by clerk**
- **Reviewed by lawyer**
- **Acknowledged by partner**
- **Checksum + Metadata**

Step 2

Account Permissions

ASSOCIATED KEYS

Access Control

Weight By Public Key

ACTION THRESHOLDS

Dispatch Deploys

Manage Keys

Step 2

Account Permissions

- **Law Association -> contract operator**
- **Member(s) -> contract user(s)**
- **Association authorises Members**
- **Association assigns keys & thresholds**

Step 3

Smart Contract

Installation

Upgrade

Execution

Decomission

Step 3

Smart Contract

- **Law Association -> installs contract**
- **Await installation confirmation**
- **Cache contract identifier (hash)**
- **View on-chain account (A)**

Step 4

Deploy

Header
(metadata)

Session
(execution)

Payment
(fees)

Approvals
(authorisation)

Step 4

Deploy

User-B

- creates
- approves
- emails -> user-C

User C

- approves
- emails -> user-D

User D

- approves
- sends -> blockchain

Step 6

Verification

- **Recalculate checksum**
- **Query ledger**
- **View metadata**
- **Assert validity**

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