A work. A record.

From a physical brass stamper to a signed digital record

01 A physical object gets a unique identity

Each brass stamper is linked to a unique digital record and tagged with physical security features.

Brass Stamper
SW-2026-603973

Hologram
0096544

NFC
UID ...1E90

QR Code
Links to record

02 A provenance record is created

Sunlit generates a structured record about the work.

```
provenance.json (simplified)
{ "serial": "SW-2026-603973",
  "title": "Brass Stamper - Custom cursive z",
  "made": "2026-08-30", "materials": "Brass, Walnut",
  "workshop": "Sunlit Workshop", ... }
```

03 The record is hashed

A SHA-256 hash is calculated from the exact bytes of provenance.json.

provenance.json

↓

SHA-256

↓

```
c39ca859572d2bd0b2d03942a88ad29b
088eacdc31854498f6eca1adf754a8e5
```

04 Sunlit signs the hash

Sunlit signs using its private key. The signature is bound to an X.509 certificate issued by Sunlit's CA.

Sunlit Bytes Document CA 1

Issuer

↓

Sunlit Bytes COA Signer 1

Subject · ECDSA (P-256)

Valid: Aug 14, 2026 - Aug 13, 2029

Signature (ECDSA)

A history you can check.

Public history, independent verification, and the physical connection

05 The signed record is published to Rekor

Sunlit submits a hashedrekord entry to Sigstore's Rekor transparency log.

Sigstore Rekor

Public transparency log

Rekor entry (hashedrekord)

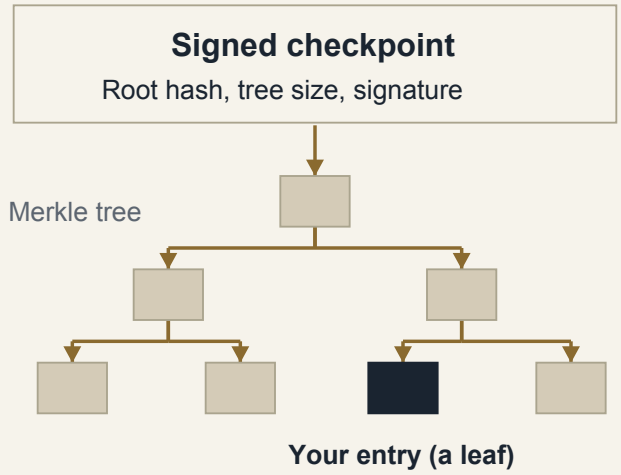
Hash (SHA-256)
`c39ca859572d2bd0...`

Signature
`3045...`

Signer certificate
Sunlit Bytes COA Signer 1
Example log index: 295,847,230

06 Rekor adds it to a public, append-only log

Rekor places the entry in a Merkle tree. It gets an inclusion proof and is covered by a signed checkpoint.



"The history grows; nothing earlier is erased."

07 Anyone can verify later

A verifier can independently check:

- The provenance.json file matches the hash
- The signature is valid and chains to Sunlit's certificate
- The entry is included in Rekor (using the inclusion proof)
- The checkpoint is signed by Rekor
- (Optional) The RFC 3161 timestamp token is valid
- The physical work's NFC / hologram / QR match the record

Verified

The record is authentic and was publicly logged in Rekor.

08 Multiple layers work together

Cryptography proves the digital record. Physical security features connect it to the real-world object.

Rekor transparency	Public, auditable history
Trusted timestamp (RFC 3161)	Evidence of time of existence
Digital signature (Sunlit PKI)	Identifies the attesting key
SHA-256 hash	Checks file integrity
Serial record (provenance.json)	Describes the work
Physical authentication (NFC / hologram / QR)	Supports the physical link