Trust-State Standard

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https://truststate.org/standard/

Abstract

The Trust-State Standard defines a deterministic framework for evaluating and recording the integrity and authorization state of digital systems. The specification establishes canonical evidence serialization requirements, rule identity derivation mechanisms, and replay-equivalent evaluation constraints necessary to ensure consistent trust-state determination across heterogeneous execution environments. Conformance requires strict adherence to canonicalization, hashing, invariant binding, and conformity artifact construction procedures. Identical canonical inputs and rule identities SHALL produce identical conformity artifacts without discretionary override.

1. Scope

This specification defines deterministic structural requirements for trust-state evaluation and conformity artifact integrity. It does not prescribe sector-specific policy content or business logic.

2. Conformance

Conformance to this standard requires reproducible canonicalization, deterministic rule identity resolution, invariant-bound evaluation, and artifact construction as defined herein.

3. Rule Identity

Rule identity SHALL be derived from canonical serialization of invariant rule structures. Rule version hashes SHALL uniquely identify normative rule sets.

4. Canonicalization

Evaluation inputs SHALL be deterministically serialized prior to hashing. Canonical evidence hashes SHALL be reproducible across independent execution environments.

5. Conformity Artifact

Conformity artifacts SHALL include the canonical evidence hash, rule version hash, invariant definition hash, a conformity state indicator, and an artifact hash derived from the foregoing

components. Artifact equivalence SHALL require identity of all deterministic components.

Governance

Governance of this standard is defined at https://truststate.org/governance/. Interpretations SHALL favor determinism, reproducibility, and independent verifiability.