

DigiEmu Core 2.0

Draft 1 — Verification Framework

Deterministic Replay Verification
and Audit Evidence Framework

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| Status | Public Draft Review Document |
| Release Line | Core 2.0 |
| Repository | https://github.com/DigiEmu/core |
| Public Standard | https://digiemu.com |

This document defines deterministic replay verification behavior and audit evidence generation for DigiEmu Core 2.0 compliant verification environments.

1. Purpose

The Verification Framework defines replay validation procedures, evidence generation requirements, and reproducible audit outputs.

2. Deterministic Replay

Verification SHALL reconstruct decision-state deterministically using immutable admissible replay references.

3. Canonical Encoding

Reconstructed replay states MUST be serialized through canonical encoding to preserve stable SHA-256 reproducibility.

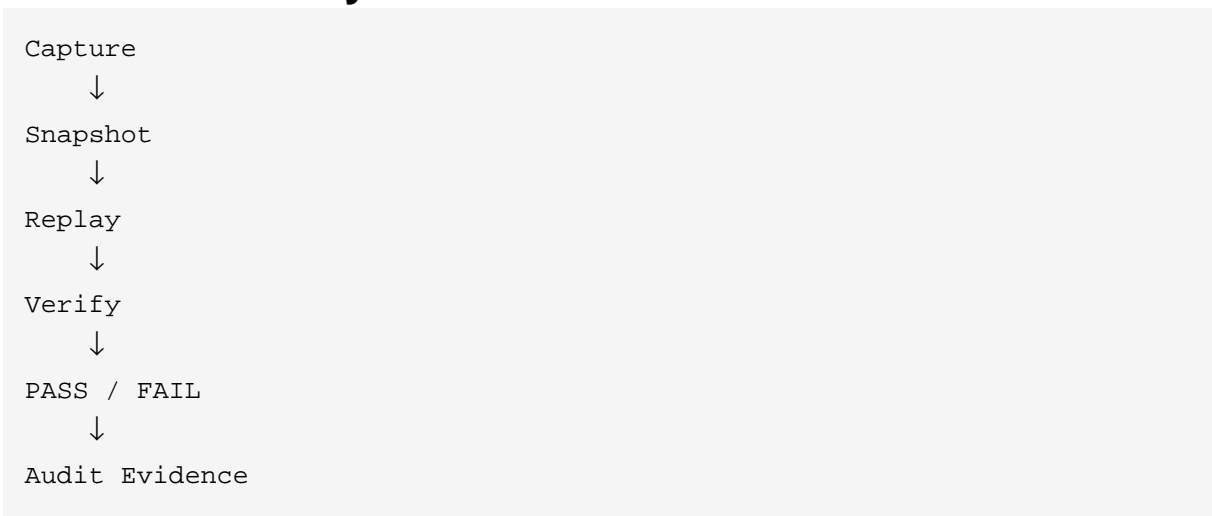
4. PASS / FAIL Semantics

PASS status SHALL indicate replay integrity consistency. FAIL status SHALL indicate deterministic mismatch between recomputed and referenced snapshot states.

5. Structured Evidence Preservation

Verification outputs MUST preserve structured audit references, replay context, and reproducible verification metadata.

6. Verification Lifecycle



7. Verification Boundaries

| Capability | Status |
|-----------------------------|---------------|
| Replay Integrity | SUPPORTED |
| Canonical Hash Validation | SUPPORTED |
| Agent Identity Verification | NOT SUPPORTED |
| Legal Attribution | NOT SUPPORTED |
| Ethical Evaluation | NOT SUPPORTED |

8. Normative Keywords

MUST — absolute requirement.

SHALL — normative mandatory behavior.

SHOULD — recommended behavior.

MAY — optional behavior.

This document is part of the DigiEmu Core 2.0 Draft 1 review bundle. GitHub remains the normative technical source of truth.