Event Replay & Generation Guard | Public Evidence Brief

Public IP-safe technical summary | 08 Nov 2026 | Not an industrial certification

Scope

Local duplicate and stale-generation admission, sequence checks and bounded checkpoint recovery.

Measured historical evidence

- Mac2 R1 median local guard-event admission: 105.30 ns, five scoped repetitions.
- Separate Linux C++20 local measured approximately 420 ns/event in a different test.
- 8,192/8,192 local stream-admission checks; not live Kafka effects or cross-host.
- No distributed exactly-once guarantee from a local guard alone.

Independent Linux synthetic reference

120/120 checks for this module, four scenarios x 30 repetitions. Six-module suite 720/720. These measure an independent simplified reference, NOT private engine performance.

Optimized comparison and open gates

Optimized Kafka transactions plus application idempotency under identical restart, replay and effect oracle.
Native fault testing, competitive superiority, production p99/p99.9, third-party lab certification and real client savings are NOT established by the reference suite.

Fixed-scope diagnostic

EUR 4,500: One approved consumer/stream with bounded replay trace, isolated environment and 30 paired attempts where feasible. Client baseline, correctness oracle, failure review and report with GO / NO-GO / INCONCLUSIVE.

Intellectual property

No private source, bitstreams, internal thresholds, confidential logs, client data, credentials or privileged implementation details in this public brief.

All results are bounded to their test protocol. No guaranteed savings, protection against all failures or production SLA.