

# JSONL Evidence Ledger Schema — Anti-Hallucination V2

## JSONL Evidence Ledger Schema — Anti-Hallucination V2

**Component:** JSONL append-only evidence ledger

**Source spec:** Anti-Hallucination V2 §3.3, §3.5

**MC:** #99732

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## Purpose

The JSONL evidence ledger is the durable, append-only record of all verdicts and their supporting evidence. One JSONL line per verdict event. Never mutated — only appended. GCS object versioning enforces immutability. This ledger is the chain of custody for all GO-LIVE-READY decisions.

## Ledger Location

- **GCS primary:** `gs://alai-audit-evidence/ledger/evidence-ledger.jsonl`
- **Local cache (HiveMind import source):** `~/system/databases/evidence-ledger.jsonl`
- **HiveMind table:** `~/system/databases/hivemind.db` — table: `evidence_ledger`

## Line Schema

```
{  
  "schema_version": "2.0",  
  "ledger_id": "<uuid-v4>",  
  "mc_id": "<task_id string>",
```

```
"verdict": "PASS | FAIL | PARTIAL | BLOCKED | REFUSED | GO-LIVE-READY",
"agent": "<agent_slug>",
"timestamp": "<ISO8601 UTC>",
"expires_at": "<ISO8601 UTC, timestamp + TTL>",
"ttl_seconds": 900,
"fencing_token": "<monotonic integer, ms since epoch at issuance>",
"machine_check_count": 5,
"machine_checks_executed": 5,
"quorum_paths_confirmed": 2,
"quorum_met": true,
"evidence_files": [
  {
    "gcs_uri": "gs://alai-audit-evidence/<mc_id>/<timestamp>/<filename>",
    "local_path": "</tmp path at capture time>",
    "type": "playwright-trace | curl-output | json-response | screenshot | log",
    "field": "<specific field, e.g. finalUrl>",
    "value": "<actual observed value>",
    "expected": "<AC-required value>",
    "match": true,
    "sha256": "<64-char hex>",
    "captured_at": "<ISO8601 UTC>"
  }
],
"john_reproducer_output": {
  "command": "<bash command>",
  "exit_code": 0,
  "stdout_excerpt": "<500 char max>",
  "matches_verdict": true,
  "executed_at": "<ISO8601 UTC>"
},
"mlx_verifier_output": {
  "model": "gemma-4-26b-mlx",
  "verdict": "CONFIRMED | REJECTED",
  "intent_proof_check": true,
  "sha256_match": true,
  "executed_at": "<ISO8601 UTC>"
},
"refused_reason": "<string, required if verdict=REFUSED>",
"wiggle_risk_acs": [],
```

```
"session_id": "<orchestrator session id>",
"ceo_approved_token": null
}
```

## Field Constraints

Field	Required	Constraint
schema_version	always	must equal "2.0" for V2 ledger lines
ledger_id	always	UUID v4, unique per line
expires_at	always	must be in the future at time of write
machine_checks_executed	always	must equal machine_check_count
quorum_paths_confirmed	always	min 2 for GO-LIVE-READY
evidence_files	always	non-empty array; each entry has sha256
john_reproducer_output	GO-LIVE-READY only	matches_verdict must be true
refused_reason	REFUSED only	non-empty string, cites specific missing evidence
gcs_uri	each evidence_file	must be written before orchestrator reads

## Append Protocol

1. Agent captures evidence files to /tmp
2. Agent copies to GCS: `gsutil cp /tmp/<file> gs://alai-audit-evidence/<mc_id>/<timestamp>/`
3. Agent constructs JSONL line with GCS URIs (not /tmp paths)
4. Agent appends line to GCS ledger
5. OCD-Delta hook reads from GCS URI, validates, passes to orchestrator
6. HiveMind import job (hourly): ingests new JSONL lines into hivemind.db

## HiveMind Table DDL

```
CREATE TABLE IF NOT EXISTS evidence_ledger (  
  id INTEGER PRIMARY KEY AUTOINCREMENT,  
  ledger_id TEXT UNIQUE NOT NULL,  
  mc_id TEXT NOT NULL,
```

```
verdict TEXT NOT NULL,  
agent TEXT,  
timestamp TEXT NOT NULL,  
expires_at TEXT NOT NULL,  
fencing_token INTEGER,  
machine_check_count INTEGER,  
machine_checks_executed INTEGER,  
quorum_paths_confirmed INTEGER,  
quorum_met INTEGER,  
evidence_files_json TEXT,  
john_reproducer_json TEXT,  
mlx_verifier_json TEXT,  
refused_reason TEXT,  
session_id TEXT,  
ceo_approved_token TEXT,  
imported_at TEXT DEFAULT (datetime('now')),  
raw_jsonl TEXT NOT NULL  
);
```

## GCS Bucket Policy

- Bucket: `gs://alai-audit-evidence/`
- Object versioning: enabled
- IAM: evidence-verifier SA = write-only (no delete)
- IAM: orchestrator SA = read-only
- Retention: TBD per CEO D4 decision (90/180/365 days — spec §8 D4)

## Audit Query

```
-- GO-LIVE-READY verdicts without quorum in last 30 days  
SELECT mc_id, verdict, quorum_paths_confirmed, timestamp  
FROM evidence_ledger  
WHERE verdict = 'GO-LIVE-READY'  
      AND quorum_paths_confirmed < 2  
      AND timestamp > datetime('now', '-30 days')  
ORDER BY timestamp DESC;
```

Source: *Anti-Hallucination V2 §3.3, §3.5* | MC #99732 | Cross-ref: *BookStack page 2995 (full spec)*,  
*HiveMind: ~/system/databases/hivemind.db*

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