

AI Evidence Coverage Report

INTERNAL

PARTIAL — 4 of 8 capabilities proven ; 4 gaps: Operator-session integrity, Reference-data provenance, Retention attestation, Biometric-match provenance.

LAYER 1 • EXECUTIVE

Every AI decision below carries cryptographic proof of which human reviewed it — re-verifiable by anyone holding the producer's public key, without trusting CarveTrace.

At a glance

PERIOD (UTC)	2026-05-01T00:00:00Z # 2026-07-01T00:00:00Z
DECISIONS IN PERIOD	14
CAPABILITIES COVERED	4 / 8
OVERSIGHT COVERAGE RATE	100.00 %
PRODUCER ID	default-producer

LAYER 2 • WHAT WAS VERIFIED

Decisions reviewed

*Sampling strategy : **most_recent** — showing **all 0 override/escalate and 7 gaps** + 0 of 14 routine approvals + 7 standalone reviews (failures are NEVER sampled out).*

GAP — no human-in-the-loop binding on the chain for this decision.

An AI flagged this decision as **'good fit'** (confidence 0.81). **No human reviewer recorded an intervention** on the chain for this decision.

*If this decision is ever disputed, this row is **not defended** by a human-in-the-loop binding — you'd be relying on out-of-chain records. The chain-level verifier confirms the GAP below.*

No cryptographic link present — the chain-level verifier confirms the GAP below.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #0 · occurred 2026-05-26T09:15:23Z · sealed 2026-06-06T00:06:58.082Z · model facebook/bart-large-mnli (ai_system) (fingerprint 0c7a705adc1bf0f0... #) · subject subject / `p-cand-alpha-202...` · input df5c315a7a944b27... # · policy fd3043d31f29e168... #

Re-derive yourself

```
$ carvetrace verify <bundle.zip> --public-key <producer.pem>
```

No HumanOversightEvent's inference_event_hash matches the inference hash above # reported as a binding GAP.

STANDALONE — oversight present, bound inference is outside this sample window.

An AI flagged this decision as '—' (conf —). A human reviewer recorded an intervention bound to an inference outside this sample's window.

The oversight event is timestamped and signed regardless ; the bound inference is outside this sample window.

Binding present, bound inference outside sample — re-derivable against the full chain.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #1 · occurred 2026-05-26T11:47:11Z · sealed 2026-06-06T00:06:58.198Z · model — (human)

Standalone oversight event ; bound inference is outside the sampled window. The event hash above is re-verifiable against the producer's chain regardless.

GAP — no human-in-the-loop binding on the chain for this decision.

An AI flagged this decision as 'marginal' (confidence 0.55). **No human reviewer recorded an intervention** on the chain for this decision.

*If this decision is ever disputed, this row is **not defended** by a human-in-the-loop binding — you'd be relying on out-of-chain records. The chain-level verifier confirms the GAP below.*

No cryptographic link present — the chain-level verifier confirms the GAP below.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #2 · occurred 2026-05-26T14:30:04Z · sealed 2026-06-06T00:06:58.212Z · model facebook/bart-large-mnli (ai_system) (fingerprint 0c7a705adc1bf0f0... #) · subject subject / `p-cand-beta-2026` · input ea87c4438d9e2565... # · policy fd3043d31f29e168... #

Re-derive yourself

```
$ carvetrace verify <bundle.zip> --public-key <producer.pem>
```

No HumanOversightEvent's inference_event_hash matches the inference hash above # reported as a binding GAP.

STANDALONE — oversight present, bound inference is outside this sample window.

An AI flagged this decision as '—' (conf —). A human reviewer recorded an intervention bound to an inference outside this sample's window.

The oversight event is timestamped and signed regardless ; the bound inference is outside this sample window.

Binding present, bound inference outside sample — re-derivable against the full chain.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #3 · occurred 2026-05-26T16:12:48Z · sealed 2026-06-06T00:06:58.231Z · model — (human)

Standalone oversight event ; bound inference is outside the sampled window. The event hash above is re-verifiable against the producer's chain regardless.

GAP — no human-in-the-loop binding on the chain for this decision.

An AI flagged this decision as 'good fit' (confidence 0.91). **No human reviewer recorded an intervention** on the chain for this decision.

*If this decision is ever disputed, this row is **not defended** by a human-in-the-loop binding — you'd be relying on out-of-chain records. The chain-level verifier confirms the GAP below.*

No cryptographic link present — the chain-level verifier confirms the GAP below.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #4 · occurred 2026-05-27T10:45:32Z · sealed 2026-06-06T00:06:58.243Z · model facebook/bart-large-mnli (ai_system) (fingerprint 0c7a705adc1bf0f0... #) · subject subject / `p-cand-gamma-202...` · input 3dcdc4565346a973... # · policy fd3043d31f29e168... #

Re-derive yourself

```
$ carvetrace verify <bundle.zip> --public-key <producer.pem>
```

No HumanOversightEvent's inference_event_hash matches the inference hash above # reported as a binding GAP.

STANDALONE — oversight present, bound inference is outside this sample window.

An AI flagged this decision as '—' (conf —). A human reviewer recorded an intervention bound to an inference outside this sample's window.

The oversight event is timestamped and signed regardless ; the bound inference is outside this sample window.

Binding present, bound inference outside sample — re-derivable against the full chain.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #5 · occurred 2026-05-27T14:22:15Z · sealed 2026-06-06T00:06:58.257Z · model — (human)

Standalone oversight event ; bound inference is outside the sampled window. The event hash above is re-verifiable against the producer's chain regardless.

GAP — no human-in-the-loop binding on the chain for this decision.

An AI flagged this decision as '**poor fit**' (confidence 0.34). **No human reviewer recorded an intervention** on the chain for this decision.

*If this decision is ever disputed, this row is **not defended** by a human-in-the-loop binding — you'd be relying on out-of-chain records. The chain-level verifier confirms the GAP below.*

No cryptographic link present — the chain-level verifier confirms the GAP below.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #6 · occurred 2026-05-28T11:00:17Z · sealed 2026-06-06T00:06:58.267Z · model facebook/bart-large-mnli (ai_system) (fingerprint 0c7a705adc1bf0f0... #) · subject subject / `p-cand-delta-202...` · input 8ec8b4dba0643cf4... # · policy fd3043d31f29e168... #

Re-derive yourself

```
$ carvetrace verify <bundle.zip> --public-key <producer.pem>
```

No HumanOversightEvent's inference_event_hash matches the inference hash above # reported as a binding GAP.

STANDALONE — oversight present, bound inference is outside this sample window.

An AI flagged this decision as '**good fit**' (conf —). A human reviewer recorded an intervention bound to an inference outside this sample's window.

The oversight event is timestamped and signed regardless ; the bound inference is outside this sample window.

Binding present, bound inference outside sample — re-derivable against the full chain.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #7 · occurred 2026-05-28T15:33:51Z · sealed 2026-06-06T00:06:58.289Z · model — (human)

Standalone oversight event ; bound inference is outside the sampled window. The event hash above is re-verifiable against the producer's chain regardless.

GAP — no human-in-the-loop binding on the chain for this decision.

An AI flagged this decision as **'good fit'** (confidence 0.78). **No human reviewer recorded an intervention** on the chain for this decision.

*If this decision is ever disputed, this row is **not defended** by a human-in-the-loop binding — you'd be relying on out-of-chain records. The chain-level verifier confirms the GAP below.*

No cryptographic link present — the chain-level verifier confirms the GAP below.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #8 · occurred 2026-05-28T16:05:09Z · sealed 2026-06-06T00:06:58.300Z · model facebook/bart-large-mnli (ai_system) (fingerprint 0c7a705adc1bf0f0... #) · subject subject / `p-cand-epsilon-2...` · input 81c58802f8e20dce... # · policy fd3043d31f29e168... #

Re-derive yourself

```
$ carvetrace verify <bundle.zip> --public-key <producer.pem>
```

No HumanOversightEvent's inference_event_hash matches the inference hash above # reported as a binding GAP.

STANDALONE — oversight present, bound inference is outside this sample window.

An AI flagged this decision as **'—'** (conf —). A human reviewer recorded an intervention bound to an inference outside this sample's window.

The oversight event is timestamped and signed regardless ; the bound inference is outside this sample window.

Binding present, bound inference outside sample — re-derivable against the full chain.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #9 · occurred 2026-05-28T17:28:33Z · sealed 2026-06-06T00:06:58.322Z · model — (human)

Standalone oversight event ; bound inference is outside the sampled window. The event hash above is re-verifiable against the producer's chain regardless.

GAP — no human-in-the-loop binding on the chain for this decision.

An AI flagged this decision as '**poor fit**' (confidence 0.43). **No human reviewer recorded an intervention** on the chain for this decision.

*If this decision is ever disputed, this row is **not defended** by a human-in-the-loop binding — you'd be relying on out-of-chain records. The chain-level verifier confirms the GAP below.*

No cryptographic link present — the chain-level verifier confirms the GAP below.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #10 · occurred 2026-05-29T09:30:04Z · sealed 2026-06-06T00:06:58.334Z · model facebook/bart-large-mnli (ai_system) (fingerprint 0c7a705adc1bf0f0... #) · subject subject / `p-cand-zeta-2026` · input f71a5faa0dea7ec8... # · policy fd3043d31f29e168... #

Re-derive yourself

```
$ carvetrace verify <bundle.zip> --public-key <producer.pem>
```

No HumanOversightEvent's inference_event_hash matches the inference hash above # reported as a binding GAP.

STANDALONE — oversight present, bound inference is outside this sample window.

An AI flagged this decision as '**good fit**' (conf —). A human reviewer recorded an intervention bound to an inference outside this sample's window.

The oversight event is timestamped and signed regardless ; the bound inference is outside this sample window.

Binding present, bound inference outside sample — re-derivable against the full chain.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #11 · occurred 2026-05-29T13:04:22Z · sealed 2026-06-06T00:06:58.369Z · model — (human)

Standalone oversight event ; bound inference is outside the sampled window. The event hash above is re-verifiable against the producer's chain regardless.

GAP — no human-in-the-loop binding on the chain for this decision.

An AI flagged this decision as 'marginal' (confidence 0.62). **No human reviewer recorded an intervention** on the chain for this decision.

*If this decision is ever disputed, this row is **not defended** by a human-in-the-loop binding — you'd be relying on out-of-chain records. The chain-level verifier confirms the GAP below.*

No cryptographic link present — the chain-level verifier confirms the GAP below.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #12 · occurred 2026-06-01T10:00:11Z · sealed 2026-06-06T00:06:58.385Z · model facebook/bart-large-mnli (ai_system) (fingerprint 0c7a705adc1bf0f0... #) · subject subject / `p-cand-eta-2026` · input 837bd34157bd3482... # · policy fd3043d31f29e168... #

Re-derive yourself

```
$ carvetrace verify <bundle.zip> --public-key <producer.pem>
```

No HumanOversightEvent's inference_event_hash matches the inference hash above # reported as a binding GAP.

STANDALONE — oversight present, bound inference is outside this sample window.

An AI flagged this decision as '—' (conf —). A human reviewer recorded an intervention bound to an inference outside this sample's window.

The oversight event is timestamped and signed regardless ; the bound inference is outside this sample window.

Binding present, bound inference outside sample — re-derivable against the full chain.

MECHANICS — HASHES + RUNNABLE VERIFY COMMAND

Decision metadata — decision #13 · occurred 2026-06-01T15:45:08Z · sealed 2026-06-06T00:06:58.412Z · model — (human)

Standalone oversight event ; bound inference is outside the sampled window. The event hash above is re-verifiable against the producer's chain regardless.

Capability summary

CAPABILITY	VERDICT	EVENTS
Chain emission	COVERED	14

Operator-session integrity	GAP	0
Reference-data provenance	GAP	0
AI decision recorded	COVERED	7
Human-oversight recorded	COVERED	7
Retention attestation	GAP	0
Biometric-match provenance	GAP	0
Human-oversight verified	COVERED	7

Per-capability detail

CAPABILITY	MECHANISM	RECOMMENDATION
Chain emission	Chain emission (any event ; recording capability)	
Operator-session integrity	AiSessionStarted.operator + OperatorSessionAudit.auditFromChain	No AiSessionStarted / AiSessionEnded pair resolves on chain ; configure operator-resolver and emit a session
Reference-data provenance	DatasetReferenceEvent on chain	No DatasetReferenceEvent ; emit one via `carvetrace dataset-reference` for each training dataset
AI decision recorded	AIInferenceEvent.input_data_reference or BiometricMatchEvent	
Human-oversight recorded	HumanOversightEvent + OversightBindingVerifier (binding-gated)	
Retention attestation	RetentionPolicyDeclaration / Enforcement / Proof on chain	No retention events ; declare via `carvetrace retention declare` (180-day minimum)
Biometric-match provenance	BiometricMatchEvent + BiometricMatchAudit.auditWithChain	No chain-resolved BiometricMatchEvent ; if biometric is in use, emit via the SDK helper with reference_database_event_hash bound to a DatasetReferenceEvent
Human-oversight verified	Article14Audit (binding-gated human oversight ; subsections oversight-bound, oversight-with-rationale, override-observed)	

Operational summary

Decision counts

Total events : 14

EVENT TYPE	COUNT
ai.inference	7
ai.oversight	7

Decision-emitting model distribution (decoded sample)

MODEL	VERSION	COUNT
facebook/bart-large-mnli	—	7

Decision outcome distribution (decoded sample)

OUTCOME	COUNT
good fit	5
marginal	2
poor fit	2

Oversight coverage rate : 100.00 %

LAYER 3 • CRYPTOGRAPHIC EVIDENCE

Cryptographic Integrity Verification

PRODUCER ID	default-producer
PRODUCER KEY FINGERPRINT	b6c2b33d2faccb42d1f9671ee970ee9695236eec72c5fb051fc01b835557d0a0
CANONICAL HASH	860e77ebfc5b37d6871b421fc4d1081edd130b1c562201faea5c8232509bab49
SIGNATURE ALGORITHM	ECDSA-P256-SHA256
SCHEMA VERSION	carvetrace.ai-evidence-coverage.v1
PERIOD FROM (HLC / UTC)	1777593600000 / 2026-05-01T00:00:00Z
PERIOD TO (HLC / UTC)	1782864000000 / 2026-07-01T00:00:00Z
GENERATED AT (HLC / UTC)	1781713544539 / 2026-06-17T16:25:44.539Z

Hash appendix

Every truncated hash in Layer 2's dossiers is listed below with its full 64-char hex value, so any decision row can be cross-checked against the bundle's `raw/events.proto` without ambiguity.

LABEL	FULL HEX
inference event hash (#0)	9cf7c94717d38e45bbf1498404fd4a3a4b91c967acdc7d3971969bcb2ca61580
model fingerprint (#0)	0c7a705adc1bf0f08464e535e119a95e8f7db4d76c5d15566c699fc3ae7ab262
input fingerprint (#0)	df5c315a7a944b27a7731069fae462978e80f78f211b980b8f290c32a26441b3
policy hash (#0)	fd3043d31f29e1684b095704055c2c2c37445aa92ca3d2be05a2d4a8a16ec49c
inference event hash (#1)	7ccd1d11e2e87ebe95b332da5fa9d9cdc242107eb0a0539a5593441a902b2cf0
inference event hash (#2)	4018b747b53f295bab0d393297b59b519e23d2ec05a7032eeac8d7c93cc2b8e1
model fingerprint (#2)	0c7a705adc1bf0f08464e535e119a95e8f7db4d76c5d15566c699fc3ae7ab262
input fingerprint (#2)	ea87c4438d9e25657a8fbf61584ecfc4d164e76538e45eccf2c859560046d49f
policy hash (#2)	fd3043d31f29e1684b095704055c2c2c37445aa92ca3d2be05a2d4a8a16ec49c
inference event hash (#3)	463a3b64bcc2c2fe0732450b1dddbdd5ade4a8b4f7713c07905391f807cb0879
inference event hash (#4)	f6399fea25a36c645fa7b6ab6cb4d461831c0abbde09f65f2de83b29af6f74cb
model fingerprint (#4)	0c7a705adc1bf0f08464e535e119a95e8f7db4d76c5d15566c699fc3ae7ab262
input fingerprint (#4)	3dcdc4565346a973c33fab2958de51f22f5a6aea0a27f82ac31dc414eca2723f
policy hash (#4)	fd3043d31f29e1684b095704055c2c2c37445aa92ca3d2be05a2d4a8a16ec49c
inference event hash (#5)	e34afdf7bd8fcaf55e72fe921c40280bb388d7f190a9a79a642c7591576a2b38
inference event	8a02c3cd6e6622cf76f6c434771e27fe72e120c5a4966a7af9cb3441bb44d4c1

hash (#6)	
model fingerprint (#6)	0c7a705adc1bf0f08464e535e119a95e8f7db4d76c5d15566c699fc3ae7ab262
input fingerprint (#6)	8ec8b4dba0643cf4afb0ac7354226b96898c021962f40137e97f03c8f69150fb
policy hash (#6)	fd3043d31f29e1684b095704055c2c2c37445aa92ca3d2be05a2d4a8a16ec49c
inference event hash (#7)	6bb15a4bc2e52bfe6d04830feafed88648098f2026aaff838418a3f48b924cc
inference event hash (#8)	d2ac77d276896de53c9c92e228dc1c8ac6f4bf6e16a8de6ba04452e1cee45661
model fingerprint (#8)	0c7a705adc1bf0f08464e535e119a95e8f7db4d76c5d15566c699fc3ae7ab262
input fingerprint (#8)	81c58802f8e20dce002ad2b2a1de787daa26035074f2f0e7228aac0e3352f92f
policy hash (#8)	fd3043d31f29e1684b095704055c2c2c37445aa92ca3d2be05a2d4a8a16ec49c
inference event hash (#9)	80c90ce779ed1e9f9cbab854c6c0e4247bb4cbb699c61badccd5801c6f42c384
inference event hash (#10)	22fc1b80e9003e0fede7db1488a4e0cdc8e35fa728e56734e5573a8222224e85
model fingerprint (#10)	0c7a705adc1bf0f08464e535e119a95e8f7db4d76c5d15566c699fc3ae7ab262
input fingerprint (#10)	f71a5faa0dea7ec8fe4bddcc2bcc06c0be34f17467af41162d1203f4021c07f5
policy hash (#10)	fd3043d31f29e1684b095704055c2c2c37445aa92ca3d2be05a2d4a8a16ec49c
inference event hash (#11)	b695b5b2693a28698a1100e448fc815e450a76c3d71f62deaf99786f6e27074c
inference event hash (#12)	2e4b5791dcbb0e06eca29329663fe24bba15048ba89b4df7b0340b0ae4615767
model fingerprint (#12)	0c7a705adc1bf0f08464e535e119a95e8f7db4d76c5d15566c699fc3ae7ab262
input fingerprint (#12)	837bd34157bd3482f1099936f985058f67a83c50a44111d0c0f341e95be60257
policy hash (#12)	fd3043d31f29e1684b095704055c2c2c37445aa92ca3d2be05a2d4a8a16ec49c
inference event hash (#13)	9bcbe0091f5045f082980e3f3381f35ef3e77566531262eb06ab6167dc5f53da

Independent Verification

The contents of this report can be verified offline. The verifier checks : (1) the canonical SHA-256 hash of the report payload matches the value in the embedded Attestation ; (2) the ECDSA P-256 signature verifies under the supplied public key ; (3) every TSA anchor's chain-head value is consistent with the chain-root recomputation ; (4) every human-oversight event hash listed under Framework Mapping is independently re-derivable as bound to an ai.inference event via the WASM `verify_oversight_binding` entry point on the bundle's `raw/events.proto` — human-oversight verification is checkable, not asserted.

```
$ carvetrace verify <report-file> --public-key <producer.pem>
```

Maven coordinates : `ma.aryamind:carvetrace-verify` (Apache 2.0, available from Maven Central).

Cryptographic attestation embedded in the document head as base64-encoded `AiEvidenceCoverageReport` proto bytes. Verify offline with `carvetrace verify <file>`.