



01_Architecture_Overview

Architecture Overview

HISN — Financial Crime Decision Operating System Version: 3.0 | Date: October 2026 Owner: Chief Technology Officer Classification: Confidential | Status: Framework

Document Control

Field

Value

Document Title

Architecture Overview

Version

3.0



Date

October 2026

Owner

CTO

Classification

Confidential

Status

Framework

Basis of Preparation

Repository architecture documentation

Limitations

No independent architecture review. No production deployment.

Provenance Taxonomy

ACTUAL / EXTERNAL FACT / MANAGEMENT ASSUMPTION / DERIVED / SCENARIO / UNKNOWN

1. Architectural Principle

HISN is built on one invariant:

**ONE SEMANTIC OWNER / ONE CONTRACT / ONE RUNTIME PATH / ONE PERSISTENCE
AUTHORITY / ONE EVIDENCE TRAIL / ONE GOLDEN PATH**

This invariant prevents architectural drift. It is documented in ADRs (repository).

Classification: ACTUAL — documented in repository.



2. Platform Components

Component

Status

Classification

Canonical Decision Runtime

Built



ACTUAL

Engine Registry

Built

ACTUAL

AML Engine

Built

ACTUAL

Fraud Engine

Built

ACTUAL

Sanctions Engine

Built

ACTUAL

KYC Engine

Built

ACTUAL

KYB Engine

Built

ACTUAL

Graph Engine

Built

ACTUAL

Decision DNA

Built

ACTUAL

Evidence Fabric



Built

ACTUAL

Audit Chain

Built

ACTUAL

Multi-tenant RLS

Built

ACTUAL

API Layer

Built

ACTUAL

Frontend (Next.js)

Built

ACTUAL

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3. Data Flow (High Level)

Source Systems (Bank / Insurance / Exchange) ↓ Canonical Transaction API ↓ Identity → Screening → Detection → Risk → Policy ↓ Canonical Decision Runtime ↓ Decision DNA + Evidence + Audit ↓ Case / Action / Regulatory Reporting ↓ Frontend Projection

Classification: MANAGEMENT ASSESSMENT — verified against repository architecture.



4. Repository Metrics

Metric

Value

Classification

Python LOC (production)

66,502

ACTUAL

TypeScript LOC

23,240

ACTUAL

Test suites

280+

ACTUAL

Migrations

46

ACTUAL

Documentation files



830+

ACTUAL

Repositories

6 (3 platform + 3 sandbox)

ACTUAL

Source: Repository evidence, October 2026.

5. Security Architecture

Control

Status

Classification

Row-Level Security (RLS)

Implemented

ACTUAL

FORCE RLS



Implemented

ACTUAL

Encryption at rest

Implemented

ACTUAL

Encryption in transit

Implemented

ACTUAL

RBAC

Implemented

ACTUAL

Audit logging

Implemented

ACTUAL

Tenant isolation tests

Passing

ACTUAL

No independent security certification. No SAMA CSF certification.

6. Deployment Options

Model

Support

Classification

Cloud (KSA region)

Supported

MANAGEMENT ASSESSMENT

Private cloud

Supported

MANAGEMENT ASSESSMENT

On-premise

Supported

MANAGEMENT ASSESSMENT

Hybrid

Supported

MANAGEMENT ASSESSMENT

7. What Is NOT Yet in Place

Item

Status

Classification

Production deployment

Not done

ACTUAL

Independent PenTest

Not conducted

ACTUAL

SOC2 / ISO 27001

Not obtained

ACTUAL

SAMA CSF certification

Not obtained

ACTUAL

SIEM integration



Not deployed

ACTUAL

24/7 operations

Not established

ACTUAL

8. Disclaimer

This Architecture Overview reflects the repository state as of October 2026. **No production deployment has occurred. No independent architecture review has been conducted.**

HISN FCDOS — Where Trust Begins. *Confidential — Not for Distribution*