

NOVAK PROTOCOL SERIES

Standard Protocol-8 (SP-8): Interoperability & Integration

Connecting Agencies, AI, Robotics, and Legacy Systems

Version 1.0 (Final Draft)

The Universal Glue

SP-8 formally defines how NOVAK attaches to the real world. It is not a replacement for databases or AI models, but an **Execution Governor Layer**.

- ⌚ **Connects:** Gov, Finance, AI, Robotics.
- ≣ **Overlays:** Existing legacy stacks.
- 🛡 **Enforces:** Proof-Before-Action.



The Integration Pyramid



NOVAK integrates at all five layers, ensuring no action executes without proof, from the kernel to the mission commander.

4 Integration Modes



Embedded

In-process library
(Medical AI,
Robotics).



Sidecar

Container/Pod
companion
(Cloud/Microservices).



Remote

Central Verification
Node (Federal
Agencies).



Client-Side

Browser/Mobile local
verification.

Canonical Data Model (NCDM)

SP-8 mandates strict normalization. No whitespace drift, no floating-point errors, no hidden fields.

JSON / XML / FHIR

ISO-8601 UTC Timestamps

SHA-256 Hashing

```
POST /novak/v1/verify
{
  "rule_id": "VA-PTSD-2025",
  "input_hash": "HD_21fa2e ...",
  "output_hash": "HO_992af2 ...",
  "context": { "agency": "VA" }
}
```

Universal SDK Support

Deterministic binding across every major language.



Python



JS/TS



Go



Rust



Java



C# / .NET



C++



Swift



Kotlin



WASM

Identical Logic. Identical Hash. Every Time.

CSIB: Saving Legacy Systems

Cross-System Integrity Bridges allow COBOL and Mainframes to be NOVAK-compliant without rewriting.



Enables determinism for systems built 40 years ago.

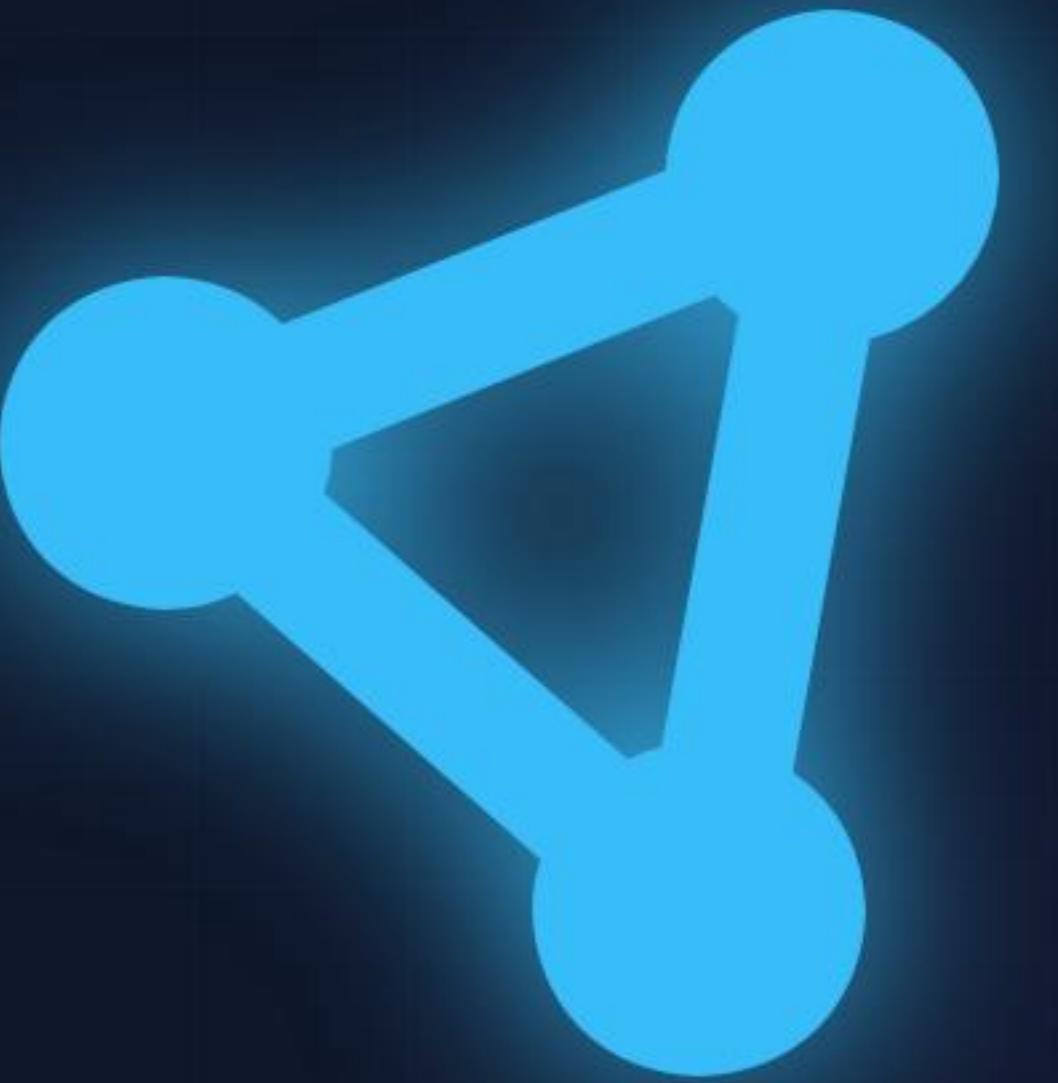
Interoperability Maturity (N-I)

Level	Status	Capability
N-I-5	Autonomous	Robotics/AI Safe Execution
N-I-4	Native	Deterministic Internal Logic
N-I-3	Enforced	Safety Gate Active (Block)
N-I-2	Bound	HVET + EIR (No Block)
N-I-1	Observed	Passive Hashing Only

Multi-Party Commit (DCCP)

Modern systems fail when agencies disagree. DCCP enforces a **Distributed Deterministic Commit**.

- 👉 **Agreement vs Truth:** We enforce Truth.
- ☛ **Cross-Agency:** VA, DoD, and Treasury must match.
- 🚫 **Block:** If one node disagrees, ALL stop.



Evidence Fusion (DMEF)

Merging sensors, AI, and human reports without corruption.



Prevents "Semantic Drift" where systems disagree on meaning.

Global Regulatory Alignment

GRIL (Global Reg. Layer)

Standardizes regulations into machine-readable logic. Allows US, EU, and UK rules to coexist.

MJ-LAL (Jurisdiction)

Prevents jurisdiction drift. Ensures a VA decision isn't judged by SSA rules.



Legal Admissibility

NOVAK Evidence Chains (UECF) are designed to be court-admissible globally.

GDEL: Global Enforcement



STOP

The Final Rule

The **Global Deterministic Enforcement Layer** ensures no system—bank, robot, agency, or AI—executes action without a complete cryptographic truth chain.

This is the "Police" of the NOVAK Protocol.

SP-8 Summary



Integration
Standard

The Universal Connector

SP-8 transforms NOVAK from a theoretical cryptographic concept into a deployable, global infrastructure compatible with everything from 1970s mainframes to 2030s autonomous swarms.

Questions?

NOVAK Protocol Standards Series

Category: SP-8 Interoperability