

JIL SOVEREIGN L1

The Century-Scale Settlement Architecture

A Trust-Based Digital Asset Infrastructure for Geopolitical Neutrality

LOCAL SOVEREIGNTY, GLOBAL SETTLEMENT

Permissioned settlement. Cryptographic proof. Polycentric trust.

Architected by JIL Sovereign Technologies, Inc.

White Paper | October 2026

MAINNET READY | AVAILABLE FOR BUSINESS TODAY | LIVE DEMO: demo.jilsovereign.net

EXECUTIVE PREMISE

A settlement layer built around sovereignty, not centralized control.

The global financial system requires an architectural upgrade. For decades, correspondent banking has relied on centralized chokepoints, pooled dependencies, and opaque intermediary ledgers. JIL Sovereign L1 is built and mainnet ready today as a permissioned, cryptographically secure settlement and proof network designed to operate across major geopolitical and macroeconomic shifts.

JIL L1 is fundamentally a trust network. It does not lend, and it does not dictate sovereign economic policy. It provides infrastructure for nations, global commodity desks, institutional hubs, and other approved sovereign operators to issue their own units, enforce their own trading rules, and route value securely across strictly authenticated corridors.

DESIGN PRINCIPLE

JIL separates sovereignty from interoperability. Each sovereign domain controls its own books and rules, while the L1 provides authenticated corridors, deterministic settlement,

evidence, and finality.

Production architecture at a glance

Operating model	Permissioned, polycentric federation of Sovereign roots, Hubs, and Annexes.
Risk model	Separated books and cryptographic boundaries prevent one domain from socializing another domain's loss.
Settlement model	Internal domestic routing remains local; cross-corridor settlement uses escrow, validation, and dual-signed finality.
Evidence model	Immutable receipts, identity proofs, site rules, signatures, and Court-Ready Evidence Bundles (CREB(TM)).

Six foundational ideas

- **Sovereign autonomy.** Each domain controls its own rules, books, counterparties, and economic policy.
- **Authenticated corridors.** External settlement can occur only through approved Sovereign roots.
- **Strict identity.** Operator identity and business identity are prerequisites for key provisioning and continued participation.
- **Risk containment.** Volatility, sanctions exposure, and failed counterparties are isolated at cryptographic boundaries.
- **Evidentiary finality.** Every material state transition is preserved as a durable, auditable receipt.
- **Predictable economics.** Network utility is monetized primarily at cross-corridor settlement, not internal movement.

01

The Vision: Sovereign Autonomy and Verified Value

The era of absolute reliance on centralized liquidity pools is ending. Sovereigns - whether Tier 1 nations, global oil desks, or philanthropic clearinghouses - require the ability to control their economic borders while retaining access to authenticated, rules-based global settlement.

JIL L1 offers a zero-compromise value-routing protocol built around three architectural commitments:

- **Absolute isolation of risk.** The network operates on separated books. If a foreign asset mark experiences extreme volatility or moves through automated bands, the contagion stops at the cryptographic boundary. Reserves are not drained to socialize another entity's loss.
- **Verified source and destination.** Every cross-corridor hop verifies the source and destination of the value movement against dynamic federation controls and site-specific refusal lists. Origin metadata cannot simply be stripped to bypass policy.
- **Geopolitical neutrality.** JIL L1 replaces singular centralized governance with a polycentric consortium model. No single participant should be able to unilaterally redefine the economic rules of another Sovereign domain.

WHAT JIL IS - AND IS NOT

JIL is the settlement, authentication, proof, and evidence layer. It is not a lender, a central bank, or a replacement for a Sovereign operator's domestic policy authority.

Network topology

Figure 1. Domestic books remain sovereign; external value crosses only through authenticated corridors.

02

The Mechanics of Value Movement

Value is mathematically routed and strictly accounted for at two operating layers: the internal domestic book and the cross-sovereign corridor.

Internal Liquidity Routing (Domestic Movement)

Within a Sovereign jurisdiction, value moves through a Hub > Spoke > Multi-Spoke topology. An Annex, such as a field treasury, routes value to its parent Hub, such as a commercial venue, which can route value to the Sovereign root. Internal transmission is governed by the Sovereign's local ruleset and remains unbilled by the JIL network. This supports a high-velocity, closed-loop domestic economy without forcing every internal movement through a global fee layer.

Cross-Corridor Settlement (Global Movement)

When value crosses geopolitical or corporate borders, it executes through a mathematical lock-and-capture state machine. Hubs and Annexes cannot bypass their Sovereign to trade externally; value must climb to the Sovereign root before entering an approved corridor.

1

ESCROW

The source Sovereign initiates the hop. The L1 engine escrows the gross transfer value plus the applicable network fee.

2	VERIFY	The destination Sovereign parses the payload, validates the unbroken origin proof, applies identity and refusal-list controls, and checks the cross-rate against its local market bands.
3	FINALIZE	Upon dual-signed finality, the destination credits value to the receiving party and the transaction is immutably settled.
4	RECEIPT	The network records the settlement evidence, signatures, policy state, and fee routing as a durable receipt.
DENIED TRADES If a corridor trade fails policy, identity, sanctions, pricing-band, or other required validation, the escrow is released. The denied transaction does not create an economic transfer.		

Why JIL.ai Gas Exists: Turning Trust Into Measurable Corridor Capacity

The gas valve is not a cryptocurrency gimmick. It is the economic and cryptographic control that prevents global settlement capacity from becoming unlimited, unauditable, or controlled by administrative discretion.

JIL Sovereign L1 separates two very different activities. Inside a Sovereign tree, institutions should be able to move value under their own rules without paying a federation toll. Crossing from one Sovereign domain to another is different. That movement consumes shared network trust, validation, evidence, and finality. JIL.ai exists to meter that shared cross-corridor capacity in a way that is scarce, transparent, and independently provable.

In plain English, JIL.ai is the key that starts an approved international corridor. It does not become the money being sent. It does not buy a Sovereign license. It does not override compliance. It simply proves that enough authorized federation capacity has been committed for the transaction to proceed.

THE DESIGN IDEA

Domestic sovereignty stays local. Global interoperability consumes a measurable network resource. That separation lets JIL protect sovereignty inside each cell while creating disciplined economics at the exact point where shared infrastructure is used.

Why a gas layer matters

Without a dedicated corridor gas layer	With the JIL.ai gas valve
External capacity can become an invisible administrative privilege.	Every external hop must present live, cryptographically signed capacity.
A central operator could silently expand access or favor one participant.	Supply, scope, concentration, and epoch rules are enforced by protocol.
Domestic users may end up subsidizing global settlement traffic.	Intra-tree movement does not spend JIL.ai. Cross-corridor use carries the network economics.
A token could be confused with the settlement asset itself.	JIL.ai is explicitly prohibited from being the corridor currency or cell currency.

The result is a cleaner institutional proposition: a Sovereign can keep its domestic books, local currency logic, and internal policy under its own control while the federation meters only the shared resource required to cross into another Sovereign domain.

What JIL.ai is, and what it is not

JIL.ai IS	JIL.ai IS NOT
Federation gas that opens an otherwise valid corridor.	A cell currency or the asset being transferred.
A source of metered authorization units for a defined epoch.	A license fee or a way to purchase a Sovereign cell.
A scarce network resource with class and scope attached to it.	A substitute for ATCE, sanctions screening, arrival policy, or identity controls.
A mechanism that can participate in a one-epoch lease market.	A guaranteed yield, perpetual claim, or protocol buyback promise.

The Economic Vision: Scarcity Without Destroying Principal

JIL.ai is designed so network utility can create economic value without requiring the protocol to consume the holder's principal.

A holder locks JIL.ai for one settlement epoch and signs a capacity authorization. The federation meter countersigns the same epoch, scope, capacity, and fee split. Once both signatures are present, the protocol derives authorization units from the locked JIL.ai. Those authorization units are what a corridor consumes. The JIL.ai principal itself is not burned by ignition.

This distinction is central. The network is not asking a holder to sacrifice the underlying asset every time a corridor is used. Instead, the holder temporarily commits scarce capacity to the federation. During that live epoch, the holder can receive the defined lessor share of fees generated by the corridor hops that the valve actually authorized. If the holder does not sign, the inventory earns nothing. At epoch end, the authorization expires and any new participation requires a new signature and a new queue position.

The five-step economic cycle

STEP	WHAT HAPPENS	ECONOMIC MEANING
1. Lock	The holder locks JIL.ai for one epoch.	Scarce capacity is committed, but principal does not move to the protocol.
2. Dual sign	Holder key A and federation meter key B sign the same authorization.	Neither side can unilaterally create live corridor capacity.
3. Derive	The protocol derives authorization units using the published gas ratio.	JIL.ai becomes measurable corridor capacity for that epoch.
4. Consume	Each approved cross-corridor hop burns authorization units.	Usage consumes capacity, not holder principal.
5. Settle fees	The lessor share accrues only from fees on hops the valve actually authorized.	Compensation is tied to real network use, with no idle yield or perpetual claim.

WHY THIS IS DIFFERENT

The design ties economic participation to actual corridor activity. It does not promise an APR, does not pay idle inventory, and does not create a perpetual claim. The holder participates only for the epoch and only where the valve was actually used.

A usage-driven supply model

The supply architecture is intended to make network capacity expand only when usage justifies it. JIL.ai has a hard cap of 10,000,000,000 units. The genesis block is 250,000,000 units. The remaining supply begins locked in reserve. Later 250,000,000 or 500,000,000 unit blocks can unlock one at a time only when the published usage gate is satisfied. There is no administrative unlock path, and a missed gate does not simply slide forward.

That creates a deliberate economic feedback loop: corridor activity consumes authorization, measurable usage can satisfy a published release gate, and only then can additional inventory enter the market. The objective is to let real settlement demand, rather than discretionary issuance, determine when more federation capacity becomes available.

SUPPLY DISCIPLINE	WHITE PAPER MEANING
10 billion hard cap	No mint path beyond the published maximum.
250 million genesis block	Initial federation inventory enters through auction, not through a cell.
Locked reserve	Unreleased supply cannot be spent, leased, pledged, or treated as cell treasury inventory.
Usage-gated later blocks	Additional supply becomes available only when the published demand conditions are met.
No admin unlock	Operators cannot release reserve inventory simply because they want more supply or more cash.
No side allocation	No team allocation, strategic mint, or off-auction issuance outside an authorized block.

Class A and Class B: Two Ways to Supply Federation Capacity

The two gas classes are not prestige tiers. They define how broadly a unit of JIL.ai may be used to ignite corridors.

Class A is federation-scoped inventory. It can be presented on any Sovereign root corridor that independently passes ATCE, sanctions inputs, identity controls, and destination arrival policy. Class B is intentionally narrower. It is bound to one Tier 3 root plus an immutable allowlist that can name permitted peer roots, asset classes, and jurisdiction tags.

This gives the network two different economic instruments for two different kinds of participation. Class A is generalized federation capacity. Class B is constrained capacity that can be associated with a defined Sovereign root and a defined commercial or jurisdictional perimeter. The scope is not a display label. It is cryptographically bound to the holder signature and rechecked when the corridor ignites.

	CLASS A GAS	CLASS B GAS
Reach	Federation scope.	One Tier 3 root plus an allowlist.
Where it can ignite	Any root corridor that passes all independent controls.	Only the root, peer, asset class, and jurisdiction combinations allowed by its certificate.
Scope mobility	Class remains A.	Class and scope certificate travel together on transfer.
Upgrade path	Not applicable.	No function upgrades Class B into Class A.
Fee participation	Fees from hops authorized by that live valve.	Fees only from in-scope hops that the Class B certificate allowed.
Compliance relationship	ATCE and destination policy still govern.	Scope is an additional constraint and never substitutes for ATCE or sanctions screening.

WHY INSTITUTIONS MAY CARE

A global operator can use broad federation capacity where appropriate, while a regional operator can participate inside a deliberately bounded perimeter. The architecture creates reach without forcing every participant into the same risk envelope.

Scope that cannot be stripped away

Class B scope is enforced at the hop. The certificate is bound to the named root and its allowlist hash, and the scope hash is covered by the holder signature. If a transfer omits the certificate, the transfer is rejected. If a Class B valve is presented outside its permitted root, peer, asset class, or jurisdiction, the hop fails with INV-GAS-SCOPE. There is no administrative override and no fallback that silently substitutes Class A capacity.

Identity travels with the economic permissioning model

At auction settlement, the buyer KYB jurisdiction and beneficial-owner reference are stored on the scope certificate and become inputs to ATCE at ignition. Gas therefore does not weaken identity and compliance controls. It gives those controls an additional, cryptographically bound context for deciding whether a particular corridor may open.

Concentration is bounded

The valve model also limits how much open epoch capacity can come from one lessor. The default single-lessor cap is 25 percent of authorization open in that epoch. Excess capacity is refused. This is designed to reduce the possibility that one holder can become the sole gatekeeper for federation corridor capacity.

From Gas to Finality: What Happens When a Corridor Opens

The gas valve does not approve the trade. It proves that the federation has live capacity to process the trade. The transaction must still survive every other rule in the settlement path.

1	ROOT REQUESTS	A Tier 3 Sovereign root initiates corridor.send. Nested hubs and leaves cannot bypass the root.
2	VALVE CHECKS	The service verifies a live dual-signed authorization for the root, epoch, asset class, peer, scope, and required units.
3	POLICY RUNS	ATCE, sanctions inputs, arrival policy, refusal lists, and pricing controls still execute. Gas never replaces them.
4	VALUE SETTLES	If all controls pass, the corridor settles in the Sovereign root currency object. JIL.ai is never the transferred asset.
5	CAPACITY BURNS	The hop burns the required authorization units. JIL.ai principal remains unchanged by ignition.
6	RECEIPT PROVES	The audit receipt records epoch, valve, class, scope hash, units authorized, units burned, and lessor slice.

Fail closed means trust is never inferred

If the meter is unavailable, times out, returns a 5xx response, or cannot produce a known verdict, the corridor does not settle. Missing or insufficient gas returns INV-GAS-VALVE. Out-of-scope use returns INV-GAS-SCOPE. Presenting JIL.ai as the transferred asset returns INV-GAS-ASSET. A nested hub attempting corridor.send returns INV-COR-HUB-ONLY. The system treats uncertainty as a refusal, not as permission.

INSTITUTIONAL OUTCOME

Every successful cross-corridor settlement can show not only what moved and where it went, but also which economic capacity authorized the hop, which scope governed it, how much capacity was consumed, and how the associated fee was attributed. That turns corridor economics into part of the evidence trail.

Mainnet today, corridor economics designed for disciplined scale

JIL Sovereign L1 is built and mainnet ready today. The gas-valve requirements define the corridor ignition and capacity contract that sits alongside the existing ATCE, hierarchy, identity, and commercial controls. Prospective operators can see the system in action at <https://demo.jilsovereign.net>.

06

The Zero-Trust Identity Mandate

Because JIL L1 is a trust network, identity is not assumed. It is cryptographically bound to participation and continuously revalidated according to the network's operating policy.

Every Sovereign and Hub operator must complete approved KYB and KYC identity controls, including biometric verification where required, before corridor keys are provisioned. The production identity workflow supports Onfido verification services, subject to jurisdictional and commercial configuration.

If a Sovereign corridor experiences a high velocity of severe compliance denials, including repeated attempts to route prohibited or sanctioned origins, the network's INV-TRUST-VELOCITY circuit breaker can suspend corridor keys. Reinstatement requires out-of-band identity re-authentication and a new key-generation ceremony.

08

Evidentiary Finality and 100-Year Logging

JIL L1 is designed to act as a durable cryptographic witness, not a legal arbiter.

The network preserves settlement records and supporting evidence for century-scale continuity where policy, law, and storage governance permit. The objective is an unbroken historical record capable of surviving changes in institutions, counterparties, software platforms, and geopolitical alignment.

- **Court-Ready Evidence Bundles (CREB(TM)).** When a cross-border trade is disputed, defaulted, or referred for legal review, the node can serialize the transaction history and supporting evidence into a CREB.
- **FRE 902(14) evidence support.** The evidence model is designed to capture the data needed to support self-authentication of electronic evidence, including origin records, applicable site rules, identity verification hashes, timestamps, and digital signatures. Legal admissibility remains subject to the governing forum and facts of the matter.
- **Absolute finality.** Receipts are never silently reversed. If a correction is authorized, it executes as a new, transparent correcting hop that references the prior state.
- **CourtChain(TM) integration.** Evidence packages can be routed into CourtChain workflows for legal preservation, review, and downstream presentation.

CRYPTOGRAPHIC LONGEVITY

The architecture should be operated with crypto-agility: current signatures can be preserved with their original verification context while the platform migrates to post-quantum algorithms as standards, libraries, and jurisdictional requirements mature.

Evidence captured at settlement

IDENTITY	POLICY	TRANSACTION	PROOF
KYB/KYC hashes Authorized signers	Site rules Refusal lists Pricing bands	Source + destination Amount + asset Timestamps	Origin chain Digital signatures CREB references

09

Solving the Dilemmas of Today and Tomorrow

TODAY

The Wholesale Syndication Dilemma

An offshore trading SPV executes a \$50 million wholesale bond or debt syndication with a sovereign desk in Dubai. Under the current correspondent-banking model, capital may traverse multiple intermediaries, creating delay, fees, duplicated controls, and the possibility of arbitrary

holds. On JIL L1, approved counterparties can establish a direct authenticated corridor. Identity gates are already satisfied, policy is explicit, and the transaction can settle with cryptographic finality and predictable pricing.

TOMORROW

The Macro Contagion Wall

A sovereign currency or commodity-linked asset experiences a sudden collapse. In pooled clearing structures, stress can propagate through shared liquidity and reserve obligations. In JIL L1, an algorithmic circuit breaker such as INV-CIRCUIT can suspend the affected asset or corridor while unrelated Sovereign domains continue operating. The objective is to make contagion stop at the cryptographic boundary.

100-YEAR HORIZON

The Century-Scale Estate

A South Dakota directed dynasty trust is structured to fund philanthropic acquisitions for generations. The challenge is preserving access, authority, and evidentiary continuity across changing institutions and geopolitical power centers. JIL L1 provides long-duration transaction history, durable proofs, explicit correction chains, and crypto-agility so the trust is not dependent on one intermediary ledger or one era of cryptography.

10

The Economic Engine and Value Capture

A utility-funded network model designed to align revenue with cross-corridor use, while leaving domestic movement economically frictionless.

JIL L1 is built and mainnet ready. The current \$45 million planning model is a four-year commercial scale-out and geographic infrastructure expansion program, not a software development budget required to reach production. The model includes a \$7.5 million baseline hardware deployment and an operational run rate that stabilizes near \$3.5 million annually. Under the current conservative five-site commercial deployment model, five-year revenue projections total approximately \$27 million, with the plan reaching cash-flow positive operations by Year 5.

PLANNING MODEL

These figures are forward-looking operating assumptions, not guarantees. Site count, deployment sequence, corridor volume, jurisdictional requirements, and infrastructure choices will materially affect actual results.

Programmatic operator pricing

OPERATOR CLASS	JOINING FEE	ANNUAL MAINTENANCE
Class A Sovereign - Global Commodities, Tier 1 Nations	\$2,500,000	\$400,000
Class B Sovereign - Regional Hubs, Philanthropic Desks	\$1,500,000	\$250,000
Additional Hubs - first 10 included	\$0	\$25,000 / Hub

Cross-corridor settlement fee

Network revenue is driven by a 5 basis point (0.0005) fee levied exclusively on gross settled cross-corridor value. When a source Sovereign routes value externally, the L1 engine escrows the gross transfer plus the fee. Upon finality, the transaction value is credited to the destination and the micro-fee is routed to the network treasury root. If the trade is denied, the transfer value and fee are un-escrowed.

DOMESTIC	CROSS-CORRIDOR	DENIED TRADE
0 bps JIL network fee	5 bps on gross settled value	0 settled fee escrow released

THE INVESTMENT THESIS IN ONE SENTENCE

JIL L1 monetizes authenticated cross-sovereign settlement while preserving local autonomy, isolating risk, and producing durable evidence for every material movement of value.

A century-scale trust fabric for sovereign value.

Local Sovereignty, Global Settlement.

JIL Sovereign L1 is built for a world in which institutions need to interoperate without surrendering authority. The mainnet-ready architecture keeps domestic economics local, moves cross-border value through authenticated corridors, isolates counterparty risk, and preserves the evidence required to explain exactly what happened, even decades later.

The result is not a new centralized financial authority. It is a neutral settlement and proof layer intended to let approved Sovereign domains transact under their own rules, with shared cryptographic trust where it matters most.

ARCHITECTURAL NORTH STAR

A network should be able to survive changes in governments, currencies, counterparties, vendors, and cryptographic standards without rewriting its historical truth.

See the system in action: <https://demo.jilsovereign.net>

JIL Sovereign L1 is mainnet ready and available for commercial deployment today.

JIL Sovereign Technologies, Inc.

jilsovereign.com