Platformless AI: A Decentralised Protocol for Trustless AI Inference

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Abstract

Platformless AI is a decentralised protocol that enables trustless AI inference through a peer-to-peer marketplace of independent compute providers. By combining Ethereum smart contracts, cryptographic proofs, and decentralised storage, the protocol eliminates platform intermediaries while maintaining accountability, privacy, and fair compensation. This whitepaper describes the technical architecture, economic model, and security mechanisms that enable a truly open AI marketplace where anyone can provide or consume AI services without centralised gatekeepers.

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1. Introduction

The AI revolution has brought unprecedented capabilities to humanity, yet access to these capabilities remains concentrated in the hands of a few large technology companies. These platforms act as gatekeepers, controlling which models users can access, what they can be used for, and at what price. Users have no choice but to trust these intermediaries with their data, their queries, and their dependency on AI-powered workflows.

Platformless AI represents a paradigm shift: a protocol, not a platform. Like BitTorrent democratized file sharing by eliminating central servers, Platformless AI democratizes AI inference by creating a trustless marketplace where independent compute providers—called **hosts**—offer AI services directly to users without intermediaries.

The protocol leverages:

- **Ethereum smart contracts** for transparent, automated settlement
- **End-to-end encryption** for privacy-preserving inference
- **Cryptographic proofs** for verifiable computation
- **Decentralised storage (S5/Sia)** for immutable audit trails
- **Economic incentives** aligned to ensure honest behaviour

The result is an open, permissionless AI marketplace where hosts compete on price and quality, users retain full control of their data, and trust is established through verifiable code, mathematics, and economic incentives rather than reputation.

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2. The Problem: Centralisation in AI

2.1 Platform Lock-in

Today's AI landscape is dominated by vertically integrated platforms that control the entire stack:

Layer	Centralised Control
Models	Platforms decide which models are available
Infrastructure	Users must use platform hardware
Pricing	Platforms set prices unilaterally
Data	All queries flow through platform servers
Policies	Platforms decide acceptable use

This creates **vendor lock-in** where users become dependent on a single provider's ecosystem, pricing, and policies.

2.2 Privacy Concerns

When users send prompts to centralised AI services:

- Prompts are transmitted and stored on platform servers
- Conversation history is retained indefinitely
- Data may be used for model training without explicit consent
- Sensitive queries expose business intelligence, personal information, or trade secrets

Users must trust platforms to handle this data responsibly—a trust that has been violated repeatedly across the technology industry.

2.3 Censorship and Availability

Centralised platforms can:

- Restrict access to certain models or capabilities
- Impose content policies that prevent legitimate use cases
- Discontinue services without notice

- Deny service based on geography, payment method, or arbitrary criteria

There is no recourse when a platform decides your use case is not welcome.

2.4 Economic Inefficiency

Platform economics favour the platform, not participants:

- Compute providers (if any external ones exist) receive a fraction of revenue
- Users pay premium prices that include platform overhead and profit margins
- No competition on pricing—platforms set prices
- Innovation is constrained to what platforms choose to offer

2.5 The Trust Problem

The fundamental issue is **forced trust**. Users must trust that:

- Platforms will not misuse their data
- Pricing is fair
- Services will remain available
- Quality will be maintained
- Terms will not change adversely

This trust cannot be verified, only assumed.

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3. The Solution: Platformless AI

Platformless AI replaces platform-mediated trust with **cryptographic trust**. Instead of trusting a company, users trust verifiable code, cryptographic mathematics, and carefully aligned economic incentives.

3.1 Core Principles

Permissionless Participation

Anyone can become a host by staking tokens and registering their compute resources. No approval process, no gatekeepers. The only requirement is economic commitment (stake) that aligns host incentives with honest behaviour.

Direct Peer-to-Peer Connections

Users connect directly to hosts via WebSocket. There is no platform server routing traffic. The SDK can establish direct connections from desktop applications, mobile apps, or server environments. Browser applications use a minimal proxy only to bypass CORS restrictions—the proxy does not see decrypted content.

Blockchain-Based Coordination

Smart contracts on Ethereum (specifically Base, an L2) handle:

- Host registration and discovery
- Session creation and payment escrow
- Proof verification and settlement
- Model governance and approval

The blockchain provides a single source of truth that all participants can verify.

End-to-End Encryption

All inference traffic is encrypted using modern cryptographic primitives:

- **ECDH key exchange** for session key establishment
- **XChaCha20-Poly1305** for symmetric encryption
- **ECDSA signatures** for authentication
- **Forward secrecy** via ephemeral session keys

Even if a host's long-term key is compromised, past sessions cannot be decrypted.

Decentralised Storage

Conversation history, proofs, and audit data are stored on **S5** (backed by the Sia network), a decentralised storage layer that provides:

- Content-addressed immutability
- Censorship resistance
- Distributed redundancy
- Cost-effective archival

Data stored on S5 is encrypted by the SDK before upload—S5 nodes cannot read content.

3.2 How It Works: A User's Perspective

```
1. User authenticates with their Ethereum wallet
2. SDK discovers available hosts from the NodeRegistry contract
3. User selects a host based on price, model support, and reputation
4. User creates a session by depositing funds into the JobMarketplace
contract
5. SDK establishes encrypted WebSocket connection to host
6. User sends prompts; host streams responses (all encrypted)
7. Host submits signed proofs of work to the contract
8. Session completes; contract settles payments automatically
9. Conversation is stored encrypted on S5 for user's records
```

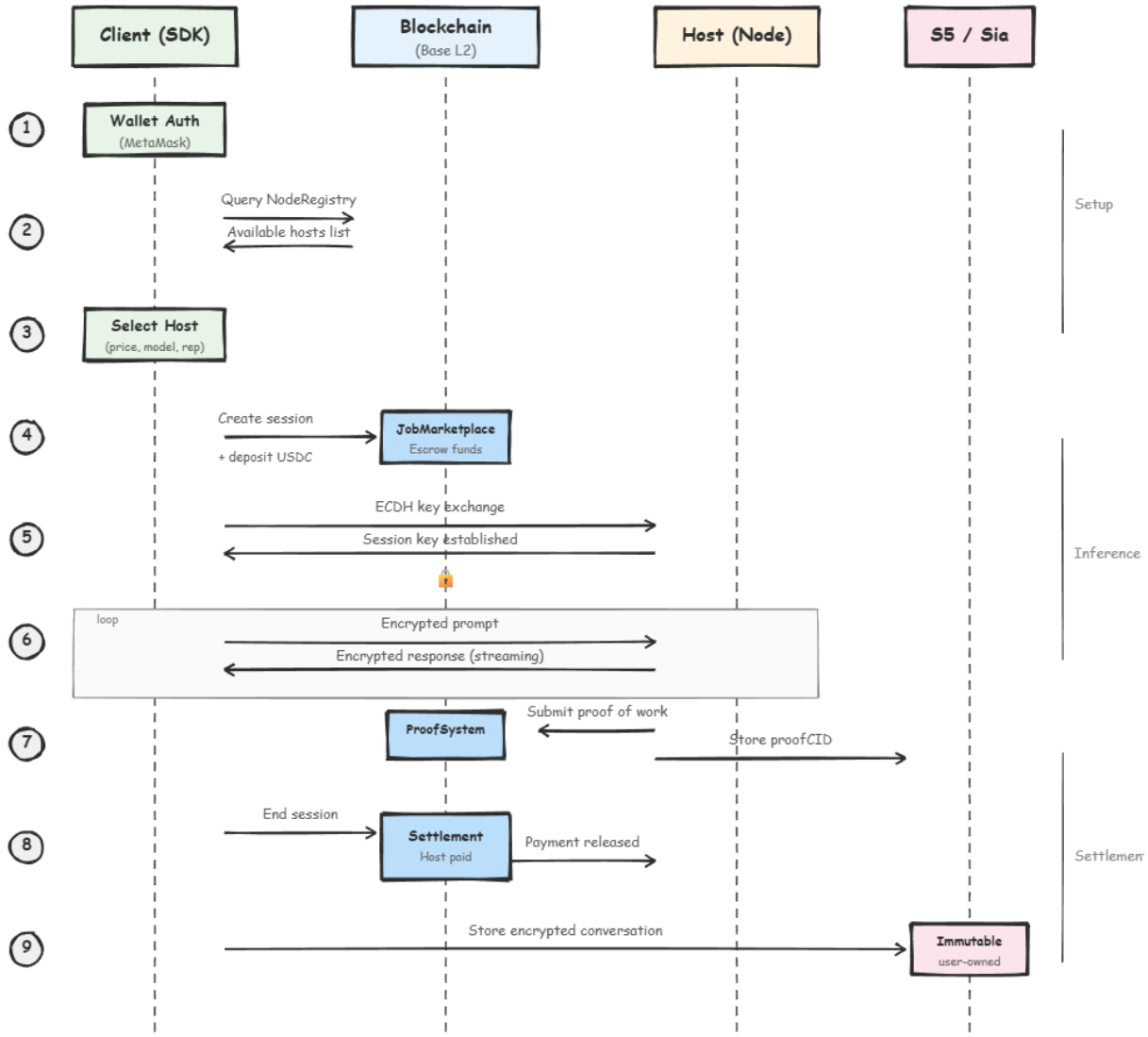

Figure 1: Session Lifecycle Flow showing the 9-step process from wallet authentication through to encrypted conversation storage.

The user never trusts a platform. Trust is established through:

- **Contracts** that enforce rules automatically
- **Encryption** that protects content
- **Proofs** that verify computation
- **Stakes** that deter malicious behaviour

3.3 How It Works: A Host's Perspective

```
1. Host stakes FAB tokens in the NodeRegistry contract
2. Host registers metadata (API URL, supported models, pricing)
3. Host runs inference server (GPU hardware + Fabstir Node software)
4. When sessions are created, host's server accepts WebSocket connections
5. Host processes encrypted prompts, streams encrypted responses
6. Host submits signed proofs of work periodically
7. On session completion, contract releases payment to HostEarnings
8. Host withdraws accumulated earnings at their convenience
```

Hosts operate as independent businesses. They set their own prices, choose which models to support, and manage their own infrastructure. The protocol handles discovery, payment, and dispute resolution.

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4. Technical Architecture

4.1 System Overview

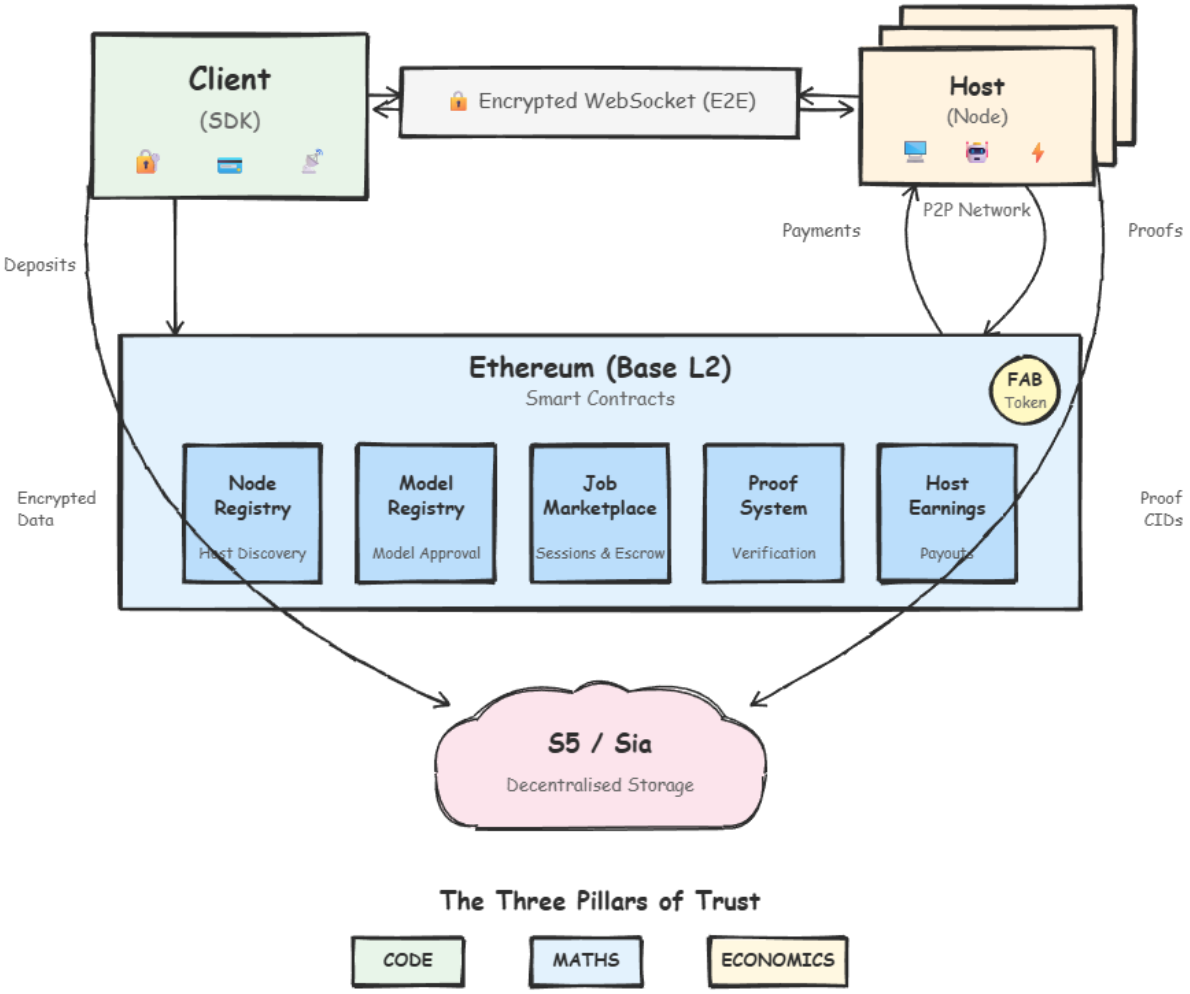


Figure 2: High-Level System Architecture showing client-host P2P connections, blockchain coordination layer (Base L2), and decentralised S5 storage.

The architecture comprises four main layers:

- **Client Layer**: SDK-powered applications connecting via encrypted WebSocket
- **Host Layer**: P2P network of independent GPU providers running inference
- **Blockchain Layer**: Ethereum (Base L2) smart contracts for coordination, escrow, and settlement
- **Storage Layer**: S5/Sia decentralised storage for encrypted conversations and proofs

4.2 Smart Contracts

The protocol uses **UUPS upgradeable proxy contracts** for future improvements without disrupting existing sessions.

NodeRegistry

Manages host registration, staking, and pricing.

```
struct Node {
    address operator;      // Host's Ethereum address
    uint256 stakedAmount; // FAB tokens staked (min 1000)
    bool active;          // Currently accepting sessions
    string metadata;      // JSON (name, description, etc.)
    string apiUrl;        // Inference endpoint URL
    bytes32[] models;     // Supported model IDs
    uint256 minPriceNative;  // Minimum price for ETH payments
    uint256 minPriceStable;  // Minimum price for USDC payments
}
```

Key functions:

- `registerNode()` - Stake tokens and register as host
- `unregisterNode()` - Withdraw stake and deregister
- `setModelPricing()` - Set per-model pricing
- `getNodesForModel()` - Discover hosts for a model

JobMarketplace

Handles session lifecycle and payment escrow.

```
struct SessionJob {
    address depositor;     // User who deposited funds
    address host;          // Host providing inference
    address paymentToken;  // ETH (address(0)) or USDC
    uint256 deposit;       // Escrowed funds
    uint256 pricePerToken; // Agreed price
    uint256 tokensUsed;    // Tokens consumed
    SessionStatus status;  // Active, Completed, TimedOut
    string conversationCID; // S5 storage reference
}
```

Key functions:

- `createSessionJob()` - Create session and escrow funds
- `submitProofOfWork()` - Host submits signed proof
- `completeSessionJob()` - Settle and distribute payments

Note: The contract includes a `DISPUTE_WINDOW` parameter (configurable via upgrade) that delays host-initiated session completion. This window allows users to review session outcomes before final settlement. The optimal duration is being evaluated—currently set to 30 seconds for testing, with production values to be determined based on user experience research.

ModelRegistry

Governs which models can be used in the marketplace.

- Community-governed model approval
- Model ID derivation from repository/filename
- Prevents malicious model distribution

ProofSystem

Verifies host signatures and integrates with zero-knowledge proofs.

- ECDSA signature verification
- STARK proof hook (future: on-chain verification)
- Graceful degradation when proof system unavailable

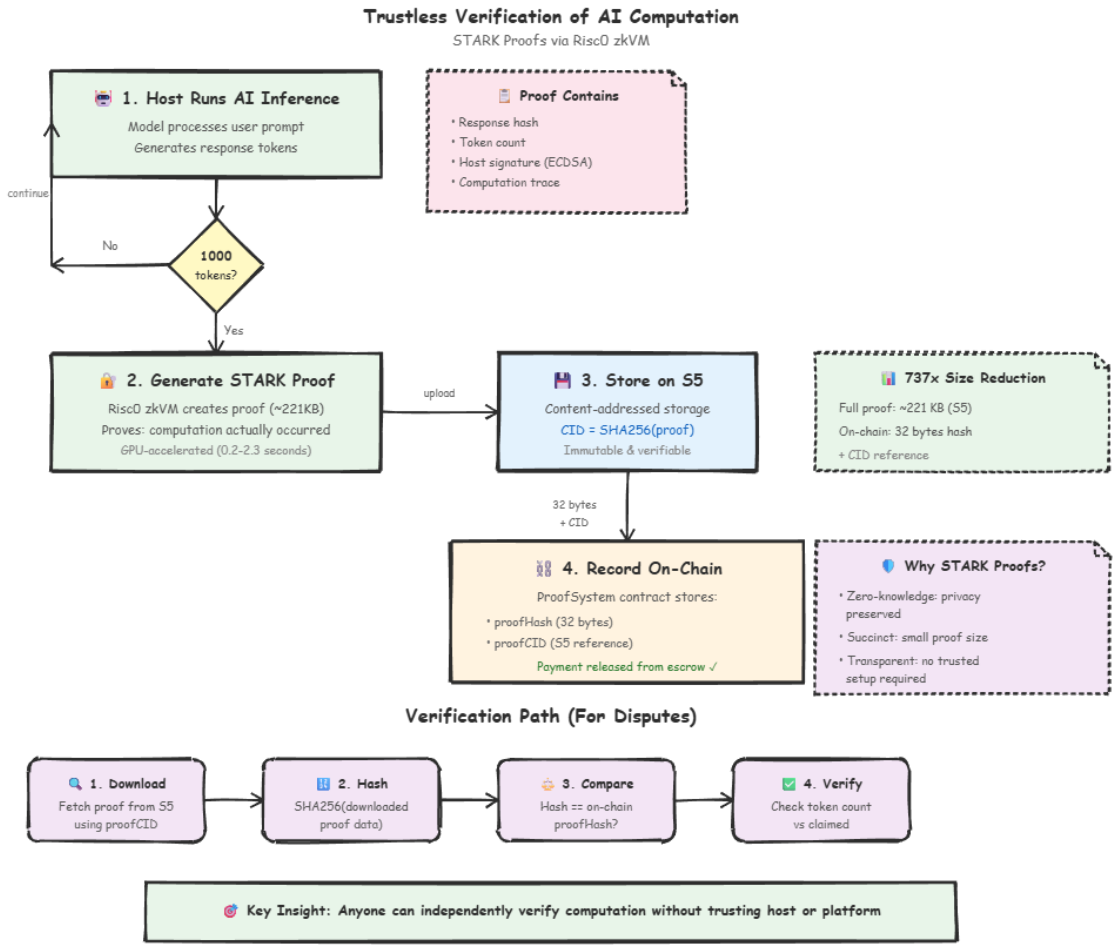


Figure 3: Proof-of-Inference Flow showing the trustless verification mechanism from AI inference through STARK proof generation, S5 storage, and on-chain recording, with the verification path for disputes.

HostEarnings

Accumulates host payments for gas-efficient batch withdrawals.

- 80% gas reduction vs individual transfers
- Hosts withdraw at their convenience
- Supports multiple payment tokens

4.3 SDK Architecture

The SDK (`@fabstir/sdk-core`) is the primary interface for client applications.

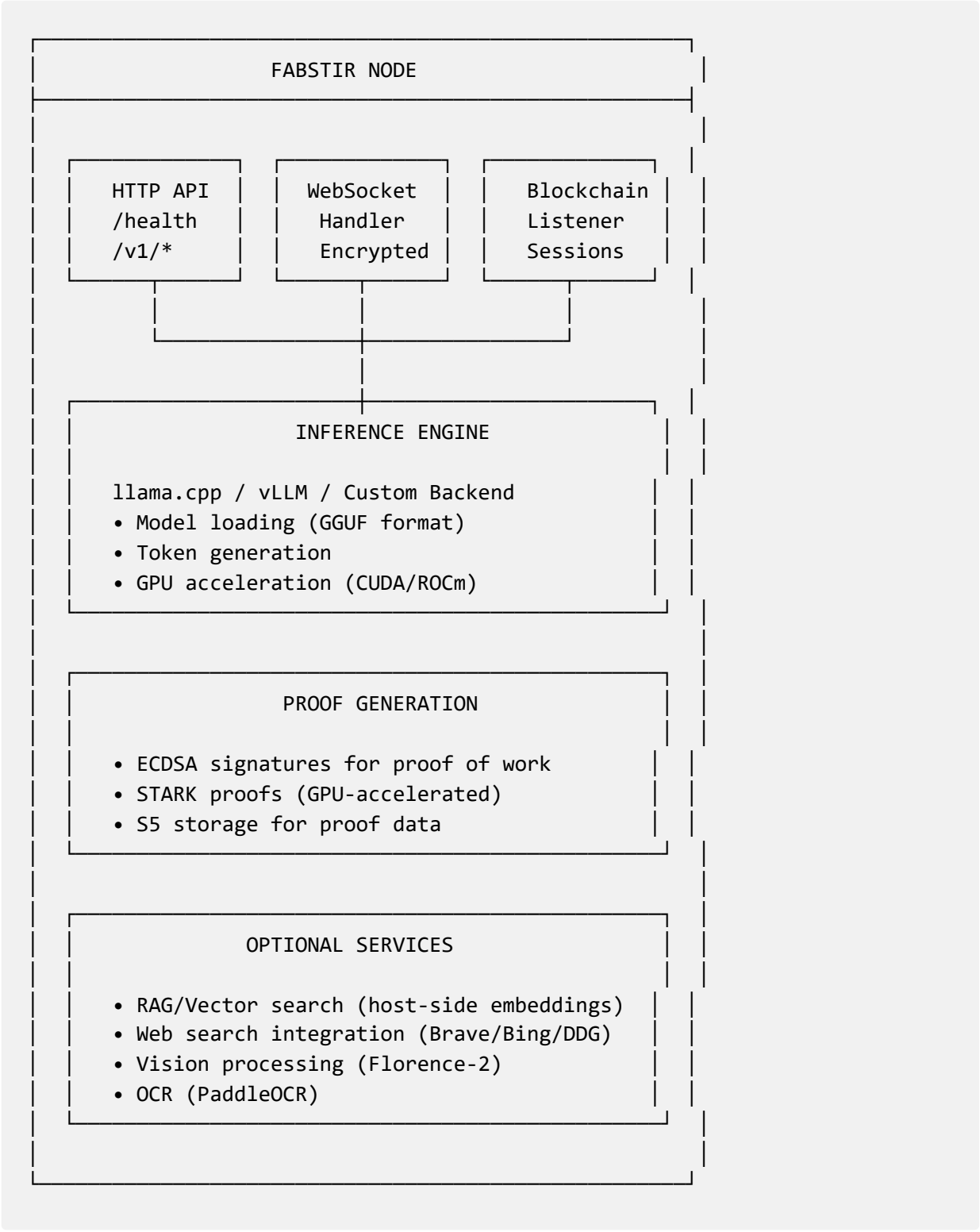
```
// Manager-based architecture
const sdk = new FabstirSDKCore({
  /* config */
});
await sdk.authenticate("privatekey", { privateKey });

// Core managers
const authManager = sdk.getAuthManager(); // Authentication
const paymentManager = sdk.getPaymentManager(); // Deposits/withdrawals
const sessionManager = sdk.getSessionManager(); // Session lifecycle
const hostManager = sdk.getHostManager(); // Host discovery
const storageManager = sdk.getStorageManager(); // S5 storage

// Advanced managers
const vectorRAGManager = sdk.getVectorRAGManager(); // RAG integration
const modelManager = sdk.getModelManager(); // Model queries
const clientManager = sdk.getClientManager(); // Client utilities
```

Key SDK features:

- **Browser-compatible**: Zero Node.js dependencies
- **Multi-chain**: Base Sepolia (production), opBNB Testnet (development)
- **Encryption by default**: All sessions encrypted automatically
- **Deterministic S5 seed**: Derived from wallet signature for data sovereignty

4.4 Host Node Architecture

The host node (`fabstir-llm-node`) is written in Rust for performance and security. Rust's ownership model and compile-time memory safety guarantees eliminate entire classes of vulnerabilities (buffer overflows, use-after-free, data races) that plague C/C++ inference servers, making it ideal for handling encrypted user data and financial transactions.



4.5 Decentralised Storage (S5)

S5 provides decentralised, content-addressed storage backed by the Sia network.

Why S5?

- **Content addressing**: Data identified by cryptographic hash (CID)
- **Immutability**: Once stored, content cannot be modified
- **Redundancy**: Data distributed across multiple Sia hosts
- **Cost efficiency**: Storage costs fraction of centralised alternatives
- **Path-based API**: Familiar filesystem interface via Enhanced S5.js

What We Store on S5:

Data Type	Purpose	Encryption
Conversation history	User's chat records	User-controlled
Proof data (proofCID)	Complete proof for verification	Public
Delta CIDs	Incremental proof changes	Public
Vector databases	RAG document embeddings	User-controlled
Session metadata	Audit trail	Host-signed

Data Sovereignty:

Each user's S5 identity is derived deterministically from their Ethereum wallet signature. This means:

- Users own their data (not the platform)
- Data follows the user across devices
- No account recovery needed—wallet = identity
- Data cannot be accessed without the wallet

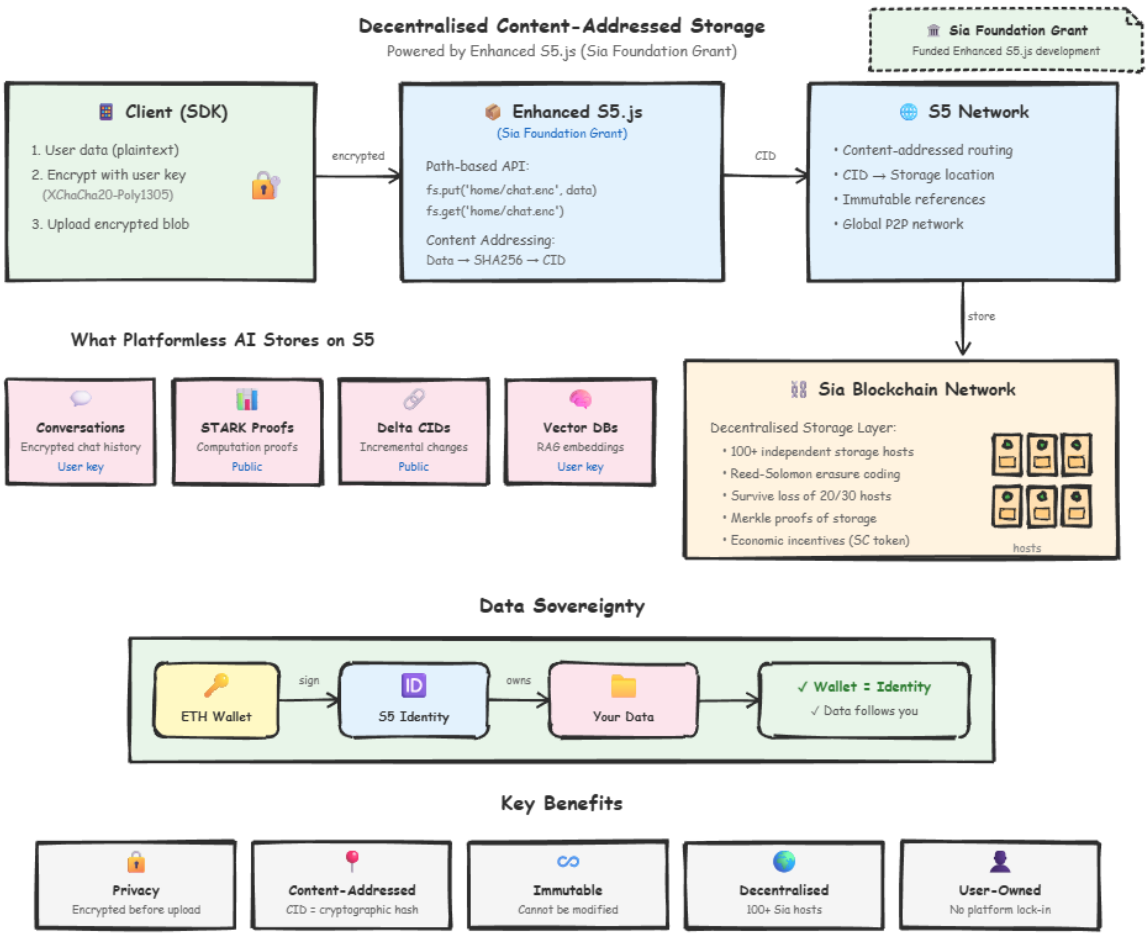


Figure 4: S5 Storage Architecture showing the decentralised content-addressed storage flow from client encryption through Enhanced S5.js to the Sia blockchain network. Developed with Sia Foundation grant funding.

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5. Economic Model

5.1 Token Economics

The protocol uses two tokens:

FAB Token (Native)

- Utility token for the Platformless AI ecosystem
- Used for host staking (minimum 1000 FAB)
- Governance voting rights (used for model approval voting)
- Slashing collateral for dispute enforcement (owner-controlled at MVP, DAO-governed post-MVP)

USDC (Stablecoin)

- Primary payment currency for sessions
- Stable value for predictable pricing
- No volatility risk for users or hosts

ETH (Native Currency)

- Alternative payment option
- Direct blockchain settlement
- Preferred by crypto-native users

5.2 Pricing Model

Hosts set prices per **million tokens** with a precision multiplier of 1000x.

```
Actual USD per million = pricePerToken / 1000

Examples:
- pricePerToken = 60    → $0.06/million (budget models)
- pricePerToken = 5000  → $5.00/million (standard models)
- pricePerToken = 25000 → $25.00/million (premium models)
```

This allows prices from $0.001/million to $100,000/million, accommodating everything from tiny test models to premium specialised inference.

Price Discovery:

- Hosts compete on price for each model
- Users query `getModelPricing()` to compare hosts
- Market forces drive prices towards equilibrium
- No platform markup—users pay hosts directly

5.3 Payment Flow

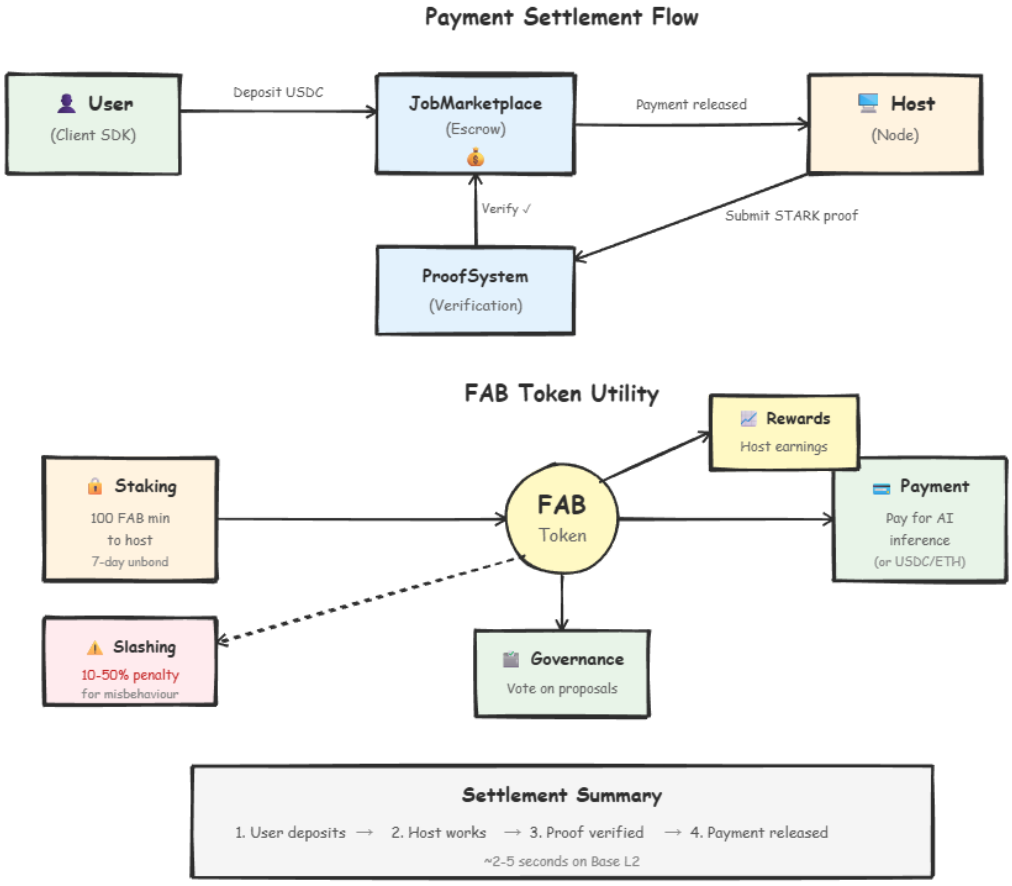

Figure 5: Token Economics & Payment Flow showing the escrow-based settlement process and FAB token utility.

Fee Structure:

- **90%** → Host (via HostEarnings contract)
- **10%** → Protocol treasury

Accumulation Pattern:

To save gas, host payments and treasury fees accumulate in contracts rather than being sent immediately. Hosts withdraw when balances are sufficient to justify gas costs. This reduces gas by ~80% compared to individual transfers.

5.4 Staking Requirements

Requirement	Value	Purpose
Minimum host stake	1000 FAB	Sybil resistance, skin in the game
Maximum slash per action	50% of stake	Prevents accidental/malicious total loss
Minimum stake after slash	100 FAB	Below this triggers auto-unregister
Slash cooldown	24 hours	Prevents rapid-fire slashing
Stake lock period	None	Can unregister and withdraw anytime

Why Stake?

- **Sybil resistance**: Prevents spam registrations
- **Quality signal**: Hosts with higher stakes demonstrate commitment
- **Weighted selection**: SDK's host selection algorithm weights stake at 35% by default
- **Dispute collateral**: Stakes can be slashed for proven misbehaviour (evidence-based)

Slashing at MVP:

The protocol includes owner-controlled stake slashing at launch. When misbehaviour is proven via the CID evidence trail:

1. Owner reviews evidence (proofCID, deltaCID, conversationCID)
2. Owner calls `slashStake(host, amount, evidenceCID, reason)`
3. Slashed tokens transfer to protocol treasury
4. All slashes emit public events for transparency

See `SLASHING_SPECIFICATION.md` for full implementation details.

5.5 Host Selection and Reputation

The SDK implements a **weighted host selection algorithm** that users can configure:

Factor	Default Weight	Source
Stake	35%	On-chain `stakedAmount` from NodeRegistry
Price	30%	Normalised inverse of host pricing
Uptime	20%	Placeholder (95%) until metrics system
Latency	15%	Placeholder (100ms) until metrics system

Selection Modes:

- **AUTO**: Standard weighted scoring (default)
- **CHEAPEST**: 70% price weight
- **RELIABLE**: 50% stake + 40% uptime weight
- **FASTEST**: 60% latency weight
- **SPECIFIC**: Use a preferred host address

Note: Uptime and latency currently use placeholder values. A comprehensive metrics collection system is planned for future development.

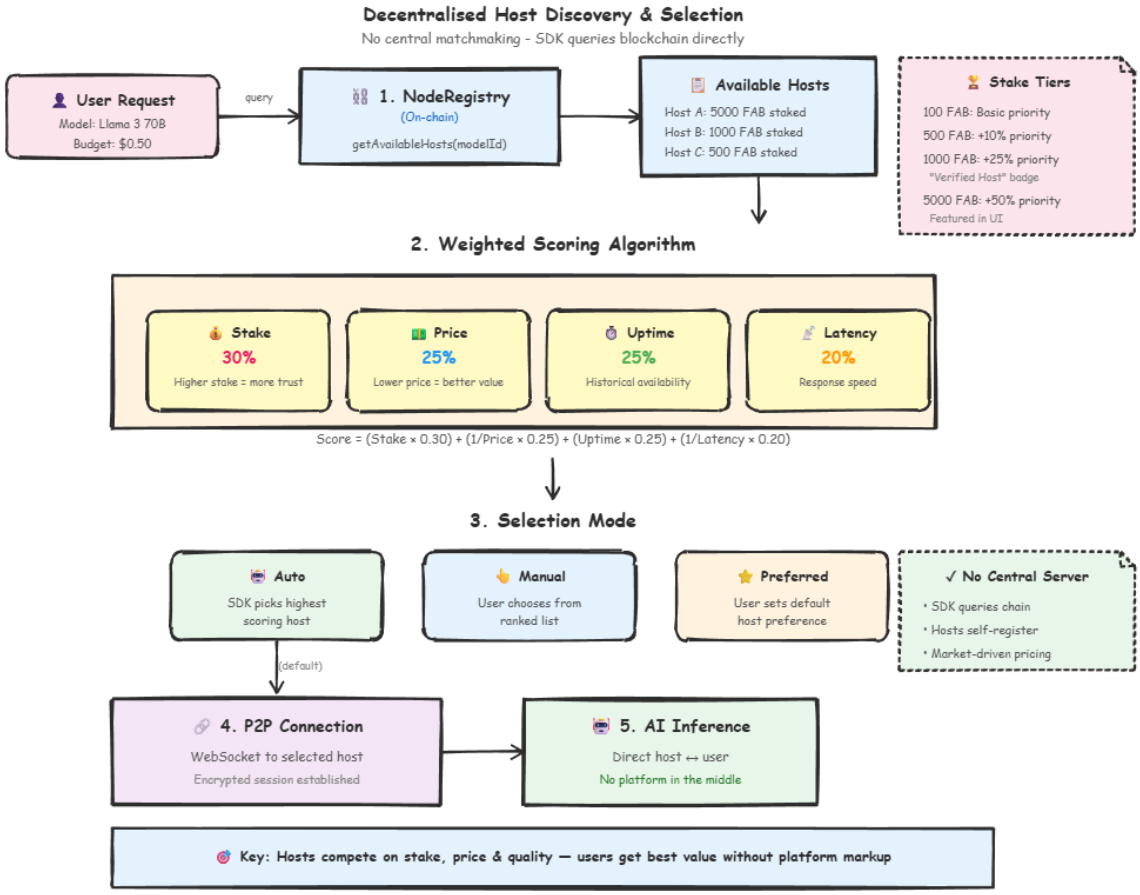

Figure 6: Host Selection Algorithm showing the decentralised discovery and selection flow from NodeRegistry query through weighted scoring (stake, price, uptime, latency) to P2P connection.

5.6 Minimum Deposits

Payment Method	Minimum	Rationale
ETH	0.0001 ETH (~$0.40)	Cover gas costs
USDC	$0.50	Prevent dust sessions

These minimums ensure sessions are economically viable for hosts.

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6. Security and Privacy

6.1 Threat Model

The protocol defends against:

Threat	Mitigation
Eavesdropping	End-to-end encryption
Man-in-the-middle	ECDSA authentication
Replay attacks	Nonces, timestamps, message indices

Threat	Mitigation
Malicious hosts	Staking + evidence-based slashing + cryptographic proofs
Data theft	User-controlled encryption keys
Platform capture	Decentralised storage + blockchain
Censorship	Permissionless participation

6.2 Encryption Architecture

All sessions are encrypted by default using state-of-the-art cryptography.

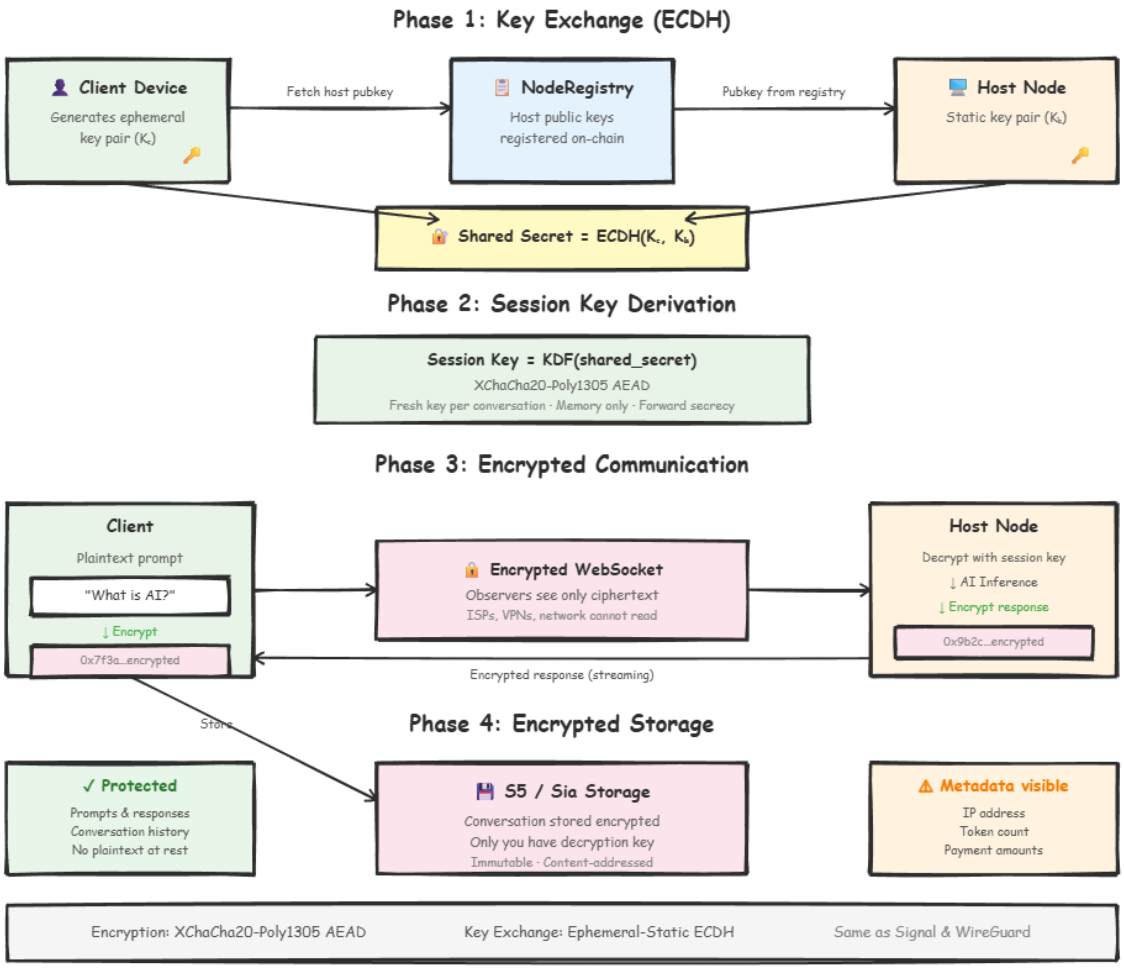

Figure 7: End-to-End Encryption Flow showing ECDH key exchange, session key derivation, and encrypted communication.

Session Initialisation (Ephemeral-Static ECDH):

```
Client                                  Host
   |                                      |
   | 1. Generate ephemeral keypair        |
   | 2. Get host public key (on-chain)    |
   | 3. ECDH → shared secret              |
   | 4. Derive session key                |
   | 5. Encrypt init payload              |
   | 6. Sign with wallet                  |
   |                                      |
   |──────── encrypted_init, sig, ephem ──►|
   |                                      |
   |                                      | 7. ECDH → same shared secret
   |                                      | 8. Decrypt payload
   |                                      | 9. Verify signature
   |                                      | 10. Accept session
```

Message Encryption (Symmetric):

After session init, messages use fast symmetric encryption:

```
encrypt(session_key, message, index) → ciphertext
```

- **XChaCha20-Poly1305**: AEAD cipher with 256-bit keys
- **Message index in AAD**: Prevents replay
- **~1ms overhead**: Negligible performance impact

Forward Secrecy:

Ephemeral keys are generated fresh per session and discarded after use. Even if host's long-term key is compromised, past sessions remain secure.

6.3 What's Protected

✅ **Encrypted:**

- Prompts and responses
- Conversation history (on S5)
- Session configuration
- RAG queries and context

❌ **Visible on-chain:**

- Session creation/completion
- Payment amounts
- Token usage
- Host selection

On-chain data is necessarily public for verification, but contains no content.

6.4 Key Management

Client Keys:

Derived from wallet private key using deterministic signature-based derivation. No additional secrets to manage.

Host Keys:

Registered on-chain during node setup. Public key stored in NodeRegistry metadata.

Session Keys:

Generated fresh per session, exist only in memory, discarded on completion.

6.5 S5 Storage Encryption

Data stored on S5 is encrypted by the SDK before upload:

```
// SDK encrypts before storage
const encrypted = encryptionManager.encrypt(conversation);
await storageManager.save(encrypted);

// S5 stores opaque bytes—cannot read content
```

S5 nodes see only encrypted blobs. Only users with the correct keys can decrypt.

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7. Dispute Resolution

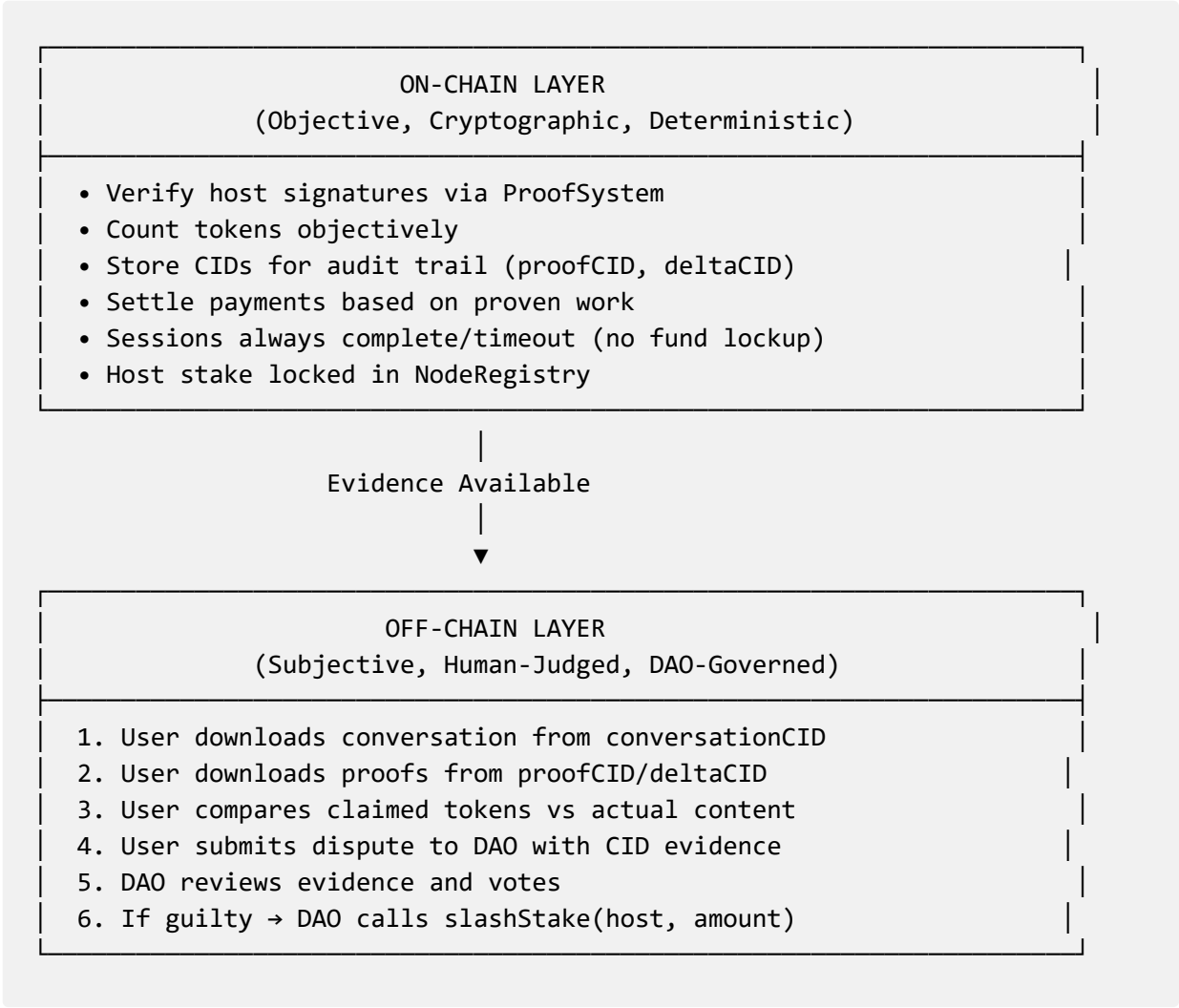
7.1 Design Philosophy

The protocol takes a **pragmatic approach** to disputes:

- **On-chain**: Handles objective, cryptographically verifiable facts
- **Off-chain**: Handles subjective quality judgements (future DAO)

Smart contracts **cannot** determine if an AI response was "good quality" or "factually correct"—these are inherently subjective. Attempting on-chain dispute resolution creates complexity, attack vectors, and gas waste.

7.2 Two-Layer Architecture



7.3 Evidence Trail

Every proof submission creates an immutable, verifiable record:

Component	Storage	Purpose
`proofHash`	On-chain	Cryptographic fingerprint
`proofCID`	S5	Complete proof data
`deltaCID`	S5	Incremental changes
`conversationCID`	S5	Full conversation at completion
`signature`	On-chain	Host's ECDSA attestation

Anyone can verify:

1. Download CID content from S5
2. Hash content, compare to on-chain `proofHash`
3. Verify signature matches host
4. Count actual tokens vs claimed tokens

7.4 Dispute Resolution Flow

MVP: Owner-Controlled Slashing

At launch, dispute resolution is handled by the protocol owner using evidence-based slashing:

```
User notices issue
       │
       ▼
User reports to owner with session ID
       │
       ▼
Owner gathers evidence from CIDs
(proofCID, deltaCID, conversationCID)
       │
       ▼
Owner verifies misbehaviour
(compare claimed tokens vs actual content)
       │
       ├── Host innocent → No action
       │
       └── Host guilty → slashStake(host, amount, evidenceCID, reason)
                         └► Slashed tokens → Treasury
```

Safety Constraints:

- Maximum 50% slash per action
- 24-hour cooldown between slashes on same host
- Evidence CID required (public accountability)
- All slashes emit events for transparency

Future: DAO-Governed Slashing

Post-MVP, slashing authority transfers to a DAO contract:

```
// Owner transfers authority to DAO
setSlashingAuthority(daoContractAddress);
```

The DAO then manages dispute submissions, voting, and slash execution. No contract upgrade required—same `slashStake()` function, different caller.

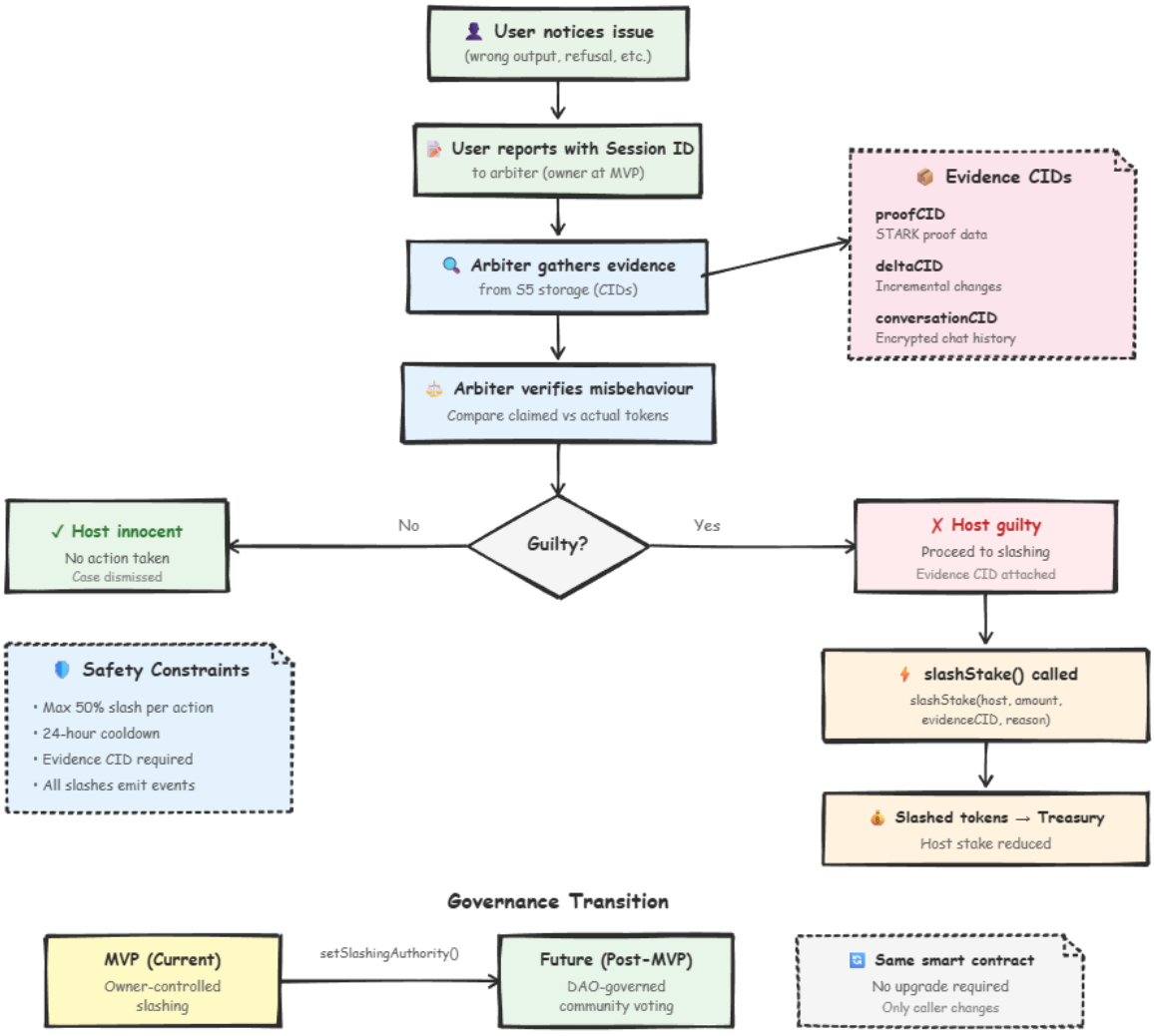


Figure 8: Dispute Resolution Flow showing the evidence-based slashing process from user report through arbiter verification to outcome, with safety constraints and governance transition path.

7.5 Attack Mitigation

Attack	Mitigation
Host misbehaviour	Evidence-based slashing with CID proof
False evidence	CIDs are content-addressed (immutable, verifiable)
Fund lockup griefing	Sessions always settle; no on-chain dispute state
Slash abuse	50% max per action, 24h cooldown, evidence required
Arbiter centralisation (MVP)	All slashes public, DAO transition planned

8. Governance

8.1 Current State

At MVP launch, governance operates in a **bootstrap phase** with admin-controlled operations:

- Contract upgrades controlled by admin keys (single-sig initially)
- Model approval via owner functions (`addTrustedModel`)
- Stake slashing via owner functions (`slashStake`)
- Parameter changes via owner functions

This centralisation is temporary and necessary for rapid iteration during early deployment. All admin actions are on-chain and publicly verifiable.

8.2 Progressive Decentralisation

The roadmap includes progressive decentralisation:

Phase	Governance
MVP	Admin-controlled (bootstrap)
Post-MVP	Multi-sig with community representatives
Mature	Full FAB token-weighted DAO voting

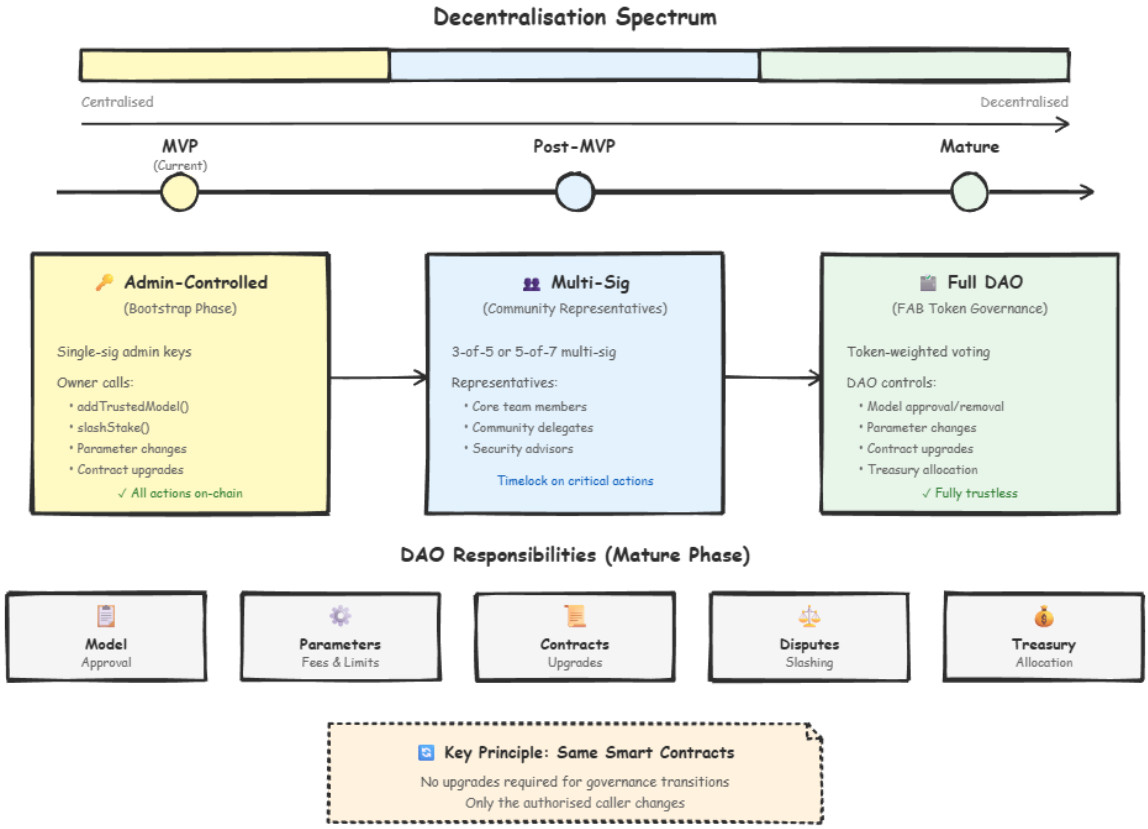


Figure 9: Progressive Decentralisation Timeline showing the governance transition from admin-controlled MVP through multi-sig to full DAO governance, with key responsibilities at each phase.

8.3 DAO Responsibilities (Future)

- Model approval/removal via voting
- Parameter changes (fees, minimums)
- Contract upgrades
- Dispute resolution and stake slashing

- Treasury allocation

8.4 Model Governance

The ModelRegistry contract is **architecturally ready** for community governance with two approval tiers:

Tier 1: Owner-Curated (MVP)

```
// Owner adds trusted models directly
function addTrustedModel(
    string huggingfaceRepo,
    string fileName,
    bytes32 sha256Hash
) external onlyOwner;
```

Tier 2: Community-Voted (Available, No UI Yet)

```
// Anyone can propose a model (requires FAB stake)
function proposeModel(string repo, string file, bytes32 hash) external;

// FAB token holders vote
function voteOnProposal(bytes32 modelId, uint256 amount, bool support)
external;

// Execute passed proposals
function executeProposal(bytes32 modelId) external;
```

The community voting infrastructure exists in the deployed contracts but awaits UI implementation. For MVP, the owner uses `addTrustedModel()` to bootstrap the model ecosystem.

Model Governance Prevents:

- Malicious models (trojaned weights)
- Illegal content generation models
- Models violating licensing terms

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9. Roadmap

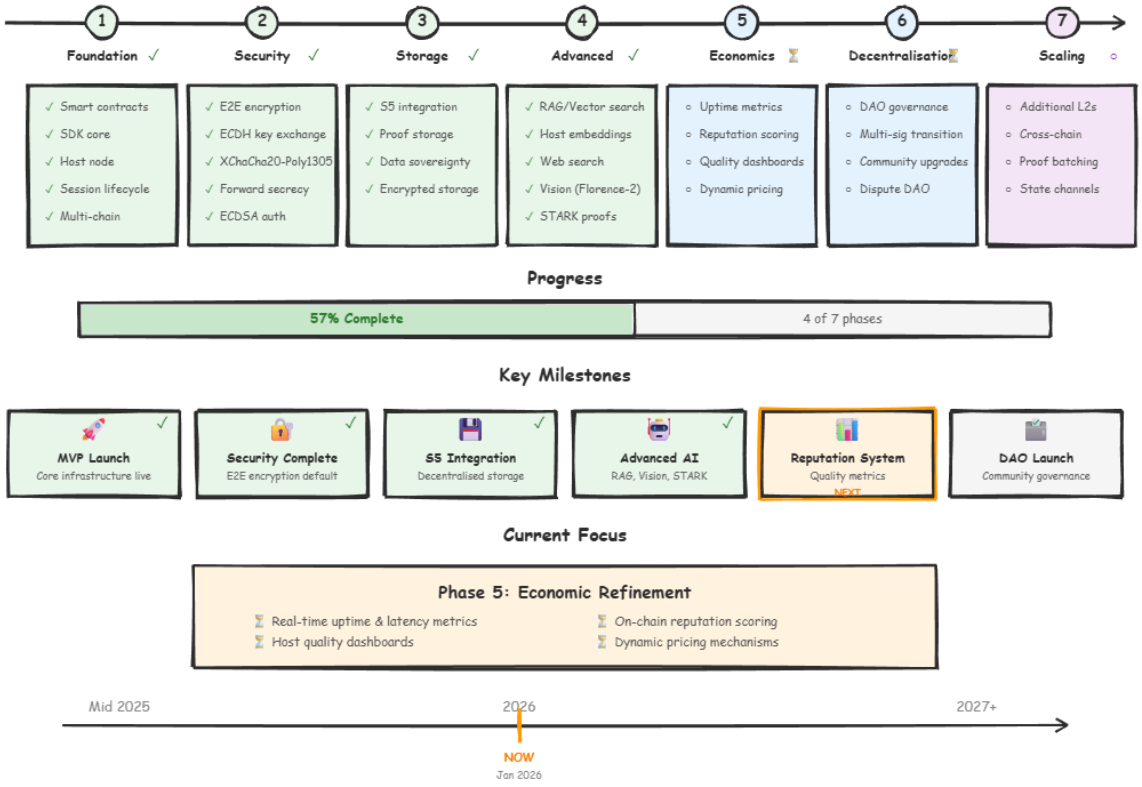

Figure 10: Roadmap Timeline showing development progress across 7 phases, with 4 phases completed (57%) and current focus on Phase 5: Economic Refinement.

Phase 1: Foundation (Completed)

- ✅ Smart contract deployment (UUPS upgradeable)
- ✅ SDK core functionality
- ✅ Host node implementation
- ✅ Basic session lifecycle
- ✅ Multi-chain support (Base Sepolia)

Phase 2: Security (Completed)

- ✅ End-to-end encryption (default)
- ✅ Ephemeral-static ECDH key exchange
- ✅ XChaCha20-Poly1305 symmetric encryption
- ✅ Forward secrecy
- ✅ ECDSA authentication

Phase 3: Storage (Completed)

- ✅ S5 integration for conversations
- ✅ Proof storage (proofCID, deltaCID)
- ✅ User-owned data sovereignty
- ✅ Encrypted storage

Phase 4: Advanced Features (Completed)

- ✅ RAG/Vector search support
- ✅ Host-side embeddings
- ✅ Web search integration
- ✅ Vision processing (Florence-2, OCR)
- ✅ Zero-knowledge proof generation (host-side STARK proofs)

Note: Production UI for ZK proof verification display is pending; backend infrastructure is complete.

Phase 5: Economic Refinement (Planned)

- ⏳ Real-time uptime and latency metrics collection
- ⏳ On-chain reputation scoring
- ⏳ Host quality dashboards
- ⏳ Dynamic pricing mechanisms

Phase 6: Decentralisation (Planned)

- ⏳ DAO governance launch
- ⏳ Multi-sig transition
- ⏳ Community-driven upgrades
- ⏳ Dispute resolution DAO

Phase 7: Scaling (Future)

- ⏳ Additional L2 chains
- ⏳ Cross-chain sessions
- ⏳ Optimistic proof batching
- ⏳ State channels for high-frequency

---

10. Conclusion

Platformless AI represents a fundamental shift in how AI services are delivered. By eliminating platform intermediaries and replacing trust with cryptography, the protocol creates an open, permissionless marketplace where:

- **Users** maintain privacy, data sovereignty, and choice
- **Hosts** operate independent businesses with fair compensation
- **Innovation** flourishes without gatekeepers
- **Trust** is established through verifiable open-source code, cryptographic mathematics, and carefully designed economic incentives—not platform reputation

The three pillars of trustless operation:

1. **Code**: Open-source smart contracts that anyone can audit, with deterministic execution
2. **Mathematics**: Cryptographic proofs, signatures, and encryption that provide guarantees no human can override
3. **Economics**: Staking requirements, payment escrow, and fee structures that align incentives towards honest behaviour

The AI revolution should not be controlled by a few large platforms. Platformless AI provides the infrastructure for a truly open AI ecosystem where anyone can participate, compete, and benefit.

Join the revolution. Become platformless.

Appendix A: Contract Addresses (Base Sepolia)

Contract	Proxy Address
JobMarketplace	`0x3CaCbf3f448B420918A93a88706B26Ab27a3523E`
NodeRegistry	`0x8BC0Af4aAa2dfb99699B1A24bA85E507de10Fd22`
ModelRegistry	`0x1a9d91521c85bD252Ac848806Ff5096bBb9ACDb2`
ProofSystem	`0x5afB91977e69Cc5003288849059bc62d47E7deeb`
HostEarnings	`0xE4F33e9e132E60fc3477509f99b9E1340b91Aee0`
FAB Token	`0xC78949004B4EB6dEf2D66e49Cd81231472612D62`
USDC Token	`0x036CbD53842c5426634e7929541eC2318f3dCF7e`

Appendix B: SDK Installation

```
npm install @fabstir/sdk-core
```

```
import { FabstirSDKCore, ChainId } from "@fabstir/sdk-core";

const sdk = new FabstirSDKCore({
  chainId: ChainId.BASE_SEPOLIA,
  rpcUrl: "https://sepolia.base.org",
  contractAddresses: {
    jobMarketplace: "0x3CaCbf3f448B420918A93a88706B26Ab27a3523E",
    nodeRegistry: "0x8BC0Af4aAa2dfb99699B1A24bA85E507de10Fd22",
    // ... other addresses
  },
});

await sdk.authenticate("metamask");
const sessionManager = sdk.getSessionManager();
```

Appendix C: Resources

- **Documentation**: https://docs.fabstir.com
- **GitHub**: https://github.com/Fabstir
- **SDK Reference**: https://github.com/Fabstir/fabstir-llm-sdk/blob/main/docs/SDK_API.md
- **Contract Reference**: https://github.com/Fabstir/fabstir-compute-contracts

Platformless AI — Trustless AI for Everyone