Scylla Technical Appendix (Non-Executable)

Preface

This document complements the white paper. It is descriptive, not normative, and it is not sufficient to implement a full client.

References to the white paper are provided in each section where relevant.

1. Purpose and Scope

This appendix summarizes protocol mechanics at a high level without code, constants, or client-specific logic. It focuses on how the system behaves rather than how to implement it.

2. State Model (Accounts, Supply, Fees)

Scylla maintains a ledger of account balances and a total supply value. Transactions move balances between accounts and trigger new issuance. Fees are not transfers between participants; they represent a governance-controlled expansion of supply tied to transaction activity.

See white paper sections 1 and 2.

3. Transaction Lifecycle

A transaction proceeds through the following conceptual stages:

1. Submission and inclusion in the current processing window.
2. Validation for basic correctness and authorization.
3. Balance updates for sender and receiver.
4. Issuance of new Scylla triggered by the act of transaction execution.
5. Distribution of newly minted Scylla to validators who facilitated the transaction.

This describes the observable lifecycle without prescribing a specific implementation pipeline.
See white paper sections 2 and 3.

4. Validator Responsibilities

Validators are responsible for:

- Participating in transaction validation and ledger updates.
- Signaling governance preferences continuously.
- Maintaining availability to contribute to the network over time.

Validators are not stakers or miners. Their influence and compensation are tied to ongoing participation rather than ownership or hardware dominance.

See white paper sections 1, 3, 5, and 8.

5. Minting Flow

Minting is transaction-coupled. Each executed transaction causes new Scylla to be created. The amount created is determined by the collectively chosen fee level at that time. Newly minted Scylla is then distributed to validators according to participation and availability, not by competitive block production.

See white paper sections 2 and 3.

6. Governance Signal Aggregation

Governance operates as continuous signaling from validators. Two categories of signals are aggregated:

- Directional signals (UP/DOWN/HOLD/ABSTAIN) that express the preferred movement of fees.
- Responsiveness signals that express how strongly the system should react to directional consensus.

Aggregation converts individual signals into a collective direction and a collective responsiveness setting. ABSTAIN indicates deliberate non-participation and pauses governance influence for that validator.

See white paper sections 5, 6, 7, and 8.

7. Notes on Completeness

This appendix omits implementation details, data layouts, constants, and client-specific behavior by design. It describes the mechanical intent and observable outcomes, not a full specification.