

When LIMIT Becomes a Governance Illusion

ArquivoNulo — Canonical State Architecture

Version 1.0

1. Problem Statement

Modern distributed data systems frequently rely on output-level limitations (such as SQL LIMIT clauses) as perceived governance mechanisms. This practice creates an illusion of control while structural entropy, scan cost, and policy exposure remain unchanged at execution level.

2. Structural Misconception of LIMIT

LIMIT constrains visible results but does not constrain underlying computation. Full table scans, policy bypass risks, and uncontrolled data exposure remain structurally possible. Governance applied after execution is reactive, not deterministic.

3. Entropy & Scan Reality

In distributed architectures, entropy manifests through uncontrolled data paths, non-canonical views, and ad hoc querying. Scan cost and computational load are determined before result truncation. Therefore, LIMIT does not reduce structural entropy.

4. Canonical Restriction Model

Canonical restriction enforces policy at the data access layer through governed views, schema constraints, and deterministic filtering prior to execution. Access is limited by structure, not by result truncation.

5. Enforcement Before Execution

Deterministic governance ensures that validation, policy enforcement, and canonical schema projection occur before query execution. Structural control replaces reactive mitigation.

6. Architectural Implications

Systems adopting canonical restriction reduce ambiguity, lower governance risk, and align cost models with access control. Governance becomes embedded in architecture rather than appended to outputs.

7. Governance Root Principle

True governance begins at structural definition, not at result limitation. Deterministic architecture eliminates governance illusion by enforcing integrity before computation is performed.