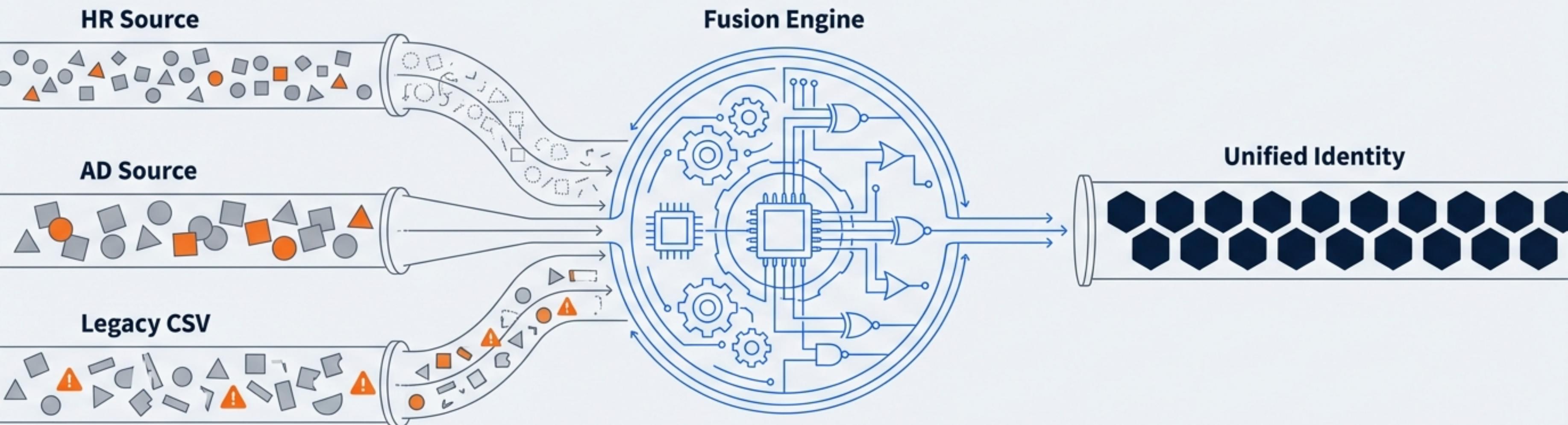


Identity Fusion NG: Architecture & Implementation

Advanced governance, attribute management, and deduplication for
SailPoint Identity Security Cloud.



The Evolution of Identity Data Management



The Core Challenge: Native ISC Limitations

No Native Unique IDs

ISC lacks a built-in mechanism to generate unique identifiers or handle value collision without complex external systems.

Correlation Failures

Standard correlation relies on identical attribute matching. It fails when source data is **dirty** (typos, variations), leading to duplicate identities.



The NG Solution: A Modular Framework

Unique Identifiers

Template-based generation including immutable UUIDs and counter-based disambiguation.

Intelligent Deduplication

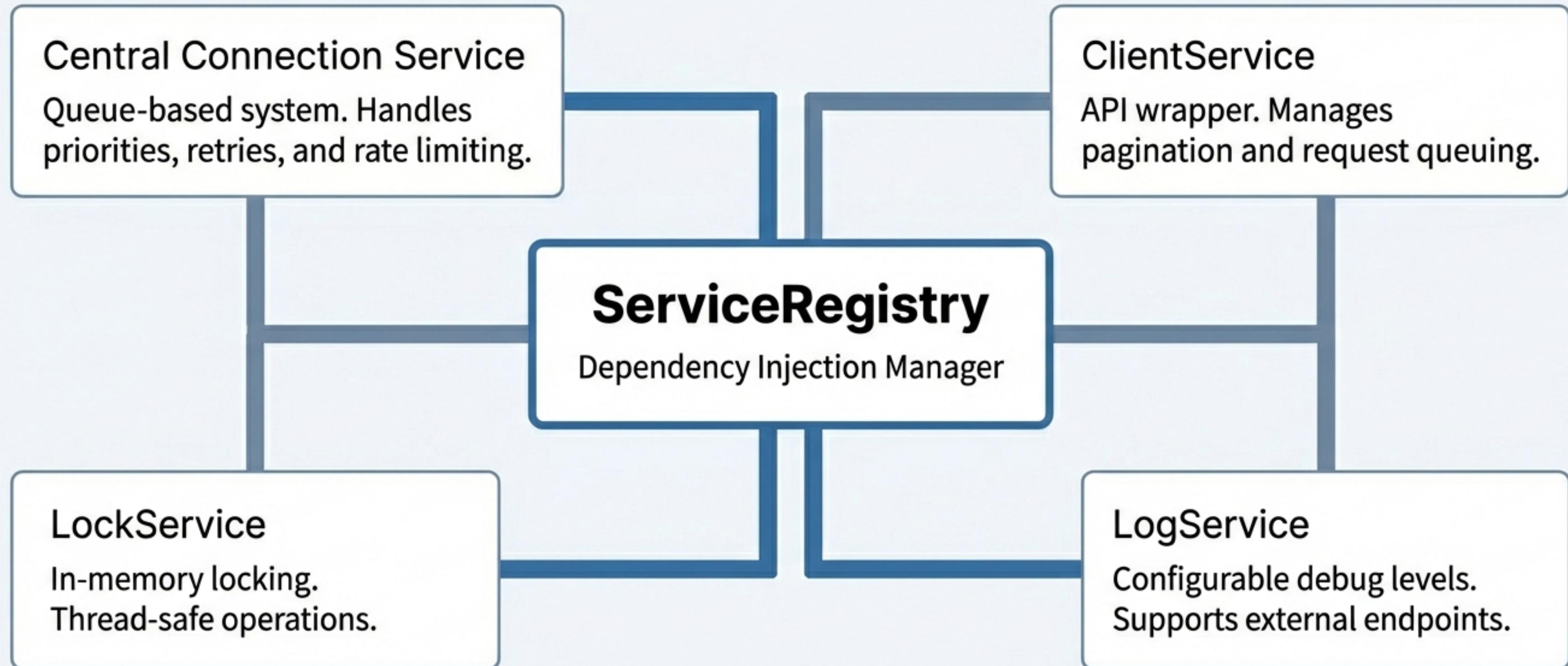
Prevention of duplicate identities via advanced similarity checks beyond simple string matching.

Attribute Management

Logic to normalize and merge account attributes from multiple sources into a single Fusion Account.

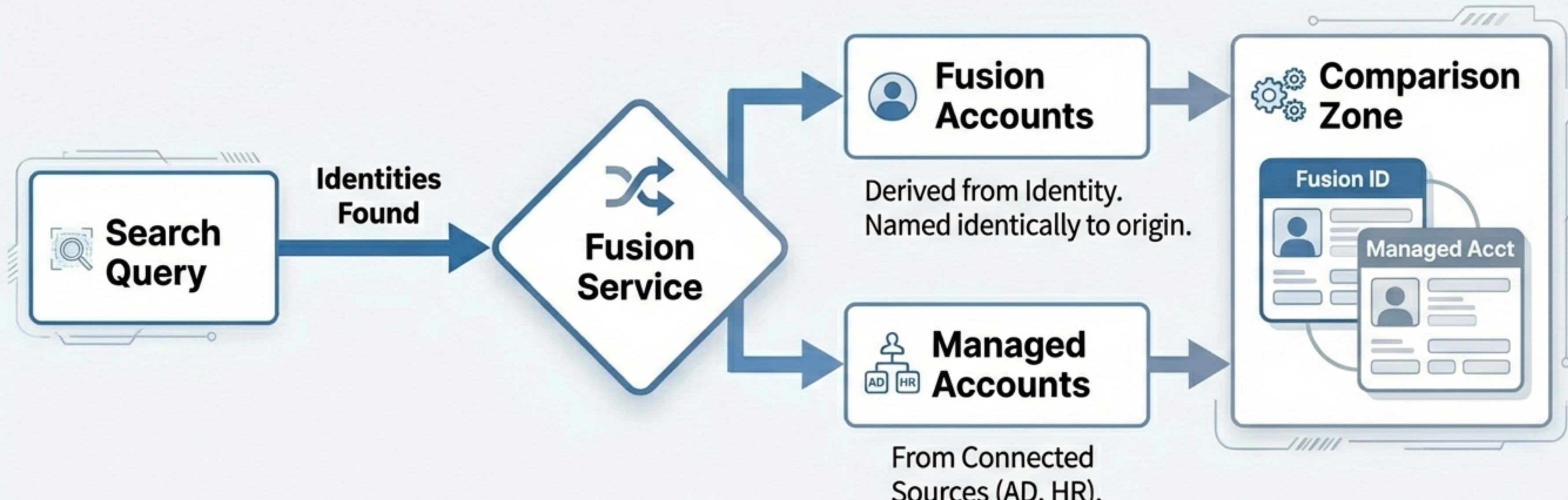
Core Infrastructure & Service Architecture

A re-architected modular system managed by a central registry.



Defining the Unified Scope of Action

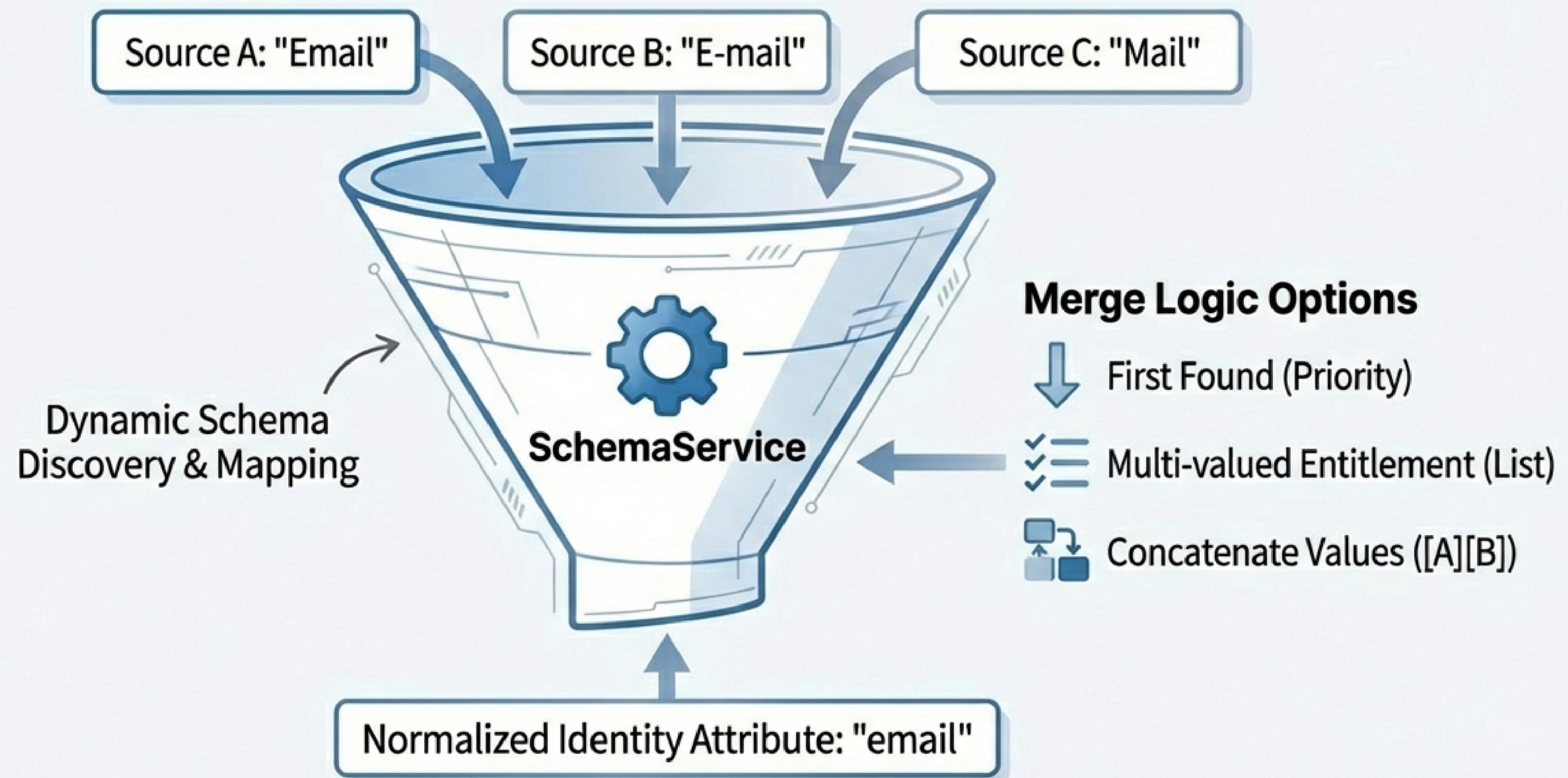
How the Fusion Engine defines comparisons.



Seamless Correlation: Even if attributes differ, the system correlates back to the baseline.

Schema Discovery & Attribute Merging Logic

Transforming chaotic source data into normalized identity attributes.



Velocity Template - ID Generation

```
1 #set($cleanName = $tools.clean($identity.lastname))
2 #set($counter = $tools.getCounter($cleanName))
3
4 ## Generate ID with padding
5 $cleanName.$tools.pad($counter, 3)
```

Advanced Velocity Templates & Unique ID Generation

Velocity Context Capabilities:

- Access to \$previous values
- Access to \$identity and \$accounts attributes
- Math and Date helper functions

Unique ID Types:

- **Immutable UUIDs:** Permanent universal identifiers.
- **Counter-based IDs:** Handles collisions (e.g., smith.001).
- **Standardized Strings:** Removes spaces, normalizes case.

Output

Result: "Doe.004"

Operational Modes: Authoritative vs. Regular

Authoritative Source Mode



- **Primary Use Case:** Full governance and deduplication.
- **Behavior:** Acts as the organization's primary list. Creates a baseline of identities.
- **Requirement:** Must be enabled for deduplication features.
- **Note:** Uses proxy accounts; original accounts not needed for profile. 

Regular Source Mode



- **Primary Use Case:** Generating unique identifiers or attribute history.
- **Behavior:** Non-authoritative. Uses identifiers from existing identity profiles.
- **Configuration:** "Include existing identities" enabled; Unique ID scope set to "Source".

The Deduplication Engine & Scoring Toolkit

ScoringService algorithms (0-100 similarity).



Enhanced Name Matcher

Optimized for person names.
Handles cultural variations and
common name differences.

Best for: Names



Jaro-Winkler

String similarity with prefix
weighting.
Excellent for detecting typos.

Best for: Short Strings / Typos



Dice Coefficient

Bigram-based similarity. Finds
matches in dense or longer text
fields.

Best for: Long Text

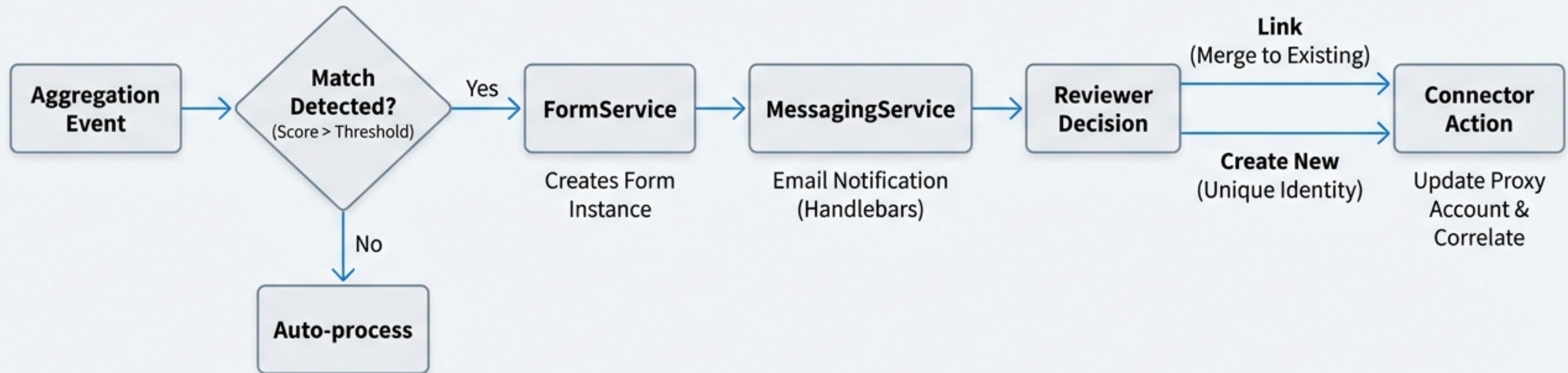


Double Metaphone

Phonetic matching. Checks if
strings sound the same (e.g.,
"Smith" vs "Smyth").

Best for: Audio/Oral Errors

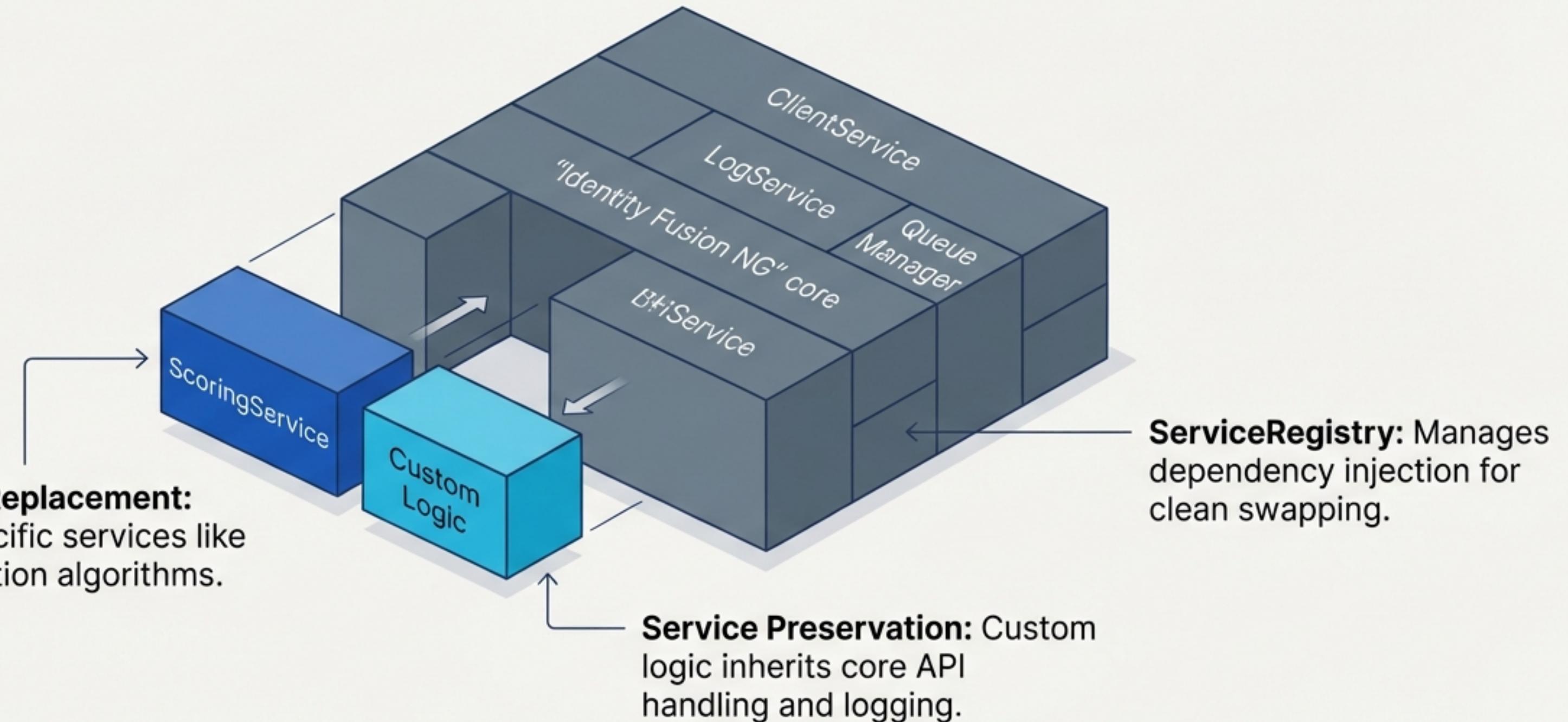
Human-in-the-Loop: Forms & Review Workflows



FormService automatically handles cleanup of completed forms.

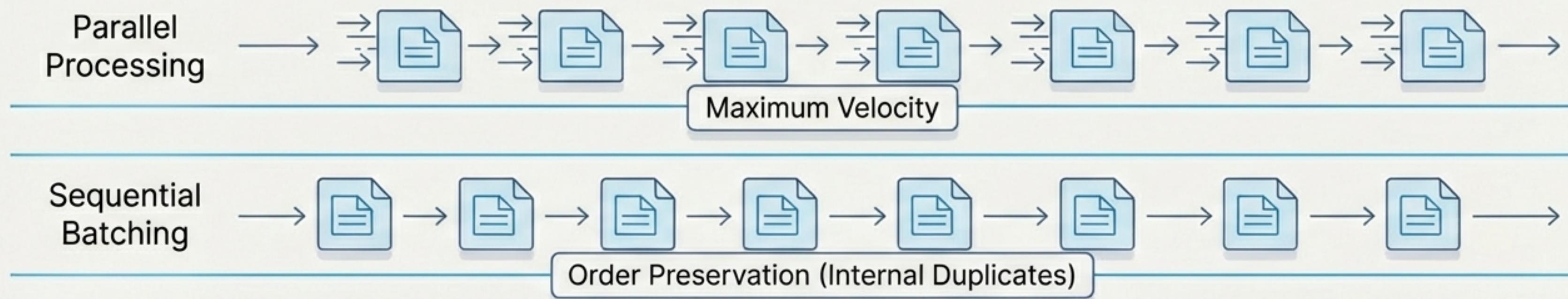
Connector Customization & SaaS Extensibility

Developer-centric architecture compatible with SailPoint SaaS customizers.

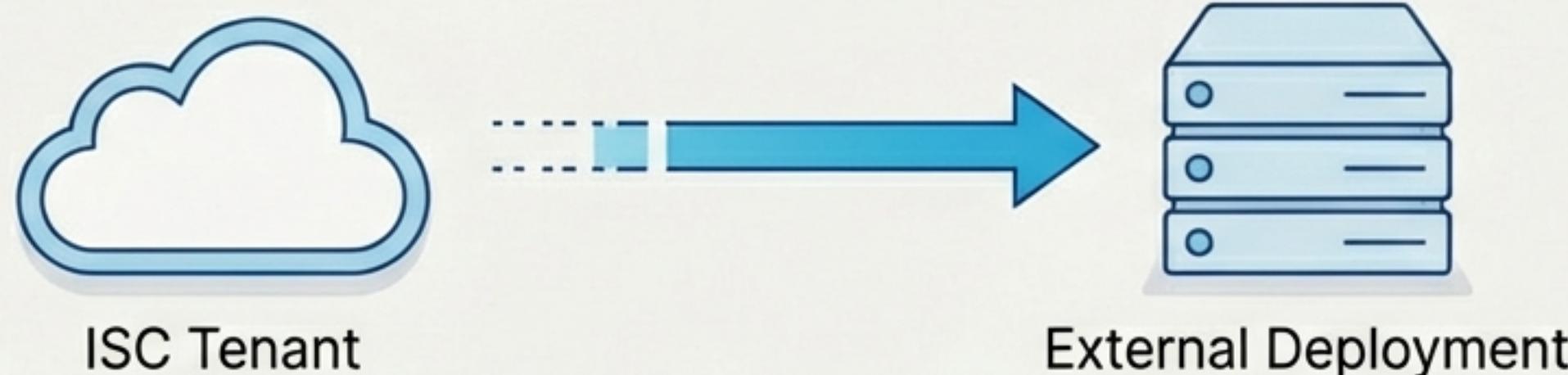


Performance Scaling & External Processing

Processing Models

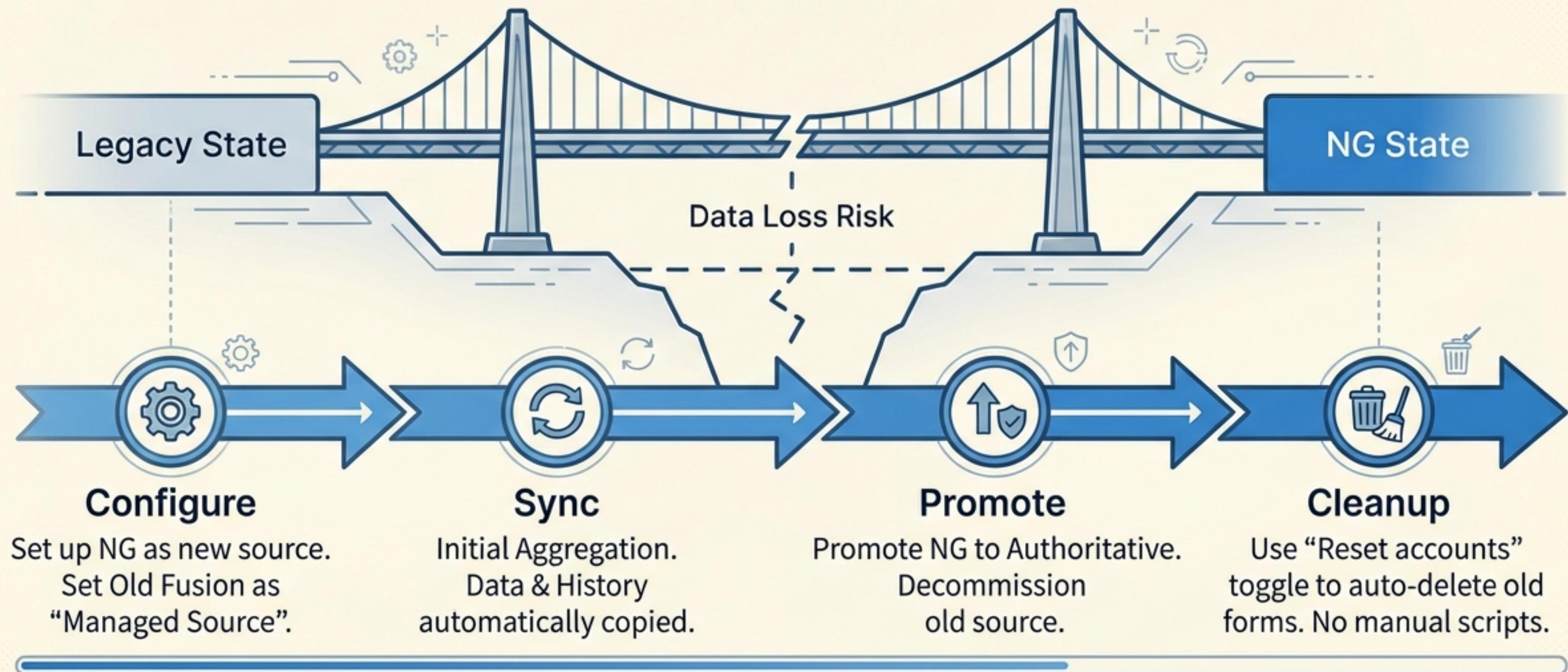


Deployment Flexibility



- Alleviates CPU/Memory pressure on tenant.
- Invoked remotely for heavy loads.
- Queue-based connection handles retries and priorities.

Risk-Free Migration from Legacy Identity Fusion



Summary: The Strategic Value of Identity Fusion NG

Data Integrity



Achieves the cleanest possible identity data via the 'Toolkit' of advanced deduplication algorithms and unified scoping.

Operational Flexibility



Adapts to any business logic via Velocity templates, modular architecture, and SaaS customizer compatibility.

Full Governance



Provides complete audit trails, fusion reports for source owners, and robust reviewer workflows.

Transforming messy inputs into a single, trusted identity stream.