📘 Versioning & Release Strategy for Ingestion Framework

This document outlines the semantic versioning approach and release management strategy for the Ingestion Framework, its Common Lib, and dependent components like PyCobol and XML Parser.

# 🔢 Semantic Versioning Approach

We use the standard MAJOR.MINOR.PATCH format:

|  |  |  |
| --- | --- | --- |
| Component | Version Format | Description |
| Ingestion Framework | MAJOR.MINOR.PATCH | Orchestrates data pipelines using Synapse |
| Common Lib / Parsers | MAJOR.MINOR.PATCH | Shared logic and parser libraries |

# 🔁 When to Bump Versions

|  |  |  |  |
| --- | --- | --- | --- |
| Change Type | Affects | Version Bump | Example |
| Breaking pipeline structure/config | Ingestion Framework | MAJOR | v2.0.0 |
| New pipeline feature or config schema | Ingestion Framework | MINOR | v1.1.0 |
| Bug fix or performance tweak | Ingestion Framework | PATCH | v1.0.1 |
| Common Lib logic changes | Common Lib | MAJOR/MINOR | v1.2.2 → v1.3.0 |
| Parser logic enhancement or bug fix | PyCobol/XML | MINOR/PATCH | v1.2.3 → v1.2.4 |
| Integration with updated dependent lib | Ingestion Framework | PATCH/MINOR | v1.0.0 → v1.0.1 / v1.1.0 |

# 🧩 Component Structure

+------------------------+  
| Ingestion Framework | ← Orchestration Layer (Synapse)  
| - Triggers pipelines |  
| - Calls Common Lib |  
+-----------+------------+  
 |  
 | +------------------+  
 +---> | Common Lib (.whl) | ← Business Logic Core  
 | +------------------+  
 |  
 | +----------------+  
 +---> | PyCobol Parser | ← Custom COBOL Parser  
 | +----------------+  
 |  
 | +--------------+  
 +---> | XML Parser | ← Custom XML Handler  
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📌 Note: The Ingestion Framework is versioned separately but depends on specific versions of the core libraries.

# 📦 Compatibility Matrix

|  |  |  |  |
| --- | --- | --- | --- |
| Ingestion Framework | Common Lib | PyCobol | XML Parser |
| v1.0.0 | v1.2.2 | v1.2.3 | v1.3.4 |
| v1.1.0 (planned) | v1.3.0 | v1.2.3 | v1.3.5 |

# 📄 Release Log

|  |  |  |  |
| --- | --- | --- | --- |
| Release Name | Version | Date | Description |
| Ingestion Framework | v1.0.0 | Mar 22, 2025 | Initial orchestration release (config-driven pipelines) |
| Common Lib | v1.2.2 | Mar 22, 2025 | Schema evolution, audit columns, SCD2 logic added |
| PyCobol | v1.2.3 | Mar 20, 2025 | Improved COBOL mapping |
| XML Parser | v1.3.4 | Mar 18, 2025 | Streaming optimization for large XML files |

# ✅ Best Practices

- Always reference specific versions of Common Lib and Parsers in pipeline configs.

- Maintain backward compatibility across minor/patch updates.

- Document and tag every release in Git.

- Update the compatibility matrix and release log for every versioned change.