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03 Nov 2026

Connect, Integrate and Govern SAP Data at Scale with Informatica IDMC

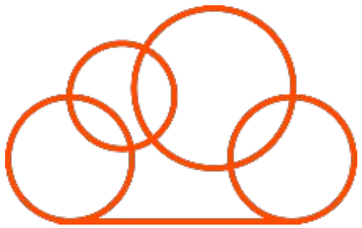
Chinnari Damerla, Senior Success Guide

Pavithra Killari, Success Guide

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- Today's session is scheduled for 1 hour and will feature a presentation followed by a Q&A session at the end.
- To ensure a smooth presentation without interruptions, all participants will be muted.
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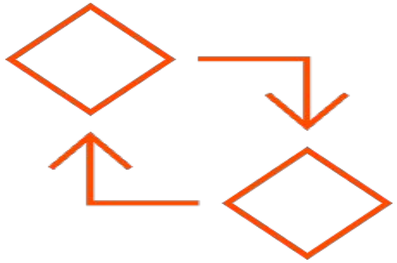
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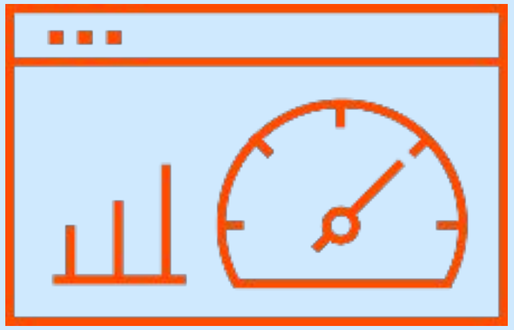
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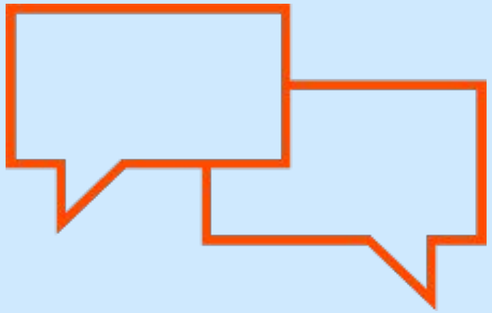
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More Information



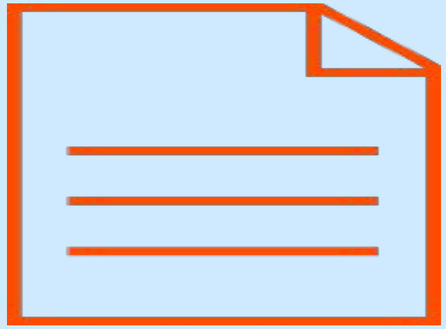
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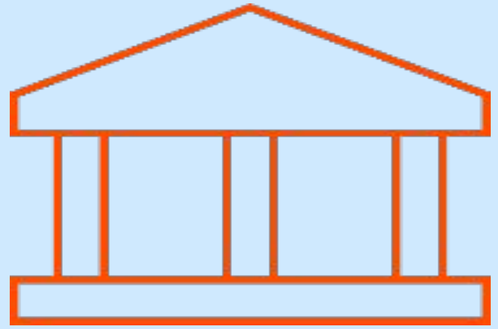
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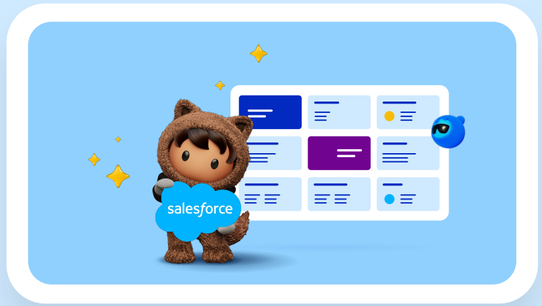
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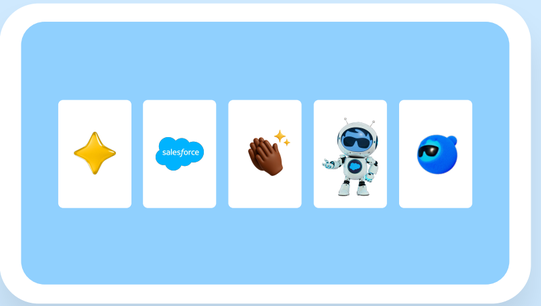
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Agenda

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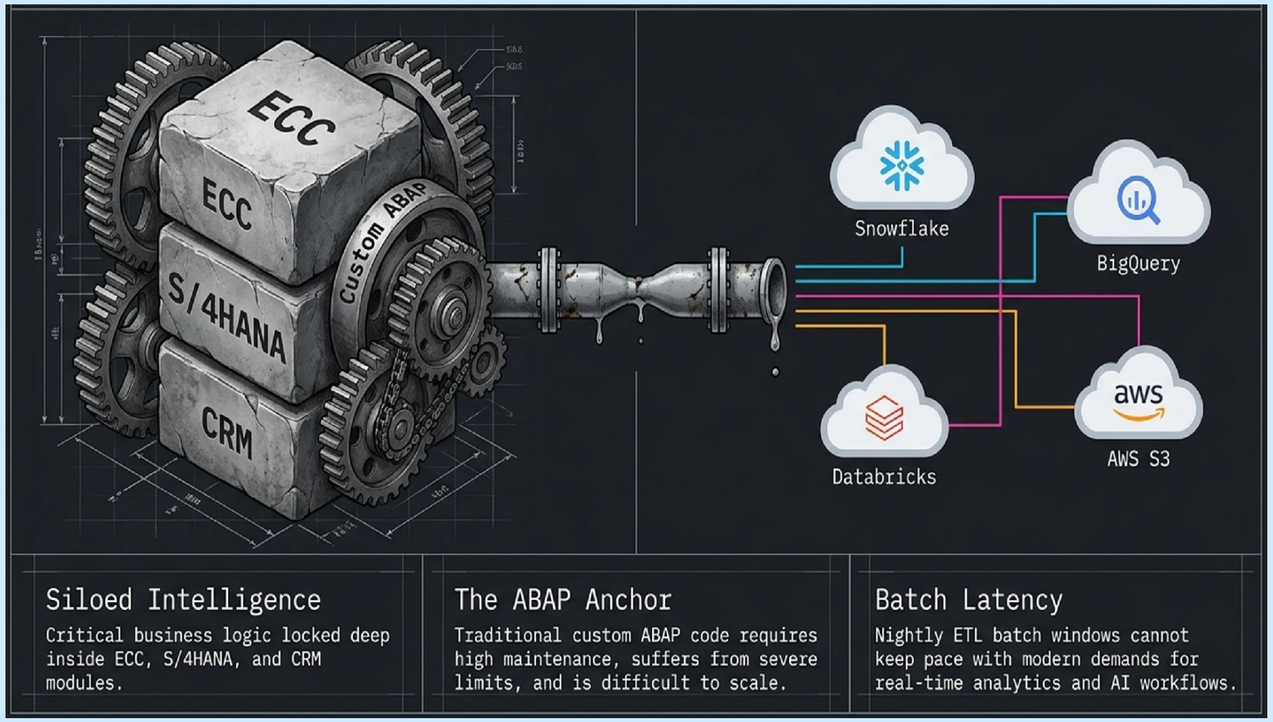
09 Q & A

Introduction

What is SAP Integration?

- SAP systems (S/4HANA, SuccessFactors, Sales Cloud) exchange data with external apps and services
- Integration connects SAP to identity systems, third-party tools, cloud services, and business workflows
- Goal: eliminate data silos, reduce manual effort, and enable real-time business decisions
- SAP Integration Suite / BTP is one of the modern integration platform
- Common protocols: OData, BAPI/RFC, IDoc, SCIM, REST, SOAP, EDI

The Legacy Bottleneck : Trapped in the SAP Monolith



SAP Ecosystem - Sources & challenge

SAP S/4HANA – Next-gen ERP; data lives in CDS views, OData services, HANA tables

- **Challenge:** Extracting large volumes efficiently; managing delta/CDC without impacting ERP performance

SAP ECC (6.x) – Legacy on-prem ERP still running at many enterprises

- **Challenge:** No native OData; relies on BAPI/RFC/IDoc; complex table joins for meaningful data

SAP SuccessFactors – HCM cloud; employee master, payroll, talent data

- **Challenge:** OData API rate limits; delta detection; sensitive PII governance

SAP BW / BW4HANA – Analytical data warehouse; InfoProviders, DSOs, Open Hub

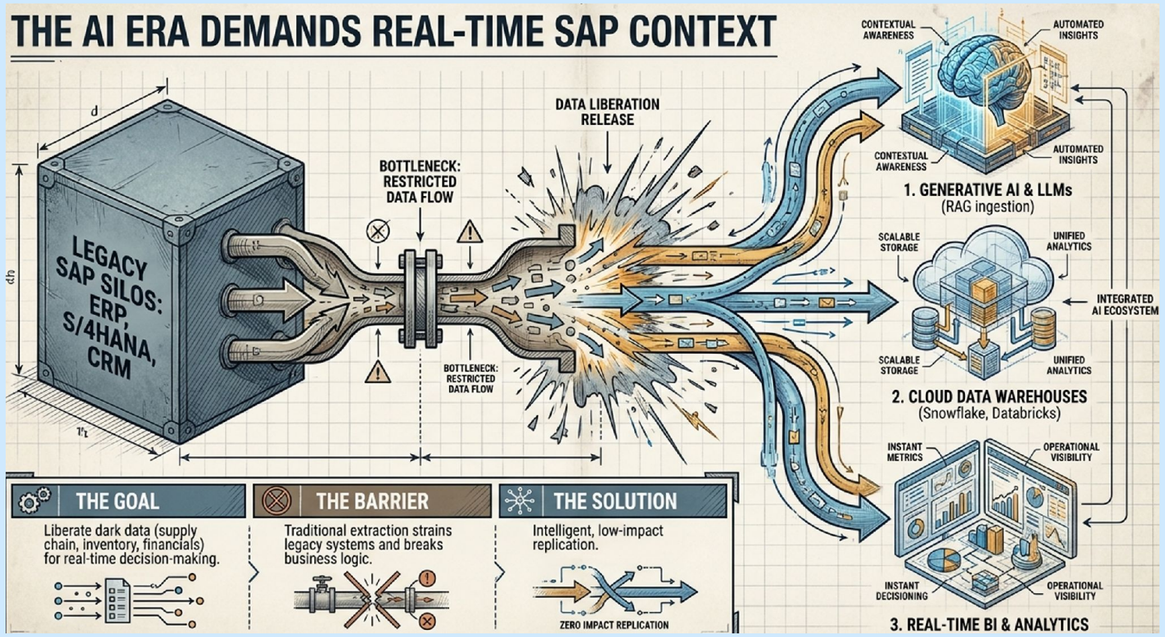
- **Challenge:** Proprietary data models; orchestration with downstream cloud DWs

SAP Ariba – Procurement network; POs, invoices, contracts

- **Challenge:** API-only access; complex procurement hierarchy mapping

SAP HANA – In-memory DB; used as source for real-time CDC pipelines

- **Challenge:** Managing real-time transaction log extractions & high-throughput streaming



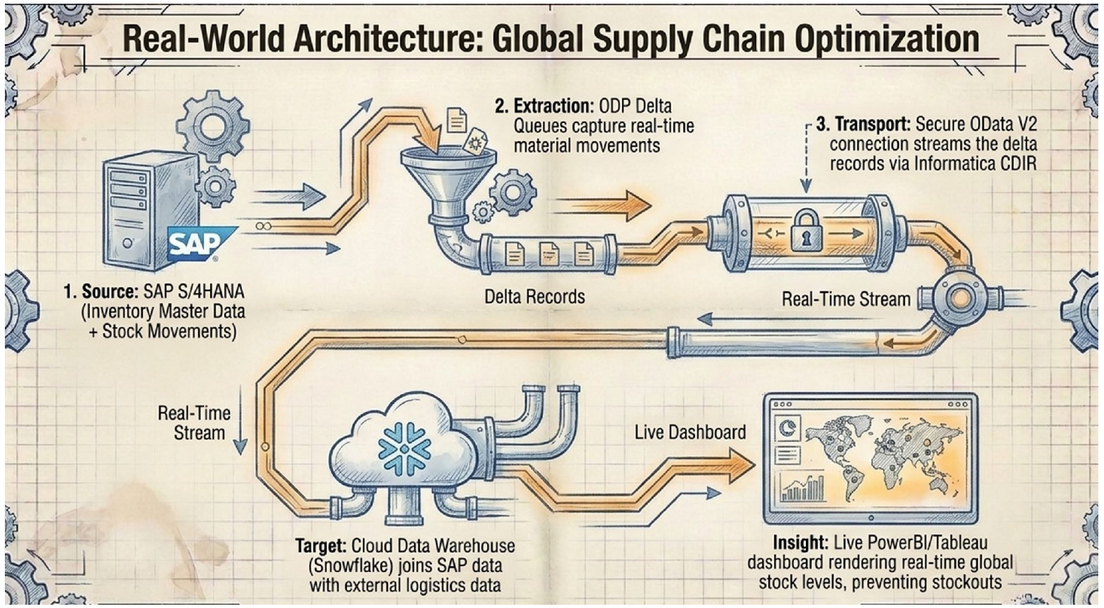
Modernizing SAP Data Integration

- Liberate trapped dark data across legacy ERP silos and specialized SAP cloud apps
- Replace traditional batch bottlenecks with low-impact, real-time CDC replication
- Seamlessly feed AI models, Cloud Data Warehouses, and Real-Time Analytics

IDMC SAP Integration - Reference Architecture

ARCHITECTURAL BLUEPRINT: SUPPLY CHAIN TOPOLOGY

HIGH-THROUGHPUT PIPELINE • CONTINUOUS REPLICATION • SUB-SECOND SYNC



Key Architectural Takeaway: Replicates 24M records continuously from SAP ECC/S/4HANA to Cloud Lakehouse with zero ERP impact, enabling sub-second supply chain visibility.

CORE INTEGRATION PIPELINE (Ingestion, Transport & Cloud Lakehouse)

- **Source Tier (SAP S/4HANA / ECC):** Enterprise transaction backbone hosting operational Inventory, Material Master, and Stock Movement tables with mission-critical SLA constraints.
- **Extraction & Ingestion:** CDIR Mass Ingestion reads change logs with zero source contention, capturing 24M records in initial bulk sync and streaming continuous deltas.
- **High-Speed Transport:** Secure, encrypted cloud messaging highway delivering sub-second real-time streams with automatic schema drift resilience.
- **Target Cloud Lakehouse:** Scalable analytics storage (Snowflake / Databricks / BigQuery) orchestrating bronze raw landing to curated gold tables.

ANALYTICS CONSUMPTION & OPERATIONAL IMPACT (Real-Time Visibility & ROI)

- **Real-Time Dashboard Consumption:** Direct push to enterprise BI tools (Power BI, Tableau) for live global supply chain tracking, heatmaps, and executive Cockpits.
- **Predictive Stock-Out Elimination:** Live telemetry feeds automated reordering models, flagging potential localized stock-outs 72+ hours before operational impact.
- **Automated Schema Drift Handling:** Upstream SAP ERP schema evolutions propagate automatically through IDMC to downstream targets without breaking data contracts.
- **Measurable Business Impact:** Reduces end-to-end data latency from days to sub-second; accelerates monthly supply chain reporting cycles by 80%.

ENTERPRISE IMPLEMENTATION BLUEPRINT: Resilience, High-Availability & Centralized Metadata Governance

- **Zero-Impact Source Ingestion:** By combining log-based CDC and IDMC Secure Agents co-located within the network DMZ, transactions are captured directly from storage redo logs without consuming SAP dialog work processes or impacting production ERP throughput.
- **Bi-Directional Context & Governance:** Raw CDC data streams land into analytical data lakes while metadata and lineage are registered centrally in IDMC Cloud Data Governance and Catalog (CDGC), ensuring cross-enterprise traceability from Power BI back to SAP table origins.

IDMC SAP Integration - Reference Architecture

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SAP Sources (ERP / Cloud / DW)

SAP S/4HANA
Cloud & On-Prem ERP (CDS Views, OData, SLT)

SAP ECC (6.x)
Core Legacy ERP (BAPI / RFC, IDoc listeners)

SAP SuccessFactors
Cloud HCM (Employee Central, OData APIs)

SAP BW / BW4HANA
Enterprise DW (InfoCubes, DSOs, Open Hub)

SAP Ariba & C4C
Procurement & CRM (REST / OData APIs)

SAP HANA & Datasphere
In-Memory DB & Unified Data Fabric / Spaces

Connectors ➔

Informatica IDMC Platform (Processing & CDC)

Cloud Data Integration (CDI)
High-performance ELT/ETL, advanced pipeline transformations, and complex business logic execution.

Cloud Data Ingestion and Replication (CDIR)
Zero-downtime log-based CDC replication, streaming ingestion, and high-volume batch file loads.

Master Data Mgmt (MDM)
Multi-domain golden record consolidation, 360° customer/product views, and automated hierarchy match/merge.

Data Quality & Observability
Automated profiling, deduplication, standardized rule validation, anomaly detection, and continuous health alerts.

App Integration (CAI)
Low-latency REST/SOAP APIs, event-driven webhooks, and bidirectional microservice workflow orchestration.

CLAIRE® AI & Catalog
AI-augmented metadata intelligence, automated semantic asset discovery, and end-to-end lineage governance.

Informatica Secure Agent – Hybrid Deployment

- **Zero-Footprint Runtime:** Deploy adjacent to SAP on-premises or across multi-cloud VPCs
- **High-Throughput Pushdown:** Elastic scale with SLT/RFC pushdown & CDC replication
- **Enterprise Zero-Trust:** Data stays inside your boundary; only metadata reaches cloud control plane

➔ Targets

Targets & Downstream Analytics

Cloud Data Warehouses
Snowflake, Google BigQuery, Databricks, Amazon Redshift

Cloud Hyperscalers
AWS, Microsoft Azure, Google Cloud data lakes & storage

SAP Datasphere & BW
Bidirectional hydration for consolidated corporate reporting

Enterprise MDM Hubs
Consolidated operational domains & Customer 360 views

BI & Analytics Platforms
Tableau, Power BI, Qlik, ThoughtSpot, SAC dashboards

GenAI & Downstream Apps
Vector DBs, LLM retrieval pipelines, CRM / SCM event streams

IDMC SAP Connectors - At a Glance

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8+ Enterprise Connectors
ERP, Cloud HCM, Data Warehouses, In-Memory DBs & Fabric

Flexible Integration Modes
Zero-downtime log-based CDC, high-speed batch & streaming

Hybrid Agent Deployment
Zero-footprint runtime adjacent to SAP on-prem or multi-cloud

Native Protocol Pushdown
High-throughput SLT, OData APIs, RFC/BAPI & Open Hub extraction

SAP S/4HANA (Cloud & On-Prem)
SAP S/4HANA Connector

Integration Mode: **Batch / Real-Time CDC**

Key Capabilities: OData APIs, SLT-based CDC, mass table & CDS view extraction

SAP ECC (6.x)
SAP ECC / BAPI Connector

Integration Mode: **Batch / RFC**

Key Capabilities: BAPI / RFC invocation, IDoc listener, deep table extraction

SAP SuccessFactors
SuccessFactors Connector

Integration Mode: **Batch / Delta**

Key Capabilities: OData API v2/v4, Employee Central entities, automated delta loads

SAP BW / BW4HANA
SAP BW Connector

Integration Mode: **Batch / Open Hub**

Key Capabilities: InfoCubes, DSOs, Open Hub service high-speed data extraction

SAP Ariba
SAP Ariba Connector

Integration Mode: **Batch / API**

Key Capabilities: Procurement network data, POs, invoices & contracts via Ariba API

SAP HANA (Database)
SAP HANA Connector

Integration Mode: **Batch / Real-Time CDC**

Key Capabilities: Native HANA SQL, SDA federation, transaction log CDC via SLT

SAP CRM / C4C
SAP C4C / OData Connector

Integration Mode: **Batch / API**

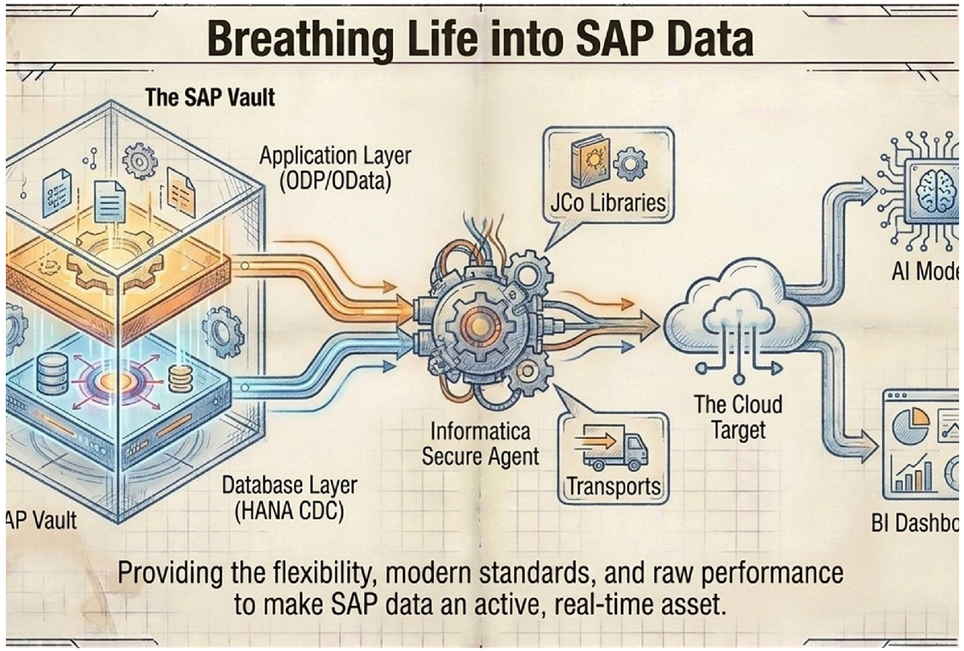
Key Capabilities: Cloud for Customer OData services, standard & custom business objects

SAP Datasphere
SAP Datasphere Connector

Integration Mode: **Batch / Federated Query**

Key Capabilities: Spaces, analytical views, remote table federation & catalog integration

SAP Integration Architecture – End-to-End Flow



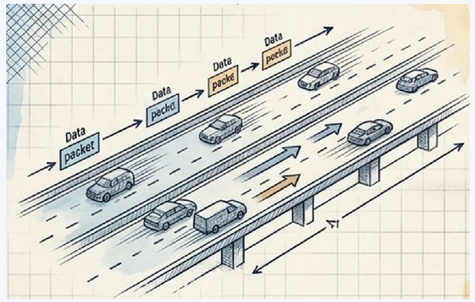
Breathing Life into SAP Data: Providing the flexibility, modern standards, and raw performance to make SAP data an active, real-time asset for downstream AI, Analytics, and Cloud Warehouses.

Choosing the Right Integration Engine : CDIR vs. CDI

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Cloud Data Ingestion & Replication (CDIR)

HIGH-SPEED REPLICATION HIGHWAY • ZERO-DOWNTIME LOG-BASED CDC



Core Workload: Mass Replication, Real-Time CDC & Streaming Ingestion

Engineered for continuous low-latency data replication from operational SAP transaction tables directly into analytical targets.

Transformation Level: Minimal (Pass-Through, Row Filtering & Column Masking)

Raw byte-level transmission optimized for zero transformation overhead to preserve native SAP source transaction throughput.

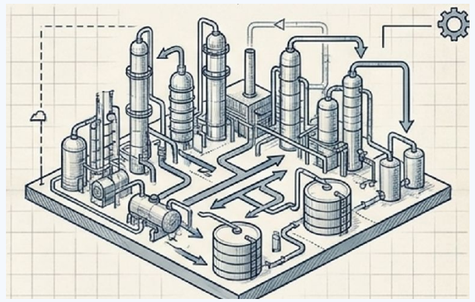
Key Capabilities: Automatic Schema Drift Support, Continuous Sync, Low-Code 4-Step Wizard

Dynamically adapts to target schema changes (add/alter columns) without pipeline restarts; setup completed in minutes.

✔ RECOMMENDED PATH FOR REAL-TIME SAP CONTEXT & OPERATIONAL REPLICATION

Cloud Data Integration (CDI)

ADVANCED TRANSFORMATION REFINERY • COMPLEX ETL/ELT PROCESSING



Core Workload: Complex ETL/ELT Workflows & High-Volume Batch Processing

Designed for sophisticated scheduled batch jobs, multi-table joins, lookups, and deep enterprise data harmonization.

Transformation Level: High (Multi-Source Joins, Cleansing & Complex Aggregations)

Full-featured expression language, deduplication, hierarchical schema parsing, and pushdown optimization (ELT).

Key Capabilities: Deeply Customizable Mappings, Advanced Data Quality & Governance

Reusable mapping templates, parameterization, enterprise scheduling, and embedded data quality validation rules.

✔ RECOMMENDED PATH FOR CURATED ANALYTICS, REFINED DW & ADVANCED ELT

ARCHITECTURAL GUIDELINE & SYNERGISTIC DEPLOYMENT PATTERN

- **Unified Hybrid Architecture:** CDIR and CDI are complementary engines within IDMC. Modern enterprise architectures leverage CDIR for high-throughput, sub-second CDC replication from SAP into cloud staging lakes, paired with CDI to execute multi-source business transformations, enrichment, and analytical data marts.
- **Selection Rule of Thumb:** Choose CDIR when latency and transaction throughput are paramount with raw/pass-through fidelity. Choose CDI when complex business rules, data quality profiling, cross-system joins, or pushdown optimizations are required.

Database Extraction : Raw Speed via HANA CDC

METHOD 01 • LOG-BASED CDC (PREVIEW)

CORE MECHANISM

Reads transaction logs directly from the source DB.

Bypasses database execution engines by parsing native redo and archive transaction logs asynchronously.

KEY ADVANTAGES (PROS)

Absolute zero impact on source database compute.

Does not compete with mission-critical ERP transactions or consume database CPU cycles on HANA.



INFRASTRUCTURE & ARCHITECTURE REQUIREMENT

Requires dedicated DB cache storage for Secure Agent archive log access.

Archive logs must be retained long enough for the Secure Agent reader to consume deltas without falling behind retention windows.

BEST FIT & OPERATIONAL PROFILE

Ideal for Extreme-Scale HANA OLTP: Recommended when peak production throughput demands 100% compute isolation, ensuring SAP financial closures and order processing experience zero trigger lock latency.

METHOD 02 • TRIGGER-BASED CDC

CORE MECHANISM

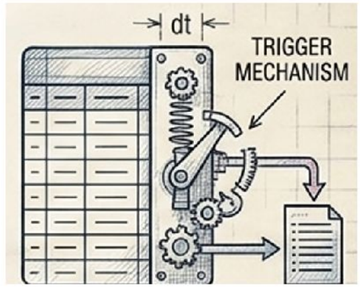
Utilizes AFTER INSERT, UPDATE & DELETE triggers.

DB triggers capture row mutations synchronously, recording primary keys and operations into shadow delta tables.

KEY ADVANTAGES (PROS)

Highly reliable capture of all DML changes.

Captures every insert, update, and hard delete deterministically without depending on log format versions or file access.



INFRASTRUCTURE & ARCHITECTURE REQUIREMENT

Writes entries to PKLOG & shadow tables (_CDC); requires planned DB storage growth.

Database administrators must provision shadow storage and schedule regular delta cleanup and purge jobs to manage table footprints.

BEST FIT & OPERATIONAL PROFILE

Universal SAP SLT Compatibility: The established enterprise standard for SAP Landscape Transformation (SLT) setups, delivering out-of-the-box reliability without low-level filesystem or redo log reader permissions.

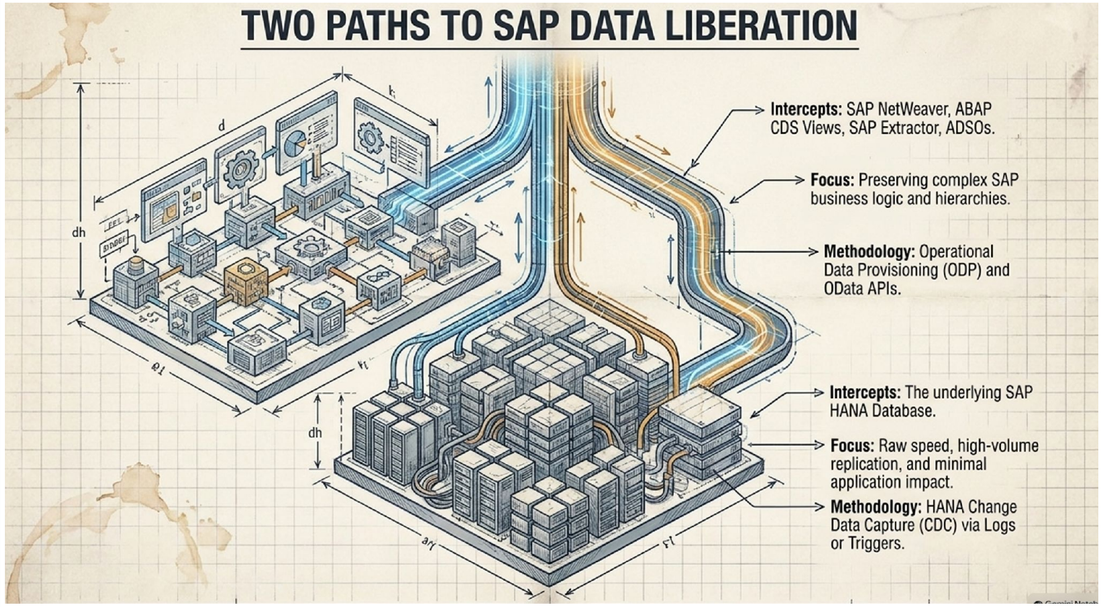
ARCHITECTURAL DECISION MATRIX: INFORMATICA IDMC CDC SELECTION

- **Compute-Sensitive Deployments:** Select **Log-Based CDC** when source CPU overhead must remain at absolute 0%, dedicating sufficient archive log cache storage on the host for Secure Agent ingestion.
- **Turnkey SLT Replication:** Select **Trigger-Based CDC** for proven SAP SLT compatibility and comprehensive DML capture, pairing it with automated shadow table purge policies to manage DB storage growth.

Two Paths to SAP Data Liberation :Application vs. Database

ARCHITECTURAL BLUEPRINT: DATA LIBERATION TOPOLOGY

DUAL EXTRACTION HIGHWAYS • APPLICATION-LEVEL VS. DIRECT DATABASE INGESTION



Key Architectural Takeaway: Choose between semantic business richness (Path 1) or maximum throughput with sub-second latency (Path 2) based on analytical downstream requirements.

PATH 1: APPLICATION-LEVEL EXTRACTION (Business Logic & Semantic Preservation)

- **Interception Point:** SAP NetWeaver Application Server, ABAP CDS Views, SAP Extractors, ADSOs & InfoProviders.
- **Strategic Focus:** Preserves complex SAP business logic, security authorization roles, currency conversions, hierarchies, and semantic calculations without manual reverse-engineering.
- **Methodology & Protocol:** Operational Data Provisioning (ODP) framework and OData APIs via IDMC SAP Connectors. Supports delta queues and managed extraction contexts.
- **Best Used For:** Enterprise reporting, analytics-ready business views, finance/supply chain data products, and SAP S/4HANA migration pipelines.

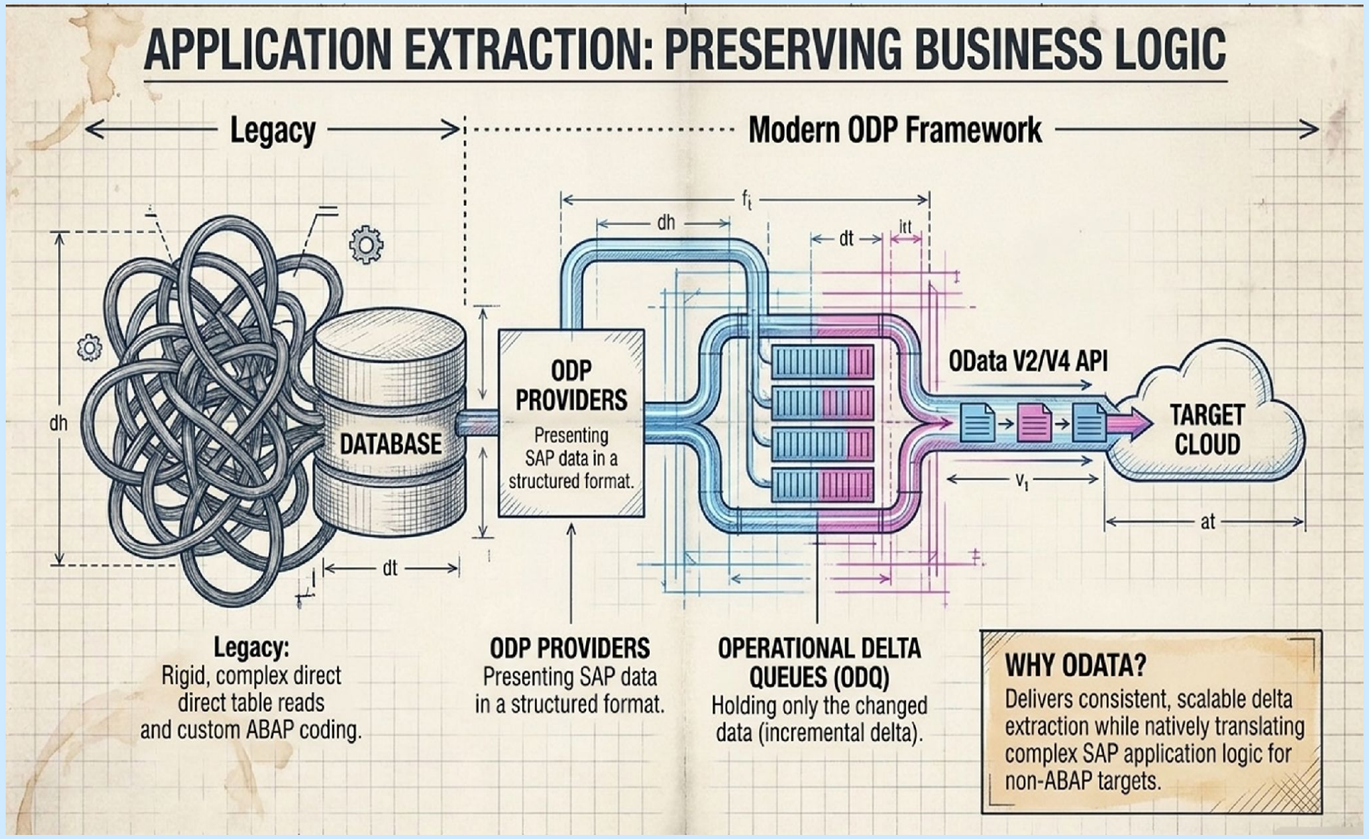
PATH 2: DIRECT DATABASE-LEVEL EXTRACTION (Raw Speed & Zero Application Overhead)

- **Interception Point:** The underlying SAP HANA Database (or Oracle, SQL Server, DB2 in legacy AnyDB deployments).
- **Strategic Focus:** Extreme transmission throughput, mass initial load, high-volume incremental replication, and minimal to zero application server workload overhead.
- **Methodology & Protocol:** HANA Change Data Capture (CDC) via database transaction redo logs or database triggers. Reads physical column tables directly.
- **Best Used For:** Real-time operational data lakes (Delta Lake, Snowflake, BigQuery), continuous raw CDC streaming, and bulk data warehouse landing.

ARCHITECTURAL DECISION MATRIX & SYNERGISTIC IMPLEMENTATION STRATEGY

- **Trade-Off Balancing:** Application-level ingestion eliminates technical debt by honoring SAP ABAP dictionary relationships and governance, but incurs SAP application server compute cycles. Database-level ingestion maximizes throughput with sub-second replication latency, but requires downstream modeling to reconstruct SAP joins.
- **Recommended Dual-Highway Pattern:** Enterprise architectures typically deploy both in tandem–leveraging HANA Log-based CDC (Path 2) for raw, high-volume transactional tables, alongside ODP/CDS Views (Path 1) for highly calculated master data, hierarchies, and financial dimensions.

Application Extraction : Preserving Business Logic



LEGACY APPROACH • DIRECT READS

Rigid Direct Database Reads

- **Custom ABAP Overhead:** Relies on brittle custom programs and unmanaged table dumps.
- **Bypasses Business Logic:** Circumvents SAP calculations, validations, and security models.
- **High Upgrade Friction:** Direct table couplings break frequently during SAP ERP version upgrades.

MODERN ARCHITECTURE • ODP & ODQ

SAP ODP Providers & Delta Queues

- **Structured Providers:** Presents SAP data natively through CDS views, extractors, and SLT.
- **Operational Delta Queues:** ODQ captures and buffers only changed data for low-impact CDC.
- **Native Logic Preservation:** Maintains application-level authorization and calculation rules intact.

CLOUD DELIVERY • ODATA APIS

Scalable Cloud Data Ingestion

- **Universal API Access:** OData V2/V4 provides standardized REST endpoints for non-ABAP targets.
- **High-Throughput Streaming:** Seamlessly delivers changes to cloud lakes with sub-second latency.
- **IDMC Integration:** Empowers Informatica IDMC pipelines with automated trust and lineage.

STRATEGIC COMPARISON & ARCHITECTURAL ADVANTAGES • ODP VS. LEGACY EXTRACTION

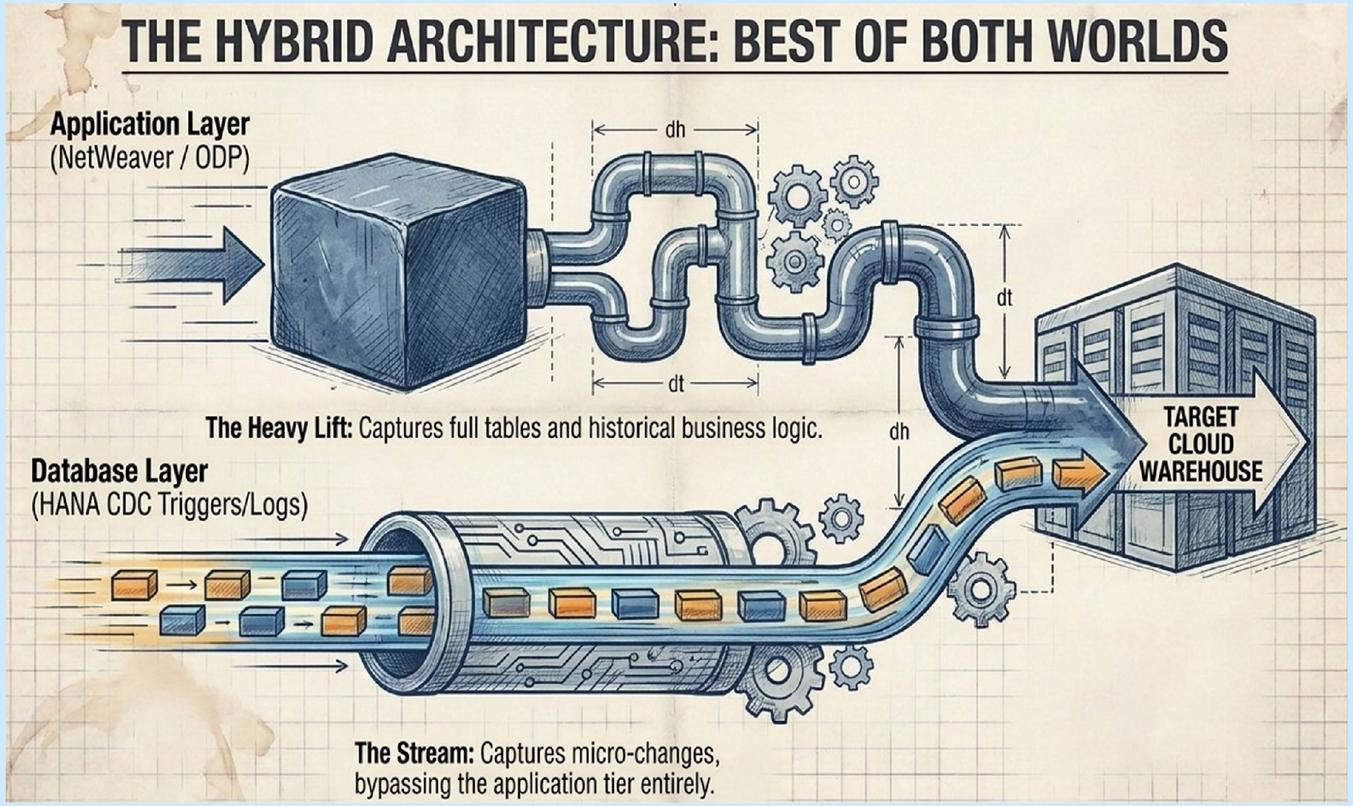
BUSINESS LOGIC & GOVERNANCE PRESERVATION

- **Native Authorization Controls:** Preserves ABAP security roles, company-code filtering, and organizational boundaries out of the box.
- **Integrated Business Semantics:** Automatically encapsulates complex currency conversions, unit conversions, and hierarchies defined in SAP CDS.
- **Future-Proof S/4HANA Readiness:** Decouples data consumption from physical tables, insulating pipelines from ERP schema migrations.

OPERATIONAL PERFORMANCE & CLOUD EXTENSIBILITY

- **Delta Queue (ODQ) Buffering:** Operational Delta Queues retain incremental deltas for multiple subscribers with zero repetitive extraction strain on SAP.
- **RESTful OData V2/V4 Streaming:** Standardized web protocols allow Informatica IDMC Secure Agents to ingest data securely without proprietary network gateways.
- **Zero Target Lock-In:** Replicates high-volume delta streams concurrently to Snowflake, Databricks, BigQuery, and AWS with full lineage tracking.

The Hybrid Architecture : Best of Both Worlds



APPLICATION LAYER • THE HEAVY LIFT

ODP & NetWeaver Framework

- **NetWeaver / ODP Engine:** Captures full ERP context, historical datasets, and complex business logic.
- **Rich Semantics:** Preserves currency conversions, unit measures, and CDS view authorizations.
- **Batch Optimization:** Scheduled micro-batches prevent contention while synchronizing master data.

DATABASE LAYER • THE STREAM

HANA CDC Streaming

- **Direct DB Triggers & Logs:** Captures row-level micro-changes with sub-second latency from HANA.
- **Complete Tier Bypass:** Bypasses SAP application tier compute to eliminate ERP user latency.
- **Event-Driven Agility:** Pushes real-time transactions instantly into target cloud message queues.

CLOUD CONVERGENCE • IDMC UNIFIED TARGET

Unified Lakehouse & Analytics

- **Informatica IDMC Orchestration:** Unifies ODP batch context and low-latency CDC streams into single target tables.
- **Automated Reconciliation:** Reconciles high-speed database change events against application-validated state.
- **Target Cloud Warehouse:** Continuous, certified analytical data fed to Snowflake, BigQuery, and Databricks.

STRATEGIC ARCHITECTURAL PILLARS • BALANCING SEMANTICS & VELOCITY

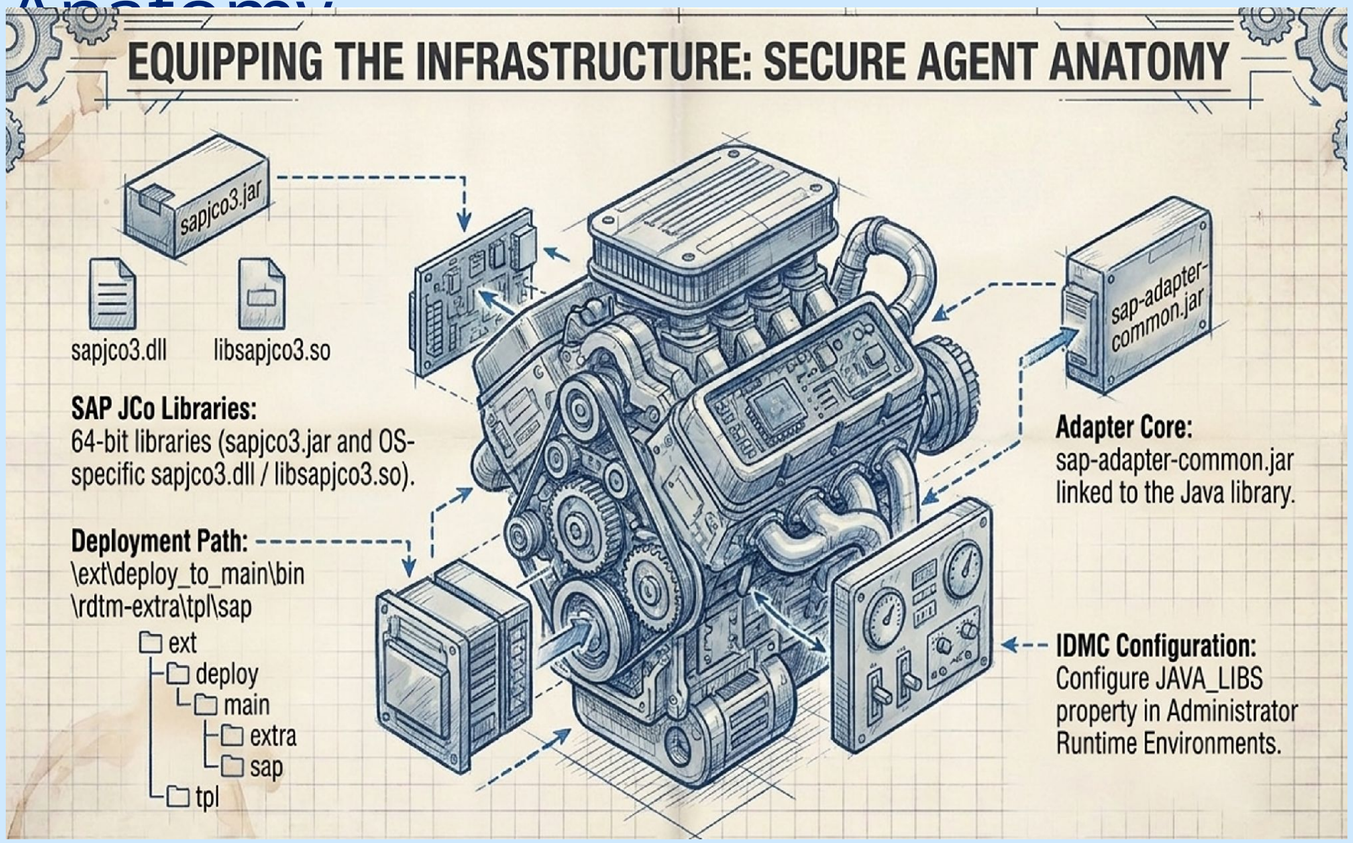
WHY DUAL-TIER EXTRACTION IS ESSENTIAL

- **The Fallacy of One-Size-Fits-All:** Pure database CDC loses complex SAP CDS calculations and authorizations, while pure application ODP strains ERP compute under sub-second event volumes.
- **Intelligent Workload Segregation:** Route dimensional master data, financial ledgers, and hierarchical trees through ODP; route high-velocity transactional events and telemetry through HANA CDC.
- **Zero Disruption to S/4HANA Core:** Eliminates contentious table locking during critical peak transaction periods, sustaining sub-millisecond ERP response times.

IDMC CONVERGENCE & ENTERPRISE OUTCOMES

- **Unified Ingestion Pipelines:** Informatica IDMC acts as the universal ingestion hub, synchronizing both discrete pipeline tiers into unified bronze/silver cloud lakehouse layers.
- **Automated Semantic Reconciliation:** Applies automated delta merging and schema mapping, matching CDC row mutations against rich ODP business metadata definitions.
- **Total Modernization Agility:** Powers real-time operational BI and ML inference while ensuring multi-cloud portability across Snowflake, Databricks, and AWS.

Equipping the Infrastructure : Secure Agent Anatomy



SAP JCO BINARIES • NATIVE DRIVERS

SAP Java Connector (JCo) Libraries

- **64-Bit Architecture:** Requires exact 64-bit binaries matching host OS (sapjco3.jar and sapjco3.dll / libsapjco3.so).
- **Native OS Bridging:** Bridges Java runtime execution with low-level RFC network protocol drivers.

DEPLOYMENT PATH • DIRECTORY ANATOMY

Secure Agent Deployment Topology

- **Target Directory Tree:** Install to \ext\deploy_to_main\bin and \rdtm-extra\tpl\sap.
- **Informatica Adapter Core:** Deploys sap-adapter-common.jar linked directly to Java connection libraries.
- **Hot-Deploy Synchronization:** Agent dynamically detects new binary

RUNTIME ENVIRONMENT • AGENT CONFIGURATION

IDMC Administrator Configuration

- **JAVA_LIBS Property:** Configure JAVA_LIBS property under System Configuration in Administrator.
- **Process Isolation:** Ensures high-throughput SAP RFC worker processes allocate dedicated memory limits.
- **Cluster Scalability:** Configuration seamlessly replicates across all Secure Agent cluster nodes.

INFRASTRUCTURE BLUEPRINT • ENTERPRISE DEPLOYMENT & GOVERNANCE BEST PRACTICES

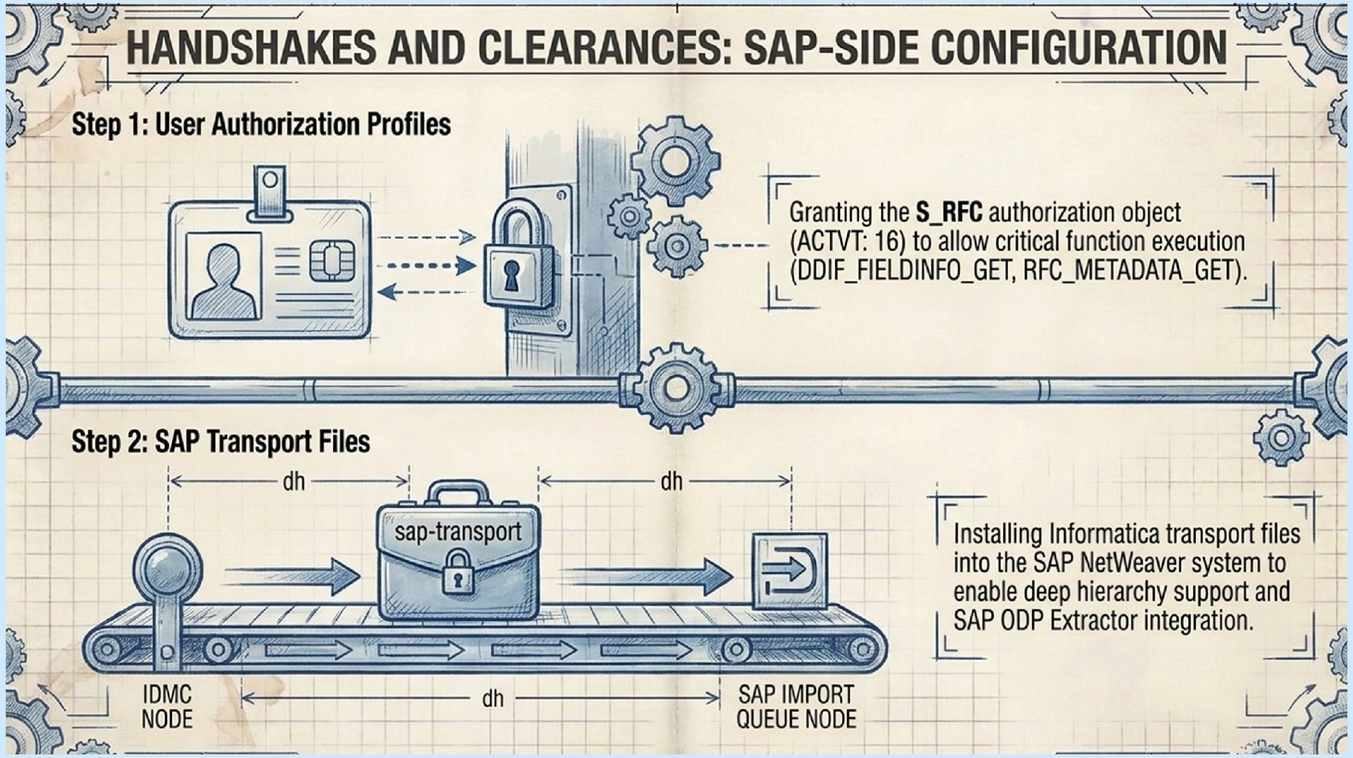
CRITICAL PREREQUISITES & ARCHITECTURAL RIGOR

- **Strict 64-Bit OS & JVM Alignment:** Mismatches between 32-bit and 64-bit binaries or incompatible JVM architectures cause silent connector initialization crashes at boot.
- **Deterministic Binary Placement:** Deploying to \ext\deploy_to_main\bin ensures the runtime classpath loads native SAP drivers before any conflicting dynamic loaders.
- **Network Proximity & Latency SLA:** Locate Secure Agents in the same cloud region or on-prem data center as SAP application servers to sustain <5ms round-trip RFC times.

HIGH AVAILABILITY & PRODUCTION OPERATIONS

- **Multi-Node Agent Clustering:** Cluster Secure Agents into Agent Groups for automated load balancing and zero-downtime failover during high-volume ingestion.
- **Automated Health Probing:** Continuous JCo RFC heartbeat monitoring detects orphaned socket connections or gateway timeouts, auto-recovering stuck sessions.
- **Secure Credential Isolation:** SAP service account credentials, SNC certificates, and crypto keys remain encrypted in the Secure Agent vault, never exposed to cloud logs.

Handshakes & Clearances : SAP-Side Configuration



STEP 1 • AUTHORIZATION PROFILES & S_RFC OBJECTS

User Clearance & Function Module Access

- **S_RFC Object Authorization:** Grant ACTVT: 16 (Execute) across RFC function groups to enable metadata discovery and schema inspection.
- **Core Function Execution:** Permits invocation of DDIF_FIELDINFO_GET and RFC_METADATA_GET for dynamic table structure resolution.
- **Principle of Least Privilege:** Restricts extraction service account specifically to designated data extraction RFCs without granting SAP_ALL.

STEP 2 • INFORMATICA SAP TRANSPORT DEPLOYMENT

NetWeaver Integration & Extraction Acceleration

- **Transport Package Import:** Install certified Informatica transport requests into SAP NetWeaver via standard TMS (STMS).
- **ODP Extractor & Hierarchy Support:** Enables deep hierarchical data extraction, optimized delta queues, and direct CDS view exposure.
- **Buffer & Compression Engine:** Custom ABAP routines compress payloads on application server before RFC network transfer, slashing transfer latency.

CONFIGURATION BLUEPRINT • PRODUCTION READINESS CHECKLIST

SECURITY CONTROLS & COMPLIANCE

- **SNC Encryption:** Enable Secure Network Communications (SNC) with cryptographic libraries (SAPCRYPTOLIB) for all RFC connections.
- **Dedicated Service Users:** Use 'Communications Data' user type (type C/B) to prevent interactive GUI logons while enforcing strict password governance.
- **Audit Logging:** Enable Security Audit Log (SM19/SM20) specifically monitoring RFC execution for comprehensive SOX compliance records.

DEPLOYMENT LIFECYCLE & VERIFICATION

- **Pre-Flight Transport Validation:** Verify transport compatibility against SAP NetWeaver release (7.0 through 7.5x, S/4HANA 1610-2023).
- **Connection Self-Test:** Execute RFC ping and metadata check directly within IDMC Administrator to confirm bidirectional handshake.
- **Transport Layer Rollback Plan:** Maintain standard SAP deletion transport requests to cleanly reverse custom objects during migration cycles.

USE CASE 1 – FINANCE

SAP Finance Data → Cloud Analytics

Informatica from Salesforce

Business Problem

✗ Monthly close takes 5–7 days of manual extraction
✗ Finance analysts depend on IT for every data pull
✗ No real-time GL/AP/AR visibility
✗ Reconciliation between SAP and non-SAP is manual

🔄 Integration Pipeline

SOURCE: SAP S/4 HANA – FI Module
G/L Accounts · AP/AR · Trial Balance · Cost Centers

↓ IDMC – ODP Delta Extraction → Transform → Enrich

TARGET: Snowflake / BigQuery
Finance Data Warehouse → Tableau / Power BI

📊 SAP Objects Integrated

SAP Table	Description	Method
BKPF/BSEG	Accounting docs	ODP
ACDOCA	Universal journal	ODP
KNA1/KNB1	Customer master	RFC
LFA1/LFB1	Vendor master	RFC
FAGLFLEXA	New G/L items	ODP

🎯 Business Outcomes

✓ Monthly close: 7 days → 1 day
✓ Real-time AP aging dashboard for treasury
✓ Finance self-service – zero IT dependency
✓ Cross-system reconciliation automated
✓ Audit trail for all financial data movements

USE CASE 2 – SALES

SAP Sales Orders ↔ Salesforce CRM Sync

Business Problem

- ✗ Sales reps switch between Salesforce and SAP constantly
- ✗ Order status in Salesforce is hours/days behind SAP
- ✗ Returns/credits in SAP not reflected in CRM
- ✗ No 360-degree customer view

🔄 Bidirectional Flow

SAP → Salesforce
Order status, delivery dates, invoices, credits – real-time sync via ODP

Salesforce → SAP
Won opportunities auto-create SAP sales orders via `BAPI_SALESORDER_CREATEFROMDAT2`

⚙️ BAPIs Used

BAPI Function	Purpose
`BAPI_SALESORDER_GETLIST`	Read orders
`BAPI_SALESORDER_CREATEFROMDAT2`	Create order
`BAPI_DELIVERY_GETLIST`	Shipment status
`BAPI_CUSTOMER_GETDETAIL`	Customer data

🎯 Business Outcomes

- ✓ Sales reps see real-time order status in Salesforce
- ✓ Customer inquiry handle time reduced 60%
- ✓ Won deals auto-create SAP orders – zero manual entry
- ✓ 360-degree customer view – CRM + ERP unified

USE CASE 3 – REAL TIME

Real-Time SAP CDC → Snowflake Data Lakehouse

Informatica from Salesforce

1 SAP S/4 HANA
ODP Delta Queue captures INSERTs, UPDATEs, DELETEs in real time

2 IDMC Mass Ingestion
CDC task reads ODP delta – processes changed records only

3 Transform
Map SAP field formats → cloud types, apply business rules

4 Snowflake MERGE
Upsert + deletes applied to RAW layer every 15 minutes

5 Analytics Ready
dbt transforms RAW → Curated for BI tools and dashboards

📋 SAP ODP Extractors

Extractor	Data Description
0FI_GL_14	G/L Accounts
2LIS_11_VAITM	Sales Order Items
2LIS_02_ITM	Purchase Orders
2LIS_03_BF	Goods Movements

🎯 Business Outcomes

✓ Data latency: 24 hours → 2 minutes
✓ 40+ custom ABAP programs eliminated
✓ Zero SAP performance impact – ODP non-invasive
✓ Real-time inventory and order analytics
✓ Finance close on same-day data

USE CASE 4 – REAL TIME

External Data → SAP S/4 HANA Loading

📥 Common Scenarios

› Acquired company customers/vendors → SAP master data
› E-commerce orders → SAP sales order creation
› Bank statement files → SAP FI posting
› 3PL logistics data → SAP goods receipt
› External pricing/catalog → SAP material master

⚙️ Key BAPIs for Inbound

BAPI Function	Purpose
BAPI_CUSTOMER_CREATEFROMDATA	Customer master
BAPI_MATERIAL_SAVEDATA	Material master
BAPI_ACC_DOCUMENT_POST	FI posting
BAPI_SALESORDER_CREATEFROMDAT2	Sales order
BAPI_GOODSMVT_CREATE	Goods receipt

⚙️ IDMC Validation Framework

› Data type validation (dates, amounts, codes)
› Reference data lookup (plant, cost center, currency)
› Business rule validation before SAP write
› Route errors to reprocessing queue
› Capture BAPI return code per record

🎯 Business Outcomes

✓ 500K customer records migrated in 4 hours
✓ Manual data entry eliminated – 10 FTE redeployed
✓ Error rate: 12% manual → 0.3% automated
✓ Acquisition integration in weeks not months
✓ Full audit trail for every SAP record loaded

USE CASE 5 – HR

SAP HR Data → Cloud Workforce Analytics

⚠️ Business Problem

- ✕ Headcount reports require multiple manual SAP extracts
- ✕ Compensation benchmarking takes weeks to prepare
- ✕ No real-time attrition risk dashboard
- ✕ HR data not connected to Finance cost center data

🔒 PII Masking & Governance in IDMC

- › SSN masked: last 4 digits only for analytics
- › Employee ID hashed for analytics join key
- › Direct identifiers removed before cloud load
- › CLAIRE AI auto-classifies PII fields.
- › Audit log for all HR data movements

📋 SAP HR Infotypes Integrated

Infotype	Data	Sensitivity
IT0001	Org Assignment	Medium
IT0002	Personal Data	PII - High
IT0008	Basic Pay	Sensitive
PA0000	HR Actions	High

🎯 Business Outcomes

- ✓ Real-time headcount dashboard for HR leadership
- ✓ Attrition risk scoring model with live SAP data
- ✓ Compensation benchmarking: weeks → hours
- ✓ HR + Finance cost center unified analytics
- ✓ GDPR compliant – PII masked before cloud

USE CASE 6 – MIGRATION

SAP ECC → S/4 HANA Migration with IDMC

Informatica from Salesforce

01 Assess
IDMC Data Profiling – DQ scorecard per SAP object

02 Cleanse
Deduplicate customers/vendors, standardize addresses

03 Migrate
Transform ECC → S/4 HANA data model via BAPI/LTMC

04 Validate
Reconcile ECC vs S/4 – count, balance, key fields

05 Delta Sync
CDC keeps S/4 in sync with ECC during parallel run

📦 Objects Migrated

- Customer Master (KNA1) ➔ Business Partner
- Vendor Master (LFA1) ➔ Business Partner
- Material Master (MARA/MARC) ➔ S/4 format
- G/L Accounts ➔ Chart of Accounts
- Open AP/AR Items ➔ FI Documents
- Inventory Balances ➔ Stock Postings

🎯 Business Outcomes

- ✓ Migration timeline reduced 40% vs manual
- ✓ 15% duplicate vendors eliminated via DQ
- ✓ Zero-downtime cutover – CDC delta sync
- ✓ 2M records reconciled automatically in hours
- ✓ Audit-ready migration documentation from logs

Data Quality, Governance and CLAIRE® AI

Informatica IDMC: Enterprise Data Trust, Unified Governance & AI-Powered Automation for SAP

Informatica from Salesforce

IDMC DATA QUALITY (Ingestion Rules & Validation)

AUTOMATED VALIDATION RULES AT INGESTION

- **Completeness & Conformity:** Apply automated rules at ingestion to verify mandatory fields, structure integrity, and schema compliance.
- **SAP-Specific Validations:** Validate GL account formats, cost center hierarchy structures, material master numbers, and company codes.
- **Cross-System Uniqueness:** Detect duplicate transactions and customer records across SAP ECC, S/4HANA, and external CRM systems.
- **Proactive Cleansing:** Standardize addresses, phone numbers, tax IDs, and country codes prior to landing in analytical targets.

DATA QUALITY IMPACT
99.9% Clean Ingestion
Automated rule execution eliminates dirty data propagation downstream to cloud lakehouses.

CLAIRE® AI & INTELLIGENCE (Embedded AI/ML Across IDMC)

EMBEDDED METADATA INTELLIGENCE & ML

- **Auto-Map SAP Schemas:** Self-learning AI models map complex SAP tables/CDS views to cloud target schemas, accelerating pipeline build by 80%.
- **Intelligent Classification:** Automatically discover and classify sensitive data, flagging PII/PHI in SAP SuccessFactors, CRM & ERP.
- **Automated Anomaly Detection:** Spot unusual values, transaction volume deviations, and outlier patterns across financial and HR data extracts.
- **Self-Healing Pipelines:** Recommend transformations, predictive fixes, and proactive routing when upstream SAP schemas evolve.

CLAIRE AI ACCELERATION
5x Faster Integration
Reduces manual mapping effort while automating schema drift handling and sensitive data classification.

UNIFIED GOVERNANCE & TRUST (Lineage, Catalog & Privacy)

END-TO-END TRACEABILITY & COMPLIANCE

- **End-to-End Lineage:** Full visual traceability from SAP CDS views & BAPIs through IDMC pipelines to Snowflake/Databricks & Power BI.
- **Catalog & Marketplace:** Publish trusted SAP data assets to IDMC Data Marketplace with business glossaries and domain ownership.
- **Zero-Trust GDPR Compliance:** Apply automated policy-driven dynamic data masking on PII before records leave the enterprise boundary.
- **Pipeline Observability:** Continuous tracking of pipeline health, SLA performance, throughput metrics, and real-time freshness alerts.

GOVERNANCE & VISIBILITY
100% Audit-Ready Lineage
Complete cross-system compliance and instant traceability for enterprise regulatory audits.

ENTERPRISE GOVERNANCE & AI ARCHITECTURE: Automated Intelligence, End-to-End Trust & Observability across Hybrid SAP Estates

- **Unified Trust & In-Flight Execution:** Coupling Data Quality and CLAIRE® AI models directly with lightweight Secure Agents executes validation rules and dynamic PII masking on live feeds before landing in cloud targets–guaranteeing clean data without ERP overhead.
- **Auditability & Semantic Discovery:** Automated multi-hop column-level lineage and IDMC Data Marketplace integration empower enterprise teams to effortlessly discover, understand, and trace SAP entities from source ABAP CDS views to final BI dashboards with full audit compliance.

Best Practices for SAP Integration

Architectural Recommendations for High-Performance, Secure, and Scalable IDMC Pipelines

Informatica from Salesforce

01 • SAP-CERTIFIED CONNECTORS

Avoid custom RFC programs; use SAP-validated IDMC connectors.

- **Impact:** Reduces risk of SAP upgrade breakage.
- **Support:** Guarantees long-term SAP support compatibility.

02 • CDS VIEWS OVER RAW TABLES

Prefer CDS views over raw database tables for S/4HANA.

- **Governance:** Natively enforces underlying SAP business logic.
- **Security:** Preserves SAP application-level authorization controls.

03 • PROXIMITY SECURE AGENTS

Deploy Secure Agent instances in close proximity to SAP.

- **Latency:** Minimizes cross-network latency for on-prem extractions.
- **Throughput:** Maximizes ingestion speeds into cloud targets.

04 • REAL-TIME CDC & SLT

Utilize CDC / SLT replication mechanisms for real-time needs.

- **Reliability:** Avoids fragile table timestamp polling on high-volume systems.
- **Efficiency:** Captures delta changes with sub-second latency.

05 • SOURCE-BOUNDARY DATA QUALITY

Apply data quality rules directly at the source boundary.

- **Clean Data:** Fixes data issues before reaching target analytical stores.
- **Validation:** Ensures 99.9% clean ingestion into cloud lakes.

06 • CROSS-SAP ENTITY MDM

Implement Master Data Management across core SAP domains.

- **Entities:** Customer, Supplier, Employee, and Product data.
- **Single Truth:** Prevents duplicate transaction records across systems.

07 • CLAIRE® AI AUTO-MAPPING

Leverage CLAIRE AI auto-mapping for pipeline acceleration.

- **Speedup:** Accelerates new SAP object onboarding by 40% to 60%.
- **Automation:** Reduces manual schema mapping and drift errors.

08 • SAP EXTRACTION MONITORING

Monitor extraction workload impact on core SAP ERP instances.

- **Scheduling:** Schedule heavy bulk loads during off-peak SAP windows.
- **Protection:** Prevents CPU/memory spikes on production ERP systems.

09 • GIT CI/CD PIPELINE VERSIONING

Version control all IDMC integration pipelines using Git integration.

- **DevOps:** Integrates seamlessly with CI/CD deployment asset workflows.
- **Safety:** Ensures auditability and team collaboration governance.

Connect, Integrate & Govern SAP Data at Scale with Informatica IDMC | Webinar 2026

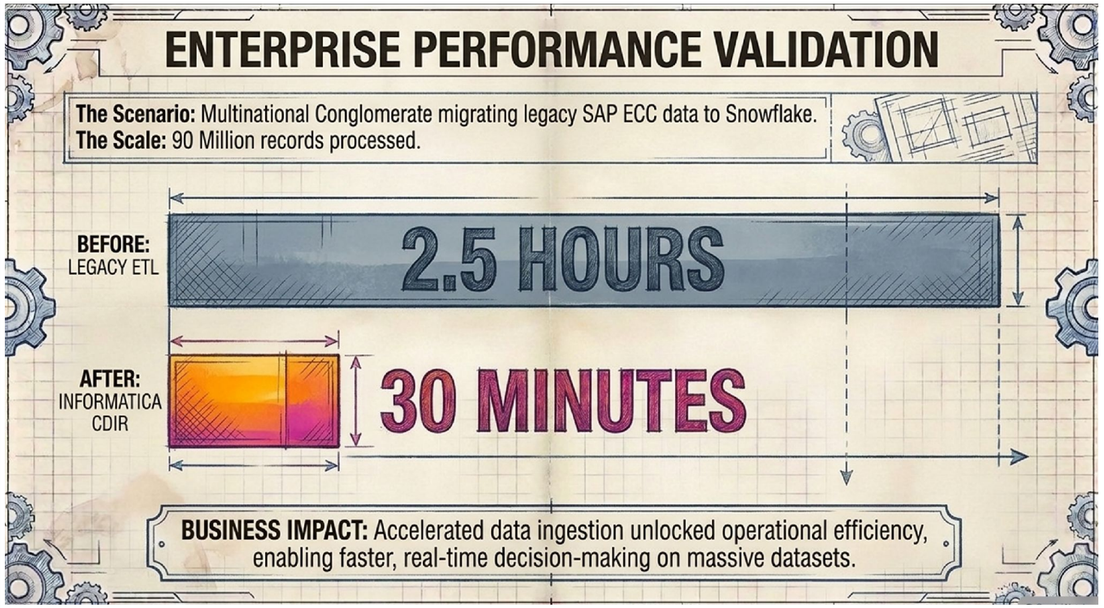
- **Enterprise Operational Blueprint:** Adopting certified connectors, CDS views, CDC replication, and CLAIRE® AI auto-mapping unlocks high-throughput SAP data pipelines with zero ERP disruption.
- **End-to-End Governance:** Combining source-boundary data quality with Git-based CI/CD pipeline versioning guarantees compliant, audit-ready data delivered seamlessly to cloud targets.

IDMC SAP Integration

Enterprise Performance Validation

BENCHMARK BLUEPRINT: Enterprise Performance Validation

MIGRATION HIGHWAY: 10M SAP Records • 5x Ingestion Speedup • Sub-Second CDC



Key Architectural Takeaway: Informatica CDIR slashes ingestion runtime from 2.5 hours to 30 minutes (an 80% duration cut), unlocking sub-second real-time analytics on Snowflake.

ENTERPRISE BENCHMARK SCENARIO (Scale, Architecture & Speedup Profile)

- **Production Enterprise Scenario:** A national enterprise conglomerate migrating mission-critical legacy SAP ECC operational transaction datasets directly to a Snowflake Cloud Data Warehouse.
- **Data Processing Scale:** 10 Million complex transactional records ingested across high-concurrency tables with complete data consistency and zero source degradation.
- **Comparative Performance Differential:** Legacy ETL batch processing required 2.5 Hours (150 mins); Informatica IDMC CDIR completed the entire load in just 30 Minutes (5x throughput acceleration).
- **Core Velocity Metric:** 80% reduction in total ingestion latency, enabling continuous intra-day micro-batching and low-latency downstream data lake delivery.

BUSINESS IMPACT & OPERATIONAL VALUE (Efficiency, Agility & Decision Velocity)

- **Operational Efficiency Unleashed:** Automated parallel ingestion eliminates batch maintenance windows, freeing up database administrators and ETL engineering bandwidth.
- **Real-Time Decision Intelligence:** Business decision-makers gain continuous visibility across supply chain, financial reconciliations, and inventory turns without overnight data delays.
- **Zero Production ERP Contention:** High-performance log-based change data capture protects SAP transactional performance, eliminating CPU and memory spikes on core ERP systems.
- **Scalable Foundation for AI & Analytics:** Prepares massive enterprise datasets for immediate consumption by Snowflake Cortex, generative AI agents, and real-time operational executive dashboards.

BENCHMARK SUMMARY & IMPLEMENTATION TAKEAWAY: Modernizing SAP Data Migration Pipelines with IDMC Cloud Data Ingestion & Replication

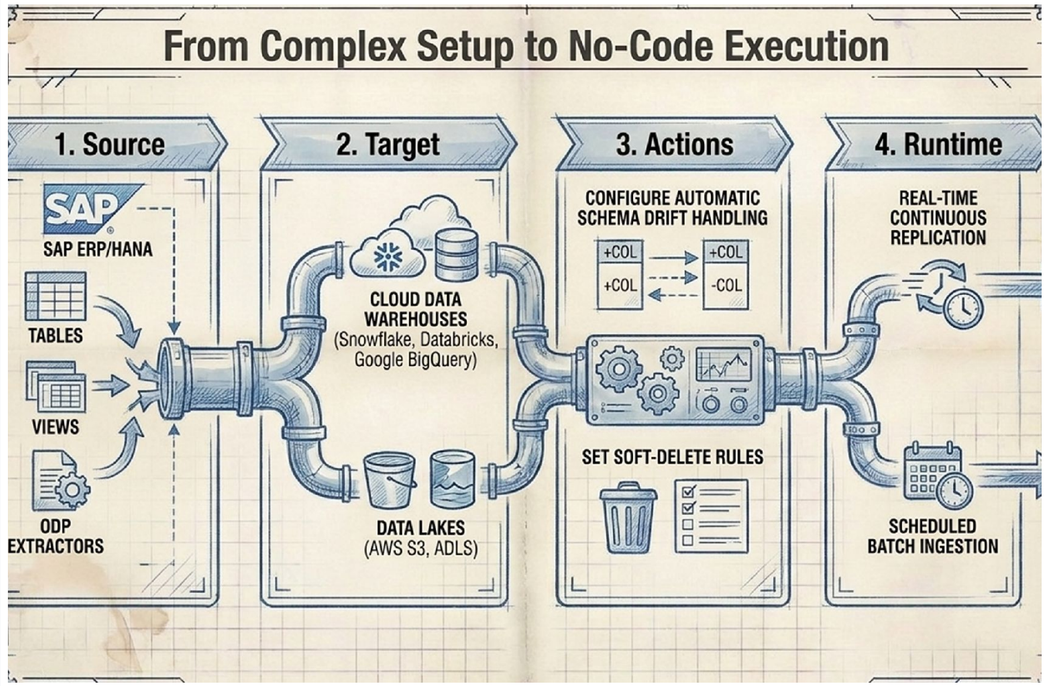
- **Proven 5x Speedup in Production:** Validating a 150-minute legacy ETL batch run down to 30 minutes for 10M records establishes IDMC CDIR as the premier engine for time-critical SAP data warehouse and data lake migrations.
- **Architectural Scalability:** Linear scale-out via lightweight IDMC Secure Agents guarantees that multi-hundred-million row daily ingestion workloads scale seamlessly without risking SAP system stability or exceeding nightly maintenance windows.

From Complex Setup to No-Code Execution

End-to-End Orchestration: Source Ingestion, Target Delivery, Automated Actions, and Runtime Modes

Informatica from Salesforce

END-TO-END ORCHESTRATION ARCHITECTURE



TIER 1 • SOURCE & TARGET MULTI-CLOUD MATRIX

Universal Connectivity Ecosystem

- **Broad SAP Object Ingestion:** Direct extraction from Transparent Tables, Pool/Cluster Tables, CDS Views, and ODP extractors.
- **Multi-Cloud Destination Targets:** Streams to Snowflake, Databricks Delta Lake, BigQuery, AWS S3, and Azure ADLS Gen2.
- **Decoupled Architecture:** One source pipeline can feed multiple downstream analytics and data lake consumers

TIER 2 • AUTOMATED ACTIONS & DRIFT GOVERNANCE

Resilient In-Flight Processing

- **Automatic Schema Drift:** Propagates new columns, renamed fields, and altered data types without pipeline stoppage.
- **Soft-Delete Governance:** Configurable soft-delete flags retain historical audit records while reflecting active state.
- **Zero Code Overhead:** Point-and-click wizard replaces thousands of lines of fragile legacy hand-coded scripts.

TIER 3 • FLEXIBLE RUNTIME EXECUTION MODES

Tailored Ingestion Latencies

- **Continuous Streaming Replication:** Real-time CDC capture streams transactions with sub-minute delivery for operational dashboards.
- **Scheduled Batch Ingestion:** Cost-optimized micro-batch runs handle massive historical reconciliations and master data loads.
- **Unified Monitoring:** Single pane of glass tracking throughput, latency SLAs, and automatic restart handling.

OPERATIONAL EXCELLENCE • STRATEGIC BUSINESS ADVANTAGES

DEVELOPER PRODUCTIVITY & TIME-TO-VALUE

- **10x Acceleration:** Build new SAP-to-cloud data pipelines in hours instead of weeks of custom ABAP and staging development.
- **Self-Healing Pipelines:** Automated schema synchronization eliminates 90% of unplanned maintenance outages caused by ERP patch releases.
- **Zero Code Footprint:** Drastically cuts technical debt by standardizing on enterprise Informatica connectors backed by SLA support.

ENTERPRISE RESILIENCE & SCALABILITY

- **Mass Ingestion Scale:** High-throughput parallelized loaders handle billions of rows daily across enterprise global operating units.
- **Resilient Checkpointing:** Stateful offset tracking ensures zero data loss and seamless automatic resume from point of interruption.
- **Cross-Cloud Portability:** Instantly re-target existing ingestion streams between cloud providers without refactoring source extraction logic.

Demo

Let's discuss how SAP Integration can be done using IDMC.

Demo : SAP Integration using Table connector using CDI

Q&A



Informatica
from Salesforce

Thank you