Semarchy xDI

Native Data Integration Companion to xDM

Why Your MDM Platform Needs an Evolutive Data Integration Solution

Why use xDM with xDI

Deliver end-to-end MDM capabilities with one vendor

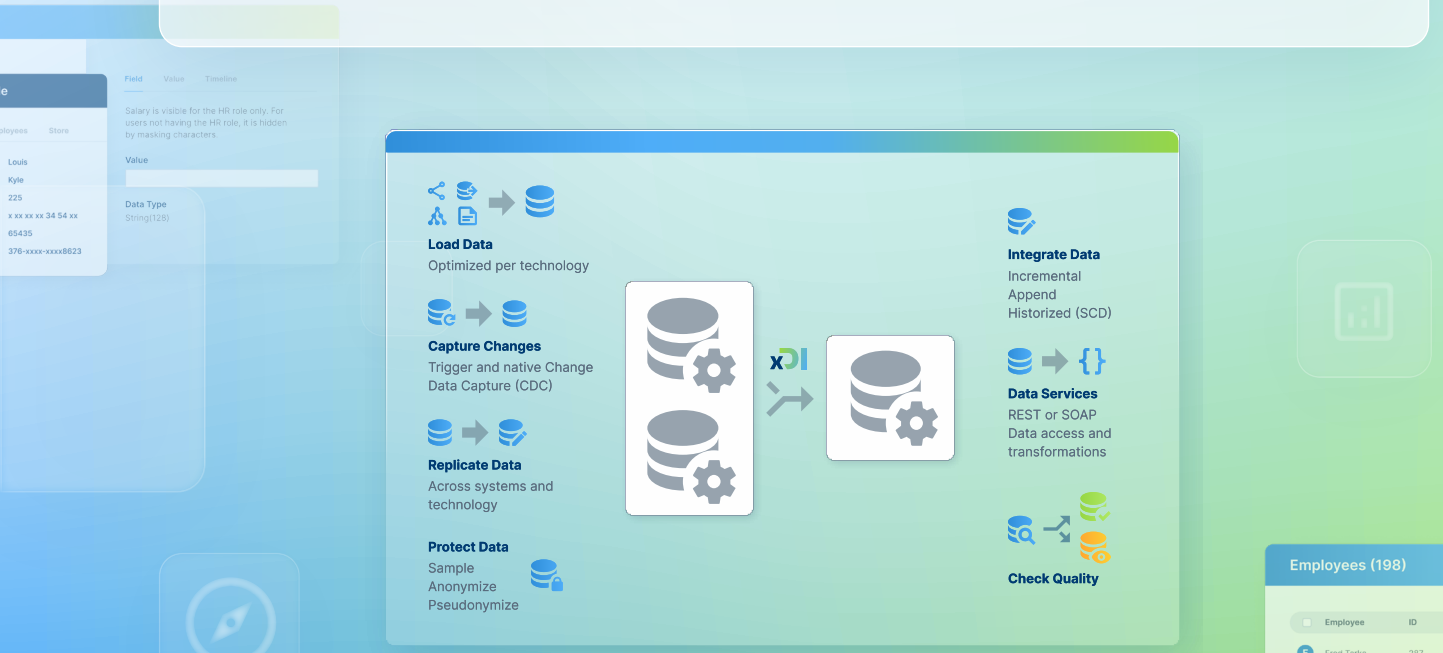
Rationalize your data management infrastructure under a single, leading vendor for discovery, integration, enrichment, management, governance, and reporting to reduce TCO on your most critical data operations.

Completely native bi-directional integration

No headache or frustration to work with multiple stakeholders and vendors to determine if other data integration tools and resources are sufficient in delivering your new data management solution.

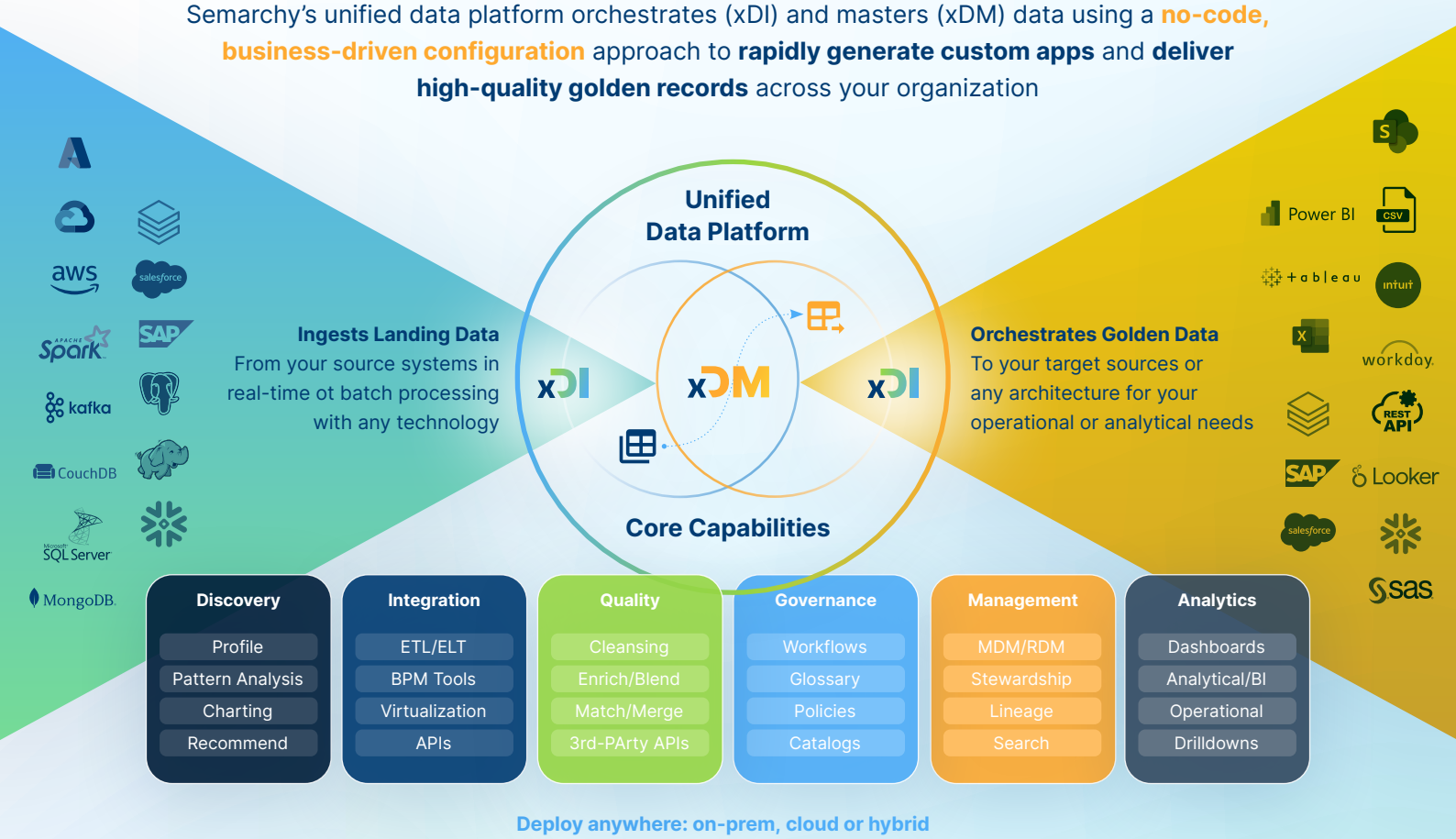
World-class support & delivery for your business

Deploy rapidly and scale seamlessly with our customer success ecosystem to deliver a robust foundation for your data operations today, ready to evolve tomorrow.



Two Incredible Modules, One Unified Platform

Semarchy's unified data platform orchestrates (xDI) and masters (xDM) data using a **no-code, business-driven configuration** approach to **rapidly generate custom apps** and **deliver high-quality golden records** across your organization



Discovery	Integration	Quality	Governance	Management	Analytics
Profile	ETL/ELT	Cleansing	Workflows	MDM/RDM	Dashboards
Pattern Analysis	BPM Tools	Enrich/Blend	Glossary	Stewardship	Analytical/BI
Charting	Virtualization	Match/Merge	Policies	Lineage	Operational
Recommend	APIs	3rd-PArty APIs	Catalogs	Search	Drilldowns

Deploy anywhere: on-prem, cloud or hybrid

Recap of Full MDM Solution Architecture Requirements

Intro: Key components/capabilities of a full MDM solution

MDM plays a critical role in the enterprise system architecture to consolidate, transform, and orchestrate high-quality golden data that the business can use to derive insights and drive decisions. Semarchy xDM's leading enterprise-scale MDM solution, paired with the powerful data integration tool (xDI), enables the complete suite of data management capabilities unified through a single vendor.

xDM provides a unified platform accessible through any web browser to rapidly generate custom data apps for end-users to manage & govern enterprise information assets efficiently. For this to work, six main components of the solution architecture are required (see graphic below). Thankfully, xDM's solution architecture is the same no matter where it's deployed (on-prem, cloud, or hybrid) and can easily integrate with any enterprise system or technology.

Architecture - Simple, robust, scalable

Reference architecture for cloud and on-prem deployment

Overview of each component

1 Existing Applications:

These are your core data generation systems/ sources. It might include operational systems/ apps that create and manage records or transactional data like CRM, ERP, SCM, HCM, etc. It can also be analytical stores from your data warehouse/lake.

For the source data from these systems to propagate information into the *Database Server* that xDM is virtualized on, you'll need a *Data Integration (xDI)* solution for moving this data efficiently in real-time or batch.

2 Database Server:

the underlying database holding all the critical data and metadata for xDM's Application Server to utilize. The Data Hubs contain data for the data models (source, master, golden, lineage, and history). The Repository stores all the metadata used in xDM (rules, dashboards, discovery data sources, and profiles)

For the database schemas to have the most relevant and recent data in the xDM apps, an enterprise Data Integration solution must either stream or batch process loads to/from Existing Applications.

3 Data Integration (xDI):

If it has not been emphasized enough already, data integration is critical in ensuring the delivery of xDM's master data management and data governance capabilities. xDM has a publish/subscribe framework using APIs to ingest/deliver data and can work with any existing middleware/integration tool you already use.

Semarchy is one of the only MDM vendors that can provide true ETL/ELT capabilities. The rest of this datasheet will cover the features and benefits of xDI. At a very high level, since xDM and xDI are part of a native, unified solution for end-to-end data management, you can rationalize a large portion of your infrastructure into a single vendor. Our hundreds of customers using xDI from all sizes and use cases benefit from the same low-code design approach as xDM, rapid time-to-value, and reduced TCO for data operations.

4 MDM Application Server (xDM):

the core Java EE app is deployed and runs on a single server or high-availability (HA) cluster. It serves as the logical foundation for the Application Builder, Dashboard Builder, Data Discovery, Workflow Builder, Configuration, and REST API to generate custom data management/governance apps for end users.

An HTTPs protocol serves the interfaces and action sets on any Web Browser for the design and run-time apps to be accessed by users. The REST API programmatically provides mastered records from xDM's underlying database schema to downstream apps or enriches the quality of source records in xDM from internal/external Content Providers.

5 Content Providers (xDM):

internal and external enrichment rules and plugins to improve the data quality of golden records. Semarchy xDM comes with existing enrichers such as (D&B, Amazon Recognition, Experian, Melissa Data, Google Maps, etc.) Clients are encouraged to create custom enrichers or leverage existing third-party ones.

For the content providers to continuously deliver accurate, up-to-date data in real-time or batch, REST API clients can be used, or a Data Integration solution like xDI.

6 Web Browser (xDM):

the design time and run-time interface used by the data stewards or end users can be accessed through any web browser. From the user's perspective, they can access their critical data management and governance apps from anywhere.

What is Semarchy xDI ?

Overview

Semarchy xDI is an evolutive data integration solution that allows you to rapidly design, deploy and deliver data in real-time streaming or batch processing. It's often used to orchestrate data to xDM so clients can create a unified data hub for their analytical and/or operational needs. xDI enables clients to efficiently deliver data of any volume across various systems without performance issues while reducing integrations costs by 80%

xDI's evolutive technology enables integration designers to deploy new flows in days, not months. Three key principles provide xDI users increased productivity when developing, deploying, and maintaining critical data integrations across systems:

Key Innovative Principles

xDI's evolutive technology enables integration designers to deploy new data flows in days, not weeks or months. These three key principles increase users' productivity when developing, deploying, and maintaining integrations.

Universal Mapping: Our low-code integration design allows users to focus on the business rules while xDI automatically generates the deployable code and technical processes that integrate, transform and publish data. This enables your technical and business teams to collaborate, develop, and deploy integrations rapidly.

Adaptive Modeling: Our metadata-driven approach to integration design and industrialization of templates promotes the reuse of existing integrations but can easily adapt to new or updated flows. This streamlines the development process while improving your integrations' overall quality, productivity, and flexibility.

Robust Architecture: Our decentralized transformation architecture (ELT) handles immense volumes of data, regardless of your technology, without compromising performance. This allows your integrations to be immediately operational with non-intrusive deployments that minimize the use of intermediate resources while offering seamless scalability.

> ***A real medical Swiss Army Knife for data transfer and transformation. Installation was quite easy. New users are rapidly onboarded after three days.***
>
> **Enterprise & Data Architect | Large Insurance Client**

Benefits & Total Cost Ownership

Reducing or optimizing resources and costs is a key element in digital transformation projects. Project costs can be measured in five main components:

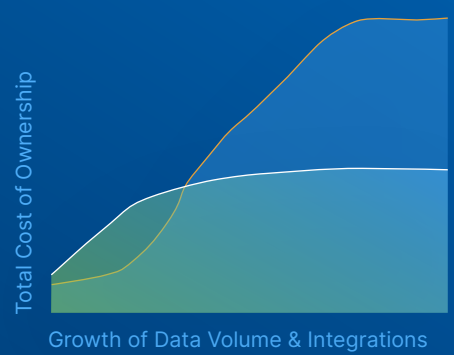
Software
xDI's pricing model is based on the "development effort" (number of developers) and not the usage of resources (CPU, volume, etc.) in production which allows the project costs to become easily predictable and controlled.

Hardware
Dedicated hardware is not required as xDI adopts a decentralized ELT approach which enables it to be deployed on your existing hardware and minimizes the use of intermediate resources to implement without any disruption.

Development
The model-driven, low-code development approach does not require deep technical expertise to design and put integrations into production, which significantly reduces the total cost of ownership.

Maintenance
Configurable Production Analytics inside xDI provide an intuitive GUI to automate operational activities and allow your data teams to monitor deployments, and runtime environments, schedule data flows, and reduce error resolution time.

Learning
xDI helps unify the most widely-used data integration technologies which enable developers to move from one type of integration to another (batch, web services, big data, etc.) within a single solution and improve the learning curve.



xDI reduces development time (up to 80%) and maintenance costs (up to 300%).

Use Cases

xDI can provide much more value and functionality to your data ecosystem than just being the preferred companion to xDM. Once your designers understand the core principles of designing the integrations, they don't expand additional resources to learn the technical complexities to deliver the following use cases.

Cloud Migration

Efficiently move data to the cloud, between any application on any architecture, while realizing hard cost savings with pay-as-you-grow scalability.

Application & Streaming

Effortlessly exchange data from high availability apps, web services, and APIs with native change data capture (CDC) without losing performance.

Business Intelligence & Analytics

Aggregate data from all of your data sources to deliver actionable insights in real-time and scheduled automated feeds.

Data Anonymization

Fully integrated privacy and compliance for each dataset with user-defined data anonymization and pseudonymization.

Data Fabric

Automatically syndicate and load big data with support for structured, semi-structured, and unstructured data without specialized knowledge.

Data Services

Rapidly expose complex data and processes without code or dedicated infrastructure for all web services (SOAP, REST, XML, JSON, and more)

Many of our clients use xDI with our award-winning xDM (Master Data Management & Governance Module) as a unified data platform to solve various business challenges. xDM combines comprehensive features covering automated data discovery, integration, stewardship, data quality and enrichment, workflows, and core MDM capabilities, alongside in-depth metrics, and dashboards, all in a single module. xDM was built entirely in-house, on a carefully designed architecture and technology stack to allow rapid implementation via an agile and iterative approach that delivers business value almost immediately yet scales to meet enterprise complexity. Learn more about our 100% recommended master data management solution and download the xDM Product eBook.

xDI Architecture Components

The architecture of xDI Enterprise is based on three simple components:

1

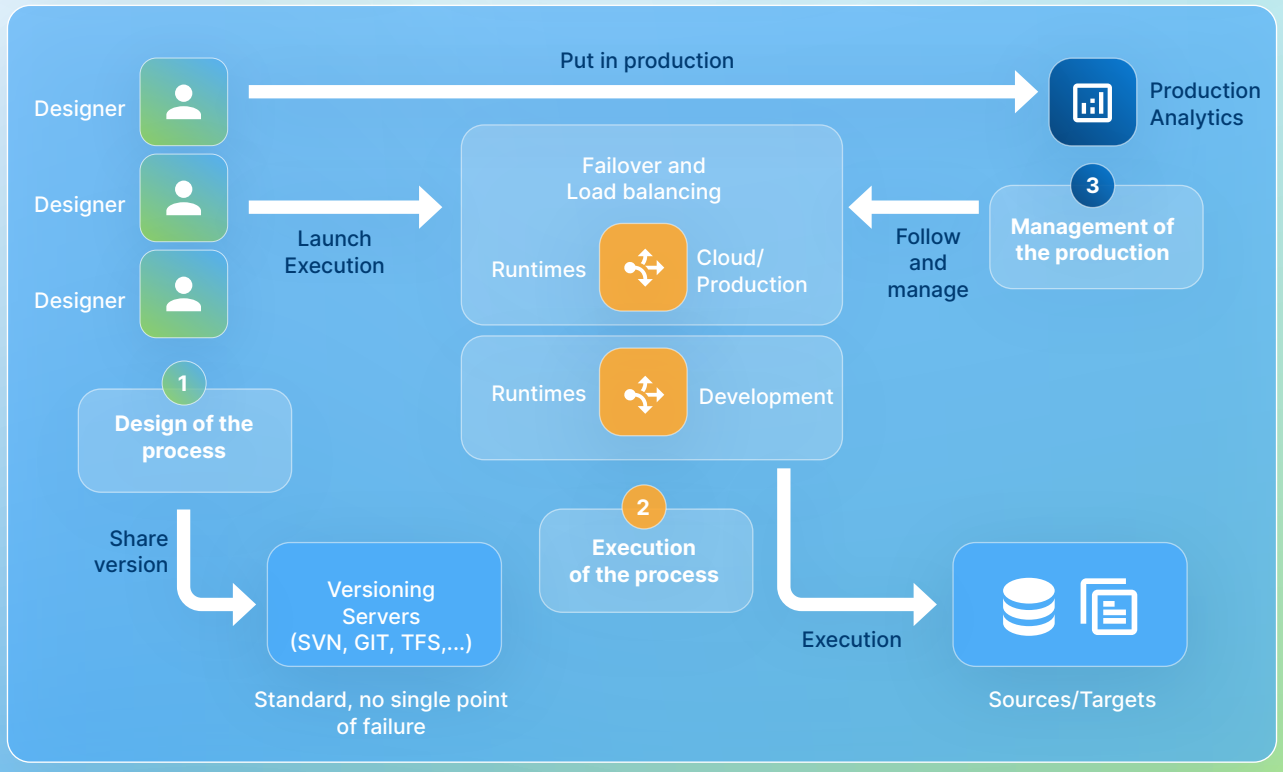
Designers
are the main integration development and test UI. Designers rely on an Eclipse architecture for easy sharing and flexible management of developments and team projects.

2

Runtimes
are the processes that execute the jobs in production. They are based on a Java architecture facilitating their deployment on-prem or in the cloud. They are compatible with Docker and Kubernetes architectures.

3

Production Analytics
is the web component that enables production (deployment, configuration, and planning) and job tracking, as well as the management of different runtimes.



xDI Native Integrations & Connectors Portfolio

xDM: Master Data Management

Semarchy xDM

Applications	Salesforce, SAP
Cloud	Actian Avalanche, AWS, Google BigQuery, Google Cloud Platform, Microsoft Azure, Snowflake
Big Data	Hadoop, Spark
Storage	Amazon S3, Apache Hadoop Distributed File System, Azure Storage, CMIS, FTP, Google Cloud Storage, SSH
Databases	**High-Performance Databases** Actian Vector (Vectorwise), Google BigQuery, IBM PDA (Netezza), SAP HANA, SAP IQ (Sybase IQ), Snowflake, Teradata, Vertica
	Relational Databases Amazon Redshift, Apache Hive, Apache Impala, Azure SQL Database, dBase, Firebird, Greenplum, H2, Hyper SQL Database (HSQLDB), Hyperfile, IBM Db2 Database, IBM Db2 for i (DB2/400), IBM Db2 for z/OS, IBM Informix, Ingres Database, Intersystem Caché, Microsoft SQL Server, MonetDB, MySQL, Oracle BI, Oracle Database, Oracle Rdb, Paradox, Parstream, PostgreSQL, Progress OpenEdge, SAP ASE (Sybase ASE), SingleStore (MemSQL)
	NoSQL Databases Apache Cassandra, Apache HBase, MongoDB, Couchbase
Search Engines & Directories	Elasticsearch, LDAP Directory
Documents & Files	Apache Avro, Apache Parquet, BSON, Flat and Hierarchical, JSON, XML, CMIS, Google Sheets, HCL Domino (Lotus Notes), Microsoft Access, Microsoft Excel

Web Services / APIs	REST API, Web Service (SOAP)
Messaging and Streaming	AMQP Messaging, Apache Kafka, JMS Messaging
Secrets Management	AWS Key Manager Service, AWS Secrets Manager, Azure Key Vault, Google Cloud Key Management or Google Cloud Secrets Manager
Version Control + CI/CD/DevOps Integration	GIT, CVS, Docker, Kubernetes
Utility	Apache Sqoop, Email Server, Google Cloud Project, HTTP Security for REST, Kerberos for Hadoop, Proxy Server, Stored Procedure, Privacy Protect (data anonymization, pseudonymization and GDPR compliance)

How to get started with xDI

Try xDI for free

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