

Ipedo XIP

Enterprise Information Integration Platform with the Power of SQL and Flexibility of XQuery

Ipedo allows organizations to use their existing data and reporting tools to make better operational business decisions. Ipedo also provides a data services layer that unlocks information for enterprises moving towards service-oriented architectures (SOA).

Ipedo XIP is an Enterprise Information Integration (EII) product that leverages SQL and XQuery to integrate and manage information from disparate, complex data sources. EII is a new style of integration that uses federated queries across virtual views to collect data from distributed sources on demand

Decision makers need access to the right information at the right time. They need visibility to diverse information sources across the enterprise and beyond its borders. Innovative organizations are using EII to generate this information to enable real-time operational decisions.

Ipedo provides a powerful and robust system for modeling and managing information and adding value to data. It allows applications to automatically aggregate and present information from disparate sources without moving or replicating data. These sources may be relational databases, Web Services, CSV files, enterprise applications, message queues, file systems, or collections of documents.

Ipedo XIP goes beyond basic EII to dynamically process internal and external data according to intelligent business criteria. People using applications built on the Ipedo platform can make complex business decisions and generate new insights from the enriched information stream that Ipedo delivers in real-time.

Consolidate and Query Disparate Data

Ipedo XIP treats all information, both inside and outside the firewall, as a single, virtual data source. It allows business users to perform

on-demand queries across all their data, generating the information they need as they need it.

Ipedo XIP uses a unique Dual-Core (SQL and XQuery) query engine to manage both structured and unstructured data. SQL works best for querying relational data, while XQuery is especially well suited for querying XML documents with complex hierarchical structures or schemas.

Add Intelligence to Information

Ipedo's platform lets data architects define meaningful semantic and structural relationships among information elements. It also allows people or other systems to enrich the information by adding additional metadata. Ipedo XIP makes information and its context reusable from application to application, creating a seamless information model across any number of sources.

To existing business intelligence or enterprise reporting applications, Ipedo makes multiple data sources look like a single relational database or XML document.

Virtualize Integrated Data as a Service

The ability to virtualize views across disparate data sources makes EII especially valuable to organizations implementing SOA. In addition to consuming data from Web Services, Ipedo views represent a reusable data services layer that makes integrated information available across the enterprise as a Web Service.

Deploy Rapidly and Evolve

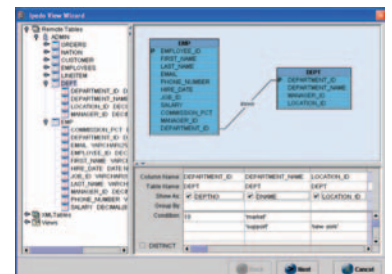
The Ipedo XIP platform significantly reduces the cost and effort of building applications. It enables non-programmers to model their data and build intelligent queries to support real-time business decisions.

Ipedo exploits the power of SQL and the flexibility of XML to leverage existing information sources and systems and extend their useful life.

Ipedo XIP At-a-Glance

The only EII platform that uses both relational and XML data models

- Supplies integrated information to business intelligence, reporting, and custom applications
- Provides a data services layer to enable service-oriented architectures
- Delivers high performance using advanced query optimization, highly configurable tuning, and intelligent caching



Intuitive user interface simplifies information integration

Business Benefits

- Improves ROI on existing information sources and systems
- Integrates internal and external information, such as multiple databases and Web Services, to enable real-time operational business decisions
- Avoids political and organization issues around master data ownership by leaving data in place

IT Benefits

- Feed existing business intelligence and reporting tools with information from across the enterprise
- Speeds deployment of new applications or Web Services that rely on disparate and complex data
- Enables migration to SOA by making integrated information available as a Web Service

PRODUCT OVERVIEW

Presentation Engine

Provides customized reporting functionality

- Facilitates connections to standard reporting tools and allows non-programmers to build Web-based applications without programming.
- Reduces application development costs by utilizing standards-based technology.

SQL Engine

Searches information across multiple relational databases using advanced cost-based optimization and heuristics

- Performs a variety of powerful search capabilities across information from multiple SQL sources using the latest cost- and rule-based query optimization techniques to maximize performance.
- Invokes the XQuery engine for access to non-relational data.

XQuery Engine

Searches information across multiple sources using XQuery and a variety of optimization methods

- Optimizes and performs federated queries across both relational data sources and unstructured data such as XML.
- Interrogates deep and/or complex payloads in XML messages in a service-oriented architecture (SOA).

Federation Engine

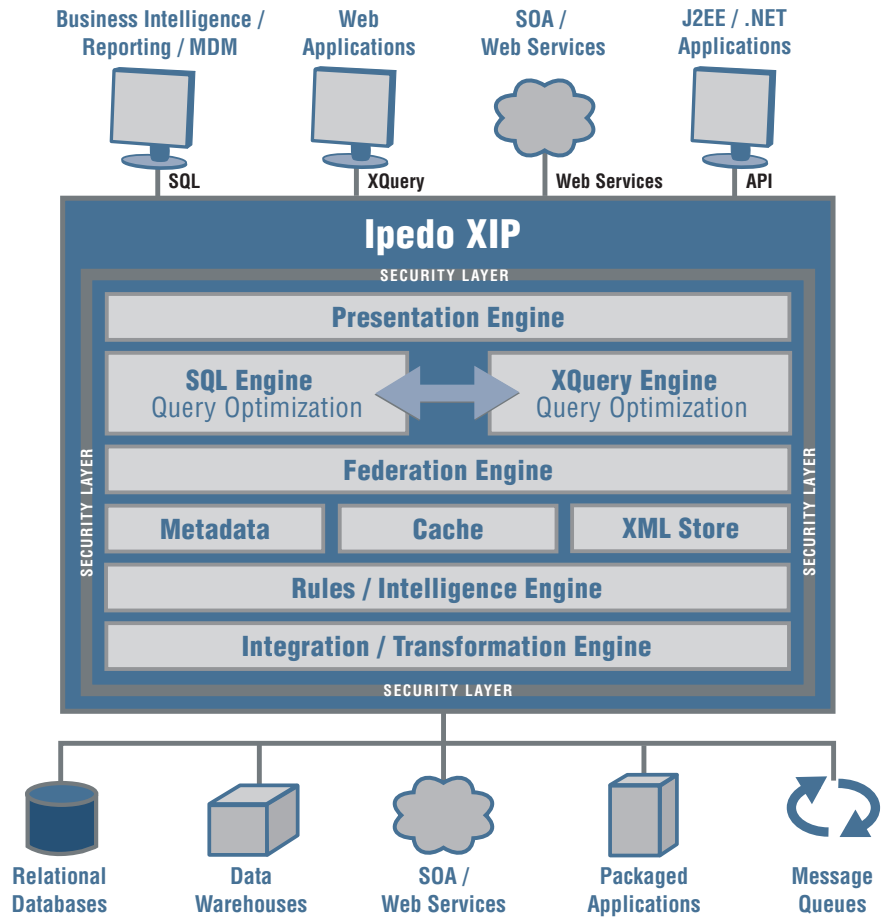
Federates information from various sources

- Examines remote data sources to determine how to distribute queries. By knowing the size of databases, the indexes they use, and the selectivity of those indexes, Ipedo can make optimal use of remote resources.

Metadata Repository

Manages metadata on data sources, mappings, and transformations

- Tracks and manages all the metadata associated with source data and how it is used in applications, facilitating integration of data from different sources.



Cache Manger

Maintains copies of information to improve system performance

- Improves query performance by storing query results based on user-defined refresh and invalidation policies.
- Keeps separate, configurable caches for relational and XML data.

XML Store

Provides persistent, searchable XML repository to supplement built-in relational storage

- Creates an operational data store for making items in a message queue searchable or keeping logs of query results for compliance, regulatory, or audit purposes.
- Manages schemas and allows data exchange between different versions or dialects of the same schema, or even different schemas.

Rules / Intelligence Engine

Adds value to information

- Validates documents for accuracy, completeness, and compliance, based on user-defined semantic criteria.
- Integrates seamlessly with external rules processing packages.

Integration / Transformation Engine

Virtualizes views across disparate data sources for reuse in various applications

- Allows users on-demand access to different information sources such as relational databases, Web Services, enterprise applications, CSV files, or collections of documents.
- Incorporates information from message queues, including real-time screening of messages and data transformations.

SOLUTION EXAMPLES

Operational Business Intelligence



Ipedo increases the value of business intelligence and reporting tools by expanding the range of data that these applications can access.

Ipedo provides a query-based information integration layer that complements BI and enterprise reporting tools, such as Business Objects, Hyperion, Cognos, Crystal Reports, Microsoft Reporting Services, and Excel. Ipedo XIP hides the complexity of multiple databases, content repositories, and message streams, each with its own different access protocols. Ipedo appears to BI tools as a single source - containing current information.

Ipedo's flexible and scalable infrastructure

makes BI tools more powerful, useful, and valuable.

Benefits:

- Produces better reports with up-to-date information that spans diverse data sources, both structured and unstructured
- Reduces data replication by leaving information in place and querying on demand
- Cuts the cost of integrating data from disparate systems and external analysis tools by replacing expensive custom programming with simple queries
- Supports multiple business intelligence and enterprise reporting applications from one platform

Service-Oriented Architectures (SOA)



Ipedo XIP enables SOA by providing a data services layer for integrating data from multiple disparate sources.

SOA allows applications to interact with one another in a loosely coupled manner using a Web Services interface. However, these applications need a standard way to retrieve data from disparate data sources that preserves the loose coupling and avoids proprietary and inflexible connections. Ipedo XIP plays a key role in an enterprise information management strategy, providing a standard interface to data from relational databases, enterprise applications, content repositories, file systems, or other Web Services.

Ipedo's XQuery engine allows it to query inside Web Services payloads, providing a more scalable and flexible approach than transformation-based methods, especially for large or complex schemas.

Benefits:

- Makes information available from disparate data sources available to Web Services
- Creates a data services layer that simplifies SOA access to information throughout the enterprise
- Presents both relational and unstructured information as XML, allowing universal information exchange through Web Services

Master Data Management



Ipedo XIP helps companies consolidate master data to create a uniform view of different business entities across the enterprise.

Ipedo XIP integrates customer and transactional data from many disparate production systems, all in real time, without replicating the data. Ipedo can also help integrate other master data such as product, supplier, and financial services' reference data. Whether via federated query over virtual views or in combination with other data integration techniques, Ipedo's ability to access a broad span of data sources simplifies and speeds development of master data and reduces the cost of

maintaining new data stores. In addition, organizations can set up views in Ipedo XIP to customize delivery of master data to applications that need it.

Benefits

- Simplify integration from disparate applications and data sources
- Easily customize and deliver subsets of customer data via virtual views
- Speed performance by minimizing the amount of data persisted centrally
- Avoid political and organizational issues around master data ownership by leaving data in place

FEATURES/BENEFITS

	Feature	Benefit
Performance	Cost-based Query Optimization	Perform remote source optimization to determine affinity, lowest-cost join ordering, and join algorithms; apply heuristics when cost-based optimization information is unavailable; query plan is available for viewing
	Statistical Analysis	Collect and analyze data from the system catalogs of relational databases to provide information for cost-based query optimization
	Data Streaming	Deliver information to applications immediately using cursors rather than waiting for the entire result set to become available
Data Span	Dual-Core Query Engine	Evaluate and optimize queries across relational and non-relational sources to provide rapid access to disparate information sources quickly and efficiently
	Relational and XML Views	Perform real-time analysis and filtering on data from relational databases (Oracle, DB2, SQL Server, Teradata, Sybase, MySQL), Web Services, CSV files, enterprise applications (SAP, Siebel, PeopleSoft, Oracle), file systems, or collections of documents, and view the results in a single application
	Feeds	Examine data from external processes such as JMS-based message queues, broadening the scope of information that developers can use in their applications
	Inbound Pipelines	Execute complex, multi-step processing, via XSL and XQuery combinations, that results in a highly flexible approach to validating data from diverse sources
	Graphical Modeling	Integrate data across disparate data sources using intuitive modeling tools, without coding
Deployment	Distributed Server Support	Share Views and associated metadata across distributed instances of Ipedo
	Data Throttling	Control loads on systems and networks by using bandwidth and connection limits and query quotas
	Scripting	Streamline data processing and server configuration by assembling commands into a reusable script
	Metadata Management	Maintain and track information on back-end databases and mappings between data sources
	Reporting Framework	Deliver integrated data to business intelligence and enterprise reporting tools through standard ODBC/JDBC interfaces
Caching	Intelligent Policy-Based Caching	Speed access to information and reduce load on back-end systems by storing frequently used results natively in either relational or XML format; Scheduled, manual, or event-driven refresh
	XML Store	Maintain a searchable XML repository for unstructured data to complement built-in caching and relational data storage
	Schema Management	Manage transformations between different schemas or versions, and map non-XML data to specific schemas
Security	Granular View Security	Apply an additional level of security at the view level to precisely control who has access to information
	Comprehensive Data Security	Maintain security on back end data sources using SSL for secure connections and by applying granular access control to Ipedo Views
	Authorization and Authentication	Integrate with existing access control lists, LDAP directories, and single sign-on systems

Data Sources

Relational: Apache Derby, IBM DB2, Informix, Microsoft Access, Microsoft SQL Server, MySQL, Oracle, PostgreSQL, Sybase, Teradata, or any JDBC- or ODBC-compliant database

Enterprise Applications: Oracle, PeopleSoft, Salesforce.com, SAP, Siebel

Web Services (SOAP, REST)

Other: XML, CSV, Excel, LDAP, HTML, UDDI, Message Queues

Standards

SQL 92, JDBC, ODBC, XML Schema, XPath, XQuery, XSL, XMI, SOAP, WSDL, WS-I, JAAS, JSSE, JMX

Development Environments

J2EE, .NET or Web Services

Intuitive GUIs allow non-programmers to integrate data, build queries, and develop applications

System Requirements

Platform: Windows 2000/2003 or XP, AIX 5.2 or higher, Solaris 8, 9 or 10, Red Hat Linux 8.0 or higher

Ipedo, Inc. 1001 Marshall Street, Redwood City, CA 94063 Tel: 650.306.4000 Fax: 650.306.4001 www.ipedo.com

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