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## Highlights

- Provide real-time, virtualized access to disparate data sources
  - Extend the data warehouse without moving data
  - Gain a unified view of data from across the enterprise
  - Link mainframe data with other sources of data and content
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# IBM InfoSphere Federation Server

*Leverage industry-leading data federation capabilities no matter where your data resides or what format it is in*

In today's enterprises, different portions of an organization often end up using different database management systems to store and search their critical data. Evolving technology, mergers, acquisitions, geographic distribution and the inevitable decentralization that results from growth all contribute to this divergence.

Enterprises must combine the information from these disparate systems to realize the full value of the data they contain. However, physical integration of this information can be difficult or impossible. Manually combining data from physical data stores is time-consuming and prone to error, potentially affecting business agility and data reliability. Accessing information stored in disparate systems through a single interface can be difficult. Budget constraints raise another barrier; for example, funds may not be available to procure new resources for a reporting database.

In addition, physical integration of data may not make sense for every enterprise. Some organizations may be reluctant to create copies of data due to security or regulatory concerns. And the data itself may pose a problem—it might be too big to integrate on a permanent basis, too changeable for constant replication across data stores or too varied and unpredictable for extract, transform and load (ETL) processing to be worthwhile.

## Unlock the value of enterprise information with InfoSphere Federation Server

IBM® InfoSphere® Federation Server (see Figure 1) enables enterprises to overcome these challenges by accessing information through a virtual server, which allows administrators and other data consumers to view and manipulate data across the enterprise as if from a single database. It is a key companion to InfoSphere Information Server, which enables data integration, data quality monitoring and the exchange of business information to help ensure delivery of trusted information across an organization.



By combining data from multiple sources—including all major relational databases, mainframe data and XML documents—into a single view, InfoSphere Federation Server makes information accessible to end users through standard SQL or any tool that supports JDBC/ODBC (SAP BusinessObjects, IBM Cognos®, Hyperion and so on). Since data is accessed virtually, businesses do not need to create extra copies of enterprise information, set up new hardware for new databases or make changes to the existing infrastructure—all factors that help to reduce IT costs and risk.

### Leverage the advantages of data federation in a variety of settings

With its low cost of implementation and ease of use, companies are increasingly using data federation software to link multiple data marts and warehouses. It provides a practical, less costly alternative to implementing a single enterprise data warehouse. It is also frequently deployed to link data warehouses with operational sources for real-time reporting and query purposes.

Additionally, organizations often use data federation as an interim measure to link relevant data sources after a merger or acquisition. Consolidation can be a lengthy and costly exercise, but data federation can rapidly provide a high level of integration at a relatively low cost. When combined with other components of the InfoSphere platform, InfoSphere Federation Server supports registry-style master data management and service-oriented architecture implementations by providing a single, virtualized data access layer. It can also deliver information to web portals, e-commerce sites and similar deployments.

### Reduce implementation costs and increase ROI

InfoSphere Federation Server does not disturb the local operation of existing data sources, helping to reduce implementation costs and increase return on investment (ROI) for data integration projects. Existing applications will

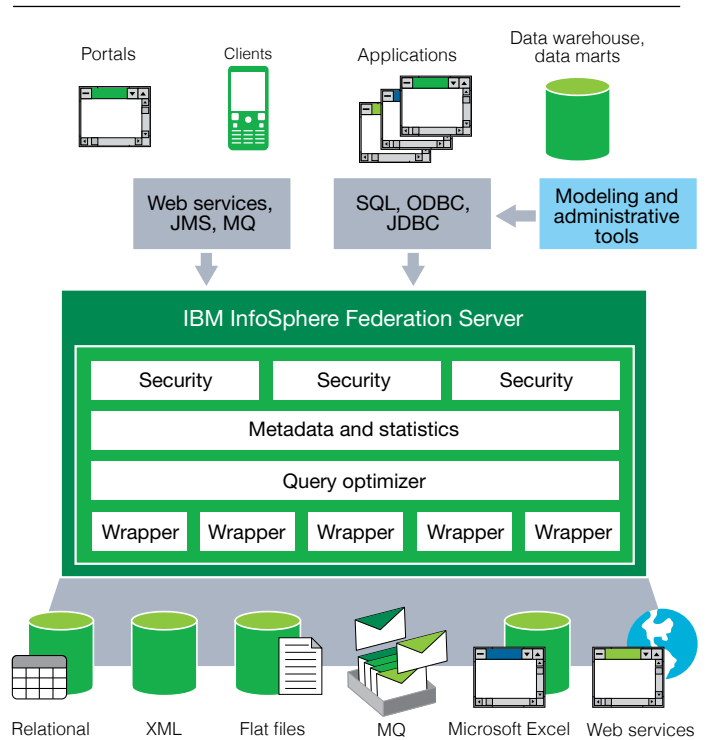


Figure 1: InfoSphere Federation Server architecture.

run unchanged, data is neither moved nor modified and interfaces remain the same. The method used by the data source to process requests is not affected by the execution of global queries against the federated system, even with global queries touching many different data sources.

InfoSphere Federation Server can also help dramatically reduce hand-coding when integrating two or more data sources because SQL queries do not have to be decomposed to act across the various databases involved. Furthermore, InfoSphere Federation Server helps reduce application maintenance costs by providing easy access to enterprise data without changing or adding to the existing IT infrastructure. The query is processed within the data server, taking full advantage of query optimization, caching and other scalable, enterprise-class techniques.

## Respond rapidly to business opportunities

InfoSphere Federation Server enables business users to quickly gain the trusted information they need to act decisively. By presenting a single view, the software masks the differences in the underlying data gathered from heterogeneous sources across the enterprise.

Users do not need to be concerned about where the data is stored, what language or programming interface is supported by the data source, what dialect of SQL the source supports, how the data is physically stored, whether it is partitioned or replicated, or what networking protocols are used. They simply see a single uniform interface, complete with a unified set of error codes.

## Gain a single view of the enterprise

By combining enterprise data such as relational, mainframe and XML documents together with standard SQL tools, InfoSphere Federation Server provides a single, unified view of enterprise data. It can accommodate all of the differences between enterprise data sources, combining data from these systems into a seamless, transparent federation. As part of InfoSphere Information Server, the federated database enables data integration, improved data quality and the exchange of business information across an organization.

## Address enterprise requirements with the IBM InfoSphere family

InfoSphere Federation Server is a key component of the IBM Information Management software portfolio. The IBM InfoSphere family is a comprehensive information integration and governance suite that helps organizations adopt analytics based on a foundation of trusted information, improve the efficiency of applications, secure enterprise data, consolidate and retire applications, build a single view and lower the cost of data. The InfoSphere platform offers time-saving automation and shared technology that work together to address enterprise requirements with repeatable processes and reusable skills.

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## How can IBM InfoSphere Federation Server meet your needs?

Businesses are using IBM InfoSphere Federation Server to solve a variety of enterprise challenges. IBM's federated database is well suited for:

- Companies that need real-time data integration across disparate sources, including those running on mainframes, UNIX and Microsoft Windows servers
  - Businesses that want to do fast prototyping and application development
  - Organizations that must meet compliance requirements to access data in place without making a copy through ETL, data replication or other means
  - Any solution where multiple data sources must be accessed through a single SQL statement, such as a query that joins tables from multiple databases
  - Any data virtualization solution that demands the power of a full relational database engine plus a global optimizer, Oracle SQL compatibility and a wide range of interfaces such as ODBC and JDBC
  - Data virtualization solutions that require caching as well as the ability to write to federated data sources using the same interface that is used to read from a cache or data source
  - Solutions that depend on transactions across multiple distributed data sources
  - Warehousing solutions that need integrated access to both local and remote data
  - Organizations with IBM InfoSphere Warehouse and IBM DB2® for Linux, UNIX and Windows that want to extend their DB2 databases by turning them into federated database servers
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## For more information

To learn more about IBM InfoSphere Federation Server, IBM InfoSphere Information Server and other InfoSphere information integration products, please contact your IBM representative or visit: [ibm.com/software/data/infosphere/federation-server](http://ibm.com/software/data/infosphere/federation-server)



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