JBOSS ENTERPRISE DATA SERVICES PLATFORM FOR MASTER DATA MANAGEMENT

DATA SERVICES CREATE THE SINGLE VIEW

Many organizations today face an urgent need for better, more flexible management of critical business information. And no information is more critical than the real subjects of business, whether they be entities (e.g., customers, trading partners, employees), offerings (e.g., products, services, securities), or places (e.g., office locations, geographic divisions).

Certainty about the accuracy and consistency of this information is a prerequisite to the success of information systems—and of business itself. Master data and reference data representing the official truth must be gathered and carefully controlled in order to enable consistent access to this information and to ensure that it is accurate, complete, and up to date.

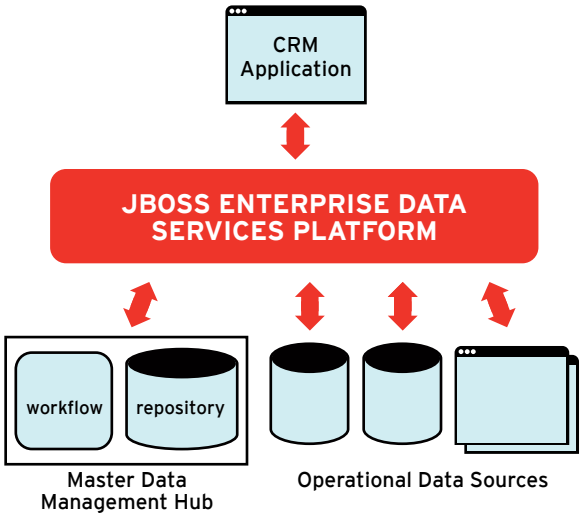
The organization needs to create canonical views of data that reflect preferred standards and vocabularies—whether based on internal standards or industry-wide standards. And given the increasing need for integration with external sources of data, this master information often must be combined with information from other systems to create comprehensive, tailored views for specific applications. As organizations seek to make the most of the information they have available, the integrity and easy flow of master data drives business processes at all levels.

Master data management initiatives have several goals:

- To create a single version of the truth—about a customer, product, or employee—for consistency that will reduce risk and eliminate debates about "whose data is right"
- To create a standard, shared vocabulary about the key "nouns" of the business, and the standard ways they are described
- To build a comprehensive view across silos (e.g., a "single view of the customer")
- To eliminate "spaghetti interfaces," streamlining the way systems access the information
- To simplify data management and standardize interoperability as part of service-oriented architecture (SOA) migration or evolution

To address the challenge of managing master data, organizations can choose from a range of architectural approaches. The core decision to be made is how you will create unified views of data from multiple systems and diverse sources, including internal and external data, legacy systems, relational and XML-based systems, and packaged applications.

SINGLE VIEW



JBoss Enterprise Data Services Platform can combine master data with data from other systems and deliver tailored views to diverse applications through SQL or Web service interfaces.

Some organizations are adopting subject-area-specific software such as customer data integration (CDI) systems or master data management systems to contain key customer information or reference data. Regardless of the approach you choose, some key questions must be answered:

- Will data be stored physically in a hub or will the master data be virtual, drawn from diverse source systems to present the standard view?
- Will a new system of record be created?
- Will the data model be vendor-supplied or will the enterprise's standard data model be used?
- How will data quality be ensured?
- How will data from the master be combined with data from other systems to deliver views containing information that will never be part of the master store?
- How will the system need to evolve over time?

"JBoss Enterprise Data Services Platform can play diverse roles in a master data management initiative, making many data sources look like one."

Red Hat's JBoss Enterprise Data Services Platform accelerates the master data project by making it easier to bridge the gap between data in existing systems and new application data requirements. It streamlines the process of resolving format and semantic differences by helping developers create data services that federate data from diverse sources to create a single view of the customer, security, product, or other entity.

Using a proven, model-driven approach, developers engage in a process of mapping and modeling, not programming, to create data services that are loosely coupled with applications. These data services present a business view of information, hiding the complexity of diverse data sources from the applications and facilitating straightforward reuse of data services. With JBoss Enterprise Data Services Platform, you will find it faster and easier to deliver data in the forms your applications need.

JBoss Enterprise Data Services Platform can complement and support master data management initiatives in a few different ways depending on your organization's goals and your preferred architectural approach:

- **JBoss Enterprise Data Services Platform can act as a master data delivery solution.** While the master data hub may contain persistent, correct master data, it is not necessarily stored in the forms or combinations that all applications will need. JBoss Enterprise Data Services Platform can be used to enable efficient delivery of master data to applications, providing the specific views or interfaces needed by those applications and combining the master data with other types of data such as specific transaction data when necessary.
- **JBoss Enterprise Data Services Platform can act as the virtual data hub.** Master data can be physically persisted or it can be created on demand. JBoss Enterprise Data Services Platform can provide access to virtual data structures that represent the master views you want to provide to applications. It can help federate data, providing views of data that match your canonical model and vocabulary, so a business view of data can be presented to applications. By supporting a variety of data sources and exposing data in a variety of interfaces and formats, JBoss Enterprise Data Services Platform can address a wide range of enterprise requirements for creating reference data or master data and serving it to applications.

- **JBoss Enterprise Data Services Platform can help supply unified data to a master hub.** The software can provide abstraction layers between the data sources and the master data, pulling together the right information for the master, resolving semantic and format differences, and creating integrated views of data that are ready to become part of your master data hub.

- **JBoss Enterprise Data Services Platform provides a service-oriented approach to complement SOA initiatives.** For organizations embarking on master data management initiatives as part of evolving their SOA, JBoss Enterprise Data Services Platform provides a service-oriented approach to data access and integration, and enables both relational and XML-based data access. The flexibility of JBoss Enterprise Data Services Platform, combined with the fact that it incorporates a full-use license of JBoss Enterprise SOA Platform, makes it an ideal way to create, manage, and deploy the data services that are needed as your SOA evolves.

SOLUTION EXAMPLE

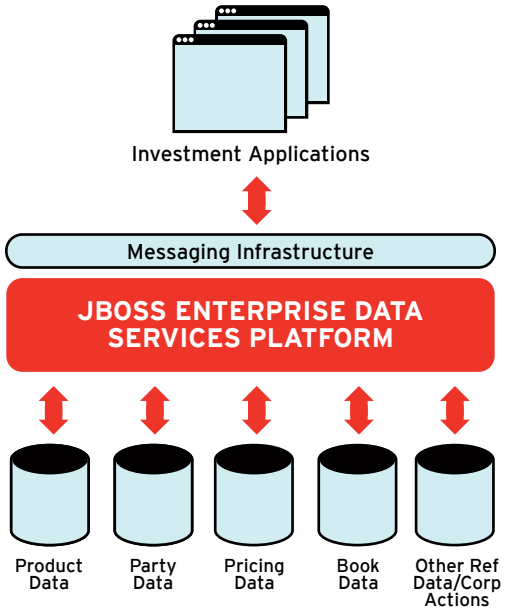
Reference data for accurate trading, accounting

One of the world's leading financial management and advisory companies is a leading global underwriter of debt and equity securities and strategic adviser to corporations, governments, institutions, and individuals worldwide. With securities data received from a wide range of sources and stored in multiple locations within the company, it was difficult to achieve consistent pricing and other securities data needed for trading and accounting.

A consistent view of securities data, which included issue and pricing information, was required, but this information was derived from a variety of sources. The process of custom coding point-to-point data access logic for the various sources was too expensive and inflexible, requiring re-coding when new data sources became available.

Once a system of record was established for each type of information, JBoss Enterprise Data Services Platform was able to federate this information, creating the forms needed by the application, and converting it to XML for use with a messaging system that served more than 50 front-end applications, such as trading systems. Models in JBoss Enterprise Data Services Platform defined a common view of the security information, and consuming applications were able to use data services in JBoss Enterprise Data Services Platform to obtain the information.

CONSISTENT SECURITIES DATA



JBoss Enterprise Data Services Platform provides a layer of data services that helps deliver consistent securities data throughout the enterprise.

The result was consistent data, more accurate trades, and improved accounting and risk management. New data sources can now be accommodated in a much shorter timeframe and over $3 million was saved in IT costs overall.

SOLUTION EXAMPLE
Banking client hierarchies

The investment banking division of a major worldwide bank wanted to gather and maintain information about client account hierarchies for the entities with which it does business. Several legacy systems each contained some client hierarchy information and data sharing was limited. Producing revenue reports across these systems was a slow, labor-intensive, and inflexible process because no standard existed for how to represent the clients with whom the bank did business with or how to roll up revenue data. A comprehensive and accurate set of client hierarchies, shared among the various groups and revenue systems, was critical to providing executives with decision support capabilities in order to, for example, identify potential cross-selling opportunities.

JBoss Enterprise Data Services Platform provided a layer of abstraction over the data sources and facilitated creation of a single view of data from those sources. The client hierarchy data is provided to systems around the world through a layer of data services using JBoss Enterprise Data Services Platform. By creating this new system, the bank has been able to improve client service for several different groups, eliminate maintenance costs for some older systems, produce accurate and consistent revenue reports, and make more effective use of the rolled-up client data for marketing and risk management.

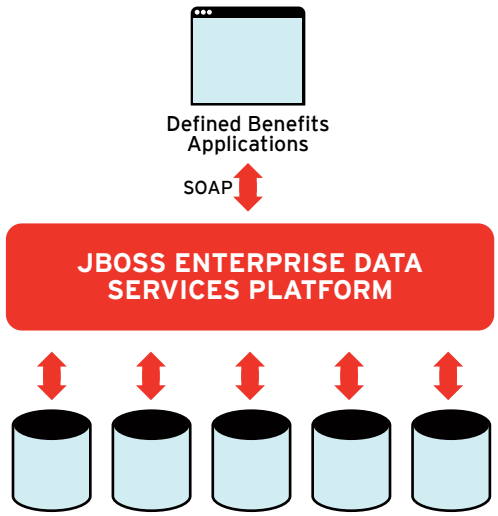
SOLUTION EXAMPLE
Standardizing investment suitability information

The defined contributions group of a top-20 insurance, banking, and asset management institution must conform to SEC Books & Records broker/dealer regulations that require confirmation of certain customer information relevant to suitability of investments and advice provided by the firm. Certain data regarding clients had to be confirmed back to the clients within a specific timeframe and also made available to branch offices and licensed representatives. Regulations also mandated certain retention policies and access by federal/state securities regulators. As customers provide and confirm their information, this information must be recorded in a write-once-read-many system and made available for access by branch representatives.

To meet regulation deadlines and provide the flexibility needed for a range of access requirements, the company selected JBoss Enterprise Data Services Platform as the core solution for an information access service through which the customer information could be read or updated.

JBoss Enterprise Data Services Platform eliminated the need for the company to create redundant point-to-point interfaces for data access by each of the client applications. In addition, the application team did not have to learn and code for the complexity of the various information sources; and they now have available data access services that can be reused for future projects. Data consumers are isolated from the complexities of source systems, and are able to use business nomenclature rather than navigating multiple database schemas. In addition, by using JBoss Enterprise Data Services Platform, the company can provide both SQL interfaces and web service interfaces to consuming applications even though most of the underlying data is relational.

SINGLE VIEW



JBoss Enterprise Data Services Platform helps create a single, consistent view of customer suitability information and make it available to diverse users and systems.

A number of client application development tools are used, including WSDL to Java, pure Java, and Microsoft .NET. The suitability data is provided through a single standard set of services usable by any system that needs the information, a process that aids internal dissemination of the information as well as regulatory access.

SOLUTION EXAMPLE

Insurance case management

The insurance unit of a top-20 insurance, banking, and asset management institution decided to put in place a data services layer that would help provide better customer policy information to customer touch points such as call centers. The company hoped to improve customer service as well as provide more opportunities for customer cross-selling and up-selling. All reporting applications and web service calls would go through the data services layer. And having data access and integration isolated in this layer would streamline development and maintenance by insulating applications from changes to the data sources. In one project, call center staff and other groups around the company used a portal application and needed to be able to look up policyholder information using wildcard entries for data elements, such as policy number, last name, first name, zip code, and other information.

Developers used JBoss Enterprise Data Services Platform to create web services that translated between the XML format used by the portal application and the native DB2 database containing the policy information. The platform's SOAP API enabled the portal application to send a SOAP message to retrieve results from the DB2 data source with performance sufficient to support real-time interactions with customers.

FOR MORE INFORMATION

JBoss Enterprise Data Services Platform is part of JBoss Enterprise Middleware by Red Hat, a powerful group of open source middleware solutions that can help make your IT infrastructure simple, open, and affordable.

For more information on the JBoss Enterprise Data Services Platform, visit **jboss.com/products/platforms/dataservices**.

For more information about how JBoss Enterprise Middleware products can help you create a more intelligent, integrated enterprise, including case studies of successful implementations, visit **redhat.com/promo/integrated_enterprise**.

To learn how Red Hat can address your specific goals and requirements, contact your Red Hat representative.

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