IBM

Customer data integration delivered in a true service-oriented architecture (SOA), to provide performance and flexibility

Customer data integration solutions

As a part of the IBM master data management (MDM) family of products, IBM WebSphere® Customer Center provides the strategic architecture that companies need in order to solve enterprise customer management issues and realize the full benefit of their investments in customer relationship management (CRM).

Industry analysts have identified the foundational problem of CRM projects as bad customer/member data. To help solve the foundational problem, WebSphere Customer Center is designed to support reference data in support of master customer data. Performing as a transaction hub, WebSphere Customer Center contains business services that can be accessed in real time and batch mode. The application is built on a proven Java™ 2 Platform, Enterprise Edition (J2EE) architecture and is designed as a componentized, service-oriented application to help optimize performance for high-volume deployments. It is also designed to permit maximum flexibility in configuration while preserving the core application for future upgrades. In summary, the proven functionality and flexibility of WebSphere Customer Center allow IT organizations to address current customer data challenges while preparing a strategic architecture to respond to future business requirements.

WebSphere Customer Center offers the following features and technologies that help set it apart from other offerings:

Service oriented architecture
From its initial product release, WebSphere Customer Center was designed as a service oriented application (SOA) that contains more than 500 business services that are accessible through multiple interfaces. WebSphere Customer Center uses a service-driven design approach; services are designed from the point of view of the functionality and processes that business applications require.

Flexible and open solution
WebSphere Customer Center is designed as a core black-box product that contains multiple configuration methods, allowing you to:

- *Configure core product behavior without changing source code*
- *Define entities and relationships using code tables*
- *Write custom business logic using the rules engine, data validation engine, other external rules (for example, Java rules) or data entitlement rules*
- *Define new services using the composite transaction framework*
- *Generate extensions and additions using the extension wizard toolkit*

All product configurations are forward-compatible with the core product, allowing you to upgrade the product.

Performance, scalability and efficiency
WebSphere Customer Center has proven benchmarking numbers for performance and scalability. On a 100 million record customer database, the average WebSphere Customer Center transaction response time was 124 milliseconds, with a transaction throughput of 165 transactions per second, which equals 600 000 per hour. WebSphere Customer Center has proven linear scalability, enabling performance improvements through clustered environments.[*]

Neutral customer management component
WebSphere Customer Center is a pure service-oriented application, enabling it to be neutral to front- and back-office systems and processes. Neutrality is important; business services must be designed to serve all business applications, not a single application suite. This allows organizations to manage front- and back-office systems and cross-application business processes independently.

Leading technology and open architecture
WebSphere Customer Center is built with leading technology such as J2EE (Enterprise JavaBeans [EJB]) and XML. This technology platform is open and componentized. WebSphere Customer Center leverages existing technology infrastructure, such as application servers, relational database management system (RDBMS) and integration hub applications (EAI). It is designed to support multiple message standards and methods.

Componentized design enables deployment flexibility
WebSphere Customer Center can be complementary to existing customer data systems. WebSphere Customer Center can be implemented in a componentized manner and integrated with other sources of customer data. WebSphere Customer Center has the capability of managing new functions such as privacy and integrating them with existing customer files.

Multiple interfaces to business services
WebSphere Customer Center supports multiple real-time (XML, Web services, JMS-MQ and so on) and batch interfaces, enabling it to be integrated more quickly and with existing applications.

Service-oriented application design

WebSphere Customer Center is a service-oriented application. All product functionality is externalized as separate business services; WebSphere Customer Center contains over 500 business services. There are many applications that claim to be service-oriented. Most of those applications offer either large-grained services that are inflexible, or extremely granular functions at a database table level. Neither option represents the true definition of a business service, which is to offer discrete processes that are granular to a functional level.

"There is a growing understanding of the right scale and content of a service — the happy mean between too fine-grained and too complex vs. too coarse-grained and too inflexible. The majority of initial Service-Oriented Business Applications (SOBAs) are limited transformations of established applications that provide access to some functionality via service interfaces. New SOBAs will be constructed purely within an SOA." — Gartner Simon Hayward, Positions 2005: *Service-Oriented Architecture Adds Flexibility to Business Processes*

Customer data integration (CDI) business services represent customer data-management functions. The primary responsibility of those functions is to maintain master customer data in the customer database. A service-oriented CDI application contains:

- *Large-grain services — which customer data processes. Large-grain services comprise of many fine-grain services and represent significant functions performed by the organization.*

- *Fine-grain services — which more atomic customer data processes or components of a larger unit of work. Fine-grain services encompass one or more objects.*

- *Object model — which granular objects that represent the database structure, not a process or functional usage of customer data. Objects are not business services.*

- *Database — defined as the database in which customer master data is stored in multiple tables.*

Service-oriented CDI applications have several differences from either application suite or tool-based approaches, including:

- *The "middle ground" definition of a service—SOA CDI hubs deliver both large- and fine-grain services. Those services offer varying levels of functionality that represent "microflows."*

- *Accessibility—SOA CDI hubs offer multiple access methods to directly call the business services. This offers greater flexibility in deployment and integration of the CDI hub.*

- *Flexibility—composites. An SOA customer hub must offer the ability to build composite transactions at multiple levels—both within the customer hub application as a 'single unit of work' service, and within outside applications such as Business Process Modeling tools.*

- *Flexibility—configuration. The business service is the central concept of the application, and the business service is the central point of integration in a transactional context.*

- *Extensibility and compatibility with existing applications—An SOA CDI hub must allow the core product to be customized as required while preserving the core product for future upgrades.*

- *Transaction management—An SOA CDI hub must be a transactional application that controls transaction context, rollback, logging, performance monitoring and audit history maintenance.*

Leading technology and open architecture
WebSphere Customer Center is a best-of-breed componentized CDI application that features:

- *Interface layer—supports multiple real-time and batch interfaces to the application.*

- *Action layer—more than 480 business services (large and fine grained) for managing customer data.*

- *Intelligence—business logic components such as event management, rules of visibility and entitlements, business rules engine, and dynamic grouping.*

- *Integrity—data quality components for party matching, data standardization and data validation.*

- *Performance—performance monitoring, application tuning using configurable subject area usage, and dynamic attribute definition and core table indicators.*

- *Integration—interfaces within the core product to support integration with vendor applications, pre- and post-exit points on all business services, and adapters to vendor solutions.*

- *Knowledge layer—operational and history and audit database.*

- *Inquiry framework—framework for building composite inquiry and search services.*

- *Fast-track server—framework for building Java 2 Platform, Standard Edition (J2SE) services for optimized performance.*

For more information
To learn more about IBM WebSphere Customer Center, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/data/masterdata/launch.html

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*   Bardine, Rick, John Byrd, and Vince Russo.
    *DWL Customer and IBM Performance and
    Scalability Results Redbook.* 2004