

## IBM InfoSphere Change Data Capture

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### Highlights

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- ***Integrates data bi-directionally between multiple computing platforms, enabling real time synchronization.***
- ***Moves data in real time ensuring critical business information is readily available and accessible.***
- ***Deploys quickly and easily using a graphical user interface to solving business problems.***
- ***Delivers changed data into various targets including IBM InfoSphere Information Server, data warehouses, databases, applications and message queues***

Up-to-date, trusted information is imperative to making actionable decisions that benefit the business. To be successful, organizations need to be able to report and analyze corporate data quickly and easily, regardless of what applications created the data, what platform they're running on, or what database they're stored in. They need to synchronize inventory, financial and customer information between existing systems and Web applications. And they need to be able to consolidate and distribute data between applications across different regions, business units and departments.

IBM® InfoSphere™ Change Data Capture is a high-performance, low latency, real-time data integration solution that enables customers to easily sense and respond to relevant business data changes throughout the enterprise.

- *High ROI through its applicability to multiple projects that require the timely capture and delivery of data changes such as dynamic data warehousing, master data management (MDM), application consolidations or migrations, live reporting, and service-oriented architectures*

- *Optimizes data sourcing for ETL processes through a direct integration with InfoSphere DataStage, enabling real-time ETL, or event-driven data cleansing through a direction integration with InfoSphere QualityStage, both of which are part of the InfoSphere Information Server Family*
- *Low impact, log-based capture and rapid delivery of data changes ensuring critical information is readily available to lines of business thereby increasing visibility and productivity*
- *Broad database, message queue, and platform support for heterogeneous environments*

### InfoSphere Change Data Capture

With real-time data integration solutions, organizations are making better business decisions, running smoother operations, winning new customers and partners, and increasing their bottom line. They're using IBM InfoSphere Change Data Capture to:

- *Provide real-time feeds of changed data for data warehouse or MDM projects, to enable operational and tactical business decision-making based on the latest information*

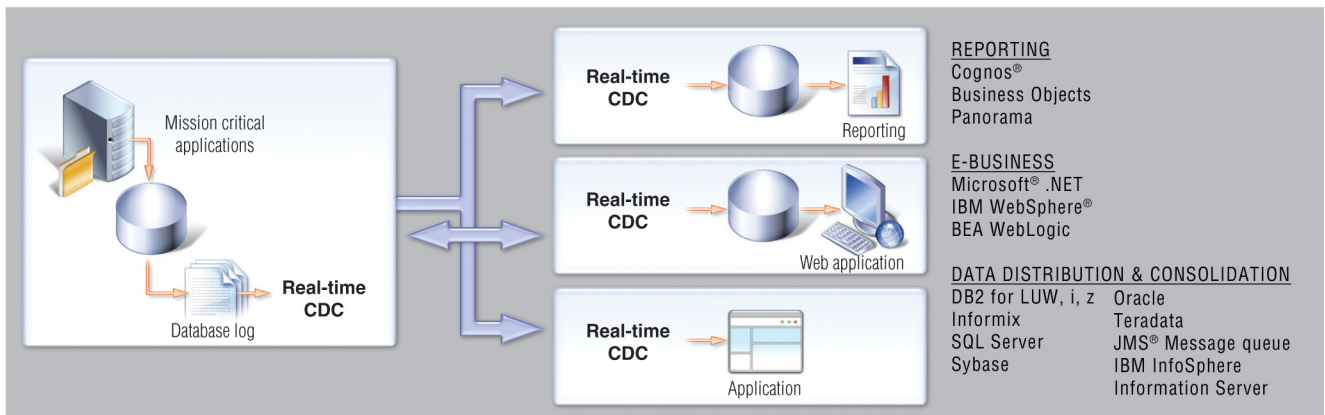


Figure 1: Architectural overview of IBM InfoSphere Change Data Capture

- Dynamically route data, based on content, to various message queues to be consumed by one or more applications to ensure accurate and reliable data across the enterprise
- Populate real-time dashboards for on-demand analytics, continuous business monitoring, and business process management (BPM) to integrate information between mission-critical systems and Web applications so employees, customers and partners have access to real-time information
- Consolidate financial data across systems in different regions, departments, or business units
- Improve the operational performance of systems that are adversely affected by shrinking nightly batch windows and expensive queries and reporting functions

**Compelling advantages**

- Versatile– As part of an overall information management solution, InfoSphere Change Data Capture can

provide real-time ETL in combination with InfoSphere DataStage, or event-driven data quality with InfoSphere QualityStage. InfoSphere Change Data Capture can also synchronize data changes for an MDM system as well as replicating data to secondary systems for operational reporting.

- Broad database and platform support– InfoSphere Change Data Capture supports a wide range of databases such as DB2® for z®, i®, LUW, Informix®, Oracle, SQL Server, Sybase, and Teradata on all major platforms, thus ensuring your existing IT investments can be fully leveraged. The expansive support for heterogeneous environments also make InfoSphere Change Data Capture an ideal solution for application migrations and consolidations as no downtime is required.
- Low impact– Rather than using triggers or performing queries against the database, IBM InfoSphere Change Data Capture reads the native database log to capture changes. For businesses

faced with shrinking batch windows or overutilized applications, this log-based change data capture (CDC) approach ensures that the performance of even the most demanding mission-critical applications running on the source system is not adversely impacted.

- Efficient– IBM InfoSphere Change Data Capture can operate in real-time CDC mode, batch refresh or net-change CDC mode. With CDC, data is processed throughout the day, as the changes occur, rather than during a nightly batch window. This means organizations can eliminate redundant data transfer, free up their batch window for other tasks, and save network bandwidth.
- Scalable– IBM InfoSphere Change Data Capture is a high-performance solution that easily scales to large data volumes without impacting the performance of mission-critical applications running on the source system.

**Operational Reporting**

A transportation capacity provider requires its order information, load

characteristics, contracts, and billing data to be integrated with the rest of the enterprise to facilitate driver load assignments, and business analytics. The amount of time required to distribute and integrate this data to their data warehouse and Web applications takes as long as 30 minutes. This not only meant that their users essentially had to wait for their data, but that they also didn't have a real-time, accurate view of the business. By using InfoSphere Change Data Capture for the low impact, real-time extraction of data changes from their source systems, InfoSphere DataStage is able to receive the timely stream of data changes and apply it to their data warehouse through ETL processes, as well as other Web applications throughout the enterprise. Not only does this provide real-time changes to the data warehouse, but multiple points within the enterprise can benefit and leverage the changed data with minimal impact to the source systems.

### **Minimizing Batch Windows**

A consumer goods manufacturer stores its manufacturing data and sales figures on two separate ERP systems located in two countries. A nightly batch job loads the data into a data warehouse for reporting. However as their business grew, so did their volume of data. The eight-hour nightly batch window was too short. By using InfoSphere Change Data Capture to load data into the

data warehouse in real time, the manufacturer has the accurate, up-to-date information it needs to make better business decisions, with the added benefit of freeing up its batch window for other tasks.

### **E-business Synchronization**

A commercial mortgage provider wants to give customers online access to their loan and investment status. It's also looking to develop new Web applications so customers can apply for mortgages, pay their car loans, and conduct Internet-based lending. By using InfoSphere Change Data Capture to synchronize data between its existing systems and new Web applications in real time, customers have instant access to information and services over the Internet.

### **Increased Business Visibility**

A global courier company wants to track customers' billing and package information as accurately as possible. But with only one billing application to track transactions in both North America and Europe, they're finding it increasingly difficult to manage the amount of data. They would like to be able to balance the load of this mission-critical system between separate systems located in North America and Europe, but they need to find a way to make sure critical information is synchronized between the two systems in real-time. By using InfoSphere Change Data Capture, they can have separate systems process transactions efficiently in each location and still synchronize

critical data in real-time across the Atlantic. In turn, customers get up-to-date information and billing on a global basis.

### **For more information**

For more information about IBM InfoSphere Change Data Capture, contact your IBM sales representative or visit

[ibm.com/software/data/infosphere/change-data-capture/](http://ibm.com/software/data/infosphere/change-data-capture/)



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