

ATTUNITY STREAM FOR IMS/DB

A CHANGE DATA CAPTURE SOLUTION

Attunity Stream for IMS captures and delivers only the changes made to IMS/DB data sources. Using low impact change-data-capture technology, companies can move operational data efficiently and in real time.

Benefits

- Reduce data latency and provide fresh data to decision makers
- Eliminate systems downtime and free up processing time – by reducing or eliminating the batch windows used for moving data
- Reduce the risk of not completing nightly batch data processing
- Dramatically reduce the required resources for ETL
- Proven to work with virtually any ETL tool in the market
- Avoid any impact on the source IMS systems by using a non-intrusive CDC technology

Real-time and Efficient Data Integration using Change Data Capture

Every organization needs to move data in order to maintain data integrity, synchronize systems, and build integrated data stores such as data warehouses (DW) and operational data stores (ODS). In order to do so, records need to be sourced from one system and moved into another. In some cases, data also needs to be processed, transformed, cleansed and integrated.

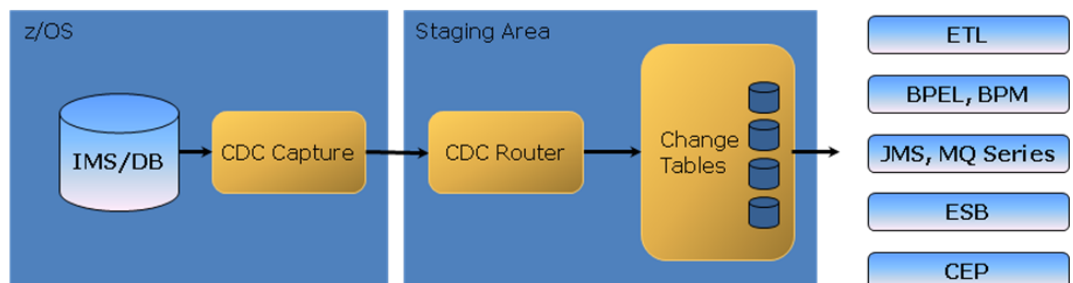
With the ever increasing demand from business users for real-time information, IT teams are challenged with architecting data integration solutions that can deliver data on time, and in an efficient manner. These solutions often try to address the following questions:

- What is the business impact of using fresh, timely information?
- How to deal with growing data volumes and shrinking batch windows?
- Can we eliminate batch windows to cut costs or better utilize resources?
- What is the risk and business impact if nightly batch processes fail?

Change Data Capture (CDC) addresses these questions by capturing and processing only the changes made to enterprise data sources. **Attunity Stream for IMS** captures and delivers only the changes made to IMS data sources. It extends ETL, data integration, EAI, or home-grown applications, allowing businesses to:

- Extract and source IMS data efficiently and in real-time
- Reduce or eliminate the batch windows required to move IMS data
- Support real-time business intelligence and data warehousing
- Synchronize IMS with other data sources
- Enable event-driven processing and business event capture

Attunity Stream for IMS/DB



Key Capabilities

- Log based change data capture
- Change record filtering
- SQL-based change delivery for ETL and data-oriented applications
- XML-based change delivery for EAI and message-oriented applications
- Simple installation and fast configuration using wizard-based GUI
- Reliable delivery and recovery
- Easy to use

Supported configurations

- IMS/DB Batch
- IMS/DB under CICS
- IMS/DB under IMS/TM

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Components of Attunity Stream for IMS/DB

IMS Change Data Capture Agent

The Attunity change capture agent for IMS is a 'live' software component that is responsible for the identification and capture of changes to IMS databases. The agent captures the changes to IMS and keeps them in an MVS logstream for minimal intrusion to the IMS system.

Staging Area

The CDC staging area improves performance, flexibility and recoverability by providing a place to store changed data and to apply intelligent filters and services. The staging area offloads processing from the data server, makes it easy to support multiple change consumers, and provides better control of the lifecycle of changed data.

CDC Consumer Interfaces

The CDC consumer interfaces allow ETL, EAI, and homegrown applications to easily consume changed records. Using standards-based APIs, applications can poll changes using SQL, or listen and wait for changes using XML-based messaging.

Attunity Studio

The Attunity Studio is a GUI for configuring and managing CDC solutions. Graphical and wizard-based, the Attunity Studio provides a productive environment for configuring IMS CDC, deploying solutions, and managing them in production.

Frequently Asked Question (Technical Q&A)

How intrusive is the solution to my IMS database?

Attunity Stream is designed for minimal intrusion. The IMS CDC does not require any changes to applications or to the IMS database. Rather, it introduces a light logger that captures changes and puts them into an MVS logstream. The remaining CDC processing is done by using the logstream and without any impact on the IMS system.

What does "change streaming" mean?

Streaming changes means that data is moved and processed in small chunks, even a record at a time. Change streaming introduces the concept of a 'stream position' that identifies the last change record that was successfully processed and the current location in the 'stream of changes'.

Is the solution fault resilient? How does it recover from failures?

As data moves from one machine to another, failures can sometime happen. CDC solutions are able to recover from any failure by managing "check points" based on stream positions. This means that in any failure, the system can pick up and continue working from the last successfully processed record.

How does the solution deal with IMS metadata and its non-relational data structure?

Attunity provides Metadata Import Utilities to harvest IMS metadata from DBD, PSB and COBOL copybooks. In addition, it provides flexible and automated mapping of non-relational structures (e.g. IMS segments) to relational metadata models, using virtual tables or flattening models.