



InSync is a comprehensive and cost-effective data management and manipulation solution for z/OS

## Data management for z/OS

Simplified data management for assured reliability of your business applications

**Rapid application deployment on IBM Z requires sophisticated data creation and correction facilities for the data sources of Db2, IMS, IBM MQ and other z/OS files. InSync®, Macro 4's data management solution, provides:**

- Interactive data manipulation for production and test environments
- Powerful test data creation capabilities, including automated generation of high-volume data
- Anonymization of sensitive data such as personal information
- Real-time management reporting on all data manipulation activities
- Extensive compare, search and selection facilities
- Full support for COBOL, PL/I and Assembler layouts
- Extensive file utilities for listing, allocating and manipulating VSAM and other z/OS file formats
- Read-only and in-storage editing for greater control of data
- Simplified Db2 and IMS data management, reducing dependence on database administrator resources
- The facility to target multiple Db2 tables in a single operation
- Ease of access through native and Eclipse interfaces

### The data management solution

Accurate data is crucial for successful business operations. If production data is erroneous or applications are not thoroughly tested during pre-production phases for a complete range of production conditions, applications will fail, causing costly downtime.

InSync is designed to simplify the process of data manipulation and provide fast and easy access to the data used by mainframe applications.

Easy-to-use data manipulation facilities allow users to correct, create, copy, extract, convert, reformat and disguise application data. Users can pull data from multiple sources, including Db2, IMS and IBM MQ.

Large volumes of realistic test data can be generated automatically from test records or production data, using randomization or specific rules.

Data manipulation is monitored and controlled through the use of security exits and centralized auditing – augmenting your RACF or other chosen security solution.

Macro 4's integrated suite for fault analysis and testing on z/OS:

#### DumpMaster

Fault analysis and recovery

#### InSync

Data management and manipulation

#### TraceMaster

Interactive testing and debugging

#### TraceMaster CodeTrack

CICS code path analysis and storage violation detection

## Comprehensive data access

InSync provides comprehensive data mapping using COBOL, PL/I and Assembler layouts. Db2 table mapping makes use of the Db2 catalog definitions.

InSync provides a common look and feel for browse, edit, print, extract and database load functions.

Many functions can be performed either online or in batch. The ability to generate batch jobs online is also provided.

## Data disguising

To aid data privacy and security, data disguising algorithms can be deployed to alter sensitive data that is copied from one environment to another, such as from production to test. Data disguising could be used to prevent access to personal information such as an individual's date of birth and bank details, for example.

Data disguising rules can be applied centrally, at an enterprise level, or by individual users wishing to anonymize production files for one-off use, such as in testing. Data disguising is available for z/OS files and for Db2 tables, including related tables, and IMS databases.

## InSync for z/OS files

InSync supports sequential data sets, VSAM data sets, PDS/PDSE libraries and HFS files. Comma-separated values (CSV) and XML files can be created. Facilities are provided for comparing:

- Files of the same or differing data layouts
- Source code/JCL
- Library member lists
- Load modules

InSync offers powerful PDS/PDSE search, update and extract facilities, complemented by flexible member and member characteristic filters.

## InSync for Db2

InSync provides facilities to browse, edit, copy, load and extract single or related sets of tables. Multiple tables can be targeted in a single operation, saving valuable time and effort. The creation of CSV files is supported.

Table selection criteria can be created via easy-to-use panels, eliminating the need for SQL knowledge.

Large object support is provided for BLOBs, CLOBs, DCLOBs, XML columns and other data types.

## InSync for IMS

InSync supports HDAM, HIDAM, HISAM, DEDBs and HALDBs. Batch facilities include change, delete and insert of segments plus the ability to compare database extracts.

An optional interface, InSync® for IMS Online, provides a variety of database browsing and editing facilities for IMS end users with restricted access rights.

## InSync for IBM MQ

Browse, edit, print, load and extract functions can be performed over IBM MQ queues. New queues can be created and the attributes of existing queues can be inquired upon and altered.

Message descriptor values and embedded MQ headers can be displayed or suppressed.

## Management reporting

To enable tracking and analysis of all data manipulation activities conducted throughout the enterprise, InSync supports real-time management reporting through Splunk, TIBCO JasperReports and all other leading business intelligence and reporting tools.

## Intuitive user interfaces

InSync offers native and Eclipse interfaces, which are intuitive and easy to use.

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