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Data Synchronization – Data Replication – Data Migration – Data Distribution

The right data in the right place at the right time.

tcVISION...

...is a cross-system solution for the timely, bidirectional data synchronization and replication based on changed data.

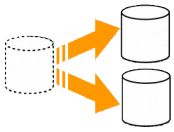
...turns data exchange into a single-step operation. No middleware or message queueing is required. The data is exchanged in raw format, compressed and reduced to the processing of changed data.

...supports unidirectional or bidirectional data transfers in real-time, time-controlled, or event-based.

Areas of Use

Coexistency

Synchronization of data in a heterogeneous system environment consisting of a mainframe and distributed systems

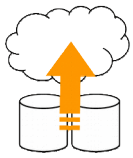


Migration

Gradual migration of data and applications in heterogeneous system environments

Modernisation

Mainframe relief: Transfer of mainframe data to distributed systems or Hadoop Data Lakes



Analytics & BigData

ETL of mainframe data for Data Warehousing, Business Intelligence, Analytics & BigData

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Why tcVISION?

Cost Reduction

- Relocation of data exchange processes from the mainframe to more cost-efficient platforms (e.g. UNIX)
- Compressed data transfers in raw format
- Prevention of mainframe costs: Backup and image copies to relieve the production mainframe databases
- No additional middleware required – elimination of costs and implementation efforts – more efficient transport layer
- Data transfer volume is reduced to a minimum through focus on changed data (Changed Data Capture)
- Loopback prevention for bidirectional replication to prevent undesired backflow of data to the source of the change

Data Integrity

- Practice-proven processes are available to restart a replication after system failures (database errors, transmission errors, etc.)
- Master Data Management to ensure data consistency
- Ensuring referential integrity through transaction-bound data transfer

Flexibility and Actuality

- High integration potential of the tcVISION solution: Multiple Change Data Capture technologies can be used depending on change frequencies and latency times
- Intuitive data mapping offers comprehensive functions for data type conversion and data transformation up to a complete change of the data model
- Comprehensive conversion of historically developed mainframe data structures
- Highest actuality through continuous real-time processing
- Automatic or user-controlled data preparation/transformation (ASCII ↔ EBCDIC) for the target (conversion, reformatting, interpretation, etc.)
- Support of relational and non-relational databases

User-Friendliness

- Intuitive dashboard for administration and controlling
- Comprehensive monitoring and logging all data movements ensure transparency across all data exchange processes
- Integrated database specific "Apply" function to merge the data into the target system, e.g. direct Insert, Update, Delete, or via JSON or DBMS loader
- Integrated data repository with history management to maintain all data structures and data exchange rules
- Key management for non-indexed data
- Elimination of programming efforts for data transfers
- Integrated pooling/streaming processes avoid programming efforts and message queueing to prevent data loss because of unavailability of the target system or delays

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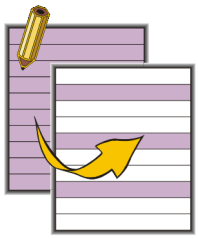
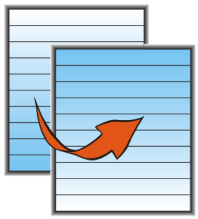
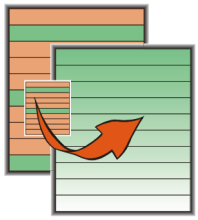
tcVISION Change Data Capture Mechanisms

DBMS-Extension	Log File Processing	Bulk Transfer	Batch Compare
Real-time	Event-based or time-controlled	Mass data transfer	Snapshot processing
			
Real-time replication – timely capturing of all changed data _____ Obtains the changed data information directly from DBMS _____ Secure data management – even across a DBMS restart _____ For: IMS/DB DL/I VSAM DB2 Adabas CA-IDMS CA-Datacom Oracle DB2 LUW MS-SQL Server PostgreSQL IBM Informix mySQL/MariaDB	Processing of DBMS log files _____ Transfer of the changed data with predefined time intervals _____ Ideal for nightly batch processing _____ Processing occurs right after log commit _____ For: IMS/DB DL/I VSAM DB2 Adabas CA-IDMS CA-Datacom Sequential files Oracle MS-SQL Server DB2 LUW PostgreSQL IBM Informix Adabas LUW Sybase mySQL/MariaDB	Efficient transfer of entire databases and files _____ Consistency analysis of all data _____ Ideal for the "initial load" prior to real-time synchronization _____ For periodic mass data transfers _____ Single-step data exchange _____ For: All supported input and output targets	Comparison with data snapshots _____ Efficient transfer of changed data since the last batch compare run _____ Automatic determination, creation, and transfer of deltas by tcVISION _____ Secure restart/recovery after error incidents _____ For: IMS/DB DL/I VSAM DB2 Adabas CA-IDMS CA-Datacom Sequential files Oracle MS-SQL Server DB2 LUW PostgreSQL IBM Informix Sybase Adabas LUW ODBC data sources mySQL/MariaDB

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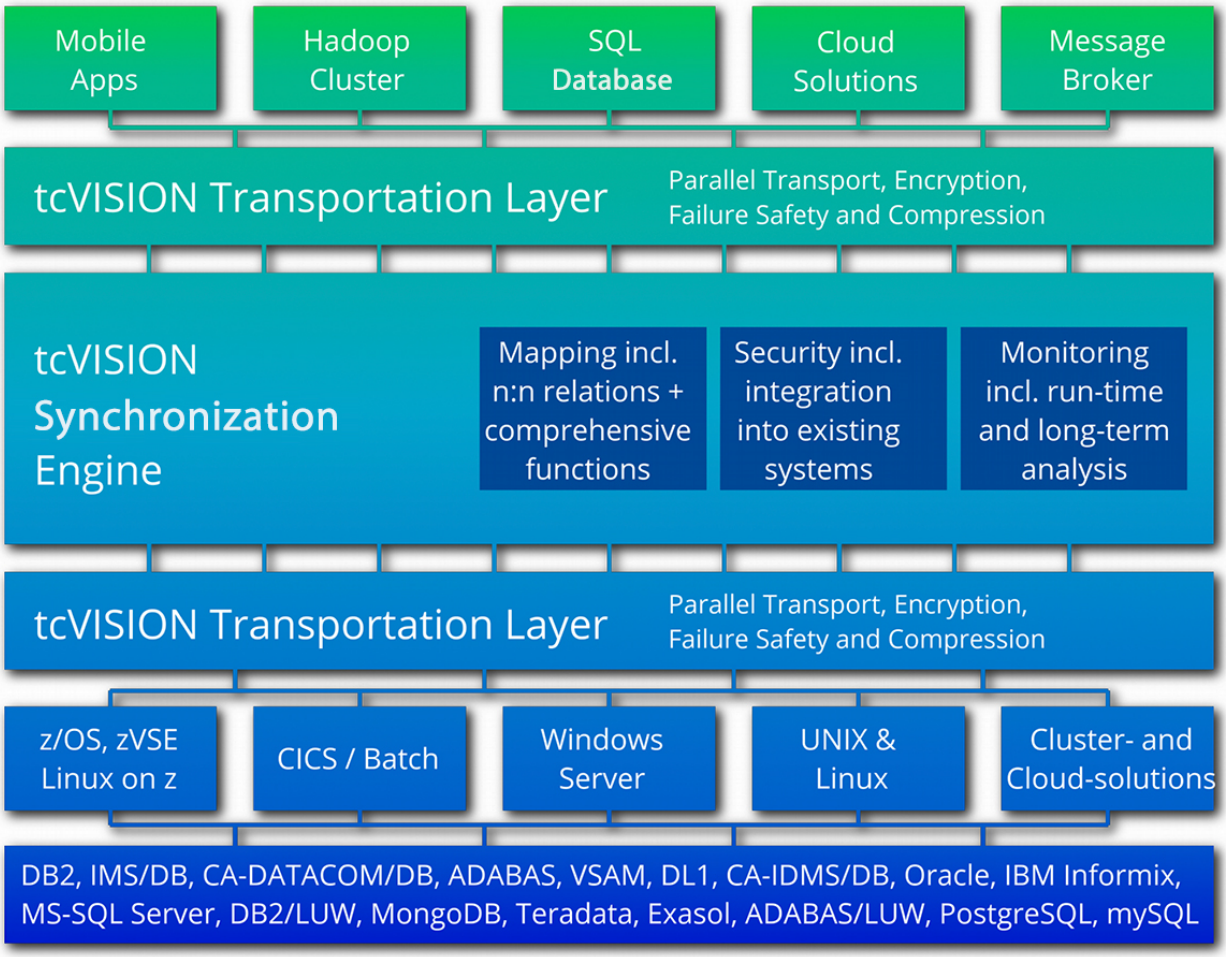

The tcVISION solution offers all functions required to perform a reliable and efficient synchronization in heterogeneous environments.

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Supported Environments

z Systems	*Distributed Systems*
• z/OS • z/VSE • Linux on System z	• MS-Windows • UNIX • Linux • Cloud systems • Open Source platforms such as Hadoop

Supported Data

z Systems	*Distributed Systems & Cloud Solutions*
• DB2 • VSAM • IMS/DB • DL1 • Adabas • CA-Datacom/DB • CA IDMS/DB • Sequential files	• Oracle • DB2 LUW • MS-SQL Server • Informix • mySQL/MariaDB • PostgreSQL • IBM Informix • Sybase • Adabas LUW • Hadoop • HDFS • MongoDB • Teradata • Exasol • Kafka • JSON • Google Protocol Buffers • XML • avro • messagepack • AWS • etc.

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