Treehouse SOFTWARE

tcVISION Extension for BigData

The Solution

A great part of the added value of modern IT systems is the latency free data and process integration of transactional and analytical areas. The cross-system integration platform tcVISION is unique, efficient and reliable. With tcVISION mainframe data can be fast and easily integrated in near real-time into BigData based operative applications or Business Intelligence and Analytics.

The tcVISION solution is practice approved and has been constantly developed further to meet the requirements of the new technologies. The result is the support of BigData in tcVISION version 6.

In the current version of tcVISION BigData is now a fully integrated output platform in addition to the already available platforms (Oracle, DB2, DB2/LUW, IBM Informix, Sybase, Microsoft SQL Server, PostgreSQL, Software AG Adabas LUW, ODBC).
The creation of FILES, the direct output into a hadoop File System (HDFS) and the usage of the distributed streaming platform Apache Kafka as transport layer is available.
JSON, Avro and CSV are the currently used protocols for the streaming to BigData.

The main focus of the tcVISION integration platform is the provision of a real-time synchronization to integrate mainframe data into BigData based solutions.

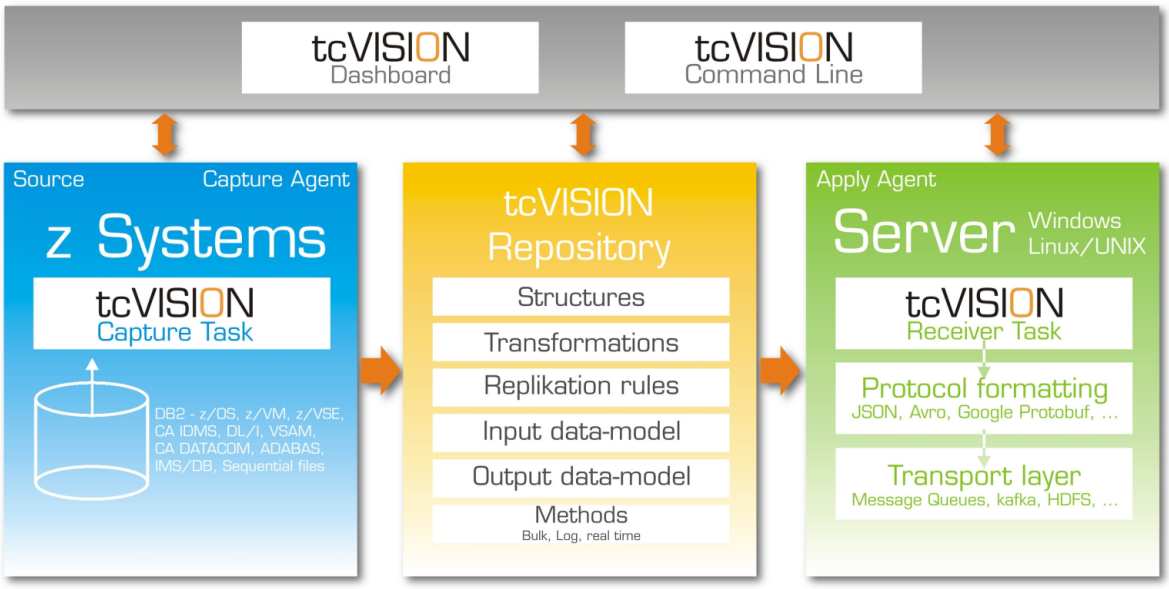
The Benefits

- Near real-time replication of mainframe data to BigData allows actual real-time analytics or the relocation of mainframe applications (e.g. internet applications like online banking, e-Government, etc.) to BigData with synchronous data on both platforms.
- Because of the concentration on changed data the costs of the data exchange are reduced to a minimum.
- The utilization of mainframe resources is reduced as far as possible to avoid costs for mainframe knowhow and mainframe MIPS.
- Data exchange processes can be deployed and maintained with tcVISION without mainframe knowledge, hence costs can be saved and BigData projects can be developed faster and put to production.
- The near real-time replication of tcVISION from mainframe to BigData allows the relocation of BI, reporting and analytic applications to the more cost efficient and – for these applications – more powerful BigData platform.

The Features

The tcVISION integration platform consists of a variety of state-of-the-art technology components which cover far more than an ETL process.

- tcVISION turns data exchange in the sense of a real-time synchronization into a single step operation.
- No additional middleware is required.
- Modern Change Data Capture Technologies allow an efficient selection of the required data from the source system with focus on the changed data. The data exchange process is reduced to the necessary minimum which results in lower costs for the cross-system data integration.
- tcVISION can also use backup and recovery files (e.g. image copies, log files, etc.) as a source for replication. Production data does not need to be touched.
- tcVISION also supports the fast and efficient load of large volumes of mainframe data into BigData. In this context the processor costs of the mainframe are low and negligible.
- An integrated data repository guarantees an overall cross-platform and transparent data management.
- Mainframe knowledge is not required for the replication.
- tcVISION includes a rule-engine to transform data into a target compliant format or allows user-specific processing via supplied APIs.
- The integrated staging concept supports the offload of changed data in raw format to less expensive processor systems. This reduces mainframe processor resources to a minimum. The preparation of the data for the target system can be performed on a less expensive platform (Linux, UNIX or MS-Windows).
- The transfer to and feeding of data into BigData is part of the tcVISION data exchange process. No intermediate files are required.
- The exchange of large volumes of data between a production mainframe environment and BigData can run in parallel processes to reduce latency to a minimum.
- The tcVISION integration platform contains comprehensive control mechanisms and monitoring functions for an automated data exchange.
- tcVISION has been designed in a way that BigData based projects can be deployed with total project autonomy and maximum reduction of mainframe resources.


tcVISION Dashboard
tcVISION Command Line
Source
Capture Agent
z Systems
tcVISION Capture Task
DB2 - z/OS, z/VM, z/VSE, CA IDMS, DL/I, VSAM, CA DATACOM, ADABAS, IMS/DB, Sequential files
tcVISION Repository
Structures
Transformations
Replikation rules
Input data-model
Output data-model
Methods
Bulk, Log, real time
Apply Agent
Server
Windows Linux/UNIX
tcVISION Receiver Task
Protocol formatting
JSON, Avro, Google Protobuf, ...
Transport layer
Message Queues, kafka, HDFS, ...