



tcVISION

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(POC description)

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1 General

The Proof of Concept should implement the general functionality of tcVISION. The criteria for the installation are defined as *setup a successful, repeatable, automated replication process with documented results from DL/I in z/VSE to a corresponding Oracle and MSSQL system on a server.*

Focus within the POC is:

- the bidirectional synchronisation between two segments of DL/I and according tables in MSSQL Server and Oracle in a production like environment
- implement the automated initial load
- implement near-realtime synchronisation between DL/I and MSSQL and Oracle
- show the handling of field tables (OCCURS)
- minimize the latency for the synchronisation process
- create an environment ready to implement into production
- discuss control mechanisms¹

2 Environment

tcVISION S390 Manager:	z/VSE V4R3 or later
tcVISION Source Databases:	DL/I version 11 or 12
tcVISION Server Manager:	(Windows/Unix/Linux) Server (32- or 64-bit)
tcVISION Target Database :	Oracle and MSSQL
tcVISION Controlboard:	Windows 7/8/10

¹ as of Nagios or Dollar Universe

3 General

tcVISION can synchronize DL/I changes made in CICS or Batch in real-time via the DBMS extension. To keep the impact on the mainframe as low as possible tcVISION sends the changes directly to the server. The whole processing for initial load and real-time capturing can be automated.

The initial load can be made by access DL/I directly to read the database and transfer to the server. After the initial transfer all the segments will be extracted and loaded by the server.

4 tcVISION Manager installation

4.1 tcVISION S390 Manager in z/VSE

The tcVISION S390 manager will

- collect the changed data from DL/I,
- control the running transfer-scripts,
- start jobs for reading DL/I databases for the initial load.

4.1.1 tcVISION S390 Manager installation requirements

The tcVISION S390 Manager z/VSE needs its own partition with at least 20 MB of memory.

The tcVISION modules, job samples and macros need the tcVISION library. For maintenance a VSAM RRDS file will be created. All jobs are available from the installation library.

The tcVISION manager needs access to all needed resources on the mainframe.

In case of *Real-Time transfer* should be at least

- 20 MB system-GETVIS and
- 50 MB dataspace

available.

More detailed installation instructions can be found in the manual '*tcV5HostInstallation_en.pdf*'.

4.2 tcVISION Server Manager

The tcVISION on the server will receive the changed data from z/VSE and apply to the target system(s). A standard installations procedure will install the components to the server. The installation requires 20 MB disk space. *If data are stored and buffered on the server, more disk space may be needed.*

The tcVISION manager can be installed at the database server. However, this is not mandatory. The communication from tcVISION to the databases is made as follows:

- Oracle: OCI interface (requires at least basic lite client)
- MSSQL: using the client library (Native Client; bcp)²

For the installation in Unix/Linux the following software packages are needed:

- unixODBC
- glibc3 runtime
- openssl
- openldap

2 For CDC using MSSQL as source an "Enterprise Edition" of SQL Server is required.

tcVISION runs on the following operating systems:

- Linux 32- and 64-bit
- Linux on System/z
- AIX 5L and later
- sun Solaris 9 and later
- MS Windows 32-bit and 64-bit

A repository for holding the metadata must be created at the target database. More detailed installation instructions about the creation of the tcVISION repository can be found in the manual '*tcV5Repository_en.pdf*'.

5 TCP/IP

The tcVISION components must be able to connect to each other. Connections must be possible:

- from z/VSE manager and scripts to the server
- from server manager and scripts to the mainframe
- from Windows Control Board to the server tcVISION is running on and to the mainframe

All tcVISION components must be able to connect to each other in both directions. To ensure the connectivity at least *five* ports must be available. The number of ports to reserve depends on the number of parallel tasks desired to run in tcVISION.

Please refer to the *connection plan* in Appendix A: Connections overview on page 6.

6 tcVISION Control Board

The tcVISION Control Board will be used to monitor, administer and control the different tcVISION manager and replication processes.

The tcVISION Control Board is to be installed on a windows machine running at least Windows Vista. For the installation a directory with free space of 40 MB is required. All writing operations will be placed beneath the *users* directory.

The tcVISION Control Board is not necessary for the transfer itself. It will be used for defining and visually monitoring the transfer process, only.

The tcVISION Control Board can be installed on the same server as the database resides. However, this is not mandatory.

7 Staff

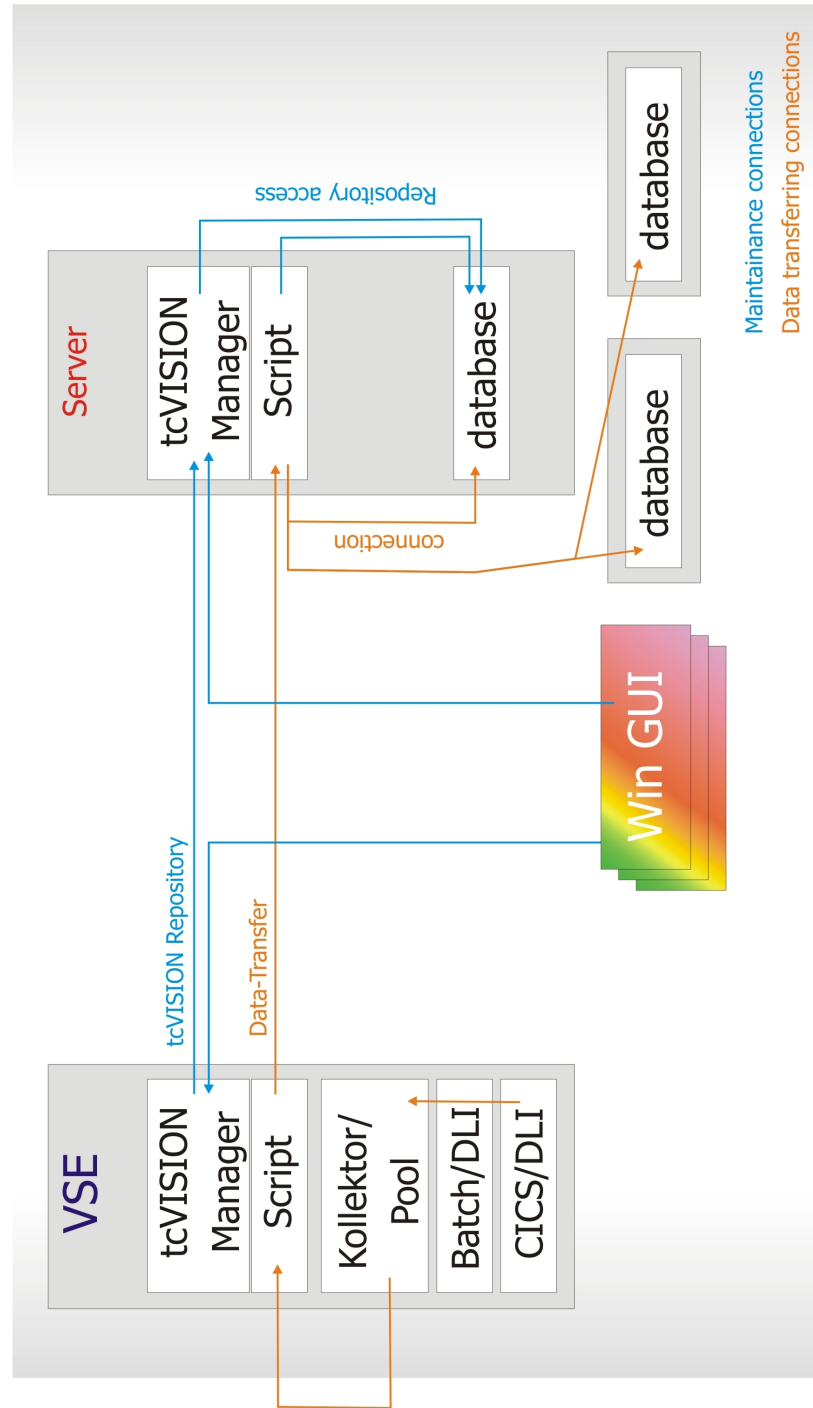
For the installation we recommend that the following people are available:

- z/VSE System administrator
- DL/I-administrator
- staff who's familiar with the data structure and content of the databases and files
- DB-administrator on server
- MS-Windows System administrator
- Network administrator

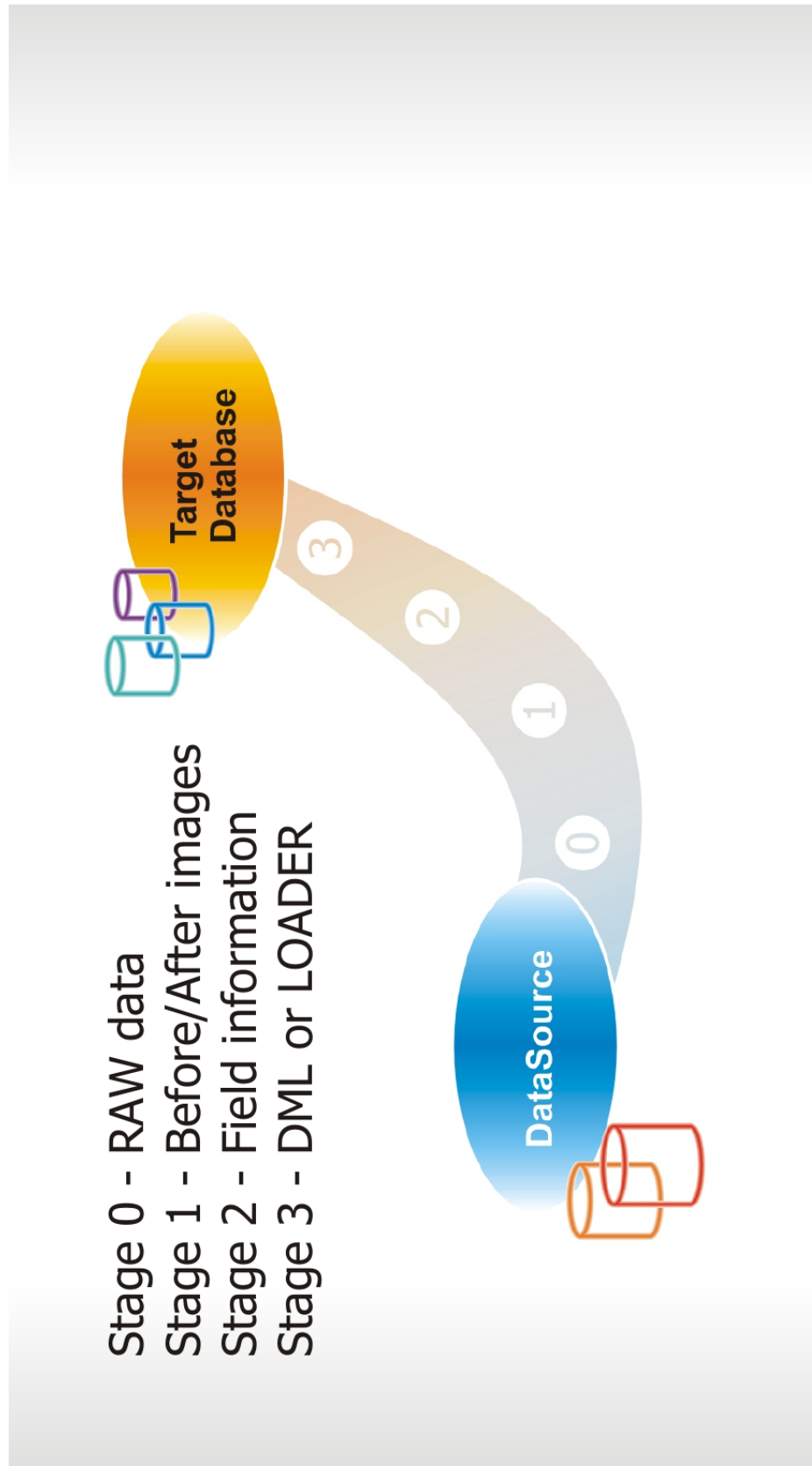
8 Appendix A: Connections overview



Connection overview



9 Appendix B: Staging concept of tcVISION



10 Appendix C: OCCURS processing



tcVISION OCCURS processing

