# We are *vit*

**Breeding values for all dairy and beef cattle in Germany, reporting about Milk Quality provided to farmers in 10 controlling organization of the German Federal States, Genetic evaluations for horses, dairy and beef cattle are the best known products of *vit*. At *vit* there is no mission statement hanging on the wall. Instead, for more than 35 years, a simple Credo has guided *vit*'s actions in fulfilling their responsibilities towards customers and employees: The provision of high quality Information Services for Agricultural and related organization, provision of best ADVISORY SERVICES to related organizations, development of reliable software for large scale processing of farm animal related data on a mainframe computer.**

The service organization ***vit*** *(Vereinigte Informationssysteme Tierhaltung w.V.)* and the subsidiary *Rechenzentrum Verden GmbH* provides full-range IT services for farming, livestock breeding and horse-sports in Germany and Luxembourg to more than 50 agricultural organizations covering approx. 55000 farms.

The equestrian city Verden is home of ***vit***. The IT-services are provided though a z/OS-system. All relevant production data is kept in ADABAS databases on the mainframe and ORACLE databases in a LINUX-environment. The mainframe applications have been developed in PL/I and NATURAL. Users of the ***vit*** services are various agricultural organizations like horse breeding organizations (i.e. the Hanoverian Society) and cattle breeding organizations (i.e. WEU and ZEH, just to name a few).

***vit*** is a long-standing customer of tcACCESS. Various JAVA applications are in production and communicate with the ADABAS databases on the mainframe using the tcACCESS JDBC component (see also user story "*vit* - High Quality INFORMATION SERVICES for Agricultural and Related Organizations").

Wolfgang Hartjen, Database Administrator at ***vit***: "It is our long term goal to migrate our mainframe applications to Client/Server platforms. tcACCESS already helped us to lay the foundation for that ambitious goal. It is our plan to perform the migration on a project base. It always has been and still is important to us that for the entire migration period we will operate both worlds as equals, the mainframe world with ADABAS and the LINUX world with ORACLE. To do this it is mandatory that we must implement a bi-directional real-time data synchronization between both platforms. We have been looking for solutions that offered a bi-directional synchronization. The tcVISION solution from B.O.S. has been the right one to implement our Master/Master concept for the replication scenario."

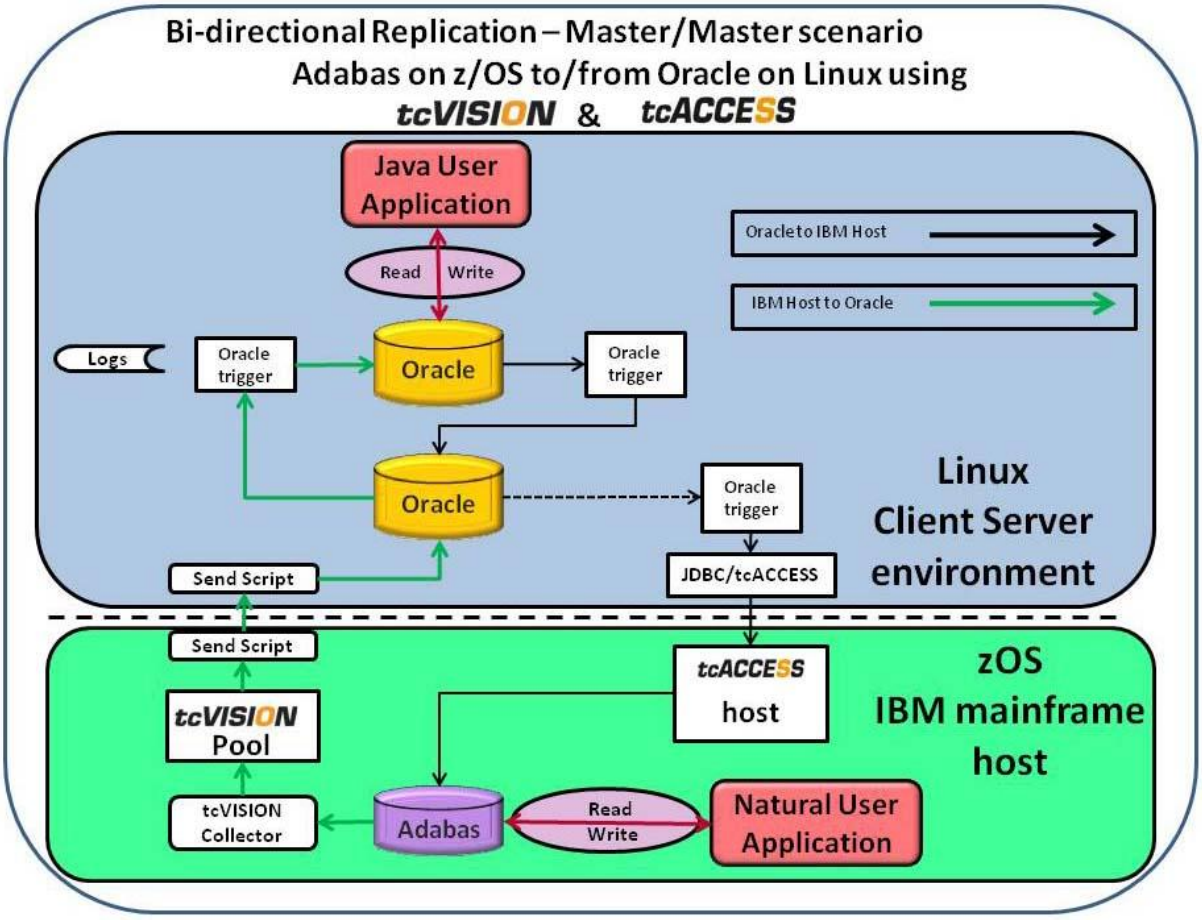
tcVISION was installed in Spring of 2008 and a first prototype for a real-time replication from mainframe ADABAS to ORACLE on LINUX was created. Mr. Hartjen: "A B.O.S. representative helped us with the first implementation steps. We were very much in favor of the tcVISION concept because the only activities on the mainframe is the capturing of the changes from the ADABAS Command log, the actual processing of the data happens on the target platform. The effect on the mainframe is only minimal."

The decision to go ahead with tcVISION was made during Summer of 2008. The ***vit*** team started the first synchronization project. Wolfgang Hartjen: "The first project has been our Address Maintenance. All master data related to our customers is maintained through that system. These are approximately 500,000 addresses stored in 3 ADABAS files. The synchronization scenario is based upon changed data capturing on the mainframe in real-time. The ADABAS extension of tcVISION captures the changes and these changes are then propagated to a LINUX system using a mainframe collector- and data pool-storage. The LINUX system hosts an ORACLE database that acts as a mirror of the ADABAS databases. tcVISION directly propagates the mainframe changes into the ORACLE database."

The updates to ORACLE that have been applied by tcVISION are forwarded to the actual ORACLE production database using ORACLE triggers. The changes applied by the Client/Server applications to the production ORACLE database must also be replicated back to the mainframe. Mr. Hartjen: "The purpose of a Master/Master concept is that both platforms must be seen as equals. Changes applied to ORACLE are triggered and passed to tcACCESS via the tcACCESS JDBC component. The mainframe SQL Engine of tcACESS applies the changes to ADABAS. It is important that these changes are recognized by tcVISION during the capturing process and not be replicated back to ORACLE. This mechanism works well in our replication solution. It is also important that when record are inserted into ORACLE and ADABAS the new ADABAS Identification Sequence Number (ISN) is successfully obtained. If that is the case the changes to ORACLE are committed. We use a tcACCESS Stored Procedure to obtain the ISN from the mainframe."

The replication solutions goes into production mid 2009. Additional projects will follow, especially the real-time replication for the large volume horses- and cattle-databases. Mr. Hartjen: "We built up our synchronization expertise with the first project and we will use and enhance this expertise with the upcoming projects. With the help of the professional and competent support from B.O.S. we are well prepared and we can follow our motto:

**We are fit. We are *vit*."**




This is a simplified representation of the replication scenario between the z/OS mainframe with ADABAS and the LINUX platform with ORACLE.

Both platforms act as equals (Master/Master). The tcVISION DBMS Extension for ADABAS captures changes on the mainframe in real-time and replicates those changes into an ORACLE mirror database. ORACLE triggers apply the changes to the ORACLE production database.

The replication path from ORACLE to ADABAS on the mainframe is maintained through ORACLE trigger and the JDBC component of tcACCESS.

A tcACCESS Stored Procedure, developed in PL/I, obtains the ADABAS Internal Sequence Number (ISN) for new inserted records for the ORACLE environment.



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