

Relational access layer for CPG-Applications

BRUNATA Hürth is a corporation with 450 employees and approximately 700 freelancers, acting as meter readers, mechanics and representatives. As an independent member of the BRUNATA-METRONA group, BRUNATA is responsible for the consumption based settlement of heating costs and water consumption costs for landlords and tenants. In addition, BRUNATA develops systems and manufactures devices to register the consumption of energy and water in residential and business buildings.



BRUNATA Hürth has defined the goal, to migrate all production data currently stored in hierarchical DL/I databases to the relational DB2 database. The most important tool to successfully complete that task will be tcACCESS.

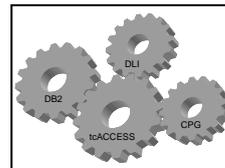
BRUNATA uses an IBM 9672-RA6 (G5) running z/VM 3.1 and VSE/ESA 2.3. The production data is stored in DL/I databases. Based on the increasing demands on the IT division to cope with the Internet/Intranet, emerging new technologies (i.e. mobile data entry devices and systems), management requirements for data warehouse solutions, as well as the fact that the existing data base was designed more than 10 years ago and was extremely inflexible to meet today's' challenging requirements; this all lead to the decision to replace the DL/I based data model with IBM's DB2 relational database. Minor technical points support the decision: the resource-consuming reorganization runs of the database as well as the fact, that nearly no tools for DL/I are available on the software market any more

For BRUNATA, the decision for DB2 has far-reaching consequences: A new data model must be designed, all application programs must be modified and the existing programming team must learn to think „relational“! To put this decision into action, BRUNATA decided to gradually migrate individual projects and applications. Although this decision will result in a longer migration period, a longer need for synchronizing the „old“and the „new“data platforms, it also means a faster productive transfer to the new technology. To support the migration process and to ensure a reliable synchronization of the data, BRUNATA started looking for a software tool, which allows to access and join the classical mainframe resources DL/I, VSAM and DB2 using the relational SQL language and which could be used with stand-alone utilities as well as being called by an API from in-house application programs.

The decision was made to purchase tcACCESS from B.O.S. , in München-Haar, Germany.

After spending a day's visit at B.O.S., where the conceptual implementation of tcACCESS was sketched out, the system was installed under the VSE operating system at BRUNATA. During the trial period, several proto-types have been developed and tested to migrate the DL/I databases to DB2. It came in extremely handy, that the new Version 5 of tcACCESS offered a feature to logically unload DL/I databases using SQL

language (including JOINS) and to create a file which could be directly used as input to the DB2 Loader Utility. This tcACCESS feature can be used with utilities or it can be implemented into in-house programs using the supplied API. This was exactly BRUNATA was looking for. „We have been convinced by the ease of use of the product, its richness in functions, the good performance and the excellent support provided by B.O.S. “ states Lothar Stein, Vice Chief Technology Officer of BRUNATA Hürth.



Since the purchase of tcACCESS BRUNATA has not been inactive! For the development of their Batch and Online-Applications, BRUNATA uses a fourth Generation package from Lattwein, Germany, called CPG5. An interface has been developed which enables CPG5 programs to transparently access any VSE resource using SQL-statements. The CPG5 developer works in his familiar environment, in addition he can now utilize the SQL syntax. „The integration of the API functions into our CPG programs was simple and straight forward“assures Ulrich Schmitz, application developer and database specialist. He continues: „The interface enables us to access VSAM and DL/I with standard SQL statements. The result is, that the CPG5 programs are now completely independent from the access layer. Migration to DB2 will be extremely simplified and we can do it step by step. We have developed additional CPG5 testing applications, where the programmer can interactively test the SQL statements and view the results. Adhoc-Reporting and the typical „Quick Shots“can now be done without any pain. We are more than happy to share the interface with other CPG customers.“

The cooperation between BRUNATA and B.O.S. is another fundament for a successful implementation of tcACCESS. „All wheels must teamwork and function together. We are convinced that we made the right decision with tcACCESS to set the course for the right future direction of our IT department.“ Summarizes Lothar Stein the previous experiences with tcACCESS and B.O.S. Software GmbH.

```

*****
* FILE DIVISION
*****
* DATASET FOR TC-ACCESS
FILE H16150.
* ....
*****
DATA DIVISION.
*****
-----
* DATENFEILDS FOR TC-ACCESS
-----
DEFINE H16150.
  ORG H16F.
  DEFINE HUGO.
  ORG.
  ....
*****
INPUT DIVISION.
*****
* DATASET TC-ACCESS
*****
FILE H16150 HS DD.
*****
PROCEDURE DIVISION.
*****
* INITIALIZE PARAMETER FOR TCACCESS
*
H16F(1) = 'SELECT * FROM SUW.LIGEPAR'.
H16F(2) = 'WHERE K LRLINR = ' .
H16F(3) = ' ' 0001844' ' . * ' --> '
* BEGIN PROCESSING
SETLL H16150.
IF CPGFRC = 'NF'.
  CONVERT H1615B IN
  * PRINT RETURNCO
ELSE.
  DO LOOP.
  *
  READ H16150.
  *
  IF CPGFRC = 'E
    BREAK.
  ENDIF.
  IF CPGFRC <> '
    CONVERT H161
    * DRUCK RETU
    BREAK.
  ENDIF.
  * SATZ STEHT I
  * Z.B. TS-QUEU
  ENDDO.
  ENDIF.
CLOSE H16150.

```

Q000008A M638 Test tcACCESS Funktionsauswahl 05.02.02 07.43UHR

Bitte geben Sie die Operation, das gewünschte Format und Ihre Anweisung an:

Op.: _____ Format: _____ Max.Satzanzahl: _____ 0 (0=alle)

SQ: select * from SUW.LIGEPAR
where k lrlinr = ' 0008144'

DF=Ausführen PF3=Storno PF4= nur QDD PF6=Daten PF9=Menü CL=Ende

Q000008E M638 Test tcACCESS Daten-Anzeige 05.02.02 07.45UHR

Feldname	Inhalt
Satznummer:	1
SEGMENT	LIGEPAR
K_LRLINR	0008144
K_LJGAR1	1
K_LJGAR2	01
K_LJGUAB	14.06.1983
LJGAR1	1
LJGAR2	01
LJGUAB	14.06.1983
LJGULT	31.12.2099
LJGPN7	0506956

DF=Vorw. PF3=Zurück PF4=BWD PF5=FWD PF7=Rückw. PF8=Vorw. PF9=Menü CL=Ende

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