



Release Note

Last review: 2006-07-13

This document contains an overview of the most important new functions of tcACCESS Version 7.

1. General

Ease of use and ultimate flexibility has been the overall goal for Version 7. The start with the new version as well as the migration to the new version should be as simple as possible. Most of the new functions and features are a direct result of customer requirements and recommendations.

2. Enhancements to the SQL-Engine

Several enhancements have been incorporated into the SQL-Engine to even further improve the flexibility and ease of use.

2.1 Access to RRDS files as SQL-Engine tables

To access a VSAM RRDS a field with a fixed name of 'RRDS_RRN' must be defined. tcACCESS uses this field to directly access the record number and is treated as a unique key.

The field format must be a full-word and it must be the first field (offset 0) in the table definition. Only if this field is present a VSAM/RRDS file can be modified (INSERT, UPDATE, DELETE).

2.2 DB2 UDB and ORACLE as SQL-Engine Tables

Version 7.0 provides a direct access to DB2 UDB without the need to have a DB2 client available. This new interface enables host programs (Online or Batch) to process data from DB2 UDB and ORACLE.

This new functionality now provides full bidirectional data-exchange with ORACLE and DB2 UDB in complex heterogeneous environments.

This feature is an enhancement of the **Open System Transparency Option** of tcACCESS.

2.3 DISTINCT, UNION and UNION ALL

The support of the SQL-keywords DISTINCT, UNION and UNION ALL further increases the flexibility to "relationally" process legacy host resources. The implementation of these key-words into Version 7.0 will also increase the number of independent software-packages that can utilize the tcACCESS ODBC- or JDBC-driver.

2.4 New datatype "LONGVARGRAPHIC"

The implementation of datatype "LONGVARGRAPHIC" allows the processing of binary images as data objects (i.e. PDF-documents). Two types of LONGVARGRAPHIC are supported: fixed field length and variable field length. In addition new SQL-functions are available to process this datatype: GRAPHIC(expr,[length]), VARGRAPHIC(expr,[length])

2.5 IDMS Enhancements

The IDMS-interface has been significantly enhanced in Version 7. IDMS Schema-definitions can now be processed by the import module of the tcACCESS front-end program. Also automatic or manual maintenance of OWNER-MEMBER relationships is fully supported for UPDATE/DELETE and INSERT-functions.

All information relevant for an efficient access to IDMS will be automatically recognized during the import of IDMS Schema definitions. Last but not least Version 7 also maintains and processes DBKEY-information.

2.6 Generic Data Server (IO-Exit)

The provision of the IO-exit allows a structured and simple access to data-sources that are not directly supported by the SQL-engine. This especially applies to home-grown file-systems or file-systems that are part of a third party software package where the file-system is proprietary but the vendor provides an interface to access the data. The IO-exit can be used as a generic data-server.

The integration into the tcACCESS SQL-Engine is part of the definition of the data-source. The program can be individually used to manage special data-sources. The host file-name specified in the data-source definition will be passed to the exit and will be used to select the correct file or table. The program will be called by the tcACCESS SQL-Engine at the corresponding exit points and it receives control to perform a specific function. (i.e. determination of the key, read a record, update a record etc.).

2.7 OCCURS- Processing (Virtual Tables)

A Virtual Table may be used when processing fixed (OCCURS) or variable (OCCURS DEPENDING ON) table structures within a record.

Using a Virtual Table is optional. If not needed the standard table structure of tcACCESS will be used.

The table structure will be recognized during the import of a COBOL- or PL/I copybook, a ADABAS-PREDICT- or IDMS Schema-definition and the user will be prompted whether he wants to use a Virtual Table or not.

An additional "index-field" can be generated in the record that contains the number of the table-entry of this record.

3. New Generationparameter

3.1 General Generationparameter

H2PTOVR	Allow to overwrite an already registered task by another workstation listener.
IGNISTR	Controls the checking mechanism of values that are too long for SQL-Engine INSERT statements. N: If value is too long an error is returned. Y: If value is too long data gets truncated.
SGNNUSR	Permits or denies the attempt to sign on with a non valid user-id (NOUSERID). If the parameter has been set to 'N', the sign-on attempt with a non valid user-id will be rejected independent of parameter SGNTYPE.
SHOWSYT	If the parameter has been set to 'N', the SQL-Engine system-tables SYSTAB, SYSCOL, SYSPROC, SYSPCOL, etc. will not be displayed for catalog access.
TCPWTO	Controls the display of TCP/IP messages on the system console.
SSAMVP	Controls the usage of a VOLUME-name as prefix for a security-check for VSE/SAM files.

4. Other enhancements

4.1 tcACCESS as Webservice

tcACCESS accesses – to all daa-sources and stored procedures – can now be used in a Webservice. The tcACCESS Webservice service transparently integrates into any existing architecture on an application server and uses the server to exchange messages via SOAP/XML.

4.2 ORACLE interface in the Front-end program

Using the tcACCESS Front-end program it is now possible to store the result of a SELECT query directly into an ORACLE table.

4.3 Type 'U' as part of the date-format for TCADCONV

The new type 'U' can be used when specifying the date format with macro 'TCADCONV'. It will now be distinguished between signed and non-signed packed date-formats. When specifying an 'S' the sign will be represented as "C" or "D" when comparing key values or for an 'INSERT'-statement. Specification of 'U' (non (un)-signed date-format) uses an "F".

4.4 Display of registered Listener-Tasks

A new dialog has been implemented into the tcACCESS Front-end program that can be used to display or maintain listener tasks that are registered in the connected CICS/VTAM Monitor-system. The following functions are available:

- Display of registered tasks (Status information)
- Cancel task processing
- Unregister tasks
- Start tasks
- Display the current runtime of a task

4.5 Listener-Enhancements

The tcACCESS Listener (workstation component) functionality has been increased to provide even better flexibility and efficiency during processing. The enhancements are:

- Definition of a time interval that must be used to process a certain task
- Batch-Tool BMLLS to individually register, unregister, start and stop tasks from a PC-batch or UNIX-script
- Automatic information provided by a host program to the workstation listener that the host is again available. This eliminates the polling activities when the host is not available.
- Limit the maximum size of the listener log-file
- Support the copying of existing tasks in the task edit dialog

4.6 ODBC/JDBC-Enhancements

The tcACCESS ODBC-driver is capable of retrieving multiple data-records in a single fetch. In addition it can connect multiple parameter-lines to a single statement. This allows for the usage of multiple INSERT/UPDATE/DELETE calls, hence increasing the overall performance.

Table- and View-names can now be defined without a CREATOR. It is possible to establish a "Default-SQLID" in the ODBC/JDBC component. This SQLID can be changed when setting the actual catalog.

The general parameter for JDBC-data-sources can now be separated by data-source.

4.7 J2EE Connection

The Java 2 platform, Enterprise Edition (J2EE) defines the standard for the development of enterprise applications. J2EE simplifies the development process for enterprise applications because the applications can be built based upon standardized, modular components. J2EE provides a full set of services to these components and independently takes care on a lot of application details with the need for complex programming.

The JDBC driver of tcACCESS Version 7 can be used with application servers that are J2EE compatible.

The tcACCESS JDBC driver has been successfully tested with the following application server:

- Sun J2EE 1.3.1 Application Server
- Sun J2EE 1.4 Application Server
- IBM WebSphere V5.0

4.8 XML Output as UTF-8

Output of XML data can be performed in UTF-8 format. This eliminates conversion errors and enhances the international usage of tcACCESS.

4.9 Copy and Print of Definitions

Version 7.0 supports the copying and printing of SQL-Engine definitions.

It is also possible to transparently edit the definitions as text files. The default editor will be used.

4.10 Compatibility mode for Stored Procedures

The tcACCESS-SQL Engine now supports a DB2-like execution of Stored Procedures. This requires the definition of *all* parameters (including output parameter) for a call. The input parameter also become part of the resultset.

This functionality can be activated using a runtime-parameter. Existing calls to Stored Procedures must not be changed.

4.11 BMLRM – Deletion of Hostfiles

A new utility has become part of the utility tool-box that supports the deletion of host-files during execution of a WINDOWS-batch. This greatly enhances the usage of automated batch procedures. The following data-sources are supported by utility "bmlrm":

- SAM
- TS-Queue
- tcACCESS Virtual Disk
- VSE-Library Member libdef
- VSE-Library Member catalog
- VSAM(FCT) (Deletion of file content)
- PDS-Member (Deletion of file content)
- PDS-PS (Deletion of file content)
- PDS-PO (Deletion of all members)
- POWER-Listing

4.12 Enhanced statistical functions

The readability of the statistics output for SQL queries has been enhanced. If the total length of the query is larger than 250 bytes, the field list will be replaced by three dots, hence providing room to display the tables and conditions.

4.13 CDC Option for OS/390 and z/OS

The Changed Data Capture support option for OS/390 - z/OS is no longer supported as an optional feature to tcACCESS.

5. Remarks

In order to use all of the functions of the new tcACCESS mainframe component you must use the client component of tcACCESS Version 7.0. However, it is still possible to use an older mainframe component with the Version 7.0 clients or an older client with the Version 7.0 mainframe components.