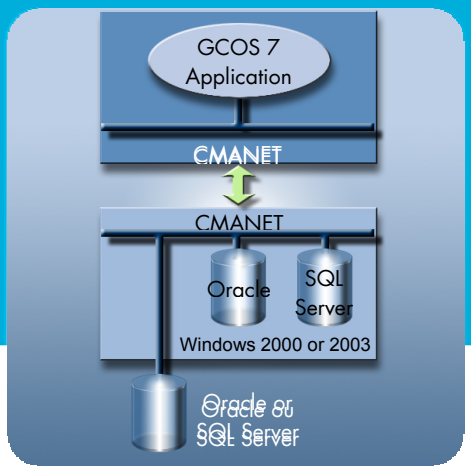


Architect of an Open World™

SQL XT

The technology SQL XT (eXtended Technology) allows GCOS 7 applications to access and manipulate data from a relational database (Oracle or SQL Server) using the SQL language.

The advantages of SQL XT

SQL XT allows GCOS 7 applications to access relational databases, with no specific DBMS on GCOS 7.
Thus, critical TDS or Batch applications accessing UFAS or IDS/II data can also access data stored on an Oracle or SQL Server database. SQL XT allows the sharing of data in real-time with applications of the open world, thus eliminating or reducing file transfers.
SQL XT also allows the evolution of Oracle 7 (Oracle on GCOS 7) applications to more recent versions of Oracle.

Components of SQL XT

SQL XT is based on the client-server model. As such it is composed of modules for execution on both GCOS 7 and Windows, together with a development tool (CMAINST) to facilitate the development of distributed applications.
The module CMANET executes on both GCOS 7 and Windows and provides:

- The handling of message exchanges between the two platforms
- The conversion of data types and character sets.

The module CMATP executes on GCOS 7 and is used in transactional mode (access to relational databases from TDS).
This module:

- Ensures data integrity due to a mechanism of synchronization of updates
- Guarantees optimal performance due to a connection cache mechanism.

The Listener Services execute on Windows and their purpose is to:

- Wait for reception of GCOS 7 requests
- Start execution of the remote (surrogate) client module.

The development tools (CMAINST and CMA) execute on Windows and:

- Generate the source programs for GCOS 7 and the remote client on Windows
- Build the executable module for the remote client on Windows.

Development of the client-server application

With SQL XT, each developer may have his own multi-platform working environment with no changes to his customary methods of working.

The development of the client-server application is comprised of the following stages:

- Writing or adaptation of a GCOS 7 source application in Cobol with insertion of SQL requests (Embedded SQL)
- Using CMAINST or CMA on Windows to construct the source programs (for GCOS 7 and the remote client on Windows) forming the basis of the remote application. This process may be entirely driven from GCOS 7.

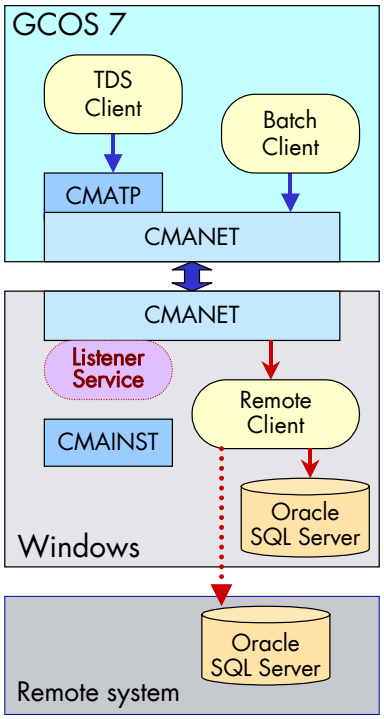
The use of the development tools results in the splitting of the GCOS 7 Cobol application into two new source programs:

- One which executes on GCOS 7 and provokes the remote execution of the primitives for relational database access after compilation and linking on GCOS 7
- A remote client program which executes on Windows and implements the relational database access after compilation and linking on Windows.

Architecture

Execution of the distributed application

Once the application is built, the GCOS 7 Client and the remote client on Windows communicate with each other via the CMANET modules, present on both GCOS 7 and Windows.



Technical specifications

ENVIRONMENT

Windows 32-bit platform

RSHD from Denicomp (necessary only if the development process is driven from GCOS 7)
For Oracle access:
- Cobol pre-compiler from Oracle (9i or 10g, according to the Oracle version used)
- Net Express 4.0 or + from Microfocus (Cobol compiler)

For SQL Server access:
- Net Express 4.0 or + from Microfocus (Cobol pre-compiler for SQL Server + Cobol compiler)

Communications

TCP/IP network
Delivered with Interop7 basic:
- Sockg7, SUBUX, FTP server on GCOS 7
- FTP client on Windows

FUNCTIONS

GCOS 7 (DPS 7000/TA and DPS 7000/XTA)

Cobol (Batch or TP) for the applications
Product available with Interop7 ID420

The database

SQL Server 2000, 2005
Oracle 9i, 10g

For further information, contact your commercial interface or the NovaScale GCOS Competence Center.

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