

GCOS8 MAINFRAME EXPRESS

GCOS8 Mainframe Express provides a fully integrated Bull GCOS8-mainframe maintenance and development environment, enabling programmers to take advantage of modern, powerful development tools to edit, compile, debug and test mainframe applications on their workstations.

Overview

Mainframe-based software development tools and the development practices that evolved from their use were adequate for building the first generation of mainframe only systems. However, the IT and business landscapes are changing and the following demands are being made:

- ⇒ Businesses require IT to deliver systems faster and for less cost
- ⇒ Programmers demand the most modern development environments available
- ⇒ Business system functionality needs to be delivered to multiple channels, including the Web

GCOS8 Mainframe Express provides a fully integrated Bull-mainframe maintenance and development environment, enabling programmers to take advantage of modern, powerful development tools to edit, compile, debug and test mainframe applications on their workstations. GCOS8 Mainframe Express combines leading-edge mainframe emulation, a comprehensive unit and integration test environment, and connectivity, increasing productivity across the entire development lifecycle.

Highlights

Faster Time-To-Market

By using a streamlined development and testing process, GCOS8 Mainframe Express programmers can create and modify mainframe-based applications in significantly less time.

Lower Costs and Reduced Risk

By using GCOS8 Mainframe Express, programmers are in full control of their own test environments. Offloading development and testing cycles to the workstation releases costly mainframe resources, and eliminates resource contention. Editing, compilation, test and printing overheads are significantly reduced, and expensive mainframe hardware upgrades, with their associated software costs, can be postponed. The best-in-class testing facilities in GCOS8 Mainframe Express lead to improved code quality and reduce the potential for system downtime in production.

Attract and Retain Top Talent

For many years, client-server programmers have had access to the most modern tools. With GCOS8 Mainframe Express, mainframe programmers can also benefit from a modern, rapid, graphical development environment. Experienced COBOL programmers with valuable programming expertise and knowledge of the business can become fluent in GUI client/server technologies, while new programmers can be more easily attracted to COBOL development.

Enable Legacy-To-Web and E-Business Development

GCOS8 Mainframe Express provides a flexible, high-performance platform for the development and testing of Internet based and client/server applications. It enables organizations to combine mission-critical COBOL with emerging information technologies in order to extend business applications across the enterprise.

Micro Focus

GCOS8 Mainframe Express is based on Micro Focus Mainframe Express®, the number one solution for IBM-mainframe maintenance and development environment. Micro Focus is the industry leader in COBOL development solutions.

Features

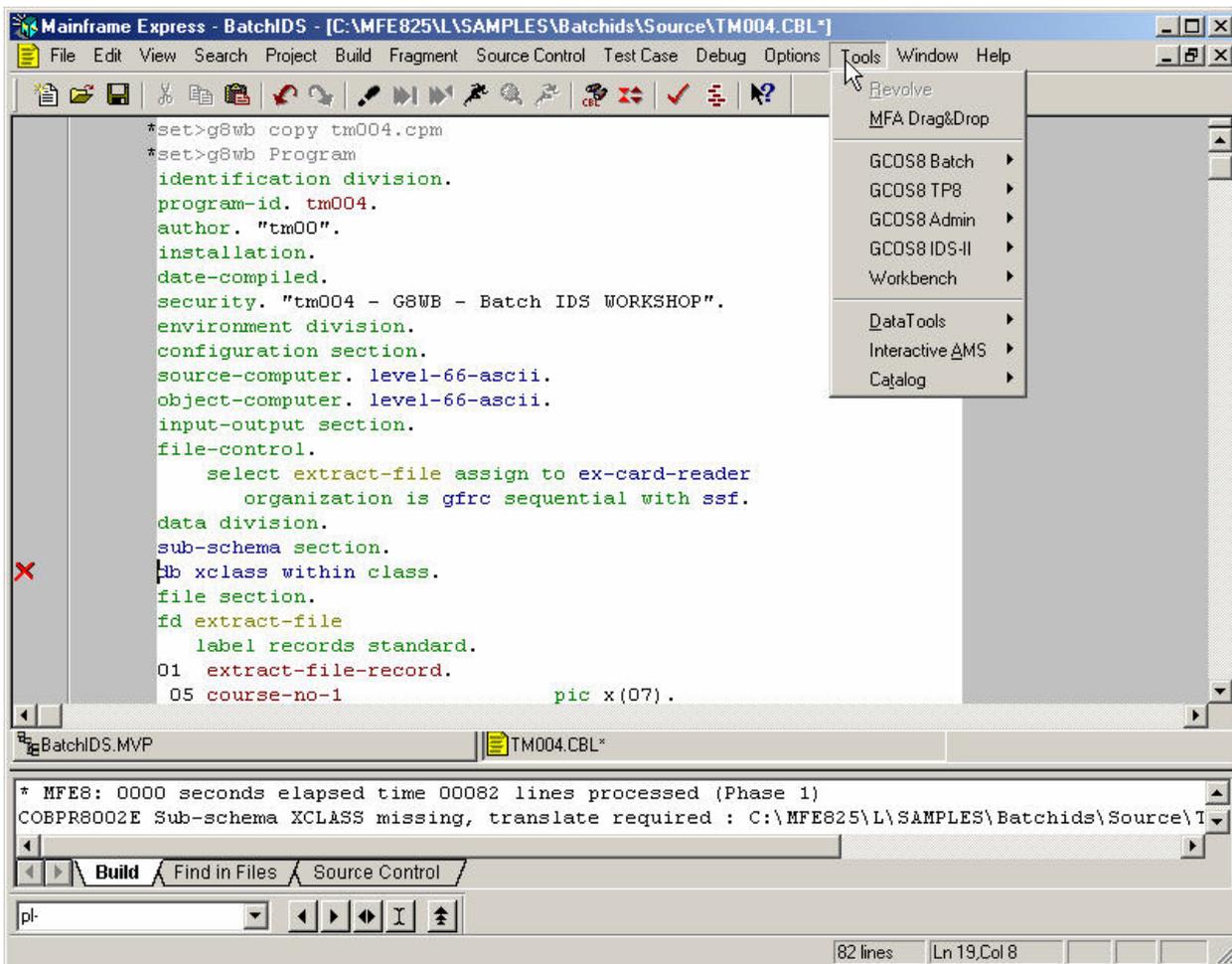
Graphical Integrated Development Environment (IDE)

The GCOS8 Mainframe Express IDE provides integrated access to all of the tools needed to develop, maintain and test applications deployed on the mainframe – and to transform and test new e-business functionality. The high level of feature integration streamlines and simplifies common maintenance, support and development tasks.

- Rapid access is provided to source code management systems that comply with the Microsoft-standard SCC (Source Code Control) interface, allowing check-in, check-out

and other related functions from the IDE. Examples of compliant systems include Microsoft Visual SourceSafe, PVCS Version Manager and PVCS Dimensions

- During the edit, compile and debug cycle, programmers edit source code using a state-of-the-art graphical (Microsoft-standard) source editor specially designed for COBOL programming
- Programs can be compiled by a single click on a toolbar icon from within an edit session
- Syntax errors automatically reposition the editor to the position within the source code where the error was detected
- Testing can be started by invoking a batch program or online TP8 with just a few clicks of the mouse
- The source level debugger utilizes the same consistent graphical interface as the editor
- At any point during a testing session, source code can be modified without interrupting the cycle of edit/compile/test



A Data File editor and support tools for batch and TP are integrated into the IDE, along with subsystem emulators, including IDS-II, Interel and TP8.

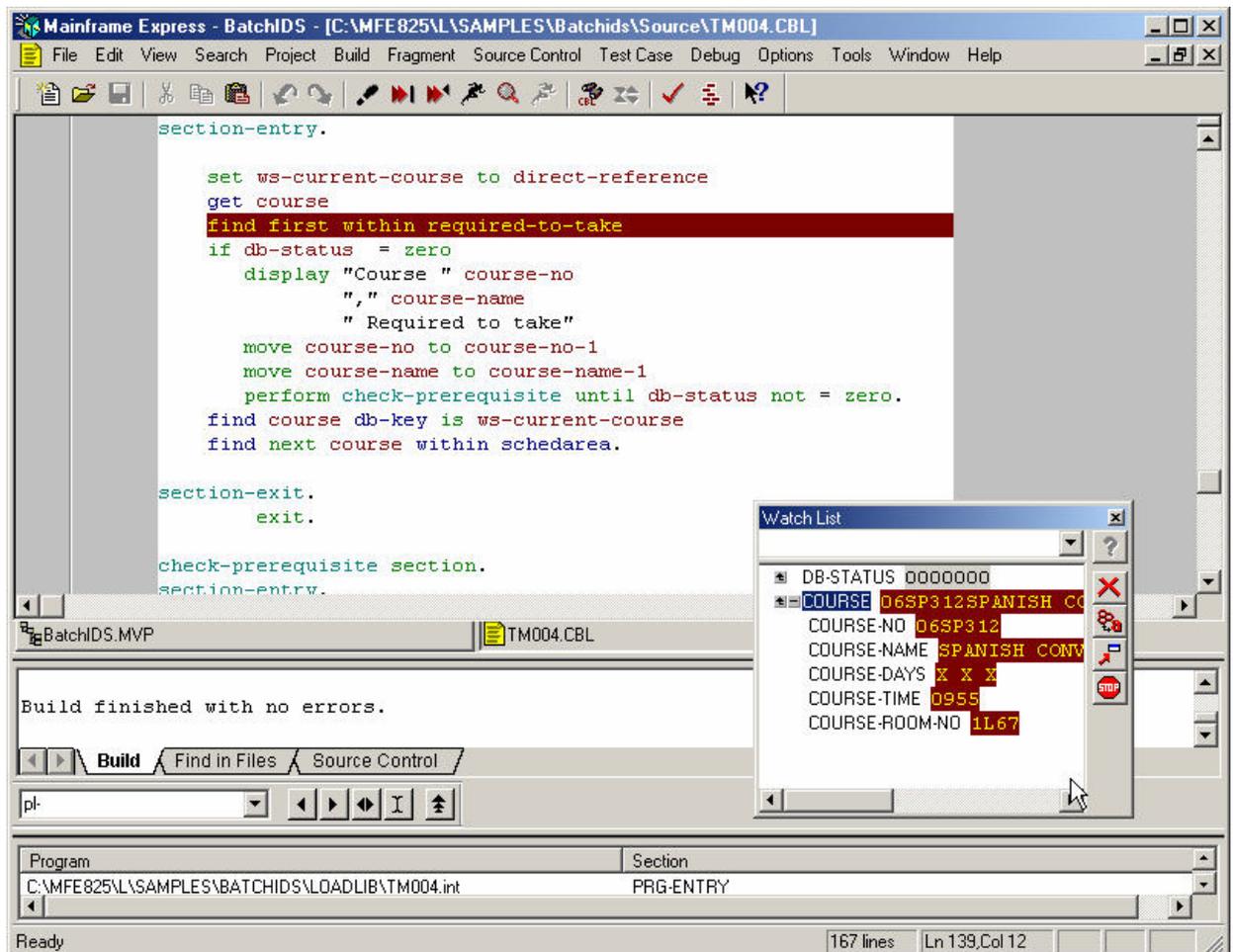
When adding/importing programs, a default project settings is used to associate the appropriate GCOS8 compile type. Copy files are auto-

matically retrieved and made visible in the project. The project view allows programmers to compile an entire application with one click of the mouse – which improves productivity while simplifying administration and project management.

Advanced Debugging Support with Animator®

The Animator debugging utility within GCOS8 Mainframe Express provides advanced features to help analyze the execution flow of applications, and find and resolve code errors. These features include:

- Total control over the debugging process. Programmers can single step, step all, skip code, run to a particular location and reset the execution point to any statement in their code – up to and including restarting the debug process with one mouse-click
- Program execution up to a pre-determined debug breakpoint. Multiple break points can be disabled and re-enabled during a run. A wide variety of advanced breakpoint options are available, and breakpoints can be set during edit sessions
- Program execution to a pre-defined program. A list of just the programs to debug can be maintained. When the application execution encounters a program in the list, the debugger is automatically invoked. All other programs can be executed without debugger intervention, but are still available for problem diagnosis if required
- The ability to examine and change any data item in the program during execution
- The ability to execute a COBOL statement, including IDS-II DML, on-the-fly
- Just-In-Time (JI/T) debugging. If an application fails while it is running, the debugger automatically starts at the point in the source code where the error occurred, allowing the programmer to locate and diagnose the error quickly
- Complete control over system date. With the DateWarp™ utility the system date can be changed at execution time or any time during the debugging process without affecting other applications running on the workstation



Mainframe Code and Data Access

GCOS8 Mainframe Express includes facilities to provide access to mainframe source and data resources.

- Automated source synchronization between mainframe and LAN development libraries, with optional interface to source code management
- Test data files (GFRC and UFAS) to be downloaded from the mainframe and optionally converted (non-Display data)
- Automated unload/load of test databases (IDS-II and Interel) and optionally reduce size using simply but powerful shrink rules

Data Manipulation

GCOS8 Mainframe Express includes a complete set of tools to manage test data. Using the data file editor, programmers can define data structures and insert, update or delete data records quickly and easily. All standard mainframe data-types are supported and can be edited directly. A formatted view of data records based on the COBOL data structure is provided, as well as a hex view of the data.

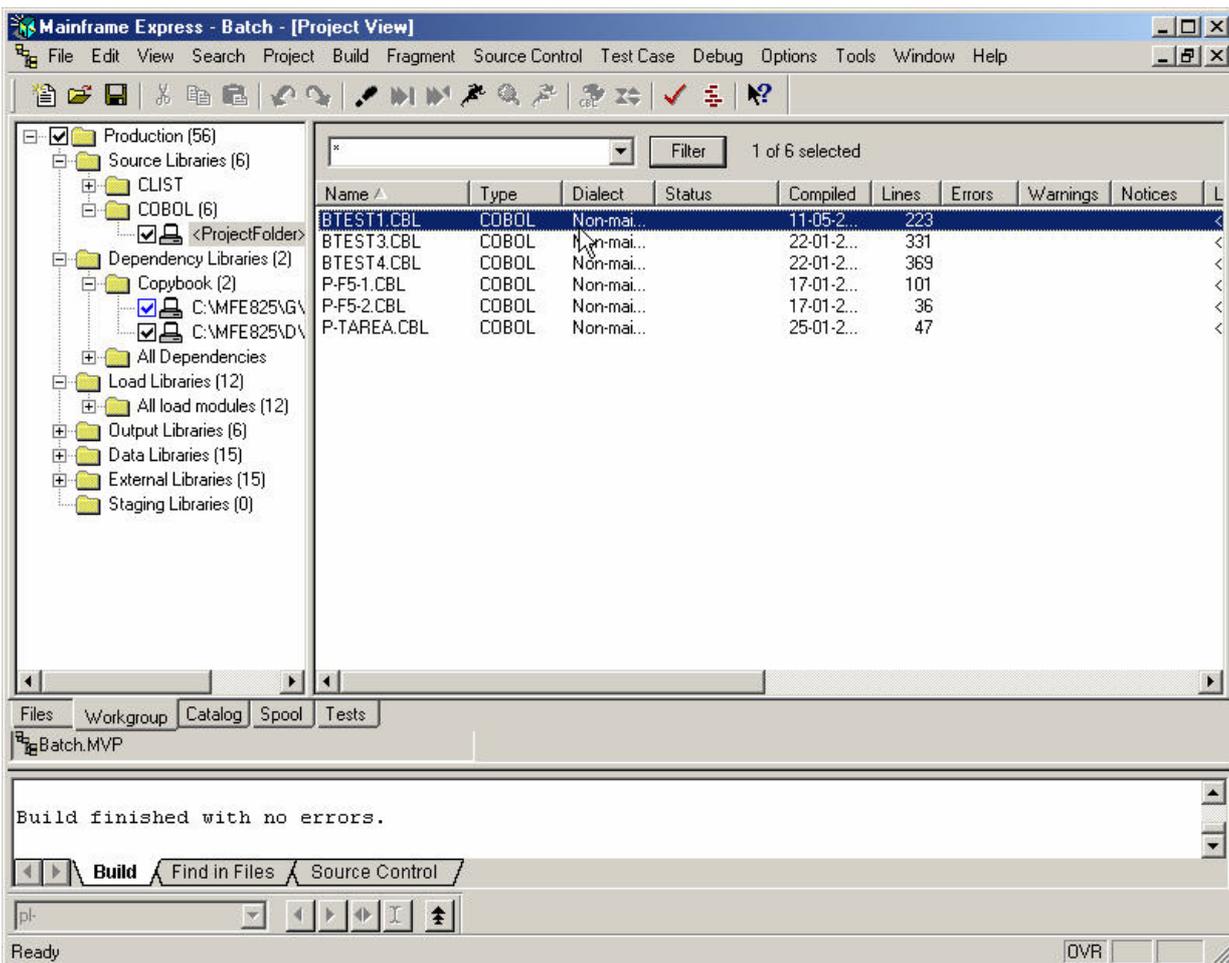
Using Interactive IDS-II, programmers can easily browse and maintain IDS-II test databases, either using DML direct or a DML Wizard.

Using DB2 UDB Tools, programmers can easily browse and maintain Interrel test databases.

Team Management through Workgrouping

To allow programmers to share source files, data, and program executables, GCOS8 Mainframe Express provides application workgrouping. This capability is essential for secure, centralized team management, and greatly simplifies the task of setting up a shared development environment for many users. With application workgrouping programmers can:

- Define multiple (up to 10 levels of) source, copy or load libraries that can reside on the LAN and be viewed by all the programmers in the workgroup
- Define a concatenated search path for load library and copy library modules. The search order is easy to visualize and configure, allowing programmers to perform unit testing and integration testing on their source code changes



GCOS8 Support

GCOS8 Mainframe Express includes a number of powerful features to provide programmers with a single-user GCOS8 test environment.

COBOL

A fast COBOL compiler designed to support mainframe COBOL applications by providing:

- Comprehensive GCOS8 COBOL dialect support, including COBOL-74, COBOL-85, COBOL-85 with SQL (both Interrel and DBSP)
- Powerful diagnostics through the integration between the compiler output and the COBOL editor

- Debugging (visual animation) of original GCOS8 source code

Database

Complete support of all GCOS8 database systems. Unlike GCOS8, each programmer will be able to work with their own databases, and thus independent of other programmers.

- A complete IDS-II emulation, including tools for schema/subschema translation, automated unload/load of GCOS8 test databases, test data maintenance and Just-In-Time debugger

- A complete Interrel emulation, including tools for database definition, browsing and maintenance, and automated unload/load of GCOS8 test databases
- A complete DBSP emulation, where both application and SQL are executed on the workstation, and with access to either a local or a remote Oracle database.

Files

All GFRC and UFAS format files are supported. Existing GCOS8 test files may be transferred and optionally converted using record views based on a COBOL data structure.

Batch

No JCL is required and program testing can be launched with a mouse click. No linking is required, any program/module is ready for test as soon as it has been compiled. Module test is possible, without the calling program.

A simple mapping technique may be used to control allocation of non-DB files.

For batch stream testing you are able to build and execute command files, like a job on GCOS8.

TP8

A comprehensive single-user emulation of TP8, which programmers can launch with a mouse click. Several TP8 specific testing aids may be used to catch common errors, before going into production.

Both native communication with VIP77, VIP78, DKU and IBM 3270 protocol, as well as standard Forms software is supported.

Forms

- A complete emulation of TPF, TSM8, DIMS8, FORMAT, Pilspårk and SOLD, with a comprehensive set of tools for local maintenance, import and export of forms components
- A complete emulation of SOLD+, including unload/load SOLD+ database
- A complete emulation of TOOLS, including unload/load TOOLS database
- Support of any own developed Forms software.

Web8

A complete emulation of Web8 with additional local definition tools.

- Access through HTTP-DSA Gateway, GEAP or other compatible gateway
- Access through Gweb or other face-lifting software
- Access through embedded CGI interface.

Open Client

- Embedded terminal emulators—VIP77,

VIP78, DKU and IBM 3270

- Terminal emulator (eg. Glink, VTD) connection via TNVIP or DSA (through Ggate)
- Session connection through HooX, GTEA or other session providers
- Any session through embedded Toolkit, eg. emulation of or interfacing with special devices.

Print

- Print files are formatted for PC printing and may be viewed/printed as required
- Report-code and Report-writer files are easily expanded to separate report files
- DISPATCH8 and QPRINT printing systems are fully emulated.

Services

A comprehensive emulation of application services provided by GCOS8:

- COBOL-74/85 run-time services
- VMPS services
- TP8 services
- Integrity Control (Abort rollback)
- Flowbus (on request)

Fortran-77

GCOS8 programs implemented in Fortran-77 may be compiled and integrated in the test environment, using Lahey Fortran compiler and a simple stub interface technique.

Virtual-C

GCOS8 programs implemented in Virtual-C may be compiled and integrated in the test environment, using standard Windows C compiler and a simple stub interface technique.

GMAP

GCOS8 programs implemented in GMAP are NOT supported, however, such programs may be migrated to COBOL-85. Often only parts of the GMAP logic needs migration to support a test environment, and B & C Solution provides a free-of-charge analysis of GMAP programs with an offer to perform such migration as required.

Other Tools

- Own developed GCOS8 tools like Preprocessors, Data Dictionary, Version Management etc. can be integrated
- Code generator (Case) tools like Pacbase, Install/1, Foundation, JSP Workbench, Natstar etc. can be integrated
- Commodity software products for Version and Project Management like PVCS, Turnkey, Visual source-safe, Continuous etc. can be integrated, and further extend your development environment.

Technical Specifications

Workstation:

- Windows 95/98, Win NT4.0 (SP3 or later), Win 2000 and Win XP
- 120 Mhz Intel Pentium processor or better
- 64MB RAM or better
- 500MB free hard disk space (either local or network)
- SVGA monitor (800x600 minimum resolution)
- CD-ROM drive (either local or network)
- Microsoft mouse or compatible pointing device
- Micro Focus Mainframe Express (2.5 or higher)
- IBM DB2 COBOL SQL Preprocessor (optional – support of Interel)
- IBM DB2 UDB Database (optional—support of Interel)
- Oracle COBOL SQL Preprocessor (optional – support of DBSP)
- Oracle 8/9 Personal Edition (optional – support of local DBSP)
- C compiler (optional – support of Virtual C)
- Lahey Fortran compiler (optional – support of Fortran-77)

Mainframe:

- GCOS8 (any release)
- FTP or UFT

DSA Gateway (optional):

- Win NT4.0 (SP3 or later), Win 2000, Win XP or AIX
- Ggate from Gallagher & Robertson

About B & C Solution

B & C Solution has more than 20 years of experience with Bull GCOS3/8 and has been providing a number of mainframe products and consulting services to customers worldwide.

In 1993 we first introduced GCOS8 COBOL Workbench – the predecessor to GCOS8 Mainframe Express, which was distributed through Bull. With more than 1000 licenses worldwide, the workbench concept has been well recognized in the Bull mainframe world. We are determined to continue to provide state-of-the-art software tools to GCOS8 mainframe customers, as support of newer Bull technologies like WEB8, GTEA, HooX and DBSP prove. The introduction of GCOS8 Mainframe Express and GCOS8 Net Express will ensure Bull mainframe customers have access to the same advanced tools as IBM mainframe customers.

In 1998 we first introduced the GCOS8 Re-hosting Workbench – a solution which allow GCOS8 application systems to be migrated/rehosted on Open Systems with limited effort. With the introduction of GCOS8 Rehosting Express, rehosting of GCOS8 application system is not only smooth and efficiently, it is also the path for bringing GCOS8 application systems into de-facto standard for RDBMS and TP/ Application server environments.

For more information, visit <http://www.bc-solution.com>

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