



GCOS8 Rehosting Express is a set of powerful run-time facilities that enable Bull GCOS8 application systems to run on all leading Windows, UNIX and Linux platforms with no or limited code changes.

# GCOS8 REHOSTING EXPRESS

## Overview

GCOS8 Rehosting Express is a high-performance execution environment to deploy Bull GCOS8 applications on all of today's popular Windows and UNIX platforms. GCOS8 Rehosting Express unique combination of emulation and migration features enable GCOS8 applications to be deployed with no or limited code changes and to execute in native RDBMS and TPMS execution environments.

## Satisfying business demands for enhancements and integration

IT organizations are under constant pressure from business demands for enhancements of existing application and integration with newer applications. GCOS8 Rehosting Express bridges the "Islands of Technology" as older applications are executed within modern and de-facto standard RDBMS, TPMS and Application Server environments, easing integration with newer applications. Enhancements to older applications may be developed either in GCOS8 style or in native style.

## Satisfying business demands for performance and reliability

The demand for increased application processing is constant. This is partially satisfied by the continued increase in processor power and Bull efforts to enhance the GCOS8 Server platform. GCOS8 Rehosting Express, however, opens older applications to the full processing capabilities of leading Windows, Linux and Unix server platforms, which provide the reliability and recovery features you demand from a server platform.

## Satisfying business demands for cost effectiveness

GCOS8 Rehosting Express liberates your older applications from the proprietary GCOS8 server platform, enabling you to benefit from the cost effectiveness of Windows, Linux and UNIX server platforms.

## Highlights

### Fast-track migration

GCOS8 Rehosting Express offers a fast-track migration of older GCOS8 applications, with less risk than conversion or re-engineering. After importing GCOS8 applications into the development environment—GCOS8 Mainframe Express, GCOS8 Net Express or GCOS8 Server Express, applications are qualified through function testing. Standard RDBMS and TPMS techniques are used to verify performance in the target deployment environment. Co-operate with your choice of "System Integration" vendor to accomplish these tasks.

### Optimized application performance

GCOS8 applications are compiled into native machine code instructions and execute under Micro Focus Application Server to utilize the full performance of the deployment platform. GCOS8 database utilize leading RDBMS software like Oracle, DB2 and SQL-Server to match and exceed the performance levels achieved under a GCOS8 platform. GCOS8 TP8 utilize leading TPMS or Application Server software like Tuxedo, IBM TXSeries and Micro Focus Enterprise Server to match and exceed the transaction performance achieved under a GCOS8 platform.

## Consolidate and retain skills

GCOS8 Rehosting Express' use of standard RDBMS and TPMS software and deployment on leading Windows, Linux and UNIX platforms, unifies older and newer applications, and allows you to consolidate and retain development and operational skills within the IT organization.

## Evaluation through pilot project

The feasibility of rehosting GCOS8 applications can be verified through a limited pilot project, where all application components are imported and processed in the GCOS8 Mainframe Express, GCOS8 Net Express or GCOS8 Server Express development environment, and where potential problem areas are highlighted. Complete the pilot project with functional test of a part of the GCOS8 application.

## Features

### Application support

GCOS8 Rehosting Express support COBOL-74 and COBOL-85 applications with no or limited code changes. Application components—source, copies, forms, schemas, subschemas etc. are imported from GCOS8 and compiled in the development environment.

- Virtual-C application modules are supported through standard C-compilers and a simple COBOL-to-C interface stub.
- Fortran-77 application modules are supported through Lahey Fortran compiler and a simple COBOL-to-Fortran interface stub.
- GMAP application modules are not supported and require re-implementation in Micro Focus COBOL or another language.

### IDS-II Database support

GCOS8 Rehosting Express translates the IDS-II schema and subschema sources with no changes, and provides compiler and run-time support for applications using IDS-II. IDS-II databases are hosted by a standard RDBMS, which may be accessed either through IDS-II syntax or any SQL access method or tool. GCOS8 Rehosting Express generates all required components for the RDBMS environment.

- SQL scripts for definition and creation of database.
- Unload and load programs for deployment of existing databases on GCOS8.
- Application IDS-II verbs are executed via dynamic SQL with excellent performance.
- Target RDBMS may be either Oracle, IBM DB2, Informix or SQL-Server.
- Referential integrity rules are enforced within RDBMS, allowing full access via SQL.
- Database browsing and maintenance either through Interactive IDS-II utility or SQL tools.

## Interel/RFM Database support

GCOS8 Rehosting Express support Interel/RFM applications with no code changes and use IBM DB2 for database hosting. SQL syntax differences are adapted during compilation, and GCOS8 Rehosting Express includes utilities to migrate SQL script files and unload/load existing Interel/RFM databases on GCOS8.

## DBSP Database support

GCOS8 Rehosting Express support DBSP applications with no code changes. Embedded SQL is compiled and executed in the application run-time environment. Existing DBSP databases are used ASIS.

## TP8 support

GCOS8 Rehosting Express provides a comprehensive emulation of TP8 run-time environment using either the embedded TP8 Server, Bea Tuxedo, IBM TXSeries Encina TPMS or Micro Focus Enterprise Server.

The TP8 run-time environment is accessible as a DSA node, and existing client connections can be switched with no changes.

- DSA-Gateway: Allow client connections through DSA protocol, ex. terminal emulators like Glink, VTD, as well as GTEA, GEAP and Hoox.
- Open-Client: A simple programmatic API for non-DSA client connections.

## Bea Tuxedo

GCOS8 Rehosting Express provides TP8 emulation hosted by a standard Tuxedo TPMS.

- Allows you to scale the TP8 environment to thousands of end-users.
- Allow client connections either through DSA-Gateway, Tuxedo programmatic API or Tuxedo distribution.
- Application may be enhanced with Tuxedo call-outs, ex. access common security system or other Tuxedo application.

## IBM TXSeries

GCOS8 Rehosting Express provides TP8 emulation hosted by a standard TXSeries Encina TPMS.

- Allows you to scale the TP8 environment to thousands of end-users.
- Allow client connections either through DSA-Gateway, Encina programmatic API or Encina distribution.
- Application may be enhanced with TXSeries call-outs, ex. access common security system or other TXSeries application.

## Micro Focus Enterprise Server

GCOS8 Rehosting Express provides TP8 emulation hosted by Micro Focus Enterprise Server. This feature is a supplement to a standard TPMS and it allows TP8 applications to be accessed as Web Services and/or J2EE applications.

### Forms/Web8

GCOS8 Rehosting Express provides a complete emulation of standard Forms software—TPFF, TSM8, DIMS8, FORMAT, SOLD, SOLD+, Arrowtalk, TOOLS and WEB8. Own developed forms software compile and execute as a GCOS8 application. Forms databases, ex. DIMS8, SOLD+, TOOLS, are hosted on standard RDBMS like other IDS-II databases.

WEB8 access is supported through HTTP-DSA Gateway, GEAP or compatible gateway, and face-lifting tools like GWEB are also fully supported.

### Batch

GCOS8 Rehosting Express does not support GCOS8 JCL, however existing GCOS8 JCL may easily be migrated into command files or scripts. You may also consider scheduling facilities offered by or for the Windows, Linux or UNIX run-time environment. A simple and flexible mapping technique may be used to control allocation of conventional files. Conditional job streams using PSW is fully supported.

### Execution environment

Application components—programs,TPR's and modules, are dynamically loaded in the Micro Focus Application Server environment for optimal flexibility and performance. No application linking is required.

### Files

GCOS8 Rehosting Express support all GFRC and UFAS file formats. Existing GCOS8 files may be transferred and converted for use in the run-time environment.

### Print

Print files—plain, report-code and report-writer, are supported and may be printed through standard print spooling facilities of the run-time environment.

DISPATCH8 and QPRINT printing systems are fully emulated. Other printing systems may be accommodated on request.

### Services

GCOS8 Rehosting Express provides a comprehensive emulation of application services provided by GCOS8:

- COBOL-74/85 run-time services
- VMPS services

- TP8 services
- Integrity Control
- Flowbus

### Other Tools

Own developed GCOS8 tools like Preprocessors, Data Dictionary, Version Management etc. can be integrated in the development environment.

GCOS8 applications developed using Code generators/Case tools like Pacbase, Install/1, Foundation, JSP Workbench, Natstar etc. may be compiled and executed within GCOS8 Rehosting Express.

## Getting started

### Evaluation

B & C Solution offers to perform a complete evaluation of your GCOS8 applications. Such evaluation is done within a short time-frame and comprises:

- Compilation of all application components.
- Analysis of application specialties and any potential problem areas.
- Analysis of GMAP programs, with fixed-price migration offer.
- Evaluation report.

### Pilot

B & C Solution offers to assist you with an on-site pilot projects, where both a development and production test environment is established. We recommend pilot project includes all GCOS8 applications, however, functional testing to be limited to one or more parts of the application.

### Implementation

After proving the feasibility of the solution and getting actual figures for migration efforts, you are ready to plan and implement the rehosting solution. We recommend you cooperate with a local "System Integration" vendor for the implementation, and RDBMS/TPMS vendors for benchmarking and tuning in the target environment.

### References

- NCCW-Netherlands: Large GCOS8 application rehosted on HP-UX, Tuxedo and Informix.
- DFDS-Denmark: Medium GCOS8 application rehosted on Windows 2000, TP8 Server and Informix.
- ADIR-Norway: Large GCOS8 application rehosted on Linux/Windows, TP8 Server and Oracle 8.
- RFV-Sweden: Pilot project for rehosting of large GCOS8 application (IDS-II, Interel/RFM, JSP-Workbench) on UNIX, Tuxedo and IBM DB2.

## Technical Specifications

### Deployment:

- Windows NT, 2000, XP, 2003, Linux (Red Hat, Suse) and UNIX (HP-UX, AIX, Solaris etc.)
- Micro Focus Net Express Application Server (Windows) or Server Express Application Server (Linux and UNIX).
- Oracle 8/9, IBM DB2, Informix IDS (Windows, Linux and UNIX) or SQL-Server 2000/2003 (windows).
- Bea Tuxedo, IBM TXSeries or Micro Focus Enterprise Server (Windows, Linux and UNIX)
- DSA Gateway—Ggate from Gallagher & Robertson (Windows, Linux and UNIX).

### Maintenance:

- GCOS8 Mainframe Express, GCOS8 Net Express or GCOS8 Server Express (Linux and UNIX).
- Micro Focus Mainframe Express, Net Express or Server Express (Linux and UNIX).
- C compiler (optional—support of Virtual C)
- Lahey Fortran compiler (optional—support of Fortran-77)

## 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 Rehosting 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 TPMS/ Application server environments.

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

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