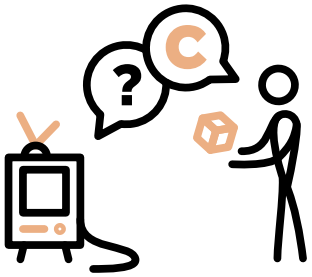
CobolCloud Compiler Suite
Product Brief

Overview

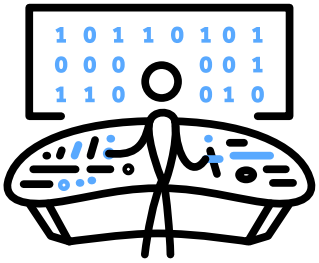
CobolCloud is the latest generation of COBOL compiler, built on an open source stack. CobolCloud is created to preserve COBOL, while enabling applications to adapt to the full range of present environments and future emerging technologies.

More than just a compiler, a multi-directional API!

It is now totally hybrid and undergoing constant evolutionary change. COBOL applications are not an exception to these rules. As a consequence, CobolCloud is engineered as an adaptable multi-directional API which integrates a new generation of COBOL compiler. Built on a powerful modularized architecture, CobolCloud allows elements to be swapped in and out seamlessly, and new modules to be adopted with ease.



CobolCloud's modularized architecture is designed to easily integrate any EXTFH-compliant file system, any EXTSM-compliant data transformation tool, any transaction monitor, or any database.
The success of this implementation is reflected in the partnerships CobolCloud has established with major providers of enterprise solutions, offering the ability to build a highly configurable, and extremely effective Enterprise Solution Stack.



Compiling COBOL apps with no modification

CobolCloud has been conceived to allow enterprises to preserve their mission-critical COBOL applications by compiling them without source code modifications and by reproducing the runtime behaviors on which they rely.

How is this done?

COBOL has been around for a long time, and different COBOLs have evolved differently, often establishing an advantage by introducing proprietary behaviors that were not supported by other COBOL compilers. COBOL dialects are defined by compatibility issues.

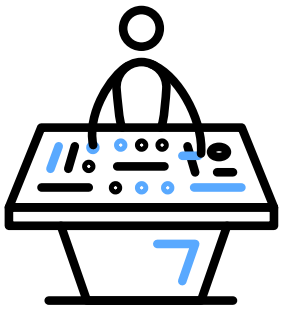
Now, there is a need for a COBOL compiler that resolves all of these diverse compatibility issues, unites diverse COBOL dialects under a single banner, and provides them all with equal access to the wide range of rapidly evolving modernization solutions that exist today.
That COBOL is CobolCloud!

The experience of 15 years of migration projects at the service of future projects

CobolCloud. 231 rue Saint Honoré - 75001 Paris - France
Follow us

CobolCloud's roots go back to 2008, when COBOL-IT forked a branch from OpenCOBOL open source code, to broaden the support of COBOL dialects, and to provide enterprises with a professional open source COBOL solution. In 2022, CobolCloud forked a branch from the COBOL-IT open source, to continue that work with a new team led by the founder of COBOL-IT.

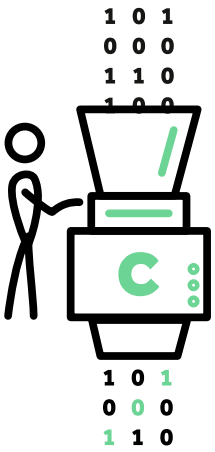
The CobolCloud compiler has become easily configurable to support a range of COBOL syntaxes and COBOL behaviors associated with different COBOL dialects. Compiler configuration flags and runtime environment variables have been engineered over the last 15 years to efficiently introduce support for a wide range of dialects and proprietary syntax.



CobolCloud's collection of flags and environment variables

CobolCloud supports over 200 compiler configuration flags with several parameters for each, giving unparalleled different possible combinations with thousands of options tailored to reproduce the original behaviors of the applications. Over 100 refinements of compatibility have been specifically made for Micro Focus COBOL dialects and runtime behaviors, giving CobolCloud the highest level of compatibility with Micro Focus COBOL, and making CobolCloud the most efficient, secure, and cost-effective solution for transitioning from Micro Focus COBOL.

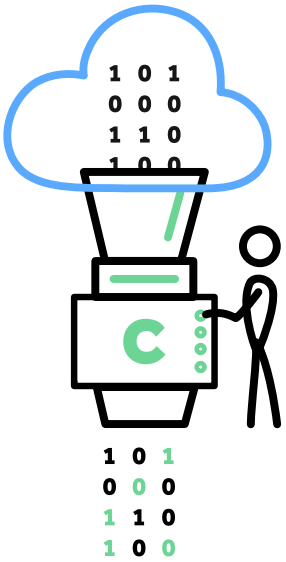
Significant adjustments have also been made for MVS, OSVS, BS2000, RMCOBOL and more.



CobolCloud is a transpiler!

The CobolCloud compiler is a transpiler, translating COBOL to "C", and using the host "C" compiler to generate executable objects. This mechanism remains completely transparent to the COBOL developer, who develops and debugs applications in COBOL only.
Any new correction or implementation provides CobolCloud with a way to isolate code improvements enabling fast and high-quality responses.
As a result, CobolCloud engineers remain focused on improving the compiler by adding new syntax variations with new options and by entrusting the binary generation specific to each CPU to the host "C" compiler that has been created and optimized for decades by platform vendors.

The net benefits are shorter migration times, speedier times to market and more rapid returns on investment for partners and customers.



CobolCloud runs your apps in the Cloud!

The Cloud is now the target for the great majority of modernization solutions being explored by enterprises large and small. This trend is irreversible now, as the amount of investment being put into Cloud solutions dwarfs the investment in traditional server-based solutions.

These investments, largely in open source solutions, are creating rapid evolution in all of the technologies required by enterprises, including the traditional requirements for security and data handling, but extending to include software delivery as well as pricing models for Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). Enterprises can achieve huge savings by trading their Capital Expenditures for Operating Expenses.

When you move your COBOL apps to the Cloud with CobolCloud, you will find that all of your traditional solution providers are already there, and easily accessible. You will also find the fruits of the massive amounts of investment that have been going into open source technologies, which include a menu of possibilities from automated tests to Artificial Intelligence (AI) in an infrastructure which can expand and contract as needed. CobolCloud is an open source technology, ready for the Cloud, built to allow enterprises to be assured that whatever the future holds, they will be able to continue to operate, leveraging the new technologies that they require.

One example among others, our -linkage-desc directive produces an XSD-file to ease the integration with the most of modern open source solutions available for Cloud. Integration with external solutions like OpenLegacy / OpenAPI, DAPR and other platforms becomes a child's play while preserving the original form of the COBOL program.
CobolCloud blends naturally with all of the techniques inherent in Cloud Computing. As a result, it's easy to integrate CobolCloud and your COBOL apps into containers and orchestrate them via Kubernetes, allowing a solid integration into any CI/CD industrial pipelines to secure and accelerate successful production implementations.

In the Cloud, the process of rethinking your COBOL apps with CobolCloud will never end. The possibilities are limitless!

Features	Benefits
• CobolCloud Compiler Suite is available on Linux, Linux and Windows	• CobolCloud Compiler Suite is available in the most widely used operating environments, and in the Cloud
• The CobolCloud compiler is a sophisticated multi-directional API based on an open-source stack	• The main elements of a solution stack have been modularized
• Swap elements of your solution stack in and out on demand in a simple and standardized way	• EXTFH-compliant file systems EXTSM-compliant internal SORT engines Integrate mainstream databases, such as Oracle, IBM DB2, PostgreSQL and ODBC compliant data sources. Integrate Transaction Monitors, such as Oracle Tuxedo, Tuxedo ART and IBM TXSeries
• The CobolCloud COBOL compiler is a transpiler. • The CobolCloud transpiler translates COBOL to "C", and uses the host "C" compiler to generate executable objects	• This process is transparent to the COBOL developer, who develops and debugs in COBOL
• This process transfers a large portion of the development process to the "C" compiler, which is used to create system-specific executable binaries	• Facilitates the enhancement of compatibility with different COBOL dialects
	• Bridging dialects with configuration flags is a very efficient process, with the focus directed almost entirely on the "C" code that is required to support the feature. The net benefits are speedier times to market and more rapid returns on investment for partners and customers
	• Enhances the interoperability of COBOL and "C"
	• Link CobolCloud objects with objects provided by Third Parties. Building Oracle-enabled runtime and debugger is a simple matter
• Compatibility of CobolCloud with mainstream COBOL dialects and enterprise solutions enhances syntax support, inline directive support, and interoperability with databases and transaction monitors	• Allows for compilation without changes to source code, and with preservation of existing behaviors
• Support for Compiler Configuration File, Runtime Environment Variables, System Libraries, Intrinsic Functions	• Hundreds of settings to fine-tune compatibility with Micro Focus Syntax, Micro Focus Compiler Flags, Micro Focus Directives and Micro Focus runtime behaviors
• CobolCloud runs your apps in the Cloud!	• In a containerized environment, running in Docker, you can explore the vast resources available in the Cloud, including CI/CD, container management with Kubernetes, and more
• Highly functional COBOL Debugger	• Feature activation through compiler flags and/or runtime environment variables
	• Collection of Stepping functions
	• Collection of Breakpoint functions
	• Setting and inquiring variable values
	• Switching between "C" and COBOL debugger
	• Attaching to a running process (debug attach functionality)
	• Debugging the original source code or source code generated by the pre-compiler.
	• Working-Storage Dump on Abort
	• Toggle Tracing Functions on an off
• High-performance external sort module	• CLDSort is modeled after DFSort and MFSORT
	• Sort, Copy, and Merge Line Sequential, Binary Sequential, Relative, and EXTFH-compliant Indexed files
• CLDSQL : ESQL Pre-compiler for PostgreSQL and ODBC	• Pre-compiler for PostgreSQL and ODBC. Enhanced to support multiple additional features to simplify the transition from existing SQL COBOL Apps to CobolCloud
• Full support for the Report Section	• Allows compilation with no modification of reports generated using the Report Section

Some Powerful Additionnal Functions

Features	Benefits
• Profiler	• Profiler measuring CPU, Elapsed times in paragraphs for internal and external functions
• Code Coverage	• Showing lines of code executed (Requires the VS Code Workbench)
• File Status Mapping	• Allows preservation of existing file status codes, by mapping them to CobolCloud defaults
• Checkpoint/Reload	• Provides the ability to save the state of the runtime session into a checkpoint file. The runtime can then be relaunched reloading the state of the runtime session from the checkpoint file
• Capture Runtime Dump upon Abort	• COB_DUMP environment variable allows the capture of a full runtime dump upon abort
• Optimization at the "C" compiler level	• Flags can be passed through to the "C" compiler for purposes of optimization using -O compiler flags
	• COB_CFLAGS environment variable allows listing flags to be passed directly to the "C" compiler
• Customize the Link step	• COB_LDADD environment variable allows additional link commands to be passed to the linker
• Support for the EBCDIC character set	• Allows CobolCloud to be used in Mainframe/zLinux share environment
• Syntax only compiler option	• Provides ability to perform a check of syntax only, saving time