



# isCOBOL™ Application Platform Suite

## isCOBOL APS 2010 Release 2 Overview

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## isCOBOL APS 2010 Release 2 Overview

### Introduction

Veryant is pleased to announce the latest update to the isCOBOL™ Application Platform Suite (APS), isCOBOL APS 2010 Release 2 (R2). isCOBOL APS provides a complete environment for the development, deployment, maintenance, and modernization of COBOL applications. The isCOBOL APS 2010 R2 update includes several enhancements to the isCOBOL™ Integrated Development Environment (IDE), new data migration and file management utility features, and improved resource management capabilities. Details on the IDE enhancements and other new features are included below.

### isCOBOL IDE Enhancements

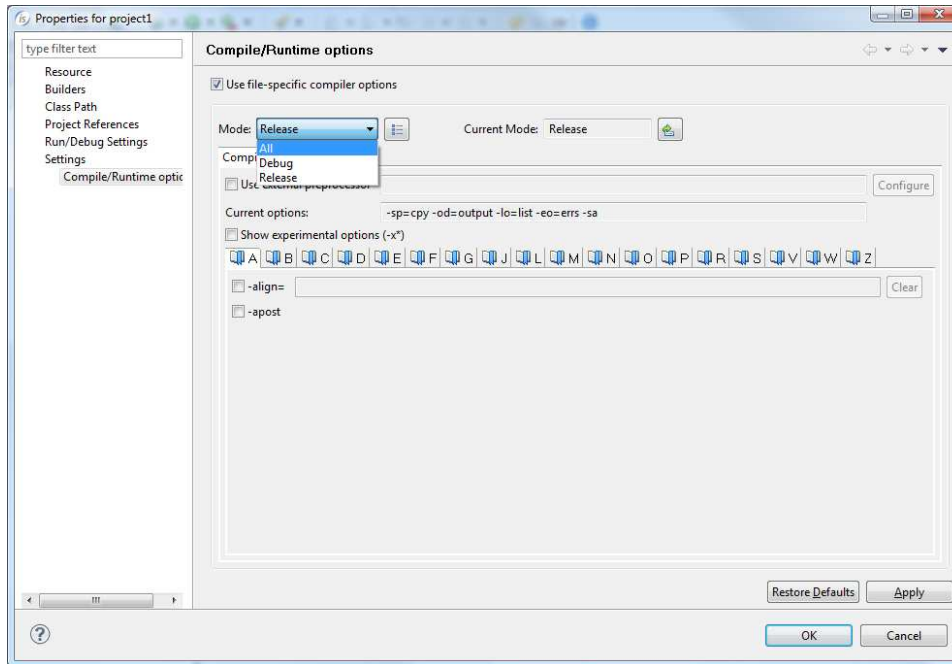
isCOBOL APS 2010 R2 includes several updates and enhancements to the isCOBOL IDE, including the ability to define specific setting modes options and project settings. Conditional breakpoints can now be set within the isCOBOL IDE and complete isCOBOL IDE documentation is available from the isCOBOL IDE Help menu as well.

#### isCOBOL IDE mode settings

isCOBOL IDE users now have the option to maintain separate settings for various operating modes. For instance, the Debug mode can be used when building an application for debugging; the Release mode can be used to build an application for a release. Programmers can also add their own user-defined modes and store settings for other purposes.

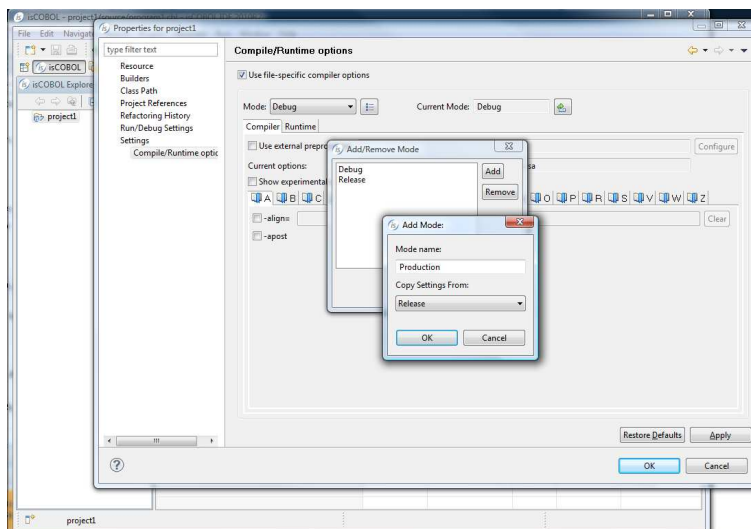
As an example, compile and runtime options for the IDE can be set for all modes by selecting "All" from the Mode drop-down menu under Project : Properties : Settings : Compile/Runtime options : as depicted in Figure 1, *Properties for Project 1*.

**Figure 1.** Properties for Project1



A new mode can be added by clicking the button to the right of the Mode drop-down menu, as depicted in Figure 2, *Compile/Runtime Options for Project1*:

**Figure 2.** Compile/Runtime Options for Project1

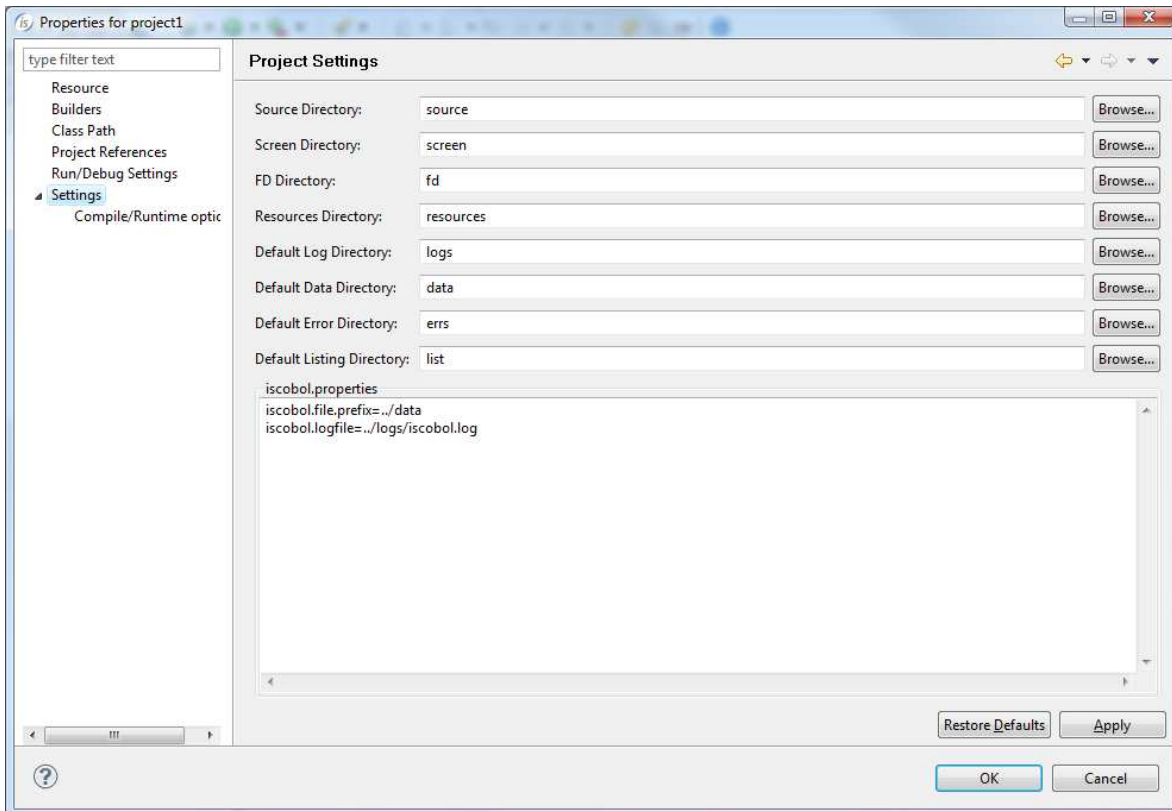


Default log, data, error/listing folders, and runtime properties

A Project Settings dialog window has been added to the isCOBOL IDE (under Project : Properties : Settings) to allow users to set up directories to store log files, data files, error

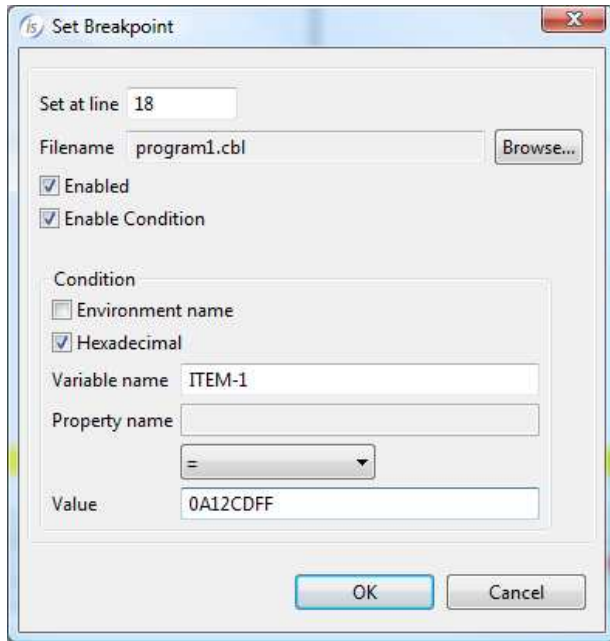
files, and listing files. As depicted in Figure 3, *Project Settings for Project1*, this window also enables users to specify which runtime properties to use when a program is launched.

**Figure 3.** Project Settings for Project1



### Conditional Breakpoints

isCOBOL IDE users can now set breakpoint conditions from within the isCOBOL IDE in which the debugger evaluates when a breakpoint is reached. If a condition is satisfied, then the debugger will stop at the designated line of code and allow a user to examine variables, step through the code, and take other actions. Figure 4, *Set Breakpoint Example*, shows a screenshot illustrating a breakpoint at line 18 conditioned upon ITEM-1 equaling x"0A12CDFF".

**Figure 4.** Set Breakpoint Example

#### Additional isCOBOL IDE enhancements

Other new features added to the isCOBOL IDE as part of isCOBOL APS 2010 R2 release include the ability to:

- Edit event paragraphs while debugging and test these changes without restarting the debugger.
- Set the design settings for graphical controls such as check-boxes, combo-boxes, and entry-fields to be used in cells of a grid control.
- Automatically change text to uppercase, lowercase, or capitalized.
- Receive a visual indication if a file's specific compile options differ from a project's global options.
- Reposition controls in the screen designer using the arrow keys.
- Press F3 to jump to a selected paragraph's declaration.

#### **Data Migration and Data Management**

Several new features have been added to key utilities in isCOBOL APS 2010 R2 to simplify migrating data to the isCOBOL platform and managing data files post migration. A graphical user interface (GUI) has been added to the isCOBOL ISMIGRATE utility to

streamline migration from the Micro Focus Vision file system to isCOBOL JISAM or isCOBOL ISAM Server. This GUI also makes it easier to move data from indexed file systems into popular relational databases such as IBM DB2, Oracle Database, Microsoft SQL Server, MySQL, and PostgreSQL.

### ISMIGRATE GUI

The ISMIGRATE utility enables one-step migration of data files between supported ISAM file systems and databases. ISMIGRATE enables efficient transitions of file systems such as the Micro Focus Vision file system (formally Acucorp's Vision file system) to isCOBOL™ JISAM or isCOBOL™ ISAM Server. The ISMIGRATE utility can be used to quickly move data between the isCOBOL JISAM or isCOBOL ISAM Server file systems, or to move data into a relational database management system (RDBMS). IBM DB2, DB2/400, Oracle Database, Microsoft SQL Server, MySQL, PostgreSQL, and any database for which there is a JDBC driver available are supported by ISMIGRATE.

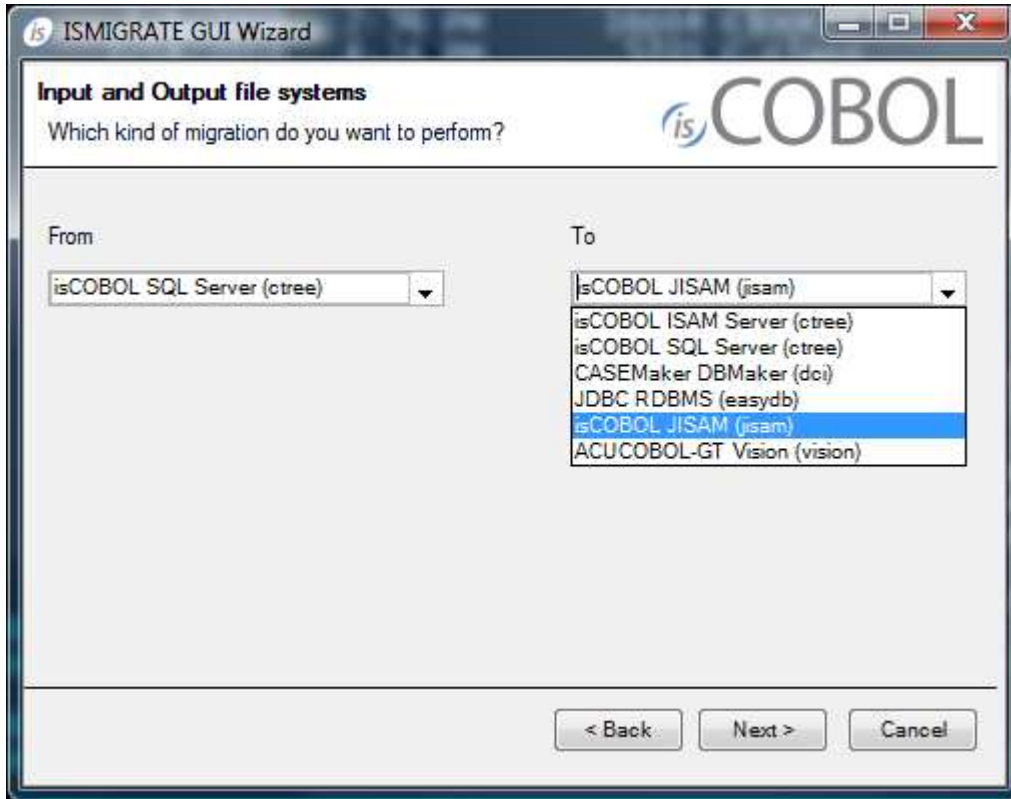
In isCOBOL APS 2010 R2, a user-friendly GUI and migration wizard were added to the ISMIGRATE utility.

The ISMIGRATE GUI will start if the ISMIGRATE utility is launched without parameters (`ismigrate`) and the migration wizard then follows these steps:

1. Input and output file system types are selected as depicted in Figure 5, *ISMIGRATE GUI Wizard*.

Users can choose from the two lists that are loaded with known file systems. If a different file format is needed, its name can be manually entered. For file indexes with native dependences (like 'ctree') ISMIGRATE checks to see if native libraries are available and shows the file system name in red if they are not available. When 'easydb' is chosen, ISMIGRATE allows users to configure and check JDBC settings for the connection to the database.



**Figure 5.** ISMIGRATE GUI Wizard

2. Specific input files are selected.

The ISMIGRATE utility will load all files that can be opened from the specified input directory and allows users to check the specific files to be migrated. When migrating a database table, the ISMIGRATE utility connects to the database through a JDBC interface and lists all available tables.

3. The output directory is chosen.

Unless a user is migrating to a relational database, the user must choose the specific directory in which resulting files will be stored.

4. The migration process status is displayed.

The last panel shows the status of the data migration. If the migration of a single file fails, placing the cursor over the 'FAILED' word will display a tool tip with the error description. Checking 'save session' before exiting saves all the information gathered

during the wizard procedure into a file with .imgs extension that can be used with -silent option.

### JUTIL enhancements

The JUTIL utility is included with isCOBOL JISAM to perform basic file management tasks. In isCOBOL APS 2010 R2, the JUTIL utility has been enhanced to enable one-step migration of individual Micro Focus indexed files to the JISAM format. This feature is invoked with the following command line:

```
jutil -convert <filename> <directory>
```

where <filename> is the name of the Micro Focus indexed file to be converted, and <directory> is the name of the directory where the converted JISAM file should be placed. Note that JUTIL -convert requires the Micro Focus "rebuild" utility which comes with Micro Focus Net Express or Micro Focus Server Express.

JUTIL was previously enhanced to facilitate migrating individual RM/COBOL indexed files to the JISAM format using the following three-step process:

1. Run a COBOL program that creates an empty JISAM file
2. Use a RM/COBOL utility to "unload" the records into a sequential file and
3. Use JUTIL to "load" the records into the new JISAM file.

This three-step process can be used for other ISAM file systems as long as the file system in question provides a utility that dumps or "unloads" the records into a sequential file.

In isCOBOL APS 2010 R2, this "unload/load" method has been simplified by eliminating the need to run a COBOL program in order to create the empty JISAM file. JUTIL -gen can be used to create an empty JISAM file instead. This feature is invoked with the following command line:

```
isrun JUTIL -gen
```

With JUTIL and ISMIGRATE, users now have the ability to migrate data files from Micro Focus indexed files, Micro Focus Vision indexed files, RM/COBOL files, and other ISAM file systems to isCOBOL JISAM or isCOBOL ISAM Server. The JUTIL utility can be used to migrate Micro Focus indexed files directly to isCOBOL JISAM if Micro Focus COBOL is

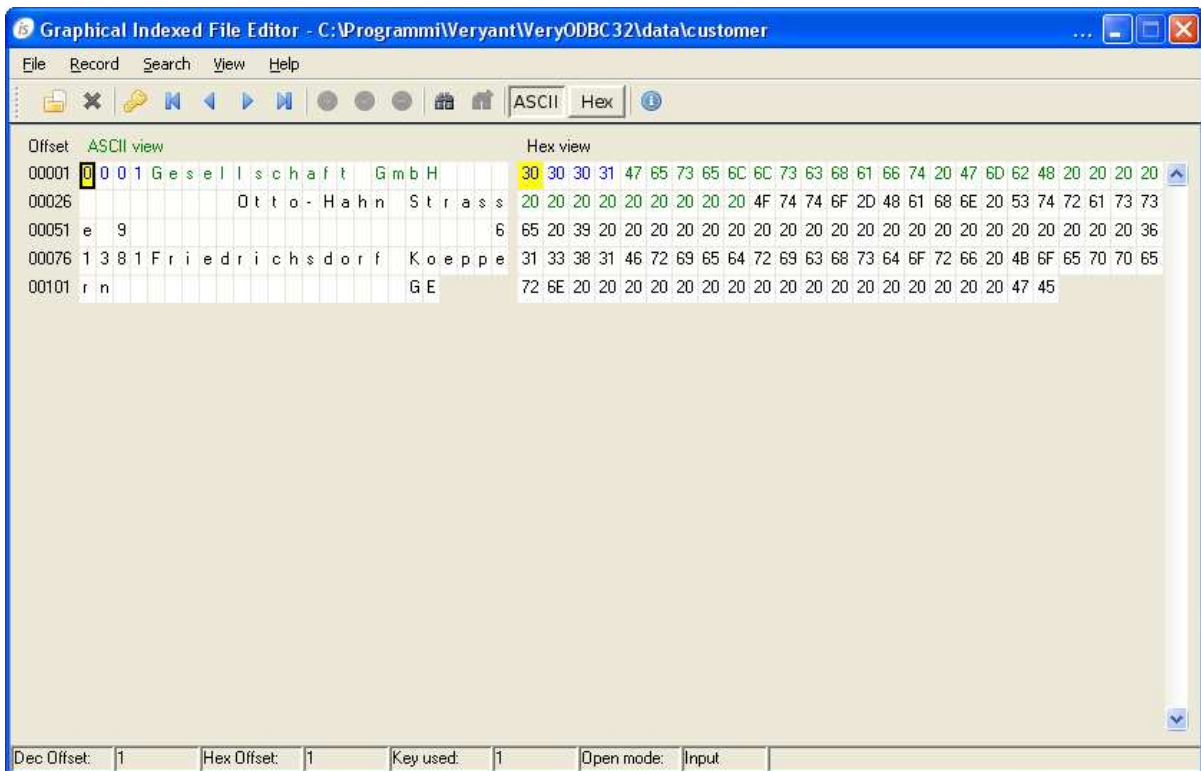
installed on the machine, and Micro Focus Vision files directly to isCOBOL JISAM if a copy of ACUCOBOL-GT is installed on the machine.

### Veryant Graphical Indexed File Editor (GIFE)

A new utility, similar to the 'alfred' record editor previously offered from Acucorp, is available to manage indexed files within isCOBOL 2010 R2.

The Veryant Graphical Indexed File Editor (GIFE) utility enables developers to read, modify, add, or delete individual records stored in an indexed file outside of an application. This tool is useful for developers who need to update information instantly during test procedures or to correct information that was originally inputted incorrectly.

**Figure 1.** Sample GIFE Screen Shot



As depicted in Figure 1, *Sample GIFE Screen Shot*, to open a file with GIFE, first click on the File menu and then select Open. You will be prompted for file name, file type, and open mode (read only / read-write).

The program shows the first record as soon as the file is open. The ASCII view of the record content is shown on the left; this view is useful for USAGE DISPLAY items. The Hex view is shown on the right; this view is useful for USAGE COMP and other kind of items that cannot be correctly represented in ASCII.

Primary key digits are shown in blue. Alternate keys digits are shown in green. The rest of the record is shown in black.

- The *Record* menu contains features that allow users to navigate through records and update the record content.
- From the *Search* menu, users can search a specific word in the current record.
- The *View* menu allows users to switch between ASCII view and HEX view.

### **isCOBOL Application Server Enhancements**

Organizations deploying applications with the isCOBOL™ Application Server (for thin client deployments) can now easily detect and resolve situations where record or file locks are blocking access to data through a GUI administration panel or a reporting program.

To view active locks from the isCOBOL Server Administration panel, select a program that is launched and the panel will display those details. An administrator can then monitor the active locks and resolve issues as appropriate.

A new library routine `A$LIST_LOCKS` gives developers access to the user record and file lock data. This routine can be used to create programs that report active locks sorted by file, record, or user name.

### **Additional compatibility with Micro Focus COBOL and Mainframe COBOL**

In the 2010 R2 release, compatibility with Micro Focus COBOL and Mainframe COBOL commands was further enhanced to simplify transitions to the isCOBOL Platform from those environments. New compatibility advancements include:

- The "ALL" syntax is now supported as an index of tables in functions that allow a variable number of arguments
- XML PARSE and XML GENERATE support for mainframe COBOL compatibility. No special compile options required
- Support for the INSPECT statement with more than 1 FOR clause

- ADDRESS OF syntax is now supported with -cp compiler option
- ALPHABETIC type is now supported
- Enhanced Micro Focus compatibility for the compile option "-cm"
  - Edited variables are now accepted in the INTO clause of UNSTRING statement
  - H"XX..." where X is a hexadecimal digit as a numeric literal whose value is the number represented by the hexadecimal digits

### **Performance enhancements**

In isCOBOL APS 2010 R2, up to 50% performance improvement may be experienced on applications using common COBOL statements such as INITIALIZE, MOVE ZERO, and PERFORM...THRU.

### **Voice of the Customer updates**

Several Voice of the Customer (VOC) updates were incorporated in the isCOBOL APS 2010 R2 update, including:

- A Consistency Check feature in the isCOBOL IDE to ensure that variables, paragraphs, and copybooks exist and are bug free. This feature is executed by right-clicking on a project in the isCOBOL Explorer and selecting it from the pop-up menu.
- Edit and continue while debugging from within the isCOBOL IDE and isCOBOL Debugger are now available. e.g. changes to event paragraph code can be tested without restarting the debugger.
- Enhancing the GRID control designer so developers can easily embed other controls such as Check-box, Combo-box, etc. in individual grid cells.