



isCOBOL™ Application Platform Suite

isCOBOL APS 2010 Release 1 Overview

Copyright © 2010 Veryant LLC.
2415 East Camelback Road, Suite 700, Phoenix, AZ 85016, U.S.A.

All rights reserved.

This product or document is protected by copyright and distributed under licenses restricting its use, copying, distribution and recompilation. No part of this product or document may be reproduced in any form by any means without prior written authorization of Veryant and its licensors, if any.

isCOBOL and Veryant are trademarks or registered trademarks of Veryant LLC in the U.S. and other countries. All other marks are property of their respective owners.

Table of Contents

| | |
|--|-----------|
| Introduction | 4 |
| isCOBOL IDE | 4 |
| isCOBOL Server | 7 |
| isCOBOL Web Direct 2.0..... | 8 |
| isCOBOL ESQL Generator | 8 |
| isCOBOL SQL Server..... | 9 |
| Print preview | 9 |
| Diagnostics..... | 11 |
| Expanded Linux on System z functionality..... | 11 |
| Enhanced ACUCOBOL-GT | 11 |

isCOBOL APS 2010 R1 Release Overview

Introduction

Veryant proudly announces the newest version of its isCOBOL™ Application Platform Suite (APS), isCOBOL 2010 Release 1 (R1). isCOBOL provides a complete and cost-effective environment for the development, deployment, maintenance, and modernization of COBOL applications and data. The latest version of isCOBOL APS includes enhancements to the Eclipse-based isCOBOL™ Integrated Development Environment (IDE) and thin client computing offering (isCOBOL™ Server). Improvements to isCOBOL™ Web Direct 2.0, software used to deliver rich Internet applications (RIA) through a zero client, browser-based deployment model, and isCOBOL™ ESQL Generator are also key parts of this release.

Beginning with isCOBOL 2010 R1, Veryant no longer uses the term "Service Pack" (SP) to designate new software versions. Successive versions of isCOBOL will now be referred to as "Releases" (i.e. isCOBOL 2010 Release 1 (R1), isCOBOL 2010 Release 2 (R2), etc.).

Details on several of the new features in the isCOBOL APS 2010 R1 release are included below.

isCOBOL IDE

Graphical and flexible Eclipse-based environment for key design, coding, testing and debugging tasks

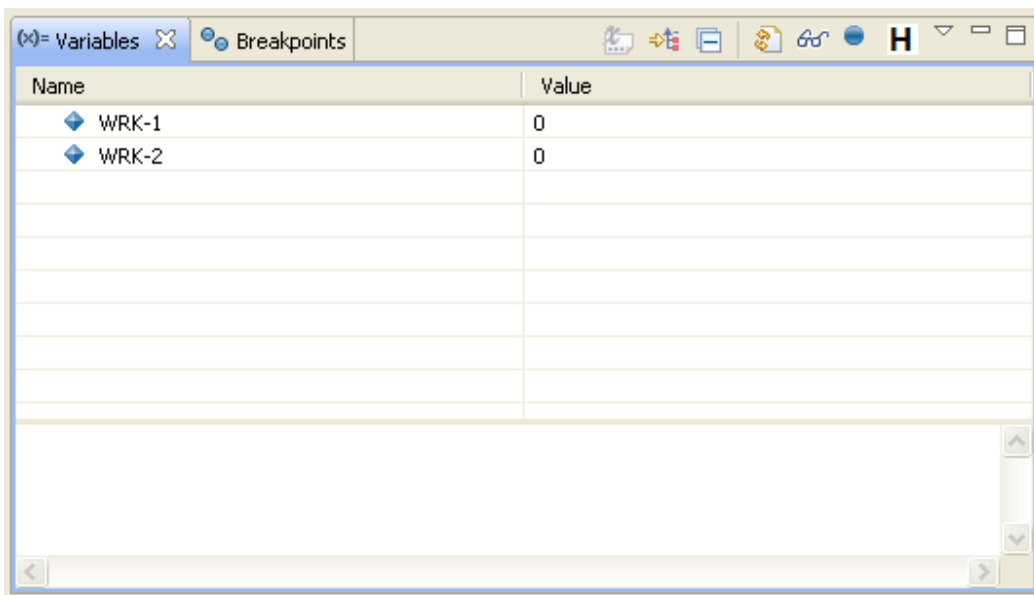
Built on Eclipse, the isCOBOL IDE features a COBOL code editor, integrated debugger with remote debugging capability, the ability to debug COBOL and Java together, and all of the other features available to the Eclipse community. In isCOBOL 2010 R1, support was added for Eclipse Galileo, so developers taking advantage of the latest Eclipse updates can develop and debug isCOBOL programs and Java in the same framework.

Several debugging capabilities previously offered only in the 100% Java-based standalone isCOBOL Debugger were rolled in as options of the isCOBOL IDE, such as the ability to show the Variables and Breakpoints View by default in debug mode. Variables and Breakpoints can be managed in the Debug Perspective of the isCOBOL IDE.

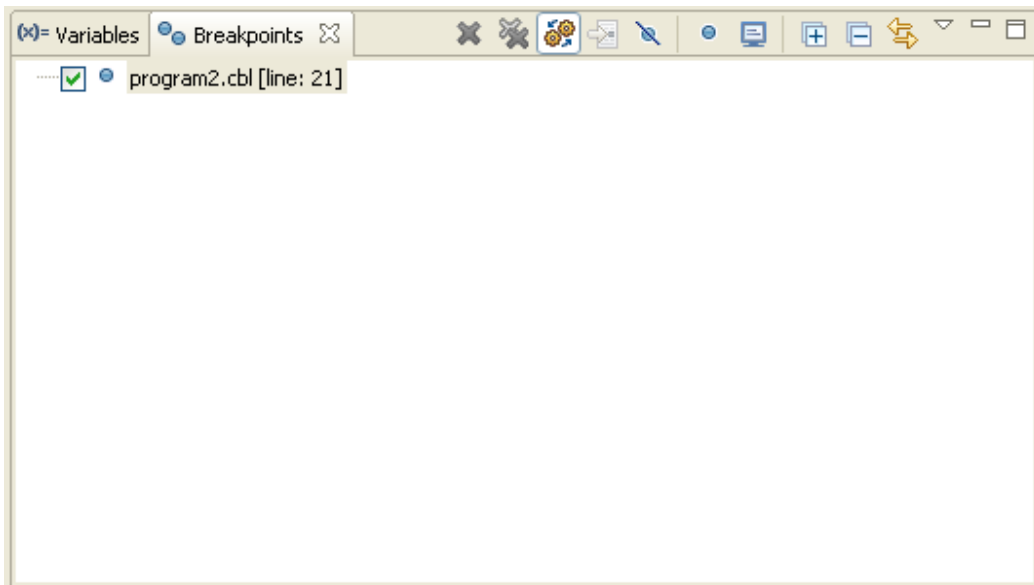
To switch to the Debug Perspective in the isCOBOL IDE:

1. Click on Window menu
2. Choose 'Open Perspective'
3. Choose 'Debug'

The Variables view allows users to monitor variables content.

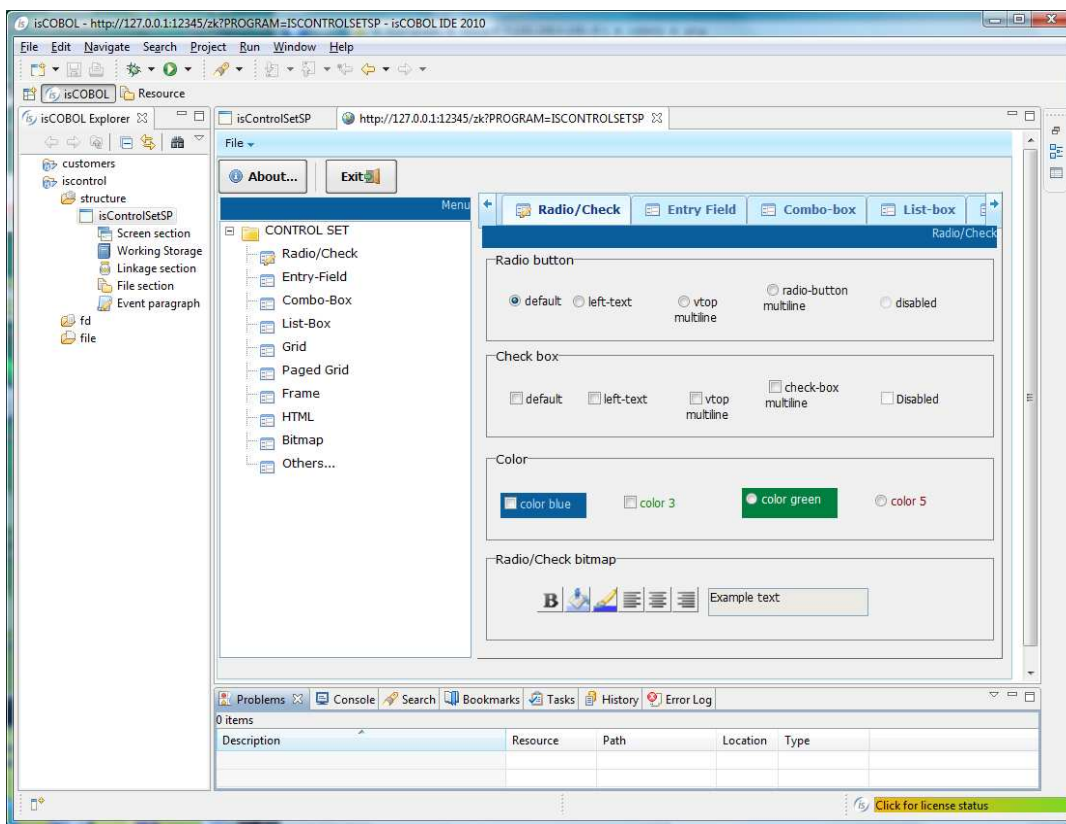


The Breakpoints view allows users to toggle between breakpoints.



A 'quick preview' capability was also added to the isCOBOL IDE for isCOBOL Web Direct 2.0 programs. As depicted in Figure 1 below, rich Internet applications (RIA) GUIs developed using isCOBOL Web Direct 2.0 can now be viewed inside of the IDE by the click of a button, as done with standalone and thin client GUIs. This feature is useful for developers creating programs that will be installed in a Servlet container (like Tomcat) to work as Web applications.

Figure 1. isCOBOL IDE Quick Preview Screenshot



To run a program as a Web application from the isCOBOL IDE:

1. Click on Run menu
2. Select 'Run As'
3. Select isCOBOL WD2 Application

To debug the program as a Web application:

1. Click on Run menu
2. Select 'Debug As'
3. Select isCOBOL WD2 Application

isCOBOL Server

Powerful thin client and distributed processing

isCOBOL Server enables high value, efficient thin client computing. With isCOBOL Server, valuable system and network resources are conserved -- nothing is needed on the client side, except a Java Runtime Environment (JRE) and the isCOBOL thin client Java library.

In the 2010 R1 release, isCOBOL Server can now run as a Windows Service on Windows-based servers so it can be installed as a service, started up automatically, and run in the background. When isCOBOL APS has been installed, the service can be installed, removed and managed through `isserver.exe` command line utility. To install the service, use the command:

```
isserver -install
```

If the operation is successful, there will be a new entry in the Windows service manager.

If the service is installed in auto mode, the service will automatically start along with the system. To install the service in demand mode, use the command:

```
isserver -install-demand
```

In this mode, the service must be manually started by the user in the Windows service manager.

More details about this feature can be found in the isCOBOL Server (Thin Client and Distributed Processing) section of the isCOBOL APS documentation set.

Without changing COBOL source code, users of isCOBOL Server can also take advantage of a new feature in the 2010 R1 release that automatically shows a wait cursor if communication time between a client and server is more than 2 seconds. This feature is helpful when TCP/IP communication from client to server is slow, to advise the end-user that a GUI application it is alive.

The property to enable this feature is called `iscobol.gui.waitcursordelay`. This property sets the timeout in milliseconds before the cursor is changed. A value of 0 disables the feature. The default value is 2000.

General isCOBOL Server administration has also been improved in isCOBOL 2010 R1. Server startup has been simplified and developers can use a single command to launch a thin client with the debugger.

isCOBOL Web Direct 2.0

Powerful thin client and distributed processing

isCOBOL Web Direct 2.0 enables organizations to leverage existing COBOL syntax to develop and deploy universally accessible, zero client rich Internet application (RIA) using standard COBOL screen sections and existing program procedure division and flow.

In isCOBOL 2010, many improvements have been made to RIA development, especially in enhancing the appearance of COBOL applications running on mobile devices. Developers can now use Cascading Style Sheets (CSS) styles for GUI controls to customize screens for targeted mobile devices and browsers. Details on how to use CSS can be found in the “Customizing the layout through CSS” section of the isCOBOL Web Direct 2.0 guide of the isCOBOL APS 2010 R1 documentation set.

Support for additional graphical controls was also added in the 2010 R1 release, making it less work to reuse existing GUIs in an isCOBOL Web Direct 2.0 deployment. Newly supported graphical controls include: Editable GRID, PAGED GRID, PAGED LIST-BOX, BAR, DATE-ENTRY and JAVA-BEAN.

isCOBOL ESQL Generator

Powerful thin client and distributed processing

isCOBOL ESQL Generator is a Rapid Application Development (RAD) tool that reads a specified COBOL file description from existing COBOL source files and generates an isCOBOL file system interface implemented with ESQL in COBOL.

The ability to add relational database access to applications without changing COBOL source code or learning ESQL was enhanced in isCOBOL 2010 R1. PostgreSQL has now been added to the list of supported database systems which already included Oracle, DB2, DB2/400, Microsoft SQL Server and MySQL.

isCOBOL ESQL Generator users can access multiple RDBMS connections such as Oracle database and MySQL in the same program with isCOBOL 2010 R1. In order to define multiple connections in the isCOBOL configuration, the following syntax must be used:

```
iscobol.jdbc.driver.<connection_name>iscobol.jdbc.url.<connection_name>
```

The above syntax must be repeated for each connection a user wishes to define using a varying `connection_name`. Different connections can be

- On the same database

- On different databases of the same family (e.g. Oracle)
- On different databases of different families (e.g. Oracle and MySQL)

Once connections are defined in a configuration, a developer can associate single files to them with the following syntax:

```
iscobol.easydb.connection_name.<physical_file_name>=<connection_name>
```

Files that are not explicitly associated to a connection will use the default connection identified by `iscobol.jdbc.driver` and `iscobol.jdbc.url` settings.

isCOBOL™ SQL Server

Add a flexible RDBMS Engine to existing ISAM data

Serving both as a powerful relational database engine and a comprehensive SQL interface to ISAM files, isCOBOL SQL Server delivers unprecedented flexibility to existing COBOL applications with no change to source code or data migration required.

isCOBOL SQL Server use has been streamlined in the 2010 R1 release with the ability to automatically create a database table. Now, ISAM files created by COBOL programs can be instantly accessed as database tables without manual intervention, further simplifying the ability of developers to take full advantage of functions such as executing custom SQL statements and complex queries with existing ISAM files.

Once all properties have been correctly set in an isCOBOL configuration, a developer can create the file in isCOBOL SQL Server by just opening it for output in the program using the code `OPEN OUTPUT logical_file_name.`

Print preview

The print preview window has been fully redesigned so that developers can use and customize settings such as window size, default zoom level, default aliasing and default messages in the print preview dialog box, as depicted in Figure 2, “isCOBOL Print Preview Screenshot.” Developers can also make print preview appear in its own window. This means users can now directly use an isCOBOL JavaBean print preview component in a custom window of their COBOL application.

Figure 2. isCOBOL Print Preview Screenshot

The screenshot shows a print preview window titled 'Iscobol print preview'. The window contains an invoice for 'veryant'. The invoice includes a logo for 'veryant' with the website 'https://www.veryant.com' and email 'Info@veryant.com'. The company name is 'ARITMETIC S.p.A.' located at 'VIA GARIBOLDI, N 51/B, 10137 TORINO (TO) - Italy'. The document is a 'SELL INVOICE' with document number '1098/002' and invoice date '12/05/2006'. The customer is 'SELLA S.P.A.' with order number '00654920011'. The invoice details a single line item for 'Identify Creation' (3 logos) with a net amount of 992.00. The total invoice amount is 1,193.51, including VAT of 198.92. A note at the bottom states: 'These commodities, technology or software were exported from United States in accordance with the export administration regulations.'

| ART.NO. | DESCRIPTION | U.M. | QTY.ORDER | PRICE | RP% | AMOUNT | VAT |
|--|--|------|--------------|--------|---------------|------------|------|
| Identify Creation | ORDER NO. S107247 OF 11.01.06 3 Logos based on color scheme | N. | 1.00 | 992.00 | | 992.00 | 20 |
| These commodities, technology or software were exported from United States in accordance with the export administration regulations. | | | | | | | |
| SUBTOTAL | | % RP | NEW SUBTOTAL | | DELIVERY | NET AMOUNT | TAX |
| 992,00 | | | | | | 992,00 | 2,59 |
| DELIVERY | | TAX | NET TOTAL | | NET | | |
| | | 2,59 | 994,59 | | 198,92 | | |
| NET AMOUNT | | | NET TOTAL | | INVOICE TOTAL | | |
| 994,59 | | | 198,92 | | 1.193,51 | | |
| NOTE | | | | | | | |

Diagnostics

Additional trace level capabilities have been added in isCOBOL APS 2010 R1. Now users can show key values and record data on read/writes for isCOBOL™ JISAM and other data file sources.

Two new values have been added to the property `iscobol.tracelevel`:

- 16 Content of keys (works only in conjunction with 8)
- 32 Content of record (works only in conjunction with 8)

Expanded Linux on System z functionality

In the 2010 R1 release, Veryant expanded functionality for Linux on System z deployments by adding the native libraries required to allow isCOBOL to call C functions, and for isCOBOL to be called from C. Now isCOBOL applications can be deployed and run with external software packages such as UniKix™ mainframe rehosting software from Clarity Solutions, Inc. and sort utilities in a Linux on System z environment.

Enhanced ACUCOBOL-GT® compatibility

To simplify the move from ACUCOBOL-GT to isCOBOL, support has been added for the W\$KEYBUF routine (opcodes 1, 2, 3 and 9), a routine that allows a program to simulate user input, as well as Ctrl+A - Ctrl+Z and Ctrl+0 - Ctrl+9 exception keys.