

## WHAT'S NEW IN VISUAL COBOL 2.0

### VISUAL COBOL 2.0

Visual COBOL is a family of COBOL development tools for the next generation of COBOL applications. Based around a choice of Visual Studio 2010 or Eclipse IDEs, it includes options for development and deployment of COBOL applications as native code, .NET and JVM on Windows, UNIX and Linux and for deployment to Microsoft Windows Azure.

The 2.0 release includes hundreds of enhancements based on customer requests designed to make it easier for Micro Focus COBOL, ACUCOBOL and RM/COBOL users to upgrade their applications to Visual COBOL. This document highlights a few of those enhancements. Full details of the powerful features available can be found in the product specific data sheets.

### VISUAL COBOL FOR ECLIPSE

- Supporting the latest Eclipse platform, Visual COBOL integrates with Eclipse 3.7, code named Indigo
- For faster upgrades, the Net Express Import Wizard automates the upgrade process enabling developers with existing Net Express projects to quickly upgrade to Visual COBOL for Eclipse
- Remote development system setup has been simplified and no longer requires SAMBA for use with remote projects, reducing the time and complexity for Developer Hub projects
- Extended support for large codebases with the introduction of the COBOL File Search and COBOL Explorer views enabling developers to quickly find source files in projects containing large numbers of artefacts
- Upgrade guides, new demonstration programs and code snippets help shorten the time needed to upgrade and help developers quickly adopt new language features
- Further developer aids include:
  - Copybook 'breadcrumbs' showing program context of the currently visible copybook

- Single file compile option allowing developers to rapidly test code changes without performing a full application build
- Icons and image updates providing consistent imagery throughout the IDE and new graphics to help indicate at a glance, the state of items within the project
- Editor keyboard handling tailored to COBOL programs for cursor positioning and word wrap consistency
- Source file dialect scanning for easier project configuration
- Several debugging enhancements including: program breakpoints, wait for debuggable attachment and the ability to debug a DLL or shared library without requiring a trigger program

### COBOL FOR JVM

- A choice of runtime systems is now available for greater deployment flexibility. With Visual COBOL 2.0, the COBOL for JVM runtime is now available with a choice of pure JVM or full runtime deployment options. With these runtime systems, COBOL applications can now be deployed to any environment where a standard J2SE environment is available while also allowing flexibility for interoperability between COBOL JVM and native code modules
- COBOL applications containing embedded SQL can now be deployed to within the Java virtual Machine. JDBC data sources can be referenced directly within the application code or using JNDI for greater deployment flexibility
- COBOL for JVM applications can now be developed within Eclipse using the remote development features of Eclipse, offering developers a rich IDE experience when application source code is maintained on a centralized server
- New language features provide portable syntax between .NET and JVM environments enabling greater reuse of the codebase and shortening time to delivery

## VISUAL COBOL FOR VISUAL STUDIO

- New tools for managing large projects, including the Project Details View
- Several debugging enhancements including: program breakpoints, wait for debuggable attachment and the ability to debug a DLL or shared library without requiring a trigger program
- Multi-build output projects make it easier to create Visual Studio projects for applications containing large numbers of COBOL programs

Upgrade guides, new demonstration programs and code snippets help shorten the time needed to upgrade and help developers quickly acquire new language features

## COBOL FOR MICROSOFT.NET

- Visual COBOL and Visual Studio 11 are now available for beta testing. For more information and download details, please see [www.microfocus.com/visualcobol11](http://www.microfocus.com/visualcobol11)
- XML support - COBOL applications using the XML\_GENERATE API can now be deployed to the .NET platform
- SmartLinkage for language interoperability – several enhancements have been added to SmartLinkage technology including serializable types, namespace support and the ability to generate SmartLinkage types for programs containing duplicate field names
- New language features provide portable syntax between .NET and JVM environments enabling greater reuse of the codebase and shortening time to delivery

## COMPATIBILITY FOR ACUCOBOL-GT AND RM/COBOL

Visual COBOL 2.0 adds further support and compatibility for ACUCOBOL-GT and RM/COBOL applications.

- File conversion utilities enable ACUCOBOL-GT Vision files and RM/COBOL indexed files to be converted to Micro Focus indexed files
- Native Vision and RM/COBOL file access is already available within Visual COBOL and this release enables that support within the Micro Focus Fileshare server. As well as providing compatibility for ACUUser users, this feature also enables customers to access native format data files from .NET or JVM applications
- The COBOL compiler now provides support for RM/COBOL applications with the addition of the DIALECT(RM) directive. Amongst other compatibility features, the RM/COBOL copybook search order is now supported in this release when using the DIALECT(RM) directive

- RM/COBOL XML Extensions are now available on all native code platforms
- PIC X(n) COMP-5 picture clauses are now supported

## COBOL SERVER

Formerly known as the COBOL 2010 runtime, Micro Focus COBOL Server is the new name for the COBOL deployment system. Including all support provided by the COBOL 2010 Runtime, COBOL Server includes over 150 customer requested product enhancements as well as these features in Visual COBOL 2.0:

- COBOL applications compiled with generator optimizations will benefit from shorter compile times with larger programs achieving the greatest savings
- Micro Focus OpenESQL technology now supports 64-bit ODBC access on all Visual COBOL platforms
- Micro Focus OpenESQL technology has been optimized and automatically defaults to optimal performance for applications using embedded SQL improving overall application performance with minimal engineering effort
- Enhanced runtime library support – the Micro Focus runtime offers further extensions, such as acquiring semaphore within a time out period, enabling developers to build platform independent software
- On Windows platforms, the COBOL runtime will now generate Microsoft minidump format files enabling developers to debug mixed language applications

## VISUAL COBOL FOR AZURE

Visual COBOL for Azure enables COBOL applications to be deployed to the Microsoft software as a service (SaaS) Cloud platform. For more information about deploying COBOL applications to the Cloud and to register for the Early Access Program, go to <http://www.microfocus.com/azure>.

- Visual COBOL for Azure integrates with the latest Microsoft Azure SDK 1.6 enabling COBOL applications to benefit from the latest innovations in Microsoft's Cloud platform
- Micro Focus OpenESQL now supports database access to the Microsoft SQL Azure cloud database

## THE COBOL LANGUAGE

Micro Focus has been the driving force behind the COBOL language for more than three decades. In Visual COBOL 2.0, Micro Focus continues to enhance the COBOL language, maintaining its relevance for business and enabling developers to take advantage of new features in platforms such as .NET and JVM:

- Local Variables - developers can now declare local variables in managed code using the new DECLARE keyword, avoiding the need to declare temporary variables globally and helping improve code quality

- Collections - two new collection types are available in managed COBOL: LIST and DICTIONARY. These types allow developers to code for .NET and JVM whilst maintaining code portability
- Properties – property syntax now allows for a simplified approach to declaration of GET and SET routines
- Indexers - in managed COBOL, an indexer can now be defined using INDEXER-ID and GETTER and SETTER phrases to access the indexer value. Indexers allow instances of a class or valuetype to be indexed just like arrays

#### SUPPORTED PLATFORMS

- Windows XP (x86) with Service Pack 3 - all editions except Starter Edition
- Windows XP (x64) with Service Pack 2 - all editions except Starter Edition
- Windows Vista (x86 & x64) with Service Pack 1 - all editions except Starter Edition
- Windows 7 (x86 and x64)

- Windows Server 2003 (x86 & x64) with Service Pack 2
- Windows Server 2003 R2 (x86 and x64)
- Windows Server 2008 (x86 and x64) with Service Pack 2
- Windows Server 2008 R2 (x64) (x86 and x64) with Service Pack 2
- RedHat 5.5, 5.7, 6.1 (Intel)
- SuSE 11, 11 SP1 (Intel)
- AIX 6.1, 7.1 (Power)
- HP-UX 11.31 (Itanium)
- Solaris 10 (Sparc)

\* Eclipse IDE support is available on Windows and Linux platforms only

\* The Developer Hub product is not available on Windows platforms

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**For additional information please visit: [www.microfocus.com](http://www.microfocus.com)**