



Server Enterprise Edition 6.0 for Windows ServicePack 2 WrapPack 2

A large, flowing, blue ribbon graphic that curves and loops across the lower half of the page, starting from the right side and moving towards the left.

Release Notes

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Server Enterprise Edition 6.0 ServicePack 2 WrapPack 2 for Windows Release Notes

These release notes contain information that might not appear in the Help. Read them in their entirety before you install the product.



Note: This document contains a number of links to external Web sites. Micro Focus cannot be responsible for the contents of the Web site or for the contents of any site to which it might link. Web sites by their nature can change very rapidly and although we try to keep our links up-to-date, we cannot guarantee that they will always work as expected.

Installing on Windows

System Requirements for Server Enterprise Edition for Windows

Hardware Requirements

The disk space requirements are:

- About 60 Mb for the Sentinel RMS license server.
- About 400 Mb for Server Enterprise Edition.

This disk size includes the space needed to cache information

Operating Systems Supported

The following platforms are supported:

- Windows XP 64-bit SP2
- Windows XP 32-bit SP3
- Windows Vista SP1 32/64-bit
- Windows 7 32/64-bit
- Windows Server 2003 SP2 32/64-bit
- Windows Server 2003 R2 64-bit
- Windows Server 2008 SP2 32/64-bit
- Windows Server 2008 R2 32/64-bit

Software Requirements

- This release requires and will upgrade Server Enterprise Edition ServicePack 2 or Service Pack 2 WrapPack 1.

Before installing this product, you must have the following software installed on your computer:

Enterprise Server

- A Web browser, such as Microsoft Internet Explorer 6.0 or Netscape Navigator 6.1, is required for Enterprise Server Administration in Server Enterprise Edition.
- To use Enterprise Server Administration, scripting or JavaScript support must be enabled in your browser. This is on by default in Internet Explorer in most Windows operating systems, apart from Windows 2003. Also, active content must be allowed and not blocked. To enable both these in Internet Explorer:
 1. Click **Tools > Internet Options**.
 2. On the **Security** tab, click **Custom Level**. In the **Scripting** section, under **Active Scripting**, click **Enable**.
 3. On the **Advanced** tab, scroll down the list to the **Security** section, and ensure the item **Allow active content to run in files on My Computer** is checked.



Note: To use your Web browser off line, you need the dial-up networking feature of Windows installed. Otherwise you may have TCP/IP errors such as being unable find "localhost" or the numeric equivalent (127.0.0.1).

- Enterprise Server Help requires the Java Runtime Environment on some Windows systems to enable the Search facility to work.

Java Beans Java 2 Platform Standard Edition (J2SE) 1.4 or later from Oracle or IBM. Oracle versions 1.4 and later are supported, but only IBM version 1.4 is supported. You can download the J2SE from www.oracle.com.

Java Compilation The Java Development Kit (JDK) is required for compiling Java. The JDK is downloadable from the Oracle Web site. After installing the JDK, you must put the tools.jar file for the JDK on your classpath, using a command similar to:

```
set classpath=jdk-install-directory\lib\tools.jar
```

Installing Server Enterprise Edition for Windows

Before Installing

Before installing this ServicePack, you must have the following software installed or uninstalled:

- You need to uninstall any old existing installations of the Open PLI standalone product.
- The Micro Focus Security Pack must be uninstalled. You can install it again after installing this release, but you must install the latest Security Pack. To uninstall, use **Add or Remove Programs**.
- Before installing Studio Enterprise Edition and Server Enterprise Edition, make sure that any existing Micro Focus Directory Server (MFDS) or CCITCP2 Windows service from an existing product is stopped and uninstalled, as follows:

1. Stop the service, using either the Windows Service Management Console GUI or from a command line prompt by typing:

```
net stop mf_ccitcp2
```

Only one instance of the MFDS or CCITCP2 service can run on a Windows machine.

2. Uninstall the MFDS or CCITCP2 service. For MFDS, from a command line prompt enter:

```
mfds -u
```

For CCITCP2:

```
ccitcp2 -u
```

To run an earlier version of MFDS as a service after you have installed a later version:

1. Stop and uninstall the MFDS service, as described above.
2. Reinstall the earlier version, as follows:

- a. Open a COBOL command environment.
- b. Install the service. Enter the following command:

```
mfds -i
```

- c. Start the service. Enter the following command:

```
net start mf_ccitcp2
```

Note that the two versions use different paths for environment and registry values, so the list of configured Enterprise Servers might be different depending on which version has been started, since, by default, different MFDS data repositories are used.

MFDS 5.1 and later are able to import or use Enterprise Server configuration data generated by earlier versions of MFDS, but 5.0 or earlier versions of MFDS might not be able to read data generated by later versions.

It is possible to run MFDS from a COBOL command environment ("mfds") rather than as a service, but by default the "mfcobol" port is used (86) and this can only be used by one process at a time

Installing

To install this ServicePack:

1. Download the ServicePack from the SupportLine Web site.
2. See *Before Installing* for what you must uninstall first.
3. Run the ServicePack's .msp file, either by double-clicking the filename in Windows Explorer, or by entering the filename at the command line.

After Installing

After installing the ServicePack, you can install the Micro Focus Security Pack. To do this download the latest version of the required pack from the SupportLine Web site, and install this latest version.

Offline Web Browser

- To use your Web browser off line, you need the dial-up networking feature of Windows installed. Otherwise you may have TCP/IP errors such as being unable find "localhost" or the numeric equivalent (127.0.0.1).

Microsoft Terminal Server

- Microsoft Terminal Server is an environment for running multiple instances of a single user product. It is not a platform where a single-user product can be made to perform as a multi-user product.
- You can use Server Enterprise Edition with Microsoft Terminal Server. Note that a separate end-user license is required for each user who accesses Server Enterprise Edition, even if the product is running on a single machine. See your *End User License Agreement*.
- To install onto a terminal server, log on to the physical terminal server with a user ID that has administrator privileges. Then use **Control Panel > Add/Remove Programs** and follow the instructions on the screen.
- When you install the product on Microsoft Terminal Server or similar terminal software, do not execute more than one installation at the same time.
- When you install Microsoft Terminal server, you must assign a unique port address to each user. Then the very first time that each user logs into Server Enterprise Edition and starts the terminal server, he or she should:
 1. Select **Options > Project > Port address for Web Server**.
 2. Type in the assigned port address.

This is necessary because the default port address for the Web server is 80. Once this has been allocated to the first user, when the next user attempts to start the Web server, the software recognizes that this port is in use and rejects the attempt. Consequently each user requires an individual port address.

Windows Compatibility Mode

- In Windows Vista and Windows Server 2008, if you have problems starting Enterprise Server instances using the Micro Focus Enterprise Server Administration HTML GUI, ensure that none of the Enterprise Server program files are configured to use a Windows compatibility mode. You can check for compatibility modes by examining the file properties for the program file using Windows Explorer. After opening the Properties dialog for the file, select the Compatibility tab; ensure the checkbox **Run this**

program in compatibility mode for is not checked. If it is checked, clear the checkbox. Then click **Show settings for all users** and ensure the **Run this program in compatibility mode for** checkbox is not checked on the new dialog. Click OK on both dialogs to update the file properties.

Verify that `product-install-folder\base\bin\mfds.exe` is not set to run in a compatibility mode. Then, for 32-bit Enterprise Server, check `base\bin\cas*.exe` and `base\bin\mfcs.exe`; for 64-bit Enterprise Server, check `base\bin\win64\cas*.exe` and `base\bin\win64\mfcs.exe`.

Reinstalling

You can reinstall this ServicePack, by uninstalling, repairing and then reinstalling. To do this:

1. Optionally, back up your Enterprise Server configuration. In Enterprise Server Administration, click **Export**.
2. Click **Control Panel > Add or Remove Programs**.
3. Uninstall the ServicePack by selecting Micro FocusServer Enterprise Edition 6.0 and clicking **Remove**.
4. Repair Server Enterprise Edition, by selecting Micro FocusServer Enterprise Edition 6.0. Then click **Click here for support information** and choose **Repair**.
5. Reinstall this ServicePack, by following the instructions in *Installing* above.
6. Restore your Enterprise Server configuration, if necessary. In Enterprise Server Administration, click **Import**.

Uninstalling

To completely remove the product you must uninstall the Micro Focus Licensing Manager as well.

To uninstall the product, you cannot simply delete its files from your hard disk. To uninstall the product:

1. Log in with the same user-ID as you used when you installed the product.
2. Click **Uninstall a program** under **Programs** (or **Add/Remove Programs** on older versions of Windows) in **Control Panel**.
3. On older versions of Windows such as Windows XP, ensure that **Show Updates** (at the top of the Add or Remove Programs dialog) is checked, so that any hot fixes or WrapPacks are listed.
4. On versions of Windows Vista and later, click **View installed updates** in the left-hand pane.
5. Select the product and click **Remove** or **Uninstall**, respectively.

When you uninstall, the only files deleted are those that the installation software installed. If the product directory has not been removed, delete any unwanted files and subdirectories within it using Windows Explorer.

Licensing Information



Note:

- This release uses the license keys for the Studio Enterprise Edition 2.0 release.
- If you are unsure about what your licensing policy is or what sort of license you require, consult your System Administrator or Micro Focus SupportLine to obtain a valid license.

Windows Use the Authorization Code, supplied with your delivery notice, to license your product. To do this:

1. Click **Start > All Programs > Micro Focus License Manager > License Management System**.

The dialog box for the Micro Focus License System Administration Tool will be displayed.

2. Click the **Authorize** tab.
3. Enter your Authorization Code and click **Authorize**.
4. Close the Micro Focus License System Administration Tool.

What's New

Enterprise Server

Enterprise Server now supports standard ECI calls to Mainframe Subsystem regions. The External Call Interface (ECI) allows non-CICS programs running outside the server to invoke CICS programs within a region opening up access to legacy business logic.

ECI client programs can run on the same machine as the enterprise server and, in this configuration, can communicate across shared memory or through the "Web Services and J2EE" listener. Programs running on different physical hardware submit ECI requests through the listener.

HCO for SQL Server (HCOSS)

HCO for SQL Server supports rowset cursors.

OpenESQL

This release includes the following enhancements:

SQL Compiler Directive Options

OpenESQL has been enhanced to support the following new SQL compiler directive options:

DATE

Controls the reformatting of date values in output parameters and in input parameter character host variables when DETECTDATE is also specified.

TIME

Controls the reformatting of date values in output parameters and in input parameter character host variables when DETECTDATE is also used.

DATEDELIM

Specifies a single character as the delimiter between the year, month, and day components to override the default delimiter determined by the HCOSS DIALECT or DATE directive specification.

TIMDELIM

Specifies a single character as the delimiter between the hour, minute, and second components to override the default delimiter determined by the HCOSS DIALECT or TIME directive specification.

TSTAMPSEP

Specifies a single character as the separator between the date and time parts of timestamp and date/time data.

SQL Server

We now support Microsoft SQL Server 2012.

Open PL/I

This release includes the following enhancements:

- Support for WCHAR data types and associated built-in function enhancements. See *Language Reference Manual* for more information.
- Support for Big-Endian CHAR VARYING on Intel chipsets
- Support for PLICTF, PLIFILL, PLIMOVE, PLIOVER, VALIDDATE built-in functions
- Support for the NOINIT and PARAMETER attributes of the DECLARE statement
- Support for XN (hex) binary fixed-point and numeric literal constants, as well as for punctuating constants
- New TINY and HUGE built-in functions
- Support for character picture data types. See *Language Reference Manual* for more information.
- Preprocessor for SQL Server (HCOSS)
- A new PLITEST debugger attach facility
- Macro preprocessor enhancements that include:
 - Support for multiple closure
 - Support for 100-byte variable names
 - Support for %SELECT,%DO WHILE,SYSVERSION, ||=
 - Support for the `-incafter` directive which allows you to add an include file without having to modify the customer source.
- The DB2 LUW precompiler now allows you to specify an userid and a password
- Early Adopter support for Oracle through the ODBC interface

WebSphere Support

Support has been added for IBM WebSphere 8 Application Server.

Known Issues

Please refer to the *Known Errors and Restrictions* topic in the *Product Information* section of your product Help.

In addition, please note the following:

- Batch Scheduler Integration** The documentation for the Micro Focus Batch Scheduler Integration (MFBSI) feature is erroneously included in the product Help for Studio Enterprise Edition, Server Enterprise Edition, and Studio Enterprise Edition Test Server. MFBSI is not available in these software products.
- CICS Web Interface Tutorials** The walkthroughs demonstrating how to use Enterprise Server with Web-enabled CICS applications require some additional steps.
- Web Server** After the *Import Files from Demonstration Program* stage, you need to edit the file `acctweb.cbl` to change `CALL 'DOCCREATE' USING WS-TOKEN TO CALL 'DOCCREAT' USING WS-TOKEN.`
- Web Client** At the *Configure the Enterprise Server* stage, on the **General** tab, add the following entry in the **Configuration Information** text box:
- ```
[ES-Environment]
ES_DOCTEMPLATE_PATH=c:\tutorials\webclnt\html
```
- At the *Start WEBCLNT Server* stage, you must add DFHWEB to the DEMOSTRT startup list as well as DFHCWI, and run `CINS DFHWEB` from your TN3270 emulator.
- COBOL Compiler** Defining a group typedef in one program scope and then using it in declarations in another program scope could lead to incorrect execution results when fields within that structure are accessed. For examples of this problem see the following KB article: [Incorrect execution results when using typedef structures -- Studio Enterprise Edition](#).
- Database Connectors** When you use Database Connectors, you may receive a licensing error "Database Connector license not found or is expired" though a valid license is installed. To workaround this please contact your Micro Focus SupportLine representative and ask that they provide you with an ACUCOBOL-GT license for the Database Connector product you are licensed for.
- HCO for Microsoft SQL Server** When stored procedures are used with the ODBC driver included with SQL Server 2008 a bug in the driver causes SQL Server to leak memory. This affects applications using OpenESQL that either call stored procedures directly, or that use the SQL ACCESS, BIND or DBRMLIB directives.
- The fix for the bug is included in Cumulative Update 5 for SQL Server 2008 R2 for SQL Server 2008 R2. This can be obtained from <http://support.microsoft.com/kb/2438347>.
- Users of Host Compatibility Option for Microsoft SQL Server (HCOSS) should apply this fix before deploying applicatons that use HCOSS.
- Installation**
- If you have any Studio Enterprise Edition 6.0 ServicePack 2 Hotfixes installed, they need to be removed before you install Studio Enterprise Edition 6.0 ServicePack 2 WrapPack 2. If the Hotfixes are not removed, the following error

message is displayed during the install, and the install exits: "Error 2771. Upgrade of feature DOTNET has a missing component."

- A bug in 64-bit Windows 7 may cause the display of the Compatibility Assistant dialog during the installation of the product showing incorrectly that `asmpclocate.exe` and `init2aslm.exe` are not compatible. The two utilities run properly and the install is successful. To avoid receiving this notification, run Windows update and install update KB978637 before installing this product.
- If, when you start Visual Studio, you receive a message box about Micro Focus package load failures, check that the Packages folder is on the PATH. If it is not, click NO to disable loading the packages.

If you accidentally click YES, you need to re-enable loading the packages, as follows:

1. Open a Visual Studio command prompt from the Start menu.
2. Enter the command:

```
devenv /ResetSkipPkgs
```

When you reboot the machine, the problem is resolved, the PATH is set up correctly and the packages are found.

- Installing this release as an upgrade to a previous version of the product might take longer in relative terms compared to a clean install.
- If this release was installed as an upgrade to a previous version of the product and you uninstall it, the Start Menu folder of the product remains.
- The `sqlda.inc` file in the `<install-dir>\base\include` directory is missing an attribute. To fix the problem, open the file with administrative rights in an editor such as Notepad++, navigate to the line that contains `3 sqlname char(30);` and add the `var` attribute as follows:

```
3 sqlname char(30) var;
```

#### J2EE Connector

No XA transaction support for WebSphere 6.1 using the EJB 3.0 Feature Pack is provided.

#### Micro Focus Communications Server

If MFCS is configured in a non-standard error-handling mode, there is a small possibility that a trap will occur when the region is stopped.

#### Microsoft SQL Server Express Edition

To install successfully Microsoft SQL Server Express Edition on Windows XP, you need to have Microsoft Installer 4.5 and PowerShell 1.0 installed. You can install Microsoft Installer 4.5 from the Autorun. Download PowerShell 1.0 from the Microsoft website.

#### Open PL/I Compiler

Named constants whose "value type" matches the named constant type, such as:

```
dcl x fixed bin (31) value ('7fff'Bx);
```

cannot be used where restricted expression evaluation is required, for example:

```
dcl myarr (x) fixed bin(31) static;
```

#### Service Interfaces

- When importing service interfaces from Net Express projects into Visual Studio, any program source that the service interface relies upon must be at the root level of the target Visual Studio project - it cannot exist in subfolders within the Visual Studio project.
- Please leave the Build Action Setting for a Service Interface set to None (the default). Setting the Build Action for a Service interface from the default value of "None" to "Compile" will result in service interface properties not being displayed.

# Resolved Issues

The resolved issues that customers have reported are listed in this section. The numbers that follow each error are the Reported Problem Incident number followed by the Customer Incident Numbers (in parentheses). RPIs that have numbers only (and no text) are included to confirm that the RPIs have been fixed, since no further information is required.

Errors have been fixed in the following areas:

- *AgentServices API*
- *ASC Automatic Synchronize Compil*
- *CAS (COBOL App Server) General*
- *CAS Security*
- *CAS XA Switch modules*
- *CCI TCP/IP*
- *CICS Emulation*
- *Client/Server Binding*
- *Cobdebug*
- *Compiler*
- *Compiler Front-end*
- *Data Tools Converter*
- *Documentation*
- *Environment*
- *File Handling - External File Handler*
- *File Handling - Fileshare*
- *File Handling - Rebuild*
- *File Handling - Sort / JCL Sort*
- *HCO for Microsoft SQL Server*
- *IDE Debugging*
- *Interface Toolkit General*
- *Interface Toolkit Mapper*
- *LE370 Support*
- *Macro Preprocessor*
- *Mainframe Call Generator Client*
- *MF Communications Server*
- *MF Directory Server*
- *MF Server Administrator (GUI)*
- *MFA: GUI components*
- *MFIO*
- *MLDAP API Interface*
- *Monitoring and Management*
- *MTO - CICS BMS Screen painter*
- *MTO - CICS Emulation*
- *MTO - CICS ESMAC*
- *MTO - CICS Supplied Transactions*
- *MTO - CICS Utilities*
- *MTO - IMS DB*
- *MTO - IMS MFS*

- *MTO - IMS Other*
- *MTO - IMS TM*
- *MTO - IMS Utils*
- *MTO - JCL ESMAC*
- *MTO - JCL MVS*
- *MTO - JCL System Catalog*
- *MTO - JCL Utils*
- *MTO - JCL Utils - IDCAMS*
- *MTO - JCL VSE*
- *MVS REXX Emulation*
- *NCG*
- *Open PL/I CICS Preprocessor*
- *Open PL/I Compiler*
- *Open PL/I Debugger*
- *Open PL/I Macro Preprocessor*
- *Open PL/I RTS*
- *Open PL/I SQL Preprocessor*
- *RTS*
- *SQL: Cobsql*
- *SQL: DB2 ECM*
- *SQL: HCO for SQL Server*
- *SQL: OpenESQL*
- *Web Service Client*
- *XDB INZUTILB Utility*
- *XDB JDBC Driver*
- *XDB Server*
- *XDB SQLWizard*
- *XDB: Problems not classed above*
- *XML syntax support runtime*

### **AgentServices API**

- For a program-based Service Interface, for any mapped COBOL data item that has an OCCURS with the new COUNT IN clause, at service run-time, upon entrance the number of occurrences of the corresponding element in the SOAP input will be placed in the data item specified in the COUNT IN clause, and upon exit the value of that data item will dictate the number of occurrences of the corresponding element to put in the SOAP output.

1081944 (2540368)

### **ASC Automatic Synchronize Compile**

- The destination folder returned from the ASC user exit program ASCBCOPY is now used for compiling in production in addition to the destination folder for the copy to production.

1085229 (2579380)

### **CAS (COBOL App Server) General**

- ES\_DFLT\_USR\_JES environment variable is now honored for cassub. Jobs submitted from the command line using cassub.exe without the '-u' option will now run as JESUSER and not mfuser.

1082264 (2550825)

- Various intermittent crashes in MFCS when TN3270, CICS Transaction Gateway, or IMS Connect conversations ended have been fixed.

1081966 (2543488)

- Numerous problems with JCL HSF records have been resolved.

1083121 (2557267)

### **CAS Security**

- The MLDAP ESM Module, which provides LDAP-based security for Enterprise Server, now lets you configure the LDAP timeout. Set it in the [LDAP] configuration section using the name "timeout"; the value is the timeout in seconds. The timeout for connecting to the LDAP server can be set separately using the name "connect timeout". See [mldapesm.html](#) for more information.

1082997 (2558350)

- When using Enterprise Server with External Security and the MLDAP ESM Module, a change-password request is now ignored if the new password matches the old one.

584831 ( )

- With the MLDAP ESM security module, when the "mode=bind" option is enabled, a user who has an expired password or the must-change-password flag set can now sign on if a new password is supplied with the sign-on request and the password is changed successfully.

1082750 (2556130)

- The MLDAP ESM Module can now be configured to support an additional wildcard character, "+", which matches any one character in the resource, user, or group name. To enable this wildcard, set "plus-wildcard=yes" in the [Operation] section of the Security Manager configuration area.

1083460 (2565125)

- The Audit Facility events generated by Enterprise Server External Security for the Auth and XAuth operations now include a parameter describing the kind of access requested by the Auth or XAuth call.

1081166 (2537472)

- When using the MLDAP ESM Module for Enterprise Server security, if a resource has an ACL with two applicable ACEs, where one is a Deny ACE for the exact name of a group (eg "deny:FOO group:read"), and the other is an Allow ACE for the exact name of a user (eg "allow:BAR:read"), the user is now allowed access.

1084543 (2577924)

### **CAS XA Switch modules**

- The JCL Job Stream no longer completes with a return code of 0 when XA Resource Manager reports an initialization error.

1082602 (2524118)

### **CCI TCP/IP**

- CAS utilities such as `cassub` or `casout`, and COBOL Web Service clients, no longer timeout prematurely when used with an SSL-enabled connection.

1082906 (2557202)

### **CICS Emulation**

- A region sometimes failed to start if a large number of libraries were specified. The size of the load module concatenation list has been increased to address this.

1084287 (2574862)

## Client/Server Binding

- Various issues with Client/Server Binding (when used with the CCI communications API) have been addressed. The client limit should now be enforced correctly, and problems with service registration and hung client processes have been eliminated or reduced.

1083869 (2565987)

## Cobdebug

- An invalid parameter no longer occurs when a progid longer than four characters is specified with the CICS type when using cobesdebug.

1081596 (2542994)

## Compiler

- A COMPUTE ROUNDED statement where the precision of intermediate results exceeds Enterprise COBOL's digit limit now produces mainframe compatible results (when the appropriate ARITHMETIC directive setting is specified).

1081927 (2546074)

- The IBMCOMP mainframe emulation directive no longer affects the behavior of PIC X(n) COMP-5 fields which are an MF extension.

1081865 (2546402)

- Hyphenated copybook names are now flagged under IBM mainframe dialects.

1082909 (2558385)

- Fields defined as PIC X(8) COMP-5 now behave correctly with the IBMCOMP directive.

590370 ( )

- When a user preprocessor which does not fully conform to the preprocessor stacking protocol is stacked with the CP preprocessor, copybooks which have standard extensions are still resolved as expected.

1084107 (2570694)

- Visual Studio no longer displays an error when opening the attached apman1.cbl.

1085708 (2590819)

## Compiler Front-end

- A problem with an END statement being matched to a PROC statement with multiple labels has been fixed.

1077132 (2488726)

## Data Tools Converter

- DFCONV no longer fails on AIX with RTS error 200 or RTS error 252 when processing a record layout file (STR) containing ODO data items.

1081674 (2544023)

- The DFCONV field has been increased from eight to nine digits in order to display a larger record count.

1085662 (2589387)

## Documentation

- When invoking MFSORT from the command line, the maximum length of the command is 1024 characters. Characters after this limit are ignored, and if this truncation causes an invalid/incomplete command, an error is produced.

592933 ( )

- The documentation was not clear about the range of acceptable values of EX\_XA\_????\_NB\_RETRIES or the consequent system behaviours. This has been corrected.

1085893 (2593300)

- The documentation has been updated to clarify the effect of escape characters on path names.

1086013 (2594224)

- In addition to the LMFCOMM environment variable, you can use the ESLMFCOMM environment variable to set the location where the LMF-common pipe files are created.

1082173 (2549723)

- When you create or edit a CICS SIT resource in ESMAC, the paths of recoverable and non-recoverable temporary storage queues are now specified in separate fields, Path (rc) and Path (nr).

1084877 (2578440)

## Environment

- The files mfeslm.conf and mflm.conf created by eslminstall and lminstall have been updated to work correctly when Red Hat 6.1 machines are rebooted and use the upstart mechanism for starting process at boot time.

1083159 (2561581)

## File Handling - External File Handler

- Invalid XML syntax in MF.MFFH.XML has been corrected.

589406 ( )

- CTF tracing no longer defaults to showing CTF handles as errors. CTF tracing for handles now only appears for DEBUG and ERROR levels.

1083551 (2566161)

- Reading IDXFORMAT"9" records non-transactionally over fileshare no longer causes any issues.

1083646 (2566578)

- Setting STRIPSPACE to OFF now correctly honors the record length and allows trailing spaces for LSEQ files.

573921 ( )

- Support has been added to allow trailing spaces in LSEQ files when used with the variable STRIPSPACE=OFF, when printing records via stdout or piping to a file.

585740 ( )

- Sequential files on a 64-bit machine are now correctly padded to fill the LRECL.

586461 ( )

- When opening a mainframe file for input, the file is now not optional as per the mainframe.

1082362 (2506971)

- Cobfhrepro now works correctly when session id is specified.

590271 ( )

- The rebuild help message file has been updated to correct a typo.

592271 ( )

- If the DDname is missing from JCL, the value of COBDATA is not used to search for a file.

1084935 (2559292)

- The maximum field length that MFSORT supports for PD summary fields is extended from 9 bytes to 18 bytes.

1084961 (2581353)

### **File Handling - Fileshare**

- It is now possible to open the same indexed file 1024 times from a single fileshare client. Any further attempts will result in a COBRTS 9/015 - Too many indexed files open.  
1084385 (2576603)
- Closing a file using FSVIEW now correctly removes the file from fileshare's open file table.  
587706 ( )
- Using a READ statement after a CLOSE REEL through Fileshare could result in a 9/077 error.  
587474 ( )
- The FSVIEW option 'stats get' gives the statistics for current users, peak users, file opens and peak file opens. The corresponding FSVIEW API is FSV-C-get-stats.  
1083664 (2567737)
- FSVIEW will no longer process the last command in a command file twice.  
589764 ( )

### **File Handling - Rebuild**

- If the checkpoint LAST is set and no checkpoint exists, BATCH BACKOUT now backs out of the entire log.  
1081493 (2541220)

### **File Handling - Sort / JCL Sort**

- A sort using SORTTEMPSPACE no longer ever results in a COBRTS 252 error.  
1081943 (2546898)
- When writing to EBCDIC files, DATE constants will now correctly be converted into EBCDIC format.  
586917 ( )
- CENTWIN and Y2PAST are now supported as PARMS.  
1080717 (2531364)
- Sort now closes down correctly after an RTS 163 error, and is now able to carry on and process further jobs.  
1082133 (2544148)
- When combining OUTFIL and SORTOUT files where headers and trailers were used, SORTOUT sometimes contained mainframe printer control characters.  
1082048 (2548488)
- An RTS 252 error no longer occurs if RTS memory checking is enabled and outfil processing is used in a sort card.  
1081337 (2540109)
- Setting SORTSPACE to the same value as SORTTEMPSPACE no longer causes an RTS 252 to occur.  
1081277 (2539633)
- If a SUBSYS is specified and does not exist, SORT reverts to using EXTFH and emits a warning message.  
1081570 (2542992)
- PARM RC16 is ignored but the comment line reports a warning.  
1081203 (2537395)
- A SORT performed from REXX no longer causes a COBRTS 114 error.  
1081942 (2546794)

- SORT will now correctly compare INCLUDE/OMIT parameters when SUM FIELDS=NONE.  
1083014 (2558088)
- The informational "Operand 'VLSHRT' Ignored" message has been removed from the sort sysout.  
1083225 (2562501)
- When using MFSORT, smaller records are padded to the size of the minimum record length of a VB file and the record length is changed to the minimum of sortout.  
1082943 (2554482)
- SORT now works correctly when SYSIN is given as LSEQ PDS Member.  
1082529 (2550678)
- The TOTAL field length calculation now works correctly when TOTALs are zeros.  
1082887 (2558079)
- SORT worked incorrectly for multiple fields to be converted in INREC/OUTREC/OUTFIL OVERLAY syntax.  
1084481 (2577157)
- Using SYMNames sometimes caused SORT to use the wrong field position and lengths.  
1083320 (2563738)
- When using MFJTOOL with a VB input file, an appropriate error is thrown when the output file is not VB or has not worked successfully when the output file is VB. Previously, a COBRts 139 error was thrown.  
1084567 (2577626)
- SORT now works correctly when there are concatenated VB files with different record lengths in SORTIN.  
1084194 (2573990)
- SORT now gracefully handles the error when there is an INCLUDE/OMIT condition with invalid HEX/ Binary digit.  
1084231 (2574465)
- SORT now ignores the operand 'WORK' along with its value.  
1081023 (2533397)
- The MFSORT help screen now shows that OPTION is supported.  
590260 ( )
- Trailers are now included in the SYSOUT outfil record count.  
1084193 (2573272)
- Records following HEADER2 and HEADER3 will now be the correct length.  
590270 ( )
- Header lengths are now calculated correctly, taking line feeds into account instead of giving a SORT099I error. Headers will now be printed for outfiles that do not have any records.  
1083701 (2565909)
- Sort now displays HEADER2 at the start and TRAILER2 at the end of each page.  
1083702 (2566545)
- Data format FI is now supported in the OUTREC edit fields section.  
1083495 (2565051)
- Sort now works correctly when OPTION COPY is given before the SORT FIELDS in SYSIN.  
1083679 (2565053)
- SORT caused different sort processing for large sort cards. This has been fixed so SORT now returns an error message and exits the sort processing when the sort card has more than 1024 INCLUDE/ OMIT conditions.

1084065 (2571660)

- The ALLDUPS option of the ICETOOL emulation now correctly separates records with duplicates and without duplicates.

1085463 (2582219)

### **HCO for Microsoft SQL Server**

- "UPDATE WHERE CURRENT OF <cursor name>" SQL statements now work as expected when executed against SQL Server databases.

1085003 (2580194)

### **IDE Debugging**

- When debugging a CICS transaction which uses the EXEC CICS LINK syntax to call a program, the value of data-items in the program now show the correct values if the transaction is running from an Enterprise Server configured as 64-bit.

1081291 (2539827)

### **Interface Toolkit General**

- In the Interface Mapper Toolkit, for Operations, the "User Exits" tab now exposes all 10 Request Handler User Exits.

1082032 (2548426)

- When executing the imtkmake command using either a command-line "session type" parameter or by setting "session type" in a property file, a stateful J2SEBean was not being generated. This has been corrected.

593480 ( )

- o The default Generate Trace Level and Run Trave Level values erroneously defaulted to Low. They now correctly default to NONE and LEVEL\_0 respectively.

593269 ( )

### **Interface Toolkit Mapper**

- In the Service Interface editor, an item of a reusable field can now be of a type that itself refers to a reusable field.

1082293 (2542739)

### **LE370 Support**

- When using LE services in an Enterprise Server IMS application, you no longer need to make several attempts to assign a heap memory segment. When the Enterprise Server region is shutdown, the memory is recovered correctly.

1083119 (2560472)

### **Macro Preprocessor**

- You no longer receive errors when the Macro Preprocessor processes an %INCLUDE filename when it is preceded by a %DECLARE statement with the same name.

1084534 (2578366)

### **Mainframe Call Generator Client**

- RJSE job steps with more than 127 records will no longer cause rjseca.dll to trap and the step to abend 0C4.  
1084126 (2572626)

### **MF Communications Server**

- Intermittent failures in the CICS Web Interface servers that send chunked responses have been fixed.  
590777 ( )
- A problem with MFCS crashing intermittently while processing inbound CICS Web Interface requests has been fixed.  
587809 ( )
- The IMS Connect (OTMA) feature of Enterprise Server no longer crashes, creates spurious log files, or displays other irregular behavior when conversations close while the server is under heavy load.  
1082306 (2502575)
- For CICS Web Interface servers that use chunking and persistent conversations, and do not send trailers, the response is now properly terminated. This fixes some issues where clients hung when receiving the response from such a server.  
1081884 (2545201)

### **MF Directory Server**

- If a user is logged into the Enterprise Server Administration HTML GUI and his account is deleted by an administrator, the next time he attempts an action it could terminate the GUI.  
1081439 (2540178)
- If a file called custom\_greeting.htmf exists in the current HTML file directory, the Enterprise Server Administration HTML GUI loads it instead of the default greeting.htmf file. This allows customers to create their own logon "Welcome" HTML page that will not be overwritten if a product update is applied.  
1079596 (2519379)
- On Solaris platforms, attempting to access the Historical Statistics Facility for an Enterprise Server instance from the Enterprise Server Administration console causes the MFDS process to terminate.  
592029 ( )
- When you used Enterprise Server Administration to create a new security resource entity, the initial ACL string value was displayed as an incorrect value.  
592375 ( )
- An incorrect value could have been saved for the "Maximum HSF file size" in the "Historical Statistics" properties of an enterprise server if you edited the setting from the Enterprise Server Administration HTML GUI.  
593405 ( )
- If MFDS\_DNS\_RESOLVE=Y is set in the MFDS process, you could get sign on errors. These were caused by the HTML GUI "Log On" menu option URL using the IP address and not the fully qualified hostname. These issues have now been fixed. As well as resolving the NAT address issues for remote clients, the HTML GUI "Log On" menu option also allows browser clients to connect to the GUI without receiving a certificate warning. This has been fixed in versions of the MFDS 1.14.27 and later.  
1084209 (2573815)
- In Enterprise Server Administration, if a server listener has been defined to use SSL, the "Authorise" URL now uses a hostname instead of an IP address if the Communications Process Control Channel listener has been defined using a hostname address. This avoids potential issues where the IP address might be invalid on a remote client because of NAT configuration.  
1083989 (2563805)

## **MF Server Administrator (GUI)**

- When adding a user to an external security manager, you can now include a password expiry time in the Advanced Configuration section of the Add New User wizard in Enterprise Server Administration. The field value is specified using generalized time format (YYYYMMDDHHMMSS.0Z), and can be used by the MLDAP ESM for calculating whether a user's password has expired and requires updating. This value may only be specified using this page when adding a user. You need to use an external directory services configuration tool to edit it.

1083203 (2562118)

## **MFA: GUI components**

- Clicking a Help button in the Compare and Synchronize Monitor had no effect.
- When using the Automatic Synchronize and Compile utility (ASC) with the Compare and Synchronize Monitor, specifying the AUTOLOGON option did not cause the ASC password exit to be used.

588082 ( )

584227 ( )

## **MFIO**

- Random OC4 abends will not occur in RJSE steps if the log file is not available for some reason.

1084336 (2575065)

- Logons to MFA sometimes failed because the userid or password contained zeros.

1082548 (2552652)

- The MFA server now accepts fixed length ASCII records without CRLF formatting.

1081969 (2544483)

## **MLDAP API Interface**

- CAS APIs such as casout could leak memory in the client (MFCC) layer. This could pose a problem for long-running processes that invoke those APIs, such as some third-party schedulers used with the Micro Focus JES subsystem. These leaks have been corrected, and MFCC memory use is stable (does not continue to grow) across multiple requests.

1083998 (2559738)

## **Monitoring and Management**

- The HSF page in ESMAC no longer shows an incorrect graph in Firefox when latency is 0.

1082792 (2551627)

## **MTO - CICS BMS Screen painter**

- You no longer receive an error message when compiling COBOL language BMS files if a PICOUT string in them contains the character "0" (zero).

1085804 (2591902)

## **MTO - CICS Emulation**

- If an alternate file is created and the base name for the referencing file is wrong, the user can now correct the resource definition base name and apply the changes without having to restart the region.

1084651 (2578312)

- A value of -1 in the parameter to the CURSOR option of a CICS SEND MAP command is now interpreted correctly as meaning "use symbolic cursor positioning".

1082249 (2545382)

- The Global User Exit XEIIIN can now signal that execution of the requested API should be bypassed by returning UERCBYP in the return-code.

1082573 (2553355)

- An initial CICS transaction, as specified in the SIT, no longer causes screen corruption if it uses DBCS characters.

1083074 (2560428)

- The value passed in the ITEM field for a CICS READQ TS command is now correctly converted, and no longer causes an ITEMERR condition.

1082920 (2558374)

### **MTO - CICS ESMAC**

- If external security is configured (MLDAP) and the default ESMAC user is not allowed to login, the region does not startup.

1082337 (2550800)

### **MTO - CICS Supplied Transactions**

- When installing an updated CICS FCT entry with a change of physical file name, the old file name is no longer used.

1082653 (2553650)

### **MTO - CICS Utilities**

- When importing sign-on table (SNT) records via the batch utility CASRDTUP, the password field is no longer checked for valid characters: any valid character may be used to match your password policy.

1083592 (2565838)

- The size of the variable used to parse the commands you enter at the command line has been increased to more than 255 characters.

1084087 (2572053)

### **MTO - IMS DB**

- When using an IMS BMP under DFSRRC00, the XA connections are now all enabled for the application to use.

1085566 (2585896)

- On 64-bit platforms, the PCB call from a CICS application that is compiled using the AMODE directive now correctly receives 4-byte linear address model pointers.

1084819 (2580421)

- When a data capture exit routine is specified in a DBD but not found, the application program which updated the database will ABEND with a U3314 and the database update will be rolled back. When data capture exit routines are defined in the DBD source but not needed at run time, the DBDGEN directive NODCX will cause the EXIT= specification in the DBD source to be ignored.

1084675 (2579600)

- PSBs which contain both LIST=NO PCBs and PCBs that do not specify a PCBNAME no longer result in a PCB misalignment.

1082973 (2558838)

- The root segment in the logical parent database is no longer updated instead of the logical parent segment, in cases where the virtual insert rule is specified for a logical parent segment that is defined at

a level below the root and an application inserts a concatenated segment containing IO areas for both logical child and logical parent.

1083054 (2559893)

- An IMS database with a virtual paired bidirectional logical relationship that specifies the physical replace rule on the real logical child now correctly returns an 'RX' status code when attempting to replace the logical child segment using the virtual logical child. Previously the physical replace rule behaved as if virtual was specified.

1083306 (2562778)

- In an IMS MPP, DLI calls that are issued before the GU to the IOPCB now give the correct results.

1083541 (2563797)

- For the batch backout job, if the user specifies the input parameter of CHKPT, a valid checkpoint id or the keyword 'ALL' or 'LAST' must follow, or the job will not run.

1082185 (2549982)

- A new directive (NOPAIR) has been added to the IMS DB Utility (IMSDBU) Pointer Update (PTRU) function. While resolving logical children (LC) segments, the NOPAIR directive will suppress the operation that searches for the paired LC segment. This can be used to optimize efficiency when loading IMS DBs with bidirectional paired logical relationships when the logical children segments are NON-KEYED. This directive should only be used when paired LC segments are loaded on only one side of the relationship.

1082663 (2555682)

- The AIB resource address field AIBRSA1 is no longer incorrectly returned in AMODE format to a NOAMODE application.

1082150 (2548504)

- A basic CHKP call from an IMS transaction now works correctly.

1082072 (2545005)

- AIBTDLI INQY FIND calls now work correctly when BTS tracing is enabled.

1081992 (2548059)

## **MTO - IMS MFS**

- Segment/field exits must be written in COBOL. Micro Focus supplies a sample segment exit routine, called DFSME127, and a sample field exit routine, called DFSME000. All user-written exits must follow the naming convention DFSME<sub>nnn</sub>, where <sub>nnn</sub> is 000 through 127. Both of the sample exits are well documented. Refer to IBM IMS documentation for a description of the linkage parameters. For the segment exit DFSME127, there is an extra field at the end of linkage control block called DFSME-R1-RETURN. This field contains a user-defined error message number when the segment exit issues a return-code of 12 (which causes the message to be canceled). To be invoked, the segment and field exits must be compiled and the compiled code must reside at a location pointed to by the ES\_IMS\_EXITPATH environment variable. If the exits are not found here, they will be searched for at the location pointed to by the COBPATH environment variable. All exits, DFSME000 through DFSME127, if they are to be invoked, must exist at the proper location before the server is started. As the server is started, the names of the exits found are written to the server console log. Use of any segment or field exit is optional. In other words, if an MFS source references an exit and it does not exist, the behavior is as if there were no exit coded in the MFS. If, for some reason, the exit returns an exception condition, a message will be written to the server console log. It is up to the author of the segment exit to ensure that the segment is not modified in a way that causes the segment to be invalid. Doing so may cause a run-time problem with the server. Currently, there are a few restrictions on using segment and field exits: 1) The sample segment and field exits are supported only for MFS source which uses the option 1 and 2 format. 2) The return code of 16 from the segment exit is not supported. This means that a segment exit returning a value of 16 cannot expect the message to be returned to the input device. 3) An exit should not invoke IMS callable services, including storage services and control block services.

1081373 (2540589)

- When running EBCDIC applications under Micro Focus server, if there are input fill characters coded as hex values in the MFS source, and those values SHOULD NOT be converted to EBCDIC at run time, you need to regenerate the MFS and use the HEXFILL directive. Those hex values will then remain the same at run time and will not be converted to EBCDIC.

1082331 (2550799)

- In dfhcwini.cpy, the default MOD screen sizes in ws-ttype-table have been modified so that they now reflect the default size of 80x24. This change means that casmfs.cbl needs to be modified because it uses the default MOD screen sizes rather than the Alternate MOD screen sizes.

590439 ( )

#### **MTO - IMS Other**

- A User 0476 ABEND (invalid PCB address) no longer uses an incorrect error message and reports a system software error.

586690 ( )

- The address of the application parameter (APARM) is now correctly returned to an INQY ENVIRON call from an IMS data capture exit routine.

1084673 (2579598)

- When SSTM is enabled for IMS, an application parameter (APARM) can be specified in the JCL for an IMS MPR and is available to the AIBTDLI INQY ENVIRON call from IMS applications and data capture exit routines. The value of the APARM is taken from the JCL when the first message is processed in the MPR which might not be immediately when the MPR is started. All MPRs share the same JCL file.

1084674 (2579599)

#### **MTO - IMS TM**

- A problem with the MFS LTNAME field not matching the I/O PCB LTERM field has been resolved.

1083958 (2569956)

- A problem with running transactions not being properly terminated and rolled back when an IMS MPR process goes down, has been resolved. Also, the ESMAC SEPs page now includes a "Kill" button for active MPRs.

1084862 (2579672)

- The IMS transaction processing limit time setting is now supported.

1077380 (2487424)

- The IO-PCB now contains the correct MOD name upon a transaction-switch.

1084892 (2579872)

- OTMA transactions no longer timeout in error.

1081620 (2502575)

- The /DEQUEUE TRAN command is now available to remove messages from the message queue.

1080760 (2490631)

- The non-discardable messages exit routine (DFSNDMX0) is now supported.

1082587 (2549339)

#### **MTO - IMS Utils**

- PSBGEN error message PSBUT870E is no longer issued in error when a logical DBD references multiple physical databases that all use the same segment names.

1082088 (2538116)

- Some failures from IMS batch backout restore were undetected by the utility control program MFDBUJCL, which resulted in confusing messages in the job SYSOUT. This has now been fixed.

1081494 (2541221)

- The IMS DB editor no longer fails with a run-time system error 173 on the "mFHTSRtr" file.

593399 ( )

### **MTO - JCL ESMAC**

- The JES Alias page now checks the OPERCMDS class to ensure that the user has "Update" or greater authority against the entity JESALIAS. If the user has only "Read" authority, the "Delete" and "Update" buttons are disabled.

1081333 (2524732)

- With Enterprise Server external security using the MLDAP ESM Module, when checking access to a dataset with a name like "A.B", a rule named "A.B" will have priority over a rule named "A.B.\*". This lets administrators give users higher permissions over more-qualified dataset resources, so for example they can give users the ability to add and delete "A.B.C", while only being able to read "A.B".

1082083 (2536980)

### **MTO - JCL MVS**

- When MFCODESET was set to a codeset where characters do not match the Latin 1 set, an error, 'JCLCM0218S System error "MFJXE00--L"', in MFLEINIT was reported in the JES log. The step would then terminate with COND CODE RTS0173. This has been fixed and the LE initialization under different codesets no longer results in this error.

1082286 (2551104)

- When a keyword value is a JCL keyword, it is now correctly interpreted.

1081501 (2542158)

- The system now allows deletion of a PDS member (not dataset) with update authority.

1084539 (2576851)

- The limit on the number of conditions in a JCL IF test has been increased from 15 to 30.

1081161 (2538377)

- The JCL STEPLIB processing has been changed to ensure that a STEPLIB is always cleared at step end so it is never active for a subsequent step.

1083422 (2534013)

### **MTO - JCL System Catalog**

- A problem following an authorization error on a pc file name that caused JCL TO HANG has been fixed.

1085702 (2590105)

### **MTO - JCL Utils**

- The use of parameters on the FD card of IEBDG has been extended to be more compatible with mainframe usage.

1085138 (2582515)

- Previously, SVC99 in the catalog did not set the expiration. It now supports retention period TU (Text Unit).

1084364 (2576036)

- When you delete a dynamic PDS, this does not automatically delete the underlying PC files. To delete the underlying PC files, set the MF\_DEL\_DYNPDS environment variable to Y. The default behavior is unchanged.

1083656 (2567645)

- In IEBGENER, if the SYSUT1 dataset is a DUMMY dataset it will now be processed as an empty dataset.

1083514 (2565707)

### **MTO - JCL Utils - IDCAMS**

- If an unbalanced quote is detected in an IDCAMS literal, an error message will be issued, detailing the command and indicating the problem, and the command will be bypassed.

1081736 (2544840)

- Symbolic parameters in JCL Procedures are now correctly expanded.

1080809 (2532904)

- If a GDG Base is returned as part of the LISTCAT command, then the generations will also be displayed. If a VSAM Cluster is returned then the elements of the cluster, such as DATA, INDEX and AIX, will also be displayed.

1079743 (2521461)

### **MTO - JCL VSE**

- There is no longer a problem identifying comments if they immediately follow the terminator ( /\* ) for an instream data file.

1084081 (2567761)

### **MVS REXX Emulation**

- CALLED EXECs now correctly inherit the trace setting of the CALLing EXEC only following the invocation of the TS command.

1081539 (2542202)

- The DATE() function now formats the year correctly when converting between a Julian and a standard date format.

1083437 (2564240)

### **NCG**

- A bug generating statements of the form: call function upper-case(var-a) has been fixed.

1084500 (2577968)

### **Open PL/I CICS Preprocessor**

- A problem with mfpix erroneously passing the compiler options -opt and -noopt to mfexecpp has been fixed.

1085080 (2582970)

- The PL/I built-in functions LOW and HIGH are now handled correctly when used in a CICS command.

589782 ( )

- A concatenated expression within a CICS parameter no longer fails with the message: The argument of ADDR must be a reference to a variable.

1081680 (2544319)

### **Open PL/I Compiler**

- Programs calling ATAN with literal constants now link on Windows.

1082358 (2551777)

- BIT(n) items passed as parameters are now handled correctly.  
1083780 (2568931)
- A problem when using a named constant with a VALUE using the DIM built-in has been fixed.  
1083576 (2566024)
- A problem passing fixed bin(15) results from built-in functions to subroutines with ANY parameters when using the -bigendian compile switch has been fixed.  
1083470 (2561007)
- If -setstack was specified on a PL/I CICS project, it was not passed by mfplx correctly. It is now correctly passed to only the mfpli step.  
1083661 (2549386)
- A problem when declaring an automatic char varying item with a length specified using the SIZE or STG built-in function has been fixed. For example: dcl x char(4); dcl str char var (stg(x));  
1083710 (2568134)
- A problem passing a char(\*) parameter to an external subroutine declared with options(nodescriptor) has been fixed.  
1081856 (2546480)
- A problem with the compiler not recognizing the UNAL keyword in the DEFAULT RANGE(\*) UNAL statement has been fixed.  
589371 ( )
- An optimizer change has been made such that the Warning message "MFPLI002481 : A possible conditional optimization was missed" should only be seen very infrequently.  
1083082 (2553574)
- The Open PL/I compiler crashed with a "page not in cache" error.  
589891 ( )
- You no longer receive erroneous diagnostic messages or Compiler errors when compiling PL/I programs that miss or include a mismatched END; statement.  
1085247 (2585031)
- When you declared a file as RECORD OUTPUT and opened it with the TITLE option pointing to a RECFM=VB file after opening it with the TITLE option and pointing a RECFM=FB file, an "UNDEFINED FILE" condition was incorrectly raised.  
1085117 (2583549)
- Using the Open PL/I Compiler -debug option no longer causes the compile to fail with "Internal consistency" error.  
1085315 (2586006)
- The VALUE clause in named constants has been enhanced to support the POINTERVALUE built-in.  
592721 ( )
- The Open PL/I Compiler now diagnoses CLOSE FILE(\*) as not yet supported.  
592693 ( )
- The Open PL/I Compiler now supports the NOINIT attribute.  
592724 ( )
- The Open PL/I Compiler now supports the PARAMETER attribute.  
592725 ( )
- The Open PL/I compiler now supports hexadecimal (XN) fixed binary constants.  
592718 ( )
- Punctuating arithmetic, bit, and hexadecimal constants is now supported.  
592719 ( )

- The TINY and HUGE Open PL/I built-ins are now supported.  
1085870 (2592830)
- When the Regional Language setting for the decimal point was a comma (for example 3,141592), a possible floating point conversion error from ASCII to float binary occurred.  
1085970 (2593986)
- The string concatenation of the HIGH/LOW built-ins with a repeat factor returned incorrect results.  
1086379 (2597746)
- Using INITIAL clauses that contain concatenation of string constants were generating compiler errors.  
1086434 (2598242)
- An incorrect padding of trailing blanks occurred for a string returned by the expression HEX(SUBSTR(...)).  
1085658 (2590174)
- A problem with an unresolved external reference when linking with an external condition has been fixed.  
1079634 (2520275)
- Previously, when a Compiler error message contained a variable name or variable description that consisted of 79 bytes or more of contiguous data without a space, a protection violation occurred when trying to compile.  
1084456 (2577444)
- A compatibility issue requiring an ENTRY keyword on an entry declaration having an empty parameter list and a RETURNS attribute, and/or the use of parenthesis ( ) at the call-point, has been fixed.  
591219 ( )
- A problem with specifying REORDER on an ON ERROR block has been fixed.  
1084879 (2581350)
- A problem when PIC variables of the same size are used as DO loop control variables has been fixed.  
1078110 (2500306)
- Structure expressions are supported with the UPPERCASE, LOWERCASE, and REVERSE built-ins. Restrictions: only "flat" structures are allowed. Arrays, arrays of structures, and structure member arrays are not yet supported.  
1084538 (2578374)
- A compound IF statement involving PIC and Fixed Binary Big-Endian fields not being evaluated correctly under certain circumstances has been resolved.  
1084155 (2572873)
- Performing fixed bin big-endian array assignments failed when conversion was required.  
1084139 (2571825)

### **Open PL/I Debugger**

- Variables declared with DEFINED POS(x) were not displaying correctly in Codewatch. This issue has been fixed but, to avoid this problem when debugging with Codewatch, you need recompile any source code that includes such variables with -deb.  
1084063 (2571824)
- When using the \_ARGC/\_ARGV mechanism to retrieve command line parameters, the number of parameters and position are now consistent, whether invoked by cwcmd, cwgui or as an executable.  
1084219 (2574105)
- If a C#/C++ combo .EXE compiled with "Debug" using CodeWatch attempted to drive an Open PL/I DLL, then the debugger attachment would fail. Having existing Program database files available from a prior compile would cause this issue.

1086177 (2587020)

- A problem evaluating CONTROLLED variables in the Open PL/I Debugger has been fixed.

1085303 (2578290)

- Using a debugger on Windows to debug an Open PL/I program that contains EXEC SQL and which was built using the -BIGENDIAN compile directive, no longer results in a trap while trying to clean up temporary storage as part of the code generated for an EXEC SQL statement.

1083481 (2561007)

### Open PL/I Macro Preprocessor

- If hex FF is found within a literal constant which spans multiple lines, the macro preprocessor no longer erroneously reports that EOF had been reached before it should have been.

589505 ( )

- The macro preprocessor now supports %DO ... WHILE expressions.

1082119 (2549068)

- When preprocessing source which contains /\*/ as part of a comment "start", the preprocessor no longer incorrectly determines that the comment is concluded with the trailing '/.

590202 ( )

- When you used the PL/I Macro Language PARMSET() built-in, it would sometimes incorrectly report PARMSET() as true for an argument that had not been passed in. The problem was most prevalent when a combination of KEYWORD invocation and positional parameter invocations were intermixed multiple levels deep.

592695 ( )

- The Open PL/I Macro Preprocessor had a limit for the length of macro variable names of 32. This has been expanded to match the compiler's limit of 100.

1085365 (2586632)

- An unterminated quote caused the Open PL/I Macro Preprocessor to loop.

1085759 (2591348)

- When running the macro preprocessor as part of an Open PL/I Compile, if there are missing %INCLUDE files, we now flag them as SEVERE errors which are visible in the Visual Studio Output Tab even with the minimal level of MSBuild information enabled. We terminate after the macro phase, allowing the customer to correct the situation before continuing.

1084419 (2577072)

- The Open PL/I Macro Preprocessor now handles multiple closes of macros.

1084417 (2577063)

- If a PL/I Macro is written so that KEYWORD parameters (as opposed to positional parameters) are used, and a macro is driven that uses a KEYWORD parameter which is not supplied, the result is no longer truncated at the location of the missing KEYWORD parameter.

1084556 (2578580)

- Previously, an attempt to compile PL/I source which contained macro language and the macro language contained an assignment statement where one of the literal constants was larger than 4096 bytes could result in a protection violation in mfpp.exe. This has been enhanced so that you can now use literal constants up to 16392 bytes. If you exceed this limitation, an appropriate message is displayed.

1084405 (2576694)

### Open PL/I RTS

- If more than 65,535 Open/Close cycles occurred in a long running standalone (.exe) PL/I application, then an RTS 13 error occurred.

1085752 (2591161)

- For all I/O, where there was absolute minimal information supplied about a file, Open PL/I RTS assumed the following for non-direct, keyed, or VSAM files. o LSEQ o RECSIZE(258) o fixed length The RECSIZE(258) in conjunction with the fixed length caused the erroneous "ON RECORD()" to be triggered. Open PL/I RTS has been enhanced so the ENV() attribute of V or F creates Micro Focus variable or fixed length files. Absence of V or F causes LSEQ format output, which is the same as the current default.  
1085491 (2588122)
- When using PLISRTB, PLISRTC and PLISRTD, an erroneous search for a supporting executable was occurring for each IO operation.  
1086317 (2592201)
- If using an automatic variable as the record buffer for a CONSECUTIVE file, a stack corruption no longer occurs upon the explicit close of the file.  
591576 ( )
- If an alternate index from an Open PL/I program is defined to allow duplicate keys, a read where two consecutive records have the same key of reference is now handled correctly.  
588713 ( )
- Previously, when attempting RECORD IO against a file which also had an ENVIRONMENT option of CTLASA specified, the first byte displayed was random uninitialized data and the first byte of user data was lost. This no longer happens.  
1082308 (2551165)
- The new PLIDUMP functionality on Server Enterprise Edition 6.0 now correctly contains the "called from" information in the PLIDUMP.  
1081893 (2545936)
- Previously the "special" behavior related to a "SKIP" on the first line of the first page was causing the output in the provided example to incorrectly NOP the SKIP statement embedded in the format portion of the PUT EDIT statement. This no longer happens.  
1082320 (2551392)

### Open PL/I SQL Preprocessor

- In Enterprise Developer 2.1, and Studio Enterprise Edition releases from SP2 WS2 onwards, EXEC PP should be used.  
1082329 (2545557)

### RTS

- When upgrading mainframe-based PL/I code to Enterprise Server, if the application utilized the CEE3ABD API then it failed to link with an unresolved external.  
1084537 (2578370)
- IF NUMERIC validation of COMP-3 slack nibbles (when there is an even number of digits in the picture clause) is now done in a way that is compatible with that on the mainframe.  
1083801 (2569340)
- An error in UNSTRING, where a zero length field is moved to a numeric display item, has been fixed.  
1085663 (2589149)
- When building a COBOL .dll that is to run in an Enterprise Server container on Windows, you must now build the .dll so it does not include system programs or it might become locked and cannot then be updated.  
1076079 (2475349)
- When using a mainframe dialect, any invalid character in the decimal point position is now ignored when de-editing a numeric-edited item.

1081507 (2542326)

- When running a transaction under Enterprise Server, the %f template string in the core\_filename tunable now works correctly.

1079249 (2504692)

- Any shared objects loaded during an Enterprise Server transaction are unloaded when the transaction finishes. Shared objects linked with a non-COBOL shared library are now correctly unloaded too.

1081549 (2539607)

- Use of PC\_PRINTER\_DRAW\_RECTANGLE, PC\_PRINTER\_GET\_BMP\_INFO, PC\_PRINTER\_LINE\_FROM\_TO, PC\_PRINTER\_SET\_BACKGROUND\_MIX\_MODE, PC\_PRINTER\_SET\_PEN or PC\_PRINTER\_SET\_POSITION no longer give an unresolved symbol error when linking as a 32-bit application.

1072571 (2418196)

- Compacting memory with CBL\_MEM\_VALIDATE when using .gnt code could potentially result in an RTS 252 error of type "1/4". This has now been resolved.

1082487 (2553152)

- Using PC\_PRINTER\_INFO with a printer that is loaded with non-standard paper size no longer causes a run-time system error 114.

1082289 (2550724)

- The call MVS\_REGISTER\_DDNAME is an MFE-only call used by the IDE. FileHandler no longer calls this routine.

1083028 (2559292)

- The RUN program now accepts command line arguments of up to 1023 characters long.

1083215 (2561567)

### **SQL: Cobsql**

- The Cobsql preprocessor was updated to no longer misinterpret WORKING-STORAGE items whose definitions were spread across multiple source lines.

1080078 (2507684)

- The Cobsql preprocessor has been updated to correctly process variables defined as USAGE COMP after an EXEC SQL INCLUDE SQLCA when the CP preprocessor directive NOSQL is specified.

1084463 (2577593)

- The Cobsql preprocessor has been updated to correctly process Pro\*COBOL-generated data items when the first WORKING-STORAGE variable in user code contains a VALUE clause with the literal value on a separate source line.

1084753 (2579264)

### **SQL: DB2 ECM**

- The HCO DCLGEN tool no longer incorrectly generates copybooks from multiple tables if the schema names are similar.

1084435 (2577256)

- The Host Compatibility Option was updated to honor database connection criteria specified on the command line.

1081585 (2537570)

- The DB2 pre-compiler now picks up the copybook path properly when running in background syntax checking mode.

1083064 (2560273)

- The DB2 pre-compiler now generates GOBACK instead of STOP RUN at the end of program source, so that poorly coded programs do not fail when running under IMS or other transaction monitors.  
1083235 (2559616)
- The DB2 ECM has been updated to resolve run-time errors returned when compiling against mainframe databases in 64-bit mode.  
1082441 (2549058)
- All HCO tools including DCLGEN have been modified to support table names up to the maximum that DB2 LUW V9.7 supports (128 characters).  
1081767 (2545044)

### **SQL: HCO for SQL Server**

- The HCO for SQL Server BIND tool results are no longer limited to the OpenESQL Maximum Row Count setting.  
1085321 (2586047)

### **SQL: OpenESQL**

- OpenESQL has been updated to support 64-bit operation for INSERT and FETCH statements.  
1079765 (2499575)
- The OpenESQL run-time has been updated to resolve issues with multiple service invocations under Enterprise Server.  
1082709 (2556475)

### **Web Service Client**

- A user exit is now available to set custom HTTP headers in a SOAP response message.  
1084118 (2570467)

### **XDB INZUTILB Utility**

- Incorrect error messages are no longer referenced by XHPU.  
1084489 (2577109)
- Run-time system error 114 ("Attempt to access item beyond bounds of memory") occurred in the XHPU emulation of INZUTILB if SYSPRINT was missing.  
1085016 (2582502)
- XHPU incorrectly marked an unload file as a blocked variable when it only included data from a single table.  
1085655 (2588729)
- Message INZC003E has been added to an XDB message file.  
1083308 (2563505)
- XHPU now returns the proper return code for the job step.  
1083307 (2563503)

### **XDB JDBC Driver**

- The server-side JDBC support has been enhanced to use indexed-message retrieval.  
1085674 (2589905)

## **XDB Server**

- A mutex deadly embrace no longer results in a server hang.  
1085199 (2583889)
- An index was sometimes selected for an entire query when all the fields were not in the index.  
1083970 (2561777)
- A problem has been fixed where Optimizer had internal flags on in error, causing no records to be selected on a count(\*).  
1083933 (2570185)
- Views containing a subquery did not have the dependency metadata updated with the tables contained in the subquery.  
1084290 (2575223)
- Adding a primary key to a table reset the clustering indicator of the index metadata.  
1083589 (2566249)
- Views created with quoted field names no longer raise "column not found" errors.  
1082639 (2552754)
- XA exception handling has been added to XDB utilities which open their own XA connections.  
1083419 (2563973)
- View materialization no longer happens during precompile validation of a query containing unions of views.  
1083671 (2557923)
- VIEW processing no longer leads to memory overrun.  
1083858 (2569409)
- Queries against views containing a GROUP BY clause no longer cause a thread access violation during symbol lookup.  
1083707 (2565781)
- An incorrect primary key index was created for a table that was in an implicitly-created tablespace.  
1081145 (2538331)

## **XDB SQLWizard**

- The SQL statements that used to exist in DBCREATE.DAT have been integrated into the SQL Wizard.  
1082576 (2553276)

## **XDB: Problems not classed above**

- INZUTILB no longer causes RTS 114 error searching for an incorrect message.  
1082443 (2552991)
- INZUTILB unloading to multiple DDs no longer leaves an unload file open.  
1082489 (2553203)
- DSNUTILB/INZUTILB have been modified to successfully enable XA connectivity to a named subsystem.  
1082423 (2552039)

## **XML syntax support runtime**

- The RTS 114 error caused by the exception at the beginning of an XML document is now fixed.

1083010 (2558865)

# Updates and SupportLine

Our Web site gives up-to-date details of contact numbers and addresses.

## Further Information and Product Support

Additional technical information or advice is available from several sources.

The product support pages contain a considerable amount of additional information, such as:

- The WebSync service, where you can download fixes and documentation updates.
- The Knowledge Base, a large collection of product tips and workarounds.
- Examples and Utilities, including demos and additional product documentation.

To connect, enter <http://www.microfocus.com> in your browser to go to the Micro Focus home page.



**Note:** Some information may be available only to customers who have maintenance agreements.

If you obtained this product directly from Micro Focus, contact us as described on the Micro Focus Web site, [www.microfocus.com](http://www.microfocus.com). If you obtained the product from another source, such as an authorized distributor, contact them for help first. If they are unable to help, contact us.

## Information We Need

However you contact us, please try to include the information below, if you have it. The more information you can give, the better Micro Focus SupportLine can help you. But if you don't know all the answers, or you think some are irrelevant to your problem, please give whatever information you have.

- The name and version number of all products that you think might be causing a problem.
- Your computer make and model.
- Your operating system version number and details of any networking software you are using.
- The amount of memory in your computer.
- The relevant page reference or section in the documentation.
- Your serial number. To find out these numbers, look in the subject line and body of your Electronic Product Delivery Notice email that you received from Micro Focus.

On Windows, if you are reporting a protection violation you might be asked to provide a dump ( `.dmp`) file. To produce a dump file you use the **Unexpected Error** dialog box that is displayed when a protection violation occurs. Unless requested by Micro Focus SupportLine, leave the dump setting as `Normal` (recommended), click **Dump**, then specify a location and name for the dump file. Once the dump file has been written you can email it to Micro Focus SupportLine.

Alternatively, you might be asked to provide a log file created by the Consolidated Tracing Facility (CTF) - a tracing infrastructure that enables you to quickly and easily produce diagnostic information detailing the operation of a number of Micro Focus software components.

## Creating Debug Files

If you encounter an error when compiling a program that requires you to contact Micro Focus technical support, your support representative might request that you provide additional debug files (as well as

source and data files) to help us determine the cause of the problem. If so, they will advise you how to create them.

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