

Release Overview, Notes, and ECN List

extend Product Suite

Version 9.0.0

Micro Focus

9920 Pacific Heights Blvd
San Diego, CA 92126
858.689.4500

Copyright Micro Focus (IP) Ltd. 1988-2010. All rights reserved.

Acucorp, ACUCOBOL-GT, Acu4GL, AcuBench, AcuConnect, AcuServer, AcuSQL, AcuXDBC, *extend*, and “The new face of COBOL” are registered trademarks or registered service marks of Micro Focus. “COBOL Virtual Machine” is a trademark of Micro Focus. Acu4GL is protected by U.S. patent 5,640,550, and AcuXDBC is protected by U.S. patent 5,826,076.

Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries. UNIX is a registered trademark of the Open Group in the United States and other countries. Solaris is a trademark of Sun Microsystems, Inc., in the United States and other countries. Other brand and product names are trademarks or registered trademarks of their respective holders.

E-01-UG-101201-RO-ECN List-9.0.0

Contents

Chapter 1: Version 9.0.0 Release Overview, Notes and ECNs

Release Overview	1-2
Special Release Notes	1-6
ACUCOBOL-GT ECN List.....	1-9
ECN-3866: Can not find XFD file.....	1-9
ECN-3892: Long line support	1-9
ECN-3919: AcuGT COM server now prompts for elevated privileges	1-10
ECN-3922: Printer dialog WINPRINT-SETUP would not show on Vista.....	1-10
ECN-3953: XFD directive line continuation.....	1-11
ECN-3973: Complex \$XFD WHEN directive expressions.....	1-13
ECN-3975: Thin Client-INQUIRE failed when using Layout Manager.....	1-15
ECN-3981: Using runtime command lines exceeding 256 bytes.....	1-16
ECN-3983: Inline DISPLAYs of .NET Components.....	1-16
ECN-3984: Compatible environment setting syntax.....	1-17
ECN-3985: Radio buttons USING an Indexed item.....	1-18
ECN-4000: License location changes for Windows.....	1-18
ECN-4007: TAB key pasted into grid cell causes cell data to shift	1-20
ECN-4010: Shared library/DLL searching changes	1-20
ECN-4011: ADD to array using index passed in linkage caused non-numeric values	1-22
ECN-4013: Native controls look and feel	1-22
ECN-4014: Orphaned runtimes while waiting for locked records	1-23
ECN-4018: New library routines C\$CARG, C\$DARG.....	1-23
ECN-4021: label on a tab loses transparent property	1-24
ECN-4022: New internal field added to ACUCOBOLINFO.....	1-24
ECN-4024: WIN\$VERSION enhanced to provide 32/64 bit architecture	1-25
ECN-4025: CLR Hosting for .NET	1-26
ECN-4026: ACCEPT_AUTO and backspace in HP-COBOL compatibility mode.....	1-27
ECN-4027: Message box statements in entry field 'after procedure' causes cursor issue ...	1-27
ECN-4029: pre-IO Handler open mode replaces original open mode of file.....	1-28
ECN-4030: Compiler option -Gl incorrectly changes symbol table in listing	1-29
ECN-4031: Support for .NET object retrieval and passing as parameters	1-29
ECN-4032: <Ctrl>-C shutdown of UNIX runtime causes core dump	1-30
ECN-4033: SHARED_LIBRARY_EXTENSION default value now matches system.....	1-30
ECN-4034: Controls shift position without cause.....	1-31
ECN-4036: Pasting text into a singleline ENTRY-FIELD with MAX-LINES > 0	1-32

ECN-4037: Print job name is truncated at 31's character in spooler queue.....	1-32
ECN-4038: Implement --xreturn command line option	1-33
ECN-4039: XML output encoding	1-33
ECN-4040: C\$PARSEXFD returns wrong segment offsets.....	1-34
ECN-4041: New compiler option -Ze for XML Extensions support	1-34
ECN-4043: NETDefGen enhancements	1-35
ECN-4044: Problem with Acu4gl & C\$PARSEXFD (9D,03 error)	1-35
ECN-4045: Performance degradation in 8.1.3 and 9.0 Beta	1-36
ECN-4046: XFD creation in v9.0 Beta, when \$XFD WHEN is used in two files	1-36
ECN-4047: Scroll Bar is enabled whenever it is displayed.....	1-37
ECN-4048: C\$Paramsize returned the wrong value.....	1-37
ECN-4049: SET EVENT-ACTION TO EVENT-ACTION-FAIL ignored	1-38
ECN-4050: Call program failure results in incorrect error message	1-38
ECN-4051: Compiler did not step to next statement when error in MODIFY.....	1-39
ECN-4053: Debugger handling of missing parenthesis	1-39
ECN-4054: character mode list box truncates items	1-40
ECN-4055: TreeView not painting correctly.....	1-40
ECN-4056: Double Click on List Box item.....	1-41
ECN-4057: Performance issue while using debugger and issuing GO command	1-41
ECN-4061: Backspace not working in MPUX.....	1-42
ECN-4067: Transparent Label transparency when enabled/disabled.....	1-42
ECN-4068: Thin Client Embedded browser Application titles on tabbed pages	1-43
Acu4GL ECN List	1-43
ECN-GL469: Separate connections for COBOL vs. internal work.....	1-44
ECN-GL471: Error message Non-numeric data in numeric field with OPEN.....	1-45
ECN-GL473: Error message Non-numeric data in numeric field with START or READ .	1-45
ECN-GL475: A4GL-USEDIR-LEVEL does not work correctly for MSSQL.....	1-46
AcuBench ECN List.....	1-46
ECN-WB889: Browse dialogs do not work correctly	1-46
ECN-WB890: Find in files did not stop	1-47
AcuConnect ECN List	1-47
ECN-RCL015: kill -p command when the runtime is busy.....	1-47
AcuSQL ECN List	1-48
ECN-SQL124: MAV when getting duplicate key error with unixODBC.....	1-48
ECN-SQL127: 64-bit AcuSQL FETCH not working.....	1-49
AcuXDBC ECN List.....	1-49
ECN-XD050: WHEN conditions not correctly evaluated.....	1-49
ECN-XD053: ERROR: Ending quote missing if user does not have a DBA role	1-50
ECN-XD054: AcuXDBC Resource error: MERGESIZE overflow.....	1-50

ECN-XD056: SUBTABLE incorrectly applied when loading xfd files of different versions 1-51	
ECN-XD057: UnixODBC memory fault on 64 bit platforms.....	1-51
ECN-XD058: Enhanced timestamp format support.....	1-52
AcuXML ECN List.....	1-53
ECN-XML026: AcuXML included incorrect encoding.....	1-53

1

Version 9.0.0 Release Overview, Notes and ECNs

Key Topics

Release Overview	1-2
Special Release Notes	1-6
ACUCOBOL-GT ECN List	1-9
Acu4GL ECN List.....	1-43
AcuBench ECN List.....	1-46
AcuConnect ECN List.....	1-47
AcuSQL ECN List	1-48
AcuXDBC ECN List.....	1-49
AcuXML ECN List	1-53

Release Overview

Welcome to *extend* version 9.0.0. *extend* is the product suite name for the ACUCOBOL-GT development, deployment, and data access technologies. Version 9 includes several major enhancements and numerous other enhancements. The major enhancements are described in this section. Other enhancements are described in the applicable ECN list. Products not listed in this document received no changes in version 9.0.0.

For important product information that may affect your use of *extend*. See the [Special Release Notes](#) section.

Web Services with Xcentricity® BIS

BIS (Business Information Server) is a native COBOL environment for building and deploying Web Services.

The BIS Server is a web server environment that manages application sessions and makes them available via any web browser or other web user agent that is granted access to the BIS server. BIS offers application developers a real opportunity to move their applications forward by building Service Oriented Architecture (SOA) applications incorporating legacy business data and logic freely mixed with the latest web languages and tools.

For both UNIX and Windows, BIS includes 32 and 64-bit archives. 32-bit archives support 32-bit Apache and IIS, and 64 bit archives support 64-bit Apache and IIS. You cannot use a 64-bit runtime with a 32 bit Apache installation.

Note: BIS on Unix is only available when provided from a Shared Library port.

Refer to the *Xcentricity BIS Users Guide* for detailed documentation on using BIS.

XML Extensions

The XML Extensions Library is provided as a DLL/shared object library. XML Extensions allows data to be imported from an XML document by converting data elements (as necessary) and storing the results directly into a matching COBOL data structure in the DATA DIVISION. Similarly, data is exported directly from a COBOL data structure by converting the COBOL data elements (as necessary) and storing the results in an XML document. XML Extensions is particularly suited to document-oriented XML data.

By allowing standard COBOL data structures to be imported from and exported to XML documents, XML Extensions enables the direct processing and manipulation of XML-based electronic documents by the ACUCOBOL-GT application programmer. Furthermore, XML Extensions does this without requiring the application programmer to become thoroughly familiar with the numerous XML-related specifications and the time-consuming process required to emit and consume well-formed XML.

Specifically, an XML document may be imported into a COBOL data structure under COBOL program control using a single, simple COBOL statement, and, similarly, the content of a COBOL data structure may be used to generate an XML document with equal simplicity. XML Extensions' approach handles both simple and extremely complex structures with ease. Individual data elements are automatically converted as needed between their COBOL internal data types and the external coding used by XML. Not only can the transition to and from XML take place when this happens, but powerful transforms, which are coded using XSLT, can be applied at the same time. This mechanism gives XML Extensions the capabilities needed to be useful in a wide range of e-commerce and Web applications.

In order to add this capability to a COBOL application, the programmer need only describe the information to be received or transmitted to the external components as COBOL data definitions. This description is not required to 'match' the XML document and, in many cases, this description will simply be an already-existing data area defined in the COBOL application.

XML Extensions are needed to support Xcentrity BIS.

XML Extensions is documented in *A Guide To Interoperating with ACUCOBOL-GT*, section 11.2.7.

Note: XML Extensions on Unix is only available when provided from a Shared Library port.

Windows Native Controls look and feel improvements

Improvements have been made to displaying graphical controls using XP/ Vista visual styles. Specifically, controls such as the frame, checkbox and radio button when placed upon tabs, now match the tab theme background the controls are placed on.

Improved .NET support

ACUCOBOL-GT programs can now retrieve .NET objects or pass .Net objects as parameters. These .Net objects can also be acted upon using the MODIFY and INQUIRE statements.

The runtime now loads the .NET CLR directly. It provides better performance, uses less memory, and allows for application deployment without needing to distribute and register the acutonet.dll.

Note: Use of .NET controls with the runtime and thin client requires .NET Framework 2.0.

NetDefGen has been enhanced with the following functionality:

- Automatic filtering out of unusable methods, properties, etc.
- You can choose which methods, properties, events, etc. that will be included in the copy file.
- New user interface elements to select Stored Objects and their data members that will be used in the COBOL application. NETDefGen will now auto-generate the NetObject def file required to use Stored Objects.

NetDefGen is documented in Section 5.5.2 of the *Interoperating with ACUCOBOL-GT* guide.

Linux distribution simplification

To simplify ordering, the Linux distribution now has just four ports:

Operating System	CPU
x86 running Linux 32 bit (glibc-2.x)	Intel x86
x64 running Linux 64 bit (glibc-2.x)	Intel x64
x86 running Linux 32 bit PowerPC (glibc-2.x)	PowerPC
x64 running Linux 64 bit PowerPC (glibc-2.x)	PowerPC

Note: glibc-2.x means glibc 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, etc..

If glibc version 3 comes out (i.e. 3.0, 3.1, etc..) we will create additional ports for glibc-3.x.

XFD WHEN directive - Complex expression support

The XFD WHEN directive supports complex expressions such as those containing multiple AND and OR operations and parentheses to group sub-expressions for proper order of evaluation.

XFD directive line continuation has been implemented for the compiler and adds support for a trailing backslash to indicate that a \$XFD directive line is continued on the next source line.

WIN\$VERSION enhancements

The WIN\$VERSION library routine now enables the user to determine whether the operating system is 32 or 64-bit.

C\$CARG and C\$DARG

Two new library routines have been added to the runtime.

C\$CARG returns information about the actual parameter that corresponds to a formal parameter in the USING phrase in the Procedure Division header of a subprogram. This information identifies the type and length of the argument and, when the argument is numeric or numeric edited, the number of digits and scale factor for the argument.

C\$DARG returns information about an actual parameter passed in the USING phrase in the CALL statement that called a subprogram. This information identifies the type and length of the argument and, when the argument is numeric or numeric edited, the number of digits and scale factor for the argument.

Acu4GL for Oracle and DB2 - Relinking on UNIX

Prior to version 9.0, using Acu4GL Oracle or Acu4GL DB2 on Unix, required re-linking the runtime. Now, relinking is no longer necessary. For Unix shared builds, Acu4GL Oracle and Acu4GL DB2 are now shared libraries, so all that needs to be done is to setting the appropriate environment variable (i.e LD_LIBRARY_PATH).

Special Release Notes

This section provides important information that may impact your use of the *extend* product line.

New Installation location on Windows

The Windows installation directory structure for all *extend* products has changed. In particular the former directory "Acucorp" has been renamed to "Micro Focus".

For example, version 8.x of ACUCOBOL-GT is installed here:

```
C:\Program Files\Acucorp\Acucbl800\AcuGT
```

Now, version 9.0.0 and higher is installed here:

```
C:\Program Files\Micro Focus\Acucbl900\AcuGT
```

Windows license file location changes

Version 9.0 now follows the Microsoft guidelines for license file locations.

When using a standard ACUCOBOL-GT installation and License Activator you should see no change in behavior. However, license files are no longer created in the installation directory (C:\Program Files\Acucorp\Acucb1900, by default on Windows XP). Instead, license files are created in an application-specific location, which changes depending on the version of Windows in use.

On Windows Vista and Windows 7, the location is:

```
C:\Program Data\Micro Focus\extend\9.0.0\x86\product-license.alc
```

Note: The directory “Micro Focus” is also new in version 9.0 and replaces “Acucorp”.

On Windows XP, the location is:

```
C:\Documents and Settings\All Users\Application Data\Micro  
Focus\extend\9.0.0\x86\product-license.alc)
```

The activator writes the license to this location, and all *extend* applications (compiler, runtime, acuserve, etc.) search for the license file in this location first. If the license file is not in the new location, then the old logic is followed - the executable will search for the license in the same directory as the executable.

We determine the location of the license files by examining the value of the environment variable ALLUSERSPROFILE. For versions prior to Windows Vista, we append the directory name “Application Data”. We then append “Micro Focus/extend/9.0.0”. For 32-bit programs, we then append “x86”.

Windows registry key changes

The Windows registry key is changed from:

```
"SOFTWARE\Acucorp, Inc.\\"
```

To:

```
"SOFTWARE\Micro Focus\\"
```

BIN-REDIST and REDIST installation directories

The *extend* Windows product medium (CD or zipped file from website download) includes two directories called BIN-REDIST and REDIST.

REDIST contains thin client files that should be distributed along with the thin client.

BIN-REDIST contains Microsoft Redistributable files. These files are needed in cases where the ACUCOBOL-GT bin directory and runtime are placed on a shared drive and users then map to that drive. The files in the BIN-REDIST directory should be placed inside the BIN directory.

SHARED_LIBRARY_EXTENSION default value change

The default value of the SHARED_LIBRARY_EXTENSION configuration value has been changed to match the standard value for the host system.

The old default value was fixed as “.so”. Some systems use a different shared library extension. The new default value will match the extension used on the shared libraries in the lib directory.

You may need to update the value of the SHARED_LIBRARY_EXTENSION configuration variable if you were relying on it always being set to “.so”.

.NET controls with the runtime and thin client.

Use of .NET controls with the runtime and thin client requires .NET Framework 2.0.

Viewing documentation in newer browsers

When viewing extend documentation from Internet Explorer 8 or higher, it is best to run the browser in compatibility mode. In non-compatibility mode help pages with numbered lists will appear with the same number for all items in the list. This behavior may also occur with Google's Chrome, which does not have a compatibility mode.

ACUCOBOL-GT ECN List

This section includes the ECNs relating to ACUCOBOL-GT.

ECN-3866: Can not find XFD file

Type of Change:	Correction
Incidents:	None
RPI Number:	1065877
Module:	runtime
Machines Affected:	All

DESCRIPTION of problem or enhancement:

When the ASSIGN clause of the SELECT statement is an EXTERNAL variable, the XFD file was not located. The ACUFH looked for an incorrect or undefined name to open.

The corrected runtime follows the correct procedure for EXTERNAL files by checking for the setting of an environment variable of the name it is passed. If a variable of that name is set, it will use the value of that variable as the filename. If the variable is not set in the environment, it will use the name of the environment variable as the filename.

ECN-3892: Long line support

Type of Change:	Enhancement
Module:	Compiler
Incidents:	None
RPI Number:	None
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

The compiler has a new option ("-SI"), or, optionally, a new source directive ">>IMP MARGIN-R IS AFTER END OF RECORD". These options allow AREA B to extend to the end of the line, regardless of line length.

INSTRUCTIONS for use:

Specify "-SI" or the source directive ">>IMP MARGIN-R IS AFTER END OF RECORD" to obtain this new behavior.

ECN-3919: AcuGT COM server now prompts for elevated privileges

Type of Change:	Enhancement
Incidents:	none
RPI Number:	none
Module:	runtime
Machines Affected:	Windows
Known Versions Affected:	9.0.0

DESCRIPTION of problem or enhancement:

The AcuGT COM server (AcuGT.exe) has built-in /REGSERVER and /UNREGSERVER command line parameters that perform COM registration. On 64-bit operating systems, these operations require administrative privileges. In previous versions these operations silently failed unless the user was "elevated".

AcuGT.exe now prompts the user for elevated privileges if one of the above (or synonymous) commands is issued, and if the user is not running with elevated privileges.

ECN-3922: Printer dialog WINPRINT-SETUP would not show on Vista

Type of Change:	Correction
-----------------	------------

Incidents:	2267953
RPI Number:	1066532
Module:	Runtime
Machines Affected:	Vista
Known Versions Affected:	8.0.x, 8.1.0

DESCRIPTION of problem or enhancement:

When running the sample program "prndemox.cbl", which is supplied with ACUCOBOL-GT, it would fail on the call to WINPRINT-SETUP returning error -2 (not supported).

The problem is related to the use of WINPRINT-DATA as the parameter to the op-code. The member WPRTDATA-SETUP-EX-FLAGS, which set certain features of the dialog when using the WINPRINT-SETUP-EX op code was not initialized.

On Vista the dialog did not recognize the flags and would not run. This behavior has been corrected.

ECN-3953: XFD directive line continuation

Type of Change:	Enhancement
Module:	Compiler
Incidents:	None
RPI Number:	None
Machines Affected:	All
Known Versions Affected:	9.0 and later

DESCRIPTION of problem or enhancement:

This ECN implements an XFD directive line continuation for the compiler and adds support for a trailing backslash to indicate that a \$XFD directive line is continued on the next source line. Continued lines also begin with \$XFD and can be continued with a trailing backslash. One new error message, "XFD directive line continuation error-XFD directive ignored", is generated if there is a continuation syntax error in the source lines.

This new feature enables support for more complex WHEN expressions with multiple AND conditions, OR conditions, and parentheses. These will likely require more than one directive line to specify.

Any \$XFD directive may be continued on multiple source lines; however, only \$XFD WHEN directives with complex expressions are likely to ever need continuation.

INSTRUCTIONS for use:

\$XFD directives may be continued onto multiple lines by specifying a single character backslash (\) as the last non-blank character on a line. For example:

```
$XFD WHEN (var1 = "abc" and var2 = "def"      \  
$XFD      and (var3 = "ghi" or var4 = "jkl")) \  
$XFD      or var5 != "xyz"
```

The following continuation line rules apply:

1. \$XFD directives are continued via a backslash as the last non-blank character on the line.
2. Continued lines begin with "\$XFD" just like the first directive line (with the dollar sign in the indicator column).
3. The final continuation line omits the trailing backslash.
4. The overall combined directive is a concatenation of all of the continuation lines.
5. The next character after the blank that follows "\$XFD" is the next character of the directive. That character logically replaces the backslash on the previous line.
6. There is no limit on the number of continuation lines other than the limit on total program source lines, and the overall size of the continued directive is limited only by available memory. But it is highly unlikely that one XFD directive would ever need to exceed a few dozen lines or a few thousand characters.
7. In standard ANSI source format the contents of columns 73-80 are ignored, the continuation backslash must appear in Area B (columns 12-72).

8. Backslashes within data (literals) will not cause a problem because they are inside quoted strings (and cannot be the last non-blank character on the line).
9. In-line comments ("*>") are not allowed on continued XFD directive lines.
10. Comment lines are allowed within a sequence of continued XFD directive lines, comment lines (asterisk in the indicator column) are ignored.
11. A new error message is generated for a syntax error within continued XFD directive lines and the erroneous continuation lines scanned up to that point are ignored. Possible syntax errors include placing a source line other than a comment line within an intended sequence of continued XFD directive lines, or omitting the final continuation line (the line that begins with "\$XFD" and does not end with a trailing backslash). Other errors are possible when the directive itself is scanned and processed.

ECN-3973: Complex \$XFD WHEN directive expressions

Type of Change:	Enhancement
Incidents:	none
RPI Number:	none
Module:	Compiler
New Version:	9.0.0
Machines Affected:	All
Known Versions Affected:	9.0 and later

DESCRIPTION of problem or enhancement:

The XFD WHEN directive supports complex expressions such as those containing multiple AND and OR operations and parentheses to group sub-expressions for proper order of evaluation. For example:

```
$XFD WHEN (var1 = "abc" or var1 = "def") and \  
$XFD      (var2 > "000" or var3 > "000") and \  
$XFD      var4 != "xyzyz"
```

INSTRUCTIONS for use:

\$XFD WHEN directives may use complex expressions involving AND, OR, and parentheses as desired to specify conditions. Here is a more complete example.

```
fd idx1-file.
01 idx1-record1.
   03 filler pic x(46).

01 idx1-record2.
   03 idx1-key.
       05 idx1-num1 pic 9(3).
       05 idx1-num2 pic 9(3).
       05 idx1-num3 pic 9(3).
   03 filler pic x(37).

$xfd when ((idx1-num1 = "000" or idx1-num1 = "009")
and \
$xfd      (idx1-num2 = "000" or idx1-num2 = "009"))
\
$xfd  tablename=one
01 idx1-record3.
   03 filler pic x(6).
   03 rec3-name1 pic x(20).
$xfd when idx1-num3 = "333" or idx1-num3 = "444",
tablename=two
   03 rec3-name2 pic x(20).

$xfd when idx1-num1 = "001" AND idx1-num2 = "001"
01 idx1-record4.
   03 filler pic x(6).
   03 rec4-name1 pic x(30).
   03 rec4-name2 pic x(10).

$xfd when idx1-num1 > "001" OR idx1-num2 > "001"
01 idx1-record5.
   03 filler pic x(6).
   03 rec5-text pic x(40).
```

ECN-3975: Thin Client-INQUIRE failed when using Layout Manager

Type of Change:	Correction
Incidents:	2360243
RPI Number:	1072037,1073291
Module:	Thin Client
New Version:	8.1.2
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

In a Thin Client setup, an INQUIRE on a control that had been acted upon by the Layout Manager would always return the starting size and position. This behavior has been corrected

INSTRUCTIONS for use:

To apply this fix turn on the runtime configuration variable "ECN_3975" by setting it to TRUE or 1. The Default behavior is FALSE or 0.

Turning on this variable fixes the inquire problem, but may affect display behavior that was incorrectly "working" based on the previous incorrect size and position.

For example, you may have defined controls that were affected by the layout manager and also had variables that specified the position of the controls.

You then DISPLAY the control immediately after the resize of the screen.

The expected behavior is for the control position to not change since the DISPLAY should override the effect of the Layout manager.

However, since the previous size and position on the application host side was not updated, the thin client would not redraw the control. Not redrawing the control nullifies the effect of the DISPLAY statement. Turning on this configuration variable will now redraw the control based on the values in the position variables.

ECN-3981: Using runtime command lines exceeding 256 bytes

Type of Change:	Correction
Incidents:	2257750
RPI Number:	1065666
Module:	Acuthin.exe
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

The runtime command line was limited to 256 bytes. This restriction has been removed so that longer command lines may now be used.

ECN-3983: Inline DISPLAYs of .NET Components

Type of Change:	Enhancement
Incidents:	2427195
RPI Number:	1972756
Module:	Compiler
New Version:	9.0.0
Machines Affected:	Win32
Known Versions Affected:	6.2.x, 7.x, 8.x

DESCRIPTION of problem or enhancement:

Displaying .NET controls is accomplished through the SCREEN SECTION, CREATE statement (non-graphical) or through inline DISPLAY statements.

When using inline DISPLAY to instantiate a graphical .NET control, any subsequent use of the verbs MODIFY, INQUIRE, DESTROY would fail because the compiler treated the control as a non-graphical control.

The compiler will now recognize whether a control from an inline DISPLAY is graphical or non-graphical and handles it accordingly.

ECN-3984: Compatible environment setting syntax

Type of Change:	Enhancement
Incidents:	None
RPI Number:	None
Module:	ccbl, runcbl
New Version:	9.0.0
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

Version 6.0 introduced new syntax for getting environment/configuration variables in a way compatible with other COBOL systems. Similar syntax can be used in those other COBOL systems for setting environment and configuration variables. ACUCOBOL-GT now supports that same setting syntax.

INSTRUCTIONS for use:

An alternate way to set environment/configuration variables is to do these two sequential steps:

```
DISPLAY env-name UPON ENVIRONMENT-NAME
DISPLAY env-value UPON ENVIRONMENT-VALUE
```

For example:

```
DISPLAY "DEFAULT-HOST" UPON ENVIRONMENT-NAME
DISPLAY "MSSQL" UPON ENVIRONMENT-VALUE
```

Now, any file operations should go through SQL Server instead of Vision. Note that you can ACCEPT my-value FROM "DEFAULT-HOST" and get MSSQL back into my-value.

ECN-3985: Radio buttons USING an Indexed item

Type of Change:	Enhancement
Incidents:	2428346
RPI Number:	1072821
Module:	compiler
Machines Affected:	All
Known Versions Affected:	6.2.0 and later

DESCRIPTION of problem or enhancement:

ECN 2770 in version 6.2.0 corrected an issue where the compiler incorrectly allowed indexed data items as the USING data item for a Radio Button (contrary to the documentation). This error was discovered from a crash that occurred in a customer program. However, some customers were using the invalid syntax without error. This ECN allows those customers to continue to do so, though unsupported.

INSTRUCTIONS for use:

Use the new compiler option, **--relaxRBUsing** (relax Radio Button USING).

This option allows USING data items to be indexed data items, as was allowed prior to ECN 2770.

Note: The use of Indexed data items in the USING clause for Radio Buttons remains unsupported syntax. Additionally, this option is NOT included in AcuBench.

ECN-4000: License location changes for Windows

Type of Change:	Correction
Incidents:	None
RPI Number:	None
Module:	All
New Version:	9.0.0
Machines Affected:	Windows only

Known Versions Affected:

DESCRIPTION of problem or enhancement:

Version 9.0 now follows the Microsoft guidelines for license file locations.

When using a standard ACUCOBOL-GT installation and License Activator you should see no change in behavior. However, license files are no longer created in the installation directory (C:\Program Files\Acucorp\Acucbl900, by default on Windows XP). Instead, license files are created in an application-specific location, which changes depending on the version of Windows in use.

On Windows Vista and Windows 7, the location is:

```
C:\ProgramData\Micro  
Focus\extend\9.0.0\x86\product-license.alc
```

Note: The directory “Micro Focus” is also new in version 9.0 and replaces “Acucorp”.

On Windows XP, the location is:

```
C:\Documents and Settings\All Users\Application Data\Micro  
Focus\extend\9.0.0\x86\product-license.alc)
```

The activator writes the license to this location, and all *extend* applications (compiler, runtime, acuserve, etc.) search for the license file in this location first. If the license file is not in the new location, then the old logic is followed - the executable will search for the license in the same directory as the executable.

We determine the location of the license files by examining the value of the environment variable ALLUSERSPROFILE. For versions prior to Windows Vista, we append the directory name "Application Data". We then append “Micro Focus/extend/9.0.0”. For 32-bit programs, we then append “x86”.

ECN-4007: TAB key pasted into grid cell causes cell data to shift

Type of Change:	Correction
Incidents:	2431451
RPI Number:	1073033
Module:	atermmgr.dll
Machines Affected:	Win32
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

If you insert data in a grid cell from the clipboard, it may contain non ASCII Data such as 0x09 (also known as TAB). While most values were accepted without problems, the TAB character was not and resulted in a shift in cell data. This behavior has been corrected.

ECN-4010: Shared library/DLL searching changes

Type of Change:	Enhancement
Incidents:	None
RPI Number:	None
Module:	runtime
New Version:	9.0.0
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

The runtime search for DLLs and shared libraries has been modified. As a result, we had to rename one of the shared libraries on UNIX. The file previously known as libclnt.so has been renamed to libaclnt.so

INSTRUCTIONS for use:

You can give the runtime a simpler name for a DLL or shared library.

The runtime will prepend various prefixes and append various suffixes to the name given, searching sequentially through the list of names until a name is found that can be loaded.

On Windows, the runtime will first try the name as given (which is the previous behavior) and then append in order “.dll” and “.ocx”. There are no prefixes that the runtime prepends.

On UNIX, the runtime will first try the name as given (which is the previous behavior) and then prepend in order “lib” or “cob”. It will also append in order “.so”, “.sl”, “.a”.

On 64-bit UNIX machines, the runtime will also append the following suffixes in order: “64”, “64.so”, “64.sl”, “64.a”.

For example, when trying to load “acInt” on UNIX, the runtime attempts to load the following library names, stopping when one is found:

```
acInt
acInt.so
acInt.sl
acInt.a
acInt64(64-bit only)
acInt64.so(64-bit only)
acInt64.sl(64-bit only)
acInt64.a(64-bit only)
libacInt
libacInt.so
libacInt.sl
libacInt.a
libacInt64(64-bit only)
libacInt64.so(64-bit only)
libacInt64.sl(64-bit only)
libacInt64.a(64-bit only)
cobacInt
cobacInt.so
cobacInt.sl
cobacInt.a
cobacInt64(64-bit only)
cobacInt64.so(64-bit only)
```

cobaInt64.sl(64-bit only)
cobaInt64.a(64-bit only)

ECN-4011: ADD to array using index passed in linkage caused non-numeric values

Type of Change:	Correction
Incidents:	2429628
RPI Number:	1073862
Module:	Compiler
Machines Affected:	All
Known Versions Affected:	N/A

DESCRIPTION of problem or enhancement:

Using an item passed in linkage section and implying an offset larger than 0xffff caused truncation of the address. The index value would then be read from the wrong location in the calling program memory. This behavior has been corrected.

ECN-4013: Native controls look and feel

Type of Change:	Enhancement
RPI Number:	US24481
Module:	runtime
Machines Affected:	Windows
Known Versions Affected:	8.1.2 and prior

DESCRIPTION of problem or enhancement:

Prior to *extend* 9, when using WIN32NATIVE_CTLs set to 1 and XP/Vista styles, controls such as the frame, checkbox and radio button when placed upon tabs, display a colored background that does not match the tab theme background the controls are placed on.

The runtime now automatically allows for these controls to have a similar background. Note for checkboxes and radio buttons, this will take effect only if the background color is not specified. Otherwise the color specified will take precedence.

ECN-4014: Orphaned runtimes while waiting for locked records

Type of Change: Enhancement
 Incidents: 99-049836
 RPI Number: 1061768
 Module: Thin Client
 Machines Affected: All
 Known Versions Affected: All

DESCRIPTION of problem or enhancement:

Thin client application hosts waiting for a record to unlock would continue to run after the client shutdown as long as the record stayed locked.

This ECN enhances the runtime to check for client activity while waiting for a record to unlock and to shutdown if the client goes dead.

INSTRUCTIONS for use:

`TC_CHECK_ALIVE_INTERVAL` must be > 0 for this feature to work.

ECN-4018: New library routines C\$CARG, C\$DARG

Type of Change: Enhancement
 RPI Number:
 Module: runtime (crun32, wrun32, runcbl, ...)
 Machines Affected: All
 Known Versions Affected: 9.0+

DESCRIPTION of problem or enhancement:

C\$CARG returns information about the actual parameter that corresponds to a formal parameter in the USING phrase in the Procedure Division header of a subprogram. This information identifies the type and length of the argument and, when the argument is numeric or numeric edited, the number of digits and scale factor for the argument.

C\$DARG returns information about an actual parameter passed in the USING phrase in the CALL statement that called a subprogram. This information identifies the type and length of the argument and, when the argument is numeric or numeric edited, the number of digits and scale factor for the argument.

INSTRUCTIONS for use:

These routines are documented in the ACUCOBOL-GT Appendices manual - Appendix I.

ECN-4021: label on a tab loses transparent property

Type of Change:	Correction
Incidents:	
RPI Number:	575315
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior

DESCRIPTION of problem or enhancement:

A program that had WIN32_NATIVE_CTL5 enabled, and a non-enabled transparent label on a tab lost the transparent label property when enabled. This behavior has been corrected.

ECN-4022: New internal field added to ACUCOBOLINFO

Type of Change:	Enhancement
Incidents:	NA
RPI Number:	NA

Module:	Runtime
Machines Affected:	All
Known Versions Affected:	NA

DESCRIPTION of problem or enhancement:

A new field named “internal” has been added to `a_cobol_info`, the structure that is passed to the call `acu_cobol`. (See *Calling COBOL from C in A Guide to Interoperating with ACUCOBOL-GT*.) This field is a void pointer and is for internal use only. It must contain the value `NULL` when `acu_cobol` is called.

For backward compatibility, `a_cobol_info` structures whose `a_cobol_info_size` indicates that the internal field is not present, will be treated as if the internal field contains a `NULL`.

INSTRUCTIONS for use:

Initialize the field “internal” to `NULL`.

ECN-4024: WIN\$VERSION enhanced to provide 32/64 bit architecture

Type of Change:	Enhancement
Incidents:	
RPI Number:	US26968
Module:	Thin client/server/runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior

DESCRIPTION of problem or enhancement:

`WIN$VERSION` function call now provides more information that enables the user to determine the correct operating system version as well as 32/64 bit architecture.

INSTRUCTIONS for use:

See the WIN\$VERSION documentation located in Appendix I of the *ACUCOBOL-T Appendices manual*.

ECN-4025: CLR Hosting for .NET

Type of Change: Enhancement

Incidents: n/a

RPI Number: n/a

Module: Runtime

New Version: 9.0.0

Machines Affected: Windows

Known Versions Affected: All

DESCRIPTION of problem or enhancement:

The Runtime will now host the Microsoft Common Language Runtime (CLR) directly to provide support for .NET assemblies.

This change eliminates the need for Acu2Net.dll, and establishes a platform for improvement of .NET support beyond the limitations of the previous architecture.

There is also a new runtime configuration variable for tracing the CLR control module: NET_FILE_TRACE.

INSTRUCTIONS for use:

Use of .NET controls with the runtime and thin client requires .NET Framework 2.0. There are no other special requirements, as the runtime automatically uses this new methodology. However, if you experience issues you can revert back to the previous methodology that used Acu2Net.dll.

To turn on tracing set NET_FILE_TRACE to 1. This creates NetTraceFile.txt in the directory where atermmgr.dll is located. The Default is 0 [off].

This option is ignored if using the `--a2n` runtime switch.

To use `AcuToNet.dll` method of .NET support:

1. From a command prompt, use the **RegAsm20Acu.exe** to register version 9.x of `AcuToNet.dll` by navigating to:

```
Program Files\Micro Focus\Acucbl9xx\AcuGT.
```

2. Enter the following command:

```
regasm20acu /register /codebase AcuToNet.dll
```

3. To run your program, use the `-a2n` runtime option.

ECN-4026: ACCEPT_AUTO and backspace in HP-COBOL compatibility mode

Type of Change:	Correction
Incidents:	2446945
RPI Number:	1074099
Module:	Runtime
Machines Affected:	Unix machines using <code>-Cp</code>
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When using the following compile options:

```
-Ca -Cp
```

and `ACCEPT_AUTO` was set in your runtime configuration, the backspace key would not work and the `ACCEPT` statement would not automatically terminate. This behavior has been corrected.

ECN-4027: Message box statements in entry field 'after procedure' causes cursor issue

Type of Change:	Correction
-----------------	------------

Incidents:
RPI Number: 576104
Module: Thin client
Machines Affected: All
Known Versions Affected: 8.1.3 and prior

DESCRIPTION of problem or enhancement:

In thin client mode and while tabbing away from an entry field, if the after procedure has a 'display message box' statement, the cursor remained on the same control. This behavior has been corrected.

ECN-4029: pre-IO Handler open mode replaces original open mode of file

Status: Complete
Type of Change: Correction
Priority: High
Incidents:
RPI Number: 1073657
Module: runtime
Machines Affected: All
Known Versions Affected: 8.1.3 and prior

DESCRIPTION of problem or enhancement:

In the following scenario, a read on a file failed.

1. Create a pre-IO handler COBOL program for a file being opened in IO mode in the main program.
2. In the handler program open a file in output mode and write a dummy record.
3. In the main program after the file is opened in IO mode perform a read on the file.

The read fails. This behavior has been corrected.

ECN-4030: Compiler option -G1 incorrectly changes symbol table in listing

Type of Change:	Correction
Incidents:	None
RPI Number:	None
Module:	Compiler
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

Compiler debug option (-G1) caused an incorrect modification of the symbol table that affected downstream processing of the symbol table. To avoid edited data items in the debug symbol table, the compiler changed the symbol table to say edited items were ANS (UNS if national).

The changed type was left in the symbol table causing side effects downstream. This can be seen in the listing when a symbol table is produced (-Ls option) and has a more serious effect on XML Extensions where the edited items need to be known, but the use of the debugging option causes all edited items to become unedited items. There might be other undetected side effects.

With this fix, the -G1 option (and its cousins) will not have a side effect on the listing or XML Extensions.

ECN-4031: Support for .NET object retrieval and passing as parameters

Type of Change:	Enhancement
Incidents:	
RPI Number:	
Module:	runtime
Machines Affected:	All
Known Versions Affected:	N/A

DESCRIPTION of problem or enhancement:

ACUCOBOL-GT programs can now retrieve .NET objects or pass .Net objects as parameters. These .Net objects can also be acted upon using the MODIFY and INQUIRE statements.

Note: MODIFY and INQUIRE is not supported if a .Net object has an Event and the Event (or Events) are stored_object.

INSTRUCTIONS for use:

Refer to the topic *Creating and Passing .NET Objects as Parameters* in the *Interoperating with ACUCOBOL-GT Manual, Section 5.5.1.1*.

ECN-4032: <Ctrl>-C shutdown of UNIX runtime causes core dump

Type of Change:	Correction
Priority:	High
Incidents:	
RPI Number:	1074950
Module:	runtime
Machines Affected:	UNIX
Known Versions Affected:	8.1.3 and prior

DESCRIPTION of problem or enhancement:

Certain COBOL programs when shut down on the UNIX OS by using the <Ctrl>-C keys would cause segmentation fault with core dump. This behavior has been corrected.

ECN-4033: SHARED_LIBRARY_EXTENSION default value now matches system

Type of Change:	Correction
Incidents:	N/A

RPI Number:	N/A
Module:	runtime
New Version:	9.0.0
Machines Affected:	some UNIX
Known Versions Affected:	all

DESCRIPTION of problem or enhancement:

The default value of the `SHARED_LIBRARY_EXTENSION` configuration value has been changed to match the standard value for the host system.

The old default value was fixed as “.so”. Some systems use a different shared library extension. The new default value will match the extension used on the shared libraries in the lib directory.

INSTRUCTIONS for use:

You may need to update the value of the `SHARED_LIBRARY_EXTENSION` configuration variable if you were relying on it always being to “.so”.

ECN-4034: Controls shift position without cause

Type of Change:	Enhancement
Incidents:	
RPI Number:	1075225
Module:	wrun32.exe
Machines Affected:	Windows
Known Versions Affected:	8.x

DESCRIPTION of problem or enhancement:

For windows that have the vertical scrollbar, clicking on a control that is at the bottom of the screen caused the screen to shift upwards even though the control was in full view.

ECN-4036: Pasting text into a singleline ENTRY-FIELD with MAX-LINES > 0

Type of Change:	Correction
Incidents:	2457122
RPI Number:	1074764
Module:	Runtime
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

Pasting text into a single line Entry Field that also has MAX-LINES set to anything other than 0 would cause strange behavior that usually ended with a MAV. This behavior has been corrected.

ECN-4037: Print job name is truncated at 31's character in spooler queue

Type of Change:	Correction
Incidents:	2469706
RPI Number:	1075684
Module:	runtime
Machines Affected:	Win32
Known Versions Affected:	Windows

DESCRIPTION of problem or enhancement:

When you set a printer prior to opening it, you can also specify the name of the print job to appear in the spool queue. While the variable in WINPRINT-SELECTION allows 80 characters, anything beyond 31 characters was truncated when the job name appeared in the spooler queue. This behavior has been corrected.

ECN-4038: Implement --xreturn command line option

Type of Change:	Enhancement
RPI Number:	RPI577412, RPI577420, RPI577422
Module:	Runtime
Machines Affected:	All
Known Versions Affected:	NA

DESCRIPTION of problem or enhancement:

The new runtime command line option `--xreturn` causes the ACUCOBOL-GT runtime to emit new return codes that detail the source of a failure to start. It may be used from the command line, but it is most useful with the `acu_initv` function. See `acu_initv` in "A Guide to Interoperting with ACUCOBOL-GT".

INSTRUCTIONS for use:

Specify the `--xreturn` on the command line or as an argument in the `argv` array passed to `acu_initv`. If there is a failure, a negative status value will be returned, otherwise a 0 is returned.

ECN-4039: XML output encoding

Type of Change:	Correction
Incidents:	2475976
RPI Number:	1076159
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.2 and later

DESCRIPTION of problem or enhancement:

When writing XML files (either with `AcuXML` or `C$XML`), ISO-8859-1 characters were being written incorrectly. They were being written as ISO-8859-1 characters, not UTF-8 characters, even though the encoding of the XML file was UTF-8. This behavior has been corrected.

ECN-4040: C\$PARSEXFD returns wrong segment offsets

Incidents: 2453183
RPI Number: 1074560
Module: Runtime
Machines Affected: ALL
Known Versions Affected: 7.0 and later

DESCRIPTION of problem or enhancement:

C\$PARSEXFD opcode PARSEXFD-GET-KEY-INFO returned incorrect values for the key segment offsets (PARSEXFD-SEGMENT-OFFSET defined in parsexf.def). This behavior has been corrected.

ECN-4041: New compiler option -Ze for XML Extensions support

Type of Change:	Enhancement
Incidents:	N/A
RPI Number:	N/A
Module:	ccbl
Machines Affected:	all
Known Versions Affected:	9.0.0

DESCRIPTION of problem or enhancement:

The new compiler option -Ze adds XML symbol table information to the COBOL object for use by XML Extensions.

INSTRUCTIONS for use:

Programs using XML Extensions must be compiled with the -Ze option. Add the -Ze compiler option to the compile command to include the XML symbol table information in the compiled COBOL object.

ECN-4043: NETDefGen enhancements

Type of Change: Enhancement

Incidents: n/a

RPI Number: n/a

Module: NETDefGen

New Version: 9.0.0

Machines Affected: Windows

Known Versions Affected: All

DESCRIPTION of problem or enhancement:

NetDefGen has been enhanced with the following functionality:

- Automatic filtering out of unusable methods, properties, etc.
- You can choose which methods, properties, events, etc. that will be included in the copy file.
- New user interface elements to select Stored Objects and their data members that will be used in the COBOL application. NETDefGen will now auto-generate the NetObject def file required to use Stored Objects.

NetDefGen is documented in Section 5.5.2 of the *Interoperating with ACUCOBOL-GT* guide.

ECN-4044: Problem with Acu4gl & C\$PARSEXFD (9D,03 error)

Type of Change: Correction

Incidents: 2473344

RPI Number: 1075908

Module: Runtime

Machines Affected: ALL

Known Versions Affected: 8.1

DESCRIPTION of problem or enhancement:

When C\$PARSEXFD was called with an absolute path name, a subsequent OPEN statement may fail with a 9D,03 error.

Also, if XFD_PREFIX was used in the configuration file then an assert failure may occur when C\$PARSEXFD is called. These behaviors have been corrected.

ECN-4045: Performance degradation in 8.1.3 and 9.0 Beta

Type of Change:	Correction
Incidents:	
RPI Number:	1076225
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior upto including 8.0.0

DESCRIPTION of problem or enhancement:

Runtime Performance degradation was occurring in versions 8.1.3 and 9.0 Beta. This behavior has been corrected.

ECN-4046: XFD creation in v9.0 Beta, when \$XFD WHEN is used in two files

Type of Change:	Correction
Incidents:	2474286
RPI Number:	1076003
Module:	Compiler
Machines Affected:	ALL
Known Versions Affected:	9.0 Beta

DESCRIPTION of problem or enhancement:

When XFD WHEN directives were used with more than one file in the same program, bogus errors were reported and correct XFD output files was not written. This only affected 9.0 Beta.

ECN-4047: Scroll Bar is enabled whenever it is displayed.

Type of Change:	Correction
Incidents:	
RPI Number:	1073719
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior.

DESCRIPTION of problem or enhancement:

If you had a scroll bar that had been disabled and you issue a display statement on that scroll bar it becomes enabled. This behavior has been corrected.

ECN-4048: C\$Paramsize returned the wrong value

Type of Change:	Correction
Incidents:	2453654
RPI Number:	1074512
Module:	Runtime
Machines Affected:	All
Known Versions Affected:	8.1.2

DESCRIPTION of problem or enhancement:

If a subprogram's linkage parameter was passed to a second subprogram via a CALL statement, the C\$ParamSize call would return the size of the linkage item

in the first subprogram, not the size of the original item in the caller. This behavior has been corrected.

INSTRUCTIONS for use:

There are no additional steps parameters that are necessary for C\$ParamSize to obtain the correct size. Note, however, that the parameter is located using the memory address of the original parameter. If a subitem of a linkage item is passed, the size of the subitem is returned by C\$ParamSize, unless the subitem is the first item in the linkage item. This will cause the size of the original item to be returned.

ECN-4049: SET EVENT-ACTION TO EVENT-ACTION-FAIL ignored

Type of Change:	Correction
Incidents:	
RPI Number:	1073162
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior

DESCRIPTION of problem or enhancement:

SET EVENT-ACTION TO EVENT-ACTION-FAIL was ignored when issued on the message MSG-BEGIN-DRAG into a grid. The expected behavior is for the messages MSG-GOTO-CELL-DRAG and especially MSG-END-DRAG are not generated when this EVENT-ACTION is set.

ECN-4050: Call program failure results in incorrect error message

Type of Change:	Correction
RPI Number:	1076415
Module:	runtime
Machines Affected:	All

Known Versions Affected: 8.1.3 and prior

DESCRIPTION of problem or enhancement:

When a CALL was executed on a variable containing low-values instead of the program name the Runtime returned an incorrect error message about hot keys instead of the correct error message about the call failing. This behavior has been corrected.

ECN-4051: Compiler did not step to next statement when error in MODIFY

Type of Change:	Correction
Incidents:	
RPI Number:	1074211
Module:	compiler
Machines Affected:	All
Known Versions Affected:	8.1.3 to 6.0

DESCRIPTION of problem or enhancement:

If you had an error in a MODIFY statement within the (), the compiler kept reporting the error and

would not step to the next statement until it aborted because it reached the maximum number of errors. This was reported as a bug under AcuBench, but the issue was with the compiler. This behavior has been corrected.

ECN-4053: Debugger handling of missing parenthesis

Type of Change:	Correction
Incidents:	
RPI Number:	1074859
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior.

DESCRIPTION of problem or enhancement:

In debug mode if you display a variable item without the closing ')', you get command error and bad characters in the output screen.

For example, the following would generate a command error:

```
d ws-var(1
```

ECN-4054: character mode list box truncates items

Type of Change:	Correction
Incidents:	
RPI Number:	1076537
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3

DESCRIPTION of problem or enhancement:

For character mode list boxes with multiple columns, the text did not appear from the 2nd column onwards. This has been corrected.

ECN-4055: TreeView not painting correctly

Type of Change:	Correction
Incidents:	2459635
RPI Number:	1074930
Module:	Runtime
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When minimizing and then restoring a screen that has a TreeView on a Tab control and with Native Controls on, when the TreeView had focus the TreeView would only repaint the selected node - not the entire control. This behavior has been corrected.

ECN-4056: Double Click on List Box item

Type of Change:	Correction
Incidents:	
RPI Number:	1075937
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior

DESCRIPTION of problem or enhancement:

Double clicking on a List Box item worked only the first time, subsequent double-clicks gave incorrect behavior in Thin Client environments. This has been corrected.

ECN-4057: Performance issue while using debugger and issuing GO command

Type of Change:	Correction
Incidents:	
RPI Number:	1073869
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior

DESCRIPTION of problem or enhancement:

When using the debugger and issuing a GO command to the next breakpoint or exit, there was a performance difference between 7.2.2 and 8.1.2. This behavior has been corrected.

ECN-4061: Backspace not working in MPUX

Type of Change:	Correction
Incidents:	
RPI Number:	1075896
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.3 and prior

DESCRIPTION of problem or enhancement:

Application of ECN 4026 (version 8.1.2) did not fix the original issue related to using the backspace key. The backspace key jumped back two characters and did not work if using AUTO_ACCEPT set to False. This behavior has been corrected.

ECN-4067: Transparent Label transparency when enabled/disabled

Type of Change:	Correction
Incidents:	2484271
RPI Number:	1076836
Module:	Runtime, Thin Client
Machines Affected:	Windows
Known Versions Affected:	all

DESCRIPTION of problem or enhancement:

When a Label was placed on a solid filled Frame, disabling/enabling the Label caused the label to change its background color - usually to the screen color. This behavior has been corrected.

ECN-4068: Thin Client Embedded browser Application titles on tabbed pages

Type of Change:	Correction
Incidents:	
RPI Number:	1076934
Date:	2010-11-17
Module:	Runtime
Machines Affected:	All
Known Versions Affected:	9.0.0 and prior

DESCRIPTION of problem or enhancement:

When you launch a Thin Client Embedded browser Application, the Internet Explorer (IE) window title is initially set to the title as indicated by the COBOL application. In versions of IE that support tab pages, the title of the tab page would initially show correctly. If you changed tabs or minimized and came back to the tab, the title was changed to the application URL. This behavior has been corrected.

Acu4GL ECN List

This section includes the ECNs relating to Acu4GL.

ECN-GL469: Separate connections for COBOL vs. internal work

Type of Change:	Enhancement
Incidents:	None
RPI Number:	568186
Module:	MSSQL
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

In a system using heavy transaction management, it is possible for the Acu4GL for MSSQL interface to not perform some of its internal work because of transactions being made by other users. This ECN partially solves this issue.

INSTRUCTIONS for use:

There is a new configuration variable, A-MSSQL-SEPARATE-LOCK-CONN, which when set to TRUE, causes the Acu4GL for MSSQL interface to open two connections to any server it connects to. One of those connections performs all the normal COBOL data work (write, rewrite, read next, etc.). Any transactions started will affect this first connection.

The second connection does all the internal work needed by the interface to do its normal work, such as updating the lock tables, testing for locks, etc. This connection always remains outside of any transactions, allowing the interface to always handle the internals correctly.

When set to the default value of FALSE, the interface will behave how it has always behaved.

The reason for the configuration variable is that a separate connection to SQL Server will require a separate license from Microsoft.

If you are not experiencing transaction difficulties with table or record locks, then we suggest keeping this variable set to the default value of FALSE. On the other hand, if you are experiencing frequent deadlocks during record locking or opening of tables, you may be able to solve those by setting this variable to TRUE.

ECN-GL471: Error message Non-numeric data in numeric field with OPEN

Type of Change: Correction

Module: Oracle

SPRs: 1074800

Machines Affected: All

Known Versions Affected: All

DESCRIPTION of problem or enhancement:

Setting the Configuration option NUMERIC-VALIDATION can cause the error message “Non-numeric data in numeric field” on an OPEN operation. This behavior has been corrected.

This option can be turned off by setting this configuration variable:
ECN_GL471=FALSE

ECN-GL473: Error message Non-numeric data in numeric field with START or READ

Type of Change: Correction

Module: Oracle

New Version: 9.0.0

SPRs: 1075696

Machines Affected: All

Known Versions Affected: All

DESCRIPTION of problem or enhancement:

Setting the Configuration option NUMERIC-VALIDATION to TRUE can cause the error message "Non-numeric data in numeric field" on an START or READ operations if there is invalid numeric data in non-key fields. This ECN temporary turns off numeric validation within the Acu4gl/Oracle interface. When the call into Oracle is finished, the prior value is restored.

This option can be turned off by setting this configuration variable:
ECN_GL473=FALSE.

ECN-GL475: A4GL-USEDIR-LEVEL does not work correctly for MSSQL

Type of Change:	Correction
Module:	MSSQL
SPRs:	1075880
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

The configuration variable A4GL-USEDIR-LEVEL was not working correctly with MSSQL. The trace log file showed that the directory prefix was not being pre-pended to the file name. This behavior has been corrected.

AcuBench ECN List

This section includes the ECNs relating to Acu4GL.

ECN-WB889: Browse dialogs do not work correctly

Type of Change:	Correction
Incidents:	574661
Module:	AcuBench81.exe

Machines Affected:	Windows 7.0
Known Versions Affected:	9.0

DESCRIPTION of problem or enhancement:

When you navigate in any of the browse dialog windows that allow for directory selection, you could not choose a directory. This behavior has been corrected.

ECN-WB890: Find in files did not stop

Type of Change:	Correction
Incidents:	1073405
Module: A	cuBench90.exe
Machines Affected:	Windows 7.0 & Windows 2008
Known Versions Affected:	9.0 and prior

DESCRIPTION of problem or enhancement:

When using the Find in Files command and when the search took a long time, you could not stop the search on Windows 2008 and Windows 7.

AcuConnect ECN List

This section includes the ECNs relating to AcuConnect.

ECN-RCL015: kill -p command when the runtime is busy

Type of Change:	Correction
Incidents:	
RPI Number:	1069740
Module:	acurcl.exe
Machines Affected:	Win32/Unix
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When using Thin Client, if the runtime on the server side is stuck in a process intensive loop, then issuing the "acurcl -kill -p " command has no effect until the runtime becomes free to process the kill command. This leads to orphan runtimes as sometimes the runtime never comes out of the loop or becomes free and also a hard kill command is never issued.

This behaviour has now been corrected so that after a default set amount of time, a hard kill command is issued on the errant runtime.

INSTRUCTIONS For Use:

The amount of time to wait before a hard kill is issued can be controlled by the acurcl SERVER configuration variable FORCE_KILL_TIME. Set this variable to the amount in seconds to wait before issuing a hard kill. The default value for this variable is 150 seconds.

AcuSQL ECN List

This section includes the ECNs relating to AcuSQL.

ECN-SQL124: MAV when getting duplicate key error with unixODBC

Type of Change:	Correction
Incidents:	2426142
RPI Number:	1072705
Module:	esqllib
Machines Affected:	UNIX
Known Versions Affected:	N/A

DESCRIPTION of problem or enhancement:

Using unixODBC and when a duplicate key error occurred, the program would generate a MAV. This behavior has been corrected.

ECN-SQL127: 64-bit AcuSQL FETCH not working

Type of Change:	Correction
Incidents:	2467961
RPI Number:	1075508
Module:	asqlsrvr
Machines Affected:	All 64-bit Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When doing a FETCH using a 64-bit AcuSQL all the values would come back with a value of 0. This behavior has been corrected.

AcuXDBC ECN List

This section includes the ECNs relating to AcuXDBC.

ECN-XD050: WHEN conditions not correctly evaluated

Type of Change:	Correction
Incidents:	None
RPI Number:	1-74880
Module:	AcuXDBC / MFXDBC
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

A file with multiple WHEN conditions may not have the fields correctly evaluated. This behavior has been corrected.

ECN-XD053: ERROR: Ending quote missing if user does not have a DBA role

Type of Change:	Correction
Incidents:	None
RPI Number:	1075822
Module:	AcuXDBC
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

Asql.bat will return the error ***** ERROR: (pos: 128 '_nd A_SELECT=^'y')-Ending quote missing if user does not have a DBA role.

ECN-XD054: AcuXDBC Resource error: MERGESIZE overflow

Type of Change:	Correction
Incidents:	None
RPI Number:	1072966
Module:	AcuXDBC
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When using a linked table in MS Access to execute a query that would return a large number of records (in this case, 13560), the odbc error "Resource error: MERGESIZE overflow" would be displayed. Adjusting the ODBC advanced configuration variable "Merge Buffer Size" to a value greater than the default (10,000) did not correct this error.

INSTRUCTIONS for use:

Make sure you increase the Merge Buffer Size along with installing the new dll.

ECN-XD056: SUBTABLE incorrectly applied when loading xfd files of different versions

Type of Change:	Correction
Priority:	Medium
Incidents:	None
RPI Number:	None
Product:	AcuXDBC
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When using xdbcutil, if a version 6 XFD file containing a subtable was loaded and then a version 5 XFD file is loaded by the same executable without exiting, the subtable name may be incorrectly applied to the second XFD file. This behavior has been corrected.

ECN-XD057: UnixODBC memory fault on 64 bit platforms

Type of Change:	Correction
Incidents:	None
RPI Number:	1076409
Product:	AcuXDBC
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

The odbcc query tool unixODBC could experience a memory fault on 64 bit platforms.

INSTRUCTIONS for use:

Install the new acuxdbc.so. Make sure your version of unixODBC is at least 2.2.12.

ECN-XD058: Enhanced timestamp format support

Type of Change:	Enhancement
Incidents:	None
RPI Number:	1073238
Module:	acuxdbc04
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

Previously, acuxdbc enforced a timestamp format of YYYY-MM-DD HH:MI:SS.UUUUUU.

The processor will now support as much of this format mask as the user requests.

For example previously the query:

```
SELECT {ts '2010-01-19 00:00:01'} FROM DUAL;
```

would result in the error:

```
SELECT {ts '2010-01-19 00:00:01'} FROM DUAL
***** ERROR: (pos: 12 'SELECT {ts '^'2010-01-19 ...}') -
  Invalid date
constant (expected 'YYYY-MM-DD')
```

You can now pass in masks such as:

```
SELECT { TS '2010-02-10 11:01:01' }
SELECT { TS '2010-02-10 11:01:01.123' }
SELECT { TS '2010-02-10 11:01:01.12345' }
SELECT { TS '2010-02-10 11:01:01.123456' }
SELECT { TS '2010-02-10 11:01' }
```

Any information not provided is zeroed out.

AcuXML ECN List

This section includes the ECNs relating to AcuXML.

ECN-XML026: AcuXML included incorrect encoding

Type of Change:	Correction
Incidents:	2239654
RPI Number:	1065604
Module:	axml32.dll
Machines Affected:	All
Known Versions Affected:	8.1.0 and later

DESCRIPTION of problem or enhancement:

AcuXML was ignoring AXML-ENCODING and incorrect encoding was being entered into all XML documents written by AcuXML. This behavior has been corrected.

