

Release Overview and ECN List

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# ***extend*** Product Suite

Version 8.1.2

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E-01-UG-091001-ECN List-8.1.2

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## Version 8.1.2 Release Overview and ECN List

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## Release Overview

Welcome and thank you for your interest in *extend* version 8.1.2. *extend* is the product suite name for the ACUCOBOL-GT development, deployment, and data access technologies.

Version 8.1.2 is a maintenance release that includes over 100 corrections. Several minor enhancements are also included and are described below. Products not listed in this document received no changes in version 8.1.2.

### Windows 7 and Windows 2008 R2 Support

Version 8.1.2 is officially supported on Microsoft Windows 7 and Windows 2008 R2.

### Compiler: Display warning message for redefined 01 levels

Currently, if an 01 level redefined zone is smaller than the redefiner, no warning messages are generated. This is the default behavior. Now, users can specify a compiler directive so that they get warning messages for 01 level redefined zones if they are smaller than the redefiner.

### Thin Client: Additional Library Routine support

Several existing ACUCOBOL-GT Library Routines can now be used in Thin Client environments by using the "@[DISPLAY]" syntax. These routines include:

C\$CHDIR  
C\$DELETE  
C\$LIST-DIRECTORY  
C\$MAKEDIR  
C\$RUN  
C\$SYSTEM  
CBL\_COPY\_FILE  
CBL\_CREATE\_DIR  
CBL\_DELETE\_DIR  
CBL\_DELETE\_FILE

## Acu4GL: Allow alternate handling of illegal data in Oracle

Two new settings have been added to 4GL\_ILLEGAL\_DATA, which provides greater flexibility in the way illegal data is handled. One of the settings can be useful for users converting from versions prior to 6.2. See [ECN-GL442: Allow alternate handling of illegal data in Oracle](#) for details.

## Acu4GL: Configuration option to suppress the addition of primary key segments in Oracle

Acu4GL/Oracle adds the segments of the primary key to the "ORDER BY" clause when reading on an alternate key that allows duplicates. This is done to insure that the keys are returned in a predictable order should the application change the direction it is reading the information in. Your application can now control whether or not this occurs.

See [ECN-GL446: Configuration option to suppress the addition of primary key segments](#) for details.

## Acu4GL: Oracle configuration option to limit drop-down queries

We have introduced a new variable to provide this instruction:

`A_ORA_LIMIT_DROPDOWN`

This variable allows an application to direct the interface not to perform "drop-down" query generation and instead return "end of file" when the records matching the current query have been exhausted. This can improve performance. See [ECN-GL448: Oracle configuration option to limit drop-down queries](#) for details.

## Acu4GL: Oracle configuration option to reuse start cursor

A new configuration variable also related to improved performance has been introduced:

`A_ORA_KEEP_START_CURSOR`

See [ECN-GL453: Oracle configuration option to reuse start cursor](#) for details.

## AcuXUI: Run AcuXUI using **extend** shared libraries

You can now run AcuXUI and the **extend** runtime as shared libraries that get loaded into the java runtime process. This enhancement provides a work around to a Solaris JRE issue in which applications that have a Swing or AWT GUI hang when launching other processes using Runtime.exec. See [ECN-XUI037: Run AcuXUI using extend shared libraries](#) for details.

## AcuXUI: Add tracing functionality

There are three new command line options to AcuXUI. The options provide additional tracing information. See [ECN-XUI046: Add tracing functionality with options -te, -tm, -tl](#) for details.

# Special Release Notes

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

## Copying or mapping the acugt bin directory

Starting with Version 8.0, users who redistribute the runtime and supporting files by either copying the acugt bin directory to another machine or by mapping a network drive to the bin directory will find that the runtime will fail to start. The associated error messages include:

```
The system cannot execute the specified program
```

```
Side by side configuration is incorrect
```

The reason for the error is that the required Microsoft Foundation Class DLLs that the runtime depends on are not installed on the target machine.

When the ACUCOBOL-GT runtime is installed on a given Windows machine the installer detects whether those DLLs are present and installs those that are missing. When the bin directory is copied to another Windows machine or a client PC is mapped to the bin directory on a server, there is no detection and installation of these DLLs on the client machine.

There are two resolutions:

1. Use the ACUCOBOL-GT installer and install the runtime on each machine.
2. Download **vcredist.exe** from Microsoft and run it on each machine. This executable will install the Microsoft Foundation Class DLLs that the runtime depends on. Information on downloading **vcredist.exe** can be found at Microsoft support: <http://support.microsoft.com/kb/923610>.

Decimal math(`-dec`) now the default instead of binary math (`-bin`)

In 7.2 a new binary math package was introduced and became the default package for the compiler to use. There have been issues with this math package. Migrations from previous versions are potentially affected, in that the customer maybe unaware of potential math issues.

Starting with version 8.1.2, the ACUCOBOL-GT compiler reverts back to decimal math (`--dec`) as the default behavior.

`-netexe` and `-netdll` compiler options on Windows 7

On Windows 7, compiling with these options may fail due to a missing **al.exe**, which is not included as a utility with Windows 7. To fix this, download and install the Microsoft .Net framework SDK and then try compiling with this option.

## ACUCOBOL-GT ECN List

This section includes the ECNs relating to ACUCOBOL-GT.

### ECN-3713: Additional Library Routines support Thin Client (@[DISPLAY])

Type of Change:	Enhancement
Module:	Thin Client
Incidents:	n/a

RPI Number:	1066809
Machines Affected:	Windows
Known Versions Affected:	All

#### DESCRIPTION of problem or enhancement:

Several existing ACUCOBOL-GT Library Routines can now be used in Thin Client environments by using the "@[DISPLAY]" syntax. These routines include:

C\$CHDIR  
C\$DELETE  
C\$LIST-DIRECTORY  
C\$MAKEDIR  
C\$RUN  
C\$SYSTEM  
CBL\_COPY\_FILE  
CBL\_CREATE\_DIR  
CBL\_DELETE\_DIR  
CBL\_DELETE\_FILE

#### INSTRUCTIONS for use:

Add the "@[DISPLAY]" syntax to the beginning of the Routine's applicable parameter. See the specific Library Routine's documentation in the *ACUCOBOL-GT Appendices guide, Appendix I* for details.

## ECN-3923: Turning off conditional compilation

Type of Change:	Correction
Incidents:	2279210
RPI Number:	1066603
Module:	compiler
Machines Affected:	All
Known Versions Affected:	8.1.0 and later

### DESCRIPTION of problem or enhancement:

In version 8.1.0 (ECN 3607) conditional compilation was added to ACUCOBOL-GT. Conditional compiling statements begin with the \$ sign. In prior versions, lines of code that began with the \$ sign were treated as comments.

Unfortunately, some COBOL programs used a type of conditional compilation that we did not include in that ECN, and which now fail to compile.

### INSTRUCTIONS for use:

There is a new compile option, “-Cg”, which will turn off all conditional compilation features added by ECN 3607. Use this option if you have programs that fail to compile with 8.1.0 or later due to using \$IF, \$ELSE, etc.

## ECN-3924: ICOBOL-FILE-SEMANTICS not working

Type of Change:	Correction
Incidents:	2279783
RPI Number:	1066585
Module:	runtime
Machines Affected:	All
Known Versions Affected:	unknown

### DESCRIPTION of problem or enhancement:

The ICOBOL-FILE-SEMANTICS variable was not having any affect on the running of a COBOL program. This behavior has been corrected.

## ECN-3925: Thin Client - Unwanted Native Control style on Buttons

Type of Change:	Correction
Incidents:	2264495
RPI Number:	1066387

Module:	Thin Client
Machines Affected:	Windows
Known Versions Affected:	XP, Vista

#### DESCRIPTION of problem or enhancement:

In certain and rare cases, Push Buttons are rendered with Native Control style in Thin Client, even if Native Controls is turned off via the WIN32\_NATIVECTLS runtime configuration variable. This behavior has been corrected.

### ECN-3930: ActiveX control error caused MAV

Type of Change:	Correction
Module:	Runtime
Incidents:	2284266
RPI Number:	1066902
Machines Affected:	All
Known Versions Affected:	8.1.0, 8.1.1

#### DESCRIPTION of problem or enhancement:

If an ActiveX control threw an exception, the server MAVed while processing the error.

#### INSTRUCTIONS for use:

For users of versions 8.1.0 and 8.1.1, apply the patch.

Earlier versions are not affected UNLESS patched with ECN 3715, in which case the patch for this ECN must be applied as well.

### ECN-3931: Display warning message if redefined 01 level is smaller than redefiner

Type of Change:	Enhancement
Module:	Compiler

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Incidents:	None
RPI Number:	1065922
Machines Affected:	All
Known Versions Affected:	All

#### DESCRIPTION of problem or enhancement:

Currently, if an 01 level redefined zone is smaller than the redefiner, no warning messages are generated. This is the default behavior. Now, users can specify a compiler directive so that they get warning messages for 01 level redefined zones if they are smaller than the redefiner.

#### INSTRUCTIONS for use:

Compile the provided program using the "-Wr" flag.

## ECN-3932: C CVS math test failed with 810 native code on Sparc

Type of Change:	Correction
Module:	Compiler
Incidents:	None
RPI Number:	559487
Machines Affected:	Sparc - Solaris 8 and 9
Known Versions Affected:	8.1.0

#### DESCRIPTION of problem or enhancement:

Using a National Bureau of Standards COBOL Compiler Validation test, a test of the computation of 0 - 99 with a rounded result should produce a value of -100. This failed on Sparc using OS Solaris 8 and 9. It succeeded on Intel as native code, and it succeeded on both platforms as an .acu file. When compiled for native code on Sparc, a result of -860 was produced instead of a value of -100. This behavior has been corrected.

## ECN-3933: COMPUTE statement after a DISPLAY returned incorrect results

Type of Change:	Correction
Module:	Runtime
Incidents:	None
RPI Number:	1066894
Machines Affected:	Windows XP
Known Versions Affected:	8.1.0

### DESCRIPTION of problem or enhancement:

Compute statement calculation was returning incorrect results immediately after a screen display. This was caused by the display code corrupting portions of the memory. This behavior has been corrected.

## ECN-3935: Thin client list box double click caused second termination to be sent to host

Type of Change:	Correction
Module:	acuthin.dll
Incidents:	N/A
RPI Number:	1067030
Machines Affected:	Windows
Known Versions Affected:	8.1.0

### DESCRIPTION of problem or enhancement:

When using thin client with a list box and the LBN\_SELCHANGE style set, double clicking that list box caused two terminations to be sent to the application host. This behavior has been corrected.

## ECN-3936: Runtime relinked for MPUX inserted a newline for each char entered when using ACCEPT\_AUTO

Type of Change:	Correction
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Module:	Runtime
Incidents:	None
RPI Numbers:	1066235/1067117
Machines Affected:	HPUX 11.23 64bit IA
Known Versions Affected:	7.2.0, 8.0.0, 8.1.0

#### DESCRIPTION of problem or enhancement:

A MPUX relinked runtime inserted a newline char after each char entered when using ACCEPT\_AUTO. Consider the following program

```
01 var pic xxx.
```

```
procedure division.
```

```
    accept var
```

When the program was run, each char entered was displayed on a new line. This behavior has been corrected.

## ECN-3937: EXAMINE verb in IBM COBOL compatibility mode didn't work for linkage section items

Type of Change:	Correction
Module:	Compiler
Incidents:	None
RPI Number:	1067037
Machines Affected:	All
Known Versions Affected:	All

#### DESCRIPTION of problem or enhancement:

The EXAMINE verb, which is used in IBM COBOL, did not work correctly when used against linkage section items. For example,

```
EXAMINE LK-DS1SIZAI TALLYING ALL SPACE
```

returned an incorrect tally where LK-DS1SIZAI was a linkage section item. The verb works correctly when referring to working storage items.

## ECN-3938: --netdll:2.0 compiler option failed to generate \_CVM

Type of Change:	Correction
Module:	Compiler
Incidents:	2288099
RPI Number:	1069485
Machines Affected:	All
Known Versions Affected:	8.1.0

### DESCRIPTION of problem or enhancement:

When using the --netdll:2.0 compiler option, the \_CVM.dll file was not created if the program had more than eight linkage items. This behavior has been fixed.

## ECN-3939: C\$XML caused runtime crash with some XML comments

Type of Change:	Correction
Module:	Runtime
Incidents:	2288712
RPI Number:	1069522
Machines Affected:	All
Known Versions Affected:	8.1.0 and later

### DESCRIPTION of problem or enhancement:

With some types of comments (in particular, those that ended with a newline, as in the example below) caused the runtime to crash during XML parsing. The type of XML comment that caused the failure is as follows:

```
<-- This is a comment
-->
```

This behavior has been corrected.

## ECN-3940: 64-bit ACUCOBOL-GT runtime failed to call a function from 64bit DLL

Type of Change:	Correction
Module:	Runtime
Incidents:	None
RPI Number:	1069491
Machines Affected:	Win XP (64bit)
Known Versions Affected:	8.1.0

### DESCRIPTION of problem or enhancement:

In some random situations the 64-bit runtime did not call a function from a 64-bit DLL, even after the DLL was loaded successfully. This behavior has been corrected.

## ECN-3941: Thin Client-NULL password accepted as valid by AcuConnect

Type of Change:	Correction
Module:	Thin Client
Incidents:	2287081
RPI Number:	1069449
Machines Affected:	All
Known Versions Affected:	All

### DESCRIPTION of problem or enhancement:

When setting AcuConnect to use the operating system's native logon facility, simply hitting ENTER would be accepted as a valid password by AcuConnect. This behavior has been corrected.

## ECN-3942: Maximize Remote desktop caused list box/tree view controls to paint incorrectly

Type of Change:	Correction
Module:	Runtime
Incidents:	None
RPI Number:	1067019
Machines Affected:	Windows XP
Known Versions Affected:	8.1.1 and prior

### DESCRIPTION of problem or enhancement:

When a program that contained the tree view control or a list box control ran in the window of a remote desktop (Windows terminal Service), and you minimized the terminal service window and then maximized it again, the control appeared partially gray—specifically, the white space around the tree view or the unpopulated list box area was painted gray. (Running the sample tree view program provided with the original 8.1.0 release shows this behavior.) This behavior has been corrected.

## ECN-3943: Transparent labels that were enabled appeared as disabled

Type of Change:	Correction
Module:	Runtime
Incidents:	None
RPI Number:	1069664
Machines Affected:	Windows XP
Known Versions Affected:	8.1.1

### DESCRIPTION of problem or enhancement:

A label that was set as transparent appeared as disabled even though it was enabled. This behavior has been corrected.

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## ECN-3944: Rotating bitmap on Tab/Frame/Fill-color caused display flicker

Type of Change:	Correction
Module:	Runtime
Incidents:	None
RPI Number:	1067079
Machines Affected:	Windows XP
Known Versions Affected:	All

### DESCRIPTION of problem or enhancement:

A rotating bitmap on a frame on a tab page caused the display to flicker as the bitmap rotated. This behavior has been corrected.

## ECN-3945: Unexpected results with non-initialized numeric data items

Type of Change:	Correction
Module:	Runtime
Incidents:	none
RPI Number:	1069680
Machines Affected:	Windows and UNIX
Known Versions Affected:	7.3.0 and later

### DESCRIPTION of problem or enhancement:

Version 7.3 introduced a new algorithm to decode sign bytes in USAGE DISPLAY (sign incorporated) data items. The new algorithm is 3-4 times faster than the previous one, but produced unexpected results for undefined or non-initialized numeric data items.

This ECN reinstates the algorithm used in versions before 7.3 as the default behavior and introduces a new runtime configuration variable to turn on the new or faster algorithm introduced in Version 7.3.

INSTRUCTIONS for use:

To use the Version 7.3 algorithm, set the FAST\_SIGN\_DECODE configuration variable to "TRUE". If using this algorithm, numeric data items must be defined/initialized, otherwise incorrect results may occur.

The default value is "FALSE" which means the pre-7.3 version of the algorithm is used. The pre-7.3 version does not require numeric data items to be defined/initialized.

## ECN-3946: Native code generation failed on intel when doing copy/replace

Type of Change:	Correction
Module:	Compiler
Incidents:	None
RPI Number:	1069709
Machines Affected:	All
Known Versions Affected:	8.1.0

### DESCRIPTION of problem or enhancement:

The compiler crashed when executing a large copy/replace operation and generating native code during compilation. This behavior has been corrected.

## ECN-3948: Compiler on OpenVMS left behind temporary files

Type of Change:	Correction
Module:	Compiler
Incidents:	None
RPI Number:	550037
Machines Affected:	Open VMS
Known Versions Affected:	All

**DESCRIPTION of problem or enhancement:**

The compiler was leaving extra temporary files under all conditions. This behavior has been corrected.

**ECN-3949: Thin Client "Remote Host not responding" dialog not functioning**

Type of Change:	Correction
Incidents:	2348394
RPI Number:	1069734
Module:	AcuThin
New Version:	8.1.2
Machines Affected:	Win XP
Known Versions Affected:	All

**DESCRIPTION of problem or enhancement:**

At the second occurrence of the message "Remote host not responding" the acuthin terminates regardless if the user decided to wait more, leaving the runtime running on the server. This behavior has been corrected.

**ECN-3950: Native code generation on AIX produces MAV**

Type of Change:	Correction
Incidents:	none
RPI Number:	1069739
Module:	compiler
New Version:	8.1.2
Machines Affected:	AIX
Known Versions Affected:	8.1.0

**DESCRIPTION of problem or enhancement:**

When native code generated for a subtract statement such as this for an unsigned

PIC 9 variable that is stored in the indirect data, the statement will cause

a MAV on AIX.

```
10 CITY-SBS                PIC 9(4) VALUE 2.          EXTCITY
   PROCEDURE DIVISION.
   SUBTRACT 1 FROM CITY-SBS                EXTCITY
```

This behavior has been corrected.

## ECN-3951: Grid with max number of columns causes random MAV

Type of Change:	Correction
Incidents:	none
RPI Number:	1069796
Module:	Runtime
Machines Affected:	Win XP
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

Creating a grid with maximum number of columns (99 columns) creates MAVs randomly. Corrections were made so that broader checking for grids larger than 99 columns will occur and thus reduce the chance of a MAV.

## ECN-3952: Access of freed memory resulted in possible crash or other undefined behavior

Type of Change:	Correction
Module:	Runtime
Incidents:	2352670
RPI Number:	1069846
Machines Affected:	All
Known Versions Affected:	8.0.0 and later

**DESCRIPTION of problem or enhancement:**

When certain types of file errors occurred, the runtime internally closed the file and then tried to access the memory freed by the close, causing unexpected (and various bad) behavior. Behaviors seen were crashes, erroneous reporting of the filename, and other undesirable behavior, causing the error (reported by C\$RERRNAME). This behavior has been corrected.

**ECN-3956: WIN\$PRINTER routine finds wrong printer driver**

Type of Change:	Correction
Incidents:	2260615
RPI Number:	1069673
Module:	Runtime
Machines Affected:	Windows
Known Versions Affected:	All

**DESCRIPTION of problem or enhancement:**

A Program looked for a printer installed on the PC. The printer name was hard-coded in the program. In this case, WINPRINT-GET-PRINTER-INFO-EX finds the wrong driver on a second run through the program. This behavior has been corrected.

**ECN-3957: Internal error #45 when using function UPPER-CASE**

Type of Change:	Correction
Incidents:	2354800
RPI Number:	1069891
Module:	compiler
Machines Affected:	All
Known Versions Affected:	8.1.0 and later

DESCRIPTION of problem or enhancement:

When compiling the construct:

```
STRING FUNCTION UPPER-CASE(var)
```

the compiler would generate an internal error #45 (MAV). This behavior has been corrected.

## ECN-3955: Decimal math(--dec)now the default instead of binary math (--bin)

Type of Change:	Correction
Incidents:	None
RPI Number:	559452
Module:	Compiler
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

In 7.2 a new binary math package was introduced and became the default package for the compiler to use. There have been issues with this math package. Migrations from previous versions are potentially affected, in that the customer maybe unaware of potential math issues.

Starting with version 8.1.2, the ACUCOBOL-GT compiler reverts back to decimal math (--dec) as the default behavior.

## ECN-3958: COPY/REPLACING statement using numbers such as ==4:3== by ==6:7==

Type of Change:	Correction
Incidents:	none
RPI Number:	none
Module:	Runtime
Machines Affected:	Win XP

Known Versions Affected: All

#### DESCRIPTION of problem or enhancement:

When using COPY/REPLACING with == and numbers, the replace could fail in some situations.

### ECN-3959: Nested ACCEPT processed incorrectly - state always set to an ACCEPT

Type of Change: Correction  
Module: Acuthin  
Incidents: None  
RPI Number: 1069533  
Machines Affected: Windows  
Known Versions Affected: 8.1.0 and later

#### DESCRIPTION of problem or enhancement:

When a program reached a nested ACCEPT condition, the entry state was always set to an ACCEPT, resulting in ACCEPTs being processed before the program had processed the begin ACCEPT message. This behavior has been corrected.

### ECN-3960: COPY/REPLACING inside PICTURE strings

Type of Change: Correction  
Module: Compiler  
Incidents: 2356633  
RPI Number: 1069983  
Machines Affected: All  
Known Versions Affected: 7.3.0 and later

### DESCRIPTION of problem or enhancement:

When REPLACING numeric values (such as level numbers) in a COPY file, if a PICTURE string had a repeat count that matched the level number being replaced, that repeat count was also replaced, in error.

For example

```
10 my-variable pic x(10).
```

If the COPY/REPLACE statement attempted to replace 10, both occurrences of 10 in this line were replaced.

## ECN-3961: Option to prevent non-ANSI fonts from showing in W\$FONT dialog

Type of Change:	Enhancement
Module:	Atermmgr.dll
Incidents:	2281416
RPI Number:	1066701
Machines Affected:	Win32
Known Versions Affected:	All

### DESCRIPTION of problem or enhancement:

As Windows has evolved, the fonts listing in the W\$FONT dialog no longer contains only ANSI fonts. While UNICODE fonts may be used with ACUCOBOL-GT, using them relies on translation back and forth between locales, a process the COBOL programmer has no means of influencing. For COBOL programmers who want to let their users have the liberty of selecting fonts, it is therefore beneficial to limit the fonts to ANSI fonts only.

This ECN introduces a new font flag: WFCHOOSE-ANSI-ONLY. By setting this flag prior to calling the W\$FONT routine, the fonts available in the font dialog are restricted to ANSI fonts only.

### INSTRUCTIONS for use:

Prior to the call to W\$FONT set the flag:

---

```
MOVE WFCHOOSE-ANSI-ONLY TO WFONT-CHOOSE-FLAGS
CALL "W$FONT" USING WFONT-CHOOSE-FONT, NULL, WFONT-DATA
```

If you have used one of the other flags for WFONT-CHOOSE-FLAGS, you can combine it with this new setting by adding instead of moving:

```
ADD WFCHOOSE-ANSI-ONLY TO WFONT-CHOOSE-FLAGS
```

## ECN-3962: Compile flag -Zz failed to convert low-values and spaces in numeric fields

Type of Change:	Correction
Module:	Compiler
Incidents:	2287006
RPI Number:	1067152
Machines Affected:	All
Known Versions Affected:	7.1.0 and later

### DESCRIPTION of problem or enhancement:

When low-values or spaces were moved to a numeric data item, and the -Zz compiler option was specified, the receiving field did not receive a value of zero as expected. This behavior has been corrected.

## ECN-3963: Acuthin memory allocation problem for parameter information buffer

Type of Change:	Correction
Module:	Acuthin.exe
Incidents:	None
RPI Number:	1070029
Machines Affected:	Windows
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

Acuthin allocated a memory block too small to hold the thin client buffer. This behavior has been corrected.

## ECN-3964: Thread switching caused display problems for Windows

Type of Change:	Correction
Module:	Atermmgr.dll
Incidents:	None
RPI Number:	1069651
Machines Affected:	Win32
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When running an application using thin client, after the user performed a series of steps in which programs are run in threads and windows created and destroyed, the toolbar shifted position. This behavior has been corrected.

## ECN-3965: Calling C\$JAVA caused MAV

Type of Change:	Correction
Module:	Runtime
Incidents:	None
RPI Number:	1071909
Machines Affected:	All
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

A C\$JAVA call either MAVed or failed with a java heap exception after several thousand calls. This behavior has been corrected.

## ECN-3966: Not all compiler options reported via cblutil -info -x

Type of Change:	Correction
Module:	Compiler
Incidents:	2358340
RPI Number:	1071828
Machines Affected:	All
Known Versions Affected:	7.2.0 and later

DESCRIPTION of problem or enhancement:

Not all compile options were listed when checking with cblutil. This behavior has been corrected.

## ECN-3967: Grid control caused MAV when control was destroyed

Type of Change:	Correction
Module:	Runtime
Incidents:	None
RPI Number:	1071971
Machines Affected:	Windows
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

If a grid is displayed and then the Window is closed by any mechanism while in the ACCEPT, and the font handles are destroyed, then DESTROY ALL CONTROLS is executed, a MAV results. This behavior has been corrected.

## ECN-3969: Thin Client Auto Update not working

Type of Change:	Correction
Module:	Runtime
Incidents:	None

RPI Number:	None
Machines Affected:	All
Known Versions Affected:	8.1.0, 8.1.1

DESCRIPTION of problem or enhancement:

Several previous ECNs broke Thin Client's auto update feature. This ECN fixes auto-update for all versions.

## ECN-3971: C\$XML failed to add attribute names of length 1

Type of Change:	Correction
Module:	Runtime
Incidents:	2357156
RPI Number:	1070013
Machines Affected:	All
Known Versions Affected:	8.1.1

DESCRIPTION of problem or enhancement:

When adding attributes to an XML file with C\$XML, attribute names of length 1 failed to be added, although the value was causing an XML file to be created that was not valid XML (and didn't have the information that the COBOL program added). This failure has been corrected.

## ECN-3972: C\$XML encoding issues

Type of Change:	Correction
Incidents:	2258555, 2258415, 2358824
RPI Number:	1065697, 1065710, 1071946
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.0.0 and later

DESCRIPTION of problem or enhancement:

Starting with version 8.0, encoding issues began to appear. These issues have been resolved and have resulted in new instructions for how to deal with XML files and encodings.

INSTRUCTIONS for use:

While the ISO-8859-1 encoding is supported by C\$XML, it always gives strings in UTF-8, regardless of the encoding of the XML file.

Starting with version 8.1.2, the data returned to the COBOL program will be in one of three (instead of one of two) encodings. If the encoding in the XML file is given as either US-ASCII, UTF-8, or ISO-8859-1, the data returned to the COBOL program will be encoded in that character set. The only other encoding supported by C\$XML is UTF-16. If an XML file is parsed that uses UTF-16, the data will be returned to the COBOL program as UTF-8.

Note that modifying the encoding will most likely cause errors, unless you translate all the data of the XML file into the new encoding before writing it. In other words, changing the encoding attribute does NOT cause the entire XML file to be translated into the new encoding automatically. Caution should be used in this area.

## ECN-3974: MAV when using threads on UNIX and during heavy processing

Type of Change:	Correction
Incidents:	2354976
RPI Number:	1069970
Module:	runcbl
Machines Affected:	UNIX
Known Versions Affected:	8.0.x 8.1.x

DESCRIPTION of problem or enhancement:

A database updating application that uses threads would MAV when it was stressed with large amounts of data. The MAV did not occur on Windows or when the work load was lessened. This behavior has been corrected.

## ECN-3976: call "W\$FONT" using WFONT-CHOOSE-FONT failed on Windows 7

Type of Change:	Correction
RPI Number:	570724
Module:	runtime
Machines Affected:	All Windows
Known Versions Affected:	8.1.2

### DESCRIPTION of problem or enhancement:

Call "W\$FONT" using WFONT-CHOOSE-FONT fails on Windows 7. This has been resolved.

## **Acu4GL ECN List**

## ECN-GL442: Allow alternate handling of illegal data in Oracle

Type of Change:	Enhancement
Module:	Oracle
Incidents:	None
RPI Number:	1066528
Machines Affected:	All
Known Versions Affected:	All

### DESCRIPTION of problem or enhancement:

Chapter 5 of the Acu4GL User's Guide describes how Acu4GL handles COBOL data items that are considered invalid and explains what happens to them when they are stored in the database. The chapter also explains which database items are considered invalid, and explains how these are translated from COBOL to the database.

---

COBOL data (except key data) that is illegal by database standards is stored in the database as null unless you specifically override this default. The default behavior can be modified with the configuration variable `4GL_ILLEGAL_DATA`, described in section 8.2.

Previously, this variable could have the values of `NULL` and `UNCHANGED`: The default `CONVERTED`. Illegal data in key fields was always converted, regardless of the value of this configuration variable.

We have added two new settings for use with character fields in Oracle:

### **KEY\_MOD**

If a key field contains `LOW-VALUES` in the first byte, the field is considered invalid. The default behavior is to set the field to the minimum possible value. For character fields, this would result in a single character with the hex value of `0x01` being inserted. (For fixed-length fields, Oracle would space pad the field.)

Setting `4GL_ILLEGAL_DATA` to the value `KEY_MOD` will result in only the first byte of an invalid key field being modified to the hex value of `0x01`. The remainder of the field will remain unchanged.

This value can be useful for users converting from versions prior to 6.2 in which the interface's functionality matched this behavior rather than the documented behavior.

### **PASS\_THROUGH**

If the value of `4GL_ILLEGAL_DATA` is set to `PASS_THROUGH`, all key field and non-key field values will be directly passed to Oracle after having trailing spaces removed for variable length fields. Any error detection on the fields will be handled by the Oracle database itself.

## **ECN-GL443: Changing character set resulted in errors on READ**

Type of Change:	Correction
Module:	Oracle

Incidents: 2284647  
RPI Number: 1067021  
Machines Affected: All  
Known Versions Affected: 8.1.0

DESCRIPTION of problem or enhancement:

If an Oracle database was created with NLS\_CHARACTERSET set to AL32UTF8 and NLS\_LENGTH\_SEMANTICS to CHAR, a START within a COBOL program using Acu4GL to access the database encountered a 23 error, on a key that should have been found.

This behavior has been modified by this ECN. The new default behavior of the product is to cause the START to locate the desired record.

INSTRUCTIONS for use:

If you encounter a problem with the new behavior, using the configuration variable ECN\_GL443 and setting it to "N" will revert the product back to the original behavior.

## ECN-GL444: Unnecessary truncation of numeric data in SQL Server

Type of Change: Correction  
Module: MSSQL  
Incidents: 2287116  
RPI Number: 1069443  
Machines Affected: All  
Known Versions Affected: 8.1.0

DESCRIPTION of problem or enhancement:

When reading from a numeric column in an SQL Server database into a COBOL data field with fractional digits, a truncation of the fractional portion occurred, and the following message appeared in the error log:

```
[1] 01S07 0 - Fractional truncation
```

If the column in the database was a decimal column, the truncation and message did not occur. This behavior has been corrected.

ECN-GL445: Incorrect record READ after an AT-END condition

Type of Change:	Correction
Module:	MSSQL
Incidents:	2281619
RPI Number:	1066738
Machines Affected:	All MSSQL platforms
Known Versions Affected:	All

#### DESCRIPTION of problem or enhancement:

The following behavior was occurring:

START >= LOW-VALUES (sets pointer to first record)

READ NEXT (reads first record)

READ PREVIOUS (gets AT-END condition)

READ NEXT (reads second record instead of first)

START <= HIGH-VALUES (sets pointer to last record)

READ PREVIOUS (reads last record)

READ NEXT (gets AT-END condition)

READ PREVIOUS (reads second to the last record instead of last)

This behavior has been corrected.

## ECN-GL446: Configuration option to suppress the addition of primary key segments

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

### DESCRIPTION of problem or enhancement:

Acu4GL/Oracle adds the segments of the primary key to the "ORDER BY" clause when reading on an alternate key that allows duplicates. This is done to insure that the keys are returned in a predictable order should the application change the direction it is reading the information in. Your application can now control whether or not this occurs.

Setting the variable A\_ORACLE\_USE\_PRIMARY to FALSE will prevent the addition of the primary key segments to the "ORDER BY" clause for alternate keys allowing duplicates. The default of TRUE will maintain the current functionality of adding the primary key segments. This variable is checked at the time of file open and may be set differently for different files.

## ECN-GL447: START with a size clause sometimes caused incorrect "drop down" queries

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

DESCRIPTION of problem or enhancement:

When a start operation was performed with a size argument, Acu4gl/Oracle used the size to determine the number of columns of the key to start on. When the application performed a subsequent number of READ NEXT/PREVIOUS operations such that the query should have dropped down to the next lower number of columns, the interface instead defaulted back to all of the key columns. This behavior has been corrected.

## ECN-GL448: Oracle configuration option to limit drop-down queries

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

DESCRIPTION of problem or enhancement:

When a sequence of START and READ NEXT/PREVIOUS operations are performed by an application, Acu4gl/Oracle generates a sequence of queries to return the set of records matching the application's request. To improve performance, the interface generates a sequence of "drop-down" queries based upon the key of reference's key segments going from the most specific subset using the most number of segments to the most general using the least number of segments.

For example if a key is described by:

```

03 MY-ALTKEY .
   05 MY-ALTKEY-SEG1      PIC X(2) .
   05 MY-ALTKEY-SEG2      PIC X(2) .
   05 MY-ALTKEY-SEG3      PIC X(2) .
    
```

then a START followed by a sequence of READ NEXT operations might generate the selection criteria of:

```
WHERE MY-ALTKEY-SEG1 = :w0 AND MY-ALTKEY-SEG2 = :w1 AND  
      MY-ALTKEY-SEG3 >= :w3  
WHERE MY-ALTKEY-SEG1 = :w0 AND MY-ALTKEY-SEG2 > :w1  
WHERE MY-ALTKEY-SEG1 > :w0
```

This can improve performance in that the target for each query is kept to a minimal size. If a set of records is not required, the database does not need to spend the time building the working set. When a "DROP DOWN" does occur however, the subsequent working set can require a large amount of time to process, because it may be an order of magnitude greater number of records. Normally there is not a way for a COBOL application to instruct the interface to stop processing when it has finished with the records based on a given key segment.

We have introduced a new variable to provide this instruction:

#### A\_ORA\_LIMIT\_DROPDOWN

This variable allows an application to direct the interface not to perform "drop-down" query generation and instead return "end of file" when the records matching the current query have been exhausted.

The potential settings for this variable are:

<b>Setting</b>	<b>Description</b>
OFF	The current default. The interface will perform "drop-down" queries.
PARTIAL	If the record positioning was performed by a START with a SIZE clause, such that the initial positioning was performed using fewer than the total number of columns in the key, the process will cease after all records matching the START columns have been exhausted.
FULL	If the record positioning was performed by a START without a SIZE clause, the process will cease after all records matching the START columns have been exhausted.

Setting	Description
ALL	Regardless of what form of START was used for the initial positioning, the process will cease after all records matching the START columns have been exhausted.

This variable is performed at the time of each start, so the application may change its value.

## ECN-GL449: SQL 1205 errors-deadlocks during stress test

Type of Change:	Correction
Module:	MSSQL/Sybase
Incidents:	N/A
RPI Number:	559641
Machines Affected:	Windows
Known Versions Affected:	8.1.0, 8.1.1

### DESCRIPTION of problem or enhancement:

If a program that used Acu4GL for SQL Server was run without the A\_MSSQL\_DEADLOCK\_LOOPS configuration option in a multi-user environment, the following SQL Server error often occurred:

```
[1] 40001 1205 - Transaction (Process ID 54) was deadlocked
      on lock resources with another process and has been chosen
      as the deadlock victim. Rerun the transaction.
```

### INSTRUCTIONS for use:

To solve this problem, rebuild the lock database using "ms\_inst.bat". See Appendix B, section 2.1 for details on using ms\_inst.bat.

## ECN-GL452: A\_MSSQL\_ROWCOUNT = 1 a cursor was still declared

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

Module:	MSSQL
Incidents:	2187407
RPI Number:	1062119
Machines Affected:	All MSSQL platforms
Known Versions Affected:	All

#### DESCRIPTION of problem or enhancement:

When the Acu4GL/MSSQL A\_MSSQL\_ROWCOUNT configuration variable was set to 1, a cursor was still declared, even though it was not needed (we wanted to return only one record). This behavior has been corrected.

### ECN-GL453: Oracle configuration option to reuse start cursor

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

#### DESCRIPTION of problem or enhancement:

When a COBOL application performs a start operation, Acu4GL/Oracle builds a sequence of one or more SQL queries to satisfy the requirements of the start operation. When a result set is found that matches the criteria of the start operation, that key value is saved for use on a subsequent READ NEXT/PREVIOUS operation. The cursor used to locate the target key value is not left open in order to maximize concurrency. When a READ NEXT/PREVIOUS operation is subsequently performed, a new query is generated. This could result in a sequence of queries such as the following.

For the START operation:

```
WHERE ( partial_key1_seg1 = :w0 AND partial_key1_seg2 =  
:w1 ) ORDER BY
```

```
partial_key1_seg1 ASC, partial_key1_seg2 ASC,
partial_key1_seg3 ASC
```

For the READ NEXT operation:

```
WHERE ( partial_key1_seg1 = :w0 AND partial_key1_seg2 >= :w1
) ORDER BY
partial_key1_seg1 ASC, partial_key1_seg2 ASC,
partial_key1_seg3 ASC
```

Hence, a new configuration variable has been introduced:

**A\_ORA\_KEEP\_START\_CURSOR**

The potential settings for this variable are:

FALSE	the current default. The interface will function as in previous versions.
TRUE	the cursor used for the start operation will be maintained in an open state for use by subsequent operations. Setting this variable to TRUE will eliminate the generation of the second SQL query for the READ operation.

## ECN-GL454: MSSQL Problem-Intermittent error 22s

Module:	MSSQL
Incidents:	2353606
RPI Number:	1069898
Machines Affected:	Windows
Known Versions Affected:	8.1.1

DESCRIPTION of problem or enhancement:

Intermittently, an error 22 occurred on a REWRITE statement when it should not have. On a level 9 trace log, SQL Server reported an 8179 error, "Could not find prepared statement with handle xxxx". This problem occurred only when an A\_MSSQL\_NATIVE\_LOCK\_TIMEOUT record was in the configuration file. This behavior has been corrected.

## ECN-GL456: Could not find records on an SQL Server 2005 database table using Acu wrun32

Type of Change:	Correction
Module:	MSSQL
Incidents:	2355301
RPI Number:	1069910
Machines Affected:	Windows
Known Versions Affected:	8.1.0, 8.1.1

DESCRIPTION of problem or enhancement:

When a program used a split prime key and the prime key segment numbers did not match the actual database column numbers, records that existed in the database could not be found. This behavior has been corrected.

## ECN-GL457: Double Byte Characters written incorrectly with Acu4GL MSSQL

Type of Change:	Correction
Incidents:	2351825
RPI Number:	1069719, 1070017
Module:	MSSQL
Machines Affected:	Windows
Known Versions Affected:	8.1.1

DESCRIPTION of problem or enhancement:

---

If a SQL Server database was configured with a collation that conflicted with the Locale of the client program, characters that could not be represented in the database's collation were turned into question marks. This was not the behavior prior to version 8.1.2.

INSTRUCTIONS for use:

Set the configuration option `A_MSSQL_DO_NOT_TRANSLATE_CHAR` to "ON" in the Acu4GL configuration file. Setting this variable to ON, causes all character fields, except those for date fields, to be treated as binary, storing them in the database and retrieving from the database without translation. This provides the behavior seen prior to 8.1.2 and is useful if the client is using a different locale than the database's collation.

The default setting is "OFF" and means that character fields, except for date fields, will be translated.

## ECN-GL458: 64-bit Acu4GL for MSSQL doesn't work. 32-bit does.

Type of Change:	Correction
Incidents:	2354325
RPI Number:	1069954
Module:	MSSQL
New Version:	8.1.2
Machines Affected:	Windows
Known Versions Affected:	8.1.1

DESCRIPTION of problem or enhancement:

When attempting to use the 64-bit version of the 4GL product for SQL Server, the program would hang and would need to be killed using the Windows Task Manager. This behavior has been corrected.

## ECN-GL460: Acu4GL/MSSQL with \$XFD BINARY caused data corruption

Type of Change:	Correction
Incidents:	N/A
RPI Number:	RPI-1071837
Module:	MSSQL
Machines Affected:	all
Known Versions Affected:	all

### DESCRIPTION of problem or enhancement:

Acu4GL for MSSQL caused data corruption when using the \$XFD BINARY directive. This behavior has been corrected.

## ECN-GL461: Write/rewrite of numeric data types fail

Type of Change:	Correction
Incidents:	2420503
RPI Number:	1072313
Module:	MSSQL
Machines Affected:	All
Known Versions Affected:	8.1.1

### DESCRIPTION of problem or enhancement:

Writing or rewriting a record containing a numeric column with a scale appears to succeed, but the row in the database is unaffected. If a log is produced it shows that the row produced the error "[1] 22001 0 - String data, right truncation". This does not occur when the tables are created with a later version of SQL Server. It appears to be an issue with databases created with earlier versions of SQL Server and run with current versions.

## ECN-GL462: Wrong file status for READ NEXT

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

Incidents:	2421076
RPI Number:	1072370
Module:	MSSQL
Machines Affected:	Windows
Known Versions Affected:	8.1.0, 8.1.1

### DESCRIPTION of problem or enhancement:

When a program uses (or writes) invalid data for a numeric field (column in the database) the operation fails but returns file status "00". A READ operation should report file status "23". The invalid data contains a non-numeric character in a byte other than the first byte of the field and the MSSQL database column is a numeric type. The log file shows the following message and the operation is unsuccessful but the file status is "00".

```
[1] 22018 0 - Invalid character value for cast specification
```

This ECN introduces a new error sub-code 22007 which is reported in the log file when an attempt is made to write non-numeric data into a numeric field (database column). It is reported with error code 9D which is Interface Error. For example:

```
report_status called from 3688
[1] 22018 0 - Invalid character value for cast specification
No more messages
Leaving, Execute
Leaving, execute
>>>file status = 9D,22007
```

## ECN-GL463: ROLLBACK TRANSACTION does not work

Type of Change:	Correction
Incidents:	2419575
RPI Number:	1072261
Module:	MSSQL
Machines Affected:	All MSSQL platforms
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

If you are using Acu4GL for MSSQL and you do a START TRANSACTION and you later do a ROLLBACK TRANSACTION the ROLLBACK would not roll back any transactions. This behavior has been corrected.

## AcuBench ECN List

### ECN-WB884: Switching between Screen Designer and Event Editor caused memory leak and crash

Type of Change:	Correction
Module:	AcuBench81.exe
Incidents:	1066968
RPI Number:	None
Machines Affected:	Windows machines running Acubench
Known Versions Affected:	8.0.0

DESCRIPTION of problem or enhancement:

Switching between the Screen Designer and the Event Editor screens in AcuBench caused a memory leak or memory to be allocated and never released. This led to AcuBench crashing after several iterations. The crash occurred only in machines running with low amounts of RAM installed. For machines with standard sizeable amounts of RAM, the crash did not occur. (To view the steady increase in memory usage while switching between screens, use the task manager provided by sysinternals.com.).

### ECN-WB886: Dark gray background appeared black at runtime

Type of Change:	Correction
Module:	AcuBench81.exe

Incidents:	1069515
RPI Number:	N/A
Machines Affected:	Windows machines running Acubench
Known Versions Affected:	All prior versions
DESCRIPTION of problem or enhancement:	

When set to dark gray (color value 131105) in the screen designer, a screen's background looked gray in the designer, but when the program was compiled and run, the background appeared black. This behavior has been corrected.

## AcuConnect ECN List

### ECN-AC089: MAX-ERROR-LINES ignored

Type of Change:	Correction
Incidents:	2279961
RPI Number:	1066628
Module:	acurcl, acuserve
Machines Affected:	All
Known Versions Affected:	8.1.0 and later

DESCRIPTION of problem or enhancement:

The configuration variable MAX-ERROR-LINES was ignored by acurcl and acuserve. This behavior has been corrected.

### ECN-RCL014: acurcl on OpenVMS would only allow 30 clients to connect

Type of Change:	Correction
Incidents:	2280109
RPI Number:	1066640

Module:	a	curl, runcbl
Machines Affected:		All OpenVMS machines
Known Versions Affected:		All

DESCRIPTION of problem or enhancement:

If you tried to have more than 30 clients connect to acurl on OpenVMS the process that started acurl would go into an infinite loop consuming all the CPU time. This behavior has been corrected.

## AcuServer ECN List

### ECN-AS152: AcuServer performance dropped for files with large record size

Type of Change:	Correction
Module:	Sockets
Incidents:	None
RPI Number:	1069823
Machines Affected:	Unix/Linux
Known Versions Affected:	7.3 and above

DESCRIPTION of problem or enhancement:

For files that had large record sizes, for example, 32K, AcuServer performance dropped significantly during file I/O. This behavior has been corrected.

---

## AcuSQL ECN List

This section includes the ECNs relating to AcuSQL.

### ECN-SQL121: Memory access violation on SQL\$CURSOR

Type of Change:	Correction
Module:	Esqllib
Incidents:	2285074
RPI Number:	1066972
Machines Affected:	All
Known Versions Affected:	N/A

#### DESCRIPTION of problem or enhancement:

If you called two COBOL programs that had the same select statement, like this:

```
EXEC SQL
  SELECT c1
        INTO :testsql.c1
        FROM testsql
        WHERE c2 = 'aaaaaa'
END-EXEC.
```

you got either a memory access violation or the following SQL error in your trace file:

```
SQLBindCol: SQL_INVALID_HANDLE
```

This was because it was trying to bind to a cursor that already exists.

This problem was introduced by ECN-SQL120 (Version 8.1.1), which tried to fix a problem with duplicate cursor names by dropping the cursor, which was not the correct solution. This behavior has been corrected.

## ECN-SQL122: Not updating cursor if SELECT statement changed

Type of Change:	Correction
Module:	esqllib
Incidents:	2266084
RPI Number:	1066956
Machines Affected:	All
Known Versions Affected:	N/A
DESCRIPTION of problem or enhancement:	

If the contents of a SELECT statement changed but used the same cursor, the cursor was not being updated with the new SELECT statement. The symptoms varied with each application, but the main symptom was that the data displayed from the cursor did not change. This behavior has been corrected.

## ECN-SQL123: MAV on second connection attempt

Type of Change:	Correction
Incidents:	2355193
RPI Number:	1069907
Module:	esqllib
Machines Affected:	All
Known Versions Affected:	8.1.1

DESCRIPTION of problem or enhancement:

When a program connects to a database, then does a disconnect, then connects again, it generates a Memory Access Violation.

---

## AcuXDBC ECN List

This section includes the ECNs relating to AcuXDBC.

### ECN-XD036: VIEWS for WHEN condition with TABLENAME clause incorrectly managed

Type of Change:	Correction
Module:	AcuXDBC / MF XDBC
Incidents:	None
RPI Number:	1066572
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

If an XFD contained WHEN directives with the TABLENAME clause, the subtables were not always correctly managed internally. This sometimes resulted in subtables containing repeating names of the columns C\_TYPE, C\_LENGTH, C\_PRECISION, C\_NAME, and C\_POSITION.

This situation can be detected by using the command-line query tool to describe the subtable command:

```
/dt MY_SUB_TABLENAME
```

where MY\_SUB\_TABLENAME is the VIEW created by the TABLENAME clause. The user would see multiple repeats of the five columns listed above.

The correct text of the VIEW can be obtained from the command-line query tool with the query:

```
SELECT  
v_text  
FROM  
genesis_views  
WHERE  
v_name = 'MY_SUB_TABLENAME'  
ORDER BY
```

V\_Seq;

Attempting to read from the subtable through a linked server in Microsoft SQL Server will result in the error:

Duplicate column names are not allowed in result sets obtained through OPENQUERY and OPENROWSET. The column name "C\_TYPE" is a duplicate.

## ECN-XD037: "Duplicate key" error when adding file more than once to database

Type of Change:	Correction
Module:	AcuXDBC
Incidents:	None
RPI Number:	1069458
Machines Affected:	All
Known Versions Affected:	All

### DESCRIPTION of problem or enhancement:

Attempting to add the same file into multiple schema or with multi-company resulted in the error "Duplicate key." This behavior has been corrected.

### INSTRUCTIONS for use:

Install the new xdbcutil and regenerate the system catalog.

## ECN-XD038: "NOT NULL" constraint on comp fields with WHEN directive

Type of Change:	Correction
Module:	AcuXDBC/MF XDBC
Incidents:	None
RPI Number:	1067025
Machines Affected:	All
Known Versions Affected:	All

## DESCRIPTION of problem or enhancement:

XDBC did not create NULLable columns on comp fields, even when there was a WHEN condition that mandated it and even when there was a PIC X field in the same WHEN condition that was a NULLable column. This is because a comp field does not have a natural value that can be used for the indicator of the NULL value, such as LOW-VALUES or SPACES, should the application attempt to INSERT a NULL into the column. XDBC was changed to allow a WHEN condition to take precedence over the usual NULL rules:

- If a NULL is inserted into a comp column and the WHEN condition is FALSE, the NULL is ignored.
- If a NULL is inserted into a comp column and the WHEN condition is TRUE, the following error is returned:

NULL not allowed for column, <columnname>

For comp columns where there is not a WHERE condition, the usual NULL rules still apply.

This correction will result in the "NOT NULL" constraint being applied only to columns that are not subject to a WHEN directive.

## INSTRUCTIONS for use:

Install the new xdbcutil or mfdcutil and regenerate the system catalog.

## ECN-XD039: Result set of UNION with aggregate functions contained invalid data

Type of Change:	Correction
Module:	AcuXDBC / MFXDBC
Incidents:	None
RPI Number:	1066002
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

Performing a union with an aggregate function sometimes resulted in invalid data being returned for the aggregate column. For example, the query performed on the demonstration database:

```
SELECT
  patient_id, COUNT(*) FROM animals GROUP BY patient_id
UNION SELECT
  client_id, COUNT(*) FROM clients GROUP BY client_id;
```

would contain invalid data in the second column titled EXPRI. This behavior has been corrected.

ECN-XD040: Unable to drop table from system catalog

Type of Change:Correction

Module:AcuXDBC

Incidents:None

RPI Number:1066875

Machines Affected:All

Known Versions Affected: All

DESCRIPTION of problem or enhancement:

When the underlying disk file type is sequential, you are unable to drop a table from the system catalog. To demonstrate the problem:

1. Run the "demo.bat" file to populate the demonstration database.
2. Then run asql and execute:

```
select * from clients;
```

This verifies that the data exists in the table.

3. Now execute:

```
drop table public.clients;
```

You will get the error:

```
**** ERROR: VISION: File cannot be opened: 0
```

This behavior has been corrected.

## ECN-XD041: Couldn't drop a table when underlying file type was relative

Type of Change:	Correction
Module:	AcuXDBC
Incidents:	None
RPI Number:	567865
Machines Affected:	All
Known Versions Affected:	All

### DESCRIPTION of problem or enhancement:

When the underlying disk file type was relative , users were unable to drop a table from the system catalog. This behavior has been corrected.

## ECN-XD042: Preview button in Microsoft Query not working

Type of Change:	Correction
Module:	AcuXDBC / MFXDBC
Incidents:	None
RPI Number:	1070037
Machines Affected:	Windows
Known Versions Affected:	All

### DESCRIPTION of problem or enhancement:

When using the Query Wizard to create a query to retrieve information from XDBC, the .Preview Now. button was non-functional. This button is now functional.

## ECN-XD043: Table authorization not preventing unauthorized access

Type of Change: Correction

Incidents: None

RPI Number:1066983

Module: AcuXDBC / MFXDBC

Machines Affected: All

Known Versions Affected: All

### DESCRIPTION of problem or enhancement:

If two schemas exist within a database where the schema names share a common beginning, they may be able to access each other's objects without being granted permission.

For example:

A database contains two schemas, peter, paul and peter2.

The schema peter owns a table pets.

If the user paul attempts to access peter.pets, the user would receive the error:

```
***** ERROR: Authorization error: Table PETER.PETS"
```

If the user peter2 attempts to access peter.pets, the user would not receive an error.

## ECN-XD044: Select user() from an object may return too many rows

Type of Change: Correction

Incidents: None

RPI Number:	None
Module:	AcuXDBC
Machines Affected:	All
Known Versions Affected:	8.1.1

#### DESCRIPTION of problem or enhancement:

If the SQL command "SELECT USER() from dual" is executed too many rows may be returned.

For example "SELECT USER() FROM DUAL" where dual contains a single row would return the values:

```

EXPR0
-----
SYSTEM
SYSTEM

```

## AcuXUI ECN List

This section includes the ECNs relating to AcuXDBC.

### ECN-XUI034: Font size calculation correction in combo boxes

Type of Change:	Correction
Incidents:	none
RPI Number:	1066459
Module:	AcuXUI.jar
Machines Affected:	all
Known Versions Affected:	8.1.0 and later.

DESCRIPTION of problem or enhancement:

The first character of combo boxes was cutoff due to font size calculation. This has been corrected.

## ECN-XUI035: Push button does not process exception value correctly

Type of Change:	Correction
Incidents:	none
RPI Number:	1066590
Module:	AcuXUI.jar
Machines Affected:	all
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

Using the calculator sample program, when pushing digit push buttons, no digits were displayed in the entry field. This has been corrected.

## ECN-XUI036: Fixed default frame control color of yellow

Type of Change:	Correction
Incidents:	none
RPI Number:	none
Module:	AcuXUI.jar
Machines Affected:	all
Known Versions Affected:	8.1.0 and later

DESCRIPTION of problem or enhancement:

When running the tour sample program, the frame controls would have a color of yellow when they were supposed to be white and gray.

---

## ECN-XUI037: Run AcuXUI using extend shared libraries

Type of Change:	Enhancement
Incidents:	none
RPI Number:	1066613
Module:	AcuXUI.jar
New Version:	8.1.2
Machines Affected:	all
Known Versions Affected:	8.1.0 and later

### DESCRIPTION of problem or enhancement:

You can now run AcuXUI and the *extend* runtime as shared libraries that get loaded into the java runtime process.

This enhancement provides a work around to a Solaris JRE issue in which applications that have a Swing or AWT GUI hang when launching other processes using Runtime.exec.

### INSTRUCTIONS for use:

There are three additional command line options for AcuXUI. They are:

**--aculib** <pathToTheLocationOfTheAcuSharedLibraries>

This is the location of the acu shared libraries on UNIX and dlls on windows an example of the usage on windows of this is:

```
--aculib C:\Program Files\Acucorp\Acucbl810\AcuGT\bin
```

### **--testlibload**

This option exists so the COBOL programmer can determine if their acu shared libraries will load or not. Specifying both --aculib and --testlibload will cause AcuXUI to attempt to load the shared libraries and exit. Tracing information will be sent to sysout to report whether loading was successful. AcuXUI will exit after doing this.

**--libs**

<listOfLibraryNamesWithoutExtensionsSeparatedBySemicolonsOrCommas>

This is an OPTIONAL command line option. There is a default list of libraries which gets loaded for both unix and windows. The default library lists on unix and windows are:

UNIX: libacme,libacuterm,libvision,libclnt,libaxml,libsrvgmt,libruncbl

Windows: acme,atermmgr,avision5,libexpat,axml32,wrun32

The java runtime will determine correct extension for the particular platform. The library names must be separated by either commas or semi-colons. Here are two examples using the lists above:

```
--libs
  libacme,libacuterm,libvision,libclnt,libaxml,libsrvgmt,libruncbl
--libs acme,atermmgr,avision5,libexpat,axml32,wrun32
--libs
  libacme;libacuterm;libvision;libclnt;libaxml;libsrvgmt;libruncbl
--libs acme;atermmgr;avision5;libexpat;axml32;wrun32
```

The library names should be ordered with those that have linkage dependencies following the libraries they are dependent on.

Also, when running with shared libraries on unix systems, it may be necessary to use the runtime option --no-signal-handlers in order for the runtime to initialize correctly.

## ECN-XUI038: Fix for arrow and tab key navigation between controls

Type of Change:	Correction
Incidents:	none
RPI Number:	1066662
Module:	AcuXUI.jar
Machines Affected:	all

Known Versions Affected: 8.1.0 and later

DESCRIPTION of problem or enhancement:

When navigating between controls in the tour program using the tab key, shift+tab keys, or arrow keys, navigation does not happen correctly. This has been corrected.

## ECN-XUI039: AcuXUI Grid column and row protection not functioning

Type of Change: Correction  
Incidents: none  
RPI Number: 1066715  
Module: AcuXUI.jar  
Machines Affected: all  
Known Versions Affected: 8.0 and later

DESCRIPTION of problem or enhancement:

In the AcuXUI grid control, row and column protection was not functioning. This is now fixed.

## ECN-XUI040: Fix for push button with exception value and loading bitmaps stored locally

Type of Change: Correction  
Incidents: none  
RPI Number: 1066416,1066590  
Module: AcuXUI.jar  
Machines Affected: all  
Known Versions Affected: 8.0 and later

### DESCRIPTION of problem or enhancement:

A bitmap loading problem occurred when the application was run on the local host and the bitmap files were stored outside the COBOL program, the application was creating a temporary directory for the bitmap files and copying them to the temporary directory. They can be opened directly without copying. This case is now handled correctly.

The push buttons in both cases were buttons with exception values that the exception value was being processed incorrectly because the travel property was set to true.

## ECN-XUI041: Character screen receiving mouse events and mouse wheel events

Type of Change:	Correction
Incidents:	none
RPI Number:	none
Module:	AcuXUI.jar
Machines Affected:	all
Known Versions Affected:	8.1.0 and later.

### DESCRIPTION of problem or enhancement:

A character application was receiving mouse click and mouse wheel events, which was causing incorrect terminating events and exceptions. This has been fixed.

## ECN-XUI042: NO-TAB property caused after-procedure of previous control to be ignored

Type of Change:	Correction
Incidents:	none
RPI Number:	1066360
Module:	AcuXUI.jar
Machines Affected:	all

Known Versions Affected: 8.1.0 and prior.

DESCRIPTION of problem or enhancement:

An after-procedure event would not execute when the no-tab property of a control was set to TRUE. This was experienced when first creating an entry field then a push button. During runtime, the after-procedure event would not execute when the push button was clicked. This behavior has been corrected.

## ECN-XUI043: AcuXUI reports an error when using an incorrect version of JRE

Type of Change: Enhancement  
 Incidents: none  
 RPI Number: none  
 Module: AcuXUI.jar  
 Machines Affected: all  
 Known Versions Affected: 8.0 and later

DESCRIPTION of problem or enhancement:

A JRE of 1.5 or later is required to run AcuXUI. If the user tries to run it with an earlier version JRE, it would throw an exception. With this addition, AcuXUI will report an error and provide information that looks like this:

```
java.vm.version --> [1.4.2_18-b06]
java.runtime.version --> [1.4.2_18-b06]
AcuXUI requires a JRE 1.5 or later
```

## ECN-XUI046: Add tracing functionality with options -te, -tm, -tl

Type of Change: Correction  
 Incidents: none  
 RPI Number: none  
 Module: AcuXUI.jar  
 Machines Affected: all

Known Versions Affected: 8.1.0 and later

**DESCRIPTION of problem or enhancement:**

There are three new command line options to AcuXUI. The options provide additional tracing information. The options are:

<b>-te</b>	Trace Events. -te can be used either alone or in conjunction with other tracing options such as -t 7.
<b>-tm</b>	Trace Memory. -tm need to be used with other options. -tm causes each trace message to add a prefix to each line of tracing information that reports amount of free memory currently consumed by the JRE in bytes
<b>-tl</b>	Trace Log. This option is used if tracing is to be configured using a logging.properties file. This is for backward compatibility for users who used a log file for tracing.

**INSTRUCTIONS for use:**

Add **-te** to the AcuXUI command line. Add **-tm** to the command line when using one of the other tracing options. Add **-tl** in conjunction with a logging.properties file.

## ECN-XUI047: System hangs when calling one COBOL program from another

Type of Change: Correction  
 Module: AcuXUI.jar  
 Incidents: none  
 RPI Number: 1066613  
 Machines Affected: All  
 Known Versions Affected: 8.0.0 and later

**DESCRIPTION of problem or enhancement:**

There is a bug when using JRE 1.6 that causes the program to hang when one COBOL program calls another COBOL program. This has been corrected.

**ECN-XUI048: Control sizing issues with AcuListBox when using motif**

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	none
RPI Number:	1066717
Machines Affected:	Solaris with motif
Known Versions Affected:	8.0.0 and later

**DESCRIPTION of problem or enhancement:**

The AcuListBox, when using a paged list box, was not displaying the paged list box buttons correctly, and the default size of a regular list box was incorrect: the default height was too short. This behavior has been corrected.

**ECN-XUI049: AcuXUI run as an applet caused a security exception when writing a file to "user.dir"**

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	None
Machines Affected:	All
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

The AcuXUI class ServerFileCache, when attempting to create a cache file for graphical images in the system property "user.dir" while run as an applet, caused a security exception, because applets cannot access the local disk. This behavior has been corrected.

## ECN-XUI050: Fix for RPI 1067030 listbox double-click behavior was incorrect

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1067030
Machines Affected:	All
Known Versions Affected:	8.0.0 and later

DESCRIPTION of problem or enhancement:

A listbox control with both the selection changed and the double-click styles set incorrectly caused a popup window to be displayed twice. This behavior has been corrected.

## ECN-XUI051: AcuXUI call to W\$TEXTSIZE caused GUI to hang

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1067153
Machines Affected:	All
Known Versions Affected:	8.1.0

---

DESCRIPTION of problem or enhancement:

A call to library routine W\$TEXTSIZE caused the AcuXUI graphical user interface to hang. This behavior has been corrected.

## ECN-XUI052: W\$TEXTSIZE failed when there was no active canvas

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069597
Machines Affected:	All
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

When there was no active canvas, a W\$TEXTSIZE call failed. This behavior has been corrected.

## ECN-XUI053: Canvas case 116 not handled

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069670
Machines Affected:	All
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

The canvas opcode 116 CANVAS\_GET\_SCREEN\_POSITION was not processed. This behavior has been corrected.

## ECN-XUI054: AcuXUI hung on character screen with a push button

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069679
Machines Affected:	All
Known Versions Affected:	8.1.0

### DESCRIPTION of problem or enhancement:

When a character screen with a push button was displayed, the application hung. This behavior has been corrected.

## ECN-XUI055: Fixes for location calculation for floating windows, bars, and bitmaps

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069698
Machines Affected:	All
Known Versions Affected:	8.1.0

### DESCRIPTION of problem or enhancement:

There were incorrect calculations for the locations of floating windows, bars, and bitmaps. These calculations have been corrected.

## ECN-XUI056: Canvas case 128 CANVAS\_SET\_POSITION not handled

Type of Change:	Correction
Module:	AcuXUI.jar

Incidents:	None
RPI Number:	1069694
Machines Affected:	All
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

The canvas opcode CANVAS\_SET\_POSITION (128) was not being processed. This behavior has been corrected.

## ECN-XUI057: Controls not displayed in the same order as the runtime

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069783
Machines Affected:	All
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

The controls on a canvas were appended so that the controls displayed first appeared on top of other controls. This behavior did not match that of the runtime, which displays the controls displayed first behind controls that are displayed later. This behavior has been corrected to match that of the runtime.

## ECN-XUI058: Grid cell hidden data didn't work correctly for string data

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	none
RPI Number:	1069793
Machines Affected:	All

Known Versions Affected: 8.1.0

DESCRIPTION of problem or enhancement:

Grid cell hidden data did not accept strings as hidden data. The data type used internally used the java Byte class, so strings were not converted correctly. This behavior has been corrected.

## ECN-XUI059: Password dialog not displayed when security method for acurcl is ST\_LOGON

Type of Change:	Correction
Incidents:	none
RPI Number:	1069763
Module:	AcuXUI.jar
Machines Affected:	all
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

When the SECURITY\_METHOD configuration variable is set to ST\_LOGON (2) in an acurcl configuration file, AcuXUI does not display the password dialog. This behavior has been corrected.

## ECN-XUI060: BACKGROUND-COLOR phrase greater than 8 caused java exception

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069956
Machines Affected:	All
Known Versions Affected:	All

**DESCRIPTION of problem or enhancement:**

Setting the background-color phrase as shown below caused a java exception. This behavior has been corrected.

**ECN-XUI061: Large bitmaps caused heap exceptions**

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069957
Machines Affected:	All
Known Versions Affected:	8.1.0

**DESCRIPTION of problem or enhancement:**

A large bitmap file (11 MB), when displayed as the background of an initial window, caused java heap exceptions. This behavior has been corrected.

---

**Note:** To preserve resources consider reducing large bitmap file sizes by saving them as jpeg files. This can be done with a program such as Microsoft Paint.

---

**ECN-XUI062: AcuXUI bar, label, and entry field are wrong size when unit is pixels**

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069979
Machines Affected:	All
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

When displaying a bar, label, or entry field using the DISPLAY statement and size units in pixels, the control size was incorrect. This behavior has been corrected.

## ECN-XUI063: AcuXUI displayed password in entry field

Type of Change:	Correction
Module:	AcuXUI.jar
Incidents:	None
RPI Number:	1069991
Machines Affected:	All
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

When users connected to AcuConnect and were prompted for a password, the password was displayed in the entry field. This behavior has been corrected.

