Release Overview and ECN List

extend Product Suite

Version 8.1.3

Micro Focus
9920 Pacific Heights Blvd
San Diego, CA 92126
858.689.4500

E-01-UG-100501-ECN List-8.1.3

Chapter 1: Version 8.1.3 Release Overview and ECN List

1 Version 8.1.3 Release Overview and ECN List

Key Topics

Release Overview

Welcome and thank you for your interest in ***extend*** version 8.1.3. ***extend*** is the product suite name for the ACUCOBOL-GT development, deployment, and data access technologies.

Version 8.1.3 is a maintenance release that includes over 50 corrections. Several minor enhancements are also included and are described in this section. Products not listed in this document received no changes in version 8.1.3.

Web Thin Clinet lets user handle second instance

When an attempt is made to run a Thin Client application in a browser process that is already running a Thin Client application, the second instance of the Web Thin Client ActiveX control will detect this and enter the "blocked" state. This means that the control is instantiated but has not loaded acuthin.dll nor its dependencies, and the Thin Client application has not been executed.

The control was hard coded to display a message box telling the user that the control can only be loaded once. This handling has been improved. The control now exposes an interface that lets the web developer detect the blocked state and customize the way the user is informed.

Ability to "turn off" use of xml stylesheets

When ACUCOBOL-GT and AcuXML introduced the ability to embed stylesheet references in the generated xml, The following runtime environment variables were introduced:

```
AXML_STYLESHEET_TYPE
AXML_STYLESHEET_HREF
```

To accommodate cases when stylesheet information is not necessary or desired in the XML file, these variables may be toggled on and off during program execution. If you have set these variables and want to generate an xml file without a xml style sheet association, you can do this by adding these statements before opening the xml file:

```
SET ENVIRONMENT "AXML_STYLESHEET_TYPE" TO ""
SET ENVIRONMENT "AXML_STYLESHEET_HREF" TO ""
```

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

Seethe Special Release Notes section for information regarding support for these routines.

Acu4GL/MSSQL performance enhancement

The Acu4GL for MSSQL runtime has been enhanced to apply the same READ logic on a previously-read record as is used for the Vision indexed file system. Instead of sending another request to MSSQL to read the same record, the runtime will get the record from cache. This new behavior is referred to as "Cached Read".

There is a new boolean configuration option, A_MSSQL_NO_CACHED_READ, which controls the new behavior. By default cached read is enabled. It can be disabled by setting A_MSSQL_NO_CACHED_READ to "true" or "1".

Acu4GL/MSSQL configuration option to limit drop down queries

When a sequence of START and READ NEXT/PREVIOUS operations are performed by an application, Acu4GL/MSSQL will generate a sequence of queries to return the set of records matching the application's request. To improve performance, the interface will generate 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. This functionality is turned on by setting the configuration variable A_MSSQL_USE_DROPDOWN_QUERIES to "TRUE".

When a "DROP DOWN" does occur however, the subsequent working set can require a large amount of time to process because of the potential magnitude 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.

To address this, a new variable has been introduced:

A_MSQL_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.

Special Release Notes

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

ECN 3713 not supported in version 8.1.2

This ECN provides additional Thin Client support for several existing library routines. See the Release Overview Section for a summary, or ECN-3713: Additional library routine support with Thin Client for details.

This ECN was documented as a new enhancement in version 8.1.2. This is incorrect. This new Thin Client enhancement is supported in version 8.1.3 and not 8.1.2.

ACUCOBOL-GT ECN List

This section includes the ECNs relating to ACUCOBOL-GT.

ECN-3713: Additional library routine support with Thin Client

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 *ACUCUBOL-GT Appendices guide, Appendix I* for details.

ECN-3968: Web Thin Client caused Internet Explorer crash

Type of Change	Correction
Module:	Acuthinax.ocx

Incidents:	None
RPI Number:	1069466
Machines Affected:	Windows
Known Versions Affected:	8.1.0

DESCRIPTION of problem or enhancement:

If a user was running a client application in Web Thin Client, then shut down the application by closing the main IE window using the X button, IE crashed. 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:

ECN 3798 broke thin client auto-update from version 8.0 or earlier to version 8.1.0 or 8.1.1.

ECN 3713 broke auto-update from any version to 8.1.2 and beyond.

This ECN fixes auto-update for all versions.

ECN-3970: Web Thin Client crashed Internet Explorer

Type of Change:	Correction
Module:	Acuthinax.ocx
Incidents:	None
RPI Number:	None
Machines Affected:	Windows

Known Versions Affected: 8.1.0

DESCRIPTION of problem or enhancement:

When opening a link to a page containing the Web Thin Client in a version of IE that supports tabs, the Web Thin Client caused Internet Explorer to crash or hang. This behavior has been corrected.

ECN-3978: Setting/getting relative key in EXTFH FSI

Type of Change: Correction
Incidents: N/A
RPI Number: 1066934
Module: fsi/mcfcs
Machines Affected: all 64-bit
Known Versions Affected: all

DESCRIPTION of problem or enhancement:

The file system interface for EXTFH was incorrectly setting and getting the relative key in the FCD structure on 64-bit ports. This could lead to memory corruption or a crash.

ECN-3979: EXTFH FSI and 64-bit seq. write opcode

Type of Change: Correction
Incidents: N/A
RPI Number: 1066935
Module: fsi/mcfcs
Machines Affected: all 64-bit
Known Versions Affected: all

DESCRIPTION of problem or enhancement:

The EXTFH file system interface was not setting the opcode passed to the EXTFH function correctly for some 64-bit sequential file WRITE operations. This error could cause an incorrect value to be passed to the EXTFH function, corrupt memory, or cause a crash. This behavior has been corrected.

ECN-3980: Reference modified MOVE when using threads

Type of Change:	Correction
RPI Number:	1072528
Module:	runtime
Machines Affected:	All Windows
Known Versions Affected:	8.1.2

DESCRIPTION of problem or enhancement:

A reference modification move caused incorrect results when using multi-threaded programs. The behavior was random and was dependent on thread switching times. This behavior has been corrected.

ECN-3982: After procedure when using Thin Client

Type of Change:	Correction
RPI Number:	1072580
Module:	Acuthin.exe
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

In a case involving an entry field and a push button, the entry field had an after procedure and also the AUTO and MAX-TEXT properties set. The push button had the self act property and in the cmd-clicked event procedure for the push button, a modify statement sets the value of the entry field to the max number of characters it can hold. When using the regular runtime, upon

clicking the push button the entry field gets its value updated and its after procedure is NOT invoked. When using the thin client the after procedure gets invoked. This behavior of the thin client has been corrected.

ECN-3986: Acuthin installation registered wrong version

Type of Change:	Correction
Incidents:	None
RPI Number:	572687
Module:	acuthin.msi
Machines Affected:	Windows
Known Versions Affected:	8.1.0 and later

DESCRIPTION of problem or enhancement:

The acuthin.msi installation for acuthin registered extensions for version 8.0 instead of version 8.1. This has been corrected.

ECN-3988: Nested perform stack in declaratives section

Type of Change:	Correction
RPI Number:	1072868
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.2 and prior

DESCRIPTION of problem or enhancement:

An infinite nested perform stack caused segmentation fault and memory access violation on UNIX. The issue has been corrected so that the proper behavior of aborting the program with an error message indicating that the max number of nested perform stack has been exceeded will occur.

ECN-3989: Web Thin Clinet lets user handle second instance

Type of Change: Enhancement
Incidents: none
RPI Number: none
Module: Web Thin Client
Machines Affected: Windows
Known Versions Affected: All

DESCRIPTION of problem or enhancement:

When an attempt is made to run a Thin Client application in a browser process that is already running a Thin Client application, the second instance of the Web Thin Client ActiveX control will detect this and enter the "blocked" state. This means that the control is instantiated but has not loaded acuthin.dll nor its dependencies, and the Thin Client application has not been executed.

The control was hard coded to display a message box telling the user that the control can only be loaded once. This handling has been improved. The control now exposes an interface that lets the web developer detect the blocked state and customize the way the user is informed.

INSTRUCTIONS for use:

Three new properties have been added to the Web Thin Client ActiveX control:

IsBlockedInstance (BOOL)

When true, the control is "blocked", meaning the acuthin DLLs haven't been loaded and the COBOL app is not executing on this page.This property is read only.

BlockedInstanceAction (short)

The action to take when the control detects a previous instance.

0 = Display nothing. For use in scripting.

1 = Display the default message, "ACUCOBOL-GT Web Thin Client may only be loaded once." in the upper left corner of the client area.

2 = Display a custom message in the upper left corner of the client area.

BlockedInstanceMsgText (CString)

The text to use for the custom message.

These properties are documented in *Section 3.6.8.3 of the Programmer's Guide to the Internet*.

ECN-3990: Ability to "turn off" use of xml stylesheets

Type of Change:	Enhancement
Incidents:	2359079
RPI Number:	1071886
Module:	runtime
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When ACUCOBOL-GT and AcuXML introduced the ability to embed stylesheet references in the generated xml, The following runtime environment variables were introduced:

```
AXML_STYLESHEET_TYPE
AXML_STYLESHEET_HREF
```

If these were set, they would be used.

With this ECN you can now turn these variables off to accommodate cases when stylesheet information is not necessary or desired in the XML file.

INSTRUCTIONS for use:

These variables may be toggled on and off during program execution. If you have set these variables and want to generate a xml file without a xml style sheet association, you can do this by adding these statements before opening the xml file:

```
SET ENVIRONMENT "AXML_STYLESHEET_TYPE" TO ""
SET ENVIRONMENT "AXML_STYLESHEET_HREF" TO ""
```

Note: Setting these variables to NULL or SPACE will NOT toggle the variable off.

ECN-3991: Wheel Page event did not work

Type of Change:	Correction
Incidents:	2287653
RPI Number:	1069432
Module:	wrun32.exe
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

If you set the wheel mouse to scroll one page per time (Control panel > Mouse Properties > Wheel), no wheel event would be raised.

Additionally, the WHEEL-PAGESCROLL value described in the documentation of MSG-PAGED-NEXT-WHEEL (User Interface Programming, Chapter 6) was wrong. The value should be -1. These items have been corrected.

ECN-3992: C$LIST-DIRECTORY with @[DISPLAY] fails

Type of Change:	Correction
Incidents:	none
RPI Number:	none
Module:	Thin Client
New Version:	8.1.3
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When using C$LIST-DIRECTORY with @[DISPLAY] to list a directory on the client, if acuthin was started without tracing (acuthin -t [n]), the LISTDIR-OPEN opcode would fail. This behavior has been corrected.

ECN-3993: Bitmap backgrounds were removed

Type of Change:	Correction
Incidents:	2423108, 2425193
RPI Number:	1072457, 1072676
Module:	atermmgr.dll
Machines Affected:	Win32
Known Versions Affected:	8.1.1, 8.1.2

DESCRIPTION of problem or enhancement:

A previous attempt to address an issue with transparent color and using a bitmap sequence (setting bitmap number) had the unfortunate side effect of destroying the background (bitmap) where it was intended to be. This ECN corrects both the new error and the original problem.

ECN-3995: Reference modification of linkage data items in screen section

Type of Change:	Correction
Incidents:	
RPI Number:	1067149
Module:	compiler
Machines Affected:	All
Known Versions Affected:	8.1.2 to 4.3

DESCRIPTION of problem or enhancement:

Using reference modification of linkage data items in the screen section caused MAVs. For example the following will create a MAV:

```
LINKAGE SECTION.
01  linker1 pic x(8).
SCREEN SECTION.
01  l1 label  from linker1(2:3).
PROCEDURE DIVISION USING linker1.
Main Section.
     display l1
```

ECN-3996: XML2FD MAVs with the AcuXML orderfile.xml

Type of Change:	Correction
Incidents:	2427204
RPI Number:	1072757
Module:	Compiler
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When running the xml2fd utility on the following AcuXML sample file:

```
xml2fd ..\sample\acuxml\orderfile.xml
```

You would get a memory access violation or a crash, and the program would abort. This behavior has been corrected.

ECN-3997: COPY/REPLACE caused incorrect XFD generation

Type of Change:	Correction
Incidents:	2432231
RPI Number:	1073146
Module:	compiler
Machines Affected:	All
Known Versions Affected:	8.1.1 and later

DESCRIPTION of problem or enhancement:

In a COPYBOOK that was copied using a COPY ... REPLACING statement, an XFD directive that was intended for the first item after a group item would instead be applied to that group item. For example:

```
03  my-group.
$XFD name=real-name
    05  my-item    pic x(10).
```

The XFD name directive should be applied to my-item, but was instead being applied to my-group. This behavior has been corrected.

ECN-3998: C$XML crash or memory leak

Type of Change:	Correction
Incidents:	2435854
RPI Number:	1073319
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.2

DESCRIPTION of problem or enhancement:

When parsing an XML file, if there was an element with data that exceeded

100 bytes in a single line, the runtime would overwrite an internal buffer, which could cause a crash. If the crash did not happen, a memory leak occurred. This behavior has been corrected.

ECN-3999: Thin Client - Runtime creating log file when tracing is off

Type of Change:	Correction
Incidents:	none
RPI Number:	1073351
Module:	Thin Client
Machines Affected:	All
Known Versions Affected:	8.1.2

DESCRIPTION of problem or enhancement:

When running a Thin Client application, the runtime was making log file entries during the start of communication to the client even if tracing was turned off. This would leave a small but unwanted file on the server every time a Thin Client program was run. This behavior has been corrected.

ECN-4001: threading and menus on parent windows

Type of Change:	Correction
Incidents:	
RPI Number:	1073255
Module:	runtime
New Version:	8.1.3, 9.0
Machines Affected:	All
Known Versions Affected:	8.1.2 and prior

DESCRIPTION of problem or enhancement:

The following scenario encountered unexpected behavior:

1. A main modeless window has a menu bar on it and also a push button.
2. The push button is used to run a perform thread that displays an independent window, which is also modeless.
3. When the user clicks on the push button the independent window is displayed and activated.
4. Now if the user directly attempts to click on the parent window menu item, the menu and its sub-items display, but nothing happens when the menu items are clicked.

This happens only on the first attempt. From that point on,everything behaves as expected. This issue has been corrected.

ECN-4002: C$XML crashes on CXML-NEW-PARSER

Type of Change:	Correction
Incidents:	

RPI Number:	1073422
Module:	runtime
New Version:	8.1.3, 9.0
Machines Affected:	HP Open VMS 8.3 on itanium
Known Versions Affected:	8.1.2

DESCRIPTION of problem or enhancement:

A program that created an XML file crashed at the very first call to C$XML library routine:

```
call "C$XML" using CXML-NEW-PARSER
```

This behavior has been corrected.

ECN-4003: COBOL calling Java does not generate CVM.log

Type of Change:	Correction
Incidents:	
RPI Number:	1073028
Module:	runtime
New Version:	8.1.3, 9.0
Machines Affected:	All
Known Versions Affected:	8.1.1 and 8.1.2

DESCRIPTION of problem or enhancement:

COBOL calling Java version 8.1.1 did not generate CVM.log. This has been corrected.

ECN-4004: Thin Client crash after double-clicking a List Box

Type of Change:	Correction
Incidents:	2435732

RPI Number:	1073396
Module:	Thin Client
Machines Affected:	Windows
Known Versions Affected:	8.1.2

DESCRIPTION of problem or enhancement:

In some cases, if a user selected a menu item immediately after double-clicking a List Box, the client application would crash. This behavior has been corrected.

ECN-4005: Out of Memory Java error

Type of Change:	Correction
Incidents:	
RPI Number:	1073578
Module:	runtime
Machines Affected:	All
Known Versions Affected:	8.1.2 and prior

DESCRIPTION of problem or enhancement:

The memory was not being released after C$JAVA calls. This lead to Out of Memory errors. This behavior has been corrected.

ECN-4006: BinaryMath(--bin) on AIX 5.3 and AIX 6.1

Type of Change:	Correction
Incidents:	
RPI Number:	1073622
Module:	runtime
Machines Affected:	AIX 5.3 and 6.1
Known Versions Affected:	8.1.2 to 8.0.0

DESCRIPTION of problem or enhancement:

On AIX 5.3 using 8.1.0 and higher with the --bin compiler option, it was seen that the math was not executing correctly. For example:

```
WORKING-STORAGE SECTION.
 01    WS-MYNUM   PIC S9(9) VALUE 88 binary.
PROCEDURE DIVISION.
010-MAIN.
     DIVIDE 10 INTO WS-MYNUM.
```

It was seen that WS-MYNUM would have a value of 88 after the divide statement. This behavior has been corrected.

ECN-4008: COPY/REPLACING failure

Type of Change:	Correction
Incidents:	2441438
RPI Number:	1073800
Module:	compiler
New Version:	8.1.3
Machines Affected:	All
Known Versions Affected:	8.0.0 and later

DESCRIPTION of problem or enhancement:

When replacing multiple strings with leading text and the strings were separated by commas, the last one would get the replacement done twice. This has been corrected.

ECN-4009: Forced termination of message events

Type of Change:	Correction
Incidents:	
RPI Number:	1071920
Module:	Acuthin.exe
Machines Affected:	All
Known Versions Affected:	6.0 and greater

DESCRIPTION of problem or enhancement:

This problem occurred in the following scenario when using the thin client debugger:

1. A program had a grid control with a msg-finish-entry procedure.
2. In that procedure, an ACCEPT statement is terminated by setting event-action to event-action-terminate.
3. After the code steps out of the ACCEPT, it goes into another ACCEPT of either the same screen or a new screen.

When debugging the program it will be seen that the debugger goes to a wrong section of the code when the second ACCEPT is executed. This behavior has been corrected.

ECN-4012: Console-mode runtime oddities

Type of Change:	Correction
Incidents:	2444692
RPI Number:	1073960
Module:	runtime
New Version:	8.1.3
Machines Affected:	Windows
Known Versions Affected:	8.0.0 and later

DESCRIPTION of problem or enhancement:

The console-mode Windows runtime had two problems:

1. The BACKSPACE key was not handled correctly. Instead of erasing characters, it was acting like an exception key of value 8.
2. The CLOSE button on the console (the X at the top-right of the window) would not close the runtime. The runtime might try to display a message (killed by user), and while it was waiting, Windows would display a message box about not being able to kill the program. If the user moved the mouse over the console window, the runtime might crash.

These behaviors have been corrected.

ECN-4015: Layout manager with transparent labels

Type of Change:	Correction
Incidents:	
RPI Number:	1073927
Module:	atermmgr.dll
New Version:	8.1.3, 9.0
Machines Affected:	Windows
Known Versions Affected:	8.1.2 and prior

DESCRIPTION of problem or enhancement:

When resizing windows that had the layout manager and transparent label controls encompassing other controls, the labels did not draw correctly on resizing.

This behavior would occur with Thin Client and the standard runtime. This behavior has been corrected.

ECN-4016: Function key invoked forced termination of grid message events

Type of Change:	Correction
Incidents:	
RPI Number:	1074064
Module:	Acuthin.exe, runtime
Machines Affected:	All
Known Versions Affected:	6.0 and greater

DESCRIPTION of problem or enhancement:

The following problem occurred with the standard runtime and with the thin client runtime:

1. A program had a grid control with a msg-finish-entry procedure.

2. In that procedure, the ACCEPT is terminated by setting event-action to event-action-terminate.
3. After the code steps out of the ACCEPT, it goes into another ACCEPT of either the same screen or a new screen.
4. When running the program and editing a grid cell, a function key is pressed.

Pressing the function key caused the message finish entry to be invoked, which forced termination of the current ACCEPT and sent the program to the next ACCEPT. This next ACCEPT immediately terminated without user input, which is incorrect.

This behavior has been corrected.

ECN-4017: Memory Alignment Error

Type of Change:	Correction
Incidents:	
RPI Number:	1073572
Module:	runcbl
Machines Affected:	All
Known Versions Affected:	All prior versions

DESCRIPTION of problem or enhancement:

A Memory Alignment error occurred when using a tree view control. The problem appeared on Windows when using the console runtime, and on UNIX/Linux. This behavior has been corrected.

ECN-4019: REPLACE failure

Type of Change:	Correction
Incidents:	2451726
RPI Number:	1074405
Module:	compiler
New Version:	8.1.3

Machines Affected: All
Known Versions Affected: 8.0.0 and later

DESCRIPTION of problem or enhancement:

When using the REPLACE capability with a long string of tokens, the compiler failed to compile the COBOL program. This behavior has been corrected.

ECN-4028: Focus issues when displaying modal windows

Type of Change:	Correction
RPI Number:	1062023/1062947/1065967/576104/ 1074767
Module:	wrun32.exe,Thin client
Machines Affected:	All
Known Versions Affected:	8.1.2 and prior

DESCRIPTION of problem or enhancement:

A program has a standard graphical window and a push button. On clicking the push button you execute an event procedure, which displays and accepts a floating window. The floating window has two entry fields and there is an after procedure for the first entry field. In this after procedure you display a message box.

When you tab away from the first entry field, the message box is displayed and the focus goes back to the first entry field instead of the second. This behavior has been corrected.

Acu4GL ECN List

This section includes the ECNs relating to Acu4GL.

ECN-GL455: Oracle numeric fields over 15 digits inaccurate

Type of Change:	Correction
Module:	Runtime
Incidents:	None
RPI Number:	1069909
Machines Affected:	All
Known Versions Affected:	6.2.0 and later OCI interface

DESCRIPTION of problem or enhancement:

Numeric fields over 15 characters were written incorrectly to the database. This behavior has been corrected.

ECN-GL459: Not unlocking deleted records for multilock files

Type of Change:	Correction
Incidents:	N/A
RPI Number:	RPI-568186
Module:	MSSQL
Machines Affected:	all
Known Versions Affected:	all

DESCRIPTION of problem or enhancement:

Acu4GL for MSSQL did not remove locks on deleted records in files open in multiple lock mode. This behavior has been corrected.

ECN-GL464: Performance enhancement re-reading same record

Type of Change:	Enhancement
Module:	MSSQL

Machines Affected:	Windows
Known Versions Affected:	8.1.3 and later

DESCRIPTION of problem or enhancement:

The Acu4GL for MSSQL runtime has been enhanced to apply the same READ logic on a previously-read record as is used for the Vision indexed file system. Instead of sending another request to MSSQL to read the same record, the runtime will get the record from cache. This new behavior is referred to as "Cached Read".

INSTRUCTIONS for use:

There is a new boolean configuration option, A_MSSQL_NO_CACHED_READ, which controls the new behavior. By default cached read is enabled. It can be disabled by setting A_MSSQL_NO_CACHED_READ to "true" or "1".

If the last operation was a successful READ with LOCK and the next operation is a READ with LOCK on the same key with the same key value then the cached record will be returned without accessing the database. A trace file entry is made that says "cached read".

ECN-GL465: MSSQL configuration option to limit drop down queries

Type of Change:	Enhancement
Incidents:	None
RPI Number:	None
Module:	MSSQL
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/MSSQL will generate a sequence of queries to return the set of records matching the application's request. To

improve performance, the interface will generate 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. This functionality is turned on by setting the configuration variable A_MSSQL_USE_DROPDOWN_QUERIES to "TRUE".

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 because 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 of the potential magnitude 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.

To address this, a new variable has been introduced:

A_MSQL_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.

INSTRUCTIONS for use

Set the configuration variable to one of the following settings:

OFF

This is 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.

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-GL466: Oracle BINARY fields written as NULL

Type of Change:	Correction
Incidents:	None
RPI Number:	1073314
Module:	Oracle
Machines Affected:	All
Known Versions Affected:	8.1.2 and later

DESCRIPTION of problem or enhancement:

Fields with the BINARY directive would be written to the database as NULL. This has been corrected.

ECN-GL467: MAV with A4GL_WHERE_CONSTRAINT and a START statement

Type of Change:	Correction
Incidents:	None
RPI Number:	1073588
Module:	MSSQL
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

A program using A4GL_WHERE_CONSTRAINT configuration variable would get a MAV instead of an error status 23 in a START statement.

AcuBench ECN List

This section includes the ECNs relating to AcuBench.

ECN-WB887: Code Completion in 8.1.1

Type of Change:	Correction
Incidents:	1069939
Module:	AcuBench81.exe
Machines Affected:	Windows
Known Versions Affected:	8.1.1

DESCRIPTION of problem or enhancement:

Code completion for a perform statement in the event editor does not list all the paragraphs such as "Acu-Screen1-Exit".

ECN-WB888: 64-bit version of AcuBenchPrint.dll

Type of Change:	Enhancement
Incidents:	1073134
Module:	AcuBench81.exe
Machines Affected:	Windows
Known Versions Affected:	8.1.2 and Prior

DESCRIPTION of problem or enhancement:

A 64-bit version of AcuBenchPrint.dll has been added to AcuBench.

AcuConnect ECN List

This section includes the ECNs relating to AcuConnect.

ECN-AC090: 64-bit AcuRCL was not installed on 64-bit Windows

Type of Change:	Correction
Incidents:	2438695
RPI Number:	1073523
Module:	AcuRCL
Machines Affected:	All 64-bit Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

On 64-bit machines, the ACUCOBOL-GT installer failed to install the 64-bit version of AcuConnect - Thin Client in the appropriate location. It would however install the 32-bit version of AcuConnect in the appropriate location.

This behavior has been corrected.

ECN-RCL016: Zombie process removal

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

DESCRIPTION of problem or enhancement:

When two or more AcuRCL children (AcuConnect thin client, or AcuConnect distributed processing runtimes) shut down at or near the same time, one or more of them could become zombie processes (a defunct process that has completed execution but still has an entry in the process table).

Note that there is a very small window in which a child process can still become a zombie, but it will go away the next time a different child process stops.

ECN-RCL017: "SetValueEx failed: 6" with acurcl -install

Type of Change:	Correction
Incidents:	2358148
RPI Number:	1071835
Module:	acurcl.exe
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

acurcl -install command lines greater than 100 bytes would fail and return a "SetValueEx failed: 6" error message. This behavior has been corrected so that virtually any size command line may be used.

AcuServer ECN List

This section includes the ECNs relating to AcuServer.

ECN-AS154: C$COPY on local files failed when using local computer name

Type of Change:	Correction
Incidents:	2421403
RPI Number:	1072387
Module:	Runtime
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When using C$COPY with AcuServer and prefixing the file location with the name of the local computer, the operation would fail. For example:

```
CALL "C$COPY" USING "myfile.txt"
  "@oslo-forseth:c:\Mydir\myfile.txt"
```

Where “oslo-gforseth” is the local computer name on which the operation takes place.

This behavior has been corrected.

AcuXDBC ECN List

This section includes the ECNs relating to AcuXDBC.

ECN-XD045: compile option -dz creates keys not handled by AcuXDBC

Type of Change:	Correction
Incidents:	2357236
RPI Number:	1070025
Module:	Compiler
Machines Affected:	All
Known Versions Affected:	8.1.1

DESCRIPTION of problem or enhancement:

If a COBOL program stored dates in PIC 9(8) COMP fields and the program was compiled with the -dz option, columns based on the date fields would return NULL. This behavior has been corrected.

INSTRUCTIONS for use:

It is necessary to recompile the COBOL programs and reimport the XFDs.

ECN-XD047: SUBTABLE directive not working with XML XFD files

Type of Change:	Correction
Incidents:	
RPI Number:	573298
Module:	acuxdbc04.dll
Machines Affected:	Windows
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

Files with the SUBTABLE directive would not be loaded correctly into the system catalog if the XFD files were in XML format. This has been corrected.

ECN-XD048: Duplicate key error with XFD

Type of Change: Correction
Incidents: None
RPI Number: 1073474
Module: AcuXDBC
Machines Affected: All
Known Versions Affected: All

DESCRIPTION of problem or enhancement:

When adding a poorly defined XFD into the system catalog, a "GENESIS_COLUMNS, duplicate key" error was correctly generated. However, even after correcting the XFD, future attempts to re-add the XFD would still generate the same error.

INSTRUCTIONS for use:

Install the new xdbcutil and regenerate the system catalog.

ECN-XD049: Access crashes when inserting or updating records in some views

Type of Change:	Correction
Incidents:	None
RPI Number:	1073412
Module:	AcuXDBC
Machines Affected:	All
Known Versions Affected:	All

DESCRIPTION of problem or enhancement:

When inserting or updating records in Access for some tables defined as a View (i.e. via the WHEN/TABLENAME directive), Access will crash.

Although inserting and updating records in a View is not supported, Access should give an error message instead of crashing. This has been corrected.