MICRO FOCUS®

extend 9.2

Release Notes

2013-06-24

Contents

extend Release notes

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

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

extend System Requirements

For system requirements, see each product's documentation

This product includes software developed by the University of California, Berkeley and its contributors.

extend Installation Release Notes

Refer to the extend product's installation guides.

What's New

The following items are new for this release:

- Improved 64-bit support
- New control styles and properties
- Sortable grid columns
- Configurable ODBC driver used for SQL Server
- Support for the new SQL Server type DATE Change Number
- Increased BIG5 character set range
- XDBC query enhancement

Acu4GL Enhancements

This section includes the enhancements related to Acu4GL.

Configurable ODBC driver used for SQL Server

The SQL Server interface can now use a user-specified ODBC SQL Server driver. A new configuration variable, *ASQL-ODBC-DRIVER-NAME* is used to specify the ODBC SQL Server driver. `SQL Server` is the value set by default. You can change this to any value. However, the results are undefined if changed to a value which is not an ODBC driver for SQL Server on your system.

Current supported values include:

    SQL Server
    SQL Server Native Client 10.0

Type of Change: Enhancement

Incidents: None

RPI Number: None

Product: Acu4GL

Module: MSSQL

New Version: 9.2.0

Machines Affected: Windows only

Known Versions Affected: All

Support for the new SQL Server type DATE Change Number

Later versions of SQL Server have a new data type called DATE, which is a compact form for date information that does not include time data. Acu4GL supports that data type for SQL Server when the ODBC Driver used supports the data type. Note that the default driver (SQL Server) does not. See ECN GL515 for details about changing the driver used.

Type of Change: Enhancement

Incidents: 2469628

RPI Number: 1076416

Product: Acu4GL Module: MSSQL

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

ACUCOBOL-GT enhancements

This section includes the enhancements related to ACUCOBOL-GT.

Better 64-bit support

Historically, `netdefgen` has been built as a managed executable. This works well, except in one notable case. When trying to generate a copybook for a 32-bit .NET assembly on a 64-bit machine, `netdefgen` can not load the assembly, and so can not generate a copybook. Note that there has never been any issue with managed .NET assemblies.

`axdefgen` has always been distributed as a 32-bit executable as well. This means it is impossible to generate a copybook for a 64-bit OCX on any machine.

`netdefgen` is now built as a native application, so a 32-bit version can be executed on a 64-bit machine.

When generating copybooks for 32-bit .NET assemblies, use `netdefgen.exe` in the 32-bit program area, for example `%ProgramFiles(x86)%`. When generating copybooks for 64-bit .NET assemblies, use `netdefgen.exe` in the 64-bit program area (`%ProgramFiles%`). When generating copybooks for managed .NET assemblies, you can use either executable.

When generating copybooks for 32-bit ActiveX controls, use `axdefgen.exe` in the 32-bit program area, for example `%ProgramFiles(x86)%`. When generating copybooks for 64-bit ActiveX controls, use `axdefgen.exe` in the 64-bit program area (`%ProgramFiles%`). The Windows Start menu should have shortcuts for all of these.

Note that the .NET assemblies and ActiveX controls may provide different information for 32-bit and 64-bit versions. Because of this, be careful when distributing applications. An application compiled with a copybook generated from a 64-bit .NET assembly may not work correctly on a 32-bit machine, even if you have a 32-bit .NET assembly, for example. This is due to the way a vendor creates .NET assemblies or ActiveX controls, and so is out of the control of `netdefgen` or `axdefgen`.

Change Number: ECN-4183

Type of Change: Enhancement

Incidents: 2550684

RPI Number: 1082290

Product: ACUCOBOL-GT

Module: axdefgen, netdefgen

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

New control styles and properties

There are some new properties and styles for some controls.

- Two new standard properties on controls are FOREGROUND-RGB and BACKGROUND-RGB. As standard properties, they apply to all controls. Each control class determines the exact implementation or meaning. The value is the normal Windows RGB encoding. See http://msdn.microsoft.com/en-us/library/aa923096.aspx for more information.

  A negative value causes the property to be ignored. The default value for all controls is -1.

  When non-negative, the value overrides any other color specification. Also, the HIGH, LOW, NORMAL and REVERSE styles have no effect on the -RGB properties. The palette is also irrelevant. Normal color handling does occur, but is overwritten by any -RGB specification. This is important since not all systems support RGB colors.

  FOREGROUND-RGB and BACKGROUND-RGB are ignored on any system with 256 colors or less.
- Tree-view controls can have a different color for each item. Use the ITEM-COLOR property (which takes a color) to specify this when adding items to the tree-view.
  ```
  MODIFY tree-ctl
         ITEM-TO-ADD "Tree Item" ITEM-COLOR 397
         GIVING item-ptr
  ```
- Tree-view controls can specify the selection color. Use the SELECTION-COLOR property (which takes a color) to specify this. You can specify the section color either at creation or with the MODIFY verb.
- Push-buttons support colors using the COLOR property, which previously had no effect. The focus rectangle is the same color as the text on the push-button. This ability depends on using native controls, by setting *WIN32-NATIVECTLS* to TRUE.

  Note that if you set a color on a push-button, it does not look like a native control with that color set for push-buttons in the control panel. It is drawn a solid color as given by the COBOL program. So, even though a color can only be set if *WIN32-NATIVECTLS* is TRUE, the push-button does not look like a native push button.

  Note: Once COLOR is used you cannot modify the push-button to use RGB colors. You would need to destroy the control and then display it with RGB colors.
- Push-buttons support a transparent color for bitmaps. Use the new TRANSPARENT-COLOR property, which is like the same-named property for bitmap controls.
- Push-buttons with bitmaps now support text along with the bitmap. The text displayed is the value of the TITLE property. The location of the text is determined by the value of the new TITLE-POSITION property.

     TITLE-POSITION = 1 | left
     TITLE-POSITION = 2 | right
     TITLE-POSITION = 3 | top
     TITLE-POSITION = 4 | bottom

  Any other value results in the text not displaying. Text color is obtained from the COLOR property of the push button.

  It is recommended to adjust the size of the button in order to display the text as well as the bitmap. Otherwise the text or the bitmap is cropped based on the TITLE-POSITION. It the TITLE-POSITION is LEFT or TOP, then the text displays first, and any remaining space is used for the bitmap. If the TITLE-POSITION is RIGHT or BOTTOM, then the bitmap displays first, and any remaining space is used for the text.
- Push-buttons can appear and behave like an HTML link. This is done with the new ISLINK style. Such push buttons are drawn as plain text without any frame. When the user moves the mouse over such a push-button, the cursor will change into a hand, indicating that the link is clickable. When the user clicks, the run time sends a message to the COBOL program, as if a push-button had been clicked. Specifying this style automatically implies the NOTAB and SELF-ACT styles.

- Checkbox controls can now be made to appear and behave similar to toggle push buttons, by setting the new TEXT-ONLY style. Setting this style overrides the bitmap property if set.
- The tab control now supports colors. Use the TAB-COLOR and TAB-BACKGROUND-COLOR properties (when adding a new tab to the control). Use the ACTIVE-TAB-COLOR property when creating the main tab control. All of these properties take a color value.
- Tab controls default to transparent for the areas that are not used.
- Tab controls have a border that encompasses the selected tab and its corresponding page. The border can be set to a specific color using the new TAB-BORDER-COLOR property (which takes a color). The default color is black. The width of this border can be controlled with the new TAB-BORDER-WIDTH property, which takes a value from 1 to 3.
- The tab control appearance can switch between square and rounded corners. Use the new ROUND style to get round corners. The default style is square. This can only be done at creation, and cannot be modified.
- Entry-fields now support a border color. Use the BORDER-COLOR property (which takes a color) to specify this color.

Type of Change: Enhancement

Priority: Medium

Incidents: None

RPI Number: None

Machines Affected: Windows

Known Versions Affected: All

ECN-4215: Increased BIG5 character set range

The range of characters that is allowed when using the BIG5 character set has been expanded.

Change Number: ECN-4215

Type of Change: Enhancement

Incidents: None

RPI Number: None

Product: ACUCOBOL-GT

Module: Runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

ECN-4218: Sortable grid columns

ACUCOBOL-GT lets you to specify automatic sorting on the Grid control. This lets you sort grid contents by any column of data specified by the program.

To use grid sorting, add SORT-TYPES to desired grids and recompile. After compiling, grids with column headers allow automatic sorting by clicking on a column header.

Properties

SORT-TYPES is an alphanumeric property that can be repeated for each column contained in the grid. The value determines the sorting property of the column as shown in the table. Many of these values are similar to those for the DATA-TYPES property.

Value	Meaning
-	Not sortable. This is the default. Any value other than the ones described below also prevents sorting on the column.
X	Alphanumeric sorting, case-insensitive
U, L	Alphanumeric sorting, case-sensitive
A	Not implemented, reserved for future use
9, N	Numeric sorting, leading sign and current decimal-point used, all other non-digit characters ignored
Z	Not implemented, reserved for future use
I	Integer sorting, leading sign used, all other non-digit ignored
P	Positive integer sorting, all non-digit characters ignored
D, E	Date sorting. Assumes three integer fields separated by one or more non-digit characters. Integers are year, month and day. Two-digit years less than 30 are treated as year 20xx while other two-digit years are treated as year 19xx.
	The default ordering of the fields is month, day, year if the current decimal point character is a point or period (.), otherwise the default ordering is day, month, year. You can explicitly specify the ordering by appending a three-character string enclosed by parenthesis, using Y, M and D to represent the year, month and day respectively. For example, D(YMD) is date order, with the date being in year-month-day order.
	Invalid format strings have undefined results. Only MDY, DMY and YMD are currently valid.

Equivalent lowercase letters may substitute for any of the formats above.

The default sort ordering is ascending. You may specify the default order as descending by appending a caret (^) to the SORT-TYPES value. For example A^ specifies a descending alphanumeric sort. Optional elements may be specified in any order. For example D^(MDY) and D(MDY)^ both specify a descending date field using the month-day-year ordering.

Ascending/descending order only determines the sort order when the user first clicks on the column. After that, the user can reverse the ordering by clicking again.

Alphanumeric ordering is done using the current language sort order on the client machine as defined by the operating system (*i.e.* Windows).

The user requests the sort by clicking on the column header. A grid must have column headings in order to be sorted by the user.

Events

MSG-BEGIN-SORT - Generated when the user clicks on the heading of a sortable column. EVENT-DATA-1 contains the column number. EVENT-ACTION determines how the control responds:

- EVENT-ACTION-NORMAL (default) - The grid's records are sorted by the column.
- EVENT-ACTION-COMPLETE - Nothing further happens. Use this to provide a custom sort procedure by emptying the grid and reloading it in the desired order.
- EVENT-ACTION-FAIL - Same effect as EVENT-ACTION-COMPLETE
- MSG-FINISH-SORT - Generated with the grid has completed a sorting operation. EVENT-DATA-1 contains the column number used to sort and EVENT-DATA-2 contains the record number of the last row of data in the grid. Use this to re-synchronize a data source's position for a paged grid.

  Note: Grid sorting uses quicksort to sort the columns. While this is very fast, it is known that quicksort is not a stable sorting algorithm. Stable sorting algorithms maintain the relative order of records with

equal keys. Since quicksort is not a stable sorting algorithm, sorting on one column and then a different column does not necessarily keep the original column in sorted order (for those rows that have duplicates in the different column).

Also, because rows are not necessarily in the order they were placed into the grid, use the NEXT, PREVIOUS, NEXT PAGE, and PREVIOUS PAGE events with care. And the TOP and END events may show unexpected rows. This is because all of these events assume that the grid rows are in the original order (the order you placed them into the grid originally). Care must be taken when using the SORT property on paged grids to avoid confusing your users.

Change Number: ECN-4218

Type of Change: Enhancement

Product: ACUCOBOL-GT

Module: Compiler, runtime, thin client

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: N/A

AcuSQL Enhancements

This section includes the enhancements related to AcuSQL for this release.

Configurable ODBC driver used for SQL Server

The SQL Server interface can now use a user-specified ODBC SQL Server driver. A new configuration variable, *ASQL-ODBC-DRIVER-NAME* is used to specify the ODBC SQL Server driver. `SQL Server` is the value set by default. You can change this to any value. However, the results are undefined if changed to a value which is not an ODBC driver for SQL Server on your system.

Current supported values include:

> SQL Server
> SQL Server Native Client 10.0

Change Number: ECN-SQL143

Type of Change: Enhancement

Incidents: None

RPI Number: None

Product: AcuSQL

Module: asqlsrvr.dll

New Version: 9.2.0

Machines Affected: Windows only

Known Versions Affected: All

AcuXDBC enhancements

This section includes the enhancements related to AcuXDBC.

ECN-XD083: Query output column width specifications

Users can now specify the display widths to use when printing query output.

Use the /w option followed by the size of each column you wish to limit to specify the column display width. A value of 0 indicates the default width of the column. The column width specification remains in effect for all subsequent queries until changed or reset to the default. Use the /w option by itself to reset the column widths to their defaults.

For example:

```
SQL (/? for help) ==> /w 5 5 5 0 0 4
SQL (/? for help) ==> select * from pets;
```

Produces printed output similar to this.

```
 PATIE PATIE ANIMA BREED                         TREATMENT OWNE
 ----- ----- ----- ----------------------------- --------- ----
     1 Cinna Cat   Tabby                         1          624
     2 Nutme Cat   Tabby                         2          550
    18 Shotz Dog   Schnauzer                     1          704
    36 Cinde Dog   Poodle                        4          221
    54 Buste Cat   Siamese                       1          377
    72 Missy Bird  Parakeet                      6          309
   102 Kit   Dog   Shiba Inu                     1          600
   160 Milo  Dog   Chow                          4          522
   161 Puzzl Repti Ball Python                   3          522
   328 Coppe Dog   Golden Retriever                         618
   377 Scoot Cat   Domestic Shorthair            2          357
   378 Scrap Cat   Devon Rex                     2          357
   379 Abbie Cat   Maine Coon                    2          357
   480 Princ Repti Iguana                        1          309
   503 Polly Bird  Senegal Parrot                6          625
   504 Diego Bird  Red Lory                      4          625
   505 Alexi Bird  African Grey                  4          625
   801 Hammy Roden Gerbil                        3          700
   802 Rodne Roden Hamster                       4          700
```

Change Number: ECN-XD083

Type of Change: Enhancement

Product: AcuXDBC

Module: AcuXDBC, MFXDBC

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

ECN-XD084: xdbcquery can save output to a file

The xdbcquery tool can now save the output of a query to a file.

The new options are:

/fa<filename> append to <filename>

/fw<filename> overwrite to <filename>

/fc close file

There should be no space between the option and the filename.

For example, this writes the results of `select * from pets` to the file `output.txt`. The file is created if it does not already exist.

```
SQL (/? for help) ==> /faoutput.txt

SQL (/? for help) ==> select * from pets;

SQL (/? for help) ==> /fc

SQL (/? for help) ==>
```

If you specify another `/fa` or `/fw` without first specifying `/fc`, then the existing file automatically closes. When you specify `/fc`, the output goes back to the screen.

Change Number: ECN-XD084

Type of Change: Enhancement

Product: AcuXDBC

Module: AcuXDBC, MFXDBC

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

Known Issues

Please refer to the Known Errors and Restrictions topic in the Product Information section of the product help. The Known Errors and Restrictions topic is in the Getting Started Guide.

Resolved Issues

The following are resolved issues for the extend products.

AcuBench ECN List

This section includes the ECNs relating to AcuBench:

ECN-WB915: AcuBench crash on build

Change Number: ECN-WB915

Type of Change: Correction

Incidents: 2597131

RPI Number: 1086395

Product: AcuBench

Module: ccbldll.dll

New Version: 9.2.0

Machines Affected: Windows only

Known Versions Affected: 9.1.2 and later

Description of problem or enhancement

When compiling a COBOL program, AcuBench would sometimes crash. This was due to a correction made in 9.1.2 that removed memory leaks.

ACUCOBOL-GT ECN List

This section includes the ECNs relating to ACUCOBOL-GT:

ECN-4179: Waiting for Vision pipe processes could stop responding on UNIX

Change Number: ECN-4179

Type of Change: Correction

Incidents: 2577887

RPI Number: 1085368

Product: ACUCOBOL-GT

Module: Vision

New Version: 9.2.0

Machines Affected: all UNIX

Known Versions Affected: all

Description of problem or enhancement

When a Vision pipe file is closed, the run time waits for the child process to exit. Previously, the run time did not wait for a specific PID, and could have stopped responding due to the presence of another child process that continued to run. This has been fixed by changing the function that waits for the pipe processes to exit to wait just for the specific PID of the pipe process.

ECN-4181: Compiler fails to parse ROLLBACK phrase

Change Number: ECN-4181

Type of Change: Correction

Incidents: 2583458

RPI Number: 1085154

Product: ACUCOBOL-GT

Module: compiler

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 9.0.0 and later

Description of problem or enhancement

Due to RM/COBOL compatibility, the compiler was not able to parse the phrase:

```
LOCK MODE IS AUTOMATIC WITH LOCK ON RECORD WITH
ROLLBACK
```

ECN-4182: EXCEL.EXE fails to shut down when destroying the handle

Change Number: ECN-4182

Type of Change: Correction

Incidents: 2546563

RPI Number: 1081861

Product: ACUCOBOL-GT

Module: run time

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: 9.0.0 and later

Description of problem or enhancement

When invoking EXCEL as an ActiveX control from within a COBOL program, `EXCEL.EXE` would not shut down when destroying the handle. This would cause multiple iterations of EXCEL running if invoked multiple times.

ECN-4185: Compiler option -Ze memory error

Change Number: ECN-4185

Type of Change: Correction

Incidents: 2570633

RPI Number: 1083948

Product: ACUCOBOL-GT

Module: compiler

New Version: 9.2.0

Machines Affected: all

Known Versions Affected: all

Description of problem or enhancement

An internal XML processing routine used a fixed size array which could overflow while processing certain COBOL data structures and compiling with the -Ze option. This code has been rewritten to use a dynamically-sized array.

ECN-4186: Thin client message box and window activation error

Change Number: ECN-4186

Type of Change: Correction

Incidents: None

RPI Number: None

Product: ACUCOBOL-GT

Module: atermmgr.dll

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

Description of problem or enhancement

In some situations, the thin client would attempt to activate a window when responding to a message box. This caused the thin client to request information from the run time when the run time was requesting the message box response from the thin client, resulting in a deadlock.

ECN-4187: Runtime MAV on CREATE when .Net 4.0 is not present

Change Number: ECN-4187

Type of Change: Correction

Incidents: 2582971

RPI Number: 1085034

Product: ACUCOBOL-GT

Module: run time

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: 9.1.1 and later

Description of problem or enhancement

If the .NET 4.0 Framework is not installed, the run time will MAV when a .NET assembly is created and an error displays. To work around this issue, install the .NET 4.0 Framework.

ECN-4188: C$XML CXML-PARSE-FILE stopped responding when parsing remote files

Change Number: ECN-4188

Type of Change: Correction

Incidents: 2595625

RPI Number: 1086132

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 9.1.0 and later

Description of problem or enhancement

When an XML filename was remote and used the form `http://server/path/file.xml`, the `C$XML` could stop responding when parsing the file. This only happened if the remote web server provided a content-length header with a non-zero content length.

ECN-4189: Entry points not available from SHARED_LIBRARY_LIST objects

Change Number: ECN-4189

Type of Change: Correction

Incidents: 2570652

RPI Number: 1083949

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 9.0.0 and later

Description of problem or enhancement

If DLLs or shared objects listed in the *SHARED_LIBRARY_LIST* configuration variable were set up to be loaded by the RM/COBOL run-time with certain entry points, then calling an entry point in that DLL or shared object would fail.

ECN-4190: Thin client socket closes unexpectedly

Change Number: ECN-4190

Type of Change: Correction

Incidents: 2596321

RPI Number: 1086178

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 9.1.2 and later

Description of problem or enhancement

When large amounts of data were transferred between the thin client to the application host, the socket could fill, causing an error in the function used to send data. This caused the socket to close unexpectedly, forcing a disconnect.

ECN-4191: Text erased at program end

Change Number: ECN-4191

Type of Change: Correction

Incidents: 2571223

RPI Number: 1084093

Product: ACUCOBOL-GT

Module: runcbl

New Version: 9.2.0

Machines Affected: UNIX

Known Versions Affected: Unknown

Description of problem or enhancement

The run time erases the screen when it shuts down to free all memory. It does this by destroying all canvases created during the run.

ECN-4192: Wrong data returned on click of first cell of a column

Change Number: ECN-4192

Type of Change: Correction

Incidents: 2596351

RPI Number: 1086187

Product: ACUCOBOL-GT

Module: runcbl

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: 9.1.2 and later

Description of problem or enhancement

ECN 4175 caused an issue with clicking on grid cells, especially when clicking on a cell in the top row. The EVENT-DATA returned by the run time would refer to the second cell, not the top cell.

ECN-4193: Thin client progress dialog cancel failure

Change Number: ECN-4193

Type of Change: Correction

Incidents: 2593275

RPI Number: 1085924

Product: ACUCOBOL-GT

Module: runcbl

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: Unknown, but as early as 8.1.3

Description of problem or enhancement

When a COBOL program displays and manages a progress dialog with the `W$PROGRESSDIALOG` routine in the thin client, it would not be able to detect when the user presses the **CANCEL** button. This was because the WPROGRESSDIALOG-QUERY-CANCEL op-code would not return a non-zero value.

ECN-4194: Application not responding with W$BITMAP and @[DISPLAY]

Change Number: ECN-4194

Type of Change: Correction

Incidents: 2585565

RPI Number: 1085296

Product: ACUCOBOL-GT

Module: Thin client

New Version: 9.2.0

Machines Affected: Windows only

Known Versions Affected: 9.1.1 and later

Description of problem or enhancement

When using W$BITMAP to load a file using @[DISPLAY] syntax to indicate that the bitmap file is on the client, the thin client would corrupt memory and cause unpredictable results including no response from the application or a bad return value.

ECN-4195: Combo-box repainted poorly after resize

Change Number: ECN-4195

Type of Change: Correction

Incidents: 2582513

RPI Number: 1085044

Product: ACUCOBOL-GT

Module: thin client

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

Description of problem or enhancement

Some controls placed in a TAB would not repaint properly when the user resized the window. This would occur with native controls in the resize layout manager when using the thin client, and controls were repainted in response to a RESIZE event.

ECN-4196: FAST-SIGN-DECODE, handling undefined data, native code

Change Number: ECN-4196

Type of Change: Correction

Incidents: 2558685

RPI Number: 1083208

Product: ACUCOBOL-GT

Module: runcbl, cblutil

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 8.0 - 9.1.x

Description of problem or enhancement

In version 8.0, the run time started using a faster sign-decoding mechanism for USAGE DISPLAY items with an incorporated sign. A few users noticed that this new mechanism could produce different results from prior versions, but only for illegal numeric data.

While the new behavior was technically correct, the new mechanism was turned off by default starting in version 8.1.2. This was done to avoid exposing any issues in code (see ECN-3945). The FAST-SIGN-DECODE configuration option was added to allow users to re-enable the new mechanism if desired.

Unfortunately, turning off the faster mechanism had effects on native code that could cause undefined execution. This was easy to avoid by turning FAST-SIGN-DECODE on, but at the price of potentially different behavior when processing illegal data.

This ECN corrects the whole situation. Starting with version 9.2.0, the faster mechanism is turned back on by default and produces results that are identical in all cases to the original algorithm, even for invalid data. In addition, native code behaves correctly and in the same manner as nonnative code.

ECN-4197: Application stops responding when closing an AcuThin window

Change Number: ECN-4197

Type of Change: Correction

Incidents: 2598683

RPI Number: 1086507

Product: ACUCOBOL-GT

Module: AcuThin

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

Description of problem or enhancement

In some cases, especially when using the Web Browser control, the thin client can stop responding on shutdown. This is due to the thin client waiting for an event response from the run time, but the run time destroying the control that is firing the event before the response is received.

ECN-4199: Thin client stops responding

Change Number: ECN-4199

Type of Change: Correction

Incidents: 2603362

RPI Number: 1086880

Product: ACUCOBOL-GT

Module: Thin client

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 9.1.2 and later

Description of problem or enhancement

ECN 4159 caused an error in which the AcuThin client could stop responding.

Work around this issue, turn ECN 4159 off. To do this, set the configuration variable *ECN-4159* to OFF.

ECN-4200: WIN$PRINTER failed to allow column colors with thin client

Change Number: ECN-4200

Type of Change: Correction

Incidents: 2565395

RPI Number: 1083489

Product: ACUCOBOL-GT

Module: runtime, thin client

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 8.1.0 and later

Description of problem or enhancement

ECN 3728 added color support for columns. However that support was not added to the thin client.

ECN-4201: Keystroke not recognized in a grid cell in entry mode, thin client

Change Number: ECN-4201

Type of Change: Correction

Incidents: 2590717

RPI Number: 1085724

Product: ACUCOBOL-GT

Module: thin client

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: 8.1.3 and later

Description of problem or enhancement

When a grid is in entry mode (the user has started typing into a cell), the thin client would not recognize termination keys until the user had gotten out of entry mode, while the local runtime would. This was caused by ECN 4016 in release 8.1.3.

ECN-4202: Assigning values to W-DEFAULT-COLOR-TABLE doesn't change colors

Change Number: ECN-4202

Type of Change: Correction

Incidents: 2600514

RPI Number: 1086637

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

Description of problem or enhancement

Modifying the external variable *W-DEFAULT-COLOR-TABLE* does not affect the colors that the thin client uses.

ECN-4203: I$IO fails with Invalid Parameter

Change Number: ECN-4203

Type of Change: Correction

Incidents: 2607378

RPI Number: 1087315

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

Description of problem or enhancement

In order to keep the application responsive in Windows, calls to IIO, SIO and R$IO check for windows messages during their execution. This has the effect of potentially calling an event procedure during a call to one of these functions. That event procedure could make a call (or set a property or style, which sometimes uses the parameter stack for storage), which could alter the parameters passed to these routines.

Prior to this fix, the runtime checked for messages at the beginning of the functions. We now check for messages at the end of the routines. While this may still alter the parameter addresses passed, it won't affect the actual values passed or returned.

Note that it is possible to get into a recursive loop, as was true before this fix. If an event procedure calls (for example) I$IO, and that event procedure fires during the call to I$IO, then the runtime may call I$IO recursively. There is no fix for this, except care to know that it may happen, and to work to prevent it from your COBOL program.

ECN-4204: CALL RETURNING fails

Change Number: ECN-4204

Type of Change: Correction

Incidents: 2609190

RPI Number: 1087438

Product: ACUCOBOL-GT

Module: compiler

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 8.2.0 and later

Description of problem or enhancement

To be more compatible with RM/COBOL, ECN 3857 added the ability to use non-numeric items in a RETURNING phrase of a CALL statement when compiling for RM compatibility (using the -Cr compile option). However, this capability was not completely implemented, and resulted in breaking the existing RETURNING clause of the CALL statement. As a result, ECN 3857 has been removed.

To address the issue, compile any COBOL programs that have CALL statements with the RETURNING or GIVING clause.

ECN-4205: XML Extensions modified XBIS communication file name

Change Number: ECN-4205

Type of Change: Correction

Incidents: 2602851

RPI Number: 1086920

Product: ACUCOBOL-GT

Module: runtime/XML Extensions

New Version: 9.2.0

Machines Affected: all

Known Versions Affected: all

Description of problem or enhancement

XML Extensions would modify the XBIS communication file name according to the ACU configuration variables, for example FILE_CASE. This could result in the XBIS request handler not being able to find the data written by the run time, as it would be written to the wrong filename.

This ECN protects the BIS_FILENAME against such modification by XML Extensions.

ECN-4206: C$REGEXP error

Change Number: ECN-4206

Type of Change: Correction

Incidents: 2610319

RPI Number: 1087581

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: UNIX

Known Versions Affected: 7.0.0 and later

Description of problem or enhancement

The C$REGEXP GETMATCH op-code was not returning the last matched pattern on UNIX.

ECN-4207: $SET always executes

Change Number: ECN-4207

Type of Change: Correction

Incidents: 2609591

RPI Number: 1087503

Product: ACUCOBOL-GT

Module: compiler

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 8.1.0 and later

Description of problem or enhancement

An earlier ECN introduced $SET, $IF/ELSE,ENDIF and $DISPLAY directives to control compilation. However, $SET was executing even if it was inside a $IF that was false.

ECN-4208: Incorrect EVENT-DATA-2 for some PAGE-NEXT-PAGE events

Change Number: ECN-4208

Type of Change: Correction

Incidents: 2609120

RPI Number: 1087460

Product: ACUCOBOL-GT

Module: runtime, acuthin

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 9.1.2

Description of problem or enhancement

When reading a file to populate a paged grid, the FILE-POS property tracks where in the file you are, and EVENT-DATA-2 determines how many records to read to get to where you need to be. In 9.1.2, EVENT-DATA-2 was incorrect, causing the program to read the wrong number of records, populating the grid incorrectly.

To workaround this issue, Install a new runtime. If using thin client, install both the runtime and the thin client.

ECN-4209: DESTROY font-handle followed by DESTROY window-handle causes error

Change Number: ECN-4209

Type of Change: Correction

Incidents: 2603977

RPI Number: 1087034

Product: ACUCOBOL-GT

Module: Runtime

New Version: 9.2.0

Machines Affected: All Windows machines

Known Versions Affected: All

Description of problem or enhancement

In code, destroying a font that is actively in use by a control or window can give unpredictable consequences. For example:

```
DISPLAY FLOATING WINDOW
    CONTROL FONT my-font
    HANDLE is my-window-handle
    ...
DESTROY my-font.
DESTROY my-window-handle.
```

If you are destroying a set of controls and their associated fonts, you should destroy the controls first, and then destroy their fonts.

One of the unpredictable consequences is you could get a memory access violation. Even though this is caused by a COBOL programming error, this ECN allows the program to continue instead of getting the error.

To fix this problem, destroy the window before the font. For example:

```
DESTROY my-window-handle.
DESTROY my-font.
```

ECN-4210: On Windows 8, C$SYSTEM fails to wait for a console-mode program

Change Number: ECN-4210

Type of Change: Correction

Incidents: 2608782

RPI Number: 1087447

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: Windows 8

Known Versions Affected: All

Description of problem or enhancement

When running on Windows 8, and calling C$SYSTEM with a non-GUI program without using `cmd.exe`, the runtime immediately returned to the COBOL program without letting the command finish. This meant that the COBOL program could not get the exit code of the command.

ECN-4211: 64-bit Windows runtime will not run on Windows Server 2003 machines

Change Number: ECN-4211

Type of Change: Correction

Incidents: 2605569

RPI Number: 1087123

Product: ACUCOBOL-GT

Module: Runtime

New Version: 9.2.0

Machines Affected: Windows Server 2003 machines

Known Versions Affected: All

Description of problem or enhancement

When trying to run the 64-bit runtime on a 64-bit Windows Server 2003 machine, you might see the following error:

```
Dependent Assembly could not be found:
Microsoft.Windows.Common-Controls.  The referenced assembly is not installed
on
your system
```

If you look at the Event Viewer you could see the following errors:

```
 Dependent Assembly
Microsoft.Windows.Common-Controls could not be found and Last Error was: The
referenced assembly is not
installed on your system.
```

```
 Resolve Partial Assembly failed for
Microsoft.Windows.Common-Controls.  Reference error message: The referenced
assembly is not installed on your  system.
```

```
 Generate Activation Context failed for
C:\Program Files\Micro  Focus\Acucbl912\bin\thinapp.dll. Reference
error message: The referenced  assembly is not installed on your
system.
```

```
 Application popup: wrun32.exe - Application
Error: The application failed to  initialize properly (0xc0150002). Click on
OK
to terminate the application.
```

ECN-4212: Floating-point errors

Change Number: ECN-4212

Type of Change: Correction

Incidents: 2605698

RPI Number: 1087120

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 7.2.0 and later

Description of problem or enhancement

Some floating-point operations were not working correctly. In particular, addition which involves non-floating point values could return an incorrect result.

ECN-4213: Removing row headings

Change Number: ECN-4213

Type of Change: Correction

Incidents: 2606376

RPI Number: 1087225

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

Description of problem or enhancement

Once created, it is impossible to remove the row-headings from a grid, either by setting the style to no row headers, or by setting the number to `0`.

ECN-4214: DISPLAY issues when font handle is greater than 32767

Change Number: ECN-4214

Type of Change: Correction

Incidents: 2616198

RPI Number: 1088199

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

Description of problem or enhancement

When a font handle was larger than 32767 (hex 7fff), the run time would not detect it as a font handle for the purposes of calculating the cell height of a canvas. This could cause controls to run into each other.

This could happen, when using C$XML, which uses a lot of handles.

ECN-4216: Library loaded with A_XML_ICONV_NAME unloaded prematurely

Change Number: ECN-4216

Type of Change: Correction

Incidents: 2637542

RPI Number: 1088458

Product: ACUCOBOL-GT

Module: libxmlif

New Version: 9.2.0

Machines Affected: all UNIX

Known Versions Affected: all

Description of problem or enhancement

A shared library loaded with *A_XML_ICONV_NAME* would unload prematurely, resulting in a memory access violation.

ECN-4217: Acuthin may display a message that the communication socket closed unexpectedly

Change Number: ECN-4217

Type of Change: Correction

Incidents: 2609604

RPI Number: 1087539

Product: ACUCOBOL-GT

Module: Runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 9.1.2.1

Description of problem or enhancement

You may see this message when running AcuThin:

```
Communication socket closed unexpectedly
```

This could be caused by the run time closing the socket after 30 attempts to transmit data to the client.

You can now configure the number of retry attempts the run time makes to transmit data.

A new runtime configuration variable, *AGS_RETRY_COUNT*, has been created. The default value is 1000 (retries). Note that if for some reason the run time performs more than 1000 retries, it closes the socket.

You can use *AGS_BLOCK_SLEEP_TIME* in addition to *AGS_RETRY_COUNT*. However, try not setting *AGS_BLOCK_SLEEP_TIME* to start with so defaults are used.

    AGS_BLOCK_SLEEP_TIME 10 (millisecond delay between retries)
    AGS_RETRY_COUNT 1000 (retry attempts before closing socket)

This way if the run time has to do multiple retries it sleeps only 10 milliseconds between them. For example, if the run time performs 100 retries before being successful in data transmission:

Retries	*AGS_BLOCK_SLEEP_TIME*	Total sleep time
100	10 milliseconds	1.6 seconds
100	100 milliseconds	16 seconds
100	1000 milliseconds	1.6 minutes
100	5000 milliseconds	8.3 minutes

So if you have *AGS_BLOCK_SLEEP_TIME* set higher than `10` and you are experiencing long delays, try setting *AGS_BLOCK_SLEEP_TIME* to a smaller value.

ECN-4219: Compile error when using .NET controls

Change Number: ECN-4219

Type of Change: Correction

Incidents: 2638815

RPI Number: 1088609

Product: ACUCOBOL-GT

Module: compiler

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: 9.1.2 and later

Description of problem or enhancement

When using .NET controls that have different class names and namespaces, the compiler incorrectly decoded the identifier into the assembly name, namespace, and class name.

ECN-4220: Whitespace in XML data

Change Number: ECN-4220

Type of Change: Correction

Incidents: 2642404

RPI Number: 1088941

Product: ACUCOBOL-GT

Module: Runtime

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

Description of problem or enhancement

Both AcuXML and C$XML removes leading and trailing white space from data elements, including white space in CDATA sections.

Nothing is needed to get the CDATA data because it is returned automatically. For other white space, use the *XML-KEEP-WHITESPACE* configuration variable.

Setting the value to FALSE (default) removes leading and trailing white space from the data when parsed. Setting the value to TRUE returns all white space in the XML element. The element looks like this:

```
<my-data>
    this is my data
 </my-data>
```

Returned data starts with a new line, then four spaces, then another new line.

ECN-4221: ECN-4007 could cause list boxes to fail to return value

Change Number: ECN-4221

Type of Change: Correction

Incidents: 2619487

RPI Number: 1088566

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: all

Description of problem or enhancement

ECN-4007 created an issue that potentially caused a list box to fail to return a value. This would happen after having accepted an edited data item. This ECN corrects that issue.

ECN-4222: Spinning the mouse wheel quickly can cause errors

Change Number: ECN-4222

Type of Change: Correction

Incidents: None

RPI Number: 1088641

Product: ACUCOBOL-GT

Module: runtime

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

Spinning the mouse wheel quickly while the cursor is in a grid control can cause errors if the event procedure can not respond quickly enough. Potential errors can include:

- `index out of bounds` if the event procedure is recursively called from within a perform loop.
- `PERFORM stack overflow` if the events procedures cause recursive calls to come in too quickly.

A new configuration variable *DEFER-WHEEL-EVENTS* has been introduced. When set to TRUE, the MSG-PAGED-PREV-WHEEL and MSG-PAGED-NEXT-WHEEL events are ignored until processing returns from the control's event procedure. The default value of this variable is `FALSE`.

Set *DEFER_WHEEL_EVENTS* to 1 if your application encounters difficulty processing mouse wheel events.

Acu4GL ECN List

This section includes the ECNs relating to Acu4GL:

ECN-GL512: `Connection is busy` error after renaming a multi-table table

Change Number: ECN-GL512

Type of Change: Correction

Incidents: 2595008

RPI Number: 1086078

Product: Acu4GL

Module: MSSQL

New Version: 9.2.0

Machines Affected: Windows only

Known Versions Affected: 8.0.0 and later

Description of problem or enhancement

The RENAME function had these issues:

- Error were not correctly reported. In particular, if the target table already exists, the RENAME fails but doesn't report an error.
- If a data file consisted of multiple tables, a RENAME would succeed, but subsequent attempts to do anything would result in a `Connection is busy with results of another statement` error.

ECN-GL513: Failure to detect wide character data columns

Change Number: ECN-GL513

Type of Change: Correction

Incidents: 2596990

RPI Number: 1086392

Product: Acu4GL

Module: MSSQL

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: 9.1.0 and later

Description of problem or enhancement

A recent change to SQL Server removed support for `nchar` and `nvarchar` columns in the database.

Support for the new SQL Server type DATE Change Number

Later versions of SQL Server have a new data type called DATE, which is a compact form for date information that does not include time data. Acu4GL supports that data type for SQL Server when the ODBC Driver used supports the data type. Note that the default driver (SQL Server) does not. See ECN GL515 for details about changing the driver used.

Type of Change: Enhancement

Incidents: 2469628

RPI Number: 1076416

Product: Acu4GL Module: MSSQL

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

ECN-GL517: Using low-values with stored procedures

Change Number: ECN-GL517

Type of Change: Correction

Incidents: 2599594

RPI Number: 1086832

Product: Acu4GL

Module: MSSQL

New Version: 9.2.0

Machines Affected: Windows only

Known Versions Affected: 8.0.0 and later

Description of problem or enhancement

When using a START stored procedure, and passing LOW-VALUES in character data, the stored procedure may fail. In particular, the character data that the stored procedure receives from the COBOL program is the same size as the COBOL data, and is all low-values. This can be a very difficult value to test for.

The interface now treats low-values in character data as terminating the data, with the length being set accordingly.

ECN-GL518: ROLLBACK fails with MSSQL

Change Number: ECN-GL518

Type of Change: Correction

Incidents: 2596950

RPI Number: 1086803

Product: Acu4GL

Module: MSSQL

New Version: 9.2.0

Machines Affected: Windows only

Known Versions Affected: 9.0.0 and later

Description of problem or enhancement

When using SQL Server, transaction management failed to work unless all files were defined with LOCK MODE IS MANUAL WITH ROLLBACK. This phrase should not be necessary.

ECN-GL519: Acu4GL for DB2 fails to connect

Change Number: ECN-GL519

Type of Change: Correction

Incidents: None

RPI Number: None

Product: Acu4GL

Module: DB2

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

The DB2 client access library recently removed the ability to get a valid handle from **SQLAllocEnv** and **SQLAllocConnect**, instead requiring applications to call **SQLAllocHandle**. The ECN provides this change.

AcuServer ECN List

This section includes the ECNs relating to AcuServer:

ECN-AS157: Old versions of AcuServer fail to start after new version installed

Change Number: ECN-AS157

Type of Change: Correction

Incidents: 2598527

RPI Number: 1086604

Product: AcuServer

Module: acuserve

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: 7.2.0 and later

Description of problem or enhancement

After installing a new version of AcuServer (or AcuRCL), old versions may not be able to start. This is due to a reference in the registry pointing to the new version of `acme.dll`. That registry reference has been modified to include the version number.

AcuSQL ECN List

This section includes the ECNs relating to AcuSQL:

ECN-SQL144: AcuSQL for DB2 fails to connect

Change Number: ECN-SQL144

Type of Change: Correction

Incidents: None

RPI Number: None

Product: AcuSQL

Module: DB2

New Version: 9.2.0

Machines Affected: All

Known Versions Affected: All

The DB2 client access library recently removed the ability to get a valid handle from **SQLAllocEnv** and **SQLAllocConnect**, instead requiring applications to call **SQLAllocHandle**. The ECN provides this change.

AcuXDBC ECN List

This section includes the ECNs relating to AcuXDBC:

ECN-XD079: GROUP BY on indexed column can cause illegal data error

Change Number: ECN-XD079

Type of Change: Correction

Incidents: None

RPI Number: 1084702

Product: AcuXDBC

Module: AcuXDBC, MFXDBC

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

Description of problem or enhancement

Using the GROUP BY clause on column that is part of an index can cause an `illegal data` error.

ECN-XD080 CREATE TABLE does not use the file_suffix configuration option

Change Number: ECN-XD080

Type of Change: Correction

Incidents: None

RPI Number: 1069638

Product: AcuXDBC

Module: AcuXDBC, MFXDBC

New Version: 9.2.0

Machines Affected: Windows

Known Versions Affected: All

Description of problem or enhancement

Using the CREATE TABLE statement in the query tool will not append the file suffix from the configuration file to the new data file.

Updates and SupportLine

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

Further Information and Product Support

Additional technical information or advice is available from several sources.

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

* The WebSync service, where you can download fixes and documentation updates.
* The Knowledge Base, a large collection of product tips and workarounds.
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Information We Need

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

* The name and version number of all products that you think might be causing a problem.
* Your computer make and model.
* Your operating system version number and details of any networking software you are using.
* The amount of memory in your computer.
* The relevant page reference or section in the documentation.
* Your serial number. To find out these numbers, look .

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Index

C

contact information 38

D

downloads 38

P

product support 38
Product Support 38

S

serial number 38
SupportLine 38

W

WebSync 38
works order number 38