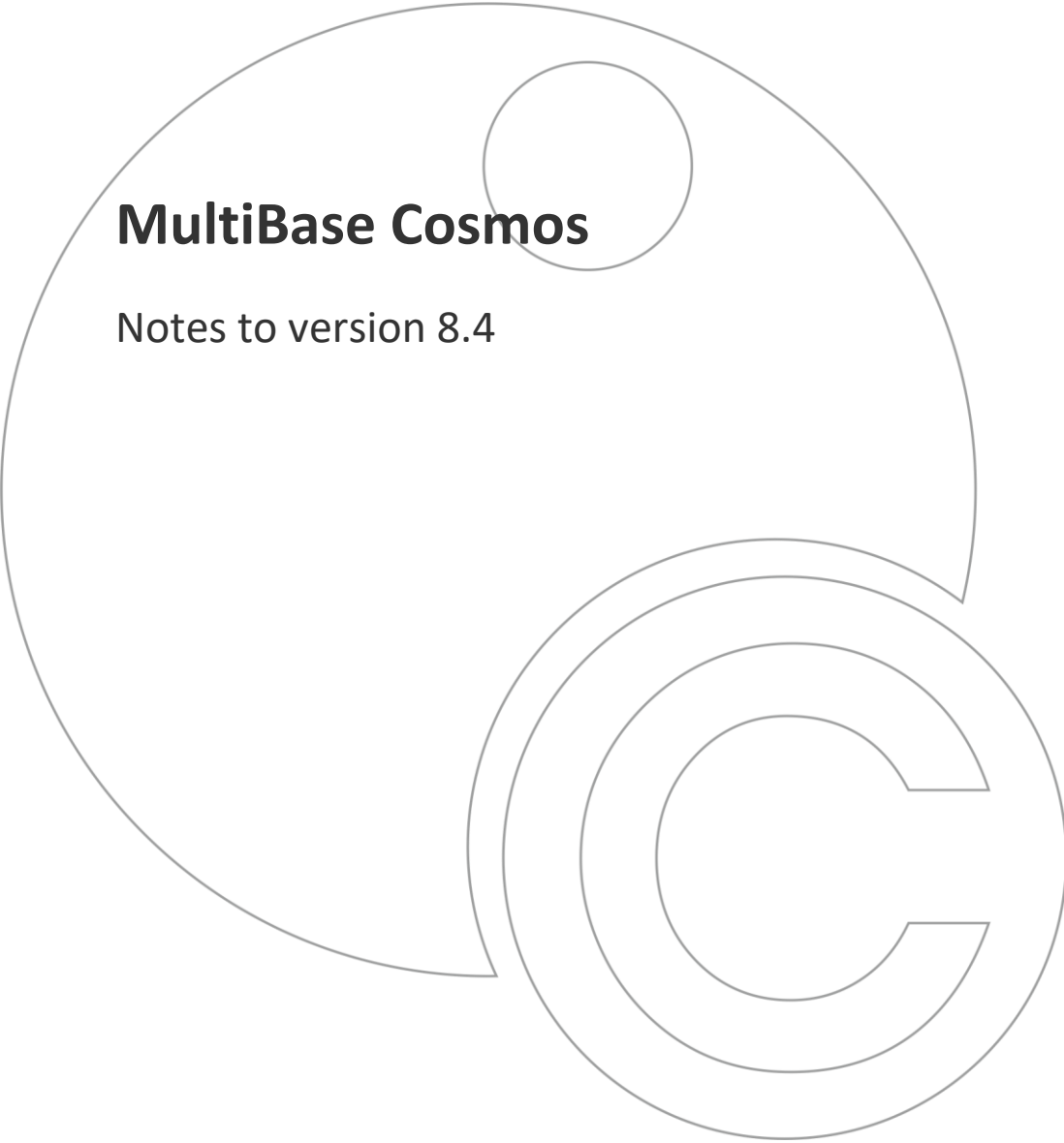




MultiBase Cosmos

Notes to version 8.4

BASE100

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1. Implementations

1.1 Runtime

- The «FtpPutFileEx» and «urlSendComand» methods now support FTPS (implicit ftp) and FTP with TLS (explicit) protocols.
- Extracting information from the database into a string of characters in «JSON» format. To achieve this, the functionality of the following methods has been implemented or extended:
 - Method «SelectTupleJson» of the «SqlServer» class.
 - Method «FetchTupleJson» of the «SqlCursor» class.
 - Method Unload of the SqlServer class.
 - Method SelectWindow of the SqlServer class. «Export» button.
 - CSQL.
 - Output of a query when pressing the «Export» button.
 - «Unload» statement.

In the Unload and SelectWindow methods, in the unload statement and in the output of a query from «CSQL», for the download to be performed in «JSON» format, the file extension must be «.json».

These text files contain all the rows of the downloaded tables in «JSON» format, and their structure is a «JSON» array. Each element of the array corresponds to a «JSON» with the information of each row of the table. The property name is the name of the column and its value is the value of the column in that row.

- New method «CompareStrict» of Char class that allows comparing two character strings byte by byte.
- List Box Control. Headers and scroll are automatically enlarged when the font size is increased. For this process to take place, it is necessary to define the environment variable «ADJUSTLISTHEADERHEIGHTBYFONT» with the value «TRUE» or «YES».

1.2 Cosmos WebServer

- Possibility to assign a log file for each service defined in Cosmos WebServer. In versions prior to version 8.4 all entries were added to the same file ("Cwslog.log").
- Possibility to define the location and name of the file ("Cwslog.log") that records errors, warnings and outputs from the "Trace" method of the Cosmos runtime.

In both cases it will be necessary to define the environment variable «CWSLOGFILE».

1.3 Development environment

1.3.1 Keyboard Accelerators

Enable/disable code insight and deep search. The key combination is given below:

- «CTRL+Alt+I» to enable/disable code insight.
- «CTRL+Alt+D» to enable/disable code deep search.

1.3.2 Compiler

New option in the development environment that allows, when compiling a complete project, to continue displaying messages when 100 errors are reached, as was the case in previous versions. This option can be enabled in the development environment. It is disabled by default.

1.3.3 Debugger

Possibility to detach the "watch" variables panel from the debugger and make it a floating window.

1.3.4 Constants editor

Possibility of dragging to duplicate constants within the same module. The key combination to use is «CTRL+click», drag and drop.

To perform the action, select the item using the indicated keys. When you release the mouse, a window will appear where you can enter the name of the new constant.

1.4 Cosmos register

It will display an error message describing why the process could not be completed.

2. Improvements

2.1 Formtable class

An optimization has been carried out on FormTable type objects with lookup columns. The referenced table will not be queried if the value of the lookup column is null. This implementation affects both the header table and the lines table.

To prevent queries from being carried out, the environment variable «OPTIMIZELOOKUPNULLVALUES» must be set to «1».

2.2 Stream class

The possibility of accessing routes longer than 127 characters has been implemented.

2.3 Json class

The process of adding elements to a «JSON» array has been optimized.

2.4 Module class

- Method «MsgText». Starting with Cosmos version 8.4, it supports an absolute path to a shared network drive in the second parameter of the method. In previous versions, it only supported a network drive if it was mapped.
- Method «GetUrlFileEx» supports the «ftpes://» syntax for Explicit Secure FTP. In previous versions it supported downloading files from servers using Explicit Secure FTP, but it did not support the standard «ftpes://» syntax.

2.5 Compiler

When compiling the entire project, if an icon file was not found, it displayed a message box whenever it encountered an icon file not found error. Starting with Cosmos version 8.4, the error message will be displayed in the error output window.

2.6 Development environment

The size of the «variable» field has been increased in the following controls:

- The «Storage» tab of the «Edit field» control of the Form class.
- The «Storage» tab of the «Variable» control of the Page class.

2.7 Stored Procedures

The process of executing stored procedures has been optimized.

3. Methods

3.1 Char class

CompareStrict

Allows you to compare two character strings byte by byte.

Syntax:

```
CompareStrict (compareStr as Char) return integer
```

Parameters:

compareStr	Character string to compare the Char object with..
------------	--

Returns:

An integer number. The values are:

0	If the two character strings are equal.
1	If the char object is greater than the character string received as a parameter by the method.
-1	If the char object is less than the character string that the method receives as a parameter.

This method will not take into account the language installed on the PC as happens when comparing two character strings with the operators ==, < and >.

3.2 SqlCursor class

FetchTupleJson

This method reads a tuple from the derived table returned by a cursor previously opened with the «Open» method of the same class and returns a string in «JSON» format.

Syntax:

```
FetchTupleJson (oem as Boolean default FALSE) return Char
```

Parameters:

Oem	If TRUE it loads the file with the OEM character set and if FALSE it loads it in ANSI.
-----	--

Returns:

Returns the tuple in a char object in «JSON» format.

3.3 SqlServer class

SelectTupleJson

This method allows you to execute a SELECT statement collecting the information from the first row found in a string of characters in «JSON» format.

Syntax:

```
SelectTupleJson (select as Char, oem as Boolean default FALSE) return Char
```

Parameters:

Select	Select statement.
Oem	If TRUE it loads the file with the OEM character set and if FALSE it loads it in ANSI.

Returns:

A Char in «JSON» format with the name of the columns and the corresponding values.

4. ENVIRONMENT VARIABLES

ADJUSTLISTHEADERHEIGHTBYFONT

This environment variable allows you to set the header size in «List Box » controls to match the font size.

It must be set to TRUE or YES in the «Environment» section of the project or Cosmos configuration file. If the height resulting from the calculation is less than the original height of the list header, the header size will be the original size, as if the variable had not been defined.

CWSLOGFILE

Allows you to define the path to the «cwslog.log» file. It is defined in the Cosmos WebServer configuration file in the «[Server]» section.

LONGVARCHARASCHAR

This environment variable allows «Long Varchar» data types in an ODBC connection to be treated as «Char».

This variable must be defined in the ODBC connection.

NORESTOREBUTTONICONS

In the case where a «Box» control has a «FormTable» associated with it and a «Button» control is defined within the «Box» control, if the button icon is changed at runtime with the «SetIcon» method, and any table command is subsequently executed («New», «Add», etc.), its original icon is automatically restored. In the case where we do not want this to be the default behavior, it will be necessary to define this environment variable with a value of «YES» or «TRUE».

This variable must be defined in the «Environment» section of Cosmos or project configuration file.

OPTIMIZELOOKUPNULLVALUES

If a lookup column exists in a FormTable, Cosmos obtains its value by querying the referenced table, even if the column value is «null».

If this variable is defined with a value equal to «1» and the value of the column defined in a lookup is «null», the query will not be performed on the referenced table. Both in the header and in the rows.

This variable must be defined in the «Environment» section of the Cosmos or project configuration file, or with the «SetOption» method of the Module or Form class.

5. Bug fixes

5.1 Runtime

5.1.1 Visualization

The repainting of screens was slow when defining the «Box» controls with borders in the «CUSTOMCONTROLS» file template. The repainting process has been optimized.

If the icon of a «Button» control belonging to a «FormTable» is modified, when any method of «FormTable» is executed, such as «New», it restores the original icon and does not respect the modification. To change this behavior, set the environment variable «NORESTOREBUTTONICONS» to TRUE.

5.1.2 Export to Excel

When exporting the content of a «Grid» control to a file with the «xlsx» extension, the font type is not respected.

5.1.3 Json class

Modifying elements of a «JSON» array did not work correctly.

5.1.4 ODBC client

When performing a query that included a literal «select 'customer name' customer from table» the data was not displayed correctly. It displayed the character «?».

For the data to be displayed correctly, the variable «LONGVARCHARASCHAR» must be defined in the ODBC connection with the value TRUE.

5.1.5 Smallint class

The call to the «WeekDayName3» method caused an error at runtime and the execution was aborted.

5.1.6 FormTable class

By defining the environment variable «LOOKUPOUTERJOIN» with value «TRUE» some extra selects were executed to consult the value of the lookups.

5.2 Development environment

When using the accelerators «Ctrl+Left Arrow» and «Ctrl+Right Arrow», if they encounter a «?» character, it will stop.

5.3 Compiler

A general protection fault occurred when compiling a module in which the character «%» was concatenated to a string without specifying the concatenation character «+».

5.4 Cosmos WebServer

The «CosHttpGetReturnCode» function did not return the HTTP code when the verb sent in the request was «DELETE». In this case, it always returned 0 when it should return 200 or 404.

5.5 CTSQL

When executing the «AVG» function, the database manager returned the following message «division by zero». This error occurs since Cosmos version 7.8.3.