Knowledge Base

Excel functions not working in Query Add-in

KB-0036-22

Document Summary	
Article Type	Product Fault and Resolution
Products Affected	Exaquantum/PIMS
Versions Affected	R3.20
Function Affected	Exaquantum Query Add-in
Available Resolution	Workaround
Audience	Users and Administrators
Summary	Excel functions such as sum and average fail to calculate when processing data from the Exaquantum Query Add-in, displaying a 0 value or a #DIV/0! error.
	Row	A Data retrieved	B Desired formula	C Displayed result	D Result status
1	Data retrieved	Desired formula	Displayed result	Result status
2	0			
3	14.81481	=A3+A4+A5	88.88888	Correct
4	29.62963			
5	44.44444	=sum(A3:A5)	0	Incorrect
6	59.25926			
7	72.59259	=(A3+A4+A5)/3	29.62962667	Correct
8	57.77778			
9	42.96296	=Average(A3:A5)	#DIV/0!	Incorrect
10	28.14815			

| **Review Date** | Document to be reviewed before July 2024 |

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Chapter 1 Introduction

When using data returned by the Exaquantum Query Add-in, it is not possible to correctly display results from some Excel formulas including SUM and AVERAGE.

The issue is confirmed in the products and versions indicated in the Applicable Products section.

There is currently no patch for the issue but there are a number of workarounds which are detailed in the Resolution section.

A permanent fix will be available in a future version of the product.

1.1 Audience

This guide is intended for system integrators and administrators.

Chapter 2 Issue Detail

2.1 Fault Description

Exaquantum has two independent Excel add-ins which can be used to retrieve and manipulate data, the Explorer Excel Add-in and the Query Add-in.

These two add-ins are accessed via a menu in Excel as shown in Figure 2-1.
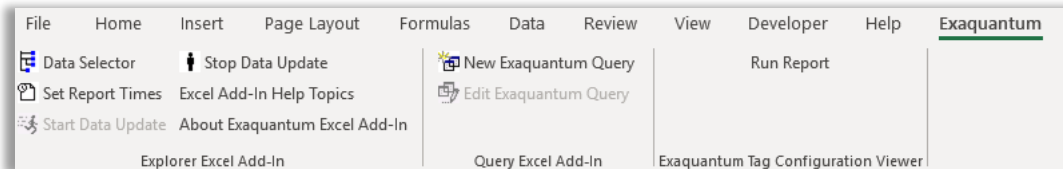
Figure 2-1 – Exaquantum menu Showing Excel add-ins

Retrieved data can make use of standard Excel functions and formulas within Excel workbooks. The issue reported only affects the Query Add-in. When using this add-in, some Excel functions will not function correctly. Figure 2-2 shows the issue on an Exaquantum/PIMS R3.20 client.

Column A - Raw Data retrieved from the Query Add-in

Column B – The formula that the user wants to employ

Column C – The result that is displayed by the formula

Column D – Whether the formula displays correctly or not

Figure 2-2 – R3.20 behaviour

The following incorrect behavior has been reported and verified:
- Alignment of raw data is left instead of the expected right for values
- Excel formulas such as SUM and AVERAGE do not calculate expected results. The **=sum** function returns a 0 and the **=average** function returns a DIV/0! error message.
- Simple maths formulas do return correct results such as **=A3+A4** and **=(A3+A4)/2**
- The number of decimal places is reduced
- It is not possible to specify a non-system decimal separator (not shown in Figure 2-2)

2.2 Cause

The Exaquantum Query Add-in in Exaquantum/PIMS R3.20 returns the data as a string variant which cannot be converted in some Excel functions.

2.3 Resolution

There is currently no patch for the issue, there are a number of workarounds. The available workarounds will depend on whether the Excel version is 32 or 64-Bit.

A permanent fix will be available in a future release.

Chapter 3 Workaround Preparation

3.1 Determine the Excel version

Before deciding on a workaround, check the version of Excel that is in use to determine 32 or 64-Bit. There are several ways to find this information. It can be seen by selecting Account from the File menu and clicking on the About Excel button.
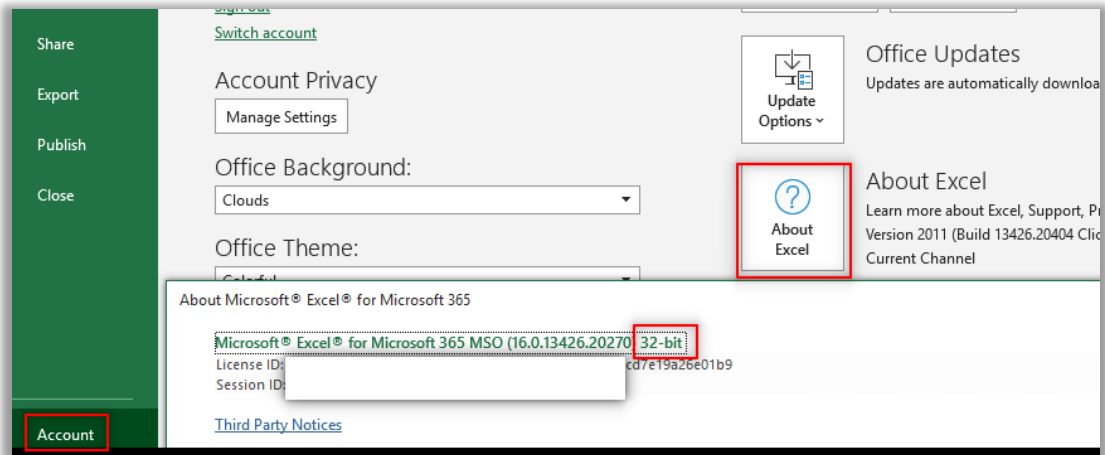

Figure 3-1 – Determining the Excel version in use

Once the Excel version is known, read the section below for applicable solutions. Note that the issue is resolved within the client application and therefore it is possible to use different solutions for different client computers where there is a mix.

Chapter 4 Workaround Options

4.1 Workaround 1: Revert Excel to R3.15 Add-in Behavior (32 Bit version only)

This is the preferred solution where available since it does not require any changes to existing workbooks.

4.1.1 Outline

On the client computer, open a registry editor, for example regedit and update the following registry key. Excel will need to be restarted for the change to be applied.

The default value for R3.20 is:

`ODBC;DSN=Exaquantum;UID=;PWD=;DATABASE=QConfig`

The value for R3.15 is:

`OLEDB;Provider=QOLEDB;Data Source=""`

It is advised to save the original version into a text file.
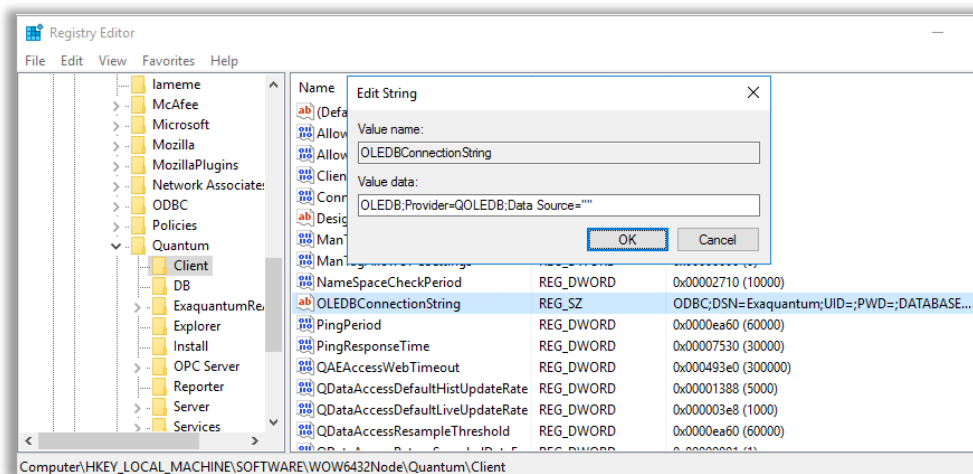
Refer to Figure 4-1 for an illustration:

Figure 4-1 – Image showing the process of registry modification.

4.1.2 Steps

1. Open the registry editor by typing Regedit in the Windows search box and selecting the Registry Editor application (exact steps will vary by operating system).

2. Navigate to the following registry location:
    `Computer\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Quantum\Client`

3. Open the registry value OLEDBConnectionString by right-clicking on it and selecting modify.

4. Verify that the current setting is:
    `ODBC;DSN=Exaquantum;UID=;PWD=;DATABASE=QConfig`

5. Copy this value and save in a text file on the client computer.

6. Update the value to:
    `OLEDB;Provider=QOLEDB;Data Source=""`

7. Click on OK to confirm the change and close the registry editor.

8. Restart Excel and verify behavior.

4.2 Workaround 2: Use Excel Formulas to Modify Returned Data

If the client computer uses 64 Bit Excel then Workaround 1 is not available. In this case, one of the other workarounds must be used.

4.2.1 Outline

Enter formulas to process the data retrieved from Excel so that it can be used in all Excel formulas.

This workaround requires rework of existing workbooks.

Figure 4-2 shows an example for illustration. It is common to have a complete sheet of values rather than just a single column. In this case, it is better to create a new sheet that copies all values from a sheet to one with manipulated values.

	A	B	C	D	E	F	G	H	I
1	Data retrieved	Desired formula	Displayed result	Result status	Conversion formula	Converted values	Desired formula	Displayed result	Result status
2	0								
3	14.81481	=sum(A3:A7)	0	Incorrect	=VALUE(A3)	14.81481	=sum(D3:D7)	220.74073	Correct
4	29.62963				=VALUE(A4)	29.62963			
5	44.44444				=VALUE(A5)	44.44444			
6	59.25926				=VALUE(A6)	59.25926			
7	72.59259				=VALUE(A7)	72.59259			
8	57.77778					57.77778			
9	42.96296					42.96296			
10	28.14815					28.14815			
11	13.33333					13.33333			

Column Descriptions	
Column name	**Description**
Data retrieved	Values retrieved using Exaquantum Query add-in
Desired formula	This is the formula that the user wants to see
Displayed result	The result displayed by Excel before any modifications
Result status	Whether the result shown is correct or incorrect
Conversion formula	The formula that will be used in the next column to convert data
Converted values	The values after conversion
Desired formula	This is the formula that the user wants to see (same as column B)
Displayed result	The result displayed by Excel after the modifications
Result status	Whether the result shown is correct or incorrect

Figure 4-2 – Workaround using Value Conversion

4.2.2 Procedure

Figure 4-2 shows a workbook with values retrieved by the Exaquantum Query Add-in in column A. The desired formula is shown in cell B3 and the incorrect result shown in cell C3.

Column E shows the formula required to convert column A data to values so that they can be used in all Excel formulas. Column F shows these converted values.

Cell G3 shows the equivalent formula for the manipulated data and the correct result is shown in cell H3.

4.2.3 Limitation

This workaround requires modification of existing workbooks.

4.3 Workaround 3 – Using the Explorer Excel Add-in

4.3.1 Outline

All data that is displayed by using the Exaquantum Query Excel Add-in can be retrieved using the Explorer Excel add-in. The two add-ins are independent and do a similar job. Therefore, a valid workaround is to create new workbooks that use the Explorer Excel add-in instead of the Exaquantum Query Add-in.

4.3.2 Steps

For information on using the Explorer Excel Add-in, please refer to the Exaquantum documentation (see Further Reading section) or contact your local support representative.

4.3.3 Limitation

This workaround requires the creation of alternative workbooks that will replace those that use the Exaquantum Query Add-in. This could require significant work.

Chapter 5 Further Reading

To find out more about the Explorer Excel Add-in, refer to the Exaquantum Explorer User's Manual Volume 3.

More support is available at [www.ymx.yokogawa.com\support](http://www.ymx.yokogawa.com/support)

Chapter 6 Further Reading

There should always be a further reading section which will direct the user to other articles. It should include the address of the support website and the support.ymx@yokogawa.com email address.

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Highlights

The Highlights section gives details of the changes made since the previous issue of this document.

▪ ## Summary of Changes

This is Issue 3.0 of the document related to Product Library version 14.0.

▪ ## Detail of Changes

The changes are as follows:

Chapter/Section/Page	Change
Front page	Review Date updated
Page 12	Email address updated