

ImportFromExcelIntoTableObject

Content

- Content
- Description
- Features
- Dependency
- Objects
 - Download
 - Parameters
- Usage
 - Output
- Testing
 - Simple
 - Skip column from Excel
 - Specify Range
 - Skip column from Table Object (nullable)
 - Insert Missing values
 - Update Existing values
- Reference

Description

The Table Editor add on Module (not the standard Table Editor) used to allow copy and paste of the content of an Excel directly into the Table Editor.

Since 9.2.10 (See KBA: [Known Issue: Table Editor overwrites key column value with an auto-generated value](#)) the Table Editor will overwrite the Key column on paste with a generated Key value.

As some Customers are copying large sets of data into different tables. Updating the Key column manually row by row is not an option. Therefore a better solution is required.

Together with services we came up with a 2 step solution (in a single chain) to import the Excel file to an RTX file. Then in Step 2 the RTX data is imported into the Table Object.

Features

Importing from Excel can be done from a specified Sheet and a specified Range of Rows.

Also there will be an option to skip the first row as this usually contains headers

For the Import into the Table you can specify the Key column to be used from the Excel/RTX file.

In addition you can specify the column mapping between the Excel/RTX and the Table Object.

Dependency

This functionality has a dependency with the Redwood_FCA Library.

The Import from Excel to RTX requires POI which is available from Redwood_FCA.

Objects

The Car-file contains:

- Application RWS
- Application RWS_ExcelToRTXToTableObject
- Process Definition CUS_RWS_Excel2RTX
- Process Definition RWS_RTX_TableObject_Write_StringColumns
- Chain Definition ExcelToRTX_ToTableObject

Download

The Car file is created with Eclipse and the import file can be downloaded from:

[Application_RWS_ExcelToRTXToTableObject.car](#)

[Application_RWS_ExcelToRTXToTableObject_TestObjects.car](#) (Just used for Testing, offers no functionality)

Note: Sources are created (Eclipse) and maintained by [@Redwood Customer Support \(Mark Z\)](#)

Parameters

- E2R_Excel
 - Excel file
File Parameter where you upload the Excel file
Mandatory: Yes
 - Sheet
Indicates the Sheet in the Excel file to import from
Mandatory: No
 - Range
Indicates the Range in the Excel file to import.
Range as <Col>:<Col> or <Col>:<Col> or <Col><Row>:<Col><Row>.
Mandatory: No
 - First line Header?
Skip the first line
Values: Yes,No
Mandatory: Yes
Default value: No
- R2T_Mapping
 - Expression for the table row key
You can use columns.<name> from the input, along with columns.\$rownum, columns.\$inkey, and columns.\$jobid for the current row number, current row key, and current job id respectively.
Mandatory: Yes
Example: `String.concat(columns.$jobid, '_', columns.$rownum)`
 - Columns to write
Columns to include from Input table. Leave empty for all columns.
Format: `<ExcelColumn>=<TableColumn>;<ExcelColumn>=<TableColumn>;<ExcelColumn>=<TableColumn>`
Note: The number of columns is not restricted.
Mandatory: No
- R2T_Table
 - Table object to write to
Select the Table name from the List.

Type part of the Name to Filter

Mandatory: Yes

- Clear the table before running

Remove current content from the Table Object

Values: Y,N

Mandatory: Yes

- Insert missing values

Values: Y,N

Mandatory: Yes

- Update existing values

Values: Y,N

Mandatory: Yes

Usage

- Import Car file
- Open the Submit Wizard for Definition ExcelToRTX_ToTableObject
- Provide Parameter values
- Submit

Output

The result can of course be checked from the Table Object, but the Chain also provides an indication of the result.

In Step 2 the job sets out-type parameters indicating what was done.

| Description | Definition | ID | Status | Scheduled Start |
|-------------------------------------|---|--------|-----------|-----------------|
| ExcelToRTX_TableObject | ExcelToRTX_TableObject | 162750 | Completed | 10:29:41 AM |
| ExcelToRTX | Step 1 | 162752 | Completed | 10:29:41 AM |
| CUS_RWS_Excel2RTX | CUS_RWS_Excel2RTX | 162753 | Completed | 10:29:41 AM |
| RTXToTable | Step 2 | 162754 | Completed | 10:29:41 AM |
| Write to a Table Object from an RTX | RWS_RTX_TableObject_Write_StringColumns | 162755 | Completed | 10:29:41 AM |

Results: 2

Process 162755 - Write to a Table Object from an RTX (parent: 162754)

(Open in li)

| | |
|--|---|
| <ul style="list-style-type: none"> Definition Process Documentation Status Start Time Scheduled Start Run Time Queue Process Server Step Iteration Scheduling Files <ul style="list-style-type: none"> stderr.log Parameters <ul style="list-style-type: none"> Input Table Output <ul style="list-style-type: none"> Rows read Cells written Cells Updated Cells inserted Updates skipped Inserts skipped Audit Related Objects | <p>RWS_RTX_TableObject_Write_StringColumns</p> <p>Process Definition ExcelToRTX_TableObject, RTXToTable, 1</p> <p>Appends rows to a table. More...</p> <p>Completed</p> <p>Inherited: 10:29:41 AM, Actual: 10:29:41 AM (140ms difference)</p> <p>10:29:41 AM</p> <p>10:29:41 AM - 10:29:41 AM (174ms elapsed)</p> <p>System</p> <p>System</p> <p>1</p> <p>Ad Hoc</p> <p>1.3k; Log: TextLog; Modified: 10:29:41 AM</p> <p>Show: Part of Key <input type="checkbox"/> Empty Parameter Value <input checked="" type="checkbox"/> Set as Default Value <input checked="" type="checkbox"/></p> <p>Out: 3</p> <p>Out: 9</p> <p>Out: 0</p> <p>Out: 9</p> <p>Out: 0</p> <p>Out: 0</p> <p>Modified: Mark Zenhorst (10:29:41 AM)</p> <p>None</p> |
|--|---|

Testing

For Testing we use a Test Application (see Downloads).

The Car-file contains:

- Application RWS
- Application TestObjects
- Application RWS_ExcelToRTXToTableObject_TestObjects
- Document RWS_ExcelToRTXToTableObject_ExcelFile
Only contains the Excel file used for Testing, download it to your workstation to test.
- Table Definition RWS_TD_ExcelToRTXToTableObject
- Table RWS_ExcelToRTXToTableObject
Will contain the imported Rows

Test Excel File:

| | A | B | C | D | E |
|---|-------|---------|--------|------------|-------------|
| 1 | MyKey | Message | Number | MyDate | ExtraColumn |
| 2 | one | World | 1 | 2023-03-13 | is |
| 3 | two | Bye | 2 | 2023-03-14 | not |
| 4 | trio | verse | 3 | 2023-03-15 | used |
| 5 | | | | | |

Simple

This is a Simple Test with a small twist. The Excel contain an additional Column which fails the insert into the Table Object.

The Exception is therefore expected!

Submit:

Submit Chain 162779 - ExcelToRTX_ToTableObject

| | |
|-----------------|--|
| Go to | Parameters |
| Show Definition | E2R_Excel R2T_Mapping R2T_Table |
| Parameters | Excel file: ExcelToRTXToTableObject_f Clear Data |
| Time and Dates | Sheet: TheSheetToProcess |
| Control | Range |
| Submit Summary | First line Header? Yes |

| | |
|-----------------|---|
| Show Definition | E2R_Excel R2T_Mapping R2T_Table |
| Parameters | Expression for table row key: columns.MyKey |
| Time and Dates | Columns to write |

| | |
|-----------------|---|
| Show Definition | E2R_Excel R2T_Mapping R2T_Table |
| Parameters | Table object to write to: RWS_ExcelToRTXToTableObject |
| Time and Dates | Clear the table before running: Yes |
| Control | Insert missing values: Yes |
| Submit Summary | Update existing values: Yes |

Result:

| Description | Definition | ID | Status | Scheduled Start |
|---|---|--------|-----------|-----------------|
| ExcelToRTX_ToTableObject | ExcelToRTX_ToTableObject | 162794 | Error | 10:56:43 AM |
| Process 162794 (submitted from ExcelToRTX_ToTableObject copy from 20... | 10:56:44 AM | | | |
| ExcelToRTX | Step 1 | 162796 | Completed | 10:56:43 AM |
| CUS_RWS_Excel2RTX | CUS_RWS_Excel2RTX | 162797 | Completed | 10:56:43 AM |
| RTXToTable | Step 2 | 162798 | Error | 10:56:44 AM |
| Write to a Table Object from an RTX | RWS RTX_TableObject_Write_StringColumns | 162799 | Error | 10:56:44 AM |

| MyKey | Message | Number | MyDate | ExtraColumn |
|-------|---------|--------|---------|-------------|
| one | World | 1 | 3/13/23 | is |
| two | Bye | 2 | 3/14/23 | not |
| trio | verse | 3 | 3/15/23 | used |

| Name | Description | Parent Application | Type |
|--|-------------|------------------------|------------------|
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> RWS_ExcelToRTXToTableObject_TestObjects RWS_ExcelToRTXToTableObject_ExcelFile RWS_ExcelToRTXToTableObject RWS_TD_ExcelToRTXToTableObject | | TestObjects | Application |
| | | RWS_ExcelToRTXToTab... | Document |
| | | RWS_ExcelToRTXToTab... | Table |
| | | RWS_ExcelToRTXToTab... | Table Definition |

| Table RWS_ExcelToRTXToTableObject | |
|-----------------------------------|---|
| Application | RWS_ExcelToRTXToTableObject_TestObjects |
| Import Mode | Import Rows |
| Definition | RWS_TD_ExcelToRTXToTableObject |
| In Memory | ✗ |
| > Audit | Modified: Mark Zenhorst (10:55:52 AM) |
| > Security | |
| > Related Objects | |

The Table contains no rows.

There are two ways to resolve this:

- specify the Column mappings and skip the last column during the import into the Table Object
- specify a Range to retrieve from Excel which strips the data before writing the RTX-file

Skip column from Excel

Submit:

| E2R_Excel | R2T_Mapping | R2T_Table |
|--------------------|---------------------------|------------|
| Excel file | ExcelToRTXToTableObject_f | Clear Data |
| Sheet | TheSheetToProcess | |
| Range | | |
| First line Header? | Yes | |

| E2R_Excel | R2T_Mapping | R2T_Table |
|------------------------------|---|-----------|
| Expression for table row key | columns.MyKey | |
| Columns to write | Message=MyString;Number=MyNumber;MyDate | |

| E2R_Excel | R2T_Mapping | R2T_Table |
|--------------------------------|-----------------------------|-----------|
| Table object to write to | RWS_ExcelToRTXToTableObject | |
| Clear the table before running | Yes | |
| Insert missing values | Yes | |
| Update existing values | Yes | |

Result:

| | | | | |
|--|---|--------|-----------|-------------|
| <ul style="list-style-type: none"> ExcelToRTX_ToTableObject <ul style="list-style-type: none"> ExcelToRTX <ul style="list-style-type: none"> CUS_RWS_Excel2RTX RTXToTable <ul style="list-style-type: none"> Write to a Table Object from an RTX | ExcelToRTX_ToTableObject | 162838 | Completed | 12:47:31 PM |
| | Step 1 | 162840 | Completed | 12:47:31 PM |
| | CUS_RWS_Excel2RTX | 162841 | Completed | 12:47:31 PM |
| | Step 2 | 162842 | Completed | 12:47:31 PM |
| | RWS_RTX_TableObject_Write_StringColumns | 162843 | Completed | 12:47:31 PM |

| Key | MyString | MyNumber | MyDate |
|------|----------|----------|------------|
| one | World | 1 | 2023/03/13 |
| trio | verse | 3 | 2023/03/15 |
| two | Bye | 2 | 2023/03/14 |

Specify Range

This will only work if the Columns in the Excel Sheet have the Same name as in the Excel file.

To demonstrate I used a modified Excel file here (with synchronized column names).

| | A | B | C | D | E |
|---|-------|----------|----------|------------|-------------|
| 1 | MyKey | MyString | MyNumber | MyDate | ExtraColumn |
| 2 | one | World | 1 | 2023-03-13 | is |
| 3 | two | Bye | 2 | 2023-03-14 | not |
| 4 | trio | verse | 3 | 2023-03-15 | used |

Submit:

| E2R_Excel | R2T_Mapping | R2T_Table |
|--------------------|---------------------------|------------|
| Excel file | ExcelToRTXToTableObject_F | Clear Data |
| Sheet | TheSheetToProcess | |
| Range | A1:D4 | |
| First line Header? | Yes | |

| E2R_Excel | R2T_Mapping | R2T_Table |
|------------------------------|---------------|-----------|
| Expression for table row key | columns.MyKey | |
| Columns to write | | |

| E2R_Excel | R2T_Mapping | R2T_Table |
|--------------------------------|-----------------------------|-----------|
| Table object to write to | RWS_ExcelToRTXToTableObject | |
| Clear the table before running | Yes | |
| Insert missing values | Yes | |
| Update existing values | Yes | |

Result:

| | | | | |
|-------------------------------------|---|--------|-----------|-------------|
| ExcelToRTX_ToTableObject | ExcelToRTX_ToTableObject | 162853 | Completed | 12:56:17 PM |
| ExcelToRTX | Step 1 | 162855 | Completed | 12:56:17 PM |
| CUS_RWS_Excel2RTX | CUS_RWS_Excel2RTX | 162856 | Completed | 12:56:17 PM |
| RTXToTable | Step 2 | 162857 | Completed | 12:56:18 PM |
| Write to a Table Object from an RTX | RWS_RTX_TableObject_Write_StringColumns | 162858 | Completed | 12:56:18 PM |

| Key | MyString | MyNumber | MyDate |
|------|----------|----------|------------|
| one | World | 1 | 2023/03/13 |
| trio | verse | 3 | 2023/03/15 |
| two | Bye | 2 | 2023/03/14 |

Modified: Mark Zenhorst (12:56:18 PM)

Skip column from Table Object (nullable)

Submit:

| | | | |
|-------------------|----------------------------------|---------------------------|------------|
| E2R_Excel | R2T_Mapping | R2T_Table | |
| Excel file | | ExcelToRTXToTableObject_F | Clear Data |
| Name | IN_EXCEL | | |
| Description | Excel file | | |
| Documentation | Excel file to retrieve data from | | |
| First line header | Yes | | |

| | | | |
|------------------------------|-------------|---|--|
| E2R_Excel | R2T_Mapping | R2T_Table | |
| Expression for table row key | | columns.MyKey | |
| Columns to write | | ExtraColumn=MyString;MyDate;Number=MyNumber | |

| | | | |
|--------------------------------|-------------|-----------------------------|--|
| E2R_Excel | R2T_Mapping | R2T_Table | |
| Table object to write to | | RWS_ExcelToRTXToTableObject | |
| Clear the table before running | | Yes | |
| Insert missing values | | Yes | |
| Update existing values | | Yes | |

Result:

| | | | | |
|-------------------------------------|---|--------|-----------|------------|
| ExcelToRTX_ToTableObject | ExcelToRTX_ToTableObject | 162860 | Completed | 1:01:05 PM |
| ExcelToRTX | Step 1 | 162862 | Completed | 1:01:05 PM |
| CUS_RWS_Excel2RTX | CUS_RWS_Excel2RTX | 162863 | Completed | 1:01:05 PM |
| RTXToTable | Step 2 | 162864 | Completed | 1:01:06 PM |
| Write to a Table Object from an RTX | RWS_RTX_TableObject_Write_StringColumns | 162865 | Completed | 1:01:06 PM |

| Key | MyString | MyNumber | MyDate |
|------|----------|----------|------------|
| one | is | 1 | 2023/03/13 |
| trio | used | 3 | 2023/03/15 |
| two | not | 2 | 2023/03/14 |

Modified: Mark Zenhorst (1:01:06 PM)

Insert Missing values

I made the Column Number in the Table Object Nullable and I added a Column named MyOptional of type String which is also Nullable.

| Display Order | Column Name | Nullable | Data Type |
|---------------|-------------|----------|-----------|
| 1 | MyString | ✗ | String |
| 2 | MyNumber | ✓ | Number |
| 3 | MyDate | ✗ | Date |
| 4 | MyOptional | ✓ | String |

Modified: Mark Zenhorst (2:10:37 PM)

Content:

| Key | MyString | MyNumber | MyDate | MyOptional |
|------|----------|----------|------------|------------|
| one | World | 1 | 2023/03/13 | - |
| trio | verse | 3 | 2023/03/15 | + |
| two | Bye | | 2023/03/14 | |

Modified: Mark Zenhorst (2:10:58 PM)

Modify the Excel File and remove a number, and add the Column MyOptional with some values:

| | A | B | C | D | E | F |
|---|-------|---------|--------|------------|-------------|------------|
| 1 | MyKey | Message | Number | MyDate | ExtraColumn | MyOptional |
| 2 | one | World | 1 | 2023-03-13 | is | - |
| 3 | two | Bye | 55 | 2023-03-14 | not | ! |
| 4 | trio | verse | 3 | 2023-03-15 | used | + |

Submit:

| E2R_Excel | R2T_Mapping | R2T_Table |
|--------------------|---------------------------|------------|
| Excel file | ExcelToRTXToTableObject_F | Clear Data |
| Sheet | TheSheetToProcess | |
| Range | | |
| First line Header? | Yes | |

| E2R_Excel | R2T_Mapping | R2T_Table |
|------------------------------|--|-----------|
| Expression for table row key | columns.MyKey | |
| Columns to write | Message=MyString;MyDate;Number=MyNumber;MyOptional | |

| E2R_Excel | R2T_Mapping | R2T_Table |
|--------------------------------|-----------------------------|-----------|
| Table object to write to | RWS_ExcelToRTXToTableObject | |
| Clear the table before running | No | |
| Insert missing values | Yes | |
| Update existing values | Yes | |

Result:

| Description | Definition | ID | Status | Scheduled Start |
|-------------------------------------|---|--------|-----------|-----------------|
| ExcelToRTX_ToTableObject | ExcelToRTX_ToTableObject | 163003 | Completed | 2:16:46 PM |
| ExcelToRTX | Step 1 | 163005 | Completed | 2:16:46 PM |
| CUS_RWS_Excel2RTX | CUS_RWS_Excel2RTX | 163006 | Completed | 2:16:46 PM |
| RTXToTable | Step 2 | 163007 | Completed | 2:16:46 PM |
| Write to a Table Object from an RTX | RWS_RTX_TableObject_Write_StringColumns | 163008 | Completed | 2:16:47 PM |

| Key | MyString | MyNumber | MyDate | MyOptional |
|------|----------|----------|------------|------------|
| one | World | 1 | 2023/03/13 | - |
| trio | verse | 3 | 2023/03/15 | + |
| two | Bye | 55 | 2023/03/14 | ! |

Modified: Mark Zenhorst (2:19:23 PM)

Update Existing values

Modify some values in the Excel:

| | A | B | C | D | E | F |
|---|-------|----------|--------|------------|-------------|------------|
| 1 | MyKey | Message | Number | MyDate | ExtraColumn | MyOptional |
| 2 | one | World | 11 | 2023-03-13 | is | - |
| 3 | two | Bye | 5 | 2023-03-20 | not | = |
| 4 | trio | Universe | 3 | 2023-03-15 | used | + |

Submit:

| E2R_Excel | R2T_Mapping | R2T_Table |
|--------------------|---------------------------|------------|
| Excel file | ExcelToRTXToTableObject_F | Clear Data |
| Sheet | TheSheetToProcess | |
| Range | | |
| First line Header? | Yes | |

| E2R_Excel | R2T_Mapping | R2T_Table |
|------------------------------|--|-----------|
| Expression for table row key | columns.MyKey | |
| Columns to write | Message=MyString;MyDate;Number=MyNumber;MyOptional | |

| E2R_Excel | R2T_Mapping | R2T_Table |
|--------------------------------|-----------------------------|-----------|
| Table object to write to | RWS_ExcelToRTXToTableObject | |
| Clear the table before running | No | |
| Insert missing values | Yes | |
| Update existing values | Yes | |

Result:

| | | | | |
|-------------------------------------|---|--------|-----------|------------|
| ExcelToRTX_ToTableObject | ExcelToRTX_ToTableObject | 163017 | Completed | 2:24:12 PM |
| ExcelToRTX | Step 1 | 163019 | Completed | 2:24:12 PM |
| CUS_RWS_Excel2RTX | CUS_RWS_Excel2RTX | 163020 | Completed | 2:24:12 PM |
| RTXToTable | Step 2 | 163021 | Completed | 2:24:12 PM |
| Write to a Table Object from an RTX | RWS_RTX_TableObject_Write_StringColumns | 163022 | Completed | 2:24:12 PM |

| Key | MyString | MyNumber | MyDate | MyOptional |
|------|----------|----------|------------|------------|
| one | World | 11 | 2023/03/13 | - |
| trio | Universe | 3 | 2023/03/15 | + |
| two | Bye | 5 | 2023/03/20 | = |

Modified: Mark Zenhorst (2:26:58 PM)

Reference

Ticket:

- 52033
- 75663
- 75908

KBA: <https://support.redwood.com/hc/en-us/articles/16490259460625-Known-Issue-Table-Editor-overwrites-key-column-value-with-an-auto-generated-value>

