

MM02 – Updating Material Master

(This is Innowera confidential document)

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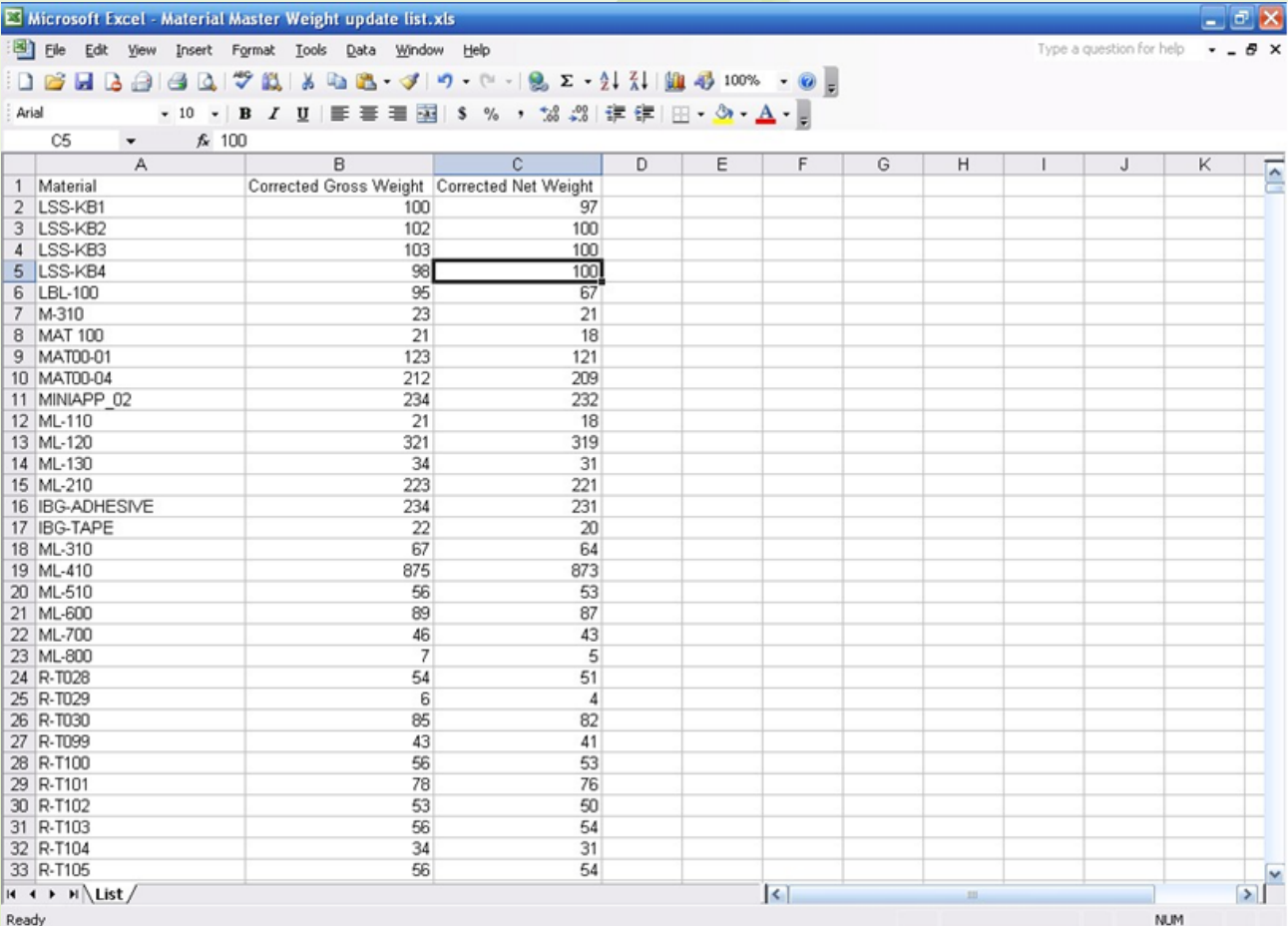
Introduction

Let's presume that we have list of few hundred materials where we want to change Gross and Net weights in material master records in basic data view.

It is presumed that you already know what you want to change and you already have all the required data in Excel file. If you do not have required data in Excel, you might want to work that out before you start.

For this example let's presume that you already know all the materials you want to update Gross and Net weight values.

The upload file looks like this. Notice in row 5 we have Net Weight more than Gross weight. This is an error situation and MM02 transaction will not allow these values to be uploaded. We will see later how this and subsequent records are treated when you use Process Runner.

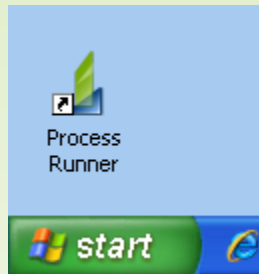


	A	B	C	D	E	F	G	H	I	J	K
1	Material	Corrected Gross Weight	Corrected Net Weight								
2	LSS-KB1	100	97								
3	LSS-KB2	102	100								
4	LSS-KB3	103	100								
5	LSS-KB4	98	100								
6	LBL-100	95	67								
7	M-310	23	21								
8	MAT 100	21	18								
9	MAT00-01	123	121								
10	MAT00-04	212	209								
11	MINIAPP_02	234	232								
12	ML-110	21	18								
13	ML-120	321	319								
14	ML-130	34	31								
15	ML-210	223	221								
16	IBG-ADHESIVE	234	231								
17	IBG-TAPE	22	20								
18	ML-310	67	64								
19	ML-410	875	873								
20	ML-510	56	53								
21	ML-600	89	87								
22	ML-700	46	43								
23	ML-800	7	5								
24	R-T028	54	51								
25	R-T029	6	4								
26	R-T030	85	82								
27	R-T099	43	41								
28	R-T100	56	53								
29	R-T101	78	76								
30	R-T102	53	50								
31	R-T103	56	54								
32	R-T104	34	31								
33	R-T105	56	54								

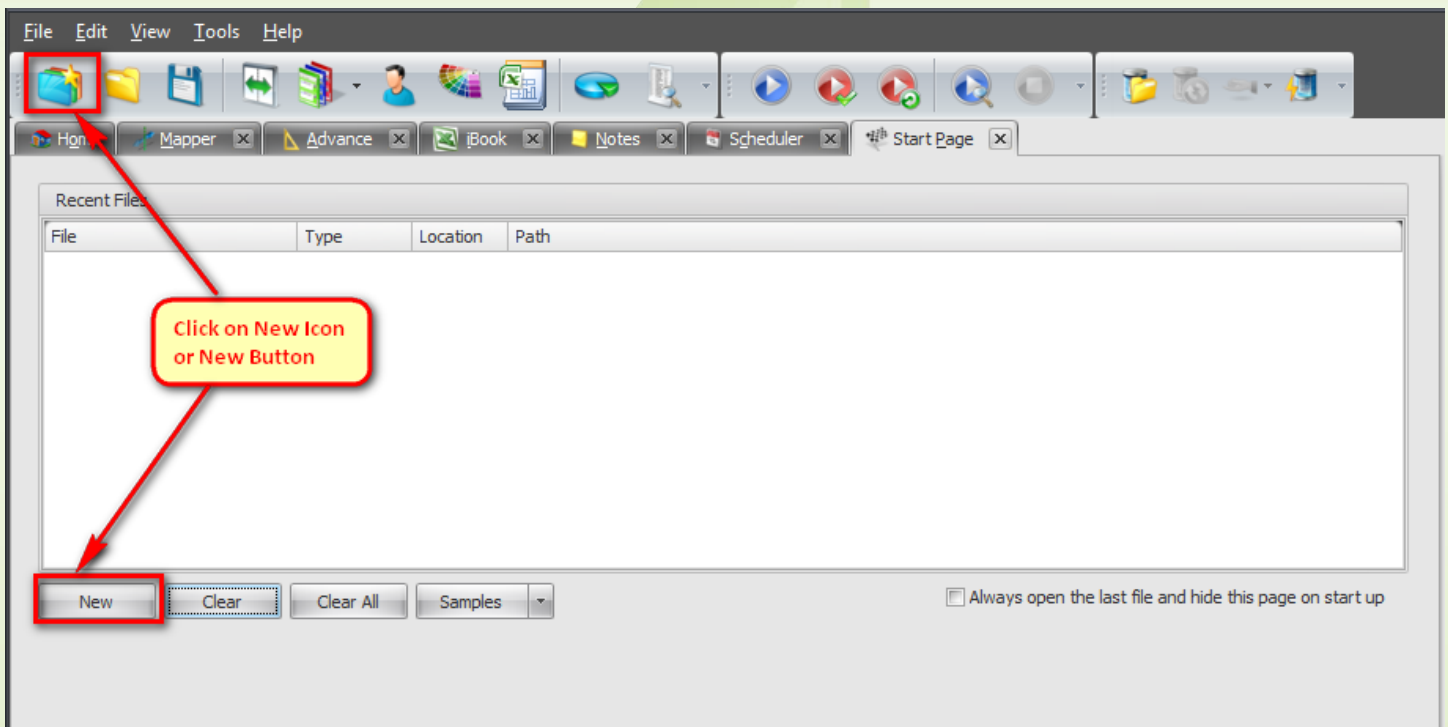
MM02 Recording using Process Runner

Before we begin recording a transaction, let's launch Process Runner and initiate the process to create a new recording.

- I. Launch Process Runner: Find Process Runner icon on your desktop and start the application.



- II. Click on "New" or press CTRL + N shortcut to record a new transaction.



- III. Execute and record transaction in SAP
In this step we will show Process Runner how to execute SAP transaction. **This is the most important step in whole process.**

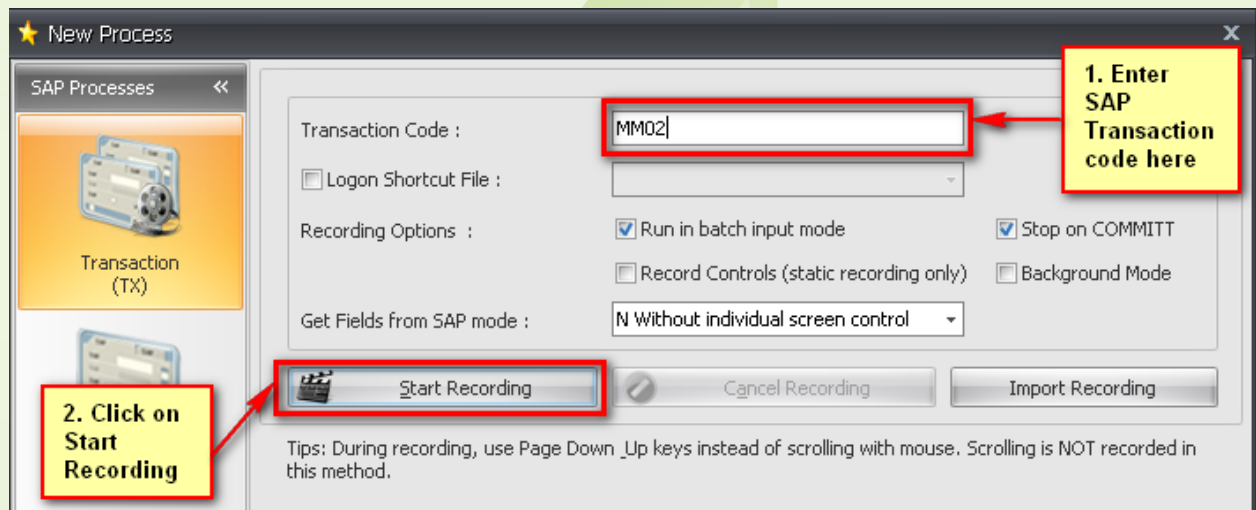
Process Runner asks you to actually execute a sample transaction in SAP. As you execute a sample transaction, Process Runner records each screen you go to and each field you change. It also captures actual data you enter into the SAP transaction. This all happens in your familiar SAP GUI. This process is called recording.

Once recording is complete in SAP GUI, you will be brought back to Process Runner. Recording information will finally be saved in Process Runner file so you can use that later on. Transaction recording file has an extension of .itf (Innowera Transaction File). Later on you can use Process Runner's advance Mapper to connect recorded SAP fields and screens with Excel columns and cell.

After you click on "New", Process Runner will present you with "New Step" wizard.

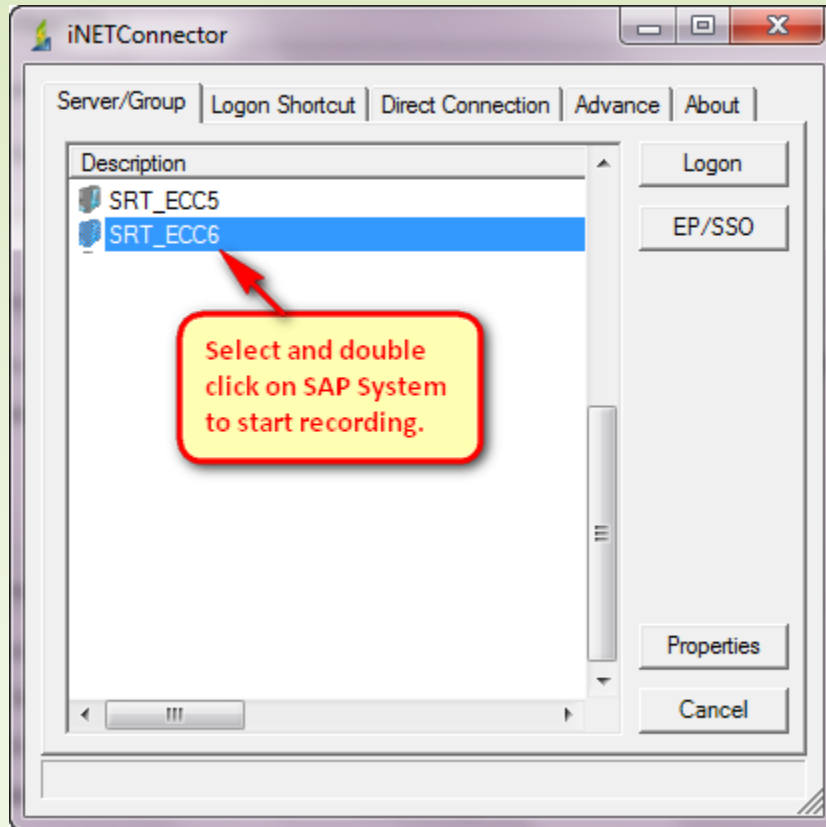
Step 1- Provide SAP Transaction code and log in to SAP

For our example, Transaction code for material master change is MM02. Enter MM02 in Transaction code field and click on Start Recording button.

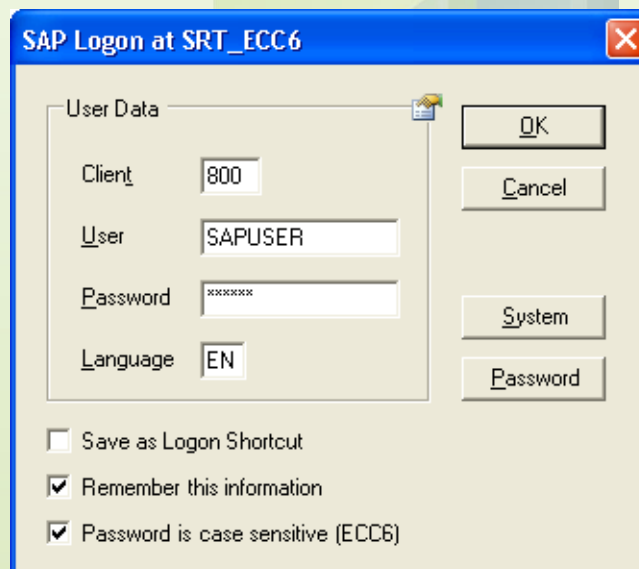


When you click "Start Recording", Process Runner will ask you which SAP System to use for recording. Select the appropriate system for performing a sample transaction recording.

Please keep in mind that while you execute a recording, actual database update in SAP takes place.



After you select the system, you will be prompted to enter Client, Username, Password and Logon language. Process Runner will use this information and will log you in to SAP.



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Process Runner will display message similar to below in “New Process” window.

SAP GUI started. Waiting for recording to finish.

Shortly after that your normal SAP GUI should be started with transaction code you provided before.

For our example, it will start change material master (MM02) transaction and wait for your input.

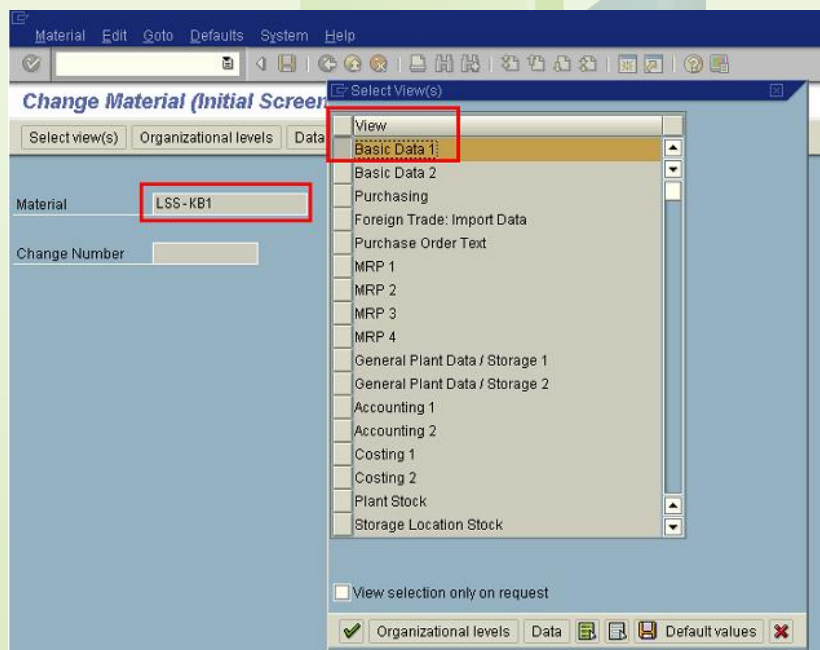
Hints:

- A. Depending on your network connection speed, SAP GUI may not appear right away. In that case, just be patient and wait a while before taking any other action.
- B. Sometime, you may not see SAP GUI if it remains in back of Process Runner screen or Windows minimizes it. In such a case, look at window’s task bar, If Process Runner launched SAP GUI, it will be the last application, simply click on it to select it. Alternatively you can use Alt + Tab key to switch through all open application windows and select SAP GUI. If you already have few other SAP GUI sessions launched, look for one with your transaction.
- C. To cancel the recording process, click on “Cancel” button and follow the on-screen instructions.

Step 2- Recording a sample Transaction

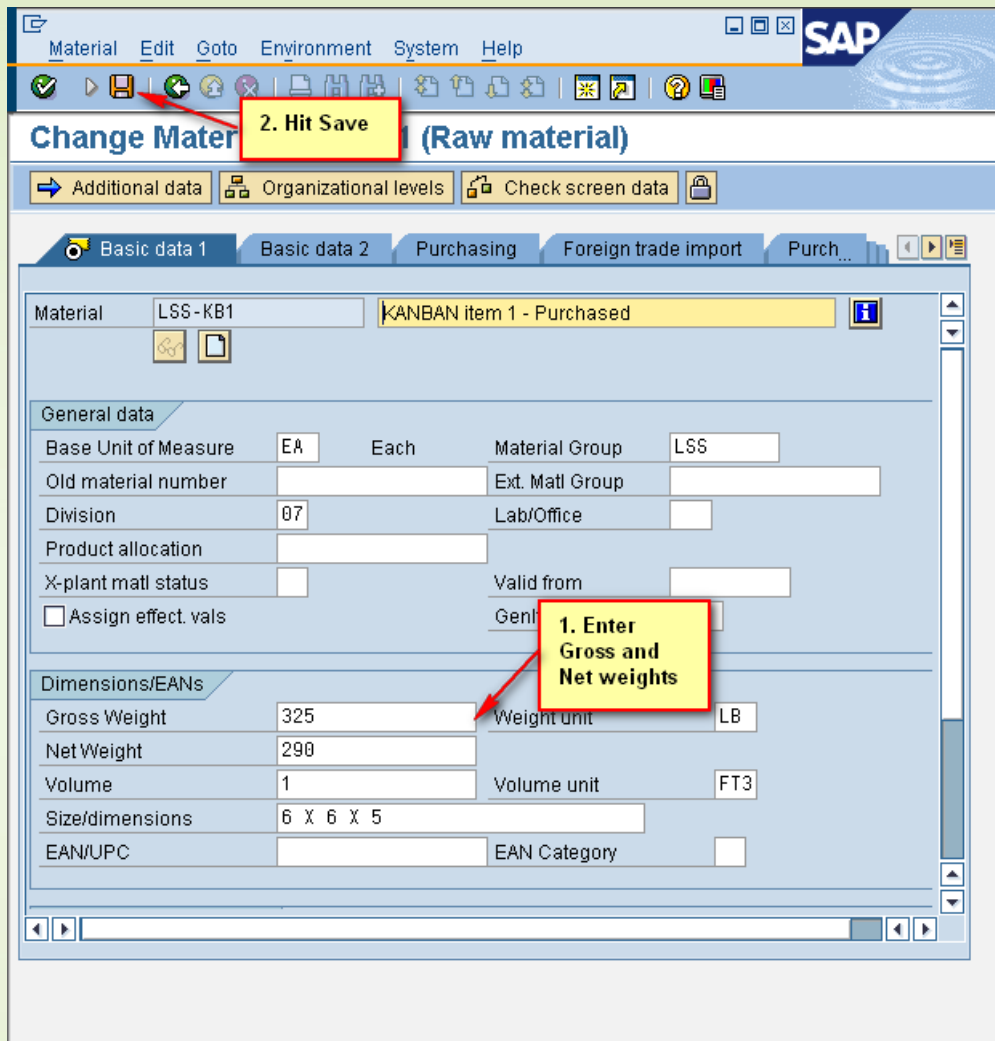
Process Runner is now ready to capture your inputs from this point. It will record all the screens you go to and all the data you enter until you finish this transaction either by saving, canceling or otherwise exit out of this transaction.

Note that it cannot record mouse scrolling, drag and drop. To continue enter a sample material. For our example, take the first material from the spreadsheet and type in Material field. Hit enter. On “Select views” dialog, Select Basic Data view and hit enter.



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Once we are in Basic Data1 view in material master, change Gross and Net Weights as per our spreadsheet and hit "Save" button.



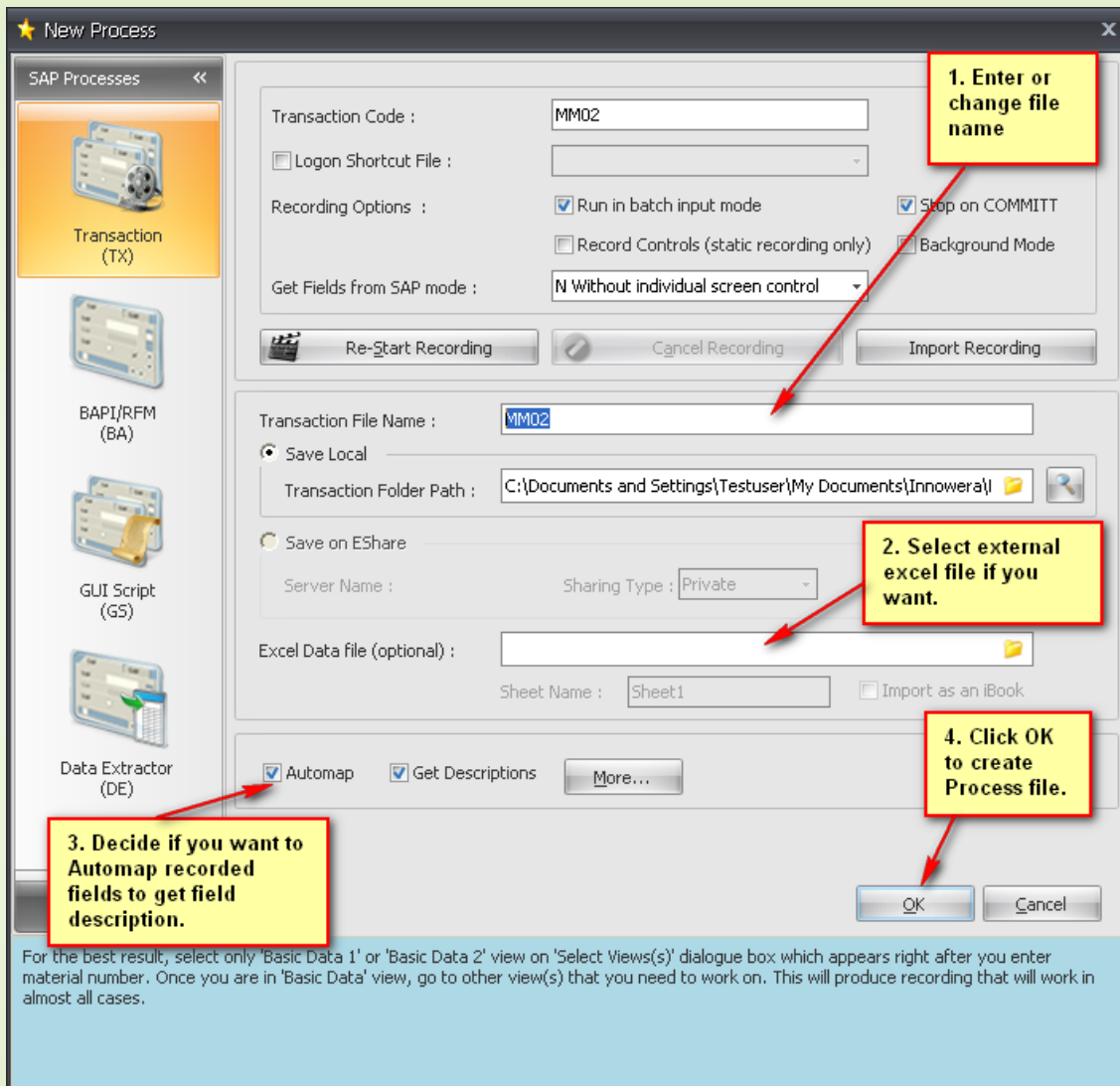
Once you have saved the changes and finished the transaction, the SAP GUI session will be ended and you will come back to Process Runner.

Hint: While most transaction ends when you press "Save" button, you have to exit out of the few other transactions by pressing back arrow key (F3). Control does not go back to Process Runner until you exit out of the transaction completely.

This ends 2nd step of recording a sample transaction. SAP GUI should have been closed and you should be back to final file creation step in Process Runner Wizard.

Step 3- Save to File

At this point, Process Runner knows all the screens you passed by and all the action you took to execute the transaction. It also knows all the fields you changed and actual data you entered. In our example, it captured material number you entered on first screen and weights you entered on last. Assign file name and give a title to this transaction file.



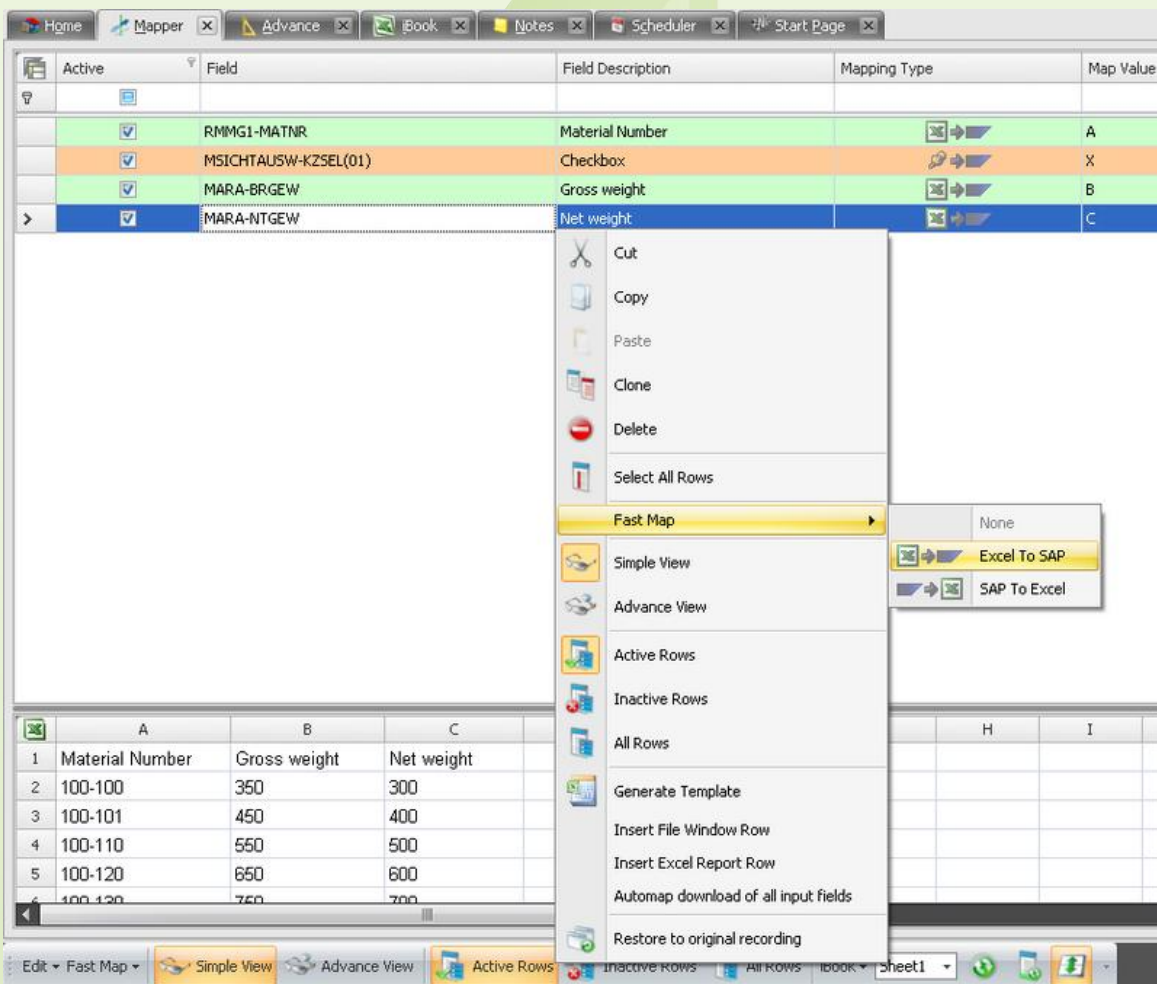
1. Transaction File Name: Process Runner proposes default file name based on the transaction code you entered before. Change this as required.
2. Excel Data File (Optional): This setting is optional. If you already have an existing Excel file for the transaction, then enter the path of the file. By checking the Import as an iBook checkbox to 'On', your Excel Data File will be automatically imported to iBook.

3. Get Field descriptions from SAP: Check this box if you want Process Runner to get descriptive and more readable information from SAP about the transaction you just executed. Turning this check box off or on has NO impact on how transaction will run. However, getting extended information makes .itf file more readable and is recommended. If you leave this checkbox turned on, it might take a little longer. Just be patient and wait a while before you take any other action.
4. Click on OK button to complete creation of the file.

Map Excel columns and cells to Sap fields

Mapper displays what you did in recording. It also allows you to easily map SAP fields to various values. You perform mapping using “Mapping Type” and “Map Value” columns.

Mapper has two views. You are currently in “Simple View”. “Advance View” displays more columns and rows. Once you select a view, it remembers your selection.



The screenshot shows the Mapper application window with several tabs: Home, Mapper, Advance, Book, Notes, Scheduler, and Start Page. The main window displays a table with the following columns: Active, Field, Field Description, Mapping Type, and Map Value.

Active	Field	Field Description	Mapping Type	Map Value
<input checked="" type="checkbox"/>	RMMG1-MATNR	Material Number		A
<input checked="" type="checkbox"/>	MSICHTAUSW-KZSEL(01)	Checkbox		X
<input checked="" type="checkbox"/>	MARA-BRGEW	Gross weight		B
<input checked="" type="checkbox"/>	MARA-NTGEW	Net weight		C

A context menu is open over the table, showing options such as Cut, Copy, Paste, Clone, Delete, Select All Rows, Fast Map, Simple View, Advance View, Active Rows, Inactive Rows, All Rows, Generate Template, Insert File Window Row, Insert Excel Report Row, Automap download of all input fields, and Restore to original recording. The 'Fast Map' option is expanded, showing sub-options: None, Excel To SAP (highlighted), and SAP To Excel.

At the bottom of the window, there is an Excel spreadsheet with the following data:

	A	B	C
1	Material Number	Gross weight	Net weight
2	100-100	350	300
3	100-101	450	400
4	100-110	550	500
5	100-120	650	600
6	100-130	750	700

The fields will be automatically mapped as shown below

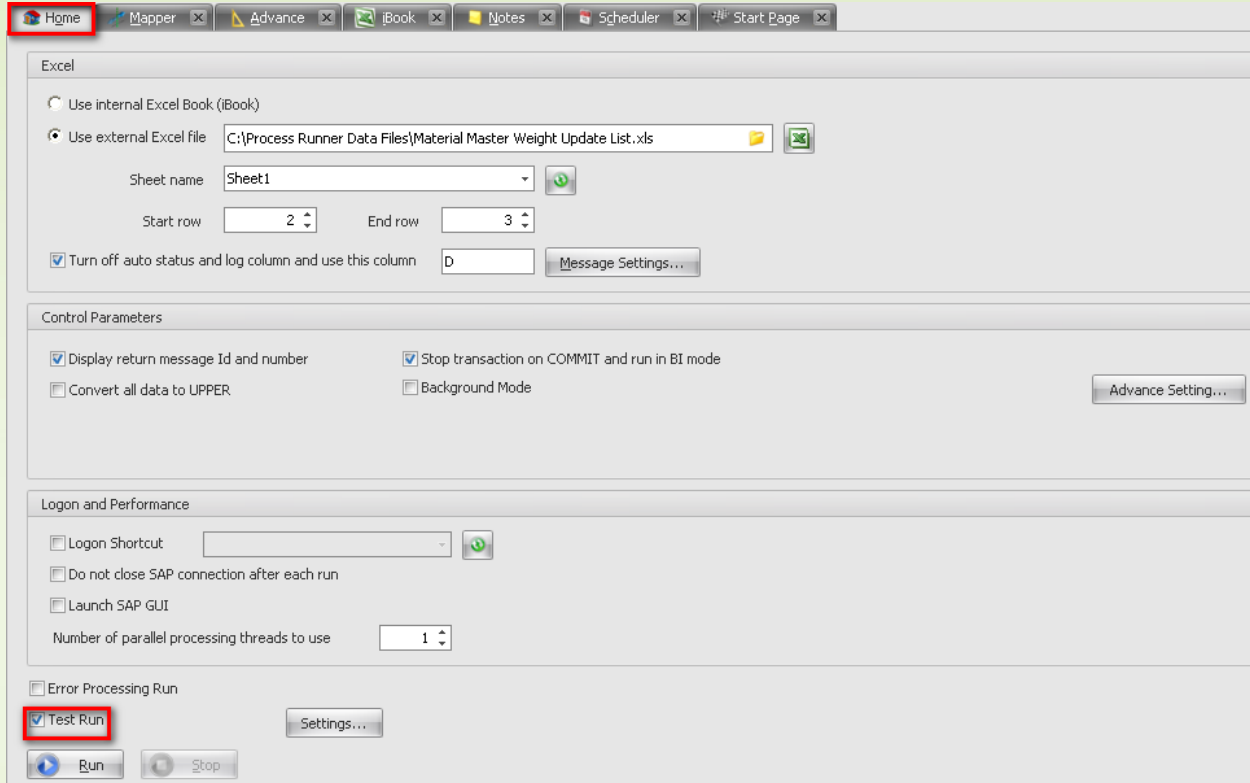
Active	Field	Field Description	Mapping Type	Map Value	Dynamic Formula
<input checked="" type="checkbox"/>	RMMG1-MATNR	Material Number		A	
<input checked="" type="checkbox"/>	MSICHTAUSW-KZSEL(01)	Checkbox		X	
<input checked="" type="checkbox"/>	MARA-BRGEW	Gross weight		B	
<input checked="" type="checkbox"/>	MARA-NTGEW	Net weight		C	

To manually change mapping just click on the drop-down in mapping type column

Active	Field	Field Description	Mapping Type	Map Value	Dynamic Formula
<input checked="" type="checkbox"/>	RMMG1-MATNR	Material Number		A	
<input checked="" type="checkbox"/>	MSICHTAUSW-KZSEL(01)	Checkbox		X	
<input checked="" type="checkbox"/>	MARA-BRGEW	Gross weight		B	
<input checked="" type="checkbox"/>	MARA-NTGEW	Net weight	<ul style="list-style-type: none"> Excel To SAP SAP To Excel Fix Single Value System Value Fix Excel Value 	C	

Test Run

Now we are ready to run mass update to material master weights. We are going to use MM02 transaction, take material number from column A and weights from column B and C.



The screenshot shows the 'Excel' configuration panel in the Process Runner application. The 'Home' tab is selected in the top navigation bar. The 'Excel' section is configured with the following settings:

- Use internal Excel Book (iBook)
- Use external Excel file: C:\Process Runner Data Files\Material Master Weight Update List.xls
- Sheet name: Sheet1
- Start row: 2
- End row: 3
- Turn off auto status and log column and use this column: D

The 'Control Parameters' section includes:

- Display return message Id and number
- Stop transaction on COMMIT and run in BI mode
- Convert all data to UPPER
- Background Mode

The 'Logon and Performance' section includes:

- Logon Shortcut
- Do not close SAP connection after each run
- Launch SAP GUI
- Number of parallel processing threads to use: 1

The 'Error Processing Run' section includes:

- Error Processing Run
- Test Run

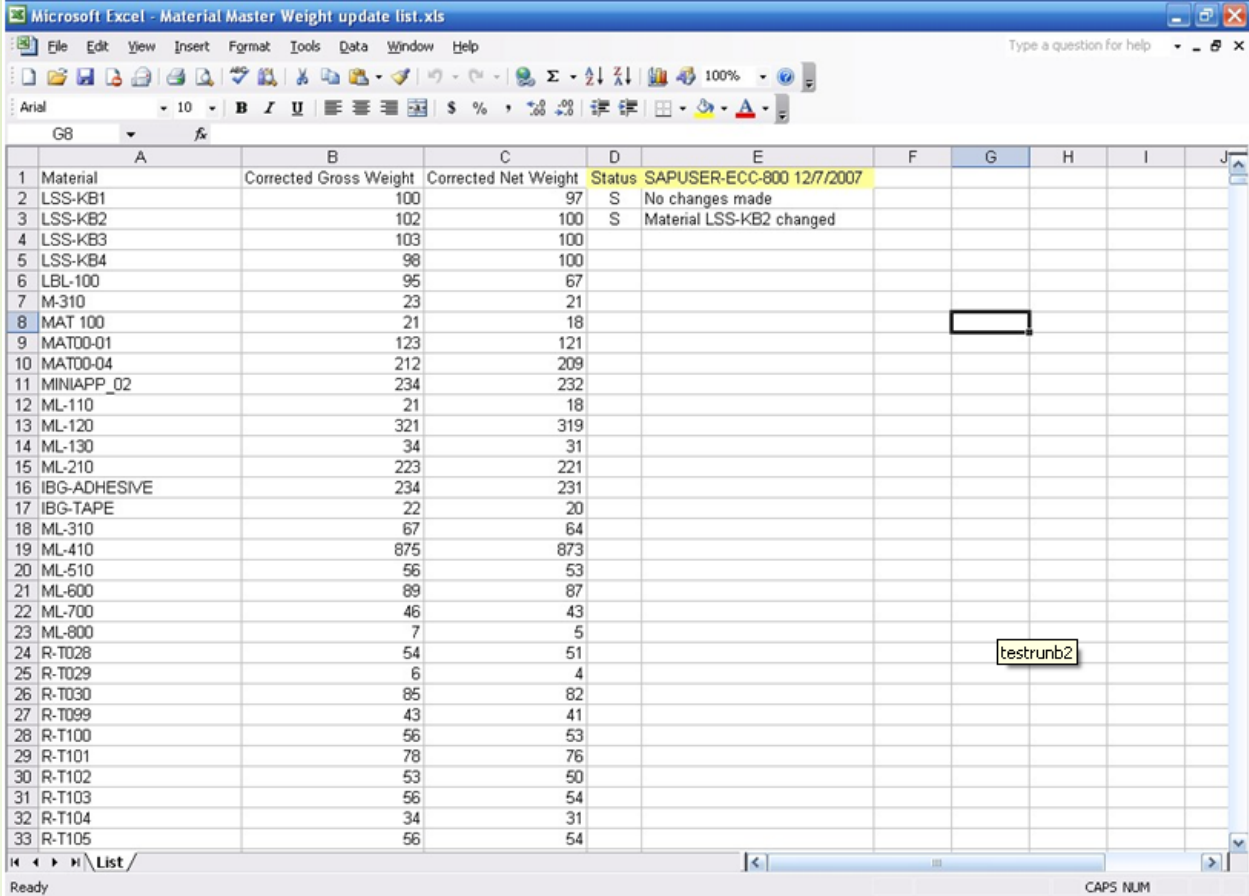
At the bottom, there are 'Run' and 'Stop' buttons. The 'Test Run' checkbox is highlighted with a red box.

We are now ready to do a small test run. We will start from Excel row 2 and stop at row 3. Finally we will click on Run button.

When you click Run – Process Runner will perform following actions:

1. SAP Logon. Select correct system; provide client, user name, password and language to logon.
2. Once logon is successfully, Process Runner will read recorded transaction and mapping instructions we carried out in earlier steps.
3. Process Runner will build data package by merging recorded transaction with mapped Excel and other values and send this package to SAP transaction for processing.
4. Once SAP is finishing executing the transaction, Process Runner will retrieve transaction status and message from SAP and place that next available empty columns in the spreadsheet
5. Repeats this process for all the Excel rows we selected to run.
6. Finally, log itself off from the SAP system.

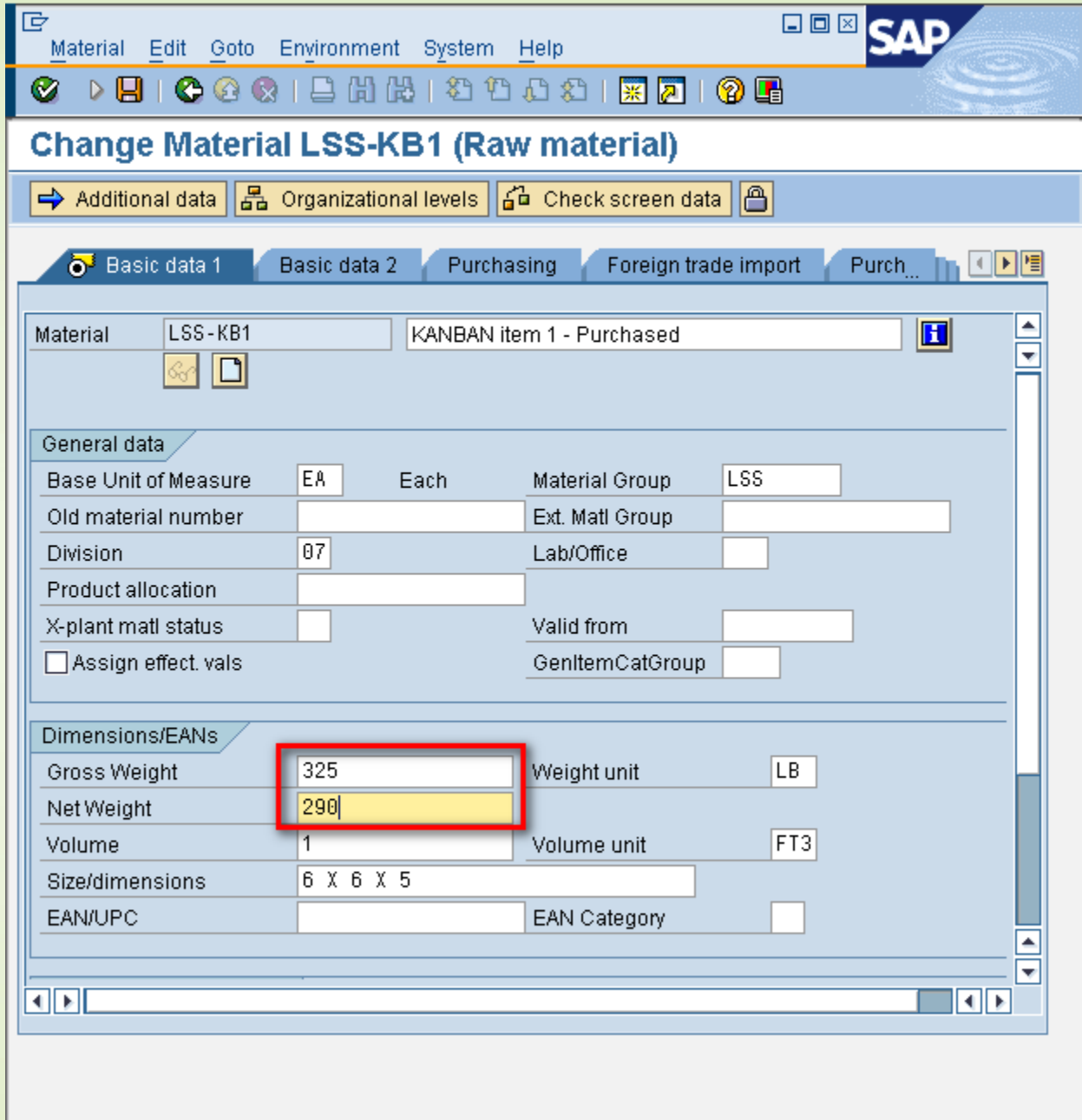
At the end of the test run, our example Excel spreadsheet should look like this:



	A	B	C	D	E	F	G	H	I	J
1	Material	Corrected Gross Weight	Corrected Net Weight	Status	SAPUSER-ECC-800 12/7/2007					
2	LSS-KB1	100	97	S	No changes made					
3	LSS-KB2	102	100	S	Material LSS-KB2 changed					
4	LSS-KB3	103	100							
5	LSS-KB4	98	100							
6	LBL-100	95	67							
7	M-310	23	21							
8	MAT 100	21	18							
9	MAT00-01	123	121							
10	MAT00-04	212	209							
11	MINIAPP_02	234	232							
12	ML-110	21	18							
13	ML-120	321	319							
14	ML-130	34	31							
15	ML-210	223	221							
16	IBG-ADHESIVE	234	231							
17	IBG-TAPE	22	20							
18	ML-310	67	64							
19	ML-410	875	873							
20	ML-510	56	53							
21	ML-600	89	87							
22	ML-700	46	43							
23	ML-800	7	5							
24	R-T028	54	51							
25	R-T029	6	4							
26	R-T030	85	82							
27	R-T099	43	41							
28	R-T100	56	53							
29	R-T101	78	76							
30	R-T102	53	50							
31	R-T103	56	54							
32	R-T104	34	31							
33	R-T105	56	54							

Notice that it did not report a change in 2nd row as we had already changed these values during recording.

Now, we should check weight data in SAP to verify that change actually occurred



The screenshot shows the SAP 'Change Material' interface for material LSS-KB1. The 'Dimensions/EANs' section is expanded, showing the following data:

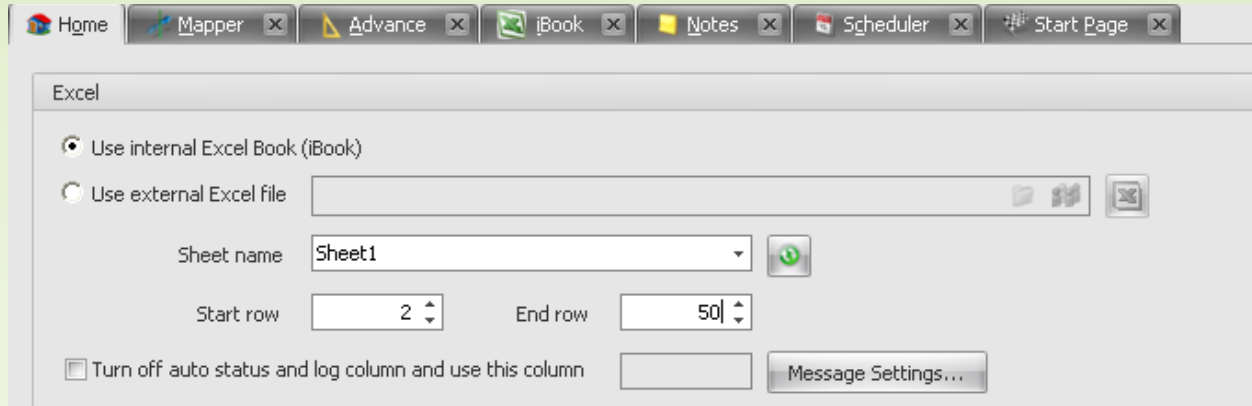
Field	Value	Unit
Gross Weight	325	LB
Net Weight	290	
Volume	1	FT3
Size/dimensions	6 X 6 X 5	
EAN/UPC		EAN Category

The 'Net Weight' field (290) is highlighted with a yellow background and a red border, indicating a change from the previous value of 325.

Only those fields got changed which you intended and no other.

Production Run

We are now ready to do full blast run. Change End row value to something big and Process Runner will run till it finds data in that sheet.



As Process Runner executes all these calls, it posts all the logs from SAP as it runs. You can switch to Excel and see what kinds of messages are returned.

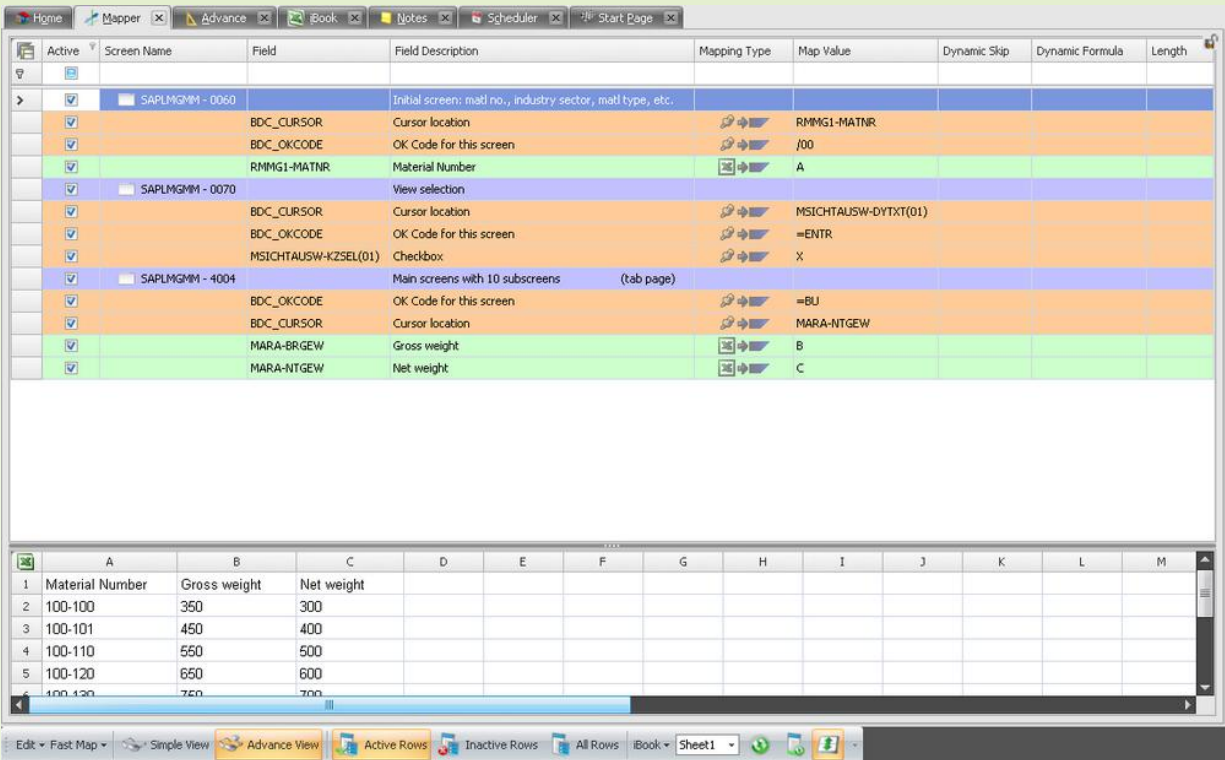
Hint: Process Runner is running; make sure you do not do anything that would lock Excel file. We recommend that you do not touch Excel

We are done with MM02 Transaction.

Transaction Extended – MM02 Writing & Reading Values Simultaneously

We can use Process Runner transaction to read as well as write values simultaneously. Here's how you do it.

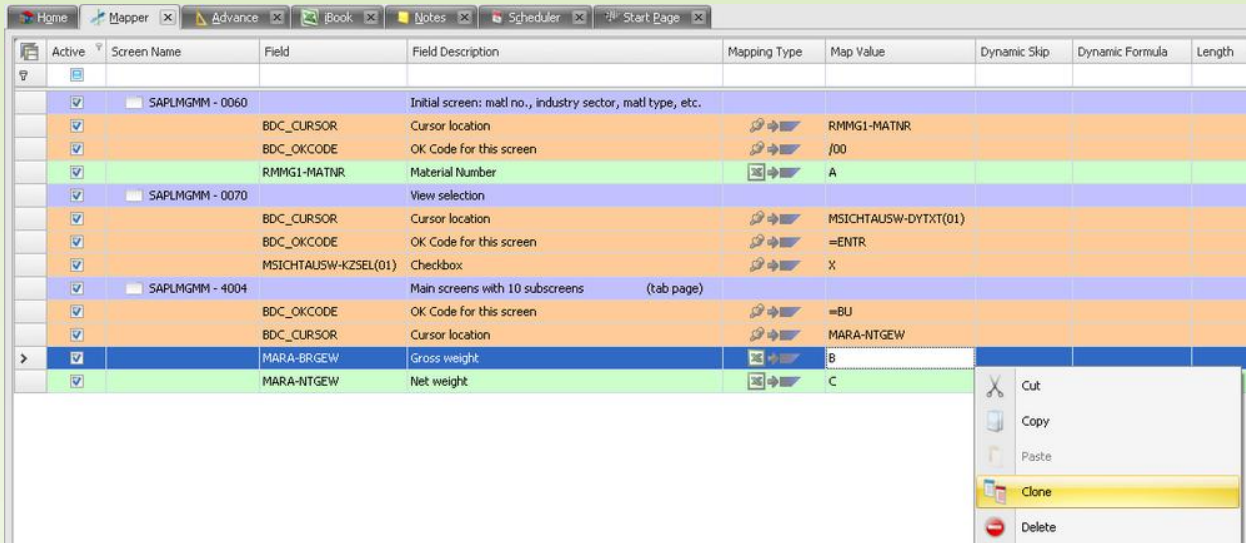
1. Record a new transaction for MM02. You can refer the tutorial section of Process Runner for recording a new transaction and go to the Mapper tab.



Active	Screen Name	Field	Field Description	Mapping Type	Map Value	Dynamic Skip	Dynamic Formula	Length
<input checked="" type="checkbox"/>	SAPLMGMM - 0060		Initial screen; matl no., industry sector, matl type, etc.					
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location	⇒	RMMG1-MATNR			
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen	⇒	/00			
<input checked="" type="checkbox"/>		RMMG1-MATNR	Material Number	⇔	A			
<input checked="" type="checkbox"/>	SAPLMGMM - 0070		View selection					
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location	⇒	MSICHTAUSW-DYTX(01)			
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen	⇒	=ENTR			
<input checked="" type="checkbox"/>		MSICHTAUSW-KZSEL(01)	Checkbox	⇒	X			
<input checked="" type="checkbox"/>	SAPLMGMM - 4004		Main screens with 10 subscreens (tab page)					
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen	⇒	=BU			
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location	⇒	MARA-NTGEW			
<input checked="" type="checkbox"/>		MARA-BRGEW	Gross weight	⇔	B			
<input checked="" type="checkbox"/>		MARA-NTGEW	Net weight	⇔	C			

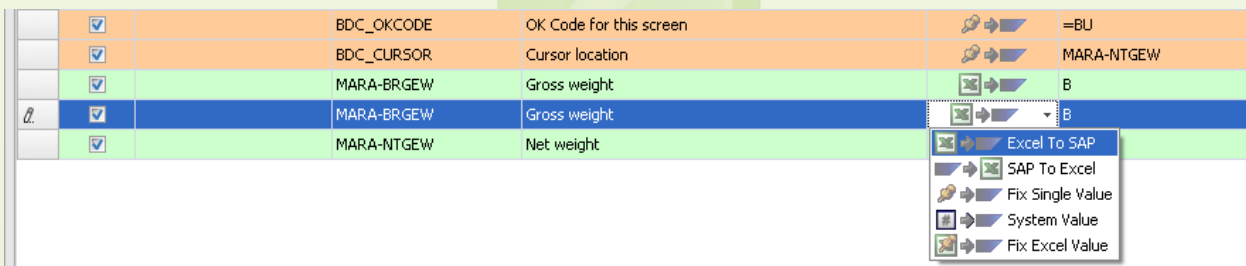
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Material Number	Gross weight	Net weight										
2	100-100	350	300										
3	100-101	450	400										
4	100-110	550	500										
5	100-120	650	600										
6	100-130	750	700										

2. Right click on MARA-GREW (Gross Weight) and click on clone.



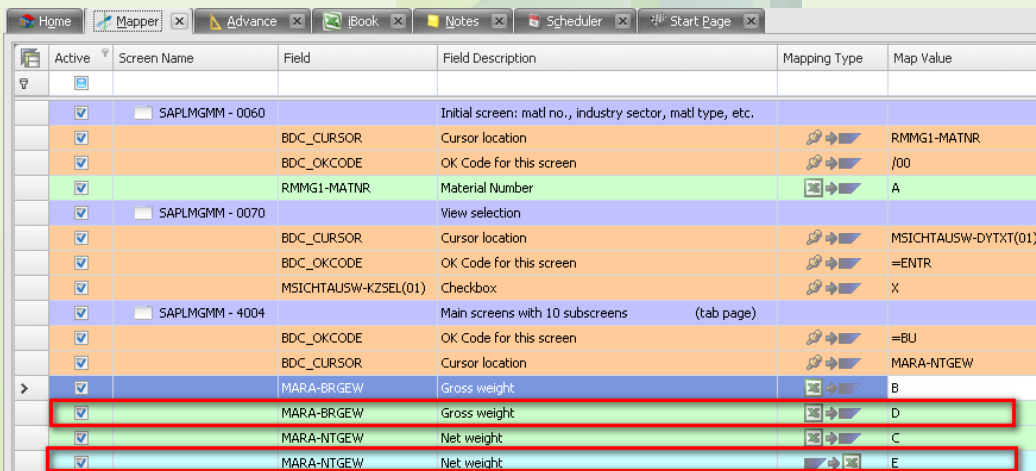
Active	Screen Name	Field	Field Description	Mapping Type	Map Value	Dynamic Skip	Dynamic Formula	Length
<input checked="" type="checkbox"/>	SAPLMGMM - 0060		Initial screen: matl no., industry sector, matl type, etc.					
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location		RMMG1-MATNR			
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen		/00			
<input checked="" type="checkbox"/>		RMMG1-MATNR	Material Number		A			
<input checked="" type="checkbox"/>	SAPLMGMM - 0070		View selection					
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location		MSICHTAUSW-DYTXT(01)			
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen		=ENTR			
<input checked="" type="checkbox"/>		MSICHTAUSW-KZSEL(01)	Checkbox		X			
<input checked="" type="checkbox"/>	SAPLMGMM - 4004		Main screens with 10 subscreens (tab page)					
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen		=BU			
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location		MARA-NTGEW			
<input checked="" type="checkbox"/>		MARA-BRGEW	Gross weight		B			
<input checked="" type="checkbox"/>		MARA-NTGEW	Net weight		C			

3. Map the newly copied row to SAP To Excel and column D as to retrieve the Gross Weight value before update from column B. SAP to Excel values in here will be the one that we get before any updates to that field.



<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen		=BU			
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location		MARA-NTGEW			
<input checked="" type="checkbox"/>		MARA-BRGEW	Gross weight		B			
<input checked="" type="checkbox"/>		MARA-BRGEW	Gross weight		B			
<input checked="" type="checkbox"/>		MARA-NTGEW	Net weight		C			

4. Similarly do it for Net weight.



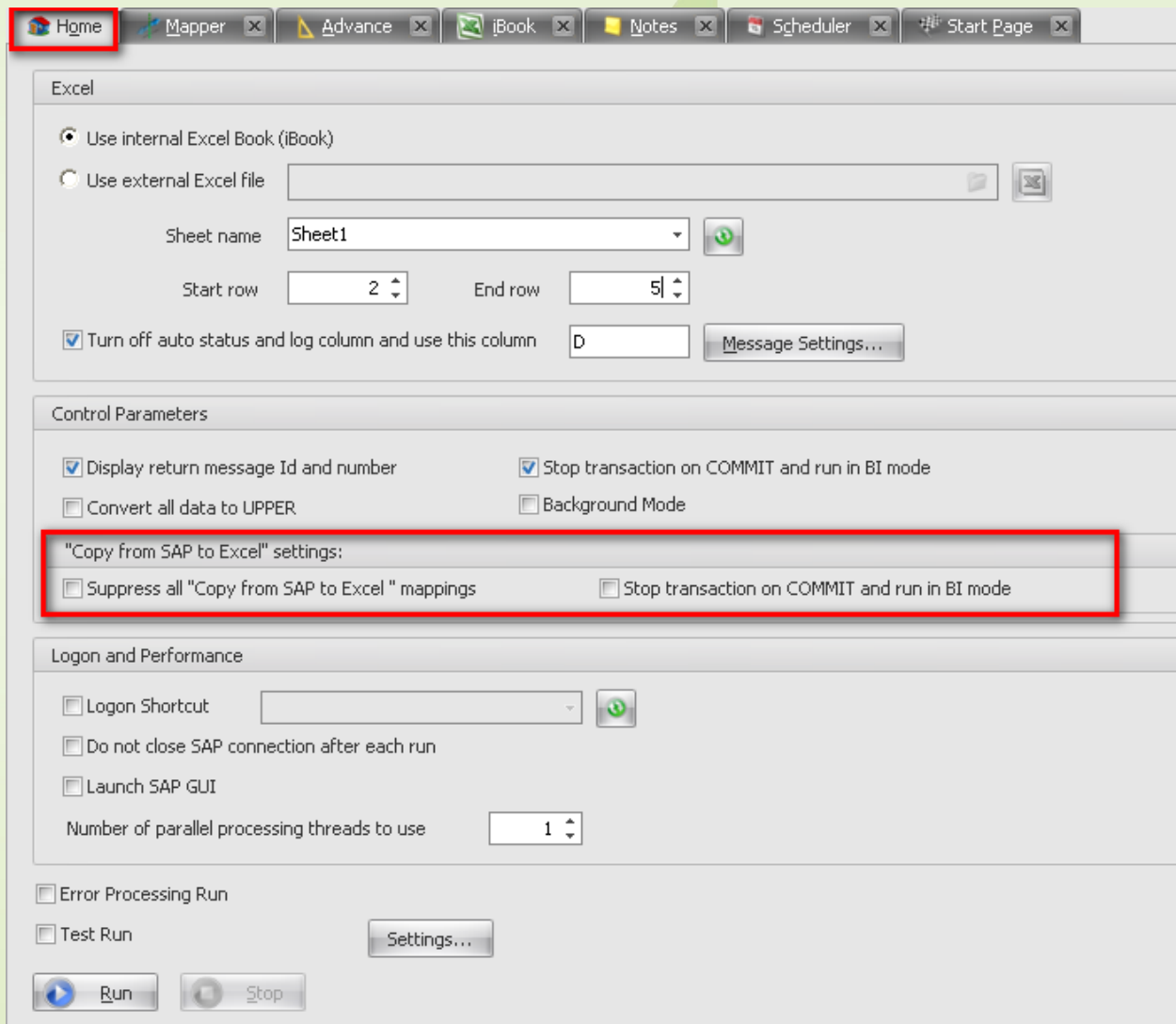
Active	Screen Name	Field	Field Description	Mapping Type	Map Value
<input checked="" type="checkbox"/>	SAPLMGMM - 0060		Initial screen: matl no., industry sector, matl type, etc.		
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location		RMMG1-MATNR
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen		/00
<input checked="" type="checkbox"/>		RMMG1-MATNR	Material Number		A
<input checked="" type="checkbox"/>	SAPLMGMM - 0070		View selection		
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location		MSICHTAUSW-DYTXT(01)
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen		=ENTR
<input checked="" type="checkbox"/>		MSICHTAUSW-KZSEL(01)	Checkbox		X
<input checked="" type="checkbox"/>	SAPLMGMM - 4004		Main screens with 10 subscreens (tab page)		
<input checked="" type="checkbox"/>		BDC_OKCODE	OK Code for this screen		=BU
<input checked="" type="checkbox"/>		BDC_CURSOR	Cursor location		MARA-NTGEW
<input checked="" type="checkbox"/>		MARA-BRGEW	Gross weight		B
<input checked="" type="checkbox"/>		MARA-BRGEW	Gross weight		D
<input checked="" type="checkbox"/>		MARA-NTGEW	Net weight		C
<input checked="" type="checkbox"/>		MARA-NTGEW	Net weight		E

5. As soon as you are done mapping as above, go to Home Tab.

You will notice an extra option in Control parameters automatically suggested by Process Runner. This is because in order to read/retrieve SAP To Excel fields we need to turn off "Stop transaction on Commit and run in BI mode".

There's an additional option to "Suppress All "Copy from SAP To Excel" mappings" which you can turn on to perform normal MM02 write function.

This way you can use the same transaction to work for two modes Read and Read-Write.



The screenshot shows the Innowera software interface with the 'Excel' configuration window open. The 'Home' tab is highlighted in red. The 'Control Parameters' section contains a red-bordered box around the 'Copy from SAP to Excel' settings, which includes 'Suppress all Copy from SAP to Excel mappings' and 'Stop transaction on COMMIT and run in BI mode'.

6. Notice the below output which shows gross weight and net weight before change in column D and E. It also updated Gross weight and Net weight from column B and C.

G29 Specify the relevant unit of weight							
	A	B	C	D	E	F	G
1	Material Number	Gross weight	Net weight	Gross weight	Net weight	Status	SAPUSER-DM0-800 29-Sep-2010 MM02_Change Material.itf [C]
2	100-100	350	300	100	85	S:M3-801	Material 100-100 changed
3	100-101	450	400	250	210	S:M3-801	Material 100-101 changed
4	100-110	550	500	250	210	S:M3-801	Material 100-110 changed
5	100-120	650	600	650	600	S:M3-810	No changes made
6	100-130	750	700	750	700	S:M3-810	No changes made
7	100-200	850	800	200	199	S:M3-801	Material 100-200 changed
8	100-210	950	900	950	900	S:M3-810	No changes made
9	100-300	1050	1000	300	299	S:M3-801	Material 100-300 changed
10	100-301	1150	1100	1 150	1 100	S:M3-810	No changes made
11	100-302	1250	1200	1 250	1 200	S:M3-810	No changes made
12	100-310	1350	1300	1 350	1 300	S:M3-810	No changes made
13	100-400	1450	1400	400	350	S:M3-801	Material 100-400 changed
14	100-401	1550	1500	1 550	1 500	S:M3-810	No changes made
15	100-410	1650	1600	1 650	1 600	S:M3-810	No changes made
16	100-420	1750	1700	1 750	1 700	S:M3-810	No changes made
17	100-430	1850	1800	1 850	1 800	S:M3-810	No changes made
18	100-431	1950	1900	1 950	1 900	S:M3-810	No changes made
19	100-432	2050	2000	2 050	2 000	S:M3-810	No changes made
20	100-433	2150	2100	2 150	2 100	S:M3-810	No changes made
21	100-500	2250	2200	600	588	S:M3-801	Material 100-500 changed
22	100-510	2350	2300	2 350	2 300	S:M3-810	No changes made
23	100-600	2450	2400	2 450	2 400	S:M3-810	No changes made
24	100-700	2550	2500	2 550	2 500	S:M3-810	No changes made