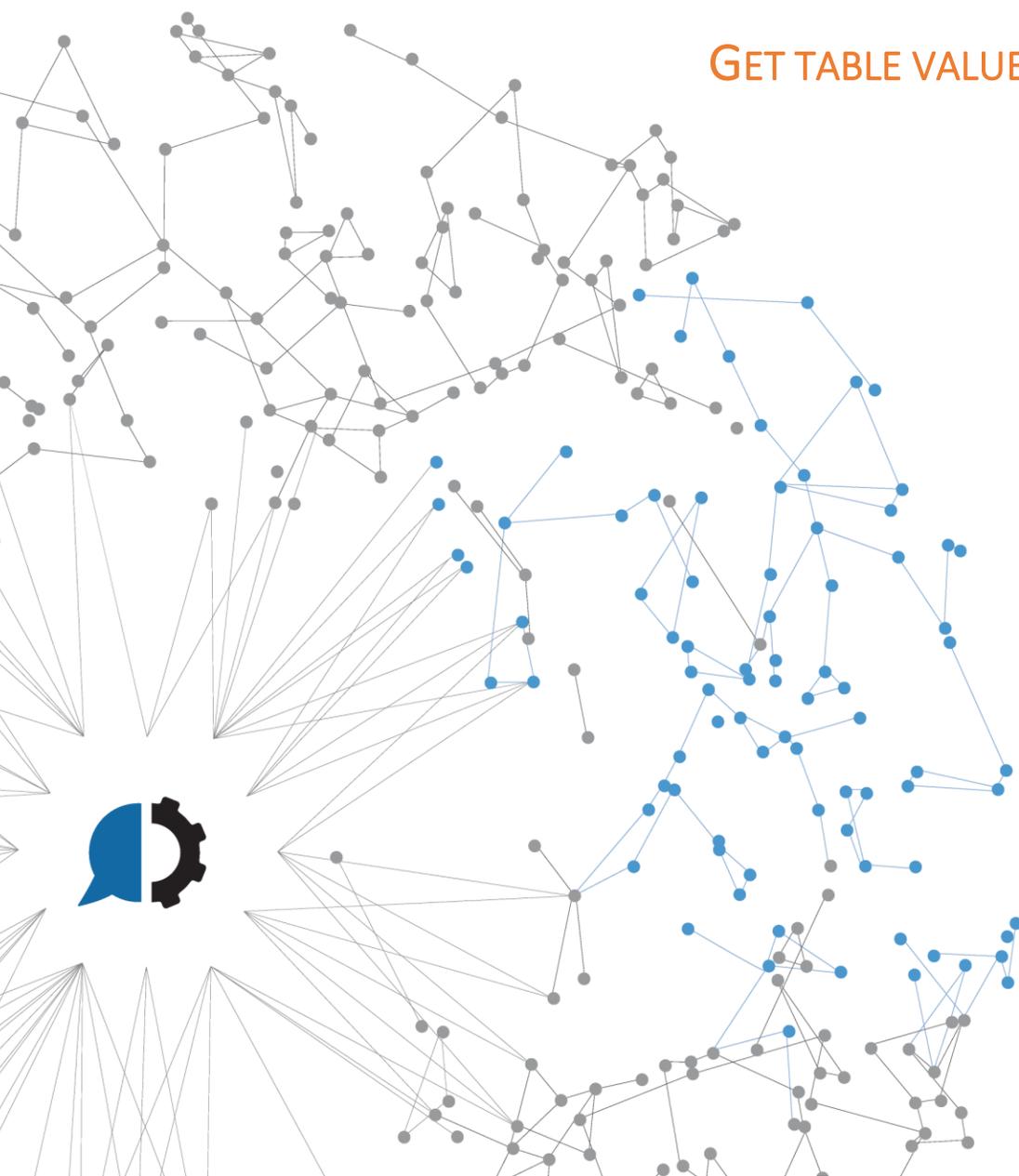




SAP BOT

GET TABLE VALUES WITH TX SE16





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DETAILS

DOCUMENT INFORMATION

AUTHOR	CUSTOMER	CREATION DATE
Helpsystems	<<CLIENT>>	22/01/2020

DESCRIPTION

This document provides information to help you understand the implementation, architecture and interfaces for the Automate Enterprise SAP BOT.

DELIVERY LIST

<<CLIENT>>	<<CONTACT1>> <<CONTACT2>>
HELPSYSTEMS	José Garay Dario Soria Sebastian Alvarez

FILE VERSIONING

VERSION	DATE	AUTHOR	DESCRIPTION
1.0	22/01/2020	José Garay	Initial document



OVERVIEW

This how to guide introduces the *SAP Bot - Get table values with TX SE16*. Instead of spending precious time and resources on repetitive, manual tasks, let Automate go to work and streamline your IT and business processes with robotic process automation. With the help of Automate we can take over manual steps which greatly reduces the repetitive activities and improves the quality and consistency of the work. The top processes being automated are reports generation, file movement, data import and export, and scheduling batch processing.

SAP Bot - Get table values with TX SE16 executes the SAP Transaction SE16 (Data Browser) to get the specified table values list and export the results to an excel or csv file. You will be able to set the SAP table and the output format. It also supports VARIANTS. These are pre saved table layout and values selection that you can prepare and store before in order to get customizable results.

SAP transaction Screen example for table T001:

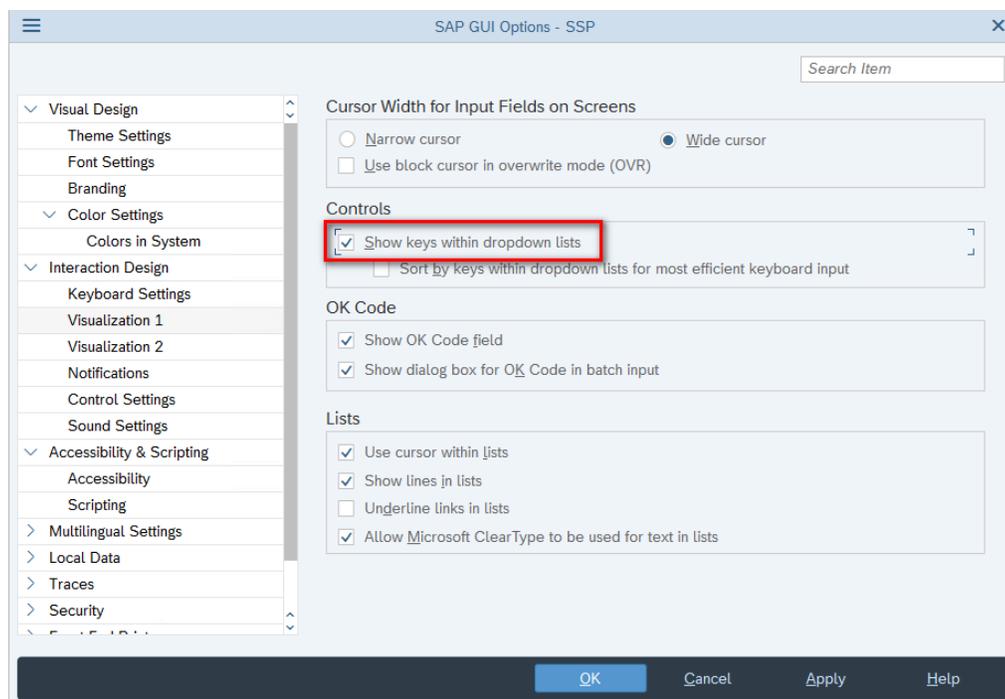
The screenshot displays the SAP Data Browser interface for table T001. The top bar shows the SAP logo and the title "Data Browser: Initial Screen". Below the bar, there is a search field containing "T001" and a "Table Name" label. The main area shows the "Data Browser: Table T001: Selection Screen" with a list of fields and their corresponding values. The fields are arranged in a grid format, with each field having a "to" field and a "copy" icon. The fields listed are:

Field	Value	to	Value	Copy Icon
BUKRS		to		Copy
BUTXT		to		Copy
ORT01		to		Copy
LAND1		to		Copy
WAERS		to		Copy
SPRAS		to		Copy
KTÖPL		to		Copy
WAABW		to		Copy
PERIV		to		Copy
KOKFI		to		Copy
RCOMP		to		Copy
ADRNR		to		Copy
STCEG		to		Copy
FIKRS		to		Copy
XFMCO		to		Copy
XFMCB		to		Copy
XFMCA		to		Copy
TXJCD		to		Copy
FMHRDATE		to		Copy
BUVAR		to		Copy
FDBUK		to		Copy
XFDIS		to		Copy
XVALV		to		Copy
XKRFM		to		Copy



PREREQUISITES

- **Set the display to "ALV Grid Display" (SAP List Viewer) for the user profile that will be used to execute the task:** The SAP tool provides common list operations and format to allow the exporting a list to Excel. See *Appendix B – Setting ALV Grid Display* for details on how to set it.
- **Automate:** The SAP BOT depends on Automate software in order to work. The minimal supported versions are:
 - Automate Ultimate 11.2
 - Automate Plus 11.2
 - Automate Desktop 11.2
- **Automate Markup Language file (.AML):** The primary file type used in Automate which contains the steps of our SAP BOT task
- **SAP Client:** Our minimal requirements are
 - SAP Logon 760
 - Show keys within dropdown lists enabled

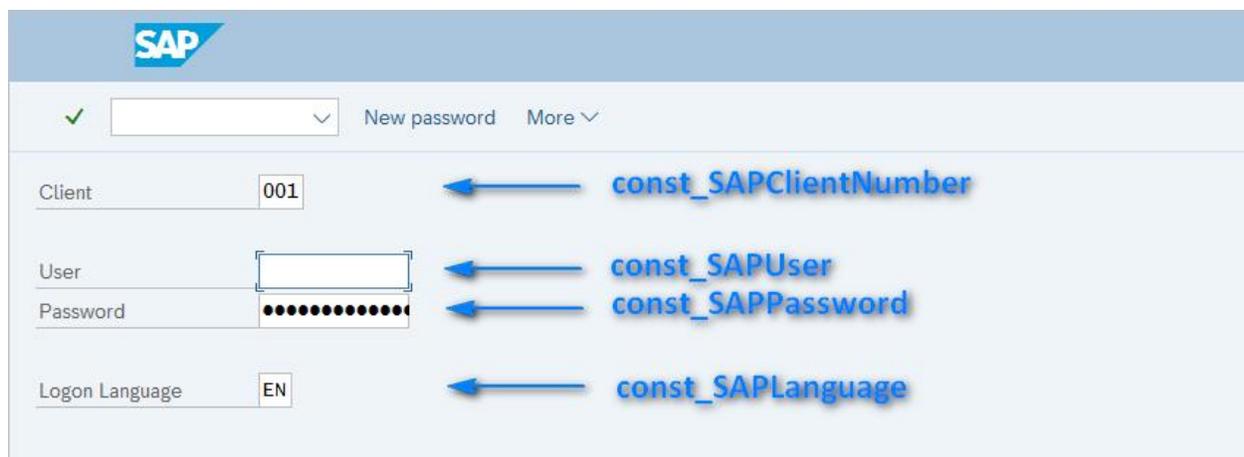
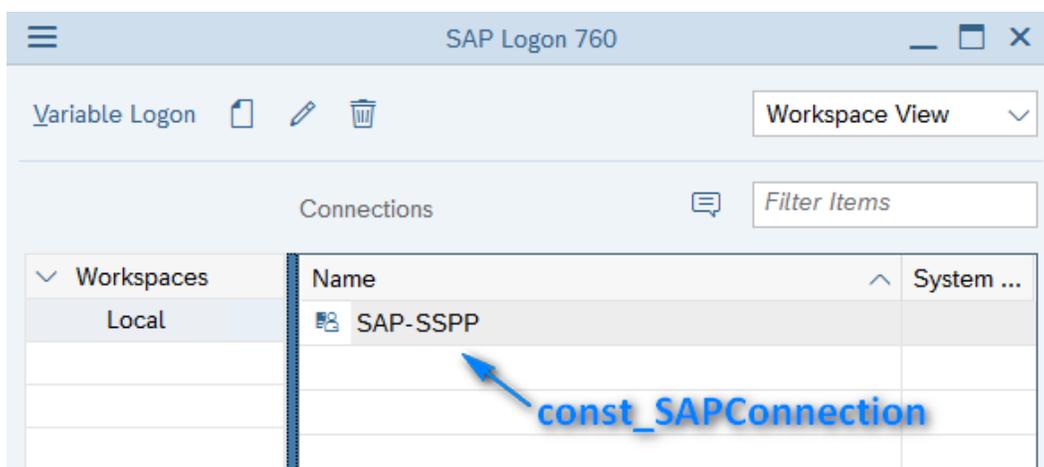




- A user with enough privileges to run the XD01 transaction

To check if you have the required level of authorization to run this and any transaction use SU53. Simply execute SE16 and then execute /NSU53 immediately afterwards. A report of all authorizations checked will then be displayed

- Automate constants for connection and SAP Login:
 - `const_SAPClientNumber`: SAP Client Number. By Default: 001
 - `const_SAPConnection`: SAP Login connection name
 - `const_SAPLanguage`: SAP Language. By Default: EN
 - `const_SapLogonPath`: SAP executable path. By Default: C:\Program Files (x86)\SAP\FrontEnd\SapGui\saplogon.exe
 - `const_SAPPassword`: SAP Login Password
 - `const_SAPUser`: SAP Login Username



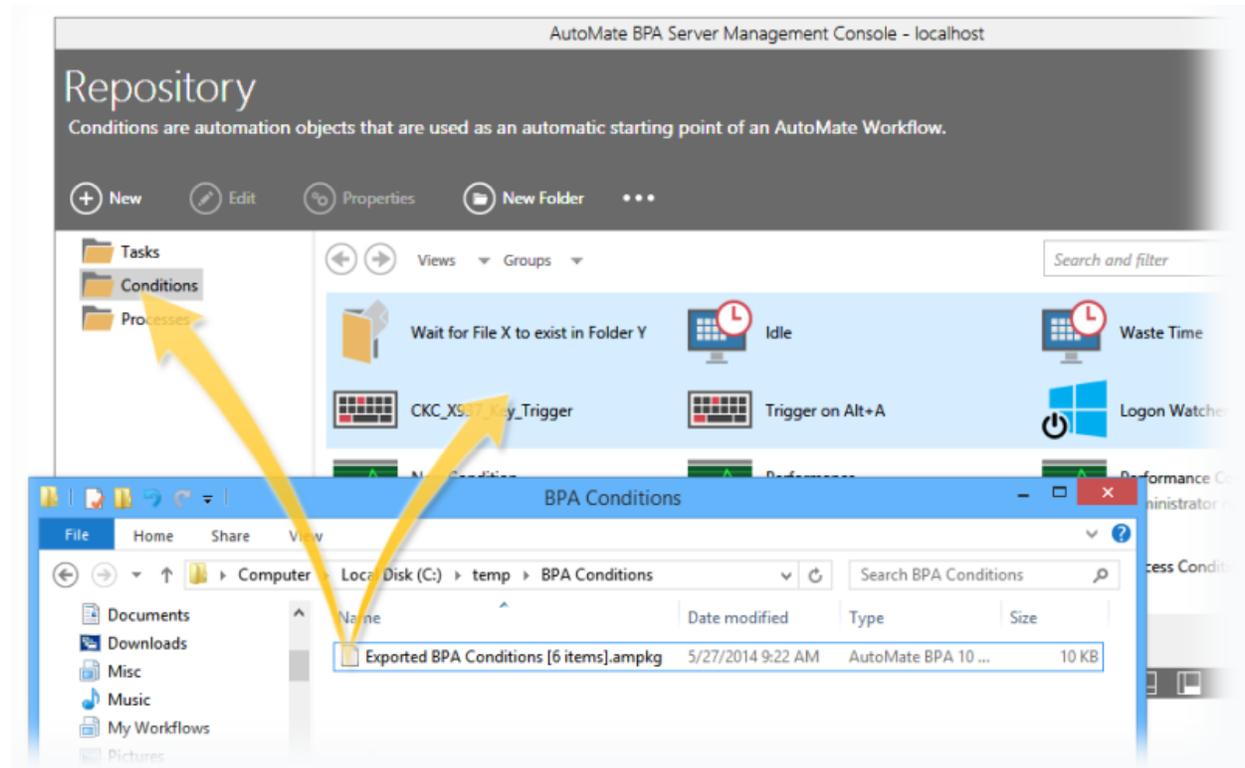


HOW TO IMPORT AN AUTOMATE TASK

Compatible file types can be imported to the repository via drag-and-drop

From the [Server Management Console](#), navigate to the Repository section

Drag the desired file(s) from its original location and drop them into the folder in the [SMC](#). Files can be dropped into the folder icon or the main panel (as shown below). Imported object(s) are automatically placed into their corresponding repository location.



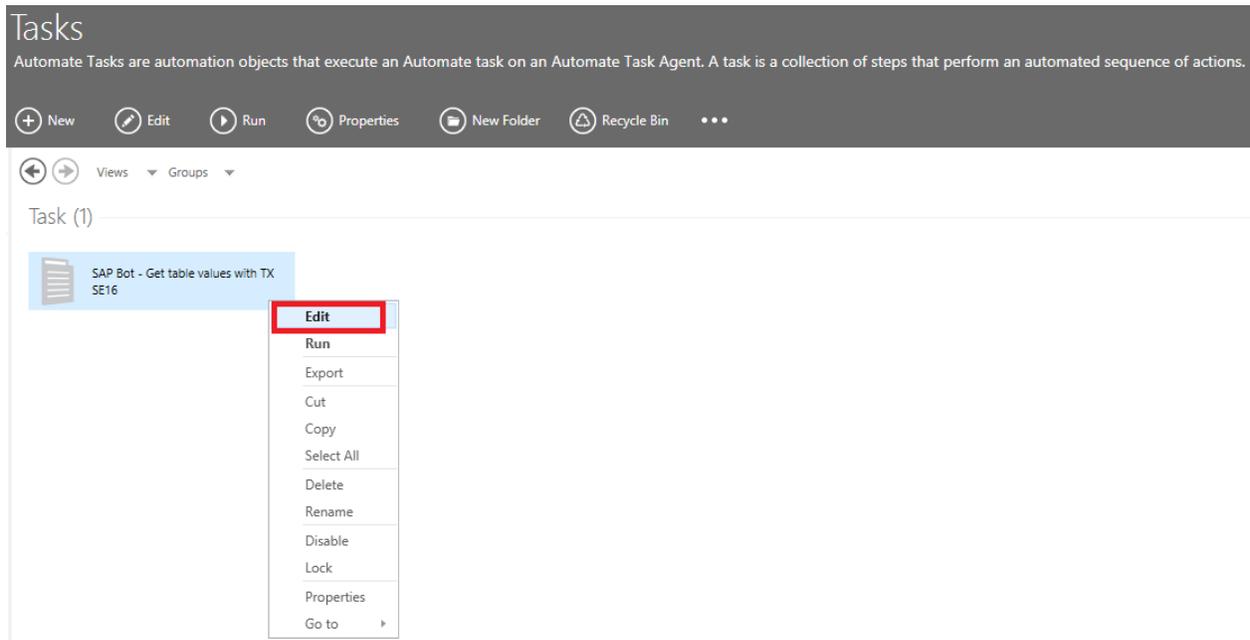


HOW TO EXECUTE THE SAP BOT - GET TABLE VALUES WITH TX SE16

If this is the first time running this task, we will need to set some parameters

Open the [Server Management Console](#) and locate the imported task

Edit the imported task by right clicking on the task and selecting [edit](#)



From [step 2](#) edit the next variables according to you desired output:

- [var_SAPTableName](#): The name of the table to get the values from.
- [var_SAPTableNameVariant](#): The name of the table Variant to get the values from. See appendix C to get more information about Variants in SAP.
- [var_FilePath](#): the location in which the ouptup file will be saved.
- [var_OutputFileFormat](#): the format of the output file. It can be set to “Excel” or “CSV”. We recommend to set it in Excel format for better performance.

The name of the Output file will be set automatically using the next name pattern example:

T001_22112019.xlsx

T001: Table code or Name

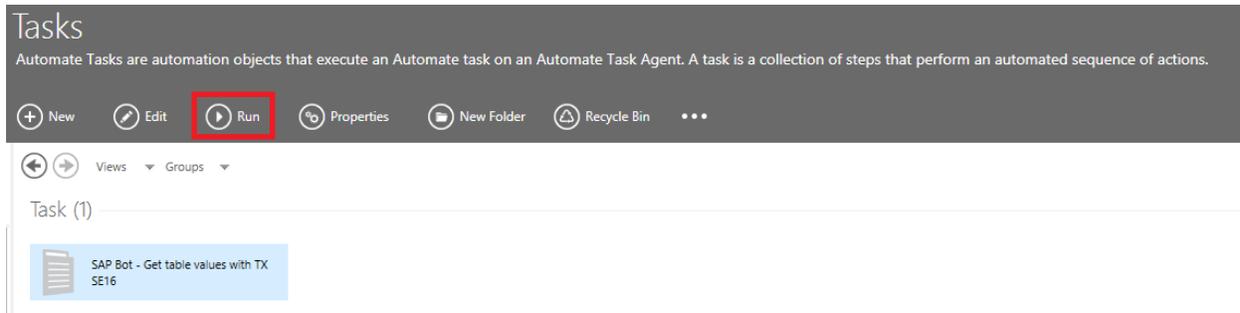
22112019: DateTime pattern (DDMMYYYY)

xlsx: Extension of the file in case the that [var_OutputFileFormat](#) was set in Excel (.CSV instead).

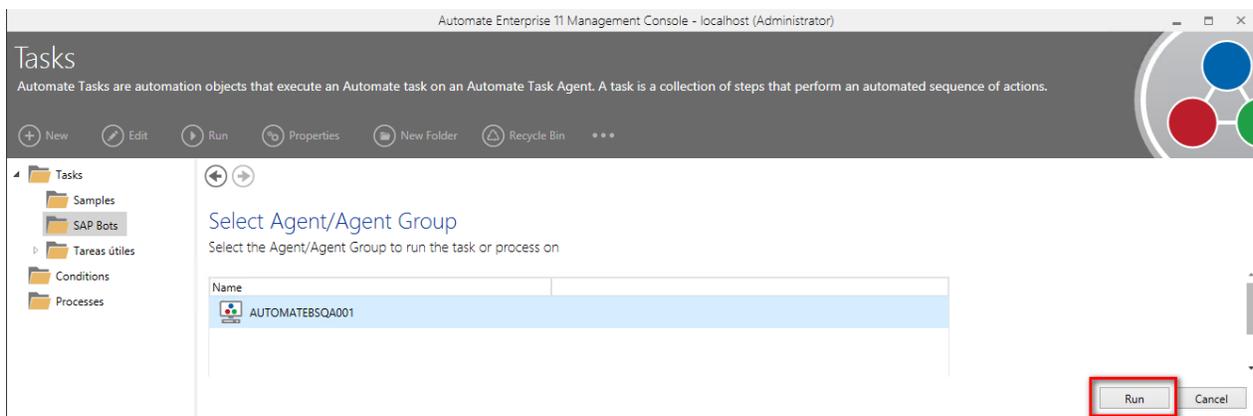


Save and close the task

Select the task and click on **Run**



Select your **Agent** and click on **Run** again





APPENDIX A – SAP TRANSACTION AND EXCEL OUTPUT EXAMPLE

SAP:

Data Browser: Table T001 Select Entries 69

MANDT	BUKRS	BUTXT	ORT01	LAND1	WAER	SPRAS	KTOPL	WAABW	PERIV	KOKFI	RCOMF	ADRNR	STCEG	FIKRS	XFMC0	XFMCB	XFMC4	TXJCD	FMHRDATE	BUVAR	FDBUK	XFDIS	XVALV	XSKFN	K4BER	XMWSN	MREGL	XGSB
001	0001	SAP A.G.	Walldorf	DE	EUR	D	INT	10	K4	2															0001			
001	0MB1	IS-B Musterbank Deutschl.	Walldorf	DE	EUR	D	OMB1	10	K4	1																		
001	AE01	Country Template AE	Dubai	AE	AED	E	INT	10	K4	1		0000023021																
001	AR01	Country Template AR	Argentinien	AR	ARS	S	INT	10	K4	2										2			X					
001	ARG1	Country Template AR	Argentinien	AR	ARS	S	INT	10	K4	2										2			X					
001	AT01	Country Template AT	Austria	AT	EUR	D	INT	10	K4	2										1								X
001	AU01	Country Template AU	Australia	AU	AUD	E	INT	10	V6	2										2			X	X		X		X
001	BE01	Country Template BE	Belgium	BE	EUR	E	CABE	10	K4	2			BE000009797							2			X	X	0001	X		X
001	BR01	Country Template BR	Brazil	BR	BRL	P	INT	10	K4	2										2			X					X
001	CA01	Country Template CA	Canada	CA	CAD	E	CANA	10	K4	2										2			X					X
001	CH01	Country Template CH	Switzerland	CH	CHF	D	CACH	10	K4	2										1			X					X
001	CL01	Country Template CL	Chile	CL	CLP	S	INT	10	K4	2			0000022910							2			X					X
001	CN01	Country Template CN	China	CN	CNY	1	CACN	10	K1	2										2			X		0001			
001	CO01	Country Template CO	Colombia	CO	COP	S	CACO	10	K4	2										2								X
001	COPY	Copy from CC.0001 (Only G/L accounts B-seg)		DE	EUR	D	INT	10	K4	2													X					X
001	CZ01	Country Template CZ	Czech Republic	CZ	CZK	C	CACZ	5	K4	2			CZ1234567890															X
001	DE01	Country Template DE	Germany	DE	EUR	D	GKR	10	K4	2													X					X
001	DF02	Country Template DE	Germany	DE	EUR	D	IKR	10	K4	2													X					X

Resulting Excel file:

Excel Output (Table T001 Select Entries):

MANDT	BUKRS	BUTXT	ORT01	LAND1	WAER	SPRAS	KTOPL	WAABW	PERIV	KOKFI	RCOMF	ADRNR	STCEG	FIKRS	XFMC0	XFMCB	XFMC4	TXJCD	FMHRDATE	BUVAR	FDBUK	XFDIS	XVALV	XSKFN	K4BER	XMWSN	MREGL	XGSB	XGJF
001	0001	SAP A.G.	Walldorf	DE	EUR	D	INT	10	K4	2																0001			X
001	0MB1	IS-B Musterbank Deutschl.	Walldorf	DE	EUR	D	OMB1	10	K4	1																			
001	AE01	Country Template AE	Dubai	AE	AED	E	INT	10	K4	1		0000023021																	
001	AR01	Country Template AR	Argentinien	AR	ARS	S	INT	10	K4	2													X					X	
001	ARG1	Country Template AR	Argentinien	AR	ARS	S	INT	10	K4	2													X					X	
001	AT01	Country Template AT	Austria	AT	EUR	D	INT	10	K4	2													X					X	
001	AU01	Country Template AU	Australia	AU	AUD	E	INT	10	V6	2													X	X		X		X	
001	BE01	Country Template BE	Belgium	BE	EUR	E	CABE	10	K4	2			BE000009797									X	X	0001	X		X	X	
001	BR01	Country Template BR	Brazil	BR	BRL	P	INT	10	K4	2												X						X	
001	CA01	Country Template CA	Canada	CA	CAD	E	CANA	10	K4	2												X						X	
001	CH01	Country Template CH	Switzerland	CH	CHF	D	CACH	10	K4	2												X						X	
001	CL01	Country Template CL	Chile	CL	CLP	S	INT	10	K4	2			0000022910									X						X	
001	CN01	Country Template CN	China	CN	CNY	1	CACN	10	K1	2												X		0001				X	
001	CO01	Country Template CO	Colombia	CO	COP	S	CACO	10	K4	2												X						X	
001	COPY	Copy from CC.0001 (Only G/L accounts B-seg)		DE	EUR	D	INT	10	K4	2													X					X	
001	CZ01	Country Template CZ	Czech Republic	CZ	CZK	C	CACZ	5	K4	2			CZ1234567890															X	
001	DE01	Country Template DE	Germany	DE	EUR	D	GKR	10	K4	2													X					X	
001	DE02	Country Template DE	Germany	DE	EUR	D	IKR	10	K4	2													X					X	
001	DK01	Country Template DK	Denmark	DK	DKK	K	INT	10	K4	2													X	X				X	
001	EG01	Country Template Egypt	Cairo	EG	EGP		INT	10	K4	2													X					X	

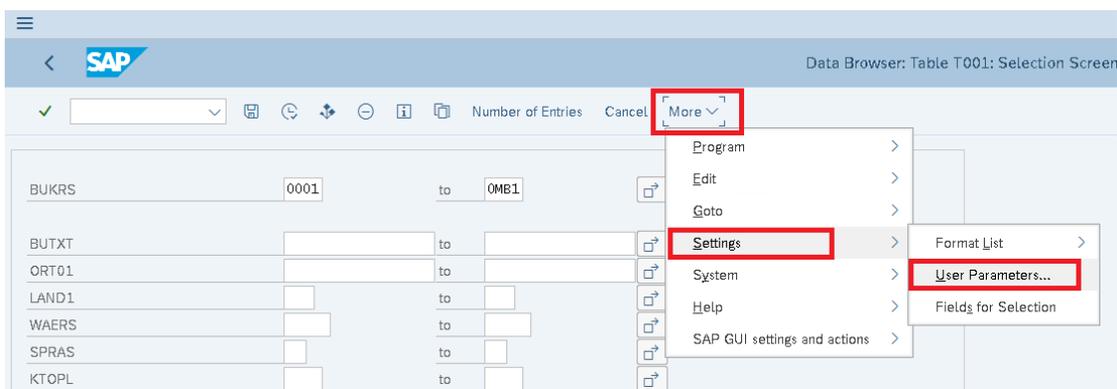


APPENDIX B – SETTING ALV GRID DISPLAY

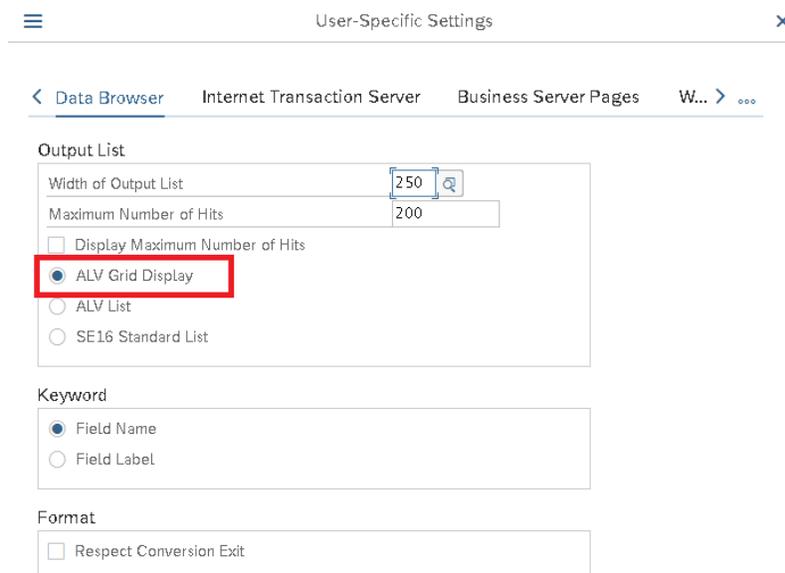
This can be set as a global setting or for a user specified. In this example we will set it for a specified user.

In order to set the ALV Grid Display, you will have to execute one the SAP transaction SE16, select a Table and then:

1. Go to More > Settings > User Parameters



2. In the User-Specific Settings go to the Data Browser tab and select ALV Grid Display





APPENDIX C – TROUBLESHOOTING

- Logs: Each iteration of our BOT creates a Log file for troubleshooting. You can locate the log file under C:\AutoMate\Tasks\<<TASK NAME>>. By Default, the task name is *SAP Bot - Get table values with TX SE16*.



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