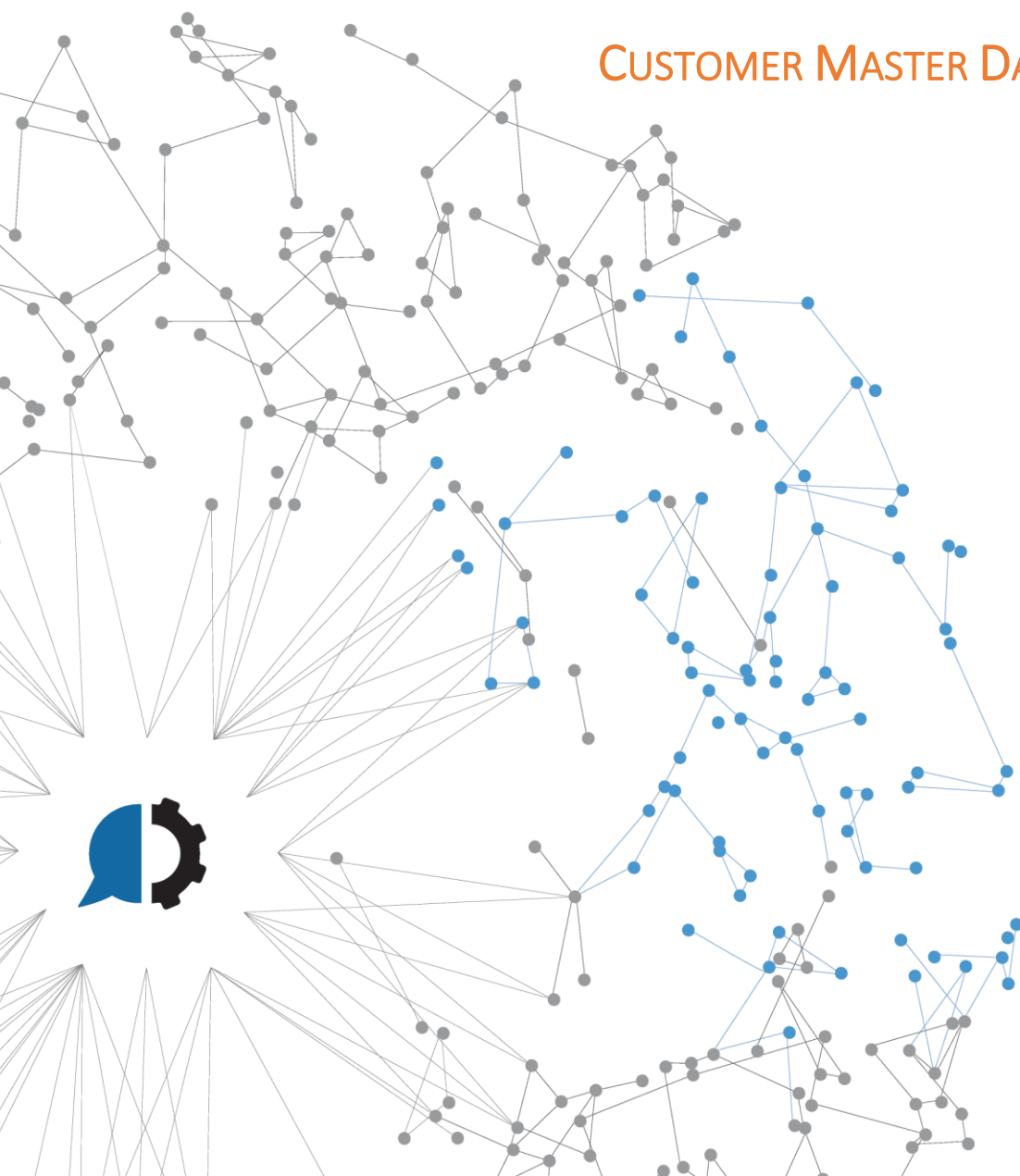




# SAP BOT

## CUSTOMER MASTER DATA (SD - XD01)





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## DETAILS

### DOCUMENT INFORMATION

AUTHOR	CUSTOMER	CREATION DATE
Helpsystems	<<CLIENT>>	<<DATE>>

### 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	<<DATE>>	Dario Soria	Initial document



## OVERVIEW

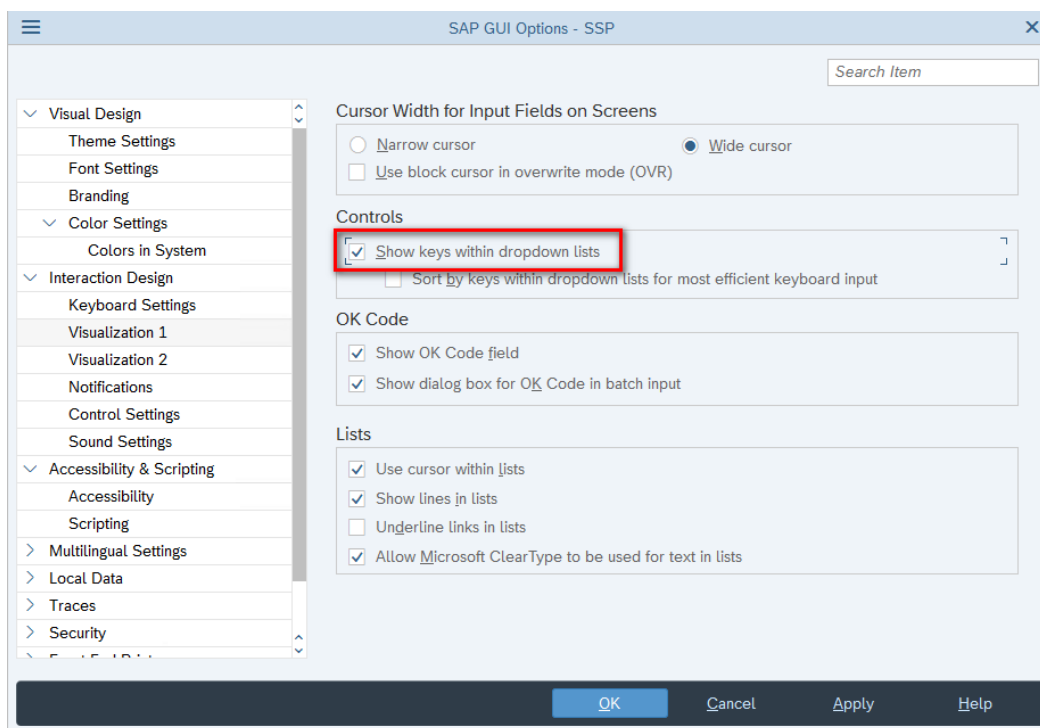
This how to guide introduces the *SAP Bot - Customer Master Data (SD - XD01)*. Instead of spending precious time and resources on repetitive, manual tasks, let Automate go to work and streamline your IT and business processes with robotic process automation. With the help of Automate we can take over 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 - Customer Master Data (SD - XD01)* uses an excel as the input for your customer generation. Each field corresponds to a particular field in your SAP transaction. Please, see section “HOW TO GENERATE THE INPUT FILE” for further explanation.



## PREREQUISITES

- **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 Create Customer Master Data INPUT.xlsx**
- **SAP:** Our minimal requirements are
  - SAP Logon 760
  - Show keys within dropdown lists enabled

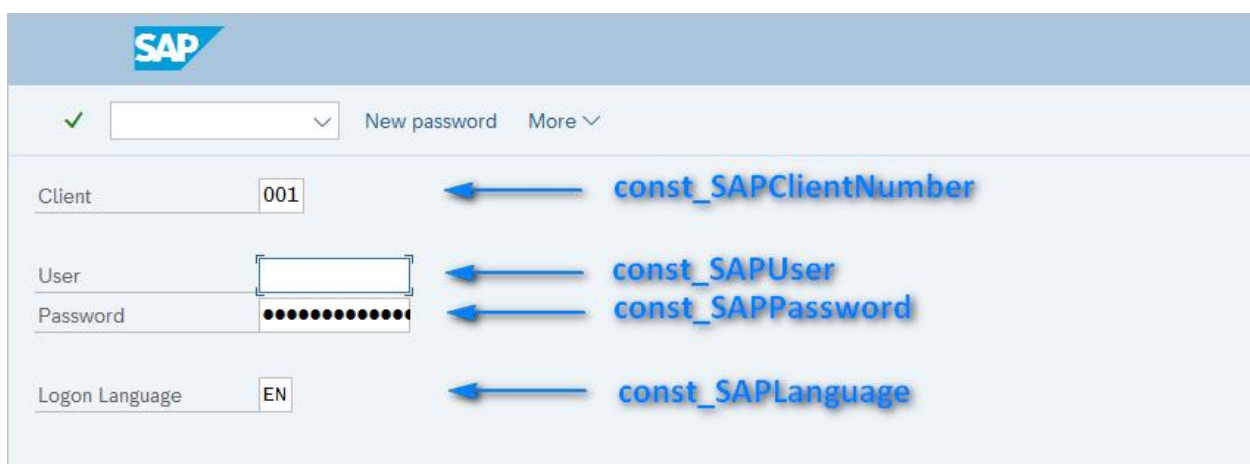
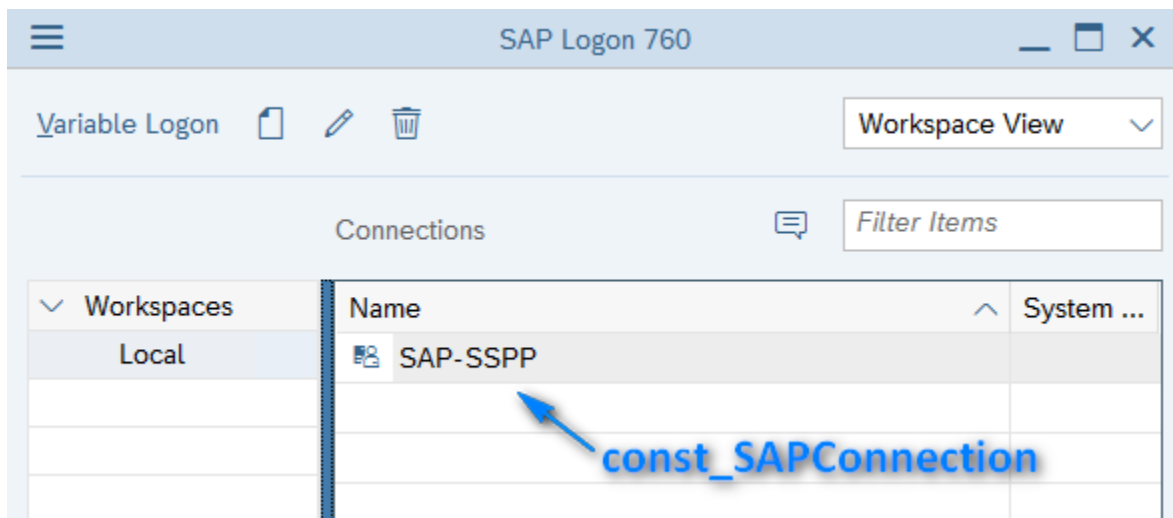


- A user with enough privileges to run the XD01 transaction

To check if you have the required level of authorization to run this and any transaction use SU53. Simply execute XD01 and then execute /NSU53 immediately afterwards. A report of all authorizations checked will then be displayed



- Automate constants:
  - `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



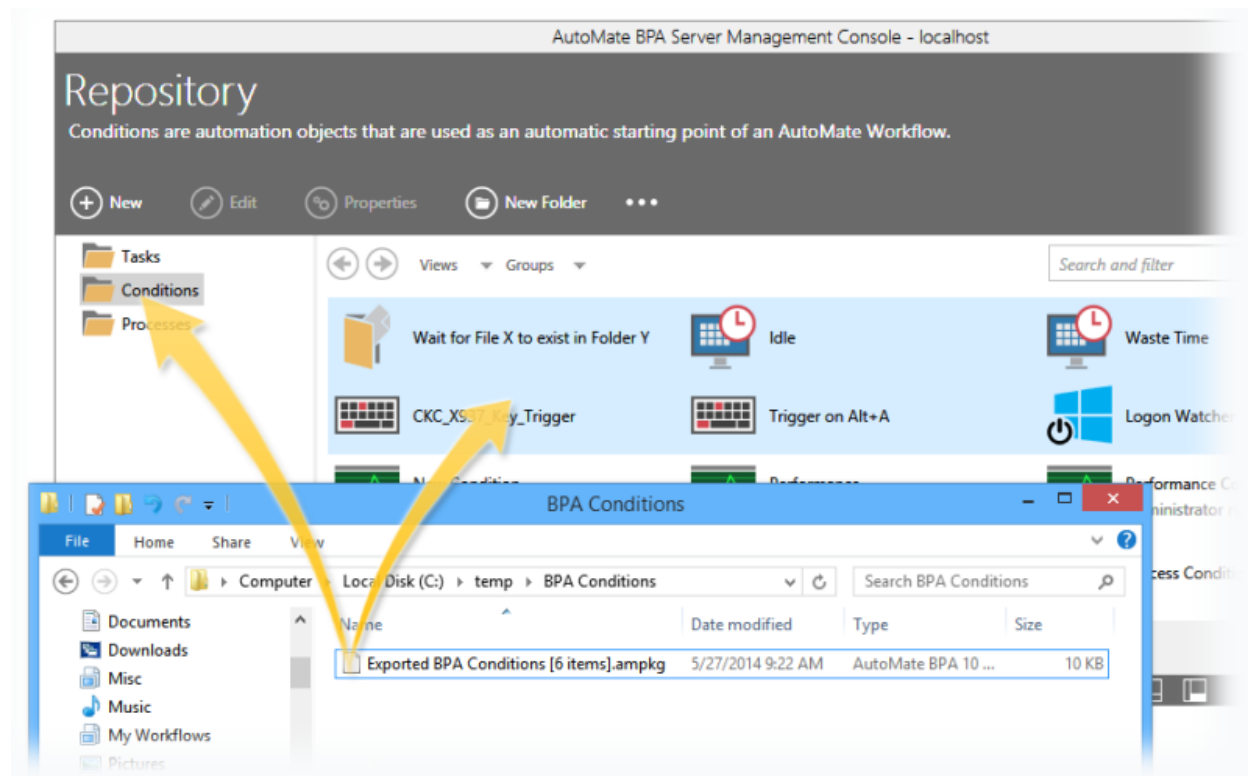


## HOW TO IMPORT AN AUTOMATE TASK

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 GENERATE THE INPUT FILE

The input file shipped with the SAP BOT provides a self-explanatory guide to complete all the fields in your transaction automatically.

Each section corresponds to a particular screen in your SAP Transaction

### Initial Screen

Customer Create: Initial Screen

Account group (Select)

Customer

Company code

Sales area

Sales Organization

Distribution Channel

Division

All sales areas... Customer's sales areas...

Reference

Customer

Company code

Sales organization

Distribution channel

Reference division

INICIALSCREEN										
Account group	Customer	Company code	Sales Organization	Distribution Channel	Division	Customer	Company code	Sales organization	Distribution channel	Reference division
RF02D-KTOKD	RF02D-KUNNR	RF02D-BUKRS	RF02D-VKORG	RF02D-VTWEG	RF02D-SPART	RF02D-REF_KUNNR	RF02D-REF_BUKRS	RF02D-REF_VKORG	RF02D-REF_VTWEG	RF02D-REF_SPART

### NOTES:

- We should only use the corresponding key from the Account Group field
- Red fields are mandatory
- **EN ACCOUNT GROUP SIEMPRE TIENE QUE DECIR DEBI?**





## Address

Address	Control Data	Payment Transactions	Marketing	Unloading Points	Contact Person
---------	--------------	----------------------	-----------	------------------	----------------

Preview

Name

Title

Name

\*

Search Terms

Search term 1/2

Street Address

Street/House number

Postal Code/City

\*

Country

Region

PO Box Address

PO Box

Postal code

Communication

Language

EN English

Telephone

Mobile Phone

Extension

Other communication...

Title	Name 1	Name 2	Search term 1/2	Street	House Number	City postal code	City	Country	Region
SZA1_D0100-TITLE_MEDI	ADDR1_DATA-NAME1	ADDR1_DATA-NAME2	ADDR1_DATA-SORT1	ADDR1_DATA-STREET	ADDR1_DATA-HOUSE_NUM1	ADDR1_DATA-POST_CODE1	ADDR1_DATA-CITY1	ADDR1_DATA-COUNTRY	ADDR1_DATA-REGION

PO Box	Postal code	Language	Telephone	Extension	Mobile Phone	Fax	Extension	E-Mail
ADDR1_DATA-PO_BOX	ADDR1_DATA-POST_CODE2	ADDR1_DATA-LANGU1	SZA1_D0100-TEL_NUMBER	SZA1_D0100-TEL_EXTENS	SZA1_D0100-MOB_NUMBER	SZA1_D0100-FAX_NUMBER	SZA1_D0100-FAX_EXTENS	SZA1_D0100-SMTP_ADDR

### NOTES:

- Red fields are mandatory

## Control Data



Address Control Data Payment Transactions Marketing Unloading Points Contact Person

Account control

Vendor	<input type="text"/>	<input type="button" value="Q"/>	Authorization	<input type="text"/>
Trading partner	<input type="text"/>		Group key	<input type="text"/>

Reference data/area

Location no. 1	<input type="text"/>	Location no. 2	<input type="text"/>	Check digit	<input type="text"/>
Industry	<input type="text"/>				
Train station	<input type="text"/>				
Express station	<input type="text"/>				
Transport Zone	<input type="text"/>		Location code	<input type="text"/>	

Tax information

Tax Number 1	<input type="text"/>	<input type="checkbox"/> Equalizatr tax
Tax Number 2	<input type="text"/>	<input type="checkbox"/> Natural person
		<input type="checkbox"/> Sales/pur.tax
Fiscal address	<input type="text"/>	
County code	<input type="text"/>	VAT Reg. No. <input type="text"/> <input data-bbox="1062 953 1190 993" type="button" value="Other..."/>
City code	<input type="text"/>	
Tax Number 5	<input type="text"/>	

Vendor	Authorization	Trading partner	Group key	Location no. 1	Location no. 2	Check digit	Industry	Train station	Express station	Location code
KNA1-LIFNR	KNA1-BEGRU	KNA1-VBUND	KNA1-KONZS	KNA1-BBBNR	KNA1-BBSNR	KNA1-BUBKZ	KNA1-BRSCH	KNA1-BAHNS	KNA1-BAHNE	KNA1-LOCCO

Tax Number 1	Tax Number 2	Equalizatr tax	Natural person	Sales/pur.tax	Fiscal address	County code	VAT Reg. No.	City code	Tax Number 5
KNA1-STCD1	KNA1-STCD2	KNA1-STKZA	KNA1-STKZN	KNA1-STKZU	KNA1-FISKN	KNA1-COUNC	KNA1-STCEG	KNA1-CITYC	KNA1-STCD5

Payment Transactions

Address Control Data Payment Transactions Marketing Unloading Points Contact Person

Bank Details

Ctry	Bank Key	Bank Account	Acct holder	Con...	IB...	IBANValue
<input type="text"/>	<input type="text"/>				<input type="button" value="Q"/>	
					<input type="button" value="Q"/>	
					<input type="button" value="Q"/>	

< >

Payment transactions

Alternative payer

Alternative payer in document

- ☐ Individual entries  
☐ Entries for referen.



Alternative payer	Indicator: Is an alternative payer allowed in document?
KNA1-KNRZA	KNA1-XZEMP

## Marketing

Address   Control Data   Payment Transactions   **Marketing**   Unloading Points   Contact Person

Classification

Nielsen ID	<input type="text" value="I"/>	Regional market	<input type="text" value=""/>
Customer class.	<input type="text" value=""/>		

Nielsen ID	Regional market	Customer class.
KNA1-NIELS	KNA1-RPMKR	KNA1-KUKLA

## Contact Person

Address   Control Data   Payment Transactions   Marketing   Unloading Points   **Contact Person**

Contact Person

Form of addr...	Name	First name	Depar...	Description	F...	Description

Position:   Name      Department  

Name	Department
*KNVK-NAME1	*TSAB-ABTNR

## Sales Area Data - Sales

✓         **Sales Area Data**      More ▾

Customer  

Address   Control Data   Payment Transactions   Marketing   Unloading Points   Contact Person

☒     

Name



Sales Shipping Billing Documents Partner Functions

Sales order

Sales district	<input type="text" value="I"/>	<input type="button" value="Q"/>	Order probab.	<input type="text" value="100"/>	%
Sales office	<input type="text"/>		AuthorizGroup	<input type="text"/>	
Sales group	<input type="text"/>		Item proposal	<input type="text"/>	
Customer group	<input type="text"/>		Acct at cust.	<input type="text"/>	
ABC class	<input type="text"/>		UoM Group	<input type="text"/>	
Currency	<input type="text" value="EUR"/>	European Euro	Exch. Rate Type	<input type="text"/>	
<input type="checkbox"/> Switch off rounding			PP cust. proc.	<input type="text"/>	
<input type="button" value="Product attributes"/>					

Pricing/Statistics

Price group	<input type="text" value="*"/>	
Cust.pric.proc.	<input type="text" value="1"/>	Standard
Price List	<input type="text"/>	

Agency business

<input type="checkbox"/> Relevant for agency business	<input type="checkbox"/> Doc. Index Active
---	--

Customer hierarchy

Hierarchy type	<input type="text"/>	
Higher-level customer	<input type="text"/>	
Valid from	<input type="text" value="31.10.2019"/>	Valid to <input type="text" value="31.12.9999"/>

Sales district	Order probab.	Sales office	AuthorizGroup	Sales group	Item proposal	Customer group	Acct at cust.	ABC class	UoM Group	Currency	Exch. Rate Type	Switch off rounding
KNVV-BZIRK	KNVV-AWAHR	KNVV-VKBUR	KNVV-BEGRU	KNVV-VKGRP	KNVV-VSORT	KNVV-KDGRP	KNVV-EIKTO	KNVV-KLABC	KNVV-MEGRU	KNVV-WAERS	KNVV-KURST	KNVV-RDOFF
PP cust. proc.	Price group	Cust.pric.proc.	Price List	Relevant for agency business	Doc. Index Active	Hierarchy type	Higher-level customer	Valid from	Valid to			
KNVV-PVKSM	KNVV-KONDA	KNVV-KALKS	KNVV-PLTYP	KNVV-AGREL	KNVV-BLIND	KNVV-HITYP	LINK_KNVH-HKUNNR	LINK_KNVH-VALID_FROM	LINK_KNVH-VALID_TO			

NOTES:

- Red fields are mandatory

Sales Area Data - Shipping



Sales   Shipping   Billing Documents   Partner Functions

### Shipping

Delivery Priority	<input type="text" value="1"/>	<input checked="" type="checkbox"/> Order Combination
Shipping conditions	<input type="text"/>	
Delivering Plant	<input type="text"/>	
<input type="checkbox"/> Relevant for POD		
POD timeframe	<input type="text"/>	

### Partial deliveries

<input type="checkbox"/> Complete delivery required		
Partial delivery per item	<input type="text"/>	Partial delivery allowed
Max. partial deliveries	<input type="text" value="9"/>	
<input type="checkbox"/> Unlimited tol.		
Underdel. Tolerance	<input type="text"/>	
Overdeliv. Tolerance	<input type="text"/>	

### General transportation data

Transportation Zone	<input type="text"/>
---------------------	----------------------

Delivery Priority	Order Combination	Shipping conditions	Delivering Plant	Relevant for POD	Complete delivery required
KNVV-LPRIO	KNVV-KZAZU	KNVV-VSBED	KNVV-VWERK	KNVV-PODKZ	KNVV-AUTLF

Max. partial deliveries	Unlimited tol.	Underdel. Tolerance	Overdeliv. Tolerance
KNVV-ANTLF	KNVV-UEBTK	KNVV-UNTTO	KNVV-UEBTO

Sales Area Data – Billing documents



Sales   Shipping   Billing Documents   Partner Functions

### Billing document

<input type="checkbox"/> Subs. invoice processing	<input type="checkbox"/> Rebate	<input type="checkbox"/> Price determin.
Invoicing dates	<input type="text" value="1"/>	
InvoicingListDates	<input type="text"/>	

### Delivery and payment terms

Incoterms	<input type="text"/>	<input type="text"/>
Terms of payment	<input type="text"/>	

### Accounting

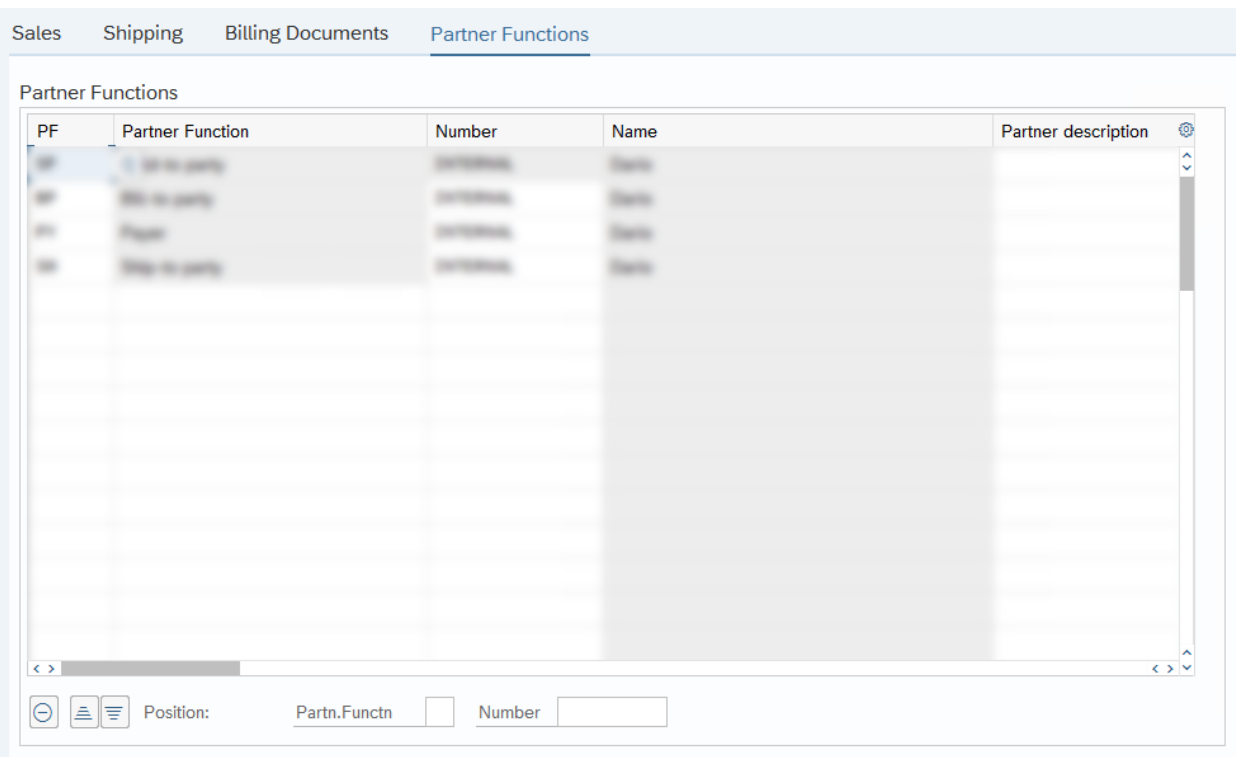
Acct assgmt group	<input type="text"/>
-------------------	----------------------

### Taxes

Country	Name	Tax category	Name
DE	Germany	MWST	Output Tax

Subs. invoice processing	Rebate	Price determin.	Invoicing dates	InvoicingListDates	Incoterms (Part 1)	Incoterms (Part 2)	Terms of payment	Acct assgmt group
KNVV-MRNKZ	KNVV-BOKRE	KNVV-PRFRE	KNVV-PERFK	KNVV-PERRL	KNVV-INCO1	KNVV-INCO2	KNVV-ZTERM	KNVV-KTGRD

Sales Area Data – Partner functions



Partn.Functn	Number
*KNVP-PARVW	*RF02D-KTONR



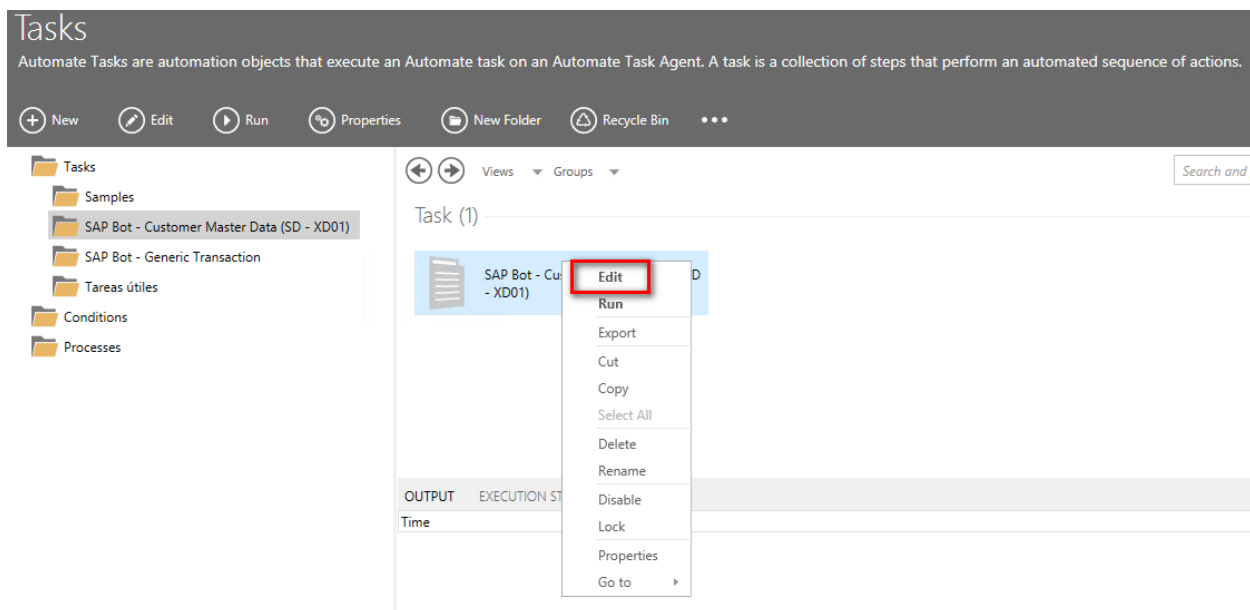
## HOW TO EXECUTE THE SAP BOT - CUSTOMER MASTER DATA (SD - XD01)

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

After editing the excel file [SAP Create Customer Master Data INPUT.xlsx](#) save it to a trusted location.

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

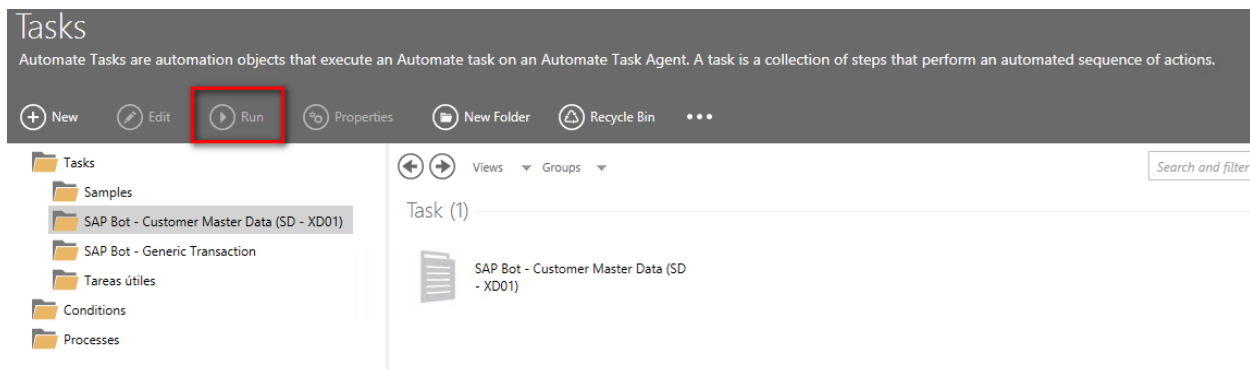
Edit the imported task by right clicking on the task and selecting [edit](#)



Locate [step 4](#) and edit the variable `var_ExcelInputpath` with the location of your excel file

[Save and close](#) the task

Select the task and click on [Run](#)



Select your [Agent](#) and click on [Run](#) again





Automate Enterprise 11 Management Console - localhost (Administrator)

# Tasks

Automate Tasks are automation objects that execute an Automate task on an Automate Task Agent. A task is a collection of steps that perform an automated sequence of actions.

New

Edit

Run

Properties

New Folder

Recycle Bin

...

Tasks

Samples

SAP Bots


Tareas útiles

Conditions

Processes

Select Agent/Agent Group

Select the Agent/Agent Group to run the task or process on

Name
 AUTOMATEBSQA001

Run

Cancel



## APPENDIX A - TROUBLESHOOTING

There are 2 very useful resources to diagnose and troubleshoot our BOT.

- Excel File: After each execution, the excel file is populated with the outcome of such execution. This is an example of the outcome:

Processed	Detail	
Yes/No	Date	Message
NO	11-4-2019 8:29:54 AM	Error: The method got an invalid argument. Field/Element: ADDR1_DATA-HOUSE_NUM1.
NO	11-4-2019 8:30:04 AM	Error: The method got an invalid argument. Field/Element: ADDR1_DATA-HOUSE_NUM1.
NO	11-4-2019 8:30:14 AM	Error: The method got an invalid argument. Field/Element: RF02D-KTOKD.
NO	11-4-2019 8:30:24 AM	Enter a postal code. Field or Last Screen: TAB02_CONTROLDATA
NO	11-4-2019 8:30:34 AM	Error: The method got an invalid argument. Field/Element: ADDR1_DATA-HOUSE_NUM1.
NO	11-4-2019 8:30:43 AM	Error: The method got an invalid argument. Field/Element: ADDR1_DATA-HOUSE_NUM1.
NO	11-4-2019 8:30:53 AM	Error: The method got an invalid argument. Field/Element: ADDR1_DATA-HOUSE_NUM1.
NO	11-4-2019 8:31:03 AM	Error: The method got an invalid argument. Field/Element: ADDR1_DATA-HOUSE_NUM1.
NO	11-4-2019 8:31:13 AM	Error: The method got an invalid argument. Field/Element: ADDR1_DATA-HOUSE_NUM1.
NO	11-4-2019 8:31:24 AM	Error: The method got an invalid argument. Field/Element: RF02D-KTOKD.
NO	11-4-2019 8:31:37 AM	Entry 2 does not exist in T188 (check entry). Field or Last Screen: TAB02_SALESAREA
YES	11-4-2019 8:31:53 AM	Success
NO	11-4-2019 8:32:04 AM	Error: The control could not be found by id. Field/Element: TAB03_PAYMENTTRANSACTIONS.

We log the output directly from SAP. For further explanation about these errors, please refer to the SAP help guide.

- 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 - Customer Master Data (SD - XD01)*



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#### **About HelpSystems**

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