



SAP Automation

SAP Automation - Agenda

 **Why SAP Automation?**

 **Example Screens**

 **Automation**

 Activating scripting

 Usable activities

 General challenges

Best Practices

Q&A

Online Resources

Why SAP Automation?

- Ui Largely Used ERP**
- Ui Complex tool, challenging to automate**
- Ui Not all fields are accessible with selector**

Example Screens

Personnel Management:

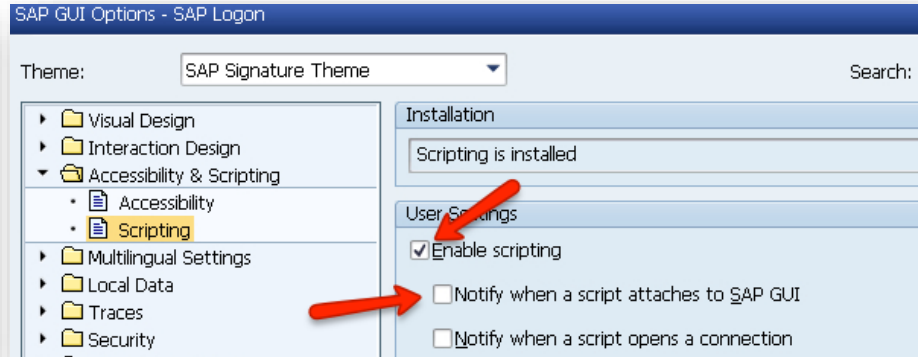
- PA10
- PB10

Activate scripting

■ Server side

Dynamic Profile Parameters		
Param. Name	Old Value	New Value
rstr/accept_remote_trace	false	false
rstr/buffer_size_kB	200	200
rstr/max_filesize_MB	16	16
rstr/max_lock_try	500	500
rstr/stacksize	10	10
sapgui/theme	TRADESHOW	TRADESHOW
sapgui/user_scripting	TRUE	TRUE
sapgui/user_scripting_disable_recording	FALSE	FALSE
sapgui/user_scripting_force_notification	FALSE	FALSE
sapgui/user_scripting_per_user	FALSE	FALSE

■ Client Side

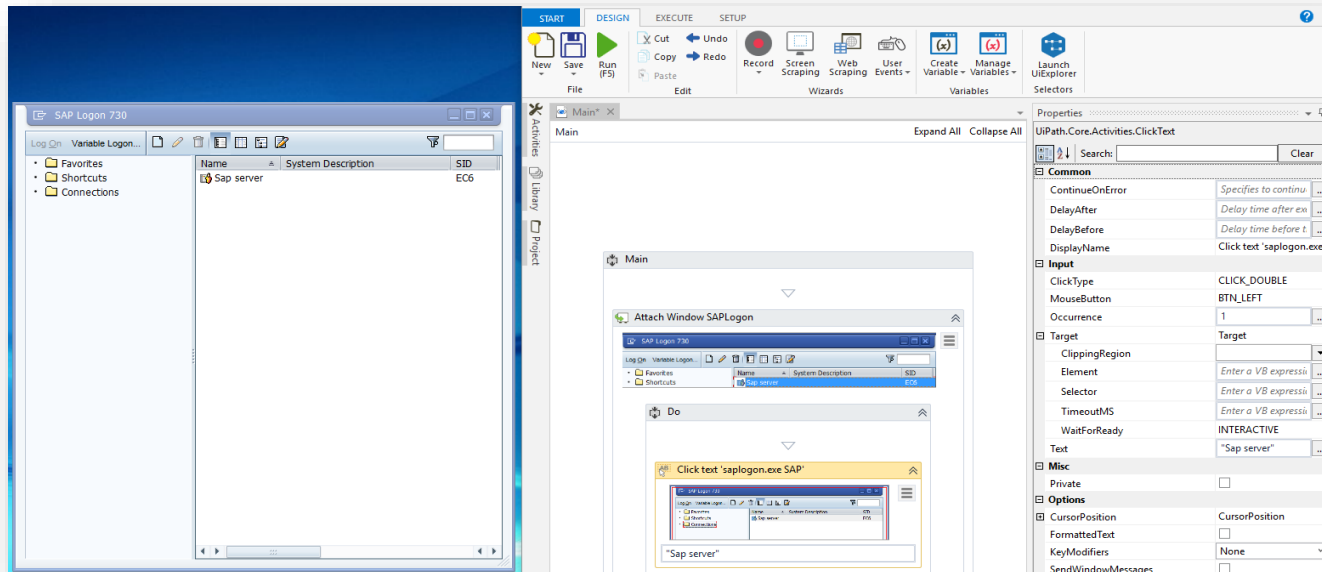


When Scripting activation is not possible, Click Image, Click Text & Keys will be used!

Automating Logon page

Why Click Text ?

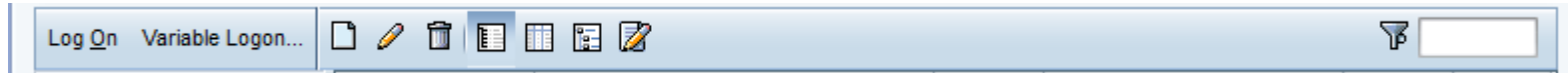
- There is no selector available
- The image might be different when is already selected.



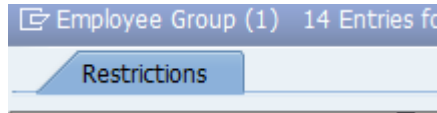
Automation choices

Interface:

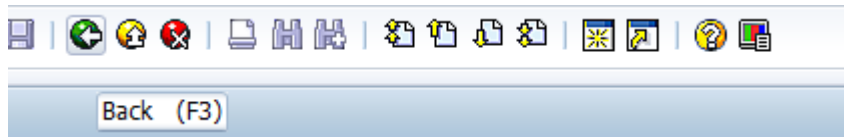
- Buttons – Normal Click or Click Image if inside a frame



- Lists and Tabs – Click Text



- Send Hotkey for most actions (going back, exit, moving to the next field with TAB etc.)



Extracting one value from tables

Create a dynamic selector by replacing '0' with a variable (Int32)

Hit list: Objects of type Person

Pers.No.	Employee/app.name
10	Herr James Bond
69	Mr. Horatio Holder
70	Miss Beryl Broughton
71	Mr. Harry Hill
72	Miss Freda Fish
73	Mr. Colman Mustard
1000	Anja Müller
1001	Michaela Maier
1002	Dipl.Kfm. Ulrike Zaucker
1003	Stefan Pfändli
1004	Olaf Paulsen
1005	Hanno Gutjahr
1006	Jasmin Awad
1007	Hanna Ulrich
1008	Hilde Müller
1009	Dr. Herbert Braunstein
1010	Dipl.Kfm. Frank Schmidtrohr
1011	Claudia Förster
1012	Sabine Grundig
1013	Wolfgang Humboldt
1014	Gudrun Hintze
1015	Alexander Rickes
1016	Mike Kaufman
1017	Annette Sturm



Robotic Process Automation

UiExplorer

Screen Element Selector View Help

Selector of current UI element is listed below.

```
<wnd app='saplogon.exe' cls='#32770' title='Hit list: Objects of type Person'/>  
<sap colName='PERNR' id='usr/cntGRID1/shellcont/shell' tableRow='0'/>
```

InitializeFromSelector: 0 ms

Current UI

- saplogon.exe | Hit list: Objects of type Person
 - GuiUserArea | usr
 - GuiCustomControl | GRID1
 - GuiContainerShell | shellcont
 - GuiGridView | shell
 - GuiGridViewCell | shell

Selector attrib...	Value
<input checked="" type="checkbox"/> id	usr/cntGRID...

Current attribu...	Value
Static attributes	
AppPath	C:\Progra...
aastate	focusable...
app	saplogon....
cls	#32770
colName	PERNR
foreground	0
id	usr/cntGRID...

Extracting entire tables

- Use Data Scraping wizard and select the whole table!

Automation

General challenges:

- Finding the easiest and fastest way to automate a screen
- Using delays for specific fields
- Some buttons become visible only after selection of the field
- List panes cannot be selected directly – Use click text

Exercise – Extract Payroll

Create a robot that can:

1. Log into SAP by taking the credentials from Windows Credentials
2. Go to PA10
3. Press F4 in order to reach HR Object Selection
4. Create a report for today
5. Display the Hit List
6. Get 10 employee from Hit List
7. Based on Pers. No search and extract the Payroll Information

Exercise – manual process details

Search based on the Pers.No.

Get 10 Pers.No.

Generate the Hit List for today

Path
Process Automation

Personnel File

Personnel No. 10 Pers.Assgn 00000010 Sales Representatives B...

Name Herr James Bond

EE group 1 Active Pers.area 200 Corporate - Uni

EE subgroup 00 Salaned

Hit List: Old Person

Pers.No.	Employee/app.name
10	Herr James Bond
69	Mr. Horatio Holder
70	Mrs Benyl Broughton
71	Mr. Harry Hill
72	Mrs Freda Fish
73	Mr. Colman Mustard
1000	Anja Müller
1001	Michaela Maier
1002	Dpl.Kfm. Ulrike Zaucker
1003	Stefan Pfändl
1004	Olaf Paulsen
1005	Hanna Gutjahr
1006	Jasmin Awad
1007	Hanna Ulrich
1008	Hilde Müller
1009	Dr. Herbert Braunstein
1010	Dpl.Kfm. Frank Schmidtrohr
1011	Claudia Förster
1012	Sabine Grundig
1013	Wolfgang Humboldt
1014	Godrun Henze
1015	Alexander Rickes
1016	Mike Kaufman
1017	Annette Sturm

HR Object Selection

Field group/fields

- Organizational assignment
- Personal data
- Challenge

Value ...

Reporting period Today 08.11.2016

Reporting set: Unrestricted


Selections


You can define selection conditions in this area.

Fields can only be selected by selecting them correspondingly from the field list. In addition, fields can be moved to this area using Drag & Drop

Hit list 5.408 Persons

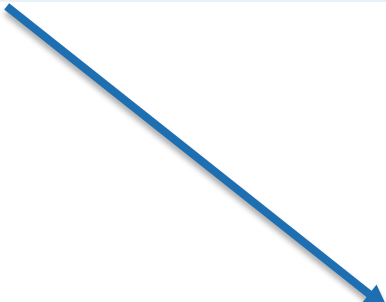
Exercise – manual process details

Personnel No. Pers.Assgn 

Name 

EE group Active Pers.area Frankfurt

EE subgroup Executive employ... Cost Center Human Resources



Personnel assignment details

Name Person ID
Original hire Key date

00001000 Director of Human Resources - (

- Hire date 01.01.1995
- Organizational Information
 - Pers.area Frankfurt / 1300
 - Subarea
 - EE group Active / 1
 - EE subgrp Executive employee / DS
 - Payr.area HR-D: Sal. employees / D2
 - Org. Unit Human Resources (D) / 00001001
 - Position Director of Human Resources - (D) / 50000052
- Payroll Information
 - Payr.area HR-D: Sal. employees / D2
 - Ann.salary 54544.56
 - WT Non-standard salary / MA90
 - PS type Metall / 40
 - PS Area Hessen / 02
 - PS group AT
 - PS level
- Benefit Information



Q&A

Online Resources

 [How to enable scripting in SAP](#)

 [Exercise available here](#)