

Addition of Custom Fields in Standard Transactions in the APO System



Applies to:

SAP APO (Advanced Planning and Optimizer) - SAP SCM 5.10. For more information, visit the [Supply Chain Management homepage](#).

Summary

The paper helps to guide you in creating custom subscreens / fields in standard SAP screen. Most of the standard transactions will provide an option to add custom developments. After reading this paper you will be able to find an option for custom development in standard transactions if any.

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Table of Contents

Introduction	3
Business Scenario	3
Pre-Requisites	3
Check for Screen Exits.....	3
Check for Enhancement Options	4
Following the Standards.....	6
Related Content.....	7
Disclaimer and Liability Notice.....	8

Introduction

Standard transactions are provided by SAP to enter data into database. To incorporate the need for additional information's to be stored in database; we have to customize the standard transactions. SAP has provided screen exits option to handle the situation. Of the possible screen exits, we are focusing on the possibility of a subscreen area in the standard screen.

Business Scenario

The customer would like to add a custom field to the standard transaction '/n/sapapo/mat1'. The custom field needs to be placed in the properties tab.

Pre-Requisites

To have better understanding of the discussed topic, the developer should have essential knowledge on the following:

- Module Pool programming – including subscreens
- Classes & Methods
- Concept of SAP Enhancements

Check for Screen Exits

The first and the foremost thing to be done are to check the program and screen of the mentioned transaction. Screen Exits for any transaction can be checked by following the steps as explained below.

Go in to the transaction and select any field in the particular screen which needs to be enhanced. Check the technical settings and find the screen number.

Ex: Transaction - /n/sapapo/mat1, Properties tab – Screen No: 201

The screenshot displays the SAP transaction /n/sapapo/mat1. The main window shows the 'Properties' tab for the field 'MATKL'. The 'Technical Information' window is open, showing the following data:

Screen Data	
Program Name	/SAPAPO/SAPLMAT_MASTER
Screen Number	0201

GUI Data	
Program Name	/SAPAPO/SAPLMAT_MASTER
Status	SHOW_ML

Field Data	
Table Name	/SAPAPO/MATIO
Table category	Struct.
Field Name	MATKL
Data Element	/SAPAPO/MATKL_P
DE Supplement	0
Parameter ID	/SAPAPO/MKL

Field Description for Batch Input	
Screen Field	/SAPAPO/MATIO-MATKL
Program Name	/SAPAPO/SAPLMAT_MASTER
Screen Number	0111

The main window also shows the following data:

Product	1021
Prod. Descript.	TAP 6-48NS TAPER test
Location	1214 Irwin Indust.
External Product Number	00000000000001021
Created By	APO-REMOTE 11/20/2008 13:42:29
Changed By	ECC-REMOTE
Material Group	27112802
Product Determ.	<input type="checkbox"/>
Prod. Hierarchy	
Ctry of Origin	
Transport Group	0001
Batch Mgmt Req.	<input type="checkbox"/>

To check for the enhancement options available for screen 201, double click on the screen which takes you to the flow logic of the screen.

Check for any '**CALL SUBSCREEN subscreen INCLUDING program screen**' statement. Check the include program and screen if it is providing any option to add enhancements.

Most probably there will be a program which acts as a container which can hold the custom subscreens of programs. There will be logic to add a definite number of subscreens in the container. The custom fields which we need to add should be created in the subscreen of our program.

Check for Enhancement Options

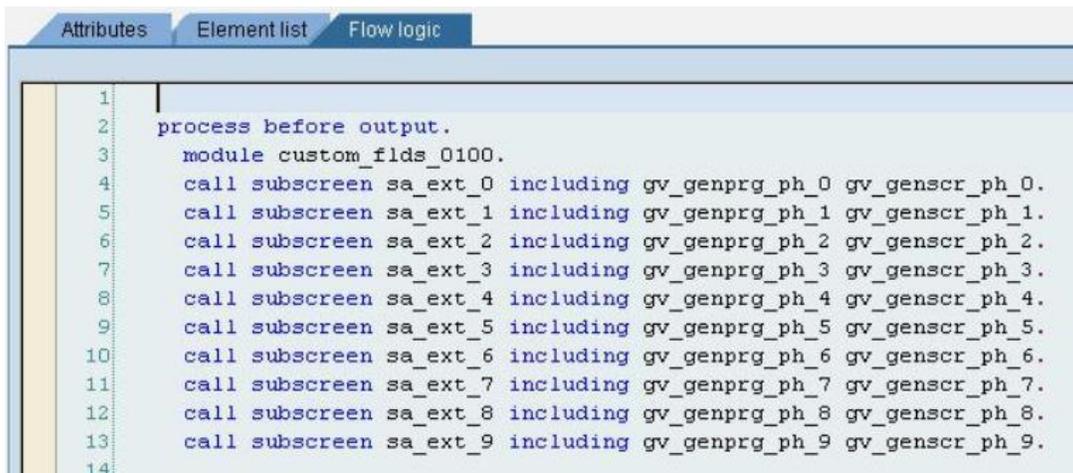
Our requirement is to add a custom screen in the properties tab of the standard transaction '/n/sapapo/mat1'. The statement identified in program which provides enhancement option is shown below.

```

11      call subscreen sa_matkey_ci
12          including '/SAPAPO/PR_GEN_MAINT_CONTAINER' '0100'.
13

```

- Checked screen '0100' and found that there is an option for incorporating 10 different subscreens.

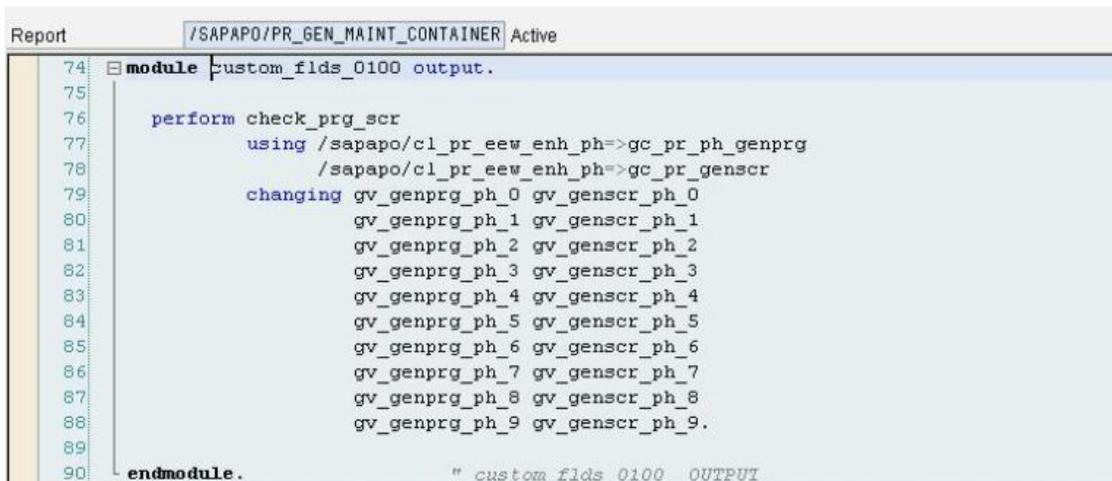


```

Attributes  Element list  Flow logic
1
2  process before output.
3  module custom_flds_0100.
4  call subscreen sa_ext_0 including gv_genprg_ph_0 gv_genscr_ph_0.
5  call subscreen sa_ext_1 including gv_genprg_ph_1 gv_genscr_ph_1.
6  call subscreen sa_ext_2 including gv_genprg_ph_2 gv_genscr_ph_2.
7  call subscreen sa_ext_3 including gv_genprg_ph_3 gv_genscr_ph_3.
8  call subscreen sa_ext_4 including gv_genprg_ph_4 gv_genscr_ph_4.
9  call subscreen sa_ext_5 including gv_genprg_ph_5 gv_genscr_ph_5.
10 call subscreen sa_ext_6 including gv_genprg_ph_6 gv_genscr_ph_6.
11 call subscreen sa_ext_7 including gv_genprg_ph_7 gv_genscr_ph_7.
12 call subscreen sa_ext_8 including gv_genprg_ph_8 gv_genscr_ph_8.
13 call subscreen sa_ext_9 including gv_genprg_ph_9 gv_genscr_ph_9.
14

```

- Checked the PBO module which uses classes as its changing parameters.



```

Report      /SAPAPO/PR_GEN_MAINT_CONTAINER Active
74  module custom_flds_0100 output.
75
76  perform check_pr_gscr
77      using /sapapo/cl_pr_eew_enh_ph=>gc_pr_ph_genprg
78          /sapapo/cl_pr_eew_enh_ph=>gc_pr_genscr
79      changing gv_genprg_ph_0 gv_genscr_ph_0
80              gv_genprg_ph_1 gv_genscr_ph_1
81              gv_genprg_ph_2 gv_genscr_ph_2
82              gv_genprg_ph_3 gv_genscr_ph_3
83              gv_genprg_ph_4 gv_genscr_ph_4
84              gv_genprg_ph_5 gv_genscr_ph_5
85              gv_genprg_ph_6 gv_genscr_ph_6
86              gv_genprg_ph_7 gv_genscr_ph_7
87              gv_genprg_ph_8 gv_genscr_ph_8
88              gv_genprg_ph_9 gv_genscr_ph_9.
89
90  endmodule.          " custom_flds_0100 OUTPUT

```

- On checking the attributes of the classes, found that the initial value is maintained for the attribute 'program name'.

Attribute	Le	V	R	T	As	Description	Initial value
/SAPAPO/IF_PR_EEW_ENH~GC_PR_PW_CISTRX	Con:Put	<input type="checkbox"/>		TyrDD0E		X CI Include Warehouse P	'CI_MATLWHX'
/SAPAPO/IF_PR_EEW_ENH~GC_PR_PS_CISTRD	Con:Put	<input type="checkbox"/>		TyrDD0E		Data CI Include Storage Ty	'CI_MATLWHST'
/SAPAPO/IF_PR_EEW_ENH~GC_PR_PS_CISTRX	Con:Put	<input type="checkbox"/>		TyrDD0E		X CI Include Storage Type	'CI_MATLWHSTX'
/SAPAPO/IF_PR_EEW_ENH~GC_PR_PH_GENPR6	Con:Put	<input type="checkbox"/>		TyrSCRH		Generated Program Product	'ZMAT_GEN_PH'
/SAPAPO/IF_PR_EEW_ENH~GC_PR_PP_GENPR6	Con:Put	<input type="checkbox"/>		TyrSCRH		Generated Program Packa	'MAT_GEN_PP'
/SAPAPO/IF_PR_EEW_ENH~GC_PR_LP_GENPR6	Con:Put	<input type="checkbox"/>		TyrSCRH		Generated Program Locat	'MAT_GEN_LP'

- On checking the routine 'check_prg_scr', found that there is a particular logic to check for the existence of custom programs following definite naming conventions.

If the program exists, then the subscreen created for the custom program will be included in the space allocated for enhancements. Created the custom program with name 'ZMAT_GEN_PH_0'. Created a subscreen for the program and added the field 'Do not Pass to IPFA' in the subscreen.

Screen Painter: Display Screen for ZMAT_GEN_PH_0

Screen number: 1 Active

Attributes | Element list | **Flow logic**

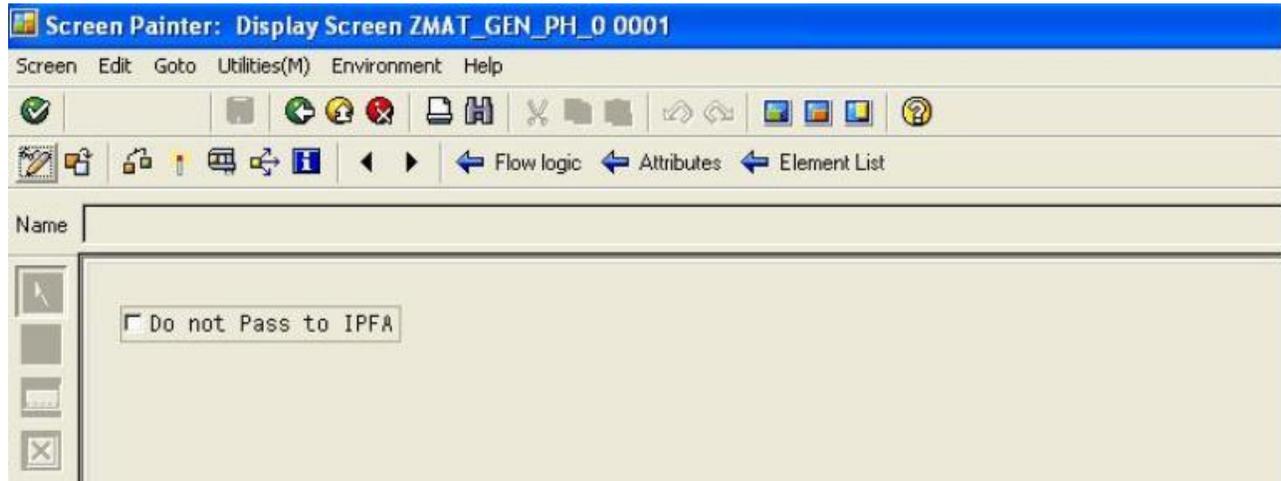
```

1
2 process before output.
3 * MODULE STATUS_001.
4   module set_screen.
5
6 process after input.
7 * MODULE USER_COMMAND_0001.
    
```

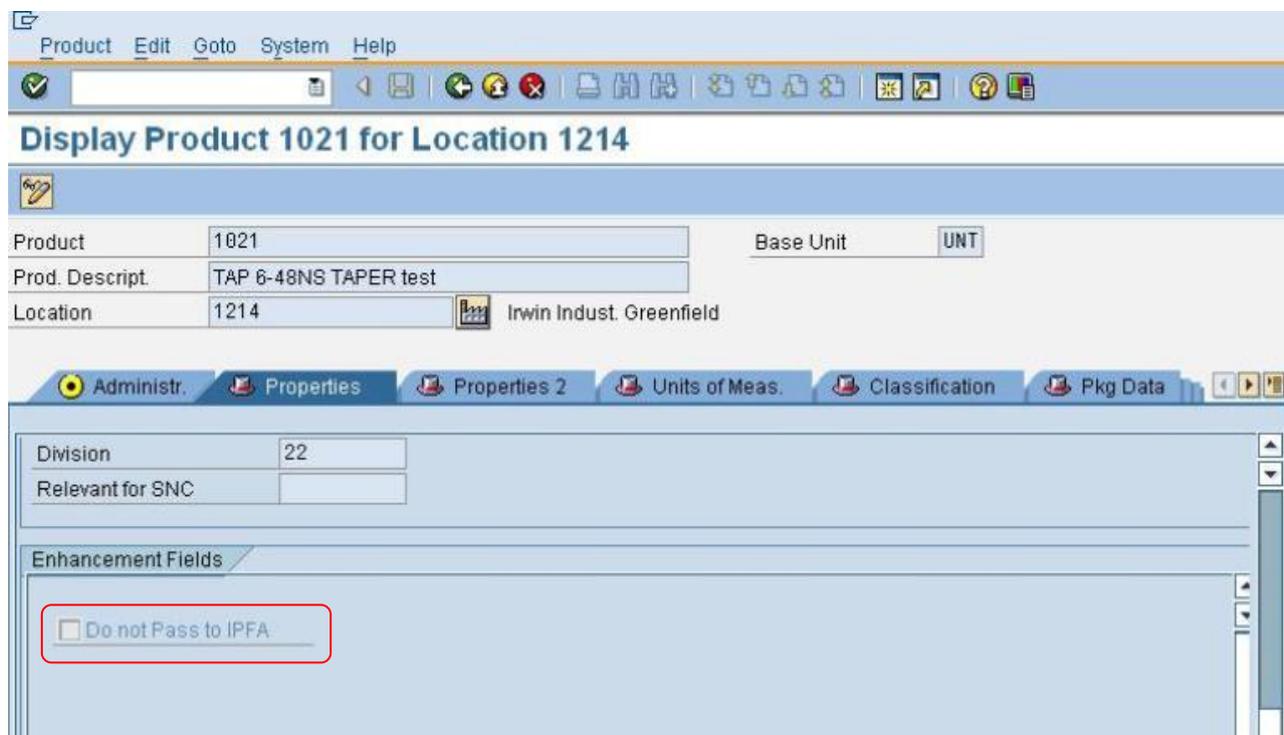
Repository Browser: Program ZMAT_GEN_PH_0

Object Name: ZMAT_GEN_PH_0

- Dictionary Structures
- Fields
- PBO Modules
- Screens: 0001
- Includes



The custom field got displayed in the 'properties' tab of the transaction '/n/sapapo/mat1' as expected.



Following the Standards

The naming standard for the custom program to be developed can be determined from the logic in the routine 'check_prg_scr'. The naming standard followed is 'Z_'initial value'_number'; where initial value is maintained as 'MAT_GEN_PH' and number can take values from 0 till 9. Hence created the program with name 'ZMAT_GEN_PH_0'.

Note: This is specific for the mentioned requirement but it will help you to sharpen your ideas to find the screen enhancement options.

Related Content

[Implementing Screen Exits](#)

[Customize Screens](#)

<http://sdn.sap.com>

For more information, visit the [Supply Chain Management homepage](#).

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