

# How to Add Columns to Tables in Standard Supply Network Collaboration (SNC) Web Interface



## Applies to:

SAP Supply Network Collaboration (SNC) 5.1 For more information, visit the [Supply Chain Management homepage](#).

## Summary

This document details the procedure of adding columns to tables in standard SNC Web UI. It is intended for SAP technical consultants. It is expected that the reader have knowledge of ABAP, especially BADIs.

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## Author Bio



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## Introduction

Supply Network Collaboration is one of the core capabilities of Adaptive Supply Chain Networks, a fundamental principle for the networked and outsourced enterprise of today and tomorrow. Through SNC, customers and suppliers can simultaneously eliminate inefficiencies in their supply chains by synchronizing the flow of information between them. SNC offers a 360 degree view on supply chain collaboration, offering a company ways to effectively collaborate with its customers, suppliers, 3rd party logistics providers and outsourced manufacturing partners.<sup>1</sup>

## Business Requirement

One uses the Supply Network Collaboration (SAP SNC) Web user interface (Web UI) to perform tasks relevant to one's role. The SNC Web UI contains different types of screens - overview screens, detail screens, details screens for time series data.

We faced a business requirement wherein we had to modify these screens by adding columns to the tables. For Example: In the 'Due List for Purchasing documents' screen, column 'Commitment Code' needed to be added.

**Due List for Purchasing Documents**

Exceptions Demand Release Purchase Order Replenishment Work Order SNI Delivery Invoice Master Data Tools

Selection

Show P100 Reset Go Close Selection

Product:

Ship-From Location:

Customer Location:

Planner:

Ship-To Location:

Delivery Date:  To

Form Details Create ASN Related ASNs

View [Standard View] Print Version Export

Order Type	Order Number	Item No.	SL No.	Customer Location	Product	Product Description	Goods Recipient	Ship-To
Forecast Delivery Schedule	5500000014	10	1	P100	75	LP SA test	P100	V21
Forecast Delivery Schedule	EC6-5500000014	10	1	P100	75	LP SA test	P100	V21
Forecast Delivery Schedule	5500000014	10	2	P100	75	LP SA test	P100	V21
Forecast Delivery Schedule	EC6-5500000014	10	2	P100	75	LP SA test	P100	V21

## Solution

### SNC Report Basics

The SNC Web UI applications have been developed in Web Dynpro ABAP.

Most SNC applications have the following flow:

- Data is retrieved from database into an internal table.

For Example, for Due List Processing:

**BADI:** /SCF/ICH\_DUELIST

**Method:** GET\_DUELIST

The internal table CT\_DUELIST contains the Duelist data.

Va	St	Variable Name	Va	Val.	Technical Type	Hexadecim
>		IT_ORD_INPUT		Sorted Table [313x68 (1564)]	Sorted Table[313x68(1564)	
>		FLT_VAL		DL	C(2)	44004C00
>		CT_DUELIST		Sorted Table [94x68 (1564)]	Sorted Table[94x68(1564)]	

Line	TSTP(8) DEC 0	VRSIOID(16)	ORDID(16)	ITMID(16)	SDLID(16)
1	20081224120000	00000000000000000000000000000000	0001B9649A4180F100D1B9649A4181F100D1B9649A4182F0		
2	20081224120000	00000000000000000000000000000000	0001BA907D09D8F100D1BA907D09D9F100D1BA907D09DAF0		
3	20081224120000	00000000000000000000000000000000	000664D320FB8CF100D664D320FB8DF100D664D320FB8E0F0		
4	20081231120000	00000000000000000000000000000000	00062EC6D3D428F100D62EC6D3D429F100D62EC6D3D42AF0		
5	20081231120000	00000000000000000000000000000000	000664D320FB36F100D664D320FB37F100D664D320FB38F0		

- This data is then mapped to a table column containing aspect structures. These aspect structure columns are mapped to the tables on the screen. One screen could be linked to multiple aspect structures

**Class:** /SCF/CL\_DATA\_RELPODUELIST

**Method:** /SCF/IF\_PATTERN\_SERVICES-QUERY

In the screenshot below, we can see that the duelist data is being mapped to several Aspects namely ORDL, ORMAP etc.

```

430 * move data
431   1s_frontend_object-obj_type = 'DUELIST'.
432
433 * aspect ORDL
434   CREATE DATA 1s_d1_obj-ord1ref TYPE /scf/duelist_str.
435
436   CLEAR 1s_aspect.
437   1s_aspect-aspecttype = c_aspecttyp_ord1.
438   FIELD-SYMBOLS: <1s_aspect!> TYPE ANY.
439   ASSIGN 1s_d1_obj-ord1ref->* TO <1s_aspect!>.
440   MOVE-CORRESPONDING <1s_due_1ist> TO <1s_aspect!>.
441
442   1s_aspect-aspectref = 1s_d1_obj-ord1ref.
443   INSERT 1s_aspect INTO TABLE 1s_frontend_object-aspects .
444
445 * aspect ORMAP
446   CREATE DATA 1s_d1_obj-ormapref TYPE /scab/ods_orm3_str.
447
448   CLEAR 1s_aspect.
    
```

**BADI:** /SCF/ICH\_DUELIST

**Method:** AFTER\_DM2FROBJ

The table CT\_FRONTEND\_OBJECT contains each row of the Duelist data.

Va	St	Variable Name	Va	Val.	Technical Type	Hexadecim
		IT_DUELIST		Sorted Table [94x68(1564)]	Sorted Table[94x68(1564)]	
		FLT_VAL		DL	C(2)	44084C80
		CT_FRONTEND_OBJECT		Sorted Table [94x5(104)]	Sorted Table[94x5(104)]	
		ME		{0:6098*\CLASS=ZCL_IM_SCFReference		

The column 'ASPECTS' contains the mapped data.

OBJ_GUID[(16)]	CONTEXT[(15)]	OBJ_TYPE[(15)]	PARENT_OBJ_GUID[(16)]	ASPECTS[Internal Table]
E9D018BC040D3F19933001F29E36A26		DUELIST	00000000000000000000000000000000	Sorted Table[11x2(40)]
E9D01C81A8C8DF19933001F29E36A26		DUELIST	00000000000000000000000000000000	Sorted Table[11x2(40)]
E9D01D31C3927F19933001F29E36A26		DUELIST	00000000000000000000000000000000	Sorted Table[11x2(40)]
E9D01D31C3928F19933001F29E36A26		DUELIST	00000000000000000000000000000000	Sorted Table[11x2(40)]
E9D01D31C3929F19933001F29E36A26		DUELIST	00000000000000000000000000000000	Sorted Table[11x2(40)]
E9D01D31C392AF19933001F29E36A26		DUELIST	00000000000000000000000000000000	Sorted Table[11x2(40)]

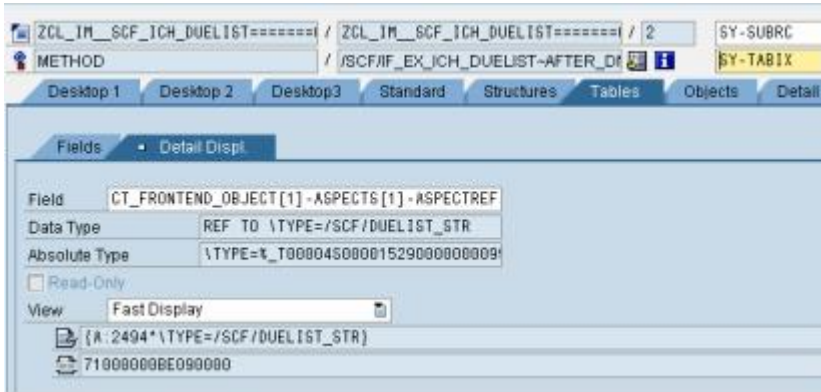
We can see that data for each row is mapped to several Aspects

Line	ASPECTTYPE[(15)]	ASPECTREF[Fre]
1	ORDL	->Structure: deep
2	ORGRPARTNER	->Structure: flat & not charlike
3	ORLOCFRNO	->Structure: flat & not charlike
4	ORLOCGRNO	->Structure: flat & not charlike
5	ORLOCTONO	->Structure: flat & not charlike
6	ORMAP	->Structure: deep
7	ORMATNR	->Structure: deep
8	ORPRTFRNO	->Structure: flat & not charlike
9	ORPRTLOCNOFR	->Structure: flat & not charlike
10	ORPRTMATNR	->Structure: flat & not charlike
11	ORPRTTONO	->Structure: flat & not charlike

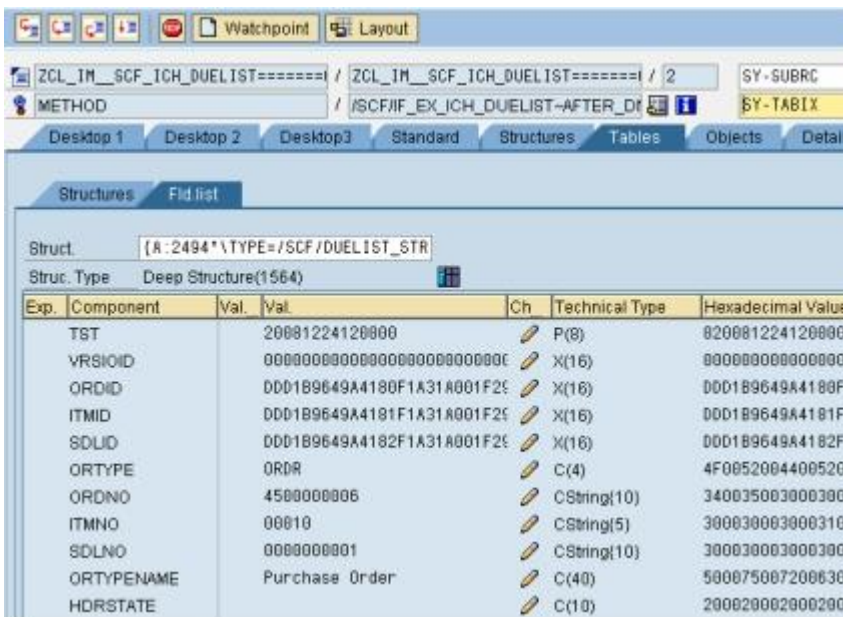


Aspect ORDL corresponds to the structure /SCF/DUELIST\_STR.

Similarly other aspects correspond to different structures.



We can see the data contained in the aspect structure. This data is mapped to the screen columns.



## Development Details

### Step I: Add the column on the screen.

1. Now that we have an idea of Aspects, we'll see how we can map the aspect structure field to the column on the screen. For this we'll have to first add the column on the screen. This can be done by implementing the following BADI.

**BADI:** /SCF/UIMDL\_APPCUST

**Method:** /SCF/IF\_EX\_UIMDL\_APPCUST~GET\_TABLEVIEW\_DATA

Properties of BAdI Definition

BAdI Definition Name	/SCF/UIMDL_APPCUST
Description	BADI for UI Framework
Interface	/SCF/IF_EX_UIMDL_APPCUST
Instance Creation Mode	Reuse of BAdI Instance

2. Check if the column exists on another screen. If so identify the Column ID, Data Element and Param ID.

For example, the Release Details screen contains a column called 'Commitment Level', that we need to add to the Due List for Purchasing Document Screen.

Release Header   Cumulative Qty   Ship-From Location   Customer Location   Ship-To Location   Goods

**es for Release Number**

tes

View]   Print Version   Export

Shipping Date	Delivery Date	Schedule Line Quantity	Due Quantity	UoM	Commitment Level
		0,000000	0,0000000000000000		
		0,000000	0,0000000000000000		
		0,000000	0,0000000000000000		
		0,000000	0,0000000000000000		
		0,000000	0,0000000000000000		



Find out the Column ID from the BADI /SCF/UIMDL\_APPCUST,  
Method: /SCF/IF\_EX\_UIMDL\_APPCUST~GET\_TABLEVIEW\_DATA

The screenshot shows the 'Local Variables and Parameters' table in an SAP ABAP editor. The table lists various variables and their technical types. The variable 'IT\_TBVCOLLYT' is highlighted, showing it is a 'Sorted Table[11x4(190)]'.

Va	St	Variable Name	Va	Val.	Technical Type	Hexadecim
>		FLT_VAL		ICH	C(15)	49004300
>		APPVIEW			ICHSUPPLFlat Structure(290)	20002000
>		IS_PERS_DATA		Structure: deep	Deep Structure(24)	00000000
>		IS_CMPTINFO		ICH DSDET	Flat Structure(434)	49004300
>		IS_TBV		D6 Sched. Line Details	Flat Structure(192)	44005300
>		IT_TBVCOLLYT		Sorted Table[11x4(190)]	Sorted Table[11x4(190)]	
>		IT_TBVCOL		Standard Table[11x12(568)]	Standard Table[11x12(568)]	
>		IT_FIELD_PRM_MAP		Sorted Table[11x4(212)]	Sorted Table[11x4(212)]	

Table IT\_TBVCOLLYT will provide the Column ID. You can identify it from the column text.

The screenshot shows the 'Table Contents' view for the table 'IT\_TBVCOLLYT'. The table type is 'Sorted Table[11x4(190)]'. The table contains 11 columns, with the 7th column, 'DEMANDTYPE', highlighted in pink. The column ID for this column is '0008'.

Line	COLID[C(30 )]	COLINDEX[N(4 )]	FIXEDCOL[C(1 )]	COLTEXT[C(60 )]
1	RELPERIOD	0001		Period
2	RELSHIPDATE	0003		Shipping Date
3	RELSCHEDLINEDATE	0004		Delivery Date
4	SCHEDLINEQUANTITY	0005		Schedule Line Qty
5	DLQTY	0006		Due Quantity
6	SCHEDLINEQUANTITYUNIT	0007		UoM
7	DEMANDTYPE	0008		Commitment Level
8	CUMSCHEDLINEQTY	0009		Cml. Sched. Qty
9	CHANGENUMBER	0010		Change No.
10	NOTEEXISTS	0011		Notes
11	DESCR40	0015		Notes123

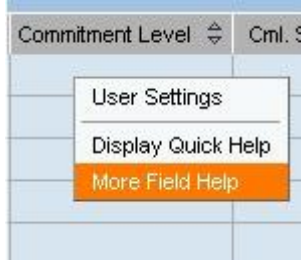
Table IT\_FIELD\_PRM\_MAP will provide the Data Element and Param ID.

Exp.	Component	Val...	Val.	Ch...	Technical
	FIELDID		DEMANDTYPE		C(30)
	PARAMID				C(16)
	DATAELEMENT		/SCMB/C_DESCR60		C(30)
	REF_FIELDID				C(30)

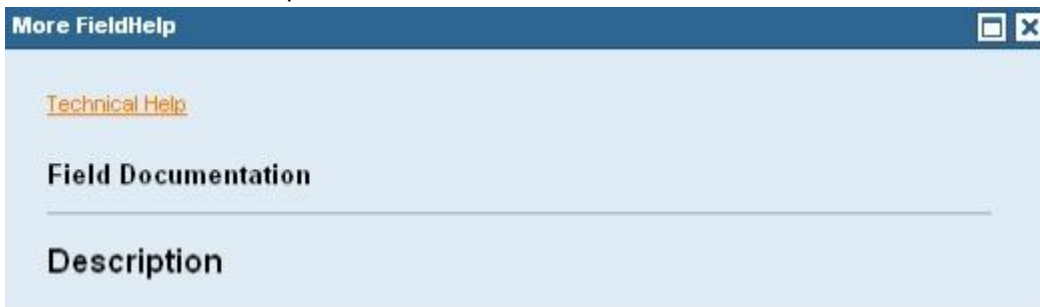
3. If the column to be added does not exist on any other screen, then choose the Data element (Data type) of a similar column/ create a Data element.

**Note:** If we use a similar column instead of the exact column, we will have to maintain the language translations for the same in different languages. For example if we use 'Schedule Line Quantity' column to display a custom column 'Last ASN Quantity', we would need to maintain the text 'Last ASN Quantity' in different languages .If this is not done, then if the user views the application in German for example, he would see the German translation of 'Schedule Line Quantity'. Same logic applies for custom Data Element.

Right click on the column and select 'More field Help'.



Click 'Technical Help'.



The Data Element will be available in the Attributes of UI element.

**Attributes of UI Element**

**List of Attributes**

Attribute Name	Value	Context Path	Type
DESIGN	standard (09)		
H_ALIGN	auto (03)		
LAYOUT	native (01)		
SEMANTIC_COLOR	standard (00)		
TEXT		DATA.DEMANDTYPE	/SCMB/C_DESCR60

- Find the application ID, Screen ID and Component ID of the screen that we want to add the column to. This can be obtained from the parameter IS\_CMPTINFO in the method GET\_TABLEVIEW\_DATA. The Default Title field will provide a clue for the correct Screen and Component ID, but to ensure that these parameters are the correct ones, check the table IT\_TBVCOLLYT for the columns being displayed on screen.

Struct.

Struc. Type Flat Structure(434)

Exp.	Component	Val...	Val.	Ch...	Techn
	APPID		ICH		C(15)
	SCRID		DUELIST		C(15)
	CMPTID		DLRLTBR1		C(15)
	HIDE				C(1)
	DEFTITLE		Duelist table		C(60)

- Now that we have the screen and column details we can write the code in the BADI, **BADI: /SCF/UIMDL\_APPCUST**  
**Method: /SCF/IF\_EX\_UIMDL\_APPCUST~GET\_TABLEVIEW\_DATA**  
 Add values to the three tables: IT\_TBVCOLLYT, IT\_TBVCOL, IT\_FIELD\_PRM\_MAP

The screenshot shows the 'Local Variables and Parameters' window in SAP ABAP. The table below is a representation of the data shown in the screenshot, with the last three rows highlighted by a pink box.

Va	St	Variable Name	Va	Val.	Technical Type	Hexadecir
✕		FLT_VAL		ICH	C(15)	49004300
✕		APPVIEW			ICHSUPPLI Flat Structure(290)	20002000
✕		IS_PERS_DATA			Structure: deep Deep Structure(24)	00000000
✕		IS_CMPTINFO		ICH DUELIST	Flat Structure(434)	49004300
✕		IS_TRV			Return List Flat Structure(192)	52006500
✕		IT_TBVCOLLYT			Sorted Table[34x4(190)] Sorted Table[34x4(190)]	
✕		IT_TBVCOL			Standard Table[34x12(568)] Standard Table[34x12(568)]	
✕		IT_FIELD_PRM_MAP			Sorted Table[34x4(212)] Sorted Table[34x4(212)]	

6. Make the following entries for the particular Application, Screen, and Component only. (These were identified in step 5 above)

i.e.

```

IF is_cmptinfo-appid EQ 'ICH'
AND is_cmptinfo-scrid EQ 'DUELIST'
AND is_cmptinfo-cmptid EQ 'DLRLTBR1'.
-----
-----
ENDIF
    
```

- **IT\_TBVCOLLYT: Table for Tableview column layout**

Fill the Column ID (obtained in step 2), position and text.

If the Column ID was not obtained, then we can provide our own Column ID.

**Note:** If we provide our own column names, they will not be automatically translated into other languages. We will need to maintain text, tool tip for the same in different languages.

Exp.	Component	Val...	Val.	Ch...	Techni
	COLID		DEMANDTYPE		C(30)
	COLINDEX		0029		N(4)
	FIXEDCOL				C(1)
	COLTEXT		Commitment		C(60)

**IT\_TBVCOL: Table for Tableview column configuration**

Provide the default Column text, tool tip, alignment, column type, sort sequence etc.

Exp.	Component	Val.	Val.	Ch.	Technical Type
	COLID		DEMANDTYPE		C(30)
	DEFCOLTEXT		Commitment		C(60)
	DEFCOLTLP		Commitment Level		C(150)
	DEFCOLWIDTH				C(4)
	DEFHORZALIGN		LEFT		C(6)
	DEFVERTALIGN		MIDDLE		C(6)
	FIXEDCOL				C(1)
	BSPCMTTYPE		TEXT		C(22)
	VALUETYPE				C(1)
	SORT				C(1)
	SHOWHELP				C(1)
	SORTSEQU		00		N(2)

- **IT\_FIELD\_PRM\_MAP: Field parameter mapping**

Provide the data element, Param ID for the column.

Exp.	Component	Val.	Val.	Ch.	Technical Type
	FIELDID		DEMANDTYPE		C(30)
	PARAMID				C(16)
	DATAELEMENT		/SCMB/C_DESCR60		C(30)
	REF_FIELDID				C(30)

**Note:** Providing the data element is mandatory. Without this step the column will not be visible on screen.

Now we have added the column on the screen. But we still need to bind data to it.



**Step II: Binding the Aspect data with Column.**

In the same BADI, implement another method.

**BADI:** /SCF/UIMDL\_APPCUST

**Method:** /SCF/IF\_EX\_UIMDL\_APPCUST~GET\_PATTERN\_BINDING

Va	St	Variable Name	Va	Val.	Technical Type
▶		FLT_VAL		ICH	C(15)
▶		IS_CMPTINFO		ICH DUELIST	Flat Structure(434)
▶▶		CT_PATTERN_CONTBND		Sorted Table [1x10 (936)]	Sorted Table[1x10(936)]
▶▶		CT_PATTERN_NAMEBND		Sorted Table [35x9 (758)]	Sorted Table[35x9(758)]

The table CT\_PATTERN\_NAMEBNDG contains the binding between aspect and screen columns.

Make the following entries for the particular Application, Screen, and Component only. (These were identified in step 5 above)

i.e.

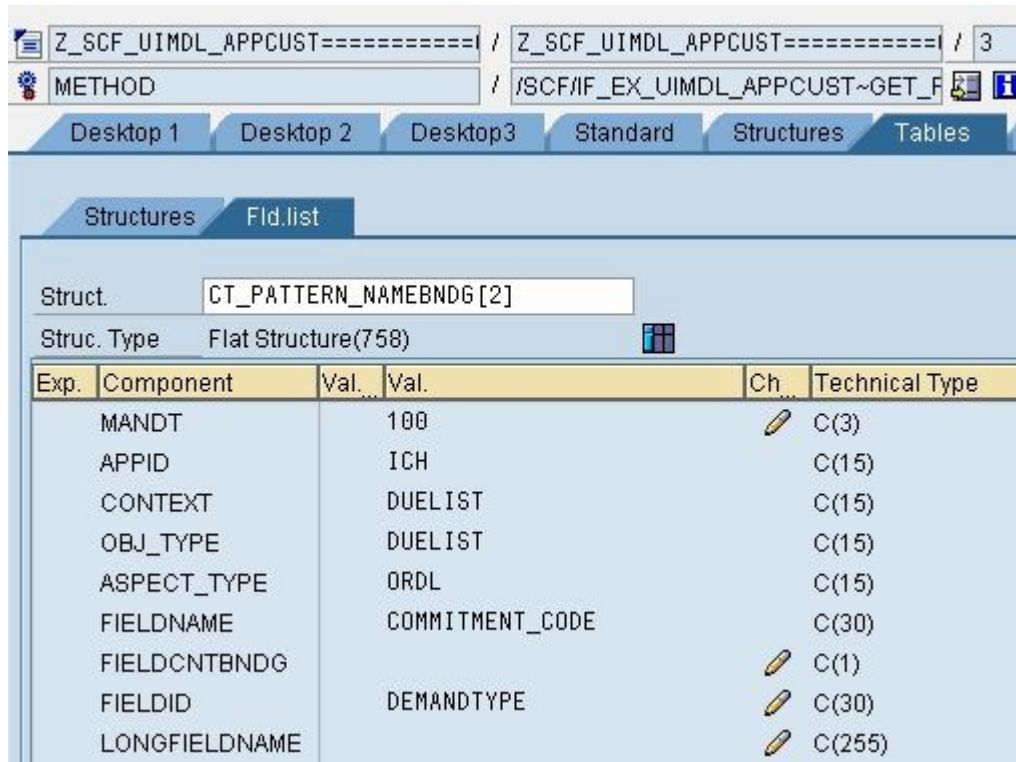
```

IF is_cmptinfo-appid EQ 'ICH'
  AND is_cmptinfo-scrid EQ 'DUELIST'
  AND is_cmptinfo-cmptid EQ 'DLRLTBR1'.
-----
-----
ENDIF

```



Provide the following:



Application ID: can be obtained in the BADI in debugging mode. Varies with type of SNC application.

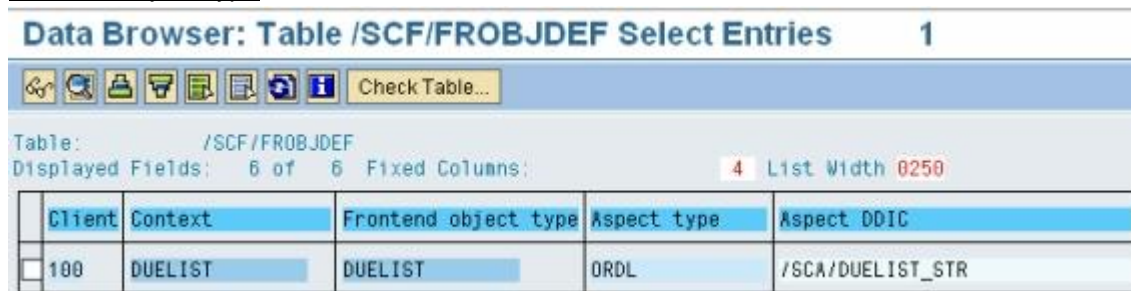
ICH = Inventory Collaboration Hub

SPP = Service Parts Planning

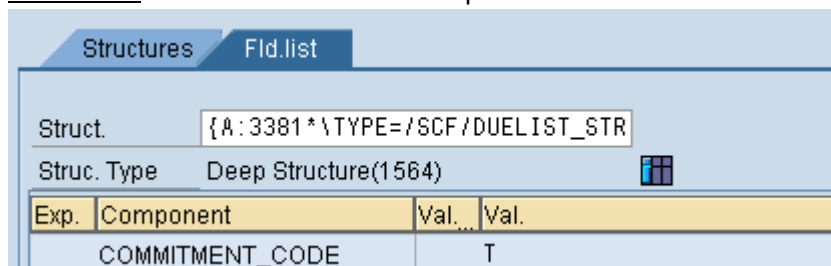
CDP = Demand Planning and so on

Aspect type: Can be obtained in the BADI in debugging mode.

Context, Object type: Can be obtained from the table /SCF/FROBJDEF



Field name: Name of the field in the aspect structure that will contain the data



FieldID: Column ID that you have added

Now the data has been bound to the screen column.

**Step III: Modify the data as required.**

This can be done using BADIs/ Enhancement spots. Data can be modified after mapping to aspect structure or before, according to requirement.

For example for the Due List for Purchasing Documents, we can use

**BADI:** /SCF/ICH\_DUELIST

**Method:** GET\_DUELIST (Before mapping to aspect)

AFTER\_DM2FROBJ (After mapping to aspect)

**Note:** 1. In case the column(s) we wish to add do not exist in the aspect structure we can create an append structure for the aspect structure and add our column(s). We can then fill the data in the aspect using BADI/ Enhancements. The rest of the procedure, i.e. adding the column to screen and binding the column to aspect structure remains the same.  
2. Not all SNC applications have Column binding to Aspect structures. The output table data is mapped to other tables containing "column ID- Data" mapping. In such cases, we'll need to create enhancements in the respective class – method to add out column ID and Data. For example: ASN Overview screen.

**Result**

We can see that the Column 'Commitment Level' has been added on the screen with header as 'Commitment' and tool tip as 'Commitment Level'. Note that we've even modified the value being displayed in the column to a code (T = Trade Off Zone, F = Firm Zone, P = Planning Zone) rather than the actual Commitment level description.

Delivery Date	Commitment	Ship-To Location	My Ship-To Location Desc.	Shipping Time
16.06.2009	T	P100		23:00:00
16.06.2009	T	P100		00:00:00
20.06.2009	T	P100		23:00:00
20.06.2009	T	P100		00:00:00
25.06.2009	T	P100		23:00:00
25.06.2009	T	P100		00:00:00

## Summary

The procedure for adding a column to a table in SNC is three-fold.

- a. Add the column to the screen.

**BADI:** /SCF/UIMDL\_APPCUST (BADI for UI Framework)

**Method:** /SCF/IF\_EX\_UIMDL\_APPCUST~GET\_TABLEVIEW\_DATA

- b. Bind the column to the aspect structure. As mentioned earlier, the aspect structures contain the data that is to be displayed on the screen. There could be certain screens where this step would be required eg. PO Overview, Due List for purchasing documents. However on certain screens such as ASN Overview aspect structures are not used to store the output data.
- c. Modify the internal table data that will be bound to the aspect structure or modify data after mapping to aspect structure.

## References

Transactions:

/n/SCF/TBVCFG: Tableview Configuration

/n/SCF/BINDANDASS: Assign Aspects to Components

## Related Content

[SAP Note 1337787](#) - Product description not available in Due List screen

[SAP Supply Network Collaboration \(SNC\) - SDN Wiki](#)

[SNC Documentation SCM 2007](#)

[Consuming Enterprise Services of SNC using XI Content](#)

[SAP SNC - Article on Basic scenarios](#)

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

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<sup>1</sup> SAP Supply Chain Management - Supply Network Collaboration, SAP AG

<http://www50.sap.com/businessmaps/32263564DAF04BA59CFBF2C6307F5EFC.htm>