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Guide

GUIDE TO CONFIGURE CUSTOM SD OUTPUT TYPES IN S/4 HANA USING BRF+

BRF+ is part of SAP provided decision service management tool (DSM) and it is not new in SAP. But doing output management via BRF+ is new in S/4 HANA system. Before knowing how output determination and management is done in S/4 HANA system using BRF+, we must know what is BRF+ and how it works.

What is BRF+

BRF+ is comprehensive application programming interface (API) and user interface for defining and processing business rule. It allows us to model rules in an intuitive way and to reuse these rules in different applications.

Overview of BRF+

- BRF+ function provides an interface between a business rule modelled with BRFplus and an application using that rule. The BRF+ function serves as a container for the entire business logic of a rule.
- Rules are implemented as expressions which are assigned to a function. The rule input is known as context and the rule output is called result.
- Context and result consist of data object which is called decision table, structure, decision tree.
- BRFplus supports features such as simulation, trace, transport, XML export and import.

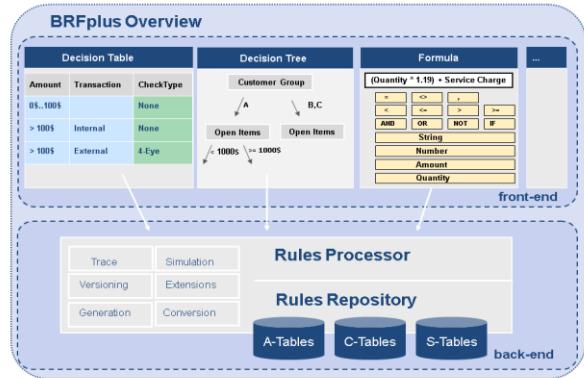


- In order to use BRF+ with your SAP ECC system, your system must be on SAP NetWeaver 7.02 SP6 or above.

Output Management using BRF+ in S/4 HANA

The new output management process allows for extensibility and has modification free configuration.

Output management based on NAST is not available for new documents in SD Billing from S/4HANA 1511 and is extended to sales order management from S/4 HANA 1602. Similarly, output management using BRF+ is mandatory for Purchase order from S/4 HANA 1511. Documents that are migrated from legacy system that are based on NACE, can also be processed using BRF+.



Output type configuration using BRF+

Here we will learn how to configure new output type 'ZSO' for sales document using new output management process BRF+ in SAP S/4 HANA system.

Below table is list of option available in BRF+ for output management in S/4 HANA system:

Channels	Printer, Email, XML, IDOC
Supported Technology	Fiori, SAP UI5, SAP GUI
Supported Forms	Adobe Forms, Smart Forms, SAP Script
Master form template	This defines universally valid layout and features reusable parts of a Form like header, logo, footer.
Determination of form template	Form template determined with preconfigured parameters such as company, sender country, channel, language.
Output determination	All output parameters can automatically determine via configuration.
Dispatched time	Immediately or scheduled
Application log	System created log per output request instance that can be viewed by SLG1.

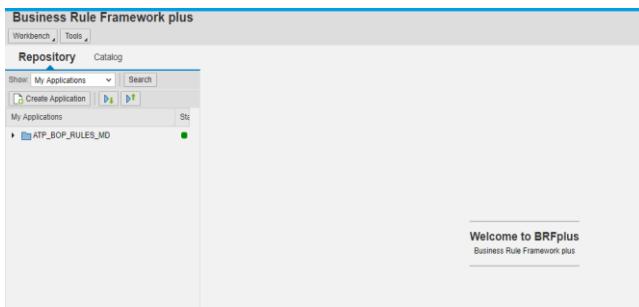
Import XML output determination application in BRF+

I. Download XML Files to local drive from SAP note 2248229

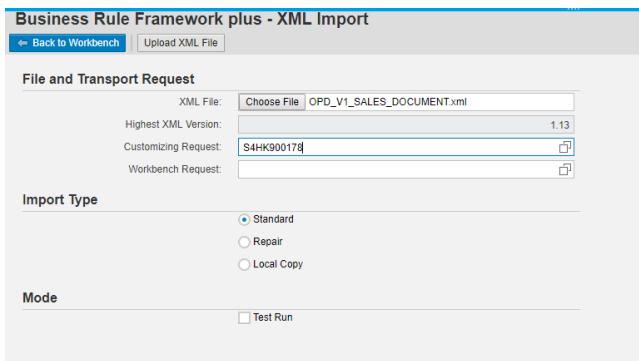
Name	Date modified	Type	Size
OPD_EF_PURCHASE_CONTRACT	22-02-2018 12:22	XML Document	326 KB
OPD_EF_PURCHASE_ORDER	22-02-2018 12:22	XML Document	352 KB
OPD_EF_REQUEST_FOR_QUOTATION	22-02-2018 12:22	XML Document	312 KB
OPD_EXCISE_INVOICE	22-02-2018 12:22	XML Document	350 KB
OPD_FFO_PAYMENT_ADVICE	22-02-2018 12:22	XML Document	240 KB
OPD_FFO_PAYMENT_CHECK	22-02-2018 12:22	XML Document	240 KB
OPD_FL_ACDOC_ITEM	22-02-2018 12:22	XML Document	283 KB
OPD_MM_GOODS_MOVEMENT	22-02-2018 12:22	XML Document	217 KB
OPD_MM_INVENTORY_MANAGEMENT	22-02-2018 12:22	XML Document	185 KB
OPD_SCHEDULING AGREEMENT	22-02-2018 12:22	XML Document	128 KB
OPD_SUPPLIER_INVOICE	22-02-2018 12:22	XML Document	178 KB
OPD_VI_SALES_DOCUMENT	22-02-2018 12:22	XML Document	475 KB
OPD_V3_BILLING_DOCUMENT.XML	22-02-2018 12:22	XML Document	322 KB

Find file for different document type like Purchase order, Invoice, sales document. We can import all files or can choose as per requirement. XML file for sales document will be imported in our example.

- II. Run Transaction code BRF+ or BRFPLUS in SAP GUI. Following screen would appear with BRF+ workbench in the web browser.



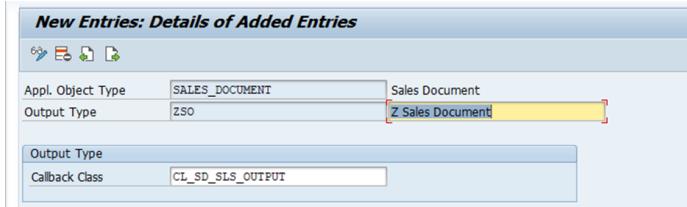
- III. Click on button personalize and change user mode to EXPERT and save it.
 IV. Click on tools and select option XML IMPORT.
 V. Following screen would appear. Choose file for SD output type.



Click on upload XML File. Uploaded file can be viewed in repository tab.

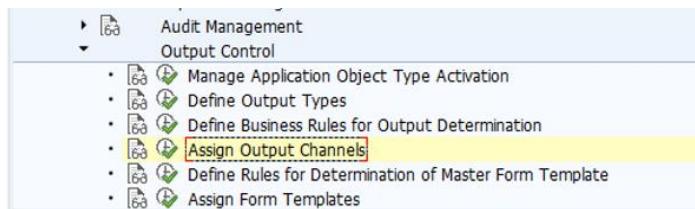
Configuration of BRF+ in SAP GUI

- I. Go to SRPO->IMG->cross application component->output control-> define output type. Create one new entry.



Save this.

- II. Now assign output channel to new output type.



Create new entry.

New Entries: Overview of Added Entries			
Channel			
Application Obj...	Output Type	Channel	
SALES_DOCUMENT	ZSO	PRINT	
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

Save this. Choose Print channel to generate spool request. There are other options like Email, IDOC.

III. Now define determination of master form template.

- ▶ Express Planning
- ▶ Audit Management
- ▶ Output Control
 - Manage Application Object Type Activation
 - Define Output Types
 - Define Business Rules for Output Determination
 - Assign Output Channels
 - Define Rules for Determination of Master Form Template
 - Assign Form Templates
- ▶ IDoc Monitor

Create new entry.

New Entries: Details of Added Entries

Rule ID	ZBIS4_0001	
Define Rules for Determination of Master Form Template		
Number	1	
Organization Type	COMPANY	
Organization ID	1010	
Org. Unit Type		
Org. Unit ID		
Channel	PRINT	
Sender Country		
Form Template		
Master Form Template	SDOM_FORM_MASTER_A4	
Content for Master Form Template		

Here user can define footer, logo.

IV. Now assign form template.

- ▶ Output Control
 - Manage Application Object Type Activation
 - Define Output Types
 - Define Business Rules for Output Determination
 - Assign Output Channels
 - Define Rules for Determination of Master Form Template
 - Assign Form Templates
- ▶ IDoc Monitor

Create new entry.

New Entries: Overview of Added Entries

Form Template				
Appl...	Output Type	Form Type	Form Template ID	Program
SALES_D...		pdf-Based Pr...	SD_SLS_ORDER_CONFIRM	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Save this.

V. Now define business rule for output determination.

Output Control

- Manage Application Object Type Activation
- Define Output Types
- Define Business Rules for Output Determination**
- Assign Output Channels
- Define Rules for Determination of Master Form Template
- Assign Form Templates

IDoc Monitor

It will open new window in the web browser. Different parameters for output type like receiver, channel, printer detail, print parameters, sender/receiver email address, form templates can be defined as shown below.

VI. Select output type and click on EDIT button. Create new entry for new output type ZSO and activate it.

Table Contents					
#	Document Cat.	Sales doc. type	Output Type	Dispatch time	Table St
1	=C	<>BV exclude =>S001 ; =>C018 ; =>C0RE	ORDER_CONFIRMATION	1	
2	=C	=BV	CASH_SALE	1	
3	=A		SALES_INQUIRY	1	
4	=B		SALES_QUOTATION	1	
5	=Q		SALES_CONTRACT	1	
6	=I		ORDER_WO_CHARGE	1	
7	=H	<>CORE	CUSTOMER_RETURN	1	
8	=C		ZSO	1	

VII. Select receiver. Create new entry for ZSO.

#	Output Type	Role	Exclusive Indicator
1	=ORDER_CONFIRMATION	AG	-
2	=CASH_SALE	RE	-
3	=SALES_INQUIRY	AG	-
4	=SALES_QUOTATION	AG	-
5	=SALES_CONTRACT	AG	-
6	=ORDER_WO_CHARGE	AG	-
7	=CUSTOMER_RETURN	AG	-
8	=ZSO	AG	-

VIII. Select channel. Create new entry for ZSO.

#	Output Type	Role	Recipient	Channel
1	=ORDER_CONFIRMATION			PRINT
2	=CASH_SALE			PRINT
3	=SALES_INQUIRY			PRINT
4	=SALES_QUOTATION			PRINT
5	=SALES_CONTRACT			PRINT
6	=ORDER_WO_CHARGE			PRINT
7	=CUSTOMER_RETURN			PRINT
8	=ZSO			PRINT

IX. Select printer settings. Create new entry for ZSO.

Output Type	Role	Recipient	Print Queue	Number of Copies
=ORDER_WO_CHARGE	LP01	1
=CUSTOMER_RETURN	LP01	1
=ZSO	LP01	1

X. Select form template. Create new entry for ZSO.

Table Contents				
Channel	Recipient Language	Sender Country	Recipient Country	Form Template
...	SD_SLS_ORDER_CONFIRM
...	SD_SLS_CASH_SALE
...	SD_SLS_INQUIRY
...	SD_SLS_QUOTATION
...	SD_SLS_CONTRACT
...	SD_SLS_ORDER_WO_CHARGE
...	SD_SLS_CUSTOMER_RETURN
...	SD_SLS_ORDER_CONFIRM

XI. Select output relevance. Create new entry ZSO.

Table Contents				
Output Type	Confirm status	Header Data	OverallCredStat	Delivery block
=ORDER_WO_CHARGE	=C; * * *	=C	contains not any 'BC'	is initial
=CUSTOMER_RETURN	...	=C	contains not any 'BC'	is initial
ZSO	=C

BRF+ configuration is now complete. We can check our new output type

Testing of ZSO Output

Execute Transaction code VA01 to create a sales order. Display the sales order using Transaction code VA03. 2 output types can be seen in the Sales order. One is SAP standard and other is custom output type.

Display Sales Document: Output							
Document 0000000237 (Issue Output To)							
Output							
ID	Status	D... Output Type	R.. Receiver	Channel	Coun...	Lang...	Form Template
1	Completed	1 ORDER_CONFIRMATION	AG 10100011	PRINT	DE	DE	SD_SLS_ORDER_CONFIRM
2	In Preparation	1 ZSO	AG 10100011	PRINT	US	Q	SD_SLS_ORDER_CONFIRM

Select 2nd row and click on display detail button and define output device.

Display Sales Document: Output		
Output Type	ZSO	Z Sales Document
Sender	1710	Dom. Sales Org US (Sales Organization)
Sender Country	US	USA
Role	AG	
Recipient	USCU_S08	Velocity Cycles
Form Template	SD_SLS_ORDER_CONFIRM	Sales Order Confirmation PDF Output
Form Country	US	USA
Form Language	EN	English
Channel	PRINT	Printout
Status	1	In Preparation
Changed On	03/06/2018 03:35:06	
Channel Details: Print		
Number of Copies	...	
Print Queue	LP01	

Now go back and click on button send output



Is NAST no more in S/4 HANA

As per Note 2228611 – output management in SAP S/4 HANA.

The new output management is going to be the successor of all other output management frameworks (SD Output Control, FI Correspondence, FI-CA Print Workbench, CRM Post-Processing). However, all other frameworks are still available and can be used. It is not mandatory to use the new output management. Via using SAP note or implementing enhancement point user can disable/enable other supported

Limitation of BRF+

There is some limitation using BRF+:

IDocs

- IDocs are not fully supported by the new output management. Their use is restricted to business applications that previously used NAST.
- Only output types which can be mapped 1:1 to the NAST-KSCHL can use IDoc.
- Only business partner-based communication is supported, but no communication to logical systems
- No ALE support

Conversion from NAST Output to BRF+

Considering the conversion of an existing SAP ECC system to SAP S/4HANA, there cannot be one generic approach to cover the conversion of all Output Management frameworks.

Therefore, the recommendation is not to carry out a conversion, but to establish a coexistence of old and new output management.

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