

Output Management via BRF+

The configuration is based on BRF+. In SAP S/4 HANA, the target architecture is based on Adobe Document Server and Adobe Forms only. For the form determination rules (along with other output parameters) BRF+ functionality is used.

With SAP S/4 HANA a new Output Management approach is in place. The complete configuration differs from the configuration that is used when output management is based on NAST (condition technique).

Output management based on NAST is not available for new documents in SD Billing from 1511/1610. Similarly, output management using BRF+ is mandatory for Purchase order from 1511 and 1610

Prerequisites

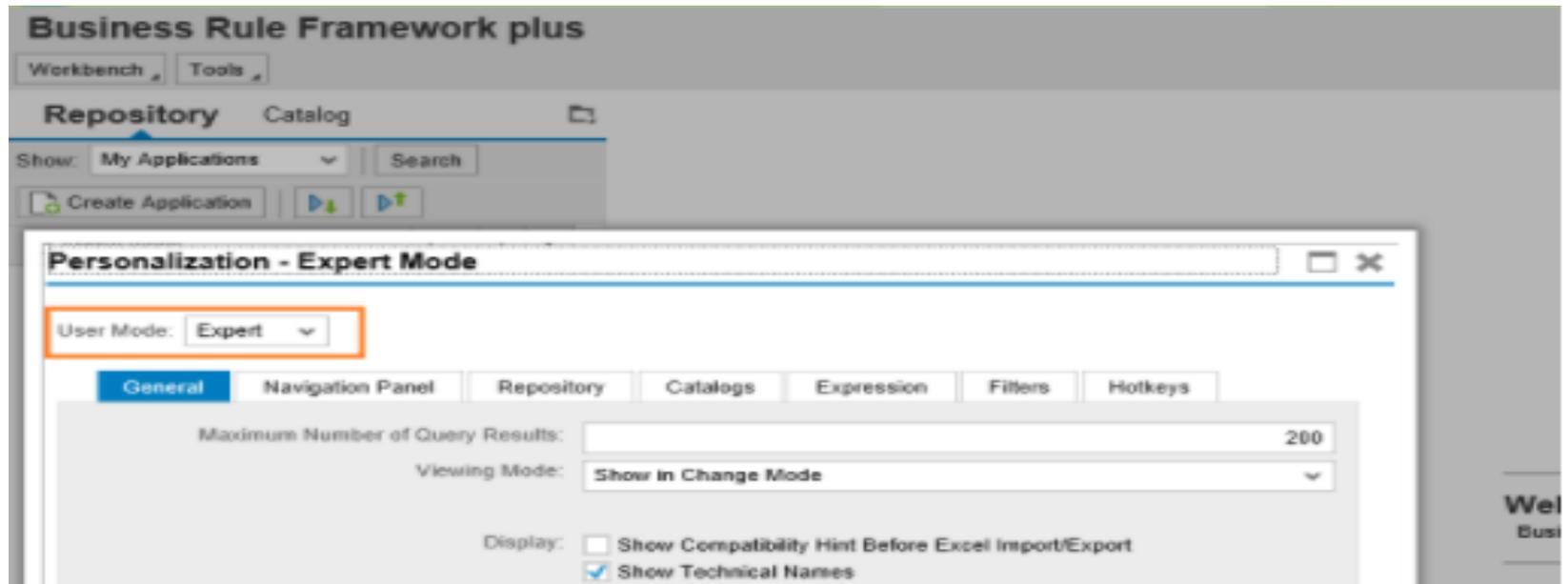
- Uploading XML for importing output determination application in BRF+ (Ref note 2248229). Means upload the XML file through Tcode OPD, system will generate the TR.
- BRF+ is active and usable
- Background RFC configuration has been set up
- Adobe Document Server is available – ADS needs to be implemented to allow SAP to fetch PDF properties for rendering output form
- KPRO has been maintained – KPRO allows to store PDF attachments on physical location.

Steps for uploading XML

Note 2248229, provides decision tables for new output management. We need to download XML files to local drive and import them using below steps.

Tcode: BRF+ or BRFPLUS

BRF+ workbench will be displayed. For importing output application, we need to change layout to “Expert” mode. Follow below steps –

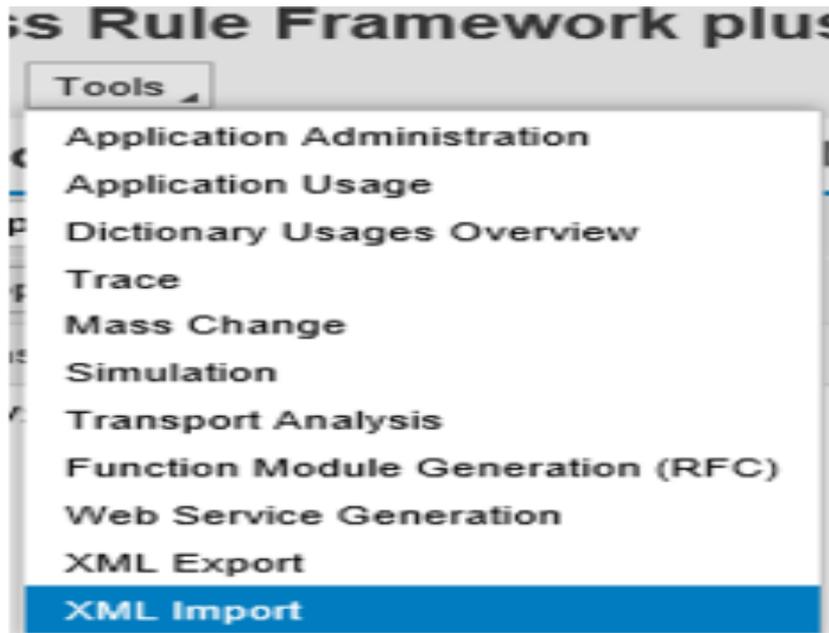


- a) Select user mode as “Expert”.
- b) Save this settings

Steps for uploading XML

Steps to import –

- 1) Download zip files from SAP note 2248229 and save them on your local machine
- 2) Next, we need to select Import XML under the Tools menu



- 3) Select relevant file in below screen

Steps for uploading XML

Business Rule Framework plus - XML Import

[← Back to Workbench](#) [Upload XML File](#)

File and Transport Request

XML File: [Browse...](#)

Highest XML Version:

Customizing Request: [Copy](#)

Workbench Request: [Copy](#)

Import Type

Standard

Repair

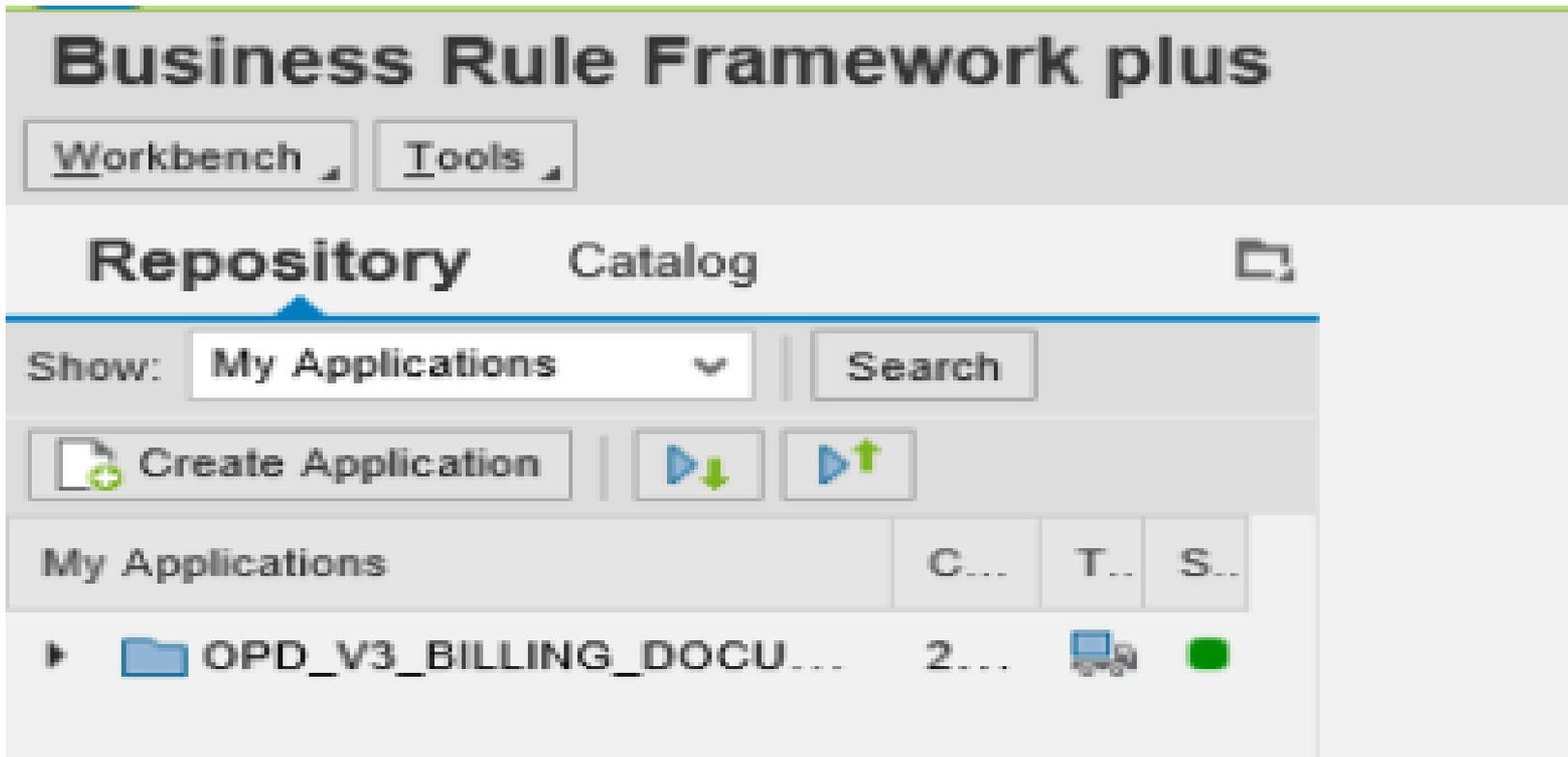
Local Copy

Mode

Test Run

Steps for uploading XML

- 4) Specify Customizing request.
- 5) Click on “Upload XML File” button.
- 6) Uploaded application will now be available under Repository tab.



More details about prerequisites”

More details about prerequisites”

Background RFC configuration has been set up – RFC to which System?

Adobe Document Server is available – ADS needs to be implemented to allow SAP to fetch PDF properties for rendering output form – How to ensure this is implemented?

KPRO has been maintained – KPRO allows to store PDF attachments on physical location. – What parameters to be maintained?

More details about prerequisites”

2) Connection to ADS can be checked in SM59. Please see below screenshot.

The screenshot shows the configuration for an RFC Destination named 'ADS'. The 'RFC Destination' field is highlighted with a red box and contains the text 'ADS'. Below it, the 'Connection Type' is set to 'G' and the description is 'HTTP Connection to External Serv'. There are three description fields: 'Description 1' contains 'ADS Configuration', while 'Description 2' and 'Description 3' are empty.

RFC Destination ADS	
Connection Test	
RFC Destination	ADS
Connection Type	G
Description	HTTP Connection to External Serv
Description	
Description 1	ADS Configuration
Description 2	
Description 3	

More details about prerequisites”

3) KPRO maintenance could be done using following configuration.

SPRO -> Cross Application Components -> Document Management -> General Data -> Settings for Storage Systems -> Maintain storage category

Here, we assign content repository to category “SOMU”.

Change View "Maintain Categories": Details

63 New Entries      

Category

Maintain Categories

Description

Document Area

Content Rep.  

Time Created	14.10.14	04:43:21	Last Changed At	25.11.14	09:39:32
Created By	SAP		Last Changed By	SAP	

Configuration

Below configuration steps are relevant for all application areas (Sales Order, Purchase Order, Billing Documents and Outbound Delivery)

SPRO Node for output configuration (IMG Path → Cross Application Components)

Configuration

1) Define Output types –

Output Control -> Define Output Types

Change View "Output Type": Details

 New Entries      

Application Object	<input type="text" value="BILLING_DOCUMENT"/>	Billing Document
Output Type	<input type="text" value="BILLING_DOCUMENT"/>	<input type="text" value="Billing Document"/>

Output Type

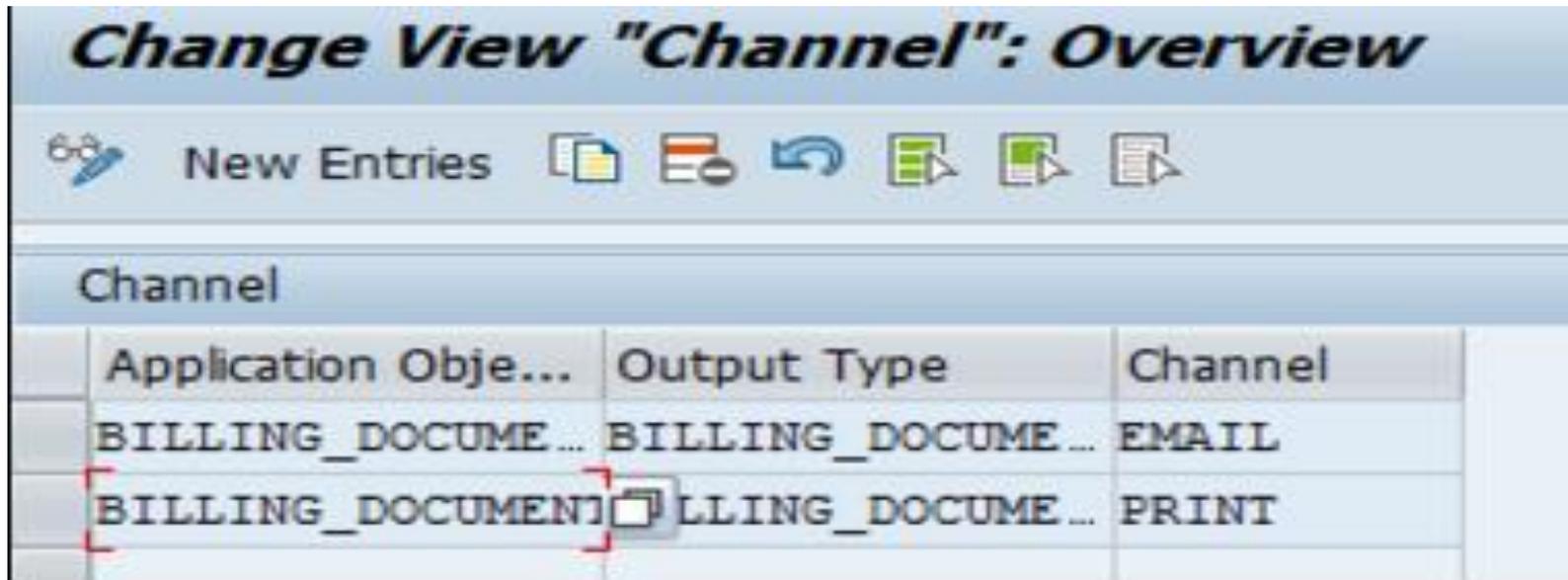
Callback Class	<input type="text" value="CL_BILLING_OUTPUT_CONTROL"/>
----------------	--

Configuration

2) Assign Output Channels–

Output Control -> Assign Output channels

In this activity assign output channels to output type.



Change View "Channel": Overview

New Entries

Channel	Application Obj...	Output Type	Channel
	BILLING_DOCUME...	BILLING_DOCUME...	EMAIL
	BILLING_DOCUMENT	BILLING_DOCUME...	PRINT

Configuration

3) Define Determination of Form Master Templates –

Output Control -> Define Determination of Form Master Templates

The master form template contains static data (such as a logo and footer) that is applied to each form page and is determined based on configuration setting maintained..

Change View "Define Rules for Determination of Master Form Template":

New Entries

Rule ID: TEST1

Define Rules for Determination of Master Form Template

Number	1	
Organization Type	COMPANY	Company
Organization ID	Z001	
Org. Unit Type	VKORG	Sales Organization
Org. Unit ID	Z001	
Channel	EMAIL	Email
Sender Country	DE	Germany
Form Template	SDBIL_CI_STANDARD_DE	Customer Invoice Standard Form

Master Form Template: SOMJ_FORM_MASTER_A4 Form Master Template for paper size A4

Content for Master Form Template

Text Type	
Sender Address	
Footer Block 1	
Footer Block 2	
Footer Block 3	
Footer Block 4	

Configuration

Activities need to be performed on above slide.

- a) Enter a rule ID, preferably an ID that indicates the logic of the rule.
- b) Enter an ordinal number to specify the position of the rule in the determination sequence.
- c) Following parameters are optional –
 - Organization Type
 - Organizational unit
 - Channel
 - Sender country
 - Form Template

During document output, the master form template is determined by comparing each defined rule with the current data provided by the application. If a parameter is not defined (no value entered), this parameter is considered as a match, and else, system determines the rule where all parameters match. Master form template is used corresponding to this rule.

Business Rules for Output Determination

Below configuration steps are relevant for all application areas (Sales Order, Purchase Order, Billing Documents and Outbound Delivery).

SPRO – > Cross-Application Components -> Output Control -> Define Business Rules for Output Determination (Transaction: OPD)

In this Customizing activity, you can define how the system determines output parameters during document processing. You can define business rules for the determination of output parameters, such as output types, recipients, and form templates.

Following determinations are available –

Business Rules for Output Determination

Determination	Number of Matches	Result	Example
Output Type	Multiple	Output Type to be used	Output BILLING_DOCUMENT can be determined on the basis of billing document type (F2).
Receiver	Multiple	List of Receiver Roles	Receiver roles (SP, SH, RE, RG) are determined for the determined output type (BILLING_DOCUMENT).
Channel	Multiple	List of Output Channels	Channels (EMAIL, PRINT and IDOC) are determined.
Printer Settings	Single	Output devices and number of copies	Output device (LOCL) for channel PRINT
Email Settings	Single	Sender Email address and Email Template	Sender email address & Email template (SD_CI_DEFAULT_EMAIL_TEMPLATE) is determined for output type.
Email Receiver	Multiple	List of Email roles(To, Cc, Bcc) and email addresses	Email addresses for roles (To, Cc, Bcc) are determined for output type. This step is optional and system uses receiver email address in case step is not maintained.
Form Template	Single	Form Template name and language	Form template (SD_CI_STANDARD_DE) is determined with following options: Output type, Receiver, Channel, Recipient language, Sender Country, Recipient Country and document category.
Output Relevance	Single	Can the document be output based on the defined condition (Yes/No)?	Output to be issued only when billing document is successfully passed to accounting.

Business Rules for Output Determination

Example of maintenance of Channel determination –

- Select Rules for relevant document, example BILLING_DOCUMENT.
- Select determination, example Channel to be used for triggering output type.
- Input parameters could be changed by adding input columns to determination table. Each determination table consists of input columns (condition columns) and result columns. You can add new input columns via the table settings.
- Maintain relevant input combination to determine the channel needed. Multiple channel can be selected for the same combination.

The screenshot shows a web interface for configuring business rules. It is divided into two main sections: 'Select Business Rules' and 'Maintain Business Rules'.

Select Business Rules: This section contains two dropdown menus. The first is labeled 'Show Rules For:' and is set to 'Billing Document'. The second is labeled 'Determination:' and is set to 'Channel'.

Maintain Business Rules: This section contains a row of action buttons: 'Back', 'Edit', 'Check', 'Save', and 'Activate'. Below the buttons, the text 'Decision Table: DEC_TAB_CHANNEL, Channel' is displayed. Underneath, there are three buttons: 'Export To Excel', 'Context Overview', and 'Start Simulation'.

Table Contents: This section features a search bar labeled 'Find:' with 'Next' and 'Previous' navigation buttons. A 'Table Settings' button is located in the top right corner. The main table has the following structure:

#	Output Type	Role	Receiver ID	Channel
1	BILLING_DOCUMENT (Billing Document)			PRINT (Printout)
2	BILLING_DOCUMENT (Billing Document)			EMAIL (Email)
3	BILLING_DOCUMENT (Billing Document)			IDOC (IDOC)

After changes, click on Save and Activate.

Output processing

Output determination is performed in document based on determination rules defined for Output type, receiver role, channel, form template, receiver email address and email template with status as 'In Preparation'. Default data can be changed in the document.

Overview Screen:

Output Request ▾ System ▾ Help ▾

Invoice (F2) Create: Output

Status	Di...	Output Type	Receiver	Channel	Country	Langu...	Form Template
In Preparation	1	BILLING_DOCUMENT	3	EMAIL	DE	EN	SDBIL_CI_STANDARD_DE

Output processing

Detail Screen:

Invoice (F2) Create: Output		
Output type	Output document	Output document
Sender	Z001	Sales Org. 001 (Sales Organization)
Sender Country	DE	Germany
Recipient	3	
Form Template	SDBIL_CI_STANDARD_DE	Customer Invoice Standard Form
Form Country	DE	Germany
Form Language	EN	English
Channel	EMAIL	Email
Status	1	In Preparation
Changed On	00.00.0000 00:00:00	

Channel Details: Email	
To	test@test.com
Cc	

Output processing

Processing of output –

Only two dispatch times are available in new output management system.

Immediately (1)

Output is processed as soon as document is saved. If no errors, output type status changes to “Successful”. In case of errors, output will be in “Error” status. Errors can be viewed by clicking log button.

Scheduled (2)

Output is processed using new transaction introduced VF31F for billing document.

Output processing

Program ▾ Edit ▾ Goto ▾ System ▾ Help ▾

Billing documents output run



Output Data

Application Object Type	BILLING_DOCUMENT		
Output Type	BILLING_DOCUMENT	to	<input type="text"/> 
Output Channel	EMAIL	to	<input type="text"/> 

Billing Document Data

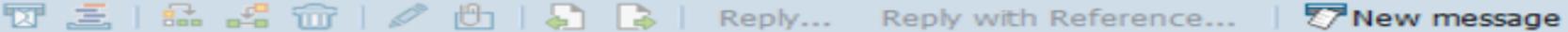
Billing Document	90000010		to	<input type="text"/> 
Billing date	<input type="text"/>		to	<input type="text"/> 
Sales Organization	<input type="text"/>			
Distribution Channel	<input type="text"/>			

Output processing

Email output in SOST –

Invoice copy is sent as PDF attachment.

Display Document: Customer Invoice 0090000010

 Reply... Reply with Reference... New message

Doc. contents | Attributes | Recipient list | Attachments

Customer Invoice 0090000010

Created  Anirudh Jain

Dear Sir or Madam,

Please find the customer invoice 0090000010 posted on 20160215 for the amount 100,00 EUR attached.

If you have any questions, please do not hesitate to contact us.

Best Regards,

DE

 Billing Document - 90000010

Additional Information

SAP still allows Smartforms and SAPscript. We can use them by maintaining below configuration. We need to specify form type, smartform, smartform program and routine.

SPRO -> Cross Application components -> Output Control -> Assign Form Templates

Change View "Form Template": Overview

New Entries      

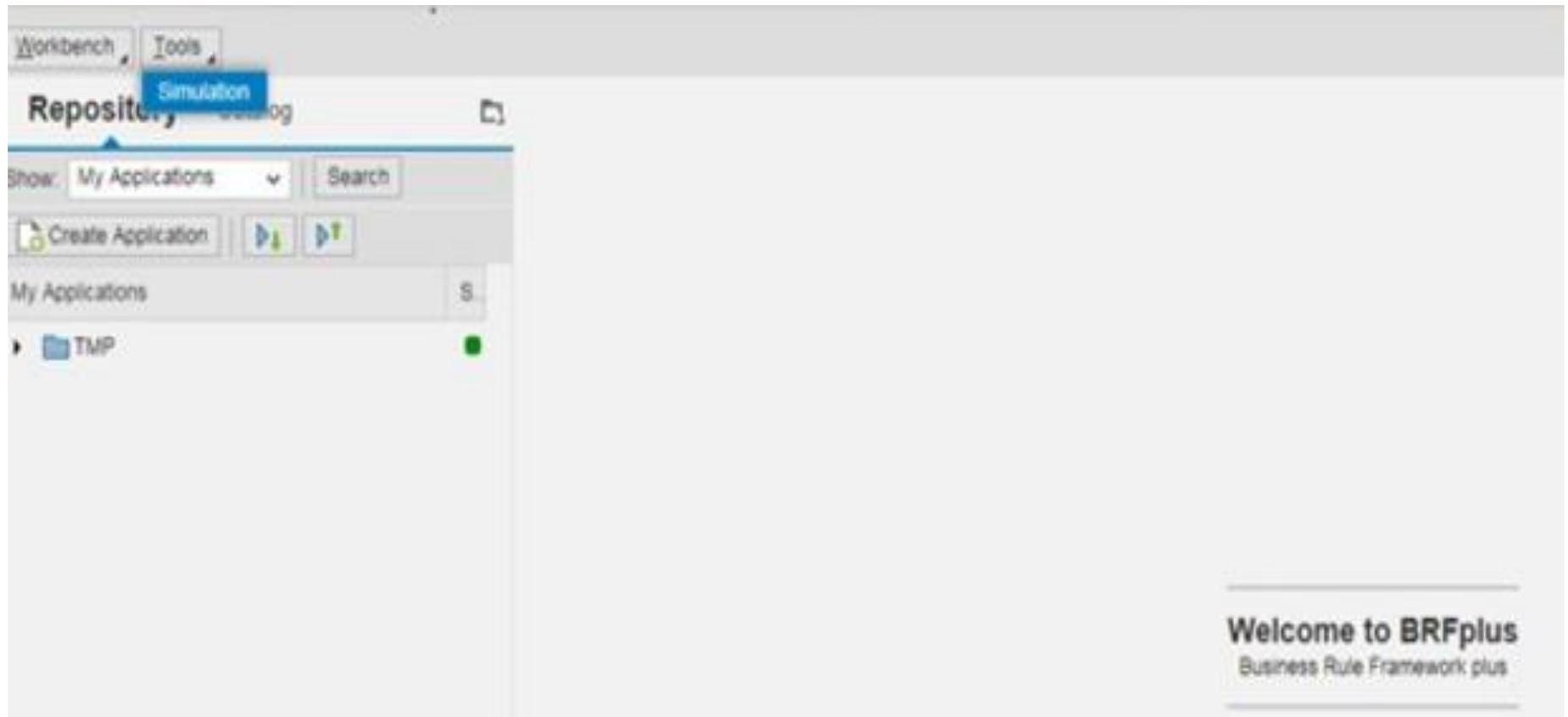
Form Template				
Applic...	Outpu...	Form Type	Form Template ID	Program
BILLING	LLIN...	2 pdf-Based ...	SD_INVOICE_FOR...	SD_INVOICE_PRINT01

Issues

S/4 HANA 1511 OP version.

1- Only 3 XML files available to Import. Do not see the option in Tools→ XML Import. Please see below image

2- The Print Preview not visible for any Sales Order/ quotation etc documents. What need to be fixed this ?



Solution

Issue 1) → For XML Import option to be visible, please use Expert mode. This can be done in personalization settings in BRF+ workbench.

Issue 2) → With 1511 release, new output management is not available for sales documents and outbound delivery. Sales documents still work with traditional output management based on NAST.

Additional Information

The **new Output Management** cannot be used

8 Special function

9 Events (SAP Business Workflow)

A Distribution (ALE)

T Tasks (SAP Business Workflow)

The new Output Management can only be used for newly created billing documents. Therefore the migrated **Billing documents** from legacy systems or which require **NAST-based output** has been determined can be processed with this technology.

If the new Output Management is used, the various configuration settings which are related to Output Management in Sales & Distribution in the area of billing / customer invoicing need to be adapted.

The following forms are delivered by SAP and can be adapted:

- **SDBIL_CI_PROF_SRV_...** used for professional service invoices
- **SDBIL_CI_STANDARD_...** used for standard customer invoices
- **SDBIL_IL_STANDARD_...** used for invoice lists
- **SDBIL_CM_STANDARD_...** used for credit memos

The forms may differ from country to country, therefore a separate form for each country. For example, **SDBIL_CI_STANDARD_DE** is for **Germany**.