Configuration Guide

CUSTOMER

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Public Budget Formulation 8.1 SP01



Typographic Conventions

Type Style	Description
Example	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.
`Example`	Emphasized words or expressions.
`EXAMPLE`	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
`Example`	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example`	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
`EXAMPLE`	Keys on the keyboard, for example, `F2` or `ENTER`.

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Document History

Version	Status	Date	Change
1.0	Final	2014-04-24	Initial release

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1 About This Document

1.1 Purpose and Scope

The Configuration Guide provides a central starting point for the technical implementation and configuration of SAP Public Budget Formulation 8.1 SP01. It describes all activities necessary for the implementation and configuration of SAP Public Budget Formulation 8.1 SP01. In addition, this Configuration Guide provides information about the components and guides that are required during the implementation process.

To allow for an efficient implementation process, all information within this document is structured according to scenarios. You can choose from several generic business scenarios and find all information that is relevant for the technical implementation and configuration of a specific business scenario.

1.2 Target Audience

This document is intended for the following target audiences:

- Consultants
- Partners
- Customers
- System administrators
- Business process owners
- Support specialists

1.3 Related Information

- Application help
- PBF Guides: Master Guide, Upgrade Master Guide, Installation Guide, Operations Guide, Security Guide, and Sizing Guide
- PBF SCN Community Page - For information on latest releases, How-to guides, upcoming events and Webinars.

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1.4 Important SAP Notes

Recommendation

Make sure that you read the SAP Note before you start implementing the software. The SAP Note contains the latest information about the installation as well as corrections to the installation information.

Also make sure that you have the up-to-date version of the SAP Note, which is available on SAP Service Marketplace at https://service.sap.com/notes.

SAP Note Number	Title	Description
13--431	Release strategy for the ABAP Add-On PBFBI	Release Note for SAP Public Budget Formulation 8.1

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2 Solution Overview

SAP Public Budget Formulation 8.1 addresses the variety of needs for formulating budgets in Public Sector organizations based on strategic goals and cost projections for personnel expenditures. The application allows customers to manage the full circle of the budget formulation process – starting with the upload of historical data; continuing through modeling and forecasting personnel costs and base budgets and the creation and usage of situation-specific budget forms; and finally to ranking, approving, and adopting the budget. Give a brief description of the solution/industry portfolio that is covered by this Configuration Guide.

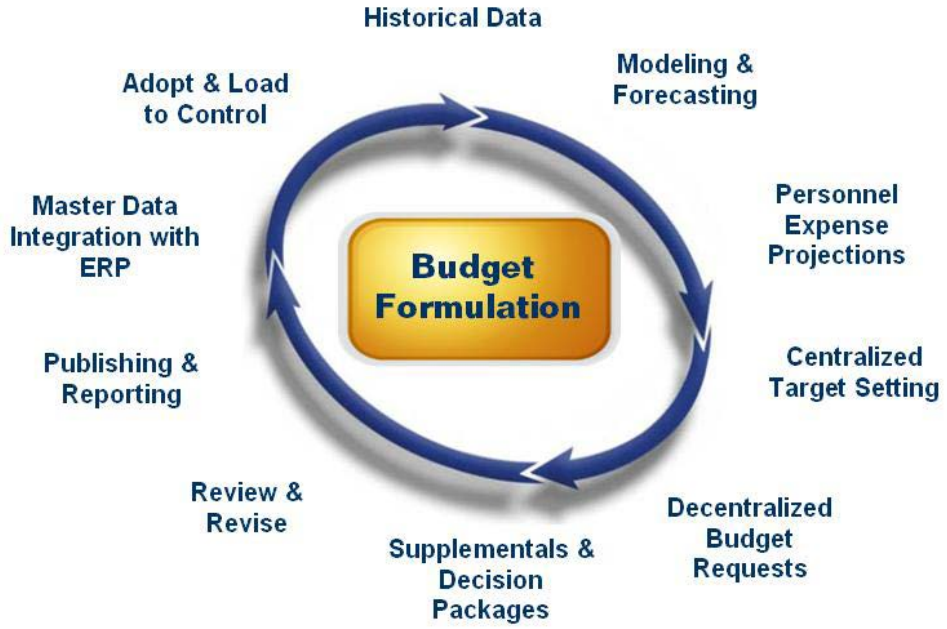


Figure 1 - Budget Formulation Process

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2.1 System Landscape

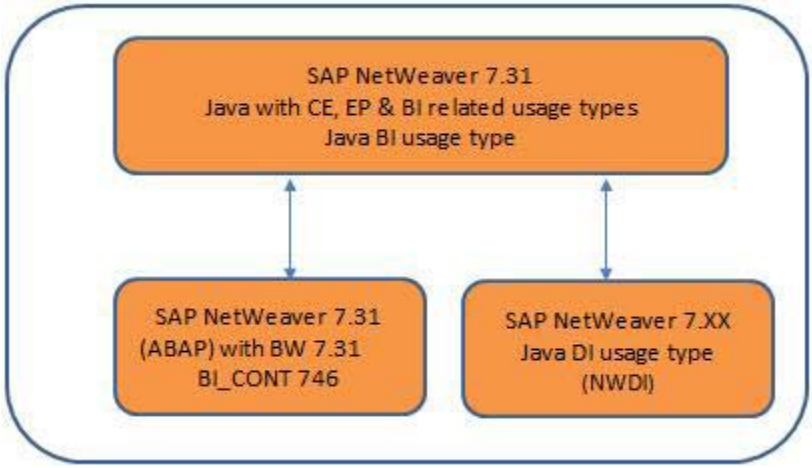


Figure 2 - A minimal Public Budget Formulation 8.1 system landscape

Note

Only a single NWDI system is required to support the DEV, QA, and PROD systems. In the context of DEV, the NWDI server provides source control capabilities for VC. In the context of QA and PROD, the NWDI server handles deployments and transport management. All of these functions can be handled by a single NWDI system.

Recommendation

We strongly recommend that you use a minimal system landscape for test and demo purposes only. For reasons of performance, scalability, high availability, and security, do not use a minimal system landscape as your productive landscape. For more information about creating productive system landscapes, see SAP Service Marketplace at https://service.sap.com.

2.2 Software Component Matrix

Scenario/Business Processes	Software Components	Implementation and Configuration Process
Public Budget Formulation	PBFBI	Public Budget Formulation
Budget Forms	PBFBI	Budget Form Configuration
Personnel Expenditure Planning	PBFBI	Personnel Expenditure Planning Configuration

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2.3 Implementation and Configuration – Basic Settings

The Configuration Guide contains the information necessary for configuring the SAP system to meet customer requirements. The actual configuration is done in Customizing with the help of the Implementation Guide (IMG; transaction SPRO). It covers all steps of the implementation process as well as the SAP standard (factory) Customizing settings and the system configuration activities. The Customizing activities and their documentation are structured from a functional perspective.

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3 Business Scenarios

3.1 Public Budget Formulation

SAP Public Budget Formulation 8.1 addresses the variety of needs for formulating budgets in Public Sector organizations based on strategic goals and cost projections for personnel expenditures. The application allows customers to manage the full circle of the budget formulation process starting with the upload of historical data to modeling and forecasting of personnel costs and base budget to the creation and usage of situation specific budget forms and finally their ranking and approval and adoption of the budget.

You can implement this business scenario with different releases of the relevant application components. However, only certain combinations are valid. For more information, see:

- Master Guide for Public Budget Formulation on SAP Service Marketplace at http://service.sap.com/instguides
- Scenario & Process Component List on SAP Service Marketplace at http://service.sap.com/scl

3.1.1 PBF System Configuration

Public Budget Formulation 8.1 requires a SAP Netweaver Application Server Java 7.31 with SP07 or higher with the minimum of the following usage types installed: AS, EP, BI, EPC, CE-APPS, COMP-ENV, BASIC and NW-MODEL, as well as SAP NetWeaver Application Server ABAP 7.31 SP 07. Additionally an NWDI server is required for the Visual Composer environment in order to create custom budget forms.

NetWeaver Release 7.31 SP07 is the minimum release on which PBF 8.1 is supported.

3.1.1.1 Cross-System Configuration

The PBF solution consists of several different components running on different systems. The various systems and components must be configured properly to enable them to communicate with one another seamlessly. The configuration tasks covered in this section are critical to the overall operation of PBF. A mistake at this level will cause issues across all other business scenarios.

3.1.1.1.1 Prerequisites

For PBF the required system landscape requires a NetWeaver 7.31 SP07 ABAP and a separate NetWeaver 7.31 SP07 JAVA . Finally an NWDI server version 7.02 or higher has to be available in order to create custom budget forms based on templates delivered with PBF.

We strongly recommend that you use a minimal system landscape for test and demo purposes only. For performance, scalability, high availability, and security reasons, do not use a minimal system landscape as your

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productive landscape. For information on creating productive system landscapes, see the SAP Service Marketplace at the following Internet address: service.sap.com/ti.

3.1.1.1.2 Process

Trusted Systems

Although not required, implementing Single Sign-On (SSO) between the various components that comprise PBF will result in the most secure and seamless landscape. The following trusted system relationships must be configured to enable SSO:

Source System	Trusted System	Required
BI Java (NW 7.31)	BI ABAP (NW 7.3)	Yes
BI Java (NW 7.31)	CE Java (NW 7.3)	Optional
BI ABAP (NW 7.31)	CE Java (NW 7.3)	Yes
NWDI (7.02 or greater)	CE Java (NW 7.3)	Optional

Prerequisite

Set the profile parameter login/accept_sso2_ticket = 1. Set login/create_sso2_ticket = 2.

SSO between BI ABAP (NW 7.31) and CE Java (NW 7.31)

1. Make sure that both the JAVA and ABAP are connected to the same SLD.
2. Navigate to following NWA location and download TicketKeystore SAPLogonTicketKeypair-cert by clicking Export Entry (format Binary X.509).

   Note

   Refer following help link for more information:
   http://help.sap.com/saphelp_nw73ehp1/helpdata/en/3F/C890769C874B41B086E22AA553C565/content.htm.
3. In the ABAP system, go to transaction STRUSTSSO2 and add the certificate.
4. Add to the ACL. You have to enter the System ID and the Client. SID System: Client is 000.
5. ACL setting is client dependent. Repeat the procedure for every client.
6. Create the equivalent user IDs in WebAS/EP as in the R/3.

VC Backend Destinations and Systems

A PBF-specific VC backend destination and a system must be configured in the NetWeaver CE system. The definition of the following destination and system will enable VC form designers to search for and access ABAP RFCs and BI-IP objects such as queries and planning functions. If these destinations are missing, standard PBF VC screens will fail to function and form designers will be unable to create custom budget forms. Please refer to NetWeaver CE (http://help.sap.com/nw731) configuration documentation for more information. Three destinations should be created: PBF_R3, PBF_MODELDATA_DEST and PBF_RFC_METADATA_DEST. Additionally, if using Stage Approval Workflow then a fourth destination, PBF_BI&WebFlowConnector needs to be created.

PBF_R3 Destination (ABAP RFC)

Navigate to Destinations screen

1. Logon to *SAP NetWeaver Administrator* (http://<host>:<port>/nwa
2. Click *Configuration* tab.

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3. Click *Security*
4. Click *Destinations*

Create Destination PBF_R3

1. Click *Create*.
2. Select *Hosting System* as per your landscape.
3. Enter ‘PBF_R3’ as the *Destination Name*.
4. Select ‘RFC' as the *Destination Type*.
5. Click *Next*.
6. Select 'Yes' for *Load Balancing*.
7. Enter the *System ID* of the backend system as per your landscape.
8. Fill in rest of the fields on this screen as per your landscape.
9. Click *Next*.
10. Select your *Authentication* method and fill in rest of the fields accordingly.
11. Click *Next*.
12. Fill in the *Pool settings and Advanced settings* as per your landscape and requirements.
13. Click *Finish*.
14. Select the *PBF_R3 RFC Destination* and click the *Ping Destination* button to test. It’s important that you test this and confirm to make sure that your connection is setup properly.

WebDynpro Java Destinations

PBF_MODELDATA_DEST

1. Click *Create*.
2. Select *Hosting System* as per your landscape.
3. Enter ‘PBF_MODELDATA_DEST’ as the *Destination Name*.
4. Select ‘RFC’ as the *Destination Type*.
5. Click *Next*.
6. Select 'Yes' for *Load Balancing*.
7. Enter the *System ID* of the backend system as per your landscape.
8. Fill in rest of the fields on this screen as per your landscape.
9. Click *Next*.
10. Select your *Authentication method* and fill in rest of the fields accordingly.
11. Click *Next*.
12. Fill in *Pool settings and Advanced settings* as per your landscape and requirements.
13. Click *Finish*.
14. Select the *RFC Destination PBF_MODELDATA_DEST* and click the *Ping Destination* button to test. It is important that you test this and confirm to make sure that your connection is setup properly.

PBF_RFC_METADATA_DEST

1. Click *Create*.
2. Select *Hosting System* as per your landscape.
3. Enter ‘PBF_METADATA_DEST’ as the *Destination Name*.
4. Select ‘RFC’ as the *Destination Type*.
5. Click *Next*.

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6. Select 'Yes' for *Load Balancing*.
7. Enter the *System ID* of the backend system as per your landscape.
8. Fill in rest of the fields on this screen as per your landscape.
9. Click *Next*.
10. Select 'Technical User' as your *Authentication method* and fill in rest of the fields as per your configuration. Note that just one single user is used to bring in the METADATA for the RFCs.
11. Click *Next*.
12. Fill in *Pool settings and Advanced settings* as per your landscape and requirements.
13. Click *Finish*.
14. Select the *PBF_METADATA_DESTRFC Destination* and click the *Ping Destination* button to test. It is important that you test this and confirm to make sure that your connection is setup properly.

    Note

    The reason Technical User is recommend as Authentication method is because PBF_RFC_METADATA_DEST is used by Web Dynpro Java code to fetch metadata for classes, objects, RFCs and structures. These remain same for all users irrespective their roles and privileges. It is recommend to create a separate user for this and assign following settings.

    - Logon Data > User type: *System*
    - Profile: *S_DDIC_MDI*

    The destination PBF_MODELDATA_DEST, on the other hand, is responsible for data communication and hence the recommended authentication for this is user id and password using SSO so that all the assigned authorizations in the back-end ABAP system are respected.

PBF_BI$WebFlowConnector Destination (Backend Workflow)

This configuration is required in order to use PBF Workflow for Stage Approval.

Navigate to Destinations screen

1. Logon to *SAP NetWeaver Administrator* (http://<host>:<port>/nwa
2. Click *Configuration* tab.
3. Click *Security*
4. Click *Destinations*

Create Destination PBF_BI$WebFlowConnector

5. Click *Create*.
6. Select *Hosting System* as per your landscape.
7. Enter ‘PBF_BI$WebFlowConnector’ as the *Destination Name*.
8. Select ‘RFC' as the *Destination Type*.
9. Click *Next*.
10. Select 'Yes' for *Load Balancing*.
11. Enter the *System ID* of the backend system as per your landscape.
12. Fill in rest of the fields on this screen as per your landscape.
13. Click *Next*.
14. Select your *Authentication* method and fill in rest of the fields accordingly.
15. Click *Next*.
16. Fill in the *Pool settings and Advanced settings* as per your landscape and requirements.

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17. Click *Finish*.
18. Select the *PBF_R3 RFC Destination* and click the *Ping Destination* button to test. It's important that you test this and confirm to make sure that your connection is setup properly.

PBF_BI System (BI-IP data)

1. Log on to the portal using the administrator user: http://<host>:<port>/irj.
2. Choose *System Administration* > *System Configuration* > *System Landscape* . For more information, see *Creating Systems.*
3. Choose the *SAP system with load balancing* template.
4. Enter the system name, system ID, system ID prefix, and description and click *Next*.
5. Create a PBF_BI alias and set it as default.

   Note

   Note: It is important that the alias is named as PBF_BI.
6. Click *Finish*.
7. Maintain the properties in the following categories by selecting the newly created system and going in edit/modify mode:
   1. BI/Business Intelligence
      1. BI Directory Provider: yes
      2. BI Master System: yes
   2. Connector
      3. Group: Logon group of back-end system
      4. Message Server: Message server of back-end system
      5. Remote Host Type: 3
      6. SAP Client: Client of back-end system
      7. SAP System ID (SID): System ID of back-end system
      8. System Type: SAP_BW

   You can find the values for the logon group, system ID, and message server from the properties in the SAPGUI logon for the BI back-end system.
   3. User Management
      9. Authentication Ticket Type: SAP Assertion Ticket (Click All properties if you are on basic view)
      10. Logon Method: SAPLOGONTICKET
      11. User Mapping Type: admin, user

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3.1.1.2 ABAP System Configuration

3.1.1.2.1 Process

Number Ranges

PBF includes several number ranges that must be configured with valid intervals during implementation. The table below lists all number range objects used in PBF along with the correct details for their interval ranges. The standard transaction SNUM can be used to setup PBF number ranges.

Object	No.	From Number	To Number	Current Number	Description
/PBFBI/CHG	01	1	9999999999	0	Number range for change number
/PBFBI/CMT	0	1	9999999999	0	Number range for comment instance IDs
/PBFBI/CT	0	1	9999999999	0	Number range for comment type IDs
/PBFBI/EMP	01	1	99999999	0	Number range for Employee
/PBFBI/FRM	0	1	9999999999	0	Number range for unique ID of budget forms
/PBFBI/JOB	01	1	99999999	0	New Job
/PBFBI/POS	01	1	59999999	0	Number range for Position
	02	60000000	79999999	60000000	PBF PCP Projection ID
	03	80000000	99999999	80000000	
/PBFBI/PRJ	01	000	299999	100	* See below
	02	600000	799999	600000	Number range for WHAT IF Projections
	03	300000	599999	300000	Number range for Pay Period Based Projections
	04	800000	999999	800000	Number range for Attrition and Backfill Projections
/PBFBI/RC1	01	1	999999999999999999	0	Position Allocation Counter
/PBFBI/RC2	01	1	999999999999999999	0	Unique Record Count Employee Allocations
/PBFBI/RC3	01	1	999999999999999999	0	Record Counter for Employee Benefits
/PBFBI/RC4	01	1	99999999999999	0	Employee Position Counter

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Object	No.	From Number	To Number	Current Number	Description
			999999		
/PBFBI/RC5	01	1	99999999999999999999	0	Position Benefit Counter
/PBFBI/RC6	01	1	99999999999999999999	0	Counter - Job Benefits
/PBFBI/RC7	01	00000000000000000001	19999999999999999999	0	Record Counter for Rate Type
/PBFBI/RC7	02	20000000000000000000	29999999999999999999	200000000000000000000	Record Counter for Activity Price
/PBFBI/RC7	03	30000000000000000000	39999999999999999999	300000000000000000000	Record Counter for Commodity Rate
/PBFBI/RC7	04	40000000000000000000	49999999999999999999	400000000000000000000	Record Counter for PBF Value Type
/PBFBI/RC7	05	50000000000000000000	59999999999999999999	500000000000000000000	Record Counter for Budget Type
/PBFBI/RC7	06	60000000000000000000	99999999999999999999	600000000000000000000	Record Counter for Inflationary Rate
/PBFBI/RNK	01	1	9999999999	0	Ranking Number Range
/PBFBI/TTR	0	1	9999999999	0	Number range for comment type tree IDs
/PBFBI/VER	01	1	999999999999	0	Ranking Version Number Range
/PBFBI/ANB	01	000001	499999	000000	Number range for Attrition Rule Configuration
	02	500000	999999	500000	Number range for Attrition and Backfill Group Configuration

* For Number range /PBFBI/PRJ: Projection ID 000001 is reserved for Budget/Decision Package projections. The remaining first 100 projection ids are used for SAP use. For each number range listed in the previous table, define the intervals using the provided details.

BC Sets

The PBF solution contains a number of BC sets containing standard customizing content from some PBF tables. The following BC sets can be activated using the standard transaction SCPR20:

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Name	Short Description	Table Updated	Comments
/PBFBI/APP_HELP	Standard application help links for PBF	/PBFBI/APP_HELP	Required
/PBFBI/BCSET_MAP_OBJ	Entries of Mapping Table for System Generated Objects	/PBFBI/V_MAP_OBJ	Required
/PBFBI/PAY_TYP	Flexible pay period types	/PBFBI/V_PAY_PRD	Required if using Flexible Pay Period PEP
/PBFBI/PROJ_SRC	PEP Pay Period Flexible Source Configuration	/PBFBI/V_PRJ_SRC	Required if using Flexible Pay Period PEP

Default Master Data Programs

There are a series of transactions and programs to create default master data for various PBF applications. All of the programs will only create the master data if it does not already exist. If the value already exists there are no changes made to the existing object. Results are written to an application log file (Object /PBFBI/PBF, Sub-Object /PBFBI/MD_DEFAULT). Please check Service Marketplace note 1751941 to get the latest updates to the programs prior to executing the programs. The following transactions are available:

Transaction	PBF Release	Pre-requisites
/PBFBI/MD_CORE01	PBF 8.0 and beyond	PBF BI content must be installed /PBFBI/GLOBALS must be maintained (see PBF IMG online doc or Configuration Guide)
/PBFBI/MD_CORE02	PBF 8.0 and beyond	PBF number range maintenance (manual maintenance) PBF Hierarchy maintenance (manual maintenance) (see PBF Configuration Guide)
/PBFBI/MD_SL01	PBF 8.0 SP01	All of the transactions listed above PBF Hierarchy maintenance (manual maintenance) (see PBF Configuration Guide)
/PBFBI/MD_CORE81	PBF 8.1 and beyond	All of the transactions listed above /PBFBI/GLOBALS must be maintained (see PBF IMG online doc or Configuration Guide)
/PBFBI/MD_SL81	PBF 8.1 and beyond	All of the transactions listed above /PBFBI/GLOBALS must be maintained (see PBF IMG online doc or Configuration Guide)

Workflow Customizing and Activation

Customizing

Perform Workflow customizing using Automatic Workflow Customizing (transaction SWU3) by referring to following the online help for Automatic Workflow Customizing. Note that PBF Worklfow does contain tasks that run in the background which will require a userid. The automatic customizing includes creation of a userid of WF-BATCH which serves this purpose. The user does not require any PBF specific authorizations, but standard workflow authorizations required. Details are included in the online help referenced above.

Activation

Workflow template WS69800007 should be activated after maintaining Agent assignment for following items:

- Workflow Template - /PBFBI/STAGE (PBF Stage Workflow)

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- Standard Task - /PBFBI/APDEC – (PBF Workflow Approval Decision Task)

The agent assignment for the PBF stage advance workflow template and the decision task needs to be configures as no agents are initially assigned to workflows. The PBF workflow template has been setup to work as a General Task, meaning that the possible agents of a task are all of the users who are organizationally responsible and authorized to execute the task at runtime. For more information on agent assignment possibilities refer to Maintenance of Agent Assignment documentation.

Execute transaction SWDD and enter Workflow Template WS69800007.

Do menu path Goto-> Basic Data.

Do menu path Goto -> Agent Assignment for Task.

Press Attributes button

Select the options for General Task and No Classification.

The display will change and reflect General Task (there is no Save button)

Select Task 000004 – Approval Request

Press the Control tab

Under Task Properties, Select the icon for Agent Assignment for Task

Press Attributes button

Select the option for General Task and No Classification

The display will change and reflect General Task (there is no Save button)

> **Note**
>
> Agent assignment can be set to General Task for non-productive use. However, it is recommended that you review your security policies to determine agent assignment for production systems.

BW Variable Exit Routines

Public Budget Formulation uses customer reporting variables in various planning objects. To activate the variable exit routines a business function has been provided that must be activated. Steps to activate the business function are:

1. Access the SAP IMG via transaction SPRO
2. Execute IMG activity ‘Activate Business Functions
3. Expand the Enterprise Business Functions node
4. Find the business function ‘/PBFBI/BF_BW_VARIABLES.’. Select the Planned Status checkbox
5. Press Activate Changes button. This will initiate a batch job to activate the business function.
6. To confirm that the variable exit routines are active execute transaction SE19. In the Edit Implementation section of the screen select the radio button New BAdI. In Enhancement Implementation enter ‘/PBFBI/EI*’ and press the F4 help button. The list should include the following implementations:

Enhancement Implementation	Short text
/PBFBI/EI_BDGT_YR_EXIT	Implementation of RSROA_VARIABLES_EXIT_BADI for /PBFBI/BDGT_YR variables
/PBFBI/EI_CURRENCY_EXIT	Implementation of RSROA_VARIABLES_EXIT_BADI for CURRENCY BW variables
/PBFBI/EI_FISCVARNT_EXIT	Implementation of RSROA_VARIABLES_EXIT_BADI for 0FISCVARNT variables

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Enhancement Implementation	Short text
/PBFBI/EI_FISCYEAR_EXIT	Implementation of RSROA_VARIABLES_EXIT_BADI for 0FISCYEAR variables
/PBFBI/EI_PEP_VARIABLE_EXIT	Implementation of RSROA_VARIABLES_EXIT_BADI for PEP BW variables
/PBFBI/EI_STAGE_EXIT	Implementation of RSROA_VARIABLES_EXIT_BADI for /PBFBI/STAGE BW variables

Each implementation can be selected and should have the ‘Implementation is active’ checkbox selected on the Enh. Implementation Elements tab.

More information on switch activation can be found at this link:
http://help.sap.com/saphelp_nw73ehp1/helpdata/en/de/899442047b0831e10000000a1550b0/content.htm

Note

In earlier releases of PBF a CMOD project was utilized for variable resolution. In PBF 8.1 the PBF code in the CMOD project (include file /PBFBI/PBF_ZXRSRU01) was commented out and replaced it with the Enhancement implementations listed above. Customers can continue to use the CMOD project for they own custom variable exits if they wish.

3.1.1.3 CE and KM System Configuration

3.1.1.3.1 Process

Knowledge Management File Repository Setup

All budget form attachments are stored in a Knowledge Management file repository hosted on the NW 7.31 Java system. This section describes the steps required to create and configure a custom file repository for the storage of PBF attachments.

The following configuration steps should be performed on the Netweaver 7.31 Java stack used for BI-IP planning. Also, the user performing the configuration will require Content Admin and System Admin roles, both of which are standard roles delivered with the portal.

To create a custom file repository, do the following:

1. Log in to http://<host>:<port>/irj/portal/.
2. Navigate to the Content Management configuration screen using the following navigation path: *System Administration —> System Configuration —> Knowledge Management —> Content Management.*
3. Click the Content Management link and then the Utilities link on the next screen. This screen lists utility subareas. To create a new memory cache, click the Caches link.
4. On the next screen click New.
5. Create the memory cache with the following properties
   - Name: ca_pbf_rm
   - Restart lifetime on access: unchecked

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- Capacity: 100
- Default Time-to-Live: 300
- Singleton: checked
- Assumed Entry Size: 0
- Max Cache Size: 0
- Max Entry Size: 0

6. Click *OK*.
7. Click the *Repository Managers* link and then the *CM Repository* link on the next screen. This screen lists all existing repository managers. To create a new repository, click *New*.
8. Configure the properties for the new repository to the following:
   - Description: none
   - Prefix: /pbf
   - Persistence Mode: db
   - Repository ID in Database: com.sap.cdev.pbf.rm
   - Root directory: none
   - Root directory for versions: none
   - Repository Services:

Name	Topic	Class
Access statistic	Access Statistics Service	com.sapportals.wcm.repository.service.accessstatistic.AccessStatisticManager
Layout	Layout Service	com.sapportals.wcm.repository.service.layout.cm.LayoutService
Properties	Application Property Service	com.sapportals.wcm.repository.service.appproperties.PropertiesManager
Statemngt	State management Service	com.sapportals.wcm.repository.service.statemanagement.cm.StatemanagementManager
Svc_acl	Service-ACL Service	com.sapportals.wcm.repository.service.AclService

   - Property Search Manager: com.sapportals.wcm.repository.manager.cm.CmPropertySearchMan
   - Security Manager: AclSecurityManager
   - Windows Landscape System: none
   - Memory Cache: ca_pbf_rm
   - Memory Cache for small content: ca_pbf_rm
9. Create a new portal group using the standard User Management functionality and add all PBF users to this new group. For the sake of explanation, we assume that the group was named PBF Attachments.
10. With the new group created, navigate to the KM Permissions screen using the following navigation path: *Content Administration —> KM Content —> Toolbox —> Permissions*

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11. Find the repository that was just created (/pbf) and click the *Details* link to set its permissions.
12. A new browser window will appear (check popup blockers if it does not). In this new window, you can add the newly created group to the list under the *Permissions* tab. To do so, click the *Select...* button towards the bottom of the window and perform a search for PBF*.
13. Once the group appears in the permissions list, make sure that the permissions drop-down list is set to *Read/Write*.
14. Finally, click *Save Permissions* to save your changes.

Use the following navigation path to create a subfolder under the PBF repository that was just created: *Content Administration —> KM Content.*

1. Click on the PBF folder and create a sub-folder named forms.
2. Select *Folder > New > Folder*.
3. For Name: enter "forms".
4. Click *Save*.

Knowledge Management Web Service Proxies

The KM web service is hosted on the Java 7.3 system used for BI-IP modeling. Client proxies must be configured on the CE system for the budget form attachments functionality to work correctly. The following steps should be performed to configure the web service client proxies:

1. Log in to the Netweaver Administrator Tool (http://<host>:<port>/nwa)
2. Navigate to the *Single Service Administration section: SOA Management —> Application and Scenario Communication —> Single Service Administration.*
3. Switch to the *Consumer Proxies* tab and search for **Repository**. Select the second result.
4. Below this first table you will see the table of logical ports. Select the single record in the table and click the *Set As Default*. Selecting the line will bring up the logical port's details.
5. In the logical port's details area, switch to edit mode by clicking *Edit*.
6. In the *General* tab, change the hostname and port to correspond to the BI-IP Java 7.3 system used for modeling.
7. Switch to the *Security* tab and configure the type of authentication to be used. If SSO has been configured between the two systems, the *Logon Ticket* option can be used with no further configuration.
8. If additional security measures are required, they can be configured using this screen.

Universal Worklist Configuration

Create a new System called PBF_WF by following steps explained for creating PBF_BI System. Technically the PBF_BI System could be reused for non-productive use, but it is recommended that you create a new system for better support and maintenance.

Navigate to Portal > System Administration > Universal Worklist & Workflow and define new system connections as described below.

Visit the following link for some background information on connectors:
http://help.sap.com/saphelp_nw73ehp1/helpdata/en/4a/f9a2c27b721115e10000000a42189c/content.htm?frameset=/en/db/579b66770245a688a227f80be3dff2/frameset.htm.

WebFlowConnector System Connection

- System Alias: PBF_WF
- Connector Type: WebFlowConnector

> **Note**
>
> This system connection is used to extract work items related to PBF Stage Workflow from ABAP/BI System.

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SomProviderConnector System Connection

- System Alias: PBF_WF
- Connector: SomProviderConnector

> **Note**
>
> This will be used to extract Stage Workflow Notifications/SAP Office Mails and they show up in SAPOfficeMails tab in Universal Worklist view. Notifications are sent from Approval Workflow whenever a decision is made for the approval request. Skip this step if you do not plan to use Approval Notifications.

Register Work Item Types

In the table System Alias, select your system. Push the Register pushbutton to generate an XML file for item types.

3.1.2 Budget Form Configuration

This process provides configurable structures that allow users to create budget requests for all formulation processes. Once submitted, requests can be reviewed and managed through a series of user-defined stages, then prioritized, or ranked, and compared to established funding levels.

The following business process runs in SAP Public Budget Formulation 8.1:

1. Combo Edit Configuration

   Combo Edit Configuration can be used to limit selection of each FM dimension based on hierarchy and levels at the header and detailed line level. It can also be used to limit the selection of FM dimensions in value/F4 helps.

2. Budget Form Execution

   Budget Forms will be used by the end user to submit budget requests. A budget form definition supports base and incremental budgeting; multi-year, enterprise, and internal service budgeting, capital budgeting, performance budgeting, and modeling and forecasting. Budget Forms are used to capture projected budget expenditures, funding sources, and new position requests by financial management (FM) dimensions over a varying number of fiscal years.

3. Budget Request Ranking

   A Ranking Form is used to assign priority ranks to budget requests, compare request amounts by FM dimension combinations, and then determine which requests could be funded by defining funding levels. Budget requests can be ranked and re-ranked as often as needed and the system will re-sequence the budget requests based on the assigned rank. Rankings can be defined for each phase of the budget. Users can also change the funding levels after they have been established.

4. Re-Allocations

   The re-allocations feature allows users to move or transfer funds from one decision package to one or more decision package request forms. Users can select a form and reallocate costs associated with expenses, revenues, and positions to a different form.

5. Mass Stage Advancer

   Mass Stage Advancer allows authorized power users to advance multiple budget forms to a higher stage at once.

6. Stage Workflow

   The functionality would allow users to configure approvers at two different levels:

   - By stage and form name
   - By individual form instance ID

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7. File Upload into Forms

   The functionality allows users to selectively upload data into specific tabs

8. Form Downloads with texts

   PBF Form Download is a feature that allows user to download all the budget items and supporting text data with just one click from the budget form. The data is downloaded in XML file format that can be easily viewed in Microsoft Excel.

9. Copy Form

   The functionality allows users to copy existing form data including line texts and justifications. Users would now be able to select forms that belong to other budget years and use it as a reference.

10. Audit Trail and Reason for Change Reporting

    The form enhancement now includes a reason for change driven audit trail reporting. The reporting feature can be viewed in the edit mode of the form.

3.1.2.1 Fiscal Year Variation Configuration

The fiscal year variant is needed for many applications in PBF. It defines the number of periods and period date ranges for the fiscal year. Use transaction SPRO to maintain Customizing data. The following menu path will take you to the correct IMG node: SAP Customizing Implementation Guide > SAP NetWeaver > Business Intelligence > General BI Settings > Maintain fiscal year variant.

PBF Requirements

- There can be only one fiscal year variant defined for PBF.
- It must not be calendar based.
- It must have 12 fiscal periods defined.
- Each fiscal period must be limited to the calendar dates for a month.

3.1.2.2 PBF Global Configuration

The PBF Globals table contains a single table entry to define default parameters that are used by the PBF calculation algorithm and budget form parameters.

Other References

Use transaction */PBFBI/START_PBF_IMG*

Use transaction SPRO to maintain Customizing data with the following menu: *SAP Customizing Implementation Guide > Public Budget Formulations (PBF) > Maintain PBF Global Settings*

Field	Value
Budget Year	2012
Outlying Years	4
Fiscal Year Variant	PS
Country Grouping	10

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Field	Value
Currency	USD
Employment Status	3
Version	999
BF Currency Conversion Type	/PBFBI/BFC
PEP Currency Conversion Type	/PBFBI/PEP
Apply Rounding	Checked
Inlying Years*	2

Inlying Years: This is used with Federal Ranking and it indicates the number of years that the budget amount should include. This is used in conjunction with the Budget Year to determine how many prior years are to be included in calculation.

For more information on other fields refer to IMG Activity Documentation in IMG (transaction SPRO).

> **Note**
>
> The data described is required in order to use PBF template forms. This data must be maintained manually. It is a pre-requisite for programs that generate PBF Default Master Data. See documentation for PBF Default Master Data Load BC Sets section in PBF System Configuration guide for more details.

3.1.2.3 Maintain Financial Management Area Master Data (FM Area)

The Financial Management Area (FM Area) is needed for many applications in PBF. It defines one of several financial dimensions (along with Fund Center, Functional Area) and has the additional attributes Currency and Fiscal Year Variant.

FM Area master data object name: /PBFBI/FM_AREA

Financial Area	Language	Currency	Fiscal Year Variant	Description
1000	EN	USD	PS	FM Area 1000

The data described above is required in order to use standard PBF template forms. This data can be programmatically loaded by executing backend transaction /PBFBI/MD_CORE01. See documentation for PBF Default Master Data Load BC Sets section in PBF System Configuration guide for more details.

3.1.2.4 Master Data Exclusion Table

Info Objects matching any pattern given in this view may not be maintained through the MDM Web UI.

1. Maintain View /PBFBI/V_EXLIOBJ.
2. In transaction SM30, enter excluded Info Objects – for example, 0*.

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3.1.2.5 Currency Configuration

There are several key pieces of configuration that are used to do currency conversion as outlined below.

Currency Translation Type for Budget Forms

- • Transaction: RSCUR
- • Currency Conversion type: /PBFBI/BFC
- • Description: Budget Forms Currency Translation
- • Exchange Rate tab:
- • Select checkbox ER Determ Using FI Modules
- • Exchange Rate Type: B
- • Select Radio Button: Dyn Ex. Rate Determination
- • Currency tab:
- • Source Currency from Variable: /PBFBI/CXSALTCUR00
- • Target Currency from Variable: /PBFBI/CXSCR02
- • Time Ref tab:
- • Fixed Time Ref – Select the radio button called Current Date

Currency Exchange Rate Types

Currency exchange rate types are maintained via transaction OB07. Currency exchange rates part of standard currency conversion and are attached to BW currency translation types. For PBF it is recommended that you use pre-configured type B.

Currency Quotation Types

Currency Quotation types are maintained via transaction ONOT. They are part of standard currency conversion that is incorporated into BW currency conversion. The Currency Quotation type table defines whether Direct or Indirect Quotations should be used during currency conversions.

Currency Exchange Rate Table

The currency exchange rates are maintained via transaction OB08. They are part of standard currency conversion that is incorporated into BW currency conversion. This is where the actual exchange rates are maintained by exchange rate type.

Note

- o The configuration defined in the Quotation type table determines whether the Indirect or Direct Quotation figures are used from this table
- o If figures are highlighted in this table, it is an indication that incorrect quotation type is being maintained.
- o The Valid from date will be compared to the date configured in the Conversion Translation type (trans. RSCUR) to determine which conversion rate record to use.

3.1.2.6 Transaction Type Master Data

The allocations functionality uses an InfoObject named Transaction Type (/PBFBI/TRANSTY). This data is automatically created if you executed the BC sets Master Data Load program (transaction /PBFBI/MD_CORE01).

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3.1.2.7 Comment Types

The standard PBF-delivered budget form templates use several comment types and a single comment type tree. These comment types must exist for the standard budget form templates to operate correctly.

Create Comment Types

To create the required comment types, navigate to the Comment Type screen using the following navigation path: *PBF Administrator* > *Budget Forms* > *Comments* > *Comment Types*.

Carry out the following steps to create each of the comment types listed in the table below.

1. Click *New*.
2. In the popup window that appears enter the *Technical Name, Display Name*, and *Description* given in the table.
3. Click *Create* to create the new comment type.

Technical Name	Display Name	Description
MISSION	Mission	Mission comment type.
GOAL	Goal	Goal comment type.
OBJECTIVE	Objective	Objective comment type.
DESCRIPTION	Description	Description comment type.
JUSTIFICATION	Justification	Justification comment type.

Create Comment Type Tree

To create the required comment type tree, navigate to the Comment Type Tree screen using the following navigation path: *PBF Administrator* > *Budget Forms* > *Comments* > *Comment Type Trees*

1. Click New.
2. In the popup window that appears enter the following values in the corresponding fields:
   - Technical Name: MISSION-GOAL
   - Display Name: Strategic Plan
   - Root Type: Mission
   - Description: Strategic planning comment type tree
3. Click *Create* to create the new comment type.
4. In the *Structure* tab, right-click on the root node (*Mission*) and add an existing comment type by clicking Add > Existing.
5. Perform a search in the popup that appears and select the *Goal* comment type from the search results.
6. The *Goal* comment type should now appear as a child of the *Mission* type in the tree.
7. Repeat steps 4-6, this time adding the *Objective* comment type as a child of the *Goal* comment type.
8. Finally, with the *Objective* comment type selected in the tree structure, make sure the *Measurable* checkbox is selected.

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3.1.2.8 Form Elements

Form elements are used in budget forms for entry and drop-down values. A default form element exists in the delivered budget form template. Follow the steps below to set the default form element and to become familiar with defining form elements. This data is automatically created if you execute the BC sets Master Data Load program (transaction /PBFBI/MD_CORE01).

Do the following in the CE Portal:

1. Under *PBF Administration -> Budget Forms -> Form Elements*, create a Capital form element by entering *Contact* and then clicking *New*.
2. Select *Text* in the *Value Type* drop-down and enter *Contact* Name as the description.
3. Click *Save*.

3.1.2.9 Spell Check

Prerequisites

Portal user must have PBF Administration role assigned.

Installing a Plug-In

1. Login to the CE portal using http://<hjost>:<port>/irj.
2. Navigate to the Dictionary Management screen using the navigation path *PBF Administration —> Dictionary Management.*
3. Click *Add* and choose the *Words From File…* option to upload words from a local file.
4. Make sure to save the dictionary using Save when you have finished adding words to the dictionary.

Populate Dictionary Content

1. If you wish to use the Jazzy plug-in, download the library (.jar) file from the project's website. If you are using a different spell check plug-in, you must download the required .jar files (if any) for that plug-in.
2. On the CE server, place the .jar files required for the plug-in being used in the following folder. In the case of Jazzy, only the jazzy-core.jar file is required.
   - On Windows: <drive>:\usr\sap\<SID>\<instance>\j2ee\cluster\bin\system
   - On Unix: /usr/sap/<SID>/?instance?/j2ee/cluster/bin/system

   If you are running a clustered environment, copy this file to the defined folder for each instance within the cluster. With the required .jar files in place, the PBF-ADAPTER software component should be deployed to the CE system.

3.1.2.10 Combo-Edit Configuration

Prerequisite Master Data Maintenance

Use transaction RSDMD to create the following three master data values for the InfoObject /PBFBI/VCNAME.

Rules must be maintained for all the three form names DP2009, DP2009_TAB_EXP and DP2009_TAB_REV. Also note that form names DP2009_TAB_EXP and DP2009_TAB_REV should be mapped to a default node on the rule

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maintenance for the InfoObject Commitment Item /PBFBI/CMMT_IT. This data is automatically created if you executed the BC sets Master Data Load program (transactions /PBFBI/MD_CORE01 and /PBFBI/MD_CORE02).

This is done to handle independent data slices for the Expense and Revenue tabs. The Planning filter definition for Expense and Revenue are configured to work with two explicitly defined nodes in the commitment item hierarchy — that is, Expenditure and Revenue.

Prerequisite Hierarchy Maintenance and Variables for Budget Form

For the budget form template to be successfully installed and used, the creation of a fund center and commitment item hierarchies is a prerequisite.

For fund center (as seen from the image below), the variable /PBFBI/NASFC00 is a hierarchy node variable created on InfoObject /PBFBI/FUND_CT. Queries /PBFBI/A_BUDG01_QI001 and /PBFBI/A_BUDG01_QI002 are filtered by Fund Centre variable /PBFBI/NASFC00.

Refer to the following link for further information on creation and maintenance of hierarchies: http://help.sap.com/saphelp_nw73/helpdata/en/2e/b8705838ab11d5b2e80050da4c74dc/frameset.htm)

For commitment item, follow the link stated above and create a hierarchy with two different nodes - one for Expense and one for Revenue. The handling of commitment item is different from that of fund center and is explained below in rule maintenance.

Create hierarchy CMMT IT HIERARCHY on InfoObject /PBFBI/CMMT_IT with nodes as shown below.

> **Note**
>
> Nodes 1000/E and 1000/R are the key here, as they are used in the planning filter. Technically, a hierarchy with the technical name CMMT IT HIERARCHY and nodes 1000/E and 1000/R are sufficient to have the form working.

- All Commitment Items — 1000ALL
  - Expenditures — 1000E
    - PERSONAL SERVICES — 10001000
    - FRINGE BENEFITS — 10002000
    - CM Detail Items — 1000DI
    - CM Detail Services — 1000DS
    - D.P.-LEASE/PURCH/CONTRACT — 10004990
    - ENERGY RESOURCES/UTILITY — 10005000
    - OUTLAY — 10006000
  - Revenues — 1000R
    - OTHER LOCAL TAXES — 100072
    - LICENSES AND PERMITS — 100073
    - FINES,FORFEIT & PENALTY — 100074
    - REVENUE FROM MONEY & PROP — 100075
    - REVENUE FROM OTHER AGENCY — 100076
    - CURRENT SERVICES CHARGES — 100077
- Statistical — 1000S
  - FTE — 1000FTE
  - Position Count — 1000POS

In the CE portal, to confirm that a user has the necessary PBF roles assigned, click PBF Administration and then click Combo-Edit.

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Combo-edit configuration involves three main activities:

- Rule Maintenance Configuration: Allows you to define a hierarchy whose nodes are available for selection in the budget form header.
- Rule Mapping Configuration: Every budget form that uses hierarchies in the header must be mapped to a rule that defines the InfoObject, hierarchy, and its level.
- Leaf Maintenance Configuration: Defines which combinations of hierarchy leafs are allowed. This configuration should be used only when there are restricted leaf combinations for a given budget form. For example, Commitment Item 1000 can only be posted to Fund Center 1000.

3.1.2.10.1 Rule Maintenance Configuration

Rule maintenance controls the usage of InfoObject hierarchy nodes in the budget form header and the available leaf values in the budget form line item.

- Combo-edit functionality is limited to the usage of six main InfoObjects - FM Area, Fund Center, Fund, Funded Program, Grant, and Functional Area.
- Each budget form can use up to four InfoObjects with their respective hierarchies, in the header — for example, Fund, Fund Center, and Grant - hierarchies in the header. In other words, all six main InfoObjects can be used in the header but only four InfoObject hierarchies can be configured, the remaining two should be leaf values.
- Access to header data and line item data of a budget form is controlled by analysis authorizations. For more information on analysis authorizations, see the following link: http://help.sap.com/saphelp_nw73/helpdata/en/4a/af6fd65e233893e10000000a42189c/frameset.htm

To create new rules:

1. In the portal Under the PBF Admiration tab->Budget Forms ->Combo Edit click New.
2. Enter a rule name and assign it to an InfoObject from the drop-down list.
3. Assign a hierarchy for the given InfoObject from the available list of dropdown values.
4. Select the level of hierarchy nodes that should be displayed in the Budget Form Header. This level selection is mandatory.

   The Hierarchy Node Selector allows two choices:

   o Only Display Nodes at selected level

   o Display Nodes at selected level and Nodes Below
5. Enter a default node.
6. Repeat and define a Rule for each Form Name defined in the beginning of the combo-edit configuration section.

3.1.2.10.2 Rule Mapping Configuration

1. Select the newly defined Rule and click the *Hierarchies Tab*.
2. Set hierarchies for each InfoObject you wish to assign to this rule. The Header Level Settings sets the levels and default node of the hierarchy defined.

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Note

Default node name should be filled only when the InfoObject is not present in the budget form header but is used in the budget form line item section.

Note

Commitment Item is not a part of the budget form header, but is used in the budget form line-item.

3. Assign the rule to a form definition on the Form Mapping tab.

Note

A Budget Form Definition can be assigned to one rule only. However, one rule can have several different form definitions assigned to it.

Caution

Do not change assignment of rules after having started using it during the budgeting process. Reassignment of rules or changing rules midway through the budgeting process will lead to inconsistencies in reporting.

Rule-hierarchy mapping is automatically created if you executed the BC sets Master Data Load program (transactions /PBFBI/MD_CORE01 and /PBFBI/MD_CORE02).

3.1.2.10.3 Leaf Maintenance Configuration

In the leaf maintenance tab, you can define a combinations of InfoObject data (hierarchy leafs) for a maximum of three header InfoObjects. These combinations will then restrict the entries in the tabs with budget form line items. Leaf maintenance is controlled by the rule configured under Rule Maintenance.

Note

If a Rule is defined for InfoObjects /PBFBI/FUND, /PBFBI/GRANT, and /PBFBI/FUND_CT, the leaf maintenance combination should be restricted to these three objects only.

- All limitations and validations that apply for rule maintenance, also apply for leaf maintenance.
- The configured leaf combinations are only available in the line-item section of the budget form.
- The lists of displayed values in the budget form (line item section) are restricted by analysis authorizations and the set of valid combinations maintained.

Additional Information on combo-edit storage

- Rule maintenance details are stored in DSO /PBFBI/CE_OH01.
- Rule Form Mappings are stored in DSO /PBFBI/CE_OH02
- Leaf maintenance values are stored in DSO /PBFBI/CE_OH01.
- Deletion of entries simply sets the deletion flag and the date is set to the deletion date.
- If the same entry is recreated, a new record with start date as current date is recreated and the old record remains in the DSO with the deletion flag.

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3.1.2.11 Stage Maintenance and Configuration

The stage assigned to a budget form restricts access to the form during the process of budget formulation. In a typical scenario, at any given time, only certain stages are open for a form definition and only certain authorized users have access to certain stages. This data is automatically created if you executed the BC sets Master Data Load programs (transactions /PBFBI/MD_CORE01 and /PBFBI/MD_CORE02).

Stage maintenance for budget forms involves two distinct steps.

> **Note**
>
> Authorized Stages in the budget form will be enabled only when sections 1, 2, and 3 are successfully maintained and stage maintenance is configured as described in this section.

Create Stage

1. Enter the required stage and click Create Stage.
2. To display the newly created stage click Refresh in the Available Stages box.
3. Upon successful creation of the stage, click Next Step.

Assign/Set Stage to Form Name

1. Assign a form name (/PBFBI/VCNAME) to a stage.
2. Set stage to open or closed by choosing the status 0 or 1 respectively. Once the stage and a form name are entered, an authorization object is automatically generated.

> **Note**
>
> Closed stages will not be displayed in the budget form. The displayed stages are controlled by analysis authorizations (RSECADMIN).

For more information on analysis authorizations, refer to http://help.sap.com/saphelp_nw73/helpdata/en/4a/af6fd65e233893e10000000a42189c/frameset.htm.

Additional Information

Successful selection of a form instance transfers control to the Stage section. The Authorized Stages drop-down list is filtered by two criteria:

Stages that are set to status Open and stages that are greater than or equal to the current stage.

Stages that the user is authorized for (analysis authorizations).

For further information on the setup and maintenance of analysis authorizations, refer to http://help.sap.com/saphelp_nw73/helpdata/en/4a/af6fd65e233893e10000000a42189c/frameset.htm.

Authorization is checked for a combination of form name and stage. The combined value of both stage and form name is automatically derived.

The stage maintenance configuration is physically stored in DSO /PBFBI/BFS_O01.

InfoObject /PBFBI/SAUTH is defined as authorization object using the analysis authorization (RSECADMIN). The drop-down list of authorized stages will

- Determine the current stage of the form
- Check for stages that are set to status Open
- Display only stages that are greater than or equal to the current stage of the form

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3.1.2.12 Audit Trail Configuration

1. Follow informational note *1395674 PBF: Audit Trail Information for PBF BI objects* for the latest information regarding Auditing of PBF BI objects.
2. After reviewing the note, enter transaction /PBFBI/START_PBF_IMG.
3. Click *Maintain InfoObject Audit settings*.
4. Enter the PBF BI InfoObject to be audited and set the Audit Check flag.
5. Save and return to the IMG screen.
6. Click *PBF Audit Trail for InfoCubes*
7. Enter the InfoCube and InfoProvider.
8. Save and exit.

3.1.2.13 Ranking Form Configuration

Ranking forms facilitate prioritization of budget requests at different levels of the financial management dimensions. Once prioritized, ranking can be used to establish a funding level and cut-off to determine which requests are included in the final budget.

This document describes relevant master data maintenance, how to maintain InfoObject /PBFBI/BOOL, stage maintenance, official version maintenance, and the values in table /PBFBI/AMTFILTER.

Master Data Maintenance

Maintain master data for the following by navigating to *PBF Administration* > *Master Data Maintenance*.

InfoObject	Short Description	New Value	Description	Attribute
/PBFBI/FRM_TYP	Form Type	RNK	Ranking	/PBFBI/FRM_TYP
PBFBI/VCNAME	Form Def/VC name	PBF RANKING	PBF Ranking Template (for DP2009)	Form Type = “RNK”

Maintain Value for InfoObject /PBFBI/BOOL

In the backend BW system, execute transaction RSD1 and maintain the value for the following InfoObject since it cannot be maintained from the application's front end.

InfoObject	Short Description	New Value
/PBFBI/BOOL	Truth Value	X

Stage Maintenance

In the Portal application, navigate to *PBF Administration —> Budget Forms —> Stage Maintenance. Click Assign Stages* to maintain the open and final stages for form name PBF_RANKING.

Stage 1 should be assigned to form PBF_RANKING. This is automatically assigned if you executed the BC sets Master Data Load program (transactions /PBFBI/MD_CORE01 and /PBFBI/MD_CORE02).

Official Version Maintenance

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In the backend BW system, execute to transaction SPRO. Select the SAP Reference IMG and navigate to *SAP Customizing Implementation Guide —> Public Budget Formulations (PBF) —> Maintain PBF Global Settings.* Maintain the value of the official version under global settings.

Values in Table /PBFBI/AMTFILTER

In Ranking, the Fund Forms planning function looks up the values in table /PBFBI/AMTFILTER. The values maintained in this table should be in sync with values in the filter of query /PBFBI/A_RANK03_QI000. This data is automatically created if you executed the BC sets Master Data Load program (transactions /PBFBI/MD_CORE01 and /PBFBI/MD_CORE02).

Form Definition	Characteristic	Sign	Operator	Value
PBF_RANKING	/PBFBI/BDGT_YR	I	EQ	2010
PBF_RANKING	/PBFBI/FRM_TYP	I	EQ	FI
PBF_RANKING	/PBFBI/PROJID	I	EQ	000001
PBF_RANKING	/PBFBI/PROJID	I	EQ	000002
PBF_RANKING	/PBFBI/VCNAME	I	EQ	DB2009
PBF_RANKING	0FISCVARNT	I	EQ	PS
PBF_RANKING	0FM_CURR	I	EQ	USD

3.1.2.14 Reallocation Configuration

During the budgeting cycle there is often a need to move or transfer funds from one Decision Package request to one or more Decision Package Request forms; the process of moving funds between Decision Packages is called reallocation.

PBF 8.0 provides a new screen to allocate budget forms expenses, revenues, and position entries separately. Users have to select a form ID and then choose to allocate the cost associated with the expenses, revenues, and positions to a different form ID.

Authorized users can access reallocations for *SAP Public Budget Formulation by choosing*  *Budget Formulation*  *Reallocations* .

This document describes the reallocation configuration process, available functions, reversing reallocations, and relevant master data maintenance.

The template allows the user to select a form ID as the sender and transfer the position, expense, and revenue funds to other form IDs that are referred to as receivers. The wizard —based template has the following steps:

1. In the first step, select the following details:
   - Form ID: The sender form ID is entered here.
   - Type of Entry: Use this to decide whether an expense, revenue, or position entry has to be allocated
   - Fiscal Year: Enter the year from which the amount has to be deducted.
2. In the second step, enter FM dimensions to retrieve a list of form IDs that can be receivers.
3. In the third step, enter the FM details for each form ID and the amount that will be allocated against each form. For each form ID, you must enter the receiving funds center and the commitment item. You also have the option of allocating based on percentages instead of entering full amounts.

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Note

The amount specified under the ‘Amount to Allocate’ column in step1 should be completely allocated among one or more receivers in step 3. Partial allocation of this amount is not possible.

Functions

- Add Receiver: This is available only for Expense and Revenue Type allocations. It is used to add the receiver form IDs manually.
- Copy: Copies the selected form details to a new row.
- Delete: Deletes the receiver form IDs from the list selectively.
- Save & Reallocate: This is enabled only during the last step of reallocation. Once the amount/percentage is specified against each receiver, clicking this pushbutton an RFC and a planning function will be triggered to create the entered allocations for the intended receivers.

Reversing Reallocations

You can reverse allocations by clicking the *Goto Deletion Screen* pushbutton at the top-right corner of the reallocations page.

On the *Goto Deletion* screen, you must enter a sender/receiver form ID and click *Search*. This displays the list of transactions previously executed in the *Allocation Entries* table and the list of sender/receiver form ID details per allocation in the *Allocation Details* table.

In the *Allocation Entries* table, select the transaction record for which the allocation has to be reversed with respect to the Transaction ID and Type Of Entries Re-allocated, then click the Reverse Selected Re-allocation pushbutton at the top-left corner of the reallocations page.

Note

- Transaction ID is a unique ID generated during each allocation transaction.
- Type of Entries Re-allocated
  - 000001 – Indicates a position entry allocation
  - 000002 – Indicates an expense entry allocation
  - 000003 – Indicates a revenue entry allocation

Master Data Maintenance

Maintain master data for the following by navigating to *PBF Administration* > *Master Data Maintenance*.

InfoObject	Short Description	New Value	Description
/PBFBI/TRANSTY	Transaction Type	ALLOC	Budget Form Reallocation

3.1.2.15 Stage Advancer Configuration

Stage Advancer allows power users to advance multiple budget forms to a higher stage at once. These power users set selection criteria at a broader level and advance all the budget forms that are at a lower stage within that selection criteria to the desired target stage.

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Stage Advancer utilizes an authorization object which allows authorized users to advance to any desired stage as long as it is assigned to the respective form name. It ignores the rule that the user trying to advance stage should have authorization to each and every stage.

Stages can be advanced to higher levels but they cannot be moved backwards.

Prerequisites

- Budget Forms

  Before Stage Advancer can be used, all the configuration steps for Budget Forms should be followed and implemented in the system.

- Form Names

  The Stage Advancer screen requires users to enter Form Name. Thus it is necessary that form names are also configured in the system.

- Stage Maintenance

  The Stage Maintenance screen allows users to add new stages as well as map stages to form names. This screen can be accessed *at* *PBF Administration* > *Budget Forms* > *Stage Maintenance*.

  Two of the three required parameters for Stage Advancer are Form Name and Target Stage. Users can only advance forms to the desired stage levels if they are assigned to correct Form Names via this stage maintenance screen.

  Create new stages and assign them to form names to make sure that this prerequisite step is complete.

Mass Stage Advancer Authorization

The mass stage advancer is intended for limited power users since it allows one to advance several budget requests at once. In order to restrict this, a new authorization object called /PBFBI/MSA is provided. This authorization object should be assigned to user profiles if they are expected to work with the Stage Advancer screen.

3.1.2.16 Workflow Configuration and Administration

In order to use PBF Workflow Approvers should be configured at either Form Definition level or at Form Instance level. Note that even though configuration and setup steps are followed, end users will not be able to use the new Stage Workflow feature in custom forms until the VC models are updated with new APIs. Workflow administration can be accessed by navigating to *PBF Administration* > *Budget Forms* Refer to application help documentation for more information on how to use Workflow Administration screens.

Prerequisites

For using Approver Maintenance and Notification List configuration screens it is required that Form Definitions and Stages are defined in the system as well as Stages are assigned to respective Form Definitions. For more granular configuration at Form Instance level, ensure that even Form Instances are already created. Since these screens are designed to maintain approvers (users) it is also important that user ids are already present in the Portal as well as back-end ABAP system.

- Master data: Form Definition, Stage, Form Instances
- User accounts
- PBF Portal Administrator role

Approver Maintenance

Approvers must be maintained for advancing forms, either at Form Definition level, or at Form Instance level. Form approvers maintained at Form Instance level take precedence over approvers maintained at Form Definition level. The following user interfaces are introduced with PBF 8.1 to allow users to maintain approvers:

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For Form Definition (Form Level Approval)

Form-Level Approval screen can be used to maintain Approvers for Form Definition-Stage. Primary and secondary approvers can be maintained, along with a flag ‘Active’ that determines which approver is active. If this field is left blank or 0, then it is set to Primary approver by default.

1. Select Form Definition (Form Name) DP2009 using value help if you are maintaining approver for standard budget form template.
2. Maintain primary or secondary approver, or both and set respective flag to indicate which one is active.
3. Click Save to save all the changes.

Notification List Maintenance

This screen can be used to maintain a list of users that should be notified whenever a decision is made on an approval request. Whether the stage advance request is approved or rejected, a notification is sent to the list of users maintained at Form Definition level, Form Instance level and the user who initiated the stage advance workflow. A notification list must be maintained for each Stage.

For Form Definition (Form Level Notification)

Form Definition Notification List screen can be used to maintain list of users at Form Definition-Stage level.

1. Select Form Definition (Form Name) using value help, e.g. DP2009, if you are maintaining notification list for standard budget for template
2. Select Stage (only stages assigned to Form Definition are available)
3. Click Edit and Add to add new users to Notification list
4. Click Save to save all changes.

For Form Instances (Form Instance Notification)

Form Instance Notification List screen can be used to maintain list of users at Form Definition-Stage level.

1. Select Form Definition (Form Name) using value help
2. Select Form Instance using value help
3. Select Stage (only stages assigned to Form Definition are available)
4. Click Edit and Add to add new users to Notification list
5. Click Save to save all changes.

Form – Web Dynpro App mapping maintenance (Form Workflow Mapping)

This screen can be used to map Form Definitions to corresponding Pages in the portal. The combination is used to link an approval request task in Universal Worklist (UWL) to directly open the Form in the corresponding Budget Form template. The settings for this table can be obtained by navigating to Portal > Content Administration > Portal Content and locating the respective pages related to Budget Forms. Open Page properties and click ‘All’ to find out the required settings.

- Form Name – This is the Form Definition (also known as Form Name or VC Name)
- Role – Can be obtained from Location field in page properties. Append text ‘ROLES://’ in front of this setting.
- Web Dynpro Application – This setting is combination of fields ID Prefix and ID



Example

Values for standard Budget Form template

Form Name	DP2009
Role	ROLES:// portal_content/com.sap.pct/every_user/com.sap.cdev.pbf.bp_folder/com.sap.cdev.p

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Form Name	DP2009
	bf.pages/com.sap.cdev.pbf.pages.budget_form_template
Web Dynpro Application	ID Prefix - com.sap.cdev.pbf.pages ID - budget_form_template Value - com.sap.cdev.pbf.pages.budget_form_template

3.1.2.17 Workflow Universal Worklist Configuration

The overall purpose of this configuration section is to create a custom UWL view for displaying PBF Stage Approval requests or work items and PBF notifications in Universal Worklist. This section explains how to add custom fields such as Budget Form Id, Form Name, Stage and Form Description to UWL view and how to customize certain launch actions like Preview and Approve/Reject.

Follow the installation guide to ensure that system connections are created and in place in UWL Administration screen.

Prerequisites

- A system connection of WebFlowConnector type – used for PBF Workflow Work Items
- A system connection of SomProviderConnector type – Used for Notification messages in SAPOfficeMails
- PBF Administration portal role, System Administration Portal role

1. Navigate to *Portal* > *System Administration* > *Universal Worklist & Workflow*
2. Select the Wizard option to Configure UWL Content. (Click the *Click to configure item types and customize views using a Wizard* link.)
3. Select the *Define custom attributes and customize corresponding view* option.
4. Specify task ID TS69800003 and click *Next*
5. Select the application systems PBF_BI, or whatever you are using, and click *Next*
6. Add values for custom attributes and click *Next*.

FormStageTaskContainer	String	Form Stage
FormDescTaskContainer	String	Form Description
FormDefTaskContainer	String	Form Name
FormIdTaskContainer	String	Form Id

7. Rename the newly created view to ‘PBF’ or ‘Public Budget Formulation’ using Rename button.
8. Customize the column order, remove unwanted columns and then click Save button.
9. Apply the newly configured settings to relevant and application systems, PBF_BI in this case.
10. Once the configuration steps are complete a .wiz file is generated with all the settings in XML format. Download this file and re-upload it after making the following changes to customize Approve and Reject actions and add a new action called Preview Form. Navigate back to the original UWL Main Administration screen. Find and replace the following XML code.

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Add these two actions to the <Actions> tag under the <ItemType> tag. (The Item Type tag would look something like this:

<ItemType name="uwl.task.webflow.decision.TS69800003.PBF_BI" connector="WebFlowConnector" defaultView="TS69800003_view" defaultAction="viewDetail" executionMode="default">

<Action name="approved" groupAction="yes" handler="UserDecisionHandler" returnToDetailViewAllowed="yes" launchInNewWindow="no">

<Properties>

<Property name="decisionKey" value="1"/>

<Property name="UserDecisionTitle" value="Enter a Rejection Reason"/>

<Property name="UserDecisionNote" value="true"/>

</Properties>

<Descriptions default="Approve Form"/>

</Action>

<Action name="rejected" groupAction="yes" handler="UserDecisionHandler" returnToDetailViewAllowed="yes" launchInNewWindow="no">

<Properties>

<Property name="decisionKey" value="2"/>

<Property name="UserDecisionTitle" value="Enter a Rejection Reason"/>

<Property name="UserDecisionNote" value="mandatory"/>

</Properties>

<Descriptions default="Reject Form"/>

</Action>

Add the following action to the <Actions> tag in the corresponding View (can be identified using the default_view setting on the ItemType tag) for example, look for a view that starts with:

<View name="TS69800003_view"…

<Action name="launchWebDynPro" groupAction="" handler="SAPWebDynproLauncher" returnToDetailViewAllowed="yes" launchInNewWindow="no">

<Properties>

<Property name="display_order_priority" value="5"/>

<Property name="WebDynproDeployableObject" value="sap.com/cdev~pbf~wfproxy~wd"/>

<Property name="WebDynproApplication" value="ProxyApp"/>

<Property name="openInNewWindow" value="no"/>

<Property name="System" value="SAP_LocalSystem"/>

<Property name="DynamicParameter" value="WIID=${item.externalId}"/>

</Properties>

<Descriptions default="Preview Form"/>

</Action>

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11. After replacing the XML has described above, upload the file by clicking on the ‘Upload New Configuration’ tab

Additional Information on the custom XML

The XML provided above helps to customize two things: add a mandatory justification box to capture rejection reason and add a Preview button to open custom Web Dynpro Java application that forwards user to Budget Form.

Reject form can be set to mandatory with following setting and message text:

- <Property name="UserDecisionTitle" value="Enter a Rejection Reason"/>
- <Property name="UserDecisionNote" value="mandatory"/>
- A custom preview button can be added using the action described with name launchWebDynPro. The setting is used to pass Work Item ID to a proxy program cdev/pbf/wfproxy/wd that is responsible to figuring out which Form Definition maps to which Portal page as configured in Section 10 part Workflow Mapping.

3.1.2.18 Form Download

Budget Form Download feature is supported in Portal download mode (using VC Service) and Application Server Download mode.

Application Server Download

The following configuration steps are only applicable if you choose to use Application Server Download option using RFC /PBFBI/BF_DOWNLOAD_APP_SERVER.

Define the logical path and logical file name using transaction FILE. Note the following values are default values and can be changed as required.

- Logical File Path - PBF_DOWNLOAD
- Logical File Name - PBF_DOWNLOAD
- Physical file (format) should be set to <PARAM_1>_<DATE>_<PARAM_2>.xls while creating logical file name definition.

3.1.3 Personnel Expenditure Planning Configuration

You use this business process to create forecasts of salary and benefit costs based on timely human resource information including positions, employees, job profiles, and salary and benefit costs. Analysts can compare the forecast results and plan for various contingencies regarding personnel costs during the budget formulation process and mid-year analysis.

The following business process runs in SAP Public Budget Formulation 8.1:

1. Personnel Data Maintenance

   Maintain job, position, employee, benefit rate, benefit rule, and pay level data.

2. Run PEP Projections (fiscal period based)

   Generate a forecast of such personnel costs as: salaries and wages, casual and temporary labor, benefits, future salary adjustments, supplemental pay, and so on. This process also allows you to save the master data so that it can be used for further what-if analyses, a feature introduced with PBF 8.0.

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3. Run What-If Projections

   Use master data saved using PEP Reference projections to do what-if analyses. This allows many parameters to be changed and further fine-tuned to allow users to do what-if analyses of PEP results.

4. PEP Projection based on flexible pay period calendar

   The functionality provides greater flexibility in calculating projection results. The functionality allows users to set up calendar which is flexible enough to support different pay type like weekly, by-weekly, semi-monthly, monthly, quarterly etc. PEP calculation engine will support any type of Pay Period that is configured. The PEP Results will be posted in Pay Periods and FISCAL Periods. A new framework is implemented to support high volume data more effectively. The functionality also allows users to select master data sources. Example: If the user has two versions of master data, say from ECC and a locally modified version in BW, during the execution of projection, the user would now be able to select the master data source.

5. PEP - Attrition and Backfill scenarios (A & B)

   A framework has been built to support A & B scenarios; very similar to what was built to support What-if projections. The A & B Scenarios will require a Pay Period based reference projection, just as What-if scenarios require a PEP fiscal period reference projection. Attrition would reduce the costs and backfill would increase costs.

3.1.3.1 Overview

PBF offers two types of PEP projections:

- Fiscal Period Projections were the original type of projections offered by PBF. Fiscal period projections use the configured Fiscal Year Variant to determine how the results are to be calculated. For Fiscal Period PEP the lowest level of results are at the fiscal period level. Additionally What-if projections can be executed on top of Fiscal Period projections. What-if projections uses a previously executed Fiscal Period projection, known as a Reference projection, and takes additional selections and input criteria to produce new results based on some specific scenarios. Examples include adding or removing benefits, changing pay scale/step date criteria, and so on.
- Flexible Pay Period Projections were added to address the requirement to produce results by pay period. These projections produce results at the fiscal period and pay period levels. For Flexible Pay Period PEP the lowest level of results are at the pay period level. Flexible Pay Period PEP utilizes the same configuration and master data as Fiscal period PEP (with some exceptions) and also requires some additional configuration. The same Employee and Position master data can be used for either Fiscal Period PEP or Pay Period PEP with one exception. Benefit Rule maintenance requires additional information for pay period month, year and accumulators to calculate benefits for Pay Period PEP.

  Pay Period PEP offers additional the following additional functionalities:

  - Attrition and Backfill projections

    = Attrition and Backfill projections can be executed on top of Pay Period Projections. Attrition and Backfill projections uses a previously executed Pay Period projection, known as a Reference projection, and takes previously configures Attrition and Backfill rules to produce new results based on some specific scenarios. Attrition and Backfill rules can be configured as Attrition only, Backfill only, or Attrition and Backfill.

  - Flexible source for Employee and Position master data

    Pay Period PEP supports having Employee and Position master data for PEP in DSO objects rather than the Employee and Position InfoObjects. There are several setup steps and configuration required to use this options. Details for all Pay Period PEP, Attrition and Backfill and Maintaining Employee and Position Master Data DSOs can be found in Solution Manager or the PEP Configuration guide.

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The following diagram illustrates what functionality each PEP type supports

PEP Type	Fiscal Period Results	Pay Period Results	What-if Scenarios	Distribution Rule	Attrition and Backfill Scenarios	Employee and Position MD from DSO
Fiscal Period PEP	x		x	x		
Flexible Pay Period PEP	x	x			x	x

The SAP IMG (transaction SPRO) is used to maintain the majority of the configuration, with the exception of Flexible Pay Period PEP Attrition and Backfill configurations, which use Portal screens.

PEP Global configuration, such as Parallelization parameters, Global table settings and Currency Conversion types are utilized by both Fiscal Period and Pay Period PEP. There are additional configuration steps specific for Fiscal Period PEP and Pay Period PEP.

Assumptions

- While there are two types of PEP available, Fiscal Period PEP and Pay Period PEP, it is assumed that customers will use one type or the other, but not both.
- Fiscal Period PEP allows What-if scenarios and Pay Period PEP allows Attrition and Backfill scenarios. Fiscal Period PEP will not support Attrition and Backfill scenarios and Pay Period PEP will not support What-if scenarios.

3.1.3.2 Prerequisites

The following configuration prerequisites apply to both Fiscal Period PEP and Flexible Pay Period PEP (access via backend IMG transaction SPRO):

- Maintain PBF Global Settings (PEP related settings)
- Maintain PBF Projection types
- Parallelization Projection Processing

The following configuration prerequisites apply only to Fiscal Period PEP:

- Process Chain Configuration

The following configuration prerequisites apply only to Flexible Pay Period PEP: (access via backend IMG transaction SPRO)

- Maintain Pay Period Process Chains
- Maintain Pay Period Types
- Upload Pay Period Table from File
- Display Pay Period Table entries
- Maintain Master Data DSO for Employee and Position (optional)
- Business Add-in (BAdI) for Attrition and Backfill (optional)

Maintain PBF Globals Configuration (PEP Settings)

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The PBF Globals table contains a single table entry to define default parameters that are used by the PBF calculation algorithm and budget form parameters. As the name suggests, Globals configuration is global and will apply to all types of PEP projections.

1. In the SAP IMG, choose the SAP Reference IMG and navigate to *SAP Customizing Implementation Guide* > *Public Budget Formulations (PBF)* > *Maintain PBF Global Settings*.
2. The Currency Conversion type for PEP needs to be populated in this table. The Currency Conversion type configured will apply to all types of PEP projections. For more details refer to the section Standard Currency Conversions Objects in Solution Manager or the PEP Configuration Guide.
3. Rounding Logic Configuration

   In the PEP Scenario during the calculation process, initially the monthwise salary and benefit amounts will be generated for a given employee or position. Upon salary and benefit calculation, the decimal amount will be truncated from all the salary and benefits and the delta amount obtained by ceiling or flooring the monthwise salary and benefit amounts will be adjusted to the first period salary and benefit rows respectively for a given fiscal year. Truncating Decimals and Adjusting First Period amount will be called as rounding logic.

   Users can decide whether or not to apply the rounding logic for a projection scenario calculation. To do so, use the following path in SPRO: *SAP Reference IMG* > *Public Budget Formulations (PBF)* > *Maintain PBF Global Settings* > *Apply Rounding*.

   If the checkbox is checked, rounding logic will be applied during the calculation process as explained above; otherwise the rounding logic will be ignored.

Standard Currency Conversion Objects

There are several key pieces of configuration that are utilized to do PEP currency conversion as outlined below. Currency configuration is global and will apply to all types of PEP projections.

Currency Conversion Types

Currency translation types are maintained via transaction RSCUR. Two currency conversion types are needed for PBF: one for Budget Forms (used in Bex queries) and one for PEP (projection program logic).

Currency translation type for PEP: /PBFBI/PEP

- Exchange Rate Tab:
  - Select checkbox ER Determ Using FI Modules
  - Exchange Rate Type: B
  - Select Radio Button: Dyn Ex. Rate Determination
- Currncy Tab:
  - Select radio button Source Currency from Data Record
  - Select radio button Target Currency with Transaction
- Time Ref Tab:
  - Select radio button Fixed Time Reference
  - Select radio button Current Date

Currency Exchange Rate Types

Currency exchange rate types are maintained using transaction OB07. Currency exchange rates are part of standard currency conversion and are attached to BW currency translation types. For PBF it is recommended that you use pre-configured type B.

Currency Quotation Types

Currency Quotation types are maintained via transaction ONOT. They are part of the standard currency conversion that is incorporated into BW currency conversion. The Currency Quotation type table defines whether Direct or Indirect Quotations should be used during currency conversions.

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Currency Exchange Rate Table

The currency exchange rates are maintained via transaction OB08. They are part of standard currency conversion that is incorporated into BW currency conversion. This is where the actual exchange rates are maintained by exchange rate type.

- The configuration defined in the Quotation type table determines whether the Indirect or Direct Quotation figures are used from this table
- If figures are highlighted in this table, it is an indication that the wrong quotation type is being maintained. In this example, the conversion rate from USD to EUR is being maintained as Direct Quotation. However in add reference above, this is configured to use Indirect Quotation.
- The *ValidFrom* date will be compared to the date configured in the Conversion Translation type (trans. RSCUR) to determine which conversion rate record to use.
- For more information, see *Help.sap.com* > *BI Platform* > *OLAP* > *Special OLAP Functions and Services* > *Currency Translation*

Maintain PBF Projection Types

The Projection Type master data is needed to establish possible entries in other areas of PEP where projection types are used. The Projection Types BUDG is utilized by Budget Forms and Projection Type PROJ is global configuration and will apply to all types of PEP projections.

1. In the SAP IMG, choose the SAP Reference IMG and navigate to SAP Customizing Implementation Guide Public Budget Formulations (PBF) Maintain PBF Projection Types.
2. Maintain the following:
   - Projection master data object name: /PBFBI/PRJ_TYP
   - Required entries:

Projection Type	Language	Short Description
BUDG	EN	BF Decision Package
PROJ	EN	Projection Scenarios

Parallelization Projection Processing

This configuration determines parallel processing of the Projection calculations. The Parallelization configuration is global and will apply to all types of PEP projections.

1. In the SAP IMG, choose the SAP Reference IMG and navigate to *SAP Customizing Implementation Guide* > *Public Budget Formulations (PBF)* > *Projection Calculation Configuration* > *Parallelization of Projection Processing*.
2. Click Parallelization of Projection Processing.

Application	Active	Logon/Server Group	Parallel	Block Size
Projection Scenario	Checked	parallel_generators	4	200

3. Enter the following values for the following Applications according to your landscape.

The number of Parallel Process and the Block Size maintained in this PBF configuration has an influence the performance of the DTP processes utilized by both types of PEP executions. The optimal setting is highly dependent on various aspects of landscape configurations. See Performance Tips for Data Transfer Service for more information on determining the optimal settings of these parameters.

Process Chain Configuration

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The process chain configuration is required to execute PEP projections. There are two types of PEP processes: Fiscal Period PEP (the original versions of PEP) and Flexible Pay Period PEP. Each type has an associated process chain configuration. Typically only one type of PEP is used.

- Use Fiscal Period PEP to have PEP results at fiscal period levels and the ability to execute What-if PEP Scenarios.
- Use Flexible Pay Period PEP to have PEP results at fiscal period and pay period levels and the ability to execute Attrition and Backfill Scenarios use Pay Period PEP.

Steps to configure Fiscal Period PEP process chains

1. In the SAP IMG, choose the SAP Reference IMG and navigate to *SAP Customizing Implementation Guide* > *Public Budget Formulations (PBF)* > *Projection Calculation Configuration* > *Process Chain Configuration*.
2. Create the entries shown below. These entries are for the process chains delivered in PBF 8.0. The first two entries are for PEP Fiscal Period projections. The third entry is specific to What-If projections.

Process Chain (ID)	InfoProvider	Position Monthwise DSO	Employee Monthwise DSO	What-If
/PBFBI/PEP_PC0400_01	/PBFBI/PROJ_1	/PBFBI/HRPAO08	/PBFBI/HRPAO07	
/PBFBI/PEP_PC0400_02	/PBFBI/PROJ_2	/PBFBI/HRPAO10	/PBFBI/HRPAO09	
/PBFBI/PEP_PC0500_01	/PBFBI/RBPSP01	/PBFBI/RBPSP01	/PBFBI/RBPSE01	X

3. Additionally there are new variants that need to be created for the report programs in the new process chain. The following table lists the report names and variant names to be created:

Variant Name	Selection Field Values		Description
	Process Chain Name	Variant Chain Name	
Report Name: /PBFBI/PROJ_CALC_ERROR			
/PBFBI/CALER03	/PBFBI/PEP_PC0500_01	/PBFBI/REFPROJ_CALC_ERROR_001	PEP Calculation Error
Report Name: /PBFBI/PRJ_ERROR_RUN			
/PBFBI/EMPERR3	/PBFBI/PEP_PC0500_01	/PBFBI/REF_EMP_ERROR_RUN	Employee Load Error
/PBFBI/POSERR3	/PBFBI/PEP_PC0500_01	/PBFBI/REF_POS_ERROR_RUN	Position Load Error
Report Name: /PBFBI/PRJ_SUCCESS_RUN			
/PBFBI/SUC_3	/PBFBI/PEP_PC0500_01	/PBFBI/REF_PRJ_SUCCESS_RUN	Successful exec of proc chain

4. Finally, executing a standard PEP projection calculation, also called a reference projection, is a pre-requisite before executing a What-if projection. Refer to PBF online help for sections titled Running a PEP Scenario Calculation and Running a What-if Scenario Calculation.

Steps to configure Flexible Pay PEP process chains

1. In the SAP IMG, choose the SAP Reference IMG and navigate to *SAP Customizing Implementation Guide* > *Public Budget Formulations (PBF)* > *Projection Calculation Configuration* > *Maintain Pay Period Process Chains*.
2. Create the entries shown below. These entries are for the process chains delivered in PBF 8.1.

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Process Chain (ID)	PC Identifier
/PBFBI/PPRD_AB	Attrition and Backfill Projection Scenario
/PBFBI/PPRD_PROJ_S01	Pay Period Projection

3. In Pay Period PEP we are delivering two types of Process Chains: Parallel and Sequential. The chain listed above is the Sequential chain and is recommended as it requires less background work processes. If there are less than 5 background processes defined in the system then the Sequential chains must be used.
4. The alternate chain is /PBFBI/PPRD_PROJ_01, and is a Parallel type of Process Chain. This chain should be used only if you have the required number of background work process supported in your system. The transfer of data from the DSO to the Cube is done through DTP's (Data Transfer Process). Each DTP needs 3 work processes for the best performance. For example, if there are 3 DTP's, a minimum of 9 background work processes are required for it to allow parallel processing since each DTP needs 3 work process for the best performance.
5. Additionally there are new variants that need to be created for the report programs in the new process chain. The following table lists the report names and variant names to be created:

Variant Name	Selection Field Values		Description
	Process Chain Name	Process Variant Name	
Report Name: /PBFBI/PROJ_CALC_ERROR			
/PBFBI/CALER04	/PBFBI/PPRD_AB	/PBFBI/AB_CALC_ERROR_001	AB Proj Calculation Error
/PBFBI/CALER05	/PBFBI/PPRD_PROJ_01	/PBFBI/PROJ_PPRD_CALC_ERROR_01	Pay Period Proj Calc Error
/PBFBI/CALER_S	/PBFBI/PPRD_PROJ_S01	/PBFBI/PROJ_PPRD_CALC_ERROR_S	Pay Period Calc Err Seq
Report Name: /PBFBI/PRJ_ERROR_RUN			
/PBFBI/EMPERR4	/PBFBI/PPRD_AB	/PBFBI/PPRD_EMP_ERROR_RUN1	AB Employee Load Error
/PBFBI/EMPERR5	/PBFBI/PPRD_PROJ_01	/PBFBI/PPRD_EMP_ERROR_RUN1	Pay Period Variant
/PBFBI/POSERR4	/PBFBI/PPRD_AB	/PBFBI/PRJ_ERROR_RUN	AB Position Load Error
/PBFBI/POSERR5	/PBFBI/PPRD_PROJ_01	/PBFBI/PPRD_POS_ERROR_RUN1	Pay Period Pos Variant
/PBFBI/EMPER_S	/PBFBI/PPRD_PROJ_S01	/PBFBI/PPRD_EMP_ERROR_RUN1_S	Employee Load Error-Seq
/PBFBI/POS_ERS	/PBFBI/PPRD_PROJ_S01	/PBFBI/PPRD_POS_ERROR_RUN1_S	Position Load Error
Report Name: /PBFBI/PRJ_SUCCESS_RUN			
/PBFBI/SUC_4	/PBFBI/PPRD_PROJ_01	/PBFBI/PPRD_SUCCESS_RUN	Successfull exec of proc chain

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Variant Name	Selection Field Values		Description
/PBFBI/SUC_5	/PBFBI/PPRD_PROJ_S01	/PBFBI/PPRD_SUCCESS_RUN_1_S	Successfull exe of pro chainS

Schedule PEP Background Job

Schedule the report /PBFBI/PEP_POOL periodically. This report is used to trigger all projection scenarios.

1. Execute transaction SE38.
2. Enter the report name as/PBFBI/PEP_POOL.
3. On the ABAP Editor screen's menu bar, navigate to Program > Execute > Background.
4. Choose the Schedule button.
5. Enter a job name of your choice and choose Schedule Periodically.
6. In the popup, enter the frequency at which the report should be executed. The suggested frequency is every 10 minutes.

3.1.3.3 PEP Flexible Pay Period Configuration

The configuration steps outlined below are not global and are utilized ONLY by Flexible Pay Period PEP.

PEP Flexible Pay Period produces PEP results by pay period and fiscal period. The prior PBF releases only supported PEP results by fiscal period, now referred to as Fiscal Period PEP. Flexible Pay Period PEP can support several payroll schedules, such as bi-weekly, weekly, monthly, etc. These are called the Pay Period Types. The configuration steps required to execute PEP Flexible Pay Period Projections include configuring the desired Pay Type(s) and uploading the Payroll pay periods and years into the PEP Pay Period table. Flexible Pay Period PEP supports loading of multiple pay period types to the Pay Period table. For example, if the payroll is run bi-weekly the PEP Pay Period results are required for the bi-weekly pay periods. But for other reporting purposes, quarterly pay periods would be desirable. In this scenario both bi-weekly and quarterly Pay Types can be configured and the associated pay periods and years can be uploaded to the pay table. In this example when users create Pay Period projections they can choose either bi-weekly or quarterly pay types. The PEP results will be produced according to the chosen Pay Period type. Regardless of the Pay Type selected the PEP Pay Period results always include fiscal period level results.

The SAP IMG (transaction SPRO) is used to maintain the configuration with the exception of Benefit Rules, Attrition Rules and Attrition and Backfill Group Rules. Portal screens are provided for these configuration activities.

After completing the configuration for executing PEP scenarios, you need to configure the Process Chain for executing Pay Period Projections. See section titled PEP Process Chain configuration in this guide for more information.

Additional optional configuration is available to define alternate Employee and Position master data for Pay Period Projections. The PBF Employee and Position InfoObject master data is the default data source for all PEP projections. For Pay Period PEP, DSOs and queries can be built and configured as an alternate source employee and position of master data.

The high level steps for PEP Flexible Pay Period configurations are:

1. Maintain Pay Period Process Chains (see Process Chain Configuration section)
2. Maintain Pay Period Type(s)
3. Upload Pay Period Table from file
4. Display Pay Period Table entries

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5. Maintain Master Data DSO for Employee and Position (optional)
6. PEP Attrition and Backfill Configuration (required for executing Attrition and Backfill Projections)

Performance considerations for Flexible Pay Period PEP

Adding the pay period level of results to PEP will significantly add volume to the calculation logic and the number of results records produced. The data volume generated is directly proportional to the number of pay periods per year. If there are 52 pay periods (weekly Pay Type), then a minimum of 52 records will be generated per employee for each fiscal year in the projection. Each occurrence of a pay period crossing a fiscal period or fiscal year will result in two records generated since results are per pay period and fiscal period. The record count for one fiscal year will depend based on the following (assuming the projection is run for entire fiscal year)

- Number of Pay periods
- Number of Allocation
- Number of Benefits

The Fiscal (original) PEP engine captures the calculated results in a single Employee monthwise DSO and a single Position monthwise DSO. The DSO data then posts to a single Projection Cube using a set of DTPs.

The Flexible Pay Period PEP utilizes a high volume framework by capturing the Employee and Position monthwise data in multiple DSOs (3 DSO's for Employee + 3 DSO's for Positions) in order to improve the DTP performance. To further increase the performance, the same number of InfoCubes (3 InfoCubes) are utilized to capture the results. A multiprovider (/PBFBI/PPRD_M1) has been created to combine the results.

Maintain Pay Period Types

The pay period types are required for verification of data uploaded to the pay period table. The pay type defines the minimum and maximum number of pay periods in a pay year. PBF supports several pay types, such as weekly, by-weekly, monthly, etc.

To create the default pay types that PBF supports activate the BC Set provided:

1. Execute transaction SCPR20 in the backend BW system
2. Enter BC Set /PBFBI/PAY_TYP.
3. Press Display to get detailed information on the entries included in the BC Set
4. Activate the BC set to create the default entries.
5. To review or further maintain the Pay Type entries use the following menu path: In the SAP IMG, choose the SAP Reference IMG and navigate to *SAP Customizing Implementation Guide* > *Public Budget Formulations (PBF)* > *Projection Calculation Configuration* > *PEP Flexible Pay Period Configuration* > *Maintain Pay Period Types*.

The Pay Types are also defined in InfoObject /PBFBI/PAY_TYP. To load the default pay types that PBF supports, execute transaction /PBFBI/MD_CORE81. This transaction will create default master data that is new for PBF release 8.1, including the Pay Type InfoObject values.

Upload Pay Period Table from File

Pay Period projections require a pay period table to be loaded with information that defines the pay year / pay period details. Data required includes the pay type(as defined above), and the start and end dates of each pay period in each pay year. When running Pay Period projections, the pay years to be included in the projection results must be defined in this table. So if projections will go out five years in the future, the next five years of pay periods will need to be uploaded to the table. There should be continuity in the pay period details i.e. there should not be any date gap between two consecutive pay periods. Also, the number of pay periods configured for a pay year needs to conform to the Pay Type minimum and maximum number of pay periods.

The IMG activity Upload Pay Period Table from file will execute a program that will read an input file (CSV formatted file) with the pay period information, perform validations and then load the Pay Period table with the data. Once loaded the data cannot be manipulated; all data loaded to the table must be uploaded using this program. Rerunning

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the program will overwrite data in the table. The input data should come from the official Payroll system that is used. See the IMG documentation and program documentation (Blue Information) button on the selection screen), for detailed information on the input file format, upload process, etc.

In the SAP IMG, choose the SAP Reference IMG and navigate to *SAP Customizing Implementation Guide* > *Public Budget Formulations (PBF)* > *Projection Calculation Configuration* > *PEP Flexible Pay Period Configuration* > *Upload Pay Period Table from file*.

Display Pay Period Table Entries

This IMG activate is for displaying/validating Pay Period Table entries. No maintenance of the entries is permitted. All data in this table is to be uploaded via the Upload Pay Period Table from file IMG node.

In the SAP IMG, choose the SAP Reference IMG and navigate to *SAP Customizing Implementation Guide* > *Public Budget Formulations (PBF)* > > *Projection Calculation Configuration* > *PEP Flexible Pay Period Configuration* > *Display Pay Period Table Entries*.

Maintain Master Data DSO for Employee and Position

This configuration only applies to Flexible Pay Period PEP and it is optional configuration.

The PEP engine uses PBF Employee and Position InfoObject Master Data as the source for PEP calculations. Flexible Pay Period PEP provides an option to specify an alternate source for Employee and Position Master Data. The alternate source data requires building DSOs for the master data and queries that PEP will use during execution to gather the employee and position data; see the Pre-requisite activities listed below. When creating a Flexible Pay Period projection, the alternate Master Data source configuration can be selected on the projection screen. When the projection runs, it will use the DSOs and Queries configured instead of the PBF Employee and Position InfoObject data and standard queries.

Once the pre-requisite activities are complete use the following IMG path to configure the DSO and query names:

1. In the SAP IMG, select the SAP Reference IMG and navigate to *(PBF)Projection Calculation Configuration-> Maintain Master Data DSO for Employee and Position.*
2. A Source ID will be assigned by the system. Enter the Employee DSO and Query name. Enter the Position DSO and Query name. Save the entry.

Pre-Requisite Activities

DSOs can be created and loaded with employee and position master data. Additionally queries must be created on top of these DSOs. Standard SAP BW tools should be used to create the DSOs and load the data and to build the queries. Template DSOs and queries have been provided as listed below. The template objects can be copied/referenced to create the new DSOs and queries:

Object	Template name
Employee DSO	/PBFBI/PPRDEMP
Employee Query	/PBFBI/DSO_I02_Q0001
Position DSO	/PBFBI/PPRDPOS
Position Query	/PBFBI/DSO_I01_Q0001

There are some limitations for defining these objects:

1. The DSOs must contain InfoObjects within the /PBFBI/ namespace. Customer namespace objects (Z*, Y*, etc.) are not supported
2. The Query templates provided should be followed when creating the queries.
3. An InfoSet should be used to store the InfoObjects and DSOs. The queries can be defined directly on the DSOs or on the InfoSet.

Business Add-in (BAdI) for Attrition and Backfill (optional)

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PEP calculations have a fundamental algorithm to calculate vacant position count. The PEP calculation engine first determines the number of Employees for a Position. It then determines the number of vacant positions as follows:

- Position Vacant Count = Authorized Count (Position Master Data) – number of employees.

When applying Attrition rules to PEP results, employees are always attritioned. Therefore while the Attrition rule would reduce the number of employees, it would also increase the number of vacation positions as per the PEP algorithm. For example, if there were an authorized count of 10 and there are 5 employees, then there are 5 vacant positions. Using the PEP algorithm, if 2 employees are attritioned, then the vacant count would become 7. This behavior may not be desired, especially if Backfill rules are provided to determine if/when backfill positions would be planned.

To prevent PEP from increasing the Position Vacant Count due to an Attrition Rule a Business Add-id (BAdI) has been developed and can be activated as follows:

1. In the SAP IMG, select the SAP Reference IMG and navigate to *Activate Business Functions*. Press the *Execute* Button. Press *Continue* on the Security Information pop-up.
2. Expand the Enterprise Business Function node.
3. Locate the node titled '/PBFBI/BF_PPRD_ANB_VACANT_ADJ'. Select the Planned Status checkbox.
4. Press Activate Changes
5. To confirm that the BAdI implementation is active execute transaction SE18
6. Select the Enhancement Spot radio button and enter /PBFBI/BADI_PPRD_ANB. Press Display.
7. Expand the BAdI Definition node /PBFBI/BADI_PPRD_ANB_ADJ_VACNT.
8. Double click on the Implementations node.
9. Double click on the Enhancement Implementation /PBFBI/BADI_PEP_PPRD_ADJ_01.
10. In the tab Enh. Implementation Elements, the checkbox Implementation is Active should be checked. The Runtime Behavior should state 'The implementation will be called'.

Note that the BAdI Implementation is activated for all Attrition and Backfill projections. The BAdI Implementation can be de-activated by following steps 1-4 above, and clearing the Planned Status checkbox.

3.1.3.4 Personnel Expenditure Planning Master Data Maintenance

There are several areas of InfoObject master data specific to PEP that are required before any type of Projection can be executed. The steps to maintain the required master data for PEP projections are outlined below. Both Fiscal Period PEP and Flexible Pay Period PEP utilize the InfoObject master data. For Flexible Pay Period PEP there is an option to configure alternate DSO sources for Employee and Position master data. If this option is used all other InfoObject data, such as benefits, pay scale, etc. is still required.

All master data maintenance screens are accessed via the Portal PBF PEP Maintenance and PEP Administration applications.

3.1.3.4.1 Job Maintenance

Creating a new job

1. Choose PBF Administration > PEP Maintenance > Job Maintenance .

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2. On the Details tab, click New.
3. On the Details tab, enter such job details as job description, salary data, and so on.
4. Click Save.
5. Maintain job benefit information on the Benefits tab.
6. Click Save.

Display an Existing Job

1. Choose PBF Administration > PEP Maintenance > Job Maintenance.
2. Select or enter the Job ID in the Job Selection area.
3. Select an available time interval in the Time Interval table.

3.1.3.4.2 Position Maintenance

Creating a New Position

1. Select PEP Maintenance > Position Maintenance.
2. Click New.
3. Enter position-related details like position description, report position, job class, and so on in the Details tab.
4. Enter salary-relevant data in the Salary tab.
5. Enter home-funding details in the Home Funding tab.
6. Enter allocation details in the Allocation tab.
7. Maintain position benefits in the Benefits tab.
8. Click Save.

Searching for an Existing Position

1. Select PEP Maintenance > Position Maintenance.
2. Click Search.
3. In the popup window that appears, enter the selection criteria (FM Area, Fund Center, and so on).
4. Click Search in the popup window.
5. Selection a position in the Matching Positions table, and select the corresponding interval in the Intervals table.
6. Click Load.
7. Data related to selected positions is loaded into the corresponding tabs.

3.1.3.4.3 Employee Maintenance

Creating a New Employee

1. Select PEP Maintenance > Employee Maintenance.
2. Click New.
3. Enter employee-related data like description, position, job class, and so on in the Details tab.
4. Enter salary-relevant data in the Salary tab.
5. Enter home-funding details in the Home Funding tab.

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6. Enter allocation details in the Allocation tab.
7. Maintain position benefits in the Benefits tab.
8. Click Save.

Searching for an Existing Employee

1. Select PEP Maintenance > Employee Maintenance.
2. Click Search.
3. In the popup window that appears, enter the selection criteria (FM Area, Fund Center, and so on).
4. Click Search in the popup window.
5. Selection a position in the Matching Positions table, and select the corresponding interval in the Intervals table.
6. Click Load.
7. Data related to selected employee is loaded into the corresponding tabs.

3.1.3.4.4 Pay Level Maintenance

You can search for, edit, or copy pay levels on the Pay Level Maintenance screen. Choose *PBF Administration* > *Pay Level Maintenance*. In the *Detailed Navigation* area, choose *Pay Level Maintenance*.

To search for a pay level, enter a search criteria and click Submit. To retrieve all existing pay levels, click Submit without entering a search criteria.

Editing a Pay Level

1. Search for and select the pay level you want to edit. The system displays the Salary Details screen.
2. In the Pay Level layout, select a pay level row to edit. The system highlights the selected row.

   Note

   You cannot change the pay scale element compound key
3. In the Pay Level Details tab, enter all changes to existing values. The options are:
   - Starting Date: Enter the date indicating when the row on the pay level table is valid.
   - End Date: The system will calculate the end date.
   - Currency code: Enter the valid currency to be used for the pay level.
   - Amount: Enter the annual amount for the pay level (with the compound key values). The amount is used in the base projection when there is no override of the salary.
   - Step Months: Enter the number of periods that an employee or position is on the current pay level before being moved to the new pay level and group. This is also used when projecting back in time to get historic pay information.
   - New Level: Enter the next pay scale level for a position or employee once the step duration has expired at the current level.
   - New Group: Enter the next pay scale group for a position or employee once the step duration has expired at the current pay level.
   - Fixed Salary Increase %: Enter the percentage of salary increase given to positions or employees on the pay level when Salary Override is set to Yes in the position or employee maintenance record.
   - Description: Enter a text description for the pay level record.
4. To save the changes, click Save.

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5. To exit without saving the changes, refresh the screen without saving.

Copying a Pay Level

1. Search for and select the pay level you want to edit.

The system displays the Salary Details screen.

2. In the Pay Level layout, select a pay level row to edit the to-date, amount, step months, new group, new level, fixed salary increase %, or description.

The system highlights the selected row.

> **Note**
>
> You cannot change the pay scale element combination or end date.

3. To save the changes, click Save.
4. To exit without saving the changes, click Cancel.

3.1.3.4.5 Benefit Maintenance

Benefit Rules Maintenance

You need to complete these steps in order to define benefit rules. You can search, edit, or copy benefits on the Benefit Maintenance screens. The Benefit Area and Plans defined will be utilized by Fiscal Period PEP and Pay Period PEP. In the previous releases, benefits were configured for the fiscal period. Pay Period PEP requires this information to be according to Pay Type, Pay Year and Pay Period. The last step of this configuration, defining the Months and Accumulators, will have separate screen tabs for the Fiscal Period and Pay Period PEP:

- For Fiscal PEP use the Months tab
- For Pay Period PEP use the Pay Period tab

Choose *PBF Administration* > *Pay Level Maintenance* > *Benefit Rules*.

Maintain Benefit Area and Benefit Plan Master Data

The Benefit Area and Benefit Plan master data is needed to establish possible entries in other areas of PEP where employee and position benefits need to be defined.

1. Open the portal application for PBF Master Data Maintenance.
2. To maintain Benefit Areas, enter the basic characteristic /PBFBI/BEN_ARE and click Search.
3. The benefit area appears selected on the screen.
4. Click Maintain.
5. Click New.
6. In the popup window, enter the two-character benefit area and click Create.
7. In the next popup window, enter the description and click Save.
8. To maintain Benefit Plans, enter the basic characteristic/PBFBI/BEN_PLN and click Search.
9. The benefit plan appears selected on the screen.
10. Click Maintain.
    4. The screen will prompt for Benefit Area as benefit plans are linked to benefit areas. Enter the appropriate two-character benefit area.

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5. Click New.
6. In the popup window, enter the four character benefit plan and click Create.
7. Enter the description and click Save.

Maintain Benefit Area (Type of Benefit)

1. Open the portal application for Benefit Rules under Benefit Maintenance.
2. Click Edit, then Add.
3. Maintain the benefit area for which benefit rules are to be maintained.

> **Note**
>
> Benefit Area is master data, and it should be created prior to maintaining the benefit rules.

Maintain Benefit Plan (Grouping for Benefits)

Benefits are typically grouped by Retirement, Health Insurance, Supplemental Pays, and so on. This field is referenced from the Benefits Subtype table.

1. Click the Next button to add new Benefit plans to the previous Benefit Plan.
2. Select the benefit area for the benefit plan that has to be added.
3. Click the Add button.
4. Maintain the benefit plan for which benefit rules are to be maintained.
5. Maintain the following details for each benefit plan:
   - Wage Type: Indicates the type of calculation (E – Earnings, ST – Statutory Benefits).
   - Calculation Basis: The accumulator that will be used to calculate percentage based benefits.
   - Calculation Order: Order of the benefit calculation.
   - Benefit Start Period: The month that the benefit needs to start or be reset to track accumulation earnings. This is used in benefits that have yearly maximums. For example, Social Security (OASDI) is based on an annual earnings cap for 2007 of $97,500. The cap is reset in January.
   - Commitment Item: The default commitment item that will be applied to this benefit during the projection and allocation.

Maintain Benefit Periods

In this setting, maintain the periods for which benefits have to be posted/calculated. Click the Next button to advance to the Months and Accumulator screen. Choose the appropriate tab depending if you will execute Fiscal Period PEP or Pay Period PEP:

Months tab (Fiscal Period PEP)

1. Click the Add button for Month periods.
2. Maintain the periods for which benefit amounts should be calculated.
3. Finally, click the Save button when finished.

Pay Periods tab (Pay Period PEP)

1. Click the Add button for Pay Periods.
2. Maintain the Pay Type, Pay Year and Pay Periods for which benefit amounts should be calculated.
3. Finally, click the Save button when finished.

Maintain Benefit Accumulators

In this setting, maintain the area where benefit costs can be stored (refer to the same figure above).

1. Click the Add button for Accumulators.
2. Maintain the accumulators to which the corresponding benefit contributes.

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3. Finally, click the Save button when finished.

Benefit Rate Maintenance

You need to complete these steps in order to define benefit rules. You can search, edit, or copy benefits on the Benefit Maintenance screens. Choose PBF Administration > Pay Level Maintenance > Benefit Rates.

Creating a New Benefit

1. Choose PBF Administration > PEP Maintenance. In the Detailed Navigation area, choose Benefit Maintenance > Benefit Rates.
2. On the Benefit Rates Detail tab, click New.
3. In the Details table, enter information in the following fields:
   - Benefit Area: Select a benefit area code. This selection will limit the available benefit plans.
   - Benefit Plan: Select a benefit plan code.
   - Benefit Range Step: Select a benefit range step. The benefit range step can be any whole number. The benefit range step allows differing minimum amount and maximum amount values within the same benefit area, benefit plan, and effective date combination.
   - Start Date: Enter the effective start date for this benefit rate row.
   - End Date: Enter the effective end date for this benefit rate row.
   - Longevity Months: Enter the number of months needed to qualify for the benefit rate row. The system will determine the current longevity months for each position or employee based on the position or employee longevity date.
   - Min Amount: Enter the minimum amount of annual salary needed to qualify for this benefit rate row.
   - Max Amount: Enter the maximum amount of salary that qualifies for this benefit rate row.
   - Amount: Enter the annual amount associated with this benefit rate row.
   - Benefit Rate: Enter the benefit rate or percentage value associated with this benefit rate row.
4. To save the information, click Save.
5. To exit without saving the information, refresh the screen without saving.

Searching for a Benefit Rate

1. Enter your search criteria.
2. Click Search.
3. To retrieve all existing benefit rates, click Search without entering any search criteria.

Editing a Benefit Rate

1. Search for and select the benefit rate that you want to edit.

   The system displays the Details screen.
2. Click Edit to change the start date, longevity months, min amount, max amount, amount, or benefit rate of the benefit rate.

   Note

   You cannot change benefit area, benefit plan, benefit range step, and end date of a benefit rule.
3. To save the changes, click Save.
4. To exit without saving the changes, refresh the screen without saving.

Deleting a Benefit Rate

1. Search for and select the benefit rate you want to delete.

   The system displays the Details screen.

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2. Click Delete.

3.1.3.4.6 PEP Attrition and Backfill Rules

There are some required and optional configurations needed in order to execute Attrition and Backfill Scenarios. An Attrition and Backfill projection has a required first step of executing a Pay Period Projection. The Pay Period projection is used as a reference projection for the Attrition and Backfill Projection. The Attrition and Backfill Projection will then attrition employees as per the configured Attrition and Backfill Group Rule that is entered on the Attrition and Backfill Projection screen. Note that the Pay Period Projection, the Attrition and Backfill Group Rule and the Attrition and Backfill Projection all need to be based on the same Pay Type (weekly, monthly, bi-monthly, etc.). The results will calculate the attrtioned employees and add backfill positions which will be posted to the Attrition and Backfill InfoCube. Only Attrition and Backfill delta records will be posted to the InfoCube. For reporting a multiprovider has been provided and users can create queries to combine the Pay Period Projection and the Attrition and Backfill Projection to get the complete projection results. Several Attrition and Backfill Projections can be executed on top of the same Pay Period Projection.

The configuration of Attrition and Backfill Rules is a two-step process:

1. Maintain Attrition Rules

   The attrition rule consists of selection criteria, such as the desired FM dimensions, Employee Group, Personnel Group, Pay Scale Group, Job, etc. Once the selection criteria are complete then the pay year and period and attrition rate is entered. This combination of data represents an attrition rule.

2. Maintain Attrition and Backfill Group Rules

   The Attrition and Backfill Group Rule incorporates the Attrition Rules configured in the first step and allows backfill rules to be created. Each Attrition Rule can be added to one or more Group Rules. Backfill rules require a Backfill Position which can be any Position defined in Master Data, or new Positions can be created specifically for backfill purposes. The Backfill Position entered in the Group Rule will be used to generate a new backfill position during the Attrition and Backfill Projection calculation. The new positions will have a different employment status so that it won't be considered for other PEP projection calculations. There are three types of group rules allowed:

   - Attrition only. These are attrition rules without any type of backfill. The type of rule can be used to represent work force reductions.
   - Attrition and backfill: These are attrition rules with a dependent backfill rule. This type of rule can be used to represent work force reductions followed by some percentage of backfilling (positions) based on a percentage of those employees that were subject to attrition.
   - Backfill only. These are independent backfill rules with no associated attrition and represent a workforce increase which could represent a hiring event. Backfill only rules require an actual number (head count) used rather than based on a percentage of an attrition rule.

Once the Attrition and Backfill Group rules have been configured and the Pay Period reference projection has run successfully then users can execute Attrition and Backfill Projection and enter the Group rule in the Attrition and Backfill Projection screen.

When the Attrition and Backfill Projection executes, it will apply the attrition and backfill group rule that was entered when the user creates the Attrition and Backfill Projection. The PEP engine will read the attrition rule to determine the number of employees to be attritioned using the selection criteria of the attrition rule and then apply the attrition rates to the pay periods indicated in the attrition rule. It is important to note that:

- Only Employees can be attritioned; Positions are not attritioned
- Once an Employee has been attritioned they are attritioned for the duration of the projection

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- Several attrition rules can be used in one Attrition and Backfill Group rule. There are no checks/warnings, etc. for attrition rules that may have overlapping selection criteria. If there is overlap the attritions will be calculated as per the configured group rules and attrition rules.
- Only Positions are created for backfills; Employees are not used for backfills
- Once a backfill position is created they are included for the duration of the projection

Attrition Rule Maintenance

Attrition and Backfill Group Rules and ultimately Attrition and Backfill projections utilize Attrition Rules. Attrition rule data consists of selection criteria that the PEP engine will use to determine which slice of employees should be attritioned. Additionally the pay year and period and attrition rate are used to determine how many employees are to be attritioned and in which pay periods.

Use the following Portal menu path to access the Attrition Rule Maintenance Screen: PBF Administration > PEP Maintenance > Flexible Pay Period PEP > Attrition Rules Maintenance

To create a new Attrition rules:

1. Press New.
2. In the popup screen, enter the
   - FM area
   - Pay Type (monthly, weekly, bi-,monthly, etc.).

     The Pay Type needs to be consistent with the Pay Period reference projection and the Attrition and Backfill Group rule to be used in the projection
   - Description
3. Press Create
4. On the Dimensions Tab, enter all the applicable selection criteria for which the rule is being created. All six FM dimension fields are available as well as Employee Group, Employee Subgroup, Personnel Area, Personnel Subarea, Pay Scale Group, Pay Scale Level, ES Grouping, Job and Position. Each field containing data will be used by the PEP engine to filter which employees are considered for the attrition rule.
5. On the Pay Period Attrition Rate tab enter the Pay Year, Pay Period and Attrition Rate that should be applied to the slice of employees selected after the filtering logic has completed. Note that default entries are created for each Pay Year and Pay Period based on the Pay Period table for the Pay Type selected in the previous step. The attrition rate is defaulted to 0. Valid attrition rates are from 0 to 100. Enter the attrition rate in the starting pay year and pay period desired. The attrition rates accumulate so each rate entered in a subsequent pay period is an additional rate of attrition.
6. It is possible to export the attrition rates to a spreadsheet, modify the spreadsheet, and then upload the changed values back to the screen. To do this:
   - Press the Export button and choose Excel from the dropdown. Select Save from the Excel popup and enter a file path and name.
   - Make changes to the spreadsheet and save the file as a .csv (Comma Delimited) file.
   - Return to the screen and press the Replace Data button. Use the Browse feature in the popup to locate the file saved in the previous step. Press the Upload button.
   - If the spreadsheet changes are no longer desired the previous rates can be retrieved by pressing the Revert Changes button.
7. When changes are complete press the Save button.

Attrition and Backfill Group Maintenance Rule

Attrition and Backfill Group rules are utilized in and Attrition and Backfill projections to determine what employees are to be attritioned and what backfill positions are to be created. Attrition Group Rules combine Attrition rules (created in the previous step) and allow backfill criteria to be added, based on a percentage of the attrition rule. For example,

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maybe only 50% of the attritioned employees would be added back in a future pay period as a vacant backfilled position. Group rules also allow independent backfill rules, which are not based on any attrition, and would represent a hiring event.

Use the following Portal menu path to access the Attrition and Backfill Group Rule Maintenance Screen: PBF Administration > PEP Maintenance > Flexible Pay Period > PEP Attrition and Backfill Group Rules Maintenance.

To create a new Attrition and Backfill group rule:

1. Press New
   - In the popup screen enter Pay Type (monthly, weekly, bi-,monthly, etc.). The Pay Type needs to be consistent with the Pay Period reference projection and the Attrition and Backfill Group rule to be used in the projection
   - Description
2. Press Create.
3. Press Add.
4. Select the Attrition and Backfill rule type. See detailed instructions for each rule type:
   - Only Attrition (workforce reduction with no backfill):
     - Attrition rule: enter the desired attrition rule created in the previous step Attrition Rule Maintenance. Note only attrition rules of the say Pay Type are available for selection
     - View Attrition Rule: Press the View button to have the attrition rule details presented in a popup screen (display only)
   - Only Backfill (workforce increase not associated with any attrition rule):
     - Attrition Rule and View Attrition rule fields do not apply and are display only
     - Backfill Position: Enter the desired backfill position. When the Attrition and Backfill projection runs and the backfill position will be created as per the master data associated with the backfill position selected.
     - Attrition Start Pay Year, Attrition Start Pay Period, Attrition End Pay Year and Attrition End Pay Period do not apply and are display only
     - Backfill Start Pay Year: Enter the pay year in which the backfill position will begin
     - Backfill Start Pay Period: Enter the pay period in which the backfill position will begin
     - Backfill Rate does not apply and is display only
     - Backfill Count: enter the number of vacant backfill positions to be calculated.
   - Attrition and Backfill (workforce reduction with workforce increase based on a percentage of the reduction):
     - Attrition rule: enter the desired attrition rule created in the previous step Attrition Rule Maintenance. Note only attrition rules of the say Pay Type are available for selection
     - View Attrition Rule: Press the View button to have the attrition rule details
     - Backfill Position: Enter the desired backfill position. When the Attrition and Backfill projection runs and the backfill position will be created as per the master data associated with the backfill position selected.
     - Attrition Start Pay Year and Attrition Start Pay Period: Enter the starting point of when attrition should be calculated for backfill purposes
     - Attrition End Pay Year and Attrition End Pay Period: Enter the ending point of when attrition should be calculated for backfill purposes
     - Backfill Start Pay Year: Enter the pay year in which the backfill position will begin
     - Backfill Start Pay Period: Enter the pay period in which the backfill position will begin

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- Backfill Rate: PEP calculation will use the backfill rate as a percentage of the number of attritioned employees during the attrition pay period/year start and end range to determine how many vacant backfill positions to create.
- Backfill Count: does not apply and is display only

When data is complete press Save.

3.1.3.5 What-if Scenario Configuration

There configuration steps need to be completed in order to execute PEP What-if projections. The SAP IMG is used to maintain the configuration.

After completing the configuration for executing PEP scenarios, you need to configure the Process Chain for executing What-if Scenarios.

Process Chain Configuration

Process chain configuration is required to execute PEP projections and what-if scenarios as they execute in the background.

1. In the SAP IMG, select the SAP Reference IMG and navigate to SAP Customizing Implementation Guide > Public Budget Formulations (PBF) > Projection Calculation Configuration > Process Chain Configuration .
2. Create the entries shown below. These entries are for the process chains delivered in PBF 8.0.

Process Chain (ID)	InfoProvider	Position Monthwise DSO	Employee Monthwise DSO	What-if Projection
/PBFBI/PEP_PC0400_01	/PBFBI/PROJ_1	/PBFBI/HRPAO-9	/PBFBI/HRPAO07	
/PBFBI/PEP_PC0400_02	/PBFBI/PROJ_2	/PBFBI/HRPAO10	/PBFBI/HRPAO09	
/PBFBI/PEP_PC0500_01	/PBFBI/RFPRJ_1	/PBFBI/RBPSP01	/PBFBI/RBPSE01	X

Note

The first two entries are for PEP projections or reference projections. The third entry is specific to what-if projections.

Additional Prerequisites for PEP What-if Projections

In addition to the above configuration, PEP master data is required before executing PEP projections. See Personnel Expenditure Projection Master Data Maintenance.

Finally, executing a standard PEP projection calculation, also called a reference projection, is a pre-requisite before executing a what-if projection. Refer to PBF online help for sections titled Running a PEP Scenario Calculation and Running a What-if Scenario Calculation.

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