

# Kofax Process Analytics for use with SAP Fiori

## Installation and Configuration Guide

Version: 1.4.1

Date: 2020-11-27

The logo for KOFAX, consisting of the word "KOFAX" in a bold, blue, sans-serif font.

# Legal Notice

© 2019–2020 Kofax. All rights reserved.

Kofax is a trademark of Kofax, Inc., registered in the U.S. and/or other countries. All other trademarks are the property of their respective owners. No part of this publication may be reproduced, stored, or transmitted in any form without the prior written permission of Kofax.

# Table of Contents

Legal Notice.....	2
Overview.....	5
About Process Analytics.....	5
Business goals.....	5
Data flow concept.....	6
About this guide.....	6
Prerequisites.....	6
Process Director for use with SAP Fiori transports.....	6
Check the namespaces.....	7
Configuration in SAP.....	9
Configure the Evaluation Engine backend.....	9
Activate the /B507/ namespace.....	9
Activate the Gateway Service.....	10
Define KPI groups.....	11
Authorizations and roles.....	12
Assign the Process Analytics applications to users.....	12
Assign the Web Service to user roles.....	13
Define configuration users.....	13
Create a custom class.....	13
Configuration in SAP Fiori Launchpad.....	15
Start the Launchpad Designer.....	15
Create a catalog.....	15
Add the Process Analytics application to the catalog.....	16
Create the target mapping.....	16
Create a dynamic tile.....	16
Add the Process Analytics Configuration application to the catalog.....	17
Create the target mapping.....	17
Create a tile.....	18
Create a group and add an existing tile to it.....	18
Define the data flow.....	19
Select a transport request.....	19
Create a new data flow.....	20
View a data flow.....	20
Select a transport request.....	21

Create a data source node.....	22
Create characteristics.....	24
Bin supplement.....	24
Available characteristics.....	25
Create a filter.....	26
Define a supplement.....	29
Define an aggregate.....	31
Define a KPI.....	35
Assign a dashboard tile.....	38
Manual activities after each configuration change.....	40
Transport the configuration.....	41
Set up Process Analytics data load.....	42
Manual data load.....	42
Automatic data load.....	42
Troubleshooting.....	50
Basic system settings.....	50
Parameter: login/create_sso2_ticket.....	50
Selection of default profile for virus scan.....	50
System alias.....	50
One system configuration (backend and frontend in one system).....	50
Two system configuration (backend and frontend in separate systems).....	51
OData service configuration.....	51
Create the service.....	51
Assign the alias.....	52
ICF node.....	52
Activate the soft state in the services list.....	52
SAP Internet Communication Framework.....	53
Application service activation.....	53
Deactivate the parallelization of batch requests.....	53
Activate and maintain services.....	54
SAP Gateway.....	54
View model.....	54

# Overview

Continuous process performance improvement is a hallmark for the sustainable success of any organization, but it is both challenging and expensive without access to real information that is delivered in a format that easily enables analysis. Fiori® KPIs are an increasingly popular choice for visualizing performance benchmarks.

The Kofax Process Analytics for use with SAP Fiori™ solution is tightly integrated with Kofax Process Director Accounts Payable™ (formerly known as the INVOICE COCKPIT Suite) and comes complete with sample KPIs.

SAP Fiori is a platform that provides the porting of applications on mobile devices. It is based on SAP's technology platform, NetWeaver. SAP Fiori enables applications to be used on desktop computers, tablets, and smartphones, and supports HTML5.

You can configure the Process Director for use with SAP Fiori add-ons to suit the requirements of your organization.

## About Process Analytics

Process Analytics is a (near) real-time reporting solution for SAP ERP consisting of three components:

- The Evaluation Engine, abbreviated as EvE. This is the backend running in ERP, comprising maintenance, configuration and data processing modules.
- The Evaluation Engine reporting frontend. This is a web frontend with an overview dashboard and graphical capabilities for detailed reporting. For reporting users, the reporting frontend based on SAP UI5 is synonymous with Process Analytics.
- The Evaluation Engine configuration frontend. This is a web frontend that allows the creation and extension of KPIs and data flows for EvE.

## Business goals

For the business user, Process Analytics is a graphical reporting frontend for SAP ERP. It is lightweight and easy to adopt. All relevant KPIs and evaluation results are shown on a dashboard overview, with the ability to drill deeper into the data. To keep the overall footprint of the application small, the drilldown capabilities are limited. Instead, the user has the option to jump directly to the focused data in the operational system.

The aggregated data for the reporting frontend is calculated by data flows that run automatically in the connected source systems. Modification and creation of data flows are done in a separate graphical frontend. Monitoring tools for the data flows ensure frictionless operation of the reporting framework.

## Data flow concept

Data flows are customizable sets of classes that transform operational data into reporting-ready aggregates. A data flow can have multiple entry points that input operational data into the process. These entry points are called sources. The exit points represent the consumable reporting data, namely KPIs, aggregates and evaluations. A data flow can have many of these exit points. Intermediary nodes in a flow are filters and supplements. Filters remove data records, while supplements add data fields.

## About this guide

This guide explains how to install and configure Process Analytics. It assumes that you are already familiar with SAP NetWeaver Business Warehouse and Process Director Accounts Payable.

For more information about Process Director and Process Director Accounts Payable, see the following guides.

- *Kofax Process Director Accounts Payable Configuration Guide*
- *Kofax Process Director Accounts Payable User Guide*
- *Kofax Process Director Configuration Guide*
- *Kofax Process Director User Guide*

## Prerequisites

To import the Process Director for use with SAP Fiori add-ons into SAP, the following prerequisites must be met.

- Prerequisites for the frontend:  
For information on the tested and supported SAP Fiori and Process Director releases, see the document *Kofax Process Director Suite Supported SAP Releases*.
- Prerequisites for the backend:  
SAP software component SAP\_GWFND 740, Support Package level 015 or higher.

## Process Director for use with SAP Fiori transports

The Process Director for use with SAP Fiori add-ons have two transports.

- Front End (FE): Imported into the gateway
- Back End (BE): Imported into the ERP system

The transports are available on request. Partners and customers should contact their local Kofax representative to place an order.

For information on how to import a transport into SAP, see the *Process Director Import and Upgrade Guide*.

## Check the namespaces

The Kofax\_ReadSoft\_Namespaces\_FQAK901961.zip transport creates the /EBY/, /COCKPIT/, and /RSE/ namespaces.

It is recommended that you check the settings of the /EBY/ and /COCKPIT/ namespaces. To check their settings, complete the following steps.

1. Go to the SE03 transaction.
2. In the **Administration** folder, double-click **Display/Change Namespaces**.

The namespaces should be defined as follows.

**Note** The /COCKPIT/ namespace is required only for Accounts Payable.

Setting	Value
Namespace	/COCKPIT/
Namespace role	C - Recipient
Correction license	13375972671823267744
Short text	Process Director - ReadSoft AG - Germany, Frankfurt/M
Owner	ReadSoft AG

Setting	Value
Namespace	/EBY/
Namespace role	C - Recipient
Correction license	05790374410114137903
Short text	Process Director - ReadSoft AG - Germany, Frankfurt/M
Owner	ReadSoft AG

3. In the **Administration** folder, double-click **Set System Change Option**.

The namespaces should be defined as follows.

Setting	Value
Namespace/Name Range	Process Director - ReadSoft AG - Germany, Frankfurt/M
Prefix	/COCKPIT/
Modifiable	X - Modifiable

Setting	Value
Namespace/Name Range	Process Director - ReadSoft AG - Germany, Frankfurt/M
Prefix	/EBY/

<b>Setting</b>	<b>Value</b>
<b>Modifiable</b>	X - Modifiable

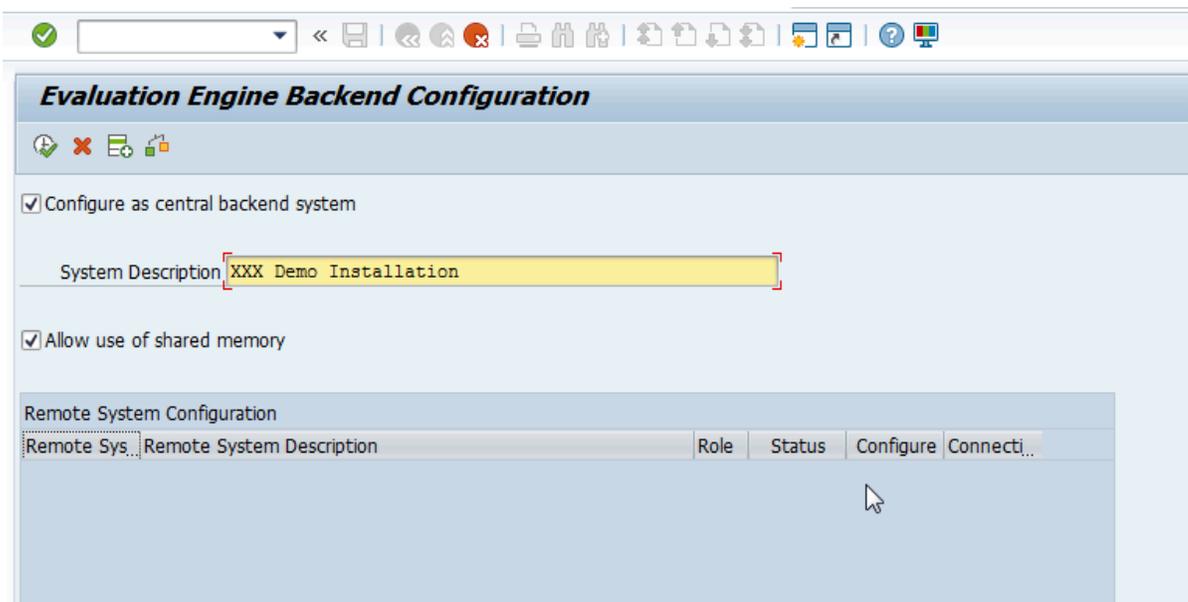
# Configuration in SAP

This chapter describes the tasks you must perform in the SAP system to activate and configure Process Analytics.

## Configure the Evaluation Engine backend

To activate Process Analytics on a single SAP backend system, complete the following steps.

1. Go to transaction `/EBY/EVE_CONFIG` and click **Lock & Edit** .
2. Select the **Configure as central backend system** check box.



3. Type a system description.
4. Select the **Allow use of shared memory** check box.
5. Click **Activate Configuration** .
6. In the popup window that opens, click **Activate** to confirm that all data will be deleted.

## Activate the /B507/ namespace

To activate the `/B507/` namespace, complete the following steps.

1. Go to transaction `SE03`.

2. In the **Administration** group, double-click **Display/Change Namespaces**.
3. In change mode, add a new entry with the following values.

<b>Namespace</b>	/B507/
<b>Namespace role</b>	C
<b>Repair license</b>	23178636483082621615
<b>Short text</b>	BW generation namespace for /EBY/
<b>Owner</b>	Kofax

4. In the **Administration** group, double-click **Set System Change Option**.
5. Under **Namespace/Name Range**, set /B507/ to **Modifiable**.
6. Click **Save** .

## Activate the Gateway Service

To activate the SAP Gateway service, complete the following steps.

1. Go to transaction `SICF`.
2. Click **Execute**  and activate the following services.

To activate a service, navigate to the service and right-click it, then select **Activate Service**.

- /default\_host/sap/bc/apc/eby/bi\_pfa\_config\_notify
  - /default\_host/sap/bc/apc/eby/bi\_pfa\_update\_notify
  - /default\_host/sap/bc/bsp/eby/bi\_eve\_config
  - /default\_host/sap/bc/bsp/eby/bi\_fiori
  - /default\_host/sap/bc/bsp/eby/bi\_lib\_eve
  - /default\_host/sap/bc/bsp/eby/fr\_lib
  - /default\_host/sap/bc/ui5\_ui5/eby/bi\_eve\_config
  - /default\_host/sap/bc/ui5\_ui5/eby/bi\_fiori
  - /default\_host/sap/bc/ui5\_ui5/eby/bi\_lib\_eve
  - /default\_host/sap/bc/ui5\_ui5/eby/fr\_lib
  - /default\_host/sap/opu/odata/eby/bi\_analytics\_data\_srv
  - /default\_host/sap/opu/odata/eby/bi\_eve\_configuration\_srv
  - /default\_host/sap/opu/odata/eby/bi\_eve\_dynamic\_tile\_srv
  - /default\_host/sap/opu/odata/eby/bi\_pfa\_persistence\_srv
3. In transaction `SPRO`, go to **SAP NetWeaver > UI Technologies > SAP Fiori > Initial Setup > Initial Launchpad Configuration** and select **Service Maintenance of SAP Gateway**.

4. Assign a system alias for the following services.

- /EBY/BI\_ANALYTICS\_DATA\_SRV
- /EBY/BI\_EVE\_CONFIGURATION\_SRV
- /EBY/BI\_EVE\_DYNAMIC\_TILE\_SRV
- /EBY/BI\_PFA\_PERSISTENCE\_SRV

**Activate and Maintain Services**

Service Catalog

Type	Technical Service Name	V.	Service Description	External Service Name	Namespace	OAuth	Soft State	Status	Is SAP Service
SEP	/EBY/BI_ANALYTICS_DATA_SRV	1	BI Central Analytics Data Service	BI_ANALYTICS_DATA_SRV	/EBY/	<input type="checkbox"/>		Not Supported	
SEP	/EBY/BI_EVE_CONFIGURATION_SRV	1	Evaluation Engine Configuration Service	BI_EVE_CONFIGURATION_SRV	/EBY/	<input type="checkbox"/>		Not Supported	
SEP	/EBY/BI_EVE_DYNAMIC_TILE_SRV	1	Evaluation Engine Dynamic Tile Data Service	BI_EVE_DYNAMIC_TILE_SRV	/EBY/	<input type="checkbox"/>		Not Supported	
SEP	/EBY/BI_PFA_PERSISTENCE_SRV	1	PD Fiori Analytics Persistence Service	BI_PFA_PERSISTENCE_SRV	/EBY/	<input type="checkbox"/>		Not Supported	
	/IWBND/SG_MED_CATALOG	2	Catalog Service Version 2	CATALOGSERVICE	/IWBND/	<input type="checkbox"/>			
RFP	DAAG_MNGGRP	1	Data Admin Manage Groups	DAAG_MNGGRP		<input checked="" type="checkbox"/>			

To assign a system alias, complete the following steps.

- a. Click on the service, then click **Add System Alias**.
- b. In change mode, add a new entry.
- c. In the **Service Doc. Identifier** field, type the service ID.
- d. Set **SAP System Alias** to LOCAL and select the **Default System** check box.

**New Entries: Overview of Added Entries**

Assign SAP System Aliases to OData Service

Service Doc. Identifier	User Role	Host Name	SAP System Alias	Default System	Metadata Default	Tech. Svc. Name
/EBY/BI_ANALYTICS_DATA_SRV_0...			LOCAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

## Define KPI groups

Before activating the Process Analytics tiles in the Fiori Launchpad, you must add the corresponding entry in the SAP backend.

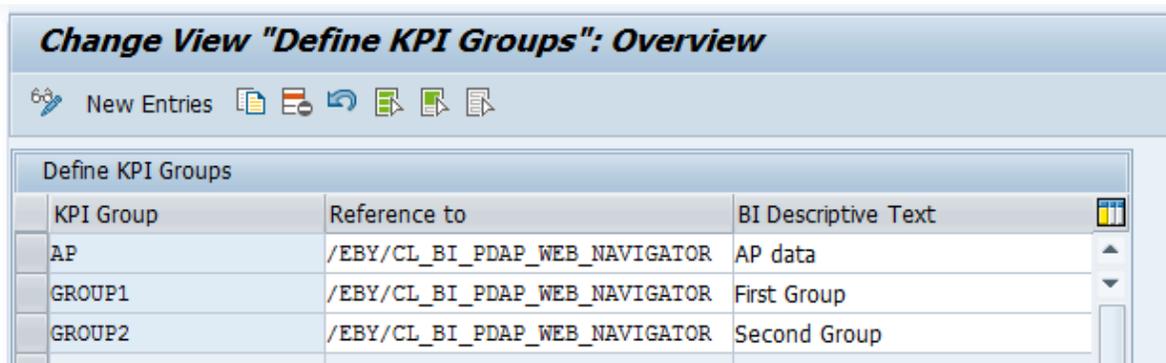
Separate tiles can be created in the Fiori Launchpad Designer which are differentiated by KPI groups that are created in this activity.

Dashboard tiles then are included in a KPI group, essentially in different dashboard tiles.

To define KPI groups, complete the following steps.

1. Go to transaction /EBY/BI.
2. Select --- **Maintain at Backend** --- > **Define KPI groups**.
3. In change mode, add a new entry.

4. Enter the details for the group.



Change View "Define KPI Groups": Overview		
Define KPI Groups		
KPI Group	Reference to	BI Descriptive Text
AP	/EBY/CL_BI_PDAP_WEB_NAVIGATOR	AP data
GROUP1	/EBY/CL_BI_PDAP_WEB_NAVIGATOR	First Group
GROUP2	/EBY/CL_BI_PDAP_WEB_NAVIGATOR	Second Group

5. Click **Save** .

## Authorizations and roles

For transactional applications, ABAP backend users with corresponding roles and authorizations are necessary. The roles provide authorizations for the OData service of the applications. The roles for the transactional applications do not comprise any authorization for the business data that needs to be displayed in the application. It is assumed that these authorizations will be provided by the customer.

For every role, you must grant authorizations according to the customer's roles and authorization concept.

### Assign the Process Analytics applications to users

To assign the Process Analytics applications to users, complete the following steps.

Prerequisite: You have created a catalog and a group and added the Process Analytics applications to them. See [Configuration in SAP Fiori Launchpad](#) for more information.

1. Go to the `PEFCG` transaction.
2. Create a new role or select an existing one.
3. Click the **Menu** tab.
4. In the **Hierarchy** group, select the **Role Menu** folder and then in the **Transaction** button menu, select **SAP Fiori Tile Catalog**.
5. In the **Assign Tile Catalog** dialog box, select or type the catalog ID of your Process Analytics catalog and click **Continue** .
6. In the **Hierarchy** group, select the **Role Menu** folder again and then in the **SAP Fiori Tile Catalog** button menu, select **SAP Fiori Tile Group**.
7. In the **Assign Group** dialog box, select or type the group ID of your Process Analytics group and click **Continue** .
8. Click **Save** .
9. Click the **User** tab.  
Type the required user IDs and click **Save**  to add the role to the users.

The authorized users can now access the application.

## Assign the Web Service to user roles

Depending on the existing authorization concepts, you may need to add the Web Service to the user roles.

To assign the Web Service to a role, complete the following steps.

1. Go to the `PF03` transaction.
2. Select the role.
3. Click the **Authorizations** tab.
4. Click **Change Authorization Data** .
5. In the **Object class AABB** list, select the **S\_SERVICE** authorization object.
6. Click the edit icon next to the **SRV\_NAME** node.
7. In the **Type** list, select **TADIR Service**.
8. In the **Object Type** list, select **IWSG**.
9. In the **Object Name** list, select **/EBY/FRAP\_WC\_0001**.
10. Click **Save** .

## Define configuration users

To define users who are able to customize data flows, complete the following steps.

1. Go to transaction `/EBY/BI`.
2. Select **--- Maintain at Backend --- > Define Configuration Users**.
3. In change mode, add a new entry.
4. Add the user ID of each user who should have authority to create data flows.
5. Click **Save** .

## Create a custom class

You can create your own class with custom logic for filters or supplements.

For more information on filters and supplements, see [Create a filter](#) and [Define a supplement](#).

To create a custom class, complete the following steps.

1. Create a new class that inherits from the appropriate class:
  - For filters: `/EBY/BI_EVE_FILTER`
  - For supplements: `/EBY/BI_EVE_SUPPLEMENT`
2. Add the required coding.
3. Go to `/EBY/BI` and select **--- Generated by Fiori Application --- > Define fields used by classes**.
4. Add all the source fields required by the custom coding, specifying your custom class and the field name.
5. Click **Save** .

6. When creating the supplement or special filter, select your custom class.

# Configuration in SAP Fiori Launchpad

This chapter describes the tasks you must perform in the SAP Fiori Launchpad to activate and configure Process Analytics.

**Note** Always use the SAP Fiori Launchpad to configure and use the Process Analytics for use with SAP Fiori applications. Kofax tests and supports only the integration with the SAP Standard Fiori Launchpad. In the production environment, always use the Launchpad to open the applications; a direct URL application call is not recommended.

You must create Fiori Launchpad tiles for the Process Analytics Fiori applications. You create Launchpad tiles in catalogs in the SAP Launchpad designer. Catalogs are collections of tiles that have similar technical or business functionality (similar to the development packages in ABAP). You can add tiles to groups. Groups are collections of tiles for specific end users and can contain tiles from different catalogs. You can grant independent access to catalogs and groups.

Tiles can be static or dynamic. In dynamic tiles, the data is updated from the database in near real-time (in relatively small intervals). It is recommended to use dynamic tiles.

## Start the Launchpad Designer

Start the launchpad designer using one of the following URLs:

```
https://<server>:<port>/sap/bc/ui5_ui5/sap/arsrvcl_upb_admn/main.html
```

```
https://<server>:<port>/sap/bc/ui5_ui5/sap/arsrvcl_upb_admn/main.html ?sap-client=<client>&scope = <CONF/CUST>
```

## Create a catalog

To create a new catalog, complete the following steps.

1. In the footer of the **Catalogs** panel, click **Create Catalog** .
2. In the **Create Catalog** dialog box, type a title and ID for the catalog and click **Save**.  
The new catalog appears.

**Note** The title and ID should follow the customer-specific naming convention, for example, `zcustomer_cat1`.

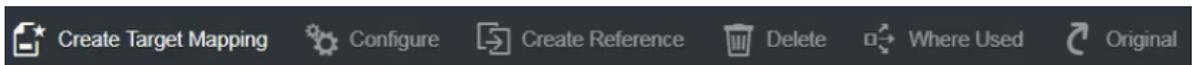
## Add the Process Analytics application to the catalog

To add the Process Analytics Fiori application to the catalog, you must create a target mapping and a tile that users can click to open the application.

### Create the target mapping

To create the target mapping, complete the following steps.

1. Click **Target Mapping** , then, in the footer, click **Create Target Mapping** to display a new form.



2. Enter the following information.

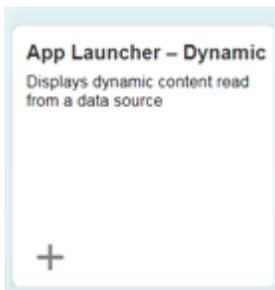
Field	Value
Semantic Object	FioriApplication
Action	toPADashboard
Application Type	SAPUI5 Fiori App
Title	Process Analytics Dashboard
URL	/sap/bc/ui5_ui5/eby/BI_FIORI/
ID	eby.eve.dashboard
Device Type	Desktop

3. Save your changes and go back.

### Create a dynamic tile

To create a dynamic tile, complete the following steps.

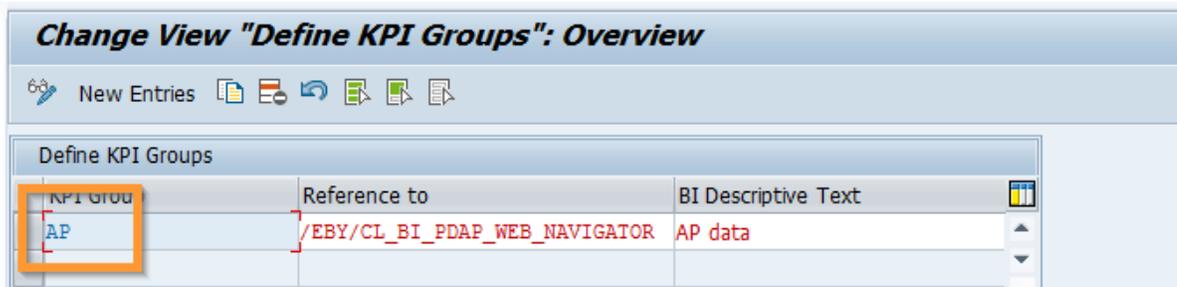
1. Click **Tiles** , then, in the footer, click **Create Tile**.
2. On the next screen, select **App Launcher - Dynamic**.



- In the form that appears, enter the following information.

Field	Value
Title	PA Dashboard (or any custom text)
Icon	sap-icon: //Fiori2/F0194 (for example)
Service Url	/sap/opu/odata/eby/bi_eve_dynamic_tile_srv/TileData('AP')
Semantic Object	FioriApplication
Action	toPADashboard (= value from the field <b>Action</b> in the target mapping)
Parameters	sap-apf-configuration-id= <b>AP.AP</b>

**Note** The substrings in the fields **Service Url** and **Parameters** (here: AP) must exactly match the entry in /EBY/BI > Define KPI Groups.



- Save your changes.

With this approach you can late group different KPIs to different tiles.

## Add the Process Analytics Configuration application to the catalog

To add the Process Analytics Configuration Fiori application to the catalog, you must create a target mapping and a tile that users can click to open the application.

### Create the target mapping

To create the target mapping, complete the following steps.

- Click **Target Mapping** , then, in the footer, click **Create Target Mapping** to display a new form.



- Enter the following information.

Field	Value
Semantic Object	FioriApplication
Action	toPAConfig

Field	Value
Application Type	SAPUI5 Fiori App
Title	Dashboard Configuration
URL	/sap/bc/ui5_ui5/eby/bi_eve_config
ID	eby.eve.flowConfig
Device Type	Desktop

3. Save your changes and go back.

## Create a tile

To create a tile, complete the following steps.

1. Click **Tiles** , then, in the footer, click **Create Tile**.
2. On the next screen, select **App Launcher - Static**.
3. In the form that appears, enter the following information.

Field	Value
Title	Dashboard: Configuration
Icon	sap-icon: //add-equipment (for example)
Semantic Object	FioriApplication
Action	toPAConfig (= value from the field <b>Action</b> in the target mapping)

4. Save your changes.

## Create a group and add an existing tile to it

To create a new group and add a tile, complete the following steps.

1. In the footer of the **Groups** panel, click **Create Group** .
2. In the **Create Group** dialog box, type a title and ID for the group and click **Save**.  
The new group appears.

**Note** The title and ID should follow the customer-specific naming convention, for example, `zcustomer_grpl`.

3. In the **Show as Tiles** group, click the icon to select the catalog that you created.  
The selected catalog displays the dynamic tile that you created.
4. Click the plus icon below the title to add the tile to the group.  
The plus icon changes into a tick  and the tile is successfully added to the group.

# Define the data flow

Data flows are customizable sets of classes that transform operational data into reporting-ready aggregates. See [Data flow concept](#) for more information.

You can use the default Process Analytics data flow Default AP Header or create your own flow. Do not make changes to the default flow. Instead, copy it to create your own flow and then deactivate the default flow.

After creating a data flow you add objects to it by appending a new object as a child of current object. An exception is the source node (the first data flow object), which you add from the menu.

Data flow objects can be of the following types:

- Staging objects (source, filter, supplement). These objects prepare data extraction.
- Computation objects (aggregate, KPI). These objects store extracted data.
- Dashboard tiles. These objects enable visualization of computation objects and determine how they are presented to the user.

After defining a data flow, you must activate it to make it available to users.

## Select a transport request

You must save all your configuration changes in a transport request.

To select the transport request to which your changes are saved, complete the following steps.

1. In the data flow list, click **Transport request** .
2. Select a transport request and click **OK**.

The selection list contains all your currently open transport requests.

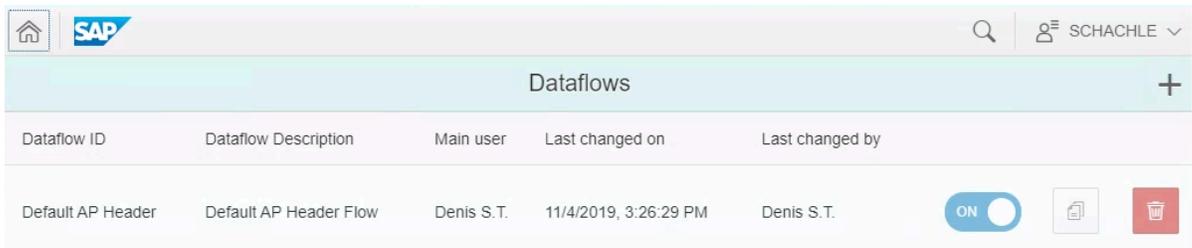
The selected request is added to your SAP user profile as the value of the parameter `/EBY/  
PA_REQUEST`.

If you do not select a transport request, or if you release the selected request, the next time you save your configuration changes, you are prompted to select a request.

## Create a new data flow

To create a new data flow, complete the following steps.

1. From the Fiori Launchpad, open the Process Analytics Configuration application and click **Add +**.



2. Type an ID and a description for the new flow, then click **Submit**.  
The new, empty data flow appears.
3. Add a [data source](#) and other objects to the flow.
4. After adding the data flow objects, click  on the overview screen to activate the flow.

You can also create a data flow by clicking **Copy**  in the row of an existing data flow.

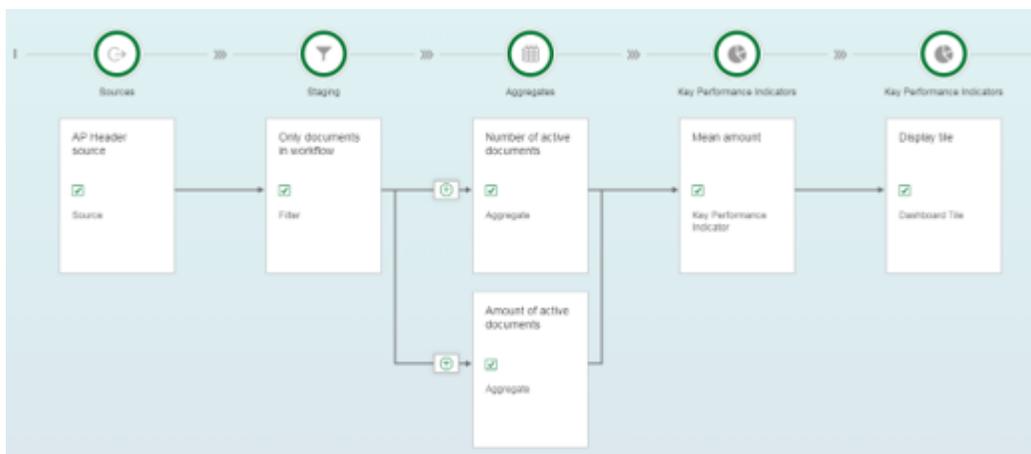
To delete a data flow, click **Delete**  in the row of an existing data flow.

## View a data flow

You can view a data flow in the standard SAPUI5 ProcessFlow control or in an enhanced diagram. The enhanced diagram provides a clearer overview of the process flow and the relations between the objects in the flow.

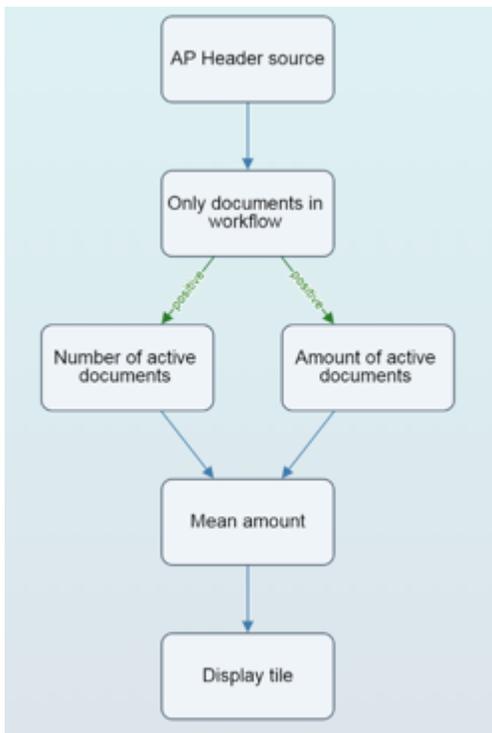
To view a data flow in the SAPUI5 ProcessFlow control, complete the following step.

- In the data flow list, click on the flow.



To view a data flow in the enhanced diagram, complete the following steps.

1. In the data flow list, click **Enhanced Diagram** .
2. Click on the flow.



## Select a transport request

You must save all your configuration changes in a transport request.

To select the transport request to which your changes are saved, complete the following steps.

1. In the data flow list, click **Transport request** .
2. Select a transport request and click **OK**.

The selection list contains all your currently open transport requests.

The selected request is added to your SAP user profile as the value of the parameter `/EBY/PA_REQUEST`.

If you do not select a transport request, or if you release the selected request, the next time you save your configuration changes, you are prompted to select a request.

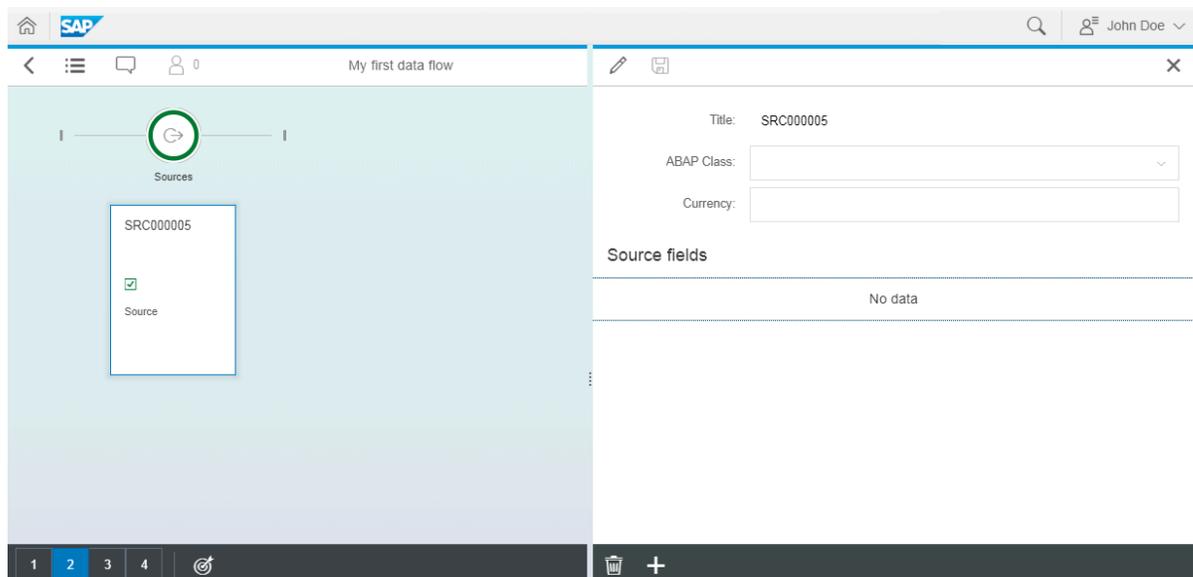
## Create a data source node

The data source node is the data entry point of the flow.

To assign a data source to the flow, complete the following steps.

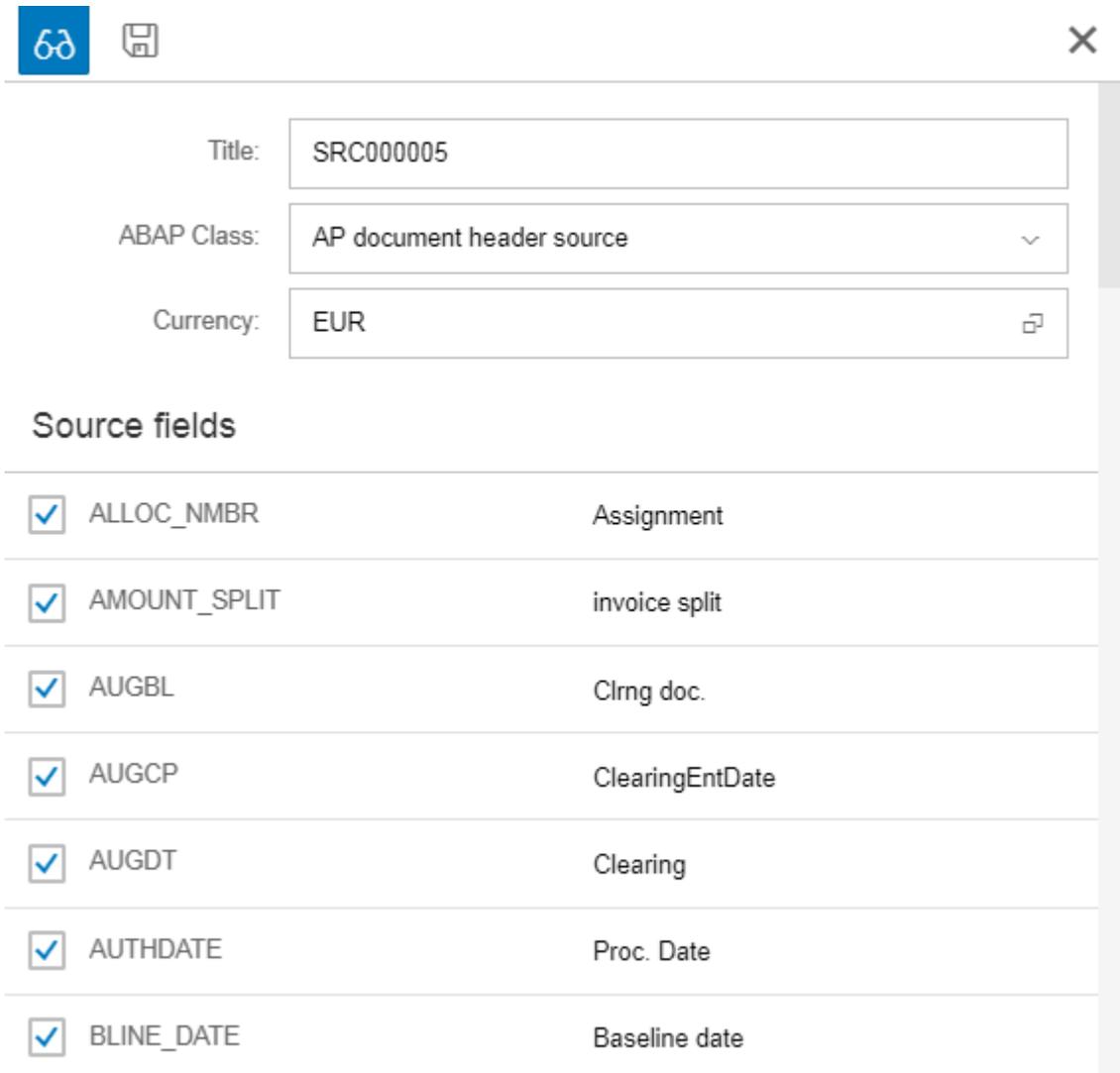
1. In the data flow list, click on the flow.
2. Click **Menu** , then click **Edit** > **Create Source Node**.
3. Select an existing source (for example, **AP Header source**), or click **Add new** to create a new source node.

The details of the new source appear on the right side of the detail screen.



4. Click **Edit**  to enter values.
5. In the **ABAP Class** list, select **AP document header source**.

6. Select the check box for each characteristic or key figure you want to use in your evaluations. If you select key figures for amounts, assign a value in the **Currency** field.



The screenshot shows a configuration window with the following fields:

- Title: SRC000005
- ABAP Class: AP document header source
- Currency: EUR

Below the form is a section titled "Source fields" containing a table of source fields with checkboxes for selection:

Field Name	Description
<input checked="" type="checkbox"/> ALLOC_NMBR	Assignment
<input checked="" type="checkbox"/> AMOUNT_SPLIT	invoice split
<input checked="" type="checkbox"/> AUGBL	Clrng doc.
<input checked="" type="checkbox"/> AUGCP	ClearingEntDate
<input checked="" type="checkbox"/> AUGDT	Clearing
<input checked="" type="checkbox"/> AUTHDATE	Proc. Date
<input checked="" type="checkbox"/> BLINE_DATE	Baseline date

For your own source nodes, copy the class `/EBY/CL_EVE_SOURCE_AP_HEADER` into the customer name space in the SAP backend.

You can use data sources in multiple flows, so you cannot remove from a flow any source field that is already used in a different flow. It appears with a 'lock' icon  and is selected automatically. You can only add source fields that are not yet used in a different flow by selecting the **Active** check box.

To remove a source field from the source node, check the usage in different flows first for this field and delete the usage there before removing the source field completely from the flow.

7. Click **Save modifications** .

## Create characteristics

A characteristic represents an additional level of detail for the KPI.

For example, the KPI "Number of unprocessed MM documents" could have additional characteristics like "Company Code" and "Document Processor". When a user opens the KPI, additional navigation is possible to view the KPI metric in respect to company code or document processor.

Process Analytics is delivered with a set of characteristics, but you can also add custom ones.

To create a characteristic, complete the following steps.

1. Click the data flow.
2. Click **Menu** , then click **Edit > Characteristics**.
3. Click the arrow  next to a characteristic to edit it.

Characteristics		
Description	Dataflow Field	Supplement
Processing time ranges	AGING_UNTIL_POSTING	<input checked="" type="checkbox"/>  
Clearing date	AUGDT	<input type="checkbox"/>  

### Bin supplement

Bin supplement (binary supplement) is a special characteristic that is used when you want to split all numerical values in ranges.

For example, for the KPI "Amount for documents in process", you want to split invoices into 3 sections:

- Invoices with insignificant amount
- Invoices with regular amount
- Invoices with high amount

Characteristics

\*Characteristic: AGING\_UNTIL\_POSTING

\*Description:

Bin Supplement

Ranges +

---

Description:

From:  To:

---

Description:

From:  To:

---

Description:

From:  To:

## Available characteristics

The following characteristics are currently available.

Characteristic	Description	Data Element	Characteristic Class	Bin Supp	Date
AGING_UNTIL_POSTING	Processing time ranges	/EBY/BI_NUMERICAL_BIN	/EBY/CL_EVE_NUMERICAL_BIN_ATTR	X	
AUGDT	Clearing date	AUGDT	/EBY/CL_EVE_DATE_ATTR		
CH_USER	Document processor	/COCKPIT/DCH_USER	/EBY/CL_EVE_USER_ATTR		
COMP_CODE	Company Code	BUKRS	/EBY/CL_EVE_COMPCODE_ATTR		
DATE_DAY	Date	/EBY/BI_DATE	/EBY/CL_EVE_DATE_ATTR		X
FI_MM_FLG	FI/MM Flag	/COCKPIT/DFI_MM_FLG	/EBY/CL_EVE_FIMMFLAG_ATTR		
STATUS	Status	/COCKPIT/DPROCESS_STATUS	/EBY/CL_EVE_AP_STATUS_ATTR		

Characteristic	Description	Data Element	Characteristic Class	Bin Supp	Date
SYSTEM_ID	System ID	RFCDEST	/EBY/CL_EVE_SYSTEM_ID_ATTR		
VENDOR_NO	Vendor	LIFNR	/EBY/CL_EVE_VENDOR_ATTR		

For binary supplement characteristics, you must define value ranges, for example:

Characteristics	Description	Range Description	From	To
AGING_UNTIL_POSTING	Processing time ranges			
		Short (less than 4 days)	0,000	4,000
		Medium (between 4 and 7 days)	4,000	7,000
		Long (more than 7 days)	7,000	9999,999

## Create a filter

A filter filters the data received from the parent object (source or supplement).

There are two filter options:

- Inclusive: Includes data that matches the filter criteria
- Exclusive: Excludes data that matches the filter criteria

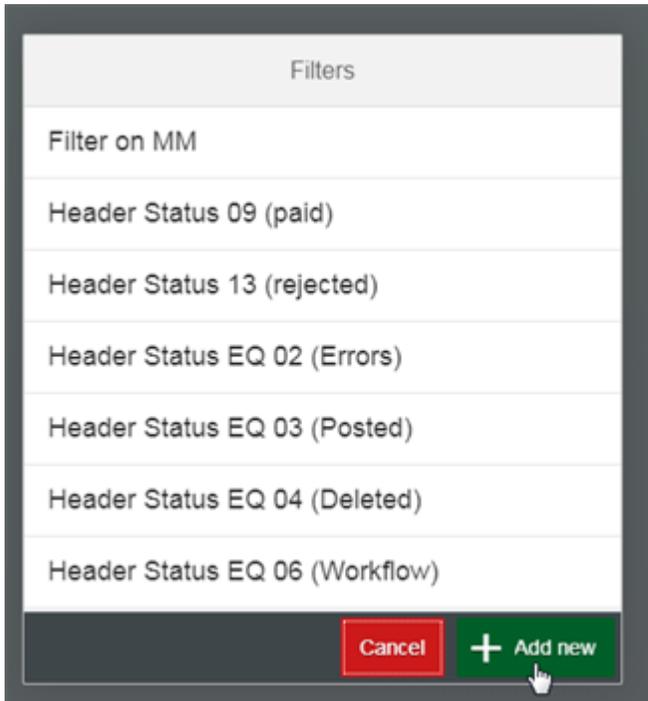
There are two filter implementations:

- Generic filter: Filter by a fixed value of a specific data flow field
- Special filter: The filter logic is provided via an ABAP class. See [Create a custom class](#) for information on how to use your own custom class.

To create a filter, complete the following steps.

1. Select the data source node.
2. Below the **Source fields** list, click **Create child node** , then click **Filter**.

3. Select an existing filter from the list or click **Add new** to create a new filter.



The details of the filter appear on the right side of the detail screen.

4. Click **Edit**  and enter values:
  - a. Type a title.
  - b. Select **Generic Filter** for simple evaluations or **Special filter** for more complex evaluations that require coding.
  - c. Click **Characteristic** or **Keyfigure**.
  - d. Select the characteristic or key figure that you want to evaluate.
  - e. Select a comparison operator.
  - f. Type the value to filter.

Title:

Type: Generic Filter Special Filter

Field Type: Characteristic Keyfigure

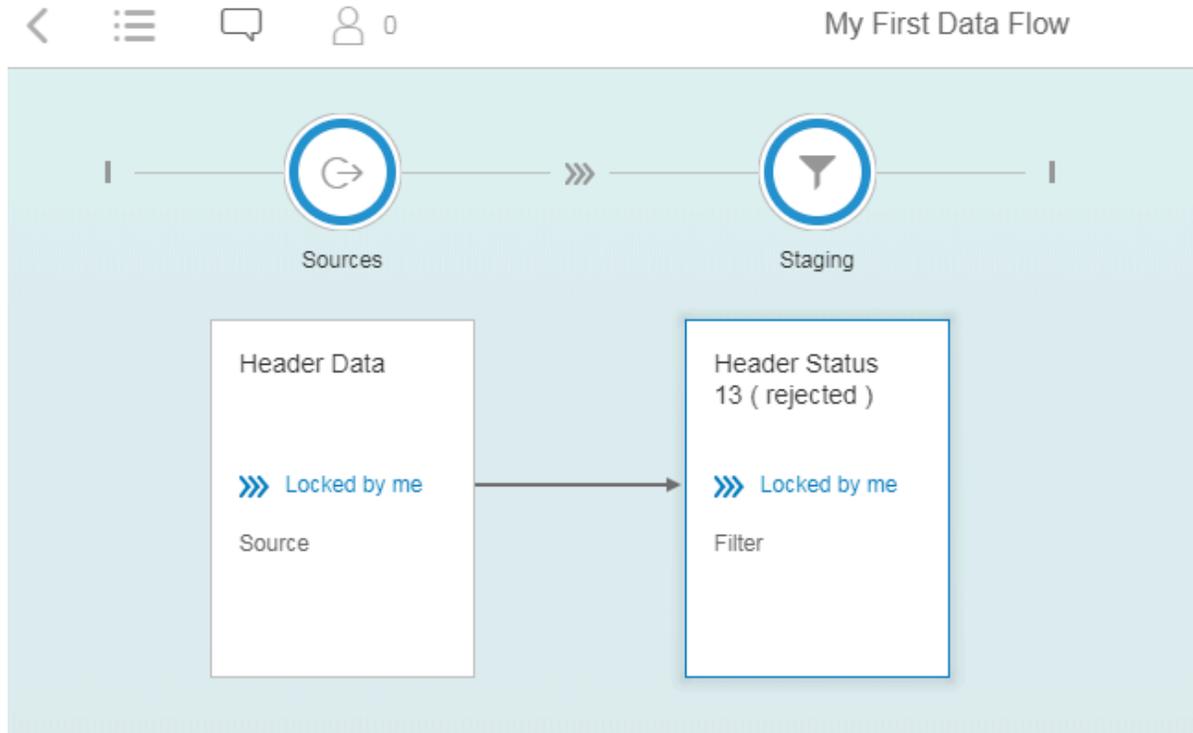
Characteristic:

Operator:

Value:

5. Click **Save modifications** .

The new filter appears in the overview on the left side.



With the current filter setup, only rejected documents are evaluated. Normally, you would use the filter the other way round, that is, exclude documents with Status = 13 from the flow. You can customize this after adding the next staging step to the flow. See [Define a supplement](#).

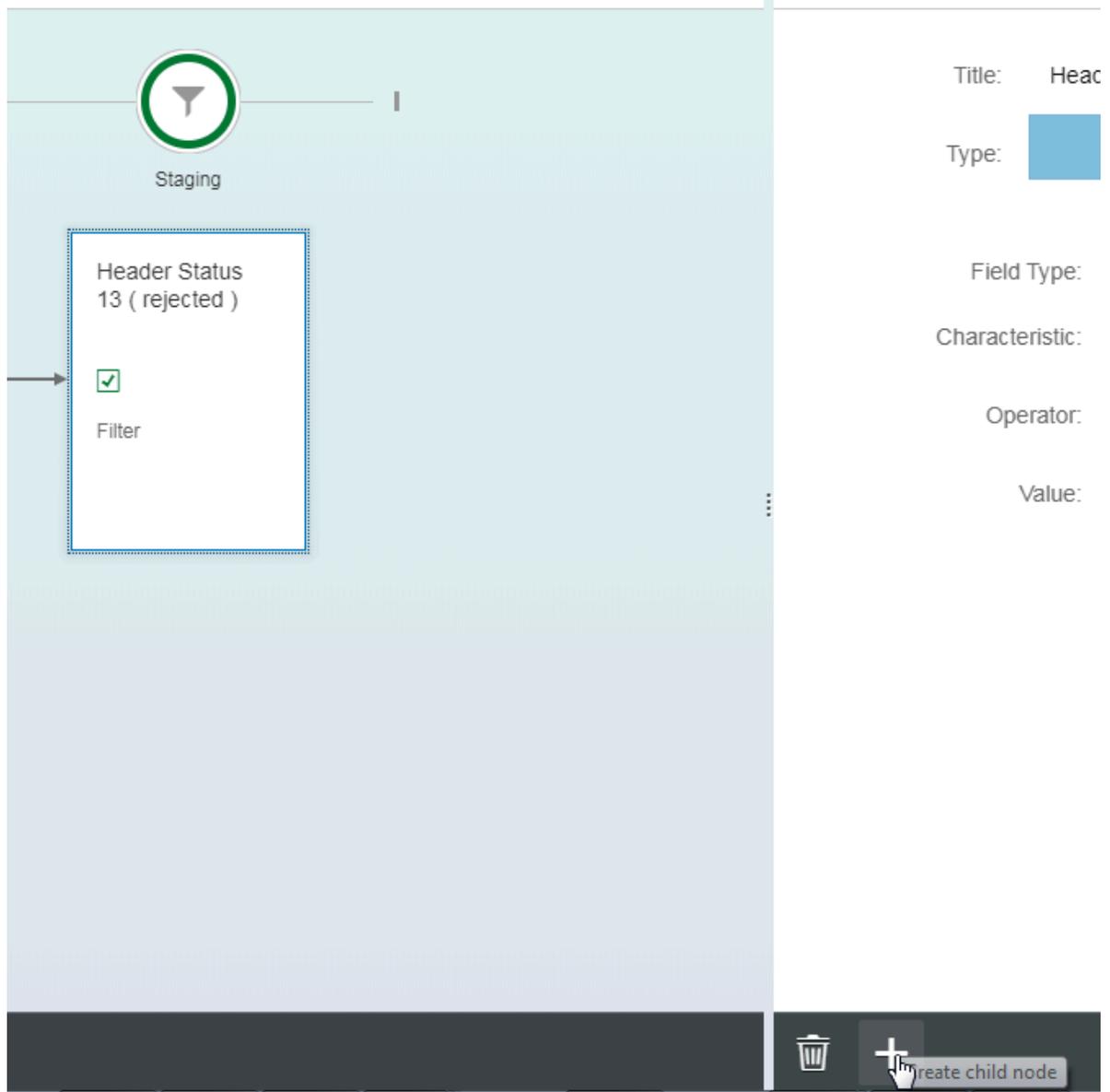
You can add now more filters or create a supplement before creating an aggregate.

## Define a supplement

A supplement adds a new column to your data structure and fills it with data. This column can have either the Characteristic or Keyfigure type. You must provide a class that defines the supplement logic (except for a Bin Supplement Characteristic). You can use the provided supplement classes or create your own class. See [Create a custom class](#) for more information.

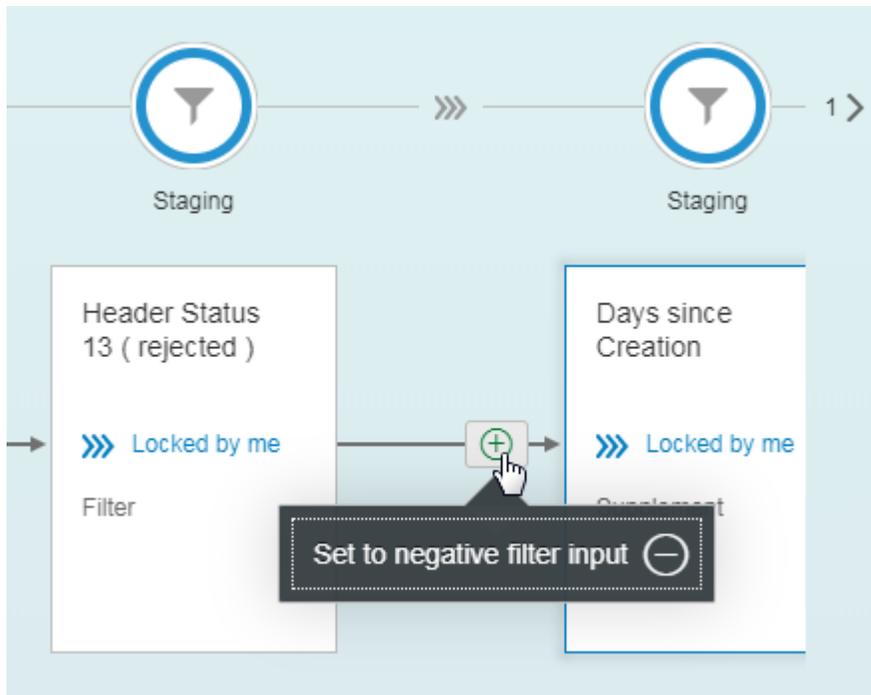
To define a supplement, complete the following steps.

1. In the data flow overview, select the new filter.



2. Click **Create child node**  and select **Supplement**.
  3. Select one of the existing values.
  4. Click **Save modifications** .
- You can now set the previously created filter as a 'negative filter'.

5. In the data flow overview, click on the icon  and select **Set to negative filter input**.



## Define an aggregate

An aggregate is a table whose columns are added from Characteristic and Keyfigure fields. For example, if you select the characteristics Vendor and Processor and the key figure Document amount, the columns Vendor, Processor and Document amount will be available.

The table lines are filled with the data found during extraction.

We recommend using at least one and a maximum of two characteristics per aggregate or KPI. A larger number of characteristics results in extensive memory usage.

To define an aggregate, complete the following steps.

1. In the data flow overview, select the new supplement.
2. Click **Create child node**  and select **Aggregate**.
3. Click **Edit** to enter values.
4. Type a title (for example, "Number of invoices in process") and select the **Store in database** check box.

5. Click the **Add** button and select up to two characteristics that you want to evaluate.

**Characteristics** +

Characteristic Add

Company Code	
Vendor	

The aggregated data can now be presented as a number, for which the characteristics supplement `DOC_COUNTER` is used. It will later be presented as an integer value and not with a unit or currency field.

**Keyfigure**

Origin keyfigure:

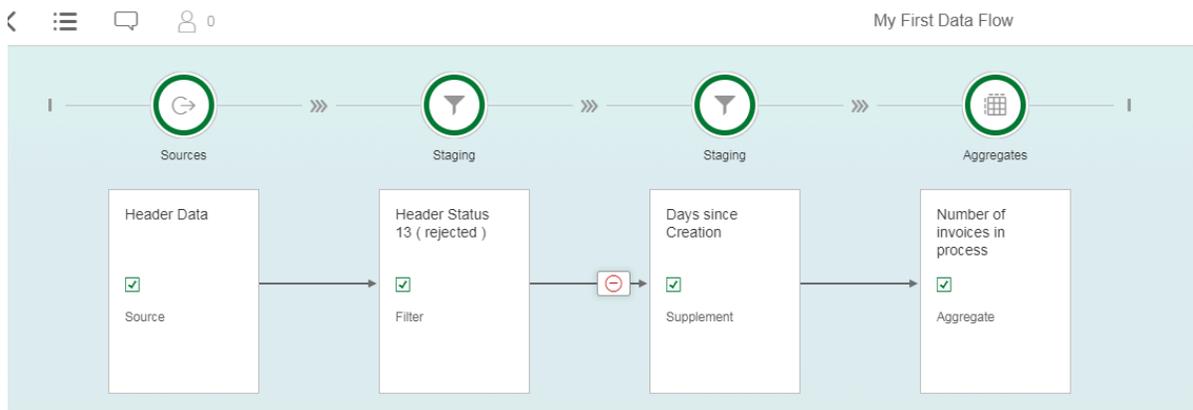
Type:	<b>Integer</b>	Decimal	Custom
Has Unit/Currency:	<b>None</b>	Unit	Currency

6. Click **Save modifications** .

You have now added an aggregate that:

- Ignores documents with Status (13) / Filter
- Adds a supplement field Days since Creation / Supplement

The aggregate can be displayed as document counter.



You can customize the presentation of aggregates in a dashboard tile. However, it is often more required to display a relation between two aggregates as a key figure, for example:

KPI Ratio of MM Invoices = Number of MM invoices in process / Number of invoices in process

You therefore need to create an additional filter for MM documents and a new aggregate on the filtered value.

7. Select the supplement **Days since Creation** and add another filter:

Title: Filter on MM

Type: Generic Filter Special Filter

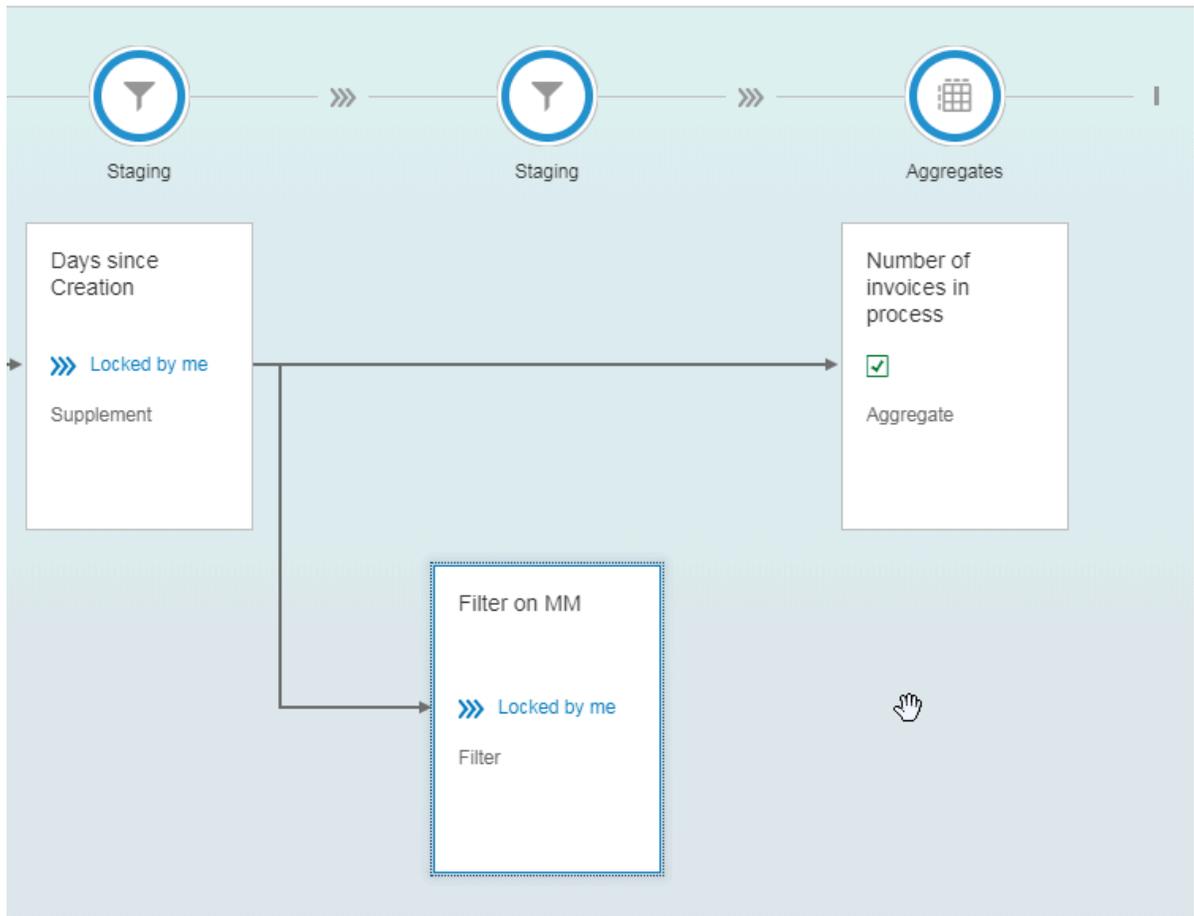
Field Type: Characteristic Keyfigure

Characteristic: FI/MM Flag ▼

Operator: Equals ▼

Value: MM

The filter appears in the correct hierarchical order and you can see that the aggregate **Number of Invoices in process** does not use the **Filter on MM** filter.



8. Add a similar aggregate, as described for the **Number of Invoices in process** aggregate. Use a different title, but the same characteristics and key figures.

After creating aggregates, you can build a KPI from two aggregates.

## Define a KPI

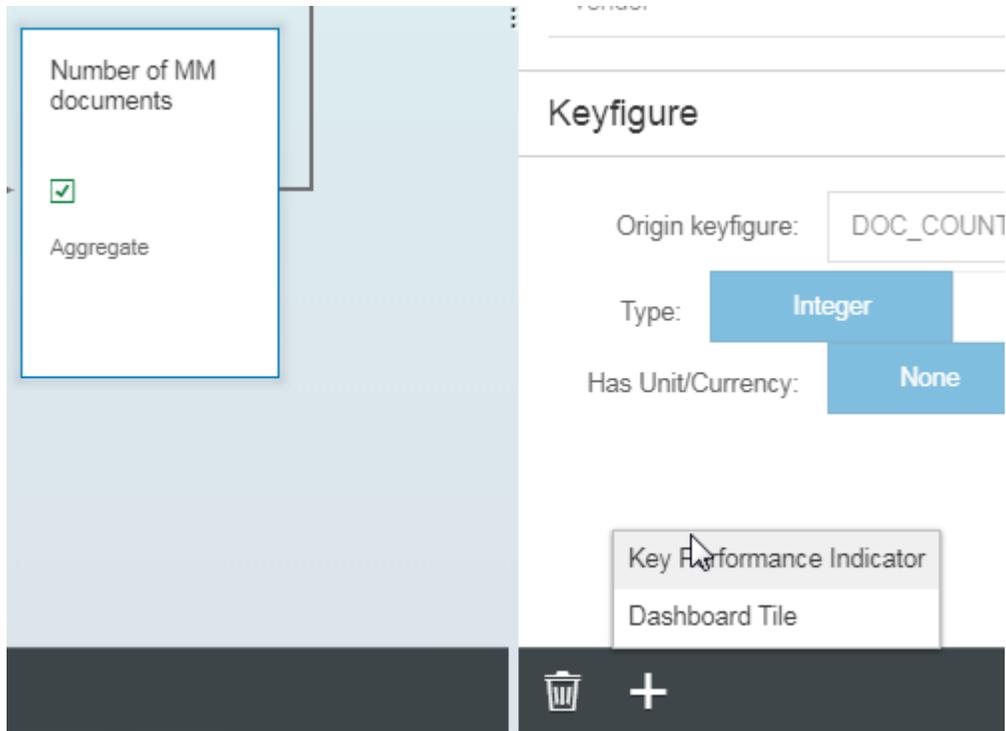
A KPI is a table with a flexible set of Characteristic columns and one obligatory Keyfigure column.

The KPI calculation is executed based on two parent aggregate objects.

A KPI can only use the characteristics that are used in both parent aggregate objects.

To define a KPI, complete the following steps.

1. Select one of the previously created aggregates and create a key performance indicator (KPI).



The "Ratio of displayed documents" will be calculated based on the aggregates **Number of MM documents** and **Number of invoices in process**.

The screenshot shows a configuration window for a dashboard tile. At the top, there is a title field containing "Ratio of MM documents". Below this are two "Base KPI" dropdown menus: the first is "Number of MM documents" and the second is "Number of invoices in process". An "Operation" dropdown menu is set to "/". A checkbox labeled "Store in database" is checked. The "Characteristics" section contains two dropdown menus: "Company Code" and "Vendor", each with a red trash icon to its right. The "Keyfigure" section has three rows of options: "Type" with "Integer", "Decimal" (selected), and "Custom"; "Has Unit/Currency" with "None", "Unit" (selected), and "Currency"; and "Unit" with "P1" and a copy icon. A bottom bar contains a trash icon and a plus sign.

2. Select **Decimal** as the type and **Unit Percentage (P1)** to display the ratio correctly in the subsequent Dashboard Tile.

## Assign a dashboard tile

The dashboard tile defines how the KPI or aggregate is displayed and in which group it is displayed.

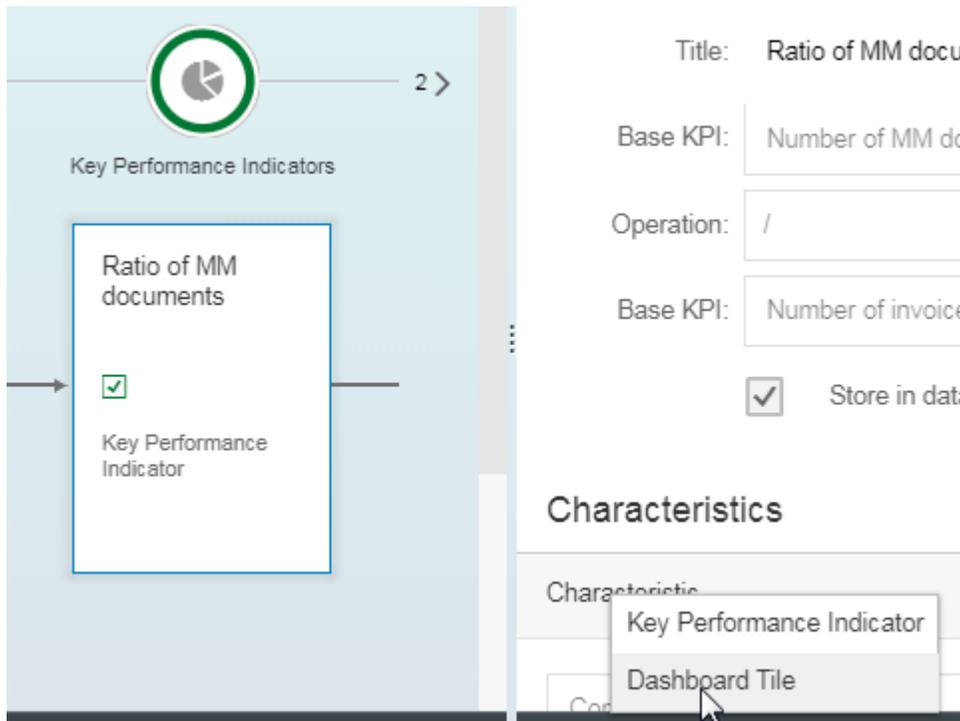
Current display types are:

- Just text
- Number
- Chart
- Chart and Number

If no dashboard tile is assigned to the KPI/aggregate, the KPI/aggregate is not displayed.

To assign a dashboard tile, complete the following steps.

1. Select the previously created KPI and create a dashboard tile.



2. Enter a threshold value to indicate how the KPIs are displayed.

The screenshot shows a configuration window for a KPI. At the top, there is a title field containing 'MM invoices rate', a KPI group dropdown menu set to 'AP data', and a display type dropdown menu set to 'Number'. A checkbox labeled 'Maintain ranges' is checked. Below these fields is a section titled 'Ranges' with a plus sign icon. This section contains two rows of range configuration. Each row has four columns: 'Neutral', 'Positive', 'Negative', and 'Critical'. The first row has 'Negative' selected, with 'From' set to 0.000 and 'To' set to 0.600. The second row has 'Positive' selected, with 'From' set to 0.601 and 'To' set to 0.999. Each row also has a red trash icon to its right.

The dashboard tile is included in the AP Group (see [Define KPI groups](#)).

The KPI will be displayed as a number.

It is possible to define ranges for the display of the KPI.

In the example above, example an MM Invoice rate of more than 60% will be displayed as a positive value.

# Manual activities after each configuration change

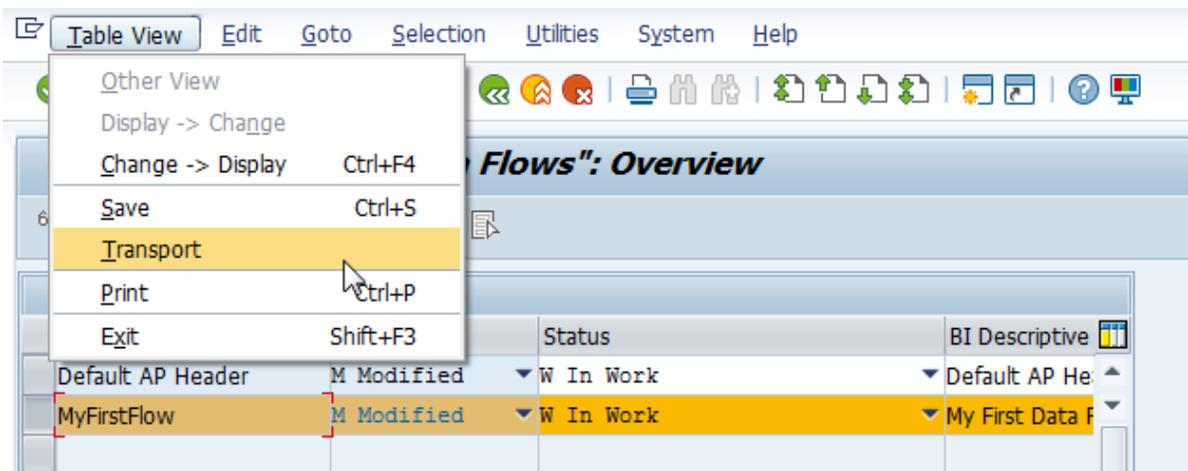
To avoid caching issues after each configuration change, complete the following steps.

1. Go to transaction `/IWBEP/CACHE_CLEANUP` to clear the cache on the Backend and Gateway (oData cache clearing).
2. Go to transaction `SHMM` to delete all entries that start with `/EBY/*` to initialize Shared memories.
3. Empty the browser cache.

# Transport the configuration

To transport your configuration, complete the following steps.

1. Go to transaction /EBY/BI.
2. Select --- **Maintain at Backend** --- > --- **Generated by Fiori Application** --- > **Define Data Flows**.
3. In change mode, select the flow to be transported and in the **Table View** menu, click **Transport**.



4. Include the selected entry in a customizing request and click **Save** .

All related table entries from the related maintenance objects are also saved in the same transport request.

# Set up Process Analytics data load

The Process Analytics data load can be performed both manually and automatically.

Before using Process Analytics for the first time, you must run a full data load. After that, you can run a delta load to load only the most recent changes. A full load loads all data; a delta load loads all changes since the last data load.

## Manual data load

To manually load Process Analytics, complete the following steps.

1. Go to transaction `/EBY/EVE_PROCESS`.
2. Click **Start processing...** .
3. Select which data to load.
  - To reload the data completely, select **Full load**.
  - To load only recent data changes, select **Delta load**.
4. Click **Continue** .

## Automatic data load

For automatic data load, schedule a job in transaction `SM36`.

**Note** This will load recently changed data only. If you changed KPI data, remember to perform the steps listed under [Manual data load](#).

1. Go to transaction `SM36`.

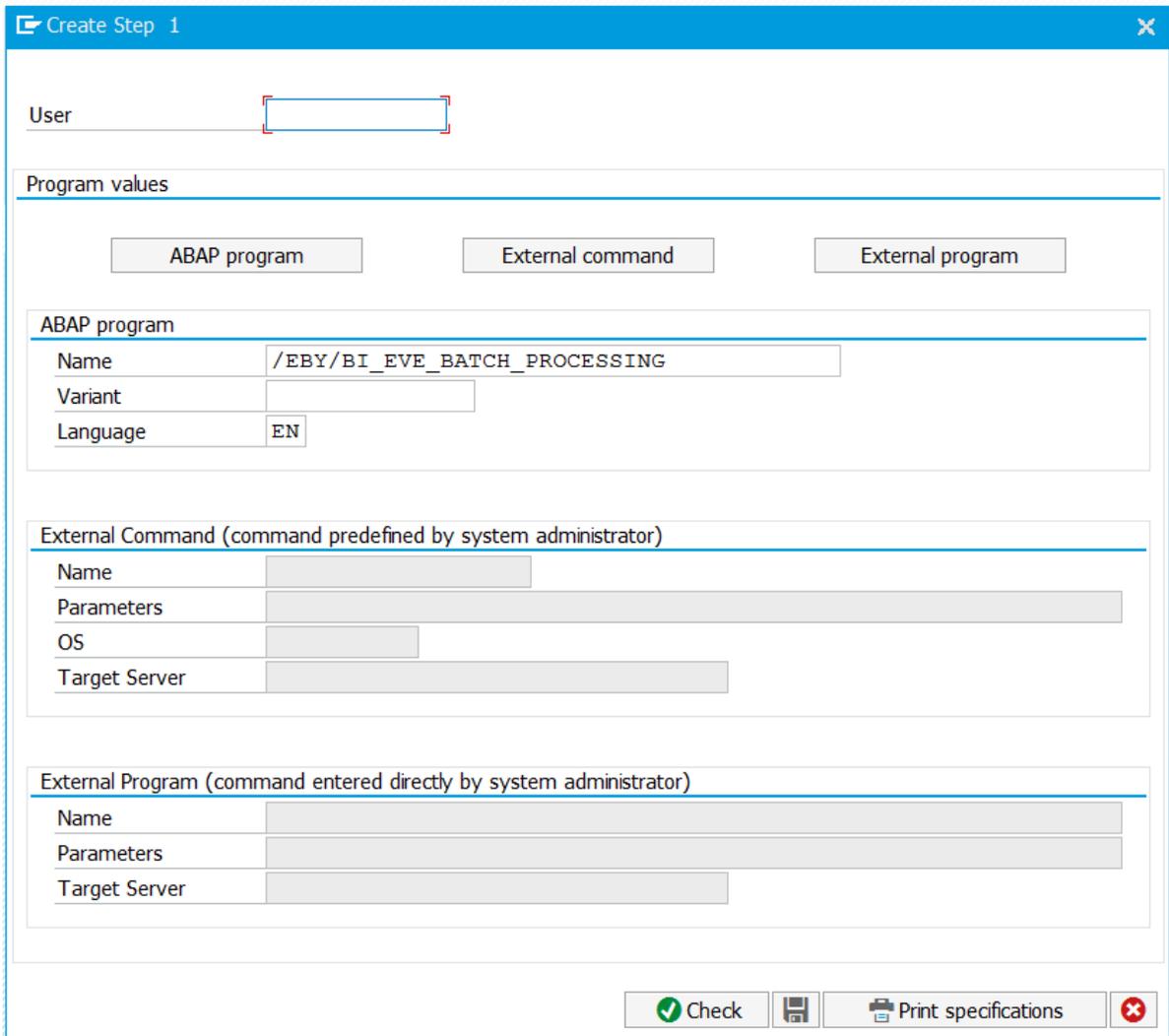
2. Type a name for your new job.

The screenshot shows the 'Define Background Job' interface with the following details:

- Navigation Bar:** Start condition, Step, Job selection, Own jobs, Job wizard, Standalone.
- General Data Section:**
  - Job Name: PA\_LOAD\_DATA
  - Job Class: C
  - Status: Scheduled
  - Exec. Target: [Empty field]
  - Spool List Recipient: [Button]
- Job Start:** [Empty field]
- Job Frequency:** [Empty field]
- Job Steps:** [Empty field]

3. Click **Step** .

4. Click **ABAP Program** and type the program name `/EBY/BI_EVE_BATCH_PROCESSING`.



Create Step 1

User

Program values

ABAP program External command External program

ABAP program

Name	/EBY/BI_EVE_BATCH_PROCESSING
Variant	
Language	EN

External Command (command predefined by system administrator)

Name	
Parameters	
OS	
Target Server	

External Program (command entered directly by system administrator)

Name	
Parameters	
Target Server	

Check Save Print specifications Close

5. Click **Save**  and return to the **Define Background Job** view.

6. Click **Start condition** .

Define Background Job

 Start condition  Step  Job selection  Own jobs  Job wizard Standard jobs

General Data

Job Name	PA_LOAD_DATA
Job Class	C
Status	Scheduled
Exec. Target	<input type="text"/> <input type="button" value="Spool List Recipient"/>

Job Start

Job Frequency

Job Steps

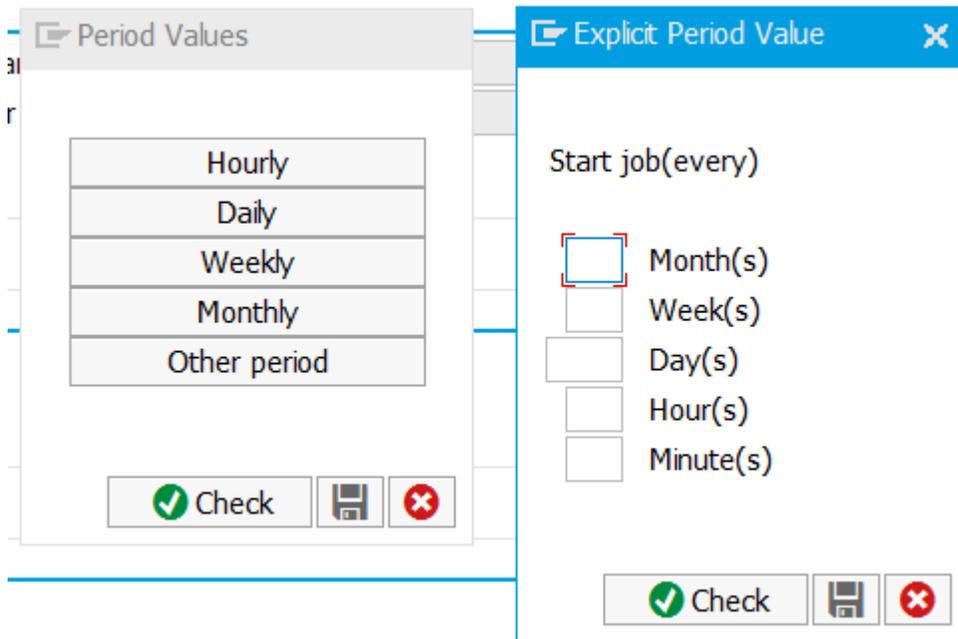
1 Step(s) defined
-------------------

7. In the **Start Time** dialog box, select the **Periodic Job** check box.

The screenshot shows the 'Start Time' dialog box with the following elements:

- Buttons: Immediate, Date/Time, After Job, After Event, At Operation Mode
- Section: Date/Time
  - Scheduled Start: Date [ ] Time [ ]
  - No Start After: Date [ ] Time [ ]
- Section: After Job
- Section: At Operation Mode
- Section: After Event
- Checkboxes:  Periodic Job
- Buttons: Check, Period values, Restrictions

- Click **Period value** and then click **Other period**.



- Type an interval in hour or minutes and click **Save** .
- In the **Period values** dialog box, click **Save** .

11. In the **Date/Time** group, type the scheduled start date and time, then click **Save** .

Start Time

Immediate Date/Time After Job After Event At Operation Mode

Date/Time

Scheduled Start	Date	<input type="text"/>	Time	<input type="text"/>
No Start After	Date	<input type="text"/>	Time	<input type="text"/>

After Job

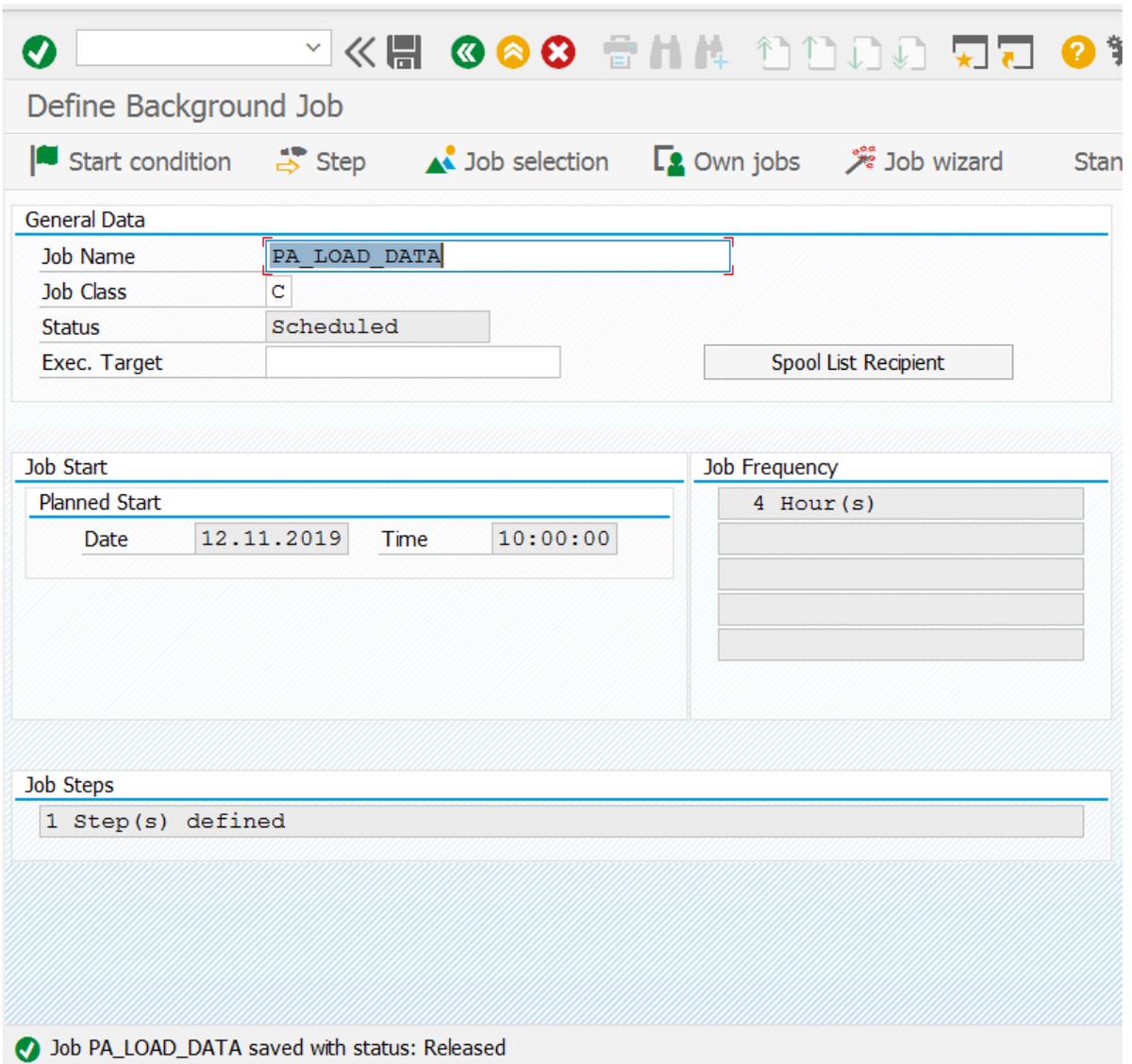
At Operation Mode

After Event

Periodic Job

Check Save Period values Restrictions

12. In the **Define Background Job** view, click **Save** .



The screenshot displays the 'Define Background Job' interface. At the top, a toolbar contains various navigation and action icons. Below the title bar, there are tabs for 'Start condition', 'Step', 'Job selection', 'Own jobs', 'Job wizard', and 'Start'. The main content area is divided into several sections:

- General Data:** A table with fields for 'Job Name' (PA\_LOAD\_DATA), 'Job Class' (C), 'Status' (Scheduled), and 'Exec. Target'. A 'Spool List Recipient' button is also present.
- Job Start:** A section for 'Planned Start' with 'Date' (12.11.2019) and 'Time' (10:00:00) fields.
- Job Frequency:** A section with a '4 Hour (s)' field and three empty rows below it.
- Job Steps:** A section showing '1 Step (s) defined'.

At the bottom, a status bar indicates:  Job PA\_LOAD\_DATA saved with status: Released

# Troubleshooting

This chapter explains how to troubleshoot issues that may occur while configuring the Process Director Accounts Payable for use with SAP Fiori application, which uses the `/EBY/FRAP_WC` service. For other applications, modify the names accordingly.

## Basic system settings

This section explains how to troubleshoot basic system settings.

### Parameter: `login/create_sso2_ticket`

If you encounter an error message in the gateway client when trying to run the oData service, modify the `login/create_sso2_ticket` system parameter.

### Selection of default profile for virus scan

If there are no other requirements for the default profile for the virus scan, complete the following steps.

1. Run the `SM30` transaction for the `/IWFND/C_CONFIG` table.
2. If the parameter `GATEWAY_VIRUSCAN_PROFILE` does not exist, add it to the `/IWFND/C_COF_PAR` table.
3. Change the value of the `GATEWAY_VIRUSCAN_PROFILE` parameter to `-`.

## System alias

To define the system alias, complete the following steps.

1. In transaction `SPRO`, go to **SAP Netweaver > UI Technologies > SAP Fiori > Initial Setup > Connection Settings (Front-End Server to ABAP Back-End Server) > Define SAP System Alias**.
2. Complete one of the following procedures.

### One system configuration (backend and frontend in one system)

If the backend and frontend are in the same system, complete the following step.

- Create the `LOCAL` system alias.

## Two system configuration (backend and frontend in separate systems)

If the backend and frontend are in separate systems, complete the following steps. In this scenario, the alias works as a proxy to the remote system.

1. Make sure that the user has authorization for the `S_RFCACL` object in both the systems.
2. Create a trusted RFC connection.  
In the **Logon and Security** tab, make sure to leave the **Language** field blank.
3. Create the alias.  
In the **System ID** field, type the SAP system name for the backend system.

## OData service configuration

To configure the OData service, complete the following steps.

1. In transaction `SPRO`, go to **SAP Netweaver > UI Technologies > SAP Fiori > Initial Setup > Initial Launchpad Configuration > Service Maintenance of SAP Gateway**.
2. Verify if the `/EBY/FRAP_WC` service has already been preset.
  - If it has a green status and in the **ICF Nodes** section, the **Session Time-out Soft State** value equals `00:05:00`, and also the system alias has been defined, the service is configured correctly.

**Note** This timeout defines the time for which a document remains locked in the application. For a longer session lock period, consider modifying this parameter.

- If the **ICF Nodes** status is yellow, you only need to activate it and proceed to the next step of creating the service.
- If the service does not exist, or exists, but the status in the **ICF Nodes** section is blank or the **Session Time-out Soft State** value equals `00:00:00`, remove the alias and **ICF Node** first to remove the service.

## Create the service

To create the OData service, complete the following steps.

1. Click **Add Service**.
2. In the **Filter** section, type the values, with `/EBY/FRAP_WC` as the **Technical Service Name** and `FRAP_WC` as the **External Service Name**.
3. Press Enter. In the **Select Backend Services** section, select the line and click **Add Selected Services**.
4. Change the names suggested by the system (starting with Z\*), to names starting with `/EBY/*`.
5. In the **Package Assignment** field, type `/EBY/FRAP`.
6. Go back to the service list.

## Assign the alias

To assign the alias, complete the following steps.

1. Click **Add System Alias**.
2. Use the search help to select the `/EBY/FRAP_WC_0001` service.
3. Assign the `LOCAL` or remote system alias, depending on if you have a one system or a two system configuration.

Depending on the requirements of your system landscape, you can use any suitable name for the remote system alias.

4. Go back to the service list.

## ICF node

The Process Director Accounts Payable for use with SAP Fiori application uses two ICF Nodes:

- Odata
- Application services

The OData service should either already exist and have been activated, or should be created (recreated) for the newly added `/EBY/FRAP_WC` service.

If this ICF Node has a blank status or the Session Time-out Soft State value is set to 00:00:00, you must create, or delete and recreate, the node.

To create the node, complete the following steps.

1. In the `SICF` transaction, click **Execute** .
2. Under **Virtual Hosts / Services**, go to `default_host > sap > opu > odata > eby` .
3. Click `eby`, then click **Create Host/Service**.
4. Confirm the popup and in the **Name of Service Element to Be Created** field, type `frap_wc`.
5. Click **OK**.
6. Type a description and in the **Session Timeout** field, type the required time interval (for example, 00:05:00).

This timeout defines the time for which a document remains locked in the application.

7. Click the **Handler List** tab.
8. Add `/IWFND/CL_SODATA_HTTP_HANDLER` to the **Handler** list.
9. Go back to the service list and activate the service.

## Activate the soft state in the services list

Verify if the soft state of the `/EBY/FRAP_WC` service is active. If it is not, click Soft State to activate it.

## SAP Internet Communication Framework

The SICF (SAP Internet Communication Framework) standard transaction code is used to maintain the services for HTTP communication in the SAP system, using the Internet Communication Manager (ICM) and the Internet Communication Framework (ICF).

### Application service activation

Activating the application service is only necessary for a one system configuration, or for the frontend system in a two system configuration.

For a two system configuration, the OData service exists in both the backend and frontend systems. The application service only exists in the frontend system.

You must verify if the application service is active. If it is not, you must activate it.

To activate the service element tree node, complete the following steps.

1. Go to the `SICF` transaction.
2. In the **Service Name** field, type `frap_wc` and click **Execute** .
3. Right-click the `frap_wc` tree nodes and select **Activate Service**.
4. Go to the `SICF` transaction again.
5. In the **Service Name** field, type `fr_lib` and click **Execute** .
6. Right-click the `fr_lib` node and select **Activate Service**.

**Note** You must activate both `frap_wc` and `fr_lib`, regardless of the sequence you follow. I

f the customer's SAP runtime environment is set up correctly, you can now start the application.

7. Right-click any `fr_lib` entry and select **Test Service**.
8. Activate the service.

### Deactivate the parallelization of batch requests

If the parallelization of batch requests is active, soft state does not work. You can activate it globally, and deactivate it for each service.

To deactivate parallelization of batch requests for a service, complete the following steps.

1. In the `/IWFND/MAINT_SERVICE` transaction, click **Service Implementation**.
2. Click **Configuration**.
3. Clear the **Deactivate Parallelization of Batch Requests** check box.

## Activate and maintain services

The OData service for the Process Director for use with SAP Fiori applications is included in the transport and is usually activated automatically in the customer system.

To check whether the OData service was automatically activated, complete the following steps.

1. Go to the `/IWFND/MAINT_SERVICE` transaction.
2. Select the `/EBY/FRAP_WC` technical service name.
3. Activate the **ICF Node** for the Odata service.
4. Click **Call Browser**.

A browser window displays the metadata of the OData service in XML format.

## SAP Gateway

You can use the `ST22` transaction to check for SAP Gateway errors. However, this does not cover web-specific errors. Web-specific errors are logged in the `/IWFND/ERROR_LOG` transaction.

## View model

Although the first Environment field in the configuration of the view model settings is not mandatory and the system environment should be automatically used, if you encounter an error, make sure that this field is filled in.

View model					
Component type	GridNo	Env.	Env.	Logical level	
WA_DOC WA Documen... ▼	21	FI Fiori ▼	FI Fiori ▼	HEADER	▼
WA_DOC WA Documen... ▼	24	FI Fiori ▼	FI Fiori ▼	ACCOUNT	▼

If changes to the customer view model are not reflected in the Fiori Application, run the `/EBY/FR_FORCE_OMODEL_UPDATE` program.

For more information about view model configuration, see the *Process Director Configuration Guide*.