Kofax Performance Analytics
Installation and Configuration Guide

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KOFAX

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Preface

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. SAP Business Warehouse (BW) is the tool of choice for many organizations, and Kofax's BW solution, Kofax Performance Analytics, makes it easier, faster and less expensive to report on and improve the accounts payable, accounts receivable and sales order processes.

For customers using SAP NetWeaver Business Warehouse, Kofax offers a suite of flexible components and reports integrated into SAP and BW to intelligently analyze, evaluate and report on business performance. Customers can use these data warehouses and accelerator components to gather, analyze and report on the information acquired during the capture and approval processes, using their BW solutions.

The Performance Analytics solution is tightly integrated with Kofax Process Director Accounts Payable (formerly known as the Invoice Cockpit Suite) and with Process Director Accounts Receivable and Sales Orders and comes complete with ready-to-go reports, data models, extractors and transformations, to significantly reduce implementation time and costs. The solution is extensible, web-enabled and provides an integrated view of corporate data.

Performance Analytics is available in the following languages:

- English
- German
- Dutch
- French
- Spanish
- Portuguese
- Italian

About this guide

This guide explains how to install and configure Performance Analytics. It assumes that you are already familiar with SAP NetWeaver Business Warehouse and Kofax Process Director Accounts Payable (PD AP), Kofax Process Director Accounts Receivable (PD AR) or Kofax Process Director Sales Orders (PD SO).

Please note that this guide is available only in English.

This guide contains the following main chapters:

- Technical overview

  Provides an overview of Performance Analytics, as well as information about the data extraction and aggregation processes.
- Install a license

  Describes how licensing works and how to obtain and install a license.
- Install Performance Analytics in SAP ERP/ECC

  Explains how to install Performance Analytics in SAP ERP/ECC. It also lists the system requirements.
- Install Performance Analytics in SAP BW

  Explains how to install Performance Analytics in SAP BW. It also lists the system requirements.
- /EBY/CONFIG transaction

  Describes the general configuration of the `/EBY/CONFIG` transaction, as well as the configuration for Process Director Accounts Payable and Process Director.
- Install the Kofax Invoices plug-in
- Describes how to install the Invoices plug-in that is used to extract data from the Invoices database and export it to Performance Analytics.
- Appendix A: Invoices plug-in settings

  Lists all the settings in the plug-in INI file.
- Appendix B: Data extractors

  Lists all the fields in Process Director and in the Invoices database that are extracted for use in Performance Analytics.
- Appendix C: Installation checklists

  Provides checklists for ERP, BW, and OCR.
- Appendix D: Additional information

  Provides details about the filters that are used for the extraction, transformation, and loading of the Process Director object types.

Related documentation

See the following Performance Analytics guides:

- *Performance Analytics User Guide*

  Describes all the standard reports shipped with Performance Analytics.
- *Performance Analytics Using process chains*

  Describes how to load data using process chains. To avoid problems during data load, the meta chains must be triggered in a specific order.

For more information about Kofax Process Director Accounts Payable and Kofax Process Director, 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*

Chapter 1

Technical overview

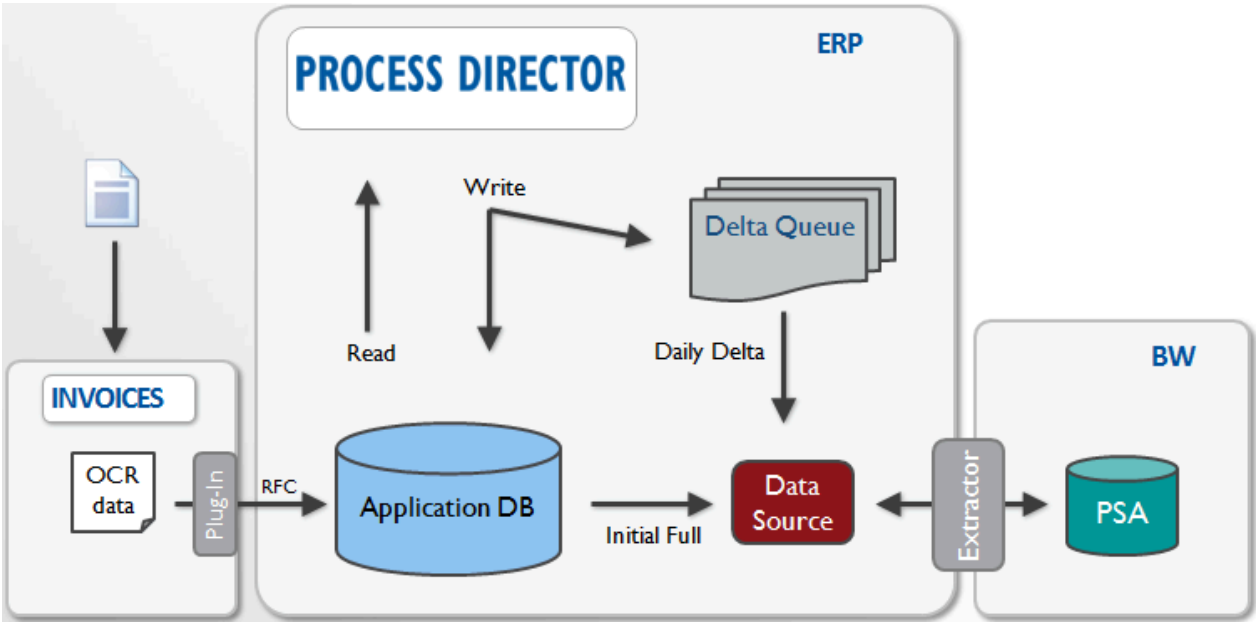
Performance Analytics provides detailed reporting for Sales Orders, Accounts Receivable, Work Cycle, and the Accounts Payable automation process (handling of incoming invoices), covering the entire process from scanning to posting.

Incoming invoices are scanned using Kofax's OCR solution, Invoices, and then transferred to Process Director, where exception handling and posting to SAP take place. Data is extracted from both Invoices and Process Director, aggregated, and then made available in Performance Analytics.

Performance Analytics provides:

- Extractors for the ERP system
- Process Chains for automated ETL (Extraction, Transformation, Loading)
- InfoProviders (InfoCubes, DataStore Objects, InfoObjects bearing characteristics)
- InfoObjects
- Standard reports
- DataSources (transactional, texts, hierarchies)
- Transformations

Architecture



Data extractors

Performance Analytics provides data extractors for transactional data, master data attributes and master data texts.

Delta extraction from the SAP delta queue is provided for all transactional data. Early initialization is possible. Textual master data is extracted only in full mode.

See Appendix B for information on the available extractors.

Process chains

Performance Analytics provides process chains for the loading of master data, transactional data and texts.

See *Performance Analytics User Guide* and *Performance Analytics Using process chains* for information on the available process chains.

The table below shows all the transformations that load from additional sources by SQL statements. The loads of the additional sources must be done before these transformations can be executed.

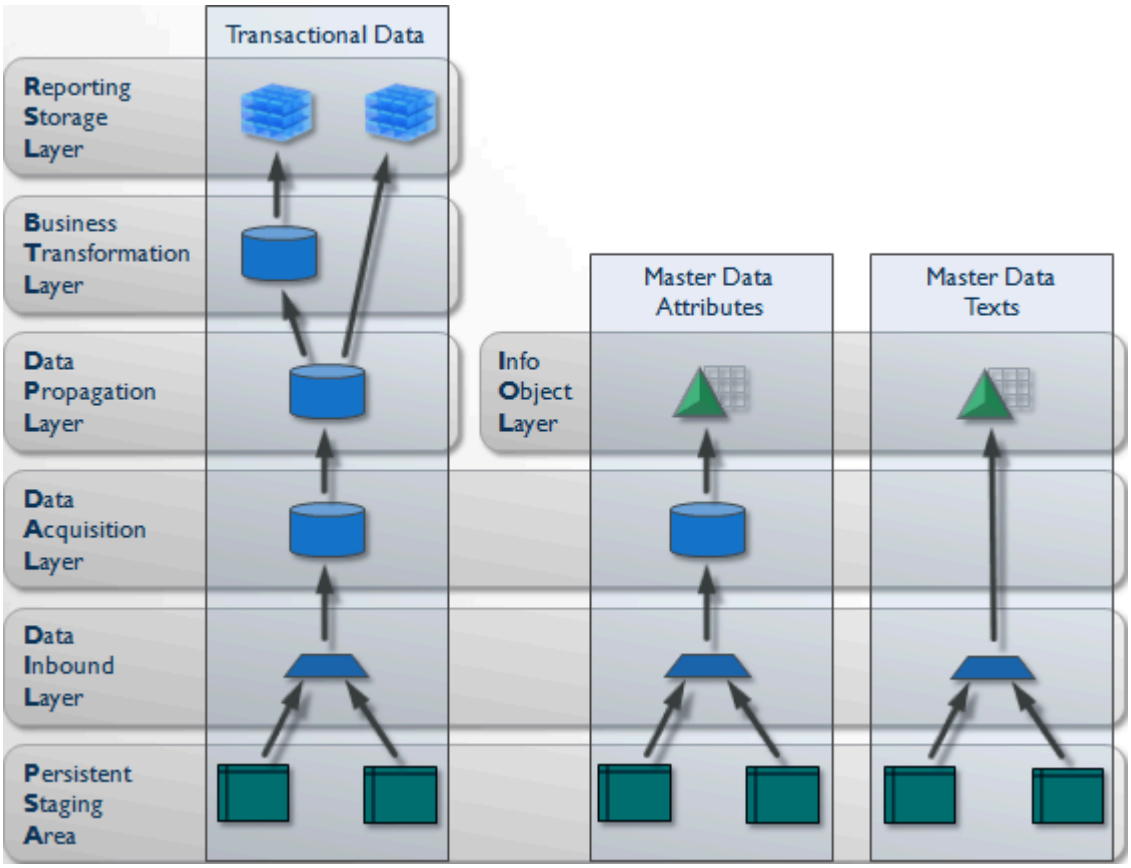
Transformation					
Source		**Target**		**Additional Source (data selected by SQL in the transformation)**	
Type	**Technical Name**	**Type**	**Technical Name**	**Type**	**Technical Name**
DSO	/EBY/APHEAP	DSO	/EBY/APPAYB	ATTR	/EBY/APUNDOC
DSO	/EBY/APHEAP	DSO	/EBY/APTIMB	ATTR	/EBY/APUNDOC
DSO	/EBY/APWOHP	DSO	/EBY/APWCTB	DSO	/EBY/APWORP
				ATTR	/EBY/WCSTATUS
DSO	/EBY/APHEAA	DSO	/EBY/APHEAP	DSO	/EBY/APITEP
				DSO	/EBY/APWOHP
				DSO	/EBY/APACCP
DSO	/EBY/APHEAA	ATTR	/EBY/APUNDOC	DSO	/EBY/APMSGP
DSO	/EBY/APWOHA	ATTR	/EBY/APUNDOC	DSO	/EBY/APHEAP
				ATTR	/EBY/APWORKFL
				ATTR	/EBY/APACCIT
DSO	/EBY/APITEP	DSO	/EBY/APSPOB	DSO	0SRAC_D4
				DSO	0SRPO_D1
				DSO	0BBP_PO_ID

Transformation					
Source		**Target**		**Additional Source (data selected by SQL in the transformation)**	
Type	**Technical Name**	**Type**	**Technical Name**	**Type**	**Technical Name**
				DSO	/EBY/APSRVP
DSO	/EBY/APOCRSP	DSO	/EBY/APOFEVB	ATTR	/EBY/OCRPSTDO
DSO	/EBY/APOCRPP	TRCS	/EBY/APEVENBIS	ATTR	/EBY/OCRPSTDO
DSO	/EBY/PDMSGA	DSO	/EBY/PDMSGP	ATTR	/EBY/PDUNDOC
DSO	/EBY/PDHEAP	DSO	/EBY/SOHEAS	DSO	/EBY/SOHEAP
DSO	/EBY/WCPROA	DSO	/EBY/WCPROP	ATTR	/EBY/PDUNDOC
				ATTR	/EBY/WCUNDOC
				ATTR	/EBY/WCSTPDOC
DSO	/EBY/WCACTP	DSO	/EBY/WCACTS	ATTR	/EBY/PDUNDOC
				ATTR	/EBY/WCUNDOC
				ATTR	/EBY/WCSTPDOC
DSO	/EBY/ARHEAP	DSO	/EBY/ARTIMB	ATTR	/EBY/PDUNDOC
DSO	/EBY/ARHEAP	DSO	/EBY/ARPROCB	ATTR	/EBY/PDUNDOC
				DSO	/EBY/PDHEAP

Example: The load of `/EBY/APUNDOC` has to be finished before the transformation from `/EBY/APHEAP` to `/EBY/APPAYB` can be run.

Data aggregation

The diagram below depicts how data is aggregated for reporting (technical description and business logic).



Info Providers and Info Objects

The lowest aggregation level of each cube is the document level. All queries are built on Multiproviders.

Time-slicing

Time-slicing is a time-dependent view of the data.

Timeslices are created for the easy selection and comparison of past business dates. Time-sliced data is stored in the Data Propagation Layer.

By using one or more time filters on every query, Performance Analytics always selects the version of the data that was valid at the time specified or for that specific time interval. This prevents the selection of multiple versions of the same document. If a document did not exist at that designated time, it will not be visible in the report. This means that every query displays only the data that was in the system at the chosen time or within the chosen time frame.

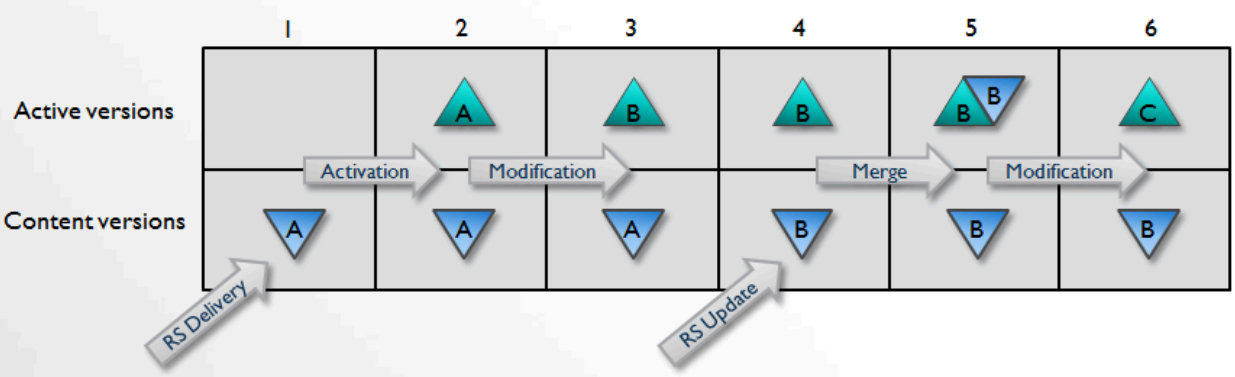
Reporting tools

- Performance Analytics uses the BEx Analyzer and the report monitor (transaction code `RSRT`) for reporting.
- BEx Query Designer 7.0 is used for the development of queries.
- Web Templates and Web Application Designer (WAD) are currently not used to design reports.
- For Portal and Web queries, the Java stack is required for developing or executing reports.

Standard reports

Performance Analytics provides more than 40 standard reports that you can use right out of the box or as templates for developing your own reports. These reports are described in the *Performance Analytics User Guide*.

Content delivery



Content is delivered for the easy merging of customized changes and Kofax updates.

The ABAP code contains Enhancement Spots for easy customizing. These are protected against Kofax updates.

Kofax's content release does not directly use SAP BI content objects. The content objects used are always a copy of the SAP content objects. Only technical and time-related SAP InfoObjects, such as 0DATE, are used.

Invoices plug-in

Kofax provides a plug-in for Invoices, to extract data from its database and transfer it via RFC to Process Director tables inside SAP. This plug-in is available on Kofax Marketplace.

Repository size

The amount of data stored in SAP BW depends on:

- The number of documents
- The number of workflows configured, and how many steps are contained in each one
- Whether data from Invoices is extracted or not

You can also see the sizing guidelines from SAP: https://service.sap.com/performance (logon required).

Chapter 2

Install a license

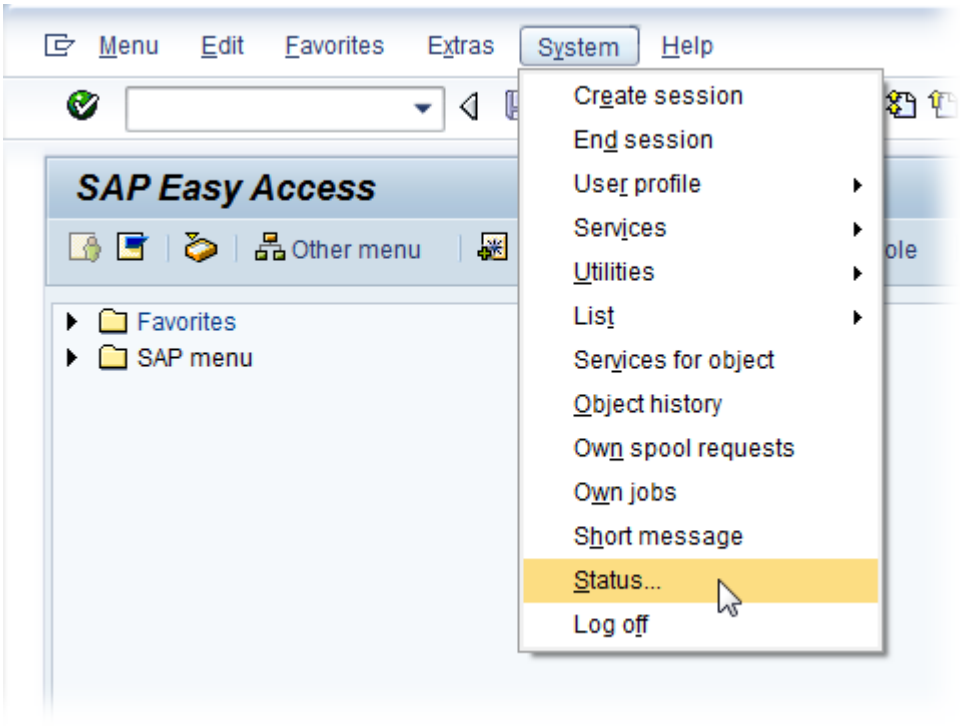
You need to install a license for Performance Analytics in ERP. The license is only an activation license and contains no document counter.

The license checks only whether a valid license exists for Process Director or Process Director Accounts Payable (during the transfer of the document into Process Director) or not. If no license exists for Process Director or Process Director Accounts Payable, or it has expired, Performance Analytics will cease working too.

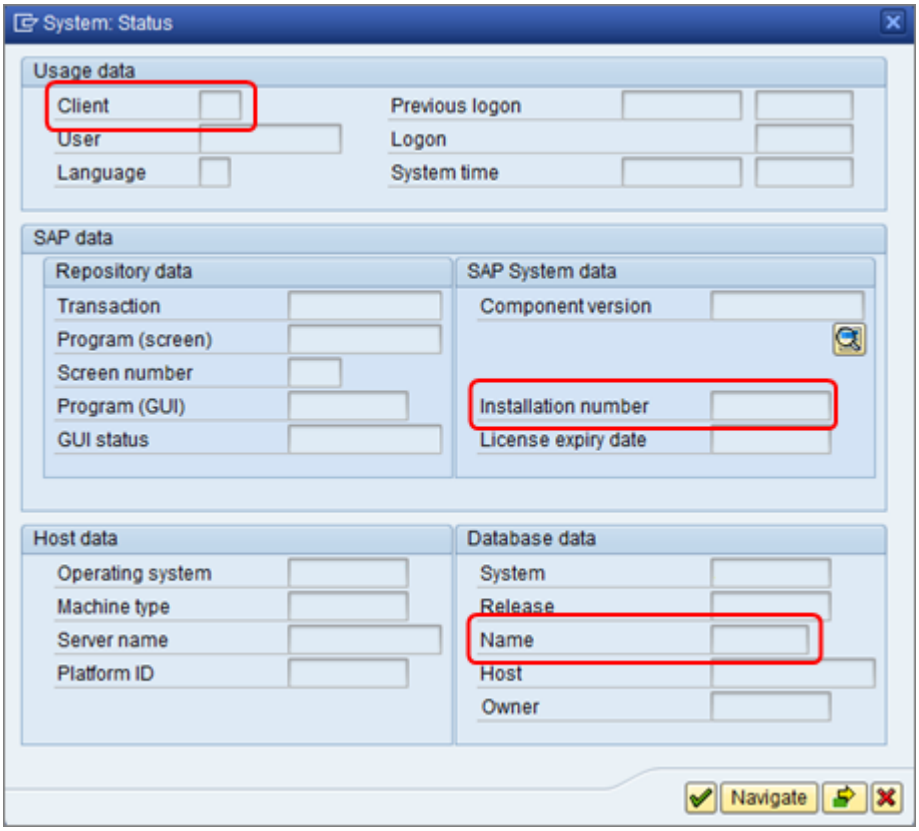
There is no license check inside BW. Even if the Performance Analytics license is no longer valid, the data that has already been transferred to BW can continue to be viewed.

Obtain a license

1. To order your license, you need your SAP Installation number and your SAP System ID. This information is found by choosing **System** > **Status** from the menu bar.



2. You need:
   - **SAP System data** > **Installation number**
   - **Database data** > **Name**
   - **Usage data** > **Client** (required only if your license is intended to be restricted to this client)



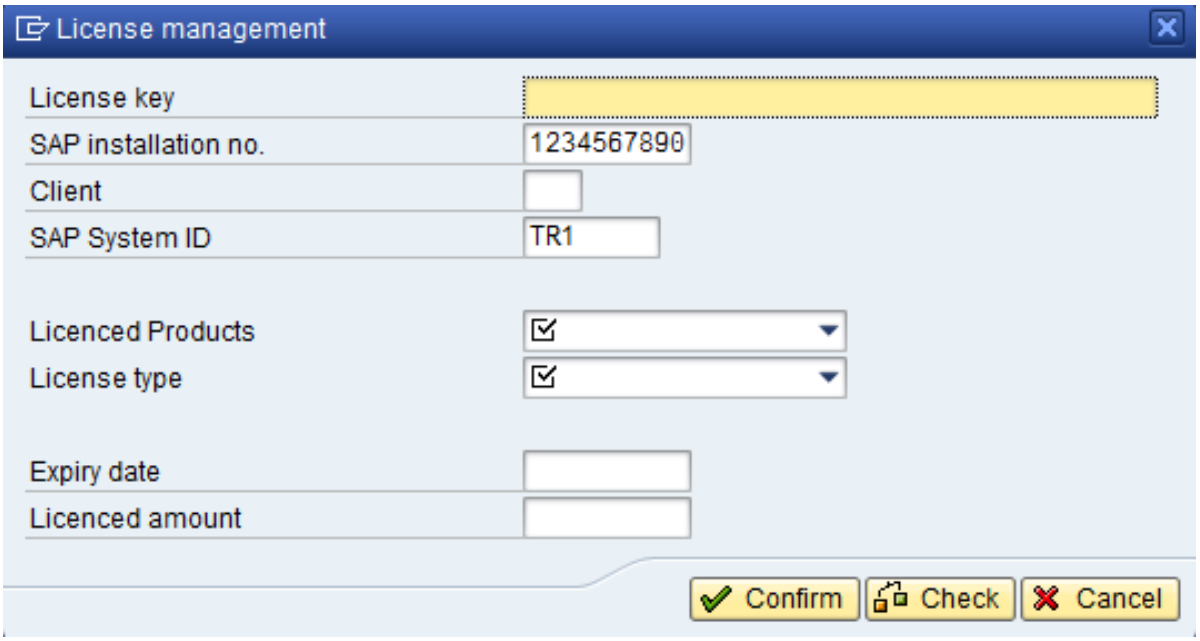
After placing your order, you will receive the license (in a .TXT file) from Kofax.

Install a license

To install a license, complete the following steps.

1. Go to `/COCKPIT/C46`.
2. Create a new license entry.

3. Enter your license information from the license file you received from Kofax.



Your license file may not include a **Client** number or **Expiry date**. If no **Client** is specified, the license is valid for all clients.

4. Click **Check** to ensure that you have entered all the relevant information.
5. Click **Confirm** to complete the license installation.

Chapter 3

Install Performance Analytics in SAP ERP/ECC

This chapter explains how to install Performance Analytics in SAP ERP/ECC.

To install Performance Analytics, complete the following steps.

1. Ensure your SAP system meets the system requirements. See Minimum system requirements.
2. Configure the namespaces.
3. Import the transports.
4. Install the data extractors in the ERP system. See Install extractors.
5. Set up the SAP PO integration in the ERP system. See SAP standard activation.

Content is delivered in content packages. These are delivered separately from Process Director (although, of course, a first installation can include these packages).

If the extraction of the OCR statistics data has been planned, you must also install the plug-in for Invoices after you have installed Performance Analytics. See Install the Kofax Invoices plug-in.

Minimum system requirements

Kofax

- Performance Analytics for Accounts Payable:
  - Process Director Accounts Payable (7.3 through 7.5)
- For Accounts Payable Invoices Statistics:
  - Invoices 5-5 or later (Kofax Documents is not supported)
  - Kofax Invoice Cockpit Connector 3.1 or later
- Performance Analytics for Process Director:
  - Process Director 7.4 SP2 or later

SAP (ERP/ECC)

The following software components have to be at least of version SAP NetWeaver 7.0 EhP2 SP17:

- PI_BASIS
- ST-PI

Configure the namespaces

Configuring the **Namespace role** as anything else other than **C – Recipient** will lead to having to delete every single object in both the `/EBY/` and `/B507/` **Namespaces** to correct the entry.

You must create two namespaces on both the ERP and BW systems:

- `/EBY/` – The namespace for Process Director. If Process Director is already installed, this namespace will already exist. In that case, you need to create only the `/B507/` namespace.
- `/B507/` – The namespace for Performance Analytics generated objects.

It is recommended that you create and configure these namespaces by importing a separate transport by Kofax. For details, see Import the transports.

To configure the namespaces, complete the following steps.

1. Start the `SE03` SAP transaction.
2. In the **Administration** folder, click **Display/Change Namespaces** and then the **Execute** button.
3. In change mode, click **New entries**.
4. Create the namespaces with the following data:

Namespace	**/EBY/**
Namespace role	**C - Recipient**
Correction license	05790374410114137903
Short text	Process Director by Kofax
Owner	Kofax

Namespace	**/B507/**
Namespace role	**C - Recipient**
Correction license	23178636483082621615
Short text	BW generation namespace for /EBY/
Owner	Kofax

5. While still in the `SE03` transaction, click **Set System Change Option** and then the **Execute** button.
6. Select **Modifiable** for both the namespaces.

   Configuring the **Namespace role** as anything else other than **C – Recipient** will lead to having to delete every single object in both the `/EBY/` and `/B507/` **Namespaces** to correct the entry.

7. Later, in the BW system, you must connect these two namespaces by using the `RSNSPACE` transaction (see Connect the /EBY/ and /B507/ namespaces).

Import the transports

Transport files

The transport files you need depend on:

- Whether you are running Process Director Accounts Payable (PD AP) or its predecessor, the Invoice Cockpit Suite (ICS).
- The content you want to have reports for:
  - Process Director Accounts Payable
  - Process Director Accounts Payable with OCR
  - Process Director Sales Orders
  - Process Director Accounts Receivable

You can download the transport files from Kofax's internal SharePoint site, the SAP Projects email address (projects-sap@kofax.com), or with the help of your local Kofax contact. Each transport folder comes with an attached text file, which has the respective transport numbers and their import order. Please ensure that you read through these files as they also contain information regarding the installation itself.

EMEICs and RSPDNs

The following table lists the EMEICs and Kofax PD Notes (RSPDNs) that have to be implemented.

RSPDN 6938	Required for PD 7.1, without any SP.
EMEIC2102	Performance Analytics activation license. Text file available with PD AP 7.2, PD AP 7.1 SP2, ICS 3.2 SP4.
EMEIC2021	Delta queue functionality. Text file available with PD AP 7.2, PD AP 7.1 SP2, ICS 3.2 SP4.
RSPDN 3453	Required until PD 7.3 SP1and PD 7.2 SP3; required only if OCR is used.
RSPDN 7690	Required for PD 7.2 SP0; required only if OCR is used.

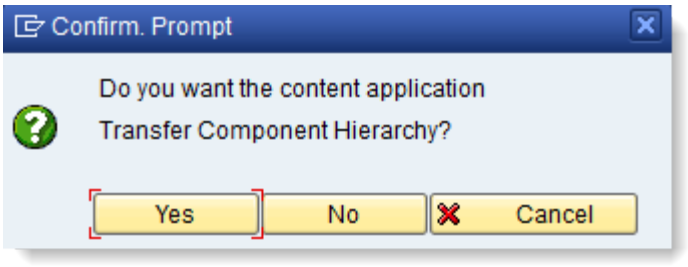
Installation in the ERP SYSTEM

Install extractors

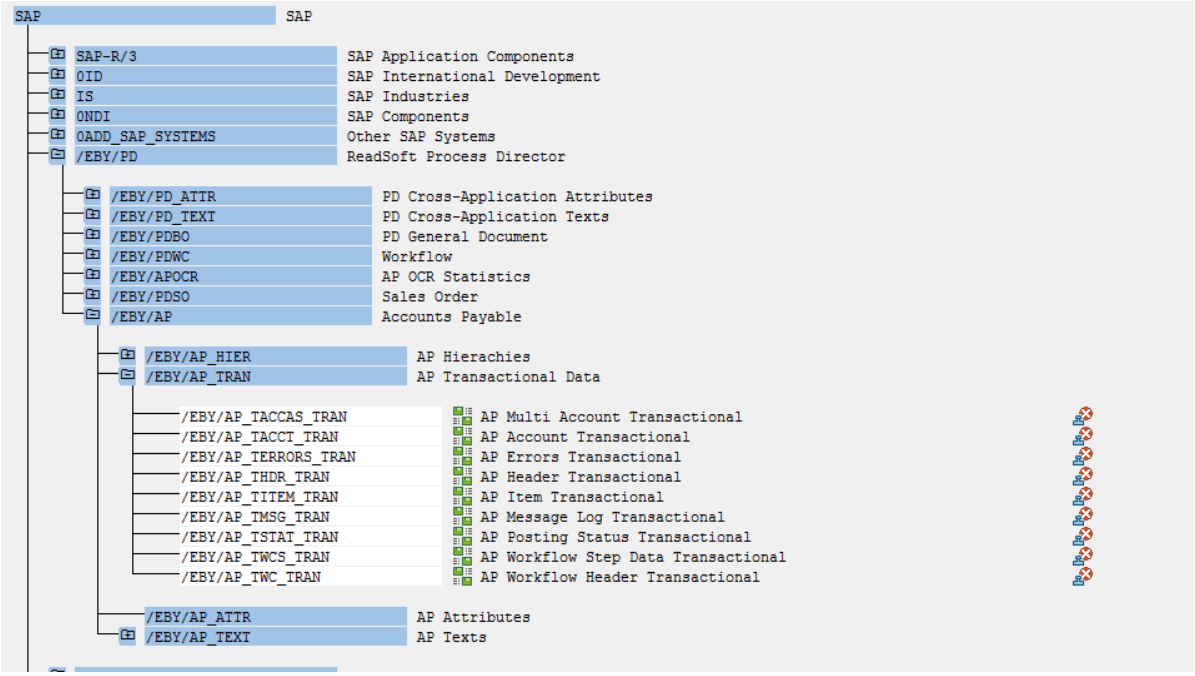
To install extractors, complete the following steps.

1. In your SAP ERP system, go to `SE19`.
2. Activate the `/EBY/BW_RLB_EXTRACT` BadI.

3. Go to RSA9.
   A popup is displayed.



4. Click **Yes**. This activates the Kofax application component hierarchy.
5. Go to RSA5.
6. Check the application component hierarchy. The /EBY/PD node, together with its subnodes and data sources, must exist. It must be the same as the list of data sources in Appendix B: Data extractors.



7. Activate all the /EBY/PD data sources:
   a. Create an Active version of the data sources from the Content version provided by Kofax.
   b. You can select either single entries or sub-nodes (position the cursor on the node and click **Select Sub-tree**) and click the **Transfer DataSources** button.
   c. After activating the DataSources, you can check the extraction process in RSA3.
8. If the ReadSoft_PA_AP_OCR_ERP_Extractors transport request has been imported, it implies that the OCR statistics data will be extracted. In such cases, the mapping of the OCR statistics

data within Process Director must be checked. For details, see Map external data in Process Director.

Set up SAP PO integration in ERP

SAP standard activation

PO integration leverages the standard SAP extractors for the PO data. In turn, Performance Analytics expects the following extractors to be active and running in the ERP system:

- 2LIS_02_HDR
- 2LIS_02_ITM
- 2LIS_02_ACC
- 2LIS_02_SRV

For extractors 1-3, the `LBWE` and `OLI3BW` transactions can be used if they are not active yet. For additional information, see the standard SAP documentation.

For 2LIS_02_SRV, the following SAP Notes must be applied:

- 1606666: To make the extractor accessible
- 2003744: To add the capability to map the SES line information to the Process Director Accounts Payable line information

See the *Performance Analytics User Guide* for more information about the technical and functional restrictions for the SAP PO integration report.

Chapter 4

Install Performance Analytics in SAP BW

Minimum system requirements

- SAP NetWeaver BI 7.3 SP14
- BEx Version 7.x (based on 7.20); Support Package 2, Patch 1
- Check Software component versions according to SAP notes 2289603 and 2290149 and implement them if applicable. Otherwise it is possible to get the following errors:
  - short dump `CALL_FUNCTION_NOT_REMOTE` - the function module `SUBST_GET_SAPRELEASE` is not remote enabled
  - short dump `CALL_FUNCTION_NOT_EXIST` - `SUBST_GET_SAPRELEASE` is not available
  - error message

    ```
    RSAR 671 Source system release &1 is not the same as local infomation &2
    ```
  - other SAP BW error messages related to function module `SUBST_GET_SAPRELEASE`.

ℹ An installation on lower support packages can succeed, but has not been tested by Kofax. Also, Performance Analytics makes use of 7.x technology and is not downward compatible with 3.x versions of BW.

Performance Analytics has been functionally tested on BW 7.4 SP 10.

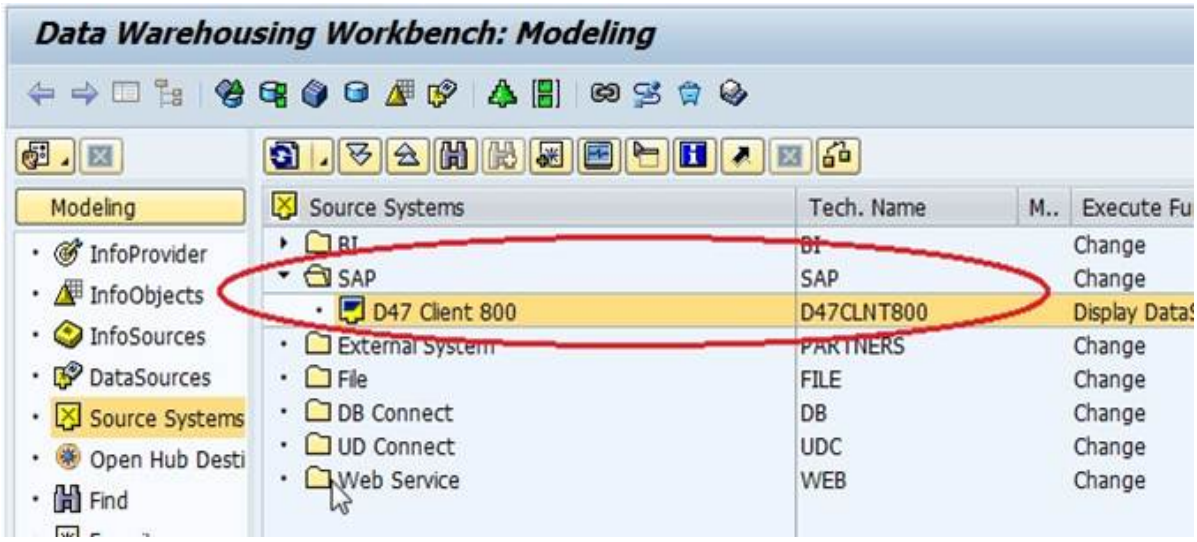
Connect BW to ERP

The following step-by-step guide describes how to create a new connection to a source system. Usually, this will already be set up.

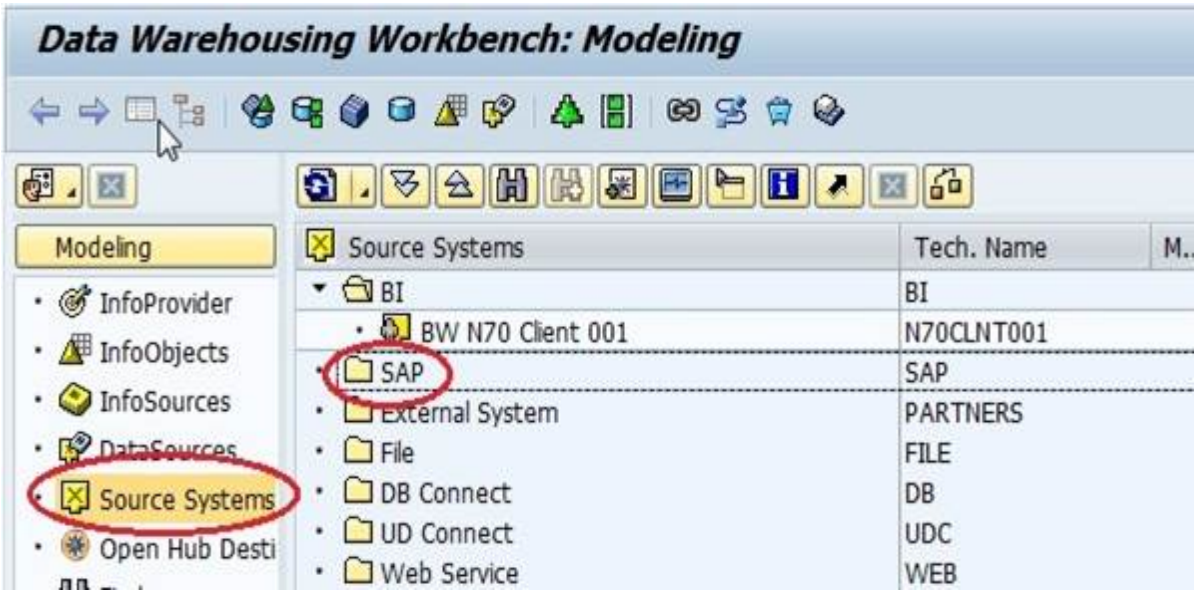
❗ Please check if these actions are really necessary.

To connect BW to ERP, complete the following steps.

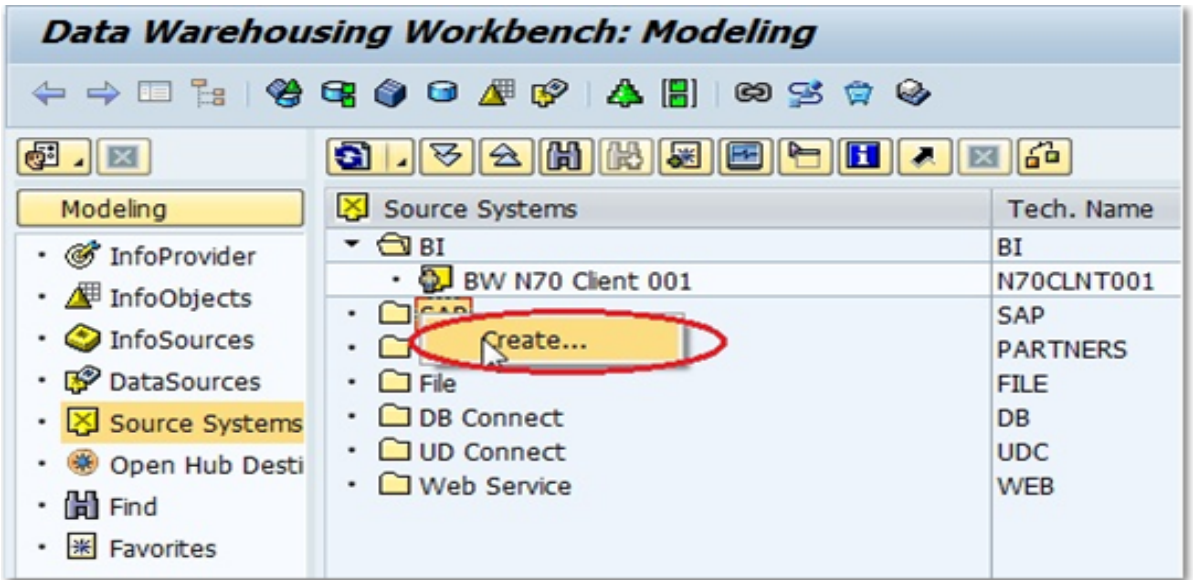
1. Call the `RSA13` transaction and check the existing connection.



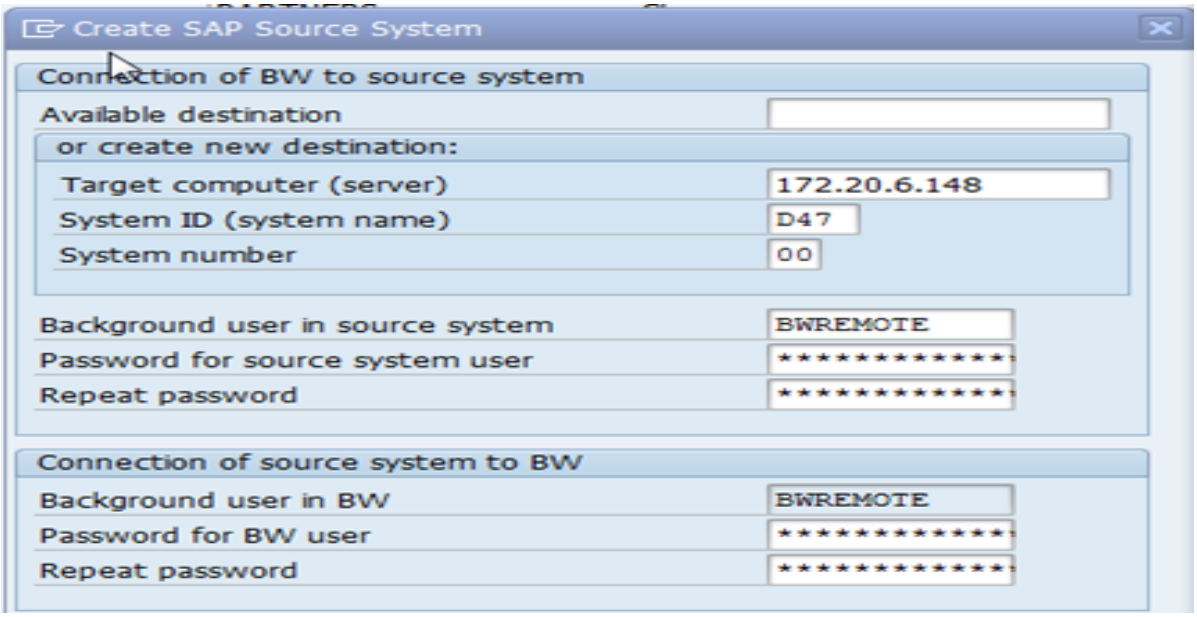
2. Create a new connection, if none exists.



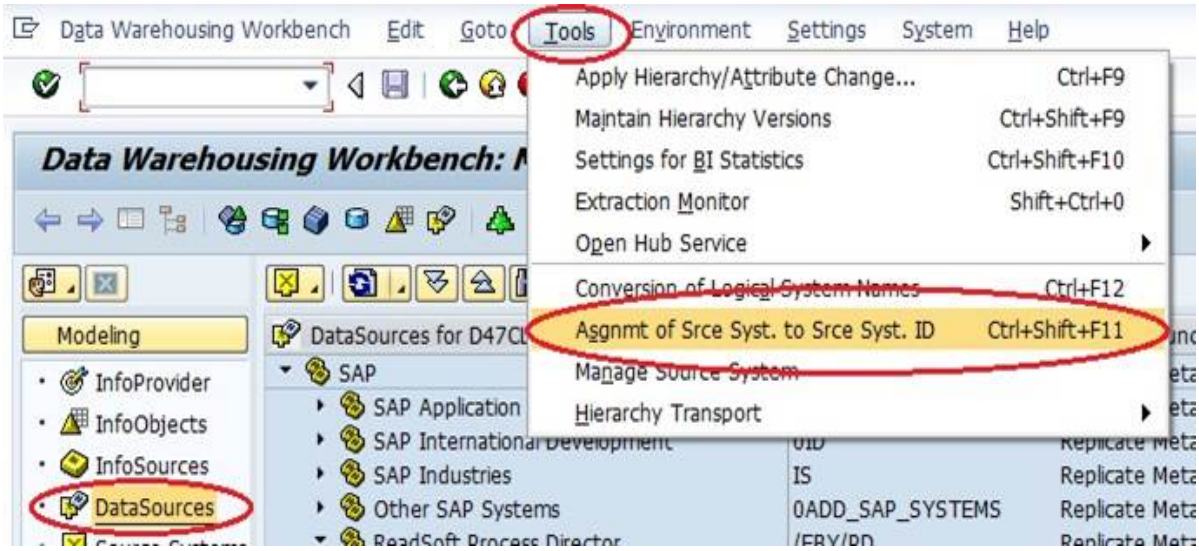
3. Right-click the **SAP** folder to create a new R3 connection.



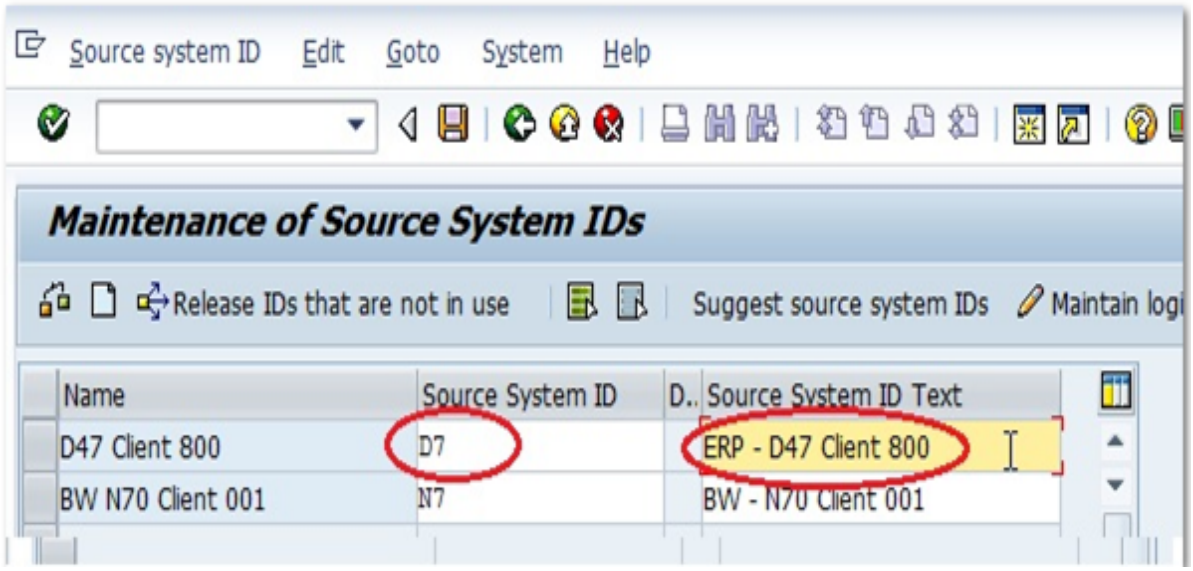
4. Provide the required data to create the new connection and save the settings.



5. Call the `RSA1` transaction, select **DataSources** and choose **Tools** > **Asgnmt of Srce Syst. to Srce Syst. ID**.



6. Select the source system, and then provide the source system ID and text for the ERP system.



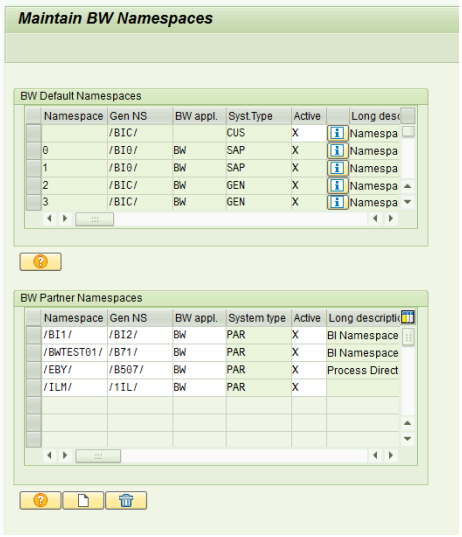
7. To install the BW content for it, add the source system in the `RSORBCT` transaction.

Connect the /EBY/ and /B507/ namespaces

Objects in the `/EBY/` namespace have to generate their local data dictionary elements in the `/B507/` namespace associated with Kofax.

- After creating the namespaces, change to the `RSNSPACE` transaction and create an entry in the BW Partner Namespaces table:

Field	Description
Namespace	/EBY/
Gen NS	/B507/
BW appl.	BW
Active	X



Do not associate the `/EBY/` namespace with any other namespace. This is possible, but rolling back the generated DDIC objects is very time consuming and requires high-level administration authorizations.

Activate query variables

Query variables like `EBY_REPORTING_DATE` are used to adjust a query output at runtime.

For example, `EBY_REPORTING_DATE` is used for Performance Analytics time slicing. Based on the input date, only the data that is valid on that specified date is taken into account.

How to activate

- Query variables are controlled through a standard SAP user exit. To activate the variables, create the new INCLUDE ZXRSRU01 with the following code:

```
INCLUDE /EBY/RS_PA_QUERY_VARIABLES IF FOUND.
```

Configure currency conversion

Purpose

When dealing with international companies, invoices usually come in different currencies like EUR, USD or GBP. In queries, amounts are displayed along with their currencies. As BW cannot aggregate amounts of different currencies properly, it will display only a * to indicate that the aggregation could not be done. To prevent this, you can convert everything into a common currency and the aggregation will then be done properly.

How to configure

1. In the `RSCUR` transaction, create a definition.
2. In the detail screen of the definition, choose which currency to use as the basis of the conversion and which currency to use as the target. You can either set it as fixed, based on document currency (only for source), or dynamically. You can also configure the exchange rate and the time reference. The time reference is the date on which the exchange rate is selected.

Set up OCR integration in BW

To set up OCR integration in BW, you need to install the Invoices plug-in. See the Invoices chapter for details on how to do this.

1. Modify the AP event process chain. Add the `Delta: APOCRPP -> APEVENB DTP` to the beginning of the `/EBY/APETRANS_DPL_RSL` process chain.
2. Load the data. After the installation in ERP and BW, the data can be loaded from ERP. Kofax provides process chains to support the data load.

   See the *Performance Analytics - Using process chains* document for further information.

Set up SAP PO integration in BW

To set up PO integration within Performance Analytics for Accounts Payable, it is first required to activate the required standard SAP content.

1. Activate the following standard SAP objects. The objects are required to be active at the time of content activation.
   - Data Sources:
     - 2LIS_02_ACC

    - 2LIS_02_ITM
    - 2LIS_02_HDR
    - 2LIS_02_SRV
  - Data Storage Objects:
    - 0SRAC_D4
    - 0SRPO_D1

2. Make sure that all Transformations, Info Packages and DTPs from the Data Sources to the DSOs are also available.

   As soon as the state of these objects has been confirmed, the AP PO content of Performance Analytics can be activated.

   After the installation, the connection between the SAP Service Data Source and the Performance Analytics content must be created. For this, it is required to first create a transformation from `RSDS 2LIS_02_SRV` up to `TRCS/EBY/APSRVI` (no configuration required), and a DTP from `2LIS_02_SRV` to `/EBY/APSRVP` (again, no configuration required). Lastly, the Info Package for the Data Source and the newly created DTP should be added to the `/EBY/APSESP_PSA_DPL PA` Process Chain.

   As SAP has removed the planned services extractor from the logistic extractor transaction with ECC6 EHP3 and not added it anywhere else, it has to be created, as described in Set up SAP PO integration in ERP in the Performance Analytics section. This will create only an active version of this Data Source in the BW system, not a shadow version. In addition, content development with this Data Source will no longer be possible.

   If you do not see the ERP system in the list, run **Tools** > **Refresh Source system infomation**.

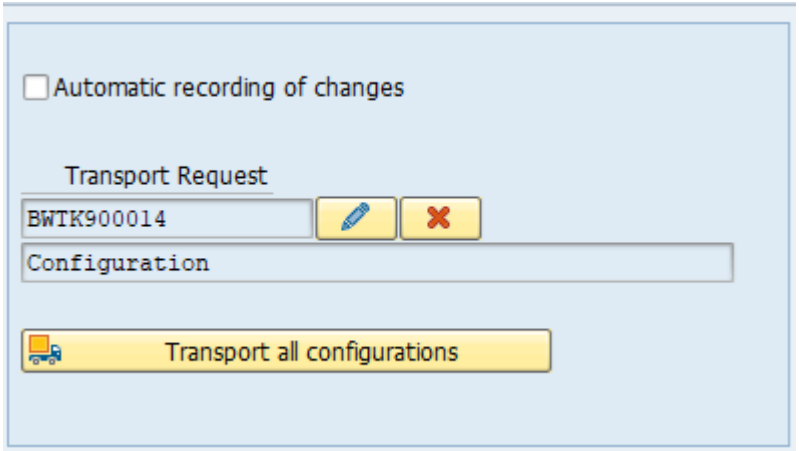
Chapter 5

/EBY/CONFIG transaction

Pre-installation tasks

If you do not see the ERP system in the list, run **Tools** > **Refresh Source System Information**.

Use **Tools** > **Transport Configuration** or a keyboard shortcut `Shift + F11` to adjust transport settings.



Use Automatic recording of changes if you want to add to transport request every change online.

Choose **Transport Request** to add changes during metadata replication and context installation.

Use **Transport all configurations** to add all the changes to the transport requests.

General configuration (cross-application)

Determine the fiscal year variant

Some transformations (for example, `/EBY/APHEAA` to `/EBY/APUNDOC`) compute fiscal time objects like fiscal year and fiscal period from the posting date. For this computation, the fiscal variant is needed.

The fiscal variant can be:

- Set to a constant

- Determined from the company code

If the company code is used to determine the fiscal variant, the `/EBY/BUKRS` field has to be in the result package of the transformation and the master data for the `0COMP_CODE` Info Object has to be loaded.

Replicate Kofax DataSources

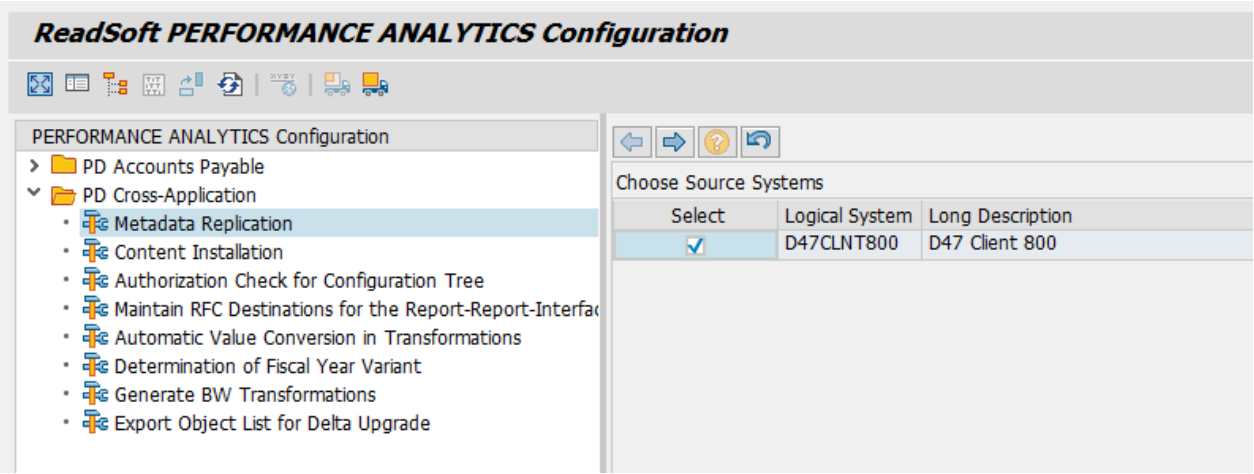
Purpose

The replication of data source metadata from source systems is necessary to extract any data. In the SAP standard, if a node has not been replicated earlier, it is not possible to select that specific metadata node for replication. Thus, the standard forces the replication of all metadata, which can result in a high load on the involved systems.

To remedy this issue, Performance Analytics comes with a functionality that enables the metadata replication of only the required components.

Usage

This functionality can be accessed in `/EBY/CONFIG` **PD Cross-Application** > **Metadata Replication**.

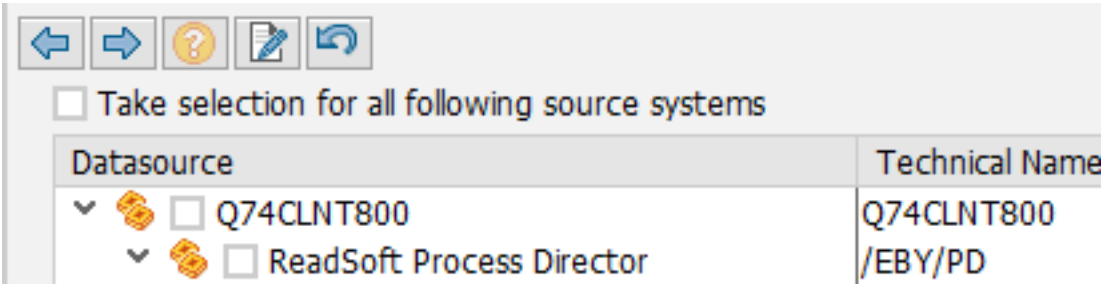


General Restrictions

This section is intended to help understand the intent of the function.

- The replication exclusively works for Kofax Performance Analytics DataSources and is not intended to handle more.
- If you choose to create a transport, you should also define an existing package and select **Activate after replication** check box.

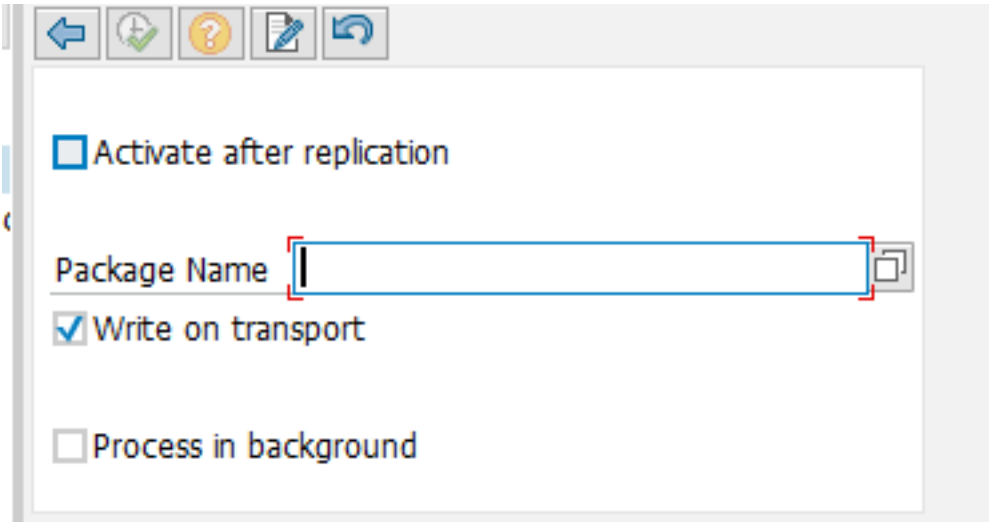
- If you select the **Take selection for all following source systems** check box in the **Datasource** selection screen, only DataSources and Application Components with the same technical name will be selected. There is no auto selection of all the child nodes.



- Selection takeover only works for successive selections, not for previous selections.

Good to know

- On the final screen, if you have an invalid selection (for example, a selected transport, but not activated), the **Execute** button will be disabled until the issue is resolved.



- If you select **Process in background**, you will not get any success or failure message.
- The source system picker (first screen) works only if you have configured the source system, including the RFC connection.
- This function is optional. You can still use the standard SAP replication and activation.

How to replicate

The replication is a multistep process.

1. Choose one or multiple source systems.
2. For each source system, select the application components and data sources you want to replicate.

3. Decide if you want to:
   a. Activate the replicated data sources afterwards too.
   b. Write the data sources on a package in order to transport them later on.
   c. Run the replication as a background task.

Install the content

Select the solution packages

The BW objects of the selected solution packages will be marked for activation. At least one major package (for example, Process Director Accounts Payable) has to be selected. To install a complete data flow, one of the sub-packages must be selected. Depending on this choice, the BW data flow will be installed with DAL DSOs or just DAL InfoSources. Installing both options in parallel is also possible.

Select the source system

Any content depending on the source systems will be installed for the selected systems. This includes the following object types:

- Data sources
- InfoPackages
- Transformations
- DTPs
- Process chains

The source systems available for selection are taken from the general content activation configuration. It can be found in `RSORBCT` (**Edit** > **Source System Assignment**).

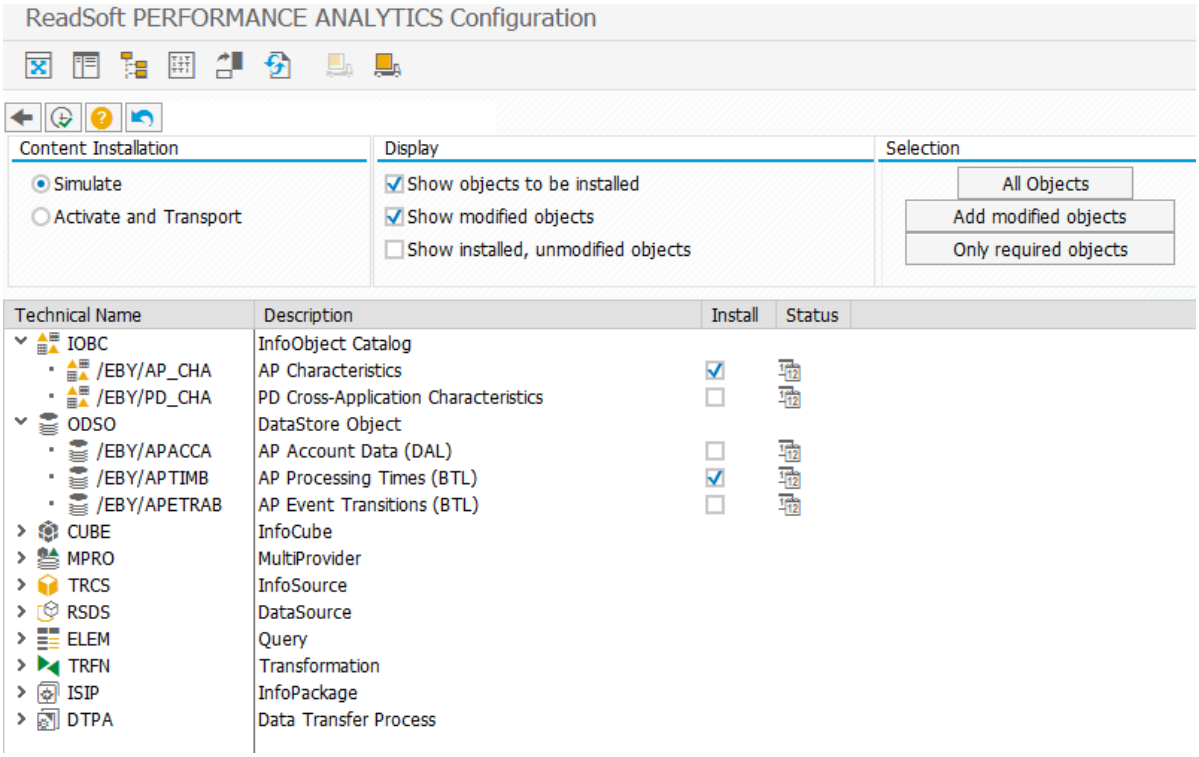
Select the objects

After selecting the solution packages and source systems, you will be presented with all the objects that are in the selected solution packages.

1. In the **Selection** section, you can choose:
   - **All Objects**: Select all the objects in the solution package.
   - **Only required objects**: Select only those objects that have not yet been installed. This is the option you should choose after an upgrade, or if the previous installation attempts encountered an error and installed only parts of the solution package.
   - **Add modified objects**: In addition to selecting only the required objects, you can also add objects that have already been installed, but are different from the content version.
2. You can also open the tree and pick specific objects for installation. In this case, the different options in the **Display** section can help.
   - **Show objects to be installed**: Shows only those objects that have been selected for installation.
   - **Show modified objects**: Objects with differences between the active and content versions.

- **Show installed, unmodified objects**: Everything that does not fall in the above two categories.

It is not possible to merge object versions. Only copying from the content is possible. If you need to merge versions, please use the standard transaction provided by SAP.



Maintain RFC destinations for the Report-Report-Interface

Some queries provide a jump to the selected documents in Process Director.

- It is recommended that you create a dedicated RFC connection in `SM59`. This connection should use a special RFC user in the ERP, with read-only authorization.
  - Source system: The ID of the ERP system.
  - User Name: The RFC destinations can be configured per user. Using the ALL option sets the connection as default for all the users.
  - RFC destination: The ID of the RFC destination from the `SM59` transaction.

Automatic creation of the RS process chain hierarchy

Performance Analytics is delivered with process chains that are organized by solution package, layer and functional level. To make the navigation in the chain overview easier, Performance Analytics offers the functionality to automatically create a chain hierarchy, depending on the installed Performance Analytics content.

This functionality is available from SAP BW 7.1 onwards.

The hierarchy is set up in the following manner:

- Process Director (root node)
  - Solution Package (for example, Process Director Accounts Payable)
  - Chain Type (meta or source -> target layer)

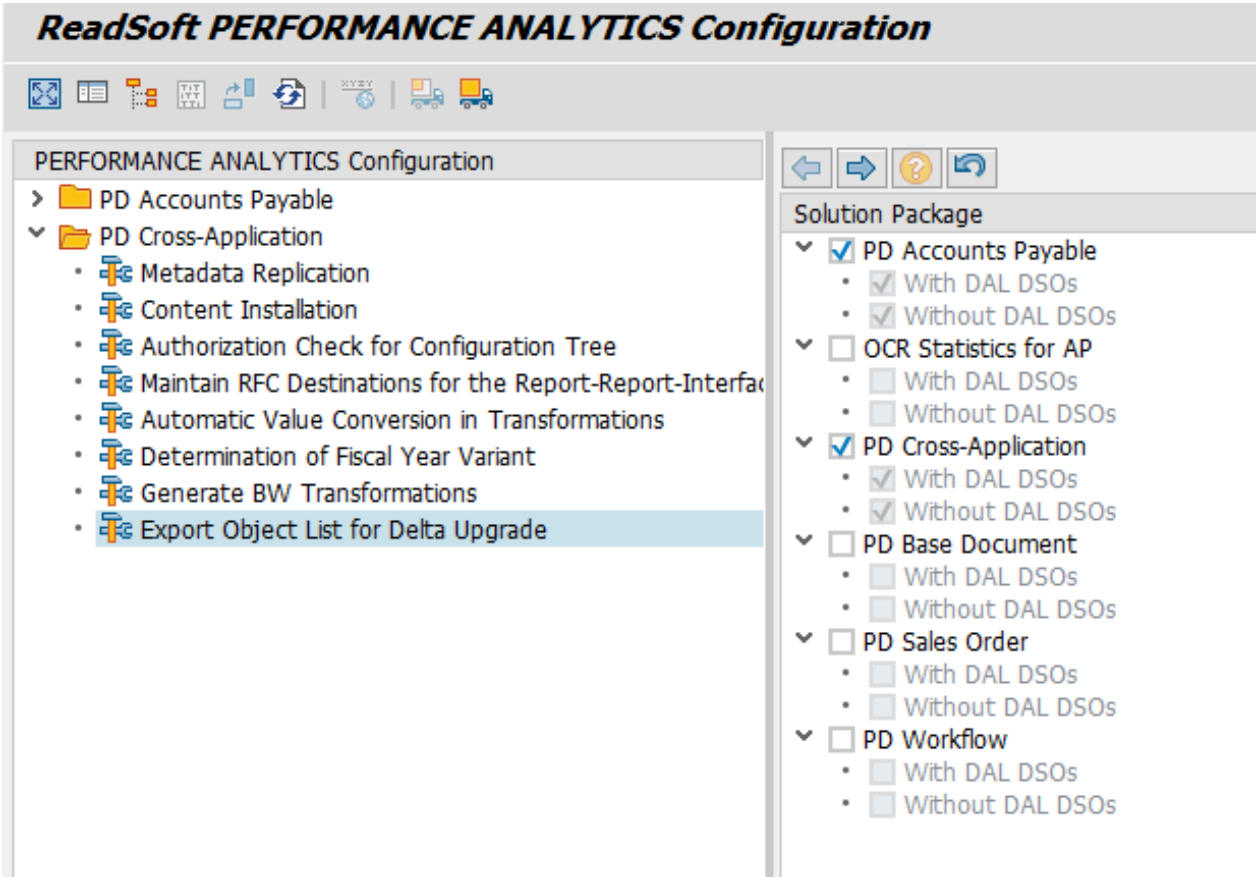
Export the object list for delta upgrade

Purpose

This exports a list of all the existing Performance Analytics objects that can be attached to the upgrade request. In turn, the customer will receive an upgrade transport that changes only those objects that are outdated and the release notes that cover only those changes that are relevant to the customer.

Usage

Select the packages that should be upgraded. On the next page, select where to save the list. The number at the bottom displays how many objects you currently have in the system for your selection. All those objects will be written into the file. After exporting, send the file to your project manager, who should then forward it to the lab as an upgrade request.



Do not change the file that was exported. Any change might cause this process to fail.

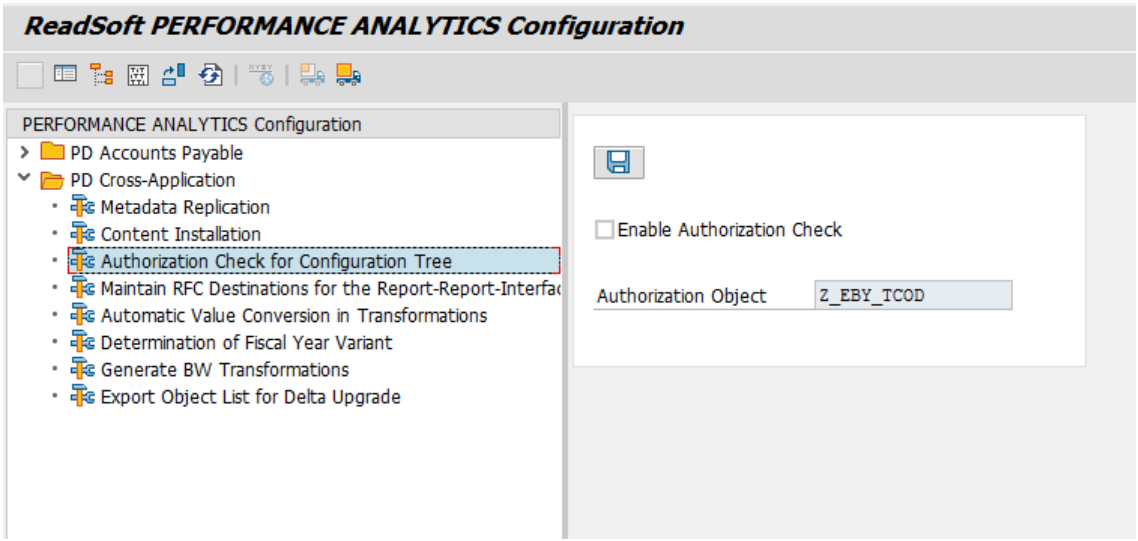
Check the authorization for the configuration tree

The authorization check was implemented to restrict access to the Performance Analytics configuration tree. To enable this feature, complete the following steps.

1. Create the authorization object in the BW System (`TCODE SU21`). The following field names are required when creating the authorization object:
   - `TCD` for transaction code
   - `CLASSNAME` for class name
   - `ACTVT` for activity. Only the `activity 16 (Execute)` is required for this field name.
2. Add the authorization object to the `USER ROLE` and maintain the authorization data (`TCODE PFCG`).
   - Activity = `16 (Execute)`
   - Transaction Code = `/EBY/CONFIG`
     (Access to Performance Analytics `/EBY/CONFIG TCODE`)
   - Classname = `/EBY/CL_AP_SYSCONFIG_PROXY`
     (Access to Process Director Accounts Payable configuration)

- Classname= `/EBY/CL_ALL_SYSCONFIG_PROXY`
  (Access to Performance Analytics Cross-Application configuration)

3. Enable or disable the authorization check in BW after Step 1 and Step 2.
   a. Call `/EBY/CONFIG TCODE`.
   b. Open the **PD Cross-Application** folder.
   c. Select the **Authorization Check for Configuration Tree** option.



   d. Use the **Enable Authorization Check** check box to enable or disable the authorization check.
   e. Enter or select the **Authorization Object**.
   f. Save your settings.

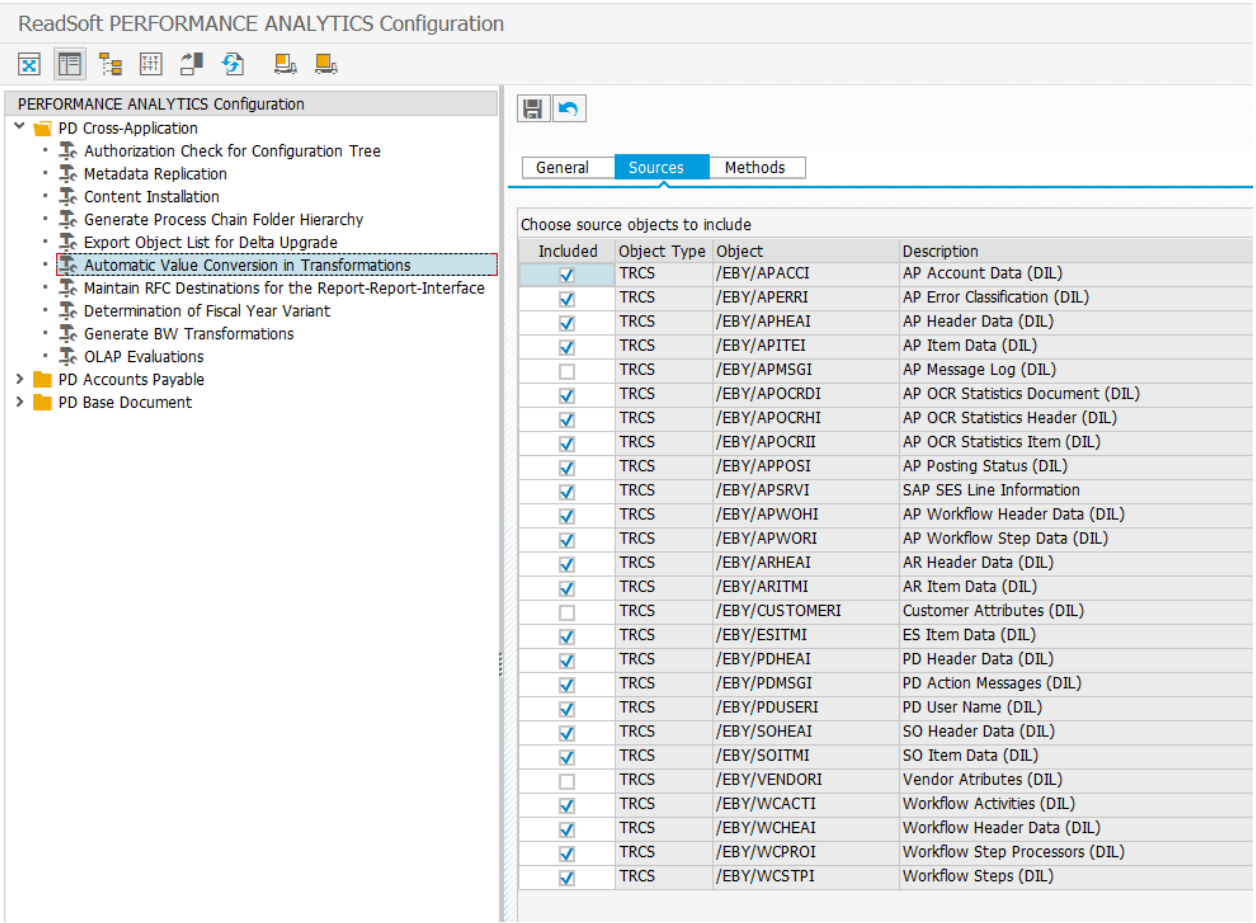
Automatic value conversion in transformations

The data activation process in InfoObjects and InfoCubes runs standard checks on the field values to ensure that they are ready for reporting. The standard checks include the validation of the data type, units, and currencies. For fields of type “DATE”, the correctness of the date format is checked. Fields of type “CHAR” are checked to ensure that they contain only allowed characters (set in the `RSKC` transaction).

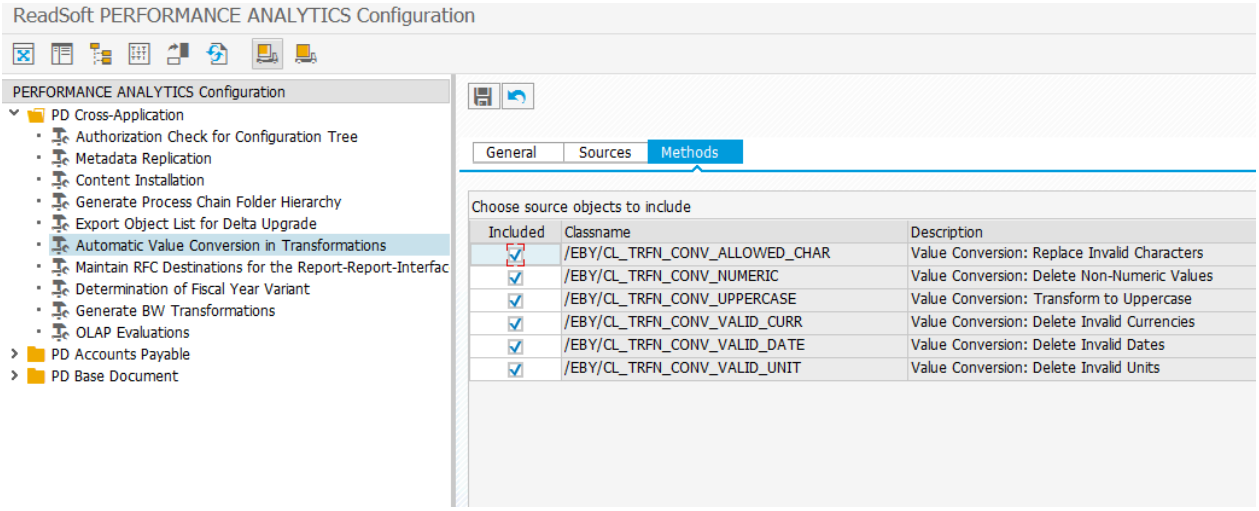
If one of the standard checks fails during the data activation, the activation process itself will fail and the data will not be available for reporting. Note that this behavior can be overruled by settings in the data transfer processes, but is not recommended for productive environments.

The automatic value conversions can be switched on to check the validity of the extracted data during the data transfer. Invalid values are transformed into a valid form, which is accepted by the target InfoProvider. The value conversion happens during the earliest stages of the dataflow in BW, right after the datasources, in the transformations to the data inbound layer.

The conversion can be switched on by setting the InfoSource of a dataflow to **Included** in the maintenance view on the **Sources** tab.



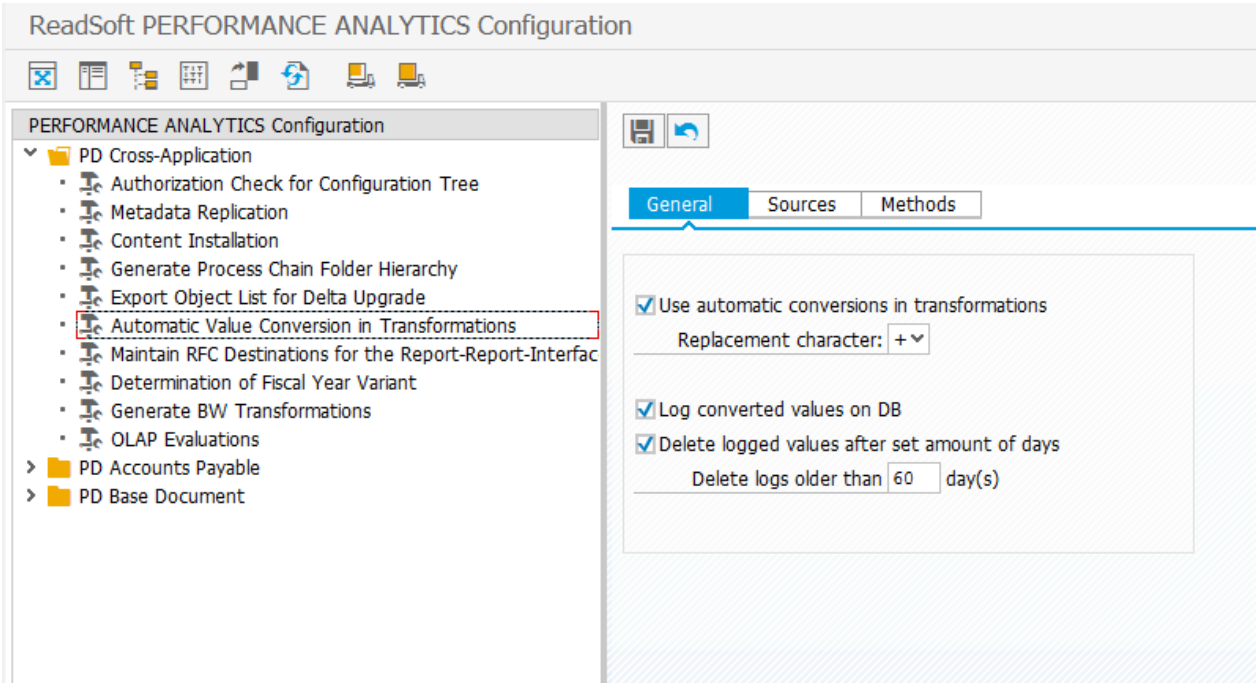
The conversions can be configured on the **Methods** tab.



The delivered standard methods are:

- Lower to upper case conversion, if the target InfoObject does not allow lower case.
- Character strings are checked against the character set defined in the `RSKC` transaction. Invalid characters are replaced by the character set in the **Replacement Character** field.
- Numeric fields are checked for non-numeric values. If any are found, the field content is set to zero.
- Unit and country code fields are checked for validity. Invalid values are deleted.

The **General** tab holds the options for deactivating the value conversion. It is also possible to set the logging parameters of the value conversion.



The logs can later be used to correct the data in the ERP system. The logging tables are generated separately for each dataflow. Their technical names can be found in the `/EBY/TRANCONMAP` table.

OLAP evaluation framework

The OLAP evaluation framework computes virtual characteristics and key figures at query runtime. Customized evaluations are implemented in ABAP.

Examples are:

- Computed time differences, based on the actual time at query execution
- Mapping of the key figure ranges to characteristic values and texts (binning)
- Simple RFC calls to source systems, to fetch current data

The OLAP evaluation framework is an implementation of the `RSR_OLAP_BADI` BAdI. The main functionality is implemented in the `/EBY/CL_IM_OLAP_EVALUATION` class. The BAdI object is `/EBY/OLAP_EVALUATION`, with a filter on `/EBY/*` InfoProviders.

Implementation steps

1. Create an InfoObject
2. Implement the interface
3. Configure the evaluation object
4. Add the evaluation InfoObject to the data flow

Create an InfoObject

1. Start the implementation by creating an InfoObject of type, characteristic or key figure.

   This will later be used as a virtual InfoObject in InfoProviders and Queries.
2. The evaluation framework comes with a text mapping mechanism. If you want to use the text mapping, create the characteristic as type `NUMC 4` and add the Master Data read class `/EBY/CL_OLAP_EVAL_TEXT_READER`.

   See the `/EBY/OETXTBAS` InfoObject as an example.

   > The standard text tables can still be used as an alternative. The text tables and read class are mutually exclusive.
3. If you are creating a key figure and want to use it with a unit, just add the unit to the key figure definition.

Implement the interface

- Next, create a class implementation of the `/EBY/IF_OLAP_EVALUATION` interface. The interface has two methods:
  - GET_INSTANCE: Receives information about the query environment during the query runtime.

    The method has the same input parameters that are also handed over to the BAdI implementations of `RSR_OLAP_BADI`. Here, you instantiate the class and return it.
  - EXECUTE: For each data record processed by the OLAP processor, this method is called.

    It receives a data bundle. You can get the value of the currently processed fields by calling the `GET_VALUE` method on the bundle, passing the name of the required InfoObject. This will return the value and unit of the requested InfoObject (if the field does not have a unit, the unit is returned as blank).

    You can request only those fields that have been added in the evaluation definition in `/EBY/CONFIG`. The method has to return its result in the RESULT parameter. For key figures, you can also fill in the UNIT parameter with a unit value.

Configure the evaluation object

The virtual InfoObject has to be connected with the class implementation in the `/EBY/CONFIG` transaction.

1. Open the OLAP evaluations node.

   The list of existing evaluations is displayed.
2. Click **Create** and select the virtual InfoObject created in implementation step 1.

   The detail view for the new evaluation opens. If the text reader class is used in the InfoObject, the corresponding flag is set. This is also necessary if you want to create a bin evaluation. For details, see Binning.
3. If you do not want to create a bin evaluation, click the pencil symbol next to the **Class** field. Select the appropriate class from step 2 and confirm the selection.
4. To make sure that all the required InfoObjects are present in the bundle during the evaluation runtime, you have to add them as dependencies. Click the **Determine Dependencies** button

to have the program do a test run of the class implementation and automatically fill in the required InfoObjects.

If you want to manually add the dependencies, do so by clicking the **Add** button. Make sure to select the **Used in Evaluation** check box if the InfoObject should actually go into the bundle. If the check box is not selected, the InfoObject is used only to ensure a certain aggregation level.

5. Save and activate the OLAP evaluation.

Add the evaluation InfoObject to the data flow

Add the evaluation InfoObject to InfoProviders and BEx Queries. The easiest way to add virtual InfoObjects to providers is as follows:

1. Add the InfoObject to a cube that is dedicated to holding only evaluation objects.

   This cube does not receive any data. Its only purpose is to provide an access point for MultiProviders.
2. Add the cube to any Multiprovider, as a source.

   This enables the MultiProvider to use any of the InfoObjects in the cube.
3. Connect the evaluation InfoObjects in the MultiProvider to the cube, even though they do not receive any data from it.
4. Build or extend queries in the MultiProvider.

The queries can now use any evaluation InfoObject in the MultiProvider.

How to avoid aggregation

When the OLAP BAdI is executed, the data is already pre-aggregated according to:

- The characteristics in the current query selection (navigational state)
- The requested characteristics in the BAdI implementation

In case you need to ensure a certain level of detail for the evaluation, you have to add the corresponding characteristic as a dependency. If you clear the **Used in Evaluation** check box, the characteristic values will not be available in the bundle during runtime.

Example
You want to create a virtual key figure to measure the average age of documents, from the date of their creation. Therefore, you add the document creation date as a dependency, with the **Used in Evaluation** check box selected.

When you add this virtual key figure to the query and have no characteristics selected, the evaluation is run with only a single record, which contains the maximum document creation date of all the documents, which is wrong. This happens because the data is pre-aggregated before the OLAP BAdI is executed.

To ensure that the data is always passed from the cube on the document level, add the document ID as a dependency. Check it as not **Used in Evaluation** and it will not be available in the bundle, but will only be required during runtime for disaggregation.

Text mapping

Text mapping can be used as an alternative to the standard master data text table.

The main advantage is that the mapping can be transported. Text mapping can be used only with characteristics of type CHAR 4, with the text master data and the master data read class, `/EBY/CL_OLAP_EVAL_TEXT_READER`.

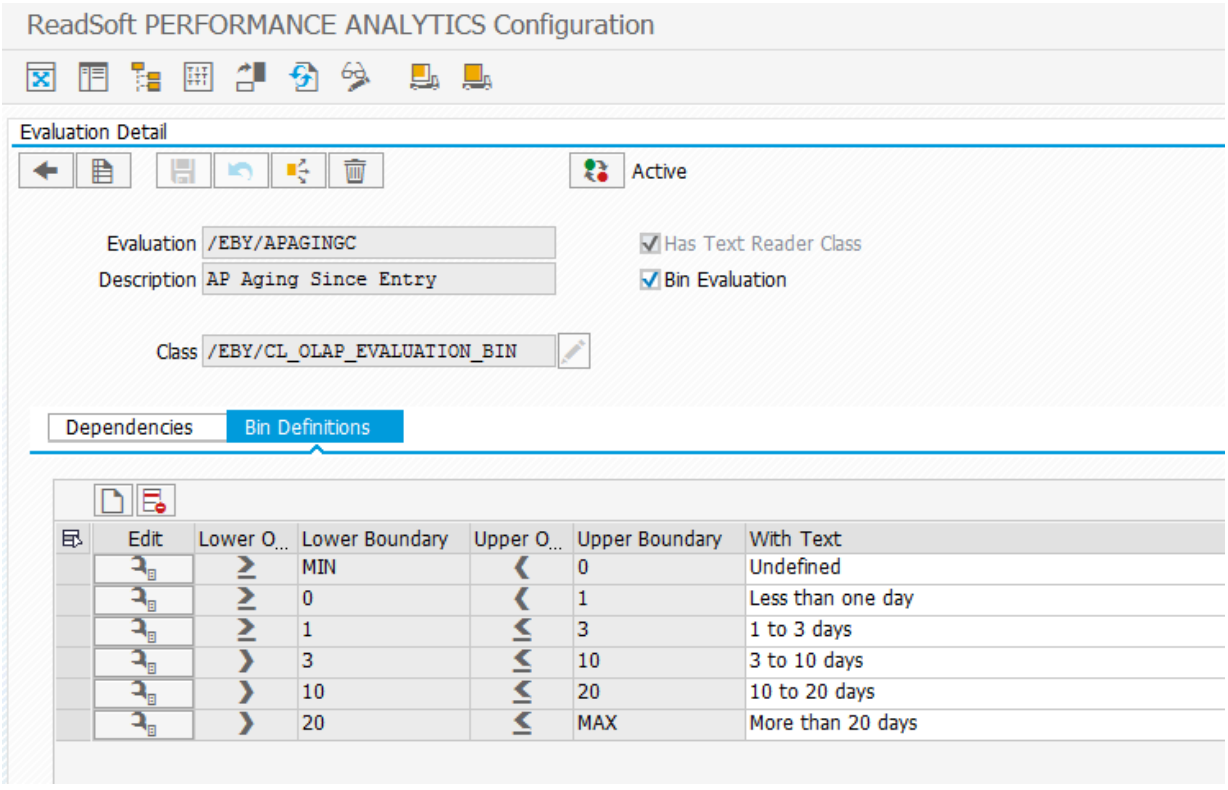
In the evaluation configuration screen, you can add text entries in the Texts tab. Each text can be of length 60 and is given a unique ID. Use these IDs as outputs in the evaluation class to map the correct texts to the values.

Binning

Binning is a mapping of key figure intervals to characteristic values.

For example: The number of days a document has not been processed can be categorized in severity levels. These categories can then be shown with texts to the reporting user. This implementation requires:

- A virtual key figure that computes the number of days for which the documents are unprocessed, with the accompanying class for the actual computation.
- A virtual characteristic that holds the mapped binning values. It has to be of type CHAR 4, with the text master data and the master data read class `/EBY/CL_OLAP_EVAL_TEXT_READER`.
- The configuration of bins (intervals) in the OLAP evaluation maintenance screen. Click the button under **Edit** to change the interval boundaries and texts. To create or delete intervals, use the buttons above the **Edit column**.



Generate BW Transformations

Purpose

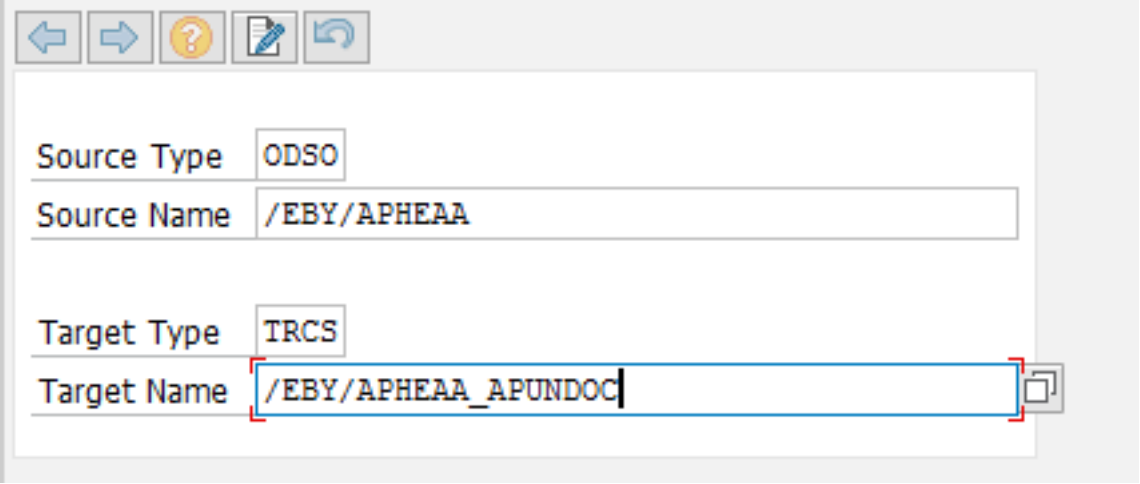
This automatically generates everything for a new transformation or regenerates specifically requested parts of an already existing transformation. This generator should be used whenever possible, instead of manually creating the transformation.

Restrictions

This generator can be used only when generating in a namespace with creation rights. This is for a customer both the Z- and Y- namespaces, as well as any namespace that the customer owns.

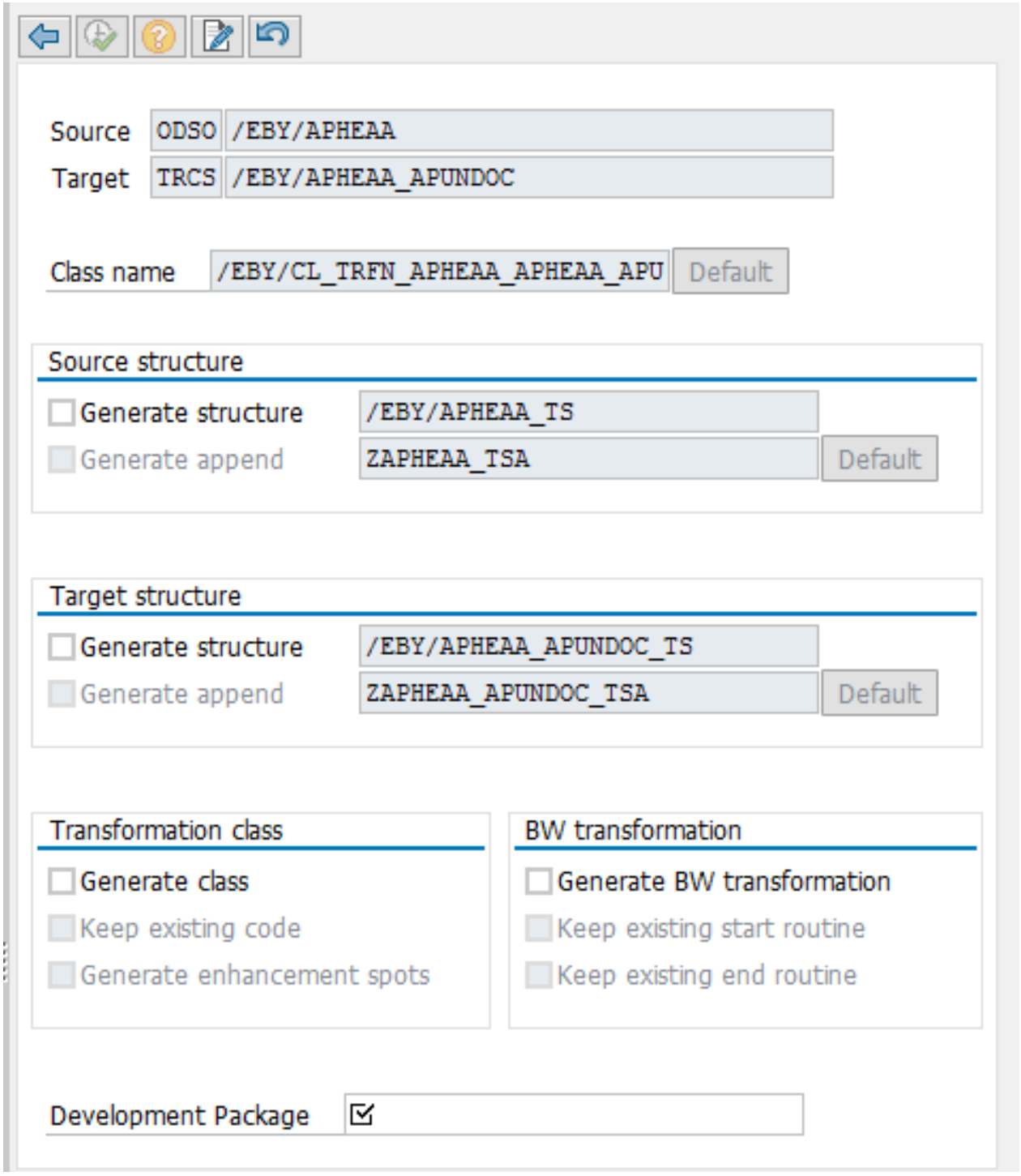
A customer cannot create transformations in the `/EBY/` namespace or in the standard SAP namespace.

Input fields: First screen



Field	Description
Source Type	Object type of the source object that the data is coming from when ETL is started
Source Name	Name of the source object
Target Type	Object type of the target object that the data is sent to when ETL is finished
Target Name	Name of the target object

Input field: Second screen



Field	Description
Generate structure	Select this check box to generate the structure listed in the display field next to it (both source and target alike).
Generate append	Generate the append structure listed in the display field next to it. This should be used when a customer wants to enhance the /EBY/ namespace structure. The append structure is automatically appended to the defined source/target structure.
Generate class	Generate the class where the transformation's expert routine logic can be implemented.
Keep existing code	Do not delete any code that has already been created.
Generate enhancements spots	Generate the four enhancement spots that can be used to alter the default logic of the expert routine.
Generate BW transformation	Generate the transformation base object with both start and end routines. If the class was generated, it automatically includes the class call.
Keep existing start routine and **Keep existing end routine**	Do not delete any code that has already been created.
Development Package	Determine to which package the generated objects should be assigned.

Display fields: Second screen

The display fields are solely for information purposes. They are not supposed to be changed.

Configuration for Accounts Payable

AP workflow status configuration

Purpose

Every workflow could go through a diversity of statuses before being finished. In some queries, a finished workflow needs to be handled differently than an ongoing one.

For this, Performance Analytics should know which status implies that the workflow is done, so that that status is not changed anymore. The **Final Workflow Status** flag tells Performance Analytics which statuses those are.

Dependency on Process Director Accounts Payable

Within Process Director Accounts Payable, statuses are highly customizable. Using user exits, the meaning of a status can be completely changed. When configuring the final status in a

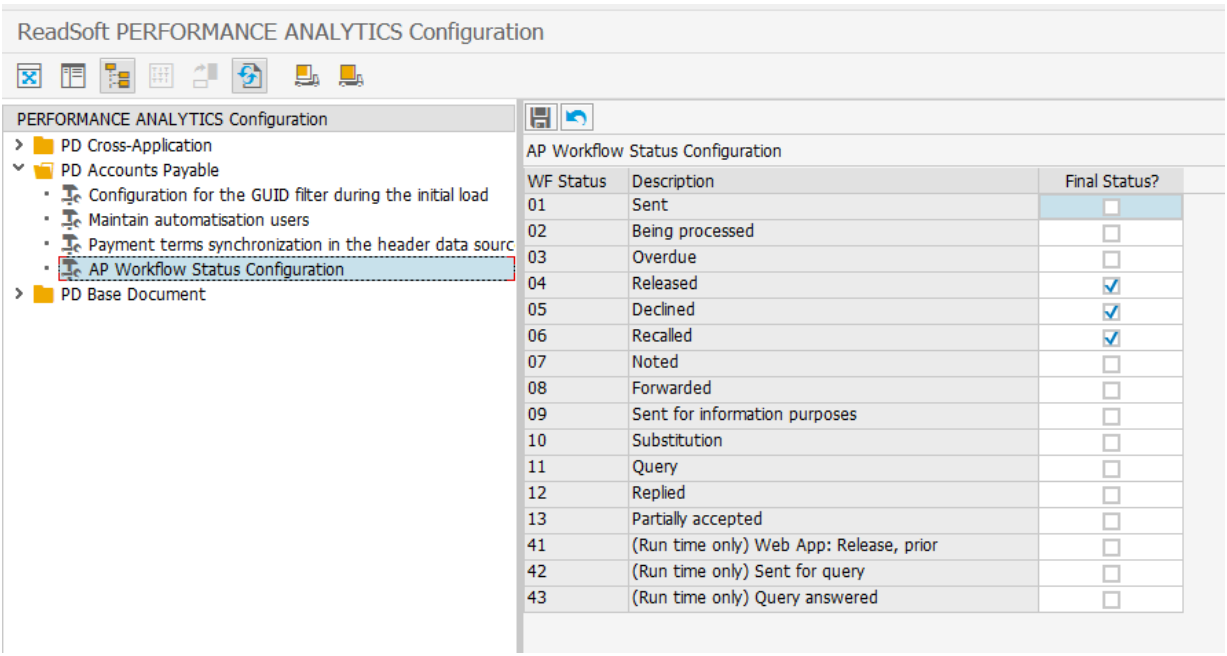
customer system, always check to see if any changes have been made to the existing statuses or any new statuses have been created, and if yes, whether or not they have any influence on this configuration.

How to configure

- In the maintenance GUI, set the flag for every status that is considered *final*.

  Statuses that are always final are Declined, Recalled, and Released, and these are pre-set in the standard configuration.

  Other new statuses could also be added in Process Director Accounts Payable.



Payment terms synchronization in the header data source

Setting this parameter for a source system forces the header extractor to read the payment terms from the respective SAP document and transfer them to BW.

By default, this option is set to ensure that the queries on payment terms display the current data.

The BAdI implementations for the following function modules are called in the source system during the extraction:

- `/COCKPIT/PAYMENT_DATA_CALC`
- `/COCKPIT/PAYMENT_TERMS_GET`

Configuration for the GUID filter during the initial load

When this option is set, all the DataSources will extract data only for those invoice documents that have also been extracted by the `/EBY/AP_THDR_TRAN` header DataSource. If there is a filter set in the InfoPackage of the header DataSource, this filter will also be applied to all the other DataSources.

This option is effective only during the initial load, and the `/EBY/AP_THDR_TRAN` DataSource has to be initialized before all the other DataSources. The `/EBY/APALL_PSA_DELTA_INIT` process chain can be triggered to ensure the correct order of the initial load.

Maintain automatisation users

The automatisation users from Process Director Accounts Payable and Invoices should be set in this table. This is necessary for several queries to work properly.

The following values are available for the **User** system field:

- APR: PD AP automatic posting
- INV: Invoices verification user
- OPS: PD AP automatic workflow determination

Configuration for Process Director

PD Object Type Filter

This configuration sets the Process Director Object Types that are extracted from the connected source systems. It acts as a filter in the ERP source systems during extraction, and in the Data Transfer Processes in BW.

See also Filters during ETL on PD object types.

Configuration for the GUID filter during the initial load

When this option is set, all the DataSources will extract data only for those Process Director documents that have also been extracted by the `/EBY/PDBO_THDR_TRAN` header DataSource. If there is a filter set in the InfoPackage of the header DataSource, this filter will also be applied to all the other DataSources.

This option is effective only during the initial load, and the `/EBY/PDBO_THDR_TRAN` DataSource has to be initialized before all the other DataSources.

See also Filters during ETL on PD object types.

Chapter 6

Install the Kofax Invoices plug-in

If you want to include data from Kofax Invoices in Performance Analytics, you must install the Performance Analytics Statistics Collector plug-in your Invoices installation.

ℹ This is not the same plug-in that collects data and passes it to Kofax_Reporter.

The data from Invoices is first sent to the Statistics Collector plug-in, and then passed on to Process Director Accounts Payable.

Invoices data is collected only from the date on which the plug-in is installed.

You must perform the following steps:

1. Ensure that your Invoices installation meets the system requirements. For details, see System requirements.
2. Install the Statistics collector plug-in.
3. If you are installing the plug-in for the first time, perform some post-installation tasks. For details, see Map external data in Process Director.

System requirements

- Invoices 5-5 or later (Kofax Documents is not yet supported)
- NET Framework 3.5 SP1
- Kofax Invoice Cockpit Connector 3.1 or later or Kofax Service Bus (RSB) 2-4 HF20 or later
- SAP GUI installed on Invoices Transfer workstations
- Microsoft SQL Server 2005 or later, or Oracle 10g or 11g
- Process Director 7.1 and additional RSPDNs

  See the table in the *Import the transport* chapter that describes the transports, EMEICs and Kofax PD Notes (RSPDNs) that have to be implemented.

Installation file

- Setup-InvStat2PA.msi

Install the Statistics collector plug-in

Run the installer

You have to install the plug-in on all Invoices Scan, Interpret, Verify and Transfer workstations, and optionally, on Manager workstations. The plug-in has no functionality in the Manager module; you should install it only if you want to see the license information in Manager.

After installing the plug-in, when you start one of those modules for the first time, you should be logged in as a user who has the right to create database tables.

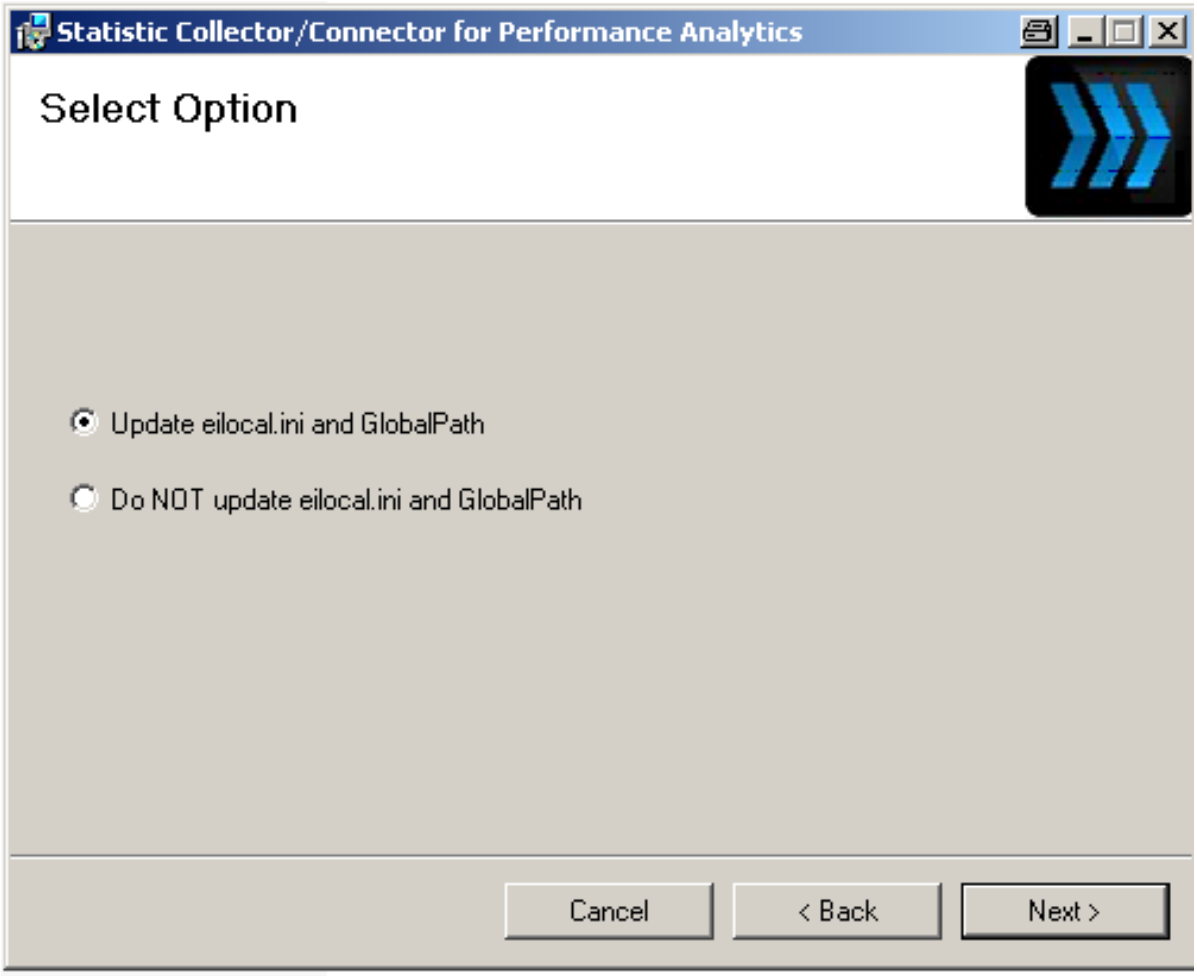
1. Back-up the Invoices `eilocal.ini` file.

   Depending on your operating system version, it is located in the `C:\Winnt, C:\Windows` or `C:\Users\Public\ReadSoft\Invoices\` folder.
2. Run `Setup_InvStat2PA.msi`. Follow the steps in the install wizard.

   > On the second screen of the install wizard, the **Update eilocal.ini and GlobalPath** option is selected by default. Select the **Do NOT update eilocal.ini and GlobalPath** option only if you do not have access to the network drive where GlobalPath resides.

   The setup installs some files to GlobalPath and automatically updates `eilocal.ini`. In most cases, `eilocal.ini` and GlobalPath are located on a network share. The user needs to have

access to at least one of the shared paths. If not, the files will need to be manually updated/copied.



Check eilocal.ini

The installer creates a new entry in the `[Plugins::eixxxx]` section of `Eilocal.ini` (where `xxxx` is the name of the Invoices module).

- You must check the entries in the `Transfer` section. It should look similar to this:

```
;************************
;*      Transfer        *
;************************
[Plugins::eitran]
Plugin1=Common
Plugin2=JobScheduler
Plugin3=InvStat2PA
 Plugin4=Eicc
[eitran::InvStat2PA]
Name=Statistic Collector for Performance Analytics
Type=COM
```

```
SupportIDispatch=TRUE
```

You must check that the `Eicc` plug-in entry is the last one in the list. If not, move it. In the example above, it is Plugin4.

Install the license

- Order a license file from Kofax Marketplace and copy it to GlobalPath.

  The license file is connected to a customer through a domain name. This domain is the network domain that the customer runs the solution on, and you can find it under the **Computer name, domain, and workgroup settings** section when you right-click **My Computer** and select **Properties**. Therefore, when checking a component out from Marketplace, you need to choose the customer and enter the domain name.

Configure InvStat2PA.INI

You must make certain edits to this file (which is located in GlobalPath).

Specify which invoice profiles to transfer data from

- In the `ACTIVATE_PROFILES` section, add all the Invoices profiles that should be passed to Performance Analytics.

  For example:

```
[ACTIVATE_PROFILES]
Profile1=1
Profile2=1
```

  Here, the statistics from the documents processed using the `Profile1` and `Profile2` Invoices profiles are sent to Performance Analytics.

Specify the license file

- In the `[MISC]` section, specify the path and name of the license file. `GlobalPath` is set by the setup program, but if you use a different path or file name, you need to enter those here. Do not change the license feature name.

```
[MISC]
=   <GlobalPath>\License.LIC
LicenseFeatureName = PRA
```

Specify the external GUID

Every invoice sent to Performance Analytics must have an external GUID.

Using `InvStat2PA.INI` with the Invoice Cockpit Connector

When using the Invoice Cockpit Connector, the external GUID should be the same variable as in the Invoice Cockpit Connector `Eicc.ini file`.

- In the `[MISC]` section, make sure that the variable name for the `ExternalGUID` is the same as the ExternalGUID parameter used in the `Eicc.ini` file.

```
[MISC]
```

```
;variable name for external GUID (needed by RFC_DATA_RECEIVE and CockpitConnector)
ExternalGUID=               GUID
StartCounter_InvoiceLevel=  0
StartCounter_HeaderLevel=   0
StartCounter_LineLevel=     0
```

Using InvStat2PA.INI with the Kofax ReadSoft Service Bus

When using the RSB to transfer invoices to Process Director Accounts Payable, the Invoices GUID should be used as the external GUID.

- In the [MISC] section, the variable name for the ExternalGUID can be chosen freely, as long as it is mapped to EXTERNAL_GUID in the OCR data mappings in SAP.

```
MISC]
CheckIfStatisticsAlreadySent= 1
UseInvoicesGuid=              1
ExternalGUID=                 _GUID
```

The CheckIfStatisticsAlreadySent setting ensures that the same statistics are not sent several times (which would otherwise be the case when using the RSB).

Specify the SAP system to connect to

For each invoice profile specified, you must specify the SAP system to connect to (the one where Process Director is installed).

Using InvStat2PA.INI with the Invoice Cockpit Connector

1. Create a new [R3::ProfileName] entry, where ProfileName is the name of the activated invoice profile.

   The default InvStat2PA.INI file contains the [R3::ProfileName1] section that you can copy/modify.
2. For the ini parameter, specify the path to Eicc.ini.
3. For the section parameter, specify the section in which the SAP logon credentials are saved.

```
[R3::PROFILE1]
ini=X:\GlobalPath\eicc.ini
section=R3::P00

[R3::PROFILE2]
ini=<GLOBALPATH>\eicc.ini
section=R3::P01
```

Using InvStat2PA.INI with the Kofax ReadSoft Service Bus

1. Create a new [R3::ProfileName] entry, where ProfileName is the name of the activated invoice profile.

   The default InvStat2PA.INI file contains the [R3::ProfileName1] section that you can copy/modify.
2. Leave the ini parameter empty.

3. For the `section` parameter, specify the section in which the SAP logon credentials are saved.

   The SAP logon credentials should be entered directly in the `InvStat2PA.INI` file. Create the section specified in the `Section` setting and enter the logon settings there.

   The following logon settings are available: `EncryptLogonInfo=XXX`

   To encrypt the user and password, the `EncryptLogonInfo` setting should be set to 1.

```
User=XXX
Password=XXX
Client=XXX
Language=XXX
Saprouter=XXX
Applicationserver=XXX
Systemnumber=XXX
Messageserver=XXX
Systemid=XXX
Groupname=XXX
```

Example: Example

```
[R3::PROFILE1]
Ini=
Section=TestSection
[TestSection]
EncryptLogonInfo=1
User=Test
Password=Testpw
Client=800
Language=EN
Applicationserver=ab.cd.ef.gh
Systemnumber=0
Groupname=SPACE
```

Specify the RFC parameters

For each invoice profile that you specified in the previous step, you must specify certain parameters for the RFC connection to the SAP system (the one where Process Director/Process Director Accounts Payable is installed).

- For each invoice profile, create a new `[RFC::ProfileName]` entry, where ProfileName is the name of the invoice profile.

  The default `InvStat2PA.INI` file contains the `[RFC::ProfileName1]` section that you can copy.

  Do not change any of the parameters or their values in this section. The default values are sufficient for a connection.

Example (all default values, except the section name):

```
[RFC::PROFILE1]
;RFC name
FunctionName = /EBY/PDBO_RFC_DATA_RECEIVE

;Constants for RFC-parameters ic_obj, ic_env and ic_mapid
IC_OBJ=   OCR
IC_ENV=   03
IC_MAPID= OCRSTAT

;Node Types
NodeType_InvoiceInfo=    HEADER
```

```
NodeType_HeaderFields=   MAIN
NodeType_LineItemFields= LINE

;Node Parents
InvoiceInfo_Parent=
HeaderFields_Parent=    HEADER
LineItemFields_Parent=  HEADER

;1:  Submit header data with LINENUMBER = 0
;0:  Submit header data without LINNUMBER parameter
;-1: Submit header data with empty LINENUMBER parameter
;any other value is interpreted as 0
HeaderDataWithLineNumber=          0

TreatWarningAsError=               0
InvoiceStatusOnError=              ValidationError
```

Other settings

Once you have installed the plug-in for Invoices, there are a number of options that you can configure, related to:

- Logging
- Database connection
- Other settings

However, changing these settings is *optional*. You should have already made all the necessary configuration entries in these files during the installation.

For details on each setting, see Appendix A: Invoices plug-in settings.

Map external data in Process Director

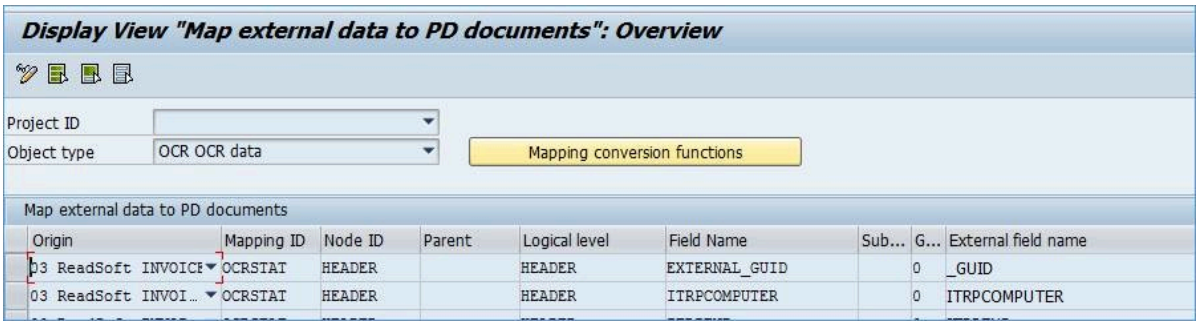
If the ReadSoft_PA_AP_OCR_ERP_Extractors transport request has been imported, it implies that the OCR statistics data will be extracted. In such cases, the mapping of the OCR statistics data within Process Director must be checked.

It is assumed that the `_GUID` field name is configured in the `EICC.ini` as `EXTERNAL_GUID`, as described in InvStat2PA.

To map external data, complete the following steps.

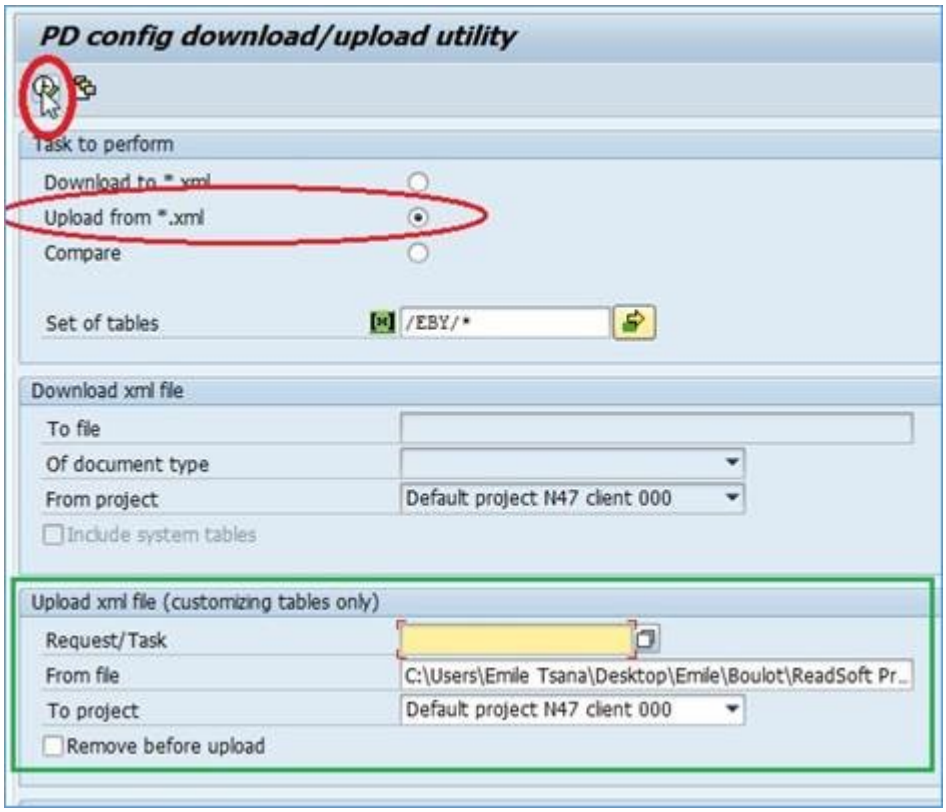
1. Go to transaction `/n/EBY/PDBOC`.
2. Select the **OCR Data** object type.
3. Select the **Expert Configuration** check box.
4. Advance to the next screen by pressing **F8**.
5. Navigate to **Initial Settings -** > **Mapping** .
6. Execute the **Map external data to PD documents** node.
7. Check if the mapping exists for **Origin Invoices** and **Mapping ID OCRSTAT**. In case the mapping does not exist, proceed to the Upload the Process Director mapping section.

8. Check if the _GUID field name is mapped to the EXTERNAL_GUID external field name. The EXTERNAL_GUID field is used in Process Director as a foreign key to the Invoices document.



Upload the Process Director mapping

The configuration file contains the OCR mapping and is shipped with the Performance Analytics transport. It can be uploaded with the /EBY/PDBO_CONFIG_DUMP ABAP report in SE38. Select the **Upload from *.xml** option, and set a transport request and the path to the file before execution.



Check the OCR tables for data

There are two ways to check that the plugin is providing data to Process Director:

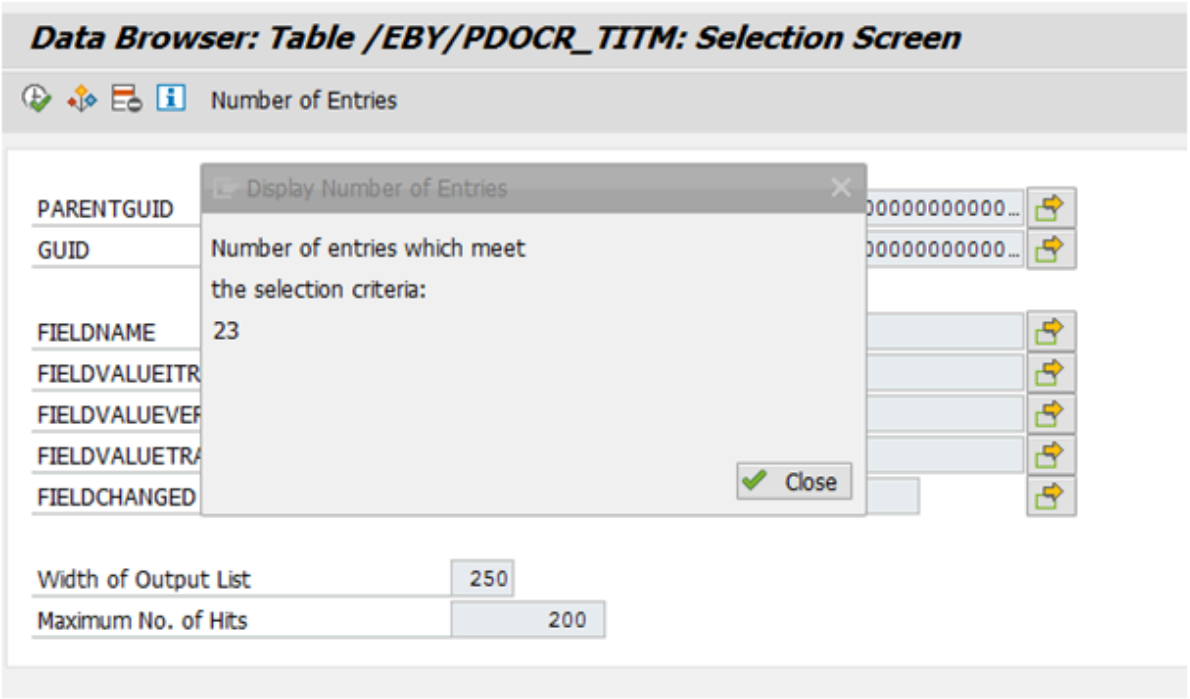
- Run either the BW-Extractor for the OCR DataSources or the `RSA3` simulation in ECC.
- Check if the OCR tables have records in them.

The downside of the first option is that Performance Analytics has to be installed at least in the ECC system where the OCR data is stored. This is not always the case, as sometimes, the plugin is installed months before Performance Analytics so that it can already start gathering statistics data. In such cases, the only way to confirm if everything is working is by using the second option.

This is done using the `SE16` transaction.

1. Open the following three tables:
   - `/EBY/PDOCR_THDR`
   - `/EBY/PDOCR_TITM`
   - `/EBY/PDOCR_TSUB`

2. In each of these tables, click **Number of Entries**.



As soon as the setup of the plugin has been completed and the first invoice has been processed, the number displayed in the **Display Number of Entries** popup must be greater than 0.

Invoices does not have any history for its statistics. Only the documents that are scanned after installing this plugin will be transferred into these tables.

Appendix A

Invoices plug-in settings

This section describes the settings for the `InvStat2PA` plug-in.

InvStat2PA

The settings for the `InvStat2PA` plug-in are contained in the `InvStat2PA.INI` file, which is located in GlobalPath.

`[ACTIVATE_PROFILES]`

Setting	Description
ProfileName	The names of the invoice profiles in Invoices for which data is sent to Performance Analytics. Each invoice profile name is the key, followed by 1 to activate it. For example: Profile1=1 Profile2=1

`[DATABASE_SETTINGS]`

Setting	Description
EncryptConnectionString	1 – The connection string is encrypted the next time a module is started. 0 – The connection string is not encrypted. Not recommended if the string contains the database password.
ConnectionString	The connection string for connecting to the InvStat2PA database. If the Invoices database is used to save this data, use `Invoices` as the value.
CommandTimeOut	Timeout (in seconds) when executing SQL statements. 0 disables this functionality.

`[LOG_SETTINGS]`

Setting	Description
Log level	Sets the level of the messages to be recorded in the log file. 0 – Logging disabled 1 – Errors only 2 – Errors, Warnings (DEFAULT) 3 – Errors, Warnings, Info
WriteErrorsToEventLog WriteWarningsToEventLog WriteInfosToEventLog	Log messages can also be written to the Windows Event Log. 0 – Log messages are only written to the log files (DEFAULT). 1 – Log messages are written to the log files and to the Windows Event Log.
EventLogAppName	The name specified here is displayed as the Source in the Windows Event Log.
EventLogName	By default, Windows writes messages to the Application log. If `EventLogName` is filled, a new log is created in the Windows Event Log.

`[MISC]`

Setting	Description
LicenseFile	The name and location of the license file. The license file is obtained from Kofax.
LicenseFeatureName	The name of the plug-in. Each license for this plug-in will have the feature name PRA. You only need to change this if the feature name changes.
ExternalGUID	Every invoice sent to Performance Analytics must have an external GUID. This should be the same variable as in the Invoice Cockpit Connector `Eicc.ini` file.
StartCounter	Tells the plug-in whether to start counting the submitted lines with zero or one (or any other value). Currently, Performance Analytics expects the counting to start with one. This parameter should not be changed.
CheckIfStatisticsAlreadySent	Keeps track if the statistics for the invoice have already been sent to PA. This must be set to 1 when using `InvStat2PA.INI` with the RSB.
UseInvoicesGuid	Uses the Invoices guid as the external guid. This must be set to 1 when using `InvStat2PA.INI` with the RSB.

`[R3::ProfileName]`

Setting	Description
ini	The path to the `Eicc.ini` file, which contains the logon credentials to the SAP system where Process Director Accounts Payable is installed. For example: `ini=\\server01\Users\Public\ReadSoft\Invoices\eicc.ini` When using the RSB, the ini parameter should be left empty.
section	The section in the `Eicc.ini file` that contains the SAP logon credentials. For example: `section=R3::P00` When using the RSB, this setting is used to point out the section in the `InvStat2PA.INI` file that contains the SAP logon credentials. If left empty, the logon credentials should be entered directly in the `[R3::ProfileName]` section.

`Logon settings in the InvStat2PA. INI file when using the RSB`

Setting	Description
EncryptLogonInfo	To encrypt the user and password, `EncryptLogonInfo` should be set to 1.
user	The SAP user name (RFC user) used for the R/3 connection.
password	The user password in the SAP R/3 system.
client	The R/3 client number.
language	The logon language (ISO code).
saprouter	Insert the SAP router string before the `Applicationserver` or `Messageserver` parameter. This is an optional setting; use with caution.
applicationserver	The IP address or domain name of the SAP R/3 application server.
systemnumber	The system number of the SAP R/3 system.
messageserver	The IP address or domain name of an SAP R/3 message server.
systemid	The systemID (for example, TR1) of the SAP R/3 system.
groupname	The group name for load balancing.

`[RFC::ProfileName]`

Setting	Description
FunctionName	The function module used to transfer the data to Performance Analytics. By default, this is set to `/EBY/PDBO_RFC_DATA_RECEIVE` and should not be changed.
Constants for RFC parameters	Do not modify.
Node Types	Do not modify.
Node Parents	Do not modify.
HeaderDataWithLineNumber	Do not modify.
TreatWarningAsError	1 – Warnings from `/EBY/PDBO_RFC_DATA_RECEIVE` are interpreted as errors. 0 – Warnings from `/EBY/PDBO_RFC_DATA_RECEIVE` are ignored.

Appendix B

Data extractors

This section provides a list of the different data extractors and source tables.

ℹ All the data fields in these tables are extracted from Process Director Accounts Payable and Invoices and passed to Performance Analytics.

AP Header data

Extractor description	AP Header Transactional
Extractor name	/EBY/AP_THDR_TRAN
Source tables	/COCKPIT/THDR /COCKPIT/THDRV

AP Workflow header data

Extractor description	AP Workflow Header Transactional
Extractor name	/EBY/AP_TWC_TRAN
Source tables	/COCKPIT/TWC /COCKPIT/TWCV

AP Workflow steps data

Extractor description	AP Workflow Step Data Transactional
Extractor name	/EBY/AP_TWCS_TRAN
Source tables	/COCKPIT/TWCS /COCKPIT/TWCSV

AP Posting status data

Extractor description	AP Posting Status Transactional
Extractor name	/EBY/AP_TSTAT_TRAN

Extractor description	AP Posting Status Transactional
Source table	/COCKPIT/TSTAT

AP Accounting data

Extractor description	AP Account Transactional
Extractor name	/EBY/AP_TACCT_TRAN
Source tables	/COCKPIT/TACCT /COCKPIT/TACCTV

AP Item data

Extractor description	AP Item Transactional
Extractor name	/EBY/AP_TITEM_TRAN
Source tables	/COCKPIT/TITEM /COCKPIT/TITEMV

AP Message log data

Extractor description	AP Message Log Transactional
Extractor name	/EBY/AP_TMSG_TRAN
Source table	/COCKPIT/TMSG

AP Error data

Extractor description	AP Errors Transactional
Extractor name	/EBY/AP_TERRORS_TRAN
Source table	/COCKPIT/TERRORS

Document OCR statistics

Extractor description	AP OCR Statistics Document Transactional
Extractor name	/EBY/AP_PDOCR_DOCU_TRAN
Source table	/EBY/PDOCR_THDR

Header OCR statistics

Extractor description	AP OCR Statistics Header Transactional
Extractor name	/EBY/AP_PDOCR_THDR_TRAN
Source table	/EBY/PDOCR_TITM

Item OCR statistics

Extractor description	AP OCR Statistics Item Transactional
Extractor name	/EBY/AP_PDOCR_TITM_TRAN
Source table	/EBY/PDOCR_TSUB

PD Basic header data

Extractor description	PD BO Header Information
Extractor name	/EBY/PDBO_THDR_TRAN
Source table	/EBY/PDBO_THDR

PD Message log data

Extractor description	PD General Message Log
Extractor name	/EBY/PDBO_TMSG_TRAN
Source table	/EBY/PDBO_TMSG

PD Workflow header data

Extractor description	PD WC Header Information
Extractor name	/EBY/PDWC_THDR_TRAN
Source table	/EBY/PDWC_THDR

PD Workflow step data

Extractor description	PD WC Step Information
Extractor name	/EBY/PDWC_TSTP_TRAN
Source table	/EBY/PDWC_TSTP

PD Workflow processor data

Extractor description	PD WC User Information
Extractor name	/EBY/PDWC_TPRO_TRAN
Source table	/EBY/PDWC_TPRO

PD Workflow activity data

Extractor description	PD WC Activity Information
Extractor name	/EBY/PDWC_TACT_TRAN
Source table	/EBY/PDWC_TACT

PD SO Header data

Extractor description	PD SO Header Information
Extractor name	/EBY/PDSO_THDR_TRAN
Source table	/EBY/PDSO_THDR

PD SO Item data

Extractor description	PD SO Item Information
Extractor name	/EBY/PDSO_TITM_TRAN
Source table	/EBY/PDSO_TITM

Appendix C

Installation checklists

ERP checklist

No.	Description	Completed
1	Install a license.	#
2	Configure the namespaces.	#
3	Set the `/EBY/` and `/B507/` namespaces to modifiable. See Configure the namespaces.	#
4	Import the Performance Analytics transport for ERP. See Import the transports.	#
5	[Optional] Import the OCR transport for ERP.	#
6	Implement all the required EMEICs and RSPDNs.	#
7	Activate the BAdI `/EBY/BW_EXTRACTION`; `SE19`. See Import the transports.	#
8	Transfer the Kofax component hierarchy from the business content - `SE9`. See Import the transports.	#
9	Activate the DataSources in ERP; `RSA5`. See Import the transports.	#
10	Check the `/EBY/PD` component hierarchy with sub-nodes and data sources. See Import the transports.	#
11	Check the extraction; `RSA3`. See Import the transports.	#

BW checklist

No.	Description	Completed
1	Configure the /EBY/ and /B507/ namespaces.	#
2	Connect the `/EBY/` and `/B507/` namespaces.	#
3	Check the connection from BW to ERP, or create a new one.	#
4	Configure the source system ID and text for the ERP system. See Connect BW to ERP.	#
5	Import the Performance Analytics transports for BW.	#
6	Replicate metadata.	#
7	Install the Kofax content; `/EBY/CONFIG` - Install the content.	#
8	Install the objects for the Report-Report interface and queries - Install the content.	#

No.	Description	Completed
9	Configure the RFC connection for query navigation to ERP.	#
10	Include the Kofax Query variable in the ZXRSRU01 customer include.	#
11	Set the local currency.	#
12	Check that the RS_CHAIN event exists; `SM64`. See the *Performance Analytics Using Process chains* guide for more information.	#
13	Define the final workflow status.	#
14	Determine the fiscal year variant.	#
15	Automatically create the RS process chain hierarchy.	#

OCR checklist

No.	Description	Completed
1	Install the InvStat2PA plug-in.	#
2	Check the EILOCAL.INI file entry.	#
3	Install the license.	#
4	Specify which invoice profiles to transfer data from.	#
5	Specify the path and name of the license file.	#
6	Specify the external GUID.	#
7	Specify the SAP system to connect to.	#
9	Check the mapping for the OCR data in ERP.	#
10	Check that the OCR tables are filled in.	#

Appendix D

Additional information

Filters during ETL on PD object types

Filter on the header GUID

The configuration for this filter is done in `/EBY/CONFIG`. When switched on, the PD BO header data source has to be initialized before any other Process Director transactional data source. All PD BO transactional data sources will then use the filters set for the header data source.

This is realized in the extractor classes by calling an instance of `/EBY/CL_BWPDBO_HEADER_FILTER`, which returns the filter values set for the header extractor. In the select statement, the PD BO header table is then inner joined using the filter values in the where-statement.

Filters in Texts and Attribute extractors

Texts and Attribute extractor classes can use the iterator provided by `/EBY/CL_BWPD_OBJ_FILTER`. This iterator holds all the Process Director object types configured in BW for extraction. The configured object types are read from the `/EBY/BWPDBOOBJFL` database table, which is held in sync with the BW configuration done in `/EBY/CONFIG`.

Filter in BW data flow

The `EBY_PDOBJ_FILTER` query variable can be used when a filter on Process Director object types is needed in DTPs or InfoPackages. This will read the configured object types from `/EBY/CONFIG` and apply them to the corresponding field in the source dataset. This is used in the standard delta InfoPackage for the PD BO header extractor.