HP OpenView Connect-It

Software version: 3.70

SAP-AssetCenter Integration Solution

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Table of Contents

List of Figures

List of Tables

Introduction

Who is the SAP-AssetCenter integration solution intended for?

The SAP-AssetCenter integration solution is aimed at companie who wish to use both SAP and AssetCenter.

In general, it is implemented by a consultant with expertise in the following domains:

- Structure and functionality of AssetCenter.
- Structure and functionality of SAP.
- Using Connect-It.

How to use this guide

Chapter Overview

This chapter explains how the SAP-AssetCenter integration solution is designed.

Chapter Installation and configuration

This chapter explains how to install and configure the different components of the SAP-AssetCenter integration solution.

Chapter Integrating reference data

This chapter explains how to maintain two reference data sets together in both SAP and AssetCenter.

Chapter Integration of procurement

This chapter explains how to manage a procurement cycle implemented across SAP and AssetCenter.

1   Overview

The SAP-AssetCenter integration solution is intended to be used as the basis for transferring data between the AssetCenter and SAP databases.

You can use it as source material for setting up processes suited to your own enterprise.

Transferring data between the two databases enables you to manage processes relying on both AssetCenter and SAP, while maintaining data integrity (for procurement management, in particular).

The integration solution can be adapted to your needs if required:
- Modifying the list of transferred fields.
- Adding tables to be transferred.
- Etc.

Why integrate AssetCenter and SAP?

AssetCenter and SAP are best-of-breed applications in their respective domains:
- AssetCenter, as an asset management solution, particularly suited for IT assets,
- SAP, as an ERP (Enterprise Resource Planning) solution.

On the whole, their zones of application are different but there are areas of overlap.

SAP excels in its ability to handle complex projects and go into great financial detail.

AssetCenter excels in its ability to manage complex assets (IT assets in particular), elaborate processes (using workflows, for example, tp manage procurement processes), maintain an inventory, manage licenses and detail expenses.

Integrating both packages enables you to make the most of their respective advantages and automate the maintenance of common data:

- For those processes that overlap, you will be using either AssetCenter, or SAP, depending on the phase of the process.
- Common reference data, except supplier catalogs and models, will be managed manually in one of the applications: SAP. The updating of this data is automated using the SAP-AssetCenter integration solution.
- Supplier catalogs are managed by hand in one of two AssetCenter software suites. This data does not appear in SAP.

SAP communication standards (IDOC and BAPI)

SAP uses two standard protocols to exchange data with other applications:

- *IDOC*: Enables SAP to produce or consume documents in the form of files. The documents produced can be imported by external applications. In turn, external applications can produce documents in the IDOC format that can be consumed by SAP.

   SAP has several IDOC document types as standard (IDOC Data Types).

   The production or consumption of IDOC documents can be automated in SAP.

   IDOC enables you to asynchronously transfer data between SAP and other applications.

- *BAPI* (Business API): Enables SAP to exchange data with external applications without using files.

   SAP has several BAPI data types as standard (Remote Function Calls).

   The triggering of the exchange of BAPI data must be initiated by an external application.

   BAPI enables you to synchronously transfer data between SAP and other applications.

- *ALE*: This standard is used to process IDoc files in synchronous and asynchronous mode.

Overview of the integration

The integration of SAP and AssetCenter is performed using Connect-It.

The integration uses the following connectors:

- Asset Management
- SAP BAPI
- SAP IDOC

Scenarios are provided for the data transfer.

Some of these scenarios use IDOC:

- IGetPeople.scn
- IGetCompany.scn
- IGetCostcenter.scn
- IGetInvoice.scn

Other scenarios use BAPI:

- BAPI_CREATE_REQUEST.scn
- BAPI_CREATE_PO.scn
- BAPI_RECEIVE.scn

2 Installation and configuration

Required configuration

The SAP-AssetCenter integration solution requires the following:

- SAP 4.5B or 4.6C (the SAP-AssetCenter integration solution has been tested with these two versions. It is possible that other versions work also.
- AssetCenter 4.1.1 or later.
- Connect-It 3.70.

  The following connectors are required:
  - Asset Management
  - SAP BAPI
  - SAP IDOC

  The full solution uses the following scenarios:
  - Integration of reference data:
    - IGetPeople.scn
    - IGetCompany.scn
    - IGetCostcenter.scn
  - Integration of procurement:
    - BAPI_CREATE_REQUEST.scn
    - BAPI_CREATE_PO.scn
    - BAPI_RECEIVE.scn
    - IGetInvoice.scn

Installing and configuring AssetCenter

Install and configure AssetCenter using the standard procedure as described in the AssetCenter *Installation* guide.

Next, import the features into the AssetCenter database:

1 Start AssetCenter.
2 Connect to the AssetCenter database to be integrated with SAP.
3 Select **File/ Import**.
4 Click **Execute a script**.
5 Select the script.

> ### Note:
>
> The full path of the script is the following:
>
> ```
> [Connect-It installation directory]\datakit\sap\acsapfeat\featerp.scr
> ```
>
> This script creates the required features in AssetCenter for integration.

6 Click **Import**.

Recommended configuration:

- Modify the user rights so that the reference tables cannot be modified in creation mode.
- Modify the user rights so that the reference fields cannot be entered in update mode.

For the list of reference tables and fields, refer to section Constraints to be respected [page 19].

Installing and configuring the SAP server

Install and configure SAP using the standard procedure as described in the SAP documentation.

Make sure that SAP automatically and regularly produces the IDOC files required by Connect-It.

The following document types are required:

- HRMD_A01
- CREMAS01
- MATMAS01
- COSMAS01

- INVOIC01

These document types must be included in a *distribution model* that references the appropriate *logical system* and *partner/ port* pairs.

Additionally, so that new records and modified records automatically create IDOC files, you must define the *ALE distribution configurations* (*SALE* transaction) so that the *Activate change pointers for message types* option is activated (*set up data distribution*).

Installing and configuring Connect-It

Install and configure Connect-It using the standard procedure as described in the Connect-It *User's Guide*.

Connect-It must be installed on a computer that has access to the AssetCenter and SAP servers.

Configure each of the scenarios of the SAP-AssetCenter integration solution so that they work in your environment:

1 Start the Scenario builder.

2 Open the scenario (**File/ Open** menu).

   List of scenarios included in the SAP-AssetCenter integration solution: See Overview of the integration [page 13]

3 In the **Scenario diagram** window, display the **Global** tab.

4 Right-click the **SAP IDOC** connector box if it is displayed.

   1 Select **Configure the connector** from the shortcut menu.

   2 Go through the pages of the wizard (**Next** button).

   3 Populate the fields according to your needs:
      - The **Choose a file or folder** page must reference the folder or the FTP server in which the IDOC documents from SAP are produced.

        These references depend on the way you have configured SAP.

      - The **Configure IDOC type** page must be fully populated.

   4 Click **Finish**.

5 Right-click the **SAP BAPI** connector box if it is displayed.

   1 Select **Configure the connector** from the shortcut menu.

   2 Go through the pages of the wizard (**Next** button).

   3 Populate the fields according to your needs.

      The **Connector deployment page** must contain the connection parameters for the SAP host to which the BAPI information from AssetCenter is to be sent.

These references depend on the way you have configured SAP.

    4 Click **Finish**.

6 Right-click the **Asset Management** connector box.

    1 Select **Configure the connector** from the shortcut menu.

    2 Go through the pages of the wizard (**Next** button).

    3 Populate the fields according to your needs.

      The **Define the connection parameters** page must contain the connection parameters for the AssetCenter database.

    4 Click **Finish**.

7 For the IDOC, right-click the **Mapping** box.

    1 Select **Edit a mapping** from the shortcut menu.

    2 Double-click each of the mappings to be viewed in the **Select a mapping** window.

    3 In the **Mapping** pane, select the **Additional scripts** tab.

    4 Set the *g_iLang* variable to the value corresponding to the language version of SAP used to generate the IDOC file.

      For German, for example, this will be `g_iLang = 0`.

    5 Click **OK**.

8 Save your parameters (**File/ Save** menu).

For more information on editing scenarios, refer to the Connect-It *Connecteurs* guide.

You must then schedule the automatic execution of the scenarios. For more information, refer to the Connect-It *User's Guide*, chapter *Putting the scenario into production*, section *Creating a schedule*.

3 Integrating reference data

In order for AssetCenter and SAP to be able to interact, the equivalent data must be maintained in their databases.

Because the SAP-AssetCenter integration solution emphasizes the procurement cycle, the following reference data is managed by default:

- Departments and employees
- Cost centers
- Suppliers

Note:

You must replicate this data in the order given in the above list.

Tip:

You can freely use what is done with these data types as inspiration for maintaining others.

Constraints to be respected

Maintaining consistent data in two different systems brings about a series of constraints:

Designating a reference database

You must begin by designating a reference database. In this case, it will be the SAP database.

Creating new records in the reference database

New reference data must be created in the SAP database. Connect-It will propagate the records created to the AssetCenter, if the IDOC documents have been correctly generated by SAP.

Warning:

If you create a new record (a new employee, for example) directly in the AssetCenter database, Connect-It will not propagate it to the SAP database, because the scenarios provided as standard do not cover this. However, you can adapt the scenarios so that the transfer works in both directions.

Tip:

We recommend prohibiting the creation of records in the reference tables of the AssetCenter database.

This is can be achieved using the user rights.

The tables in question are:

- **Employees** (amEmplDept)
- **Companies** (amCompany)
- **Cost centers** (amCostCenter)

Modifying the reference fields in the reference database

The fields transferred from the SAP database to the AssetCenter database must be modified in the SAP database only. Connect-It will propagate the values of these fields to the AssetCenter database.

Warning:

If you modify a record (telephone number of an employee, for example) directly in the AssetCenter database, Connect-It will not propagate the modifications to the SAP database.

Managing reference data

The following illustration shows how data is transferred between the SAP and AssetCenter databases.

Figure 3.1. Managing reference data
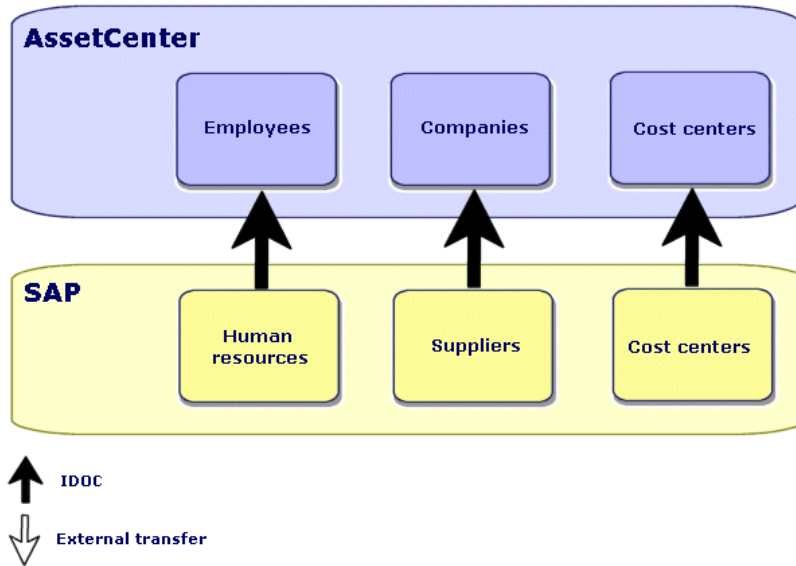
Comments:

- The SAP database is used as the reference database.
- The AssetCenter database is updated via Connect-It.
  These scenarios use IDOC.
- The AssetCenter are updated by other means, which are not part of the SAP-AssetCenter integration solution.

  Connect-It is shipped with a scenario that handles the importing of catalogs (*catalog.scn*). This scenario uses the *Asset Management* connector.

Scenarios and document types used

The installation program copies the scenarios to a folder such as `C:\Program Files\HP OpenView\ConnectIt\scenario\sapac43`.

Table 3.1. Integration of reference data - Scenarios and document types used

Type of transferred data	Connect-It scenario to use	SAP IDOC document type used
Employees	IGetPeople.scn	HRMD_A01
Suppliers	IGetCompany.scn	CREMAS01

Type of transferred data	Connect-It scenario to use	SAP IDOC document type used
Cost centers	IGetCostcenter.scn	COSMAS01

 Tip:

When Connect-It is installed, the sample IDOC files are copied to the `datakit\sap\idocs` sub-folder of the Connect-It installation folder.

You can use these files for testing purposes.

 Warning:

To view a mapping:
1 Start Connect-It.
2 Open the scenario (**File/ Open** menu).
3 In the **Mapping scenario** window, **Global** tab, right-click the **Mapping** box and select **Edit a mapping** from the shortcut menu.
4 Double-click the mapping to be viewed in the **Select a mapping** window.
5 Examine the **Mapping** window.

4   Integration of procurement

The SAP-AssetCenter integration solution allocates certain procurement tasks to AssetCenter and others to SAP.

This enables you to use the specific advantages of each application.

Two different strategies are available:

- Strategy 1: Budgetary validation in SAP [page 26]
- Strategy 2: Budgetary validation in AssetCenter [page 27]

Strategy 1: Budgetary validation in SAP

Figure 4.1. Procurement management - Strategy 1
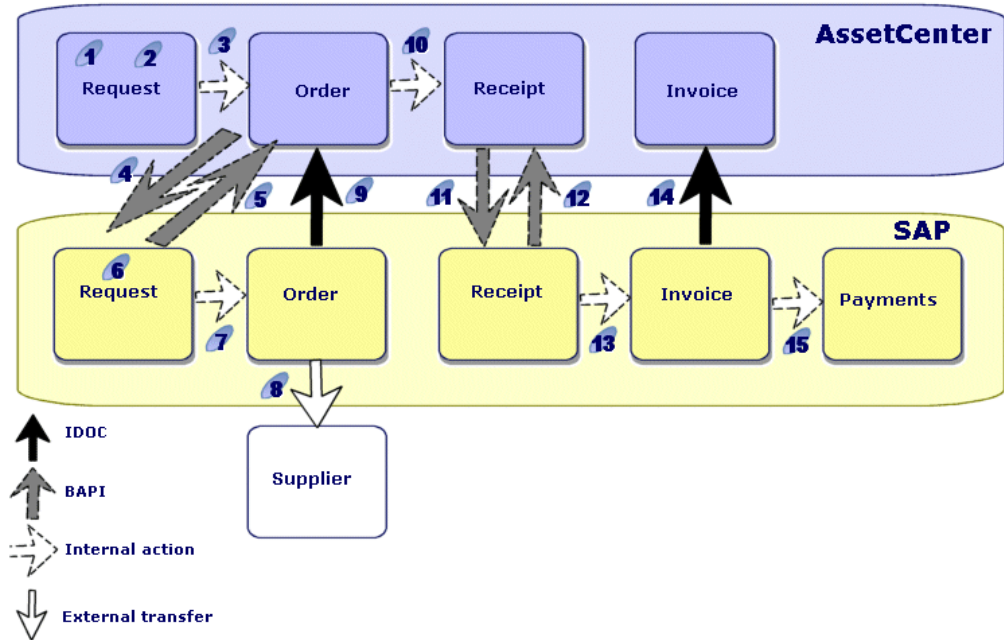
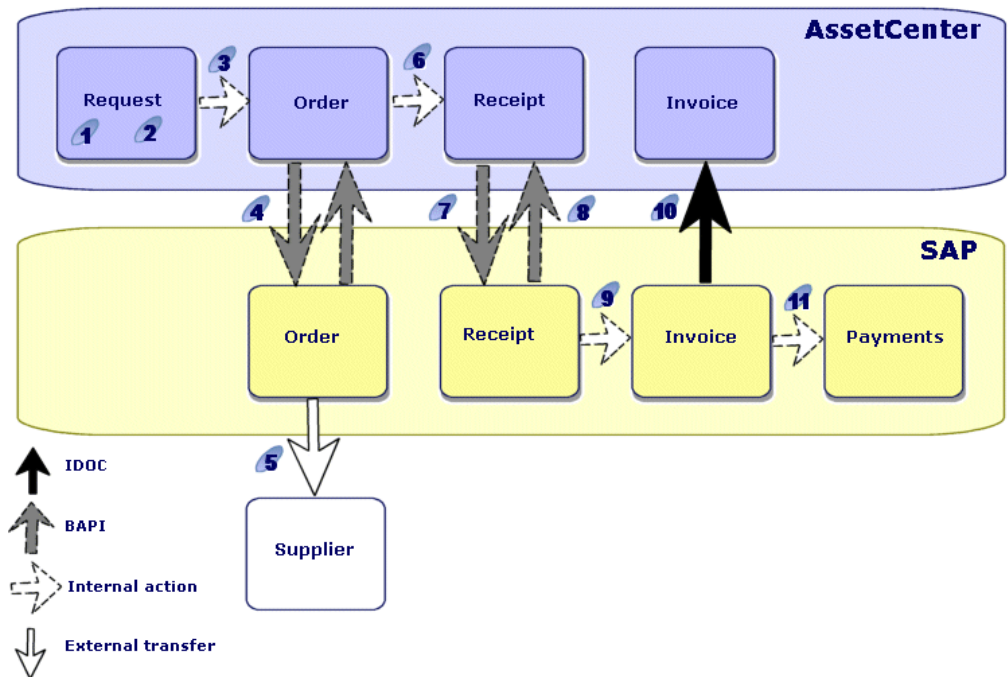With this strategy, the procurement cycle is organized as follows:

1 The purchase request is issued in AssetCenter.
2 The purchase request is receives technical validation in AssetCenter.
3 The purchase order is issued in AssetCenter from the request in AssetCenter.
4 The *BAPI_CREATE_REQUEST.scn* scenario transfers the validated purchase orders from AssetCenter to SAP, is the form of requests, using BAPI (*BAPI_REQUISITION_CREATE*).
5 The same scenario populates the SAP request number in the AssetCenter purchase order.
6 The purchase request receives budgetary validation in SAP.
7 The purchase order is issued in SAP in the form of a SAP request.
8 The purchase order is sent to the supplier from SAP.
9 A Connect-It scenario updates the AssetCenter purchase order with the information in the SAP purchase order using IDOC.

10 The assets are received in AssetCenter from the purchase order.
11 The *BAPI_RECEIVE.scn* scenario transfers the receiving slips from AssetCenter to SAP using BAPI (*BAPI_GOODSMVT_CREATE*).
12 The same scenario populates the SAP receipt number in the AssetCenter receiving slip.
13 The invoice is created, validated and processed for payment in SAP.
14 The *IGetInvoice.scn* scenario transfers the invoice to AssetCenter using IDOC (*INVOIC01*).

   Thus, you have in AssetCenter the prices actually paid to suppliers.
15 The SAP invoice is handled for payment in SAP.

Strategy 2: Budgetary validation in AssetCenter

Figure 4.2. Procurement management - Strategy 2

With this strategy, the procurement cycle is simpler and is organized as follows:
1 The purchase request is issued in AssetCenter.

2   The purchase request undergoes technical and budgetary validation in AssetCenter.

3   The purchase order is issued in AssetCenter from the AssetCenter request.

4   The *BAPI_CREATE_PO.scn* scenario transfers the purchase orders validated in AssetCenter to SAP using BAPI (*BAPI_PO_CREATE*).

    The same scenario populates the SAP purchase order number in the AssetCenter purchase order.

5   The purchase order is sent to the supplier from SAP.

6   The assets are received in AssetCenter from the AssetCenter purchase order.

7   The Connect-It *BAPI_RECEIVE.scn* scenario transfers the receiving slips from AssetCenter to SAP using BAPI (*BAPI_GOODSMVT_CREATE*).

8   The same scenario populates the SAP receipt number in the AssetCenter receiving slip.

9   The invoice is created, validated and processed for payment in SAP.

10   The *IGetInvoice.scn* scenario transfers the invoice to AssetCenter using IDOC (*INVOIC01*).

    Thus, you have in AssetCenter the prices actually paid to suppliers.

11   The SAP invoice is handled for payment in SAP.

Connect-It scenarios, SAP document types and RFCs used

Table 4.1. Integration of procurement - Scenarios, document types and RFCs used

Type of transferred data	Connect-It scenario to use	SAP IDOC document type used	SAP BAPI RFC used
AssetCenter purchase order -> SAP request (strategy 1)	BAPI_CREATE_RE-QUEST.scn		BAPI_REQUISI-TION_CREATE
AssetCenter purchase order -> SAP purchase order (strategy 2)	BAPI_CRE-ATE_PO.scn		BAPI_PO_CREATE
AssetCenter receipt -> SAP receipt (strategies 1 and 2)	BAPI_RECEIVE.scn		BAPI_GOODS-MVT_CREATE
SAP invoice -> AssetCenter invoice (strategies 1 and 2)	IGetInvoice.scn	INVOIC01	

Tip:

When Connect-It is installed, the sample IDOC files are copied to the `datakit\sap\idocs` sub-folder of the Connect-It installation folder. You can use these files for testing purposes.

Warning:

To view a mapping:
1 Start Connect-It.
2 Open the scenario (**File/ Open** menu).
3 In the **Mapping scenario** window, **Global** tab, right-click the **Mapping** box and select **Edit a mapping** from the shortcut menu.
4 Double-click the mapping to be viewed in the **Select a mapping** window.
5 Examine the **Mapping** window.

Index

R

S