Icons in Body Text

<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Caution" /></td>
<td>Caution</td>
</tr>
<tr>
<td><img src="image" alt="Example" /></td>
<td>Example</td>
</tr>
<tr>
<td><img src="image" alt="Note" /></td>
<td>Note</td>
</tr>
<tr>
<td><img src="image" alt="Recommendation" /></td>
<td>Recommendation</td>
</tr>
<tr>
<td><img src="image" alt="Syntax" /></td>
<td>Syntax</td>
</tr>
</tbody>
</table>

Additional icons are used in SAP Library documentation to help you identify different types of information at a glance. For more information, see Help on Help → General Information Classes and Information Classes for Business Information Warehouse on the first page of any version of SAP Library.

Typographic Conventions

<table>
<thead>
<tr>
<th>Type Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example text</td>
<td>Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation.</td>
</tr>
<tr>
<td>Example text</td>
<td>Emphasized words or phrases in body text, graphic titles, and table titles.</td>
</tr>
<tr>
<td>EXAMPLE TEXT</td>
<td>Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.</td>
</tr>
<tr>
<td>Example text</td>
<td>Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.</td>
</tr>
<tr>
<td>Example text</td>
<td>Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.</td>
</tr>
<tr>
<td>&lt;Example text&gt;</td>
<td>Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.</td>
</tr>
<tr>
<td>EXAMPLE TEXT</td>
<td>Keys on the keyboard, for example, F2 or ENTER.</td>
</tr>
</tbody>
</table>
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  Maintaining Print Settings ........................................................................................................ 24
    Configuring Label Printing .................................................................................................... 24
Master Data ..................................................................................................................................... 27
  Defining Units of Measurement ............................................................................................... 27
  Defining Products ....................................................................................................................... 28
  Defining GTIN Number Ranges ............................................................................................... 28
  Defining SSCC Number Ranges ............................................................................................... 29
  Defining Locations .................................................................................................................... 29
  Defining Business Partners ..................................................................................................... 30
  Maintaining Device Settings .................................................................................................. 30
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  Enabling Application Log and Monitoring ............................................................................ 32
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RFID-Enabled Slap&Ship Outbound Processing: Configuration Guide

Use

This business scenario configuration guide applies to the RFID-Enabled Slap&Ship Outbound Processing business scenario with the corresponding releases of SAP application components.

Business Scenario and Application Components

<table>
<thead>
<tr>
<th>Business Scenario</th>
<th>Application Component with Minimum Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFID-Enabled Slap&amp;Ship Outbound Processing</td>
<td>SAP Auto-ID Infrastructure (SAP All) 2.1</td>
</tr>
</tbody>
</table>

For more information about the necessary components and releases, see the RFID-Enabled Supply Chain Execution Master Guide in the SAP Service Marketplace at service.sap.com/instguides → Installation → Installation & Upgrade Guides → SAP Components.

Contents

The business scenario configuration guide contains all steps required to implement RFID-Enabled Slap&Ship Outbound Processing. The guide specifies the sequence of the configuration activities, and their dependencies. It includes information about the following topics:

- System connections
- Business Customizing (including master data settings)

For more information about RFID-Enabled Standalone Outbound Processing, see SAP Service Marketplace at service.sap.com/ibc → mySAP SCM → RFID-Enabled Supply Chain Execution.

Target Group

- Technical consultants
- Application consultants
- Project team members during the implementation of an SAP solution
- SAP customer IT department

The sections are aimed at both technical and application consultants. Other target groups may find certain sections important as well.

SAP Notes

Use

Before you start to configure this business scenario, consult the following SAP notes. This summary only contains major SAP notes, to give you an initial overview.
Central SAP Notes for the Business Scenario

<table>
<thead>
<tr>
<th>Support Package</th>
<th>SAP Note</th>
<th>Title of SAP Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>791067</td>
<td>Packing with more than one item not always working</td>
</tr>
<tr>
<td>00 and 01</td>
<td>788512</td>
<td>Key of ODS object 9AIIDSO1 is too long</td>
</tr>
</tbody>
</table>

To get a comprehensive and up-to-date overview of the SAP notes about a business scenario and its SAP application components, use the note search function on the SAP Service Marketplace at service.sap.com/notes.

Users and Roles in SAP All

User Management


Roles

SAP Auto-ID Infrastructure provides the following roles:

- **SAP_AIN_ADMINISTRATOR**
  
  As an administrator you will usually also need the roles SAP_XI_APPL_SERV_USER, SAP_XI_ADMINISTRATOR_ABAP and SAP_XI_MONITOR_ABAP.

- **SAP_AIN_SUPERVISOR**

- **SAP_AIN_WORKER**

  For more information, see the system documentation for each role (transaction PFCG).

Authorization Objects

The delivered roles have preconfigured authorization objects associated with them. If you create new roles, or modify existing roles, you can choose the authorization objects associated with those roles.

In ABAP, most transactions have a corresponding authorization object that gives the user permission to display or change data. However, some of the All Web browser (Web Dynpro) screens are not available in ABAP. For those screens, use an authority object for an ABAP screen with similar functionality. The table below shows the mapping of the Web Dynpro screens to the ABAP authority objects used for checking user permissions.

Mapping of Java screens to ABAP Authority Objects/Transactions

<table>
<thead>
<tr>
<th>Web Dynpro Auto-ID Infrastructure Menu Option</th>
<th>ABAP Screen</th>
<th>Authority Object</th>
<th>Field</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Data →</td>
<td>COMMPR01</td>
<td>COM_PRD</td>
<td>ACTVT</td>
<td>02, 03</td>
</tr>
</tbody>
</table>
### Settings in SAP BW

#### Introduction

The following section describes the settings needed for SAP BW.

#### BI Content for SAP Auto-ID Infrastructure

Built-in SAP BI capability provides flexible reporting based on a history of EPC observations – recorded by SAP Auto-ID Infrastructure (SAP AII) or from external sources.

SAP AII delivers the following SAP BI business content:

**Queries**
- *Quality of Reads* (9AII_C01_Q0001)
- *Quality of Writes* (9AII_C01_Q0002)
- *Situation of Stock in Different Locations* (9AII_C01_Q0003)

**InfoCubes**

---

<table>
<thead>
<tr>
<th>Product</th>
<th>Master Data → Location</th>
<th>Master Data → Business Partner</th>
<th>Master Data → GTIN Number Range</th>
<th>Master Data → SSCC Number Range</th>
<th>Monitoring → Document Status</th>
<th>Monitoring → Object Query</th>
<th>Monitoring → Unexpected Events</th>
<th>Execution → Commission Tag</th>
<th>Execution → Pack</th>
<th>Execution → Load</th>
<th>Execution → Assign Document</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/AIN/MDL</td>
<td>BP</td>
<td>/AIN/MDL</td>
<td>/AIN/MDL</td>
<td>/AIN/TDES</td>
<td>/AIN/QUPAC</td>
<td>/AIN/UE</td>
<td>/AIN/UE</td>
<td>/AIN/UE</td>
<td>/AIN/LOAD</td>
<td>/AIN/ASSIGNDOC</td>
</tr>
<tr>
<td></td>
<td>/AIN/LOC</td>
<td>B_BUPA_RLT</td>
<td>/AIN/LOC</td>
<td>/AIN/LOC</td>
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<td>S_TCODE</td>
<td>S_TCODE</td>
<td>S_TCODE</td>
<td>S_TCODE</td>
<td>S_TCODE</td>
<td>S_TCODE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ActVT</td>
<td>ActVT</td>
<td>ActVT</td>
<td>TCD</td>
<td>TCD</td>
<td>TCD</td>
<td>TCD</td>
<td>TCD</td>
<td>TCD</td>
<td>TCD</td>
</tr>
</tbody>
</table>
- **Reporting for All Using Internal and External Data** (9AII_C01)

**ODS Objects**
- **All Using Internal Data** (9AII_DS01_INT)
- **All Using External Data** (9AII_DS01_FF)

**InfoSources**
- **InfoSource for Extraction of All Internal Data** (AIN_9AII_INT)
- **InfoSource for Extraction of All External Data** (AIN_9AII_FF)

**DataSources**
- **All Internal Data** (9AII_INT)
- **All External Data** (9AII_FF)

**Data Flow**
The following graphic displays the data flow with the corresponding valuation levels:

![Data Flow Diagram]

**See also:**
For detailed information on the BI Content, refer to SAP Help Portal at help.sap.com → mySAP Business Suite → mySAP Supply Chain Management → SAP Auto-ID Infrastructure → Reporting with SAP Business Intelligence.

For general information on SAP BI, see SAP Help Portal at help.sap.com → SAP NetWeaver → Information Integration → SAP Business Information Warehouse.
Initializing SAP BW

Procedure

1. Define the client for SAP Business Information Warehouse (SAP BW) in table RSADMINA.
   
   ! This client needs to be different from client 000. For more information, refer to SAP Note 355814.

2. Define a logical system for the BW client and assign the logical system to the BW client.

3. Create a technical user for communication between SAP AII and SAP BW.
   
   In the command field, enter transaction SU01 and create a technical user, for example BIWREMOTE, and assign the roles SAP_AIN_ADMINISTRATOR and the profile S_BI-WX_RFC to this technical user. For more information, see SAP Note 784891.

4. Define a technical user for communication between the application and SAP BW.
   
   a. In the command field, enter transaction SM30.
   
   b. In the Table/View field enter RSADMINAV and choose Maintain.
   
   c. In the RSADMINA Maintenance view, enter the newly defined technical user in the BW User ALE field.

5. Transfer the application component hierarchy and transfer the DataSources.
   
   a. In the command field, enter transaction SBIW.
   
   b. Choose Data Transfer to the SAP Business Information Warehouse → Business Content Data Sources → Transfer Application Component Hierarchy and choose then Yes.
   
   c. Choose Data Transfer to the SAP Business Information Warehouse → Business Content Data Sources → Transfer Business Content Data Sources and maintain the following settings: Choose 9AI_BW_DATASOURCES → 9AI_TRANS_DATA, select the DataSources 9AI_FF and 9AI_INT and choose Transfer DataSources.

   ! For general information, see SAP Help Portal at help.sap.com → SAP NetWeaver → Information Integration → SAP Business Information Warehouse → Data Warehousing → Data Retrieval → Data Extraction from SAP Source Systems.

Activating BI Content and Setting up Data Extraction

Use

SAP delivers BI Content that is tailor-made for the requirements of the RFID-Enabled Slap&Ship Outbound Processing business scenario. If you want to use the Business Content, you must first copy it to the active version.
For general information on installing BI Content, refer to SAP Help Portal at help.sap.com → SAP NetWeaver → Information Integration → SAP Business Information Warehouse → Data Warehousing → Data Warehouse Management → Business Content (Versions) → Installing Business Content.

For an overview of the Business Content, see Settings in SAP BW [Seite 7].

Furthermore, you need to set up data extraction by defining a source system for the upload of external data and by assigning DataSources to InfoSources.

For general information on transferring data from flat files, see SAP Help Portal at help.sap.com → SAP NetWeaver → Information Integration → SAP Business Information Warehouse → Data Warehousing → Data Retrieval → Data Transfer from Flat Files.

For general information on assigning DataSources to InfoSources, see SAP Help Portal at help.sap.com → SAP NetWeaver → Information Integration → SAP Business Information Warehouse → Data Warehousing → Data Retrieval → Source System → Data Extraction from SAP Source Systems → DataSource → Assigning DataSources to InfoSources and Fields to InfoObjects.

Procedure

1. In the command field, enter transaction RSA1 to reach the Administrator Workbench.

   If the system prompts you to define a logical system for SAP BW and to assign this newly defined logical system to the appropriate BW client, maintain the necessary settings. You then need to replicate the metadata.

   For general information on the Administrator Workbench in SAP BW, refer to SAP Help Portal at help.sap.com → SAP NetWeaver → Information Integration → SAP Business Information Warehouse → Data Warehousing → Administrator Workbench.

2. Activate the InfoSources.

   a. In the Administrator Workbench (transaction code RSA1), choose Business Content → InfoSources by Application Component.
   b. Select the InfoSources AIN_9AII_INT and AIN_9AII_FF.
   c. Select Grouping → Dataflow Before and Afterwards.
   d. Select Collection Mode → Collect Automatically.
   e. Use the drag-and-drop function to transfer the InfoSources into the right-hand Collected Objects area of the screen.
   f. Choose Select All.
   g. Choose Install → Install.
   h. In the Merge InfoObject Calendar day (0CALDAY) screen, chose Transfer all without dialog.

3. Define a source system for the upload of external data using flat files.

   a. In the Administrator Workbench, choose Modeling → Source Systems.
   b. In the context menu of Source Systems, choose Create → File Systm (Manual Metadata, data using File Interface) and maintain your source system for the InfoSource AIN_9AII_FF.

   The source system is meant to be a file system in this context. When asked for the Logical System Name and Source System Name, enter names that differ...
from the names used for the BW system. You can freely define the names of the systems.

4. Assign source systems and DataSources to the InfoSources.
   a. In the Administrator Workbench, choose Modeling → InfoSources.
   b. In the context menu of the InfoSource AIN_9AII_FF, choose Change.
   c. Expand the Transfer Structures/Transfer Rules group box.
   d. Assign the newly defined source system for the upload of external data to the InfoSource.
   e. Assign the DataSource AIN_9AII_FF to the InfoSource.

   ![Tip]

   If the necessary DataSource is not available for your source system, choose Modelling → Source Systems. In the context menu of the DataSource, choose Replicate DataSources.

   f. On the Transfer Rules tab, maintain the following settings:

   **Assign InfoObject-field**

<table>
<thead>
<tr>
<th>InfoObject</th>
<th>Description</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>9AII_EPC_S</td>
<td>Electr. Product Code</td>
<td>/BI0/9AII_EPC_S</td>
</tr>
<tr>
<td>9AII_PRO_T</td>
<td>Product description</td>
<td>/BI0/9AII_PRO_T</td>
</tr>
<tr>
<td>9AII_LOC_I</td>
<td>Location identifier</td>
<td>/BI0/9AII_LOC_I</td>
</tr>
<tr>
<td>9AII_EPCNO</td>
<td>Electr. Product Code</td>
<td>/BI0/9AII_EPCNO</td>
</tr>
<tr>
<td>9AII_GTIN</td>
<td>Glob. TradeItemNo.</td>
<td>/BI0/9AII_GTIN</td>
</tr>
<tr>
<td>9AII_EX_TS</td>
<td>Execution time stamp</td>
<td>/BI0/9AII_EX_TS</td>
</tr>
<tr>
<td>9AII_RLOTY</td>
<td>Reader location type</td>
<td>/BI0/9AII_RLOTY</td>
</tr>
<tr>
<td>9AII_LO_TL</td>
<td>Location description</td>
<td>/BI0/9AII_LO_TL</td>
</tr>
<tr>
<td>9AII_LO_TS</td>
<td>Location description</td>
<td>/BI0/9AII_LO_TS</td>
</tr>
<tr>
<td>9AII_STAT</td>
<td>Virtual status</td>
<td>/BI0/9AII_STAT</td>
</tr>
<tr>
<td>9AII_SU_RF</td>
<td>Successful read Indicator</td>
<td>/BI0/9AII_SU_RF</td>
</tr>
<tr>
<td>9AII_EX_RF</td>
<td>Expected read Indicator</td>
<td>/BI0/9AII_EX_RF</td>
</tr>
<tr>
<td>9AII_INFTY</td>
<td>Info type</td>
<td>/BI0/9AII_INFTY</td>
</tr>
<tr>
<td>RECORDMODE</td>
<td>Update Mode</td>
<td>RECORDMODE</td>
</tr>
</tbody>
</table>

   g. Choose Activate.
   h. Go back to the Administrator Workbench.
   i. In the context menu of the InfoSource AIN_9AII_INT, choose Change.
   j. Expand the Transfer Structures/Transfer Rules group box.
   k. Ensure that the correct source system is assigned to the InfoSource.
   l. Assign the DataSource AIN_9AII_INT to the InfoSource.

   ![Tip]

   If the necessary DataSources are not available for your source system, choose Modeling → Source Systems. In the context menu of the DataSource, choose Replicate DataSources.
m. On the Transfer Rules tab page maintain the following settings:

### Assign InfoObject-field

<table>
<thead>
<tr>
<th>InfoObject</th>
<th>Description</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>9AII_CLNT</td>
<td>Client</td>
<td>MANDT</td>
</tr>
<tr>
<td>9AII_EPCNO</td>
<td>Electronic Product Code</td>
<td>EPC_NO</td>
</tr>
<tr>
<td>9AII_EPC_H</td>
<td>Hexadecimal representation of the EPC number</td>
<td>EPC_NO_HEX</td>
</tr>
<tr>
<td>9AII_INFTY</td>
<td>Information type</td>
<td>INFOTYPE</td>
</tr>
<tr>
<td>9AII_GTIN</td>
<td>Global Trade Item Number (GTIN)</td>
<td>GTIN</td>
</tr>
<tr>
<td>9AII_GTINV</td>
<td>GTIN Type</td>
<td>GTIN_VAR</td>
</tr>
<tr>
<td>9AII_SSCC</td>
<td>Serial Shipping Container Code</td>
<td>SSCC</td>
</tr>
<tr>
<td>9AII_EX_DT</td>
<td>Execution date</td>
<td>EXEC_DATE</td>
</tr>
<tr>
<td>9AII_EX_TI</td>
<td>Execution time</td>
<td>EXEC_TIME</td>
</tr>
<tr>
<td>9AII_DEV_I</td>
<td>Device ID</td>
<td>DEV_ID</td>
</tr>
<tr>
<td>9AII_DEV_T</td>
<td>Device Description</td>
<td>DEV_DESCR</td>
</tr>
<tr>
<td>9AII_DVG_I</td>
<td>Device Group ID</td>
<td>DEVGRP_ID</td>
</tr>
<tr>
<td>9AII_DVG_T</td>
<td>Device Group Description</td>
<td>DEVGRP_DESCR</td>
</tr>
<tr>
<td>9AII_LOC_I</td>
<td>Location ID</td>
<td>LOC_ID</td>
</tr>
<tr>
<td>9AII_LOCTY</td>
<td>Location Type</td>
<td>LOC_TYPE</td>
</tr>
<tr>
<td>9AII_LO_TL</td>
<td>Location Description</td>
<td>LOCDESC</td>
</tr>
<tr>
<td>9AII_SU_RF</td>
<td>Success Read Indicator</td>
<td>SUCC_R_FLAG</td>
</tr>
<tr>
<td>9AII_EX_RF</td>
<td>Expected Read Indicator</td>
<td>EXP_R_FLAG</td>
</tr>
<tr>
<td>9AII_IN_F</td>
<td>Inward Inventory Movement Indicator</td>
<td>IN_MV_FLAG</td>
</tr>
<tr>
<td>9AII_OUT_F</td>
<td>Inward Inventory Movement Indicator</td>
<td>OUT_MV_FLAG</td>
</tr>
<tr>
<td>9AII_BUPA</td>
<td>Business Partner Number</td>
<td>BU_PARTNER</td>
</tr>
<tr>
<td>9AII_PRO_I</td>
<td>Product ID</td>
<td>PRODUCT_ID</td>
</tr>
<tr>
<td>9AII_PRO_T</td>
<td>Product Description</td>
<td>PROD_DESCR</td>
</tr>
<tr>
<td>9AII_DOC_I</td>
<td>Document ID</td>
<td>DOC_ID</td>
</tr>
<tr>
<td>9AII_DOCTY</td>
<td>Document Type</td>
<td>DOC_TYPE</td>
</tr>
<tr>
<td>9AII_ACTTY</td>
<td>Action Type</td>
<td>ACTION_TYPE</td>
</tr>
<tr>
<td>9AII_DVGRO</td>
<td>Business Role of a Device Group</td>
<td>DEVGRP_ROLE</td>
</tr>
<tr>
<td>0RECORDMODE</td>
<td>Cancel Data Record Indicator</td>
<td>ROCANCEL</td>
</tr>
<tr>
<td>9AII_PAN01</td>
<td>Activity Parameter Name</td>
<td>PARAM_NAME_01</td>
</tr>
<tr>
<td>9AII_PAV01</td>
<td>Activity Parameter Value</td>
<td>PARAM_VALUE_01</td>
</tr>
</tbody>
</table>
5. Activate the queries for InfoCube 9AII_C01.
   a. In the Administrator Workbench, choose Business Content → InfoProviders by InfoAreas.
   b. Select the InfoCube 9AII_C01.
   c. Select Grouping → Dataflow Afterwards.
   d. Select Collection Mode → Collect Automatically.
   e. Use the drag-and-drop function to transfer the InfoCube into the right-hand Collected Objects area of the screen.
   f. Choose Select All.
   g. Choose Install → Install.
   h. In the Merge InfoObject Calendar day (0CALDAY) screen, chose Transfer all without dialog.

6. Maintain the ODS objects 9AIIDS01 and 9AIIDS02 in case Update data targets from ODS object automatically should be done for both ODS objects.

   For SP0 and SP1 releases of SAP All 2.1, you must manually apply SAP note 788512 before you activate the ODS objects.
   a. In the Administrator Workbench, choose Modeling → InfoProvider.
   b. In the context menu of the ODS object 9AIIDS01, choose Change.
   c. Choose Settings, and ensure that the checkbox Update data targets from ODS object automatically is selected. In case you change the settings, you need to activate the ODS object again.
   d. Repeat these steps for the ODS object 9AIIDS02 (if necessary).

### Setting up InfoPackages

#### Use

You need to create the following InfoPackages

- InfoPackage for InfoSource AIN_9AII_INT: Delta Upload (initialization) for Internal Data
- InfoPackage for InfoSource AIN_9AII_INT: Delta Upload (Delta) for internal data.
- Optional: InfoPackage for InfoSource AIN_9AII_FF: Upload for external data
For more information on InfoPackages, see SAP Help Portal at help.sap.com → SAP NetWeaver → Information Integration → SAP Business Information Warehouse → Data Warehousing → Data Warehouse Management → Process Management → Scheduler.

Procedure 1: Delta Upload (Initialization) for Internal Data
You set up an InfoPackage for the InfoSource AIN_9AI_INT, for example Delta Upload (initialization) for Internal Data.

1. In the Administrator Workbench in the Modeling area, choose InfoSources.
2. On the InfoSources tab page, in the context menu of the <source system>, choose Create InfoPackage.
3. In the Create InfoPackage dialog box, enter the name of the InfoPackage and choose Enter.
   a. On the Data Selection tab page, you do not need to make any entries.
   b. On the Processing tab page, select the radio button PSA and then into Data Targets (Package by Package).
   c. On the Data Targets tab page, select the radio button Select Data Targets. Ensure that the Updating the Data Target check box is selected for 9AIIDS01.
   d. On the Update tab page, select the radio button Initialize Delta Process. Ensure that the Initialize Without Data Transfer check box is not selected.
   e. On the Schedule tab page, select the radio button Start Data Load Immediately.
4. Save your entries.

Procedure 2: Triggering the Upload
After you have maintained all necessary Customizing settings described in this document and created some transaction data, you can trigger the following upload to get the scenario up and running.

If transaction data are not yet available, the following steps do not apply.

1. Execute the program /AIN/BW_INIT_UPLOAD (transaction SE38).
2. In the Administrator Workbench in the Modeling area, choose InfoSources.
3. On the InfoSources tab page, in the context menu of <Delta Upload (initialization) for Internal Data>, choose Schedule.
4. On the Scheduler (Maintain InfoPackage) screen, on the Schedule tab page, choose Start.
5. To ensure that the request is completed successfully go to the Administrator Workbench → Modeling → InfoProvider. In the context menu of the ODS object All using internal data (9AIIDS01), choose Manage. On the Requests tab page, you can check the results of the upload.
6. To ensure that the data is loaded correctly to the appropriate InfoCube, go to the Administrator Workbench → Modeling → InfoProvider. In the context menu of the InfoCube Reporting for All using internal and external data (9AI_C01), choose Manage. On the Requests tab page, you can check the results of the upload.
Procedure 3: Delta Upload (Delta) for Internal Data

You set up an InfoPackage for the InfoSource AIN_9AII_INT, for example Delta Upload (Delta) for internal data.

⚠️

You can only proceed with the following steps after procedures 1 and 2 are done.

1. In the Administrator Workbench in the Modeling area, choose InfoSources.
2. On the InfoSources tab page, in the context menu of the <source system>, choose Create Info Package.
3. In the Create Info Package dialog box, enter the name of the InfoPackage and choose Enter.
   a. On the Data Selection tab page you do not need to make any entries.
   b. On the Processing tab page, select the radio button PSA and then into Data Targets (Package by Package).
   c. On the Data Targets tab page, select the radio button Select Data Targets. Ensure that the Updating the Data Target check box is selected for 9AIIDS01.
   d. On the Update tab page, select Delta Update.
   e. On the Schedule tab page, select the button Start Later in Background.
   f. Choose Schedule options to maintain the frequency of the delta upload.
4. Save your entries.

Procedure 4 (Optional): Upload for External Data

You set up an InfoPackage for the InfoSource AIN_9AII_FF, for example Upload for external data.

1. In the Administrator Workbench in the Modeling area, choose InfoSources.
2. On the InfoSources tab page, in the context menu of the <source system>, choose Create Info Package.
3. In the Create InfoPackage dialog box, enter the name of the InfoPackage and choose Enter.
   a. On the Data Selection tab page you do not need to make any entries.
   b. On the External Data tab page, select the radio button Load External Data from Workstation. Enter the name of the CSV-File with exact path. Ensure that the File is Data file and the radio button File Type CSV File is chosen. The data separator should be <,>. Ensure that the CSV file is built accordingly to the InfoSource AIN_9AII_FF.
   c. On the Processing tab page, select the radio button PSA and then into Data Targets (Package by Package).
   d. On the Data Targets tab page, select the radio button Select Data Targets. Ensure that the Updating the Data Target check box is selected for 9AIIDS02.
   e. On the Update tab page, select Full Update.
   f. On the Schedule tab page, select Start Data Load Immediately.
4. Save your entries.
**Procedure 5: Triggering the Upload**

After you have maintained all necessary Customizing settings described in this document and created some data in a CSV file, you can trigger the following upload to get the scenario up and running.

1. In the Administrator Workbench in the Modeling area, choose InfoSources.
2. On the InfoSources tab page, in the context menu of <InfoPackage Upload for External Data>, choose Schedule.
3. On the Scheduler (Maintain InfoPackage) screen, on the Schedule tab page, choose Start.
4. To ensure that the request is completed successfully go to the Administrator Workbench → Modeling → InfoProvider. In the context menu of the ODS object All using external data (9AIIDS02), choose Manage. On the Requests tab page, you can check the results of the upload.
5. To ensure that the data is loaded correctly to the appropriate InfoCube, go to the Administrator Workbench → Modeling → InfoProvider. In the context menu of the InfoCube Reporting for All using internal and external data (9AII_C01), choose Manage. On the Requests tab page, you can check the results of the upload.

**Configuring Periodic Updates to SAP BW**

**Use**

You use this procedure to change the frequency of the periodic Delta Update jobs that transfer SAP AII data to SAP BW.

**Procedure**

1. Update the Delta Update InfoPackage to change the settings for the background job. In the Administrator Workbench in the Modeling area, choose InfoSources.
2. On the InfoSources tab page, in the context menu of the Delta Update InfoPackage, for Info source for extraction of AII internal data (AIN_9AII_INT) choose Schedule.
3. On the Schedule tab page, ensure that the Start Later in Background radio button is selected.
4. Choose Stop to stop the current scheduled job.
5. Choose Schedule options to change the settings for the background job:
   a. Choose Period values.
   b. Change the period according to the requirement.
   c. Save your entries.
   d. Choose Restrictions.
   e. Change the restrictions according to the requirement.
   f. Save your entries and go back.
6. Save your entries.
7. Choose Start to release the first job with the new requirements.
8. Choose Job and then Execute to check if a new job was released. There should be an entry for a batch job with an X in the column Released.
Loading Spreadsheet Data into SAP BW

Use
You can load EPC observations outside of SAP AII into SAP BW from a comma-delimited spreadsheet. This procedure describes the spreadsheet format and the steps for loading the external data.

Procedure
1. Each worksheet must be saved as a CSV-File with delimiter <,>.

   The CSV-File must contain the following columns in the following order:

<table>
<thead>
<tr>
<th>Field in DataSource</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/BI0/9AII_EPC_S</td>
<td>Electr. Product Code</td>
</tr>
<tr>
<td>/BI0/9AII_PRO_T</td>
<td>Product description</td>
</tr>
<tr>
<td>/BI0/9AII_LOC_I</td>
<td>Location identifier (= the store)</td>
</tr>
<tr>
<td>/BI0/9AII_EPCNO</td>
<td>Electr. Product Code</td>
</tr>
<tr>
<td>/BI0/9AII_GTIN</td>
<td>Glob.TradeItemNo.</td>
</tr>
<tr>
<td>/BI0/9AII_EX_TS</td>
<td>Execution time stamp</td>
</tr>
<tr>
<td>/BI0/9AII_RLOTY</td>
<td>Reader location type (= the reader)</td>
</tr>
<tr>
<td>/BI0/9AII_LO_TL</td>
<td>Location description</td>
</tr>
<tr>
<td>/BI0/9AII_LO_TS</td>
<td>Location description</td>
</tr>
<tr>
<td>/BI0/9AII_STAT</td>
<td>Virtual status</td>
</tr>
<tr>
<td>/BI0/9AII_SU_RF</td>
<td>Successful read flag</td>
</tr>
</tbody>
</table>

2. Delete any previously loaded external data from the PSA and ODS.

   Retain previous data in the InfoCube.

   Delete all existing data for ODS object 9AIIDS02 (external data):
   a. In the Administrator Workbench in the Modeling area, choose InfoProvider.
   b. In the context menu of the ODS object All using external data (9AIIDS02), choose Delete Data.
   c. In dialog box Delete InfoCube/ODS Contents, choose Delete Entries.

   Delete all data for PSA (external data):
   d. In the Administrator Workbench in the Modeling area, choose PSA.
   e. In the context menu of the InfoSource InfoSource for extraction of All external data (AIN_9AII_FF), choose Delete PSA Data.
   f. In the tray Delete All Requests, change the Before date to <tomorrow> and choose Start.

3. Upload each external CSV-File using the Full Update InfoPackage for the InfoSource for extraction of All external data (AIN_9AII_FF):

   a. In the Administrator Workbench in the Modeling area, choose InfoSources.
   b. Open the Full Update InfoPackage for the InfoSource InfoSource for extraction of All external data (AIN_9AII_FF). Check the following points:
      i. On the Data Selection tab page no entries are required.
ii. On the External Data tab page, select the radio button *Load External Data from Workstation*. Enter the name of the CSV-File with its exact path. Ensure that the File is *Data file* and the radio button *File Type CSV File* is chosen. The data separator should be <,>.  

iii. On the Processing tab page, select the radio button *PSA and then into Data Targets (Package by Package)*.  

iv. On the Data Targets tab page, select the radio button *Select Data Targets*. Ensure that the *Updating the Data Target* check box is selected for 9AIIDS02.  

v. On the Update tab page, select *Full Update*.  

vi. On the Schedule tab page, select *Start Data Load Immediately*.  

vii. Choose *Start*.  

viii. Check if upload was successful:  

To ensure that the request is completed successfully, go to the Administrator Workbench → Modeling → InfoProvider. In the context menu of the ODS object *All using external data* (9AIIDS02), choose *Manage*. On the Requests tab page, you can check the results of the upload.  

To ensure that the data is loaded correctly to the appropriate InfoCube, go to the Administrator Workbench → Modeling → InfoProvider. In the context menu of the InfoCube *Reporting for All using internal and external data* (9AI_01), choose *Manage*. On the Requests tab page, you can check the results of the upload.  

---

**Settings in SAP All Customizing**  

In Customizing for Auto-ID Infrastructure, you can find standard settings for configuring the *RFID-Enabled Slap&Ship Outbound Processing* business scenario. Some of these settings require individual adjustments; some of them do not necessarily need to be adjusted to configure the scenario.  

The following Customizing activities for Auto-ID Infrastructure need individual adjustment.  

- [Maintaining EPC Settings](#)  
- [Activating HTTP Services](#)  
- [Creating RFC Connections](#)  
- [Defining Product Hierarchies](#)  
- [Maintaining Product Settings](#)  
- [Defining Rules](#)  
- [Maintaining Print Settings](#)  

---

**Maintaining EPC Settings**  

**Use**  

In the standard system, the following EPC versions are delivered:  

- EPC_1.20  
- EPC_1.24
Additionally, you define one of these versions as the EPC version that is to be used and you define your company prefix.

**Procedure**

1. In Customizing for SAP Auto-ID Infrastructure, choose *Basic Settings* → *Electronic Product Code (EPC) Settings* → *Define EPC Settings*.
2. In the dialog structure, choose *Active EPC Version*.
3. Choose *New Entries* and select EPC version EPC_1.24 from the input help.
4. Save your entries.
5. In the dialog structure, choose *Company Prefix*.
6. Maintain the following sample settings:

<table>
<thead>
<tr>
<th>Company Prefix</th>
<th>0037000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Index</td>
<td>1</td>
</tr>
</tbody>
</table>
7. Save your entries.

![Activating HTTP Services]

**Activating HTTP Services**

**Use**

You need to activate HTTP services to enable communication from SAP AII to other systems (for example, between the SAP AII system and external printers).

**Procedure**

1. In Customizing for Auto-ID Infrastructure, choose *Basic Settings* → *Device Communication Settings* → *Activate HTTP Services*.
2. Read the instructions given under *Basic Settings* → *Device Communication Settings* → *Activate HTTP Settings for Auto-ID* and maintain the following sample settings.
3. Choose *External Aliases*,
4. Select *default_host* and choose then *Create New External Alias*.
5. Create the new external alias /sap/scm/ain.
6. On the *Trg Element* tab page, select *default_host* → *sap* → *scm* → *ain*.
7. On the *Service data* tab page, maintain the *Anonymous Logon Data* of the SAP AII system.

   ![Create new user]

   Enter a system user such as ALEREMOTE.
8. Save your settings.

![Creating RFC Connections]

**Creating RFC Connections**

**Use**

You need to define RFC connections (HTTP or TCP/IP) to your tag writers.
Note that is only possible to create EPCs with a valid RFC connection in place.

**Procedure**

**Define an HTTP RFC Connection**

1. In Customizing for Auto-ID Infrastructure, choose Basic Settings → Integration → Create RFC Connections.
2. Choose Create.
3. Enter the following sample data:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFC Destination</td>
<td>&lt;your RFC destination, for example MYDEVICE CONTROLLER&gt;</td>
</tr>
<tr>
<td>Type</td>
<td>G (HTTP Connection to Ext. Server)</td>
</tr>
<tr>
<td>Target Host</td>
<td>&lt;IP address of the printer’s device controller&gt;</td>
</tr>
<tr>
<td>Service</td>
<td>&lt;port at which the device controller receives the HTTP message, for example 8080&gt;</td>
</tr>
<tr>
<td>Prefix</td>
<td>&lt;path to application in the device controller handling the HTTP message. In case the device controller is dedicated for the printer, the path is usually “/” &gt;</td>
</tr>
</tbody>
</table>

4. Save your entries.

**To Define a TCP/IP RFC Connection**

**Configuration on the ABAP Side**

5. In Customizing for Auto-ID Infrastructure, choose Basic Settings → Integration → Create RFC Connections.
6. Choose TCP/IP connections and choose then Create.
7. Enter the following sample data:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFC Destination</td>
<td>&lt;your RFC destination, for example, ALL_PRINT_TCP/IP &gt;</td>
</tr>
<tr>
<td>Type</td>
<td>T (Start an external program via TCP/IP)</td>
</tr>
<tr>
<td>Description</td>
<td>User-defined</td>
</tr>
</tbody>
</table>

8. Choose Enter.
9. Select Registered Server Program for the Activation Type.
10. In the Program ID field, enter the RFC Destination that you just entered above (ALL_PRINT_TCP/IP).
11. **Only if your system is set to Unicode**, choose the Special Options tab, then select Unicode.
12. Choose Save.

**Define Connections for Printers**

13. In Customizing for Auto-ID Infrastructure, choose Basic Settings → Integration → Create RFC Connections.

15. Enter the following sample data:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFC Destination</td>
<td>&lt;your printer destination, for example TCPIP_PRINTER &gt;</td>
</tr>
<tr>
<td>Type</td>
<td>T (Start an external program via TCP/IP)</td>
</tr>
<tr>
<td>Description</td>
<td>User-defined</td>
</tr>
</tbody>
</table>

16. Choose Enter.

17. Select Registered Server Program for the Activation Type.

18. In the Program ID field, enter the RFC Destination that you just entered above (AII_PRINT_TCPIP).

19. In the field Gateway Host, enter the IP address of the printer.

20. In the field Gateway Service, enter the printer port.

21. Choose Save.

**Configuration on the J2EE Side**

1. Start the tool Visual Administrator tool.

   Visual Administrator is usually an executable program named `go.bat` found in the `j2ee/admin` directory on the machine running J2EE. The absolute path depends on the installation.

2. Go to Server -> Services -> JCo RFC Provider.

3. In the RFC destination groupbox:
   a. In the Program ID field, enter the RFC destination name created in step 1 of section To Define a TCP/IP RFC Connection for ABAP (AII_PRINT_TCPIP in this case).
   b. In the Gateway host field, enter the name of the machine running the ABAP application
   c. In the Gateway service field enter sapgw<system number of the machine running ABAP application>.
   d. In the Number of processes field, enter 20.

4. In the Repository groupbox:
   a. In the Application server host field, enter the name of the machine running the ABAP application.
   b. In the System number field, enter the system number of the machine running ABAP application.
   c. Enter appropriate client, language, user and password.

5. Only if your system is set to Unicode, select Unicode.

6. Choose Set.

**Check that the Connection is Working**

1. In Customizing for Auto-ID Infrastructure, choose Basic Settings → Integration → Create RFC Connections.

2. Choose the destination (AII_PRINT_TCPIP in this case) from the list of TCP/IP connections.
3. Choose Test Connection. The screen displays the Connection types and TCP/IP connections.

4. Navigate to transaction SMGW.

5. Choose Goto -> Logged on clients.

6. Locate the entry for the machine running J2EE and program ID - AII_PRINT_TCPIP.

   The program name may be truncated. Double click on the entry to see the full name.

7. The program ID name appears in the TP name column and the J2EE machine name appears in the LU name column.

   Do NOT test the connection for the RFC destination of the printer (TCPIP_PRINTER, in this case). This is created to hold information for opening the connection from the Java Stack.

---

### Defining Product Hierarchies

**Use**

SAP Auto-ID infrastructure handles products by SAP standard functionality. In general, products are grouped into categories, and each category belongs to one hierarchy. However, all products in the Auto-ID infrastructure belong to the category AIN_MATERIAL, and the category AIN_MATERIAL belongs to the hierarchy AIN_BASE. To create this category and this hierarchy, execute the following steps.

For more information about the SAP Product, see SAP Help Portal at help.sap.com → SAP NetWeaver → Application Platform (SAP Web Application Server) → Cross-Application Services → SAP – Product.

**Prerequisites**

You have maintained the logical system in transaction SCC4.

**Procedure**

1. In Customizing for Auto-ID Infrastructure, choose Master Data → Product → Define Product Hierarchies.

2. Choose Create Hierarchy and enter the following data:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchy ID</td>
<td>AIN_BASE</td>
</tr>
<tr>
<td>Description</td>
<td>AIN base hierarchy</td>
</tr>
</tbody>
</table>

3. Save your entries.

4. Choose Environment → Assign Hierarchies to Applications.

   a. In the dialog structure, choose Assign Hierarchies to Applications, then choose New Entries and enter the following sample data:

<table>
<thead>
<tr>
<th>Application</th>
<th>Hierarchy ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>AIN_BASE</td>
</tr>
</tbody>
</table>
b. In the dialog structure, choose Assgmt per Product Type for Application Product, then choose New Entry and enter the following sample data:

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Hierarchy ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>AIN_BASE</td>
</tr>
</tbody>
</table>

c. Save your entries and then choose Back.

5. Open the hierarchy AIN_BASE and choose Display<->Change.

6. Choose Create category and enter the following sample data:

<table>
<thead>
<tr>
<th>Category ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIN_MATERIAL</td>
<td>AIN Material</td>
</tr>
</tbody>
</table>

7. On the Category tab page, select the product type Material.

8. On the Set Types tab page, add the following set types:
   - COMM_PR_GTIN
   - COMM_PR_SHTEXT
   - COMM_PR_UNIT
   You need only to enter the set-type names; the remaining fields are filled automatically.

9. Save your entries.

---

Maintaining Product Settings

Use

You define output format and storage form of product IDs as well as authorization groups. These settings cannot be delivered in the standard system and have to be maintained in the project.

Procedure

1. In Customizing for Auto-ID Infrastructure, choose Master Data → Product → Define Output Format and Storage Form of Product IDs and maintain the necessary settings.

   Enter the length (40 is the maximum length).

2. In Customizing for Auto-ID Infrastructure, choose Master Data → Product → Define Authorization Groups and maintain the necessary settings.

---

Defining Rules

Use

To enable packing using fixed RFID devices (via EPC filter values) instead of mobile devices, you need to do the following for the standalone scenario. The same can be done for the integrated scenario using rule FPP.

Procedure

2. Select the rule PSP (Pack to Stock – Packing) and copy this rule to the rule ZPSP (Pack to Stock – Packing). If a dialog box appears, choose to copy all dependent entries.

3. Save your entries.

4. Select rule ZPSP.

5. In the dialog structure, choose Rule activities.

6. Select the activity DEVICE_VALIDATE and choose then Activity parameters.

7. Enter the parameter HIERARCHY_BY_EPC_FILTER and save your entries.

Maintaining Print Settings

You need to maintain the following in Customizing for Auto-ID Infrastructure under Basic Settings → Printing:

8. Assign format to printer and profile

Generally, label printers store a format for the label that is to be printed. This IMG activity allows you to assign a label format to a printer device group and field list profile. The assigned format, together with the values in the profile, are included in the print command sent to the selected printer.

9. Assign profile for printing

In this IMG activity, you assign a profile to a set of EPCs defined by Global Trade Identification Number (GTIN), filter value, or both GTIN and filter value. The profile determines the list of fields provided when the system writes or prints the selected EPCs.

The GTIN field can be blank, "*", or a valid GTIN. Blank implies an EPC of type SSCC. "*" implies all products and an EPC of type SGTIN. A specific GTIN refers to EPCs of type SGTIN for the selected GTIN.

The filter value indicates the container type (for example, case or pallet).

For further information, refer to the IMG activity documentation under Auto-ID Infrastructure → Basic Settings → Print Settings.

Configuring Label Printing

Use

- You need to maintain print settings to enable label printing.

Prerequisites

You have done the following regarding label design:

10. You have designed the label formats using software provided by printer vendors.

11. You store those formats on your printer server or application server.

12. You have uploaded those label formats to the appropriate printers.

Procedure

Data Profile

1. In Customizing for Auto-ID Infrastructure, choose Basic Settings → Data Profile.
2. Define the elements that will be sent to the printer and printed on the labels.

3. Define the element sets and include the elements that will be used for:
   - Document maintenance for the automated scenario (no human intervention)
   - Document maintenance for semi-automated (some human intervention) and manual (no automation) scenarios
   - Each label format that will be used for printing

4. Define the profile for label printing (profile type Print Label and Writing E) and include the appropriate element set with the usage 1 (Write/Print EPC).

5. In the profile SAP_DOCUMENT_CONTEXT_PROFILE (profile type Document context maintenance), assign the element sets you created for document maintenance based on the following usages:
   - 04 - Semi-Automated & Manual Scenario
   - 05 - Automated Scenario

Refer to the IMG activity documentation for details on maintaining these entries.

Print Settings

1. In Customizing for Auto-ID Infrastructure under Basic Settings → Print Settings → Assign Profile for Printing, assign the print profile to the GTIN and filter value.

2. In Customizing for Auto-ID Infrastructure under Basic Settings → Print Settings → Assign format to printer and profile, add entries determining formats that will be used during the label printing. Based on the print profile and printer, different label formats are selected during the label printing.

Refer to the IMG activity documentation for details on maintaining these entries.

Rule Configuration

- Mobile User Interface

If label printing is to be initiated from the mobile user interface, you must define conditions for the mobile messages as follows:

In Customizing for Auto-ID Infrastructure under Conditions and Rules → Conditions and Message Types → Define Conditions for Mobile Messages, add an entry for business process Write / Print, command DO, and rule TCPR.

This rule is triggered from the mobile user interface and desktop user interface for Tag Commissioning. Rule TCPR is the SAP delivered rule for tag commissioning.

We recommend that you copy this rule and modify it if necessary.

- RFID Device User Interface

If label printing is to be initiated from the RFID device user interface, you must define conditions for the RFID device messages as follows:

In Customizing for Auto-ID Infrastructure under Conditions and Rules → Conditions and Message Types → Define Conditions for Fixed Device Messages, add an entry as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Your device’s location</td>
</tr>
<tr>
<td>Location type</td>
<td>Your device’s location type</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Command</td>
<td>PRNT</td>
</tr>
<tr>
<td>Rule</td>
<td>TCPR</td>
</tr>
</tbody>
</table>

- **TCPR Rule**
  
  This rule is triggered when a RFID device message is received.

  ![Image](image)

  We recommend that you copy this rule and modify it if necessary.

  In the TCPR rule, the activity `DEVICE_CREATE_EPC_TO_WRITE` plays a very important role when the message (and the document assigned to the device) does not contain GTIN or SSCC values. The following parameter values result in different behaviors:

### TCPR Rule Dependencies

<table>
<thead>
<tr>
<th>Parameter</th>
<th>If the value is</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC_FILTER_VALUE</td>
<td>3 ‘Case’</td>
<td></td>
</tr>
<tr>
<td>EPC_TYPE</td>
<td>SGTIN-64 or SGTIN-96</td>
<td>The activity will generate an EPC for case SGTIN</td>
</tr>
<tr>
<td>EPC_FILTER_VALUE</td>
<td>4 ‘Pallet’</td>
<td></td>
</tr>
<tr>
<td>EPC_TYPE</td>
<td>SSCC-64 or SSCC-96</td>
<td>The activity will generate an EPC for pallet SSCC</td>
</tr>
</tbody>
</table>

### Device Communications Settings

Activate HTTP Services for SAP All as described in [Activating HTTP Services][1].

### Device Configuration

In this IMG activity you define the technical parameters for the TCP/IP connections which SAP All uses for communicating with other systems. Printer Commands can be sent via HTTP or TCP/IP.

A TCP/IP connection is a kind of RFC destination, and is maintained in Customizing for Auto-ID Infrastructure under Basic Settings → Integration → Create RFC Connections. For more information, see [Creating RFC Connections][2].

### Defining HTTP Connections

Refer to the IMG activity documentation for setting up HTTP connections.

### Defining TCP/IP Connections

1. In Customizing for Auto-ID Infrastructure, choose Basic Settings → Integration → Create RFC Connections.
2. In the RFC Destinations tree, open the branch TCP/IP Connections.
3. Choose Create and do the following:
   a. Enter a destination name and description.
   b. Select connection type TCP/IP Connection.

[1]: #activating-http-services
[2]: #creating-rfc-connections
c. Set Activation Type to Registered Server Program.

d. Set Program ID: AII_PRINT_TCPIP.

4. Go back to the RFC Destination Tree, and create following, if not existing:

   a. Enter a destination name as AII_PRINT_TCPIP.
   b. Select connection type TCP/IP Connection.
   c. Set Activation Type to Registered Server Program.
   d. Set Program ID: AII_PRINT_TCPIP.

Also use the above configured RFC destination in the device controller maintenance as described in Maintaining Device Settings [Seite 30].

Master Data

The following section describes the set-up of master data.

Note that the set-up of the following master data is described with reference to the Web browser transactions:

- Product
- GTIN Number Range
- SSCC Number Range
- Location
- Business Partner

The procedures may differ slightly when you use the Desktop transactions instead.

Defining Units of Measurement

1. In Customizing for SAP NetWeaver, choose General Settings → Check Units of Measurement → ISO Codes.

2. Maintain the necessary settings for the ISO Code CSE (Case) and save your entries.

3. Choose then General Settings → Check Units of Measurement → Units of Measurement.

4. Choose Unit of Measurement, then choose Create and maintain the following settings for the ISO Code CSE (Case):

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>CSE</td>
</tr>
<tr>
<td>Technical</td>
<td>CSE</td>
</tr>
<tr>
<td>Measurement Unit Text</td>
<td>Case</td>
</tr>
<tr>
<td></td>
<td>CSE</td>
</tr>
<tr>
<td>ISO Code</td>
<td>CSE</td>
</tr>
<tr>
<td>Primary code</td>
<td>&lt;checked&gt;</td>
</tr>
</tbody>
</table>
5. Save your entries.

Defining Products

Procedure

1. In the Auto-ID Cockpit, choose Master Data → Product.
2. In the Master Data: Product screen, choose Change.
3. Choose Create and enter the following sample data:

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Base Unit of Measure</th>
<th>Base GTIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFID_MAT1</td>
<td>RFID Material 1</td>
<td>EA</td>
<td>00037000657330</td>
</tr>
</tbody>
</table>

4. Save your entries.
5. Select the newly defined product RFID_MAT1.
6. In the Unit of Measure group box, choose Create and enter the following sample data:

<table>
<thead>
<tr>
<th>Unit of Measure</th>
<th>GTIN</th>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE</td>
<td>00037000657331</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

7. Repeat steps 1 to 4 for the following product:

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Base Unit of Measure</th>
<th>Base GTIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFID_MAT2</td>
<td>RFID Material 2</td>
<td>EA</td>
<td>00037000657332</td>
</tr>
</tbody>
</table>

Defining GTIN Number Ranges

Procedure

1. In the Auto-ID Cockpit, choose Master Data → GTIN Number Range.
2. In the Master Data: GTIN Number Range screen, choose Change.
3. Choose Create and enter the following sample data for the newly defined GTINs.
4. For more information about products and GTINs, see this document under Master Data → Defining Products [Seite 28].

<table>
<thead>
<tr>
<th>GTIN</th>
<th>Processing Sequence</th>
<th>EPC Type</th>
<th>Active</th>
<th>From Number</th>
<th>To Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>00037000657330</td>
<td>1</td>
<td>SGTIN-96</td>
<td>&lt;checked&gt;</td>
<td>1</td>
<td>999</td>
</tr>
<tr>
<td>00037000657331</td>
<td>1</td>
<td>SGTIN-96</td>
<td>&lt;checked&gt;</td>
<td>1000</td>
<td>1999</td>
</tr>
<tr>
<td>00037000657332</td>
<td>1</td>
<td>SGTIN-96</td>
<td>&lt;checked&gt;</td>
<td>2000</td>
<td>2999</td>
</tr>
</tbody>
</table>
Defining SSCC Number Ranges

Procedure

1. In the Auto-ID Cockpit, choose Master Data → SSCC Number Range.
2. In the Master Data: SSCC Number Range screen, choose Change.
3. Choose Create and enter the following sample data:

<table>
<thead>
<tr>
<th>Company Prefix</th>
<th>EPC Type</th>
<th>Processing Sequence</th>
<th>From Number</th>
<th>To Number</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>0037000</td>
<td>SCC-96</td>
<td>1</td>
<td>1</td>
<td>999</td>
<td>&lt;checked&gt;</td>
</tr>
</tbody>
</table>

4. Save your entries.

Defining Locations

Prerequisites

You have assigned your company prefix to the SSCC number ranges (see Defining SSCC Number Ranges [Seite 29]).

Procedure

1. In the Auto-ID Cockpit, choose Master Data → Location.
2. In the Master Data: Location screen, choose Change.
3. Choose Create and enter the following sample data:

<table>
<thead>
<tr>
<th>Location</th>
<th>Location Type</th>
<th>Location Status</th>
<th>Company Prefix</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRITE_STATION</td>
<td>Door</td>
<td>Available</td>
<td>&lt;your company prefix, for example 0037000&gt;</td>
<td>Incoming</td>
</tr>
<tr>
<td>PACK_STATION</td>
<td>Warehouse</td>
<td>Available</td>
<td>&lt;your company prefix, for example 0037000&gt;</td>
<td>Warehouse</td>
</tr>
<tr>
<td>LOADING_GATE</td>
<td>Door</td>
<td>Available</td>
<td>&lt;your company prefix, for example 0037000&gt;</td>
<td>Door</td>
</tr>
</tbody>
</table>

4. Save your entries.
Defining Business Partners

Prerequisites

In Customizing for Cross-Application Components, you have defined the necessary ship-to addresses under SAP Business Partner → Business Partner → Basic Settings → Address Determination → Define Address Types.

For testing purposes you can define the following ship-to address:

<table>
<thead>
<tr>
<th>Addr. Type</th>
<th>Short name</th>
<th>Name</th>
<th>Several uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHIP_TO</td>
<td>Ship-to</td>
<td>Ship-to address</td>
<td>&lt;checked&gt;</td>
</tr>
</tbody>
</table>

Procedure

1. In the Auto-ID Cockpit, choose Master Data → Business Partner.
2. In the Master Data: Business Partner screen, choose Change.
3. Choose Create and enter the necessary data for your business partners.
4. Save your entries.

For more information about the SAP Business Partner, see SAP Help Portal at help.sap.com → SAP NetWeaver → Application Platform (SAP Web Application Server) → SAP Business Partner (SAP BP).

Maintaining Device Settings

Use

In standard system, the following Customizing settings are delivered:

- Device controller types
- Business roles of device groups

In addition, you need to maintain the following device settings:

- Device controller
- Device groups
- Devices

Prerequisites

- You have defined an RFC connection for the tag writer.
  
  For more information, see this document under Settings in SAP All Customizing → Creating RFC Connections [Seite 19].
- You have defined locations.
  
  For more information, see this document under Master Data → Defining Locations [Seite 29].

Procedure

1. On the SAP Easy Access screen in SAP All, choose Auto-ID Infrastructure → Master Data → RFID Device (transaction code /A1N/DEVICE).
2. Choose **Start selection**.
3. In the **RFID Device Controller** group box, choose **Display<>Change** and then choose **Insert Row**.
4. Maintain the following sample data:

<table>
<thead>
<tr>
<th>Device Controller ID</th>
<th>Device Controller Description</th>
<th>DC Type Description</th>
<th>RFC Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;your device controller ID&gt;</td>
<td>&lt;your description&gt;</td>
<td>PML for Fixed Devices and Mobile Devices</td>
<td>&lt;enter the RFC destination you have defined for your tag writer, for example All&gt;</td>
</tr>
</tbody>
</table>

5. Select the newly created RFID device controller and choose **Show Device Groups**.

   If it is not possible to choose **Show Device Groups**, exit the transaction and call it then up once again.

6. In the **RFID Device Group** group box, choose **Display<>Change** and then choose **Insert Row**.
7. Maintain the following sample data:

<table>
<thead>
<tr>
<th>Device Group ID</th>
<th>Device Group Description</th>
<th>Business Role of a Device Group</th>
<th>Location Type</th>
<th>Location ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write</td>
<td>Writer</td>
<td>Write/Print</td>
<td>Door</td>
<td>WRITE_STATION</td>
</tr>
<tr>
<td>Pack</td>
<td>Pack Station</td>
<td>Pack</td>
<td>Warehouse</td>
<td>PACK_STATION</td>
</tr>
<tr>
<td>Load</td>
<td>Load Gate</td>
<td>Load</td>
<td>Door</td>
<td>LOADING_GATE</td>
</tr>
<tr>
<td>&lt;Mobile&gt;</td>
<td>&lt;your description&gt;</td>
<td>All Roles</td>
<td>Default</td>
<td>&lt;*&gt;</td>
</tr>
</tbody>
</table>

   Use business role **All Roles** for mobile readers. The business roles determine which device groups you see in the mobile user interface when assigning a document.

   The location ID is used in the conditions for fixed reader messages to determine which rule will be triggered. For more information, see this document under **Conditions and Message Types → Defining Conditions for Fixed Reader Messages [Seite 32]**.

8. Select the newly created RFID device group and choose **Show RFID Device**.
9. In the **RFID Device** group box, choose **Display<>Change** and then choose **Insert Row**.
10. Maintain your RFID Devices.

    Enter at least one RFID device for each device group. To do so, enter an ID and a description.

11. Save your entries.
Conditions and Message Types

The following section describes the set-up of conditions and message types.

Enabling Application Log and Monitoring

Procedure

1. In Customizing for Auto-ID Infrastructure, choose Conditions and Rules → Conditions and Message Types → Define Condition Types, Application Log and Monitoring per message type.
2. In the dialog structure, choose Enable Application log for Msg. types.
3. Ensure that the application log is enabled for all used message types.
4. In the dialog structure, choose CCMS Alert for Msg. types.
5. Enter the message type 01 (Mobile Message).

Defining Conditions for Fixed Device Messages

Use

In the standard system, Customizing settings for mobile message conditions and backend message conditions are delivered. Additionally, you need to define conditions for fixed reader messages.

Prerequisites

You must have defined locations. For more information, see this document under Master Data → Defining Locations [Seite 29].

Procedure

2. Choose New Entries and maintain the following sample settings.

<table>
<thead>
<tr>
<th>Location ID</th>
<th>Location Type</th>
<th>Command</th>
<th>Processing Sequence</th>
<th>Rule ID</th>
<th>Exit indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACK_STATION</td>
<td>Warehouse</td>
<td>IN</td>
<td>1</td>
<td>PSP</td>
<td>&lt;unchecked&gt;</td>
</tr>
<tr>
<td>PACK_STATION</td>
<td>Warehouse</td>
<td>OUT</td>
<td>1</td>
<td>PSPU</td>
<td>&lt;unchecked&gt;</td>
</tr>
<tr>
<td>LOADING_GATE</td>
<td>Door</td>
<td>IN</td>
<td>1</td>
<td>PSL</td>
<td>&lt;unchecked&gt;</td>
</tr>
<tr>
<td>LOADING_GATE</td>
<td>Door</td>
<td>OUT</td>
<td>1</td>
<td>PSLU</td>
<td>&lt;unchecked&gt;</td>
</tr>
<tr>
<td>WRITE_STATION</td>
<td>Door</td>
<td>PRNT</td>
<td>1</td>
<td>TCPR</td>
<td>&lt;unchecked&gt;</td>
</tr>
</tbody>
</table>

3. Save your entries.

User Data Profiles

User Data Profiles include the following:
User Data Profiles

Profiles and element sets are used in various Auto-ID applications. For example, they determine which fields are to be printed on an RFID label, and which data a user can enter when creating a document.

Profile types control which applications use this profile. New profile names must be in the customer namespace (that is, they cannot start with s).

For each profile, you can assign at most one element set to each element use.

Element Sets that are Assigned to the User Data Profiles

An element set contains elements of a single type. The purpose of defining element sets is to have a mechanism to allow the user to store a collection of similar elements. For example: The element set that has a collection of elements of type fields will contain the list of fields. This list of fields can be used for label printing or document maintenance. Elements and element sets must conform to the following rules:

- New element names must be in the customer namespace (that is, they must start with Y or Z).
- New element names must be added to the element set SAP_ALL_Fields.
- New element set names must be in the customer namespace (that is, they cannot start with s).
- An element set may only contain elements belonging to its associated parent element set.

For further information on maintenance of user data profiles and element sets, refer to the IMG documentation under Auto ID Infrastructure → Basic Settings → Data Profile.