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A Business and Technical Roadmap to Deploying SAP

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INTRODUCTION

Welcome to the fascinating world of SAP. This book helps you crack the tricks of mastering SAP HANA Customization

Calendar Upload for Financial Services

Assign Financial Center to Factory Calendar and Public Holiday Calendar

Use

In this Customizing activity, you specify the calendar for which the data from the input file is relevant.

On the one hand, you can assign one public holiday calendar ID and one factory calendar ID to each financial center and country to be filled with data from the input file.

On the other hand, you can combine the public holiday information for several financial centers and countries by assigning a public holiday calendar ID and a factory calendar ID for combined calendars to these financial centers and countries. For example, if you want to generate a combined calendar for France that contains the public holidays for Paris and Lyon, you have to enter the relevant calendar ID for combined calendars for the financial centers Paris and Lyon in both fields for combined calendars. The *Load Public Holidays* report then combines the calendars for these financial centers and generates a combined calendar for France.

Dependencies

The *Load Public Holidays* report checks the settings and rules of this Customizing activity. If errors occur, the report does not process the input file. If a calendar entered here does not exist in the system yet, the report creates this calendar in the system.

For more information, see Load Public Holidays.

Activities

Note the following rules:

You must enter a calendar ID in both fields *Public Holiday Calendar ID* and *Factory Calendar ID* or leave both fields empty.
If you leave both fields empty, you must make entries in both fields for combined calendars. This means that only the combined calendars are supplied with data from the input file.

You must enter a calendar ID for combined calendars in both fields *Public Holiday Calendar ID for Combined Calendars* and *Factory Calendar ID for Combined Calendars* or leave both fields empty.
If you leave both fields empty, you must assign a public holiday ID and a factory calendar ID. This means that only these calendars are supplied with data from the input file.

You can also enter calendar IDs for all four calendar ID fields. In this case, the public holiday calendars and factory calendars as well as the combined calendars are supplied with data from the input file. The *Load Public Holidays* report generates or updates all four calendars.

You cannot enter in the entire table the values entered in the fields *Public Holiday Calendar ID* and *Factory Calendar ID* as combined calendars in the other two fields. Similarly, you also cannot enter the calendar IDs entered in the fields for the combined calendars in the fields *Public Holiday Calendar ID* and *Factory Calendar ID*.

Note that you can enter a combined calendar only if you assign at least two financial centers or two countries to this calendar. This means that there must be at least two entries (rows) in the table for this calendar.

Only in Customizing Client: Upload Public Hol. Calendars for Fin. Centers

Use

You use this Customizing activity to upload public holidays received in file format from an external provider (such as Exchange Data International or Copp Clark) into the SAP system and overwrite or supplement the public holidays and public holiday and factory calendars defined in the Customizing activity Maintain Calendar.

You can run the report only in the Customizing client.

For more information, see the report documentation.

BAdI: Identification of Existing Public Holiday

Use

This Business Add-In (BAdI) is used in the *Calendar Tools (CA-GTF-CAL)* component.

You can use this BAdI to assign public holidays that already exist in the system to the public holidays in an input file. This means that the Load Public Holidays report can reuse public holidays within a public holiday calendar in order to minimize the number of public holidays in the system.

In the standard system, public holidays are reused only within one public holiday calendar ID because the same name for a public holiday can be used in different calendars for different public holidays.

Standard settings

For more information about the standard settings (filters, single or multiple use), see the *Enhancement Spot Element Definitions* tab page in the BAdI Builder (transaction SE18).

BAdI Implementations

This BAdI definition contains the following active BAdI implementation delivered by SAP:

FSCAL_HOLIDAY_IDENTIFICATION
Identification of Existing Public Holiday

See also

BAdI method documentation:

FIND_EXISTING_HOLIDAY

For more information about implementing BAdIs as part of the Enhancement Framework, see SAP Library for SAP NetWeaver Platform on SAP Help Portal at http://help.sap.com/nw_platform. Choose a release and then *Application Help*. In SAP Library, choose *SAP NetWeaver Library: Function-Oriented View -> Application Server -> Application Server ABAP -> Application Development on AS ABAP -> ABAP Customer Development -> Enhancement Framework*.

General Application Functions

Here you make the system settings for the general application functions.

SAP Application Interface Framework

Interface Development

Define Namespace

Use

In this Customizing activity, you can define namespaces for the logical structuring of objects and configurations in the SAP Application Interface Framework. All interfaces, value mappings, fix values, checks, and actions have to be assigned to a namespace.

Furthermore, the Customizing activities Define Interface, Define Value Mappings, Define Fix Values, Define Checks, and Define Actions are locked at a per-namespace level. If one user edits the objects and configurations of a specific namespace, these will be locked for other users.

You can set authorizations for Customizing and error handling based on the namespace.

Standard settings

There is no namespace in the delivery of the SAP Application Interface Framework. The namespace list is empty by default.

Activities

In order to define a new namespace, choose *New Entries*.

Assign a name to the namespace and provide a short description.

Example

You want to logically group country-specific objects and configurations, so you define the namespaces *UK* and *BRASIL*.

You want to logically group inbound and outbound interfaces, so you define the namespaces *INB* and *OUTB*.

Define Interfaces

Use

In this Customizing activity, you define interfaces in the SAP Application Interface Framework. You have to set up the interface according to the communication technology you are using (for example, the SAP NetWeaver PI). Once an interface is defined, you can maintain its mapping and assign actions.

Requirements

You have defined a Namespace using the Customizing activity Define Namespace. Each interface has to be assigned to a namespace.

You have created / generated the Raw Data Structure and SAP Data Structure for this interface.

You require the authorization to maintain interfaces for a given namespace.

Standard settings

There are no interfaces in the delivery of the SAP Application Interface Framework. The interface list is empty by default.

Activities

Choose an existing namespace.

In order to define a new interface, choose *New Entries*. The overview screen appears. To edit an existing interface, double-click into any field in the corresponding line.

Assign a name to the interface and provide a short description. Assigning a name is only possible for new interfaces.

Define at least the SAP Data Structure, the Raw Data Structure, and the Record Type in Raw Structure. Where you are using an SAP NetWeaver PI inbound interface, the raw data structure and the record type in raw structure are automatically filled when you enter the Proxy Class Inbound class name.

[Optional] Enter a check and / or in it function module name.

If the interface uses the proxy framework for receiving / sending messages, you have to fill the Proxy Class Inbound for an inbound interface, or the Proxy Class Outbound for an outbound interface.

If your service interface has multiple operations, you have to maintain the corresponding Proxy Method that the interface should use.

[Optional] Define a Field for the Sending System. This value can be used, for example, as a key field for interface determination or for creating system-specific value mappings.

[Optional] Define an interface status, for example, *Obsolete*, with the corresponding status handling. Furthermore, you can set a formal end date until which the interface will be valid.

Example

You have an inbound interface for receiving business partner data using the SAP NetWeaver PI. You generated the proxy class ZCL_BP_INBOUND in transaction SPROXY. The generated main structure is ZBP_PI_DATA. Within the proxy class main method implementation, you call the SAP Application Interface Framework.

Within the SAP Application Interface Framework, you define an interface named BP_INBOUND. You enter the name of the SAP data structure you previously created. You also enter ZCL_BP_INBOUND as the proxy class inbound and press ENTER. The raw data
Structure and the record type in raw structure will be derived automatically.

Additional Interface Properties

Specify Interface Engines

Use

In this Customizing activity, you define which engines should be used to handle message of the interface in, for example, *Monitoring and Error Handling* or the *Message Summary*.

Depending on the interface's base technology, for example, IDoc or proxy, you have to maintain the corresponding engines. You have to maintain the following engines:

Application engine

Persistence engine

Selection engine

Logging engine

Requirements

You have created an interface in Customizing for the SAP Application Interface Framework under Define Interfaces. Alternatively, you can have used the *Generate IDoc Structure and Interface Definition* report to generate the interface.

If you want to maintain a customer-specific engine, it has to be defined in Customizing for the SAP Application Interface Framework under *Additional Interface Properties* -> Define Custom Engines.

Standard settings

If you do not maintain any engines, *Monitoring and Error Handling* handles the messages as proxy messages that are processed with the SAP Application Interface Framework.

After defining the interface, the following engines are set as default:

Application engine: Proxy

Persistence engine: Proxy

Selection engine: AIF index tables

Logging engine: AIF application log

Note that if you used the *Generate IDoc Structure and Interface Definition* report, the engines are set automatically depending on the variant ID you selected.

Activities

Enter your namespace and select the interface for which you want to maintain engines.

Maintain the engines corresponding to the interface's base technology.

Instead of selecting one of the engines delivered with the SAP Application Interface Framework, you can maintain a customer -specific engine. Select *Customer-Specific* and maintain the customer-specific engine's namespace and the customer-specific engine.

Assign IDoc Types

Use

In this Customizing activity, you assign IDoc types for generic selection (only variant ID 01).
You define additional settings for IDoc interfaces that use selection engine IDoc control records.
In order to be able to monitor an IDoc processed without the SAP Application Interface Framework, it is necessary to define which IDoc should be selected based on data from the IDoc control records.

Requirements

You have defined an interface in Customizing for the SAP Application Interface Framework under Define Interfaces. The interface is defined as an IDoc interface. Alternatively, you have created the interface with the *Generate IDoc Structure and Interface Definition* report.

Standard settings

If you created the interface with the *Generate IDoc Structure and Interface Definition* report, the basic type is already maintained.

Activities

Select your namespace.
A list of the namespace's interfaces is displayed.

Select the interface you want to monitor.

Maintain at least the IDoc's message type and basic type you want to monitor with your interface.
Optionally, you can maintain an extension, message variant, and message function.

Example

You want to monitor an interface to create bookings.

Enter the message type FLIGHTBOOKING_CREATEFROMDAT.
Enter the basic type FLIGHTBOOKING_CREATEFROMDAT01.

In *Monitoring and Error Handling*, all IDocs processed with the selected message type and basic type are displayed.

Map IDoc Status to AIF Processing Status

Use

There is a default assignment of an IDoc status in the SAP Application Interface Framework. In this Customizing activity, the default assignment can be changed. You can define which IDoc status should be mapped to which processing status of the SAP Application Interface Framework. In addition, you can change the icon that is displayed in the data messages view of Monitoring and Error Handling.

Activities

Select the IDoc status for which you want to change the default assignment and maintain the following:

Processing status of the SAP Application Interface Framework that should be assigned to the IDoc status

Icon that should be displayed in *Monitoring and Error Handling* for this status.

Define Serialization Settings

Use

Serialization ensures that the messages are processed in the right order within the SAP Application Interface Framework. While the messages are related to the same business object, the messages can have different message types. A message that relates to the same business object should not be processed in case its predecessor has not been processed yet. Messages related to different business objects or object types should not have to wait for each other.

Requirements

You must define the key fields for the interface under *Error Handling -> Define Interface-Specific Features*

Activities

To enable serialization, you have to define the following settings:

Define Serialization Object:

You define the serialization object with its serialization type, serialization table and other related settings.

You assign the serialization object to the interface.

Assign the serialization object to one or more interfaces to enable the serialization features for interfaces.

Assign key fields for serialization

You assign the interface key fields to the serialization object.

Define Custom Engines

Use

In this Customizing activity, you define custom engines.

If you have created your own custom engine classes, you have to maintain those classes here. You can create your own engine class(es) if you have scenarios where no engines are delivered with the SAP

Application Interface Framework. Creating your own engines will enable you to monitor those scenarios in the SAP Application Interface Framework.

After you have maintained your custom-specific engines, you can use them in Customizing for the SAP Application Interface Framework under *Additional Interface Properties* -> Specify Interface Engines

Requirements

You have created one or more custom engine class(es).

Activities

Enter a namespace.

Enter a customer-specific AIF engine, which is the name of your customer-specific engine.

Enter the names of your engine classes. You can maintain following classes:

Application engine class

Persistence engine class
Selection engine class

Logging engine class

Interface determination class

Assign ECH Component

Use

In this customizing activity, you define additional settings for the Error and Conflict Handler (ECH) interfaces that use the ECH selection engine.

In order to be able to monitor a SAP NetWeaver PI message that is processed with the ECH but without the SAP Application Interface Framework, you must define which ECH component is to be selected based on data from the ECH message payload.

Activities

Assign ECH components to interfaces for generic selection.

Define RFC Function Module Collection

Use

In this Customizing activity, you define a collection of RFC function modules to be used by the *RFC Mass Function Module Generator* report, and a list of function modules. For each function module, you can propose an interface name and also a short name, which is then used to determine the name of the playback function module and also the name of the data structure.

Define IDoc Type Collection

Use

In this Customizing activity, you define a collection of IDoc to be used by the Mass IDoc Structure and Interface Generator report as well as a list of the IDoc types. For each IDoc type, you can propose a short name that is then used with a prefix for the raw structure name.

Define Structure Mappings

Use

In this Customizing activity, you define the mapping for an interface and assign the actions that will be executed when processing a data message of that interface. The structure mapping is always dependent on the combination of a namespace, interface name, and interface version.

Requirements

You have defined a namespace using the Customizing activity Define Namespace.

You have defined an interface name and version using the Customizing activity Define Interfaces.

You have the authorization to display or maintain Customizing for the given namespace.

Standard settings

There is no structure mapping in the delivery of the SAP Application Interface Framework. The structure mapping list for a namespace / interface name / interface version combination is empty by default.

Activities

Choose an existing combination of namespace / interface name / interface version.

Choose *Select Source Structure* in the tree view on the left. Choose *New Entries* in order to select a new source structure. We recommend that you use the value help for selecting the source structure.

You should note that for inbound interfaces, the source structure is the raw data structure. For outbound interfaces, the source structure is the SAP data structure.

Select one line in the *Select Source Structure* view. Choose *Assign Destination Structure* in the tree view to the left. Enter a number in the *No. of Structure Mapping* field. This number has to be unique for the selected source structure. Enter a destination structure (using value help is recommended). You can optionally define function modules for execution before or after the mapping. If you are setting up a hierarchy mapping, choose *Indirect Mapping.*

Select one line in the *Assign Destination Structure* view table. If no table is displayed, then there is only one entry which is automatically selected. Select the following:

Assign Checks to assign checks to the structure mapping

Define Fix Values to define fix value mappings

Define Field Mappings to define field and / or value mappings.

You can assign a check (defined in Customizing for the SAP Application Interface Framework under Define Checks to the field mapping and define if the check is executed before or after field mapping execution. You can optionally assign conditions to the field mapping.

Choose *Assign Actions* in the tree view on the left. Choose *New Entries* in order to assign a new action. The actions you assign here are executed when a data message of this interface is processed.

For further information about possible input values and dependencies between fields, refer to the field help of the corresponding field.

Define Value Mappings

Use

In this Customizing activity, you define value mappings in the SAP Application Interface Framework.

Value mappings can be used to map one or multiple values of an external structure to the corresponding value in an internal structure. If used as part of the structure mapping during interface processing, the value mapping can take up to five field values as its input. You can use these values to derive the result value, for example, using a value mapping table or a database select.

Since value mappings in the SAP Application Interface Framework have a well-defined input (up to five field values) and a well-defined output (one field value), they remain independent of the context in which they are called. As a result, value mappings can be easily reused by several interfaces in the SAP Application Interface Framework.

Requirements

You have defined a namespace in Customizing for the SAP Application Interface Framework under Define Namespace. Every value mapping has to be assigned to a namespace.

You have the authorization to display and / or maintain value mappings for a given namespace.

Standard settings

There are no value mappings in the delivery of the SAP Application Interface Framework. The value mapping list is empty by default.

Activities

Choose an existing namespace.

In order to define a new value mapping, choose *New Entries*. To edit an existing value mapping, double-click any field in the corresponding line.

Enter a name for the value mapping (minimum requirement).

You are able to select from different options to compose the value mapping, including the following:

Execute a conversion exit

Select data from a database table

Define a default value

Use a function module to map data

Define that value mappings from the value mapping transaction should be used

Define single or multiple value mappings (use the *Define Values* or *Define Multi Values* views for this purpose)

Assign a check (defined in Customizing for the SAP Application Interface Framework under Define Checks) to the value mapping and define if the check is executed before or after value mapping execution.

Define the validity period type that should be used, that is, either the validity dates or the validity period number.

Define Fix Values

Use

In this Customizing activity, you define fix values in the SAP Application Interface Framework. The fix values that are defined here are reusable and can be maintained and changed in a central place.

Within the SAP Application Interface Framework, fix values are used in structure and value mappings to assign a constant value to a field in the destination structure. Additionally, they can also be used in checks to refer to a constant value.

You should be aware of the different use of the term *fix value*, which refers to an object in the SAP Application Interface Framework, and the term *constant value*, which refers to a value that is fixed.

Requirements

You have defined a namespace using the Customizing activity Define Namespace. Every fix value has to be assigned to a namespace.

You have the authorization to display or maintain Customizing for the given namespace.

Standard settings

There are no fix values in the delivery of the SAP Application Interface Framework. The fix value list is empty by default.

Activities

Choose an existing namespace. The *Define Fix Values* group box is displayed showing all existing fix values that have been created.

To define a new fix value, choose *New Entries*.

To edit an existing fix value, double-click on the fix value name.

Enter the name of the fix value, insert a description, and add the value you require. On saving, it is added to the list of existing fix values.

[Optional] Create a number of fix values within a table for an existing named fixed value. The fix value table can be used in a self-defined function module as follows:

```
SELECT * FROM /AIF/T_TFIX INTO TABLE <your internal table> WHERE NS
= <your namespace name> AND FIXVALUENAME = <your fix value name>
```

To create a fix value table, proceed as follows:

To use a fix value table, click on the named fix value from within the *Define Fix Values* group box and then double-click on *Define Fix Value Table* from within the dialog structure.

To define new entries, choose *New Entries*.

Enter a row number and value. On saving, your entries are added to the *Define Fix Value Table*.

Example

A $1.00 store receives item data using different interfaces. However, the price of the items should be present to 1.00. The company now has two options to accomplish this goal:
Maintain a constant value for the price field in every interface receiving item data.

Maintain a fix value in namespace GENERAL called PRICE with the associated constant value 1.00. Enter the name of the fix value for the mapping of the price field in every interface receiving item data.

At a later point, the company decides to increase the price of their products to $10 per item. Here, the advantages of a fix value become immediately obvious: Option 1 requires the company to change every interface receiving item data, whereas option 2 leaves the interface settings completely untouched and the fix value needs to be changed only once in the corresponding Customizing activity.

Define Checks

Use

In this Customizing activity, you define the checks for controlling the message mapping and action processing.

The purpose of a check is to identify if a specified condition is true or false for the given input values. With checks, you can therefore conditionally influence the processing in the SAP Application Interface

Framework. You can assign checks in different places, for example, to conditionally skip a specific mapping step, to conditionally execute a specific function of an action, or to identify application error situations in which the processing is to be stopped immediately.

Since checks in the SAP Application Interface Framework have a well-defined input (up to five field values) and a well-defined output (a success checkbox indicating the result of the check), they remain independent of the context in which they are used. As a result, checks can be easily reused by several interfaces in the SAP Application Interface Framework.

Requirements

You have defined a namespace using the Customizing activity Define Namespace. Every check has to be assigned to a namespace.

You have the authorization to display or maintain Customizing for the given namespace.

Standard settings

There are no checks in the delivery of the SAP Application Interface Framework. The check list is empty by default.

Activities

Choose an existing namespace.

In order to define a new check, choose *New Entries*.

To edit an existing check, double-click on the name of the check. A detail view is Displayed.

Enter a check name in the *Check* field and a description.

[Optional] We recommended that you create an error message that will be displayed if the check fails. You can do this by defining an error message ID and number and defining the variable definition for the message.

Select the *Define Single Checks* option from the left-hand menu. To create a new single check, choose *New Entries*. If single checks have already been created, they are displayed on this page. Double-click on a single check to edit it.

You have different options to compose the check, including the following:

Define simple field checks

Check data from a database table

Use a function module to check data

[Optional] Define a success and / or error message that will be appended to the application log in case the check succeeds / fails.

Define Actions

Use

In this Customizing activity, you define the steps for message processing in the SAP Application Interface Framework.

An action is an interface building block that contains the business logic of an SAP Application Interface Framework interface. It consists of at least one action function module that can, for example, call BAPIs or function modules to process data.

An action is defined by its name and the namespace it is assigned to. The action's main component type defines which data type the action handles. An action can be assigned to an interface and be used across namespaces.

Since actions in the SAP Application Interface Framework have a well-defined input (a data structure with the type defined as the action's main component type), they remain independent of the context in which they are called. As a result, actions can be easily reused by several interfaces in the SAP Application Interface Framework.

Requirements

You have defined a namespace using the Customizing activity Define Namespace. Every value action has to be assigned to a namespace.

You have the authorization to display and / or maintain Customizing for a given namespace.

Standard settings

There are no actions in the delivery of the SAP Application Interface Framework. This list of actions is empty by default.

Activities

Choose an existing namespace.

To define a new action, choose *New Entries*.
To edit an existing action, double-click on the action name.

Assign a name that identifies the action (together with its namespace) and optionally enter a description.

[Optional] Define an init function before processing, which is executed before the function modules of the action.

Define a commit mode and commit level.

Specify the main component type. This is the type of the DDIC structure the action is working with. The action will only have access to the data contained in this structure. When assigning the action in the Customizing activity Define Structure Mappings, you can also assign a table as the *Record Type* in the *Assign Action* view. Then, the action will be called with for each dataset in the table.

Choose *Define Functions* in the menu on the left-hand side. Choose *New Entries* to assign function modules that should be executed.

[Optional] Select a function module and choose *Assign Checks* in the menu on the left-hand side if you want to explicitly specify conditions under which the selected function is executed.

[Optional] Select a function module and choose *Define Fields to Restore* in the menu on the left-hand side if you want to specify fields whose value will be restored in a situation where the data message is restarted.

Note: In order for the action to get called, it has to be assigned in the Customizing activity Define Structure Mappings.

Interface Variants

Define Interface Variants

Use

In this Customizing activity, you can define interface variants for alternative processing of specific data messages in the SAP Application Interface Framework.
Interface variants are used to change the behaviour of an interface. Typically, interface variants are used where you want to make some adaptations to an interface but do not wish to make major changes or create a new interface.

Requirements

You have the authorization to display and / or maintain Customizing for a given namespace.

Standard settings

There are no interface variants in the delivery of the SAP Application Interface Framework. The interface variant list is empty by default.

Activities

Choose an existing namespace.

To define a new interface variant, choose *New Entries*.

Specify the name and the description of the new interface variant.

Example

An organization has subsidiaries in multiple countries. Some data is aggregated in a central system. Although processing of the incoming messages is very similar, the inbound structure and, as a result, the mapping differs slightly. Instead of creating two separate interfaces, a single interface is used in combination with an interface variant. Depending on the unique plant number, the interface variant can become active to exchange parts of the original mapping and processing information.

Define Assigning Tables

Use

In this Customizing activity, you define assigning tables for interface variants in the SAP Application Framework.

You need to specify a variant assigning table for all your interfaces where the utilization of interface variants is required. The table defined as the assigning table is used to determine the correct variant for an interface based on key field values. The variant assigning table must have at least the following fields:

Comp. Name	Type	Description
NS	/AIF/NS	Namespace
IFNAME	/AIF/IFNAME	Interface Name
IFVERSION	/AIF/IFVERSION	Interface Version

```
VARIANT_NS          /AIF/VARIANT_NS       Variant Namespace
VARIANT_NAME  /AIF/VARIANT_NAME           Name of Interface
Variant
```

To create your own variant assigning table, you can copy the template table /AIF/VAR_AS_TMPL.

The table also needs to specify additional fields for the key fields that are used in the variant determination. The fields in the table are later linked to the fields in the actual message data structure using the Customizing activity Define Interface Key Fields.

Requirements

You have the authorization to display and / or maintain Customizing for a given namespace.

Standard settings

There are no variant assigning tables in the delivery of the SAP Application Interface Framework.

Activities

Choose an existing namespace.

Specify the assignment from the interface to the variant assignment table.

Define Interface Key Fields

Use

In this Customizing activity, you define interface key fields for the determination of interface variants during runtime of the SAP Application Interface Framework.

Interface key fields defined here are available as the basis for the determination of interface variants. You therefore define a link between the field in the raw data structure that contains the key value and a field name in your variant assignment table that will be used to identify the correct interface variant for a data message.

When a data message for an interface that is customized for the use of interface variants is processed, the value of the key field will be compared to the key field's value as defined in the variant assignment table. If they match, then the corresponding interface variant is used for processing the message.

Requirements

You need to have completed the preceding two steps Define Interface Variants and Define Assigning Tables.

Standard settings

There are no interface key fields in the delivery of the SAP Application Interface Framework.

Activities

Choose a namespace, interface name, and interface version.

In order to define new interface key fields, choose *New Entries*.

Link an interface variant key field to a field in the variant assignment table.

Define Variant Mappings

Use

In this Customizing activity, you define a variant mapping for a given interface variant. One variant mapping can include alternative mappings for different interfaces.

Setting up a variant mapping is similar to the initial configuration of the mapping in the Customizing activity Define Structure Mappings. You have the possibility to define alternative structure mappings, actions, checks, fix values, value mappings, and/or field mappings.

Linking an alternative mapping to the original mapping is carried out using multiple criteria as follows:

For most steps in the variant mapping, you have to define a namespace / interface name / interface version combination that the variant is valid for.

When defining an action / check / field mapping in the original mapping, you also assigned numbers for the identification of these objects. You can use these numbers to influence the variant mapping as follows:

Define a number which does not exist in the original mapping

The new action / check / field mapping will be called in addition to those defined in the original mapping. The order is defined by the sequence of the numbers (ascending).

Define a number which does already exist in the original mapping

The new action / check / field mapping will replace the one with the same number defined in the original mapping.

You can add new structure mappings by defining a source and destination structure. Checks, fix values, and field mappings can then be assigned as usual. If you enter an existing source / destination structure combination, the corresponding structure mapping will be extended, that is, the original checks / fix value mappings / field mappings will be executed as usual and the checks / fix value mappings / field mappings defined in the interface variant will be executed additionally.

Requirements

You need to have completed the preceding three steps Define Interface Variants, Define Assigning Tables, and Define Interface Key Fields.

You have the authorization to display and / or maintain interface variants for a given namespace.

Standard settings

There are no default variants in the delivery of the SAP Application Interface Framework.

Activities

Choose an existing namespace and interface variant.

To define an alternative structure mapping / action / check / fix value / value mapping / field mapping, choose *New Entries* in the corresponding view which you select in the menu on the left-hand side.

Enter the option(s) you require for your desired interface variant.

Example

Example 1: Fix Values

You are able to replace original fix values with an alternative fix value. For example, in the structure mapping, a fix value is used called ZGTP/ VALB. It has the value *B*. Using variant mapping, it is possible to define an alternative so that instead of the value *B*, a new value *C* is used wherever the fix value is customized in the structure mapping.

Example 2: Actions

You can add new actions to the standard processing or create an action that replaces an existing action. This is dependent on the action number given to an action. For example, if the original action with the action number *10* exists, then this will be replaced if an action created within *Interface Variants* is also given *10* as an action number. If an action is given the action number *20* within *Interface Variants* and this number has not been previously assigned, then this will be called as an additional action.

Error Handling

Define Applications

Use

In this Customizing activity, you define error handling applications that are available in the Monitoring and Error Handling transaction of the SAP Application Interface Framework.

The Monitoring and Error Handling transaction provides capabilities for the integration of customer-defined error handling applications. This allows you to integrate your own error handling applications into this central transaction provided by the SAP Application Interface Framework.

Standard settings

AIF is the standard application delivered with the SAP Application Interface Framework. Using this application allows for monitoring and error handling of messages processed by the SAP Application Interface Framework.

Activities

Create a new error handling application by choosing *New Entries*.

Maintain a unique application name and provide the required technical information.

Choose *Maintain Application Specific Key Fields* from the menu on the left-hand side to specify the key fields for the application that will be shown in the *Application specific selection* in the selection screen of the Monitoring and Error Handling transaction.

Choose *Register Functions* from the menu on the left-hand side to specify application-specific functions that are available in the user interface of the Monitoring and Error Handling transaction.

Choose *Exclude Functions from Appl. Toolbar* to exclude previously registered functions from the application toolbar of the Monitoring and Error Handling transaction.

Define Global Features

Use

In this Customizing activity, you define settings that are relevant for error handling at a global level.

You can use global settings to define the following:

Dissolved structures

In some cases, the structure of the messages for an interface includes substructures that are always related to a parent structure and should not be displayed separately. By defining a dissolved structure name, the corresponding structure will not be shown at a separate level in the Monitoring and Error Handling transaction but will be consolidated with the parent structure.

Trace level

Trace levels define the level of detail for the log messages that will be saved in the application log. The standard trace level is 0. However, a higher trace level, which will result in more processing information (depending on the setup of the trace levels), can be assigned to a specific interface or data message in the Monitoring and Error Handling transaction or directly in the database table /AIF/FINF_TL.

Activities

In order to maintain dissolved structures, choose *Dissolve Structures* from the menu on the left-hand side. Choose *New Entries* and enter the names of the structures.

In order to specify the settings for trace levels, choose *Define Trace Level* from the menu on the left-hand side. Choose an existing trace level and choose *Details*. A view is displayed that allows you to specify which message types are to be included in the trace level.

Define Namespace-Specific Features

Use

In this Customizing activity, you define namespace-specific features for error handling.

You can use this activity to do the following:

Define an interface-specific single index table and/or a subscreen that will be displayed in the Monitoring and Error Handling transaction when the given interface is selected by the user.

Define fields of the data message's source structure that can be changed in the Monitoring and Error Handling transaction.

The fields defined here will be applied to all interfaces of the given namespace.

Define (sub-) structures of a data message's source structure that will not be displayed in the Monitoring and Error Handling transaction.

This gives you the opportunity to hide sensitive or private information. The structures defined here will be applied to all interfaces of the given namespace.

Configure alerts and their assignment to recipients, which will ultimately define which messages the user will be able to see in the Interface Monitor transaction.

Define alert recipients which will act as logical groups for collecting interface data and statistics.

In a subsequent step, users can be assigned to a recipient.

Define a structure label to replace the original description of a structure (Data Type) or a field of the structure (Data Element) with its own description.

This new label will be displayed in the Monitoring and Error Handling transaction only for the namespace used in the definition.

Define fields of the data message's source structure that shall be hidden in the Monitoring and Error Handling transaction.

The fields defined here will be applied to all interfaces of the given namespace. **Requirements**

You have the authorization to display / maintain Customizing for a given namespace.

Standard settings

Namespace-specific features are not part of the delivery of the SAP Application Interface Framework.

Activities

Select the correct view in the menu on the left-hand side for the action you want to execute.

Specify the required data.

Note that the field help in the corresponding views will help you to identify the correct input values.

Define Interface-Specific Features

Use

In this Customizing activity, you define interface-specific features for error handling.

You can use this activity to do the following:

Define key fields that are available to search for specific data messages on the selection screen of the Monitoring and Error Handling transaction. You can define single or multiple key fields for searching as follows:

Single key fields

Have exactly one value per data message and are therefore stored in the interface's single index table

Multiple key fields

Can have more than one value per data message (for example, item numbers in a sales order document). For this reason, they require an additional database table which can be defined in this Customizing activity.

In addition to being used for search, the key fields defined here can also be used to build a hierarchy in the message selection view (view 1) of the Monitoring and Error Handling transaction.

Define fields of the data message's source structure that can be changed in the Monitoring and Error Handling transaction.

The fields defined here are applied only to the given interface.

Define (sub-) structures of a data message's source structure that will not be displayed in the Monitoring and Error Handling transaction.

This gives you the opportunity to hide sensitive or private information. The structures defined here are applied only to the given interface.

Assign recipients without key fields, that is, the corresponding recipients are active for all data messages of the given interface.

You can use this feature to define fallback recipients that are used in the case where no key field-specific recipient can be defined.

Assign authorization objects to interfaces in the SAP Application Interface Framework. This authorization object needs to have a field *ACTVT*, which can have the same values as the *ACTVT* field of the authorization object /AIF/ERR. The custom authorization object can have additional fields for all key field values.

Define a structure label to replace the original description of a structure (Data Type) or a field of the structure (Data Element) with an own description.

This new label will be displayed in the Monitoring and Error Handling transaction. Only for the namespace and interface / version used in the definition.

Define fields of the data message's source structure that shall be hidden in the Monitoring and Error Handling transaction.

The fields defined here are applied only to the given interface.

Requirements

You have the authorization to display / maintain Customizing for a given namespace.

Standard settings

Interface-specific features are not part of the delivery of the SAP Application Interface Framework.

Activities

Select the correct view in the menu on the left-hand side for the action you want to execute.

Specify the required data.

Note that the field help in the corresponding views will help you to identify the correct input values.

System Configuration

Define Business Systems

Use

In this Customizing activity, you maintain the business systems from which your data messages are sent. This is important for value mapping, which might be system dependent.

Requirements

In Customizing for the SAP Application Interface Framework, under *Interface Development* -> Define Interfaces, in *Field for the Sending System*, you have assigned a system field, so the system is derived from the data content, whereas in this Customizing activity, another business system might be mapped.

Standard settings

Usually, you enter a list of system identifiers with the value from the data content (for example, **LEGACY1**) and a corresponding AIF system identifier, which you use in the value mapping definition; There might be more than one business system assigned to one AIF system.

Assign Recipients

Use

In this Customizing activity, you maintain the alert recipients in the SAP Application Interface Framework.

A recipient defines that a user or a group of users is responsible for the interfaces assigned to that recipient. A recipient defines in which cases the users assigned to it receive an alert.

You can use this activity to do the following:

Assign users to recipients and specify whether the messages of this recipient should be displayed in the Interface Monitor of the corresponding user. If you select the checkbox *Technical User*, then the user will also be able to monitor messages in a technical error state or which are still being processed.

Assign roles to recipients and specify whether the messages of this recipient should be displayed in the Interface Monitor of the users belonging to the role. If you select the checkbox *Technical User*, then the user is also be able to monitor messages in a technical error state or which are still being processed.

Assign external addresses and settings for alert distribution.

For each assignment, you can specify a message type indicating which type of message will trigger an alert.

Requirements

You have the authorization to display / maintain Customizing for a given namespace.

Standard settings

Recipients are not part of the delivery of the SAP Application Interface Framework.

Activities

Select the correct view in the menu on the left-hand side for the action you want to execute.

Specify the required data.

Note that the field help in the corresponding views will help you to identify the correct input values.

Configure Data Transfer

Use

To support the integration with qRFC/tRFC, CIF PP (CIF Post Processing), and BDC (Batch Data Communication), a *Data Transfer* report is required to transfer qRFC/tRFC, CIF PP, and BDC data into the SAP Application Interface Framework.

To be able to execute the *Data Transfer* report, you have to make the following Customizing settings:

Define Logical Systems

You have to define the logical systems pointing to external/local systems which are to be monitored by the monitoring functions of the SAP Application Interface Framework.

Define Selection Set

You define a selection set name which is to be used by the *Data Transfer* report.

Assign Interface

You assign an interface to a selection set. **Note:**

You can only assign one interface to one selection set.

You can assign the namespace only, which means that all the interfaces under the namespace are assigned.

You can assign one selection set to multiple interfaces.

a) If you want to use the *Data Transfer* report to transfer only qRFC data into the SAP Application Interface Framework, you have to make the following Customizing settings:

Read Inbound / Read Outbound: The 2 checkboxes indicate, if data from the inbound or outbound queue should be transferred.

Max. Number: Restricts the maximum number of queue transactions to be transferred.

Queue Name: Defines the queues to be transferred. The system also supports wildcard * search. For example: Q* represents all the queues starting with Q.

Persist.Ty: Indicates which persistence type of the SAP Application Interface Framework you want to use for storing the queue transaction data (see F1 help for further information).

Assign Logical Systems

Note:

When you run the *Data Transfer* report with a specific selection set, only the logical systems assigned to the selection are reached, and only the queues defined in the related selection set are transferred.

If you want to use the *Data Transfer* report to transfer only tRFC data into SAP AIF, you have to make the following Customizing settings:

Read Inbound / Read Outbound: The 2 checkboxes indicate, if data from the inbound/outbound transaction should be transferred.

Max. Number: Restrict the max. Number of transactions to be transferred.

Function Module: Define the function module (actually indicates the tRFC transactions) to be transferred. The system also supports wildcard * search. For example, Z* represents all the function modules starting with Z.

Persist.Ty: Indicates which persistence type of the SAP Application Interface Framework you want to use for storing the queue transaction data (see F1 help for further details).

Assign Logical Systems

Note:

When you run the *Data Transfer* report with a specific selection set, only the logical systems assigned to the selection are reached and only the queues defined in the related selection set are transferred.

If you want to use the *Data Transfer* report to transfer only CIF Post processing data into the SAP Application Interface Framework, you have to make the following Customizing settings:

Read Local / Read Remote

Read Local: Read local post processing (PP) transaction data according to the assigned remote local systems. This means that only the local PP transactions related to the assigned remote systems are transferred.

Read Remote: Read remote PP transaction data from the assigned remote local systems. This means that only the PP transactions (communicating with the local system) located in the assigned remote systems are transferred.

Max. Number: You can restrict the max. Number of transactions to be transferred. R/3 Objects: You can define transferring those Post Processing transactions that are R/3 transactions.

Persist.Ty: Indicates which persistence type of the SAP Application Interface Framework you want to use to store the queue transaction data. By default, an empty value (not determined yet) is assigned. This means that all the R/3 objects are selected.

Assign Remote Logical Systems **Note:**

When you run the *Data Transfer* report with a specific selection set, only the logical systems assigned to the selection are reached, and only the queues defined in the related selection set are transferred.

If you want to use the *Data Transfer* report to transfer only BDC data into the SAP Application Interface Framework, you have to make the following Customizing settings:

Max. Number: Restricts the max. Number of transactions to be transferred.

Group Name: In this field, you assign a BDC session name. The system also supports wildcard * search. For example, Z* represents all the BDC sessions starting with Z.

Creator: In this field, you assign a user name.

Requirements

You have to define RFC destinations linking external/local systems in advance by means of transaction SM9.

Activities

As far as the qRFC/tRFC integration scenario is concerned, you normally define the following steps:

Function Generator: Generates the required objects and initializes an interface.

Customizing of the SAP Application Interface Framework: You make detailed Customizing settings for the generated interface.

QRFC/tRFC: You use Customizing activity *Configure Data Transfer* to make the necessary settings for running the *Data Transfer* report.

You use the Interface and Error Handling monitor to monitor and process qRFC/tRFC transactions.

Configure File Adapter

Use

In this Customizing activity, you determine which types of files you want to upload, how the Files are read, and how they are transferred into ABAP structures.

Requirements

You have created an interface in Customizing for the SAP Application Interface Framework under Define Interfaces. For the mapping you need to have at least an SAP structure which describes the resulting data type (for example, a BAPI structure).

Standard settings

There are no default settings. You make the required settings depending on the file types and destination structures that you are using.

Activities

Enter your namespace for which you want to maintain file adapter settings.

Maintain the file adapter settings.

To be able to read files from the file system, the minimum information you require is the *File Type*, the *File Content*, and the *Structure Name* of your interface's raw structure.

Configure Interfaces for Process Observer

Use

In this Customizing activity, you can set up your interfaces to be monitored by the Process Observer. If the processing of a message in an interface is part of a business process defined in the Process Observer, the settings you can make here will enable you to monitor the interface in the Process Observer. This will provide you with a better overview of where a business process currently is.

You can make the following Process Observer settings:

You can define the different event types that will be forwarded to the Process Observer while a message is being processed. If the Process Observer is on a remote system, you can specify the RFC destination.

You can define the interfaces that you want to monitor in the Process Observer.

You can assign single key fields of your interface to be able to search for those values in the Process Observer.

Requirements

You have a system with the Process Observer in your system landscape. This system can either be the current system or a remote system.

The Process Observer has been activated.
You have set up the necessary Customizing in transaction POC_FACADE (Business Objects and Tasks) and you have defined a business process in transaction POC_MODEL.

In addition, you need to perform the following activities:

Define business object types and tasks in transaction POC_FACADE. If you want to reuse existing ones, you do not have to perform this step.

Define a business process in transaction POC_MODEL.

Define the event types that you want to use to pass on to the Process Observer.

Assign the interface that should be monitored in the Process Observer.

Assign the single key fields of the interface that you want to use for searching in the interface monitor.

Standard settings

If you maintain an entry for sub-activity *Configure Process Observer* where the interface keys (namespace, interface name, and version) are empty, these entries will be regarded as the default. These settings will be used when there is no interface-specific setting.

Interface Determination

Define Interface Determination for Proxy Interfaces

Use

In this Customizing activity, you define the settings for interface determination for proxy interfaces in the SAP Application Interface Framework.

Interface determination enables you to configure which interface in the SAP Application Interface Framework should be used for processing a data message. You do this on the basis of the proxy class that is handling the inbound data message along with fields whose values are used to determine the correct interface.

Requirements

Interface determination is only available for inbound messages coming from a PI proxy, that is, interfaces that are using the local integration engine / proxy framework.

Standard settings

Interface determination is done implicitly within the SAP Application Interface Framework based on the following rule:
The name of the proxy class that handles the data message is compared to the interface customizing in the SAP Application Interface Framework. If there is an interface that has the proxy class name as its inbound proxy class name, then the highest version of this interface is used to process the message.

Instead of using the standard behaviour, interface determination can be explicitly customized in this activity.

Activities

In order to create a new entry for interface determination, select *Edit ->New Entries*. To edit an existing entry double-click on it.

Select up to five fields whose value is to be used to determine the interface.

Select *Assign Interface* in the menu on the left-hand side.

Choose *Edit -> New Entries* to create a new interface assignment.

Enter an operator and value for one or more fields that are used for interface determination.

Assign a namespace, interface name, and interface version for the given fields / values combination.

In addition to specifying values from the data structure, it is possible to maintain checks in order to determine the correct interface:

Select *Assign Checks* in the menu on the left-hand side.

Choose *Edit -> New Entries* to create a new check assignment.

Enter field name for one or more fields that are used for the checks.

Assign a namespace and check for the given field names.

Define Interface Determination for IDoc Interfaces

Use

In this Customizing activity, you define the settings for interface determination for IDoc interfaces in the SAP Application Interface Framework.

Interface determination enables you to configure which interface in the SAP Application Interface Framework should be used for processing a data message. You do this on the basis of the basic type and message type that is handling the inbound data message along with fields whose values are used to determine the correct interface.

Requirements

Interface determination is only available for IDoc inbound messages. To use the IDoc interface determination, the basic type and message type should be maintained either in the interface definition or in Customizing for the SAP Application Interface Framework under *Additional Interface Properties* -> Assign IDoc Types.

The interface determination for IDoc interfaces is not available if the standard IDoc runtime is used.

Standard settings

Interface determination is done implicitly within the SAP Application Interface Framework based on the following rule:

The name of the basic type and message type that handles the data message is compared to the interface Customizing in the SAP Application Interface Framework. If there is an interface that has the basic type and message type maintained, then the highest version of this interface is used to process the message.

Instead of using the standard behaviour, interface determination can be explicitly customized in this activity.

Activities

In order to create a new entry for interface determination, select *Edit -> New Entries*. To edit an existing entry double-click on it.

Select up to five fields whose value is to be used to determine the interface.

Select *Assign Interface* in the menu on the left-hand side.

Choose *Edit -> New Entries* to create a new interface assignment.

Enter an operator and value for one or more fields that are used for interface determination.

Assign a namespace, interface name, and interface version for the given fields / values combination.

In addition to specifying values from the IDoc data/control structure, it is possible to maintain checks in order to determine the correct interface:

Select *Assign Checks* in the menu on the left-hand side.

Choose *Edit -> New Entries* to create a new check assignment.

Enter field name for one or more fields that are used for the checks.

Assign a namespace and check for the given field names.

Define Interface Determination for XML Interfaces

Use

In this Customizing activity, you define the settings for interface determination for interfaces that store their messages in the persistence layer of SAP Application Interface Framework.

Interface determination enables you to configure which interface in the SAP Application Interface Framework should be used for processing a data message. You do this on the basis of the raw data structure of the inbound data message along with fields whose values are used to determine the correct interface. In the case of outbound messages, the SAP data structure should be the basis for the correct determination.

Requirements

Interface determination is available for inbound and outbound messages coming from the persistence layer.

Standard settings

Interface determination is done implicitly within the SAP Application Interface Framework based on the following rule:

The name of the structure that handles the data message is compared to the interface Customizing in the SAP Application Interface Framework. If there is an interface that has the structure name as its SAP data structure name, then the highest version of this interface is used to process the message.

Instead of using the standard behaviour, interface determination can be explicitly customized in this activity.

Activities

In order to create a new entry for interface determination, select *Edit -> New Entries*. To edit an existing entry, double-click on it.

Select up to five fields whose value is to be used to determine the interface.

Select *Assign Interface* in the menu on the left-hand side.

Choose *Edit -> New Entries* to create a new interface assignment.

Enter an operator and value for one or more fields that are used for interface determination.

Assign a namespace, interface name, and interface version for the given fields / values combination.

In addition to specifying values from the SAP/raw data structure, it is possible to maintain checks in order to determine the correct interface:

Select *Assign Checks* in the menu on the left-hand side.

Choose *Edit -> New Entries* to create a new check assignment.

Enter field name for one or more fields that are used for the checks.

Assign a namespace and check for the given field names.

Define Interface Determination for Customer-Specific Engines

Use

In this Customizing activity, you define the settings for interface determination for customer-specific interfaces in the SAP Application Interface Framework.

Interface determination enables you to configure which interface in the SAP Application Interface Framework should be used for processing a data message. You do this on the basis of customer-specific types that are handling the inbound data message along with fields whose values are used to determine the correct interface.

Requirements

You have created a customer-specific interface determination class. This class has to implement interface /AIF/IF_INF_DET_ENGINE. Alternatively, the class can inherit from

/AIF/CL_INF_DET_ENGINE_BASE. Furthermore, you have maintained your customer-specific interface determination class in Customizing for the SAP Application Interface Framework under *Additional Interface Properties* -> Define Custom Engines.

Standard settings

Interface determination is done implicitly within the SAP Application Interface Framework based on the following rule:

The user has to enter the customer-specific interface determination type. The interface determination is based on the custom type and two custom-specific names.

Activities

In order to create a new entry for interface determination, select *Edit -> New Entries*. To edit an existing entry, double-click on it.

Select up to five fields whose value is to be used to determine the interface.

Select *Assign Interface* in the menu on the left-hand side.

Choose *Edit -> New Entries* to create a new interface assignment.

Enter an operator and value for one or more fields that are used for interface determination.

Assign a namespace, interface name, and interface version for the given fields / values combination.

In addition to specifying values from the data structure, you can maintain checks in order to determine the correct interface:

Select *Assign Checks* in the menu on the left-hand side.

Choose *Edit -> New Entries* to create a new check assignment.

Enter field name for one or more fields that are used for the checks.
Assign a namespace and check for the given field names.

Define Pre-Interface Determination for Batch Input

Use

In this Customizing activity, you define the structure to be used for a certain session name and creator combination.

When you create a structure for a batch input session by using transaction */AIF/BDC_GEN*, a table is filled. The entries in this table determine which structure is to be used for a certain session and creator combination. The values specified here may, however, be different in your test and productive system.

If the creator field is empty, the entry is valid for all creators. You can use ***** as a wildcard for the session name.

Requirements

You have to create a structure for a session and creator combination by using transaction */AIF/BDC_GEN*.

Standard settings

If the system does not find any entries for a certain session and creator combination, the corresponding entry from table */AIF/BDC_ST_GEN* is used. This table is filled by transaction */AIF/BDC_GEN*.

Activities

1. Enter the session name. 2. Enter the creator name.
3. Enter the structure name.

Example

You have a batch input interface that creates invoices. In your test and development system your sessions are always named "INVOIC_TST". In your productive system, the names of the sessions are "INVOIC_CREA". The name of the generated structure is *ZAIF_CREATE_INVOICE*.

Since the session name filled by the generation report is "INVOIC_TST", you have to maintain an entry here. To make sure that the correct structure is found, make an entry with session "INVOIC_CREA" and assign structure *ZAIF_CREATE_INVOICE*.

Assign Batch Input Session and Creator

Use

You use this Customizing activity, to assign the batch input session and creator for batch input interfaces for which you want to use the simple monitoring scenario.

This setting will be evaluated in the *Monitoring and Error Handling* transaction. Based on this session, the corresponding batch input sessions are selected from the batch input tables. The selected entries are displayed for the interface.

Note:

If there is no entry in the *Creator* field, the session will be selected independently of the creator in the batch input tables.

Requirements

You have selected **BDC - Batch Input** as your selection engine in Customizing activity *Additional Interface Properties -> Specify Interface Engines*

Standard settings

If the batch input interface was created with the AIF Batch Input Structure Generator (transaction AIF/BDC_GEN), a table (/AIF/BDC_IF_GEN) will already have been filled. In this table, the interface is assigned to the session and creator that was used to generate the structure. If you do not make an entry in this configuration, the table (/AIF/BDC_IF_GEN) that is filled by the report will be used to get the session and creator for the interface.

HANA-Based Search for SAP Business Suite

Assign Administrator Role

Use

Administrators must be assigned to the **SAP_ESH_LOCAL_ADMIN** role.

This composite role and the roles contained in it provide the various authorizations required for configuration changes and administration tasks.

Activities

Start transaction **SU01** and assign the users who should have access to the administration cockpit and the modeller to the role **SAP_ESH_LOCAL_ADMIN**.

Configure Indexing

Set TREX/BWA Destination or SAP HANA DB Connection

To allow TREX/BWA and SAP NetWeaver to communicate with one another, you must create a connection between them.

If you use SAP HANA you have to create a database connection from SAP NetWeaver to SAP HANA.

Requirements

You have installed TREX/BWA on a separate system. After the installation, you have created an RFC connection between the ABAP system for SAP NetWeaver and TREX/BWA.

In case of SAP HANA you have created a database connection from SAP NetWeaver to SAP HANA.

Activities

Specify the RFC connection to the TREX/BWA server to be used in the *RFC destination of TREX* parameter and choose *Execute*.

If you use SAP HANA specify the database connection to SAP HANA database to be used in the *RFC destination of TREX* parameter and choose *Execute*. Use the format "**: db :< name of database connection>**".

Note:

If no SAP HANA/BWA is connected to the system, you can only activate Operation Data Providers if an explicit RFC connection "**NO TREX**" is defined here.

Define Server Group for Indexing Jobs

You can distribute the *Search* indexing jobs among the servers in a specific server group.

Requirements

The server group specified must exist. You can use transaction `SM61` to manage server groups.

Activities

Specify a server group on which the background jobs for indexing should be run.

If you do not enter a server group, the background jobs for indexing are run on all available servers.

Configure Extraction User for Indexing

You use this customizing activity to specify the user to be used for real-time indexing tasks.

The user needs read permission for all object types that are to be extracted to the Enterprise Search hub system. The customizing has to be done in all back-end systems that are connected to the Enterprise Search hub system.

We recommend specifying an existing user as the service user. Alternatively, you can let the system automatically generate a service user that then is assigned to the roles listed in two tables.

Requirements

If you want the system to generate a service user for the indexing tasks, you need to define all roles for this user in the *SAP Default Roles* and *Custom Roles* tables.

Activities

Setting a User:

To specify a user as the extraction user, choose *Set Extraction User*.

If you want to use an existing user, enter the name in the *Other User* field.

If you want the system to generate a service user, choose *Generate Service User and specify the name under which the user should be generated*. The system assigns the roles to the service user that are contained in the *SAP Default Roles* and *Custom Roles* tables.

Choose *Execute*.

Removing a User:

1. To unregister an existing extraction user, select the *Unregister Current User* field and choose *Execute*.

You can find a summary of the executed actions on the customizing activity screen.

Note on Use Case-Specific Use of the Activities Below

Requirements

You plan to use an Enterprise Search that is included in SAP NetWeaver on a local system.

Activities

Before you start with the customizing settings for Enterprise Search you have to perform the steps listed under the IMG node **Common Settings for Operational Analytics and Enterprise Search**.

Then follow the customizing settings below this IMG node to set up your local SAP NetWeaver system for the correct usage of Enterprise Search.

Presentation of Objects

Define Preferred Language Sequence for the Presentation of Objects

Use

In this IMG activity you define the preferred language sequence for the presentation of objects.

You can use the preferred language sequence to determine in which language an object is displayed for a user if the object is not available in the log-on language.

Requirements

It only makes sense to define preferred language sequence in multilingual systems.

Activities

Assign the installed languages of your system by their priority, and use this sequence when entering the languages in the table.

Example

If you have defined this preferred language sequence:

English

Spanish

French

Italian

Now, if you log on in French, then for you French gets the highest priority in the system. This would give you the following ranking list:

French

English - Spanish

Italian

Note

The preferred language sequence is currently supported by the search interface of the search engine service and Enterprise Search.

Search Configuration

Set Parameters for Federated Search

In this customizing activity, you make some central settings for the federated search.

Activities

Configure the following settings:

Define the timeout for the federated search.

Define the number values for the interactive navigation attributes.

Define a server group for parallelization of searches.

Define the search method (fuzziness) that is provided by the search engine.

For more information, see the F1 help of the parameters.

Configure Query Logging

In this customizing activity, you specify whether or not search queries and search runs of users are logged. You can display and analyse the logged queries and runs in the Enterprise Search Query Log (transaction ESH_QUERY_LOG).

The log is also used for the type-ahead feature on the search UI. Based on the logged search terms of all users, the system can make suggestions while a user is typing in a search term on the UI.

Standard settings

By default, query logging and the aggregation for the type-ahead UI feature are switched off. If and to what extent you can use the logging depends on the data protection laws in your country and data privacy rules in your company. The logging and the aggregation do not significantly influence performance.

Activities

Switch the logging on or off and define the anonymization level of the log. You can also enable the recording of access to the query log. Switch the aggregation of log data for the type-ahead UI feature on or off. Define the time interval for which the data is to be aggregated.

For more information, see the F1 help for the fields.

Configure Relevance Ranking

In this customizing activity, you specify the values for the ranking weights. The different weights are used for relevancy calculation of attributes. You assign the weight or relevance for search request attributes in the modeller later on.

Activities

Add an entry or edit the existing values for the ranking levels. Changing the range between the ranking levels affects the ranking of attributes that are set in the modeller. The system interprets the relation and calculates a new range. For more information, see the F1 help of the fields.

Further notes

The values you enter here are recognized in the next search that you start.

Note that other factors play a role in the calculation of the relevance, such as the frequency and order of the attributes in the structure.

Nota fiscal

Maintain Number Ranges

Use

In this IMG activity, you maintain the range for the internal document numbers of fiscal documents (notas fiscais and conhecimentos).

Define Nota Fiscal Types

In this Customizing activity, you create Nota Fiscal types for Nota Fiscal document processing. The Nota Fiscal types distinguish the business situation and control the filing of documents.

You specify both a direction and document type. All combinations that are relevant in materials management and sales have been delivered. Please note that two Nota Fiscal types (incoming and outgoing) for cancel must be present.

You also specify whether this Nota Fiscal type is a 'Nota Fiscal Entrada'. This field should only be set when you need a Nota Fiscal type to generate your own Nota Fiscal for incoming movements.

You also specify the cancel Nota Fiscal type used in a cancel situation. The original document always creates a reversal document with this cancel Nota Fiscal type.

You also specify the fiscal model. The model differentiates between the different models used for Notas Fiscais or Conhecimento.

You can specify the Nota Fiscal form or output type to be used when the Nota Fiscal is to be printed. Please note that when form/output type is left blank then that Nota Fiscal type will not be printed.

NF Types for Electronic Fiscal Documents

For NF types for electronic fiscal documents (such as NF-e or CT-e), you select the *Electronic Doc.* checkbox. You must also enter the correct NF model:

For NF-e - **7** for CT-e

When you enter 7 as the NF model, the system displays the *CT-e Type* field. If this NF type is to be used for value annulment or substitution processes, you must make the corresponding entry in this field.

Note the following:

Value annulment can only be entered when the document type is **6 (Return)**

Substitution can only be entered when the document type is **4 (Conhecimento)** or **7 (Conhecimento for multiple NF)**

Standard settings

The delivered example Nota Fiscal types cover the most used business situations for both materials management and sales. The existing scenarios cover Nota Fiscal, Not a Fiscal Complementary, Nota Fiscal Correction, Not a Fiscal 'de Entrada' and Nota Fiscal Return in most variants.

Please note that the delivered output setup is such that all Notas Fiscais are printed with form/output type NF01 and all Nota Fiscal 'de Entradas' with form/output type NF02. This would allow for separate numbering and different printer locations.

Recommendation

If you wish to print Notas Fiscais with different series and numbering for Complementars and Corrections then you should create new form/output types. This can then be assigned to the existing Nota Fiscal types.

If you wish to print a conhecimento then you should create a new Nota Fiscal type and a form/output type. The new form/output type can then be assigned to the new Nota Fiscal type.

Activities

Ensure that the standard scenarios do not cover your requirements before creating new Nota Fiscal types.

If you create a new NF type, ensure that you assign the necessary screen control groups to it in the Assign Screen Control Groups to NF Type Customizing activity.

Define Nota Fiscal Item Types

Use

In this IMG activity, you define nota fiscal item types and their rules.

Standard settings

The rules are maintained for all nota fiscal item types delivered with the standard system.

Activities

If you create additional item types, maintain the rules here as required.

Under *Main Item Types*, you enter the item types that are allowed in combination with the one you are maintaining.

Fiscal Classification Data

Define CNAE

Use

In this Customizing activity, you define CNAE codes according to your business needs.

You use the values you define in this activity for tax declaration purposes, while creating a vendor or a customer or while defining a business place.

Define Legal Nature

Use

In this Customizing activity, you define company legal nature values according to your business needs.

You use the values you define in this activity for tax declaration purposes, while creating a vendor or a customer or while defining a business place.

Define Type of ICMS Taxpayer

Use

In this Customizing activity, you define different types of ICMS taxpayers according to your business needs.

You use the values you define in this activity for tax declaration purposes, while creating a vendor or a customer or while defining a business place.

Define Industry Main Type

Use

In this Customizing activity, you define different types of industries according to your business needs.

You use the values you define in this activity for tax declaration purposes, while creating a vendor or a customer or while defining a business place.

Define Type of Tax Declaration

Use

In this Customizing activity, you define different types of income tax declaration according to your business needs.

You use the values you define in this activity for tax declaration purposes, while creating a vendor or a customer or while defining a business place.

Define Company Size

Use

In this Customizing activity, you define company size values according to your business needs.

You use the values you define in this activity for tax declaration purposes, while creating a vendor or a customer or while defining a business place.

Define Declaration Regimen

Use

In this Customizing activity, you define different types of PIS/COFINS declaration regimen according to your business needs.

You use the values you define in this activity for tax declaration purposes, while creating a vendor or a customer or while defining a business place.

Define ANP Code

Use

In this Customizing activity, you define different types of materials controlled by the ANP according to your business needs.

You use the values you define in this activity for tax declaration purposes.

Select Fields for Vendor Master Data

Use

In the *Create Vendor* report (transaction `XK01`), you create new vendors. To cover Brazilian requirements, you must enter specific tax data in the *Brazil Tax Data* screen.

In this Customizing activity, you select the vendor tax data fields that are necessary for your business requirements while creating a new vendor.

Select Fields for Customer Master Data

Use

In the *Create Customer* report (transaction `XD01`), you create new customers. To cover Brazilian requirements, you must enter specific tax data in the *Brazil Tax Data* screen.

In this Customizing activity, you select the customer tax data fields that are necessary for your business requirements while creating a new customer.

CNPJ Business Places

Define Business Places

Use

In this IMG activity, you define your business places, which are used in Brazil for:

Nota fiscal reporting

Reporting taxes on sales/purchases

Processing electronic fiscal documents (such as NF-e or CT-e)

Official document numbering

Activities

You do the following in these parts of the Customizing activity:

In the *Details* for each business place, enter the required information, such as the tax numbers. If you create notas fiscais for dangerous goods, you can select the source of the dangerous goods text that is to be included in the notas fiscais.

On the *Regional Tax Codes* screen, enter the relevant tax regions. If substituição tributária (SubTrib) is to be applied, you can enter the state tax number for SubTrib, per tax region.

To enable the system to process electronic fiscal documents (such as NF-e or CT-e), make the necessary settings on the *Electronic Fiscal Document Configuration* screen. This includes settings, for example, for the following:

XML version

Type of processing, normal or contingency, to be included in the XML

Automatic cancellation of source documents when NF-e are cancelled

Settings for cancellation of electronic fiscal documents under contingency and for the handling of the respective source documents

Default reasons for contingency processing

Note: Because there can be different reasons for switching to contingency or for cancelling different kinds of electronic fiscal documents, the value help for these fields depends on the selected model. For more information, see the Customizing documentation for Define
Contingency Reasons or Define Cancellation Reasons

For more information about the configuration settings for electronic fiscal documents, see the field help for each field in the system.

You also need to maintain address data for each business place since the nota fiscal print program uses the business place address as the address of the issuer (**not** the address of the delivering plant). You do this by choosing *Goto -> Address*.

Assign Business Places to Plants

Use

In this IMG activity, you assign a business place to one or more plants.

Requirements

The plant must be assigned to a Brazilian company code before you can allocate a business place to it.

Enable NF Issue within Same Business Place

Use

In this Customizing activity, you enable the system to issue outgoing notas fiscais for non-taxable stock transfer between plants that are assigned to the same business place. Such notas fiscais are needed, for example, when you move stock to a third-party location, that is, the location is run by a third party, represented in the system as a separate plant. This plant belongs to the same business place as the supplying plant. Note that when such stock transfers are created in the system, they must have a tax code for which no tax is calculated.

In this Customizing activity, you record the plants that can initiate such goods movements and the corresponding plants that receive the goods. In the *CustomerNoRec* column, the system displays the

customer number of the receiving plant. The customer represents the third party that runs the location and is the main business partner of the notas fiscais issued for these goods movements.

Requirements

You have assigned the plants involved in such a goods movement to the same business place. You make this assignment in the Assign Business Places to Plants Customizing activity.

You have entered the customer number for the plants that receive goods in the Define Shipping Data for Plants Customizing activity. This is also required if you make stock transfers without stock transport orders.

Activities

You determine which plants initiate such stock transfers by entering them in the *Plant* column. For each of these plants, you enter the plants that receive the goods by entering them in the *Receiving Plant* field.

NCM Codes

Define NCM Codes

Use

In this IMG activity, you define NCM codes for your materials and material groups.

The system uses the NCM codes to determine the IPI tax rate.

Further notes

You can also use the NCM code as a key field when defining tax groups for dynamic exceptions.

Assign NCM Codes to Material Groups

Use

In this IMG activity, you assign NCM codes to your material groups.

If you create a non-material item in a purchase order, the system uses the NCM code of the item's material group to determine the IPI rate for the item.

NBS Codes

Define NBS Codes

Use

In this Customizing activity, you define NBS codes for use in Nota Fiscal reporting. NBS *(Nomenclatura Brasileira de Serviços* in Portuguese) codes are issued by the Brazilian government to classify services.

Activities

In the **NBS Code** field, enter an NBS code. In the **Description** field, enter a description for the code.

Example

For example, the NBS code *1.0012.00* corresponds to #Gardening Services#.

Service Types

Define Official Service Types for Incoming Notas Fiscais

Use

In this and the following IMG activities, you make settings related to service types. They are only relevant if you need to process the Brazilian service tax, ISS - including calculation of ISS, printing of related notas fiscaís, and statutory reporting of ISS.

In Brazilian company codes, you can manage your services with *either* a material master or a service master. Note that you enter the generic service type (described below) in the *Tax Tariff Code* field in the service master in *External Services Management* (MM-SRV), and in the *NCM Code* field in the material master in *Materials* Management (MM).

Overview

You must maintain the official service types - defined by the relevant tax jurisdiction (*município*) - for all services you procure and/or provide:

Define Official Service Types for Incoming Notas Fiscaís (services you procure)

Define Official Service Types for Outgoing Notas Fiscaís (services you provide)

The system calculates ISS based on the official service types assigned to materials. If several of your services bear the same official service type, then you can group them together by means of generic service types (activity: Define Generic Service Types). By then assigning official service types to generic service types (activity: Assign Official Service Types to Generic Service Types), and assigning a generic service type to each of your services in material master records, you do not need to maintain as many ISS rates (which are normally maintained per material). In this case, you make settings in the first four activities as described above.

However, it might not make sense for you to create generic service types - and so you would just maintain official service types for incoming and outgoing services, and then assign them directly to materials in the last activity, Assign Official Service Types to Material Numbers.
Consider the following examples where this could be the case:

If you only maintain a few materials (for services), then you can just assign official service types directly to materials in this activity. There is then no need to assign a generic service type in the material master.

If a município frequently changes its classification of services and the service subsequently has a different official service type and rate, you can assign the official service type directly to the material in this activity, and the system accesses this value instead of the generic service type assigned in the material master.

If just one município has a detailed classification of services (while the others are more general and can be covered by creating generic service types), then you can directly assign this município's official service types to materials in this activity.

Activities

In **this** activity, you maintain official service types for incoming services. Incoming services refer to those that you procure and for which you receive a nota fiscal.

Define Official Service Types for Outgoing Notas Fiscais

Use

In this IMG activity, you maintain official service types for outgoing services. Outgoing services refer to those that you provide and for which you issue a nota fiscal.

For more information, refer to the service type overview.

Activities

For a combination of country and jurisdiction code, enter the official service type and the ABRASF code (required for combined notas fiscais (notas fiscais conjugadas).

Assign Official Service Types to Generic Service Types

Use

In this IMG activity, you assign official service types to generic service types.

For more information, refer to the service type overview.

Assign Official Service Types to Material Numbers

Use

In this IMG activity, you assign official service types to material numbers.

For more information, refer to the service type overview.

4 Assign Official Service Types to Services

Use

In this IMG activity, you assign official service types to services. Note that services are also referred to as *activity numbers* in this activity.

Activities

For each of your services/activity numbers, assign an appropriate jurisdiction code and official incoming service type.

For more information, refer to the service type overview.

CFOP Codes

Define CFOP Versions

Use

In this IMG activity, you define CFOP versions.

Activities

For each version, you specify:

Whether the system is to redetermine the CFOP code automatically in the case of a version change

Length of CFOP code

Length of CFOP extension, if applicable

Text identifier for the system to determine which CFOP text to print

Assign Validity Date to CFOP Versions

Use

In this IMG activity, you assign a valid-from date to CFOP versions, and assign a version to a region (state) if required.

Requirements

You have already defined CFOP versions.

Activities

To assign a version and validity date to all of Brazil, leave the region blank; otherwise, assign the relevant version to the relevant region.

The system determines the version in the following sequence:

Most recent valid-from date

Most specific entry, such as the region

This means that if a general CFOP change occurs (as on 1/1/2003), you only need to maintain one entry for country BR with the valid-from date. If, however, a state has a different version for the new date, you must enter that explicitly as an exception.

Example

Country	Region	Valid-from	Version

BR	-	1/1/1900	1
BR	SP	1/1/2001	2
BR	SC	1/1/2001	3
BR	-	1/1/2003	4

BR SC 1/1/20033 (same version for SC, just a different validity date; otherwise the system would take the most recent entry, version 4) With the above settings, the system would select the CFOP version as follows:

Region	Billing date	Version
SP	1/1/1999	1
RJ	1/1/2002	1
SP	1/1/2002	2
SP	1/1/2003	4 (the system takes the most recent entry; if the SP exception still applies, you have to maintain it explicitly as of the same valid-from date as the general entry, which in this case is 4)
SC	1/1/20033	

Define CFOP Codes and Assign Version

Use

In this IMG activity, you enter CFOP codes and assign them a version. As of January 1, 2003, the code consists of four digits (previously it was three), for example, 1122. The code appears in this 4-digit format on the nota fiscal and in reporting.

Requirements

You have defined CFOP versions in the Define CFOP Versions Customizing activity.

Activities

Enter the CFOP codes in the format **xxxxyy** or **xxxx/yy,** where:

xxxx is the legally defined numeric code

yy is the extension - numeric or character

The system uses the extension to control which text is printed on the nota fiscal. By defining different extensions, you can specify different texts for the same CFOP code. In most cases, however, you only need one extension per code and the extension itself is not printed.

When you enter a code, you must enter at least one generic 2-digit extension - even if the extension is not required in your state. This is important in the case of multiple CFOP codes per nota fiscal (see CFOP Text Identifier). You can enter any extension, using letters or numbers. For example, you enter 1122AA; the system converts it then to 1122/AA in the table, and it is entered on the nota fiscal and in reporting as 1122.

Then assign the CFOP code the appropriate version, which you have defined in the corresponding activity.

ICMS Exemption Reason

For CFOP codes that are used in conjunction with ICMS tax situations that are exempted from ICMS (for example, 40, 41, or 0), select the reason for the ICMS exemption. For more information, see the field help for this column.

Further notes

While pending documents are still in your system, you may also be using a version other than the general one valid for Brazil starting in 2003. For example, the versions for certain CFOP codes for Sao Paulo (SP) and Santa Catarina (SC) prior to 2003 contain a one- or two-digit extension respectively, and these extensions are printed on the nota fiscal and in the legal books (for instance, 199 for SP, and 199.01 for SC).

Define CFOP Determination for Goods Receipts and Returns (Versioned)

Use

In this IMG activity, you define the entries in the CFOP determination table for incoming movements (goods receipts) and their returns. The system uses these entries in the *Materials Management* (MM) components *Logistics Invoice Verification* (MM-IV-LIV) and *Inventory Management* (MM-IM).

Standard settings

This table is delivered with samples only.

Activities

Complete this table for all of your business cases. For each relevant CFOP code maintained in
The corresponding activity, you specify:

Direction of the goods movement

Destination category (such as same state)

Material CFOP category (such as material or transportation)

NF item type

NF special case (CFOP determination with or without substituição tributária)

Material usage

CPOF category of the business place

CFOP version

Define CFOP Determination for Goods Issues and Returns (Versioned)

Use

In this IMG activity, you define the entries in the CFOP determination table for outgoing movements (goods issues) and their returns. The system uses these entries in *Sales and Distribution* (SD) and *Materials Management - Inventory Management* (MM-IM).

Standard settings

This table is delivered with samples only.

Recommendation

Complete this table for all of your business cases. For each relevant CFOP defined in the corresponding activity, you specify:

Direction of the goods movement

Destination category (such as same state)

Material CFOP category (such as material or transportation)

NF item type

NF special case (CFOP determination with or without substituição tributária)

Whether the material was produced in-house

Material usage
Customer's CPOF category

Material origin

CFOP version

Define Law for CT-e CFOP Determination

Use

In this Customizing activity, you specify the type of law to be used to determine the CFOP code in a CT-e for a business transaction. Depending on the state in which the Logistics Service Provider (LSP) is located, the CFOP code can be determined either according to federal law or the rules specified by *CT-e Technical Note 2013.014*.

The method used to determine the CFOP also depends on whether the transaction is for incoming or outgoing freight service.

Incoming Process

For incoming freight service, the Vendor partner represents the LSP and therefore determines how the CFOP is determined. Both methods of determination compare two locations of the process. If both locations are in the same state, the first digit of the CFOP is "1"; if they are in different states, the first digit of the CFOP is "2"; and if they are in different countries, the first digit of the CFOP is "3".

For federal law, the CFOP code is determined by comparing the location in which the transport has started and the location of the Service Taker.

The location in which the transport has started is the location of the Vendor partner. However, if the Sending Tax Jurisdiction of the NF type is 6 (*Conhecimento*), the location of the Goods Supplier partner is the location in which the transport starts. The location of the Service Taker is the location of the plant specified in the purchase order.

For *CT-e Technical Note 2013.014*, the CFOP code is determined by comparing the location in which the transport has started and the location in which the transport has ended.

The location in which the transport has started is the location of the Vendor partner. However, if the Sending Tax Jurisdiction of the NF type is 6 (C*onhecimento*), the location of the Goods Supplier partner is the location in which the transport starts. The location in which the transport has ended is the location of the Tax Jurisdiction code. If that code is not specified, the location of the plant is considered as the location where the transport has ended.

Outgoing Process

For outgoing freight service, the plant partner represents the LSP and therefore determines how the CFOP will be determined. Both methods of determination compare two locations of the process. If both locations are in the same state, the first digit of the CFOP is ""; if they are in different states, the first digit of the CFOP is "6"; and if they are in different countries, the first digit of the CFOP is "7".

For federal law, the CFOP code is determined by comparing the location of the LSP (that is, the plant) and the location of Service Taker (that is, the Billing partner).

For *CT-e Technical Note 2013.014*, the CFOP code is determined by comparing the location in which the transport has started and the location in which the transport has ended.

The location where the transport has started is the location of the plant indicated in the sales order. However, if the Sending Tax Jurisdiction of the NF type is 6 (*conhecimento*) , the location where the transport has started is the location of the partner indicated as

#Goods Sender# in the view `J_1BCTE_PAR_MAPV`.

The location where the transport has ended is the location of the Ship-to partner.

Activities

You must specify the issuer state and whether to use federal law or *CT-e Technical Note 2013.014* to determine the CFOP code.

Business Add-Ins (BAdI)

BAdI: Parameter Changes for CFOP Determination

Use

This Business Add-In (BAdI) is used in the *Sales and Distribution* (SD) component in Brazil.

You can use this BAdI to overwrite parameters that are related to the automatic CFOP Determination during the sales and the delivery process. You must also implement your tax code determination in this BAdI to set the correct values in CFOP Determination.

Standard settings

In the standard system, there is no activated BAdI implementation.

The BAdI is designed for single use, and it is not filter-dependent.

Activities

For information about implementing BAdIs as part of the Enhancement Concept, see SAP Library for SAP NetWeaver under BAdIs - Embedding in the Enhancement Framework.

See also:

This BAdI uses the interface IF_EX_CFOP_DET_PREP. For more information, display the interface in the Class Builder.

Methods:

Change Interface Structure

Check Input Parameter Changes in Sales

Check Input Parameter Changes in Shipping

Output

Define Forms

Use

In this IMG activity, you maintain the nota fiscal forms that control the output of fiscal documents.

Requirements

Each form has to be assigned to exactly one condition type in the step 'Create output conditions' or 'Change output conditions'.

The condition types can be maintained in the step 'Condition types'.

The form must have the same name as the respective condition type.

Define Number Groups

Use

In this IMG activity, you create number groups for notas fiscaís and other fiscal documents (such as conhecimentos).

Further notes

You assign number ranges to these groups in the activity Maintain Number Ranges, and you establish the link between the number groups and the company code, business place, nota fiscal form, and, if required, a fourth dynamic field in the activity Assign Numbering and Printing Parameters .

Maintain Number Ranges

Use

In this IMG activity, you maintain one or several ranges for the external document numbers of fiscal documents (notas fiscais and conhecimentos). These are the official numbers printed on the documents.

Requirements

You have already created the number groups to which you are assigning these number ranges, in the activity Define Number Groups.

Assign Numbering and Printing Parameters

Use

In this IMG activity, you assign the following printing settings to a combination of company code, business place, nota fiscal form, and, if required, to an additional key field:

Number range
Number of text lines allowed in the header message

Number of line items allowed

Whether the nota fiscal is a fatura

Series and subseries

Requirements

If you assign the following values, they have already been created in the specified IMG activity:

Value	IMG activity
Number groups	Define Number Groups
Number range numbers	Maintain Number Ranges
Output device	Entered as a condition record in Create Condition Records

40 Condition Records

40 Create

In this step, you can maintain the output conditions for the predefined output condition types.

Requirements

The condition types can be maintained in the step 'Condition types'.

Change

In this step, you can maintain the output conditions for the predefined output condition types.

Requirements

The condition types can be maintained in the step 'Condition types'.

Display

In this step, you can display the output conditions for output condition types.

Processing Programs

In this step, you can maintain the processing programs controlling the output of fiscal documents. You can assign the responsible print program and the Layout set to be used to the respective output types.

BAdI: Numbering and Printing Parameters

Use

This Business Add-In is called when you print a nota fiscal and the system retrieves the required printing parameters entered in the activity, Assign Numbering and Printing Parameters. The system first accesses the parameters in the Customizing table and calls this BAdI before the results are returned to the print program. You can create an implementation for this BAdI if the three key fields - company code, business place, and nota fiscal form - in addition to a fourth, the dynamic key - do not cover your company's requirements for determining the printing parameters, or if you want to overwrite any parameters that the system retrieves from the Customizing settings.

Activities

Implement the Add-In following the instructions.

Example

Assume, for example, that you need to print notas fiscaís based on not one, but two dynamic keys - shipping point and nota fiscal due date. You can configure the shipping point in the IMG activity above, and then create an implementation to return the printing and numbering parameters based on the due date.

See also

Method: Change Nota Fiscal Print Configuration

Output Determination

Condition Tables

Create

In this step, you can maintain condition tables that control the output.

Recommendation

New entries should only be made by SAP.

The creation of new condition tables means a modification.

Change

In this step, you can maintain condition tables that control the output.

Recommendation

Changes should only be made by SAP.

Changes of condition tables mean a modification.

Display

In this step, you can display the condition tables that control the output.

Field Catalog

In this step, you can maintain the field catalog. These are the fields that are used to determine the output of a fiscal document.

Recommendation

New entries should only be made by SAP.

The creation of new fields means a modification.

Access Sequences

In this step, you can maintain the access sequences that control the output of fiscal documents.

Recommendation

Changes should only be made by SAP.

The creation of new entries or changes in the existing access sequences mean a modification.

Condition Types

In this step you can maintain the output condition types.

Output Determination Procedure

In this step, you can maintain the output determination procedures for the output of fiscal documents.

Nota Fiscal Document Maintenance

Define Screen Controls for Fields (Item)

Use

In this Customizing activity, you define the screen controls for fields in the item level, such as item and tax fields, that the system will display during the maintenance of NF documents. Screen controls determine, for example, which fields are displayed on the screens and if they are open for editing or for display only. They also determine if an entry in a field is optional or mandatory.

Activities

Along with the entries provided by SAP, in this view you can create and maintain your own entries in the customer namespace 9000 and above.

You can also view the field groups and their attributes (display, optional, obligatory and hide).

You can create separate item screen controls for when TMISS (Service Tax) is switched on and also for the different item types of the Nota Fiscal.

The system will use the entries in the following order:

Full key: Screen control + Service + NF Item Type

Screen control + Service

Screen control
The table contains 3 groups for customer use: 98, 99 and 100. These can be used for fields that have been added to the Nota Fiscal tables.

To view the fields and the groups to which they are assigned to the J_1BAKIT view, use the SM30 transaction.

To view Field Groups, enter J_1BAEHV in the SM30 transaction.

To view which tab or subscreen the field is assigned to, call the object J_1BAKH_MANV in the transaction SM30

After maintaining the current Customizing activity, execute the subsequent Customizing activity Define Screen Controls for Fields (Header)

Define Screen Controls for Fields (Header)

Use

In this Customizing, you define the screen controls for fields on header level that the system displays during the maintenance of NF documents. The screen controls determine, for example, which fields are displayed on the screens and if they are open for editing or for display only. They also determine if an entry in a field is optional or mandatory.

Requirements

You have defined the item screen controls for the header screen controls in Define Screen Controls for Fields (Item)

Activities

Along with the entries provided by SAP, in this view you can create and maintain your own entries in the customer namespace 9000 and above.

You can also view the field groups and their attributes (display, optional, obligatory and hide).

Note: The table contains 3 groups for customer use: 98, 99 and 100. These groups can be used for fields that have been added to the Nota Fiscal tables. To view the fields and the groups to which they are assigned to the J_1BAKHV view, use the SM30 transaction.

To view Field Groups,enter J_1BAEMV in the SM30 transaction.

To view which tab or subscreen the field is assigned to, call the view J_1BAKIT_MANV in the transaction SM30.

After maintaining the current Customizing activity , execute the subsequent Customizing activityAssign Screen Controls to NF Type

Define Screen Controls for Tabs and Subscreens (Item)

Use

In this Customizing activity, you define the screen controls for tabs and subscreens in the item level, such as the fuel and vehicle tab, that the system will display during the maintenance of NF documents. Screen controls determine, for example, which tabs are displayed on the screens.

Activities

Along with the entries provided by SAP, in this view you can create and maintain your own entries in the customer namespace 9000 and above.

You can also view the screen groups and their attributes (display and hide).

You can create separate item screen controls for when TMISS (Service Tax) is switched on and also for the different item types of the Nota Fiscal.

The system will use the entries in the following order:

Full key: Screen control + Service + NF Item Type

Screen control + Service

Screen control

To view the screens and the groups to which they are assigned, go to the J_1BNFW_SCGAITV view, using the SM30 transaction.

To view Screen Groups, enter J_1BNFW_SCGITV in the SM30 transaction.

After maintaining the current Customizing activity, execute the subsequent Customizing activity Define Screen Controls for Tabs and Subscreens (Header)

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Define Screen Controls for Tabs and Subscreens (Header)

Use

In this Customizing activity, you define the screen controls for tabs and subscreens on header level, such as the Collection or Additional Information tab, that the system will display during the maintenance of NF documents. Screen controls determine, for example, which tabs are displayed on the screens.

Activities

Along with the entries provided by SAP, in this view you can create and maintain your own entries in the customer namespace 9000 and above.

You can also view the screen groups and their attributes (display and hide).

To view the screens and the groups to which they are assigned go to the J_1BNFW_SCGAV view, using the SM30 transaction.

To view screen groups, enter J_1BNFW_SCGV in the SM30 transaction.

Assign Screen Controls to NF Type

SAP allows you to determine how nota fiscal documents are maintained, that is, created, displayed, or changed, from different access points within the system:

From within an MM-IV or MM-IM application, for example, by using the **MIRO** transaction

Manually using one of the transactions related to the *Nota Fiscal Writer* (for example, **J1B1N**)

The fields that the system displays or fills during the maintenance of NF documents are determined by screen control groups. The screen control group determines, for example, which fields are displayed on the screens and if they are open for editing or for display only. They also determine if an entry in a field is optional or mandatory.

For some tabs or subscreens in the *Nota Fiscal Writer, such as Collection or Additional Information*, you can determine if they are displayed or hidden. If they are to be displayed, you must explicitly determine that, otherwise they will be hidden. You do this by means of a dedicated set of screen control groups.
In this Customizing activity, you determine which screen control groups are available for the different maintenance modes (create, display, or change) for your nota fiscal types. You should create at least one display mode entry for each nota fiscal type.

Requirements

If you want to create new Header screen controls, you have to define them in the following Customizing activities first:

Define Screen Controls for Fields (Item)

Define Screen Controls for Fields (Header)

Define Screen Controls for Tabs/Subscreens (Item)

Define Screen Controls for Tabs and Subscreens (Header)

Activities

Note that every time that you create a new NF type in the Define Nota Fiscal Types Customizing activity, you should assign a screen control group to that NF type and also the relevant maintenance modes (display, change, create).

For some of tabs and subscreens in the *Nota Fiscal Writer*, *suc*h as Collection or Additional Information, you must explicitly assign a group tabs or subscreens if you want them to be displayed, otherwise they will be hidden.

Further notes

You can view the fields and their attributes (display, optional, obligatory and hide) for the entries provided by SAP. In the customer namespace 9000 and above, you can create and maintain screen controls.

Define MS Excel Layouts for Data Upload

Use

To make the manual creation of notas fiscais with many line items easier, for example, for notas fiscais for imports, the system can allow you to upload data from an MS Excel file in a special view of the *Nota Fiscal Writer* (accessed using the J1B1N_IMP transaction).
To enable the system to offer this upload function, you must record the possible layouts that you want to use in this Customizing activity. The system then displays the names of these layouts as selection criteria for the MS Excel layout on the selection screen called up with the *Upload Data for NF from MS Excel* (**J1B1N_IMP)** transaction. Note that this function can only be used to create notas fiscais with entrada as the nota fiscal type.

When the system uploads the data from an MS Excel file, it must be able to place the data in each cell in the corresponding field in the respective data structure. This data is then stored in the corresponding table when you save the nota fiscal. To enable the system to do this data mapping, in this Customizing activity, you also map the columns in the MS Excel layouts to the corresponding fields in the relevant data structures. To be able to map a column to a field in a tax-relevant data structure, you must have also entered the corresponding tax group for the data structures in this Customizing activity.

Activities

You record the possible MS Excel layouts in this Customizing activity.

For each layout, you assign tax types that are relevant for the tax-relevant data in the MS Excel to the corresponding tax groups in *Assign Tax Types to Tax Groups* view of this Customizing activity. You can also enter in the MS Excel new columns for assigning specific tax types. In this case, after uploading the MS Excel, the system overwrites the customizing by the value you have added in the MS Excel file.

For each layout, you map the fields in the MS Excel to the fields in the data structures in the system in the *Map MS Excel Fields to Data Structure Fields* view of this Customizing activity.

Materials Management

Invoice Verification

Line Category

Here the values from the Nota Fiscal item types are maintained depending on the item category of the purchase order.

Value Determination

Here the condition types are maintained which values are stored as discount (value = 1) , insurance (3) or other expenses (4) in the Nota Fiscal.

Recommendation

When condition types are used in different pricing procedures, for every pricing procedure an entry must be created.

Automatic Texts

In this activity, you define texts that are used for generating automatic texts during nota fiscal creation within MM Invoice Verification.

Each text is identified by a unique 4-character key and consists of a variable number of text lines. Each of these lines can contain a variable '&', which is substituted by the current value of the argument defined for each text line.

Activities

Maintain the texts for the nota fiscal header. Start with sequence number **1** and assign the argument to be inserted for the placeholder. The placeholder is defined in the text by an ampersand (&).

Maintain the interface table for non-invoice-relevant items. Insert/maintain the movement type and special stock indicator, and assign the text number.

Withholding Tax Value Determination

In this step, you can maintain how withholding tax data is transferred to Notas Fiscais generated in MM invoice verification.

For each withholding tax type you can define

if the withholding tax amount is summarized in the withholding tax amount field of the Nota Fiscal header and

if a header text (which can include also the withholding tax amount as a variable) is generated.

Material Document Lines

In this table movement types could be inserted which are not invoice relevant but nota fiscal relevant.

Example

Nr

In purchase orders for subcontracting the item includes the ordered material and as sub items the used components. The goods receipt is posted for the main item with movement type 101 which is invoice relevant. The system generates automatically the movement type 43 O for the used components. This movement type is not invoice relevant but the components must appear in the nota fiscal. It is necessary to insert the movement type 43 O in this table then the system generates based on this entry automatically the nota fiscal items from goods receipt document
via invoice verification.

Nr

During goods receipt for a purchase order an additional item is added for RTP with movement type 841 M. This also is not invoice relevant but must appear in the nota fiscal. Movement type 841 M must also be added in this table.

Maintain Movement Types for Vendor Invoices

Use

In this IMG activity, you maintain information for special movement types that the system uses to generate a nota fiscal and a vendor invoice from a goods receipt posting without a purchase order.

Normally when you post a goods receipt without a purchase order, the system generates a material document and a corresponding *Financial Accounting* (FI) document, the second of which contains a stock posting and its offsetting entry (stock offset). The system also generates tax lines in the document if:

Brazilian functionality is active (in the activity Define Countries, the vehicle country key or the ISO code is set to BR or BRA), **and**

Movement types with posting strings WA01, WA04 or WE01 are used (such as movement type 01).

However, it does not generate a nota fiscal or create any open items in FI.

By making the settings in this activity and fulfilling the prerequisites below, the system generates a nota fiscal and a second FI document with open items. The FI document credits the vendor for the amount of the stock offset entry in the first document, and debits the stock offset. The system determines the debit and credit automatically by the posting keys maintained in this activity.

Requirements

You have already:

Created the required movement types (8xx and 8xx+1) in the IMG activity Copy, Change Movement Types (by copying movement types 01 (Receipt w/o PO) and 02 (RE Receipt w/o PO)).

Maintained the screen layout for the new movement types in the activity Define Screen Layout.

Select the *Materials management* group, and set the *vendor* and *tax code* to required, the *External GA amount in LC* to optional, and all other fields to suppressed.

Created the tax posting strings for WA01, by copying WA04, in the activity Maintain Tax Posting String.

We recommend that you differentiate the account postings for these new movement types that use posting string WA01 from your normal account postings. Posting string WA01 uses the transaction key GBB for account offset postings, and the system later uses the account postings for this key to generate the vendor open item in FI. There should not, then, be a balance in these accounts when they are used exclusively for these special movement types.

To set up this differentiation in account postings, in the Copy, Change Movement Types activity, select your new movement types and double-click *Account Grouping* from the dialog structure. Define an account modification (freely definable value) for each movement type and transaction key GBB, and set the *Check account assignment* indicator. Lastly, maintain the account assignments in the activity Configure Automatic Postings.

Activities

Make the following settings for your new movement types:

Movement type	Item ID Component		Document type	Posting key	Tax code
<8xx>	K	KR	31	IE	FI
<8xx+1>	K	KG	22	IE	FI

By defining these settings, you are establishing that for postings involving these new movement types, the system generates a vendor invoice using a tax code for non-taxable transactions.

Inventory Management

Maintain Nota Fiscal Category Derivation

In this step, you define the movement type that is relevant for Nota Fiscal creation in inventory management.

You must also enter in the Nota Fiscal type when a movement type is set to relevant.

You may enter the item type and special item indicator so that CFOP determination will work.

Example

Sample entry for component shipment to a subcontractor.

41 'X' G1 6 1

This is NF relevant. It would produce an outgoing Nota Fiscal with type G1. It would use the values 6 and 1 for CFOP determination.

Standard settings

The delivered configuration is an example.

Define NF Type Redetermination for Goods Movements

Use

In this Customizing activity, you assign a nota fiscal type for processing of electronic notas fiscais (NF-e) to a combination of plant and movement type.

The system determines the NF type as follows:

You specify a plant and movement type in *Materials Management* (MM) goods movement transactions.

The system checks if an NF type is assigned to the movement type in the activity Maintain Nota Fiscal Type Derivation.

If an NF type is assigned to the movement type (from step 2), then the system checks this IMG activity, Define NF Type Redetermination for Goods Movements, as follows:

If, for the same movement type and plant specified in the transaction, an NF type is assigned, then the generated nota fiscal is electronic (NF-e).

If, for the same movement type and plant specified in the transaction, no NF type is assigned, then the generated nota fiscal is no electronic.

Note

If you want to have the same nota fiscal type assigned to a specific movement type, but not to a specific plant, you can leave the field *Plant* empty, and the system will use the same combination of nota fiscal type and movement type to all plants.

Requirements

You have:
Assigned nota fiscal types to movement types for normal nota fiscal processing in the activity Maintain Nota Fiscal Type Derivation

Created nota fiscal types for electronic notas fiscais, by setting the *Electronic NF*, in the activity Define Nota Fiscal Types

Standard settings

The program access logic works as follows:

Access the **Nota Fiscal type determination for NFe by Vendor** (*J_1BNFTYPEREDLF*) table with the key *Plant - Movement Type - Vendor*.

Access the **Nota Fiscal type determination for NFe by Vendor** (*J_1BNFTYPEREDLF*) table (when the first access fails) with the key *Plant = Space - Movement Type - Vendor*.

Access the **Nota Fiscal type determination for NFe** (*J_1BNFTYPEREDMM*) table (when the second access fails) with the key *Plant - Movement Type*.

Access the **Nota Fiscal type determination for NFe** (*J_1BNFTYPEREDMM*) table (when the third access fails) with the key *Plant = Space - Movement Type*.

If the system does not find an entry in any of the combinations, then the default NF-type entry from the **Movement Type** (*T16*) table is used.

Activities

Assign electronic nota fiscal types as required.

Define NF Type Determination for Vendors

Use

In this Customizing activity, you assign a nota fiscal type for processing of NF-e to a combination of vendor, plant, and movement type.

Note

If you want to have the same nota fiscal type for processing of NF-e assigned to a specific vendor and movement type, but not to a specific plant, you can leave the field *Plant* empty, and the system will use the same combination of nota fiscal type, vendor and movement type to all plants.

Requirements

You only maintain this activity if you have a scenario with mixed nota fiscal (NF) types, in which the user needs to decide on the type of NF to be created based on the vendor.
If this is not required, maintain only the activity Define NF Type Redetermination for Goods Movements.

Standard settings

The program access logic works as follows:

Access the **Nota Fiscal type determination for NFe by Vendor** (*J_1BNFTYPEREDLF*) table with the key *Plant - Movement Type - Vendor*.

Access the **Nota Fiscal type determination for NFe by Vendor** (*J_1BNFTYPEREDLF*) table (when the first access fails) with the key *Plant = Space - Movement Type - Vendor*.

Access the **Nota Fiscal type determination for NFe** (*J_1BNFTYPEREDMM*) table (when the second access fails) with the key *Plant - Movement Type*.

Access the **Nota Fiscal type determination for NFe** (*J_1BNFTYPEREDMM*) table (when the third access fails) with the key *Plant = Space - Movement Type*.

If the system does not find an entry in any of the combinations, then the default NF-type entry from the **Movement Type** (*T16*) table is used.

Example

Note:

An entry for vendor, plant and movement type in this activity overrules any entries made in the Assign Nota Fiscal Category to Sales Document Types and **Define NF Type Redetermination for Goods Movement** activities.

Maintain Tax Posting String

In this step, you maintain the conditions under which tax conditions in a tax procedure are posted in inventory management.

You must maintain entries for an existing tax procedure and an existing posting string that calls tax calculation.

Requirements

Currently only the posting string J1B1 calls tax calculation.

Sales and Distribution - Billing Documents

Assign Nota Fiscal Type to Sales Document Types

Here, you can assign nota fiscal types to sales document types.

Define NF Type Redetermination per Business Place

Use

In this IMG activity, you can specify that for a given **business place**, the system is to use a different nota fiscal (NF) type than the one that it determines automatically per sales document type as described below.

Step 1 is referred to as classic NF type determination, while steps 2 and 3 enable you to configure the system to take an alternative NF type for the business place or region (provided step 1 is fulfilled). This enables you, for example, to specify an alternative NF type in case NF-e processing is required.

The process begins when you enter a sales order in *Sales and Distribution* (SD), for which you specify a sales document type in the *Order Type* field (for example, ORB for Standard Order Brazil). The system determines the NF type as follows:

The system checks if an NF type is assigned to the sales document type you specify in the sales order; the system checks this assignment in the activity Assign Nota Fiscal Type to Sales Document Types.

If an NF type is assigned to the sales document type (from step 1), the system then checks in the activity Define NF Type Redetermination per Business Place whether an alternative NF type has been specified at the level of the business place.

If an NF type is assigned to the sales document type (from step 1) **and** the system does not find an assignment to alternative NF type at business-place level (from step 2), then the system checks in the activity Define NF Type Redetermination per Region whether an alternative NF type has been specified at the level of the region.

Activities

Per business place, enter the nota fiscal type that the system finds during classic NF determination in the *NT* (Nota Fiscal Type) field, and enter the NF type that the system is to use instead in the *Alternative NT* (Alternative Nota Fiscal Type) field.

Define NF Type Redetermination per Region

Use

In this IMG activity, you can specify that for a given **region,** the system is to use a different nota fiscal (NF) type than the one that it determines automatically per sales document type as described below.

Step 1 is referred to as classic NF type determination, while steps 2 and 3 enable you to configure the system to take an alternative NF type for the business place or region (provided step 1 is fulfilled). This enables you, for example, to specify an alternative NF type in case NF-e processing is required.

The process begins when you enter a sales order in *Sales and Distribution* (SD), for which you specify a sales document type in the *Order Type* field (for example, ORB for Standard Order Brazil). The system determines the NF type as follows:

The system checks if an NF type is assigned to the sales document type you specify in the sales order; the system checks this assignment in the activity Assign Nota Fiscal Type to Sales Document Types.

If an NF type is assigned to the sales document type (from step 1), the system then checks in the activity Define NF Type Redetermination per Business Place whether an alternative NF type has been specified at the level of the business place.

If an NF type is assigned to the sales document type (from step 1) **and** the system does not find an assignment to alternative NF type at business-place level (from step 2), then the system checks in the activity Define NF Type Redetermination per Region whether an alternative NF type has been specified at the level of the region.

Activities

Per region, enter the nota fiscal type that the system finds during classic NF determination in the *NT* (Nota Fiscal Type) field, and enter the NF type that the system is to use instead in the *Alternative NT* (Alternative Nota Fiscal Type) field.

Maintain Automatic Nota Fiscal Header Texts

Here, you can assign nota fiscal header texts to sales order types.

Business Add-Ins (BAdIs)

BAdI: Redetermination of Nota Fiscal Type per Line Item

Use

Normally the system determines the nota fiscal (NF) type as follows:

Step 1 is referred to as classic NF type determination, while steps 2 and 3 enable you to configure the system to take an alternative NF type for the business place or region (provided step 1 is fulfilled). This enables you, for example, to specify an alternative NF type in case NF-e processing is required.

The process begins when you enter a sales order in *Sales and Distribution* (SD), for which you specify a sales document type in the *Order Type* field (for example, ORB for Standard Order Brazil). The system determines the NF type as follows:

The system checks if an NF type is assigned to the sales document type you specify in the sales order; the system checks this assignment in the activity Assign Nota Fiscal Type to Sales Document Types.

If an NF type is assigned to the sales document type (from step 1), the system then checks in the activity Define NF Type Redetermination per Business Place whether an alternative NF type has been specified at the level of the business place.

If an NF type is assigned to the sales document type (from step 1) **and** the system does not find an assignment to alternative NF type at business-place level (from step 2), then the system checks in the activity Define NF Type Redetermination per Region whether an alternative NF type has been specified at the level of the region.

You can use this Business Add-In to determine a **different NF type for each line item,** as described in the method documentation.

See also

Method Modify NF Type per Line Item

BAdI: Set Net Price in Return Movements

Use

Your company has acquired goods, but for some reason needs to return them. The system would normally use the net price set in the incoming nota fiscal.

This Business Add-In (BAdI) enables you to set an alternate net price in return movements.

Activities

After you call the IMG activity, the system displays a dialog box where you enter a name for the implementation.

If implementations of this Business Add-In have already been created, the system displays them in a dialog box. You then choose one of them by choosing ***Create***, and continue as follows:

In the dialog box, enter a name for the implementation of the Add-In and choose ***Create***. The system displays the initial screen for creating Business Add-In implementations.

On this screen, enter a short description for you implementation in the ***Implementation Short Text*** field.

If you choose the ***Interface*** tab, you will notice that the system has filled in the ***Name of the Implementing Class*** field automatically, by assigning a class name based on the name of your implementation.

Save your entries and assign the Add-In to a package.

To edit a method, double-click its name.

Enter your implementation code between the `method <Interface Name>~<Name of Method>.` and `endmethod.` statements.

Save and activate your code. Navigate back to the ***Change Implementation*** screen.

Note: You can also create an implementation for an Add-In and not activate it until later. If you want to do this, do not carry out the following step:

Choose ***Activate***.

When the application program is executed, the system carries out the code in the method you wrote.

See Also

Get Net Price for Return Movements

Imports

Upload Import Data from MS Excel

Assign Tax Types to Tax Groups for Import Data Upload

Use

In this Customizing activity, you assign the tax types relevant for the data that is uploaded from an MS Excel file to the corresponding tax groups. You must do this for each MS Excel layout that you want to use for uploading import data.

Activities

You assign the tax types to tax groups in this Customizing activity.

You assign the tax groups to the relevant data structures used for storing the import data in the system in the Map MS Excel Columns to Data Structure Fields Customizing activity.

Record MS Excel Layouts for Import Data

Use

To make the manual creation of a nota fiscal for imports easier, the system can allow you to upload import data in a special view of the *Nota Fiscal Writer* (accessed using the **J1B1N_IMP** transaction) from an MS Excel file. To enable the system to offer this upload function, you must record the possible layouts that you want to use in this Customizing activity.

The system then displays the names of these layouts as selection criteria for the MS Excel layout on the selection screen called up with the **J1B1N_IMP** transaction.

Requirements

You have assigned tax types that are relevant for imports to the corresponding tax groups in the Assign Tax Types to Tax Groups for Import Data Upload Customizing activity.

Activities

You record the possible MS Excel layouts in this Customizing activity.

You map the fields in your MS Excel layouts to the fields in the data structures in the system in the Map MS Excel Fields to Data Structure Fields Customizing activity.

Map MS Excel Columns to Data Structure Fields

Use

When the system uploads the import data from an MS Excel file in the special view of the *Nota Fiscal Writer* (**J1B1N_IMP** transaction), it must be able to place the data in each cell in the corresponding field in the respective data structure. This data is then stored in the corresponding table when you save the nota fiscal. To enable the system to do this data mapping, in this Customizing activity you map the columns in the MS Excel layouts that you want to use for upload to the corresponding fields in the relevant data structures. If you map a column to a field in a tax-relevant data structure, you must also enter the corresponding tax group for the data structures.

Requirements

For each possible MS Excel layout, you have assigned the tax types relevant for imports to the tax groups for the tax-relevant data structures in the Assign Tax Types to Tax Groups for Import Data Upload Customizing activity.

Electronic Fiscal Documents

Define Official Status Codes

Use

In this Customizing activity, you maintain official status codes for electronic fiscal documents (such as NF-e and CT-e) as defined by the tax authorities.

When you (or the system) send a message to the tax authorities (for example, to request authorization to print or cancel an NF-e), the tax authorities send a response that contains a predefined status code. The system then displays this official status code for the given document in the Monitor. If you maintain all relevant codes and their descriptions in this Customizing activity, the system displays both the code **and** the corresponding description in the *Document History* section of the *Monitor*.

Activities

Enter the official status codes that you need and the corresponding descriptions.

If the same description is used for electronic fiscal documents with model (NF-e) and model 7 (CT-e), you only need one entry in the *Status Code Description* column for each code. If the description for model 7 (CT-e) differs from the one for model , enter the relevant description in the *CT-e Status Code Description* column.

Maintain Number Ranges for Electronic Fiscal Documents

Use

In this Customizing activity, you maintain one or several ranges for the external document numbers of electronic fiscal documents (such as NF-e or CT-e). These are the official numbers printed on the documents.

Requirements

You have already created the number groups to which you are assigning these number ranges, in the Define Number Groups Customizing activity.

Maintain Last Checked Number for Fiscal Document Number Range

Use

You use this Customizing activity to maintain the last checked number of a number range used by the Check Number Range Gaps report.

Activities

The number entered in the **To Number** column serves as a starting point for the next run of the report.

When you execute the report, it uses the next number to check any gaps in the number range of the electronic fiscal documents (such as NF-e or CT-e).

At the end of the report execution the last processed number found in the database is stored in the **To Number** as a starting point for the next execution.

Note:

You can set the number manually to define a different starting point for the *Check Number Range Gaps* report.

You have to be aware of the number you maintain in the Customizing activity so that you do not report duplicate gaps.

Define Contingency Reasons

Use

In this Customizing activity, you define contingency reason codes and their corresponding descriptions. The system displays these description texts, for example, in these places:

In the Define Business Places Customizing activity, these texts are the value help for the default contingency reasons.

On the output of the Monitor, these texts are displayed in the *Document Overview* for electronic fiscal documents that were set to contingency processing.

In the *Monitor*, these texts are displayed as the value help for the reasons for switching an electronic fiscal document to contingency.

Activities

Since the same description text can be used for different contingency reason codes, the model is used to differentiate which text belongs to which type of electronic fiscal document. To enter a text for one type of electronic fiscal document, you enter the code, the model that corresponds to this type of document, and the text. If a text is used for all kinds of electronic fiscal documents, you enter the code and text and leave the *Electronic Document Model* column blank.

Example

To enter a descriptive text only for NF-e, you enter the code, as the model, and the description text. If a text is used only for CT-e, you enter the code, **7** as the model, and the description text.

Define Cancellation Reasons

Use

In this Customizing activity, you define possible reasons to cancel or skip an electronic fiscal document (such as an NF-e or CT-e).

You can also enter a description text for each code. When such a document is cancelled or skipped from the Monitor, the texts that you enter here are displayed as the value help for the cancellation/skipping reason. These description texts are also displayed, for example, in the *Document Overview* for an electronic fiscal document that was cancelled/skipped.

Standard settings

The application reversal reasons in the areas of Logistics Invoice Verification and Goods Movement are optional. If you do not select any options there, the system will use predefined reasons.

Activities

Since the same description text can be used for different reason codes, the model is used to differentiate which text belongs to which type of electronic fiscal document. To enter a descriptive text for one type of electronic fiscal document, you enter the code, the corresponding model and the text. If a text is used for all kinds of electronic fiscal documents, you enter the code and text and leave the *Electronic Document Model* column blank.

Example

You define a cancellation reason, 01 (*NF-e switched to contingency*) and assign the following reversal reasons:

Area	Reason	Reason Text
Logistics Invoice Verification Reversal in current period	01	
Goods Movements	1	Poor Quality

Since this description text is only for NF-e, you enter in the *Electronic Document Model* column.

If the NF-e to be cancelled was issued in one of the above areas, when you receive the authorization from the authorities, the system uses the assigned cancellation reason in the reversal transactions.

Events

Enter Official Event Codes and Map to Internal Codes

Use

For each event, the tax authorities assign an official event code to identify the event type. To be able to create and process the different event types, you enter the official event codes in this Customizing activity. You then map them to the internal event codes that are delivered with your SAP system. This internal event code is used in backend processing and allows for consistency if the tax authorities change the official event code. In this case, you enter the new official event code and re-map it to the internal event code.

You can also use internal event codes to limit the output displayed on the NF-e/CT-e Monitor. If you select an internal event code on the selection screen for the *NF-e/CT-e Monitor* the system only displays documents for which the corresponding type of event was created.

In this Customizing activity, you can also enter a descriptive text for the official event code. The system displays this text in the *NF-e/CT-e Monitor* when you display the event history for a single electronic fiscal document.

Example

The tax authorities assign "110110" as the official event code for identifying electronic correction letters. In the SAP ERP system, the equivalent internal event code is "EV_CCE". You enter "110110" as the official event code in this Customizing activity and a descriptive text. You map this official code to the internal event code, "EV_CCE".

If later the tax authorities change this official event code to, for example, "110333", you change the official event code that is mapped to "EV_CCE" in this Customizing activity. After such a change, the official code, "110333", would be mapped to the internal code, "EV_CCE".

Group Internal Event Codes

Use

In your SAP system, you can group internal event codes into event groups to, for example, control which business places are able to process specific types of events. In this Customizing activity, you first define the event groups. For each event group, you can enter a descriptive text. Then, in the *Assign Internal Events* view, for each of the event groups, you assign the internal event codes that should belong to the group.

Requirements

You have entered the official event codes in the Enter Official Event Codes and Map to Internal Codes Customizing activity.

Activities

To control which business places are able to process specific types of events, after you group the internal event codes, you must assign the relevant event group to your business places in the Define Business Places Customizing activity. You do so as follows:

Select the business place.

Open the *Electronic Fiscal Document Configuration* view.

Enter the code for the relevant event group in the *Event Group* field.

Business Add-Ins

BAdI: General Enhancements for Electronic Fiscal Documents

Use

This Business Add-In enables you to make cross-component enhancements to the processing of electronic fiscal documents such as NF-e or CT-e.

Activities

Implement the BAdI as required following the instructions.

See also

Methods

Allow Printing of Documents Without Authorization

Allow Checking of Subsequent Documents

Fill Additional NF-e Header Fields

Fill Additional NF-e Item Fields

Set Indicator for Commit Call

Call Print Program

Get Availability of Server

Exclude Documents from Batch Processing

Set Order of Documents for Batch Processing

Change Cancellation Date for NF-e from Material Documents

Fill Additional CT-e Fields - Layout 1.04

Fill Additional CT-e Fields - Layout 2.00

BAdI: Additional Data for Nota Fiscal

Use

This Business Add-In (BAdI) is used in *Sales and Distribution* (SD) and in *Material Management* (MM) for the creation of a Nota Fiscal. This BAdI enables you to fill additional fields in the Nota Fiscal which are necessary for your business practices.

If implemented, this BAdI is automatically called upon generation of a nota fiscal in one of the components above mentioned. The BAdI fills in the additional fields you have implemented and stores the data in the database.

Relevant for MM only: To avoid that the data that you have inserted manually in the Nota Fiscal is overwritten by the system, this BAdI is called only once upon generation of the Nota Fiscal.

Standard settings

For more information about the standard settings (filters, single or multiple uses), see the *Enhancement Spot Element Definitions* tab in the BAdI Builder (transaction SE18).

Activities

Implement the BAdI as required following the instructions

See also

Method

ADD_DATA

FILL_AUTXML

FILL_EXPARAMETERS

ADD_DATA_J1B1N

FILL_COD_SIT

BAdI: Check Period of Notas Fiscais

Use

This Business Add-In (BAdI) is used in the *Financials* (FI) component for Brazil.

When you want to change the posting date of an electronic nota fiscal (NF-e), the system calls the **Nota Fiscal System - Check posting period in case of cancel** (J_1B_NF_CANCEL_CHECK_PERIOD) function module to check the posting period. If the period is closed, the system will not allow you to change the posting date in the NF-e.

You can then use the **Set Flag to Check the Period** method of this BAdI to change the behaviour of the function module and manually change the posting date in the Change Nota Fiscal transaction.

Standard settings

In the standard system, the Business Add-In is activated. The default code is executed automatically.

The BAdI is not filter-dependent and is not reusable.

Activities

After you call the IMG activity, the system displays a dialog box where you enter a name for the implementation.

If implementations of this Business Add-In have already been created, the system displays them in a dialog box. You then choose one of them by choosing ***Create***, and continue as follows:

In the dialog box, enter a name for the implementation of the Add-In and choose ***Create***. The system displays the initial screen for creating Business Add-In implementations.

On this screen, enter a short description for you implementation in the ***Implementation Short Text*** field.

If you choose the ***Interface*** tab, you will notice that the system has filled in the ***Name of the Implementing Class*** field automatically, by assigning a class name based on the name of your implementation.

Save your entries and assign the Add-In to a package.

To edit a method, double-click its name.

Enter your implementation code between the `method <Interface Name>~<Name of Method>.` and `endmethod.` statements.

Save and activate your code. Navigate back to the ***Change Implementation*** screen.

Note: You can also create an implementation for an Add-In and not activate it until later. If you want to do this, do not carry out the following step:

Choose ***Activate***.

When the application program is executed, the system carries out the code in the method you wrote.

Example

Your company, located in Mato Grosso, buys equipment from Germany. The equipment arrives in the Port of Santos in São Paulo, and needs to be transported by land to your company.

You then create a manual incoming NF-e to accompany the equipment during the transporting. However, since you cannot know for certain when the equipment will arrive at your company, you estimate the arriving date and post the NF-e.

When the equipment arrives at your company, if the date is different from the estimate, you need to manually change the posting date of the NF-e.

Coding Example

```
IF LT_J1BNFDOC-NFE    = 'X' AND

  LT_J1BNFDOC-DIRECT = 1    AND     LT_J1BNFDOC-MANUAL =
'X'.


 LV_FLAG = '  '.


ENDIF.
```

See Also

BAdI method documentation:

- Set Flag to Check the Period

NF-e Specifics

Incoming NF-e Automation

Create RFC Connection to SAP Business Objects NFE

Use

To use the Incoming NF-e/CT-e Automation functions delivered with *SAP Business Objects Nota Fiscal Eletrônica*, you must set up a Remote Function Call (RFC) connection from all SAP systems in which you will use these functions to the *SAP Business Objects Nota Fiscal Eletrônica* system. Note the release level of the *SAP Business Objects Nota Fiscal Eletrônica* solution must be at least 10.0.

Activities

Create a new ABAP connection with 3 as the type.

Name the new destination **NFE_IN**.

Note that the user for the RFC connection needs display and RFC authorization in the target system.

Customizing for Incoming NF-e Automation

Use

To use the Incoming NF-e Automation functions delivered with SAP Business Objects Nota Fiscal Eletrônica, you must make certain Customizing settings in your system.

Requirements

Before you complete the Customizing activities included here under *Incoming NF-e Automation*, you must ensure that you have completed the following activities in other parts of the SAP Customizing Implementation Guide (IMG).

Units of Measurement

Assign ISO codes to the units of measurement (UoM) that are used for delivered quantities. You make settings for UoM and ISO codes in the Check Units of Measurement Customizing activity. You can also access the Customizing activity by calling transaction **CUNI**.

Normal Purchasing Process

Make the necessary Customizing settings for the normal processing of inbound deliveries. You can find relevant information under Customizing for *Logistics Execution -> Shipping -> Deliveries*.

Stock Transfer Process

You make the settings for processing stock transfers in one of these Customizing activities:

Define NF Type Redetermination for Goods Movements

Define NF Type Determination for Vendors Make the following settings:

For the goods movement types used in stock transfer, enter an NF type that results in an NF-e.

For each combination of plant and goods movement type used in stock transfer, ensure that the *User Decision* checkbox is not selected.

Future Delivery Process

Make the following settings for processing future deliveries:

Create a delivery type for inbound deliveries for future deliveries that differs from the delivery type for incoming deliveries for normal purchases in the Define Delivery Types Customizing activity.

Create a delivery item category that is assigned to the movement type for future delivery goods receipt (for example, 801) in the Define Item Categories for Deliveries Customizing activity.

Assign this delivery item category to the delivery type that you created for future deliveries in the Define Item Category Determination in Deliveries Customizing activity.

Map the tax codes for the purchase order to the tax codes of the goods receipt in the Define FI/MM Tax Codes Customizing activity.

Returnable Transfer Packaging (RTP) Process

Make the following settings for processing RTP:

Create a delivery item category (or categories as needed) that are assigned to the movement type for RTP (for example, 841) in the Define Item Categories for Deliveries Customizing activity.

Assign this delivery item category to the delivery types for relevant processes, for example, normal purchasing and future deliveries, in the Define Item Category Determination in Deliveries Customizing activity.

Consignment Process

Make the following settings for processing consignment goods:

Create a delivery type for inbound deliveries for consignment goods that differs from the delivery type for incoming deliveries for normal purchases in the Define Delivery Types Customizing activity.

Create a delivery item category that is assigned to the movement type for consignment goods receipt (for example, 821) in the Define Item Categories for Deliveries Customizing activity.

Assign this delivery item category to the delivery type that you created for consignment goods in the Define Item Category Determination in Deliveries Customizing activity.

Map the tax codes for the purchase order to the tax codes of the goods receipt in the Define FI/MM Tax Codes Customizing activity.

Assign NF Type to Incoming NF-e Processes

Use

The Incoming NF-e Automation functions delivered with *SAP Business Objects Nota Fiscal Eletrônica* can be used to process the XML from NF-e in many different incoming NF-e processes, such as normal purchasing or future delivery. In this Customizing activity, you enter the nota fiscal type that an NF-e must have for a specific incoming NF-e process. You must enter an NF type for each of the processes in which you use the functions of Incoming NF-e Automation.

Note about the functions of Incoming NF-e Automation for subcontracting: For this process, your SAP system uses the NF type that you enter here for the normal purchasing process.

Requirements

Future Delivery Process

You have defined the NF type for the future delivery process in the Define Nota Fiscal Types Customizing activity with a default NF item type that has ICMS set to statistic for all usages.

Assign Delivery Type to Incoming NF-e Processes

Use

In this Customizing activity, you enter the delivery type to be used for certain incoming NF-e processes, for example, *Future Delivery Goods Receipt*. This delivery type is mapped in your Customizing to a goods movement type. When your SAP system processes the incoming XML in one of these processes, the system can then determine the correct goods movement type and subsequently the NF item type for the items in the notas fiscais.

Requirements

You have assigned the NF item type needed for each incoming NF-e process to the relevant goods movement type in the Maintain Nota Fiscal Category Derivation Customizing activity. You have also marked this goods movement type as NF relevant.

In the Define Delivery Types Customizing activity, you have created delivery types for the respective processes, for example, inbound deliveries for future deliveries.

You have created the necessary delivery item categories for these processes, which have the respective goods movement types, in the Define Item Categories for Deliveries Customizing activity.

You have assigned these delivery item categories to the delivery types that you created for the processes in the Define Item Category Determination in Deliveries Customizing activity.

Example

You want to use the functions for Incoming NF-e Automation for the *Future Delivery Goods Receipt* process. You will use 801 as the goods movement type for this process. To enable your SAP system to process the NF-e delivered with the goods receipts, you make the following Customizing settings:

In the *Maintain Nota Fiscal Category Derivation* Customizing activity, you assign **42** as the nota fiscal item type. You also set the goods movement type as nota fiscal relevant.

In the *Define Delivery Types* Customizing activity, you create an entry ELF.

In the *Define Item Categories for Deliveries* Customizing activity, you define a delivery item category for future deliveries called **ELNF**. This delivery item category has **801** as the goods movement type.

In the *Define Item Category Determination in Deliveries* Customizing activity, you create entries with the following values:

Delivery type is **ELF** - Inbound Delivery Future Delivery

Item category group from material master is **NORM** for normal material

Default item category is **ELNF**

In this Customizing activity, you enter **ELF** as the delivery item category for the *Future Delivery Goods Receipt* process.

Later when you simulate the NF-e based on the goods receipt for a future delivery, your SAP system uses the delivery type to determine that the goods movement type is 801 and subsequently the NF item type is 42.

Business Add-Ins

BAdI: Conversions for Incoming NF-e Automation

Use

This Business Add-In (BAdI) is used in the *Materials Management # Invoice Verification* (MM-IV) component for Brazil.
SAP Business Objects Nota Fiscal Eletrônica provides automated functions for processing incoming electronic notas fiscais (NF-e) in conjunction with your SAP system. You can use this BAdI to implement your own logic when processing the XML data for the incoming NF-e in your SAP system. You can implement logic in different methods to do the following:

UNIT_CONVERSION BAdI method. This method allows you to:

Convert the External Unit of Measurement in Commercial Format (3-Char.) for a delivered quantity to the corresponding Internal Unit of Measurement Format. The mapping for these two units of measurement (UoM) is defined in the Check Units of Measurement Customizing activity. You can access the Customizing activity by calling transaction **CUNI**. The system uses the internal unit of measurement format to check the quantities in the incoming NF-e.

Find the 3-character ISO code for unit of measurement that corresponds to the external unit of measurement. The Incoming NF-e Automation functions use the ISO code for processing the quantities.

MATERIAL_CONVERSION BAdI method: In some incoming NF-e processes, for example, subcontracting and returnable packaging, your system may not be able to link the NF-e items in the incoming XML direct to a purchase order or purchase order item. In this case, your system tries to map the materials in the XML to materials and the corresponding unit of measurement using the vendor information records. Alternatively, you can use this method to implement your own logic to do this mapping.

INBOUND_DELIV_SEARCH BAdI method: This method allows you to add a search for existing inbound deliveries in your SAP system to the steps in the automated processing of incoming NF-e.

INBOUND_DELIV_DELETE_CHECK BAdI method: This method allows you to stop the automatic deletion of inbound deliveries in the automated NF-e cancellation process.

CHANGE_SLOC_AND_VALTYPE BAdI method: This method allows you to determine a storage location and valuation type for materials that are included in an inbound delivery.

CHECK_INVOICE BAdI method: This method allows you to implement your own checks for the invoice and NF-e simulation step.

SET_EKPO_BUFFER_REFRESH: this method allows you to set a flag that defines that during NF-e simulation step, the purchase data is retrieved from the data base and not from the buffer.

INBOUND_DELIV_CHANGE_HEADER: this method allows you to overwrite default header data to a customer-specific data.

Standard settings

For more information about the standard settings (filters, single or multiple uses), see the *Enhancement Spot Element Definitions* tab in the BAdI Builder (transaction SE18).

Activities

For information about implementing BAdIs as part of the Enhancement Concept, see SAP Library for SAP NetWeaver under BAdIs - Embedding in the Enhancement Framework.

Example

You can find an example implementation in the BAdI Builder on the *Enhancement Spot Element Definitions* tab in the *Implementation Example Classes* section.

CL_J_1BNFE_IN_EXAMPLE uses Spanish as the language of the units of measurement.

See also

BAdI method documentation:

UNIT_CONVERSION

MATERIAL_CONVERSION

INBOUND_DELIV_SEARCH

INBOUND_DELIV_DELETE_CHECK

CHANGE_SLOC_AND_VALTYPE

CHECK_INVOICE

SET_EKPO_BUFFER_REFRESH

INBOUND_DELIV_CHANGE_HEADER

BAdI: Change Batch Information for Incoming NF-e Automation

Use

You use this Business Add-In during the automation process of incoming electronic notas fiscais (NF-e) in conjunction with SAP Nota Fiscal Eletrônica (SAP Electronic Invoicing for Brazil).

For some processes, the user has to insert manually data that is not available in the SAP because the previous processes did not provide this data. This BAdI enables you to insert such data when the processing of an NF-e is automated. This BAdI is enabled for the following process only:
Creation of future delivery via incoming automation

Creation of stock transfer via incoming automation

Activities

Implement the BAdI as required following the instructions.

Methods

CHANGE_BATCH

CT-e Specifics

Outgoing CT-e

Map CT-e Partners to NF Partner Functions

Use

To create or process a CT-e, the system needs to be able to determine which CT-e partner is included in the XML. The CT-e partner depends on the value that is entered in the system for the Nota Fiscal (NF) partner function (entered, for example, on the creation screen in the NF Writer). To allow your SAP system to map the NF partner function to the correct CT-e partner when, for example, filling the corresponding XML tags, in this Customizing activity, you map the possible CT-e partners to NF partner functions.

Activities

You can map a CT-e partner to an NF partner function by entering the relevant NF type for the mapping combination.

Note the following:

One NF partner function cannot be mapped to more than one CT-e partner.

If you enter a mapping for the goods sender partner, you must also map the CT-e destination to an NF partner function.

If you process services of the intermediate redispatch type, you must map both the cargo dispatcher and the cargo receiver to NF partner functions.

Business Add-Ins

BAdI: Import Outgoing CT-e Data

Use

This BAdI enables you import data into a freight sales order. When performing the billing of a freight sales order, you can use this BAdI to import data to fill the resources and the NF references to create the conhecimento de transporte eletrônico (CT-e).

Requirements

This BAdI will only be called if the related NF type being created has NF Type 7.

Standard settings

The BAdI is called during the creation of the billing document.

Activities

After you call the IMG activity, the system displays a dialog box where you enter a name for the implementation.

If implementations of this Business Add-In have already been created, the system displays them in a dialog box. You then choose one of them by choosing ***Create***, and continue as follows:

In the dialog box, enter a name for the implementation of the Add-In and choose ***Create***. The system displays the initial screen for creating Business Add-In implementations.

On this screen, enter a short description for you implementation in the ***Implementation Short Text*** field.

If you choose the ***Interface*** tab, you will notice that the system has filled in the ***Name of the Implementing Class*** field automatically, by assigning a class name based on the name of your implementation.

Save your entries and assign the Add-In to a package.

To edit a method, double-click its name.

Enter your implementation code between the `method <Interface Name>~<Name of Method>.` and `endmethod.` statements.

Save and activate your code. Navigate back to the ***Change Implementation*** screen.

Note: You can also create an implementation for an Add-In and not activate it until later. If you want to do this, do not carry out the following step:

Choose ***Activate***.

When the application program is executed, the system carries out the code in the method you wrote.

Incoming CT-e

Business Add-Ins

BAdI: Fill CT-e Data During Invoice Verification

Use

This Business Add-In (BAdI) is used in the *Financials* (FI) component for Brazil.

This BAdI enables you to collect information from the purchase order (PO) to fill specific data in the *conhecimento de transporte eletrônico* (CT-e).

Requirements

You have used model 7 to create the CT-e.

Standard settings

The BAdI is called during CT-e creation when you choose the **Nota Fiscal** pushbutton during the invoice verification.

Activities

After you call the IMG activity, the system displays a dialog box where you enter a name for the implementation.

If implementations of this Business Add-In have already been created, the system displays them in a dialog box. You then choose one of them by choosing ***Create***, and continue as follows:

In the dialog box, enter a name for the implementation of the Add-In and choose ***Create***. The system displays the initial screen for creating Business Add-In implementations.

On this screen, enter a short description for you implementation in the ***Implementation Short Text*** field.

If you choose the ***Interface*** tab, you will notice that the system has filled in the ***Name of the Implementing Class*** field automatically, by assigning a class name based on the name of your implementation.

Save your entries and assign the Add-In to a package.

To edit a method, double-click its name.

Enter your implementation code between the `method <Interface Name>~<Name of Method>.` and `endmethod.` statements.

Save and activate your code. Navigate back to the ***Change Implementation*** screen.

Note: You can also create an implementation for an Add-In and not activate it until later. If you want to do this, do not carry out the following step:

Choose ***Activate***.

When the application program is executed, the system carries out the code in the method you wrote.

See Also

Fill Specific CT-e Data During Invoice Verification

BAdI: Select Service Master Used in Dynamic Exceptions

Use

This BAdI enables you to select a service item to determine the tax exception to apply to a service purchase order (PO).

A service PO can have many service items. One service item is used to determine the tax exceptions to be applied to the service PO. By default, the service item with the highest value is used. However, you can implement this BAdI to define your own method to select a different service item.

Standard settings

The BAdI is called during the preparation of the parameters used to search for tax exceptions. The BAdI will only be called if CONH condition (or another condition type assigned to internal code CONHECIMENTO) is active in the purchase pricing procedure.

Activities

After you call the IMG activity, the system displays a dialog box where you enter a name for the implementation.

If implementations of this Business Add-In have already been created, the system displays them in a dialog box. You then choose one of them by choosing ***Create***, and continue as follows:

In the dialog box, enter a name for the implementation of the Add-In and choose ***Create***. The system displays the initial screen for creating Business Add-In implementations.

On this screen, enter a short description for you implementation in the ***Implementation Short Text*** field.

If you choose the ***Interface*** tab, you will notice that the system has filled in the ***Name of the Implementing Class*** field automatically, by assigning a class name based on the name of your implementation.

Save your entries and assign the Add-In to a package.

To edit a method, double-click its name.

Enter your implementation code between the `method <Interface Name>~<Name of Method>.` and `endmethod.` statements.

Save and activate your code. Navigate back to the ***Change Implementation*** screen.

Note: You can also create an implementation for an Add-In and not activate it until later. If you want to do this, do not carry out the following step:

Choose ***Activate***.

When the application program is executed, the system carries out the code in the method you wrote.

Incoming CT-e Automation

Create RFC Connection to SAP Business Objects NFE

Use

To use the Incoming NF-e/CT-e Automation functions delivered with *SAP Business Objects Nota Fiscal Eletrônica*, you must set up a Remote Function Call (RFC) connection from all SAP systems in which you will use these functions to the *SAP Business Objects Nota Fiscal Eletrônica* system. Note the release level of the *SAP Business Objects Nota Fiscal Eletrônica* solution must be at least 10.0.

Activities

Create a new ABAP connection with 3 as the type.

Name the new destination **NFE_IN**.

Note that the user for the RFC connection needs display and RFC authorization in the target system.

Assign NF Type to Incoming CT-e Processes

Use

The Incoming CT-e Automation functions delivered with SAP Business Objects Nota Fiscal Eletrônica can be used to process the XML from CT-e in the incoming CT-e process. In this Customizing activity, you enter the nota fiscal type that is used for incoming CT-e during the invoice simulation and posting.

4 Field Length Extension

Activate Extended Fields

Use

In this Customizing activity, you can activate the usage of the following extended field in external communication interfaces:

Extended material number

With this activation, in relevant external communication interfaces, such as BAPIs and IDocs, the system uses only the extended version of the field, for example MATERIAL_LONG. The extended material number can have a maximum length of 40 characters. There are the following settings:

Checkbox is not selected: Standard setting; the system uses the short version of the material number field, for example MATNR, for all external communication. As a standard, this field has a maximum length of 18 characters.

Checkbox is selected: For the external communication, the system only uses the extended material number field.

Requirements

Before you activate the extended field, you must ensure that all your communication partners are able to work with the extended version of the field. Communication partners can be business partners or other SAP systems, for example SAP CRM.

Standard settings

As long as you have not activated the extended field, the system, for compatibility reasons, does not allow fields longer than the length as in the short version of the field.

Notes

In the following activities you make settings for notes.

Establish Language for Notes

In this activity you define the languages in which notes can be maintained.

If you do not make any entries, notes can be maintained in the system in all the languages stated in table T002.

For performance reasons we recommend that you reduce the number of possible languages in which notes can be maintained.

You can maintain notes in master data transactions, for example, by defining notes for a certain contract. You can find the customizing settings for the individual note objects in the relevant master data objects.

Digital Signature

Basic Information for Digital Signature

Use

The digital signature is implemented in the SAP system by means of the Basis component **Digital Signatures and Encryption** and is based on Secure Store and Forward (SSF) mechanisms and public-key technology.

To use the digital signature, you must configure the SSF settings for the digital signature. These settings depend on the signature method you want to use.

The following signature methods are available:

System signature
Authentication is done here using the SAP user master and the password of the signatory.
This can be the user logged on to the system or another system user.

The SSF settings for the system signature are included in the standard system.

User signature

Authentication is done here using a security product and not the SAP user master. You must integrate the security product in your SAP system with the aid of the component SSF.

Note that you should not store the users' Personal Security Environment (PSE) in the file system (hard disk) but rather, for example, on a smart card. The PSE software does not fulfil the regulatory requirements for digital signatures.

You decide which signature method you want to use in Customizing for the simple signature for each type of signature object or for the signature strategy.

Requirements

In addition to the Customizing activities, the digital signature (package DS in SAP_ABA) also provides a standardized programming interface with which you can integrate the digital signature in any application in an SAP system, such as ERP, APO, CRM. To be able to integrate the digital signature in an application, you must first make a series of settings and include the programming interface in your application. The settings are described in detail in the Implementation Guide **Digital Signature Tool**. You will find this guide in Note 70049. Only then can you execute the Customizing activities required for the digital signature.

Activities

SSF Settings for System Signature

If you want to use the system signature, you must check the default settings and change them if required. To do this, execute the following activities in Customizing under *SAP NetWeaver -> Application Server -> System Administration -> Maintain the Public Key Information for the System*:

Maintaining Application-Dependent SSF Information

Maintaining the System's Security Information

SSF Settings for User Signature

If you want to use the user signature, you must execute the activity Maintaining Application-Dependent SSF Information in Customizing under *SAP NetWeaver -> Application Server -> System Administration -> Maintain the Public Key Information for the System*.

See also

Settings in User Maintenance

For more information about SSF and public-key information, see the *SAP NetWeaver Library* under *Digital Signatures and Encryption*.

Settings in User Maintenance

Use

In this Customizing activity, you specify the data in the user master record of the person who is to execute the signature. You enter the full name of the user and their time zone. When a signature is executed, the system copies the signatory name together with the local time according to the signatory's personal time zone to the signed document.

Note

You must enter the user data in the productive system, that is, in each system in which the digital signature is to be available, as the settings in the user master cannot be transported.

Caution

Each user can maintain his or her address data and default values under *System -> User Profile -> Own Data*. This data includes the general user settings and the SFF settings for the user. If you are working with the digital signature, you should therefore not allow all users authorization to maintain their own data.

Requirements

Basic Information for Digital Signature

Activities

Specify the general user settings:

To do this, either execute the Customizing activity or choose *Tools -> Administration -> User Maintenance* in the SAP Easy Access menu.

Enter the user ID of the user whose data you want to maintain and choose *Change*.

Choose the *Address* tab and enter the user's first and last name.

Choose the *Defaults* tab and enter the user's personal time zone.

Choose *Save*.

If you want to use the **user signature**, you must also enter the **SSF information** in the user master for the user who is to execute a digital signature:

Choose the *Address* tab of the user.

Choose the *Other Communication* pushbutton and double-click the SSF entry to open the dialog box for maintaining SSF addresses.

Enter the SSF information for the security product used.

How the entries must be structured depends on the security product you are using.

For more information, see the document *Maintaining User SSF Information* in the SAP NetWeaver documentation.

Choose *Copy* and save your entries.

Specify Signature Method for Approval Using Simple Signature

Use

In this IMG activity, you define the settings for approval using simple signature. For a simple signature, the signature process comprises one signature only, that is, only one person needs to sign. The signature process is completed when the authorized person has signed the document.

If no signature strategy is required to sign a document, but only the signature of one person, you must specify the *signature method* for the signature object in this IMG activity and also specify other options. This signature method is then automatically valid for all processors of the application to which you have not assigned a signature strategy

Requirements

In the transaction SIGNO, you have defined a signature object for your application that you want to link to the digital signature.

Activities

Make the following settings:

Signature object

You specify the signature object for your application. All the following settings then apply only for this signature object.

Signature method

Here, you select the signature method. This signature method is then valid for all signatories of the application to which you have not assigned a signature strategy You have the following options:

System signature with authorization by user ID and password

Here, you do not require an external security product. The signatory identifies himself or herself with his or her user ID and password, just as when logging on to a system. The SAP system then provides the digital signature, whereby the name and user ID are part of the signed document.

User signature with verification

Here, you do require an external security product. The user provides the digital signature using his or her own private key and the signature provided is checked immediately to verify its authenticity.

User signature without verification

Here, you do require an external security product. You can use this signature method for test purposes only and not in a production system. The user provides his or her signature as described in the previous method, however, the automatic verification is deactivated.

Comment

You specify if the user has the option of entering a text comment when signing the application. You have the following options: Disallowed (no comment field is provided), Possible (comment field can be called up), and Required (signature is only possible after a comment has been entered).

Remark

You enable the user to select a remark from a list of predefined remarks and to add this to the signature. The availability of remarks depends on the respective application. You have the following options: Disallowed, Possible, and Required.

Document

You specify if the document to be signed should also be displayed for the signatory. You have the following options: Disallowed, Possible, and Required.

Verification

You can verify previously executed signatures. A check is run in the background to determine if this document is still identical to the original document and if the previously executed signatures have been stored correctly in the system. If you use the user signature, you always work with verification in the production system. The validity of the user certificate is not checked for signatures without verification. This signature method should therefore only be used for test purposes.

Further notes

The settings for *Comment, Remark*, and *Document* are overridden if you set the option *Disallowed* for each of these points in the system table for the application (transaction SIGNO).

Signature Strategy

Define Authorization Groups

Use

In this activity, you define the authorization group that can provide a specific individual signature when executing signature strategies.
You use user groups if individual signatures are to be executed in succession by different groups of users, such as production operators, shift managers, and QM employees, and this process is to be implemented with a signature strategy. This has the advantage that an individual signature is only executed when the system has verified that the correct user group was assigned to the user for this individual signature.

You use the authorization groups to restrict the authorization for executing digital signatures in applications as follows:

You define different authorization groups for users with different areas of responsibility.

In the user master record, you assign authorizations for the authorization group that corresponds to the user's area of responsibility (authorization object C_SIGN_BGR). Depending on the application, it may also be necessary to assign the authorizations for the C_SIGN authorization object.

You define individual signatures that must be created by the user of a specific authorization group and use them in the signature strategies for the relevant application.

Activities

Determine which user groups or which areas of responsibility must be distinguished in your company.

Define an authorization group for each user group.

Example

In your company, specific input values must be entered by an employee and then verified by a second employee. Make the following settings:

Define the authorization groups *EING (entry)* and *VERIF (verification)*.

The employees that enter data receive authorization for the *EING* group and the employees that check data receive authorization for the *VERIF* group.

Define two individual signatures for the relevant applications and assign the first to authorization group *EING* and the second to authorization group *VERIF*.

Further notes

Authorization groups are valid in all areas in which the digital signature with signature strategy is used. Therefore, before you change existing authorization groups or use them for your purposes, ensure that this will not lead to conflicts of interest with other areas.

Define Individual Signatures

Use

In this IMG activity, you define the digital individual signatures that must be executed by users in a specific authorization group.

You can then use the individual signatures as sub steps of a signature strategy that is executed in the relevant application if you sign a process step or confirm an input value outside the permitted value range.

Requirements

You have defined authorization groups (see Defining Authorization Groups).

Activities

Define the individual signatures that must be executed in the relevant application when signing a process step or for an invalid input value.

Example

In your company, invalid input values must be signed by the employee responsible for the values and must be checked and signed by another employee. You define the following individual signatures:

S1 with authorization group *EING*

S2 with authorization group *VERIF*

Further notes

Individual signatures are also valid in other areas in which the digital signature is used. Therefore, before you change existing individual signatures or use them for your purposes, ensure that this will not lead to any conflicts of interest with other areas.

Define Signature Strategies

Use

In this Customizing activity, you define signature strategies. To do this, make the following settings:

Group individual signatures of different user groups into one signature process.
Define which signature method is used when the signature process is executed.

In Customizing for the application you can then define which signature strategy is used to execute a process step.

Requirements

You have defined individual signatures (see Define Individual Signatures).

Activities

To create a new signature strategy, execute the following activities:

A. Create new entry for the signature strategy

Choose *New Entries*.

Create the key, name, and signature method for the signature strategy.

Define whether the following options are required, possible, or disallowed:

Comment

Here, you can specify if the user has the option of entering a text comment when signing the application. You have the following options: *Disallowed* (no comment field is provided), *Possible* (comment field can be called up), and *Required* (signature is only possible after a comment has been entered).

Remark

Here, you enable the user to select a remark from a list of predefined remarks and add it to the signature. The availability of remarks depends on the respective application. You have the following options: *Disallowed*, *Required*, and *Possible*.

Document

Here, you specify if the document to be signed should also be displayed to the signatory. You have the following options: *Disallowed*, *Possible*, and *Required*.

Verification

Here, you allow signatures that have already been executed to be verified. A check is run in the background to determine if this document is still identical to the original document and if the previously executed signatures have been stored correctly in the system.

Note:

These settings are overridden if you chose the setting *Disallowed* for these options in the transaction SIGNO (Register Signature Objects for Digital Signature) for the application.

B. Assign individual signatures

In this step, you assign the individual signatures that can or must be executed when executing the strategy, to the signature strategy.

You can assign the same individual signature more than once or you can assign several individual signatures with the same authorization group. However, when executing the signature strategy, each user in the authorization group can only execute one signature.
When saving, the system specifies a counter for each assigned individual signature. The counter identifies the assignment within the signature strategy but has no influence on the signature sequence when the strategy is executed.

Select the signature strategy to which you want to assign individual signatures and choose *Assign Individual Signatures*.

To assign new signatures, choose *New Entries*.

Enter the key for the required individual signatures.

Save the settings.

C. Define the signature sequence

In this step, you define the sequence in which the individual signatures in a signature strategy must be executed.

You determine the signature sequence by selecting a predecessor for each individual signature, in a sequence matrix.
Then you can also list the predecessors for each individual signature. However, you cannot edit the data in the individual display.

Example:

Individual signatures S1, S2, S3, and S4 are assigned to a signature strategy. The signature sequences are specified in the matrix, as follows:

		Predecessor Signatures			
Signatures to Be Executed		**S1**	**S2**	**S3**	**S4**
	S1				
	S2	X			
	S3	X			
S4		X		X	

This means:

S1 must be executed first.

S2 and S3 can be executed after S1.

S4 can be executed as soon as S3 is available.

Defining signature sequences in the matrix:

In the *Define Signature Strategy* view, select the signature strategy for which you want to specify the signature sequence.

Choose the *Signature Sequence* pushbutton.

The system displays the dialog box for the signature sequence of the signature strategy. The dialog box shows the matrix of the individual signatures.

In each row, flag the direct predecessors of the individual signature listed at the start of the row.
Choose *Enter*.

If necessary, the system adds the indirect predecessors for the signatures.

Save the settings.

Displaying predecessors for individual signatures:

Select the signature strategy for which you wish to display data.

Choose *Assign Individual Signatures*.

Select the individual signatures for which you wish to display the predecessor.

In the navigation area, choose *Display Predecessor*.

D. Define release statuses

In this step, you define one or more alternative release statuses for a signature strategy. For each release status, you determine a combination of individual signatures with which the signature process can be completed.

A signature process is only complete if all the signatures belonging to a release status have been executed.
If you do not define a release status for a signature strategy, all the individual signatures in a signature strategy must be executed in each signature process.

To define a release status, you flag the required signature combinations in the overview of possible signature combinations.
You can then also list the individual signatures for each release status. However, you cannot edit the data in the individual display.

Example:

The following signature sequence is defined in a signature strategy:

		Predecessor Signatures		
Signatures to Be Executed	**S1**	**S2**	**S3**	**S4**
S1				
S2				
X **S3**				
X				
S4	X	X		

In the tabular overview, select the following release statuses:

Individual Signatures Required for Release

S1 S2 S3 S4

X	X	X	
X		X	X

The signature strategy can be completed with either S2 and S3 or with S4.

Flagging the release status in the tabular overview:
Select the signature strategy for which you want to define release statuses.

Choose *Display Release Statuses*.
A table is displayed with all the possible signature combinations contained in the signature strategy.

Select the signature combinations that you want to use as the release statuses for the signature strategy.

Choose *Enter* and save the settings.

Displaying individual signatures for each release status:

Select the signature strategy for which you wish to display data.

Choose *Display Release Statuses*.

Select the release status whose data you wish to display and choose *Display Individual Signatures*.
A list appears with the counters for the individual signatures that are assigned to the release status.

Further notes

Signature strategies also apply in other areas where digital signatures are used. Therefore, before you change existing signature strategies or use them for your purposes, ensure that this will not lead to conflicts of interest with other areas.