



Version 5.10

Customizing Adapter for SAP

Manual

Document:	Manual - Customizing Adapter for SAP
-----------	--------------------------------------

Created:	2019-08-21
----------	------------

Last changes:	2019-10-31
---------------	------------

Author:	STernes
---------	---------



COPYRIGHT 2019 BY **FORCAM GMBH**, D-88214 Ravensburg
ALL RIGHTS RESERVED. COPY OR TRANSLATION, ALSO IN EXTRACTS
ONLY WITH WRITTEN PERMISSION BY FORCAM GMBH

Table of Contents

1	General.....	4
2	Development System (D) Activities - Including Transfer	6
2.1	Creating Additional Message Types	6
2.2	Assigning Additional Message Types to the IDoc Basic Type	7
2.3	Defining Logical Systems	8
2.4	Creating Inbound Process Codes	10
2.5	Assignment of Function Modules to Logical Message and IDoc Type	12
2.6	Configuring a Work Center for Activating a Transfer	14
2.7	Special Case for Serialization through Work Center.....	16
2.7.1	Changing the Properties of Input Function Modules	16
2.7.2	Configuring the Serialization	16
2.7.3	Configuring Transaction BD105	17
2.7.4	Configuring Transaction BD104	17
2.7.5	Configuring the SALE Transaction.....	18
2.8	Editing Table Entries.....	19
2.8.1	Table: /FFMES/GLOBAL	19
2.8.2	Table: /FFMES/VERTEILER	19
2.8.3	Table: /FFMES/KORR_CUST	21
2.8.4	Table: /FFMES/CONTROL_V	22
2.8.5	Table: /FFMES/STATUS	24
3	Receiving System (Q-P) Activities - Without Transfer	26
3.1	Creating RFC Destinations	26
3.2	Setting up a Port	27
3.3	Configuring Partner Profiles.....	28
3.3.1	Configuring Outbound Parameters	29
3.3.1.1	Shift Data Transfer.....	29
3.3.1.2	Production Orders	30
3.3.1.3	HR Mini-Master Records	31
3.3.2	Configuring Inbound Parameters	31
3.4	Configuration of HTTP Communication Using Standard Services (HTTP Port)	33
3.4.1	Uploading Data from FORCAM FORCE™ (Confirmations)	33
3.4.2	Special Case for Serialization through Work Center: Defining a SOAP RFC Request for Object Channel Serialization.....	36

3.5	Editing Table Entries.....	37
3.5.1	Table: /FFMES/PARM (mandatory)	37
3.5.2	Table: /FFMES/CONTROL (mandatory).....	39
3.5.3	Table: /FFMES/AUFTR (mandatory)	39
3.5.4	Table: /FFMES/FA_FELDER (mandatory)	42
3.5.5	Table: /FFMES/STDVAL (only if required).....	43
3.5.6	Table: /FFMES/FILTER (only if required).....	44
3.5.7	Table: /FFMES/DELETE_PO (only if required).....	45
3.6	Activating IDoc Event Linkage	47
4	Scheduling Reports	48
4.1	RBDMANIN: Automatic Subsequent Posting of Non-Posted IDocs	48
4.2	RBDAPP01: Inbound Processing of IDocs Ready for Transfer	49
5	Notes for Going Live	50
5.1	Importing Existing Transports into the Production System	50
5.2	Manual Rework.....	50
6	Document History.....	53
7	Table of Figures	54

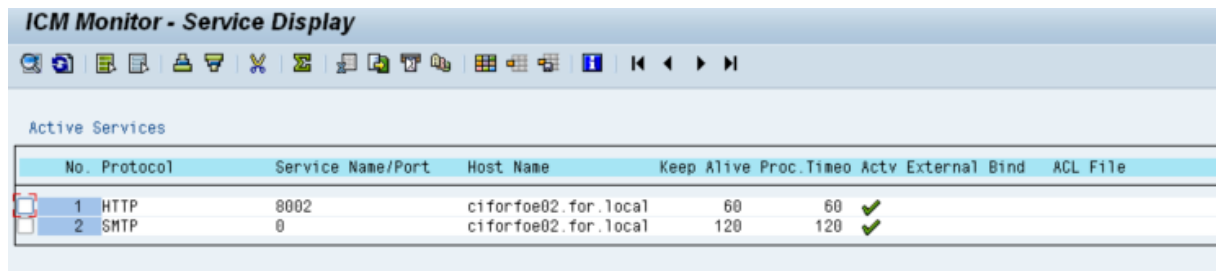
1 General

All transport orders must be imported into the SAP system with which the FORCAM system is to be integrated.

It is important to make sure that the ports required for communication between the systems are enabled. This may involve adjusting any firewall settings, if applicable.

The following ports are required:

- Download port:
Specified in the RFC destination (transaction **SM59**, HTTP link to external server, **Technical Settings** tab). Usually **Port 10080** is used for this purpose.
- Upload port:
From the **SMICM** transaction (Goto - Services). For example, **Port 8002** is used for this purpose.



The screenshot shows the 'ICM Monitor - Service Display' window. It contains a table titled 'Active Services' with the following data:

No.	Protocol	Service Name/Port	Host Name	Keep Alive	Proc. Timeo	Actv	External Bind	ACL File
1	HTTP	8002	ci:for:foe02.for.local	60	60	✓		
2	SMTP	0	ci:for:foe02.for.local	120	120	✓		

Fig. 1: ICM Monitor - Service Display

A suitable system user must be created for RFC communication. This user does not need any special authorizations except the **B_ALE_ALL** profile. The user must not be a dialog user but a system / communication user.

The subsystem indicator to be used must be specified. It is entered into the work center basic data and used for identifying the work centers that are relevant for communication and for controlling the interface functions.

The serialization of the inbound IDocs must be selected. For new installations, this is always the operation-related serialization. A work center related serialization (old method) may be useful only in exceptional cases.

- ❗ Creating an Index in the table EDIDC may be required if the table EDIDC has a large number of entries for operation-related serialization.

General

Dictionary: Change Index

Index Name: EDIDC 5

Short Description: Index to EDIDC for Serial information and MESTYP

Last changed: 20.03.2017 Original language: DE German

Status: Package: SED

☒ Non-unique index

☒ Index on all database systems

☐ For selected database systems

☐ No database index

☐ Unique Index (database Index required)

Table Fields

Field name	Short Description	DType	Length
MANDT	Client	CLNT	3
MESTYP	Message Type	CHAR	30
SERIAL	Serialization field	CHAR	20

Fig. 2: Example EDIDC Index

2 Development System (D) Activities - Including Transfer

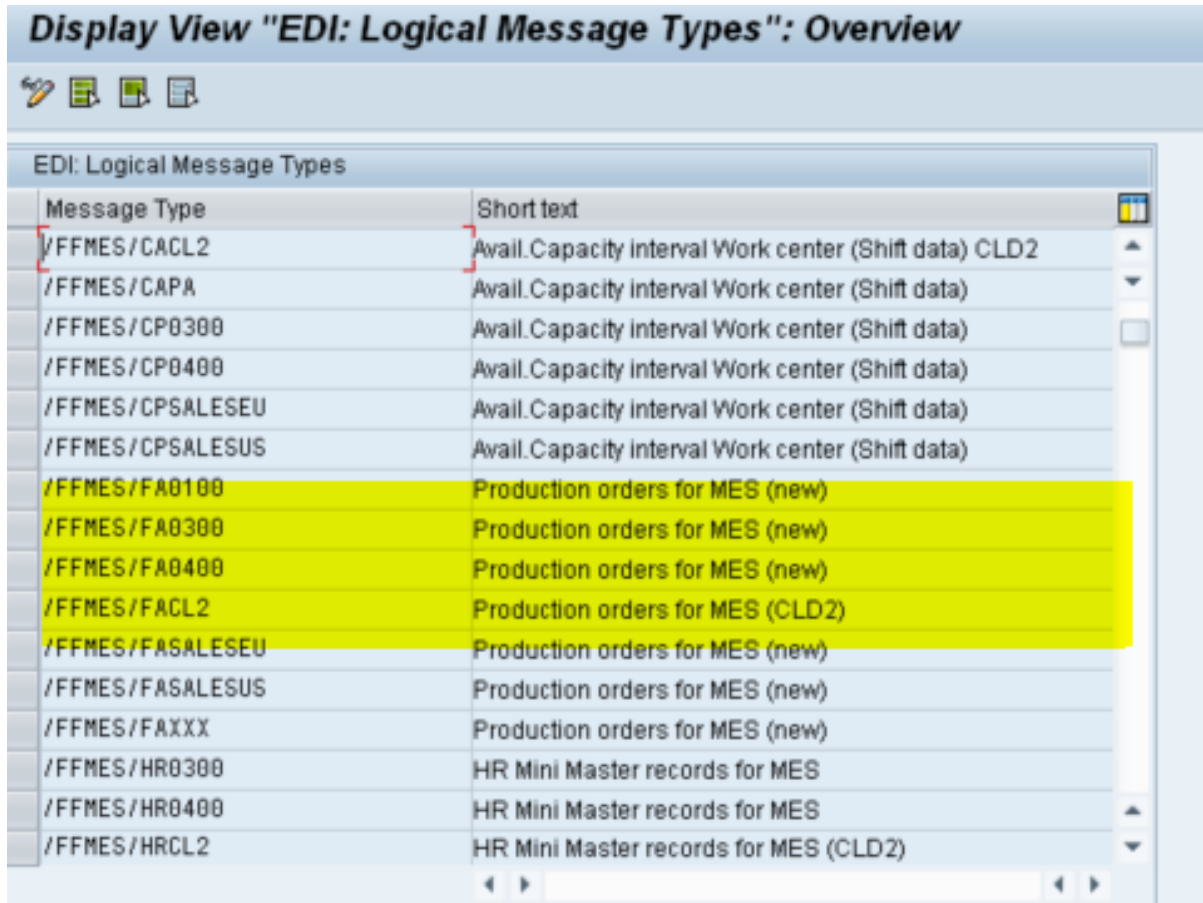
2.1 Creating Additional Message Types

The sample entries received with the transfer are marked yellow here (see Fig. 3). They may be adjusted accordingly, for example, to distinguish the messages among several plants.

To create additional message types:

1. Call up transaction **WE81**.
2. Press **CTRL+F4** to change to edit mode.
3. Click **New Entries** (F5).
4. Create the required message types for each plant.
5. Save by pressing **CTRL+S**.

Display View "EDI: Logical Message Types": Overview




Message Type	Short text
/FFMES/CACL2	Avail.Capacity interval Work center (Shift data) CLD2
/FFMES/CAPA	Avail.Capacity interval Work center (Shift data)
/FFMES/CP0300	Avail.Capacity interval Work center (Shift data)
/FFMES/CP0400	Avail.Capacity interval Work center (Shift data)
/FFMES/CPSALESEU	Avail.Capacity interval Work center (Shift data)
/FFMES/CPSALESUS	Avail.Capacity interval Work center (Shift data)
/FFMES/FA0100	Production orders for MES (new)
/FFMES/FA0300	Production orders for MES (new)
/FFMES/FA0400	Production orders for MES (new)
/FFMES/FACL2	Production orders for MES (CLD2)
/FFMES/FASALESEU	Production orders for MES (new)
/FFMES/FASALESUS	Production orders for MES (new)
/FFMES/FAXXX	Production orders for MES (new)
/FFMES/HR0300	HR Mini Master records for MES
/FFMES/HR0400	HR Mini Master records for MES
/FFMES/HRCL2	HR Mini Master records for MES (CLD2)

Fig. 3: Overview of the logical message types





2.2 Assigning Additional Message Types to the IDoc Basic Type

To assign additional message types to an IDoc basic type:

1. Call up transaction **WE82**.
2. Press **CTRL+F4** to change to edit mode.
3. Click **New Entries** (F5).
4. For each message type additionally created, create an entry assigning it to the appropriate IDoc basic type.
5. Save by pressing **CTRL+S**.

 If extensions were created for the IDoc basic types (to accommodate customer-specific fields), the table entries must be adjusted accordingly.

Display View "Output Types and Assignment to IDoc Types": Overview

Message Type	Basic type	Extension	Release	
/FFMES/APLSALESUS	/FFMES/W		700	
/FFMES/ARBPL	/FFMES/W		700	
/FFMES/CACL2	/FFMES/S		700	
/FFMES/CAPA	/FFMES/S		700	
/FFMES/CP0400	/FFMES/S		700	
/FFMES/CPSALESEU	/FFMES/S		700	
/FFMES/CPSALESUS	/FFMES/S		700	
/FFMES/FA0100	/FFMES/F		700	
/FFMES/FA0100	/FFMES/F	ZFCMESF	700	
/FFMES/FA0100	/FFMES/F	ZFC_TEST_AUDI	700	
/FFMES/FA0400	/FFMES/F		700	
/FFMES/FACL2	/FFMES/F		700	
/FFMES/FASALESEU	/FFMES/F		700	
/FFMES/FASALESUS	/FFMES/F		700	
/FFMES/HR0400	/FFMES/H		700	
/FFMES/HRCL2	/FFMES/H		700	

Fig. 4: Message types and assignment to IDoc types

2.3 Defining Logical Systems

The logical system is required for FORCAM FORCE™. This system is the recipient of the messages output by SAP.

To name a logical system:

1. Call up transaction **SALE**.
2. Click **Create Logical System**.

 Make additional entries by clicking **New Entries**.

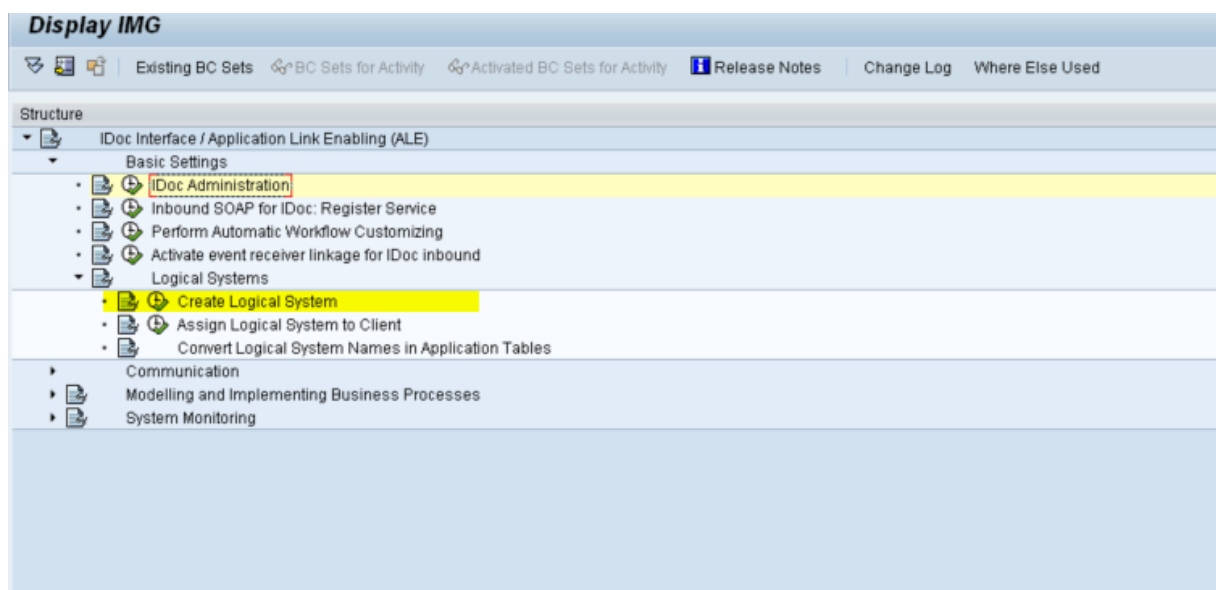


Fig. 5: Creating a logical system

A logical system must be created for each FORCAM system to be integrated (SAP-FORCAM FORCE™ link). The logical systems are required later when configuring the partner profiles. The sample entry included in the standard version is **FORCAMFF** (see Fig. 6).

Change View "Logical Systems": Overview

New Entries

Log.System	Name
A41TSP999	Unknown
BDE1000100	FORCAM MES Plant 0100
BDE1000150	FORCAM MES Plant 0150
BDE2000100	FORCAM MES Test
FCCLD	FORCAM Sales Demo Cloud
FCSALES_EU	FORCAM Factory Framework
FCSALES_US	FORCAM Factory Framework
FCTEST16	<input checked="" type="checkbox"/>
FC_ACAD	<input checked="" type="checkbox"/>
FFNEW_LS_T	T Botz_Sys
FODCLNT100	System FOD Client 100
FODCLNT200	System FOD Client 200
FOECLNT100	<input checked="" type="checkbox"/>
FOECLNT200	<input checked="" type="checkbox"/>
FOECLNT300	<input checked="" type="checkbox"/>
FOECLNT400	<input checked="" type="checkbox"/>
FORCAMFF	FORCAM Factory Framework
FORCAMTEST	TEST
FORF00000	FOR System FOD Client 000
FORF0E000	FOR System FOD Client 000
FRCLD2	FORCAM Cloud 2
IMS_KF_BDE	FORCAM BDE

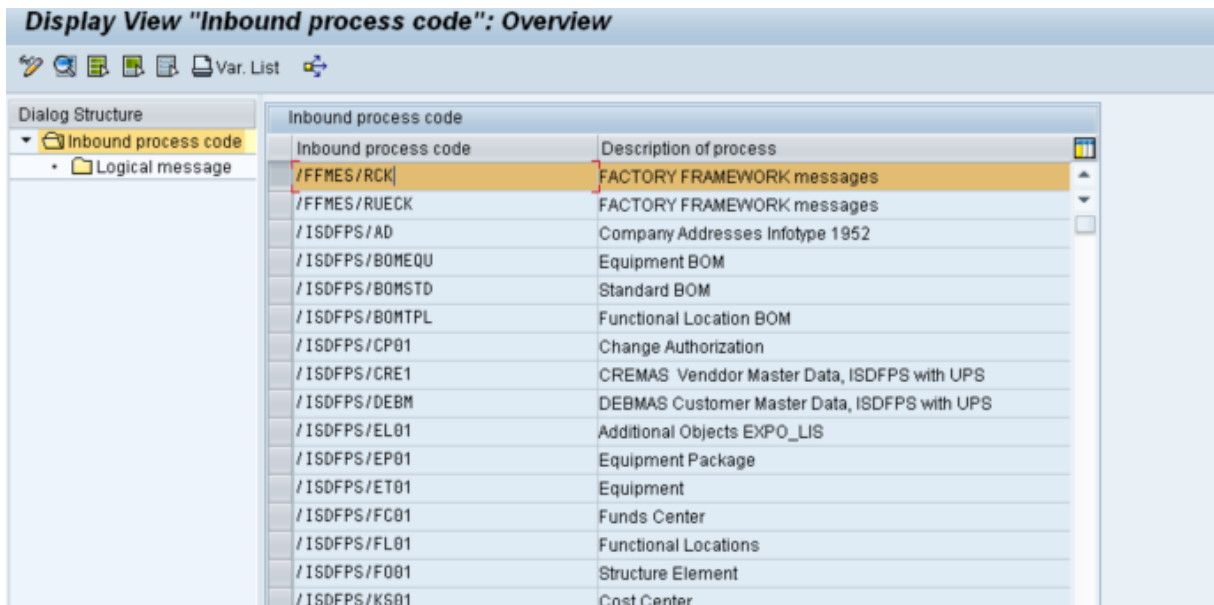
Fig. 6: Standard logical system

2.4 Creating Inbound Process Codes

To create an inbound process code:

1. Call up transaction **WE42**.
2. Identify the input function module for processing the inbound messages by the process code (see Fig. 7).
3. Press **CTRL+F4** to change to edit mode.
4. Click **New Entries** (F5).
5. Create the entry for the process code **/FFMES/RCK**.
6. Select the detail screen (see Fig. 8).
7. Edit the data as shown in Fig. 9.

Display View "Inbound process code": Overview



Inbound process code	Description of process
/FFMES/RCK	FACTORY FRAMEWORK messages
/FFMES/RUECK	FACTORY FRAMEWORK messages
/ISDFPS/AD	Company Addresses Infotype 1952
/ISDFPS/BOMEQU	Equipment BOM
/ISDFPS/BOMSTD	Standard BOM
/ISDFPS/BOMTPL	Functional Location BOM
/ISDFPS/CP01	Change Authorization
/ISDFPS/CRE1	CREMAS Vendor Master Data, ISDFPS with UPS
/ISDFPS/DEBM	DEBMAS Customer Master Data, ISDFPS with UPS
/ISDFPS/EL01	Additional Objects EXPO_LIS
/ISDFPS/EP01	Equipment Package
/ISDFPS/ET01	Equipment
/ISDFPS/FC01	Funds Center
/ISDFPS/FL01	Functional Locations
/ISDFPS/F001	Structure Element
/ISDFPS/KS01	Cost Center

Fig. 7: Change the inbound process code: Overview


Display View "Inbound process code": Details

Dialog Structure

- Inbound process code
 - Logical message

Process code: /FFMES/RCK

Description: FACTORY FRAMEWORK messages

Identification: /FFMES/IDOC_INPUT_MESSAGE 

Option ALE

☒ Processing with ALE service
☐ Processing w/o ALE service

Processing type

☐ Processing by task
☒ Processing by function module
☐ Processing by process

Fig. 8: Change the inbound process code: Details

Display View "Function modules for inbound ALE-EDI": Details

Process code: /FFMES/RCK

Module (inbound)

Function Module: /FFMES/IDOC_INPUT_MESSAGE
Maximum Number of Repeats: 5

IDoc packet

Object Type:
End Event:

IDoc

Object Type:
Start Event:
End event:
Success Event:

Application Object

Object Type: /FFMES/MSG
Start event:

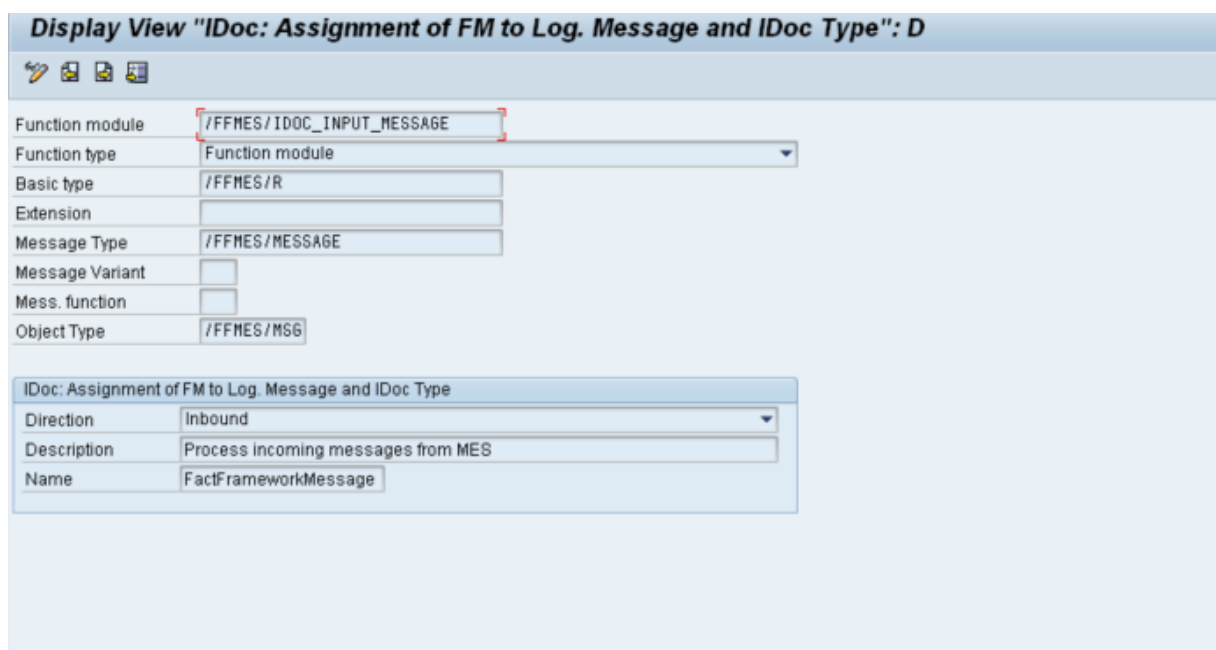
Fig. 9: Configuring the detail view

2.5 Assignment of Function Modules to Logical Message and IDoc Type

This section describes how to assign the new inbound message types for the FORCAM messages to the input function module. This is done using transaction **WE57**.

To assign function modules to logical message and IDoc type:

1. Find the table entry using the **/FFMES/IDOC_INPUT_MESSAGE** function module.
2. Select the entry.
3. Click **Copy as (F6)**.
4. Enter the target entry in the next dialog.
5. Accept all suggestions.
6. Enter the new additional message type for each message type.
7. Save.



Display View "IDoc: Assignment of FM to Log. Message and IDoc Type": D

Function module: **/FFMES/IDOC_INPUT_MESSAGE**

Function type: Function module

Basic type: **/FFMES/R**

Extension:

Message Type: **/FFMES/MESSAGE**

Message Variant:

Mess. function:

Object Type: **/FFMES/MSG**

IDoc: Assignment of FM to Log. Message and IDoc Type

Direction: Inbound





Description: Process incoming messages from MES

Name: FactFrameworkMessage

Fig. 10: Assigning function modules to logical message and IDoc type

- i** If extensions to the IDoc basic types were created, these extensions must be entered into the **Extension** field (see Fig. 11):

New Entries: Details of Added Entries

Function module	/ffmes/ldoc_input_message
Function type	Function module
Basic type	/FFMES/R
Extension	/FFMES/E
Message Type	/FFMES/MESSAGE
Message Variant	
Mess. function	
Object Type	/ffmes/msg

IDoc: Assignment of FM to Log. Message and IDoc Type

Direction	Inbound
Description	
Name	

Fig. 11: Entering extensions to the IDoc base types

2.6 Configuring a Work Center for Activating a Transfer

It is necessary to configure a work center for activating the transfer to FORCAM FORCE™. For this, the SAP team must have completed configuring the interface, and the economic, manufacturing, and production planning team must have defined which SAP work centers require data in FORCAM FORCE™. IDoc communication activates when a “subsystem” is created within the work center using transaction **CR02**.

To configure a work center:

1. Start transaction **CR02**.
2. Enter the work center.
3. Click on **Subsystem link** in the menu **Extras**
Or
Select the tab **Basic Data** and click **Subsystems** (see the figures below).
4. Enter the defined subsystem for FORCAM FORCE™.

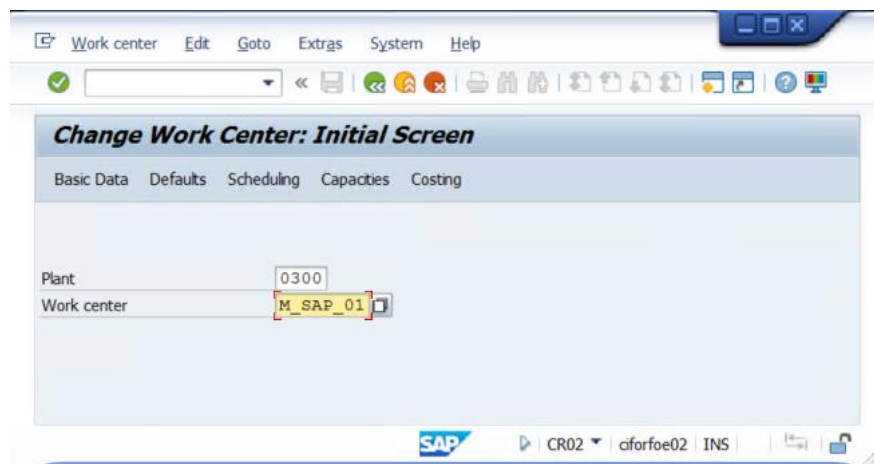


Fig. 12: Configuring a work center

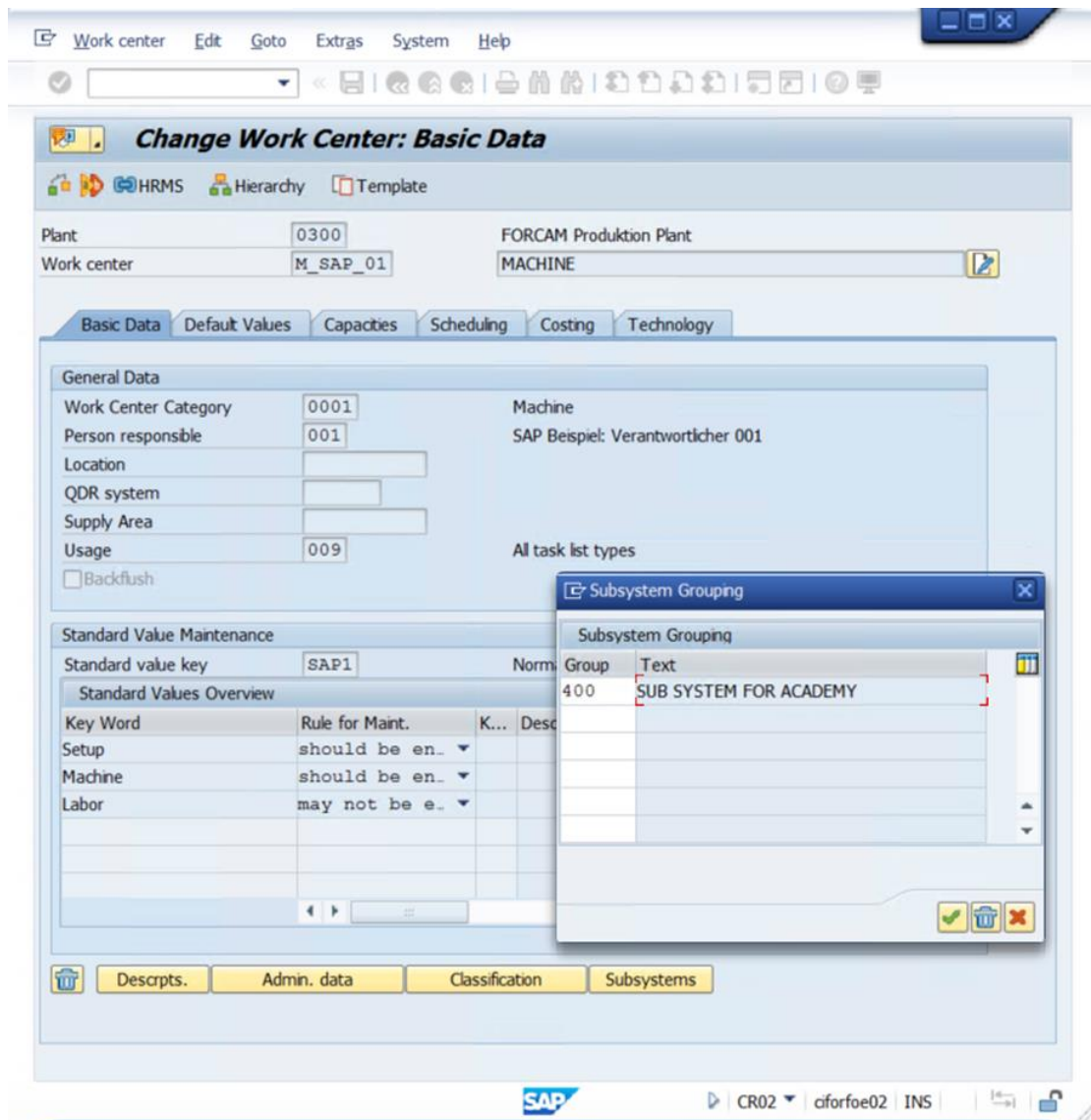


Fig. 13: Configuring a work center subsystem

2.7 Special Case for Serialization through Work Center

 This chapter is purely optional for the special case of serialization through a work center.

2.7.1 Changing the Properties of Input Function Modules

To change the properties of input function modules:

1. Call up transaction **BD51**.
2. Change the input type of the input function module **/FFMES/IDOC_INPUT_MESSAGE** to **Bulk processing**.
 0 = Bulk processing, 1=Single input.

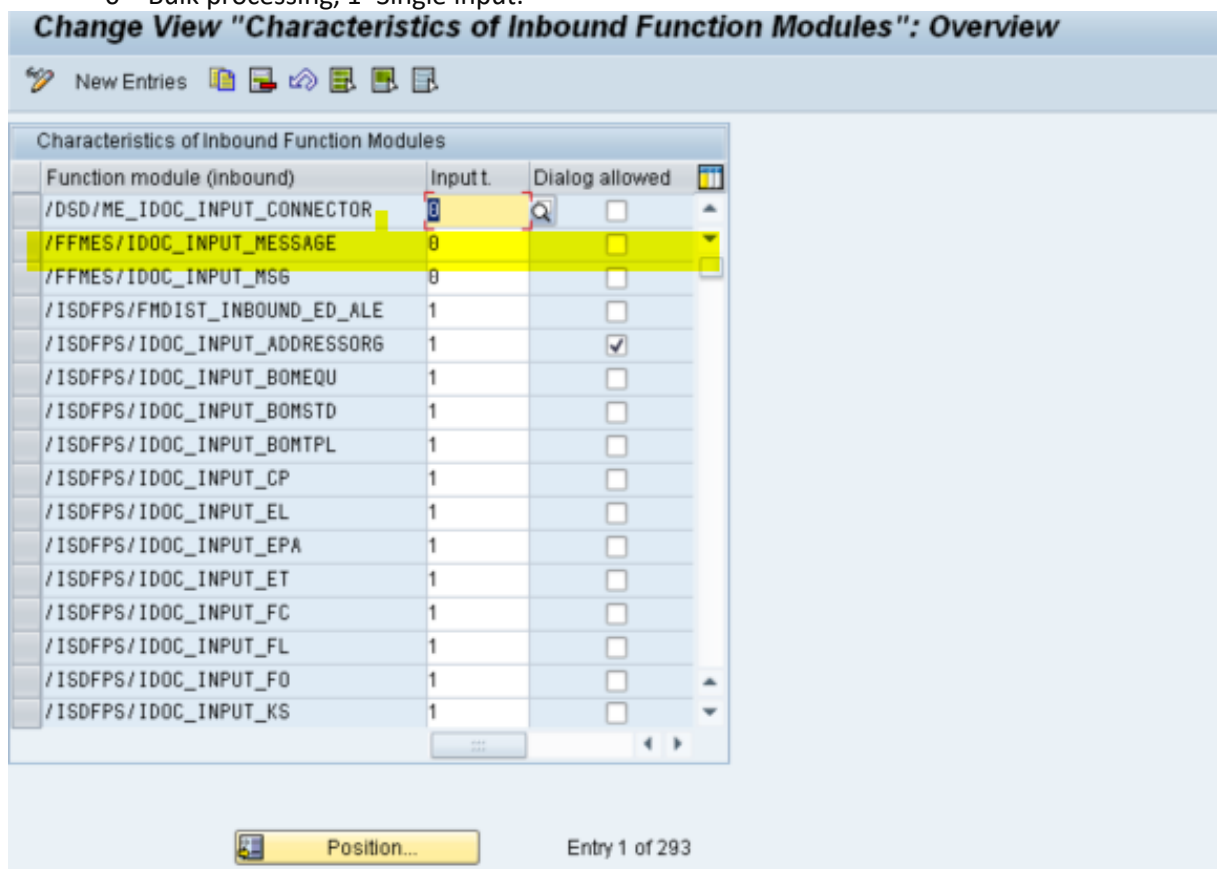


Fig. 14: Changing the characteristics of inbound function modules

2.7.2 Configuring the Serialization


Serialization through object types is used for IDoc input of the FORCAM Adapter.

For the synchronization of the object channels for serialization with FORCAM FORCE™, the **/FFMES/SERIAL_CHANNEL_USED** function module from the **/FFMES/REQUEST** function group is used. This function module is called up by FORCAM FORCE™ through a SOAP request.

In the **BD51** transaction, the input type of the **IDOC_INPUT_MESSAGE** inbound function module has already been set to 0.

2.7.3 Configuring Transaction BD105


This transaction is used for setting the relevant business object types.

 This is a table that is independent of the client.

To configure transaction BD105:

1. Call up transaction **BD105**.
2. Adopt the entry from Fig. 15.

Change View "ALE:Object Channel Serializ: Supported Business Object Ty

New Entries 

ObjectType	Obj. name	Rel...	Descript.
/FFMES/MSE	FORCAMForceMessage	740	Messages from Forcam Force
/FFMES/MSG	FactFrameworkMessage	740	Message from Factory Framework
/ISDFPS/PQ	PurchaseReq_CrossSys	700	DFPS: Cross-System Purchase Requi
BUS1001004	MatInspectionControl	46A	Material inspection control
BUS1037	BusPartnerContact	46A	Partner Sales Activity
BUS1071	ProductCatalog	46A	Product Catalog
BUS1077	Substance	731	Specification
BUS1091	Phrase	45B	Phrase
BUS1092	SpecificationReport	703	Specification report
BUS1157	ExpenditureProgDef	46C	Expenditure Program Definition
BUS1158	ExpenditureProgTree	700	Program Sub-Tree
BUS1176	ComponentPPE	620	Component (Integrated Product and Pr
BUS1179	ActivityPPE	620	Activity (Integrated Product and Proces
BUS1182	FactoryLayoutPPE	620	Factory Layout (Integrated Product and
BUS1183	LineBalancingPPE	620	Line Balance (Integrated Product and F
BUS1193	ProdResourcePPE	620	Production Resource (Integrated Produ

Fig. 15: Configuring transaction BD105

2.7.4 Configuring Transaction BD104

This transaction is used for assigning those message types to each business object type that are relevant for serialization.

To configure transaction BD104:

1. Call up transaction **BD104**.
2. Adopt the entry from Fig. 16.

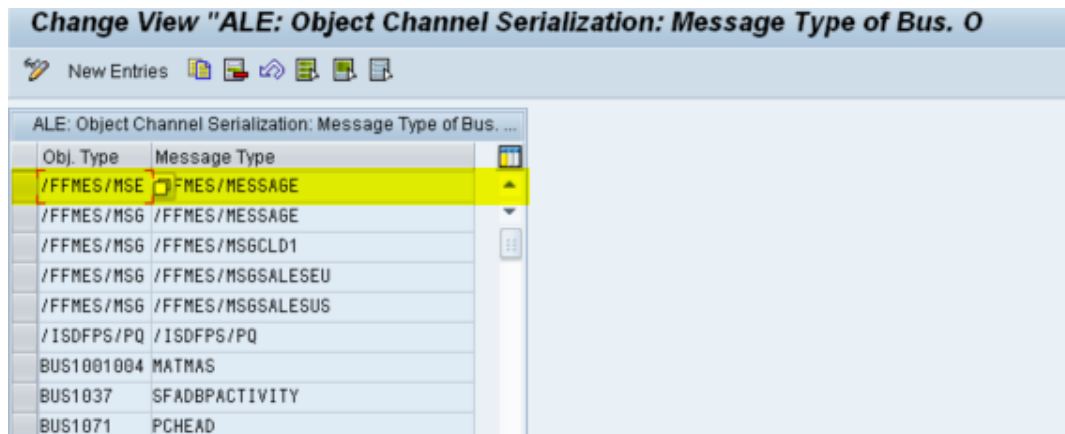


Fig. 16: Configuration of transaction BD104

2.7.5 Configuring the SALE Transaction

The serialized distribution in the receiving system through Customizing (IMG) must be activated.

To activate distribution:

1. Open the **ALE** Implementation Guide (transaction **SALE**).
2. Design and implement the business processes.
3. Configure the distribution of master data.
4. Set serialization of data for sending and receiving.
Serialization by business objects.
5. Execute the activity **Activate Inbound Business Objects**.
6. Set the **Serialization** flag for the required business object types.

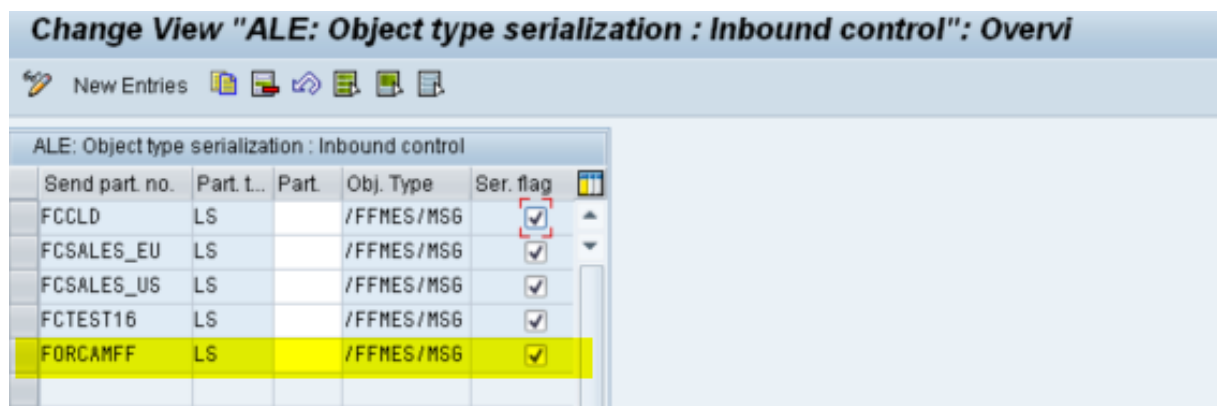


Fig. 17: Example of object type serialization

2.8 Editing Table Entries

The tables are edited using transaction **SM30**.

The tables described in the following sections are first edited in the development system. Following that, the table content must then be imported into receiving systems.

These tables are:

- /FFMES/GLOBAL
- /FFMES/VERTEILER
- /FFMES/KORR_CUST
- /FFMES/CONTROL_V
- /FFMES/CONTROL
- /FFMES/STATUS (if required)

2.8.1 Table: /FFMES/GLOBAL

This table contains important global entries for the FORCAM Adapter. The entries are created for each specific plant.

The name of the customer is entered for each plant and echoed in the **/FFMES/VERTEILER** table. If activity allocation posting is planned (CO postings with a special record type), the controlling area and the version number must be entered this table.

The following other global parameters are verified in this table:

- Is a customer-specific confirmation program to be used?
- Is status logic active?
- Is an alternative relevancy test used for download?
- Function module call up type for IDoc generation with order data (standard or background task)

Fig. 18: Common parameters of SAP adapter

2.8.2 Table: /FFMES/VERTEILER

Development System (D) Activities - Including Transfer

This table can be used to find the correct processing programs for the record types sent by FORCAM FORCE™. Suitable entries must be created for all record types to be processed and sent by the FORCAM system.

- ❗ For the correction record type (REVMG), the **IDoc Type** field must always contain **K**.

The customer name from the **/FFMES/GLOBAL** table must be entered in the **Field Name** column.

The **Act. Type** field can be used to specify the activity type assignment in accordance with the active SAP Customizing (e.g. 1 = Setup time, 2 = Machine time, 3 = Labor time). The assignment relates to the standard values 1 to 6 from the production order.

With respect to time messages from the FORCAM system (DURAT IDOCS), the following options exist for mapping the FORCAM time base to an SAP standard value:

- Creating special entries in the **/FFMES/VERTEILER** table
- Editing the **/FFMES/STDVAL** table (if the standard value assignment is not consistent within a plant, for example, if it differs among work centers)

A special entry in the distribution table (VERTEILER) may look like this:

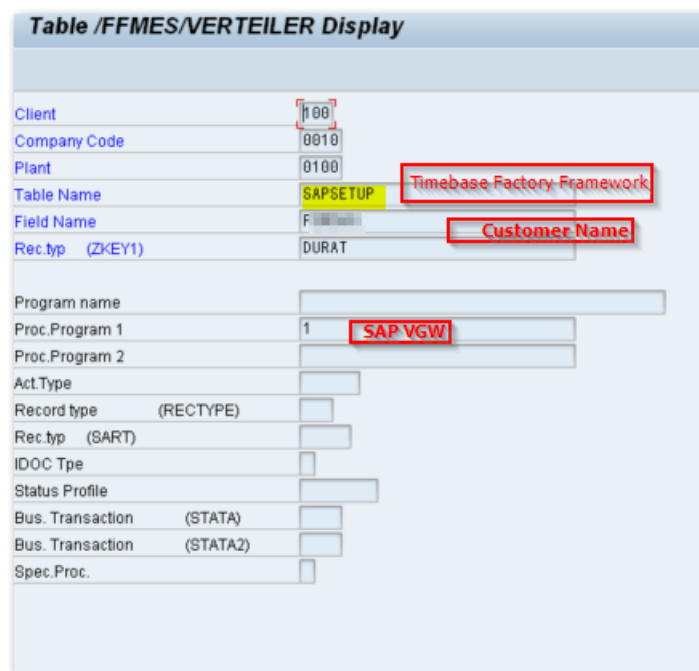


Table /FFMES/VERTEILER Display	
Client	100
Company Code	0010
Plant	0100
Table Name	SAPSETUP
Field Name	F
Rec.type (ZKEY1)	DURAT
Program name	
Proc.Program 1	1
Proc.Program 2	
Act.Type	
Record type (RECTYPE)	
Rec.type (SART)	
IDOC Type	
Status Profile	
Bus. Transaction (STATA)	
Bus. Transaction (STATA2)	
Spec.Proc.	

Fig. 19: Special entry in the distribution table (example)

If special processing is deemed necessary for specific record types when processing the inbound IDocs, the **Spec.Proc.** indicator can be specified for the record type (field name in table = **SPEC**). The extension method **SPECIAL_PROCESSING** can then be used for implementing the coding for special processing.

Customer-specific processing routines in customer programs may also be entered in the **/FFMES/VERTEILER** table if special processing is required.

Development System (D) Activities - Including Transfer

It is also possible to use self-defined record types. Generation of these messages must be ensured accordingly in the FORCAM system.


Data Browser: Table /FFMES/VERTEILER Select Entries 119

Table: /FFMES/VERTEILER
Displayed Fields: 11 of 17 Fixed Columns: 6 List Width 0250

Client	Company Code	Plant	Table Name	Field Name	Rec. type	Program name	Proc. Program 1	Proc. Program 2	Act. Type	Record type
100	0001	0150	MES_VERTTEILER	SAP	DURAT	/FFMES/SAPL100C_IN				
100	0001	0150	MES_VERTTEILER	SAP	OPEND	/FFMES/SAPL100C_IN				
100	0001	0150	MES_VERTTEILER	SAP	OPINT	/FFMES/SAPL100C_IN				
100	0001	0150	MES_VERTTEILER	SAP	OPSTR	/FFMES/SAPL100C_IN				
100	0001	0150	MES_VERTTEILER	SAP	QTYMG	/FFMES/SAPL100C_IN				
100	0001	0150	MES_VERTTEILER	SAP	REYMG	/FFMES/SAPL100C_IN				
100	0001	0150	SAPPROD	SAP	DURAT					
100	0001	0150	SAPSETUP	SAP	DURAT					
100	0010	0100	LAPP	FORCAM	DURAT					
100	0010	0100	LAPP	FORCAM	REMDU					
100	0010	0100	LAPR	FORCAM	DURAT					
100	0010	0100	LAPR	FORCAM	REMDU					
100	0010	0100	LAPR	FORCAM	DURAT					
100	0010	0100	LARU	FORCAM	DURAT					
100	0010	0100	LARU	FORCAM	REMDU					
100	0010	0100	MES_VERTTEILER	FORCAM	AABBR	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	AEND1	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	ARUEE	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	ARUEE	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	ARUEU	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	ASTRT	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	ATEIL	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	AUNTB	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	DURAT	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	GEN01	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	IEND1	/FFMES/SAPL100C_IN				
100	0010	0100	MES_VERTTEILER	FORCAM	ISTRT	/FFMES/SAPL100C_IN				

Fig. 20: Sample entries for /FFMES/VERTEILER table

2.8.3 Table: /FFMES/KORR_CUST

 This table is only required if corrections need to be sent from FORCAM FORCE™ to SAP.

One entry must be created for each valid correction type (Delete D / Insert I) and for each record type and plant. This specifies a specific FORM routine used for posting the correction for each of the valid correction types.

Data Browser: Table /FFMES/KORR_CUST Select Entries 129

Table: /FFMES/KORR_CUST
Displayed Fields: 7 of 7 Fixed Columns: 5 List Width 0250

Client	Company Code	Plant	Rec. type	CorrType	FORM routine	FORM routine
100	0010	0100	AABBR	D	STANDARD	
100	0010	0100	AABBR	I	STANDARD	
100	0010	0100	AEND1	D	STANDARD	
100	0010	0100	AEND1	I	STANDARD	

Fig. 21: Sample entries for /FFMES/KORR_CUST

2.8.4 Table: /FFMES/CONTROL_V

This table is the list of values for the **/FFMES/CONTROL** table.

The control parameters contained in this table can be used for activating and deactivating specific SAP Adapter functions.

The following parameters exist in the standard version:

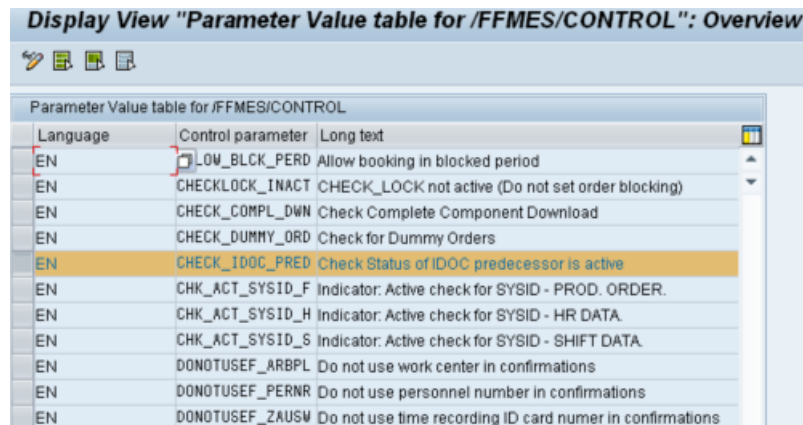
Table 1: Predefined standard parameters

Parameter	Function
ACTIV_CLEAR_RES	Clear Open Reservations if final confirmation
ACTIV_NO_REMN_1	Indicator: No remaining activity expected for standard value 1
ACTIV_NO_REMN_2	Indicator: No remaining activity expected for standard value 2
ACTIV_NO_REMN_3	Indicator: No remaining activity expected for standard value 3
ACTIV_NO_REMN_4	Indicator: No remaining activity expected for standard value 4
ACTIV_NO_REMN_5	Indicator: No remaining activity expected for standard value 5
ACTIV_NO_REMN_6	Indicator: No remaining activity expected for standard value 6
ACTIV_SEQUENCES	Consideration of sequences when downloading orders
ALLOW_BLK_PERD	Confirmation in locked BUPER with date of day
ALLOW_PLANG_FLD	Filling the Plan Data Segment in the Order IDoc with Data
BOOK_ADD_OPSTR	Booking additional OPSTR at day change
CHECK_AFOLG_S_D	Additional check download when reading master data
CHECKLOCK_INACT	CHECK_LOCK not active (Do not set order blocking)
CHECK_IDOC_PRED	Serialization active at operation level
CHECK_DUMMY_ORD	IDoc with incorrect AUFNR or RUECK receives status 68
CHECK_COMPL_DWN	Always transfer components to the operation
CHK_ACT_SYSID_F	Indicator: Active Check for SYSID: PROD-ORDER.
CHK_ACT_SYSID_H	Indicator: Active Check for SYSID: HR DATA.
CHK_ACT_SYSID_S	Indicator: Active Check for SYSID: SHIFT DATA.
CHK_ADDN_CNF	Process multiple confirmations to the operation

DONOTUSEF_ARBPL	Leave work center in confirmations empty
DONOTUSEF_PERNR	Leave personnel number in confirmations empty
DONOTUSEF_ZAUSW	Leave time recording ID card number in confirmations empty
INACTIV_FINCONF	Indicator FIN_CONF not active if final confirmation
OPEND_TAR_ACTI1	Indicator: Determine target activity if OPEND - Standard value 1
OPEND_TAR_ACTI2	Indicator: Determine target activity if OPEND - Standard value 2
OPEND_TAR_ACTI3	Indicator: Determine target activity if OPEND - Standard value 3
OPEND_TAR_ACTI4	Indicator: Determine target activity if OPEND - Standard value 4
OPEND_TAR_ACTI5	Indicator: Determine target activity if OPEND - Standard value 5
OPEND_TAR_ACTI6	Indicator: Determine target activity if OPEND - Standard value 6
POST_ALL_CONFIR	Always book services with duration zero
QTYMG_TAR_ACTI1	Indicator: Determine target activity if QTYMG - Standard value 1
QTYMG_TAR_ACTI2	Indicator: Determine target activity if QTYMG - Standard value 2
QTYMG_TAR_ACTI3	Indicator: Determine target activity if QTYMG - Standard value 3
QTYMG_TAR_ACTI4	Indicator: Determine target activity if QTYMG - Standard value 4
QTYMG_TAR_ACTI5	Indicator: Determine target activity if QTYMG - Standard value 5
QTYMG_TAR_ACTI6	Indicator: Determine target activity if QTYMG - Standard value 6

The **CHECK_IDOC_PRED** parameter must be activated to enable serialization by operations.

Display View "Parameter Value table for /FFMES/CONTROL": Overview



Language	Control parameter	Long text
EN	<input type="checkbox"/> LOW_BLK_PERD	Allow booking in blocked period
EN	CHECKLOCK_INACT	CHECK_LOCK not active (Do not set order blocking)
EN	CHECK_COMPL_DWN	Check Complete Component Download
EN	CHECK_DUMMY_ORD	Check for Dummy Orders
EN	CHECK_IDOC_PRED	Check Status of IDOC predecessor is active
EN	CHK_ACT_SYSD_F	Indicator: Active check for SYSID - PROD. ORDER.
EN	CHK_ACT_SYSD_H	Indicator: Active check for SYSID - HR DATA.
EN	CHK_ACT_SYSD_S	Indicator: Active check for SYSID - SHIFT DATA.
EN	DONOTUSEF_ARBPL	Do not use work center in confirmations
EN	DONOTUSEF_PERNR	Do not use personnel number in confirmations
EN	DONOTUSEF_ZAUSM	Do not use time recording ID card number in confirmations

Fig. 22: Parameters for activating serialization at operation level

2.8.5 Table: /FFMES/STATUS

Use this table for controlling specific user status settings for status message processing (OPSTR, OPINT and OPEND messages from FORCAM FORCE™).

The table contains the following fields:

Dictionary: Display Table

Transparent Table: /FFMES/STATUS Active

Short Description: FORCAM Adapter: Map Status

Attributes: Delivery and Maintenance Fields Entry help/check Currency/Quantity Fields

1 / 8

Field	Key	Init...	Data element	Data Type	Length	Decl...	Short Description	Group
MANDT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MANDT	CLNT	3		Client	
BUKRS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	BUKRS	CHAR	4		Company Code	
WERKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WERKS_D	CHAR	4		Plant	
AUFART	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	AUFART	CHAR	4		Order Type	
AUSTA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	/FFMES/AUSTA	CHAR	2		FACT order status	
STMS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	J_STMS	CHAR	8		Status Profile	
ESTAT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	J_STATUS	CHAR	5		Object status	
INACT	<input type="checkbox"/>	<input type="checkbox"/>	J_INACT	CHAR	1		Indicator: Status is Inactive	

Fig. 23: Fields of the table /FFMES/STATUS

The **INACT** field (Fig. 23) specifies that previously set user states have to be deactivated when setting specific states.

A sample entry may look like this:

Change View "FORCAM Adapter: Map Status": Overview

New Entries

FORCAM Adapter: Map Status

Co...	Pint	Type	FACTstatus	StatProf	Stat.	I
0010	<input type="checkbox"/>	30 PP01	50	FCPROD	E0004	<input type="checkbox"/>

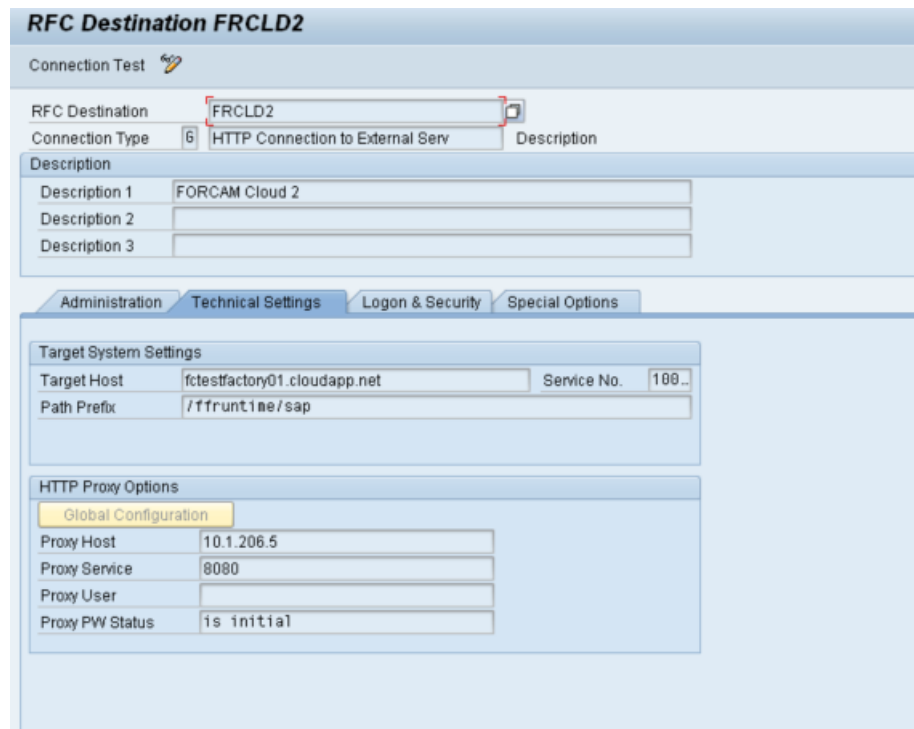
Fig. 24: Sample entry for /FFMES/STATUS

- ① On completion of this working step, all standard changes in the development system to be transferred are finished. The changes must now be imported from the development system into the receiving system before performing any other customizing activities.


3 Receiving System (Q-P) Activities - Without Transfer


3.1 Creating RFC Destinations

An RFC destination must be created for each receiving system (FORCAM system). Fig. 25 shows an example:



RFC Destination FRCLD2

Connection Test 

RFC Destination 

Connection Type HTTP Connection to External Serv Description

Description

Description 1

Description 2

Description 3

Administration Technical Settings Logon & Security Special Options

Target System Settings

Target Host Service No.

Path Prefix

HTTP Proxy Options

Global Configuration


Proxy Host

Proxy Service

Proxy User

Proxy PW Status

Fig. 25: Example of RFC destination FRCLD2

-  In individual cases, the correct parameters may have to be coordinated with FORCAM FORCE™.

To set up an RFC destination:


1. Call up transaction **SM59**.
2. Select connection type **HTTP Connection to External Server**.
3. Click **Create**.
4. Enter a name and description for the RFC destination.
5. Go to the **Technical Settings** tab.
6. Enter the IP address of the Factory Framework Server into the **Target Host** field.
7. Enter the path prefix into the **Path Prefix** field.
8. Enter the Service No.
This is the port which can be used to address the FORCAM FORCE™ server. The default value is 10080.
9. Go to the **Logon & Security** tab and configure the appropriate authentication data (optional).

3.2 Setting up a Port

The outbound IDocs are sent via the HTTP port to the connected FORCAM system.

To set up a port:

1. Call up transaction **WE21**.
2. Click on the **XML HTTP** folder in the navigation area on the left and create an entry by pressing **F7**.
3. Enter the RFC destination for transferring the data to FORCAM FORCE™ (download) (created as described in the previous section 3.1 using **SM59**).
4. Save by pressing **CTRL+S**.

 A separate port definition must be created in the same way for each recipient (FORCAM system) for transferring data.

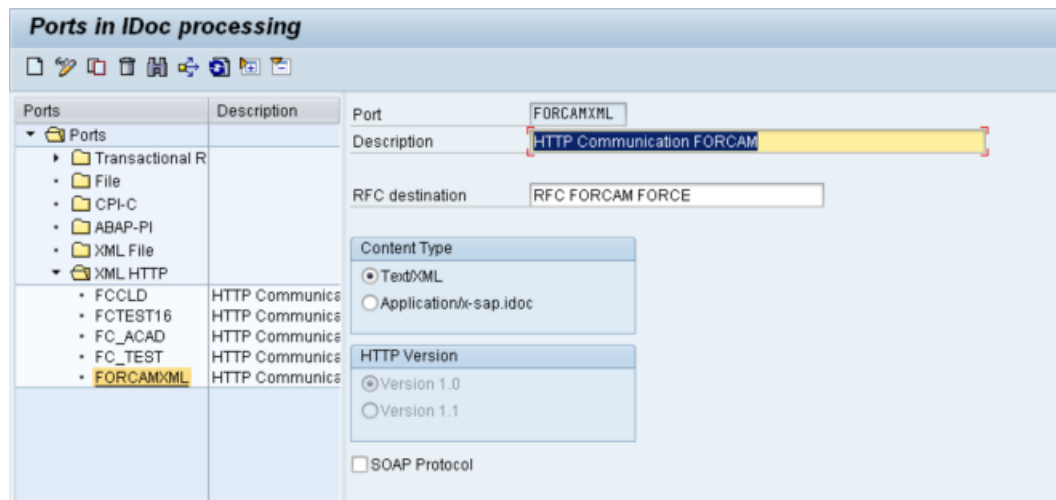


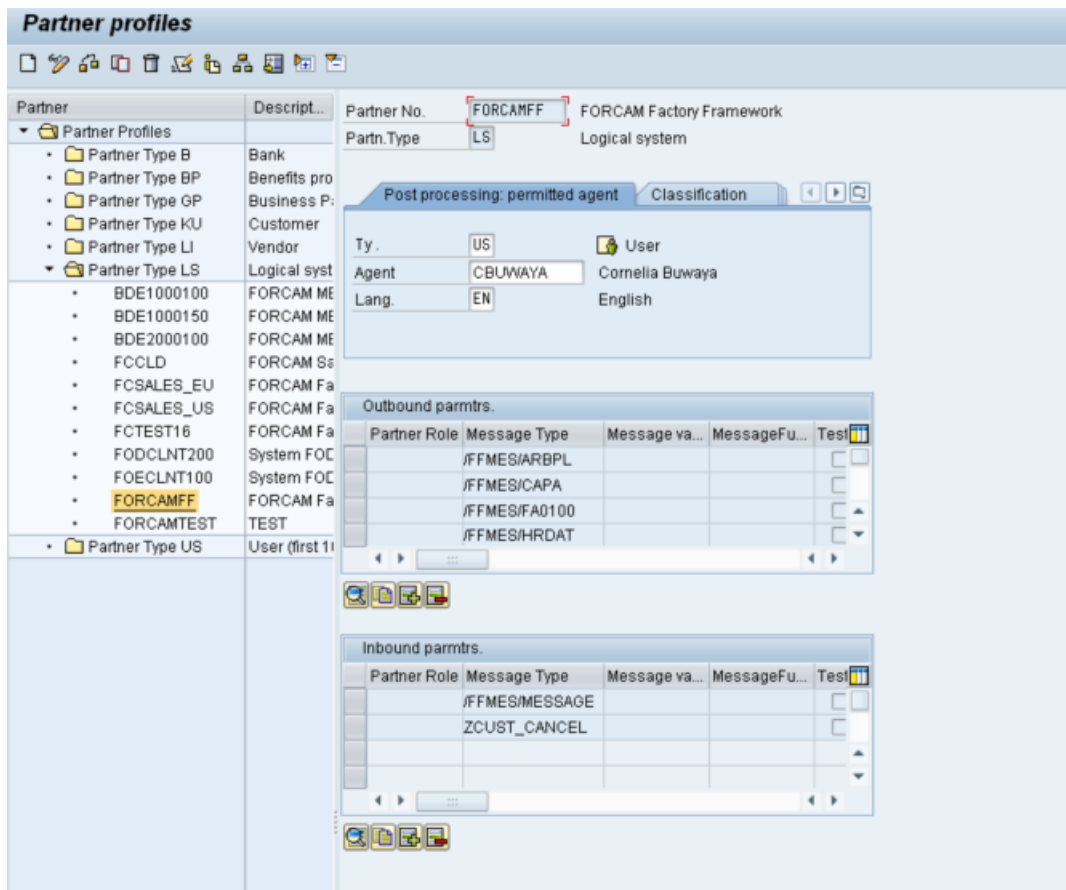
Fig. 26: Ports in IDoc processing

3.3 Configuring Partner Profiles

A partner profile describes which IDocs are exchanged with specific recipients. This section describes how to set the inbound and outbound parameters for the logical systems previously set up.

To configure a partner profile:

1. Call up transaction **WE20**.
2. Click on the **Partner Type LS** folder in the navigation area on the left and create an entry by pressing **F7**.
3. Enter the logical system for the FORCAM system into the **Partner No.** field.
4. Go to the **Postprocessing: Permitted Agents** tab.
5. Enter a valid user.
6. Save by pressing **CTRL+S**.
7. Select the previously created entry and activate editing by pressing **F6**.



Partner profiles

Partner: **FORCAMFF** (FORCAM Factory Framework)

Partn.Type: **LS** (Logical system)

Post processing: permitted agent

Ty.: **US** (User)

Agent: **CBUWAYA** (Cornelia Buwaya)

Lang.: **EN** (English)

Outbound parmtrs.

Partner Role	Message Type	Message va...	MessageFu...	Test
	/FFMES/ARBPL			<input type="checkbox"/>
	/FFMES/CAPA			<input type="checkbox"/>
	/FFMES/IFA0100			<input type="checkbox"/>
	/FFMES/HRDAT			<input type="checkbox"/>

Inbound parmtrs.


Partner Role	Message Type	Message va...	MessageFu...	Test
	/FFMES/MESSAGE			<input type="checkbox"/>
	ZCUST_CANCEL			<input type="checkbox"/>

Fig. 27: Configuring partner profiles

3.3.1 Configuring Outbound Parameters

To configure outbound parameters:

1. Click "+" in the **Outbound Parameters** area (see Fig. 27).
→ The view changes to configuration mode.
2. Go to the **Outbound Options** tab.
3. Make the settings as necessary.
The Packet Size field appears only after pressing **Enter**.

 If any extensions were defined (customer fields), they must be entered in the **Extension** field.
This applies to all message types for which partner profiles are maintained.

The entries required for the outbound parameters are governed by the messages to be exchanged with the recipient. The sample screen shows the entries for shifts, production orders and HR mini-master. However, you may also exchange other data, for example, work centers or internal orders. To do this, appropriate entries must be added.

The message types are defined with transaction **WE81** (see section 2.1).

If there are several recipients (logical systems) where the interface is active, the outbound parameters must be configured accordingly for all recipients.

Any existing extensions of the IDoc basic type should also be entered here.

3.3.1.1 Shift Data Transfer

To configure a shift data transfer:

1. Click "+" in the **Outbound Parameters** area (see figure 25).
→ The view changes to configuration mode.
2. Go to the **Outbound Options** tab.
3. Enter the message type (from **WE81**).
4. Enter the receiving port.
The name of the port for the corresponding FORCAM system.
5. Enter the packet size (30).
6. Select **Transfer IDoc immediately**.
7. Enter the basic type (/FFMES/S).
8. Set a check mark next to **Cancel Processing After Syntax Error**.
9. Save by pressing **CTRL+S**.

Partner profiles: Outbound parameters

Partner No. FORCAM Factory Framework
 Partn.Type Logical system
 Partner Role

Message Type Avail.Capacity interval Work center (...)
 Message code
 Message function ☐ Test

Outbound Options | Message Control | Post Processing: Permitted Agent | Tel...

Receiver port HTTP Communication FORCAM

Output Mode
☒ Transfer IDoc Immed. Output Mode 2
☐ Collect IDocs

IDoc Type
 Basic type Shift Data with breaks for MES
 Extension
 View
☒ Cancel Processing After Syntax Error
 Seg. release in IDoc type Segment Appl. Rel.

Fig. 28: Configuring the shift data transfer

3.3.1.2 Production Orders

To configure production orders:

1. Click "+" in the **Outbound Parameters** area (see figure 25).
 → The view changes to configuration mode.
2. Go to the **Outbound Options** tab.
3. Enter the message type (from **WE81**).
4. Enter the receiving port.
 The name of the port for the corresponding FORCAM system.
5. Enter the packet size (1).
6. Select **Transfer IDoc immediately**.
7. Enter the basic type (/FFMES/F).
8. Set a check mark next to **Cancel Processing After Syntax Error**.
9. Save by pressing **CTRL+S**.

3.3.1.3 HR Mini-Master Records

To configure HR mini-master records:

1. Click "+" in the **Outbound Parameters** area (see figure 25).
→ The view changes to configuration mode.
2. Go to the **Outbound Options** tab.
3. Enter the message type (from **WE81**).
4. Enter the receiving port.
The name of the port for the corresponding FORCAM system.
5. Enter the packet size (30).
6. Select **Transfer IDoc immediately**.
7. Enter the basic type (/FFMES/H).
8. Set a check mark next to **Cancel Processing After Syntax Error**.
9. Save by pressing **CTRL+S**.

3.3.2 Configuring Inbound Parameters

In the standard version, there is only one entry for messages from FORCAM for inbound parameters.


If there are several senders (logical systems) where the interface is active, the inbound parameters must be configured accordingly for all senders.

Any existing extensions of the IDoc basic type should also be entered here.

To configure inbound parameters:

1. Click "+" in the **Inbound Parameters** area (see Fig. 27).
→ The view changes to configuration mode.
2. Go to the **Inbound Options** tab.
3. Enter the message type (from **WE81**).
4. Enter the process code (/FFMES/RCK).
5. Set a check mark next to **Cancel Processing After Syntax Error**.
6. Select **Trigger immediately**.
7. Save by pressing **CTRL+S**.


Partner profiles: Inbound parameters



Partner No. FORCAM Factory Framework

Partn.Type Logical system

Partner Role

 Message type Process incoming messages from ...

Message code

Message function ☐ Test

Inbound options | Post processing: permitted agent | Telephony

Process code ☐ FACTORY FRAMEWORK mes...

☒ Cancel Processing After Syntax Error

Processing by Function Module

☐ Trigger by background program

☒ Trigger Immediately






 Options

Fig. 29: Configuring inbound parameters

3.4 Configuration of HTTP Communication Using Standard Services (HTTP Port)

3.4.1 Uploading Data from FORCAM FORCE™ (Confirmations)

To upload data from FORCAM FORCE™:

1. Call up transaction **SMICM**.
 2. Check that the HTTP port is active.
 - a. Click **Goto** in the top bar and select **Services** from the context menu.
The activity is indicated by a green check mark next to the protocol (see Fig. 30).
 - b. Click **Services** in the top bar and select **Activate** from the context menu.
 3. Call up transaction **SICF**.
 4. Check that the **idoc_xml** service is active.
 - a. Click  in the top left corner.
 - b. Go to default_host > sap > bc > idoc_xml (see Fig. 31).
 - c. Right-click on **idoc_xml** and then click on **Activate Service** in the context menu.
 5. Enter a dedicated alias for the **idoc_xml** service.
The alias is the target path to be specified in the FORCAM configuration as the destination. It starts with a / character (example: /forcamff/forcam_rueck). If the entry is incorrect, the new address cannot be adopted. In this case, stop the configuration process and restart.
 - a. Click  in the top left corner.
 - b. Click  in the top bar (see Fig. 32).
 - c. Enter an alias.
 6. Go to the **Logon Data** tab (see Fig. 33).
 7. Select the **Alternative Logon Procedure** in the **Procedure** field.
→ The **Logon Procedure List** appears at the bottom.
 8. Remove all entries from the logon procedure list except **Basic Authentication**.
 9. Enter a target client in the **Logon Data** area at the top.
This is the client intended for message processing.
 10. Enter user name and password.
The user must exist on the target system specified. The user does not need any authorizations. The user and the password must be used in the FORCAM configuration.
 11. Go to the **Target Element** tab (see Fig. 34).
 12. Double-click on the **idoc_xml** service (to select it).
 13. Save by clicking .
- The service can now be addressed from FORCAM.

Receiving System (Q-P) Activities - Without Transfer

ICM Monitor - Service Display

Active Services

No.	Protocol	Service Name/Port	Host Name	Keep Alive	Proc.Timeo	Actv	External Bind	ACL File
1	HTTP	8002	ciforfoe02.for.local	60	60	<input checked="" type="checkbox"/>		
2	SMTP	0	ciforfoe02.for.local	120	120	<input checked="" type="checkbox"/>		

Fig. 30: Activity indicator of HTTP port

virtuelle Hosts / Services	Dokumentation	Kategorie Service
default_host	VIRTUAL DEFAULT HOST	
sap	SAP NAMESPACE; SAP IS OBLIGED NOT T...	
option	RESERVED SERVICES AVAILABLE GLOBA...	
public	PUBLIC SERVICES	
0001_langes_fel		
ap	Application Platform	
A_NEW_INTAL1		/default_host/sap/A_FRISCH
bc	BASIS TREE (BASIS FUNCTIONS)	
11111	sss	
abap	Services from NW Foundation ABAP	
adt	ABAP Development Tools	
apc	ABAP Push Channel Framework	
apc_test	ABAP Push Channel test applications	
approval_100	Link to Approval Service	/default_host/sap/bc/bsp/sap/hrccf_approval
batch	Services for Background Processing	
bcs	Business Communication Services (BCS)	
bsp	BUSINESS SERVER PAGES (BSP) RUNTI...	
bsp_dev	WEBDAV ACCESS TO BSP DEVELOPMEN...	
ccms	Services of the CCMS Monitoring Architecture	
contentserver	CONTENT SERVER INTERFACE	
crm_bsp_dl	Service to handle xml/csv downloads	
dbosc	A Generic Webservice for DBOS Cockpit	
docb	Document Builder	
docu	ABAP DOCUMENTATION	
ecat	Services for eCATT	
echo	REPEAT OF REQUEST DOCUMENT (ONL...	
ecm	ECM Tree (ECM Functions)	
erecruiting	E-Recruiting	

Fig. 31: Path to service idoc_xml

Maintain external aliases

☒ HTTP service hierarchy

Filter Details

Virtual Host: Service Path:

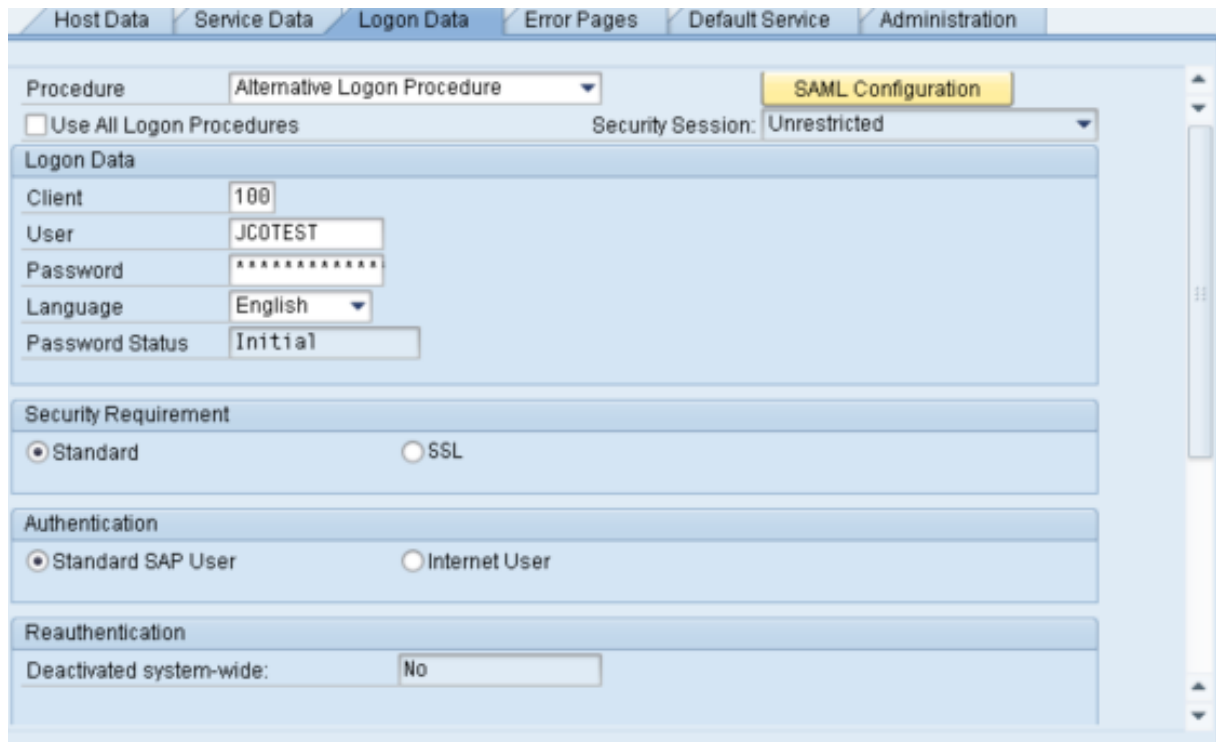
Description:

Lang: Ref.Service:

Virtuelle Hosts / Services	Dokumentation	Alias
default_host		

Fig. 32: Creating an alias

Receiving System (Q-P) Activities - Without Transfer



Host Data / Service Data / **Logon Data** / Error Pages / Default Service / Administration

Procedure: Alternative Logon Procedure SAML Configuration

☐ Use All Logon Procedures Security Session: Unrestricted

Logon Data

Client: 100

User: JCOTEST

Password: *****

Language: English

Password Status: Initial

Security Requirement

☒ Standard ☐ SSL

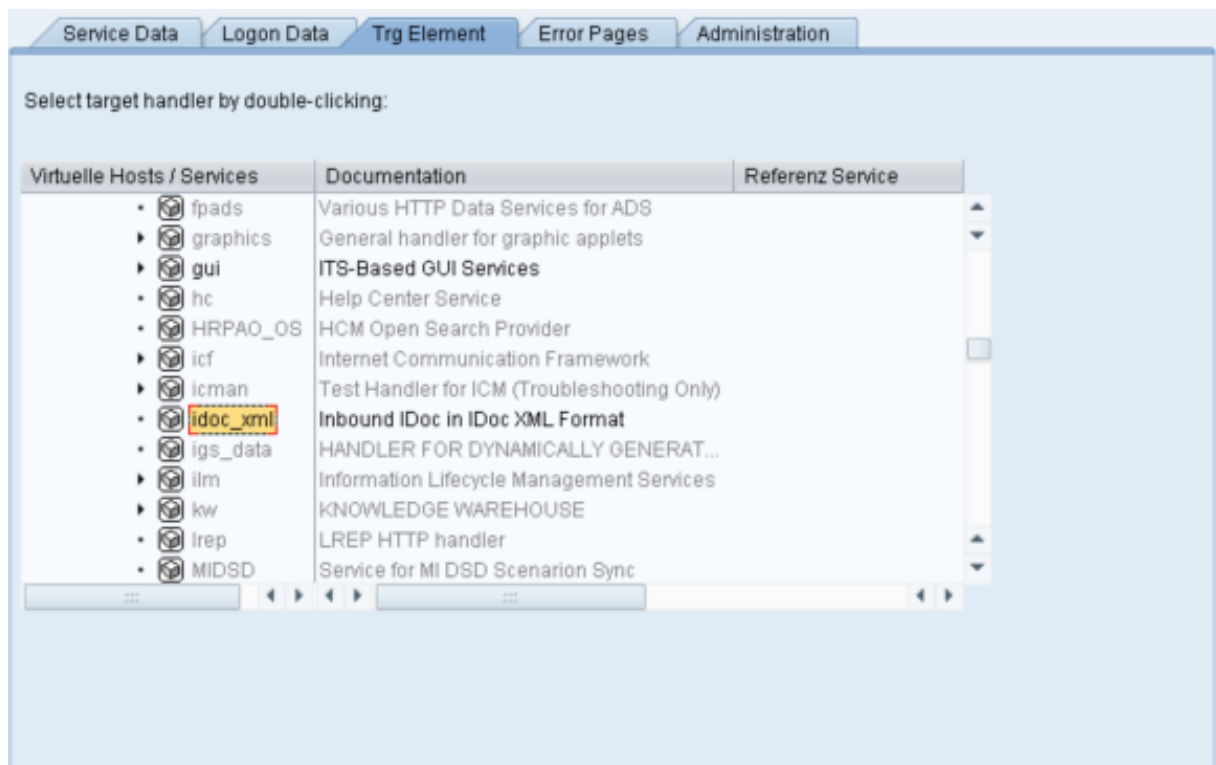
Authentication

☒ Standard SAP User ☐ Internet User

Reauthentication

Deactivated system-wide: No

Fig. 33: Configuring logon data



Service Data / Logon Data / **Trg Element** / Error Pages / Administration

Select target handler by double-clicking:

Virtuelle Hosts / Services	Documentation	Referenz Service
fpads	Various HTTP Data Services for ADS	
graphics	General handler for graphic applets	
gui	ITS-Based GUI Services	
hc	Help Center Service	
HRPAO_OS	HCM Open Search Provider	
icf	Internet Communication Framework	
icman	Test Handler for ICM (Troubleshooting Only)	
idoc_xml	Inbound IDoc in IDoc XML Format	
igs_data	HANDLER FOR DYNAMICALLY GENERAT...	
ilm	Information Lifecycle Management Services	
kw	KNOWLEDGE WAREHOUSE	
lrep	LREP HTTP handler	
MIDSD	Service for MI DSD Scenarion Sync	

Fig. 34: Selecting the target element

3.4.2 Special Case for Serialization through Work Center: Defining a SOAP RFC Request for Object Channel Serialization

From the FORCAM terminal, a function module with RFC capability is called up in SAP which returns information from the **BDRGIN** table (channel count).

This communication process is also set up using the **SICF** transaction.

Executing the SOAP request for object channel serialization requires the **default_host/sap/bc/soap/rfc** service to be active (activation of the service is described in section 3.4.1).

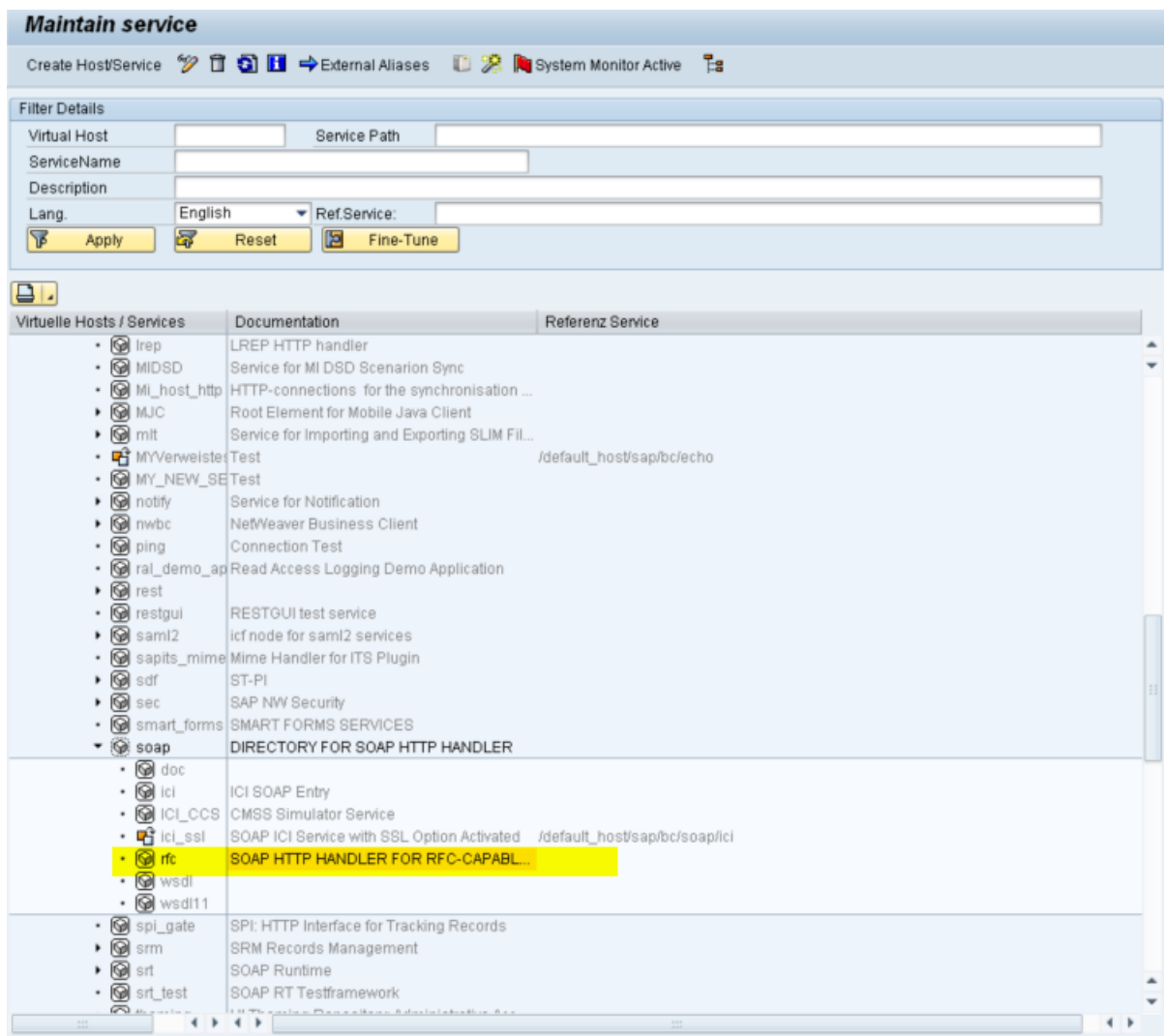



Fig. 35: Path to RFC service

This service also requires defining an alias and configuring the RFC user in the logon data. The user may be the same as the one for the other alias.

Creating an alias is similar to the method described in section 3.4.1. However, the **soap-rfc** service must be selected here and a different name specified for the alias, for example **/forcam/forcam_rfc**.

-  To be able to execute the SOAP request for object channel serialization, the RFC user requires the authorization for the **/FFMES/REQUEST** function group which contains the function module to be called up when it is verified in the SAP system.

3.5 Editing Table Entries

The tables are edited using transaction **SM30**.

The tables described in the following sections are application-specific tables and must be updated separately in each system. The contents of these tables are not transferred.

These tables are:

- /FFMES/PARM
- /FFMES/CONTROL
- /FFMES/AUFTR
- /FFMES/FA_FELDER
- /FFMES/STDVAL
- /FFMES/FILTER
- /FFMES/DELETE_PO

Not all tables are required to operate the interface in every case. If needed, special settings could be made later on in the course of the project.

3.5.1 Table: /FFMES/PARM (mandatory)

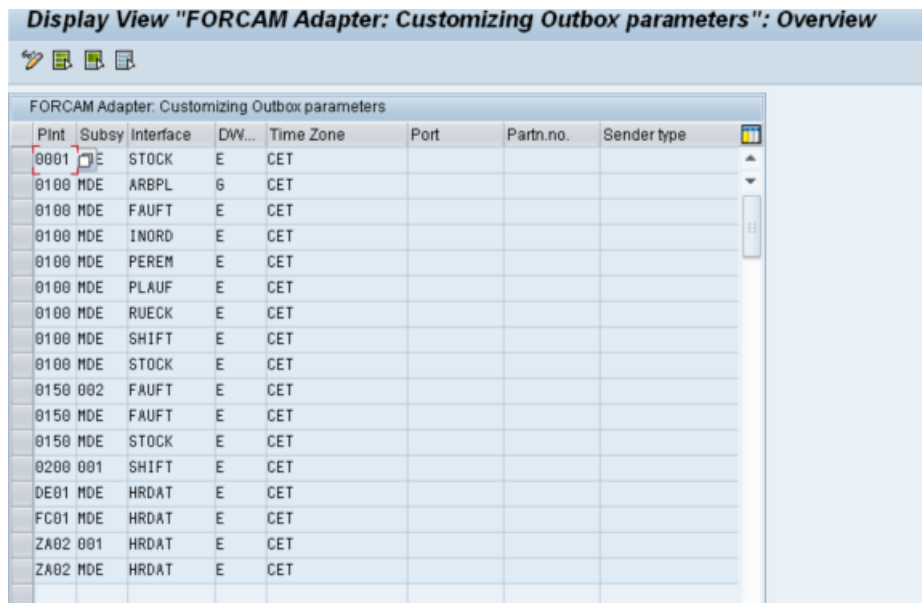
This table is important for successful communication between SAP and the attached FORCAM system since it contains the essential control parameters.

The entries in this table must be customized for each plant in which the interface is to be active.

The subsystem indicator the interface uses for each active plant can be specified.

This subsystem indicator must be specified in the basic data of the relevant work centers. An operation with this work center is sent to FORCAM FORCE™ only if this subsystem indicator is set (**BDEGR** field).

Display View "FORCAM Adapter: Customizing Outbox parameters": Overview



Plant	Subsy	Interface	DW...	Time Zone	Port	Partn.no.	Sender type
0001	E	STOCK	E	CET			
0100	MDE	ARBPL	G	CET			
0100	MDE	FAUFT	E	CET			
0100	MDE	INORD	E	CET			
0100	MDE	PEREM	E	CET			
0100	MDE	PLAUF	E	CET			
0100	MDE	RUECK	E	CET			
0100	MDE	SHIFT	E	CET			
0100	MDE	STOCK	E	CET			
0150	002	FAUFT	E	CET			
0150	MDE	FAUFT	E	CET			
0150	MDE	STOCK	E	CET			
0200	001	SHIFT	E	CET			
DE01	MDE	HRDAT	E	CET			
FC01	MDE	HRDAT	E	CET			
ZA02	001	HRDAT	E	CET			
ZA02	MDE	HRDAT	E	CET			

Fig. 36: Sample entries for /FFMES/PARM table

Receiving System (Q-P) Activities - Without Transfer

The **Interface** field specifies the short code of the respective interface:

Table 2: Short codes for /FFMES/PARM and their definitions

Short code	Definition
FAUFT	Production orders
SHIFT	Machine capacity/shifts
HRDAT	Personnel data/ HR mini-master records
ARBPL	Work centers
RUECK	Confirmations

- i** Note for the RUEK entry:
 The **Time Zone** field must contain the time zone of the sender (FORCAM FORCE™) so that the message time can be converted correctly into the SAP time zone (this is important if SAP and FORCAM FORCE™ have different time zones).

An entry in this table may look like this:

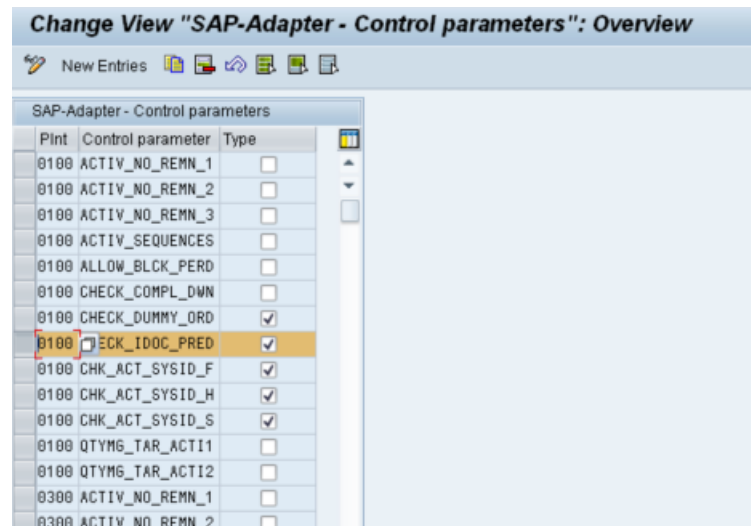
Table /FFMES/PARM Display

Client	100
Plant	0100
Subsystem grpg	MDE
Interface	FAUFT
Downl.tp	E
Time Zone	CET
Sender port	
Sender	
Sender type	
Receiver port	FORCAMXML
Receiver	FORCAMFF
Rec.Partn.Type	LS
Message Type	/FFMES/FA0100
Basic type	/FFMES/F
Extension	
IDoc Type	/FFMES/F
Destination	
directory	
File name	

Fig. 37: Sample view of /FFMES/PARM table

3.5.2 Table: /FFMES/CONTROL (mandatory)

This table is used for setting the control parameters for special FORCAM Adapter functions. The **CHECK_IDOC_PRED** parameter must be activated for the specific SAP plant to enable serialization through work centers (set check mark).




Plant	Control parameter	Type
0100	ACTIV_NO_REMN_1	<input type="checkbox"/>
0100	ACTIV_NO_REMN_2	<input type="checkbox"/>
0100	ACTIV_NO_REMN_3	<input type="checkbox"/>
0100	ACTIV_SEQUENCES	<input type="checkbox"/>
0100	ALLOW_BLK_PERD	<input type="checkbox"/>
0100	CHECK_COMPL_DWN	<input type="checkbox"/>
0100	CHECK_DUMMY_ORD	<input checked="" type="checkbox"/>
0100	CHECK_IDOC_PRED	<input checked="" type="checkbox"/>
0100	CHK_ACT_SYSID_F	<input checked="" type="checkbox"/>
0100	CHK_ACT_SYSID_H	<input checked="" type="checkbox"/>
0100	CHK_ACT_SYSID_S	<input checked="" type="checkbox"/>
0100	QTYM_TAR_ACTI1	<input type="checkbox"/>
0100	QTYM_TAR_ACTI2	<input type="checkbox"/>
0300	ACTIV_NO_REMN_1	<input type="checkbox"/>
0300	ACTIV_NO_REMN_2	<input type="checkbox"/>

Fig. 38: Activating the parameter CHECK_IDOC_PRED for table /FFMES/CONTROL

3.5.3 Table: /FFMES/AUFTR (mandatory)

This table is used for specifying control parameters for transferring production order data from SAP to FORCAM FORCE™. Use the **SM30** transaction to edit this table.

-  The table verifies whether the interface for transferring production orders is active for the respective plant. This is a prerequisite for transferring order data from this plant to FORCAM FORCE™. For this purpose, the **active** field must be provided with a **check mark** for the respective plant.

The table includes the **order category** as a key field. This also makes it possible to transfer other order categories such as plant maintenance (PM) orders (AUTYP = 30), for example. The other order categories are transferred in the IDocs with the basic type **/FFMES/F**. The **/FFMES/AUFTR** table can be used to control the IDoc segments included in this transfer.

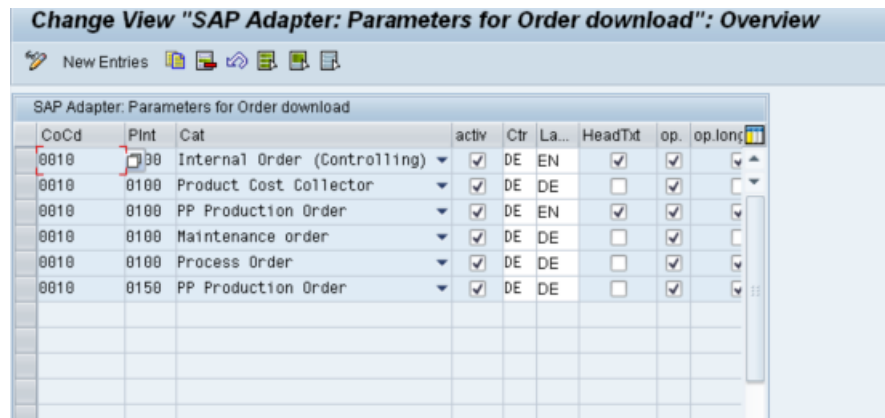


Fig. 39: Activity display of plants, the order data of which are transferred to FORCAM FORCE™

A table row comprises the following columns in which either the appropriate entries are made or check marks are set by clicking:

Table 3: Columns in /FFMES/AUFTR and their meanings

Column	Meaning
Company code	
Plant	
Order category	The category of the order to be transferred
Active indicator	Activate the interface for this plant?
Country	Country key (e.g. DE)
Language	System language (e.g. DE)
Flag long text for order header	Should the long text for the order header be transferred when the IDoc is created? (This is read in the function module for IDoc creation /FFMES/FA_IDOCS_CREATE.)
Operation data flag	Include operation data when creating the IDoc? (Read in the function module for IDoc creation /FFMES/FA_IDOCS_CREATE.)
Flag for operation long texts	Include operation long texts when creating the IDoc? (Read in the function module for IDoc creation /FFMES/FA_IDOCS_CREATE.)
Flag for production re-sources/tools	Include production resource/tool data when creating the IDoc? (Read in the function module for IDoc creation /FFMES/FA_IDOCS_CREATE.)
Components flag	Include component data when creating the IDoc? (Read in the function module for IDoc creation /FFMES/FA_IDOCS_CREATE.)
Flag for material classification	Include classification data when creating the IDoc? (Read in the function module for IDoc creation /FFMES/FA_IDOCS_CREATE.)
Flag for material master	Include material master data when creating the IDoc? (Read in the function module for IDoc creation /FFMES/FA_IDOCS_CREATE.)
CORCB flag: Correction with callback	Relates to processing of corrections from FORCAM FORCE™. If this flag is set, a message is returned to FORCAM FORCE™ on completion of a correction.

Receiving System (Q-P) Activities - Without Transfer

NOTT flag: Do not create a time ticket	This flag can override creation of time tickets.
Flag for including orders already created	Also send orders with CREATED status to FORCAM FORCE™? (Read in the function module for IDoc creation /FFMES/FA_IDOCS_CREATE.)
Error indicator	Read in the subroutine F01_CO11N. Can be used as an input parameter for implementing the extension method MODIFY_CONF_PARAMETERS.
Designation of the REGION	Must be transferred to ensure correct decimal formatting according to region-specific rules
Time unit	The time unit used by the FORCAM system for the activity confirmations is entered here.

An entry in this table may look like this:

Table /FFMES/AUFTR Display

Client	100
Company Code	0010
Plant	0100
Order category	5
active	<input checked="" type="checkbox"/>
Country	DE
Language	DE
HeadTxt	<input type="checkbox"/>
op.	<input checked="" type="checkbox"/>
Flag op.long text	<input type="checkbox"/>
PRT	<input type="checkbox"/>
components	<input checked="" type="checkbox"/>
Classification mat.	<input type="checkbox"/>
Mat. master	<input type="checkbox"/>
CORCB	<input type="checkbox"/>
NOTT	<input type="checkbox"/>
Flag Created Ord.	<input type="checkbox"/>
Ind.: Error	<input type="checkbox"/>

Fig. 40: Sample entry of /FFMES/AUFTR

3.5.4 Table: /FFMES/FA_FELDER (mandatory)

- ✓ Prior to editing this table, the /FFMES/AUFTR must have been configured.

This table specifies the fields that are relevant for transferring order data to FORCAM FORCE™, i.e. whenever these fields are changed, the data of the order are transferred to FORCAM FORCE™. This table must be filled in first, otherwise there will be no transfer of order data to FORCAM FORCE™. This is done using the /FFMES/FA_FELDER_INIT report.

To configure the /FFMES/FA_FELDER_INIT report:

1. Start the report by transaction **SA38**.
2. Enter the basic type **/FFMES/F**.
3. Enter the plants for which the interface is to be active.
4. Select **Set new fields to active**.
5. Execute the program by pressing **F8**.
6. Make any necessary corrections in the table using transaction **SM30**.

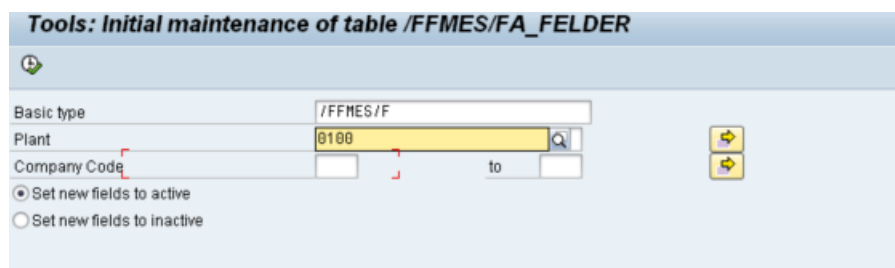


Fig. 41: Selection screen of /FFMES/FA_FELDER_INIT report

In order to achieve a field transfer when customer-specific extension fields are changed, special entries must be made in the /FFMES/FA_FELDER table:

The **Cust.Enhancement** column must be marked **X** to identify the field as a customer field.

The **Basic Struct** column specifies the original basic structure that was extended by the customer segment. Here, for example, the AFOLG segment.

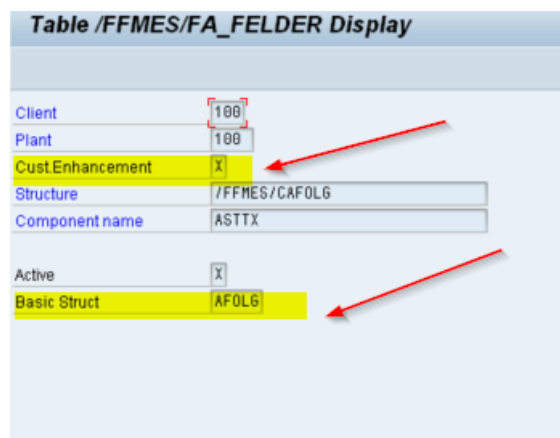


Table /FFMES/FA_FELDER Display	
Client	100
Plant	100
Cust Enhancement	X
Structure	/FFMES/CAFOLG
Component name	ASTTX
Active	X
Basic Struct	AFOLG

Fig. 42: Field transfer in case of a change

3.5.5 Table: /FFMES/STDVAL (only if required)

This table can be used when downloading the order data or processing the time messages if there are different standard values in FORCAM FORCE™.

When downloading the order data, an assignment of standard values differing from the FORCAM system can be mapped (FORCAM standard: 1= Setup, 2= Production, 3= Labour time).

This table is used for mapping the FORCAM FORCE™ time base to the SAP standard values when posting the time messages from FORCAM. The table is used if there are no specific entries in the distribution table for mapping the FORCAM FORCE™ time base to a specific standard value. Specific standard values can be maintained in the table for each plant, standard value key, work center category or work center.

An entry in this table may look like this:

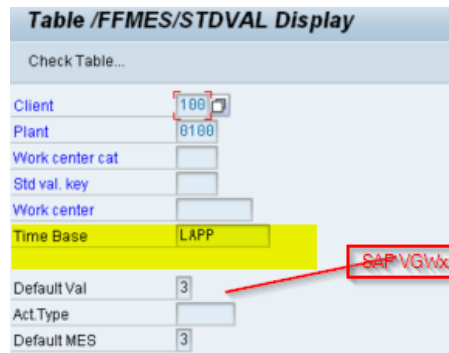


Fig. 43: Sample entry of /FFMES/STDVAL

Fig. 44 shows another example of table entries in which specific standard values are defined for specific work centers. It illustrates the assignment of different activity types for time posting:

/FFMES/STDVAL: Display of Entries Found

Table to be searched: /FFMES/STDVAL SAP-Adapter: Dynamic standard value

Number of hits: 18

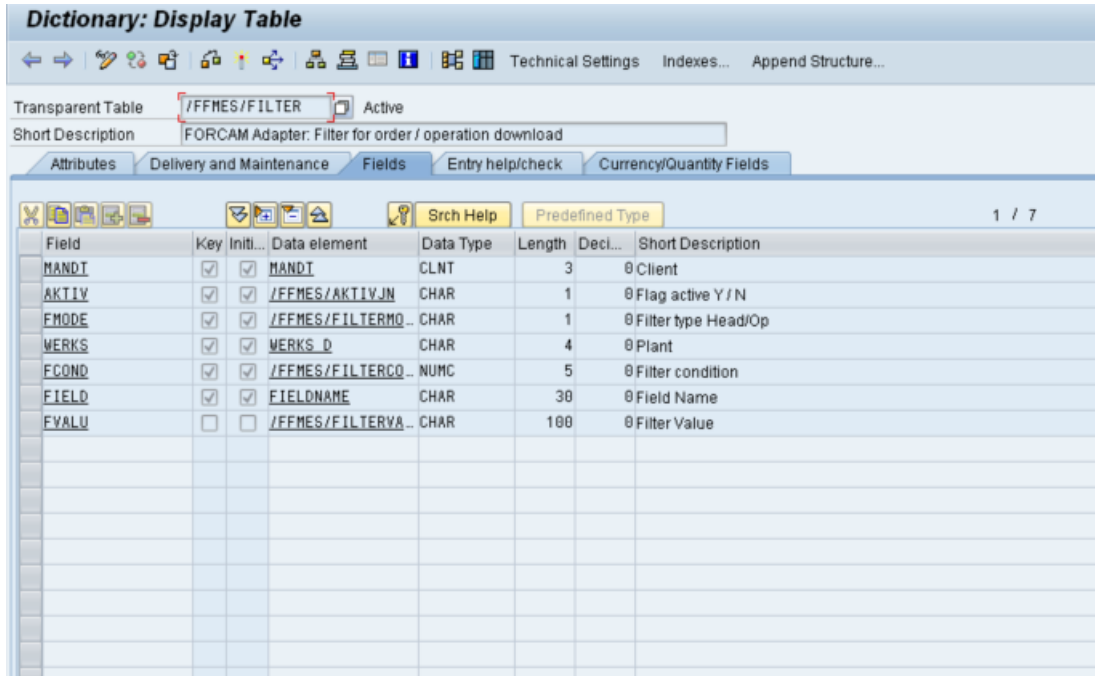
Runtime: 0 Maximum no. of hits: 500

Plant	Cat. SVK	Work ctr	Time Base	Default	ACTTP	Def.MES
0150			LAPP	3	100	3
0150			LAPR	2	130	2
0150			LARU	1	120	1
0150		42250	LARU	1	120	1
0150		42310	LAPP	3	110	3
0150		42310	LAPR	2	130	2
0150		42310	LARU	1	120	1
0150		42330	LAPP	3	110	3
0150		42330	LAPR	2	130	2
0150		42330	LARU	1	120	1
0150		42340	LAPP	3	110	3
0150		42340	LAPR	2	130	2
0150		42340	LARU	1	120	1
0150		42350	LAPP	3	110	3
0150		42350	LAPR	2	130	2
0150		42360	LAPP	3	110	3
0150		42360	LAPR	2	130	2
0150		42360	LARU	1	120	1

Fig. 44: Sample entry for / FFMES / STDVAL with assignment of different activity types for posting the times

3.5.6 Table: /FFMES/FILTER (only if required)

This table permits filtering specific data for order and operation download.



Field	Key	Initi...	Data element	Data Type	Length	Deci...	Short Description
MANDT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MANDT	CLNT	3		@ Client
AKTIV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	/FFMES/AKTIVJN	CHAR	1		@ Flag active Y / N
FMODE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	/FFMES/FILTERMO...	CHAR	1		@ Filter type Head/Op
WERKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WERKS_D	CHAR	4		@ Plant
FCOND	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	/FFMES/FILTERCO...	NUMC	5		@ Filter condition
FIELD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIELDNAME	CHAR	30		@ Field Name
FVALU	<input type="checkbox"/>	<input type="checkbox"/>	/FFMES/FILTERVA...	CHAR	100		@ Filter Value

Fig. 45: Table /FFMES/FILTER (example)

Table 4 describes the fields of this table:

Table 4: Fields in the /FFMES/FILTER table and their meanings

Field	Meaning
MANDT	The current client where the user is logged in
AKTIV	Activity flag for a condition. If this flag is not set for a specific condition, the filter condition is not applied to the operations.
FMODE	Head/Operation filter type: Which level should the filter be applied to?
WERKS	Conditions must be set for each plant.
FCOND	The condition number governs the logical operation type. Entries with the same condition number are subject to a logical AND operation. Entries with different numbers are interpreted as OR blocks (see Fig. 46).
FIELD/FVALU	A combination of a field and its value that is to be used for filtering the field.

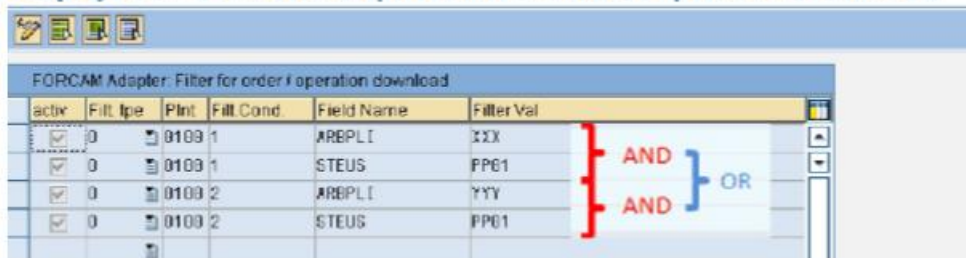
The SAP Adapter package includes a special method (**DYNAMIC_FILTER**) which is called up when filling the operation and order head segments for the production order download. This method involves checking the conditions from **/FFMES/FILTER**.

The following Fig. 46 shows a sample filter condition. Operations matching this condition are not sent to the FORCAM system:

Receiving System (Q-P) Activities - Without Transfer

STEUS (control key) = „PP01“ **AND** ARBPLI (workplace) = „XXX“
OR
STEUS (control key) = „PP01“ **AND** ARBPLI (workplace) = „YYY“

Display View "FORCAM Adapter: Filter for order / operation download":



activ	Filter type	Plant	Filter Cond	Field Name	Filter Val
<input checked="" type="checkbox"/>	0	0103 1		ARBPLI	XXX
<input checked="" type="checkbox"/>	0	0103 1		STEUS	PP01
<input checked="" type="checkbox"/>	0	0103 2		ARBPLI	YYY
<input checked="" type="checkbox"/>	0	0103 2		STEUS	PP01

Visual logic diagram: (ARBPLI = XXX AND STEUS = PP01) OR (ARBPLI = YYY AND STEUS = PP01)

Fig. 46: Filter condition for a production order download (example)

All those conditions of the **/FFMES/FILTER** table are checked that correspond to the plant associated with the operation and have the active indicator set.

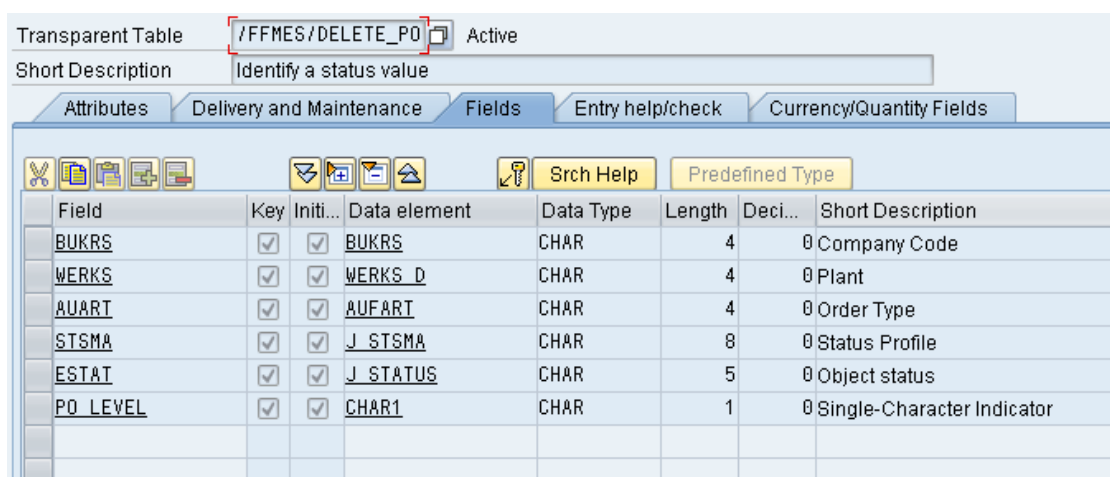
If an AND condition is true for the current operation, it is filtered out and not sent to the FORCAM system: If a match is not found, it is assumed that the respective operation is relevant for a download to the FORCAM system.

3.5.7 Table: /FFMES/DELETE_PO (only if required)

This table allows a customizable creation of deletion records for production orders and the table is used in production order download.

Deletion records are triggered in standard installations of the FORCAM Adapter after a system status change from **PO** operation into **CLSD** or **TECO**.

Table **/FFMES/DELETE_PO** should be maintained if a different creation of deletion records is wanted. The program logic of download **PO** data is implemented in a way that either standard deletion records or deletion records at specified system status values from table **/FFMES/DELETE_PO** are created.



Field	Key	Initi...	Data element	Data Type	Length	Deci...	Short Description
BUKRS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	BUKRS	CHAR	4	0	Company Code
WERKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WERKS_D	CHAR	4	0	Plant
AUART	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	AUFART	CHAR	4	0	Order Type
STSM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	J STSM	CHAR	8	0	Status Profile
STAT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	J STATUS	CHAR	5	0	Object status
PO_LEVEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CHAR1	CHAR	1	0	Single-Character Indicator

Fig. 47: Table /FFMES_DELETE_PO (fields)

A sample entry of this table might look like this:


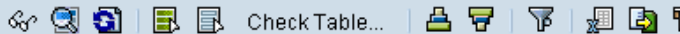
Detail: Display	
	
Column	Contents
Company Code	0010
Plant	0100
Order Type	PP01
Status Profile	
Status	I0045
Single-Character Indicator	0

Fig. 48: Table /FFMES_DELETE_PO (sample entry)

Table **/FFMES/DELETE_PO** has a maintenance dialogue and must be transported (application table). The single digit indicator determines on which level deletion records should be created: header or operation (H= Header, O = Operation). Status must be entered in internal format. Applicable values can be found in table **TJ02T** (system status). The following picture shows some entries of the SAP standard table **TJ02T**.

Data Browser: Table TJ02T Select Entries			
			
SysSt	Language	Stat	Status
<input checked="" type="checkbox"/> I0001	EN	CRTD	Created
<input type="checkbox"/> I0002	EN	REL	Released
<input type="checkbox"/> I0003	EN	MSCP	Capacity shortage
<input type="checkbox"/> I0004	EN	MSPT	Material shortage
<input type="checkbox"/> I0005	EN	AVAC	Availability control active
<input type="checkbox"/> I0006	EN	ESTC	Estimated costs
<input type="checkbox"/> I0007	EN	PRT	Printed
<input type="checkbox"/> I0008	EN	PPRT	Part printed
<input type="checkbox"/> I0009	EN	CNF	Confirmed
<input type="checkbox"/> I0010	EN	PCNF	Partially confirmed
<input type="checkbox"/> I0011	EN	CPCK	Capacity checked
<input type="checkbox"/> I0012	EN	DLV	Delivered
<input type="checkbox"/> I0013	EN	DLT	Deletion indicator
<input type="checkbox"/> I0014	EN	PCST	Product costed
<input type="checkbox"/> I0015	EN	NCMP	Not completed
<input type="checkbox"/> I0016	EN	PRC	Pre-costed
<input type="checkbox"/> I0017	EN	ISSD	Goods issued
<input type="checkbox"/> I0018	EN	NHFD	Ntwk header: final delivery
<input type="checkbox"/> I0019	EN	GEN1	General list 1 printed
<input type="checkbox"/> I0020	EN	GEN2	General list 2 printed
<input type="checkbox"/> I0021	EN	GEN3	General list 3 printed
<input type="checkbox"/> I0022	EN	GEN4	General list 4 printed
<input type="checkbox"/> I0023	EN	OPL1	Activity list 1 printed
<input type="checkbox"/> I0024	EN	OPL2	Activity list 2 printed
<input type="checkbox"/> I0025	EN	OPL3	Activity list 3 printed
<input type="checkbox"/> I0026	EN	OPL4	Activity list 4 printed
<input type="checkbox"/> I0027	EN	SFMT	Settlement fields maintained
<input type="checkbox"/> I0028	EN	SETC	Settlement rule created
<input type="checkbox"/> I0029	EN	DSEX	Date set by external system
<input type="checkbox"/> I0030	EN	MLTL	Multi-level: Top level
<input type="checkbox"/> I0031	EN	MLBL	Multi-level: Bottom level
<input type="checkbox"/> I0032	EN	MLDI	Multi-level: Dummy info record
<input type="checkbox"/> I0033	EN	CNC	Costs not current
<input type="checkbox"/> I0034	EN	SORL	Subordinate order released
<input type="checkbox"/> I0035	EN	SOPR	Subordinate order printed
<input type="checkbox"/> I0036	EN	SOCF	Subordinate order confirmed
<input type="checkbox"/> I0037	EN	UMGP	Rescheduled
<input type="checkbox"/> I0038	EN	CONI	Configuration incomplete
<input type="checkbox"/> I0042	EN	PREL	Partially released
<input type="checkbox"/> I0043	EN	LKD	Locked
<input type="checkbox"/> I0045	EN	TECO	Technically completed
<input type="checkbox"/> I0046	EN	CLSD	Closed
<input type="checkbox"/> I0047	EN	RDIS	Relevant for Distrib. to MES

3.6 Activating IDoc Event Linkage

For a one-time activation of IDoc event linkage, the **RSEINBEV** report must be started (transaction **SA38**).

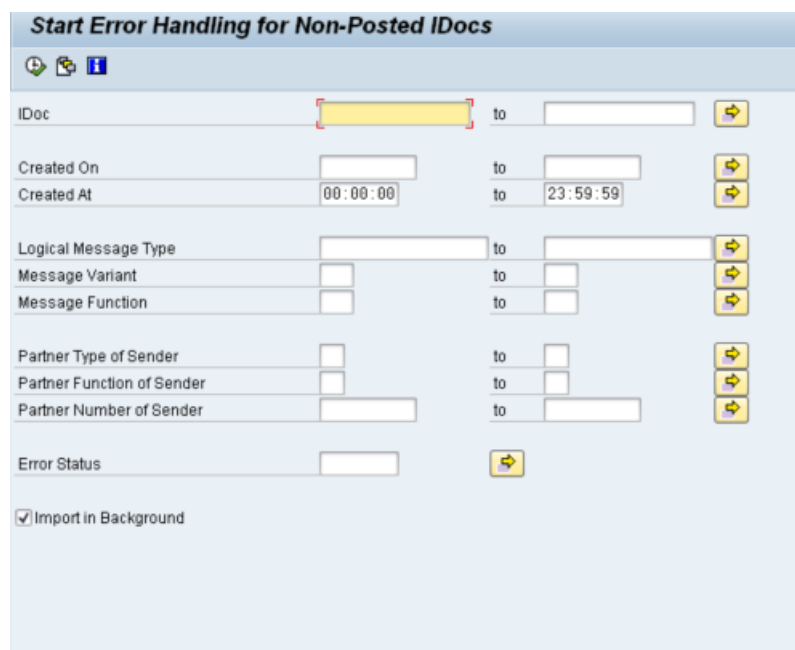
4 Scheduling Reports

4.1 RBDMANIN: Automatic Subsequent Posting of Non-Posted IDocs

This routine makes sure that non-posted (stuck) IDocs are subsequently posted automatically.

The report must run in an SAP system with active FORCAM Adapter as a regular batch job (for details for report scheduling, refer to the SAP standard documentation).

This requires first creating a report variant and then scheduling the batch job with transaction **SM36**.



The screenshot shows the 'Start Error Handling for Non-Posted IDocs' report selection screen. It includes the following fields and options:


- IDoc**: A text input field with a yellow highlight and a red selection box, followed by a 'to' field and a right arrow button.
- Created On**: A date input field, followed by a 'to' field and a right arrow button.
- Created At**: A time input field with the value '00:00:00', followed by a 'to' field with the value '23:59:59' and a right arrow button.
- Logical Message Type**: A text input field, followed by a 'to' field and a right arrow button.
- Message Variant**: A dropdown menu, followed by a 'to' field and a right arrow button.
- Message Function**: A dropdown menu, followed by a 'to' field and a right arrow button.
- Partner Type of Sender**: A dropdown menu, followed by a 'to' field and a right arrow button.
- Partner Function of Sender**: A dropdown menu, followed by a 'to' field and a right arrow button.
- Partner Number of Sender**: A text input field, followed by a 'to' field and a right arrow button.
- Error Status**: A dropdown menu, followed by a right arrow button.
- Import in Background**: A checked checkbox.

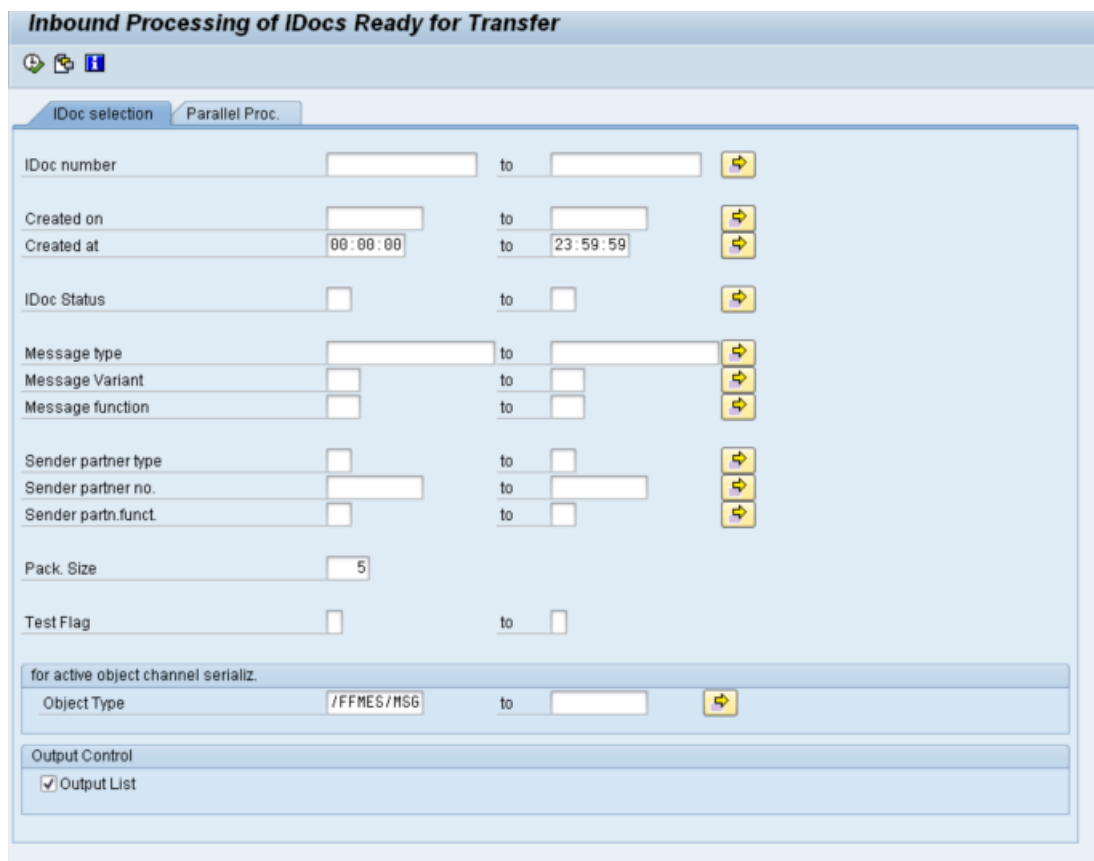
Fig. 49: Error handling for non-posted IDocs

4.2 RBDAPP01: Inbound Processing of IDocs Ready for Transfer

With serialization active, the inbound IDocs that are ready for transfer and in waiting status 66 after an error must be restarted.

This is performed by the **RBDAPP01** report, which should be scheduled as a regular batch job for this purpose.

-  The **RBDMANIN** report cannot start IDocs with status 66 for processing.



The screenshot shows the 'Inbound Processing of IDocs Ready for Transfer' report selection screen. It features a 'Parallel Proc.' tab and various selection criteria for IDocs. The criteria include IDoc number, Created on, Created at, IDoc Status, Message type, Message Variant, Message function, Sender partner type, Sender partner no., Sender partn.funct., Pack. Size, Test Flag, and Object Type. Each criterion has a 'to' field and a selection button. The 'Output Control' section at the bottom has a checked 'Output List' checkbox.

Field	Value	to	Value	Button
IDoc number		to		[Selection]
Created on		to		[Selection]
Created at	00:00:00	to	23:59:59	[Selection]
IDoc Status		to		[Selection]
Message type		to		[Selection]
Message Variant		to		[Selection]
Message function		to		[Selection]
Sender partner type		to		[Selection]
Sender partner no.		to		[Selection]
Sender partn.funct.		to		[Selection]
Pack. Size	5			
Test Flag		to		
for active object channel serializ.				
Object Type	/FFMES/MSG	to		[Selection]
Output Control				
<input checked="" type="checkbox"/> Output List				

Fig. 50: Inbound processing of IDocs ready for transfer

5 Notes for Going Live

After completing a test installation or pilot phase successfully, the transition to the respective SAP production system is carried out. This requires taking some issues into consideration that are described in more detail in the following paragraphs.

5.1 Importing Existing Transports into the Production System

In addition to the basic installation of the FORCAM Adapter programs, it is important to make sure that the Workbench and Customizing transfers originating from the installation and customizing phase are imported into the production system in the correct sequence. This involves loading the Workbench transfers first, followed by the Customizing transfers. It is recommended to prepare a list of transfers in the test and installation phase.

5.2 Manual Rework

Manual rework is required after loading the transfers. There are non-transferable objects that need to be handled manually in every system.

1 Specifying Subsystem Indicators for the Work Centers

The basic data of all FORCAM-relevant work centers must be supplemented with the subsystem indicator specified in the **/FFMES/PAWM** table. Operations with these work centers are only eligible for a transfer from SAP to FORCAM FORCE™ if this is ensured.

Data Browser: Table /FFMES/PAWM Select Entries 17

Table: /FFMES/PAWM
 Displayed Fields: 16 of 19 Fixed Columns: List Width: 8250

Client	Plant	Subsystem group	Interface	Downl. tp	Time Zone	Sender port	Sender	Sender type	Receiver port	Receiver	Rec. Partn. Type	Message Type	Basic type	Extension	Idoc. Type
100	0001	ME	STOCK	E	CET				FORCAMML	FORCAMFF	LS	/FFMES/STOCK	/FFMES/L		/FFMES/L
100	0100	ME	ARBPL	G	CET				FORCAMML	FORCAMFF	LS	/FFMES/ARBPL	/FFMES/W		/FFMES/W
100	0100	ME	FAUPT	E	CET				FORCAMML	FORCAMFF	LS	/FFMES/FAUPT	/FFMES/F		/FFMES/F
100	0100	ME	INORD	E	CET				FORCAMML	FORCAMFF	LS	/FFMES/INORD	/FFMES/I		/FFMES/I
100	0100	ME	PEREN	E	CET				FORCAMML	FORCAMFF	LS	/FFMES/PEREN	/FFMES/F		/FFMES/F
100	0100	ME	PLAUF	E	CET				FORCAMML	FORCAMFF	LS	/FFMES/PLAUF	/FFMES/F		/FFMES/F

Fig. 51: System indicators in the **/FFMES/PAWM** table

2 Creating a System User

A communication user is required for uploading messages from the FORCAM system; it must be created according to the pattern of the test system.

3 Checking the Ports

Have the appropriate ports enabled for communication:

- The download port is specified in **SM59**; usually port 10080.
- The upload HTTP port is specified in **SMICM** (Goto – Services, e.g. 8000) and must be active.

4 Verifying the Customizing

It is recommended to verify all Customizing settings to avoid errors due to transfers.

The following settings are not transferred and must be readjusted in accordance with the settings of the test system.

Table 5: Non-transported settings with associated transactions

Setting	Transaction
Creating an RFC destination	SM59
Maintaining the port definition	WE21
Setting up partner profiles	WE20
Maintaining SICF services	

5 Maintaining Tables

It is recommended to verify critical table entries in order to avoid later troubleshooting. These tables are transferred:

- /FFMES/GLOBAL
- /FFMES/KORR_CUST
- /FFMES/VERTEILER

The entries in the following tables need to be readjusted in the production system. These are application-specific tables, the contents of which are not transferred.

- /FFMES/AUFTR
(Activate interface for download only when starting the interface = KZ-AKTIV)
- /FFMES/FA_FELDER
- /FFMES/PARM
- /FFMES/CONTROL
- /FFMES/FILTER
- /FFMES/STATUS

6 Filling in the Parameter List for the Services

For the configuration of the FORCAM services, the parameter list must be filled in and forwarded to the responsible colleagues.

Fig. 52 shows an example:

Technical Infrastructure

XYZ Customer

SAP Configuration

Productive System (XXX)

SAP Upload (Confirmation Interface)

Key	Value
URL of SAP-IDOC-XML confirmation interface	http://Bspserver.local:8000/forcamff/forcam_xml
CLNT of SAP-IDOC-XML confirmation interface	500
Http Basic Authentication User name of SAP-IDOC-XML confirmation interface	XXX-User
Http Basic Authentication Password der SAP-IDOC-XML confirmation interface	Passwort
Use Http Basic Authentication of SAP-IDOC-XML confirmation interface	BASIC
IDOC-TYP of SAP-IDOC-XML confirmation interface	/FFMES/R
Message type MESTYP of SAP-IDOC-XML confirmation interface	/FFMES/MSGXXX
Sender port SNDPOT of SAP-IDOC-XML confirmation interface	FORCAMFF
Sender Partner type 'SNDPRT' of SAP-IDOC-XML confirmation interface	LS
Sender Partner number 'SNDPRN' of SAP-IDOC-XML confirmation interface	FORCAMFF
Receiver port 'RCVPOR' of SAP-IDOC-XML confirmation interface	PRDSYST
Receiver partner type 'RCVPRT' of SAP-IDOC-XML confirmation interface	LS
Receiver partner number 'RCVPRN' of SAP-IDOC-XML confirmation interface	SAPXXX
Exclusion list serialization	Are there exceptions of idoc serialization
IDOC example	<pre><?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <_FFMES_R> <IDOC BEGIN="1"> <EDI_DC40 SEGMENT="1"> <TABNAM>EDI_DC40</TABNAM> <MANDT>@MANDT@</MANDT> <DOCNUM>@DOCNUM_Value@</DOCNUM> <DOCREL>@DOCREL@</DOCREL> <STATUS>@STATUS@ <DIRECT>2</DIRECT> <OUTMOD>@OUTMOD@</OUTMOD> <EXPRS>@EXPRS@</EXPRS> <TEST>@TEST@ <IDOC-TYP>@IDOC-TYP@</IDOC-TYP> <CIMTYP>@CIMTYP@</CIMTYP> <MESTYP>@MESTYP@</MESTYP> <MESCOD>@MESCOD@</MESCOD> <MESFCT>@MESFCT@</MESFCT> <STD>@STD@</STD> <STDVRS>@STDVRS@</STDVRS> <STDMES>@STDMES@</STDMES> <SNDPOT>@SNDPOT@</SNDPOT> <SNDPRT>@SNDPRT@</SNDPRT> <SNDPFC>@SNDPFC@</SNDPFC> <SNDPRN>@SNDPRN@</SNDPRN> <SNDSD>@SNDSD@</SNDSD></pre>

Fig. 52: Parameter list for the configuration of the FORCAM services (example)

6 Document History

Table 6: Revisions of this document

Date	Page(s)	Description	Edited by
15-01-2016		Revision of the manual	Buwaya
19-12-2016		New formatting and updates	Buwaya
11-01-2017		New formatting	Egilmez
20-03-2017	4,5,20,36,46	EDIDC index creation, changed attributes of /FFMES/CONTROL, new parameters in /FFMES/CONTROL	Buwaya
17-11-2017	34, 42+	Changed sort sequence of tables, added new chapter with description of table /FFMES/DELETE_PO	Buwaya
11-05-2018	20+, 38+	New fields in tables /FFMES/CONTROL_V and /FFMES/AUFTR, changes in chapter 2.7.4 and chapter 3.5.3, new contents of table 1 and table 3, new figure 20 and figure 38	Buwaya
21-08-2019	14,15	Added new chapter with 2 new figures: 2.6 "Configuring a Work Center for Activating a Transfer"	Ternes

7 Table of Figures

Fig. 1: ICM Monitor - Service Display	4
Fig. 2: Example EDIDC Index	5
Fig. 3: Overview of the logical message types	6
Fig. 4: Message types and assignment to IDoc types	7
Fig. 5: Creating a logical system	8
Fig. 6: Standard logical system	9
Fig. 7: Change the inbound process code: Overview	10
Fig. 8: Change the inbound process code: Details	11
Fig. 9: Configuring the detail view	11
Fig. 10: Assigning function modules to logical message and IDoc type	12
Fig. 11: Entering extensions to the IDoc base types	13
Fig. 12: Configuring a work center	14
Fig. 13: Configuring a work center subsystem	15
Fig. 14: Changing the characteristics of inbound function modules	16
Fig. 15: Configuring transaction BD105	17
Fig. 16: Configuration of transaction BD104	18
Fig. 17: Example of object type serialization	18
Fig. 18: Common parameters of SAP adapter	19
Fig. 19: Special entry in the distribution table (example)	20
Fig. 20: Sample entries for /FFMES/VERTEILER table	21
Fig. 21: Sample entries for /FFMES/KORR_CUST	21
Fig. 22: Parameters for activating serialization at operation level	24
Fig. 23: Fields of the table /FFMES/STATUS	24
Fig. 24: Sample entry for /FFMES/STATUS	24
Fig. 25: Example of RFC destination FRCLD2	26
Fig. 26: Ports in IDoc processing	27
Fig. 27: Configuring partner profiles	28
Fig. 28: Configuring the shift data transfer	30
Fig. 29: Configuring inbound parameters	32
Fig. 30: Activity indicator of HTTP port	34
Fig. 31: Path to service idoc_xml	34
Fig. 32: Creating an alias	34
Fig. 33: Configuring logon data	35
Fig. 34: Selecting the target element	35
Fig. 35: Path to RFC service	36
Fig. 36: Sample entries for /FFMES/PARM table	37
Fig. 37: Sample view of /FFMES/PARM table	38
Fig. 38: Activating the parameter CHECK_IDOC_PRED for table /FFMES/CONTROL	39
Fig. 39: Activity display of plants, the order data of which are transferred to FORCAM FORCE™	40
Fig. 40: Sample entry of /FFMES/AUFTR	41
Fig. 41: Selection screen of /FFMES/FA_FELDER_INIT report	42
Fig. 42: Field transfer in case of a change	42
Fig. 43: Sample entry of /FFMES/STDVAL	43
Fig. 44: Sample entry for /FFMES/STDVAL with assignment of different activity types for posting the times ...	43
Fig. 45: Table /FFMES/FILTER (example)	44
Fig. 46: Filter condition for a production order download (example)	45
Fig. 47: Table /FFMES_DELETE_PO (fields)	45
Fig. 48: Table /FFMES_DELETE_PO (sample entry)	46
Fig. 49: Error handling for non-posted IDocs	48
Fig. 50: Inbound processing of IDocs ready for transfer	49
Fig. 51: System indicators in the /FFMES/PARM table	50

Table of Figures

<i>Fig. 52: Parameter list for the configuration of the FORCAM services (example)</i>	52
---	----