



FLM Installation Guide

Release 290

Version History

Version	Date	Reason for update
1	01/10/2007	Initial version
2		Update for CMS / User group / FLM Portal
3		Screenshots added
4	02/06/2008	271 Updates
5	14/08/2008	Email setup added
290	08.09.08	290 Updates

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1 Introduction

This document describes the installation process for Forms Lifecycle Manager release 290.

1.1 Prerequisites for installing FLM

- Current versions of kernel, tp and R3trans

Make sure that your system contains the current versions of kernel, tp and R3trans.

- Current SPAM / SAINT Update

Make sure that you have imported the most recent SPAM / SAINT Update into your system. Compare the short text of the last SPAM / SAINT Update you imported with that of the SPAM / SAINT Update in the SAP Service Marketplace. If the version of the SPAM / SAINT Update in the SAP Service Marketplace is more recent, import it.

- Before starting the installation, read the following SAP Notes and documentation:

Description	Note
Problems w/add-on inst/upgrade to SAP NW 7.0s ABAP	822380
Known Problems with Support Packages in SAP NW 2004s AS ABAP	822379

- The following software components are required in your system:

SAP_ABA	700
SAP_BASIS	700

1.2 Java Prerequisites

For the on-line scenario you also require a Java Component, the "FLM Portal", which resides on the SAP WebAS Java stack 700.

1.3 Preparation for installing FLM

- Mount the Add-On Installation CD.
- Unpack the archive FLM_INST_<VER>.SAR in the subdirectory DATA using the command:

```
sapcar -xvf FLM_INST_<VER>.SAR
```

- From the resulting EPS/IN directory, copy the E5Q0020246584_*.PAT file into your development system EPS inbox directory:

```
//sapmnt/trans/EPS/in
```

- Ensure that the permissions of the file are set for read/write access for the SAP O/S users.

For more information about this, see the online documentation for Add-On Installation Tool. To do this, choose the help function in the application toolbar and navigate to *Online Docu* → *Loading Installation Packages*.

2 Performing the installation of FLM

This section describes the installation procedure for the software.

If you are updating a preexisting installation of FLM be sure to first export all the forms in the system on a form-by-form basis (one at a time) including business logic.

2.1 SAINT

1. Log on to your SAP system as client 000 and as a user that has SAP_ALL authorization. Do not use the user SAP* or DDIC.
2. Start the installation or upgrade using Add-On Installation Tool (transaction SAINT):

For more information about this, see the online documentation for Add-On Installation Tool. To do this, choose the help function on the toolbar.

2.2 SGEN

At this point you should compile FLM using the SGEN transaction.

1. Transaction SGE N.
2. Select the first option: Generate All Objects of Selected - Continue
3. Select for Parallel Generation: Leave default. - Continue
4. Start Job Directly.
5. Generation speed depends on your system but should take under 10 minutes.

You can stop here if you are updating an existing installation of FLM and import your forms.

Depending on the version of FLM some forms will not run because they are missing required parameters introduced after the update.

To fix this:

1. Create a new Userexit in the Wizard.
2. Copy the signature from the new Userexit to the offending pre-existing user exits.
3. Remove the newly created Userexit.

3 Post Installation of FLM

Installation should be done on the Client that will be using FLM so the objects created below transport properly to QA and Customer Systems. We suggest creating a new transport when prompted named "FLM <VER> Installation <CLNT>".

3.1 Adobe ReaderRights Credential

In order for ADS to be able to render pdf forms which are interactive, it is required to install into each Java stack an 'Adobe Credential for ReaderRights'. This is a piece of Adobe intellectual property delivered via the SAP OSS system in the form a small file. It is installed into the WebAS java stack and then configured using the 'Visual Administrator'. Only one Credential is required per customer.

The process is described in SAP Note 736902.

3.2 Namespace /FLM/ and Software Component FLM

During the process of forms creation the FLM framework generates Data dictionary objects in the namespace /FLM/. Therefore this namespace must be set to 'modifiable'. Process:

1. Transaction SE03 [ess-ee-zero-three].
2. Choose 'Set System Change Option'.
3. Navigate in the 'Software Component' Table to FLM.
4. Choose 'Modifiable'.
5. Navigate in the 'Namespace/Name range' Table to /FLM/.
6. Choose 'Modifiable'.
7. Save the settings.

3.3 Packages /FLM/CUST and ZFLM

Two packages are important for the maintenance of the FLM system, /FLM/CUST and ZFLM.

3.3.1 /FLM/CUST

This package is used to hold and transport the business logic associated with customer forms and is delivered empty. Certain aspects of form business logic has to be generated by the FLM framework in the /FLM/ namespace, and hence an /FLM/ package can only be used to hold these objects.

After the initial installation, this package should be repaired in transaction SE21 to change the transport layer to the customer's standard transport layer, such that objects in this package can be successfully migrated through the customer landscape.

3.3.2 ZFLM

This package is used to hold objects that cannot be maintained in the /FLM/ namespace, eg authorisation objects, such that they can be migrated through the customer's landscape. The package is created in transaction SE21.

6. Transaction SE21.
7. Package will be ZFLM and select Create.
8. Short Description: FLM: Authorization Objects
9. Application Component: CA
10. Software Component: HOME
11. Transport Layer: Customer Specific, Default SAP.
12. Save

3.4 Content Management Physical Tables

FLM uses the 'Content Management System' [CMS] or 'Content Server' to store form and form templates. The setup of CMS is SAP standard and described fully in the IMG documentation accordingly.

The standard FLM installation scenario makes use of SAP DDIC physical tables as the final repository for CMS data, and under those circumstances it is necessary to create physical table for that purpose as follows:

13. Transaction SE11.
14. Select the radiobutton 'Tables' and enter table SDOKCONT1.
15. Copy this table to /FLM/SDOKCONT1, assigning package /FLM/CUST and workbench request as required.
16. Activate this table.

Ensure that the technical settings of the table match the expected size of the table, and adjust accordingly.

FLM supports any CMS repository types; consult the SAP documentation for a discussion of the advantages and disadvantages of the different repository types that can be utilized with this system.

The remaining FLM table configuration behind the CMS is described in the Implementation guide.

3.5 Number Range /FLM/TID

The FLM Transport ID (/FLM/TID) Number Range Object is delivered with FLM and a new interval range must be setup in it.

1. Transaction SNRO [es-en-ar-oh].

2. Enter number range object name (/FLM/TID).
3. Press Number Range button.
4. Press change Intervals.
5. Create an Interval. E.g 01 100000000 - 1999999999 - 1000000000
6. Press save.

3.6 SICF Settings

FLM makes use of a business server pages transaction in order to allow FLM form URLs to be sent as part of the reminder functionality in form routing. The BSP application must be activated in transaction SICF. Proceed as follows:

1. Transaction SICF.
2. Enter *FLM* into Service Name field
3. Press Execute
4. Right-click and select Activate all FLM nodes
5. Choose to Activate this node and all child nodes

Please note that there are certain standard BSP service nodes that must be activated as a prerequisite for using any BSP application; please consult the SAP documentation for details.

3.7 Define Content Repositories

In this Activity, you can define content repositories to which contents can be moved.

In Knowledge Warehouse three different types of content repositories can be used, we suggest using the SAP System Database and we will highlight the steps for it. Possibilities include:

HTTP Content Server

Documents of different types are generally stored in an external Content Server with SAP HTTP Interface (SAP Content Server).

Structure Storage System

Structures are stored in the Structure Storage System of the SAP System.

Database

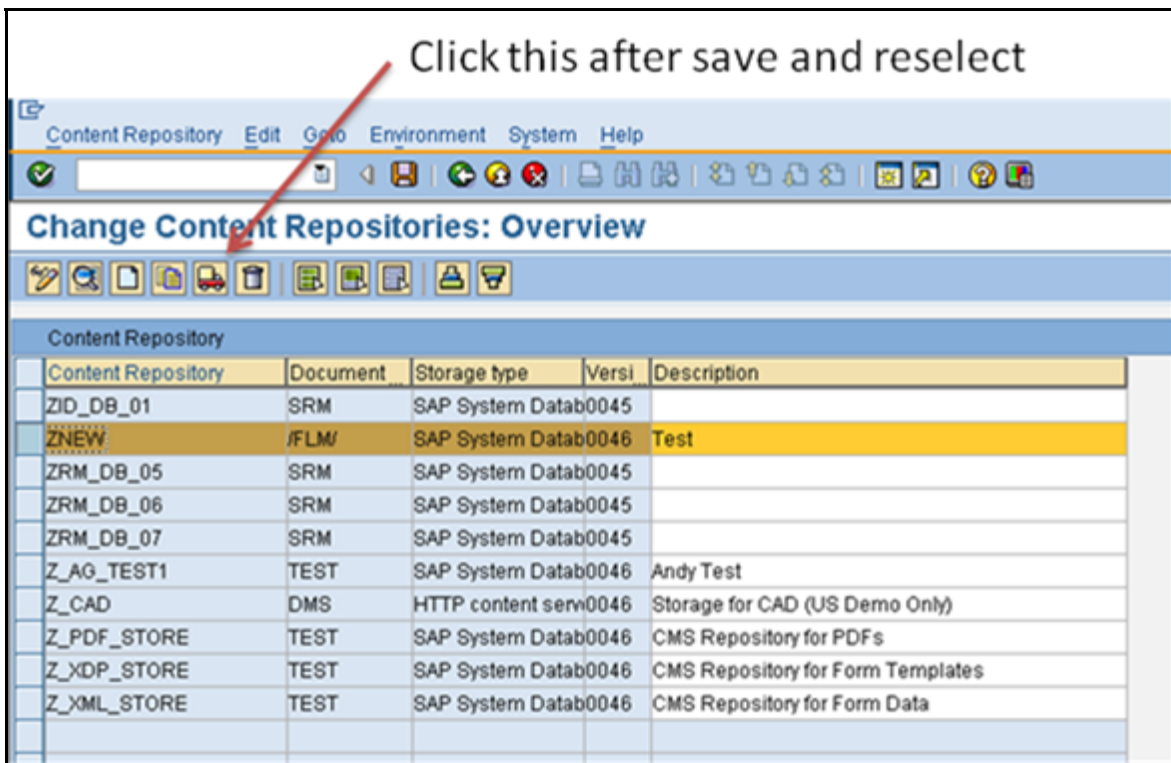
Document administration data, macro files and other utilities needed to use the Knowledge Warehouse are stored in the SAP System Database.

You can find further information on content repositories in the SAP Knowledge Warehouse Installation Guide and in the SAP Library under Basis - Basis Services - SAP Knowledge Provider - Content Management Service - Concepts.

Setup the Content Repository to use the SAP System Database.

1. Transaction OAC0 (OH-A-C-Zero).
2. Change - Create
3. Content Rep. : We suggest "ZFLM0001"
4. Description: FLM: Content Repository
5. Document Area: We suggest /FLM/ or Forms Lifecycle Manager
6. Storage type: SAP System Database
7. Version No.: 0046
8. Contents Table: /FLM/SDOKCONT1
9. Save

If you encounter problems with entering data at this step please see SAP NOTE: 1163925



3.8 Define and Assign Content Categories

In this activity you assign the storage categories of documents managed in the Knowledge Warehouse to content repositories (in the Knowledge Provider these are also called content categories).

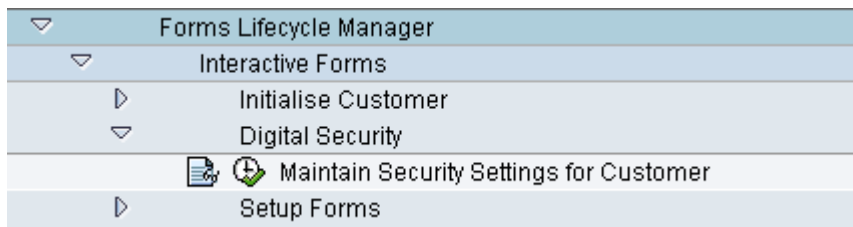
Follow the steps below to create a new storage category and assign it to the content repository.

1. Transaction OACT (OH-A-C-T).
2. New Entries

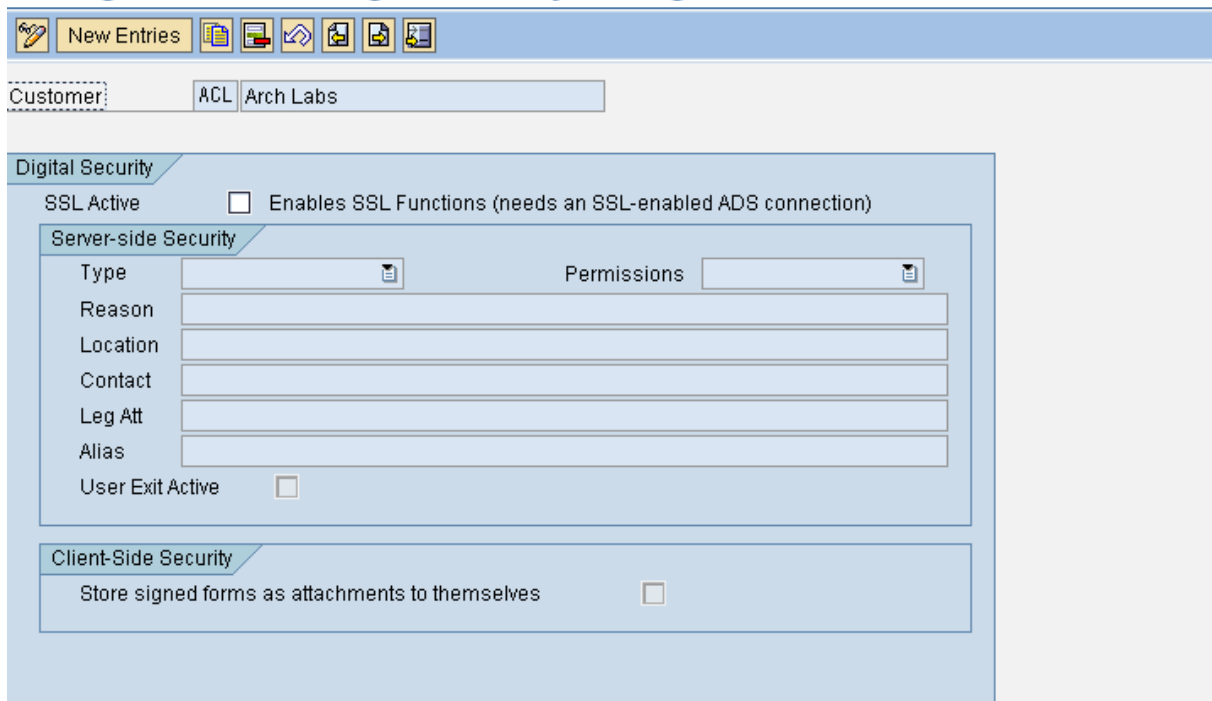
3. Category: We suggest "ZFLM0001"
4. Description: FLM: Content Categories
5. Document Area: /FLM/
6. Content Repo: This is the repository created in the previous step, ZFLM0001
7. Save

4 Digital Security

For FLM to support digital signatures, this must be configured after installation in the Digital Security activity in the IMG:



Change View "FLM: Digital Security Settings for Customer code": Detail



The screenshot shows the configuration page for 'Digital Security' for customer 'Arch Labs'. The page includes a toolbar with 'New Entries' and several icons. The main configuration area is titled 'Digital Security' and contains the following options:

- SSL Active:** Enables SSL Functions (needs an SSL-enabled ADS connection)
- Server-side Security:**
 - Type:
 - Reason:
 - Location:
 - Contact:
 - Leg Att:
 - Alias:
 - User Exit Active:
 - Permissions:
- Client-Side Security:**
 - Store signed forms as attachments to themselves:

You can create the credentials for a certification (server-side digital signature) as they will appear to the user using the 'new entries' function. The 'permissions' selection allows you configure what is allowed to be changed on the form without damaging the integrity of its digital certification.

5 User Management

In SAP, each user's authorization can be defined with reference to a composite role, single roles, and profiles. The object to be checked is an 'authorization object', and is made up of authorization fields that the system will need to use in the check.

FLM is delivered with authorization checking code and the authorization fields, but the set-up of the users, roles, profiles and objects will be different in each implementation.

The installation guide suggests the creation of the following roles, one of which will be need to be assigned to a user accessing FLM.

FLM_ADMIN

FLM_DEVELOPER

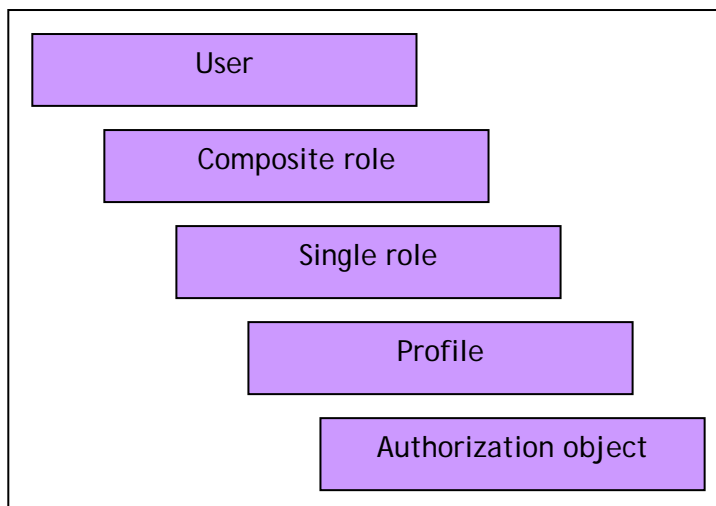
FLM_USER

6 Setting Up Authorisation Checks for FLM Forms

FLM relies entirely on the user master record as defined in the ABAP stack. The UME of the java stack must have the ABAP stack set as it's data source in order to take advantage of this standard installation configuration.

Firstly, in order to control which users have access to which form categories and form types, an authorisation object must be created in the customer system and transported through the system landscape. Typically this would be in the customer namespace, we recommend for example, Z/FLM/0001.

6.1 Overview



In SAP, each user's authorization can be defined with reference to a composite role, single roles, and profiles. The object to be checked is an 'authorization object', and is made up of authorization fields that the system will need to use in the check. FLM is delivered with authorization checking code and the authorization fields, but the set-up of the users, roles, profiles and objects will be different in each implementation.

6.2 Authorization Fields

Three authorization fields are delivered as part of FLM:

- /FLM/CUST *Customer*
- /FLM/FTYPE *Form type*
- /FLM/FCAT *Form category*

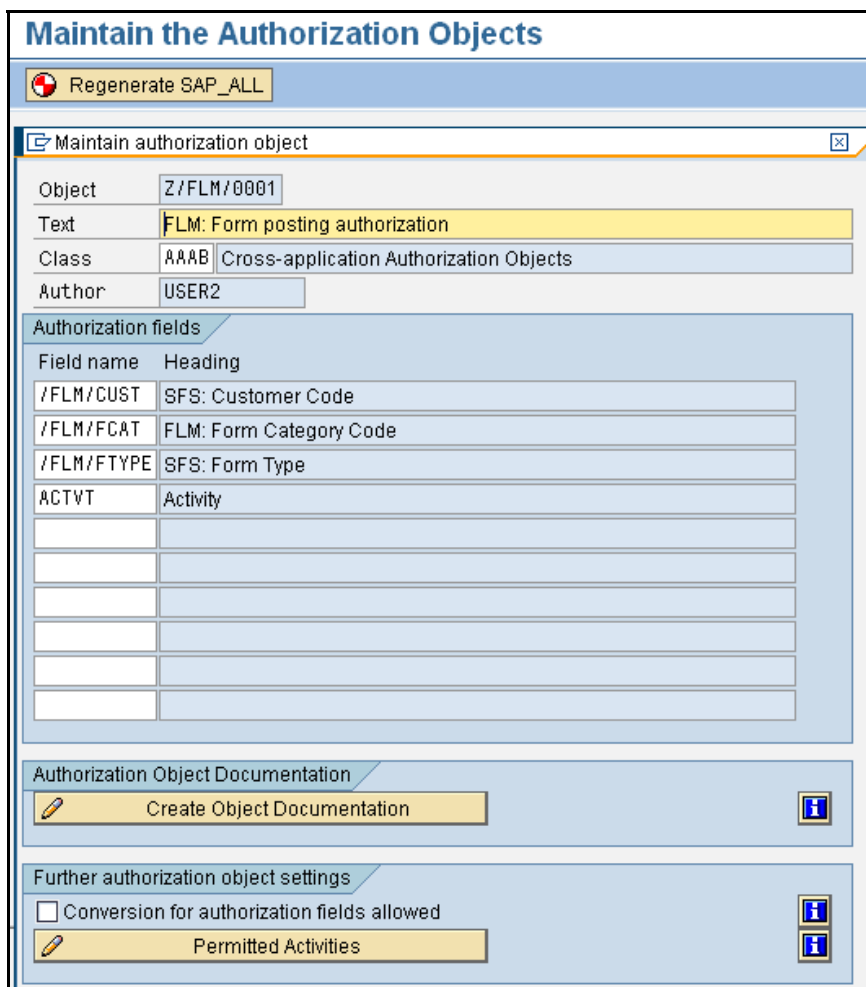
These three authorization fields, along with the standard field ACTVT, must be included in the authorization object.

6.3 Authorization Object

FLM is not shipped with an authorization object. Part of the installation process involves the creation of authorization object 'z/flm/0001'.

Creating an Authorization Object

- Transaction SU21 or menu path 'Tools->ABAP Workbench->Development->Other tools->Authorization objects->Objects'
- Choose the pushbutton for create authorization object.
- Enter the following:
 - Object: 'z/flm/0001'
 - Text: 'FLM: Form posting authorization'
 - Class: 'AAAB'
 - Field name: /FLM/CUST
 - Field name: /FLM/FCAT
 - Field name: /FLM/FTYPE
 - Field name: ACTVT



Maintain the Authorization Objects

Regenerate SAP_ALL

Maintain authorization object

Object: Z/FLM/0001

Text: FLM: Form posting authorization

Class: AAAB Cross-application Authorization Objects

Author: USER2

Authorization fields

Field name	Heading
/FLM/CUST	SFS: Customer Code
/FLM/FCAT	FLM: Form Category Code
/FLM/FTYPE	SFS: Form Type
ACTVT	Activity

Authorization Object Documentation

Create Object Documentation

Further authorization object settings

Conversion for authorization fields allowed

Permitted Activities

- Select pushbutton to maintain the permitted activities.

- Select options '01', '02', '03' and '10' only. Save,
- Select pushbutton to create documentation, then save
- Save the authorization object. You may get a message indicating it has already been saved, if so just cancel out of the maintenance window.
- Finally we need to regenerate the SAP_ALL profile in order to include the new object. Use the pushbutton 'Re-generate SAP_ALL' on the top of the front screen for transaction RSU21_NEW.

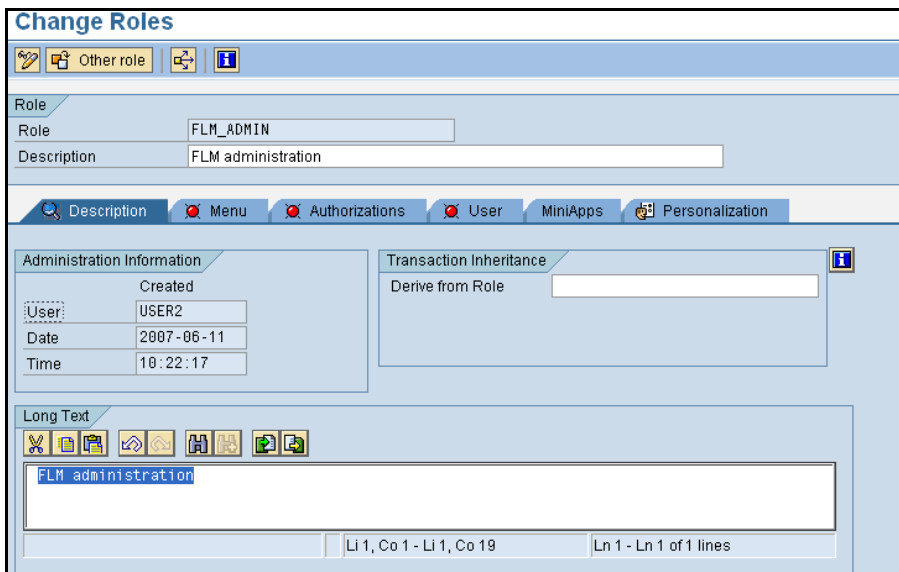
6.4 Roles

There are various ways of linking the authorization object to user ids using roles and profiles. In this section we describe one method, using a 'single role' and a 'generated profile'.

6.4.1 Creating an FLM Admin Role

We need one role for FLM administration

- Or transaction code PFCG or select the menu path 'Tools->Administration->User Maintenance->Role Administration->Roles.'
- Enter role name 'FLM_ADMIN' and choose the 'Single Role' pushbutton.
- Enter the role description then Save

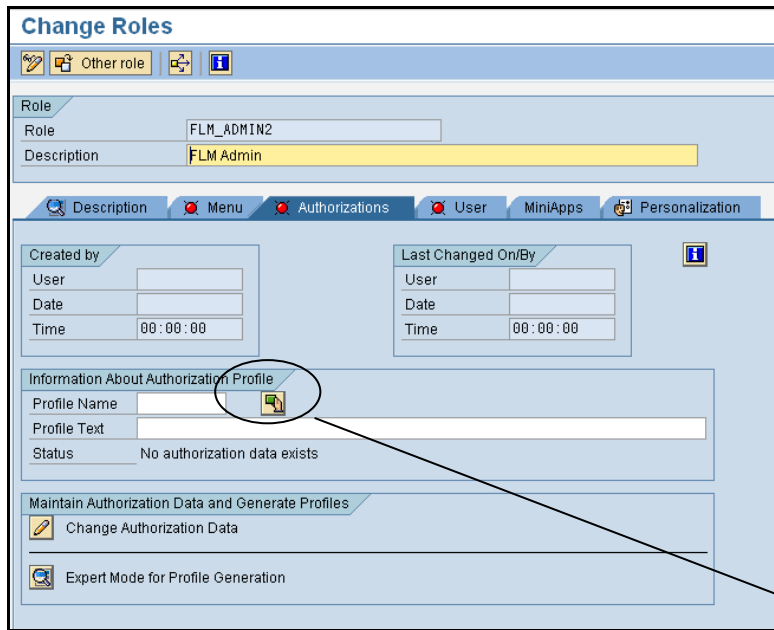


The screenshot shows the 'Change Roles' SAP interface. At the top, there are navigation icons and a title bar. Below the title bar, the 'Role' section contains a text field for 'Role' with the value 'FLM_ADMIN' and a text field for 'Description' with the value 'FLM administration'. A horizontal menu bar below this section includes tabs for 'Description', 'Menu', 'Authorizations', 'User', 'MiniApps', and 'Personalization'. The 'Description' tab is currently selected. Below the menu bar, there are two main sections: 'Administration Information' and 'Transaction Inheritance'. The 'Administration Information' section contains a table with the following data:

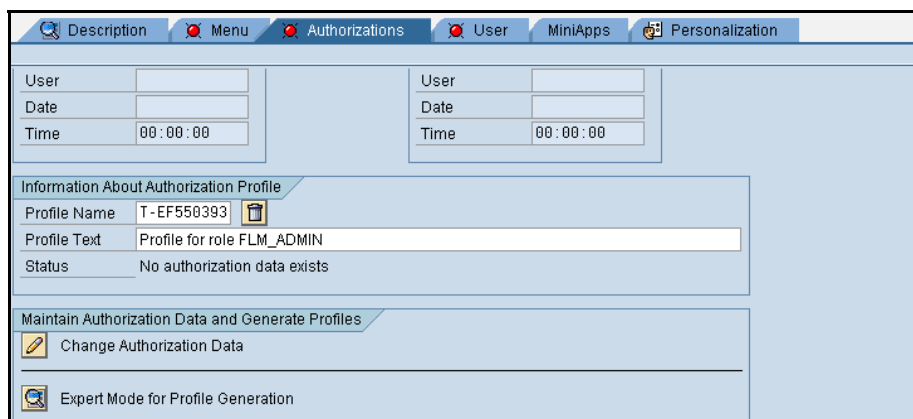
Administration Information	
Created	
User:	USER2
Date	2007-06-11
Time	10:22:17

The 'Transaction Inheritance' section contains a text field for 'Derive from Role' which is currently empty. Below these sections is a 'Long Text' area with a text field containing the value 'FLM administration'. At the bottom of the interface, there are status indicators: 'Li 1, Co 1 - Li 1, Co 19' and 'Ln 1 - Ln 1 of 1 lines'.

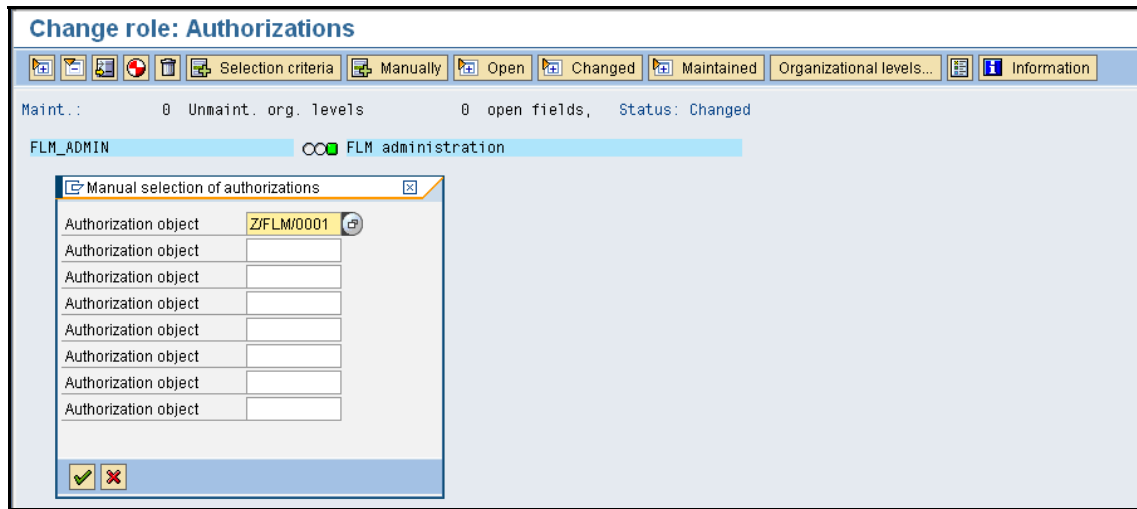
- Select the Authorizations tab



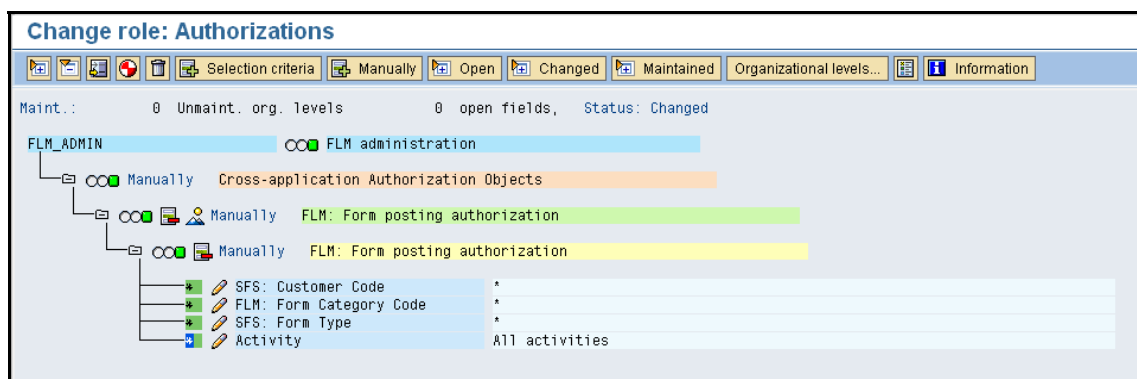
- In the 'Information About Authorisation Profile' box, select the 'Propose Profile Names' pushbutton, and a profile name is generated automatically. Save.



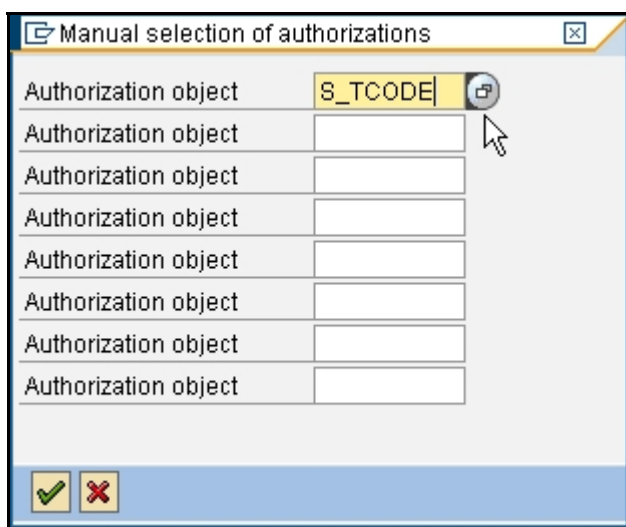
- Select the Change Authorization Data pushbutton. A pop-up window is displayed. Select the 'Do not select templates' pushbutton.
- Now select the 'Manually' pushbutton, and enter the authorization object 'Z/FLM/0001'.



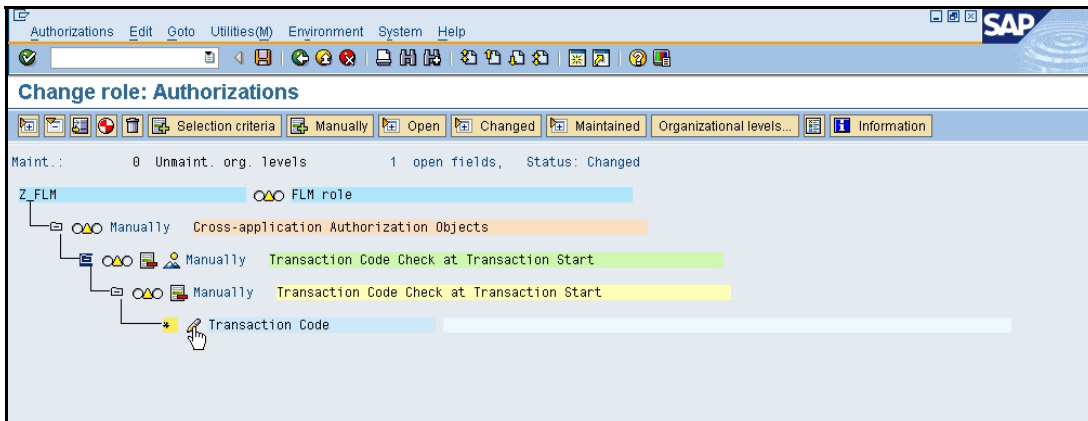
- o Expand the hierarchy and then enter values for each field: select the '*' symbol in order for this role to include all form types, categories and activities.



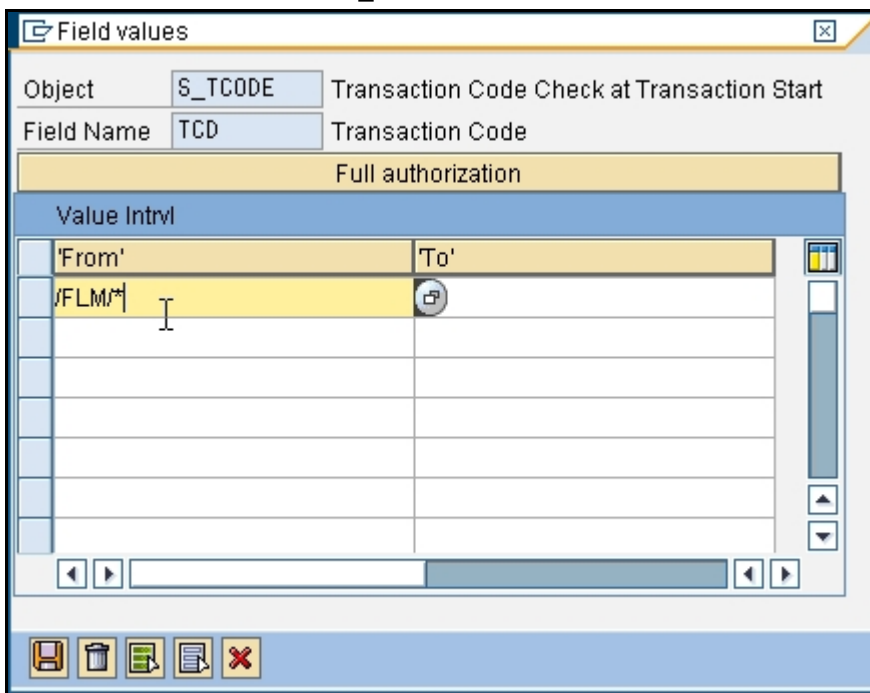
- o Select the 'Manually' pushbutton again, and enter the authorization object S_TCODE



- o Expand the Tree out and select the Change Transaction code button.



- Enter '/FLM/*' into the 'Form' field as shown. This is granting authority for ALL /FLM transactions to the FLM_ADMIN role.



- Generate. (Save)
- Role FLM_ADMIN is now ready to be linked to user records.

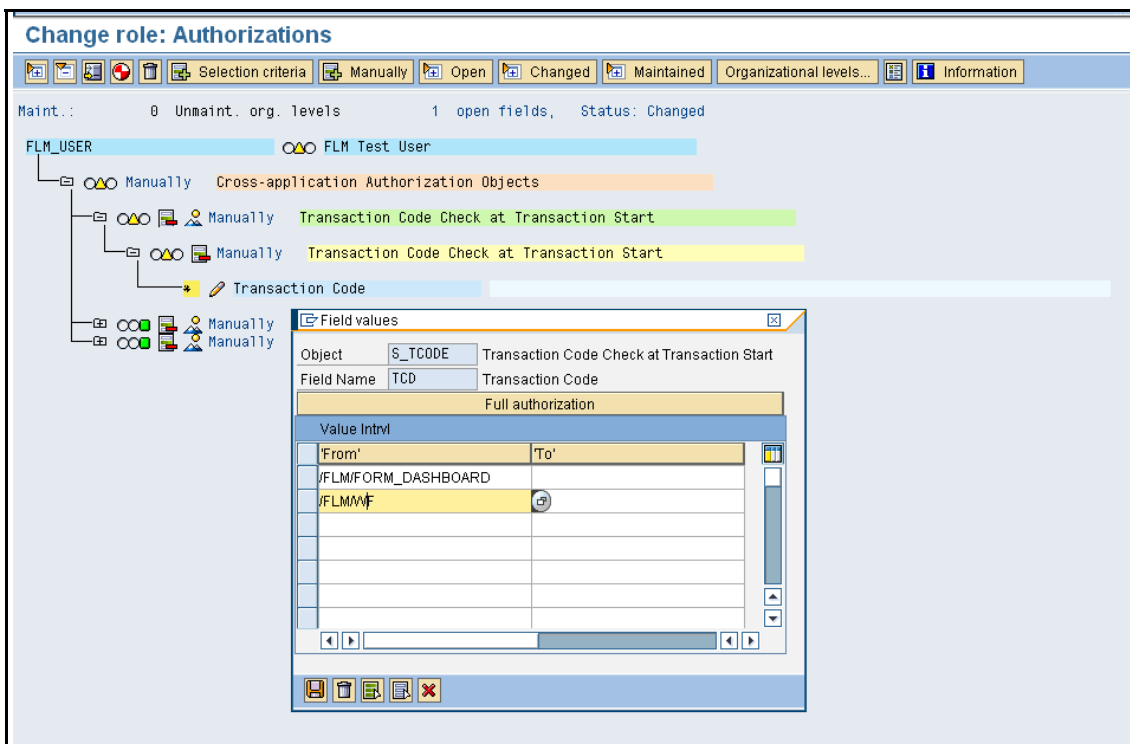
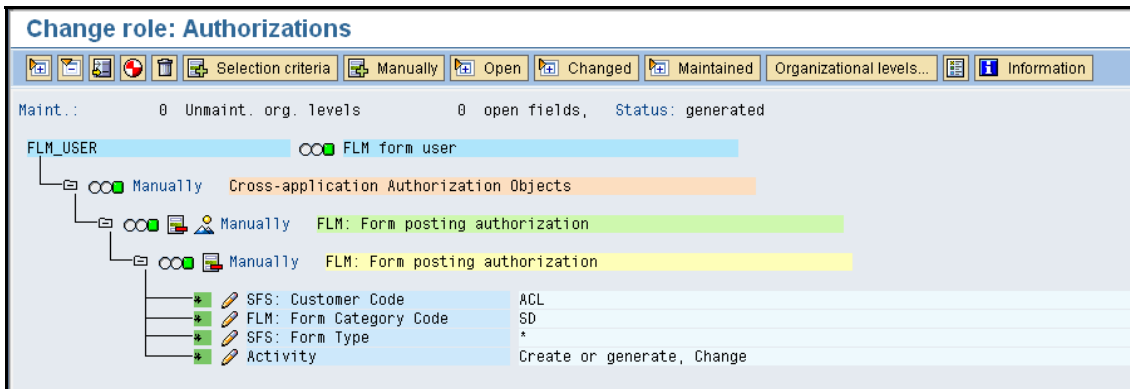
6.4.2 Creating Form User Roles

Follow the same steps as for setting up the FLM_ADMIN role, but in the final step, limit the role by form category, form type and /or /FLM transaction code.

For example:

If the user only submits forms but cannot change submitted forms, then select activity 01 but not 02 for authorisation object Z/FLM/0001.

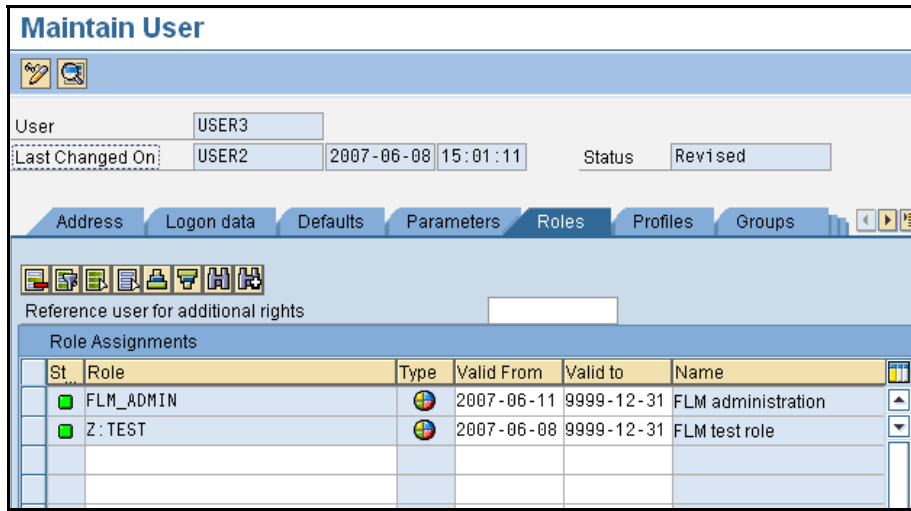
If the user can display forms in the Dashboard (transaction code /FLM/FORM_DASHBOARD), but not post forms in FPE (transaction /FLM/FPE) or trigger form routing escalations (transaction /FLM/WF) for example ,select only the relevant transaction code(s) in place of the /FLM/* assigned to the admin role against authorisation object S_TCODE



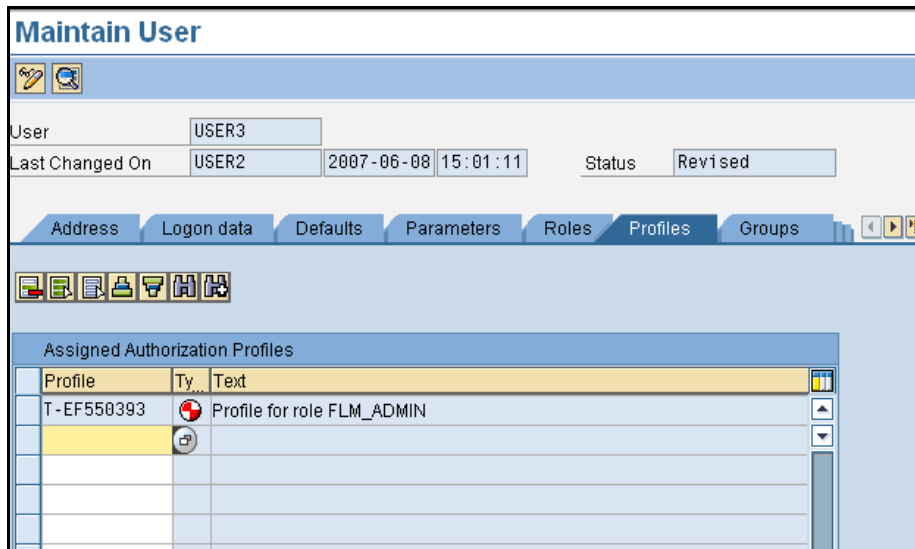
6.5 User Masters Roles

Once the roles and profiles have been created, it is necessary to link the roles to the user master records as normal. This can be achieved on a user-by-user basis, or by adding the

FLM roles to existing composite roles. Users are maintained in transaction SU01. The role is added as shown in the 'Roles' tab.



When the role is added to the user, the profile appears in the 'Profiles' tab.



6.6 Offline User

The FLM system requires one SAP user as the so-called 'Offline User'. The FLM framework uses this user for processing offline forms [ie form sent to user not via the FLM Portal], since at this time no SAP dialog user is available for authorisation checking.

It is recommended that an SAP user is given the auth object Z_FLM... with open authorisations to the whole FLM system as follows:

```

/FLM/CUST          *
/FLM/FCAT          *
/FLM/FTYPE         *
ACTVT              *
  
```

This user master record is entered into the FLM configuration under the 'Set Customer Code' IMG activity against the 'Offline User' field. = user name attributed to offline email user activity

6.7 FLM Developer User Role and Authorisations

1. [SE16] Insert entry in table TBRG as below to define a class for FLM customising tables.

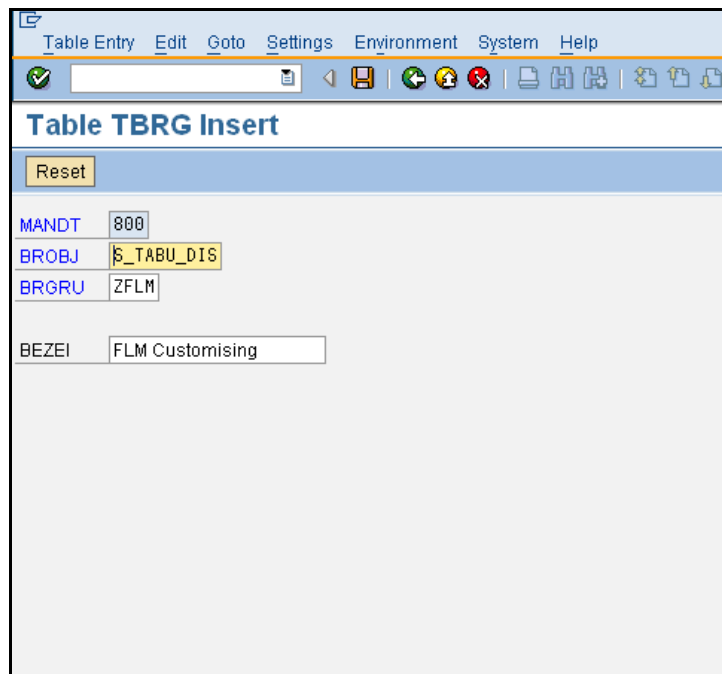


Table TBRG Insert	
Reset	
MANDT	000
BROBJ	S_TABU_DIS
BRGRU	ZFLM
BEZEI	FLM Customising

2. [SE16] Change entries in table TDDAT for each /FLM/* table - change the authorisation group from &NC& to ZFLM

Before				After			
Table Name	Authorization class	AuGr	Flag for internal table	Table Name	Authorization class	AuGr	Flag for internal table
<input type="checkbox"/> /FLM/CCODE		&NC&		<input type="checkbox"/> /FLM/CCODE		ZFLM	
<input type="checkbox"/> /FLM/CMS		&NC&		<input type="checkbox"/> /FLM/CMS		ZFLM	
<input type="checkbox"/> /FLM/EMAIL		&NC&		<input type="checkbox"/> /FLM/EMAIL		ZFLM	
<input type="checkbox"/> /FLM/EM_SAFE_REC		&NC&		<input type="checkbox"/> /FLM/EM_SAFE_REC		ZFLM	
<input type="checkbox"/> /FLM/FACT		&NC&		<input type="checkbox"/> /FLM/FACT		ZFLM	
<input type="checkbox"/> /FLM/FCAT		&NC&		<input type="checkbox"/> /FLM/FCAT		ZFLM	
<input type="checkbox"/> /FLM/FDD_ATT_V		&NC&		<input type="checkbox"/> /FLM/FDD_ATT_V		ZFLM	
<input type="checkbox"/> /FLM/FLD_ATT		&NC&		<input type="checkbox"/> /FLM/FLD_ATT		ZFLM	
<input type="checkbox"/> /FLM/FLD_ATT_V		&NC&		<input type="checkbox"/> /FLM/FLD_ATT_V		ZFLM	
<input type="checkbox"/> /FLM/FLD_ATT_V1		&NC&		<input type="checkbox"/> /FLM/FLD_ATT_V1		ZFLM	
<input type="checkbox"/> /FLM/FLD_ATT_V2		&NC&		<input type="checkbox"/> /FLM/FLD_ATT_V2		ZFLM	
<input type="checkbox"/> /FLM/FLMO_REDET		&NC&		<input type="checkbox"/> /FLM/FLMO_REDET		ZFLM	
<input type="checkbox"/> /FLM/FORM_ATTR		&NC&		<input type="checkbox"/> /FLM/FORM_ATTR		ZFLM	
<input type="checkbox"/> /FLM/FPE_CNTRL		&NC&		<input type="checkbox"/> /FLM/FPE_CNTRL		ZFLM	
<input type="checkbox"/> /FLM/FPE_STAT_V		&NC&		<input type="checkbox"/> /FLM/FPE_STAT_V		ZFLM	
<input type="checkbox"/> /FLM/FSORT		&NC&		<input type="checkbox"/> /FLM/FSORT		ZFLM	
<input type="checkbox"/> /FLM/FSORTT		&NC&		<input type="checkbox"/> /FLM/FSORTT		ZFLM	
<input type="checkbox"/> /FLM/FSTAT		&NC&		<input type="checkbox"/> /FLM/FSTAT		ZFLM	
<input type="checkbox"/> /FLM/FSTATT		&NC&		<input type="checkbox"/> /FLM/FSTATT		ZFLM	
<input type="checkbox"/> /FLM/FTYPE		&NC&		<input type="checkbox"/> /FLM/FTYPE		ZFLM	
<input type="checkbox"/> /FLM/FTYPE_A		&NC&		<input type="checkbox"/> /FLM/FTYPE_A		ZFLM	
<input type="checkbox"/> /FLM/FTYPE_STAT		&NC&		<input type="checkbox"/> /FLM/FTYPE_STAT		ZFLM	
<input type="checkbox"/> /FLM/FTYPE_V1		&NC&		<input type="checkbox"/> /FLM/FTYPE_V1		ZFLM	
<input type="checkbox"/> /FLM/SENDER_ADDR		&NC&		<input type="checkbox"/> /FLM/SENDER_ADDR		ZFLM	
<input type="checkbox"/> /FLM/WF_ESCA		&NC&		<input type="checkbox"/> /FLM/WF_ESCA		ZFLM	
<input type="checkbox"/> /FLM/WF_REMI		&NC&		<input type="checkbox"/> /FLM/WF_REMI		ZFLM	
<input type="checkbox"/> /FLM/WF_STAT		&NC&		<input type="checkbox"/> /FLM/WF_STAT		ZFLM	
<input type="checkbox"/> /FLM/WF_USER		&NC&		<input type="checkbox"/> /FLM/WF_USER		ZFLM	

- [PFCG] Add the authorisation object S_TABU_DIS with activity '*' and Authorisation Group 'ZFLM' to an FLM_DEVELOPER role as normal



Change role: Authorizations

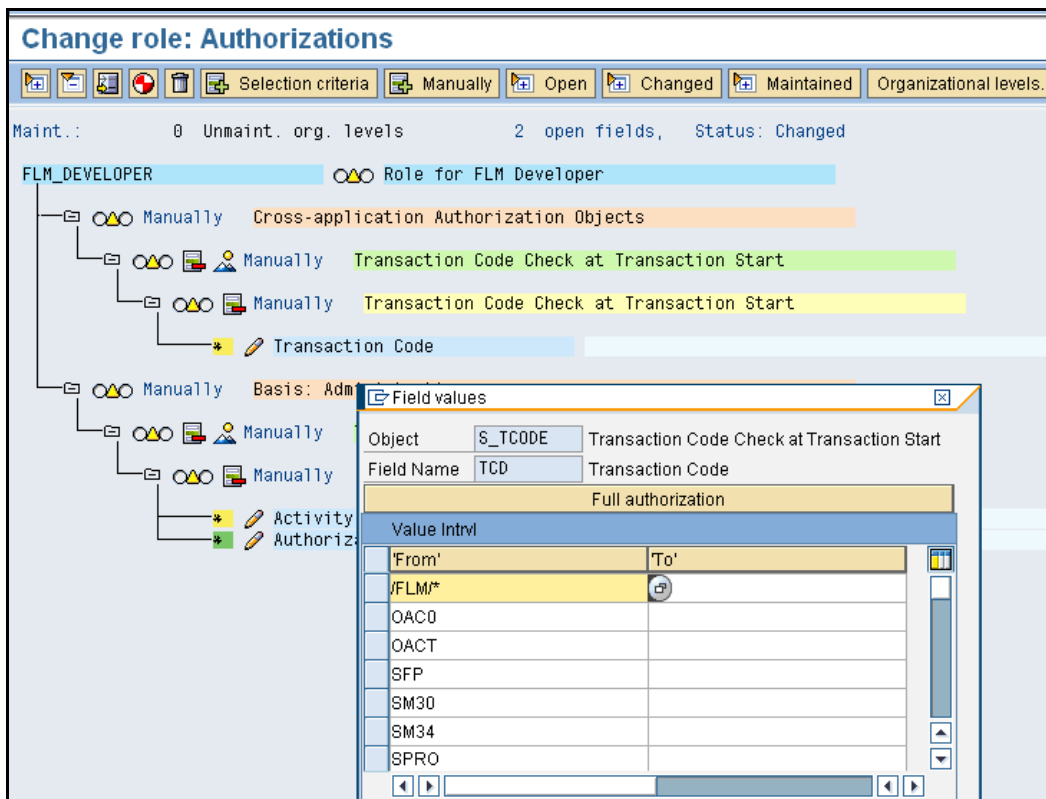
Maint.: 0 Unmaint. org. levels 1 open fields, Status: Changed

FLM_DEVELOPER Role for FLM Developer

- Manually Basis: Administration
 - Manually Table Maintenance (via standard tools such as SM30)
 - Manually Table Maintenance (via standard tools such as SM30)
 - Activity
 - Authorization Group ZFLM

- Also add the authorisation object S_TCODE with the following transactions:

- /FLM/*
- OAC0
- OACT
- SFP
- SM30
- SM34
- SPRO
- SOST
- SCOT



5. Add authorisation objects S_CTS_ADMI and S_TRANSPRT to enable the role to create and administer transport requests.
6. Add role FLM_DEVELOPER to the developer user, along with a normal ABAP developer role such as SAP_BC_DWB_ABAPDEVELOPER

7 Deploying the FLM Portal

7.1 Introduction

In order to make use of the FLM Portal for on-line forms, the FLM Portal must be deployed to the Java Server using the Software Deployment Manager [SDM].

7.2 Enterprise Archive

The FLM portal is shipped as an Enterprise Archive on the installation disks. This file is called "flm.com~flmgui.ear" and is located in the DATA directory.

7.2.1 SDM Procedure

The high-level procedure for deploying this archive is as follows. For step-by-step guidance on any particular step, please consult the appropriate SAP documentation:

1. Copy the archive from the installation media to a local file available to the Java application server.
2. Start the SDM and login to the Java server.
3. Select 'Deploy New Archive' and navigate to the file from step 1)
4. Follow the on-screen instructions to deploy the file

7.2.2 Java Connectors

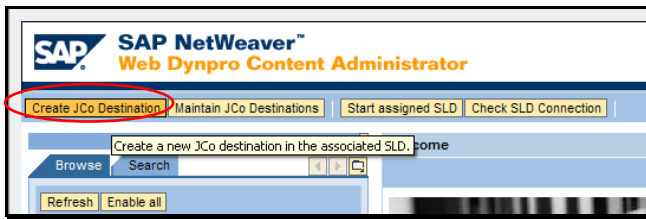
Once the archive has been successfully deployed, the new java application must be connected to the ABAP backend system by configuring necessary "Java Connectors" [JCo's].

There are two java connectors that must be configured:

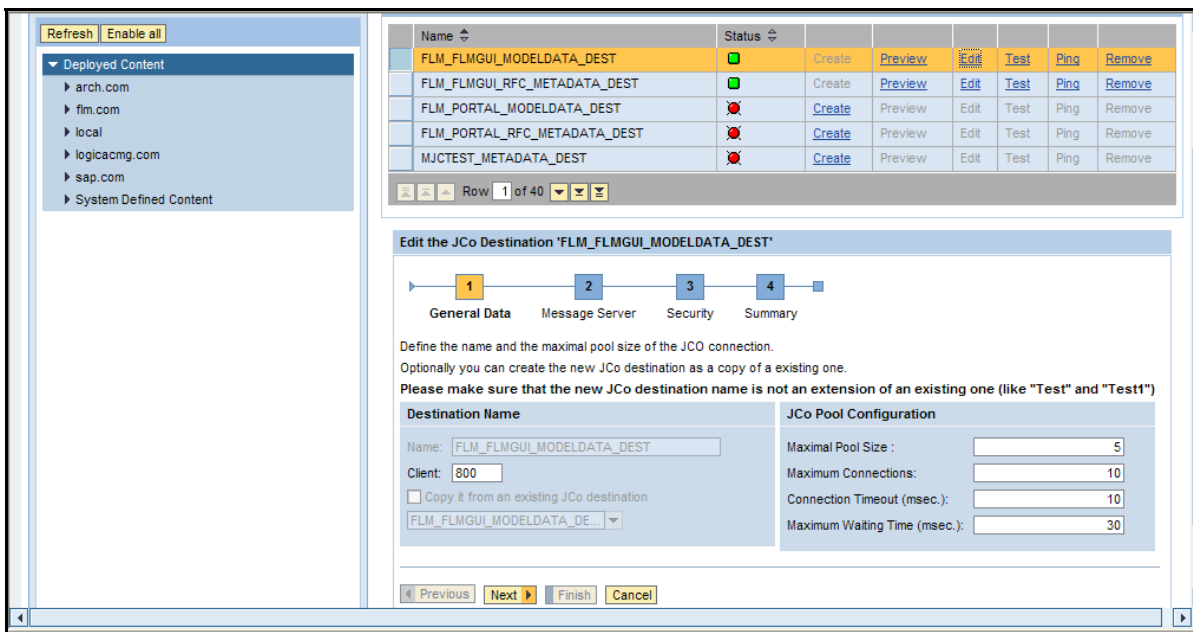
- FLM_FLMGUI_RFC_METADATA_DEST
- FLM_FLMGUI_MODELDATA_DEST

These two connectors will have been registered in the System Landscape Directory [SLD] during the deployment of the archive in the previous step. Hence each JCo can now be configured using the Content Manager application of the local Java stack.

Login to the User Management portal and click 'create JCo destination'.



Here, create the two Java connectors as detailed above and configure their settings and security using the wizard:



Please consult SAP standard documentation for further guidance on the step-by-step process of configuring Java Connectors.

Note:

It is highly recommended to configure the JCo's to make use of 'Logon Tickets', rather than by hardcoding usernames and passwords, as this ensures that user management is centralised into the ABAP stack and that all SAP-standard authorisation checks are enforced.

For the purposes of prototyping and development, FLM can be used with hardcoded JCO userreferences as the FLM authorisations do not rely on the user maintained in these connections, but rather the user who has logged into the FLM Portal.

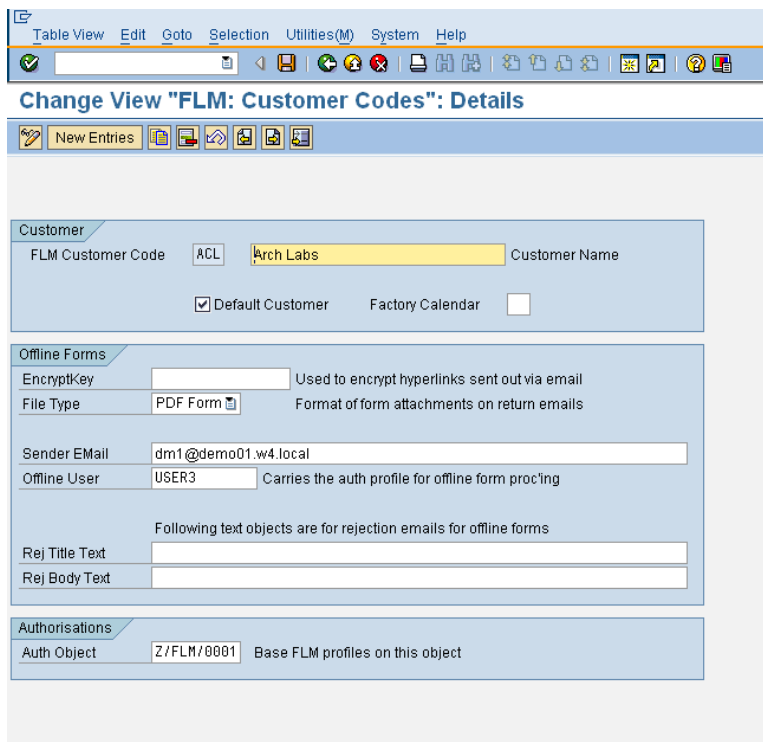
8 Customer initialisation tasks

8.1 Creating a new customer code

Each implementation of FLM is defined by at 3-digit customer code. You will need to use this activity to setup a default customer code by clicking on 'new entries' at the top of the window and defining a new 3-letter customer code. Also enter a text description.

On the main screen is a list of setup customer codes. The tick box shows which customer code is currently set as default

You can create a new customer code by clicking 'new entries' at the top of the screen. This must be a unique 3-letter code approved by Arch.



8.1.1 Customer

Enter the 3-letter code you want to define your new FLM implementation, and text that describes the customer code. Checking the 'default' box will set it as the default customer, to which forms will be assigned unless you otherwise specify. Each FLM system can have multiple FLM Customer Codes maintained. However, only one FLM Customer Code can be 'default' in each system. Only the default customer can be actively processing forms at runtime - other FLM Customer Codes are for development purposes only.

Entering a factory calendar will assign that calendar to the customer code. For example you may wish to use a working-day calendar for escalation and reminder time lapses.

8.1.2 Encryption/Key

The encryption key is used in the case of reminder emails. If, in an online scenario, a user for example, fails to approve a form within a given time frame, a reminder email will be sent out containing a URL link to the form. In order to provide security, this URL is encrypted according to the encryption key entered with each customer code. The encryption key can be any 14-letter combination that does not include the same letter twice.

8.1.3 File Type

Forms can be sent as PDF format (entire form) or Data Only Format. PDF format contains both the form and the data held within it so the file attachment size can be very large.

Data only format sends only the information contained within the form, which means that the size of the attachment can be minimized. However, if this option is preferred, it is worth checking that this kind of data transmission would be supported by your firewall settings.

8.1.4 Sender Email

This field holds the name of the email address from which reminders will be sent, and to which any incoming mail will be directed.

Enter the email address from which any prompts should be sent, and from which replies can be retrieved

8.1.5 Offline User

The username assigned to the customer code

8.1.6 Rej Title Text

Text Object for Body of e-mail Rejection

When an off-line e-mail is received back into the FLM system it may have certain fields validated before it is received fully into the system. If the form fails validation, an e-mail may also be sent back to the sender to explain why it could not be received.

This field holds the name of the text object that is used to store the title of that e-mail.

8.1.7 Rej Body Text

FLM: Text Object for Body of e-mail Rejection

When an off-line e-mail is received back into the FLM system it may have certain fields validated before it is received fully into the system. If the form fails validation, an e-mail may also be sent back to the sender to explain why it could not be received.

This field holds the name of the text object that is used to store the body of that e-mail.

8.1.8 Authorisation Object

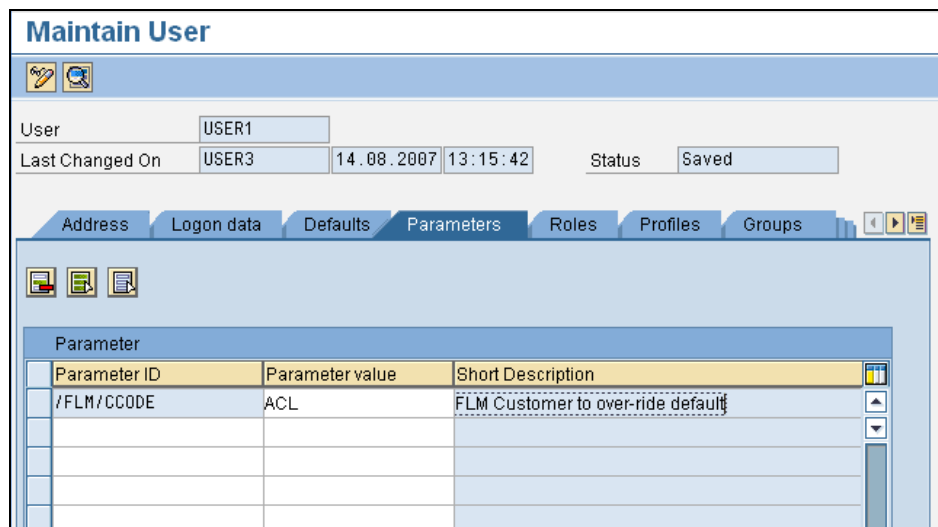
In this context the object is an element of the authorization system.

An authorization object combines up to 10 authorization fields, which are checked using the AND connective.

Authorizations are checked against objects in the system. Authorization objects enable complex checks (linked to several conditions) of an authorization. For the authorization check to be successful, the user must pass the check for each field contained in the object.

3.4.1 Customer Code Parameters

If the Customer is only maintaining one Customer Code than this step can be skipped. The FLM framework needs to know for every FLM user which 3-digit FLM Customer Code that user should be associated with. This is achieved in the user master record, by adding the parameter /FLM/CCODE to the user master record in the 'Parameters' tab, as shown below:



Parameter ID	Parameter value	Short Description
/FLM/CCODE	ACL	FLM Customer to over-ride default

Any user that does not have this parameter maintained will take the default customer code set up in the FLM system; hence any FLM customer only maintaining one customer code is not required to maintain this parameter.

8.2 Number Range /FLM/<Customer Code>

Each FLM customer is allocated a 3-digit customer code, for example ABC. The customer must create a number range object in this case called /FLM/ABC. Process:

7. Transaction SNRO [es-en-ar-oh].
8. Enter number range object name.
9. Press create icon.
10. Enter Short and Long Texts.
11. In *Number length domain* enter CHAR10.
12. Set the warning %, eg 5%.
13. Press save.
14. Ignore warning about buffering.
15. Assign to package /FLM/CUST.

16. Create a transport/assign to an existing transport.
17. Create a number interval. E.g. 01 1000000000 - 1999999999 - 1000000000
18. To create the number interval go to SNRO again
19. Enter the name of the object you just created and click on "Number ranges"

8.3 Message Class /FLM/<Customer_Code>

The customer message class is used to store work instructions for your forms. For example, message 001 could be 'Please resubmit your form'. The process for creating your message class is as follows:

1. Transaction SE91.
2. Enter message class /FLM/<Customer_Code>.
3. Press create icon.
4. Enter short text.
5. Press save.
6. Assign to package /FLM/CUST.
7. Create a transport/assign to an existing transport.

8.4 Link Document Types

In this activity, you link your document types to the content categories as defined in the CMS in the previous step. You should create four entries:

- XDP Form Templates
- XML Form Data
- ATT Attachments
- ANN Annotations

The content repository was created during the installation phase 3.7 and can be found in transaction OAC0 (OH-A-C-Zero). We suggested the name be something like ZFLM0001 but it could be anything. If in doubt contact the administrator who did the installation.

8.5 Upload Master Template

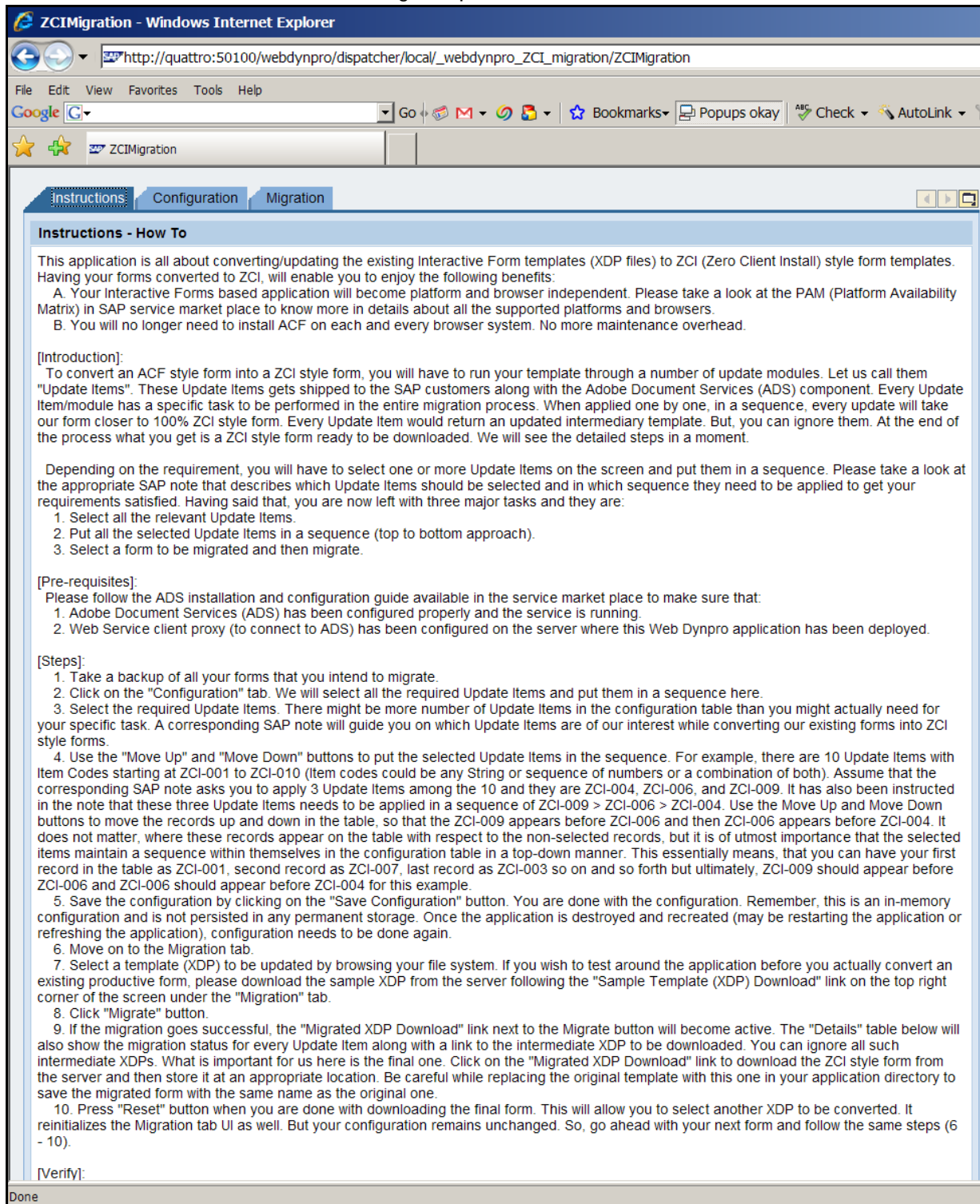
Use this activity to upload a master template into the FLM system. This can then be accessed by the form wizard to be used as a base template for a new form. Select the template shipped as an .xdp file with the FLM software package from the installation CD, and execute.

FLM bases all new forms on an existing template, and so for each new customer code initialization this template must be uploaded into the system.

This procedure can be repeated as required if the template must be changed later on:

1. Copy the FLM template from the DOCU/RESOURCES folder on the installation disks to the presentation server
2. Rename the file to 'Master_FLM_Template.xdp'.

3. Navigate to transaction SPRO, select F5
4. Navigate to FLM in the Cross-Application Settings, General Application Functions
5. Navigate to Interactive Forms/Setup Forms/Download Form Templates
6. Browse to the file from step 1)
7. Press Execute and follow the on-screen instructions
8. You will need a script object in the template called 'ContainerFoundation_JS' which can be created following the procedures in SAP Note number 1042394:



Instructions - How To

This application is all about converting/updating the existing Interactive Form templates (XDP files) to ZCI (Zero Client Install) style form templates. Having your forms converted to ZCI, will enable you to enjoy the following benefits:

- A. Your Interactive Forms based application will become platform and browser independent. Please take a look at the PAM (Platform Availability Matrix) in SAP service market place to know more in details about all the supported platforms and browsers.
- B. You will no longer need to install ACF on each and every browser system. No more maintenance overhead.

[Introduction]:
To convert an ACF style form into a ZCI style form, you will have to run your template through a number of update modules. Let us call them "Update Items". These Update Items gets shipped to the SAP customers along with the Adobe Document Services (ADS) component. Every Update Item/module has a specific task to be performed in the entire migration process. When applied one by one, in a sequence, every update will take our form closer to 100% ZCI style form. Every Update Item would return an updated intermediary template. But, you can ignore them. At the end of the process what you get is a ZCI style form ready to be downloaded. We will see the detailed steps in a moment.

Depending on the requirement, you will have to select one or more Update Items on the screen and put them in a sequence. Please take a look at the appropriate SAP note that describes which Update Items should be selected and in which sequence they need to be applied to get your requirements satisfied. Having said that, you are now left with three major tasks and they are:

1. Select all the relevant Update Items.
2. Put all the selected Update Items in a sequence (top to bottom approach).
3. Select a form to be migrated and then migrate.

[Pre-requisites]:
Please follow the ADS installation and configuration guide available in the service market place to make sure that:

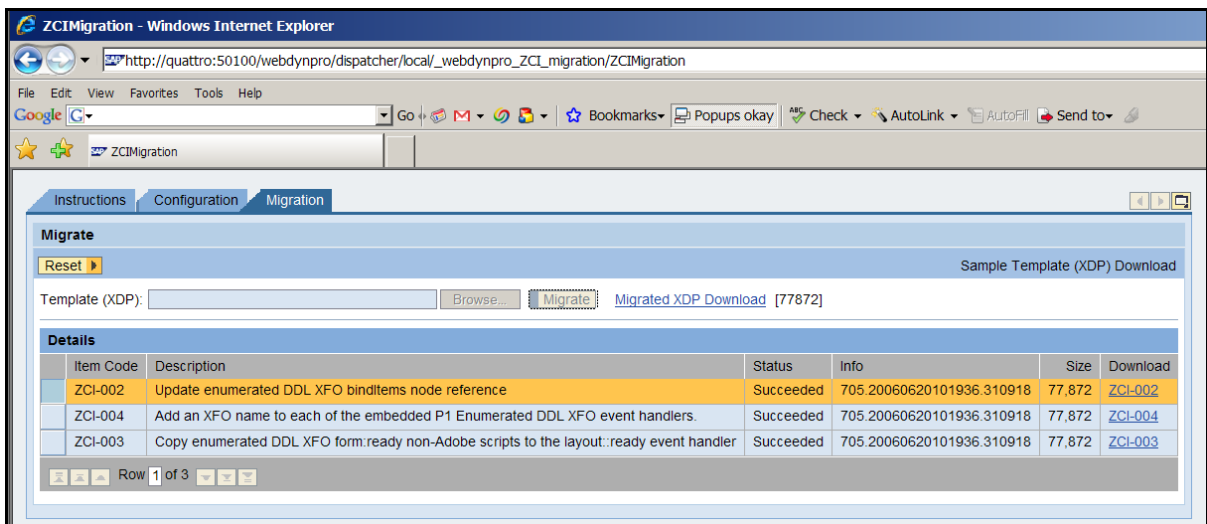
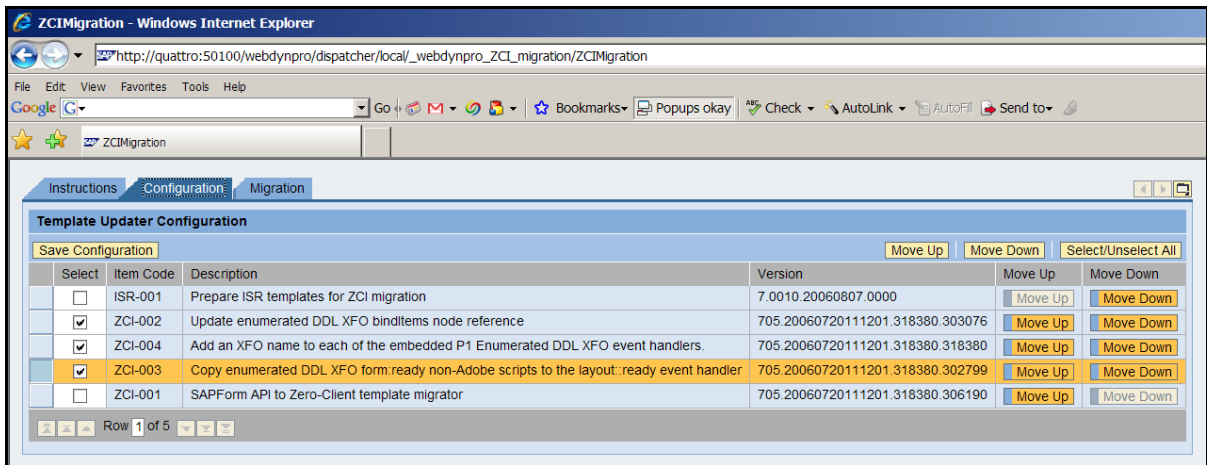
1. Adobe Document Services (ADS) has been configured properly and the service is running.
2. Web Service client proxy (to connect to ADS) has been configured on the server where this Web Dynpro application has been deployed.

[Steps]:

1. Take a backup of all your forms that you intend to migrate.
2. Click on the "Configuration" tab. We will select all the required Update Items and put them in a sequence here.
3. Select the required Update Items. There might be more number of Update Items in the configuration table than you might actually need for your specific task. A corresponding SAP note will guide you on which Update Items are of our interest while converting our existing forms into ZCI style forms.
4. Use the "Move Up" and "Move Down" buttons to put the selected Update Items in the sequence. For example, there are 10 Update Items with Item Codes starting at ZCI-001 to ZCI-010 (Item codes could be any String or sequence of numbers or a combination of both). Assume that the corresponding SAP note asks you to apply 3 Update Items among the 10 and they are ZCI-004, ZCI-006, and ZCI-009. It has also been instructed in the note that these three Update Items needs to be applied in a sequence of ZCI-009 > ZCI-006 > ZCI-004. Use the Move Up and Move Down buttons to move the records up and down in the table, so that the ZCI-009 appears before ZCI-006 and then ZCI-006 appears before ZCI-004. It does not matter, where these records appear on the table with respect to the non-selected records, but it is of utmost importance that the selected items maintain a sequence within themselves in the configuration table in a top-down manner. This essentially means, that you can have your first record in the table as ZCI-001, second record as ZCI-007, last record as ZCI-003 so on and so forth but ultimately, ZCI-009 should appear before ZCI-006 and ZCI-006 should appear before ZCI-004 for this example.
5. Save the configuration by clicking on the "Save Configuration" button. You are done with the configuration. Remember, this is an in-memory configuration and is not persisted in any permanent storage. Once the application is destroyed and recreated (may be restarting the application or refreshing the application), configuration needs to be done again.
6. Move on to the Migration tab.
7. Select a template (XDP) to be updated by browsing your file system. If you wish to test around the application before you actually convert an existing productive form, please download the sample XDP from the server following the "Sample Template (XDP) Download" link on the top right corner of the screen under the "Migration" tab.
8. Click "Migrate" button.
9. If the migration goes successful, the "Migrated XDP Download" link next to the Migrate button will become active. The "Details" table below will also show the migration status for every Update Item along with a link to the intermediate XDP to be downloaded. You can ignore all such intermediate XDPs. What is important for us here is the final one. Click on the "Migrated XDP Download" link to download the ZCI style form from the server and then store it at an appropriate location. Be careful while replacing the original template with this one in your application directory to save the migrated form with the same name as the original one.
10. Press "Reset" button when you are done with downloading the final form. This will allow you to select another XDP to be converted. It reinitializes the Migration tab UI as well. But your configuration remains unchanged. So, go ahead with your next form and follow the same steps (6 - 10).

[Verify]:

Done



8.6 Create Form Classes

Each FLM customer code and form stores its business logic in a series of form classes. You must generate these classes (suggested initial number = 50) as part of the installation process.

When prompted for a development class [or package] choose /FLM/CUST, as this will then allow you to transport these classes through the landscape.

You have to manually activate the classes after the run. Use transaction SE80 to do this, choose 'Inactive Objects' from the dropdown then shift-select from the list.

You can run this report subsequently if you run out of classes to add more space, and each time you have to transport the classes through the landscape.

8.7 FLM-CG setup

FLM-CB uses a web service. This must be released for use on each client that FLM is installed in. In <sp13 systems use transaction WSCONFIG for service /FLM/CO_TEXT_GET, variant /FLM/CO_TEXT_GET. [In >sp13 systems use transaction SOAMANAGER to do the same.] Don't forget to add logon details into ICF service details for this webservice.

LM-PI [FLM Plug-In] module is available for 700 series machines. This module allows non-FLM SAP systems to participate in FLM-CG processes. Note: currently, any system involved in the FLM-CG process must be at basis level 700 or above, but plugins for older versions will be available soon. To install the plugin, use the FLM-PI file (on the software installation disc) and transaction SAINT on the relevant system.

8.8 Test Form

At this phase you should setup a new test form to ensure the customer code is setup properly. Please see the developer guide for details of how to do this.

9 Setting Up Email Handling in FLM

FLM processing relies on e-mails in the following scenarios:

- On-line forms: outbound notification e-mails
- On-line forms: outbound reminder e-mails
- Off-line forms: outbound e-mail with PDF attachment
- Off-line forms: inbound e-mail with attachment processing
- SAP Output: e-mail with PDF attachment

This document describes the SAP set-up for handling the outbound and inbound e-mails for these scenarios.

Also refer to SAP note 455140 for further reading.

9.1 Outbound Emails

9.1.1 Transaction SCOT: SAP Connect

Change the SMTP node to point this at the external SMTP server.

SMTP node set-up

SAPconnect: Administration (system status)

Start of evaluation time: 2007-06-10 00:00

Completed	Error	In transit	Waiting	Duration In transit	Duration Waiting
				∅ hh:mm	∅ hh:mm

E5F (800)

- FAX Telefax
 - SXC1
- INT Internet
 - IMGW
 - SMTP
- X40 X.400
 - SXC1
- RML R/Mail or
 - MAIL
- PAG
 - PSSFAX
- PRT

SAPconnect: General node data

General information

Node: SMTP
 Description: Mail Server
 Maximum waiting time for repeat send attempt procedure:
 Hours/minutes: / 30
 Node in use

SMTP Connection

Mail Host: pickwick.w4.local
 Mail Port: 25
 Code Page: 4110 Unicode UTF-8

Supported address types

<input type="checkbox"/> Fax	Set
<input checked="" type="checkbox"/> Internet	Set
<input type="checkbox"/> Pager (SMS)	Set

Last changed by: USER1 on 2007-05-30

Set up the Internet address types as follows:

SAPconnect: Address type for node

General information

Node: SMTP
 Description: Mail Server
 AddrType: Internet

Address areas

Address area

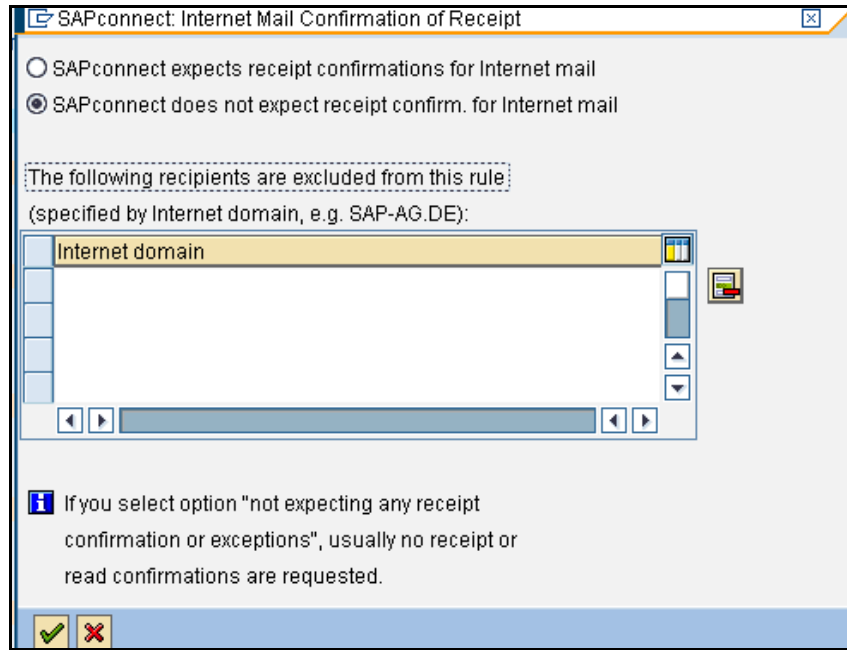
*
 *

Output Formats for SAP Documents

SAPscript/Smart Forms	PDF
ABAP List	HTM
Business Object/Link	HTM
RAW Text	TXT

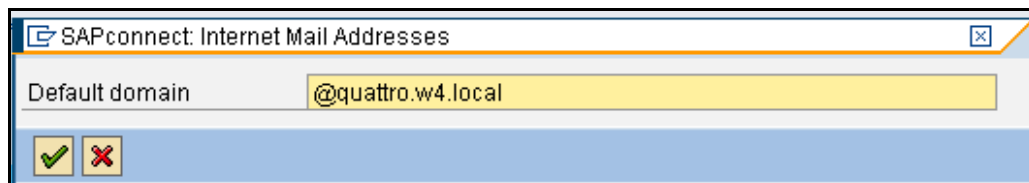
Turn off confirmation of receipt

Use the menu path *Settings->Confirmation of receipt*.



Set default domain

Use the menu path *Settings->Default domain*. This is the location of the SAP application server.



9.1.2 Transaction SICF: Service for SAP Connect

Execute hierarchy type 'SERVICE' and change the 'SAPconnect' service.

Create/Change a Virtual Host

Path /

Service Name SMTP Host (Active)

Default Service:

Lang. [Other Languages](#)

Description

Description 1

Description 2

Description 3

Host Data | Logon Data | Handler List | Administration

Host Names and Port Numbers

Profile Parameter No. (Parameter 1s/SMTP/virt_host_#)

Host Configuration Information

* : *

Enter a user id to logon to SAPconnect.

Host Data | Logon Data | Handler List | Administration

Logon Data

Client

User

Language [Other Languages](#)

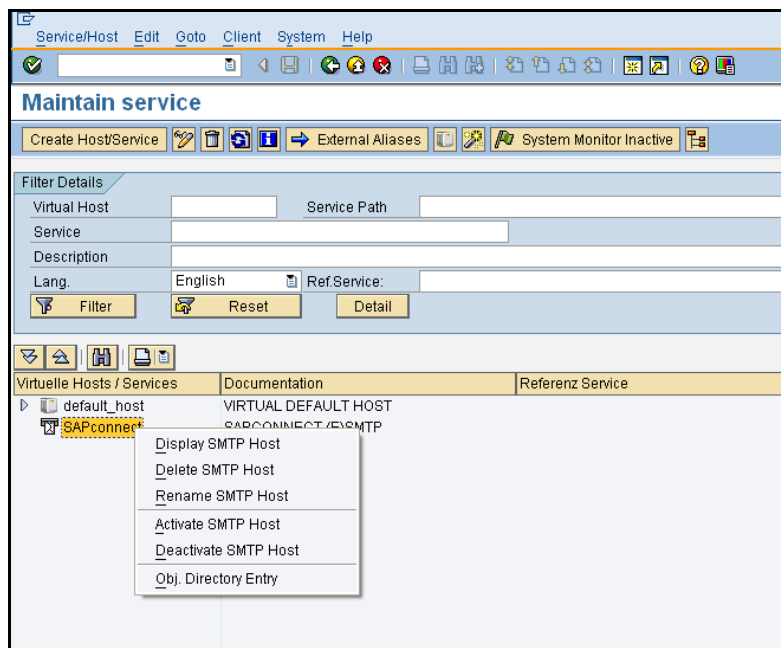
Password Status

Host Data | Logon Data | Handler List | Administration

Handler List (In Order of Execution)

N	Handler
1	CL SMTP EXT SAPCONNECT
2	
3	
4	
5	
6	
7	

Once the settings are correct, right-click on the SAPConnect service to activate it



9.1.3 User Defaults

Ensure that the user selected for the SAPconnect logon has an e-mail address, and has a personal time zone that matches the required locale. (Transaction SU01).

9.1.4 SPAM filter on Exchange Server.

Set the Intelligent Message Filter on the Exchange Server in order to enable e-mails from the SAP server. [We needed to set this to '8' in order for the e-mails to be permitted.]

9.1.5 SOST for tracking test e-mails.

Use the 'Send status' tab with the 'Further' settings in order to track outbound e-mails.

SAPconnect: Transmission Requests from 2007-06-10 to 2007-06-11

Refresh

Period Send status Sender Options

Waiting Further...
 Errors
 Sent Transmitted

Execute Close

Display Other Status

Still Not Entered in Queue
 Send Date Not Yet Reached

Trace

All Send Requests

Status	Send Meth	Doc. Title	Sender	Recipient	Send date	Send time	Msg
	via Internet	LGCA Demo form	ag@arch.co.uk	ag@arch.co.uk	2007-06-11	20:01:46	872
	via Internet	LGCA Demo form	ag@arch.co.uk	ag@arch.co.uk	2007-06-11	19:30:00	872
	via Internet	LGCA Demo form	ag@arch.co.uk	ag@arch.co.uk	2007-06-11	19:29:56	872
	via Internet	LGCA Demo form	ag@arch.co.uk	ag@arch.co.uk	2007-06-11	19:23:40	73
	via Internet	LGCA Demo form	ag@arch.co.uk	ag@arch.co.uk	2007-06-11	19:23:34	73

9.2 Inbound E-mails

9.2.1 SCOT: SAP Connect Settings

Use the menu path *Settings->Inbound processing*.

Insert an entry for the address to which off-line forms are to be returned.
Choose the exit '/FLM/EMAIL_HANDLER' to process all inbound e-mails.

Exit Rules for Inbound Processing (Maintenance Mode)

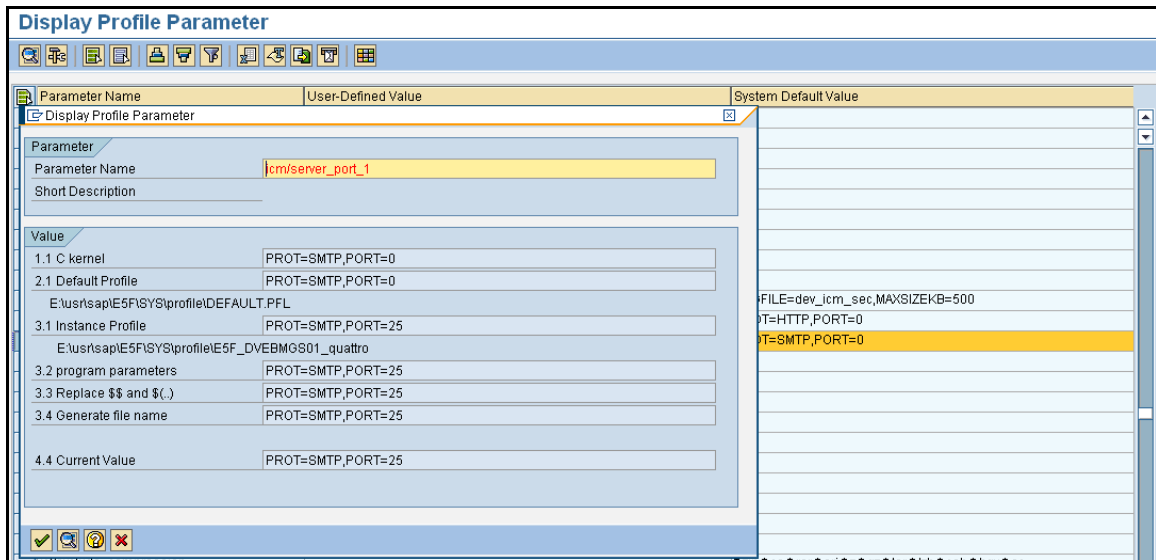
Communication T... Recipient Address Docu... Exit Name Call...

Internet Mail	flm@quattro.w4.local	*	/FLM/EMAIL_HANDLER	1
Internet Mail	*	ICS	CL_APPOINTMENT_REPLY	2
Internet Mail	survey@800.id3.r3.sap-ag.de	*	CL_UWS_FORM_RUNTIME_MAI	3

9.2.2 System Profile Parameters

Run program RSPARAM in SE38 to display the profile parameters.

Navigate to parameter icm/server_port_1, and set the port to 25.



9.3 Test Config

Here we will run through a sample test to ensure outbound and inbound emails are working correctly.

9.3.1 Form Type Configuration.

In SPRO Enter: Form Types Configuration.

- Select the form being used for the test.
- Ensure that Transport Type is: OnLine and Offline

9.3.2 Setup Customer Code

Go to Setup Customer Code.

For the customer code in question:

- File Type: PDF Format
- Sender Email: qa1@flm01.w4.local
- Offline User: USER3

The Sender Email and Offline User are going to correspond to the settings entered in transaction SCOT.

9.3.3 Offline Form Setup

In Email Settings:

Set the Receiver Email to an account you have access to so you can verify receipt.

Hit F1 on the Offline Title Text and follow the instructions for the 3 next fields.

In Define Approved Email Addresses:

Add the email from from the Email Settings.

This check is only done on Non-Productive systems to prevent mass emails to customers during development.

9.3.4 Run Trial Email Dispatch

Go to transaction: /n/FLM/MAIN

In OffLine Processing run Trial e-Mail Dispatch.

9.3.5 Check your inbox.

If the form has arrived entered some data and submit.

If not check transaction SOST aslo in SCOT run Utilities->Routing Test

9.3.6 Check Round Trip in Dashboard

Go to transaction: /n/FLM/MAIN

In Monitoring run Dashboard.

Select Form.

Check "Include Terminated Forms"

Then "View Current Traffic"

Select all froms and Show Forms.

Find the form in Question and "Display Form"