Installation Guide

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We estimate that the installation of FLM on a customer site takes around one day.   The starting point for the FLM installation is a working NetWeaver system with ADS configured and working.

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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.

If you wish to run FLM Correspondence Management, you must install on sp13 or higher.

- SAP Notes you may need prior to installation:

Description	Note
NW 700 SP12 or greater is required for 290 SP3 due to SAP dependency.	
NW 700 SP12 - will get error "RFC system error for destination GTADIR_SERVER"	1063482
NW 700 SP12 - will require the following note to avoid Activation Errors.	1047930
NW 700 SP15 - systems will require the following note.	1163925
NW 700 SP20 and below - Apply the following SAP Notes for FLMCG WSDL	1378391 1230235

- 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

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

> sapcar –xvf FLM_INST_<VER>.SAR

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

> //sapmnt/trans/EPS/in

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

Quick note: Steps 2-4 can also be done in SAINT:

> SAINT -> Installation Package -> Load Packages -> From Front End

> For Service Packs you would use SPAM.

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 backup all your forms by exporting 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.

1. For installations or upgrades use 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 Apply Support Packs

1. Apply all support Packs delivered with the FLM software.

2.3 SGEN

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

1. Transaction SGEN.
2. Select the first option: Generate All Objects of Selected .... - Continue
3. Select for Parallel Generation: Leave defualt. - 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.

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.

1. Transaction SE21.
2. Package will be ZFLM and select Create.
3. Short Description: FLM: Authorization Objects
4. Application Component: CA
5. Software Component: HOME
6. Transport Layer: Customer Specific, Default SAP.
7. 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:

1. Transaction SE11.
2. Select the radiobutton 'Tables' and enter table SDOKCONT1. (Those are OHs)
3. Copy this table to /FLM/SDOKCONT1, assigning package /FLM/CUST and workbench request as required.
4. 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.

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 activated as a pre-requisite 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.
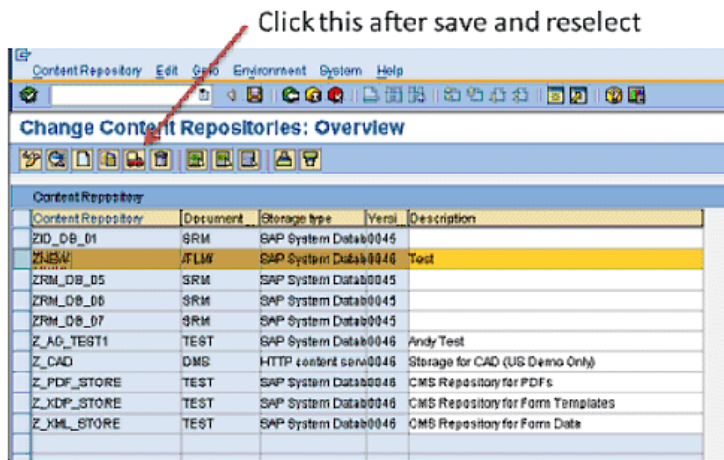
Database

> 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

Click this after save and reselect

Change Content Repositories: Overview

Content Repository	Document	Storage type	Versi	Description
ZID_DB_01	SRM	SAP System Datab0045		
ZNEW	/FLM/	SAP System Datab0046		Test
ZRM_DB_05	SRM	SAP System Datab0045		
ZRM_DB_06	SRM	SAP System Datab0045		
ZRM_DB_07	SRM	SAP System Datab0045		
Z_AG_TEST1	TEST	SAP System Datab0046		Andy Test
Z_CAD	DMS	HTTP content serv0046		Storage for CAD (US Demo Only)
Z_PDF_STORE	TEST	SAP System Datab0046		CMS Repository for PDFs
Z_XDP_STORE	TEST	SAP System Datab0046		CMS Repository for Form Templates
Z_XML_STORE	TEST	SAP System Datab0046		CMS Repository for Form Data

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:

	Forms Lifecycle Manager
	Interactive Forms
	Initialise Customer
	Digital Security
	Maintain Security Settings for Customer
	Setup Forms

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
> FLM_PORTAL

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

- Select pushbutton to maintain the permitted activities. Use ZFLM for the package.
- Select options '01', '02', '03' and '10' only. Save,
- Select pushbutton to create documentation, then save
- Save the authoriation 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

- 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.
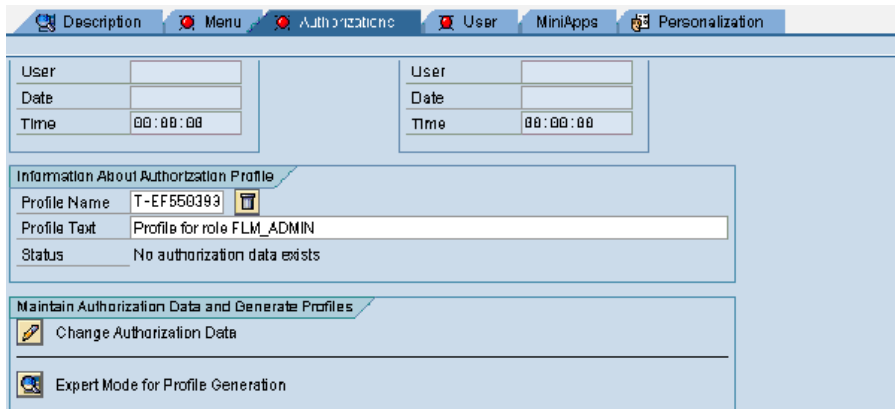

- Select the Change Authorization Data pushbutton. A pop-up window is displayed. Select the 'Do not select templates' pushbutton.
- Now select the 'Manually' pushbutton, and enter the authorization object 'Z/FLM/0001'.
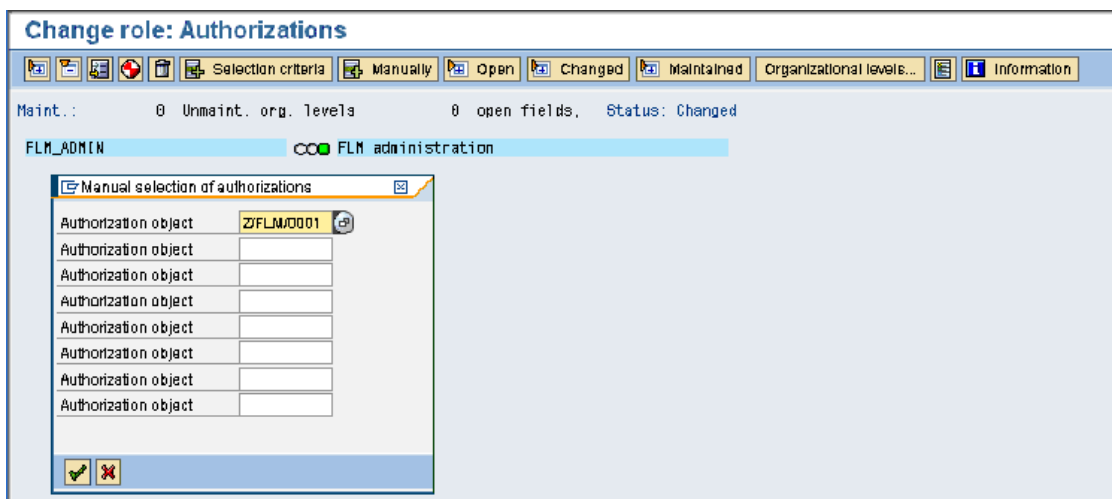
- Expand the hierarchy and then enter values for each field: select the '*' symbol in order for this role to include all form types, categories and activities.
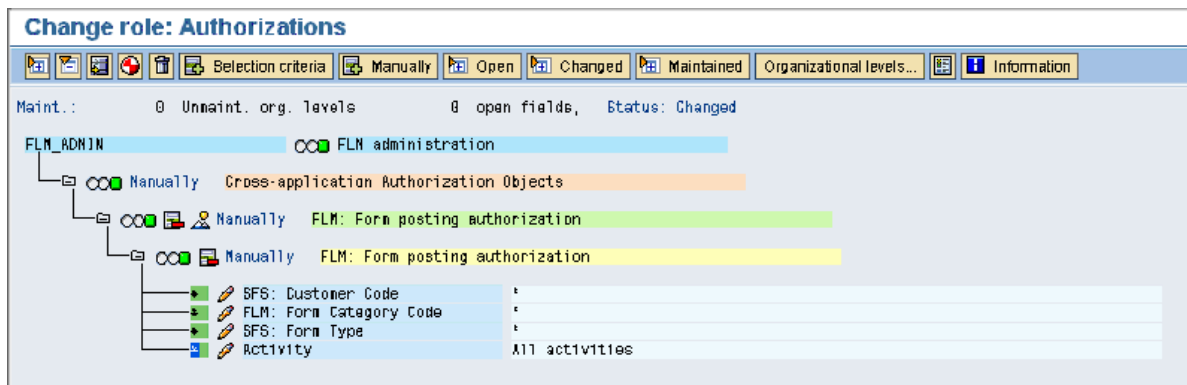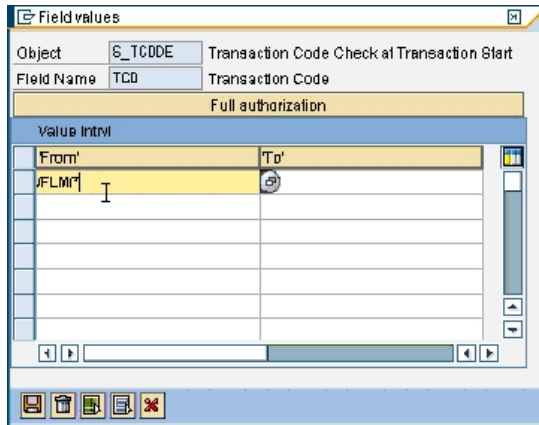

- Select the Manually' pushbutton again, and enter the authorization object S_TCODE
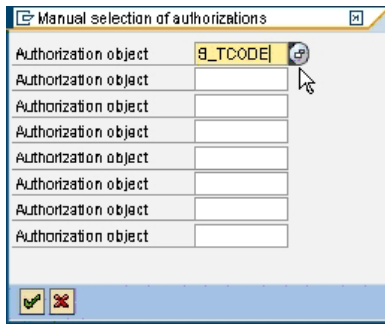
- Expand the Tree out and select the Change Transaction code button.
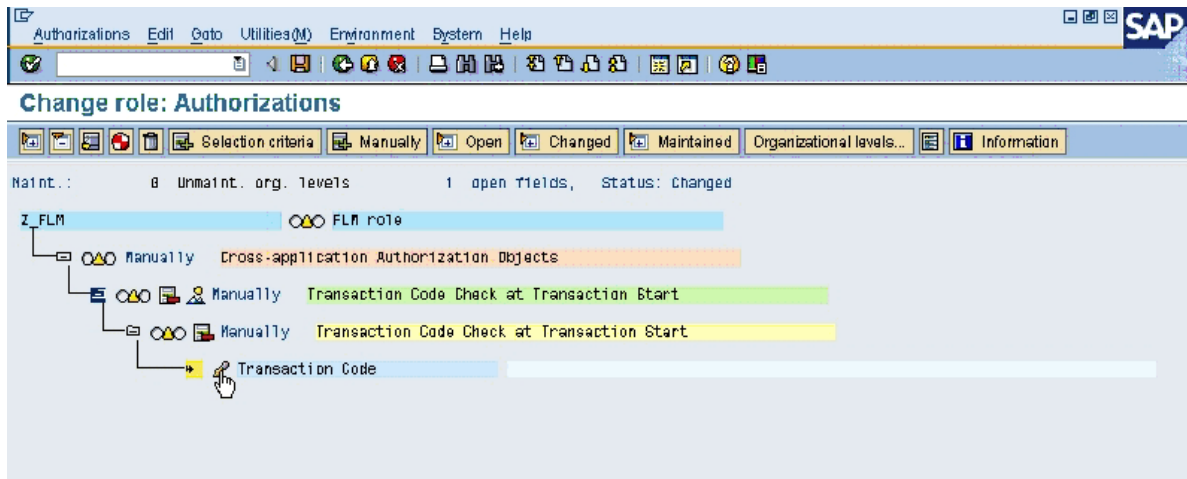
- Enter '/FLM/*' into the 'Form' field as shown. This is granting authority for ALL /FLM transactions to the FLM_ADMIN role.

- 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
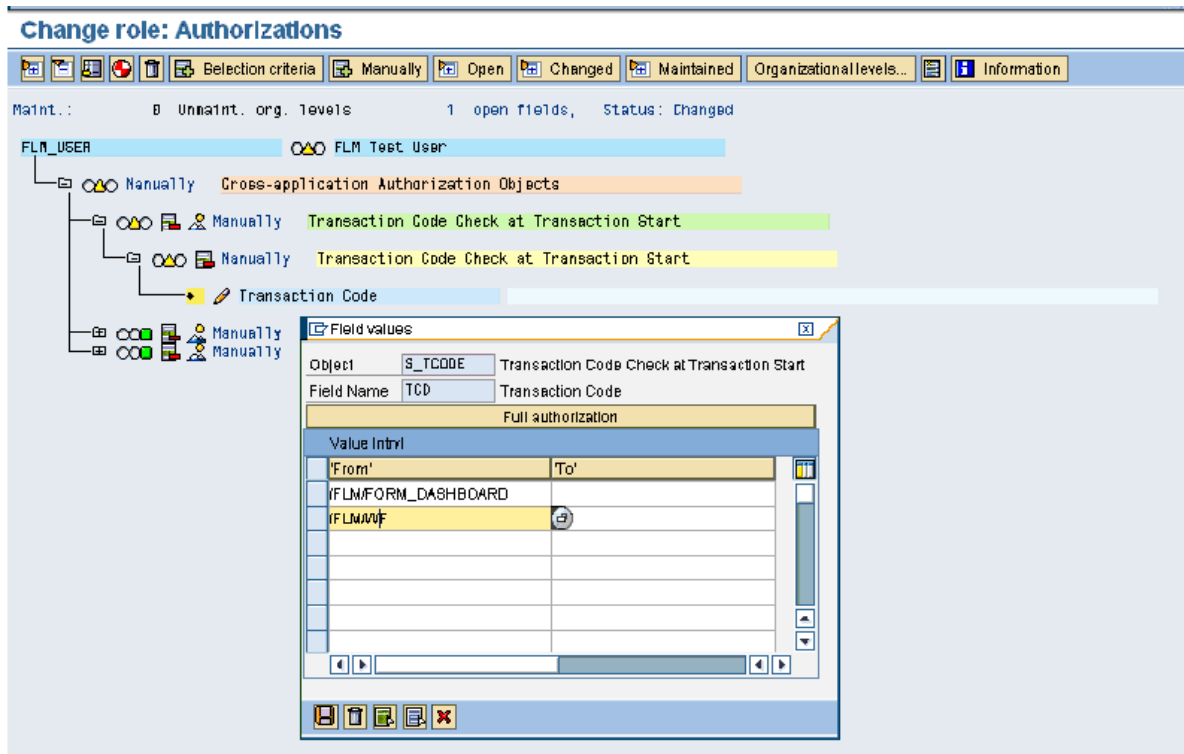
6.5 User Master Roles

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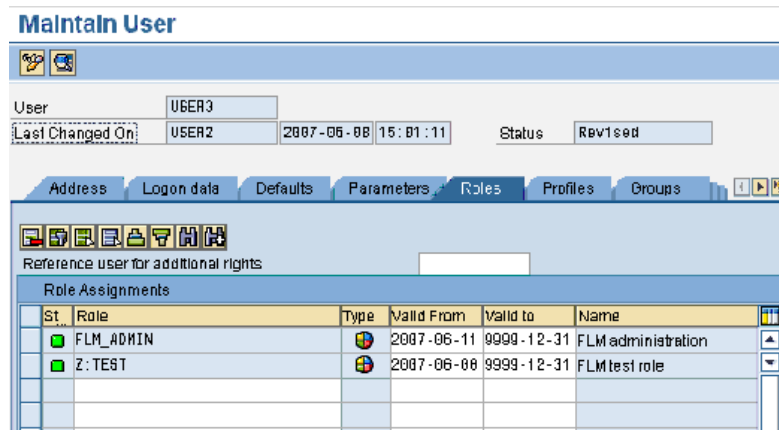
When the role is added to the user, the profile appears in the 'Profiles' tab.
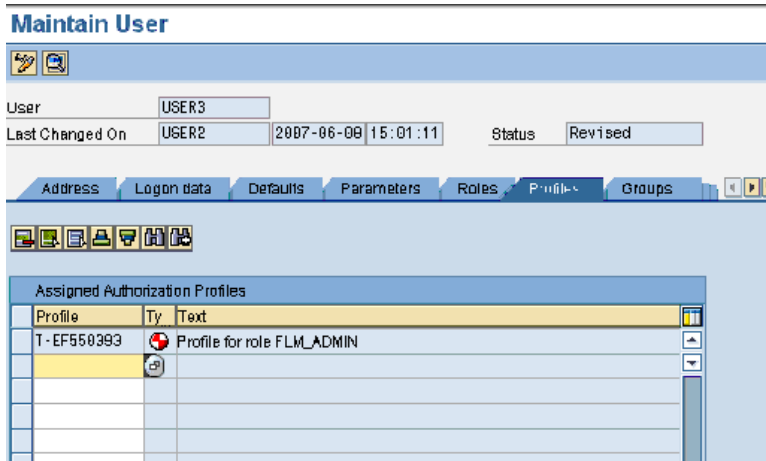
6.6 Offline user

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.

Create technical (Services) user FLMOffline.

6.7 FLM Developer User Role and Authorizations

- [SE16] Insert entry in table TBRG as below to define a class for FLM customising tables
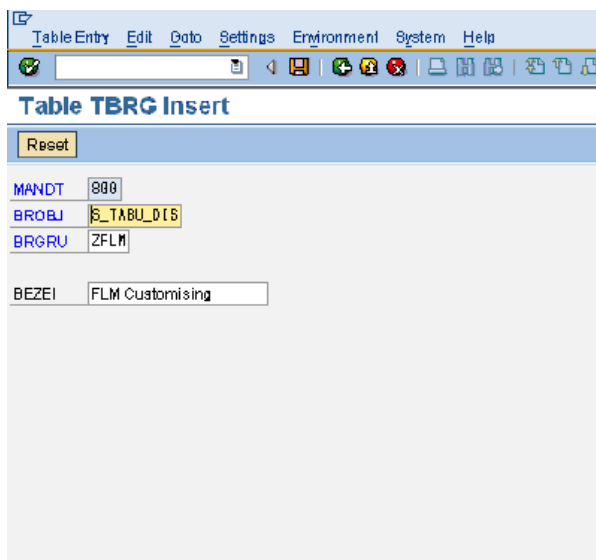
- [SE16] Change entries in table TDDAT for each /FLM/* table – change the authorisation group from &NC& to ZFLM

Before	After

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

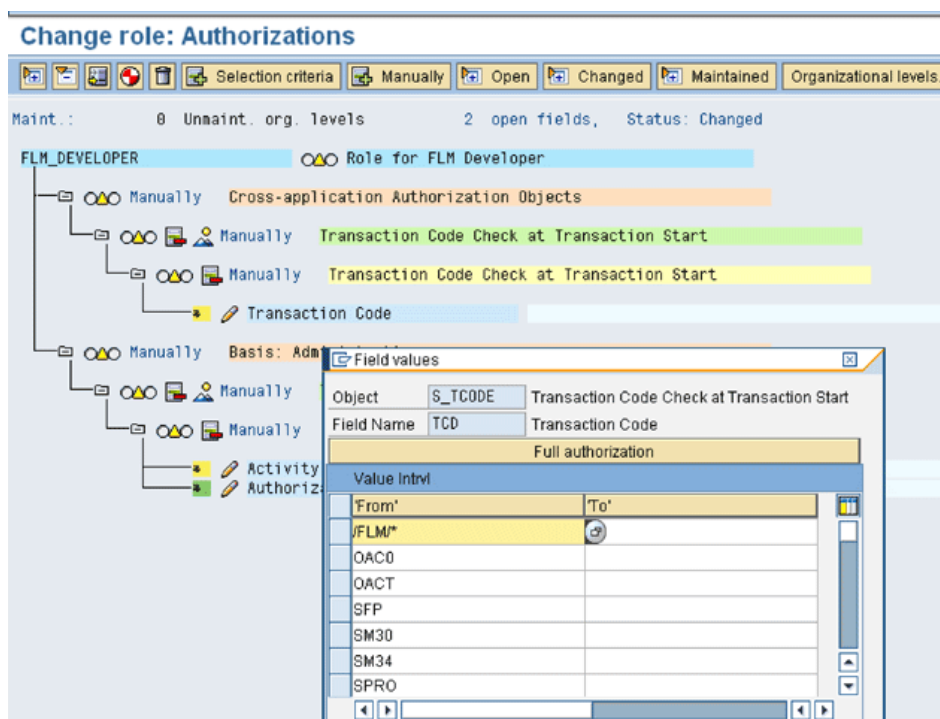- Also add the authorisation object S_TCODE with the following transactions
  - OAC0
  - OACT
  - SE10
  - SE16
  - SO10
  - SFP
  - SM30
  - SM34
  - SPRO
  - SOST
  - SCOT

- Add authorisation objects S_CTS_ADMI and S_TRANSPRT to enable the role to create and administer transport requests.

- Add authorisation object S_GUI.

- Add role FLM_DEVELOPER to the developer user, along with a normal ABAP developer role such as SAP_BC_DWB_ABAPDEVELOPER

6.8 FLM Portal and Authorizations

The FLM Portal requires at minimum the S_RFC authorization object to run.

Create a technical (Services) user FLMPortal to use in your Portal Java Connector.

Create a Role: FLM_PORTAL and add the S_RFC authorization object and assign the role to FLMPortal.

7   Deploying the FLM Portal

7.1 Introduction

In order 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].

Tip: We've found it best to run a local SLD that reports back to Solution Manager rather than use a remote SLD. The reason for this is that the Java Connector will register itself with the SLD and if the SLD were to become unavailable the FLM Portal may produce errors for the duration.

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.

Tip: for Production a local SLD should be configured that reports back to the remote/Solution Manager SLD so any outage on the remote SLD does not affect the Java Connector.

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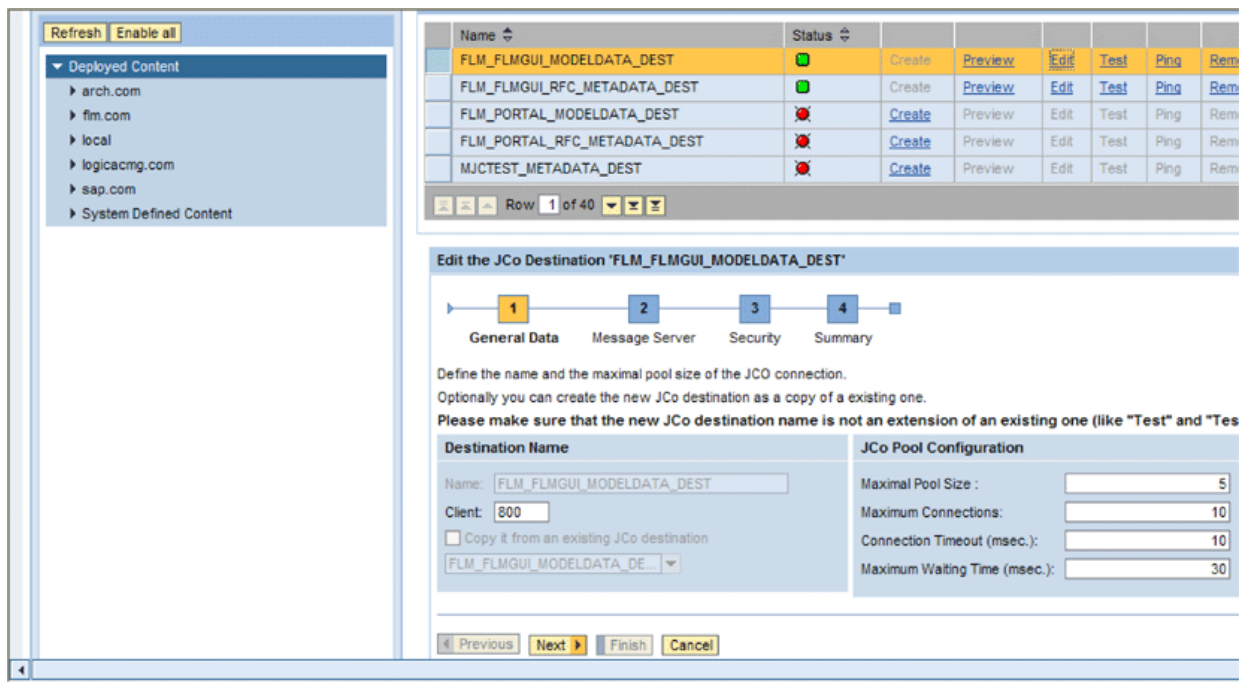
Please consult SAP standard documentation for further guidance on the step-by-step process of configuring Java Connectors.

Tip: Be sure to set the correct Language for the Java Connector. English and English (United Kingdom) will display Dates differently.

Note:

It is highly recommended to configure the JCo's to make use of 'Logon Tickets' - SSO - for the Model Data JCo, 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 due not rely on the user maintained in these connections, but rather the user who has logged into the FLM Portal.

http://<server>:<port>/webdynpro/dispatcher/flm.com/flmgui/FLMPortal

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. Default FC is 01 or Country Code (GB for Britian).

Metadata is off by default. If you are running NW700 SP14 or better you can turn this on to see meta data in your PDFs.

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.

8.1.9 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:

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 Define Form Statuses

This section displays all the available statuses that can be assigned to each form. A separate status is available according to customer code, description and category.

Form statuses refer to the stage of the workflow, or **routing,** that the form is in at any one time.

An **initial** status defines a form at the first stage of a routing, i.e. **initial.**

An **intermediate** status defines a form in the middle stages of a routing, e.g. **approved, rejected, submitted,** or **approved**

A **final** status defines the form at the end of a routing, e.g. **End Of Routing**

All statuses displays all available statuses

You can create a new form status tag by going to the 'new entries' menu and entering new criteria for customer code, status code, description, and category. Once this new status has been created in this activity, it will then become available to select in the routing configuration table (see 1.3.2)

8.3 Define Form Actions

Form Actions list the options available to select the next position in the form routing, e.g. submit, approve, post etc. You can enter a new action by going to 'new entries' and entering a customer code, action code and description for each new action. Actions Y and Z are reserved and cannot be reassigned. All other letters of the alphabet are available to assign to different stages of a workflow as you wish. The stage names themselves are only suggestions and are completely customisable.
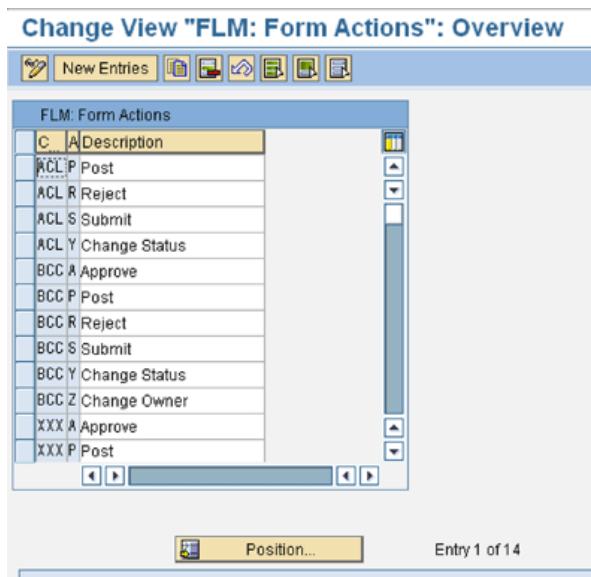
8.4 Define Form Categories

In this activity you define the set of available Form Categories in your system. A Form Category is a logical grouping of Form Types that is used as a part of the user authorisation concept in FLM. You must define your form categories before you can begin creating logical forms via the FLM Form Wizard, as each form must be assigned to a 2-character category.

The groupings shown in the demo below are examples of typical form categories: 'Purchasing' 'Human Resources' and 'Accounting'.

To create a new form category, go to 'New Entries' and define a two-character form category code with an associated description for each form category required. Form Category codes are only applicable for the customer code within which they were set up.
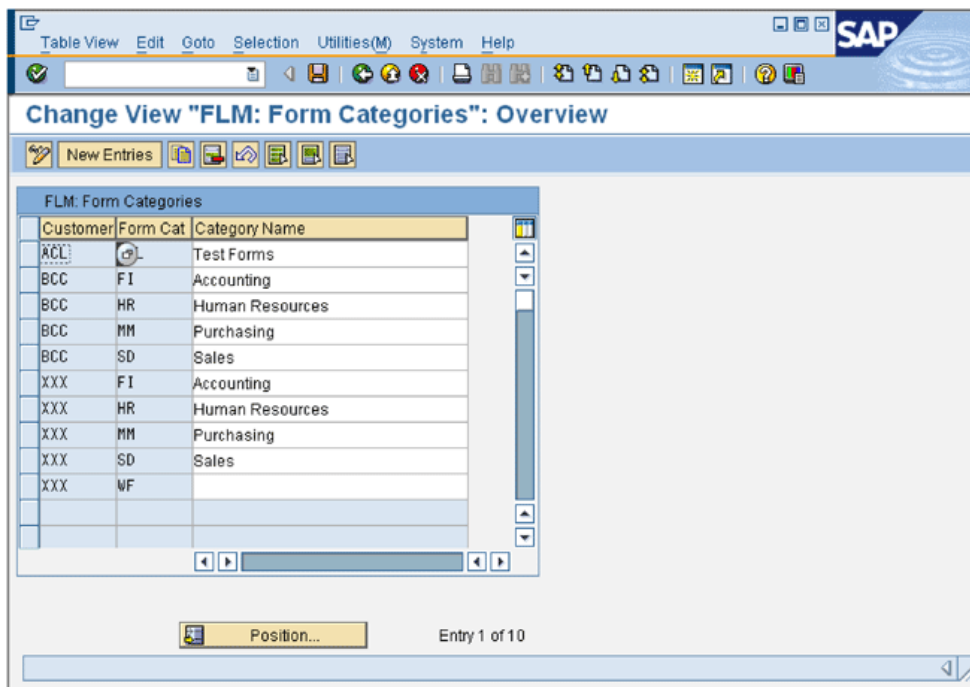
8.5 Number Range /FLM/<Customer Code>

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

1. Transaction SNRO [es-en-ar-oh].
2. Enter number range object name.
3. Press create icon.
4. Enter Short and Long Texts.
5. In *Number length domain* enter CHAR10.
6. Set the warning %, eg 5%.
7. Press save.
8. Ignore warning about buffering.
9. Assign to package /FLM/CUST.
10. Create a transport/assign to an existing transport.
11. Create a number interval. E.g. 01 1000000000 – 199999999 – 1000000000
12. To create the number interval go to SNRO again
13. Enter the name of the object you just created and click on "Number ranges"

8.6 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.

8.7 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
- SWF Flex Forms

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.

8.8 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 and Navigate to FLM in the Cross-Application Settings -> General Application Functions -> Forms Lifecycle Manager -> Initialise Customer Code -> Initialise FLM System -> **Upload Master Template**
4. Browse to the file from step 1)
5. Press Execute and follow the on-screen instructions

8.9 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.

8.10 FLM-CG setup

This only needs to be applied if you are using Correspondence Management.

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.

8.11 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

Set up the Internet address types as follows:
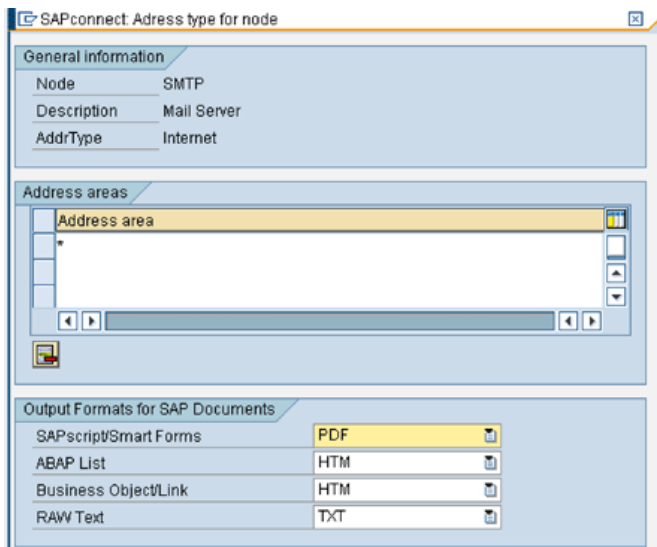
Turn off confirmation of receipt

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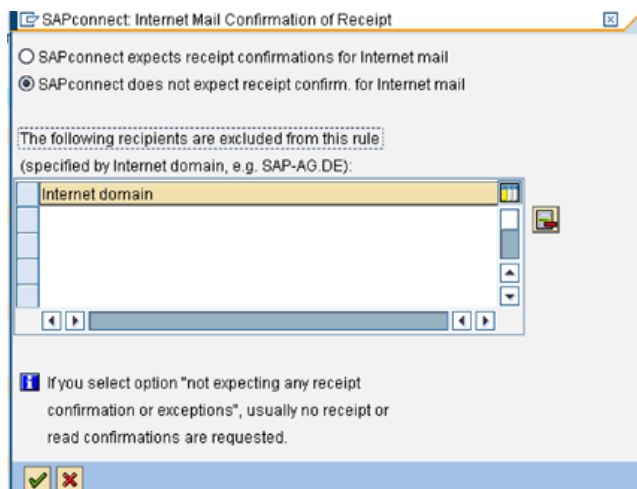
Set default domain

Use the menu path *Settings->Default domain*. This is the location of the SAP application server.
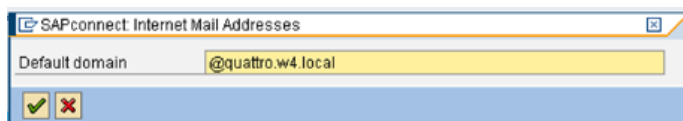
9.1.2 Transaction SICF: Service for SAP Connect

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

Create/Change a Virtual Host

Path   /
Service Name   SAPconnect   SMTP Host (Active)
Default Service:
Lang.   English   → Other Languages

Description
Description 1   SAPCONNECT (E)SMTP
Description 2
Description 3

Host Data | Logon Data | Handler List | Administration

Host Names and Port Numbers
Profile Parameter No.   0   (Parameter 'is/SMTP/virt_host_#')

Host Configuration Information
* : *
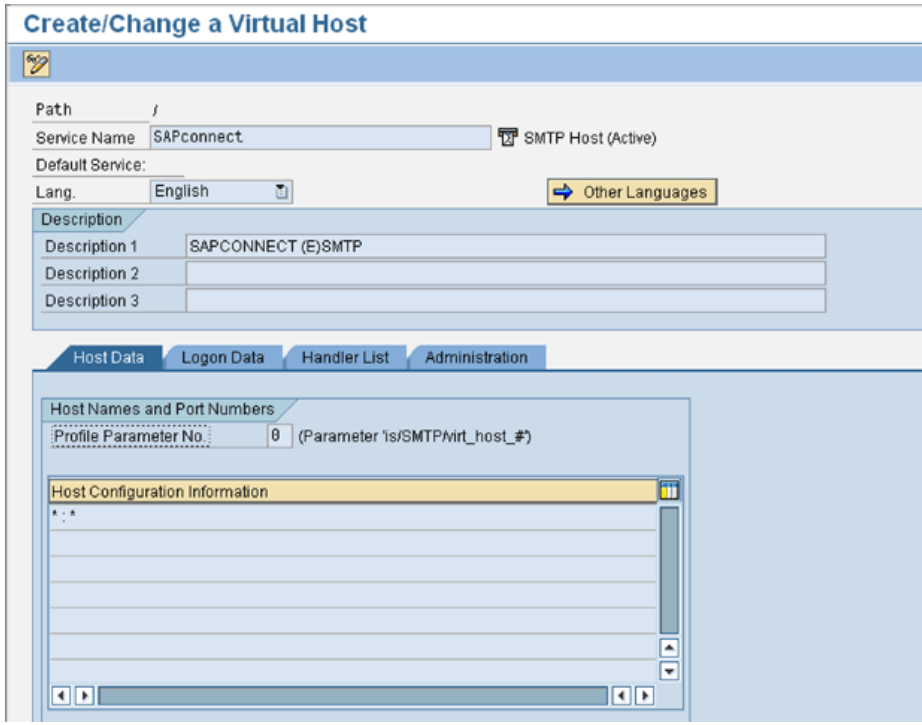
Enter a user id to logon to SAPconnect.

Host Data | **Logon Data** | Handler List | Administration

Logon Data
Client   800
User   USER1
Language   English
Password Status   Set

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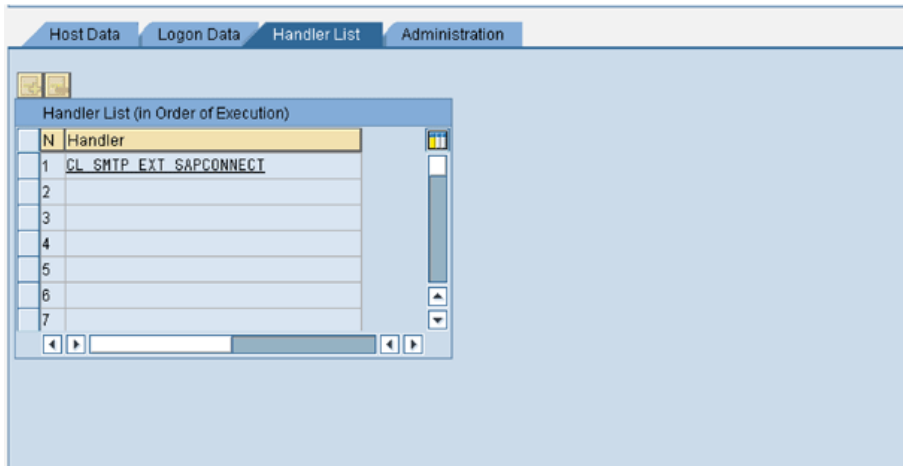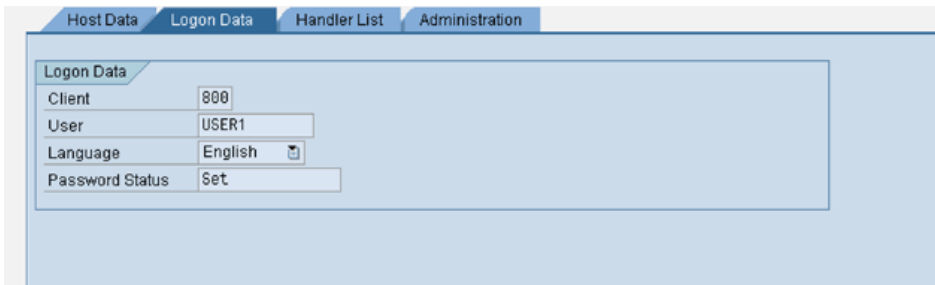
Once the settings are correct, right-click on the SAPConnect service to activate it
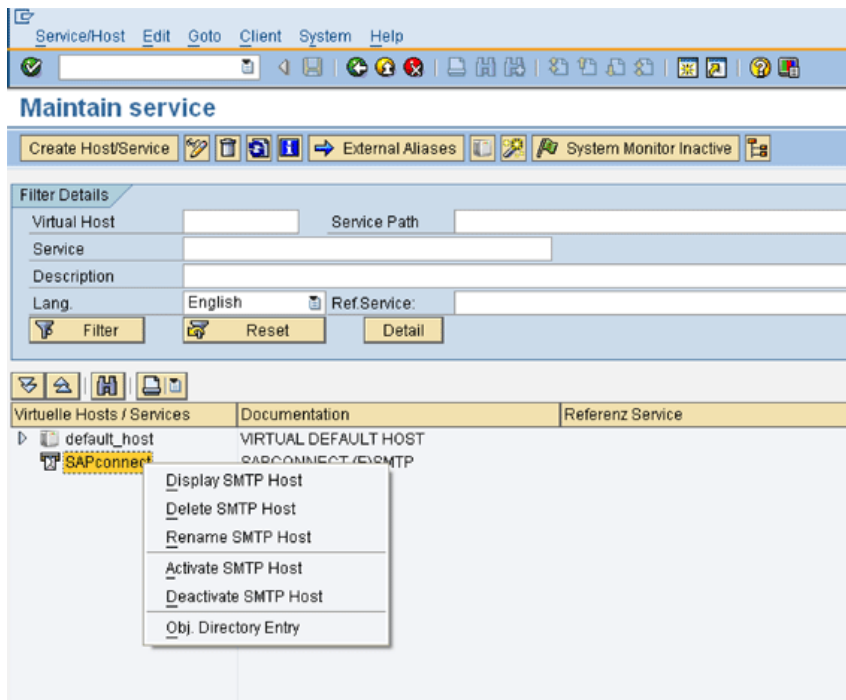
9.1.3 User Defaults

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.
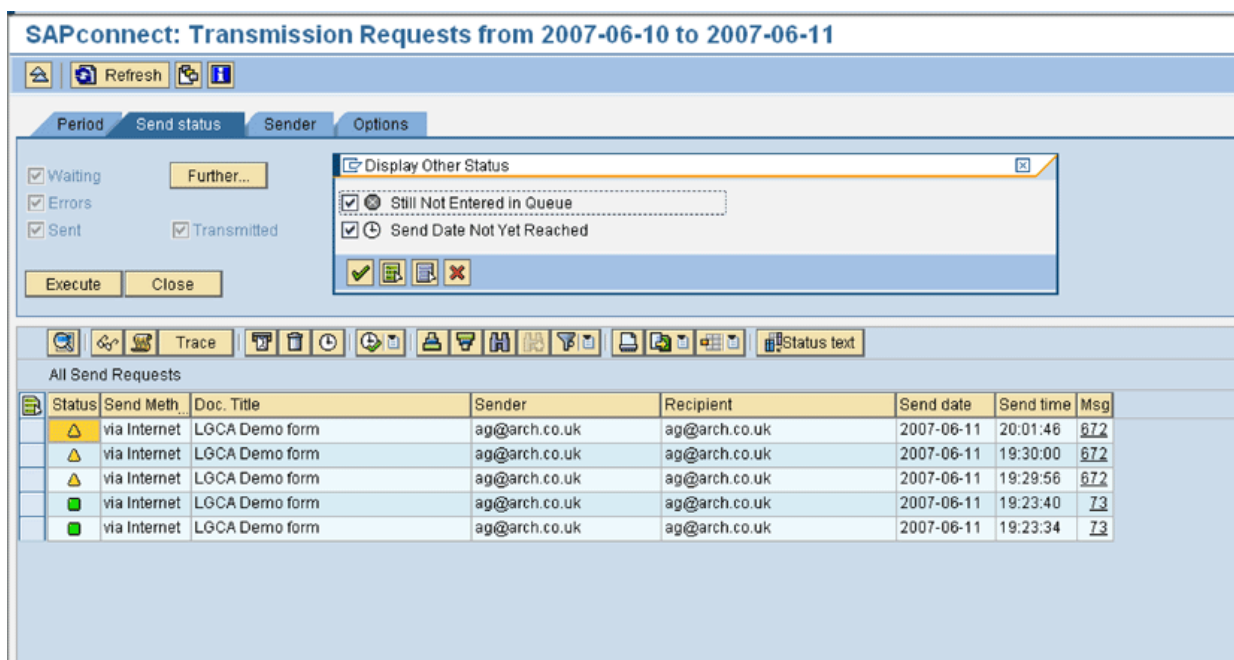
9.1.6 Ensure SAPConnect: Start Send Process is scheduled.

You must schedule report RSCONN01 in order to physically dispatch the emails at the frequency you require.

9.1.7 Test if outbound email is working.

In SAP Menu goto Office -> Workspace -> New Message

After sending an Internet eamil message check SOST where you may have to manually Start Send Process.

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.

Display Profile Parameter

Parameter Name	User-Defined Value	System Default Value

Display Profile Parameter

Parameter

Parameter Name	icm/server_port_1
Short Description	

Value

1.1 C kernel	PROT=SMTP,PORT=0	
2.1 Default Profile	PROT=SMTP,PORT=0	
E:\usr\sap\E5F\SYS\profile\DEFAULT.PFL		FILE=dev_icm_sec,MAXSIZEKB=500
3.1 Instance Profile	PROT=SMTP,PORT=25	T=HTTP,PORT=0
E:\usr\sap\E5F\SYS\profile\E5F_DVEBMGS01_quattro		T=SMTP,PORT=0
3.2 program parameters	PROT=SMTP,PORT=25	
3.3 Replace $$ and $(..)	PROT=SMTP,PORT=25	
3.4 Generate file name	PROT=SMTP,PORT=25	
4.4 Current Value	PROT=SMTP,PORT=25	

9.3 Test Config

Here we will run though 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"

10.0   Setting Up Flex

10.1   Configuration

Add an entry in table SDOKFEXT using SE16 as follows:

type: application/x-shockwave-flash

extension: swf

description: Shockwave Flash File

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Training Configuration

24/11/08 14:00:18

Table of Contents

Introduction

FLM is delivered with a training course based on a weekly Time Sheet.

This document describes how to setup the delivered materials.

Import the FLM100 Form.flm

Import the FLM100 Form.flm using the FLM Import tools.

Make table entries.

/flm/tc100_per
    USER: <Any Username> USER1
    Personal Number: <Anything Again> 00102222
    Add as many entries as you like.

/flm/tc100_cc
    Cost_center: <Anything> C100
    Cost_Njame: <Anything> Client Time

    Cost_center: <Anything> C400
    Cost_Njame: <Anything> Personal Time

/flm/tc100_task (Values can be anything)
    Task_Type: 1
    Task_Name: Client Work

    Task_Type: 2
    Task_Name: Admin

Add FPE config entries.

FPE: Valid Form Status

ACL   TS01   G   Checked

FPE: FPEC

ACL   TS01   G   0   /FLM/TC100_TIMESHEET_700

   - Posting Adapter /FLM/TC100_TIMESHEET_700 is delivered in SP3.

Test and Check.

Test the form by submitting data and invoking the posting adapter.

Use transaction /FLM/TC100 to check the results.

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