



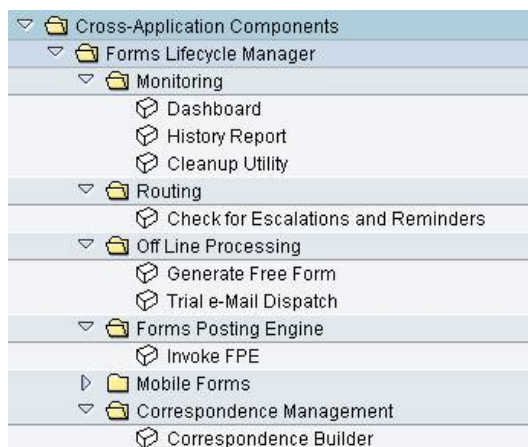
FLM Administrators Guide

Table of Contents

- 1 Introduction**
- 2 Forms Processes Monitoring Tools**
 - 2.1 Forms Dashboard**
 - 2.1.1 To access the Form Dashboard
 - 2.1.2 Viewing Current Forms Traffic
 - 2.1.3 Form status re-assignment
 - 2.1.4 Form owner re-assignment
 - 2.1.5 Unlocking a Form
 - 2.2 Forms Archiving**
 - 2.2.1 Form Archive Program
 - 2.2.1 Forms Reload Program
- 3 Free Form Generation**
- 4 Form History Report**
- 5 Manually posting forms using the FPE**
- 3 FLM Maintenance**
 - 3.1 FLM Configuration**
 - 3.1.1 High Availability Clustering & Adaptive Computing
 - 3.2 Logs and Traces**
 - 3.2.1 FLM System Log
 - 3.2.2 FLM Portal Log
 - 3.2.3 Forms Process Errors
 - 3.3 CCMS Configuration**
 - 3.4 Remote Access Support**
 - 3.5 Background Jobs**
 - 3.5.1 Form Escalation
 - 3.5.2 Form Reminder E-mails
 - 3.5.3 Form Posting
 - 3.5.4 Form Clean-up
 - 3.6 Backups**
 - 3.7 Restart and Recovery**

1 Introduction

This document explains the functions of the FLM application menu, and the general maintenance and monitoring of forms processes. To access this menu go through Cross-Application Components> Forms LifeCycle Manager.



2 Forms Processes Monitoring Tools

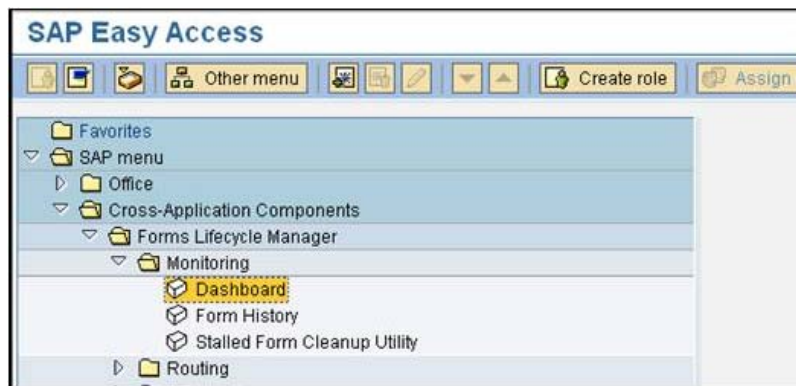
2.1 Forms Dashboard

The FLM Forms Dashboard allows you to:

- view all forms contained in the system
- change the status of a form or group of forms
- change the owner of a form or group of forms

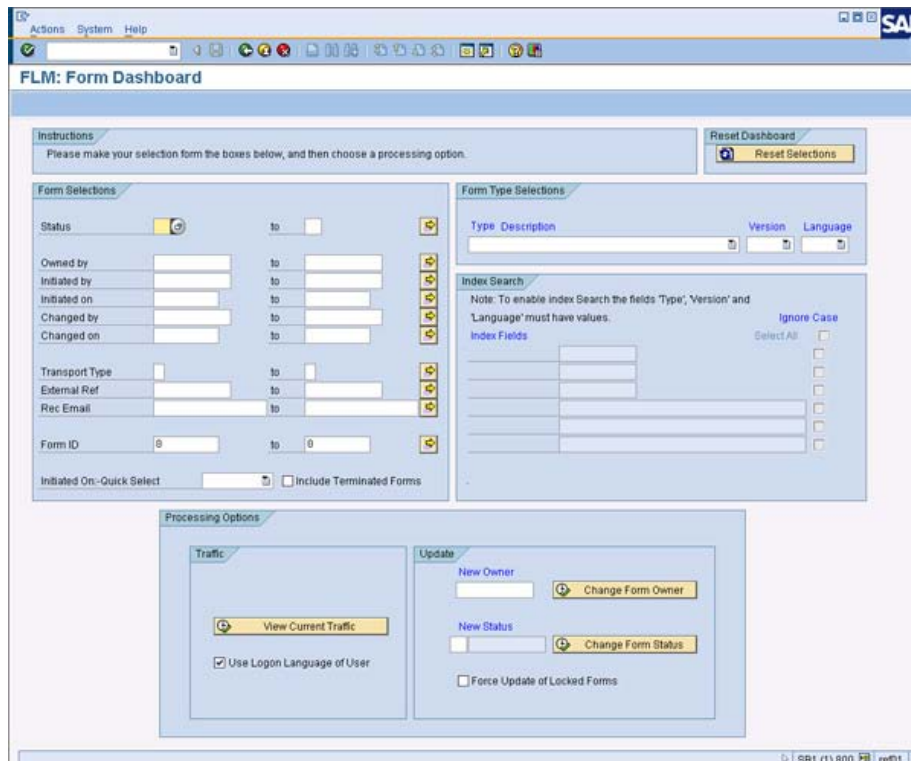
2.1.1 To access the Form Dashboard

From the SAP menu select the menu path Cross-Application Components->Forms Lifecycle Manager->Monitoring->Dashboard.



2.1.2 Viewing Current Forms Traffic

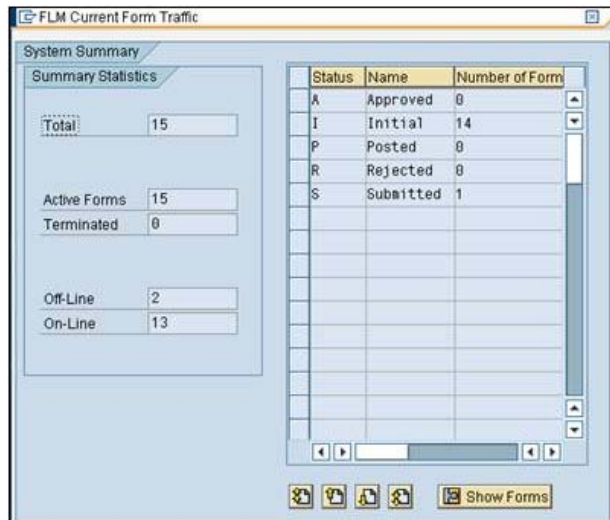
Select the Form Types under review and select the pushbutton 'View Current Traffic'.



Alternatively, use the 'Form Selections' section for a free selection based on form type, owner, initiator,

creation date or form ID.

Use the 'Include Terminated Forms' checkbox to include forms at the end of their lifecycle in the returned selection.



The returned pop-up report shows the number of forms by status, broken down by active forms and terminated forms, and broken down by on-line forms and off-line forms.

To drill-down further, select a row and then select the 'Show Forms' pushbutton.

Type	Lang	Vers	Form ID	Variant	Status	Owner	Creator	Created	Time	Created by
C656	E	00	1000009903	1	I	USER1	USER1	2007-08-05	10:06:53	USER3
C656	E	00	1000001131	1	I	USER1	USER1	2007-08-27	17:11:57	USER3
C656	E	00	1000001133	1	I	USER1	USER1	2007-08-27	17:38:11	USER3
C656	E	00	1000001166	1	I	USER2	USER2	2007-08-29	17:54:04	USER3
C657	E	00	1000001080	1	I	ELLIOTT	ELLIOTT	2007-08-16	13:50:13	USER2
C657	E	00	1000001093	1	I	USER2	USER2	2007-08-16	21:10:28	USER3
C657	E	00	1000001094	1	I	USER2	USER2	2007-08-16	21:13:44	USER3
C657	E	00	1000001095	1	I	USER2	USER2	2007-08-16	21:15:07	USER3
C657	E	00	1000001096	1	I	USER2	USER2	2007-08-16	21:16:10	USER3
C657	E	00	1000001115	1	I	USER2	USER2	2007-08-20	09:14:16	USER3
C657	E	00	1000001116	1	I	USER2	USER2	2007-08-20	10:05:15	USER3
C657	E	00	1000001127	1	I	USER1	USER1	2007-08-27	16:20:49	USER3
C657	E	00	1000001134	1	I	USER1	USER1	2007-08-27	19:40:33	USER3
C657	E	00	1000001168	1	I	USER2	USER2	2007-08-30	13:55:09	USER3

The FLM Form List shows the detailed list of the forms selected, showing the Form ID and Form Variant.

To drill-down to see the details of the particular form, select a row and then select the 'Display Form' pushbutton.

2.1.3 Form status re-assignment

From the SAP menu select the menu path Cross-Application Components->Forms Lifecycle Manager->Monitoring->Dashboard.

Enter selections using the 'Form Selections' or 'Group Selections' section boxes.

Enter the current status in the 'Status' field within the 'Form selections' selection box.

Enter the target status in the 'New Status' field within the 'Update' section of the 'Processing Options' selection box.

If any forms to be updated are locked then the 'Force Update of Locked Forms' checkbox must be selected.

Execute using the 'Change Form Status' pushbutton. Several pop-up windows now appear:

- 1) A warning pop-up window is displayed
- 2) A confirmation pop-up window is displayed to confirm the change status action
- 3) A pop-up window is displayed for each locked form, explaining that the form will be unlocked.
- 4) The following final confirmation window is displayed:

Code	Form ID	Run Date	Run Time	Old User	New User	Old Status	New Status	Text
0	1000001222	24.09.2007		USER1	USER1	I	P	Status can be changed
0	1000001169	24.09.2007		USER2	USER2	I	P	Status can be changed
0	1000001124	24.09.2007		USER1	USER1	I	P	Status can be changed
0	1000001127	24.09.2007		USER1	USER1	I	P	Status can be changed
0	1000001116	24.09.2007		USER2	USER2	I	P	Status can be changed
0	1000001115	24.09.2007		USER2	USER2	I	P	Status can be changed
0	1000001096	24.09.2007		USER2	USER2	I	P	Status can be changed
0	1000001095	24.09.2007		USER2	USER2	I	P	Status can be changed
0	1000001094	24.09.2007		USER2	USER2	I	P	Status can be changed
0	1000001093	24.09.2007		USER2	USER2	I	P	Status can be changed
0	1000001090	24.09.2007		ELL10TT	ELL10TT	I	P	Status can be changed

Select 'Accept Changes' to continue.

- 5) A final confirmation window is displayed when the changes have been posted.

2.1.4 Form owner re-assignment

From the SAP menu select the menu path Cross-Application Components->Forms Lifecycle Manager->Monitoring->Dashboard.

Enter selections using the 'Form Selections' or 'Group Selections' section boxes.

Enter the current owner in the 'Owner' field within the 'Form selections' selection box.

Enter the target owner in the 'New Owner' field within the 'Update' section of the 'Processing Options' selection box.

If any forms to be updated are locked then the 'Force Update of Locked Forms' checkbox must be selected.

Execute using the 'Change Form Owner' pushbutton. Several pop-up windows now appear:

- 1) A confirmation pop-up window is displayed to confirm the change owner action
- 2) A pop-up window is displayed for each locked form, explaining that the form will be unlocked.
- 3) The following final confirmation window is displayed:

Code	Form ID	Run Date	Run Time	Old User	New User	Old Status	New Status	Text
0	1000001222	24.09.2007		USER1	USER2	P	P	Owner can be changed
0	1000001134	24.09.2007		USER1	USER2	P	P	Owner can be changed
0	1000001127	24.09.2007		USER1	USER2	P	P	Owner can be changed

Select 'Accept Changes' to continue.

- 4) A final confirmation window is displayed when the changes have been posted.

2.1.5 Unlocking a Form

To unlock a form enter the for ID in the FLM Dashboard and in the Update form Processing Options section give the form its current status in the New Status filed and check "Force Update of Locked Forms". When you run "Change Form Status" this will unlock the form and reassign its current status.

2.2 Forms Archiving

The ability to Archive forms data was introduced at FLM 295 SP2.

The FLM archiving suite comprises two main programs, one for archiving forms (/flm/form_archive) and one for reloading archived forms (/flm/form_reload). The intention is to reduce the load on the main FLM tables to maintain system performance under increasing load conditions.

In each case you make a series of selections to filter out the set of forms you require (note that forms are selected according to the details they hold at their latest variant).

The archive program would normally run as a regular background job, and would move forms from the main FLM tables into a series of parallel but separate tables. From there, forms can be reloaded by the other program as required.

The system archives the following tables:



- /flm/fpe -> /flm/fpe_arc (main FLM Form index table)
- /flm/fpe_h -> /flm/fpe_h_arc (main FLM form history table)
- /flm/fpe_err -> /flm/fpe_err_arc (FPE message table)
- /flm/fpe_exec -> /flm/fpe_exec_arc (FPE run details table)

In addition, form data, attachments and annotations are moved into a parallel set of repositories in the content server. These must be configured in the FLM IMG activity 'link document types', for document types 'AR1', 'AR2' and 'AR3'. See the [FLM Installation Guide](#) for more detail.

2.2.1 Form Archive Program

Use the Archive program as a one time run or as a daily background job to move completed forms to the archive.


Form Archive Program


 


Form Selections


Status or only draft forms

Days since form creation

Customer to 

Form Type to 

Form ID to 

External Document to 

Additional Settings



Test mode

Only report errors


2.2.1 Forms Reload Program

Use the Reload Program to retrieve forms from the archive back into the main FLM tables so they can be viewed.


Form Reload Program


 


Form Selections


Status  or only draft forms

Days since form creation

Customer to 

Form Type to 

Form ID to 

External Document to 

Additional Settings

Test mode

Only report errors

3 Free Form Generation

You can generate an offline form independent of any routing scenario using the 'free form generation' facility. Select the form type and version you wish to dispatch, and whether you would like to disenable prepopulation, then click execute. Note that Mobile is not functioning in FLM version 290.

FLM: Free offline form creation

Enter Selections

Customer Code to

Form Type to

Form Version to

Language to

Further Selections

Turn off form Pre-population

Mobile Form Options

Send to Mobile Device

Mobile Users to Receive Fo to

MI Server RFC Dest

4 Form History Report

From the SAP menu select the menu path Cross-Application Components->Forms Lifecycle Manager->Monitoring->Form History.

Form History Report

Form selections

Customer to

Form Type to

Form Version to

Language Key to

ID to

Status selections

Status to

Form Owner to

Form Creation Date to

Form Initiator to

Enter selections as normal for any selection screen.

The report performs a simple selection on table /FLM/FPE_H and displays the form history for one or many forms.

Form History Report

Form History Report

Form ID	Variant	Event	Old Owner	New Owner	Old Status	New Status	Created on	Created at	Initiator	Description	Action	Posting Status
1000001078	0001	001		USER2		Initial	15.08.2007 17:41:13		USER3	New form instance		Initial
1000001078	0002	002	USER2	USER2	Initial	Initial	15.08.2007 17:42:30		USER3	New Variant Generated	0	Initial
	0002	003	USER2	USER2	Initial	0	15.08.2007 17:42:30		USER3	Status Change	0	Initial
1000001078	0003	004	USER2	USER2	0	0	15.08.2007 17:43:14		USER3	New Variant Generated	0	Initial
	0003	005	USER2	USER2	0	Posted	15.08.2007 17:43:14		USER3	Status Change	Submit	Initial
	0003	006	USER2	USER2	Posted	Posted	15.08.2007 17:43:56		USER2	FPE: Posted to SAP. Document.. 0100000126		Posted

5 Manually posting forms using the FPE

From the SAP menu select the menu path Cross-Application Components->Forms Lifecycle Manager->Monitoring->Dashboard.

Leave the Form Type selection empty and select the option 'Reprocess Forms in Error'.

Execute in the Foreground as shown.

Process Status	Customer	FType	Language	Version	ID	Variant	Status	User	Task	Recr EMail	User	Form Block	Date	Date
Rejected	ACL	TRN3	EN	00	100	2	S	USER1			USER1			00

Any failed forms are displayed. The following options are available:

- 1) 'Show Errors': Display any errors returned by the posting adapter.
- 2) 'Background': Try to post the failed form in the background. This is suitable for posting adapters that use BAPIs to update SAP.
- 3) 'Foreground': Try to post the failed form in the foreground. This is suitable for posting adapters that use 'call transaction' (like a BDC session) to update SAP.
- 4) 'Lock/Unlock': Lock a form so that FPE stops trying to post it. The form can be fixed later or removed using the clean-up utility as necessary.
- 5) 'Display Form as PDF': Show the form data to help understand why the posting failed.

Select the option as desired to further process the form.

3 FLM Maintenance

3.1 FLM Configuration

For information on the Technical Setup, Configuration and Customizing of FLM please see the [FLM Installation Guide](#) and [ADS Performance Tuning Tips](#).

3.1.1 High Availability Clustering & Adaptive Computing

The FLM-AddOn resides entirely inside of the SAP ABAP Instance. This allows FLM to be run on each node in

al High Availability Cluster and can also to be migrated with each Instance in a virtualized environment without additional configuration or reconfiguration.

Similarly the FLM Portal resides entirely on a Java Instance and can operate on each node in a High Availability Cluster and be migrated with the Java Instance without requiring reconfiguration.

No additional configuration is required to take advantage of FLM in a High Availability or Virtualized environment.

3.2 Logs and Traces

For problem analysis please see the [ADS Problem Analysis](#)

3.2.1 FLM System Log

FLM-specific events are recorded in the general application log (SLG1).

In the current release of FLM the log level is set to Success by default for the /FLM/LOG entries. Currently there is no way to change this setting but the next release will provide a mechanism to set the log level for FLM.

Old log entries can be removed by using transaction SLG2 and object /FLM/LOG

As of FLM 295 SP2 the log levels and CCMS alert mode can be set in System Specific Settings.



System Logging	
Min Log Level	<input type="text"/>
Alert Mode	<input type="text" value="Unknown"/>

3.2.2 FLM Portal Log

Java Errors and Dumps in the FLM Portal are written to the default.trc file on the Java Stack.

FLM Errors that appear in the FLM Portal are written to SLG1.

3.2.3 Forms Process Errors

Errors generated from a Form Processes are typically caught by FLM and written to SLG1.

Major errors in Form Processes that cause ABAP Dumps are written to ST22.

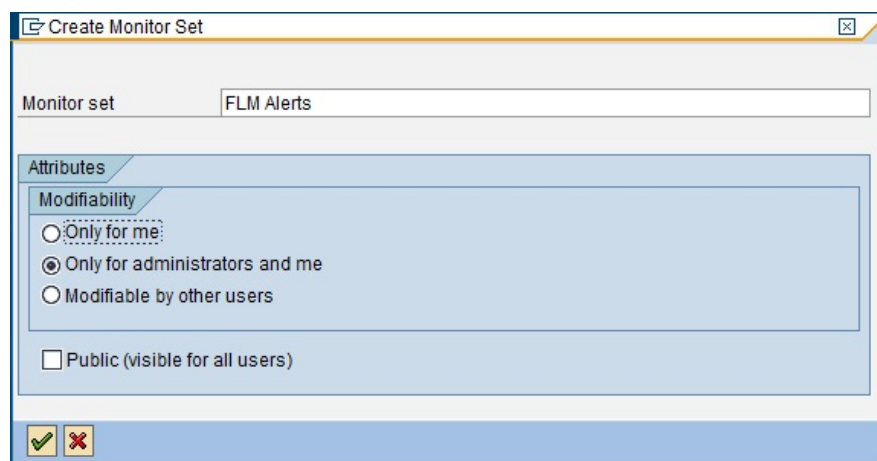
3.3 CCMS Configuration

Monitoring of FLM can be setup using CCMS in the following way.

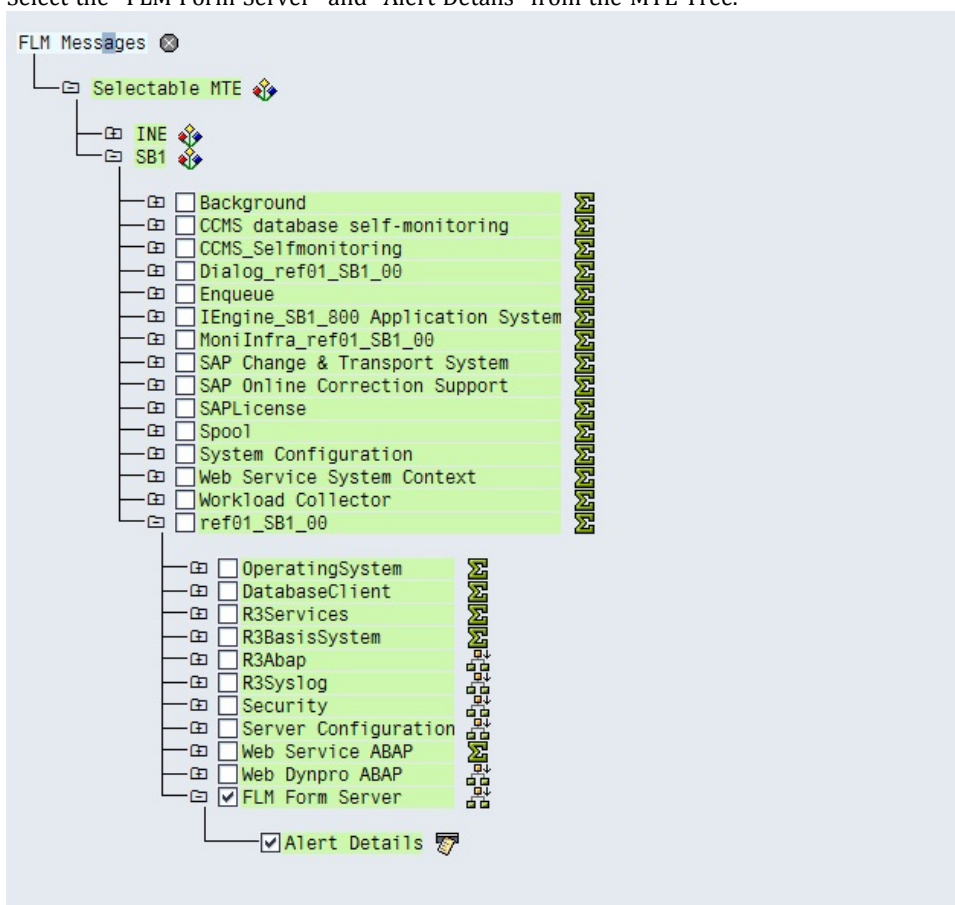
// Please note if you have applied Note 0064 to 295 SP1 at least one message must be written to the log before the FLM will appear in the MTE tree.

In transaction RZ20

- Go to Extra menu -> Activate maintenance function
- Monitor (set) menu -> Create
 - Select the New monitor set option (default).



- Select "FLM Alerts" and create new monitor 
- Change the Monitors name to "FLM Messages" by going to Monitor definition -> Change name
- Select the "FLM Form Server" and "Alert Details" from the MTE Tree.



- Activate Monitor

3.4 Remote Access Support

To allow remote access support the FLM_READONLY role should be created in PFCG.

See [FLM Authorizations and Security](#) for additional information.

Errors should be logged under the BC-SRV-FP component.

3.5 Background Jobs

Typically the following jobs should run daily, depending on the business process requirements:

3.5.1 Form Escalation

Program: /FLM/WF_ENGINE

The screenshot shows the 'FLM Routing Server' interface. Under the 'Restrict Form Selections' section, 'Customer Code' is set to 'ACL' and 'Form Type' is set to 'G6S7'. Below this, the 'Perform Routing Actions' section has three checkboxes: 'Escalate' (checked), 'Send E-mail reminders' (unchecked), and 'Test only' (unchecked).

The form routing server should be run with the 'escalate' option for all form types.

The program can be run in this mode multiple times per day; for example it could be run hourly depending on the business requirements.

The output written to the spool shows all forms selected for escalation.

3.5.2 Form Reminder E-mails

Program: /FLM/WF_ENGINE

The screenshot shows the 'FLM Routing Server' interface. Under the 'Restrict Form Selections' section, 'Customer Code' is set to 'ACL' and 'Form Type' is set to 'G6S8'. Below this, the 'Perform Routing Actions' section has three checkboxes: 'Escalate' (unchecked), 'Send E-mail reminders' (checked), and 'Test only' (unchecked).

The form routing server should be run with the 'Send e-mail reminders' option for all form types.

The program must only be run in this mode once per day.

The output written to the spool shows all forms selected for e-mail reminders.

3.5.3 Form Posting

Program: /FLM/FPE_INVOKE

The screenshot shows the 'FPE: Form Posting Engine' interface. Under 'Processing Mode', 'Background' is selected. Under 'Forms Selection', 'Customer' is set to 'ACL', and 'Form Type', 'Language Key', and 'Form Version' are all set to empty fields. Under 'Forms Status', 'Initial Transfer' is checked, while 'Reprocess Forms in Error' and 'Locked Forms' are unchecked. Under 'Record Selection', 'Forms ID' is set to '0'.

The Form Posting Engine should be run as a background job multiple times per day; for example it could be run once every hour depending on the business requirements.

The option 'Initial Transfer' should be selected for background processing. The options 'Reprocess Forms in Error' and 'Locked Forms' should not be selected.

The output written to the spool shows all forms posted.

3.5.4 Form Clean-up

The Cleanup Program allows you to clean unwanted forms and associated table entries from your system to help keep the FLM tables optimized.

Program: /FLM/FORM_CLEANUP

It is recommended that the clean-up utility is run daily to remove unwanted forms. These forms have been rendered but not submitted, so remain in their Initial status.

For offline forms the deletion window (shown above as 30 days) should be set at the point in time after which no submissions are accepted for the form type.

For on-line forms the deletion window should be set to 1 day.

Typically there would be one variant for on-line forms and one variant for off-line forms for the clean up utility background job. Alternatively a separate variant could be used for each form type.

The output written to the spool shows all forms removed. The form history table is not deleted and records that the form has been removed.

As of FLM 295 SP2 a "Clean Locks Only" variant can be set to clear out locks that didn't clear automatically due to timeouts or exit events that aren't caught. The locks will be removed based their age and on the setting to set the lifespan the Lock Table Entry Max Lifespan in System Specific Settings.

3.6 Backups

All configuration, customizing and form data for the FLM Add-ON is stored in the local SAP System Database and is covered by normal database backup procedures.

The FLM Prortal WDPJ Component configuration parameters are stored in the SAP J2EE Configtool and will be covered by normal backup procedures for the Java Stack. No application or customizing data is stored on the Java Stack.

3.7 Restart and Recovery

Recovering from system failure follows normal SAP procedures given that all associated data is stored inside the SAP System Database.

Last modified on 4/9/2012 11:07 AM - Copyright Arch 2011.