

WAY4™ Magnetic Stripe Card Issuing

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Introduction

The WAY4™ Issuing Module and PIN Management and Electric Personalisation subsystems are used to issue bankcards.



Data required to personalise cards is generated by a bank or processing centre workstation connected to a hardware security module (see the "Configuring Hardware Security Modules" section of the document "Configuring WAY4™ for Magnetic Stripe Card Issuing"). A specialised printer for printing PIN mailers is connected to this hardware security module.

This document is intended for WAY4 users, bank or processing centre employees responsible for the daily operation of the PIN Management and the Electric Personalisation subsystems.

While working with this document, it is recommended that users refer to the following reference material from OpenWay's documentation series:

- DB Manager Manual
- Issuing Module User Manual
- Configuring WAY4™ for Magnetic Stripe Card Issuing
- Configuring WAY4™ for Smart Card Issuing

The following conventions are used throughout this document:

- Field labels in screen forms are typed in *italics*
- Button labels used in screen forms are placed in square brackets, such as [Approve]
- Menu selection sequences are shown with the use of arrows; for instance, Issuing → Contracts Input & Update
- Item selection sequences in the system menu, are shown with the use of different arrows, as in Database => Change password
- Key combinations used while working with DB Manager are shown in angular brackets such as <Ctrl>+<F3>
- The names of directories and/or files that vary for each local instance of the program are also displayed in angular brackets, like <OWS_HOME>
- Warnings that there is a risk of making an incorrect action are marked with the  sign
- Messages marked with the  sign contain information about important features, additional facilities, or the optimal use of certain functions of the system

Chapter 1. Card Issuing Steps

Issuing bankcards in WAY4 consists of the following steps:

- Creating card contracts in the Issuing Module and exporting jobs to PIN Management (see the "Card Issuing" section of the Issuing Module User Manual).
- Importing jobs into PIN Management.
- Performing jobs in the hardware security module (HSM); at this step, the HSM will generate data required to personalise cards (PIN codes and card verification values will be calculated) and print out the PIN mailers using a specialised printer.
- Exporting the data generated by the hardware security module to the Issuing Module and Electric Personalisation.
- Personalising the cards, i.e. embossing necessary information on the plastic and writing data to the magnetic stripe.

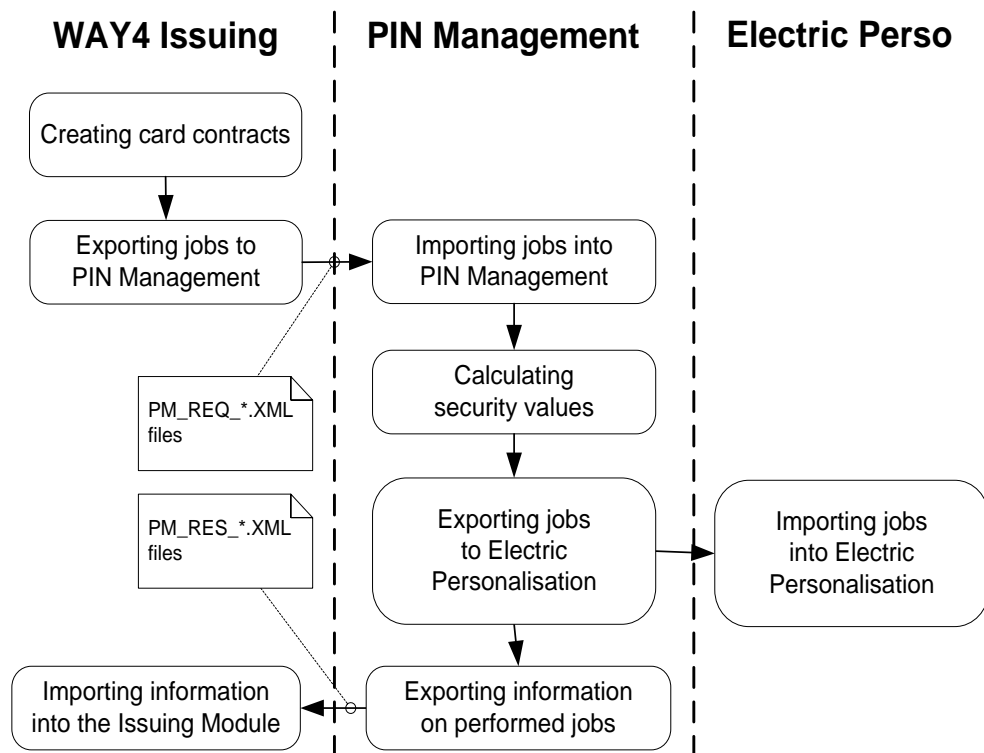


Fig. 1. Issuing bank cards in WAY4

Chapter 2. PIN Management

The PIN Management subsystem is used to process card issuing jobs, i.e. to calculate data required to personalise cards on the hardware security module and to print out PIN mailers.

The following terminology is used throughout this document: a task corresponds to a request to issue a plastic card for a card contract. Tasks are combined into jobs. In PIN Management, a task is imported and processed as part of a job.

To access PIN Management, select the "Full → Issuing → PIN Management" user menu folder (see Fig. 2).

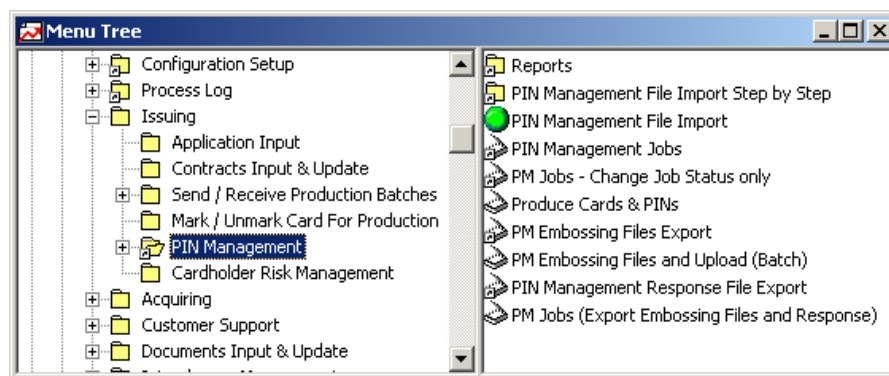


Fig. 2. Menu items of the PIN Management subsystem

Importing Jobs into PIN Management

To import card and PIN mailer issuing jobs, select the "Full → Issuing → PIN Management → PIN Management File Import" user menu item (see Fig. 2 in the section "PIN Management"). This is a complex menu item. It consecutively executes the following menu items located in the "Full → Issuing → PIN Management → PIN Management File Import Step by Step" menu folder:

- Load PM Jobs – imports data into PIN Management but does not check data correctness or the availability of the configuration required for its processing.

Imported tasks are assigned the "Preloaded" status.

- Start PM Task Preprocessing – controls imported data correctness and checks whether the configuration required for its processing is set up in the subsystem.

Tasks that have passed the check are assigned the "Loaded" status.

Tasks that have failed the check are assigned the "Preloaded with Error" status.

This process is executed in background mode.

- Wait for the Last Process – this menu item is used to block operation of the DB Manager user interface while the process started through the "Start PM Task Preprocessing" menu item is running.
- Update Preprocessed Jobs – if all tasks in a job have passed the check, the job is assigned the "Loaded" status; if any of the tasks has failed the check, the job is assigned the "Preloaded with Error" status.
- "PM Jobs (Export Embossing Files and Responses)" – export data for embossing to the electric personalisation subsystem and export the response file to the issuing module.

The check may fail for two reasons:

- Incorrect task data – this error is a result of incorrect data generation in the Issuing Module and cannot be solved in PIN Management. However, it is possible to process job tasks that have passed the check (see the "Executing Jobs on a Hardware Security Module" section).
- A configuration required for task processing is not set up in PIN Management, e.g. necessary encryption keys are missing. In this case, set up the configuration and execute the "Start PM Task Preprocessing", "Wait for the Last Process" and "Update Preprocessed Jobs" menu items again.

As a result of executing either the "PIN Management File Import" or "Load PM Jobs" menu item, the "Load Files" dialogue box will be displayed with a list of files that can be imported (see Fig. 3).

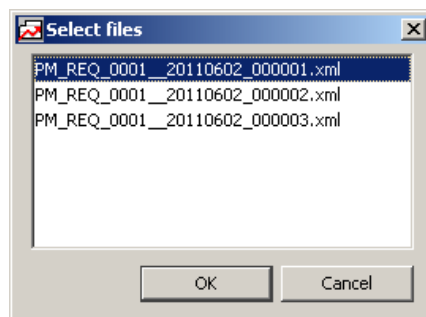


Fig. 3. List of files that can be imported into the PIN Management subsystem

To select the files to be imported, hold down the <Ctrl> key while clicking their names in the list.

When the required files are selected, click the [OK] button.

Executing Jobs on a Hardware Security Module

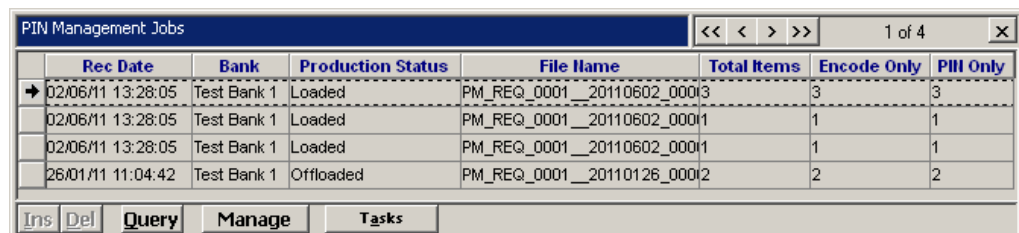
A task is executed on the hardware security module as part of a certain job. The "Loaded" status is automatically assigned to a job if all its tasks have passed the check for correctness (see the "Importing Jobs into PIN Management" section).

If a job contains tasks that for some reason fail the check, it is still possible to process the tasks that have passed the check. For this, manually assign the "Loaded" status to the job.

To execute tasks included in a job on the HSM, manually change its status to "To Produce" (see the "Selecting Card Issuing Jobs" section) and start job processing (see the "Processing Jobs" section).

Selecting Card Issuing Jobs

Job statuses (see Fig. 6) are managed through the "PIN Management Jobs" form (see Fig. 4). To open this form, select the "Full → Issuing → PIN Management → PIN Management Jobs" menu item.



The screenshot shows a window titled "PIN Management Jobs" with a table of job tasks. The table has columns: Rec Date, Bank, Production Status, File Name, Total Items, Encode Only, and PIN Only. There are four rows of data. Below the table are buttons: Ins, Del, Query, Manage, and Tasks. The window also shows navigation arrows and a page indicator "1 of 4".

| Rec Date | Bank | Production Status | File Name | Total Items | Encode Only | PIN Only |
|-------------------|-------------|-------------------|----------------------------|-------------|-------------|----------|
| 02/06/11 13:28:05 | Test Bank 1 | Loaded | PM_REQ_0001_20110602_00013 | 3 | 3 | 3 |
| 02/06/11 13:28:05 | Test Bank 1 | Loaded | PM_REQ_0001_20110602_00011 | 1 | 1 | 1 |
| 02/06/11 13:28:05 | Test Bank 1 | Loaded | PM_REQ_0001_20110602_00011 | 1 | 1 | 1 |
| 26/01/11 11:04:42 | Test Bank 1 | Offloaded | PM_REQ_0001_20110126_00012 | 2 | 2 | 2 |

Fig. 4. List of tasks imported from the Issuing Module

The form contains the following fields:

- *Rec Date* – time and date when the job was imported into PIN Management.
- *Bank* – financial institution name.
- *File Name* – name of job file.
- *Total Items* – number of cards and/or PIN mailers to be issued.
- *Encode Only* – number of cards to be issued.
- *PIN Only* – number of PIN mailers to be printed.
- *Status* – job status; the following values can be specified in this field:
 - Preloaded – the job has been imported into PIN Management, but tasks have not yet been checked for correctness.
 - Preloaded with Errors – the job contains tasks that have failed the check for correctness.
 - Loaded – if the status is assigned automatically, all tasks in the job have passed the check for correctness.
 - To Produce – the job has been marked to be processed on the hardware security module.
 - Encoded – data of several cards in the job has been processed, but the PIN mailers have not been printed.
 - Mailer Printed – job card data has been processed, the PIN mailers have been printed, but the results of several cards have not been prepared to be exported to the Issuing Module.
 - Produced – the tasks contained in the job have been completed, i.e. the data required to personalise the cards has been generated, the PIN mailers have been printed, and the results have been prepared to be exported to the Issuing Module.

- Offloaded – the results of task execution have been exported to the Issuing Module and to the external device that will emboss the required information on the card surface and write data to its magnetic stripe
- Error – an error occurred while the hardware security module was processing the job.

Clicking the [Manage] button in the "PIN Management Jobs" form opens a context menu containing the following items:

- "New Status – All Batch" – change the status of the job and all tasks in the batch. When this item is selected, the "Set PM Job Status" form (see Fig. 5) will be displayed.

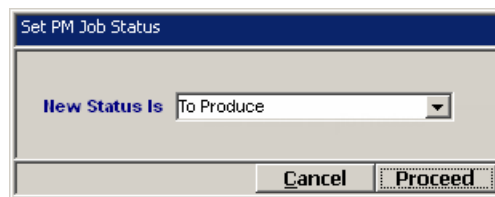


Fig. 5. Form for setting job status

Select a new status in the *New Status Is* field of this form and click the [Proceed] button. As a result, the status of the job and all tasks in the job will be changed.

- "New Status – Job Only" – change the status of the job without changing task statuses. This item is similar to the "New Status – All Batch" item and is used when a portion of the tasks in the job did not pass the check during import but it was decided to process the remaining tasks. In this case, select the "Loaded" value in the *New Status Is* field of the "Set PM Job Status" form (see Fig. 5), after which only the job status will be changed.
- "New Status – ReProduce" – change the status of the job and all tasks in the job to "To Produce". This menu item is only available when a job with the "Error" status is selected. This item is used, for example, when restoring (after a temporary interruption) the connection with the hardware security module or correcting configurations set earlier for processing jobs in PIN Management.
- "Produce Job" – starts the process of job processing for this job (see the section "Processing Jobs"). This menu item is only available when a job with the "To Produce" status is selected.
- "Produce All Jobs" – starts the process of job processing for all jobs with the "To Produce" status (see the section "Processing Jobs").



When this menu item is selected, the process "PM Security Calc & Mailer Printing" (see Fig. 11 in the section "Processing Jobs") will be started for each job, which may take a significant amount of time. To cancel job processing, for each process, the [Cancel] button in the process execution window must be clicked.

- "Wipe" – delete a job from the list. This item is used, for example, to delete jobs with the "Offloaded" status.

If the "Loaded" status is assigned to the job, it is necessary to manually change the job status to "To Produce". To do so, select the item "New Status – All Batch" from the context menu, and select the "To Produce" value in the *New Status Is* field of the "Set PM Job Status" form.

The "Set PM Job Status" form can also be used to transfer card issuing jobs to the corresponding status, for example, if an error occurs (see Fig. 6). The "New Status – All Batch" item must be selected in the context menu.

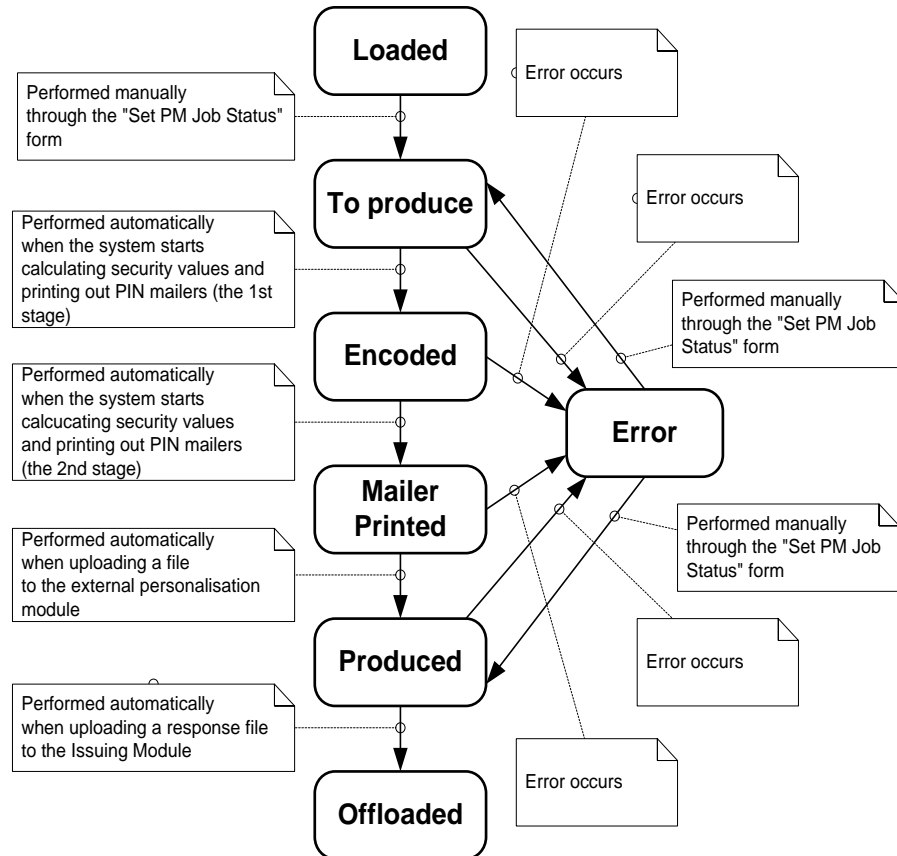


Fig. 6. Job statuses

To see the list of tasks included in the job, click the [Tasks] button in the "PIN Management Jobs" form. This will display the "Tasks for <name of job file>" form (see Fig. 7).


| | | | | | | | | | | |
|---|------------------|---------------|-------------|-----------|-------------------|-------------|--|-----------|------------|----------|
| Tasks for PM_REQ_0001_20110602_000001.xml | | | | << < > >> | | 3 of 3 | | b x | | |
| | PAII | PM Parms | Prod Type | Prod Code | Production Status | Log Message | | | | |
| | 4015500164965836 | VISA+Electron | Replace All | 0 | Loaded | | | | | |
| | 4015500192009300 | VISA+Electron | Replace All | 0 | Loaded | | | | | |
| → | 4015500130883949 | VISA+Electron | Replace All | 0 | Loaded | | | | | |
| | | | | | | | | | | |
| Ins Del | | Query | SetStatus | OUT Parms | | IN Parms | | Add Parms | Pm.Address | Messages |

Fig. 7. List of tasks included in the job

This form contains the following fields:

- *PAN* – card number.
- *PM Params* – card product type.
- *Prod Type* – card issuing method:


- Replace All – a new card will be issued and a PIN mailer will be printed, e.g. when a new card is issued or a stolen card is replaced.
- Replace Plastic – only a card will be issued, e.g. to replace an expired card.
- Reorder PIN – a new PIN will be issued.
- Replace CVV – a card with a new CVV value will be issued.
- Replace PIN – the same PIN mailer will be printed again (this action is only allowed by a special agreement with the system vendor).
- Replace Add Parms – in the current system version, this production type is used to issue PIN2.
- Replace Chip Data – calculation of encryption values for smart cards (no PIN code is generated and no PIN mailer is printed).
- *Production Code* – error code
- *Production Status* – job status (see Fig. 6)

 If the "To Produce" status has been specified for the job to which a task belongs, its *Production Status* field will be left blank.

- *Log Message* – a message generated as a result of executing a process.

Clicking the [SetStatus] button of this form opens a context menu containing the following items:

- "SetStatus" – change task status. Selecting this menu item opens the "Set PM Job Status" form (see Fig. 5).

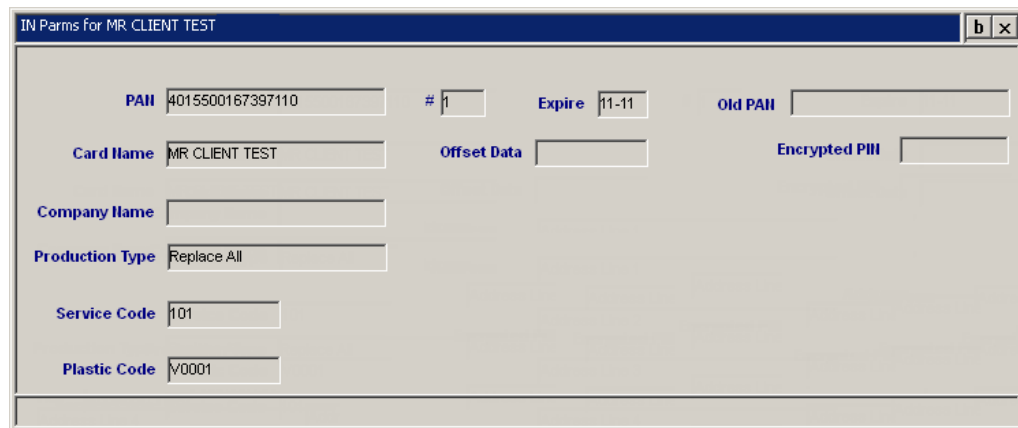
 Note that in the "Set PM Job Status" form an additional status "Skip production" for tasks in the job has appeared. If this value is set, no card will be issued. This value is used, for example, if an error occurs when entering client data.

- "SetStatus-All" – change the status of all tasks in the job. This item is the same as the "SetStatus" item.

The [Messages] button is used to access messages generated by the system during process execution, including error messages (for more information, see the "'Messages' Menu Item" section in the DB Manager Administrator Manual).

The [Pm Address] button opens the "Pm.Address for <name of client>" which contains address information, such as a plastic delivery address or a PIN mailer delivery address.

The [IN Parms] button in the "Tasks for <name of job file>" form (see Fig. 7) is used to display the "IN Parms for <client name>" form (see Fig. 8). It contains the card details imported from the Issuing Module.

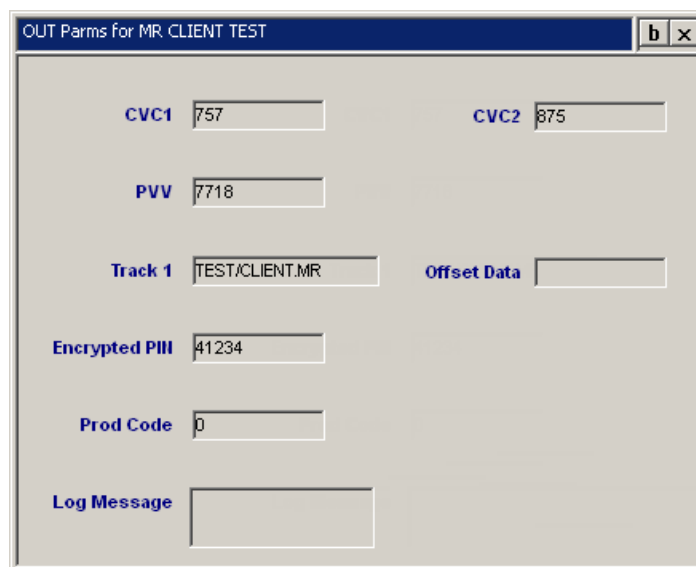


| | | | | | | | |
|-----------------|------------------|-------------|---|---------------|-------|---------|--|
| PAI | 4015500167397110 | # | 1 | Expire | 11-11 | Old PAI | |
| Card Name | MR CLIENT TEST | Offset Data | | Encrypted PIN | | | |
| Company Name | | | | | | | |
| Production Type | Replace All | | | | | | |
| Service Code | 101 | | | | | | |
| Plastic Code | V0001 | | | | | | |

Fig. 8. Card details received from the Issuing Module

i Note that if the card is issued for the first time or uses the CVV value only, the *Offset Data* and *Encrypted PIN* fields in its form are left blank.

The [OUT Params] button of the "Tasks for <name of job file>" form (see Fig. 7) opens the "OUT Params for <client name>" form (see Fig. 9) containing information about card parameters received after processing tasks on the hardware security module.



| | | | |
|---------------|----------------|-------------|-----|
| CVC1 | 757 | CVC2 | 875 |
| PVV | 7718 | | |
| Track 1 | TEST/CLIENT.MR | Offset Data | |
| Encrypted PIN | 41234 | | |
| Prod Code | 0 | | |
| Log Message | | | |

Fig. 9. Card parameters received after processing tasks on the hardware security module

The [Add Params] button in the "Tasks for <name of job file>" form (see Fig. 7) is used to display the "Add Params for <card>" form (see Fig. 10). The form contains additional data such as track templates and information required for smart card issuing.

| Add Params for MR_CLIENT TEST | | | |
|--|------------|---------|--|
| | | 6 of 12 | |
| Data Value | Code | Seq # | |
| PVKH+PVV+"0"+OFFSET_DATA+CVC1 | TRACK2_DDF | 1 | |
| PVKH+PVV+"0"+OFFSET_DATA+CVC1+"00"+CVC1+"000000" | TRACK1_DDF | 1 | |
| 1 | PVKI | 1 | |
| 00 | MKDI | 1 | |
| 00 | CVER | 1 | |
| → 0000 | 9F08 | 1 | |
| 01 | 87 | 1 | |
| 01 | 5F34 | 1 | |
| 0101 | 5F30 | 1 | |
| 101101 | 5F25 | 1 | |
| 111130 | 5F24 | 1 | |
| 4015500167397110 | 5A | 1 | |

Fig. 10. Additional parameters specified for smart cards

Processing Jobs

The process of job processing is started on the hardware security module in one of the following ways:

- In the "PIN Management Jobs" form (see Fig. 4 in the section "Selecting Card Issuing Jobs"), click the [Manage] button and select the item "Produce Job" or "Produce All Jobs" from the context menu.
- Select the "Full → Issuing → PIN Management → Produce Cards & PINs" user menu item.

When the job processing process is started, the "PM. Security Calc & Mailer Printing" process dialogue box (see Fig. 11) will be displayed.

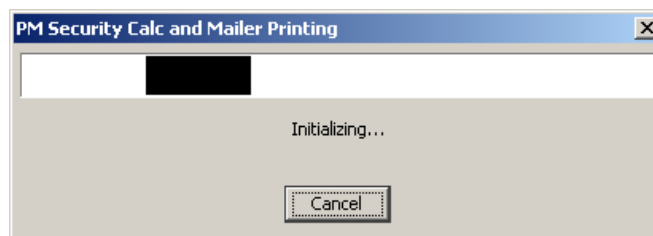


Fig. 11. Process executed by the hardware security module

The hardware security module performs jobs in the following two steps:

- Generating card personalisation data.
- Printing PIN mailers.

When the first step is completed, the second step begins, and a message will be displayed that the PIN mailer printer should be prepared (see Fig. 12).

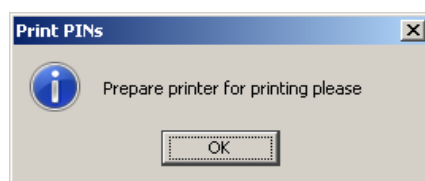


Fig. 12. Request to prepare the printer

Clicking the [OK] button opens a dialogue box offering to print a test PIN mailer (see Fig. 13).

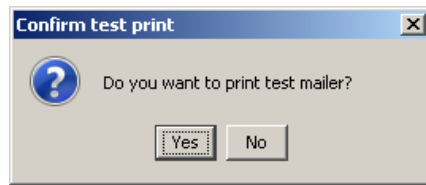


Fig. 13. Request to confirm printing of the test mailer

If the [Yes] button is clicked, a test PIN mailer will be printed. If the [No] button is clicked, the PIN mailers included in the job will be printed.

i Note that when working with some models of PIN printers, it is necessary to stop printing PIN mailers to realign the paper manually. The *Realignment* parameter of the "Security Device" form (Full → Configuration Setup → Card Production Setup → Security Device) is used to specify how many PIN mailers the printer will print before it automatically stops to realign the paper (see the "Configuring Hardware Security Module Parameters" section of the document "Configuring WAY4™ for Magnetic Stripe Card Issuing"). Every time the printer stops to realign the paper, a new offer to print a test PIN mailer will be displayed.

If an error occurs while testing, the system will ask the user if it should continue performing the job "Test printing error. Do you want to interrupt printing?" Click [Yes] to return to testing or click [No] to cancel the job.

If no error is found while generating the data or printing out the PIN mailers, the "Mailer Printed" value is specified in the *Status* field of the corresponding job record in the "PIN Management Jobs" form (see Fig. 4 in the "Selecting Card Issuing Jobs" section).

If an error occurs while transferring the data to the hardware security module, generating the data, or printing out the PIN mailers, a corresponding program error message is displayed (see "Card and PIN Mailer Issuing Errors").

If an error occurs while issuing a card or printing out a PIN mailer, the "Error" value is specified in the *Status* field of the corresponding job record in the "PIN Management Jobs" form.

Exporting Performed Job Data

Exporting information on performed jobs consists of two steps:

- Generating a file to be sent to Electric Personalisation
- Generating a special-format file to be exported to the Issuing Module

To generate a file that will be sent to Electric Personalisation, select the "Full → Issuing → PIN Management → PM Embossing Files Export" menu item. This will display the "PM Embossing Files Export" form (see Fig. 14).

| PM Embossing Files Export | | | | | | | |
|---|-------------------|-------------|---------------------------------|-------------|-------------|----------|------------|
| | | | | << < > >> | | 1 of 3 | |
| | Rec Date | Bank | File Name | Total Items | Encode Only | PIN Only | Batch ID |
| → | 14/06/11 13:07:19 | Test Bank 1 | PM_REQ_0001_20110614_000003.xml | 1 | 1 | 1 | 0000000009 |
| | 14/06/11 13:07:19 | Test Bank 1 | PM_REQ_0001_20110614_000004.xml | 3 | 3 | 3 | 0000000010 |
| | 14/06/11 13:17:34 | Test Bank 1 | PM_REQ_0001_20110614_000005.xml | 1 | 1 | 1 | 0000000011 |
| <input type="button" value="Ins"/> <input type="button" value="Del"/> <input type="button" value="Query"/> <input type="button" value="Upload"/> <input type="button" value="PM Task"/> | | | | | | | |

Fig. 14. List of files used to generate files for the Electric Personalisation subsystem


To generate a file for the electric personalisation subsystem, select a file with a task executed on the hardware security module and click [Upload].

To generate a file to be exported to the Issuing Module, select the "Full → Issuing → PIN Management → PIN Management Response File Export" menu item. This will display the "PIN Management Response File Export" form (see Fig. 15).

| PIN Management Response File Export | | | | | | | |
|---|-------------------|-------------|---------------------------------|-------------|-------------|----------|------------|
| | | | | << < > >> | | 1 of 3 | |
| | Rec Date | Bank | File Name | Total Items | Encode Only | PIN Only | Batch ID |
| → | 14/06/11 13:07:19 | Test Bank 1 | PM_REQ_0001_20110614_000003.xml | 1 | 1 | 1 | 0000000009 |
| | 14/06/11 13:17:34 | Test Bank 1 | PM_REQ_0001_20110614_000005.xml | 1 | 1 | 1 | 0000000011 |
| | 14/06/11 13:07:19 | Test Bank 1 | PM_REQ_0001_20110614_000004.xml | 3 | 3 | 3 | 0000000010 |
| <input type="button" value="Ins"/> <input type="button" value="Del"/> <input type="button" value="Query"/> <input type="button" value="Upload"/> <input type="button" value="PM Task"/> | | | | | | | |

Fig. 15. List of files to be exported from the PIN Management subsystem

To export data on performed jobs, select the file and click the [Upload] button.

 Note that only those files for which tasks have been generated for the electric personalisation subsystem will be contained in the "PIN Management Response File Export" form.

Files to be sent to Electric Personalisation and the Issuing Module can be generated in batch mode.

To do this, select the "Full → Issuing → PIN Management → PM Embossing Files and Export (Batch)" menu item (see Fig. 2 in the section "PIN Management").

As a result, the system will process all the jobs with the "Mailer Printed" status, i.e. the jobs for which, using the hardware security module, the required data has been generated and the PIN mailers have been printed.

After the performed job is exported from PIN Management to the Issuing Module, the card is considered issued.

Chapter 3. Card and PIN Mailer Issuing Errors

The following table describes error messages that may appear during job execution and suggests steps to be made by the system user.

| Message | Cause | Instruction |
|---------------------------------|--|---|
| "TEST ERROR" HSM | Hardware security module test error. | Check if the hardware security module is properly connected and the correct operation mode is selected. |
| "TIMEOUT" | The hardware security module does not respond. | |
| "SYSTEM ERROR" | The hardware security module connection port is locked by another program. | |
| "HANDSHAKE ERROR" | RS-232 handshake hardware error (no response). | |
| "OVERFLOW ERROR" | Data transfer buffer overflow. | Restart DB Manager and process the job again. |
| "COMMUNICATION ERROR" | Fatal communication protocol error (usually when the connection to the ESM hardware security module is established). | Check if the hardware security module is properly connected and process the job again. |
| "DATA FORMAT ERROR" | Wrong format of data received from the hardware security module. | Ask the system administrator to check the job data and the current settings of the system and/or to import the data from the Issuing Module again. |
| "DATA INTEGRITY ERROR" | Missing data in the card issuing job. | |
| "HSM ANSWER ERROR <Error Code>" | Hardware security module data processing error or PIN mailer printout error. | Look up the code in the "Host Security Module 8000. Programmer's Manual" or PayShield 9000 Host Command Reference Manual (in most cases the error code corresponds to that returned by the HSM after the latest instruction is executed). |

In the general case, it is recommended to do the following to analyse error causes:

- Select the "Full → Issuing → PIN Management → PIN Management Jobs" user menu item to open the "PIN Management Jobs" form (see Fig. 4 in the "Selecting Card Issuing Jobs" section)
- In this form, select the job that resulted in the error (its *Status* field contains the "Error" value) and click the [Tasks] button to display the "Tasks for <name of job file>" form (see Fig. 16)

| | | | | | | | | | | | | | | | | | |
|---|------------------|---------------|-------------|-----------|-------------------|-----------------------|--|-----------|--|----------|--|-----------|--|------------|--|----------|--|
| Tasks for PM_REQ_0001_20110614_000004.xml | | | | | | << < > >> | | 3 of 3 | | b x | | | | | | | |
| | PAI | PM Parms | Prod Type | Prod Code | Production Status | Log Message | | | | | | | | | | | |
| | 4015500109319461 | VISA+Electron | Replace All | 0 | Mailer Printed | | | | | | | | | | | | |
| | 4015500107077194 | VISA+Electron | Replace All | 0 | Produced | | | | | | | | | | | | |
| → | 4015500150977696 | VISA+Electron | Replace All | 1 | Error | HSM ANSWER ERROR [10] | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Ins | | Del | | Query | | SetStatus | | OUT Parms | | IN Parms | | Add Parms | | Pm.Address | | Messages | |

Fig. 16. Job results after an error occurred

- The form presents the list of cards included in the job; their *Production Status* field values correspond to the data processing step at which the error occurred:
 - To Produce – the data is not processed.
 - Encoded – the card data is processed but the PIN mailer is not printed.
 - Mailer Printed – the card data is processed and the PIN mailer is printed.
 - Produced – the card data is completely processed.
 - Skip production – this card will not be issued.
 - Error – an error occurred while processing the data.
- In the "Tasks for <name of job file>" form select the card processed with an error and click the [OUT Params] button. As a result, the "OUT Params for <card>" form will be displayed (see Fig. 17). This form contains the card details received from the hardware security module, including description of the error that occurred while issuing the card.

| OUT Params for MISS TEST CARDHOLDER | |
|-------------------------------------|--|
| CVC1 | 200 |
| CVC2 | 413 |
| PPV | 9906 |
| Track 1 | CARDHOLDER/TEST.MIS |
| Offset Data | |
| Encrypted PIN | 41234 |
| Prod Code | 1 |
| Log Message | HSM ANSWER ERROR [10] IN ANSWER [1234DH10] |

Fig. 17. Card contract details received from the encryption device

This form contains the following fields:

- CVC1* – value generated by the hardware security module that is used to verify the card data.
- CVC2* – value generated by the hardware security module that is used to verify the card data.
- PPV* – value generated by the hardware security module that is used to verify the PIN.

- *Track 1* – data to be recorded on Track 1 of the card magnetic stripe.
- *Offset Data* – value generated by the hardware security module that is used to verify the PIN by the IBM 3624 method (The functionality remains for backward compatibility. Its support is limited and its use is not recommended).
- *Encrypted PIN* – encrypted PIN.
- *Prod Code* – contains "0" if the task has been successfully completed or "1" if an error occurred while generating personalisation data.
- *Log Message* – additional information in case an error occurred while generating personalisation data.

Clicking the [Add Parms] button in the "Tasks for <name of job file>" form, opens the "Add Parms for <card>" form (see Fig. 10 in the "Selecting Card Issuing Jobs" section). The form contains additional smart card parameters used when processing or exporting jobs.

Chapter 4. Electric Personalisation

The Electric Personalisation subsystem is used at the final step of card issuing. It contains a special device called an embosser that is used to personalise a card, i.e. emboss necessary information on the plastic and write data to the magnetic stripe.

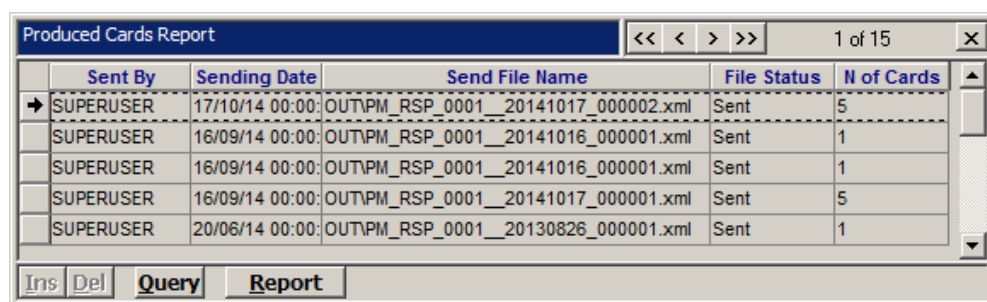
Personalisation data is imported into this subsystem from PIN Management in a special-format file.

Chapter 5. Generating Job Reports

"Produced Cards Report"

The "Produced Cards Report" is used to view information about jobs executed and exported from PIN Management.

To generate the report, select the user menu item "Full → Issuing → PIN Management → Reports → Produced Cards Report". The "Produced Cards Report" form will be displayed (see Fig. 18) with a list of files exported from PIN Management.



The screenshot shows a web application window titled "Produced Cards Report". It features a table with columns: "Sent By", "Sending Date", "Send File Name", "File Status", and "N of Cards". There are navigation buttons at the top right (back, forward, first, last) and a "1 of 15" indicator. At the bottom, there are buttons for "Ins", "Del", "Query", and "Report".

| | Sent By | Sending Date | Send File Name | File Status | N of Cards |
|---|-----------|----------------|------------------------------------|-------------|------------|
| → | SUPERUSER | 17/10/14 00:00 | OUTPM_RSP_0001_20141017_000002.xml | Sent | 5 |
| | SUPERUSER | 16/09/14 00:00 | OUTPM_RSP_0001_20141016_000001.xml | Sent | 1 |
| | SUPERUSER | 16/09/14 00:00 | OUTPM_RSP_0001_20141016_000001.xml | Sent | 1 |
| | SUPERUSER | 16/09/14 00:00 | OUTPM_RSP_0001_20141017_000001.xml | Sent | 5 |
| | SUPERUSER | 20/06/14 00:00 | OUTPM_RSP_0001_20130826_000001.xml | Sent | 1 |

Fig. 18. List of files exported from PIN management

This form contains the following fields:

- *Sent By* – user who exported the file with information about cards produced.
- *Sending Date* – banking date and time of file export.
- *File Name* – file name.
- *File Status* – file status.
- *N of Cards* – number of issued cards in the file.

To generate a report, select a file in this form and click the [Report] button. A report will be generated on Oracle Report Server. A sample report is shown in Fig. 19.

Produced Cards

File: OUT\PM_RSP_0001__20141017_0
 Report Created on: 17/10/2014 11:25:17
 Printed by: SUPERUSER
 Number of Pages: 1

Produced Cards

| File Name: OUT\PM_RSP_0001__20141017 File Date: 17/10/2014 Batch ID: 0000000014 | | | | | | Status: Offloaded |
|---|-------------------------------|------------------|-------------------|---------|-------------|-------------------|
| # | Card Name | PAN | Expire | Plastic | Prod Type | Status |
| 1 | MR WILLIAM SMITH TEST COMPANY | 4015500139011773 | 15-10 | V0003 | Replace All | Offloaded |
| 2 | MR CLIENT TEST | 4015500139936417 | 15-10 | V0003 | Replace All | Offloaded |
| 3 | MR CLIENT TEST | 4015500176694796 | 15-10 | V0003 | Replace All | Offloaded |
| 4 | MR WILLIAM SMITH TEST COMPANY | 4015500195560473 | 15-10 | V0003 | Replace All | Offloaded |
| 5 | MR WILLIAM SMITH TEST COMPANY | 4025240163004133 | 15-10 | V0006 | Replace All | Offloaded |
| Total | | | N of Plastics: | | 5 | |
| | | | N of PIN Mailers: | | 5 | |

Report created on: 17/10/2014 11:25:17

by: SUPERUSER

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Fig. 19. Report on executed jobs exported from PIN Management

The report header contains the name of the report, name of the file for which the report was generated, date and time of report creation, name of the user who created the report and number of pages.

The body of the report contains the following information:

- # - sequence number of the card in the file.
- *Card Name* – information about the cardholder and name of the company that will be embossed on the plastic.
- *PAN* – card number.
- *Expire* – card expiration date in "YY-MM" format.
- *Plastic* – code of the plastic type used for card embossing; this code determines the plastic design.
- *Prod Type* – card production type.
- *Status* – status of the card production job.
- Totals (*Total*)
 - N of Plastics – total number of cards issued.
 - N of PIN Mailers – total number of PIN mailers printed.

"Embossing Files Report"

The "Embossing Files Report" is used to view information about files exported to Electronic Personalisation.

To generate the report, select the user menu item "Full → Issuing → PIN Management → Reports → Embossing Files Report". The "Date From – To" form will be displayed (see Fig. 20).

Fig. 20. Setting the report generation period

In this form's *Date From* and *Date To* fields, specify the banking dates of the start and end of the period for which the report is being generated.

After the [Proceed] button is clicked, the report will be generated on Oracle Report Server. A sample report is shown in Fig. 21.

| Embossing Files Report | | | | | | |
|---------------------------------|--------------|---------------------|---------|------------|---------|------------|
| | | | From | 01/01/2014 | to | 01/01/2015 |
| ReqFile | EmbFile | Date&Time | N Plast | N Pin | Plastic | |
| PM_REQ_0001_20141016_000001.xml | V0003001.001 | 16/10/2014 16:07:57 | 1 | 1 | V0003 | |
| PM_REQ_0001_20141017_000001.xml | V0003002.001 | 17/10/2014 09:43:43 | 3 | 3 | V0003 | |
| PM_REQ_0001_20141017_000002.xml | V0003003.001 | 17/10/2014 10:52:55 | 4 | 4 | V0003 | |


Created on: 17/10/2014 12:57:40 by: SUPERUSER Page 1 of 1

Fig. 21. Report on files exported to Electronic Personalisation

The report header contains the following information: report name and period for which the report has been created.

The report body contains the following information:

- *ReqFile* - name of card file.
- *EmbFile* – name of Electronic Personalisation file.
- *Date & Time* – date and time of generating Electronic Personalisation file.
- *N Plast* – total number of cards issued for a job file.
- *N Pin* – total number of PIN mailers printed for a job file.

 If a smart card contains applets in addition to the main financial application, each application will be included in this report by default. For example, if a MasterCard PayPass card contains one financial application and one applet, for this card the value of each of the report's *N Plast* and *N Pin* fields will be increased by two (although the card has only one plastic and one PIN mailer). For the report to include information about plastics

(financial applications) only, the "P_SHOW_ONLY_MAIN_APPLETS" report parameter must be set to "Y" (for more information about specifying parameters, see the section "'Oracle Report' Type" of the document "Menu Editor"). The default value of the parameter is "N" (i.e. the report includes information about each of the card's applications).

- *Plastic* – code of the plastic type used for card embossing; this code determines the plastic design.