

Transaction Notifications

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Introduction

In WAY4™ it is possible to generate notifications about transactions made with a card and crediting/debiting funds to/from a card account. Messages are generated on the basis of authorisation and financial documents containing information about transactions that have been made and can be sent to clients by e-mail or SMS.



General principles for setting up message templates and localising them are described in the document "Configuration of Client Messages".

This document is intended for bank or processing centre employees responsible for WAY4 setup and describes general principles and setup of transaction notifications.

It is recommended to refer to the following resources from the WAY4™ documentation series when working with this document:

- "Events"
- "Configuration of Client Messages"
- "Issuing Module"


The following notation is used throughout the document:

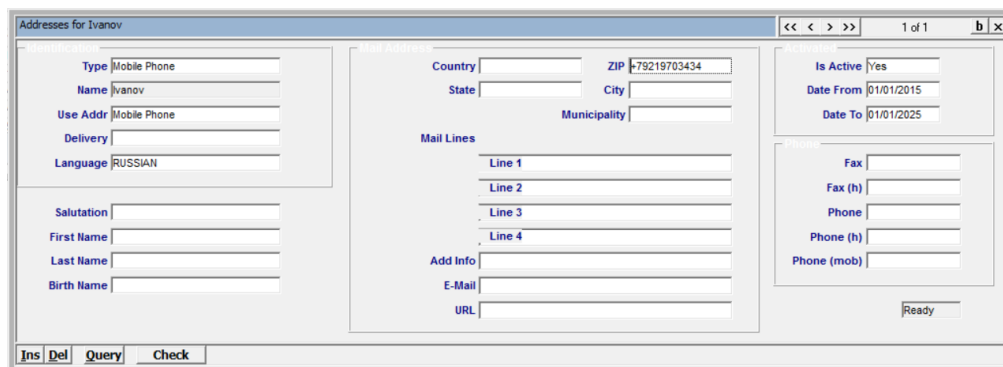
- Screen form field names are shown in *italics*.
- Screen form button labels are encased in square brackets, for example [Approve].
- Sequences for selecting user menu items are shown with arrows as follows: "Configuration Setup → Contract Types"
- Warnings about potentially hazardous situations or actions are marked with the  sign.
- Messages marked with the  sign contain information about important characteristics, additional features or the best use of certain system functions.

Chapter 1. Recipient Data

Addresses for delivering notifications are determined based on data registered in the form with additional client and contract addresses (see the paragraph "Address Support" of the document "Issuing Module"). The additional address type (the *Type* field in the same form) can be any of those registered in the "Address Types" list of address types ("Full → Configuration Setup → Client Classifiers → Address Types").

If a specific address type is to be used for sending SMS notifications, the number of the recipient's mobile phone is registered in the *ZIP* field (see Fig. 1). To send notifications by e-mail, the corresponding address is registered in the *E-Mail* field.

 It is recommended to configure one address type for one telephone number. If two address types are registered in the system for the same telephone number, it will be impossible to change this telephone number from an ATM.



The screenshot shows a web form titled "Addresses for Ivanov". The form is divided into several sections. On the left, there is a "Identification" section with fields for "Type" (set to "Mobile Phone"), "Name" (set to "Ivanov"), "Use Addr" (set to "Mobile Phone"), "Delivery", "Language" (set to "RUSSIAN"), "Salutation", "First Name", "Last Name", and "Birth Name". In the center, there is a "Mail Address" section with fields for "Country", "State", "City", "Municipality", "ZIP" (set to "79219703434"), "Mail Lines" (with four lines), "Add Info", "E-Mail", and "URL". On the right, there is an "Activation" section with fields for "Is Active" (set to "Yes"), "Date From" (set to "01/01/2015"), and "Date To" (set to "01/01/2025"). Below this is a "Phone" section with fields for "Fax", "Fax (h)", "Phone", "Phone (h)", and "Phone (mob)". At the bottom right, there is a "Ready" button. At the bottom left, there are buttons for "Ins", "Del", "Query", and "Check".

Fig. 1. An example of client mobile phone number registration

Chapter 2. Event Setup

Messages to be sent to clients are generated when an Event is opened. For more information about Events, see the document "Events". The set of parameters is the same for all the Event Types listed below (see Fig. 2):

- The *Contract* field must contain the "Card" value.
- *Duration Type* – "Unique".

The *Code* field must contain a predefined Event type code, generated with consideration of the following rules:

- To notify a client that an authorisation document has been created, Event types are registered with the code AUTH_<Service Class>_<Request Category>_<Response Code>, where the <Service Class> variable is mandatory and can have, for example, the following values:
 - "T" (Transaction) – card transactions.
 - "C" (Credit Limit) – operations for setting and changing credit limits.
 - "P" (Online Payment) – utilities or mobile operator service payments made by the generation of a payment order.
 - "B" (Balance Inquiry) – balance inquiry.
 - "S" (Online Statement) – request for mini-statement.
 - "X" (Additional Online Service) – additional online operation.

The <Request Category> variable is mandatory and can have one of the following values:

- "Q" (Request) – transaction request.
- "P" (Advice) – notification that a transaction has been made, including chargeback or representment.
- "R" (Reversal) – notification of reversal.
- "J" (Adjustment) – notification of transaction amount adjustment.

The <Response Code> variable is used to specify the internal three-character response code with which the system processed the document. This variable is not mandatory. It can be used to generate a message only as the result of receiving specific system response codes on a processing result. Other functionality of notification according to system response codes is described in detail in the section "Notification of Negative Response Codes" of the document "Alert Notification Messaging".

In addition, Event types can be used that as the result of an authorisation generate notifications with the following predefined codes:

- AUTH_<Service Class>_<Request Category>_NRC – notification that an authorisation message was not successfully processed; this code can be used to open an Event after any negative response code is received in response to an authorisation attempt.

- `AUTH_<Service Class>_DR` – notification of a card debit transaction that was made based on a payment order.
- `AUTH_<Service Class>_CR` – notification of a card credit transaction that was made based on a payment order.

For example, an event with the `AUTH_P_CR` (`AUTH_P_DR`) code will open for a contract credited (debited) by an online payment based on a payment order.

- `AUTH_RISK` – notification sent to an administrator if a transaction meets criteria for suspicious transactions (violates risk control rules). The notification is generated after all checks have been performed and may contain a coefficient determining the degree to which the transaction is suspicious (included in a message template using the `%TRANS_RISK_DEGREE[*format_code]%` variable).
- To notify clients of financial transactions that have been made, Events with the following codes can be registered:
 - `"NON_AUTH"` – notification of a financial transaction made without authorisation.
 - `"MTR_PAYMENT"` – payment to a card contract account.
 - `"MTR_CREDIT"` – notification that a card has been credited.
 - `"MTR_DEBIT"` – notification that a card has been debited.
 - `"MTR_FIN_REVERSE"` – notification of reversal.
 - `"MTR_FIN_ADJUST"` – notification of adjustment.




When an attempt is made to open this Event, a check is performed for whether an Event was opened earlier with the code `"AUTH_T_R"` or `"AUTH_P_R"`. If an `"AUTH_T_R"` or `"AUTH_P_R"` Event was opened, an Event with the code `"MTR_FIN_REVERSE"` will not open.


- To notify clients that funds have been blocked, Events with the following codes can be registered:
 - `"BLOCK_REQUEST"` – notification when fees with the "When Available" or "When Credit" category are blocked.
 - `"BLOCK_AMNT"` – notification when any funds are blocked in the account.
- To notify a client about a secondary transaction in a dispute cycle (for example "Chargeback" or "2nd Presentment"), Event types are registered with a code like `DISP_<Request Category>_<Chain Type>`, where the `<Request Category>` variable can have one of the following values:
 - `"ADV"` (Advice) – 2nd presentment for the entire transaction amount.
 - `"REV"` (Reversal) – presentment reversal.
 - `"ADJ"` (Adjustment) – presentment adjustment (partial reversal).
 - `"PADV"` (Partial Advice) – partial 2nd presentment.
- The `<Chain Type>` variable can have one of the following values:

- "CHB" (Chargeback) – chargeback/
- "2PR"(Representment/2nd Presentment) – 2nd presentment.
- "2CH" (Arbitration Chargeback) – 2nd chargeback.

Examples of Event type codes:

- DISP_ADV_CHB – chargeback notification.
- DISP_ADJ_2PR – partial reversal of a 2nd presentment.

 Depending on the dispute cycle direction, issuing contracts for which these Events open may act as the transaction message source or target.

 The ability to send dispute cycle transaction notifications is enabled using the DISP_NOTIFY tag in financial institution parameters. To enable the feature, set "DISP_NOTIFY=Y;" in the *Special Parms* field of the "Financial Institutions" form.

For each registered Event Type, Event messages are configured with the corresponding text and address type. For more information about configuring messages, see the document "Configuration of Client Messages".

In a message template, special variables can be used to get information from a document generated as the result of an authorization or financial operation (see "Use of Variables").

The address type for which the mobile phone was registered or the e-mail address of the notification recipient must be specified in the *Address Type* field of the form used to enter a message template.

- The %ADDR_ZIP% template is automatically set for the "SMS" delivery channel (mobile phone number is determined from the *ZIP* field of the corresponding type of address).
- The %E-MAIL% template is automatically set for the "E Mail" delivery channel (e-mail address is determined from the *E-Mail* field of the corresponding type of address).

Fig. 2 shows an example of configuring an Event used to generate a message when authorisation on a card is made.

The screenshot displays the 'Event Setup' interface. At the top, a table titled 'Issuing Event Types' shows a list of events. The selected event is 'Auth_Trans_Request' with code 'AUTH_T_Q' and duration '0'. Below this, a tabbed interface shows the 'Messages' tab. The 'Messages for Auth_Trans_Request' section contains a form for configuring a message. The form includes fields for 'Code', 'Delivery Channel' (SMS), 'Address Type' (Mobile Phone), 'Address Data' (%ADDR_ZIP%), 'From' (01/01/2015), 'To' (01/01/2025), 'Activity' (00:00), 'Sending Time' (00:00), 'Is Ready' (Not Ready), 'Subject', 'Text' (Card %CONTRACT_NUMBER:3*5%, available %AVAILABLE% %CONTRACT_CURR%, RRN=%TRANS_RET_REF_NUMBER%, AUTH CODE=%TRANS_AUTH_CODE%), and 'Details'. The bottom of the interface has tabs for 'Ins', 'Del', 'Query', 'Actions', 'Dictionary', and 'Errors'.

Contract	Name	Code	Duration	Type	Duration	Due To	Work Day	Next Event	Event Custom	Code Group	Code Post	Immediate	Special	Parms
Card	Auth_Trans_Request	AUTH_T_Q	Unique		0									

Messages for Auth_Trans_Request

Code:

Delivery Channel: SMS

Address Type: Mobile Phone

Address Data: %ADDR_ZIP%

From: 01/01/2015 To: 01/01/2025

Activity: 00:00 Sending Time: 00:00

Is Ready: Not Ready

Subject:

Text: Card %CONTRACT_NUMBER:3*5%, available %AVAILABLE% %CONTRACT_CURR%,
RRN=%TRANS_RET_REF_NUMBER%, AUTH CODE=%TRANS_AUTH_CODE%

Details:

Fig. 2. Example of configuring an Event for generating a message

Chapter 3. Use of Variables

Various WAY4 Database data can be included in a message's text by using special variables. Variables in message template text are indicated using the "%" (percent) sign. For example, if the variable %TRANS_AMOUNT% is used, the transaction amount will replace it when a message is generated.

The list of available variables, and information about using them is provided in the section "Use of Variables" of the document "Configuration of Client Messages".

Chapter 4. Configuring Service Packages

For a contract to be able to open the aforementioned Event types, these Events must be registered in the form "Events for <Name of Service Package>", opened by clicking the [Events] button in the form for editing a contract's Service Packages.

Since sending notifications to clients is usually a service provided according to an additional agreement, it is recommended to use technology of attaching additional Service Packs for which a set of possible system Events for generating messages is specified.

Conditions for charging fees for notification services are set in an attached Service packages in one of two ways:

- To set up a recurring fee for use of notification services:
 - A new type of custom fee and subtype are registered in the system ("Full → Configuration Setup → Transaction Types → Fee Types") specifying the frequency with which the fee will be charged (for example, Charge Event = "Monthly").
 - In the additional Service Pack, the fee rate and charge date is specified (Miscellaneous service).
- To charge a fee each time an Event is opened:
 - A new type of custom fee and subtype are registered in the system ("Full → Configuration Setup → Transaction Types → Fee Types") with a marker that the fee will be charged once (Charge Event = "Single");
 - The fee rate is specified in the additional Service Pack.
 - The fee type must be specified in the description of Event types used to generate messages.



A fee that will be charged each time an Event opens cannot be set for "MTR_DEBIT" Event types.

For more detailed information about configuring Service Packages, please refer to the document "Service Packages".

Chapter 5. Technology of Use

For a client application to connect to notification services, the following actions are executed in the system:

- An Event opens to connect the contract to the notification service. As a result of this procedure, the appropriate additional Service Packages should be connected to the contract.
- During authorisation or a financial transaction, the corresponding Event that generates a message according to a template opens in the database.
- An external module for sending notifications accepts this message from the database, processes it, and sends it to the phone number or e-mail address specified for this message. The message receives the processed status in the WAY4™ database.