



## Functional Specification

# Visa Alias Support in Way4

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This document is the specification for the OpenWay solution that supports Visa Aliases, and describes the solution's functionality.

This document introduces bank and processing center employees to Way4 specifics that determine the procedure for interacting with Alias Directory Service (ADS).

When working with this document, it is recommended to use Visa specifications that describe Alias Directory Service functionality.

The following notation is used in the document:

- Screen form field labels are shown in *italics*.
- Key combinations are shown in angular brackets, for example, <Ctrl>+<F3>.
- Names of screen form buttons and tabs are shown in square brackets, for example, [Approve].
- Sequences for selecting user menu items or context menu items are shown using arrows as follows: "Issuing → Contracts Input & Update".
- Sequences for selecting system menu items are shown using arrows as follows: Database => Change password.
- Values such as directory and file names and file paths that vary for each local computer are shown in angular brackets, as in <OWS\_HOME>.

Warnings and information messages are marked as follows:



Warnings about potentially hazardous situations or actions.



Information about important features, additional options, or the best use of certain system functions.

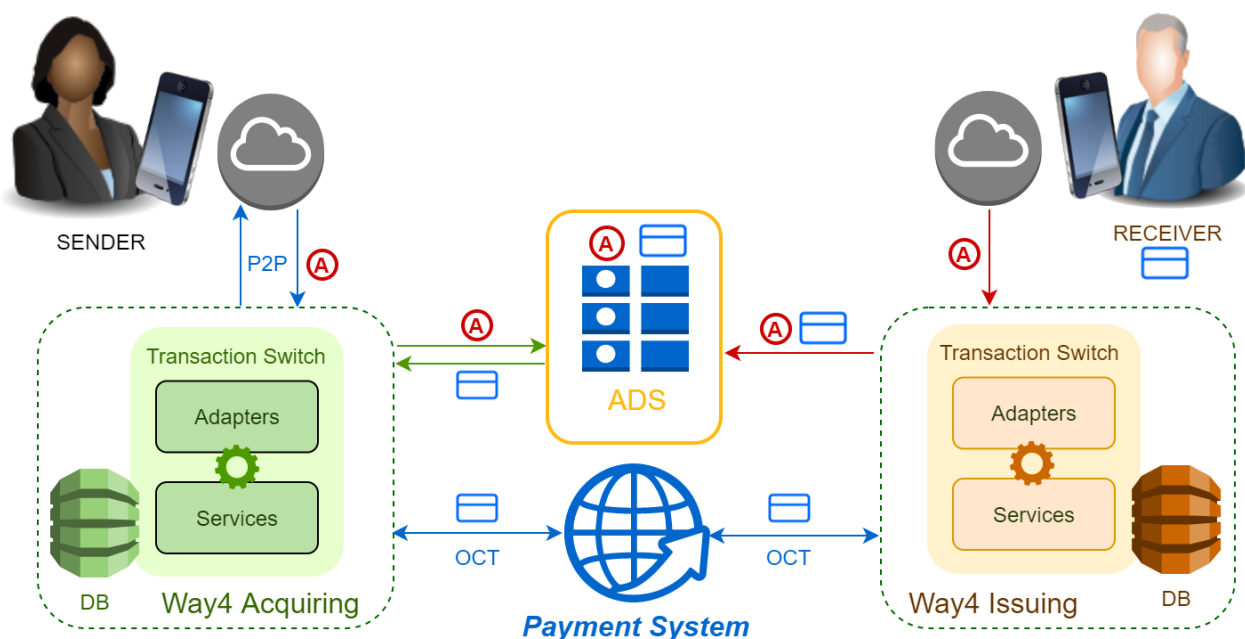
# 1 Overview

Alias – a way to identify a receiver when transferring money to the receiver's card account without providing the card number (PAN) to the sender. An Alias can be a mobile phone number, email address or other type of receiver identification supported by Alias Directory Service (ADS). ADS – a Visa service responsible for storage of "Alias – PAN" pairs and a software interface for managing an Alias' life cycle and determining a receiver's PAN when making money transfers.

Way4 makes it possible to generate and register an Alias with a link to a 16-digit PAN on the cardholder's demand. Several Aliases (including Aliases of the same type) can be registered for the same card number. To create an Alias, data specified by the client can be used or data registered in the Way4 issuing module. Way4 is responsible for the following activities with Aliases:

- On the issuer's side:
  - Creation of an Alias by registering a new record in the ADS. The record links the Alias with a specific PAN (for any payment system's cards).
  - Deletion of an Alias (the link to PAN) on the client's demand.
  - Automatic deletion of an Alias when the card account closes or expires.
  - Automatic linking of an Alias with a new PAN, for example when reissuing a card.
  - Getting information about an Alias registered in Way4.
- On the acquirer's side – request the receiver's card number for the Alias specified by the sender in a money transfer.

During creation and use of an Alias, Way4 components and Visa services interact according to the following scheme:



Client requests to create an Alias that are received by the issuer are processed using Way4 Transaction Switch adapters supporting various data exchange protocols. New Aliases for a client (potential recipient) are registered by special Transaction Switch services in conjunction with the Way4 database. For each Alias, its own identification scheme is generated in the database. The scheme is a set of parameters that determine how the Alias is used. After an identification scheme has been created or its status changed, a specialized Way4 adapter passes the corresponding data to the payment system, using the ADS interface.

Money transfer requests can be sent to the acquirer's system via various data transmission channels. Such requests, including those that contain an Alias as receiver details are processed by the corresponding Way4 Transaction Switch adapters. Subsequent authorization of the transaction is performed by standard Transaction Switch acquiring services in conjunction with the Way4 database. If an Alias is used, the acquiring authorization procedure includes a request to the ADS to get the receiver's card number for this Alias. A specialized adapter makes the PAN request through the ADS software interface. After the card number has been determined, the transfer is made as a regular OCT transaction ("Original Credit Transaction") using PAN as the receiver's payment details.

## 2 Use cases

Use cases for the solution may differ depending on the bank's requirements for the process of registering and using Aliases.

The section describes the general procedure for how Way4 components interact when transactions are performed with an Alias.

### 2.1 Creating an Alias

Generally, an Alias is created as follows:

- The client initiates a request to create and link an Alias to a specified card number, for example, through the bank's mobile app. The system that provides an interface between the client app and the issuer's system (in this case, the web banking system), sends a request to the corresponding Way4 adapter.



The procedure to provide data for the client to select an Alias type and the need to enter its value in the client's app is determined by the caller independently. The set of parameters and the format of the request to Way4 is determined by the specifics of the corresponding adapter's software interface.

The following parameters are passed in a request:

- Client card number (PAN), for which an Alias must be created. Mandatory parameter.
- Alias support service code, hardcoded in Way4 settings (in general, identifies parameters for interaction with the payment system's service).
- Alias type supported by the ADS, for example:
  - 01 – phone number.
  - 02 – email address.
  - 03 – social identification number (National ID).
  - 04 – account number (International Bank Account Number, IBAN).

If no value is specified, the Alias type determined by Way4 settings is used. The default is client phone number.

- Alias value that should be linked to the specified PAN. If a value was not passed in the request, the corresponding Alias type (for example, phone number) is determined on the basis of client data in the Way4 database.

- A specialized Way4 service checks the PAN that was received. If this card is registered in the Way4 issuing module and is available for client transactions, an Alias identification scheme is registered for the card contract. The scheme contains parameters for managing the Alias' life cycle.
- Way4 generates a request to register an "Alias – PAN" pair that is sent to the payment system through an adapter providing an interface to the ADS.
- If a response is received that the "Alias – PAN" pair was registered successfully, the corresponding Alias identification scheme is activated in Way4. If a negative response is received, the corresponding Alias identification scheme is closed.
- The caller (in the example, this is the client's web banking system) is sent a response message with data about the results of creating the Alias.



The list of parameters that are returned is determined by the specifics of the Way4 software interface. The procedure for interpreting the received data and providing this data to the client is determined by the caller independently.

## 2.2 Deleting an Alias

Deleting an Alias means deactivating the link between a card number and the corresponding Alias (in Way4 – closing the corresponding identification scheme for the card contract). The procedure to delete an Alias can be initiated:

- On demand by the client, for example, if the client will no longer use this Alias.
- By Way4, for example, when closing a card account.

### 2.2.1 Deleting an Alias on demand

A client can initiate a request to delete an Alias, for example, through a bank's mobile app. The activity is performed as follows:

- The system that provides an interface between the client app and the issuer's system (in this case, the web banking system), sends a request to the corresponding Way4 adapter.



The procedure to provide data for the client to select the Alias to be deleted is determined by the caller independently. The set of parameters and the format of the request to Way4 is determined by the specifics of the corresponding adapter's software interface.

The following parameters are passed in a request:

- Alias support service code, hardcoded in Way4 settings (in general, identifies parameters for interaction with the payment system's service).
- Card number (PAN) to which the Alias that is being deleted is linked.

- Value of the Alias that must be deleted.
- A specialized Way4 service checks the received PAN and Alias. If this card is registered in the Way4 issuing module, is available for client transactions and has a valid Alias identification scheme, a request is generated to delete the "Alias – PAN" pair.
- The request is sent to the payment system through the adapter that provides an interface to the ADS.
- If a response is received that the "Alias – PAN" pair was deleted successfully, the corresponding Alias identification scheme is deactivated in Way4. If a negative response is received, the corresponding Alias identification scheme remains valid.
- The caller (in the example, this is the client's web banking system) is sent a response message with data about the results of deleting the Alias.



The list of parameters that are returned is determined by the specifics of the Way4 software interface. The procedure for interpreting the received data and providing this data to the client is determined by the caller independently.

## 2.2.2 Deleting an Alias when a card's status changes

The need to automatically deactivate an Alias when the status of the corresponding card contract changes is determined by Way4 settings. In this case, an Alias is deleted as follows:

- The Way4 process that controls changes in card contract statuses checks for valid Aliases linked to these card contracts and the need to deactivate the Aliases. For an Alias that meets the check conditions, the corresponding identification schemes are closed.
- Way4 generates a notification about the deletion of the Alias and sends it to the payment system through an adapter providing an interface to the ADS.

Notification of the client that the card's status has changed and a Alias has been deleted can be configured in the standard procedure for closing a card contract.

## 2.3 Getting information about an Alias

Way4 provides a software interface for getting information about client Aliases registered in the Way4 database. The following requests are supported:

- Get information about all a specific card's Aliases.
- Get information about all a specific client's Aliases.
- Get the status of a specific Alias.





Scenarios in which a request is made for information about an Alias, and the procedure for providing this information to clients is determined by the caller independently. The set of input and return parameters and the format of requests to Way4 is determined by the specifics of the corresponding adapter's software interface.

The following parameters must be passed in a request:

- Identifier of the card contract for getting information about Aliases that are linked to it.
- Identifier of the client for getting information about Aliases linked to the client's cards.
- Alias support service code, hardcoded in Way4.
- Value of the card contract's Alias for getting information about the status of this Alias

The following parameters are returned in responses:

- Alias value.
- Current status of the Alias.
- Identifier of the "Alias – PAN" pair.
- Identifier of the card contract with which the Alias is linked.
- Masked number of the card with which the Alias is linked.
- Service code of the payment system supporting this Alias.

## 2.4 Linking an Alias to a new card

An Alias can be linked to a new card (for example, when a card is reissued) automatically by a special Way4 process that controls the activation of new cards. Depending on Alias identification scheme settings, the following use cases are possible:

- When a card is reissued, the existing Alias identification scheme closes. The procedure to create an Alias must be repeated for the new card.
- An existing Alias identification scheme is only closed if a card is reissued with a new PAN. If the previous PAN is used, the identification scheme remains linked to the reissued card.
- An existing Alias identification scheme unconditionally remains linked to a reissued card.

When an identification scheme closes or it is linked to a new card contract (PAN), Way4 generates the corresponding notification, which is sent through the adapter that provides an interface to the ADS.

Notification of a client that an Alias has been moved or deleted can be set up in the standard procedure for unlocking a reissued card.

### 3 Additional requirements and limitations

The solution has the following characteristics and limitations:

- An Alias' specific value can be linked to one PAN only.
- Use of an Alias is only possible for transactions crediting the account of the receiver to whom the Alias belongs.
- Alias types that can be used are specified by Alias Directory Service requirements.