Native Interconnection Hub Functional Specification

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Introduction

The "WAY4™ Native Interconnection Hub" (NIH) solution is implemented on the "WAY4 Transaction Switch" (TS) platform and makes it possible to connect additional participants to the process of exchanging information (information flow) between two main participants (for example, the TS adapter and an external system).

This document is an introduction to the "WAY4 Native Interconnection Hub" solution's features and operating principles.

When working with this document, it is also recommended to refer to the document "Transaction Switch Platform Overview".

The following notation is used in the document:

- Field labels in screen forms are shown in *italics*.
- Key combinations are given in angular brackets, for example, <Ctrl>+<F3>.
- Screen form button labels and tab labels are shown in square brackets, such as [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.
- Variables such as directory names, file names, and file paths that differ for each local computer are shown in angular brackets, for example, <OWS_HOME>.

Warnings and information messages are marked as follows:

Warnings about potentially hazardous situations or actions.

Messages with information about important features, additional options, or the best use of certain system functions.

Chapter 1. NIH Functionality

The "WAY4 Native Interconnection Hub" solution makes it possible to do the following:

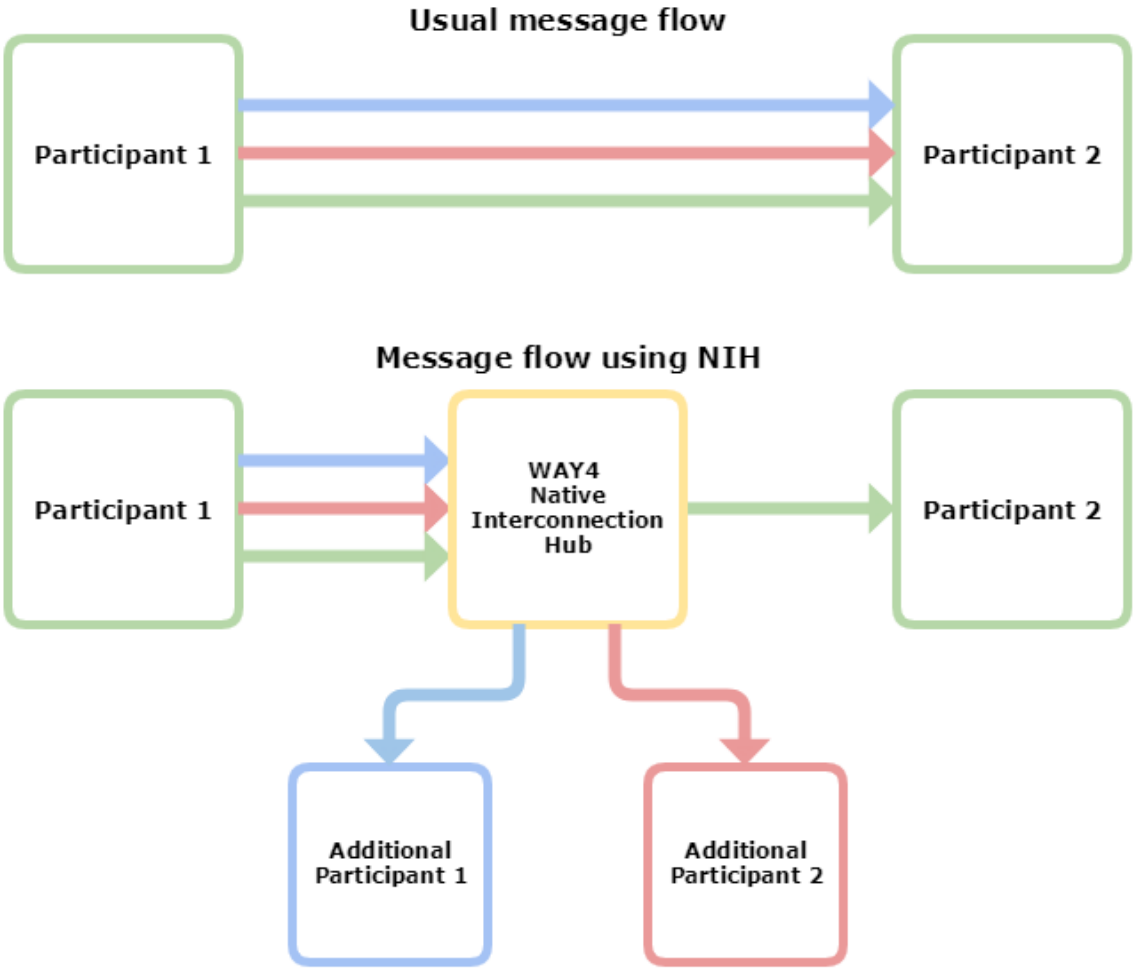
- Connect new participants to the information flow without the need for their integration with the main participants.
- Connect the solution to the information flow before making any settings on the side of additional participants (this connection does not cause delays and the loss of information).
- Remove the solution from interaction without disrupting the connection between the main participants.
- Process various types of message (for example, transaction messages and management messages) with one instance of the solution.
- Flexibly route messages when transferring data from a main participant to additional participants.

Chapter 2. NIH Use Cases

The "WAY4 Native Interconnection Hub" solution can be used in the following tasks:

- Load distribution: some messages can be sent to one or several participants that are additionally connected to the information flow.
- Uninterrupted operation when transferring data: when transferring data from a main participant to additional participants, incoming messages are routed to the participant whose database stores data required for processing the message.

> For flexible routing of messages when transferring data, WAY4 must be one of the participants.



Scheme for transmitting requests without using NIH (top) and with two additional participants connected through NIH (bottom)

Chapter 3. Procedure for Processing Transactions in NIH

When the "WAY4 Native Interconnection Hub" solution is used, transaction messages are processed as follows:

- When a transaction request from a main participant is processed in NIH, the message's route is determined in one of the following ways:
  - using a rule that is described in the solution's configuration.
  - by a special request to WAY4.

    A special parameter from the NIH configuration determines which method has a higher priority.

- A transaction request, according to the specific route, is sent either to the second main participant or to an additional participant.

  The request is transmitted in unchanged form, which makes it possible to avoid additional settings on the side of the target participant.

- A response to the transaction request is returned through NIH to the sender, ensuring consistency (in terms of the sender) of the information flow regardless of which participant processed the request.

Chapter 4. Procedure for Processing Management Messages in NIH

When the "WAY4 Native Interconnection Hub" solution is used, management messages are processed as follows:

- For a management message received from any main participant, a copy can be created for delivery to an additional participant.

  > The need to create a copy of a management request is determined by NIH configuration parameters .

- The copy of the management request must be processed by the additional participant, however its response will not be transmitted to the request's sender and does not affect interaction between the main participants.

Chapter 5. NIH Implementation Limitations and Conditions

Only messages in ISO 8583 protocol dialects used on the "WAY4 Transaction Switch" platform can be processed with the "WAY4 Native Interconnection Hub" solution. The solution is not used for processing clearing messages.

In the majority of cases, additional participants' responses to management requests (MTI 0800) are not processed by the sender. For this reason, to align the network state of additional participants with that of the main participants, forced regulation of states may be required.

Transaction messages can be routed from an additional participant to a main participant only if this main participant is a payment system.