



Douane
Belastingdienst

Interface description HTG Single Window

Version 1.1

Date: 24-08-2020
Status: Definitive

Publisher's imprint

Title	Interface description HTG Single Window
Organisation	National Helpdesk Dutch Customs T +31 88 156 66 55 nhd.apeldoorn@belastingdienst.nl

Table of contents

Publisher's imprint—3

Table of contents—4

1 Introduction—6

1.1 Purpose of this document—6

1.2 Available interfaces—6

1.3 Single Window—6

1.4 Target audience—7

1.5 Support—7

1.6 Outline of the document—7

1.7 Version history—7

2 Process description—8

2.1 General—8

2.2 Message processing—8

3 Specific details for Single Window—9

3.1 Three mailboxes for each reporting party—9

3.2 Separate mailbox per message format—9

3.3 Example control-message—9

3.4 Subject of the message (VAKS)—10

3.4.1 General—10

3.4.2 Syntax—11

3.4.3 Completion instruction—12

3.4.4 Activity codes and declaration types—13

3.4.5 Examples of usage VAKS—13

4 Abbreviations—15

1 Introduction

1.1 Purpose of this document

This document complements the interface descriptions HTG SMTP-MTA and HTG-MSA and POP3 for the Single Window message flow.

1.2 Available interfaces

HTG, the "Handel en Transport Gateway" (Trade and Transport Gateway) (the successor of Digipoot Trade & Transport) is a generic electronic access service that allows the business community, active in the Trade and Transportation domain, to exchange electronic messages with public authorities. Whether or not HTG will function successfully is depending heavily on a proper description of the interfaces to which the business community and the public authorities must be able to connect. Single Window (see paragraph 1.3) is an integral part of the HTG.

HTG offers the business community and the private authorities a number of interfaces based on electronic mail messages:

- SMTP-MTA (server-to-server)
- SMTP-MSA and POP3.

A separate description is available for each interface. The following table indicates which interface descriptions apply to a specific message flow.

Message flow	Type of interface	Document
Logistic message flows for Customs and NVWA	SMTP-MTA	Interface description HTG SMTP-MTA
	SMTP-MSA/POP3	Interface description HTG SMTP-MSA and POP3
Single Window message flow for Rijkswaterstaat/NCA SSN, Border control and Customs	SMTP-MTA	Interface description HTG Single Window in addition to Interface description HTG SMTP-MTA
	SMTP-MSA/POP3	Interface description HTG Single Window in addition to Interface description HTG SMTP-MSA en POP3
Logistic message flows with an additional attachment	SMTP-MTA	Interface description HTG message with an additional attachment in addition to Interface description HTG SMTP-MTA
	SMTP-MSA/POP3	Interface description HTG message with an additional attachment in addition to Interface description HTG SMTP-MSA and POP3

Table 1: Message flows and interface descriptions

The documents "Interface description HTG; Message Exchange - SMTP-MTA (server-to-server)" and "Interface description HTG; Message Exchange - SMTP-MSA and POP3" describe the standards used for exchanging email messages between mail servers (MTAs), respectively exchanging email messages between a mail client and HTG based on SMTP-MSA and POP3 protocols. For Single Window there are a number of additional agreements on these standards. This document describes these additional agreements.

1.3 Single Window

The Single Window for maritime and aviation is developed in The Netherlands for maritime and aviation information exchange. The exchange of maritime messages is prescribed in the European

Directive 2010/65, which is implemented in Dutch legislation. Single Window also supports additional maritime messages and messages from the air cargo sector.

All communications intended for Customs, border control (Royal Netherlands Marechaussee and Seaport Police) and NCA SSN (Rijkswaterstaat) can be communicated electronically using the Single Window. Each communication needs to be sent only once and will be delivered to one or more public authorities who are legally entitled to the message.

1.4 Target audience

This document is primarily aimed at implementers of communication facilities and developers of system-to-system connections.

1.5 Support

Support during connection setup and use is provided by the National Helpdesk Dutch Customs (NHD). See the publisher's imprint for contact details.

1.6 Outline of the document

The structure of the document is as follows. Chapter 1 contains general information. Chapter 2 contains a global process description of Single Window. Chapter 3 describes the specific Single Window details that are not mentioned in the generic interface descriptions for SMTP-MTA, SMTP-MSA and POP3. The document finishes with a list of abbreviations in chapter 4.

1.7 Version history

Version	Date	Changes (draft/definitive)
1.0	10-12-2019	Definitive version.
1.1	24-08-2020	Paragraph 1.2 Available interfaces changed due to possible extra attachment.

2 Process description

2.1 General

The HTG Single Window interface will use the interface descriptions for SMTP and POP3 mentioned in paragraph 1.2. This interface description documents the Single Window process, where it deviates from the other HTG processes and message flows.

2.2 Message processing

Message processing by Single Window starts by receiving the message (XML or Edifact format). When a message in Edifact format is received, it will first be transformed to XML. Single Window delivers the XML message to the relevant public authority/authorities.

In the opposite direction a public authority can react to a received declaration message with a response message ("declaration response"). A public authority can also send messages to a reporting party as a result of actions in the monitoring process ("process responses"). More information about this Single Window MIG can be found in the community for developers of Dutch Customs related software of the National Helpdesk Dutch Customs.

Message reception, confirmation of receipt and message delivery for Single Window messages is as described in the interface descriptions for SMTP-MTA, SMTP-MSA and POP3. However, for Single Window the following additions apply:

- Message reception: public authorities may also deliver messages to Single Window, "declaration responses" and "process responses". Single Window will deliver these responses to the addressed reporting party or dispatching organisation.
- Confirmation of receipt: Additionally, Single Window may send a control message to the originating system when the received message is syntactically incorrect. If a public authority returns a control message to Single Window, the message will not be forwarded to a company's system.
- Message delivery: received declaration messages may be of interest for multiple public authorities. If that is the case, Single Window will connect with each server of these public authorities and will deliver (a copy of) the message.

3 Specific details for Single Window

3.1 Three mailboxes for each reporting party

Single Window uses three unique email addresses for each reporting party:

- an email address used by the reporting party to send the B2SW message (declaration message) to Single Window. This email address will also be used for DSNs;
- an email address to which Single Window will send the SW2B message (response);
- an email address to which Single Window will send the SW2B_C messages (control messages).

3.2 Separate mailbox per message format

Depending on the message format (XML or Edifact) messages must be delivered to Single Window in one of these mailboxes:

- b2sw.xml@htpoort.nl (for messages in XML format)
- b2sw.edifact@htpoort.nl (for messages in Edifact format)

3.3 Example control-message

The example below shows how a control message can be constructed. This example is a response to an invalid XML declaration message.

```
Date: Wed, 24 Jul 2019 09:45:51 +0100 (CET)
From: sw2b-control@preprod.htpoort.nl
To: testaccount@msa.preprod.htpoort.nl
Subject:
Message-ID: <2952664727.0243.2589295968935@htgmsa>
MIME-Version: 1.0
Content-Type: application/xml
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="23cc096f-0cfe-5a5f-bc1f-ba6e82e5621d.xml";
```

```
PD94bWwgdMvYc2l2bWVjOj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiIHN0YW5kYWxvbmU9InllcyI/PjxT
VzJCIHhthbG5zOm5zMTY9IiLNXMkI6Uk5FOjAxIiB4bWxuc20idXJuOndjbzpkYXRhbW9kZWw6U1c6
U1cyQjowMSIgeG1sbnM6bnMxNz0iU1cyQjpsSTkk6MDEiIHhthbG5zOm5zMTQ9IiLNXMkI6TlRTOjAx
IiB4bWxuc2puc2E1PSJTVzJCOlBETToWMSIgeG1sbnM6bnMxOD0iU1cyQjpsTRFc6MDEiIHhthbG5z
Om5zOT0iU1cyQjpsDTkk6MDEiIHhthbG5zOlJDUF8wMT0iU1cyQjpsSQ1A6MDEiIHhthbG5zOm5zNT0i
U1c6TUQ6MDEiIHhthbG5zOm5zMTI9IiLNXMkI6RVNEOjAxIiB4bWxuc2puc2EzPSJTVzJCOk5DQjow
MSIgeG1sbnM6bnM2PSJTVzJCOkFDVDowMSIgeG1sbnM6bnM3PSJTVzJCOkFJTjowMSIgeG1sbnM6
bnMxMD0iU1cyQjpsERUM6MDEiIHhthbG5zOlJFU18wMT0iU1cyQjpsSRVM6MDEiIHhthbG5zOm5zOD0i
U1cyQjpsDTku6MDEiIHhthbG5zOm5zMTE9IiLNXMkI6RFJOOjAxIiB4bWxuc2puc20iU1c6RFM6MDEi
Pjxuc2U6TWV0YURhdGE+PG5zNTpDb21tdW5pY2F0aW9uTWV0YURhdGE+PG5zNTpBcHBsaWNhdGlv
b1JlZmVyZW5jZU1EPjE0NzgxODQ4NTc0ODI8L25zNTpBcHBsaWNhdGlvb1JlZmVyZW5jZU1EPjxu
czU6UHJlcGFyYXRpb25EYXRlVGltZT48ZHM6RGF0ZV8zMDQgZm9yYm90Q29kZT0iMzA0Ij44MDE2
MTEwMzE0NTQxNz0iL2RzOkRhZGVmZmZ0PjwvbnM1OlByZXhcmF0aW9uRGF0ZVRpbWU+PG5zNTpS
ZWNpcG1lbnQ+PG5zNTpJRD50TERPPC9uc2U6SUQ+PC9uc2U6UmVjaXBpZW50Pjxuc2U6U2VuZGVy
Pjxuc2U6SUQ+TkxTVzZwbnM1Ok1EPjwvbnM1OlNlbnRlcj48L25zNTpDb21tdW5pY2F0aW9uTWV0
YURhdGE+PG5zNTpNZXRhRGF0YT48bnM1OkFnZW5jeUFzc2lnbmVkdQ3VzdG9taXphdGlvbkNvZGU+
UkVMTDFEPC9uc2U6QWdlbmN5QXNzaWduZWRDdXN0b21pemF0aW9uQ29kZT48bnM1OkNvbWl1bm1j
YXRpb25NZXRhRGF0YT48bnM1OkFwcGxpY2F0aW9uUmVmaW9uZm9uZm9uZm9uZm9uZm9uZm9uZm9u
bnM1OkFwcGxpY2F0aW9uUmVmaW9uZm9uZm9uZm9uZm9uZm9uZm9uZm9uZm9uZm9uZm9uZm9uZm9u
bnM1Ok1ldGFYXhRbPjxuc2U6TWV0YURhdGE+PG5zNTpBZ2VvY3lBc3NpZ25lZEN1c3RvbWl6YXRp
b25Db2RlPlJDUdAxdWVbnM1OkFnZW5jeUFzc2lnbmVkdQ3VzdG9taXphdGlvbkNvZGU+PG5zNTpD
```

b21tdW5yY2F0aW9uTWV0YURhdGE+PG5zNTpBcHBSaWNhdGlvblJlZmVyZW5jZU1EPjEONzgODQ4 NTc0ODI8L25zNTpBcHBSaWNhdGlvblJlZmVyZW5jZU1EPjwvbnM1OkNvbWllbmrljYXRpb25NZXRh RGF0YT48L25zNTpNZXRhRGF0YT48L25zNTpNZXRhRGF0YT48UkVTXzAxOlJlc3BvbmlPjxSRNVf MDE6RnVuY3Rpb25hbFJlZmVyZW5jZU1EPjEyImIxNTU3YmQ0YzQyNjc4NmJlODNKYTE2MThlODBm PC9SRNVfMDE6RnVuY3Rpb25hbFJlZmVyZW5jZU1EPjxSRNVfMDE6SXNZdWEYXRlVGltZT48ZHM6 RGF0ZVRpbWVtDhJpbmcgZm9ybWF0Q29kZT0imZA0Ij4yMEDE2METeWMZE0NTQxNiO8L2RzOkRh dGVUaw1lU3RyaW5nPjwvUkVTXzAxOkIzc3VlRGF0ZVRpbWU+PFJFU18wMTpUeXBQ29kZT5SRVM8 L1JFU18wMTpUeXBQ29kZT48UkVTXzAxOkRlY2xhcmlf0aW9uPjxSRNVfMDE6RnVuY3Rpb25hbFJl ZmVyZW5jZU1EPkrJU1BPukdfmjAxBNV8wMDA3MDE8L1JFU18wMTpGdw5jdGlvlbmFsUmVmZXJlbm NlSUQ+PC9SRNVfMDE6RGVjbGFyYXRpb24+PC9SRNVfMDE6UmVzcG9uc2U+PFJDUF8wMTpSZXNW b25zZT48 UkNQxzAxOkZ1bmN0aW9uPjI3PC9SQ1BfMDE6RnVuY3Rpb24+PFJDUF8wMTpUeXBQ29kZT5SQ1A8 L1JDUF8wMTpUeXBQ29kZT48UkNQxzAxOlNlYmpldHRlcj48UkNQxzAxOkIEpk5MU1c8L1JDUF8w MTpJRd48L1JDUF8wMTpTdWJtaXR0ZXI+PFJDUF8wMTpFcncj48UkNQxzAxOkRlc2NyaXB0aW9u PkhldCBhYW5nZmxldmVyZGUgaW5zdGfuY2UgZG9jdW1lbnQgdmsZG9ldCBuaWV0IGFhbiBkZSBO ZWRlcmlxhmRrZSB0YXhvbm9taWUUIEHpZXJkb29yIGthbiBoZXQqYWFubGV2ZXJ2ZXJ6b2VrIG5p ZXQqZG9vcilBIVEcgd29yZGVuIHZlcndlcmt0LGokSGV0IGLuc3RhbmlGRvY3VtZW50IGJldmF0 IGRlIHZvbGdlbmRIIGZvdXRlbjokKClZhbkGlxYXRpZSBpcyBtaxNsdt0IGlldCBmb3V0OiBjdmMt cGF0dGVybil2YXpwZDogVmFsZWUGJ0phc3BlcicgaXMgbm90IGZhY2V0LXZhbkGlxKHdpdGggcmVz cGVjdCB0byBwyXR0ZXJuICdbMS05XVswLTldWzAtOVlbMC05XSgoWzbDwzfFM83wlfdD8OF0pKFsw XVsxLTldfFsxLTJdWzAtOVl8WzNdWzAtMVOpfChbfMflbNHwf2fdldKShbMF1bMS05XXxbMS0yXVsw LTldfFsZxVswXS18KFswXVsYXSkOWzBDWzEtOVl8WzEtM1lbMC05XS18KFswXVswfDJdkShbMF1b MS05XXxbMS0yXVswLTldfFsZxVswLTFdKKwoWzFdWzFdkShbMF1bMS05XXxbMS0yXVswLTldfFsZ xVswXSkpKChbM1lbMC0zXXxbMF1bMC05XXxbMV1bMC05XSkoWzAtNV1bMC05XSkoWzAtNV1bMC05 XSkpWiCGZm9yIHR5cGUGJ0Rh dGVUaW1lVHlwZW8zMDRfUYcuPC9SQ1BfMDE6RGVZY3JpcHRpb24+ PFJDUF8wMTpWYXpwZGF0aW9uQ29kZT45OTAwPC9SQ1BfMDE6VmFsaWRhdGlvbkNvZGU+PC9SQ1Bf MDE6RXJyb3I+PC9SQ1BfMDE6UmVzcG9uc2U+PC9TVzJCpq==

3.4 Subject of the message (VAKS)

The RFC 5322 message subject is required to be present. It must contain the “keywords” V, A, K, and S. VAKS is a Dutch abbreviation for “Van (From), Aan (To), Kenmerk (Reference), Status”. The VAKS is required for a correct routing and processing through the systems of Customs. Single Window does not verify if the VAKS is present or correct, that verification is done by the systems of Customs. The VAKS is not a part of Single Window. Traditionally the VAKS is important for the Customs processes and email messages. Therefore it has been decided at the start of Single Window to use the VAKS for Single Window as well.

3.4.1 General

This chapter was written from the point of view of Customs, but the instruction is valid for all declarations that are sent to Single Window. The reason that this instruction is written from the point of view of Customs is that Customs uses the contents of the subject field (VAKS) for the internal routing and processing of the message. The other public authorities do not use the VAKS, or use it only in a support context.

For the correct routing and processing within the Customs systems it is important that the subject field is filled correctly. If not, the message probably will not be processed correctly by Customs. For Single Window there are two ways for the reporting party to fill the VAKS.

Option 1:

This option applies when the dispatching organisation supplies its own EORI number. Customs will send the response to the dispatching organisation, optional routing by the dispatching organisation to the reporting party must be done based on the message contents.

Option 2:

This second option applies when the dispatching organisation uses the EORI number of another party in the subject field, for example the EORI number of a reporting party. Customs will send the response message to the email address that is administrated by Customs for the EORI number and

sequence number mentioned in the VAKS. Optional routing by a dispatching organisation can be done either based on the message contents, or by the logistic information in the subject field (the VAKS).

3.4.2 Syntax

The RFC 5322 subject field contains four so-called “keywords”. The sequence of the “keywords” V, A, K, and S is unordered.

The syntax of the subject field consists of the four “keywords”:

[V=PROCESS-ID of the originator][A=PROCESS-ID of the recipient][K=originator’s reference][S=0]

The subject field must be filled as explained below. There are three possibilities:

Entry (Dutch: Binnenbrengen):

[V=<EORI Number>.<sequence number>.08][A=MSW.NL][K=reference][S=0]

Exit (Dutch: Uitgaan):

[V=<EORI Number>.<sequence number>.09][A=MSW.NL][K=reference][S=0]

Provisioning (Dutch: Proviandering):

[V=<EORI Number>.<sequence number>.14][A=MSW.NL][K=reference][S=0]

The meaning of the characters V, A, K and S is:

V: Process-ID of the originator (dispatching organization of reporting party)

A: Process-ID of the recipient (MSW)

K: Reference of this communication, chosen by the originator

S: Status, in case of an initial message (declaration) 0 (zero)

The following rules apply:

- The reference (K) must be supplied, because this element is used by Customs as a search criterion to find the history of a message. Without this reference the National Helpdesk Dutch Customs cannot offer good support for customer questions about sent messages.
- The Process-ID of the originator (V) must always contain a sequence number. This sequence number is usually 00 if the party uses exactly one email address for communication with Customs. If more than one email address is used, Customs will use the sequence number to select one of these email addresses.
- The status (S) of a message must always be 0 (zero) for Single Window.

The following syntax rules apply:

- The maximum length for the subject field (all VAKS fields together, including brackets) is 128 characters.
- The square brackets '[' and ']' are part of the syntax and are required. They serve a role in recognition of the “keywords”.
- Spaces are not allowed between the square brackets ']' and '['.
- The “keywords” (V, A, K and S) can be supplied in uppercase or lowercase; all characters are treated as case insensitive.
- Between a “keyword” and its value exactly one equals sign '=' is allowed.
- Spaces or other whitespace characters before or after the equals sign '=' are not allowed.
- The sequence of the “keywords” can be chosen freely.
- The values of the keywords V, A and K may only contain characters from the following set: “.0123456789ABCDEFGHIJKLMNPOQRSTUVWXYZabcdefghijklmnopqrstuvwxyz”.

3.4.3 Completion instruction

This instruction applies for Single Window messages from a reporting party of dispatching organisation to Customs.

Key word	Description	Format	Instruction
V	<p>Process-ID of the originator. "V" stands for "Van" (Dutch for "From"). This Process-ID is made up of three parts:</p> <ol style="list-style-type: none"> 1. The EORI number 2. The sequence number 3. The activity code of the Customs process. <p>These three parts, together with the separating dots '.', form the Process-ID of the originator.</p>	AN..32	<p>Between the EORI number and the sequence number a dot ('.') must be placed. A dot ('.') must also be placed between the sequence number and the activity code. For Single Window the allowed activity codes are "08", "09", and "14".</p> <p>Example: [V=NL001234567.00.08]</p> <p>If the combination of the three parts is not administered by Customs, the message cannot be processed.</p>
A	<p>Process-ID of the recipient. "A" stands for "Aan" (Dutch for "To"). The address of the Customs application must be used here.</p>	AN..32	[A=MSW.NL]
K	<p>Reference of the originator. "K" stands for "Kenmerk". A unique reference for each message allows the National Helpdesk Dutch Customs to easily retrieve the message in case of customer questions.</p>	AN..32	<p>Example: [K=B2SW.20191234d] [K=550e8400e29b41d4a716446655440000]</p>
S	Status of the message.	AN..5	<p>[S=0] (the digit zero) For a message from a reporting party or dispatching organisation always use S=0.</p>

Example of a subject field for a message of a reporting party for Customs process Entry (Dutch: Binnenbrengen):

[V=NL123456789.00.08][A=MSW.NL][K=45000025457612][S=0]

For response messages from Customs via Single Window to the system of the dispatching organisation, Customs determines the value for the Reference keyword ("K"). This reference is important for the National Helpdesk Dutch Customs to support customer questions about responses. Customs fills the "V" keyword with value "MSW.NL" as originator and the "A" keyword with the EORI number, sequence number and activity code of the reporting party or dispatching organization. Example of a subject field for a response message sent by Customs:

[V=MSW.NL][A=NL123456789.00.08][K=45000025457613][S=0]

3.4.4 Activity codes and declaration types

Table 2 contains an overview of the activity codes of the Customs processes and the declaration types of Single Window.

Activity code	Declaration types
08	ATA, CAI, COA, DIV, ENS, EXP, HZA, LCP, NOA, PAX, PRN, SDT, SEC, STO, WAS
09	ARX, ATD, EXS, HZD, MFX, NOD
14	PRO

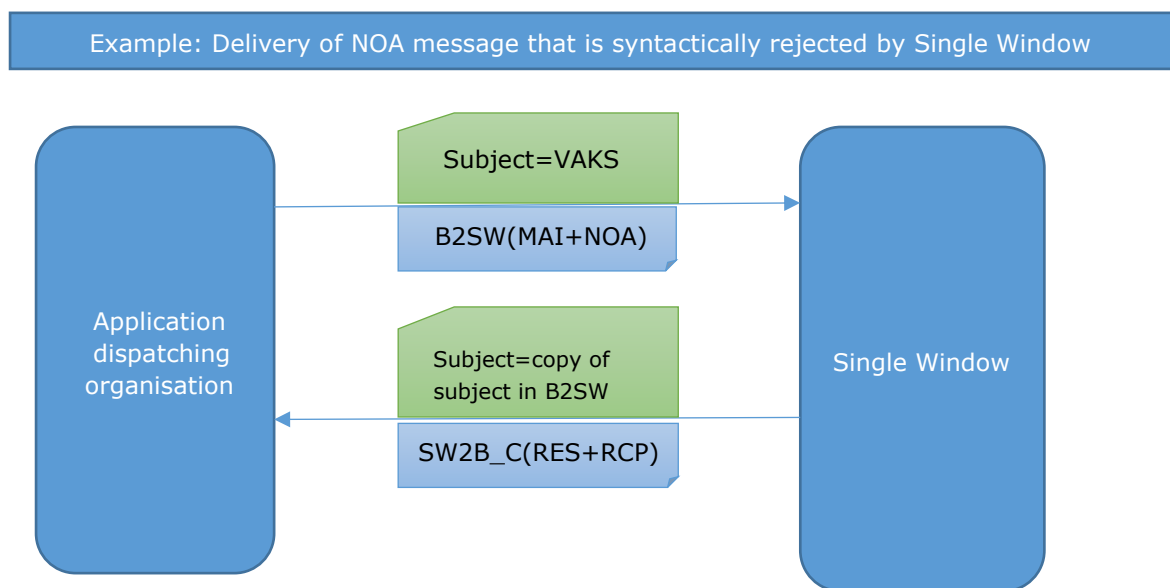
Table 2: Customs activity codes and Single Window declaration types

3.4.5 Examples of usage VAKS

This paragraph contains examples of the VAKS usage. The following examples have been worked out:

- Example of a control-message (SW2B_C) which is returned by Single Window to a dispatching organisation.
- Example of a declaration response (SW2B) in reply to a NOA that Customs sends via Single Window to a dispatching organisation.

Example – Control-message

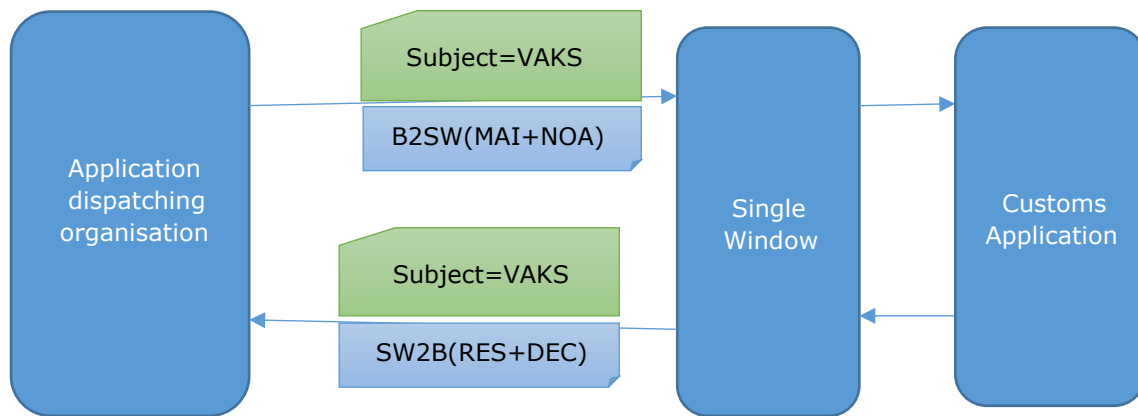


Explanation:

- Subject field of the dispatching organisation:
[V=NL123456789.00.08][A=MSW.NL][K=2232AB00F11BB288FF][S=0]
- The dispatching organisation chooses the structure of the Reference ("K"), taking into account the maximum permitted length and allowed character set.
- It is possible to use the identification of the message (in MAI) as the reference value.
- NL123456789 is the EORI number that the originator uses in the Process-ID for "V".
- 00 is the sequence number of the email address of the dispatching organisation for this EORI number in the administration of Customs.
- 08 is the activity code belonging to declaration type NOA.

Example – Declaration response Customs

Example: Delivery of syntactically correct NOA with a response from Customs



Explanation:

- Subject field of the dispatching organisation:
[V=NL123456789.00.08][A=MSW.NL][K=123AF123BB][S=0]
- Subject field of Customs
[V=MSW.NL][A=NL123456789.00.08][K=DWP123456BB][S=0]
- "A" in VAKS of Customs is a copy of "V" in VAKS of the dispatching organisation.
- "K" in VAKS of Customs is Reference generated by Customs, this Reference differs from the Reference in VAKS of the dispatching organisation.

4 Abbreviations

Abbreviation	Meaning
DSN	Delivery Status Notification, an automated message from a mail system
HTG	Handel en Transport Gateway (Dutch), Trade and Transport Gateway
IP	Internet Protocol, a fundamental Internet standard
MIG	Message Implementation Guide
MSA	Message Submission Agent, software used when receiving email from client
MSW	Maritime Single Window, the old name for Single Window
MTA	Mail Transfer Agent, software that transfers email messages between computers
NHD	National Helpdesk Dutch Customs (Dutch abbreviation)
NOA	Notice of pre arrival – SW message type that is used as a pre-arrival notice
POP3	Post Office Protocol - Version 3
RFC	Request for Comments, technical and organisational notes about the internet
SMTP	Simple Mail Transfer Protocol
SW	Single Window, single reporting intended for multiple public authorities
TCP	Transmission Control Protocol, a fundamental Internet standard