Douane
Belastingdienst

Interface description HTG Message with additional attachments

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1 Introduction

1.1 Purpose of this document

This document complements the interface descriptions "HTG SMTP-MTA" and "HTG-MSA and POP3" for message flows with one or more additional attachments.

The term "additional attachments" needs explanation, since the terms "message" and "attachment" are sometimes used differently in different contexts. Colloquially speaking, in HTG an email can be said to contain a message, denoting the part of the mail which has meaning at the process level. At the business level that is true, but at the technical level of the interface description (MIME) the message may consist of one or more parts. When single part MIME is used this part is also the actual message. When multipart/mixed MIME is used as prescribed by HTG, the message is stored in the specific part indicated by "Content-Disposition: attachment;".

In MIME terminology, this document describes the structure of a multipart/mixed MIME message with yet one or more other attachments, so two or more meaningful parts. On a business level, the first MIME attachment is the message, and the second and subsequent MIME attachments are an addition to that message. In the terms of MIME described below, all parts are being labeled as MIME attachments.

1.2 Available interfaces

HTG, the "Handel en Transport Gateway" (Trade and Transport Gateway) (the successor of Digipoort 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 depends heavily on a proper description of the interfaces to which the business community and the public authorities must be able to connect.

HTG offers the business community and the public 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, NVWA and RVO	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, Coastguard 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 and POP3
Logistic message flows with one or more additional attachments	SMTP-MTA	Interface description HTG message with additional attachments in addition to Interface description HTG SMTP-MTA
	SMTP-MSA/POP3	Interface description HTG message with additional attachments 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 messages with one or more additional attachments, that is, with two or more meaningful parts, there are a number of additional agreements on these standards. This document describes these additional agreements.

1.3 Additional attachments

The documents "Interface description HTG; Message Exchange - SMTP-MTA (server-to-server)" and "Interface description HTG; Message Exchange - SMTP-MSA and POP3" describe that a message always contains exactly one meaningful part.

In addition to the possibility to send a single part MIME message or a multipart MIME message with one meaningful part, this document describes the possibility for a selection of message flows to send a multipart MIME message with one or more additional attachments, so with a second or subsequent meaningful part.

The use of additional attachments is only permitted for a message flow where the specific specifications indicate that one or more extra attachments can be included. The additional attachments are currently only used for messages addressed to public authorities.

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. Chapter 3 describes the specific details of the additional attachments 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	28-07-2020	Definitive version.
1.1	24-08-2020	Version for release 1.1, no changes.
1.1.1	21-12-2020	Explaining the use of MIME headers for NVWA: - Paragraph 3.1: some textual changes - New paragraph 3.1.1.
1.2	07-02-2022	Publisher's imprint: NHD email address changed. Paragraph 1.2: RVO and Coastguard added as public authorities. Paragraph 2.2: duplicate text with respect to Interface descriptions MTA and MSA and POP3 removed. Chapter 4: New abbreviations added.
1.2.2	30-05-2024	Document revised for the use of more than one attachment.
1.3	07-03-2025	New version number, no content changes.
1.3.1	09-07-2025	New version number, no content changes.

2 Process description

2.1 General

The HTG interface for messages with an additional attachment will use the interface descriptions for SMTP and POP3 mentioned in paragraph 1.2. The process description in chapter 2 of these documents also applies to messages with an additional attachment.

In HTG no validation takes place on the (content of the) message, other than verification of the interface specifications as far as needed for routing and transportation (i.e. no syntax checks and no semantic checks of the payload). For the additional attachments, HTG will carry out additional checks, needed to transport the message correctly and safely through the chain. HTG will refuse a message if the extra checks give cause to do so.

HTG supports multiple message flows for several public authorities. An overview of the message flows for which additional attachments is permitted is shown in Table 2.

Process/message flow	Public authority
Pre-notification import animal products	NVWA
Pre-notification import plant products	NVWA

Table 2: Message flows on HTG which allow additional attachments

2.2 Message processing

The processing of a message with additional attachments is identical to the processing of other messages without an additional attachment.

3 Specific details for the additional attachments

3.1 Multipart MIME

Single part MIME messages by definition contain only one part. Therefore, single part MIME is unsuitable for sending a message with an additional attachment. A message with an extra attachment must therefore always be in multipart MIME format.

When using multipart MIME, the content type is always "multipart/mixed". A message with only one meaningful part still has the following unchanged restrictions:

- There is either exactly one part available, which includes the same information as a single part
- Or there are exactly two parts, the first of which is content-type text/plain and is otherwise empty, and the second part contains the same information as a single part.

For a message with additional attachments, so with two or more meaningful parts, the following applies:

- There are two or more parts, the first includes the same information as a single part and the second and subsequent parts are the additional meaningful parts (attachments).
- Or there are three or more parts, the first of which is content-type text/plain and is otherwise empty, the second includes the same information a single part message would have, and the third and subsequent parts are the additional meaningful parts (attachments).

HTG makes no additional demands for the additional parts in the multipart MIME message. The relevant message flows may impose additional requirements. One can think of things such as the file format, the order of the parts or the values to be used for Content-Type. When using the HTG interface, there is a message exchange between applications (system-to-system communication). This means that, based on the information in the message, the receiving application must be able to determine what processing is required for the different parts.

The advice is to use element Content-Type to indicate as specifically as possible what each part contains. A few examples:

- If all parts contain “Content-Type: application/octet-stream”, then it is not possible for the receiving application to determine what each part contains. It must then be assumed that this can be determined on the basis of another agreement in the message specification, for example by a fixed order.
- If one part contains “Content-Type: application/xml” (or “Content-Type: application/edifact”) and the other part contains “Content-Type: application/pdf”, then it is clear what each part contains and an additional agreement is not necessary.

The message flow specification determines which Content-Type may or must be used. HTG (this interface description) does not determine this and HTG does not check it either.

3.1.1 Additional requirements for the NVWA message flows

For the NVWA message flows “Pre-notification import animal products” and “Pre-notification import plant products”, a message with an additional attachment consists of a meaningful part with an Edifact message and one or more meaningful parts with a PDF document. The following additional requirements apply for correct processing of the message:

- The meaningful part with the PDF document must have “Content-Type: application/pdf” in the MIME header. The message cannot be processed properly without this Content-Type indication.
- The meaningful part with the Edifact message should have “Content-Type: application/edifact” in the MIME header. Because messages without an extra attachment

often still use "Content-Type: text/plain" or "Content-Type: application/octet-stream", "application/edifact" is strongly recommended, but it is not yet mandatory.

3.2 Maximum message size

HTG supports a maximum message size of 20 MB. This limit remains in force, even for messages with extra attachments. The following considerations apply when calculating the maximum permitted size of the additional attachment:

- 20 MB applies to the entire email. The email consists of SMTP Headers, MIME Headers, the first meaningful part and the subsequent meaningful parts, and anything in between or trailing.
- The meaningful parts will often be base64 encoded. This makes them about 1.4 times larger.

Calculation examples:
For the SMTP Headers and MIME headers 0.1 MB is reserved, which should be sufficient. If the first meaningful part is 1 MB, the remaining space available for the subsequent meaningful parts is:
(20 MB – 0.1 MB – 1 * 1.4 MB) / 1.4 = 13 MB (rounded)

If the first meaningful part is 5 MB, then there is less space available for the subsequent meaningful parts, namely: (20 MB – 0.1 MB – 5 * 1.4 MB) / 1.4 = 9 MB (rounded)

In this way, it is possible to calculate how much space is available for additional attachments.

3.3 SMTP Headers

In addition to the interface descriptions "HTG SMTP-MTA" and "HTG-MSA and POP3", for messages with an additional attachment, the following applies for element Content-Type:

Element	Value	Explanation
Content-Type	text/plain	Value for text-based messages.
	application/edifact	Preferred value for messages (parts) in EDIFACT format.
	application/xml	Preferred value for messages (parts) in XML format.
	application/pdf	Value for messages (parts) in PDF format.

3.4 Example multipart MIME message with an additional attachment

The example below shows how a multipart MIME message with an additional attachment, with two meaningful parts, can be constructed. This example (made with a standard email client) contains three parts:

- The first part has "Content-Type: text/plain" and is otherwise empty.
- The second part has "Content-Type: application/edifact" and contains an EDIFACT message.
- The third part has "Content-Type: application/pdf" and contains an attachment in PDF format.

```
To: cli_acc_pd@aportaal.bhf.agro.nl
From: testaccount@nvwa.preprod.htpoort.nl
Subject: Voorbeeldbericht
Message-ID: <b3d1bf07-819d-3707-0285-5eb305c9da1d@testhost.nl>
Date: Wed, 24 Jun 2020 16:50:28 +0200
MIME-Version: 1.0
Content-Type: multipart/mixed;
 boundary="------------5F24F4CCF0E624971802C99C"

This is a multi-part message in MIME format.
--------------5F24F4CCF0E624971802C99C
Content-Type: text/plain; charset=utf-8; format=flowed
```

```
Content-Transfer-Encoding: 7bit



--------------5F24F4CCF0E624971802C99C
Content-Type: application/edifact;
Content-Transfer-Encoding: base64
Content-Disposition: attachment;
 filename="example.edi"

VU5BOisuPyAnDQpVTkIrVU5PQTozK1NUWUxVU1NUVURJTzoxK0RBVEFESVJFQ1Q6MSsyMDA1
MTEwNzoxMTU5KzYwMDInDQpVTkgrU1NERDErT1JERVJTOkQ6MDNCOlVOOkVBTjAwOCcNCkJH
TSsyMjArQktPRDk5KzknDQpEVE0rMTM3OjIwMDUxMTA3OjEwMicNCk5BRCtCWSs1NDEyMzQ1
MDAwMTc2Ojo5Jw0KTkFEK1NVKzQwMTIzNDUwMDAwOTQ6OjknDQpMSU4rMSsxKzA3NjQ1Njkx
MDQ6SUInDQpRVFkrMToyNScNCkZUWCtBRk0rMSsrWFBhdGggMi4wIFByb2dyYW1tZXI/J3Mg
UmVmZXJlbmNlJw0KTElOKzIrMSswNzY0NTY5MDkwOklCJw0KUVRZKzE6MjUnDQpGVFgrQUZN
KzErK1hTTFQgMi4wIFByb2dyYW1tZXI/J3MgUmVmZXJlbmNlJw0KTElOKzMrMSsxODYxMDA0
NjU2OklCJw0KUVRZKzE6MTYnDQpGVFgrQUZNKzErK0phdmEgU2VydmVyIFByb2dyYW1taW5n
Jw0KTElOKzQrMSswNTk2MDA2NzU2OklCJw0KUVRZKzE6MTAnDQpGVFgrQUZNKzErK0VudGVy
cHJpc2UgU2VydmljZSBCdXMnDQpVTlMrUycNCkNOVCsyOjQnDQpVTlQrMjIrU1NERDEnDQpV
TlorMSs2MDAyJw==
--------------5F24F4CCF0E624971802C99C
Content-Type: application/pdf;
Content-Transfer-Encoding: base64
Content-Disposition: attachment;
 filename="certificaat.pdf"

JVBERi0xLjQKJcOkw7zDtsOfCjIgMCBvYmoKPDwvTGVuZ3RoIDMgMCBSL0ZpbHRlci9GbGF0
ZURlY29kZT4+CnN0cmVhbQp4nD2OywoCMQxF9/mKu3YRk7bptDAIDuh+oOAP+AAXgrOZ37et
jmSTe3ISIljpDYGwwrKxRwrKGcsNlx1e31mt5UFTIYucMFiqcrlif1ZobP0do6g48eIPKE+y
dk6aM0roJG/RegwcNhDr5tChd+z+miTJnWqoT/3oUabOToVmmvEBy5IoCgplbmRzdHJlYW0K
ZW5kb2JqCgozIDAgb2JqCjEzNAplbmRvYmoKCjUgMCBvYmoKPDwvTGVuZ3RoIDYgMCBSL0Zp
bHRlci9GbGF0ZURlY29kZS9MZW5ndGgxIDIzMTY0Pj4Kc3RyZWFtCnic7Xx5fFvVf+59Zt
drzIu7xFz1G8Kl7i2HEWE8vxQlI3iRM71A6ksSwrsYptKZYUE9omYStgloZhaSlMMbTsbSPL
AZwEGgNlusxQ0mHa0k4Z8muhlJb8ynQoZVpi/b736nkjgWlnfn/8Pp9fpNx3zz33bPecc899
T4oVHA55KIEOkUJO96DLvyQxM5WI/omIpbr3BbU/3J61FPBpItOa3f49g1948t/vI4rLIzL8
[knip]
QjhGMjg+IF0KPj4Kc3RhcnR4cmVmCjEyNzg3CiUlRU9GCg==
--------------5F24F4CCF0E624971802C99C--
```

Multiple attachments can be added in the same way.

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
MTA	Mail Transfer Agent, software that transfers email messages between computers
NHD	National Helpdesk Dutch Customs (Dutch abbreviation)
NVWA	Netherlands Food and Consumer Product Safety Authority (Dutch abbreviation)
PDF	Portable Document Format, standard for electronic documents and forms
POP3	Post Office Protocol - Version 3
PDF	Portable Document Format, file format for exchange of documents
RFC	Request for Comments, technical and organisational notes about the internet
RVO	Rijksdienst voor Ondernemend Nederland (Dutch), Netherlands Enterprise Agency
SMTP	Simple Mail Transfer Protocol
TCP	Transmission Control Protocol, a fundamental Internet standard